

# NOVA CLASSICAL ACADEMY IMPROVEMENTS & EXPANSION

## ST. PAUL, MINNESOTA

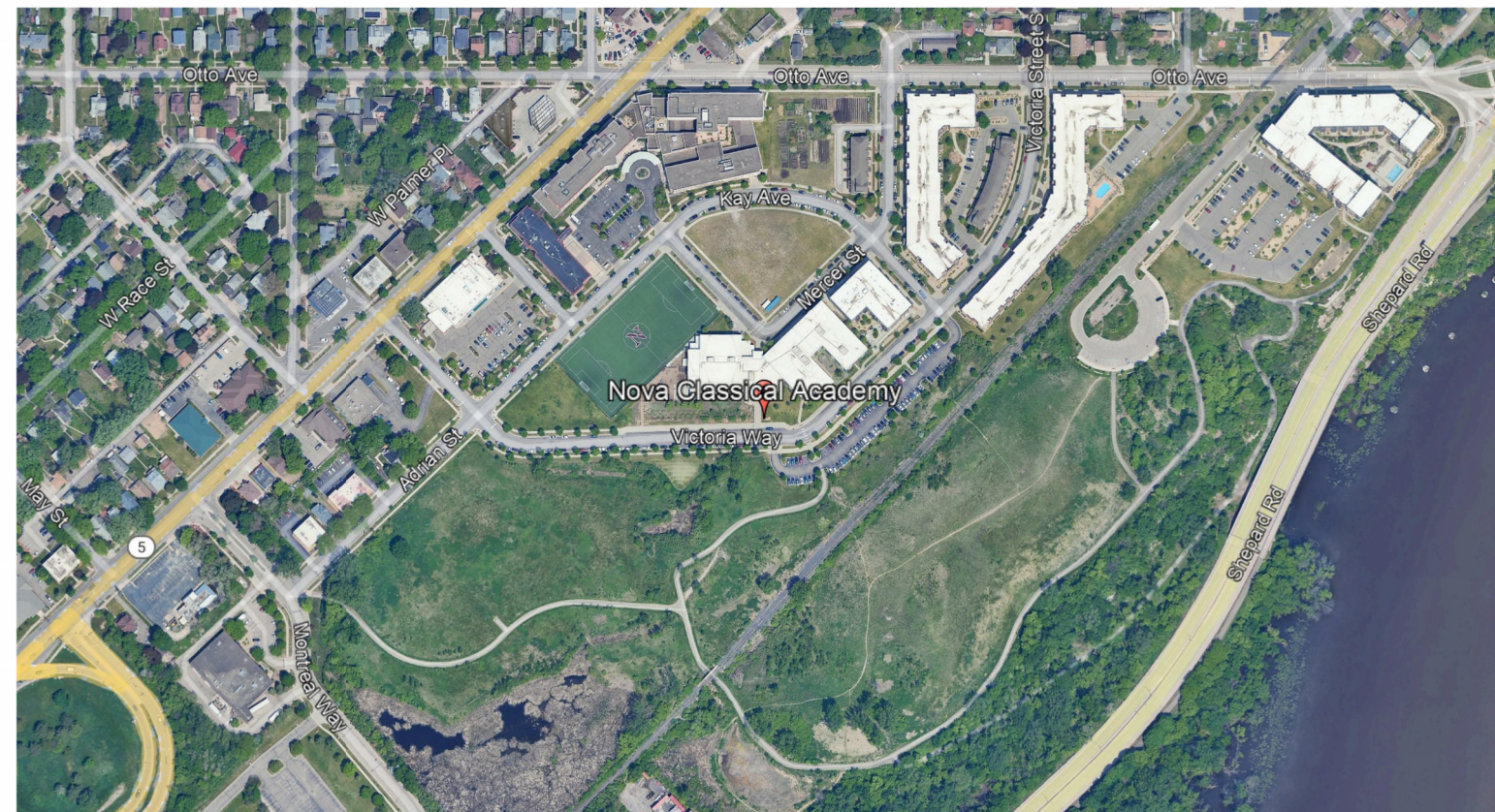


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CONSULTANT

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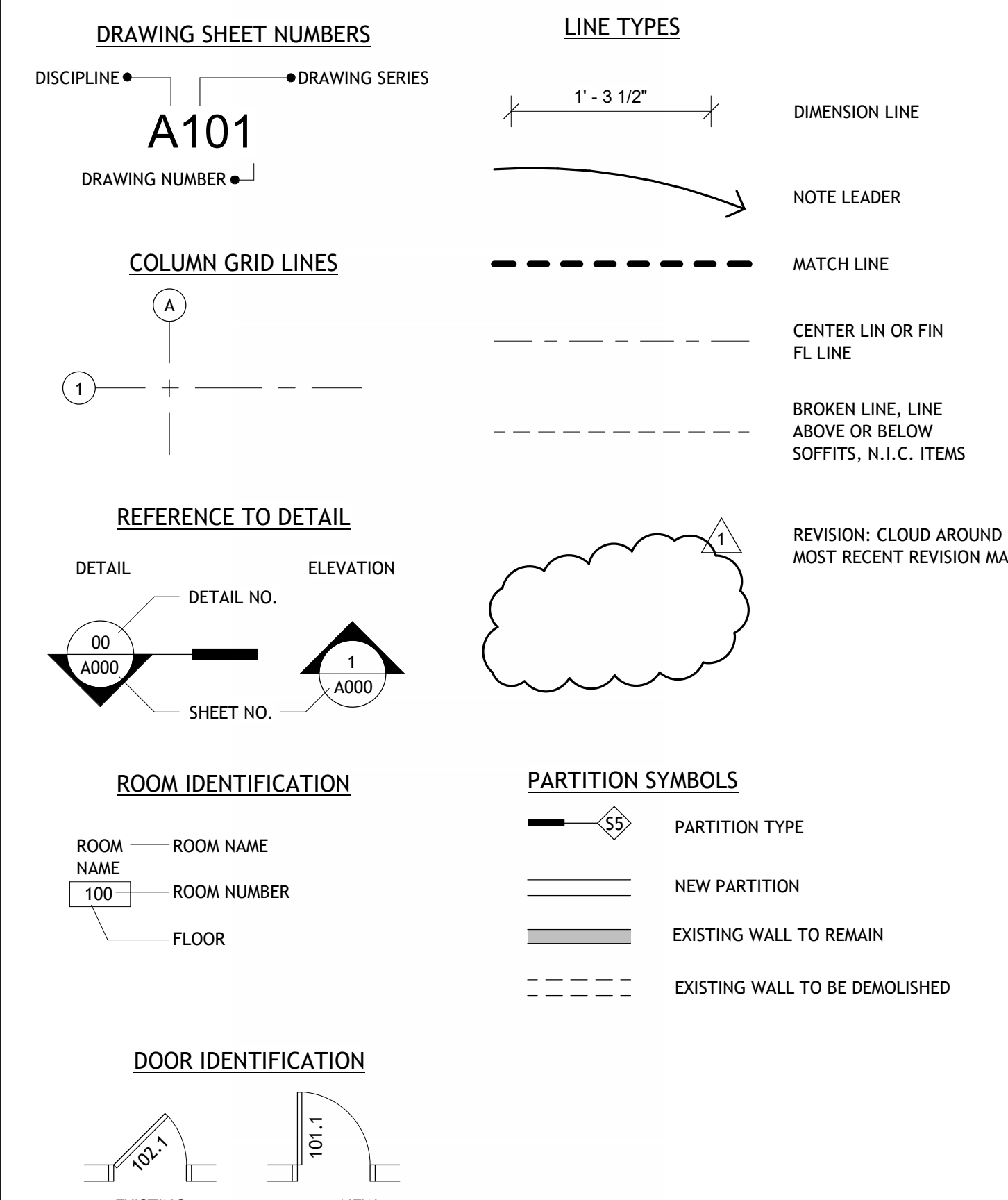
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Project Name: NOVA CLASSICAL ACADEMY IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
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### ARCHITECTURAL ABBREVIATIONS

ABV ABOVE	DETL DETAIL	GA GAUGE	MP METAL PANEL	SHT SHEET
ACP ACOUSTICAL PANEL	DF DRINKING FOUNTAIN	GALV GALVANIZED	MR MOISTURE RESISTANT	SM SIMILAR
ACT ACOUSTICAL CEILING TILE	DIA DIAMETER	GRAB GRAB BAR	MTD MOUNTED	SM REV SIMILAR REVERSED
ADJ ADJUSTABLE	DIAG DIAGONAL	GC GENERAL CONTRACTOR	MTL METAL	SLNT SEALANT
ADJ ADJACENT	DIM DIMENSION	GL GLASS	MULL MULLION	SPEC SPECIFICATION(S)
AFF ABOVE FINISH FLOOR	DISP DISPENSER	GYP GYPSUM	N NORTH	SQ SQUARE
AHJ AUTHORITIES HAVING JURISDICTION	DS DOWNSPOUT	GYP BD GYPSUM BOARD	NIC NOT IN CONTRACT	SS STAINLESS STEEL
ALT ALTERNATIVE	DT DRAIN TILE	HD HEAD	NOM NOMINAL	STD STANDARD
ALUM ALUMINUM	DW DISHWASHER	HDR HEADER	NRC NOISE REDUCTION COEFFICIENT	STL STL
ANOD ANODIZED	DWG DRAWING	HM HOLLOW METAL	NTS NOT TO SCALE	STOR STORAGE
AP ACCESS PANEL	DWR DRAWER	HR HORZONTAL	OA OVERALL	SUSP SUSPENDED
APPROX APPROXIMATE(LY)	E EAST	HSS HOLLOW STEEL SECTION	OC ON CENTER	SYST SYSTEM
ARCH ARCHITECT(URAL)	EA EACH	HT HEIGHT	OD OUTSIDE DIAMETER	TBD TO BE DETERMINED
AUTO AUTOMATIC	ELEC ELECTRICAL	HTG HEATING	OPG OPENING	T.O. TOP OF
BD BOARD	ELEV ELEVATION	HVAC HEATING/AIR CONDITIONING	OVHD OVERHEAD	TPD TOILET PAPER DISPENSER
BIT BITUMINOUS	EMER EMERGENCY	ID INSIDE DIAMETER	PLAM PLASTIC LAMINATE	TPTN TREATED PARTITION
BLDG BUILDING	ENC ENCLOSE(URE)	INT INTERIOR	PLYWD PLYWOOD	TRTD TREATED
BLK BLOCK	EQ EQUAL	INSUL INSULATION	PNL PANEL	TYP TYPICAL
BLKG BLOCKING	EQU EQUIPMENT	JC JANITOR'S CLOSET	PR PAIR	UNO UNLESS NOTED OTHERWISE
B.O. BOTTOM OF	EST ESTIMATED	ETC ET CETERA	PTN PARTITION	VB VINYL BASE
BRG BEARING	ETC ET CETERA	EWC ELEC WATER COOLER	PT PAINT	VCT VINYL COMPOSITION TILE
BSMT BASEMENT	EXH EXHAUST	EXPN EXPN JT EXPANSION JOINT	PTN PARTITION	VER VERIFY
BTM BOTTOM	EXIST EXISTING	EXT EXTERIOR	PTN PARTITION	VERT VERTICAL
BTWN BETWEEN	EXPN EXPN JT EXPANSION JOINT	EXPN EXPN JT EXPANSION JOINT	PTN PARTITION	VEST VESTIBULE
CABT CABINET	EXT EXTERIOR	EXT EXTERIOR	PTN PARTITION	VEST VESTIBULE
CEM CEMENT(ITOUS)	FAP FLUID APPLIED FLOOR	EXT EXTERIOR	PTN PARTITION	VR VAPOR RETARDER
CER CERAMIC	FB FACE BRICK	EXT EXTERIOR	PTN PARTITION	W WEST
CG CORNER GUARD	FD FLOOR DRAIN	EXT EXTERIOR	PTN PARTITION	W/O WITHOUT
CJ CONTROL JOINT	FE FIRE EXTINGUISHER	EXT EXTERIOR	PTN PARTITION	WC WATER CLOSET
CL CENTER LINE	FFE FINISHED FLOOR ELEVATION	EXT EXTERIOR	PTN PARTITION	WD WOOD
CLG CEILING	FIN FINISH(ED)	EXT EXTERIOR	PTN PARTITION	WDW WINDOW
CPT CARPET	FLR FLOOR(ING)	EXT EXTERIOR	PTN PARTITION	WF WIDE FLANGE
CAU CONCRETE MASONRY UNIT	FND FOUNDATION	EXT EXTERIOR	PTN PARTITION	WP WORK POINT
COL COLUMN	FOS FACE OF STEEL	EXT EXTERIOR	PTN PARTITION	WWF WELDED WIRE FABRIC
CONC CONCRETE	FR FRAME	EXT EXTERIOR	PTN PARTITION	S SOUTH
CONF CONFERENCE	FTG FOOTING	EXT EXTERIOR	PTN PARTITION	SCHED SCHEDULE
CONST CONSTRUCTION	FV FIELD VERIFY	EXT EXTERIOR	PTN PARTITION	SF SQUARE FOOT
CONTR CONTRACTOR		EXT EXTERIOR	PTN PARTITION	
CORR CORRIDOR		EXT EXTERIOR	PTN PARTITION	

### GENERAL SYMBOLS



### MATERIALS

	BATT INSULATION
	BRICK
	CAST STONE
	CONCRETE
	CONCRETE MASONRY UNIT
	EARTH
	EXISTING MATERIAL
	GRAVEL BED
	PLASTER
	RIGID INSULATION
	STEEL
	STONE
	WOOD

### CONTACTS

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<b>CIVIL ENGINEER</b> BKBM STRUCTURAL & CIVIL ENGINEERS 6120 EARLE BROWN DRIVE SUITE 700 MINNEAPOLIS, MN 55430 763.843.0420	<b>STRUCTURAL ENGINEER</b> BKBM STRUCTURAL & CIVIL ENGINEERS 6120 EARLE BROWN DRIVE SUITE 700 MINNEAPOLIS, MN 55430 763.843.0420
<b>MECHANICAL ENGINEER</b> DUNHAM 50 SOUTH SIX ST. SUITE 1100 MINNEAPOLIS, MN 55402 612.465.7950	<b>ELECTRICAL ENGINEER</b> DUNHAM 50 SOUTH SIX ST. SUITE 1100 MINNEAPOLIS, MN 55402 612.465.7950

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

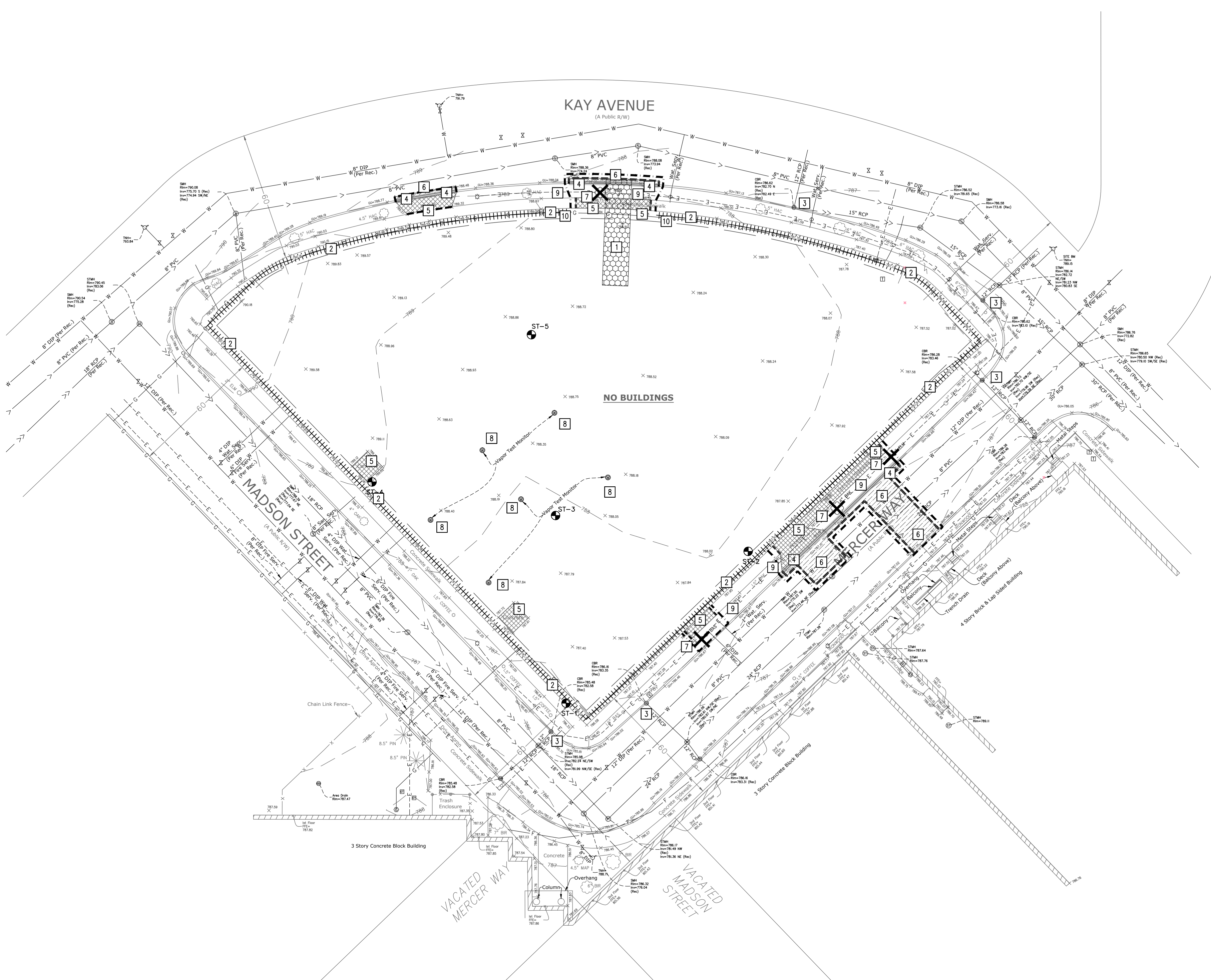
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LICENSE NO.  
DATE  
05/07/2025

**DD DOCUMENT**  
**Not For Construction**

SHEET TITLE:  
TITLE SHEET

SHEET NUMBER:

**G000**



**KEYED NOTES**

KEYED NOTES ARE DENOTED BY [ ] ON PLAN.

- INSTALL ROCK CONSTRUCTION ENTRANCE. REFER TO DETAIL 1/C500.
- INSTALL PERIMETER EROSION CONTROL. REFER TO DETAILS 2/C500 AND 3/C500.
- INSTALL INLET SEDIMENT PROTECTION. REFER TO DETAIL 4/C500.
- REMOVE CURB AND GUTTER IN ITS ENTIRETY TO THE APPROXIMATE EXTENTS SHOWN. SAWCUT AND REMOVE AT NEAREST JOINT.
- REMOVE CONCRETE PAVEMENT IN ITS ENTIRETY TO THE APPROXIMATE EXTENTS SHOWN.
- SAWCUT AND REMOVE BITUMINOUS PAVEMENT IN ITS ENTIRETY TO THE EXTENTS SHOWN.
- REMOVE TREE IN ITS ENTIRETY INCLUDING STUMP.
- REMOVE VAPOR TEST MONITOR. CONTRACTOR SHALL FOLLOW ALL MPCIA AND AN DEPARTMENT OF HEALTH RULES AND REGULATIONS.
- EXISTING ELECTRICAL LINE TO REMAIN. PROTECT AT ALL TIMES.
- EXISTING GAS LINE TO REMAIN. PROTECT AT ALL TIMES.

**PROPOSED PLAN SYMBOLS**

CONSTRUCTION LIMITS	-----
SEDIMENT CONTROL LOG	
PROPERTY LINE	-----
SAWCUT LINE (APPROX.)	-----
CONSTRUCTION ENTRANCE	[Pattern]
BITUMINOUS REMOVAL	[Pattern]
CONCRETE REMOVAL	[Pattern]
CURB REMOVAL	[Pattern]
TREE REMOVAL	[Symbol]

**ABBREVIATIONS**

BLDG	Building
BM	Benchmark
BS	Bottom of Step
BW	Bottom of Wall
CB	Catch Basin
CONC	Concrete
ELEV	Elevation
EX	Existing
FFE	Finish Floor Elevation
HWL	High Water Level
INV	Invert
LFE	Lower Floor Elevation
MAX	Maximum
MIN	Minimum
NWL	Normal Water Level
PVC	Polyvinyl Chloride
RCP	Reinforced Concrete Pipe
STRM	Storm Sewer Structure
T.C.	Top of Curb
TS	Top of Step
TW	Top of Wall
W.C.	Wastewater
WQE	Water Quality Elevation

**NOTE:**  
STORM SEWER INLETS NOT SHOWN ON PLAN MAY RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INSTALL INLET SEDIMENT PROTECTION PER DETAIL 4/C500 ON ALL STORM INLETS THAT MAY RECEIVE RUNOFF.

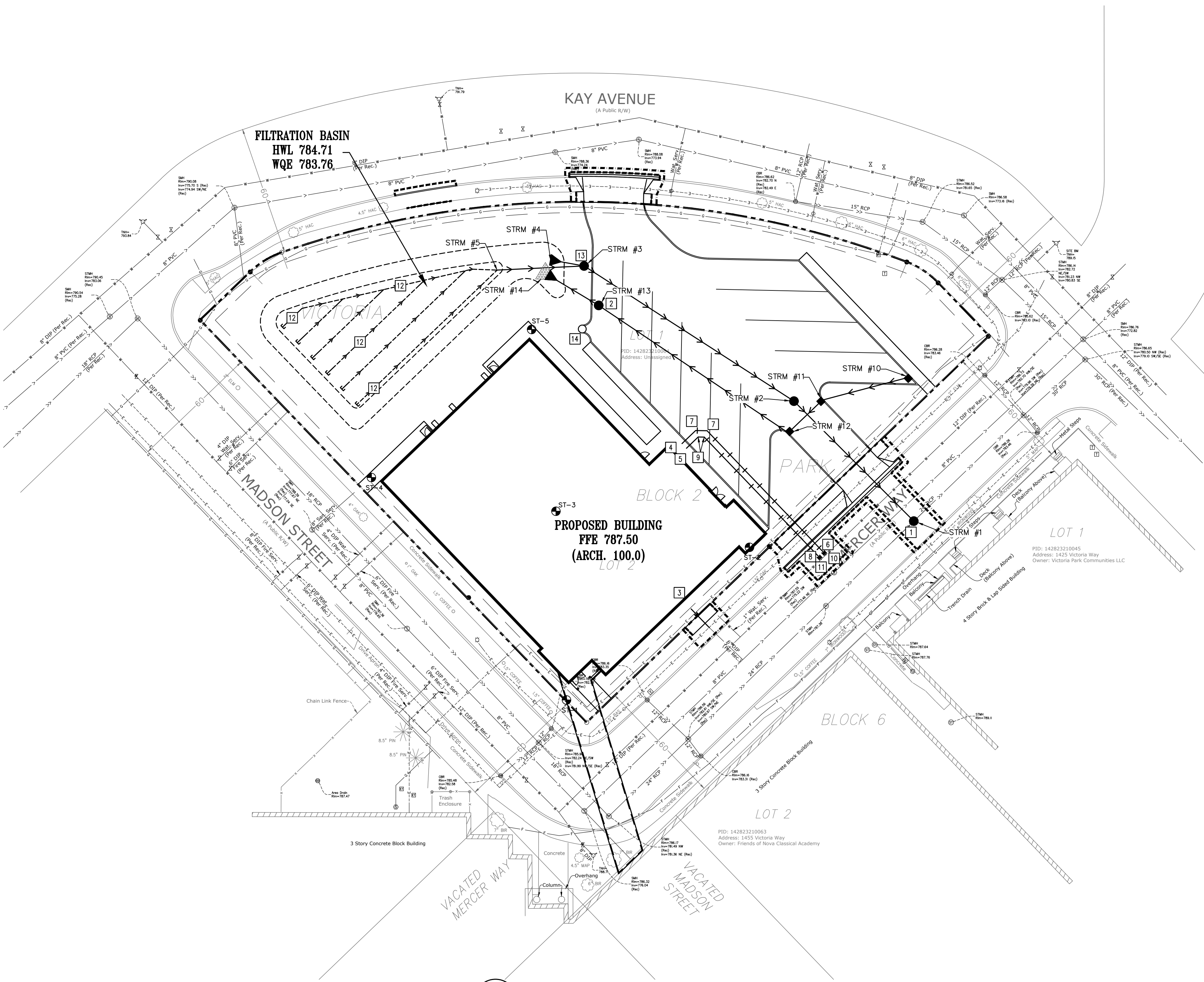
- ST. PAUL'S NOTES:**
- INSPECTION CONTACT: THE DEVELOPER SHALL CONTACT THE RIGHT OF WAY INSPECTOR DAN BRADY AT (651) 485-4398 (TWO WEEK PRIOR TO BEGINNING WORK) TO DISCUSS TRAFFIC CONTROL, PRESERVE SAFETY AND COORDINATION OF ALL WORK IN THE PUBLIC RIGHT OF WAY. NOTE: IF A TWO WEEK NOTICE IS NOT PROVIDED TO THE CITY, ANY RESULTING DELAYS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
  - SAFE WORK SITE REQUIREMENTS: THE CONTRACTOR SHALL PROVIDE A CONTINUOUS, ACCESSIBLE AND SAFE PEDESTRIAN WALKWAY THAT MEETS ADA AND MN MUTCO STANDARDS IF WORKING IN A SIDEWALK AREA AND TRAFFIC CONTROL PER MUTCO REQUIREMENTS FOR WORK IN THE PUBLIC RIGHT OF WAY.
  - NO PRIVATE FACILITIES IN THE RIGHT OF WAY: THE DEVELOPER IS STRICTLY PROHIBITED FROM INSTALLING PRIVATE ELECTRICAL WIRING, CONDUIT, RECEPTACLES AND/OR LIGHTING IN THE CITY'S RIGHT OF WAY. THIS INCLUDES STUBBING CONDUIT OR CABLE INTO THE PUBLIC RIGHT OF WAY TO ACCOMMODATE UTILITY FEEDS TO THE SITE. COORDINATE WITH EACH UTILITY PRIOR TO CONSTRUCTION TO DETERMINE FEED POINTS INTO THE PROPERTY. UTILITIES ARE RESPONSIBLE FOR SECURING EXCAVATION PERMITS TO RUN THEIR SERVICE INTO A SITE, AND (WHERE REQUIRED) SUBMITTING PLANS FOR REVIEW BY THE PUBLIC WORKS UTILITY REVIEW COMMITTEE.
  - CITY OF ST. PAUL PERMIT REQUIREMENTS:
    - ORDERING OBSTRUCTION AND EXCAVATION PERMITS: CONTACT PUBLIC WORKS RIGHT OF WAY SERVICE DESK AT (651) 266-6151. IT IS STRONGLY RECOMMENDED THAT CONTRACTORS CALL FOR COST ESTIMATES PRIOR TO BIDDING TO OBTAIN ACCURATE COST ESTIMATES.
    - OBSTRUCTION PERMITS: THE CONTRACTOR MUST OBTAIN AN OBSTRUCTION PERMIT IF CONSTRUCTION (INCLUDING SILT FENCES) WILL BLOCK CITY STREETS, SIDEWALKS OR ALLEYS, OR IF DRIVING OVER CURBS.
    - EXCAVATION PERMITS: ALL DIGGING IN THE PUBLIC RIGHT OF WAY REQUIRES AN EXCAVATION PERMIT. IF THE PROPOSED BUILDING IS CLOSE TO THE RIGHT OF WAY, AND EXCAVATING INTO THE RIGHT OF WAY IS NEEDED TO FACILITATE CONSTRUCTION, CONTACT THE UTILITY INSPECTOR.
    - FAILURE TO SECURE PERMITS: FAILURE TO SECURE OBSTRUCTION PERMITS OR EXCAVATION PERMITS WILL RESULT IN A DOUBLE-PERMIT FEE AND OTHER FEES REQUIRED UNDER CITY OF ST. PAUL LEGISLATIVE CODES.
    - REQUIREMENTS TO WORK IN THE PUBLIC RIGHT OF WAY: ALL UTILITIES AND CONTRACTORS WORKING IN THE PUBLIC RIGHT OF WAY MUST BE REGISTERED, INSURED AND BONDED, AS RECOGNIZED BY THE PUBLIC WORKS SERVICE DESK. (651) 266-6151.
    - ALL WORK ON CURBS, DRIVEWAYS, AND SIDEWALKS WITHIN THE PUBLIC RIGHT OF WAY MUST BE DONE BY A LICENSED AND BONDED CONTRACTOR UNDER A PERMIT FROM PUBLIC WORKS SIDEWALK SECTION (651) 266-9700. SIDEWALK GRADES MUST BE CARRIED ACROSS DRIVEWAYS.
    - RESTORATION OF ASPHALT AND CONCRETE PAVEMENTS ARE PERFORMED BY THE PUBLIC WORKS STREET MAINTENANCE DIVISION. THE CONTRACTOR IS RESPONSIBLE FOR PAYMENT TO THE CITY FOR THE COST OF THESE RESTORATIONS. THE CONTRACTOR SHALL CONTACT PUBLIC WORKS STREET MAINTENANCE TO SET UP A WORK ORDER PRIOR TO BEGINNING ANY REMOVALS IN THE STREET AT (651) 266-9700. PROCEDURES AND UNIT COSTS ARE FOUND IN STREET MAINTENANCE'S "GENERAL REQUIREMENTS - ALL RESTORATIONS" AND ARE AVAILABLE AT THE PERMIT OFFICE.
    - SIGNS REGULATING PARKING AND/OR TRAFFIC ON PRIVATE PROPERTY (OUTSIDE OF THE PUBLIC RIGHT-OF-WAY ROW) SHALL BE FURNISHED AND INSTALLED BY THE PROPERTY OWNER OR CONTRACTOR AT NO COST TO THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS. REMOVAL OF EXISTING SIGNS WITHIN PUBLIC ROW THAT REGULATE TRAFFIC AND OR PARKING SHALL BE COMPLETED BY THE CITY AT THE EXPENSE OF THE DEVELOPMENT. NEW SIGNS OR THE REINSTALLATION OF EXISTING SIGNS, AS APPROVED BY PUBLIC WORKS TRAFFIC ENGINEERING, REGULATING PARKING AND/OR TRAFFIC IN THE PUBLIC ROW SHALL BE FURNISHED AND INSTALLED BY THE CITY AT THE EXPENSE OF THE DEVELOPMENT. ALL EQUIPMENT, MATERIALS, AND LABOR COSTS ASSOCIATED WITH THE CITY AFFECTING A COMPLETE SIGN INSTALLATION SHALL BE THE RESPONSIBILITY OF THE DEVELOPMENT. CONTACT CHRIS GULDEN OF PUBLIC WORKS 651-266-9778 TWO WEEKS IN ADVANCE OF NEEDED SIGN WORK.
    - SEWER REMOVAL/ABANDONMENT PERMIT: LICENSE HOUSE DRAIN CONTRACTOR TO OBTAIN REMOVAL PERMITS FROM PUBLIC WORKS TO CUT OFF EXISTING SEWER CONNECTIONS SERVICES TO THE MAIN LINE. CALL ST. PAUL PW PERMIT DESK (651-266-6234) FOR INFORMATION ON OBTAINING THIS PERMIT.
    - SEWER CONNECTION PERMIT: PLUMBING CONTRACTOR TO OBTAIN (SEWER CONNECTION PERMIT) TO CONSTRUCT NEW SANITARY AND STORM CONNECTION IN STREET FROM MAIN TO THE PROPERTY. CALL ST. PAUL PW PERMIT DESK (651-266-6234) FOR INFORMATION ON OBTAINING THIS PERMIT.
    - ALL WATER MAIN AND SERVICES TO BE INSTALLED ACCORDING TO 'SPRWS STANDARDS FOR INSTALLATION OF WATER MAINS', AND 'SPRWS WATER CODE'.
    - SERVICES THAT ARE TO BECOME UNUSED UPON COMPLETION OF THE NEW SERVICE CONNECTION MUST BE CUT OFF BY THE CONTRACTOR AT THE MAIN PRIOR TO THE TURN ON OF THE NEW SERVICES. EXCAVATION AND RESTORATION BY CONTRACTOR.
    - THE CONTRACTOR SHALL CONTACT MIKE LUSIAN, GENERAL FOREMAN, LIGHTING - SIGNAL MAINTENANCE, (651-266-9780), IF REMOVAL OR RELOCATION OF EXISTING FACILITIES IS REQUIRED OR IN THE EVENT OF DAMAGE TO THE LIGHTING OR SIGNAL UTILITIES. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY (AND RELATED COSTS) FOR ANY DAMAGE OR RELOCATIONS.
    - THE INSTALLATION OF PRIVATE ELECTRICAL WIRING, CONDUIT, RECEPTACLES AND/OR LIGHTING IS STRICTLY PROHIBITED IN THE CITY'S ROW (RIGHT OF WAY). CONTRACTOR IS TO CONTACT SAINT PAUL CITY FORESTER (651) 632-2436 PRIOR TO IMPACTING ANY BOULEVARD TREES.
      - EXISTING PUBLIC PROPERTY TREES ARE TO BE PROTECTED AT ALL TIMES. PUBLIC TREES DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE RESTORED OR REPLACED TO THE SATISFACTION OF, AND AT NO COST TO THE CITY, AS DETERMINED BY THE FORESTRY MANAGER. THE CONTRACTOR IS ADVISED TO DOCUMENT PRE-EXISTING CONDITIONS OF PUBLIC TREES AS WELL AS THE SURROUNDING BOULEVARD PRIOR TO CONSTRUCTION ACTIVITIES.
      - THE REMOVAL, PRUNING, AND/OR PLANTING OF TREES ON PUBLIC PROPERTY REQUIRES AN APPROVED FORESTRY TREE WORK PERMIT FROM THE CITY FORESTER (651-632-2436). ANY WORK MUST BE COMPLETED BY A LICENSED TREE CONTRACTOR.
      - PUBLIC PROPERTY TREES SHALL BE PROTECTED BY ESTABLISHING A TREE PROTECTION ZONE USING A 4" TALL FENCING INSTALLED AT THE DRIP LINE OF THE TREE. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE WORK AND MAINTAINED FOR THE DURATION OF THE PROJECT. PROPOSED WORK WITHIN, OR CHANGES TO THE LOCATION OF TREE PROTECTION FENCING SHALL BE REVIEWED BY THE CITY FORESTER PRIOR TO ALTERATION.
      - CONSTRUCTION SUPPLIES, MATERIALS, EQUIPMENT, AND VEHICLES SHALL NOT BE STORED OR OPERATED WITHIN THE DRIP LINE OF ANY PUBLIC TREE OR WITHIN TREE PANNER AREA OF BOULEVARD WITHOUT PRIOR WRITTEN APPROVAL FROM THE CITY FORESTER. IF THE BOULEVARD MUST BE USED FOR CONSTRUCTION ACTIVITIES, SITE ACCESS ROUTES, MATERIAL STORAGE, OR OTHER RELATED ACTIVITIES, PROTECTIVE MEASURES APPROVED BY THE CITY FORESTER SHALL BE TAKEN TO REDUCE SOIL COMPACTION AND DAMAGE TO PUBLIC TREES.
      - IN LOCATIONS WHERE PUBLIC TREES CANNOT BE PROTECTED BY THE DRIP LINE WITH TEMPORARY TREE PROTECTION FENCING, THE USE OF A 6" LAYER OF MULCH OR TRACK PADS WILL BE REQUIRED TO LIMIT SOIL COMPACTION AND PROTECT ROOT SYSTEMS WITHIN THE BOULEVARD WHEN ACCESS ROUTES OR MATERIAL STORAGE IS NECESSARY.
    - BUSINESS SIGNS WILL REQUIRE A SEPARATE REVIEW AND SIGN PERMIT FROM THE DEPARTMENT OF SAFETY AND INSPECTIONS. SITE PLAN APPROVAL DOES NOT CONSTITUTE APPROVAL OF BUSINESS SIGNS SHOWN ON THE SITE PLAN. CONTACT YAYA DIATTA OF DSI ZONING (651) 266-9080 IF YOU HAVE ANY QUESTIONS ABOUT SIGNS.
    - CARE MUST BE TAKEN DURING CONSTRUCTION AND EXCAVATION TO PROTECT ANY SURVEY MONUMENTS AND/OR PROPERTY IRONS. CALL SAM GIBSON OF PUBLIC WORKS SURVEYING (651-266-6075) IF YOU HAVE ANY QUESTIONS.
    - AS PER THE CITY'S "STANDARD SPECIFICATION FOR STREET OPENINGS" POLICY, RESTORATION ON ROADWAY SURFACES LESS THAN 5 YEARS OLD WILL REQUIRE FULL WIDTH MILL AND OVERLAY OR ADDITIONAL DEGRADATION FEES. PAVEMENT RESTORATION SHALL BE COMPLETED BY THE ST. PAUL PUBLIC WORKS STREET MAINTENANCE DIVISION. ALL RELATED COSTS ARE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR. CONTACT KEVIN NELSON AT 651-266-9700 FOR ESTIMATE OF COSTS FOR PAVEMENT RESTORATION.
    - PIPE MUST BE MECHANICAL JOINT UNDERNEATH THE BUILDING FOOTPRINT AND UP TO TEN FEET OUTSIDE OF THE BUILDING FOOTPRINT.
    - A FOUR-SIDED TRENCH BOX IS REQUIRED ON ALL EXCAVATIONS DEEPER THAN 5 FEET WHERE UNDERGROUND WORK OR INSPECTION IS TO BE PERFORMED BY SPRWS. FOR ALL MET TAPS TO BE PERFORMED BY SPRWS, A MINIMUM TRENCH BOX SIZE OF 8 FEET HIGH X 8 FEET WIDE X 10 FEET LONG IS REQUIRED. LADDER ARE REQUIRED AND MUST EXTEND 3 FEET ABOVE THE SURFACE OF THE TRENCH. SIDEWALKS, PAVEMENTS, DUCTS AND OTHER OUTLET THAT IS SUBJECT TO COLD, INSULATION SHALL NOT BE PLACED BETWEEN THE STRUCTURE AND THE WATER PIPE. ABOVE OR BELOW A STORM SEWER, INSULATION SHALL BE PLACED BETWEEN THE WATER PIPE AND THE STORM PIPE. WHERE A WATER SERVICE OR MAIN IS OFFSET FROM A STORM SEWER, INSULATION SHALL BE PLACED BOTH ABOVE AND BETWEEN THE WATER PIPE AND BETWEEN THE WATER PIPE AND THE STORM SEWER. REFER TO STANDARD PLATE D-10, WHERE A WATER MAIN OR SERVICE IS WITHIN 6 FEET OF A CATCH BASIN, MANHOLE OR OTHER OUTLET THAT IS SUBJECT TO COLD, INSULATION SHALL BE PLACED BETWEEN THE STRUCTURE AND THE WATER PIPE.
    - REFER TO SPRWS "STANDARDS FOR THE INSTALLATION OF WATER MAINS" STANDARD PLATE D-11 FOR RESTRAINED PIPE REQUIREMENT.
    - ALL WATER SERVICE VALVE BOXES WITHIN CONSTRUCTION AREA MUST BE EXPOSED AND BROUGHT TO GRADE UPON COMPLETION OF CONSTRUCTION.
    - ALL PIPE WORK INSIDE OF PROPERTY TO BE PERFORMED BY A PLUMBER LICENSED BY THE STATE OF MINNESOTA AND CERTIFIED BY THE CITY OF SAINT PAUL. SPRWS REQUIRES SEPARATE OUTSIDE AND INSIDE PLUMBING PERMITS FOR EACH NEW WATER SERVICE.
    - PIPES INSTALLED WITH LESS THAN 2% SLOPE SHALL BE INSTALLED UTILIZING LASER EQUIPMENT.
    - ALL STORM WATER PIPING INSTALLED BETWEEN THE BUILDING AND THE STORM WATER RETENTION SYSTEM SHALL BE INSPECTED AND TESTED PRIOR TO BACKFILLING. CONTACT THE DEPARTMENT OF SAFETY AND INSPECTIONS AT 651-266-9009 TO SCHEDULE AN INSPECTION WITH THE AREA PLUMBING INSPECTOR.
    - STRIPING UNRESOLVED GENERAL RESTORATION SHALL BE COMPLETED IMMEDIATELY FOLLOWING FINAL PAVEMENT RESTORATION. ROADWAY STRIPING IMPACTED BY WORK ZONE SHALL BE REPLACED IN-KIND AT NO COST TO THE ROAD AUTHORITY. IF THERE ARE QUESTIONS AS TO THE TYPE OF STRIPING MATERIAL TO BE USED, CONTACT CHRIS GULDEN (651) 266-9778 IN THE CITY'S TRAFFIC OPERATIONS SECTION. IF THERE IS A DESIRE FOR THE CITY OF ST. PAUL PUBLIC WORKS DEPARTMENT TO COMPLETE PAVEMENT MARKING RESTORATION WORK, CONTACT CHRIS GULDEN OF PUBLIC WORKS TRAFFIC OPERATIONS FOR AN ESTIMATE. AT A MINIMUM, TWO WEEKS ADVANCE NOTICE SHALL BE PROVIDED FOR ANY STRIPING REQUEST. IF ADVANCE NOTICE IS NOT PROVIDED, ANY ASSOCIATED PROJECT DELAYS, AND COSTS INCURRED FROM SAID DELAYS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
    - ADJACENT STREETS AND ALLEYS MUST BE SWEEP TO KEEP THEM FREE OF SEDIMENT. CONTRACTOR MUST MONITOR CONDITIONS AND SWEEP AS NEEDED OR WITHIN 24 HOURS OF NOTICE BY THE CITY. STREET SWEEPING IS AN IMPORTANT TEMPORARY EROSION CONTROL BEST MANAGEMENT PRACTICE AND SHALL BE PERFORMED WITH THE USE OF WATER. DRY SWEEPING IS PROHIBITED. ADDITIONALLY, TRUCKS HAULING IN AND OUT OF THE SITE, FOR ANY ACTIVITY INCLUDING BUT NOT NECESSARILY LIMITED TO PAVING, EXCAVATION, ETC., NEEDS TO ENSURE CLEAN OFF ALL MUD FLAPS TO AVOID ANY BUILDUP ON THE STREET PAVEMENT.
    - ANY PUBLIC INFRASTRUCTURE DAMAGE RESULTING FROM THE CONTRACTORS ACTIVITIES, INCIDENTAL OR OTHERWISE, SHALL BE REPAIRED/REPLACED TO THE SATISFACTION OF THE CITY AT NO COST TO THE CITY.
    - BOULEVARD RESTORATION SHALL INCLUDE THE FOLLOWING: ALL CONCRETE, ASPHALT, AND BASE MATERIALS SHALL BE REMOVED. BOULEVARD SOILS ARE TO BE PROTECTED DURING CONSTRUCTION BY USING PLYWOOD, A 6" LAYER OF MULCH, AND/OR TRACK PADS. SOIL PROTECTION DURING CONSTRUCTION ACTIVITIES SHALL BE CORRECTED TO THE SATISFACTION OF, AND AT NO COST TO THE CITY PRIOR TO FINAL GRADING. BOULEVARDS SHALL BE RESTORED WITH A MINIMUM OF 6" OF TOPSOIL.
    - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL EXCAVATION AND OBSTRUCTION PERMITS REQUIRED BY ANY GOVERNING AUTHORITY.
    - CONTRACTOR MUST MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THESE PLANS TO SAINT PAUL REGIONAL WATER SERVICES ENGINEERING DEPARTMENT UPON COMPLETION OF WORK VIA EMAIL AT: WATER-PLUMBINGPERMIT@C100STPAUL.MN.US.
    - CONTRACTOR TO MAINTAIN ACCESS TO THE FIRE DEPARTMENT CONNECTION FOR FIRE DEPARTMENT PERSONNEL AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
    - ANY PUBLIC INFRASTRUCTURE DAMAGE RESULTING FROM THE CONTRACTORS ACTIVITIES, INCIDENTAL OR OTHERWISE, SHALL BE REPAIRED/REPLACED TO THE SATISFACTION OF THE CITY AT NO COST TO THE CITY.
    - NOTIFY GRAEME CHAPLE AT 651-266-6882 A MINIMUM OF 2 WEEKS PRIOR TO SCHEDULING WORK BY SPRWS CONSTRUCTION CREW.
    - THE FOLLOWING WORK IN THE RIGHT-OF-WAY SHALL BE PERFORMED BY SPRWS ON AN ACTUAL COST BASIS: (1) CONNECTION TO THE PUBLIC MAIN FOR ANY INSTALLATION THAT IS OFF A PUBLIC MAIN LARGER THAN 12" OR OF MATERIAL NOT MADE OF IRON. (2) INSPECTION OF CONTRACTOR INSTALLED MAINS AND SERVICES. (3) CONSTRUCTION OF TEMPORARY SERVICES IF NECESSARY. AN ESTIMATE WILL BE PROVIDED FOR THIS WORK AND PAYMENT IN THE AMOUNT OF THE ESTIMATE MUST BE RECEIVED BEFORE THE WORK CAN BE SCHEDULED. ALL OTHER WORK, INCLUDING EXCAVATION, RESTORATION, CUTOFFS, AND PIPEWORK TO BE PERFORMED BY THE CONTRACTOR.
    - SANITARY AND/OR STORM SEWER SERVICE PASSING WITHIN 10 FEET OF THE BUILDING ARE GOVERNED BY THE MN PLUMBING CODE. SPECIFICATION FOR PIPE MATERIAL SELECTION AND NOTES FOR REQUIRED AIR TEST OF THE PIPING, COMPLIANT WITH THE MN STATE PLUMBING CODE, MUST BE SHOWN ON THE PLAN. IF UNDERGROUND INFILTRATION SYSTEM IS WITHIN 10 FEET, PROVIDE PLUMBING INSPECTOR APPROVAL.
    - SUBMIT MANHOLE SHOP DRAWINGS FOR REVIEW. THE SHOP DRAWINGS NEED TO BE SUBMITTED/APPROVED PRIOR TO ISSUING CONNECTION PERMITS.
    - ALL STORMWATER PIPING CONNECTIONS INSTALLED BETWEEN THE BUILDING AND THE STORM WATER RETENTION SYSTEM SHALL BE INSPECTED AND TESTED PRIOR TO BACK FILLING. CONTACT THE DEPARTMENT OF SAFETY AND INSPECTIONS AT (651) 266-9009 TO SCHEDULE AN INSPECTION WITH THE AREA PLUMBING INSPECTOR.

**1 SELECTIVE SITE DEMOLITION AND EROSION CONTROL PLAN**  
C100 1" = 30'

- DEMOLITION AND REMOVAL NOTES:**
- CONTRACTOR SHALL FOLLOW ALL CITY OF ST. PAUL STANDARDS AND SPECIFICATIONS.
  - PRIOR TO START OF ANY CONSTRUCTION ACTIVITY, ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE CITY OF ST. PAUL AND CAPITOL REGION WATERSHED DISTRICT. PERIMETER SEDIMENT PROTECTION SHALL BE INSTALLED ALONG THE CONTOUR.
  - IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION AND MARK ALL EXISTING UTILITIES 48 HOURS BEFORE CONSTRUCTION STARTS. THE ENGINEER, ARCHITECT, OR OWNER DOES NOT GUARANTEE THAT ALL THE UTILITIES ARE MAPPED, OR, IF MAPPED, ARE SHOWN CORRECTLY. CONTACT COPIER STATE ONE CALL AT 651-454-0002 FOR FIELD LOCATING EXISTING UTILITIES. CONTACT UTILITY OWNER IF DAMAGE OCCURS DUE TO CONSTRUCTION.
  - THERE MAY BE MISCELLANEOUS ITEMS TO BE REMOVED THAT ARE NOT IDENTIFIED ON THESE PLANS. THE CONTRACTOR SHALL VISIT THE SITE AND REVIEW THE DOCUMENTS TO OBTAIN A CLEAR UNDERSTANDING OF THE INTENDED SCOPE OF WORK.
  - REMOVE ALL GAS AND ELECTRIC LINES UNDER PROPOSED BUILDING FOOTPRINT. COORDINATE DISCONNECTION OF EACH UTILITY WITH THE UTILITY OWNER.
  - ANY UTILITIES NOT INDICATED FOR REMOVAL OR ABANDONMENT ARE TO BE PROTECTED AT ALL TIMES.
  - EXISTING CONCRETE PAVEMENT AND CURB AND GUTTER SHOWN TO BE REMOVED WITHIN THE SCOPE OF THE PROJECT SHALL BE REMOVED FROM THE SAW CUT LINES TO THE NEAREST JOINT. ANY CURB AND GUTTER, SIDEWALK, AND PAVEMENT NOT INDICATED FOR REMOVAL OR ABANDONMENT ARE TO BE PROTECTED AT ALL TIMES.
  - THE BACKGROUND INFORMATION WAS PREPARED BY CIVIL SITE GROUP, (612) 615-0060.
  - ALL WORK IN THE PUBLIC RIGHT OF WAY IS TO BE COORDINATED WITH THE CITY OF ST. PAUL. ROADWAY REPAIRS, BOULEVARD REPAIRS, AND TRAFFIC CONTROL ARE TO BE PER CITY OF ST. PAUL STANDARDS AND SPECIFICATIONS.

- GENERAL NOTES:**
- CONCRETE CURBS AND GUTTER REMOVAL, PAVEMENT REMOVAL, AND UTILITY REMOVAL LIMITS ARE TO BE COORDINATED WITH THE CITY OF ST. PAUL AND UTILITY OWNER.
  - THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A TRAFFIC CONTROL PLAN WHILE WORKING WITHIN THE RIGHT-OF-WAY. THE TRAFFIC CONTROL PLAN SHALL BE APPROVED BY THE CITY ENGINEERING DEPARTMENT PRIOR TO STREET ENCROACHMENT.
  - CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING AND REVIEW ALL CONSTRUCTION DOCUMENTS AND GEOTECHNICAL REPORTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ITEMS THAT SHOULD HAVE BEEN ANTICIPATED BY PERFORMING THE ABOVE.
  - THE CONSTRUCTION ENTRANCE INDICATED ON THE PLAN IS SHOWN IN AN APPROXIMATE LOCATION. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR IS TO COORDINATE WITH THE CITY OF ST. PAUL FOR THE EXACT CONSTRUCTION ENTRANCE LOCATION.





**1**  
C3.0  
**UTILITY PLAN**  
1" = 30'

STRUCTURE ID	STRUCTURE DIMENSION (INCHES)	NEENAH CASTING TYPE	RIM ELEVATION	INVERT ELEVATION(S)	PIPE LENGTH, DIAMETER, SLOPE & NEXT UPSTREAM STRUCTURE
STRM #1	48" MH	EX.	792.37	NE = 780.29 SW = 780.29 NW = 780.40	79 L.F. OF 12" PVC @ 0.28% STRM #2
STRM #2	48" MH	R-1678-A	787.77	SE = 780.62 NW = 780.62	116 L.F. OF 12" PVC @ 0.29% STRM #3
STRM #3	48" MH	R-1678-A	787.73	W = 780.96 E = 780.96	16 L.F. OF 12" RCP @ 0.50% STRM #4 41 L.F. OF 4" PVC @ 0.30% STRM #5
STRM #4	12" FES	NA		E = 783.76	
STRM #5	DRAIN TILE CONNECTION	NA		E = 781.08	
STRM #10	24"x36" CB	R-3067	787.21	W = 784.37	
STRM #11	48" CB MH	R-3067	787.48	SW = 784.26 E = 784.26	42 L.F. OF 10" PVC @ 0.26% STRM #10
STRM #12	48" CB MH	R-3067	787.68	NW = 784.20 NE = 784.20	22 L.F. OF 10" PVC @ 0.26% STRM #11
STRM #13	48" SUMP	R-1678-A	786.90	NW = 783.87 SE = 783.87	106 L.F. OF 12" RCP @ 0.31% STRM #12
STRM #14	12" FES	NA		SE = 783.77	28 L.F. OF 12" RCP @ 0.36% STRM #13

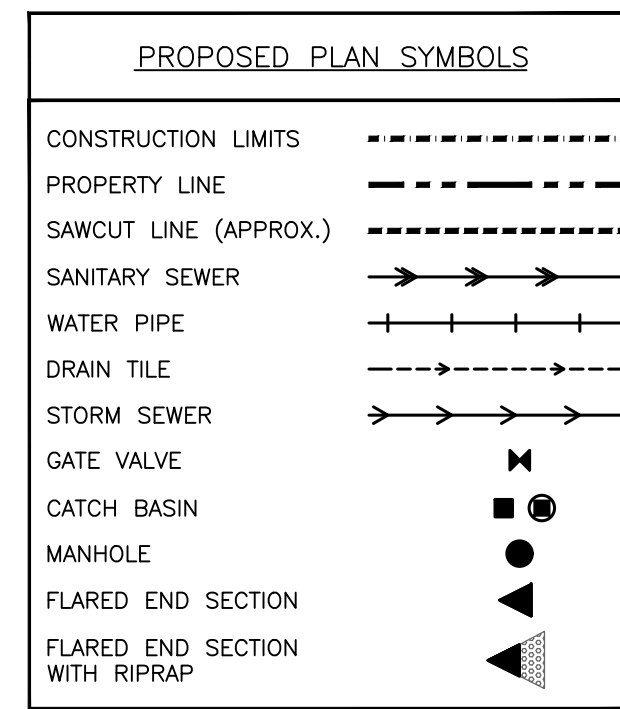
**UTILITY NOTES:**

- CONTRACTOR SHALL FOLLOW ALL CITY OF SAINT PAUL STANDARDS AND SPECIFICATIONS.
- COORDINATE SERVICE CONNECTION LOCATIONS, SIZES, AND INVERTS AT THE BUILDING WITH THE MECHANICAL CONTRACTOR PRIOR TO CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR UNCOORDINATED WORK.
- COORDINATE UTILITY INSTALLATION WITH STRUCTURAL PRIOR TO START OF CONSTRUCTION. UTILITIES SHALL NOT BE INSTALLED WITHIN THE ZONE OF INFLUENCE OF ANY STRUCTURAL ELEMENTS. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR UNCOORDINATED WORK.
- ALL SEWER SERVICE CONNECTIONS WITH LESS THAN 5 FEET OF COVER OVER THE TOP OF PIPE SHALL BE INSULATED. INSULATION SHALL BE INSTALLED FROM THE CONNECTION OF THE SERVICE AT THE BUILDING TO THE POINT WHICH THE SERVICE ATTAINS 5 FEET OF COVER. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM ARCHITECT OR ENGINEER PRIOR TO INSTALLATION OF INSULATION.
- PROTECT ALL EXISTING STRUCTURES AND UTILITIES WHICH ARE NOT SCHEDULED TO BE REMOVED.
- SANITARY SEWER PIPING SHALL BE DUCTILE IRON PIPE UNLESS NOTED OTHERWISE.
- STORM SEWER PIPING SHALL BE REINFORCED CONCRETE PIPE (RCP), UNLESS NOTED OTHERWISE. ALL 12-INCH THROUGH 18-INCH RCP STORM SEWER PIPE SHALL BE CLASS 5. ALL STORM SEWER PIPE THAT IS EXTENDED TO THE BUILDING FOR ROOF DRAIN SERVICES SHALL BE ASTM D1785 OR ASTM D2665 SCHEDULE 40 PVC.
- ALL FLARED END SECTIONS SHALL HAVE TRASH GUARDS. ALL DOWNSTREAM FLARED END SECTIONS SHALL HAVE GEOTEXTILE FABRIC AND RIPRAP PER MNDOT STANDARDS, AS DETAILED.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH GAS, ELECTRIC, TELEVISION, AND TELEPHONE COMPANIES PRIOR TO START OF CONSTRUCTION.
- WHERE PROPOSED GRADE OVER EXISTING SMALL UTILITIES IS PROPOSED TO BE LOWERED, CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER FOR THE LOWERING OF THE EXISTING UTILITY TO PROVIDE THE MINIMUM COVER REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
- ALL PORTIONS OF THE STORM AND SANITARY SEWER SYSTEMS LOCATED WITHIN 10-FEET OF THE BUILDING OR WATER SERVICE LINE SHALL BE AIR TESTED IN ACCORDANCE WITH PLUMBING CODE. PIPING MATERIAL SHALL BE ASTM D1785 OR ASTM D2665 SCHEDULE 40 PVC.
- ALL JOINTS AND CONNECTIONS IN THE STORM SEWER SYSTEM SHALL BE GAS TIGHT TO WATER TIGHT IN ACCORDANCE TO MN PLUMBING CODE. APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATER TIGHT CONNECTIONS TO MANHOLES, CATCH BASINS, AND OTHER STRUCTURES. RESILIENT WATER-STOP GROUTING RINGS ARE AN ACCEPTABLE ALTERNATIVE. CEMENT MORTAR JOINTS ARE PERMITTED ONLY FOR REPAIRS AND CONNECTIONS OF EXISTING LINES CONSTRUCTED WITH SUCH JOINTS.

**KEYED NOTES**

KEYED NOTES ARE DENOTED BY [ ] ON PLAN.

- CONTRACTOR SHALL INSTALL MANHOLE IN LINE WITH EXISTING 24-INCH RCP PIPE. APPROXIMATE INVERT OF EXISTING PIPE IS 780.29. PRIOR TO INSTALLATION OF MANHOLE, CONTRACTOR SHALL CONTACT CIVIL ENGINEER WITH EXACT INVERT ELEVATION.
- INSTALL SUMP MANHOLE WITH SNOT, ENVIROHOOD, OR APPROVED EQUAL. REFER TO DETAIL 6/C501.
- CONNECT TO EXISTING SERVICE STUB AND INSTALL APPROXIMATELY 12-FEET OF 6-INCH DUCTILE IRON PIPE AT MINIMUM 2.0% SLOPE TO INVERT OF 782.00. STUB TO WITHIN 5-FEET OF PROPOSED BUILDING. COORDINATE EXACT LOCATION, SIZE, AND INVERT ELEVATION WITH MECHANICAL CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
- STUB 6-INCH FIRE PROTECTION LINE TO WITHIN 5-FEET OF THE PROPOSED BUILDING. TOP OF WATER SERVICE SHALL BE 8 FEET BELOW FINISHED GRADE AT THE PROPOSED CONNECTION POINT. COORDINATE EXACT LOCATION WITH MECHANICAL AND STRUCTURAL PLANS PRIOR TO THE START OF CONSTRUCTION.
- STUB 4-INCH DOMESTIC WATERLINE TO WITHIN 5-FEET OF THE PROPOSED BUILDING. TOP OF WATER SERVICE SHALL BE 8 FEET BELOW FINISHED GRADE AT THE PROPOSED CONNECTION POINT. COORDINATE EXACT LOCATION WITH MECHANICAL AND STRUCTURAL PLANS PRIOR TO THE START OF CONSTRUCTION.
- INSTALL 6-INCH GATE VALVE.
- INSTALL 6-INCH 45-DEGREE BEND WITH THRUST BLOCKING.
- INSTALL 4-INCH GATE VALVE.
- INSTALL 4-INCH 45-DEGREE BEND WITH THRUST BLOCKING.
- INSTALL 6-INCH WET TAP.
- INSTALL 4-INCH WET TAP.
- INSTALL FILTRATION BASIN DRAIN TILE. REFER TO DETAIL 1/C501.
- INSTALL WEIR MANHOLE. REFER TO DETAIL 2/C501.
- INSTALL RAIN GUARDIAN TURRET. REFER TO DETAIL 7/C502.



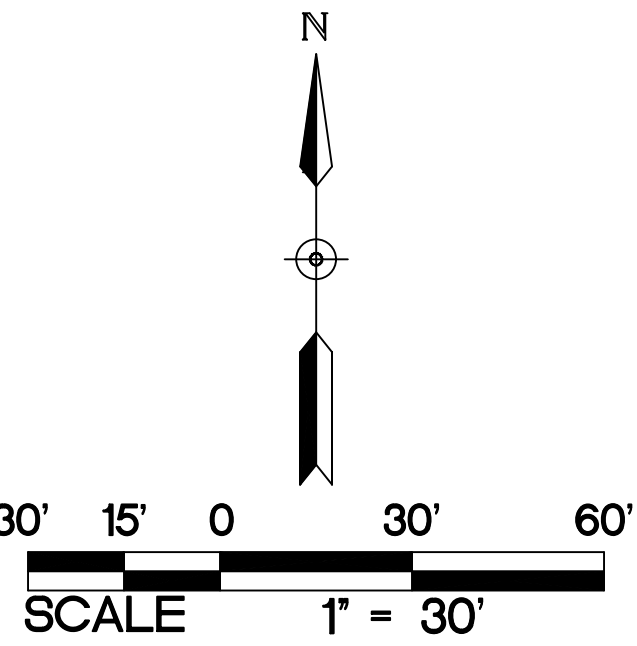
**NOTE:**  
THE CONTRACTOR IS RESPONSIBLE FOR AN AS-BUILT SURVEY OF ALL STORMWATER (FILTRATION BASIN, OUTLET STRUCTURES, DRAIN TILE, SUMP, CATCH BASINS, ETC.). THE AS-BUILT SHALL BE SUBMITTED TO CAPITAL REGION WATERSHED DISTRICT PRIOR TO PROJECT CLOSURE. THE AS-BUILT SURVEY SHALL INCLUDE THE FILTRATION BASIN DRAIN TILE INVERTS AND LAYOUT FOR VERIFICATION THAT THE SYSTEM WAS INSTALLED PROPERLY AND THAT 23-INCHES OF SAND/FILTRATION MIX OVER THE TOP OF THE DRAIN TILE HAS BEEN PROVIDED.  
THE OWNER'S SURETY MONEY FOR THE WATERSHED PERMIT WILL NOT BE RETURNED UNTIL THE CONTRACTOR PROVIDES THIS INFORMATION TO THE WATERSHED DISTRICT.

**ABBREVIATIONS**

BLDG	Building
BM	Benchmark
CB	Catch Basin
CONC	Concrete
DIP	Ductile Iron Pipe
ELEV	Elevation
EX	Existing
FTE	Finished Floor Elevation
HOPE	High Density Polyethylene
INV	Invert
MAX	Maximum
MH	Manhole
MIN	Minimum
PVC	Polyvinyl Chloride
RCP	Reinforced Concrete Pipe
RD	Roof Drain
WQE	Water Quality Elevation

**NOTE:**  
WHERE PROPOSED GRADE OVER EXISTING SMALL UTILITIES IS PROPOSED TO BE LOWERED, CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER FOR THE LOWERING OF THE EXISTING UTILITY TO PROVIDE THE MINIMUM COVER REQUIRED AT NO ADDITIONAL COST TO THE OWNER.

**NOTE:**  
PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL SHALL POHOLE AND DETERMINE THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES. CONTACT CIVIL ENGINEER IF EXISTING UTILITIES TO REMAIN WILL BE IMPACTED BY PROPOSED WORK.



**UTILITY NOTES FOR WORK IN PUBLIC RIGHT-OF-WAY:**

- FOLLOW ALL CITY OF SAINT PAUL STANDARDS AND SPECIFICATIONS.
- PRIOR TO CONSTRUCTION, CONTRACTORS ARE TO COORDINATE ALL WORK WITHIN RIGHT-OF-WAY AND OBTAIN ALL APPLICABLE PERMITS.

**ST. PAUL'S NOTES:**

- INSPECTION CONTACT: THE DEVELOPER SHALL CONTACT THE RIGHT OF WAY INSPECTOR DAN BRADY AT (651) 485-4398 (TWO WEEK PRIOR TO BEGINNING WORK) TO DISCUSS TRAFFIC CONTROL, PEDESTRIAN SAFETY AND COORDINATION OF ALL WORK IN THE PUBLIC RIGHT OF WAY. NOTE: IF A TWO WEEK NOTICE IS NOT PROVIDED TO THE CITY, ANY RESULTING DELAYS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- SAFE WORK SITE REQUIREMENTS: THE CONTRACTOR SHALL PROVIDE A CONTINUOUS, ACCESSIBLE AND SAFE PEDESTRIAN WALKWAY THAT MEETS ADA AND MN MUTCD STANDARDS IF WORKING IN A SIDEWALK AREA, AND TRAFFIC CONTROL PER MN MUTCD REQUIREMENTS FOR WORK IN THE PUBLIC RIGHT OF WAY.
- NO PRIVATE FACILITIES IN THE RIGHT OF WAY: THE DEVELOPER IS STRICTLY PROHIBITED FROM INSTALLING PRIVATE ELECTRICAL WIRING, CONDUIT, RECEPTACLES AND/OR LIGHTING IN THE CITY'S RIGHT OF WAY. THIS INCLUDES STUBBING CONDUIT OR CABLE INTO THE PUBLIC RIGHT OF WAY TO ACCOMMODATE UTILITY FEEDS TO THE SITE. COORDINATE WITH EACH UTILITY PRIOR TO CONSTRUCTION TO DETERMINE FEED POINTS INTO THE PROPERTY. UTILITIES ARE RESPONSIBLE FOR SECURING EXCAVATION PERMITS TO RUN THEIR SERVICE INTO A SITE, AND (WHERE REQUIRED) SUBMITTING PLANS FOR REVIEW BY THE PUBLIC WORKS UTILITY REVIEW COMMITTEE.
- CITY OF ST. PAUL PERMIT REQUIREMENTS:
  - ORDERING OBSTRUCTION AND EXCAVATION PERMITS: CONTACT PUBLIC WORKS RIGHT OF WAY SERVICE DESK AT (651) 266-6151. **IT IS STRONGLY RECOMMENDED THAT CONTRACTORS CALL FOR COST ESTIMATES PRIOR TO BIDDING TO OBTAIN ACCURATE COST ESTIMATES.**
  - OBSTRUCTION PERMITS: THE CONTRACTOR MUST OBTAIN AN OBSTRUCTION PERMIT IF CONSTRUCTION (INCLUDING SILT FENCES) WILL BLOCK CITY STREETS, SIDEWALKS OR ALLEYS, OR IF DRIVING OVER CURBS.
  - EXCAVATION PERMITS: ALL DIGGING IN THE PUBLIC RIGHT OF WAY REQUIRES AN EXCAVATION PERMIT. IF THE PROPOSED BUILDING IS CLOSE TO THE RIGHT OF WAY, AND EXCAVATING INTO THE RIGHT OF WAY IS NEEDED TO FACILITATE CONSTRUCTION, CONTACT THE UTILITY INSPECTOR.
  - FAILURE TO SECURE PERMITS: FAILURE TO SECURE OBSTRUCTION PERMITS OR EXCAVATION PERMITS WILL RESULT IN A DOUBLE-PERMIT FEE AND OTHER FEES REQUIRED UNDER CITY OF ST. PAUL LEGISLATIVE CODES.
  - REQUIREMENTS TO WORK IN THE PUBLIC RIGHT OF WAY: ALL UTILITIES AND CONTRACTORS WORKING IN THE PUBLIC RIGHT OF WAY MUST BE REGISTERED, INSURED AND BONDED, AS RECOGNIZED BY THE PUBLIC WORKS SERVICE DESK. (651) 266-6151.
  - ALL WORK ON CURBS, DRIVEWAYS, AND SIDEWALKS WITHIN THE PUBLIC RIGHT OF WAY MUST BE DONE BY A LICENSED AND BONDED CONTRACTOR UNDER A PERMIT FROM PUBLIC WORKS SIDEWALK SECTION (651) 266-9700. SIDEWALK GRADES MUST BE CARRIED ACROSS DRIVEWAYS.
  - RESTORATION OF ASPHALT AND CONCRETE PAVEMENTS ARE PERFORMED BY THE PUBLIC WORKS STREET MAINTENANCE DIVISION. THE CONTRACTOR IS RESPONSIBLE FOR PAYMENT TO THE CITY FOR THE COST OF THESE RESTORATIONS. THE CONTRACTOR SHALL CONTACT PUBLIC WORKS STREET MAINTENANCE TO SET UP A WORK ORDER PRIOR TO BEGINNING ANY REMOVALS IN THE STREET AT (651) 266-9700. PROCEDURES AND UNIT COSTS ARE FOUND IN STREET MAINTENANCE'S "GENERAL REQUIREMENTS" - ALL RESTORATIONS ARE AVAILABLE AT THE PERMIT OFFICE.
  - SIGNS REGULATING PARKING AND/OR TRAFFIC ON PRIVATE PROPERTY (OUTSIDE OF THE PUBLIC RIGHT-OF-WAY ROW) SHALL BE FURNISHED AND INSTALLED BY THE PROPERTY OWNER OR CONTRACTOR AT NO COST TO THE CITY OF ST. PAUL. DEPARTMENT OF PUBLIC WORKS. REMOVAL OF EXISTING SIGNS WITHIN THE PUBLIC ROW THAT REGULATE TRAFFIC AND OR PARKING SHALL BE COMPLETED BY THE CITY AT THE EXPENSE OF THE DEVELOPMENT. NEW SIGNS OR THE REINSTALLATION OF EXISTING SIGNS, AS APPROVED BY PUBLIC WORKS TRAFFIC ENGINEERING, REGULATING PARKING AND/OR TRAFFIC IN THE PUBLIC ROW SHALL BE FURNISHED AND INSTALLED BY THE CITY AT THE EXPENSE OF THE DEVELOPMENT. ALL EQUIPMENT, MATERIALS, AND LABOR COSTS ASSOCIATED WITH THE CITY AFFECTING A COMPLETE SIGN INSTALLATION SHALL BE THE RESPONSIBILITY OF THE DEVELOPMENT. CONTACT CHRIS GULDEN OF PUBLIC WORKS (651-266-9779) TWO WEEKS IN ADVANCE OF NEEDED SIGN WORK.
  - SEWER REMOVAL/ABANDONMENT PERMIT: LICENSE HOUSE DRAIN CONTRACTOR TO OBTAIN REMOVAL PERMITS FROM PUBLIC WORKS TO CUT OFF EXISTING SEWER CONNECTIONS SERVICES TO THE MAIN LINE. CALL ST PAUL PW PERMIT DESK (651-266-6234) FOR INFORMATION ON OBTAINING THIS PERMIT.
  - SEWER CONNECTION PERMIT: PLUMBING CONTRACTOR TO OBTAIN (SEWER CONNECTION PERMIT) TO CONSTRUCT NEW SANITARY AND STORM CONNECTION IN STREET FROM MAIN TO THE PROPERTY. CALL ST PAUL PW PERMIT DESK (651-266-6234) FOR INFORMATION ON OBTAINING THIS PERMIT.
  - ALL WATER MAIN AND SERVICES TO BE INSTALLED ACCORDING TO "SPRWS STANDARDS FOR INSTALLATION OF WATER MAINS", AND "SPRWS WATER CODE".
  - SERVICES THAT ARE TO BECOME UNUSED UPON COMPLETION OF THE NEW SERVICE CONNECTION MUST BE CUT OFF BY THE CONTRACTOR AT THE MAIN PRIOR TO THE TURN ON OF THE NEW SERVICES. EXCAVATION AND RESTORATION BY CONTRACTOR.
  - THE CONTRACTOR SHALL CONTACT MIKE LUSIAN, GENERAL FOREMAN, LIGHTING - SIGNAL MAINTENANCE, (651-266-9780), IF REMOVAL OR RELOCATION OF EXISTING FACILITIES IS REQUIRED OR IN THE EVENT OF DAMAGE TO THE LIGHTING OR SIGNAL UTILITIES, THE CONTRACTOR SHALL ASSUME RESPONSIBILITY (AND RELATED COSTS) FOR ANY DAMAGE OR RELOCATIONS.
  - THE INSTALLATION OF PRIVATE ELECTRICAL WIRING, CONDUIT, RECEPTACLES AND/OR LIGHTING IS STRICTLY PROHIBITED IN THE CITY'S ROW (RIGHT OF WAY).
  - CONTRACTOR IS TO CONTACT SAINT PAUL CITY FORESTER (651) 632-2436 PRIOR TO IMPACTING ANY BOULEVARD TREES.
  - EXISTING PUBLIC PROPERTY TREES ARE TO BE PROTECTED AT ALL TIMES. PUBLIC TREES DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE RESTORED OR REPLACED TO THE SATISFACTION OF, AND AT NO COST TO THE CITY, AS DETERMINED BY THE FORESTRY MANAGER. THE CONTRACTOR IS ADVISED TO DOCUMENT PRE-EXISTING CONDITIONS OF PUBLIC TREES AS WELL AS THE SURROUNDING BOULEVARD PRIOR TO CONSTRUCTION ACTIVITIES.
  - THE REMOVAL, PRUNING, AND/OR PLANTING OF TREES ON PUBLIC PROPERTY REQUIRES AN APPROVED FORESTRY TREE WORK PERMIT FROM THE CITY FORESTER (651-632-2436). ANY WORK MUST BE COMPLETED BY A LICENSED TREE CONTRACTOR.
  - PUBLIC PROPERTY TREES SHALL BE PROTECTED BY ESTABLISHING A TREE PROTECTION ZONE USING A 4' TALL FENCING INSTALLED AT THE DRIP LINE OF THE TREE. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE WORK AND MAINTAINED FOR THE DURATION OF THE PROJECT. PROPOSED WORK WITHIN, OR CHANGES TO THE LOCATION OF TREE PROTECTION FENCING SHALL BE REVIEWED BY THE CITY FORESTER PRIOR TO ALTERATION.
  - CONSTRUCTION SUPPLIES, MATERIALS, SCROLLS, EQUIPMENT, AND VEHICLES SHALL NOT BE STORED OR OPERATED ON THE DRIP LINE OF ANY PUBLIC TREE OR WITHIN TREE PAVER AREA OF BOULEVARD WITHOUT PRIOR WRITTEN APPROVAL FROM THE CITY FORESTER. IF THE BOULEVARD MUST BE USED FOR CONSTRUCTION ACTIVITIES, SITE ACCESS ROUTES, MATERIAL STORAGE, OR OTHER RELATED ACTIVITIES, PROTECTIVE MEASURES APPROVED BY THE CITY FORESTER SHALL BE TAKEN TO REDUCE SOIL COMPACTION AND DAMAGE TO PUBLIC TREES.
  - IN LOCATIONS WHERE PUBLIC TREES CANNOT BE PROTECTED TO THE DRIP LINE WITH TEMPORARY TREE PROTECTION FENCING, THE USE OF A 6" LAYER OF MULCH OR TRACK PADS WILL BE REQUIRED TO LIMIT SOIL COMPACTION AND PROTECT ROOT SYSTEMS WITHIN THE BOULEVARD WHEN ACCESS ROUTES OR MATERIAL STORAGE IS NECESSARY.
  - BUSINESS SIGNS WILL REQUIRE A SEPARATE REVIEW AND SIGN PERMIT FROM THE DEPARTMENT OF SAFETY AND INSPECTIONS. SITE PLAN APPROVAL DOES NOT CONSTITUTE APPROVAL OF BUSINESS SIGNS SHOWN ON THE SITE PLAN. CONTACT YAYA DIATTA OF DSI ZONING (651) 266-9080 IF YOU HAVE ANY QUESTIONS ABOUT SIGNS.
  - CARE MUST BE TAKEN DURING CONSTRUCTION AND EXCAVATION TO PROTECT ANY SURVEY MONUMENTS AND/OR PROPERTY IRONS. CALL SAM OGBORN OF PUBLIC WORKS SURVEYING (651-266-6075) IF YOU HAVE ANY QUESTIONS.
  - AS PER THE CITY'S "STANDARD SPECIFICATION FOR STREET OPENINGS" POLICY, RESTORATION ON ROADWAY SURFACES LESS THAN 5 YEARS OLD WILL REQUIRE FULL WIDTH MILL AND OVERLAY OR ADDITIONAL DEGRADATION FEES. PAVEMENT RESTORATION SHALL BE COMPLETED BY THE ST. PAUL PUBLIC WORKS STREET MAINTENANCE DIVISION. ALL RELATED COSTS ARE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR. CONTACT KEVIN NELSON AT 651-266-9700 FOR ESTIMATE OF COSTS FOR PAVEMENT RESTORATION.
  - PIPE MUST BE MECHANICAL JOINT UNDERNEATH THE BUILDING FOOTPRINT AND UP TO TEN FEET OUTSIDE OF THE BUILDING FOOTPRINT.
  - A FOUR-SIDED TRENCH BOX IS REQUIRED ON ALL EXCAVATIONS DEEPER THAN 5 FEET WHERE UNDERGROUND WORK OR INSPECTION IS TO BE PERFORMED BY SPRWS. FOR ALL WET TAPS TO BE PERFORMED BY SPRWS, A MINIMUM TRENCH BOX SIZE OF 8 FEET HIGH X 8 FEET WIDE X 10 FEET LONG IS REQUIRED. LADDERS ARE REQUIRED AND MUST EXTEND 3 FEET ABOVE THE SURFACE OF THE TRENCH. SIDEWALKS, PAVEMENTS, DUCTS AND APPURTENANCE STRUCTURES SHALL NOT BE UNDERMINED UNLESS A SUPPORT SYSTEM OR OTHER METHOD OF PROTECTION IS PROVIDED. TRENCHES IN EXCESS OF 30 FEET IN DEPTH MUST BE SIGNED OFF BY A REGISTERED PROFESSIONAL ENGINEER. EXCAVATED MATERIAL MUST BE KEPT A MINIMUM OF 2 FEET FROM THE EDGE OF THE TRENCH.
  - SERVICE CONNECTIONS SHALL BE INSTALLED WITH 8 FEET OF COVER AS PER THE ESTABLISHED GRADE FROM THE MAIN TO THE PROPERTY LINE OR, IF APPLICABLE, TO THE UTILITY EASEMENT LINE. WHEN SOLID ROCK CONDITIONS ARE ENCOUNTERED, THE NEED FOR INSULATION WILL BE DETERMINED BY SPRWS INSPECTORS.
  - PIPE MATERIAL FOR 8" DUCTILE IRON PIPE MUST BE CLASS 52. PIPE MATERIAL FOR 6" AND 4" DUCTILE IRON PIPE MUST BE CLASS 53. THE EXTERIOR OF DUCTILE IRON PIPE SHALL BE COATED WITH A LAYER OF ARC-SPRAYED ZINC PER ISO 8179. THE INTERIOR CEMENT MORTAR LINING SHALL BE APPLIED WITHOUT ASPHALT SALT COAT. PIPE MUST BE WRAPPED IN V-BIO POLYWRAP ENCASEMENT AND SHALL BE INSTALLED UTILIZING MODIFIED METHOD A AS RECOMMENDED BY DIPRA. ENCASEMENT SHALL BE TAPED AT EACH JOINT AND AROUND THE MIDDLE OF THE PIPE.
  - MAINTAIN 3 FEET VERTICAL SEPARATION BETWEEN WATER AND SEWER PIPES OR A 18" SEPARATION WITH 4" OF INSULATION, WHERE A WATER SERVICE OR MAIN IS OFFSET OVER A STORM SEWER. INSULATION SHALL BE PLACED BOTH OVER THE TOP OF THE WATER PIPE AND BETWEEN THE WATER PIPE AND THE STORM SEWER. REFER TO STANDARD PLATE D-10. WHERE A WATER MAIN OR SERVICE IS WITHIN 6 FEET OF A CATCH BASIN, MANHOLE OR OTHER OUTLET THAT IS SUBJECT TO COLD, INSULATION SHALL BE PLACED BETWEEN THE STRUCTURE AND THE WATER PIPE.
  - REFER TO SPRWS "STANDARDS FOR THE INSTALLATION OF WATER MAINS" STANDARD PLATE D-11 FOR RESTRAINED PIPE REQUIREMENT.
  - ALL WATER SERVICE VALVE BOXES WITHIN CONSTRUCTION AREA MUST BE EXPOSED AND BROUGHT TO GRADE UPON COMPLETION OF CONSTRUCTION.
  - ALL PIPE WORK INSIDE OF PROPERTY TO BE PERFORMED BY A PLUMBER LICENSED BY THE STATE OF MINNESOTA AND CERTIFIED BY THE CITY OF SAINT PAUL. SPRWS REQUIRES SEPARATE OUTSIDE AND INSIDE PLUMBING PERMITS FOR EACH NEW WATER SERVICE.
  - PIPES INSTALLED WITH LESS THAN 2% SLOPE SHALL BE INSTALLED UTILIZING LASER EQUIPMENT.
  - ALL STORM WATER PIPING INSTALLED BETWEEN THE BUILDING AND THE STORM WATER RETENTION SYSTEM SHALL BE INSPECTED AND TESTED PRIOR TO BACKFILLING. CONTACT THE DEPARTMENT OF SAFETY AND INSPECTIONS AT 651-266-9006 TO SCHEDULE AN INSPECTION WITH THE AREA PLUMBING INSPECTOR.
  - STRIPING UNRESOLVED GENERAL RESTORATION SHALL BE COMPLETED IMMEDIATELY FOLLOWING FINAL PAVEMENT RESTORATION. ROADWAY STRIPING IMPACTED BY WORK ZONE SHALL BE REPLACED IN-KIND AT NO COST TO THE ROAD AUTHORITY. IF THERE ARE QUESTIONS AS TO THE TYPE OF STRIPING MATERIAL TO BE USED, CONTACT CHRIS GULDEN OF PUBLIC WORKS TRAFFIC OPERATIONS SECTION. IF THERE IS A DESIRE FOR THE CITY OF ST. PAUL PUBLIC WORKS DEPARTMENT TO COMPLETE PAVEMENT MARKING RESTORATION WORK, CONTACT CHRIS GULDEN OF PUBLIC WORKS TRAFFIC OPERATIONS FOR AN ESTIMATE. AT A MINIMUM, TWO WEEKS ADVANCE NOTICE SHALL BE PROVIDED FOR ANY STRIPING REQUEST. IF ADVANCE NOTICE IS NOT PROVIDED, ANY ASSOCIATED PROJECT DELAYS, AND COSTS INCURRED FROM SUD DELAYS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
  - ADJACENT STREETS AND ALLEYS MUST BE SWEEP TO KEEP THEM FREE OF SEDIMENT. CONTRACTOR MUST MONITOR CONDITIONS AND SWEEP AS NEEDED OR WITHIN 24 HOURS OF NOTICE BY THE CITY. STREET SWEEPING IS AN IMPORTANT TEMPORARY EROSION CONTROL BEST MANAGEMENT PRACTICE AND SHALL BE PERFORMED WITH THE USE OF WATER. DRY SWEEPING IS PROHIBITED. ADDITIONALLY, TRUCKS Hauling IN AND OUT OF THE SITE, FOR ANY ACTIVITY INCLUDING BUT NOT NECESSARILY LIMITED TO PAVING, EXCAVATION, ETC., NEEDS TO ENSURE CLEAN OFF ALL MUD FLAPS TO AVOID ANY BUILDUP ON THE STREET PAVEMENT.
  - ANY PUBLIC INFRASTRUCTURE DAMAGE RESULTING FROM THE CONTRACTORS ACTIVITIES, INCIDENTAL OR OTHERWISE, SHALL BE REPAIRED/REPLACED TO THE SATISFACTION OF THE CITY AT NO COST TO THE CITY.
  - BOULEVARD RESTORATION SHALL INCLUDE THE FOLLOWING: ALL CONCRETE, ASPHALT, AND BASE MATERIALS SHALL BE REMOVED. BOULEVARD SOILS ARE TO BE PROTECTED DURING CONSTRUCTION BY USING PLYWOOD, A 6" LAYER OF MULCH, AND/OR TRACK PADS. SOIL COMPACTION DUE TO CONSTRUCTION ACTIVITIES SHALL BE CORRECTED TO THE SATISFACTION OF, AND AT NO COST TO THE CITY PRIOR TO FINAL GRADING. BOULEVARDS SHALL BE RESTORED WITH A MINIMUM OF 6" OF TOPSOIL.
  - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL EXCAVATION AND OBSTRUCTION PERMITS REQUIRED BY ANY GOVERNING AUTHORITY.
  - CONTRACTOR MUST MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THESE PLANS TO SAINT PAUL REGIONAL WATER SERVICES ENGINEERING DEPARTMENT UPON COMPLETION OF WORK VIA EMAIL AT: WATER-PLUMBINGPERMITS@CITY.STPAUL.MN.US.
  - CONTRACTOR TO MAINTAIN ACCESS TO THE FIRE DEPARTMENT CONNECTION FOR FIRE DEPARTMENT PERSONNEL AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
  - ANY PUBLIC INFRASTRUCTURE DAMAGE RESULTING FROM THE CONTRACTORS ACTIVITIES, INCIDENTAL OR OTHERWISE, SHALL BE REPAIRED/REPLACED TO THE SATISFACTION OF THE CITY AT NO COST TO THE CITY.
  - NOTIFY GRAEME CHAPLE AT 651-266-6882 A MINIMUM OF 2 WEEKS PRIOR TO SCHEDULING WORK BY SPRWS CONSTRUCTION CREW.
  - THE FOLLOWING WORK IN THE RIGHT-OF-WAY SHALL BE PERFORMED BY SPRWS ON AN ACTUAL COST BASIS: (1) CONNECTION TO THE PUBLIC MAIN FOR ANY INSTALLATION THAT IS OFF A PUBLIC MAIN LARGER THAN 12" OR OF MATERIAL NOT MADE OF IRON. (2) INSPECTION OF CONTRACTOR INSTALLED MAINS AND SERVICES. (3) CONSTRUCTION OF TEMPORARY SERVICES IF NECESSARY. AN ESTIMATE WILL BE PROVIDED FOR THIS WORK AND PAYMENT IN THE AMOUNT OF THE ESTIMATE MUST BE RECEIVED BEFORE THE WORK CAN BE SCHEDULED. ALL OTHER WORK, INCLUDING EXCAVATION, RESTORATION, CUTOFFS, AND PIPEWORK TO BE PERFORMED BY THE CONTRACTOR.
  - SANITARY AND/OR STORM SEWER SERVICE PASSING WITHIN 10 FEET OF THE BUILDING ARE GOVERNED BY THE MN PLUMBING CODE. SPECIFICATION FOR PIPE MATERIAL SELECTION AND NOTES FOR REQUIRED AIR TEST OF THE PIPING, COMPLIANT WITH THE MN STATE PLUMBING CODE, MUST BE SHOWN ON THE PLAN. IF UNDERGROUND INFILTRATION SYSTEM IS WITHIN 10 FEET, PROVIDE PLUMBING INSPECTOR APPROVAL.
  - SUBMIT MANHOLE SHOP DRAWINGS FOR REVIEW. THE SHOP DRAWINGS NEED TO BE SUBMITTED/APPROVED PRIOR TO ISSUING CONSTRUCTION PERMITS.
  - ALL STORMWATER PIPING CONNECTIONS INSTALLED BETWEEN THE BUILDING AND THE STORM WATER RETENTION SYSTEM SHALL BE INSPECTED TESTED PRIOR TO BACK FILLING. CONTACT THE DEPARTMENT OF SAFETY AND INSPECTIONS AT (651) 266-9009 TO SCHEDULE AN INSPECTION WITH THE AREA PLUMBING INSPECTOR.

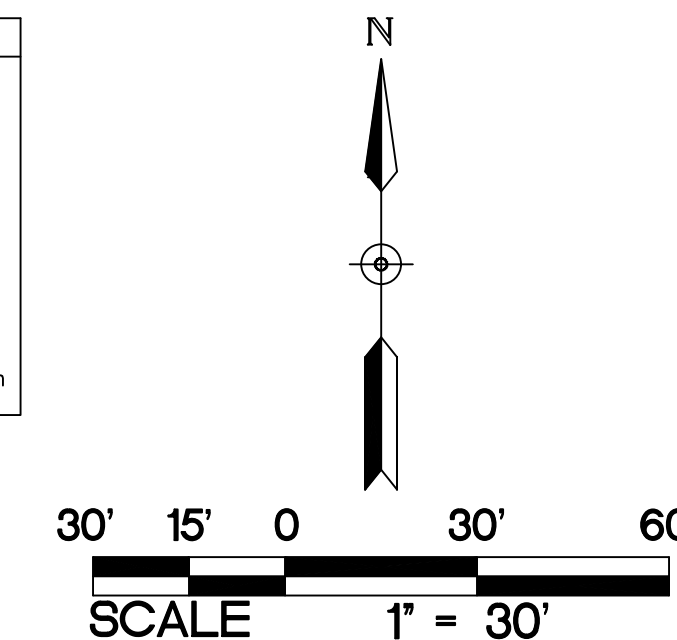
JOEL W. MAIER	PRINT NAME
	SIGNATURE
19181	LICENSE NO.
05/07/2025	DATE

**DD DOCUMENT Not For Construction**

SHEET TITLE:  
**UTILITY PLAN**

SHEET NUMBER:

**C400**



PROPOSED PLAN SYMBOLS	
CONSTRUCTION LIMITS	---
PROPERTY LINE	---
SAW CUT LINE (APPROX.)	---
BITUMINOUS PAVEMENT	---
CONCRETE PAVEMENT/SIDEWALK	---
PARKING STALL COUNT	④

ABBREVIATIONS	
BLDG	Building
BM	Benchmark
CONC	Concrete
ELEV	Elevation
Ex	Existing
FFE	Finished Floor Elevation
LFE	Lower Floor Elevation
MAX	Maximum
MIN	Minimum
R	Radius
TYP.	Typical
MN MUTCD	Minnesota Manual on Uniform Traffic Control Devices

\*NOTE: CONSTRUCTION LIMITS ARE ANTICIPATED TO BE PROPERTY LINE UNLESS OTHERWISE SHOWN.

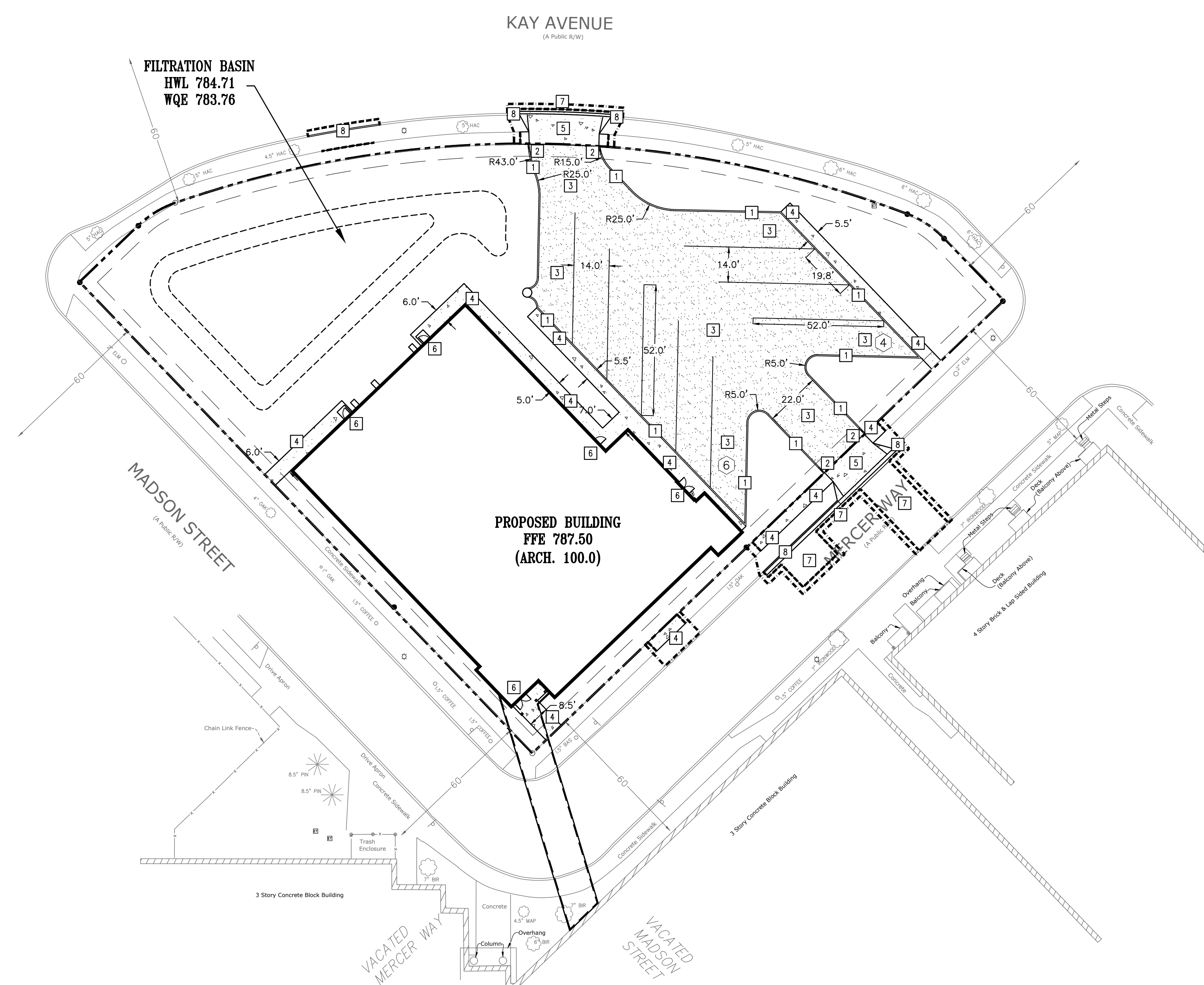
**KEYED NOTES**

KEYED NOTES ARE DENOTED BY **NO** ON PLAN.

- INSTALL B612 CONCRETE CURB AND GUTTER. REFER TO DETAIL 3/C502.
- INSTALL NOSE-DOWN CURB SECTION. REFER TO DETAIL 6/C502.
- INSTALL BITUMINOUS PAVEMENT. REFER TO DETAIL 4/C502.
- INSTALL CONCRETE WALK. REFER TO DETAIL 5/C502.
- INSTALL CONCRETE DRIVE ENTRANCE. REFER TO DETAIL 1/C502.
- STOOP. REFER TO STRUCTURAL PLANS AND DETAILS.
- INSTALL NEW BITUMINOUS PAVEMENT TO MATCH EXISTING PAVEMENT CROSS SECTION. FOR BIDDING PURPOSES REFER TO DETAIL 4/C502. INTENT IS TO MATCH EXISTING PAVEMENT CROSS SECTION.
- INSTALL CONCRETE CURB AND GUTTER TO MATCH EXISTING CURB STYLE AND SECTION. REFER TO DETAIL 2/C502.

**ST. PAUL'S NOTES:**

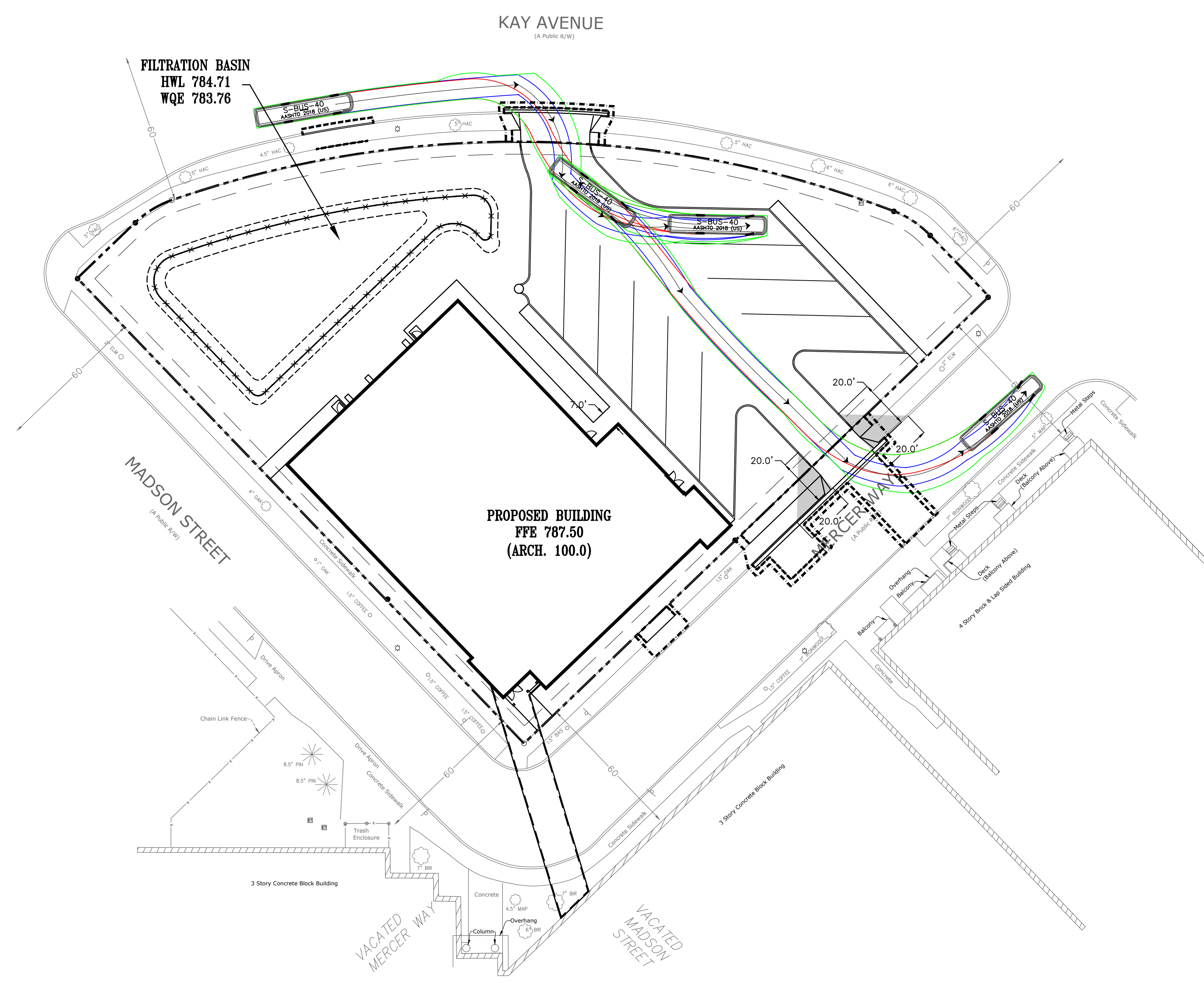
- INSPECTION CONTACT: THE DEVELOPER SHALL CONTACT THE RIGHT OF WAY INSPECTOR **DAN BRADY** AT (651) 485-4398 (TWO WEEK PRIOR TO BEGINNING WORK) TO DISCUSS TRAFFIC CONTROL, PEDESTRIAN SAFETY AND COORDINATION OF ALL WORK IN THE PUBLIC RIGHT OF WAY. NOTE: IF A TWO WEEK NOTICE IS NOT PROVIDED TO THE CITY, ANY RESULTING DELAYS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- SAFE WORK SITE REQUIREMENTS: THE CONTRACTOR SHALL PROVIDE A CONTINUOUS, ACCESSIBLE AND SAFE PEDESTRIAN WALKWAY THAT MEETS ADA AND MN MUTCD STANDARDS IF WORKING IN A SIDEWALK AREA AND TRAFFIC CONTROL PER MN MUTCD REQUIREMENTS FOR WORK IN THE PUBLIC RIGHT OF WAY.
- NO PRIVATE FACILITIES IN THE RIGHT OF WAY: THE DEVELOPER IS STRICTLY PROHIBITED FROM INSTALLING PRIVATE ELECTRICAL WIRING, CONDUIT, RECEPTACLES AND/OR LIGHTING IN THE CITY'S RIGHT OF WAY. THIS INCLUDES STUBBING CONDUIT OR CABLE INTO THE PUBLIC RIGHT OF WAY TO ACCOMMODATE UTILITY FEEDS TO THE SITE. COORDINATE WITH EACH UTILITY PRIOR TO CONSTRUCTION TO DETERMINE FEED POINTS INTO THE PROPERTY. UTILITIES ARE RESPONSIBLE FOR SECURING EXCAVATION PERMITS TO RUN THEIR SERVICE INTO A SITE, AND (WHERE REQUIRED) SUBMITTING PLANS FOR REVIEW BY THE PUBLIC WORKS UTILITY REVIEW COMMITTEE.
- CITY OF ST. PAUL PERMIT REQUIREMENTS:
  - ORDERING OBSTRUCTION AND EXCAVATION PERMITS: CONTACT PUBLIC WORKS RIGHT OF WAY SERVICE DESK AT (651) 266-6151. **IT IS STRONGLY RECOMMENDED THAT CONTRACTORS CALL FOR COST ESTIMATES PRIOR TO BIDDING TO OBTAIN ACCURATE COST ESTIMATES.**
  - OBSTRUCTION PERMITS: THE CONTRACTOR MUST OBTAIN AN OBSTRUCTION PERMIT IF CONSTRUCTION (INCLUDING SILT FENCES) WILL BLOCK CITY STREETS, SIDEWALKS OR ALLEYS, OR IF DRIVING OVER CURBS.
  - EXCAVATION PERMITS: ALL DIGGING IN THE PUBLIC RIGHT OF WAY REQUIRES AN EXCAVATION PERMIT. IF THE PROPOSED BUILDING IS CLOSE TO THE RIGHT OF WAY, AND EXCAVATING INTO THE RIGHT OF WAY IS NEEDED TO FACILITATE CONSTRUCTION, CONTACT THE UTILITY INSPECTOR.
  - FAILURE TO SECURE PERMITS: FAILURE TO SECURE OBSTRUCTION PERMITS OR EXCAVATION PERMITS WILL RESULT IN A DOUBLE-PERMIT FEE AND OTHER FEES REQUIRED UNDER CITY OF ST. PAUL LEGISLATIVE CODES.
  - REQUIREMENTS TO WORK IN THE PUBLIC RIGHT OF WAY: ALL UTILITIES AND CONTRACTORS WORKING IN THE PUBLIC RIGHT OF WAY MUST BE REGISTERED, INSURED AND BONDED, AS RECOGNIZED BY THE PUBLIC WORKS SERVICE DESK. (651) 266-6151.
  - ALL WORK ON CURBS, DRIVEWAYS, AND SIDEWALKS WITHIN THE PUBLIC RIGHT OF WAY MUST BE DONE BY A LICENSED AND BONDED CONTRACTOR UNDER A PERMIT FROM PUBLIC WORKS SIDEWALK SECTION (651) 266-9700. SIDEWALK GRADES MUST BE CARRIED ACROSS DRIVEWAYS.
  - RESTORATION OF ASPHALT AND CONCRETE PAVEMENTS ARE PERFORMED BY THE PUBLIC WORKS STREET MAINTENANCE DIVISION. THE CONTRACTOR IS RESPONSIBLE FOR PAYMENT TO THE CITY FOR THE COST OF THESE RESTORATIONS. THE CONTRACTOR SHALL CONTACT PUBLIC WORKS STREET MAINTENANCE TO SET UP A WORK ORDER PRIOR TO BEGINNING ANY REMOVALS IN THE STREET AT (651) 266-9700. PROCEDURES AND UNIT COSTS ARE FOUND IN STREET MAINTENANCE'S "GENERAL REQUIREMENTS - ALL RESTORATIONS" AND ARE AVAILABLE AT THE PERMIT OFFICE.
  - SIGNS REGULATING PARKING AND/OR TRAFFIC ON PRIVATE PROPERTY (OUTSIDE OF THE PUBLIC RIGHT-OF-WAY ROW) SHALL BE FURNISHED AND INSTALLED BY THE PROPERTY OWNER OR CONTRACTOR AT NO COST TO THE CITY OF ST. PAUL DEPARTMENT OF PUBLIC WORKS. REMOVAL OF EXISTING SIGNS WITHIN THE PUBLIC ROW THAT REGULATE TRAFFIC AND OR PARKING SHALL BE COMPLETED BY THE CITY AT THE EXPENSE OF THE DEVELOPER. NEW SIGNS, AS APPROVED BY PUBLIC WORKS TRAFFIC ENGINEERING, REGULATING PARKING AND/OR TRAFFIC IN THE PUBLIC ROW SHALL BE FURNISHED AND INSTALLED BY THE CITY AT THE EXPENSE OF THE DEVELOPER. ALL EQUIPMENT, MATERIALS, AND LABOR COSTS ASSOCIATED WITH THE CITY AFFECTING A COMPLETE SIGN INSTALLATION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. CONTACT CHRIS GULDEN OF PUBLIC WORKS 651-266-9778 TWO WEEKS IN ADVANCE OF NEEDED SIGN WORK.
  - SEWER REMOVAL/ABANDONMENT PERMIT: LICENSE HOUSE DRAIN CONTRACTOR TO OBTAIN REMOVAL PERMITS FROM PUBLIC WORKS TO CUT OFF EXISTING SEWER CONNECTIONS SERVICES TO THE MAIN LINE. CALL ST PAUL PW PERMIT DESK (651-266-6234) FOR INFORMATION ON OBTAINING THIS PERMIT.
  - SEWER CONNECTION PERMIT: PLUMBING CONTRACTOR TO OBTAIN (SEWER CONNECTION PERMIT) TO CONSTRUCT NEW SANITARY AND STORM CONNECTION IN STREET FROM MAIN TO THE PROPERTY. CALL ST PAUL PW PERMIT DESK (651-266-6234) FOR INFORMATION ON OBTAINING THIS PERMIT.
  - ALL WATER MAIN AND SERVICES TO BE INSTALLED ACCORDING TO "SPRWS STANDARDS FOR INSTALLATION OF WATER MAINS", AND "SPRWS WATER CODE".
  - SERVICES THAT ARE TO BECOME UNUSED UPON COMPLETION OF THE NEW SERVICE CONNECTION MUST BE CUT OFF BY THE CONTRACTOR AT THE MAIN PRIOR TO THE TURN ON OF THE NEW SERVICES. EXCAVATION AND RESTORATION BY CONTRACTOR.
  - THE CONTRACTOR SHALL CONTACT **MIKE LUSIAN, GENERAL FOREMAN, LIGHTING - SIGNAL MAINTENANCE, (651-266-9780)**, IF REMOVAL OR RELOCATION OF EXISTING FACILITIES IS REQUIRED OR IN THE EVENT OF DAMAGE TO THE LIGHTING OR SIGNAL UTILITIES. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY (AND RELATED COSTS) FOR ANY DAMAGE OR RELOCATIONS.
    - THE INSTALLATION OF PRIVATE ELECTRICAL WIRING, CONDUIT, RECEPTACLES AND/OR LIGHTING IS STRICTLY PROHIBITED IN THE CITY'S ROW (RIGHT OF WAY).
    - CONTRACTOR IS TO CONTACT **SANT PAUL CITY FORESTER (651) 632-2438** PRIOR TO IMPACTING ANY BOULEVARD TREES.
    - EXISTING PUBLIC PROPERTY TREES ARE TO BE PROTECTED AT ALL TIMES. PUBLIC TREES DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE RESTORED OR REPLACED TO THE SATISFACTION OF, AND AT NO COST TO THE CITY, AS DETERMINED BY THE FORESTRY MANAGER. THE CONTRACTOR IS ADVISED TO DOCUMENT PRE-EXISTING CONDITIONS OF PUBLIC TREES AS WELL AS THE SURROUNDING BOULEVARD PRIOR TO CONSTRUCTION ACTIVITIES.
    - THE REMOVAL, PRUNING, AND/OR PLANTING OF TREES ON PUBLIC PROPERTY REQUIRES AN APPROVED FORESTRY TREE WORK PERMIT FROM THE CITY FORESTER (651-632-2438). ANY WORK MUST BE COMPLETED BY A LICENSED TREE CONTRACTOR.
    - PUBLIC PROPERTY TREES SHALL BE PROTECTED BY ESTABLISHING A TREE PROTECTION ZONE USING A 4" TALL FENCING INSTALLED AT THE DRIP LINE OF THE TREE. TREE PROTECTION FENCING SHALL BE INSTANT PRIOR TO THE START OF ANY SITE WORK AND MAINTAINED FOR THE DURATION OF THE PROJECT. PROHIBITED WORK WITHIN OR CHANGES TO THE LOCATION OF TREE PROTECTION FENCING SHALL BE REVIEWED BY THE CITY FORESTER PRIOR TO ALTERATION.
    - CONSTRUCTION SUPPLIES, MATERIALS, SPILLS, EQUIPMENT, AND VEHICLES SHALL NOT BE STORED OR OPERATED WITHIN THE DRIP LINE OF ANY PUBLIC TREE OR WITHIN TREE PAVEMENT AREA OF BOULEVARD WITHOUT PRIOR WRITTEN APPROVAL FROM THE CITY FORESTER. IF THE BOULEVARD WITHOUT PROHIBITED WORK WITHIN OR CHANGES TO THE LOCATION OF TREE PROTECTION FENCING SHALL BE REVIEWED BY THE CITY FORESTER PRIOR TO ALTERATION.
    - IN LOCATIONS WHERE PUBLIC TREES CANNOT BE PROTECTED TO THE DRIP LINE WITH TEMPORARY TREES, THE USE OF A 4" LAYER OF MULCH OR TRACK PADS WILL BE REQUIRED TO LIMIT SOIL COMPACTION AND PROTECT ROOT SYSTEMS WITHIN THE BOULEVARD WHEN ACCESS ROUTES OR MATERIAL STORAGE IS NECESSARY.
  - BUSINESS SIGNS WILL REQUIRE A SEPARATE REVIEW AND SIGN PERMIT FROM THE DEPARTMENT OF SAFETY AND INSPECTIONS. SITE PLAN APPROVAL DOES NOT CONSTITUTE APPROVAL OF BUSINESS SIGNS SHOWN ON THE SITE PLAN. CONTACT **YAYA DATTA OF DSJ ZONING (651) 266-9080** IF YOU HAVE ANY QUESTIONS ABOUT SIGNS.
  - CARE MUST BE TAKEN DURING CONSTRUCTION AND EXCAVATION TO PROTECT ANY SURVEY MONUMENTS AND/OR PROPERTY IRONS. CALL **SAM GIBSON OF PUBLIC WORKS SURVEYING (651-266-6075)** IF YOU HAVE ANY QUESTIONS.
  - AS PER THE CITY'S "STANDARD SPECIFICATION FOR STREET OPENINGS" POLICY, RESTORATION ON ROADWAY SURFACES LESS THAN 5 YEARS OLD WILL REQUIRE FULL WIDTH MILL AND OVERLAY OR ADDITIONAL DEGRADATION FEES. RESTORATION SHALL BE COMPLETED BY THE ST. PAUL PUBLIC WORKS STREET MAINTENANCE DIVISION. ALL RELATED COSTS ARE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR. CONTACT **KEVIN NELSON** AT 651-266-9700 FOR ESTIMATE OF COSTS FOR PAVEMENT RESTORATION.
  - PIPE MUST BE MECHANICAL JOINT UNDERNEATH THE BUILDING FOOTPRINT AND UP TO TEN FEET OUTSIDE OF THE BUILDING FOOTPRINT.
  - A FOUR-SIDED TRENCH BOX IS REQUIRED ON ALL EXCAVATIONS DEEPER THAN 5 FEET WHERE UNDERGROUND WORK OR INSPECTION IS TO BE PERFORMED BY SPRWS. FOR ALL WET TAPS TO BE PERFORMED BY SPRWS, A MINIMUM TRENCH BOX SIZE OF 8 FEET HIGH X 8 FEET WIDE X 8 FEET LONG IS REQUIRED. LADDERS ARE REQUIRED AND MUST BE WITHIN 3 FEET ABOVE THE SURFACE OF THE TRENCH. SIDEWALKS, PAVEMENTS, DUCTS AND APPURTENANCE STRUCTURES SHALL NOT BE UNDERMINED UNLESS A SUPPORT SYSTEM OR ANOTHER METHOD OF PROTECTION IS PROVIDED. TRENCHES IN EXCESS OF 20 FEET IN DEPTH MUST BE SIGNED OFF BY A REGISTERED PROFESSIONAL ENGINEER. EXCAVATED MATERIAL MUST BE KEPT A MINIMUM OF 2 FEET FROM THE EDGE OF THE TRENCH.
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  - PIPE MATERIAL FOR 8" DUCTILE IRON PIPE MUST BE CLASS 52. PIPE MATERIAL FOR 6" AND 4" DUCTILE IRON PIPE MUST BE CLASS 53. THE EXTERIOR OF DUCTILE IRON PIPE SHALL BE COATED WITH A LAYER OF ARC-SPRAYED ZINC PRIMER ISO 8179. THE INTERIOR GEMENT MORTAR LINING SHALL BE APPLIED WITHOUT POLYWRAP ENCASEMENT AND SHALL BE INSTALLED UTILIZING MODIFIED METHOD A AS RECOMMENDED BY DIPRA. ENCASEMENT SHALL BE TAPED AT EACH JOINT AND AROUND THE MIDDLE OF THE PIPE.
  - MAINTAIN 3 FEET VERTICAL SEPARATION BETWEEN WATER AND SEWER PIPES OR A 18" SEPARATION WITH 4" OF INSULATION WHERE A WATER SERVICE OR MAIN IS OFFSET OVER A STORM SEWER. INSULATION SHALL BE PLACED BOTH OVER THE TOP OF THE WATER PIPE AND BETWEEN THE WATER PIPE AND THE STORM SEWER. REFER TO STANDARD PLATE D-10. WHERE A WATER MAIN OR SERVICE IS WITHIN 6 FEET UNDER A CATCH BASIN, MANHOLE OR OTHER OUTLET THAT IS SUBJECT TO COLD, INSULATION SHALL BE PLACED BETWEEN THE STRUCTURE AND THE WATER PIPE. ABOVE OR BELOW A STORM SEWER, INSULATION SHALL BE PLACED BETWEEN THE WATER PIPE AND THE STORM PIPE. WHERE A WATER SERVICE OR MAIN IS OFFSET OVER A STORM SEWER, INSULATION SHALL BE PLACED BOTH OVER THE TOP OF THE WATER PIPE AND BETWEEN THE WATER PIPE AND THE STORM SEWER. REFER TO STANDARD PLATE D-10. WHERE A WATER MAIN OR SERVICE IS WITHIN 6 FEET OF A CATCH BASIN, MANHOLE OR OTHER OUTLET THAT IS SUBJECT TO COLD, INSULATION SHALL BE PLACED BETWEEN THE STRUCTURE AND THE WATER PIPE.
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  - STRIPPING UNRESOLVED GENERAL RESTORATION SHALL BE COMPLETED IMMEDIATELY FOLLOWING FINAL PAVEMENT RESTORATION. ROADWAY STRIPING IMPACTED BY WORK ZONE SHALL BE REPLACED IN-KIND AT NO COST TO THE ROAD AUTHORITY. IF THERE ARE QUESTIONS AS TO THE TYPE OF STRIPING MATERIAL TO BE USED, CONTACT CHRIS GULDEN (651) 266-9778 IN THE CITY'S TRAFFIC OPERATIONS SECTION. IF THERE IS A DESIRE FOR THE CITY OF ST. PAUL PUBLIC WORKS DEPARTMENT TO COMPLETE PAVEMENT MARKING RESTORATION WORK, CONTACT CHRIS GULDEN OF PUBLIC WORKS TRAFFIC OPERATIONS FOR AN ESTIMATE. AT A MINIMUM, TWO WEEKS ADVANCE NOTICE SHALL BE PROVIDED FOR ANY STRIPING REQUEST. IF ADVANCE NOTICE IS NOT PROVIDED, ANY ASSOCIATED PROJECT DELAYS, AND COSTS INCURRED FROM SAID DELAYS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
  - ADJACENT STREETS AND ALLEYS MUST BE SWEEP TO KEEP THEM FREE OF SEDIMENT. CONTRACTOR MUST MONITOR CONDITIONS AND SWEEP AS NEEDED OR WITHIN 24 HOURS OF NOTICE BY THE CITY. STREET SWEEPING IS AN IMPORTANT TEMPORARY EROSION CONTROL BEST MANAGEMENT PRACTICE AND SHALL BE PERFORMED WITH THE USE OF WATER. DRY SWEEPING IS PROHIBITED. ADDITIONALLY, TRUCKS HAULING IN AND OUT OF THE SITE, FOR ANY ACTIVITY INCLUDING BUT NOT NECESSARILY LIMITED TO PAVING, EXCAVATION, ETC., NEEDS TO ENSURE CLEAN OFF ALL MUD FLAPS TO AVOID ANY BUILDUP ON THE STREET PAVEMENT.
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  - CONTRACTOR MUST MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THEM TO SAINT PAUL REGIONAL WATER SERVICES ENGINEERING DEPARTMENT UPON COMPLETION OF WORK VIA EMAIL AT: WATER-PLUMBING@SANTPAUL.MN.US.
  - CONTRACTOR TO MAINTAIN ACCESS TO THE FIRE DEPARTMENT CONNECTION FOR FIRE DEPARTMENT PERSONNEL AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
  - ANY PUBLIC INFRASTRUCTURE DAMAGE RESULTING FROM THE CONTRACTORS ACTIVITIES, INCIDENTAL OR OTHERWISE, SHALL BE REPAIRED/REPLACED TO THE SATISFACTION OF THE CITY AT NO COST TO THE CITY.
  - NOTIFY **GRAEME CHAPLE** AT 651-266-6882 A MINIMUM OF 2 WEEKS PRIOR TO SCHEDULING WORK BY SPRWS CONSTRUCTION CREW.
  - THE FOLLOWING WORK IN THE RIGHT-OF-WAY SHALL BE PERFORMED BY SPRWS ON AN ACTUAL COST BASIS: (1) CONNECTION TO THE PUBLIC MAIN FOR ANY INSTALLATION THAT IS OFF A PUBLIC MAIN LARGER THAN 12" OR OF MATERIAL NOT MADE OF IRON. (2) INSPECTION OF CONTRACTOR INSTALLED MAINS AND SERVICES. (3) CONSTRUCTION OF TEMPORARY SERVICES IF NECESSARY. AN ESTIMATE WILL BE PROVIDED FOR THIS WORK AND PAYMENT IN THE AMOUNT OF THE ESTIMATE MUST BE RECEIVED BEFORE THE WORK CAN BE SCHEDULED. ALL OTHER WORK, INCLUDING EXCAVATION, RESTORATION, CUTOFFS, AND PIPEWORK TO BE PERFORMED BY THE CONTRACTOR.
  - SANITARY AND/OR STORM SEWER SERVICE PASSING WITHIN 10 FEET OF THE BUILDING ARE GOVERNED BY THE MN PLUMBING CODE. SPECIFICATION FOR PIPE MATERIAL SELECTION AND NOTES FOR REQUIRED AIR TEST OF THE PIPING, COMPLIANT WITH THE MN STATE PLUMBING CODE, MUST BE SHOWN ON THE PLAN. IF UNDERGROUND INFILTRATION SYSTEM IS WITHIN 10 FEET, PROVIDE PLUMBING INSPECTOR APPROVAL.
  - SUBMIT MANHOLE SHOP DRAWINGS FOR REVIEW. THE SHOP DRAWINGS NEED TO BE SUBMITTED/APPROVED PRIOR TO ISSUING CONNECTION PERMITS.
  - ALL STORMWATER PIPING CONNECTIONS INSTALLED BETWEEN THE BUILDING AND THE STORM WATER RETENTION SYSTEM SHALL BE INSPECTED AND TESTED PRIOR TO BACK FILLING. CONTACT THE DEPARTMENT OF SAFETY AND INSPECTIONS AT (651) 266-9009 TO SCHEDULE AN INSPECTION WITH THE AREA PLUMBING INSPECTOR.



**1 PAVING AND GEOMETRIC PLAN**  
C3.0 1" = 30'

**PAVING NOTES:**

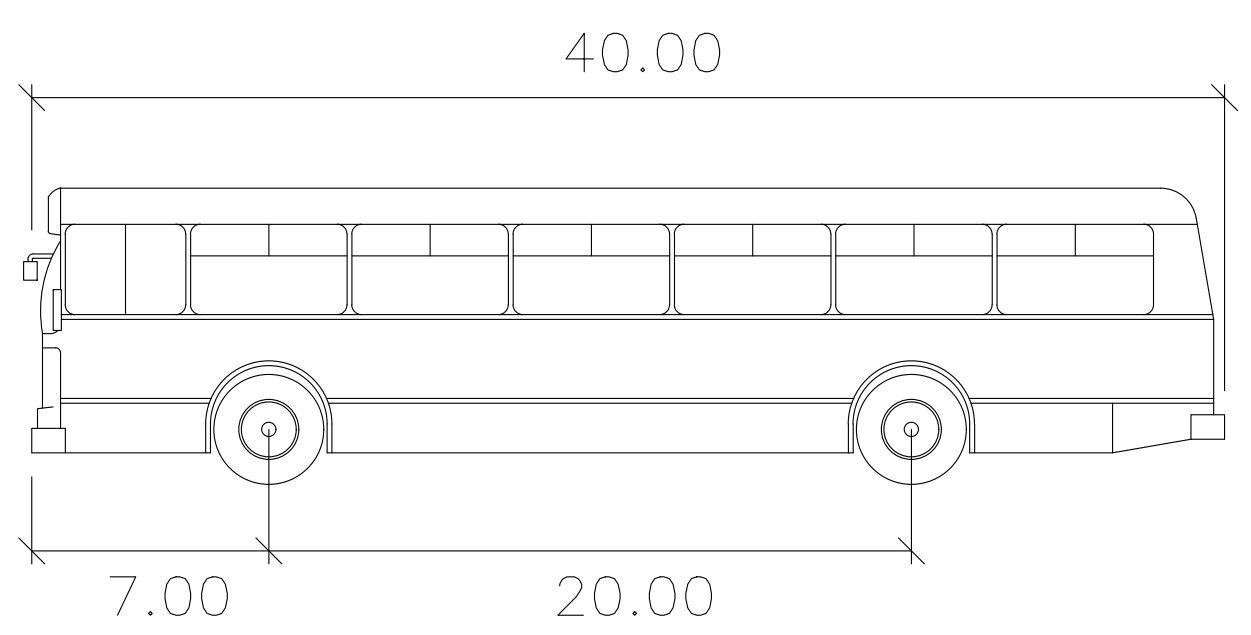
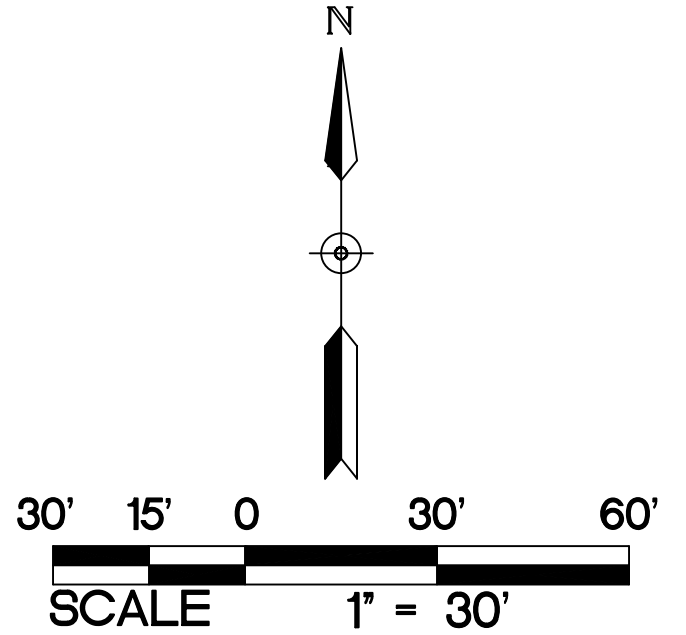
- CONTRACTOR SHALL FOLLOW ALL CITY OF ST. PAUL STANDARDS AND SPECIFICATIONS.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
- ALL CURB AND GUTTER IS TO BE B612 CONCRETE CURB AND GUTTER UNLESS NOTED OTHERWISE.
- NO SIDEWALK IS TO HAVE MORE THAN A 2% CROSS SLOPE OR MORE THAN A 5% LONGITUDINAL SLOPE.
- REFER TO ARCHITECTURAL PLANS FOR PROPOSED BUILDING LAYOUT.
- FOLLOW ALL CITY OF ST. PAUL RULES, REGULATIONS, AND SPECIFICATIONS WHEN WORKING IN PUBLIC RIGHT OF WAY.
- STRIP PARKING LOT AS SHOWN. ALL BUS PARKING STALLS ARE TO BE 14 FEET WIDE BY 52 FEET LONG, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS TO CONTACT THE CITY OF ST. PAUL FIRE MARSHALL FOR THE EXACT PLACEMENT OF FIRE LANES, YELLOW-PAINTED CURBING, AND NO PARKING AREAS FOR FIRE PROTECTION PURPOSES.
- REFER TO STRUCTURAL PLANS FOR STOOP DETAILS. ALL WALKS ARE TO BE CENTERED ON THE DOORS.
- INSTALL APPROPRIATE EXPANSION MATERIAL WHERE CONCRETE IS ADJACENT TO BUILDING FACE.
- ALL EXPANSION AND ISOLATION JOINTS SHALL BE SEALED PER SPECIFICATIONS.
- MATCH NEW PAVEMENT, CURB AND GUTTER, AND SIDEWALK INTO EXISTING. NO ABRUPT GRADE TRANSITIONS OR PONDING OF WATER WILL BE ALLOWED.
- SAWCUT EXISTING PAVEMENT, SIDEWALK, AND CURB AND GUTTER TO NEAREST JOINT. COORDINATE REMOVAL LIMITS WITH SITE DEMOLITION CONTRACTOR AND CONSTRUCTION MANAGER.
- INSTALL DRIVE ENTRANCE PER CITY OF ST. PAUL STANDARDS AND SPECIFICATIONS. FOLLOW ALL CITY OF ST. PAUL REQUIREMENTS FOR TRAFFIC CONTROL.



PROPOSED PLAN SYMBOLS	
CONSTRUCTION LIMITS	---
PROPERTY LINE	---
SAWCUT LINE (APPROX.)	---
SIGHT TRIANGLE	▲

ABBREVIATIONS	
BLDG	Building
BM	Benchmark
CONC	Concrete
ELEV	Elevation
EX	Existing
FFE	Finished Floor Elevation
LFE	Lower Floor Elevation
MAX	Maximum
MIN	Minimum
R	Radius
TYP	Typical
MN MUTCD	Minnesota Manual on Uniform Traffic Control Devices

\*NOTE: CONSTRUCTION LIMITS ARE ANTICIPATED TO BE PROPERTY LINE UNLESS OTHERWISE SHOWN.



- S-BUS-40
- feet
- Width : 8.00
- Track : 8.00
- Lock to Lock Time : 6.0
- Steering Angle : 34.4

1 PAVING AND GEOMETRIC PLAN  
C3.0 1"=30'



Midwest Commercial  
2324 University Ave. W.  
Suite 200  
St. Paul, MN 55114  
Tel: 612.338.4090

NOVA CLASSICAL ACADEMY  
1455 VICTORIA WAY  
ST. PAUL, MN 55102

CONSULTANT

**BKBM** 6120 Earle Brown Drive  
Suite 700 Minneapolis,  
MN 55430 Phone: 763.843.0420  
Structural & Civil Engineers 763.843.0420  
bkbm.com

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BKBM Project No. 24226-5

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008-033  
Date: 05/07/2025  
BKBM Project Number: 24226-50

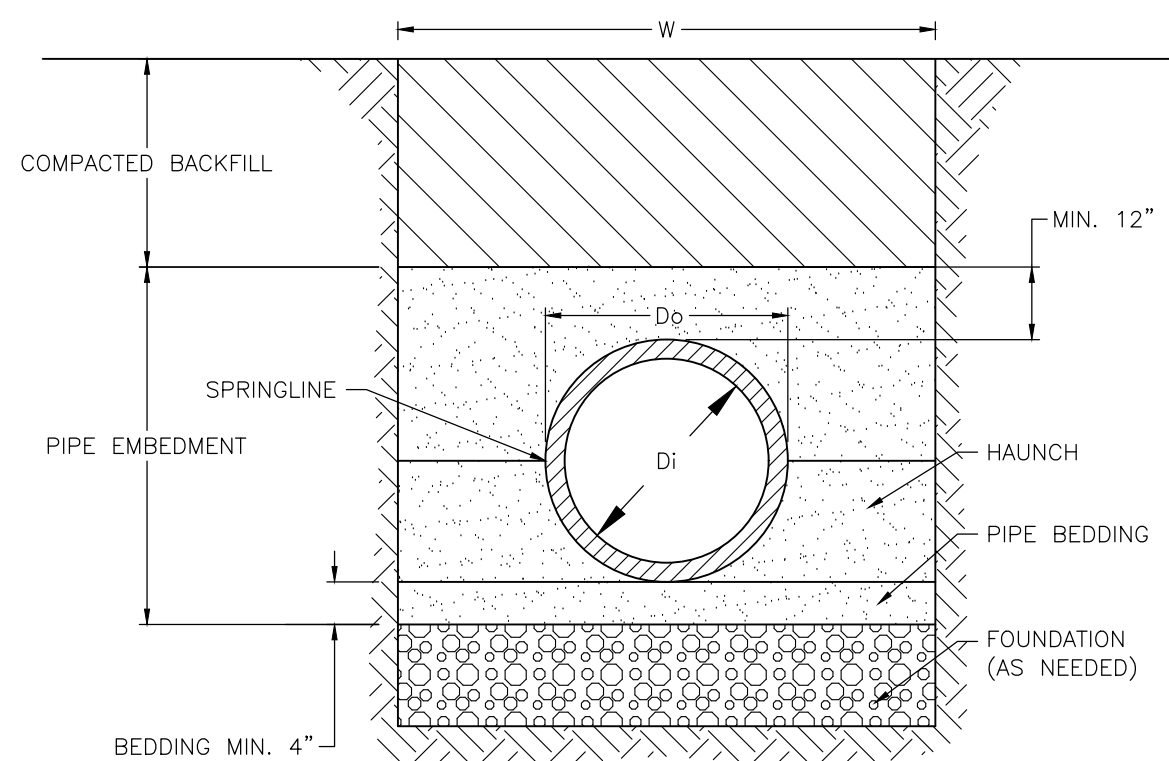
I HEREBY CERTIFY THAT THIS PLAN,  
SPECIFICATION OR REPORT WAS PREPARED BY ME  
OR UNDER MY DIRECT SUPERVISION AND THAT I AM  
A DULY LICENSED PROFESSIONAL ENGINEER UNDER  
THE LAWS OF THE STATE OF MINNESOTA.

JOEL W. MAIER  
PRINT NAME  
SIGNATURE  
19181  
LICENSE NO.  
05/07/2025  
DATE

**DD**  
**DOCUMENT**  
**Not For**  
**Construction**

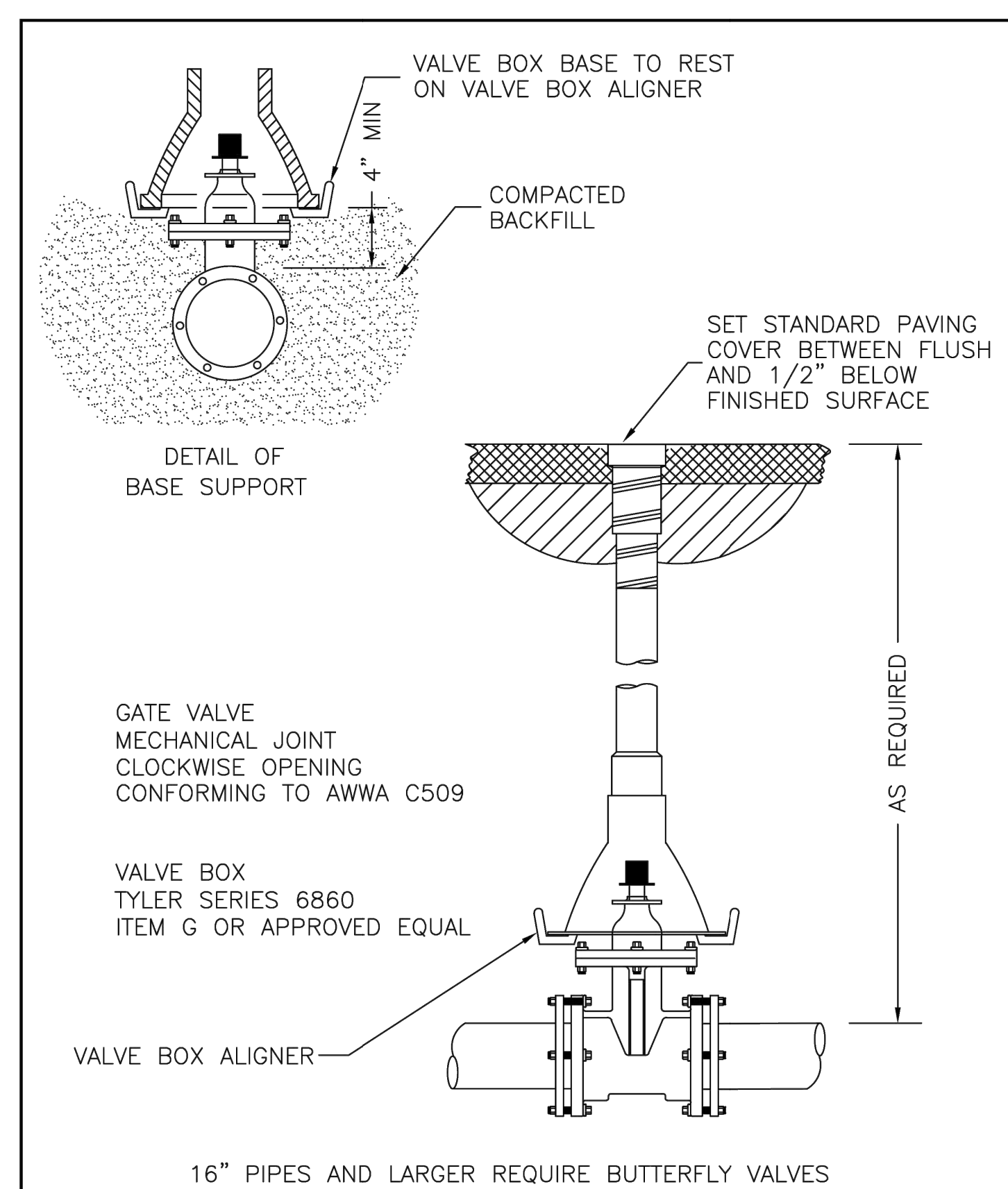
SHEET TITLE:  
**CIVIL SITE PLAN AND  
TURNING MOVEMENTS**

SHEET NUMBER:  
**C401**



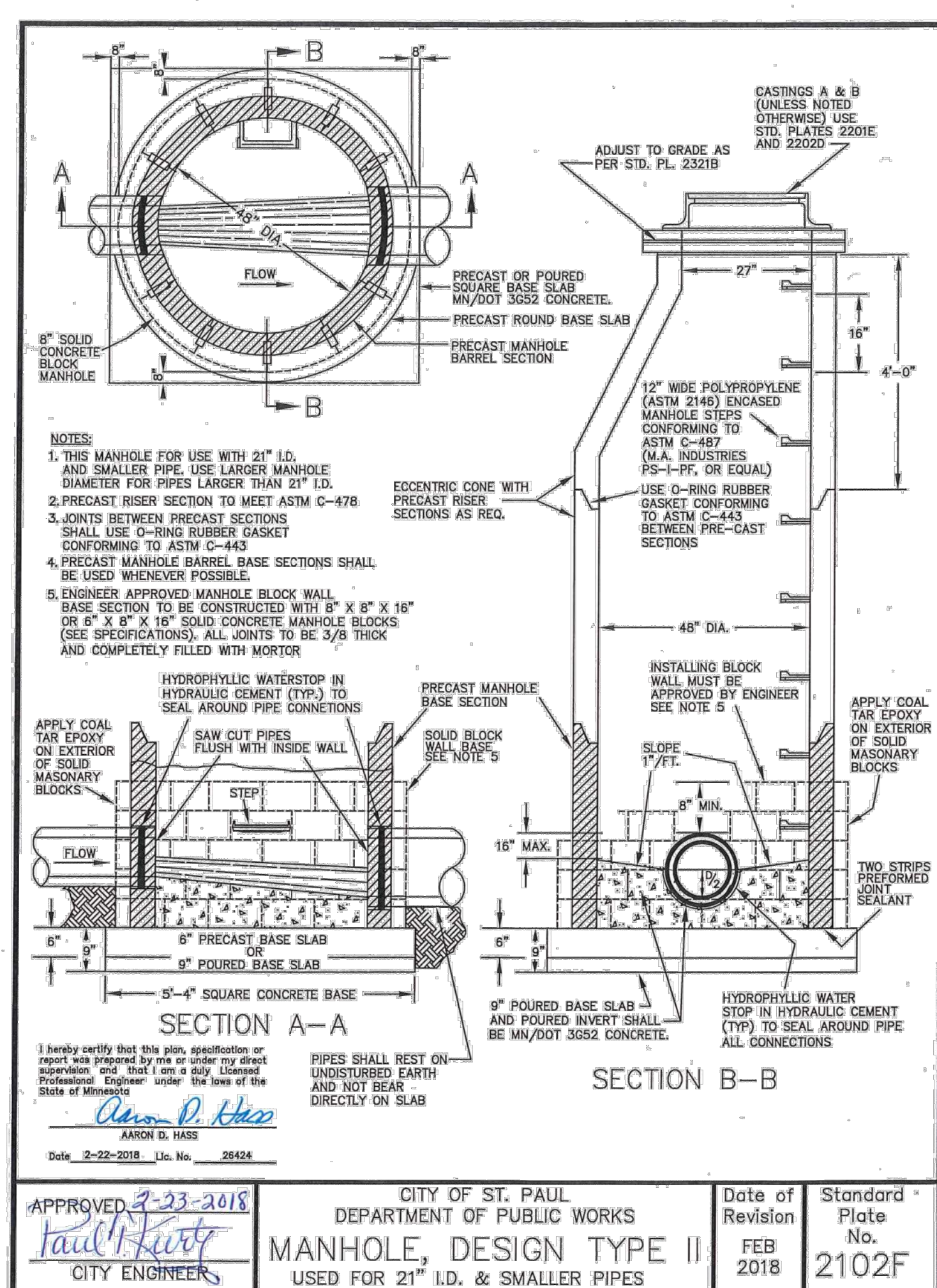
- NOTES:
1. THE MINIMUM TRENCH WIDTH "W" SHALL BE  $W = D_o + 16"$  OR  $1.25 \times D_o + 12$  WHICHEVER IS GREATER.
  2. PIPE EMBEDMENT MATERIAL SHALL BE CLASS I OR CLASS II MATERIAL. REFER TO SPECIFICATIONS FOR DETAILS.
  3. REFER TO ASTM D2321-05 "UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS" FOR DETAILS.

8 TYPICAL PIPE BEDDING FOR PVC  
C500 NOT TO SCALE

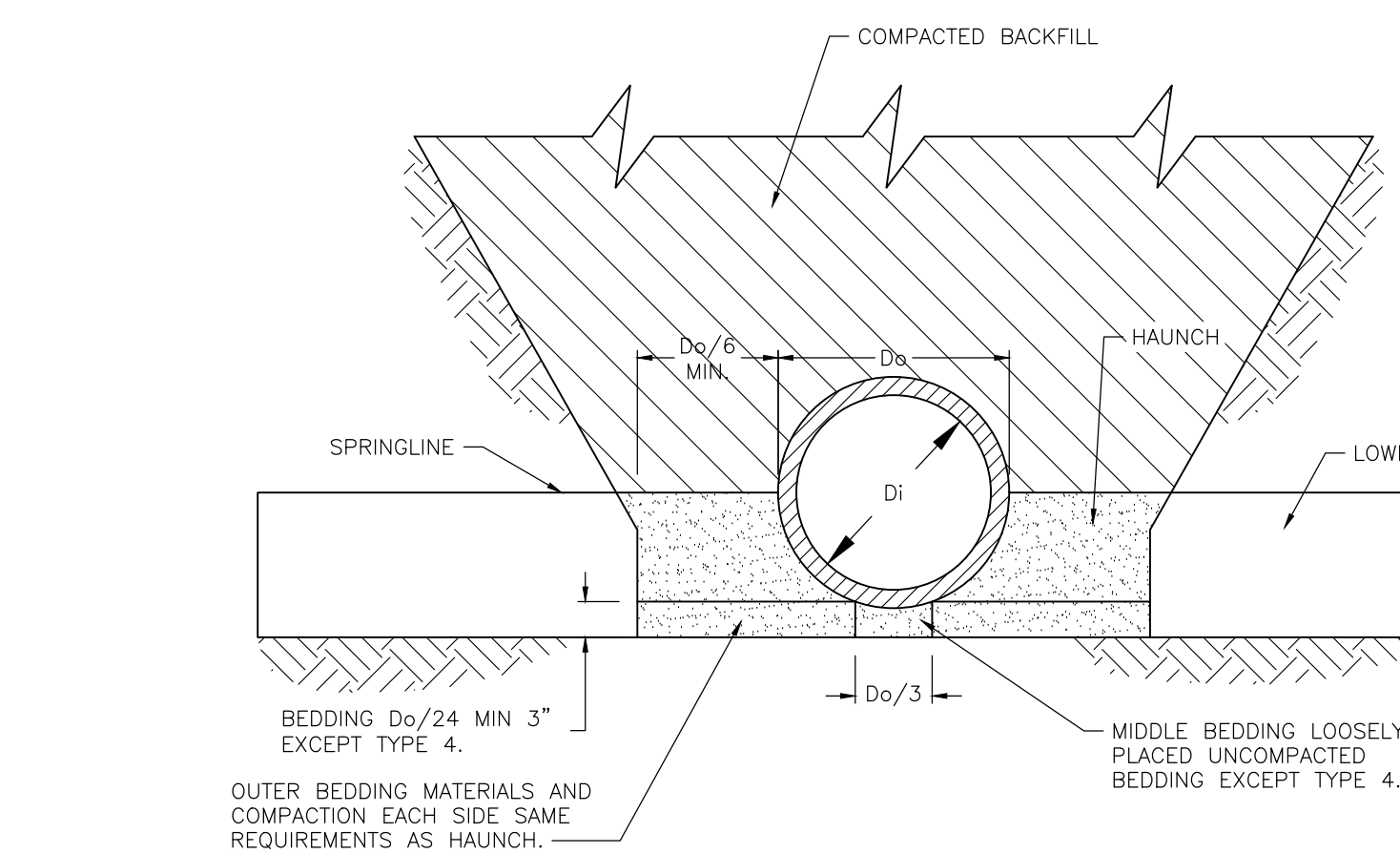


DR. LJP	DATE: 01/13/2020	SAINT PAUL REGIONAL WATER SERVICES ST. PAUL, MINNESOTA	STANDARD PLATE
CH. VJH			
APPROVED	DJS	VALVE BOX & INSTALLATION	D-2

9 GATE VALE AND BOX INSTALLATION  
C500 NOT TO SCALE



6 MANHOLE, DESIGN TYPE II  
C500 NOT TO SCALE

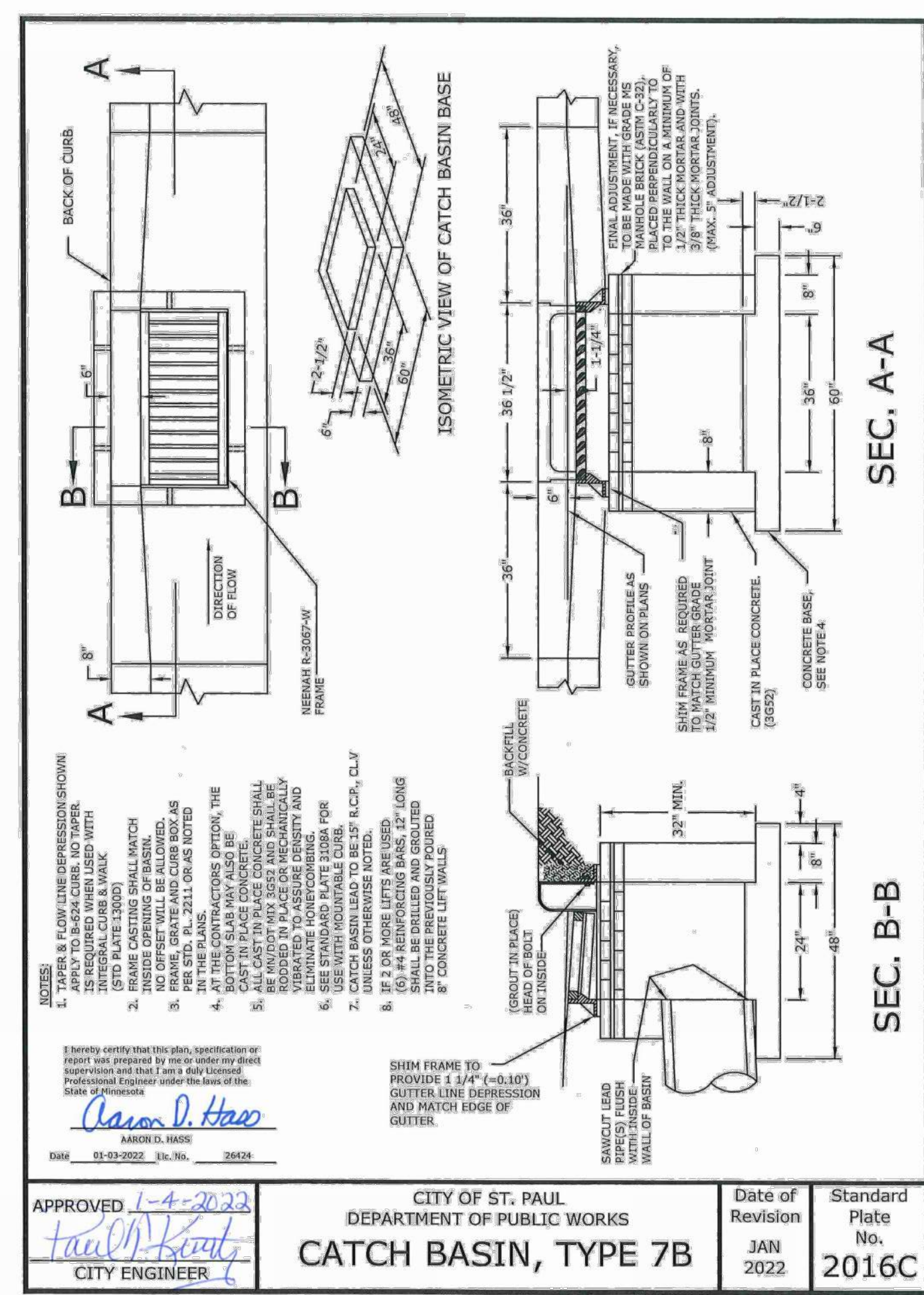


INSTALLATION TYPE	HAUNCH AND OUTER BEDDING	LOWER SIDE
TYPE 1	95% CATEGORY I	90% CATEGORY I 95% CATEGORY II 100% CATEGORY III
TYPE 2	90% CATEGORY I 95% CATEGORY II	85% CATEGORY I 90% CATEGORY II 95% CATEGORY III
TYPE 3	85% CATEGORY I 90% CATEGORY II	85% CATEGORY I 90% CATEGORY II 95% CATEGORY III
TYPE 4	NO COMPACTION REQUIRED, EXCEPT IF CATEGORY III USE 85% CATEGORY III	NO COMPACTION REQUIRED, EXCEPT IF CATEGORY III USE 85% CATEGORY III

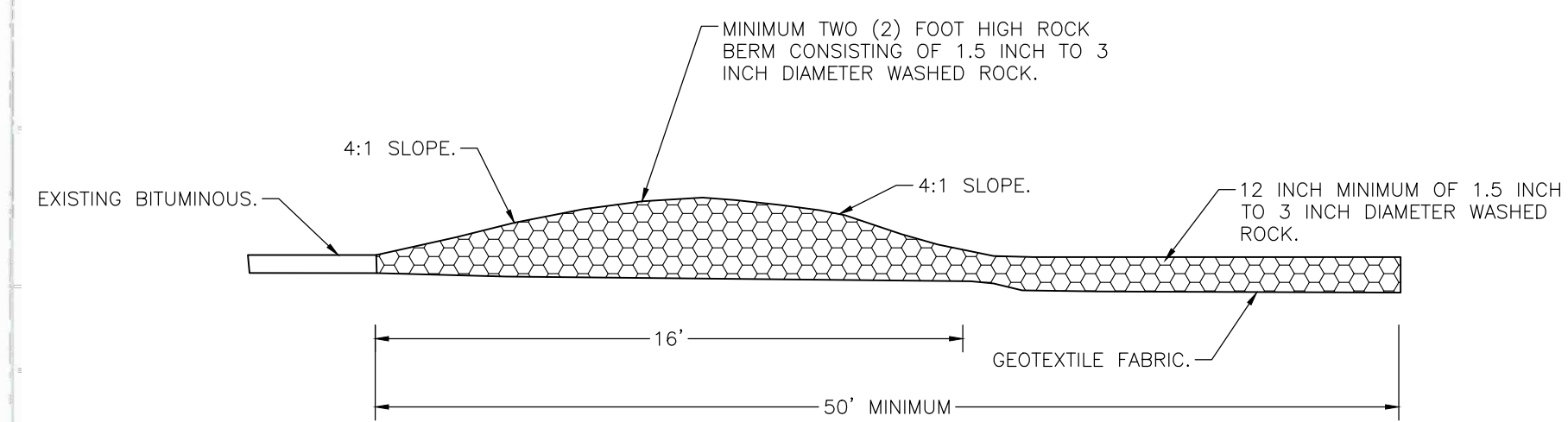
SOIL	UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)	MN/DOT SPECIFICATION
CATEGORY I	CLEAN COURSE GRAINED SOILS: SW, SP, GW, GP, OR ANY SOIL BEGINNING WITH ONE OF THESE SYMBOLS WITH 12% OR LESS PASSING A #200 SIEVE	COARSE FILTER AGGREGATE MN/DOT 3149.2H
CATEGORY II	COURSE GRAINED SOILS WITH FINES: GM, GC, SM, SC, OR ANY SOIL BEGINNING WITH ONE OF THESE SYMBOLS CONTAINING MORE THAN 12% PASSING A #200 SIEVE	AGGREGATE BEDDING MN/DOT 3149.2G
CATEGORY III	FINE GRAINED SOILS: CL, ML, (OR CL-ML, CL-ML, ML/CL) WITH LESS THAN 30% RETAINED ON A #200 SIEVE.	NOT APPLICABLE

- NOTES:
1. COMPACTION AND SOIL SYMBOLS—E. "95% CATEGORY I" REFERS TO CATEGORY I SOIL MATERIAL WITH MINIMUM STANDARD PROCTOR COMPACTION OF 95%.
  2. SOIL IN BEDDING AND HAUNCH ZONES SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS SPECIFIED FOR THE MAJORITY OF SOIL IN THE BACKFILL ZONE.
  3. THE TRENCH WIDTH SHALL BE WIDER THAN SHOWN IF REQUIRED FOR ADEQUATE SPACE TO ATTAIN SPECIFIED COMPACTION IN THE HAUNCH AND BEDDING ZONES.
  4. FOR TRENCH WALLS WITH GREATER THAN 10 DEGREE SLOPES THAT CONSIST OF EMBANKMENT, THE LOWER SIDE SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS SPECIFIED FOR THE SOIL IN THE BACKFILL ZONE.
  5. NO BEDDING IS REQUIRED FOR TYPE 4 STANDARD INSTALLATION.
  6. REFER TO ASTM C1479-07 FOR DETAILS.
  7. TYPE III BEDDING SHALL BE USED UNLESS NOTED OTHERWISE.

7 TYPICAL PIPE BEDDING FOR RCP AND DIP  
C500 NOT TO SCALE

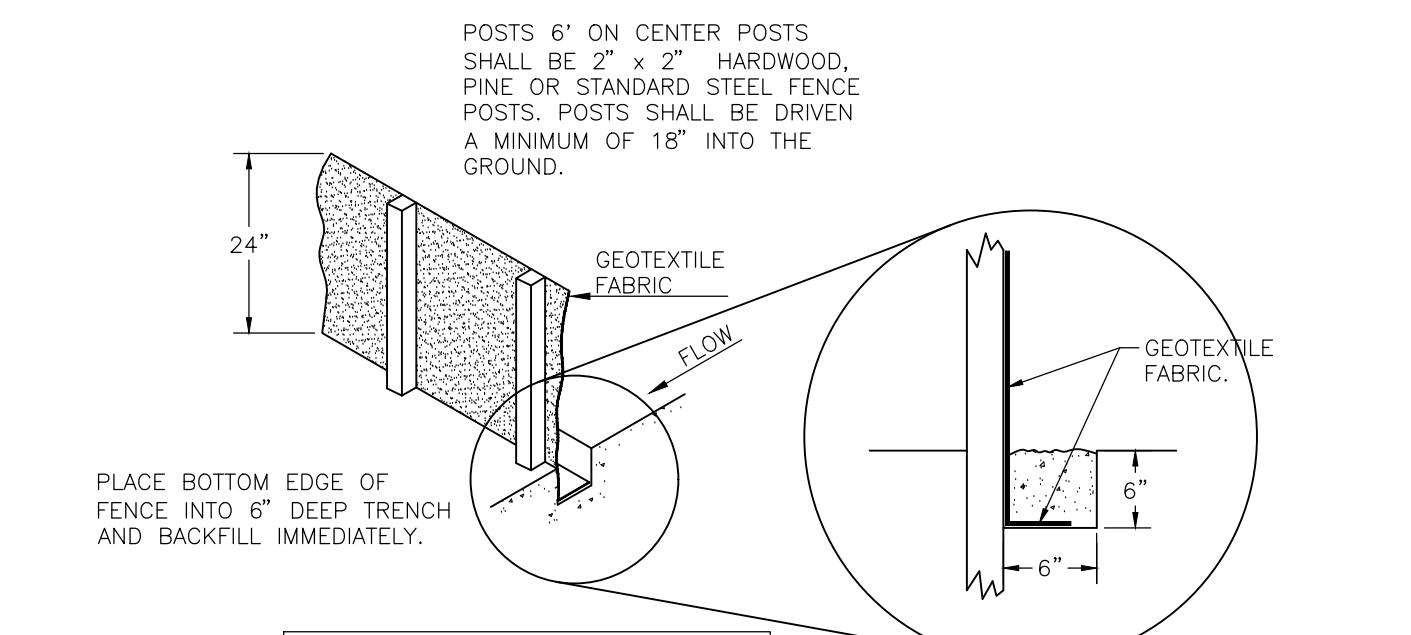


5 CATCH BASIN, TYPE 7B  
C500 NOT TO SCALE

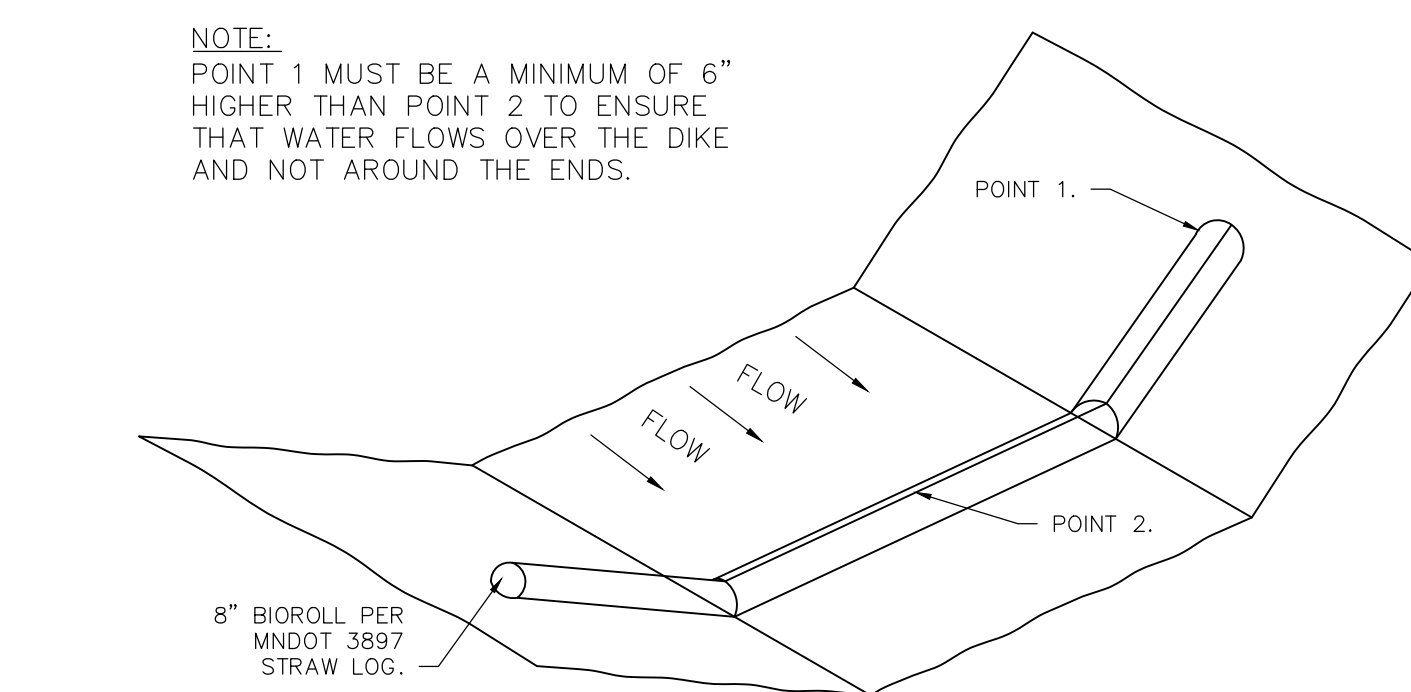


- NOTE:
1. MINIMUM LENGTH OF 50 FEET AND WIDTH OF 12 FEET.
  2. FOLLOW ALL CITY, WATERSHED DISTRICT AND MPCA STANDARDS.
  3. CLEAN STREETS ON A DAILY BASIS OR MORE FREQUENTLY IF REQUESTED BY CITY, WATERSHED DISTRICT OR MPCA.

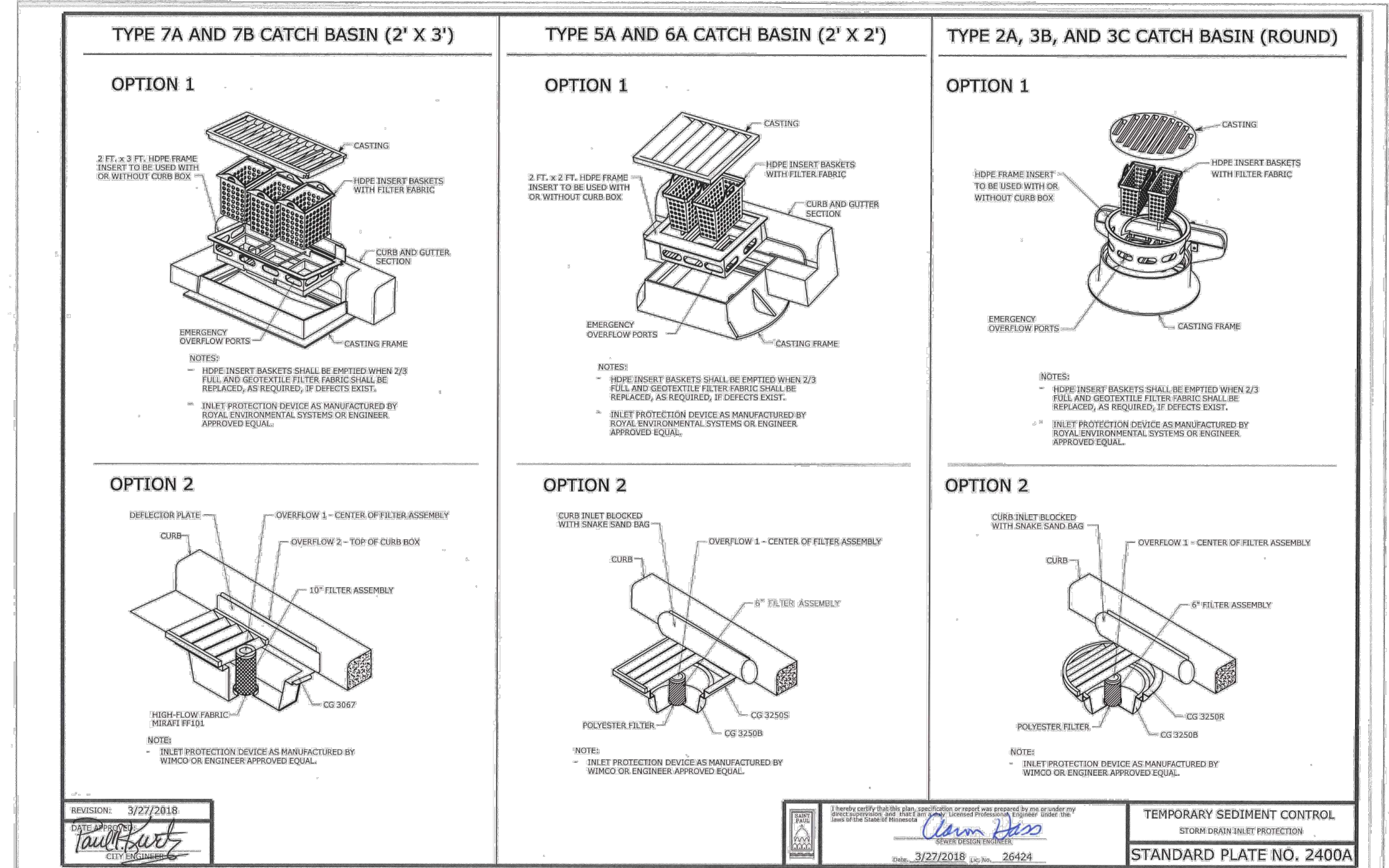
1 BERMED ROCK CONSTRUCTION ENTRANCE  
C500 NOT TO SCALE



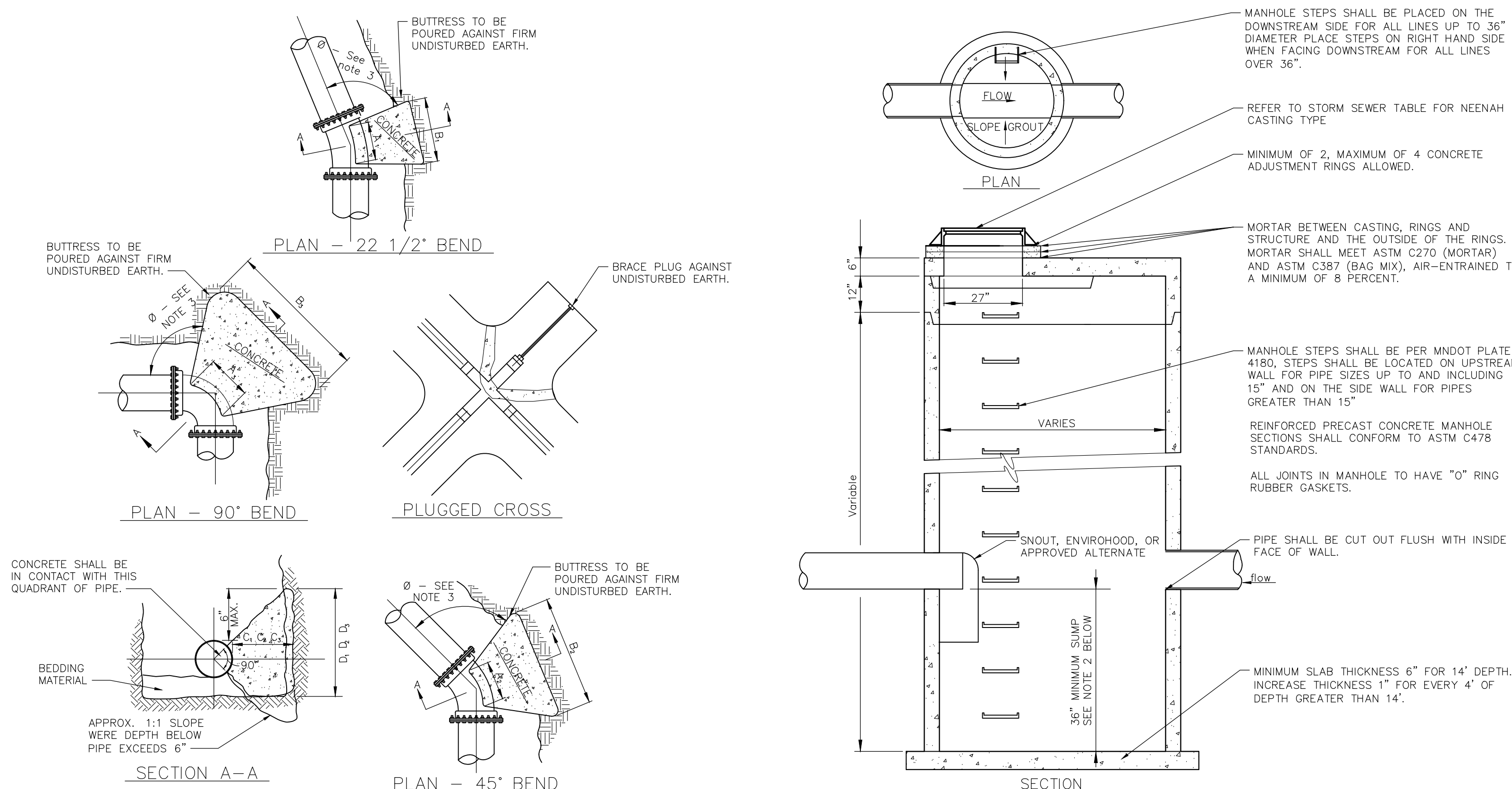
2 SILTATION FENCE  
C500 NOT TO SCALE



3 BIO ROLL  
C500 NOT TO SCALE



4 STORM DRAIN INLET PROTECTION  
C500 NOT TO SCALE



NOTES:  
1. DIMENSIONS IN TABLE ARE BASED ON A WATER PRESSURE OF 150 P.S.I. AND AN EARTH RESISTANCE OF 1 TON PER SQUARE FOOT.  
2. DIMENSION C1, C2, C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE Ø EQUAL TO OR LARGER THAN 45°.  
3. DIMENSION A1, A2, A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH M.J. BOLTS.  
4. SHAPE OF BACK OF BUTRESS MAY VARY AS LONG AS POUR IS AGAINST FIRM UNDISTURBED EARTH.

PIPE SIZE	22 1/2 BEND		45° BEND		90° BEND	
	B1	D1	B2	D2	B3	D3
6"	1'-5"	1'-5"	1'-5"	1'-5"	2'-1"	1'-6"
8"	1'-5"	1'-5"	2'-1"	1'-6"	2'-8"	2'-0"
12"	1'-10"	1'-10"	3'-4"	2'-0"	4'-9"	2'-6"
18"	3'-0"	2'-0"	3'-10"	3'-0"	6'-2"	3'-6"
20"	3'-4"	2'-8"	3'-4"	3'-4"	8'-4"	4'-0"
24"	4'-0"	3'-0"	6'-10"	3'-10"	9'-8"	5'-0"

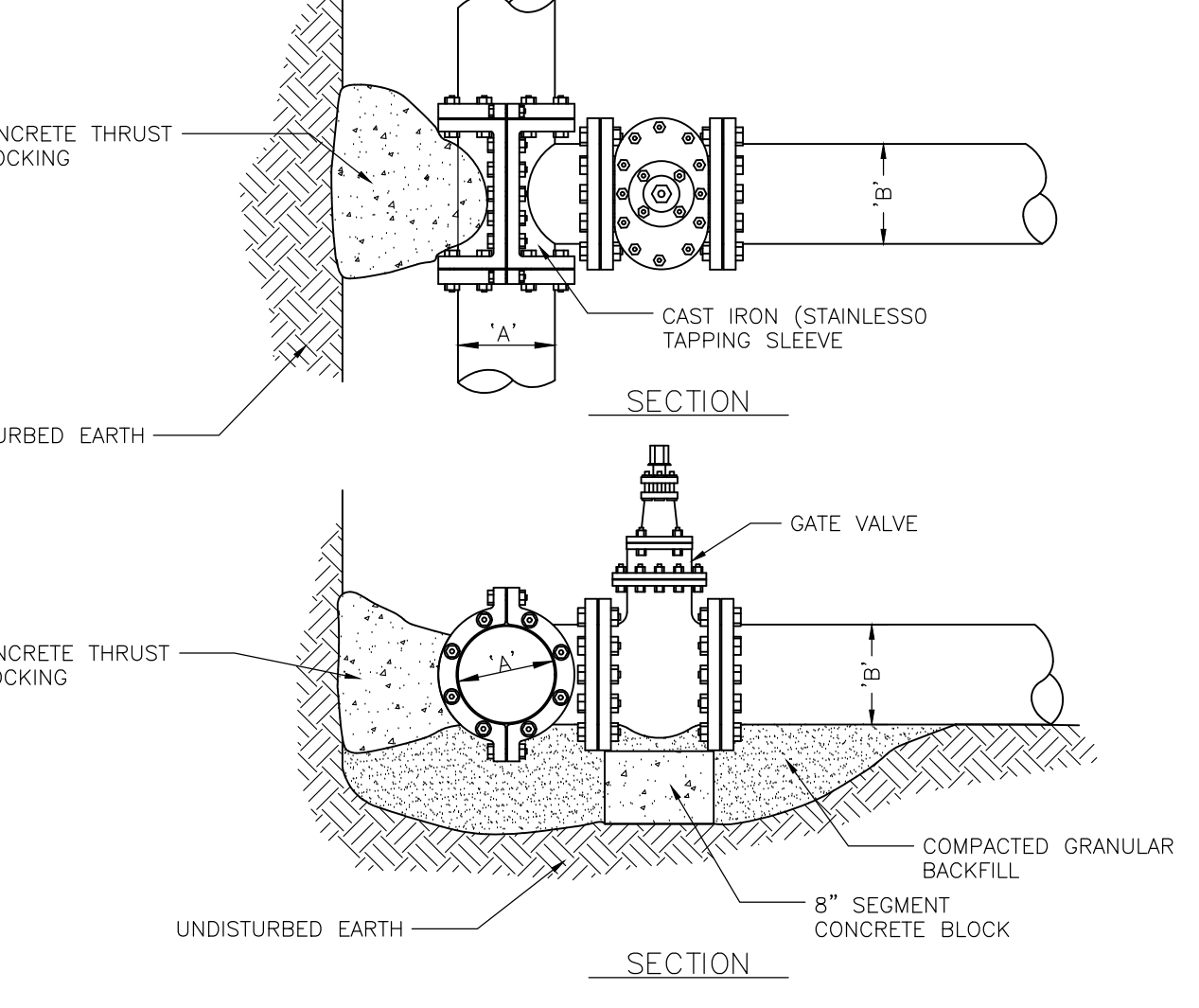
PIPE SIZE	22 1/2 BEND		45° BEND		90° BEND	
	B1	D1	B2	D2	B3	D3
6"	1'-5"	1'-5"	1'-5"	1'-5"	2'-1"	1'-6"
8"	1'-5"	1'-5"	2'-1"	1'-6"	2'-8"	2'-0"
12"	1'-10"	1'-10"	3'-4"	2'-0"	4'-9"	2'-6"
18"	3'-0"	2'-0"	3'-10"	3'-0"	6'-2"	3'-6"
20"	3'-4"	2'-8"	3'-4"	3'-4"	8'-4"	4'-0"
24"	4'-0"	3'-0"	6'-10"	3'-10"	9'-8"	5'-0"

9 THRUST BLOCK DETAIL FOR MECHANICAL PIPE BENDS  
NOT TO SCALE

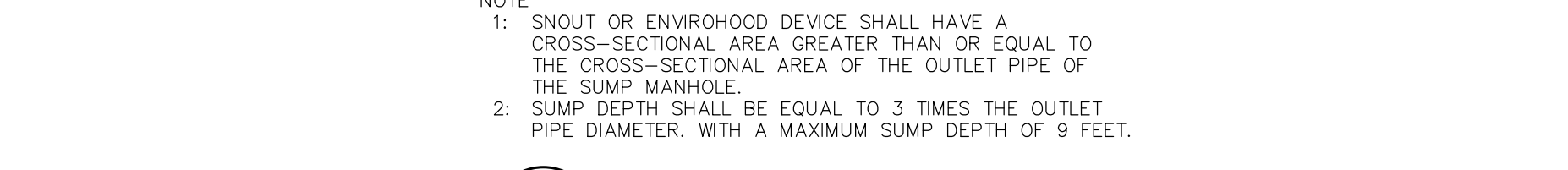
BRANCH PIPE "B"	EXISTING PIPE "A"					
	18"	16"	14"	12"	10"	8"
12"	C,D	C,D	C	C	C	C
10"	C,D	C,D	C	C	C	C
8"	C,D	C,D	C,D	C,D	C	C
6"	C,D	C,D	C,D	C,D	C,D	C
4"	C,D	C,D	C,D	C,D	C,D	C

C - CLOW F-5205, TCW A212A OR EQUAL FULL CAST IRON TAPPING SLEEVE.  
D - KENNEDY SQUARESIL OR EQUAL CAST IRON TAPPING SLEEVE.

NOTE: STAINLESS TAPPING SLEEVES ALLOWED AS EQUAL.

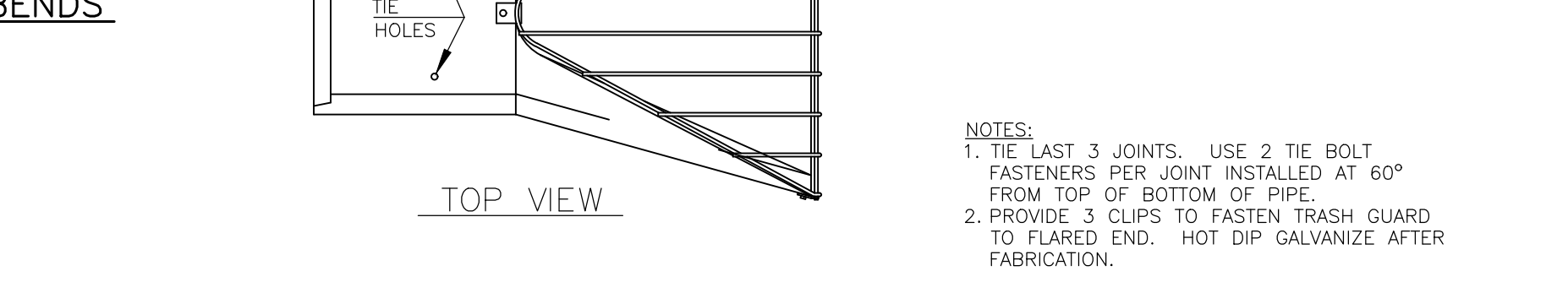


10 WATERMAIN WET TAP (TYP.)  
NOT TO SCALE



6 SUMP CATCH BASIN MANHOLE  
NOT TO SCALE

SIZE OF PIPE	RIPRAP REQUIRED	
	CU. YD.	CU. YD.
12" TO 24"	4	4
27" TO 33"	8	8
36" TO 48"	12	12
54" TO 72"	16	16

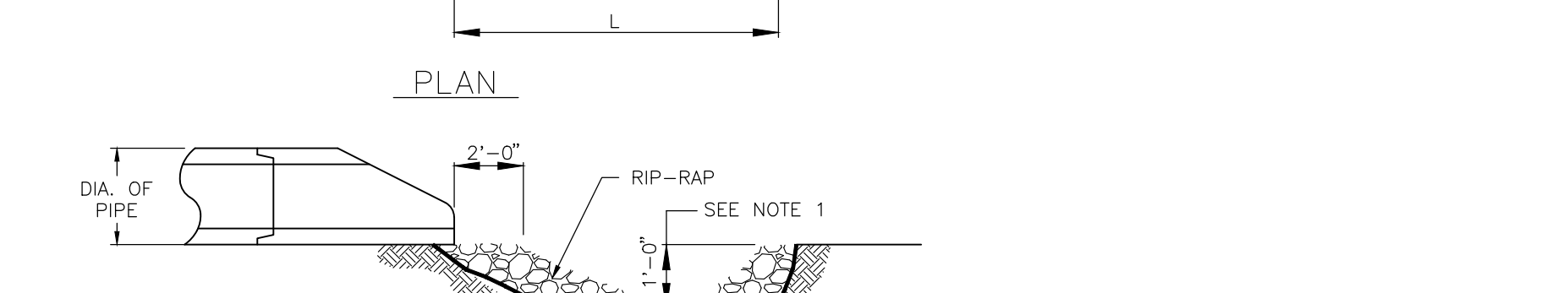


SIZE OF PIPE	TRASH GUARD		BOLTS
	BAR#	1"	
12" TO 18"	3/4"	4"	5/8"
21" TO 24"	1"	6"	3/4"
48" TO 72"	1-1/4"	12"	1"

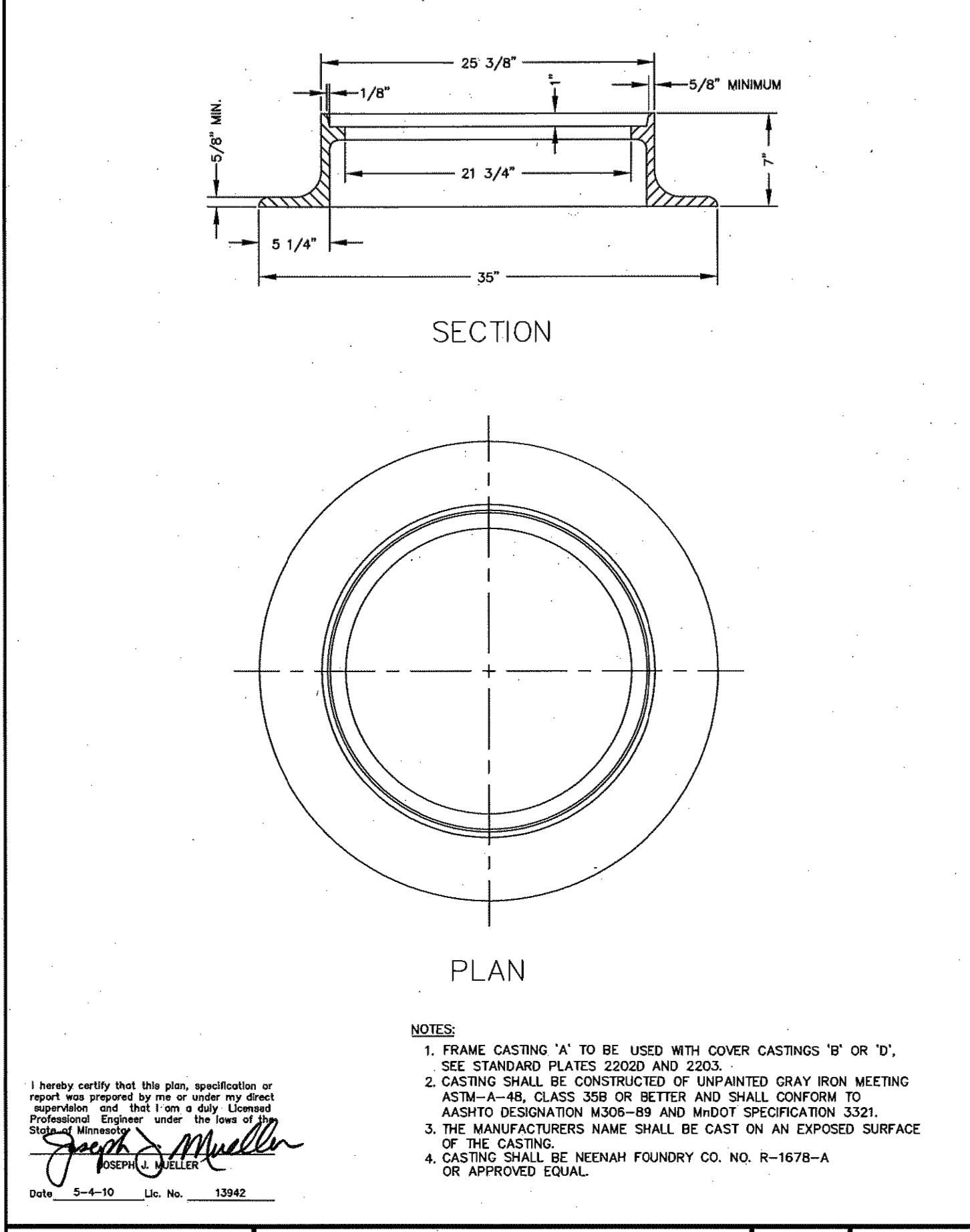


7 FLARED-END SECTION  
NOT TO SCALE

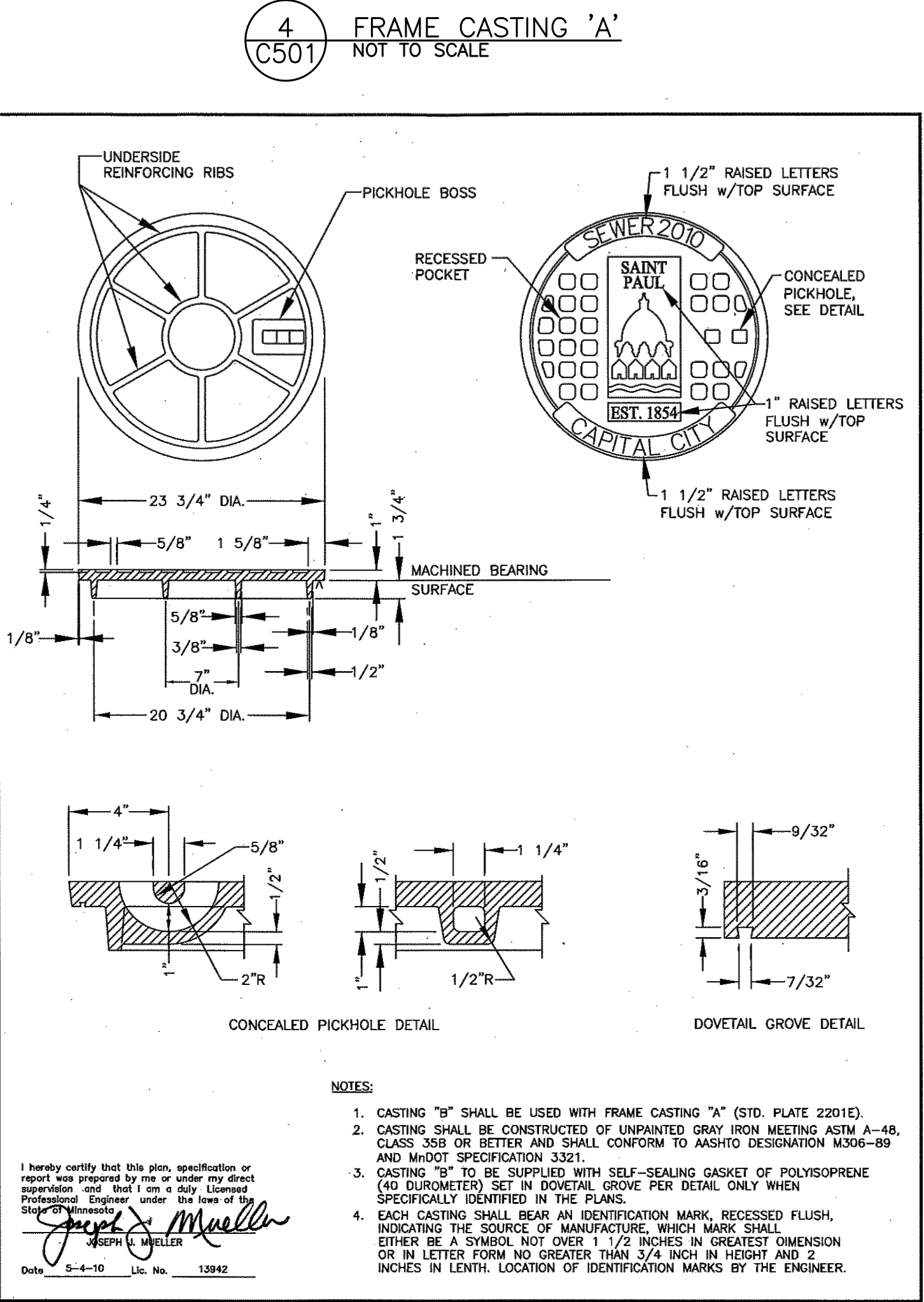
DIA. OF ROUND PIPE (IN.)	W (FT.)	L (FT.)	12" DEPTH CLASS II RIPRAP (CU. YDS.)		18" DEPTH CLASS II RIPRAP (CU. YDS.)
			W	L	
12	6.0	8	2.8	4.1	4.1
15	6.5	8	2.9	4.4	4.4
18	7.0	10	3.9	5.9	5.9
21	7.5	10	4.2	6.3	6.3
24	8.0	12	5.5	8.3	8.3
27	8.5	12	5.8	8.7	8.7
30	9.0	14	7.3	10.9	10.9
36	10.0	16	9.2	13.8	13.8
42	10.5	18	10.9	16.3	16.3
48	11.0	20	12.9	19.4	19.4



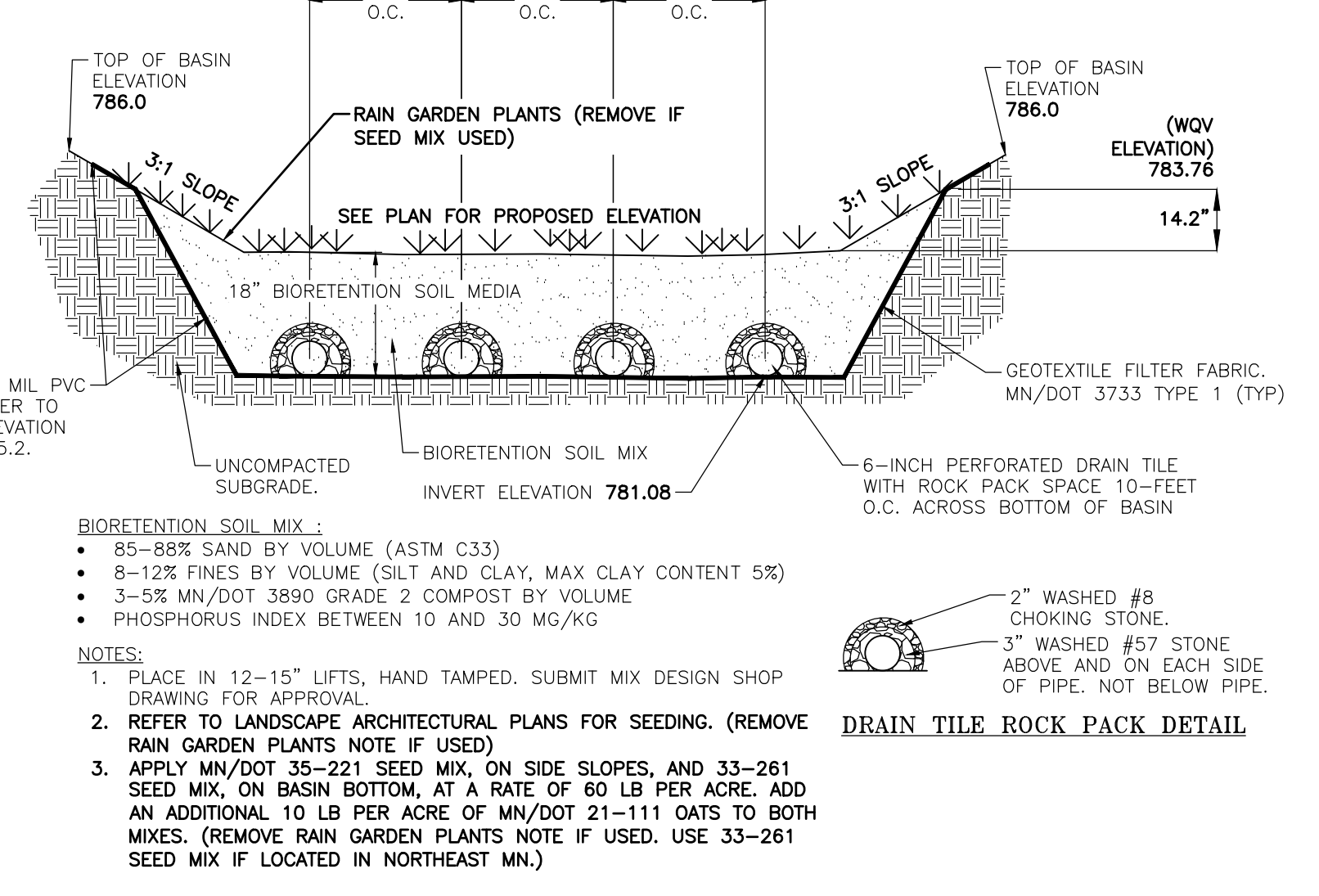
8 RIP-RAP AT FLARED ENDS  
NOT TO SCALE



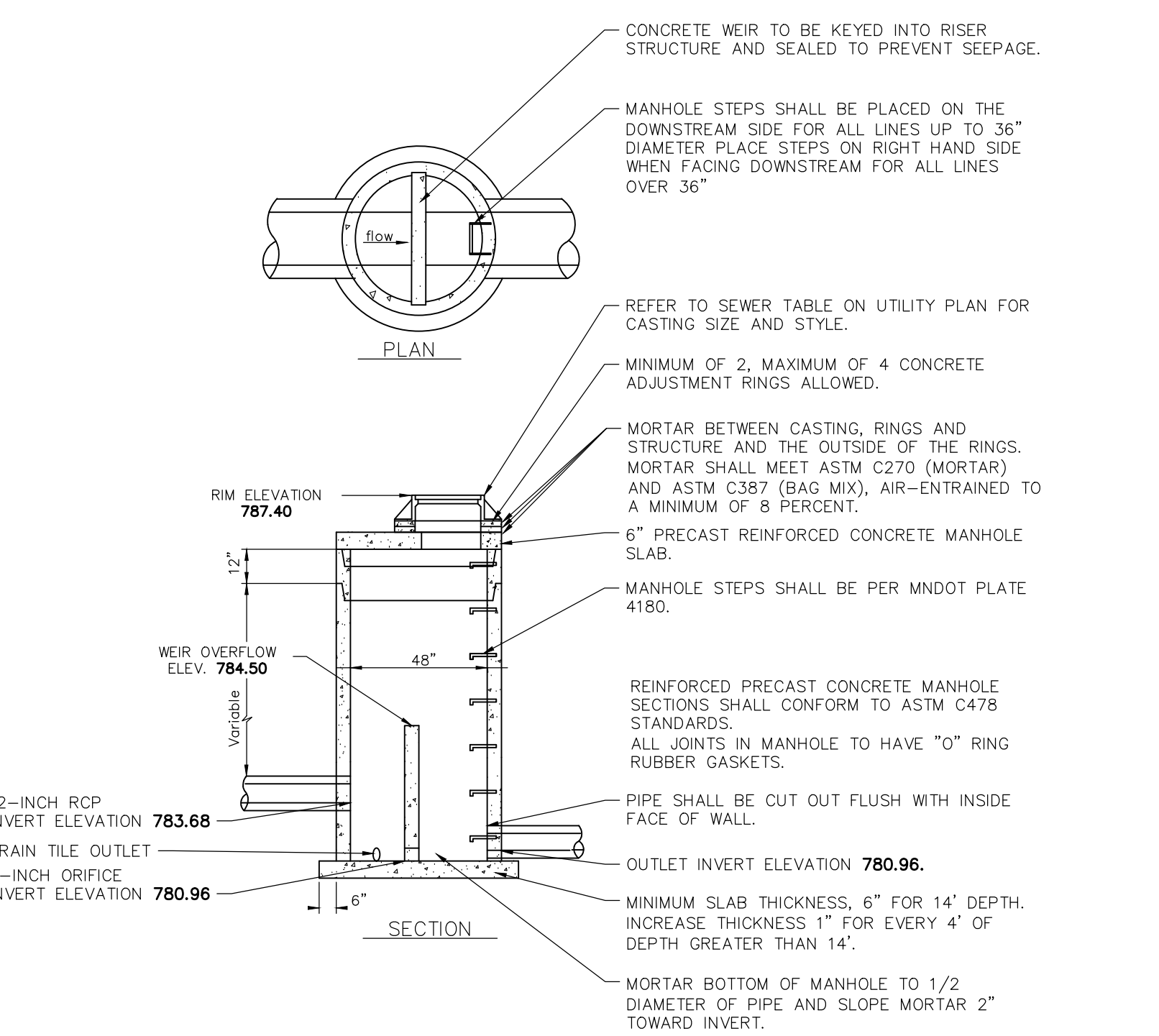
4 FRAME CASTING "A"  
NOT TO SCALE



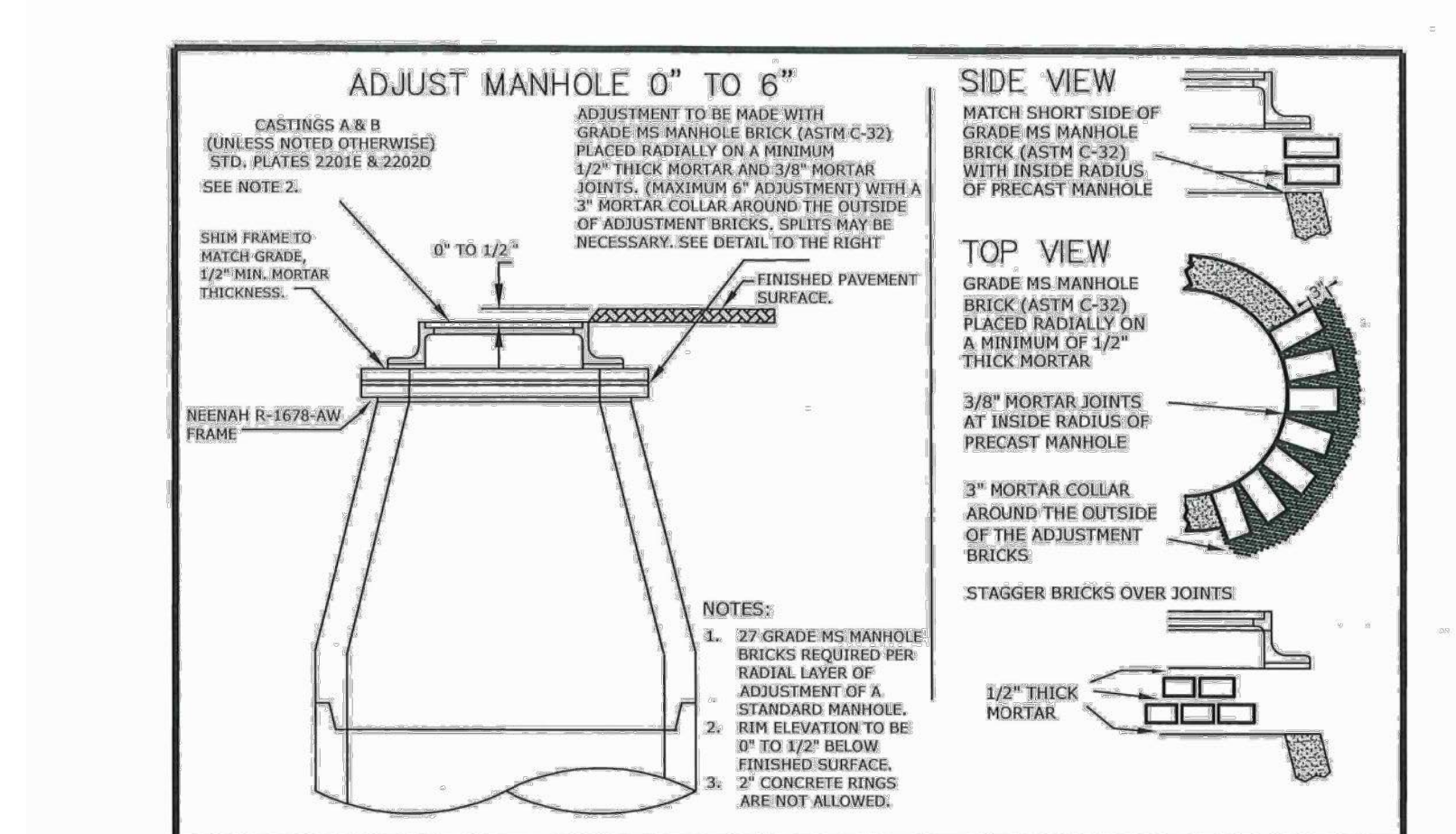
5 FRAME CASTING "B"  
NOT TO SCALE



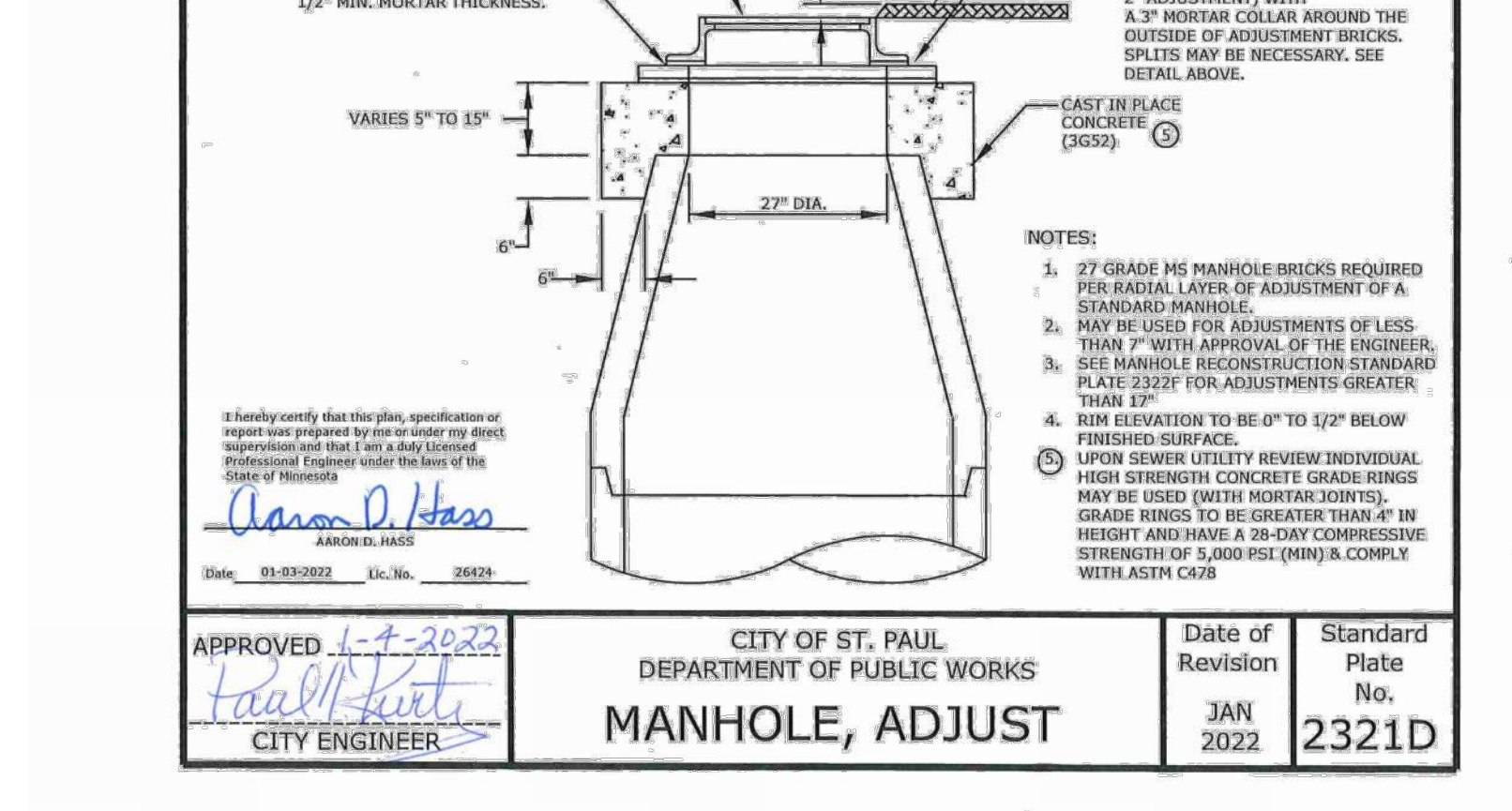
1 BIOFILTRATION BASIN DETAIL  
NOT TO SCALE



2 STORM SEWER MANHOLE WITH WEIR  
NOT TO SCALE

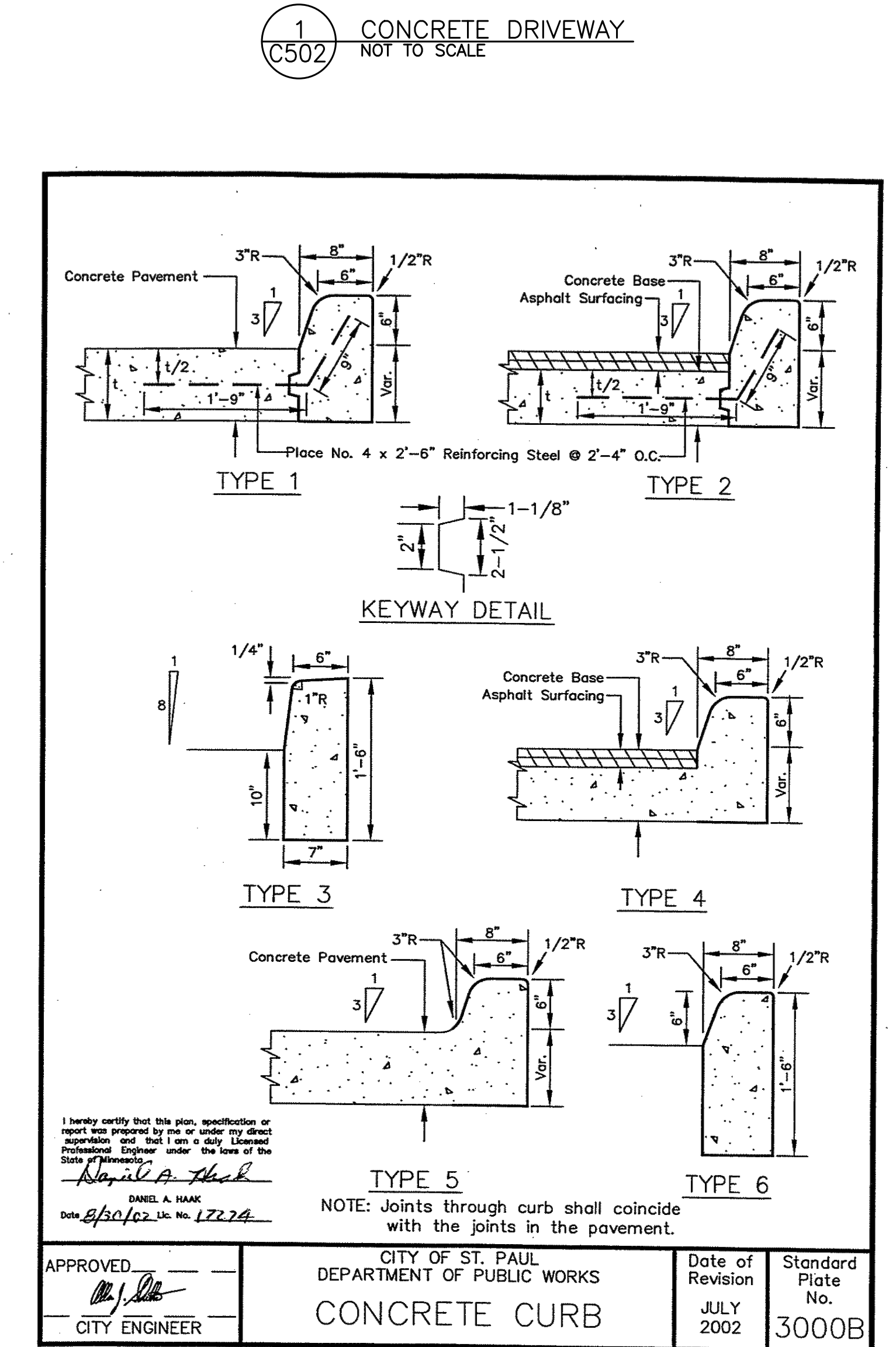
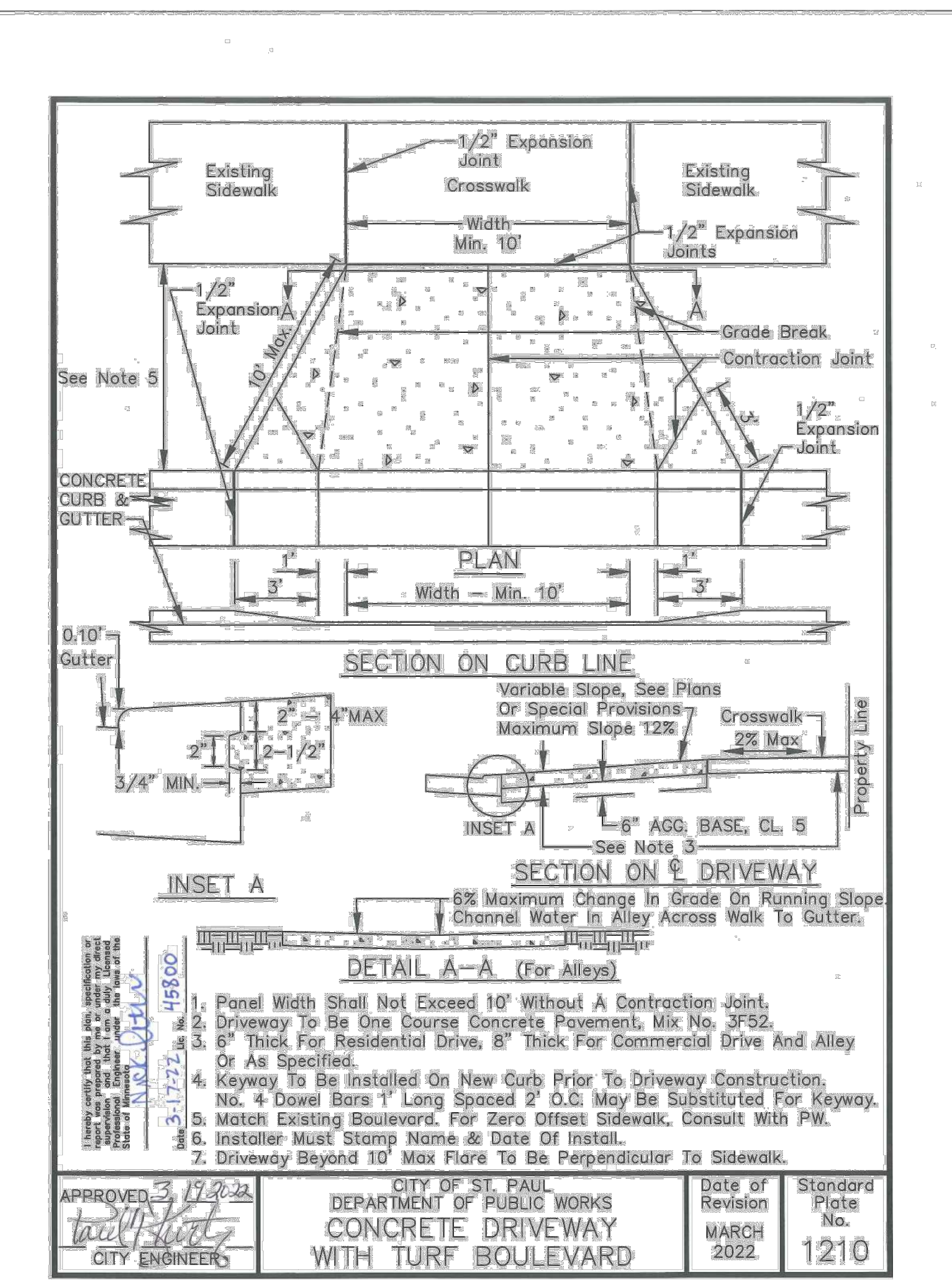
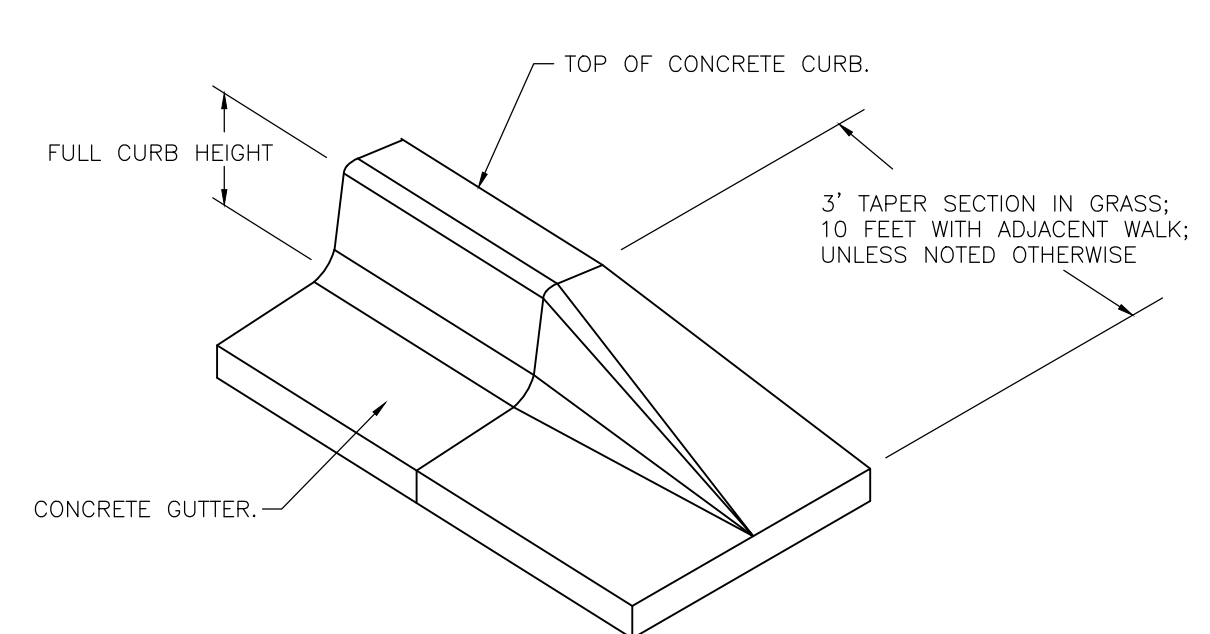
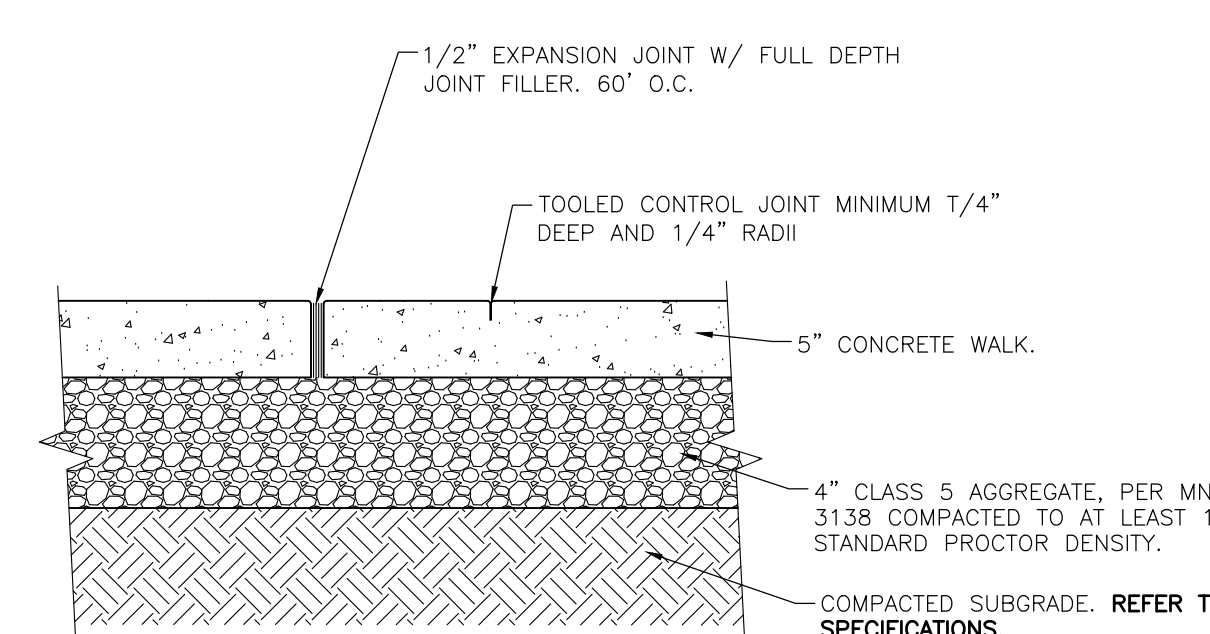
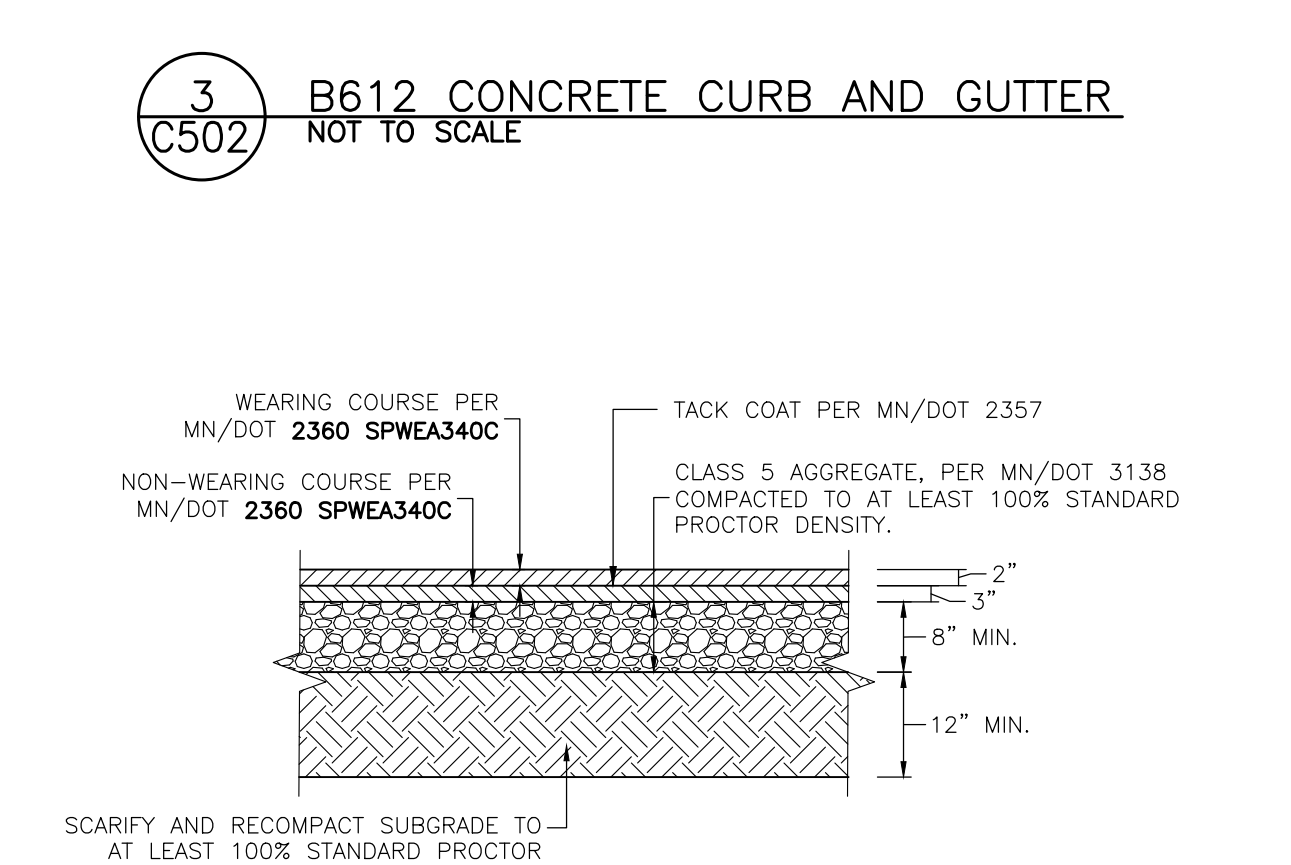
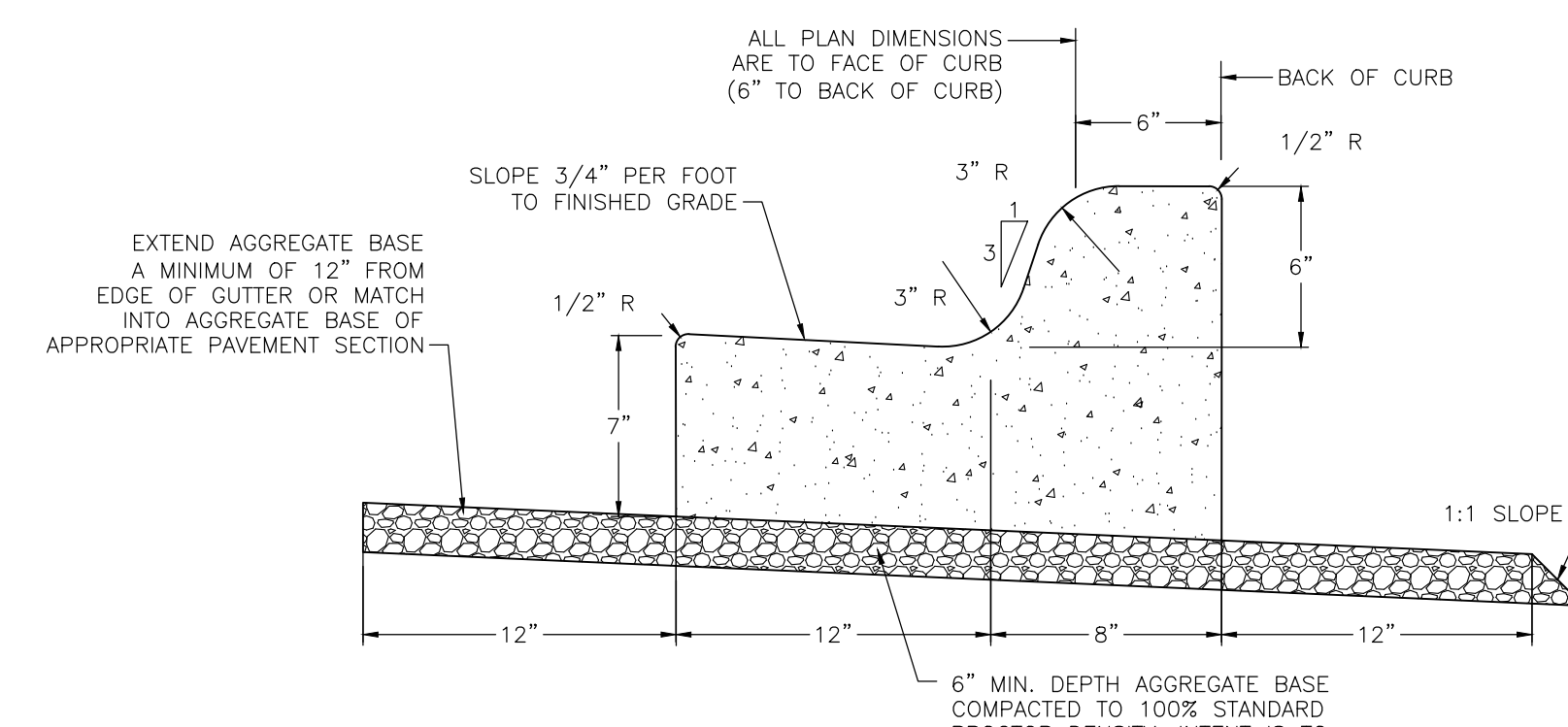
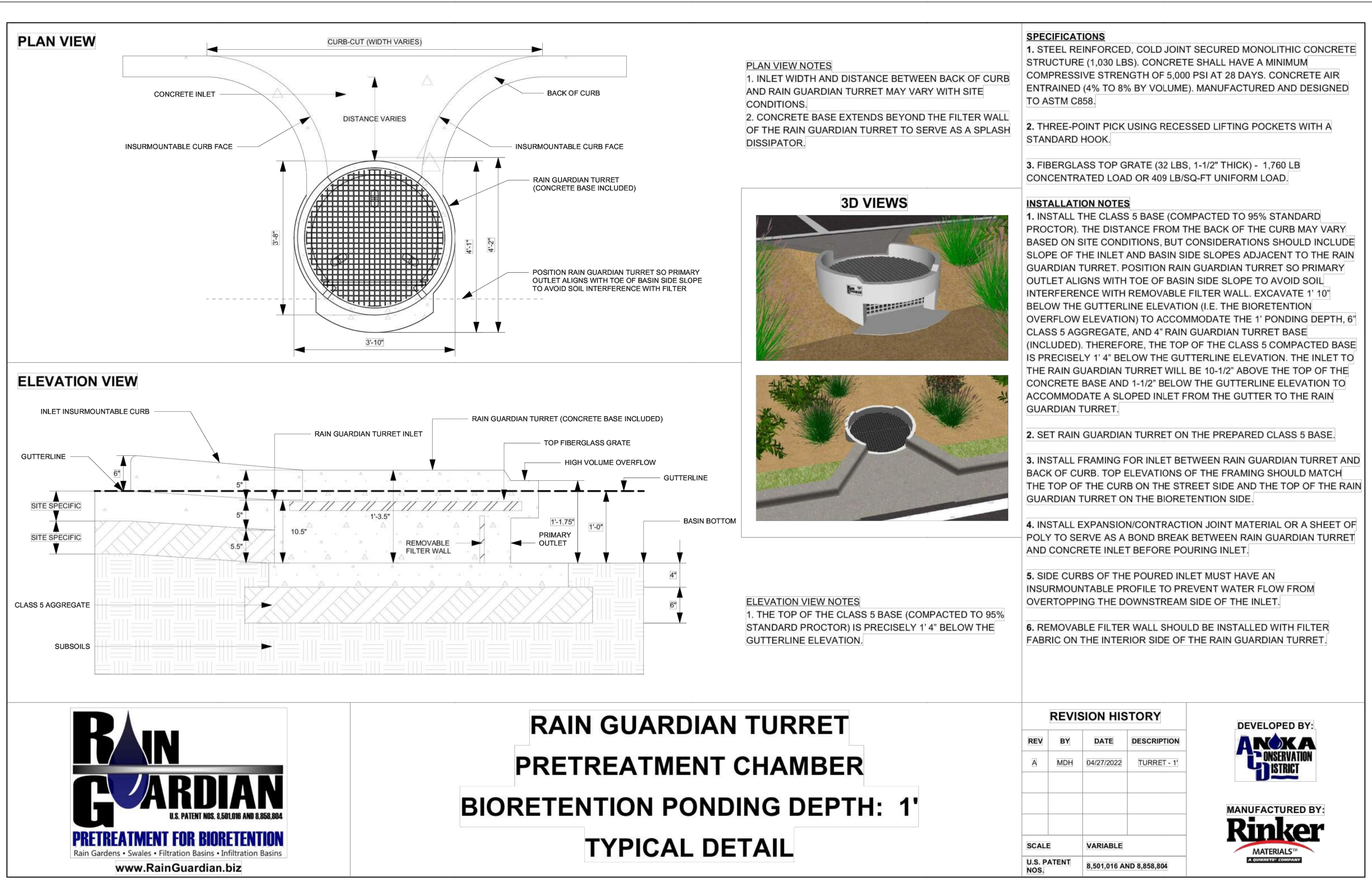


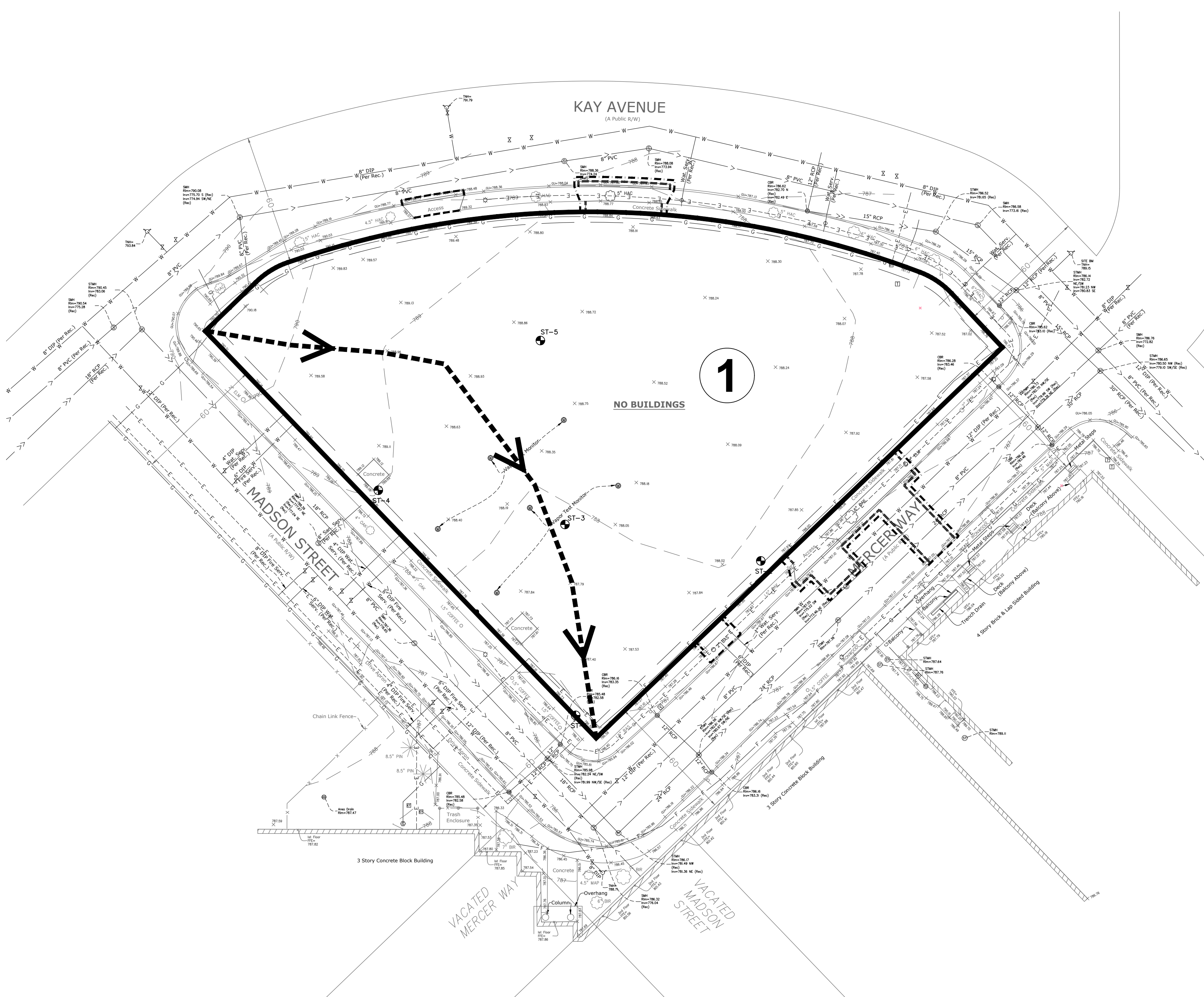
3 MANHOLE, ADJUST  
NOT TO SCALE



3 MANHOLE, ADJUST  
NOT TO SCALE







EXISTING DRAINAGE AREAS								
DRAINAGE AREA	IMPERVIOUS AREA (ACRES)	PERVIOUS AREA (ACRES)	TOTAL AREA (ACRES)	Q OUT (CFS) STORM EVENT				ROUTING
				2-YEAR (2.80")	10-YEAR (4.20")	100-YEAR (7.40")	100-YEAR 10-DAY SNOWMELT (7.20")	
1	0.01	1.14	1.14	0.37	1.72	6.11	1.36	CITY STORM SEWER IN MERCER WAY
TOTAL	0.01	1.14	1.14	0.37	1.72	6.11	1.36	

PROPOSED DRAINAGE AREAS								
DRAINAGE AREA	IMPERVIOUS AREA (ACRES)	PERVIOUS AREA (ACRES)	TOTAL AREA (ACRES)	Q OUT (CFS) STORM EVENT				ROUTING
				2-YEAR (2.81")	10-YEAR (4.20")	100-YEAR (7.46")	100-YEAR 10-DAY SNOWMELT (7.20")	
1	0.62	0.38	1.00	-	-	-	-	FILTRATION BASIN
2	0.01	0.13	0.14	0.08	0.26	0.82	0.17	
FILTRATION BASIN	-	-	-	0.10	0.27	2.21	0.78	CITY STORM SEWER IN MERCER WAY
TOTAL	0.64	0.51	1.14	0.18	0.53	3.03	0.95	

STORMWATER RUNOFF SUMMARY				
	2-YR STORM (2.81") RUNOFF (CFS)	10-YR STORM (4.20") RUNOFF (CFS)	100-YR STORM (7.46") RUNOFF (CFS)	100-YR 10-DAY SNOWMELT (7.20") RUNOFF (CFS)
EXISTING SITE	0.37	1.72	6.11	1.36
PROPOSED SITE	0.18	0.53	3.03	0.95

**INSPECTIONS**  
EXPOSED SOIL AREAS: ONCE EVERY 7 DAYS AND WITHIN 24 HOURS FOLLOWING A 1/2 INCH OVER 24 HOURS RAIN EVENT.  
STABILIZED AREAS: ONCE EVERY 30 DAYS.  
FROZEN GROUND: AS SOON AS RUNOFF OCCURS OR PRIOR TO RESUMING CONSTRUCTION.  
RECORDS: A COPY OF THE GRADING, DRAINAGE EROSION CONTROL PLAN AND WATERSHED DATA & SWPPP PLANS AS WELL AS THE INSPECTIONS/MAINTENANCE LOGS ARE TO BE KEPT EITHER IN THE FIELD OFFICE, INSPECTOR'S VEHICLE, OR CONTRACTOR'S VEHICLE.

**FINAL STABILIZATION**  
STABILIZATION BY UNIFORM PERENNIAL VEGETATIVE COVER (70% DENSITY)  
DRAINAGE DITCHES STABILIZED.  
ALL TEMPORARY SYNTHETIC AND STRUCTURAL BMP'S REMOVED.  
CLEAN OUT SEDIMENT FROM CONVEYANCES AND SEDIMENTATION BASINS (RETURN TO DESIGN CAPACITY).

**GRADING & SOILS**  
BASED ON SOIL BORING(S) PROVIDED BY BRAUN INTERIC SOILS TYPICALLY FOUND ON THIS PROJECT ARE: SM, SP, SP-SM  
REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

**SPECIAL AND IMPAIRED WATERS**  
THESE SPECIAL AND IMPAIRED WATERS ARE LOCATED WITHIN ONE MILE (AERIAL RADIUS) OF THE PROJECT LIMITS AND RECEIVE RUNOFF FROM THE PROJECT SITE. DUE TO THE PROXIMITY OF THESE SPECIAL AND IMPAIRED WATERS, THE BMP'S DESCRIBED IN SECTION 23 OF THE NPDES PERMIT WILL APPLY TO ALL AREAS OF THE SITE.

WATERBODY	IMPAIRMENT(S)
MISSISSIPPI RIVER	ADC, ADL, ADR

MINIMUM ESTIMATED QUANTITIES FOR EROSION CONTROL		
ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT
DRAINAGE STRUCT. INLET FILTER	6	EACH
ROCK CONSTRUCTION ENTRANCE	1	EACH
CONCRETE WASHOUT	1	EACH
PERIMETER EROSION CONTROL	1209	LF
EROSION CONTROL BLANKET	5970	SY

NOTE: QUANTITIES SHOWN ARE THE MINIMUM REQUIRED. ADDITIONAL QUANTITIES MAY BE NEEDED IF REQUIRED BY THE MPCA, WATERSHED DISTRICT, OR CITY. CONTRACTOR IS RESPONSIBLE FOR FINAL DETERMINATION OF QUANTITIES PRIOR TO CONSTRUCTION.

**CONSTRUCTION ACTIVITY EROSION PREVENTION PRACTICES**  
CONTRACTOR SHALL STABILIZE ALL EXPOSED SOIL AREAS (INCLUDING STOCKPILES). STABILIZATION MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS. STABILIZATION MUST BE COMPLETED NO LATER THAN 7 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.  
FOR PUBLIC WATER, THE DNR HAS PROMULGATED "WORK IN WATER RESTRICTIONS" THAT ARE CERTIFIED IN THE DESIGN OF WATERS. WATERS MUST COMPLETE THE STABILIZATION ACTIVITIES WITHIN 24 HOURS DURING THE RESTRICTION PERIOD.  
PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.  
SEDIMENT CONTROL MEASURES MUST BE INSTALLED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADIENT LAND DISTURBING ACTIVITIES BEGIN.

**SEDIMENT AND EROSION CONTROL MAINTENANCE**  
PERIMETER SEDIMENT CONTROL PRACTICES: WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE BMP, THE SEDIMENT MUST BE REMOVED WITHIN 24 HOURS. IF PERIMETER SEDIMENT CONTROL HAS BEEN DAMAGED OR IS NOT FUNCTIONING PROPERLY, IT MUST BE REPAIRED AND/OR REPLACED WITHIN 24 HOURS. PERIMETER BMP MEASURES MAY INCLUDE SILT FENCING.  
CONSTRUCTION SITE VEHICLE EXIT LOCATIONS: ALL TRACKED SEDIMENT ONTO PAVED SURFACES MUST BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR MORE FREQUENTLY IF REQUIRED BY CITY OR WATERSHED.  
CONSTRUCTION SITE DEWATERING: THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL DEWATERING PERMITS. DISCHARGE FROM ALL DEWATERING OPERATIONS SHALL BE DIRECTED TO ON-SITE DEPRESSIONS. NO DISCHARGE FROM DEWATERING OPERATIONS SHALL BE DIRECTED OFF-SITE TOWARDS A WATER OF THE STATE.

**PORTABLE TOILET NOTES:**  
1. PORTABLE TOILETS PLACE AN ENVIRONMENTAL HAZARD WHEN POSED IN THE VICINITY OF STORM DRAINS OR BODIES OF WATER. PORTABLE TOILET CLEANING ACTIVITIES CAN ALSO GENERATE POLLUTANTS THAT CAN DEGRADE WATER QUALITY.  
2. PORTABLE TOILET PLACEMENT:  
2.1. PLACE PORTABLE TOILETS ON FLAT STABLE GROUND WITH CLEAR ACCESS TO THE UNITS.  
2.2. LOCATE TOILETS A MINIMUM OF 20 FEET FROM ANY WATER BODY AND 10 FEET FROM ANY CURB AND GUTTER. IF UNFEASIBLE, AN EASTERN BERM OR SAND BAG BERM SHALL BE PLACED AROUND THE UNIT FOR SPILL AND LEAK CONTAINMENT.  
2.3. AVOID PLACING TOILETS ON IMPERVIOUS SURFACES THAT WILL QUICKLY DRAIN TO STORM SEWERS.  
2.4. LOCATE TOILETS SO THAT EXPOSURE TO TRAFFIC AND MOVING EQUIPMENT IS MINIMIZED.  
2.5. SECURE TOILETS TO THE GROUND WITH STRAPS OR CABLES.  
2.6. RINSE WATER FROM CLEANING ACTIVITIES SHALL NOT BE DISPOSED ON SITE.  
3. REGULARLY CHECK TOILETS FOR DAMAGE, LEAKS AND SPILLS AS PART OF THE WEEKLY STORMWATER SITE INSPECTION.  
4. OWNER IDENTIFICATION AND CONTACT INFORMATION SHALL BE DISPLAYED IN A PROMINENT LOCATION ON EACH UNIT.

**NOTE:**  
THE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT INCLUDES THE CIVIL ENGINEERING PLANS AND THE PROJECT MANUAL.  
CONTRACTOR SHALL SUPPLY CONSTRUCTION PHASING NARRATIVE, ESTIMATED PRELIMINARY QUANTITIES OF ALL EROSION PREVENTION AND SEDIMENT CONTROL BMP'S ANTICIPATED AT THE START OF THE PROJECT AND FOR THE LIFE OF THE PROJECT, AND LOCATION OF AREAS WHERE CONSTRUCTION WILL BE PHASED TO MINIMIZE DURATION OF EXPOSED SOIL AREAS. CONTRACTOR IS TO REVIEW MINNESOTA POLLUTION CONTROL AGENCIES' INSTRUCTIONS FOR THE APPLICATION FOR MINNESOTA'S NPDES/SDS GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY PRIOR TO SUBMITTING APPLICATION.

**HANDLING AND STORAGE OF HAZARDOUS MATERIALS:**  
IF THE CONTRACTOR INTENDS TO USE POLYMERS, FLOCCULANTS, OR OTHER SEDIMENTATION TREATMENT CHEMICALS ON THE PROJECT SITE, THE CONTRACTOR MUST COMPLY WITH THE FOLLOWING MINIMUM REQUIREMENTS:  
1. THE CONTRACTOR MUST USE CONVENTIONAL EROSION AND SEDIMENT CONTROLS PRIOR TO CHEMICAL ADDITION TO ENSURE EFFECTIVE TREATMENT. CHEMICALS MAY ONLY BE APPLIED WHERE TREATED STORMWATER IS DIRECTED TO A SEDIMENT CONTROL SYSTEM WHICH ALLOWS FOR FILTRATION OR SETTLEMENT OF THE FLOC PRIOR TO DISCHARGE.  
2. CHEMICALS MUST BE SELECTED THAT ARE APPROPRIATELY SUITED TO THE TYPES OF SOILS LIKELY TO BE EXPOSED DURING CONSTRUCTION, AND TO THE EXPECTED TURBIDITY, PH, AND FLOW RATE OF STORMWATER FLOWING INTO THE CHEMICAL TREATMENT SYSTEM OR AREA.  
3. CHEMICALS MUST BE USED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES, AND WITH DOSING SPECIFICATIONS AND SEDIMENT REMOVAL DESIGN SPECIFICATIONS PROVIDED BY THE MANUFACTURER OR PROVIDER/SUPPLIER OF THE APPLICABLE CHEMICALS.  
ON-SITE FUEL TANKS REQUIRE SECONDARY CONTAINMENT AS REQUIRED BY THE PERMIT. PORTABLE FUEL TANKS SHALL HAVE THEIR SPILL KITS AVAILABLE DURING FUELING. SPILLS GREATER THAN 5 GALLONS MUST BE REPORTED TO THE PROPER AUTHORITIES.

**PROJECT NARRATIVE**  
EXISTING SITE DESCRIPTION --- THE EXISTING SITE IS APPROXIMATELY 1 ACRE IN SIZE AND IS UNDEVELOPED. STORMWATER RUNOFF GENERALLY SHEET DRAINS FROM NORTHWEST TO SOUTHEAST AND ENTERS EXISTING PUBLIC STORM SEWER IN MERCER WAY.  
PROPOSED SITE DESCRIPTION --- THE PROPOSED WORK CONSISTS OF A NEW BUILDING, BITUMINOUS PARKING LOT, SIDEWALKS, AND GREEN SPACES, AND IS EXPECTED TO CREATE 0.63 ACRES OF NEW IMPERVIOUS AREA. STORMWATER MANAGEMENT WILL BE PROVIDED BY A PROPOSED FILTRATION BASIN IN THE NORTHWEST CORNER OF THE SITE. DISCHARGE FROM THE PROPOSED FILTRATION BASIN WILL BE INTO EXISTING PUBLIC STORM SEWER IN MERCER WAY.

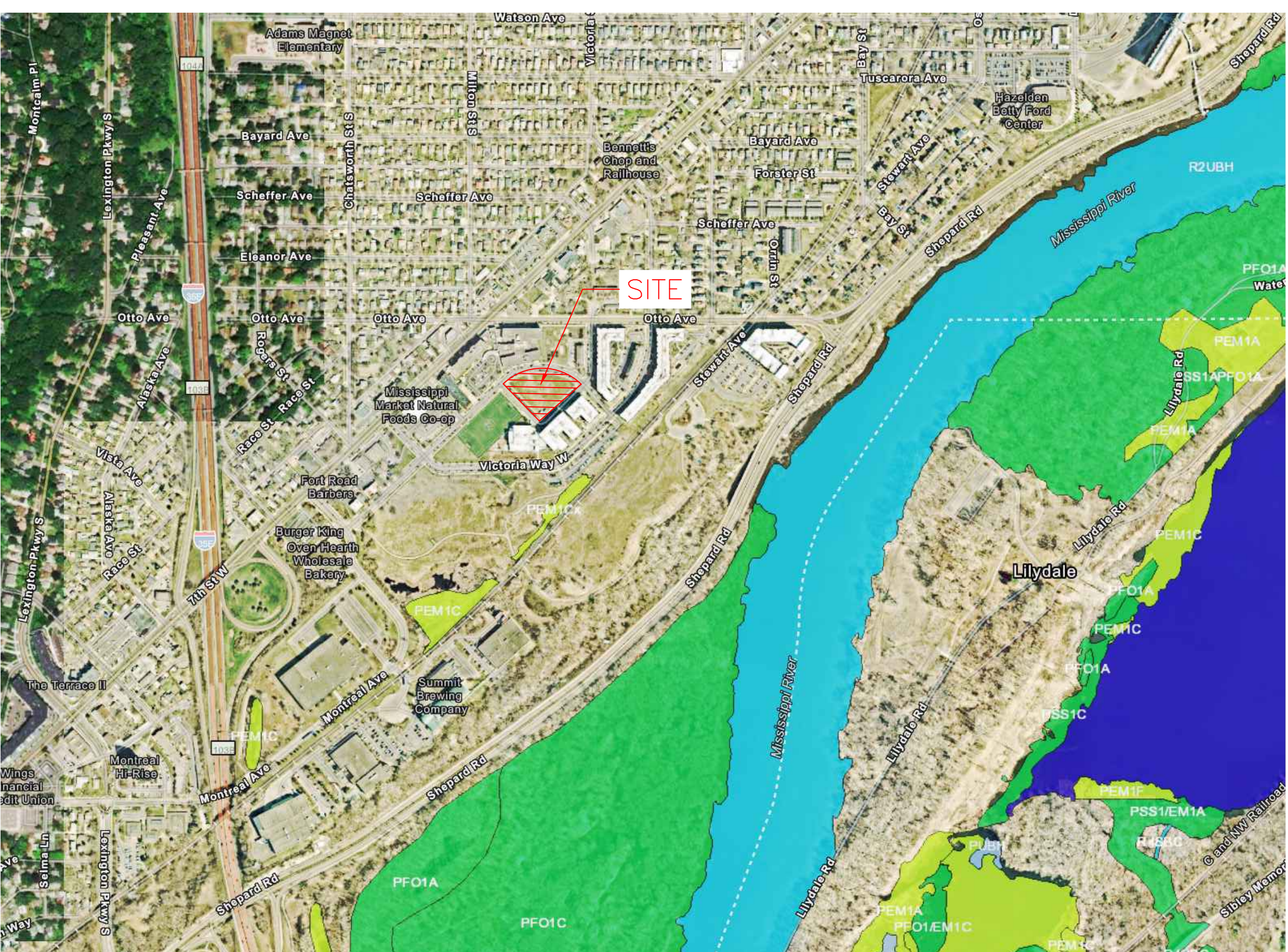
**OTHER NOTES:**  
1. LONG TERM MAINTENANCE OF THE SITE WILL BE PERFORMED BY THE OWNER, NOVA CLASSICAL ACADEMY. INCLUDED MAINTENANCE FOR STORMWATER DEVICES SHALL BE:  
1.1. INSPECT SUMP CATCH BASIN ON A BIENNIAL BASIS, ONCE IN THE SPRING AND ONCE IN THE FALL.  
1.2. CLEAN SUMP CATCH BASIN OF SEDIMENT AND DEBRIS ANNUALLY OR WHEN SEDIMENTS FILL 1/2 OF THE STORAGE VOLUME.  
1.3. CLEAN DEBRIS FROM BIOFILTRATION BASIN ANNUALLY.  
1.4. REMOVE RAIN GUARDIAN FILTER, WASH FILTER AND REINSTALL, ONCE IN THE SPRING AND ONCE IN THE FALL.  
2. THIS SWPPP WAS PREPARED BY PERSONNEL THAT ARE CERTIFIED IN THE DESIGN OF CONSTRUCTION SWPPPS. COPIES OF THE CERTIFICATIONS ARE ON FILE WITH BKBM AND ARE AVAILABLE UPON REQUEST.  
3. THIS SWPPP DOCUMENT MUST BE AMENDED AS NECESSARY DURING CONSTRUCTION IN ORDER TO KEEP IT CURRENT WITH THE POLYMER CONTROL MEASURES UTILIZED AS THE SITE. THE SITE MAP SHOWING LOCATIONS OF ALL STORM WATER CONTROLS MUST BE POSTED ON THE SITE AND UPDATED TO REFLECT THE PROGRESS OF CONSTRUCTION.

**POLLUTION PREVENTION MANAGEMENT MEASURES**  
SOLID WASTE DISPOSED PROPERLY, COMPLY WITH MPCA REQUIREMENTS.  
HAZARDOUS WASTE STORED (SECONDARY CONTAINMENT, RESTRICTED ACCESS) AND DISPOSED IN COMPLIANCE WITH MPCA REQUIREMENTS.  
NO EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION ALLOWED ON-SITE.  
CONCRETE WASHOUT ON-SITE: ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LIQUID CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER THAT DOES NOT ALLOW LIQUIDS TO ENTER GROUND WATER IS CONSIDERED AN IMPERMEABLE LINER. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.  
THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION IN ACCORDANCE WITH MPCA REQUIREMENTS.  
STORAGE HANDLING AND DISPOSAL OF WASTES:  
BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS MUST BE UNDER COVER.  
PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS MUST BE UNDER COVER.  
HAZARDOUS MATERIALS, TOXIC WASTE (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, SOLVENTS, FETTEROLIM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ADHESIVES) MUST BE PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGES.

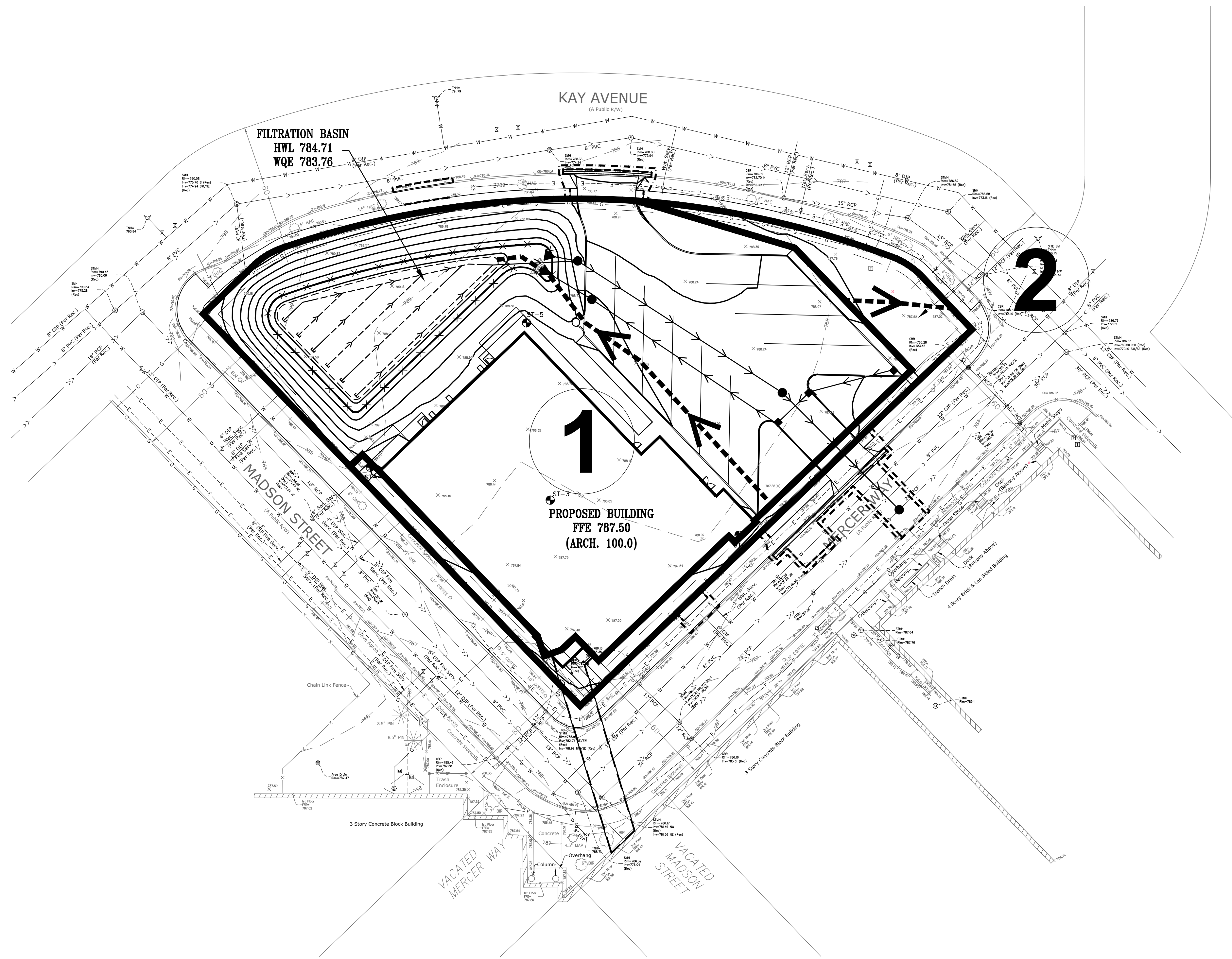
**MECHANICAL AND NON STORMWATER DISCHARGES, EXISTING AND PROPOSED**  
1. LANDSCAPE IRRIGATION  
2. DISCHARGE FROM POTABLE WATER SOURCES  
3. FOUNDATION GRABNS  
4. AIR CONDITIONING CONDENSATION

**AGENCY CONTACTS**  
CITY OF ST. PAUL  
ENGINEERING DEPARTMENT  
PHONE: (651) 266-6270  
  
MINNESOTA POLLUTION CONTROL AGENCY  
PHONE: (651) 296-6300  
  
CAPITOL REGION WATERSHED DISTRICT  
PHONE: (651) 644-8888  
  
OWNER  
NOVA CLASSICAL ACADEMY  
1455 VICTORIA WAY  
ST. PAUL, MN 55102  
PHONE: (651) 209-6320

**NOTE:**  
THE CONTRACTOR IS RESPONSIBLE FOR AN AS-BUILT SURVEY OF ALL STORMWATER BMP'S (FILTRATION BASIN, OUTLET STRUCTURES, DRAIN TILE SUMP CATCH BASINS, ETC.). THE AS-BUILT SHALL BE SUBMITTED TO CAPITOL REGION WATERSHED DISTRICT PRIOR TO PROJECT CLOSURE. THE AS-BUILT SURVEY SHALL INCLUDE THE FILTRATION BASIN DRAIN TILE INVERTS AND LAYOUT FOR VERIFICATION THAT THE SYSTEM WAS INSTALLED PROPERLY AND THAT 23-INCHES OF SAND/FILTRATION MIX OVER THE TOP OF THE DRAIN TILE HAS BEEN PROVIDED. THE OWNER'S SURVEY MONEY FOR THE WATERSHED'S PERMIT WILL NOT BE RETURNED UNTIL THE CONTRACTOR PROVIDES THIS INFORMATION TO THE WATERSHED DISTRICT.



VICINITY MAP  
ST. PAUL, MINNESOTA

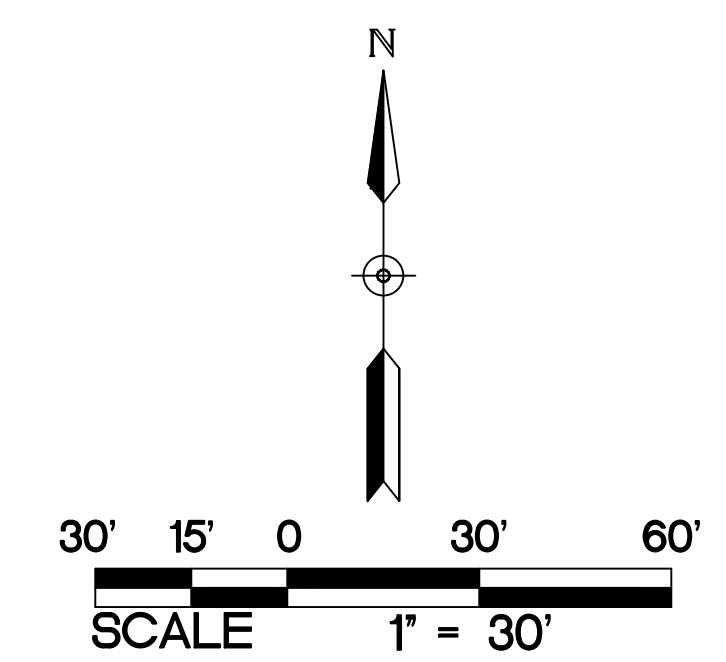


1

PROPOSED BUILDING  
FFE 787.50  
(ARCH. 100.0)

2

1  
C601 1" = 30'



**BLOOM  
HAY DOBBS**

Midwest Commercial  
2324 University Ave. W.  
Suite 205  
St. Paul, MN 55114  
Tel. 612.338.4090

NOVA CLASSICAL ACADEMY  
1455 VICTORIA WAY  
ST. PAUL, MN 55102

CONSULTANT

**BKBM** 6120 Earle Brown Drive  
Suite 700 Minneapolis,  
MN 55420 Phone: 763.843.0420  
Structural & Civil Engineers 763.843.0420  
bkbm.com

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BKBM Project No. 24426-5

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008-003  
Date: 05/07/2025  
BKBM Project Number: 24426-50

I HEREBY CERTIFY THAT THIS PLAN,  
SPECIFICATION OR REPORT WAS PREPARED BY ME  
OR UNDER MY DIRECT SUPERVISION AND THAT I AM  
A DULY LICENSED PROFESSIONAL ENGINEER UNDER  
THE LAWS OF THE STATE OF MINNESOTA.

JOEL W. MAIER  
PRINT NAME  
SIGNATURE  
19181  
LICENSE NO.  
05/07/2025  
DATE

**DD  
DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**STORM WATER POLLUTION  
PREVENTION PLAN**

SHEET NUMBER:  
**C601**

NOVA CLASSICAL ACADEMY, P.A.  
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**PROJECT NARRATIVE**  
 THIS PROJECT IS PROVIDING ADDITIONAL SPACE ON THE NOVA CLASSICAL ACADEMY CAMPUS. THE PROJECT WILL ADD A NEW OPEN RECREATION/FLEXIBLE TEACHING SPACE, WHICH IS DESIGNED AS AN ICC 500 COMPLIANT STORM SHELTER, AS WELL AS A HOST BUILDING WITH STAFF AND ADMINISTRATIVE OFFICES, A LARGE MEETING SEMINAR ROOM AND OTHER ADDITIONAL SUPPORT SPACES. THIS PROJECT ALSO INCLUDES A PEDESTRIAN SKYWAY BRIDGE TO CONNECT THE NEW BUILDING TO THE EXISTING NOVA CLASSICAL ACADEMY BUILDING, AS WELL AS MINOR INTERIOR RENOVATIONS WITHIN THE EXISTING BUILDING. NO ADDITIONAL SQUARE FOOTAGE IS BEING ADDED TO THE EXISTING NOVA CLASSICAL ACADEMY BUILDING AS A RESULT OF THIS PROJECT.

**APPLICABLE CODES**  
 2020 MN STATE BUILDING CODE  
 2024 MN COMMERCIAL ENGERY CODE (ASHRE 90.1- 2019 WITH MN AMENDMENTS)  
 2020 MN ACCESSIBILITY CODE  
 2020 MN MECHANICAL CODE  
 2020 MN ELECTRICAL CODE  
 2020 MN PLUMBING CODE  
 2020 MN STATE FIRE CODE  
 2020 MN CONSERVATION CODE FOR EXISTING BUILDINGS  
 ICC 500 - 2014

**CONSTRUCTION CLASSIFICATION**  
 TYPE IIB CONSTRUCTION

**BUILDING OCCUPANCY CLASSIFICATION AND USE**

**GROUP E OCCUPANCY**  
 IN ACCORDANCE WITH 303.1.3 - A ROOM OR SPACE USED FOR ASSEMBLY PURPOSES THAT IS ASSOCIATED WITH A GROUP E OCCUPANCY IS NOT CONSIDERED A SEPARATE OCCUPANCY

**GENERAL BUILDING HEIGHTS AND AREAS SUMMARY (EXISTING)**  
 THE EXISTING NOVA CLASSICAL ACADEMY BUILDING WAS CONSTRUCTED IN 2011/2012 AND WAS DESIGNED BY RIVERA ARCHITECTS. THE EXISTING BUILDING IS DESIGNED AS A TYPE IIB, E-OCCUPANCY BUILDING. THE CODE PLAN ON FILE FROM THE EXISTING DOCUMENTS INDICATES THAT THE BUILDING WAS WITHIN THE ALLOWABLE AREA AT THE TIME OF DESIGN/CONSTRUCTION. THE CODE PLAN ISSUED IN THE 2011 DOCUMENT SET IDENTIFIES COMPLIANCE WITH THE 2007 MINNESOTA STATE BUILDING CODE, ACCORDING TO THE BUILDING HEIGHTS AND AREA SUMMARY, THE EXISTING BUILDING IS 44,420SF ON THE FIRST FLOOR, 22,392SF FOR FLOORS 2 AND 3, WITH AN ALLOWABLE AREA PER FLOOR IS 51,620SF (ACCORDING TO THE CODE PLAN CALCULATIONS). THE ALLOWABLE NUMBER OF STORIES IS IDENTIFIED ON THE CODE SHEET AS 3 (2 + 1 FLOOR SPRINKLER INCREASE), THE EXISTING BUILDING IS 3 STORIES. BASED ON A CURSORY REVIEW, THE EXISTING BUILDING REMAINS COMPLIANT WITH CURRENT (2020 MSBC) BUILDING HEIGHTS AND AREAS FOR TYPE IIB CONSTRUCTION WITH A GROUP E OCCUPANCY (43,500SF TABULAR + 8,120SF FRONTAGE INCREASE = 51,620SF ALLOWABLE PER STORY).

**GENERAL BUILDING HEIGHTS AND AREAS (NEW)**

IN ACCORDANCE WITH SECTION 510.2, NEW CONSTRUCTION IS HORIZONTALLY SEPARATED FROM THE EXISTING BUILDING BY A FIRE WALL. THE IDENTIFIED FIRE WALL IS 2HR RATED IN ACCORDANCE WITH TABLE 706.4 NOTE "a"

**ALLOWABLE HEIGHT (TABLE 504.3)**  
 ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE FOR SPRINKLERED **TYPE IIB** CONSTRUCTION FOR OCCUPANCY CLASSIFICATION **E: 75 FEET**  
 ACTUAL HEIGHT OF ## FEET IS LESS THAN 75 FEET

**ALLOWABLE NUMBER OF STORIES (TABLE 504.4)**  
 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE FOR SPRINKLERED **TYPE IIB** CONSTRUCTION FOR OCCUPANCY CLASSIFICATION **E: 3 STORIES**  
 ACTUAL STORIES OF 2 STORIES IS LESS THAN 3 STORIES ALLOWED

**ALLOWABLE AREA (TABLE 506.2)**  
 PROPOSED BUILDING IS MORE THAN ONE STORY. AREAS NOTED IN TABLE 506.2 WILL BE USED  
 ALLOWABLE BUILDING AREA FACTOR FOR SPRINKLERED **TYPE IIB** CONSTRUCTION FOR OCCUPANCY CLASSIFICATION **E S1: 43,500SF**

**FRONTAGE INCREASE (506.3)**  
 $I_f = (F/P - .25) W/30$   
 $.68 = [678/(723 - 25)] 30/30$

**ALLOWABLE AREA DETERMINATION (506.2.3 SINGLE-OCCUPANCY, MULTISTORY BUILDINGS)**  
 $A_a = [A_f + (N_S \times I_f)] \times S_a$   
 $160,080sf = [43,500sf + (14,500sf \times .68)] \times 3$

**ACTUAL AREA:**  
 FLOOR 1: 14,109 sf  
 FLOOR 2: 14,254 sf  
 SKYWAY: 1,346 sf  
 TOTAL: 29,709 sf

**ACTUAL AREA OF 29,709 sf IS LESS THAN CALCULATED TOTAL ALLOWABLE AREA OF 160,080 sf**  
**ALL STORIES ARE LESS THAN THE MAXIMUM ALLOWABLE AREA PER STORY OF 53,360 sf**

**FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS**

BUILDING ELEMENT	REQUIRED RATING
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS (INTERIOR)	0
BEARING WALLS (EXTERIOR)	0
NON BEARING WALLS & PARTITIONS	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION	0

**SUMMARY OF ADDITIONAL RELEVANT CODE SECTIONS**

THIS SECTION IS INTENDED TO HIGHLIGHT CODE SECTIONS THAT MAY BE UNIQUE TO THIS PROJECT TYPE AND SCOPE, THIS SECTION IS NOT INTENDED TO CAPTURE OR SUMMARIZE ALL CODE REQUIREMENTS

**423.4 STORM SHELTER FOR GROUP E OCCUPANCY**

THIS PROJECT IS LOCATED IN RAMSEY COUNTY, AND HAS AN OCCUPANT LOAD OF 50 OR MORE. A STORM SHELTER CONSTRUCTED IN ACCORDANCE WITH THE ICC500-2014 IS REQUIRED. SEE SHEET A002 FOR SHELTER AREA CODE ANALYSIS AND ICC 500 COMPLIANCE.

**SECTION 31 - PEDESTRIAN WALKWAYS AND TUNNELS**

**3104.3 CONSTRUCTION**

THE PROPOSED PEDESTRIAN WALKWAY IS OF NON COMBUSTIBLE CONSTRUCTION, MEETING THE REQUIREMENT OF 3104.3 WITH NO EXCEPTIONS.

**3104.5.2 ALTERNATIVE SEPARATION**

THIS PROJECT WILL COMPLY WITH 3104.5.2.1 AND 3104.5.2.2 IN ACCORDANCE WITH 3104.5.2. THE DISTANCE BETWEEN THE TWO BUILDINGS IS GREATER THAN 10 FEET. THE PEDESTRIAN WALKWAY AND CONNECTED BUILDINGS ARE EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM. THE ROOF OF THE WALKWAY IS NOT GREATER THAN 55 FEET ABOVE GRADE, AND THE CONNECTION IS ON THE SECOND STORY AS REQUIRED BY THIS SECTION. THE WALLS SEPARATING THE SKYWAY FROM THE BUILDING SHALL BE CAPABLE OF RESISTING THE PASSAGE OF SMOKE, AND THE GLASS WALL SEPARATING THE BUILDINGS WILL BE PROTECTED WITH A SPRINKLER SYSTEM IN ACCORDANCE WITH 903.3.1.1 (AS REQUIRED BY 314.5.2.2)

**3104.6 PUBLIC WAY**

THE PROPOSED PEDESTRIAN WALKWAY COMPIES WITH THE REQUIREMENTS OF SECTION 32 AS APPLICABLE, MEETING THE REQUIREMENTS OF 3104.6, SEE ADDITIONAL NARRATIVE UNDER "SECTION 32" HEADING

**3104.9 EXIT ACCESS TRAVEL DISTANCE**

EXCEPTION 1: EXIT ACCESS TRAVEL DISTANCE ON A PEDESTRIAN WALKWAY EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH 903.3.1.1 SHALL BE 250 FEET OR LESS. THE MEASURED WORST-CASE EXIT ACCESS TRAVEL DISTANCE AT THE PROPOSED PEDESTRIAN WALKWAY IS 230 FEET, WHICH IS LESS THAN THE ALLOWABLE 250 FEET.

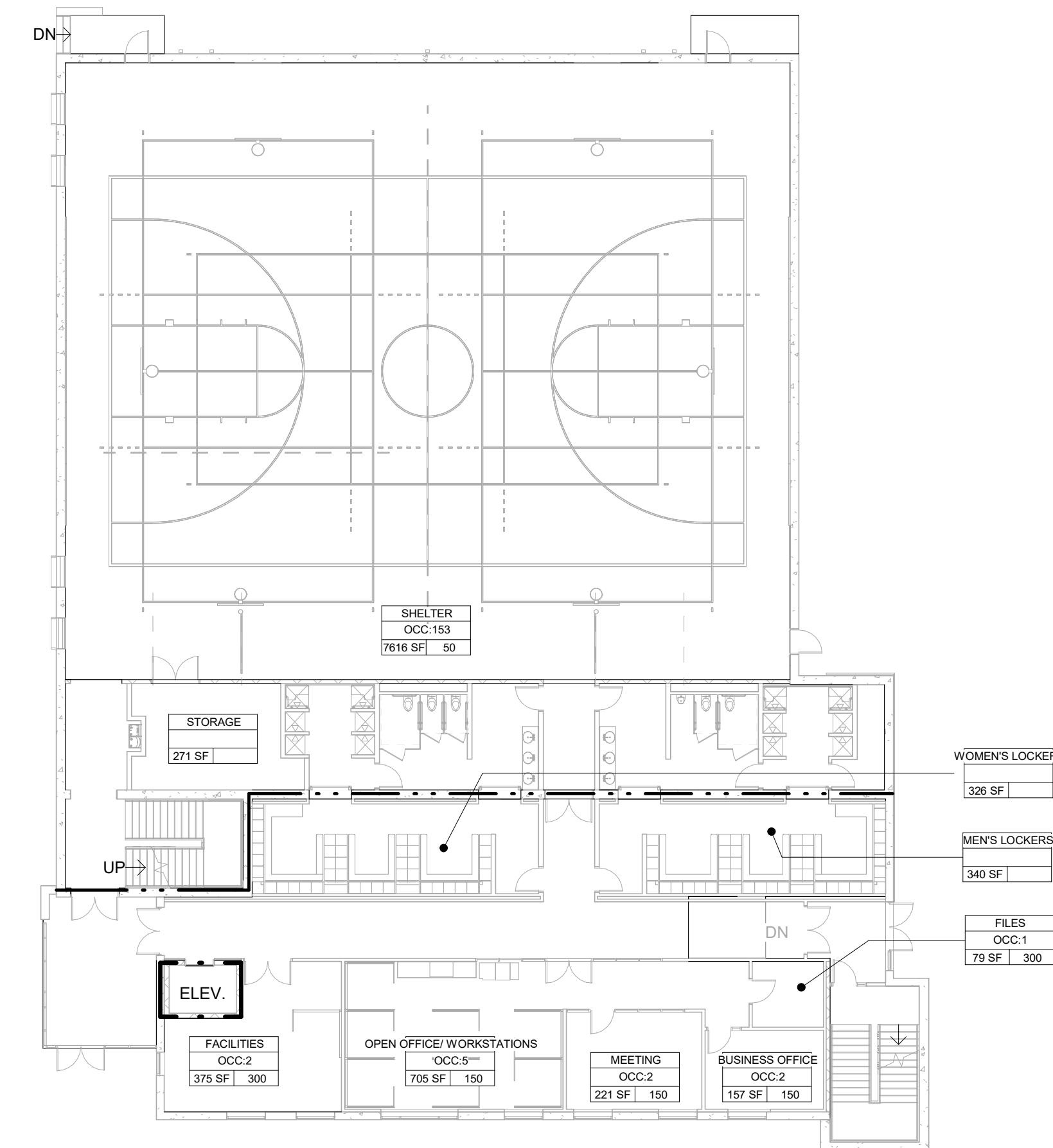
**SECTION 32 ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY**

**3202.3.4 PEDESTRIAN WALKWAYS**

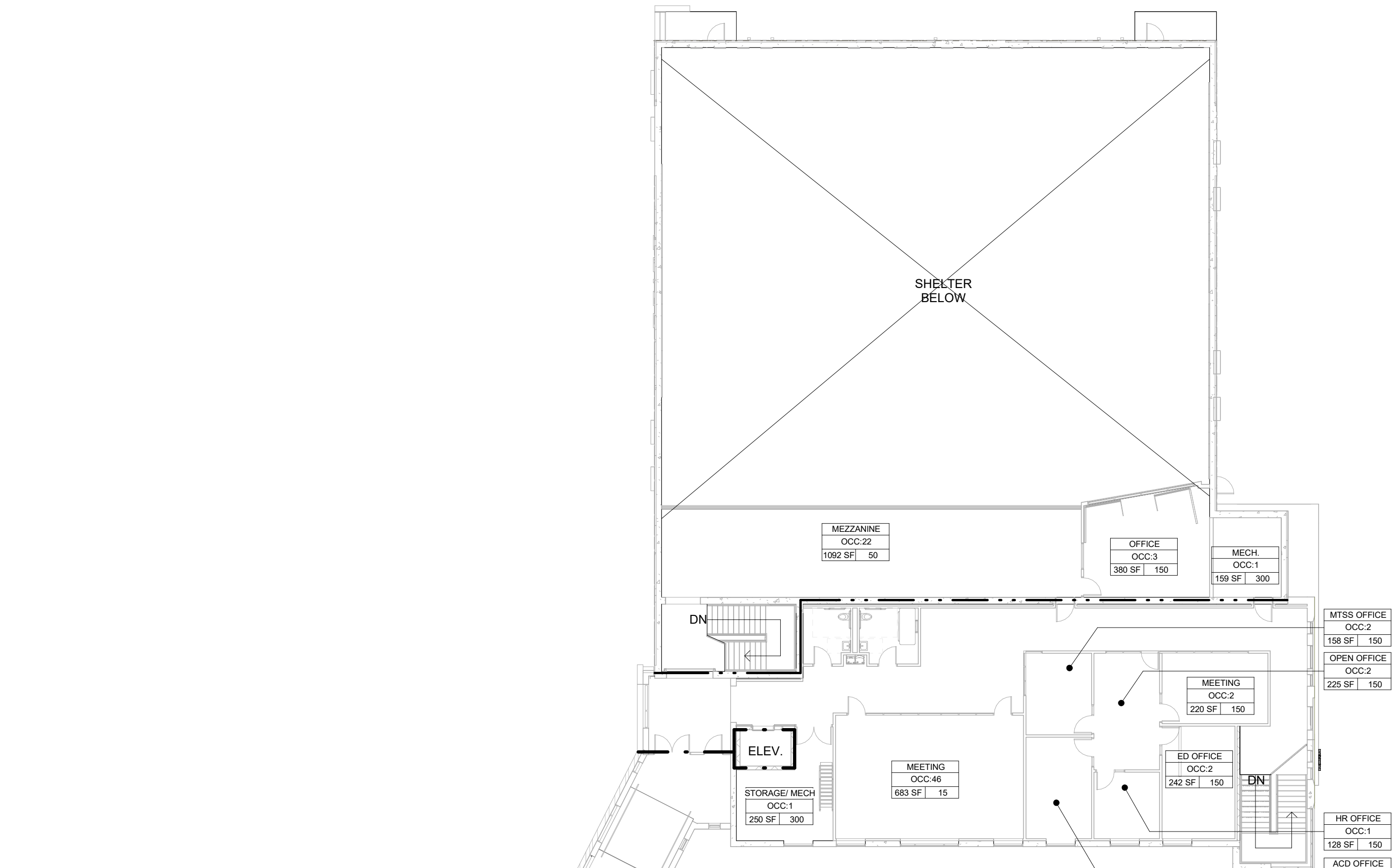
THE VERTICAL CLEARANCE FROM THE PUBLIC RIGHT-OF-WAY TO THE LOWEST PART OF THE SKYWAY IS NOT LESS THAN 15 FEET.

**BUILDING EGRESS**

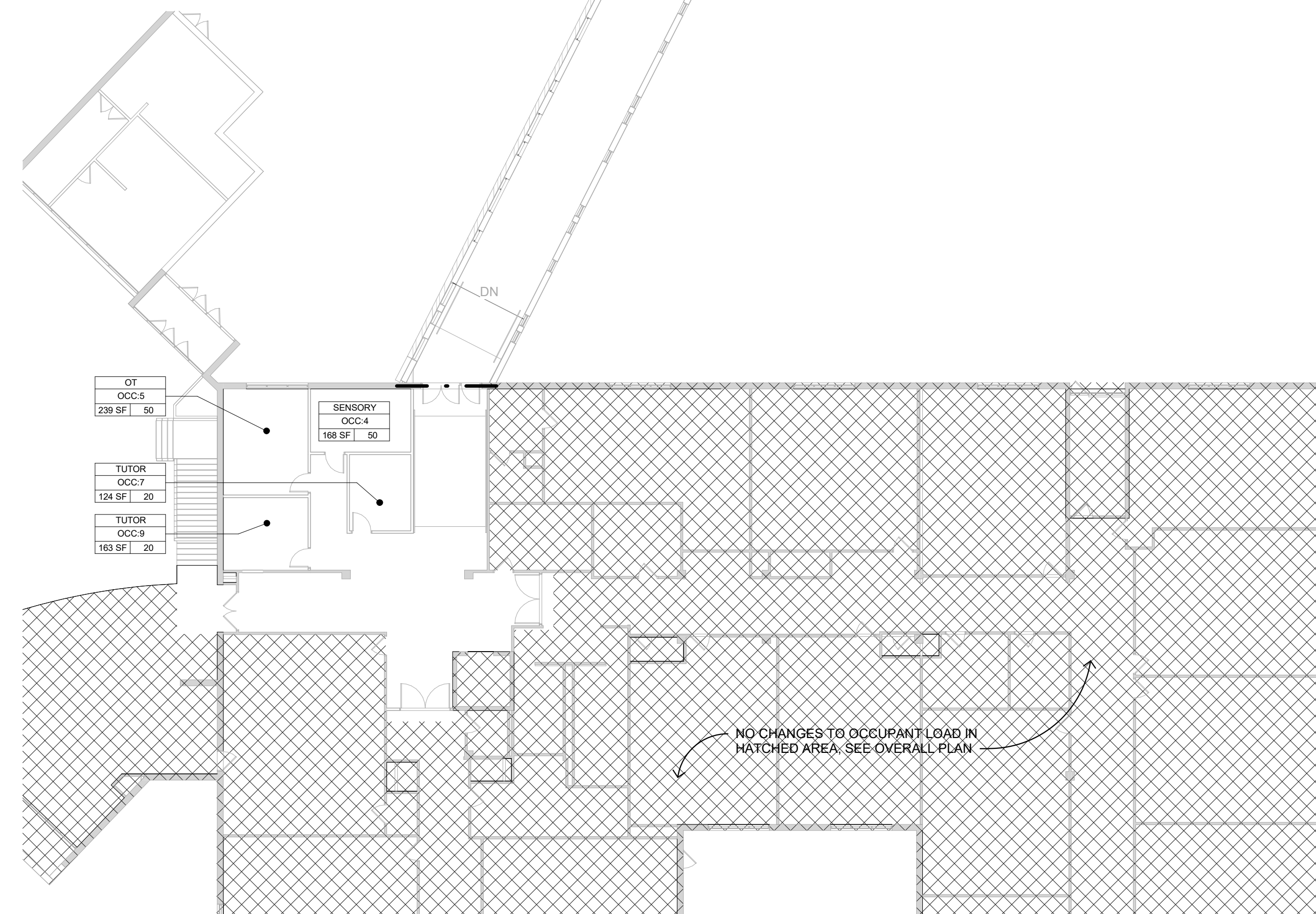
EGRESS REQUIRED FROM SHELTER OCCUPANT LOADS HAS BEEN CALCULATED AT .15" PER OCCUPANT  
 153 OCCUPANTS x .15 IN/OCCUPANT = 22.95 TOTAL INCHES REQUIRED.  
 TOTAL EGRESS INCHES PROVIDED AT GYMNASIUM = 238 INCHES



1 LEVEL 1 CODE PLAN  
 1/16" = 1'-0"



2 LEVEL 2 CODE PLAN  
 1/16" = 1'-0"



CODE PLAN LINE TYPE KEY

---	2HR FIRE BARRIER WALL
- - -	SMOKE RATED PARTITION

3 CODE LINE TYPES  
 1/16" = 1'-0"



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 Tel. 612.338.6990

NOVA CLASSICAL ACADEMY  
 1455 VICTORIA WAY  
 ST. PAUL, MN 55102  
 Phone: 651.209.6320

CONSULTANT

Project Name: NOVA CLASSICAL ACADEMY  
 IMPROVEMENTS & EXPANSION  
 Project Number: 23008.003  
 Date: 05/07/2025

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME  
 SIGNATURE  
 LICENSE NO.  
 05/07/2025  
 DATE

**DD DOCUMENT Not For Construction**

SHEET TITLE:  
**BUILDING CODE SUMMARY**

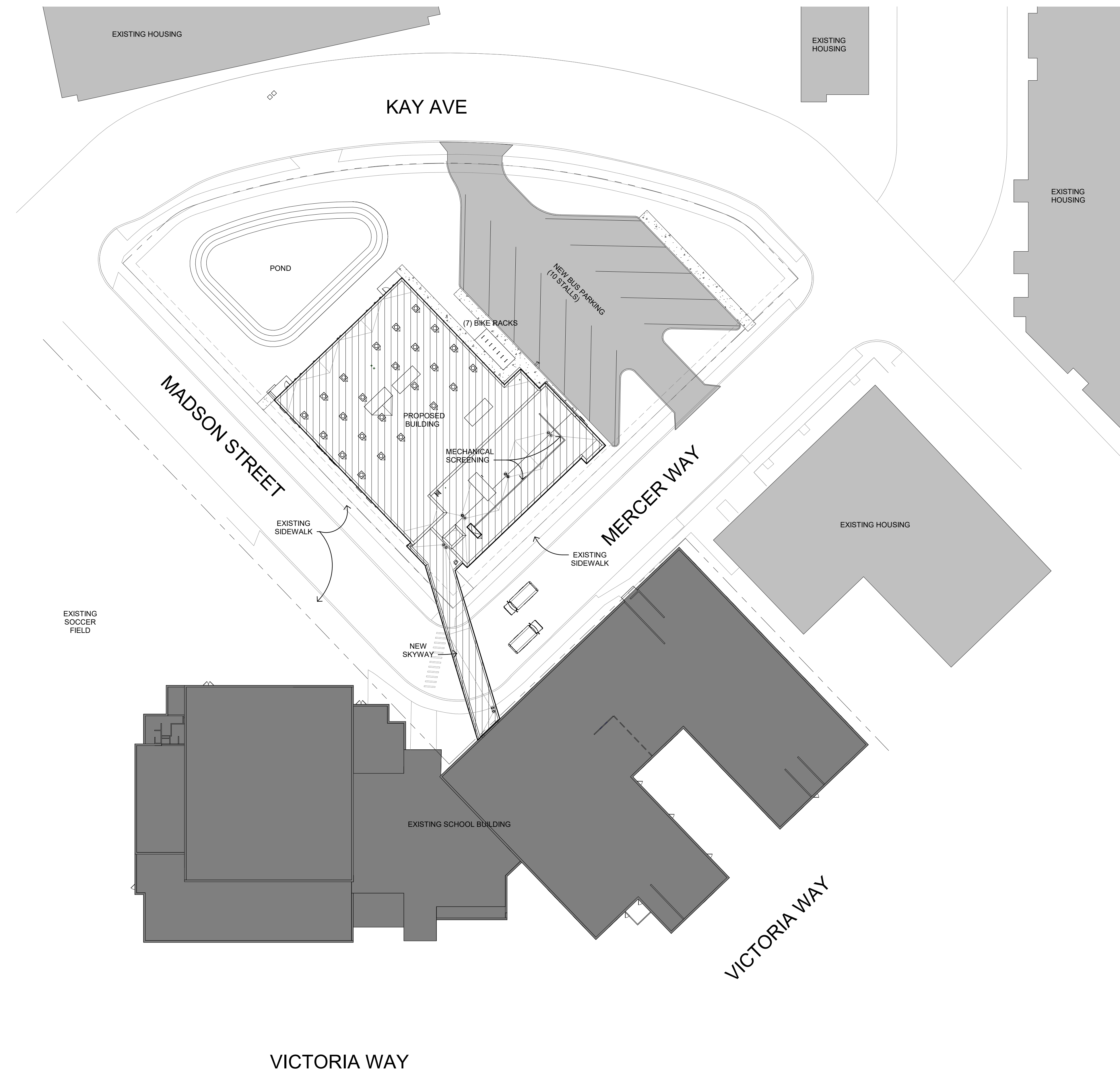
SHEET NUMBER:  
**A001**

**DD  
DOCUMENT  
Not For  
Construction**

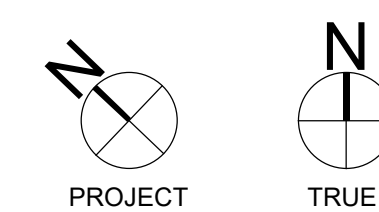
SHEET TITLE:  
**ARCHITECTURAL SITE PLAN**

SHEET NUMBER:

**A100**



① SITE PLAN  
1" = 30'-0"

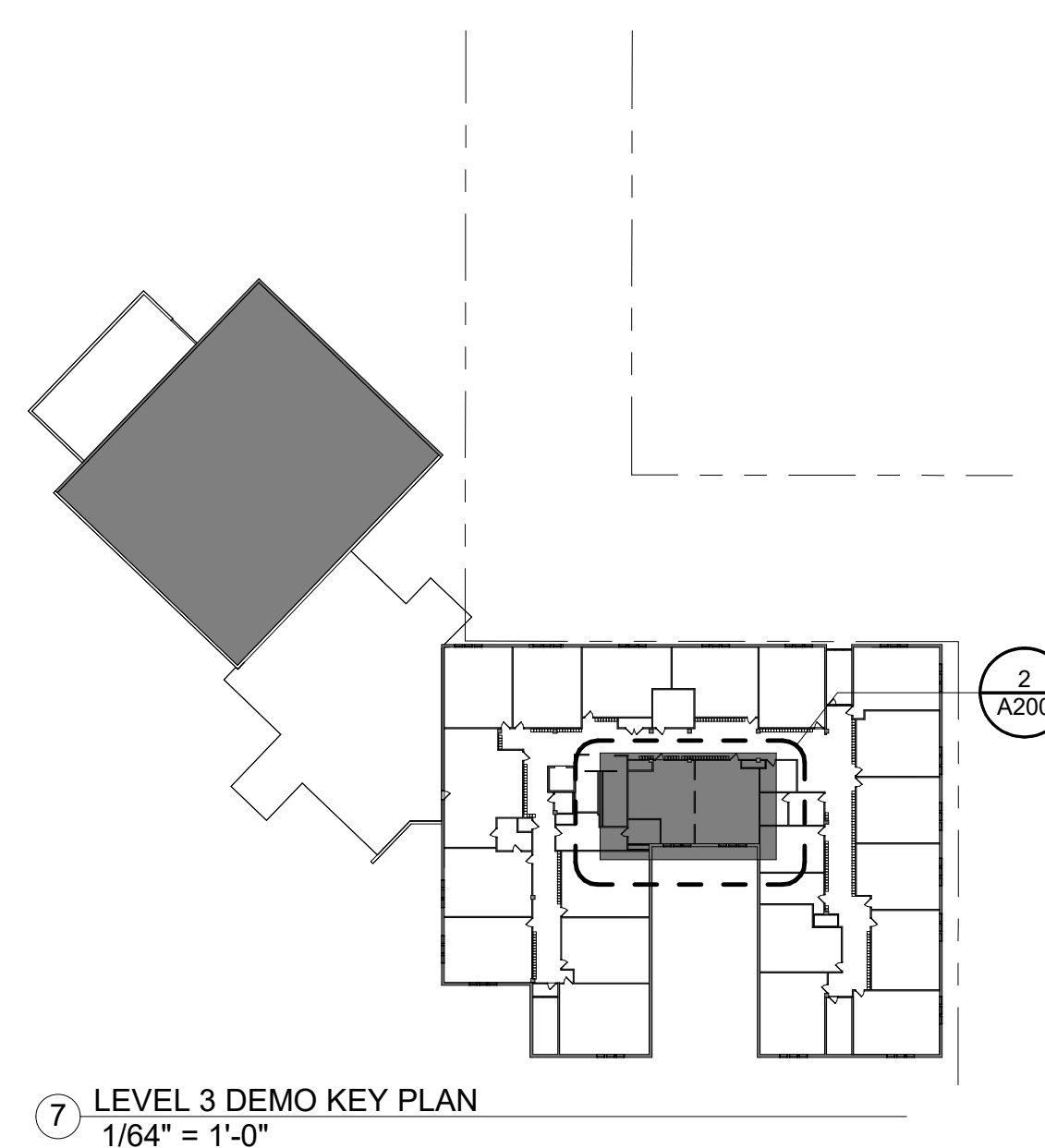
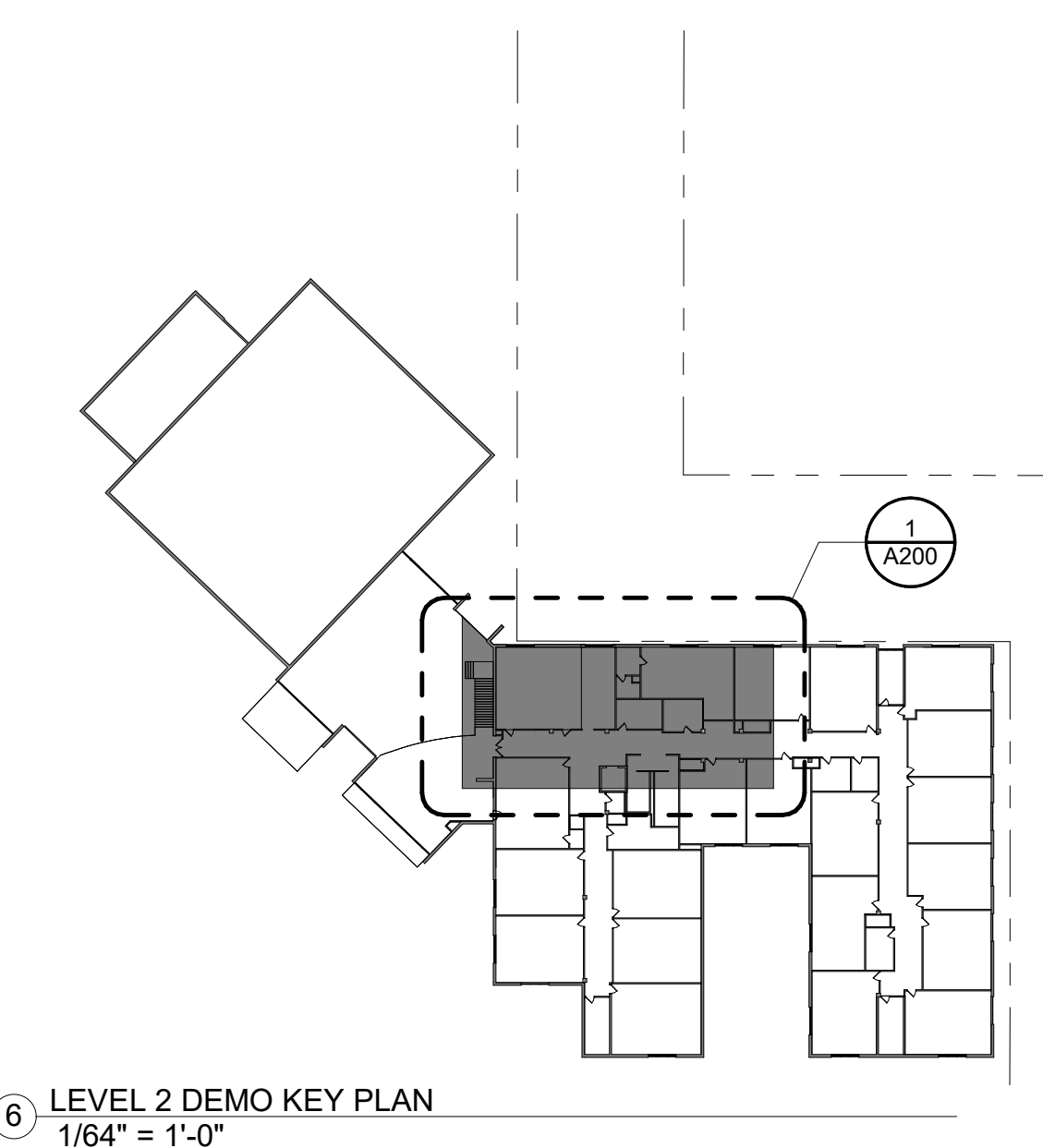
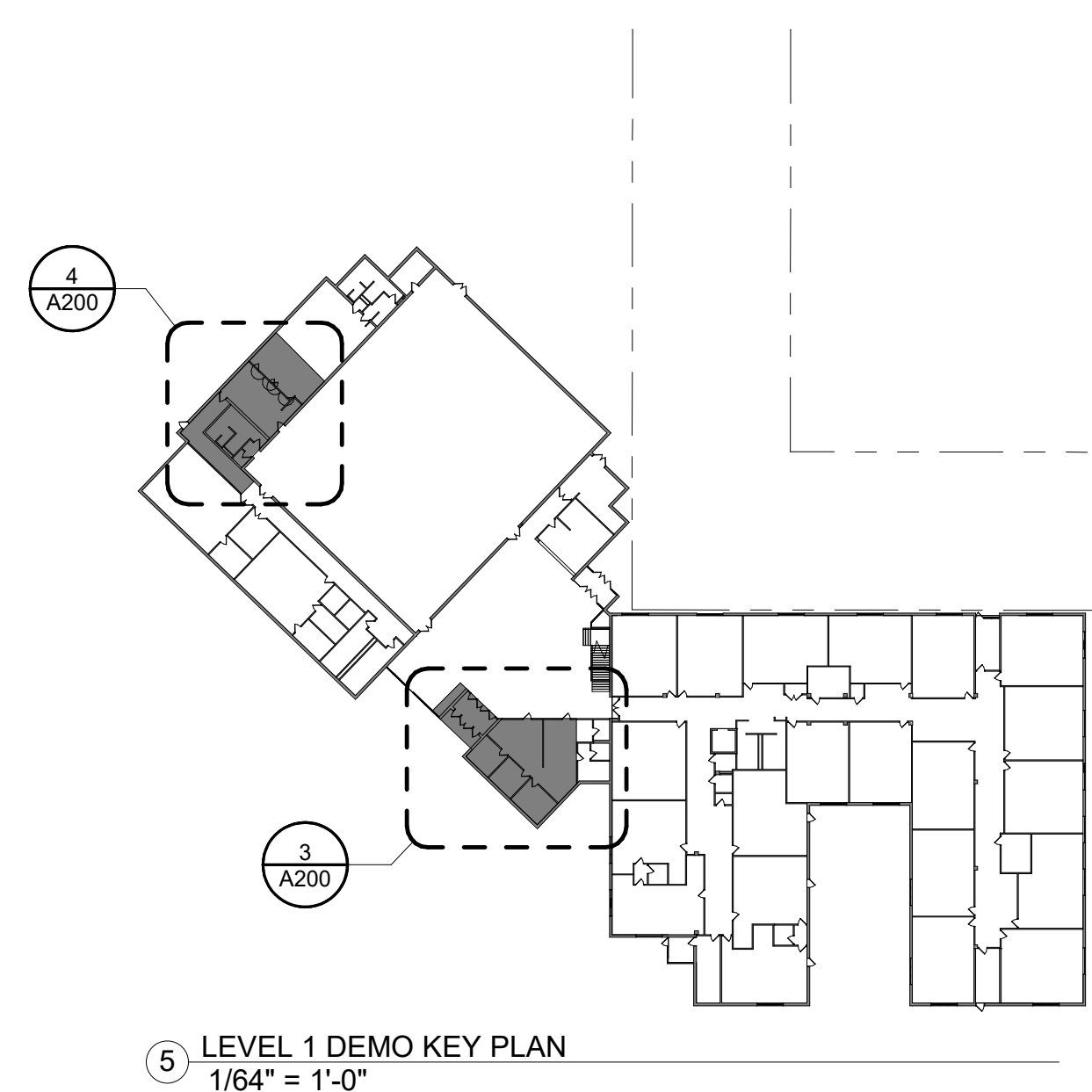
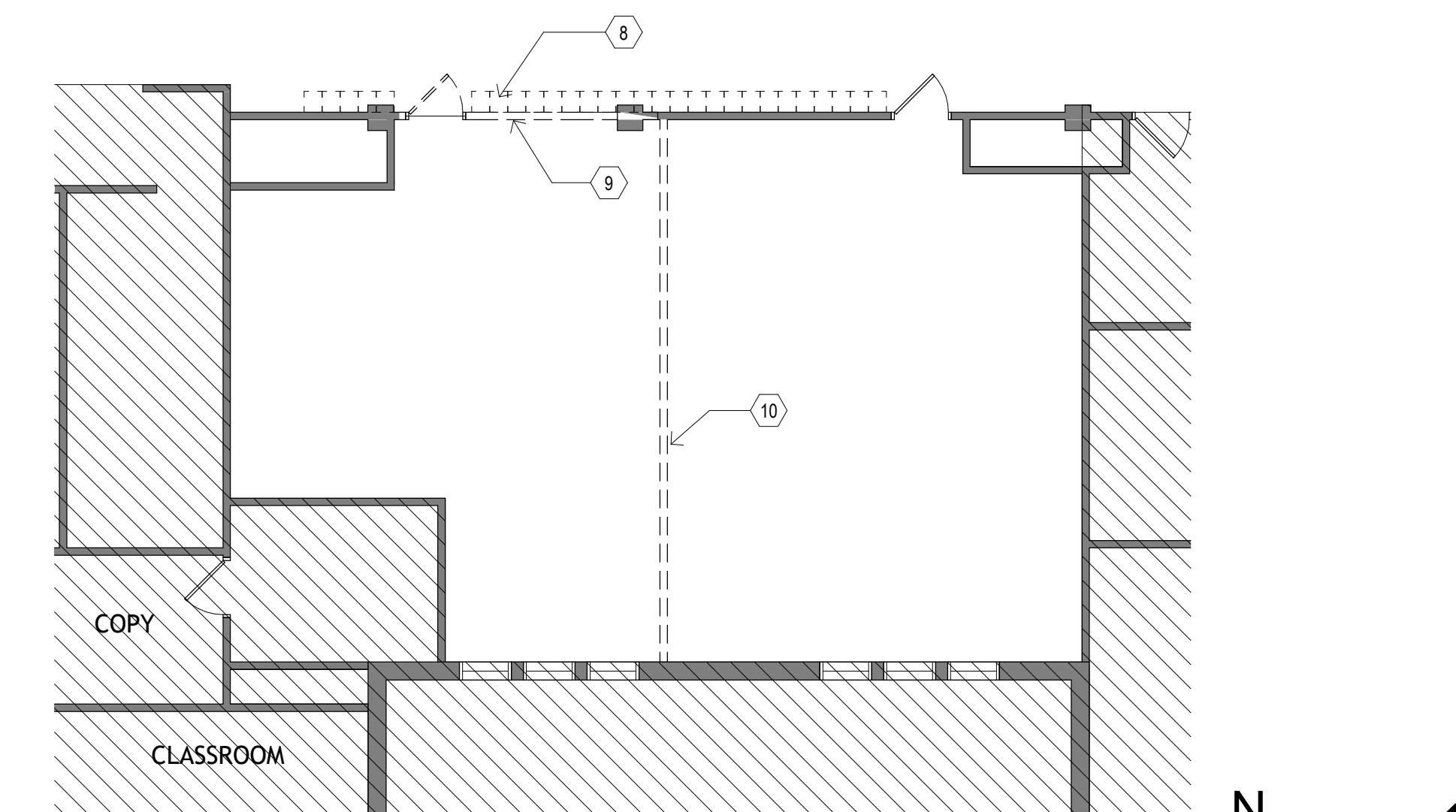
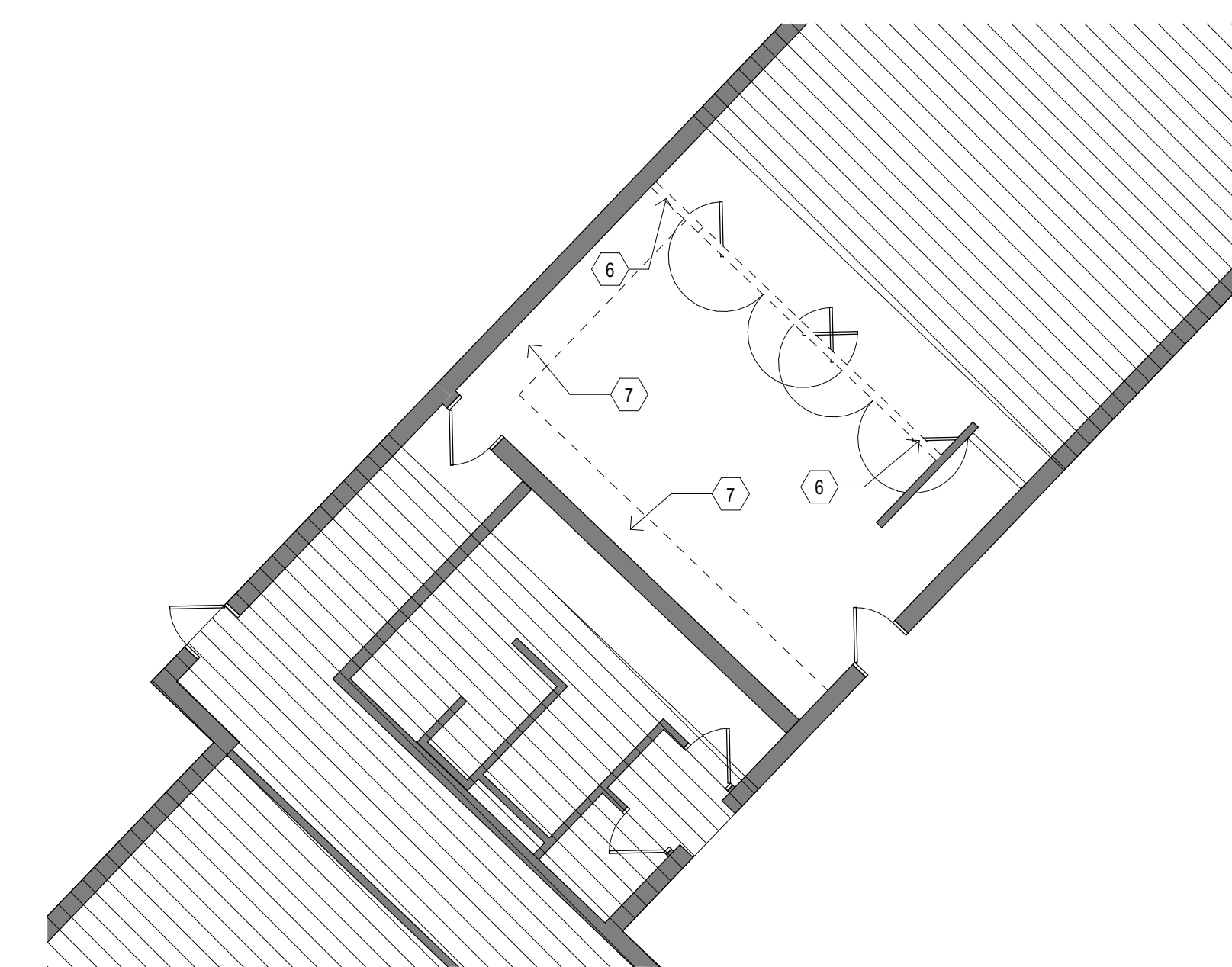
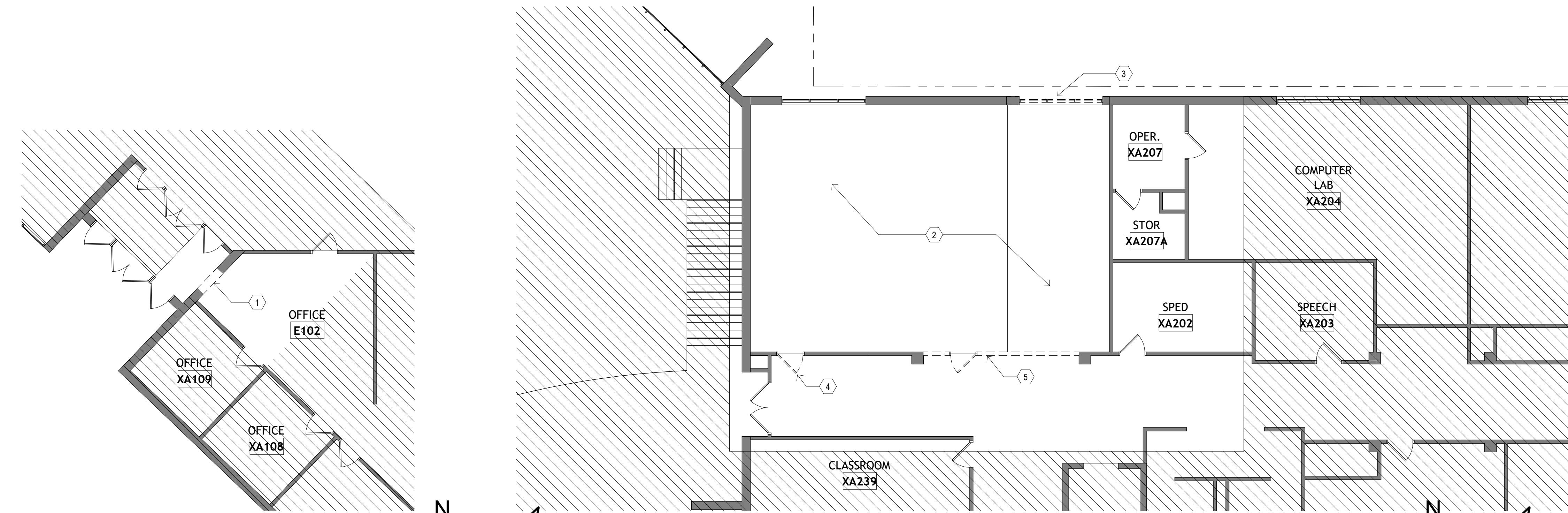


**GENERAL DEMOLITION NOTES**

- A. PROVIDE ALL DEMOLITION WORK AS REQUIRED TO COMPLETE THE WORK IN THIS CONTRACT, INCLUDING THAT REQUIRED TO COMPLETE THE WORK SHOWN ELSEWHERE IN THESE DOCUMENTS, BUT NOT SPECIFICALLY IDENTIFIED ON THESE DEMOLITION PLANS.
- B. SHADED AREAS ON THE PLAN GENERALLY INDICATE AREA TO CONTAIN NO DEMOLITION WORK. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL RELATED DEMOLITION THAT IS NECESSARY TO COMPLETE ALL WORK THAT IS DIRECTED BY THESE DOCUMENTS, WHETHER OR NOT THAT DEMOLITION WORK IS SPECIFICALLY IDENTIFIED ON THESE DEMOLITION PLANS OR IS LOCATED OUTSIDE THE AREAS OF CONSTRUCTION OR DEMOLITION THAT ARE IDENTIFIED ON THIS PLAN.
- C. CONSTRUCTION SHOWN DASHED INDICATES CONSTRUCTION TO BE REMOVED. ALL PARTITIONS SHOWN TO BE DEMOLISHED ARE TO BE REMOVED FROM TOP OF FLOOR SLAB UP TO BOTTOM OF STRUCTURE ABOVE, UNLESS NOTED OTHERWISE. ALL CONSTRUCTION MOUNTED IN OR ON PARTITIONS TO BE REMOVED, SUCH AS DOORS, GLAZING AND OTHER WALL MOUNTED CONSTRUCTION AND FINISHES SHALL BE REMOVED AS A PART OF THE PARTITION DEMOLITION.
- D. ALL PRIME CONTRACTORS AND SUBCONTRACTORS SUBMITTING BIDS SHALL CAREFULLY EXAMINE THE ENTIRE SET OF BIDDING DOCUMENTS, VISIT THE SITE OF THE WORK, RECORD THEIR OWN INVESTIGATIONS, AND SHALL BECOME FULLY INFORMED OF THE EXISTING CONDITIONS AND LIMITATIONS UNDER WHICH THE WORK SHALL BE PERFORMED, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
  - EXISTING BUILDINGS, INCLUDING THE CONDITION OF EXISTING STRUCTURE, LOCATIONS AND CAPACITIES OF EXISTING UTILITIES, AND ANY OBSTACLE OR OBJECT WHICH MAY BE ENCOUNTERED WHILE COMPLETING THE WORK DESCRIBED IN THE BIDDING DOCUMENTS
  - SUBMITTAL OF A BID SHALL BE CONCLUSIVE EVIDENCE THAT THE BIDDER HAS MADE SUCH AN EXAMINATION, UNDERSTANDS THE CONTRACT DOCUMENTS IN THEIR ENTIRETY, AND IS FAMILIAR WITH THE SITE CONDITIONS IN WHICH THE WORK SHALL OCCUR. FAILURE TO MAKE SUCH AN EXAMINATION SHALL NOT BE ACCEPTED AS A BASIS FOR CLAIMS FOR ADDITIONAL COMPENSATION OR AN EXTENSION OF TIME.
  - IF FIELD CONDITIONS ARE OBSERVED THAT CONFLICT WITH THE INTENTIONS AND FEASIBILITY OF THE WORK DESCRIBED IN THESE DOCUMENTS DURING BIDDING, THE CONTRACTOR/SUBCONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT SO THAT THEY MAY MAKE ACCOMMODATIONS THROUGH AN ADDENDUM.
  - SUBMISSION OF BID ALSO PRESUMES THAT ALL REQUIRED DEMOLITION WORK, WHETHER OR NOT IT HAS BEEN SPECIFICALLY IDENTIFIED BY THESE DOCUMENTS OR BY ADDENDUM, HAS BEEN INCORPORATED INTO THE BIDDER'S BID PROPOSAL.
- E. WHERE FINISHES ARE TO BE REMOVED FROM EXISTING SUBSTRATES AND SUBSTRATES ARE SCHEDULED TO RECEIVE NEW FINISHES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EXISTING ADHESIVES, ATTACHMENTS, FASTENERS AND OTHER COATINGS THAT WILL INTERFERE WITH THE INSTALLATION OR ADHESION OF NEW FINISHES. THE CONTRACTOR SHALL PREPARE ALL EXISTING SURFACES TO PROVIDE SUBSTRATES THAT ARE ACCEPTABLE FOR THE NEW FINISH INSTALLER. AT EXISTING CONCRETE FLOOR SLABS WHERE SLAB IS DAMAGED DUE TO THE REMOVAL OF EXISTING FINISHES, THE CONTRACTOR SHALL PATCH ALL DAMAGE OF THE EXISTING SLAB WITH CONCRETE TOPPING TO PROVIDE A SMOOTH AND EVEN SUBSTRATE FOR NEW FINISHES.
- F. SEE MECHANICAL/ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR WORK THAT REQUIRES ADDITIONAL DEMOLITION AND PATCHING. PROVIDE ALL DEMOLITION AS REQUIRED TO PERFORM THE SCHEDULED WORK AND REINSTALL ALL EXISTING CONSTRUCTION AND FINISHES TO MATCH PREVIOUS CONDITIONS WHERE POSSIBLE. IF NOT POSSIBLE, PATCH IN NEW CONSTRUCTION TO MATCH EXISTING CONDITIONS.
- G. PATCH ALL EXISTING AND NEW PENETRATIONS THROUGH EXISTING FIRE OR SMOKE RATED FLOOR SLABS AND PARTITIONS, USING U.L. LISTED MATERIALS THAT ARE REQUIRED TO MAINTAIN ALL EXISTING FIRE RATINGS.
- H. SEE ALSO REFLECTED CEILING PLANS FOR ADDITIONAL REMOVAL AND REINSTALLATION OF EXISTING SUSPENDED ACOUSTICAL CEILINGS AS REQUIRED FOR NEW CONSTRUCTION.
- I. WHERE EXISTING CEILINGS ARE SHOWN TO BE REMOVED AND REINSTALLED, SALVAGE ALL FIRE ALARM AND NOTIFICATION DEVICES, INCLUDING SMOKE DETECTORS, STROBES, ALARMS, ETC. CONTRACTOR MAY REINSTALL THOSE DEVICES THAT ARE FULLY FUNCTIONAL. IF IT IS NOT POSSIBLE TO REINSTALL EXISTING SYSTEM COMPONENTS, THE CONTRACTOR SHALL PROVIDE NEW MATCHING DEVICES THAT ARE COMPATIBLE AND WARRANTABLE WITH THE EXISTING SYSTEM WHICH SHALL PROVIDE A FULLY FUNCTIONAL, CODE-COMPLIANT FIRE DETECTION/NOTIFICATION SYSTEM.
- J. PATCHING: WHERE DEMOLITION OR CUTTING WORK HAS OCCURRED OR WHERE EXISTING CONSTRUCTION HAS BEEN REMOVED, DAMAGED OR DISTURBED AS A PART OF THIS WORK, THE SAID SURFACES SHALL BE CLOSED UP, PATCHED, FINISHED AND RESTORED AS REQUIRED TO MATCH CONTIGUOUS SURFACES AND FINISHES.
- K. PROTECTION OF EXISTING CONSTRUCTION: ALL CONSTRUCTION INDICATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY ALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL RETURN ALL EXISTING CONSTRUCTION TO THE CONDITION FOUND PRIOR TO THE START OF DEMOLITION AND CONSTRUCTION, WHETHER OR NOT IT IS SPECIFICALLY IDENTIFIED ON THE DRAWINGS TO REMAIN, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL REPAIR OR REPLACE ALL SUCH DAMAGED ITEMS AT THE OWNER'S DISCRETION.
- L. SALVAGE: BEFORE COMMENCING ANY DEMOLITION WORK, THE CONTRACTOR SHALL CONTACT THE OWNER TO CONFIRM THEIR INTENT REGARDING THE SALVAGE, REUSE AND FINAL DISPOSITION OF ANY EXISTING ITEMS OF EQUIPMENT OR MATERIAL NOT USED IN THIS PROJECT, INCLUDING ALL WALL & CEILING MOUNTED EQUIPMENT (WHITEBOARDS, HEADWALL UNITS, CAMERAS, ETC.)
- M. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND IDENTIFYING EXISTING UTILITY LINES PRIOR TO BEGINNING DEMOLITION; SEE MECHANICAL, PLUMBING, AND ELECTRICAL DOCUMENTS FOR PROTECTION AND PATCHING OF EXISTING UTILITIES.
- N. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EXISTING PIPING, CONDUIT AND OTHER UTILITY LINES, AND THEIR HANGERS OR SUPPORTS WHICH ARE ABANDONED BY THE WORK DESCRIBED IN THESE DOCUMENTS OR THOSE THAT HAVE BEEN PREVIOUSLY ABANDONED AND LEFT IN PLACE, LOCATED IN ALL CONSTRUCTION AREAS, UNLESS NOTED OTHERWISE. SEE MECHANICAL AND ELECTRICAL DOCUMENTS FOR EXTENT OF REMOVAL AND THE CAPPING OFF OR TERMINATION OF EXISTING LINES.
- O. SEE STRUCTURAL DRAWINGS FOR INFORMATION REGARDING DEMOLITION OF EXISTING STRUCTURAL SYSTEMS AND SHORING REQUIREMENTS.

**DEMOLITION PLAN KEYNOTES**

Keynote Number	Keynote Description
1	REMOVE EXISTING WINDOW BETWEEN OFFICE AND VESTIBULE, ENLARGE/PREPARE OPENING AS REQUIRED TO FIT SCHEDULE DOOR AND FRAME, REMOVE ANY EXISTING CASEWORK
2	DEMOLISH ALL EXISTING PARTITIONS, SYSTEMS FURNITURE, FLOOR FINISH AND CEILING FINISH IN THIS AREA, PREPARE AS REQUIRED FOR NEW CONSTRUCTION, INCLUDING NEW RAMP AND WALLS. SEE PLAN.
3	REMOVE EXISTING WINDOW SYSTEM AT EXISTING PRECAST WALL PANEL AND MODIFY PANELS AS REQUIRED FOR NEW SKYWAY, SEE PLANS
4	REMOVE EXISTING DOOR AND FRAME, PATCH WALL WITH MATERIALS TO MATCH ADJACENT WALL CONSTRUCTION AND FINISHES.
5	CUT NEW WALL OPENING IN EXISTING WALL, PATCH AS REQUIRED TO PREPARE ALL IMPACTED SUBSTRATES FOR SCHEDULED FINISHES.
6	DEMOLISH EXISTING WING WALLS AND GYP BD FRAMED HEADER AT TOP OF STAGE OPENING IN THEIR ENTIRETY DOWN TO THE TOP OF STAGE ELEVATION; RELOCATE EXISTING ELECTRICAL PANEL AND ALL ASSOCIATED CONDUITS AND FEEDERS AS REQUIRED TO ACCOMMODATE NEW STAIR AND MEZZANINE.
7	DEMOLISH WALL MOUNTED SHELVING
8	DEMOLISH LOCKERS +/- 150 LOCKERS IN VARIOUS LOCATIONS THROUGHOUT THIRD FLOOR, PATCH FLOOR AND WALL FINISHES AS REQUIRED TO MATCH EXISTING
9	REMOVE EXISTING DOOR AND ENLARGE OPENING IN EXISTING WALL, PATCH AS REQUIRED TO PREPARE ALL IMPACTED SUBSTRATES FOR SCHEDULED FINISHES.
10	DEMOLISH EXISTING OPERABLE PARTITION AND ALL ASSOCIATED INSTALLATION ACCESSORIES, PREPARE STRUCTURE/ADJACENT SURFACES TO ACCOMMODATE NEW PARTITION WALL, SEE PLAN.



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- H. THE CONTRACTOR SHALL LOCATE EXISTING BUILDING UTILITIES AND SERVICES PRIOR TO THE START OF CONSTRUCTION.
- I. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS IN THE DRAWINGS THAT ARE BASED ON FIELD MEASURING/OBSERVATION OF THE EXISTING CONSTRUCTION.
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**BLOOM  
HAY DOBBS**

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CONSULTANT

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

I HEREBY CERTIFY THAT THIS PLAN,  
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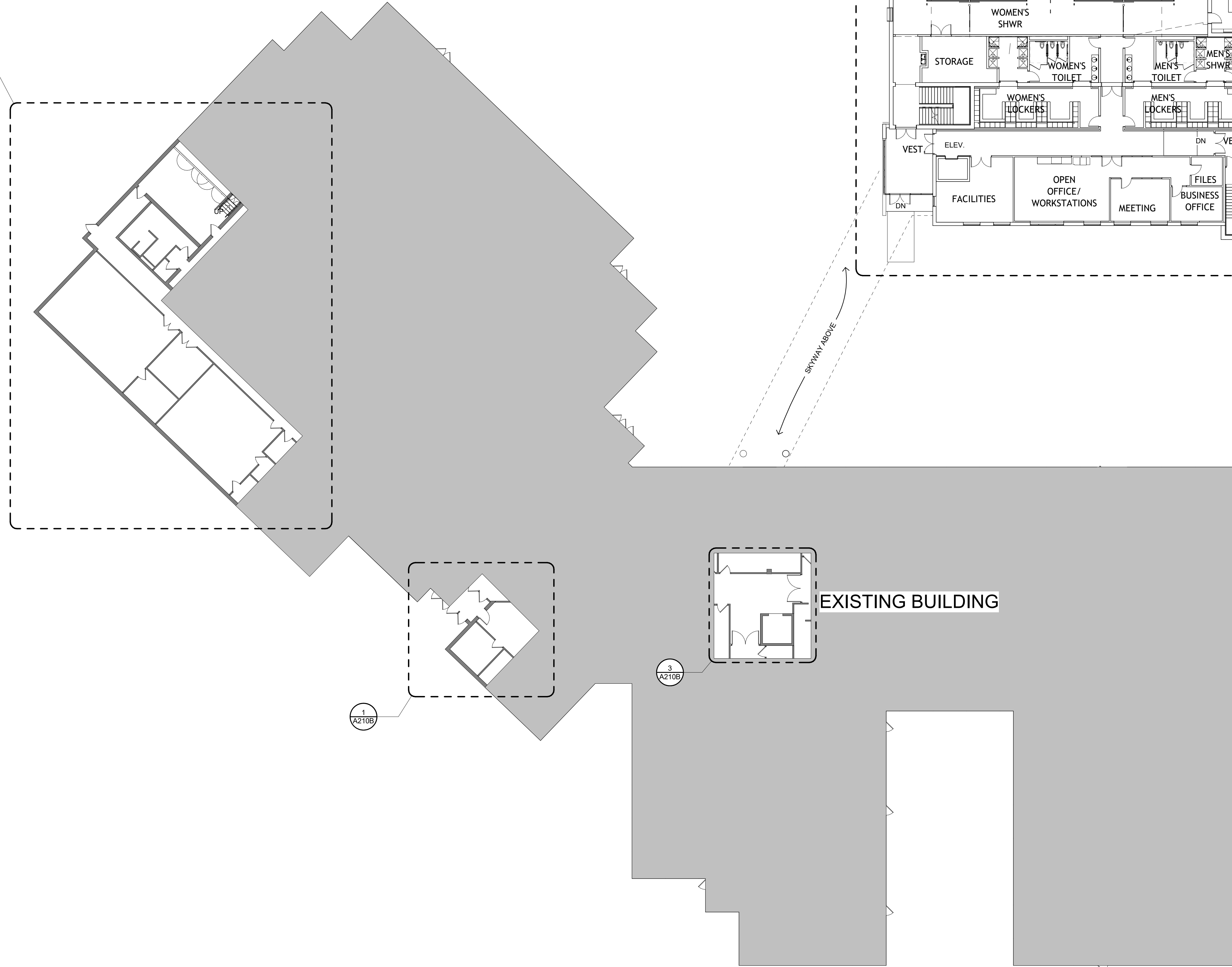
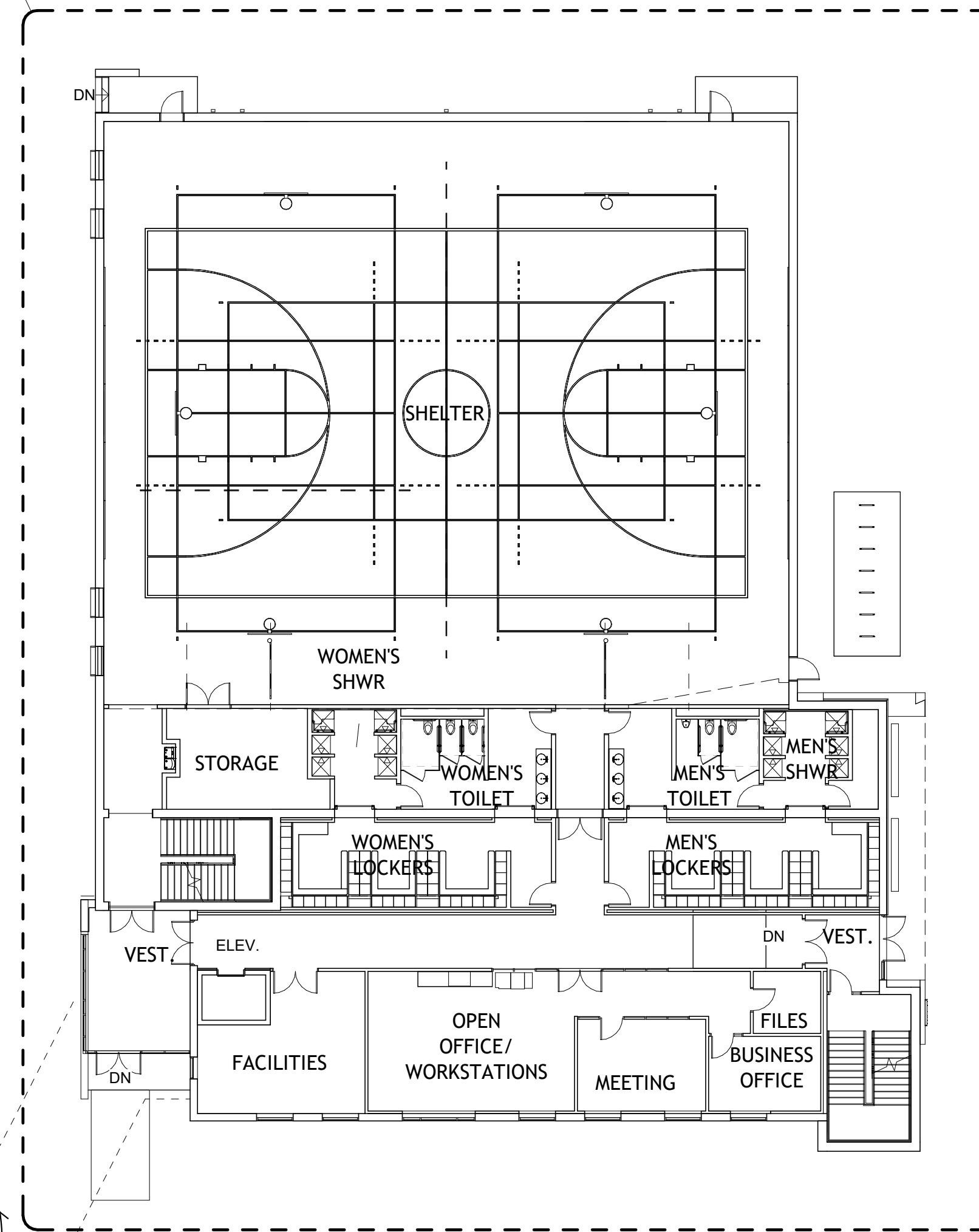
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DATE 05/07/2025

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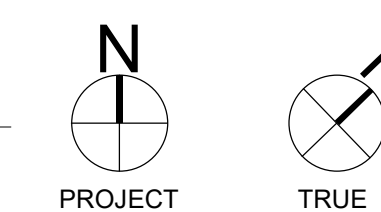
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**OVERALL PLAN - FIRST  
FLOOR**

SHEET NUMBER:

**A210**



1 FIRST FLOOR OVERALL PLAN  
1/16" = 1'-0"

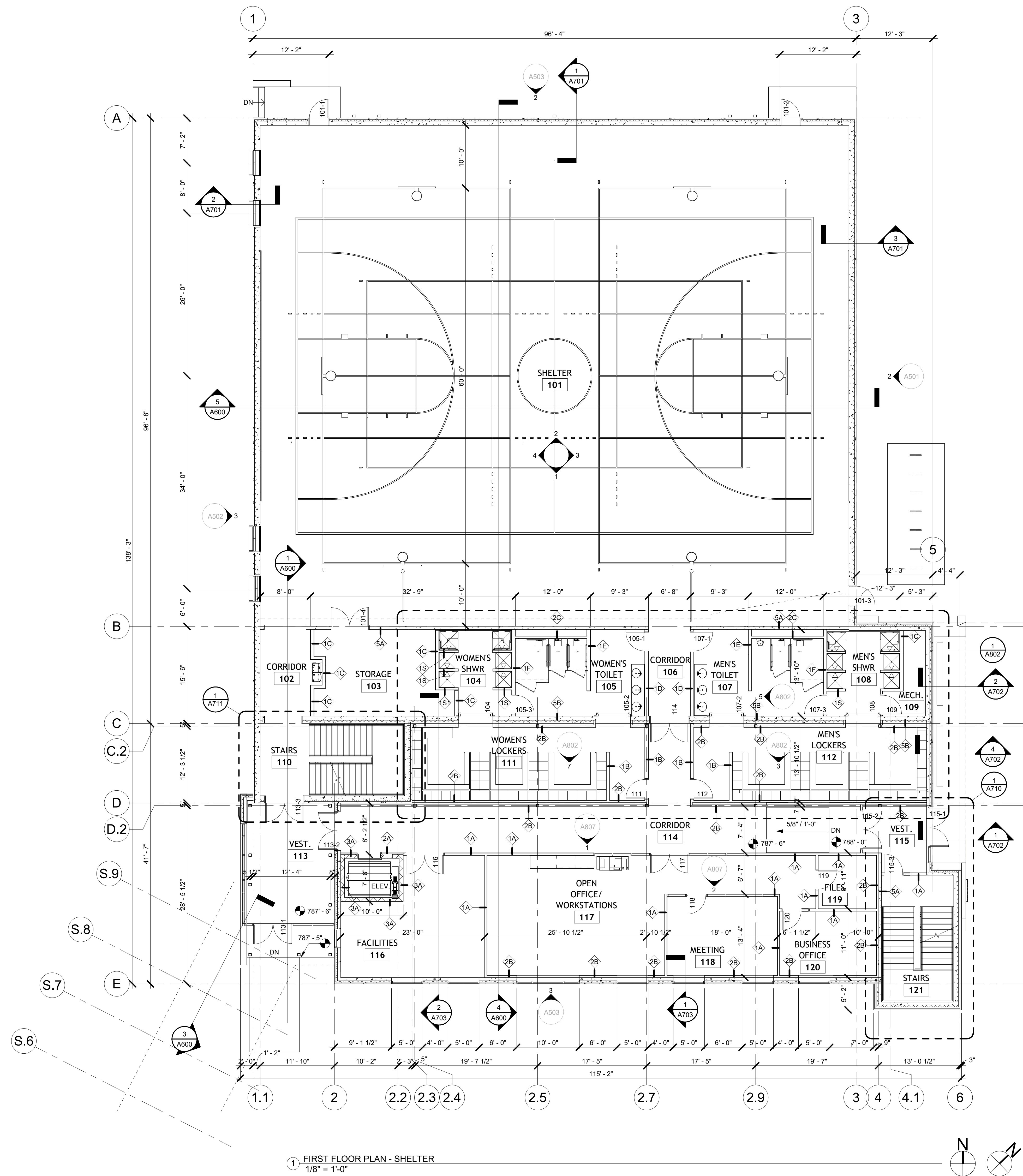


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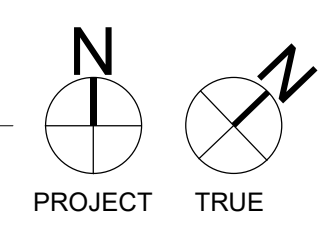
SHEET TITLE:  
**FIRST FLOOR PLAN -  
 SHELTER**

SHEET NUMBER:

**A210A**



1 FIRST FLOOR PLAN - SHELTER  
 1/8" = 1'-0"



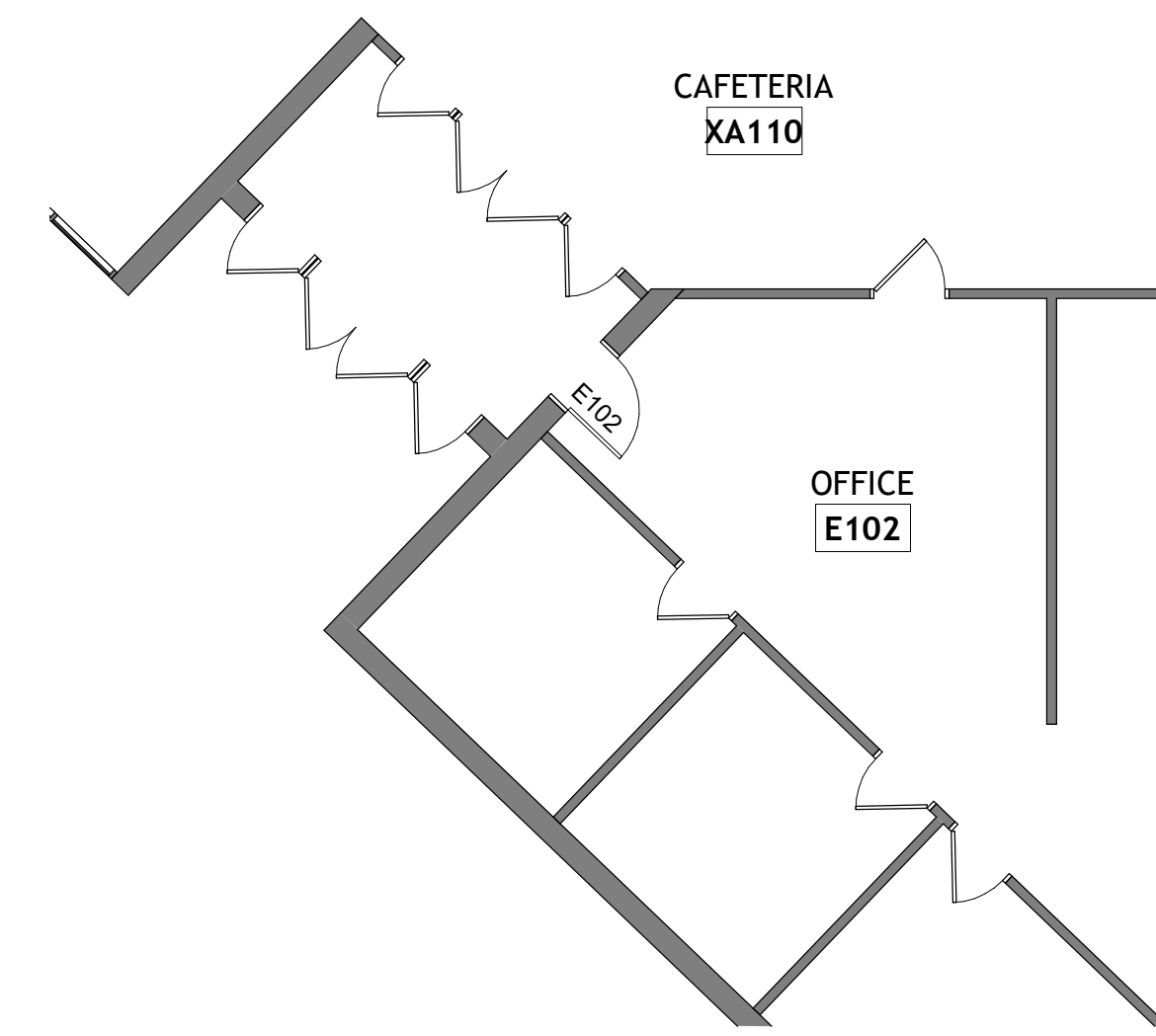


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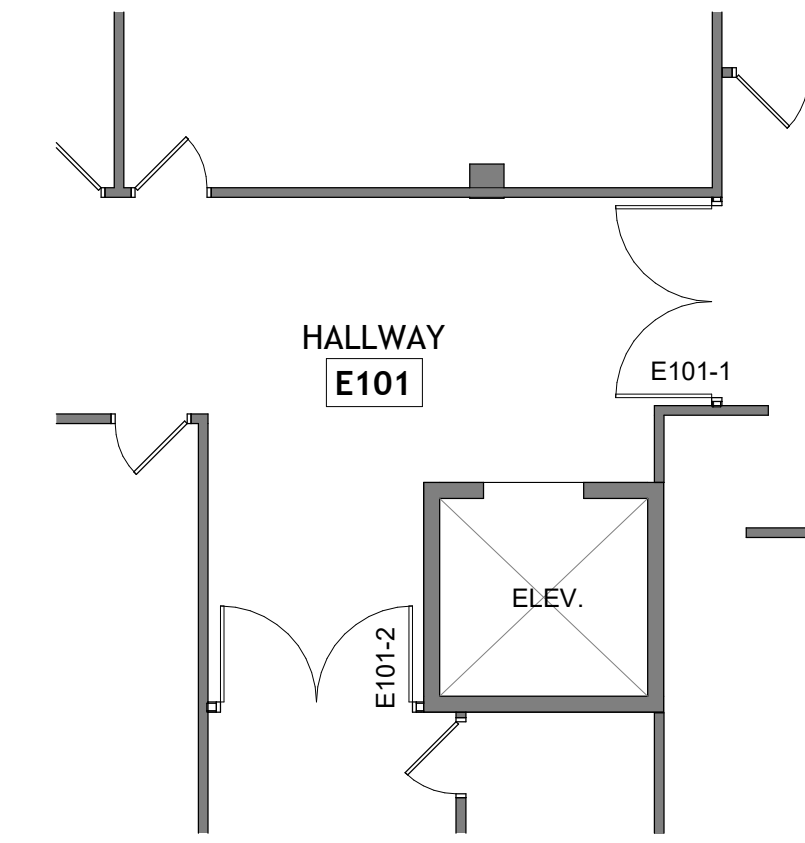
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EXISTING BUILDING**

SHEET NUMBER:

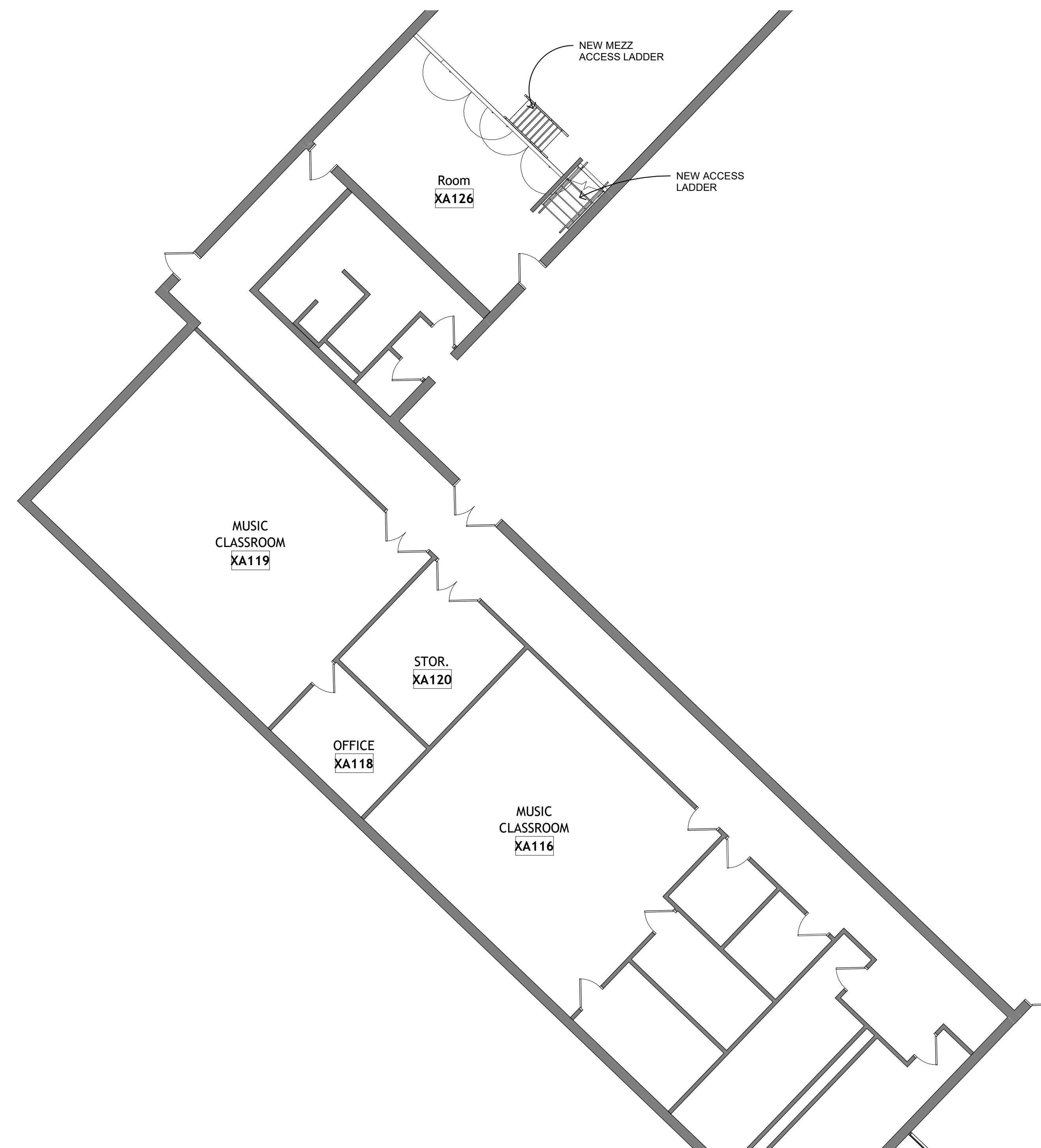
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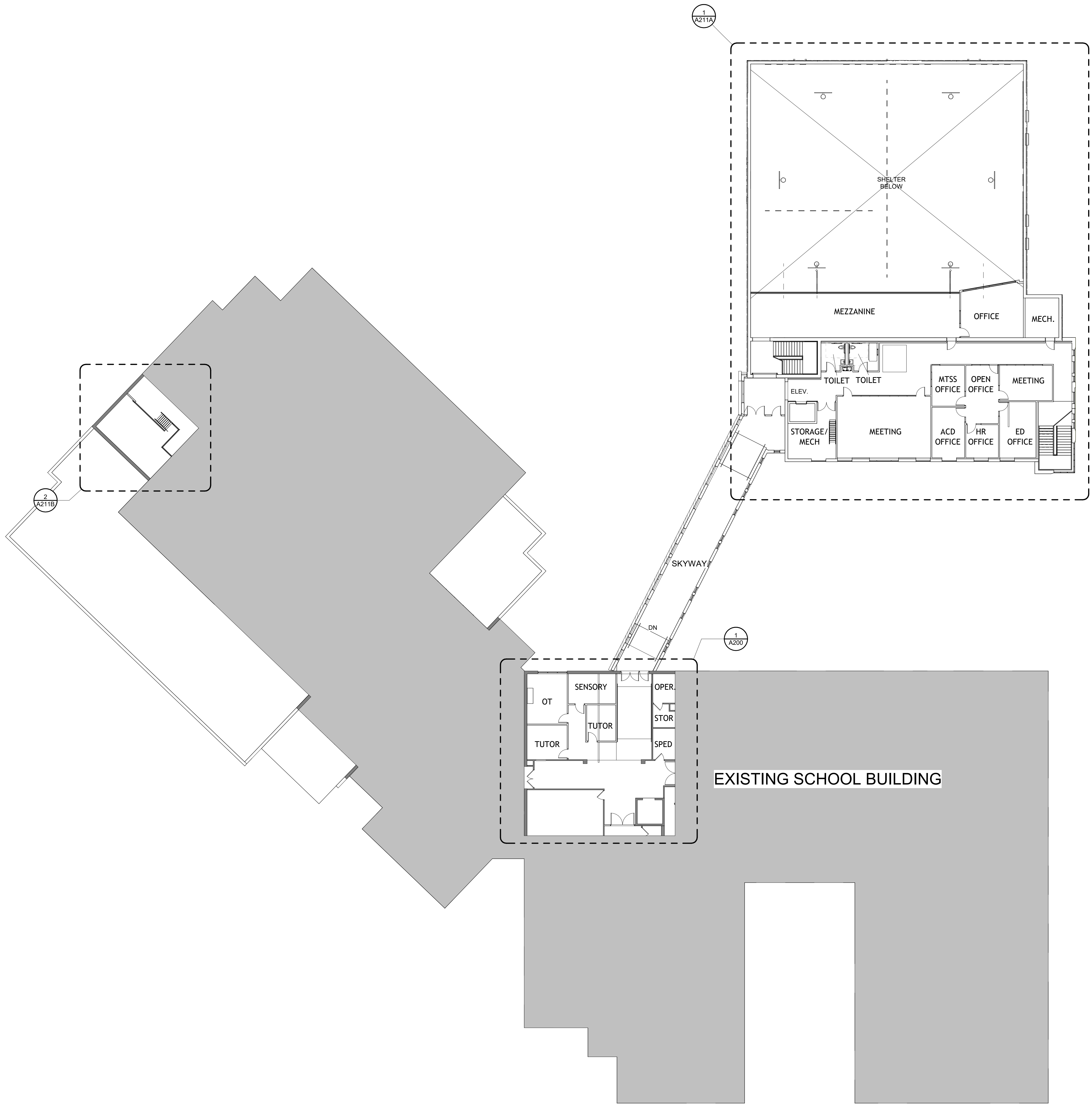
① FIRST FLOOR PLAN - ENTRANCE & ADMIN AT EXISTING  
1/8" = 1'-0"



③ FIRST FLOOR PLAN - SECURITY DOORS NEAR ELEVATOR  
1/8" = 1'-0"



② FIRST FLOOR PLAN - MUSIC ROOMS AT EXISTING  
1/8" = 1'-0"



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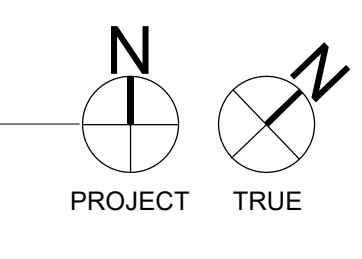
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Construction**

SHEET TITLE:  
**OVERALL PLAN - SECOND  
FLOOR**

SHEET NUMBER:

**A211**

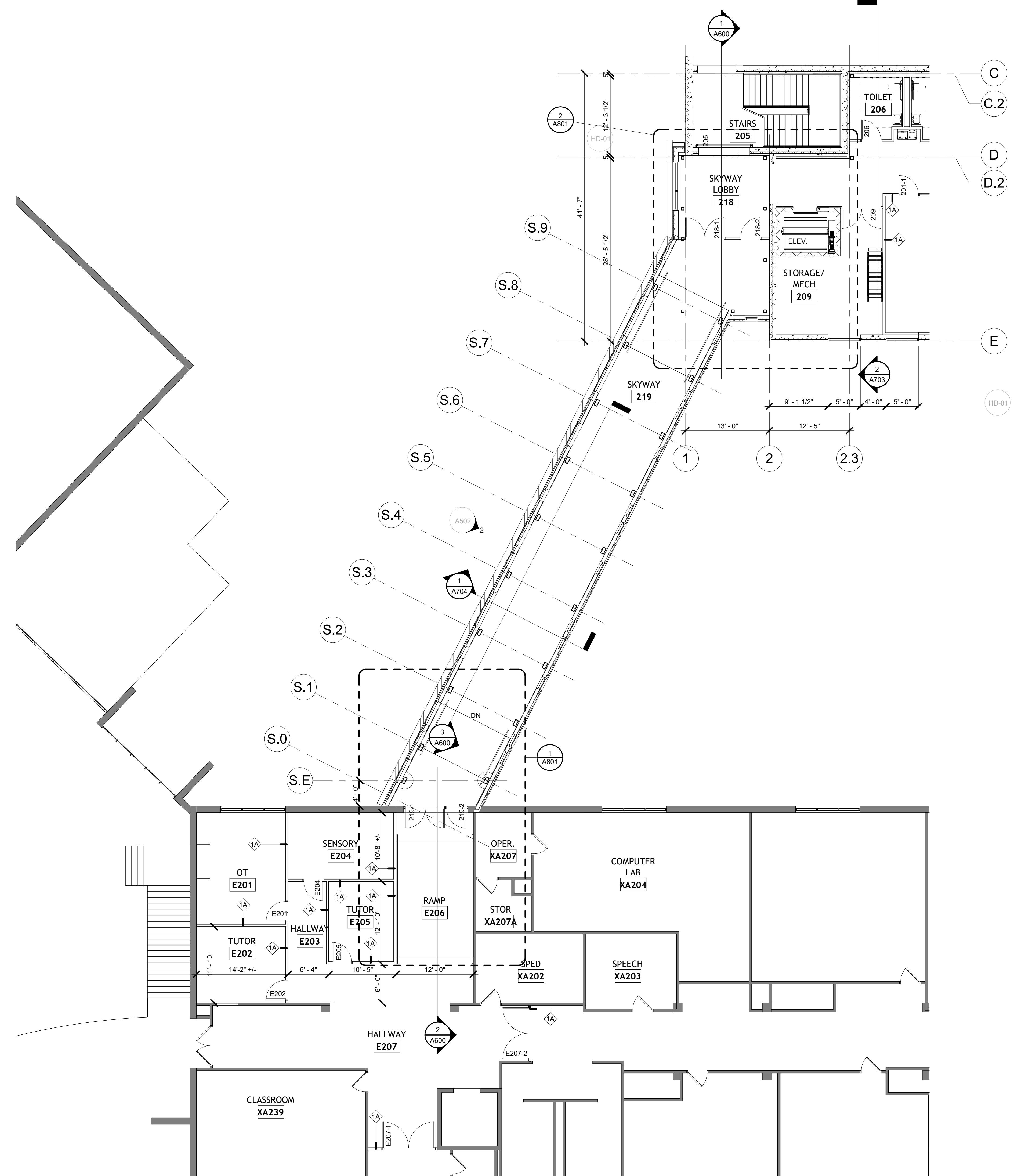
1 SECOND FLOOR OVERALL PLAN  
1/16" = 1'-0"



NOVA CLASSICAL ACADEMY, P.A.  
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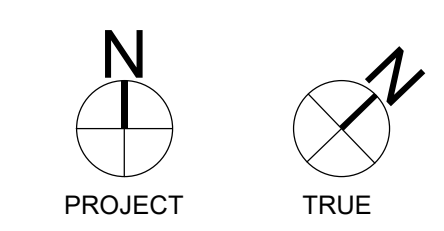


WALL TYPE TAGS  
1A INTERIOR PARTITION TYPE SCHEDULE, SEE A300

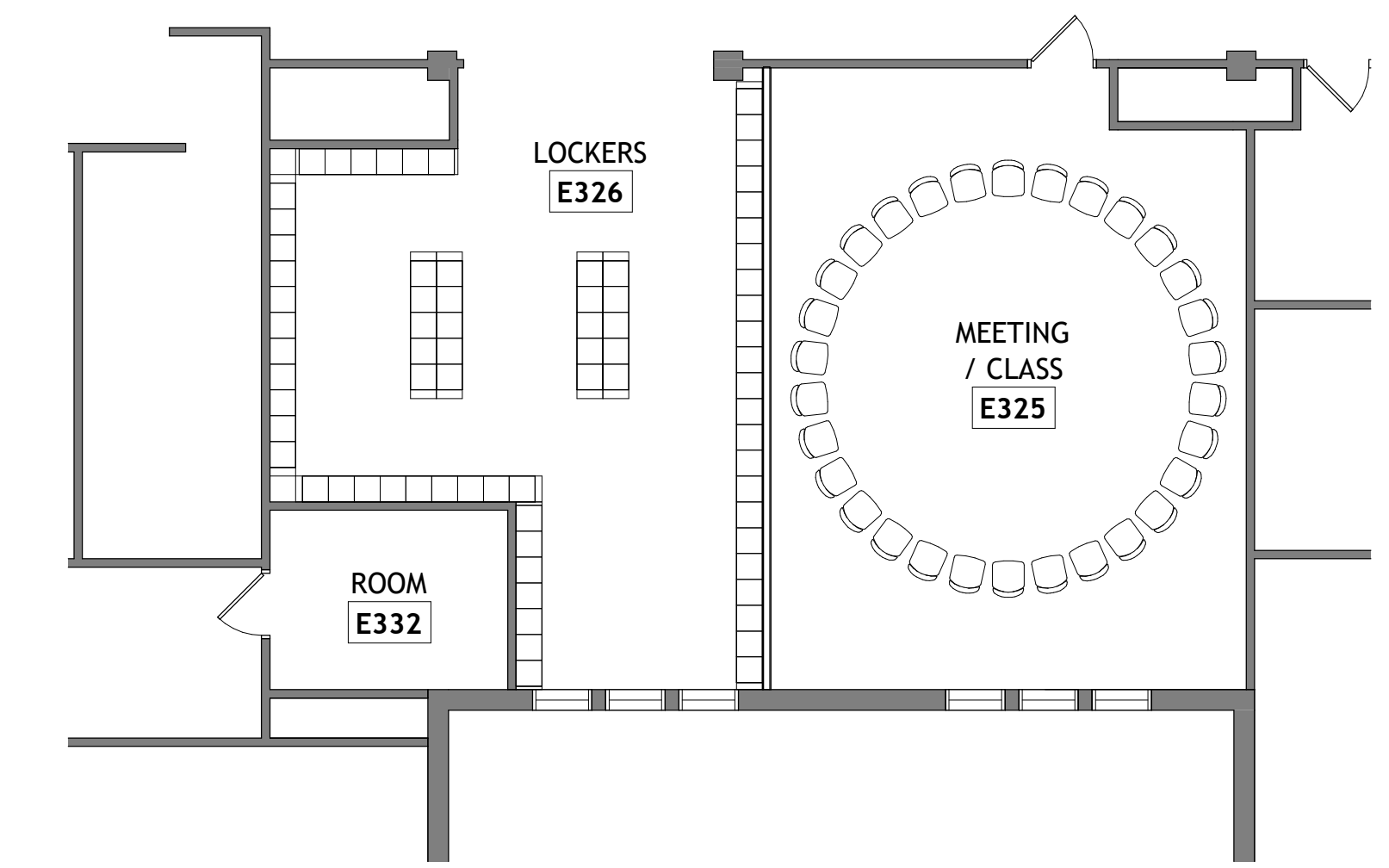


2 SECOND FLOOR PLAN - MEZZANINE AT EXISTING  
1/8" = 1'-0"

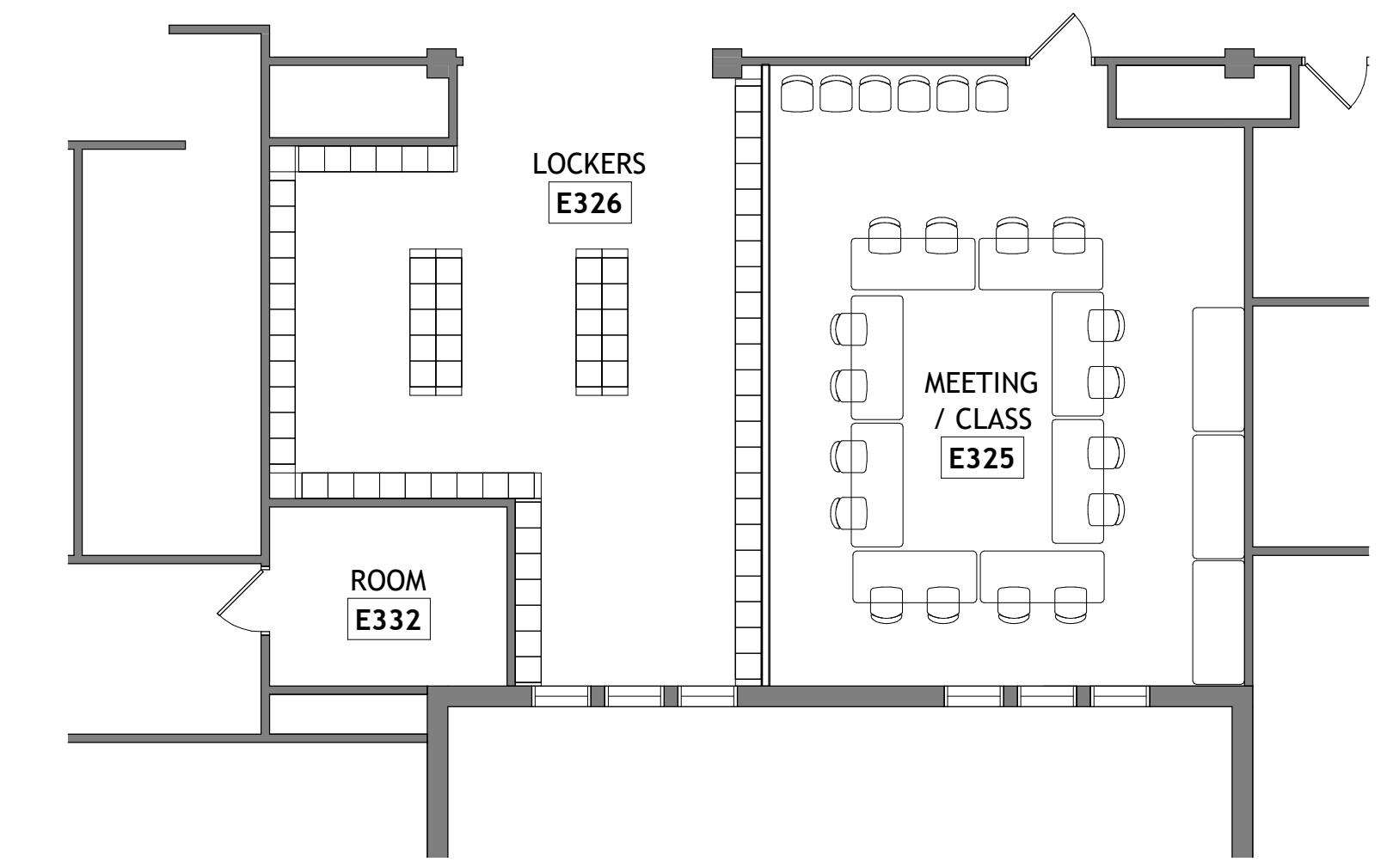
1 SECOND FLOOR PLAN - SKYWAY  
1/8" = 1'-0"



WALL TYPE TAGS  
INTERIOR PARTITION TYPE SCHEDULE, SEE A300

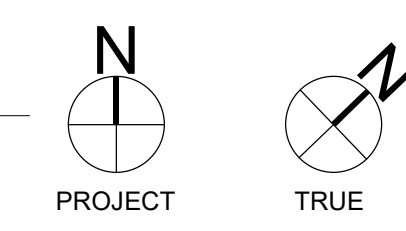


2 THIRD FLOOR PLAN - LOCKER & MEETING ROOM AT EXISTING  
1/8" = 1'-0"



3 THIRD FLOOR PLAN - EX HALL - MEETING  
1/8" = 1'-0"

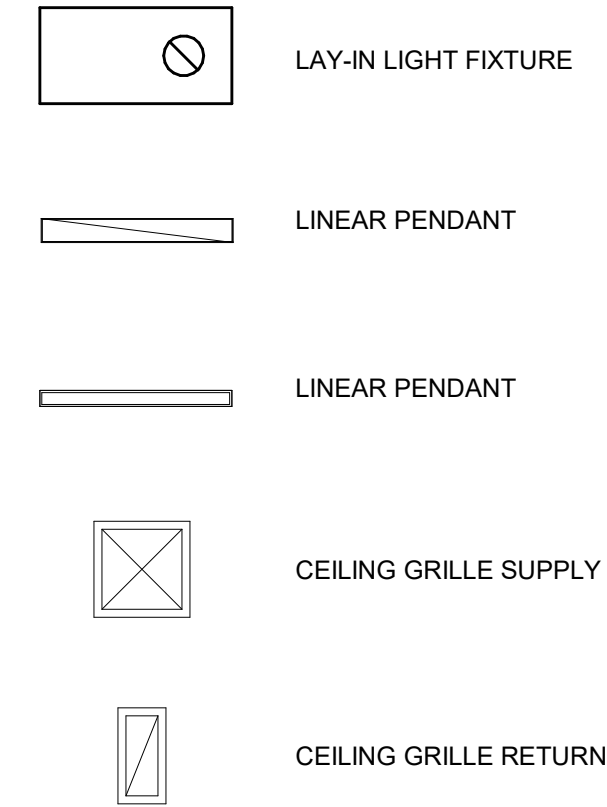
1 THIRD FLOOR OVERALL PLAN  
1/16" = 1'-0"



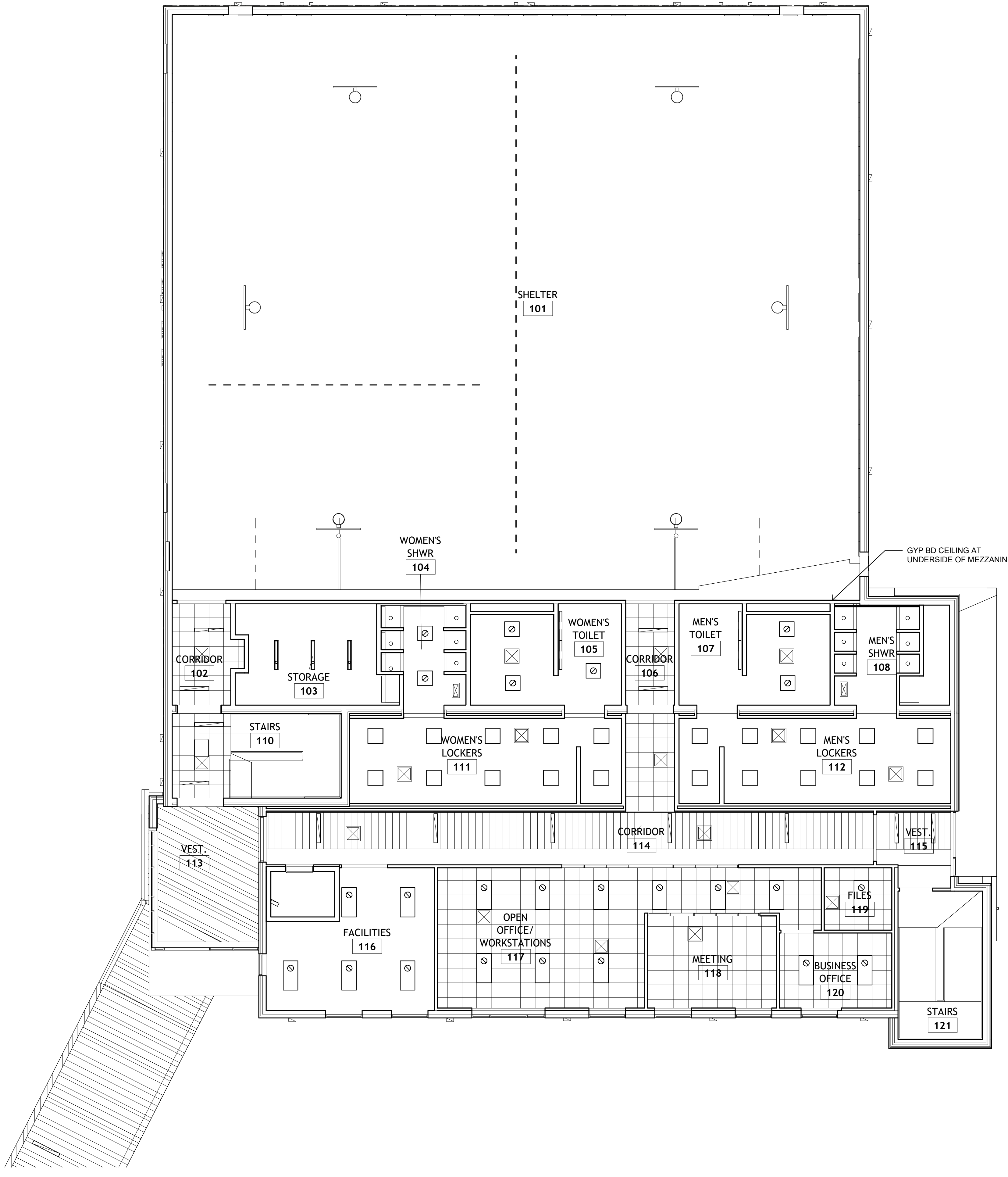
**GENERAL REFLECTED CEILING PLAN NOTES:**

- A. PROVIDE ALL DEMOLITION WORK AS REQUIRED TO COMPLETE THE WORK IN THIS CONTRACT, INCLUDING THAT WORK THAT IS REQUIRED TO COMPLETE ALL WORK SHOWN ELSEWHERE IN THESE DOCUMENTS, BUT NOT SPECIFICALLY IDENTIFIED ON THESE PLANS.
- B. SEE MECHANICAL AND ELECTRICAL PLANS FOR WORK REQUIRING ADDITIONAL CEILING WORK THAT IS REQUIRED TO BE PERFORMED TO COMPLETE IT. SEE MECHANICAL AND ELECTRICAL PLANS FOR EXTENT OF THE REMOVAL AND CAPPING OF EXISTING UTILITY, AND ELECTRICAL LINES, DUCTWORK, ETC.
- C. AREAS ON CEILING PLANS THAT ARE DENSELY HATCHED INDICATE EXISTING CEILINGS, LIGHTING AND OTHER CEILING MOUNTED ITEMS THAT ARE SCHEDULED TO REMAIN AND RECEIVE NO ADDITIONAL WORK, UNLESS NOTED OTHERWISE.
- D. PROTECTION OF EXISTING CONSTRUCTION: ALL CONSTRUCTION INDICATED AS REMAINING IS TO BE PROTECTED FROM DAMAGE FROM ALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING EXISTING CONSTRUCTION INDICATED AS REMAINING TO THE CONDITION FOUND PRIOR TO THE START OF DEMOLITION AND CONSTRUCTION, UNLESS NOTED OTHERWISE. THE CONTRACTOR IS TO REPAIR OR REPLACE ALL DAMAGED ITEMS AT THE OWNER'S DISCRETION.
- E. AT EXISTING CEILINGS THAT ARE INDICATED TO BE REMOVED AND NOT REINSTALLED, REMOVE THE ENTIRE CEILING SYSTEM, INCLUDING, BUT NOT LIMITED TO, THE TILES, SUSPENSION GRID, LIGHTING AND OTHER CEILING MOUNTED ITEMS, HANGERS, WIRES AND OTHER SUPPORT STRUCTURES. CEILING COMPONENTS MAY BE SALVAGED FOR REUSE IN OTHER AREAS FOR PATCHING IF THEY MATCH THOSE CEILINGS AND REMAIN UNDAMAGED.
- F. EXISTING CEILINGS THAT ARE INDICATED ON THESE PLANS TO REMAIN, BUT ARE REQUIRED TO BE REMOVED IN ORDER TO PERFORM WORK IDENTIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS SHALL BE DISASSEMBLED, SALVAGED, AND THEN REINSTALLED TO THEIR ORIGINAL CONDITION PRIOR TO THE START OF WORK. SALVAGE ONLY THOSE CEILING COMPONENTS WHICH REMAIN IN UNDAUNAGED AND CLEAN CONDITION. DO NOT REINSTALL CEILING TILES THAT ARE STAINED, WHICH HAVE ABRASIONS, CRACKS OR OTHER SURFACE IMPERFECTIONS. DISCARD OTHER DAMAGED AND UN-REPAIRABLE CEILING COMPONENTS. IF THERE ARE NOT SUFFICIENT SALVAGED COMPONENTS TO COMPLETE PATCHING AND REINSTALLATION OF THE EXISTING CEILING, PROVIDE NEW CEILING COMPONENTS MATCHING THE EXISTING CEILING.
- G. PROTECTION OF SALVAGED ITEMS: THE CONTRACTOR IS TO REMOVE AND STORE ITEMS INDICATED AS BEING REMOVED AND REUSED, AND STOCKPILE THEM IN A SECURE LOCATION ON SITE AS TO PROTECT FROM THEM FROM CONSTRUCTION DAMAGE UNTIL THEY ARE TO BE REINSTALLED. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING SUCH ITEMS THAT ARE EITHER DAMAGED OR MISPLACED.

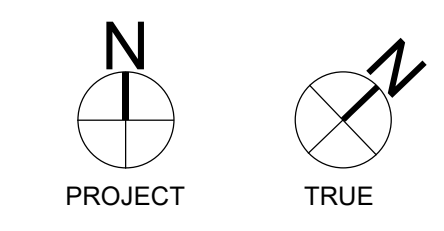
**ELECTRICAL**



REFLECTED CEILING PLAN SYMBOLS  
1/4" = 1'-0"



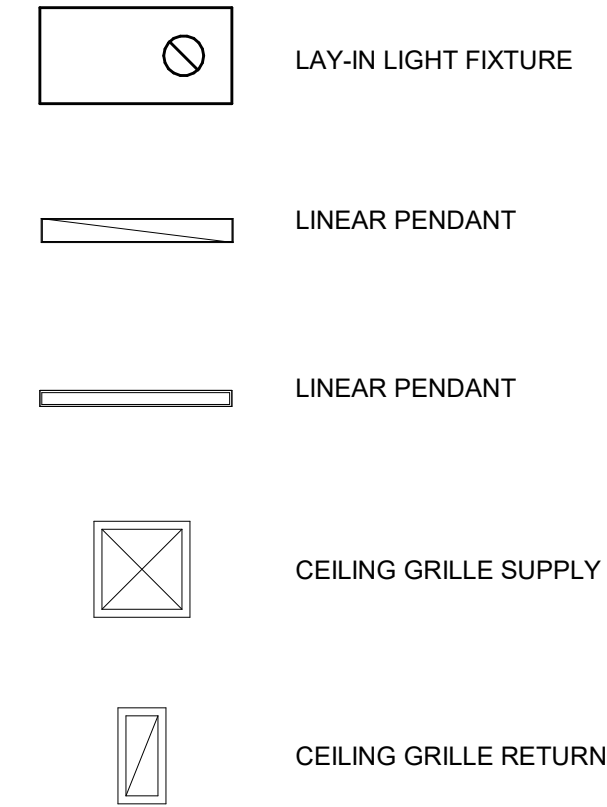
1 REFLECTED CEILING PLAN - FIRST FLOOR  
1/8" = 1'-0"



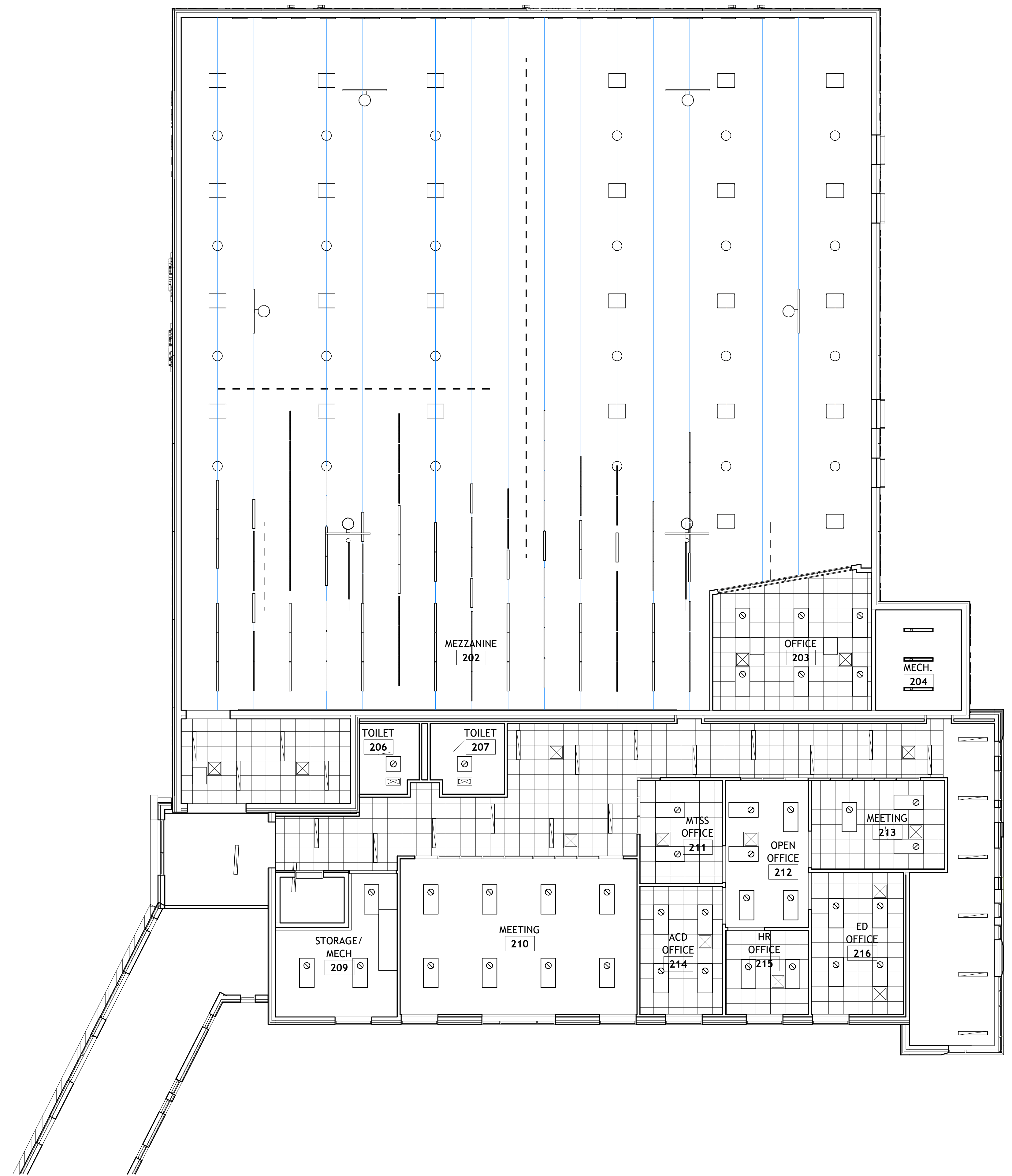
**GENERAL REFLECTED CEILING PLAN NOTES:**

- A. PROVIDE ALL DEMOLITION WORK AS REQUIRED TO COMPLETE THE WORK IN THIS CONTRACT, INCLUDING THAT WORK THAT IS REQUIRED TO COMPLETE ALL WORK SHOWN ELSEWHERE IN THESE DOCUMENTS, BUT NOT SPECIFICALLY IDENTIFIED ON THESE PLANS.
- B. SEE MECHANICAL AND ELECTRICAL PLANS FOR WORK REQUIRING ADDITIONAL CEILING WORK THAT IS REQUIRED TO BE PERFORMED TO COMPLETE IT. SEE MECHANICAL AND ELECTRICAL PLANS FOR EXTENT OF THE REMOVAL AND CAPPING OF EXISTING UTILITY, AND ELECTRICAL LINES, DUCTWORK, ETC.
- C. AREAS ON CEILING PLANS THAT ARE DENSELY HATCHED INDICATE EXISTING CEILINGS, LIGHTING AND OTHER CEILING MOUNTED ITEMS THAT ARE SCHEDULED TO REMAIN AND RECEIVE NO ADDITIONAL WORK, UNLESS NOTED OTHERWISE.
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- F. EXISTING CEILINGS THAT ARE INDICATED ON THESE PLANS TO REMAIN, BUT ARE REQUIRED TO BE REMOVED IN ORDER TO PERFORM WORK IDENTIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS SHALL BE DISASSEMBLED, SALVAGED, AND THEN REINSTALLED TO THEIR ORIGINAL CONDITION PRIOR TO THE START OF WORK. SALVAGE ONLY THOSE CEILING COMPONENTS WHICH REMAIN IN UNDAMAGED AND CLEAN CONDITION. DO NOT REINSTALL CEILING TILES THAT ARE STAINED, WHICH HAVE ABRASIONS, CRACKS OR OTHER SURFACE IMPERFECTIONS. DISCARD OTHER DAMAGED AND UN-REPAIRABLE CEILING COMPONENTS. IF THERE ARE NOT SUFFICIENT SALVAGED COMPONENTS TO COMPLETE PATCHING AND REINSTALLATION OF THE EXISTING CEILING, PROVIDE NEW CEILING COMPONENTS MATCHING THE EXISTING CEILING.
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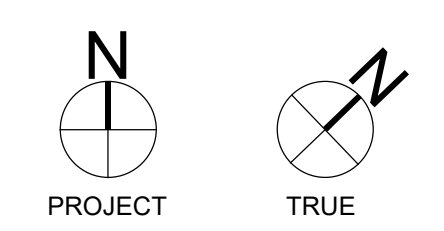
**ELECTRICAL**



REFLECTED CEILING PLAN SYMBOLS  
1/4" = 1'-0"



1 REFLECTED CEILING PLAN - SECOND FLOOR  
1/8" = 1'-0"



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME  
SIGNATURE  
LICENSE NO.  
05/07/2025  
DATE

**DD DOCUMENT**  
**Not For Construction**

SHEET TITLE:  
**SECOND FLOOR REFLECTED CEILING PLAN - SHELTER**

SHEET NUMBER:

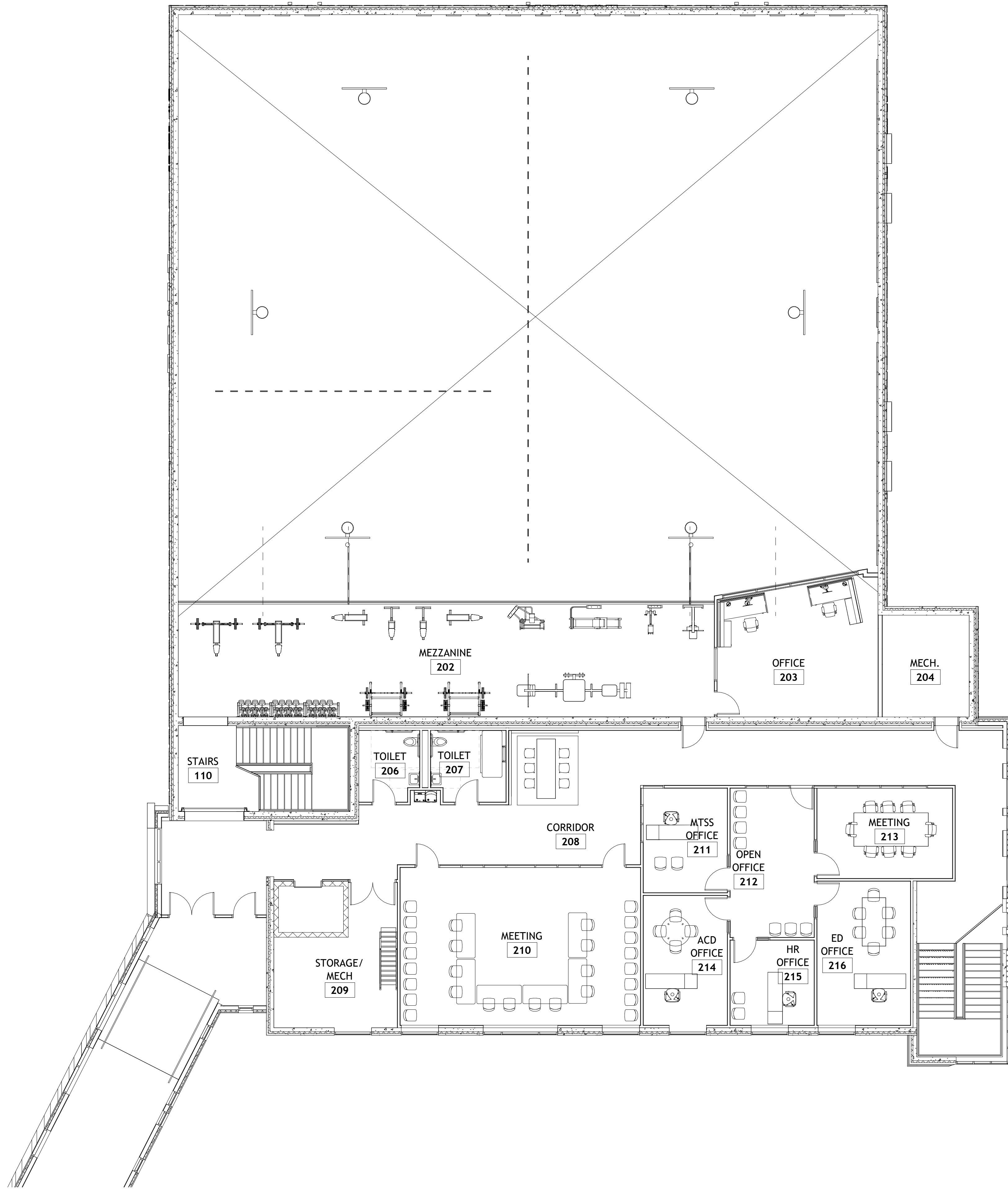
**A221A**

**DD  
DOCUMENT  
Not For  
Construction**

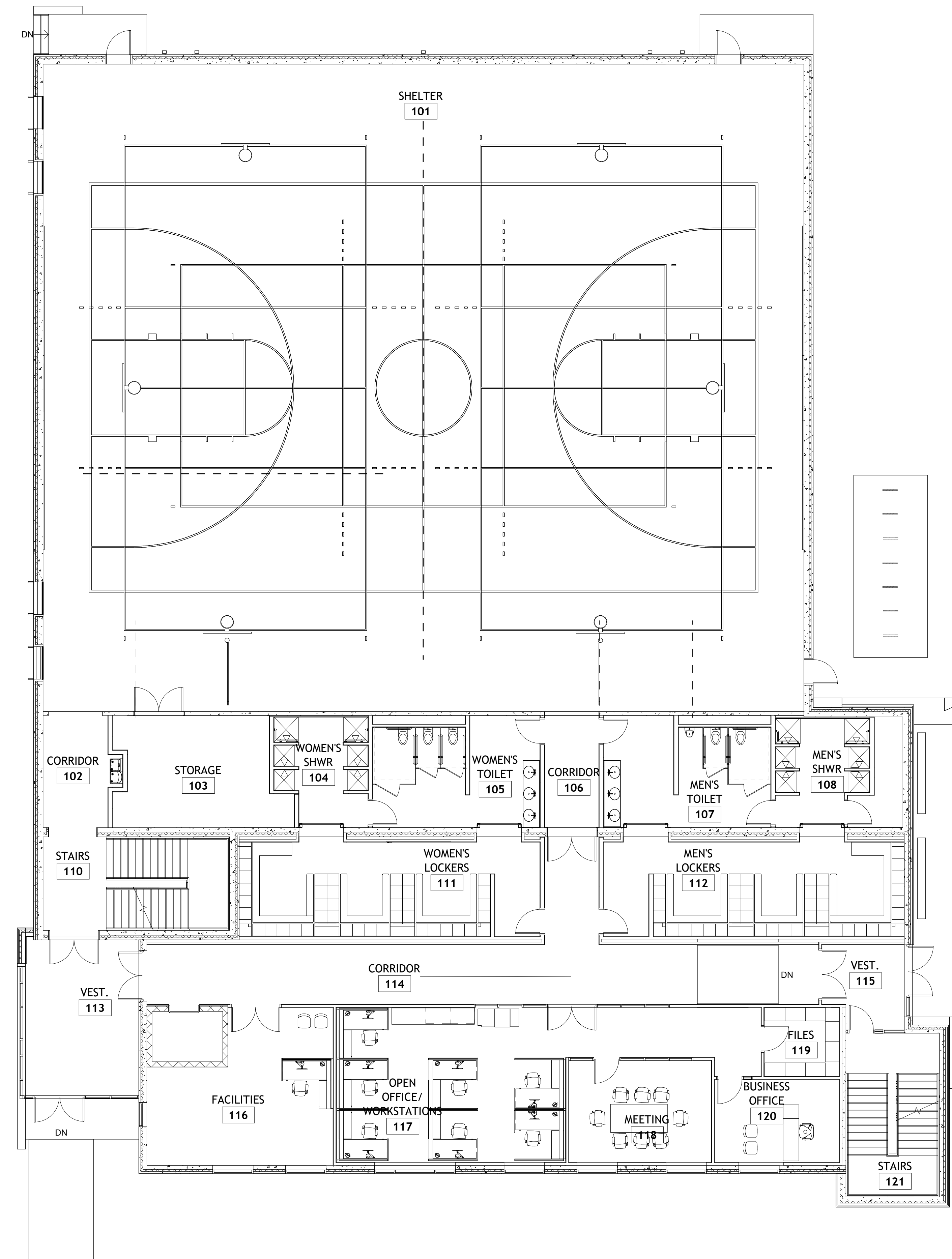
SHEET TITLE:  
**FURNITURE PLAN - FIRST &  
SECOND FLOOR**

SHEET NUMBER:

**A240**



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



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



**GENERAL FINISH SCHEDULE NOTES:**

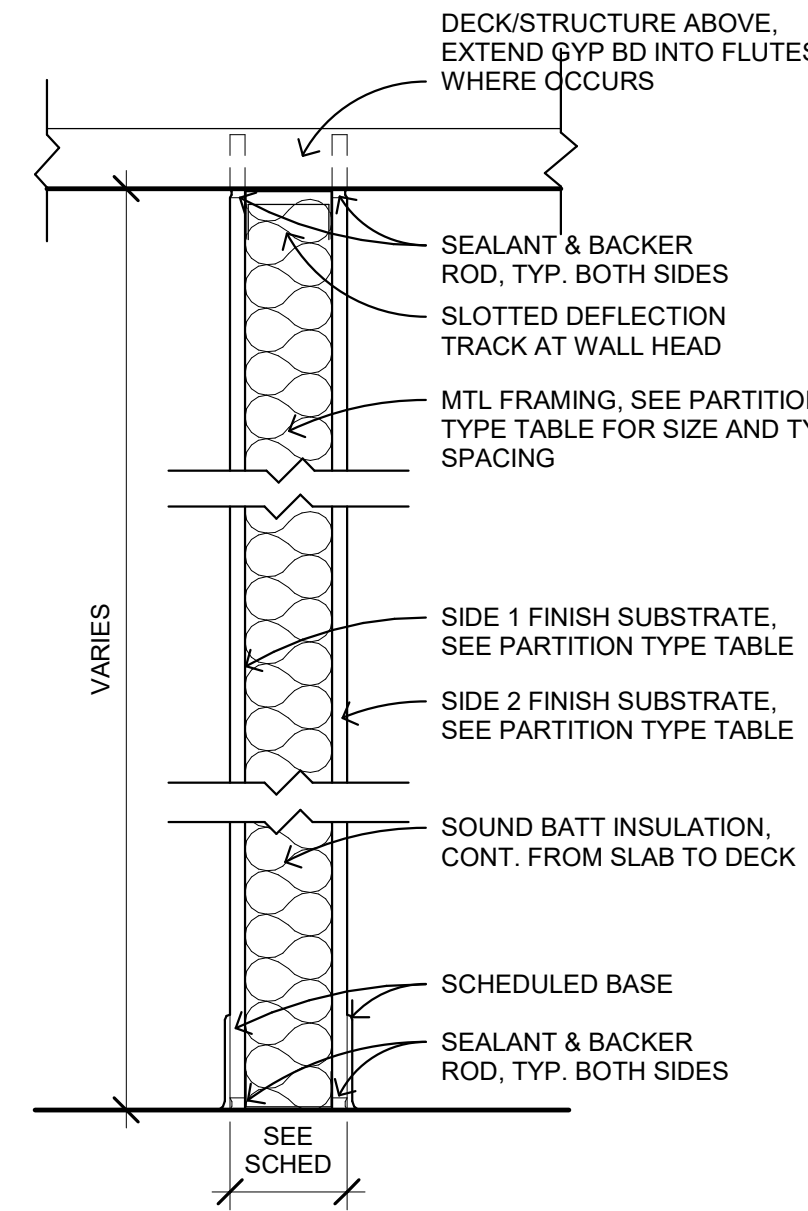
- REVIEW INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION REGARDING ACCENT COLORS AND LOCATIONS OF PAINT COLOR TRANSITIONS.
- SEE SPECIFICATIONS FOR SPECIFIC COLORS AND BLENDS FOR FINISH MATERIALS NOTED IN ROOM FINISH SCHEDULE.
- SEE DOOR SCHEDULE FOR HM DOOR AND FRAME PAINT COLORS.
- ALL STRUCTURAL STEEL EXPOSED TO VIEW FROM BELOW TO BE PAINTED PT-1.

**FINISH SCHEDULE KEYNOTES:**

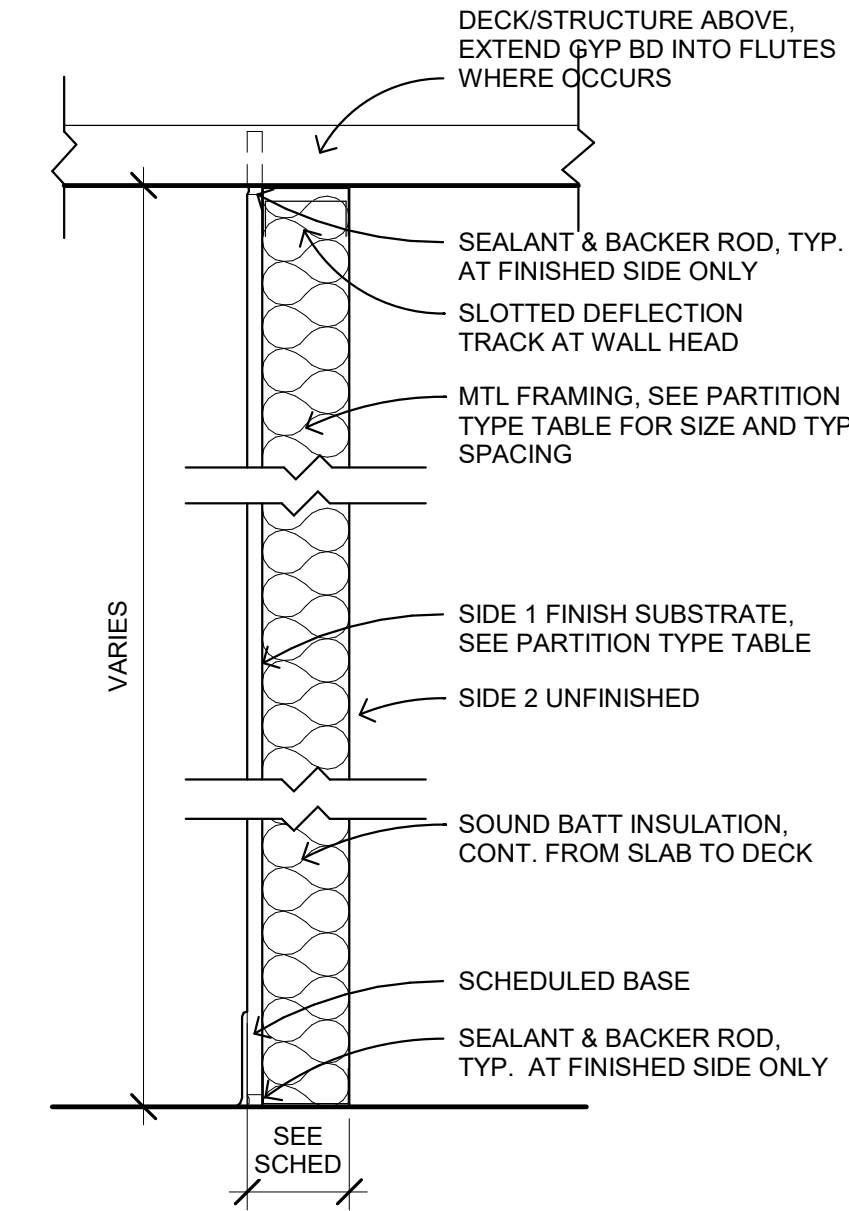
- SEE FINISH PLAN FOR EXTENT OF ACCENT COLORS.
- ALIGN CEILING WITH TOP OF LAST FULL COURSE OF CT-2.

**ROOM FINISH SCHEDULE**

Level	ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	NORTH WALL FINISH	NORTH WALL SUBSTRATE	EAST WALL FINISH	EAST WALL SUBSTRATE	SOUTH WALL FINISH	SOUTH WALL SUBSTRATE	WEST WALL FINISH	WEST WALL SUBSTRATE	CEILING MATERIAL	CEILING FINISH	CEILING HEIGHT
LEVEL 1	101	SHELTER	REC-1	VINYL	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	STRUCT.	NA	
LEVEL 1	102	CORRIDOR	LIN-1	VINYL	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	ACT-1	NA	10'-0"
LEVEL 1	103	STORAGE	SEALED CONC.	VINYL	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	STRUCT.	NA	
LEVEL 1	104	WOMEN'S SHWR	PA FLOORING	PA BASE	EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		GYP BD		
LEVEL 1	105	WOMEN'S TOILET	PA FLOORING	PA BASE	EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		GYP BD		
LEVEL 1	106	CORRIDOR	LIN-1	VINYL	PT-1		PT-1	GYP BD	PT-1	CONC.	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 1	107	MEN'S TOILET	PA FLOORING	PA BASE	EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		GYP BD		
LEVEL 1	108	MEN'S SHWR	PA FLOORING	PA BASE	EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		GYP BD		
LEVEL 1	109	MECH.													
LEVEL 1	110	STAIRS	LIN-1	VINYL	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	ACT-1	NA	10'-0"
LEVEL 1	111	WOMEN'S LOCKERS	PA FLOORING	PA BASE	EPOXY PT-1	GYP BD	EPOXY PT-1	GYP BD	EPOXY PT-1	GYP BD	EPOXY PT-1	GYP BD	GYP BD		
LEVEL 1	112	MEN'S LOCKERS	PA FLOORING	PA BASE	EPOXY PT-1	GYP BD	EPOXY PT-1	GYP BD	EPOXY PT-1	GYP BD	EPOXY PT-1	GYP BD	GYP BD		
LEVEL 1	113	VEST	CTP-2	VINYL	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	ACT-1	NA	10'-0"
LEVEL 1	114	CORRIDOR	LIN-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 1	115	VEST	CTP-2	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 1	116	FACILITIES	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	CONC.	PT-1	CONC.	STRUCT.	NA	
LEVEL 1	117	OPEN OFFICE/WORKSTATIONS	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 1	118	MEETING	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 1	119	FILES	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 1	120	BUSINESS OFFICE	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 1	121	STAIRS	LIN-1	VINYL	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	ACT-1	NA	10'-0"
LEVEL 1	122	STAIR													
LEVEL 1	126	TOILET													
LEVEL 1	149	TOILET													
LEVEL 1	E101	HALLWAY													
LEVEL 1	E102	OFFICE													
LEVEL 2	202	MEZZANINE	RUBBER FLOORING	VINYL	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	ACT-1	NA	10'-0"
LEVEL 2	203	OFFICE	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	204	MECH.	SEALED CONC.	VINYL	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	GYP BD	ACT-1	NA
LEVEL 2	205	STAIRS													
LEVEL 2	206	TOILET	PA FLOORING	PA BASE	EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		GYP BD		
LEVEL 2	207	TOILET	PA FLOORING	PA BASE	EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		EPOXY PT-1		GYP BD		
LEVEL 2	208	CORRIDOR	LIN-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	209	STORAGE/MECH	SEALED CONC.	VINYL	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	PT-1	CONC.	STRUCT.	NA	
LEVEL 2	210	MEETING	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	211	MTSS OFFICE	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	212	OPEN OFFICE	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	213	MEETING	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	214	ACD OFFICE	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	215	HR OFFICE	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	216	ED OFFICE	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	217	STAIRS													
LEVEL 2	218	SKYWAY LOBBY													
LEVEL 2	219	SKYWAY													
LEVEL 2	E101M	MEZZ													
LEVEL 2	E201	OT	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	E202	TUTOR	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	E203	HALLWAY													
LEVEL 2	E204	SENSORY	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	E205	TUTOR	CPT-1	VINYL	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	PT-1	GYP BD	ACT-1	NA	10'-0"
LEVEL 2	E206	RAMP													
LEVEL 2	E207	HALLWAY													
LEVEL 3	E326	MEETING / GLASS													
LEVEL 3	E326	LOCKERS													
LEVEL 3	E332	ROOM													



1 PARTITION TYPE 1 - TYP MTL STUD  
1 1/2" = 1'-0"



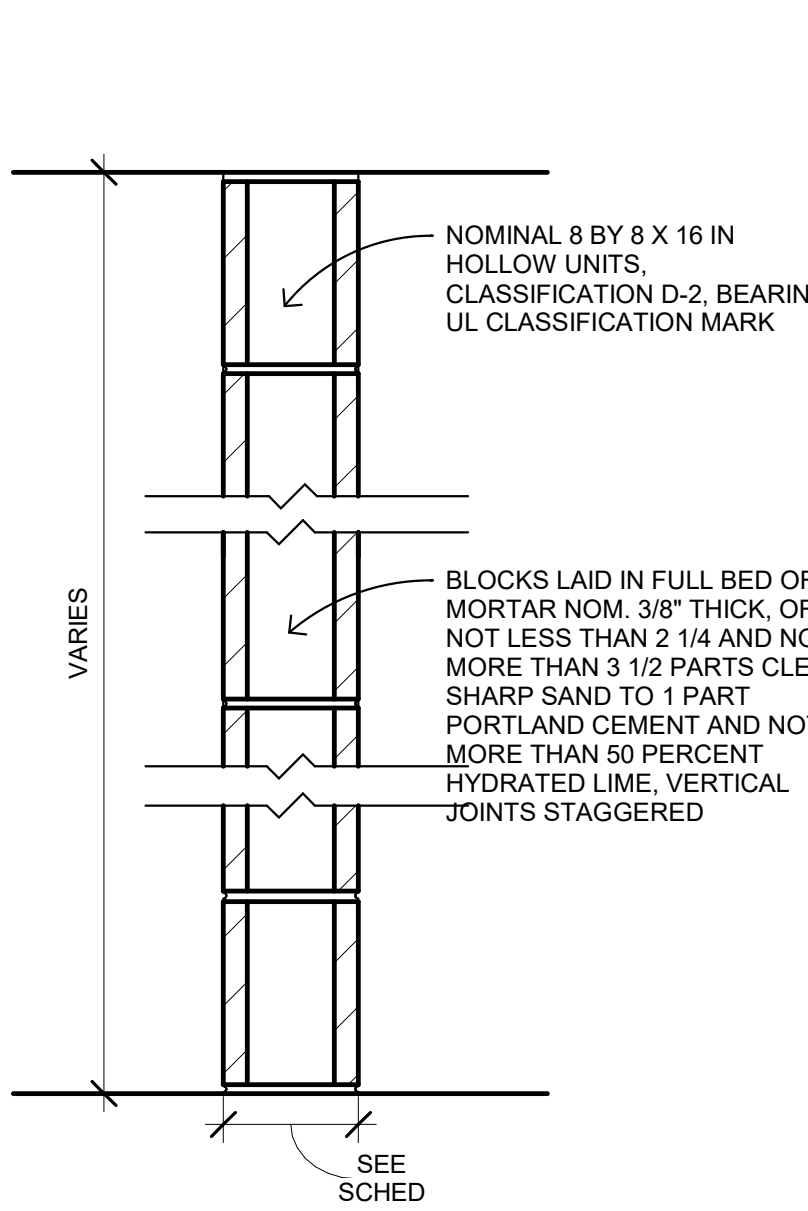
2 PARTITION TYPE 2 - MTL STUD FURRING/SHAFT  
1 1/2" = 1'-0"

**PARTITION TYPE 1**

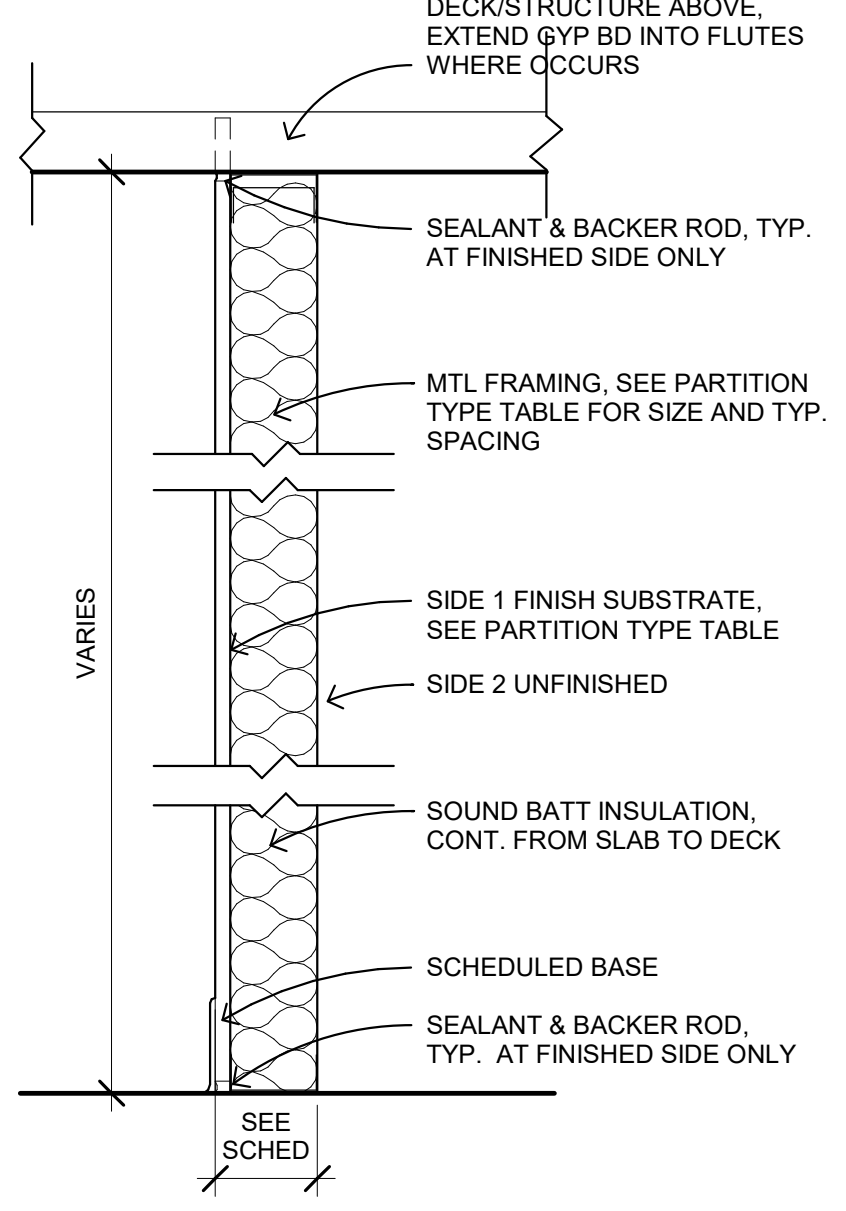
TYPE	TOTAL WIDTH	FRAMING	SIDE 1 SUBSTRATE	SIDE 2 SUBSTRATE	SOUND BATT	FIRE RATING	UL DESIGN NO.
1A	4 7/8"	3 5/8"	5/8" TYPE-X GYP BD	5/8" TYPE-X GYP BD	YES		
1B	7 1/4"	6"	5/8" TYPE-X GYP BD	5/8" TYPE-X GYP BD	YES		
1C	7 1/4"	6"	5/8" TYPE-X GYP BD	5/8" TYPE-X GYP BD	YES		
1D	7 1/4"	6"	5/8" TYPE-X GYP BD	5/8" MOIST. RES. GYP BD W/CT	YES		
1E	7 1/4"	6"	5/8" MOIST. RES. GYP BD	5/8" MOIST. RES. GYP BD W/CT	YES		
1F	7 1/4"	6"	5/8" MOIST. RES. GYP BD W/CT	5/8" CEMENT BACKER BOARD	YES		
1S	4 7/8"	3 5/8"	5/8" MOIST. RES. GYP BD W/S.S.	5/8" MOIST. RES. GYP BD W/S.S.	YES		
1S1	4 7/8"	3 5/8"	5/8" MOIST. RES. GYP BD W/S.S.	5/8" TYPE-X GYP BD	YES		

**PARTITION TYPE 2**

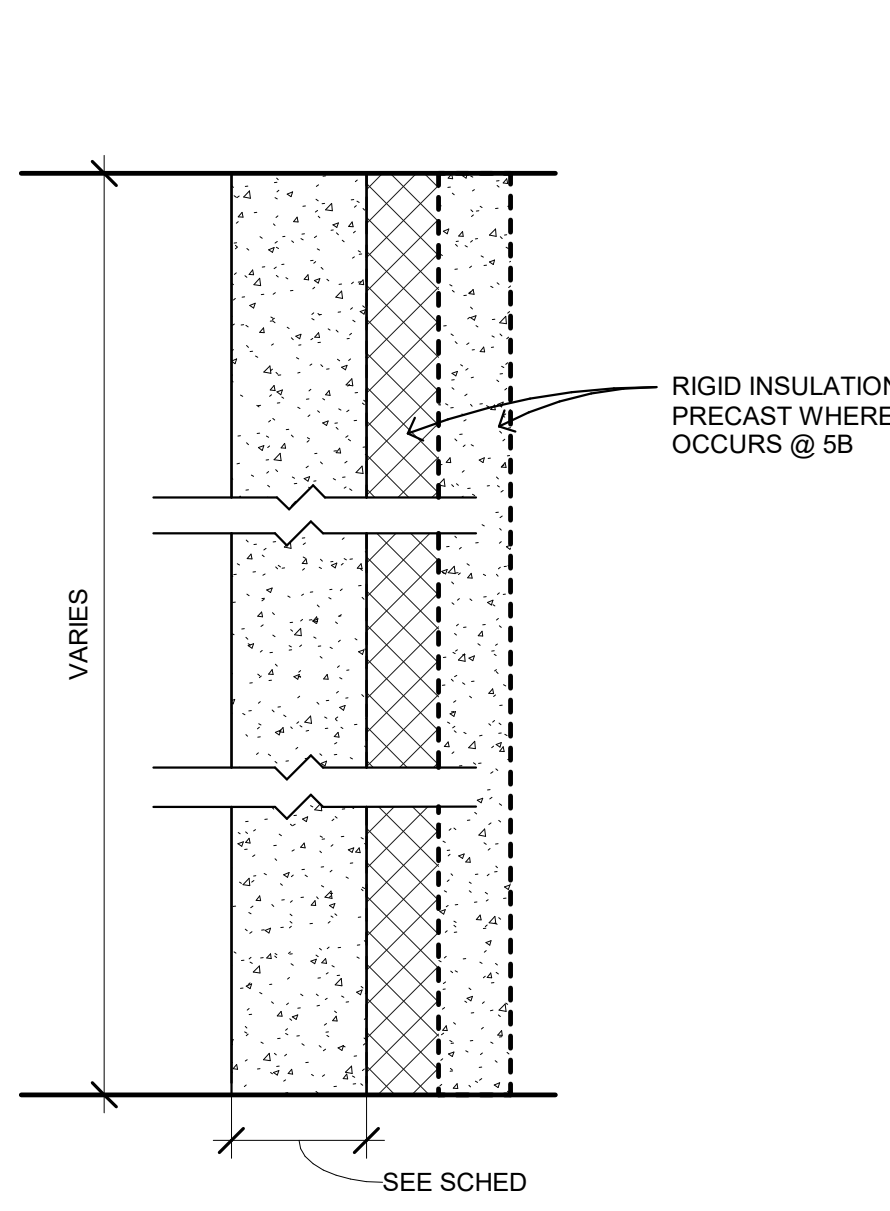
TYPE	TOTAL WIDTH	FRAMING	SIDE 1 SUBSTRATE	SIDE 2 SUBSTRATE	SOUND BATT	FIRE RATING	UL DESIGN NO.
2A	2 1/4"	1 5/8"	5/8" TYPE-X GYP BD	NONE	YES		
2B	4 1/4"	3 5/8"	5/8" TYPE-X GYP BD	NONE	YES		
2C	4 1/2"	3 5/8"	5/8" MOIST. RES. GYP BD W/CT	NONE	NO		
2D	4 1/4"	3 5/8"	5/8" TYPE-X GYP BD	NONE	YES		



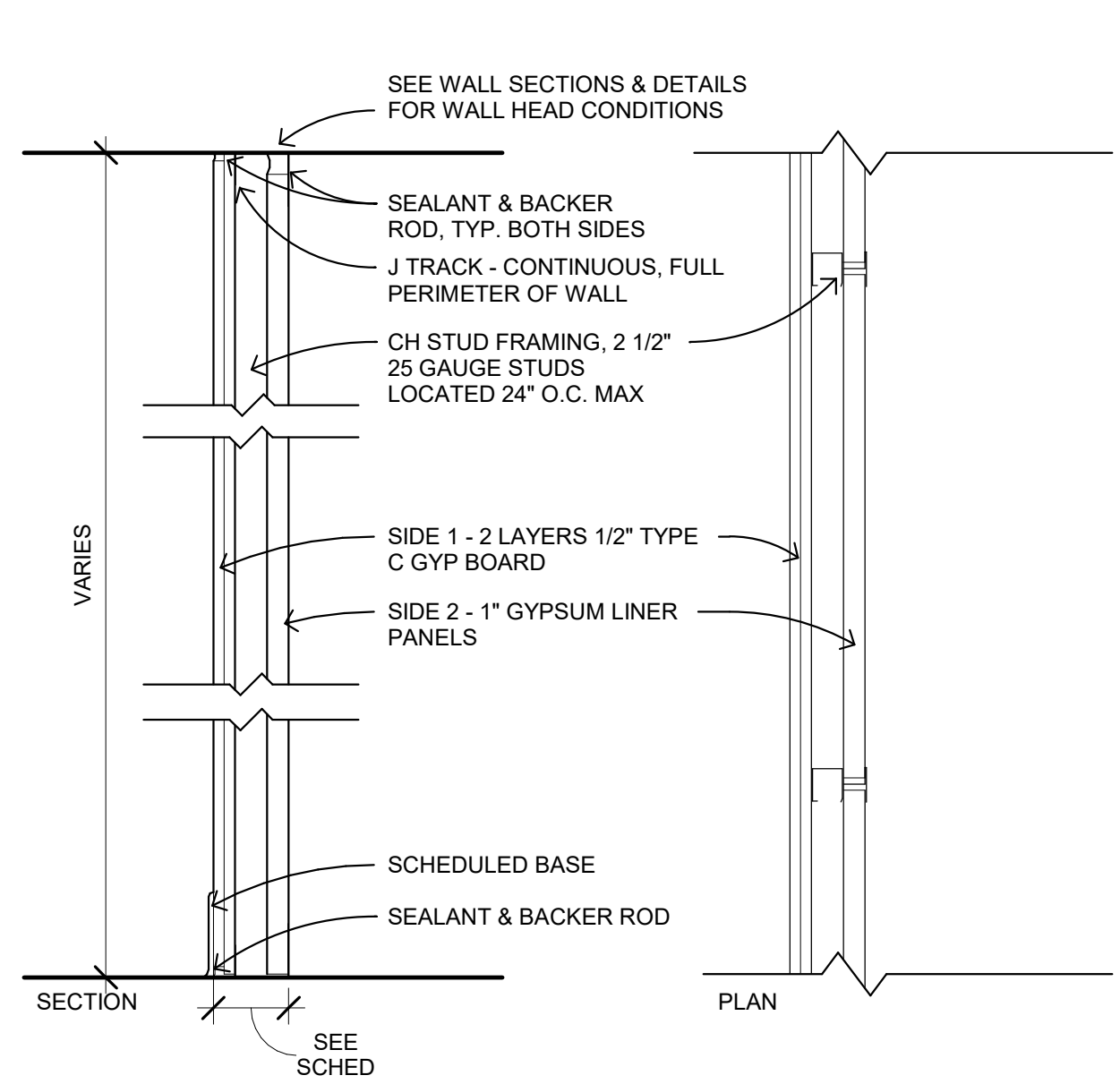
3 PARTITION TYPE 3 - CONCRETE MASONRY UNITS (BEARING)  
1 1/2" = 1'-0"



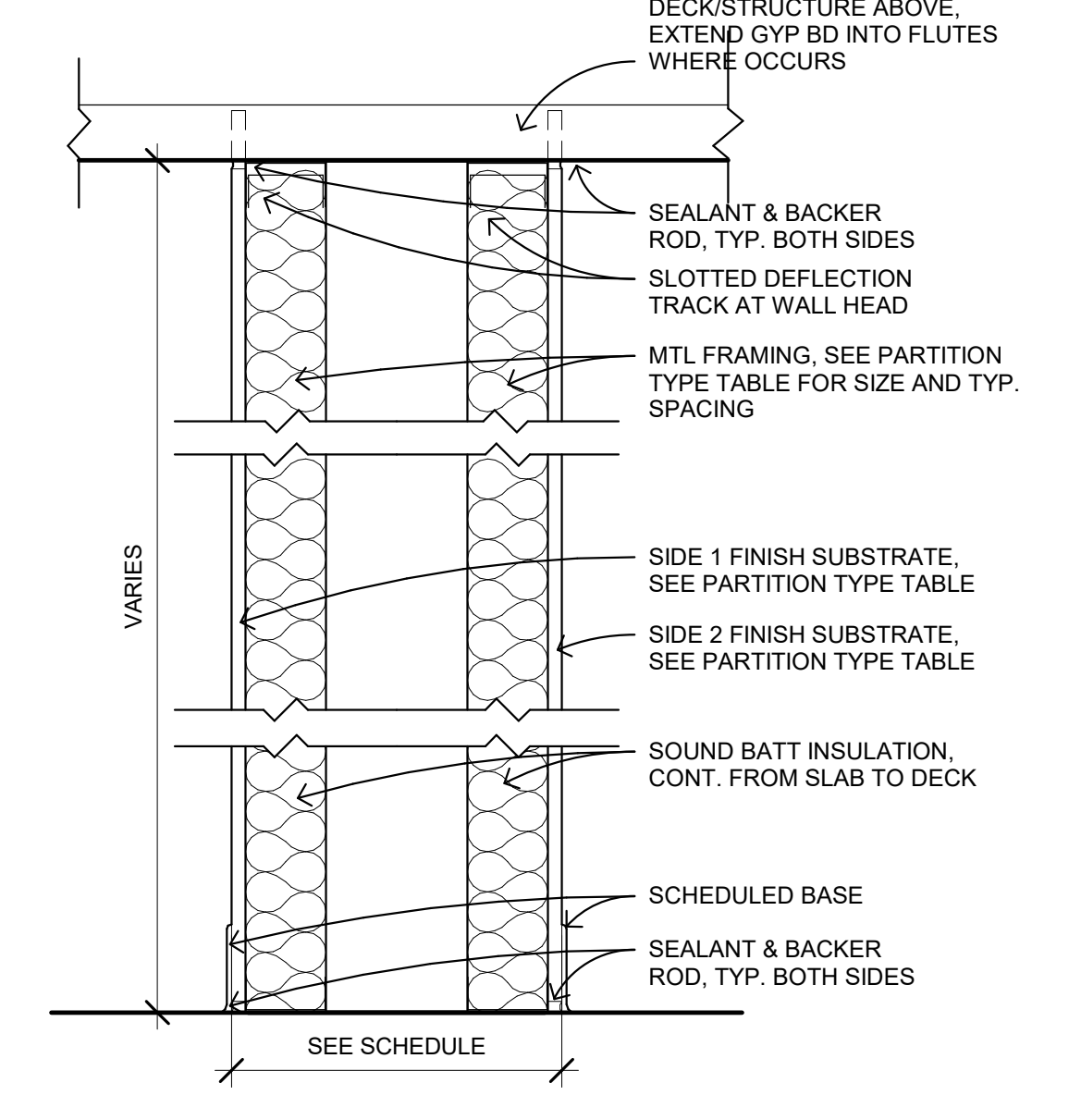
4 PARTITION TYPE 4 - MTL STUD FURRING/SHAFT (BEARING)  
1 1/2" = 1'-0"



5 PARTITION TYPE 5 - INTERIOR PRECAST  
1 1/2" = 1'-0"



6 PARTITION TYPE 6 - FIRE RATED - 2HR - UL U415, SYSTEM B (U438)  
1 1/2" = 1'-0"



7 PARTITION TYPE 8 - TYP MTL STUD - TYP CHASE  
1 1/2" = 1'-0"

**PARTITION TYPE 3**

TYPE	TOTAL WIDTH	FRAMING	SIDE 1 SUBSTRATE	SIDE 2 SUBSTRATE	SOUND BATT	FIRE RATING	UL DESIGN NO.
3A	7 5/8"					1HR	

**PARTITION TYPE 4**

TYPE	TOTAL WIDTH	FRAMING	SIDE 1 SUBSTRATE	SIDE 2 SUBSTRATE	SOUND BATT	FIRE RATING	UL DESIGN NO.

**PARTITION TYPE 5**

TYPE	TOTAL WIDTH	FRAMING	SIDE 1 SUBSTRATE	SIDE 2 SUBSTRATE	SOUND BATT	FIRE RATING	UL DESIGN NO.
5A	6"					2HR	
5B	1' - 2"						

**PARTITION TYPE 6**

TYPE	TOTAL WIDTH	FRAMING	SIDE 1 SUBSTRATE	SIDE 2 SUBSTRATE	SOUND BATT	FIRE RATING	UL DESIGN NO.

**PARTITION TYPE 8**

TYPE	TOTAL WIDTH	FRAMING	SIDE 1 SUBSTRATE	SIDE 2 SUBSTRATE	SOUND BATT	FIRE RATING	UL DESIGN NO.

Project Name: NOVA CLASSICAL ACADEMY IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

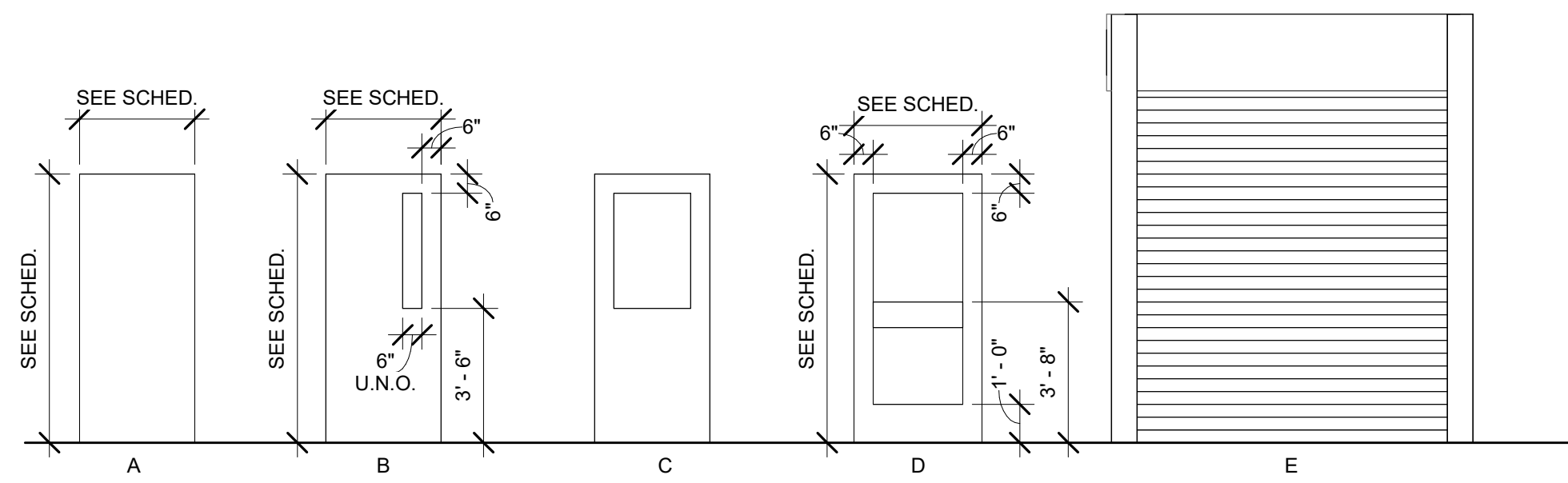
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

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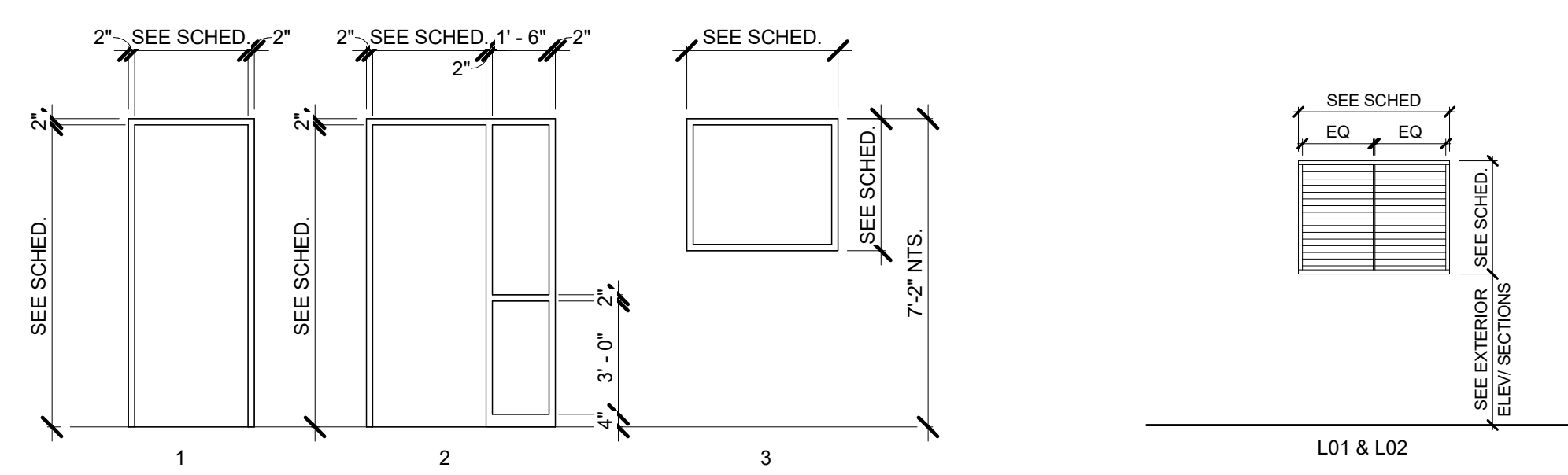
**DD DOCUMENT Not For Construction**

SHEET TITLE:  
**ROOM FINISH SCHEDULE & PARTITION TYPES**

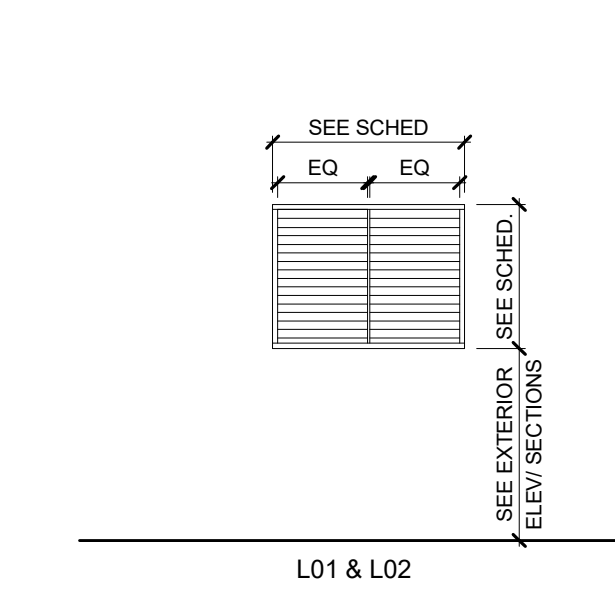
SHEET NUMBER:  
**A300**



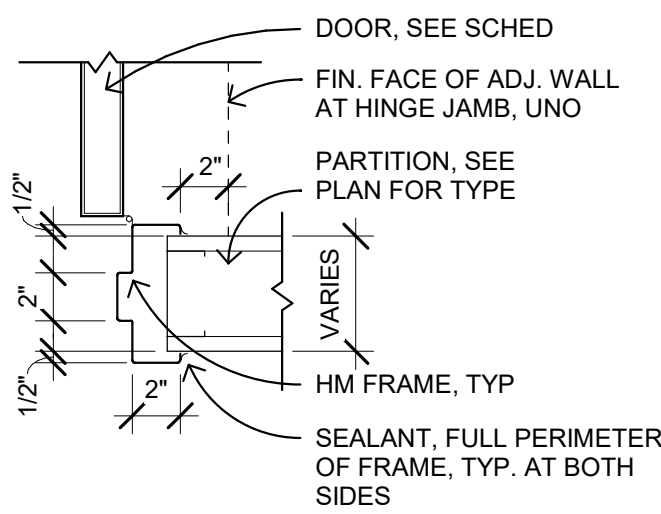
DOOR TYPES  
1/4" = 1'-0"



FRAME TYPES  
1/4" = 1'-0"



LOUVER TYPE  
NOT TO SCALE



SEE DOOR SCHED. FOR REQ. RATED OPENING PROTECTIONS

TYPICAL HM DOOR JAMB (HEAD SIM.)  
1 1/2" = 1'-0"

**OPENING SCHEDULE KEYNOTES:**

1. PAIR OF DOORS, TWO EQUAL, TOTALING TO DIMENSION INDICATED IN SCHEDULE, UNLESS NOTED OTHERWISE
2. PROVIDE ELECTRONIC ACCESS CONTROL AND CARD READERS, SEE ELEC.
3. DOOR SHALL MEET REQUIREMENTS OF ICC 500 & FEMA 320/361, SEE SPEC FOR FEMA PACKAGE DOORS AND FRAMES FOR TORNADO SHELTERS
4. PROVIDE FIRE RATED GLAZING.
5. DOOR TO BE INSTALLED IN EXISTING MASONRY OPENING, FIELD VERIFY EXISTING OPENING SIZE
6. PROVIDE 4" FRAME HEAD

**OPENING SCHEDULE GENERAL NOTES:**

- A. SEE PLAN FOR ALL DOOR LOCATIONS.
- B. FOR WINDOW OPENING HEIGHTS, SEE HOLLOW METAL FRAME TYPES, UNLESS NOTED OTHERWISE ON DRAWINGS.

**OPENING SCHEDULE**

Level	OPENING NUMBER	OPENING SIZE		THICKNESS	DOOR			FRAME			RATING	HARDWARE GROUPS	DETAILS			NOTES
		WIDTH	HEIGHT		TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH			HEAD	JAMB	SILL/THRESHOLD	
LEVEL 1	101-1	3'-0"	8'-0"	1 3/4"	A	HM	POLY	1	HM	PT	X					
LEVEL 1	101-2	3'-0"	8'-0"	1 3/4"	A	HM	POLY	1	HM	PT	X					
LEVEL 1	101-3	3'-0"	8'-0"	1 3/4"	A	HM	POLY	1	HM	PT	X					
LEVEL 1	101-4	3'-0"	7'-0"	1 3/4"	A	HM	PT	1	HM	PT	X					
LEVEL 1	104	5'-6"	11'-2"	0"												
LEVEL 1	105-1	3'-0"	7'-0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
LEVEL 1	105-2	5'-6"	11'-2"	0"												
LEVEL 1	105-3	3'-0"	7'-0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
LEVEL 1	107-1	3'-0"	7'-0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
LEVEL 1	107-2	5'-6"	11'-2"	0"												
LEVEL 1	107-3	3'-0"	7'-0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
LEVEL 1	108	5'-6"	11'-2"	0"												
LEVEL 1	109	3'-0"	7'-0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
LEVEL 1	111	3'-0"	7'-0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
LEVEL 1	112	3'-0"	7'-0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
LEVEL 1	113-1	6'-0"	8'-0"	1 3/4"	D	ALUM		SEE ELEV	ALUM			TBD				
LEVEL 1	113-2	6'-0"	8'-0"	1 3/4"	D	ALUM		SEE ELEV	ALUM			TBD				
LEVEL 1	113-3	3'-0"	8'-0"	1 3/4"	B	HM	PT	1	HM	PT	X					
LEVEL 1	114	3'-0"	8'-0"	1 3/4"	B	HM	PT	1	HM	PT	X					
LEVEL 1	115-1	6'-0"	8'-0"	1 3/4"	D	WD		SEE ELEV	HM			TBD				
LEVEL 1	115-2	3'-0"	8'-0"	1 3/4"	C	WD	POLY	1	HM	HM	X					
LEVEL 1	115-3	3'-0"	8'-0"	1 3/4"	A	WD	POLY	2	HM	PT	X					
LEVEL 1	116	3'-0"	8'-0"	1 3/4"	A	HM	PT	1	HM	PT	X					
LEVEL 1	117	6'-0"	8'-0"	1 3/4"	D	WD		SEE ELEV	HM			TBD				
LEVEL 1	118	3'-0"	9'-0"	1 3/4"	A	WD		SEE ELEV	HM			TBD				
LEVEL 1	119	3'-0"	7'-0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
LEVEL 1	120	3'-0"	8'-0"	1 3/4"	A	WD	POLY	2	HM	PT	X					
LEVEL 1	179	3'-0"	7'-0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
LEVEL 1	180	3'-0"	7'-0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
LEVEL 1	E101-1	4'-0"	7'-0"	1 3/4"	C	WD	POLY	1	HM	HM	X					
LEVEL 1	E101-2	4'-0"	7'-0"	1 3/4"	C	WD	POLY	1	HM	HM	X					
LEVEL 1	E102	3'-0"	7'-0"	1 3/4"	C	WD	POLY	1	HM	PT	X					
LEVEL 2	201-1	3'-0"	8'-0"	1 3/4"	A	WD		SEE ELEV	HM			TBD				
LEVEL 2	201-2	3'-0"	8'-0"	1 3/4"	A	WD		SEE ELEV	HM			TBD				
LEVEL 2	203	3'-0"	7'-0"	1 3/4"	B	HM	POLY	1	HM	PT	X					
LEVEL 2	203-1	4'-6"	3'-6"					3								
LEVEL 2	204	3'-0"	7'-0"	1 3/4"	A	HM	PT	1	HM	PT	X					
LEVEL 2	205	6'-0"	11'-2"	0"												
LEVEL 2	206	3'-0"	7'-0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
LEVEL 2	207	3'-0"	7'-0"	1 3/4"	A	WD	POLY	1	HM	PT	X					
LEVEL 2	208	3'-0"	7'-0"	1 3/4"	B	HM	PT	1	HM	PT	X					
LEVEL 2	209	3'-0"	8'-0"	1 3/4"	A	HM	PT	1	HM	PT	X					
LEVEL 2	211	3'-0"	8'-0"	1 3/4"	A	WD	POLY	2	HM	PT	X					
LEVEL 2	212	3'-0"	8'-0"	1 3/4"	A	WD		SEE ELEV	HM			TBD				
LEVEL 2	213	3'-0"	8'-0"	1 3/4"	A	WD	POLY	2	HM	PT	X					
LEVEL 2	214	3'-0"	8'-0"	1 3/4"	A	WD	POLY	2	HM	PT	X					
LEVEL 2	215	3'-0"	8'-0"	1 3/4"	A	WD	POLY	2	HM	PT	X					
LEVEL 2	216	3'-0"	8'-0"	1 3/4"	A	WD	POLY	2	HM	PT	X					
LEVEL 2	218-1	3'-0"	7'-0"	1 3/4"	C	WD	POLY	1	HM	PT	X					
LEVEL 2	218-2	3'-0"	7'-0"	1 3/4"	C	HM		1	HM		X	12				
LEVEL 2	219-1	3'-0"	7'-0"	1 3/4"	C	WD	POLY	1	HM	PT	X					
LEVEL 2	219-2	3'-0"	7'-0"	1 3/4"	C	HM		1	HM		X	12				
LEVEL 2	E201	3'-0"	7'-0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
LEVEL 2	E202	3'-0"	7'-0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
LEVEL 2	E204	3'-0"	7'-0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
LEVEL 2	E205	3'-0"	7'-0"	1 3/4"	B	WD	POLY	1	HM	PT	X					
LEVEL 2	E207-1	4'-0"	7'-0"	1 3/4"	C	WD	POLY	1	HM	HM	X					
LEVEL 2	E207-2	4'-0"	7'-0"	1 3/4"	C	WD	POLY	1	HM	HM	X					

**LOUVER SCHEDULE**

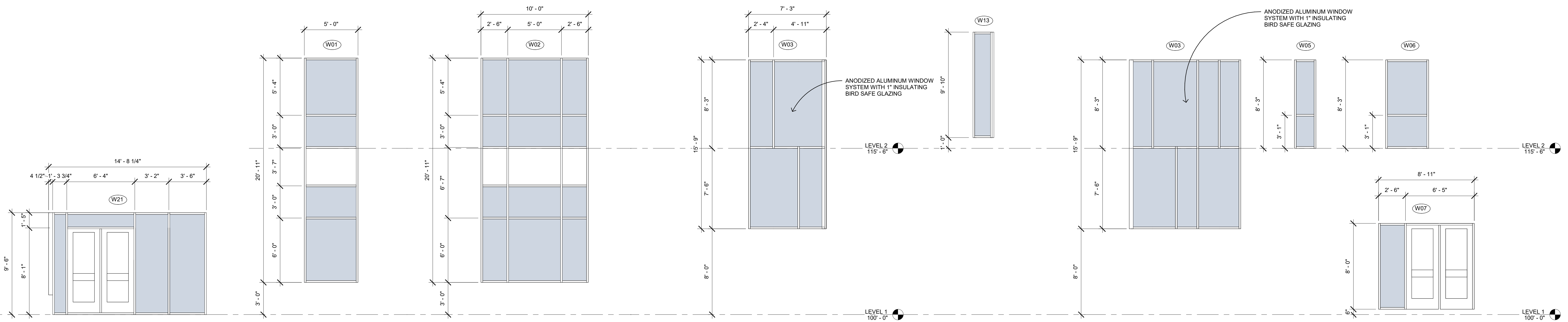
OPENING NUMBER	OPENING SIZE		DETAILS			NOTES
	WIDTH	HEIGHT	HEAD	JAMB	SILL	
L01	4'-0"	7'-0"				
L01	4'-0"	7'-0"				
L01	4'-0"	7'-0"				
L02	4'-0"	6'-0"				
L02	4'-0"	6'-0"				
L02	4'-0"	6'-0"				
L02	4'-0"	6'-0"				

**DD  
DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**WINDOW TYPES**

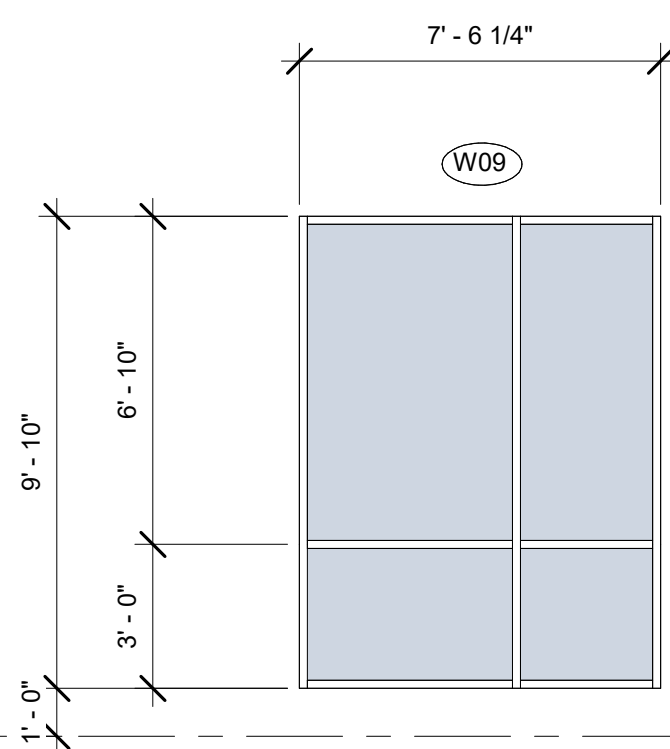
SHEET NUMBER:

**A311**

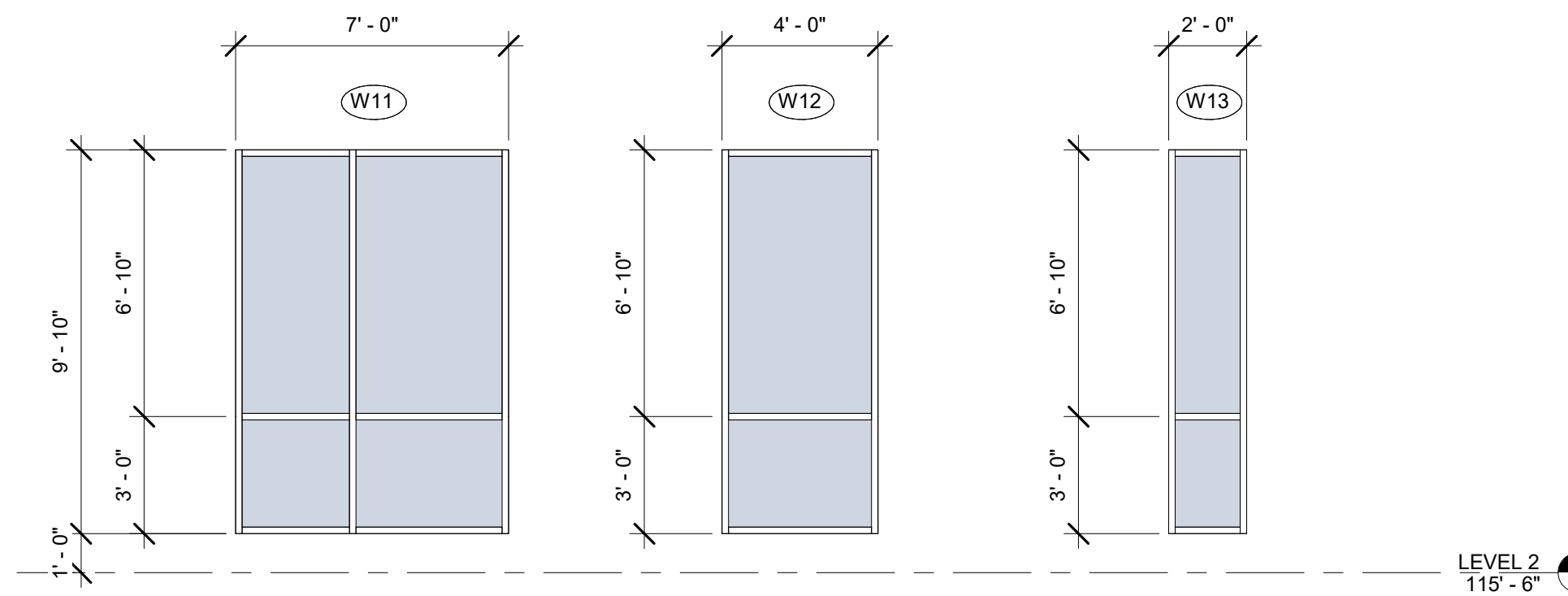


1 STOREFRONT - SOUTHEAST  
1/4" = 1'-0"

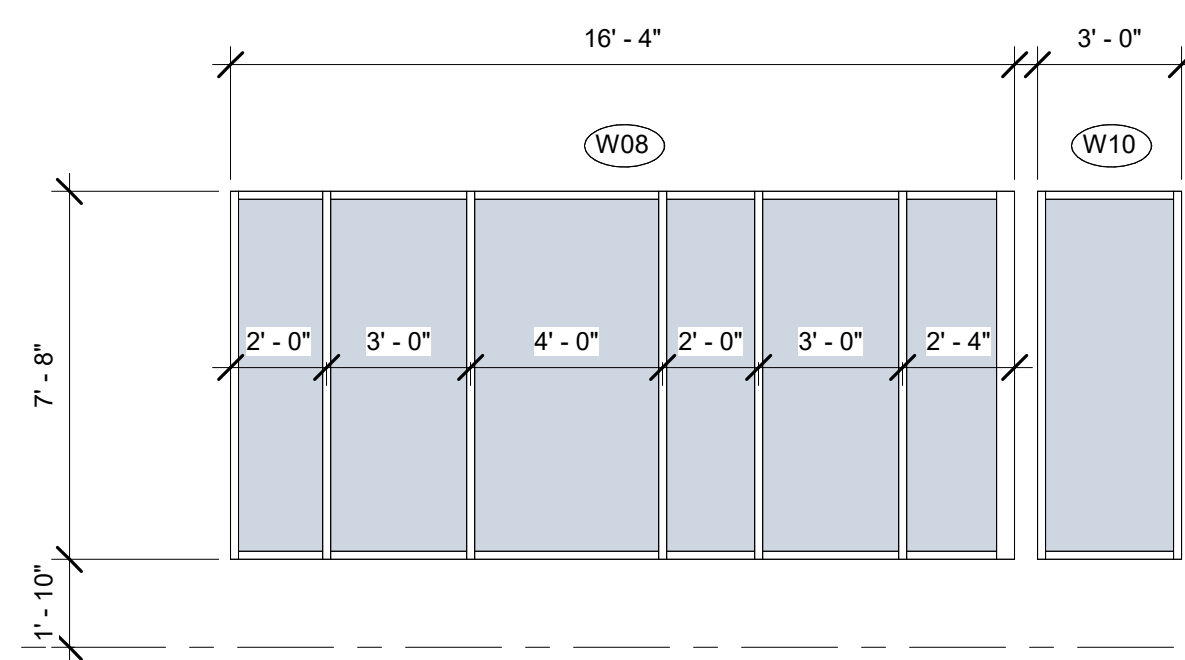
2 STOREFRONT - NORTHEAST  
1/4" = 1'-0"



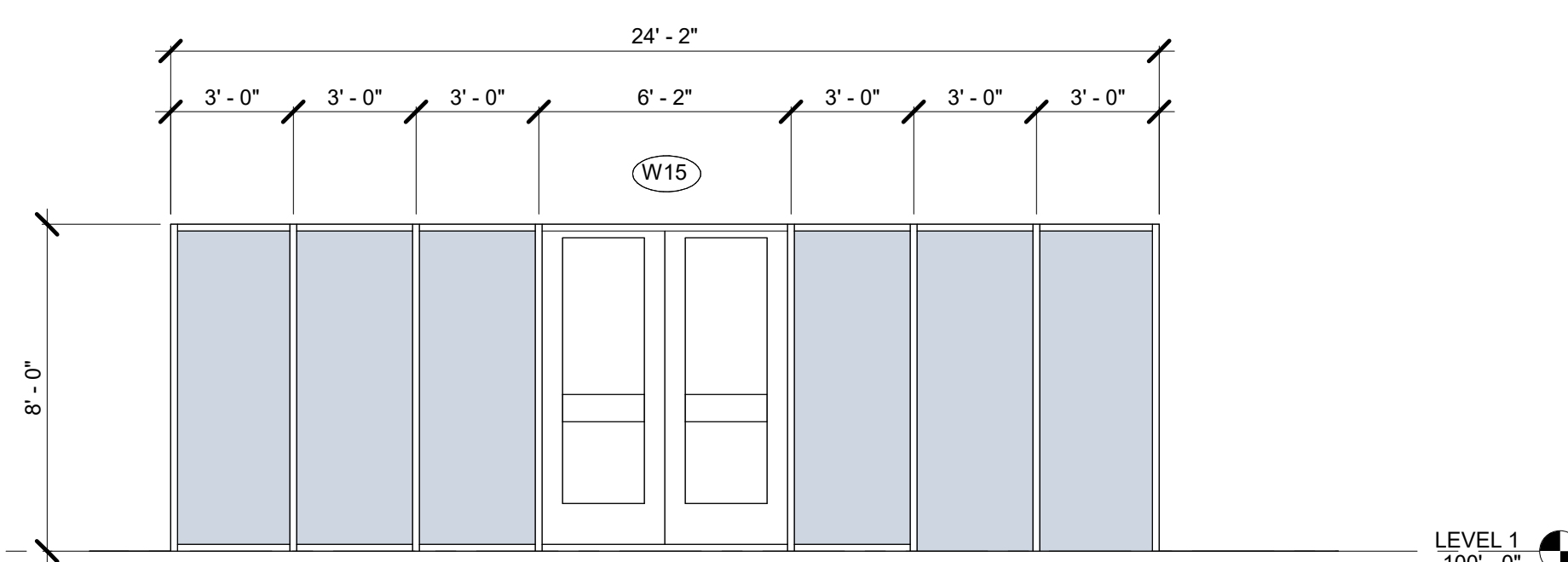
LEVEL 2  
115'-6"



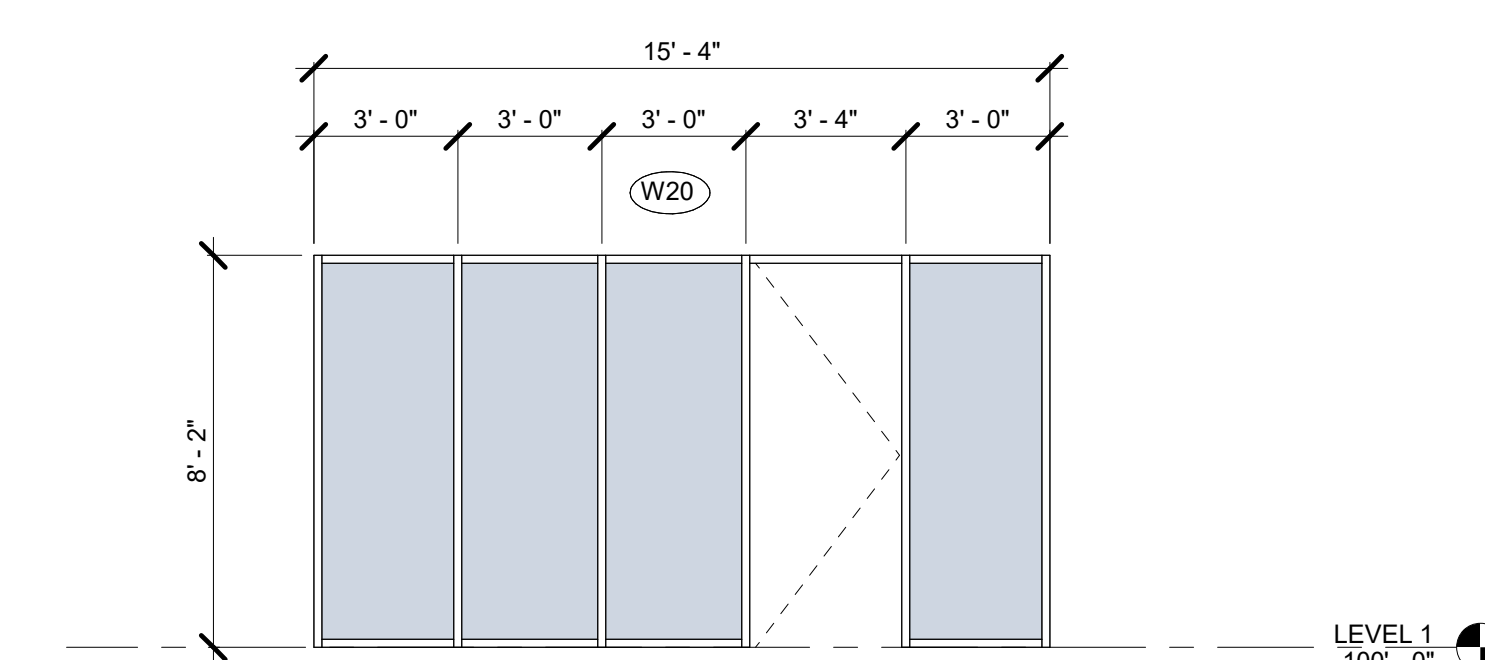
4 STOREFRONT - SKY WAY  
1/4" = 1'-0"



LEVEL 1  
100'-0"



LEVEL 1  
100'-0"

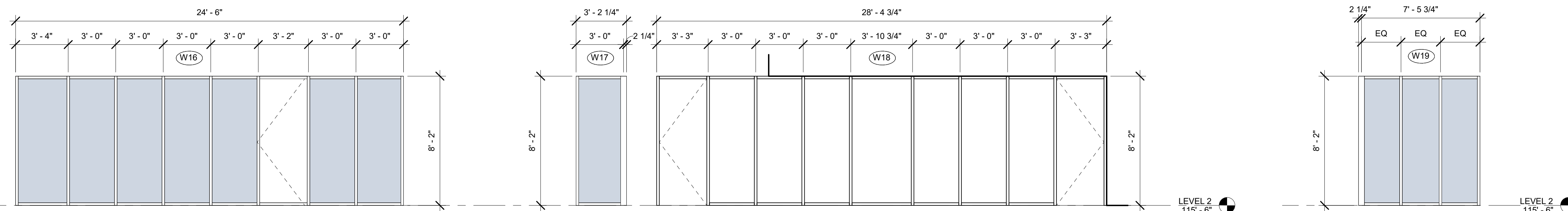


LEVEL 1  
100'-0"

3 STOREFRONT - SOUTHWEST  
1/4" = 1'-0"

5 STOREFRONT - LEVEL 1 - HALLWAY SOUTH  
1/4" = 1'-0"

6 STOREFRONT - LEVEL 1 MEETING ROOM  
1/4" = 1'-0"



LEVEL 2  
115'-6"

LEVEL 2  
115'-6"

7 STOREFRONT - LEVEL 2 - HALLWAY SOUTH  
1/4" = 1'-0"

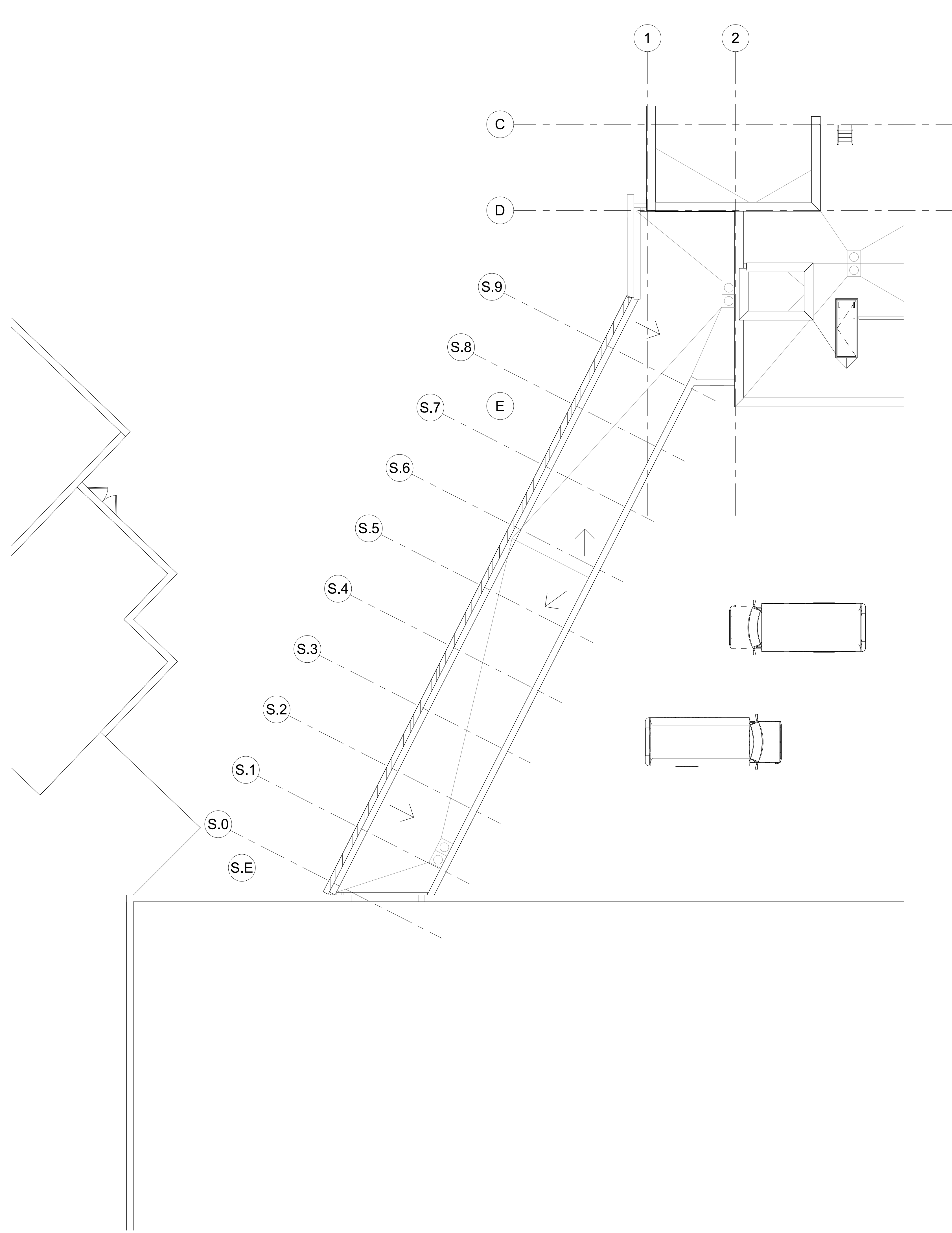
8 STOREFRONT - LEVEL 2 - MTSS OFFICE  
1/4" = 1'-0"

**DD  
DOCUMENT  
Not For  
Construction**

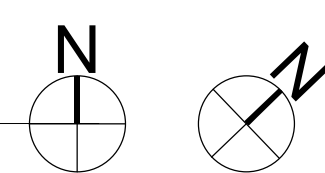
SHEET TITLE:  
**ROOF PLAN - SHELTER &  
SKYWAY**

SHEET NUMBER:

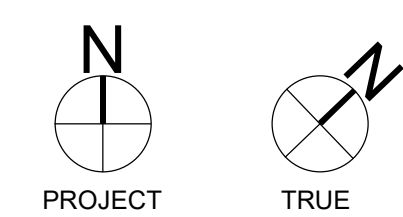
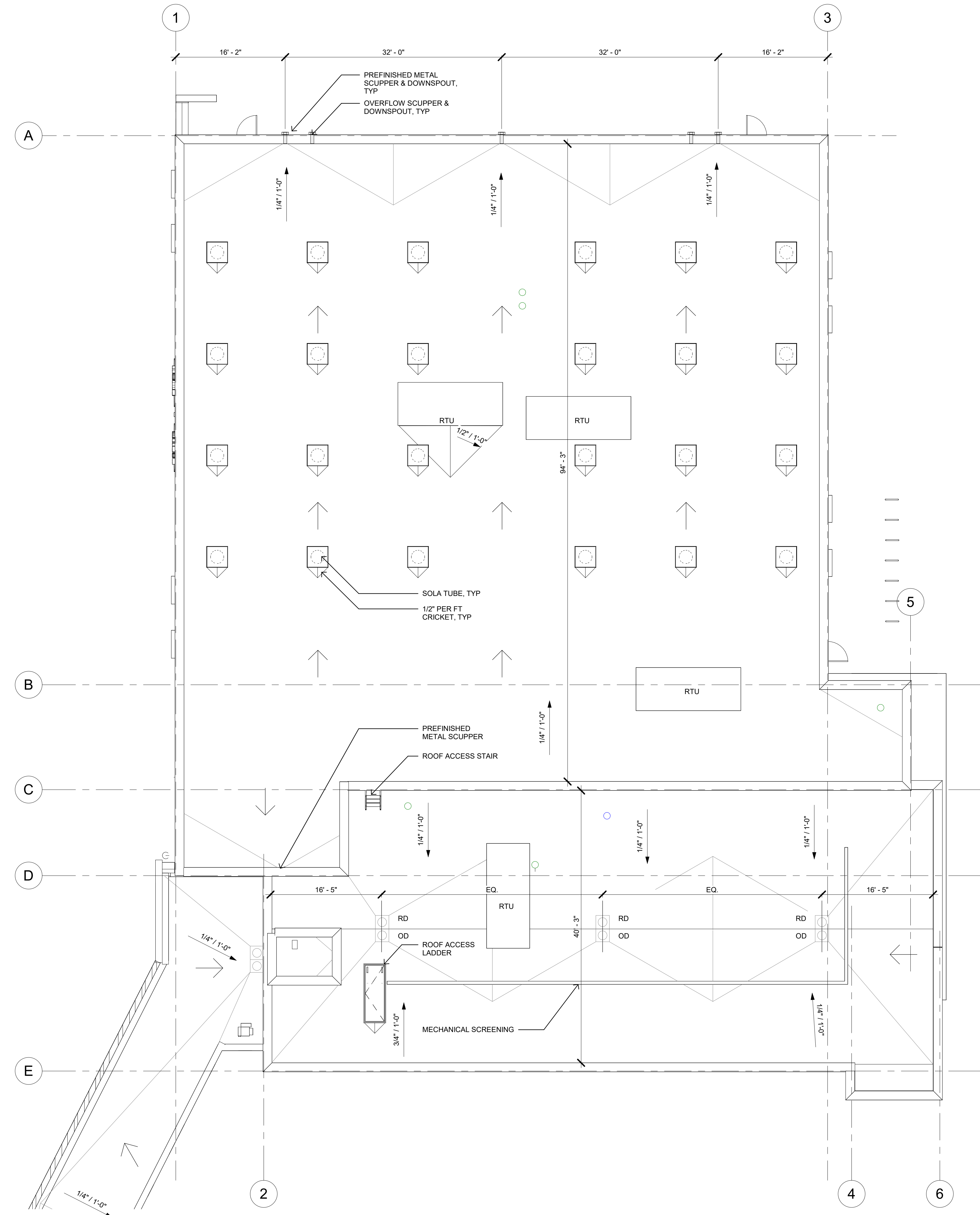
**A400**

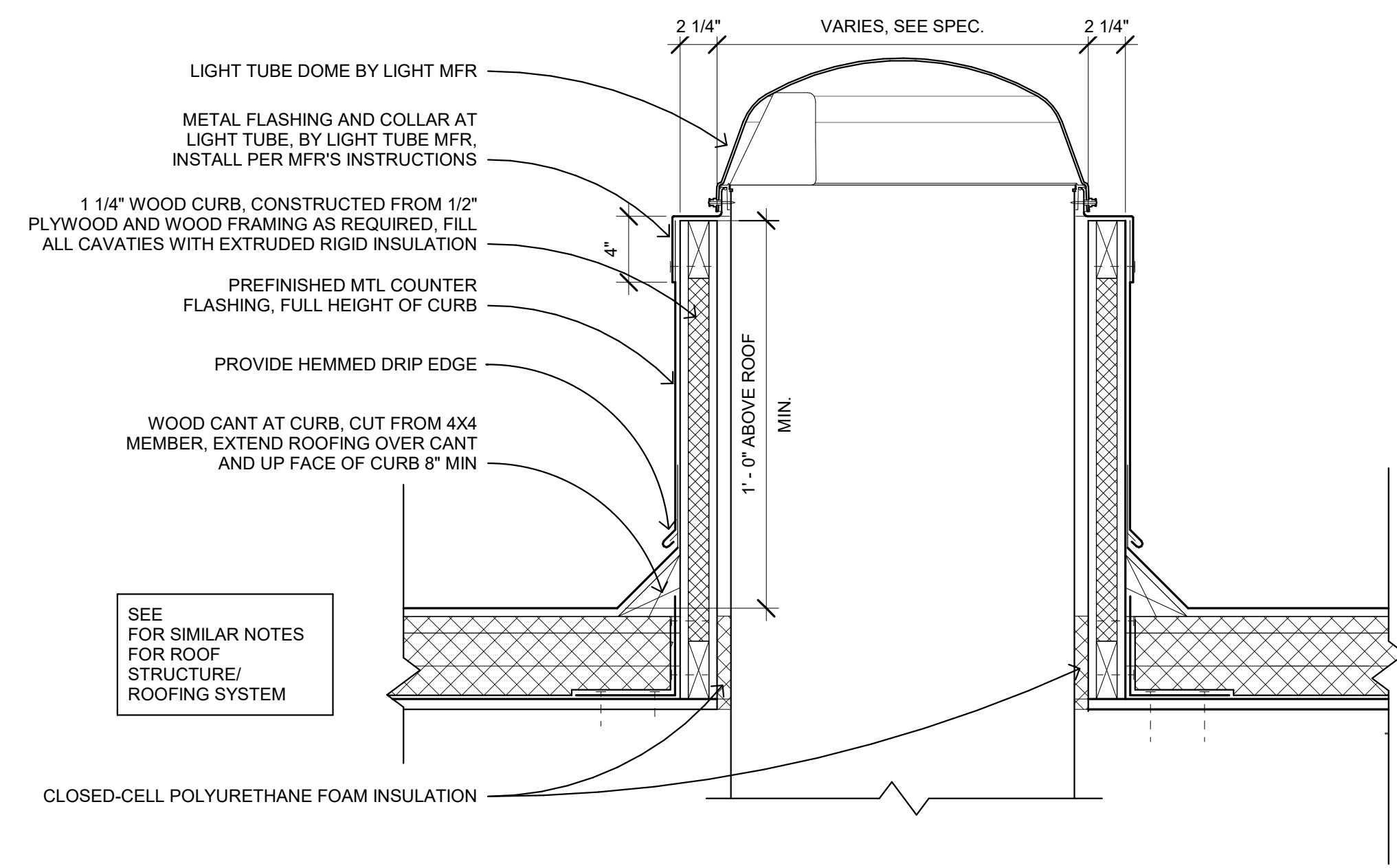


1 ROOF PLAN SKYWAY  
1/8" = 1'-0"

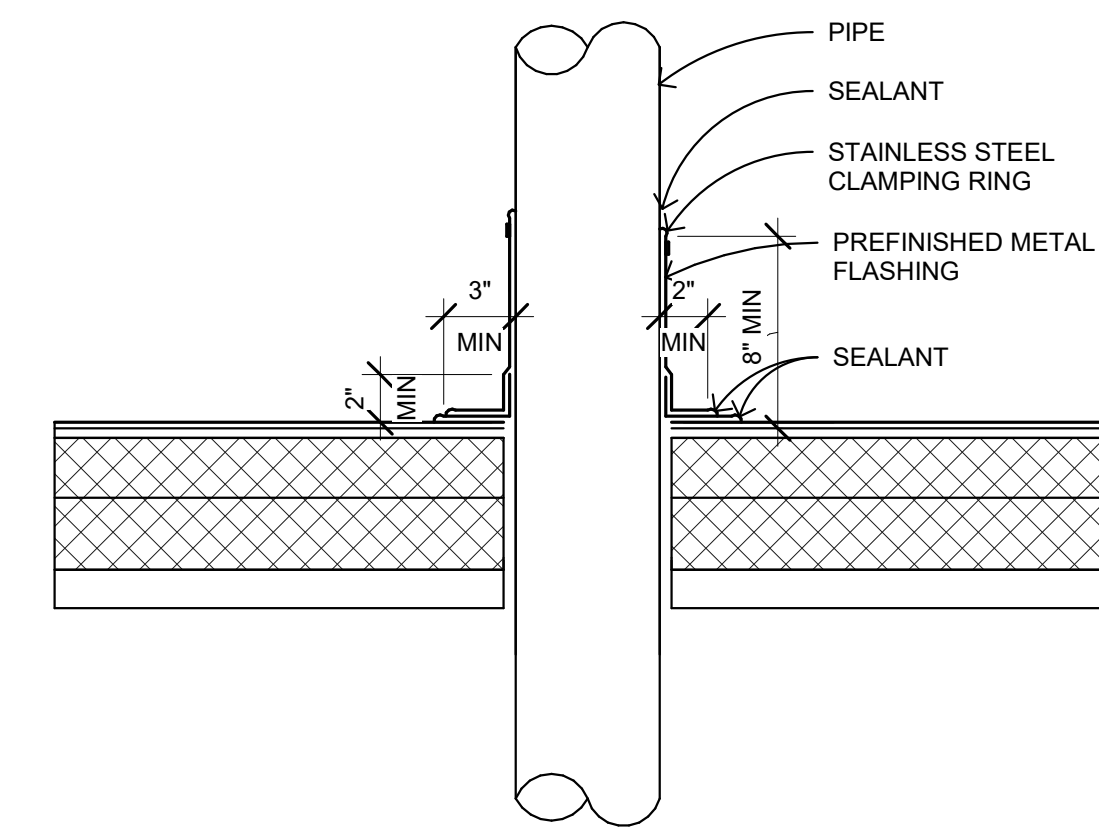


2 ROOF PLAN SHELTER  
1/8" = 1'-0"

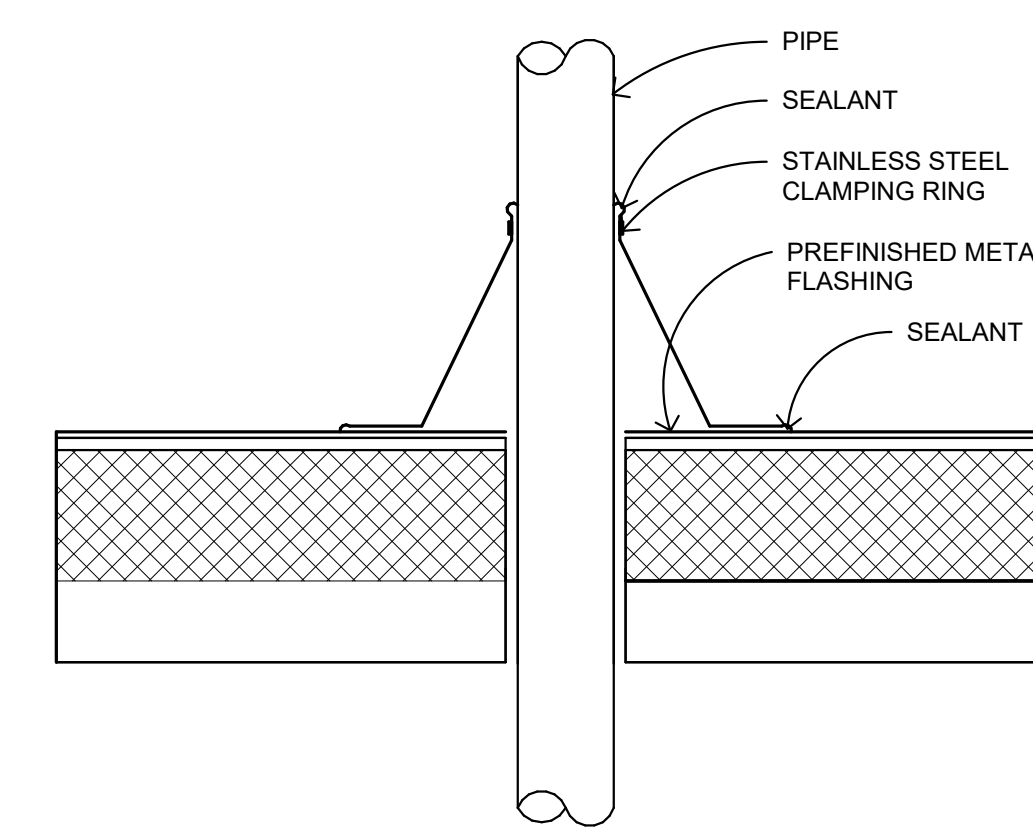




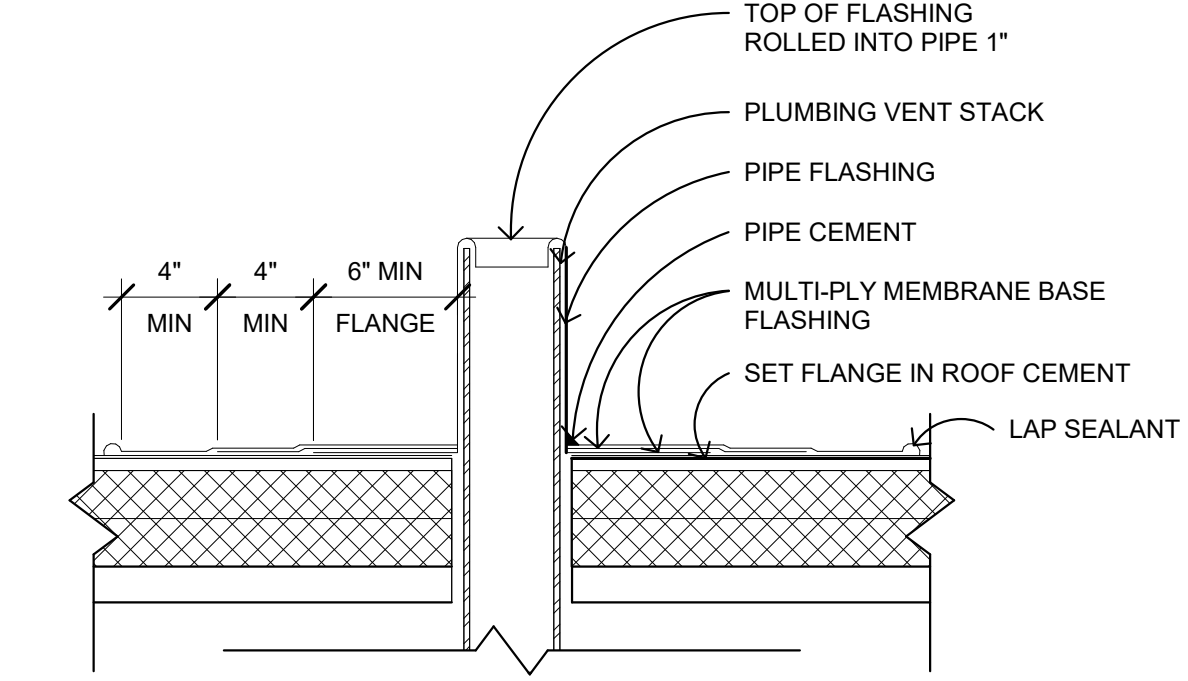
1 TUBULAR DAYLIGHTING DEVICE DETAIL  
1 1/2" = 1'-0"



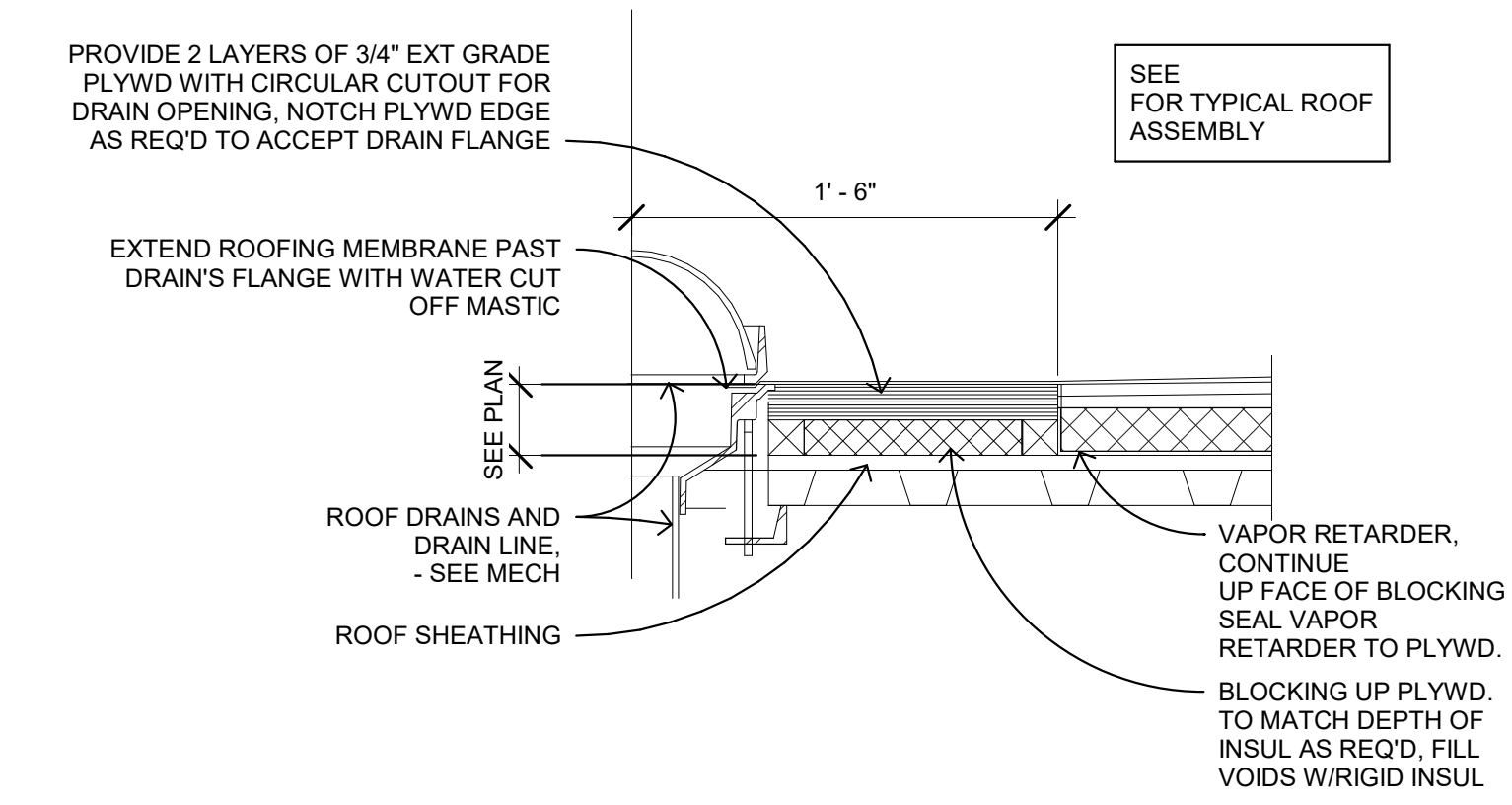
2 TYP PIPE PENETRATION - STRAIGHT BOOT  
1 1/2" = 1'-0"



3 TYP PIPE PENETRATION - TAPERED BOOT  
1 1/2" = 1'-0"



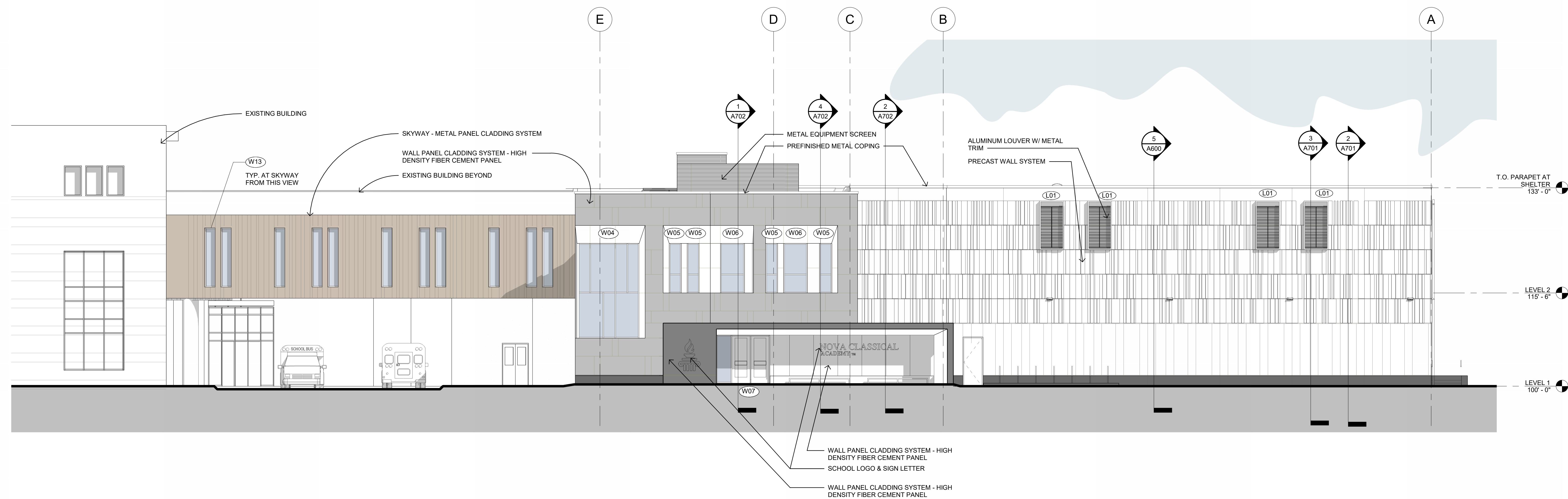
4 TYP VENT DETAIL  
1 1/2" = 1'-0"



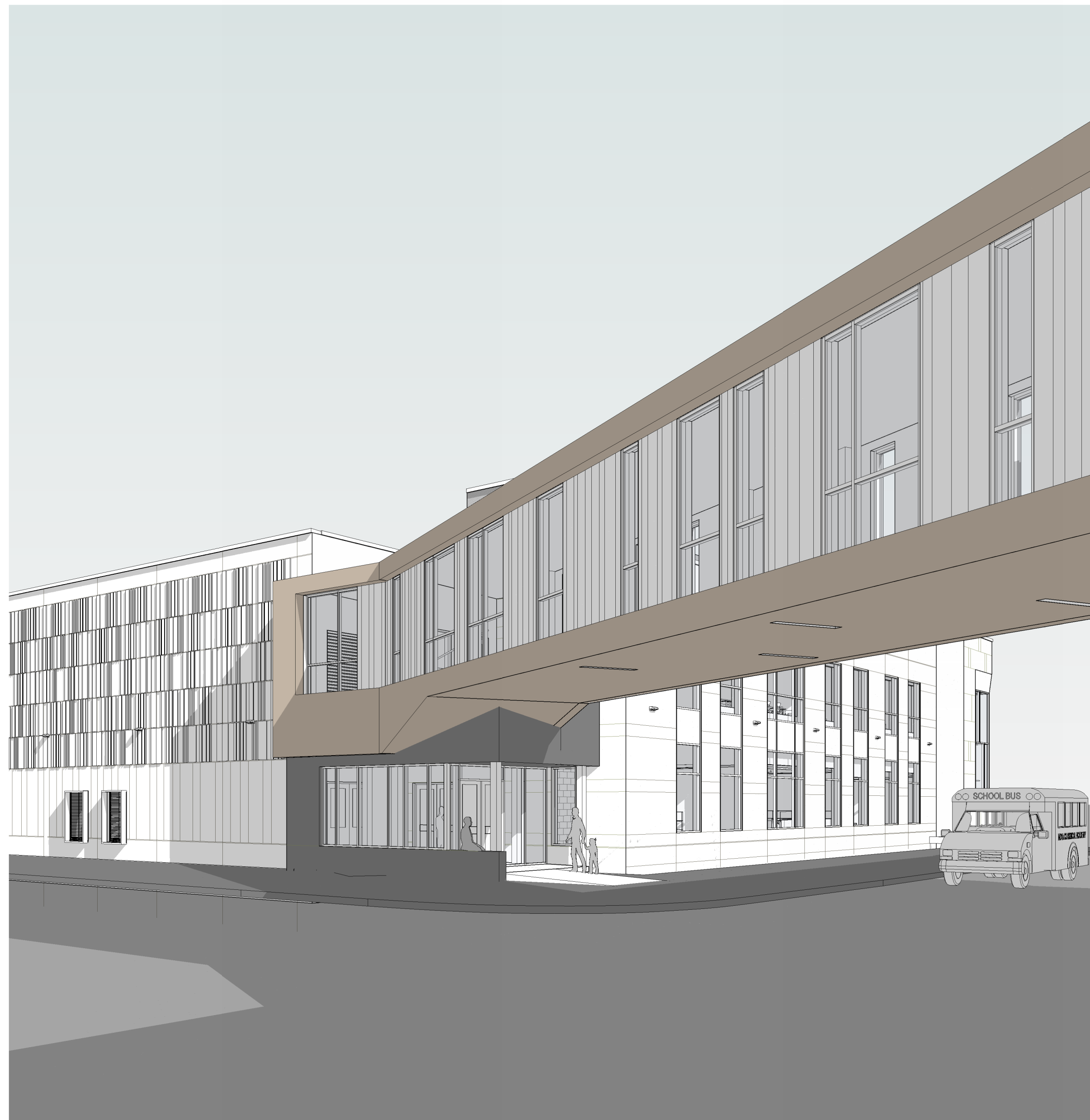
5 TYP. ROOF DRAIN DETAIL  
1 1/2" = 1'-0"



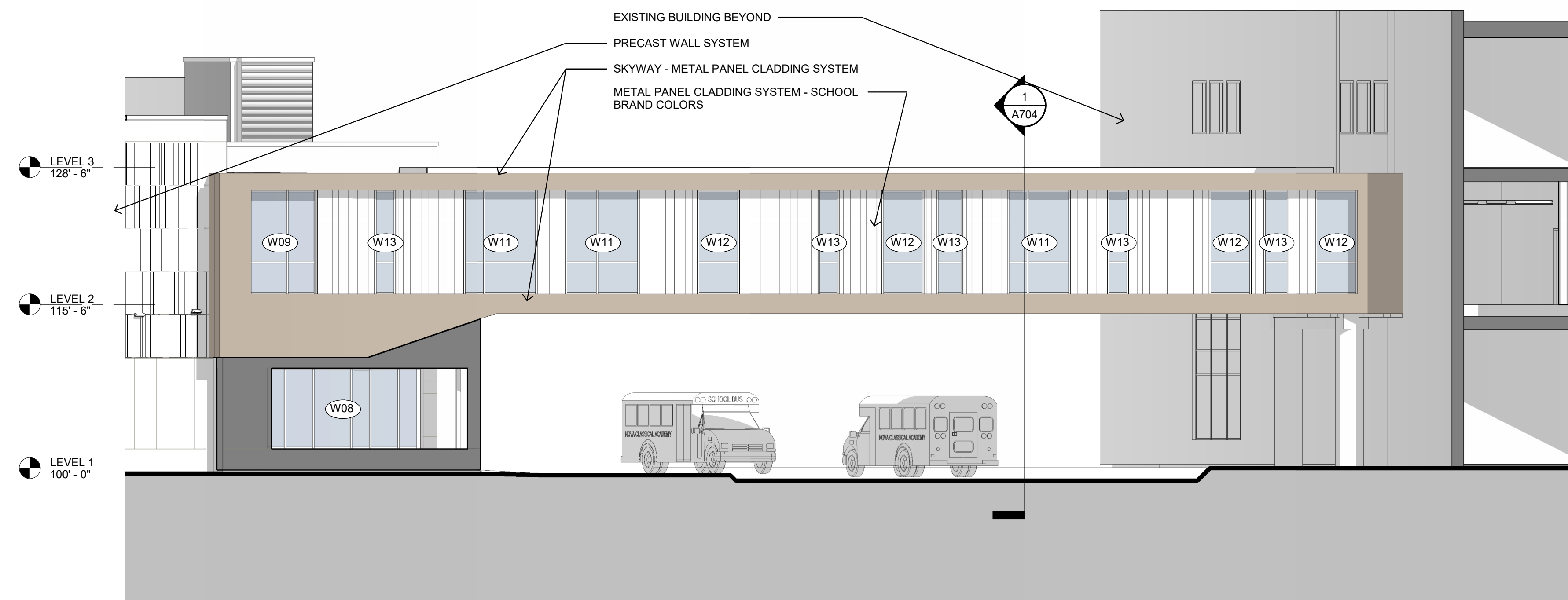
1 SKYWAY VIEW FROM MERCER ST.



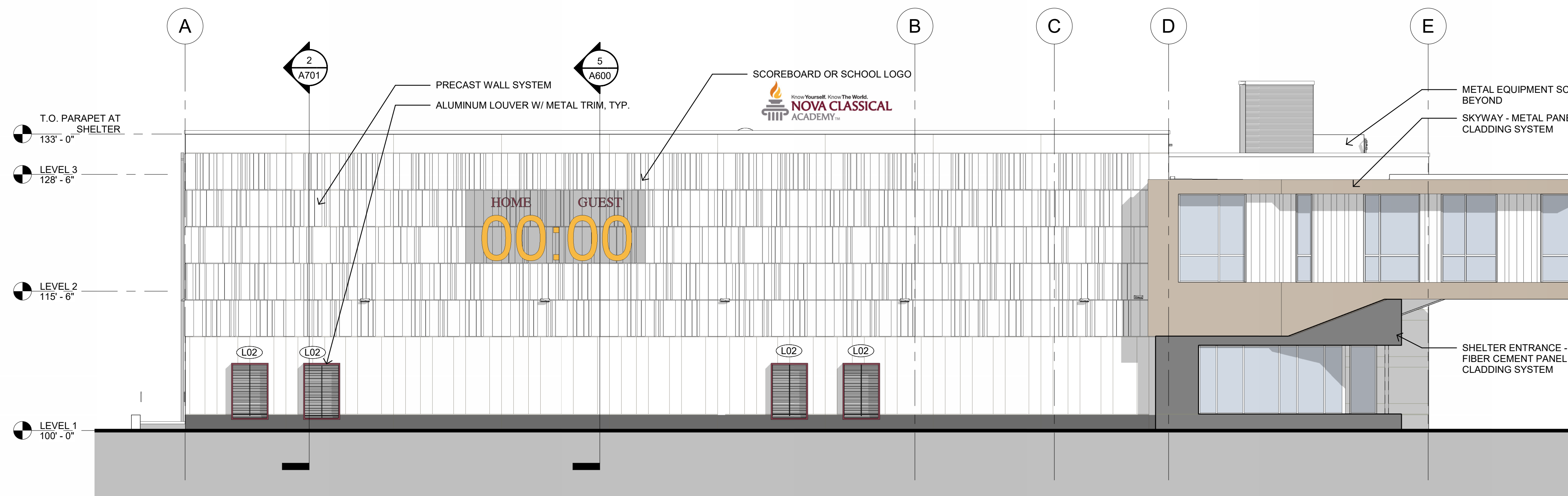
2 ELEVATION - NORTHEAST  
1/8" = 1'-0"



1 SKYWAY - SHELTER ENTRANCE VIEW



2 SKYWAY ELEVATION  
1/8" = 1'-0"



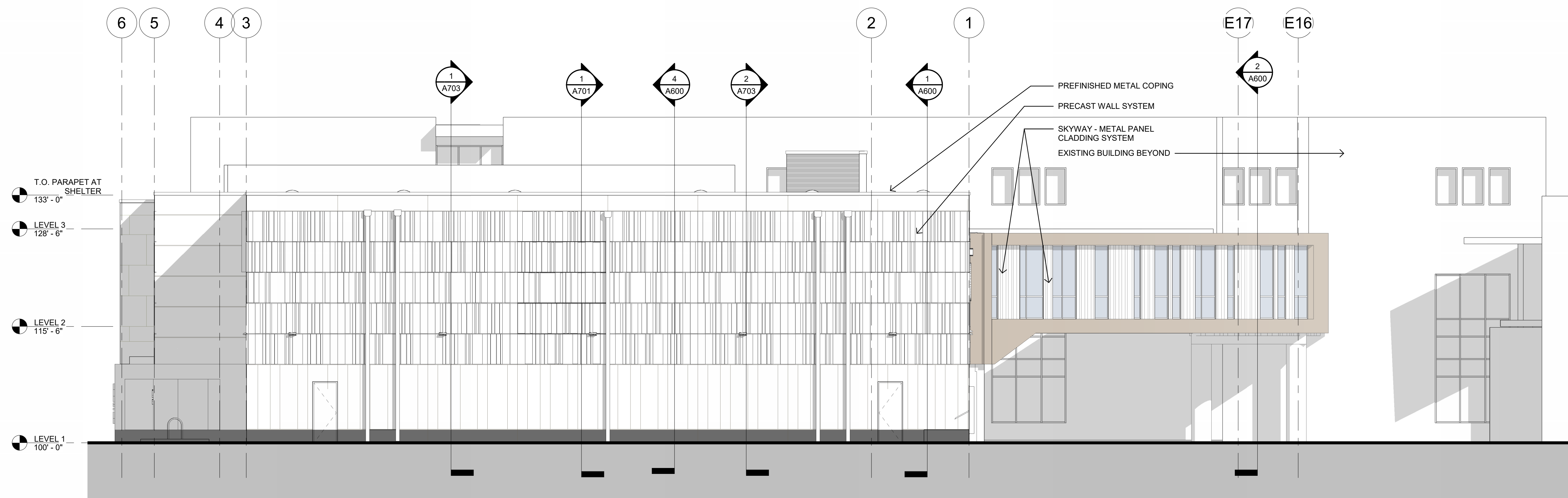
3 ELEVATION - SOUTHWEST  
1/8" = 1'-0"



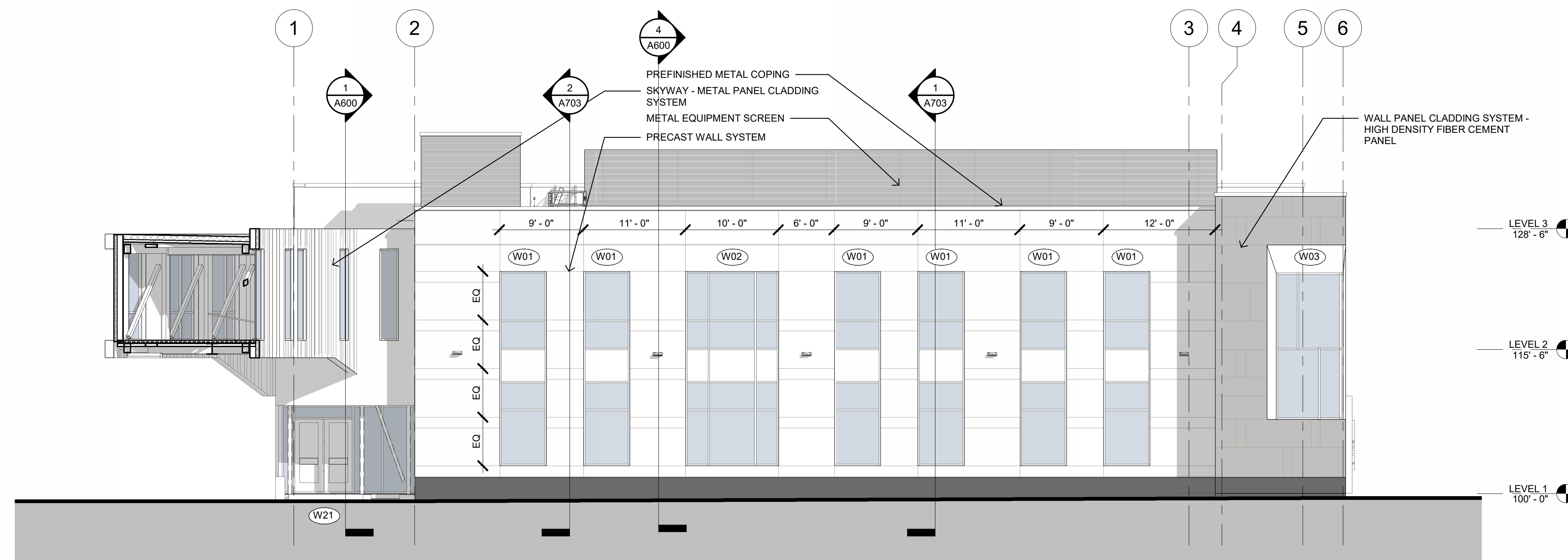
4 SKYWAY - SHELTER VIEW FROM MAIN BUILDING



1 SKYWAY VIEW - FROM NORTH

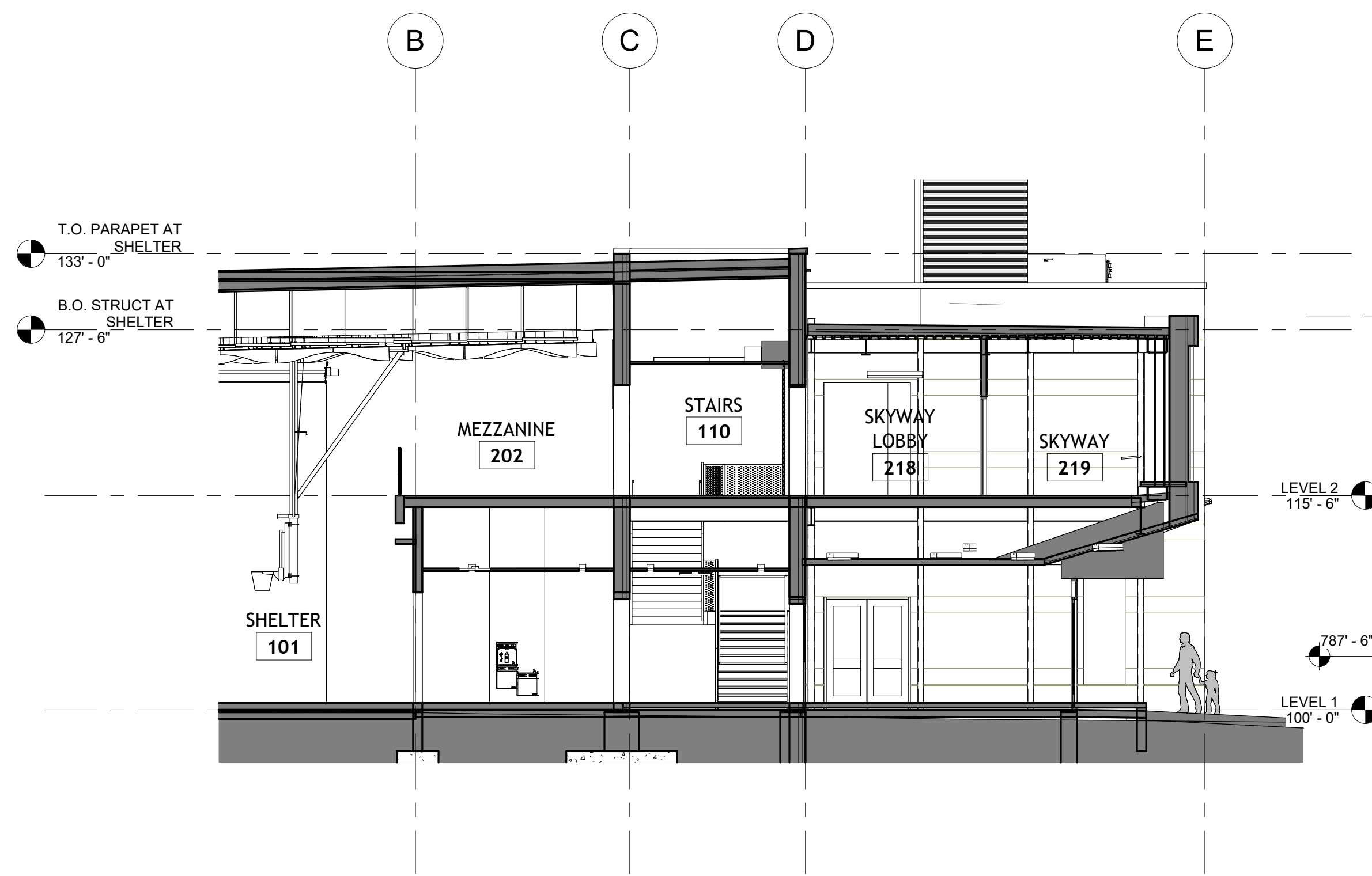


2 ELEVATION - NORTHWEST  
1/8" = 1'-0"

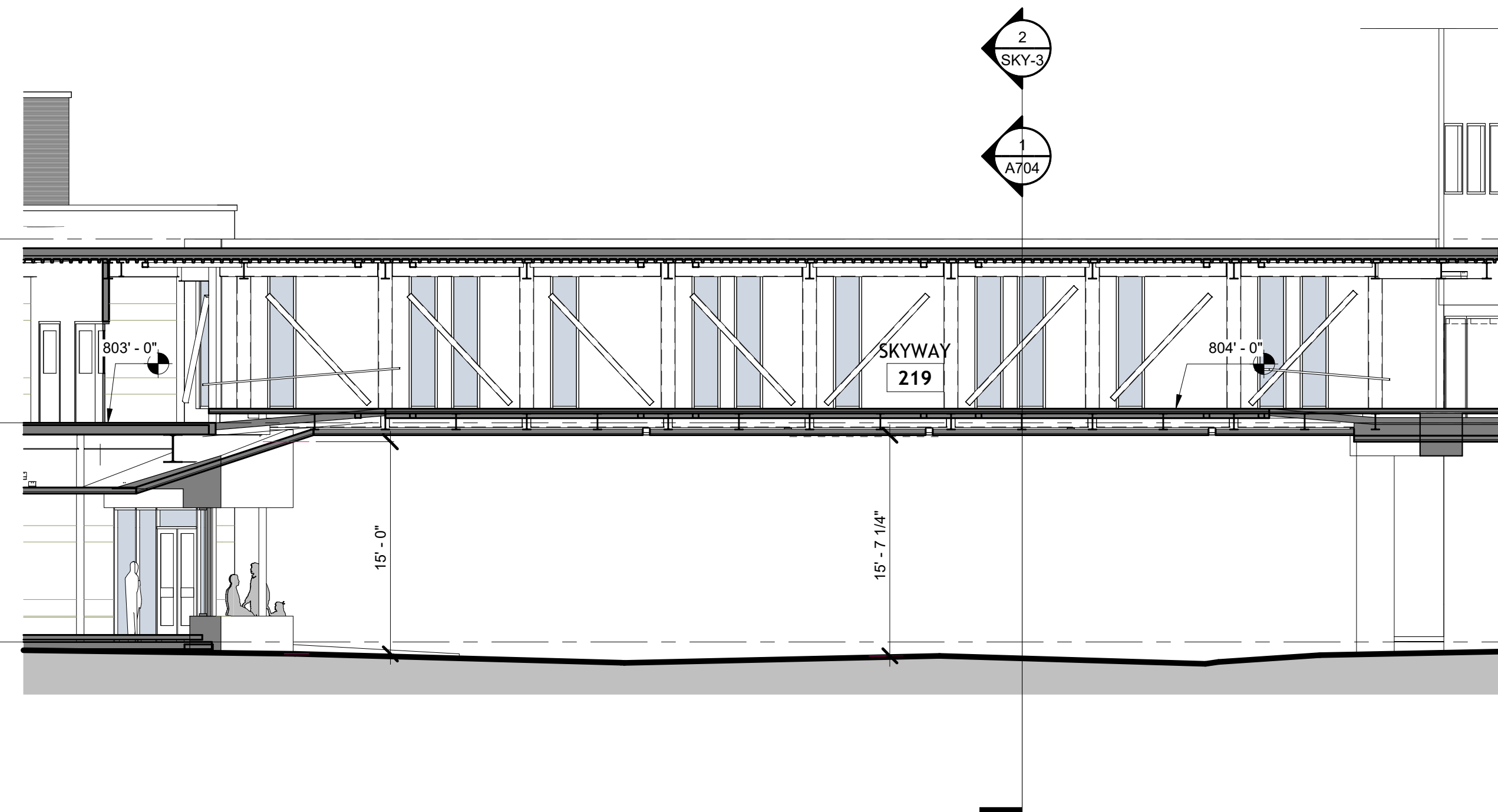


3 ELEVATION - SOUTHEAST  
1/8" = 1'-0"

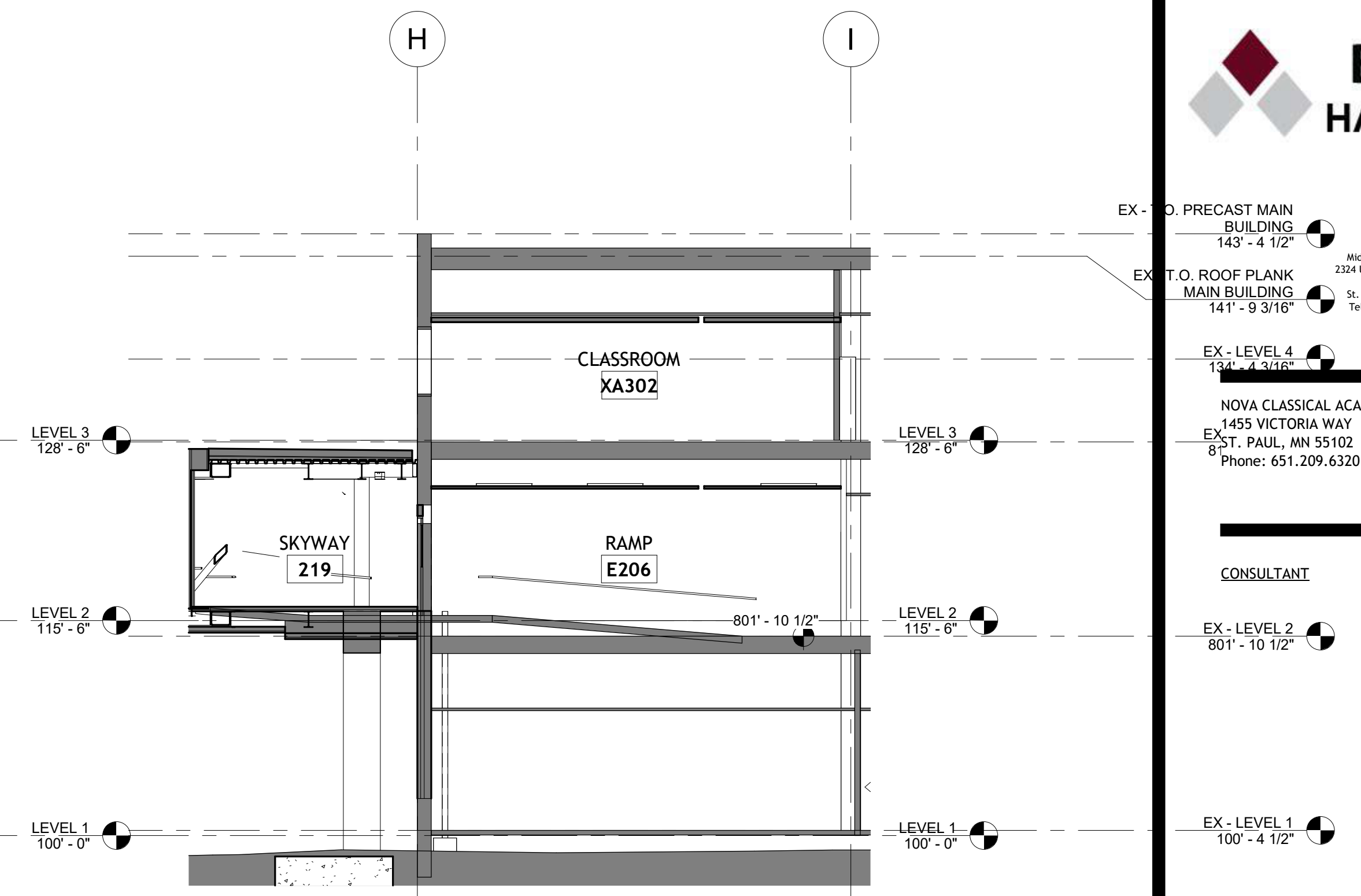




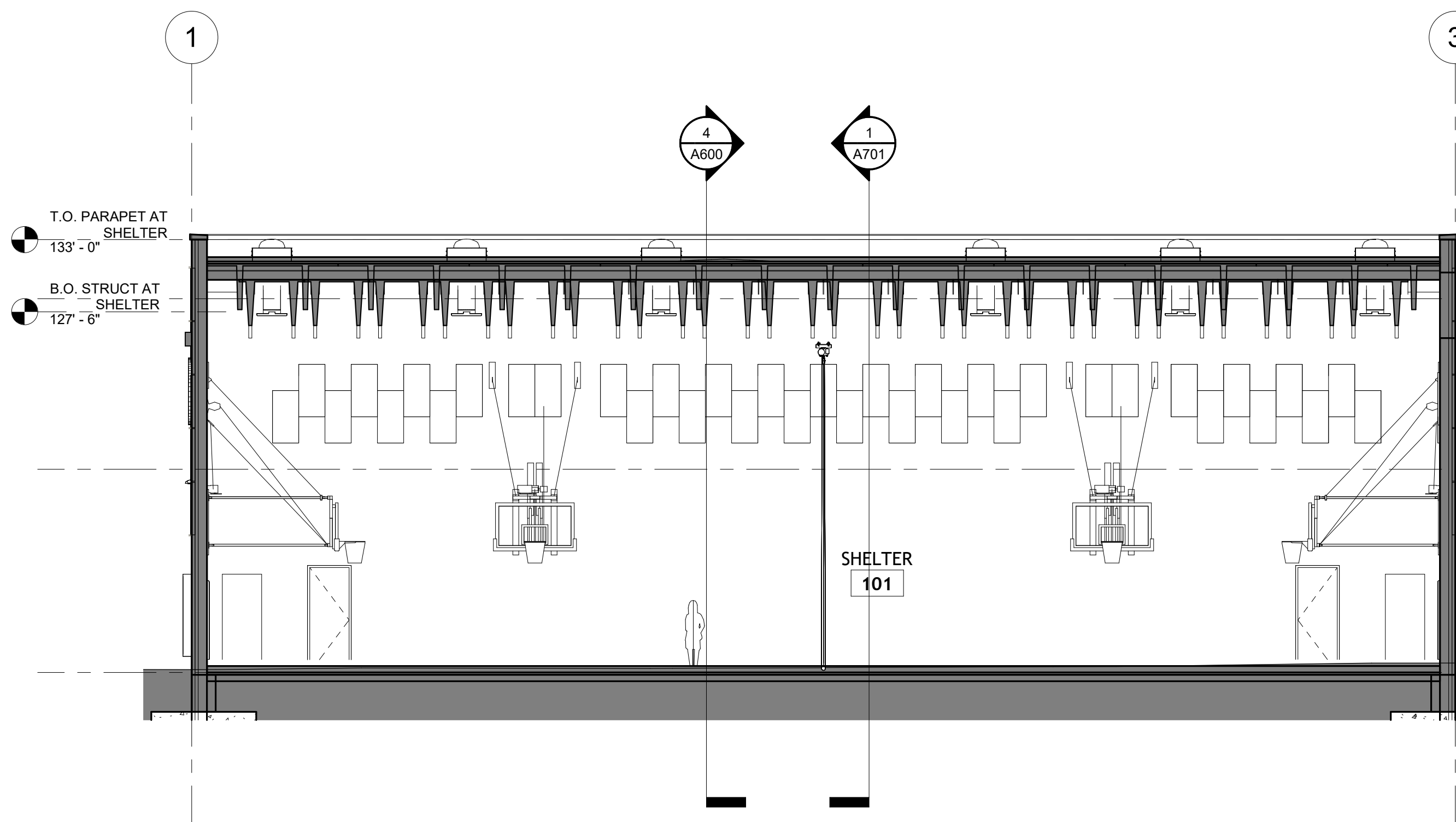
1 SKYWAY SECTION - AT NEW  
1/8" = 1'-0"



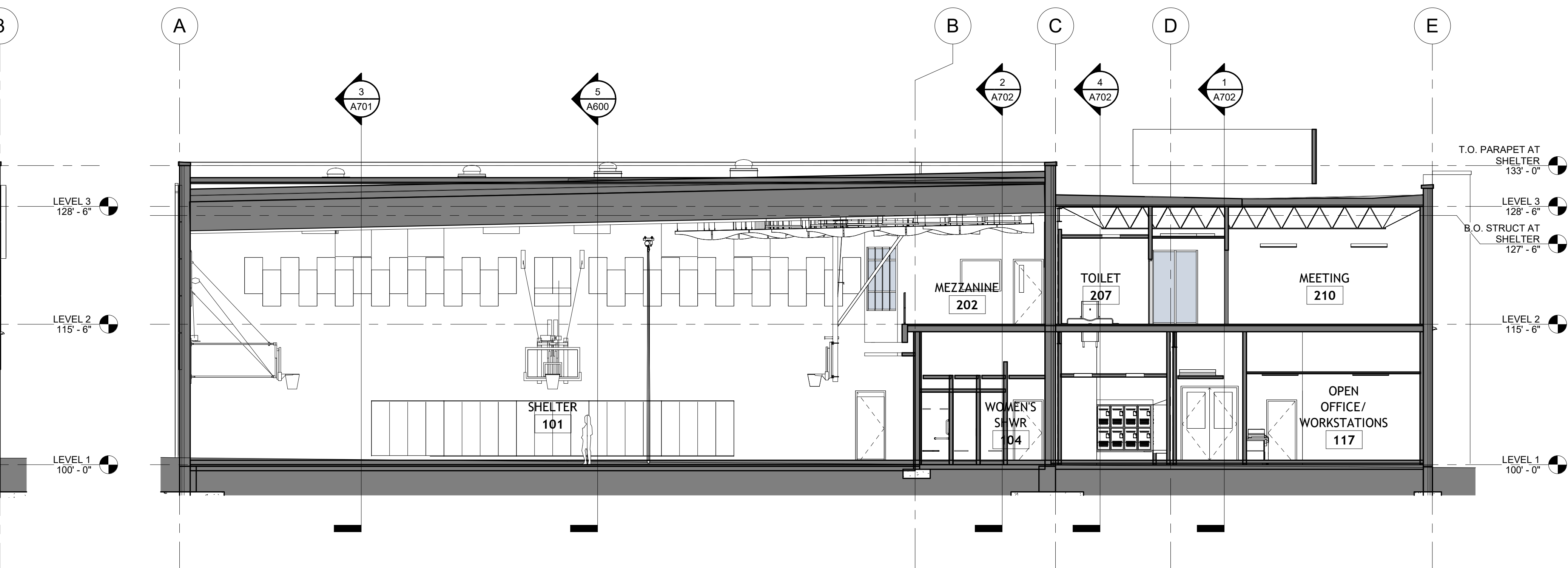
3 SKYWAY SECTION - CENTER  
1/8" = 1'-0"



2 SKYWAY SECTION - AT EXISTING  
1/8" = 1'-0"



5 EAST-WEST SECTION AT SHELTER  
1/8" = 1'-0"



4 NORTH-SOUTH SECTION AT SHELTER  
1/8" = 1'-0"

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

I HEREBY CERTIFY THAT THIS PLAN,  
SPECIFICATION OR REPORT WAS PREPARED BY ME  
OR UNDER MY DIRECT SUPERVISION AND THAT I AM  
A DULY LICENSED ARCHITECT UNDER THE LAWS OF  
THE STATE OF MINNESOTA.

PRINT NAME  
SIGNATURE  
LICENSE NO.  
05/07/2025  
DATE

**DD  
DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**BUILDING SECTIONS**

SHEET NUMBER:

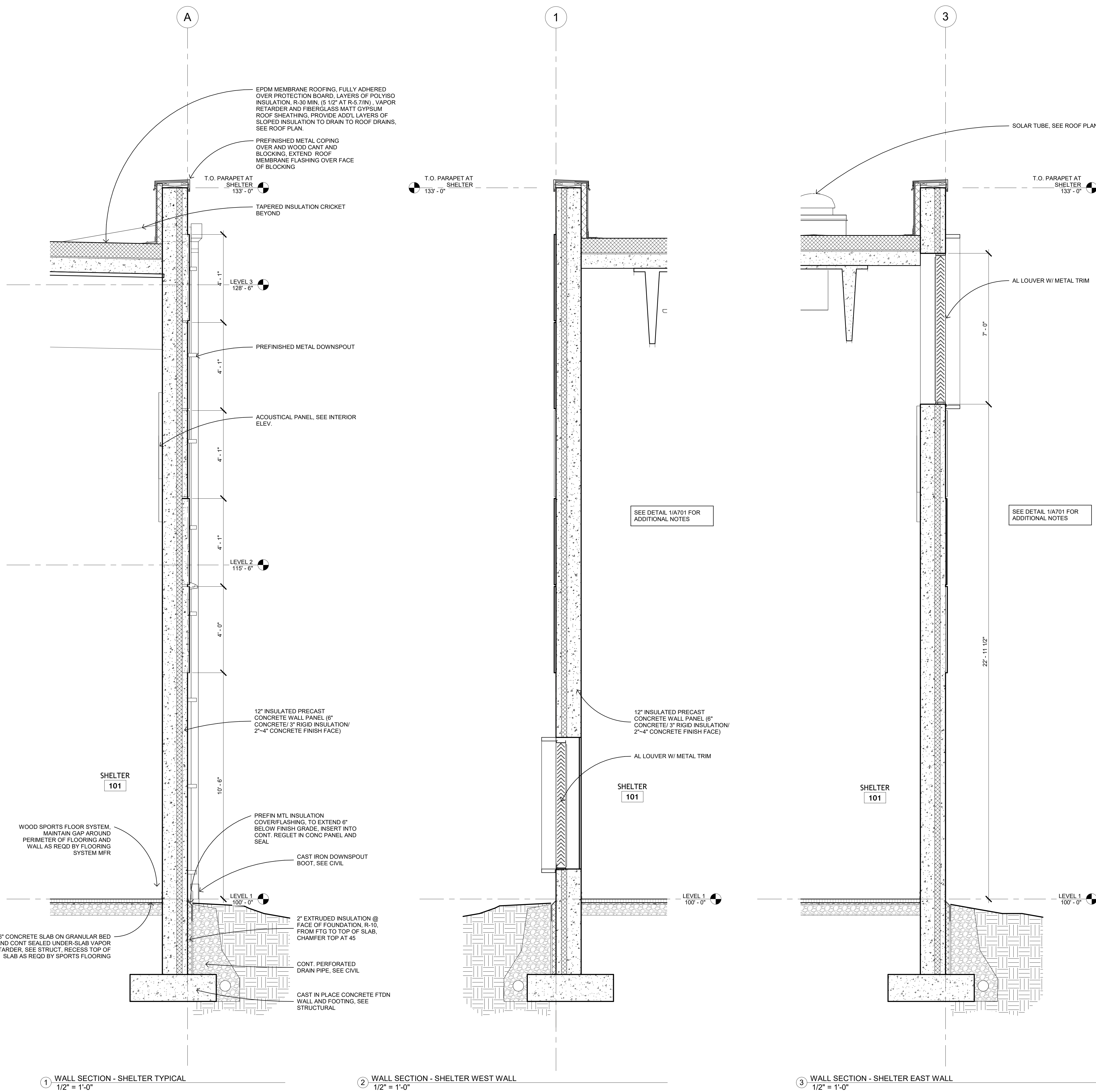
**A600**

**DD  
DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**WALL SECTIONS - SHELTER**

SHEET NUMBER:

**A701**

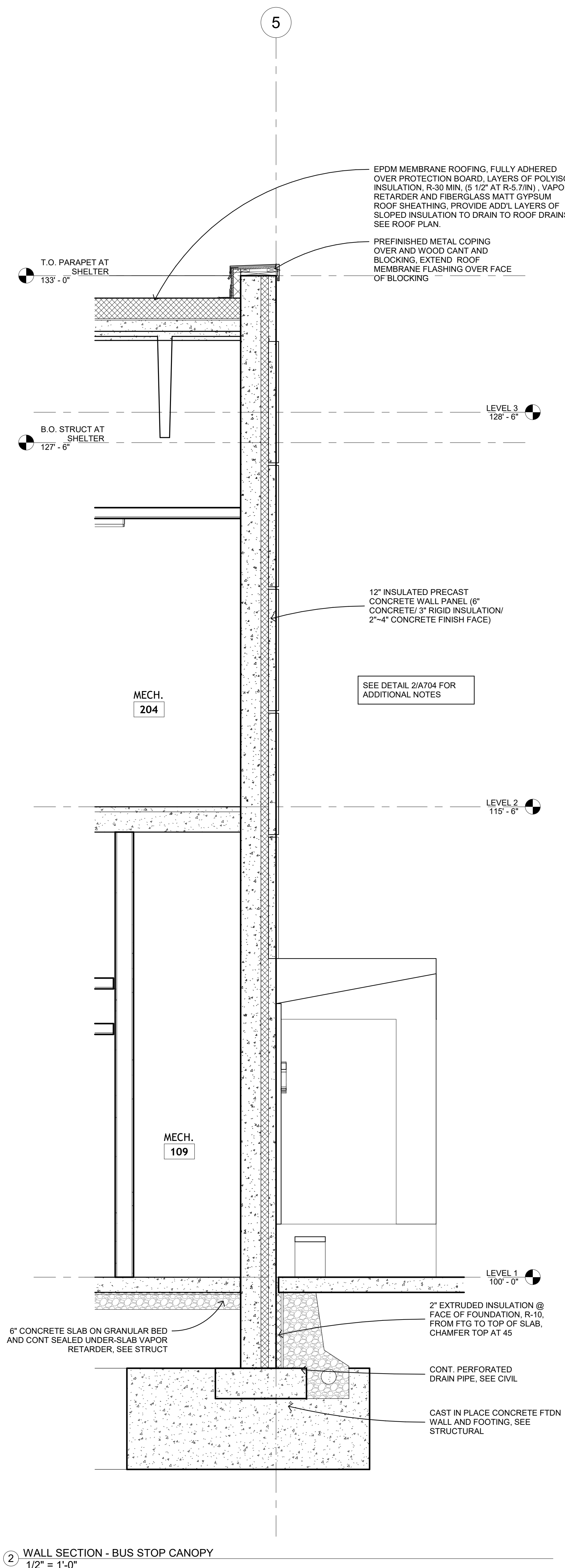
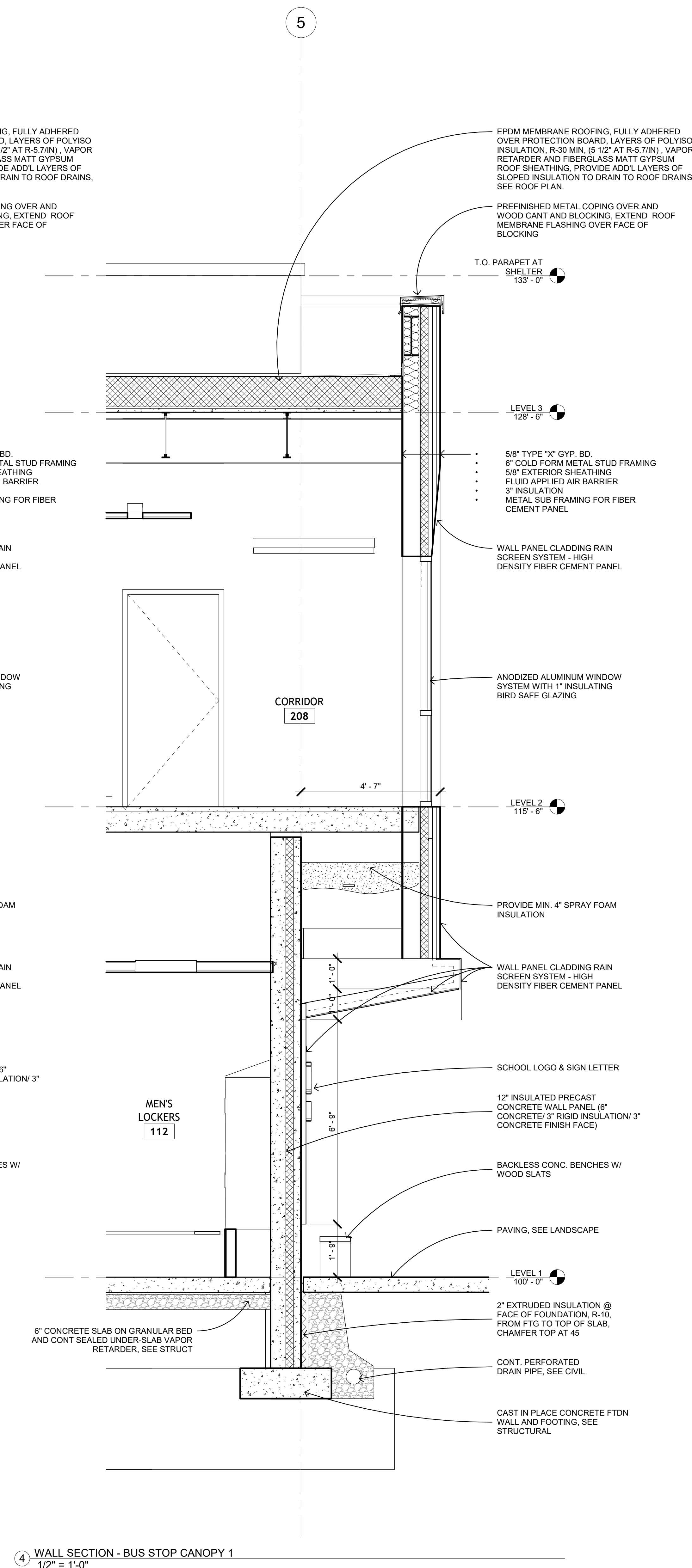
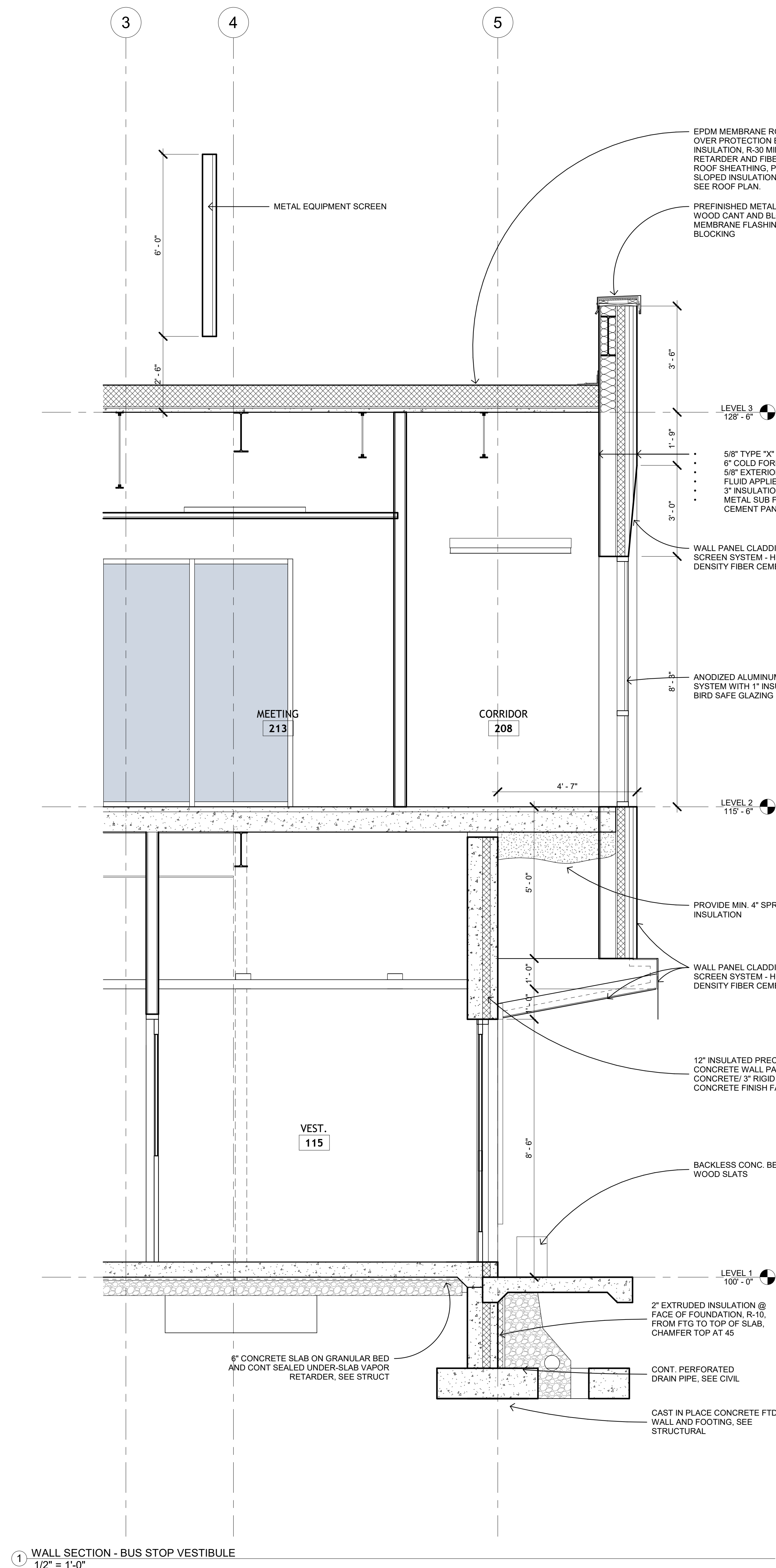


**DD DOCUMENT**  
**Not For Construction**

SHEET TITLE:  
**WALL SECTIONS - NORTHEAST WALL**

SHEET NUMBER:

**A702**

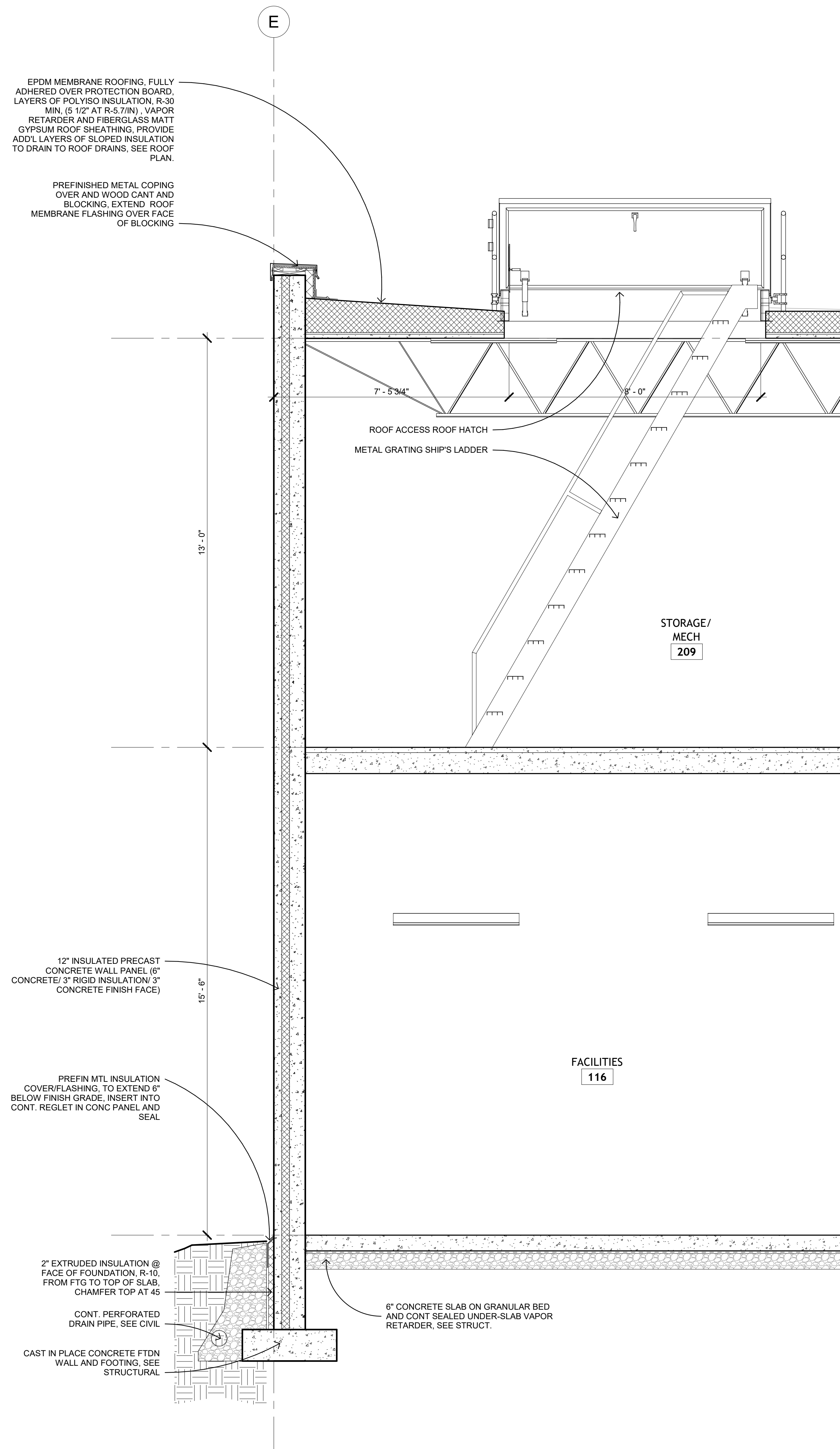


**DD  
DOCUMENT  
Not For  
Construction**

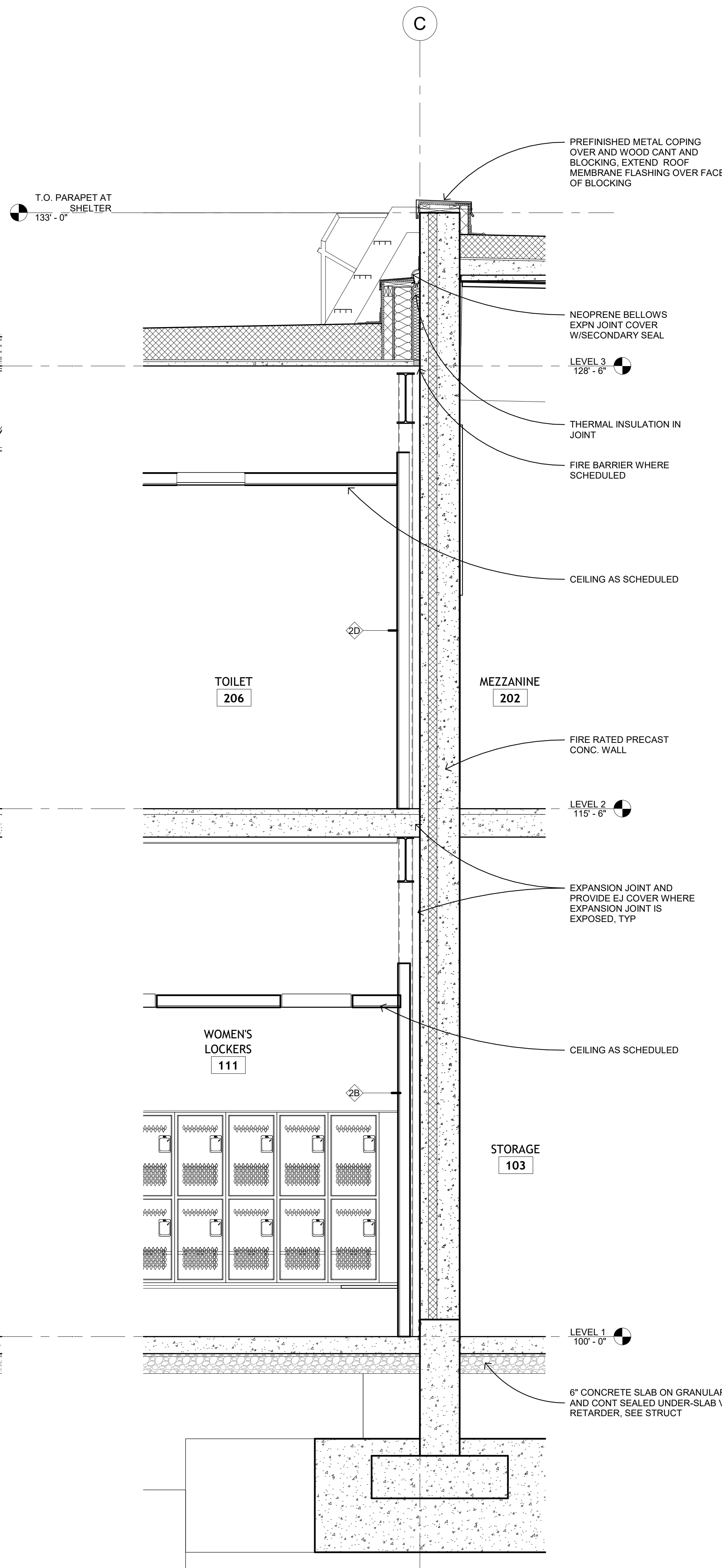
SHEET TITLE:  
**WALL SECTIONS -  
SOUTHEAST WALL**

SHEET NUMBER:

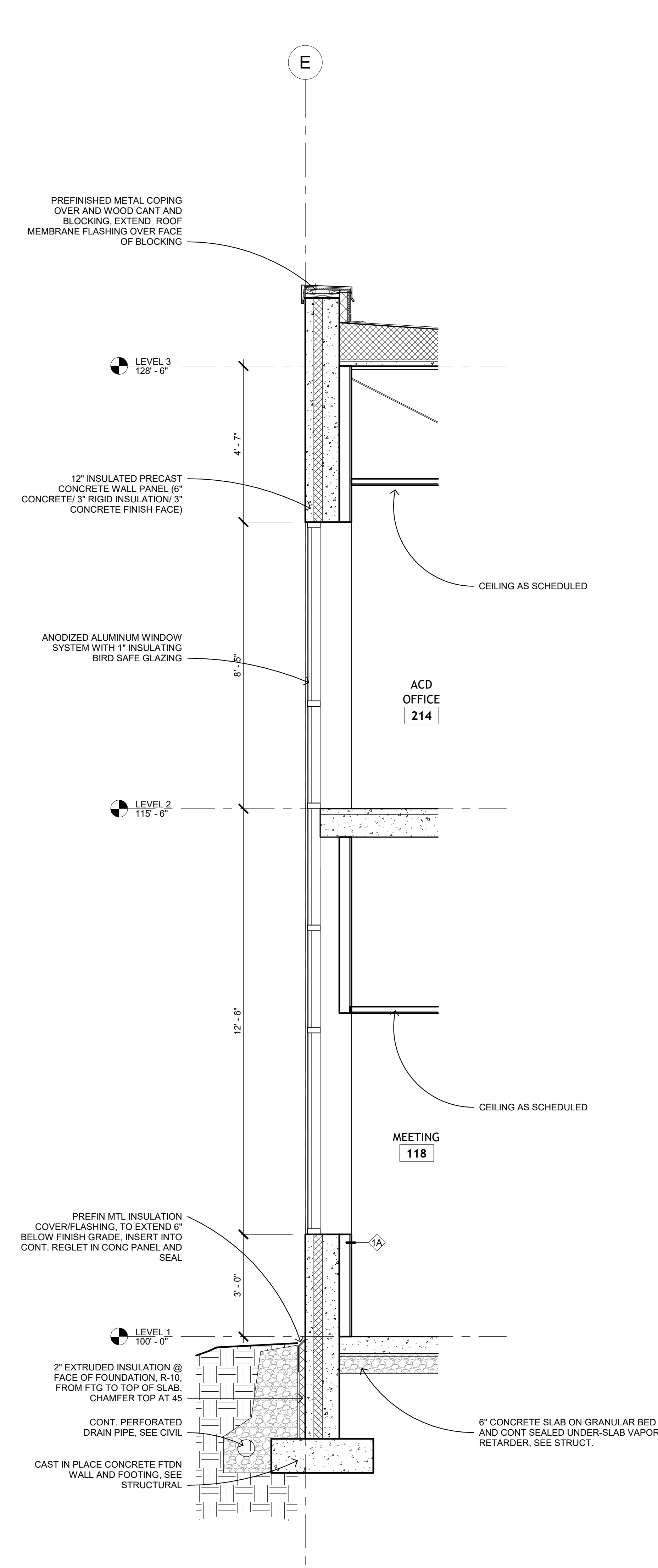
**A703**

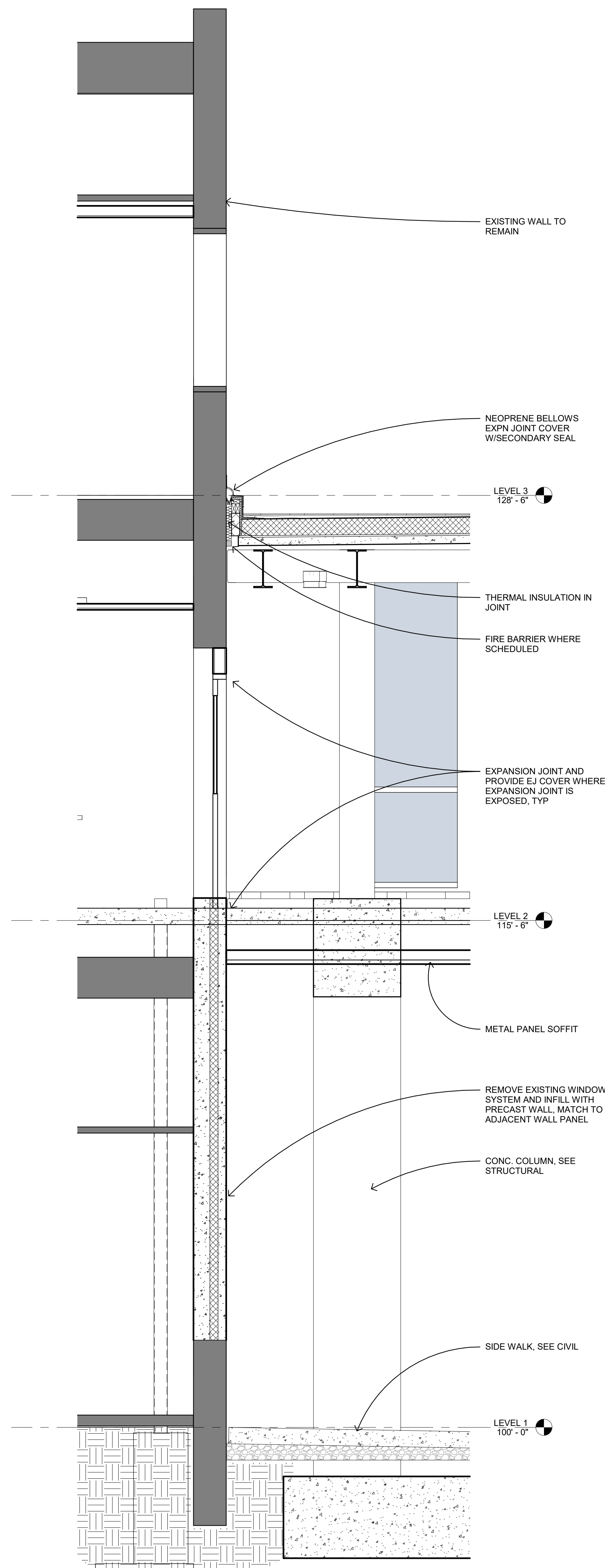


② WALL SECTION - SOUTH EAST  
1/2" = 1'-0"

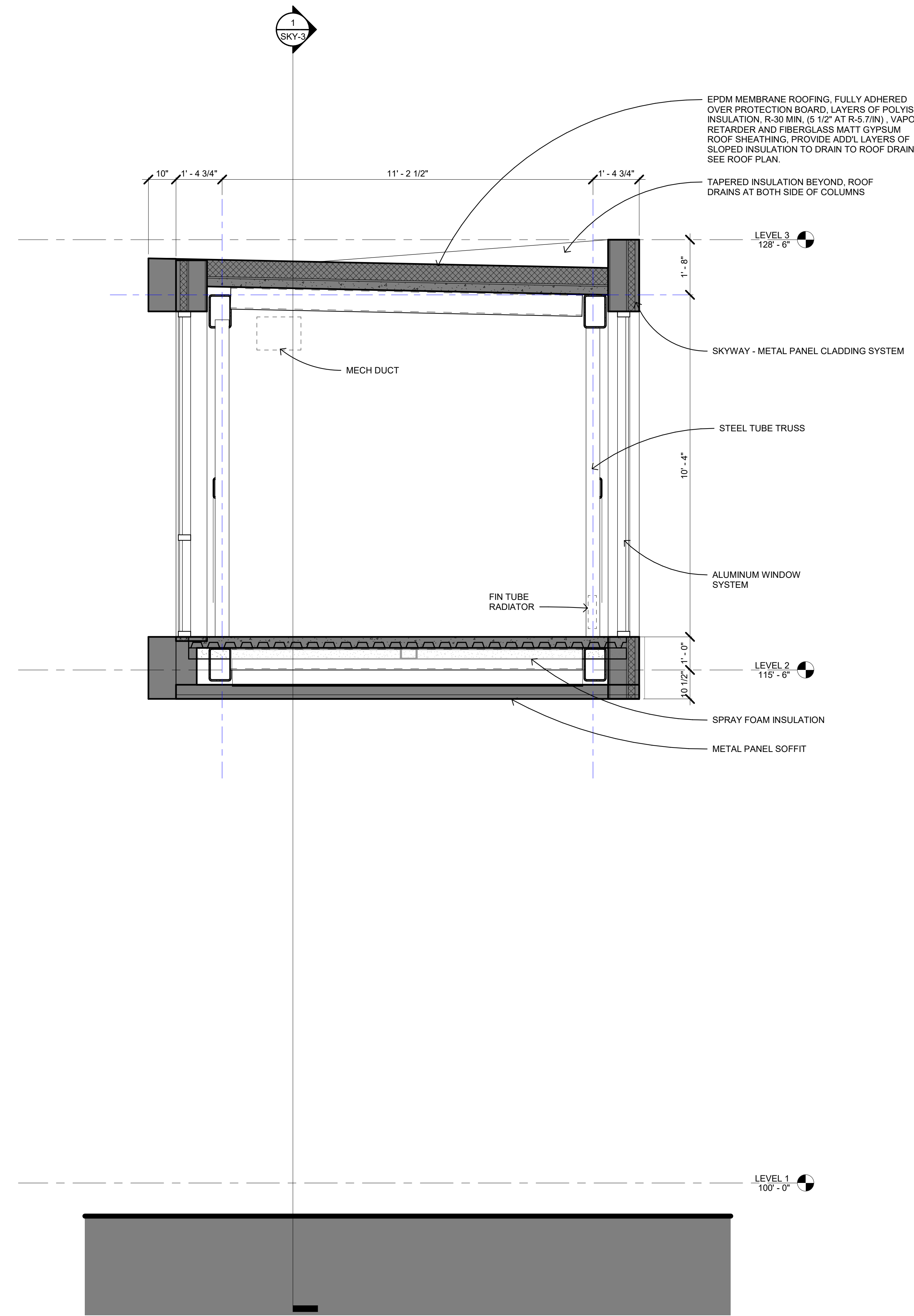


① WALL SECTION - OFFICE, TYP.  
1/2" = 1'-0"

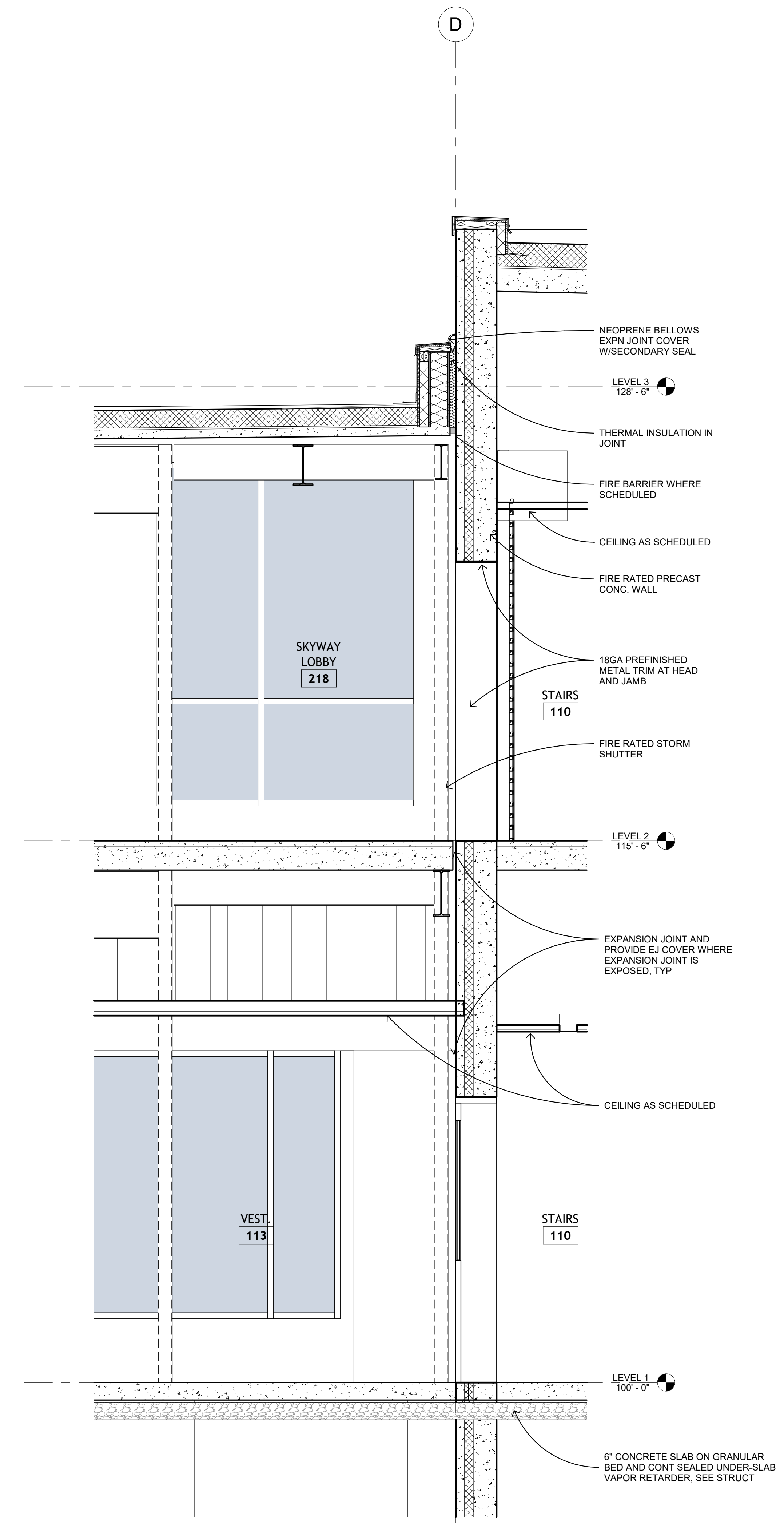




4 WALL SECTION - SKYWAY AT EXISTING  
1/2" = 1'-0"



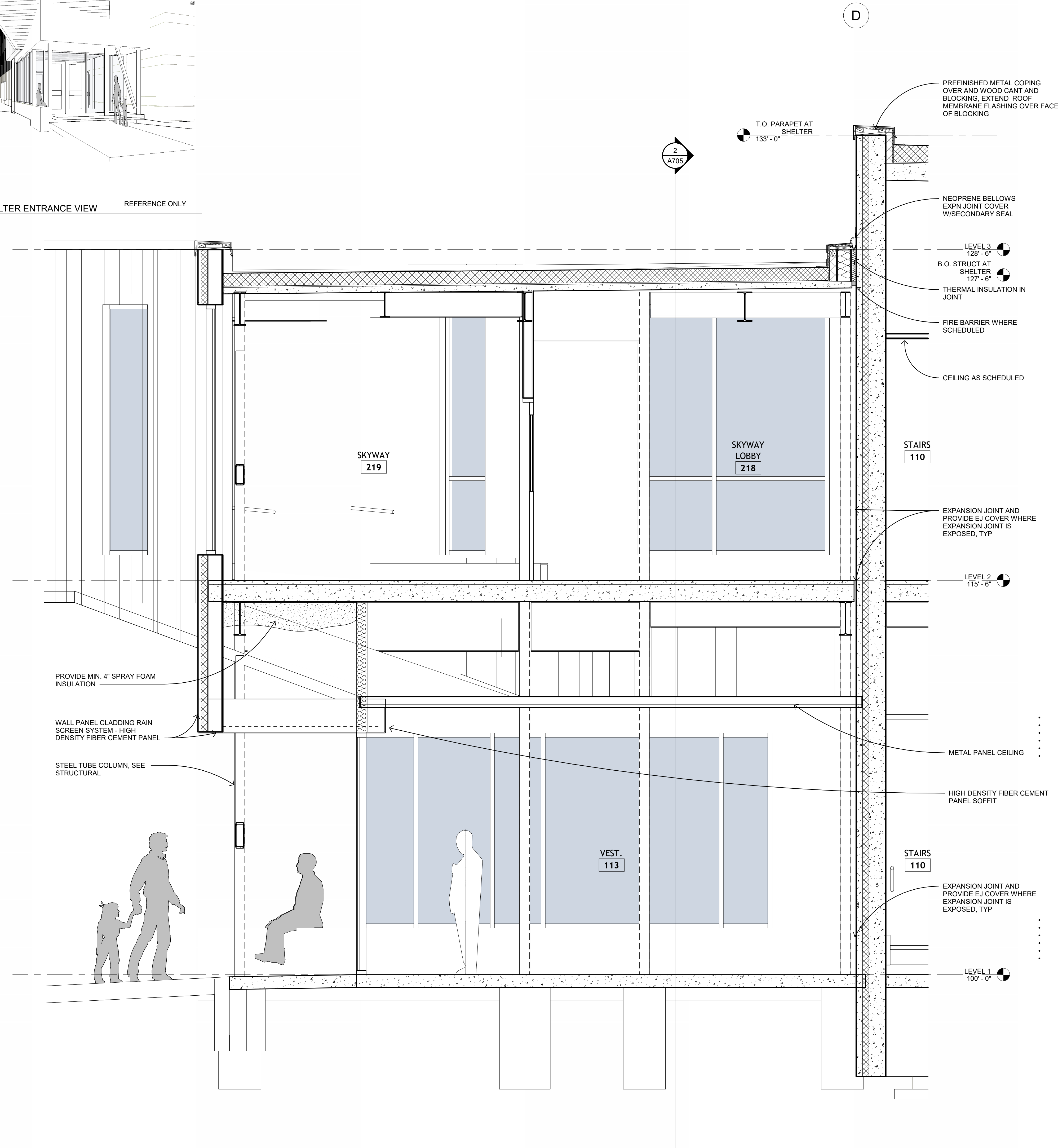
1 WALL SECTION - SKYWAY SECTION  
1/2" = 1'-0"



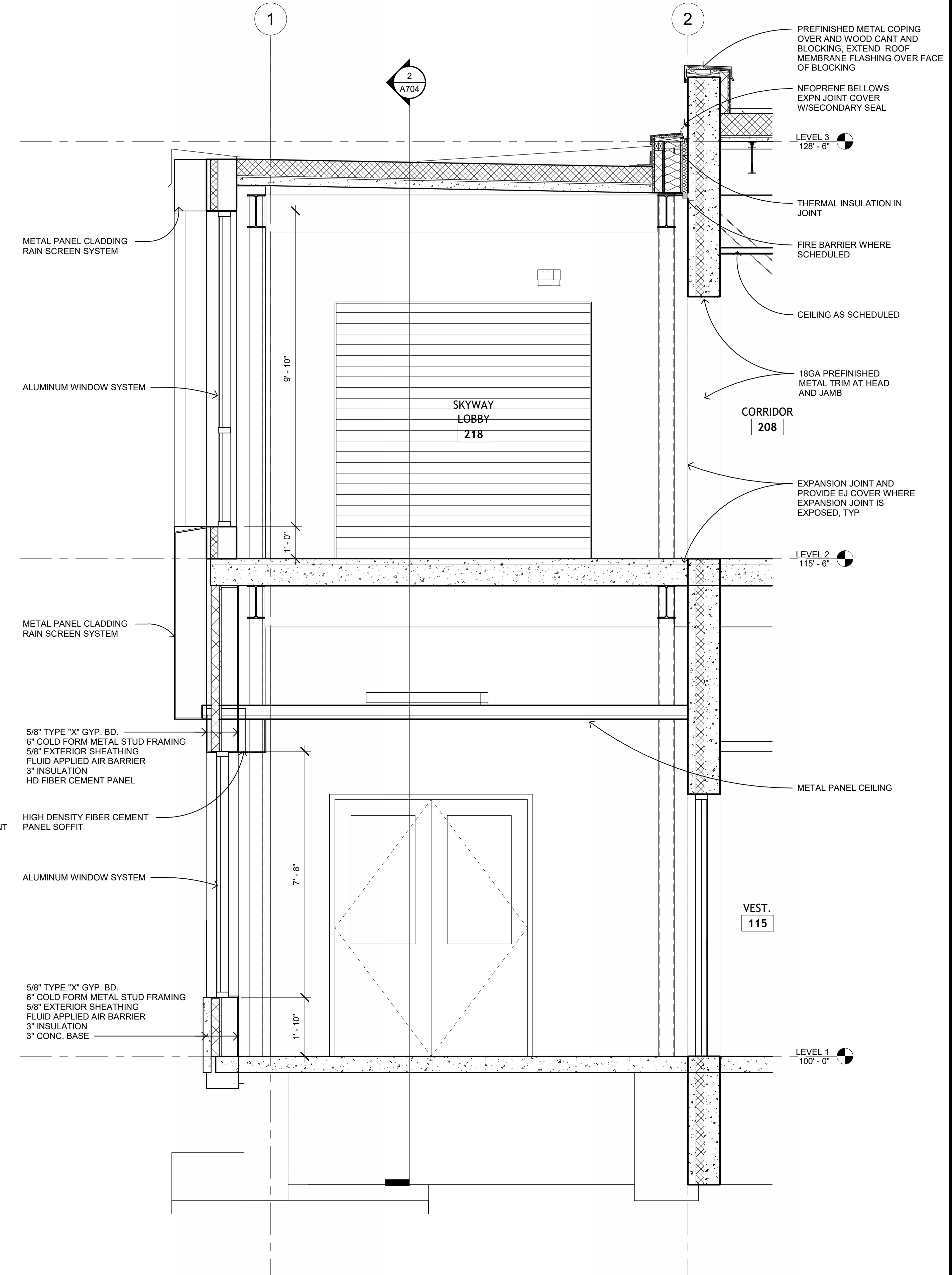
2 WALL SECTION - SKYWAY LOBBY  
1/2" = 1'-0"



1 SHELTER ENTRANCE VIEW REFERENCE ONLY



3 WALL SECTION - SHELTER VESTIBULE  
1/2" = 1'-0"



2 WALL SECTION - SHELTER VESTIBULE 2  
1/2" = 1'-0"

PREFINISHED METAL COPING  
OVER AND WOOD CANT AND  
BLOCKING, EXTEND ROOF  
MEMBRANE FLASHING OVER FACE  
OF BLOCKING

EPDM MEMBRANE ROOFING, FULLY  
ADHERED OVER PROTECTION BOARD,  
LAYERS OF POLYISO INSULATION, R-30  
MIN. (5 1/2" AT R-5.7IN); VAPOR  
RETARDER AND FIBERGLASS MATT  
GYPSUM ROOF SHEATHING, PROVIDE  
ADDL. LAYERS OF SLOPED INSULATION  
TO DRAIN TO ROOF DRAINS, SEE ROOF  
PLAN.

NEOPRENE BELLOWS  
EXPN JOINT COVER  
WISECONDARY SEAL

THERMAL INSULATION IN  
JOINT  
FIRE BARRIER WHERE  
SCHEDULED

EXPANSION JOINT AND  
PROVIDE EJ COVER WHERE  
EXPANSION JOINT IS  
EXPOSED, TYP

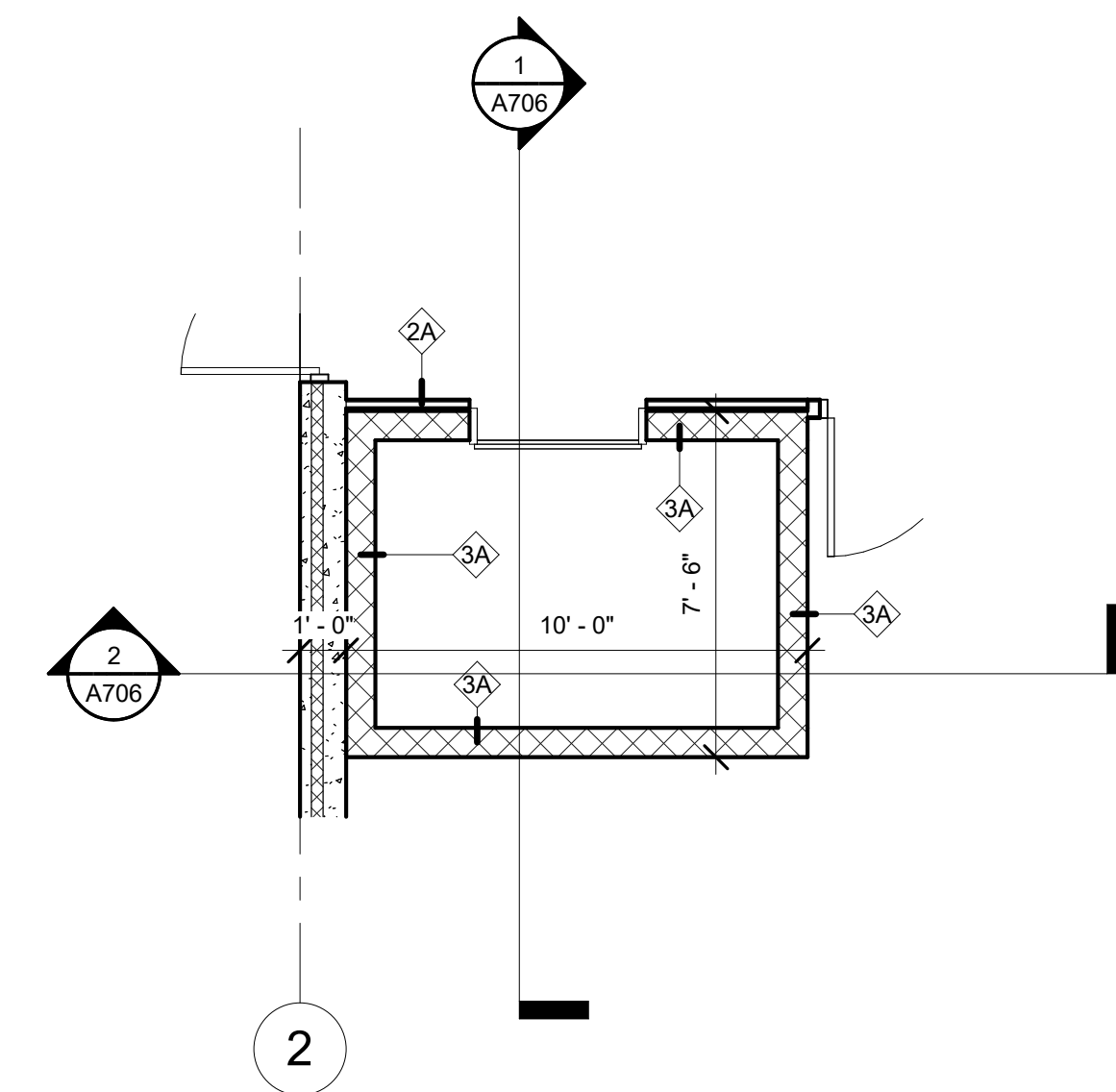
METAL PANEL CEILING

PROVIDE ACCESS LADDER AND SUMP,  
NOT SHOWN

① ELEVATOR SECTION  
1/2" = 1'-0"

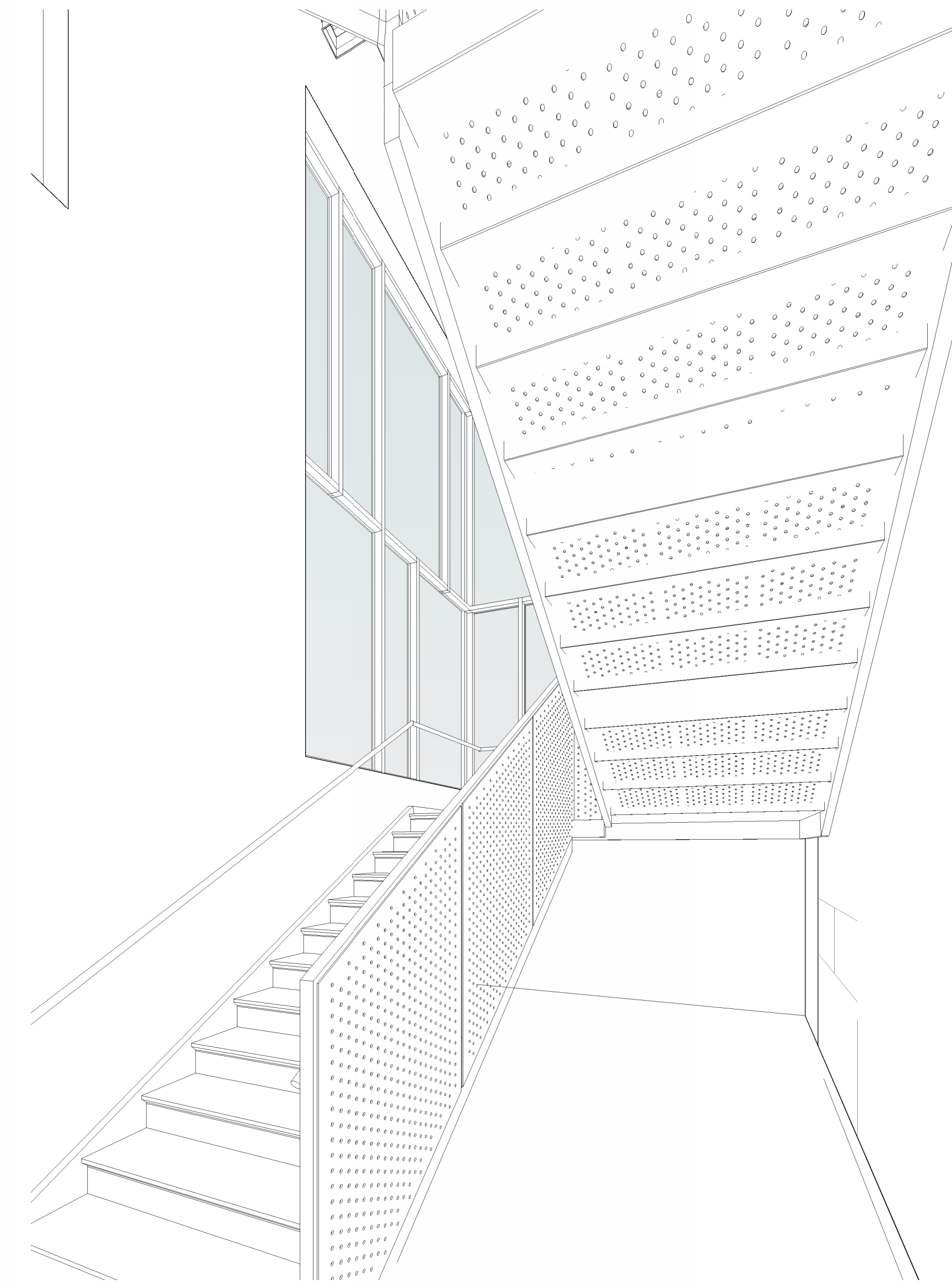
② ELEVATOR SECTION 2  
1/2" = 1'-0"

③ ENLARGED ELEV. PLAN - 1ST FLOOR  
1/4" = 1'-0"

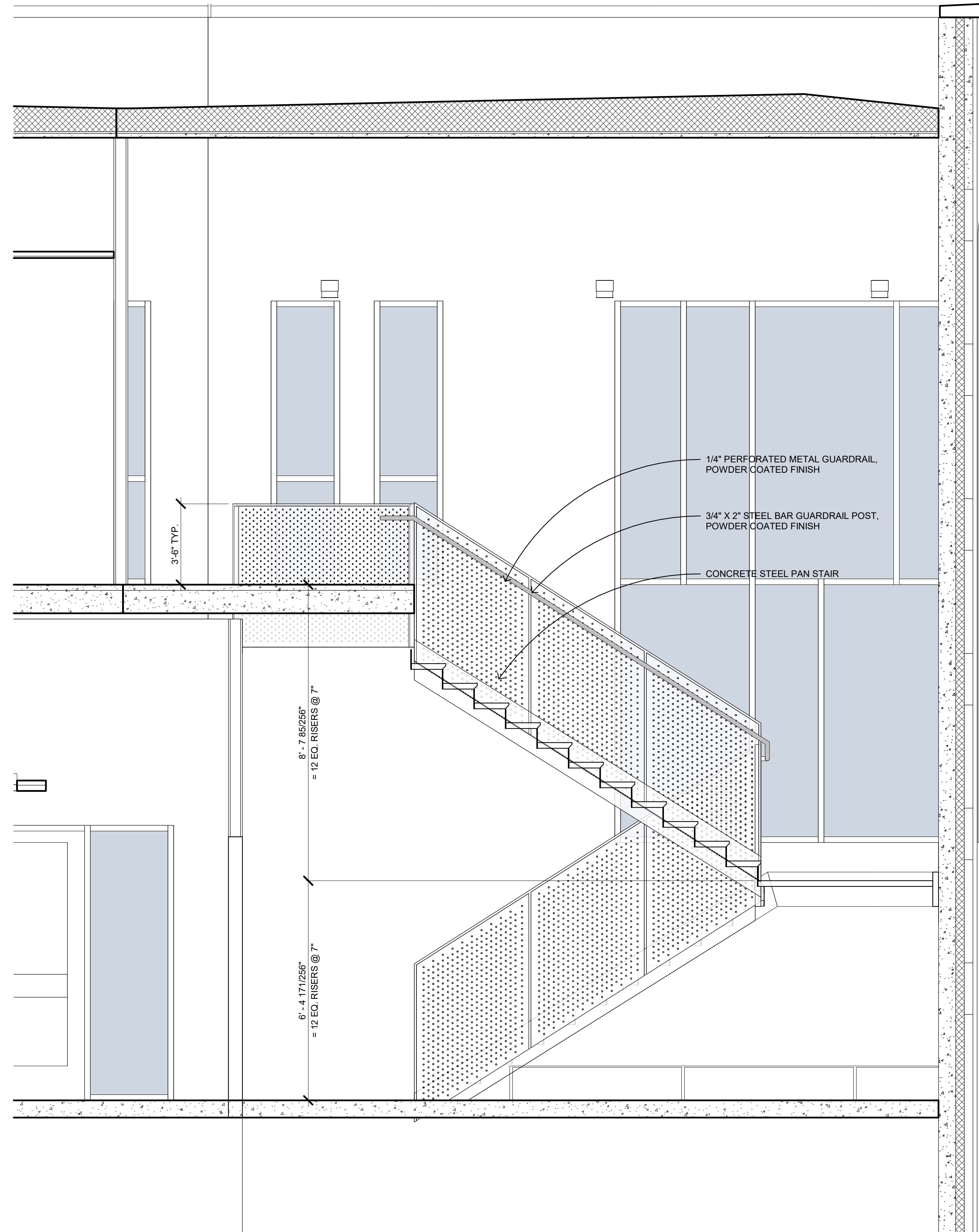


**STAIR DETAIL GENERAL NOTES**

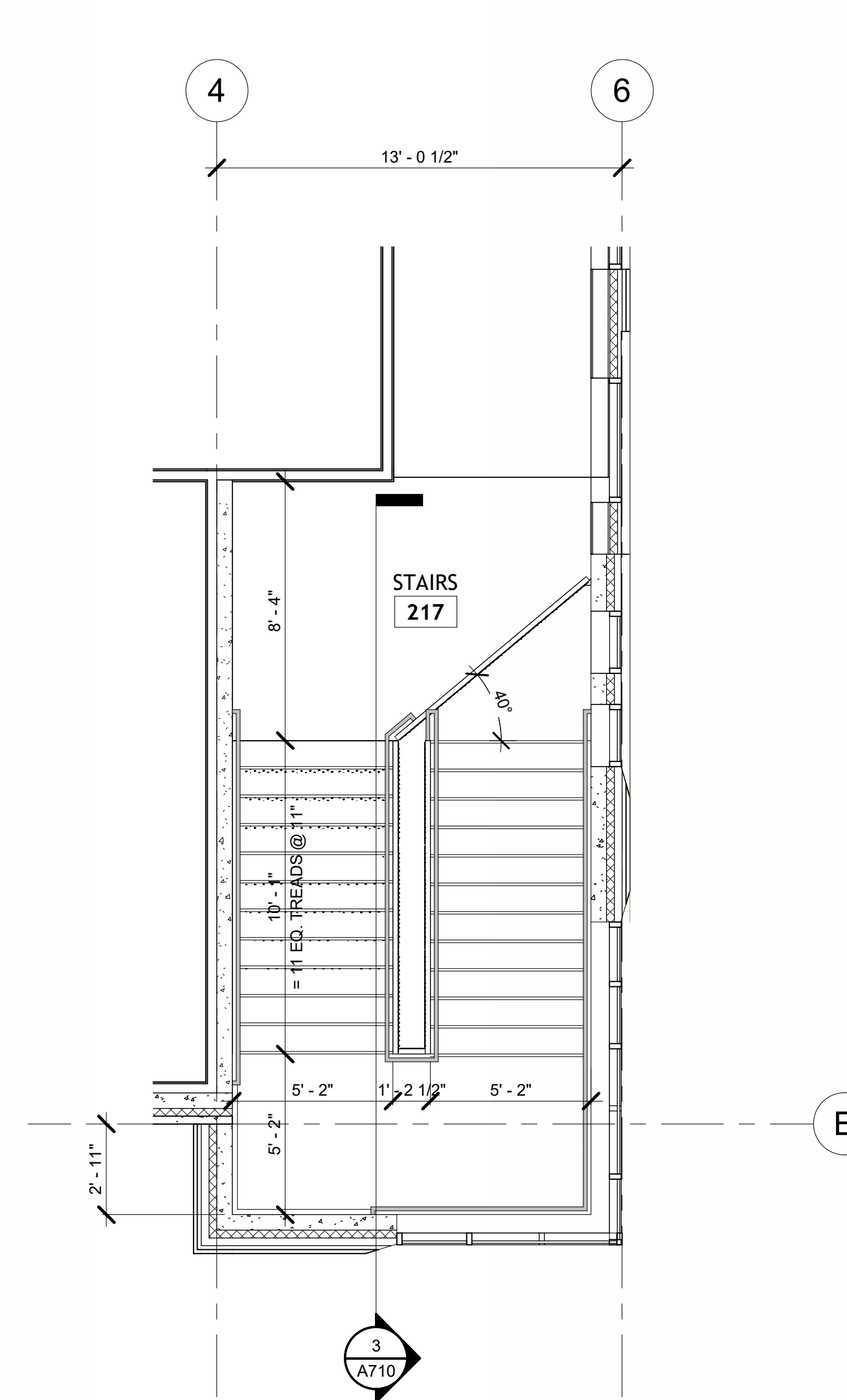
1. FOLLOW LOCAL CODE REQUIREMENTS. VERIFY ALLOWABLE DESIGN STRESSES OF RAILS AND POSTS.
2. VERIFY THE STRUCTURAL VALUE OF FASTENERS AND ANCHORAGE TO BUILDING STRUCTURE FOR BOTH VERTICAL AND LATERAL FORCES.
3. GUARDRAILS AND RAILS AT STAIR SHOULD BE DESIGNED TO PREVENT PASSAGE OF A 4" DIAMETER SPHERE. AT ANY OPENING EXCEPT TRIANGULAR OPENING AT STAIR TREADS AND RISERS TO PREVENT PASSAGE OF A 4" DIAMETER SPHERE WHERE APPLIES.
4. EXTERIOR GUARDRAILS AND HANDRAILS TO BE SHOP FABRICATED AND GALVANIZED AND POWDER COAT PAINTED. INTERIOR STAIR COMPONENTS TO BE PRIMED AND POWDER COAT PAINTED U.N.O.
5. PROVIDE 1/4" PL CAP AT EXPOSED STL TUBE COLUMN AND STAIR STRINGER ENDS. U.N.O.
6. GRIND ALL WELDS SMOOTH. PREPARE FOR PAINT
7. REFER TO SPECIFICATION SECTION DECORATIVE METAL STAIRS AND RAILINGS FOR DELEGATED DESIGN REQUIREMENTS.
8. THE GUARDRAIL/HANDRAIL IN THIS DRAWING IS FOR GRAPHIC PURPOSES ONLY. ALL STAIR DIMENSIONS MUST BE VERIFIED IN THE FIELD AND GUARDRAIL/HANDRAILS MUST BE FABRICATED TO COMPLY WITH CODE REQUIREMENTS BASED ON FIELD DIMENSIONS. ANY DISCREPANCIES WITH THE DRAWINGS SHOULD BE NOTIFIED IMMEDIATELY TO THE ARCHITECT FOR APPROVAL BEFORE PROCEEDING.



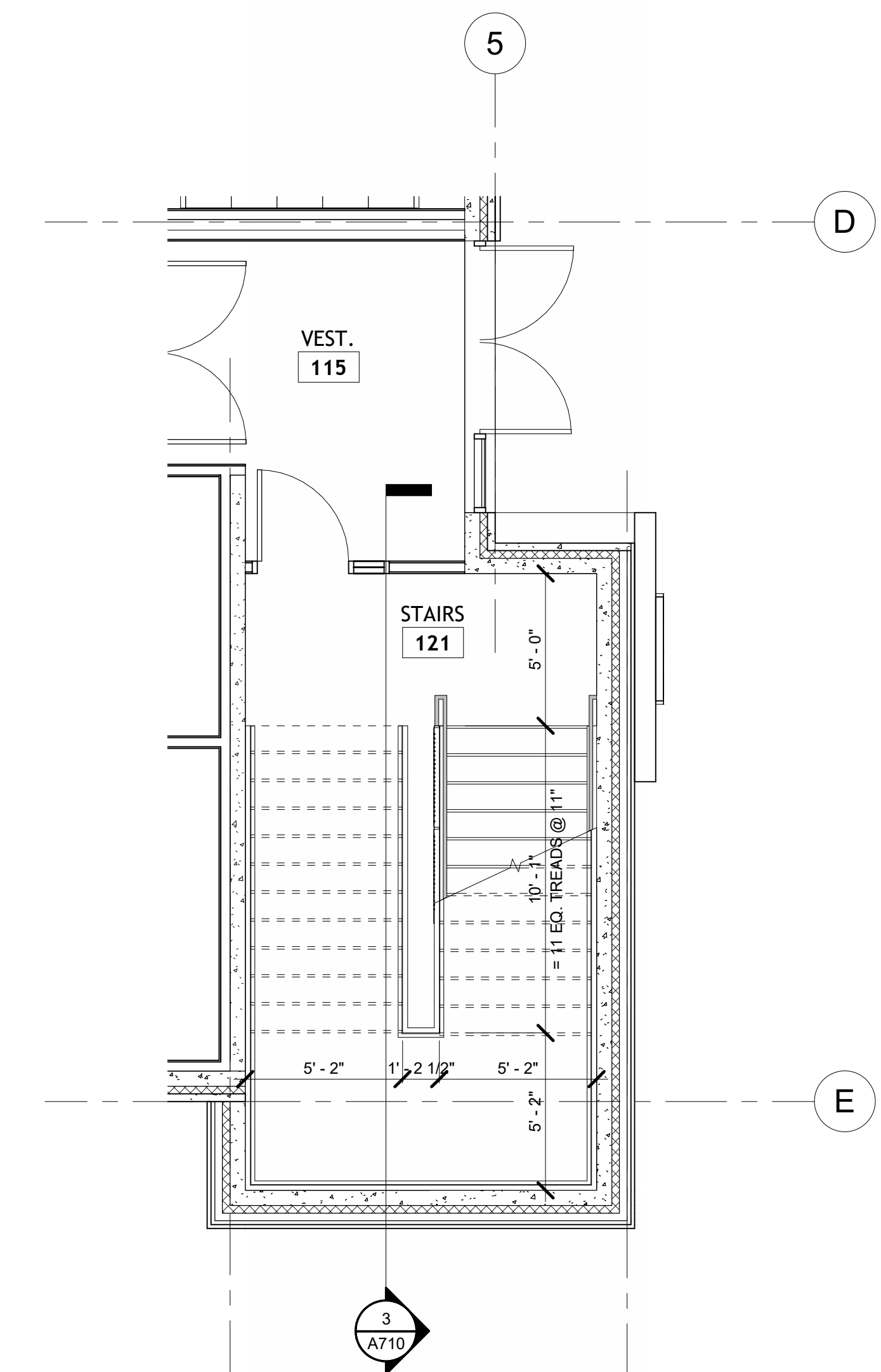
4 STAIR B113 - VIEW FROM LEVEL 1



3 STAIR B113 - SECTION2  
1/2" = 1'-0"



2 STAIR B113 - LEVEL 2 ENLARGED PLAN  
1/4" = 1'-0"



1 STAIR B113 - LEVEL 1 ENLARGED PLAN  
1/4" = 1'-0"



**DD  
DOCUMENT  
Not For  
Construction**

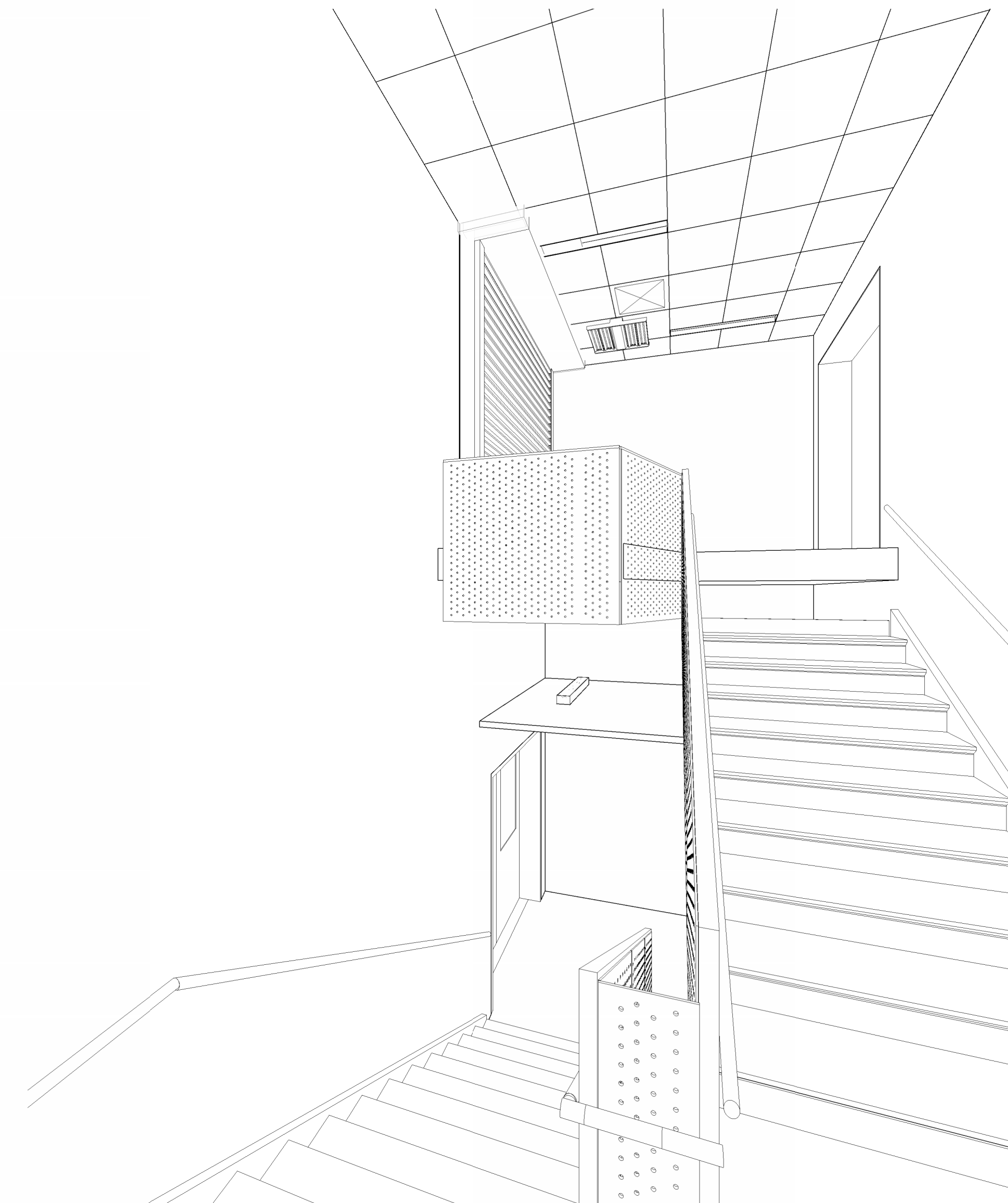
SHEET TITLE:  
**STAIR B107 - FLOOR PLANS  
& SECTION**

SHEET NUMBER:

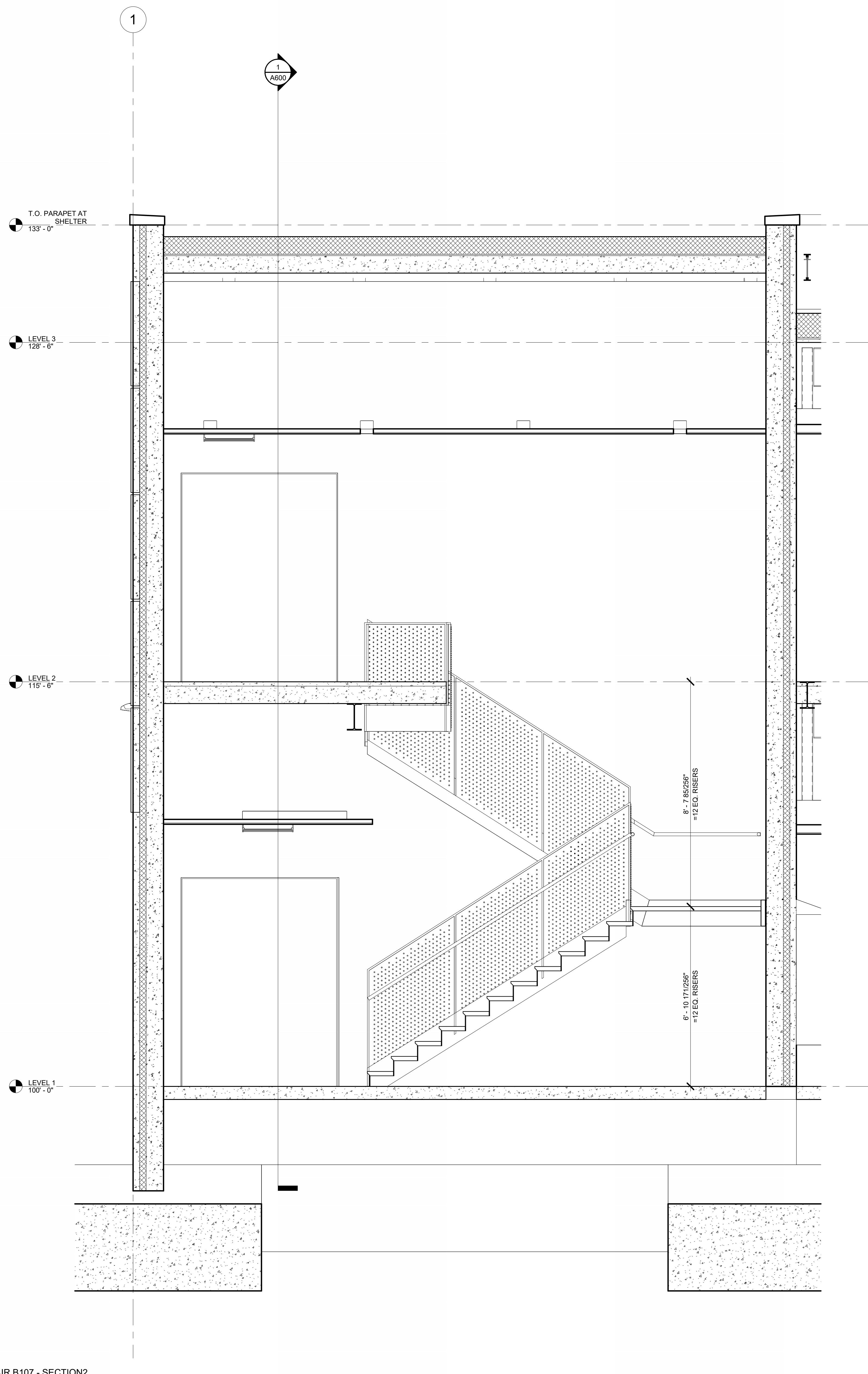
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**STAIR DETAIL GENERAL NOTES**

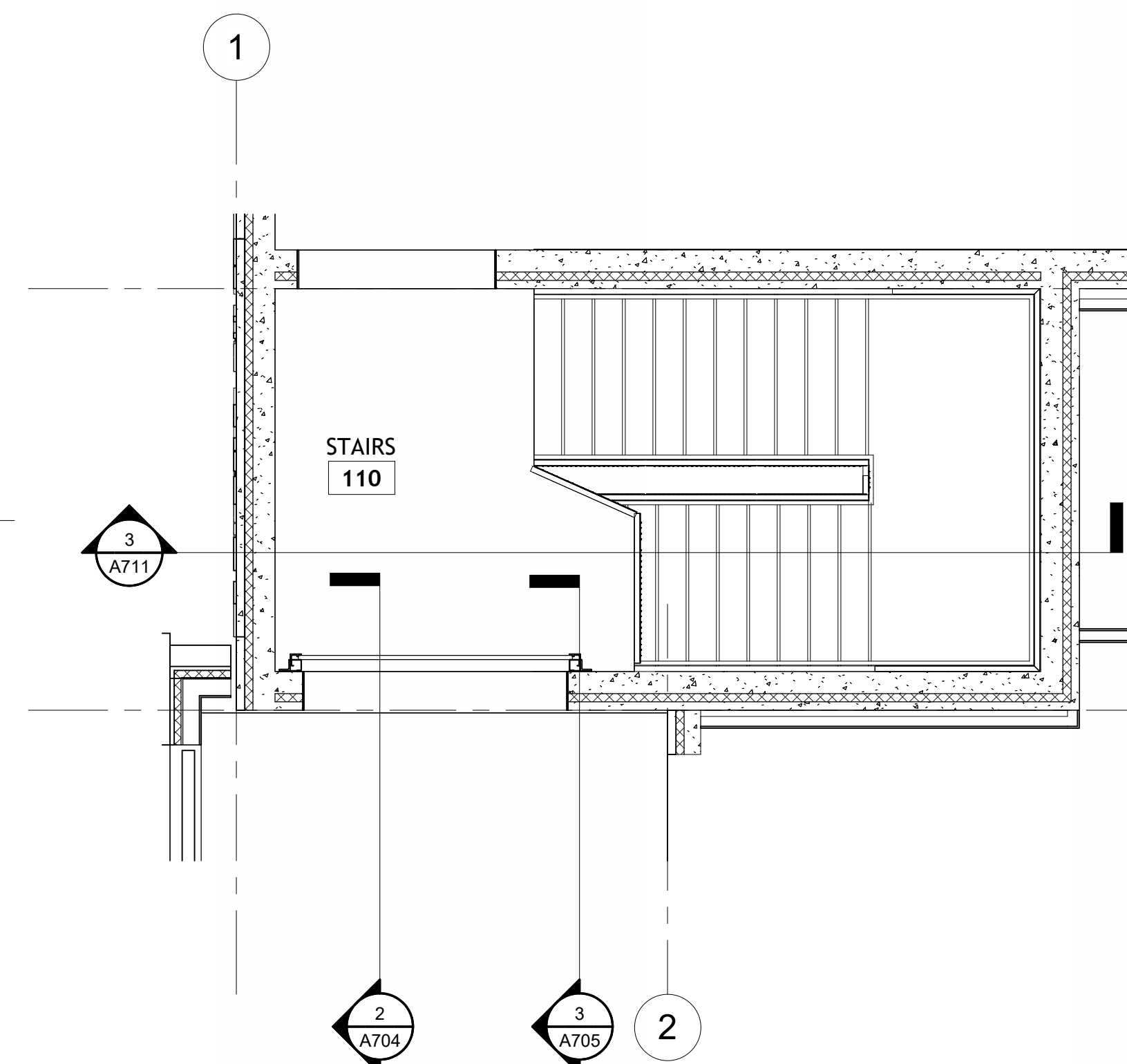
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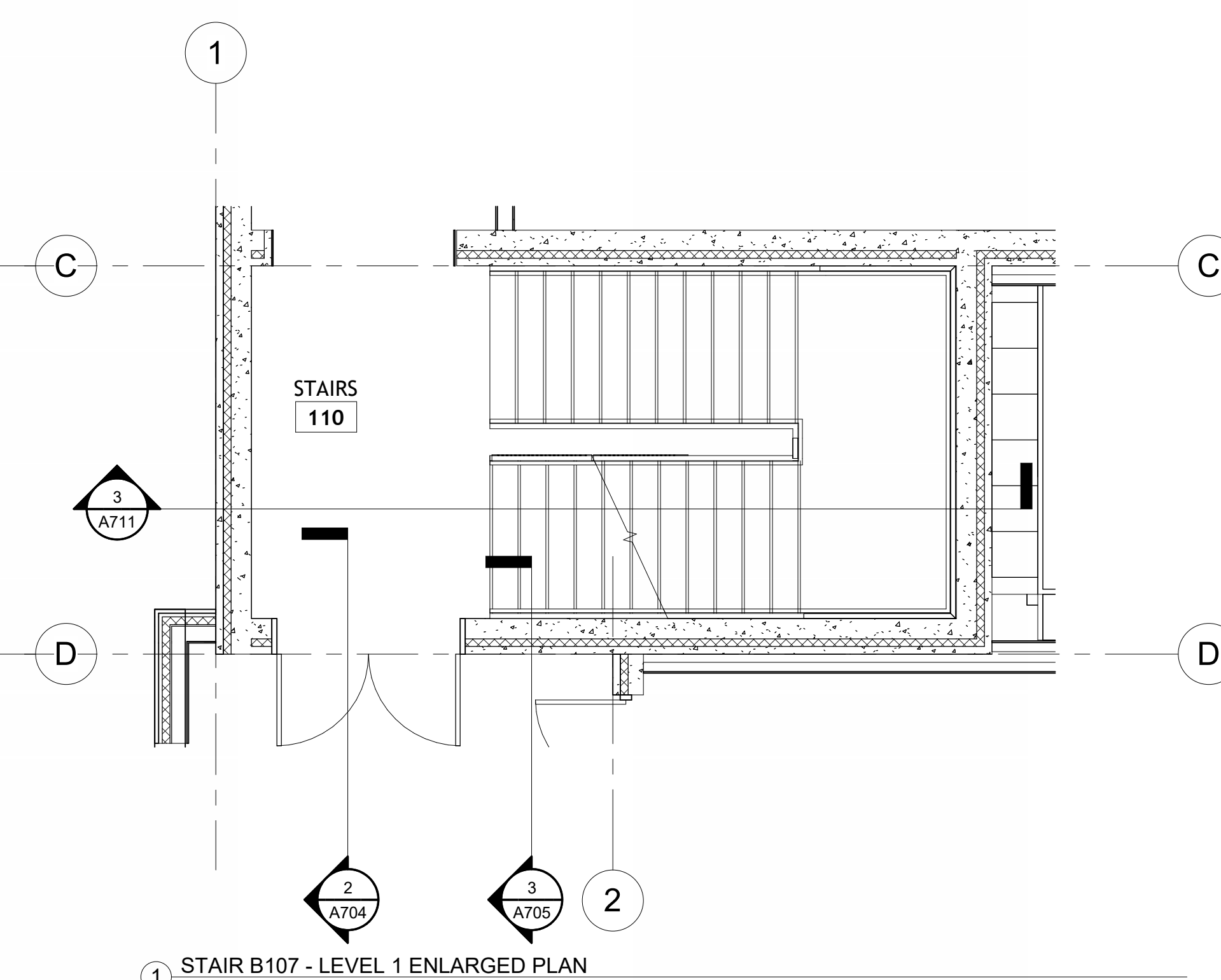
4 STAIR B107 - VIEW FROM LANDING



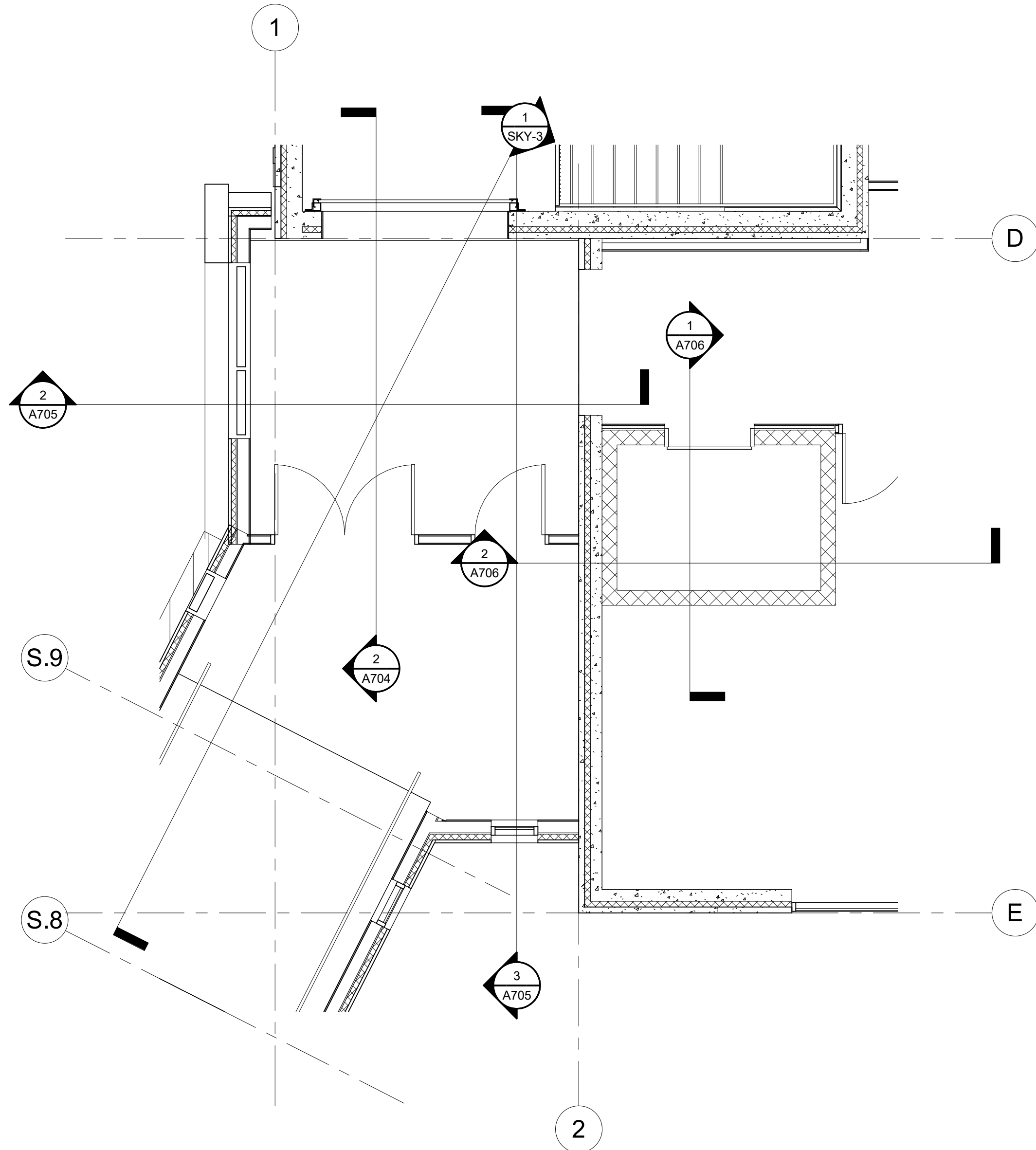
3 STAIR B107 - SECTION2  
1/4" = 1'-0"



2 STAIR B107 - LEVEL 2 ENLARGED PLAN  
1/4" = 1'-0"

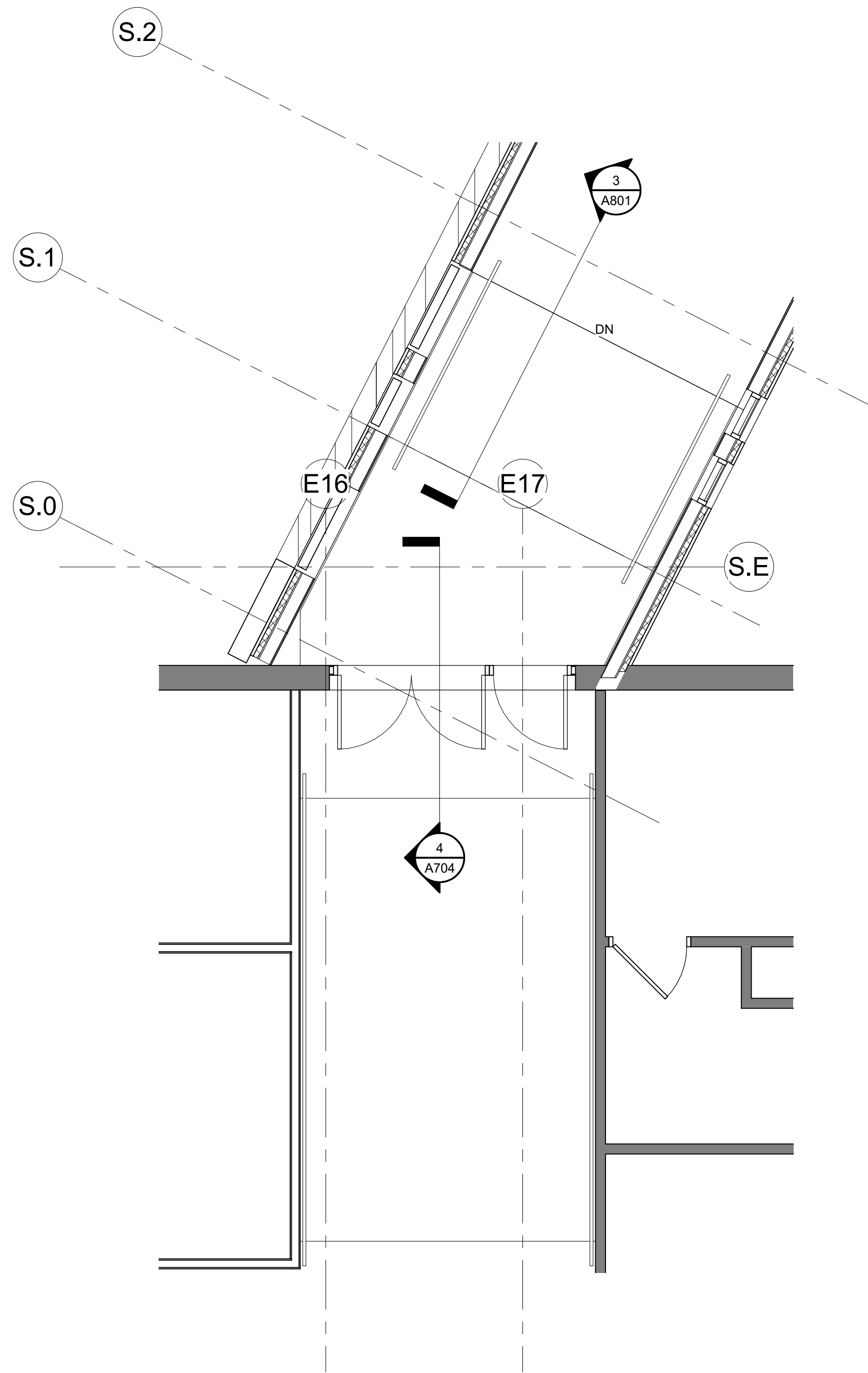


1 STAIR B107 - LEVEL 1 ENLARGED PLAN  
1/4" = 1'-0"

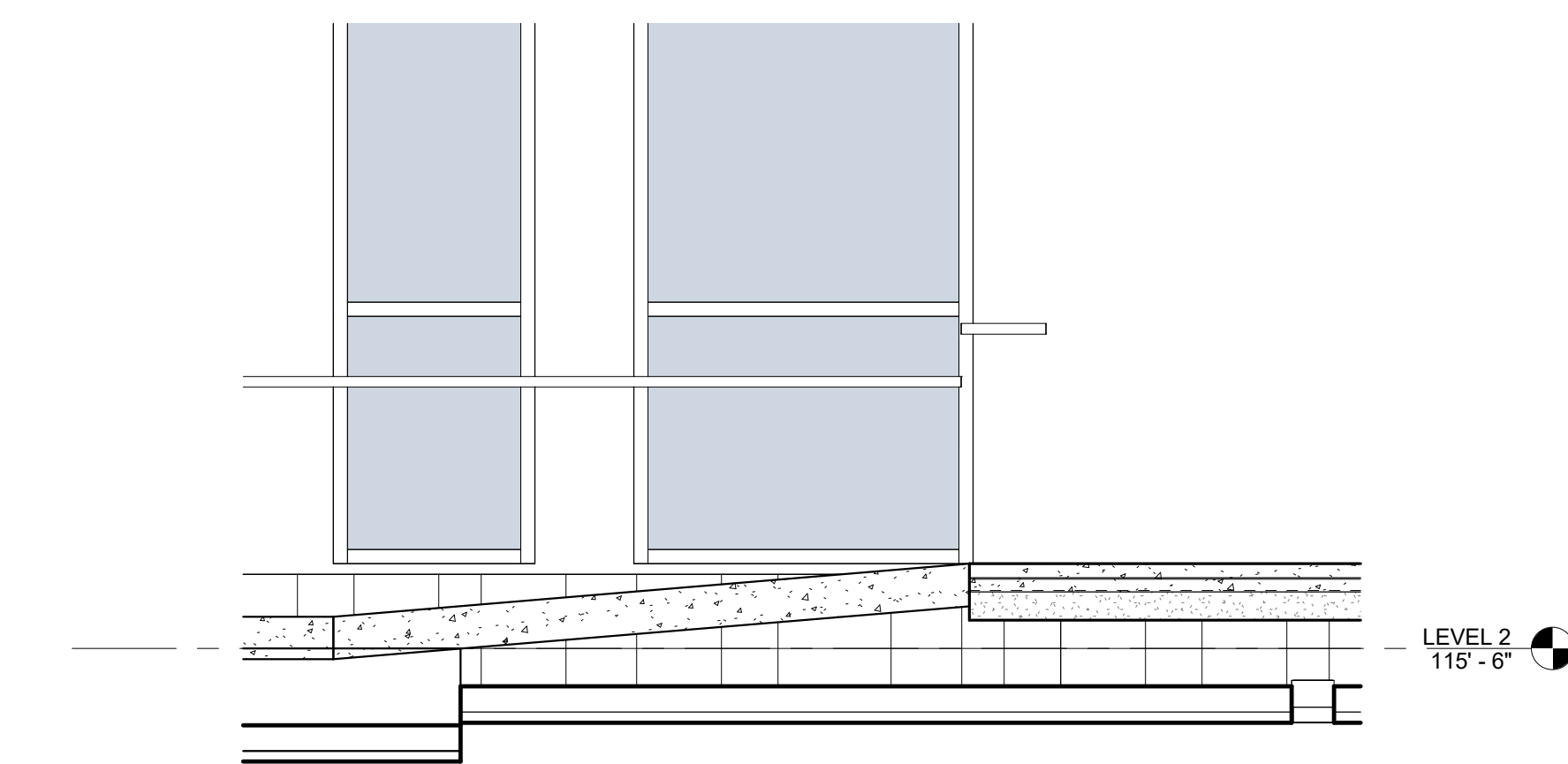


- STAIR DETAIL GENERAL NOTES**
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  2. VERIFY THE STRUCTURAL VALUE OF FASTENERS AND ANCHORAGE TO BUILDING STRUCTURE FOR BOTH VERTICAL AND LATERAL FORCES.
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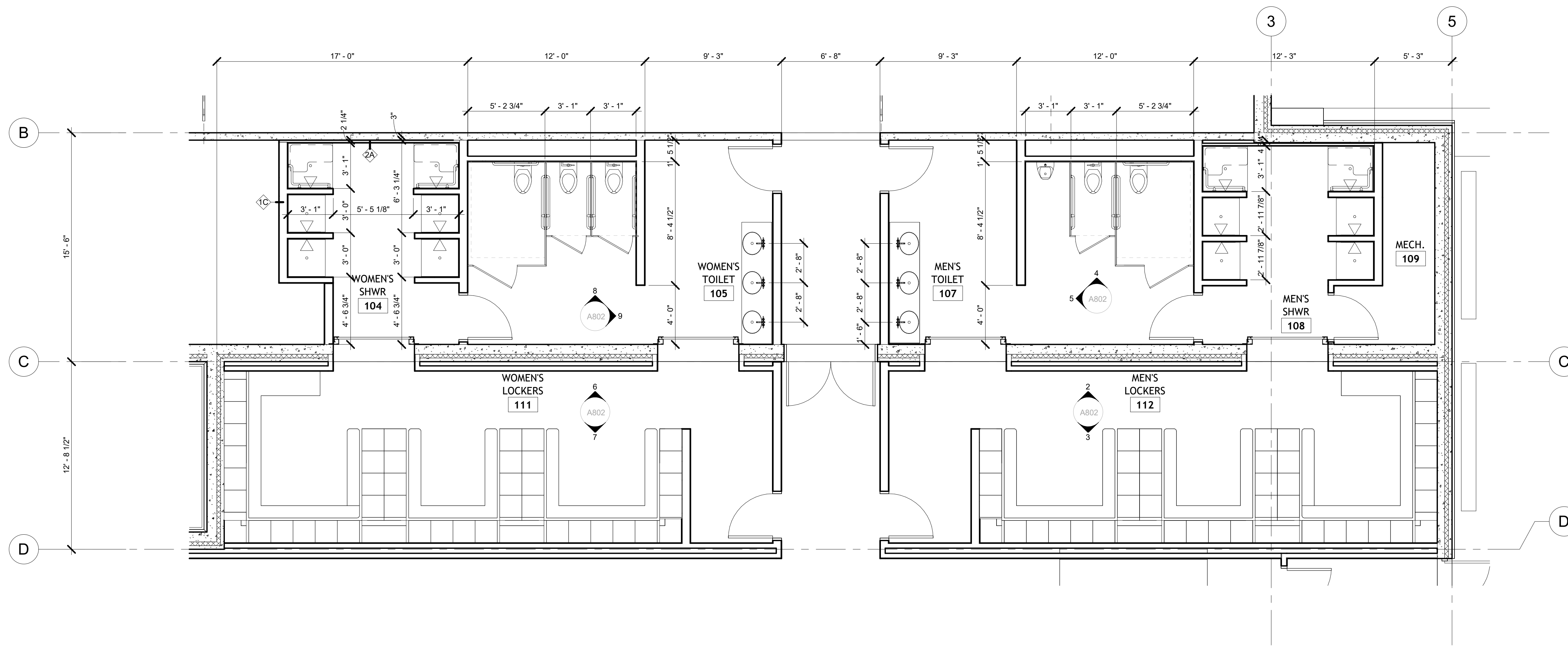
2 LEVEL 2 - SKYWAY AT EXISTING - Callout 2  
1/4" = 1'-0"



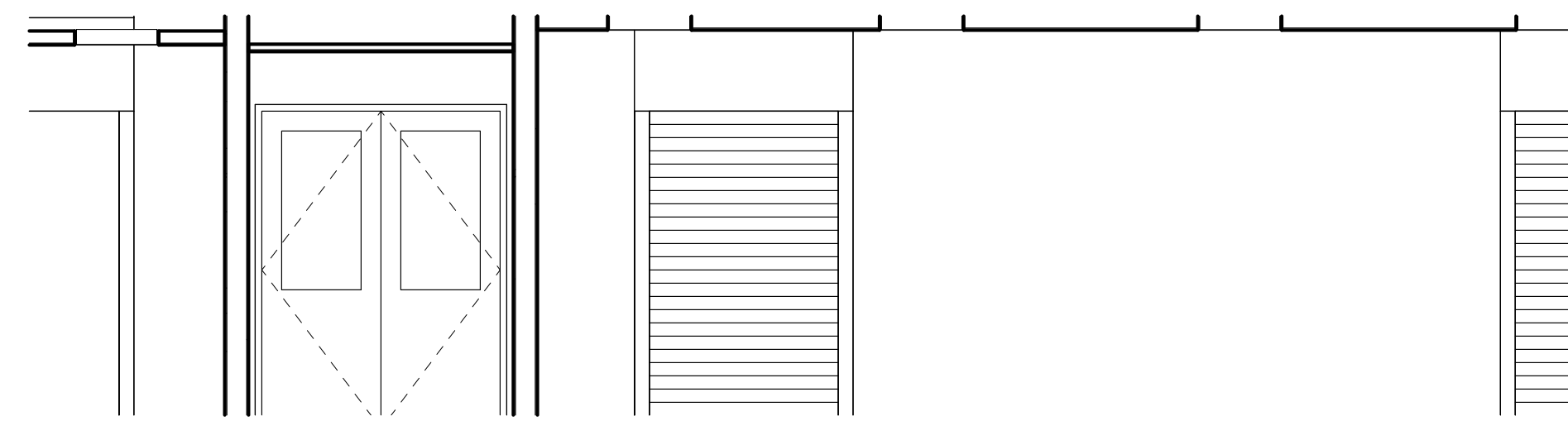
1 LEVEL 2 - SKYWAY AT EXISTING - Callout 1  
1/4" = 1'-0"



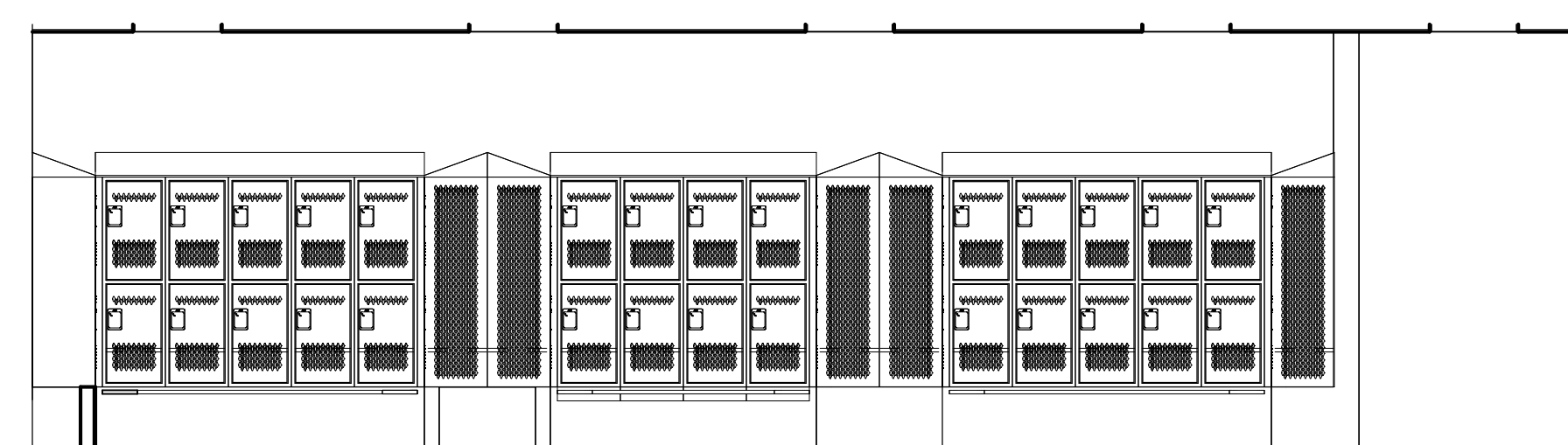
3 Section 25  
1/2" = 1'-0"



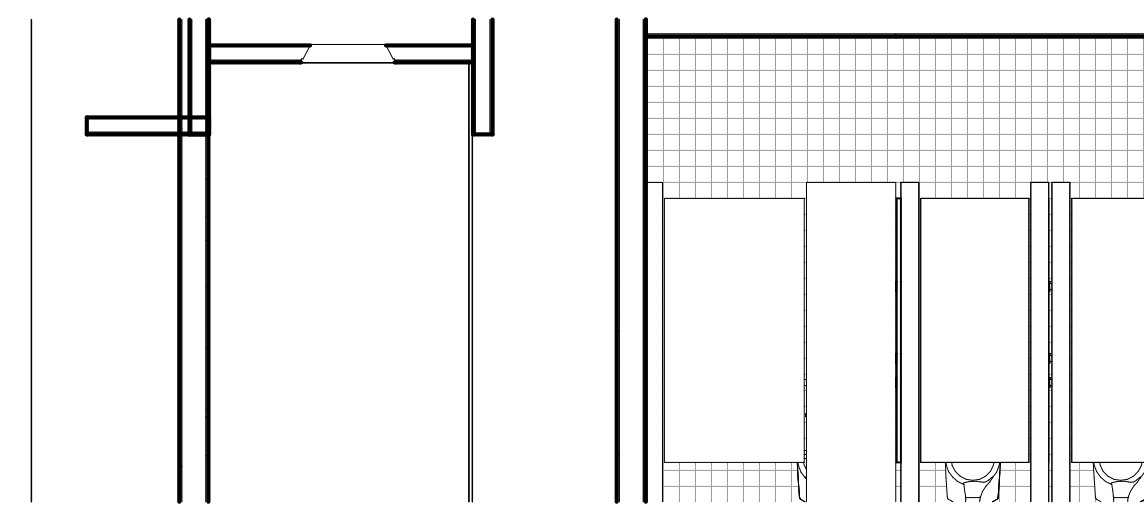
1 FIRST FLOOR PLAN - SHELTER - Callout 1  
1/4" = 1'-0"



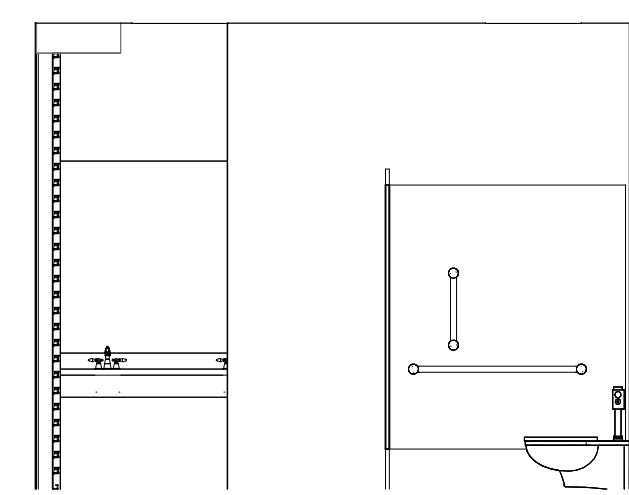
2 FIRST FLOOR - MAN'S LOCKER - NORTH WALL  
1/4" = 1'-0"



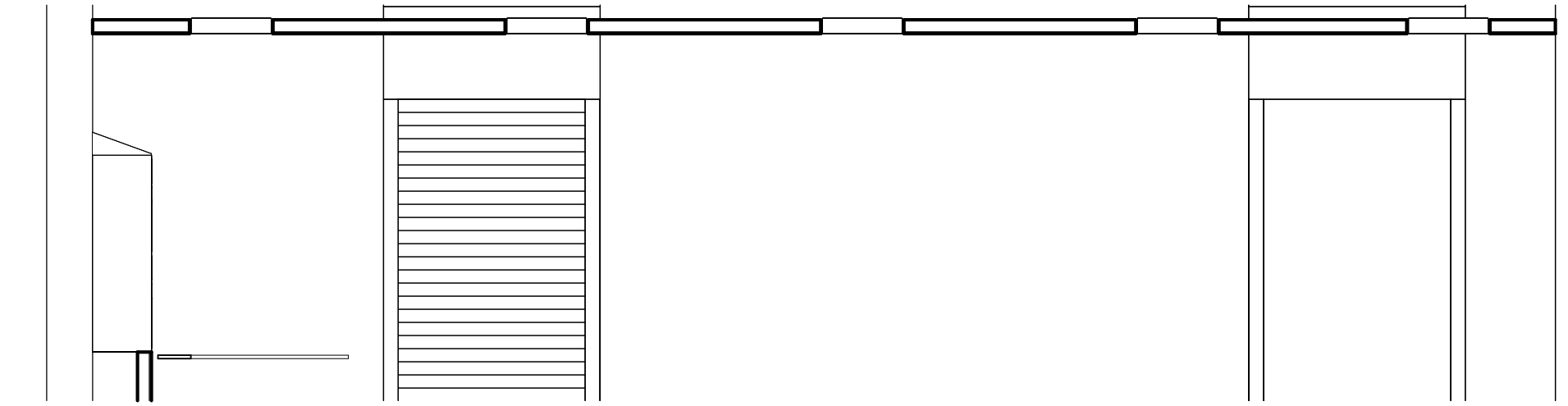
3 FIRST FLOOR - MAN'S LOCKER - SOUTH WALL  
1/4" = 1'-0"



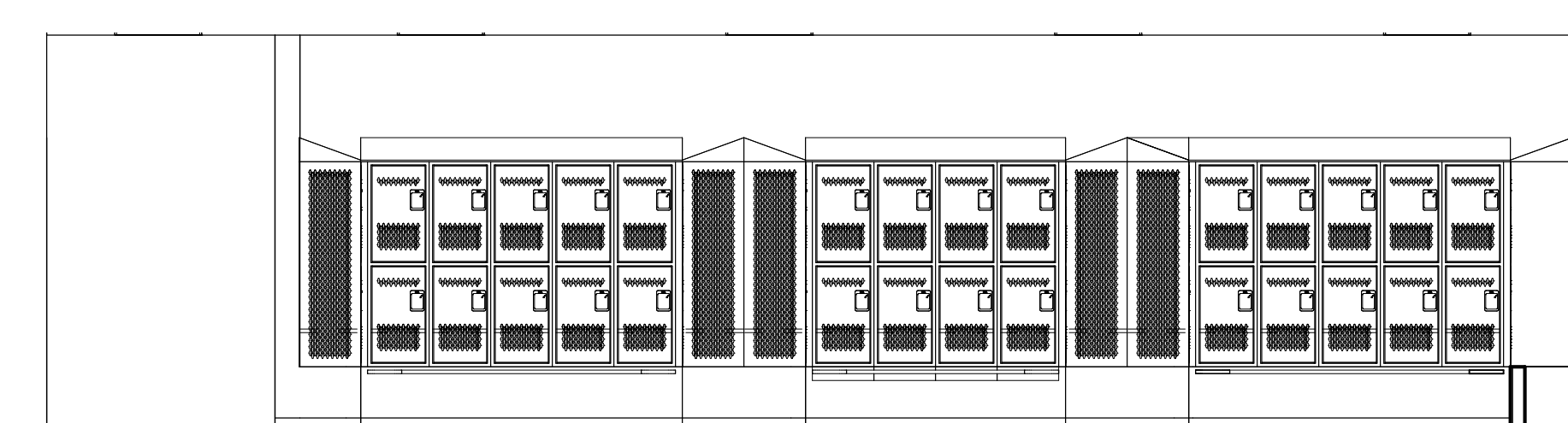
4 FIRST FLOOR - MAN'S TOILET  
1/4" = 1'-0"



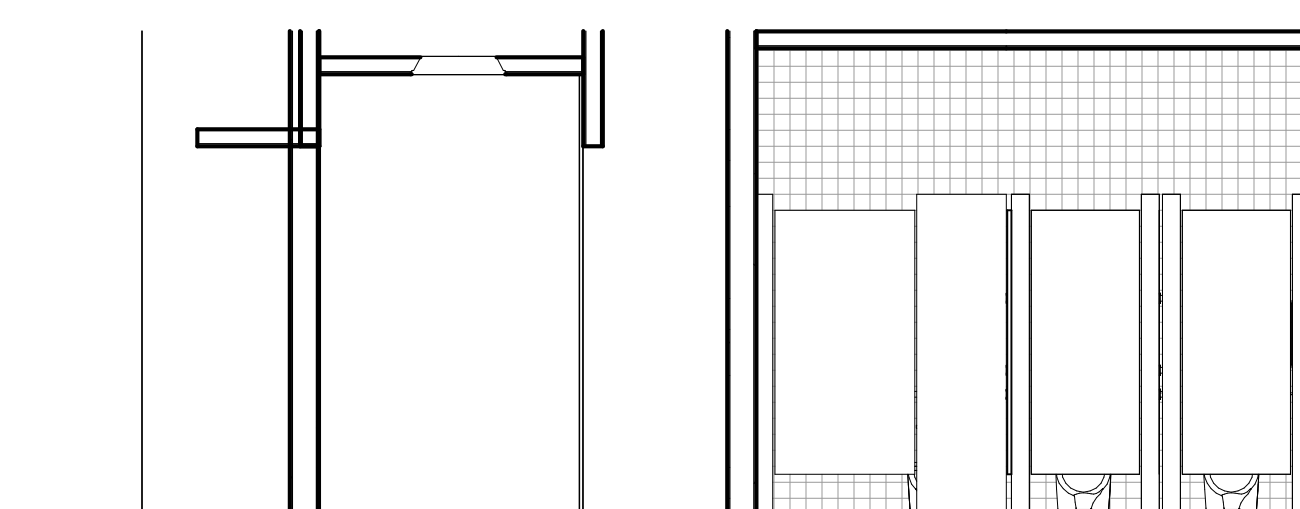
5 FIRST FLOOR - MAN'S TOILET - WEST WALL  
1/4" = 1'-0"



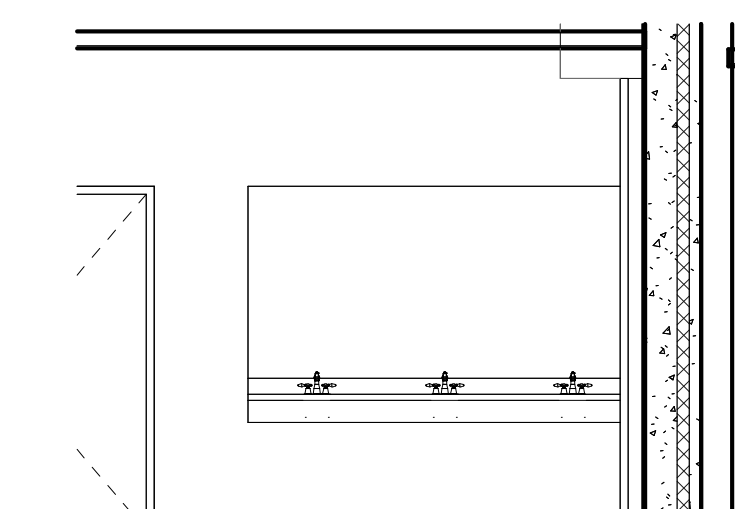
6 FIRST FLOOR - WOMAN'S LOCKER - NORTH WALL  
1/4" = 1'-0"



7 FIRST FLOOR - WOMAN'S LOCKER - SOUTH WALL  
1/4" = 1'-0"



8 FIRST FLOOR - WOMAN'S TOILET  
1/4" = 1'-0"



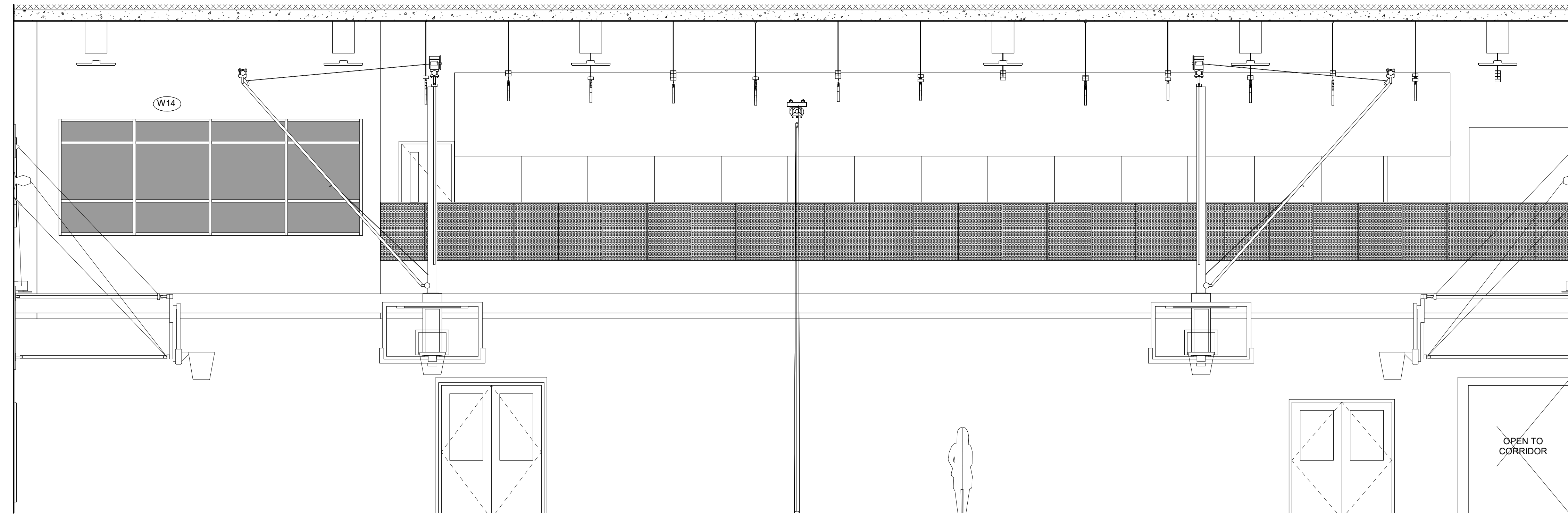
9 FIRST FLOOR - WOMAN'S TOILET - EAST WALL  
1/4" = 1'-0"

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Construction**

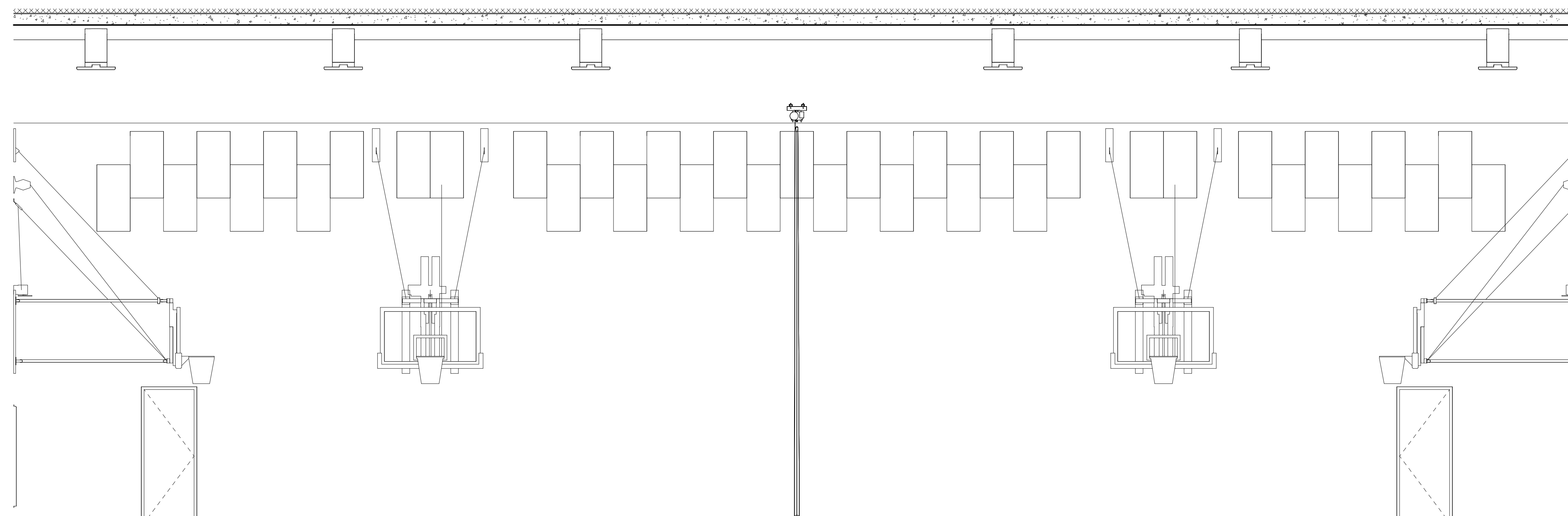
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**INTERIOR ELEVATIONS -  
SHELTER**

SHEET NUMBER:

**A805**



1 INTERIOR ELEVATION - SHELTER LOOKING SOUTH  
1/4" = 1'-0"



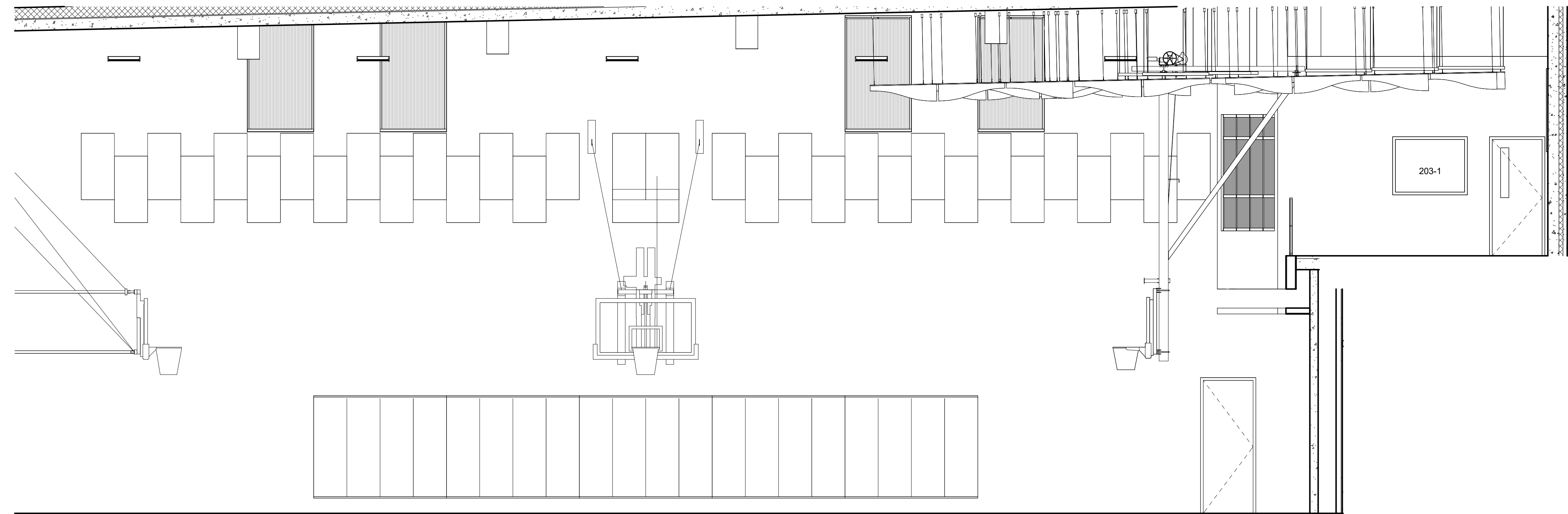
2 INTERIOR ELEVATION - SHELTER LOOKING NORTH  
1/4" = 1'-0"

**DD  
DOCUMENT  
Not For  
Construction**

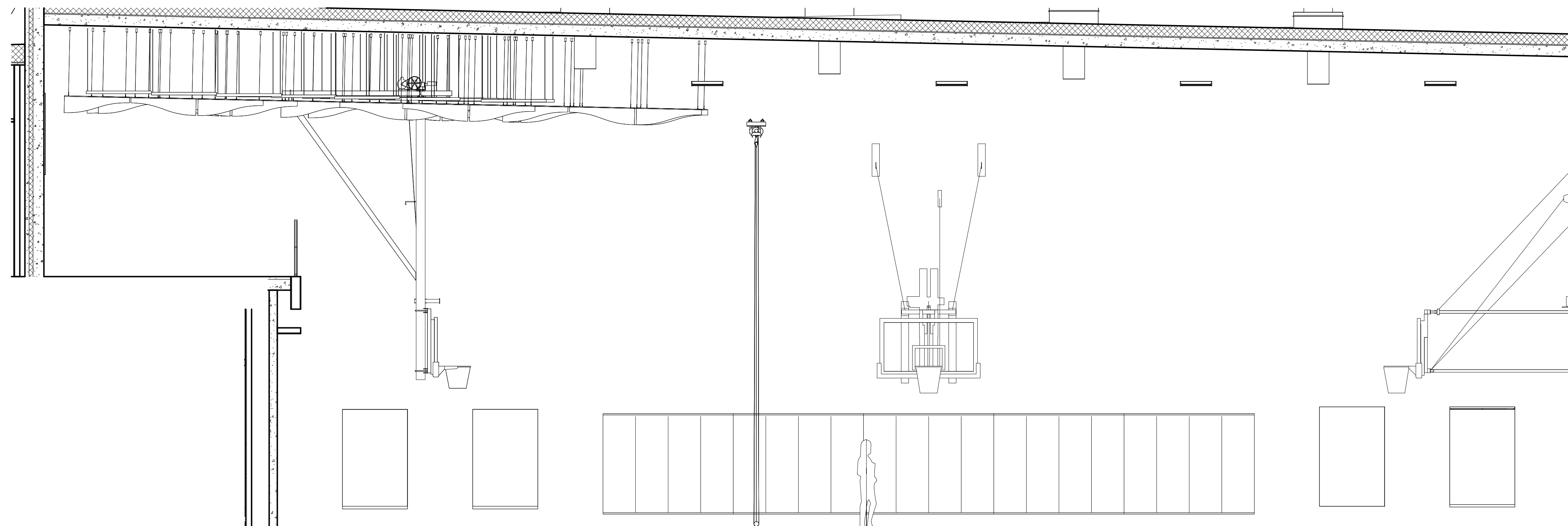
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SHELTER**

SHEET NUMBER:

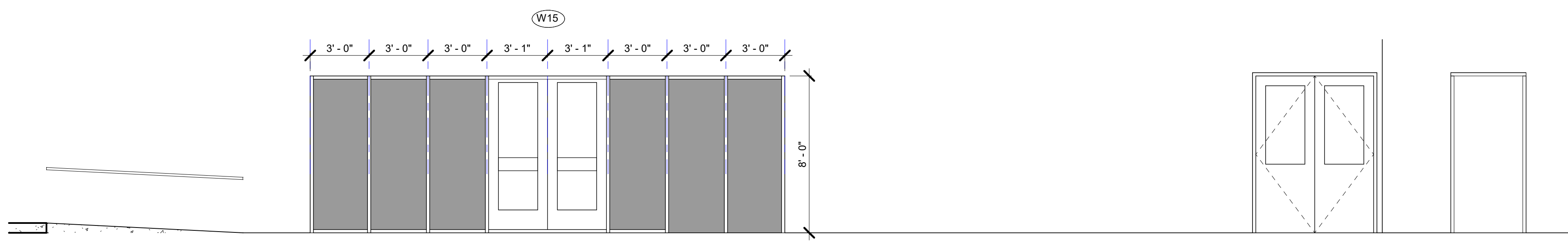
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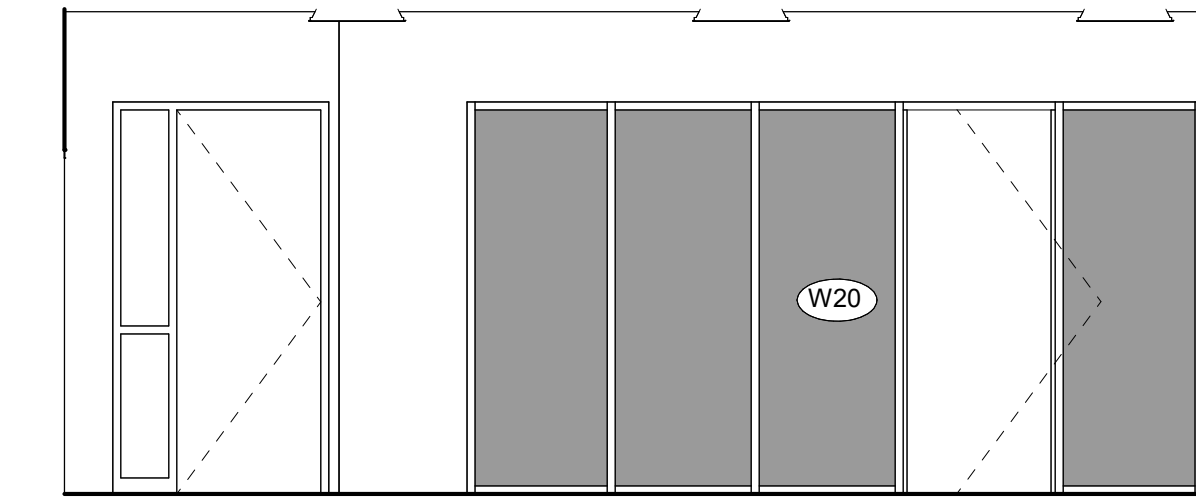
3 INTERIOR ELEVATION - SHELTER LOOKING EAST  
1/4" = 1'-0"



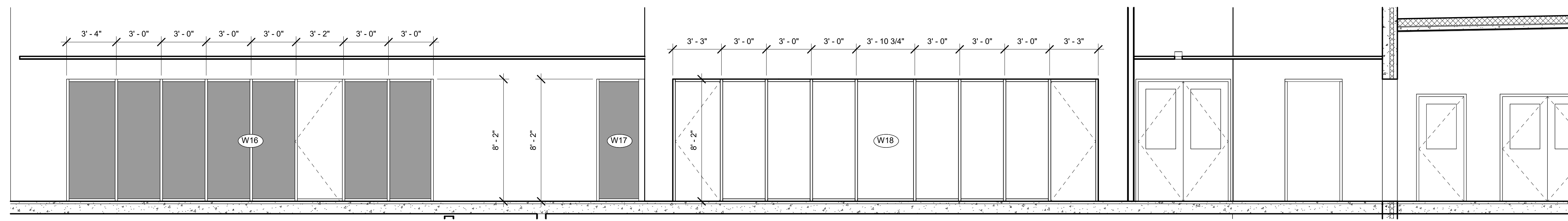
4 INTERIOR ELEVATION - SHELTER LOOKING WEST  
1/4" = 1'-0"



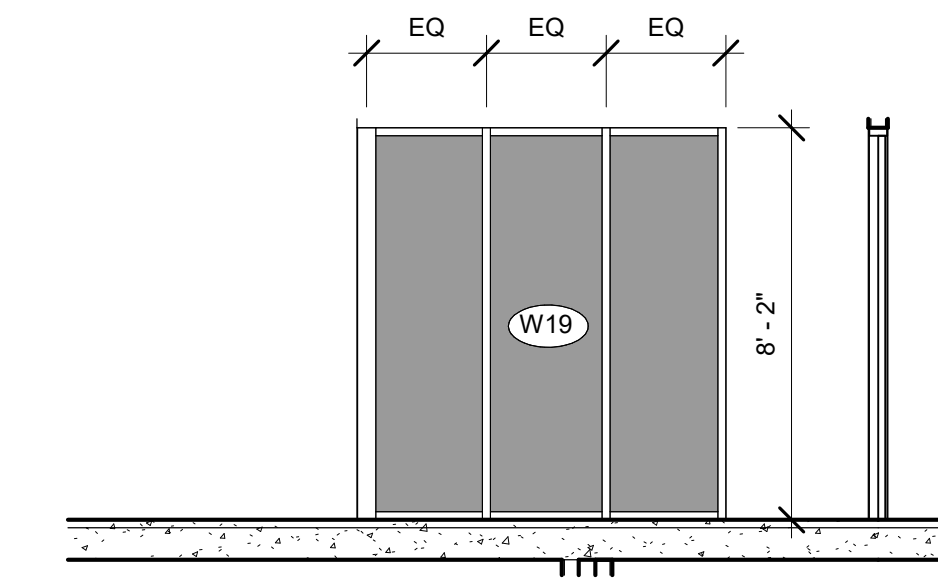
① LEVEL 1 - HALLWAY SOUTH  
1/4" = 1'-0"



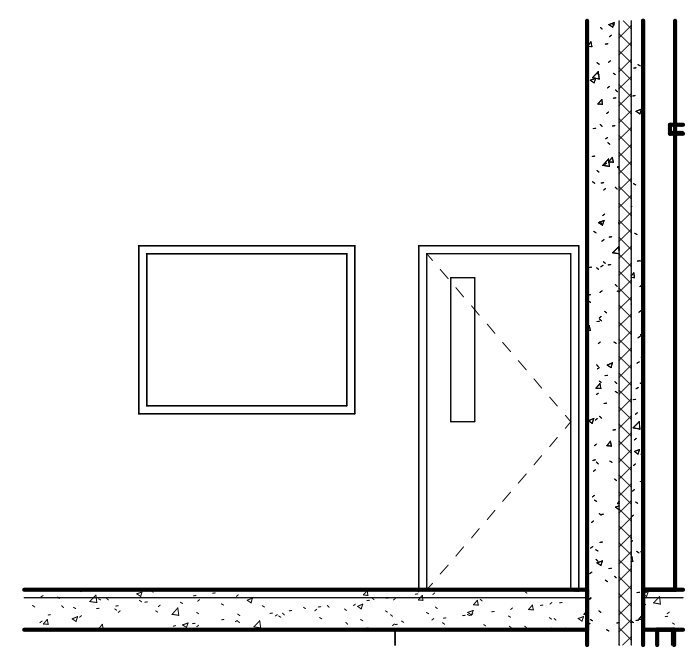
② LEVEL 1 - MEETING ROOM  
1/4" = 1'-0"



③ LEVEL 2 - HALLWAY SOUTH  
1/4" = 1'-0"



④ LEVEL 2 - MTSS OFFICE  
1/4" = 1'-0"



⑤ LEVEL 2 MEZZANINE EAST  
1/4" = 1'-0"



⑥ LEVEL 2 HALLWAY NORTH  
1/4" = 1'-0"

### STRUCTURAL SYMBOLS

	DIMENSIONAL LUMBER		BEARING PLATE MARK - SEE SCHEDULE		MATCHLINE
	WOOD BLOCKING		CMU CONTROL JOINT		EXISTING BUILDING LINE
	STEEL OR METAL		HIDDEN EXISTING BUILDING LINE		BREAK LINE
	CONCRETE BLOCK - HOLLOW OR SOLID		COLUMN MARK - STEEL, CONCRETE, OR PRECAST - SEE SCHEDULE		DIRECTION OF SLOPE
	FACE OR COMMON BRICK		DESIGN DIAPHRAGM SHEAR FORCE TO BE RESISTED BY PRECAST WALL PANEL OR COLD-FORMED STEEL SHEAR WALL - SEE PLAN NOTES FOR LOAD TYPE		BEAM OR COLUMN SPLICE
	RIGID INSULATION		Precast concrete units		Steel connections for Skyway
	STRUCTURAL INSULATED PANELS (SIPs)		Steel joists, special joists, and bridging		Cold-formed steel framing
	SHEATHING		Curtain wall systems		Steel stairs and landings, railings
	EARTH, FILL OR BACKFILL		Fabricated steel protective elements for storm shelter		BEAM CONTINUOUS OVER SUPPORT
	SAND		KEY NOTES - SPECIFIC NOTES KEYS TO AN ELEMENT OR AREA - SEE SCHEDULE		MOMENT CONNECTION FOR BEAM
	GROUT OR CONCRETE TOPPING		LOCATION OF BEAM BRACE		LOCATION OF STRUCTURAL ELEMENT
	CONCRETE		SPAN OF STRUCTURAL ELEMENT		LOCATION OF BRACED FRAME
	EXISTING ELEMENT - MATERIAL VARIES		HIGH END OF BRACE		LOW END OF BRACE
	AREA DESIGNED FOR SOLAR PANEL SURCHARGE LOAD		SLAB REINFORCING - TOP BARS		SLAB REINFORCING - BOTTOM BARS
	SNOW DRIFT SURCHARGE LOAD		DIMENSION LINES		MATERIAL LIMIT LINES
	TOP RETURN WELD AND LENGTH		MATERIAL NOT INCLUDED IN LIMIT LINES		FOOTPRINT STEP
	RETURN WELD SYMBOL		TOP OF WALL STEP		CENTERLINE
	BOTTOM RETURN WELD AND LENGTH		PIPE		TOP OF SLAB ELEVATION CHANGE (STEPPED OR SLOPED)
	SECTION NUMBER		TOP OR BOTTOM OF SLAB ELEVATION CHANGE (STEPPED)		
	DRAWING NUMBER WHERE SECTION IS FOUND				
	DETAIL NUMBER				
	DRAWING NUMBER WHERE DETAIL IS FOUND				
	ELEVATION NUMBER				
	DRAWING NUMBER WHERE ELEVATION IS FOUND				

### STRUCTURAL ABBREVIATIONS

#	Pound or Number	DWL(S)	Dowels	K	Kips	PL	Plate
&	And	EA	Each	KIP	Kips	PLF	Pound per Linear Foot
@	Per	EA	Each Face	KLF	Kips per Linear Foot	PSF	Pound per Square Foot
/	At	EJ	Expansion Joint	KSF	Kips per Square Foot	PSI	Pound per Square Inch
Ø	Diameter	EJ	Expansion Joint	KSI	Kips per Square Inch	PSL	Parallel Strand Lumber
AB	Anchor Bolt	ELV	Elevation	L	Leg	PT	Post-Tensioned/Tensioning
ADDNL	Additional	ELEC	Electrical	LL	Long Leg	REBAR	Reinforcing Bar
AF	Above Finished Floor	ELEV	Elevator	LLH	Long Leg Horizontal	REIN	Reinforcing or Reinforce
ALT	Alternate	EOR	Engineer of Record	LLV	Long Leg Vertical	REQD	Required
ARCH	Architect or Architectural	EQ	Equal	LSH	Long Side Horizontal	RKN	Reaction
BY	Bottom of Element	EW	Each Way	LSL	Laminated Strand Lumber	S	South
BB	Bond Beam	E-W	East - West	LSV	Long Side Vertical	SCH	Schedule
BLDG	Building	EXP	Expansion	LVL	Laminated Veneer Lumber	SHT	Sheet
BM	Beam	EXT	Exterior	LV	Light Weight Concrete	SIM	Similar
BOT	Bottom	FDN	Foundation	M	Moment	SIPs	Structural Insulated Panels
BP	Bearing Plate or Bent Plate	FE	Effective Force (P.T.)	MAS	Masonry	SPA	Spacos
BRG	Bearing	FFE	Finished Floor Elevation	MAT	Material	SOG	Slab on Grade
BSMT	Basement	FLG	Flange	MAX	Maximum	SPEC	Specification
BTWN	Between	FLR	Floor	MC	Miscellaneous Channel	STL	Standard
C	Channel	FRT	Fire Retardant Treated	MECH	Mechanical	STRUC	Structure
C&C	Components and Cladding	FS	Far Side	MEP	Mechanical, Electrical, and Plumbing	T&B	Top and Bottom
CANT	Can'tilever	FT	Foot	MEZZ	Mezzanine	T	Top of Element
CFS	Cold-Formed Steel	FTG	Footing	MFG	Manufacturer or Manufacturing	TEMP	Temporary or Temperature
CG	Center of Gravity of Steel	FV	Field Verify	MISC	Miscellaneous	THRU	Through
CIP	Cast in Place	GA	Gauge	MIN	Minimum	TOP	Top of Beam
CJ	Control Joint	GALV	Galvanized	MISC	Miscellaneous	TOF	Top of Footing
CLP	Complete Joint Penetration	GB	Grade Beam	MO	Masonry Opening	TOS	Top of Slab
CLR	Clear	GC	General Contractor	MPH	Miles per Hour	TYP	Typical
CMU	Concrete Masonry Unit	GLU-LAM	Glue Laminated Wood	N	North	UNO	Unless Noted Otherwise
COL	Column	GSN	General Structural Notes	NO	No	VER	Verify
COMP	Composite	HAS	Headed Anchor Stud	N	North	VERT	Vertical
CONC	Concrete	HK	Hook	NO	No	WID	Width
CONN	Connection	HORIZ	Horizontal	NW	North West	WIND	Wind Load
CONSTR	Construction	HS	Headed Stud(s)	OC	On Center	WIND	Wind
CONT	Continuous	HSS	Heavy Structural Section	OD	Outside Diameter	W/W	West or Wide Flange
CTR	Center	ID	Inside Diameter	OF	Outside Face	W/O	Without
CTRD	Controlled	IE	Invert Elevation	OPNG	Opening	WO	Without
D	Deflected	IF	Inside Face	OPP	Opposite	W/W	West or Wide Flange
DEFL	Deflection	INCH	Inch	PAF	Pre-Attached Fasteners	W/L	Wind Load
DIA	Diameter	INFO	Information	PCF	Precast Concrete Footing	WLD	Window
DIAG	Diagonal	INSUL	Insulation	PF	Pounds per Cubic Foot	W/P	Workpoint
DIM	Dimension	INT	Interior	PDF	Power Driven Fasteners	WS	Wall Step
DL	Dead Load	INT(S)	Joint(s)	PERP	Perpendicular	WT	Weight
DWL	Dead Load	JT	Joint	PIP	Partial Joint Penetration	W/WF	Welded Wire Fabric
DWG(S)	Drawing(s)						

### GENERAL STRUCTURAL NOTES

These notes are provided for typical conditions. See plans and details for specific requirements in other areas.

**DEFERRED STRUCTURAL SUBMITTALS**  
Deferred submittals are those portions of the design which are not submitted at the time of permit application but are to be submitted to the building official prior to installation. Deferred submittals are governed by Minnesota State Building Code section 1300.0130. The following items are to be issued as deferred submittals:  
Precast concrete units  
Steel connections for Skyway  
Steel joists, special joists, and bridging  
Cold-formed steel framing  
Curtain wall systems  
Steel stairs and landings, railings  
Fabricated steel protective elements for storm shelter

For all deferred structural submittals, include design and calculations prepared and certified by a Professional Engineer licensed in the state in which the project is located as part of the submittal documents. See specification for additional shop drawing requirements. Provide deferred submittals a minimum of 30 days prior to installation, and after contractor's review, to the architect for review for general conformance to the contract documents. After architect's review, submit to building official for review and approval. Do not install deferred submittal items until submittal documents have been reviewed and approved by the building official.

Refer to architectural, civil, mechanical, and electrical drawings for additional deferred submittal components.

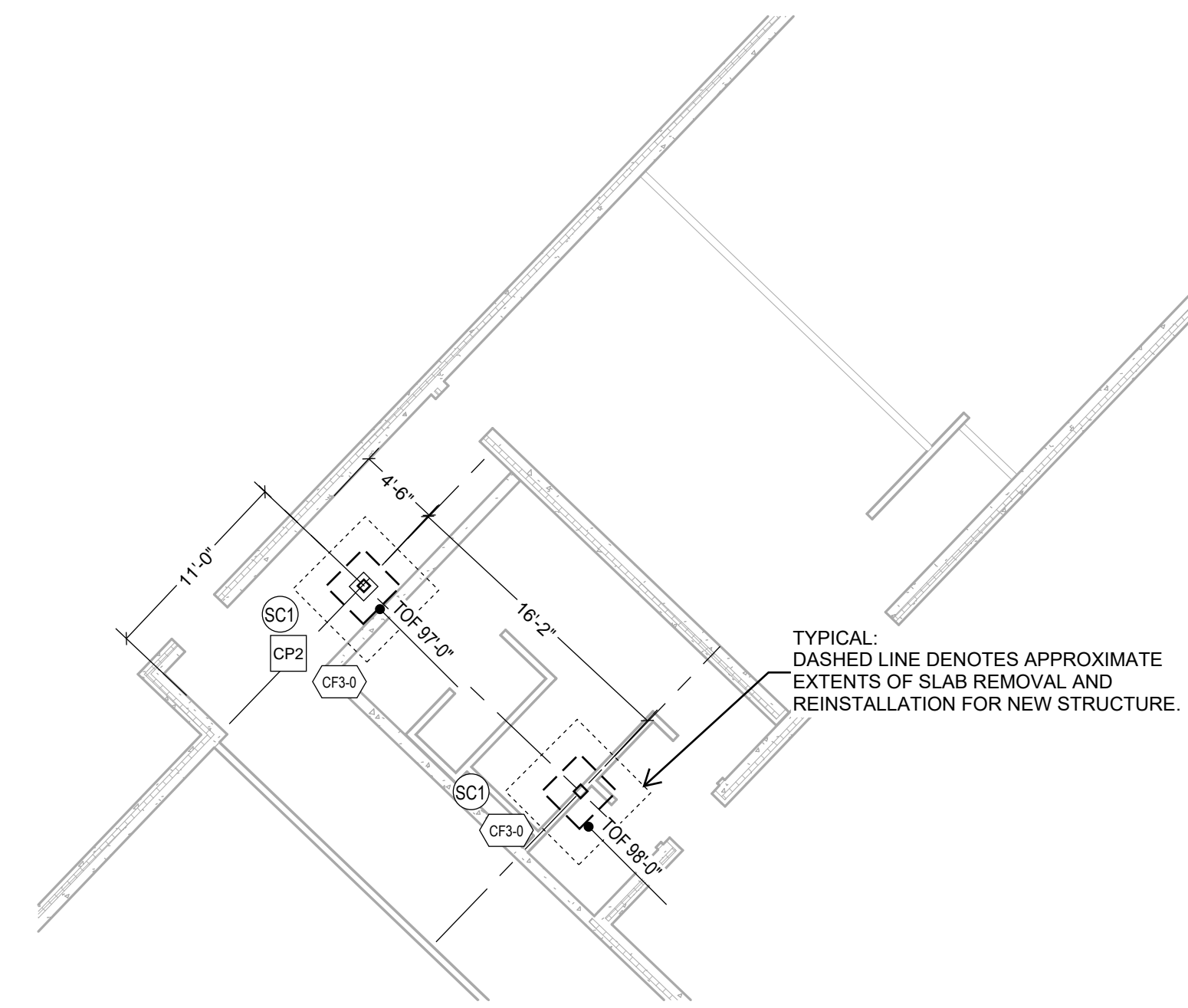
**EXISTING CONDITIONS**  
Verify all dimensions, elevations, and details of existing structure where they affect this construction.  
Notify engineer if there are any deviations from the contract documents.  
Obtain prior approval from Structural Engineer before cutting openings or recesses or making other modifications to existing structure not shown on structural drawings.

**COORDINATION - ARCHITECTURAL, MECHANICAL AND ELECTRICAL ITEMS**  
Verify all depressions, dimensions, elevations, equipment supports, and details and coordinate by reference to architectural, mechanical, and electrical drawings.  
All non-bearing masonry walls shown on architectural drawings, brace top of wall to structure per architectural drawings.

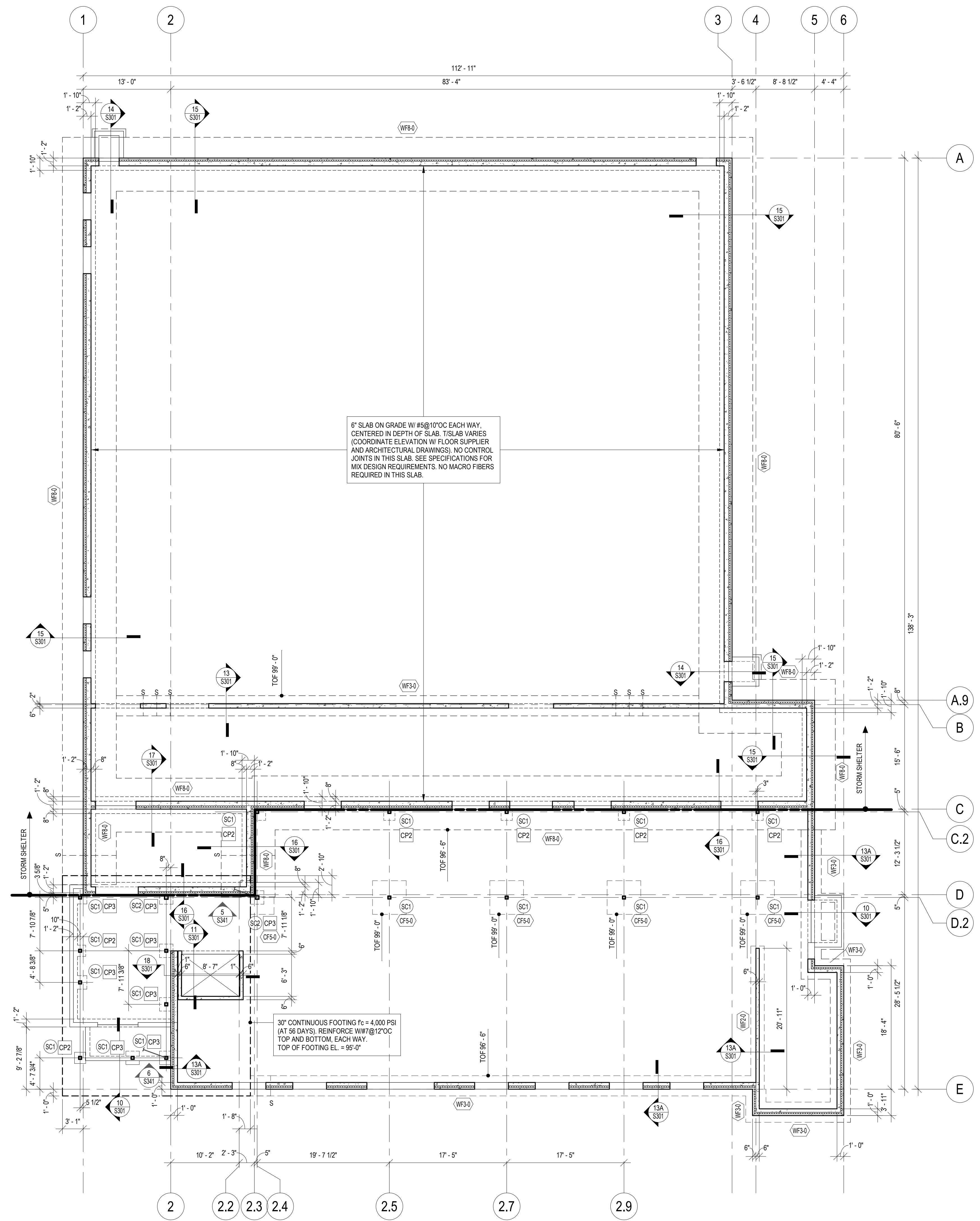
**OPENINGS**  
Verify size and location of all openings with architectural, mechanical, and electrical drawings. Structural drawings do not necessarily show all openings.  
Place openings in floor and roof not shown on structural drawings between structural members. Notify Structural Engineer before openings larger than 12" in any dimension are added. See specific material sections for required clear spacing between openings.  
Obtain prior approval from Structural Engineer before making any openings through structural members if the openings are not shown on the structural drawings.

**DESIGN CODES AND STANDARDS**  
International Building Code (IBC) 2018 - As amended by the Minnesota State Building Code 2020  
American Society of Civil Engineers (ASCE) 7-16 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures  
International Code Council (ICC) 500-14 - ICC-ENSA Standard for the Design and Construction of Storm Shelters  
American Concrete Institute (ACI) 318-14 - Building Code Requirements for Structural Concrete  
American Institute of Steel Construction 360-16 - Specification for Structural Steel Buildings (AISC 360)  
American Institute of Steel Construction - Steel Construction Manual - Fifteenth Edition (AISC 159)  
American Welding Society D1.1-2015 - Structural Welding Code - Steel and D1.3-2008 - Structural Welding Code - Steel Shell and for Joint Grades  
American Welding Society D1.1-2015 - Structural Welding Code - Steel and D1.3-2008 - Structural Welding Code - Steel Shell and for Joint Grades  
Steel Deck Institute RD-2017 - Standard for Steel Roof Deck (SDI RD)  
American Iron and Steel Institute (AISI) C100-16 - North American Specification for the Design of Cold-Formed Steel Structural Members  
Design Stresses  
Reinforcing Steel (F<sub>y</sub>)  
50,000 psi (A615, Grade 60)  
60,000 psi for structural studs  
Concrete (F<sub>c</sub>) (28-day compressive strength)  
5,000 psi for exterior concrete  
4,000 psi unless noted  
4,000 psi for interior slab on grade  
3,000 psi for footings and topping  
5,000 psi for non-shrink grout (ASTM C1107)  
Macro Fiber Minimum Residual Strength (L<sub>r</sub>)  
100 psi for topping  
Structural Steel (F<sub>y</sub>)  
50,000 psi (A992 or A572 Grade 50) for W shapes  
36,000 psi (A36) for bars, plates, angles, and other shapes  
50,000 psi (A502, Grade C) for rectangular structural tubing  
46,000 psi (A501, Grade C) for round structural tubing  
35,000 psi (A53, Type E or S, Grade B) for pipes  
55,000 psi (F1554, Grade 50) for anchor rods  
65,000 psi (F108) for headed studs  
70,000 psi (E70XX) for welding electrodes

**DESIGN LOADS**  
Roof Loads:  
Roof Dead Load: 20 psf superimposed.  
Includes allowance for ballasted roof. Limit dead load to 12 psf for roof uplift calculation to allow for fully-adhered membrane roof system.  
Sole-Ready Roof: \_\_\_ psf additional dead load  
See roof plan for designated areas. Do not include solar panel load in uplift calculation.  
Roof Snow Load Parameters  
Ground Snow Load: 50 psf  
Exposure Factor (C<sub>e</sub>): 1.0  
Occupancy Importance Factor: 1.1  
Thermal Factor (C<sub>t</sub>): 1.0  
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**2 FOOTING AND FOUNDATION PLAN - MEZZANINE**  
S210A  
UNLESS NOTED OTHERWISE:  
1. SEE SHEET 1/S210A FOR TYPICAL PLAN NOTES.



**1 FIRST FLOOR FOUNDATION PLAN - SHELTER**  
S210A

- UNLESS NOTED OTHERWISE:
- SEE SHEET S300 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS AND SYMBOLS.
  - SEE SHEET S301 FOR TYPICAL FOOTING AND FOUNDATION DETAILS.
  - SEE SHEET S401 FOR SCHEDULES.
  - PROVIDE 4" SLABS ON GRADE W/MICRO FIBER REINFORCING (SEE SPECIFICATION FOR DOSAGE). AT STEEL STAIR STRINGER/POST LOCATIONS, THICKEN SLAB TO 12" OVER 24"x24" AREA, CENTERED UNDER STRINGER/POST. PROVIDE 3-#4 EACH WAY. COORDINATE LOCATIONS WITH STAIR SUPPLIER PRIOR TO PLACEMENT.
  - TOP OF SLAB ELEVATION = 100'-0".
  - TOP OF EXTERIOR FOOTING ELEVATION (TOP) AT WALLS AND COLUMNS = 99'-6".
  - TOP OF INTERIOR FOOTING ELEVATION (TOP) AT WALLS AND COLUMNS = 99'-0".
  - PROVIDE SLEEVES FOR ALL PIPES THAT INTERSECT BUILDING FOUNDATIONS. FOR PIPES THAT CROSS BELOW TOP OF FOOTING, STEP OR THICKEN FOOTINGS AS SHOWN IN SECTION 1/S301 AND DETAIL 2/S301. SEE 9/S301 FOR PIPES RUNNING ADJACENT TO FOOTINGS. PIPES SHOWN ON PLAN ARE FOR REFERENCE ONLY. COORDINATE LOCATIONS AND ELEVATIONS WITH CIVIL AND MECHANICAL.
  - TOP OF FOUNDATION WALL ELEVATION = 100'-0"; TOP OF FOUNDATION WALL AT PRECAST WALL PANELS (SHELTER) = 99'-0".
  - TOP OF CONCRETE PIER ELEVATION = 99'-0".
  - PROVIDE THE FOLLOWING CONCRETE FROST WALL REINFORCING:  
6" WALLS: #4@18"OC VERTICAL, #4@18"OC HORIZONTAL CENTERED IN WALL  
8" WALLS: #4@18"OC VERTICAL, #4@12"OC HORIZONTAL CENTERED IN WALL  
12" WALLS: #4@18"OC VERTICAL EACH FACE, #4@18"OC HORIZONTAL EACH FACE  
14" WALLS: #4@18"OC VERTICAL EACH FACE, #4@14"OC HORIZONTAL EACH FACE  
22" WALLS: #4@12"OC VERTICAL EACH FACE, #5@12"OC HORIZONTAL EACH FACE  
30" WALLS: #5@12"OC VERTICAL EACH FACE, #5@10"OC HORIZONTAL EACH FACE  
LAP REINFORCING AS FOLLOWS:  
#4: 1'-8"  
#5: 2'-1"  
PROVIDE DOWELS FROM FOOTING INTO CONCRETE WALLS TO MATCH VERTICAL WALL REINFORCING SIZE AND SPACING. PROJECT INTO WALL TO MATCH VERTICAL REINFORCING LAP SPLICE. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
  - FOOTINGS FOR WALLS NOT NOTED SHALL BE 12" THICK WITH A MINIMUM PROJECTION OF 4" EACH SIDE. REINFORCE WITH 2-#5 CONTINUOUS. ADD 1-#5 CONTINUOUS FOR EACH 6" WIDTH OVER 24".
  - PLACE ALL STUOP SLABS ON CLEAN GRANULAR FILL MATERIAL THAT EXTENDS DOWN TO BOTTOM OF FOOTING.
  - SEE ARCHITECTURAL DRAWINGS FOR FIRE RATINGS OF STRUCTURAL MASONRY WALLS AND FOR LOCATIONS AND FIRE RATINGS OF NON-BEARING MASONRY WALLS.
  - SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RAMPS, SLAB SLOPES, STEPPED SLABS AND PARTITION WALLS. SEE 9/S301 FOR STEPPED SLAB DETAIL.
  - REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND DIMENSIONS.

KEYNOTES

**FOR REVIEW ONLY, NOT FOR CONSTRUCTION**

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME

SIGNATURE

LICENSE NO.

05/07/2025

DATE

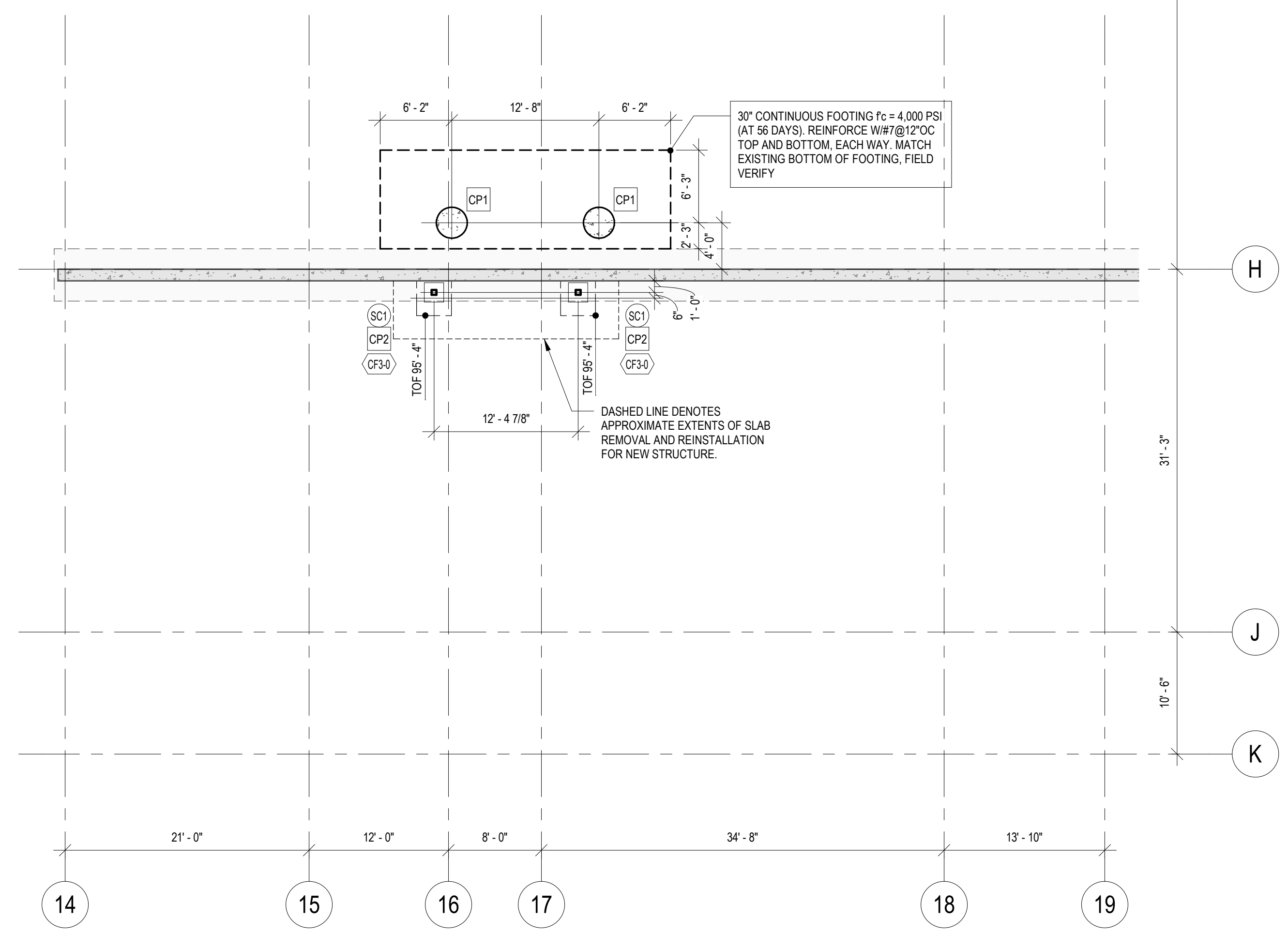
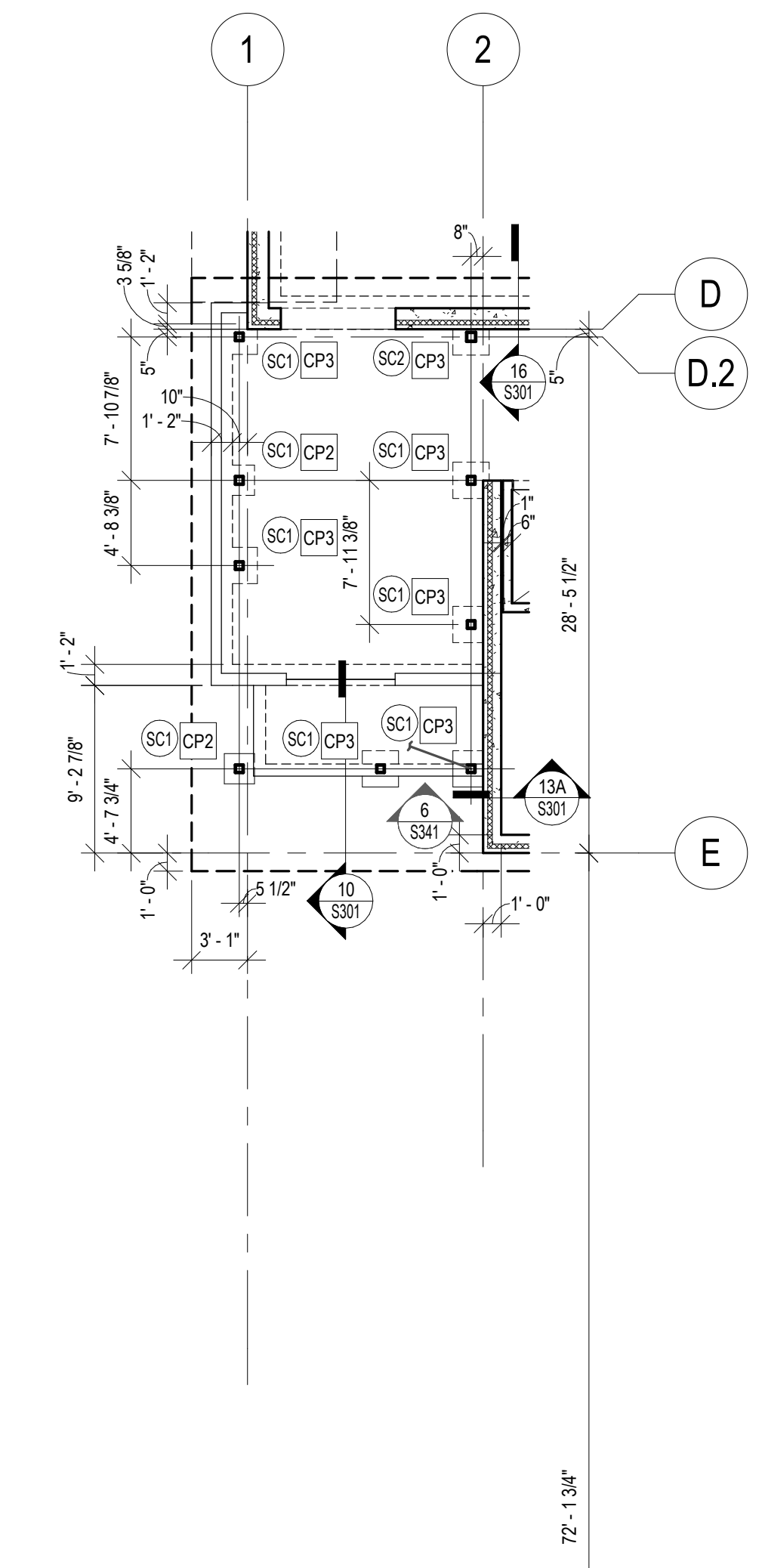
**DD DOCUMENT**  
**Not For Construction**

SHEET TITLE:  
**FIRST FLOOR FOUNDATION PLAN - SHELTER**

SHEET NUMBER:

**S210A**





**1** FIRST FLOOR FOUNDATION PLAN - SKYWAY  
UNLESS NOTED OTHERWISE:  
1. SEE SHEET 1/5210A FOR TYPICAL PLAN NOTES.

KEYNOTES

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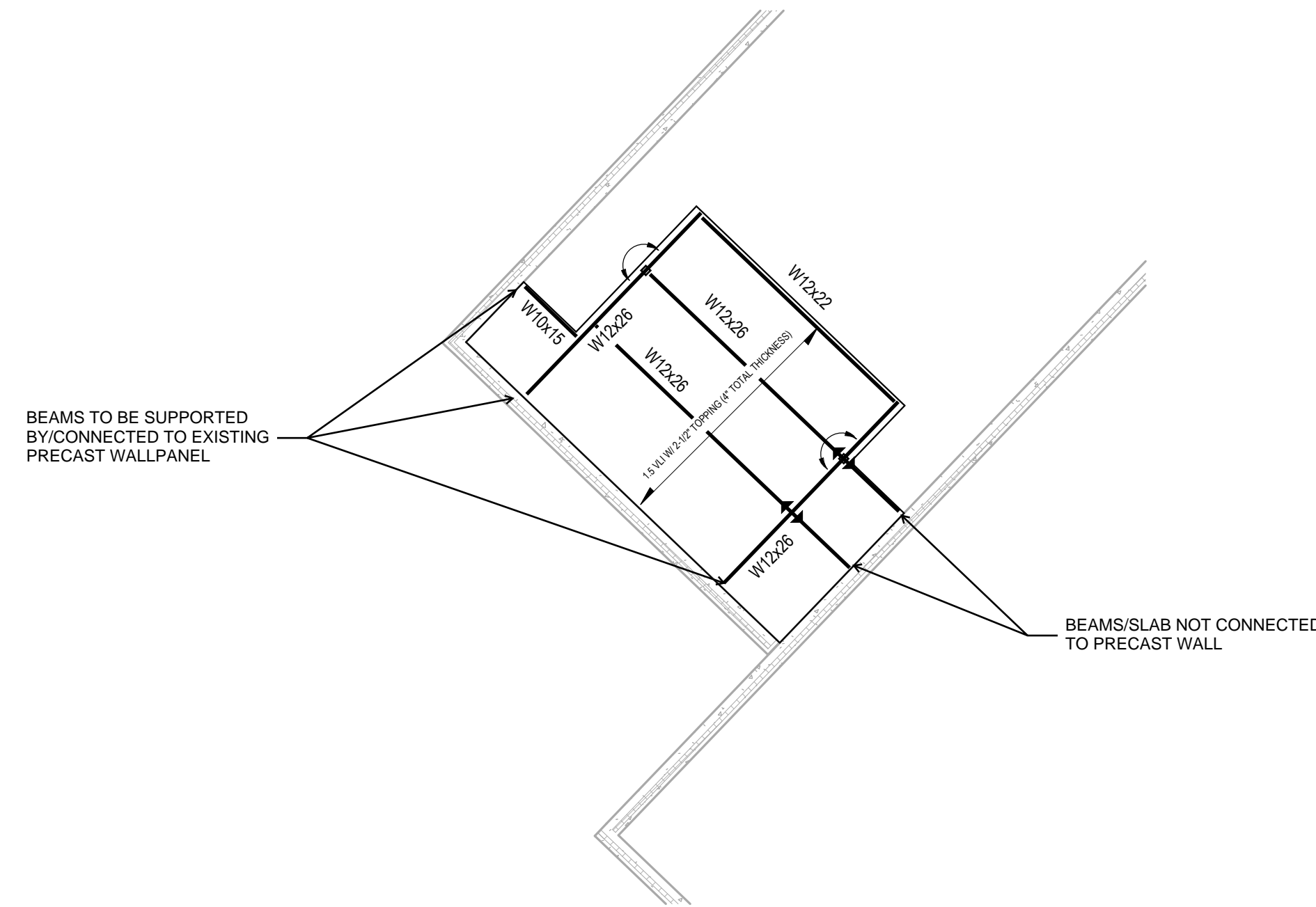
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SHEET TITLE:  
**FIRST FLOOR FOUNDATION  
PLAN - SKYWAY**

SHEET NUMBER:

**S210B**

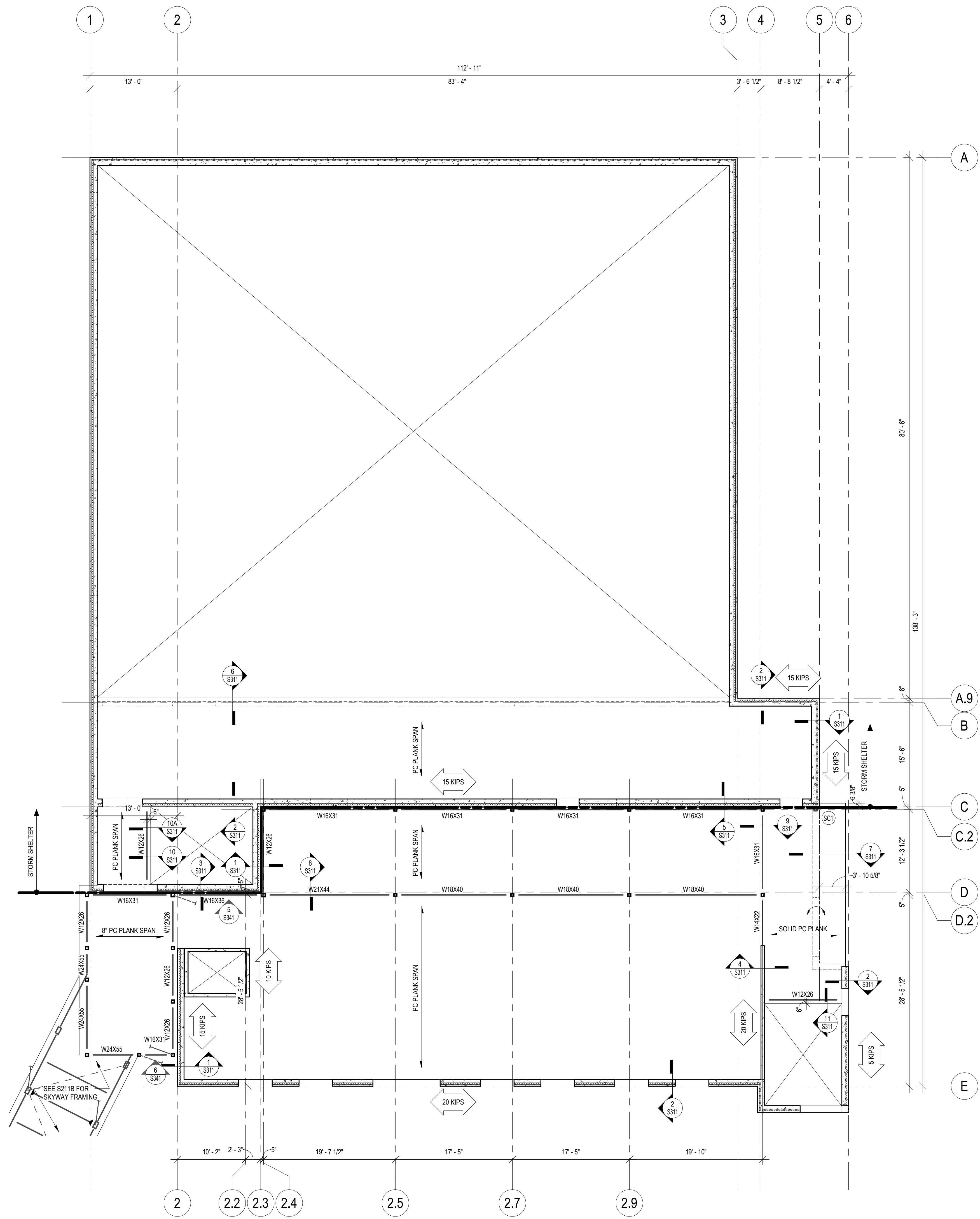


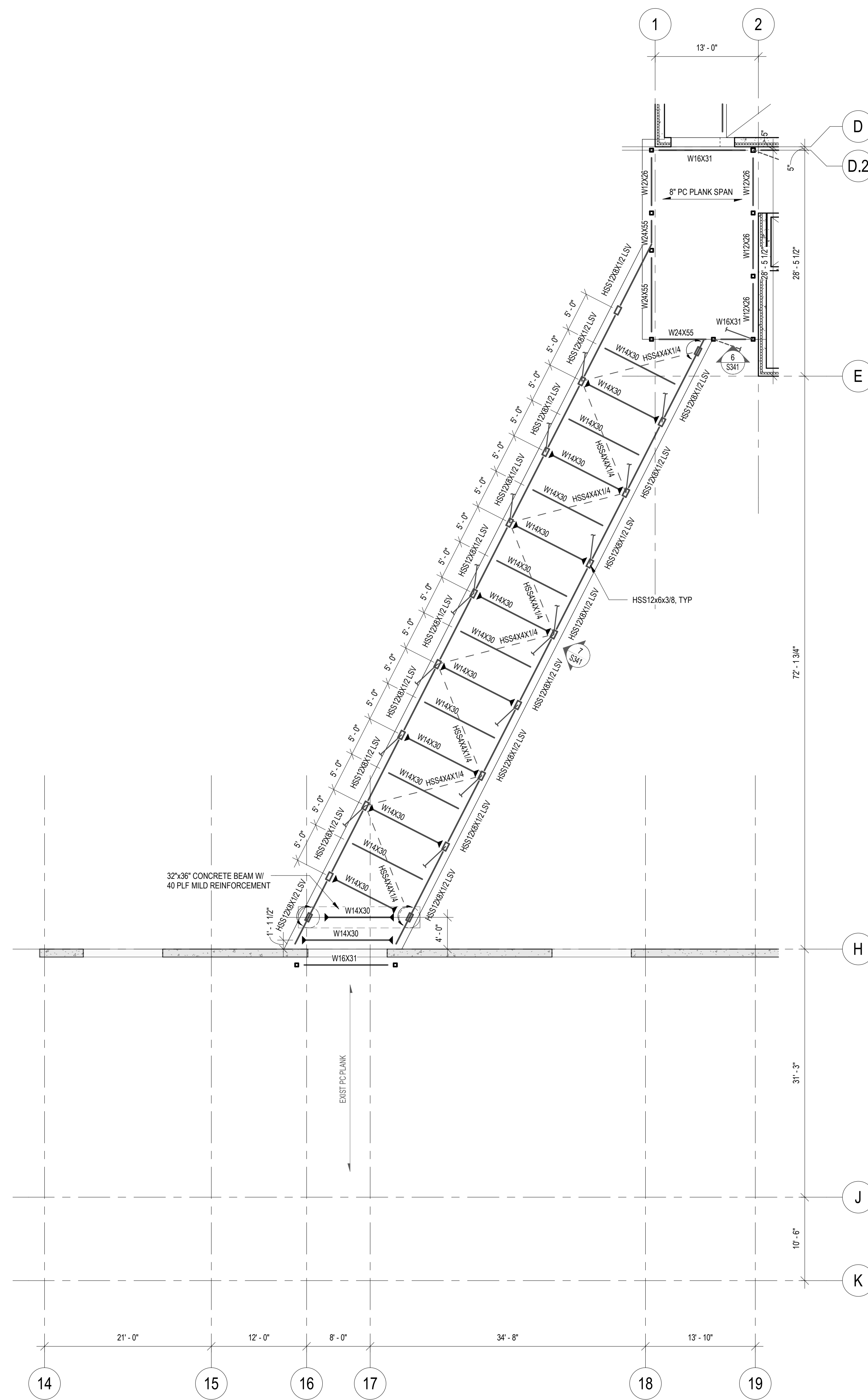
**2 MEZZANINE FRAMING PLAN**  
S211A  
UNLESS NOTED OTHERWISE:  
1. SEE SHEET 1/S211A FOR TYPICAL PLAN NOTES.

**1 LEVEL 2 FRAMING PLAN - SHELTER**  
S211A

- UNLESS NOTED OTHERWISE:
- SEE SHEET S300 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS, AND SYMBOLS.
  - SEE SHEET S401 FOR SCHEDULES.
  - 8" PRECAST CONCRETE PLANK W/2" NON-STRUCTURAL TOPPING, REINFORCE WITH SYNTHETIC MACRO FIBER REINFORING (SEE GENERAL STRUCTURAL NOTES FOR MINIMUM STRENGTH). SEE ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE RATING OF PRECAST PLANK.
  - TOP OF PRECAST CONCRETE PLANK ELEVATION = 114'-10"
  - SUPERIMPOSED DEAD LOAD (DOES NOT INCLUDE TOPPING AND PARTITION WALLS) = 10 PSF. SEE GENERAL STRUCTURAL NOTES FOR LIVE AND SNOW LOADS.
  - SEE SHEET S311 FOR TYPICAL PRECAST CONCRETE PLANK BEARING DETAILS.
  - FOR ALL MECHANICAL OPENINGS IN MASONRY BEARING WALLS, SEE STRUCTURAL UNIT MASONRY UNITS SECTION IN GENERAL STRUCTURAL NOTES.
  - DIAPHRAGM SHEAR LOADS SHOWN ON PLAN ARE DUE TO WIND.
  - SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RAMPS, SLAB SLOPES, STEPPED SLABS AND PARTITION WALLS.
  - REFER TO ARCHITECTURAL DRAWINGS AND/OR COORDINATE WITH ARCHITECT REGARDING ANY DIMENSIONS.

KEYNOTES





- 2** SECOND FLOOR FRAMING PLAN - SKYWAY  
**S211B**
- UNLESS NOTED OTHERWISE:  
1. SEE SHEET 3000 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS, AND SYMBOLS.  
2. SEE SHEET 3401 FOR SCHEDULES.  
3. SKYWAY SLAB TO BE 1 1/2" 20GA COMPOSITE DECK W/ 2 1/2" NORMAL WEIGHT CONCRETE (4" TOTAL THICKNESS). REINFORCE WITH SYNTHETIC MACRO FIBER REINFORCING PER THE SPECIFICATIONS.  
4. TOP OF SKYWAY SLAB ELEVATION = ...' AT LOW END; ...' AT HIGH END. VERIFY WITH ARCHITECT.  
5. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RAMPS, SLAB SLOPES, STEPPED SLABS AND PARTITION WALLS.  
6. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND DIMENSIONS.

KEYNOTES

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Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

I HEREBY CERTIFY THAT THIS PLAN,  
SPECIFICATION OR REPORT WAS PREPARED BY ME  
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DATE

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DOCUMENT  
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Construction**

SHEET TITLE:  
**SECOND FLOOR FRAMING  
PLAN - SKYWAY**

SHEET NUMBER:

**S211B**

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Project Number: 23008.003  
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SIGNATURE

LICENSE NO.

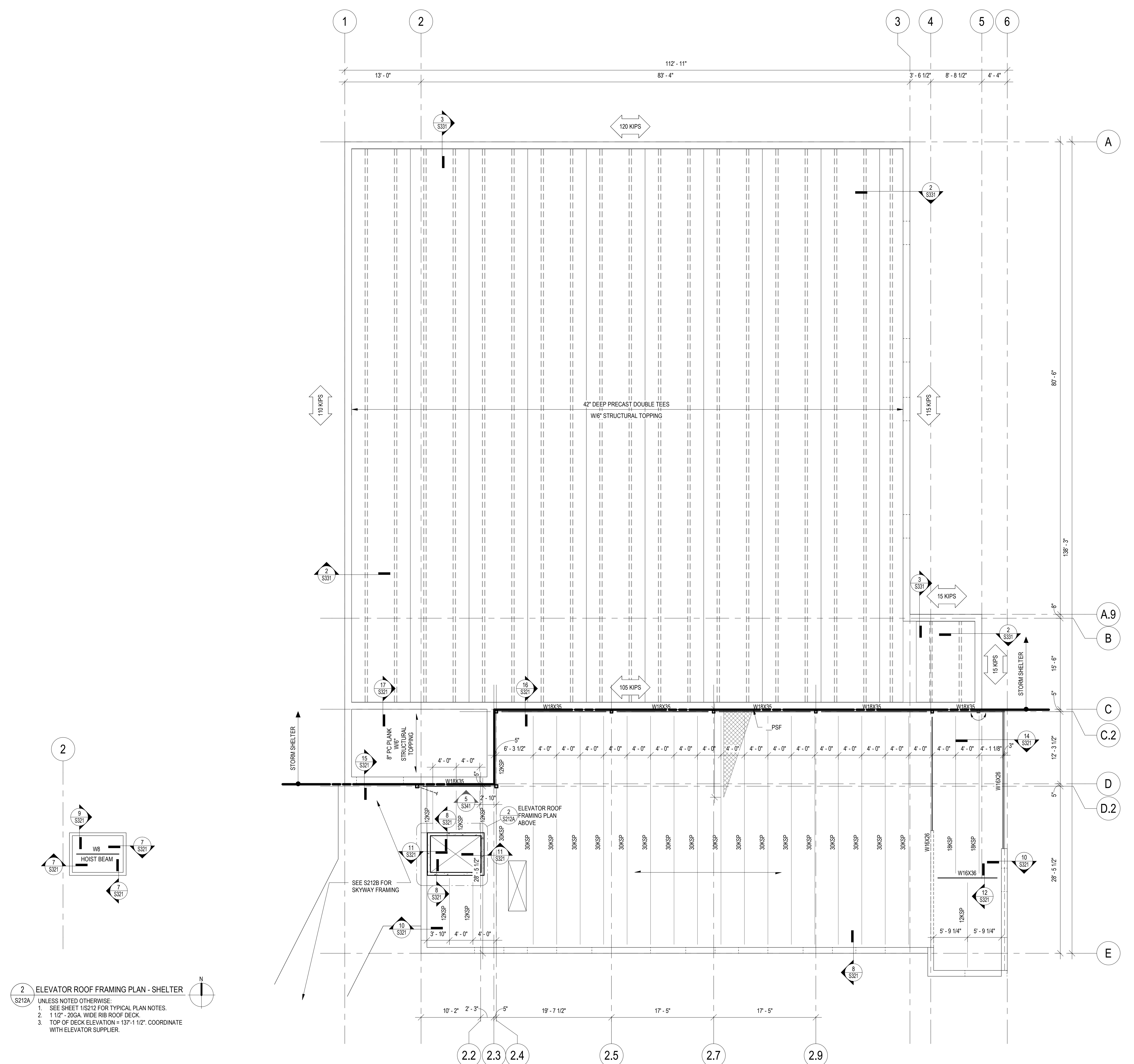
05/07/2025 DATE

**DD DOCUMENT Not For Construction**

SHEET TITLE:  
**ROOF FRAMING PLAN - SHELTER**

SHEET NUMBER:

**S212A**



**1 ROOF FRAMING PLAN - SHELTER**  
S212A

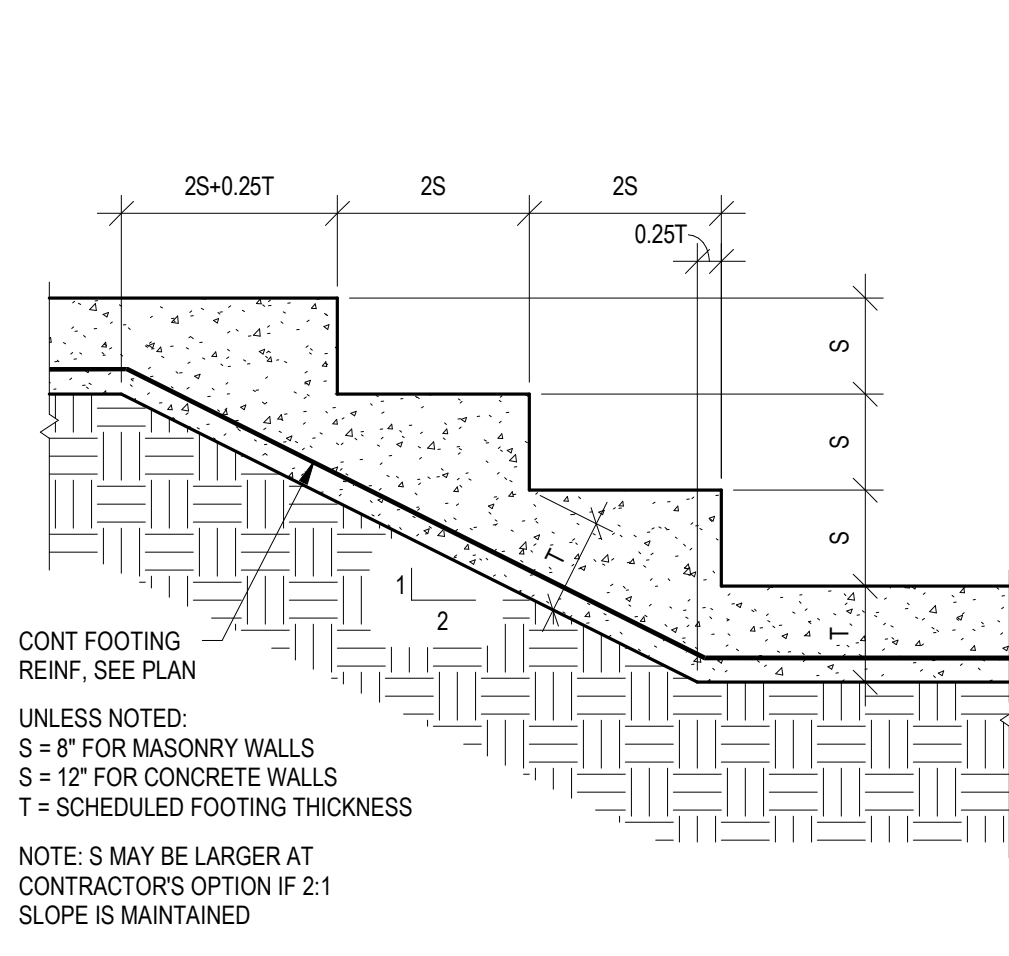
- UNLESS NOTED OTHERWISE:
- SEE SHEET S200 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS, AND SYMBOLS.
  - SEE SHEET S401 FOR SCHEDULES.
  - 1 1/2" - 20GA, WIDE RIB ROOF DECK.
  - TOP OF DECK ELEVATION = 122'-1 1/2".
  - SEE SHEET S212 FOR TYPICAL PLAN NOTES.
  - PROVIDE 2-5/16" WEB STIFFENER PLATES AT STEEL BEAMS RUNNING OVER COLUMNS OR WALLS. CENTER ON SUPPORT.
  - AT ALL COLUMNS THAT SUPPORT JOISTS, SEE SECTIONS 18/S321-20/S321. AT ALL COLUMNS NOT SUPPORTING JOISTS, PROVIDE 1/2" CAP PLATE AND EXTEND COLUMN TO DECK BEARING ELEVATION. WELD DECK W/ 4-5/8" Puddle WELDS, 9" GAGE EACH WAY.
  - DIAPHRAGM SHEAR LOADS SHOWN ON PLAN ARE DUE TO WIND.
  - SEE GENERAL STRUCTURAL NOTES FOR TYPICAL ROOF FRAMING AT OPENINGS WIDER THAN 6". COORDINATE WITH ARCHITECTURAL/MECHANICAL DRAWINGS FOR OPENING LOCATION AND SIZE.
  - JOIST SUPPLIER TO DESIGN JOISTS FOR:  
TOTAL LOAD/LIVE LOAD (PSF) NOTED IN JOIST DESIGNATION.  
MECHANICAL POINT LOADS AND SNOW DRIFT LOADS SHOWN ON PLAN.  
LOADS SHOWN ON DETAILS.
  - JOIST SEAT DEPTHS:  
K-SERIES: 2 1/2"
  - SEE GENERAL STRUCTURAL NOTES FOR CONCENTRATED LOADS (PIPING, MECHANICAL ROOF TOP EQUIPMENT, CURBS, ETC) ON JOISTS.

- 42" DEEP PRECAST DOUBLE TEES W/ 8" STRUCTURAL TOPPING SLAB. POUR TOPPING SLAB TO A CONSTANT THICKNESS.
- TOP OF PRECAST DOUBLE TEE EL. = 120'-0".
- SEE "COMMUNITY TORNADO SHELTER" SECTION OF STRUCTURAL NOTES FOR SUPERIMPOSED DEAD LOAD, LIVE LOAD, SNOW LOAD, AND WIND LOADS ON PRECAST DOUBLE TEES.
- ROOF DIAPHRAGM DESIGN BY THE PRECAST SUPPLIER. ROOF DIAPHRAGM TO BE DESIGNED TO RESIST ALL LATERAL WIND LOADS NOTED ON THE DRAWINGS. AT PRECAST SUPPLIER'S OPTION, THEY MAY PERFORM THEIR OWN WIND ANALYSIS TO DETERMINE LOADS. INCLUDE ANY ANALYSIS IN CALCULATION SUBMITTAL. THE TOPPING SLAB, PRECAST DOUBLE TEES, OR COMPOSITE OF THE TWO MAY BE USED FOR THE ROOF DIAPHRAGM DESIGN. THE PRECAST SUPPLIER IS RESPONSIBLE FOR THE DESIGN OF ALL DIAPHRAGM CHORDS, COLLECTORS, AND/OR DRAG STRUTS, AND ANY CONNECTIONS NECESSARY TO PROVIDE CONTINUOUS LOAD PATHS OVER THESE ELEMENTS. PRECAST SUPPLIER TO DESIGN DIAPHRAGM ELEMENTS AND ANY CONNECTIONS TO RESIST ALL NECESSARY SHEAR LOADS IN DIAPHRAGM.
- PRECAST SUPPLIER TO PROVIDE CAST-IN #4 U-BARS @ 4" O/C MAX EACH WAY. SEE 1/S331 FOR ADDITIONAL INFORMATION. PRECAST SUPPLIER TO DESIGN U-BAR EMBEDMENT IN DOUBLE TEE STEMS FOR 5 KIP UPWARD TENSION LOAD (COMPONENTS AND CLADDING WIND STRENGTH LEVEL). IF ADDITIONAL REINFORCEMENT IS REQUIRED ACROSS DOUBLE TEES AND TOPPING INTERFACE FOR PRECAST DESIGN (HORIZONTAL SHEAR TRANSFER FOR COMPOSITE ACTION UNDER GRAVITY OR UPLIFT LOADING, HORIZONTAL SHEAR TRANSFER FOR COMPOSITE DIAPHRAGM ACTION, OR ANY OTHER LOADING), THE DESIGN AND SUPPLY OF THE ADDITIONAL REINFORCEMENT IS BY THE PRECAST SUPPLIER. IF TOPPING SLAB IS USED AS COMPOSITE WITH DOUBLE TEES IN ANY CONDITION WHERE TENSION EXISTS ACROSS DOUBLE TEE AND TOPPING INTERFACE (POTENTIALLY DURING WIND UPLIFT LOAD CONDITIONS), PRECAST SUPPLIER TO DESIGN AND PROVIDE TRANSVERSE REINFORCEMENT PER ACI 318 16.4.1.2.

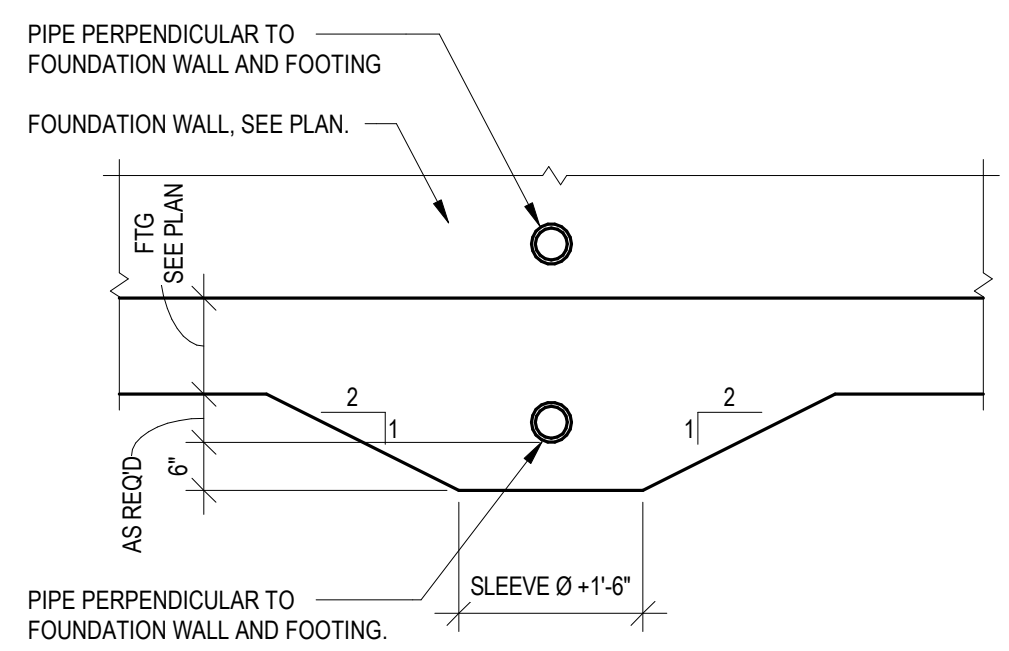
- 6" STRUCTURAL TOPPING SLAB TO HAVE MINIMUM REINFORCEMENT OF #4@12" O/C EACH WAY, CENTERED IN DEPTH OF TOPPING SLAB. THREAD REINFORCEMENT THROUGH U-BARS CAST-IN TO DOUBLE TEES. SEE 3/S331 FOR ADDITIONAL INFORMATION. THIS MINIMUM REINFORCEMENT AND SLAB THICKNESS MEET MISSILE IMPACT TEST ASSEMBLY REQUIREMENTS (REFERENCE "DEBRIS IMPACT RESISTANCE OF BUILDING ASSEMBLIES", NIST, 2006). THIS MINIMUM REINFORCEMENT HAS BEEN DESIGNED SUCH THAT THE TOPPING SLAB CAN SPAN BETWEEN U-BAR ANCHORAGE POINTS UNDER COMPONENTS AND CLADDING WIND UPLIFT LOADS. TOPPING SLAB MUST BE SUFFICIENTLY ANCHORED TO PRECAST DOUBLE TEES SUCH THAT IT CAN REMAIN IN PLACE DURING WIND UPLIFT LOADING, IN ORDER TO MAINTAIN MISSILE IMPACT PROTECTION.
- IF ANY INCREASE IN TOPPING SLAB REINFORCEMENT IS REQUIRED FOR THE PRECAST DESIGN AND/OR ROOF DIAPHRAGM DESIGN, PRECAST SUPPLIER TO DESIGN AND SUPPLY THE ADDITIONAL REINFORCEMENT. PRECAST SUPPLIER TO COORDINATE THE INSTALLATION OF ANY ADDITIONAL REINFORCEMENT IN THE TOPPING SLAB WITH THE CONTRACTOR RESPONSIBLE FOR PLACING THE TOPPING SLAB REINFORCEMENT.
- XX KIPS INDICATES IN-PLANE LATERAL LOAD (MAIN WIND FORCE RESISTING SYSTEM, STRENGTH LEVEL) TO BE TRANSFERRED FROM ROOF DIAPHRAGM TO ADJACENT PRECAST SHEAR WALL. PRECAST SUPPLIER TO DESIGN ALL WALL PANELS IN ADJACENT WALL LINE TO ACT AS PART OF SHEAR WALL. PRECAST SUPPLIER TO DESIGN CONNECTIONS BETWEEN WALL PANELS SUCH THAT ALL PANELS IN WALL LINE ACT COMPOSITELY AS A SINGLE SHEAR WALL.
- PRECAST SUPPLIER TO DESIGN ROOF DIAPHRAGM FOR 120 PSF LOAD (MAIN WIND FORCE RESISTING SYSTEM, STRENGTH LEVEL) IN EAST-WEST DIRECTION AND 115 PSF (MAIN WIND FORCE RESISTING SYSTEM, STRENGTH LEVEL) LOAD IN NORTH-SOUTH DIRECTION. PRECAST SUPPLIER TO DESIGN ROOF DIAPHRAGM FOR ALL WIND LOAD CASES IN ASCE 7 FIG. 27.3-8.
- SEE SHEET S331 FOR TYPICAL PRECAST CONCRETE DOUBLE TEE DETAILS.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RAMPS, SLAB SLOPES, STEPPED SLABS AND PARTITION WALLS.
- REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND DIMENSIONS.

KEYNOTES



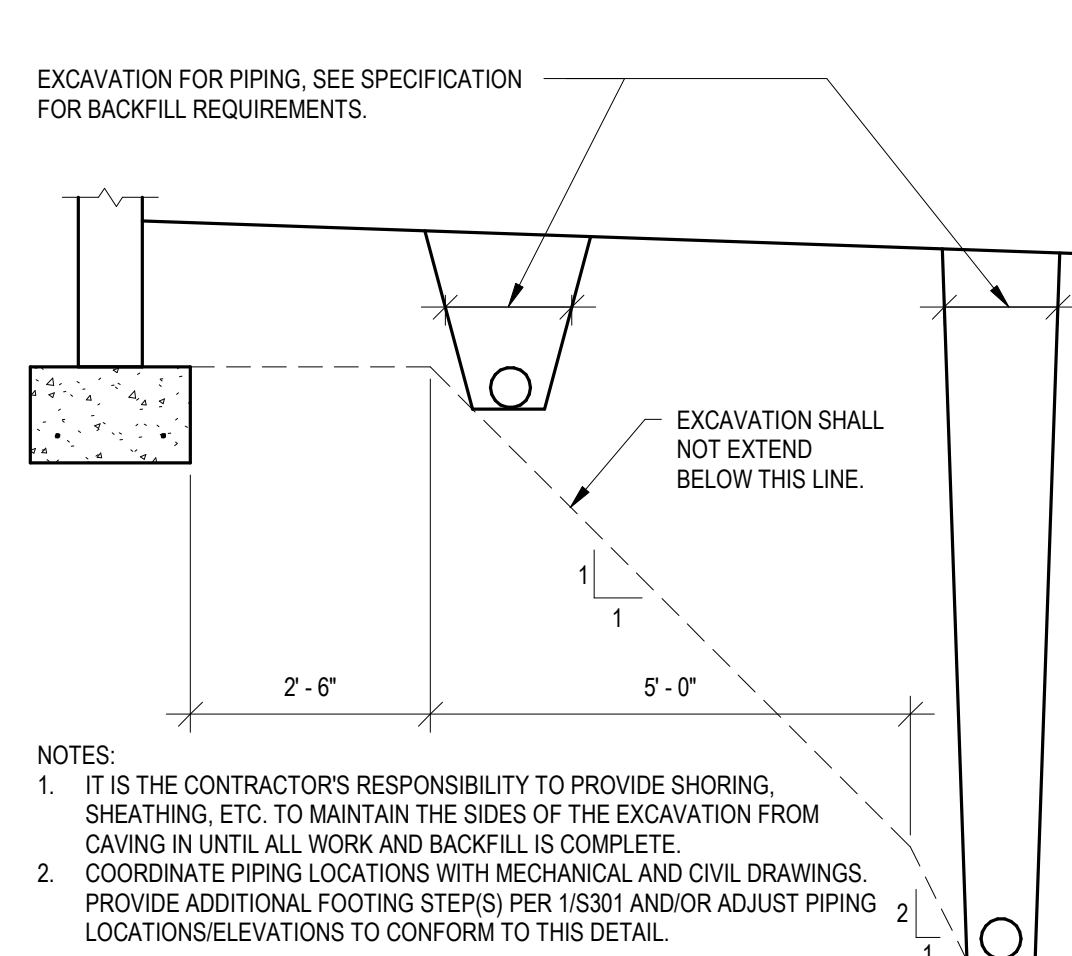


1 TYPICAL FOOTING STEP SECTION  
S301



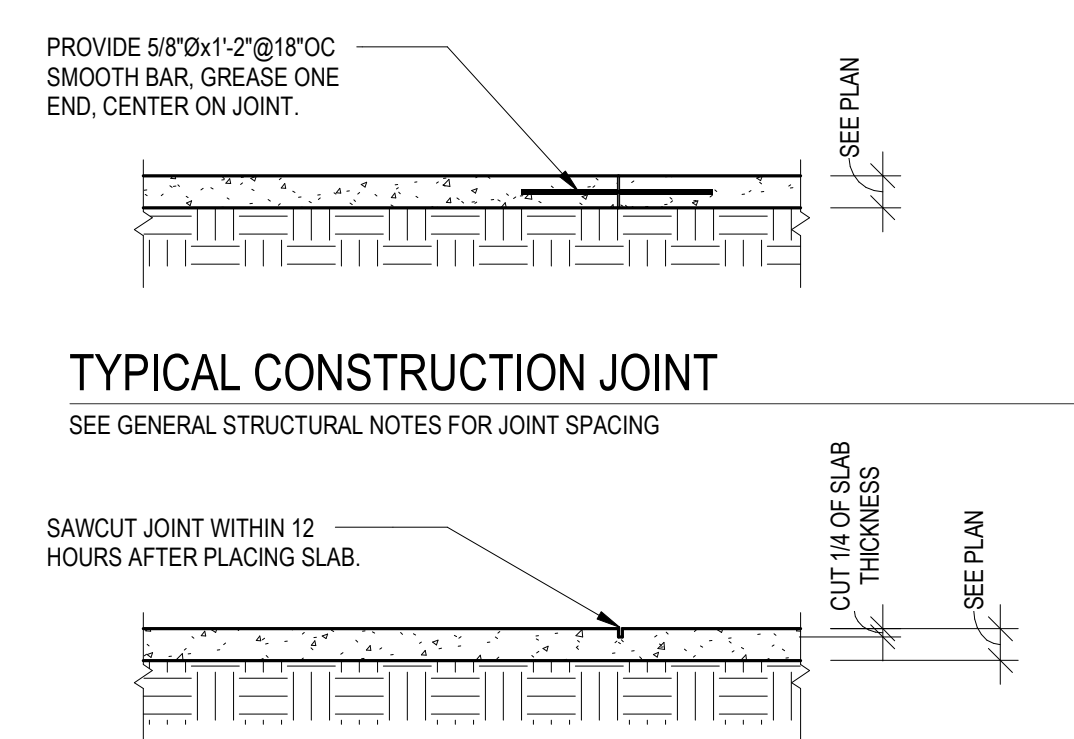
- NOTES:
- FOR PIPES BELOW FOOTING PROVIDE SLEEVE AND THICKEN CONCRETE FOOTING AS SHOWN OR STEP FOOTING BELOW PIPE PER 1/3S01
  - FOR PIPES WITHIN FOOTING DEPTH STEP FOOTING PER 1/3S01 SO PIPES PASS THROUGH WALL. PROVIDE SLEEVE AND GROUT INTO WALL.
  - SLEEVE DIAMETER TO BE 2" GREATER THAN PIPE OUTSIDE DIAMETER.
  - COORDINATE PIPING LOCATIONS WITH MECHANICAL DRAWINGS.

2 DETAIL  
S301

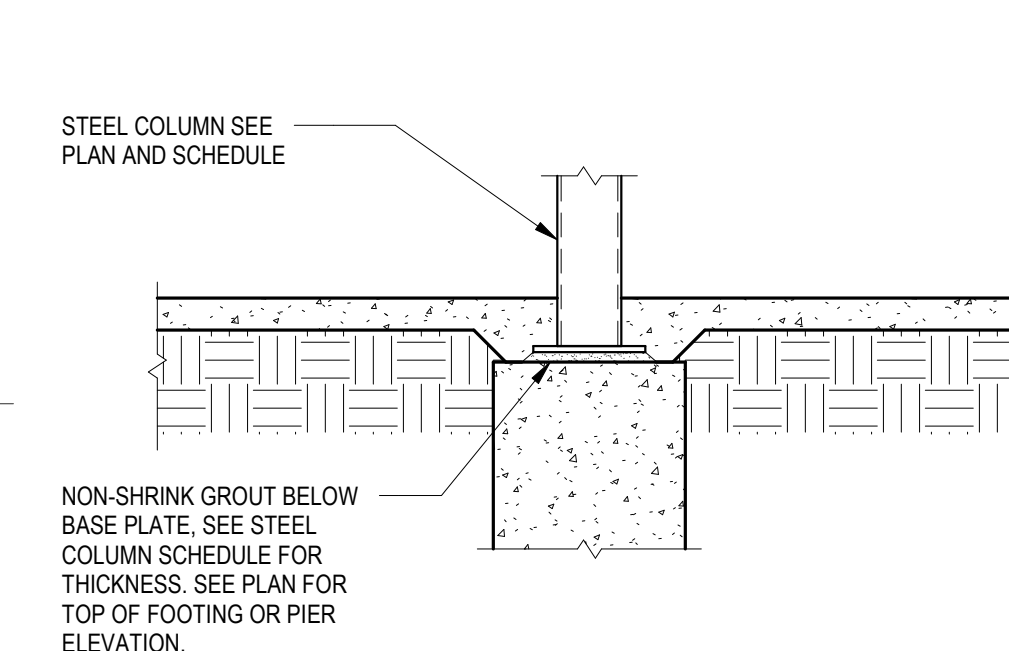


- NOTES:
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SHORING, SHEATHING, ETC. TO MAINTAIN THE SIDES OF THE EXCAVATION FROM CAVING IN UNTIL ALL WORK AND BACKFILL IS COMPLETE.
  - COORDINATE PIPING LOCATIONS WITH MECHANICAL AND CIVIL DRAWINGS. PROVIDE ADDITIONAL FOOTING STEPS PER 1/3S01 AND/OR ADJUST PIPING LOCATIONS/ELEVATIONS TO CONFORM TO THIS DETAIL.

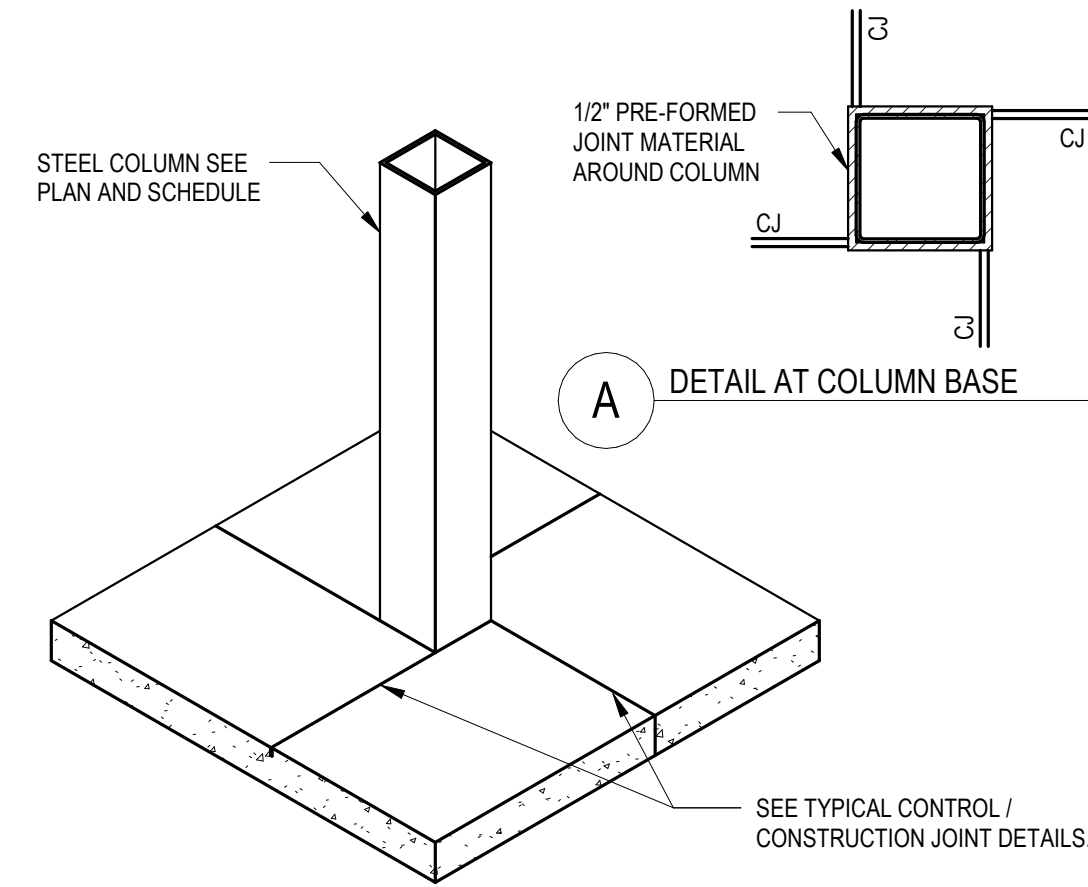
3 PIPING EXCAVATION ADJACENT TO FOOTINGS  
S301



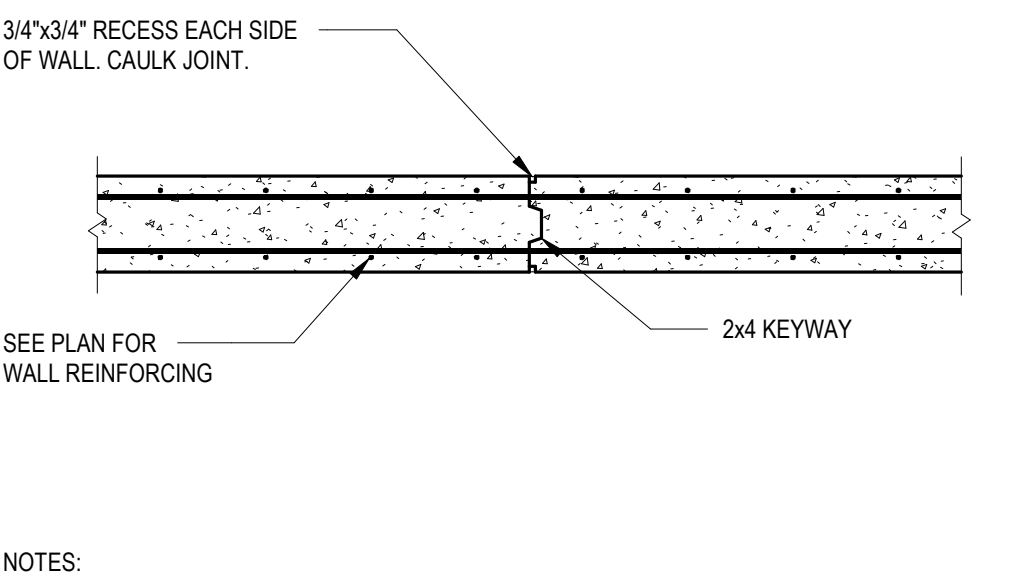
4 TYPICAL CONTROL/CONSTRUCTION JOINT  
SEE GENERAL STRUCTURAL NOTES FOR JOINT SPACING



5 TYPICAL INTERIOR TUBE COLUMN AT SLAB ON GRADE DETAIL  
S301

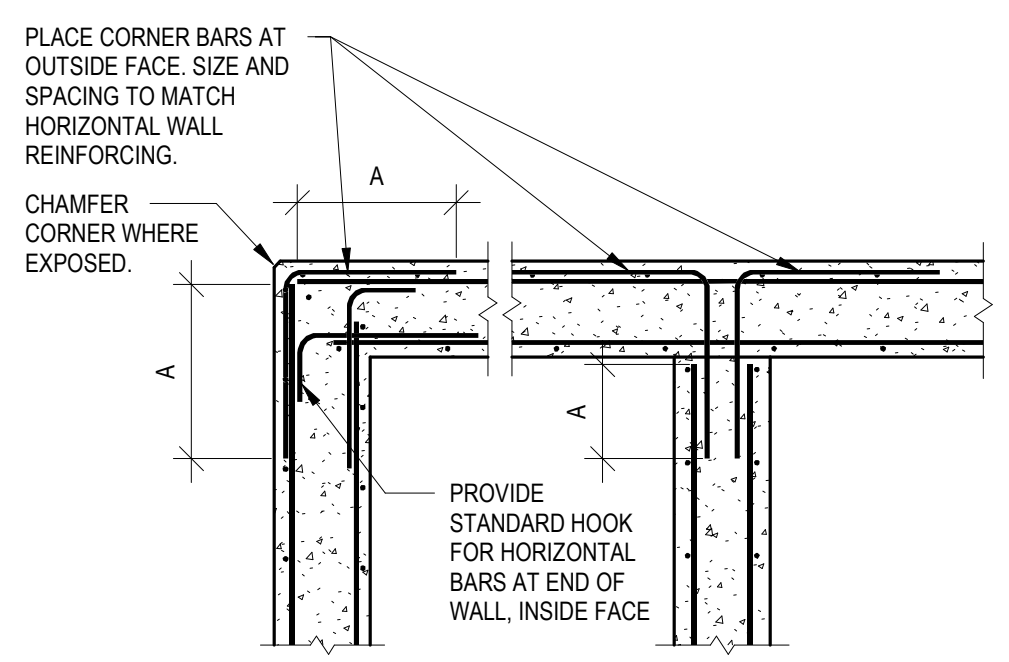


6 TYPICAL SLAB AT STEEL TUBE COLUMN DETAIL  
S301

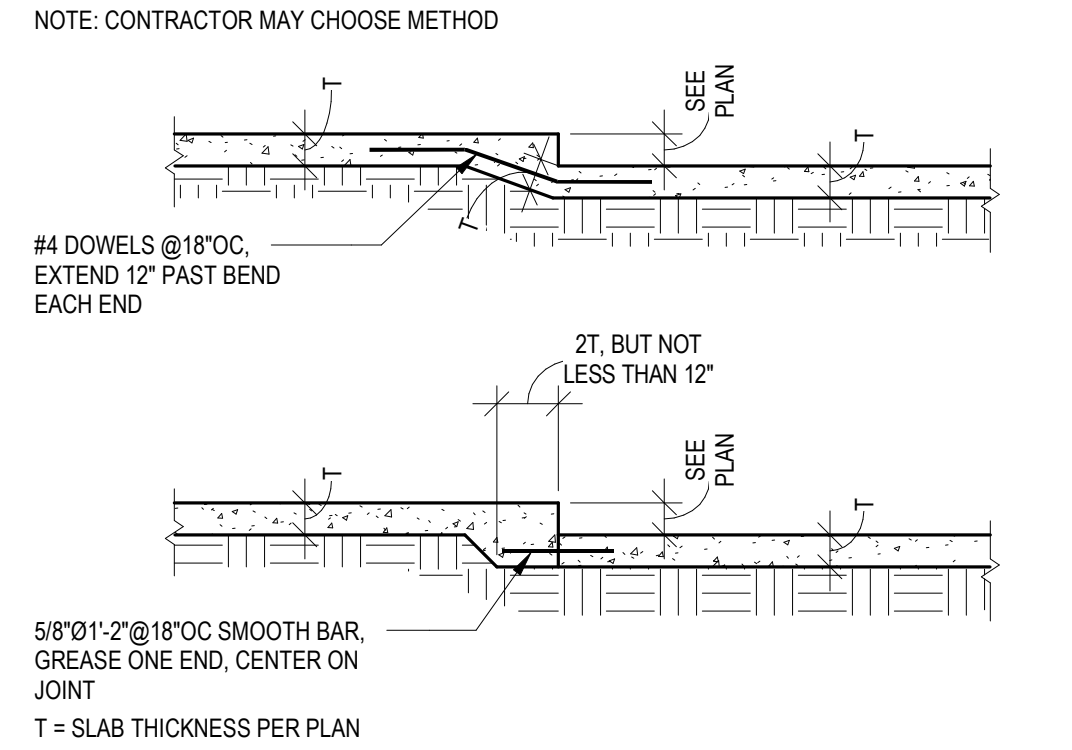


- NOTES:
- AT CONTROL JOINTS OMIT KEYWAY AND PROVIDE RECESS EACH SIDE OF WALL.
  - PLACE CONTROL JOINTS @20'-0" MAXIMUM. FOR WALLS LESS THAN 6'-0" TALL, PLACE CONTROL JOINTS AT 3 TIMES WALL HEIGHT (MAX).
  - STOP 1/2 OF HORIZONTAL REINFORCING PRECISELY AT CONTROL JOINT LOCATIONS.

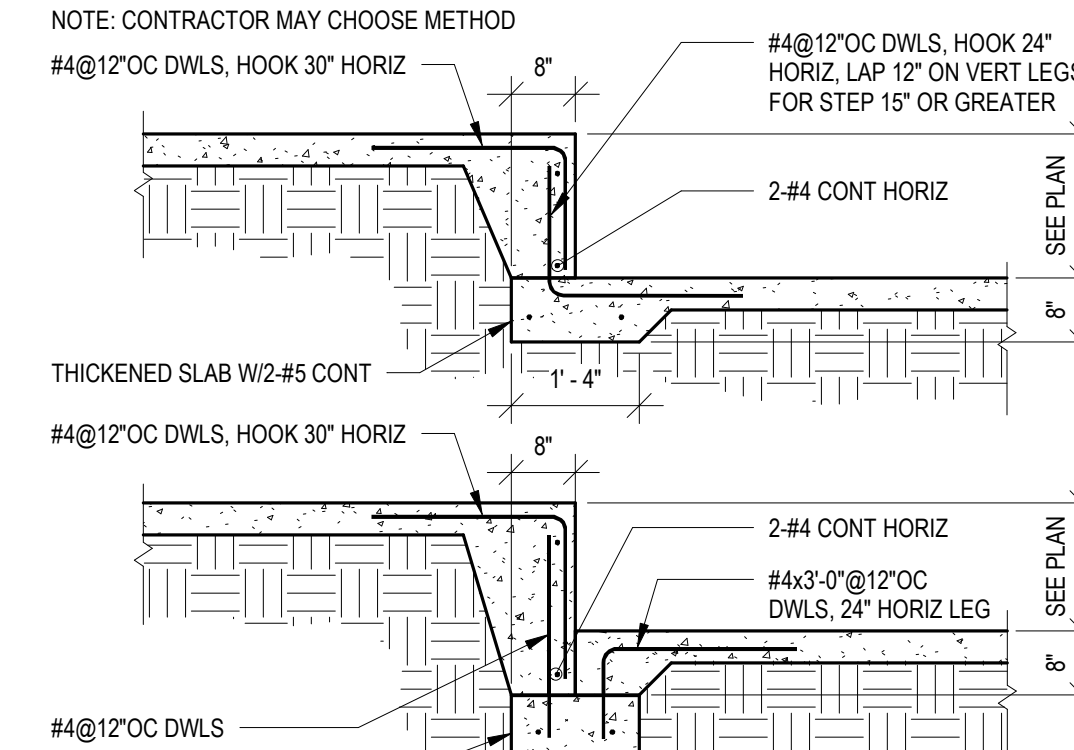
7 TYPICAL VERTICAL CONTROL/CONSTRUCTION JOINT IN CONC WALL  
S301



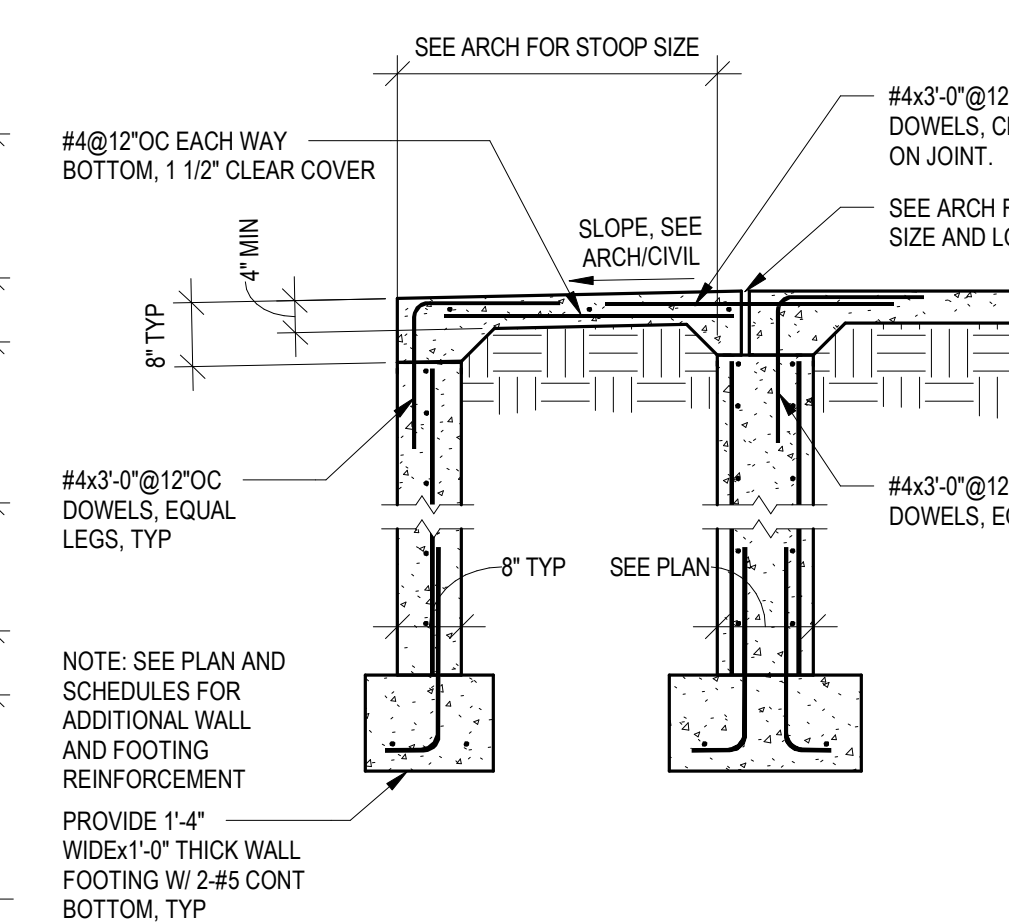
8 TYPICAL CONCRETE WALL INTERSECTION REINFORCING - PLAN  
S301



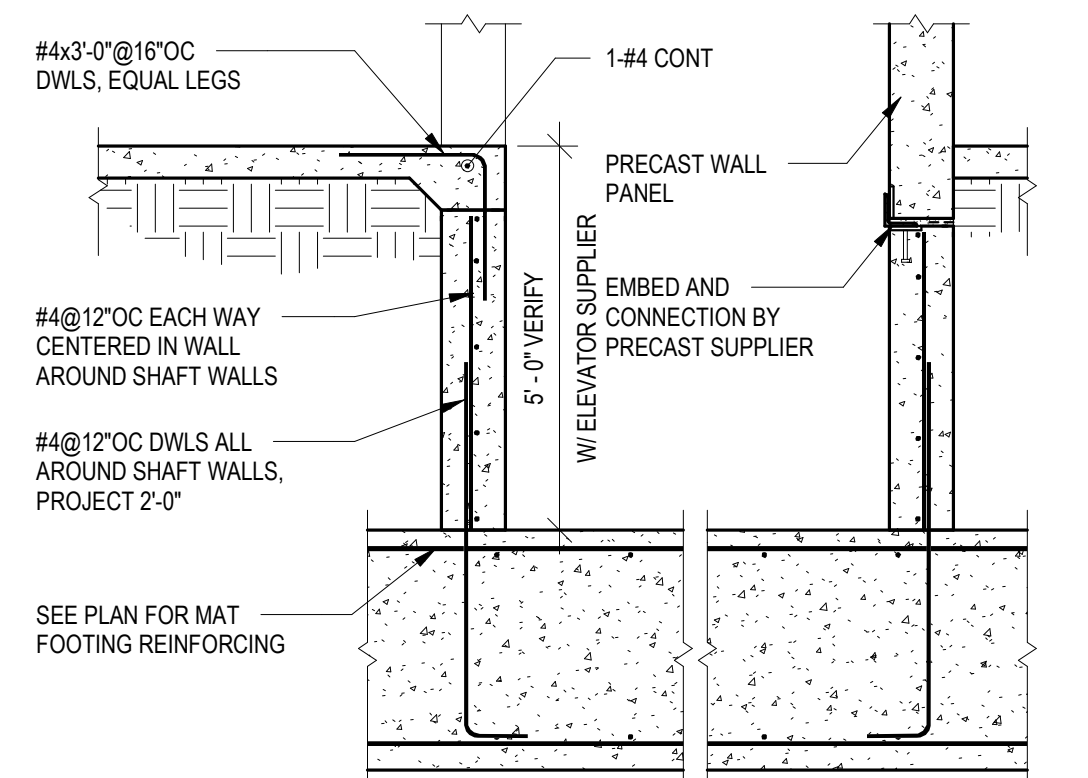
9 TYPICAL SLAB ON GRADE STEP UNDER 10"  
S301



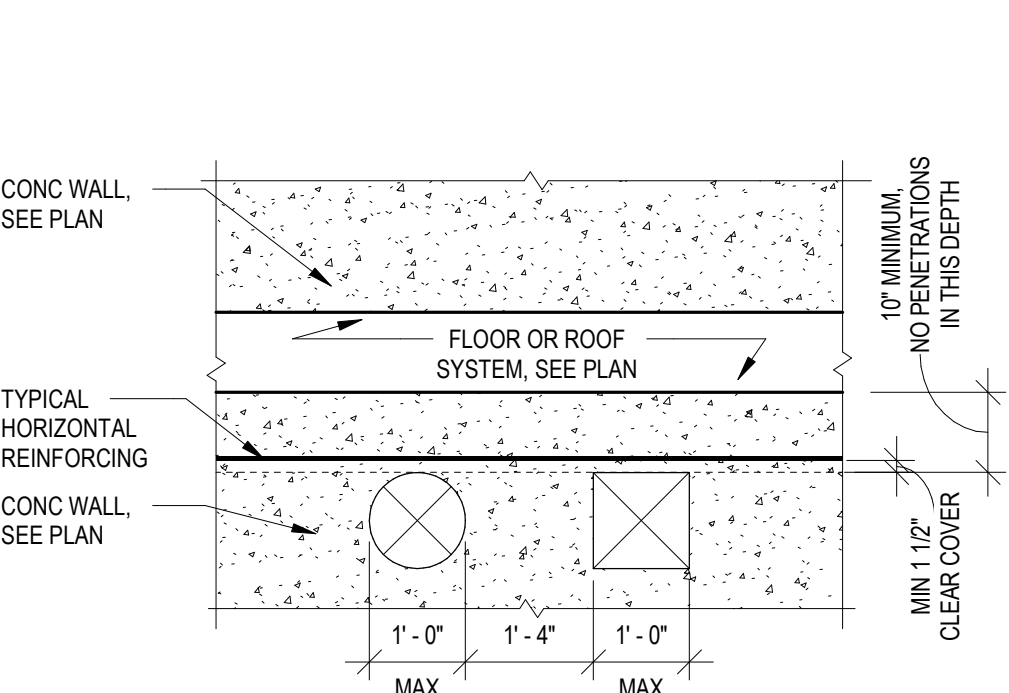
10 SECTION  
S301



11 SECTION  
S301

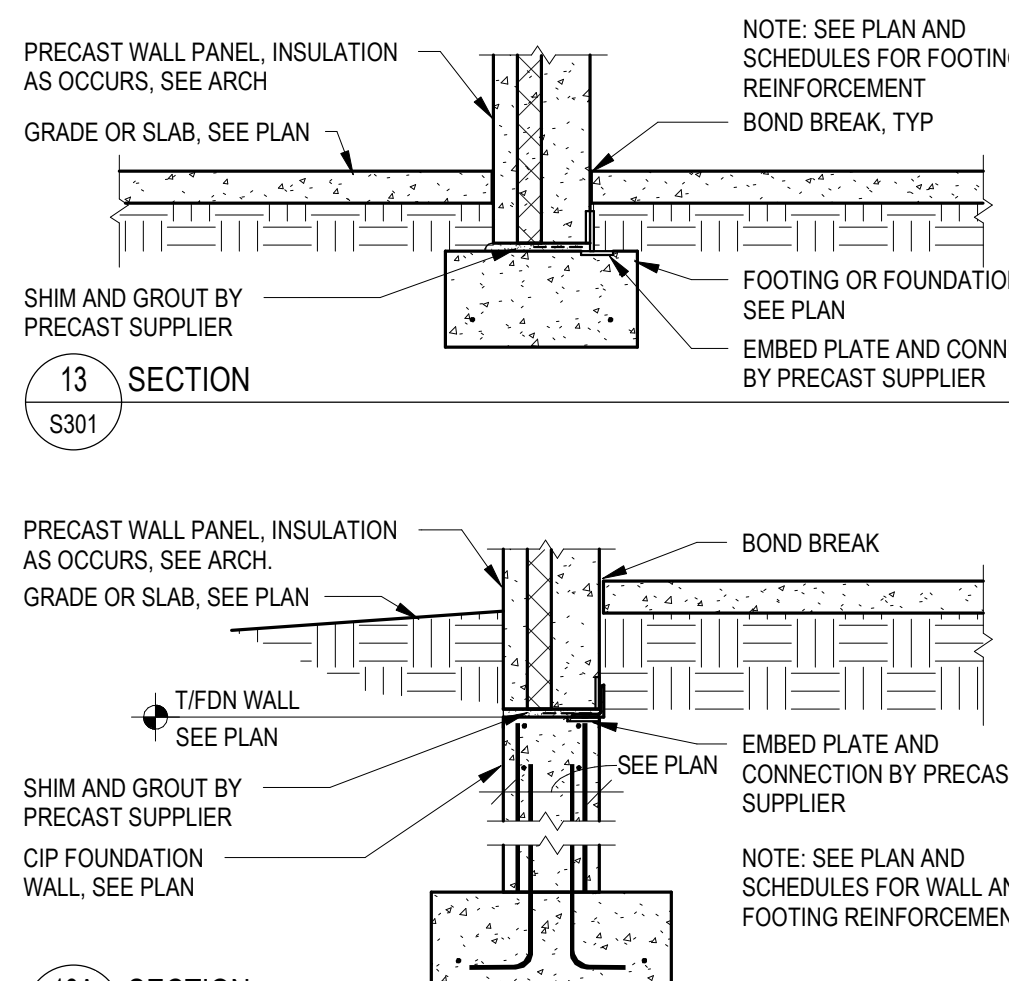


12 OPENINGS UP TO 12" IN POURED CONCRETE WALLS  
S301

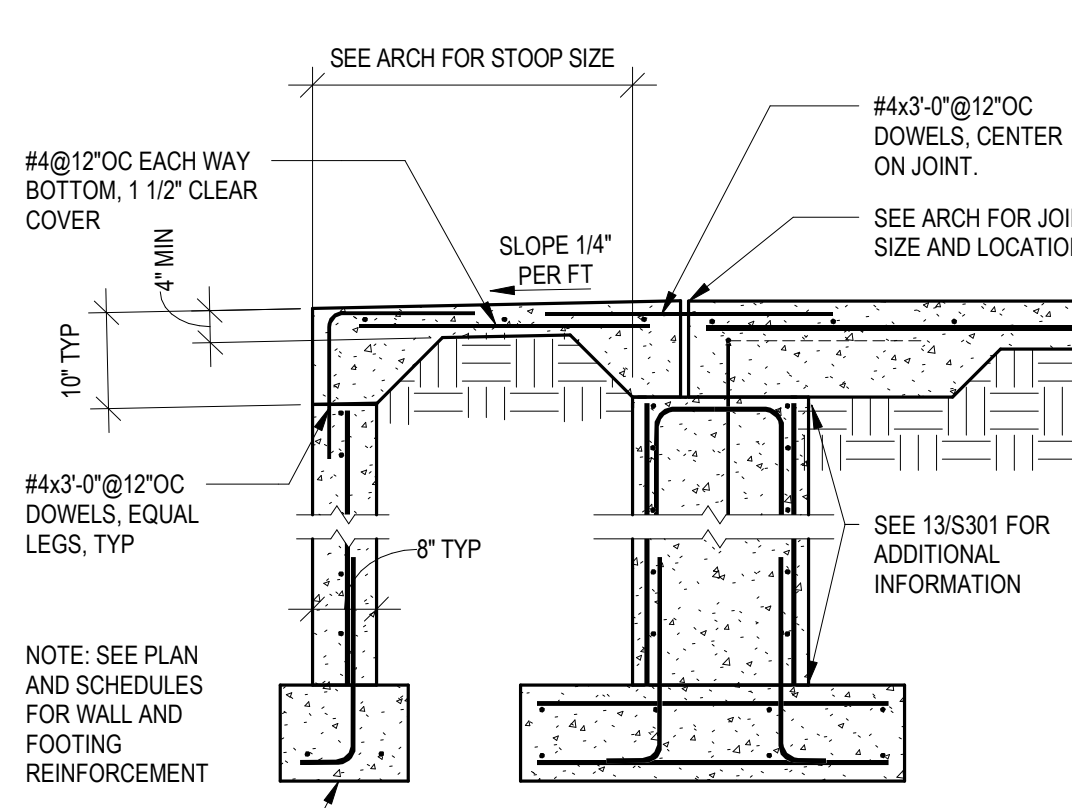


- NOTES:
- DO NOT CUT VERTICAL OR HORIZONTAL WALL REINFORCING. LOCATE PENETRATIONS BETWEEN VERTICAL REINFORCING. PROVIDE MIN 1 1/2" CLEAR COVER BETWEEN VERTICAL REINFORCING AND EDGE OF OPENING. ACCEPTABLE TO ADJUST VERTICAL REINFORCING SPACING UP TO 8" MAX TO ALLOW PENETRATIONS BETWEEN REINFORCING. (ADJUSTING PIER VERTICAL REINFORCING IS NOT ACCEPTABLE.)
  - MULTIPLE PENETRATIONS WITHIN 16" OF EACH OTHER ARE CONSIDERED A SINGLE OPENING.
  - SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.

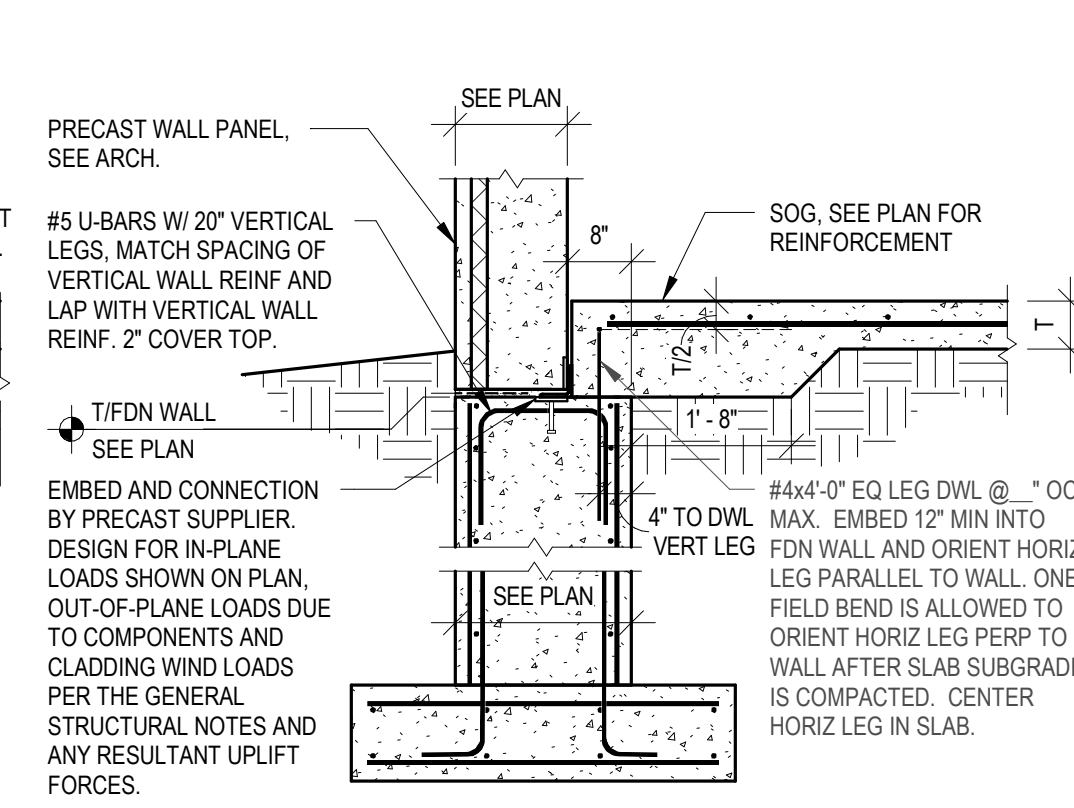
13 SECTION  
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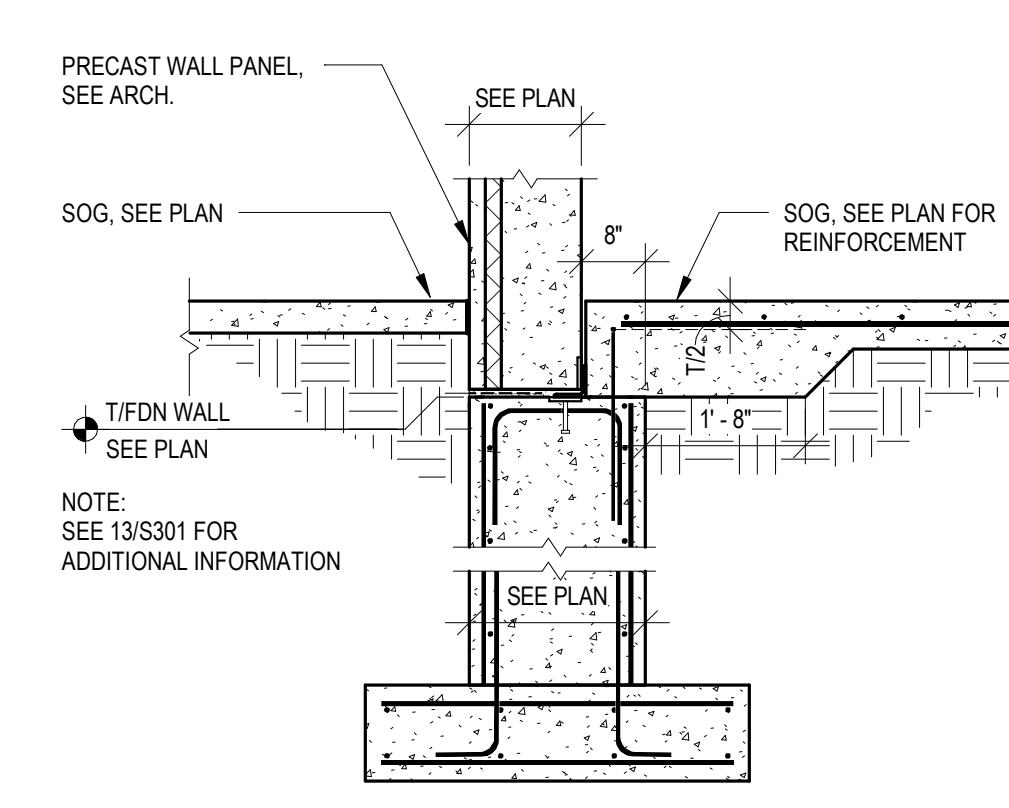
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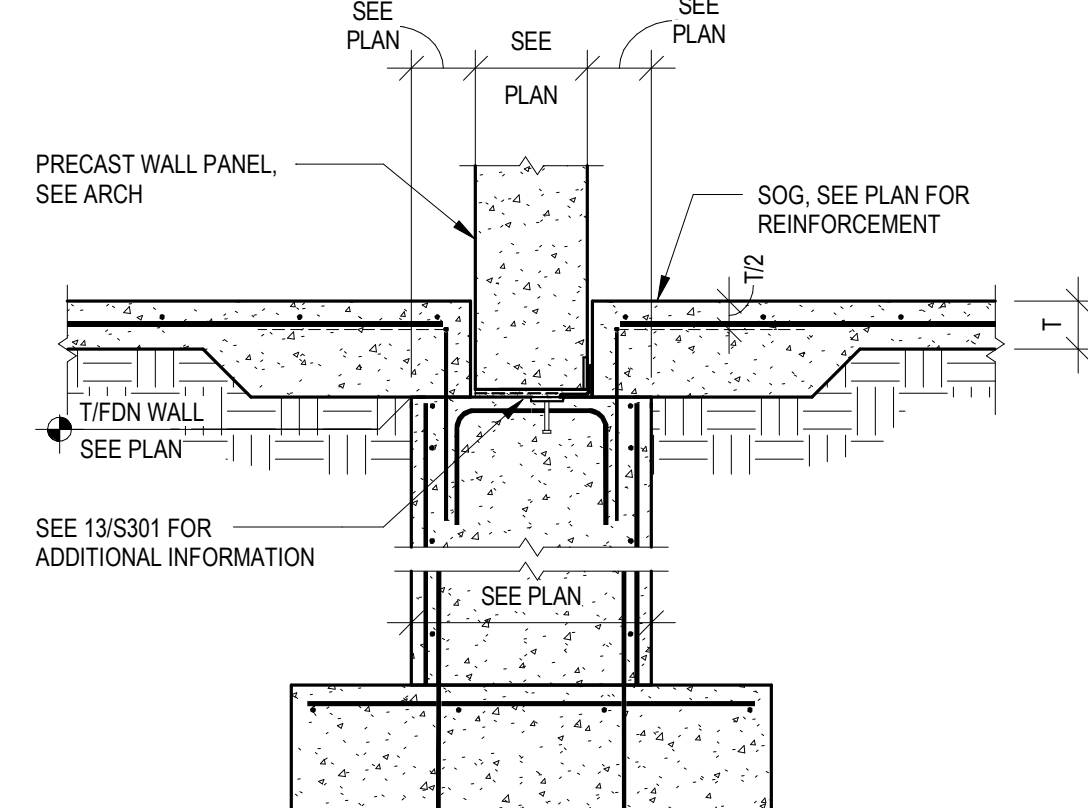
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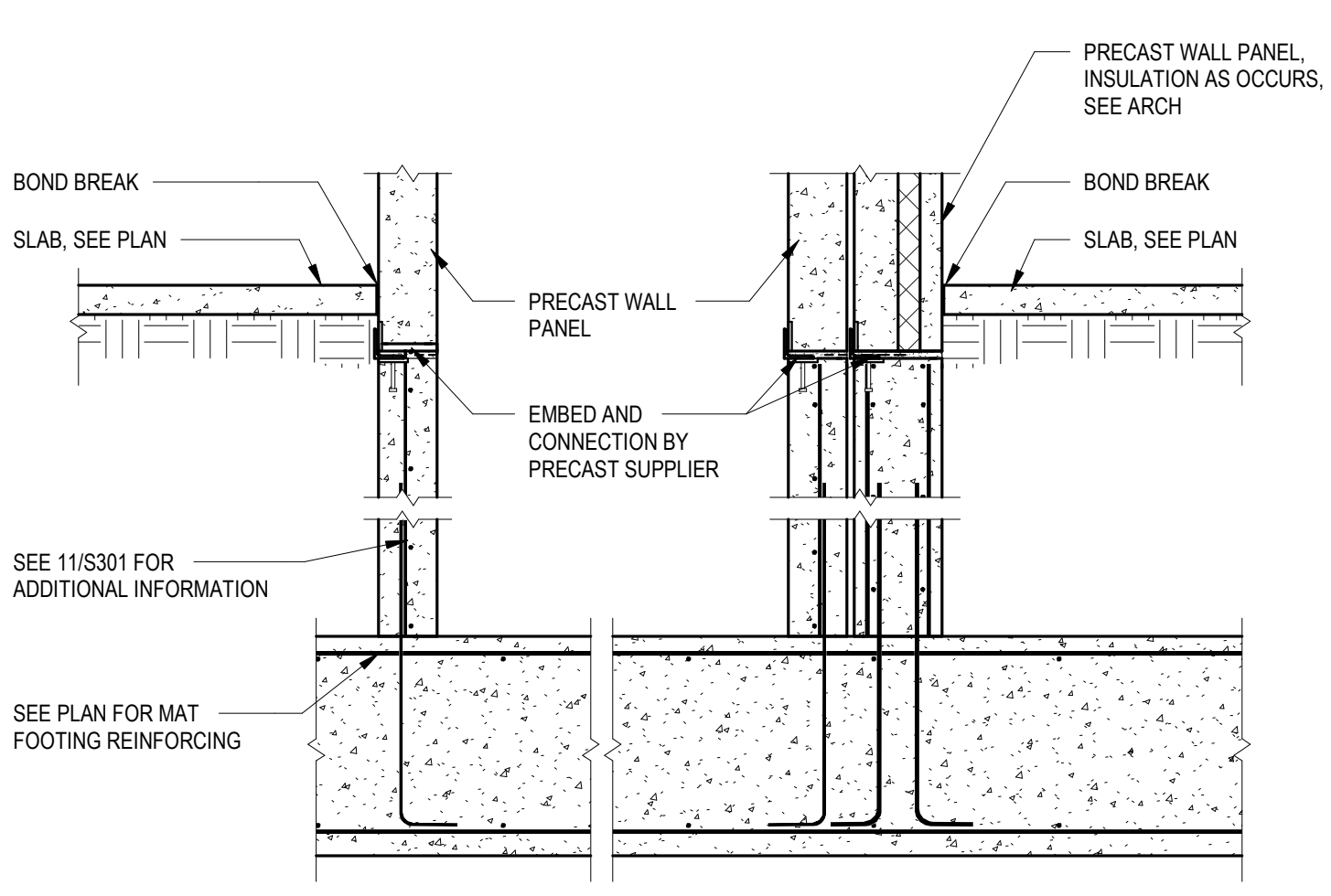
16 SECTION  
S301



17 SECTION  
S301



18 SECTION  
S301



19 SECTION  
S301

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SHEET TITLE:  
**SECTIONS AND DETAILS**

SHEET NUMBER:

**S301**

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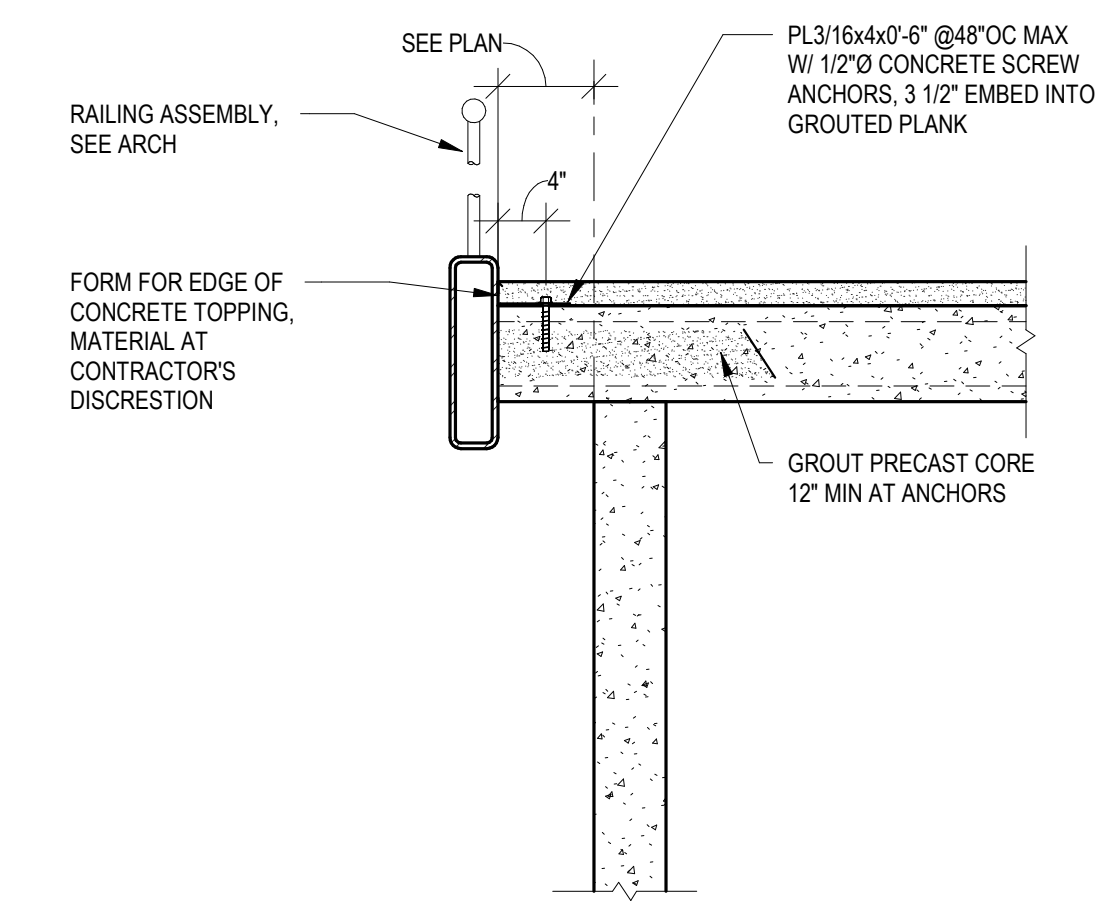
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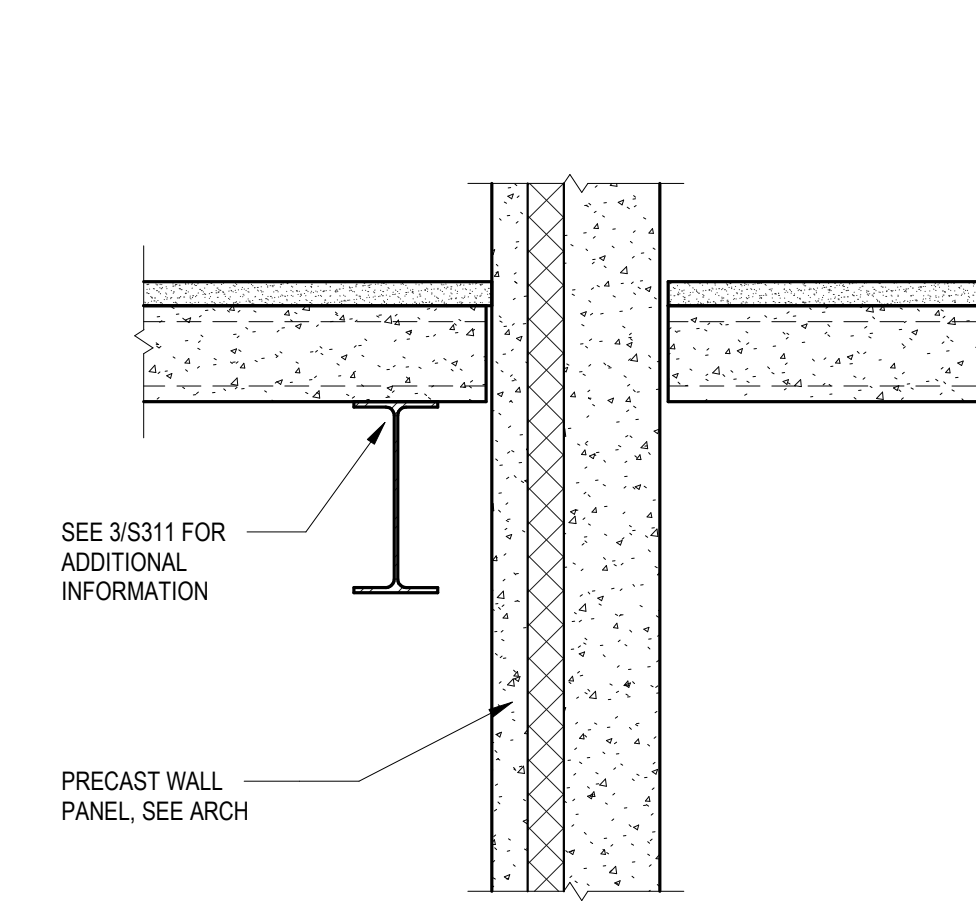
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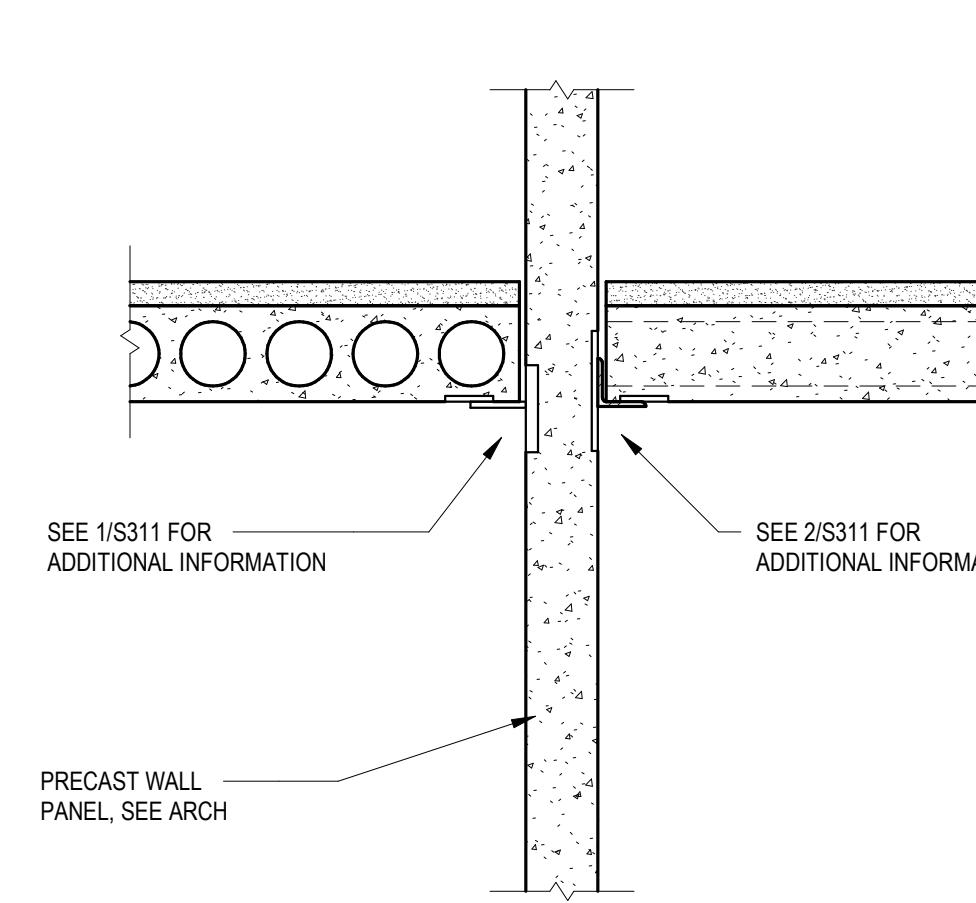
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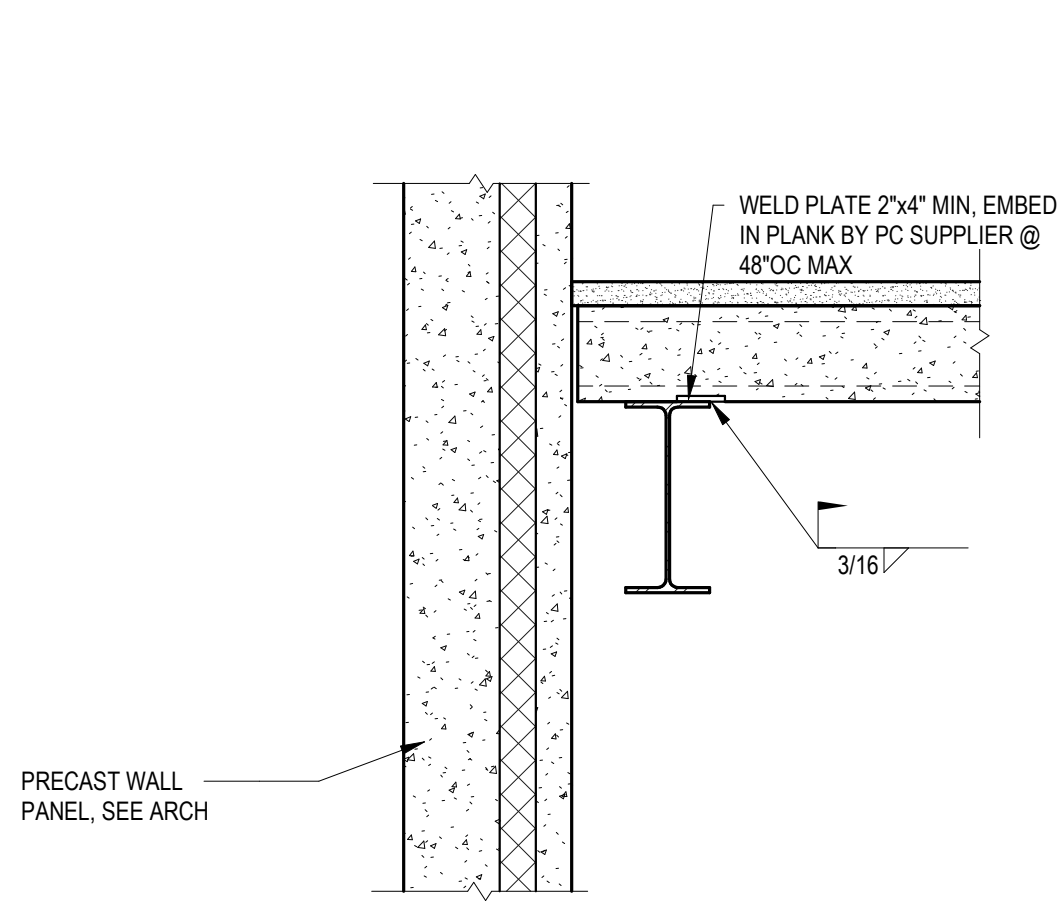
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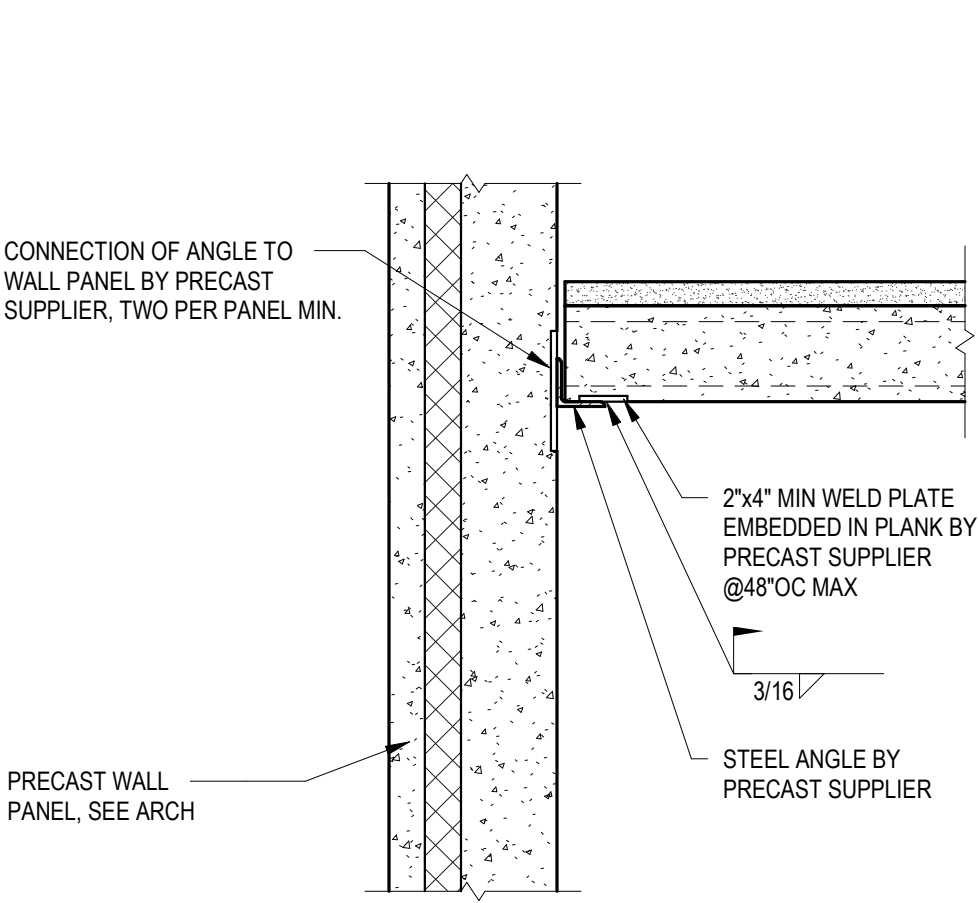
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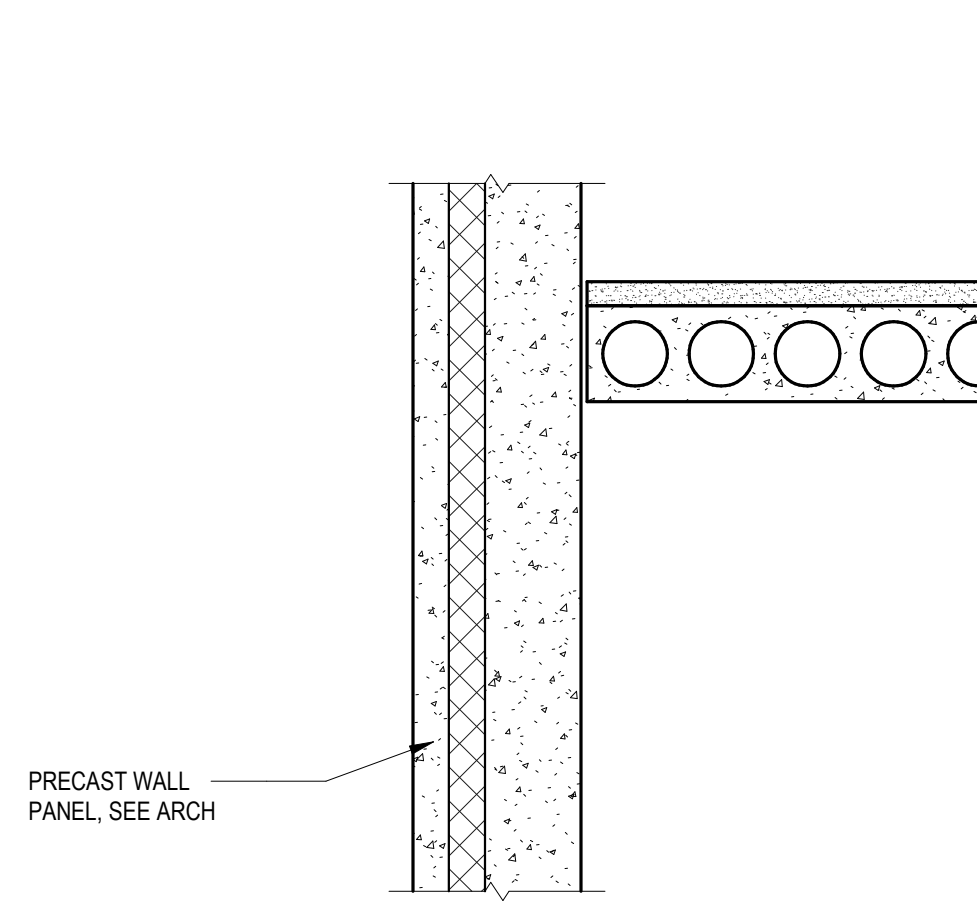
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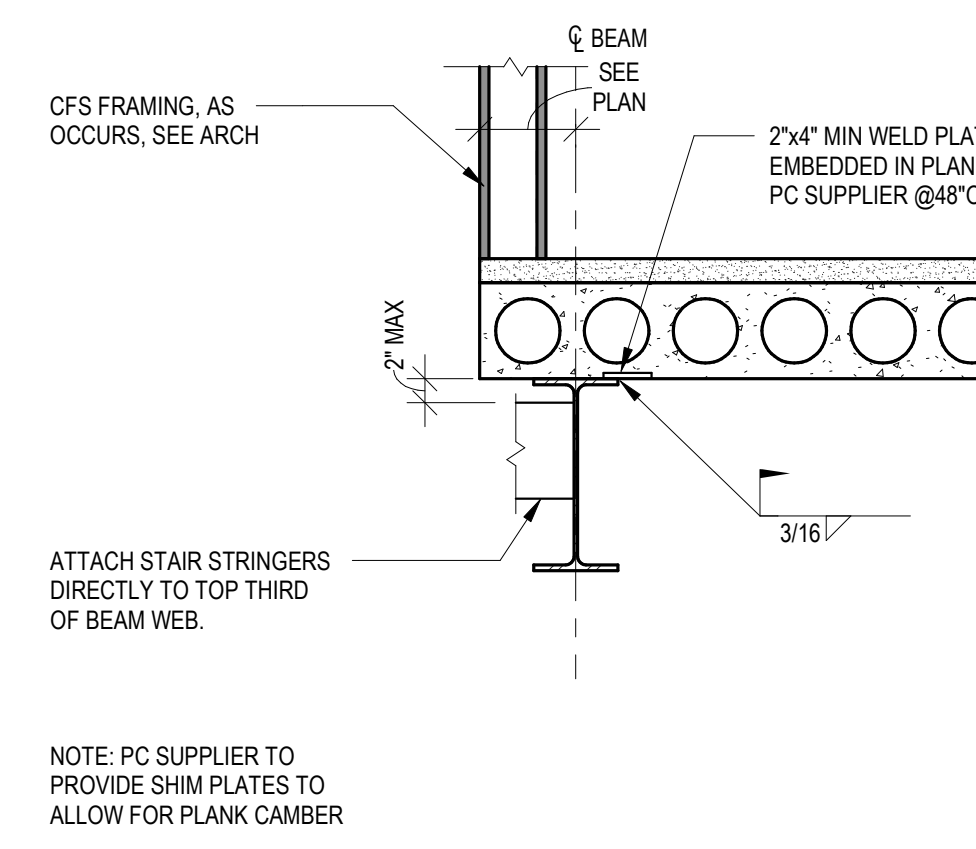
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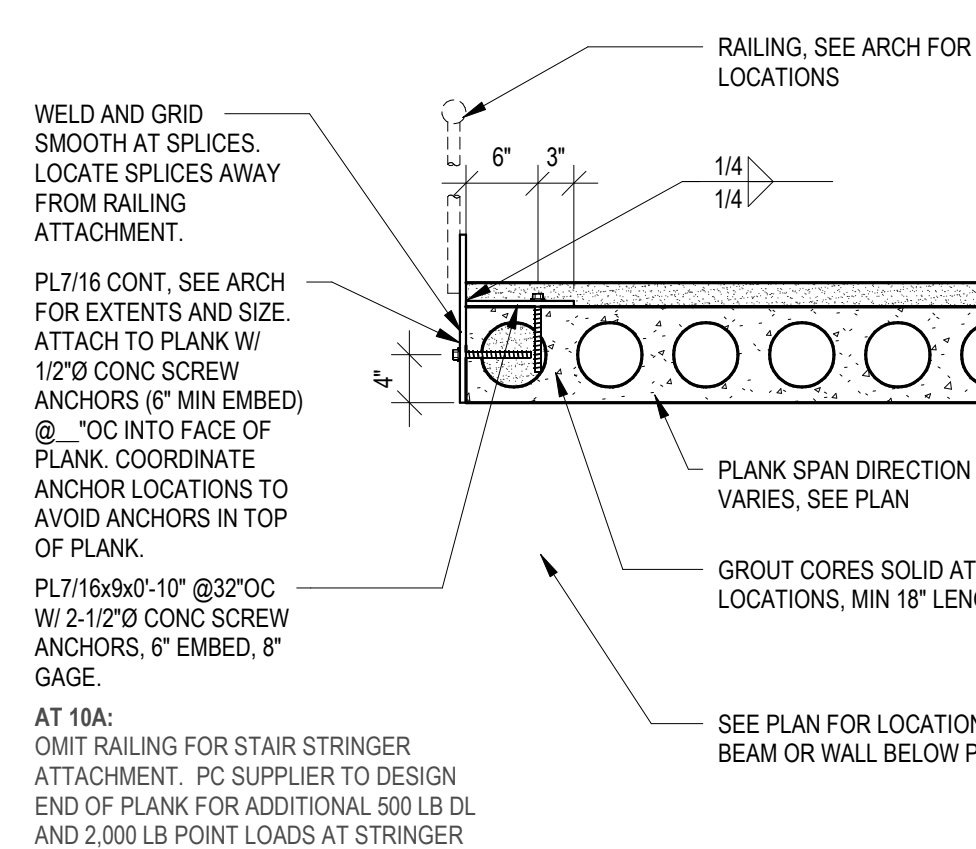
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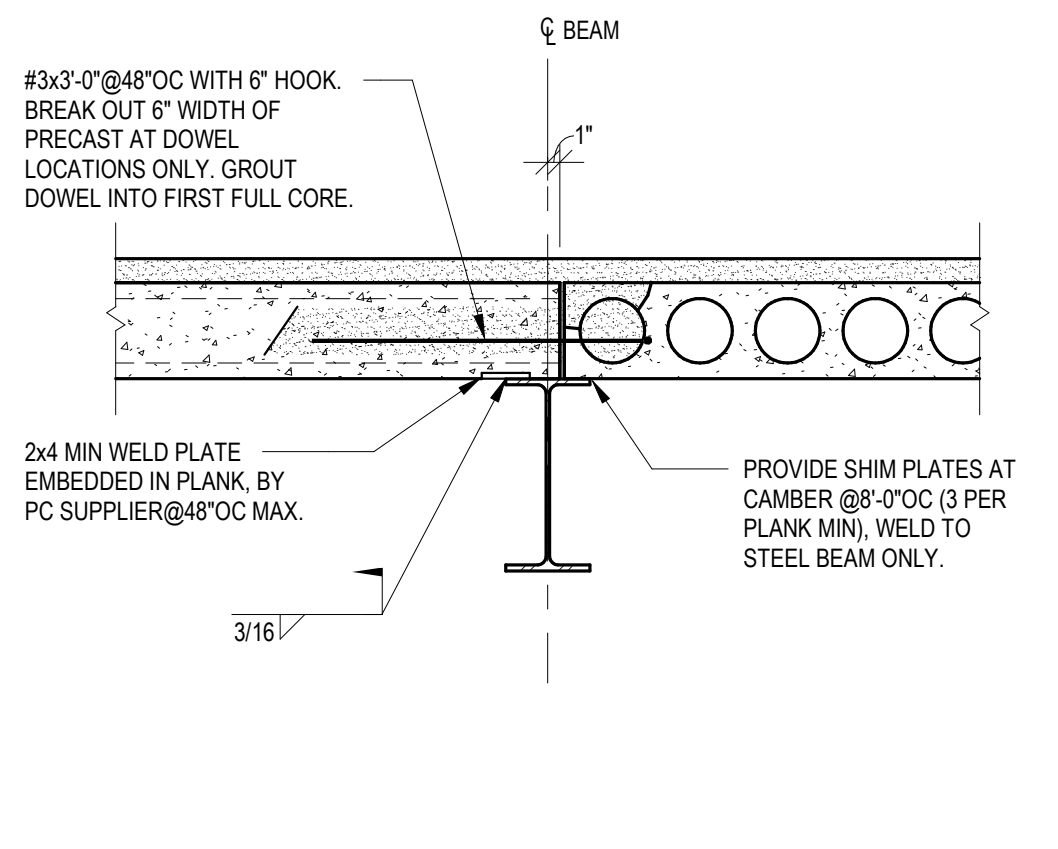
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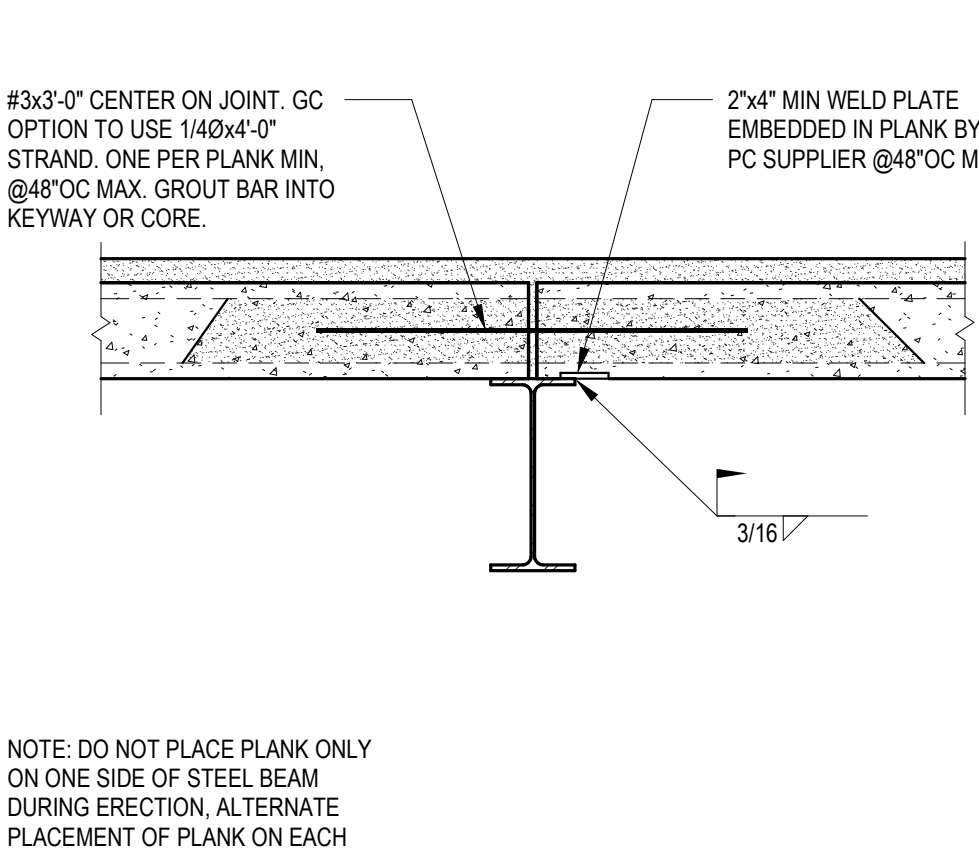
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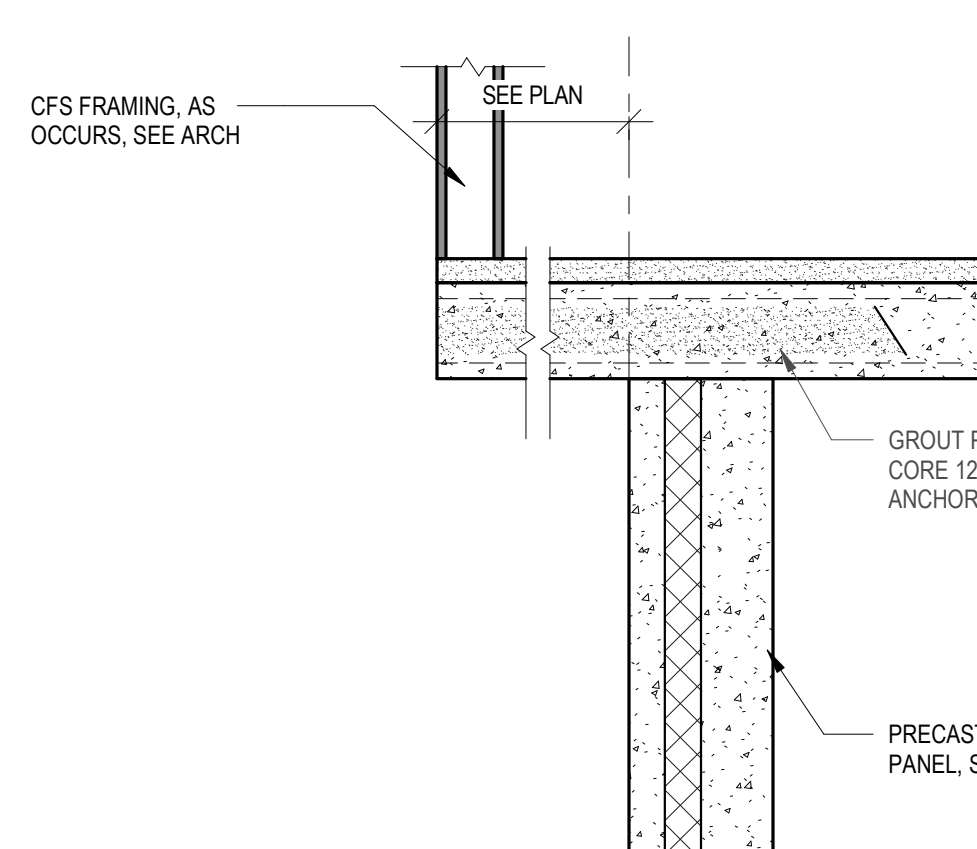
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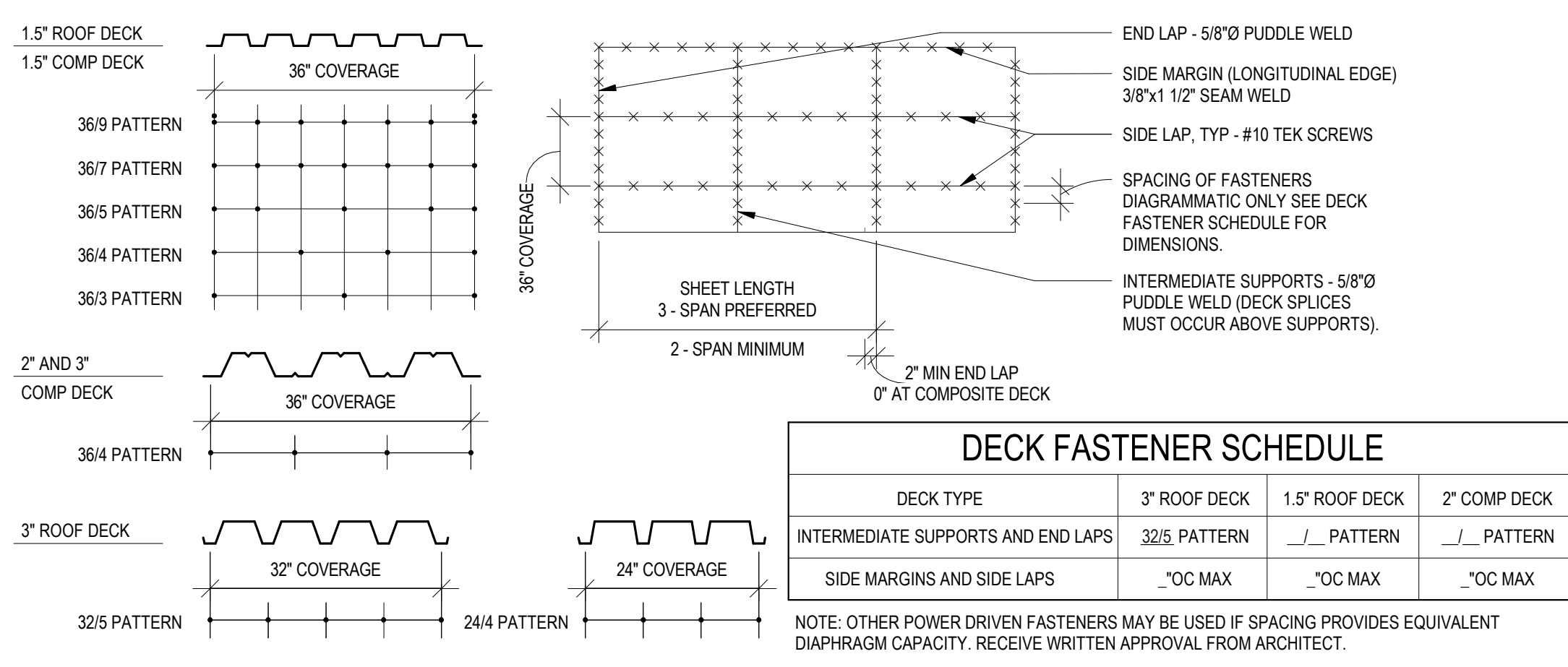
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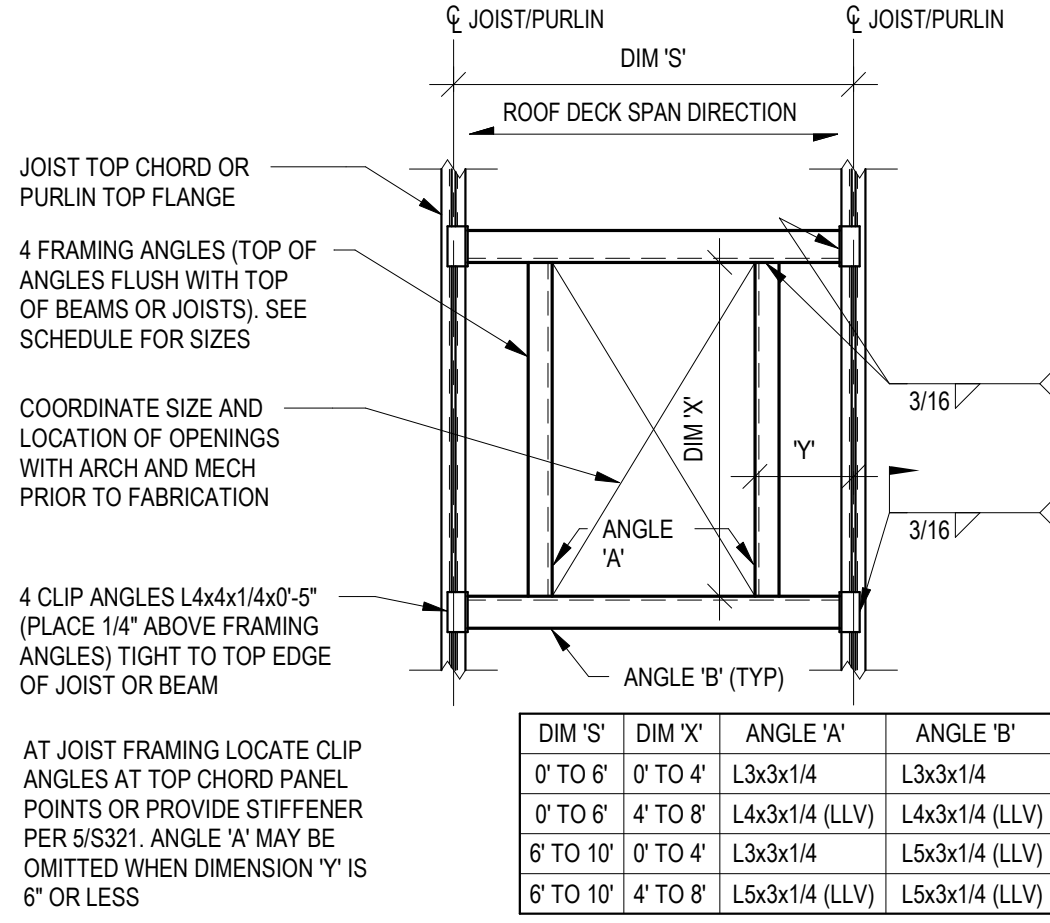
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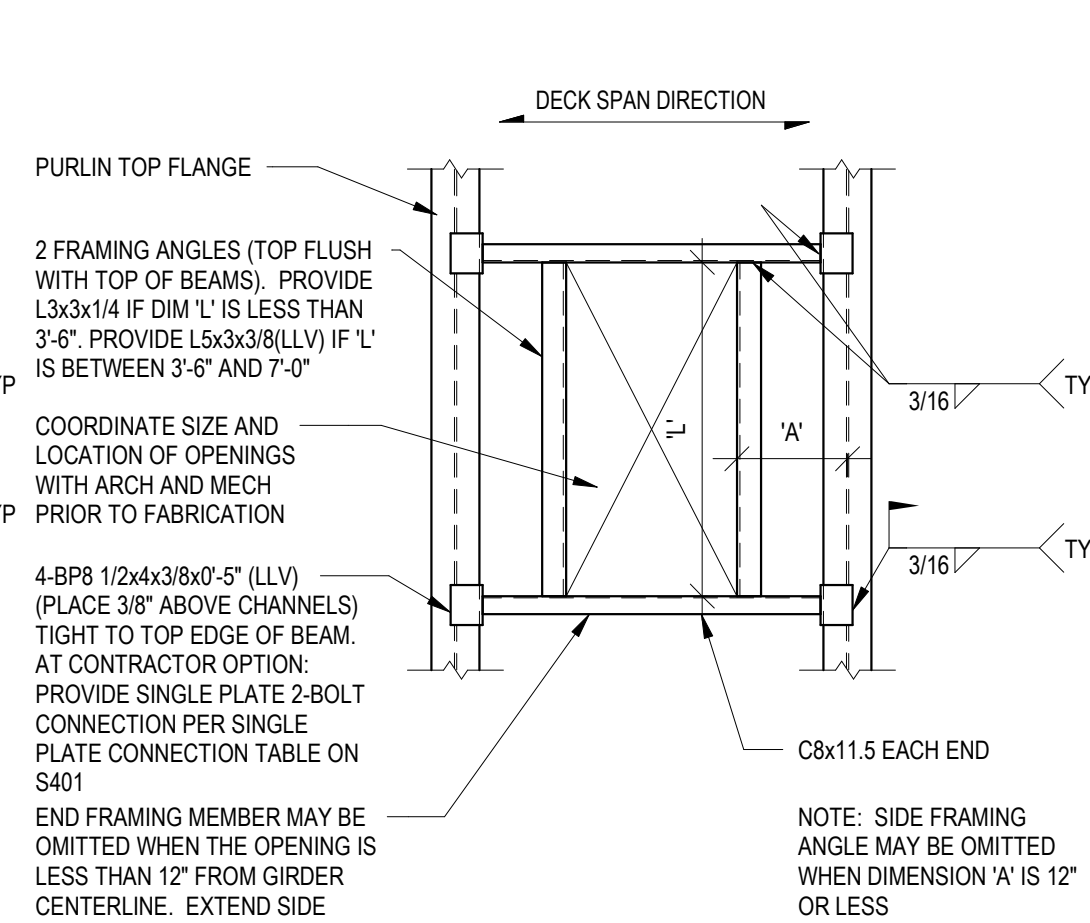
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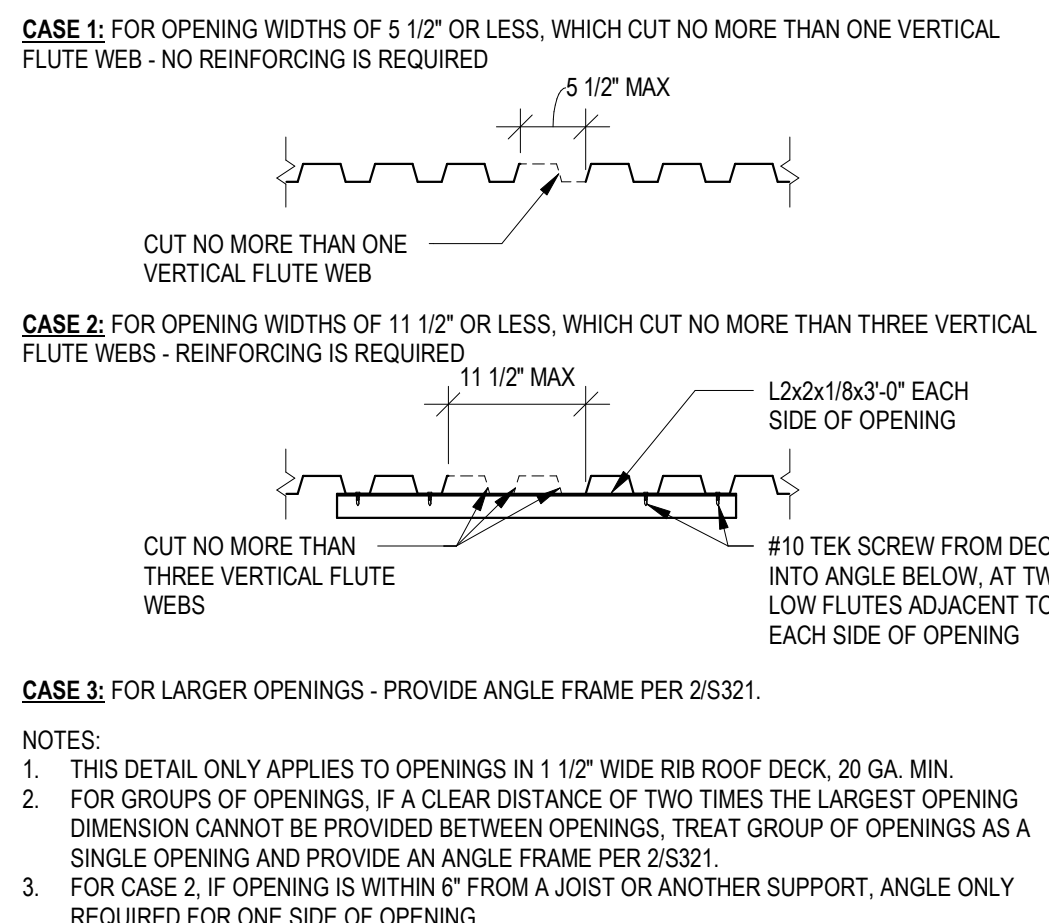
1 STEEL DECK ATTACHMENT  
S321



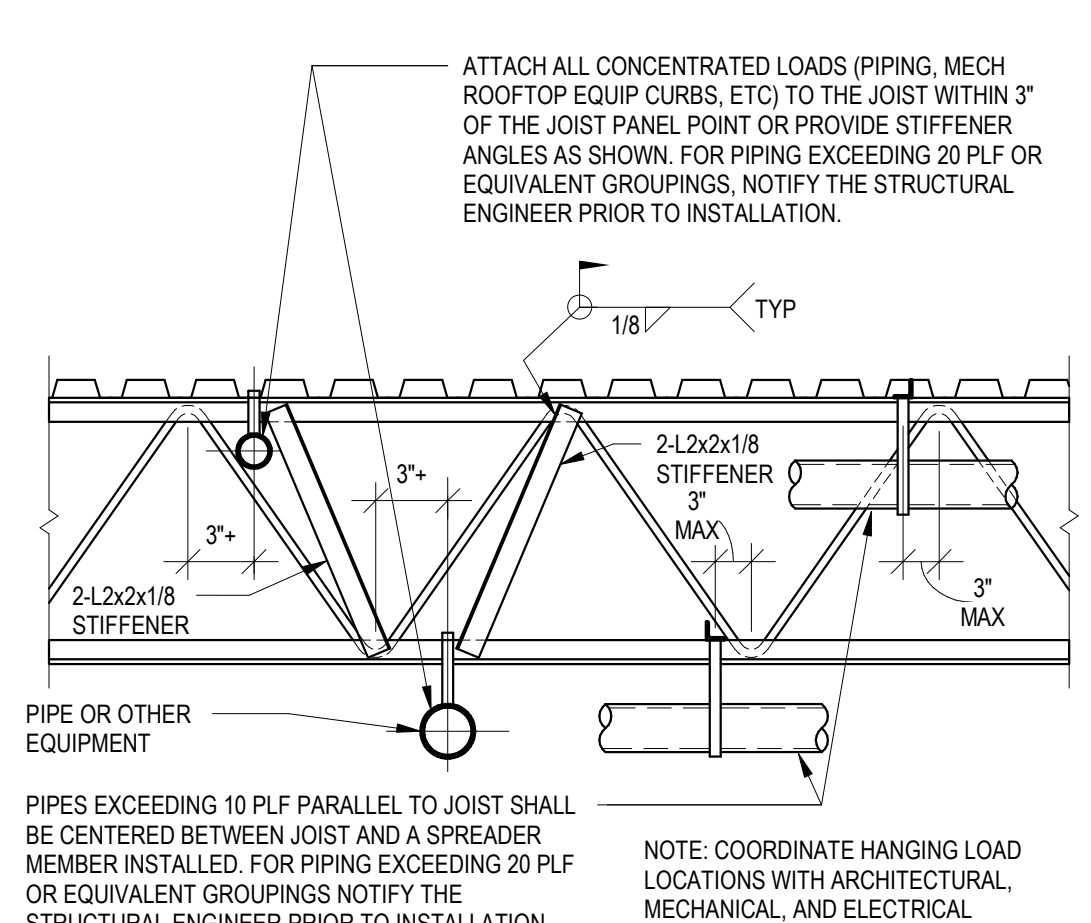
2 OPENING IN NEW ROOF DECK  
S321



3 OPENING IN NEW COMPOSITE DECK ON STEEL BEAMS  
S321

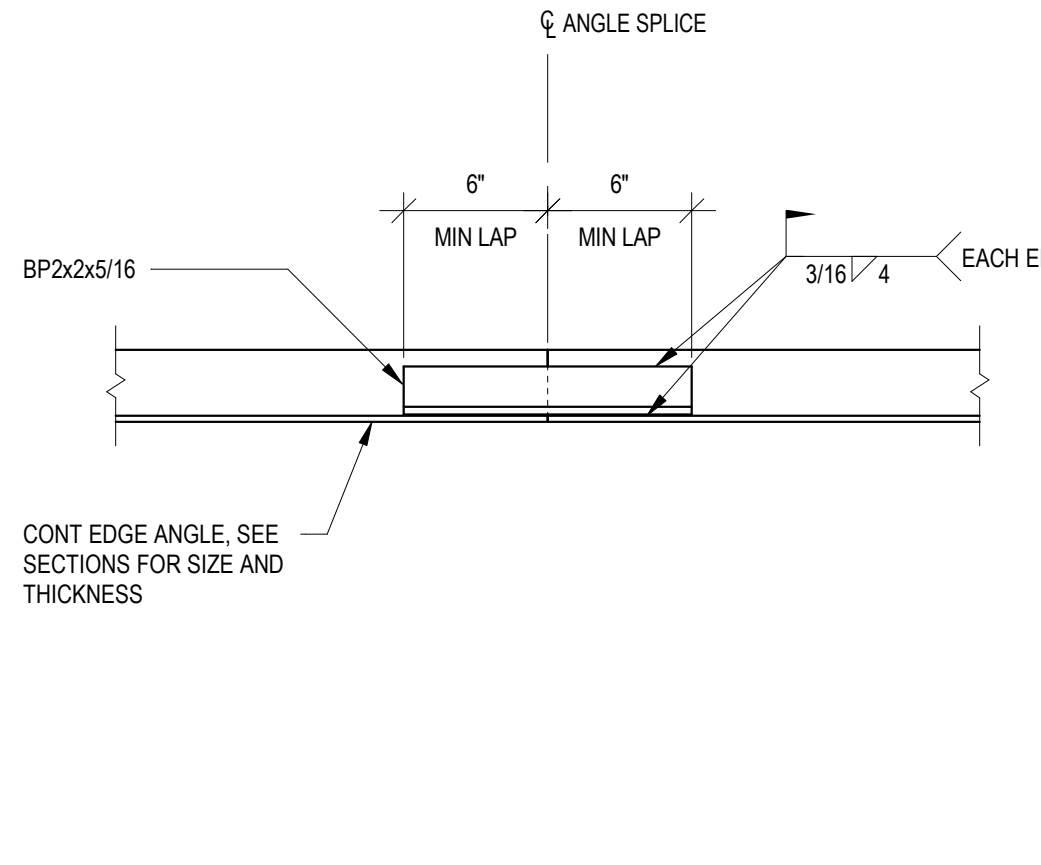


4 OPENING IN 1 1/2" WIDE RIB ROOF DECK  
S321

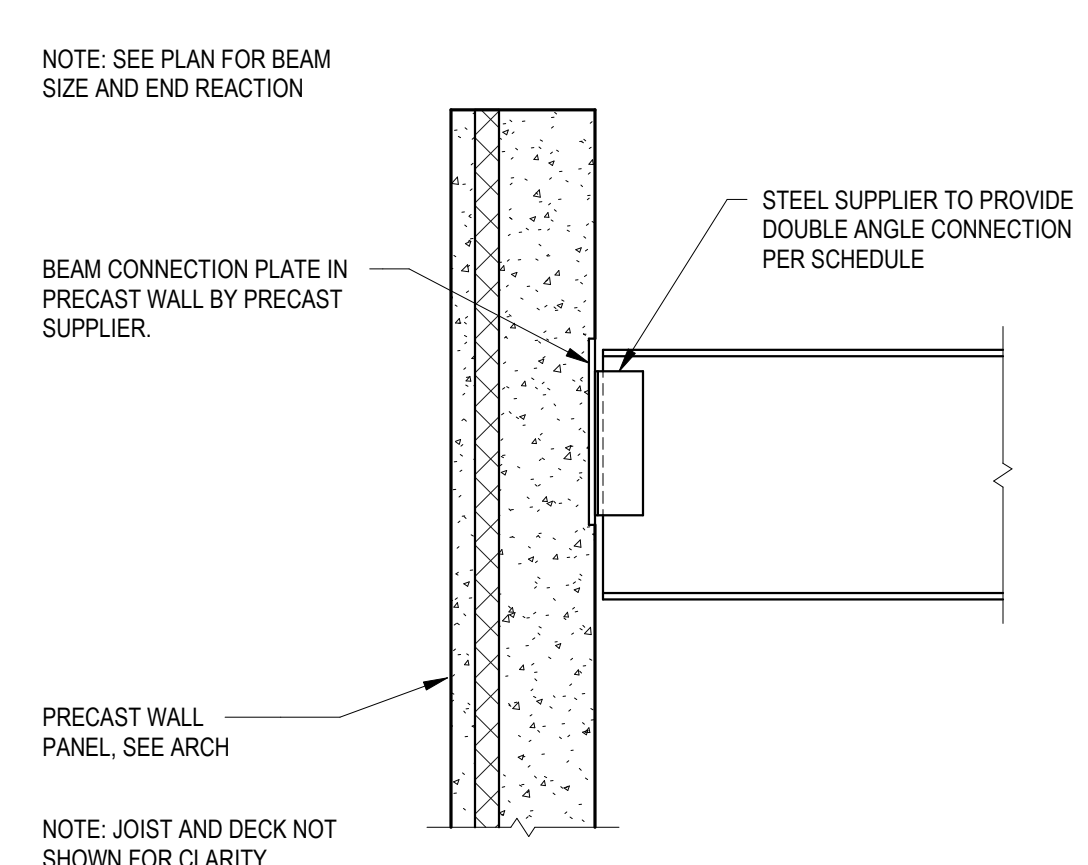


5 CONCENTRATED LOADS ON NEW JOIST  
S321

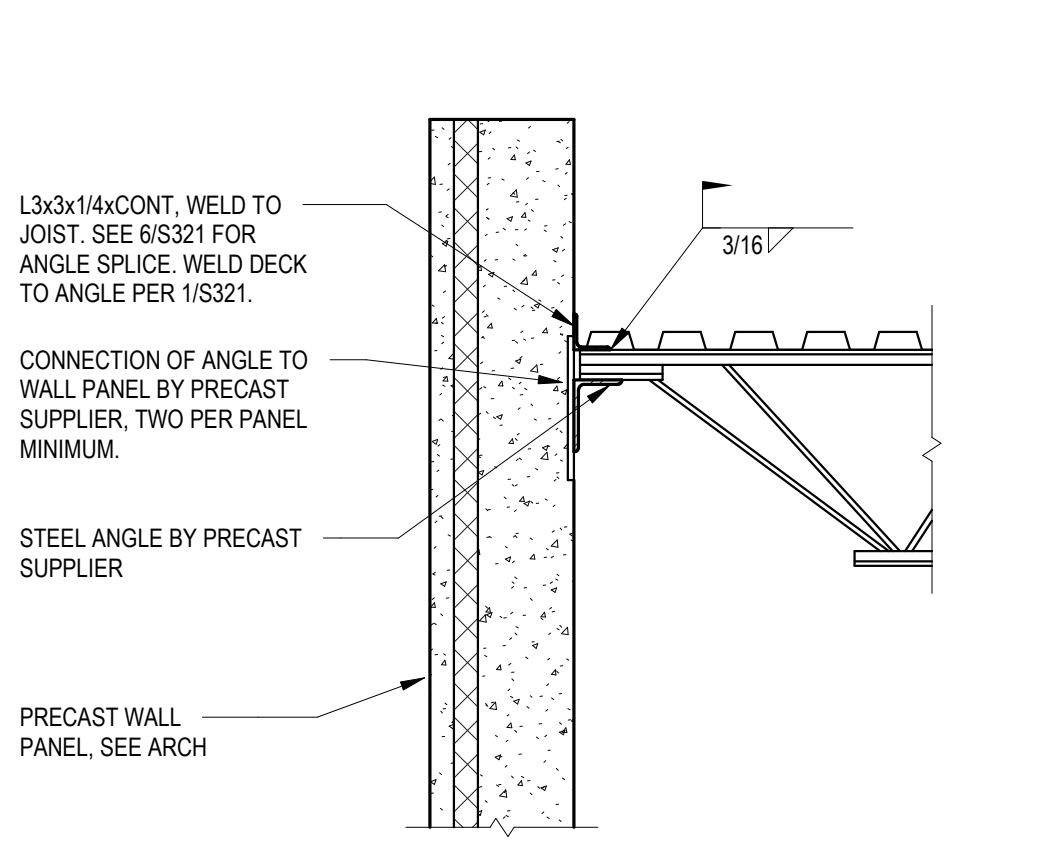
DECK FASTENER SCHEDULE			
DECK TYPE	3\"/>		
INTERMEDIATE SUPPORTS AND END LAPS	325 PATTERN	1\"/>	
SIDE MARGINS AND SIDE LAPS	OC MAX	OC MAX	OC MAX



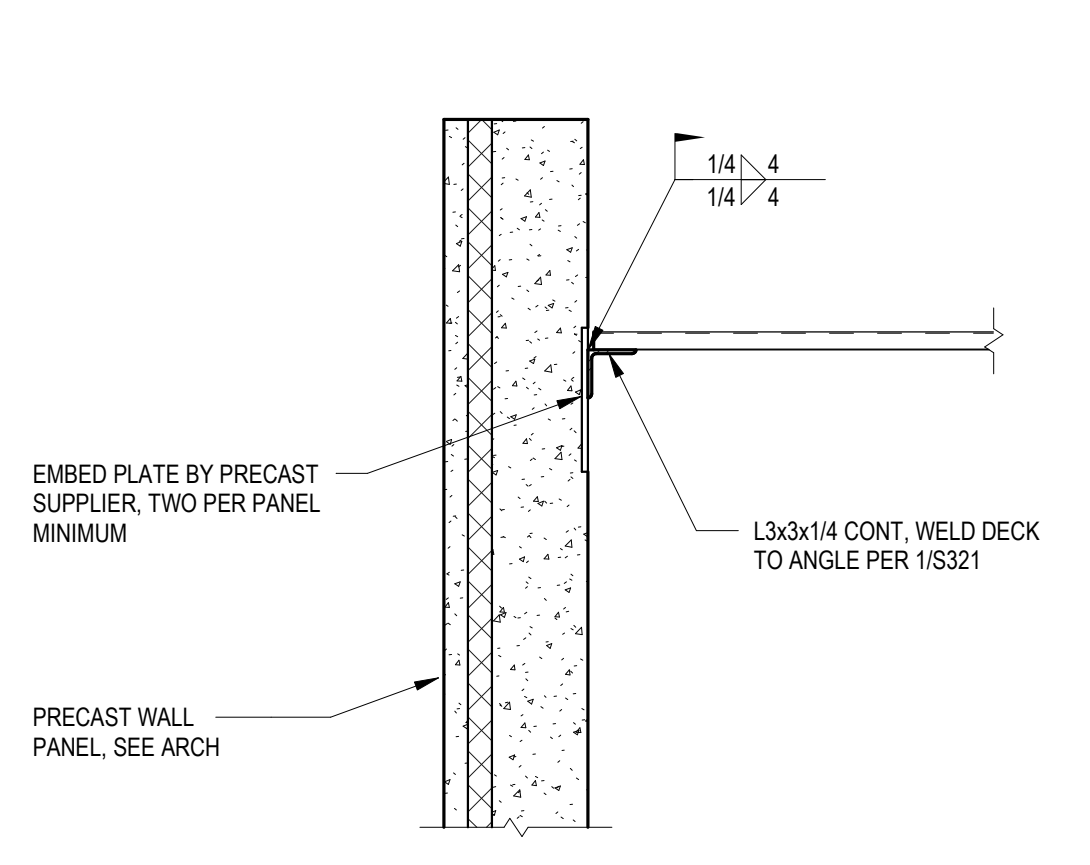
6 DETAIL  
S321



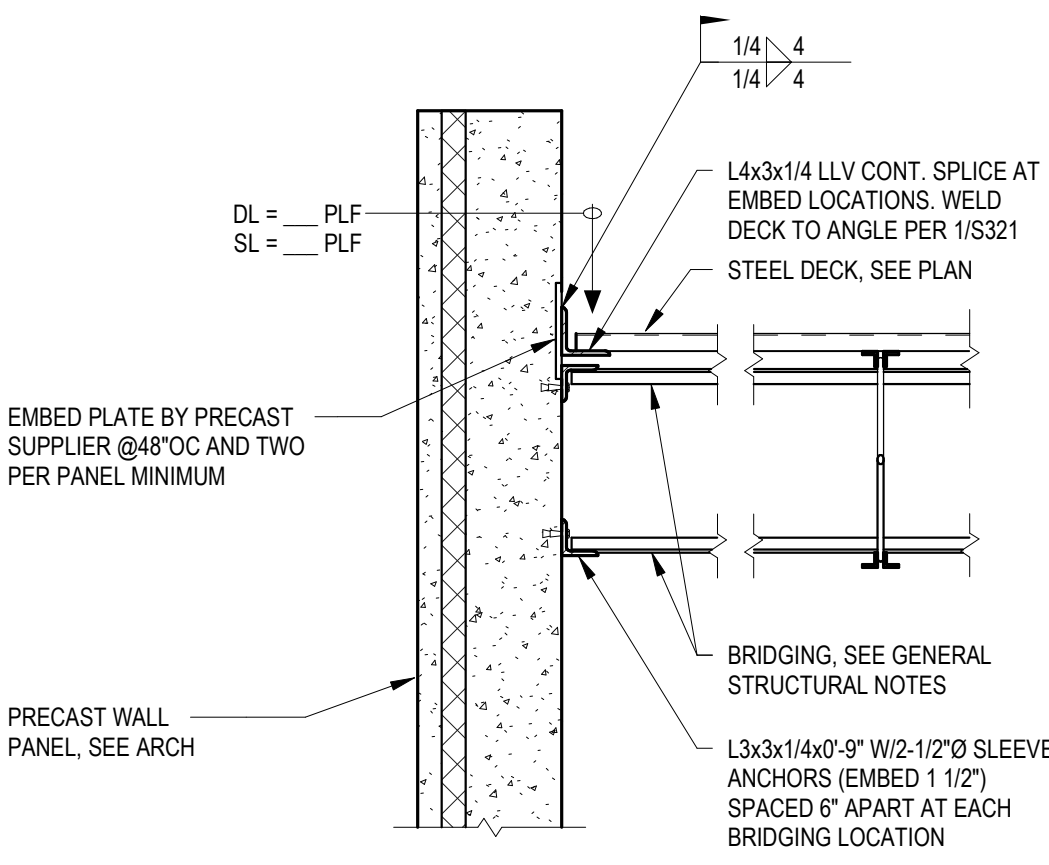
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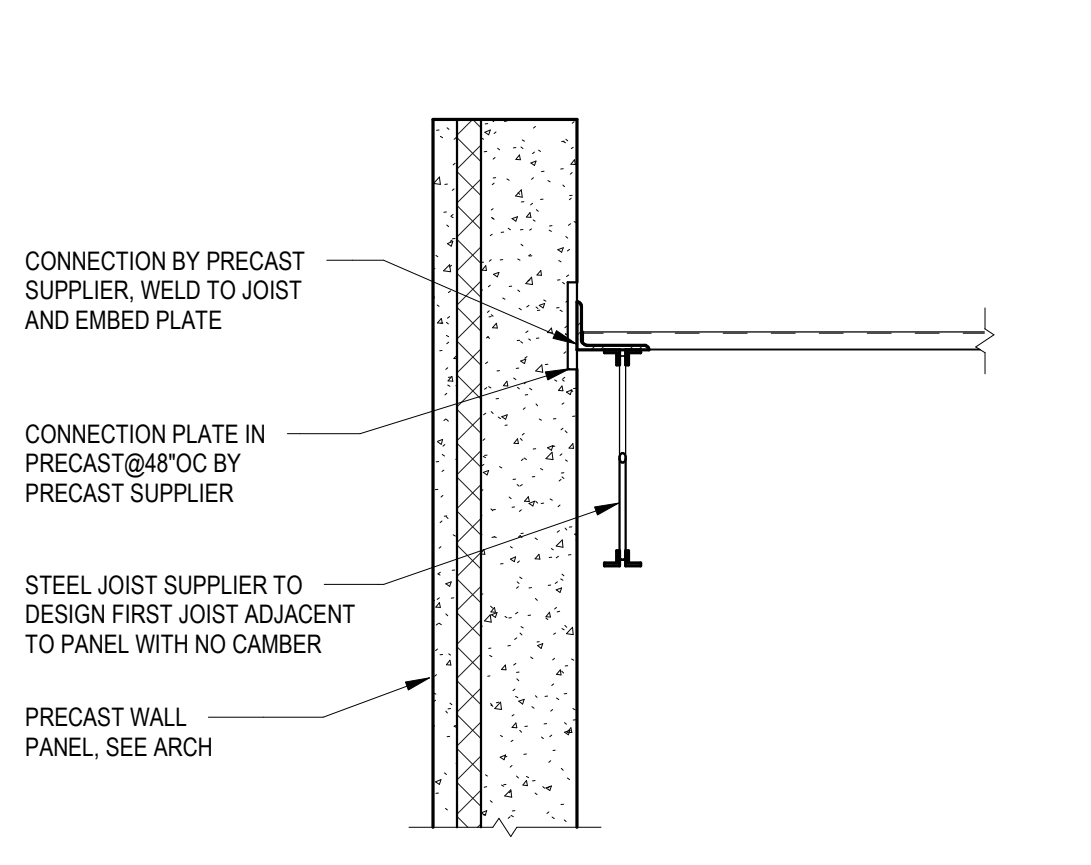
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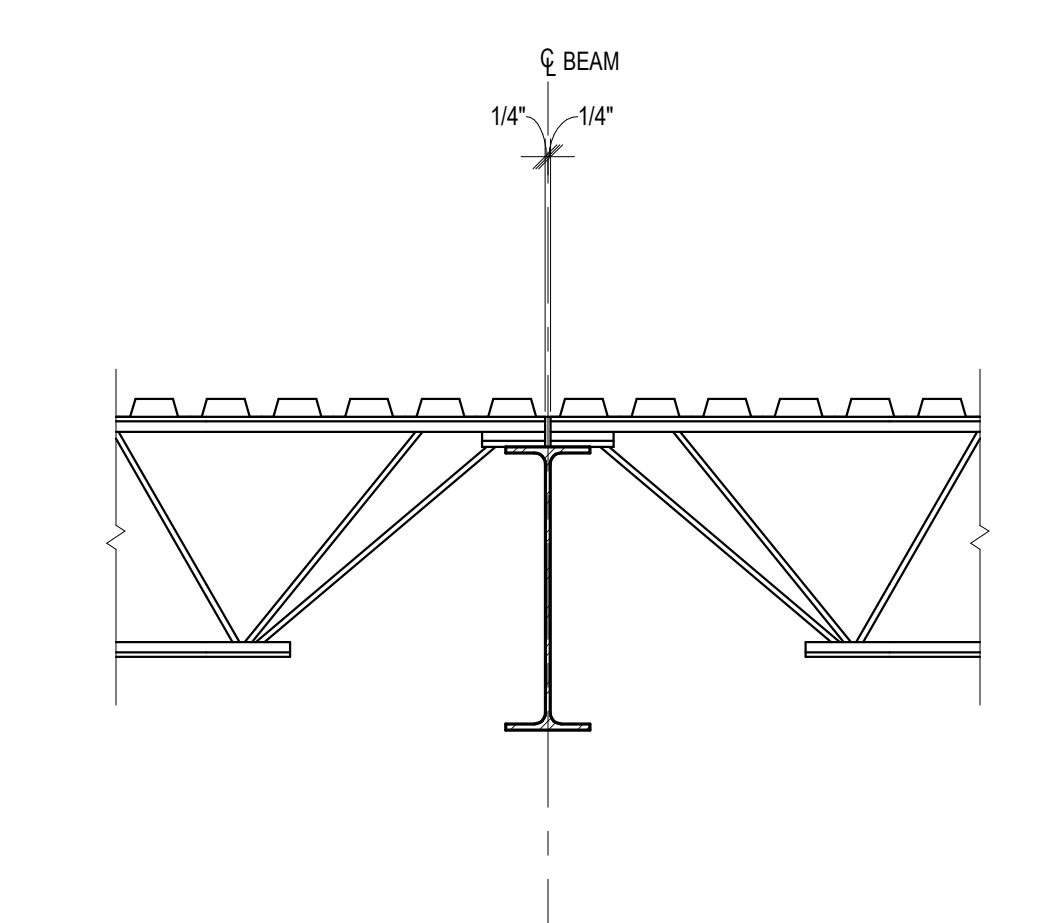
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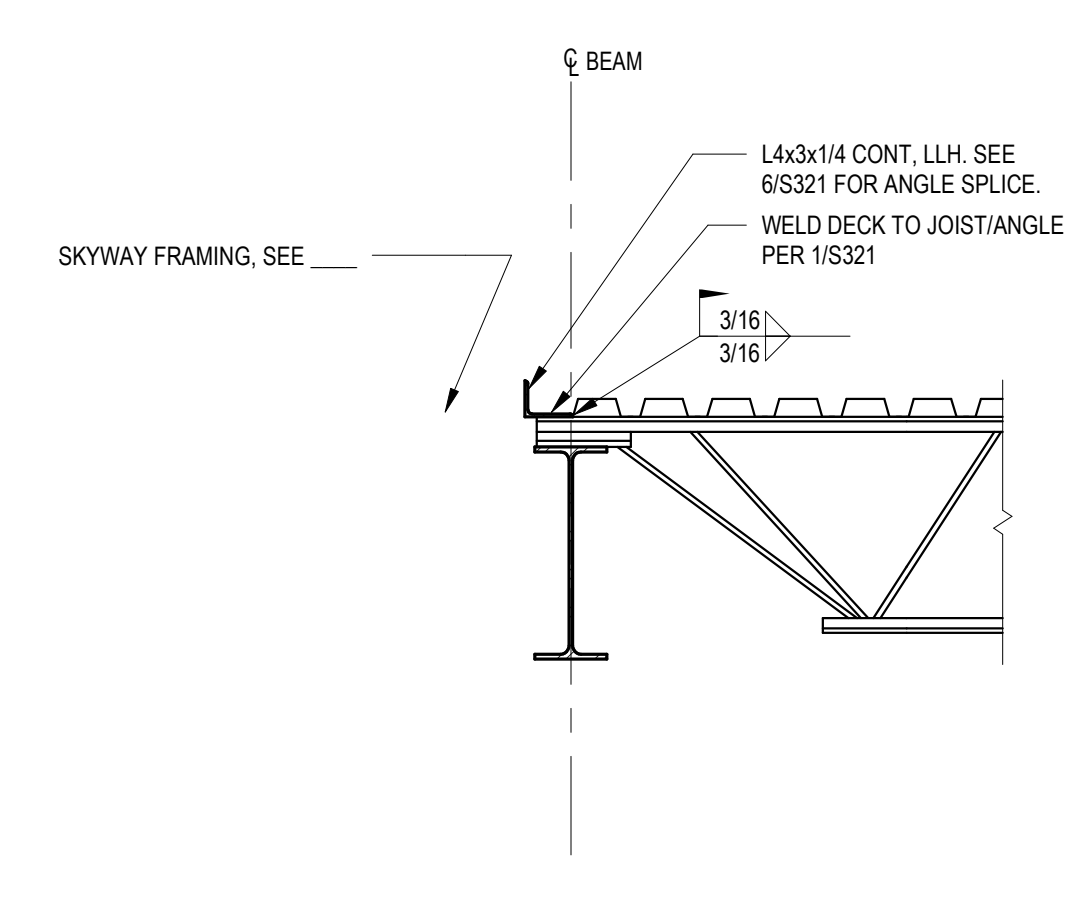
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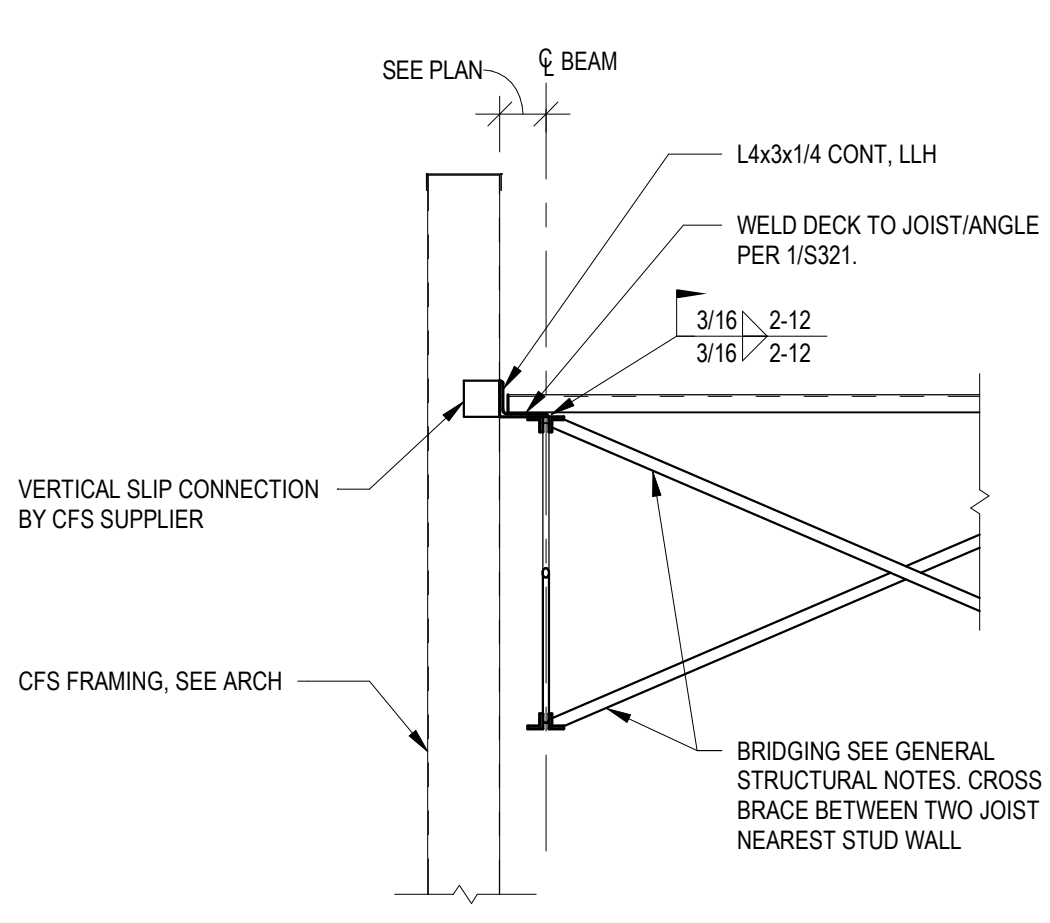
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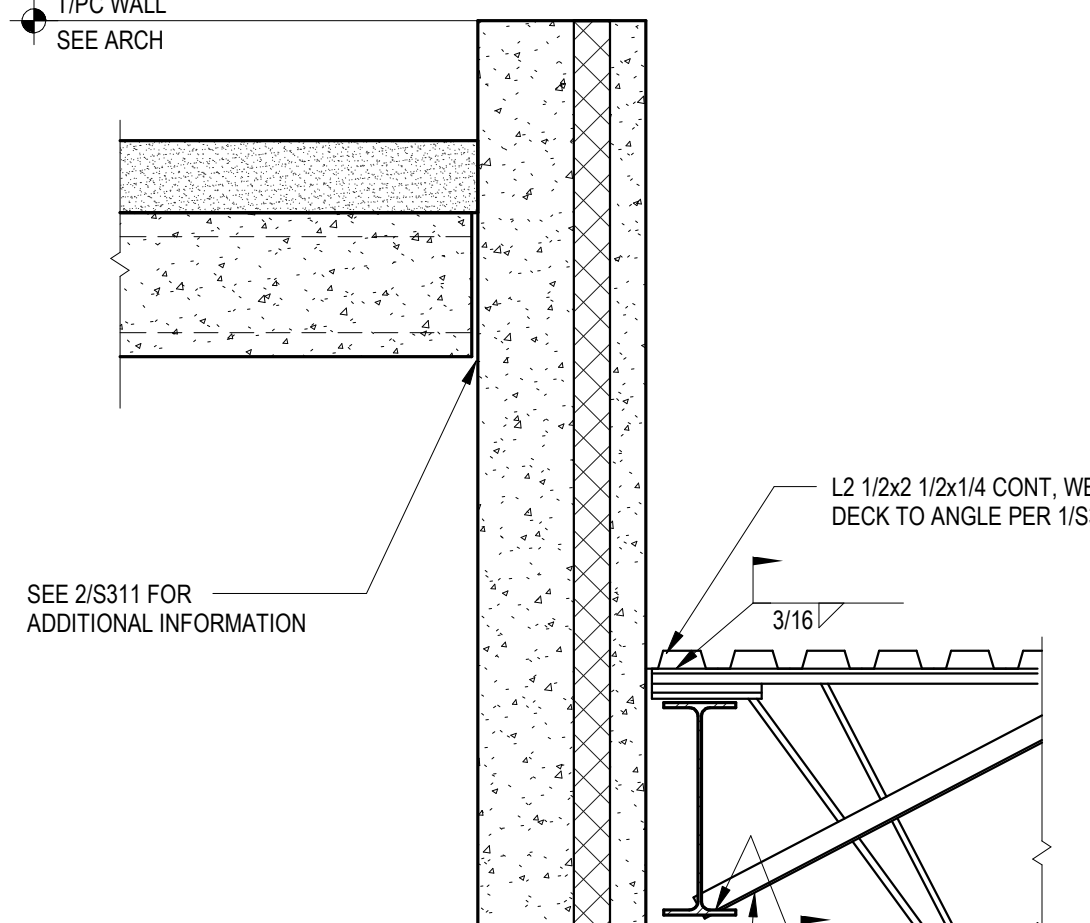
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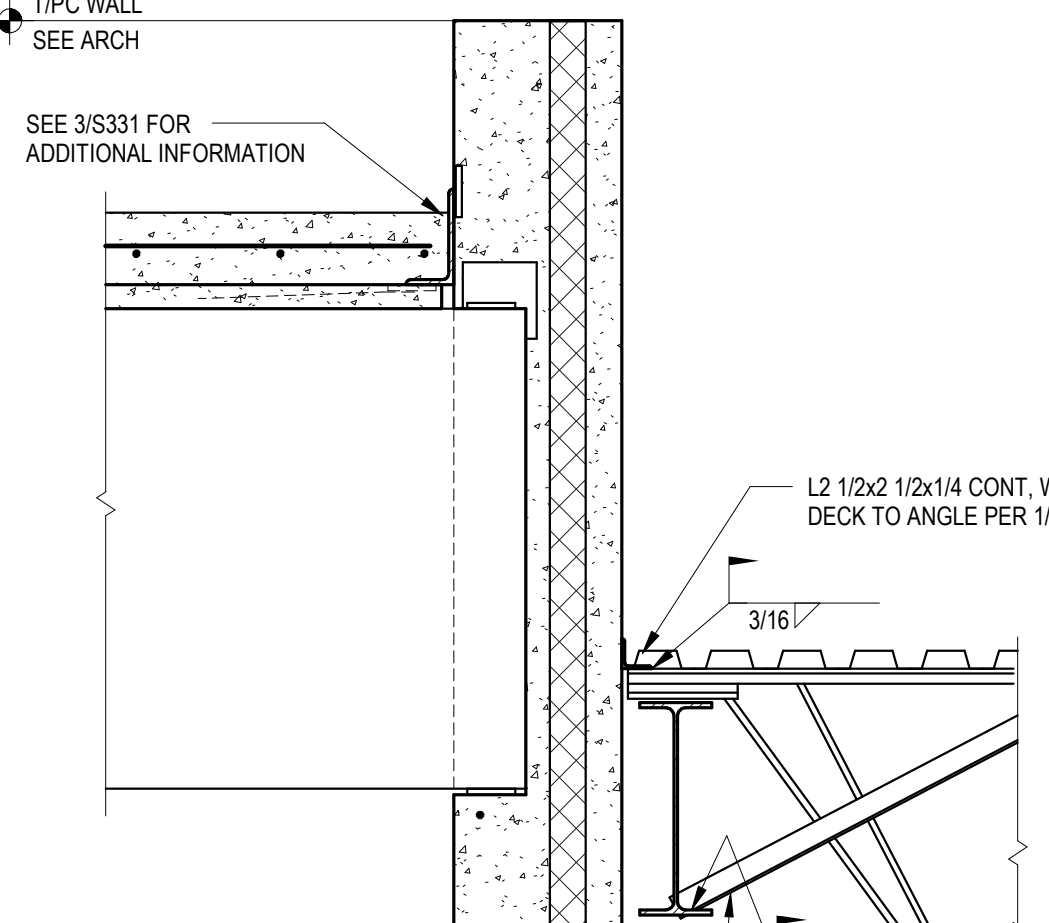
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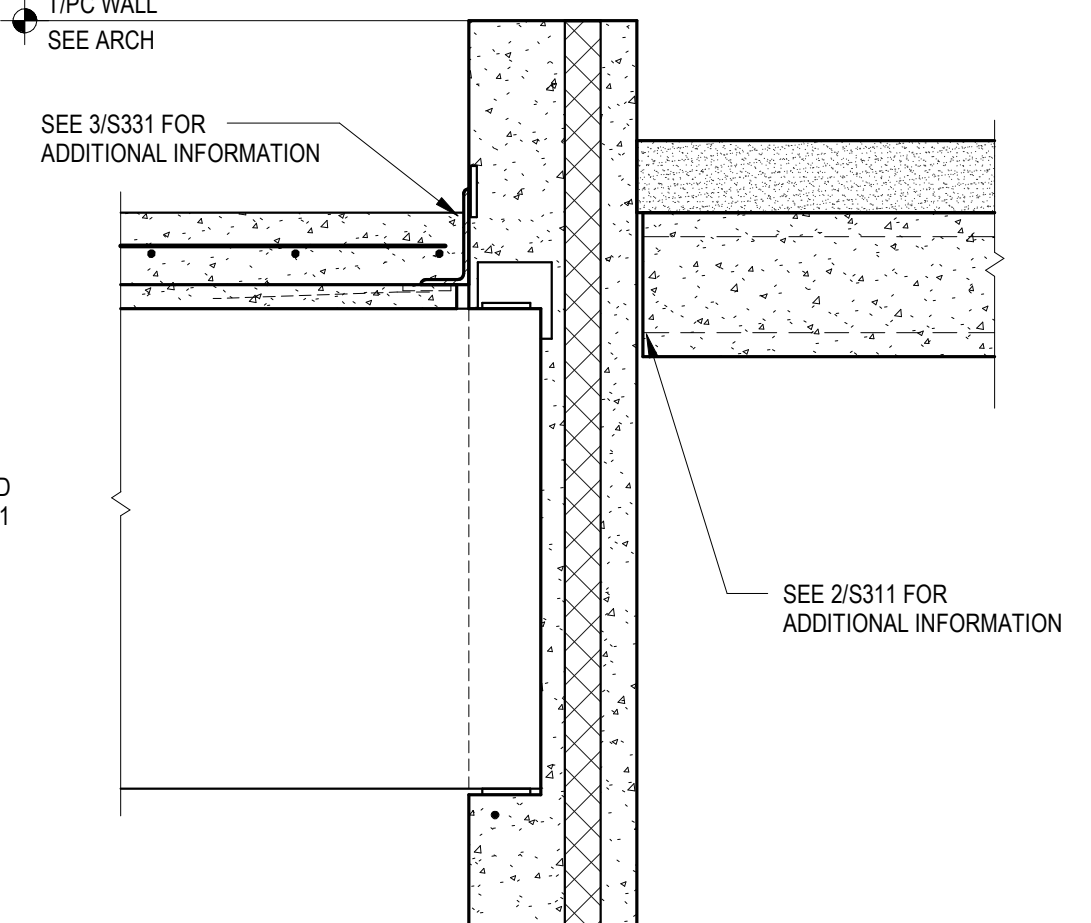
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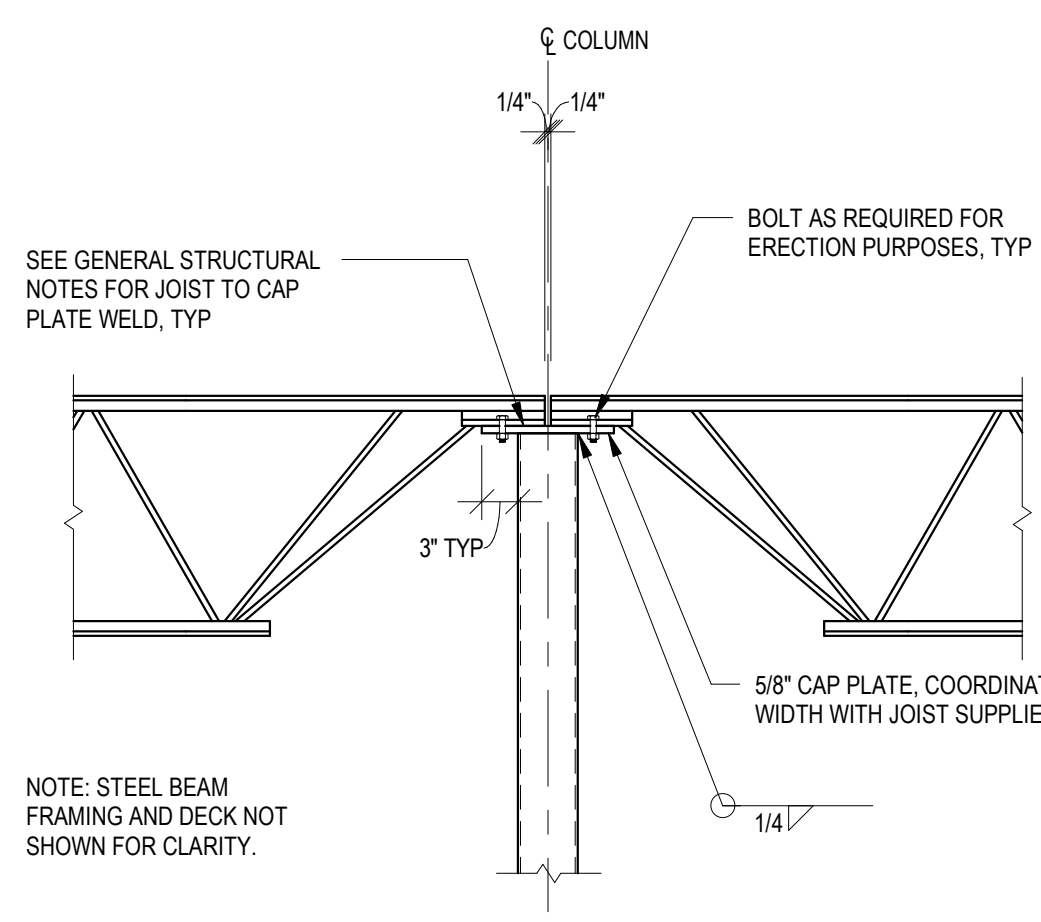
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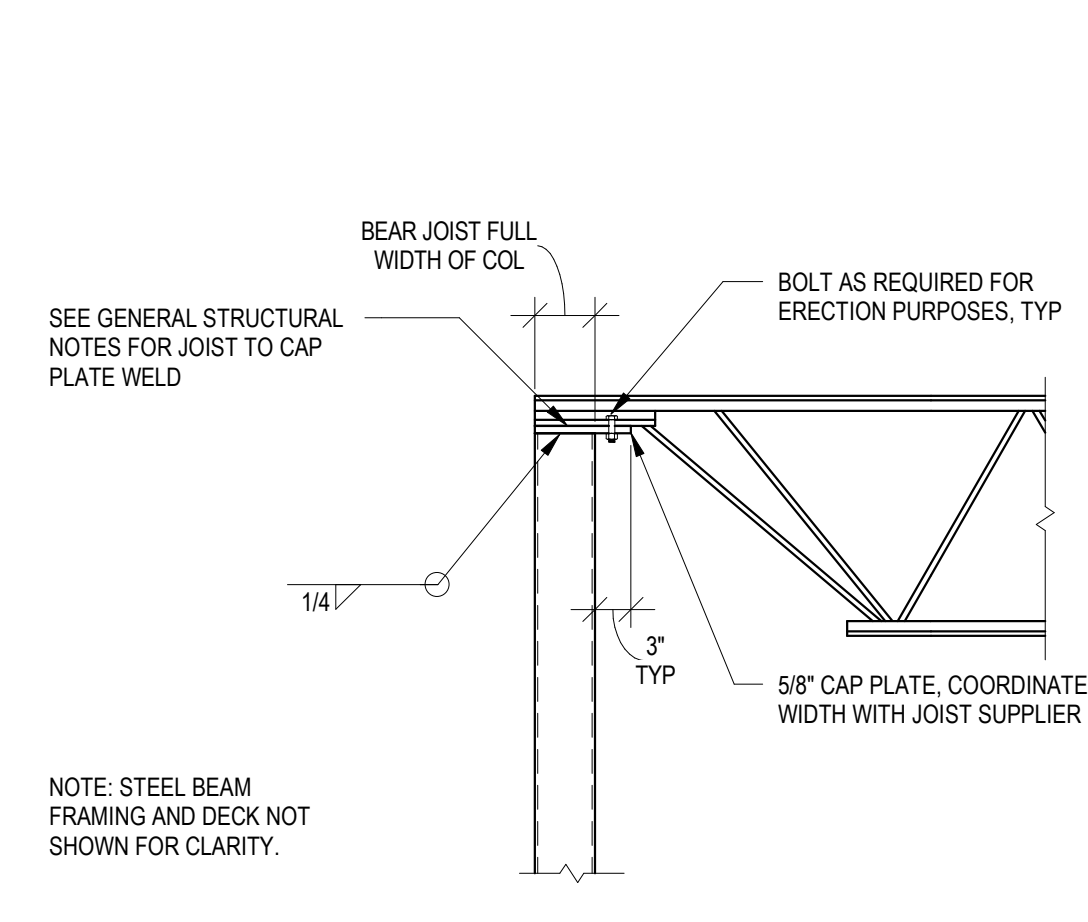
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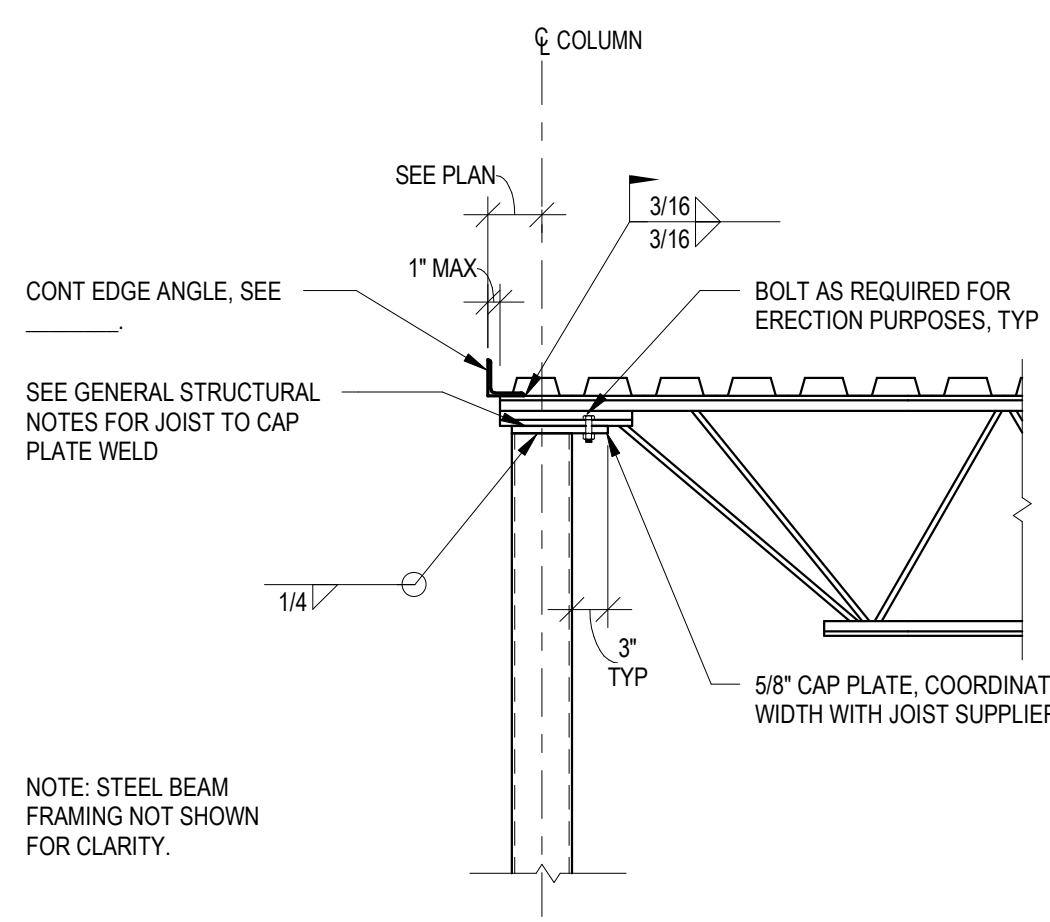
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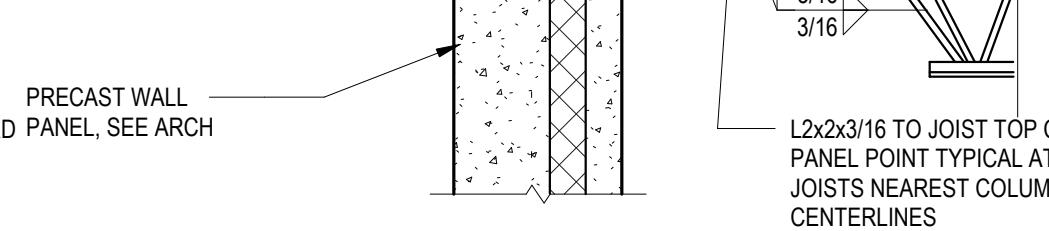
18 JOIST AT TUBE COLUMN, BEARING EACH SIDE  
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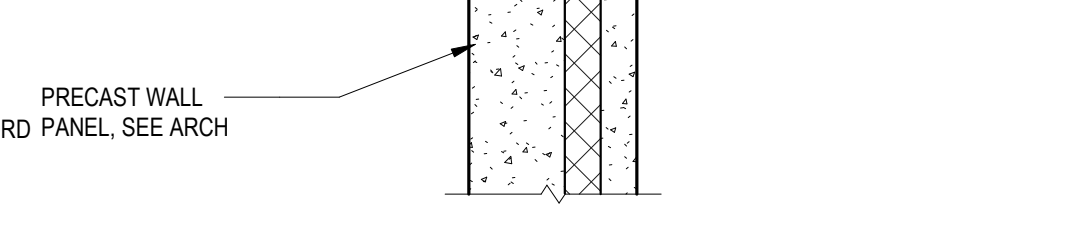
19 JOIST AT TUBE COLUMN, BEARING ONE SIDE  
S321



20 JOIST AT TUBE COLUMN AT DECK EDGE  
S321



16 SECTION  
S321



17 SECTION  
S321

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Project Number: 23008.003  
Date: 05/07/2025

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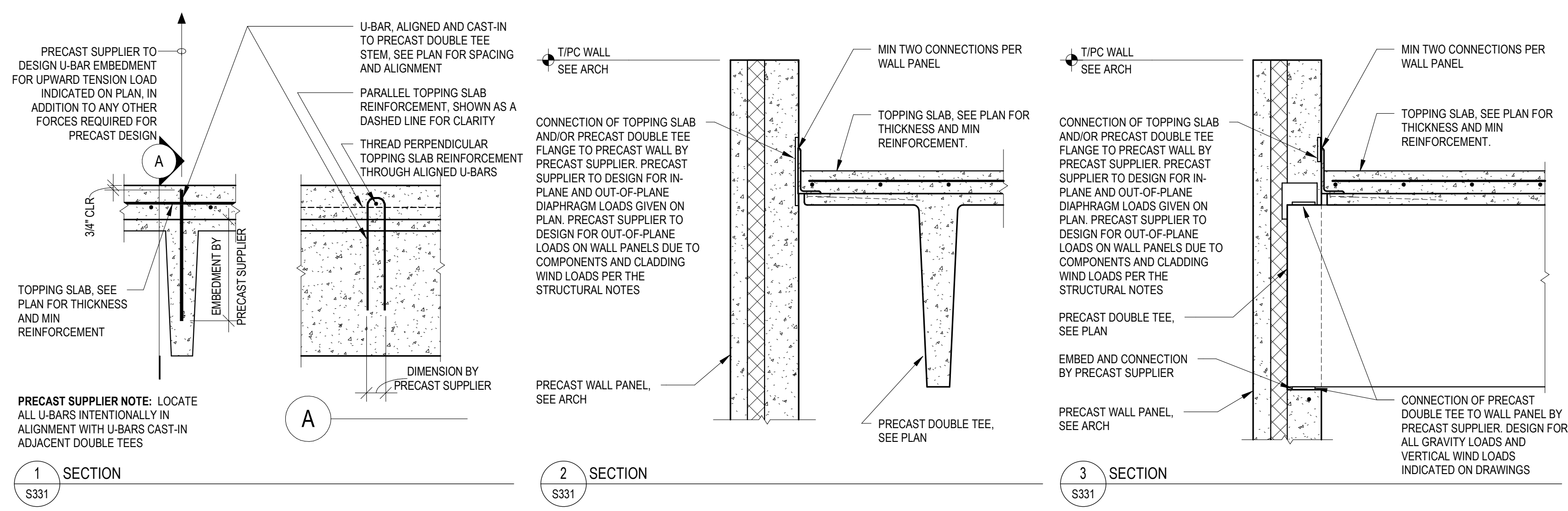
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**SECTIONS AND DETAILS**

SHEET NUMBER:  
**S321**





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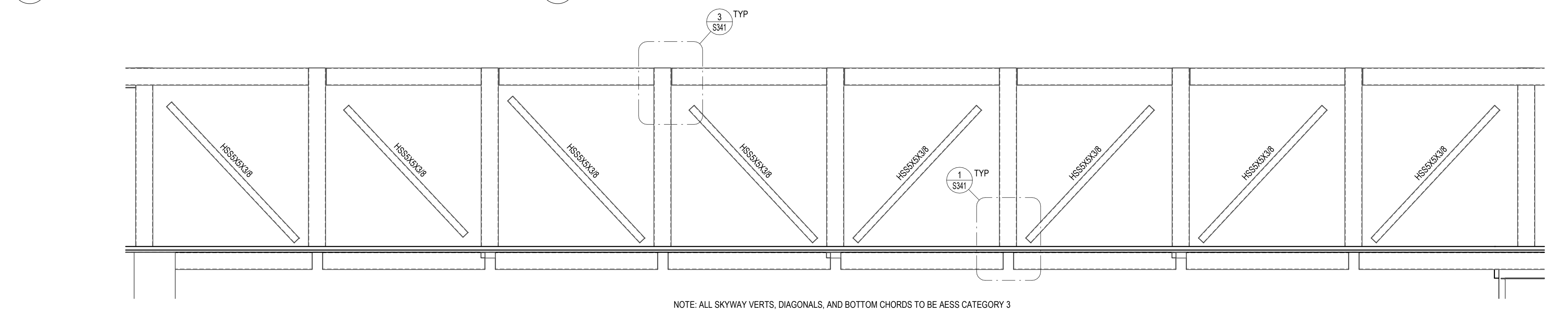
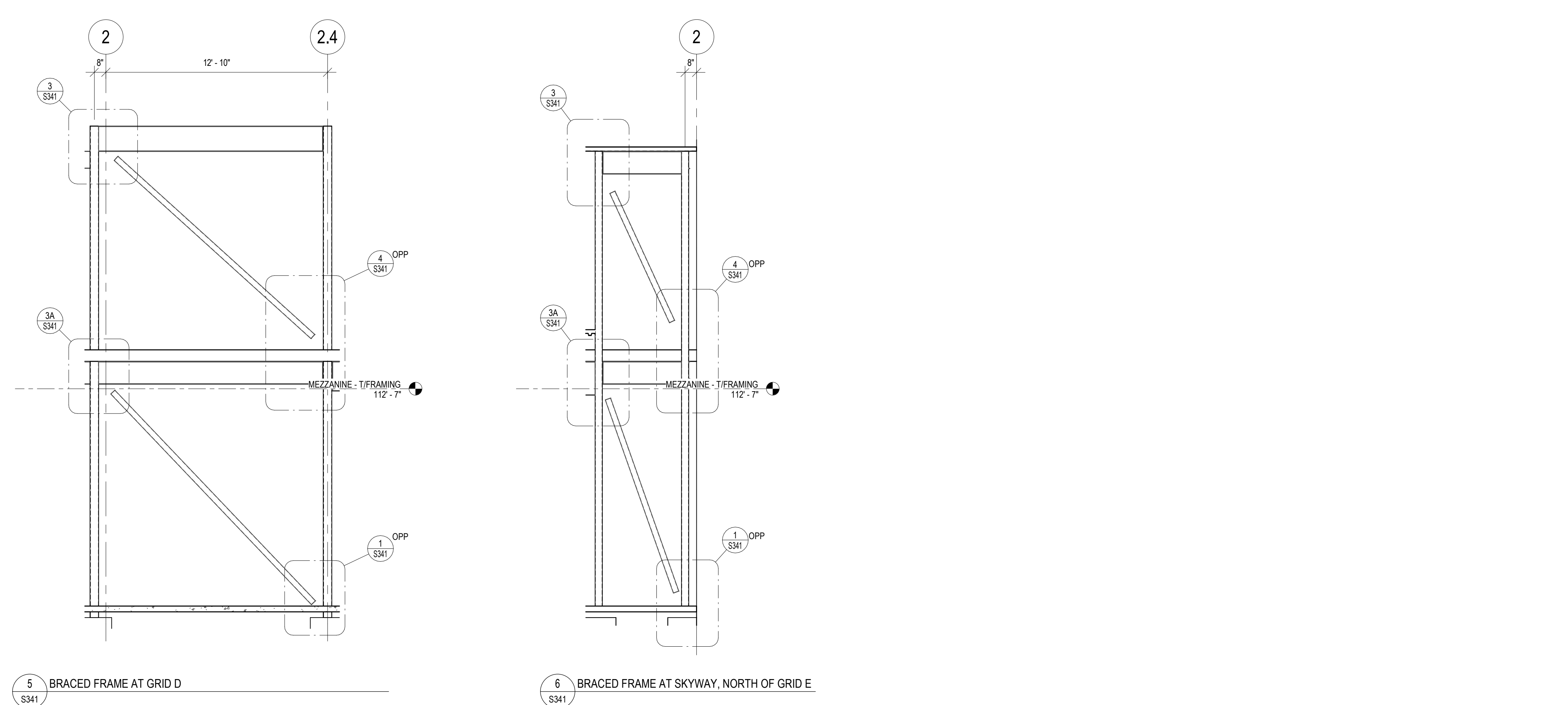
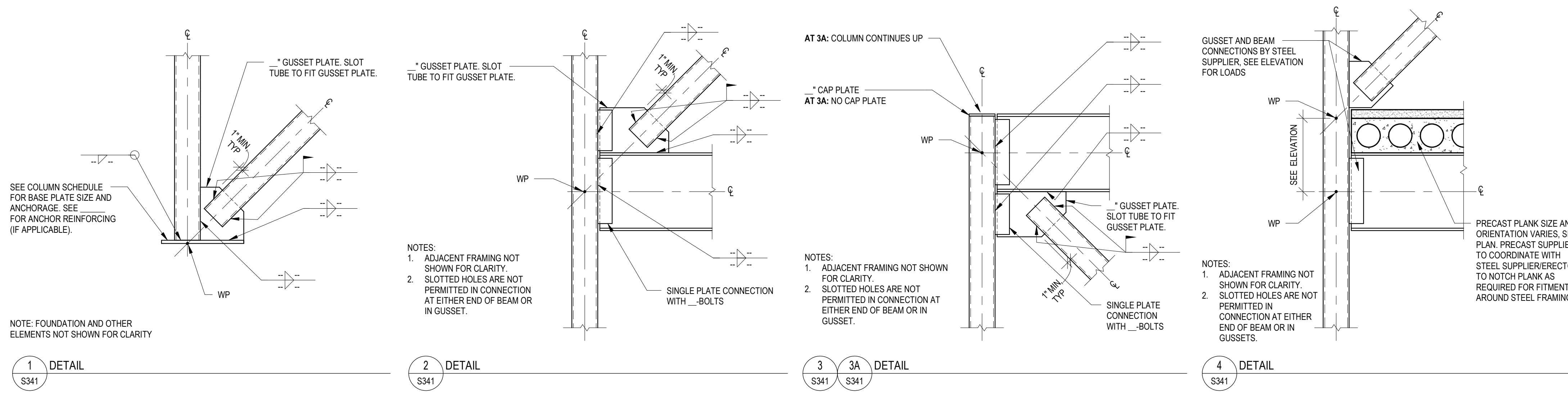
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DATE 05/07/2025 \_\_\_\_\_

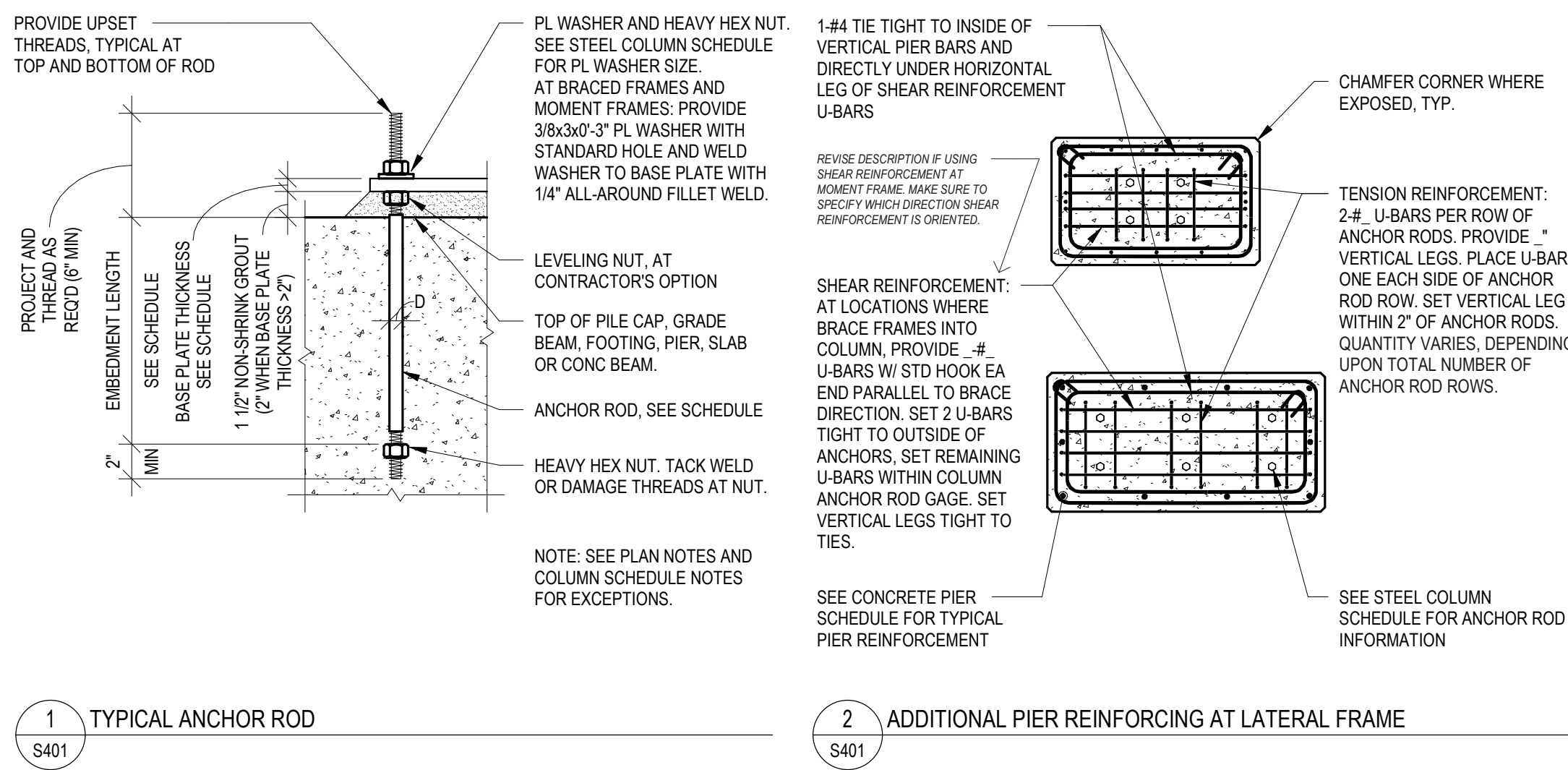
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**SECTIONS AND DETAILS**

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**S341**



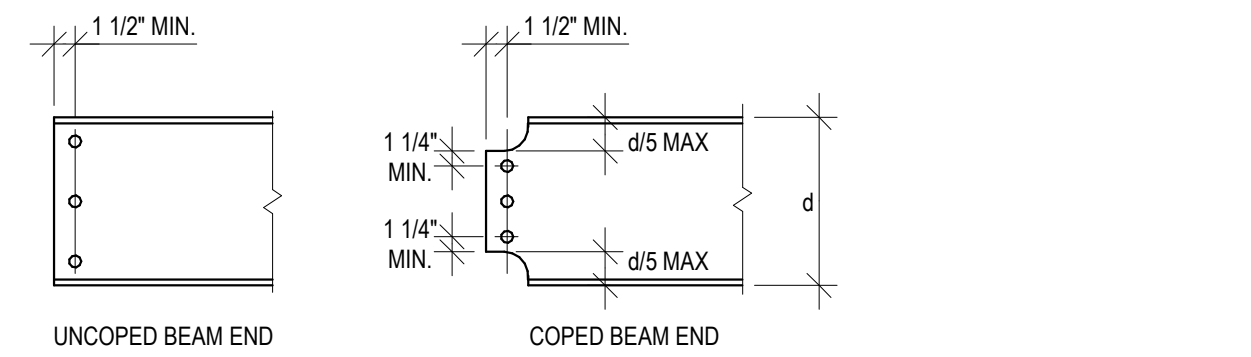


AESS CATEGORY MATRIX							
CHARACTERISTICS	CATEGORY	AESS C	AESS 4	AESS 3	AESS 2	AESS 1	SSS
		CUSTOM ELEMENTS	SHOWCASE ELEMENTS	FEATURE ELEMENTS IN CLOSE VIEW (<20 FT)	FEATURE ELEMENTS NOT IN CLOSE VIEW (>20 FT)	BASIC ELEMENTS	STANDARD STRUCTURAL STEEL
1.1 SURFACE PREPARATION TO SSPC-SP 6			X	X	X	X	
1.2 SHARP EDGES GROUND SMOOTH			X	X	X	X	
1.3 CONTINUOUS WELD APPEARANCE			X	X	X	X	
1.4 STANDARD STRUCTURAL BOLTS			X	X	X	X	
1.5 WELD SPATTERS REMOVED			X	X	X	X	
2.1 VISUAL SAMPLES		OPTIONAL	OPTIONAL	OPTIONAL			
2.2 ONE-HALF STANDARD FABRICATION TOLERANCES			X	X	X		
2.3 FABRICATION MARKS NOT APPARENT			X	X	X		
2.4 WELDS UNIFORM AND SMOOTH			X	X	X		
3.1 MILL MARKS REMOVED			X	X			
3.2 BUTT AND PLUG WELDS GROUND SMOOTH AND FILLED			X	X			
3.3 HSS WELD SEAM ORIENTED FOR REDUCED VISIBILITY			X	X			
3.4 CROSS SECTIONAL ABUTTING SURFACE ALIGNED			X	X			
3.5 JOINT GAP TOLERANCES MINIMIZED			X	X			
3.6 ALL WELDED CONNECTIONS		OPTIONAL	OPTIONAL				
4.1 HSS SEAM NOT APPARENT			X				
4.2 WELDS CONTOURED AND BLENDED			X				
4.3 SURFACES FILLED AND SANDED			X				
4.4 WELD SHOW-THROUGH MINIMIZED			X				
C.1 ROLLED MEMBERS MINIMIZE DISTORTION							
C.2							
C.3							
C.4							
C.5							

- NOTES:
- PRIOR TO BLAST CLEANING, GREASE AND OIL ARE REMOVED BY SOLVENT CLEANING TO MEET SSPC-SP 1.
  - ROUGH SURFACES ARE DEBURRED AND GROUND SMOOTH. SHARP EDGES RESULTING FROM FLAME CUTTING, GRINDING, AND ESPECIALLY SHEARING ARE SOFTENED.
  - INTERMITTENT WELDS ARE MADE CONTINUOUS, EITHER WITH ADDITIONAL WELDING, CAULKING, OR BODY FILLER. FOR CORROSIVE ENVIRONMENTS, ALL JOINTS ARE SEAL WELDED. SEAMS OF HOLLOW STRUCTURAL SECTIONS ARE ACCEPTABLE AS PRODUCED.
  - ALL BOLT HEADS IN CONNECTIONS ARE ON THE SAME SIDE, AS SPECIFIED, AND CONSISTENT FROM ONE CONNECTION TO ANOTHER.
  - WELD SPATTER, SLIVERS, AND SURFACE DISCONTINUITIES ARE REMOVED. WELD PROJECTION UP TO 1/16" (2mm) IS ACCEPTABLE FOR BUTT AND PLUG WELD JOINTS.
  - VISUAL SAMPLES ARE EITHER A 3-D RENDERING, A PHYSICAL SAMPLE, A FIRST-OFF INSPECTION, A SCALED MOCK-UP, OR A FULL SCALE MOCK-UP, AS SPECIFIED IN THE CONTRACT DOCUMENTS.
  - THESE TOLERANCES ARE ONE-HALF OF THOSE FOR STANDARD STRUCTURAL STEEL AS SPECIFIED IN AISC CODE OF STANDARD PRACTICE.
  - MEMBERS MARKINGS DURING THE FABRICATION AND ERECTION PROCESSES ARE NOT VISIBLE.
  - ALL MILL MARKS ARE NOT VISIBLE IN THE FINISHED PRODUCT.
  - CAULKING OR BODY FILLER IS ACCEPTABLE.
  - SEAMS ARE ORIENTED AWAY FROM VIEW OR AS INDICATED IN THE CONTRACT DOCUMENTS.
  - THE MATCHING OF ABUTTING CROSS SECTIONS IS REQUIRED.
  - THIS CHARACTERISTIC IS SIMILAR TO 2.2 ABOVE. A CLEAR DISTANCE BETWEEN ABUTTING MEMBERS OF 1/8" (3mm) IS REQUIRED.
  - HIDDEN BOLTS MAY BE CONSIDERED.
  - HSS SEAMS ARE TREATED SO THEY ARE NOT APPARENT.
  - IN ADDITION TO A CONTOURED AND BLENDED APPEARANCE, WELDED TRANSITIONS BETWEEN MEMBERS ALSO ARE CONTOURED AND BLENDED.
  - THE STEEL SURFACE IMPERFECTIONS ARE FILLED AND SANDED.
  - WELD SHOW-THROUGH ON THE BACK SIDE OF A WELDED ELEMENT CAN BE MINIMIZED BY HAND GRINDING THE BACK SIDE SURFACE. THE DEGREE OF WELD-THROUGH IS A FUNCTION OF WELD SIZE AND MATERIAL.
  - ADDITIONAL CHARACTERISTICS MAY BE ADDED FOR CUSTOM ELEMENTS.

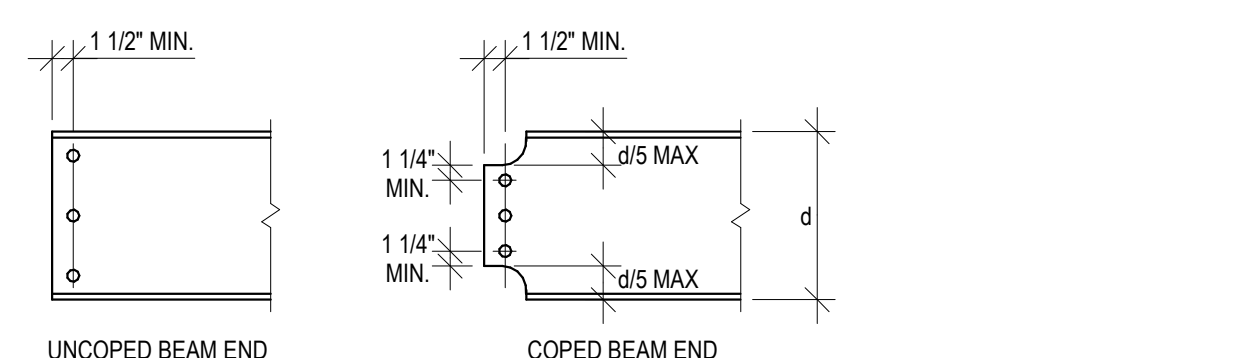
BOLTED - DOUBLE ANGLE CONNECTION TABLE				
BEAM SIZE	# OF BOLT ROWS	$\Phi_R$ (K) COPED	$\Phi_R$ (K) UNCOPED	REMARKS
W8x10-W8x31, W10x12-W10x22	2	19 (13 FOR W8x10, 17 FOR W8x31)	40 (30 FOR W8x10, 35 FOR W10x12)	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=7K W/OUT STIFFENER)
W8x35-W8x48, W10x26-W10x49	2	27	51 (46 FOR W10x26)	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=13K W/OUT STIFFENER)
W8x58-LARGER, W10x54-LARGER	2	41	61	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=19K W/OUT STIFFENER)
W12x14, W12x26, W14x22	3	36 (32 FOR W12x14)	58 (53 FOR W12x14)	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=20K W/OUT STIFFENER)
W12x30-W12x40, W14x26-W14x43, W16x26-W16x40, W18x35-W18x40	3	43	66	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=25K W/OUT STIFFENER)
W12x45-LARGER, W14x49-LARGER, W16x45-LARGER, W18x46-LARGER	3	58	88	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=33K W/OUT STIFFENER)
ALL W21 AND W24	4	81	123	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=73K W/OUT STIFFENER)
ALL W27 AND W30	5	136	196	
ALL W33 AND W36	6	187	271	
BEAMS AS NOTED	7	193	271	UNCOPED CAPACITY ASSUMES $h_w=0.36$
BEAMS AS NOTED	8	222	247	UNCOPED CAPACITY ASSUMES $h_w=0.36$
BEAMS AS NOTED	9	256	278	UNCOPED CAPACITY ASSUMES $h_w=0.36$
BEAMS AS NOTED	10	308	308	UNCOPED CAPACITY ASSUMES $h_w=0.36$

- UNLESS NOTED OTHERWISE:  
\*ASSUMES AISC STANDARD CONNECTION CONFIGURATION.
- ALL BOLTS 3/4" A325-N.
  - ALL ANGLES MINIMUM 5/16" THICK ASTM A36. ALL BEAMS ASTM A992.
  - FOR COPED BEAM  $L_{eh} \geq 1 1/2'$  MINIMUM.  $L_{ev} \geq 1 1/4'$  MINIMUM (PARAMETERS PER AISC 15TH EDITION). MAXIMUM COPE LENGTH = 5". MAXIMUM COPE DEPTH 20% OF BEAM DEPTH.
  - HORIZONTAL SHORT SLOTTED HOLES PERMITTED IN BEAM WEB AND OUTSTANDING ANGLE LEGS.
  - COORDINATE ANGLE LENGTHS WITH DRAWINGS AND COORDINATE BOLT LOCATIONS FOR ERECTION PURPOSES.
  - BEAMS REQUIRING ADDITIONAL BOLTS WILL BE NOTED ON THE DRAWINGS THUS: "DA-X" (X=NUMBER OF ROWS OF BOLTS).
  - CAPACITIES SHOWN REPRESENT MINIMUM CONNECTION CAPACITY FOR THE RANGE OF SIZES GIVEN.



SINGLE PLATE CONNECTION TABLE				
BEAM SIZE	# OF BOLT ROWS	$\Phi_R$ (K) COPED	$\Phi_R$ (K) UNCOPED	REMARKS
W8x10-W8x31, W10x12-W10x22	2	19 (13 FOR W8x10, 17 FOR W8x31)	25	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=7K W/OUT STIFFENER)
W8x35-W8x48, W10x26-W10x54	2	25	25	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=13K W/OUT STIFFENER)
W8x58-LARGER, W10x60-LARGER	2	25	25	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=19K W/OUT STIFFENER)
W12x14-W12x30, W14x22-W14x30	3	36 (32 FOR W12x14, 36 FOR W12x16)	43	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=19K W/OUT STIFFENER)
W12x35-LARGER, W14x34-LARGER	3	43	43	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=28K W/OUT STIFFENER)
W16x26-W16x40, W18x35-W18x40	4	58	62	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH $\geq 3'$ (MAX CAPACITY=45K W/OUT STIFFENER)
W18x45-LARGER, W18x46-LARGER	4	62	62	
ALL W21 AND W24	5	80	80	USE ONLY WHERE NOTED FOR W24'S
ALL W27 AND W30	6	85	85	USE ONLY WHERE NOTED
ALL W33 AND W36	7	111	111	USE ONLY WHERE NOTED

- UNLESS NOTED OTHERWISE:  
\*ASSUMES AISC STANDARD CONNECTION CONFIGURATION.
- ALL BOLTS 3/4" A325-N. PLATE WELDS 2-1/4" FULL LENGTH FILLET WELDS.
  - ALL PLATES 5/16" THICK ASTM A36. ALL BEAMS ASTM A992.
  - FOR COPED BEAM  $L_{eh} \geq 1 1/2'$  MINIMUM.  $L_{ev} \geq 1 1/4'$  MINIMUM (PARAMETERS PER AISC 15TH EDITION). MAXIMUM COPE LENGTH = 5". MAXIMUM COPE DEPTH = 20% OF BEAM DEPTH.
  - HORIZONTAL SHORT SLOTTED HOLES PERMITTED IN BEAM WEB.
  - COORDINATE PLATE LENGTH WITH DRAWINGS AND COORDINATE BOLT LOCATIONS FOR ERECTION PURPOSES.
  - BEAMS REQUIRING ADDITIONAL BOLTS WILL BE NOTED ON THE DRAWINGS THUS: "SP-X" (X=NUMBER OF ROWS OF BOLTS).
  - CAPACITIES SHOWN REPRESENT MINIMUM CONNECTION CAPACITY FOR THE RANGE OF SIZES GIVEN.
  - AT PURLINE TO HSS COLUMN CONNECTIONS, MINIMUM HSS TUBE WALL THICKNESS IS 1/4". PROVIDE DOUBLE ANGLE CONNECTION OR CONTACT EDGE IF MINIMUM IS NOT MET.



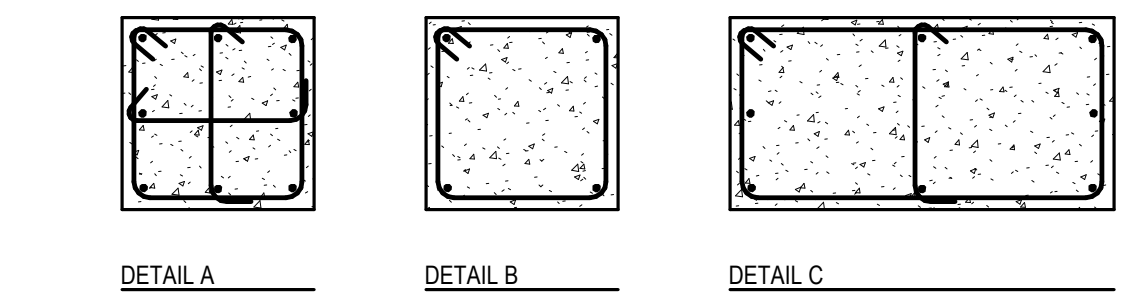
COLUMN FOOTING SCHEDULE				
MARK	FOOTING SIZE			REINFORCING
	WIDTH	LENGTH	THICKNESS	
CF3-0	3'-0"	3'-0"	1'-0"	3-#5 EACH WAY, BOTTOM
CF5-0	5'-0"	8'-0"	1'-4"	6-#5 EACH WAY, BOTTOM

CONTINUOUS WALL FOOTING SCHEDULE				
MARK	FOOTING SIZE		REINFORCING	
	WIDTH	THICKNESS		
WF2-0	2'-0"	1'-0"	2-#5 CONT. BOTTOM	
WF3-0	3'-0"	1'-0"	3-#5 CONT. BOTTOM	
WF8-0	8'-0"	3'-4"	8-#6 CONT. TOP AND BOTTOM	

CONCRETE PIER SCHEDULE				
MARK	SIZE	REINFORCING		REMARKS
CP1	32"Ø	18-#9 VERT. #4 TIES @12"OC		SEE _S_ FOR REINFORCING LAYOUT AT TOP. AT BASE PROVIDE #9 DOWELS MATCHING SIZE AND LOCATION OF BAR ABOVE. HOOK DOWELS 2' CLEAR BOTTOM OF FOOTING. PROJECT HALF DOWELS 2'-0" ABOVE TOP OF FOOTING AND REMAINING HALF 5'-0" ABOVE (ALTERNATE). PROVIDE MECHANICAL COUPLER BETWEEN DOWEL AND PIER VERT.
CP2	20"x20"	8-#7 VERT. #3 TIES @14"OC		SEE DETAIL 'X' FOR THE LAYOUT
CP3	24"x24"	8-#8 VERT. #3 TIES @14"OC		SEE DETAIL 'X' FOR THE LAYOUT

- UNLESS NOTED OTHERWISE:
- PROVIDE HOOKED DOWELS INTO FOOTING TO MATCH VERTICAL REINFORCING. PROJECT INTO PIER PER CLASS B TENSION LAP SPICE TABLE. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
  - PROVIDE CROSSTIES AS SHOWN WITH 90° HOOK ONE END AND 135° HOOK OTHER END. SIZE TO MATCH TIES. ALTERNATE THE CONFIGURATIONS MEETING ACI 318, SECTION 25.2.3.3 ARE ACCEPTABLE.
  - PROVIDE FIRST TIE MAXIMUM OF ONE-HALF THE SPACING ABOVE TOP OF FOOTING.
  - EXTEND TIES TO WITHIN ONE-HALF THE SPACING OF TOP OF PIER. PROVIDE MINIMUM OF 2-#4 OR 3-#3 TIES WITHIN 5'-0" OF TOP OF PIER.
  - EXTEND VERTICAL REINFORCEMENT TO 2' CLEAR TOP OF PIER.

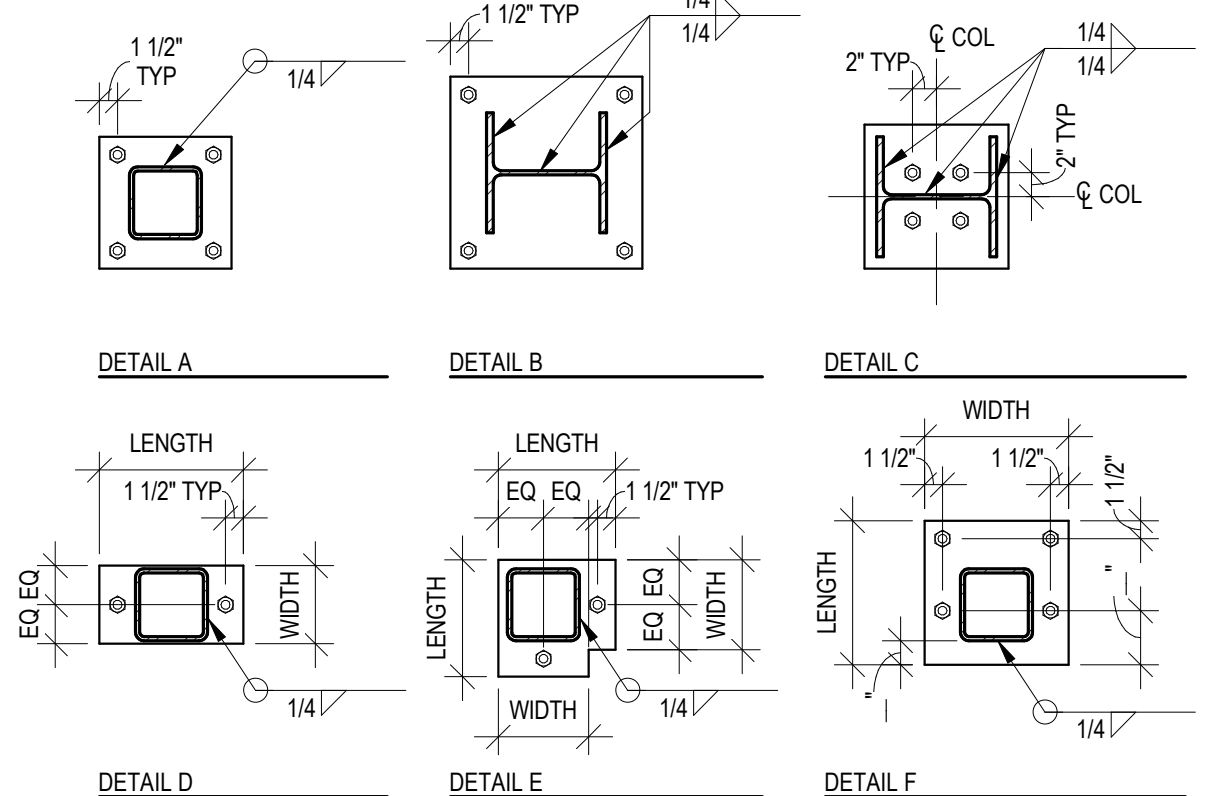
CONCRETE PIER BAR PLACEMENT DETAILS



STEEL COLUMN SCHEDULE		
MARK	SIZE	BASE PLATE
SC1	HSS54x59x16	
SC2	HSS66x69x16	

- UNLESS NOTED OTHERWISE:
- PROVIDE 5-3/8" UNHEADED ANCHOR RODS WITH HEX NUT AT EMBED END. SEE 1/5401. EXTEND 8" INTO CONCRETE TO TOP OF NUT.
  - PROVIDE 1 1/2" NON-SHRINK GROUT BELOW BASE PLATE.
  - PROVIDE 1/8"x2 1/2" PLATE WASHER AND NUT ON TOPSIDE OF BASE PLATE AT 3/4"Ø ANCHOR RODS. CIRCULAR OR SQUARE PLATE WASHERS ARE ACCEPTABLE. FOR LARGER ANCHOR RODS PROVIDE ALSO STANDARD PLATE WASHER SIZE FOR OVERSIZE ANCHOR ROD HOLES PER AISI MANUAL TABLE 14.2. SEE DETAIL 3/8503/33 FOR SPECIFIC PLATE WASHER SIZES AT BRACED FRAMES AND MOMENT FRAMES.
  - USE 1/2" COLUMN CAP PLATE AT TOP.

BASE PLATE DETAILS



BAR SIZE	CLASS 'A' TENSION LAP SPICE TABLE							
	$f'_c$ (psi)							
	2500	3000	3500	4000	5000	6000	7000	8000
#3	1'-6"	1'-5"	1'-4"	1'-3"	1'-1"	1'-0"	1'-0"	1'-0"
#4	2'-0"	1'-10"	1'-9"	1'-7"	1'-5"	1'-4"	1'-3"	1'-2"
#5	2'-6"	2'-4"	2'-2"	2'-0"	1'-10"	1'-8"	1'-6"	1'-5"
#6	3'-0"	2'-8"	2'-7"	2'-5"	2'-2"	2'-0"	1'-10"	1'-9"
#7	4'-0"	4'-0"	3'-9"	3'-6"	3'-2"	2'-10"	2'-8"	2'-6"
#8	5'-0"	4'-7"	4'-3"	4'-0"	3'-7"	3'-3"	3'-0"	2'-10"
#9	5'-6"	5'-2"	4'-10"	4'-6"	4'-0"	3'-8"	3'-5"	3'-2"
#10	6'-4"	5'-9"	5'-4"	5'-0"	4'-6"	4'-1"	3'-9"	3'-6"
#11	7'-1"	6'-4"	5'-10"	5'-6"	4'-11"	4'-6"	4'-2"	3'-11"

BAR SIZE	CLASS 'B' TENSION LAP SPICE TABLE							
	$f'_c$ (psi)							
	2500	3000	3500	4000	5000	6000	7000	8000
#3	1'-11"	1'-10"	1'-8"	1'-7"	1'-5"	1'-4"	1'-2"	1'-2"
#4	2'-7"	2'-5"	2'-3"	2'-1"	1'-11"	1'-9"	1'-7"	1'-6"
#5	3'-3"	3'-0"	2'-9"	2'-7"	2'-4"	2'-2"	2'-0"	1'-10"
#6	3'-11"	3'-7"	3'-4"	3'-1"	2'-10"	2'-7"	2'-4"	2'-3"
#7	5'-8"	5'-5"	4'-10"	4'-6"	4'-1"	3'-9"	3'-6"	3'-3"
#8	6'-6"	6'-2"	5'-6"	5'-2"	4'-8"	4'-3"	3'-11"	3'-8"
#9	7'-4"	6'-9"	6'-3"	5'-10"	5'-3"	4'-9"	4'-5"	4'-2"
#10	8'-3"	7'-6"	6'-11"	6'-6"	5'-9"	5'-3"	4'-11"	4'-7"
#11	9'-2"	8'-2"	7'-7"	7'-1"	6'-4"	5'-10"	5'-5"	5'-0"

- NOTES:
- THESE TABLES SHOW LENGTHS FOR PLAN. BOTTOM ASTM A615 GRADE 60 BARS IN NORMAL WEIGHT CONCRETE. MEETING THE SPACING AND COVER LIMITATIONS GIVEN BELOW. MULTIPLY THESE LENGTHS BY ALL OF THE APPLICABLE FACTORS GIVEN FOR OTHER CONDITIONS. SPECIFIC EMBEDMENT, LAP, OR PROJECTION LENGTHS SHOWN ON DRAWINGS GOVERN OVER THESE TABLES.
  - SPACING AND COVER REQUIREMENTS:
    - CLEAR SPACING BETWEEN BARS AT SPICE  $\geq 2d_b$  AND CLEAR COVER  $\geq d_b$  OR
    - CLEAR SPACING BETWEEN BARS AT SPICE  $\geq 2d_b$  AND CLEAR COVER  $\geq d_b$  AND STIRRUPS/TIES OVER FULL LENGTH OF SPICE. STIRRUPS/TIES TO BE SPACED SUCH THAT:
      - $s \times n \leq 16$  FOR #3 TIES/STIRRUPS
      - $s \times n \leq 20$  FOR #4 TIES/STIRRUPS
      - $s \times n \leq 30$  FOR #5 TIES/STIRRUPS
  - MULTIPLY GIVEN SPICE LENGTHS BY ALL THE FOLLOWING APPLICABLE FACTORS:
    - MULTIPLY BY 1.2 FOR #3 OR #4 EPOXY COATED BARS SPACED 4" MIN OC WITH 1 1/2" MIN CLEAR COVER.
    - MULTIPLY BY 1.3 FOR TOP BARS. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR.
    - MULTIPLY BY 1.2 FOR #3 OR #4 EPOXY COATED BARS SPACED 4" MIN OC WITH 1 1/2" MIN CLEAR COVER.
    - MULTIPLY BY 1.31 FOR OTHER EPOXY COATED TOP BARS.
    - MULTIPLY BY 1.5 FOR OTHER EPOXY COATED BARS (EXCEPT TOP BARS).
    - MULTIPLY BY 1.3 FOR LIGHTWEIGHT CONCRETE.
    - MULTIPLY BY 1/60 FOR BARS WITH YIELD STRESS  $\geq 60$  KSI.
  - USE CLASS 'B' TENSION LAP SPICES UNLESS SPECIFICALLY NOTED OTHERWISE.
  - COMPRESSION LAP LENGTH, ONLY WHERE NOTED, TO BE  $3d_b$ . INCREASE TO 44d FOR  $F_y = 75$  KSI, AND 57d FOR  $F_y = 90$  KSI.



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NOVA CLASSICAL ACADEMY  
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Project Name: NOVA CLASSICAL ACADEMY IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

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SHEET TITLE:  
**SCHEDULES AND DETAILS**

SHEET NUMBER:

**S401**

MECHANICAL ABBREVIATIONS				MECHANICAL SYMBOLS LEGEND									
AD	AREA DRAIN	ISO	ISOLATION EXHAUST	SYMBOL	DESIGNATIONS	SYMBOL	DESIGNATIONS	SYMBOL	DESIGNATIONS	SYMBOL	DESIGNATIONS	SYMBOL	DESIGNATIONS
A.F.F.	ABOVE FINISHED FLOOR	KW	KILOWATT	<b>GENERAL</b>									
AFMS	AIR FLOW MEASURING STATION	LAT	LEAVING AIR TEMPERATURE	<b>PIPE FITTINGS</b>									
AHU	AIR HANDLING UNIT	LAV	LAVATORY	<b>DUCTWORK</b>									
ANB	ACID NEUTRALIZING BASIN	LWT	LEAVING WATER TEMPERATURE	<b>MEDICAL GAS</b>									
AP	ACCESS PANEL	MBH	BTU PER HOUR (THOUSANDS)	<b>PLUMBING</b>									
ARCH	ARCHITECT	MCF	THOUSAND CUBIC FEET	<b>PIPE SPECIALTIES</b>									
AS	AIR SEPARATOR	MH	MANHOLE	<b>FIRE PROTECTION</b>									
BD	BUTTERFLY DAMPER	NC	NOISE CRITERIA OR NORMALLY CLOSED	<b>ANNOTATION</b>									
B/G	BELOW GRADE			<b>MECHANICAL PIPING</b>									
BTU	BRITISH THERMAL UNIT	NEG	NEGATIVE	<b>GENERAL DUTY VALVES</b>									
BWV	BACKWATER VALVE	NIC	NOT IN CONTRACT	<b>CONTROLS</b>									
CCF	HUNDRED CUBIC FEET	NO	NORMALLY OPEN	<b>MECHANICAL SYMBOLS LEGEND</b>									
CFH	CUBIC FEET PER HOUR	NTS	NOT TO SCALE	<b>GENERAL</b>									
CFM	CUBIC FEET PER MINUTE	OA	OUTSIDE AIR	<b>PIPE FITTINGS</b>									
CL	CENTER LINE	QBD	OPPOSED BLADE DAMPER	<b>DUCTWORK</b>									
CLG	CEILING	ORD	OVERFLOW ROOF DRAIN	<b>MEDICAL GAS</b>									
CO	CLEAN OUT	PD	PRESSURE DROP OR DIFFERENCE	<b>PLUMBING</b>									
CONTR	CONTRACTOR	PE	PNEUMATIC-ELECTRIC	<b>PIPE SPECIALTIES</b>									
CONV	CONVECTOR	PLBG	PLUMBING	<b>FIRE PROTECTION</b>									
CUH	CABINET UNIT HEATER	PRV	PRESSURE REDUCING VALVE OR POWER ROOF VENTILATOR	<b>ANNOTATION</b>									
CW	COLD WATER			<b>MECHANICAL PIPING</b>									
DB	DECIBEL	PSIA	POUNDS/SQ INCH ABSOLUTE	<b>GENERAL DUTY VALVES</b>									
DF	DRINKING FOUNTAIN	PSIG	POUNDS/SQ INCH GAUGE	<b>CONTROLS</b>									
DIA	DIAMETER	PVC	POLY VINYL CHLORIDE	<b>MECHANICAL SYMBOLS LEGEND</b>									
DIFF	DIFFUSER	RA	RETURN AIR	<b>GENERAL</b>									
DISCH	DISCHARGE	RCP	REINFORCED CONCRETE PIPE	<b>PIPE FITTINGS</b>									
DMPR	DAMPER	RD	ROOF DRAIN	<b>DUCTWORK</b>									
DN	DOWN	RECIRC	RECIRCULATING	<b>MEDICAL GAS</b>									
DR	DRAIN	REG	REGISTER	<b>PLUMBING</b>									
DSN	DOWNSPOUT NOZZLE	RET	RETURN	<b>PIPE SPECIALTIES</b>									
DWG	DRAWING	RH	RELATIVE HUMIDITY	<b>FIRE PROTECTION</b>									
EAT	ENTERING AIR TEMPERATURE	RHT	REHEAT	<b>ANNOTATION</b>									
EDR	EQUIVALENT DIRECT RADIATION	RHC	REHEAT COIL	<b>MECHANICAL PIPING</b>									
EP	ELECTRIC-PNEUMATIC	RHW	RECIRCULATED HOT WATER	<b>GENERAL DUTY VALVES</b>									
EW	ELECTRIC WATER COOLER	RLF	RELIEF	<b>CONTROLS</b>									
EWT	ENTERING WATER TEMPERATURE	RM	ROOM	<b>MECHANICAL SYMBOLS LEGEND</b>									
EXH	EXHAUST	RPM	REVOLUTIONS PER MINUTE	<b>GENERAL</b>									
EXP	EXPANSION	RPZ	REDUCED ZONE BACKFLOW PREVENTER	<b>PIPE FITTINGS</b>									
F	FAHRENHEIT			<b>DUCTWORK</b>									
FC	FAN COIL	SA	SUPPLY AIR	<b>MEDICAL GAS</b>									
FCO	FLOOR CLEAN OUT	SAN	SANITARY	<b>PLUMBING</b>									
FD	FLOOR DRAIN	SCFM	CFM, STANDARD CONDITIONS	<b>PIPE SPECIALTIES</b>									
FHC	FIRE HOSE CABINET	SD	SMOKE DAMPER	<b>FIRE PROTECTION</b>									
FHR	FIRE HOSE RACK	SP	STATIC PRESSURE	<b>ANNOTATION</b>									
FLR	FLOOR	SPECS	SPECIFICATIONS	<b>MECHANICAL PIPING</b>									
FLEX	FLEXIBLE	SUP	SUPPLY	<b>GENERAL DUTY VALVES</b>									
FM	FIRE MAIN	SQ	SQUARE	<b>CONTROLS</b>									
FPM	FEET PER MINUTE	STM	STEAM	<b>MECHANICAL SYMBOLS LEGEND</b>									
FPS	FEET PER SECOND	TD	TEMPERATURE DIFFERENCE	<b>GENERAL</b>									
FT	FEET OR FOOT	TEMP	TEMPERATURE	<b>PIPE FITTINGS</b>									
F&T	FLOAT AND THERMOSTATIC	TONS	TONS OF REFRIGERATION	<b>DUCTWORK</b>									
FTG	FOOTING	T-STAT	THERMOSTAT	<b>MEDICAL GAS</b>									
FTR	FINNED TUBE RADIATION	TYP	TYPICAL	<b>PLUMBING</b>									
FV	FACE VELOCITY	UB	UP-BLAST	<b>PIPE SPECIALTIES</b>									
GA	GALVE	UG	UNDERGROUND	<b>FIRE PROTECTION</b>									
GAL	GALLON	UH	UNIT HEATER	<b>ANNOTATION</b>									
GEXH	GREASE EXHAUST	UR	URINAL	<b>MECHANICAL PIPING</b>									
GPH	GALLONS PER HOUR	V	SANITARY VENT	<b>GENERAL DUTY VALVES</b>									
GPM	GALLONS PER MINUTE	VAV	VARIABLE AIR VOLUME	<b>CONTROLS</b>									
GR	GRILLE	VD	VOLUME DAMPER	<b>MECHANICAL SYMBOLS LEGEND</b>									
HB	HOSE BIBB	VEL	VELOCITY	<b>GENERAL</b>									
HD	HEAD	VFD	VARIABLE FREQUENCY DRIVE	<b>PIPE FITTINGS</b>									
HOA	HANDS-OFF-AUTOMATIC	VOL	VOLUME	<b>DUCTWORK</b>									
HTG	HEATING	VTR	VENT THROUGH ROOF	<b>MEDICAL GAS</b>									
HTR	HEATER	W	SANITARY WASTE	<b>PLUMBING</b>									
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	WO	WITHOUT	<b>PIPE SPECIALTIES</b>									
HYD	HYDRANT	WC	WATER CLOSET	<b>FIRE PROTECTION</b>									
HW	HOT WATER	WCO	WALL CLEANOUT	<b>ANNOTATION</b>									
GOO	GRADE CLEANOUT	WH	WALL HYDRANT	<b>MECHANICAL PIPING</b>									
INSUL	INSULATION	WTR	WATER	<b>GENERAL DUTY VALVES</b>									
INV	INVERT			<b>CONTROLS</b>									

MECHANICAL SHEET LIST	
SHEET NUMBER	SHEET NAME
M000	MECHANICAL TITLE SHEET
M101	FIRST FLOOR PIPING PLAN
M102	SECOND FLOOR PIPING PLANS
M201	FIRST FLOOR DUCTWORK PLAN
M202	SECOND FLOOR DUCTWORK PLANS
M203	THIRD FLOOR DUCTWORK PLANS
M204	ROOF MECHANICAL PLAN
M700	MECHANICAL DETAILS
M701	MECHANICAL DETAILS
ME800	MECHANICAL ELECTRICAL SCHEDULES
ME801	MECHANICAL ELECTRICAL SCHEDULES
P100	BELOW GRADE PLUMBING PLAN
P101	FIRST FLOOR PLUMBING PLAN
P102	SECOND FLOOR PLUMBING PLAN
P103	ROOF PLUMBING PLAN
P200	ENLARGED PLUMBING PLANS
P300	PLUMBING RISER DIAGRAMS
P301	PLUMBING RISER DIAGRAMS
P400	PLUMBING DETAILS
P500	PLUMBING SCHEDULES
PE600	PLUMBING ELECTRICAL SCHEDULES
FP101	FIRST FLOOR FIRE PROTECTION PLAN
FP102	SECOND FLOOR FIRE PROTECTION PLAN
SHEET TOTAL: 23	



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mechanical + electrical consulting engineering  
Dunham Project Number: 0425231-000-00

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

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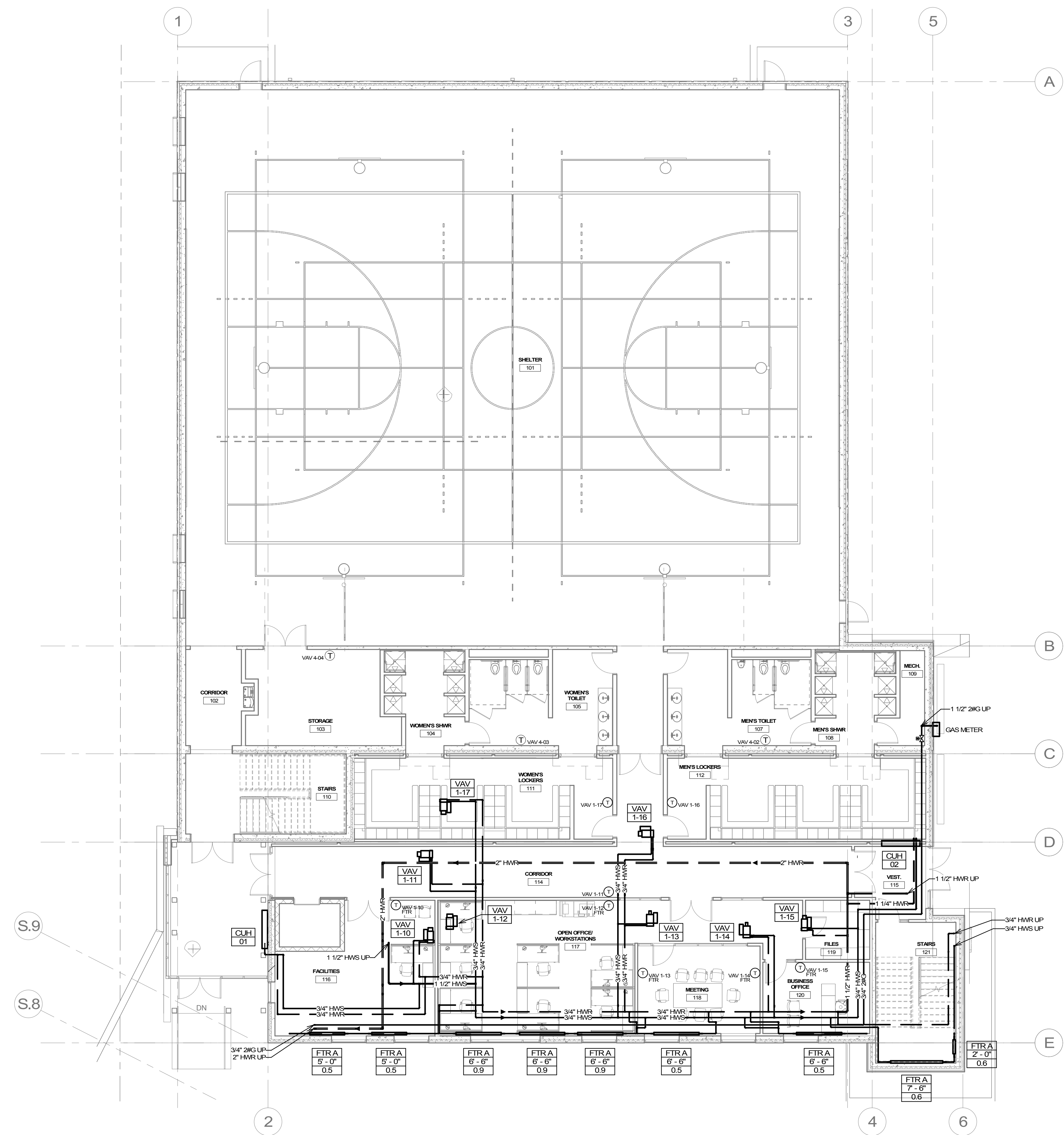
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**Construction**

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**MECHANICAL TITLE SHEET**

SHEET NUMBER:  
**M000**

**KEY NOTES:**

◇ NOT USED.



① FIRST FLOOR PIPING PLAN  
1/8" = 1'-0"

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 232006.003  
Date: 05/07/2025

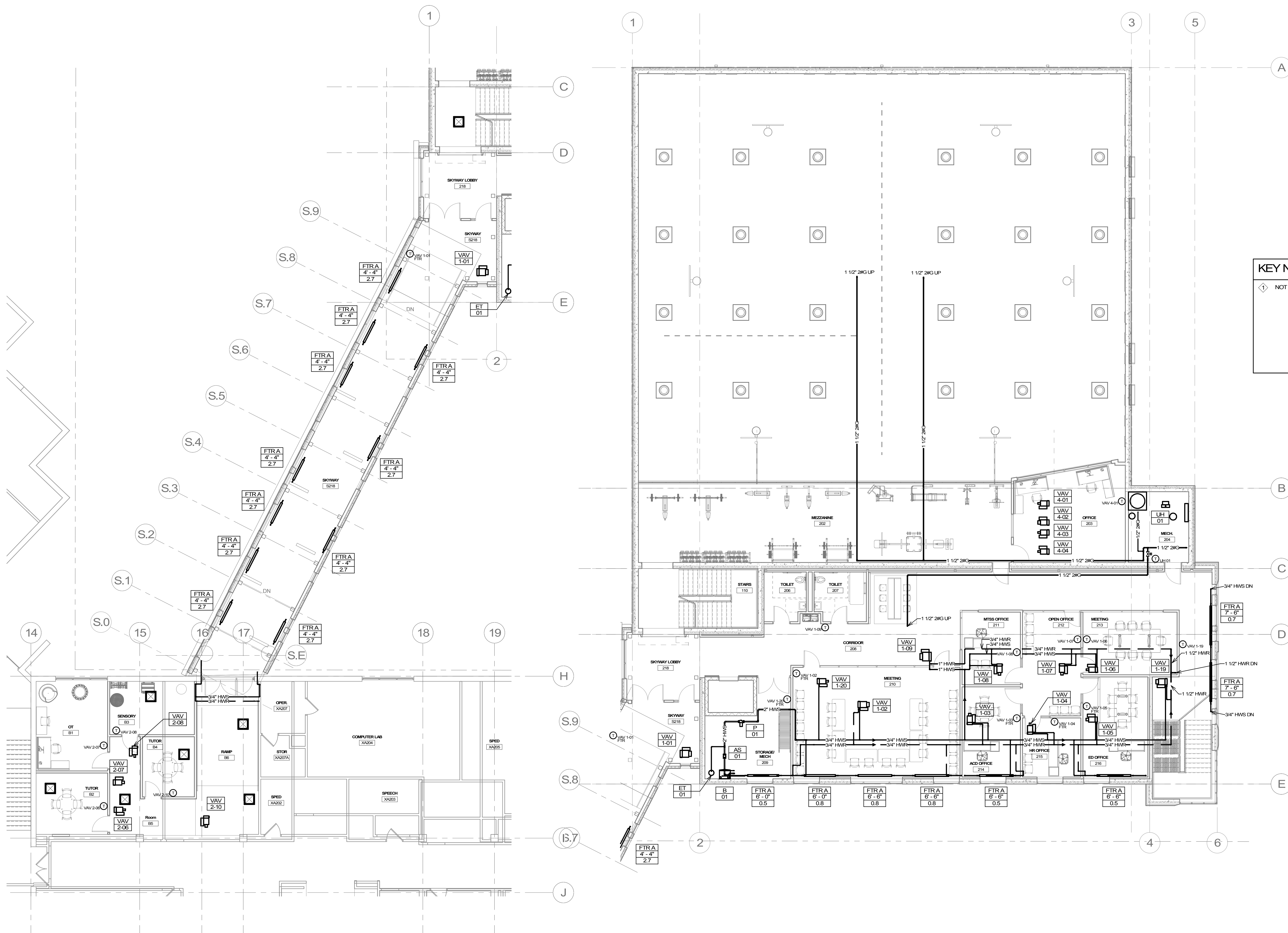
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Construction**

SHEET TITLE:  
**FIRST FLOOR PIPING PLAN**

SHEET NUMBER:  
**M101**



**KEY NOTES:**

⬇ NOT USED.

2 SECOND FLOOR PIPING PLAN - SKYWAY  
1/8" = 1'-0"

1 SECOND FLOOR PIPING PLAN - SHELTER  
1/8" = 1'-0"

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23006.003  
Date: 05/07/2025

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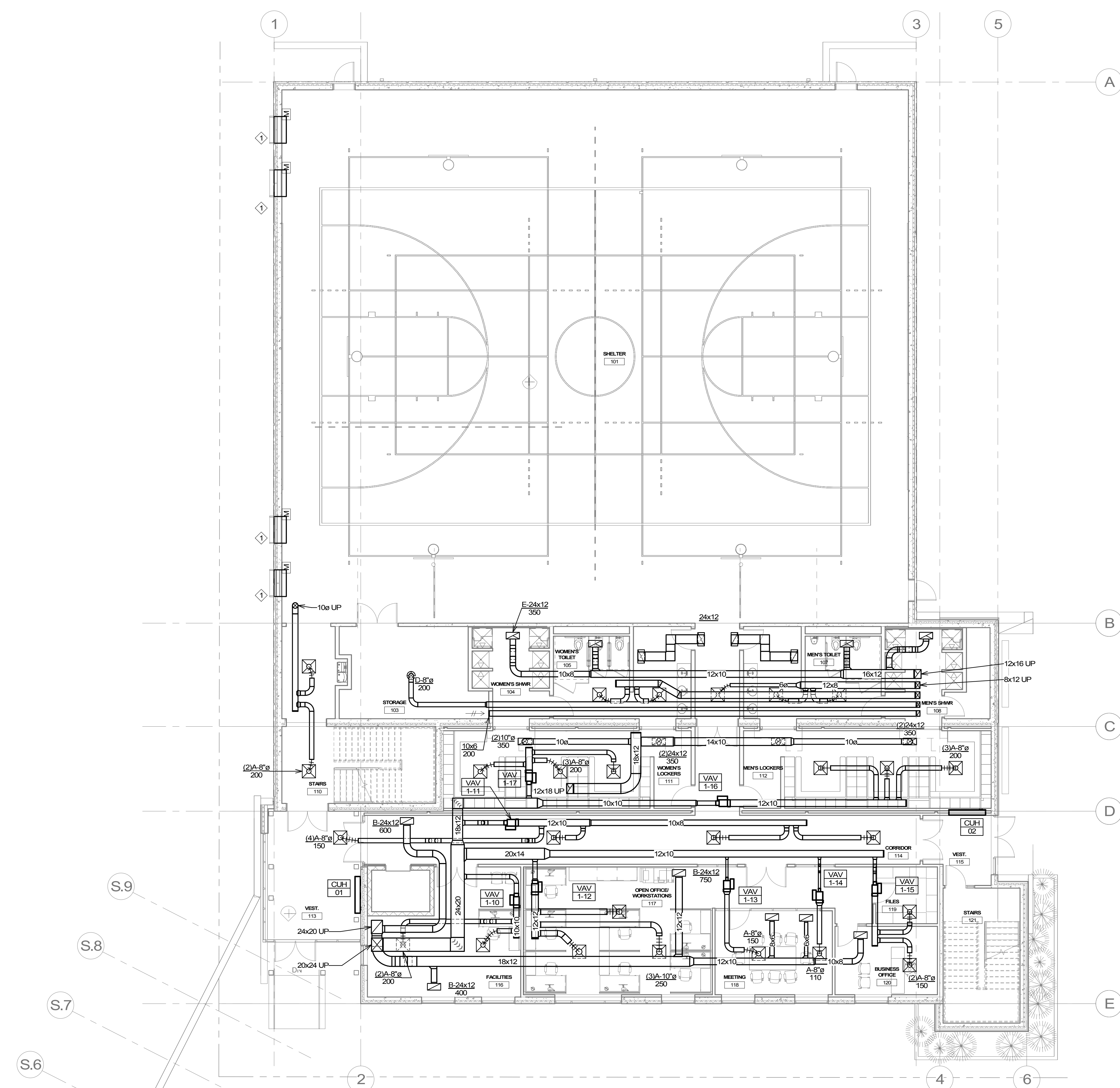
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**SECOND FLOOR PIPING  
PLANS**

SHEET NUMBER:

**M102**

**KEY NOTES:**

◇ INSULATED DAMPER, EMERGENCY POWER, CYCLONE GWS WALL SHROUD, ICC-500 LOUVER BY ARCH



1 FIRST FLOOR DUCTWORK PLAN  
1/8" = 1'-0"

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 232008.003  
Date: 05/07/2025

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05/07/2025

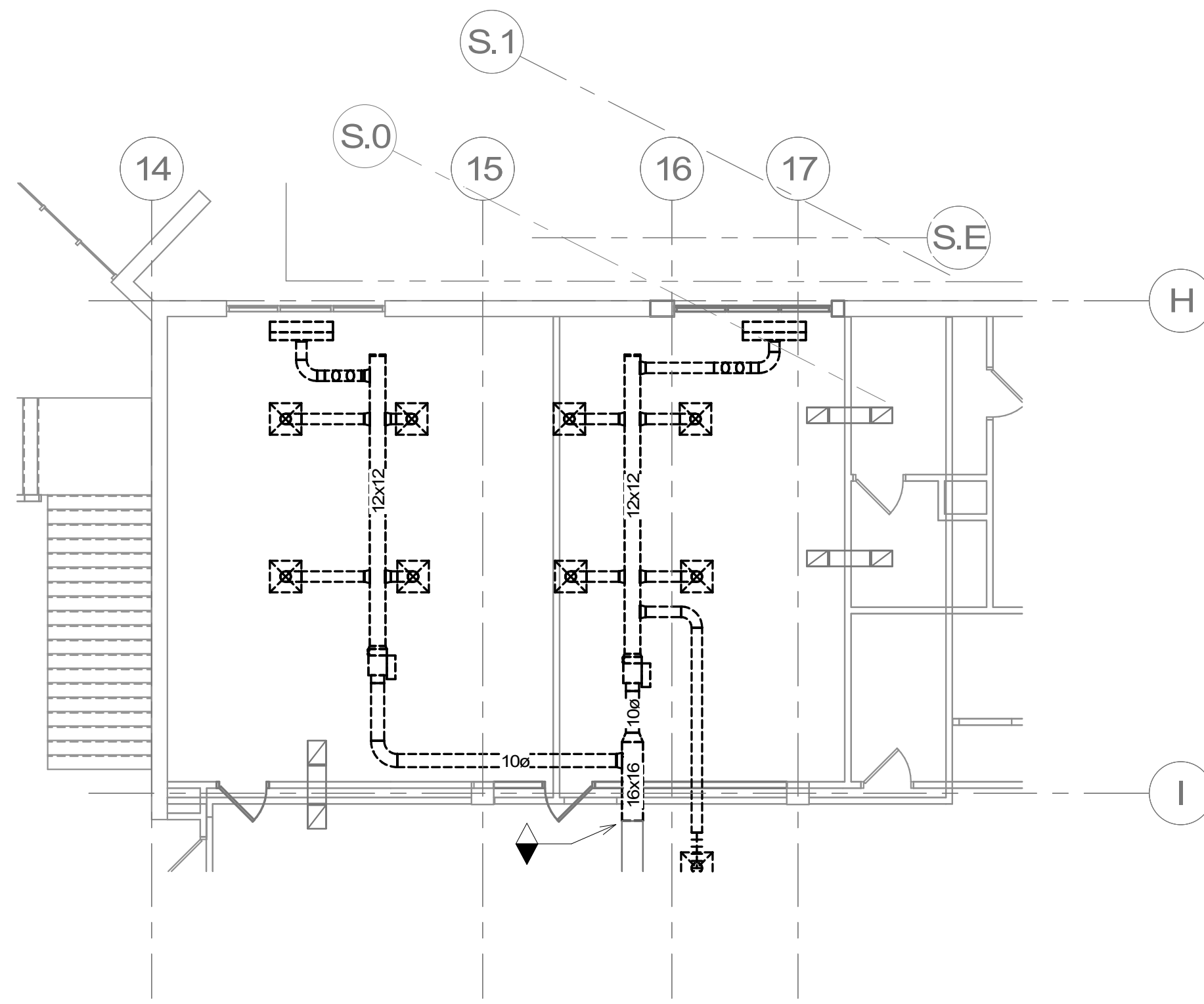
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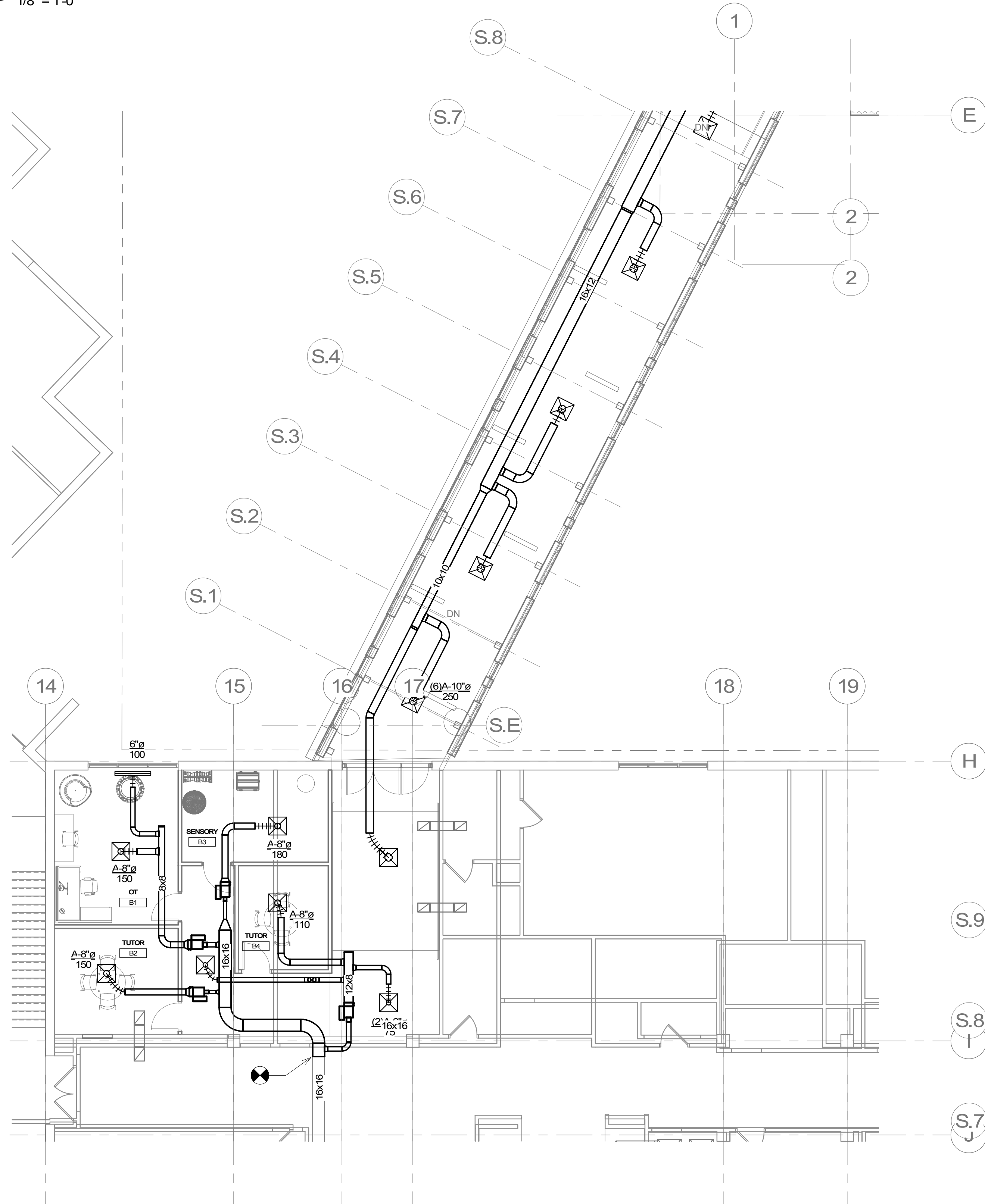
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PLAN**

SHEET NUMBER:

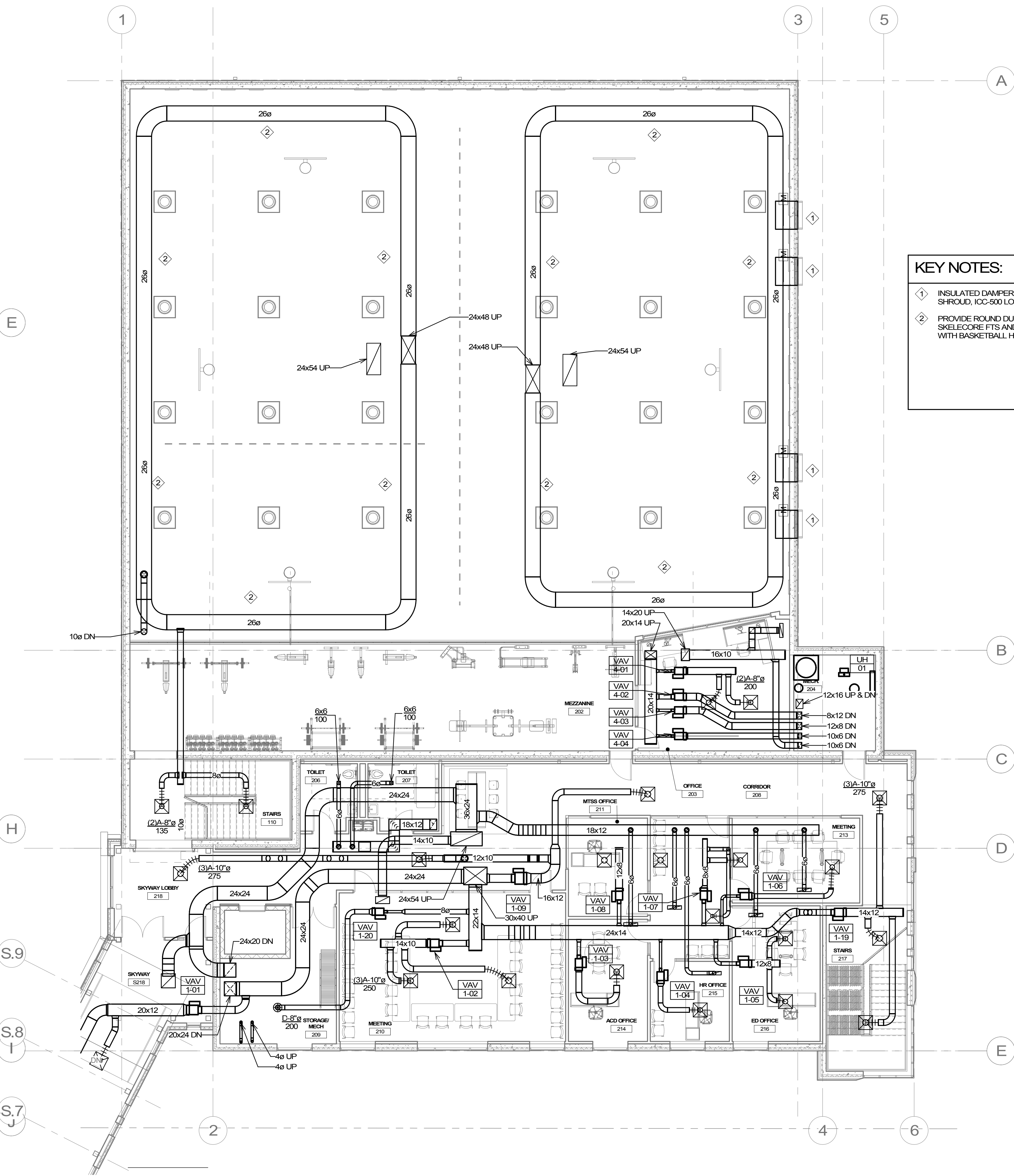
**M201**



4 SECOND FLOOR DEMOLITION PLAN -  
1/8" = 1'-0"



2 SECOND FLOOR DUCTWORK PLAN - SKYWAY  
1/8" = 1'-0"



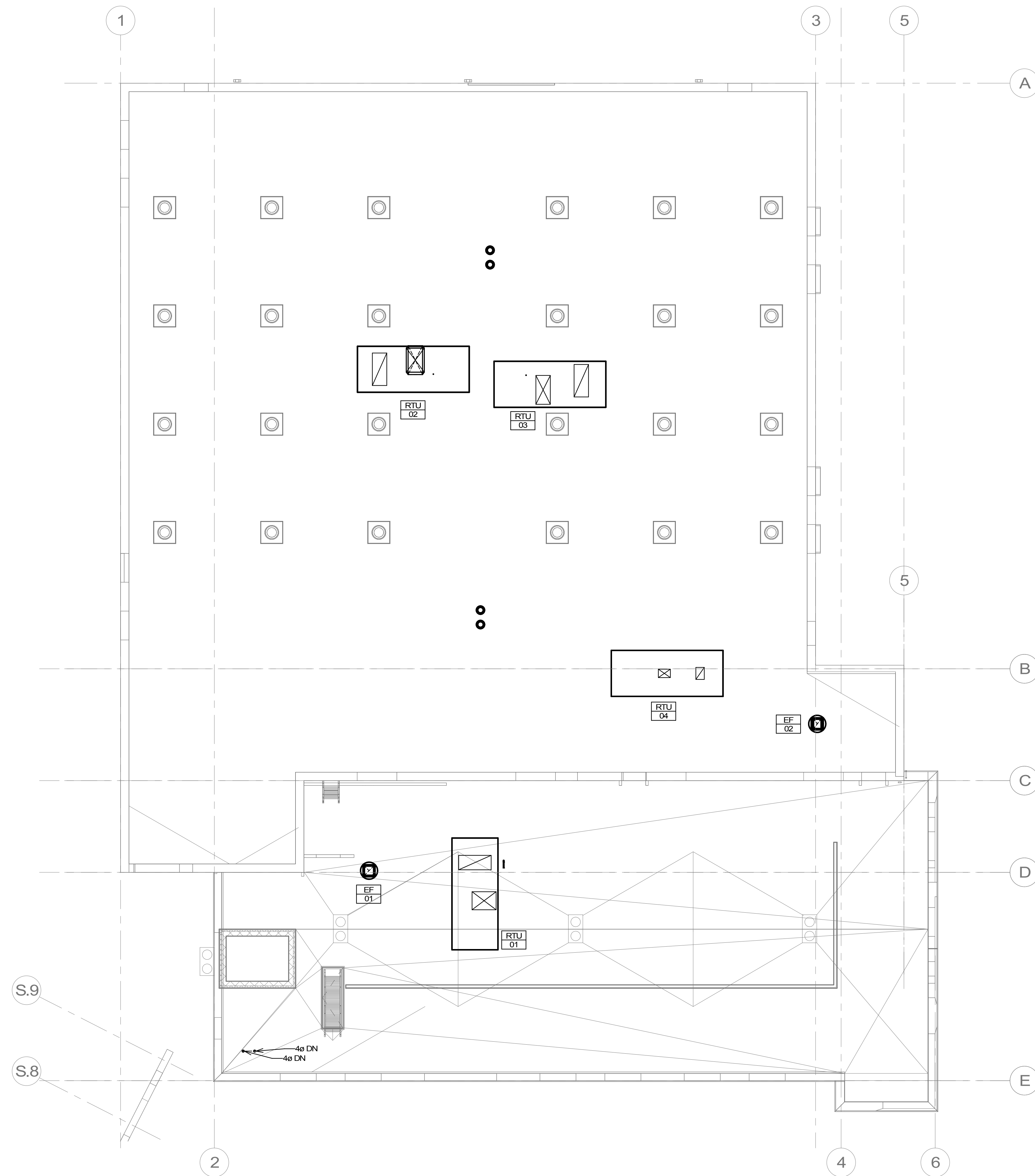
1 SECOND FLOOR DUCTWORK PLAN - SHELTER  
1/8" = 1'-0"

**KEY NOTES:**

- ① INSULATED DAMPER, EMERGENCY POWER, CYCLONE GWS WALL SHROUD, ICC-500 LOUVER BY ARCH
- ② PROVIDE ROUND DUCTSOX TUFTEX FABRIC DUCT SYSTEM WITH SKELETORE FTS AND U-TRACK SUSPENSION. COORDINATE ROUTING WITH BASKETBALL HOOPS AND MOVABLE PARTITIONS.







**KEY NOTES:**

① INSULATED DAMPER, EMERGENCY POWER, CYCLONE CWS WALL SHROUD, ICC-500 LOUVER BY ARCH

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

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IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
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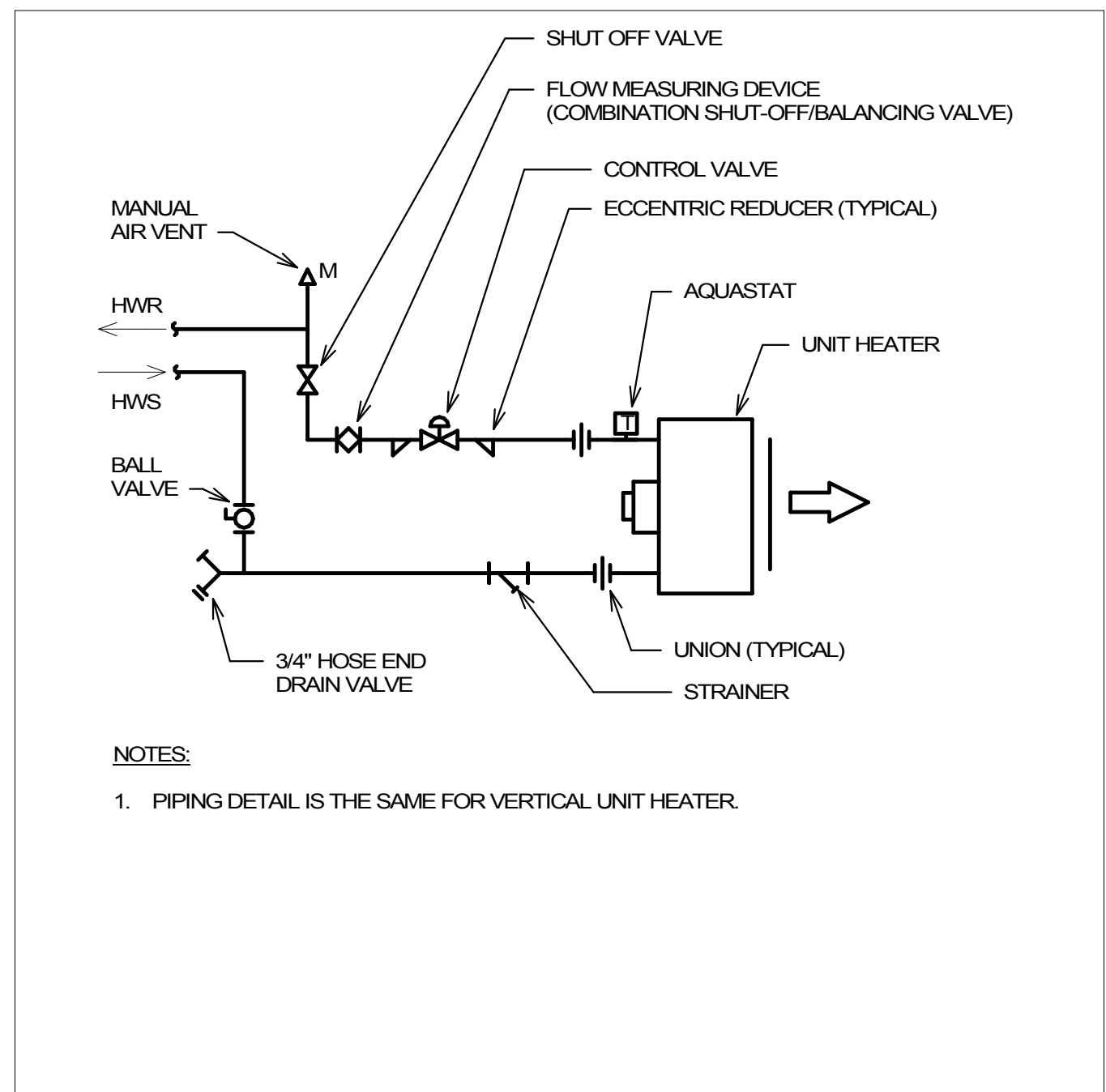
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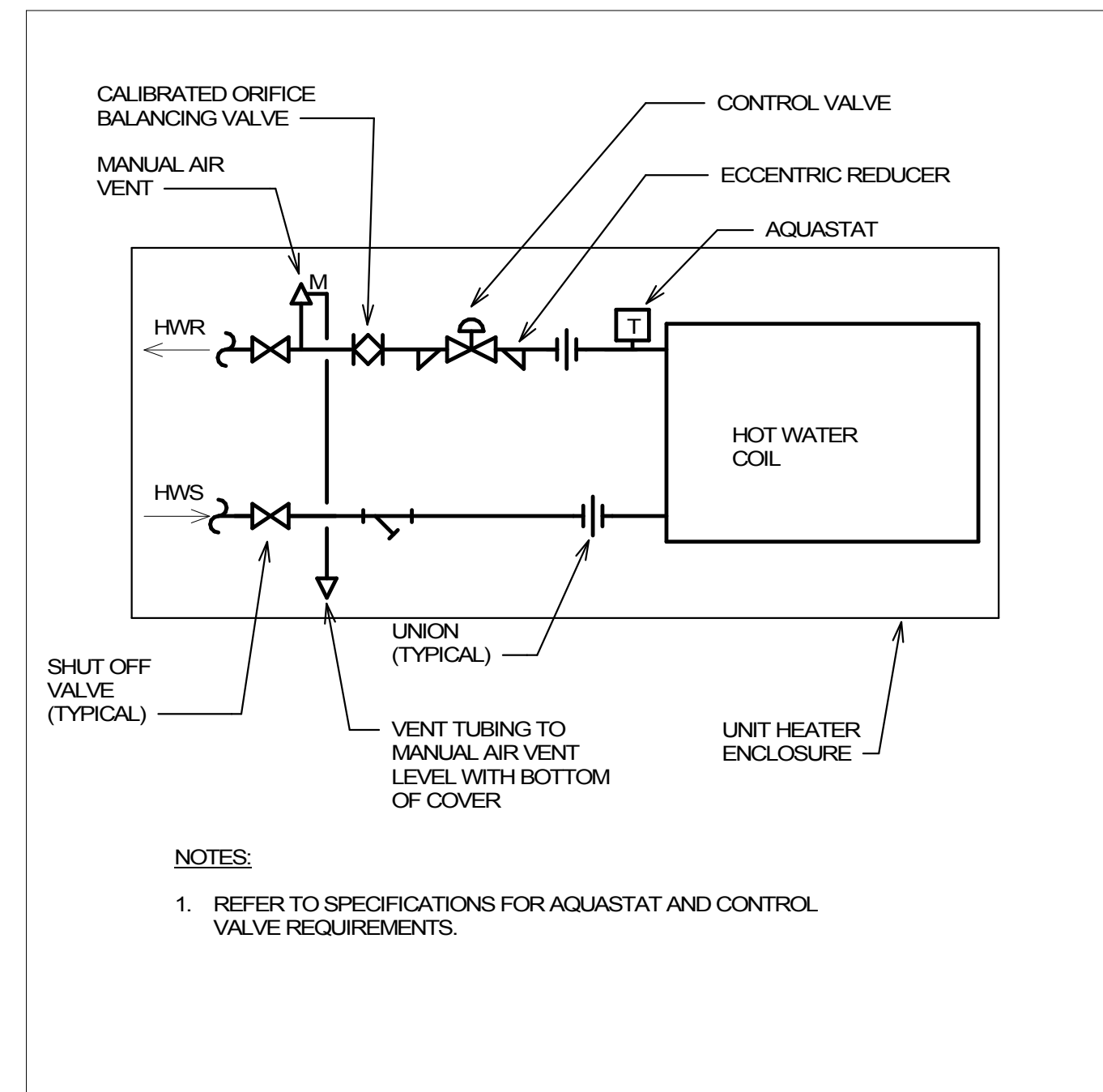
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SHEET NUMBER:

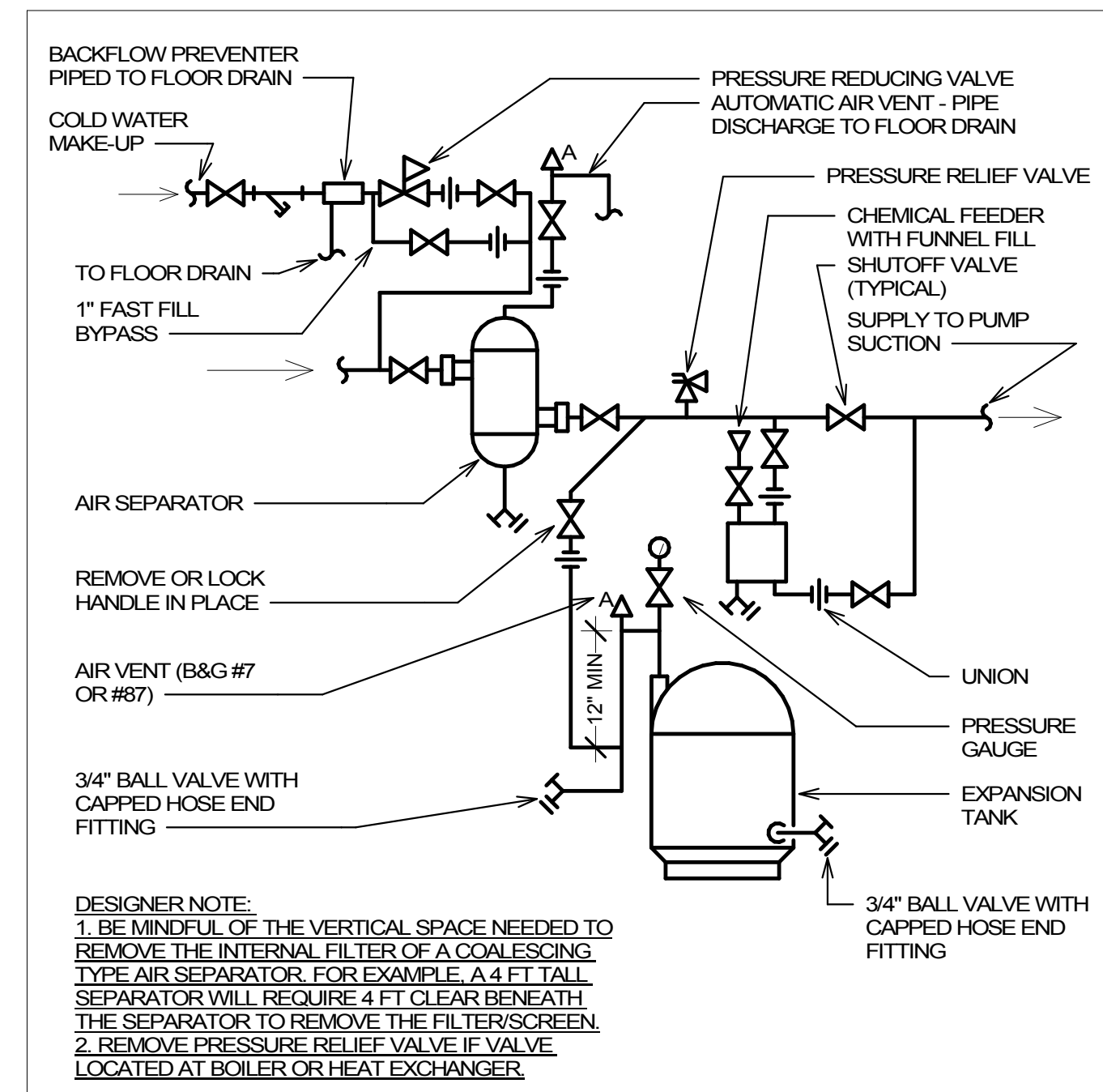
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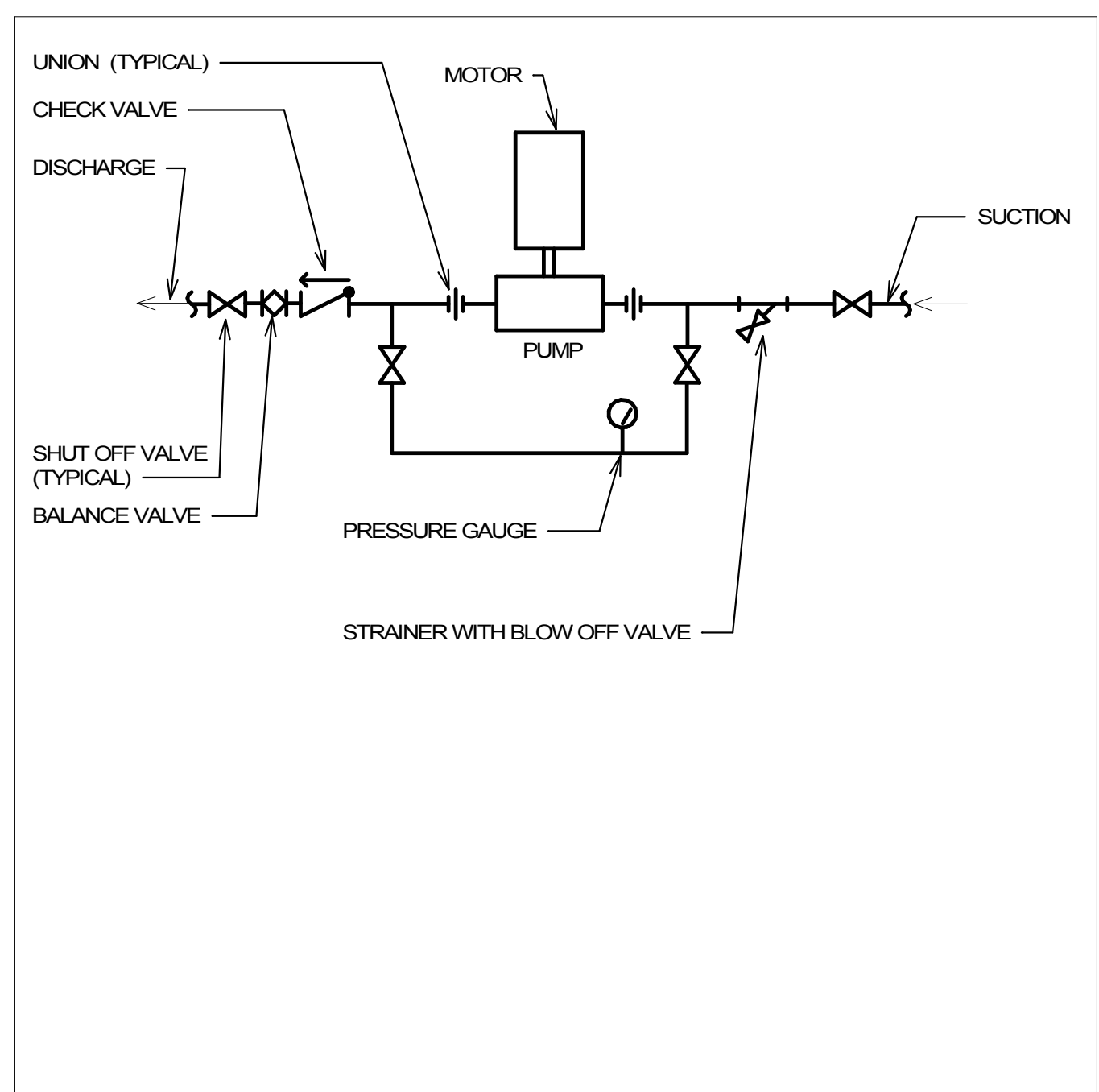
6 HOT WATER HORIZONTAL UNIT HEATER PIPING DETAIL (2-WAY VALVE)  
NO SCALE



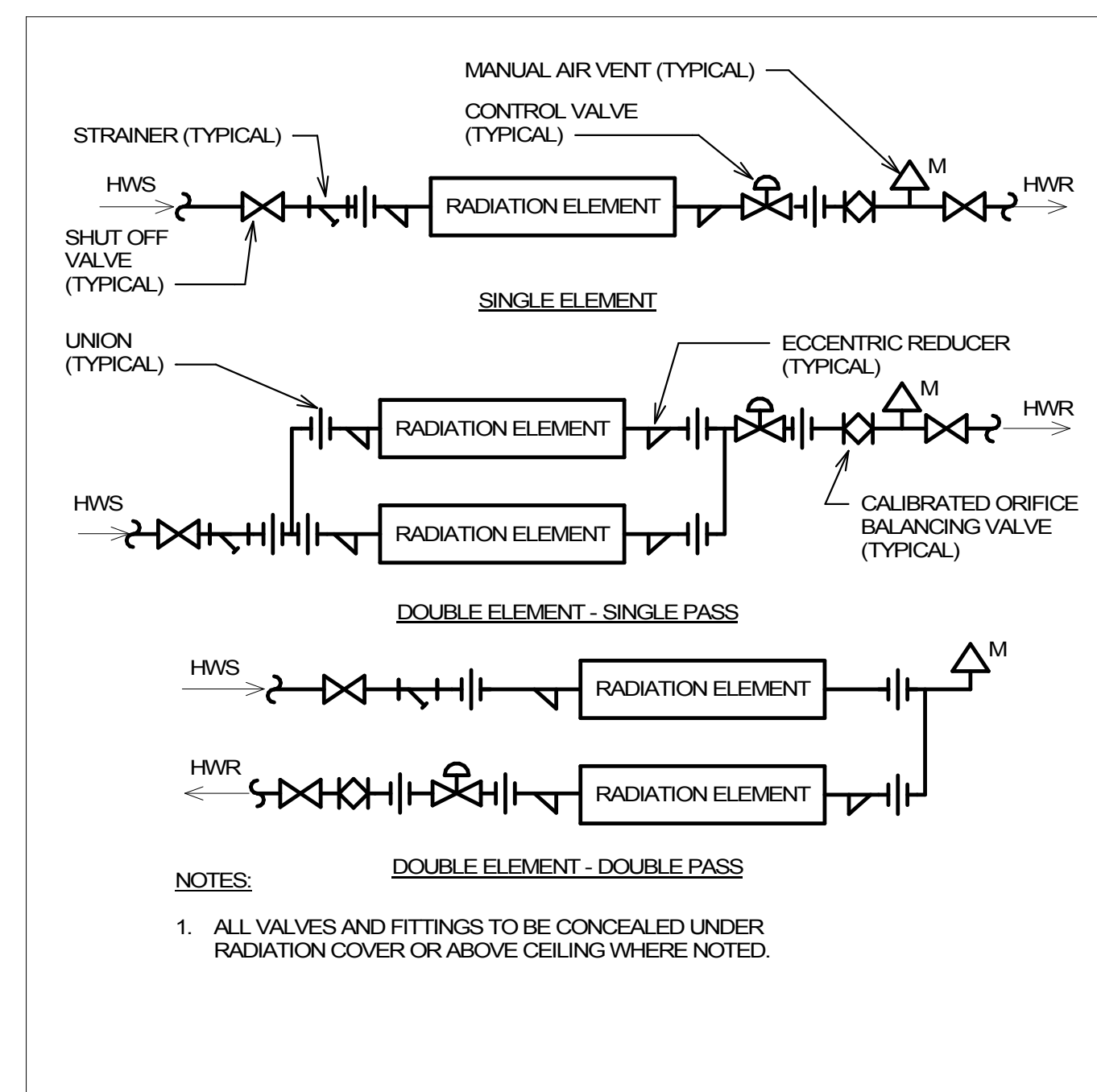
5 HOT WATER CABINET UNIT HEATER PIPING DETAIL (2-WAY VALVE)  
NO SCALE



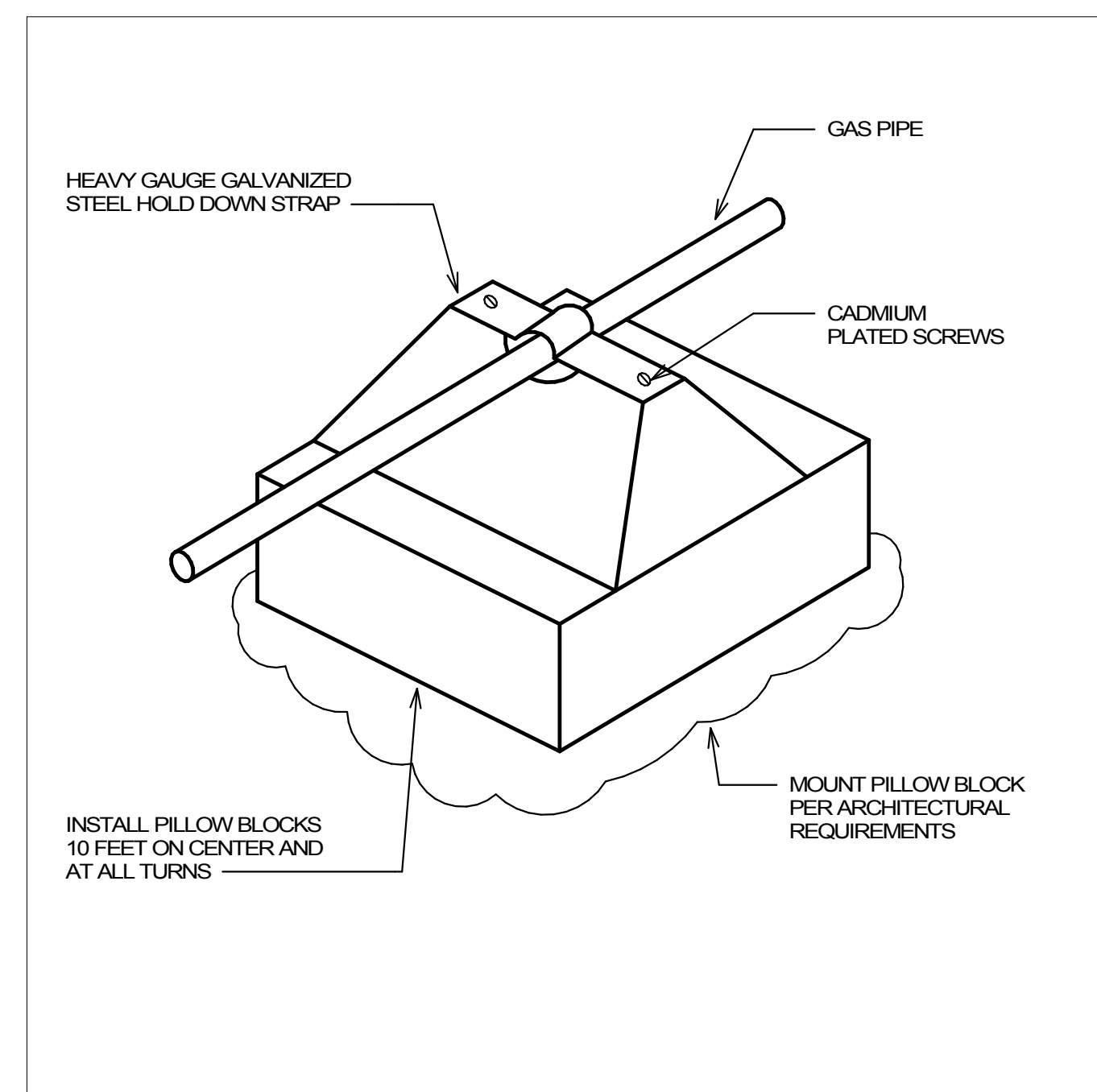
2 EXPANSION TANK AND AIR SEPARATOR PIPING DETAIL  
NO SCALE



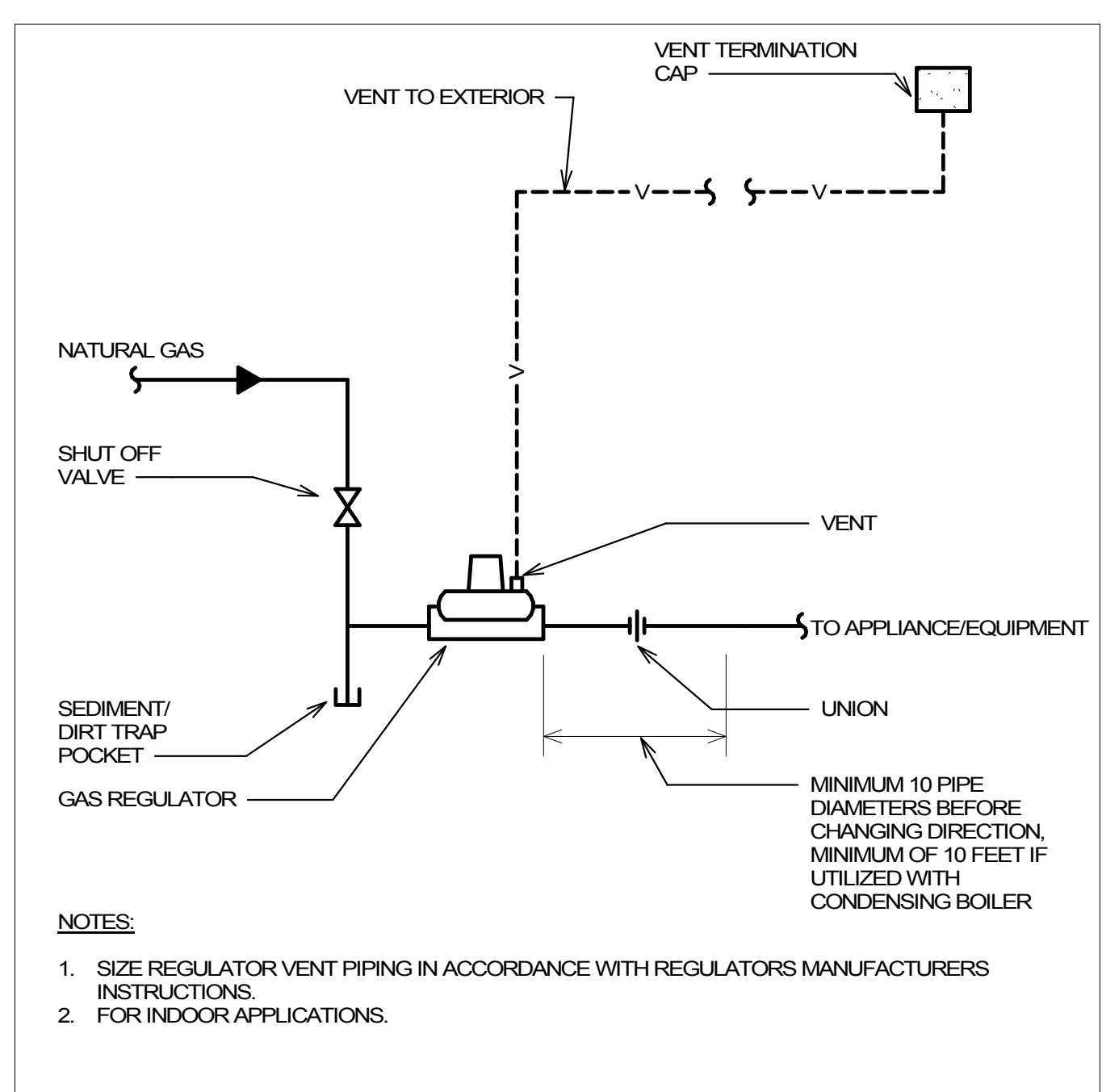
8 INLINE CIRCULATING PUMP DETAIL 1  
NO SCALE



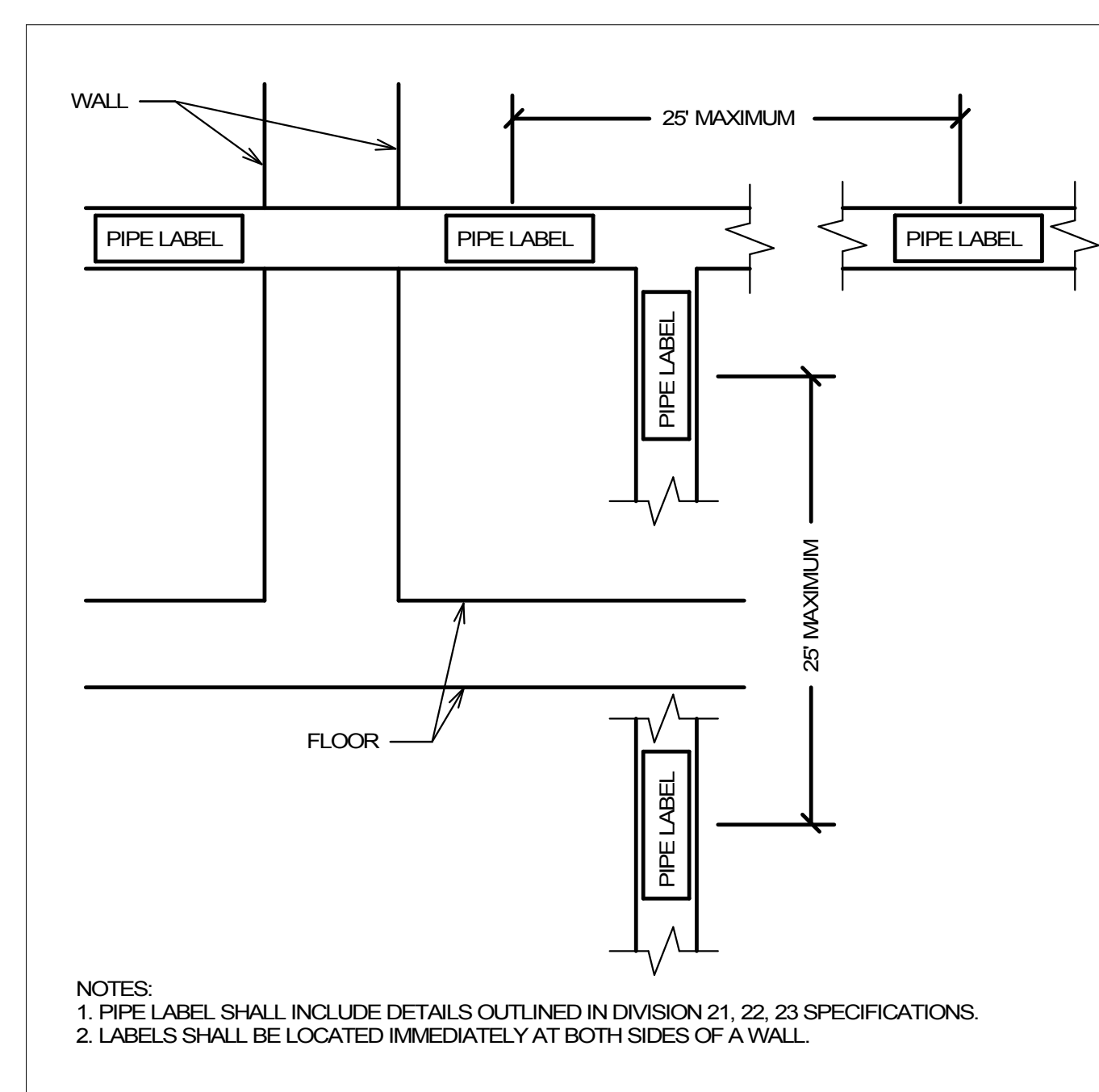
7 HOT WATER RADIATION PIPING DETAIL  
NO SCALE



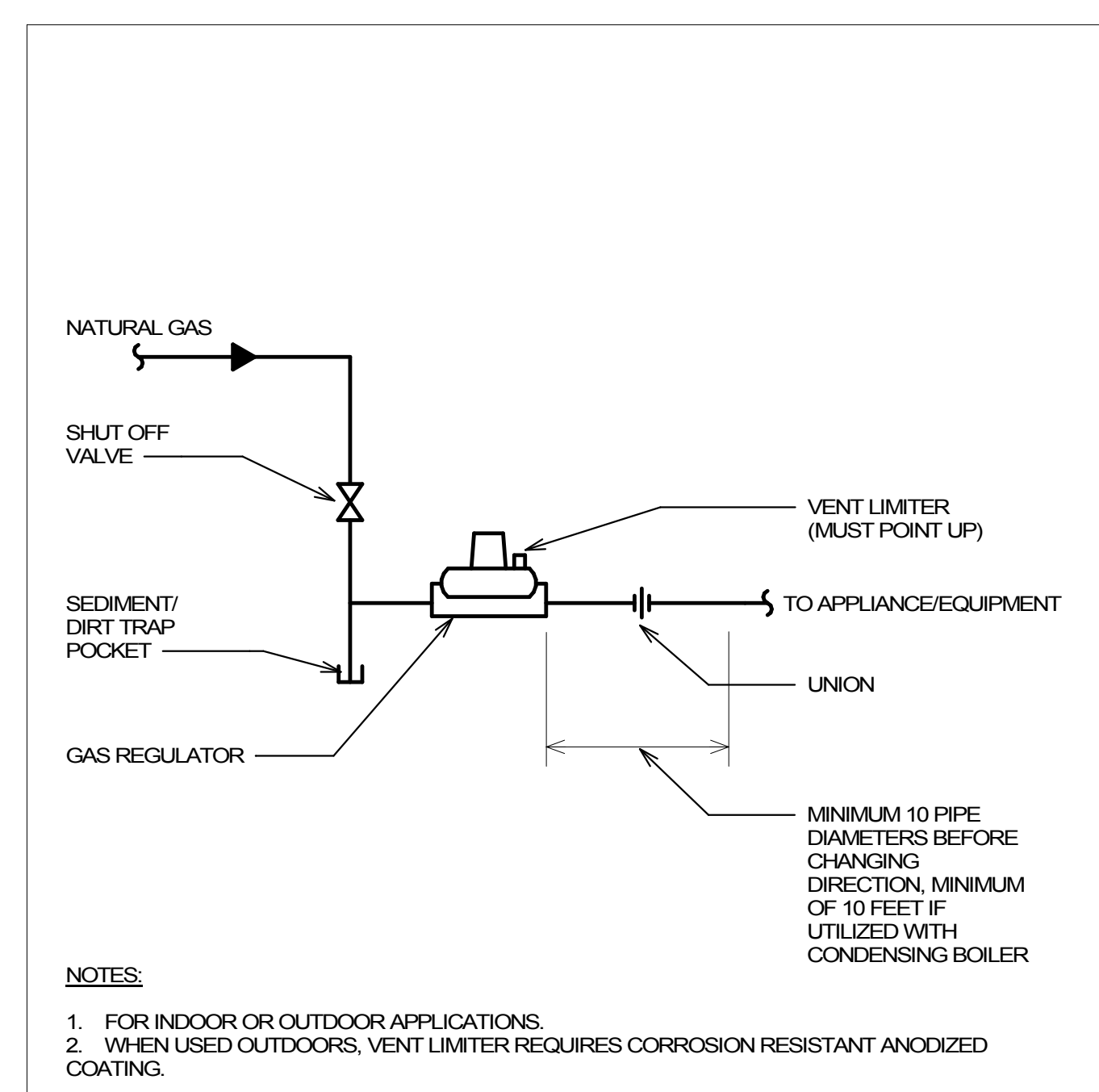
3 GAS PIPE ROOF SUPPORT DETAIL  
NO SCALE



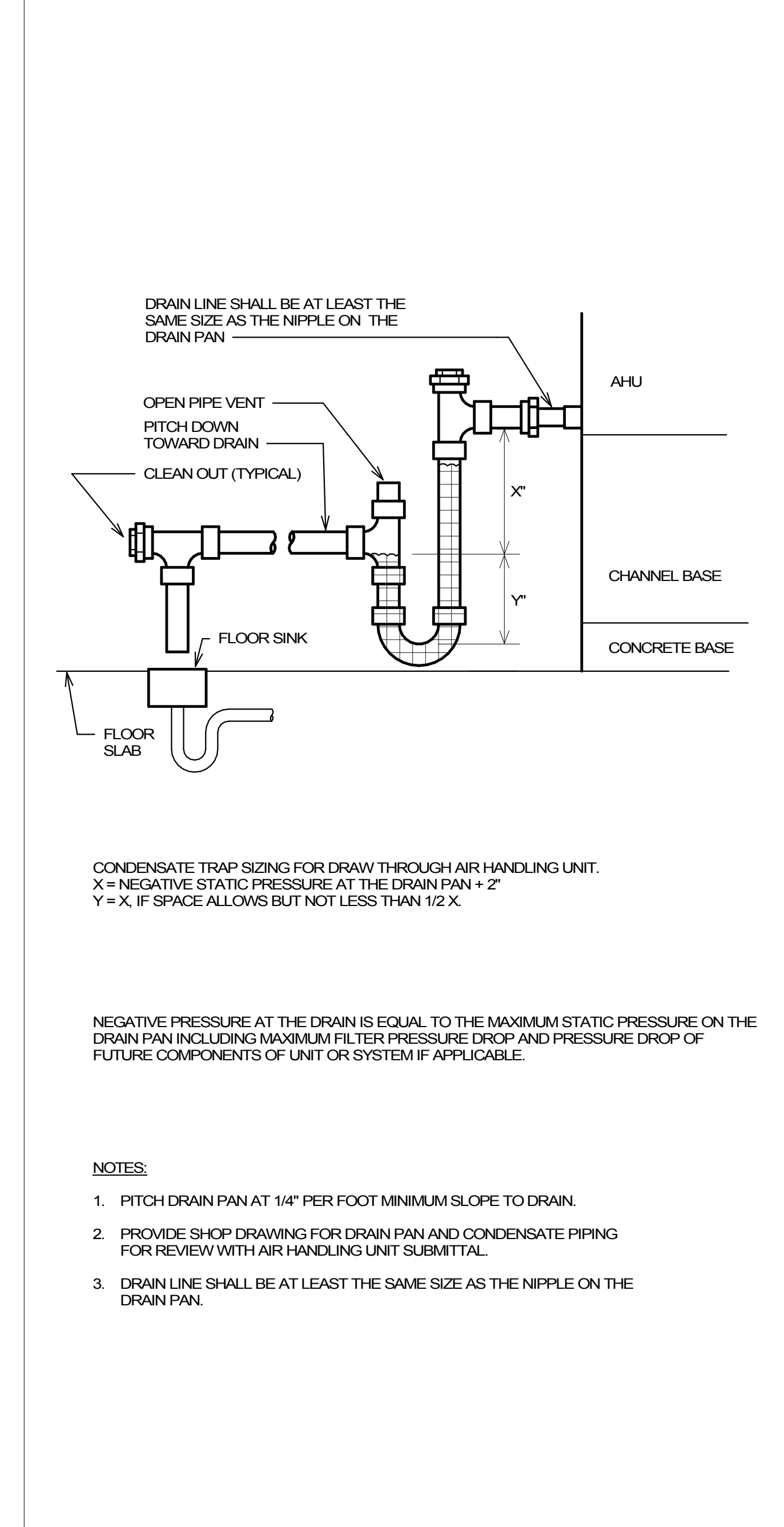
11 PIPED VENT GAS REGULATOR DETAIL  
NO SCALE



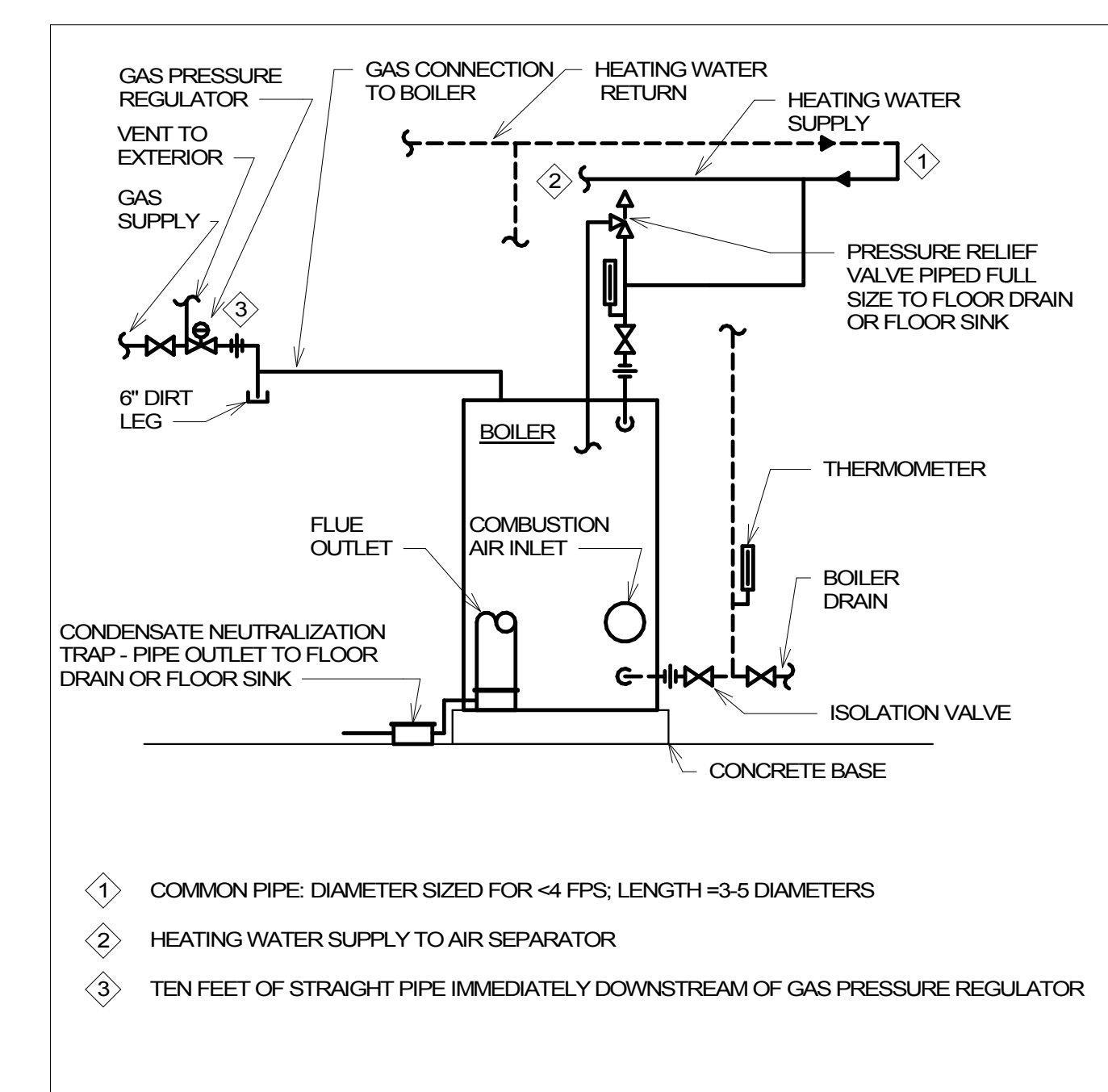
10 PIPE LABEL DETAIL 1  
NO SCALE



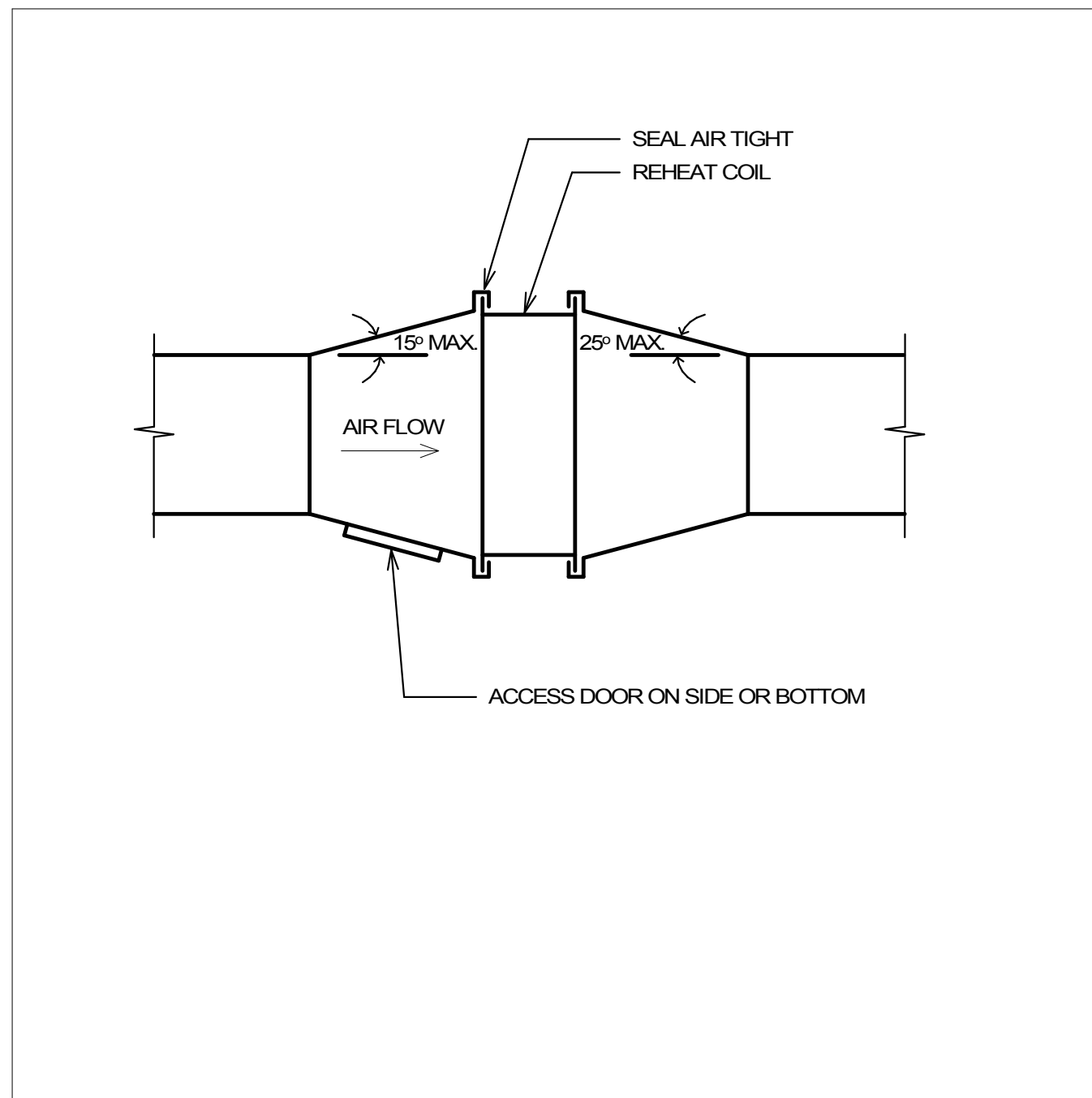
9 OPEN TO AIR VENT GAS REGULATOR DETAIL  
NO SCALE



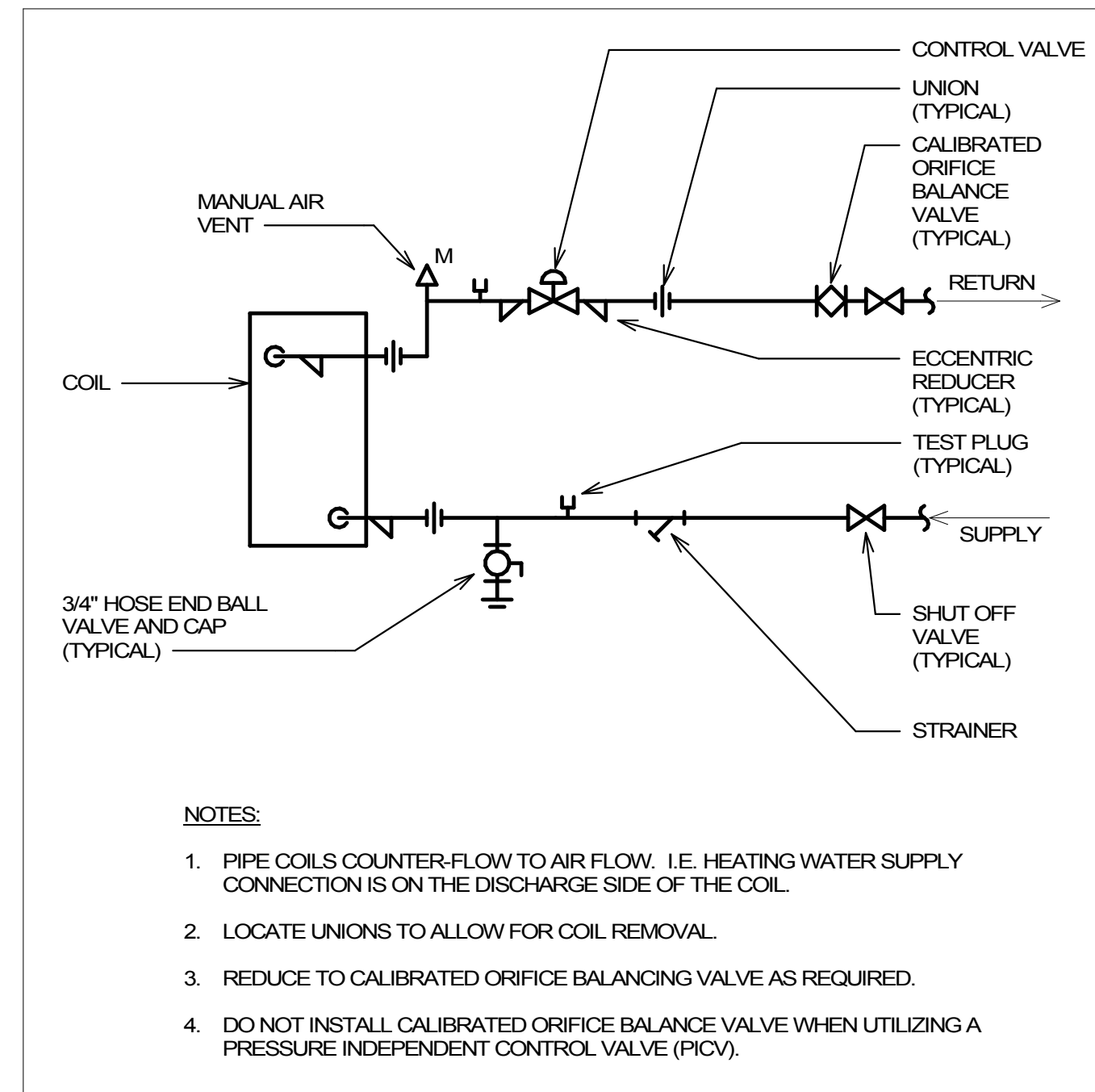
1 DRAW THROUGH AHU CONDENSATE TRAP DETAIL  
NO SCALE



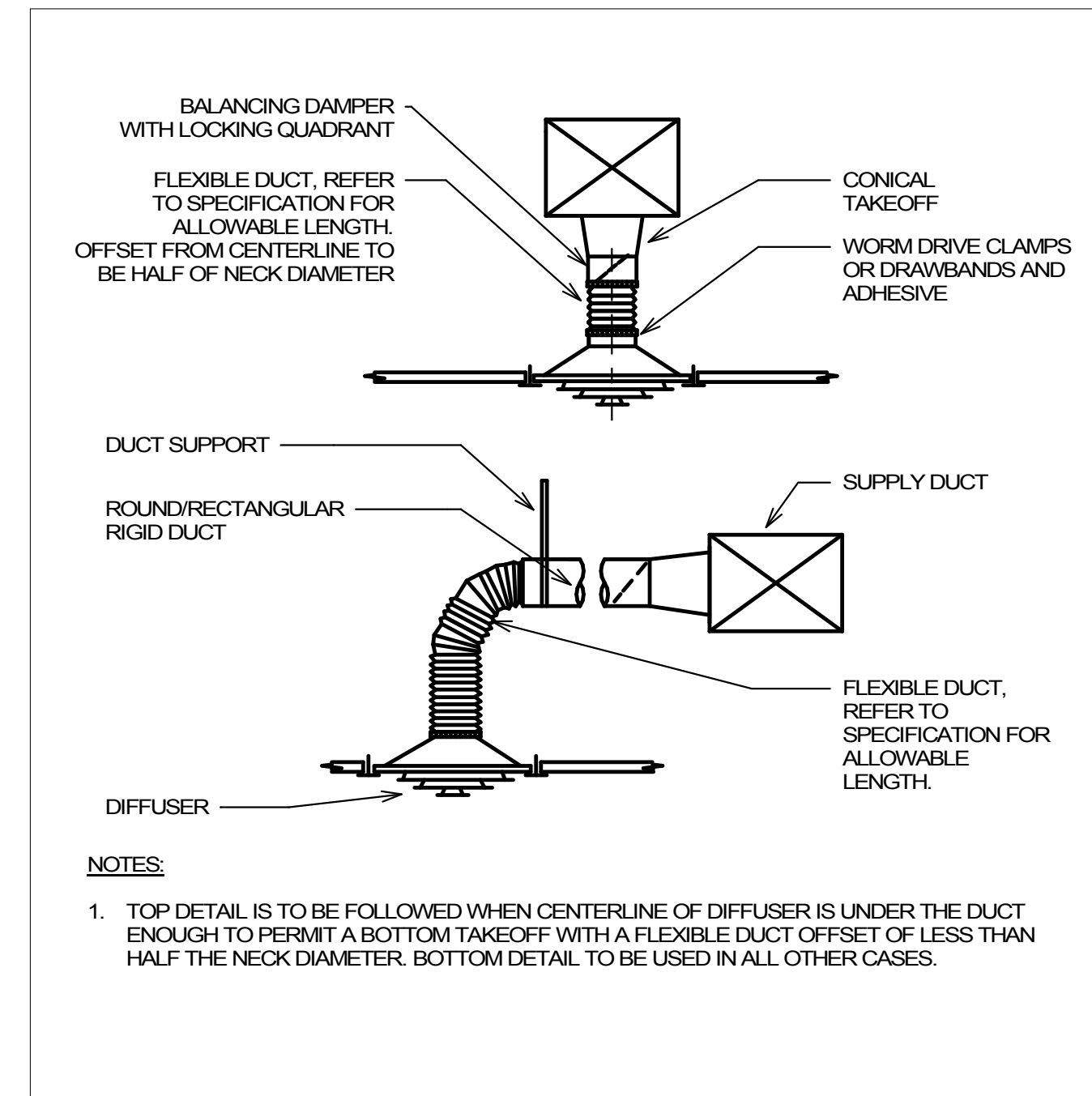
4 GAS-FIRED CONDENSING BOILER PIPING DETAIL  
NO SCALE



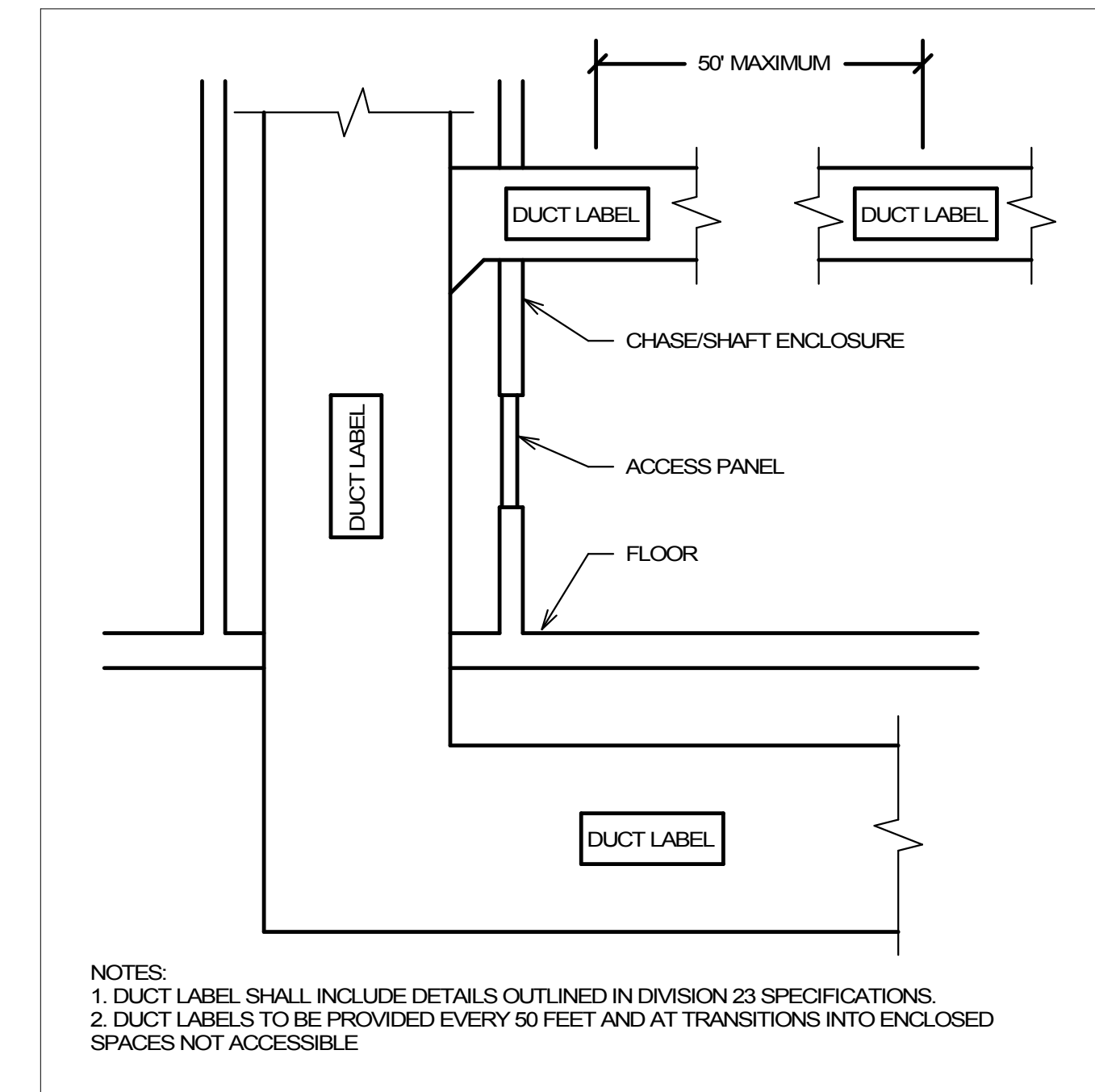
1 REHEAT COIL DUCT CONNECTION  
NO SCALE



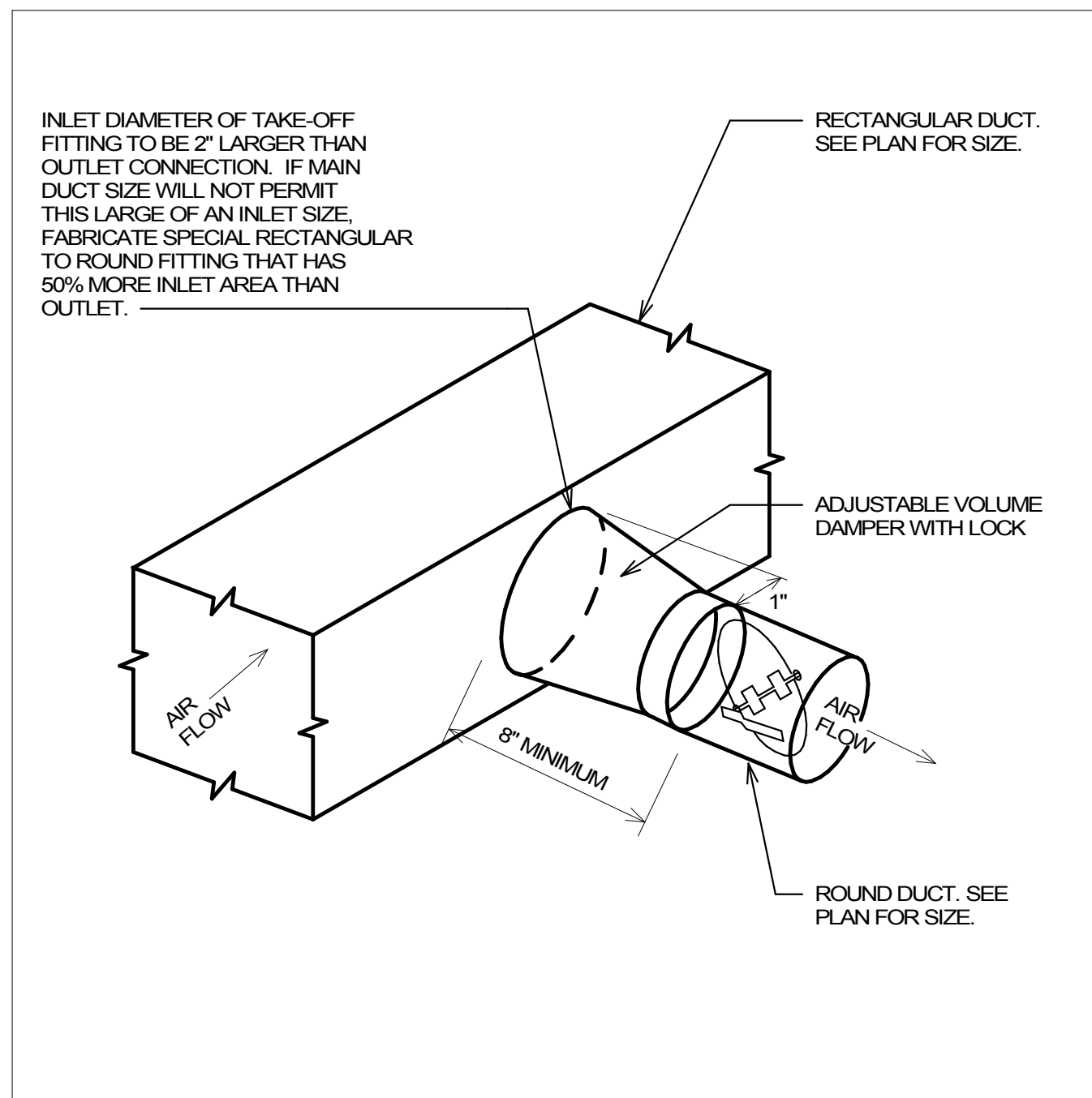
2 REHEAT COIL PIPING DETAIL (2-WAY VALVE)  
NO SCALE



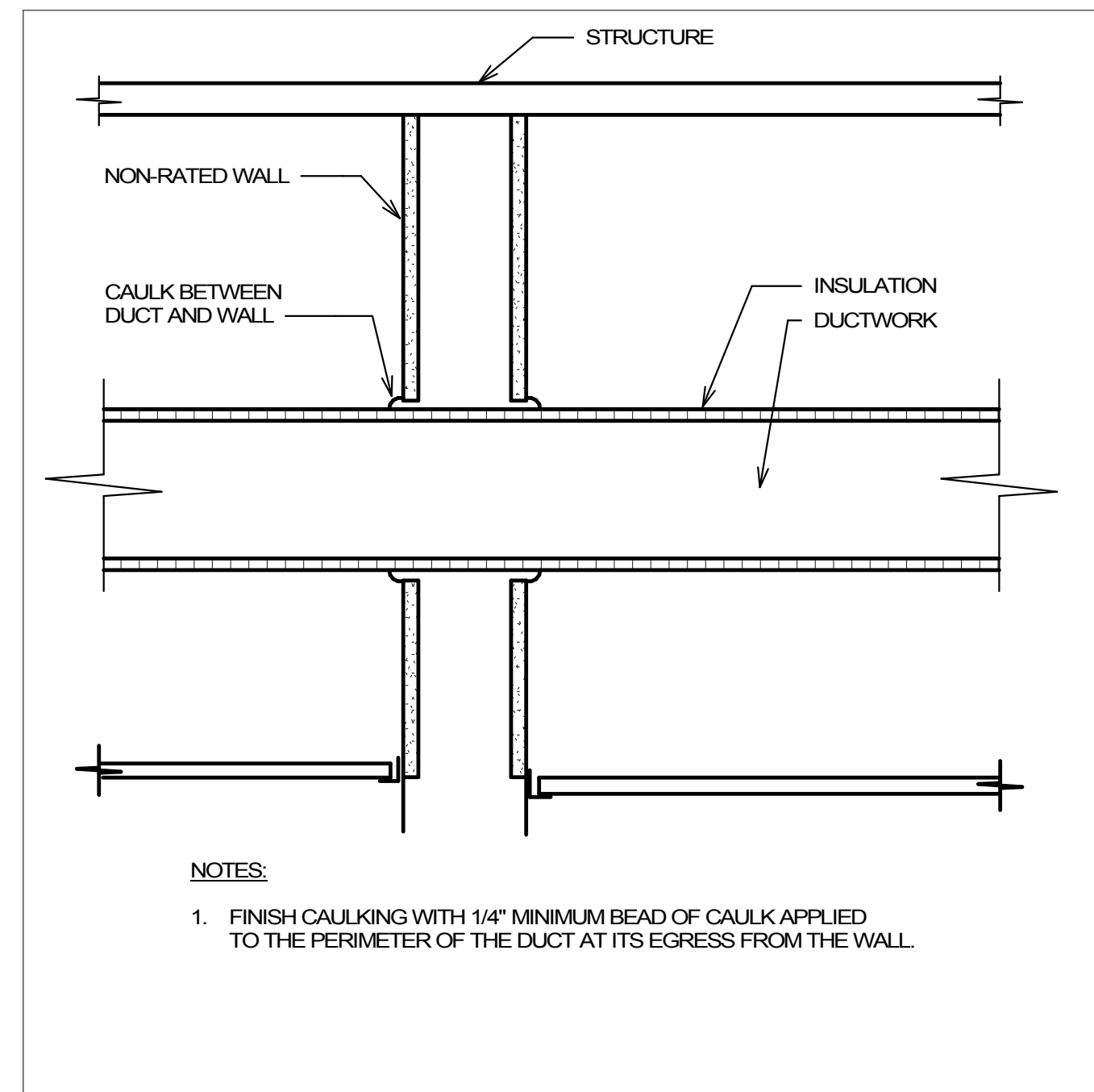
3 CEILING DIFFUSER RUNOUT DETAIL  
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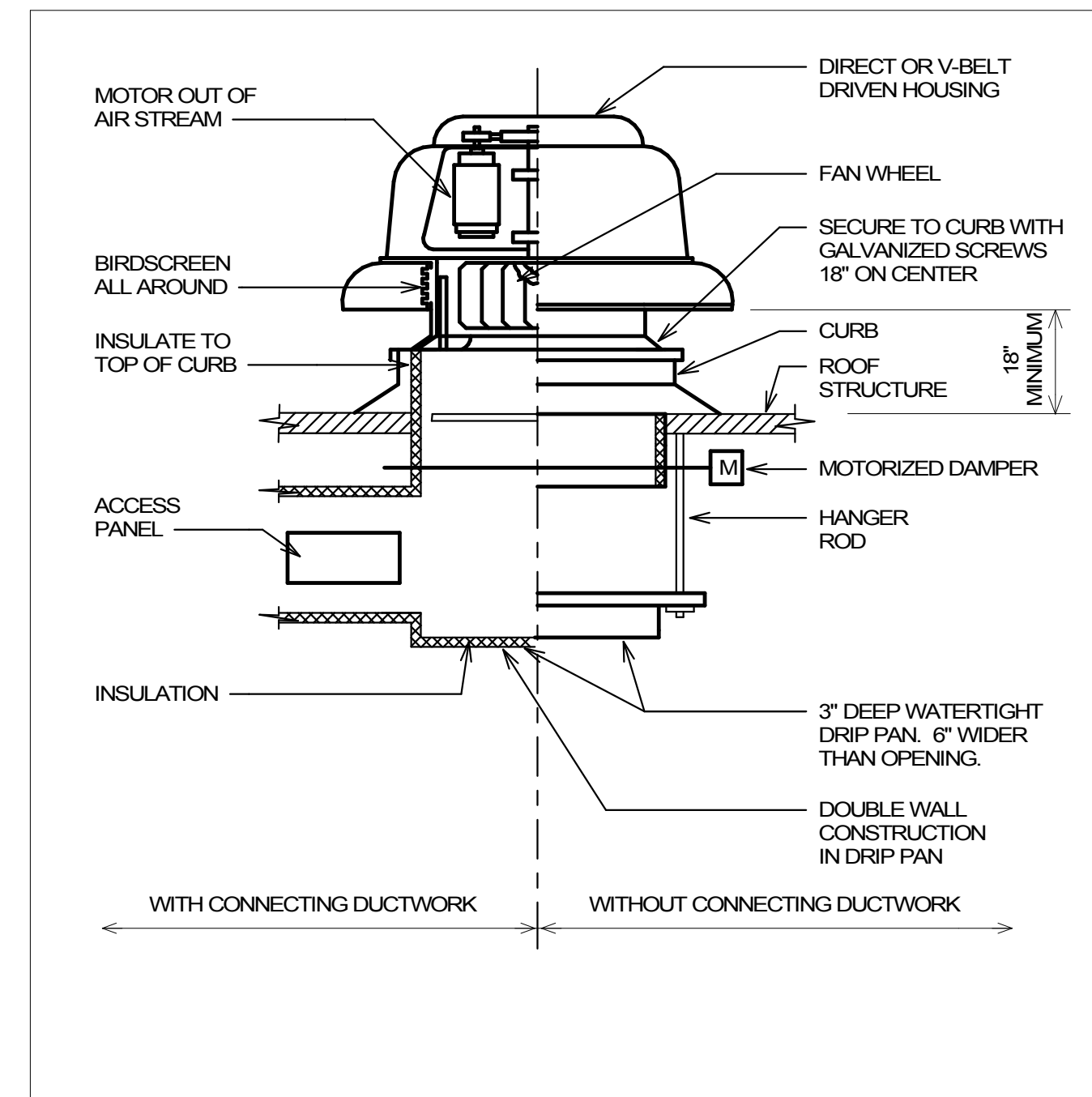
4 DUCT LABEL DETAIL  
NO SCALE



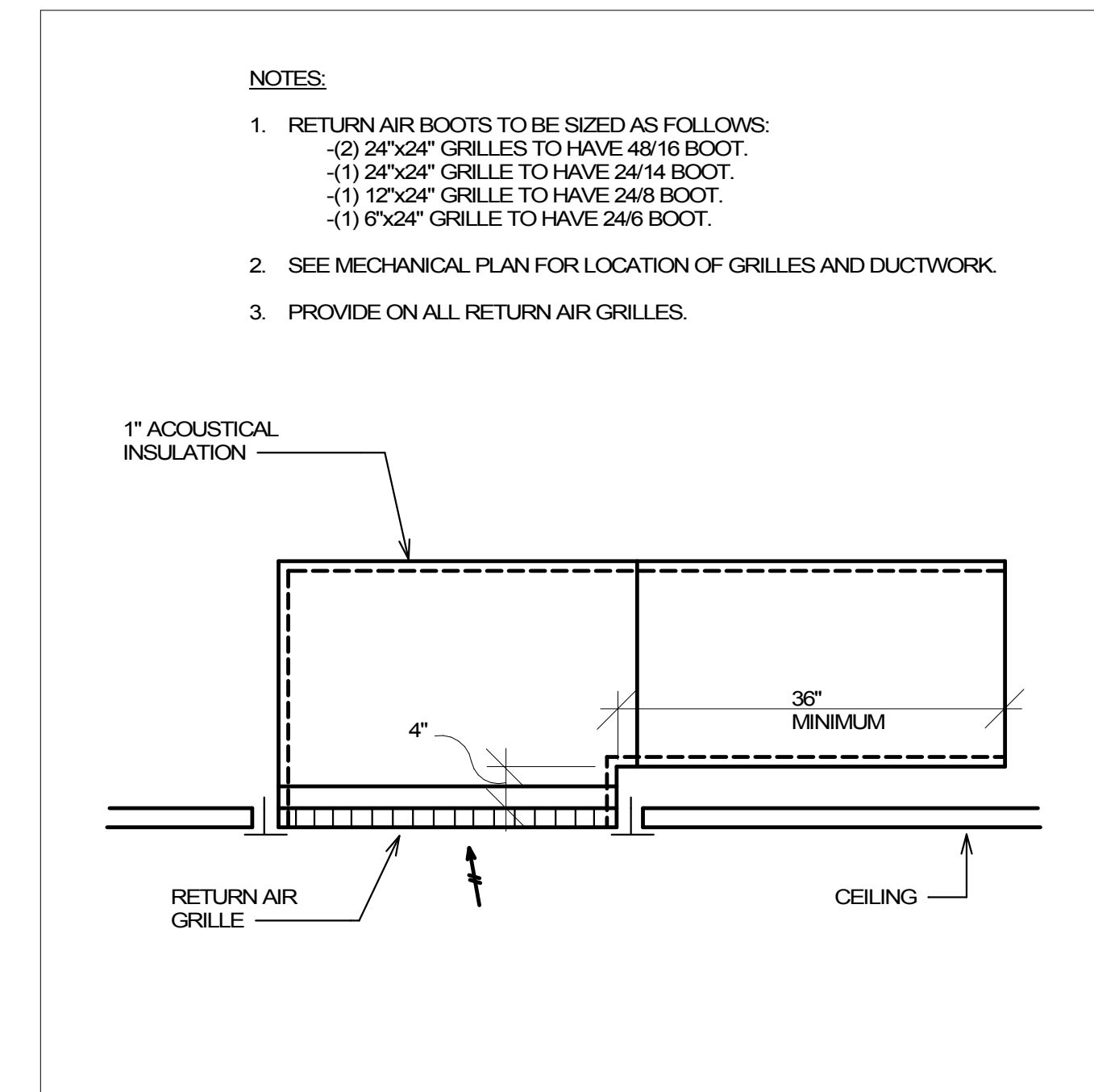
5 DUCT TAKE-OFF TO DIFFUSER DETAIL  
NO SCALE



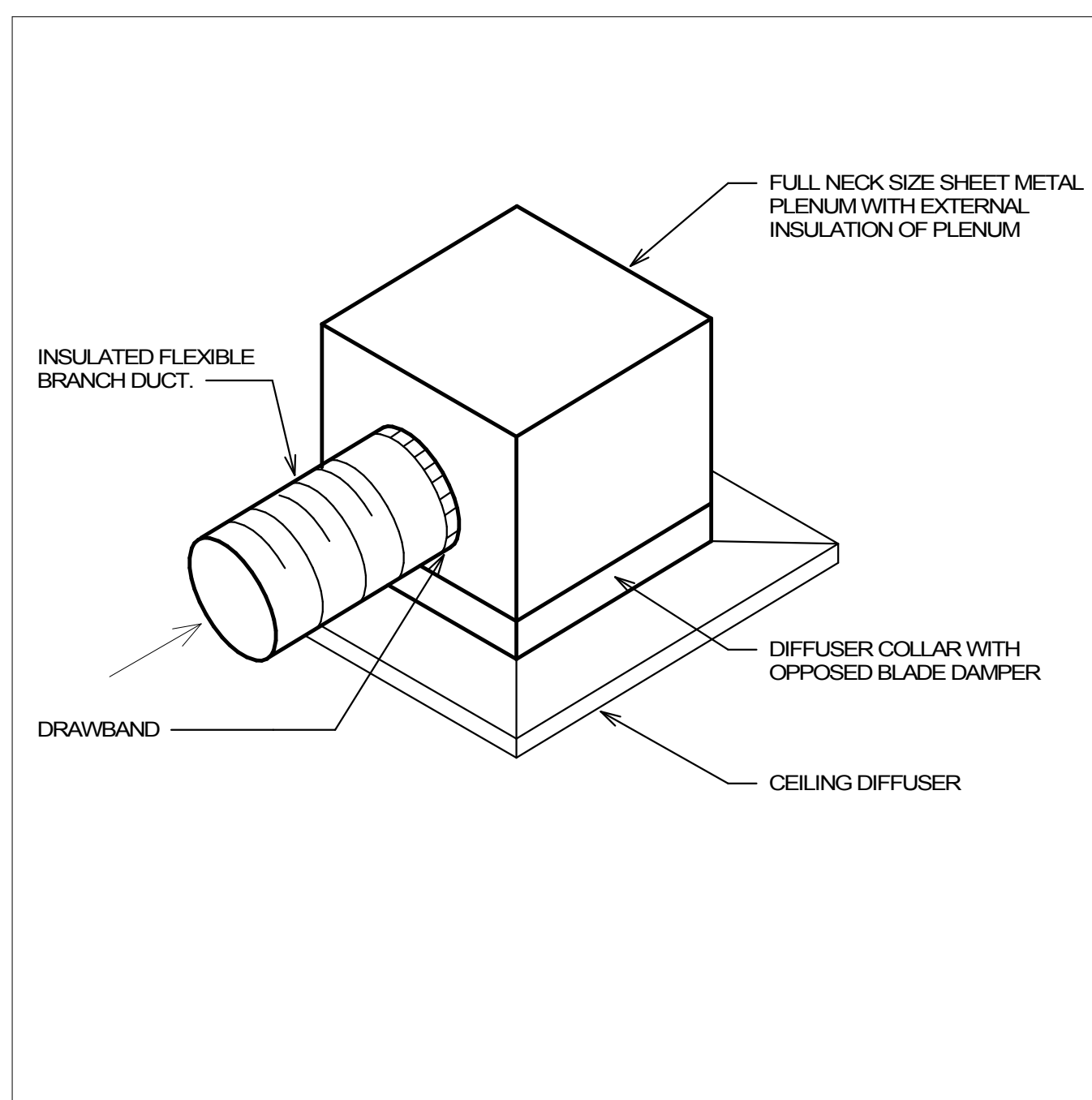
6 DUCT THROUGH NON-RATED WALL PENETRATION DETAIL  
NO SCALE



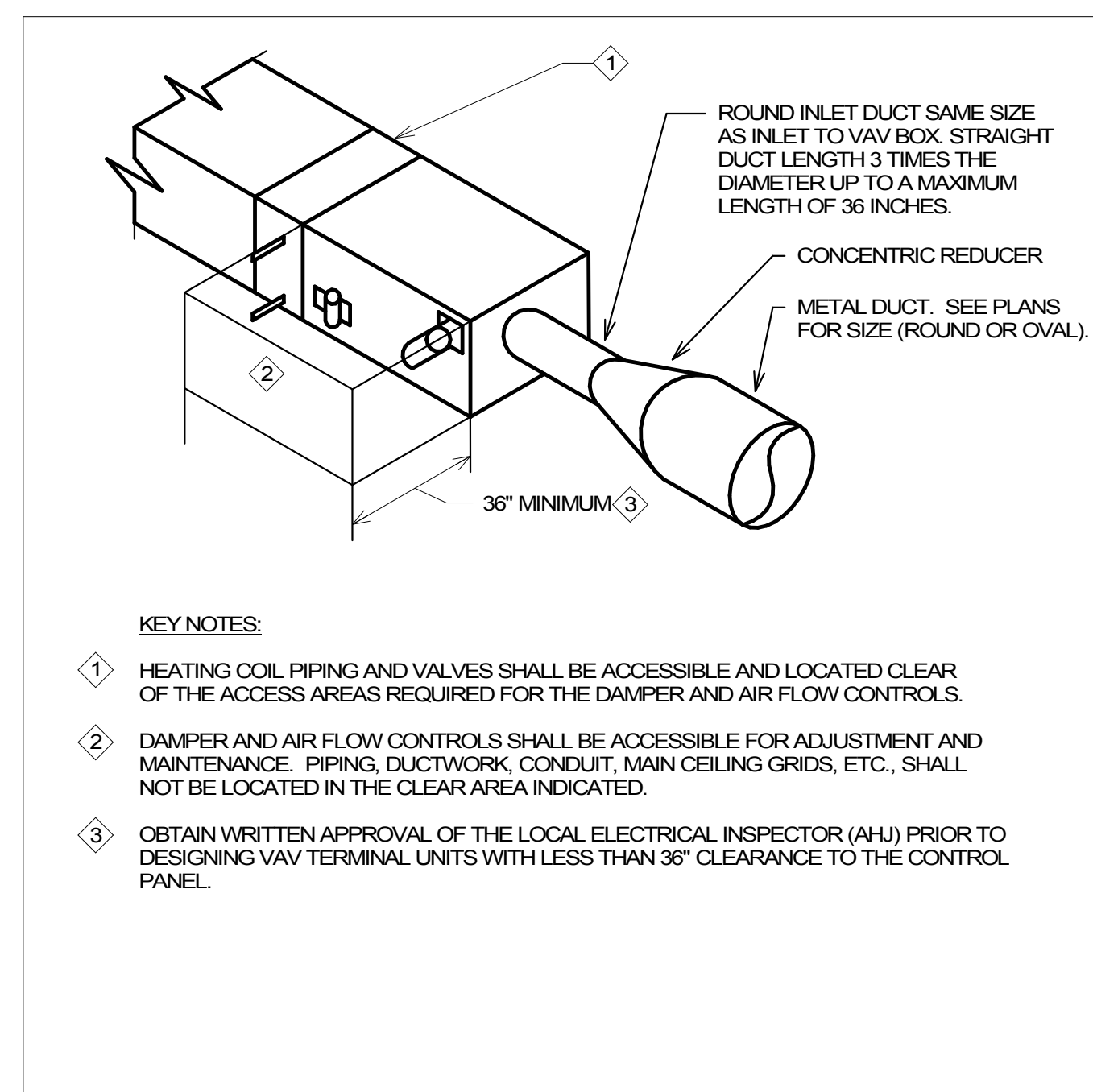
7 POWER ROOF VENTILATOR DETAIL  
NO SCALE



8 RETURN AIR GRILLE DETAIL  
NO SCALE



9 SUPPLY DIFFUSER CONNECTION DETAIL (SQUARE NECK)  
NO SCALE



10 TERMINAL UNIT INSTALLATION DETAIL  
NO SCALE



CONSULTANT



**DUNHAM**  
50 South Sixth Street / Suite 1100  
Minneapolis, Minnesota 55402-1540  
PHONE: 612.465.7550 FAX: 612.465.7551  
WEB: dunhameng.com  
mechanical + electrical consulting engineering  
Dunham Project Number: 0425231-000-00

BOILER SCHEDULE - HEATING WATER																	
MECHANICAL																	
EQUIPMENT TAG	APPLICATION	TYPE	BOILER RATED PRESSURE (PSIG)	OUTPUT (MBH)	WATER				BURNER				MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES		
					CONNECTION SIZE (IN)	EWT (F)	LWT (F)	GPM	GLYCOL TYPE	WPD (FT)	GAS INPUT (CFH)	GAS TYPE				GAS PRESSURE TO REGULATOR (PSIG)	TURNDOWN
B 01	HEATING WATER	CONDENSING		284	3	100	120	30	NONE		285	NAT GAS		10:1	LOCHINVAR	WHB285N	

**GENERAL MECHANICAL NOTES:**  
A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.  
**MECHANICAL NOTES:**

ELECTRICAL																	
EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	CONTROLLER				DISCONNECT AT MOTOR				PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES	
					TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYPE	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY					LOCATION
<b>GENERAL ELECTRICAL NOTES:</b> A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION. B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN. <b>ELECTRICAL NOTES:</b>																	
												<b>CONTROLLER TYPES:</b> MMS - MANUAL MOTOR STARTER (WITH OVERLOADS) CP - CONTROL PANEL		<b>MAGS - MAGNETIC STARTER</b> MFSMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)			

HYDRONIC PUMP SCHEDULE														
MECHANICAL														
EQUIPMENT TAG	APPLICATION	TYPE	GPM	DISCHARGE HEAD (FT)	GLYCOL TYPE	NPSHR (FT)	RPM	BHP	SUCTION SIZE (IN)	DISCHARGE SIZE (IN)	ECM (YES/NO)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
P 01	HEATING WATER	INLINE	30	45	NONE	-	2614	0.832	1-1/2	1-1/2	YES	BELL & GOSSETT	ECOCIRC XL 110-180	

**GENERAL MECHANICAL NOTES:**  
A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.  
**MECHANICAL NOTES:**

ELECTRICAL																
EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	CONTROLLER				DISCONNECT AT MOTOR				PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES
					TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYPE	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY				
<b>GENERAL ELECTRICAL NOTES:</b> A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION. B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN. <b>ELECTRICAL NOTES:</b>																
										<b>CONTROLLER TYPES:</b> VFD - VARIABLE FREQUENCY MOTOR CONTROLLER MMS - MANUAL MOTOR STARTER (WITH OVERLOADS) CP - CONTROL PANEL		<b>MAGS - MAGNETIC STARTER</b> MFSMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)				

FINNED TUBE RADIATION SCHEDULE - HEATING WATER																			
MECHANICAL																			
EQUIPMENT TAG	TYPE	NUMBER OF ROWS	FIN SIZE (IN/IN)	FINS/FT	FIN MATERIAL	PIPE MATERIAL	PIPE SIZE (IN)	ENCLOSURE GAUGE	ENCLOSURE HEIGHT (IN)	EAT DB (F)	EWT (F)	LWT (F)	GLYCOL TYPE	GLYCOL %	WPD/100 FT (FT)	CAPACITY PER LINEAR FT (BTU/H)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
FTR A	WALL	1	2-3/4X4	32	ALUMINUM	COPPER	3/4	14	8	65	120	110	NONE	-	270	270	RITTLING	FS3	

**MECHANICAL NOTES:**

EXPANSION TANK SCHEDULE											
MECHANICAL											
EQUIPMENT TAG	APPLICATION	TYPE	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	PRECHARGE PRESSURE (PSIG)	ASME CERTIFIED (YES/NO)	SIZE		MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
							DIAMETER (IN)	LENGTH (IN)			
ET 01	HEATING WATER	DIAPHRAGM	4.4	2.5	12	NO	11	14	BELL & GOSSETT	HFT-30	

**MECHANICAL NOTES:**

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Madeline M. Folin, P.E.  
PRINT NAME

PRINT NAME

SIGNATURE

57233

LICENSE NO.

05/07/2025

DATE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Bryan J. Schmidt, P.E.  
PRINT NAME

PRINT NAME

SIGNATURE

26566

LICENSE NO.

05/07/2025

DATE

**DD  
DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**MECHANICAL ELECTRICAL  
SCHEDULES**

SHEET NUMBER:

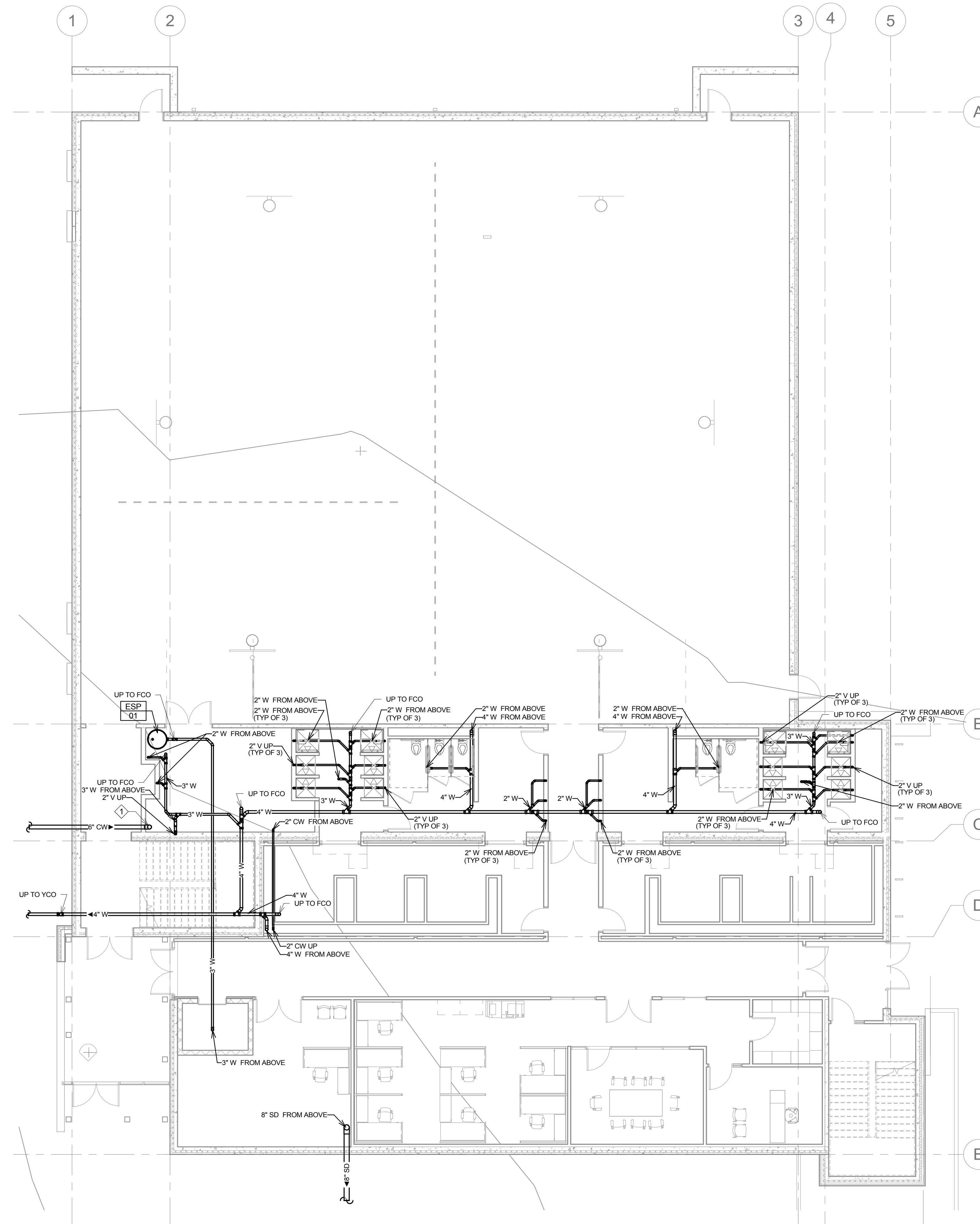
**ME801**

**GENERAL NOTES:**

- A. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY GENERAL CONSTRUCTION WORK AS DIRECTLY IMPACTED BY THE PIPING INSTALLATION. EXAMPLES OF WORK DIRECTLY TIED TO THE MECHANICAL CONTRACTOR'S WORK WOULD INCLUDE, BUT NOT LIMITED TO, ANY ROOF PENETRATIONS, FIRE SEALING OF ALL RATED WALL PENETRATIONS, ETC.
- B. COORDINATE ALL PIPE ROUTING WITH ALL OTHER TRADES TO ENSURE ADEQUATE CLEARANCES FOR OTHER PIPING, DUCTWORK, ELECTRICAL CONDUIT, STRUCTURAL SUPPORTS, ETC. ANY UNAVOIDABLE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OF RECORD. PROVIDE ALL OFFSETS AND TRANSITIONS AS REQUIRED FOR A CLEAN INSTALLATION. ADDITIONAL COMPENSATION WILL NOT BE REWARDED DUE TO LACK OF COORDINATION WITH OTHER SUBCONTRACTORS.
- C. SUPPORT ALL PIPING DIRECTLY FROM STRUCTURE. DO NOT SUPPORT ANY PIPING FROM DUCTWORK, CONDUIT, PIPING, ETC.
- D. COORDINATE WITH PROJECT SPECIFICATION MANUAL AND DRAWING DETAILS FOR ADDITIONAL PIPING ISOLATION VALVES, TEMPERATURE/PRESSURE GAUGES, BALANCING VALVES, DRAINS, VENTS, AND OTHER REQUIRED PIPING ACCESSORIES AND COMPONENTS THAT MAY NOT BE DIRECTLY INDICATED ON THIS DRAWING.
- E. THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE TO ADEQUATELY SEAL AND PROTECT ALL PIPING ON SITE FROM CONSTRUCTION DEBRIS AND CONTAMINATION THROUGHOUT THE ENTIRE PROCESS.
- F. WALLS AND PLUMBING FIXTURES FROM FLOOR ABOVE SHOWN FOR REFERENCE ONLY.

**KEY NOTES:**

- ① 6" COMBINATION FIRE PROTECTION AND DOMESTIC WATER SERVICE PIPE UP TO FLOOR ABOVE. SEE DETAIL FOR FURTHER INFORMATION.



① BELOW GRADE PLUMBING PLAN  
1/8" = 1'-0"

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

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OR UNDER MY DIRECT SUPERVISION AND THAT I AM  
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THE LAWS OF THE STATE OF MINNESOTA.

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LICENSE NO.  
05/07/2025  
DATE

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DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**BELOW GRADE PLUMBING  
PLAN**

SHEET NUMBER:

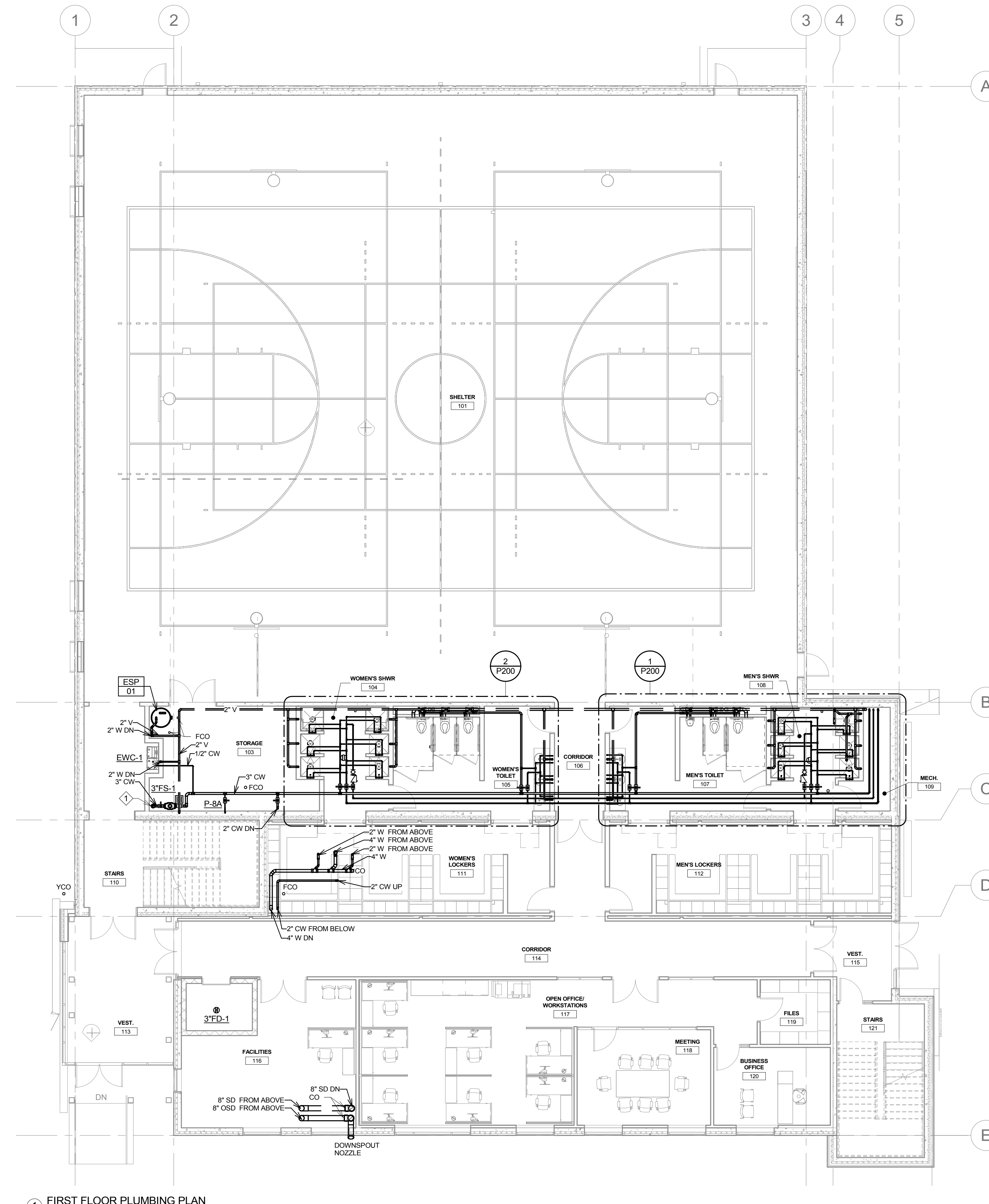
**P100**

**GENERAL NOTES:**

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- B. COORDINATE ALL PIPE ROUTING WITH ALL OTHER TRADES TO ENSURE ADEQUATE CLEARANCES FOR OTHER PIPING, DUCTWORK, ELECTRICAL CONDUIT, STRUCTURAL SUPPORTS, ETC. ANY UNAVOIDABLE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OF RECORD. PROVIDE ALL OFFSETS AND TRANSITIONS AS REQUIRED FOR A CLEAN INSTALLATION. ADDITIONAL COMPENSATION WILL NOT BE REWARDED DUE TO LACK OF COORDINATION WITH OTHER SUBCONTRACTORS.
- C. SUPPORT ALL PIPING DIRECTLY FROM STRUCTURE. DO NOT SUPPORT ANY PIPING FROM DUCTWORK, CONDUIT, PIPING, ETC.
- D. COORDINATE WITH PROJECT SPECIFICATION MANUAL AND DRAWING TEMPERATURE/PRESSURE GAUGES, BALANCING VALVES, DRAINS, VENTS, AND OTHER REQUIRED PIPING ACCESSORIES AND COMPONENTS THAT MAY NOT BE DIRECTLY INDICATED ON THIS DRAWING.
- E. THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE TO ADEQUATELY SEAL AND PROTECT ALL PIPING ON SITE FROM CONSTRUCTION DEBRIS AND CONTAMINATION THROUGHOUT THE ENTIRE PROCESS.

**KEY NOTES:**

- ① 6" COMBINATION FIRE PROTECTION AND DOMESTIC WATER SERVICE PIPE UP FROM BELOW FLOOR. SEE DETAIL FOR FURTHER INFORMATION.



① FIRST FLOOR PLUMBING PLAN  
1/8" = 1'-0"

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 232008.003  
Date: 05/07/2025

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Bryan J. Schmidt, P.E.  
PRINT NAME  
SIGNATURE  
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LICENSE NO.  
05/07/2025  
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Construction**

SHEET TITLE:  
**FIRST FLOOR PLUMBING  
PLAN**

SHEET NUMBER:

**P101**

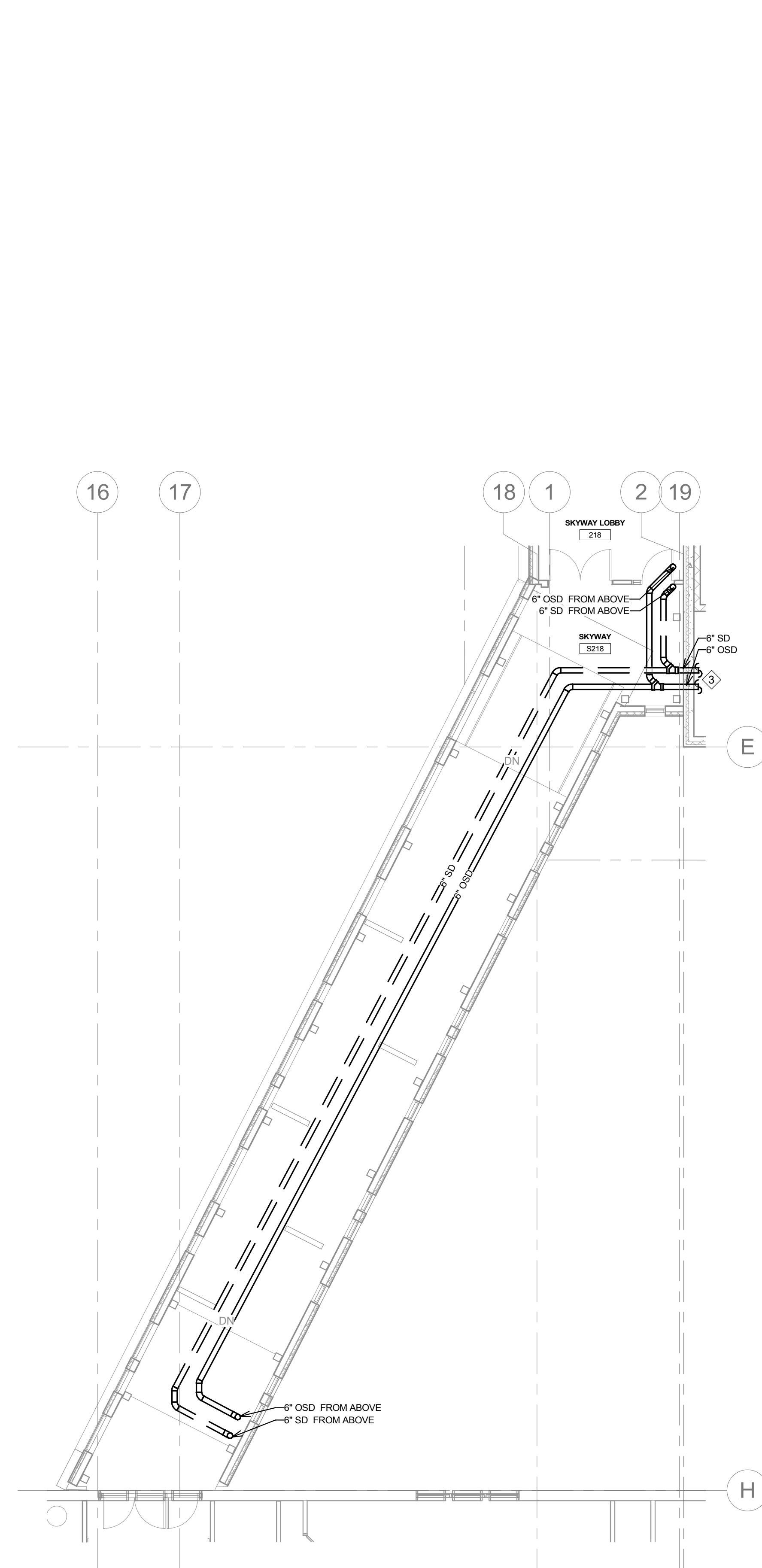


**GENERAL NOTES:**

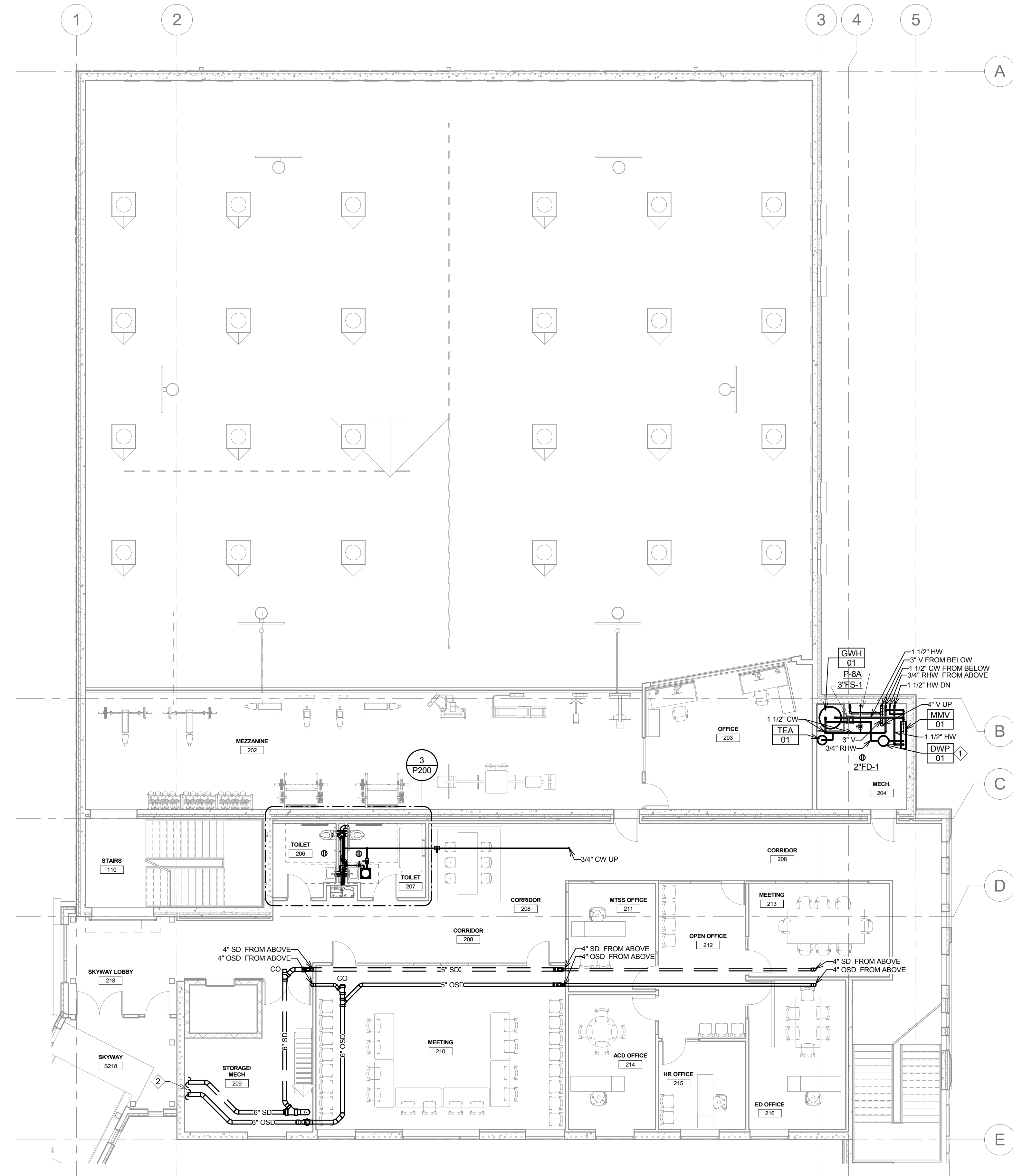
- A. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY GENERAL CONSTRUCTION WORK AS DIRECTLY IMPACTED BY THE PIPING INSTALLATION. EXAMPLES OF WORK DIRECTLY TIED TO THE MECHANICAL CONTRACTOR'S WORK WOULD INCLUDE, BUT NOT LIMITED TO, ANY ROOF PENETRATIONS, FIRE SEALING OF ALL RATED WALL PENETRATIONS, ETC.
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- D. COORDINATE WITH PROJECT SPECIFICATION MANUAL AND DRAWING TEMPERATURE/PRESSURE GAUGES, BALANCING VALVES, DRAINS, VENTS, AND OTHER REQUIRED PIPING ACCESSORIES AND COMPONENTS THAT MAY NOT BE DIRECTLY INDICATED ON THIS DRAWING.
- E. THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE TO ADEQUATELY SEAL AND PROTECT ALL PIPING ON SITE FROM CONSTRUCTION DEBRIS AND CONTAMINATION THROUGHOUT THE ENTIRE PROCESS.

**KEY NOTES:**

- ① DWP-01 TO BE MOUNTED ON UNISTRUT STAND SERVING MMV-01.
- ② REFER TO 2/P102 FOR PIPING CONTINUATION.
- ③ REFER TO 1/P102 FOR PIPING CONTINUATION.



② SECOND FLOOR PLUMBING PLAN - SKYWAY S218  
1/8" = 1'-0"



① SECOND FLOOR PLUMBING PLAN  
1/8" = 1'-0"

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

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THE LAWS OF THE STATE OF MINNESOTA.

Bryan J. Schmidt, P.E.  
PRINT NAME  
SIGNATURE  
26566  
LICENSE NO.  
05/07/2025  
DATE

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DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**SECOND FLOOR PLUMBING  
PLAN**

SHEET NUMBER:

**P102**

**GENERAL NOTES:**

- A. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY GENERAL CONSTRUCTION WORK AS DIRECTLY IMPACTED BY THE PIPING INSTALLATION. EXAMPLES OF WORK DIRECTLY TIED TO THE MECHANICAL CONTRACTOR'S WORK WOULD INCLUDE, BUT NOT LIMITED TO, ANY ROOF PENETRATIONS, FIRE SEALING OF ALL RATED WALL PENETRATIONS, ETC.
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- E. THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE TO ADEQUATELY SEAL AND PROTECT ALL PIPING ON SITE FROM CONSTRUCTION DEBRIS AND CONTAMINATION THROUGHOUT THE ENTIRE PROCESS.

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

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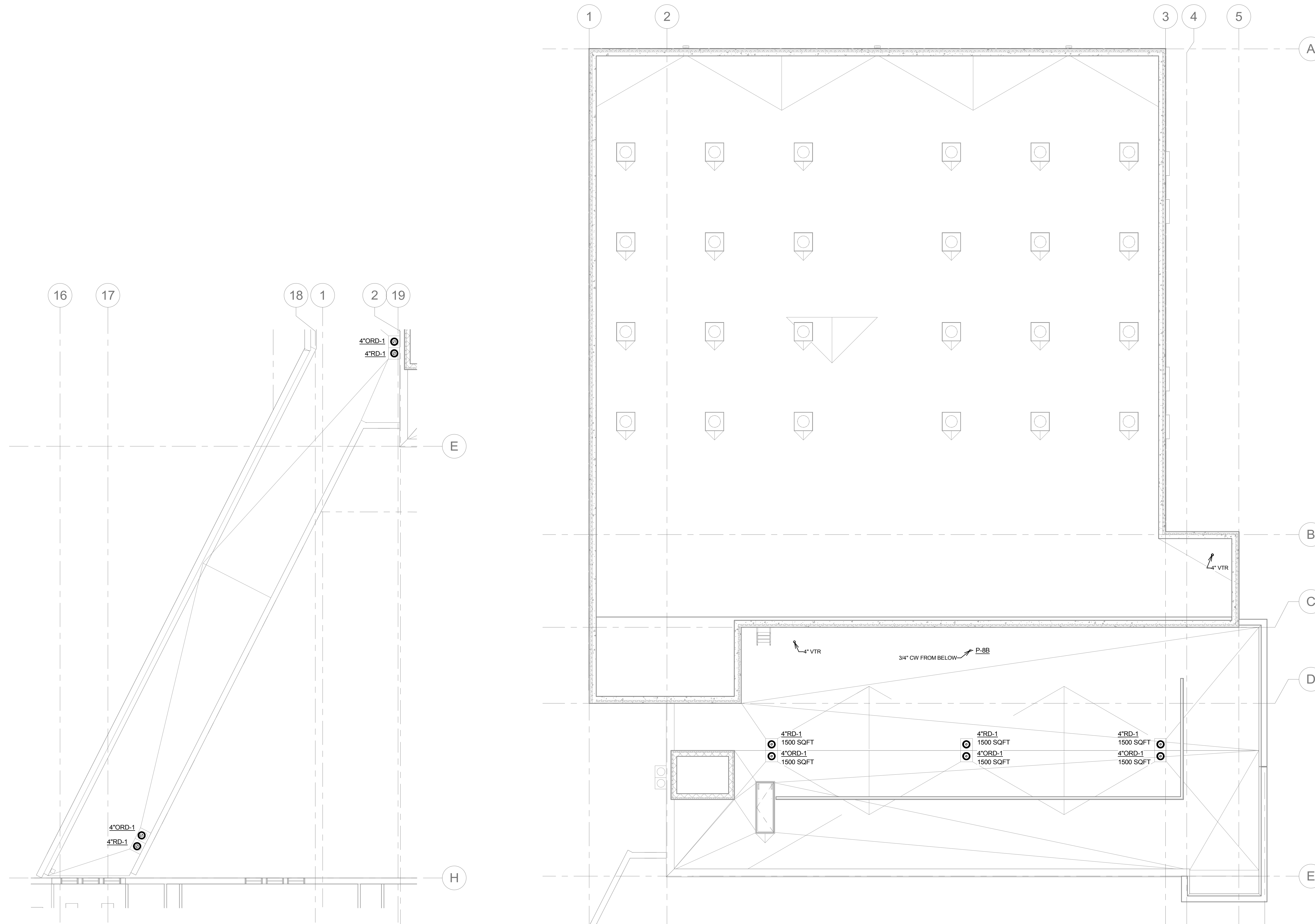
Bryan J. Schmidt, P.E.  
PRINT NAME  
SIGNATURE  
26566  
LICENSE NO.  
05/07/2025  
DATE

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DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**ROOF PLUMBING PLAN**

SHEET NUMBER:

**P103**



2 ROOF PLUMBING PLAN - SKYWAY  
1/8" = 1'-0"

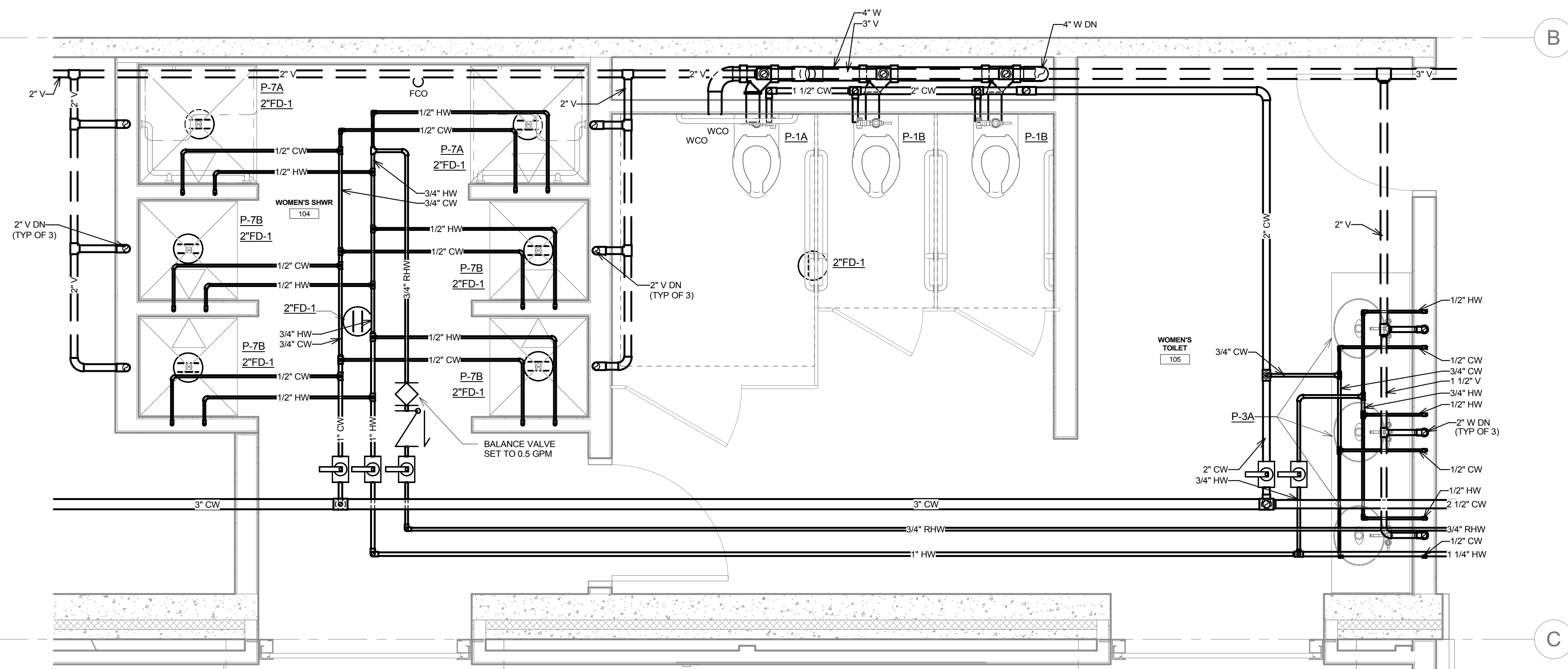
1 ROOF PLUMBING PLAN  
1/8" = 1'-0"

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DOCUMENT  
Not For  
Construction**

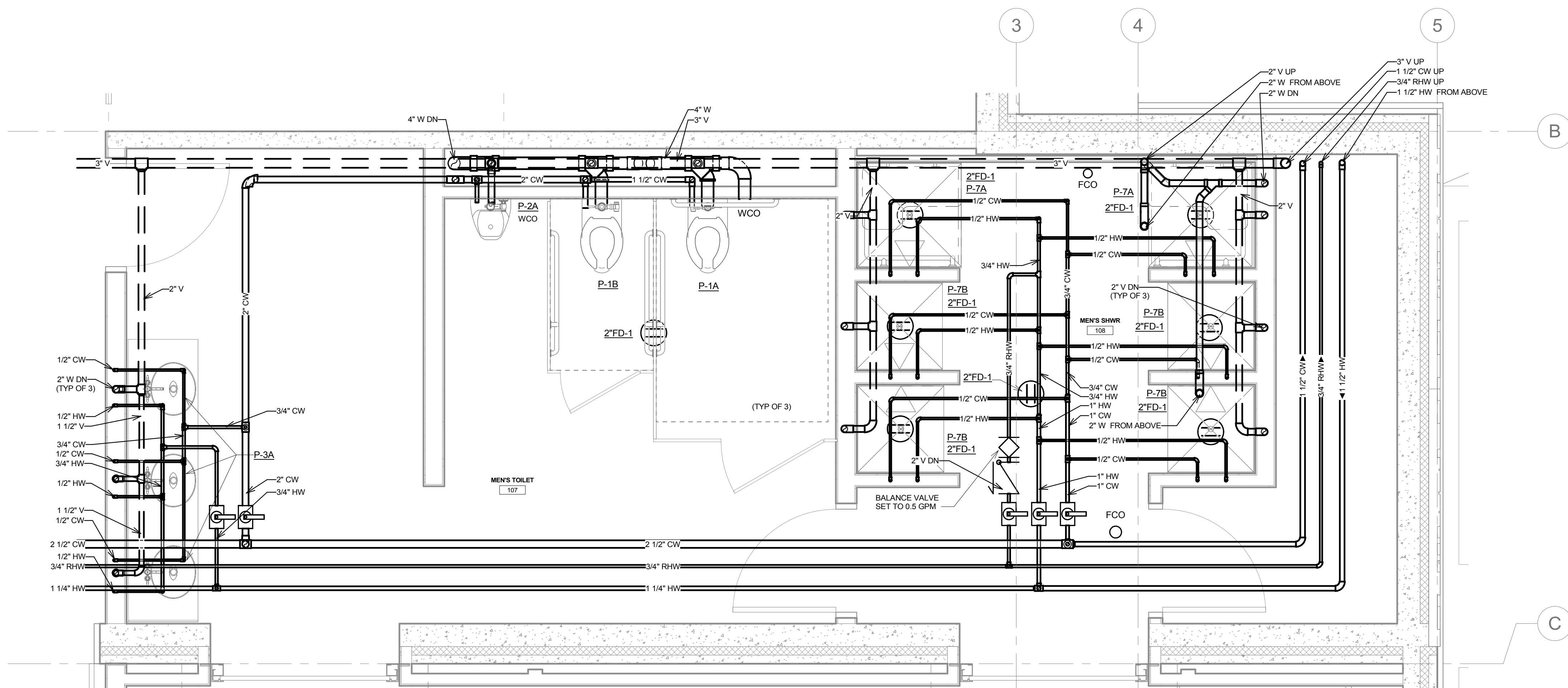
SHEET TITLE:  
**ENLARGED PLUMBING  
PLANS**

SHEET NUMBER:

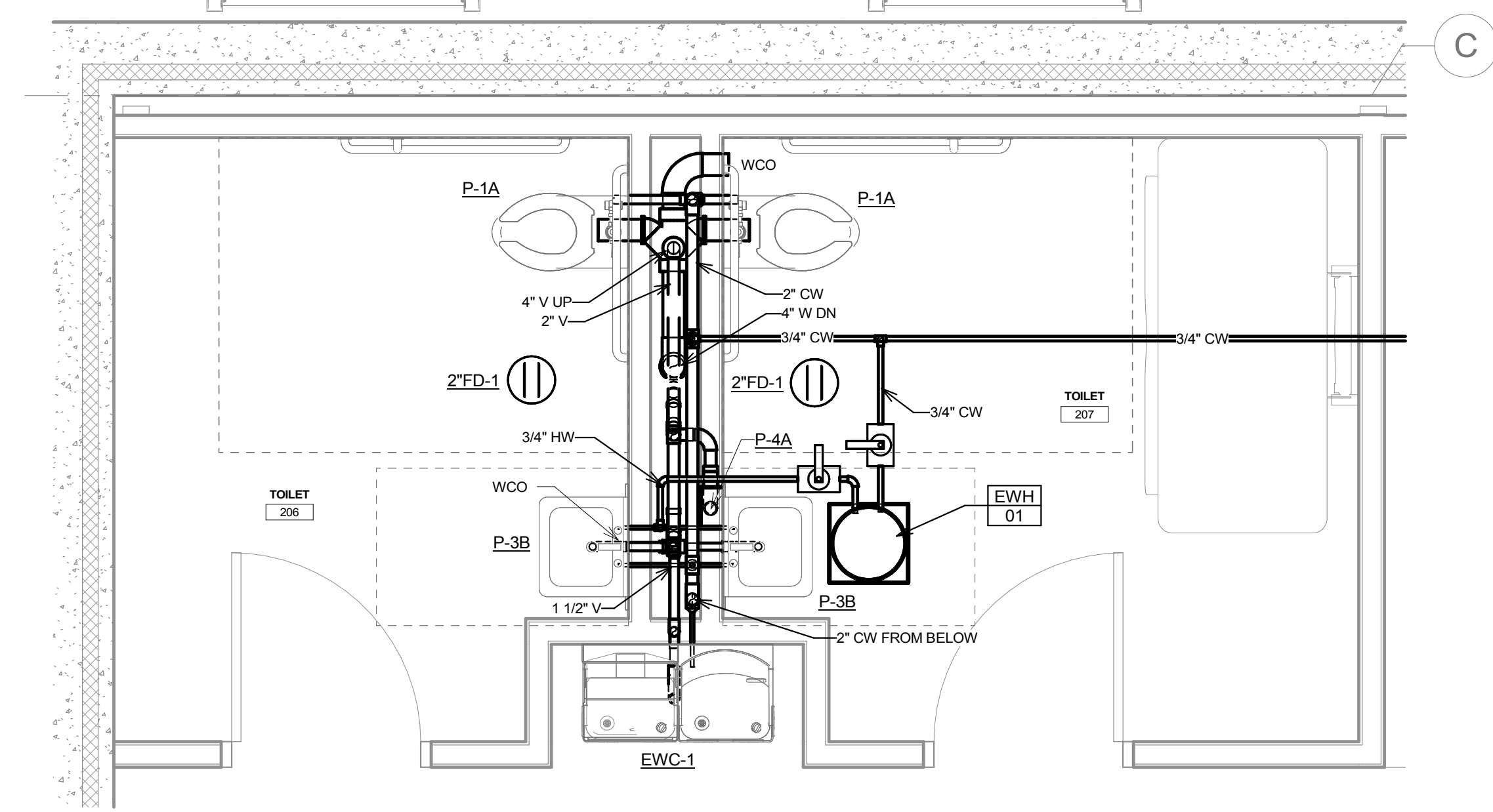
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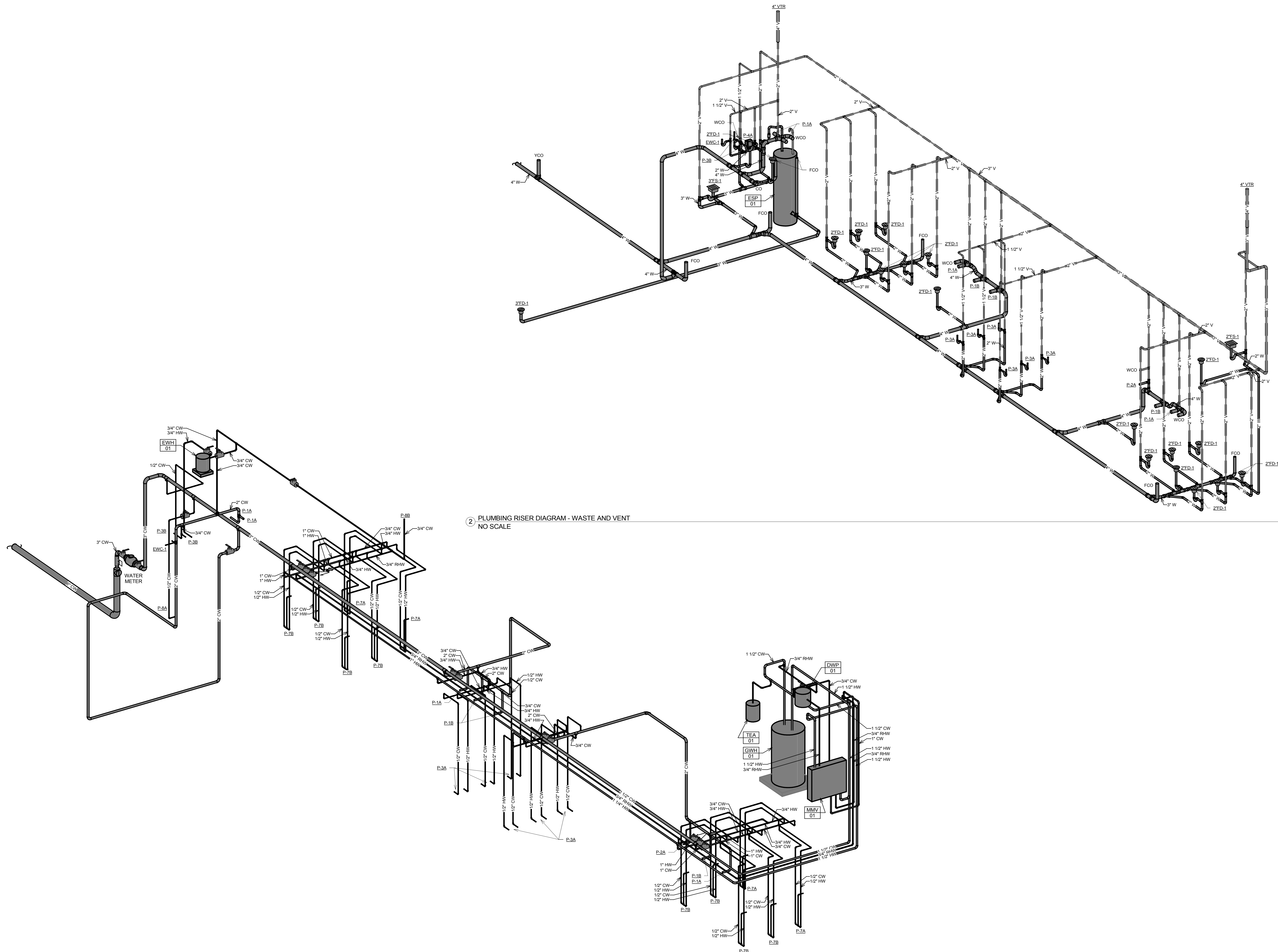
2 ENLARGED PLUMBING PLAN - WOMAN'S TOILET (B105) AND WOMAN'S SHWR (B105A)  
1/2" = 1'-0"



1 ENLARGED PLUMBING PLAN - MEN'S TOILET (B103) AND MEN'S SHWR (B103A)  
1/2" = 1'-0"



3 ENLARGED PLUMBING PLAN - TOILET (B204) & TOILET (B205)  
1/2" = 1'-0"



1 PLUMBING RISER DIAGRAM - POTABLE WATER  
NO SCALE

2 PLUMBING RISER DIAGRAM - WASTE AND VENT  
NO SCALE

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

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05/07/2025  
DATE

**DD  
DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
PLUMBING RISER DIAGRAMS

SHEET NUMBER:

**P300**

CONSULTANT



**DUNHAM**  
50 South Sixth Street / Suite 1100  
Minneapolis, Minnesota 55402-1540  
PHONE 612.465.7550 FAX 612.465.7551  
WEB dunhaminc.com  
mechanical + electrical consulting engineering  
Dunham Project Number: 0425231-000-00

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

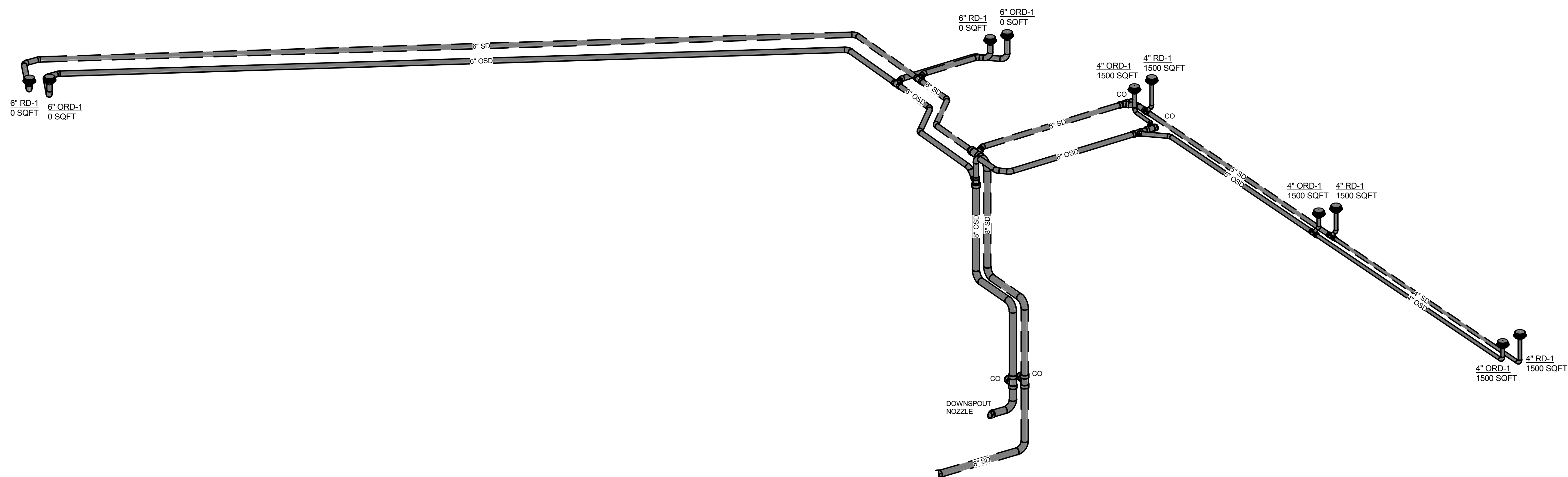
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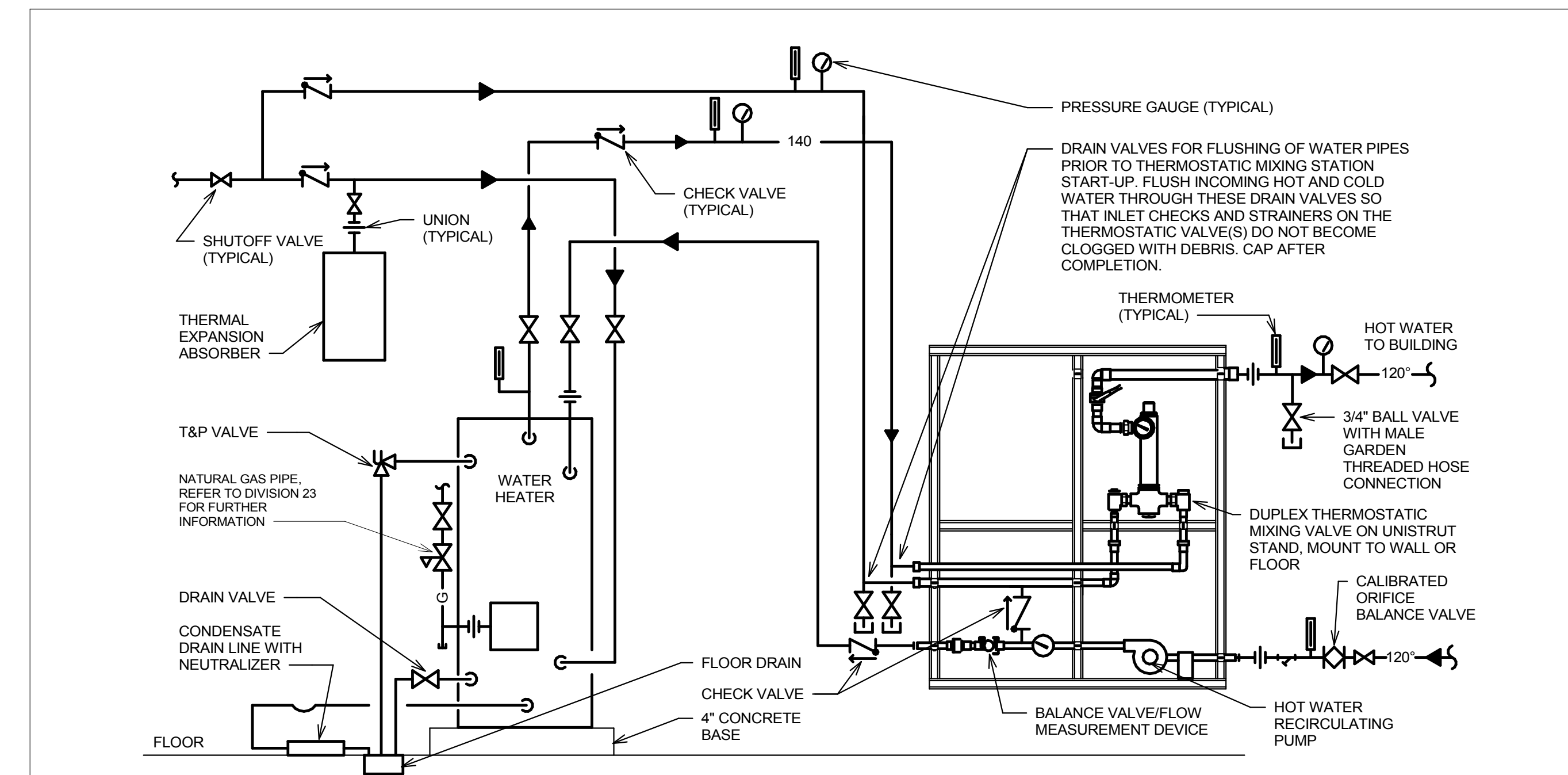
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DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**PLUMBING RISER DIAGRAMS**

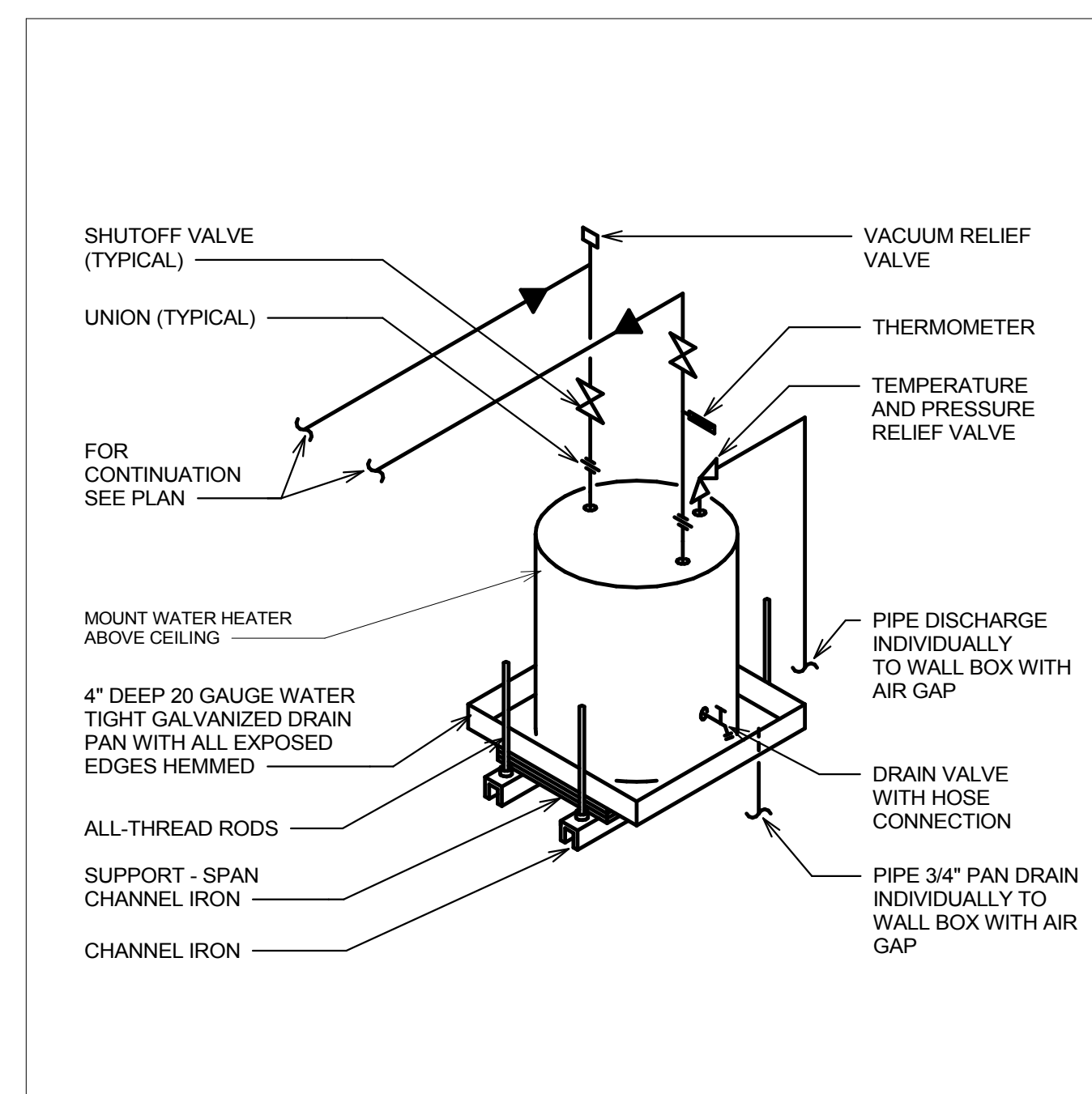
SHEET NUMBER:  
**P301**



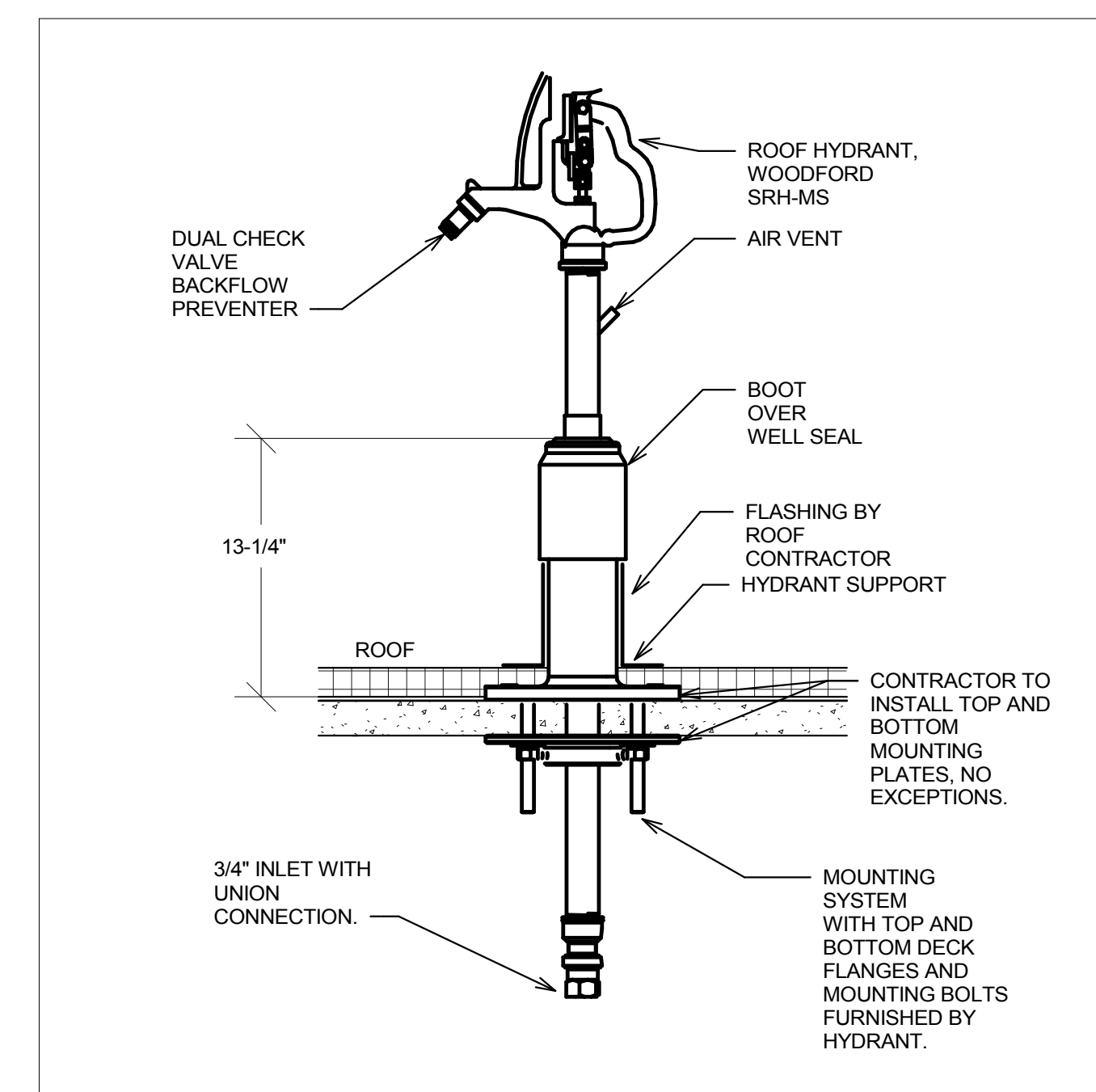
1 PLUMBING RISER DIAGRAM - STORM DRAINAGE  
NO SCALE



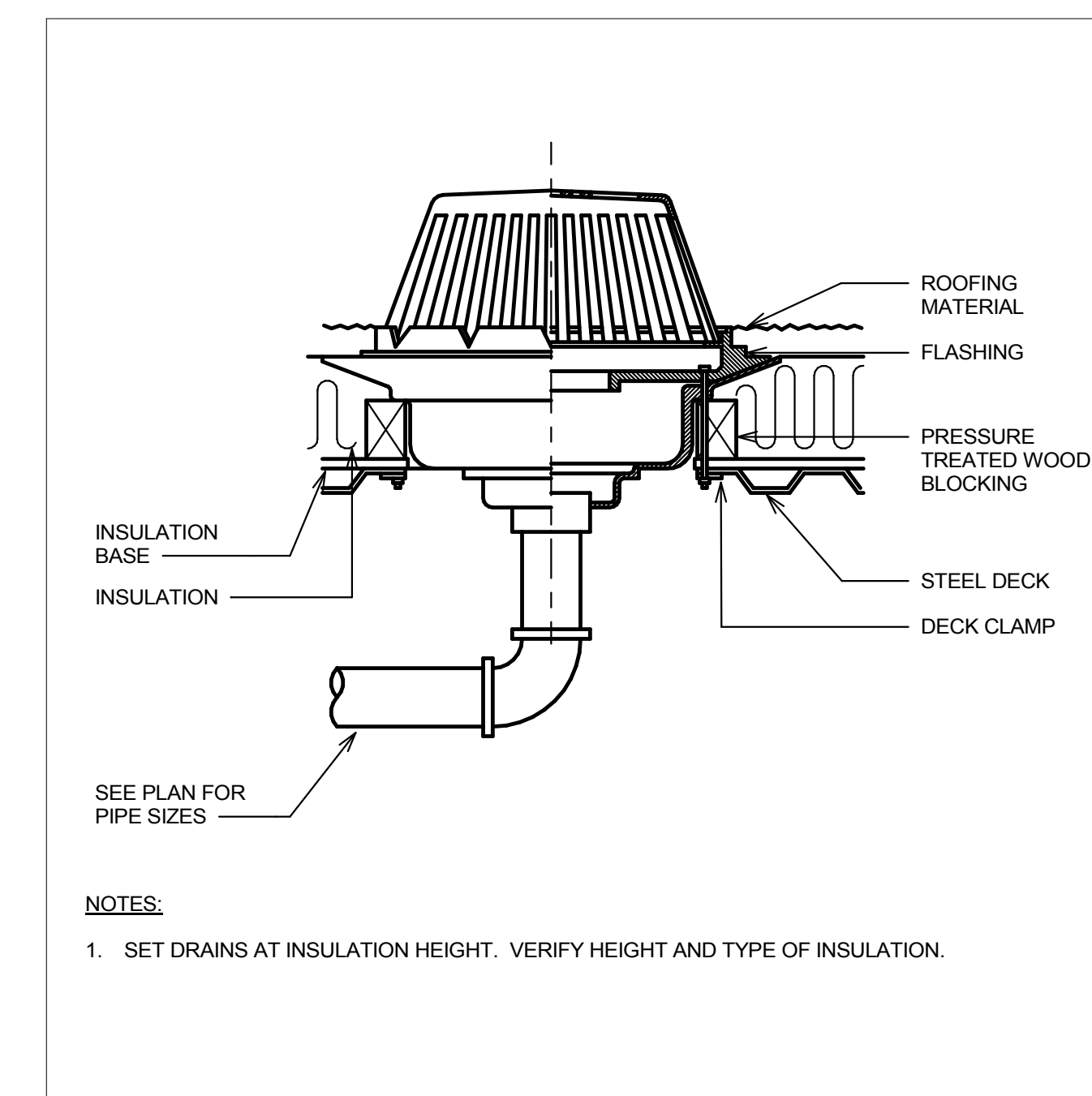
9 GAS WATER HEATER WITH MASTER MIXING VALVE STATION DETAIL  
NO SCALE



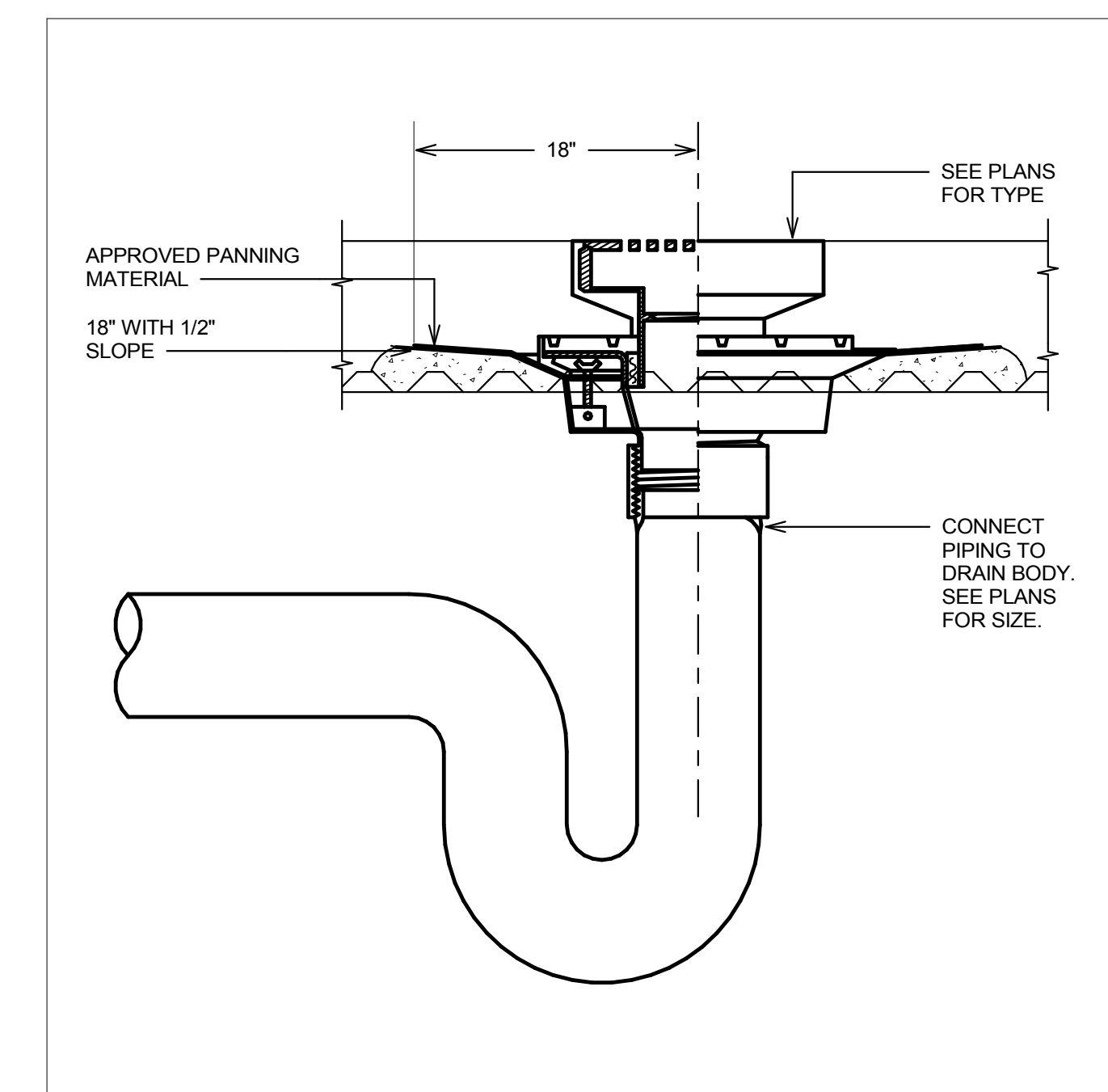
8 ELECTRIC WATER HEATER PIPING DETAIL  
NO SCALE



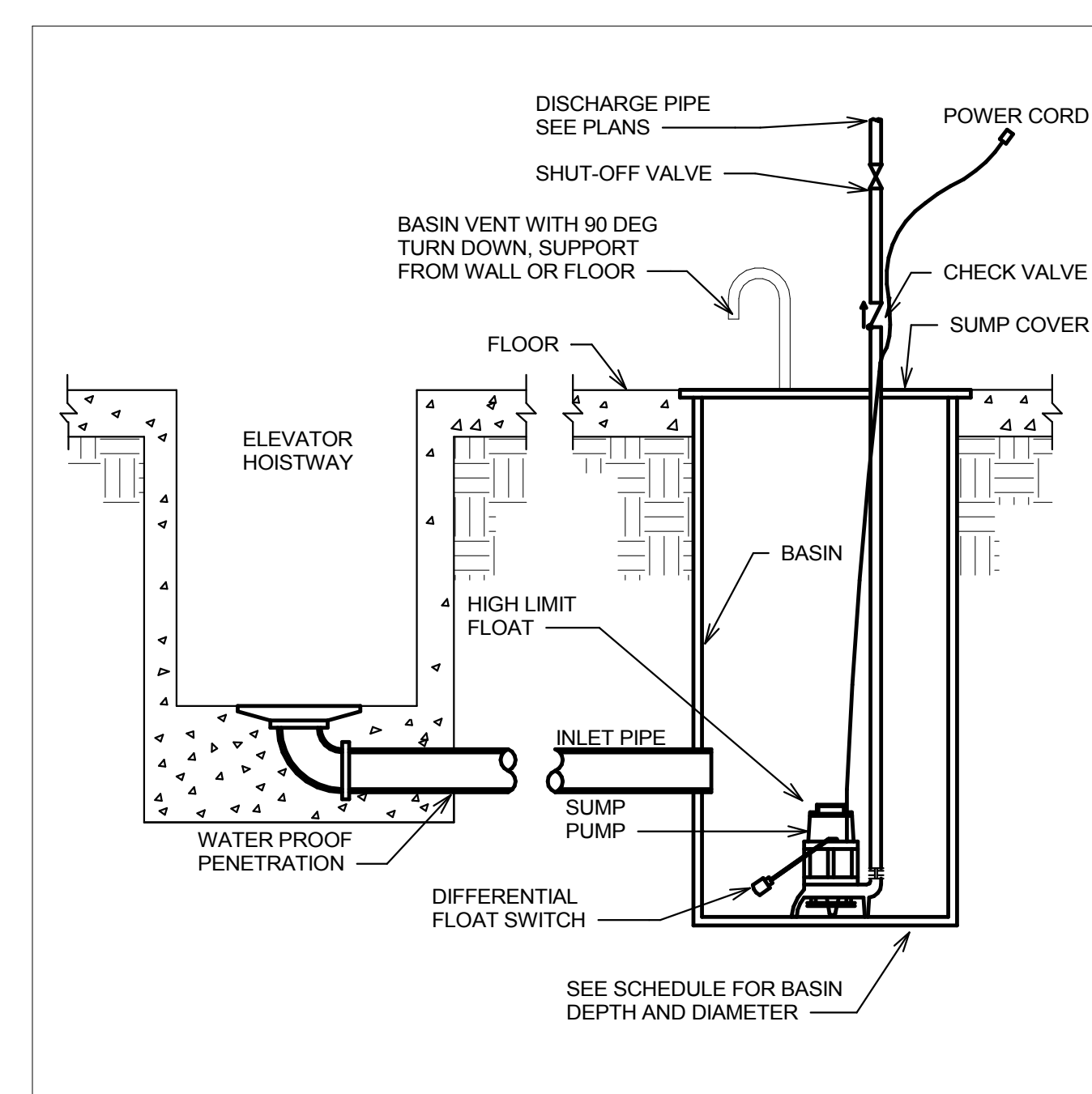
7 ROOF HYDRANT DETAIL  
NO SCALE



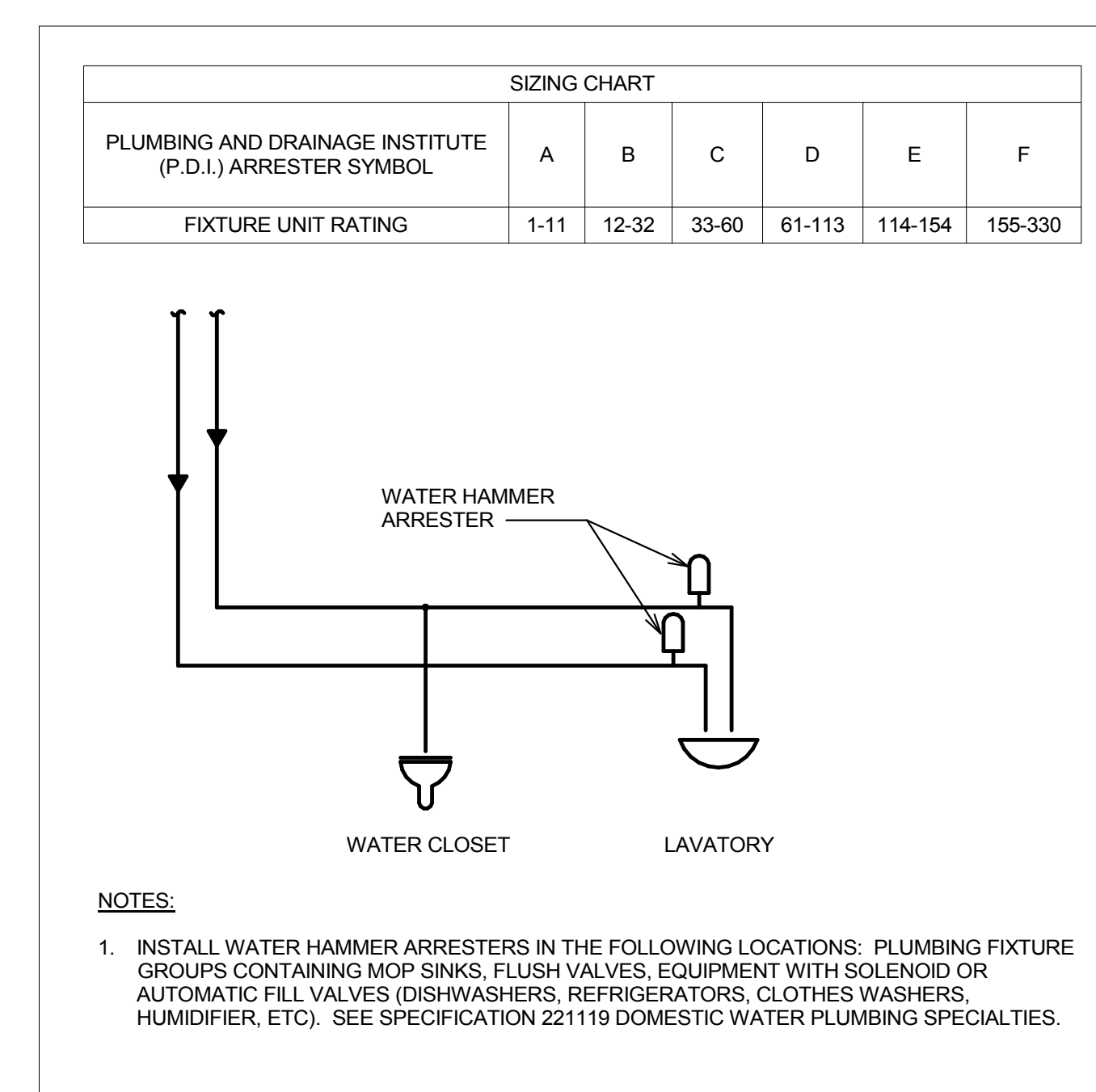
6 ROOF DRAIN DETAIL  
NO SCALE



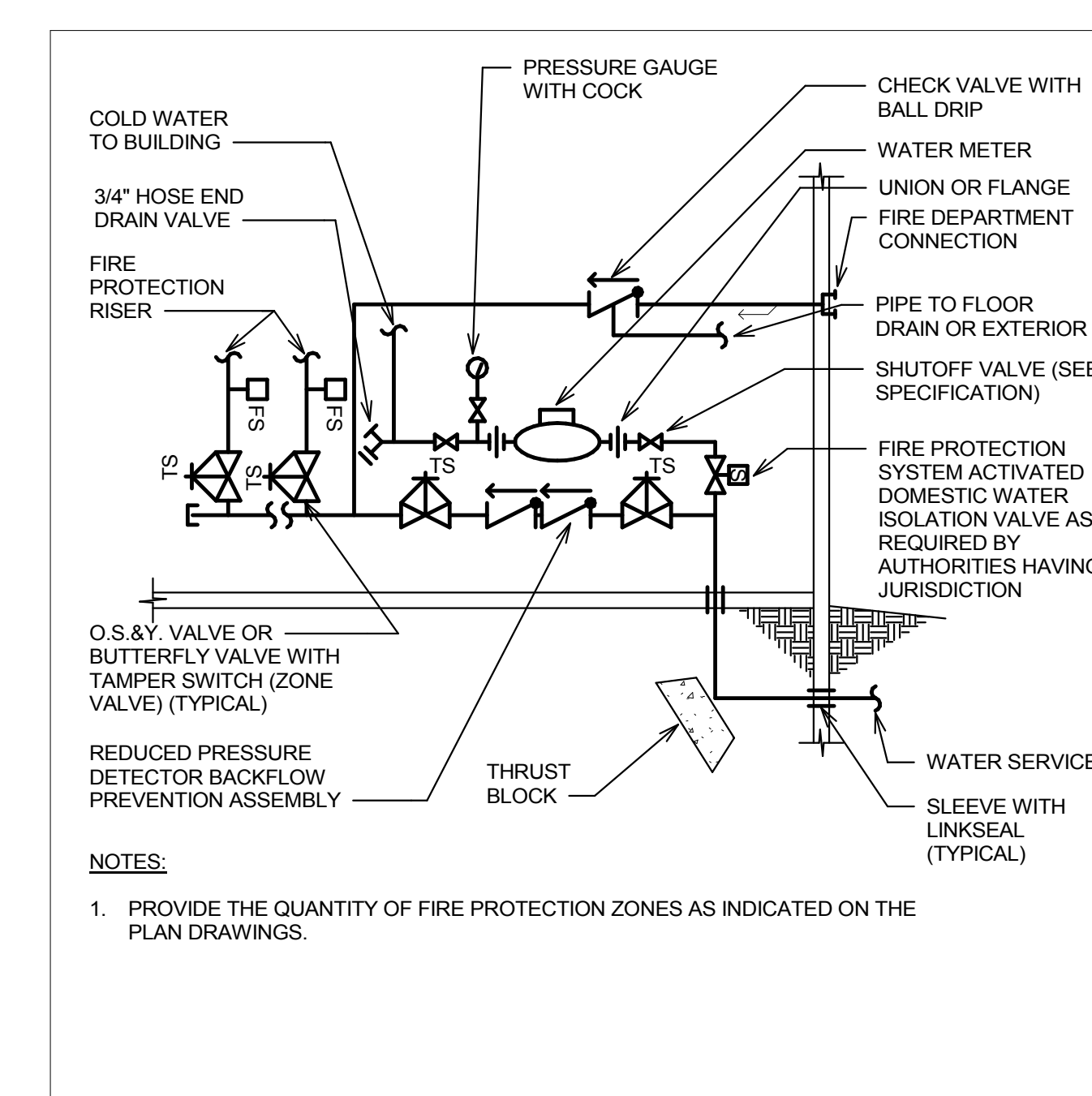
5 FLOOR DRAIN DETAIL  
NO SCALE



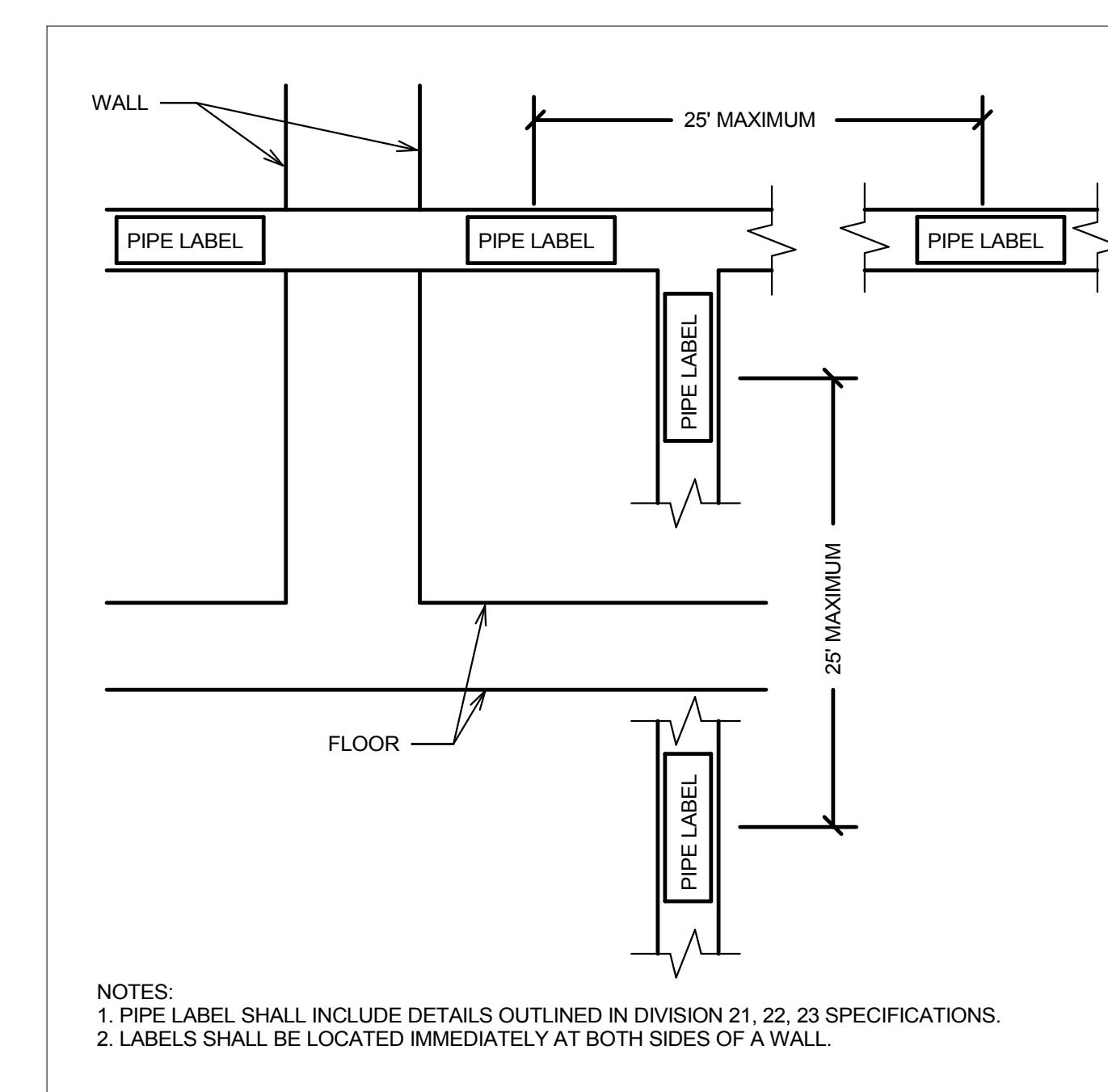
4 ELEVATOR HOISTWAY SUMP PUMP DETAIL  
NO SCALE



3 WATER HAMMER ARRESTOR DETAIL  
NO SCALE



2 COMBINATION FIRE AND DOMESTIC WATER SERVICE PIPING DETAIL  
NO SCALE



1 PIPE LABEL DETAIL  
NO SCALE

**PLUMBING FIXTURE SCHEDULE**

MECHANICAL															
FIXTURE TAG	FIXTURE DESCRIPTION	MOUNTING	ADA	FIXTURE	TRIM	STOP	TRAP	CARRIER	WASTE (IN)	TRAP (IN)	VENT (IN)	CW (IN)	HW (IN)	RO (IN)	MECHANICAL NOTES
P-1A	WATER CLOSET	WALL	YES	AMERICAN STANDARD AFWALL MILLENNIUM 3351.101, ELONGATED BOWL, WALL MOUNTED WITH TOP SPUD, WHITE, EVERCLEAN SURFACE.	TOTO FLUSHOMETER MODEL ECOPOWER TETBLA, SENSOR OPERATED, HYDROELECTRIC FLUSH, BATTERY POWERED, 1.28 GPF LOW CONSUMPTION, 1" ANGLE STOP, TOP SPUD, POLISHED CHROME.	INTEGRAL ANGLE STOP ON FLUSH VALVE.	INTEGRAL	FLOOR SET VERTICALLY ADJUSTABLE WITH AUXILIARY SUPPORT ASSEMBLY (4 FEET SUPPORTS).	4	NA	2	1 1/2	NA	NA	PROVIDE OPEN FRONT WHITE SEAT EQUAL TO OLSONITE 95SSCT. FLUSH VALVE HANDLE TO BE ON THE APPROACH SIDE OF WATER CLOSET.
P-1B	WATER CLOSET	WALL	NO	AMERICAN STANDARD AFWALL MILLENNIUM 3351.101, ELONGATED BOWL, WALL MOUNTED WITH TOP SPUD, WHITE, EVERCLEAN SURFACE.	TOTO FLUSHOMETER MODEL ECOPOWER TETBLA, SENSOR OPERATED, HYDROELECTRIC FLUSH, BATTERY POWERED, 1.28 GPF LOW CONSUMPTION, 1" ANGLE STOP, TOP SPUD, POLISHED CHROME.	INTEGRAL ANGLE STOP ON FLUSH VALVE.	INTEGRAL	FLOOR SET VERTICALLY ADJUSTABLE WITH AUXILIARY SUPPORT ASSEMBLY (4 FEET SUPPORTS).	4	NA	2	1 1/2	NA	NA	PROVIDE OPEN FRONT WHITE SEAT EQUAL TO OLSONITE 95SSCT. FLUSH VALVE HANDLE TO BE ON THE APPROACH SIDE OF WATER CLOSET.
P-2A	URINAL	WALL	YES	AMERICAN STANDARD WASHBROOK 6590.001, ELONGATED 14" RIM, WALL MOUNTED WITH TOP SPUD, WASHOUT FLUSH, STRAINER, WHITE.	TOTO FLUSHVALVE MODEL ECOPOWER TEU1LA, SENSOR OPERATED, HYDROELECTRIC FLUSH, BATTERY POWERED, 0.5 GPF, 3/4" ANGLE STOP, TOP SPUD, POLISHED CHROME.	INTEGRAL ANGLE STOP ON FLUSH VALVE.	NA	FLOOR MOUNTED, HANGER PLATE, ADJUSTABLE SUPPORTING RODS, STRUCTURAL UPRIGHTS AND WELDED FEET.	2	NA	1-1/2	3/4	NA	NA	-
P-3A	LAVATORY	UNDER COUNTER MOUNT	YES	AMERICAN STANDARD OVALVYN 0455.221, OVAL UNDERMOUNT SINK, 17-1/8x14-1/8" BOWL, LESS OVERFLOW, VITREOUS CHINA, WHITE.	SLOAN MODEL EBF-187, 0.5 GPM, LAMINAR FLOW, DECK MOUNTED, SENSOR OPERATED, BATTERY POWERED, POLISHED CHROME.	McGUIRE QUARTER TURN BRASS BALL VALVE POLISHED CHROME PLATED CAST BRASS ANGLE VALVE KITS, LOOSE KEY, FLEXIBLE RISERS, ESCUTCHEON.	McGUIRE 1-1/4"x1-1/4" CAST BRASS CHROME PLATED P' TRAP, TREATED INSIDE & OUTSIDE WITH SANIGUARD, EXTEND TO WALL WITH ESCUTCHEON.	NA	1-1/2	1-1/4	1-1/2	1/2	1/2	NA	PROVIDE WITH ASSE 1070 THERMOSTATIC MIXING VALVE. PROVIDE MOLDED COVERING FOR WATER AND WASTE PIPING EQUAL TO TRUEBRO LAV GUARD 2". PROVIDE McGUIRE CAST BRASS CHROME PLATED TAILPIECE & OPEN GRID STRAINER, ALL METAL PARTS TREATED INSIDE & OUTSIDE WITH SANIGUARD.
P-3B	LAVATORY	WALL	YES	AMERICAN STANDARD DECORUM 9024.001EC, WALL HUNG FOR CONCEALED ARMS SUPPORT, SINGLE HOLE, LESS OVERFLOW, VITREOUS CHINA, WHITE.	SLOAN MODEL EBF-187, 0.5 GPM, LAMINAR FLOW, DECK MOUNTED, SENSOR OPERATED, BATTERY POWERED, POLISHED CHROME.	McGUIRE QUARTER TURN BRASS BALL VALVE POLISHED CHROME PLATED CAST BRASS ANGLE VALVE KITS, LOOSE KEY, FLEXIBLE RISERS, ESCUTCHEON.	McGUIRE 1-1/4"x1-1/4" CAST BRASS CHROME PLATED P' TRAP, TREATED INSIDE & OUTSIDE WITH SANIGUARD, EXTEND TO WALL WITH ESCUTCHEON.	FLOOR MOUNTED, CONCEALED ARMS, LEVELING AND SECURING SCREWS, STRUCTURAL UPRIGHTS AND WELDED FEET.	1-1/2	1-1/4	1-1/2	1/2	1/2	NA	PROVIDE WITH ASSE 1070 THERMOSTATIC MIXING VALVE. PROVIDE MOLDED COVERING FOR WATER AND WASTE PIPING EQUAL TO TRUEBRO LAV GUARD 2". PROVIDE McGUIRE CAST BRASS CHROME PLATED TAILPIECE & OPEN GRID STRAINER, ALL METAL PARTS TREATED INSIDE & OUTSIDE WITH SANIGUARD.
P-4A	STANDPIPE WALL BOX	WALL	NA	GUY GRAY MBS1200DB2, RECESSED, WHITE POWDER COATED STEEL WASTE OUTLET BOX, WATER TIGHT, SLOPED TO 2" CENTER.	NA	NA	2" P' TRAP	NA	2	2	1-1/2	NA	NA	NA	MOUNT WALL BOX BELOW LAVATORY SINK.
P-7A	SHOWER	WALL	YES	NA	DELTA R1000-UNWS PRESSURE BALANCE VALVE WITH T13H333-05, 1.5 GPM SHOWER HEAD, HAND HELD SHOWER HEAD AND WALL HEAD WITH DIVERTER, 70" WHITE VINYL HOSE, 36" SLIDE BAR, INTEGRAL STOPS, DIVERTER FOR HEAD TO HAND CONTROL.	INTEGRAL	NA	NA	2" FD	NA	NA	1/2	1/2	NA	-
P-7B	SHOWER	WALL	NO	NA	DELTA R1000-UNWS PRESSURE BALANCE VALVE WITH T13H132, 1.5 GPM SHOWER HEAD, INTEGRAL STOPS.	INTEGRAL	NA	NA	2" FD	NA	NA	1/2	1/2	NA	-
P-8A	HOSE BIBB	WALL	NA	WOODFORD MODEL Z1	NA	BALL VALVE	NA	NA	NA	NA	NA	3/4	NA	NA	-
P-8B	ROOF HYDRANT	ROOF	NA	WOODFORD MODEL RHY2-1MS	NA	BALL VALVE	NA	NA	NA	NA	NA	3/4	NA	NA	-

**THERMAL EXPANSION ABSORBER SCHEDULE**

MECHANICAL												
EQUIPMENT TAG	APPLICATION	TYPE	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	PRECHARGE PRESSURE (PSIG)	ASME CERTIFIED (YES/NO)	DIAMETER (IN)	LENGTH (IN)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES	
TEA 01												

MECHANICAL NOTES:

**ELECTRIC WATER COOLER SCHEDULE**

MECHANICAL												
EQUIPMENT TAG	FIXTURE DESCRIPTION	MOUNTING	ADA	FIXTURE	STOP	TRAP	WASTE (IN)	TRAP (IN)	VENT (IN)	CW (IN)	MECHANICAL NOTES	
EW-C-1	B1-LEVEL ELECTRIC WATER COOLER WITH BOTTLE FILLER.	WALL	YES	ELKAY MODEL LZSTLWSSK B1-LEVEL COOLER, FILTERED BOTTLE FILLING STATION, STAINLESS STEEL.	BALL VALVE	1-1/4"x1-1/4" CAST BRASS, CHROME PLATED, P' TRAP, EXTEND TO WALL W/ ESCUTCHEON	1-1/4	1-1/4	1-1/2	1/2	1	

MECHANICAL NOTES:  
1. REFER TO ELECTRICAL PLANS FOR RECEPTACLE LOCATION.

**ROOF AND OVERFLOW DRAIN SCHEDULE**

MECHANICAL				
EQUIPMENT TAG	SIZE (IN)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
ORD-1	SEE PLAN	JOSAM	21500-AE	1
RD-1	SEE PLAN	JOSAM	21500-AE	--

MECHANICAL NOTES:  
1. PROVIDE WITH 2" INTERNAL DAM.

**FLOOR DRAIN SCHEDULE**

MECHANICAL				
EQUIPMENT TAG	SIZE (IN)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
FD-1	SEE PLAN	JOSAM	30000-5A	--

**FLOOR SINK SCHEDULE**

MECHANICAL				
EQUIPMENT TAG	SIZE (IN)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
FS-1	SEE PLAN	JOSAM	49360-LF-NB-3	--



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mechanical + electrical consulting engineering  
Dunham Project Number: 0425231-000-00

Project Name: NOVA CLASSICAL ACADEMY IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Bryan J. Schmidt, P.E.  
PRINT NAME  
SIGNATURE  
26566  
LICENSE NO.  
05/07/2025  
DATE

**DD DOCUMENT**  
**Not For Construction**

SHEET TITLE:  
**PLUMBING SCHEDULES**

SHEET NUMBER:  
**P500**

THERMOSTATIC MIXING STATION SCHEDULE																				
MECHANICAL																				
EQUIPMENT TAG	APPLICATION	NUMBER OF MIXING VALVES	MINIMUM FLOW (GPM)	MAXIMUM FLOW (GPM)	PRESSURE DROP AT MAXIMUM FLOW (PSIG)	INLET TEMPERATURE (F)	OUTLET TEMPERATURE (F)	INLET SIZE (IN)	OUTLET SIZE (IN)	RETURN FROM BUILDING SIZE (IN)	RETURN TO HEATER SIZE (IN)	DISCHARGE HEAD (FT)	RPM	BHP	SUCTION SIZE (IN)	DISCHARGE SIZE (IN)	VFD (YES/NO)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
MMV 01																				
GENERAL MECHANICAL NOTES: A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.																				
ELECTRICAL																				
EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYPE	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES			
DWP 01																				
GENERAL ELECTRICAL NOTES: A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION. B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.										CONTROLLER TYPES: VFD - VARIABLE FREQUENCY MOTOR CONTROLLER MMS - MANUAL MOTOR STARTER (WITH OVERLOADS) CP - CONTROL PANEL MAGS - MAGNETIC STARTER MRSIMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)										
ELECTRICAL NOTES:																				

DOMESTIC WATER PUMP SCHEDULE																			
MECHANICAL																			
EQUIPMENT TAG	APPLICATION	TYPE	GPM	DISCHARGE HEAD (FT)	NPSHR (FT)	RPM	BHP	SUCTION SIZE (IN)	DISCHARGE SIZE (IN)	VFD (YES/NO)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES						
DWP 01																			
GENERAL MECHANICAL NOTES: A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.																			
ELECTRICAL																			
EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYPE	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES		
DWP 01		120 V	1	<5000	CP	MFR	INTEGRAL	DIV 23	MRS	-	NEMA-1	DIV 26	AT UNIT						
GENERAL ELECTRICAL NOTES: A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION. B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.										CONTROLLER TYPES: VFD - VARIABLE FREQUENCY MOTOR CONTROLLER MMS - MANUAL MOTOR STARTER (WITH OVERLOADS) CP - CONTROL PANEL MAGS - MAGNETIC STARTER MRSIMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)									
ELECTRICAL NOTES:																			

WATER HEATER SCHEDULE - ELECTRIC																		
MECHANICAL																		
EQUIPMENT TAG	APPLICATION	STORAGE CAPACITY (GAL)	WATER RECOVERY RATE (GPH)	TEMPERATURE RISE (F)	HEATING CAPACITY (W)	WATER HEATER SET POINT (F)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES									
EW 01	DOMESTIC HOT WATER	6	8	90	1650	120	AO SMITH	EJC-6										
GENERAL MECHANICAL NOTES: A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.																		
ELECTRICAL																		
EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYPE	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES	
DWP 01		120 V	1	<5000	CP	MFR	INTEGRAL	DIV 23	MRS	-	NEMA-1	DIV 26	AT UNIT					
GENERAL ELECTRICAL NOTES: A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION. B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.										CONTROLLER TYPES: MMS - MANUAL MOTOR STARTER (WITH OVERLOADS) CP - CONTROL PANEL MAGS - MAGNETIC STARTER MRSIMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)								
ELECTRICAL NOTES:																		

WATER HEATER SCHEDULE - GAS																	
MECHANICAL																	
EQUIPMENT TAG	APPLICATION	STORAGE CAPACITY (GAL)	WATER RECOVERY RATE (GPH)	TEMPERATURE RISE (F)	INPUT (MBH)	TYPE	MINIMUM INLET PRESSURE (IN. W.C.)	MAXIMUM INLET PRESSURE (IN. W.C.)	EFFICIENCY (%)	WATER HEATER SET POINT (F)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES				
GW 01																	
GENERAL MECHANICAL NOTES: A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.																	
ELECTRICAL																	
EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYPE	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES
GW 01		120 V	1	<5000	CP	MFR	INTEGRAL	DIV 23	MRS	-	NEMA-1	DIV 26	AT UNIT				
GENERAL ELECTRICAL NOTES: A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION. B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.										CONTROLLER TYPES: MMS - MANUAL MOTOR STARTER (WITH OVERLOADS) CP - CONTROL PANEL MAGS - MAGNETIC STARTER MRSIMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)							
ELECTRICAL NOTES:																	

ELEVATOR SUMP PUMP SCHEDULE																	
MECHANICAL																	
EQUIPMENT TAG	APPLICATION	TYPE	DISCHARGE HEAD (FT)	GPM	NUMBER OF PUMPS	BHP	MOTOR RPM (EACH)	BASIN DIAMETER (IN)	BASIN DEPTH (IN)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES					
ESP 01	ELEVATOR SUMP PUMP	SIMPLEX SUBMERSIBLE	25	50	1	1	1750	30	96	WEIL	1601-550	1,2,3,4,5,6,7					
GENERAL MECHANICAL NOTES: A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.																	
ELECTRICAL																	
EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYPE	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES
DWP 01																	
GENERAL ELECTRICAL NOTES: A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION. B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.										CONTROLLER TYPES: MMS - MANUAL MOTOR STARTER (WITH OVERLOADS) CP - CONTROL PANEL MAGS - MAGNETIC STARTER MRSIMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)							
ELECTRICAL NOTES: 1. PROVIDE WEIL MODEL 8234 TETHERED LEVEL CONTROL FOR SIMPLEX PUMPING (OFF LEAD, HIGH WATER FLOAT). 2. PROVIDE WEIL MODEL 8163 SIMPLEX CONTROL PANEL, HIGH WATER ALARM SYSTEM, LOCKABLE THROUGH DOOR DISCONNECT. 3. PROVIDE WEIL MODEL 8869 ROUND WEL WELL COVER FOR SUBMERSIBLE FLOOR MOUNT PUMPS. 4. PROVIDE ANTI-FLOTATION RING AS PART OF THE BASIN WITH CONCRETE BALLAST AS RECOMMENDED BY BASIN MANUFACTURER. 5. PROVIDE 20 FOOT STAINLESS STEEL LIFTING CABLE AND PUMP OPENING COVER WITH DISCHARGE FLANGE. 6. PROVIDE CAST IRON CALKING HUB INLET, GASKET, NUTS, BOLTS AND WASHERS. REFER TO PLAN FOR PIPE SIZE. 7. PROVIDE 2" DISCHARGE PIPE. 8. PROVIDE 3" DISCHARGE PIPE. 9. PROVIDE 4" DISCHARGE PIPE. 10. PROVIDE UL EXPLOSION PROOF MOTOR.																	



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mechanical + electrical consulting engineering  
Dunham Project Number: 0425231-000-00

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

I HEREBY CERTIFY THAT THIS PLAN,  
SPECIFICATION OR REPORT WAS PREPARED BY ME  
OR UNDER MY DIRECT SUPERVISION AND THAT I AM  
A DULY LICENSED PROFESSIONAL ENGINEER UNDER  
THE LAWS OF THE STATE OF MINNESOTA.

Madeline M. Molin, P.E.  
PRINT NAME  
SIGNATURE  
57233  
LICENSE NO.  
05/07/2025  
DATE

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Bryan J. Schmidt, P.E.  
PRINT NAME  
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DD  
DOCUMENT  
Not For  
Construction

SHEET TITLE:  
PLUMBING ELECTRICAL  
SCHEDULES

SHEET NUMBER:

PE600

DUNHAM ENGINEERING, P.A.  
A MINNESOTA LIMITED LIABILITY COMPANY

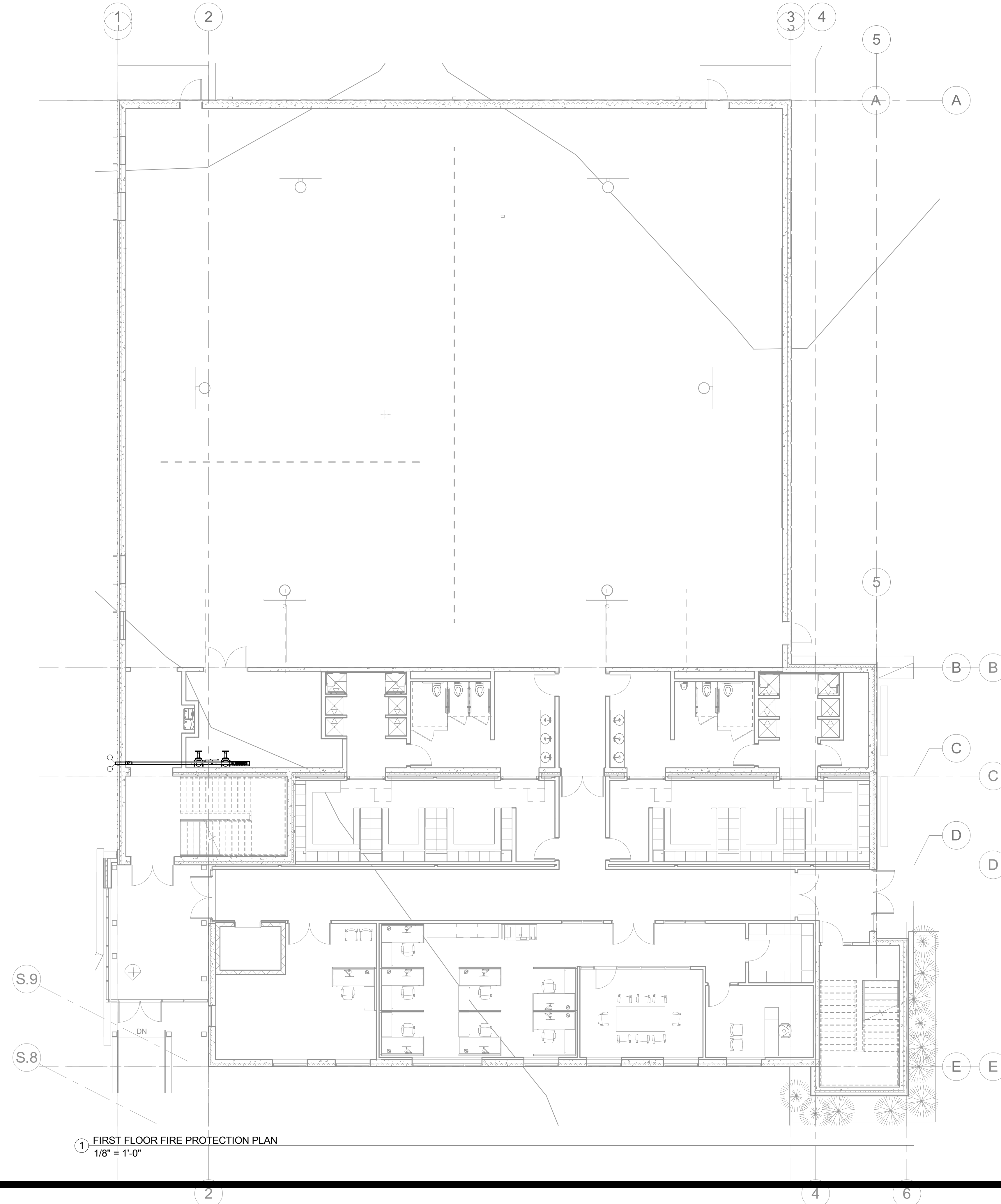


**GENERAL NOTES:**

- A. THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR ANY GENERAL CONSTRUCTION WORK AS DIRECTLY IMPACTED BY THE SPRINKLER SYSTEM INSTALLATION. EXAMPLES OF WORK DIRECTLY TIED INTO THE FIRE PROTECTION CONTRACTORS WORK INCLUDES, BUT NOT LIMITED TO FIRE SEALING OF ALL RATED WALL PENETRATIONS, CEILING ACCESS PANELS, ETC.
- B. COORDINATE ALL SPRINKLER PIPE ROUTING WITH ALL OTHER TRADES TO ENSURE ADEQUATE CLEARANCES FOR DUCTWORK, ELECTRICAL CONDUIT, STRUCTURAL SUPPORTS, PIPING, EQUIPMENT, ETC. ANY UNAVOIDABLE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OF RECORD. PROVIDE ALL OFFSETS AND TRANSITIONS AS REQUIRED FOR A CLEAN INSTALLATION. ADDITIONAL COMPENSATION WILL NOT BE REWARDED DUE TO LACK OF COORDINATION WITH OTHER SUBCONTRACTORS. FIRE PROTECTION CONTRACTOR TO MOVE AND RELOCATE PIPING THAT INTERFERES WITH OTHER TRADES.
- C. SUPPORT ALL PIPING DIRECTLY FROM STRUCTURE. DO NOT SUPPORT ANY PIPING FROM DUCTWORK, CONDUIT, PIPING, ETC.
- D. ALL SPRINKLER PIPING ROUTED THROUGH FIRE RATED WALLS SHALL BE ADEQUATELY FIRE SEALED AS REQUIRED TO MAINTAIN THE LISTED WALL RATING.
- E. ALL SPRINKLER HEADS SHALL BE INSTALLED AT THE CENTER OF ALL LAY-IN CEILING TILES. SPRINKLER HEADS IN GYPSUM CEILING SHALL BE ARRANGED IN AN ARCHITECTURALLY SYMMETRIC MANNER. COORDINATE WITH ARCHITECTURAL CEILING PLANS.
- F. COORDINATE WITH ARCHITECTURAL CEILING PLANS TO PROVIDE FULL COVERAGE THROUGHOUT. VERIFY SOFFITS, COLUMNS, AND OTHER POTENTIAL OBSTRUCTIONS WHEN LAYING OUT SPRINKLER HEAD COVERAGE.
- G. COORDINATE WITH PROJECT SPECIFICATION MANUAL AND DRAWING DETAILS FOR ADDITIONAL AUXILIARY DRAIN, MANUAL VENTS, INSPECTOR'S TEST STATIONS, AND OTHER REQUIRED PIPING COMPONENTS THAT MAY NOT BE INDICATED DIRECTLY ON THIS DRAWING.

**KEY NOTES:**

- ① NOTE NOT USED.



① FIRST FLOOR FIRE PROTECTION PLAN  
1/8" = 1'-0"

Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

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DOCUMENT  
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SHEET TITLE:  
**FIRST FLOOR FIRE  
PROTECTION PLAN**

SHEET NUMBER:

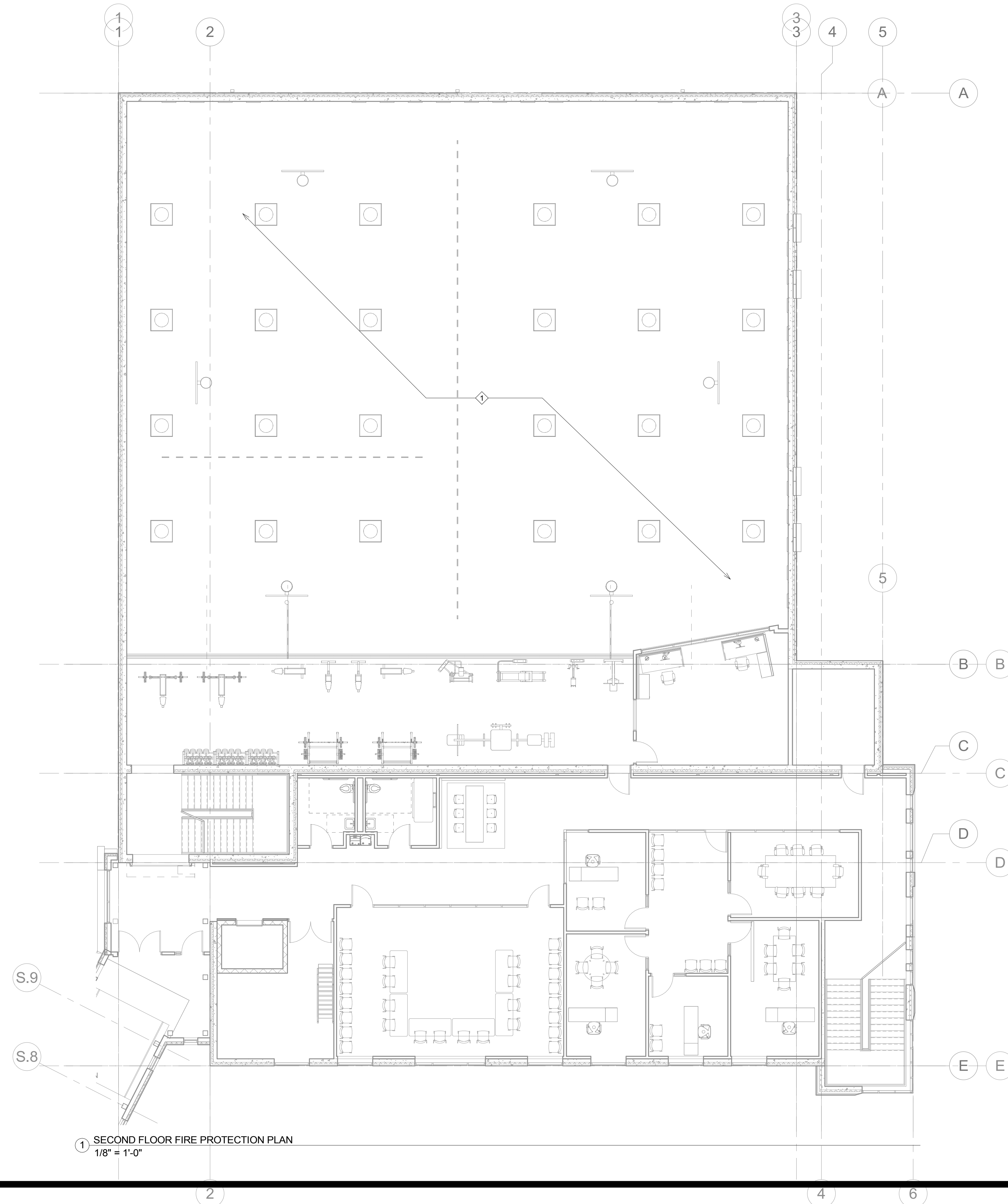
**FP101**

**GENERAL NOTES:**

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- B. COORDINATE ALL SPRINKLER PIPE ROUTING WITH ALL OTHER TRADES TO ENSURE ADEQUATE CLEARANCES FOR DUCTWORK, ELECTRICAL CONDUIT, STRUCTURAL SUPPORTS, PIPING, EQUIPMENT, ETC. ANY UNAVOIDABLE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OF RECORD. PROVIDE ALL OFFSETS AND TRANSITIONS AS REQUIRED FOR A CLEAN INSTALLATION. ADDITIONAL COMPENSATION WILL NOT BE REWARDED DUE TO LACK OF COORDINATION WITH OTHER SUBCONTRACTORS. FIRE PROTECTION CONTRACTOR TO MOVE AND RELOCATE PIPING THAT INTERFERES WITH OTHER TRADES.
- C. SUPPORT ALL PIPING DIRECTLY FROM STRUCTURE. DO NOT SUPPORT ANY PIPING FROM DUCTWORK, CONDUIT, PIPING, ETC.
- D. ALL SPRINKLER PIPING ROUTED THROUGH FIRE RATED WALLS SHALL BE ADEQUATELY FIRE SEALED AS REQUIRED TO MAINTAIN THE LISTED WALL RATING.
- E. ALL SPRINKLER HEADS SHALL BE INSTALLED AT THE CENTER OF ALL LAY-IN CEILING TILES. SPRINKLER HEADS IN GYPSUM CEILING SHALL BE ARRANGED IN AN ARCHITECTURALLY SYMMETRIC MANNER. COORDINATE WITH ARCHITECTURAL CEILING PLANS.
- F. COORDINATE WITH ARCHITECTURAL CEILING PLANS TO PROVIDE FULL COVERAGE THROUGHOUT. VERIFY SOFFITS, COLUMNS, AND OTHER POTENTIAL OBSTRUCTIONS WHEN LAYING OUT SPRINKLER HEAD COVERAGE.
- G. COORDINATE WITH PROJECT SPECIFICATION MANUAL AND DRAWING DETAILS FOR ADDITIONAL AUXILIARY DRAIN, MANUAL VENTS, INSPECTOR'S TEST STATIONS, AND OTHER REQUIRED PIPING COMPONENTS THAT MAY NOT BE INDICATED DIRECTLY ON THIS DRAWING.

**KEY NOTES:**

- ① ALL SPRINKLER HEADS WITHIN GYM SPACE SHALL HAVE GUARDS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.



Project Name: NOVA CLASSICAL ACADEMY  
IMPROVEMENTS & EXPANSION  
Project Number: 23008.003  
Date: 05/07/2025

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Bryan J. Schmidt, P.E.  
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LICENSE NO.  
05/07/2025  
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**DD  
DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**SECOND FLOOR FIRE  
PROTECTION PLAN**

SHEET NUMBER:

**FP102**

ELECTRICAL ABBREVIATIONS			
A. AMP	AMPERES	M	METER
ABV	ABOVE	MC	MOMENTARY CONTACT OR MECHANICAL CONTRACTOR
AG	ABOVE GRADE		
AA	AUDIBLE ALARM	MCB	MAIN CIRCUIT BREAKER
AC	ABOVE COUNTER	MCC	MOTOR CONTROL CENTER
ACH	ABOVE COUNTER HEIGHT	MH	MAN HOLE
ADD	ADDENDUM	MLO	MAIN LUG ONLY
AFC	AVAILABLE FAULT CURRENT	MMFO	MULTI MODE FIBER OPTIC
AFCI	ARC FAULT CIRCUIT INTERRUPTER	MRS	MOTOR RATED SWITCH
AFF	ABOVE FINISHED FLOOR	MSB	MAIN SWITCHBOARD
AHU	AIR HANDLING UNIT	MT	EMPTY
AL	ALUMINUM	MTR	MOTOR
ANT	ANTENNA	N	NEUTRAL
ATS	AUTOMATIC TRANSFER SWITCH	NC	NORMALLY CLOSED
AV	AUDIO VISUAL	NEC	NATIONAL ELECTRICAL CODE
AWG	AMERICAN WIRE GAUGE	NIC	NOT IN CONTRACT
BAS	BUILDING AUTOMATION SYSTEM	NO	NORMALLY OPEN
BFC	BELOW FINISHED CEILING	NTS	NOT TO SCALE
BPS	BOLTED PRESSURE SWITCH	OC	ON CENTER
C	CONDUIT OR CONTROLLED RECEPT	PB	PULL BOX OR PUSHBUTTON
CAB	CABINET	PE	PNEUMATIC ELECTRIC
CB	CIRCUIT BREAKER	PF	POWER FACTOR
CCTV	CLOSED CIRCUIT TV	PH	PHASE
CKT	CIRCUIT	PNL	PANEL
CLG	CEILING	PRI	PRIMARY
COMM	COMMUNICATIONS	PT	POTENTIAL TRANSFORMER
CT	CURRENT TRANSFORMER	R	RACEWAY
CTRL	CONTROL	RECEPT	RECEPTACLE
CU	COPPER	REFG	REFRIGERATOR
DAS	DISTRIBUTED ANTENNA SYSTEM	RTU	ROOF TOP UNIT
DED	DEDICATED	SEC	SECONDARY
DN	DOWN	SGB	SERVICE GROUND BAR
EC	ELECTRICAL CONTRACTOR	SMFO	SINGLE MODE FIBER OPTIC
EGB	ELECTRICAL GROUND BAR	SPKR	SPEAKER
ELEC	ELECTRICAL OR ELECTRICAL	STP	SHIELDED TWISTED PAIR
EM	EMERGENCY	SUB	SUBSTATION
EMT	ELECTRICAL METALLIC TUBING	SW	SWITCH
ENCL	ENCLOSURE	SWBD	SWITCHBOARD
EP	ELECTRIC PNEUMATIC	TEL	TELEPHONE
EPO	EMERGENCY POWER OFF	TELCOM	TELECOMMUNICATIONS
EWC	ELECTRIC WATER COOLER	TGB	TELECOMMUNICATIONS GROUND BAR
F	FUSE OR FUSED	TMBG	TELECOMMUNICATIONS MAIN GROUND BAR
FA	FIRE ALARM	TR	TAMPER RESISTANT
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TSTAT	THERMOSTAT
FACP	FIRE ALARM CONTROL PANEL	TYP	TYPICAL
FB	FLOOR BOX	UC	UNDER COUNTER
FO	FIBER OPTIC	UF	UNDER FLOOR
FSD	FIRE-SMOKE DAMPER	UG	UNDER GROUND
FV	FILM VIEWER	UH	UNIT HEATER
G. GND	GROUND	UNO	UNLESS NOTED OTHERWISE
GC	GENERAL CONTRACTOR	USB	UNIVERSAL SERIAL BUS
GFEP	GROUND FAULT EQUIPMENT PROTECTION	UTP	UNSHIELDED TWISTED PAIR
GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER	V	VOLT OR VOLTAGE
HH	HAND HOLE	VA	VOLT-AMP
HOA	HAND OFF AUTO	VAC	VOLTS ALTERNATING CURRENT
IG	ISOLATED GROUND	VDC	VOLTS DIRECT CURRENT
JBOX	JUNCTION BOX	W	WATT, WIRE OR WALL PHONE
KV	KILOVOLT	WAP	WIRELESS ACCESS POINT
KVA	KILOVOLT-TAMP	WP	WEATHERPROOF
KW	KILOWATT	X	EXISTING
KWH	KILOWATT-HOUR	XFMR	TRANSFORMER

ELECTRICAL SYMBOLS LEGEND					
SYMBOL	DESIGNATIONS	MTG HT	SYMBOL	DESIGNATIONS	MTG HT
<b>SYMBOL SCHEDULE NOTES</b>			<b>POWER</b>		
A. THESE SYMBOLS COMPRISE A STANDARD LIST, NOT ALL SYMBOLS MAY APPEAR ON THESE DRAWINGS.			BRANCH CIRCUIT PANEL		
B. MOUNTING HEIGHTS INDICATED ARE STANDARD. DIMENSIONAL NUMBERS INDICATED AT DEVICES SHALL OVERRIDE THESE STANDARDS. MOUNTED HEIGHTS ARE TO THE CENTER OF THE DEVICE, UNLESS NOTED OTHERWISE.			EQUIPMENT CABINET		
C. MOUNTING HEIGHTS INDICATED ARE FOR STUD WALL CONSTRUCTION. WHEN BLOCK OR BRICK CONSTRUCTION IS USED, ADJUST MOUNTING HEIGHTS TO ALIGN DEVICE PLATES WITH RUNNING JOINT.			TRANSFORMER		
D. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.			MOTOR OR MOTOR CONNECTION		
<b>GENERAL</b>			MOTOR CONTROLLER, STARTER OR VFD		
LIGHT SOLID LINE WEIGHT INDICATES EXISTING ITEM TO REMAIN.			COMBINATION STARTER & DISCONNECT SWITCH		
DARK DASHED LINE WEIGHT INDICATES EXISTING ITEM TO BE REMOVED.			FUSED DISCONNECT SWITCH		
DARK SOLID LINE WEIGHT INDICATES NEW ITEM OR NEW LOCATION.			DISCONNECT SWITCH		
R REMOVE EXISTING ITEM			MOTOR RATED TOGGLE		
RL REMOVE EXISTING ITEM AND RELOCATE AS INDICATED			MOTOR ROTARY STARTER SWITCH WITH THERMAL OVERLOAD		
X EXISTING ITEM TO REMAIN			DUPEX RECEPTACLE - WALL/CEILING MOUNT		
NL NEW LOCATION FOR RELOCATED ITEM			EMERGENCY DUPEX RECEPTACLE - WALL/CEILING MOUNT		
<b>NOTES &amp; TAGS</b>			SPLIT DUPEX RECEPTACLE - WALL/CEILING MOUNT		
XX EQUIPMENT IDENTIFICATION TAG - SEE EQUIPMENT SCHEDULES			EMERGENCY SPLIT DUPEX RECEPTACLE - WALL/CEILING MOUNT		
XXX-X FEEDER SIZE TAG - SEE POWER RISER SCHEDULE			SIMPLEX RECEPTACLE - WALL/CEILING MOUNT		
# ELEC EQUIP CONNECTION TAG - SEE EQUIP SCHEDULE			EMERGENCY SIMPLEX RECEPTACLE - WALL/CEILING MOUNT		
# KEYNOTE			QUADPLEX RECEPTACLE - WALL/CEILING MOUNT		
# MISCELLANEOUS NOTE			EMERGENCY QUADPLEX RECEPTACLE - WALL/CEILING MOUNT		
LC # LIGHTING CONTROL SEQUENCE - SEE SCHEDULE			GFI RECEPTACLE, DUPLEX/QUADPLEX - WALL MOUNT		
CABLE TRAY TAG			GFI RECEPTACLE, DUPLEX/QUADPLEX - CEILING MOUNT		
X" W - WIDTH OF CABLE TRAY			GFI RECEPTACLE, DUPLEX/QUADPLEX - CONTROLLED - CEILING MOUNT		
X" H - HEIGHT OF CABLE TRAY			DUPEX RECEPTACLE - CONTROLLED - WALL/CEILING MOUNT		
X" X" AFF - MOUNTING HEIGHT OF CABLE TRAY (FROM FINISH FLOOR TO BOTTOM OF TRAY)			GFI DEAD FRONT DEVICE, NORMAL/EMERGENCY - WALL MOUNT		
<b>RACEWAYS</b>			SPECIAL PURPOSE RECEPTACLE - WALL/CEILING MOUNT		
CONDUIT CONCEALED IN CEILING OR WALLS			EMERGENCY SPECIAL PURPOSE RECEPTACLE - WALL/CEILING MOUNT		
CONDUIT CONCEALED IN THE FLOOR OR BELOW			FLOOR BOX - DEVICES AS INDICATED		
CONDUIT EXPOSED ON THE CEILING OR WALLS			POWER POLE - DEVICES AS INDICATED		
CONDUIT BURIED UNDERGROUND (# = DEPTH)			GROUND REFERENCE BUS - AS NOTED - WALL/CEILING MOUNT		
CONDUIT WITH BEND DOWN			<b>SWITCHES AND CONTROLS</b>		
CONDUIT WITH BEND UP			SINGLE POLE TOGGLE SWITCH		
CONDUIT WITH BUSHED END			DOUBLE POLE TOGGLE SWITCH		
CONDUIT WITH BREAK OR CONTINUATION			THREE WAY TOGGLE SWITCH		
CIRCUIT HOME RUN - L1 INDICATES PANEL NUMBER			FOUR WAY TOGGLE SWITCH		
JUNCTION BOX - WALL/CEILING MOUNT			TOGGLE SWITCH - "a" INDICATES SWITCHING		
WIREWAY, DUCT BANK, OR FLOOR DUCT AS NOTED			PILOT LIGHT TOGGLE SWITCH		
CABLE TRAY, TYPE/SIZE AS INDICATED			ILLUMINATED TOGGLE - TOGGLE SWITCH		
<b>LIGHTING</b>			KEYED SWITCH		
LIGHT FIXTURE ID - REFER TO LIGHT FIXTURE SCHEDULE (SCHEDULE OVERRIDES SYMBOL ABBREVIATION)			MOMENTARY CONTACT TOGGLE SWITCH		
NO HATCH INDICATES NORMAL CIRCUIT			TIMER SWITCH		
ANGLED HATCH INDICATES CRITICAL CIRCUIT			MULTI SWITCH, MULTI GANG BOX		
SOLID HATCH INDICATES LIFE SAFETY CIRCUIT			DIMMER SWITCH		
TROFFER TYPE LIGHT FIXTURE, SIZE AS INDICATED - CEILING MOUNT			PUSH BUTTON SWITCH		
CHANNEL OR INDUSTRIAL, LENGTH AS INDICATED			OCCUPANCY SENSOR - CLG MOUNT		
CHANNEL OR INDUSTRIAL WALL MOUNT, LENGTH AS INDICATED			OCCUPANCY SENSOR WALL SWITCH		
ROUND DOWNLIGHT, RECESSED OR SURFACE MOUNT			PHOTO ELECTRIC CELL		
SQUARE DOWNLIGHT, RECESSED OR SURFACE MOUNT			TIME CLOCK		
CEILING WALL WASH FIXTURE OR TRACK HEAD			CONTACTOR		
WALL MOUNT FIXTURE OR SCENCE			RELAY		
LINEAR SUSPENDED, LENGTH AS INDICATED			PUSH BUTTON STATION - BUTTONS AS INDICATED		
LINEAR RECESSED, LENGTH AS INDICATED			<b>SECURITY</b>		
ROUND OR SQUARE PENDANT			SECURITY - WALL MOUNT - TYPICAL		
TAPE OR ROPE LIGHT			CR - CARD READER		
UNDER CABINET FIXTURE, LENGTH AS INDICATED			EP - EXIT PUSHBUTTON		
TRACK FIXTURE, NUMBER OF HEADS AS INDICATED			CR/KP - CARD READER W/ KEY PAD		
VANITY FIXTURE			M - MASTER STATION		
EMERGENCY BATTERY LIGHT - WALL/CEILING MOUNT			KP - KEYPAD		
EXIT LIGHT, FILLED QUADRANT INDICATES FACES - WALL/CEILING MOUNT			PB - PUSH BUTTON		
WALL PACK			DS - DURESS SYSTEM		
FLAG OR FLOOD LIGHT			SECURITY - CEILING MOUNT - TYPICAL		
SITE LIGHTING POLE FIXTURE, ROUND/RECTANGLE HEAD - NUMBER OF HEADS INDICATED			RX - REQUEST TO EXIT		
SITE LIGHTING ROUND OR SQUARE BOLLARD			ES - ELECTRIC STRIKE		
			DC - DOOR CONTACT		
			ODC - OVERHEAD DOOR CONTACT		
			MS - MONITOR STRIKE		
			MD - MOTION DETECTOR		
			GB - GLASS BREAKER DETECTOR		
			SECURITY PANEL - WALL MOUNT - TYPICAL		
			SEC - SECURITY		
			CA - CARD ACCESS		
			IDS - INTRUSION DETECTION SYSTEM		
			SECURITY CAMERA - WALL/CEILING MOUNT		
			<b>NURSE CALL</b>		
			NURSE CALL - WALL MOUNT - TYPICAL		
			A1 - AUXILIARY INPUT STATION		
			D - DUTY STATION		
			ANN - ANNUNCIATOR PANEL		
			E - EMERGENCY PULL STATION		
			BD - PATIENT BED STATION		
			M - MASTER STATION		
			C - CODE BLUE STATION		
			M1 - SECONDARY MASTER STATION		
			C/A - CODE BLUE/STAFF ASSIST COMBINATION STATION		
			P - PATIENT STATION (ENHANCED)		
			P1 - PATIENT STATION (BASIC)		
			C-B - CODE BABY STATION		
			SA - STAFF ASSIST STATION		
			C-B/A - CODE BABY/STAFF ASSIST COMBINATION STATION		
			TV - PATIENT TV STATION		
			WF - WORK FLOW (TOUCH SCREEN)		
			CC - CALL CANCEL		
			WF1 - WORK FLOW (4-BUTTON)		
			LOCATOR ANTENNA		
			DOME LIGHT - WALL/CEILING MOUNT (BLANK = 4 LIGHTS, # = NUMBER OF LIGHTS, Z = ZONE INDICATOR LIGHTS)		
			NURSE CALL PANEL - WALL MOUNT		

SYMBOL	DESIGNATIONS	MTG HT	SYMBOL	DESIGNATIONS	MTG HT
<b>FIRE ALARM</b>			<b>ONE LINE AND RISER</b>		
FIRE ALARM - WALL MOUNTED - TYPICAL			UTILITY SERVICE: EQUIPMENT ID VOLTAGE, PHASE, 3 OR 4 WIRE		
MP - MANUAL PULL STATION (48")			ID KW/KVA V, Ø, W PF		
DH - DOOR HOLD			ENGINE GENERATOR: EQUIPMENT ID KW/KVA RATING OF GENERATOR VOLTAGE, PHASE, 3 OR 4 WIRE, POWER FACTOR		
RS - REMOTE STATION (72")			800 VOLT MOLDED CASE CIRCUIT BREAKER: AF = AMP FRAME, AT = AMP TRIP XX = OPTIONS TO BE PROVIDED, MAY BE BLANK		
RI - REMOTE INDICATOR LAMP (72")			600 VOLT INSULATED CASE CIRCUIT BREAKER: AF = AMP FRAME, AT = AMP TRIP XX = OPTIONS TO BE PROVIDED, MAY BE BLANK		
FIRE ALARM - CEILING MOUNTED - TYPICAL			600 VOLT DRAWOUT CIRCUIT BREAKER: AF = AMP FRAME, AT = AMP TRIP XX = OPTIONS TO BE PROVIDED, MAY BE BLANK		
# - HEAT DETECTOR (FIXED TEMP)			15,000 VOLT DRAWOUT CIRCUIT BREAKER: AS = AMP SWITCH, AF = AMP FUSE XX = OPTIONS TO BE PROVIDED, MAY BE BLANK		
P - SMOKE DETECTOR (PHOTO ELEC)			DISCONNECT SWITCH: AS = AMP SWITCH XX = OPTIONS TO BE PROVIDED, MAY BE BLANK		
R - HEAT DETECTOR (RATE OF RISE)			FUSE: AF = AMP FUSE XX = OPTIONS TO BE PROVIDED, MAY BE BLANK		
I - SMOKE DETECTOR (IONIZATION)			FUSED DISCONNECT SWITCH: AS = AMP SWITCH, AF = AMP FUSE XX = OPTIONS TO BE PROVIDED, MAY BE BLANK		
RS - REMOTE STATION			TRANSFORMER: EQUIPMENT ID KVA RATING OF TRANSFORMER PRIMARY VOLTAGE SECONDARY VOLTAGE		
B-T - BEAM DETECTOR (TRANSMITTER)			TRANSFORMER WITH SPECIAL CORE: EQUIPMENT ID KVA RATING OF TRANSFORMER PRIMARY VOLTAGE SECONDARY VOLTAGE		
B-R - BEAM DETECTOR (RECEIVER)			PANELBOARD: EQUIPMENT ID VOLTAGE, PHASE, 3 OR 4 WIRE, AMP RATING SPACES AVAILABLE CALCULATED FAULT CURRENT		
MM - MONITOR MODULE			TRANSFER SWITCH: EQUIPMENT ID VOLTAGE, PHASE, 3 OR 4 WIRE, AMP RATING OPEN/CLOSED/DELAYED CALCULATED FAULT CURRENT		
CM - CONTROL MODULE			MOTOR: EQUIPMENT ID HORSEPOWER, PHASE		
SA - COMBINATION SMOKE DETECTOR AND ALARM			MULTIFUNCTION RELAY: NUMBERS INDICATE ANSI DEVICE NUMBERS		
SD - FIRE/SMOKE DAMPER CONNECTION			FEEDER DESCRIPTION: SEE ELECTRICAL ONE LINE SHEET FOR SCHEDULE		
FP - FLOOR PROTECTION			STATIC SWITCH		
DUCT MOUNTED PHOTOELECTRIC DETECTOR			MOTOR OVERLOAD PROTECTION DEVICE		
FIREMAN'S STATION - WALL MOUNT			POTENTIAL TRANSFORMER: TR = TURNS RATIO		
STROBE - WALL/CEILING MOUNT (# = CANDELA)			CURRENT TRANSFORMER: TR = TURNS RATIO		
BELL - WALL/CEILING MOUNT			LIGHTNING ARRESTER		
BELL/STROBE - WALL/CEILING MOUNT (# = CANDELA)			GROUND CONNECTION		
CHIME - WALL/CEILING MOUNT			CAPACITOR		
CHIME/STROBE - WALL/CEILING MOUNT (# = CANDELA)			BATTERY		
HORN - WALL/CEILING MOUNT			CONTACTOR - NORMALLY OPEN		
HORN/STROBE - WALL/CEILING MOUNT (# = CANDELA)			CONTACTOR - NORMALLY CLOSED		
SPEAKER - WALL/CEILING MOUNT			KIRK KEY INTERLOCK		
SPEAKER/STROBE - WALL/CEILING MOUNT (# = CANDELA)			METER: M = WATT/ HOUR METER, A = AMMETER, V = VOLT METER		
FIRE ALARM/MISS NOTIFICATION: SPEAKER/STROBE - WALL/CEILING MOUNT (# = CANDELA)			15,000 VOLT TEE AND ELBOW		
FIRE ALARM PANEL - WALL MOUNT			LINEWORK: EQUIPMENT ENCLOSURE LINE SWITCHGEAR BUS LINE BUSWAY NEW WORK EXISTING WORK DEMO WORK FUTURE WORK		
FACP - FIRE ALARM CONTROL PANEL			OPTIONS ABBREVIATIONS: LSI = LONG TIME/SHORT TIME INSTANTANEOUS TRIP SETTINGS LSIØ = LSI WITH GROUND FAULT PROTECTION EO = ELECTRICALLY OPERATED M1 = METER (REFER TO METER SCHEDULE) ST = SHUNT TRIP K1 = KIRK KEYED (REFER TO KIRK KEY SCHEDULE)		
FAAP - FIRE ALARM ANNUNCIATOR PANEL					
AMP - AMPLIFIER					
VESDA - ASPIRATING SMOKE DETECTION					
NAC - NOTIFICATION APPLIANCE CIRCUIT					

ELECTRICAL SHEET LIST	
SHEET NUMBER	SHEET NAME
E000	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E100	ELECTRICAL SITE PLAN
E200	SELECTIVE ELECTRICAL DEMOLITION PLAN
E201	SELECTIVE ELECTRICAL PLAN
E211	FIRST FLOOR LIGHTING PLAN
E212A	SECOND FLOOR LIGHTING PLAN
E212B	SECOND FLOOR LIGHTING PLAN
E221	FIRST FLOOR POWER PLAN
E222A	SECOND FLOOR POWER PLAN
E222B	SECOND FLOOR POWER PLAN
E223	ROOF FLOOR POWER PLAN
E231	FIRST FLOOR SYSTEMS PLAN
E232A	SECOND FLOOR SYSTEMS PLAN
E232B	SECOND FLOOR SYSTEMS PLAN
E300	ELECTRICAL RISER DIAGRAM
E400	PANELBOARD SCHEDULES
E450	LIGHTING SCHEDULES
E500	ELECTRICAL DETAILS
E501	ELECTRICAL DETAILS
E502	ELECTRICAL DETAILS
E503	ELECTRICAL DETAILS
E504	ELECTRICAL DETAILS
SHEET TOTAL: 22	



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Dunham Project Number: 0425231-000

Project Name: NOVA CLASSICAL ACADEMY  
Project Number: 23008.003  
Date: 05/07/2025

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Madeline M. Moflin, P.E.

PRINT NAME

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57233

LICENSE NO.

ISSUE DATE

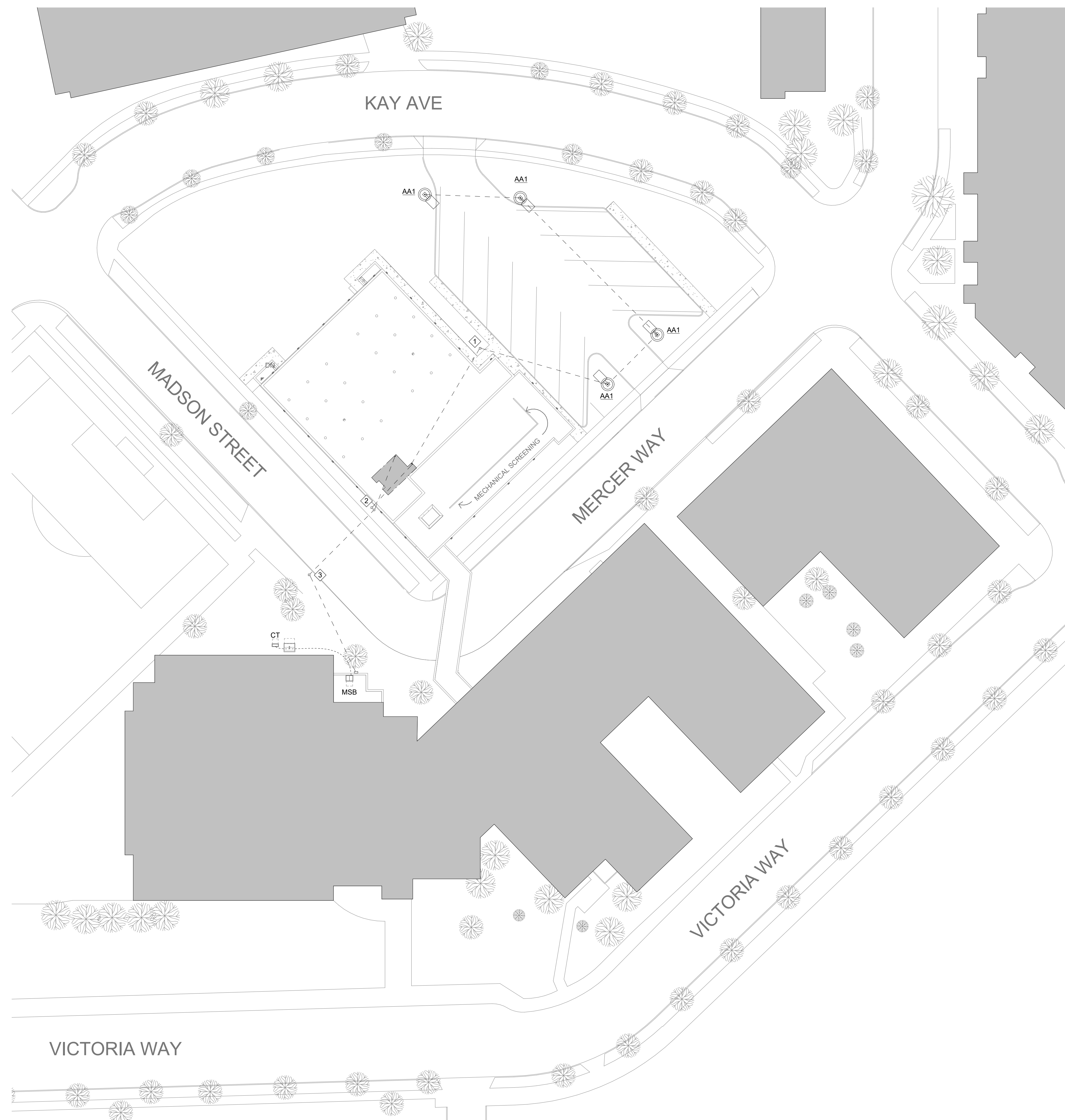
DATE

**DD DOCUMENT Not For Construction**

SHEET TITLE:  
**ELECTRICAL SYMBOLS AND ABBREVIATIONS**

SHEET NUMBER:

**E000**



1 ELECTRICAL SITE PLAN  
1" = 30'-0"

**GENERAL NOTES:**

A. VERIFY LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO ANY SITE WORK. UTILIZE A SURVEY SERVICE TO PROVIDE ADDITIONAL INFORMATION REGARDING EXISTING ELECTRICAL AND COMMUNICATION CABLING LOCATED ON THIS SITE.

**KEY NOTES:**

- 1 PROVIDE 1" PVC STUB UP FROM BUILDING ELECTRICAL ROOM TO AN EXTERIOR HANDHOLE. UTILIZE THIS PATHWAY FOR POLE LIGHTS.
- 2 PROVIDE 4" PVC STUB UP FROM BUILDING ELECTRICAL ROOM TO AN EXTERIOR HANDHOLE FOR FUTURE.
- 3 PROVIDE EXTERIOR PULL BOX AND NECESSARY HANDHOLES FOR 600A FEEDER BETWEEN MSB AND HP1'S. REFER TO RISER DIAGRAM FOR ADDITIONAL INFORMATION.



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Madeline M. Folin, P.E.  
PRINT NAME  
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LICENSE NO.  
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DATE

**DD**  
**DOCUMENT**  
**Not For**  
**Construction**

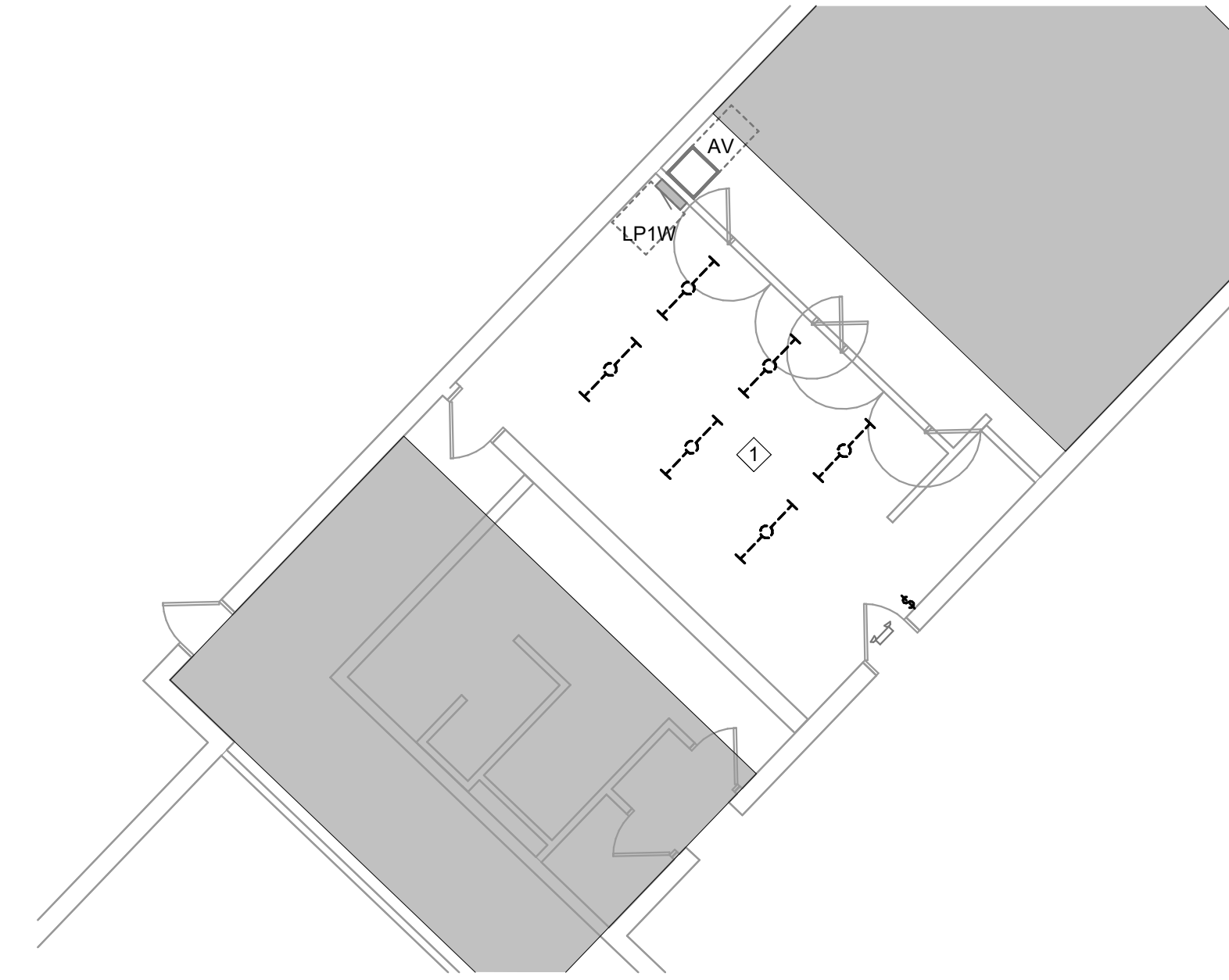
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**ELECTRICAL SITE PLAN**

SHEET NUMBER:

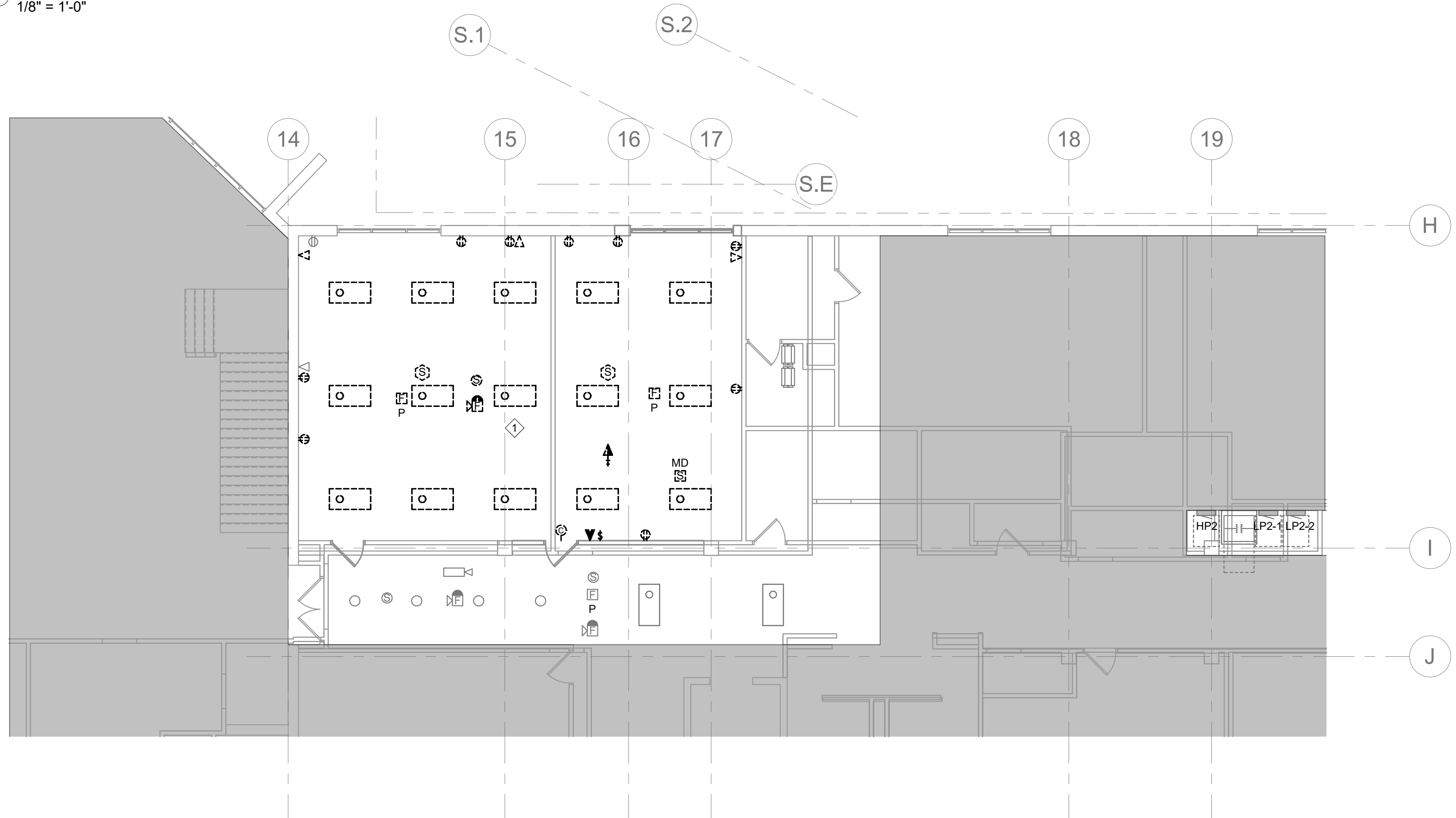
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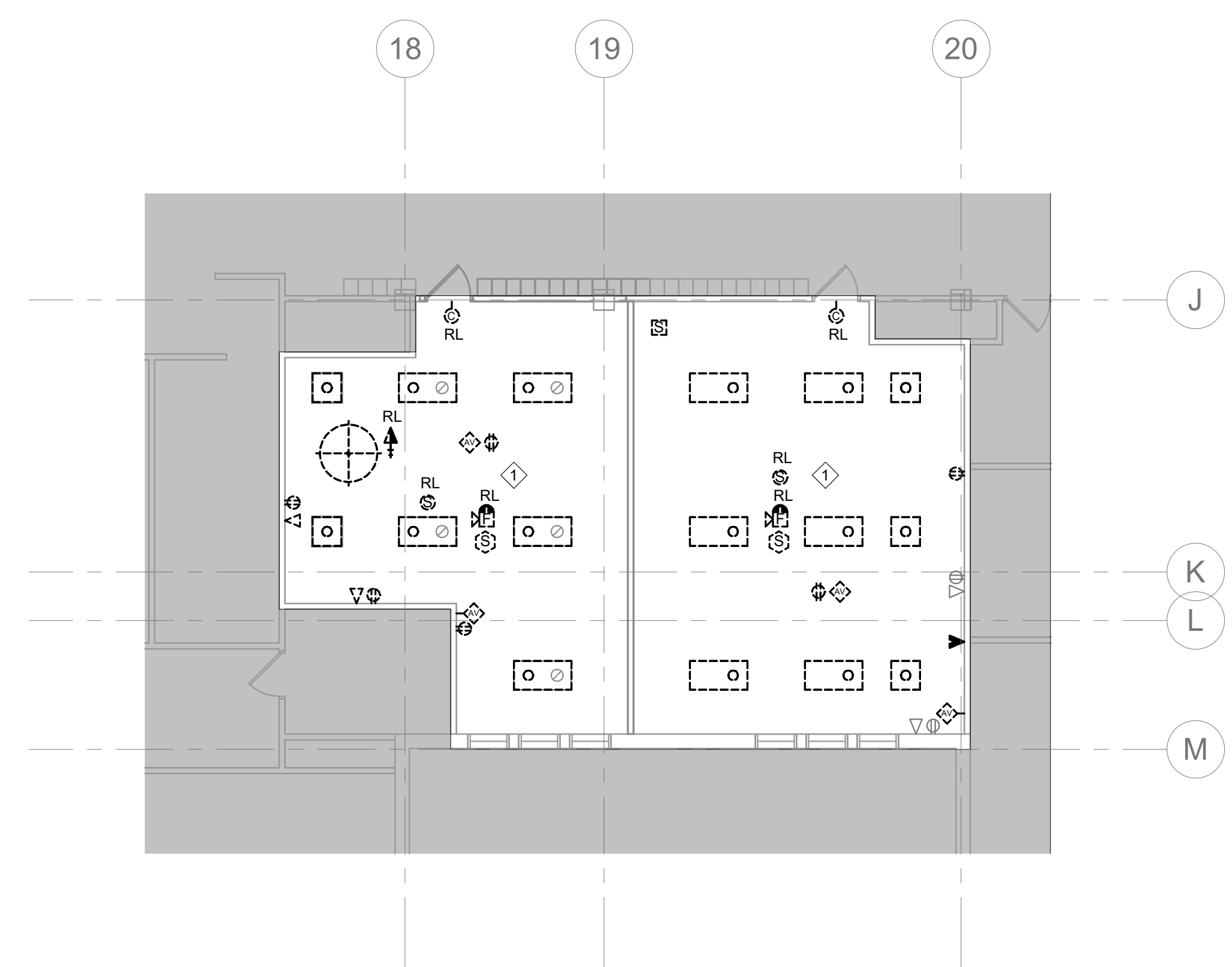
1 ELECTRICAL DEMOLITION - ENTRY & ADMIN  
1/8" = 1'-0"



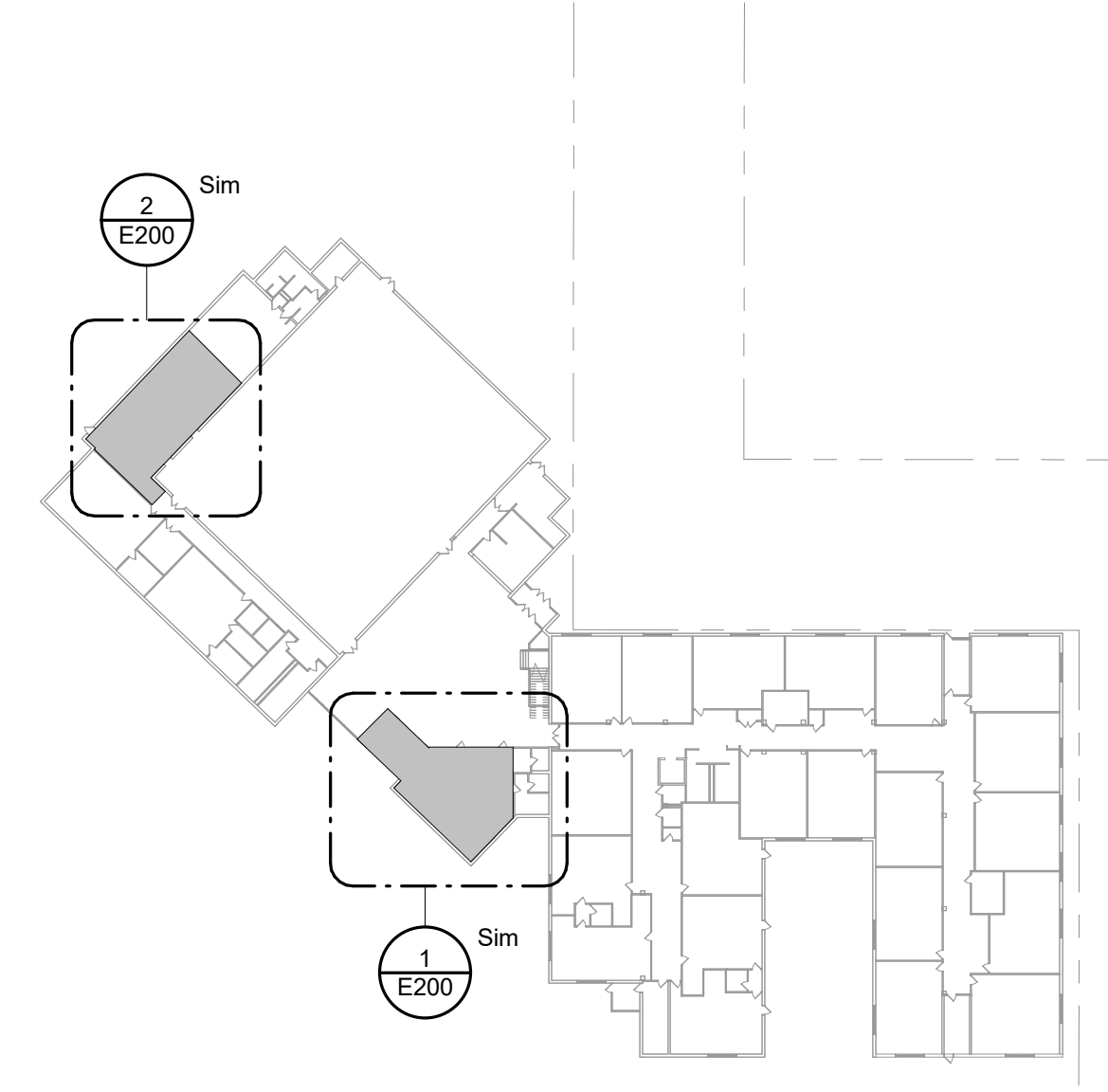
2 ELECTRICAL DEMOLITION - MUSIC ROOM  
1/8" = 1'-0"



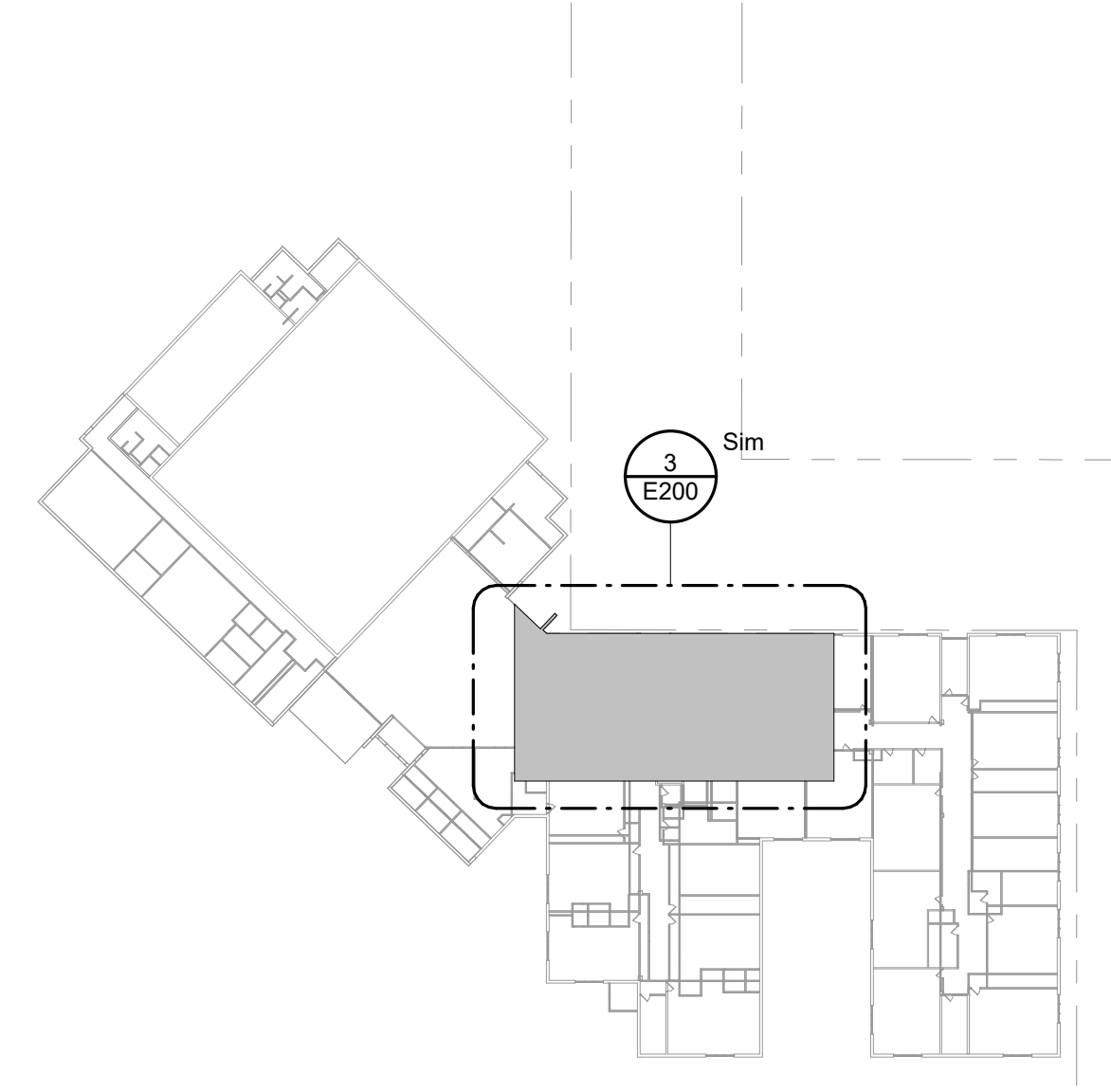
3 ELECTRICAL DEMOLITION - SKYWAY AT EXISTING  
1/8" = 1'-0"



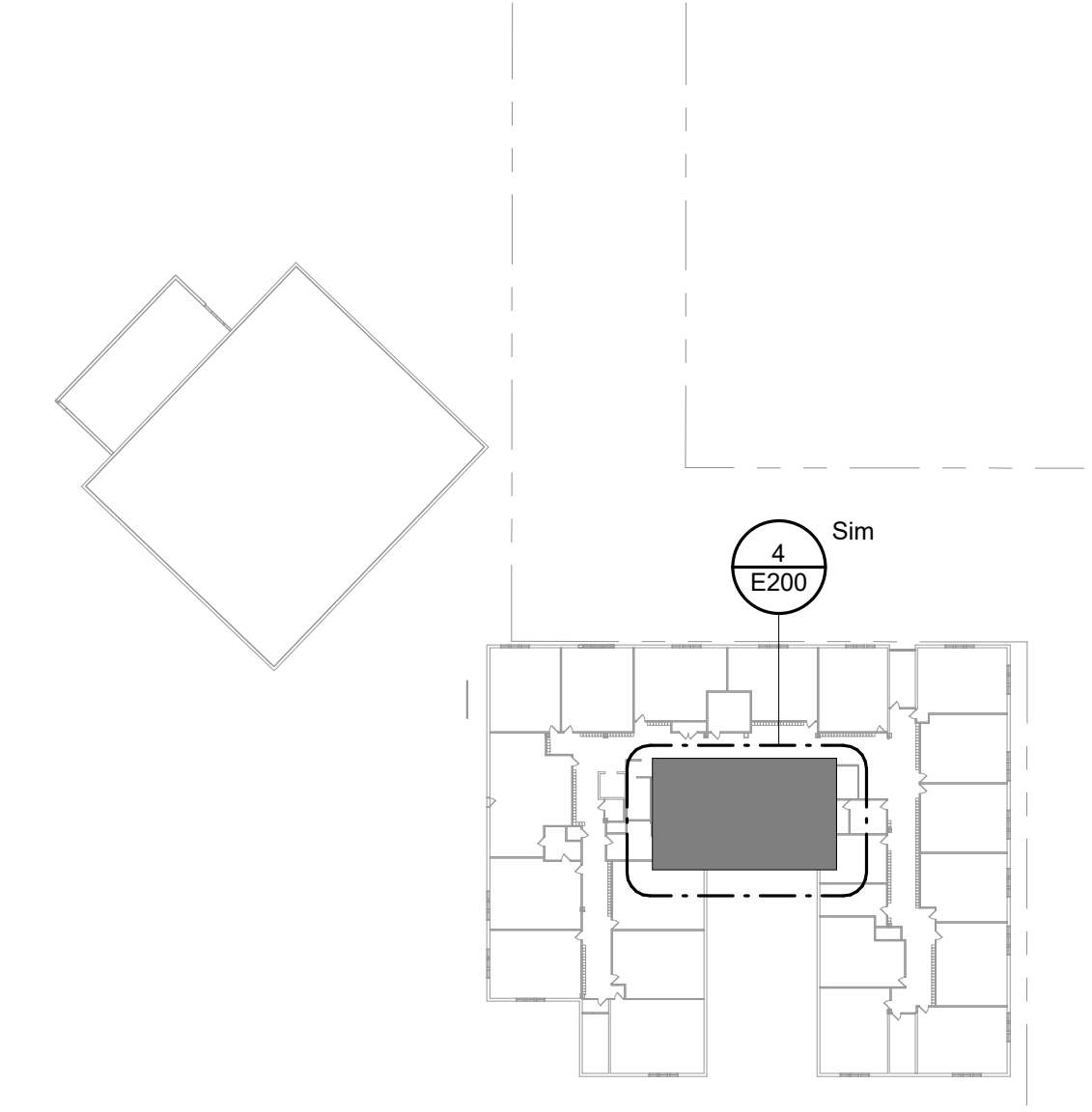
4 ELECTRICAL DEMOLITION - EX HALL  
1/8" = 1'-0"



5 FIRST FLOOR - NOVA CLASSICAL ACADEMY OVERALL  
1/64" = 1'-0"



6 SECOND FLOOR - NOVA CLASSICAL ACADEMY OVERALL  
1/64" = 1'-0"



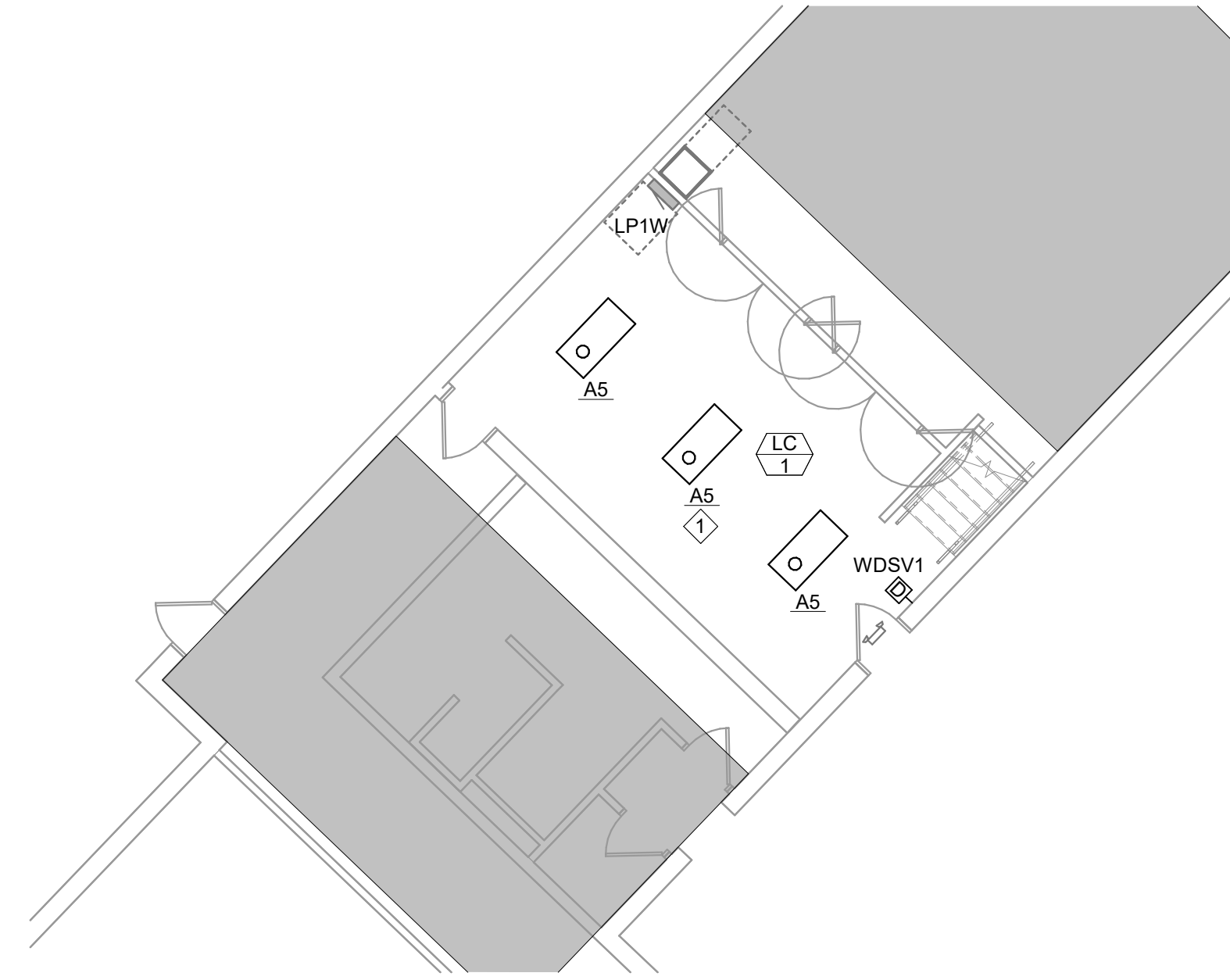
7 THIRD FLOOR - NOVA CLASSICAL ACADEMY OVERALL  
1/64" = 1'-0"

**GENERAL NOTES:**  
A. NOTE NOT USED.

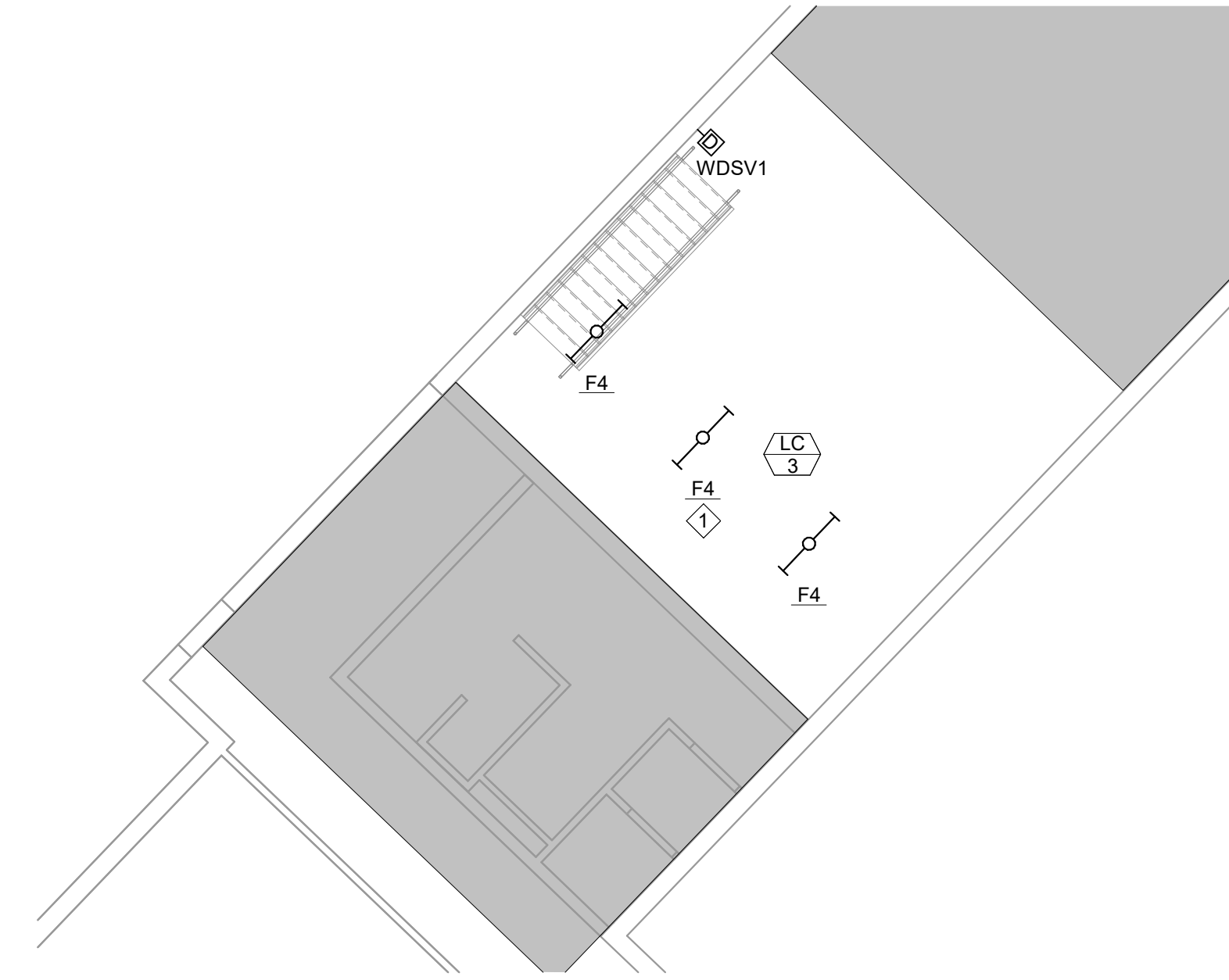
**KEY NOTES:**  
◇ DEMOLISH LIGHT FIXTURES AND CONTROLS IN THIS ROOM. PRESERVE CIRCUIT IN AREA FOR NEW LIGHTS.



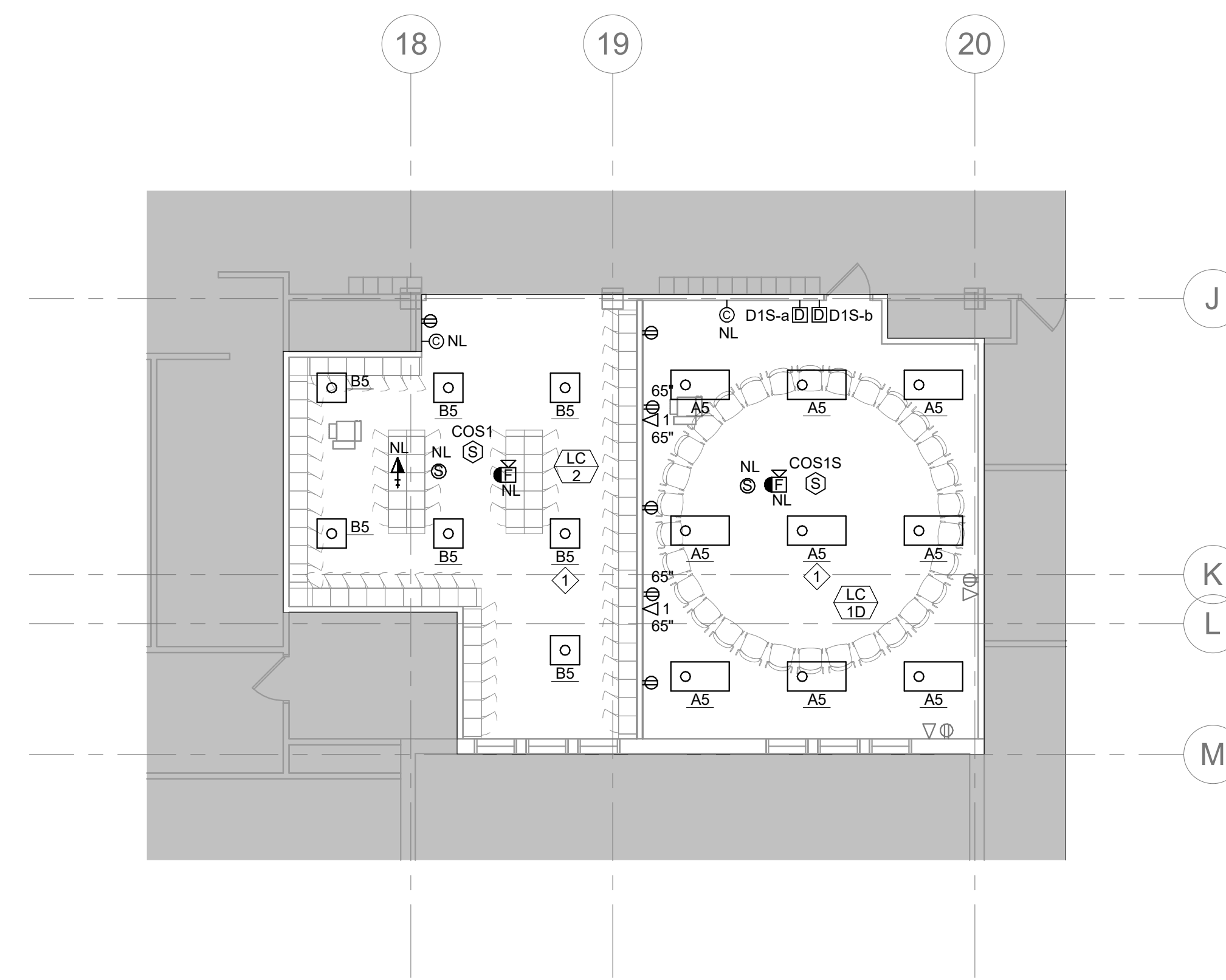
1 ELECTRICAL PLAN - ENTRY & ADMIN  
1/8" = 1'-0"



2 ELECTRICAL PLAN - MUSIC ROOM  
1/8" = 1'-0"



3 ELECTRICAL PLAN - MEZZANINE  
1/8" = 1'-0"



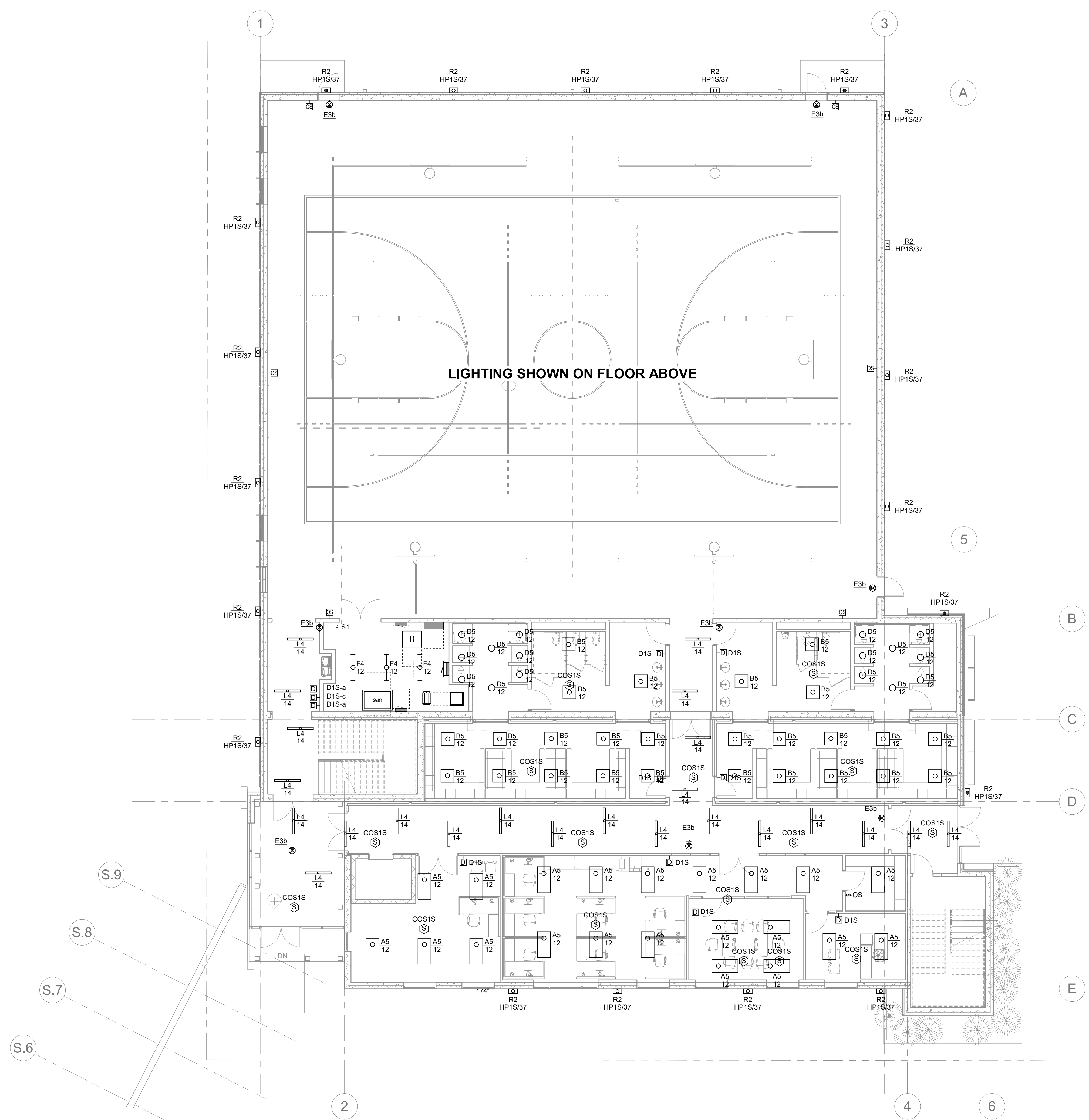
4 ELECTRICAL PLAN - EX HALL  
1/8" = 1'-0"

**GENERAL NOTES:**

- A. VERIFY CEILING TYPES, RECESSED CONDITIONS, AND MOUNTING HARDWARE REQUIRED PRIOR TO PURCHASING LIGHT FIXTURES.
- B. ALL BRANCH CIRCUITS SHALL HAVE DEDICATED NEUTRALS.
- C. REFER TO LIGHTING CONTROL SCHEDULES FOR ADDITIONAL REQUIREMENTS OF THE LIGHTING CONTROL SYSTEM.
- D. PROVIDE CUTTING AND PATCHING FOR ELECTRICAL WORK.
- E. PROVIDE A MINIMUM OF #10 AWG CONDUCTOR SIZE (INCREASING IN SIZE AS REQUIRED) FOR A MAXIMUM OF 3% VOLTAGE DROP FROM PANEL TO LOAD FOR 120V/20A CIRCUITS LONGER THAN 75 FEET AND FOR 277V/20A CIRCUITS LONGER THAN 150 FEET.
- F. EXIT SIGNS AND EMERGENCY LIGHT FIXTURES SHALL BE WIRED WITH A CONTINUOUS HOT CIRCUIT AND SHALL ALWAYS BE "ON".
- G. MOUNT ANY REQUIRED POWER PACKS OR RELAYS ABOVE ACCESSIBLE CEILING AT THE DOOR INTO THE ROOM.
- H. PROVIDE CUTTING AND PATCHING FOR ELECTRICAL WORK.

**KEY NOTES:**

- 1 FEED LIGHT FIXTURES IN THIS AREA FROM CIRCUIT MADE AVAILABLE FROM DEMOLITION.

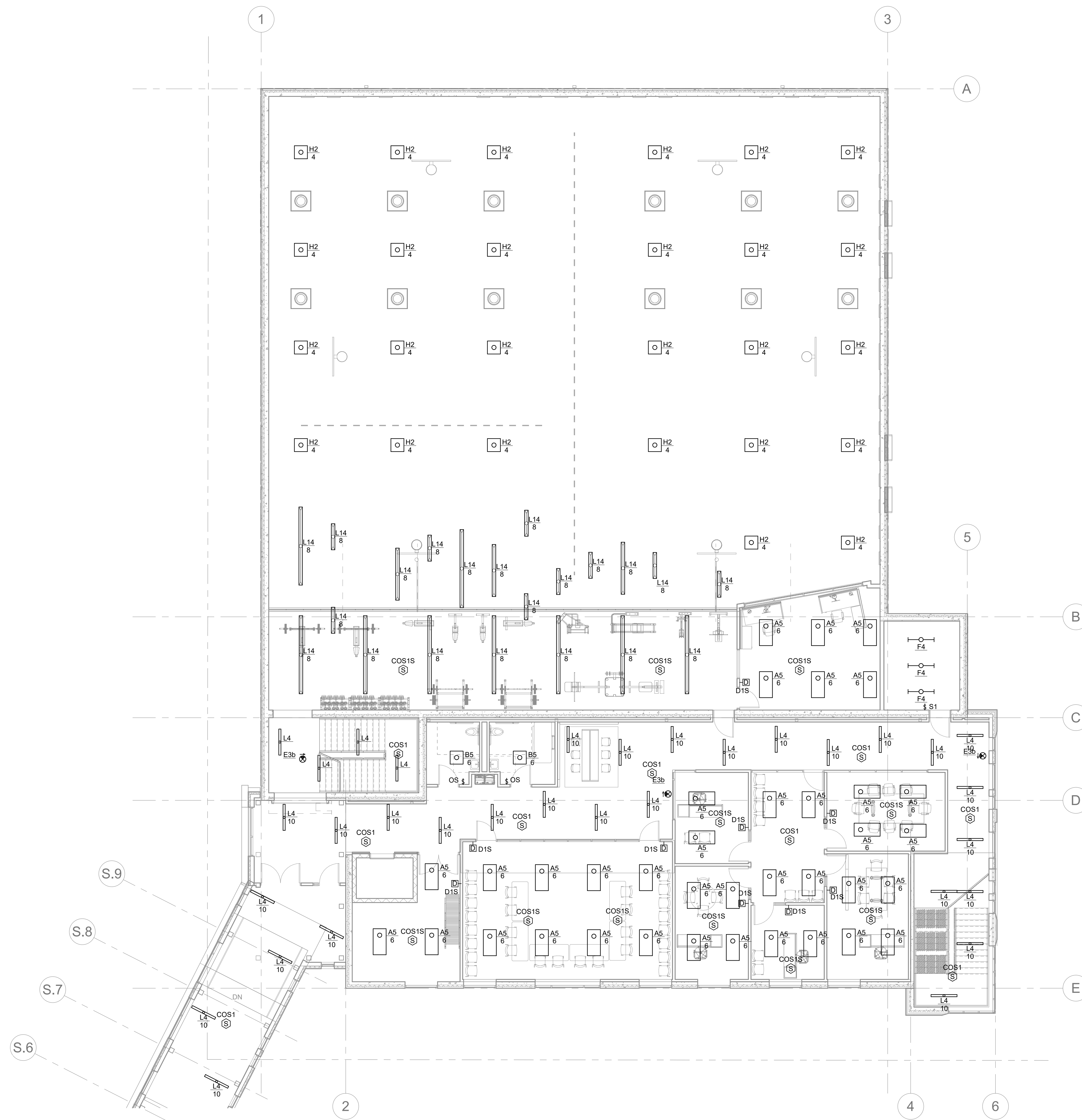


1 FIRST FLOOR LIGHTING PLAN  
1/8" = 1'-0"

- GENERAL NOTES:**
- VERIFY CEILING TYPES, RECESSED CONDITIONS, AND MOUNTING HARDWARE REQUIRED PRIOR TO PURCHASING LIGHT FIXTURES.
  - ALL BRANCH CIRCUITS SHALL HAVE DEDICATED NEUTRALS.
  - REFER TO LIGHTING CONTROL SCHEDULES FOR ADDITIONAL REQUIREMENTS OF THE LIGHTING CONTROL SYSTEM.
  - WHERE LIGHTING CONTROL DEVICES (OCCUPANCY SENSORS, PHOTOCELLS, ETC.) ARE SHOWN ON PLANS, LOCATE DEVICES IN EACH SPACE PER DEVICE TYPE AND MANUFACTURER'S RECOMMENDATIONS. PROVIDE A NEUTRAL CONDUCTOR DOWN TO LINE VOLTAGE SWITCH BOXES.
  - EXIT SIGNS AND EMERGENCY LIGHT FIXTURES SHALL BE WIRED WITH A CONTINUOUS HOT CIRCUIT AND SHALL ALWAYS BE "ON".
  - MOUNT ANY REQUIRED POWER PACKS OR RELAYS ABOVE ACCESSIBLE CEILING AT THE DOOR INTO THE ROOM.
  - PROVIDE CUTTING AND PATCHING FOR ELECTRICAL WORK.
  - PROVIDE A MINIMUM OF #10 AWG CONDUCTOR SIZE (INCREASING IN SIZE AS REQUIRED) FOR A MAXIMUM OF 3% VOLTAGE DROP FROM PANEL TO LOAD FOR 120V/20A CIRCUITS LONGER THAN 75 FEET AND FOR 277V/20A CIRCUITS LONGER THAN 150 FEET.
  - CIRCUIT NORMAL FIXTURES TO PANEL X AND EMERGENCY FIXTURES TO PANEL X.

- KEY NOTES:**
- NOTE NOT USED.

1 SECOND FLOOR LIGHTING PLAN  
1/8" = 1'-0"



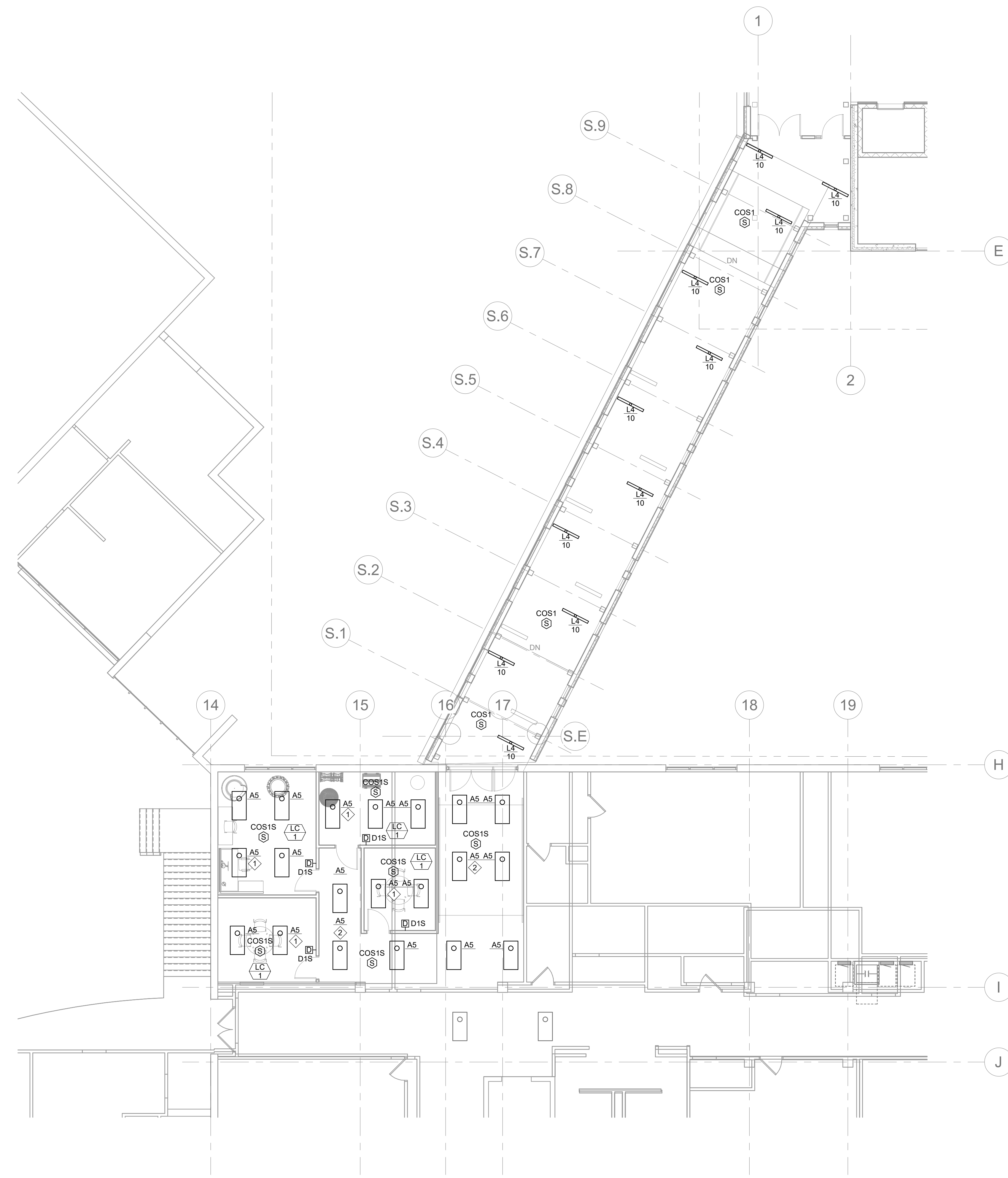
**GENERAL NOTES:**

- A. VERIFY CEILING TYPES, RECESSED CONDITIONS, AND MOUNTING HARDWARE REQUIRED PRIOR TO PURCHASING LIGHT FIXTURES.
- B. ALL BRANCH CIRCUITS SHALL HAVE DEDICATED NEUTRALS.
- C. REFER TO LIGHTING CONTROL SCHEDULES FOR ADDITIONAL REQUIREMENTS OF THE LIGHTING CONTROL SYSTEM.
- D. WHERE LIGHTING CONTROL DEVICES (OCCUPANCY SENSORS, PHOTOCELLS, ETC.) ARE SHOWN ON PLANS, LOCATE DEVICES IN EACH SPACE PER DEVICE TYPE AND MANUFACTURER'S RECOMMENDATIONS. PROVIDE A NEUTRAL CONDUCTOR DOWN TO LINE VOLTAGE SWITCH BOXES.
- E. EXIT SIGNS AND EMERGENCY LIGHT FIXTURES SHALL BE WIRED WITH A CONTINUOUS HOT CIRCUIT AND SHALL ALWAYS BE "ON".
- F. MOUNT ANY REQUIRED POWER PACKS OR RELAYS ABOVE ACCESSIBLE CEILING AT THE DOOR INTO THE ROOM.
- G. PROVIDE CUTTING AND PATCHING FOR ELECTRICAL WORK.
- H. PROVIDE A MINIMUM OF #10 AWG CONDUCTOR SIZE (INCREASING IN SIZE AS REQUIRED) FOR A MAXIMUM OF 3% VOLTAGE DROP FROM PANEL TO LOAD FOR 120V/20A CIRCUITS LONGER THAN 75 FEET AND FOR 277V/20A CIRCUITS LONGER THAN 150 FEET.
- I. CIRCUIT NORMAL FIXTURES TO PANEL X AND EMERGENCY FIXTURES TO PANEL X.

**KEY NOTES:**

- 1 NOTE NOT USED.





1 SECOND FLOOR LIGHTING PLAN  
1/8" = 1'-0"

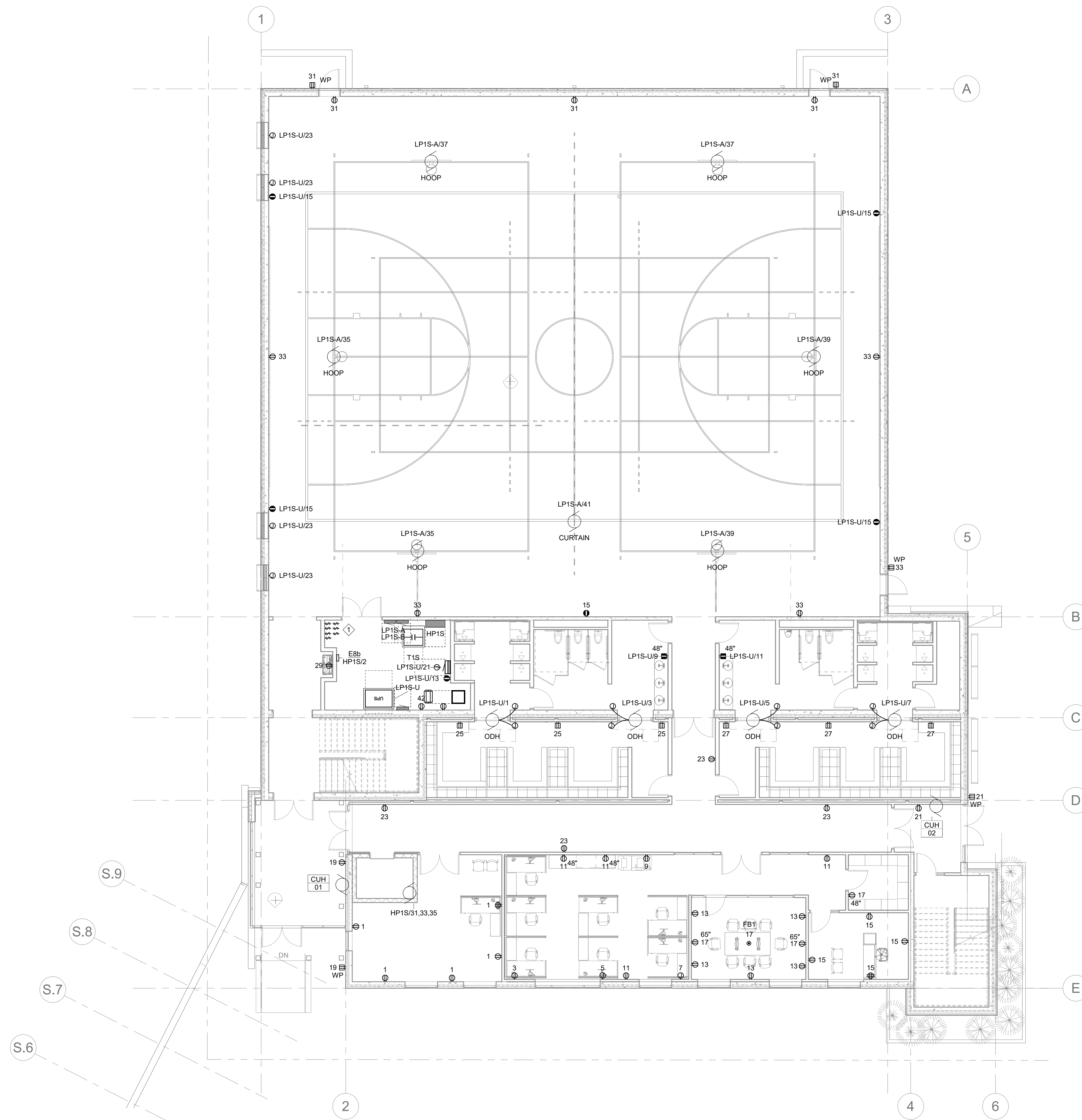
**GENERAL NOTES:**

- A. VERIFY CEILING TYPES, RECESSED CONDITIONS, AND MOUNTING HARDWARE REQUIRED PRIOR TO PURCHASING LIGHT FIXTURES.
- B. ALL BRANCH CIRCUITS SHALL HAVE DEDICATED NEUTRALS.
- C. REFER TO LIGHTING CONTROL SCHEDULES FOR ADDITIONAL REQUIREMENTS OF THE LIGHTING CONTROL SYSTEM.
- D. WHERE LIGHTING CONTROL DEVICES (OCCUPANCY SENSORS, PHOTOCELLS, ETC.) ARE SHOWN ON PLANS, LOCATE DEVICES IN EACH SPACE PER DEVICE TYPE AND MANUFACTURER'S RECOMMENDATIONS. PROVIDE A NEUTRAL CONDUCTOR DOWN TO LINE VOLTAGE SWITCH BOXES.
- E. EXIT SIGNS AND EMERGENCY LIGHT FIXTURES SHALL BE WIRED WITH A CONTINUOUS HOT CIRCUIT AND SHALL ALWAYS BE "ON".
- F. MOUNT ANY REQUIRED POWER PACKS OR RELAYS ABOVE ACCESSIBLE CEILING AT THE DOOR INTO THE ROOM.
- G. PROVIDE CUTTING AND PATCHING FOR ELECTRICAL WORK.
- H. PROVIDE A MINIMUM OF #10 AWG CONDUCTOR SIZE (INCREASING IN SIZE AS REQUIRED) FOR A MAXIMUM OF 3% VOLTAGE DROP FROM PANEL TO LOAD FOR 120V/20A CIRCUITS LONGER THAN 75 FEET AND FOR 277V/20A CIRCUITS LONGER THAN 150 FEET.

**KEY NOTES:**

- ⬇ FEED LIGHT FIXTURES IN THIS AREA FROM CIRCUIT MADE AVAILABLE FROM DEMOLITION.

1 FIRST FLOOR POWER PLAN  
1/8" = 1'-0"



**GENERAL NOTES:**

- A. REFER TO MECHANICAL ELECTRICAL SCHEDULES FOR ELECTRICAL CONNECTION REQUIREMENTS OF MECHANICAL EQUIPMENT.
- B. PROVIDE DEDICATED NEUTRALS IN ALL BRANCH CIRCUITS.
- C. PROVIDE POWER OUTLETS ADJACENT TO COMMUNICATION DEVICES, MOUNTED AT THE SAME HEIGHT AND WITHIN 12 INCHES, ON CENTER, OF EACH OTHER. UTILIZE MOUNTING STRAPS BETWEEN STUDS FOR ADJACENT INSTALLATION. DIVISION 26 SPECIFIED HEIGHTS SHALL TAKE PREFERENCE.
- D. PROVIDE CUTTING AND PATCHING FOR ELECTRICAL WORK.
- E. PROVIDE MINIMUM #10 AWG CONDUCTOR SIZE (INCREASING IN SIZE AS REQUIRED) FOR A MAXIMUM OF 3 PERCENT VOLTAGE DROP FROM PANEL TO LOAD FOR 120V/20A CIRCUITS LONGER THAN 75 FEET AND FOR 277V/20A CIRCUITS LONGER THAN 150 FEET.
- F. DEVICES SHALL NOT BE INSTALLED BACK TO BACK TO PREVENT NOISE TRAVEL UNLESS NOTED OTHERWISE.

**KEY NOTES:**

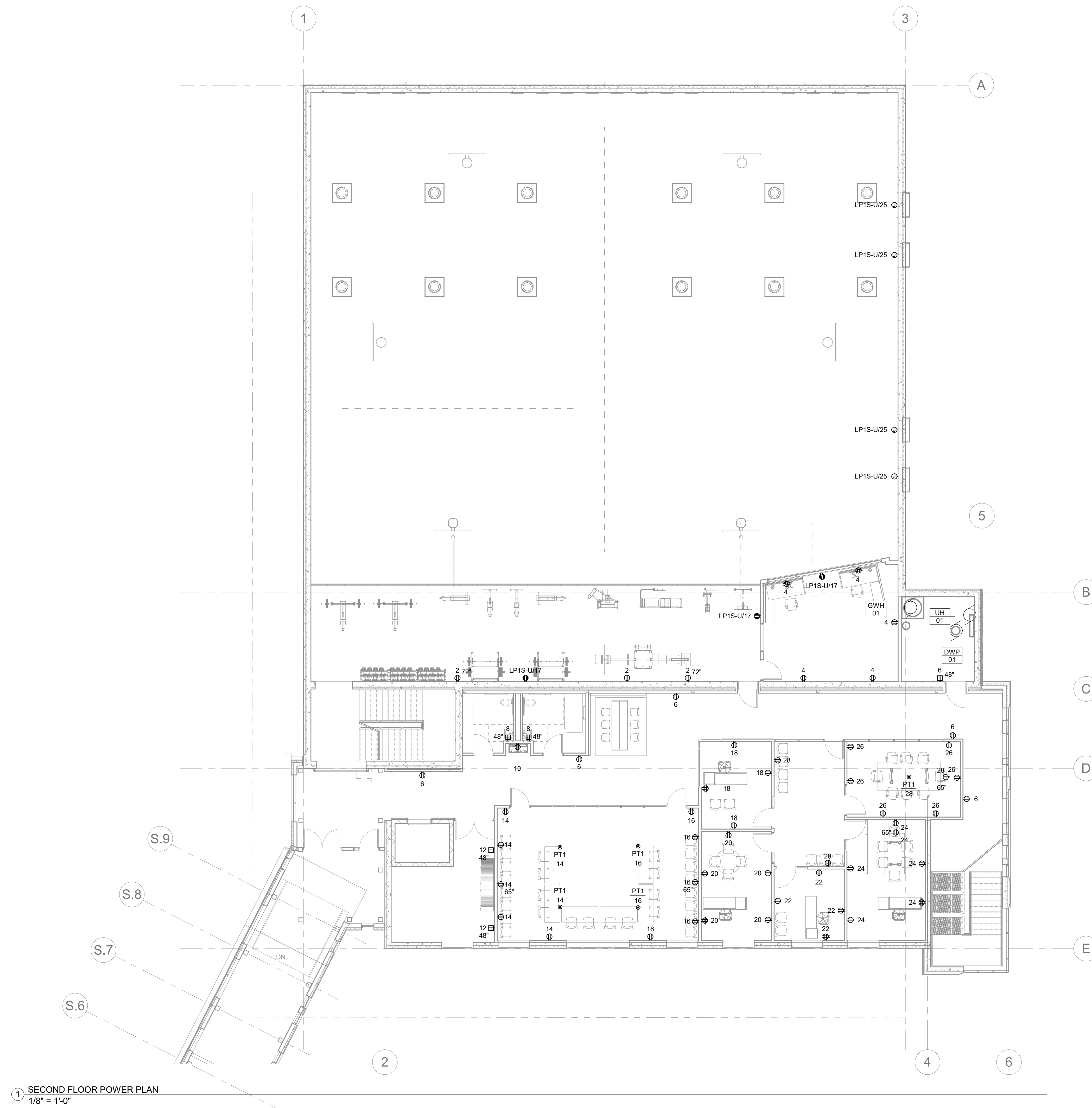
- ① PROVIDE KEYED SWITCH FOR BASKETBALL HOOPS AND CURTAIN

**GENERAL NOTES:**

- A. REFER TO MECHANICAL ELECTRICAL SCHEDULES FOR ELECTRICAL CONNECTION REQUIREMENTS OF MECHANICAL EQUIPMENT.
- B. PROVIDE DEDICATED NEUTRALS IN ALL BRANCH CIRCUITS.
- C. PROVIDE POWER OUTLETS ADJACENT TO COMMUNICATION DEVICES, MOUNTED AT THE SAME HEIGHT AND WITHIN 12 INCHES, ON CENTER, OF EACH OTHER. UTILIZE MOUNTING STRAPS BETWEEN STUDS FOR ADJACENT INSTALLATION. DIVISION 26 SPECIFIED HEIGHTS SHALL TAKE PREFERENCE.
- D. PROVIDE CUTTING AND PATCHING FOR ELECTRICAL WORK.
- E. PROVIDE MINIMUM #10 AWG CONDUCTOR SIZE (INCREASING IN SIZE AS REQUIRED) FOR A MAXIMUM OF 3 PERCENT VOLTAGE DROP FROM PANEL TO LOAD FOR 120V/20A CIRCUITS LONGER THAN 75 FEET AND FOR 277V/20A CIRCUITS LONGER THAN 150 FEET.
- F. DEVICES SHALL NOT BE INSTALLED BACK TO BACK TO PREVENT NOISE TRAVEL UNLESS NOTED OTHERWISE.

**KEY NOTES:**

- ① NOTE NOT USED.



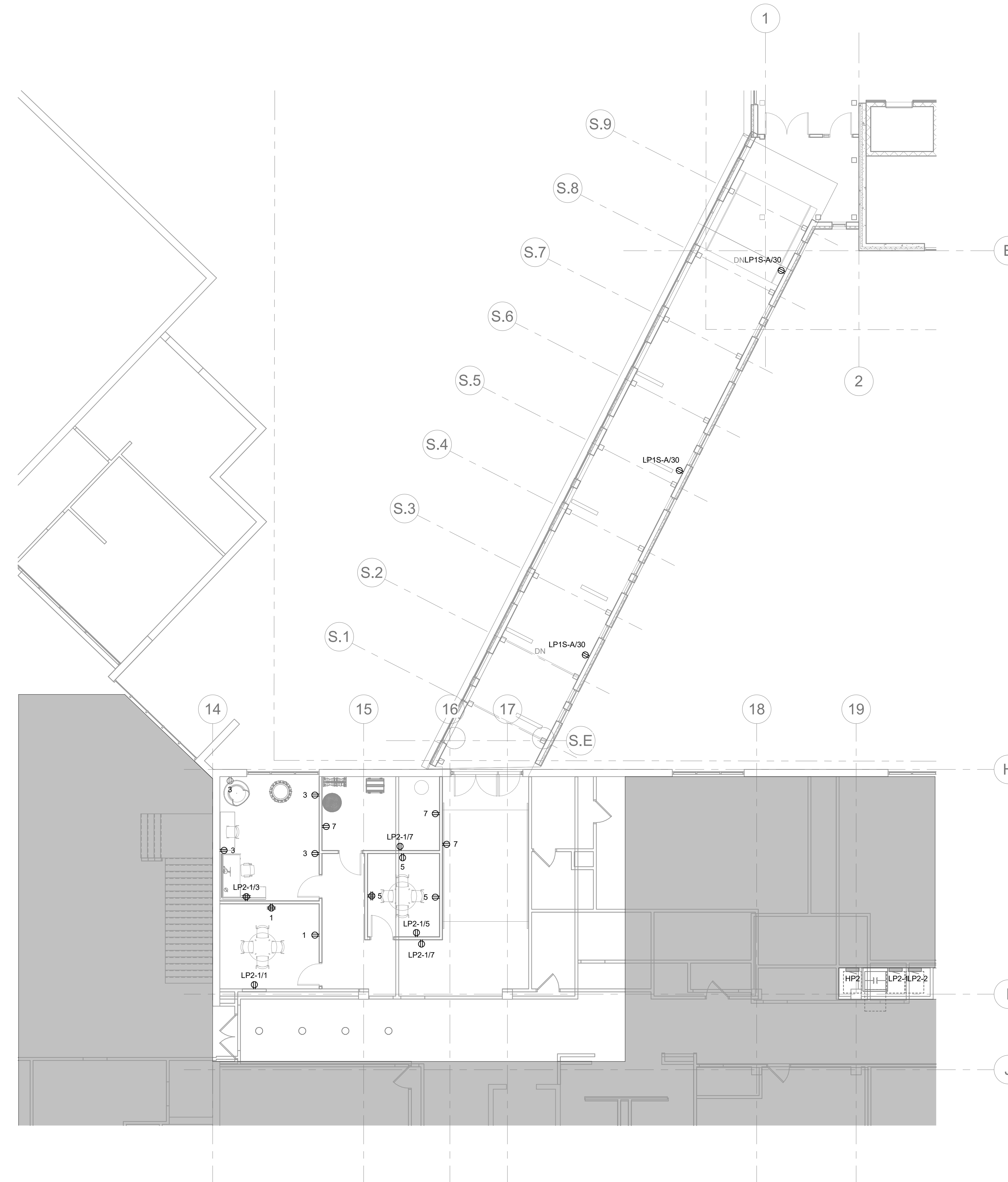
① SECOND FLOOR POWER PLAN  
1/8" = 1'-0"

**GENERAL NOTES:**

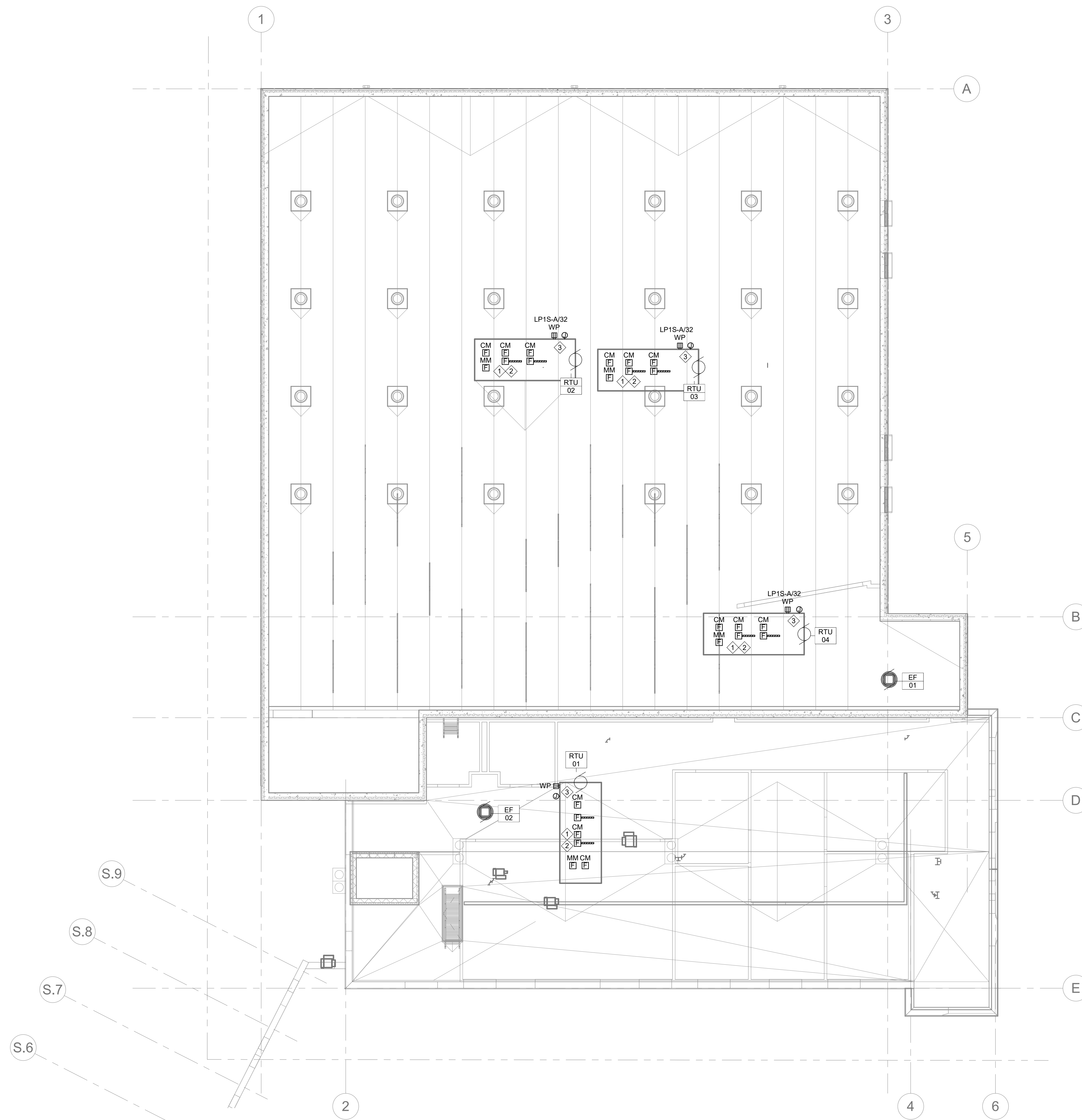
- A. REFER TO MECHANICAL ELECTRICAL SCHEDULES FOR ELECTRICAL CONNECTION REQUIREMENTS OF MECHANICAL EQUIPMENT.
- B. PROVIDE DEDICATED NEUTRALS IN ALL BRANCH CIRCUITS.
- C. PROVIDE POWER OUTLETS ADJACENT TO COMMUNICATION DEVICES, MOUNTED AT THE SAME HEIGHT AND WITHIN 12 INCHES, ON CENTER, OF EACH OTHER. UTILIZE MOUNTING STRAPS BETWEEN STUDS FOR ADJACENT INSTALLATION. DIVISION 26 SPECIFIED HEIGHTS SHALL TAKE PREFERENCE.
- D. PROVIDE CUTTING AND PATCHING FOR ELECTRICAL WORK.
- E. PROVIDE MINIMUM #10 AWG CONDUCTOR SIZE (INCREASING IN SIZE AS REQUIRED) FOR A MAXIMUM OF 3 PERCENT VOLTAGE DROP FROM PANEL TO LOAD FOR 120V/20A CIRCUITS LONGER THAN 75 FEET AND FOR 277V/20A CIRCUITS LONGER THAN 150 FEET.
- F. DEVICES SHALL NOT BE INSTALLED BACK TO BACK TO PREVENT NOISE TRAVEL UNLESS NOTED OTHERWISE.

**KEY NOTES:**

- ① NOTE NOT USED.



① SECOND FLOOR POWER PLAN  
1/8" = 1'-0"



1 ROOF FLOOR POWER & SYSTEMS PLAN  
1/8" = 1'-0"

**GENERAL NOTES:**

A. REFER TO MECHANICAL ELECTRICAL SCHEDULES FOR ELECTRICAL CONNECTION REQUIREMENTS OF MECHANICAL EQUIPMENT.

**KEY NOTES:**

- 1 DUCT DETECTOR FOR AIR HANDLING UNIT SHUT DOWN. VERIFY LOCATION WITH MECHANICAL CONTRACTOR. REFER TO FIRE ALARM DETAILS FOR ADDITIONAL INFORMATION.
- 2 CONTROL AND MONITOR MODULES FOR AHU SHUTDOWN AND STATUS MONITORING. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 3 PROVIDE 120V POWER CONNECTION TO UNIT LIGHTS AND RECEPTACLE.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

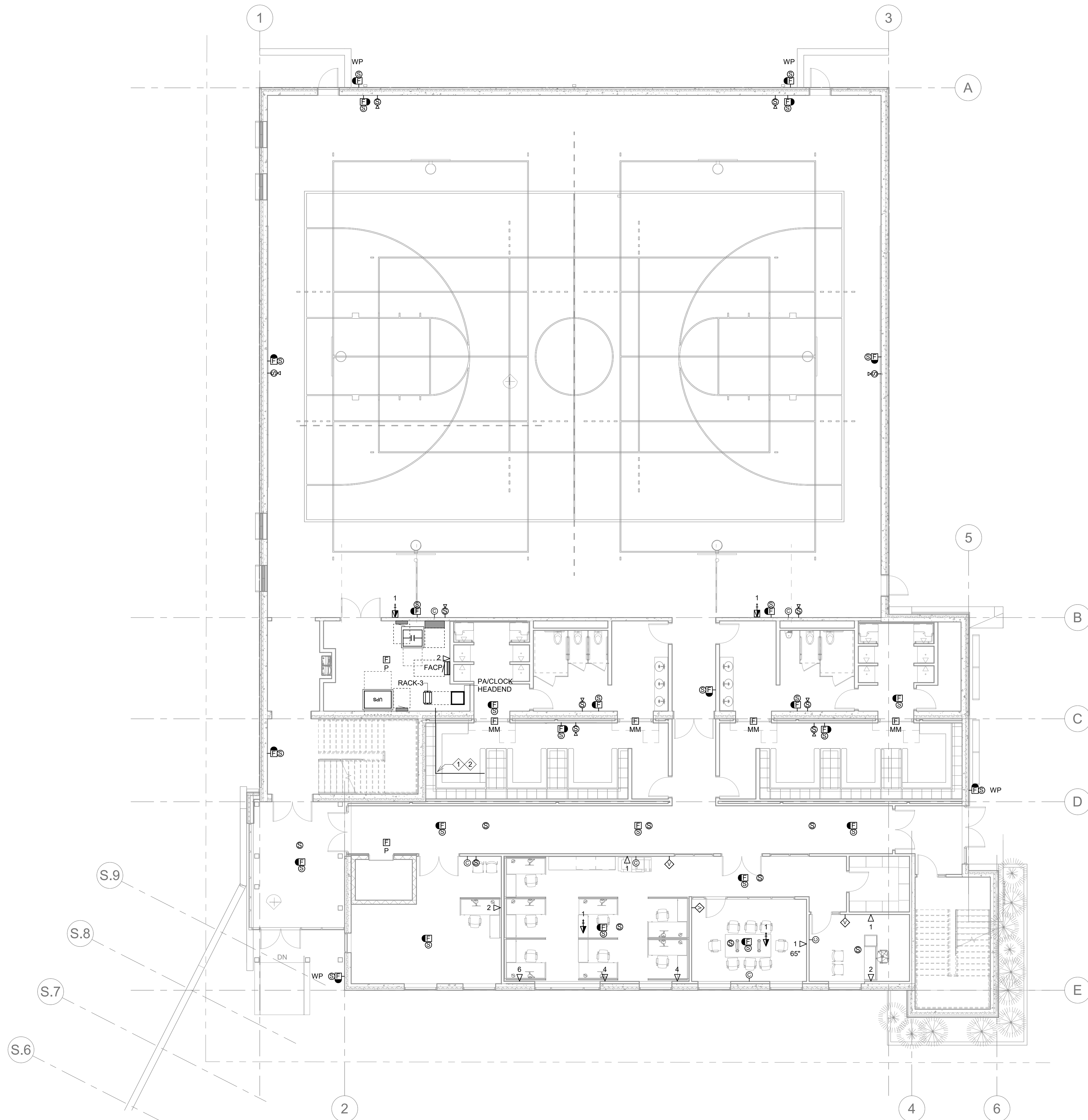
Madeline M. Folin, P.E.  
PRINT NAME  
SIGNATURE  
57233  
LICENSE NO.  
02/03/25  
DATE

**DD DOCUMENT Not For Construction**

SHEET TITLE:  
**ROOF FLOOR POWER PLAN**

SHEET NUMBER:

**E223**



1 FIRST FLOOR SYSTEMS PLAN  
1/8" = 1'-0"

**GENERAL NOTES:**  
A. NOTE NOT USED.

**KEY NOTES:**

- ① PROVIDE ARMORED FIBER FROM EXISTING IDF TO NEW DATA RACK. REFER TO RISER DIAGRAM FOR ADDITIONAL INFORMATION. RECOMMENDED PATHWAY SHOWN.
- ② PROVIDE INTERCONNECTION FROM EXISTING FIRE ALARM CONTROL PANEL TO NEW FIRE ALARM CONTROL PANEL. RECOMMENDED PATHWAY SHOWN.



**BLOOM  
HAY DOBBS**

Madison Commons  
2324 University Ave. W.  
Suite 200  
St. Paul, MN 55114  
Tel. 612.338.6990

NOVA CLASSICAL ACADEMY  
1455 VICTORIA WAY

CONSULTANT



**DUNHAM**  
50 South Sixth Street / Suite 1100  
Minneapolis, Minnesota 55402-1540  
PHONE: 612.465.7550 FAX: 612.465.7551  
WEB: dunhaminc.com  
mechanical + electrical consulting engineering  
Dunham Project Number: 0425231-000

Project Name: NOVA CLASSICAL ACADEMY  
Project Number: 23008.003  
Date: 05/07/2025

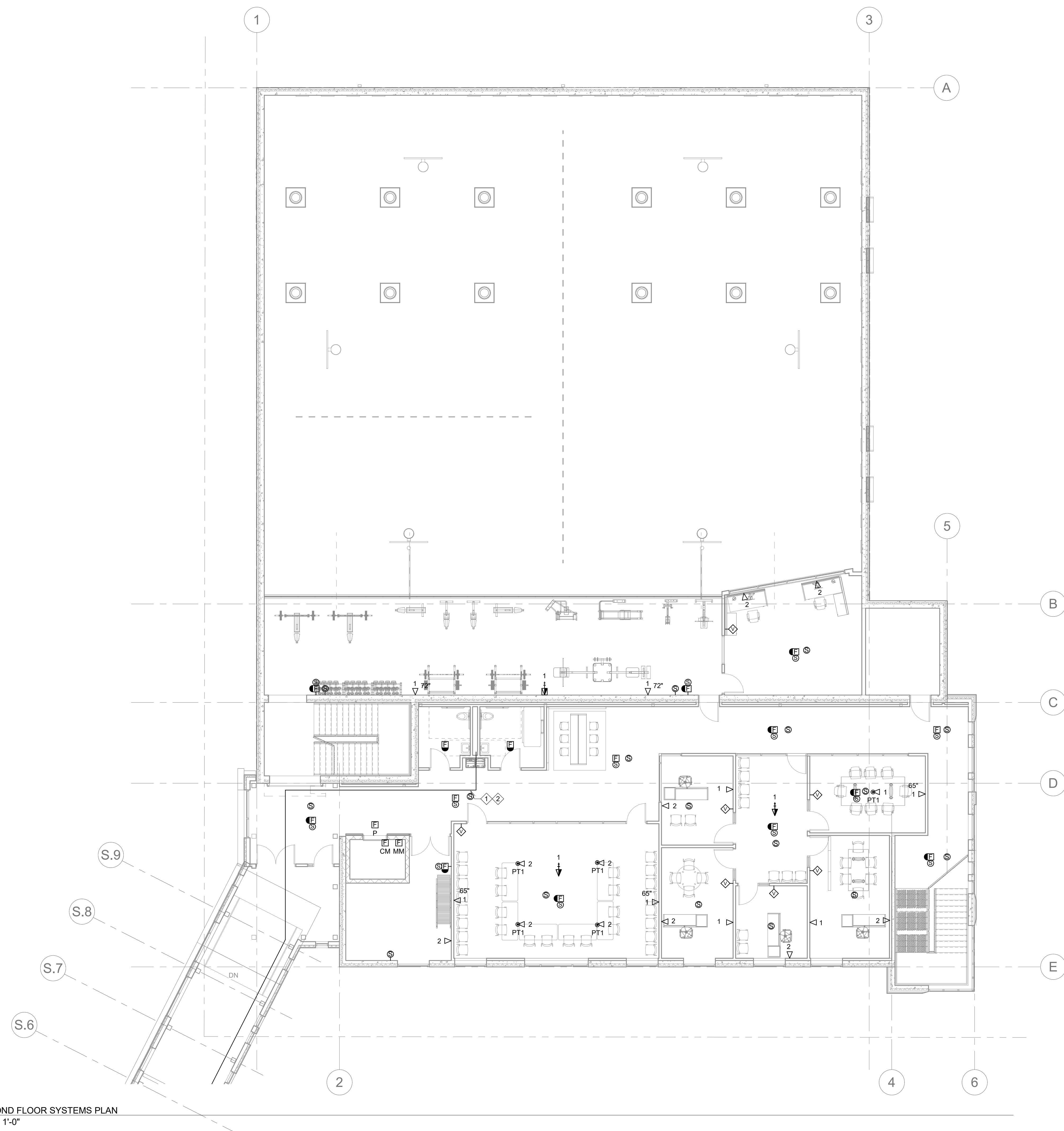
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Madeline M. Folin, P.E.  
PRINT NAME  
SIGNATURE  
57233  
LICENSE NO.  
02/03/25  
DATE

**DD  
DOCUMENT  
Not For  
Construction**

SHEET TITLE:  
**FIRST FLOOR SYSTEMS PLAN**

SHEET NUMBER:  
**E231**



1 SECOND FLOOR SYSTEMS PLAN  
1/8" = 1'-0"

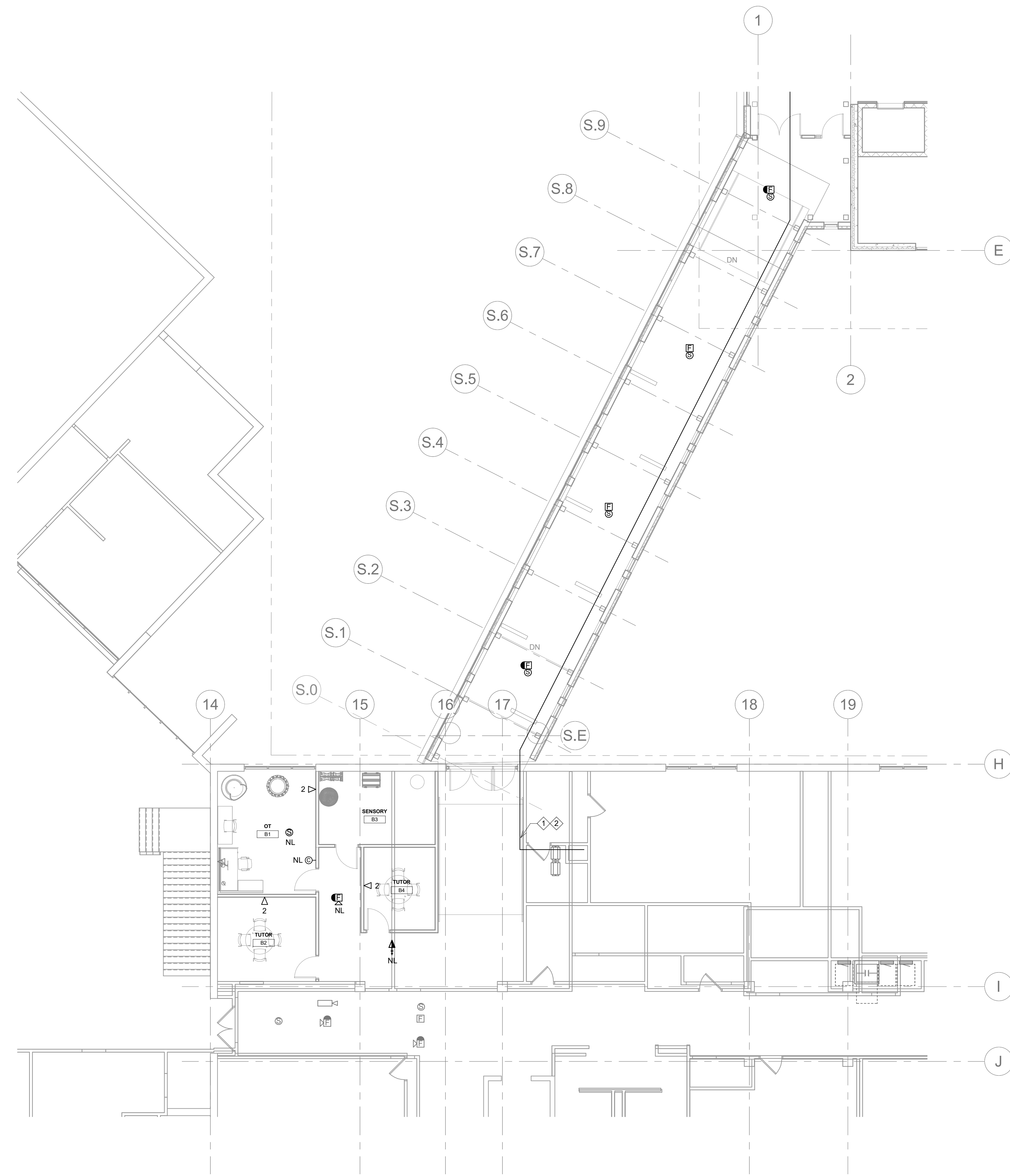
**GENERAL NOTES:**

A. NOTE NOT USED.

**KEY NOTES:**

- ① PROVIDE ARMORED FIBER FROM EXISTING IDF TO NEW DATA RACK. REFER TO RISER DIAGRAM FOR ADDITIONAL INFORMATION. RECOMMENDED PATHWAY SHOWN.
- ② PROVIDE INTERCONNECTION FROM EXISTING FIRE ALARM CONTROL PANEL TO NEW FIRE ALARM CONTROL PANEL. RECOMMENDED PATHWAY SHOWN.

**DD  
DOCUMENT  
Not For  
Construction**



1 SECOND FLOOR SYSTEMS PLAN  
1/8" = 1'-0"

**GENERAL NOTES:**  
A. NOTE NOT USED.

**KEY NOTES:**

- 1 PROVIDE ARMORED FIBER FROM EXISTING IDF TO NEW DATA RACK. REFER TO RISER DIAGRAM FOR ADDITIONAL INFORMATION. RECOMMENDED PATHWAY SHOWN.
- 2 PROVIDE INTERCONNECTION FROM EXISTING FIRE ALARM CONTROL PANEL TO NEW FIRE ALARM CONTROL PANEL. RECOMMENDED PATHWAY SHOWN.



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Project Name: NOVA CLASSICAL ACADEMY  
Project Number: 23008.003  
Date: 05/07/2025

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Madeline M. Folin, P.E.  
PRINT NAME  
SIGNATURE  
57233  
LICENSE NO.  
02/03/25  
DATE

**DD DOCUMENT**  
**Not For Construction**

SHEET TITLE:  
**SECOND FLOOR SYSTEMS PLAN**

SHEET NUMBER:

**E232B**

DUNHAM ENGINEERING, P.A.  
A PROFESSIONAL CORPORATION



**GENERAL NOTES:**  
A. NOTE NOT USED.

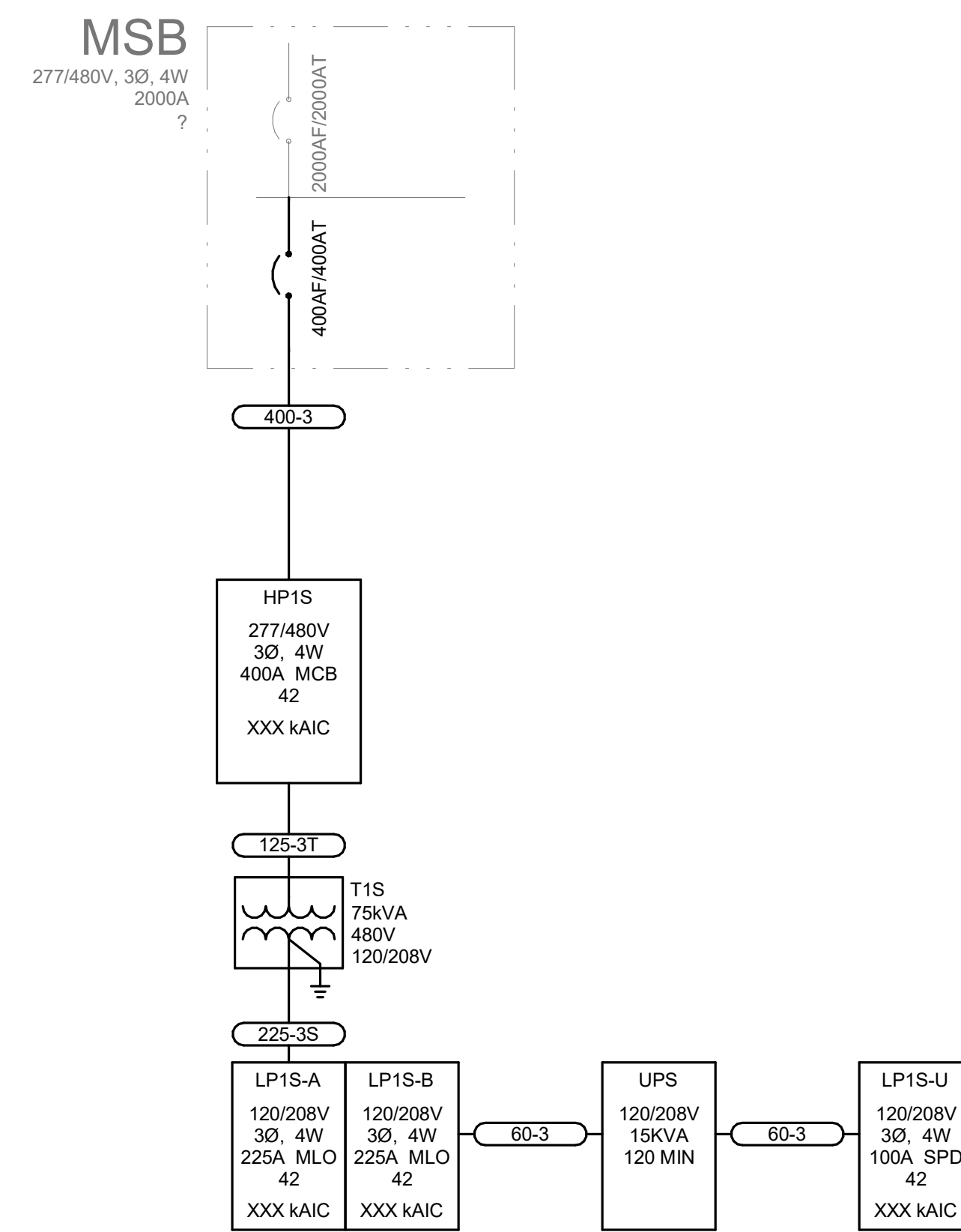
**KEY NOTES:**  
NOTE NOT USED.

FEEDER SCHEDULE		
XXXX		
FEEDER	FEEDER DESCRIPTION	CONDUIT
60-3	1" C, 4#6 + #10 G	EMT
125-3T	1-1/2" C, 3#1 + #6 G	EMT
225-3S	2-1/2" C, 4#4/0 + #2 G	EMT
400-3	3-1/2" C, 4#500KCMIL + #3 G	EMT

-2	SINGLE PHASE
-3	THREE PHASE
SE	SERVICE ENTRANCE
S	SECONDARY (LV TRANSFORMER)
D	SIZED FOR VOLTAGE DROP
P	PVC
U	UNDERGROUND
L	ALUMINUM
N	ADDED NEUTRAL
T	THREE WIRE ONLY, NO NEUTRAL

**GENERAL NOTES:**  
A. NOMENCLATURE DEFAULTS WITH A SINGLE NEUTRAL AND A GROUND.  
**NOTES:**



① One Line Diagram  
12" = 1'-0"

NAME: HP1S												
ENCLOSURE: NEMA 1			SUPPLY FROM: MSB			VOLTAGE: 277/480			MIN. BUS RATING: 400 A			
MOUNTING: SURFACE			FEED THRU LUGS:			PHASE: 3			MAIN SIZE: 400 A			
INCOMING FEED:			FTL SUB PANEL:			WIRE: 4			MAIN OPTIONS: MCB			
CALCULATED AFC: SEE RISER												
CK T	CIRCUIT DESCRIPTION	NOTE	TRIP	POL E	A	B	C	POL E	TRIP	NOTE	CIRCUIT DESCRIPTION	CK T
1					13380	150			1	20	DA_L	2
3	T1S		20	3		12400	2730		1	20	DA_L	4
5							11700	1368	1	20	DA_L	6
7					17528	1260			1	20	DA_L	8
9	RTU 01		20	3		17528	816		1	20	DA_L	10
11							17528	1480	1	20	DA_L	12
13					13620	552			1	20	DA_L	14
15	RTU 02		20	3		13620						16
17							13620					18
19					13620							20
21	RTU 03		20	3		13620						22
23							13620					24
25					4434							26
27	RTU 04		20	3		4434						28
29							4434					30
31					0							32
33	ELEVATOR		20	3		0						34
35												36
37	DA_L		20	1	1000							38
39												40
41												42
<b>TOTAL LOAD:</b>					65545 VA	65149 VA	63751 VA					
<b>TOTAL AMPS:</b>					237 A	236 A	230 A					
LOAD CLASSIFICATION	CONNECTED LOAD (VA)	DEMAND FACTOR	LOAD DEMAND (VA)	TOTALS								
LIGHTING LOAD (DA_L)	9356 VA	125%	11695 VA									
RECEPTACLE LOAD (DA_R)	23400 VA	10 KVA @ 100%, Remaining @ 50%	16700 VA	<b>TOTAL CONN. LOAD:</b> 194444 VA								
MTR LOAD - HEATING (DA_HM)		100%		<b>TOTAL EST. DEMAND:</b> 190083 VA								
MTR LOAD - COOLING (DA_CM)		100%		<b>TOTAL CONN. CURRENT:</b> 234 A								
MTR LOAD - GENERAL (DA_M)	158528 VA	100%	158528 VA	<b>TOTAL EST. DEMAND CURRENT:</b> 229 A								
LARGEST MTR - BRANCH (DA_LBM)		125%	0 VA									
<b>MOTOR LOAD TOTALS:</b>	<b>158528 VA</b>		<b>158528 VA</b>									
KITCHEN LOAD (DA_K)		DEMAND PER NEC										
ELECTRONIC LOAD (DA_EL)		100%										
ELECTRIC HEATING (DA_E)		100%										
DWELLING UNIT - GEN LOAD (DA_D)		10 KVA @ 100%, Remaining @ 40%										
MISCELLANEOUS LOAD (DA_MI)	1000 VA	100%	1000 VA									
SPARE CAPACITY (DA_SP)		100%										
NON-COINCIDENT (DA_NC)		0%										
<b>GENERAL NOTES:</b>												
A.												
B.												
C.												
<b>NOTES:</b>												
1.												
2.												
3.												
4.												
5.												
6.												

NAME: LP1S-A													
ENCLOSURE: NEMA 1			SUPPLY FROM: T1S			VOLTAGE: 120/208			MIN. BUS RATING: 200 A				
MOUNTING: SURFACE			FEED THRU LUGS: Yes			PHASE: 3			MAIN SIZE: MLO				
INCOMING FEED:			FTL SUB PANEL:			WIRE: 4			MAIN OPTIONS: MLO				
CALCULATED AFC: SEE RISER													
CK T	CIRCUIT DESCRIPTION	NOTE	TRIP	POL E	A	B	C	POL E	TRIP	NOTE	CIRCUIT DESCRIPTION	CK T	
1	DA_R		20	1	1080	540			1	20	DA_R	2	
3	DA_MI		20	1		0	1260		1	20	DA_R	4	
5	DA_MI		20	1			0	1080	1	20	DA_R	6	
7	DA_MI		20	1	0	360			1	20	DA_R	8	
9	DA_R		20	1		1000	180		1	20	DA_R	10	
11	DA_R		20	1			720	360	1	20	DA_R	12	
13	DA_R		20	1	900	1620			1	20	DA_R	14	
15	DA_R		20	1		900	1620		1	20	DA_R	16	
17	DA_R		20	1			900	900	1	20	DA_R	18	
19	DA_R		20	1	360	1080			1	20	DA_R	20	
21	DA_R		20	1		360	900		1	20	DA_R	22	
23	DA_R		20	1			720	1260	1	20	DA_R	24	
25	DA_R		20	1	540	1080			1	20	DA_R	26	
27	DA_R		20	1		540	900		1	20	DA_R	28	
29	DA_R		1	20	1			180	540	1	20	DA_R	30
31	DA_R		20	1	900	720			1	20	DA_R	32	
33	DA_R		20	1		900	0		1	20	DA_M	34	
35	DA_M		20	1			3120	180				36	
37	DA_M		20	1	3120	1080			3	20	UPS	38	
39	DA_M		20	1		3120	720					40	
41	DA_M		20	1			1560	180	1	20	DA_R	42	
<b>TOTAL LOAD:</b>					13380 VA	12400 VA	11700 VA						
<b>TOTAL AMPS:</b>					112 A	104 A	98 A						
LOAD CLASSIFICATION	CONNECTED LOAD (VA)	DEMAND FACTOR	LOAD DEMAND (VA)	TOTALS									
LIGHTING LOAD (DA_L)		125%											
RECEPTACLE LOAD (DA_R)	23400 VA	10 KVA @ 100%, Remaining @ 50%	16700 VA	<b>TOTAL CONN. LOAD:</b> 37480 VA									
MTR LOAD - HEATING (DA_HM)		100%		<b>TOTAL EST. DEMAND:</b> 30780 VA									
MTR LOAD - COOLING (DA_CM)		100%		<b>TOTAL CONN. CURRENT:</b> 104 A									
MTR LOAD - GENERAL (DA_M)	10920 VA	100%	10920 VA	<b>TOTAL EST. DEMAND CURRENT:</b> 85 A									
LARGEST MTR - BRANCH (DA_LBM)		125%	0 VA										
<b>MOTOR LOAD TOTALS:</b>	<b>10920 VA</b>		<b>10920 VA</b>										
KITCHEN LOAD (DA_K)		DEMAND PER NEC											
ELECTRONIC LOAD (DA_EL)		100%											
ELECTRIC HEATING (DA_E)		100%											
DWELLING UNIT - GEN LOAD (DA_D)		10 KVA @ 100%, Remaining @ 40%											
MISCELLANEOUS LOAD (DA_MI)	1000 VA	100%	1000 VA										
SPARE CAPACITY (DA_SP)		100%											
NON-COINCIDENT (DA_NC)		0%											
<b>GENERAL NOTES:</b>													
A.													
B.													
C.													
<b>NOTES:</b>													
1. PROVIDE GFCI BREAKER													
2.													
3.													
4.													
5.													
6.													

NAME: LP1S-U												
ENCLOSURE: NEMA 1			SUPPLY FROM: UPS			VOLTAGE: 120/208			MIN. BUS RATING: 100 A			
MOUNTING: SURFACE			FEED THRU LUGS:			PHASE: 3			MAIN SIZE:			
INCOMING FEED:			FTL SUB PANEL:			WIRE: 4			MAIN OPTIONS:			
CALCULATED AFC:												
CK T	CIRCUIT DESCRIPTION	NOTE	TRIP	POL E	A	B	C	POL E	TRIP	NOTE	CIRCUIT DESCRIPTION	CK T
1	DA_M		20	1	0							2
3	DA_M		20	1		0						4
5	DA_M		20	1			0					6
7	DA_M		20	1	0							8
9	DA_R		20	1		180						10
11	DA_R		20	1			180					12
13	DA_R		20	1	180							14
15	DA_R		20	1		900						16
17	DA_R		20	1			540					18
19	DA_M		20	1	0							20
21	DA_MI		20	1		0						22
23	DA_MI		20	1			0					24
25	DA_MI		20	1	0							26
27												28
29												30
31												32
33												34
35												36
37												38
39												40
41												42
<b>TOTAL LOAD:</b>					180 VA	1080 VA	720 VA					
<b>TOTAL AMPS:</b>					2 A	10 A	7 A					
LOAD CLASSIFICATION	CONNECTED LOAD (VA)	DEMAND FACTOR	LOAD DEMAND (VA)	TOTALS								
LIGHTING LOAD (DA_L)		125%										
RECEPTACLE LOAD (DA_R)	1980 VA	10 KVA @ 100%, Remaining @ 50%	1980 VA	<b>TOTAL CONN. LOAD:</b> 1980 VA								
MTR LOAD - HEATING (DA_HM)		100%		<b>TOTAL EST. DEMAND:</b> 1980 VA								
MTR LOAD - COOLING (DA_CM)		100%		<b>TOTAL CONN. CURRENT:</b> 5 A								
MTR LOAD - GENERAL (DA_M)	0 VA	100%	0 VA	<b>TOTAL EST. DEMAND CURRENT:</b> 5 A								
LARGEST MTR - BRANCH (DA_LBM)		125%	0 VA									
<b>MOTOR LOAD TOTALS:</b>	<b>0 VA</b>		<b>0 VA</b>									
KITCHEN LOAD (DA_K)		DEMAND PER NEC										
ELECTRONIC LOAD (DA_EL)		100%										
ELECTRIC HEATING (DA_E)		100%										
DWELLING UNIT - GEN LOAD (DA_D)		10 KVA @ 100%, Remaining @ 40%										
MISCELLANEOUS LOAD (DA_MI)	0 VA	100%	0 VA									
SPARE CAPACITY (DA_SP)		100%										
NON-COINCIDENT (DA_NC)		0%										
<b>GENERAL NOTES:</b>												
A.												
B.												
C.												
<b>NOTES:</b>												
1.												
2.												
3.												
4.												
5.												
6.												

**LIGHT FIXTURE SCHEDULE**

ELECTRICAL											
FIXTURE LETTER	FIXTURE STYLE	VOLTAGE	MOUNTING	LAMPS		BALLAST/ DRIVER	FIXTURE MAX VA	CONTROL MEDIA (LENS, LOUVER, ETC.)	MANUFACTURER'S SERIES NUMBER	FIXTURE DESCRIPTION	NOTES
				TYPE	COLOR						
A5	2X4 LED EDGE-LIT FLAT PANEL	120/277	LAY-IN GRID INVERTED TEE	LED 4000 LUM MIN	3500K	DIMMING 0-10V (10%)	36 VA	ACRYLIC WHITE FROST	COOPER-METALUX FPANEL SERIES COLUMBIA CFP SERIES LITHONIA EPANL SERIES ORACLE 24-FPL1-LED SERIES	EXTRUDED ALUMINUM FRAME, SEAMLESS CORNERS, WHITE, 3" DEEP OR LESS	
B5	2X2 LED EDGE-LIT FLAT PANEL	120/277	LAY-IN GRID INVERTED TEE	LED 2000 LUM MIN	3500K	DIMMING 0-10V (10%)	18 VA	ACRYLIC WHITE FROST	COOPER-METALUX FPANEL SERIES COLUMBIA CFP SERIES LITHONIA EPANL SERIES ORACLE 22-FPL1-LED SERIES	EXTRUDED ALUMINUM FRAME, SEAMLESS CORNERS, WHITE, 3" DEEP OR LESS	
D5	4" ROUND DOWNLIGHT - WET LOCATION	120/277	RECESSED GYP-BOARD AND/OR LAY-IN GRID INVERTED TEE	LED 1000 LUM MIN	3500K	DIMMING 0-10V (1%)	16 VA	SEMI-SPECULAR CLEAR SELF FLANGED MEDIUM DISTRIBUTION	HALO COMMERCIAL HC4 SERIES PRESOLITE L14 SERIES GOTHAM EV04SG SERIES MAXILUME H4-LED SERIES	PRE-PAINTED WHITE ALUMINUM HOUSING, PRE-WIRED J-BOX, TWO 27" HANGER BARS, IP66	
E3b	EXIT SIGN, SINGLE FACE, DIECAST, BATTERY	120/277	RECESSED	LED	RED	N/A	5 VA	RED LETTERS	ISOLITE LPOC SERIES DUAL LITE SE SERIES LITHONIA LOC SERIES EMERGI-LITE PRECEPTOR SERIES	WHITE FINISH, DIE-CAST ALUMINUM CONSTRUCTION, UNIVERSAL FACEPLATE KIT, MOUNTING PER FLOOR PLAN, FULLY RECESSED EMERGENCY BATTERY UL924, SELF DIAGNOSTICS	
E8b	EMERGENCY INVERTER BATTERY	120/277	SURFACE	N/A	N/A	N/A	150VA	N/A	SURE LITES INV110SI SERIES POWER SENTRY EAC ISSM SERIES DUAL-LITE LG125 SERIES EMERGI-LITE MINI INVERTER SERIES	STEEL HOUSING, VARIABLE RATE TEMPERATURE-COMPENSATED CHARGER, 90 MINUTE RUN TIME, WHITE FINISH, EMERGENCY BATTERY UL924, SELF DIAGNOSTICS	
F4	4" INDUSTRIAL	120/277	SURFACE/ CHAIN HUNG	LED 4000 LUM MIN	3500K	DIMMING 0-10V (10%)	24 VA	SEMI FROSTED ACRYLIC LENS	COOPER-METALUX SNLED SERIES COLUMBIA LCL SERIES LITHONIA CLX SERIES ORACLE OECLED SERIES	STEEL CHANNEL, WHITE POWDER COAT	
H2	SUSPENDED HIGH BAY	120/277	CHAIN HUNG	LED 18000 LUM MIN	3500K	DIMMING 0-10V (10%)	105 VA	MEDIUM DISTRIBUTION, FROSTED DIFFUSER	COOPER-METALUX OHB SERIES COLUMBIA PEL SERIES LITHONIA IBC SERIES ORACLE OECLED SERIES	STEEL CHANNEL, WIRE GUARD, POST PAINTED STEEL HOUSING	
L4	4" X 4" RECESSED LINEAR	120/277	LAY-IN GRID INVERTED TEE	LED 600 LUM/FT	3500K	DIMMING 0-10V (10%)	24 VA	FLUSH, SNAP-IN SATIN LENS	NULITE RC4 SERIES AXIS BEAM 4 SERIES MARK S4L SERIES LITECONTROL MOD SERIES	CONTINUOUS WHITE ALUMINUM HOUSING	
L14	2" PENDANT LINEAR	120/277	PENDANT	LED XXX LUM/FT	3500K	DIMMING 0-10V (10%)	XXX VA	FROSTED WHITE ACRYLIC, 100% DIRECT	AXIS BEAM 2 SERIES CORONET L28 SERIES NULITE RP24 SERIES LITECONTROL MODL SERIES	EXTRUDED ALUMINUM HOUSING, 2 1/2" WIDE LENS, LENGTHS MADE TO MEASURE, POWDER-COATED WHITE	
R2	WEATHER PROOF WALL PACK - TRAPEZOID	120/277	WALL	LED 6000 LUM MIN	3500K	DIMMING 0-10V	50 VA	CLEAR TEMPERED GLASS, TYPE III DISTRIBUTION	COOPER-MCGRAW-EDISON IST SERIES HUBBELL TRP SERIES LITHONIA WST SERIES GARDCO 111L SERIES	BRONZE, INTEGRAL PHOTOCCELL	

**GENERAL ELECTRICAL NOTES:**

- A. REFER TO SPECIFICATION SECTIONS 265100 AND 265600 FOR LIGHT FIXTURE REQUIREMENTS.
- B. BRING CONFLICTS BETWEEN THE MANUFACTURER'S CATALOG NUMBER AND DESCRIPTIONS TO THE ATTENTION OF THE ENGINEER.
- C. LIGHT SOURCE SHALL HAVE COLOR TEMPERATURE 3500K WITH MINIMUM CRI OF 80 UNLESS OTHERWISE NOTED.
- D. UNLESS A SPECIFIC CATALOG NUMBER OR SERIES IS NAMED, THE MANUFACTURER'S NAMED ALTERNATES MUST SUBMIT CATALOG CUT SHEETS AND IES FORMATTED PHOTOMETRIC REPORT TO THE ENGINEER FOR APPROVAL AT LEAST 10 DAYS PRIOR TO BID DATE. THE ENGINEER MAY REQUEST SAMPLE OF LUMINAIRE TO BE SUPPLIED.
- E. MINIMUM LUMENS LISTED FOR LIGHT FIXTURES ARE DELIVERED LUMENS BASED ON PHOTOMETRIC TESTING COMPLETED IN ACCORDANCE WITH IES LM-79 STANDARDS.
- F. SUBSTITUTE LIGHT FIXTURE IS SUBJECT TO ARCHITECT/ENGINEER APPROVAL.

**NOTES:**

**LIGHTING CONTROL DEVICE SCHEDULE**

DEVICE TYPE	LIGHTING DEVICE DESCRIPTION	LIGHTING DEVICE OPERATION
COS1	STAND ALONE DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR	STAND ALONE CEILING SENSOR, TIME OUT AT 30 MINUTES.
COS1S	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR TO WORK WITH LIGHTING CONTROL SYSTEM AND TO BE COMPATIBLE WITH DIMMER D1S.	DUAL TECHNOLOGY TO CONTROL DIMMER SWITCH D1S OR TO BE OVERRIDE CONTROL FOR LIGHTING CONTROL SYSTEM. TIME OUT AT 30 MINUTES.
D1S	0-10V DIMMER SWITCH. DIMMER TO WORK WITH CEILING MOUNTED SENSOR COS1S.	0-10V DIMMING. DIMMER TO BE CAPABLE OF DIMMING TO 1%. DIMMER TO WORK WITH CEILING MOUNTED SENSOR COS1S.
OS	WALL MOUNTED 0-10 SWITCH WITH INTEGRAL OCCUPANCY SENSOR.	BASIC ON/OFF CONTROL.
ST	TOGGLE SWITCH	BASIC ON/OFF CONTROL.
WDSV1	WALL MOUNTED 0-10V DIMMER SWITCH WITH INTEGRAL VACANCY SENSOR.	0-10V DIMMING. MANUAL ON, AUTO OFF AFTER 20 MINUTES. DIMMER TO BE CAPABLE OF DIMMING TO 1%.

**GENERAL NOTES:**

- A. ALL LIGHTING CONTROLS NOT INDICATED AS STAND ALONE SHALL BE PART OF THE LIGHTING CONTROL SYSTEM. SYSTEM IS DESIGNED AROUND A WATTSTOPPER DLM SERIES SYSTEM. DOCUMENTS INDICATE CONTROL DEVICES, SEQUENCE OF OPERATION, AND OVERRIDE CONTROL LOCATIONS. CONTRACTOR SHALL PROVIDE ALL REQUIRED POWER PACKS, DIMMING POWER PACKS, BRIDGES, GATEWAYS, AND PROGRAMMING AS REQUIRED TO ACCOMPLISH THE CONTROL SEQUENCES INDICATED. NOT ALL PARTS AND PIECES ARE SHOWN ON PLAN. CONTRACTOR TO PROVIDE ALL PIECES THAT ARE REQUIRED.

**ELECTRICAL NOTES:**

**LIGHTING CONTROL SEQUENCE SCHEDULE**

**LC #** LIGHTING CONTROL SEQUENCE SYMBOL FOUND ON LIGHTING PLAN(S).

LIGHTING CONTROL SEQUENCE	EMS/BAS CAPABILITIES	NETWORK CONTROL SYSTEM	TIME CLOCK	VACANCY SENSOR	OCCUPANCY SENSOR	AUTO OFF TIME (MINUTES)	LIGHT REDUCTION % SWITCHING (MIN 50%)	DIMMING TYPE	DIMMING LEVEL	SIDELIGHT DAYLIGHT HARVEST (AUTOMATIC/ SWITCHED)	TOPLIGHT DAYLIGHT HARVEST (AUTOMATIC/ SWITCHED)	AFTERHOURS OVERRIDE	OVERRIDE DURATION	MANUAL ON/OFF	NOTES
LC 1				DT		20		0-10V	0.01					YES	
LC 1D				DT		20		0-10V	0.01	AUTOMATIC				YES	
LC 2	X	X	X					0-10V	0.01			X	2 HOURS		
LC 3				PIR		5		0-10V	0.01					YES	

**GENERAL NOTES:**

- A. PROVIDE ALL PARTS AND PIECES NECESSARY TO MAKE A FUNCTIONAL LIGHTING CONTROL SYSTEM WITH ALL CONTROLS AS MARKED ABOVE.
- B. SUPPLIER TO PROVIDE COMPLETE WIRING DIAGRAM PRIOR TO INSTALLATION.
- C. IF DIMMING IS CALLED FOR IN SCHEDULE IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND PROVIDE ALL NECESSARY PARTS, BALLASTS, DRIVERS, ETC. TO PROVIDE THE DIMMING FUNCTION.
- D. CONTRACTOR TO PROVIDE ALL WIRING NECESSARY INCLUDING ANY 0-10V CONTROL WIRING AS REQUIRED.
- E. CONTRACTOR MUST COMPLY WITH THE CONTROLS INTENT AS INDICATED ON THE DRAWINGS.
- F. AT MINIMUM, CONTRACTOR SHALL HOLD TWO PRE CONSTRUCTION MEETINGS, PRIOR TO BID, WITH THEIR SELECTED LIGHTING CONTROLS VENDOR OR SUPPLIER.
- G. THE INTENT OF (2) PRE CONSTRUCTION MEETINGS IS TO DEVELOP AN UNDERSTANDING OF THE CONTROLS SYSTEM TO ACCURATELY ACCOUNT FOR ALL POWER, CONTROLS, CABLING, EQUIPMENT AND CONNECTION REQUIREMENTS.
- H. CONTRACTOR SHALL PROVIDE ALL NECESSARY COMPONENTS, ACCESSORIES AND ASSOCIATED LABOR FOR THEIR SELECTED LIGHTING CONTROLS SYSTEM.

**ELECTRICAL NOTES:**

**LIGHT FIXTURE SCHEDULE - SITE**

ELECTRICAL												POLE DESCRIPTION										BASE DESCRIPTION				
FIXTURE LETTER	FIXTURE STYLE	VOLTAGE	MOUNTING	LAMPS		BALLAST/ DRIVER	FIXTURE MAX VA	CONTROL MEDIA (LENS, LOUVER, ETC.)	MANUFACTURER'S SERIES NUMBER	FIXTURE DESCRIPTION	POLE LENGTH	POLE SHAPE	POLE MATERIAL	POLE COLOR/ FINISH	FIXTURE MOUNTING	SUPPORTS CCTV CAMERA (EPA RATING)	SUPPORTS FLAG OR BANNER (EPA RATING)	INTEGRAL DUPLEX RECEPTACLE	VIBRATION DAMPERS	FOUNDATION	BASE HEIGHT ABOVE GRADE	BASE DEPTH BELOW GRADE	BASE DIAMETER	VERTICAL REBARS	REBAR TIES	NOTES
				TYPE	COLOR																					
AA1	POLE MOUNTED AREA LIGHT - 1 HEAD	480	POLE	LED 14500 LUM MIN	4000K	HVOLT DRIVER	150 VA	TYPE III DISTRIBUTION	LUMARK PREVAL SERIES BEACON VIPER LARGE SERIES LITHONIA DSX SERIES NLS LIGHTING NV-1 SERIES	DARK SKY COMPLIANT, DIE-CAST ALUMINUM CONSTRUCTION, TOOLLESS OPENING, MATCH COLOR LISTED IN EXTERIOR LIGHT POLE SCHEDULE, MOTION/AMBIENT SENSOR	25'	SQUARE	STEEL	BRONZE	POLE	-	YES	-	YES	CONCRETE BASE	3'	6'	24"	#4	#3	

**GENERAL ELECTRICAL NOTES:**

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- C. LIGHT SOURCE SHALL HAVE COLOR TEMPERATURE 3500K WITH MINIMUM CRI OF 80 UNLESS OTHERWISE NOTED.
- D. UNLESS A SPECIFIC CATALOG NUMBER OR SERIES IS NAMED, THE MANUFACTURER'S NAMED ALTERNATES MUST SUBMIT CATALOG CUT SHEETS AND IES FORMATTED PHOTOMETRIC REPORT TO THE ENGINEER FOR APPROVAL AT LEAST 10 DAYS PRIOR TO BID DATE. THE ENGINEER MAY REQUEST SAMPLE OF LUMINAIRE TO BE SUPPLIED.
- E. MINIMUM LUMENS LISTED FOR LIGHT FIXTURES ARE DELIVERED LUMENS BASED ON PHOTOMETRIC TESTING COMPLETED IN ACCORDANCE WITH IES LM-79 STANDARDS.
- F. SUBSTITUTE LIGHT FIXTURE IS SUBJECT TO ARCHITECT/ENGINEER APPROVAL.

**NOTES:**



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mechanical + electrical consulting engineering  
Dunham Project Number: 042521-000

Project Name: NOVA CLASSICAL ACADEMY  
Project Number: 23008.003  
Date: 05/07/2025

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

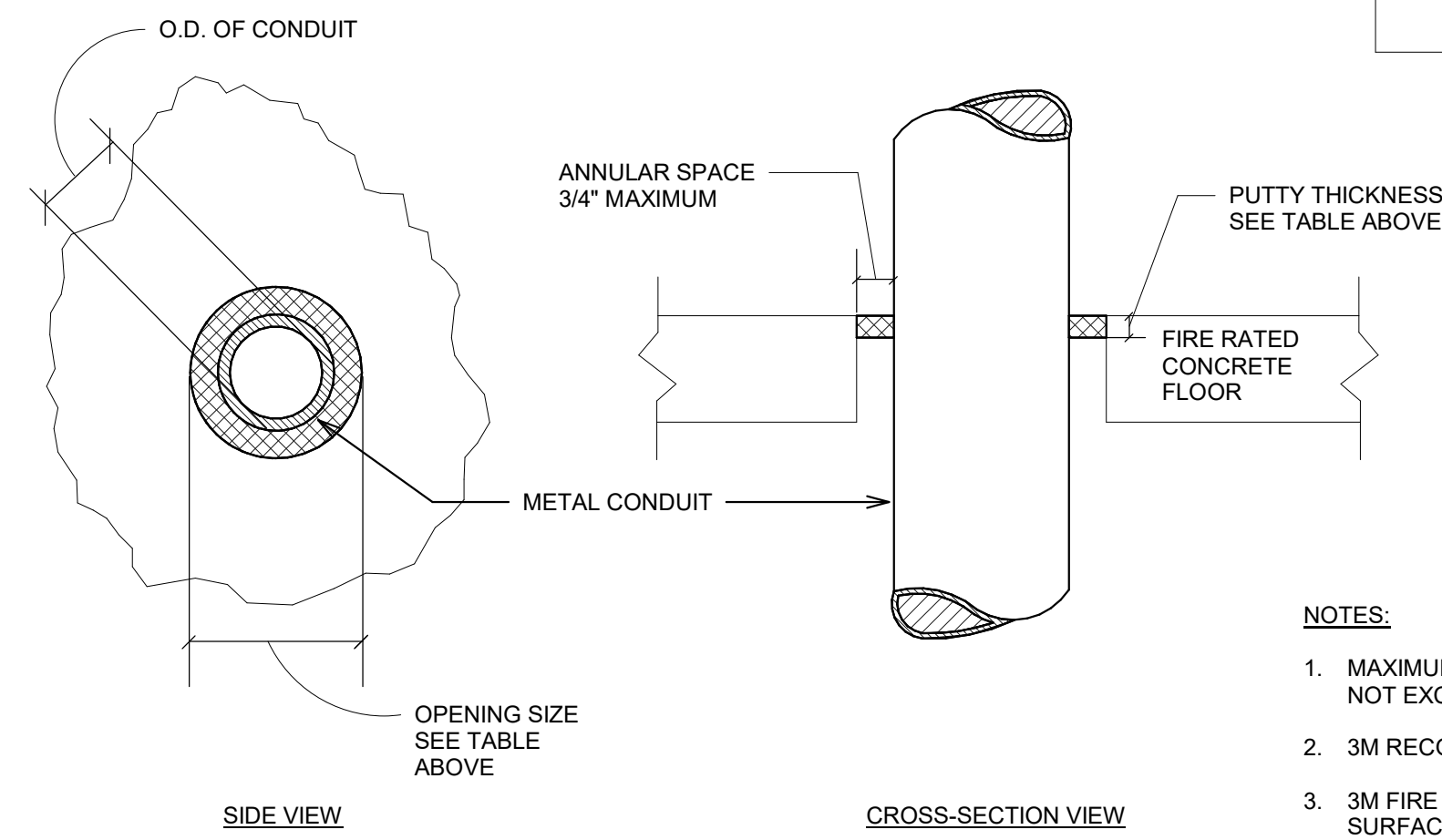
Madeline M. Folin, P.E.  
PRINT NAME  
SIGNATURE  
57233  
LICENSE NO.  
02/03/25  
DATE

**DD DOCUMENT**  
**Not For Construction**

SHEET TITLE:  
**LIGHTING SCHEDULES**

SHEET NUMBER:  
**E450**

MAXIMUM O.D. OF CONDUIT	MAXIMUM OPENING SIZE	MINIMUM PUTTY THICKNESS	FIRE RATING OF ASSEMBLY
5"	6 1/4 INCH	1/2 INCH	2 HOUR
10"	12 1/4 INCH	1 INCH	3 HOUR

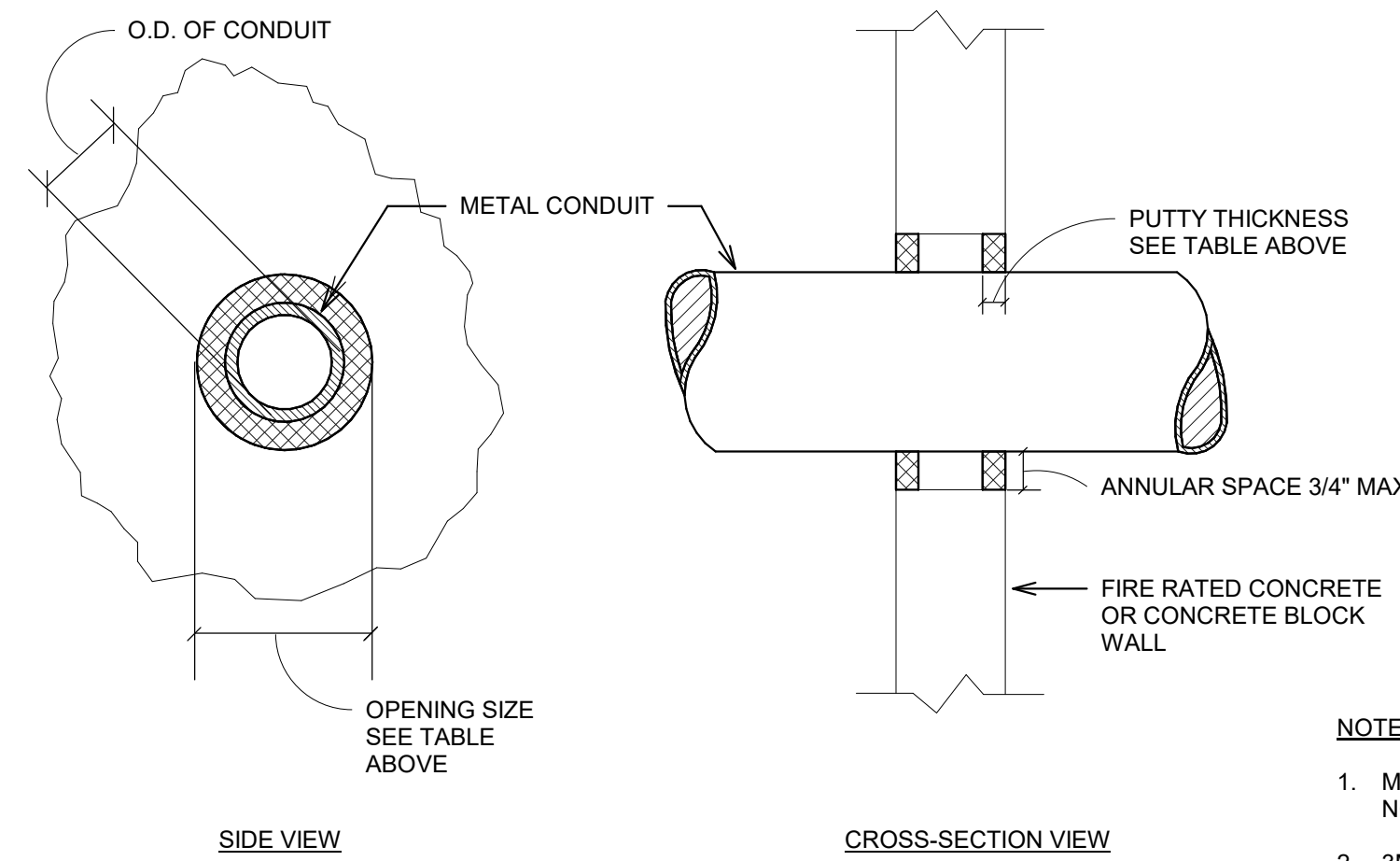


**NOTES:**

1. MAXIMUM ANNULAR SPACE BETWEEN CONDUIT AND OPENING SHALL NOT EXCEED 3/4 INCH.
2. 3M RECOMMENDATIONS ARE BASED ON U.L. FIRESTOP SYSTEM 202.
3. 3M FIRE BARRIER MP MOLDABLE PUTTY INSTALLED FLUSH TO BOTH SURFACES OF THE WALL.

1 PENETRATION FIRESTOP FOR CONDUIT THROUGH CONCRETE FLOOR (2,3 HOUR) DETAIL  
NO SCALE

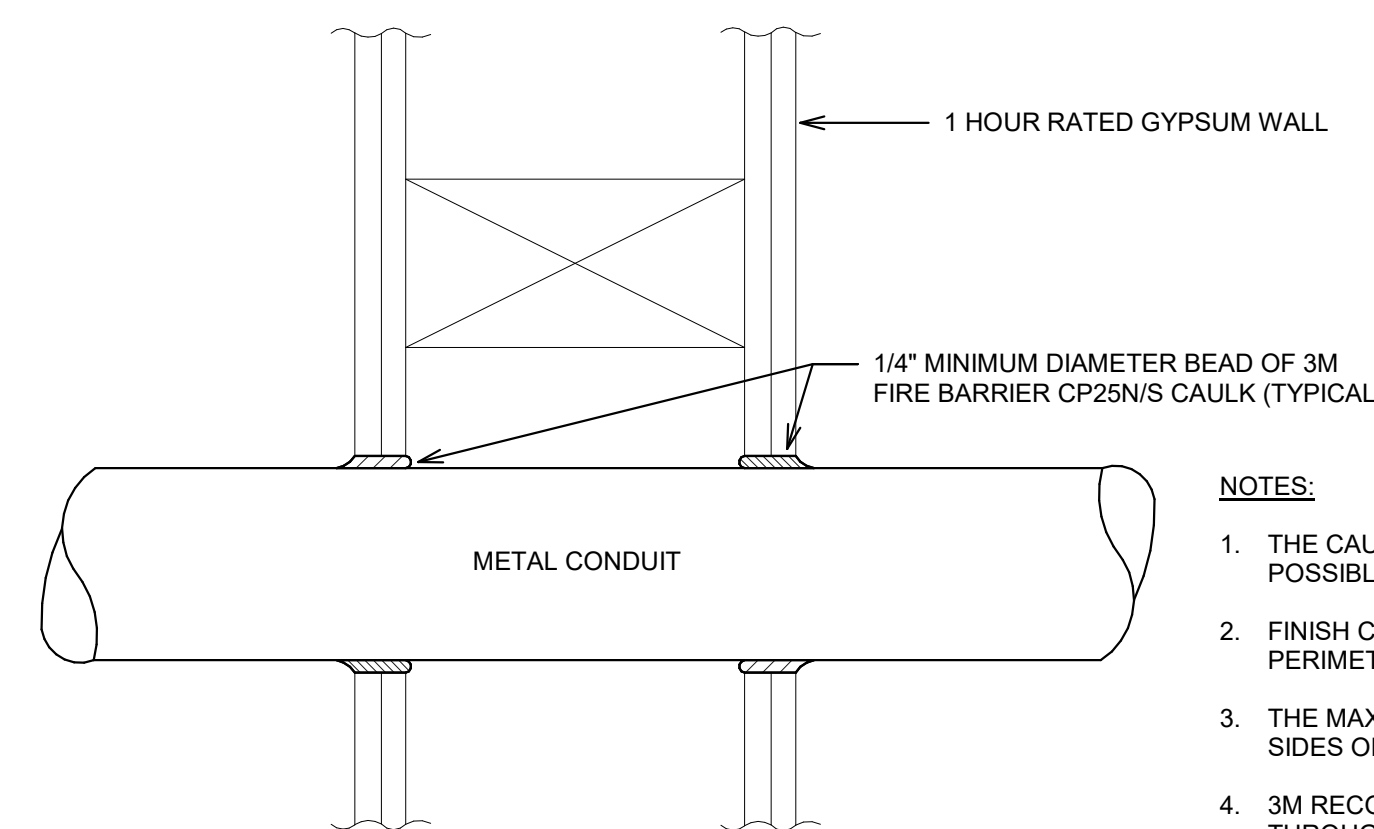
MAXIMUM O.D. OF CONDUIT	MAXIMUM OPENING SIZE	MINIMUM PUTTY THICKNESS	FIRE RATING OF ASSEMBLY
5"	6 1/4 INCH	1/2 INCH	2 HOUR
10"	12 1/4 INCH	1 INCH	3 HOUR



**NOTES:**

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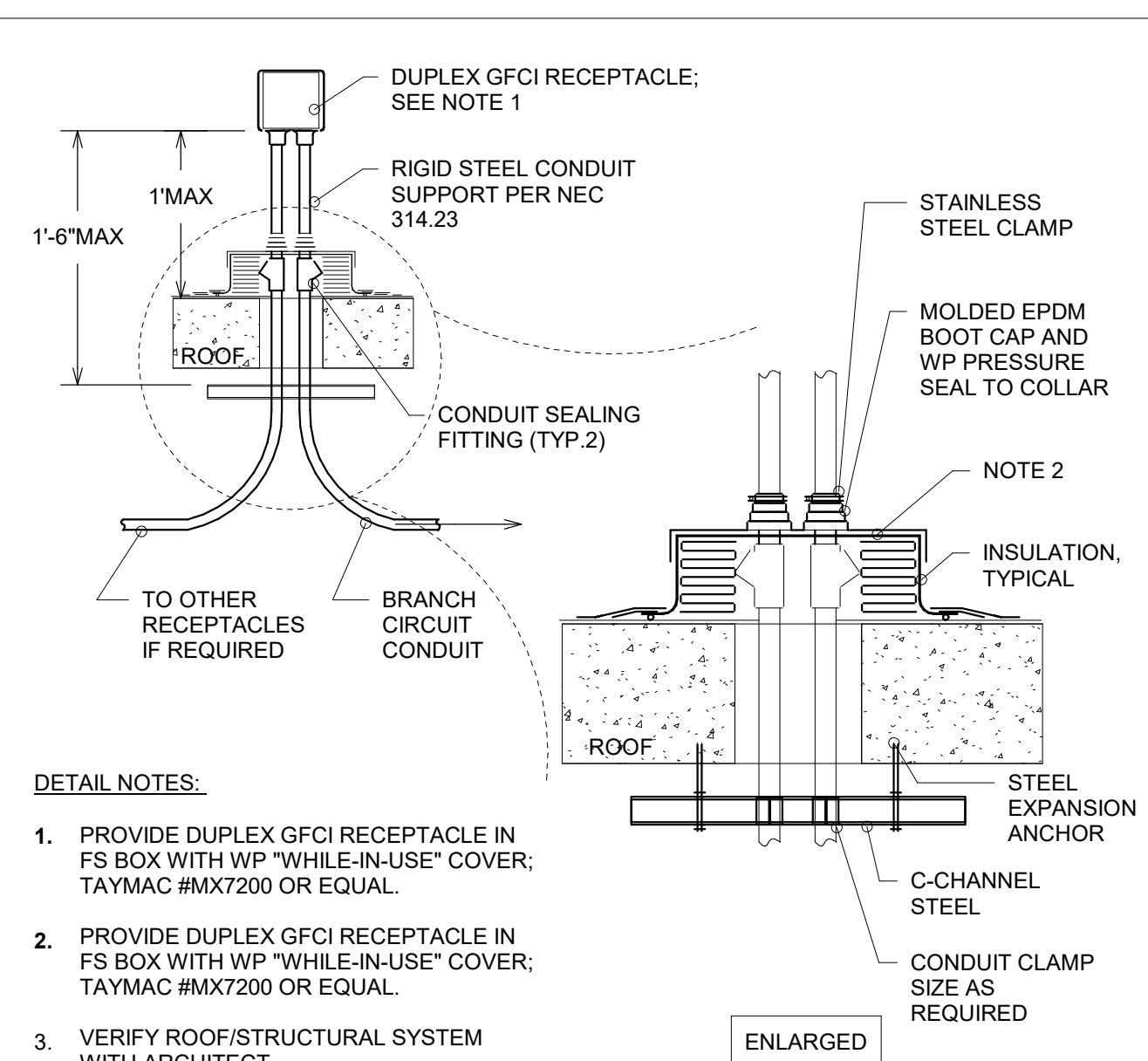
2 PENETRATION FIRESTOP FOR CONDUIT THROUGH CONCRETE WALL (2,3 HOUR) DETAIL  
NO SCALE



**NOTES:**

1. THE CAULK SHALL BE FORCED INTO THE ANNULAR SPACE TO THE MAXIMUM EXTENT POSSIBLE, FLUSH WITH THE EXTERIOR OF PENETRATION SURFACE.
2. FINISH CAULKING WITH 1/4\"/>

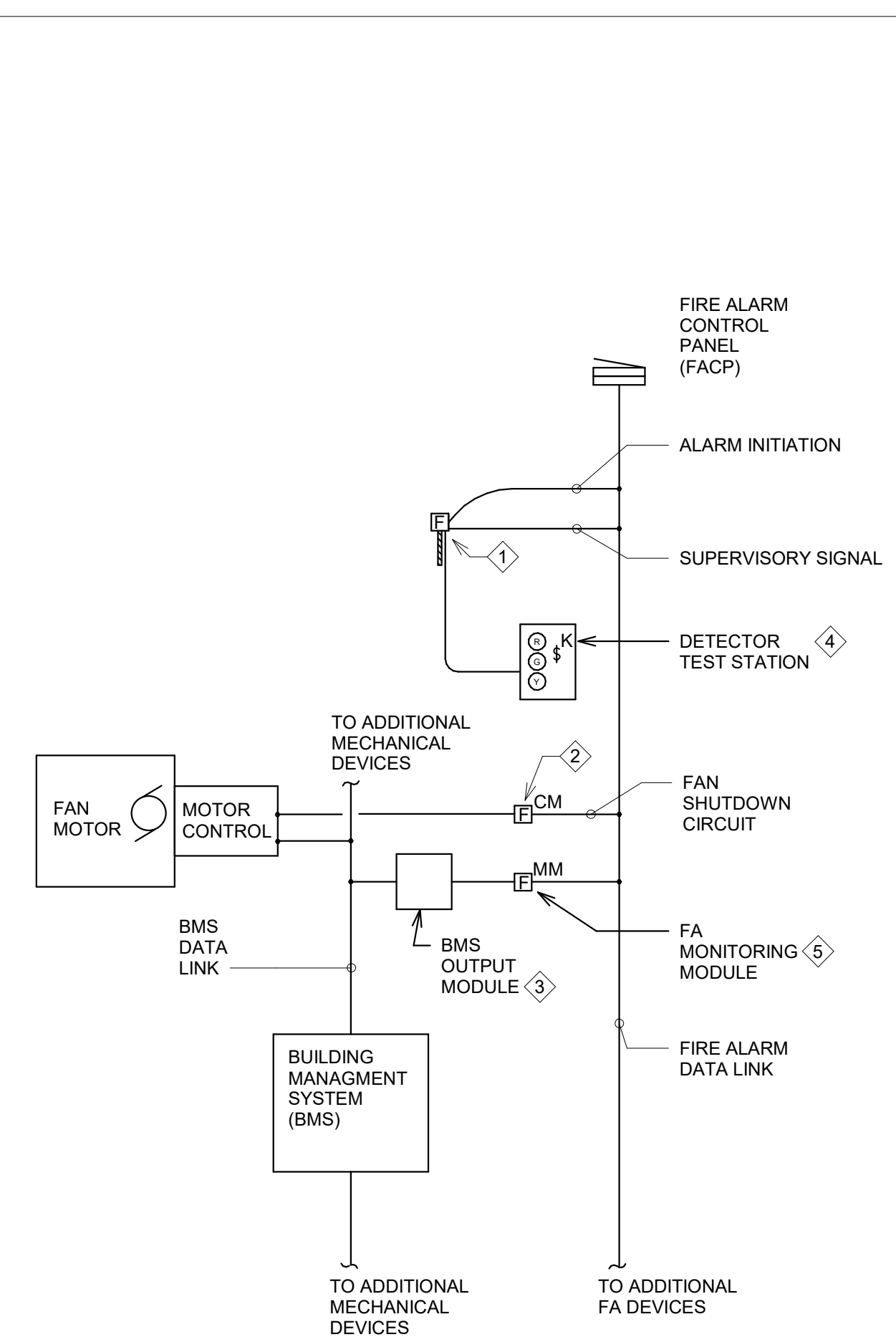
3 PENETRATION FIRESTOP FOR CONDUIT THROUGH GYPSUM WALL (1 HOUR) DETAIL  
NO SCALE



**DETAIL NOTES:**

1. PROVIDE DUPLEX GFCI RECEPTACLE IN FS BOX WITH WP \"WHILE-IN-USE\" COVER, TAYMAC #MX7200 OR EQUAL.
2. PROVIDE DUPLEX GFCI RECEPTACLE IN FS BOX WITH WP \"WHILE-IN-USE\" COVER, TAYMAC #MX7200 OR EQUAL.
3. VERIFY ROOF/STRUCTURAL SYSTEM WITH ARCHITECT.

4 RECEPTACLE MOUNT ROOF PENETRATION  
NO SCALE



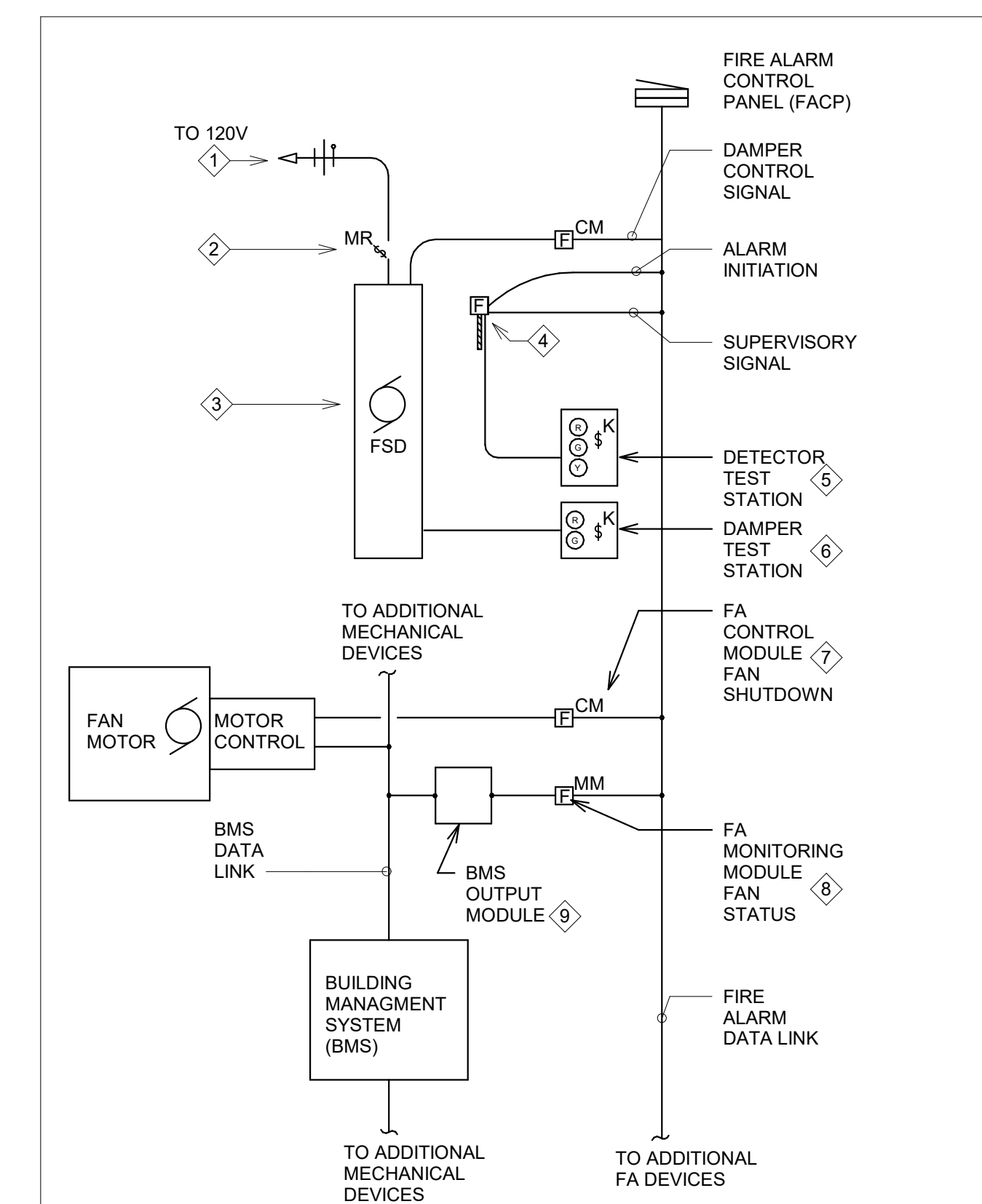
**GENERAL DETAIL NOTES:**

- A. PROVIDE LISTED COMPONENTS APPROVED FOR USE AS A SYSTEM

**DETAIL NOTES:**

1. ADDRESSABLE PHOTOELECTRIC DUCT SMOKE DETECTOR WITH EOL RESISTOR
2. FIRE ALARM CONTROL MODULE FOR UNIT SHUT DOWN (1 FOR EACH FAN UNIT)
3. BMS OUTPUT MODULE (1 PER FAN UNIT)
4. PROVIDE DETECTOR TEST STATION WHERE DETECTORS ARE CONCEALED AND MORE THAN 10FT AFF. OR WHERE DETECTOR ALARM ARE NOT VISIBLE. SHALL HAVE RED LED FOR ALARM, GREEN LED FOR POWER, YELLOW LED FOR TROUBLE AND KEYED TEST SWITCH
5. FIRE ALARM MONITORING MODULE, STATUS OF UNIT RUNNING OR LOSS OF FLOW IN THE SYSTEM THROUGH THE MOTOR CONTROL TO SHUT THE DAMPERS UPON LOSS OF AIR FLOW (1 FOR EACH FAN UNIT)

5 DUCT DETECTOR DETAIL  
NO SCALE



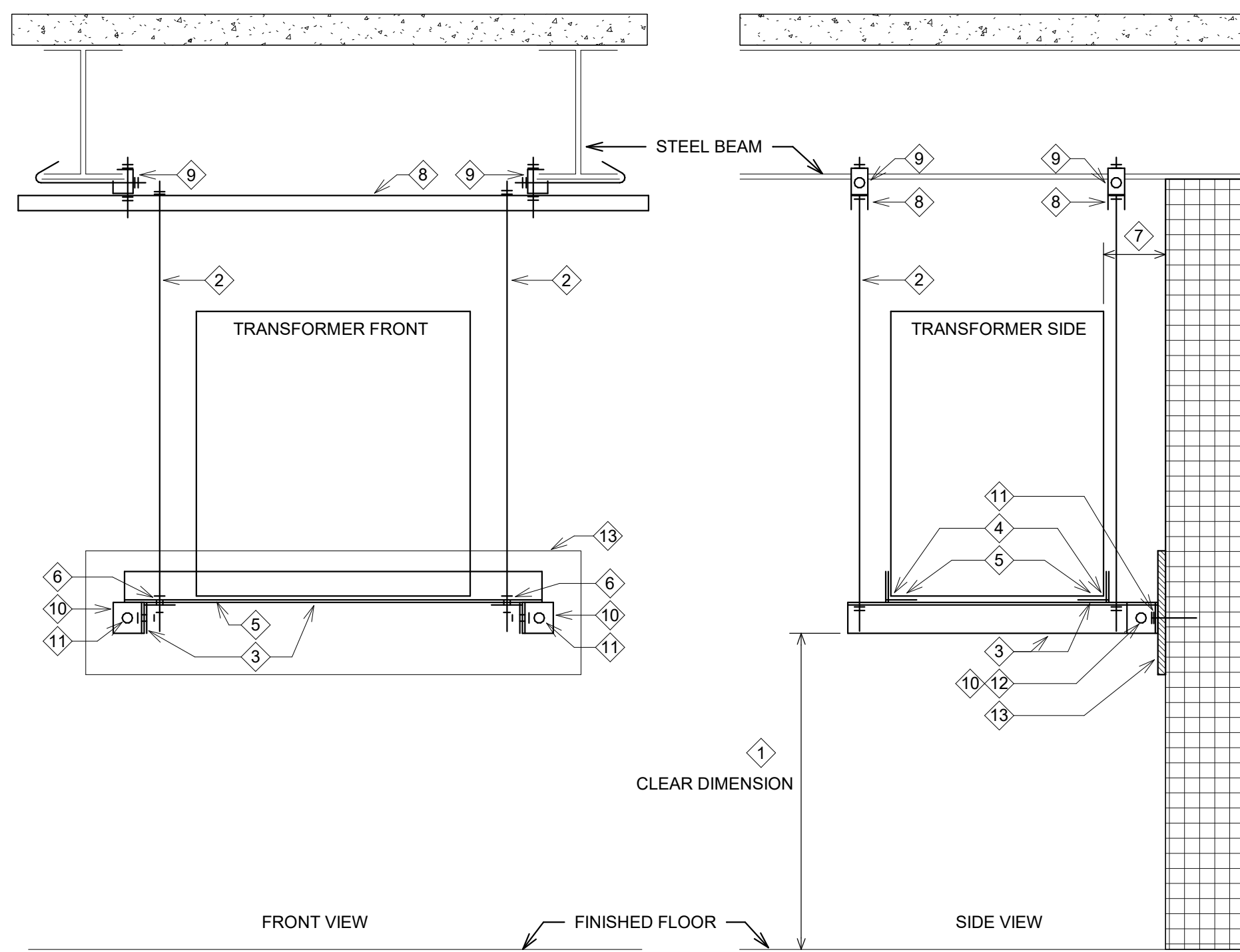
**GENERAL DETAIL NOTES:**

- A. PROVIDE LISTED COMPONENTS APPROVED FOR USE AS A SYSTEM

**DETAIL NOTES:**

1. REFER TO PLANS FOR CIRCUITING
2. PROVIDE MOTOR RATED TOGGLE SWITCH FOR EACH DAMPER MOTOR
3. FIRE/SMOKE DAMPER, AS SCHEDULED, WITH 120V MOTOR
4. ADDRESSABLE PHOTOELECTRIC DUCT SMOKE DETECTOR WITH EOL RESISTOR
5. PROVIDE DETECTOR TEST STATION WHERE DETECTORS ARE CONCEALED AND MORE THAN 10FT AFF. OR WHERE DETECTOR ALARM ARE NOT VISIBLE. SHALL HAVE RED LED FOR ALARM, GREEN LED FOR POWER, YELLOW LED FOR TROUBLE AND KEYED TEST SWITCH
6. DAMPER TEST STATION, SHALL HAVE RED LED FOR CLOSED, GREEN FOR OPEN, AND KEYED TEST SWITCH
7. FIRE ALARM CONTROL MODULE FOR UNIT SHUT DOWN (1 FOR EACH FAN UNIT)
8. FIRE ALARM MONITORING MODULE, STATUS OF UNIT RUNNING OR LOSS OF FLOW IN THE SYSTEM THROUGH THE MOTOR CONTROL TO SHUT THE DAMPERS UPON LOSS OF AIR FLOW (1 FOR EACH FAN UNIT)
9. BMS OUTPUT MODULE (1 PER FAN UNIT)

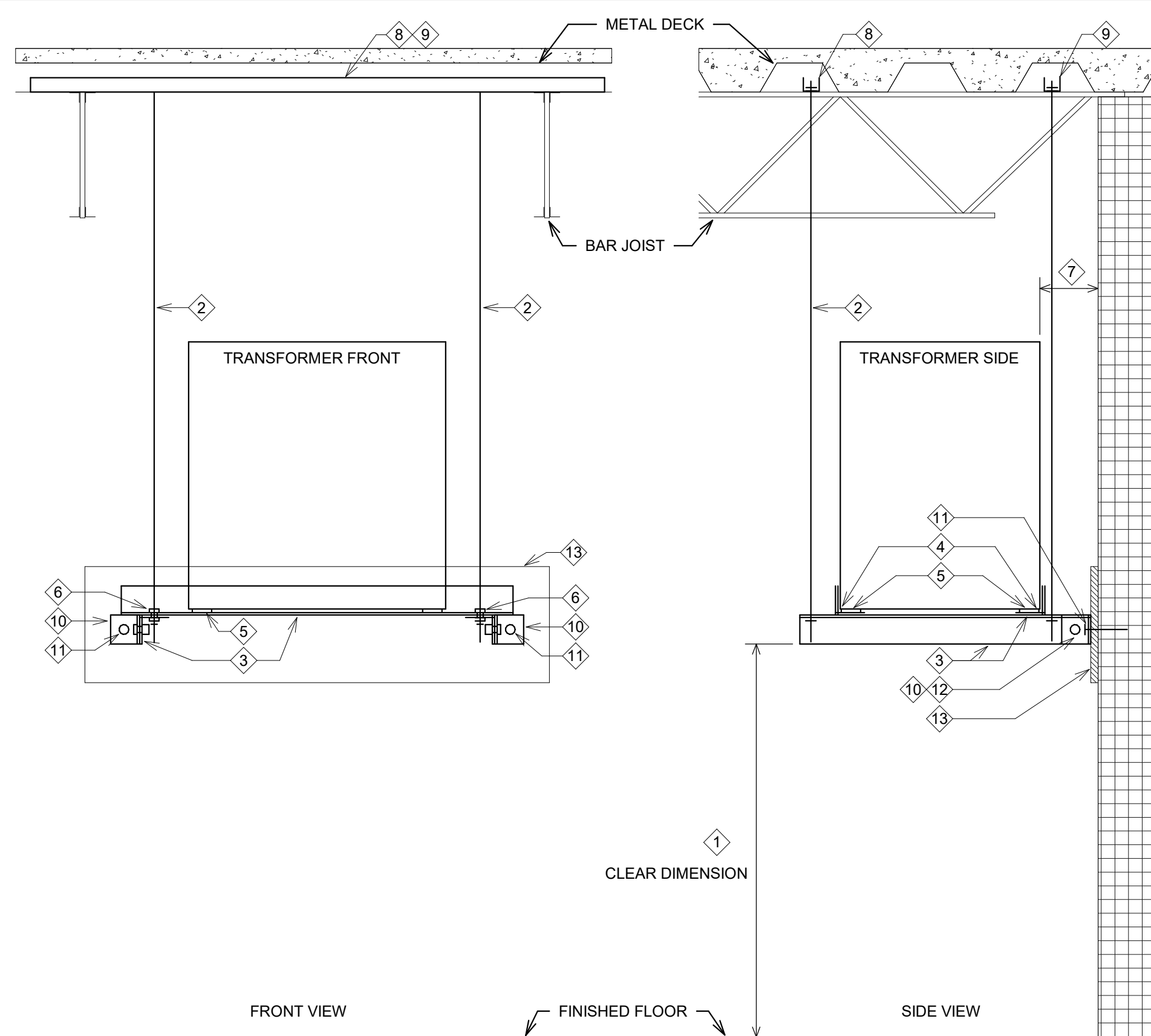
6 FIRE/SMOKE DAMPER DUCT DETECTOR DIAGRAM  
NO SCALE



**KEY NOTES:**

- ① SEE TRANSFORMER SCHEDULE FOR DIMENSION ABOVE FINISHED FLOOR.
- ② 1/2" DIA. THREADED ROD (4 THUS).
- ③ 3"x3"x1/4" STEEL ANGLE (4 THUS). PAINTED TO MATCH TRANSFORMER.
- ④ ANCHOR 4 CORNERS OF TRANSFORMER TO ANGLE FRAME.
- ⑤ NEOPRENE PAD VIBRATION ISOLATORS.
- ⑥ BOLT 4 SECTIONS OF 3"x3"x1/4" STEEL ANGLE TOGETHER WITH 5/8" BOLTS.
- ⑦ CLEAR DIMENSION SHALL BE A MINIMUM OF 6".
- ⑧ 1-3/8"H X 1-5/8"W UNISTRUT #P3000.
- ⑨ BEAM CLAMP - UNISTRUT #P2824 SERIES. PROVIDE 1/2" DIA. THREADED RODS FOR CONNECTION TO UNISTRUT #P3000 BARS.
- ⑩ 3" LONG, 3"x3"x1/4" STEEL ANGLE FOR POURED CONCRETE, PRECAST CONCRETE, OR CONCRETE BLOCK WALLS. 6" LONG, 3"x3"x1/4" FOR METAL STUD WALLS (ANCHORED TO WOOD BACK PLATE).
- ⑪ 1/2" DIA. X 4" EXPANSION ANCHOR FOR POURED CONCRETE OR PRECAST CONCRETE WALLS. 1/2" DIA. TOGGLE BOLTS IN HOLLOW CONCRETE BLOCK WALL. (2) 5/16" LAG BOLTS FOR ANCHOR TO PLYWOOD BACK PLATE ON METAL STUD WALLS.
- ⑫ BOLT WALL ANGLE TO TRANSFORMER FRAME ANGLES WITH 5/8" BOLTS.
- ⑬ 3/4" X 12"H PLYWOOD OF SUFFICIENT WIDTH TO SPAN 3 METAL STUDS. ATTACH PLYWOOD TO EACH STUD (20 GAUGE OR HEAVIER; FOR LIGHTER GAUGE STUDS, CONSULT ENGINEER FOR DIFFERENT MOUNTING DETAIL) WITH MINIMUM OF 3/8" SCREWS PER STUD.

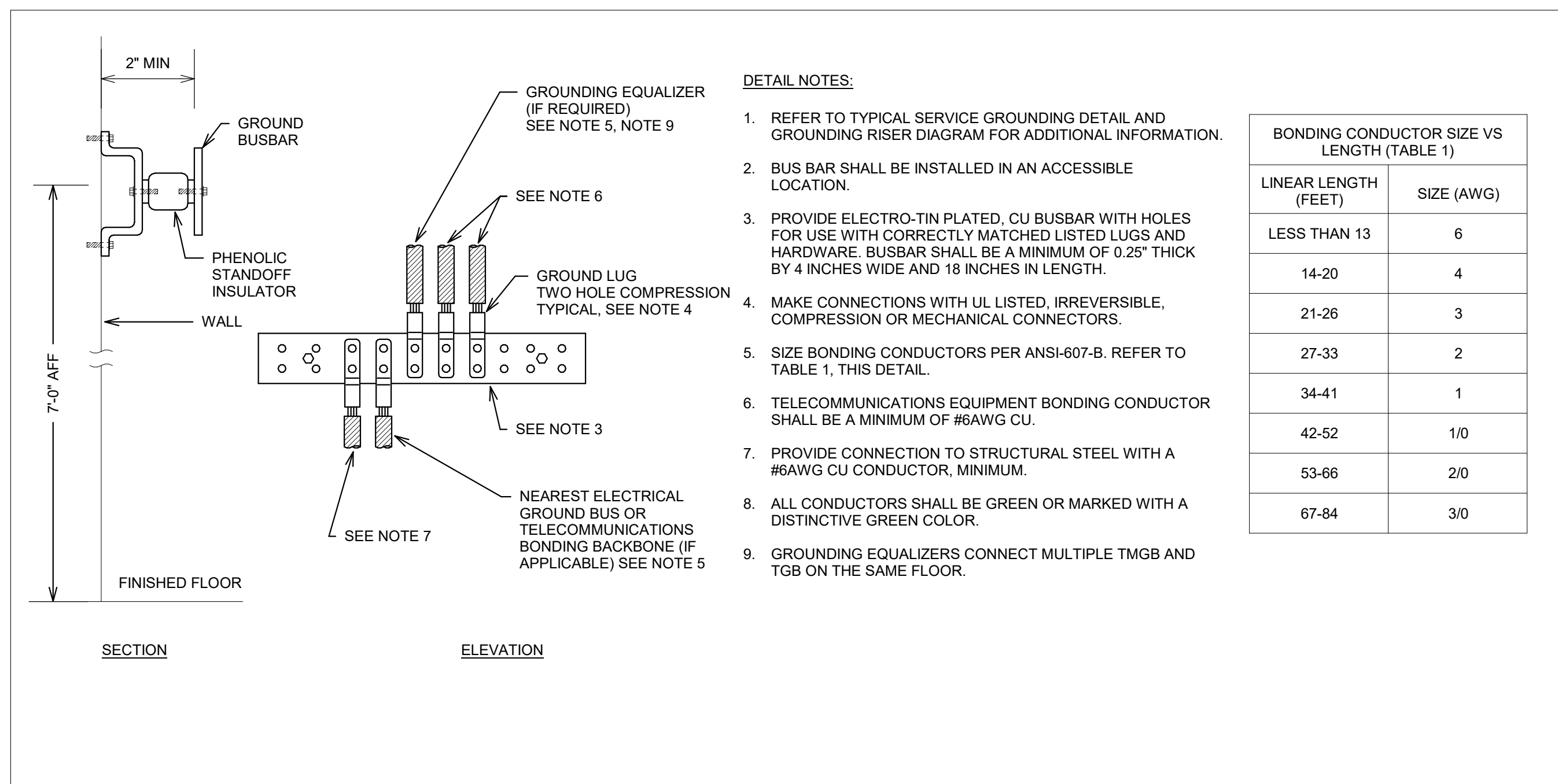
① TRANSFORMER BEAM (PERPENDICULAR TO WALL) SUPPORT MOUNTING DETAIL (15-75KVA)  
NO SCALE



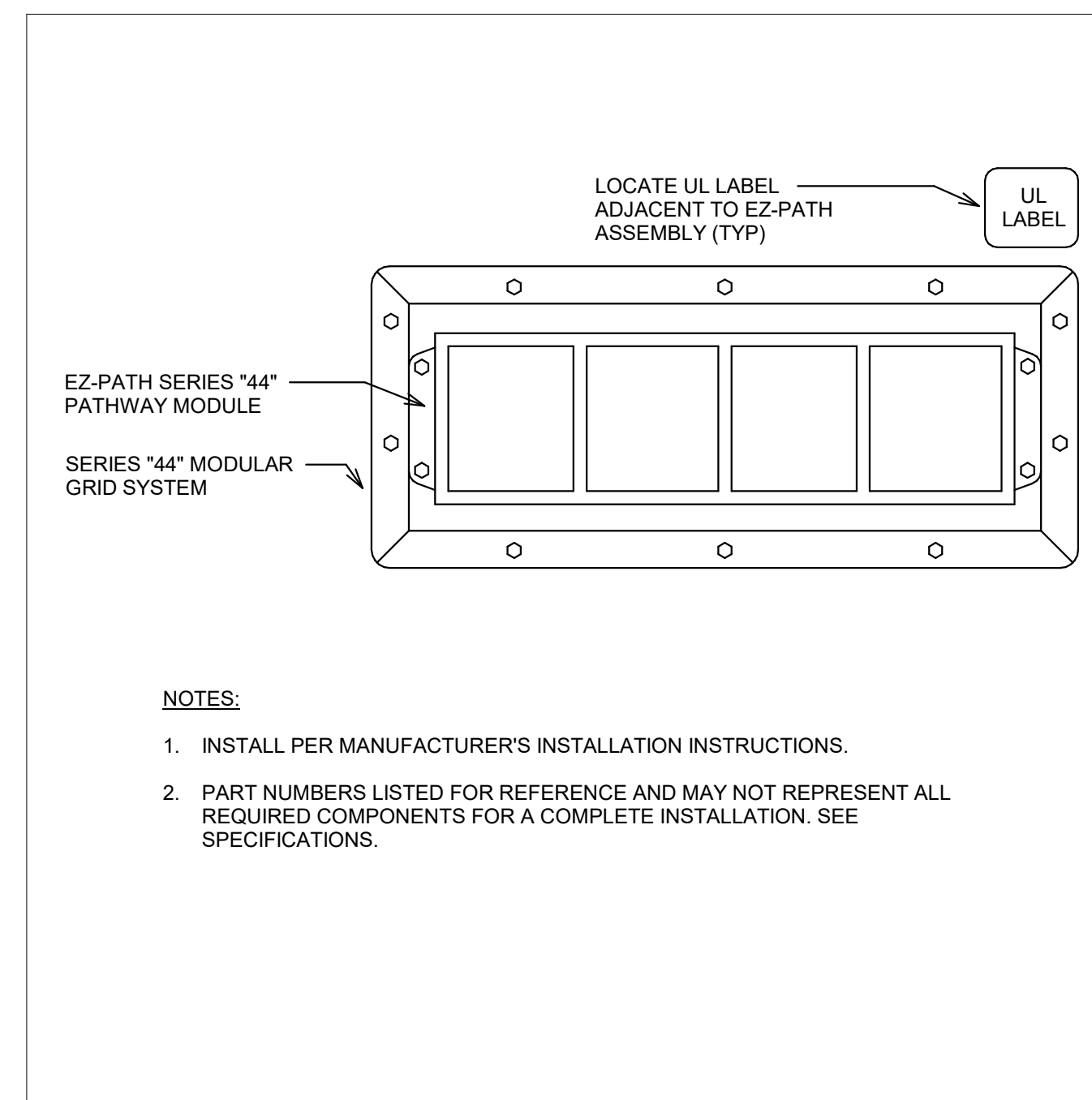
**KEY NOTES:**

- ① SEE TRANSFORMER SCHEDULE FOR DIMENSION ABOVE FINISHED FLOOR.
- ② 1/2" DIA. THREADED ROD (4 THUS).
- ③ 3"x3"x1/4" STEEL ANGLE (4 THUS). PAINTED TO MATCH TRANSFORMER.
- ④ ANCHOR 4 CORNERS OF TRANSFORMER TO ANGLE FRAME.
- ⑤ NEOPRENE PAD VIBRATION ISOLATORS.
- ⑥ BOLT 4 SECTIONS OF 3"x3"x1/4" STEEL ANGLE TOGETHER WITH 5/8" BOLTS.
- ⑦ CLEAR DIMENSION SHALL BE A MINIMUM OF 6" OR SUCH THAT THE TRANSFORMER IS BETWEEN HANGING RODS (WHICHEVER DIMENSION IS GREATER).
- ⑧ 1-3/8"H X 1-5/8"W UNISTRUT #P3000 THROUGH WEBBING OF METAL DECKING. LOCATE AS CLOSE TO PANEL POINTS AS POSSIBLE.
- ⑨ 1-3/8"H X 1-5/8"W UNISTRUT #P3000 THROUGH WEBBING OF METAL DECKING. LOCATE AS CLOSE TO FIRST PANEL POINT AS POSSIBLE.
- ⑩ 3" LONG, 3"x3"x1/4" STEEL ANGLE FOR POURED CONCRETE, PRECAST CONCRETE, OR CONCRETE BLOCK WALLS. 6" LONG, 3"x3"x1/4" FOR METAL STUD WALLS (ANCHORED TO WOOD BACK PLATE).
- ⑪ 1/2" DIA. X 4" EXPANSION ANCHOR FOR POURED CONCRETE OR PRECAST CONCRETE WALLS. 1/2" DIA. TOGGLE BOLTS IN HOLLOW CONCRETE BLOCK WALL. (2) 5/16" LAG BOLTS FOR ANCHOR TO PLYWOOD BACK PLATE ON METAL STUD WALLS.
- ⑫ BOLT WALL ANGLE TO TRANSFORMER FRAME ANGLES WITH 5/8" BOLTS.
- ⑬ 3/4" X 12"H PLYWOOD OF SUFFICIENT WIDTH TO SPAN 3 METAL STUDS. ATTACH PLYWOOD TO EACH STUD (20 GAUGE OR HEAVIER; FOR LIGHTER GAUGE STUDS, CONSULT ENGINEER FOR DIFFERENT MOUNTING DETAIL) WITH MINIMUM OF 3/8" SCREWS PER STUD.

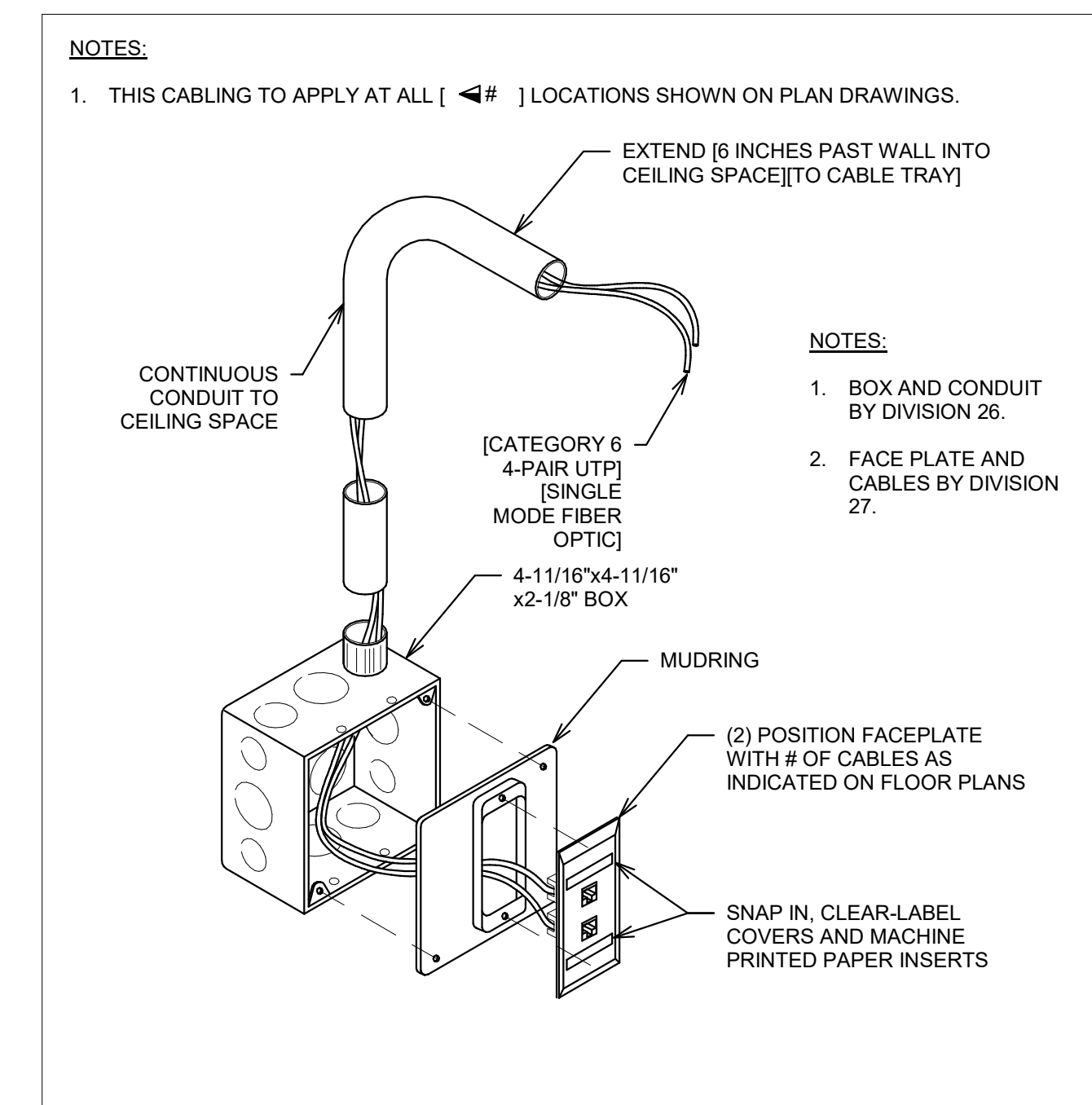
② TRANSFORMER BAR JOIST (PERPENDICULAR TO WALL) SUPPORT MOUNTING DETAIL (15-75KVA)  
NO SCALE



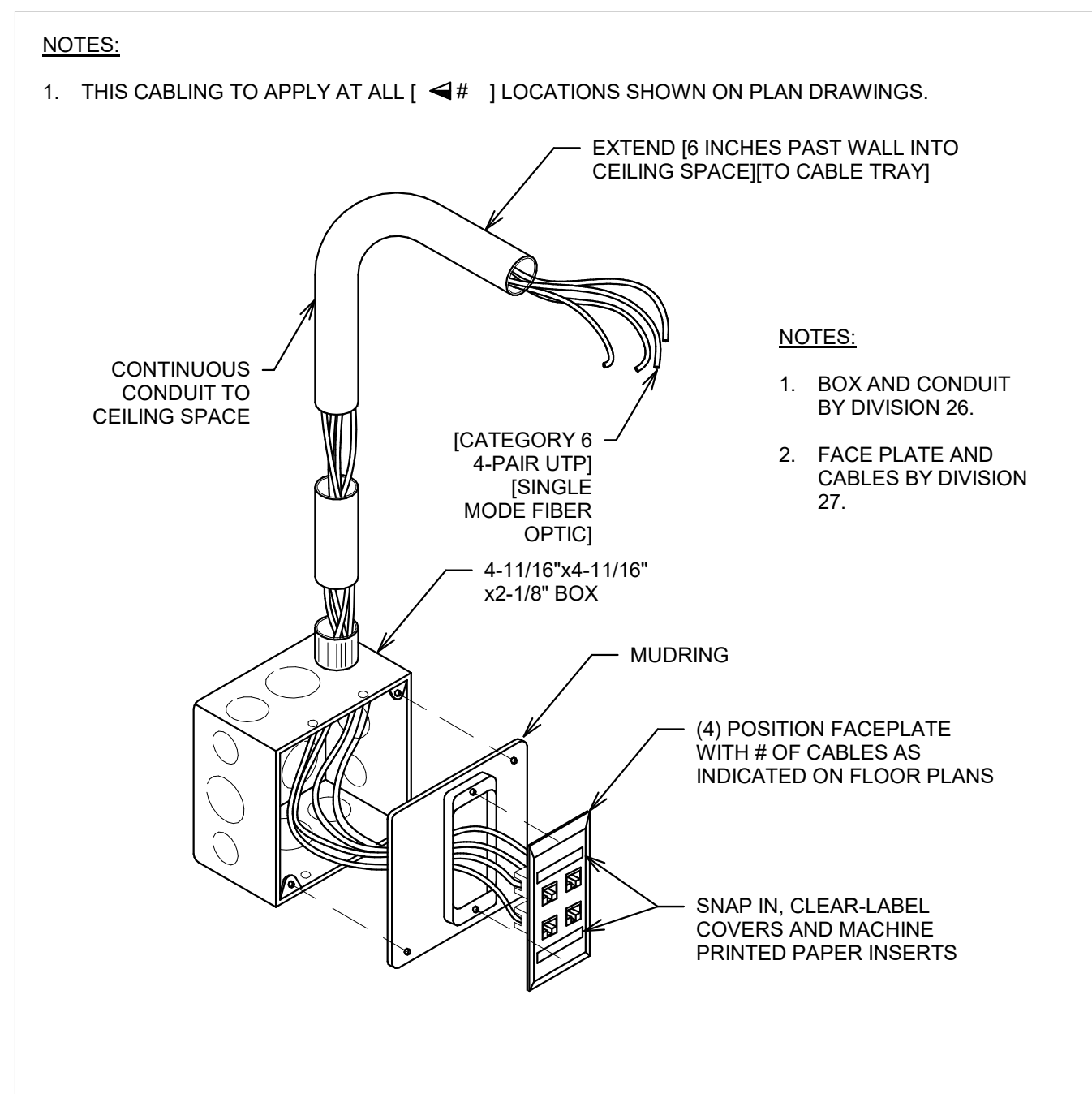
1 TELECOMMUNICATIONS GROUND BAR DETAIL (TGB)  
NO SCALE



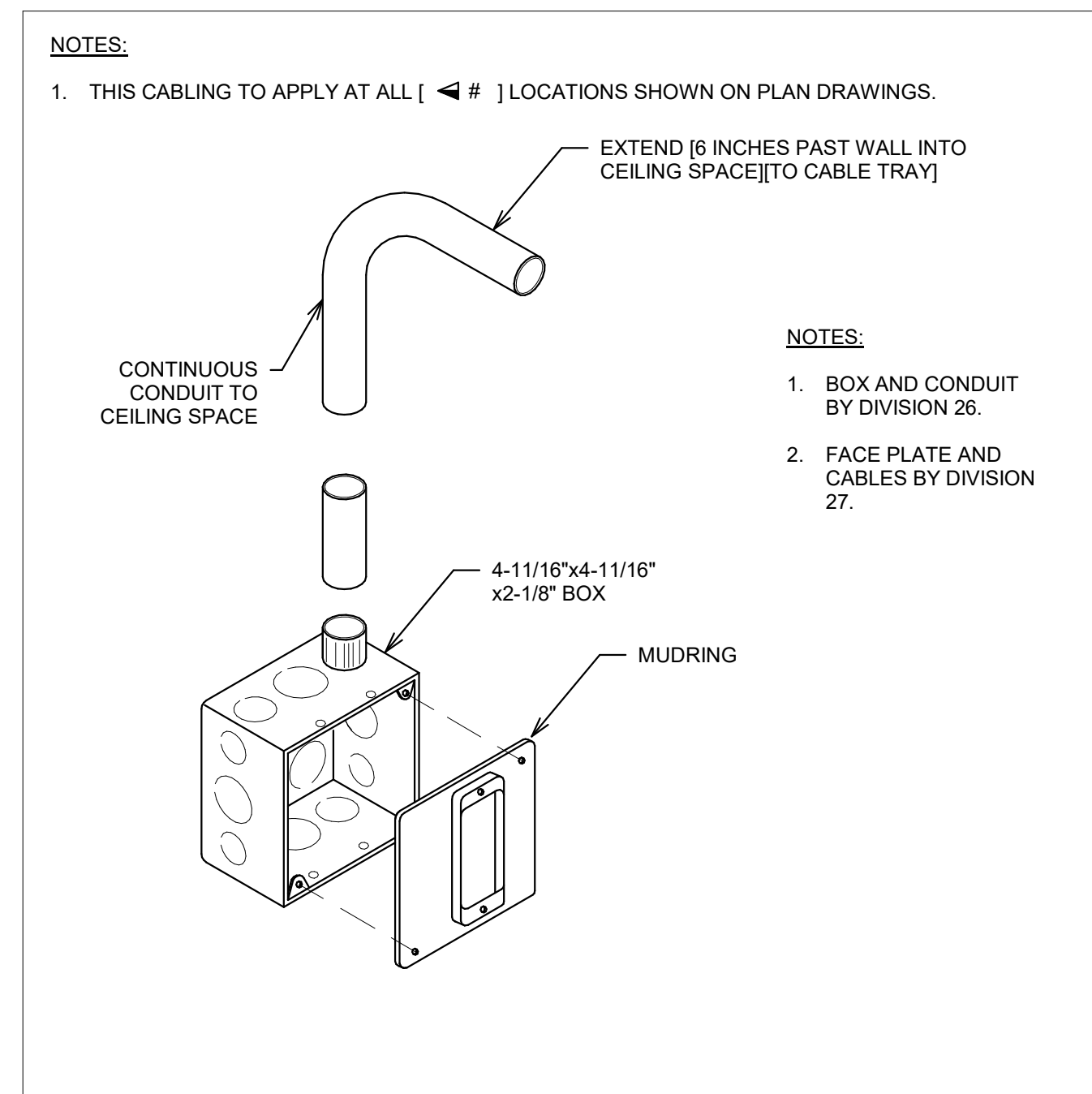
2 FIRE STOP DETAIL - CORRIDOR PENETRATION  
NO SCALE



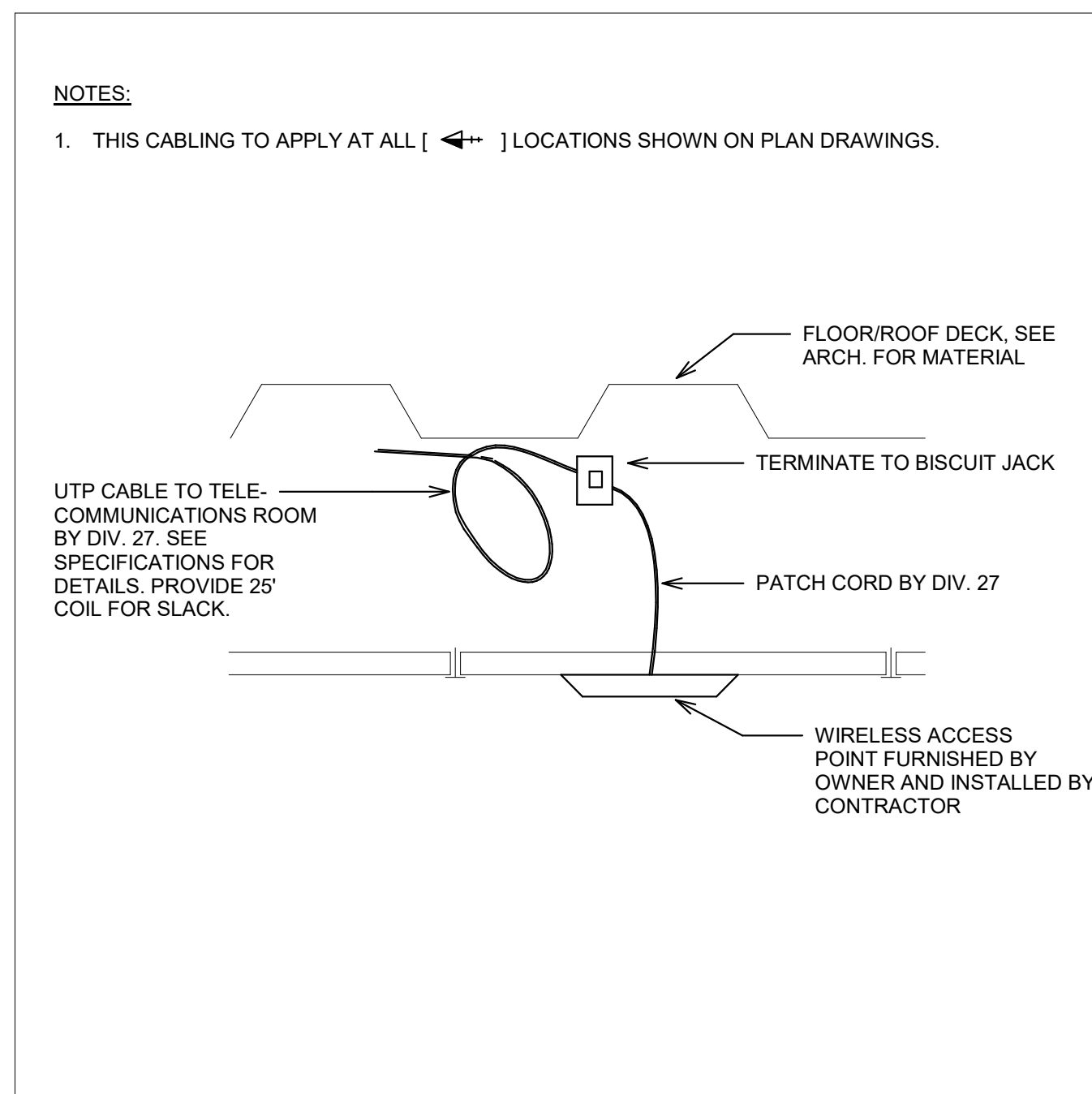
3 VOICE/DATA OUTLET DETAIL - 2 POSITION FACEPLATE - DATA  
NO SCALE



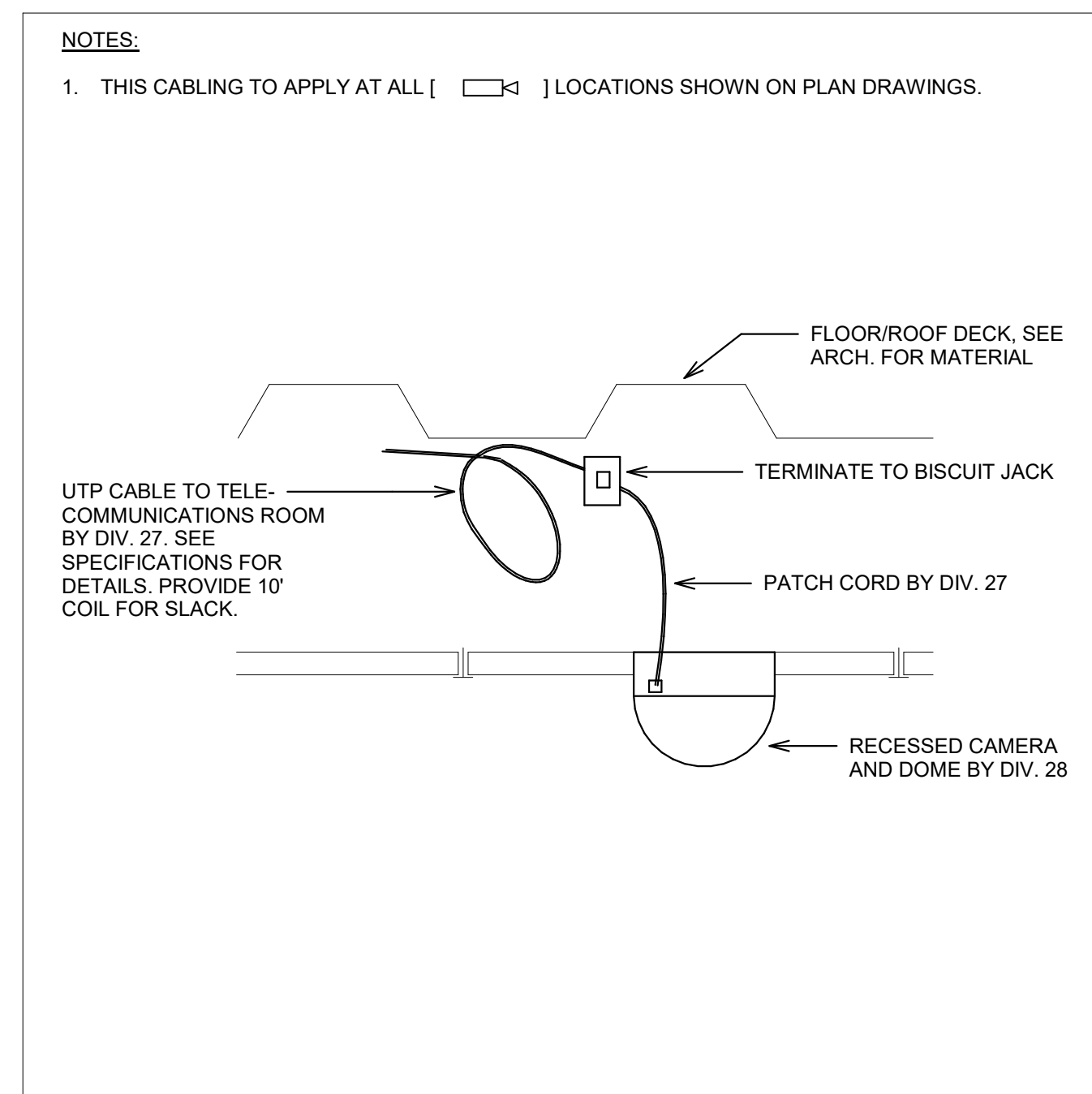
4 VOICE/DATA OUTLET DETAIL - 4 POSITION FACEPLATE - DATA  
NO SCALE



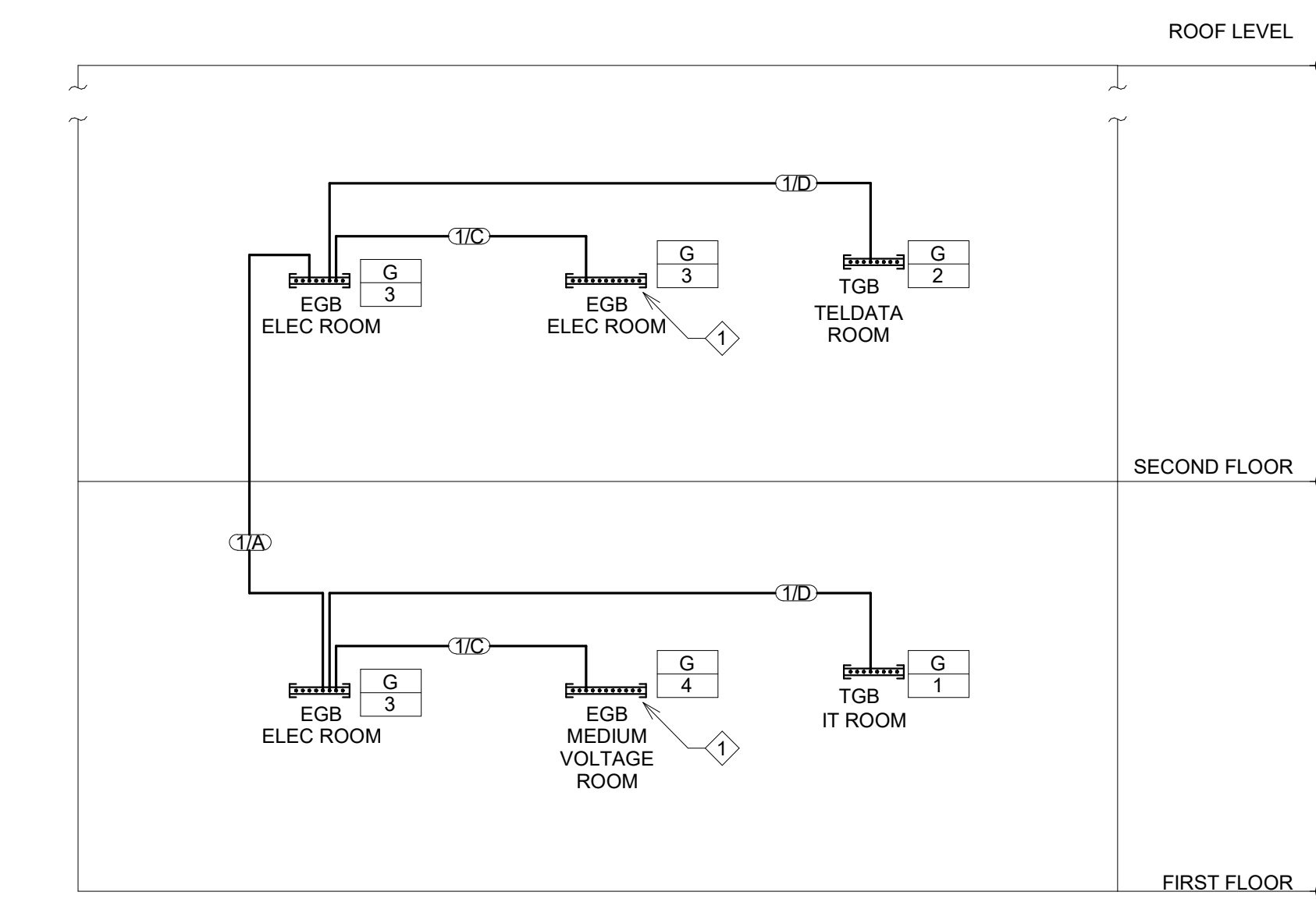
5 VOICE/DATA OUTLET DETAIL - MUDRING  
NO SCALE



6 WIRELESS ACCESS POINT MOUNTING DETAIL  
NO SCALE



7 SURVEILLANCE CAMERA CEILING MOUNTED WIRING DETAIL  
NO SCALE



8 GROUNDING RISER DIAGRAM  
NO SCALE

**GENERAL NOTES:**

- A. ALL CABLING SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURE.
- B. ALL BONDING BACKBONE CABLING WORK BY DIVISION 26.
- C. DIVISION 26 TO PROVIDE PULL STRING IN ALL CONDUIT RUNS.
- D. REFER TO GROUNDING DETAILS FOR ADDITIONAL DIRECTION.

**KEY NOTES:**

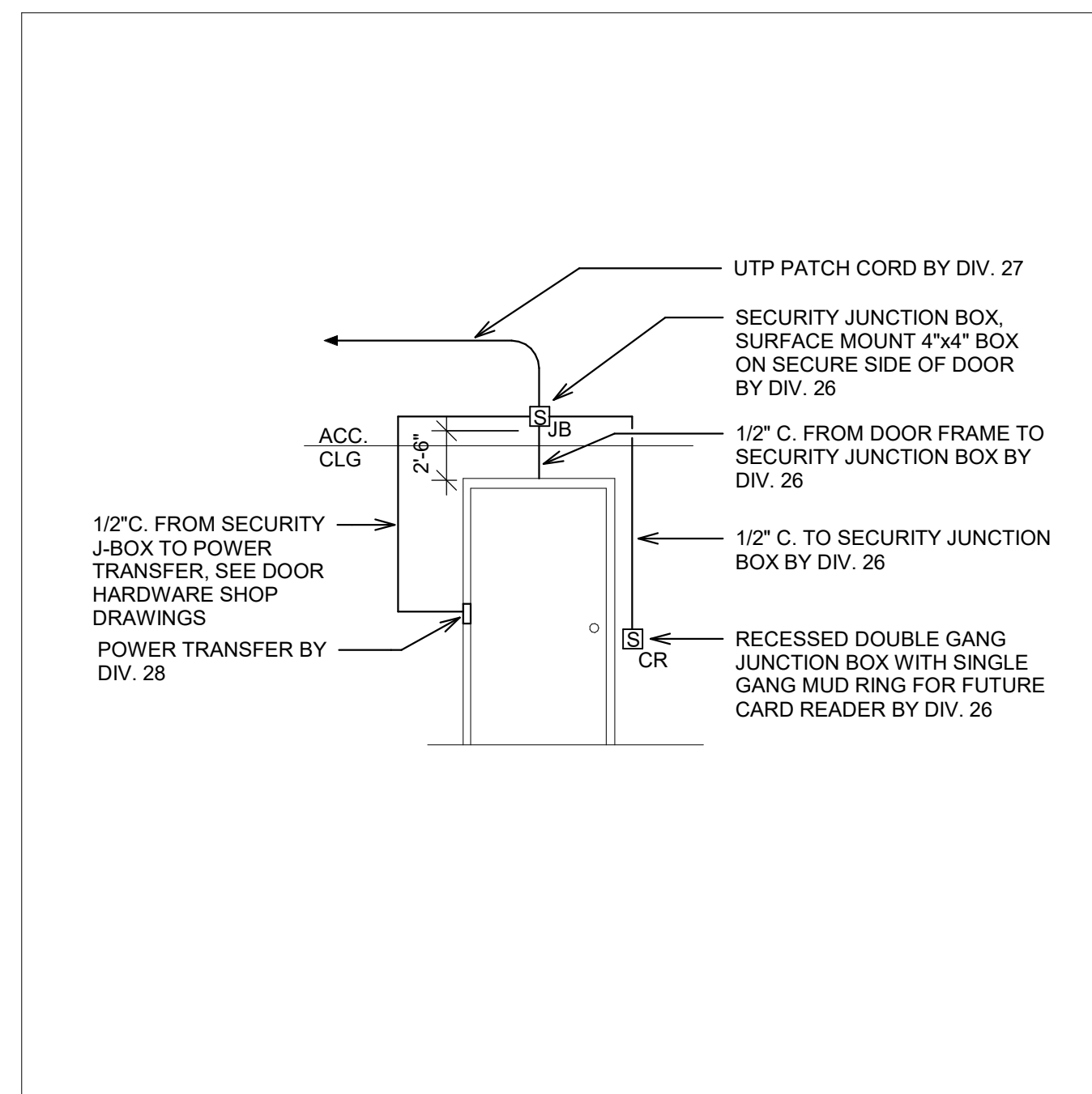
- 1 MOUNT DEVICE AT 7'-0" AFF.

**EQUIPMENT:**

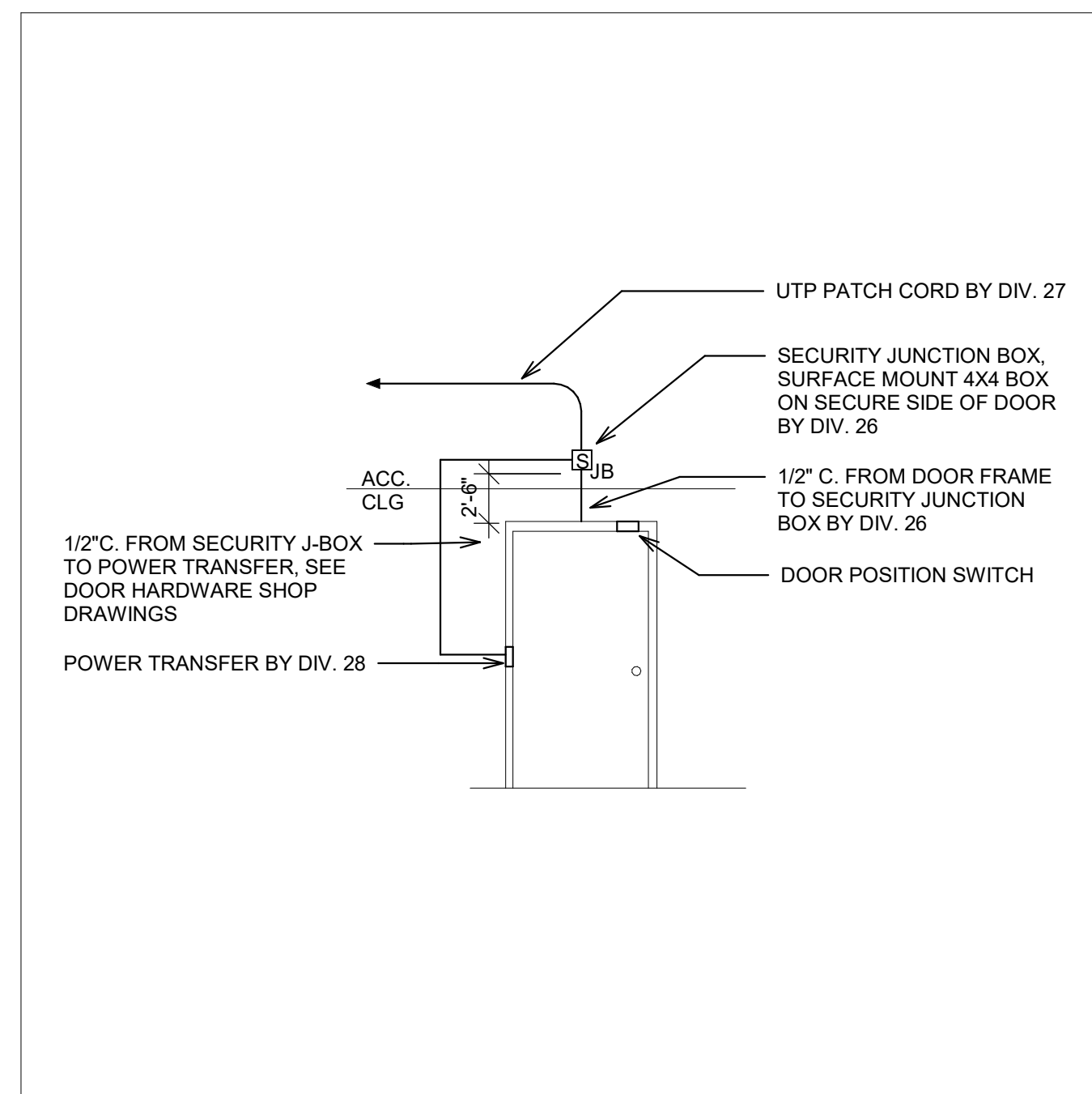
- G-1 TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB) PROVIDED AND INSTALLED BY DIVISION 26. SEE DETAILS FOR ADDITIONAL DIRECTION.
- G-2 TELECOMMUNICATIONS GROUNDING BUSBAR (TGB) PROVIDED AND INSTALLED BY DIVISION 26. SEE DETAILS FOR ADDITIONAL DIRECTION.
- G-3 ELECTRICAL ROOM GROUNDING BUS BAR (EGB) PROVIDED AND INSTALLED BY DIVISION 26. SEE DETAILS FOR ADDITIONAL DIRECTION.
- G-4 SERVICE GROUNDING BUS BAR (SGB) PROVIDED AND INSTALLED BY DIVISION 26. SEE DETAILS FOR ADDITIONAL DIRECTION.

**CABLE TYPE:**

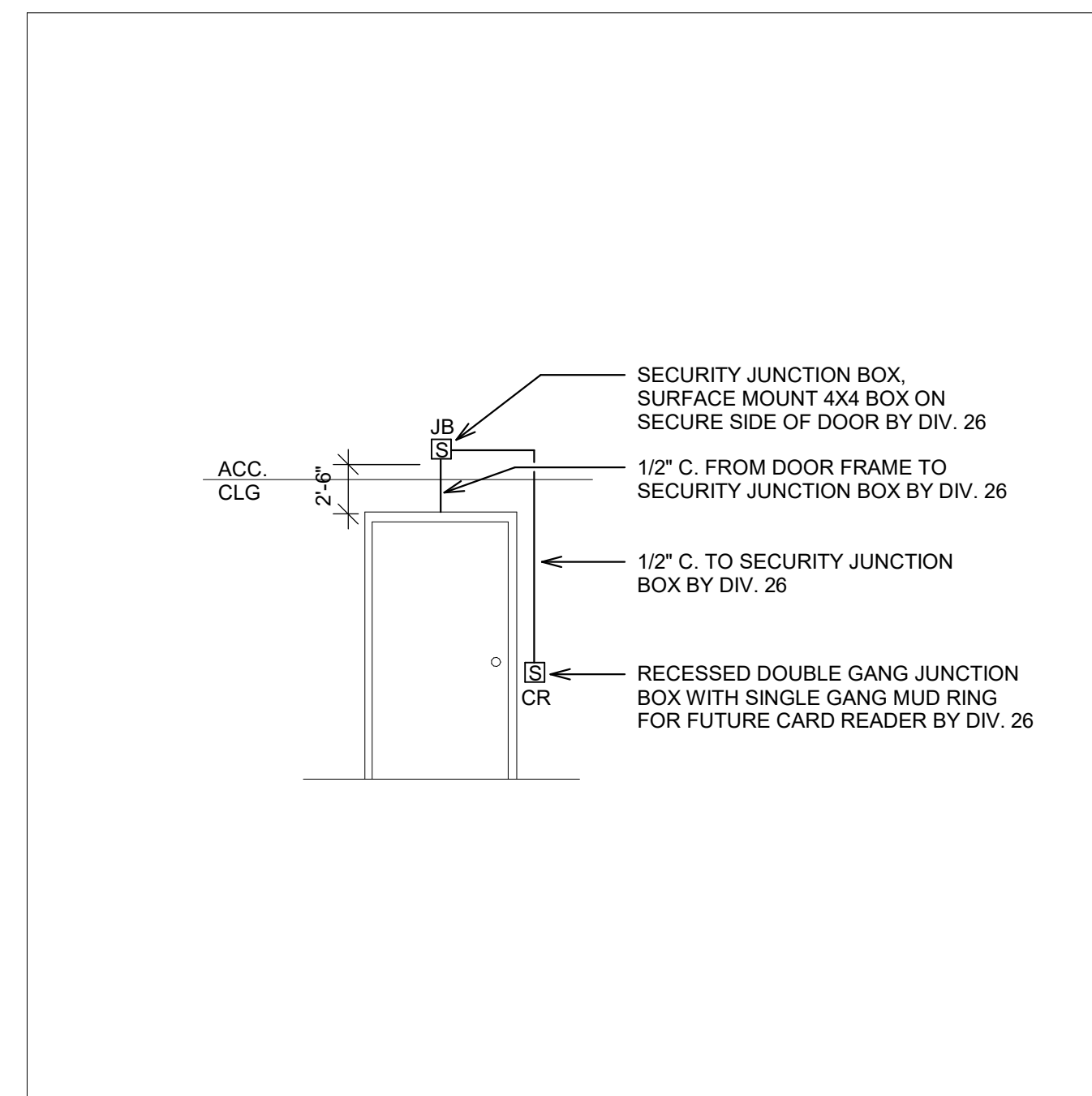
- #A CABLE TYPE CALLOUT
- #B CABLE QUANTITIES
- #1 #500 AWG CABLE [GROUND BONDING CONDUCTOR]. PROVIDE EXOTHERMIC WELDS TO ALL GROUND BUS BARS.
- #2 #350 AWG CABLE [TELECOMMUNICATION BONDING].
- #3 #410 AWG CABLE [BONDING BACKBONE].
- #4 #1 AWG CABLE [TELECOMMUNICATION BONDING].
- #5 #6 AWG CABLE [COMMON BONDING CONDUCTOR].



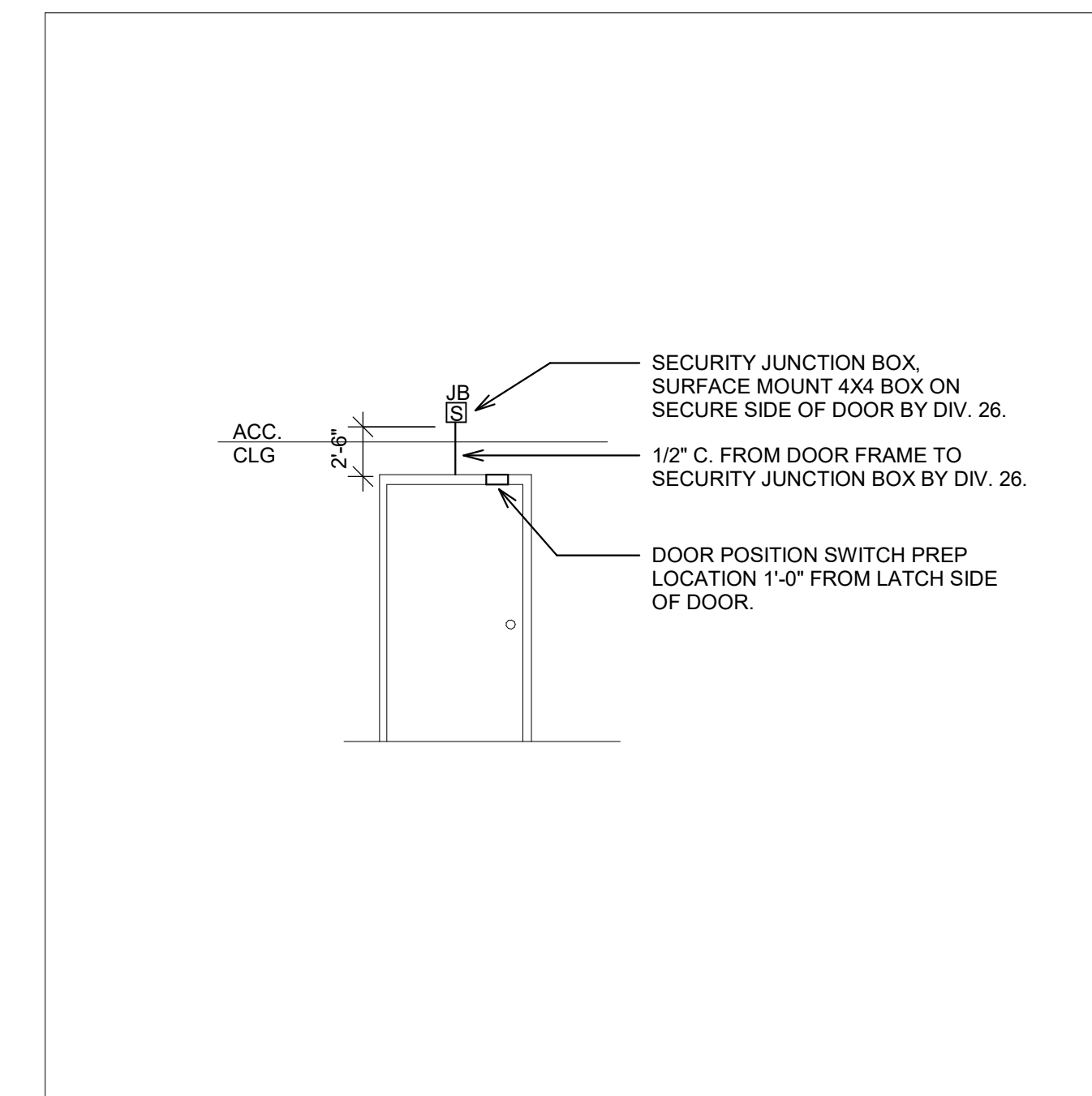
1 CARD READER CABLING DETAIL  
NO SCALE



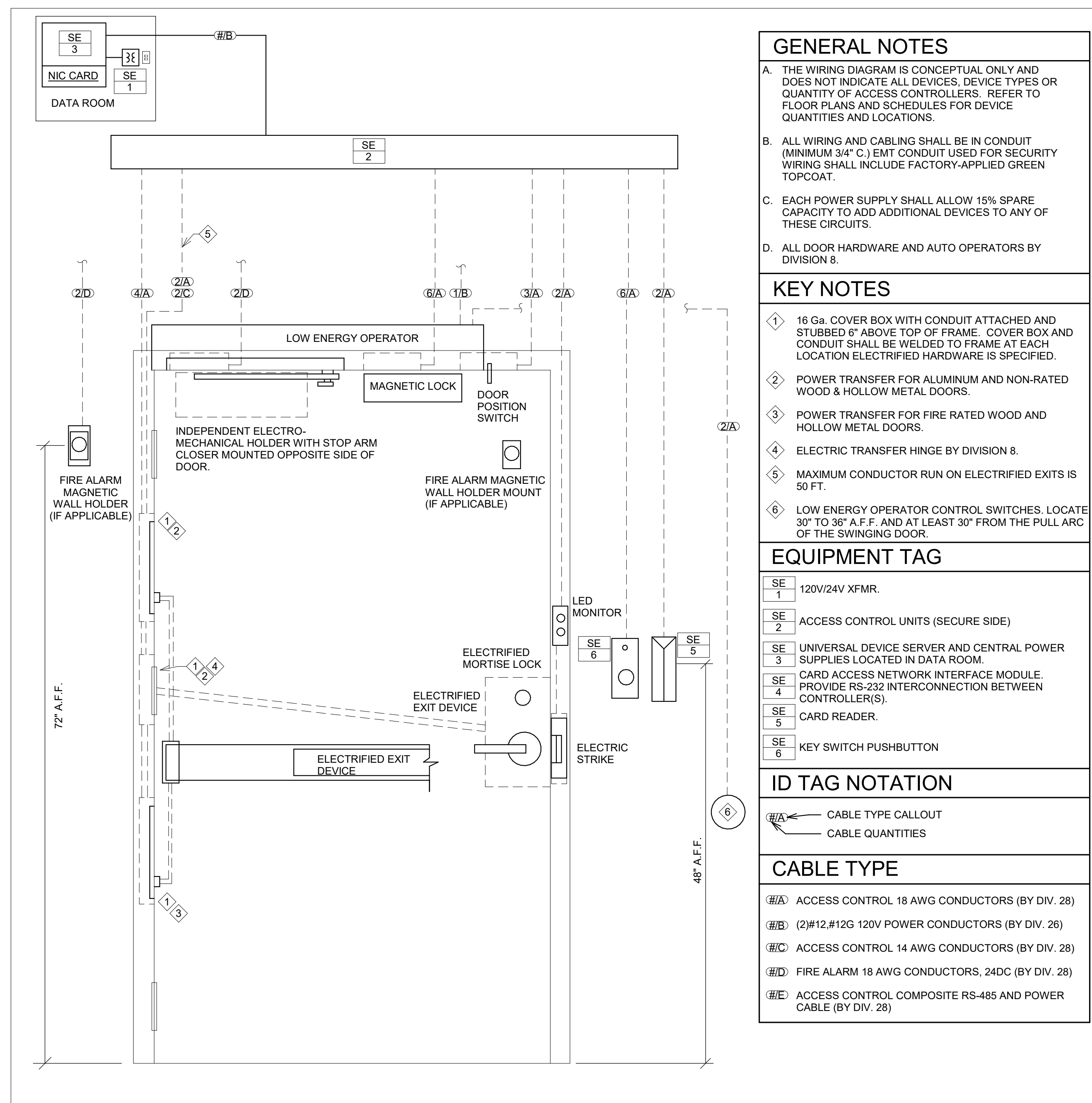
2 DOOR POSITION SWITCH CABLING DETAIL  
NO SCALE



3 CARD READER ROUGH-IN DETAIL  
NO SCALE



4 DOOR POSITION SWITCH ROUGH-IN DETAIL  
NO SCALE



5 DOOR HARDWARE REQUIREMENTS  
NO SCALE

**GENERAL NOTES**

- THE WIRING DIAGRAM IS CONCEPTUAL ONLY AND DOES NOT INDICATE ALL DEVICES, DEVICE TYPES OR QUANTITY OF ACCESS CONTROLLERS. REFER TO FLOOR PLANS AND SCHEDULES FOR DEVICE QUANTITIES AND LOCATIONS.
- ALL WIRING AND CABLING SHALL BE IN CONDUIT (MINIMUM 3/4\"/>

**KEY NOTES**

- 18 Ga COVER BOX WITH CONDUIT ATTACHED AND STUBBED 6\"/>

**EQUIPMENT TAG**

SE 1	120V/24V XFMR.
SE 2	ACCESS CONTROL UNITS (SECURE SIDE)
SE 3	UNIVERSAL DEVICE SERVER AND CENTRAL POWER SUPPLIES LOCATED IN DATA ROOM.
SE 4	CARD ACCESS NETWORK INTERFACE MODULE. PROVIDE RS-232 INTERCONNECTION BETWEEN CONTROLLER(S).
SE 5	CARD READER.
SE 6	KEY SWITCH PUSHBUTTON

**ID TAG NOTATION**

- #A CABLE TYPE CALLOUT
- #B CABLE QUANTITIES

**CABLE TYPE**

#A	ACCESS CONTROL 18 AWG CONDUCTORS (BY DIV. 28)
#B	(2)#12.#12G 120V POWER CONDUCTORS (BY DIV. 26)
#C	ACCESS CONTROL 14 AWG CONDUCTORS (BY DIV. 28)
#D	FIRE ALARM 18 AWG CONDUCTORS, 24DC (BY DIV. 28)
#E	ACCESS CONTROL COMPOSITE RS-485 AND POWER CABLE (BY DIV. 28)

**GENERAL NOTES**

1. THE WIRING DIAGRAM IS CONCEPTUAL ONLY AND DOES NOT INDICATE ALL DEVICES, DEVICE TYPES OR QUANTITY OF LOOPS. REFER TO FLOOR PLANS FOR DEVICE QUANTITIES AND LOCATIONS.
2. THE SYSTEM DIAGRAM IS BASED ON A DIGITAL ADDRESSABLE FIRE ALARM SYSTEM.
3. ALL WIRING AND CABLING SHALL BE IN CONDUIT (MINIMUM 3/4" C). EMT CONDUIT USED FOR FIRE ALARM WIRING SHALL INCLUDE FACTORY-APPLIED RED TOPCOAT UL-LISTED FOR FIRE ALARM USE.
4. THE INSTALLATION SHALL BE FROM DRAWINGS THAT HAVE BEEN SUBMITTED, REVIEWED AND APPROVED BY THE AUTHORITIES HAVING JURISDICTION.
5. EACH SIGNALING CIRCUIT SHALL ALLOW 15% SPARE CAPACITY TO ADD ADDITIONAL AUDIO, VISUAL OR COMBINATION AUDIOVISUAL SIGNALING DEVICES TO ANY OF THESE CIRCUITS.
6. PROVIDE THE CONTROL WIRING FROM FIRE ALARM CONTROLLER TO THE HVAC CONTROLLER.
7. ALL SPRINKLER HEADS, LOCATED IN ELEVATOR SHAFTS AND ELEVATOR EQUIPMENT ROOMS, ARE TO HAVE A HEAT DETECTOR MOUNTED WITHIN TWO (2) FEET OF HEAD FOR ACTIVATION OF SHUNT TRIP POWER DEVICE. VERIFY QUANTITY ON SITE.
8. REFER TO FIRE ALARM CONTROL MATRIX FOR ALL CONTROL REQUIREMENTS.

**KEY NOTES**

- ① FIREFIGHTERS TELEPHONE SYSTEM FOR COMMUNICATIONS TO FIRE COMMAND CENTER. INTEGRATE NEW FF TELEPHONES WITH EXISTING SYSTEM.
- ② DIGITAL VOICE EVACUATION AND PAGING SYSTEM INTERFACE WITH OWNERS' TELEPHONE SYSTEM.
- ③ SEE SPECIFICATIONS FOR BACKGROUND MUSIC AND PAGING ZONE SCHEDULE.
- ④ LIFE SAFETY BRANCH CIRCUIT (REFER TO POWER PLAN DWGS).
- ⑤ FIRE/SMOKE AND SMOKE DAMPER MOTORS ARE SHOWN ON MECHANICAL PLANS. VERIFY QUANTITIES AND LOCATIONS. PROVIDE FIRE ALARM CONNECTIONS TO RELAY SO THAT THE FIRE/SMOKE AND SMOKE DAMPERS CLOSE UPON LOSS OF POWER. (DIV. 26 SHALL PROVIDE RELAY AND CIRCUITING. SEE POWER PLANS FOR 120V CIRCUITING, RELAY LOCATIONS, ETC.) PROVIDE ONE (1) FIRE ALARM CONTROL MODULE PER FIRE/SMOKE DAMPER AND (1) ADDITIONAL FIRE ALARM CONTROL MODULE PER SMOKE ZONE FOR INTEGRATION WITH SMOKE EVACUATION SEQUENCE OF OPERATIONS. SEE ARCH. LIFE SAFETY PLANS FOR SMOKE ZONES.

**CABLE TYPE**

← CABLE TYPE CALLOUT  
← CABLE QUANTITIES

#1A	INITIATING LINE CIRCUIT	---
#1B	BRANCH CIRCUIT	---
#1C	CONTROL CIRCUIT	---
#1D	FIBER OPTIC CONNECTION	---
#1E	SIGNAL LINE CIRCUIT	---
#1F	TWO-HOUR RATED PRIMARY BACKBONE (CLASS A)	---
#1G	TWO-HOUR RATED REDUNDANT BACKBONE (CLASS A)	---
#1H	FUTURE FIRE FIGHTERS TELEPHONE HOMERUN	---
#1J	AUDIO INPUT	---

