

SHELBY COUNTY COMMISSION

PROPOSED WATER IMPROVEMENTS

NORTH-SOUTH CONNECTOR CONTROL VALVE STATION

INDEX

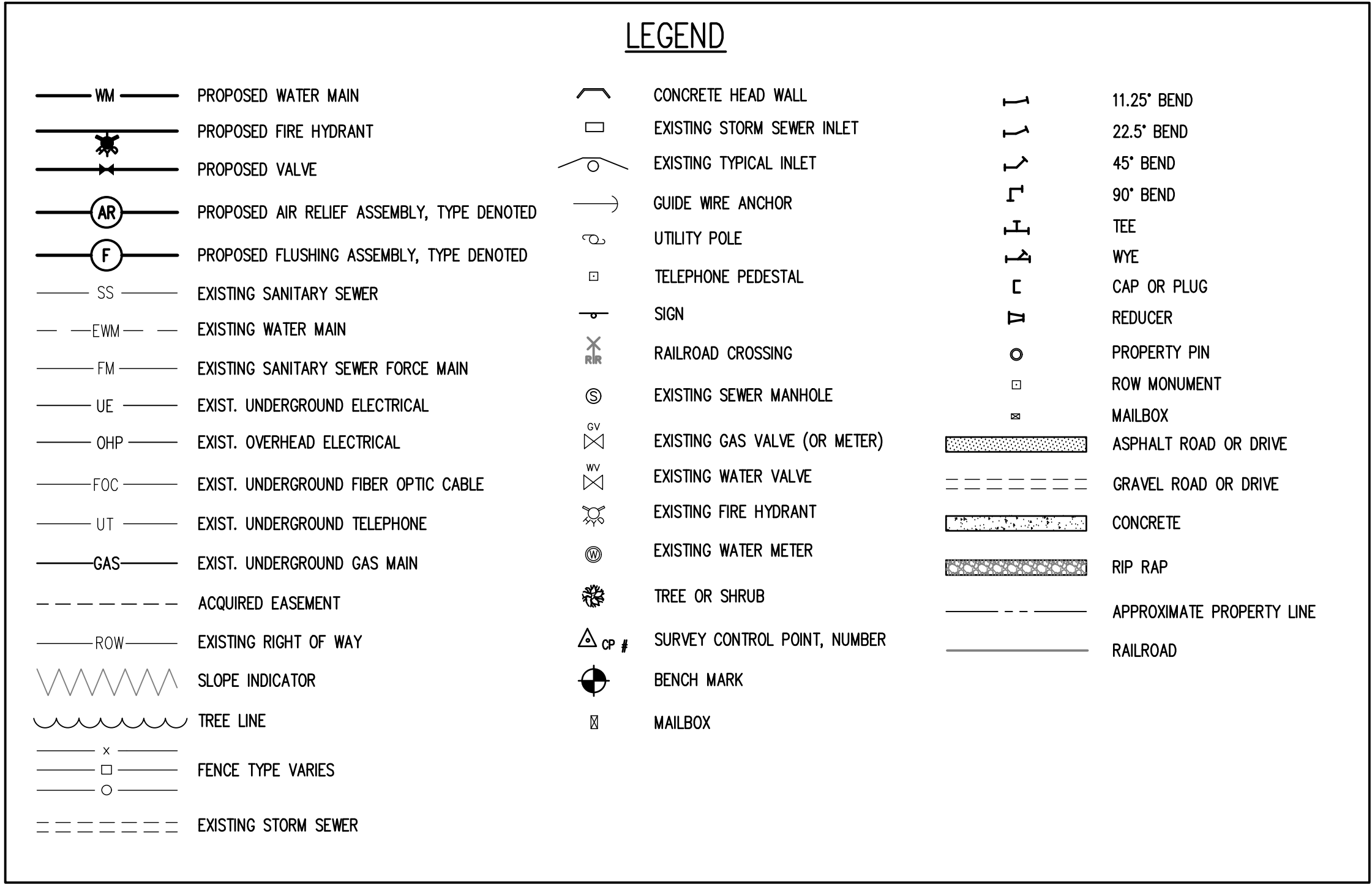
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2026

Municipal
Consultants,
Inc. Birmingham, Alabama



BID SET



Drawing		Title
Project No.		LOCATION MAP AND LEGEND
Date	7 - 2026	
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BAR = 1"



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Municipal Consultants, Inc.

200 Century Park South, Suite 212
Birmingham, Alabama 35226
(205) 932-0361

SHELBY COUNTY COMMISSION

NORTH-SOUTH CONNECTOR
CONTROL VALVE STATION

2026

PROJECT NOTES:

1. KEEP PIPE CLEANED AND REMOVE ALL DEBRIS AND DIRT FROM INSIDE OF PIPE TO BE INSTALLED AND PREVIOUS PIPES INSTALLED DUE TO THE SHORTAGE OF FLUSHING WATER WHEN PIPE LINE IS COMPLETED. WHEN LAYING IS NOT IN PROGRESS, INCLUDING BREAK PERIODS, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED BY PLUGS OR APPROVED MEANS.
2. FOR COORDINATION OF CONSTRUCTION, CONTRACTOR SHALL HIRE A LICENSED SURVEYOR FAMILIAR WITH SHELBY COUNTY'S LAND WHO WILL IDENTIFY AND FLAG THE PROPERTY LINES, SURVEY THE WATER LINE ALIGNMENTS, SET THE BUILDING CORNERS, SET ELEVATION CONTROL FOR THE PROJECT, AND ENSURE PROPER PLACEMENT OF THE BUILDING AND WATER LINES. RESPONSIBILITY FOR THE SURVEY COORDINATION, ACCURACY AND TIMELINESS, SHALL REST WITH THE CONTRACTOR AND SURVEYOR.
3. PIPING TO AND FROM THE CONTROL VALVE STATION SHALL WILL BE LAYED ON RISING OR FALLING GRADES WITH SUFFICIENT DEPTH TO ELIMINATE AIR POCKETS AND FORCE ALL AIR TO MIGRATE TO THE AIR RELEASE VALVE ASSEMBLIES SHOWN INSIDE THE CONTROL VALVE STATION BUILDING.
4. ALL BELL HOLES SHALL HAVE EXCAVATED SOCKET SO ENTIRE PIPE BEARS EVENLY ITS ENTIRE LENGTH.
5. WATER TO TEST AND FLUSH LINES AND THE CONTROL VALVE STATION WILL BE PROVIDED SHELBY COUNTY VIA THE CONNECTION POINTS TO THE EXISTING WATER SYSTEM. CONTRACTOR SHALL PROPOSE, MODIFY AS REQUIRED, AND COORDINATE WITH THE ENGINEER AND OWNER TO DETERMINE ACCEPTABLE FLUSHING AND DISINFECTION OPERATIONS. CONTRACTOR SHALL ALSO ASSIST OWNER AND ENGINEER IN DETERMINING AND MINIMIZING WATER USAGE.
6. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING WATER LINE CONNECTION POINTS TO DETERMINE FIELD CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR INVESTIGATING ANY CROSSING LOCATIONS WITH OTHER UTILITIES TO DETERMINE EXISTING CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR CONDITIONS ENCOUNTERED SUCH AS ROCK, SOFT CONDITIONS, ETC.
7. TESTING OF LINES & APPURTENANCES WILL BE AS SPECIFIED. CONTRACTOR MAY USE CLOSED VALVES OR TEMPORARILY PLUGGED LINES AT HIS OPTION. CLOSED CLASS 150 BUTTERFLY VALVES CANNOT BE TESTED AGAINST UNLESS CONTRACTOR PUTS PRESSURE ON EACH SIDE OF VALVES SO DIFFERENCE IN PRESSURE DOES NOT EXCEED 150 PSI. DURING TEST, VALVES WITH SUFFICIENT PRESSURE RATINGS HAVE BEEN PLACED AT BEGINNING AND END OF PROJECT FOR TESTING LINE AGAINST A CLOSED VALVE.
8. ALL RESTRAINED JOINT PIPE SHALL BE FULLY EXTENDED FROM EACH ADJOINING PIPE BELL AND THE RESTRAINT MECHANISM MUST BE FULLY ENGAGED. NO FIELD WELDING OF D.I. ALLOWED.
9. ABIDE BY ALABAMA POWER COMPANY'S REQUIREMENTS FOR WORK ASSOCIATED WITH NEW ELECTRICAL SERVICE.
10. ALL MAIN LINE M.J. VALVES AND FITTINGS SHALL USE MEGA LUG OR EQUAL RESTRAINT GLANDS.
11. CONTRACTOR SHALL OBTAIN AND PAY FOR ANY NPDES PERMITS REQUIRED FOR PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE DRAINAGE, STORM WATER PERMITS (IF REQUIRED) AND COMPLIANCE WITH ALL GOVERNMENTAL STORM WATER REGULATIONS.
12. ALL YARD PIPE FITTINGS AND VALVES SHALL BE MECHANICAL JOINT, DUCTILE IRON WITH MEGA-LUG RESTRAINING GLANDS (BY EBAA FOUNDRY) UNLESS INDICATED OTHERWISE.
13. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR SAFETY NOR THE MEANS AND METHODS OF THE CONTRACTOR. THIS APPLIES THROUGHOUT THE PROJECT.
14. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL SHELBY COUNTY RULES AND REGULATIONS, AS APPLICABLE.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL EXCESS MATERIALS/DEBRIS RESULTING FROM THE WORK.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF ANY ROW MONUMENTS AND/OR PROPERTY PINS DISTURBED DURING CONSTRUCTION.
17. UTILITIES ON PLANS AND PROFILES ARE SHOWN IN APPROXIMATE LOCATIONS AND MAY BE AT ASSUMED ELEVATIONS. CONTRACTOR TO VERIFY ALL POTENTIALLY CONFLICTING UTILITIES BEFORE PIPE IS LAID.
18. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE LOCATION, TYPE, AND SIZE OF ALL EXISTING UTILITIES, OBSTRUCTIONS, FENCING, DRAINAGE, ETC.
19. ALL ROCK SHALL BE UNDERCUT A MINIMUM OF 12" BELOW THE PIPE INVERT AND PIPE IS TO BE BEDDED IN STONE - SEE DETAILS. PIPE BEDDING MATERIAL SHALL BE #57 CRUSHED STONE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
20. CONTRACTOR SHALL CONTINUALLY MAINTAIN TRAFFIC FLOW AND MINIMIZE DISRUPTION OF ACCESS TO ALL BUSINESSES AND RESIDENCES. CONTRACTOR SHALL COORDINATE AS REQUIRED TO ENSURE UNOBSTRUCTED TRAVEL/ACCESS DURING SPECIFIC/CRITICAL TIMES OF DAY AS REQUIRED.
21. ANY TRAFFIC CONTROL REQUIRED SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
22. ALL CONTRACTORS SHALL ADHERE TO OSHA STANDARDS.
23. CALL 811 BEFORE YOU DIG.
24. NO TRENCH OR EXCAVATION SHALL BE LEFT OPEN OVERNIGHT OR UNATTENDED UNLESS PROPERLY PROTECTED.
25. TRENCHES AND EXCAVATION MUST BE FILLED, FENCED, COVERED, OR BARRICADED WHEN UNATTENDED.
26. NO BLASTING ALLOWED. ANY ROCK ENCOUNTERED THAT MUST BE REMOVED SHALL BE BY ROCK HAMMER.
27. WALKWAYS/SIDEWALKS SHALL BE POURED WITH SLIGHT SLOPE AND NO LOW SPOTS SO THEY WILL DRAIN FREE.
28. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR STORMWATER RUNOFF, DRAINAGE, AND FINAL GRADING AND GRASSING OF THE CONTROL VALVE STATION SITE. THE OWNER SHALL ASSUME NO RESPONSIBILITY FOR THESE ITEMS.
29. UNACCEPTABLE FILL MATERIAL SHALL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.
30. ALL FILL SHALL BE PLACED IN 8" LOOSE LIFTS AND COMPACTED TO 98% SPD. EACH LIFT SHALL BE TESTED BY THE OWNER'S GEOTECHNICAL REPRESENTATIVE. EACH LIFT MUST PASS COMPACTION AND TESTING REQUIREMENTS BEFORE PLACEMENT OF SUCCESSIVE LIFTS.
31. TOPSOIL REMOVED FROM SUBGRADE SHALL BE STOCKPILED AND REUSED FOR GRASSING. IF NO TOPSOIL IS AVAILABLE, THE CONTRACTOR SHALL BRING IN TOPSOIL AS REQUIRED SUCH THAT THE FINAL TOPSOIL IS IN ACCORDANCE WITH THE PROJECT'S GRASSING SPECIFICATION.
32. FINAL GRADING SHALL BE HAND RAKED AND ALL STONES, BOULDERS, ETC. REMOVED TO ALLOW MOWING WITHOUT CAUSING DAMAGE TO TYPICAL MOWERS..
33. FINAL GRADING AS REQUIRED FOR SITE DRAINAGE AND TO PREVENT WATER FROM DRAINING ONTO PUBLIC ROADWAYS.
34. SEE SPECIFICATIONS FOR ADDITIONAL SOIL REQUIREMENTS.
35. CONTRACTOR SHALL COORDINATE WITH ENGINEER TO TEST DIG SITE IF DESIRED.
36. CONTRACTOR SHALL EMPLOY A PROFESSIONAL LAND SURVEYOR FOR LOCATING PROPERTY PINS AND/OR STAKING SITE PRIOR TO PERFORMING ANY WORK. CONTRACTOR SHALL MAINTAIN PINS/STAKES CONTINUOUSLY DURING CONSTRUCTION.
37. CONTRACTOR SHALL PROVIDE TOPSOIL, FERTILIZER, GRASSING, ETC. AS NECESSARY TO MAINTAIN AN EROSION FREE SURFACE CAPABLE OF MAINTAINING A COMPLETE STAND OF GRASS.
38. NO ROCK BACKFILL SHALL BE PLACED WITHIN ONE FOOT (1') OF PIPE.
39. ALL ROCK SHALL BE UNDERCUT A MINIMUM OF 12" AND PIPE BEDDED IN STONE.
40. ALL UNDERGROUND VALVES SHALL BE SUITABLE FOR BURIED SERVICE AND ENDS SHALL BE MECHANICAL JOINT WITH MEGA-LUG GLANDS UNLESS NOTED OTHERWISE. ALL VALVES SHALL BE RODDED TO THE NEAREST FITTING.
41. CONTRACTOR SHALL COORDINATE AS REQUIRED WITH APCO REGARDING THE ELECTRICAL SERVICE AND METERING REQUIREMENTS. ALL WORK ITEMS FOR THE ELECTRICAL SERVICE NOT SPECIFICALLY INDICATED TO BE PROVIDED BY SHELBY COUNTY IN THE PLANS, SHALL BE PROVIDED BY THE CONTRACTOR AND MEET ALL APCO REQUIREMENTS.
42. AFTER EXCAVATION TO SUBGRADE, THE OWNER MAY PERFORM INVESTIGATIONS ON SUBGRADE. SUBGRADE MUST BE APPROVED BY ENGINEER BEFORE PROCEEDING WITH WORK.
43. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE PROVISIONS OF ANY "NPDES" PERMIT NECESSARY FOR THE PROJECT AND FOR PROVIDING EROSION AND SEDIMENTATION CONTROL IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
44. CONTRACTOR SHALL MAINTAIN ALL "BMP's" DURING CONSTRUCTION AND REMOVE ALL SEDIMENT AND EROSION CONTROL DEVICES FOLLOWING STABILIZATION AND IN ACCORDANCE WITH ALL REGULATORY AUTHORITIES.

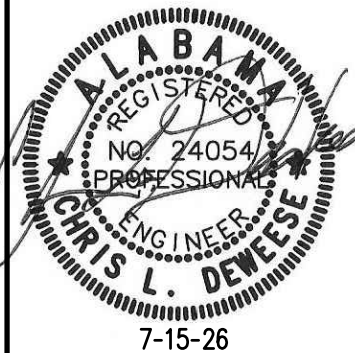
THE OWNER HAS PAID FOR AND OBTAINED THE BUILDING PERMIT FOR THIS PROJECT AND WILL PROVIDE IT TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL INCLUDE NO COSTS IN HIS BID FOR OBTAINING THE BUILDING PERMIT.

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NORTH-SOUTH CONNECTOR
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BAR = 1"

Title

PROJECT NOTES

BID SET

Drawing

Project No.

Date

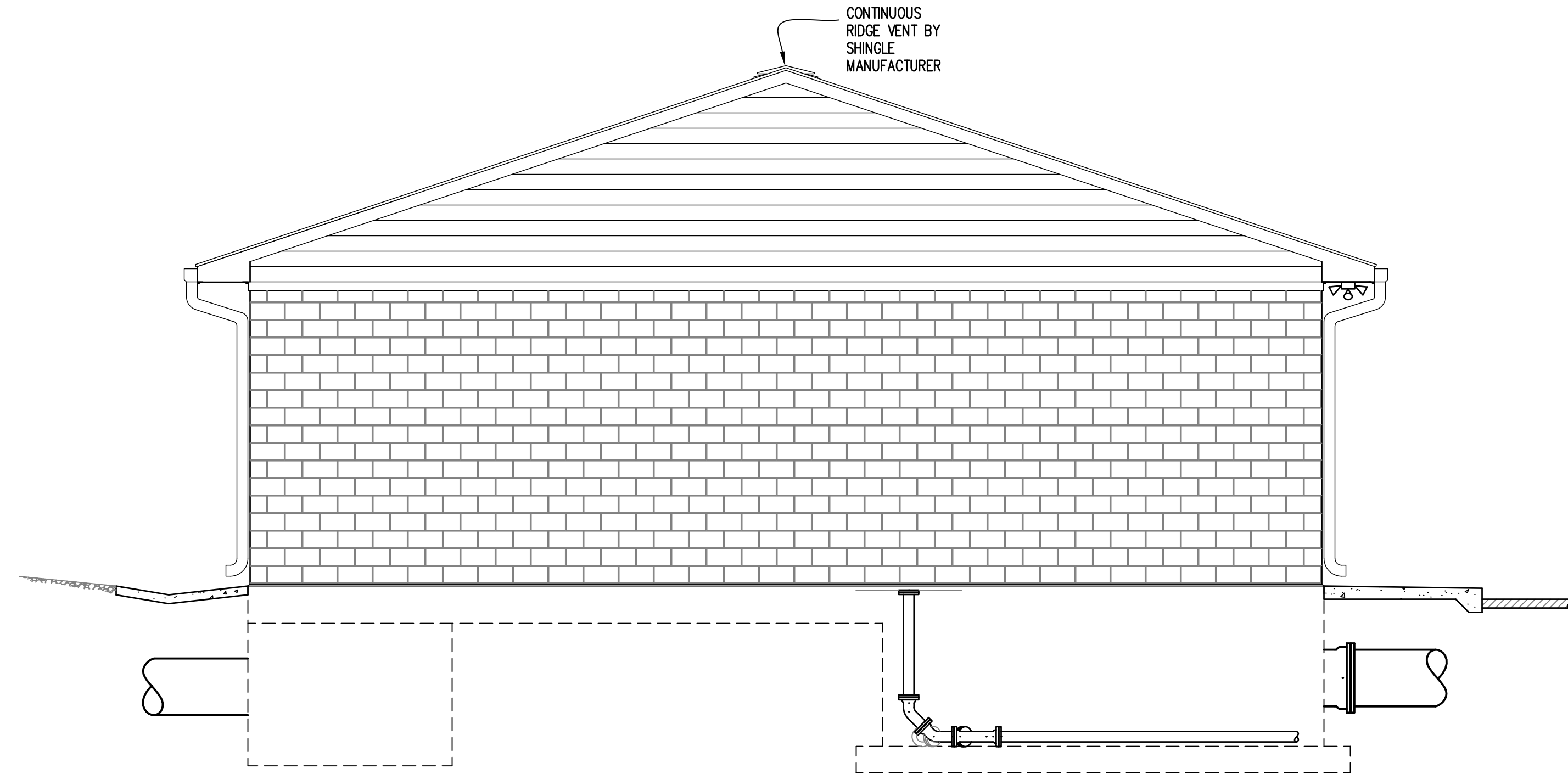
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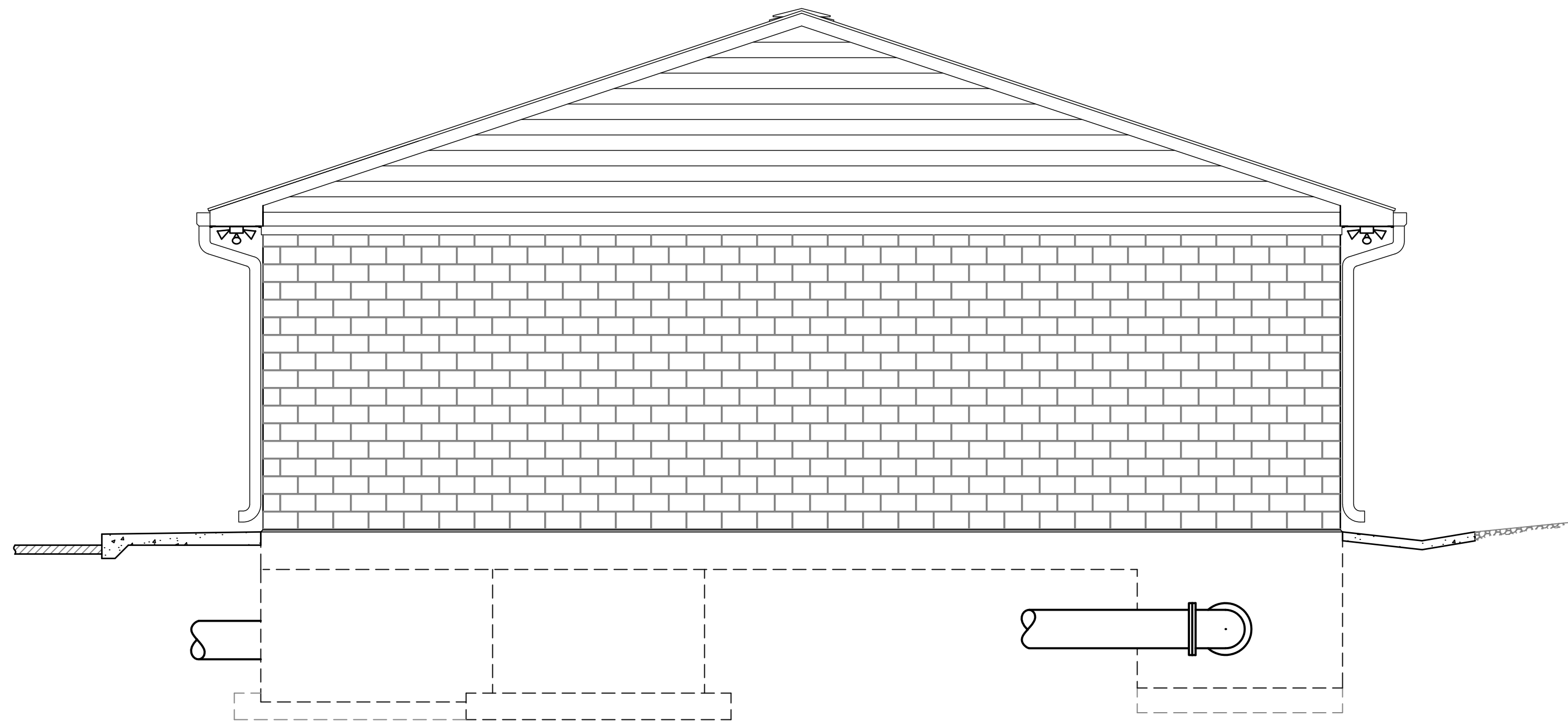
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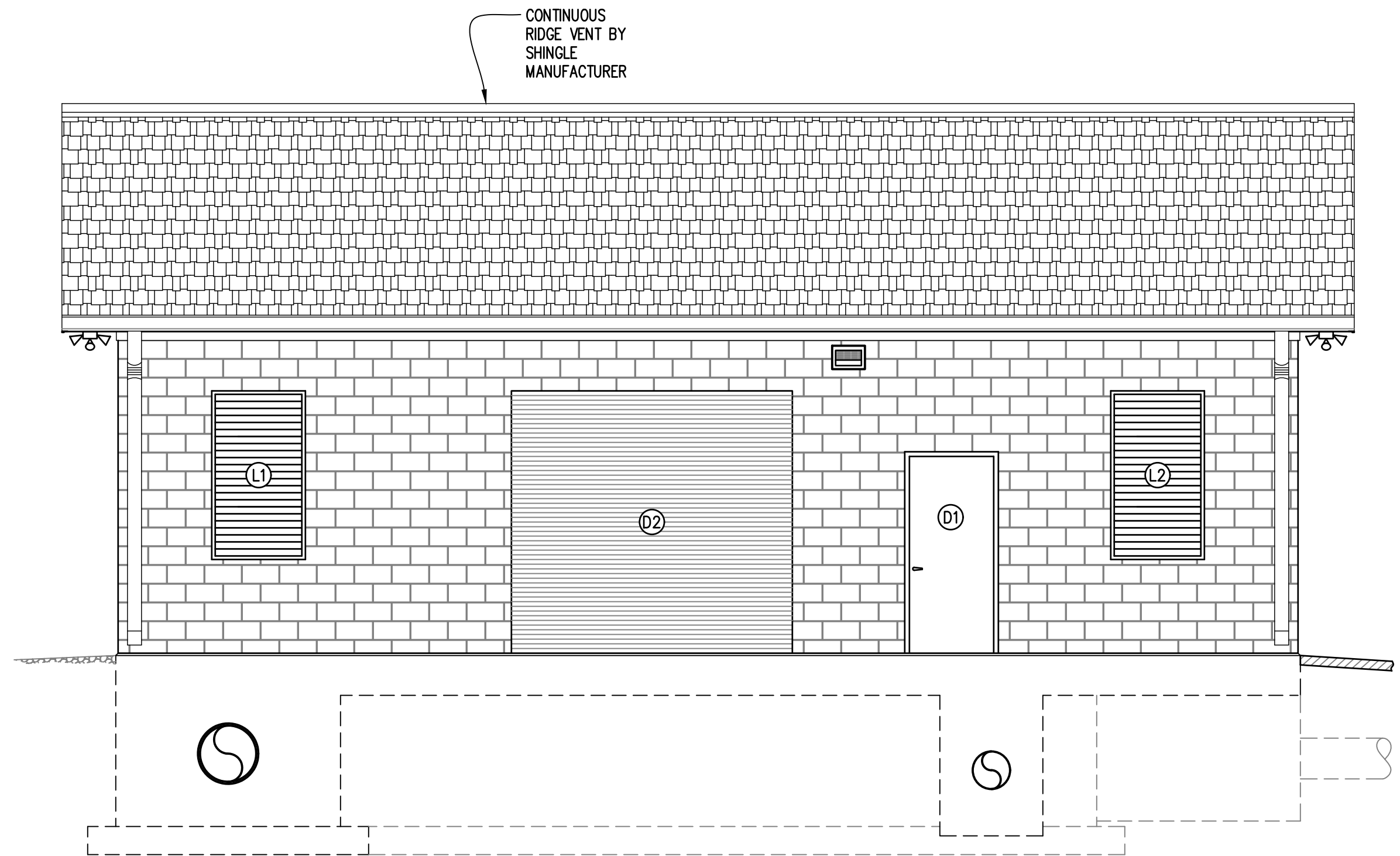
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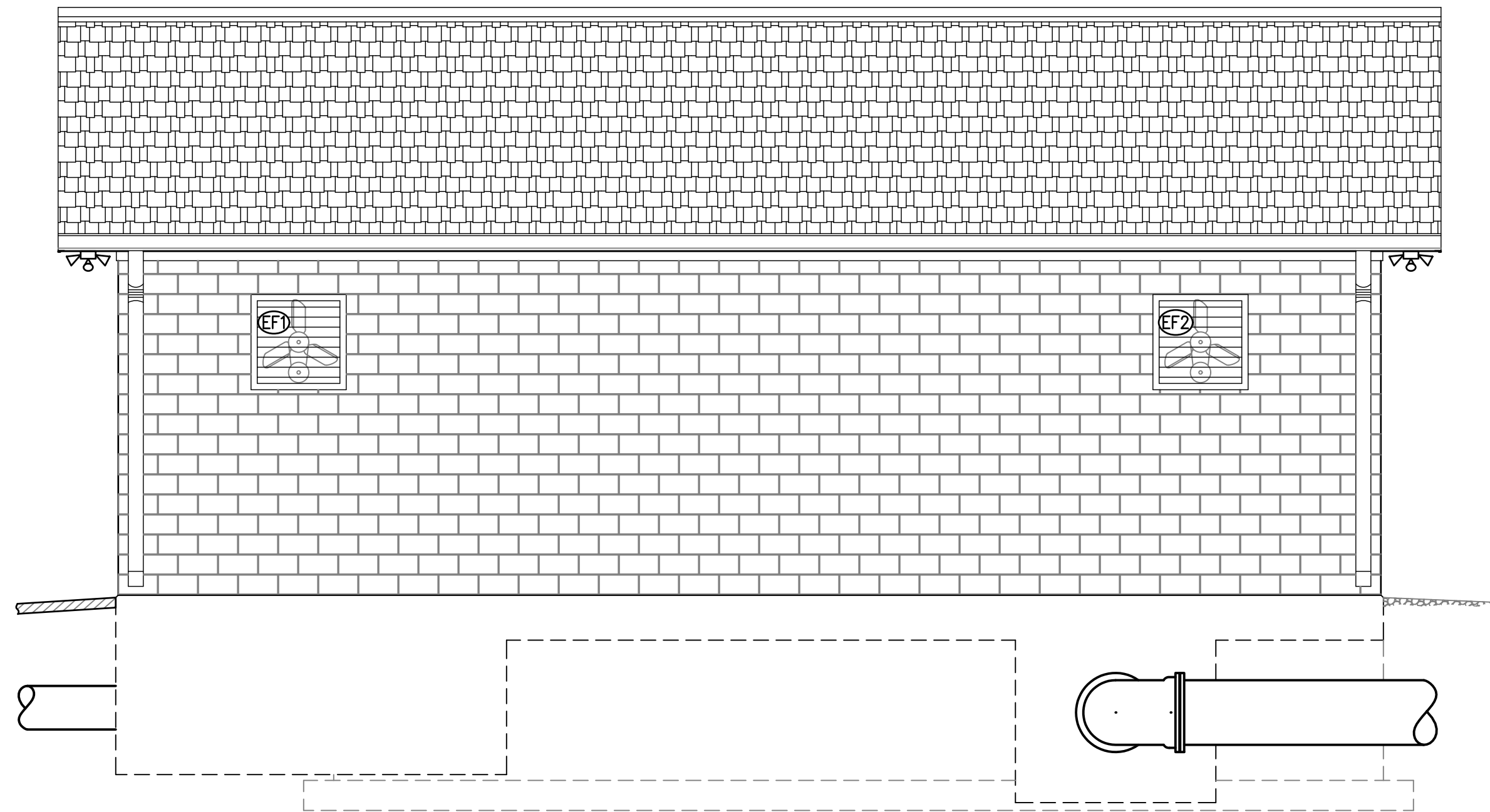
WEST ELEVATION
SCALE: 1/4"=1'-0"



EAST ELEVATION
SCALE: 1/4"=1'-0"



SOUTH ELEVATION
SCALE: 1/4"=1'-0"



NORTH ELEVATION
SCALE: 1/4"=1'-0"

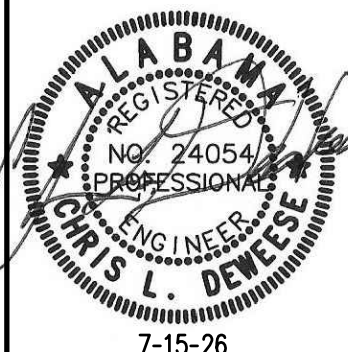
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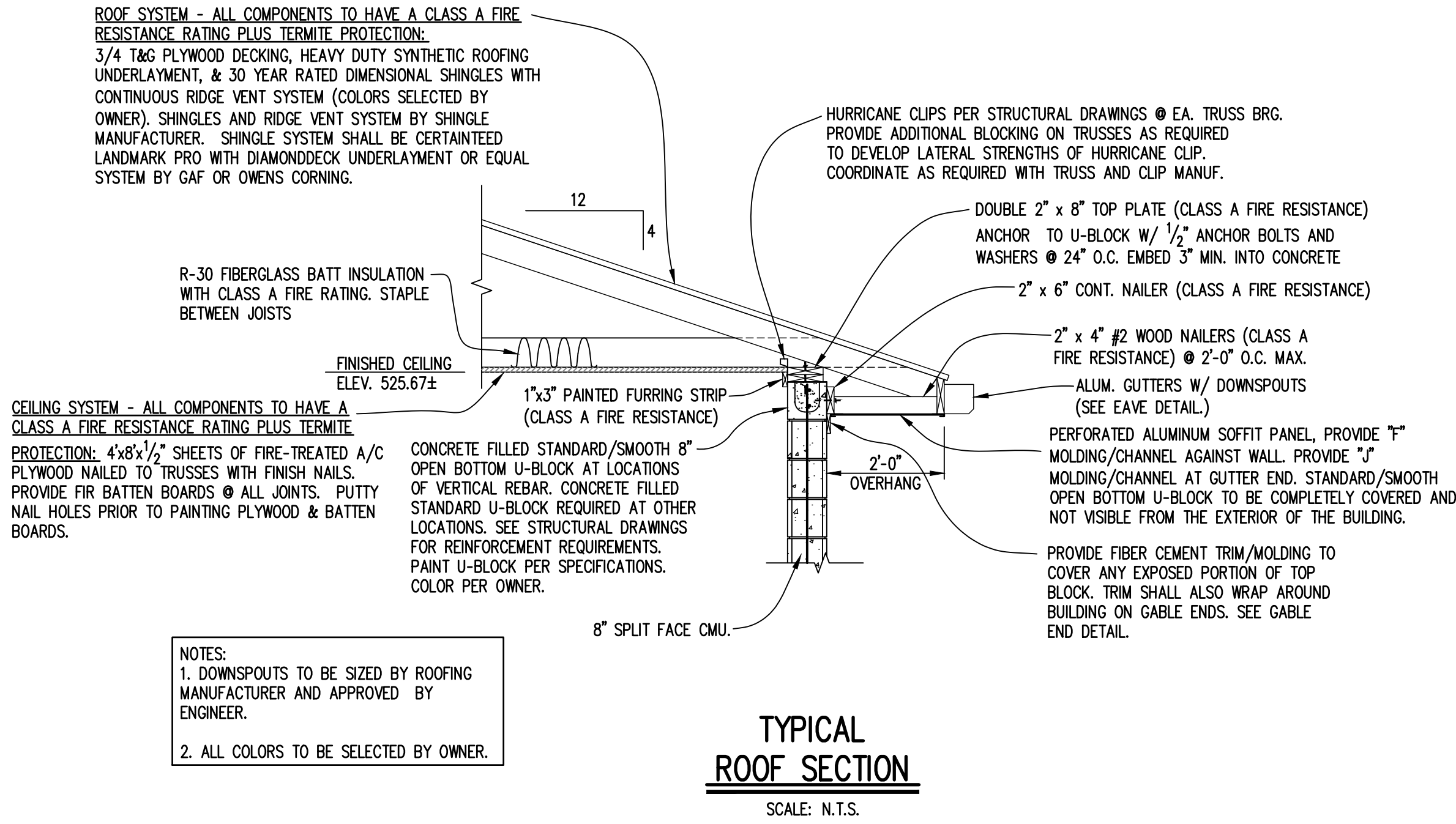
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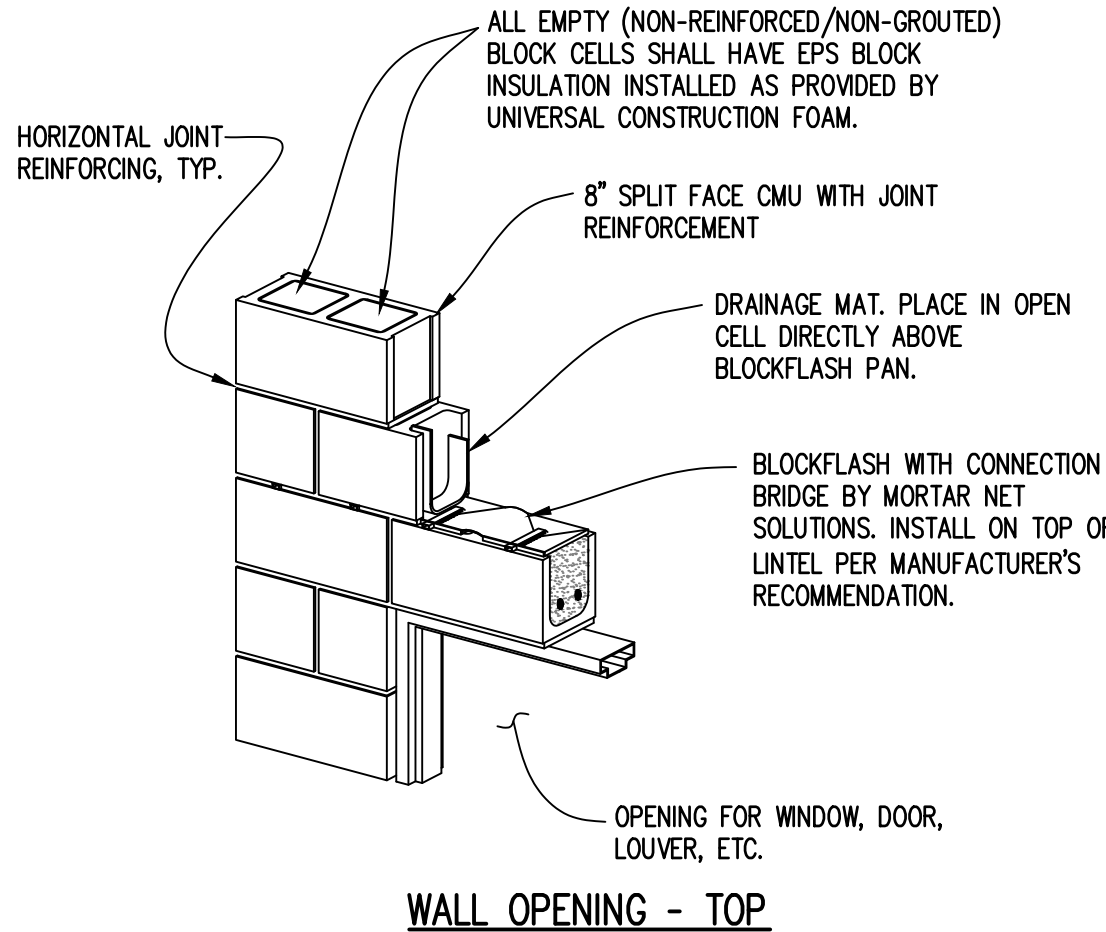
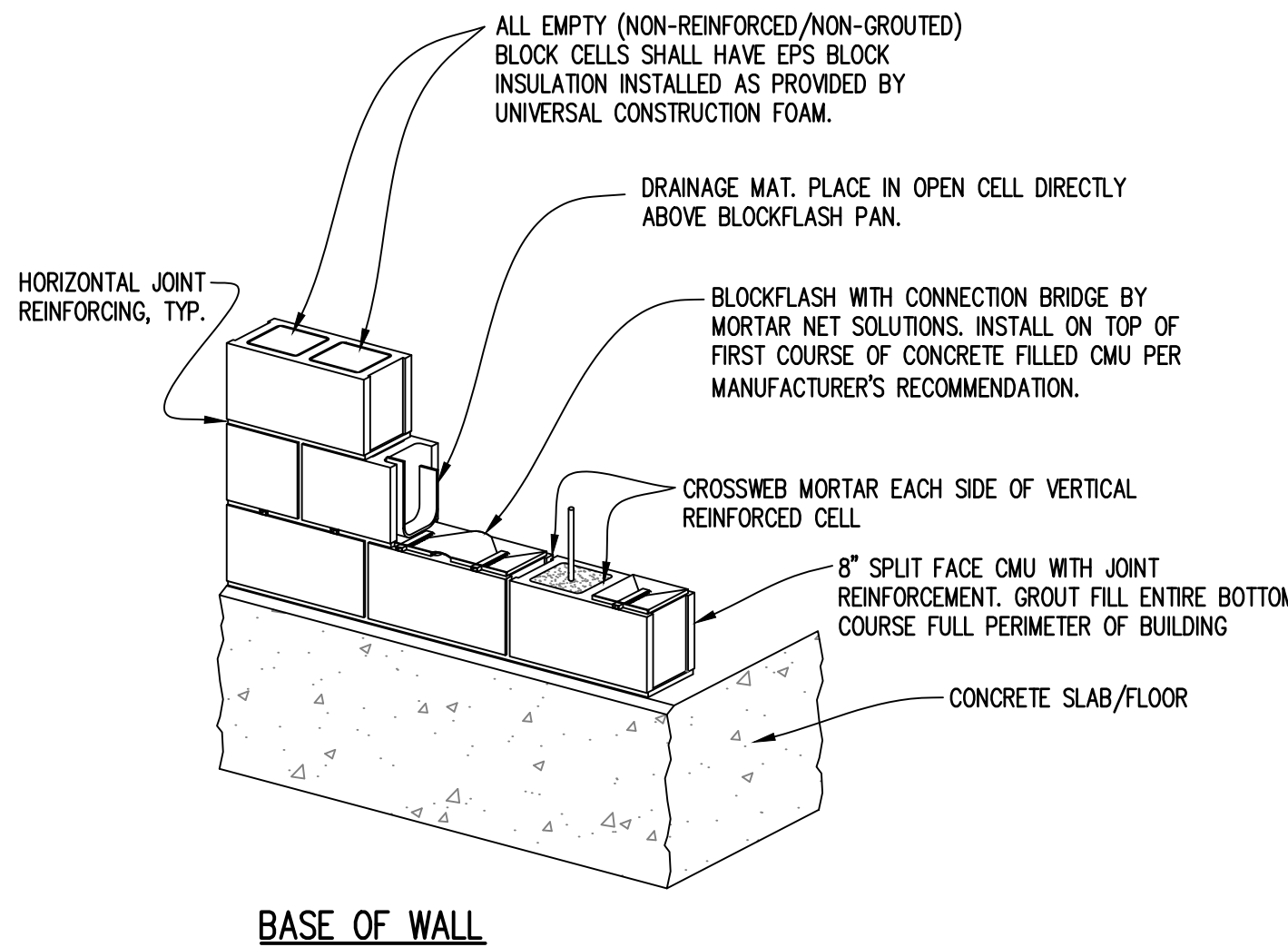
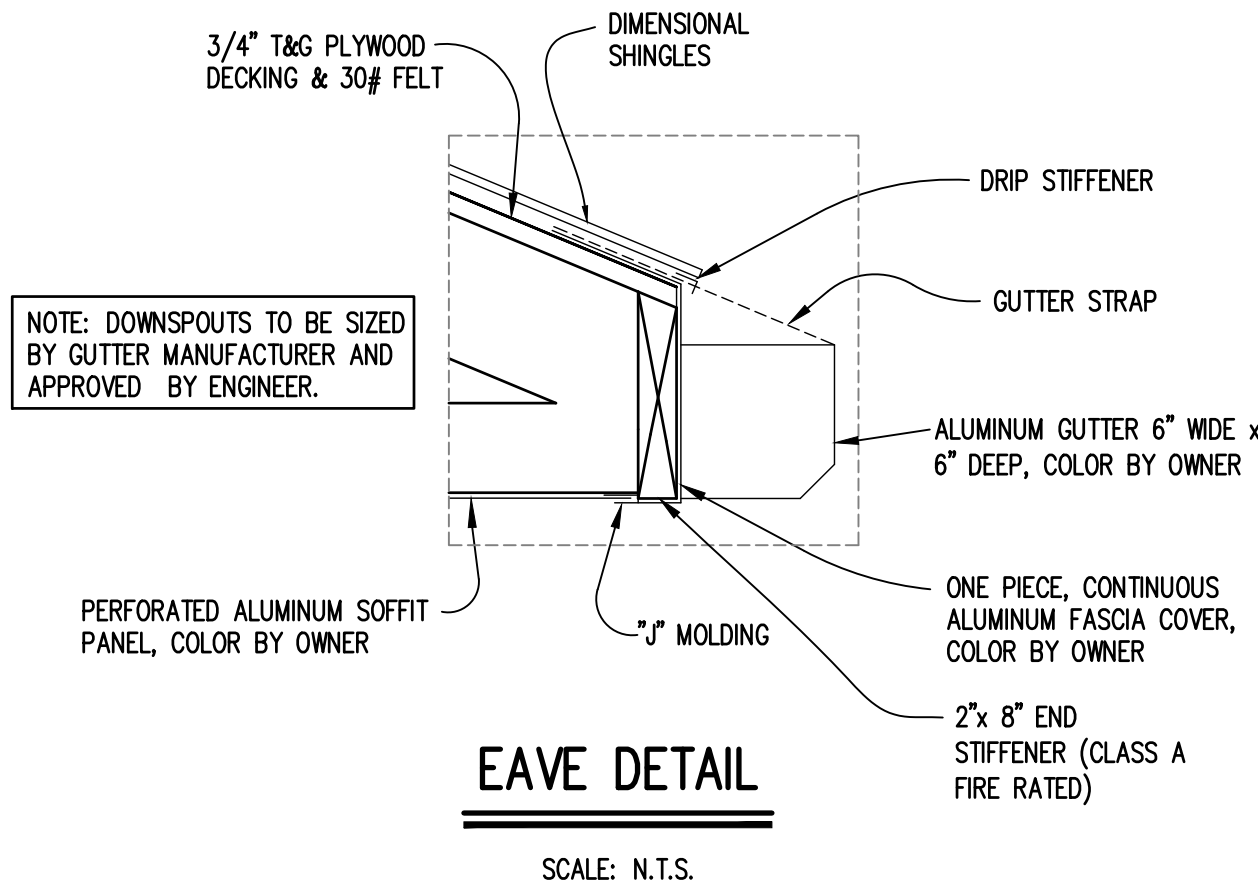
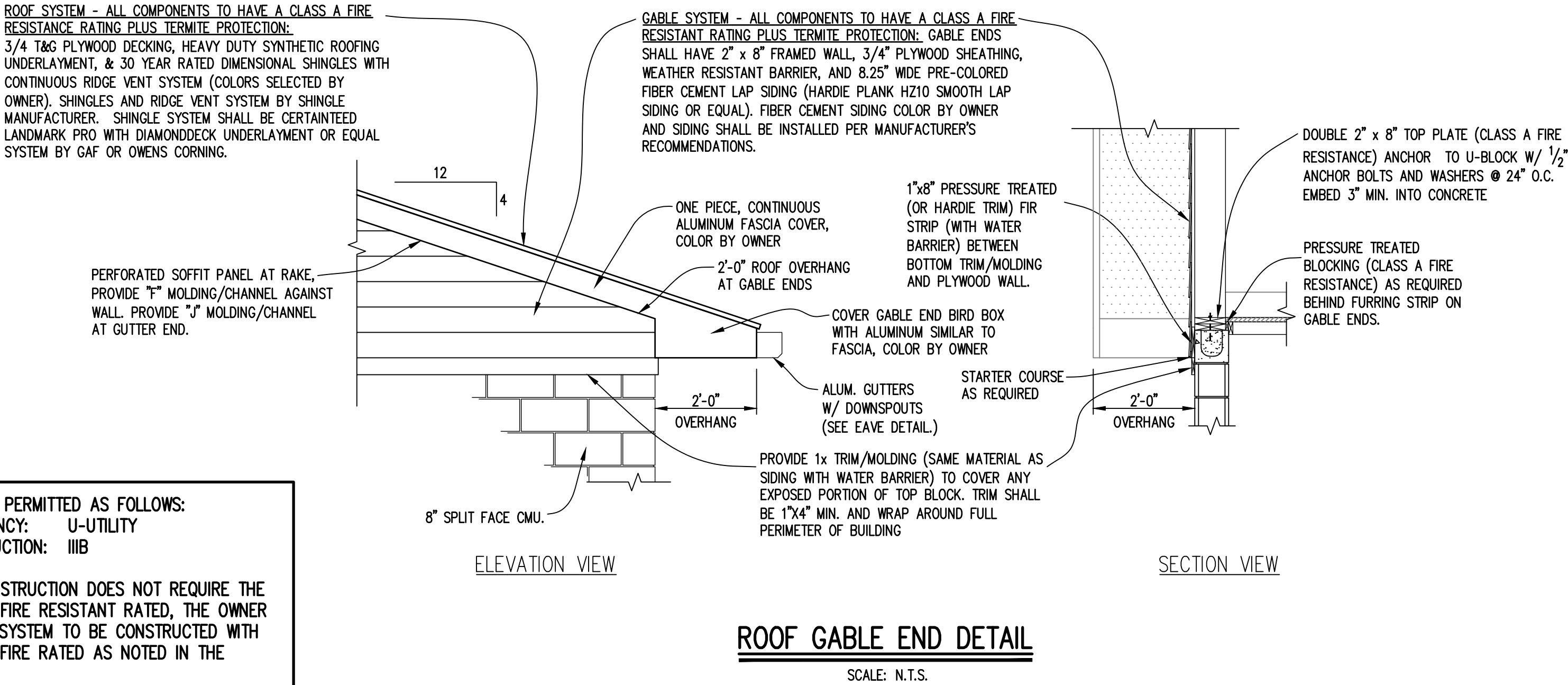
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Date	Scale	Sheet			



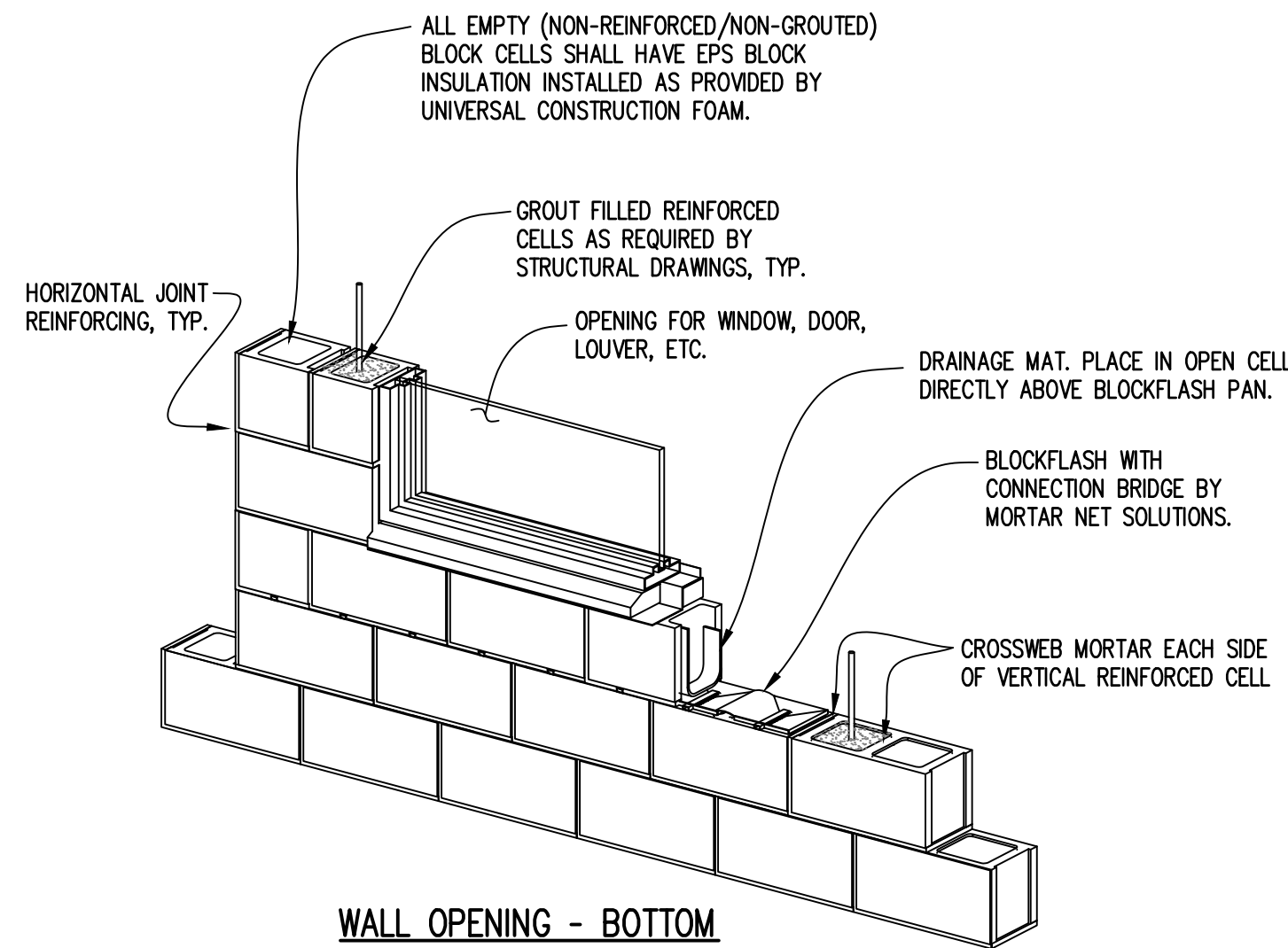
THE BUILDING HAS BEEN PERMITTED AS FOLLOWS:
BUILDING OCCUPANCY: U-UTILITY
TYPE OF CONSTRUCTION: IIIB

ALTHOUGH TYPE IIIB CONSTRUCTION DOES NOT REQUIRE THE ROOFING SYSTEM TO BE FIRE RESISTANT RATED, THE OWNER DESIRES FOR THE ROOF SYSTEM TO BE CONSTRUCTED WITH COMPONENTS THAT ARE FIRE RATED AS NOTED IN THE DETAILS ON THIS SHEET.

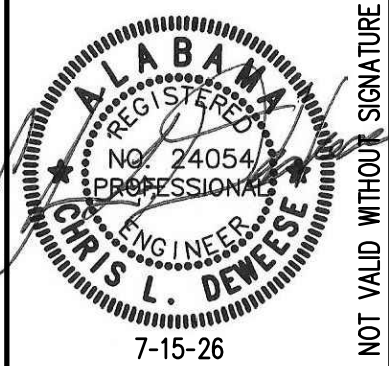


- NOTES:
1. ALL BLOCKFLASH COMPONENTS BY MORTAR NET SOLUTIONS OR EQUAL SHALL BE USED AT ALL LOCATIONS TYPICALLY REQUIRING FLASHING AND SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. THE BUILDING MUST BE PROPERLY FLASHED AND MOISTURE MUST BE KEPT OUT OF THE CMU THROUGHOUT CONSTRUCTION TO AVOID THE POTENTIAL FOR EFFLORESCENCE DEVELOPING ON THE BLOCK.
 2. FOR SINGLE COURSE AND MULTI-COURSE LINTELS, INSTALL BLOCKFLASH DIRECTLY ON TOP OF THE OVERALL LINTEL FOR STEEL I-BEAM LINTELS, FILL THE FIRST MASONRY COURSE ABOVE THE STEEL I-BEAM LINTEL WITH CONCRETE AND INSTALL THE BLOCKFLASH ON TOP OF THIS CONCRETE FILLED MASONRY COURSE PER THE MANUFACTURER'S RECOMMENDATIONS.
 3. VERTICAL REBAR/GROUTED CELLS/CORNERS: WHERE WALLS ARE REINFORCED, ELIMINATE THE BLOCKFLASH PAN AT THE GROUTED CORE AND DETACH THE CONNECTOR BRIDGE FROM THE ADJOINING PAN BY BENDING IT BACK AND FORTH A FEW TIMES. USE SAME TECHNIQUE FOR CORNERS. CROSS WEB MORTAR ADJACENT TO THE GROUTED CORE MAKING SURE TO OVERLAP THE BLOCKFLASH FLANGE. USE SAME TECHNIQUE FOR CORNERS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
 4. EPS INSULATION BLOCKS SHALL BE AS PROVIDED BY UNIVERSAL CONSTRUCTION FOAM OR EQUAL. THE INSULATED CMU SHALL HAVE AN EFFECTIVE R-VALUE OF 13.5. PRIOR TO ORDERING, COORDINATE THE REQUIRED DIMENSIONS OF THE EPS INSULATION BLOCKS WITH THE INTERNAL DIMENSIONS OF THE ACTUAL CMU TO BE PROVIDED.
 5. HORIZONTAL JOINT REINFORCING REQUIRED PER SPECS.
 6. SPLIT FACE BLOCK SHALL BE INSTALLED, PROTECTED, CLEANED, SEALED, ETC. TO PREVENT EFFLORESCENCE. COORDINATE ALL REQUIREMENTS WITH BLOCK MANUFACTURER AND SUPPLIER.

TYPICAL WALL SECTIONS
SCALE: N.T.S.

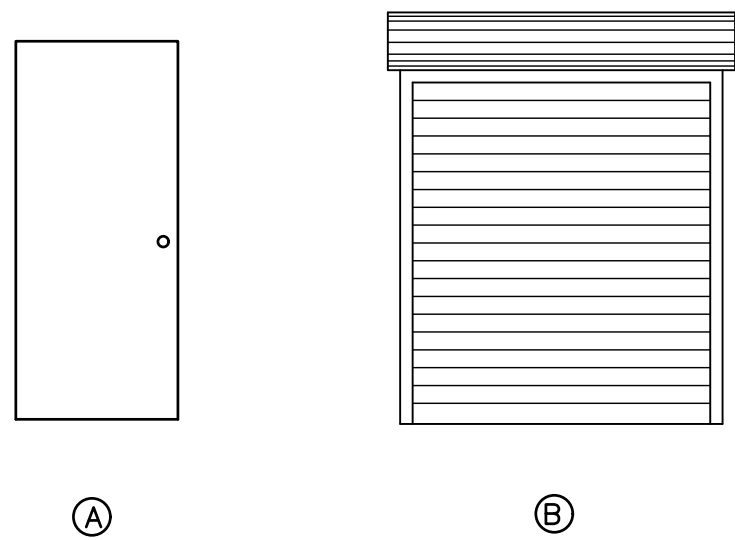


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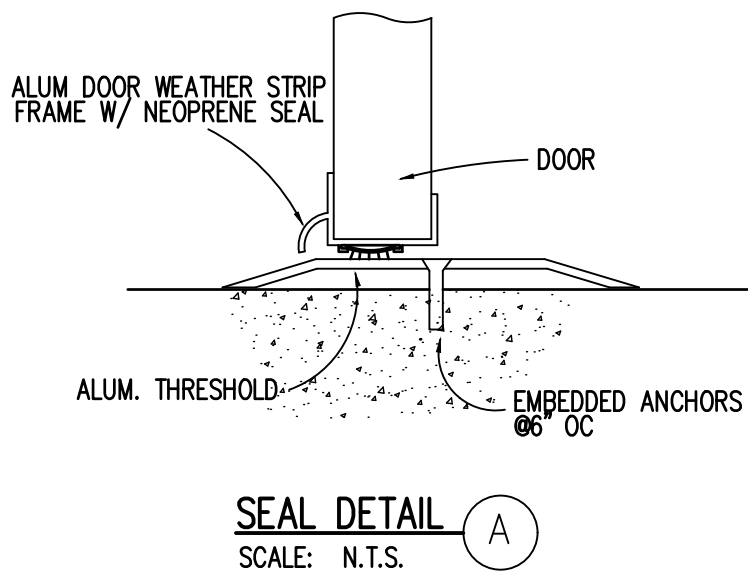


BAR = 1"

DESIGNATION	ELEVATION	NOMINAL DOOR (D) OR ROUGH OPENING (R) (WxH)	DOOR/ FRAME	HEAD/JAMB/SEAL	LINTEL	DESCRIPTION	DOOR & FRAME		HARDWARE
							FINISH	FINISH COLOR	
D1	A	3'-0" x 7'-0" (D)	INSUL. ALUM./ ALUM	A/B/A	SEE STRUCTURAL	SOLID PANEL, INSULATED ALUMINUM, LOW U-FACTOR	ANODIZED	DARK BRONZE	EXTERIOR KEY LOCK SET W/CLOSURE AND PANIC ESCAPE HARDWARE. MOUNT DOOR FRAME DIRECTLY TO REINFORCED CMU PER MANUF. RECOMMENDATIONS
D2	B	10'-0" x 9'-4" (R)	INSUL. ALUM./ ALUM	B/A/MANUF. SEAL	SEE STRUCTURAL	ROLL UP, INSULATED ALUMINUM	ANODIZED	DARK BRONZE	PAD LOCKABLE, CHAIN WHEEL, INSULATED (MIN. R VALUE = 16; U-FACTOR <= 0.10)
DOOR SCHEDULE						NOTE: CONTRACTOR TO COORDINATE ROUGH OPENING DIMENSIONS w/ FRAME DIMENSIONS REQUIRED BY DOOR MANUF. FOR THE DOOR OPENINGS LISTED TO ENSURE ROUGH OPENING CORRESPONDS WITH MASONRY BLOCK COURSES.			



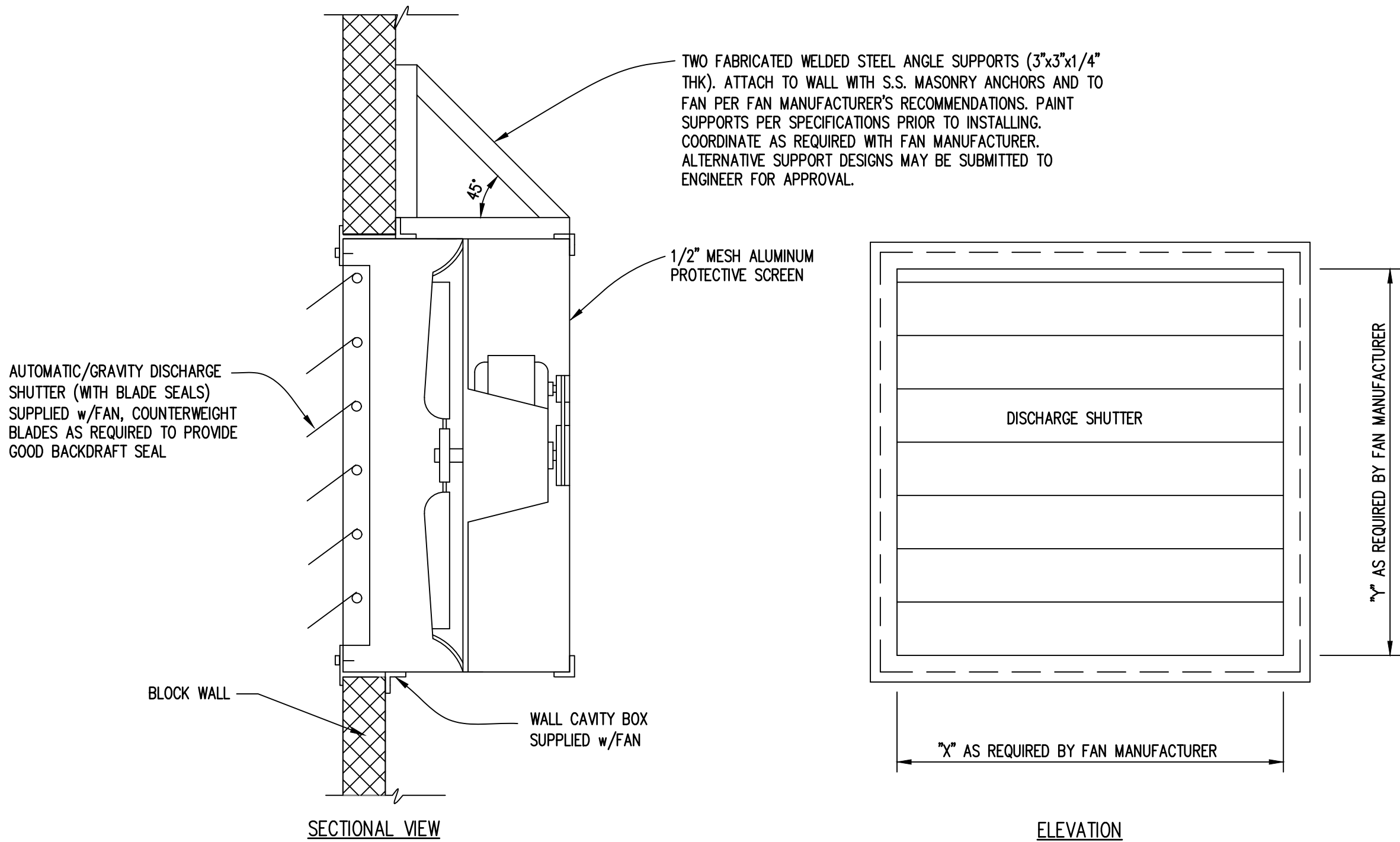
TYPICAL DOOR ELEVATIONS
NTS



SEAL DETAIL (A)
SCALE: N.T.S.

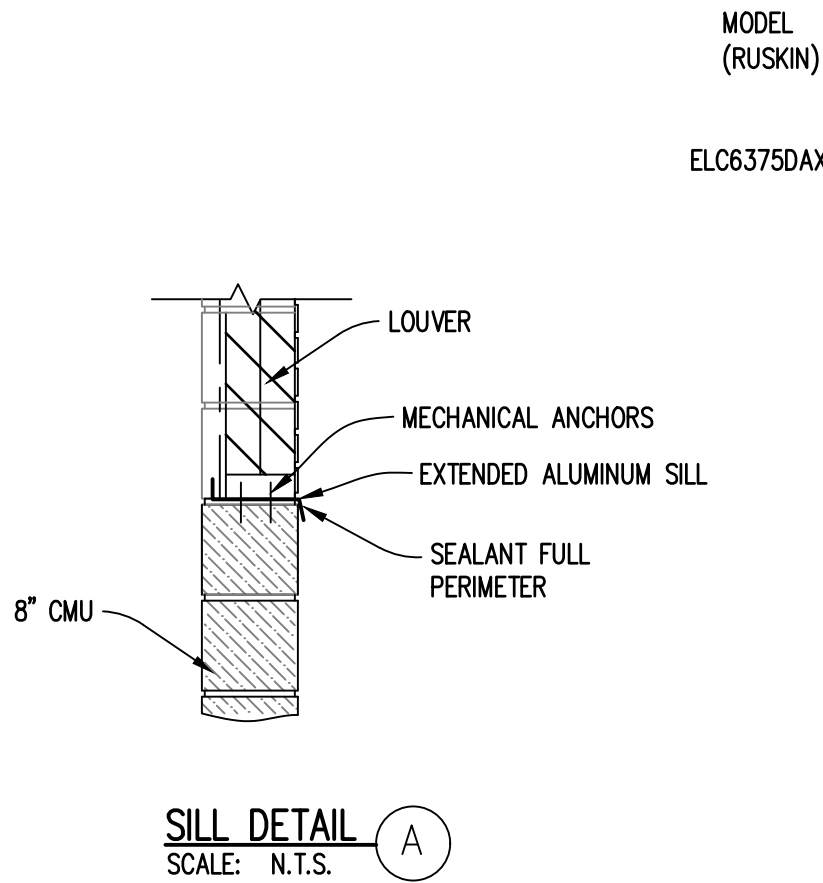
NOTE: HEAD, JAMB, AND SILL DETAILS ARE TYPICAL. WHEN MANUFACTURER'S RECOMMENDED INSTALLATION DETAILS ARE MORE STRINGENT THAN THOSE SHOWN, MANUFACTURER'S STANDARDS SHALL APPLY.

EXHAUSTER SCHEDULE									
NOTE: 1) CONTRACTOR IS TO VERIFY ALL OPENING SIZES WITH MANUF.									
DESIGNATION	ROUGH OPENING DIMENSIONS	TYPE/DESCRIPTION	LINTEL	CFM	S.P. IN W.C.	VOLTS/ PHASE	MIN. HP	FINISH COLOR	COMMENTS/ NOTES
EF1 & EF2	38" x 38"	LOREN COOK MODEL APB(30P88) OR EQUAL (DISCHARGE SHUTTER TO HAVE BLADE AND JAMB GASKETS/SEALS)	SEE STRUCTURAL	4600	0.20	240/1	0.75	DARK BRONZE	ALL STEEL FAN COMPONENTS SHALL HAVE AN ELECTROSTATICALLY BAKED POLYESTER POWDER COATING. COATING SHALL BE APPLIED BY FAN MANUFACTURER. FINISH COLOR TO MATCH DOORS.

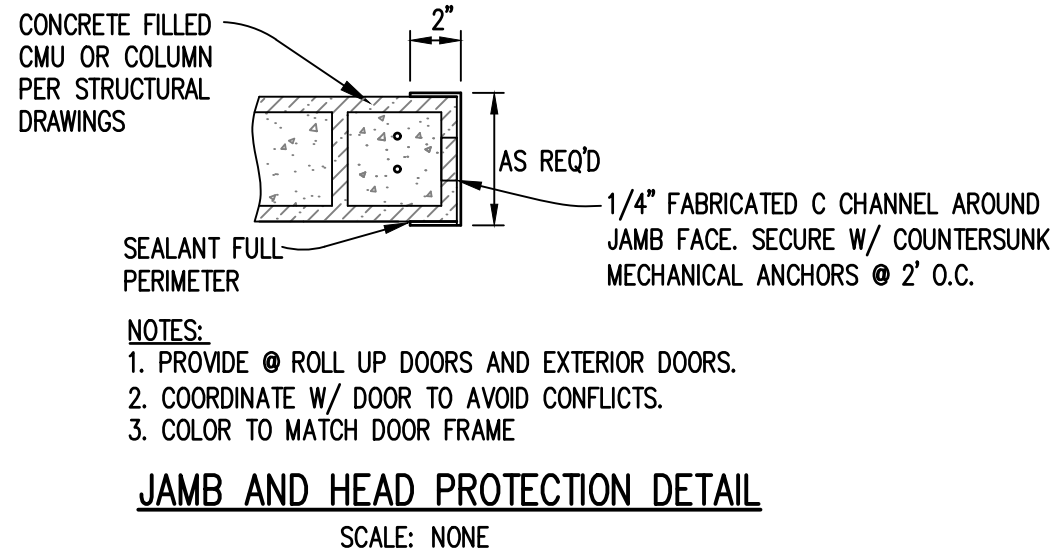


DETAIL - WALL VENTILATOR WITH DISCHARGE SHUTTER
SCALE: NONE

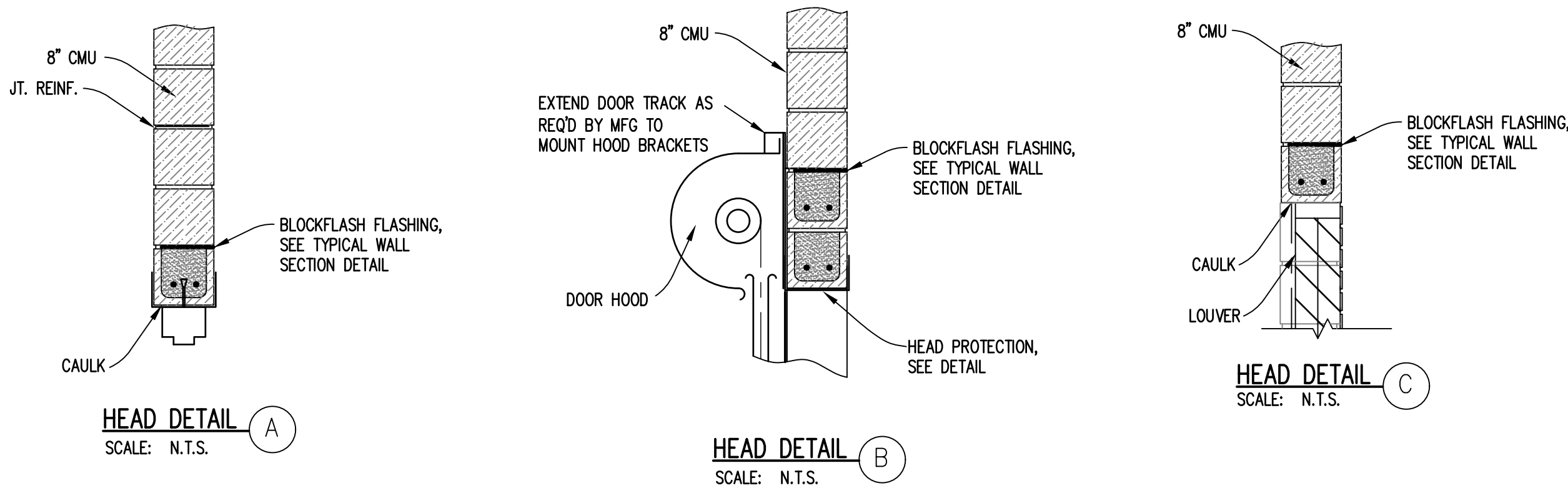
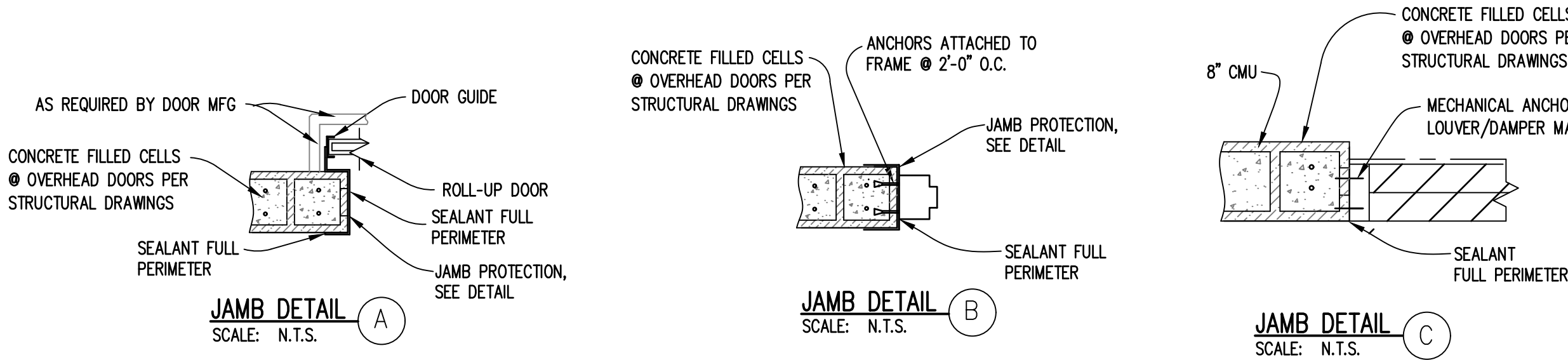
DESIGNATION	ROUGH OPENING DIMENSIONS* W X H	DESCRIPTION	MODEL (RUSKIN)	ACTUATOR	FINISH/COLOR (RUSKIN)	HEAD/JAMB/SILL	LINTEL	REMARKS
L1 AND L2	40"(W) x 72"(H)	ALUMINUM COMBINATION LOUVER/DAMPER ASSEMBLY	LOUVER: ELF2110 DAMPER: TED50 (INSULATED)	ELECTRIC 120V, 1 PH	K'YNAR 500/ DARK BRONZE	C/C/A	SEE STRUCTURAL	PROVIDE EXTENDED ALUMINUM SILLS WITH END DAMS. ANCHOR LOUVER ASSEMBLY FIRMLY ON ALL SIDES & WEATHERPROOF. PROVIDE ELECTRIC 120VAC ACTUATORS ON EACH LOUVER ASSEMBLY. FRAME-STYLE INSULATED DAMPER TO BE BOLTED TO LOUVER FRAME - ASSEMBLED BY MANUF.
NOTES: PROVIDE REMOVABLE INTERIOR INSECT SCREENS ON ALL LOUVER ASSEMBLIES. CONTRACTOR IS TO ENSURE THAT LOUVERS DO NOT INTERFERE w/OTHER ITEMS OF WORK								* FIELD VERIFY ALL LOUVER OPENING DIMENSIONS
LOUVER SCHEDULE								



SILL DETAIL (A)
SCALE: N.T.S.



JAMB AND HEAD PROTECTION DETAIL
SCALE: NONE



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NORTH-SOUTH CONNECTOR
CONTROL VALVE STATION

2026

ALABAMA
REGISTERED PROFESSIONAL ENGINEER
NO. 74054
CHRIS L. DENNIS
7-15-26

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DETAILS

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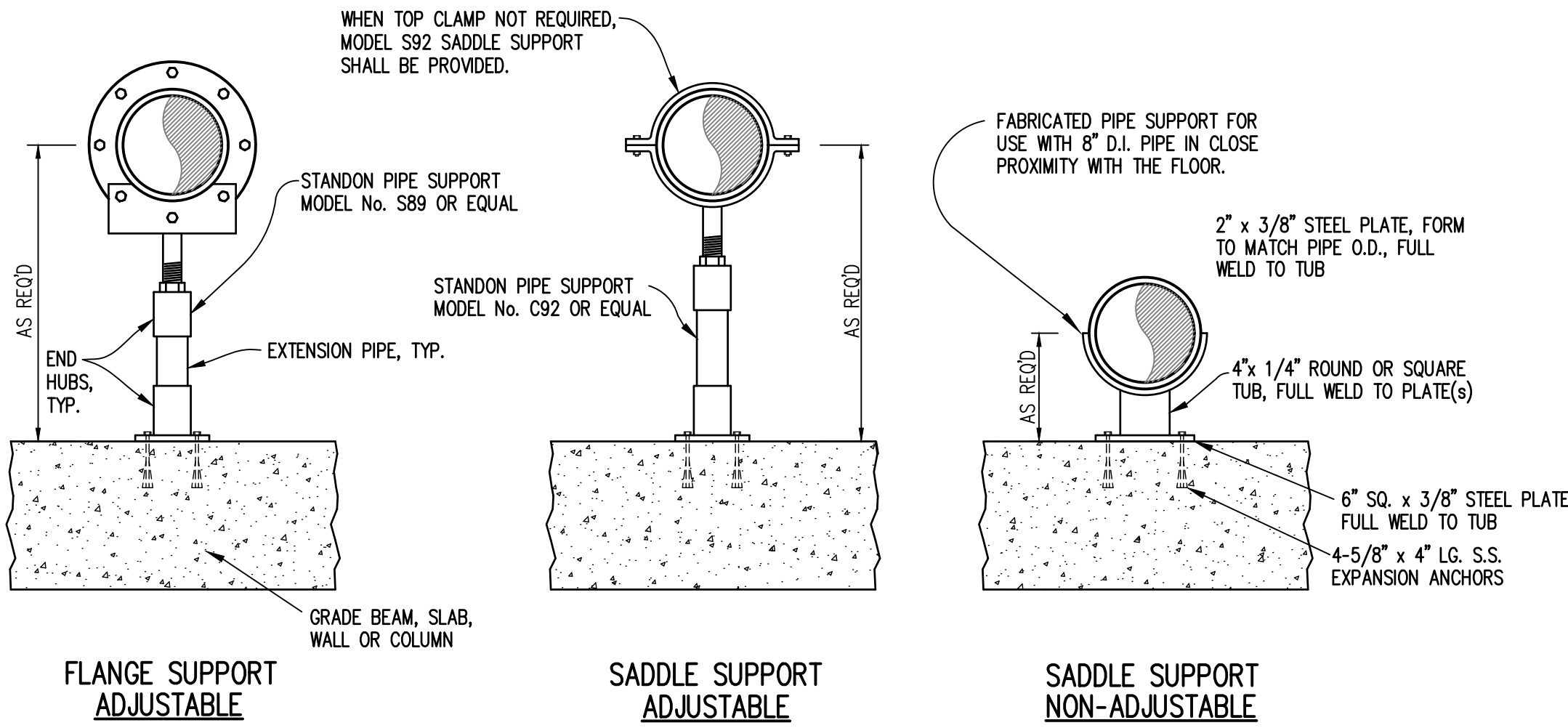
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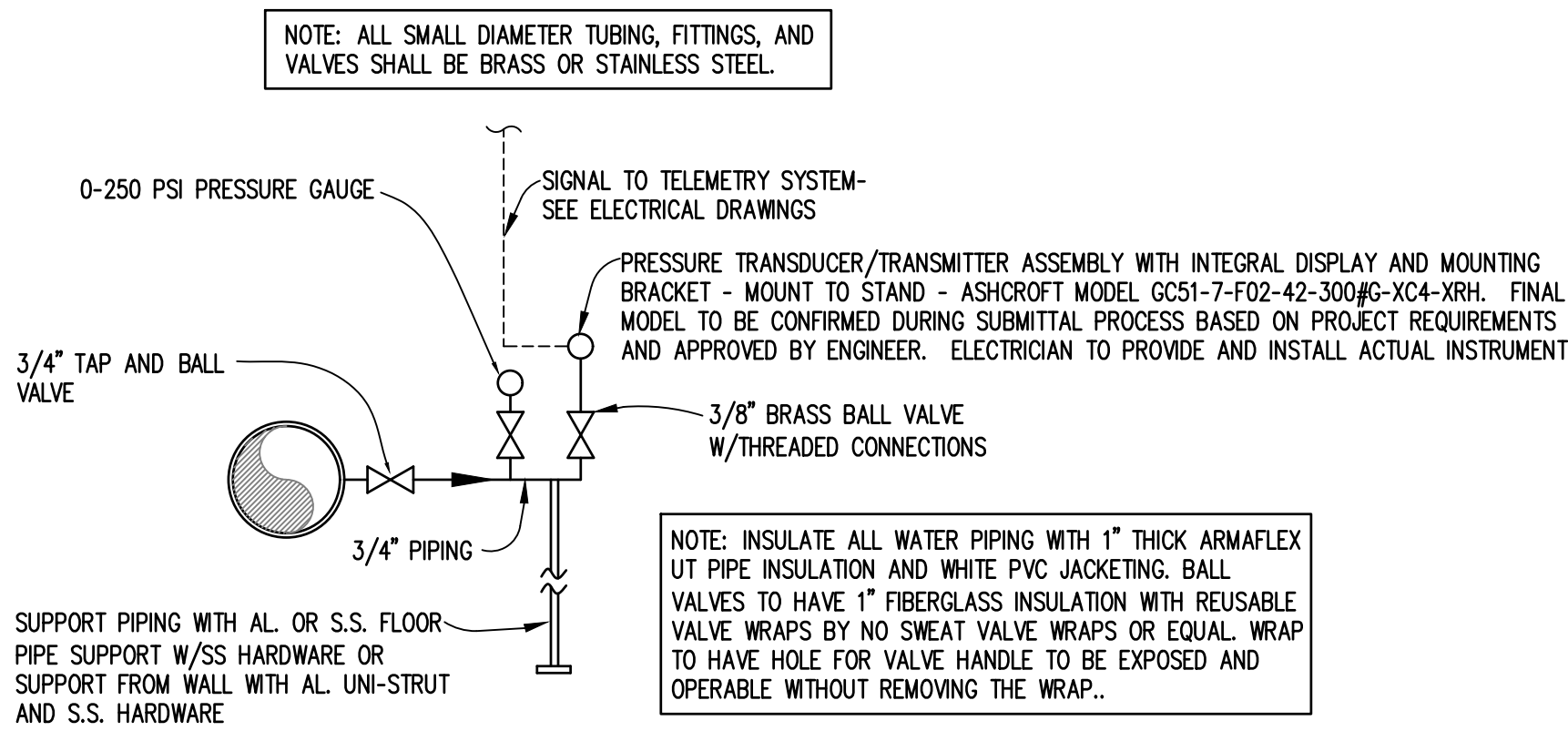
8

- NOTES:
- PIPE SUPPORT ASSEMBLIES INTERIOR TO A BUILDING SHALL BE STEEL, HOT DIPPED GALVANIZED AFTER FABRICATION, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. THE COMPLETE ASSEMBLY SHALL BE HOT DIPPED GALVANIZED AFTER ALL WELDING OF THE END HUBS TO THE EXTENSION PIPE HAS BEEN COMPLETED. ADJUSTABLE PIPE SUPPORTS SHALL BE FIELD ADJUSTED AFTER INSTALLATION USING THE THREADED ROD PORTION OF THE ASSEMBLY. ONCE FINAL ADJUSTMENT IS MADE IN THE FIELD, PROVIDE DOUBLE LOCKNUT ON THREADED ROD. ANY FIELD MODIFICATIONS REQUIRED IN THE FIELD WHICH DAMAGE THE GALVANIZING SHALL BE FIELD GALVANIZED IMMEDIATELY.
 - PIPE SUPPORT ASSEMBLIES LOCATED OUTSIDE SHALL BE STAINLESS STEEL UNLESS INDICATED OTHERWISE. PIPE SUPPORTS IN SEWAGE LIFT STATIONS, VAULTS, OR PITS (I.E., WET/HUMID & CORROSIVE CONDITIONS) SHALL BE STAINLESS STEEL UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
 - FOR SUPPORTS RESISTING ONLY DEAD WEIGHT, WELDING OF THE EXTENSION PIPE TO THE END HUBS SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS AND GENERALLY CONSIST OF TACK WELDS. FOR PIPE SUPPORTS RESISTING UPLIFT, PROVIDE FULL PERIMETER FILLET WELDS AROUND THE FULL PERIMETER OF THE EXTENSION PIPING AT BOTH END HUBS. ALL WELDING SHALL UTILIZE COMPATIBLE WELDING RODS AND BE PER THE PIPE SUPPORT MANUFACTURER'S RECOMMENDATIONS.
 - EXTENSION PIPE MATERIAL AND WALL THICKNESS SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS TO EQUAL THE LOAD CAPACITY OF THE SUPPORT ASSEMBLIES.
 - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR SUPPORTS PRIOR TO ORDERING MATERIALS/FABRICATION.



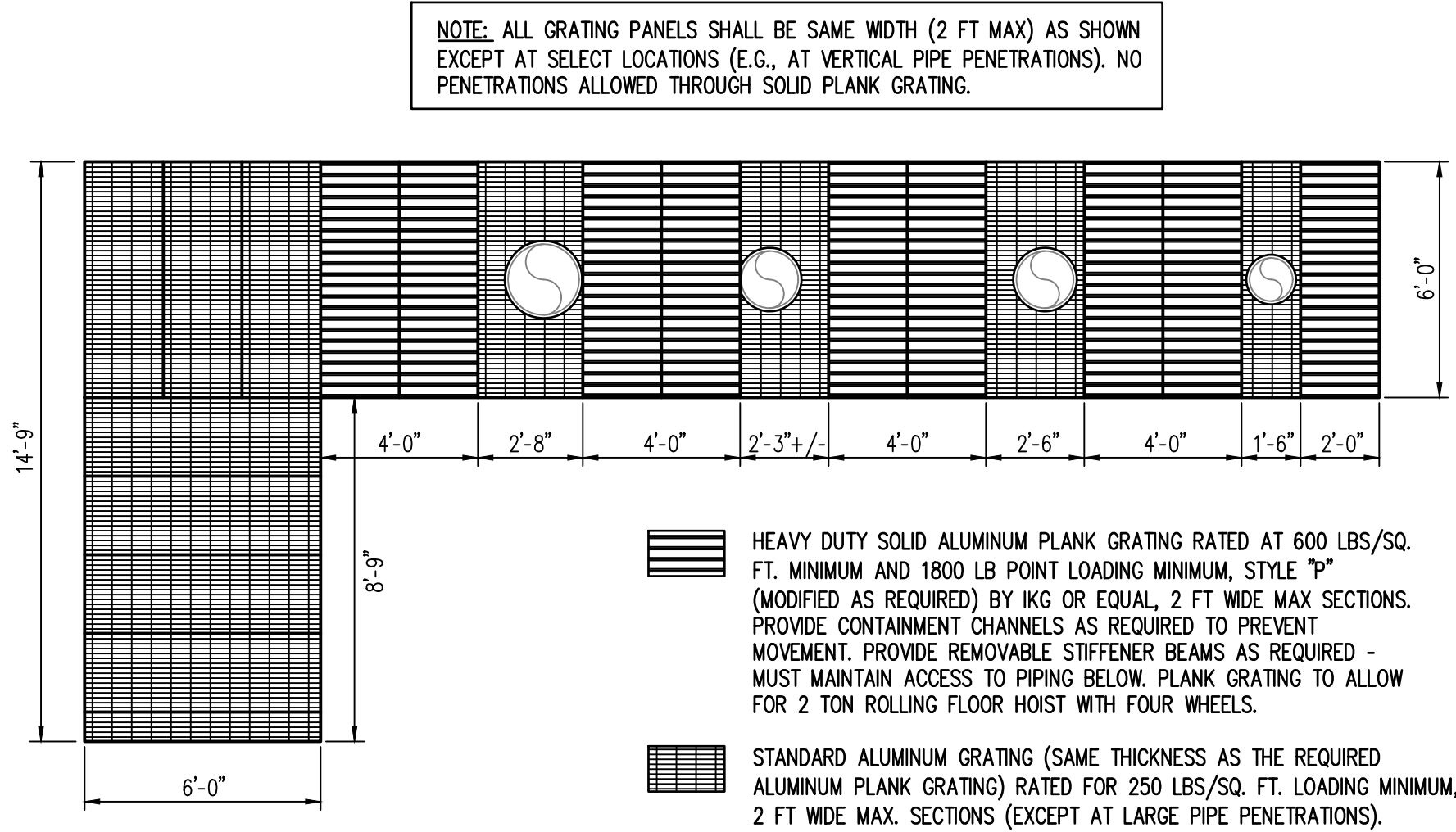
FLOOR MOUNTED PIPE SUPPORT DETAIL

SCALE: N.T.S.



PRESSURE TRANSDUCER ASSEMBLY DETAIL

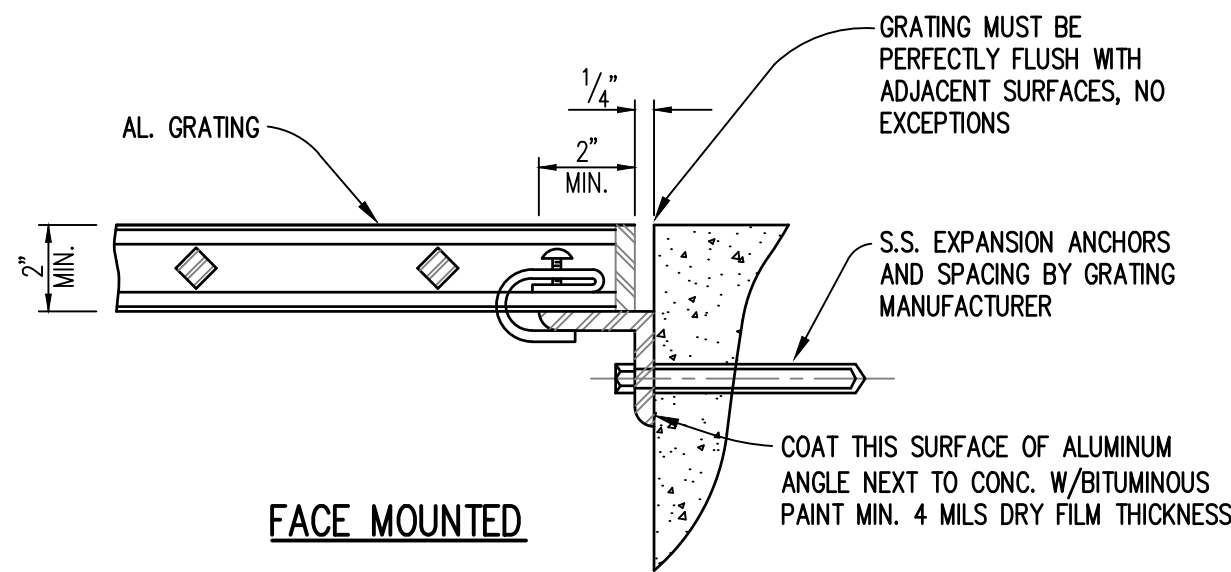
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NOTE: THE GRATING SUPPLIER SHALL PROVIDE AN OVERALL GRATING SYSTEM DESIGN THAT IS MODULAR IN NATURE SUCH THAT THE HEAVY DUTY, SOLID ALUMINUM PLANK SECTIONS ARE INTERCHANGEABLE WITH THE STANDARD ALUMINUM GRATING SECTIONS SHOWN ON THE LEFT SIDE OF THE GRATING PLAN ABOVE. THIS SHALL ALLOW THE OWNER TO REARRANGE THE HEAVY DUTY GRATING TO OTHER LOCATIONS IF NEEDED. THE LOAD RATING OF THE GRATING PANELS SHALL BE MAINTAINED REGARDLESS OF LOCATION. NO SUPPORT COLUMNS ALLOWED. ANY REQUIRED SUPPORT BEAMS SHALL BE SUPPORTED BY SMALL BEAM POCKETS OR OTHER MEANS THAT WILL ALLOW FOR EASY REMOVAL OF THE BEAMS FOR ACCESS TO THE PIPING BELOW. COORDINATE OVERALL DESIGN WITH ENGINEER DURING THE SUBMITTAL PROCESS.

GRATING LAYOUT DETAIL

SCALE: N.T.S.



NOTES:

- GRATING TO BE FURNISHED IN PIECES SIZED FOR EASY HANDLING. ALL CUT OPENINGS TO BE Banded.
- ALL GRATING & FRAMES TO BE ALUM. ALLOY 6063-T6.
- ALL SUPPORTS OF GRATING TO BE ALUMINUM STOCK I-BEAMS ANGLES ETC. ATTACHED WITH STAINLESS STEEL HARDWARE. GRATING SUPPORT SHALL BE DESIGNED & PROVIDED BY GRATING SUPPLIER WITH A DEFLECTION NOT EXCEEDING 1/240 OF THE SPAN OR 1/4 INCH BASED ON THE SPECIFIED DESIGN LOADINGS. SEE GRATING LAYOUT DETAIL FOR STYLE OF GRATING REQUIRED.

ALUMINUM GRATING INSTALLATION

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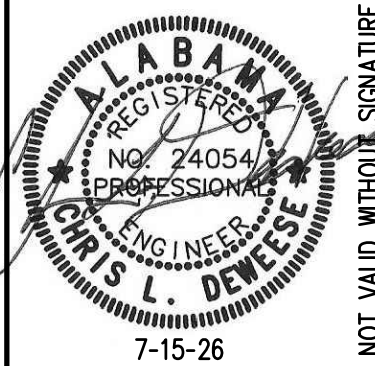
Municipal Consultants, Inc.
200 Cahney Park South, Suite 212
Birmingham, Alabama 35226
(205) 822-0387

SHELBY COUNTY COMMISSION

NORTH-SOUTH CONNECTOR

PHASE 1

2026



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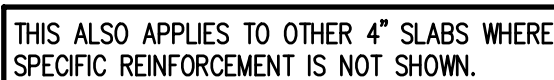
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Project No.	DETAILS				
Date				7 – 2026	
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1. POURED JOINT FILLER SIKA-FLEX 2C SL (SELF LEVELING) OR EQUAL TO BE FLUSH w/ ADJOINING PAVING. COLOR TO MATCH FINISH COLOR OF PAVING.
2. SAWCUT PER ACI 302.1R.
3. USE POSITIVE REFERENCE TO LOCATE JOINT IN PAVING.

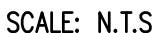
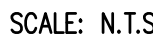


5. PROVIDE CONSTRUCTION JOINT FILL MATERIAL AS SPECIFIED ABOVE AT ALL LOCATIONS WHERE NEW CONCRETE PAVING IS POURED AGAINST EXISTING CONCRETE OR STRUCTURES.

SCALE: N.T.S



ALL SIDEWALKS AND ELEVATED WALKS TO HAVE
MEDIUM BROOM FINISH AND SLOPE TO DRAIN.



Municipal Consultants,

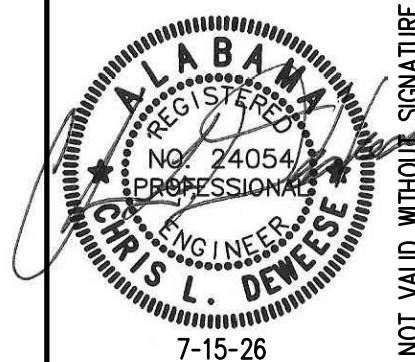
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NORTH-SOUTH CONNECTOR

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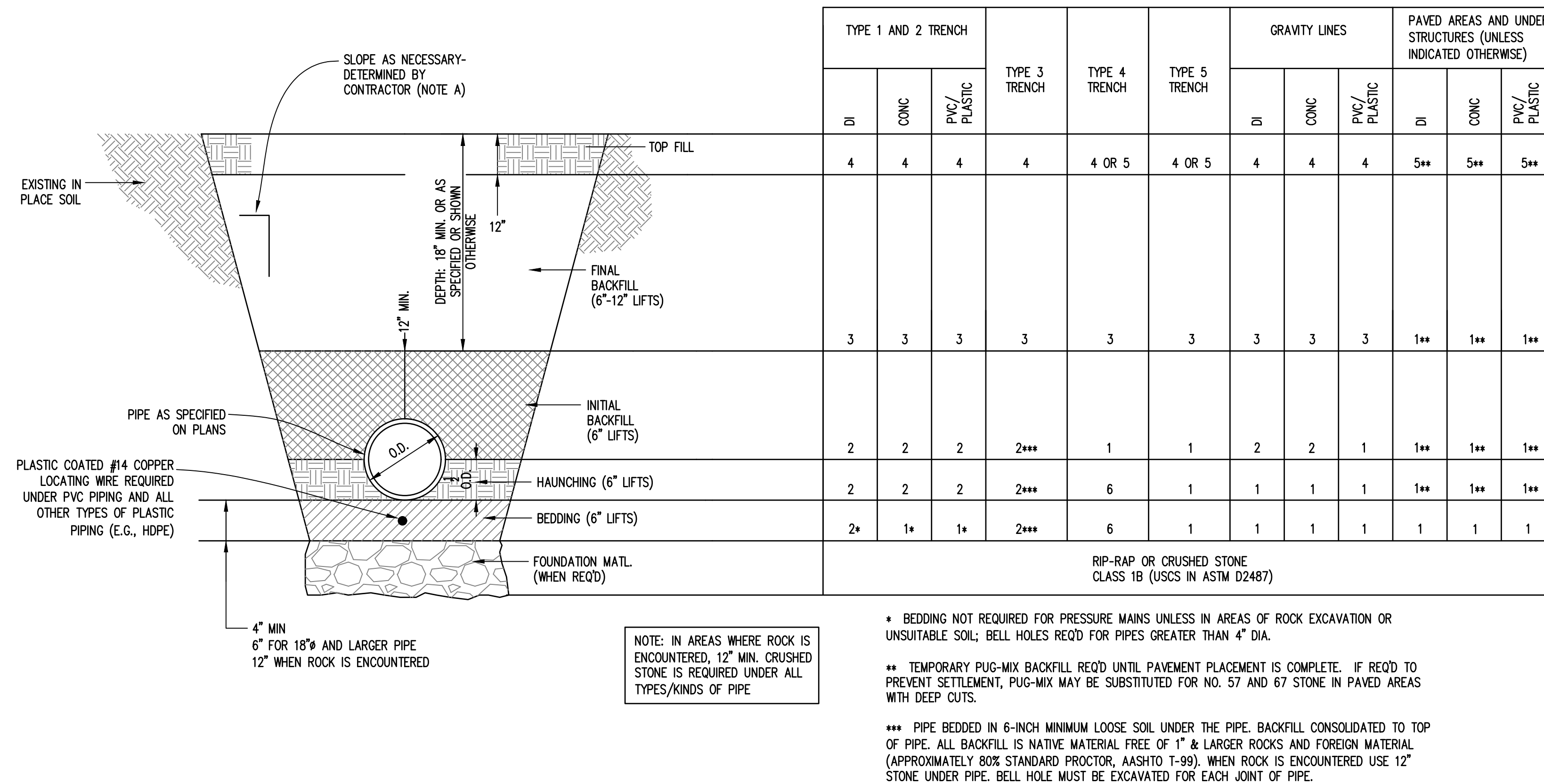
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<u>MATERIALS</u>	<u>DESCRIPTION</u>
1	CRUSHED STONE, ASTM-448 NO. 57 OR 67 GRADATION
2	SELECT EXCAVATED MAT'L REASONABLY DRY (WITHIN LIMITS REQ'D FOR COMPACTION) NO STONES GREATER THAN 1" DIA.
3	EXCAVATED MAT'L REASONABLY DRY (WITHIN LIMITS REQ'D FOR COMPACTION) NO STONES GREATER THAN 12" DIA.
4	SELECT TOPSOIL MAT'L TO SUPPORT VEGETATION, NO STONES GREATER THAN 1/2" DIA.
5	CRUSHED STONE, MOIST "PUG-MIX" PER ALDOT SECTION 825
6	IMPORTED FILL FROM BORROW PIT

STANDARD NOTES:

A. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE OSHA REGULATIONS FOR "OPEN TRENCH EXCAVATIONS".

B. ALL MATERIALS UNDER PAVED AREAS AND UNDER STRUCTURES SHALL BE COMPACTED TO MINIMUM 98% STANDARD PROCTOR DENSITY UNLESS INDICATED OTHERWISE. ALL MATERIALS IN OTHER AREAS (I.E. NOT UNDER PAVED AREAS OR UNDER STRUCTURES) SHALL BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR DENSITY AT 2%± OPTIMUM MOISTURE CONTENT TO PREVENT SETTLEMENT, UNLESS STATED OTHERWISE.

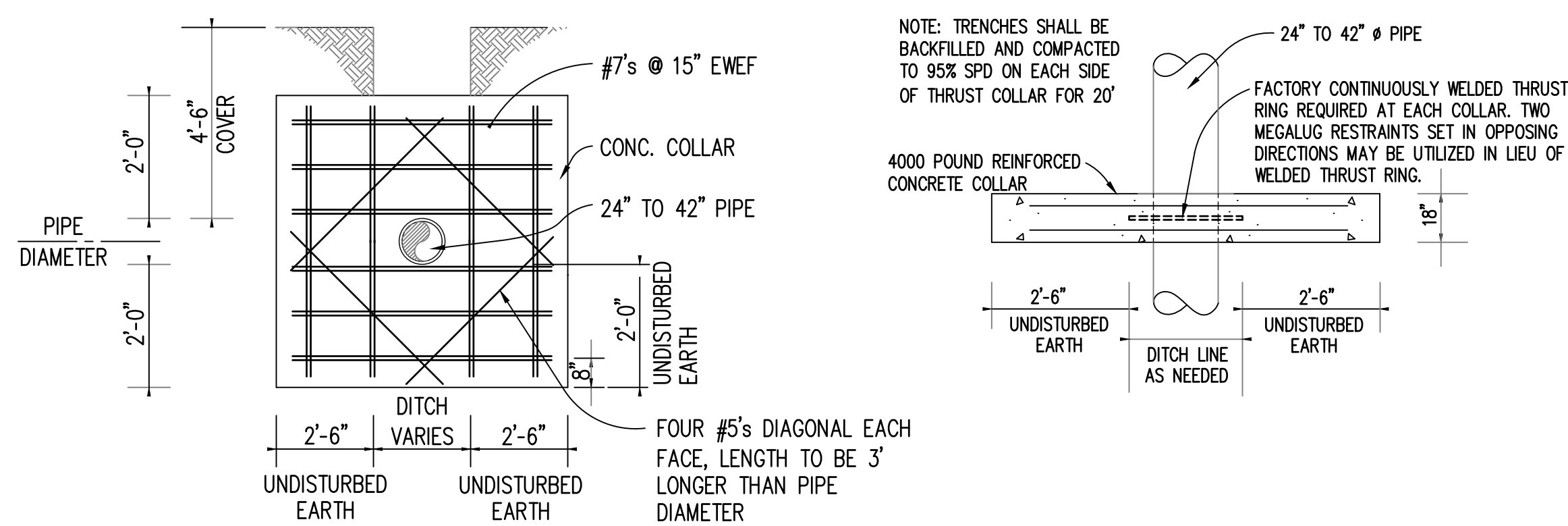
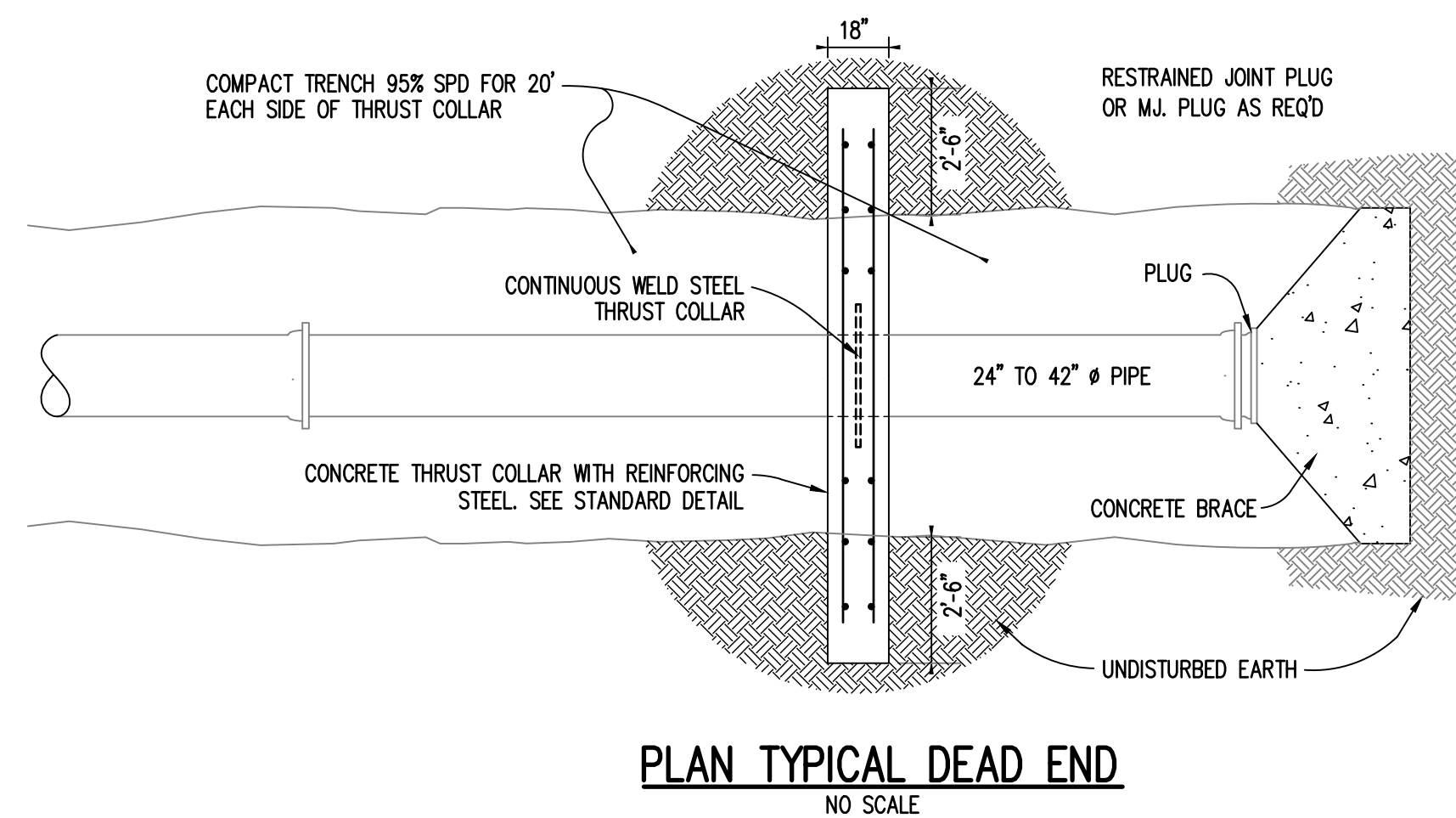
JOB SPECIFIC NOTES

A. FOR ALL PIPE, A TYPE 3 PIPE TRENCH IS REQUIRED EXCEPT IN PAVED AREAS OR IF SPECIFIED OTHERWISE. IN ALL AREAS WHERE DEPTH OF COVER EXCEEDS 15 FEET, A TYPE 4/5 TRENCH IS REQUIRED.

B. IF PIPE DEPTH IS INDICATED SUCH THAT TRENCH TYPE CHANGES FROM THAT SHOWN IN DRAWINGS (SEE PREVIOUS NOTES), THE CONTRACTOR SHALL USE THE CORRECT TRENCH AT NO ADDITIONAL COST TO THE OWNER.

BEDDING AND BACKFILL FOR TRENCHES DETAIL

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THRUST COLLAR AND ANCHOR

SHELBY COUNTY COMMISSION

NORTH-SOUTH CONNECTOR

PHASE 1

2026



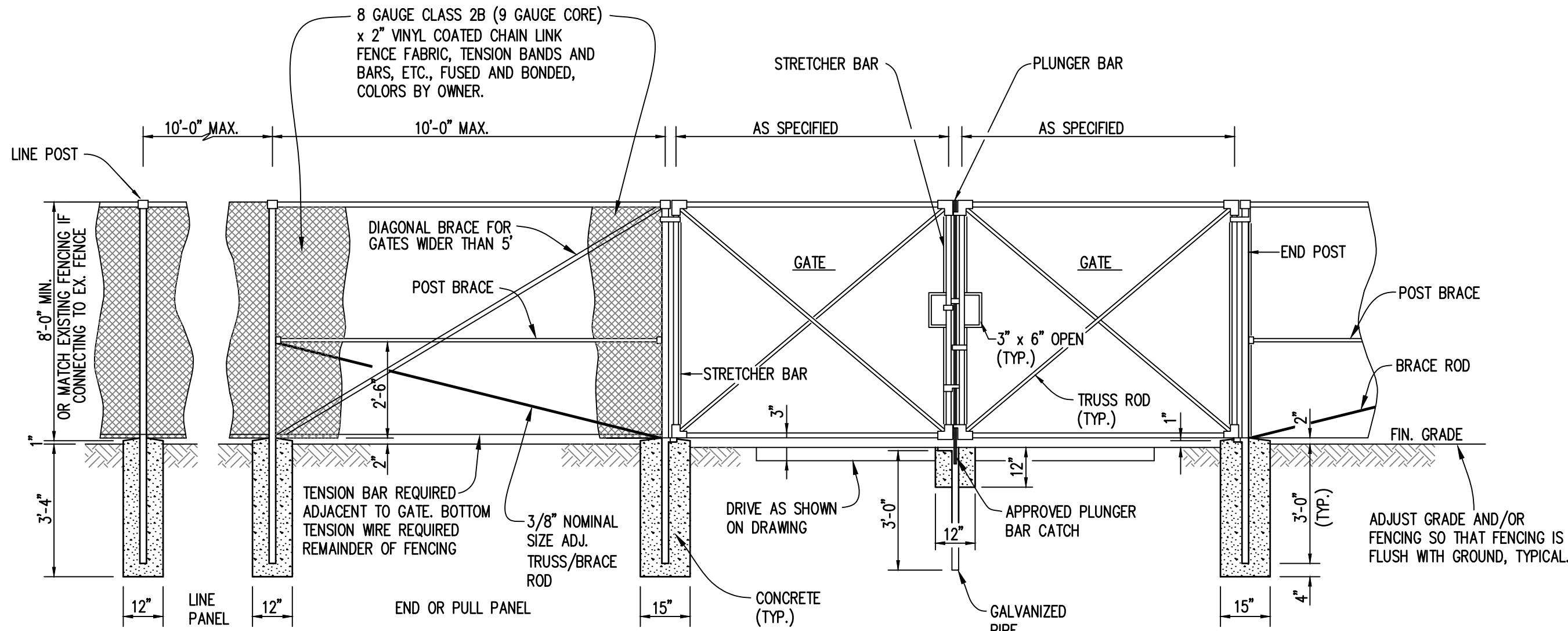
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TIE ROD SCHEDULE		
TEST PRESSURE	250 PSI OR LESS	
	TIE RODS	
PIPE DIA. (IN.)	DIA. (IN.)	NO. REQ'D
6	3/4	2
8	3/4	2
10	3/4	4
12	3/4	4
14	3/4	4
16	3/4	4
18	3/4	4
20	3/4	5
24	3/4	7
30	1	7
36	1	10
42	1-1/4	10
48	1-1/4	12

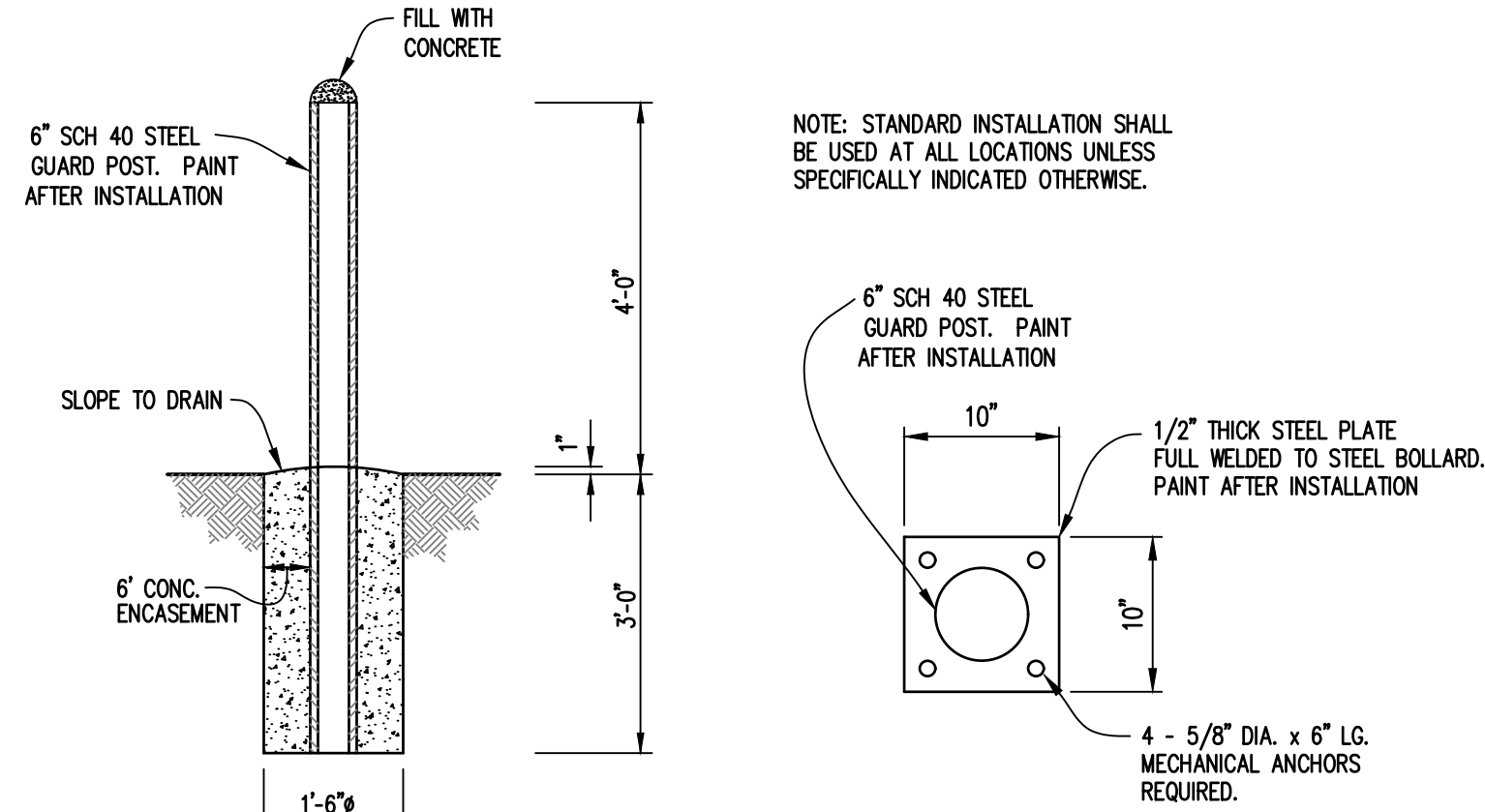
NOTES:

1. TIE RODS SHALL CONFORM TO ASTM A193 GRADE B7 AND NUTS SHALL CONFORM TO ASTM A194 GRADE 2H.



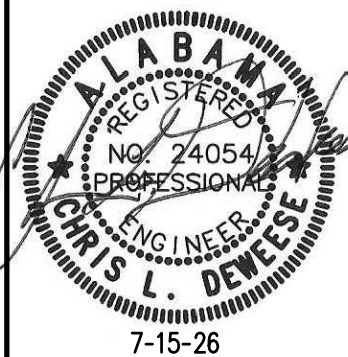
TYPE "A" CHAIN LINK FENCE DETAIL

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BOLLARD OR GUARD POST DETAIL

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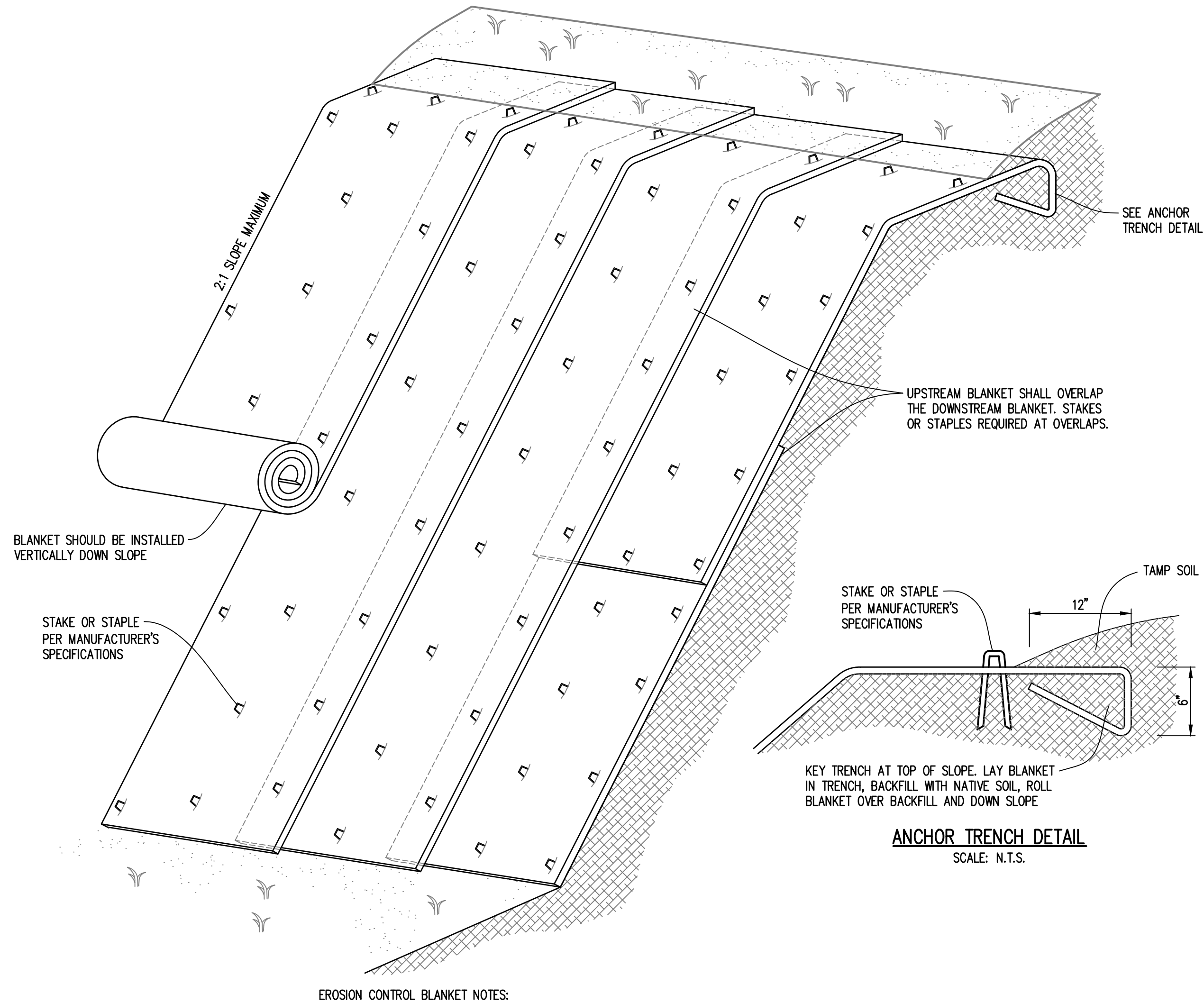
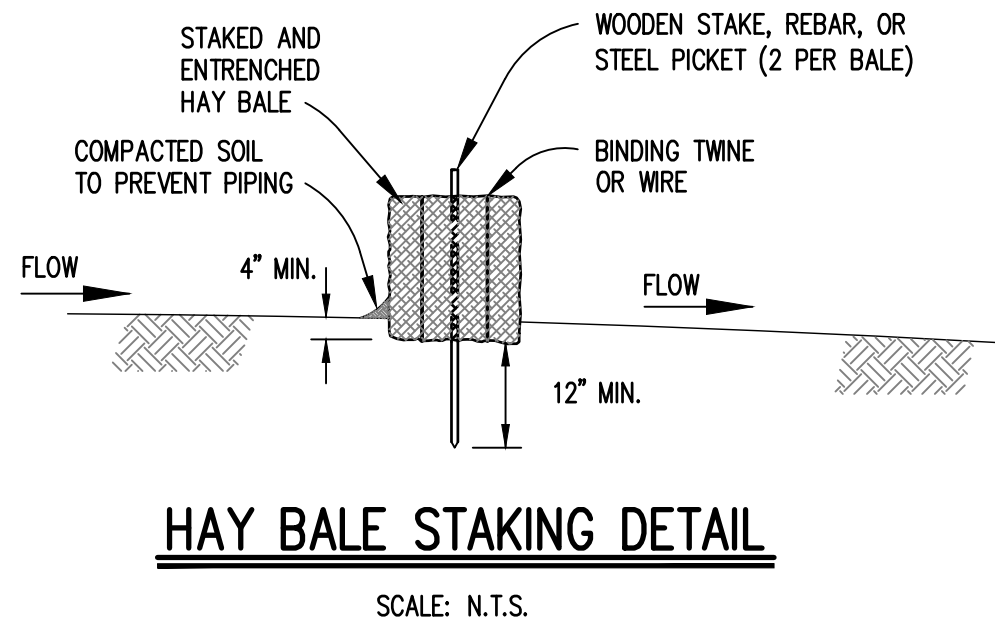
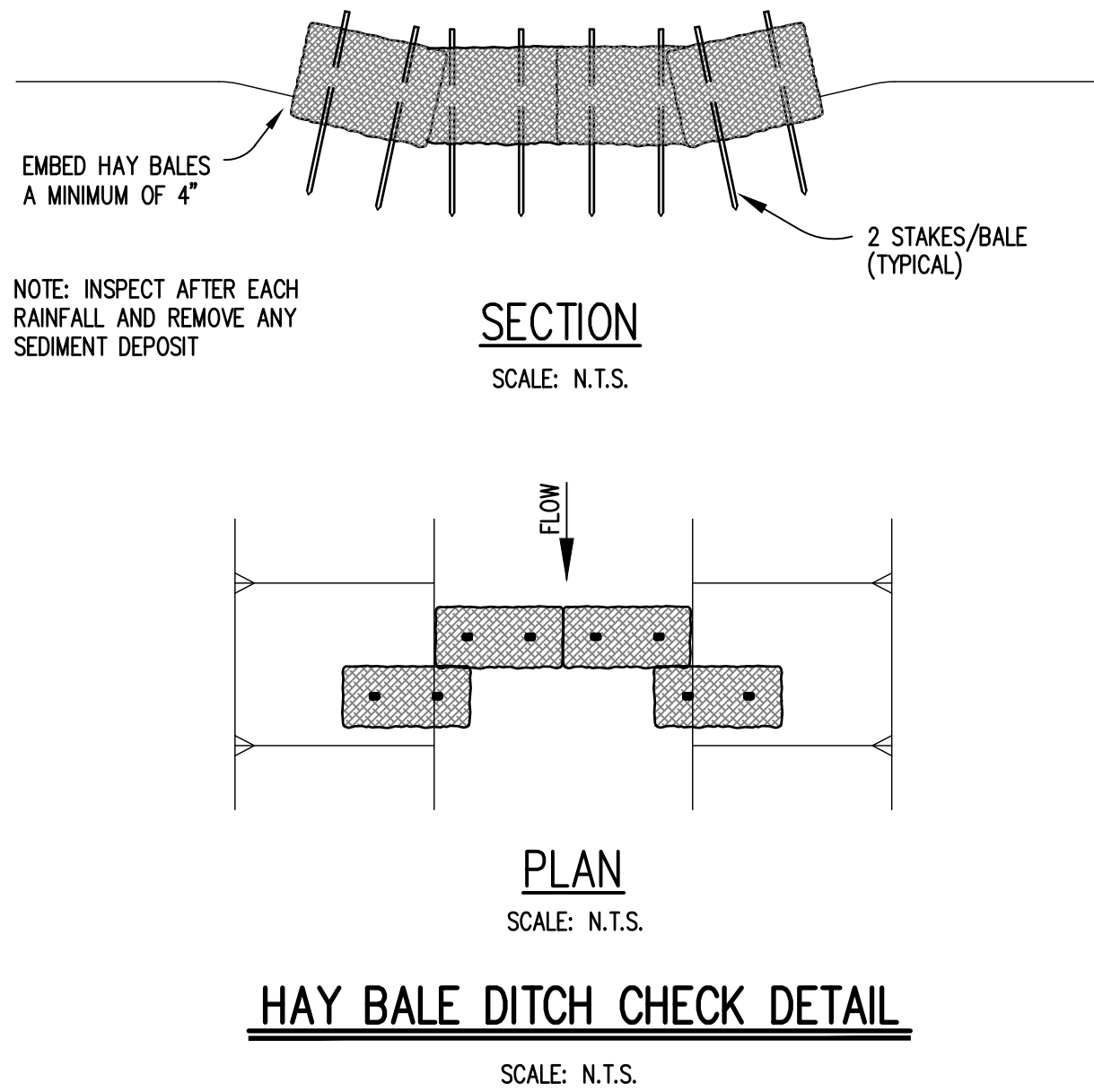
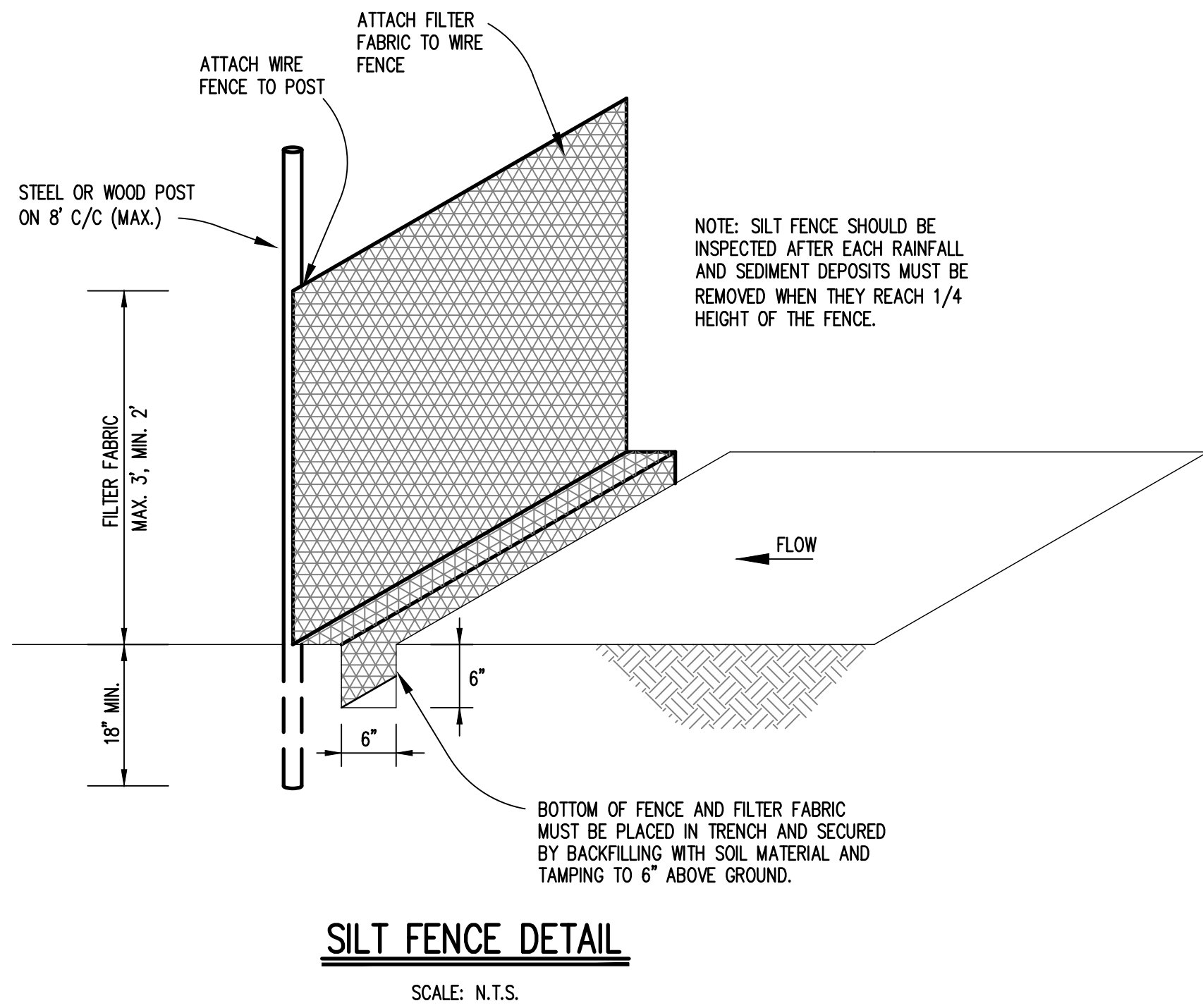
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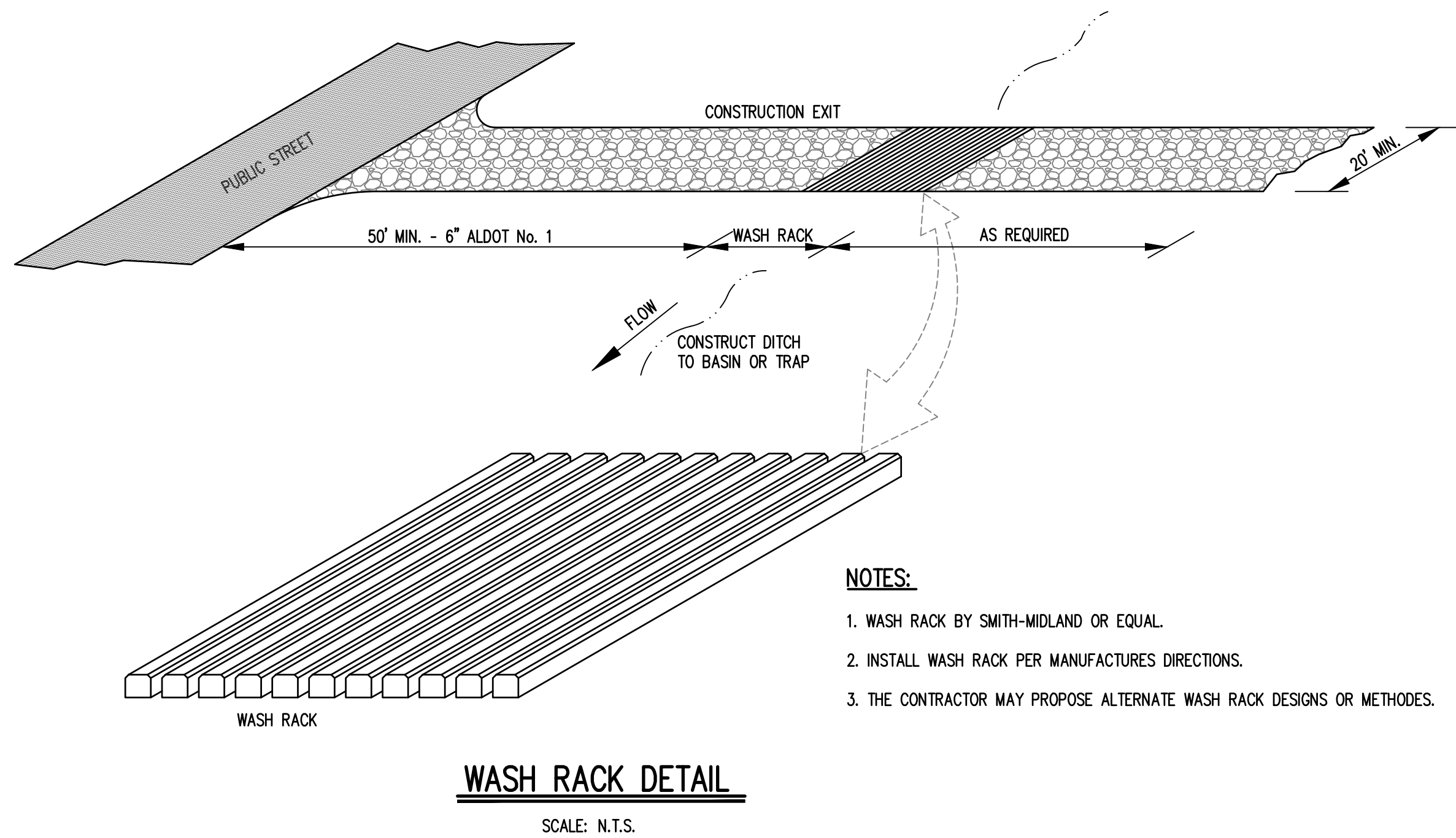
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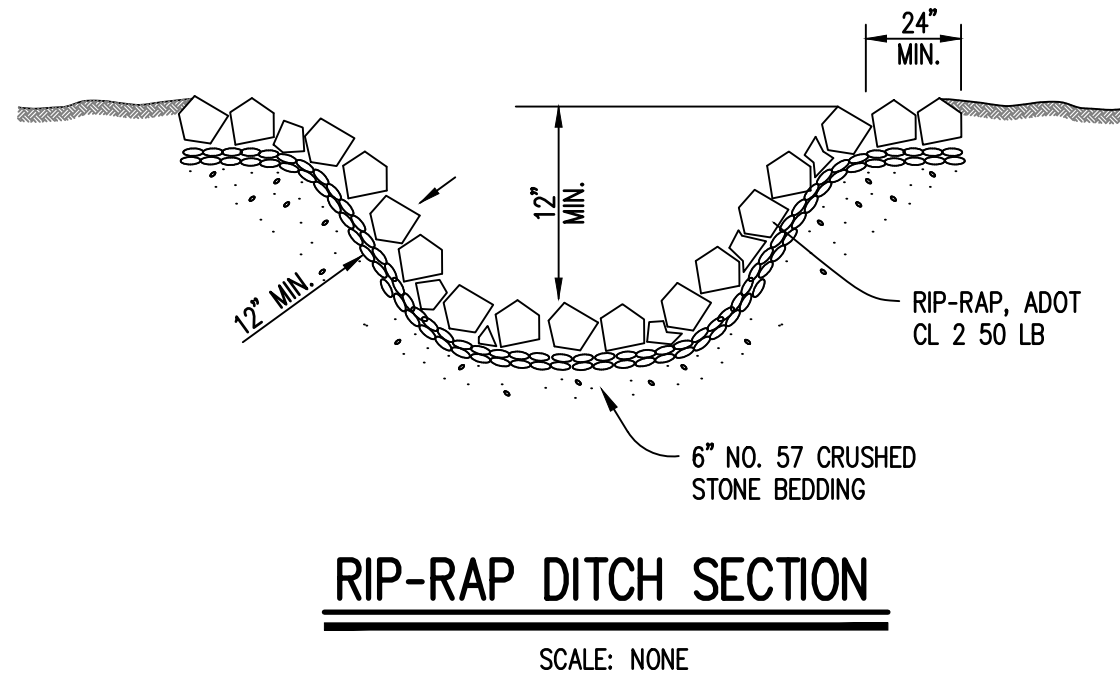
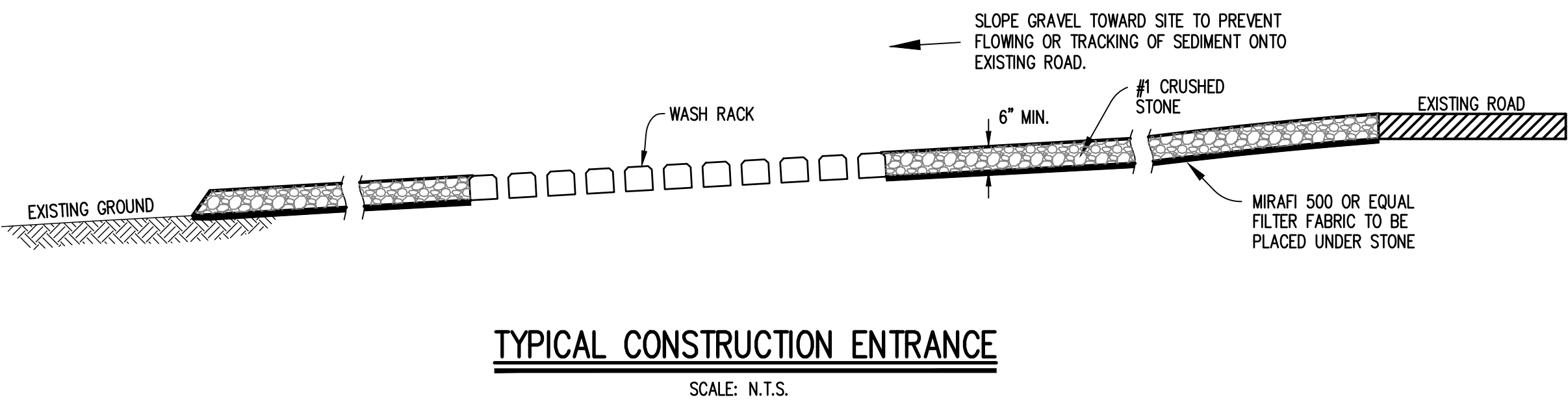
Sheet 12



- EROSION CONTROL BLANKET NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS AND OTHER DEBRIS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT. SCARIFY AND/OR TILL SLOPE SURFACE 12" DEEP BEFORE LAYING BLANKET.
 2. LAY BLANKETS LOOSELY AND STAKE OR STAPLE AS NEEDED TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH OR TWIST.
 3. HAND WALK BLANKET DOWN SLOPE AS BLANKET IS STAKED OR STAPLED TO PREVENT STRETCHING.
 4. DO NOT WALK ON BLANKET ONCE IN PLACE.
 5. ALL ANCHORS SHALL BE INSTALLED PERPENDICULAR TO SLOPE.



- NOTES:
1. WASH RACK BY SMITH-MIDLAND OR EQUAL.
 2. INSTALL WASH RACK PER MANUFACTURES DIRECTIONS.
 3. THE CONTRACTOR MAY PROPOSE ALTERNATE WASH RACK DESIGNS OR METHODES.



BMP GENERAL NOTES:

- THE FOLLOWING REQUIREMENTS ARE TO BE CONSIDERED MINIMUM STANDARDS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, CODES AND REGULATIONS. THE CONTRACTOR, WHERE NEEDED, SHALL OBTAIN AN NPDES PERMIT FOR THE PROPOSED WORK AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM). BY BIDDING THE PROJECT, THE CONTRACTOR IS CERTIFYING THAT IF AWARDED THE CONTRACT, HE WILL BE THE SOLE PERMITEE ON THIS PERMIT AND THAT HE SHALL INDEMNIFY THE OWNER AGAINST AND SHALL BE SOLELY RESPONSIBLE FOR ANY FINES OR MONETARY DAMAGES ASSOCIATED WITH STORMWATER RUNOFF AND CONTROL.
1. THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) FOR THE PREVENTION AND CONTROL OF NONPOINT SOURCES OF POLLUTANTS DURING AND AFTER PROJECT IMPLEMENTATION. THE CONTRACTOR, AT A MINIMUM, MUST IMPLEMENT BMP'S AS PROVIDED IN THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL & STORMWATER MANAGEMENT ON CONSTRUCTION SITES & URBAN AREAS, AS AMENDED, AND THE EPA STORMWATER POLLUTION PREVENTION FOR CONSTRUCTION ACTIVITIES-DEVELOPING POLLUTION PREVENTION PLANS AND BEST MANAGEMENT PRACTICES, AS AMENDED. THE EROSION CONTROL DEVICES SHOWN ON THIS PLAN ARE A MINIMUM. ADDITIONAL DEVICES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER AS REQD TO PREVENT SILTATION, EROSION, & OTHER DEGRADATION OR POLLUTION TO SITE OR ADJACENT PROPERTIES, STREAMS, DITCHES, PUBLIC ROADWAYS, ETC.
 2. SITE GRADING SHALL BE MAINTAINED SO THAT NO UPSLOPE DRAINAGE ENTERS EXCAVATED OR DISTURBED AREAS.
 3. TO THE EXTENT PRACTICAL, THE CONTRACTOR SHALL SCHEDULE HIS ACTIVITIES TO MINIMIZE THE AMOUNT OF AREA DISTURBED AT ANY ONE TIME.
 4. ALL STOCKPILE EXCAVATED MATERIAL SHALL BE GRASSED OR COVERED WITHIN 72 HOURS OF STOCKPILING. GRASSING AND FERTILIZATION OF STOCKPILED SOILS SHALL BE AS PER THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL & STORMWATER MANAGEMENT ON CONSTRUCTION SITES & URBAN AREAS. SEED RATES SPECIFIED IN THE MANUAL SHALL BE DOUBLED.

5. CONTRACTOR SHALL AS A MINIMUM INSPECT STORMWATER CONTROLS ONCE EVERY TWO WEEKS AND FOLLOWING A 1/2" OR GREATER RAINFALL IN ANY 24 HOUR PERIOD. SILT FENCING SHALL ALSO BE CHECKED WHEN WIND GUSTS EXCEED 25 MPH. DEFICIENCIES FOUND IN STORMWATER CONTROLS SHALL BE CORRECTED IMMEDIATELY. THE CONTRACTOR SHALL MAINTAIN A LOG OF ALL INSPECTION ACTIVITIES.
6. THE CONTRACTOR SHALL INSTALL SILT FENCING AROUND THE PROJECT PERIMETER PRIOR TO COMMENCING PROJECT. IN THE EVENT THAT THE PROJECT REQUIRES TEMPORARY CHANNELIZATION OF STORMWATER RUNOFF, THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN APPROPRIATE BMP CONTROLS (SETTLING BASINS, CHECK DAMS, ETC.)
7. PERMANENT VEGETATION OF ALL DISTURBED AREAS IS REQUIRED. ONCE ALL LAND DISTURBANCES HAVE CEASED & ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED, EROSION CONTROL DEVICES SHALL BE REMOVED.
8. THE CONTRACTOR SHALL REMOVE ANY SEDIMENT TRACKED ON PUBLIC ROADWAYS IMMEDIATELY.
9. ALL DISTURBED AREAS LEFT INACTIVE FOR LONGER THAN 13 DAYS SHALL BE TEMPORARILY GRASSED OR COVERED TO PREVENT EROSION.
10. PERMANENT TURF REINFORCEMENT MATS ARE REQUIRED ON ALL SLOPES 2:1 OR STEEPER, AS WELL AS ALL DITCH LINES & SIDES.
11. BMP MEASURES MAY BE SHOWN OUTSIDE OF CONSTRUCTION LIMITS AND/OR RIGHTS OF WAY FOR CLARITY. CONTRACTOR SHALL NOT INSTALL BMP'S BEYOND PROJECT BOUNDARIES.
12. CONTRACTOR IS RESPONSIBLE FOR THE RENEWAL OF ALL NPDES PERMITS AS REQUIRED FOR THE PROJECT.

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GENERAL NOTES:

1.

CONTRACTOR SHALL COORDINATE BETWEEN ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER DRAWINGS:
- A.

ANY DISCREPANCIES OR CONFLICTS BETWEEN DRAWINGS OF DIFFERENT DISCIPLINES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCH/ENG. CONTRACTOR SHALL NOT PROCEED WITH SHOP DRAWING PREPARATION OR ANY CONSTRUCTION UNTIL THE ARCHITECT/ENGINEER HAS GIVEN DIRECTION OF RESOLUTION FOR THE DISCREPANCY OR CONFLICT.
- B.

NOT ALL OPENINGS AND OTHER COMPONENTS THAT ARE REQUIRED HAVE BEEN SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE AND VERIFY THE LOCATIONS AND SIZES OF CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS AT FLOORS, WALLS, AND ROOFS BETWEEN DRAWINGS OF DIFFERENT DISCIPLINES.
2.

IN THE CASE OF INCONSISTENCIES BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT, A BIDDER WILL BE DEEMED TO HAVE INCLUDED IN ITS BID THE BETTER QUALITY OR GREATER QUANTITY OF THE WORK INVOLVED UNLESS THE BIDDER ASKED FOR AND OBTAINED THE ARCHITECT/ENGINEER'S WRITTEN CLARIFICATION OF THE REQUIREMENTS BEFORE SUBMISSION OF BID.
3.

ALL DIMENSIONS SHOWN TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS, AND DETAILS. DO NOT SCALE THE DRAWINGS.
4.

THE DETAILS PROVIDED ON SHEETS LABELED AS "TYPICAL DETAILS" APPLY GENERALLY TO THE DRAWINGS IN AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAILS, UNLESS NOTED OTHERWISE.
5.

ALL OF THE CONTRACTOR'S PROPOSED SUBSTITUTIONS ARE CONSIDERED CHANGE ORDERS AND SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW AND/OR APPROVAL PRIOR TO ANY PERTINENT WORK OR FABRICATION.
6.

CONSTRUCTION METHODS, PROCEDURES AND SEQUENCES ARE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL TAKE ALL THE NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION, NEW AND EXISTING, AT ALL STAGES INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

A.

BRACE ALL STRUCTURE WALLS RETAINING EARTH UNTIL RESTRAINING SLABS/FLOORS HAVE BEEN INSTALLED AND REACHED REQUIRED DESIGN STRENGTH.

B.

BRACE/SHORE ALL WALLS AND REMOVE WATER AS REQUIRED TO MAINTAIN STRUCTURAL STABILITY AND PREVENT FLOTATION AT ALL TIMES DURING CONSTRUCTION.

C.

SHORE EXISTING FLOORS, WALLS, AND/OR ROOFS AS REQUIRED DURING DEMOLITION OF ANY PORTION OF EXISTING STRUCTURE UNTIL NEW SUPPORT FRAMING HAS BEEN INSTALLED.

7.

ALL STRUCTURAL MEMBERS, AS SHOWN, HAVE BEEN DESIGNED TO CARRY IN PLACE DESIGN LOADS ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPORT OF ANY LOADS AND FORCES IMPOSED DURING CONSTRUCTION(INCLUDING FLOTATION/UPLIFT PRESSURES), TRANSPORTATION, ERECTION, AND HANDLING. THE CONTRACTOR SHALL INSURE THAT CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS AND THAT THESE LOADS ARE NOT IMPOSED ON THE STRUCTURAL MEMBERS PRIOR TO THE TIME THAT CONCRETE REACHES THE FULL SPECIFIED DESIGN STRENGTH. STEEL MEMBERS AND THEIR CONNECTIONS ARE FULLY BOLTED AND / OR WELDED AND ALL OTHER FRAMING MEMBERS AND THEIR CONNECTIONS ARE IN PLACE.

8.

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO ANY PERTINENT WORK OR FABRICATION. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE NOTED ON THE SHOP DRAWINGS.

9.

ALL CONSTRUCTION/CONTROL JOINTS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE. ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON THE SHOP DRAWINGS FOR REVIEW.

10.

ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED.
- SHOP DRAWINGS/SUBMITTALS:
1.

SHOP DRAWING SUBMITTAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE PROJECT CONTRACT DOCUMENTS (DRAWINGS AND SPECIFICATIONS) AND SHALL FOLLOW INDUSTRY GUIDELINES AND STANDARDS.

2.

ALL QUESTIONS, CLARIFICATIONS, OR MODIFICATIONS OF THE CONTRACT DOCUMENTS SHALL BE CLEARLY DOCUMENTED AND INDICATED ON THE SHOP DRAWINGS/TRANSMITTAL OR COVER SHEET. ITEMS SUCH AS THESE SHALL NOT BE CONSIDERED APPROVED UNLESS SPECIFICALLY ADDRESSED BY MBA IN THE REVIEW COMMENTS.

3.

ALL SHOP DRAWINGS ARE TO BE NEWLY PREPARED. REPRODUCTIONS OF CONTRACT STRUCTURAL DRAWINGS FOR USE AS ERECTION DRAWINGS WILL NOT BE PERMITTED. SHOULD SHOP DRAWING SUBMITTALS CONTAIN ANY REPRODUCTIONS OF CONTRACT STRUCTURAL DRAWINGS, THEY WILL BE REJECTED AND RETURNED WITHOUT ENGINEER REVIEW.

A.

MBA MAY CONSIDER TRANSFERRING COMPUTER FILES, IN THE FORMAT CREATED, OF THE PLAN SHEETS TO PROJECT SUBCONTRACTORS TO ASSIST IN DEVELOPING SHOP DRAWINGS ON A CASE BY CASE BASIS. A SIGNED FILE TRANSFER AGREEMENT WILL BE REQUIRED PRIOR TO RELEASE OF MBA FILES.

4.

CONTRACTOR TO REVIEW ALL SHOP DRAWING SUBMITTALS AND STAMP WITH APPROVAL PRIOR TO SUBMISSION TO ARCHITECT/ ENGINEER. **SHOP DRAWINGS RECEIVED BY ARCHITECT/ENGINEER THAT HAVE NOT BEEN REVIEWED AND COORDINATED BY THE CONTRACTOR WILL BE RETURNED WITHOUT ARCHITECT/ENGINEER'S REVIEW.** THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRECTING DIMENSIONS WHICH PERTAIN TO FABRICATION PROCESSES OR CONSTRUCTION TECHNIQUES PRIOR TO SUBMITTAL AND FOR COORDINATION OF WORK OF ALL TRADES.

5.

CONTRACTOR MAY PROVIDE REVIEWED AND APPROVED SUBMITTALS IN AN ELECTRONIC .PDF FORMAT FOR ENGINEER REVIEW AND APPROVAL. IN LIEU OF ELECTRONIC SUBMITTALS, CONTRACTOR MAY PROVIDE NO MORE THAN FOUR PAPER COPIES OF EACH STRUCTURAL SHOP DRAWING SUBMITTAL TO THE ENGINEER. THE STRUCTURAL ENGINEER WILL REVIEW AND RETURN TWO OF THE COPIES TO THE ARCHITECT/ENGINEER. ADDITIONAL COPIES REQUIRED BY THE CONTRACTOR SHALL BE MADE BY THE CONTRACTOR AFTER THE REVIEW PROCESS. MBA REVIEW OF SHOP DRAWING SUBMITTALS IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS. REVIEW AND/OR APPROVAL OF SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OR FOR ERRORS/ OMISSIONS IN THE SHOP DRAWINGS.

7.

RESUBMITTED SHOP DRAWINGS SHALL HAVE CHANGES AND/OR ADDITIONS CLEARLY INDICATED. REVIEW OF RESUBMITTED SHOP DRAWINGS IS LIMITED TO THE ITEMS REQUIRING CORRECTION ON THE PREVIOUS SUBMITTAL.
- EQUIPMENT NOTES:
1.

CONTRACTOR SHALL COORDINATE BETWEEN DRAWINGS TO VERIFY ALL EQUIPMENT WEIGHTS, LOCATIONS, AND/OR PENETRATIONS. THIS INFORMATION SHALL BE PROVIDED TO SUBCONTRACTORS PERFORMING DELEGATED DESIGN AND SHALL BE IDENTIFIED ON THE CORRESPONDING SUBMITTAL.

2.

CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S CERTIFIED DRAWINGS, SPECIFICATIONS AND/OR OTHER REQUIREMENTS FOR ATTACHING THE EQUIPMENT TO THE STRUCTURE. IF STRUCTURAL MEMBERS CONFLICT WITH ATTACHMENT, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED AND ALLOWED TO MODIFY THE DESIGN AS REQUIRED TO ACCOMMODATE THE MANUFACTURER'S REQUIREMENTS.
- STRUCTURAL STEEL:
1.

DESIGN, CONSTRUCTION, QUALITY ASSURANCE, AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH CURRENT AISC STANDARDS.

2.

ALL STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992.

3.

ALL STRUCTURAL STEEL PLATES, ANGLES AND CHANNELS SHALL CONFORM TO ASTM A36.

4.

ALL STRUCTURAL STEEL SQUARE, RECTANGULAR AND ROUND HSS SECTIONS SHALL CONFORM TO ASTM A500, GRADE B.

5.

ALL STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B.

6.

FABRICATION AND ERECTION SHALL CONFORM TO AISC CODE OF STANDARD PRACTICE.

7.

ALL WELDING SHALL CONFORM TO AWS STANDARDS. THICKNESS OF WELDS ARE AS SHOWN, SPECIFIED OR REQUIRED.

8.

ALL BOLTED CONNECTIONS SHALL BE MINIMUM 3/4" DIAMETER, A325 HIGH STRENGTH BOLTS, UNLESS NOTED OTHERWISE.

9.

ALL EXTERIOR EXPOSED STEEL SHALL BE HOT DIPPED GALVANIZED.
- SITE AND FOUNDATION:
1.

ALLOWABLE SOIL BEARING PRESSURES (PSF):
ISOLATED FOOTINGS 2000
CONTINUOUS FOOTINGS 2000

2.

EXCAVATE, WHERE REQUIRED, TO BUILDING AND STRUCTURE SUBGRADE.

3.

PROOF-ROLL THE AREA UNDER THE BUILDING, PLUS 5'-0" ON ALL SIDES, WITH A LOADED DUMP TRUCK TO LOCATE ANY SOFT AREAS. A GEOTECHNICAL ENGINEER IS TO BE PRESENT DURING THIS OPERATION. ANY SOFT AREAS DETECTED ARE TO BE UNDERCUT AND REPLACED WITH ENGINEERED FILL.

4.

ACCEPTABLE FILL MATERIAL SHALL BE FREE OF ORGANICS, AND HAVE A P.I. OF LESS THAN 30, L.L. OF LESS THAN 50 AND A MAXIMUM DRY DENSITY OF GREATER THAN 100 PCF. CRUSHED STONE BACKFILL TO MEET REQUIREMENTS OF A.H.D. No. 57 STONE. DRAINAGE FILL SUPPORTING SLABS SHALL MEET THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER.

5.

FILL, WHERE REQUIRED, IS TO BE PLACED IN 8" LOOSE LIFTS AND COMPACTED TO 98% STANDARD PROCTOR (ASTM D-698), WITHIN ±2% OF OPTIMUM MOISTURE CONTENT.

6.

OWNER SHALL ENGAGE A GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION TO PROVIDE REQUIREMENTS FOR ALL SUBGRADES, FILLS AND BACKFILLS PRIOR TO PLACEMENT OF CONCRETE. THE GEOTECHNICAL ENGINEER IS TO PROVIDE ASSURANCE THAT THE REQUIREMENTS WILL ACHIEVE THE ALLOWABLE SOIL BEARING CAPACITIES NOTED.

7.

PROVIDE 6" OF COMPACTED CRUSHED STONE BELOW ALL MAT FOUNDATIONS.
- CONCRETE:
1.

CONCRETE CONSTRUCTION AND QUALITY ASSURANCE SHALL BE IN ACCORDANCE WITH CURRENT ACI STANDARDS.

2.

CONCRETE SCHEDULES

ITEM	28 DAY COMPRESSIVE STRENGTH
A. CONCRETE IN CMU CELLS	3000 PSI GROUT
B. ALL OTHER CONCRETE	4000 PSI NORMAL WEIGHT

3.

CONCRETE COVER OVER REINFORCING (UNO)

A. UNFORMED SURFACE IN CONTACT WITH EARTH:	3 IN.
B. UNFORMED SURFACE OVER VAPOR BARRIER:	2 IN.
C. FORMED SURFACES EXPOSED TO EARTH, WEATHER OR LIQUID INCLUDING TOP OF SLAB REINFORCING	2 IN.

4.

CONCRETE AT SLABS ON GRADE SHALL HAVE A NOMINAL MAXIMUM COARSE AGGREGATE SIZE OF 3/4 INCH. ADJUST PORTIONS OF COMBINED COARSE, INTERMEDIATE AND FINE AGGREGATES TO PROVIDE A COARSENESS FACTOR OF 60 TO 75%.

5.

ALL REINFORCING SHALL CONFORM TO THE LATEST REVISION OF ASTM SPECIFICATION A615, GRADE 60 AND BE DETAILED IN ACCORDANCE WITH THE LATEST REVISION OF ACI STANDARD 315.

6.

NO REINFORCING BAR SHALL BE WELDED IN ANY MANNER, UNLESS SPECIFICALLY SHOWN OR NOTED ON THE DRAWINGS.

7.

CONTINUOUS FOOTING REINFORCING BARS SHALL BE LAPPED 30 BAR DIAMETERS, BUT NOT LESS THAN 1'-0".

8.

GRADE BEAM, ELEVATED BEAM, AND ELEVATED SLAB REINFORCING BARS SHALL BE SPLICED ONLY AS SHOWN ON THE DRAWINGS, EXCEPT THE REINFORCING DESIGNATED AS "CONTINUOUS" SHALL HAVE A CLASS "B" LAP SPLICE (PER ACI 318). LAP SPLICES OF CONTINUOUS REINFORCING SHALL BE MADE OVER SUPPORTS FOR BOTTOM BARS AND FOR INTERMEDIATE BARS AND AT MID-SPAN FOR TOP BARS. AT EXTERIOR SUPPORTS, TOP AND BOTTOM BARS SHALL BE HOOKED AND INTERMEDIATE BARS SHALL EXTEND TO WITHIN 2" OF EXTERIOR FACE. MAT FOUNDATION SLAB REINF. SHALL BE SPLICED WITH CLASS "B" SPLICES.

9.

COLUMN AND WALL VERTICAL REINFORCING BARS SHALL BE LAPPED WITH A CLASS "B" SPLICE. WALL HORIZONTAL REINFORCING BARS SHALL BE LAPPED WITH A CLASS "B" TOP BAR SPLICE AT SPLICE POINTS. PROVIDE CORNER BARS FOR WALL CORNERS AND INTERSECTING WALLS.

10.

PROVIDE FULL EMBEDMENT FOR ALL DOWELS. IF NOT OTHERWISE SPECIFIED, DOWEL SIZE AND SPACING SHALL BE THE SAME AS MAIN REINFORCING.

11.

CONSTRUCTION JOINTS IN CONCRETE BEAMS AND SLABS SHALL BE AT OR NEAR MIDSPAN. ALL CONSTRUCTION JOINTS TO BE KEPT.

12.

HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN WALLS AND BEAMS, UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

13.

CONDUIT, PIPES, AND SLEEVES SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTER, NOT HAVE AN OUTSIDE DIAMETER GREATER THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL, OR BEAM IN WHICH THEY ARE EMBEDDED, AND SHALL HAVE A MINIMUM COVER OF 1 1/2 INCH FOR CONCRETE EXPOSED TO EARTH OR WEATHER AND 3/4 INCH FOR CONCRETE NOT EXPOSED TO EARTH OR WEATHER.

14.

PIPING AND CONDUIT SHALL BE SO FABRICATED AND INSTALLED THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS PROPER LOCATION WILL NOT BE REQUIRED.

15.

THE CONTRACTOR SHALL SUBMIT, FOR REVIEW, SHOP DRAWINGS FOR ALL REINFORCING BARS INCLUDING DETAILS AT ALL OPENINGS AND ASSOCIATED ADDED REINFORCEMENT AS SHOWN ON TYPICAL DETAILS.

16.

ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED AND CONTRACTOR SHALL PROVIDE NOTCHES AT TOP OF WALL AND EDGE OF SLAB WHERE GRATING SUPPORT IS REQUIRED. COORD. LOCATIONS WITH ENGINEER/ARCHITECT DRAWINGS.
- | TENSION LAP SPLICE LENGTH | | | | | | | | | |
|---------------------------|---------------|------------|-----|------|---------------|------------|-----|-----|--|
| BAR SIZE | Fc = 3000 PSI | | | | Fc = 4000 PSI | | | | |
| | TOP BARS | OTHER BARS | A | B | TOP BARS | OTHER BARS | A | B | |
| #3 | 22" | 28" | 17" | 22" | 19" | 24" | 15" | 19" | |
| #4 | 29" | 37" | 22" | 29" | 25" | 32" | 19" | 25" | |
| #5 | 36" | 47" | 28" | 36" | 31" | 40" | 24" | 31" | |
| #6 | 43" | 56" | 33" | 43" | 37" | 48" | 29" | 37" | |
| #7 | 63" | 81" | 48" | 63" | 54" | 70" | 42" | 54" | |
| #8 | 72" | 93" | 55" | 72" | 62" | 80" | 48" | 62" | |
| #9 | 81" | 105" | 62" | 81" | 70" | 91" | 54" | 70" | |
| #10 | 91" | 118" | 70" | 91" | 79" | 102" | 61" | 79" | |
| #11 | 101" | 131" | 78" | 101" | 87" | 113" | 67" | 87" | |
- PRE-FABRICATED WOOD TRUSSES:
1.

THE DESIGN, MANUFACTURE, QUALITY ASSURANCE AND ERECTION OF WOOD TRUSSES SHALL BE IN ACCORDANCE WITH THE CURRENT "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION" (TP1) BY THE TRUSS PLATE INSTITUTE.

2.

A TRUSS SUBMITTAL PACKAGE SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION AND ERECTION. THIS PACKAGE SHALL INCLUDE, AT A MINIMUM, EACH INDIVIDUAL TRUSS DESIGN DRAWING, THE TRUSS PLACEMENT DIAGRAM, THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING METHOD AND DETAILS, AND ANY OTHER STRUCTURAL DETAILS GERMANE TO THE TRUSSES. THE TRUSS DESIGN DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF THE TRUSS DESIGNER WHO SHALL BE REGISTERED IN THE STATE OF ALABAMA.

3.

TRUSS TO TRUSS CONNECTIONS SHALL BE DESIGNED AND SPECIFIED BY THE TRUSS MANUFACTURER FOR THE DESIGN LOADS.

4.

ALL TEMPORARY AND PERMANENT BRACING MEMBERS AND CONNECTIONS REQUIRED FOR TRUSSES SHALL BE DESIGNED AND DETAILED BY THE WOOD TRUSS DESIGNER. AT A MINIMUM, TRUSS INSTALLER SHALL COMPLY WITH THE "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" BY BCSI.

5.

TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING SUPERIMPOSED LOADS:
ROOF TOP CHORD DEAD LOAD----- 10 PSF
ROOF BOTTOM CHORD DEAD LOAD----- 10 PSF
ROOF TOP CHORD LIVE LOAD----- 20 PSF

6.

TRUSSES SHALL BE DESIGNED FOR COMPONENT AND CLADDING WIND LOADS BASED ON THE PROVIDED DESIGN CRITERIA AND COMPONENT AND CLADDING WIND LOAD TABLES.

7.

TRUSS DESIGNER SHALL VERIFY THAT ALL EQUIPMENT WEIGHTS, CONCENTRATED LOADS, AND LOCATIONS ARE PROVIDED BY THE GENERAL CONTRACTOR. THE LOADS AND CORRESPONDING LOCATIONS SHALL BE IDENTIFIED ON THE TRUSS PLACEMENT DIAGRAM.

8.

MECHANICAL DUCT OPENINGS IN TRUSSES SHALL BE COORDINATED WITH THE MECHANICAL DRAWINGS TO ACCOMMODATE THE DUCT LOCATION AND SIZE WITH INSULATION.
- CONCRETE MASONRY:
1.

MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530.1 SPECIFICATION OR TMS 402/602.

2.

MASONRY COMPRESSIVE STRENGTH (fm) SHALL BE 1900 PSI BASED ON THE UNIT STRENGTH METHOD OR VERIFIED BY PRISM TESTS IN ACCORDANCE WITH ASTM C 1314.

3.

MORTAR SHALL BE TYPE S OR M.

4.

ALL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.

5.

NO REINFORCING BAR SHALL BE WELDED IN ANY MANNER, UNLESS SPECIFICALLY SHOWN OR NOTED ON THE DRAWINGS.

6.

BLOCK FILL SHALL BE GROUT WITH AN 8" TO 11" SLUMP, PROPORTIONED PER ASTM C 476 OR ATTAINING 3000 PSI AT 28 DAYS PER ASTM C 1019. DO NOT USE MORTAR AS BLOCK FILL.

7.

ALL GROUT SHALL BE CONSOLIDATED AT TIME OF PLACEMENT USING A LOW-VELOCITY MECHANICAL VIBRATOR WITH A 3/4-INCH HEAD. RE-CONSOLIDATE GROUT AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED. DO NOT PLACE NEXT LIFT OF GROUT UNTIL LOWER LIFT HAS BEEN RE-CONSOLIDATED.

8.

ALL BLOCK CELLS AND CAVITIES BELOW GRADE SHALL BE GROUTED SOLID. ALL LINTELS & BOND BEAMS SHALL BE GROUTED SOLID.

9.

ALL BLOCK CELLS WHICH HAVE VERTICAL REINFORCING SHALL BE GROUTED FULL-HEIGHT IN 4'-8" LIFTS (MAXIMUM HEIGHT). PROVIDE 1 1/2" (MINIMUM) GROUT KEY BELOW MORTAR JOINT AT TOP OF EACH LIFT.

10.

VERTICAL REINFORCING SHALL BE DOWELED TO FOOTING WITH HOOKED BARS AT THE BASE AND EXTEND FULL-HEIGHT INTO BOND BEAM AT THE TOP. WHERE SPLICES ARE NECESSARY, PROVIDE LAP LENGTH = 48 BAR DIAMETERS.

11.

VERTICAL REINFORCING SHALL BE LOCATED IN THE CENTER OF THE BLOCK CELLS, UNLESS NOTED, AND SHALL BE HELD IN PLACE WITH BAR POSITIONERS (HECKMANN #376 OR HOHMANN & BARNARD #RB) PRIOR TO GROUTING. "WET-STICKING" OF REINFORCING SHALL NOT BE ALLOWED.

12.

MINIMUM VERTICAL WALL REINFORCING IN ALL WALLS SHALL CONSIST OF ONE VERTICAL (MATCHING WALL REINF. BUT NOT LESS THAN #5) IN EACH CORNER, AT EACH DOOR & WINDOW JAMB & AT EACH SIDE OF CONTROL AND/OR EXPANSION JOINTS. PROVIDE ADDITIONAL VERTICAL REINFORCING AS SHOWN IN SECTIONS AND AS NOTED ON PLANS.

13.

AT CORNERS AND INTERSECTIONS OF BOND BEAMS IN WALLS, PROVIDE CORNER BARS (48 DIAMETERS LONG EA. LEG) TO TIE WALLS TOGETHER. BAR DIAMETER SHALL MATCH BOND BEAM REINFORCING.

14.

AT TOP OF ALL MASONRY WALLS (BEARING OR NON-BEARING), PROVIDE 8" DEEP CONTINUOUS BOND BEAM REINFORCED WITH #5 CONTINUOUS, UNLESS NOTED OTHERWISE.

15.

HORIZONTAL WALL REINFORCING SHALL BE REQUIRED FOR ALL MASONRY AND SHALL CONSIST OF A MINIMUM STANDARD (9 GAGE) LADDER-TYPE REINFORCING AT EVERY OTHER COURSE (16" OC).

16.

COORDINATE WITH ENGINEER DRAWINGS FOR DETAILS AND LOCATIONS OF MASONRY CONTROL JOINTS. IF NOT OTHERWISE SHOWN, DO NOT EXCEED 30'-0" BETWEEN BLOCK WALL CONTROL JOINTS AND 20'-0" BETWEEN BRICK VENEER CONTROL JOINTS.

17.

ANCHOR WALLS TO SUPPORTING STRUCTURES AS SHOWN ON THE STRUCTURAL AND PRIMARY ENGINEER DRAWINGS. CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING OF ALL MASONRY WALLS DURING CONSTRUCTION.

18.

THE CONTRACTOR SHALL SUBMIT, FOR REVIEW, SHOP DRAWINGS FOR ALL REINFORCING BARS INCLUDING DETAILS AT ALL OPENINGS AND ASSOCIATED ADDED REINFORCEMENT AS SHOWN ON TYPICAL DETAILS.

19.

PROVIDE DOVETAIL TIES FOR BRICK TO MASONRY AND MASONRY TO CONCRETE.
- DESIGN CRITERIA:
1.

GOVERNING CODE:

A. INTERNATIONAL BUILDING CODE, I.B.C. 2021

2.

GRAVITY DESIGN LOADS:

A. DEAD

1. DESIGN DEAD LOADS ARE BASED ON THE SELF WEIGHT OF CONSTRUCTION MATERIALS SHOWN IN THE CIVIL/ARCHITECTURAL AND STRUCTURAL DRAWINGS. ANY ALTERNATE MATERIALS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER TO REVIEW.

B. LIVE:

1. GRATING 600 PSF/250 PSF - COORD. W/ CIVIL DWGS
2. ROOF 20 PSF

C. SNOW

1. GROUND SNOW LOAD (Pg) = 5 PSF
2. FLAT ROOF SNOW LOAD (Pf) = 5 PSF
3. SNOW EXPOSURE FACTOR (Ce) = 1.0
4. SNOW LOAD IMPORTANCE FACTOR (Is) = 1.1
5. THERMAL FACTOR (Ct) = 1.0

3.

LATERAL DESIGN LOADS:

A. WIND

1. DESIGNED PER ASCE 7-16
2. ULTIMATE WIND SPEED = 115 MPH
3. RISK CATEGORY = III
4. BUILDING CATEGORY = ENCLOSED
5. EXPOSURE CATEGORY = C
6. INTERNAL PRESSURE COEFFICIENT (Gcpi) = ±0.18
7. COMPONENTS & CLADDING WIND PRESSURES SEE CHART

B. EARTHQUAKE

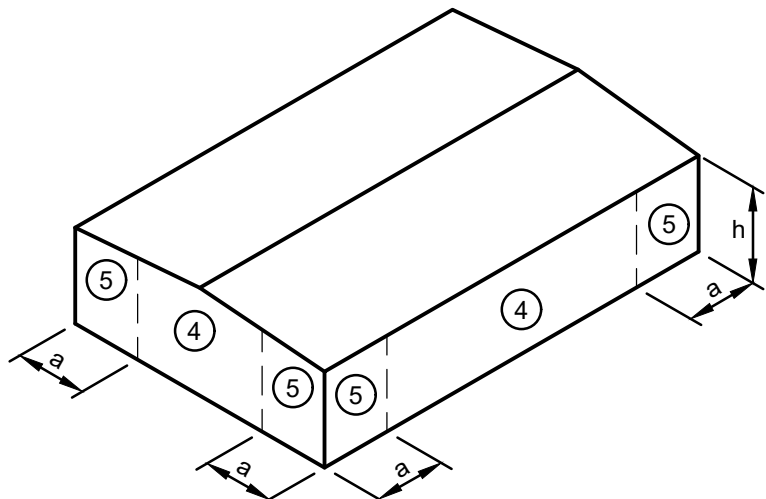
1. SEISMIC RISK CATEGORY = III
2. SEISMIC IMPORTANCE FACTOR (Ie) = 1.25
3. MAPPED SPECTRAL RESPONSE ACCELERATIONS
A. Ss = 0.278
B. S1 = 0.096
4. SOIL SITE CLASS = D
5. DESIGN SPECTRAL RESPONSE ACCELERATIONS
A. Sds = 0.292
B. Sd1 = 0.153
6. SEISMIC DESIGN CATEGORY = C
7. BASIC SEISMIC-FORCE-RESISTING SYSTEM
ORDINARY REINFORCED MASONRY SHEARWALLS
8. DESIGN BASE SHEAR = 25 KIPS
9. SEISMIC RESPONSE COEFFICIENT (Cs) = 0.183
10. RESPONSE MODIFICATION FACTOR (R) = 2
11. ANALYSIS PROCEDURE:
EQUIVALENT LATERAL FORCE
- SPECIAL INSPECTIONS:
1.

THE OWNER SHALL EMPLOY A QUALIFIED TESTING AGENT/ENGINEER TO PROVIDE SPECIAL INSPECTIONS. SPECIAL INSPECTORS SHALL SUBMIT RESUME OF EXPERIENCE AND QUALIFICATIONS OF ALL INDIVIDUALS PERFORMING WORK TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL PRIOR TO ANY WORK BEING PERFORMED. SPECIAL INSPECTIONS SHOULD BE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2021 ED. AND AS INDICATED IN THE SPECIFICATIONS.
- Municipal Consultants, Inc.
- 200 Century Park, South, Suite 212
Birmingham, Alabama 35226
(205) 822-0387
- SHELBY COUNTY COMMISSION
- NORTH-SOUTH CONNECTOR
CONTROL VALVE STATION
- 2025
-
- BAR = 1"
- Title
- GENERAL NOTES STRUCTURAL
- GNS01
- Project No.
- 7 - 2026
- Date
- Scale AS NOTED
- Sheet 14
- BID SET
- MBA Engineers

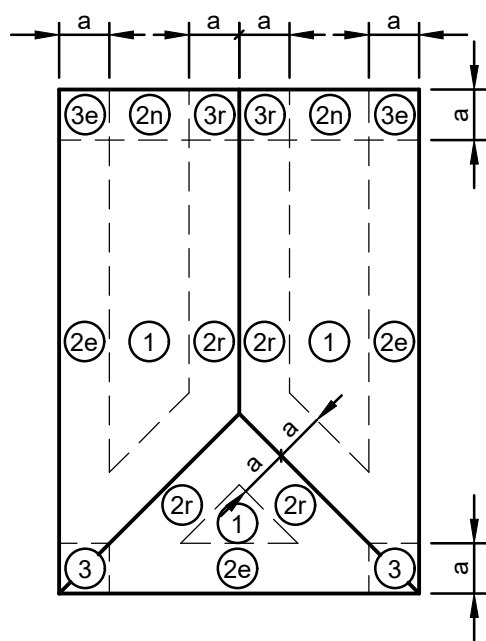
COMPONENTS AND CLADDING DESIGN WIND PRESSURES (PSF)

ZONE	EFFECTIVE WIND AREA									
	10 SF		20 SF		50 SF		100 SF		200 SF	
	XXX	-XXX	XXX	-XXX	XXX	-XXX	XXX	-XXX	XXX	-XXX
1	18	-54	16	-54	16	-33	16	-17	16	-17
2e	18	-54	16	-54	16	-33	16	-17	16	-17
2h	18	-79	16	-68	16	-54	16	-43	16	-43
2r	18	-79	16	-68	16	-54	16	-43	16	-43
3e	18	-79	16	-68	16	-54	16	-43	16	-43
3r	18	-93	16	-80	16	-62	16	-49	16	-49
2OH	18	-79	16	-68	16	-54	16	-43	16	-43
3OH	21	-107	19	-92	16	-72	16	-56	16	-56
4	29	-32	28	-31	26	-29	25	-28	25	-28
5	29	-39	28	-37	26	-33	25	-31	25	-31

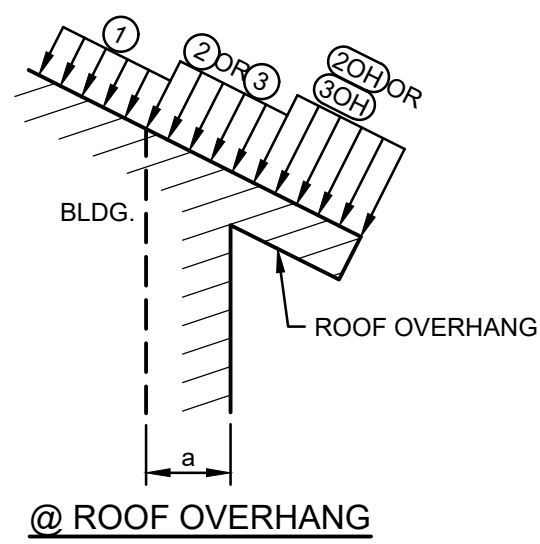
NOTE:
1. PLUS AND MINUS SIGNS DENOTE PRESSURE ACTING TOWARD AND AWAY FROM BUILDING SURFACES.
2. PRESSURE ZONE LOCATIONS ARE IN ACCORDANCE WITH ASCE 7-16.
3. PRESSURES INDICATED ARE BASED ON ULTIMATE WIND SPEEDS PER ASCE 7-16. TO CONVERT PRESSURES TO NOMINAL LOADS, MULTIPLY VALUES IN CHART BY A FACTOR OF 0.6.
4. a = 5'-0"



WALL ZONES

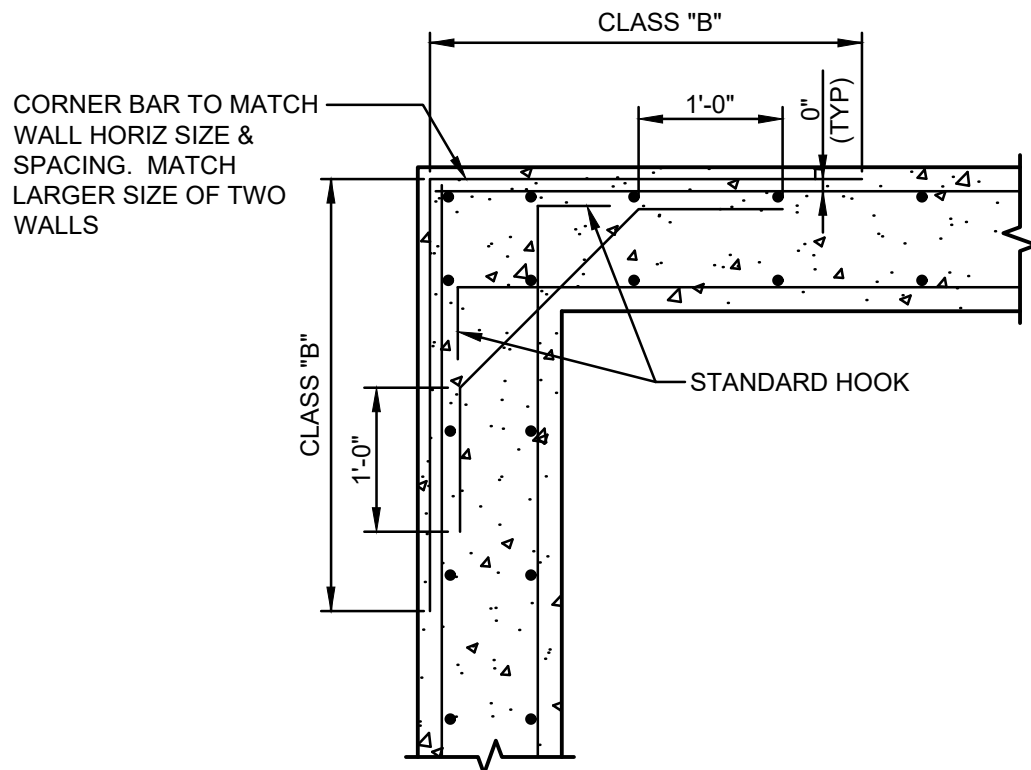


ROOF ZONES
GABLE/HIP ROOF 7° < θ ≤ 27°

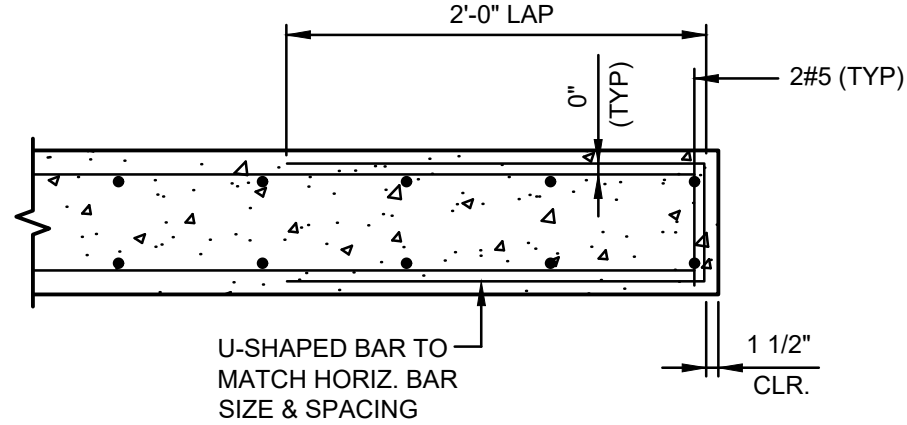


@ ROOF OVERHANG

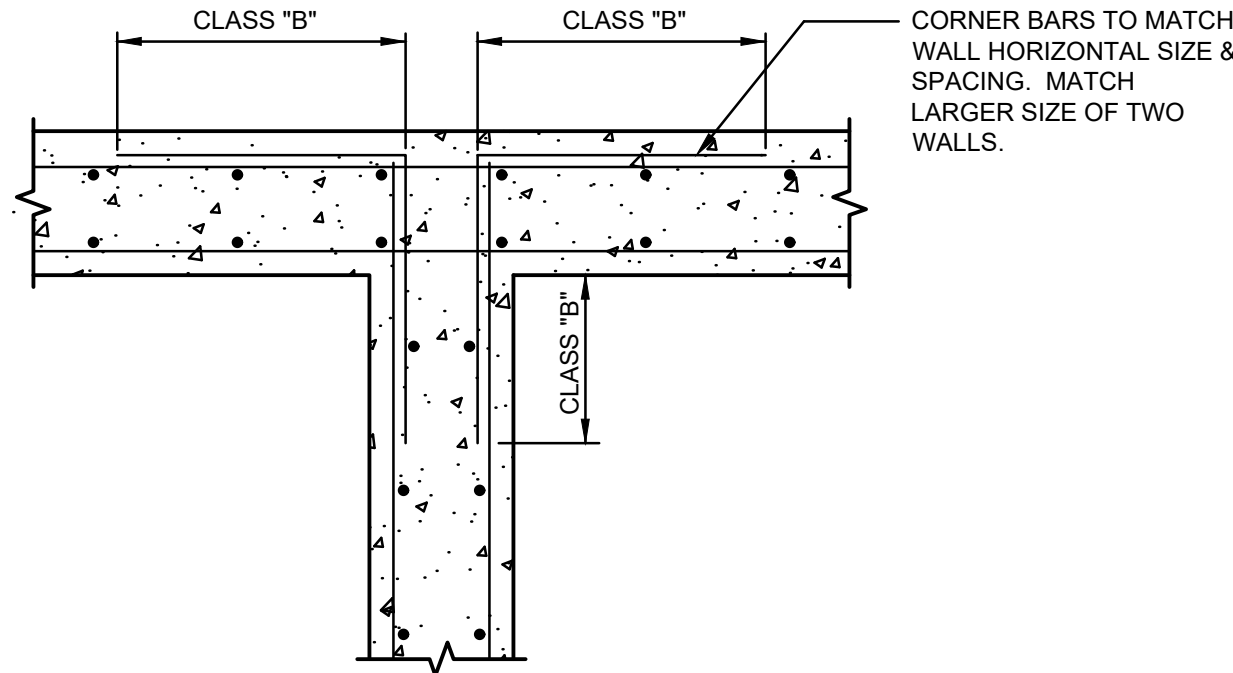
ZONE LAYOUT DIAGRAMS



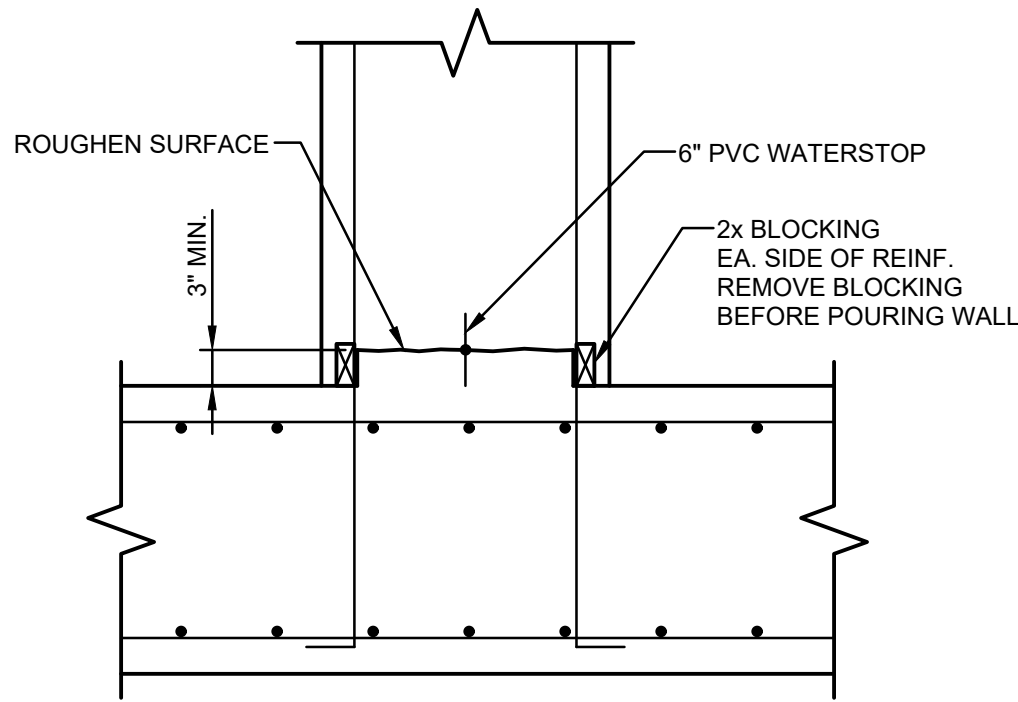
TYPICAL 90° CORNER DETAIL @ CONCRETE WALL



TYPICAL EDGE DETAIL @ CONCRETE WALL

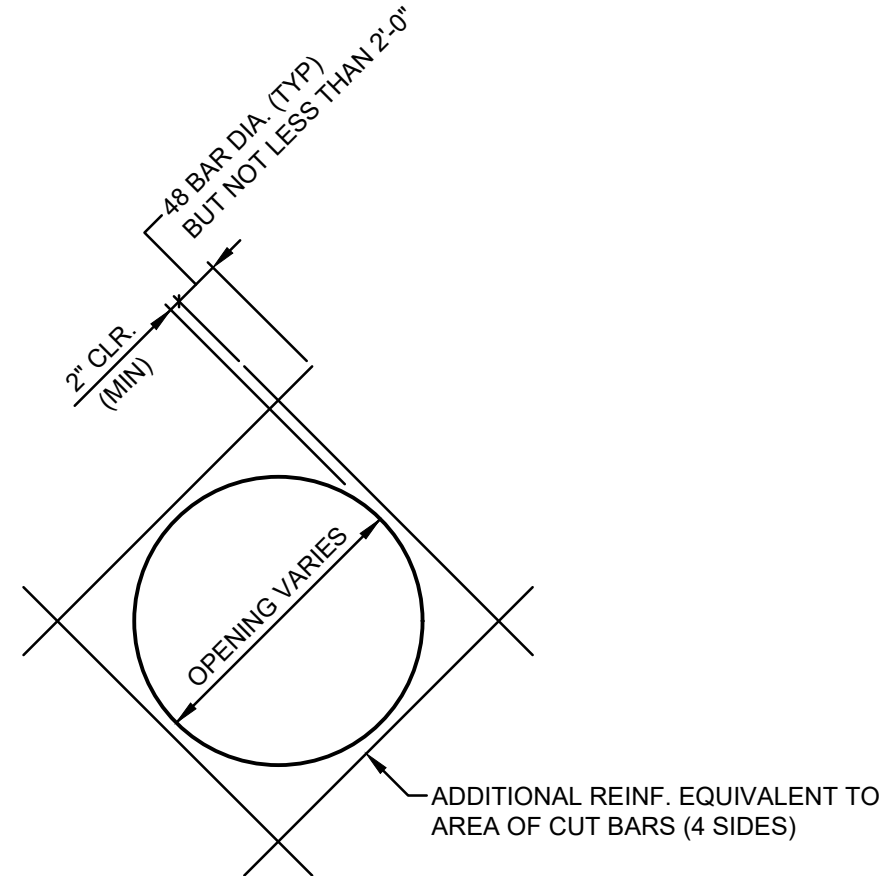


TYPICAL INTERSECTION DETAIL @ CONCRETE WALL



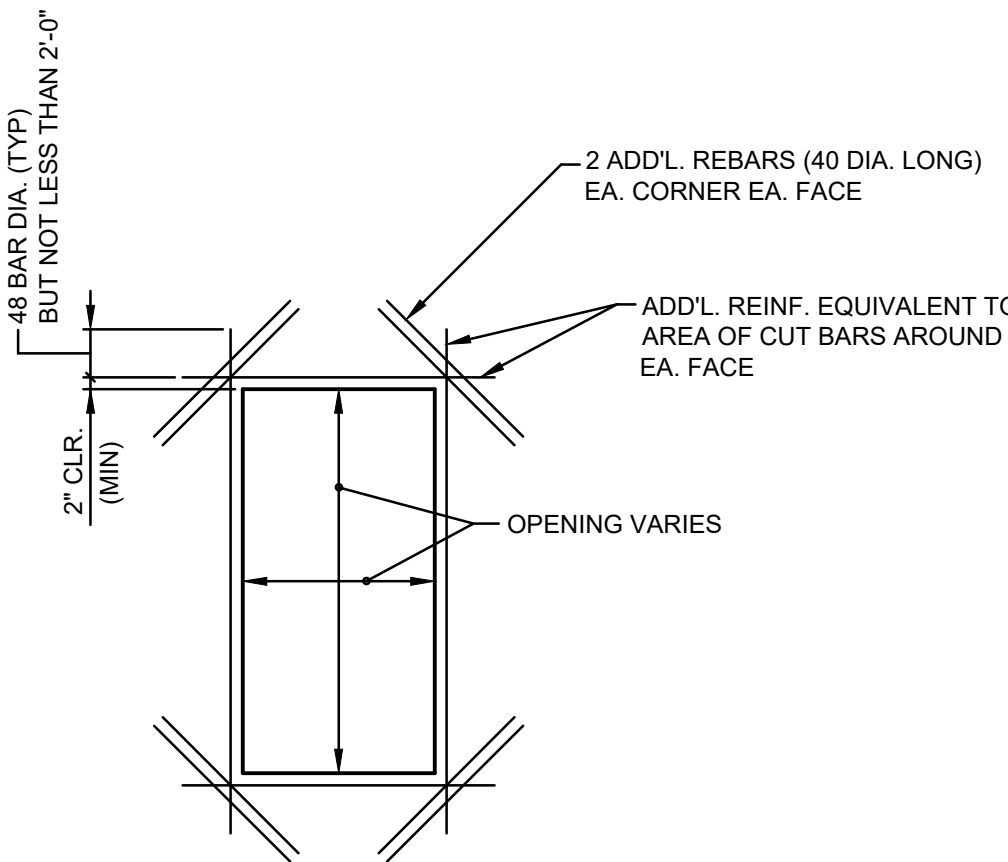
TYPICAL WATERSTOP DETAIL

3/4" = 1'-0"



CIRCULAR OPENING

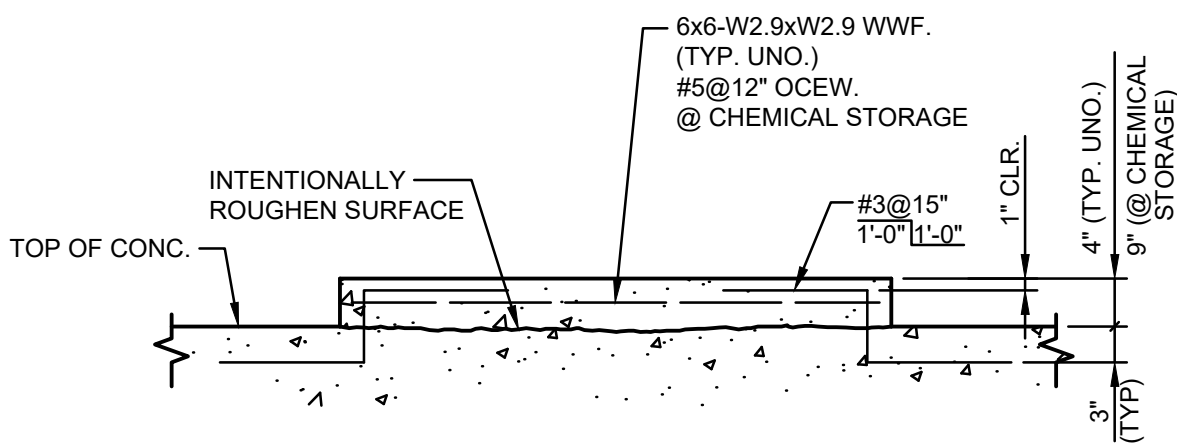
NOTE:
MAX. OPENING SIZE
36" DIA.



RECTANGULAR OPENING

NOTE:
MAX. OPENING SIZE
36" DIA.

TYPICAL DETAILS OF ADDITIONAL REINFORCING AROUND OPENINGS IN CONC. SLABS & WALLS

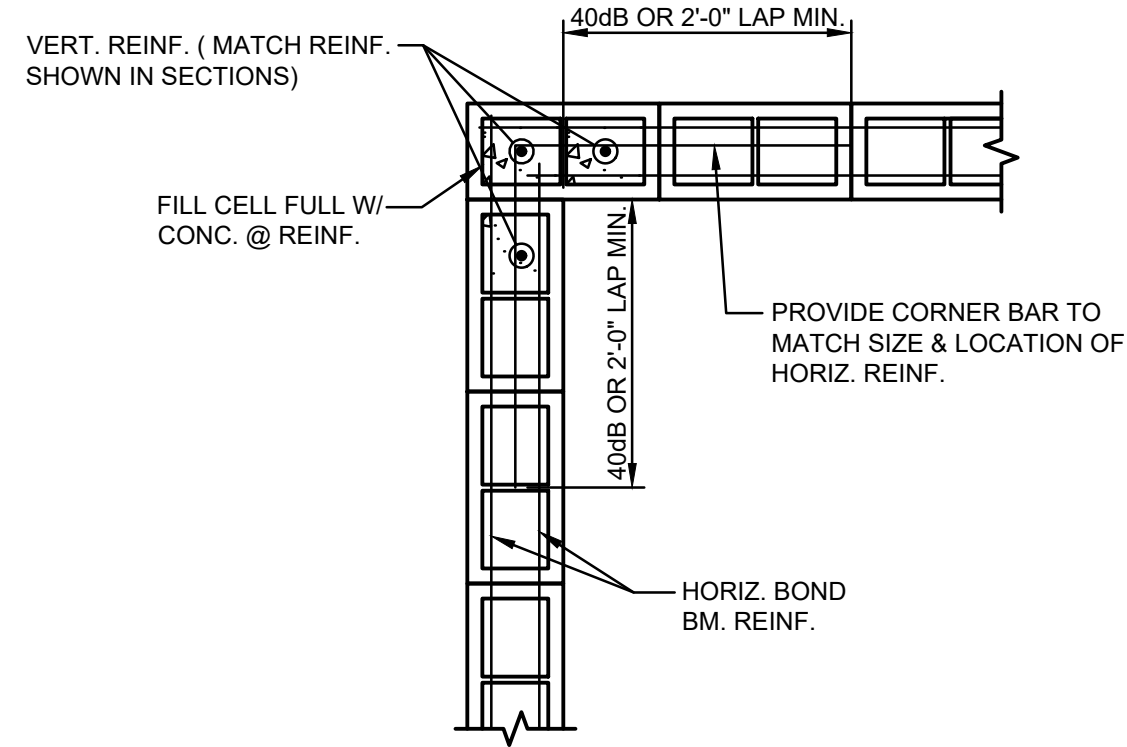


TYPICAL MECHANICAL HOUSEKEEPING PAD AND TOPPING SLABS

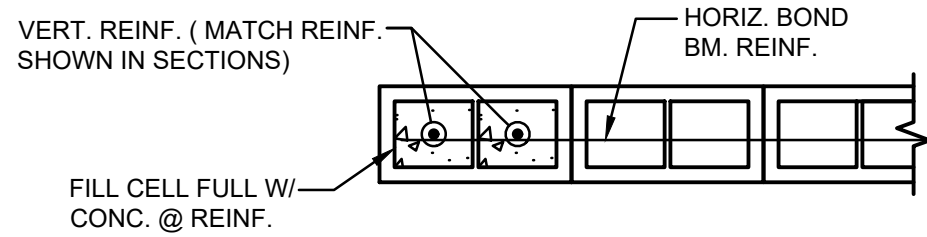


BAR = 1"

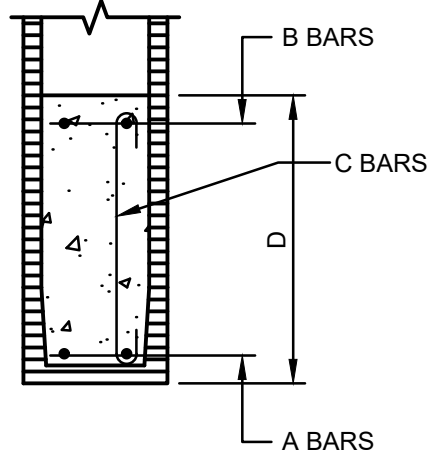
Drawing	GNS02	Title		Sheet
		Project No.	BID SET	
Date	7 - 2026	TYPICAL DETAILS STRUCTURAL		
Scale	AS NOTED			
Sheet	15			



TYPICAL CORNER MASONRY WALL REINF. DETAIL



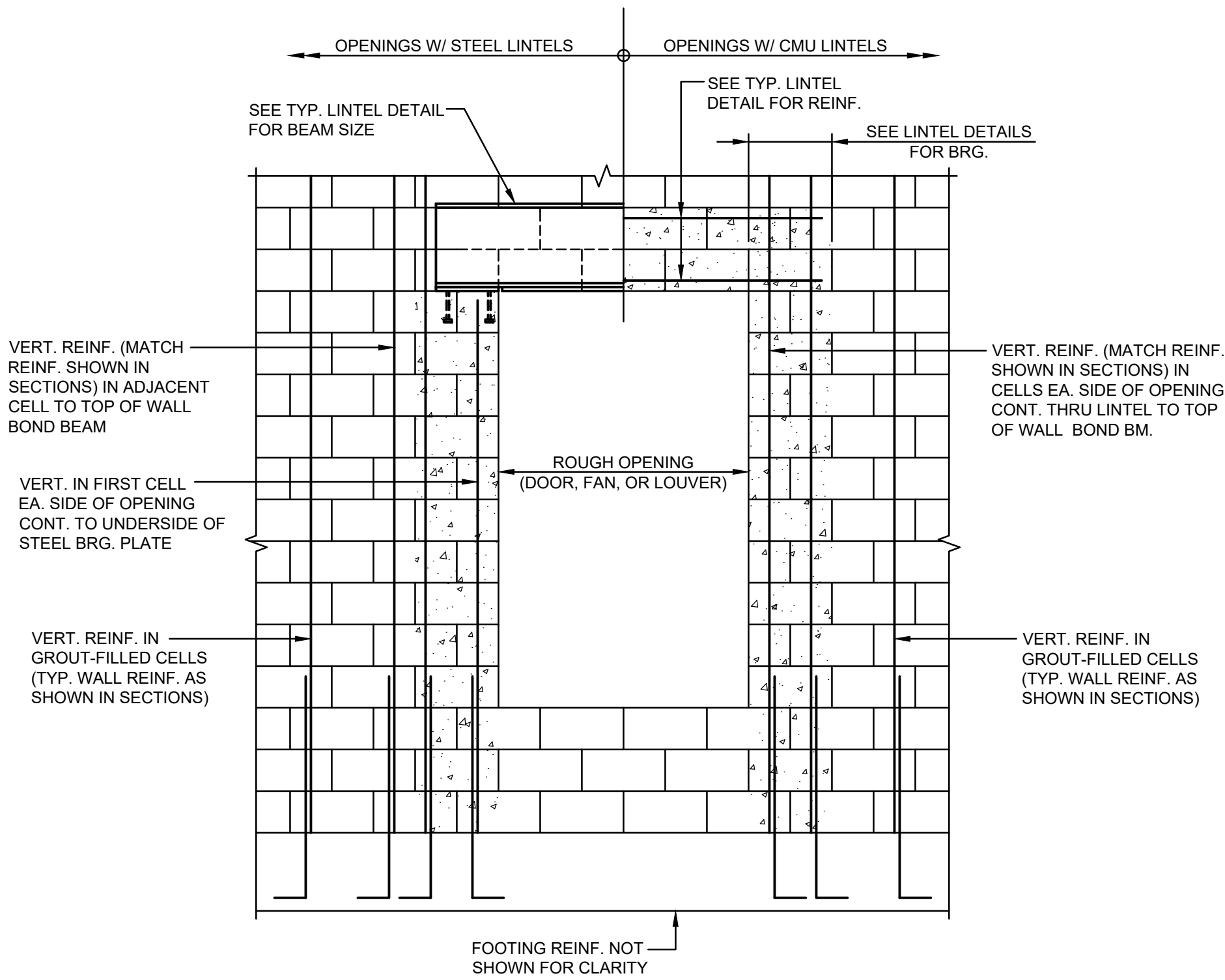
TYPICAL JAMB AND END OF MASONRY WALL REINF. DETAIL



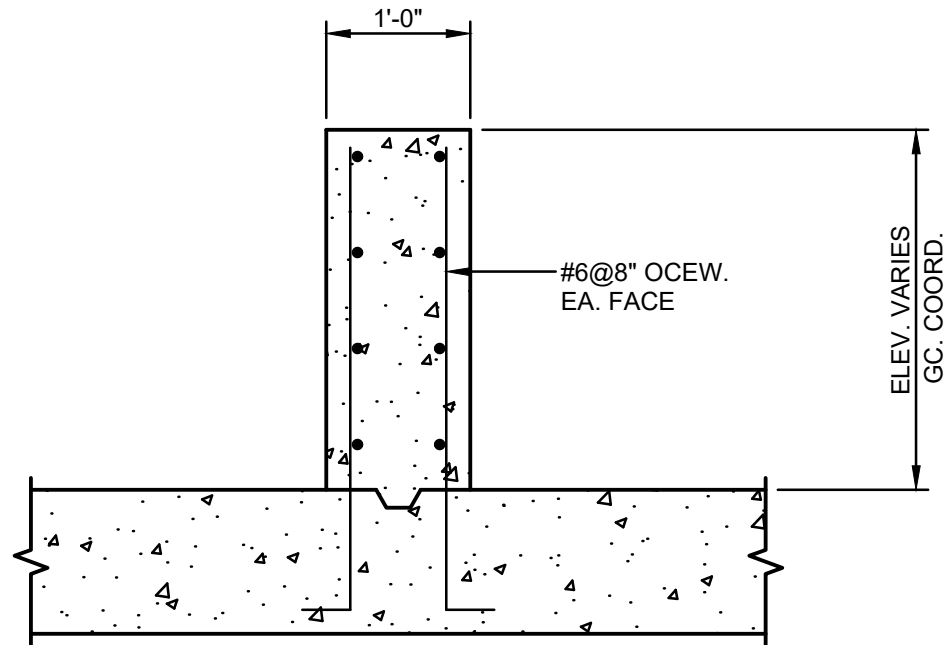
NOTE:
GROUT & REINF. CELLS FOR FULL BRG.
LENGTH OF LINTEL (SEE SCHEDULE)

8" MASONRY LINTEL SCHEDULE					
MAX. SPAN	D	A BARS	B BARS	C BARS	BEARING LENGTH
≤ 4'-0"	1'-4"	1#5	1#5	-	1'-4"
≤ 10'-0"	2'-8"	1#6	1#6	-	2'-0"

TYPICAL LOAD BEARING WALL LINTEL DETAIL & SCHEDULE



TYPICAL REINF. @ MASONRY WALL OPENINGS



TYPICAL CONCRETE PIPE SUPPORT DETAIL

NOTE: COORD. LENGTH OF SUPPORT W/ CIVIL DWGS.



BAR = 1"

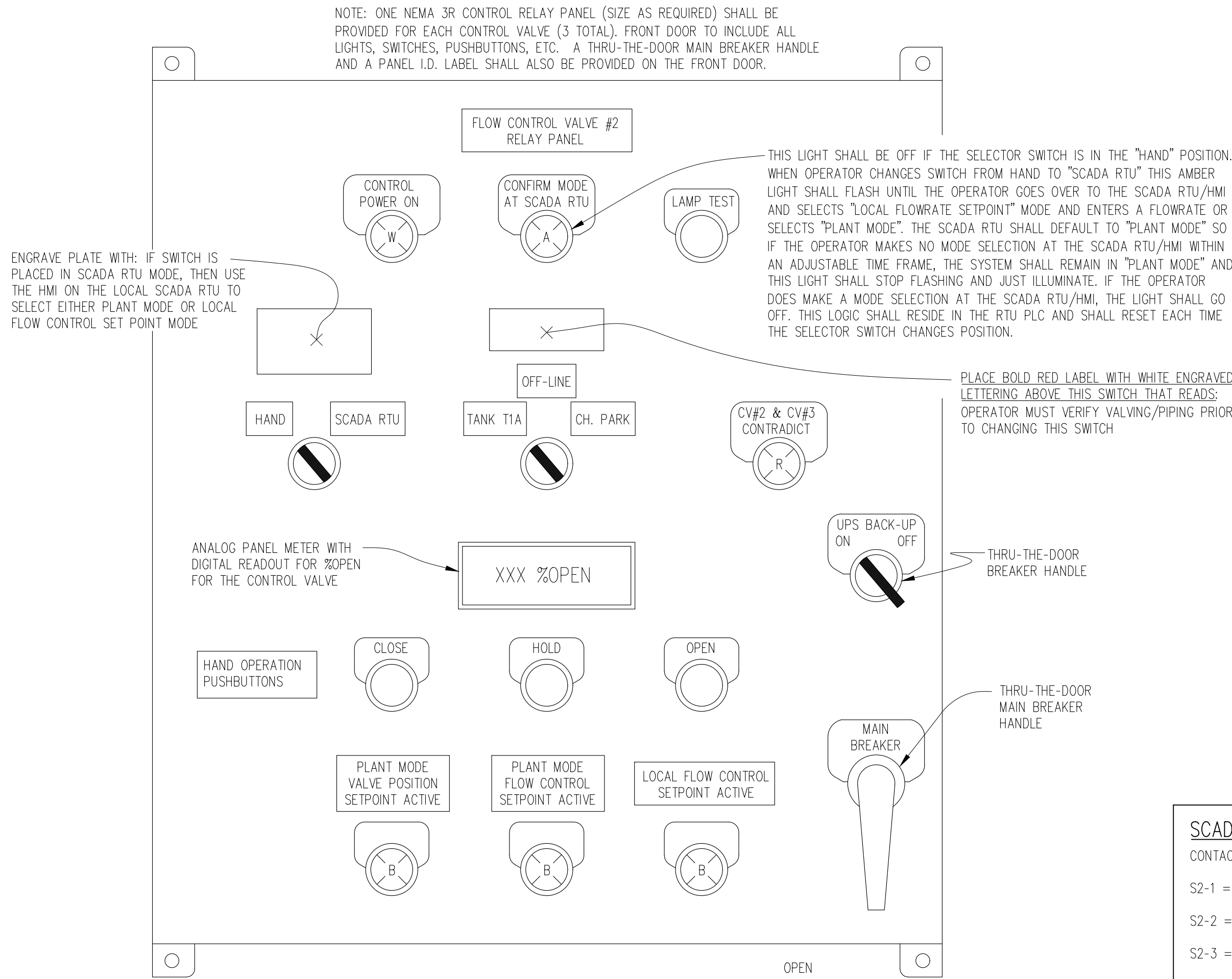
Title		Title	
Drawing Project No. Date Scale Sheet	GNS03 7 - 2026 AS NOTED 16	TYPICAL DETAILS STRUCTURAL	
		BID SET	

Architectural drawing of a roof plan. The overall dimensions are 42'-0" wide by 40'-8" deep. The drawing shows a grid of trusses. Key features include:

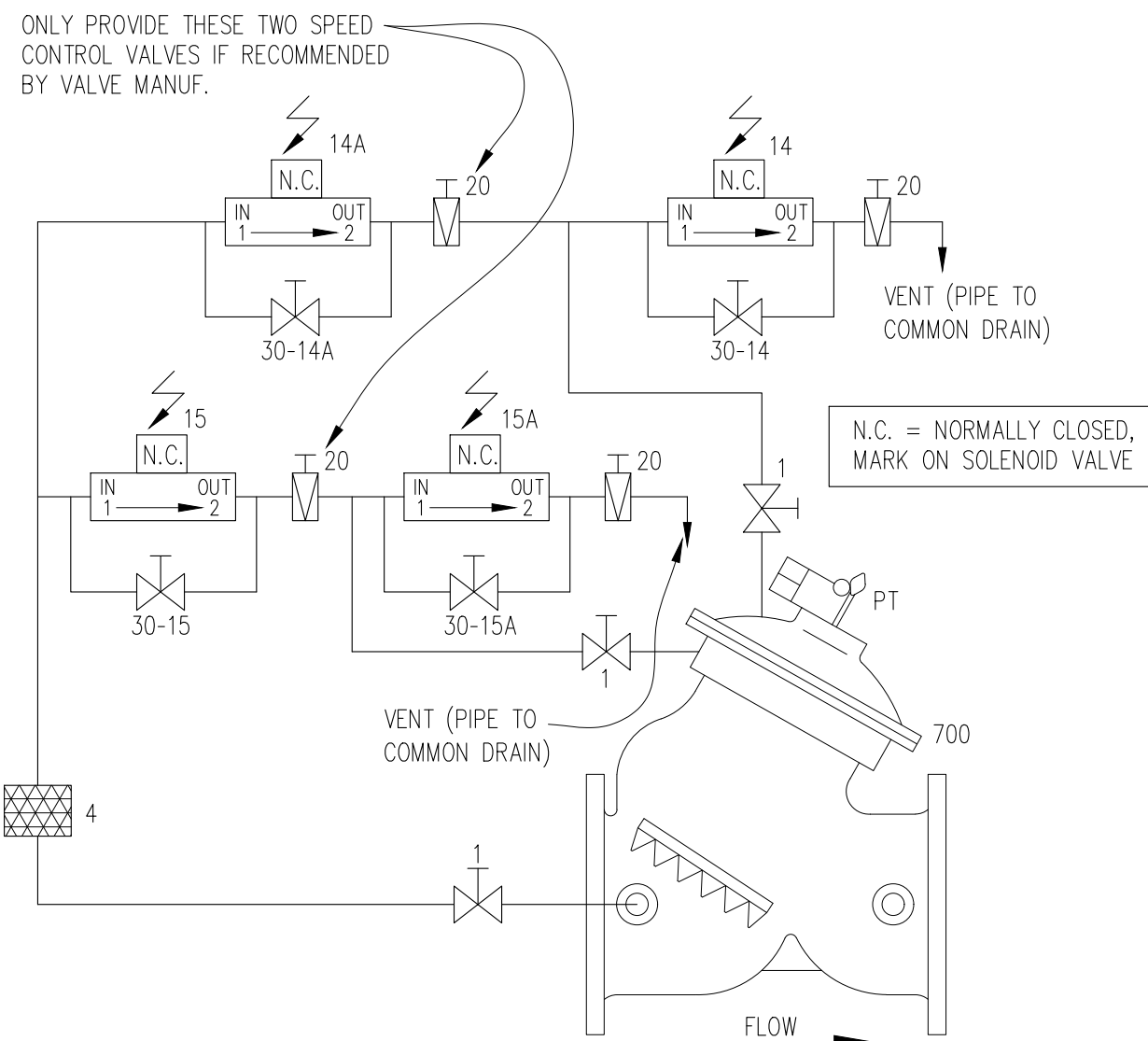
- PRE-FAB WOOD TRUSSES @ 2'-0" OC. MAX.**: Labeled across the main truss grid.
- CABLE END TRUSS**: Labeled on both the left and right sides of the plan.
- RIDGE**: Labeled along the central vertical line.
- SLOPE DN. 4:12**: Indicated on both sides of the ridge line.
- Points E and F**: Circled points located near the top and bottom center of the plan, respectively.
- Dimensions**: 8'-0" is marked at the top and bottom edges. 39'-4" and 40'-8" are marked on the right side.



MBA Engineers



CONTROL VALVE #2 CONTROL PANEL
FRONT DOOR DETAIL
SCALE: N.T.S.



E = ENERGIZE, DE = DE-ENERGIZE

FUNCTION TABLE - SOL NO.	14	14A	15	15A
HOLD POSITION OR POWER FAILURE	DE	DE	DE	DE
VALVE CLOSE	DE	E	DE	E
VALVE OPEN	E	DE	E	DE

PARTIAL PARTS LIST - ALL VALVE COMPONENTS TO BE PROVIDED BY THE VALVE MANUFACTURER	
1	NORMALLY OPEN BALL VALVE
4	CONTROL FILTER (BERMAD TYPE F LARGE CONTROL FILTER OR EQUAL)
14, 15	2-WAY N.C. OPENING SOLENOID 120 VAC (RATED FOR 0 TO 200 PSI DIFFERENTIAL)
14A, 15A	- BURKERT SERIES 0290, MODEL 298113 OR EQUAL
700	MAIN VALVE - DOUBLE CHAMBERED WITH DIAPHRAGM
PT	POSITION TRANSMITTER
20	NEEDLE VALVES FOR SPEED CONTROL (LOCATIONS PER MANUFACTURER)
30-	BYPASS BALL VALVE (NORMALLY CLOSED) FOR CORRESPONDING SOLENOID
SPARE PARTS	2 SPARE 2-WAY N.C. OPENING SOLENOID 120 VAC (SAME MODEL AS ABOVE)
SPARE PARTS	1 SPARE NEEDLE VALVE (FOR SPEED CONTROL)
SPARE PARTS	1 SPARE BALL VALVE OF EACH SIZE
SPARE PARTS	1 SPARE CONTROL FILTER

FLOW CONTROL VALVE #2 SCHEMATIC

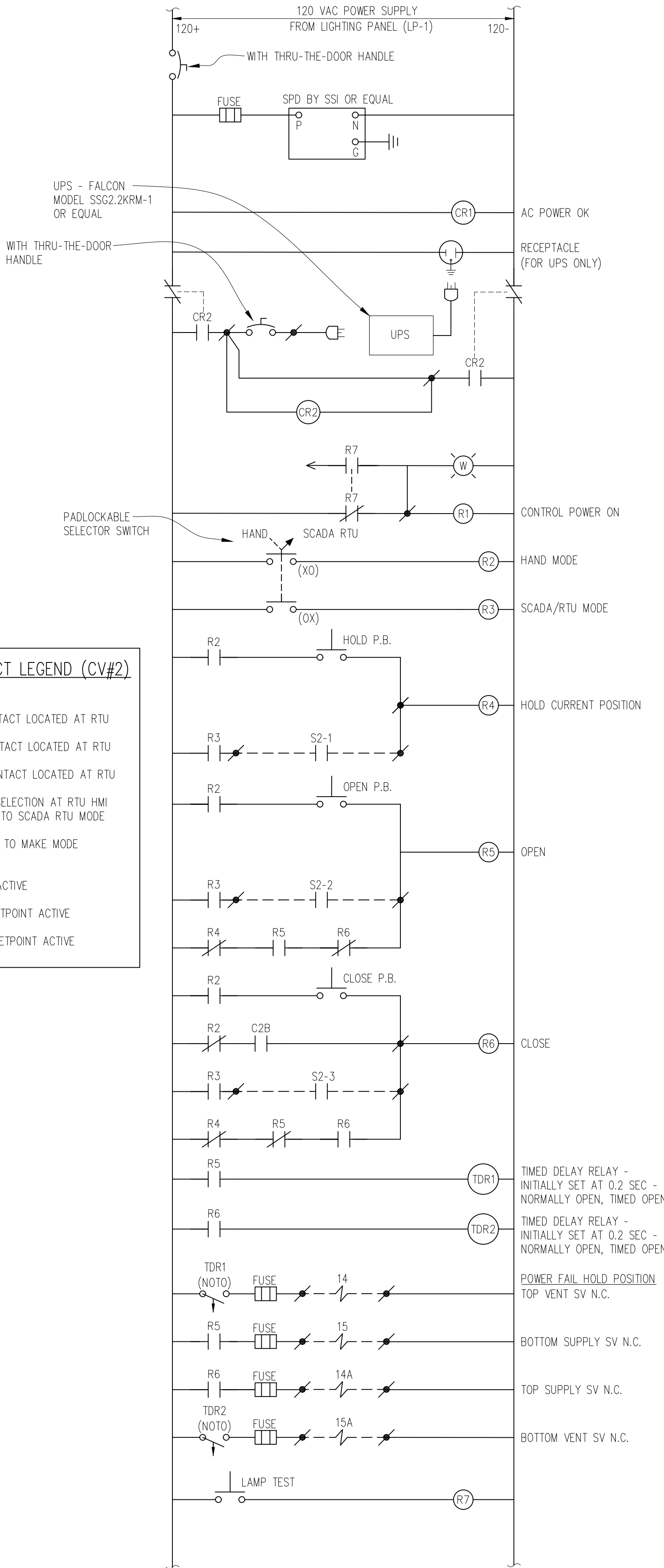
SCALE: N.T.S.

NOTES:

1. VALVE TO BE DESIGNED TO ALLOW EASY RETROFIT WITH A MECHANICAL STOP IN LIEU OF A POSITION TRANSMITTER.
2. CONTRACTOR SHALL PROVIDE ALL WORK AND COORDINATION NECESSARY TO SUCCESSFULLY START-UP THE CONTROL VALVE. DURING START-UP, THE CONTRACTOR SHALL DEMONSTRATE PROPER OPERATION OF THE VALVE UNDER ALL MODES OF OPERATION. OPERATIONAL SPEED OF THE VALVE SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER.
3. WHEN THE MAIN VALVE IS CLOSED UNDER NORMAL CONDITIONS THE DOWNSTREAM PRESSURE WILL RANGE APPROXIMATELY BETWEEN 100 PSI AND 118 PSI AND THE UPSTREAM PRESSURE WILL RANGE BETWEEN 107 PSI AND 126 PSI DEPENDING ON TANK W.L. ELEVATIONS AND NUMBER OF PLANT PUMPS RUNNING.
4. ALL VALVE COMPONENTS (INCLUDING HYDRAULIC CONTROL COMPONENTS) SHALL HAVE PRESSURE RATINGS OF AT LEAST 250 PSI. SOLENOID VALVES TO BE RATED FOR 0 TO 200 PSI DIFFERENTIAL.
5. INSULATE ALL PILOT PIPING WITH 3/4" ARMAFLEX UT PIPE INSULATION AND WRAP WITH WHITE PVC JACKETING.
6. SEE PLANS AND SECTIONS FOR CONTINUATION OF DRAIN PIPING FOR PILOT PIPING VENTS/DRAINS. THE VENTS/DRAINS FOR THE PILOT PIPING SHALL HAVE FREE DISCHARGE INTO A COMMON DRAIN PIPE THAT CONNECTS TO A DRAIN HEADER.
7. ALL VALVE I.D. PLATES AND VALVE PAINTING (I.E., COLOR CODING) DISCUSSED BELOW SHALL BE DONE BY THE MAIN VALVE MANUFACTURER TO ENSURE FACTORY FINISH QUALITY AND DURABILITY.
8. EACH SOLENOID VALVE AND BALL VALVE ON THE PILOT PIPING SHALL HAVE A DEEPLY ENGRAVED (WITH LARGE BLACK LETTERING), DURABLE S.S. TAG WITH THE VALVE I.D.# (E.G., 14A) ATTACHED WITH S.S. CHAIN TO EACH OF THE VALVES. EACH BYPASS BALL VALVE CORRESPONDING TO EACH SOLENOID VALVE SHALL BE PAINTED BRIGHT RED AND HAVE A BRIGHT RED PLASTIC HANDLE COVER. THERE SHALL ALSO BE A LARGE, DEEPLY ENGRAVED (WITH LARGE BLACK LETTERING), DURABLE, S.S. TAG ATTACHED WITH S.S. CHAIN TO THE MAIN VALVE THAT HAS THE FOLLOWING TABLE.

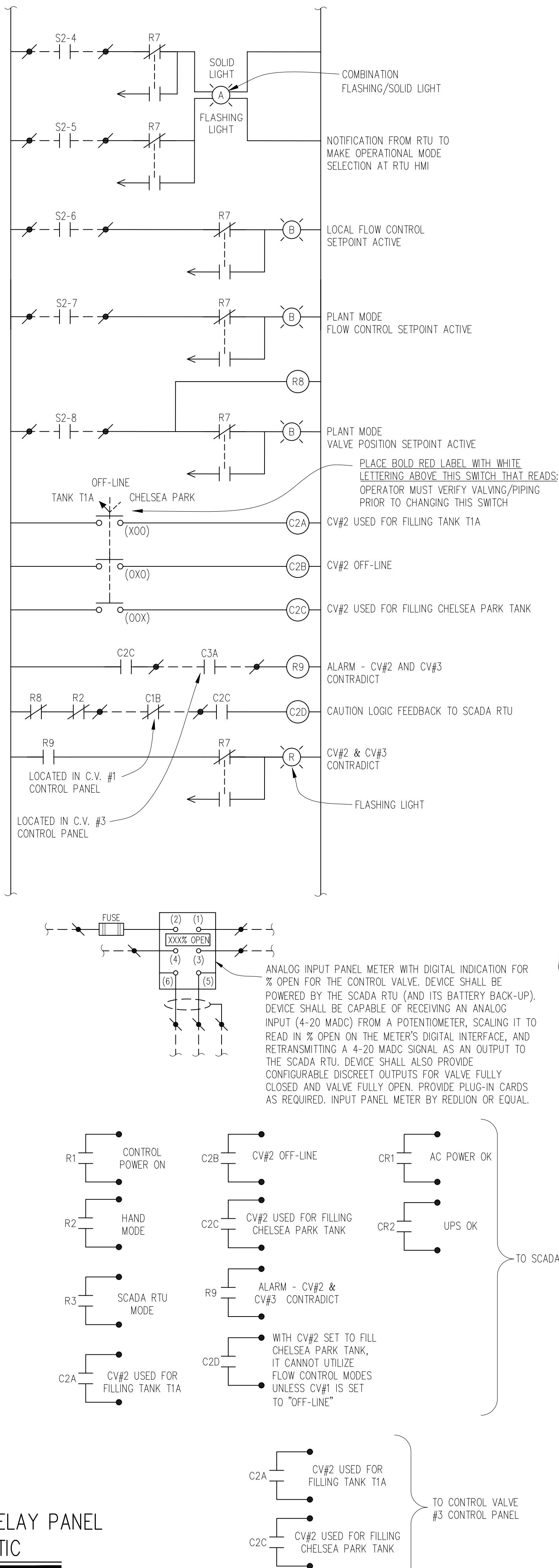
STATUS OF RED BALL VALVES FOR MANUAL OPERATION OF MAIN VALVE WHEN POWER TO MAIN VALVE IS OFF:				
BALL VALVE NUMBER	30-14	30-14A	30-15	30-15A
HOLD POSITION OF MAIN VALVE	CLOSED	CLOSED	CLOSED	CLOSED
MAIN VALVE CLOSE	CLOSED	OPEN	CLOSED	OPEN
MAIN VALVE OPEN	OPEN	CLOSED	OPEN	CLOSED

SEE EQUIPMENT SPECIFICATION FOR "CONTROL/DISPLAY PANELS & SCADA MODIFICATIONS/ADDITIONS" FOR ADDITIONAL REQUIREMENTS RELATED TO THE CONTROL VALVE RELAY PANEL



FLOW CONTROL VALVE #2 RELAY PANEL
CONCEPTUAL SCHEMATIC

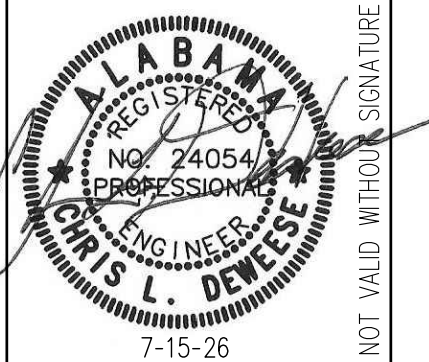
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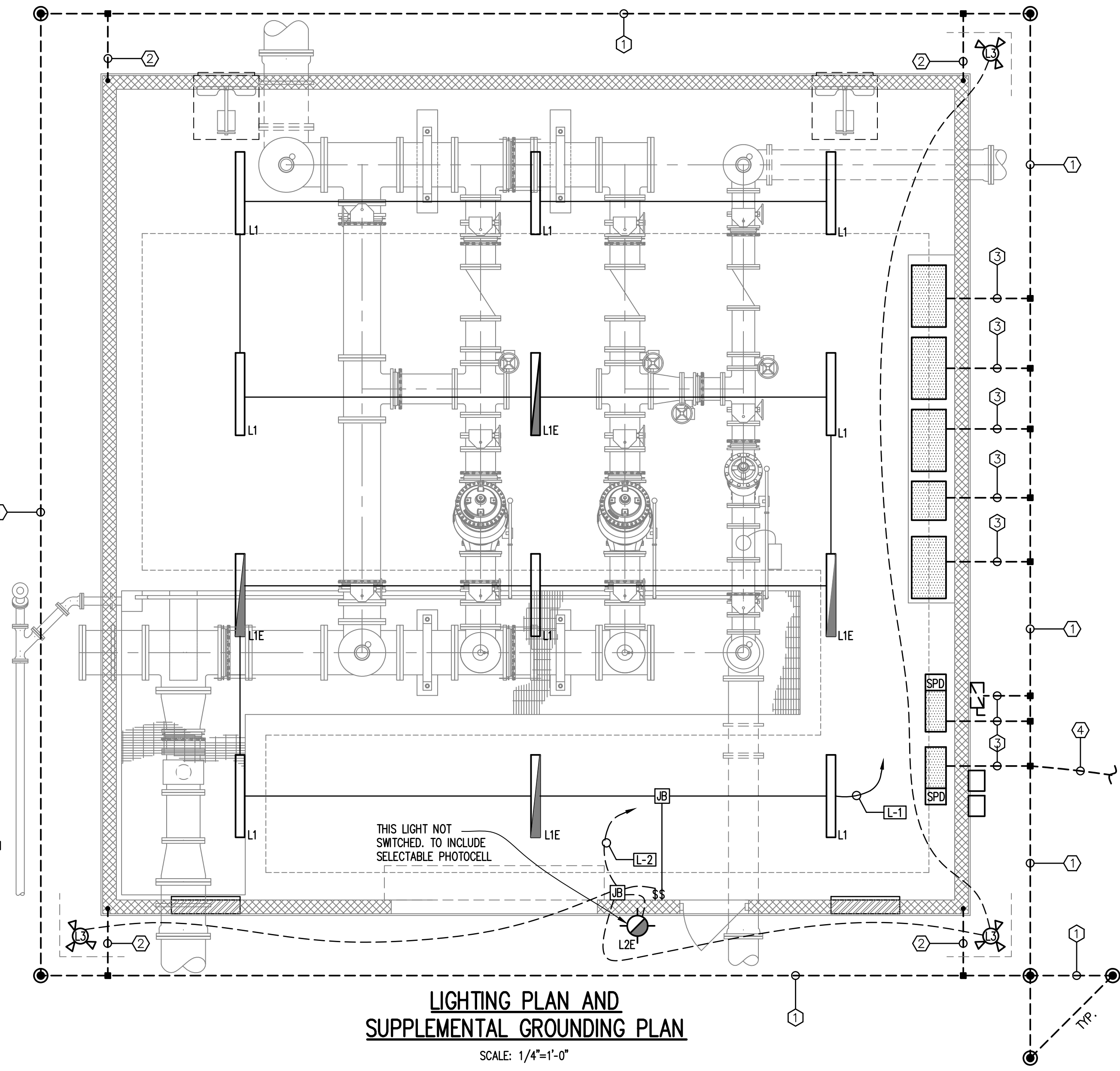
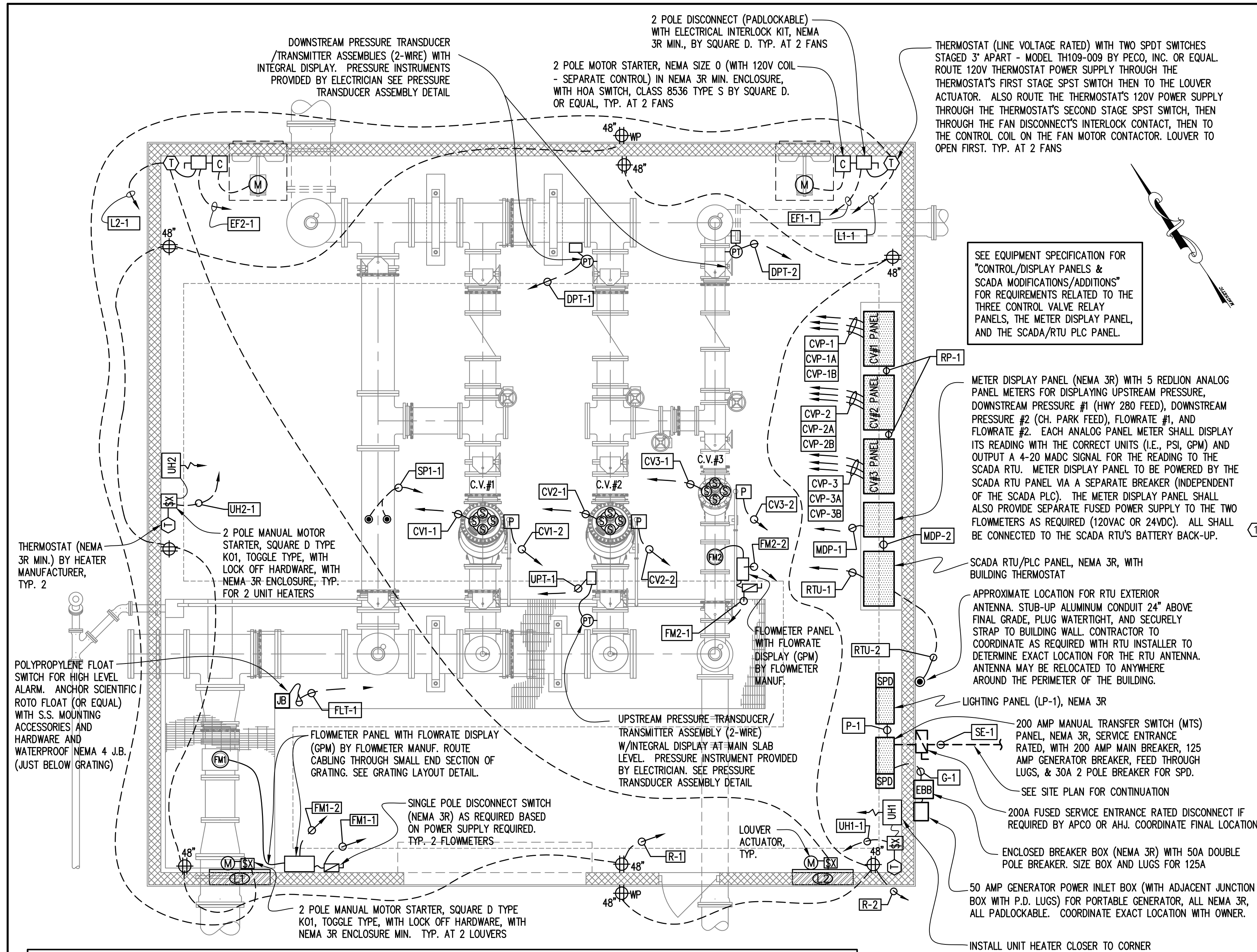
SHELBY COUNTY COMMISSION
NORTH-SOUTH CONNECTOR
CONTROL VALVE STATION

2026



BAR = 1"

Title		BID SET	
Drawing	CONTROL VALVE #2 PANEL AND SCHEMATICS	7 - 2026	AS SHOWN
Project No.		Scale	Sheet
			20



CONDUIT AND WIRING SCHEDULE

MARK	FROM	TO	CONDUIT	WIRING	REMARKS
SE-1	SE MANUAL TRANSFER SWITCH	APCO TRANSFORMER	TWO-2 1/2"	3-4/0 & 1-4/0G	UNDERGROUND SERVICE ENTRANCE, ONE 2.5" CONDUIT IS SPARE
G-1	MANUAL XFER SWITCH	GEN. POWER INLET BOX	2 1/2"	3-#1 & 1-#1G	POWER, VIA ENC. BREAKER BOX. TRANSITION TO #8 WIRE AT E.B.B.
P-1	LIGHTING PANEL (LP-1)	MANUAL XFER SWITCH	2 1/2"	3-4/0 & 1-4/0G	POWER
CVP-1	CONTROL VALVE PANEL #1	LP-1	3/4"	2-#10 & 1-#10G	PANEL POWER
CVP-1A	CONTROL VALVE PANEL #1	SCADA RTU	THREE-3/4"	2-#12 & 1-#12G, 2-#14 & 1-#14G	ANALOG PANEL METER POWER (120VAC OR 24VDC), SIGNAL WIRING
CVP-1B	CONTROL VALVE PANEL #1	SCADA RTU	3/4"	#16 STP (SHIELDED)	ANALOG PANEL METER - VALVE POSITION SIGNAL (4-20 MADC)
CVP-2	CONTROL VALVE PANEL #2	LP-1	3/4"	2-#10 & 1-#10G	PANEL POWER
CVP-2A	CONTROL VALVE PANEL #2	SCADA RTU	THREE-3/4"	2-#12 & 1-#12G, 2-#14 & 1-#14G	ANALOG PANEL METER POWER (120VAC OR 24VDC), SIGNAL WIRING
CVP-2B	CONTROL VALVE PANEL #2	SCADA RTU	3/4"	#16 STP (SHIELDED)	ANALOG PANEL METER - VALVE POSITION SIGNAL (4-20 MADC)
CVP-3	CONTROL VALVE PANEL #3	LP-1	3/4"	2-#10 & 1-#10G	PANEL POWER
CVP-3A	CONTROL VALVE PANEL #3	SCADA RTU	THREE-3/4"	2-#12 & 1-#12G, 2-#14 & 1-#14G	ANALOG PANEL METER POWER (120VAC OR 24VDC), SIGNAL WIRING
CVP-3B	CONTROL VALVE PANEL #3	SCADA RTU	3/4"	#16 STP (SHIELDED)	ANALOG PANEL METER - VALVE POSITION SIGNAL (4-20 MADC)
RTU-1	SCADA RTU	LP-1	3/4"	2-#12 & 1-#12G	POWER
MDP-1	METER DISPLAY PANEL	LP-4 SCADARTU	3/4"	2-#12 & 1-#12G	POWER
MDP-2	METER DISPLAY PANEL	SCADA RTU	AS REQD	WIRING AS REQD	WIRING TO 5 ANALOG PANEL METERS (SEGREGATE POWER & SIGNAL)
UH1-1	UNIT HEATER #1	LP-1	1"	2-#8 & 1-#10G	POWER
UH2-1	UNIT HEATER #2	LP-1	1"	2-#8 & 1-#10G	POWER
EF1-1	EXHAUST FAN #1	LP-1	3/4"	2-#12 & 1-#12G	POWER
L1-1	LOUVER #1	LP-1	3/4"	2-#12 & 1-#12G	POWER
EF2-1	EXHAUST FAN #2	LP-1	3/4"	2-#12 & 1-#12G	POWER
L2-1	LOUVER #2	LP-1	3/4"	2-#12 & 1-#12G	POWER
R-1	BLDG. RECEPTACLES	LP-1	3/4"	2-#12 & 1-#12G	POWER
R-2	BLDG. RECEPTACLES	LP-1	3/4"	2-#12 & 1-#12G	POWER
L-1	INTERIOR BLDG. LIGHTS	LP-1	3/4"	2-#12 & 1-#12G	POWER
L-2	EXTERIOR BLDG. LIGHTS	LP-1	3/4"	2-#12 & 1-#12G	POWER
CV1-1	CONTROL VALVE #1 SOLENOID VALVES	CONTROL VALVE #1 C.P.	1"	8-#14 & 4-#14G	120 VAC POWER SUPPLY
CV1-2	CONTROL VALVE #1 POTENTIOMETER	CONTROL VALVE #1 C.P.	3/4"	#16 STP (SHIELDED), & 1-#14G	POWER & VALVE POSITION (4-20 MADC) (POWERED BY SCADA RTU)
CV2-1	CONTROL VALVE #2 SOLENOID VALVES	CONTROL VALVE #2 C.P.	1"	8-#14 & 4-#14G	120 VAC POWER SUPPLY
CV2-2	CONTROL VALVE #2 POTENTIOMETER	CONTROL VALVE #2 C.P.	3/4"	#16 STP, & 1-#14G	POWER & VALVE POSITION (4-20 MADC) (POWERED BY SCADA RTU)
CV3-1	CONTROL VALVE #3 SOLENOID VALVES	CONTROL VALVE #3 C.P.	1"	8-#14 & 4-#14G	120 VAC POWER SUPPLY
CV3-2	CONTROL VALVE #3 POTENTIOMETER	CONTROL VALVE #3 C.P.	3/4"	#16 STP, & 1-#14G	POWER & VALVE POSITION (4-20 MADC) (POWERED BY SCADA RTU)
UPT-1	UPSTREAM PRESSURE TRANSMITTER	METER DISPLAY PANEL	3/4"	#16 STP (SHIELDED), & 1-#14G	POWER & PRESSURE SIGNAL (4-20 MADC)
DPT-1	DOWNSTREAM PRESS. TRANSMITTER #1	METER DISPLAY PANEL	3/4"	#16 STP (SHIELDED), & 1-#14G	POWER & PRESSURE SIGNAL (4-20 MADC)
DPT-2	DOWNSTREAM PRESS. TRANSMITTER #2	METER DISPLAY PANEL	3/4"	#16 STP (SHIELDED), & 1-#14G	POWER & PRESSURE SIGNAL (4-20 MADC)
FM1-1	MAGNETIC FLOWMETER #1	METER DISPLAY PANEL	3/4"	2-#12 & 1-#12G	POWER (120 VAC)
FM1-2	MAGNETIC FLOWMETER #1	METER DISPLAY PANEL	3/4"	#16 STP (SHIELDED)	FLOWMETER SIGNAL (4-20 MADC)
FM2-1	MAGNETIC FLOWMETER #2	METER DISPLAY PANEL	3/4"	2-#12 & 1-#12G	POWER (120 VAC)
FM2-2	MAGNETIC FLOWMETER #2	METER DISPLAY PANEL	3/4"	#16 STP (SHIELDED)	FLOWMETER SIGNAL (4-20 MADC)
SP1-1	SPARE CONDUITS	RTU	TWO - 3/4"	N/A	
RTU-2	OUTSIDE RTU ANTENNA LOCATION	RTU (VERIFY LOCATION)	1 1/2"	ANTENNA CABLE	ANTENNA CABLE BY RTU PROVIDER
RP-1	CONTROL VALVE RELAY PANEL (R.P.)	CONTROL VALVE R.P.	3/4"	#14 AS REQUIRED	CONTROL WIRING B/W PANELS. SEE CONTROL R.P. SCHEMATICS
FLT-1	HIGH LEVEL FLOAT SWITCH	SCADA RTU	3/4"	2-#14	HIGH LEVEL ALARM

NOTE:

LOCATION/PLACEMENT OF CONDUITS EXTENDING UP THROUGH THE FLOOR SLAB SHALL BE CLOSELY COORDINATED WITH OWNER AND ENGINEER TO ENSURE THERE ARE NO CONFLICTS WITH THE REQUIRED ROLLING PATHS OF THE ROLLING FLOOR CRANE THAT IS NECESSARY FOR MAINTENANCE WITHIN THE STATION

PANELBOARD SCHEDULE - LP-1

PANEL TYPE: SQUARE "D" TYPE NQ00				AIC RATING: 22 KAIC (MINIMUM)				
VOLTAGE: 120/240V-1P-3W				MOUNTING: SURFACE/WALL MOUNT				
AMPS & TYPE: 225 AMPS/2 POLE, NEMA 3R				LOCATION: WALL				
FED FROM: 200A MANUAL TRANSFER SWITCH				FEEDER: 3#4/0 & 1#1/04G - 2 1/2"				
CKT. NO.	BKR	DESCRIPTION	WATTS	PHASE	WATTS	DESCRIPTION	BKR	CKT. NO.
1	20/1	BLDG. RECEPTACLES (R1)	1600	A	3750	UNIT HEATER #2 (UH2)	50/2	16
2	20/1	BLDG. RECEPTACLES (R2)	1600	B	3750	-	-	17
3	20/2	EXHAUST FAN #1 (EF1)	840	A	810	INT. BLDG. LIGHTS (L1)	20/1	18
4	-		840	B	120	EXT. BLDG. LIGHTS (L2)	20/1	19
5	20/1	EXHAUST FAN #2 (EF2)	840	A				20
6	-		840	B				21
7	20/1	FAN #1 THERMOSTAT/LOUVER #1 ACT.	700	A				22
8	20/1	FAN #2 THERMOSTAT/LOUVER #2 ACT.	700	B				23
9	20/1	CONTROL VALVE #1 CONTROL PANEL	200	A				24
10	20/1	CONTROL VALVE #2 CONTROL PANEL	200	B		SPARE	20/1	25
11	20/1	CONTROL VALVE #3 CONTROL PANEL	200	A		SPARE	20/1	26
12	20/1	METER DISPLAY PANEL	400	B		SPARE	30/2	27
13	20/1	SCADA RTU	700	A		-	-	28
14	50/2	UNIT HEATER #1 (UH1)	3750	B		SPD DEVICE	30/2	29
15	-		3750	A		-	-	30
NOTES:			PH. A:	PH. B:	TOTAL CONNECTED LOAD:		26 KVA	
			13,390	12,200			108 AMPS	
					TOTAL DEMAND LOAD:		26 KVA	
							108 AMPS	

LIGHTING FIXTURE SCHEDULE

MARK	FIXTURE MFG	CATALOG NO.	TYPE	LUMENS	MOUNTING HEIGHT	MOUNTING TYPE	REMARKS
L1	LITHONIA	CLX-L48-10000LM-SEF-WDL-WD-120-GZ10-40K-80CRI-WH	LED	10,000	CEILING	SURFACE	120V
L1E	LITHONIA	CLX-L48-10000LM-SEF-WDL-WD-120-GZ10-40K-80CRI-WH-E10W	LED	10,000	CEILING	SURFACE	120V, W/EMERG. BATTERY BACKUP
L2E	LITHONIA	TWR1-LED-AL0-SWM2-UVOLT-PE-DOB7XD-E7WC	LED	ADJ. - 2300, 5300, 8500	ABOVE DOORS	OUTLET BOX	120V, W/EMERG. BATTERY BACKUP, SELECTABLE PHOTOCCELL, DARK BRONZE
L3	LITHONIA	HGX-LED-3RH-AL0-SWM2-120-PE-DOB	LED	ADJ. - 1750, 2750, 4100	EAVE MOUNTED	OUTLET BOX	120V, W/SELECTABLE PHOTOCCELL, DARK BRONZE

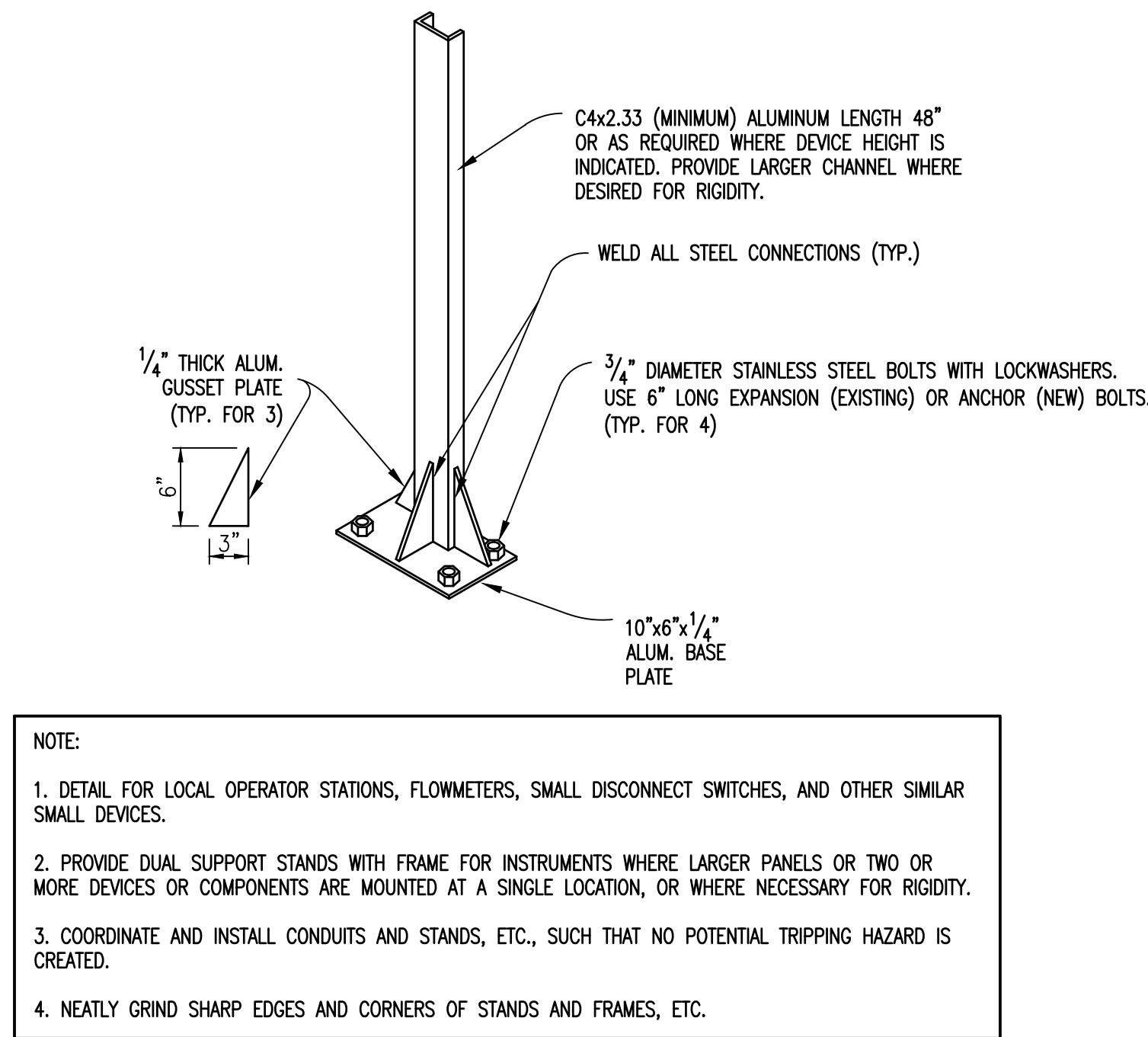
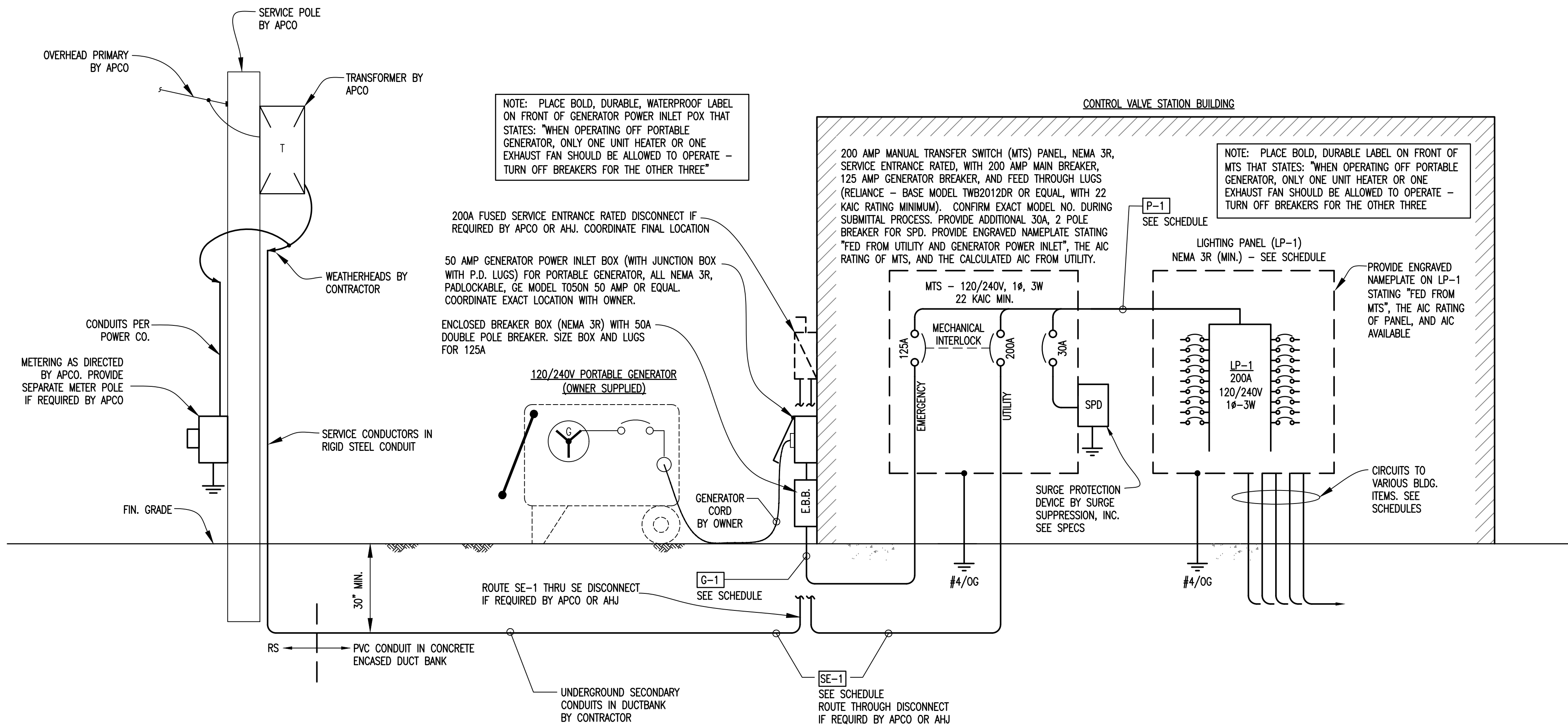
UNIT HEATER SCHEDULE

MARK	QUANTITY	MANUFACTURER	CATALOG NO.	KW	VOLTS	PHASE	MOUNTING HEIGHT A.F.F.	REMARKS
UH1	1	CHROMALOX	HVH-7-21-34-0	7.5	240	1	8'-0"	WALL MOUNT WITH SWIVEL BRACKET (BY MANUF.)
UH2	1	CHROMALOX	HVH-7-21-34-0	7.5	240	1	8'-0"	WALL MOUNT WITH SWIVEL BRACKET (BY MANUF.)

NOTE: FOR ALL UNIT HEATERS, FURNISH AND INSTALL A CHROMALOX WALL MOUNTED THERMOSTAT LOCATED DIRECTLY BELOW UNIT HEATER MOUNTED 60" AFF. PROVIDE 3-#14 - 3/4" CONTROL WIRING FROM THERMOSTAT TO UNIT HEATER.

GROUNDING SYSTEM LEGEND

- GROUND ROD - 3/4" x 10'-0" COPPER CLAD (IF ROCK IS ENCOUNTERED, CHEMICAL ROD EQUIVALENT REQ'D)
- GROUND CONNECTION - CADWELD WHERE BELOW GRADE OR CONCEALED - TWO BOLT LUG BOLTED WHERE EXPOSED.
- ① #4/0 BARE COPPER GROUND GRID
- ② #3/0 BARE COPPER GROUND WIRE - BOND TO BUILDING REBAR
- ③ #2/0 BARE COPPER GROUND WIRE - BOND TO PANEL
- ④ #4/0 BARE COPPER GROUND WIRE - RUN WITH DUCTBANK FROM SERVICE POLE, SEE DUCTBANK DETAIL



SUPPORT STAND DETAIL

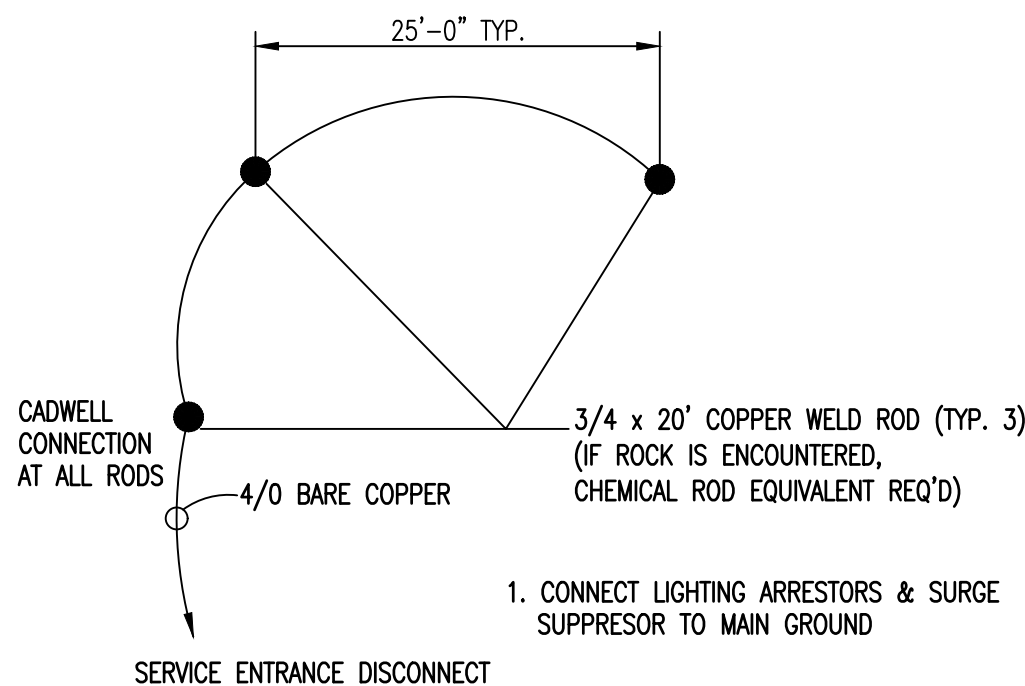
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GENERAL NOTES:

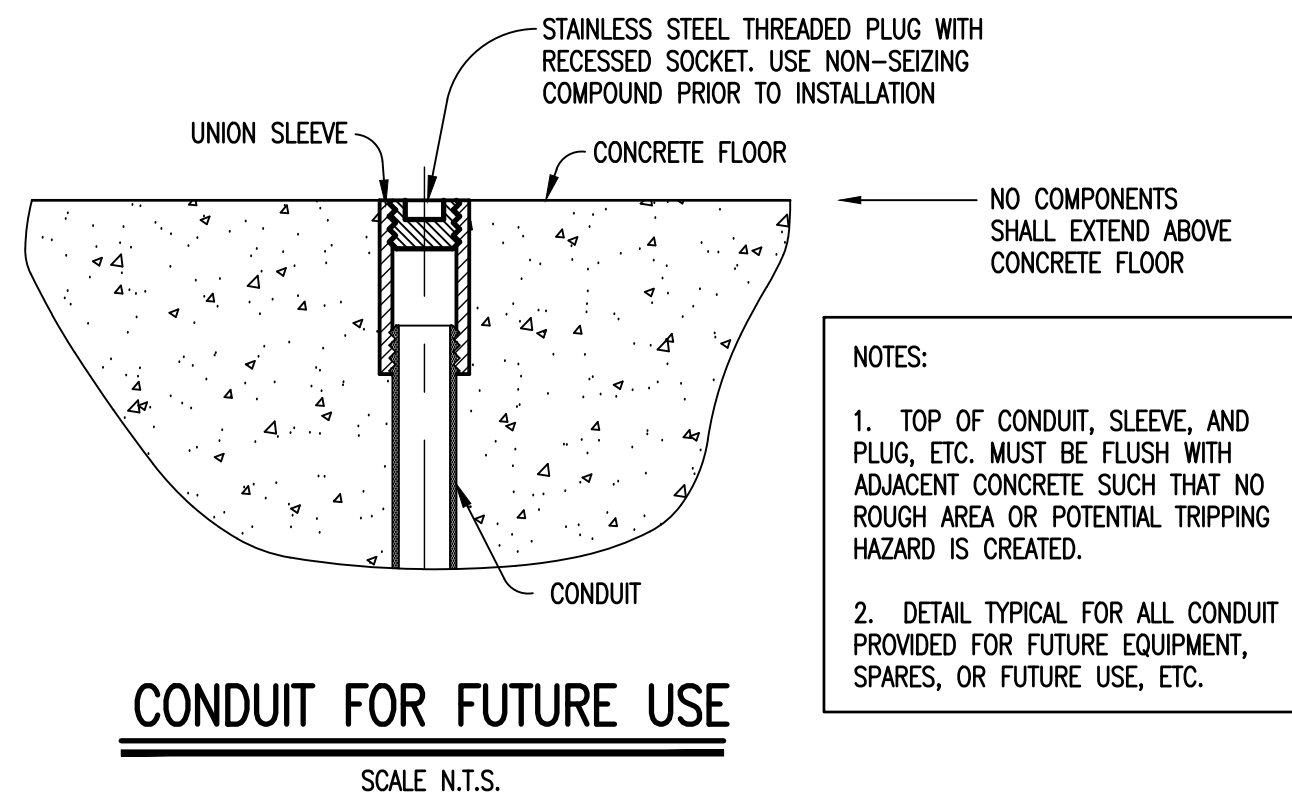
1. ALL EXTERIOR ELECTRICAL DEVICES AND ELECTRICAL CONNECTIONS SHALL BE WEATHERPROOF. ALL INTERIOR ELECTRICAL DEVICES SHALL BE WATER RESISTANT.
2. ALL WIRING AND COMPONENTS SHALL MEET THE NATIONAL ELECTRIC CODE AND INDUSTRY STANDARDS.
3. PROVIDE GROUNDING AS REQUIRED BY CODE.
4. ALL PANELS AND COMPONENTS TO BE UL LISTED
5. ALL CONDUIT SHALL BE PER THE SPECIFICATIONS.
6. ALL ELECTRICAL ENCLOSURES SHALL BE BOLDLY AND DURABLY LABELED AND SHALL HAVE A SINGLE, LOCKABLE DOOR HANDLE FOR EASY ACCESS (NO DOOR CLIPS ALLOWED).
7. DRAWINGS REFLECT GENERAL ELECTRICAL REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR SUPPLYING, GROUNDING, AND INSULATING ALL CONDUITS, WIRING, AND APPURTENANCES NECESSARY FOR A COMPLETELY OPERATIONAL SYSTEM MEETING ALL CODE REQUIREMENTS.
8. COORDINATE LOCATIONS/ROUTES FOR ALL CONDUITS WITH FIELD ENGINEER DURING CONSTRUCTION.
9. ELECTRICAL PLANS & DETAILS INDICATE TYPICAL WIRING REQUIREMENTS FOR EQUIPMENT. VERIFY EXACT WIRING REQUIREMENTS WITH APPROVED MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGH-IN. NO ADDITIONAL COMPENSATION WILL BE PAID FOR WIRING ADJUSTMENTS REQUIRED TO COMPLY WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
10. THE CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT FROM MANUFACTURER'S RECOMMENDATIONS PRIOR TO ROUGHING IN CONDUIT AND SHALL ADJUST CONDUIT SIZE, WIRE SIZE AND CIRCUIT PROTECTION SIZE ACCORDINGLY. IF REQUIREMENTS ARE LARGER THAN CALLED FOR ON ELECTRICAL PLANS NOTIFY ENGINEER IMMEDIATELY.
11. ALL EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH NEC.
12. DEVICE PLATES SHALL BE TYPE 302 STAINLESS STEEL AS MANUFACTURED BY HUBBELL, SIERRA OR APPROVED EQUAL.
13. ALL CONDUITS FOR FUTURE USE SHALL BE STUBBED UP PER THE "CONDUIT FOR FUTURE USE" STANDARD DETAIL.
14. COORDINATE WITH THE ELECTRICAL UTILITY PRIOR TO SUBMITTING BID AND PROVIDE ALL ITEMS AND WORK REQUIRED BY THE UTILITY FOR A COMPLETE ELECTRICAL SERVICE.
15. ALL HANGERS, UNISTRUT, BRACKETS, ATTACHMENTS, CLAMPS, SCREWS, BOLTS, NUTS, WASHERS, HARDWARE, AND APPURTENANCES USED SHALL BE STAINLESS STEEL (OR ALUMINUM IF APPLICABLE AND APPROVED BY THE ENGINEER).
16. ALL EXTERIOR DISCONNECT SWITCHES, RECEPTACLES, AND OTHER EXTERIOR DEVICES SHALL BE IN NEMA 3R ENCLOSURES.
17. PROVIDE 18" MINIMUM WIDTH CONCRETE MOWING STRIP AROUND ALL EXTERIOR ELECTRICAL FACILITIES.
18. INSTRUMENTATION CIRCUITS SHALL BE INSTALLED A MINIMUM OF 12" AWAY FROM ALL 110 VOLT OR HIGHER POWER CIRCUITS. DO NOT INSTALL INSTRUMENTATION CIRCUITS IN THE SAME CONDUIT WITH ANY AC POWER CIRCUITS. INSTRUMENTATION CIRCUITS INCLUDE, BUT ARE NOT LIMITED TO: 4-20 MA CIRCUITS; 24 VOLT OR LOWER CIRCUITS; FIBER OPTIC CIRCUITS; COMMUNICATION CIRCUITS; COMPUTER RELATED CIRCUITS; AND SIMILAR.
19. ALL UNDERGROUND CONDUIT SHALL BE ENCASED IN CONCRETE (WITH STEEL REINFORCING WHERE CALLED FOR) REGARDLESS OF WHETHER INCLUDED IN A DUCT BANK OR INDIVIDUAL RUNS. INSTALL A MINIMUM OF 6" OF CONCRETE AROUND ALL SIDES FOR INDIVIDUAL RUNS.
20. NO CONDUIT OR ELECTRICAL FACILITY OR APPURTENANCE SHALL BE INSTALLED IN A MANNER THAT CREATES A POTENTIAL TRIPPING HAZARD OR AN OBSTRUCTION TO PASSAGE OR HEADROOM, ETC.
21. PROVIDE DANGER LABELS ON ALL PANELS OR BOXES OR PANELBOARDS, ETC. WHERE POWER IS FED FROM MORE THAN ONE SOURCE OR WHERE TURNING OFF THE MAIN BREAKER OR SWITCH DOES NOT AUTOMATICALLY KILL ALL POWER INSIDE THE PANEL.
22. INSTALL PULL CORD IN ALL EMPTY CONDUITS.
23. STAINLESS STEEL UNI-STRUT AND FASTENING HARDWARE SHALL BE PROVIDED AS REQUIRED FOR MISCELLANEOUS MOUNTING PURPOSES.

PROJECT SPECIFIC NOTES:

1. UNIT HEATERS TO BE PROVIDED BY THE ELECTRICAL SUBCONTRACTOR. EXHAUST FANS TO BE PROVIDED BY THE GENERAL CONTRACTOR.
2. MTS, LP-1, AND ALL CONTROL PANELS SHALL BE PROVIDED BY THE ELECTRICAL SUBCONTRACTOR.
3. ELECTRICAL SUBCONTRACTOR SHALL COORDINATE WITH THE RTU MANUFACTURER/VENDOR FOR SUPPLY OF ALL MOUNTING HARDWARE, INSTRUCTIONS, AND ANY WIRING AND CONDUIT REQUIREMENTS FOR THE RTU ANTENNA. ALL ASSOCIATED COSTS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
4. ELECTRICAL SUBCONTRACTOR TO COORDINATE LOCATION OF CONDUIT STUB-UPS FOR ALL EQUIPMENT.
5. ALL PANELS AND COMPONENTS TO BE UL LISTED
6. PROVIDE SURGE PROTECTION DEVICES FOR LP-1 AND MTS (EACH WITH 30 AMP BREAKER) FOR PROTECTING ELECTRICAL EQUIPMENT. MOUNT SPD (NEMA 3R MIN.) TO SIDE OF LP-1 AND MTS WITH VERY SHORT LEAD LENGTHS (12" MAX). SPDs TO BE BY SURGE SUPPRESSION, INC.

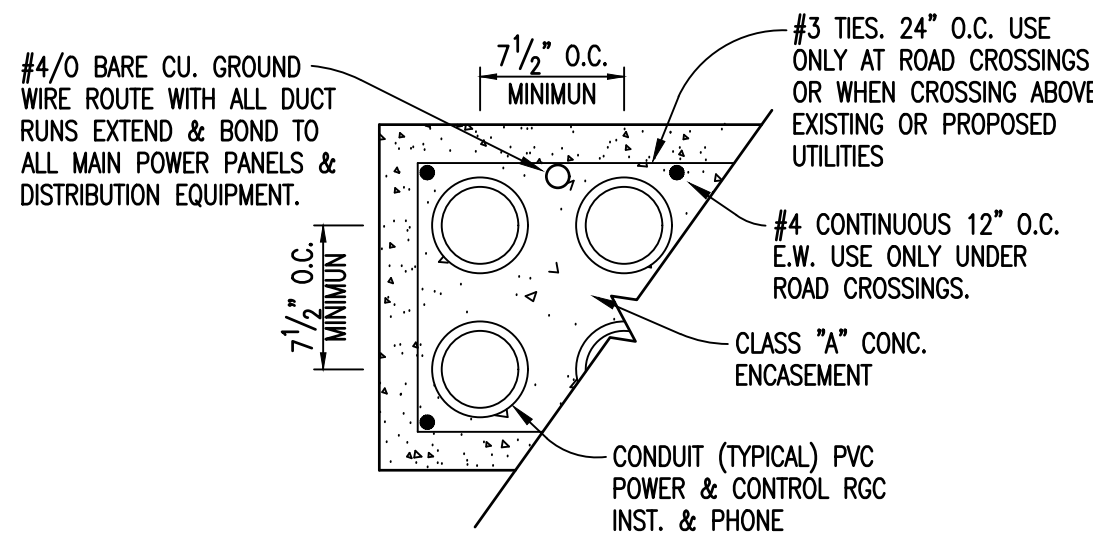


GROUNDING DETAIL AT SERVICE POLE



CONDUIT FOR FUTURE USE

SCALE: N.T.S.



PARTIAL DUCTBANK DETAIL

NOT TO SCALE

1. SEE PLANS FOR NUMBER OF CONDUITS IN DUCTBANKS.
2. PROVIDE A MINIMUM OF 3" CONCRETE COVER AROUND ALL REINFORCING STEEL.
3. ALL BURIED CONDUIT SHALL BE CONCRETE ENCASED AND MARKED WITH BURIED MARKER TAPE.

GENERAL ELECTRICAL LEGEND

- VP WALL OUTLET - DUPLEX - 15A - 125V - 2P - 3W - GROUNDING - NEMA 5-20R - "GFCI" TYPE WEATHERPROOF - HUBBELL GF-5362 - WITH WEATHERPROOF PLATE.
- W WALL OUTLET - DUPLEX - 20A - 125V - 2P - 3W - GROUNDING - NEMA 5-20R - "GFCI" TYPE - HUBBELL GF-5362.
- BR BRANCH CIRCUIT - EXPOSED ON WALLS OR CEILING.
- BR BRANCH CIRCUIT - EXPOSED ON WALLS OR CEILING.
- BR BRANCH CIRCUIT - CONCEALED FLOOR SLAB, DIRT FILL, WALLS, OR CEILING
- BR BRANCH CIRCUIT - HOMERUN
- \$ SWITCH OUTLET - S.P.S.T. - 20A - 120-277VAC - HUBBELL 1221.
- \$X SWITCH OUTLET - MANUAL MOTOR STARTER - TOGGLE TYPE - 2 POLE - ENCLOSURE AS REQUIRED BY APPLICATION - SQUARE "D" - TYPE KO1 OR CLASS 2510 TYPE F DEPENDING ON APPLICATION. PROVIDE LOCK-OFF HARDWARE
- T TRANSFORMER - POWER.
- D DISCONNECT SWITCH - FUSED.
- D DISCONNECT SWITCH - NONFUSED.
- M MOTOR OUTLET - SIZE AS SHOWN.
- C ENCLOSED MOTOR CONTACTOR/STARTER
- J JUNCTION BOX - FLOOR OR SURFACE MOUNTED
- SPD SURGE PROTECTION DEVICE
- S SOLENOID VALVE
- P POTENTIOMETER
- PT PRESSURE TRANSDUCER/TRANSMITTER ASSEMBLY
- T MECHANICAL THERMOSTAT
- FM FLOW METER

SCALE: NONE

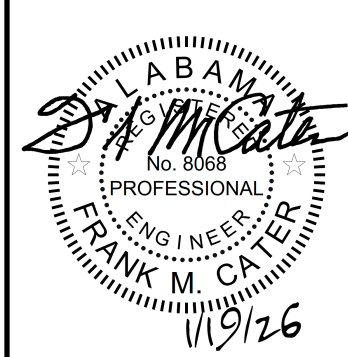
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(205) 822-0397

SHELBY COUNTY COMMISSION

NORTH-SOUTH CONNECTOR
CONTROL VALVE STATION

2026



NOT VALID WITHOUT SIGNATURE

BAR = 1"

Title

ELECTRICAL SINGLE LINE,
NOTES AND DETAILS

BID SET

Drawing

Project No.

Date 7 - 2026

Scale NONE

Sheet 23