

INTERNATIONAL DRIVE BOOSTER PUMP STATION



CONWAY, SC

PROJECT NUMBER CGRE190054

GOODWYN MILLS & CAWOOD, INC

ARCHITECTURE, CIVIL, ELECTRICAL, ENVIRONMENTAL,
GEOTECHNICAL, PROCESS ENGINEERING

TIMMERMAN STRUCTURAL ENGINEERING GROUP

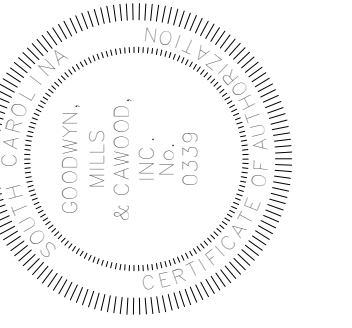
STRUCTURAL ENGINEERING

SWYGERT & ASSOCIATES

MECHANICAL & PLUMBING ENGINEERING

GMC

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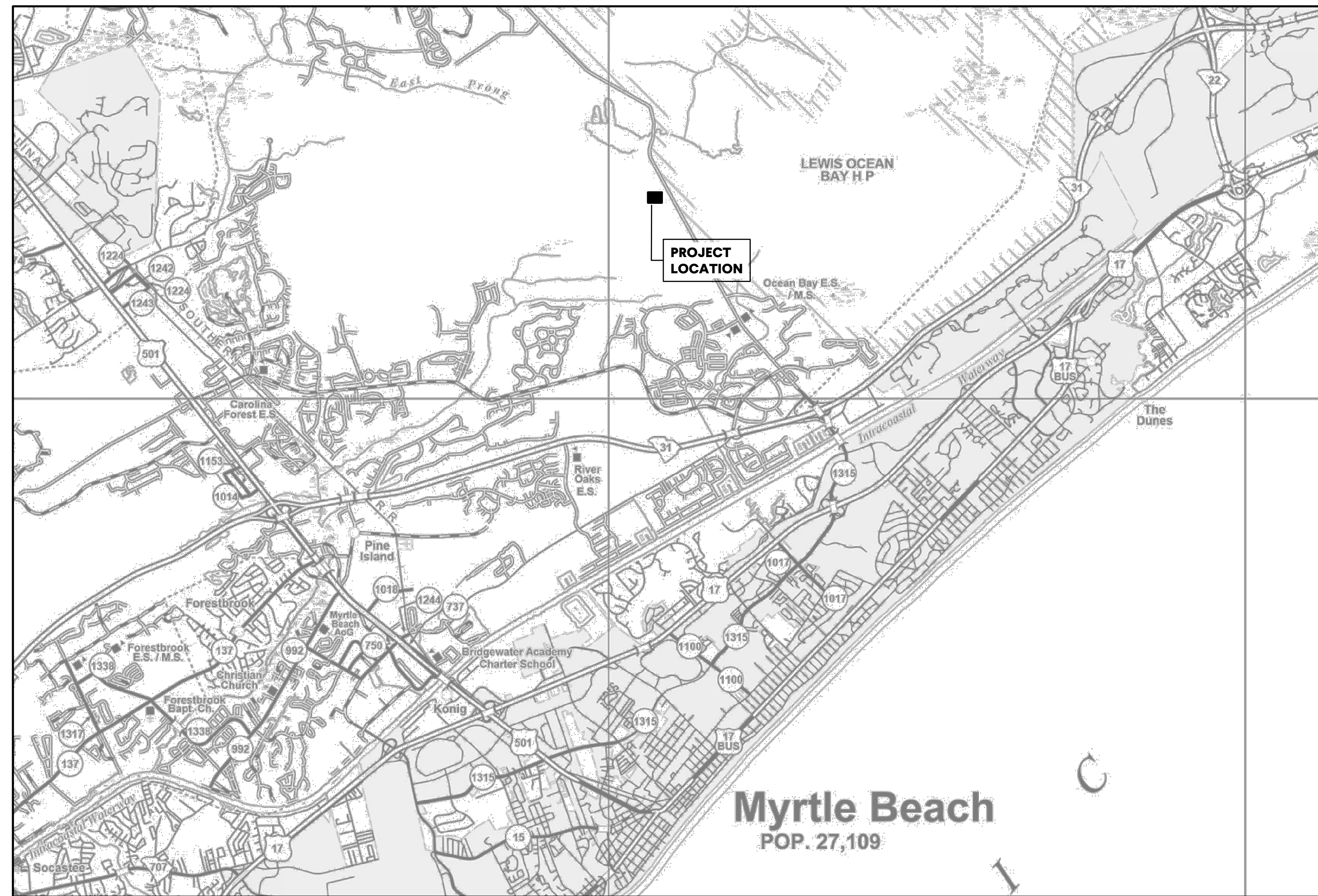
INTERNATIONAL DRIVE
BOOSTER PUMP STATION
CONWAY, SC

CGRE190054
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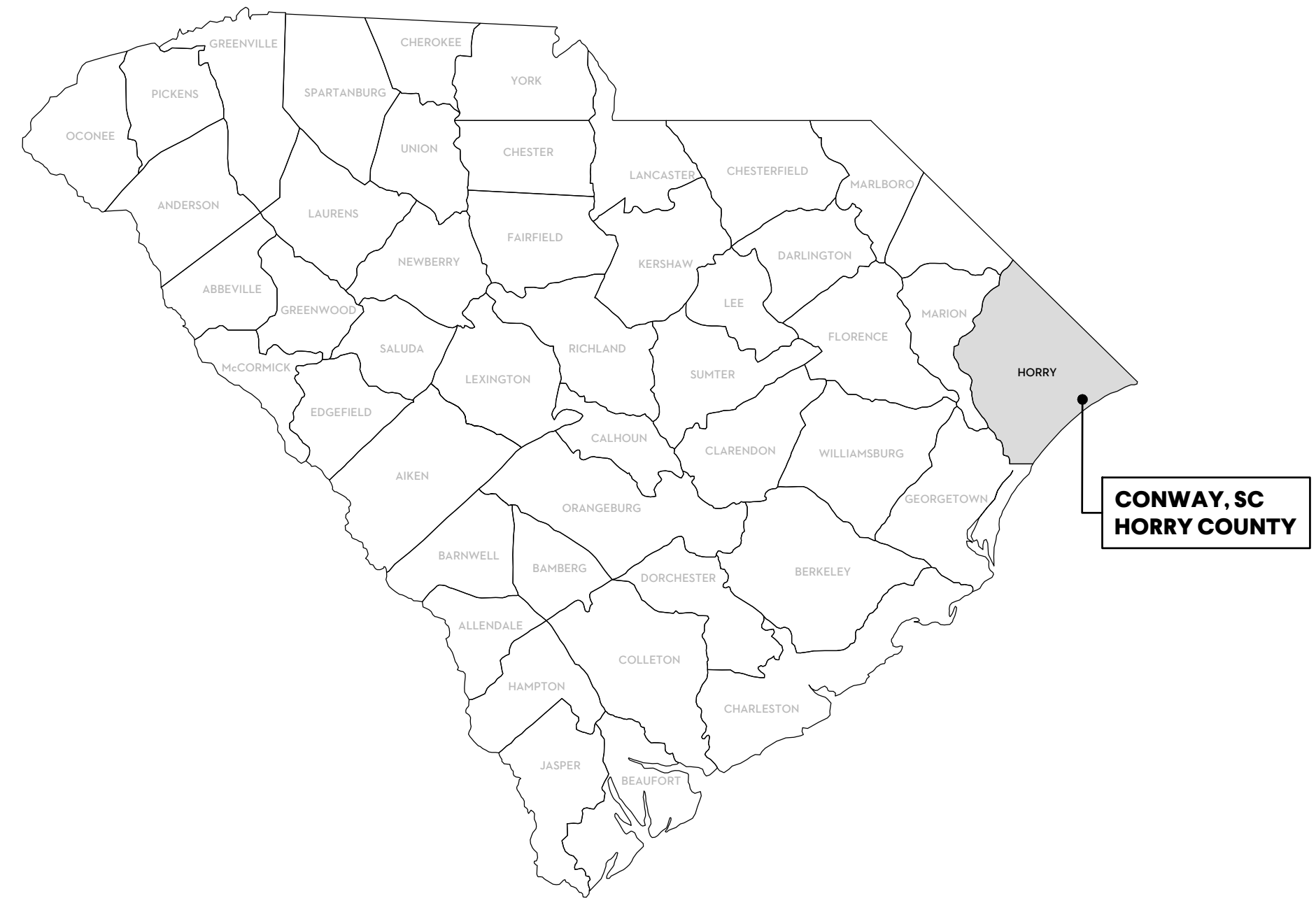


TITLE SHEET

G-001

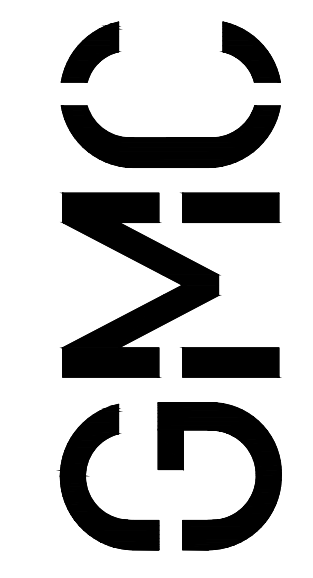


VICINITY MAP
NOT TO SCALE

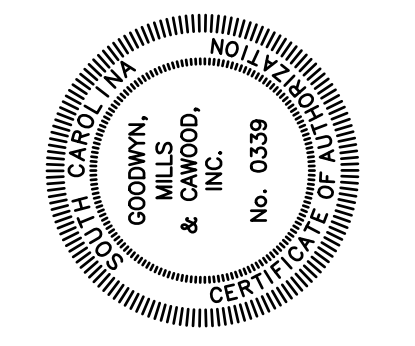


LOCATION MAP
STATE OF SOUTH CAROLINA

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DRAWING INDEX &
PROJECT
LOCATION MAP

G-002

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PLOT DATE: 05/27/2020 10:48:58am

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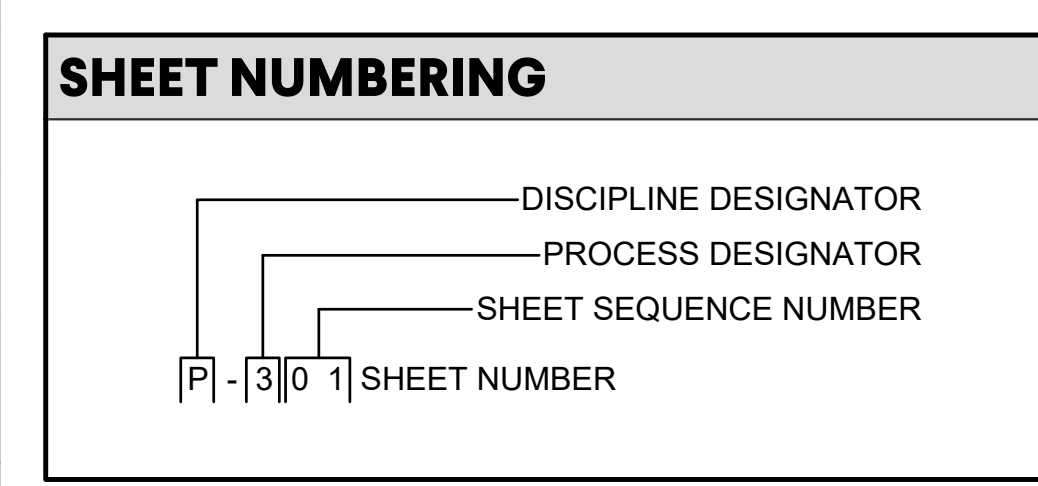
DISCIPLINE DESIGNATORS	
DISCIPLINE	DESIGNATOR
GENERAL	G
INSTRUMENTATION	I
CIVIL UTILITIES	CU
CIVIL	C
STRUCTURAL	S
ARCHITECTURAL	A
PLUMBING	P
MECHANICAL	M
PROCESS	D </td
ELECTRICAL	E

HATCHING LEGEND		
DESCRIPTION	EXISTING	PROPOSED
ASPHALT PAVING (PLAN)		
RIP RAP		
CONCRETE (PLAN)		
CONCRETE (SECTION)		
CRUSHED STONE (SECTION)		
EARTH OR BACKFILL (SECTION)		
REMOVAL OR DEMOLITION (PLAN & SECTION)		
UNPAVED DRIVE (PLAN)		
NEW WETLANDS IMPACT WITHIN SEWER EASEMENT		
EXISTING WETLANDS WITHIN SEWER EASEMENT		
100-YR FLOOD BOUNDARY		
PERMANENT ACCESS EASEMENT		
TEMPORARY ACCESS EASEMENT		
GEOTECHNICAL MATTING MATERIAL		
PROPOSED GROUT		
WATER BODY		
KEY MAP SHEET BOUNDARY		

ABBREVIATIONS	
ASP	ASPHALT
AR	AUGER REFUSAL
ARV	AIR RELEASE VALVE
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BM	BENCH MARK
BO	BLOW-OFF
BT	BORING TERMINATION
C	CENTERLINE
CIP	CAST IN PLACE
CO	CLEANOUT
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
DIP	DUCTILE IRON
EG	EXISTING GRADE
ELEV.	ELEVATION
EX.	EXISTING
FL	FLANGED
FM	FORCE MAIN
GAB	GRADED AGGREGATE BASE
GV	GATE VALVE
HDD	HORIZONTAL DIRECTIONAL DRILL
HDPE	HIGH DENSITY POLYETHYLENE
HYD	HYDRANT
INV	INVERT
IV	IRRIGATION VALVE
LF	LINEAR FEET
LOD	LIMITS OF DISTURBANCE
MAX.	MAXIMUM
MIN.	MINIMUM
MJ	MECHANICAL JOINT
N.T.S.	NOT TO SCALE
PC	PRESSURE CLASS
P.E.	PLAIN END
PP	POWER POLE
PROP	PROPOSED
PRV	PRESSURE REGULATING VALVE
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RJ	RESTRAINED JOINT
R/W	RIGHT-OF-WAY
SS	SANITARY SEWER
WT	WATERTIGHT
VAR.	VARIOUS

OWNER			
DESCRIPTION	NAME	PHONE NUMBER	EMAIL ADDRESS
OWNER CONTACT	CHRISTY EVERETT	(843) 443-8293	CHRISTY@GSWSA.COM

ENGINEER			
DESCRIPTION	NAME	PHONE NUMBER	EMAIL ADDRESS
PROJECT MANAGER	TYLER MORGAN	(864) 527-0460	TYLER.MORGAN@GMCNETWORK.COM
ENGINEER	CORBIN JENKINS	(864) 527-0460	CORBIN.JENKINS@GMCNETWORK.COM



PIPE SERVICE (GENERAL)	
BYP	BYPASS
D	DRAIN
DIS	DISCHARGE WATERLINE
LFBYP	LOW FLOW BYPASS
SA	SAMPLE
SUCT	SUCTION WATERLINE
W	WATER

GRAPHICS LEGEND

ELEVATION INDICATOR

ELEVATION NUMBER
SHEET WHERE DRAWN

SECTION INDICATOR

SECTION NUMBER
SHEET NUMBER

ENLARGED PLAN/DETAIL INDICATOR

ENLARGED PLAN/DETAIL NUMBER
SHEET WHERE DRAWN
SHEET WHERE INDICATED
AREA ENLARGED

DRAWING TITLE

PLAN/DETAIL TITLE
PLAN/DETAIL NUMBER
VIEW TITLE
SCALE: 1/8" = 1'-0"
SHEET WHERE DRAWN
SCALE

PIPE SUPPORT INDICATOR

SEE DETAIL NUMBER ON SHEET D-9XX & D-9XX
SEE DETAIL NUMBER ON SHEET D-9XX & D-9XX

SHEET NUMBERING

DISCIPLINE DESIGNATOR
PROCESS DESIGNATOR
SHEET SEQUENCE NUMBER
P-3|0|1 SHEET NUMBER

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LEGENDS & ABBREVIATIONS

G-003

DRAWN BY: TMM
CHECKED BY: JTM

1 2 3 4 5 6 7 8 9 10

GENERAL NOTES

1. THE CONTRACTOR IS EXPECTED TO CAREFULLY EXAMINE THE PLANS, PROPOSAL AND SITE OF THE WORK. THEREFORE, IT WILL BE ASSUMED THAT THE CONTRACTOR HAS SATISFIED HIMSELF AS TO THE CONDITIONS TO BE ENCOUNTERED IN REGARDS TO THE CHARACTER, QUALITY, AND QUANTITIES OF WORK TO BE PERFORMED AND MATERIALS TO BE FURNISHED, AND AS TO THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS, SPECIAL PROVISIONS AND CONTRACT. THE SUBMISSION OF A PROPOSAL BY A CONTRACTOR WILL BE CONSIDERED PRIMA FACIE EVIDENCE THAT THE CONTRACTOR HAS MADE SUCH AN EXAMINATION.
2. THE CONTRACTOR IS REQUIRED TO MAINTAIN AN AS-BUILT SET OF DRAWINGS DURING PROJECT CONSTRUCTION. THE COMPLETE AS-BUILT MAP WILL CONTAIN ALL INSTALLED LINES, VALVES, METERS, AND CONNECTIONS WITH REFERENCE DISTANCES TO PERMANENT ABOVE GROUND STRUCTURES.
3. ALL EXISTING UTILITIES SHOWN ABOVE AND BELOW GROUND ARE APPROXIMATE AND ARE NOT NECESSARILY ALL THAT EXIST. THE DETERMINATION OF THE EXISTENCE, LOCATION, AND DEPTH OF ALL UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED BY CONTRACTOR FOR ONE YEAR AFTER ACCEPTANCE BY THE OWNER.
5. ALL HAZARDOUS SUBSTANCES USED FOR THIS PROJECT, INCLUDING, BUT NOT LIMITED TO, PAINT, OIL, GREASE, AND OTHER PETROLEUM PRODUCTS SHALL BE STORED IN ACCORDANCE WITH SPCC REGULATIONS. THESE SUBSTANCES SHALL BE STORED AWAY FROM STORM DRAINS, DITCHES, AND GUTTERS IN WATERTIGHT CONTAINERS. DISPOSAL OF THESE SUBSTANCES SHALL BE IN ACCORDANCE WITH STATE & FEDERAL AGENCY REGULATIONS. CONTRACTOR SHALL PROVIDE ADEQUATE TRASH CONTAINERS ON SITE FOR THE DISPOSAL OF CONSTRUCTION MATERIALS WASTE. CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY TRASH OR OTHER POLLUTANTS FROM ENTERING STORM DRAINS.
6. ANY PROPERTY CORNERS OR PERMANENT SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A LICENSED SURVEYOR AT CONTRACTORS EXPENSE.
7. ANY PAVEMENT OR CURBING DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED AND RESTORED TO LIKE OR BETTER CONDITION.
8. SITE SECURITY AND EQUIPMENT STORAGE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE AND RESET FENCING TO ORIGINAL CONDITION WHERE REQUIRED AT NO ADDITIONAL COST.
10. THE MAXIMUM LENGTH OF AREA DISTURBED BEFORE SOIL STABILIZATION TECHNIQUES WILL BE REQUIRED HAS BEEN SET TO 500 FT. ALL DISTURBED AREAS ALONG THE PIPELINE SHALL BE GRASSED AS SOON AS POSSIBLE AFTER BACKFILLING OPERATIONS HAVE BEEN COMPLETED.
11. EXCAVATION AND BACKFILLING ACTIVITIES SHALL BE IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) OF 1970 (PL 91-596), AS AMENDED. PARTICULAR ATTENTION SHALL BE PAID TO THE SAFETY AND HEALTH REGULATIONS PART 1926, SUBPART P "EXCAVATION, TRENCHING, AND SHORING" AS DESCRIBED IN OSHA PUBLICATION 2226.
12. ALL DIMENSIONS, STATIONS, COORDINATES, ELEVATIONS, ETC. SHOWN ON THESE PLANS ARE IN FEET UNLESS OTHERWISE NOTED.
13. THE CONTRACTOR SHALL REMOVE FROM THE SITE AND DISPOSE OF LEGALLY, ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM CONSTRUCTION OPERATIONS, INCLUDING BUT NOT LIMITED TO RESIDUAL CUT MATERIALS, AND DEMOLITION MATERIALS AT NO ADDITIONAL COST TO THE OWNER.
14. BURNING IS NOT PERMITTED.
15. CLEARING AND GRUBBING LIMITS SHALL BE LIMITED TO AREAS DISTURBED BY GRADING OPERATIONS.
16. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATION & PROTECTION OF EXISTING ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES. ANY AND ALL MAINS, LINES OR INDIVIDUAL SERVICES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
17. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS ONSITE AND NOTIFY THE ENGINEER OF ANY DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES IN WRITING PRIOR TO BEGINNING WORK.
18. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING CONSTRUCTION STAKING FOR ALL IMPROVEMENTS. THE LOCATIONS OF ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS.
19. ACCESS EASEMENTS FOR PROJECT ARE SHARED. CONTRACTOR SHALL MAINTAIN INGRESS AND EGRESS FOR ALL AUTHORIZED PERSONNEL ALONG ACCESS EASEMENT.
20. CONTRACTOR SHALL LIMIT ACTIVITIES TO EASEMENTS AND PROPERTY OBTAINED FOR THIS PROJECT.
21. THERE SHALL BE NO LAND DISTURBANCE OUTSIDE OF THE PERMITTED WETLAND IMPACT AREA. THE CONTRACTOR SHALL TAKE EXTRA PRECAUTIONS WHEN DISTURBING AREAS WITHIN THE PERMITTED WETLAND IMPACT AREA TO MINIMIZE IMPACTS WHERE POSSIBLE.
22. THIS PROJECT IS LOCATED IN FEMA ZONE X AS SHOWN ON F.I.R.M. MAP NUMBER 45051C0545H DATED AUGUST 23, 1999.

UTILITY NOTES


1. ALL CONSTRUCTION SHALL CONFORM TO SCDHEC AND GSWA STANDARDS AND SPECIFICATIONS.
2. WHEN INSTALLING WATERLINES, THE CONTRACTOR SHALL INSTALL A METALLIC TRACER WIRE ON THE PIPE WHEREBY THE INSTALLATION CAN BE LOCATED BY ELECTRONIC DETECTION DEVICES AFTER THE WORK IS COVERED.
3. ALL GATE VALVES, BUTTERFLY VALVES, AIR RELEASE VALVES, AND TAPPING SADDLES SHALL CONFORM TO GSWA SPECIFICATIONS.
4. ALL NEW WATER MAINS SHALL BE TRENCHED UNLESS OTHERWISE NOTED.
5. ALL PIPE SHALL BE A MINIMUM OF 4-FT OF COVER UNLESS INDICATED OTHERWISE ON PLANS.
6. ALL FITTINGS SHALL BE COMPACT BODY DUCTILE IRON WRAPPED IN POLYETHYLENE ENCASEMENT. FITTINGS TO BE LEFT EXPOSED UNTIL APPROVAL TO BACKFILL IS PROVIDED BY GSWA OR ENGINEER.
7. ALL BURIED FITTINGS AND VALVES SHALL BE RESTRAINED MECHANICAL JOINT. RESTRAINED JOINTS SHALL BE USED TO THE EXTENTS SHOWN ON THE PLANS. ALL FITTINGS AND VALVES SHALL HAVE ADEQUATE RESTRAINED LENGTHS TO PREVENT PIPE SEPARATION.
8. THE CONTRACTOR SHALL FOLLOW GSWA SPECIFICATIONS AND PROCEDURES TO FLUSH, PRESSURIZE, STERILIZE, AND FURNISH WATER SAMPLES FOR TESTING UNTIL APPROVAL IS GRANTED BY SCDHEC AND GSWA. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING GSWA A COMPLETED AND APPROVED WATER SYSTEM.
9. CONTRACTOR SHALL COORDINATE ALL EQUIPMENT START UP AND TESTING WITH GSWA STAFF.
10. GSWA AND ENGINEER TO BE NOTIFIED A MINIMUM OF 72 HOURS PRIOR TO ANY PLANNED TAP OR SYSTEM CONNECTIONS.
11. ALL SYSTEM OUTAGES SHALL BE COORDINATED AT LEAST ONE (1) WEEK IN ADVANCE WITH GSWA AND ENGINEER. SYSTEM CONNECTIONS TO THE EXISTING 24-INCH AND 30-INCH TRANSMISSION MAINS SHALL BE COMPLETED AT NIGHT DURING PERIODS OF LOW DEMAND.

SURVEY NOTES

1. SURVEY WAS PERFORMED BY PALMETTO CORP LAND SURVEYING DIVISION ON 2/18/2020.
2. SURVEY BEARINGS ARE BASED ON SOUTH CAROLINA NAD83 STATE PLANE COORDINATE SYSTEM. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCE, NOT GRID DISTANCES.

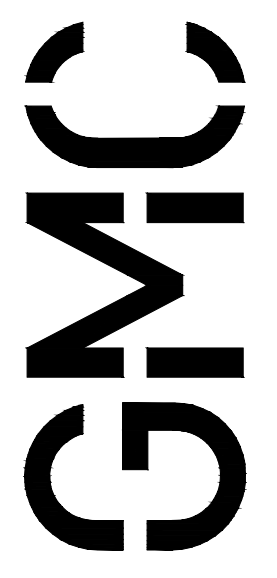
G-004

GENERAL PROJECT NOTES



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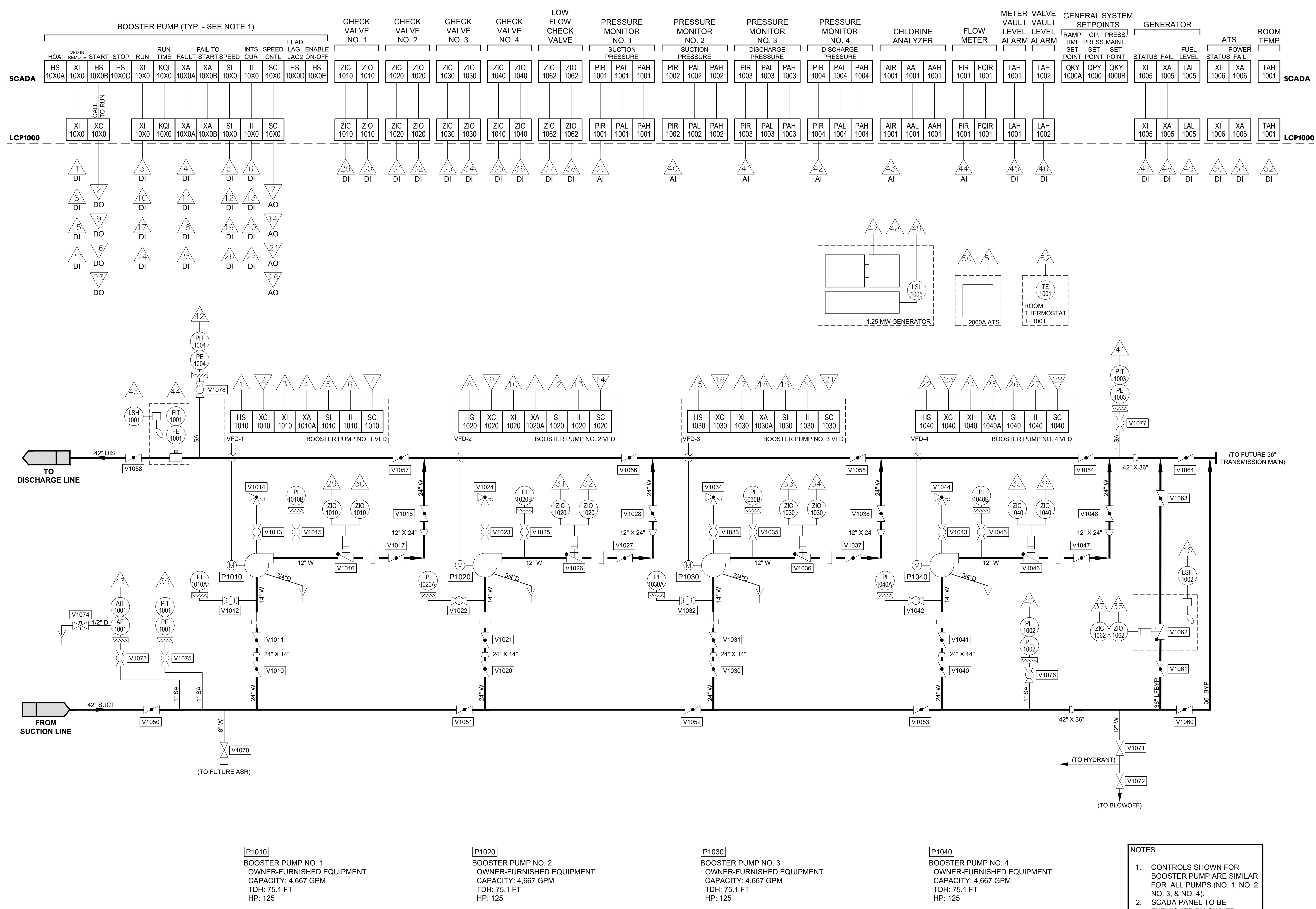


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CHECKED BY: DJM

DRAWING FILE: I:\Projects\2020\20200518\20200518-International Drive PS and Water Main\Instrumentation\I-101-Booster Pump Station\I-101-Booster Pump Station.dwg
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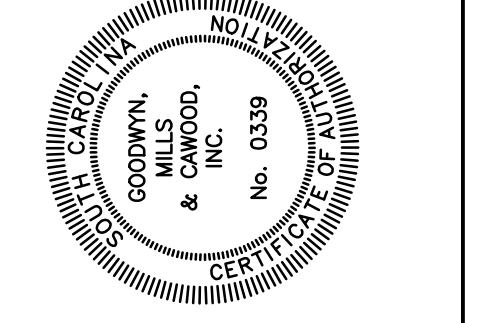
- P1010**
BOOSTER PUMP NO. 1
OWNER-FURNISHED EQUIPMENT
CAPACITY: 4,667 GPM
TDH: 75.1 FT
HP: 125
- P1020**
BOOSTER PUMP NO. 2
OWNER-FURNISHED EQUIPMENT
CAPACITY: 4,667 GPM
TDH: 75.1 FT
HP: 125
- P1030**
BOOSTER PUMP NO. 3
OWNER-FURNISHED EQUIPMENT
CAPACITY: 4,667 GPM
TDH: 75.1 FT
HP: 125
- P1040**
BOOSTER PUMP NO. 4
OWNER-FURNISHED EQUIPMENT
CAPACITY: 4,667 GPM
TDH: 75.1 FT
HP: 125

NOTES

1. CONTROLS SHOWN FOR BOOSTER PUMP ARE SIMILAR FOR ALL PUMPS (NO. 1, NO. 2, NO. 3, & NO. 4).
2. SCADA PANEL TO BE FURNISHED BY OWNER.

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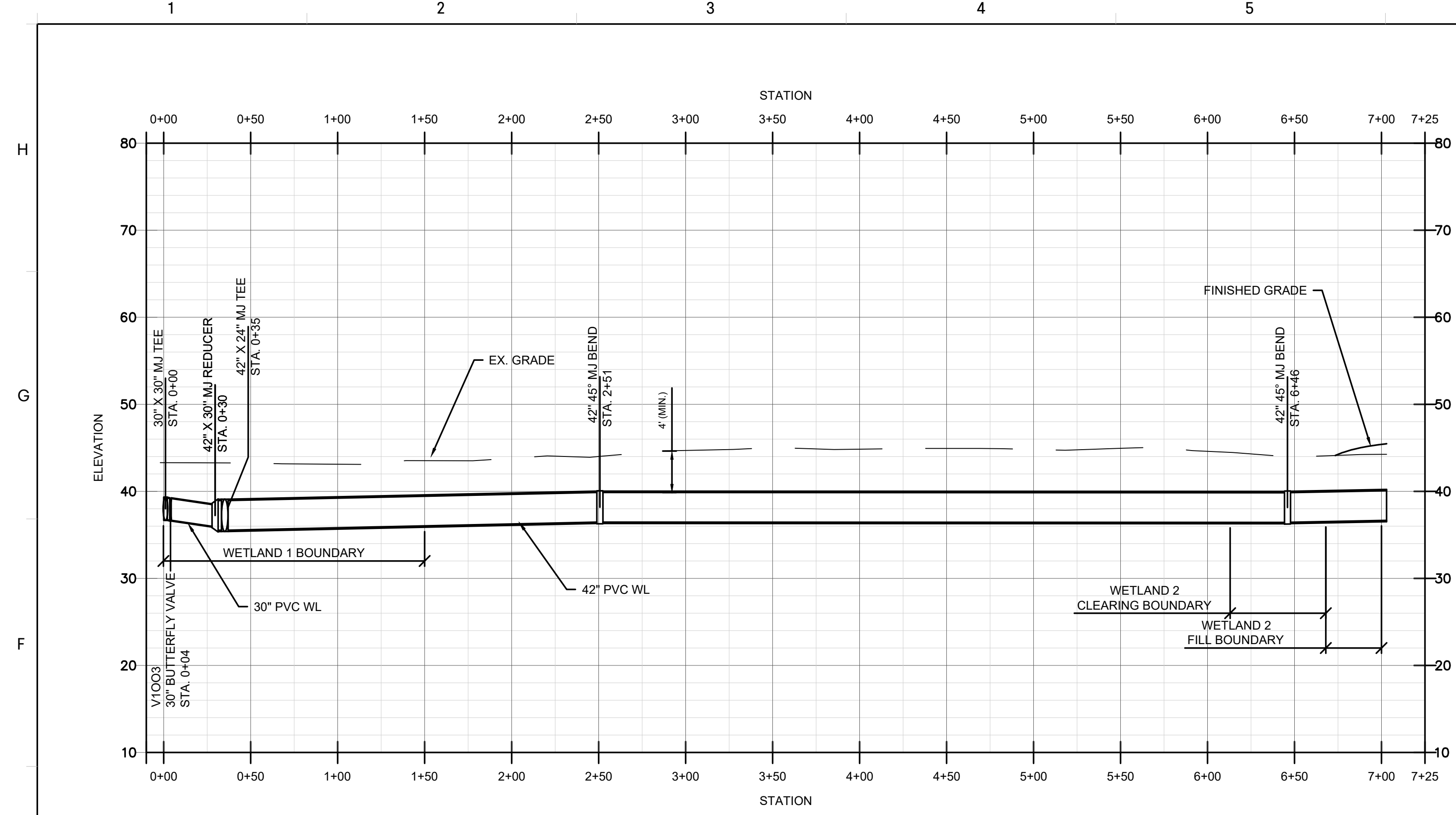
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PROCESS & INSTRUMENTATION DIAGRAM - BOOSTER PUMP STATION

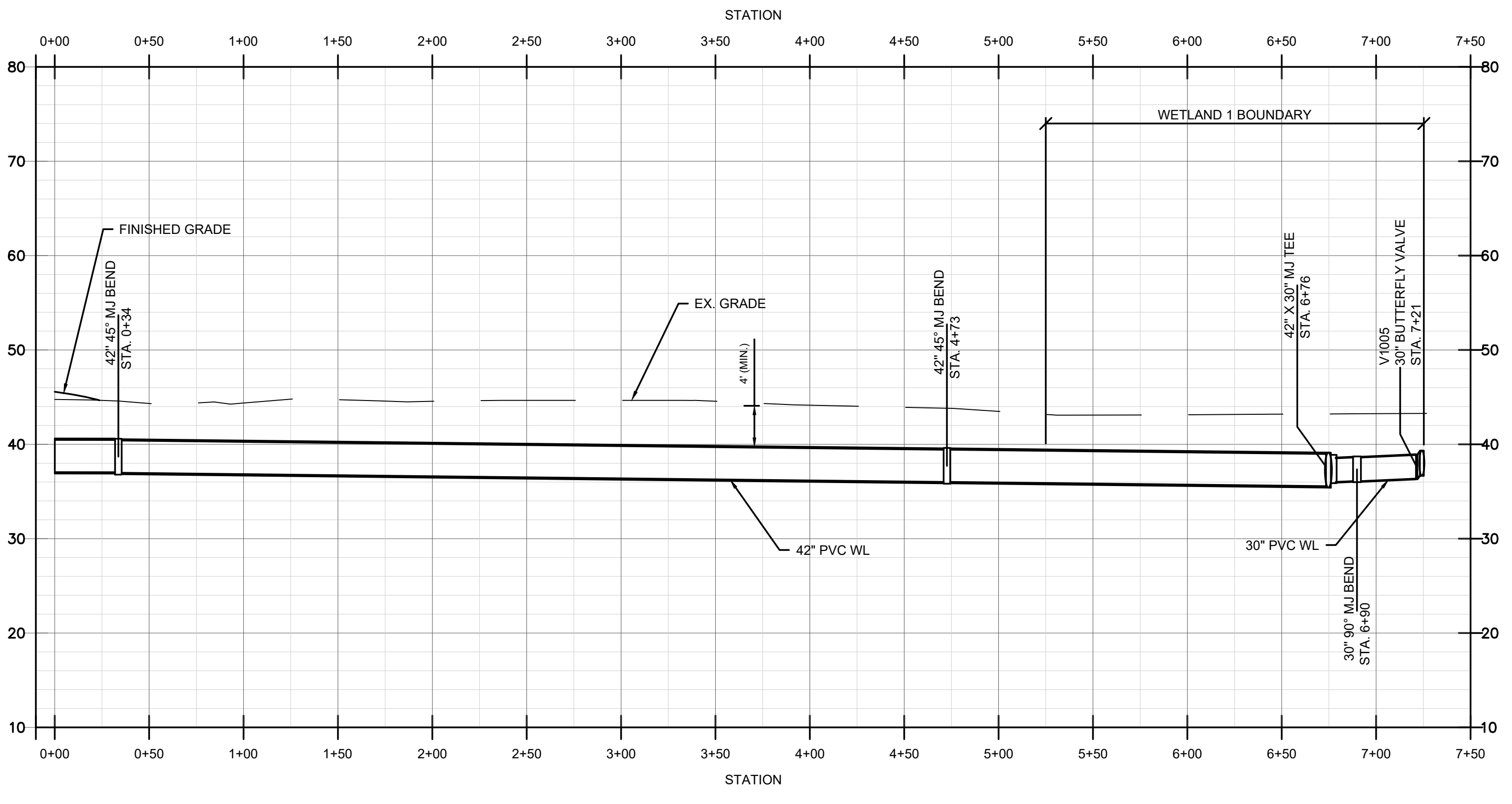
I-101

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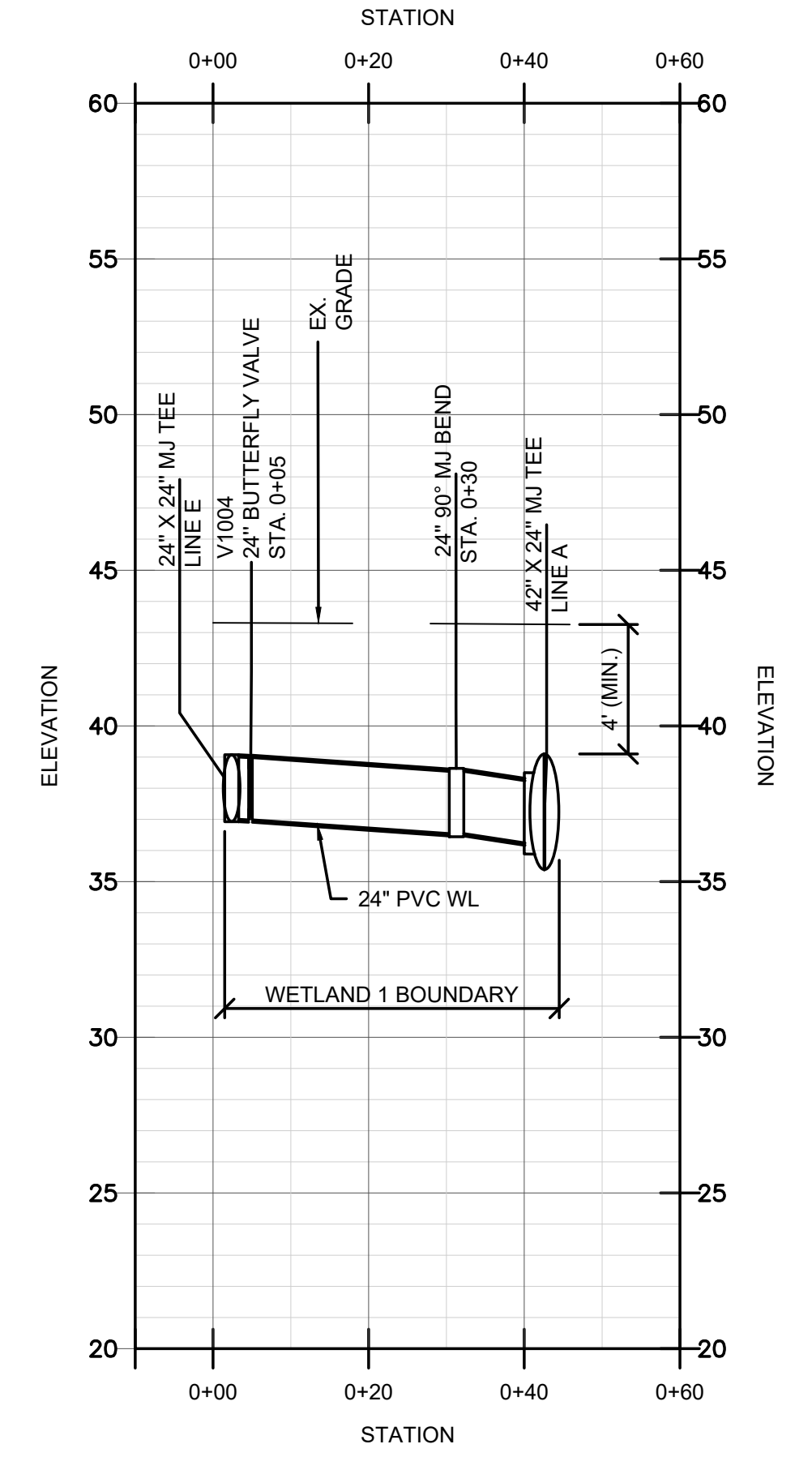


A PROFILE - LINE A
CU102 SCALE: HORIZ; 1" = 50' VERT 1" = 10'

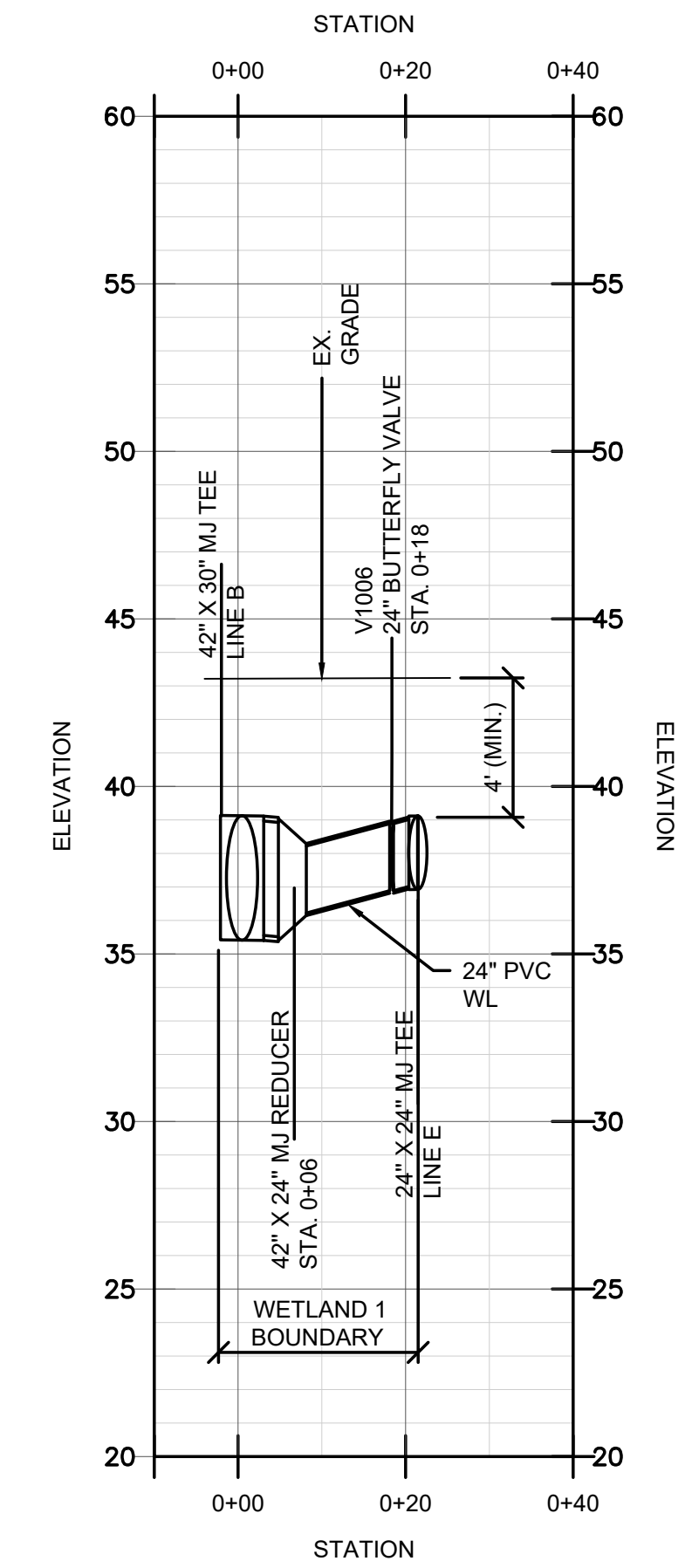
NOTE:
REFER TO SHEET CU902 FOR TABLE OF RESTRAINED
JOINT REQUIREMENTS.



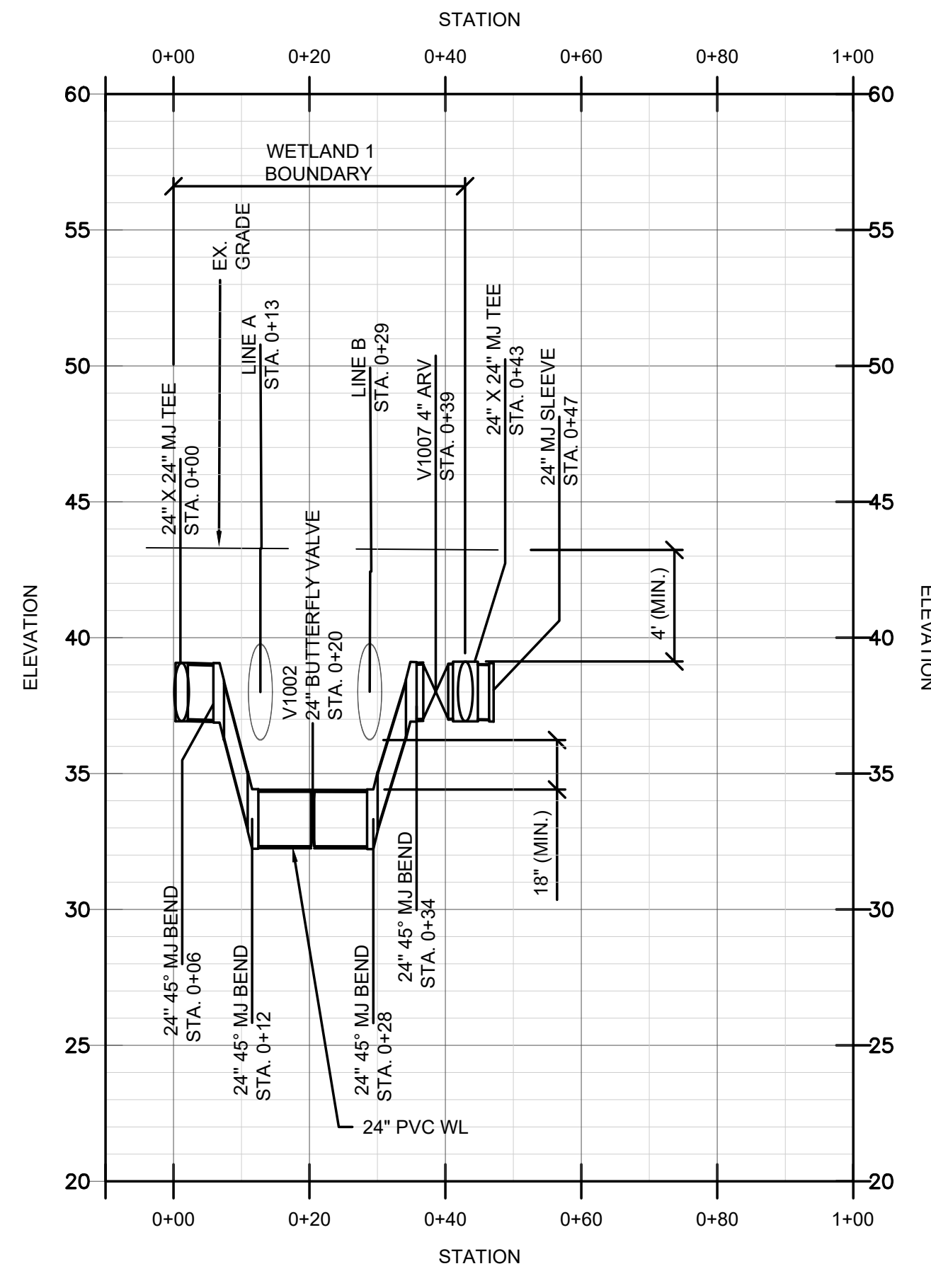
B PROFILE - LINE B
CU102 SCALE: HORIZ; 1" = 50' VERT 1" = 10'



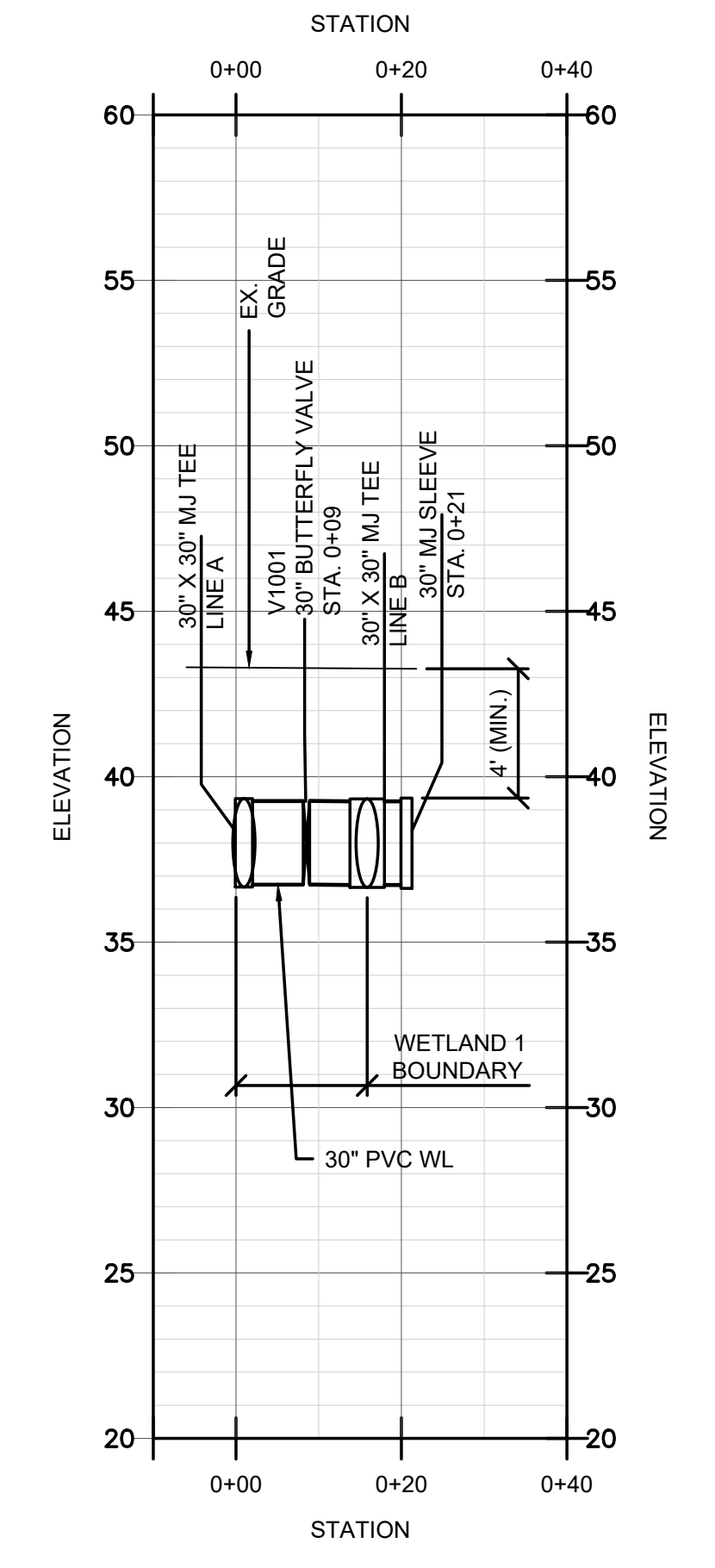
C PROFILE - LINE C
CU102 SCALE: HORIZ; 1" = 20' VERT 1" = 5'



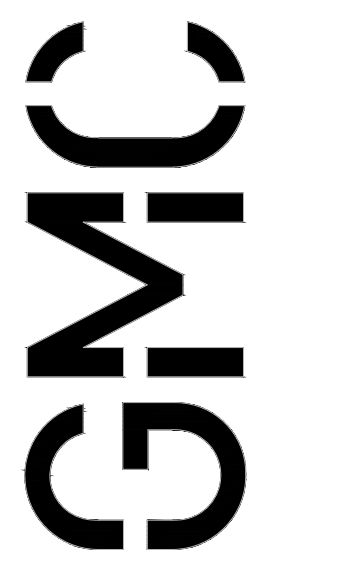
D PROFILE - LINE D
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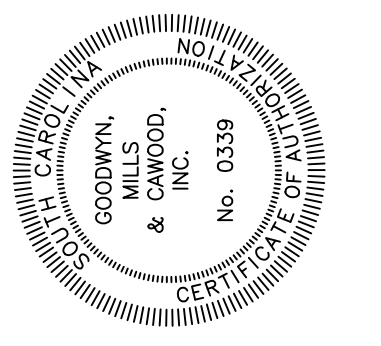
E PROFILE - LINE E
CU102 SCALE: HORIZ; 1" = 20' VERT 1" = 5'



F PROFILE - LINE F
CU102 SCALE: HORIZ; 1" = 20' VERT 1" = 5'



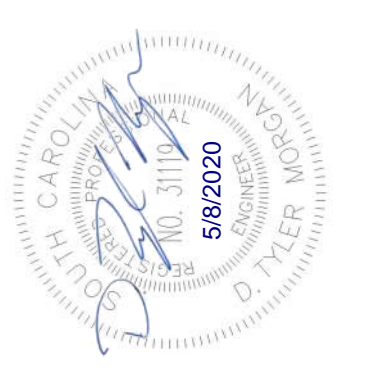
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CIVIL UTILITIES
WATERLINE PROFILES
CU102

CONCRETE VALVE MARKER NOTES:

1. MAIN LINE VALVE MARKERS SHALL BE PAINTED BLUE. HYDRANT VALVE MARKERS SHALL BE PAINTED RED.

VALVE & VALVE BOX NOTES:

1. SEE "FITTING & JOINT RESTRAINT" DETAIL FOR VALVE RESTRAINTS.
2. TOP OF VALVE BOX & COLLAR SHALL BE PAINTED GREEN FOR SEWER & BLUE FOR WATER.
3. EXTENSION STEM WILL BE REQUIRED TO BE WITHIN 2FT OF THE SURFACE IF OPERATING NUT IS OVER 5FT BELOW GRADE. EXTENSIONS SHALL BE PERMANENTLY ATTACHED TO VALVE NUT & SHALL BE PROVIDED W/ HORIZONTAL SPACERS FOR VERTICAL ALIGNMENT WITHIN THE VALVE BOX.
4. PER GSWA STANDARDS, MATERIALS APPROVAL THRU THE SUBMITTAL PROCESS ARE REQUIRED PRIOR TO ANY INSTALLATIONS.

WATER SAMPLING ASSEMBLY NOTES:

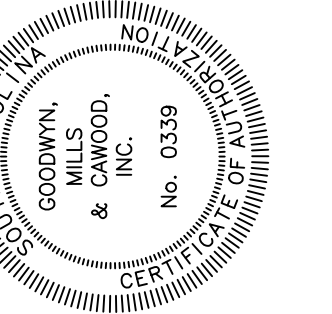
1. LOCATION OF BOX & FITTINGS TO BE DETERMINED BY GSWA

FITTING & JOINT RESTRAINT NOTES:

1. PER GSWA STANDARDS, MATERIAL APPROVAL THRU THE SUBMITTAL PROCESS ARE REQUIRED PRIOR TO ANY INSTALLATIONS.

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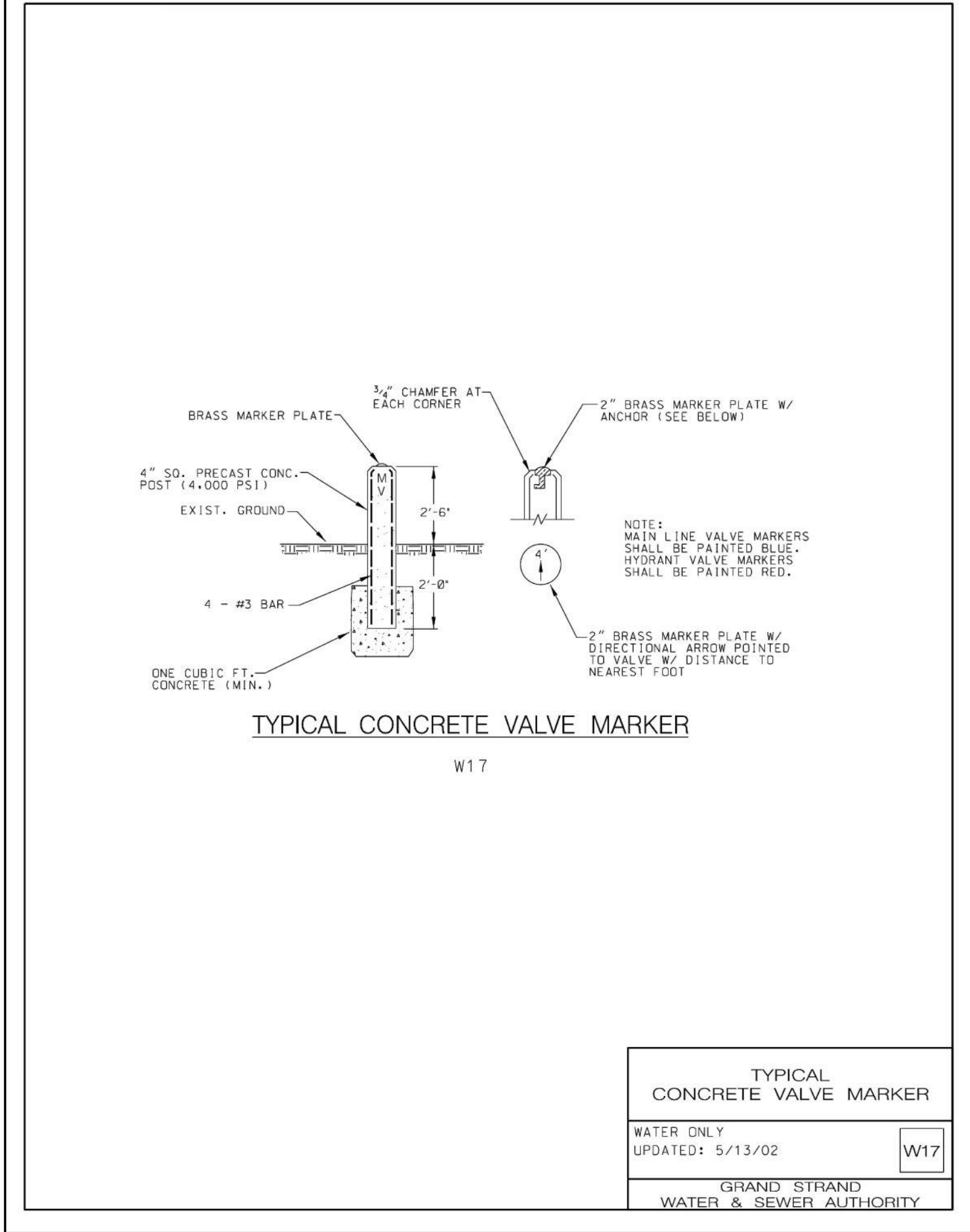
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INTERNATIONAL DRIVE
BOOSTER PUMP STATION
CONWAY, SC

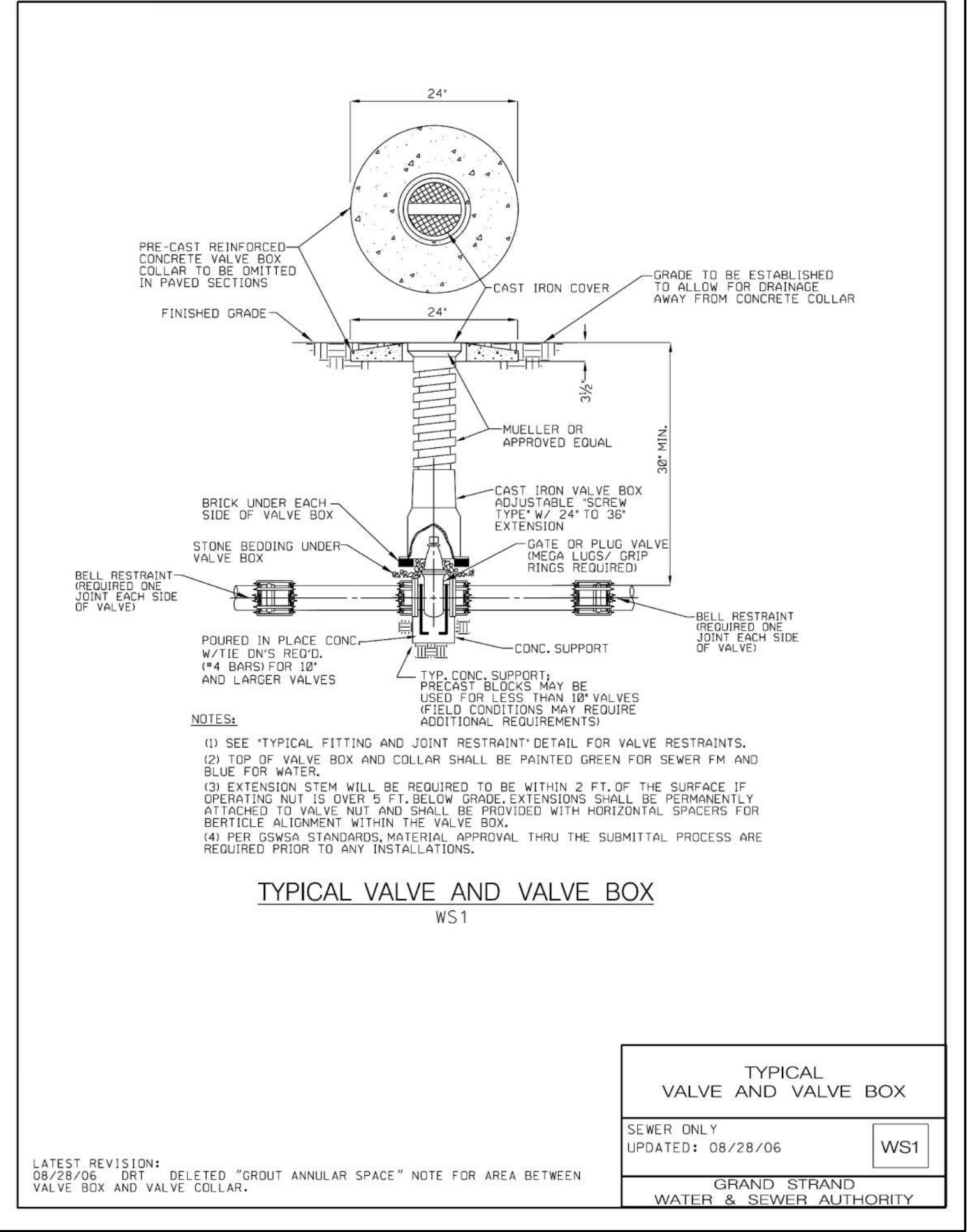


CIVIL UTILITIES
DETAILS
CU901

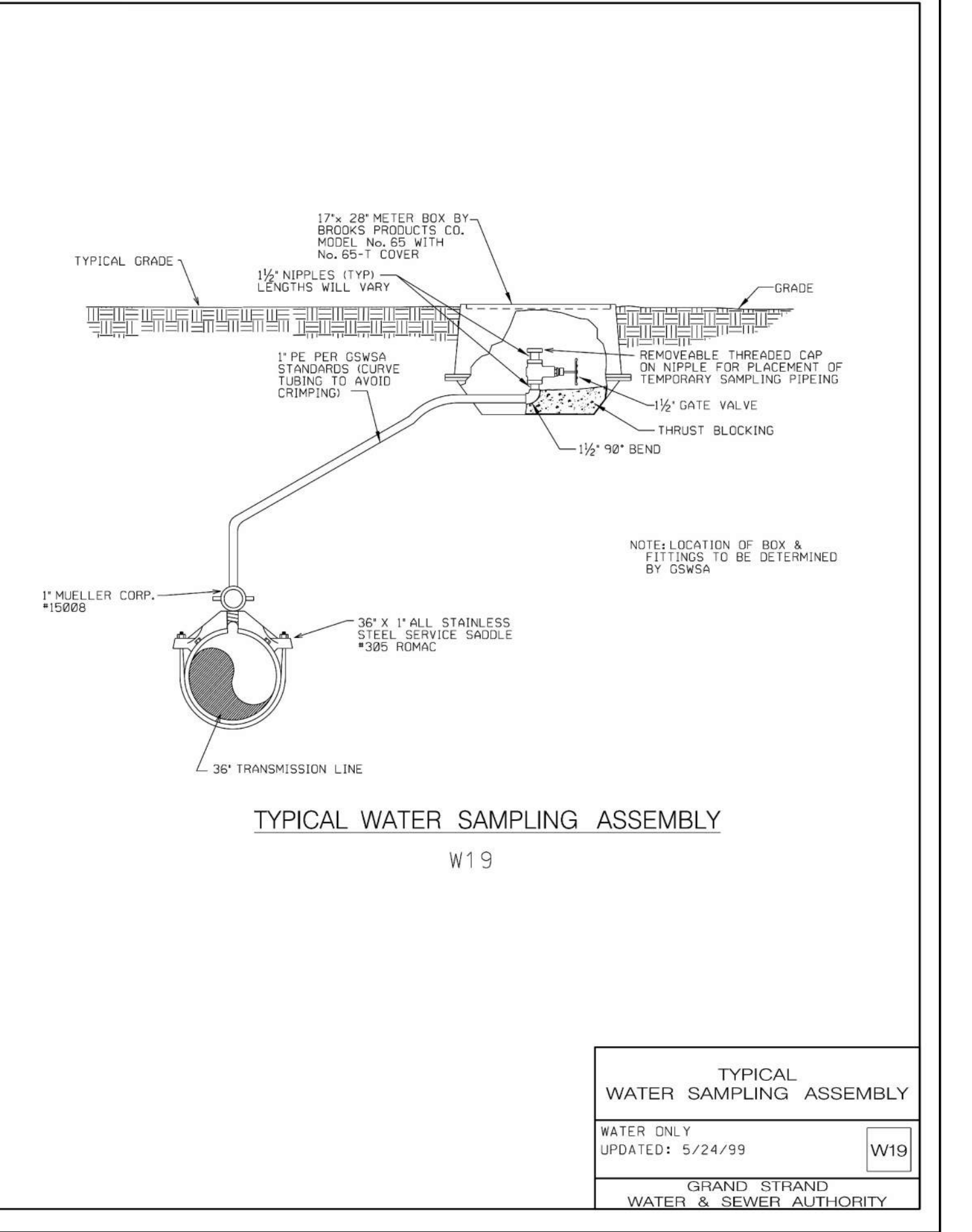
CGRE190054
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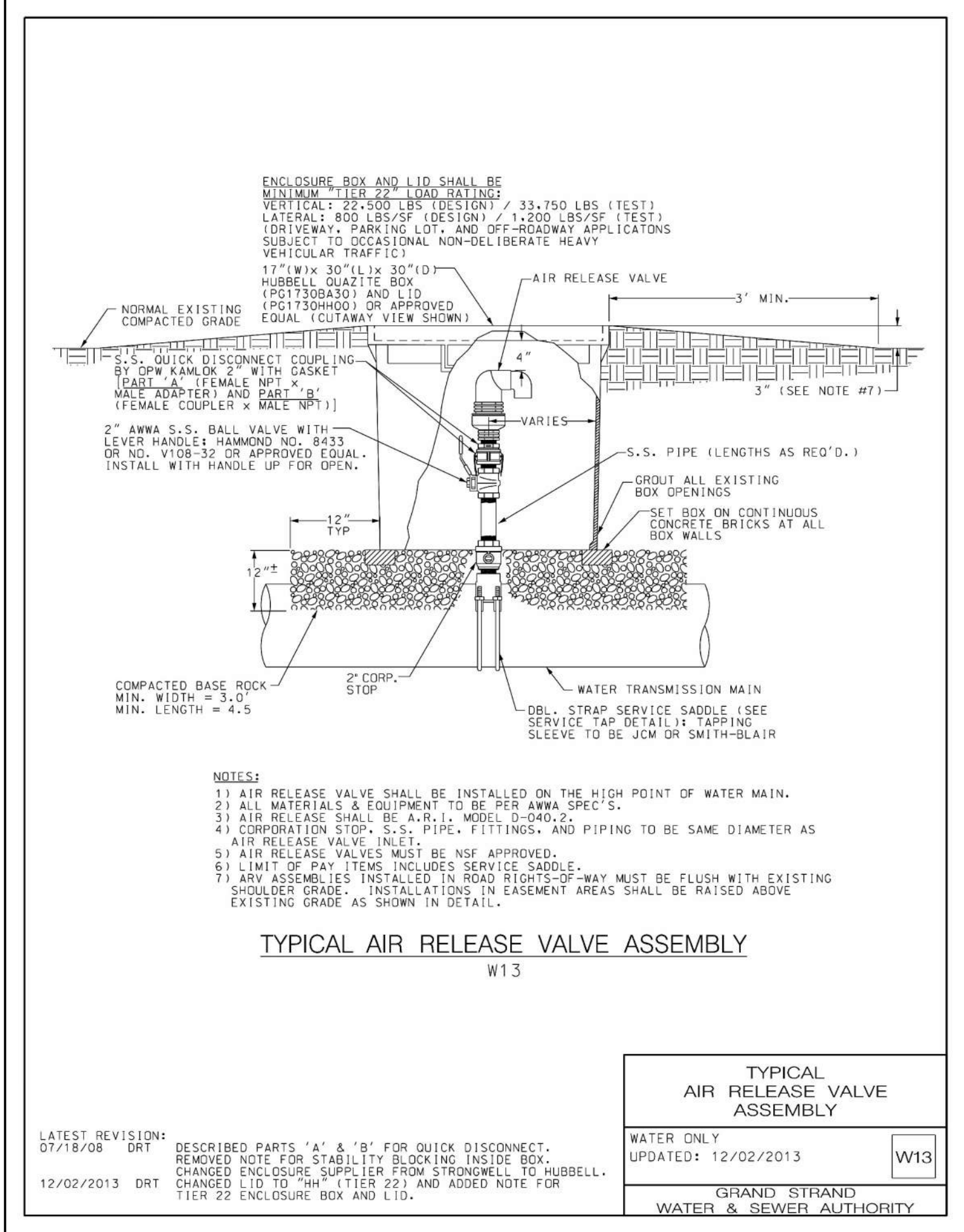
A **DETAIL - CONCRETE VALVE MARKER**
CU901 SCALE: NOT TO SCALE



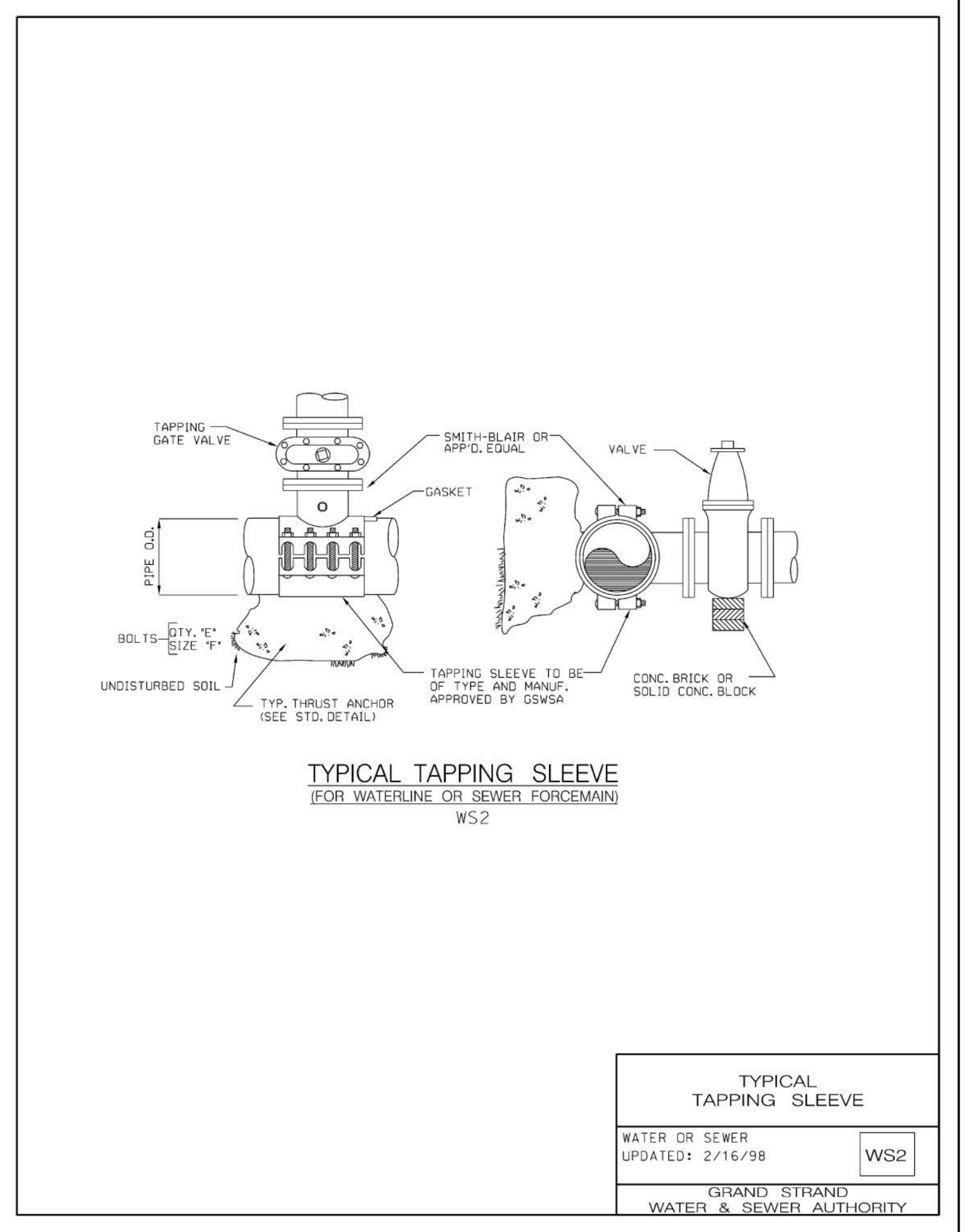
B **DETAIL - VALVE & VALVE BOX**
CU901 SCALE: NOT TO SCALE



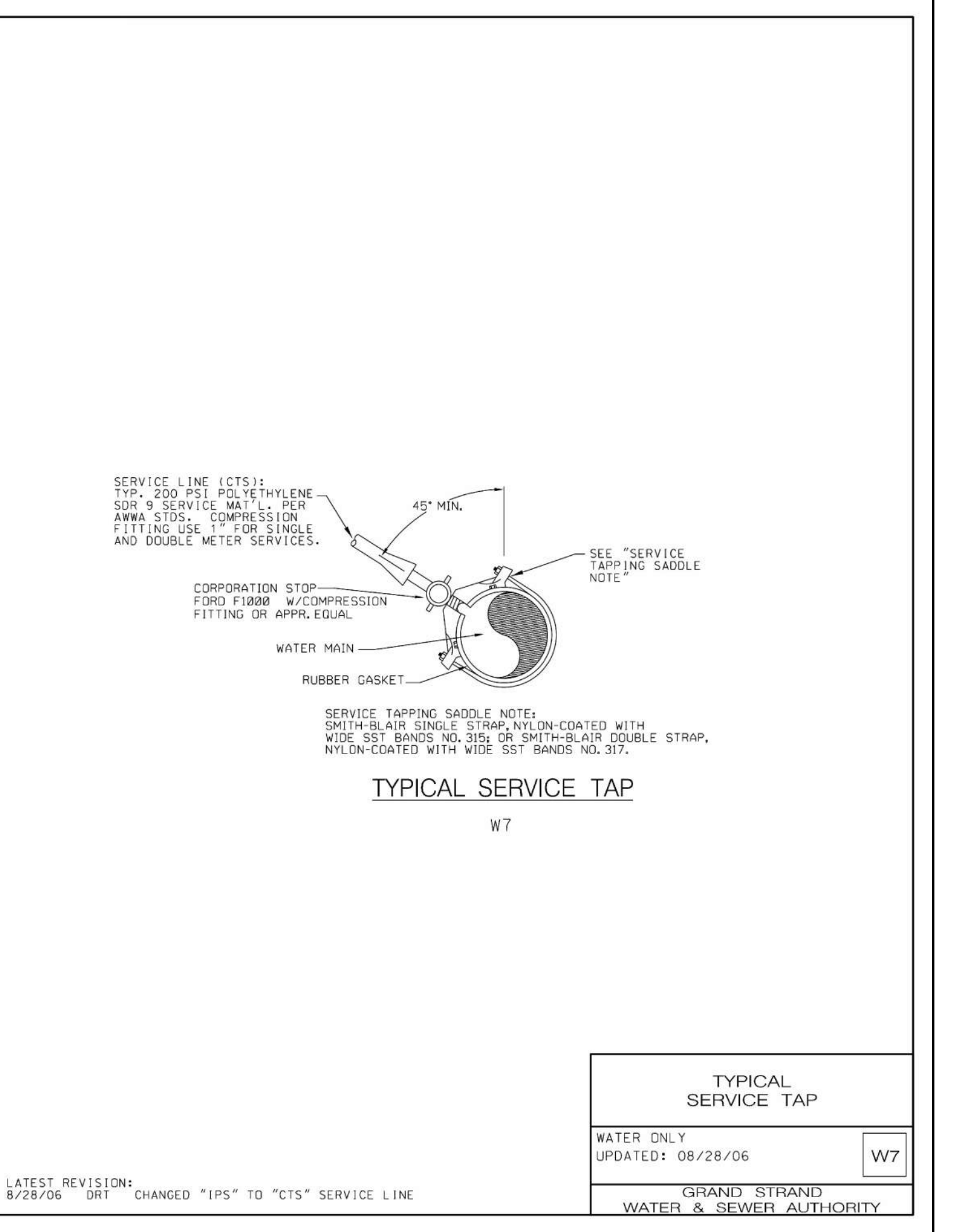
C **DETAIL - WATER SAMPLING ASSEMBLY**
CU901 SCALE: NOT TO SCALE



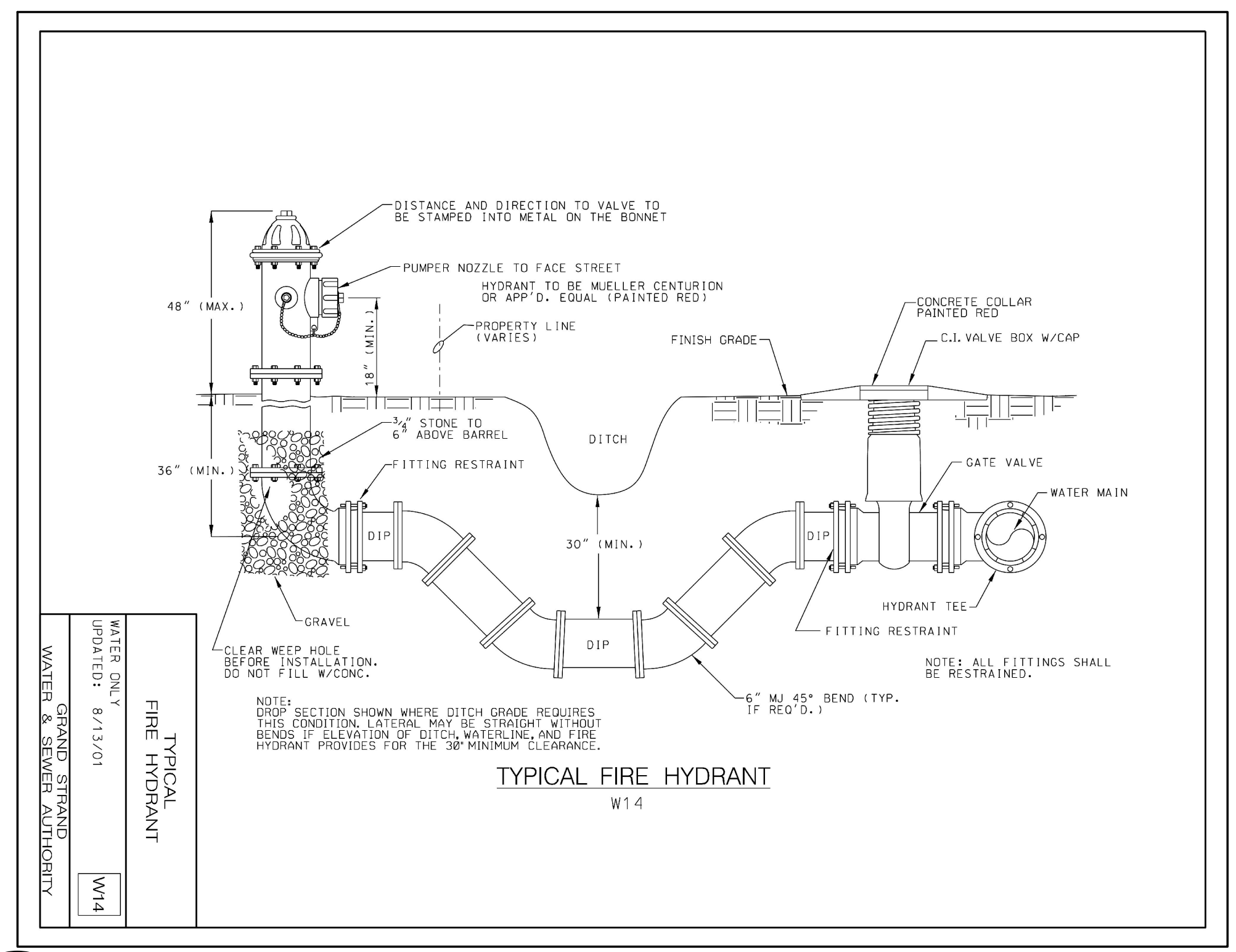
D **DETAIL - AIR RELEASE VALVE**
CU901 SCALE: NOT TO SCALE



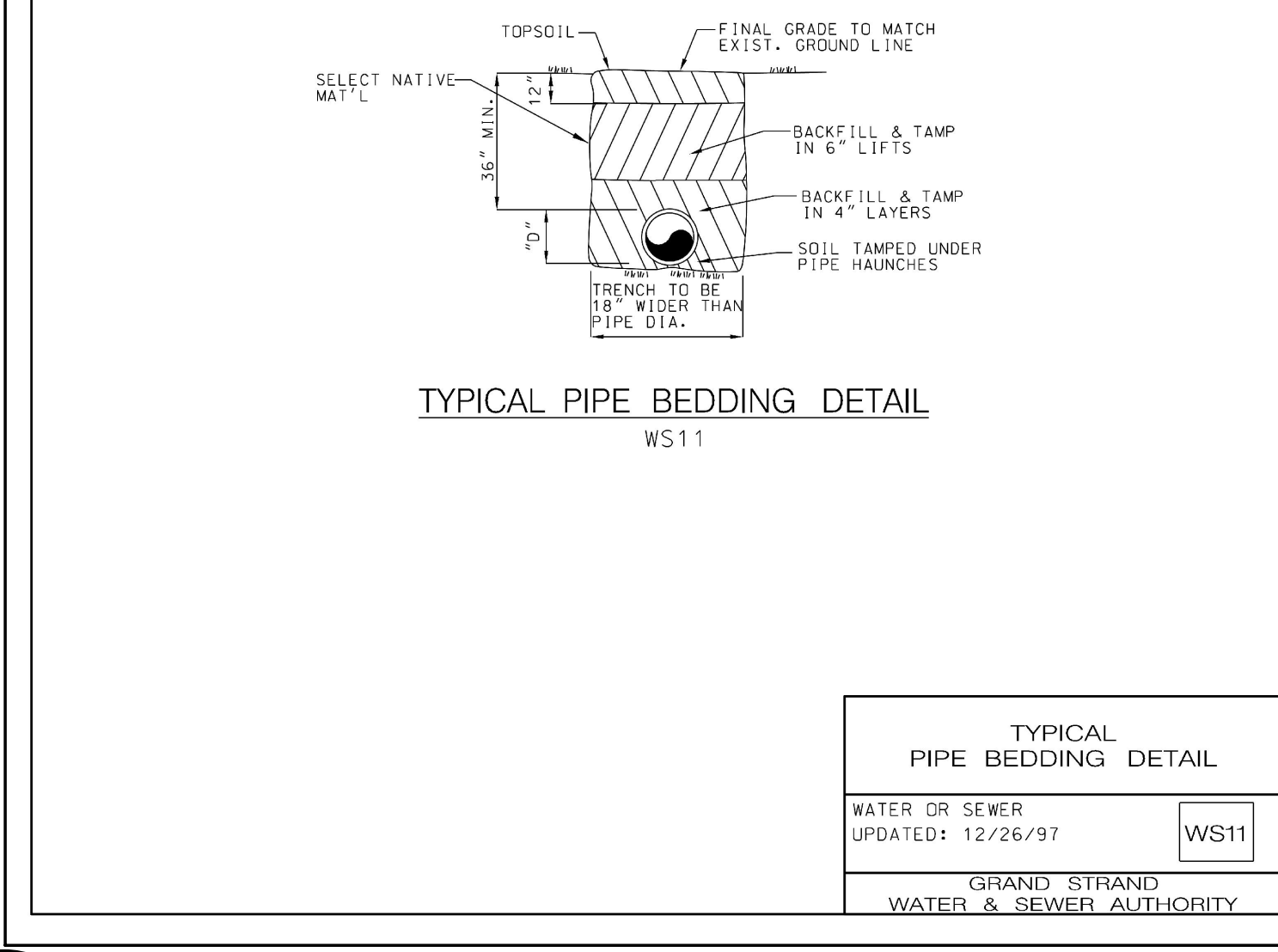
E **DETAIL - TAPPING SLEEVE**
CU901 SCALE: NOT TO SCALE



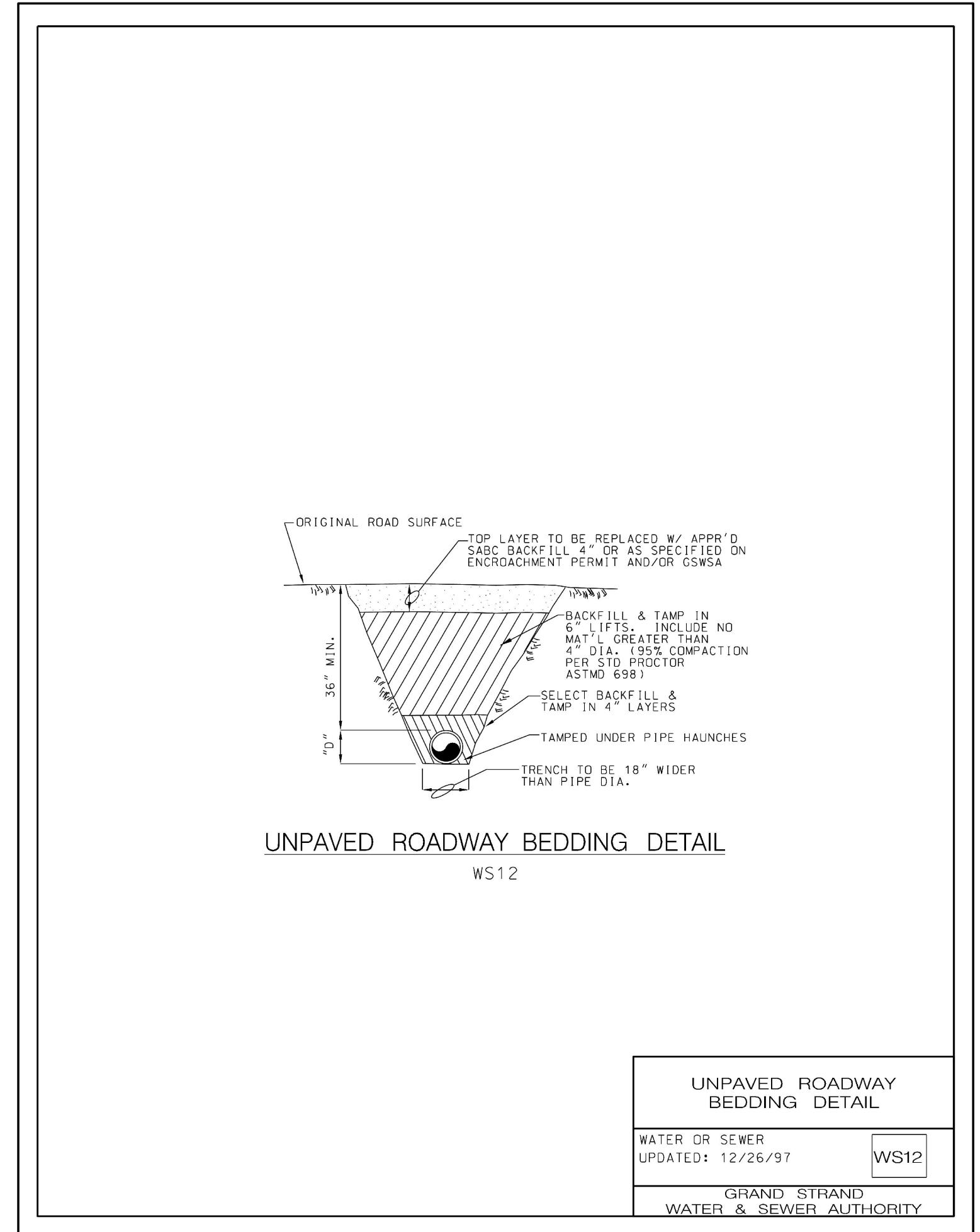
F **DETAIL - TYPICAL SERVICE TAP**
CU901 SCALE: NOT TO SCALE



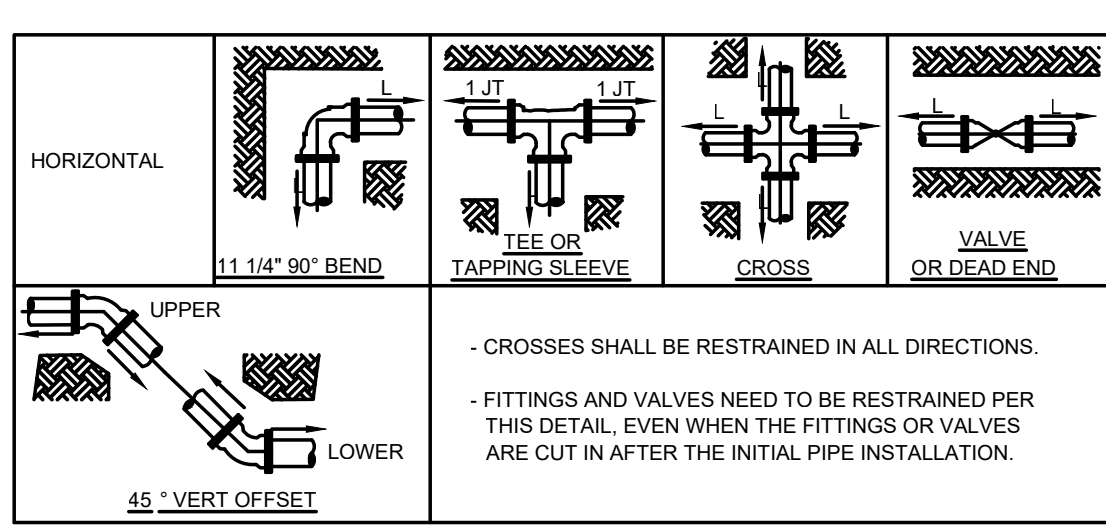
G
CU902
DETAIL - FIRE HYDRANT
SCALE: NOT TO SCALE



H
CU902
DETAIL - PIPE EMBEDMENT
SCALE: NOT TO SCALE



I
CU902
DETAIL - UNPAVED ROADWAY BEDDING
SCALE: NOT TO SCALE



DIAMETER (INCHES)	HORIZONTAL DUCTILE IRON PIPE - LINEAR FEET					45° VERTICAL OFFSET (FEET)	
	45°	90°	TEES OR CROSS	VALVES & DEAD ENDS	REDUCERS LARGE SIDE	UPPER	LOWER
8	—	—	—	55	—	—	—
12	—	35	—	78	—	—	—
24	—	62	124	144	—	60	16
30	—	74	154	174	—	—	—
36	—	99	270	301	—	—	—
42	40	—	—	230	—	—	—
42 x 24	—	—	105	—	153	—	—
42 x 30	—	—	143	—	111	—	—
42 x 36	—	—	—	N/A	89	—	—

THE NOTED REQUIREMENTS WERE CALCULATED IN ACCORDANCE WITH THRUST RESTRAINT CALCULATOR v7.1.2 BY EBAA IRON WITH THE FOLLOWING ASSUMPTIONS:
 SOIL CONDITIONS: SANDS (SM, SP)
 LAYING CONDITION: 3' LOOSE SOIL BEDDING, BACKFILL LIGHTLY CONSOLIDATED TO TOP OF THE PIPE.
 MINIMUM COVER: 4.0 FT
 SAFETY FACTOR: 1.5, BARE PIPE.
 IF FIELD CONDITIONS DIFFER FROM THE ABOVE, CONTRACTOR SHALL NOTIFY ENGINEER.

J
CU902
RESTRAINED JOINT LENGTHS
SCALE: NOT TO SCALE

CONCRETE VALVE MARKER NOTES:

1. MAIN LINE VALVE MARKERS SHALL BE PAINTED BLUE. HYDRANT VALVE MARKERS SHALL BE PAINTED RED.

VALVE & VALVE BOX NOTES:

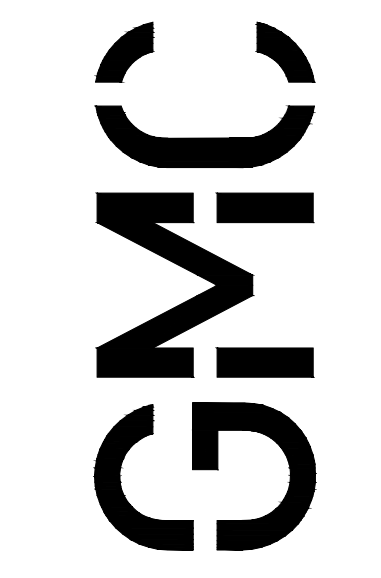
1. SEE "FITTING & JOINT RESTRAINT" DETAIL FOR VALVE RESTRAINTS.
2. TOP OF VALVE BOX & COLLAR SHALL BE PAINTED GREEN FOR SEWER & BLUE FOR WATER.
3. EXTENSION STEM WILL BE REQUIRED TO BE WITHIN 2FT OF THE SURFACE IF OPERATING NUT IS OVER 5FT BELOW GRADE. EXTENSIONS SHALL BE PERMANENTLY ATTACHED TO VALVE NUT & SHALL BE PROVIDED W/ HORIZONTAL SPACERS FOR VERTICAL ALIGNMENT WITHIN THE VALVE BOX.
4. PER GSWSA STANDARDS, MATERIALS APPROVAL THRU THE SUBMITTAL PROCESS ARE REQUIRED PRIOR TO ANY INSTALLATIONS.

WATER SAMPLING ASSEMBLY NOTES:

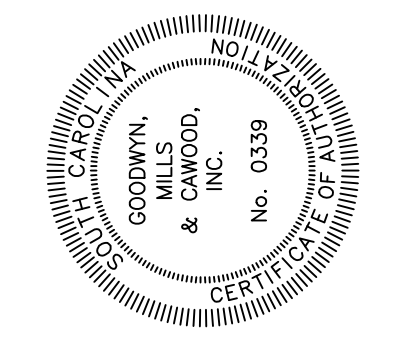
1. LOCATION OF BOX & FITTINGS TO BE DETERMINED BY GSWSA

FITTING & JOINT RESTRAINT NOTES:

1. PER GSWSA STANDARDS, MATERIAL APPROVAL THRU THE SUBMITTAL PROCESS ARE REQUIRED PRIOR TO ANY INSTALLATIONS.



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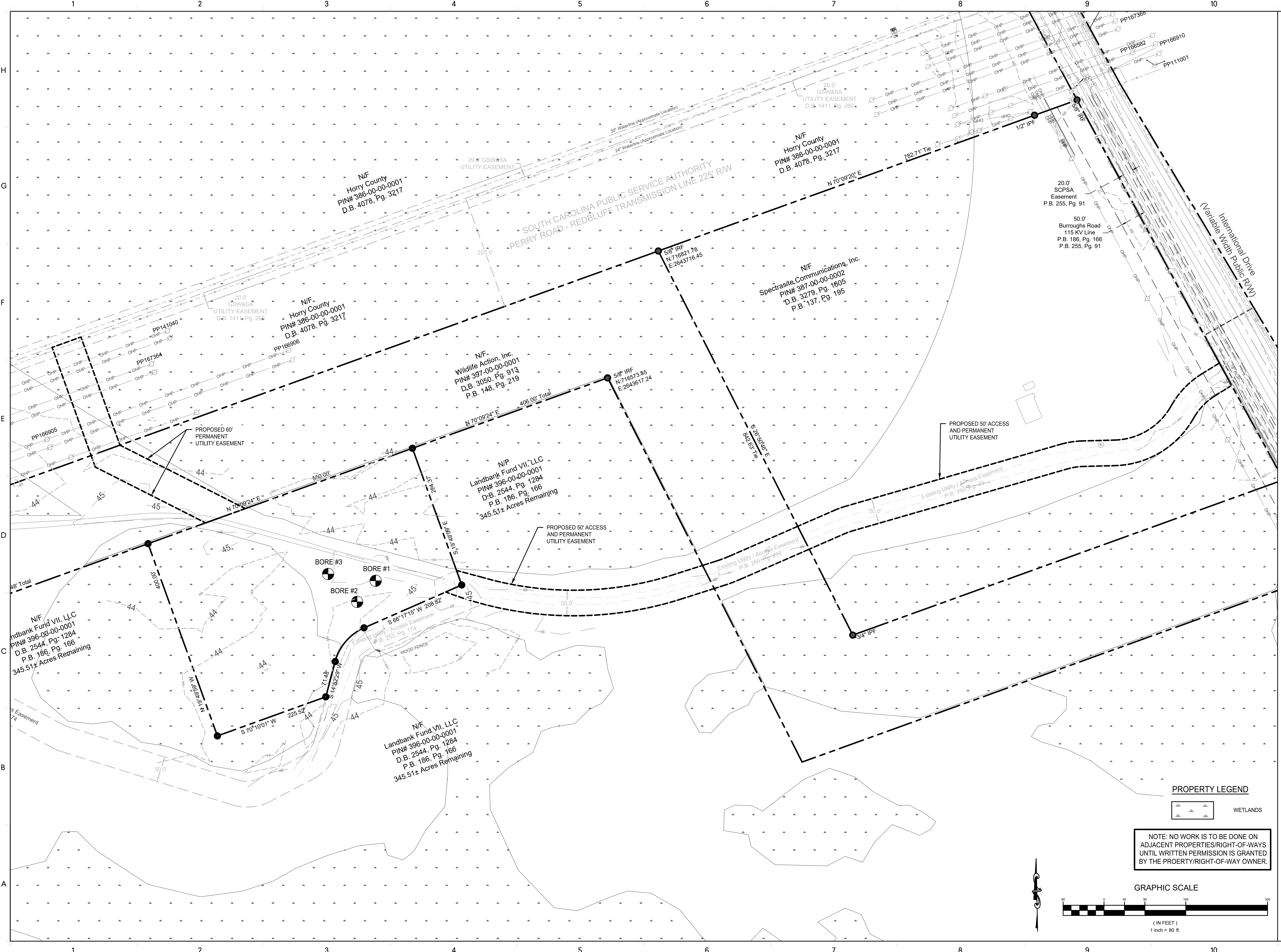
INTERNATIONAL DRIVE
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CONWAY, SC
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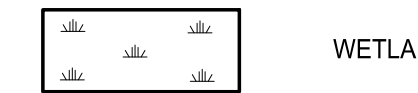
CIVIL UTILITIES
DETAILS
CU902

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PLOTTED: May 19, 2020 - 13:38pm

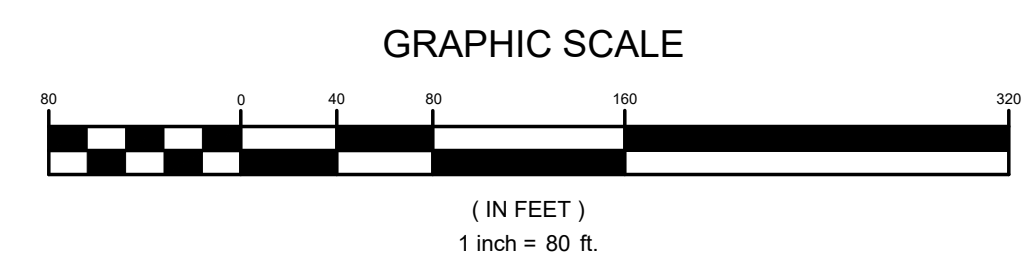
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PLOTTED: May 08, 2020 10:45am




PROPERTY LEGEND

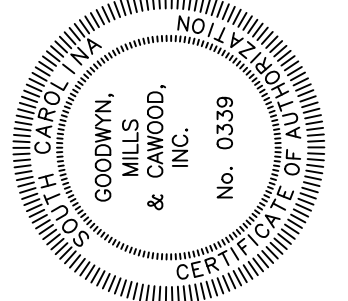


NOTE: NO WORK IS TO BE DONE ON ADJACENT PROPERTIES/RIGHT-OF-WAYS UNTIL WRITTEN PERMISSION IS GRANTED BY THE PROPERTY/RIGHT-OF-WAY OWNER.





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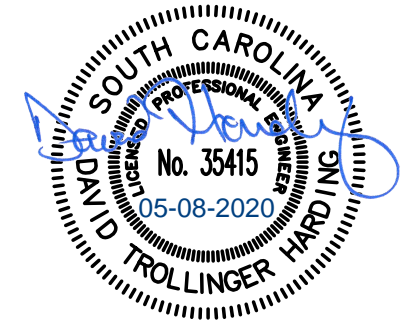


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BID SET	05.08.2020

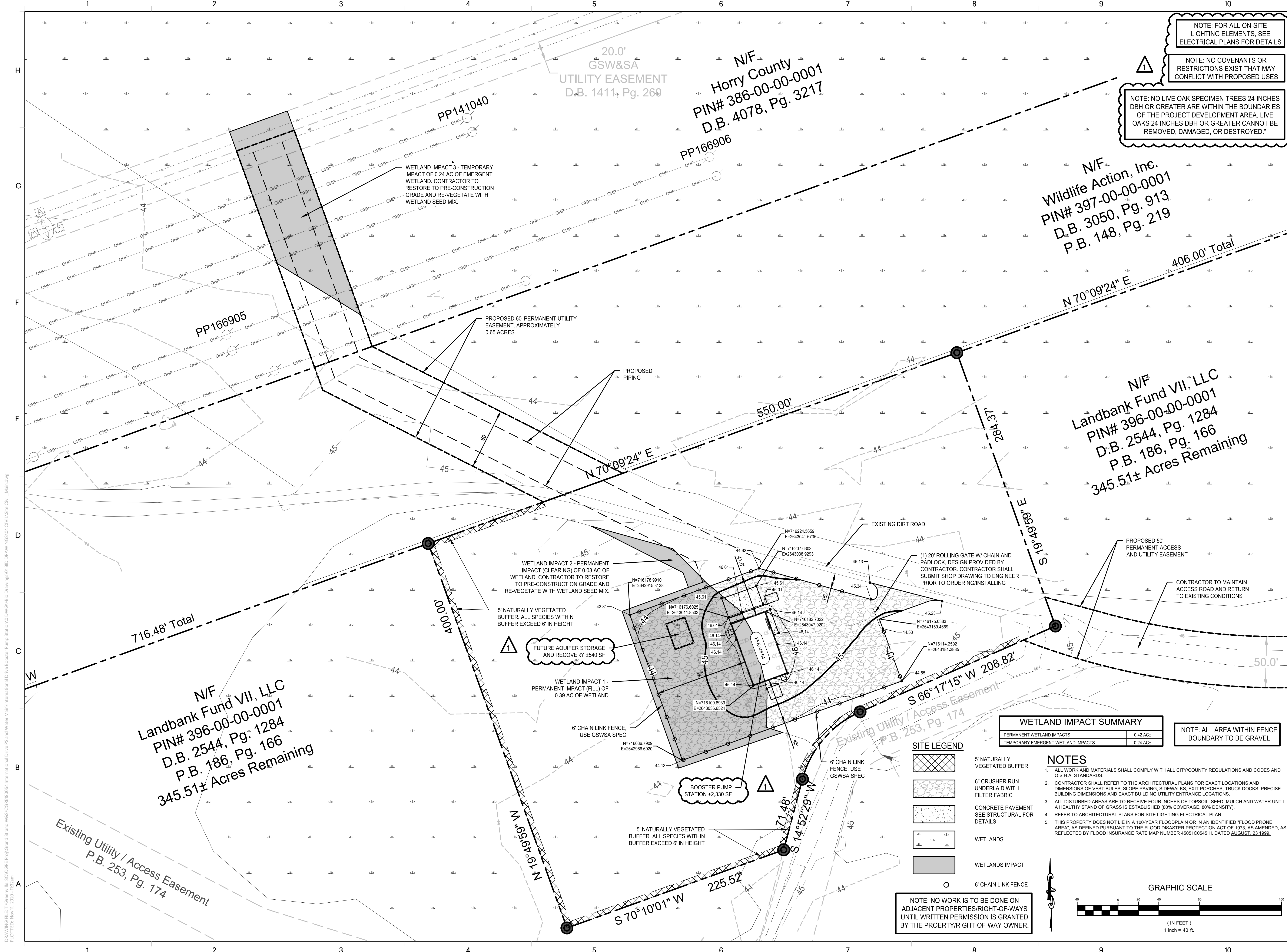
**INTERNATIONAL DRIVE
BOOSTER PUMP STATION**
CONWAY, SC

CGRE190054
NOT - RELEASED FOR CONSTRUCTION

**CIVIL SITE PLAN
EXISTING CONDITIONS**



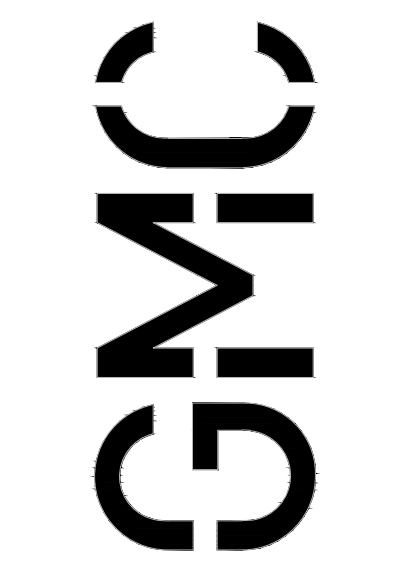
C-101



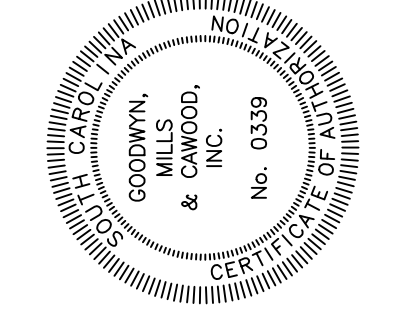
NOTE: FOR ALL ON-SITE LIGHTING ELEMENTS, SEE ELECTRICAL PLANS FOR DETAILS

NOTE: NO COVENANTS OR RESTRICTIONS EXIST THAT MAY CONFLICT WITH PROPOSED USES

NOTE: NO LIVE OAK SPECIMEN TREES 24 INCHES DBH OR GREATER ARE WITHIN THE BOUNDARIES OF THE PROJECT DEVELOPMENT AREA. LIVE OAKS 24 INCHES DBH OR GREATER CANNOT BE REMOVED, DAMAGED, OR DESTROYED.



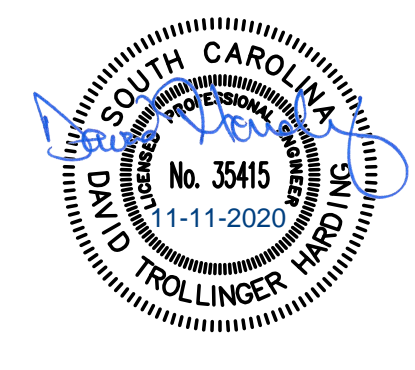
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BID SET REV1	11.11.2020

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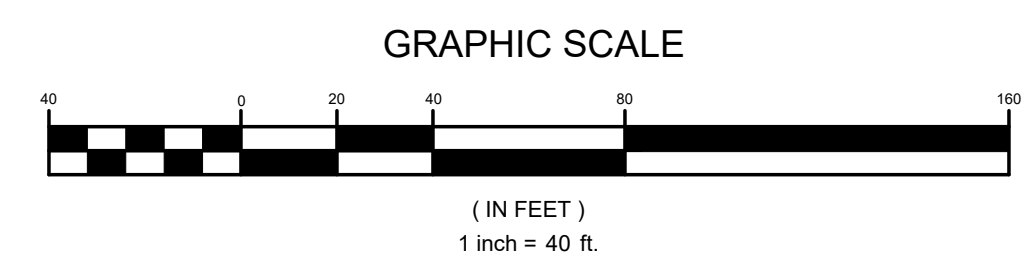
CIVIL SITE PLAN
SITE IMPROVEMENT
PLAN
C-201

WETLAND IMPACT SUMMARY	
PERMANENT WETLAND IMPACTS	0.42 AC±
TEMPORARY EMERGENT WETLAND IMPACTS	0.24 AC±

NOTE: ALL AREA WITHIN FENCE BOUNDARY TO BE GRAVEL

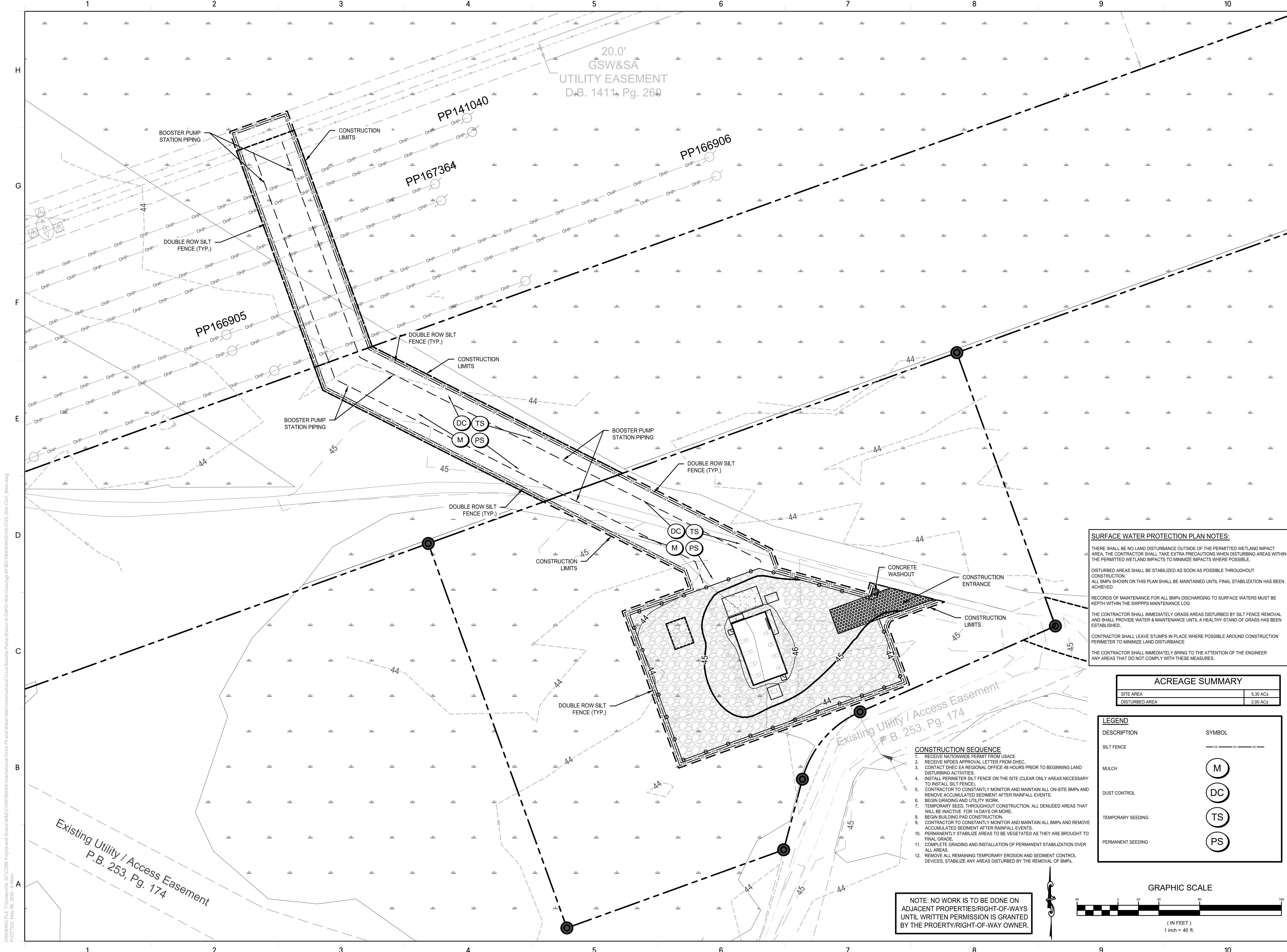
- SITE LEGEND**
- 5' NATURALLY VEGETATED BUFFER
 - 6' CRUSHER RUN UNDERLAID WITH FILTER FABRIC
 - CONCRETE PAVEMENT SEE STRUCTURAL FOR DETAILS
 - WETLANDS
 - WETLANDS IMPACT
 - 6' CHAIN LINK FENCE

- NOTES**
- ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
 - CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
 - ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED (80% COVERAGE, 80% DENSITY).
 - REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
 - THIS PROPERTY DOES NOT LIE IN A 100-YEAR FLOODPLAIN OR IN AN IDENTIFIED "FLOOD PRONE AREA" AS DEFINED PURSUANT TO THE FLOOD DISASTER PROTECTION ACT OF 1973, AS AMENDED, AS REFLECTED BY FLOOD INSURANCE RATE MAP NUMBER 45051C0545 H, DATED AUGUST 23, 1999.



NOTE: NO WORK IS TO BE DONE ON ADJACENT PROPERTIES/RIGHT-OF-WAYS UNTIL WRITTEN PERMISSION IS GRANTED BY THE PROPERTY/RIGHT-OF-WAY OWNER.

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PLOTTED: Nov 11, 2020 - 10:30am



SURFACE WATER PROTECTION PLAN NOTES:

THERE SHALL BE NO LAND DISTURBANCE OUTSIDE OF THE PERMITTED WETLAND IMPACT AREA. THE CONTRACTOR SHALL TAKE EXTRA PRECAUTIONS WHEN DISTURBING AREAS WITHIN THE PERMITTED WETLAND IMPACTS TO MINIMIZE IMPACTS WHERE POSSIBLE.

DISTURBED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE THROUGHOUT CONSTRUCTION. ALL BMPs SHOWN ON THIS PLAN SHALL BE MAINTAINED UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED.

RECORDS OF MAINTENANCE FOR ALL BMPs DISCHARGING TO SURFACE WATERS MUST BE KEPT WITHIN THE SWPPPS MAINTENANCE LOG.

THE CONTRACTOR SHALL IMMEDIATELY GRASS AREAS DISTURBED BY SILT FENCE REMOVAL AND SHALL PROVIDE WATER & MAINTENANCE UNTIL A HEALTHY STAND OF GRASS HAS BEEN ESTABLISHED.

CONTRACTOR SHALL LEAVE STUMPS IN PLACE WHERE POSSIBLE AROUND CONSTRUCTION PERIMETER TO MINIMIZE LAND DISTURBANCE.

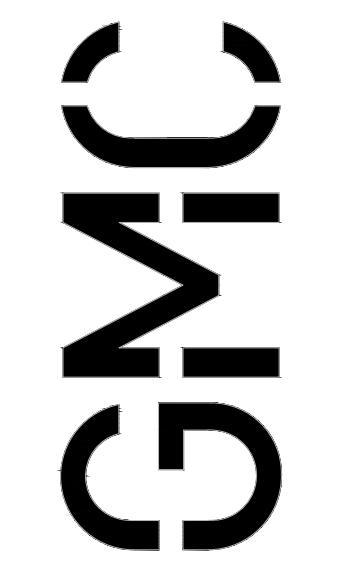
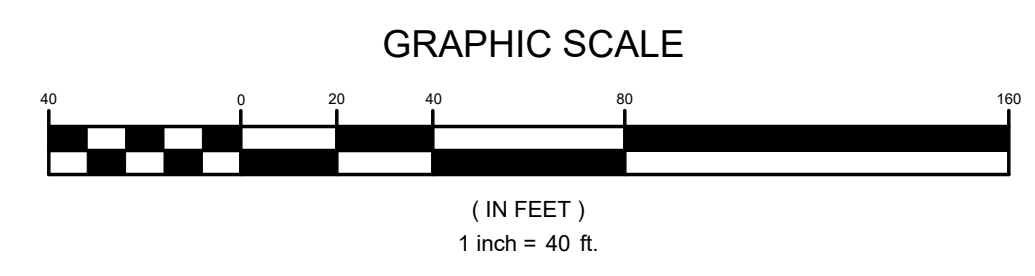
THE CONTRACTOR SHALL IMMEDIATELY BRING TO THE ATTENTION OF THE ENGINEER ANY AREAS THAT DO NOT COMPLY WITH THESE MEASURES.

ACREAGE SUMMARY	
SITE AREA	5.30 AC±
DISTURBED AREA	2.00 AC±

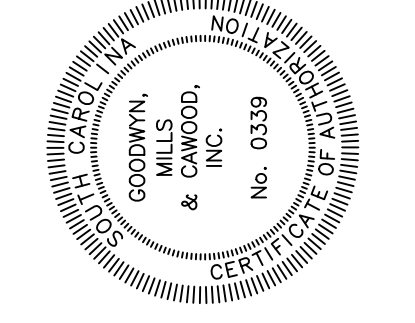
DESCRIPTION	SYMBOL
SILT FENCE	---
MULCH	(M)
DUST CONTROL	(DC)
TEMPORARY SEEDING	(TS)
PERMANENT SEEDING	(PS)

- CONSTRUCTION SEQUENCE**
1. RECEIVE NATIONWIDE PERMIT FROM USACE
 2. RECEIVE NPDES APPROVAL LETTER FROM DHEC
 3. CONTACT DHEC EA REGIONAL OFFICE 48 HOURS PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES.
 4. INSTALL PERIMETER SILT FENCE ON THE SITE (CLEAR ONLY AREAS NECESSARY TO INSTALL SILT FENCE).
 5. CONTRACTOR TO CONSTANTLY MONITOR AND MAINTAIN ALL ON-SITE BMPs AND REMOVE ACCUMULATED SEDIMENT AFTER RAINFALL EVENTS.
 6. BEGIN GRADING AND UTILITY WORK.
 7. TEMPORARY SEED, THROUGHOUT CONSTRUCTION, ALL DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE.
 8. BEGIN BUILDING PAD CONSTRUCTION.
 9. CONTRACTOR TO CONSTANTLY MONITOR AND MAINTAIN ALL BMPs AND REMOVE ACCUMULATED SEDIMENT AFTER RAINFALL EVENTS.
 10. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
 11. COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS.
 12. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES. STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF BMPs.

NOTE: NO WORK IS TO BE DONE ON ADJACENT PROPERTIES/RIGHT-OF-WAYS UNTIL WRITTEN PERMISSION IS GRANTED BY THE PROPERTY/RIGHT-OF-WAY OWNER.



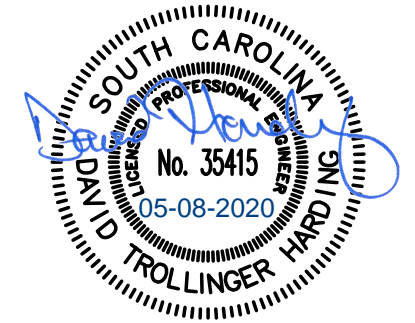
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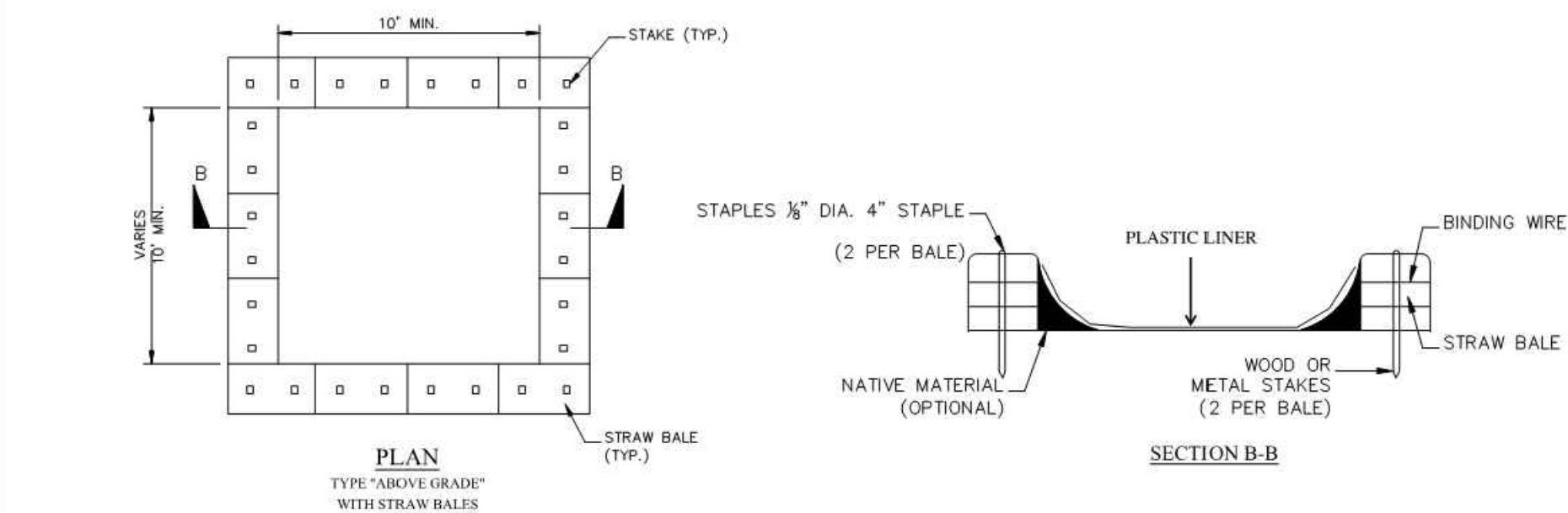
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CIVIL SITE PLAN
SEDIMENT AND
EROSION CONTROL
PLAN
C-301

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PLOTTED: May 08, 2020 10:45am

STRAW BALE BARRIER CONCRETE WASHOUT



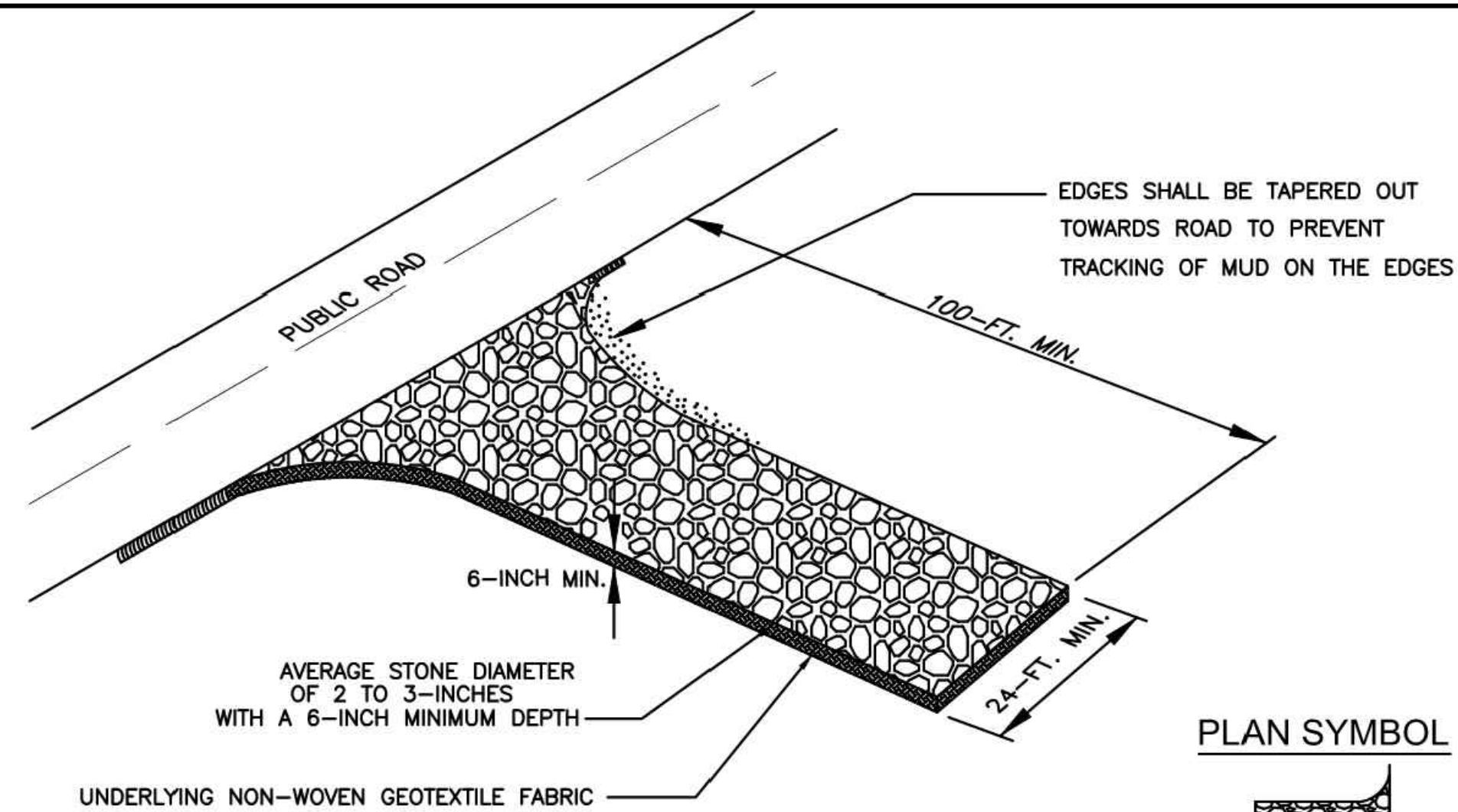
- NOTES:
1. ACTUAL LAYOUT DETERMINED IN FIELD.
 2. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
 4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
 5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
 6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
 7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

LETTERS A MINIMUM OF 5" IN HEIGHT



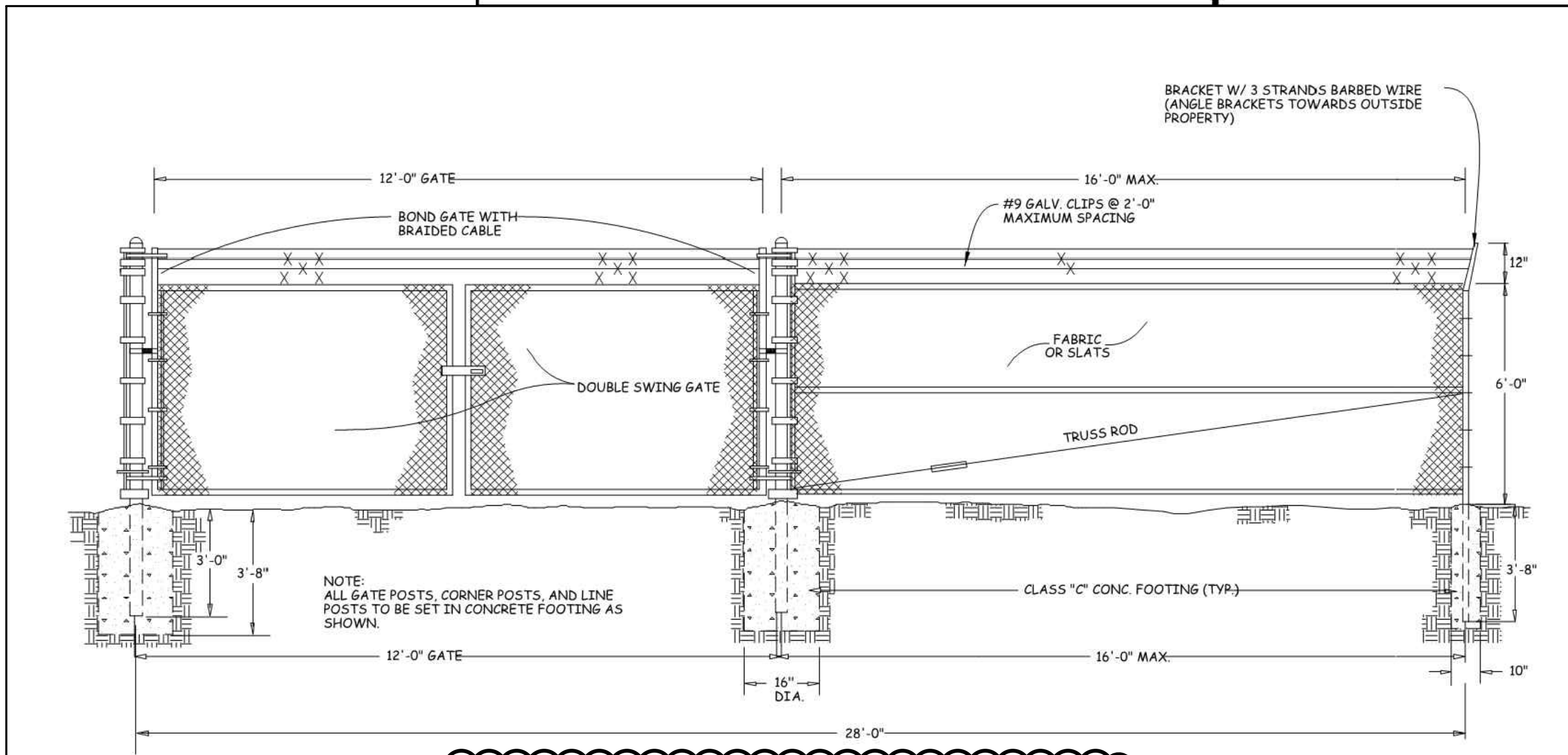
CONCRETE WASHOUT SIGN DETAIL

South Carolina Department of Health and Environmental Control
CONCRETE WASHOUT
 STRAW BALES OR ABOVE GROUND
 STANDARD DRAWING NO. RC-07 PAGE 1 of 1
 FEBRUARY 2014 DATE
 NOT TO SCALE



SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2-3 INCHES

South Carolina Department of Health and Environmental Control
CONSTRUCTION ENTRANCE
 STANDARD DRAWING NO. SC-06 PAGE 1 of 2
 FEBRUARY 2014 DATE
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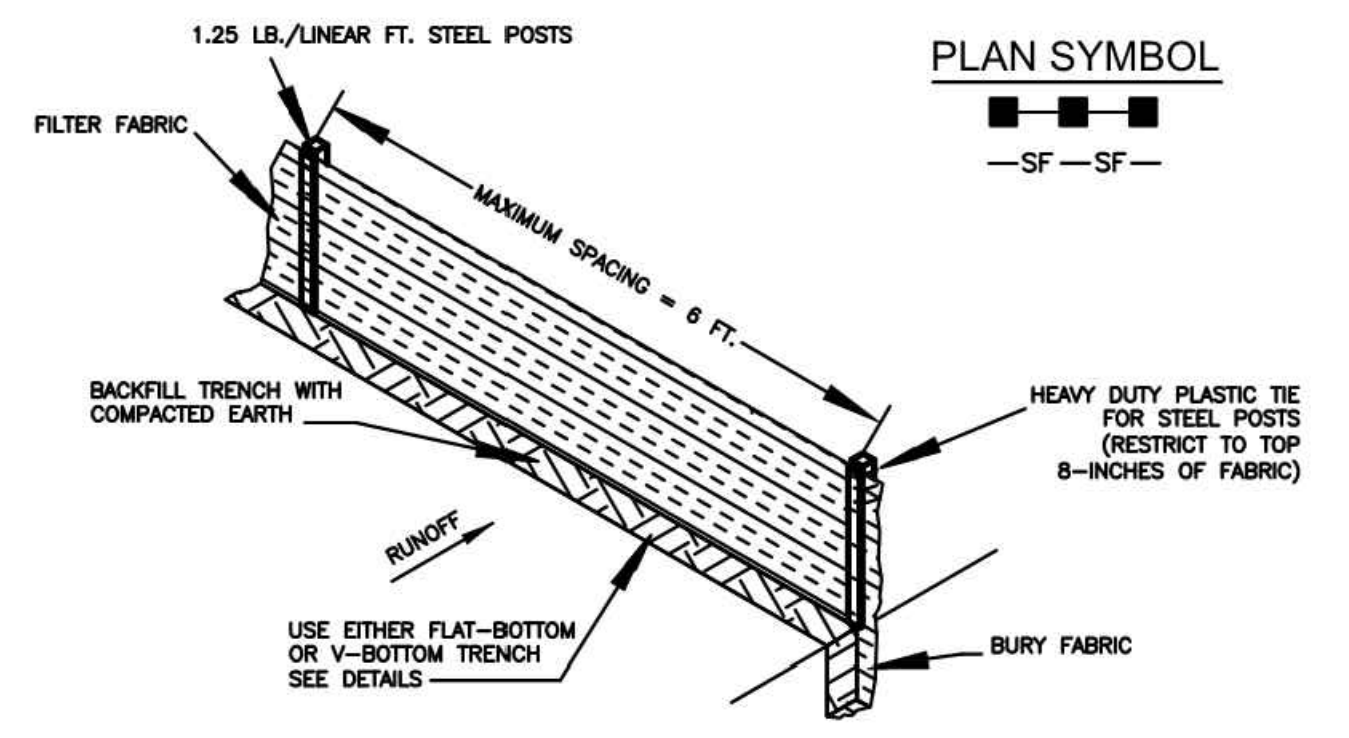


6'-0" GALV. CHAIN LINK FENCE & GATE DETAIL
 N.T.S.

- NOTES:
1. SEE STANDARD SPECIAL PROVISIONS AND STANDARDS FOR SPECIAL REQUIREMENTS.
 2. FINAL SITE FENCING DIMENSIONS TO BE DETERMINED BY GSWA.
 3. SIGN WITH STATION NUMBER AND EMERGENCY PHONE NUMBER WILL BE PROVIDED BY OPERATIONS AFTER FINAL ACCEPTANCE.
 4. WIND SCREEN FABRIC AND/OR SLATS MAY BE REQUIRED TO MEET HORRY COUNTY'S ZONING ORDINANCE. WIND SCREEN AND SLATS ARE TO BE GREEN OR BLACK IN COLOR.

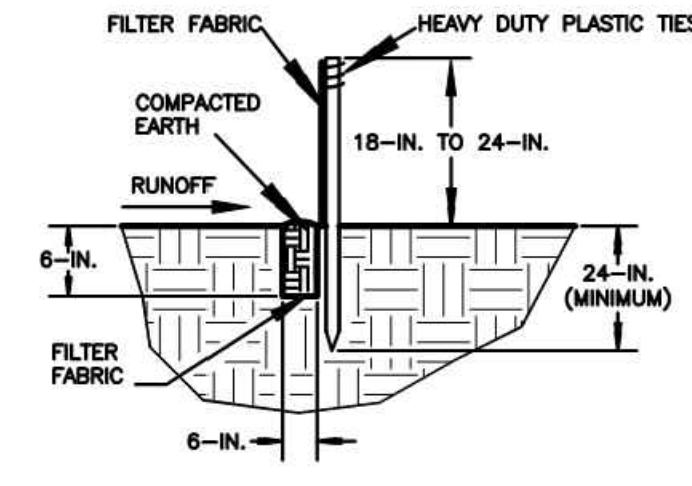
***NOTE: PER HORRY COUNTY ORDINANCES, FENCE WILL HAVE 80% OR GREATER OPACITY UTILIZING FABRIC OR SLATS.

SILT FENCE INSTALLATION

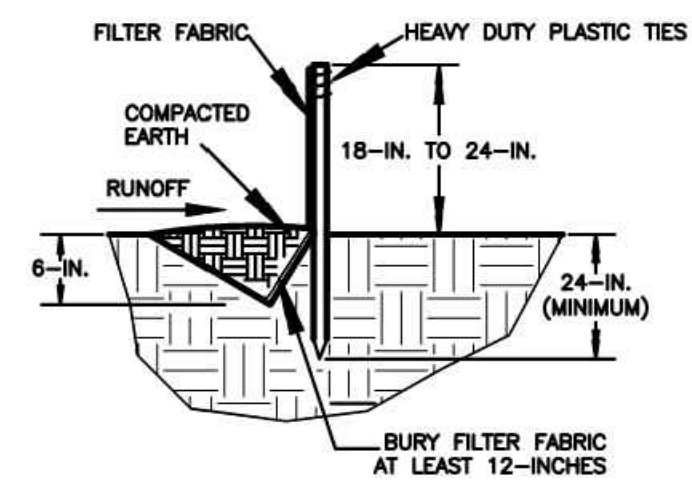


- SILT FENCE - GENERAL NOTES**
1. Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
 2. Maximum sheet or overland flow path length to the silt fence shall be 100-feet.
 3. Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
 4. Silt fence joints, when necessary, shall be completed by one of the following options:
 - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;
 - Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy-duty plastic ties; or,
 - Overlap entire width of each silt fence roll from one support post to the next support post.
 5. Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8-inches of the fabric.
 6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
 7. Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

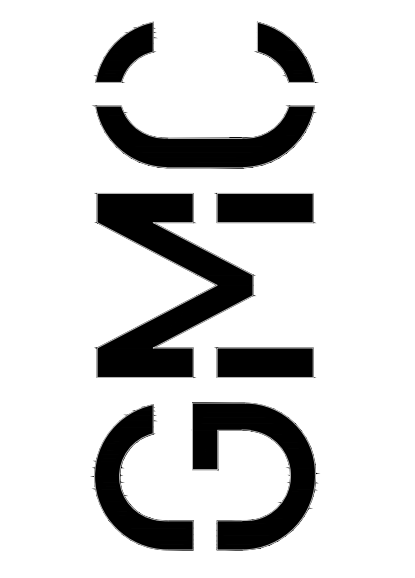
FLAT-BOTTOM TRENCH DETAIL



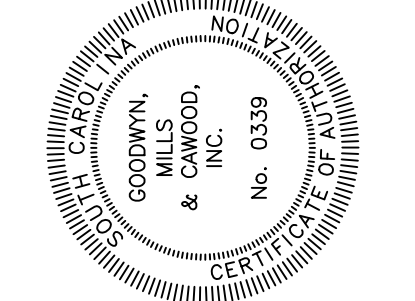
V-SHAPED TRENCH DETAIL



South Carolina Department of Health and Environmental Control
SILT FENCE
 STANDARD DRAWING NO. SC-03 Page 1 of 2
 FEBRUARY 2014 DATE
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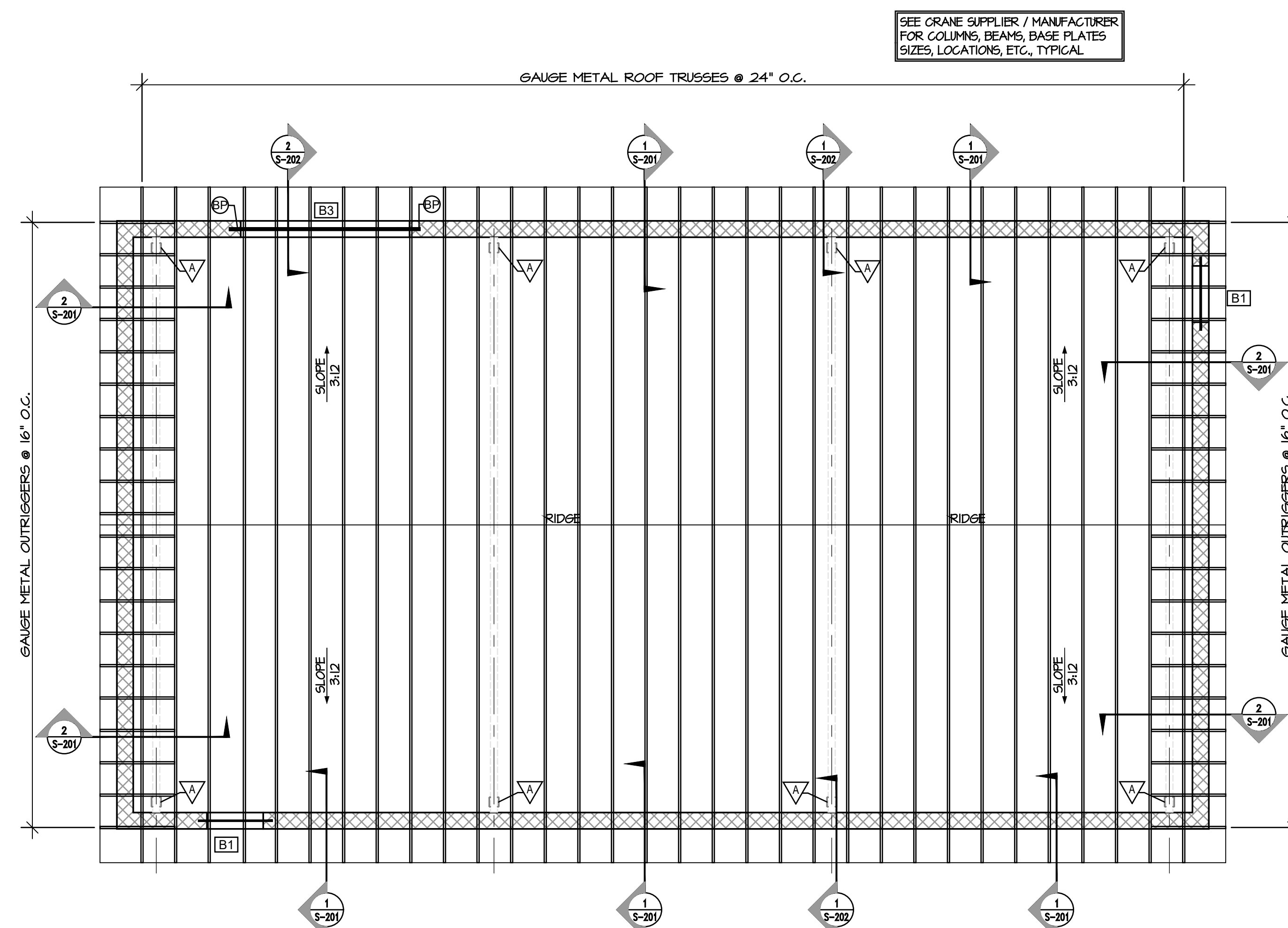
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BID SET REV1	11.11.2020

INTERNATIONAL DRIVE
 BOOSTER PUMP STATION
 CONWAY, SC
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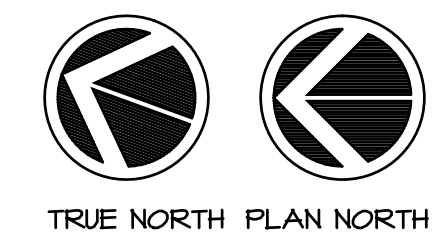


C-401

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 PLOTTED: Nov 11, 2020 - 11:58am



ROOF FRAMING PLAN
SCALE: 3/16" = 1'-0"

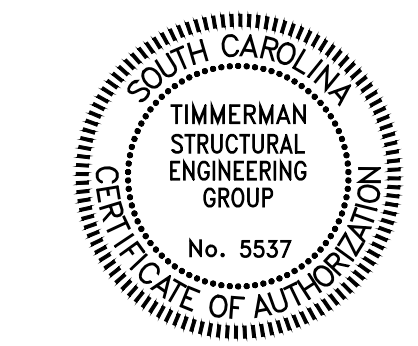
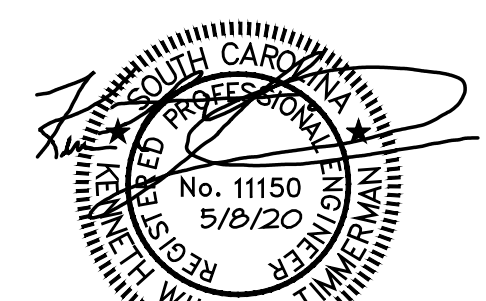


SYMBOL LEGEND

- ◊ - DENOTES MASONRY CMU WALLS
- ▽ - DESIGNATES NOTE NUMBER - SEE NOTE LEGEND ON PLAN SHEETS.
- B1 - DENOTES LINTEL - SEE PLAN FOR LOCATION AND SEE SCHEDULE FOR ADDITIONAL INFO.
- BP - DENOTES BEARING PLATE - SEE THIS PLAN FOR SIZE & LOCATION.

FRAMING PLAN NOTES:

- ▽ CRANE BEAM COLUMN BELOW PER CRANE SUPPLIER / MANUFACTURER.
- B1 DENOTES 8" DEEP BOND BEAM W/ (2) #5 BARS CONT. - SEE SCHEDULE.
- B3 DENOTES W16x26 STEEL BEAM W/ 1/4" x 10" WIDE CONT. PLATE - SEE SCHEDULE.
- BP 1/2" BEARING PLATE x 8" x 1'-4" W/ (2) 3/4"x4" LONG HEADED STUDS INTO FILLED CELLS OF BLOCK.



Designed By: KWT
Drawn By: TAP
Job Number: 20-114

TIMMERMAN
Structural Engineering Group
580 Chris Dr. West Columbia S.C. 29169
Ph. (803)791-4511 Fax (803)791-4522

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INTERNATIONAL DRIVE
BOOSTER PUMP STATION
CONWAY, SC

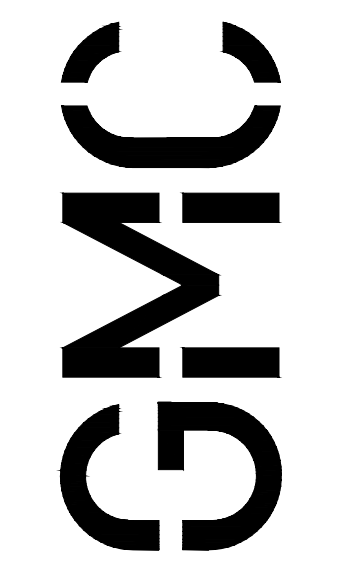
CGRE190054

FOR CONSTRUCTION

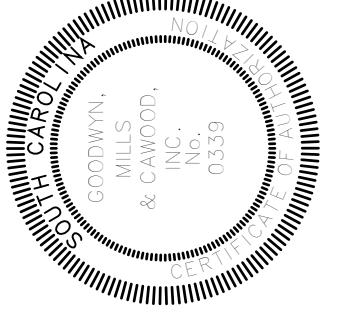
ROOF FRAMING PLAN

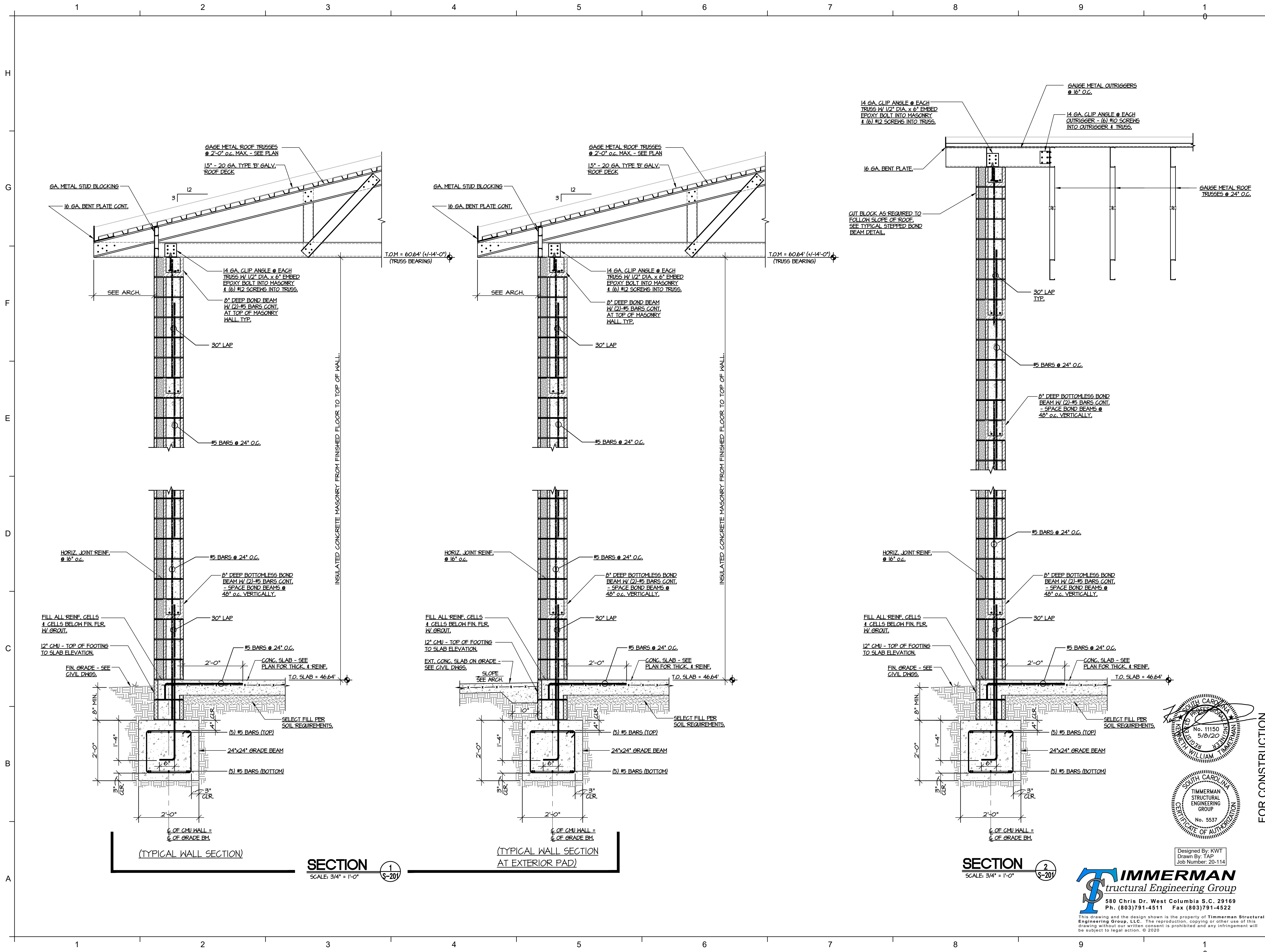
S-101

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WALL SECTIONS

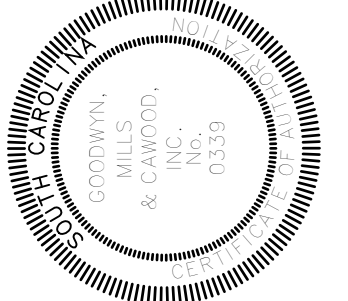
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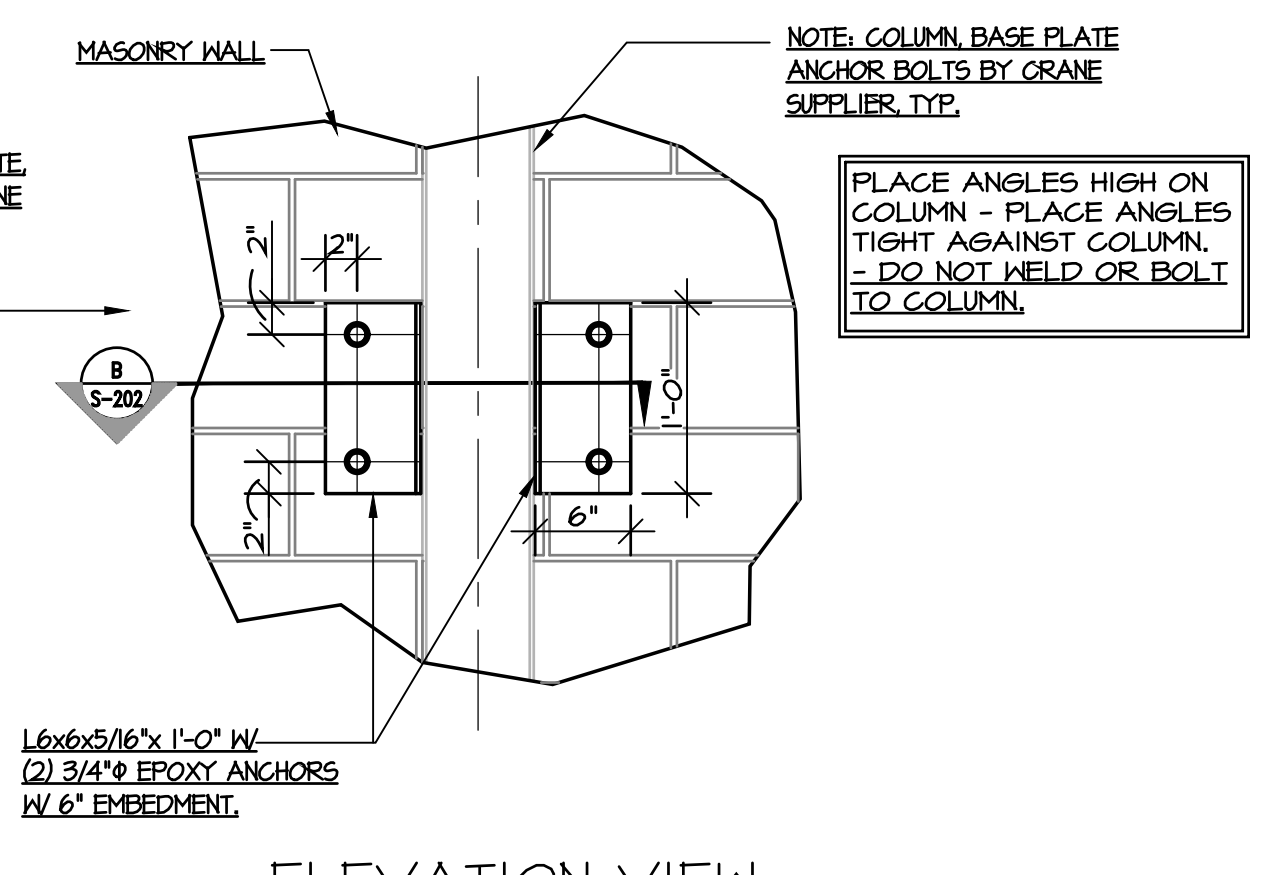
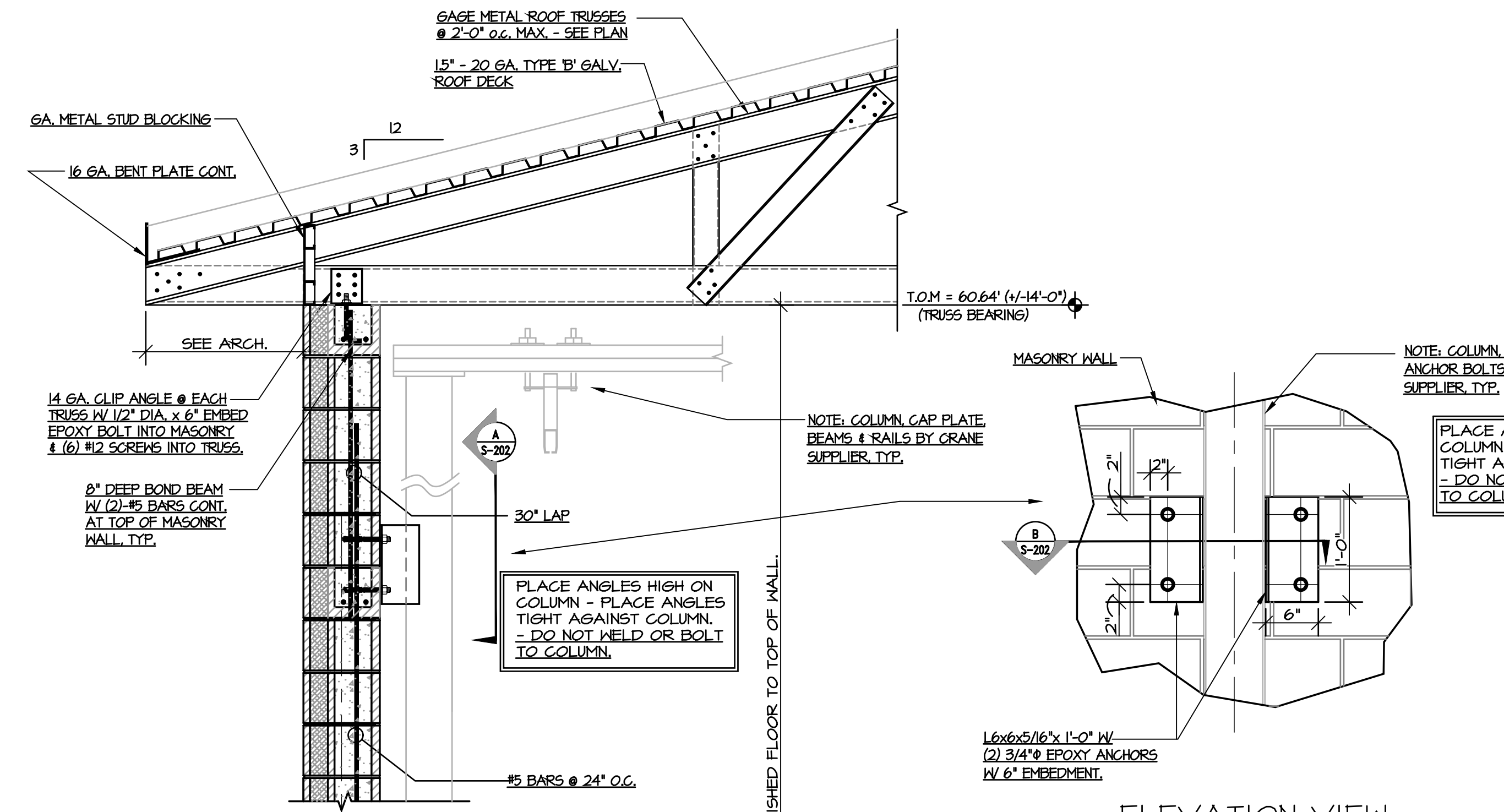
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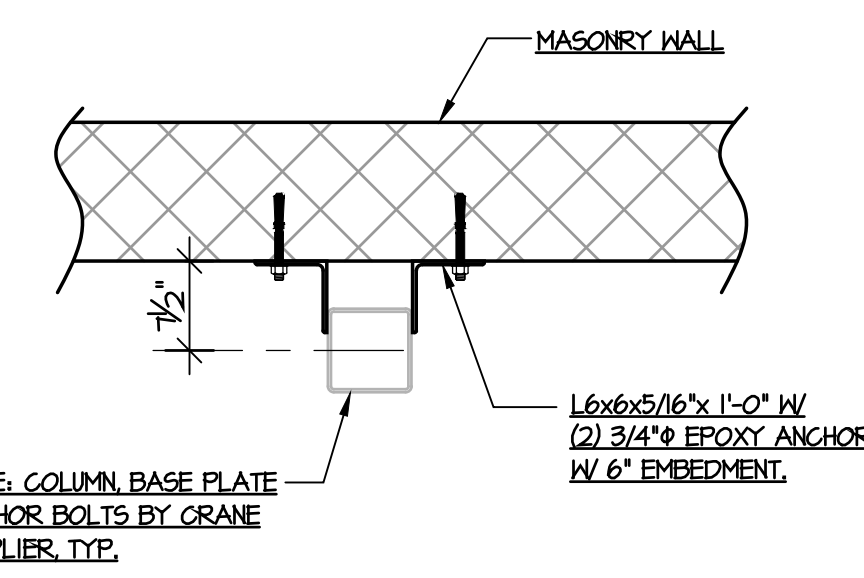
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H
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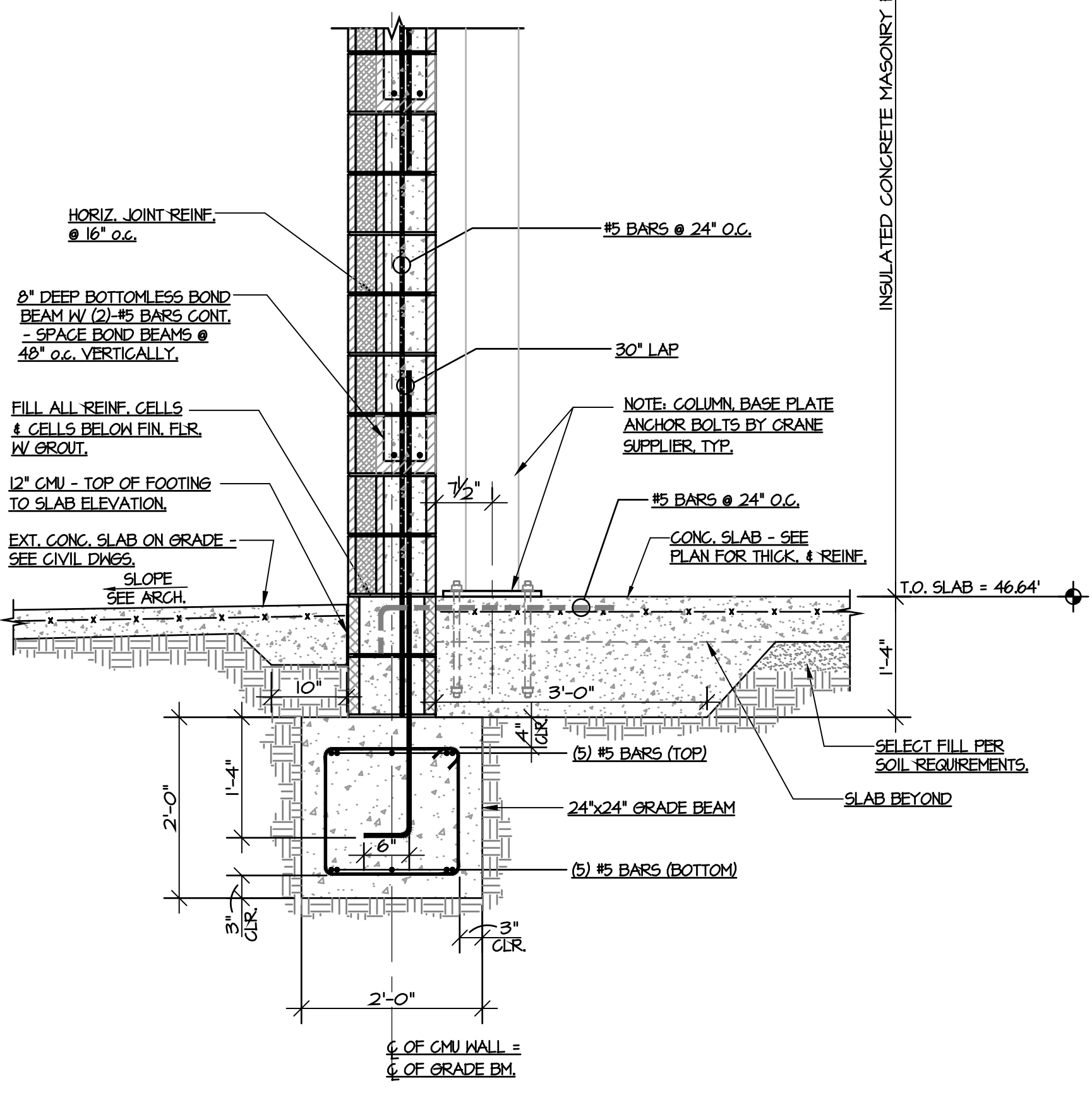
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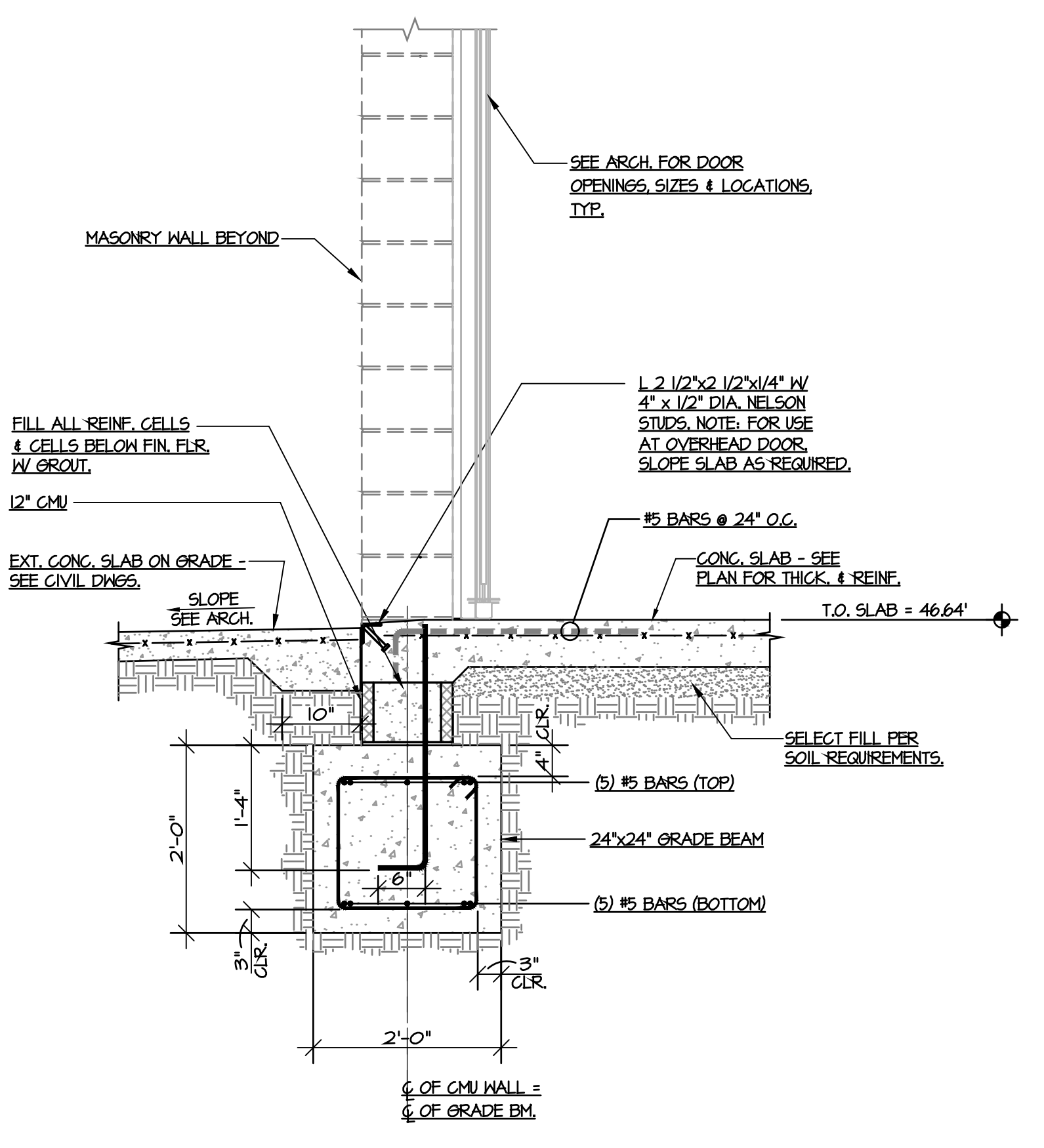
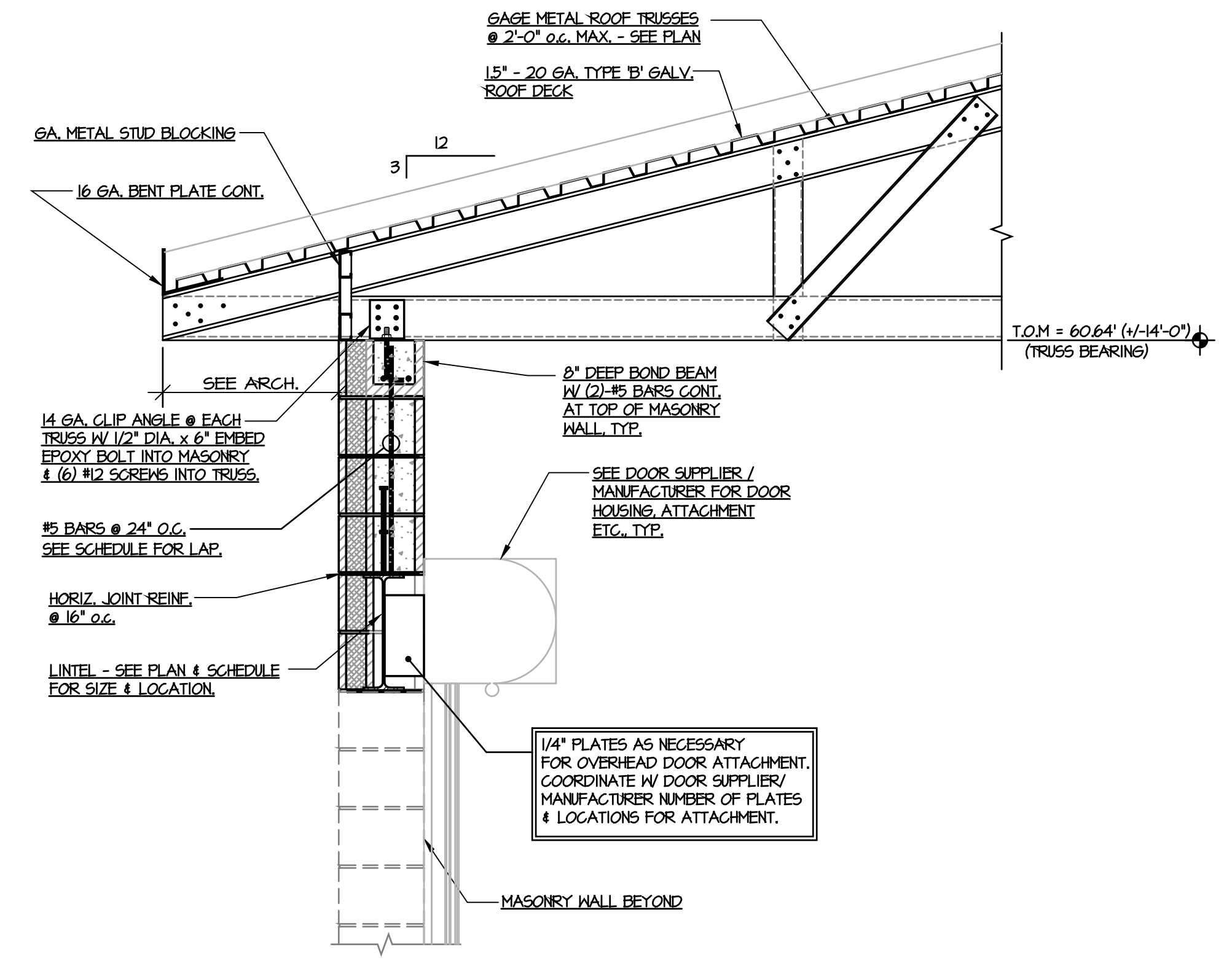
**ELEVATION VIEW
DETAIL**
SCALE: 1" = 1'-0"



**PLAN VIEW
DETAIL**
SCALE: 3/4" = 1'-0"

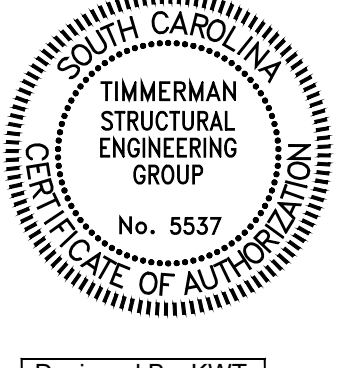
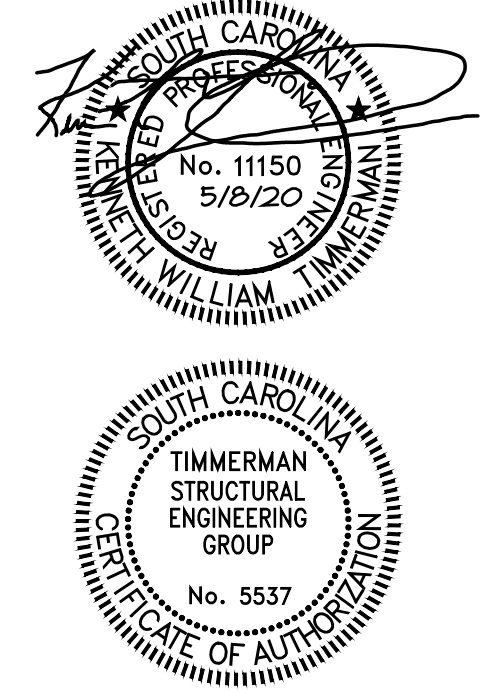


SECTION 1
SCALE: 3/4" = 1'-0"



AT DRIVE DOOR OPENING

SECTION 2
SCALE: 3/4" = 1'-0"



Designed By: KWT
Drawn By: TAP
Job Number: 20-114



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**INTERNATIONAL DRIVE
BOOSTER PUMP STATION**
CONWAY, SC

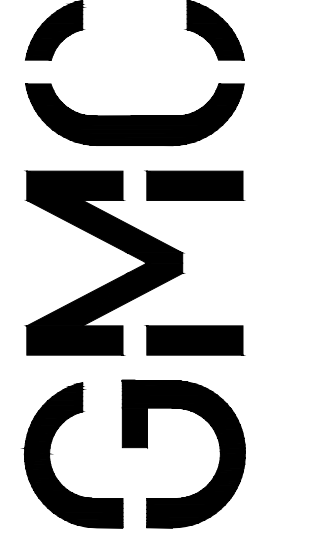
**WALL SECTIONS
AND DETAILS**

S-202

CGRE190054

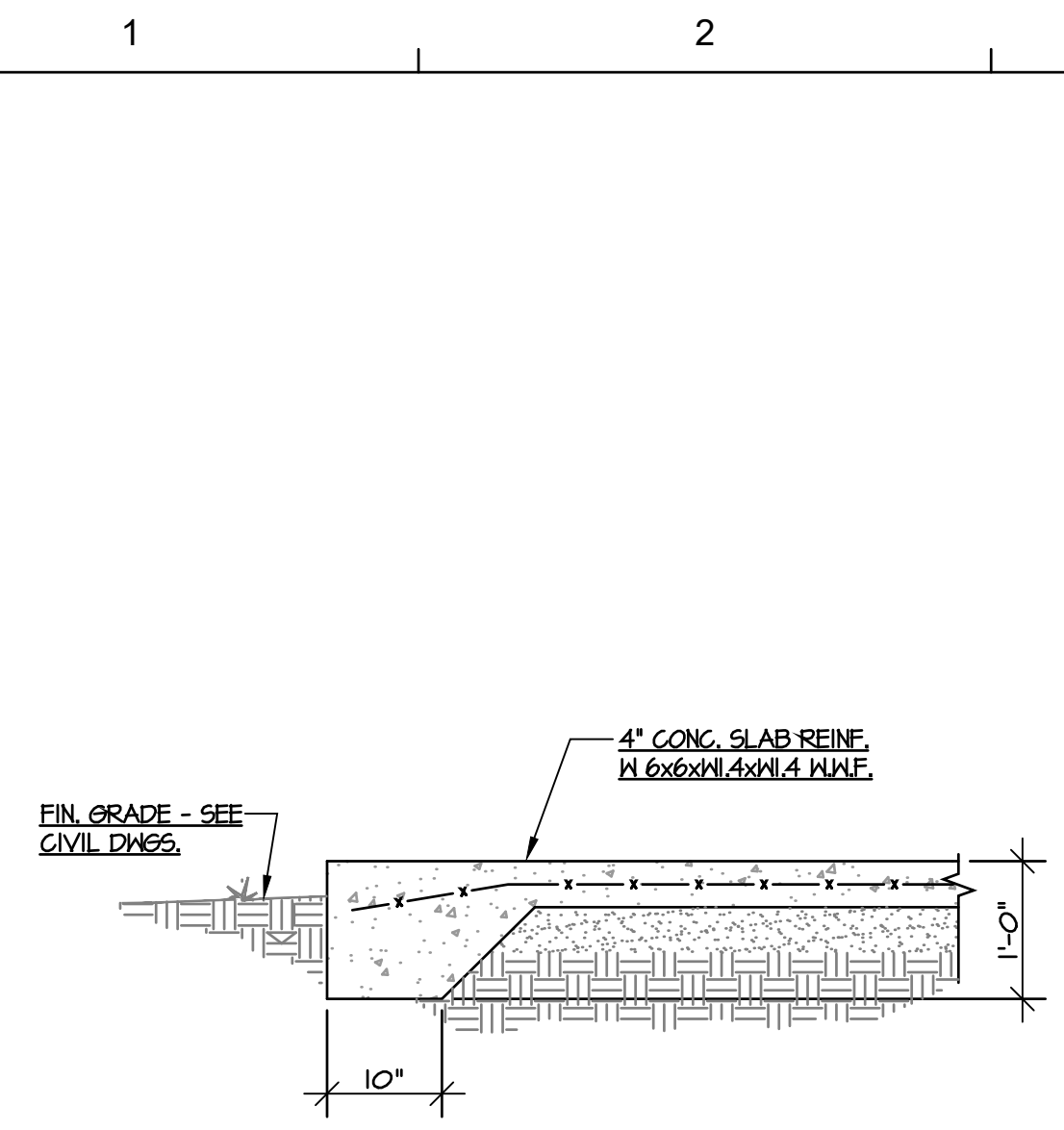
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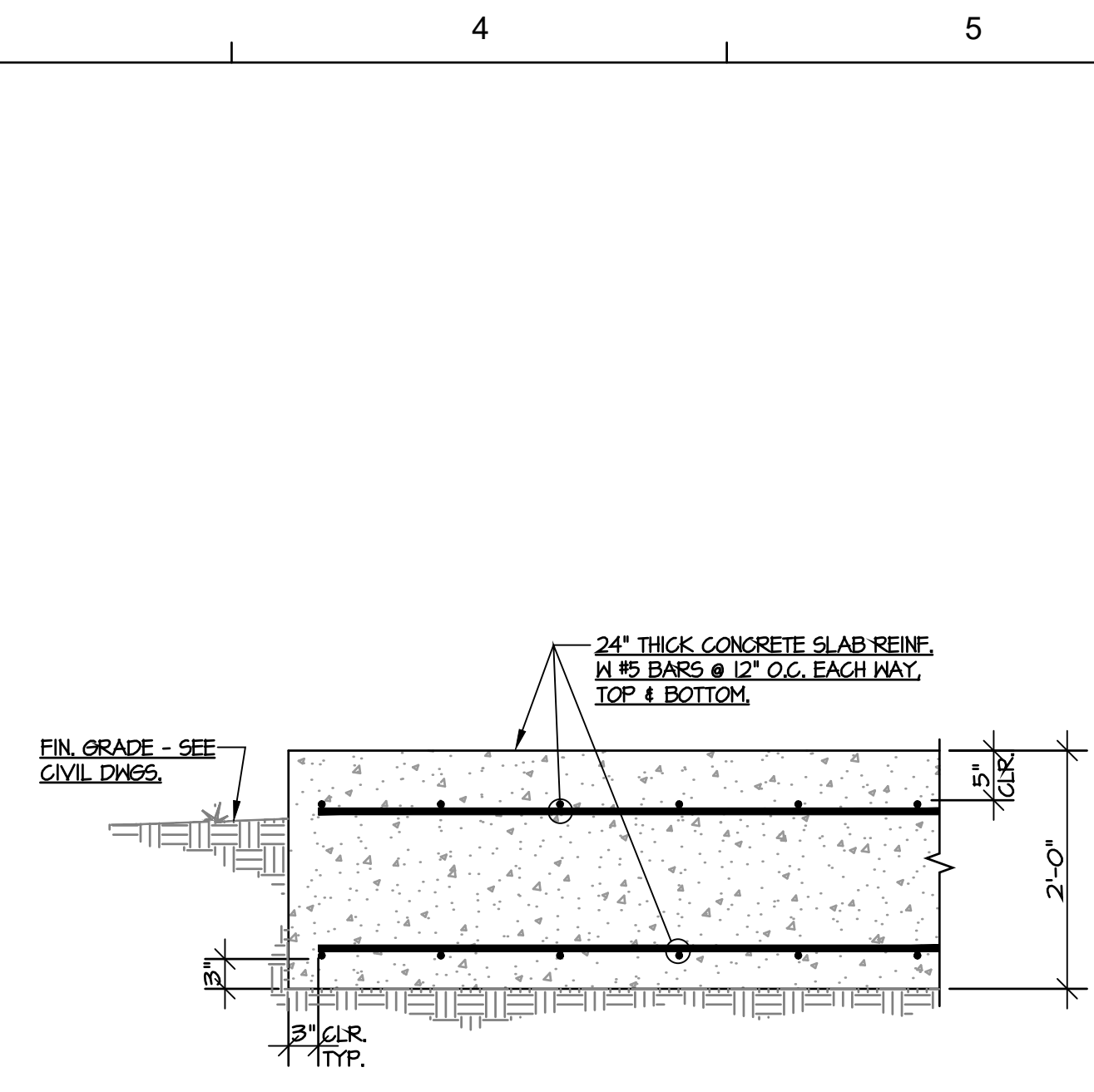


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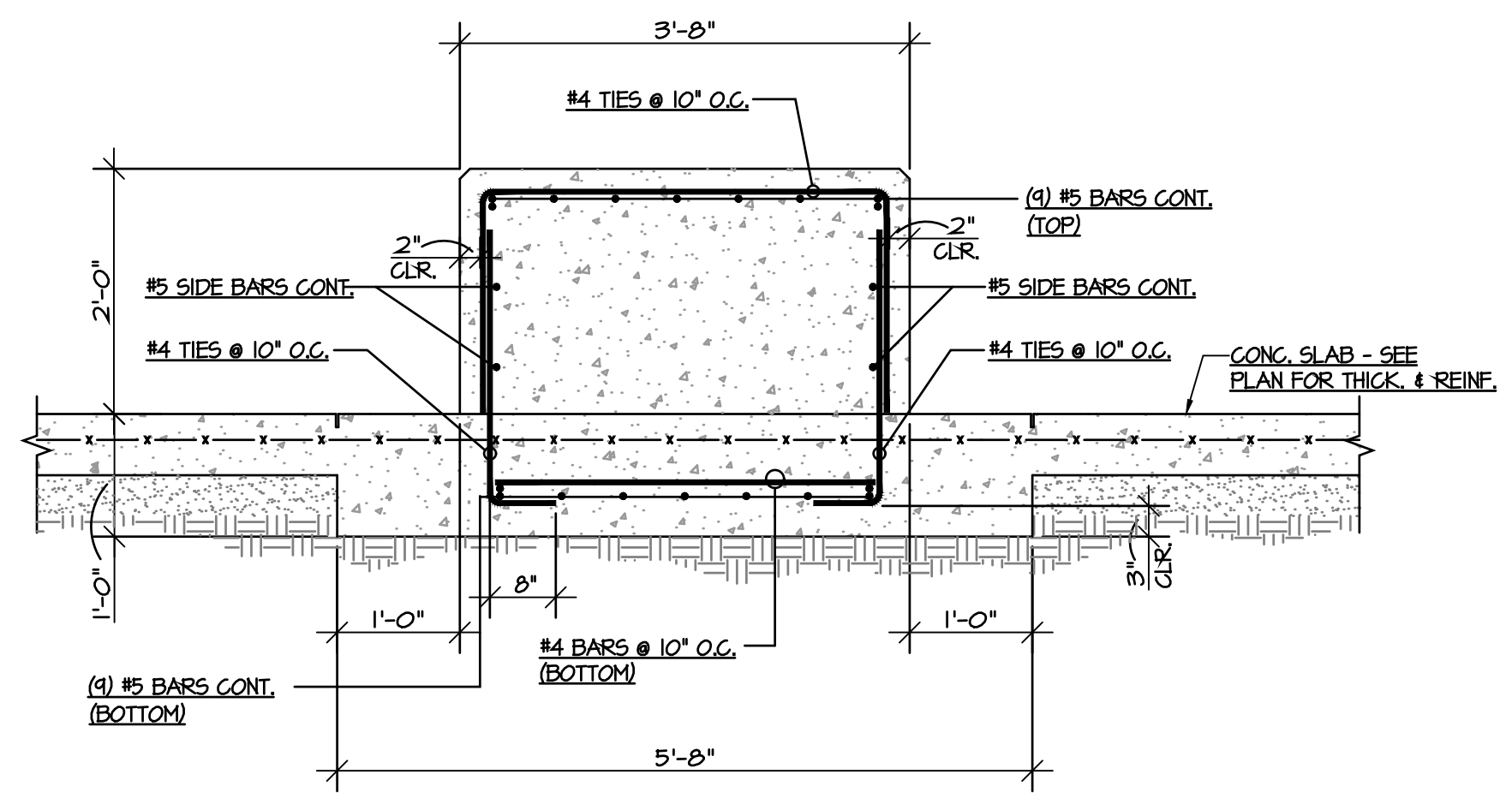
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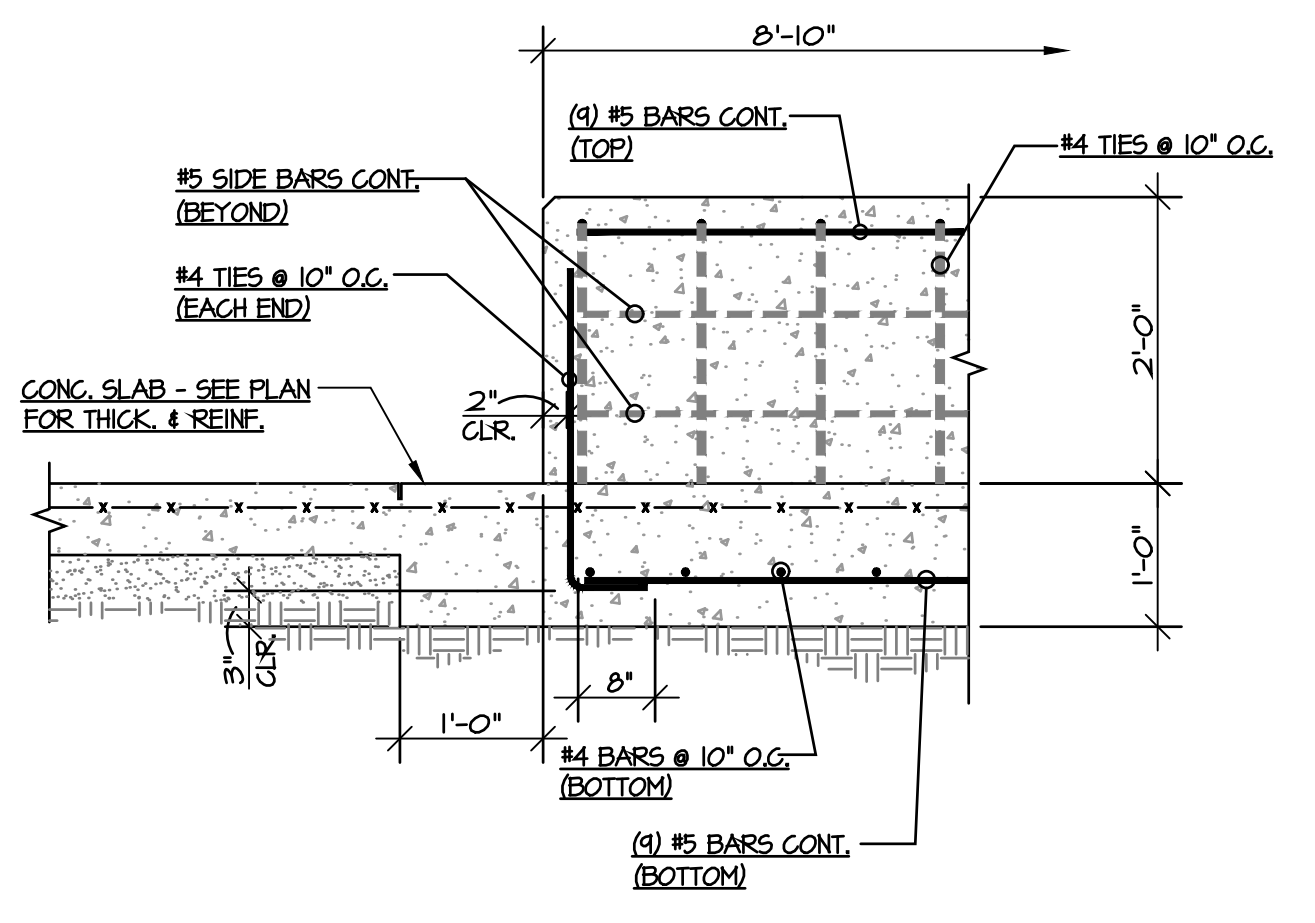
TYPICAL SECTION AT EXTERIOR PAD / SLAB
SECTION 1
SCALE: 3/4" = 1'-0"



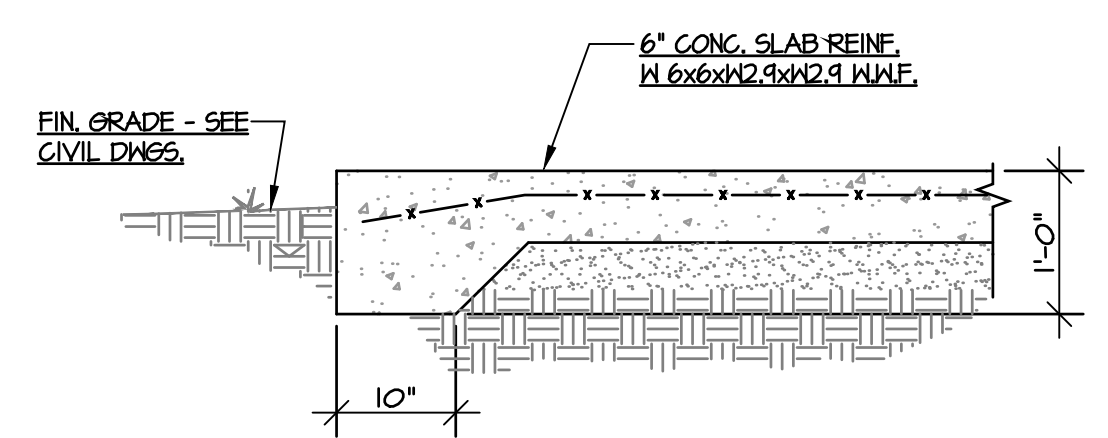
SECTION THRU GENERATOR PAD
SECTION 2
SCALE: 3/4" = 1'-0"



SECTION AT CONCRETE PUMP PEDESTAL
SECTION 3
SCALE: 3/4" = 1'-0"



SECTION AT CONCRETE PUMP PEDESTAL
SECTION 4
SCALE: 3/4" = 1'-0"



TYPICAL SECTION AT 6" CONCRETE EXTERIOR PAD / SLAB
SECTION 5
SCALE: 3/4" = 1'-0"

12" MASONRY BLOCK LINTEL SCHEDULE

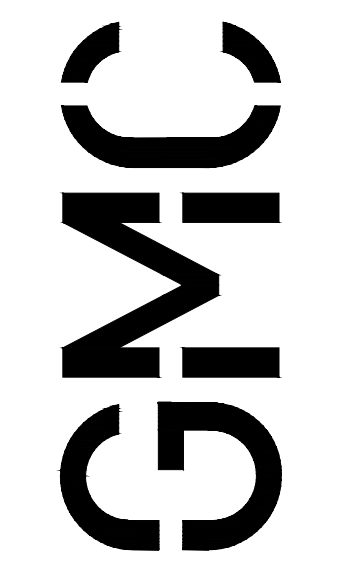
MARK	LINTEL DESCRIPTION	REFERENCE DIAGRAM	DIAGRAMS (Not to Scale)
B1	8" DEEP BOND BEAM W/ 2-#5 BARS CONT.	DIAGRAM A	
B2	16" DEEP BOND BEAM W/ 2-#5 BARS CONT.	DIAGRAM A	
B3	W 16x26 W/ 1/4" PLATE CONT.	DIAGRAM B	

CONTRACTOR'S NOTES:

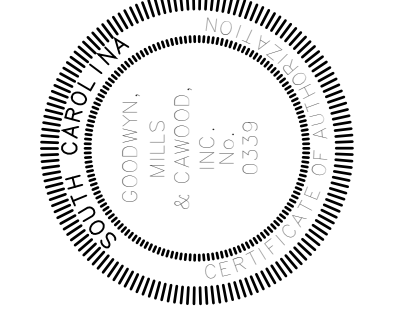
- ALL MASONRY LINTEL BEARING TO BE 16" MIN. ON EACH SIDE.
- SEE STRUCTURAL PLAN AND ADDITIONAL WALL SECTIONS FOR WALL REINFORCEMENT AND SPACING.
- SEE TYPICAL BEARING PLATE SCHEDULE AND DETAILS FOR PLATE SIZE AND NUMBER OF ANCHORS.

MASONRY OPENING REINFORCEMENT DETAIL (Not to Scale)

*** NOTE: IN THE EVENT THAT AN ELECTRICAL BOX IS LOCATED IN EITHER OF THE FIRST TWO CELLS BESIDE DOOR OPENING, THE CONTRACTOR MAY RELOCATE THE REBAR FROM THAT CELL TO THE THIRD CELL LOCATION. CONTRACTOR TO BE MIND-FULL THAT LINTEL WILL NEED TO BE EXTENDED TO REINFORCED CELLS.**



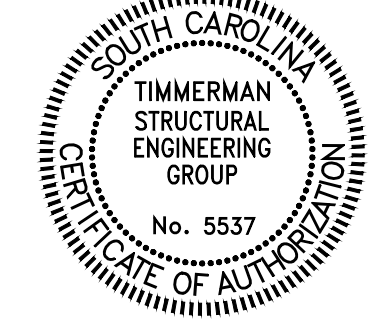
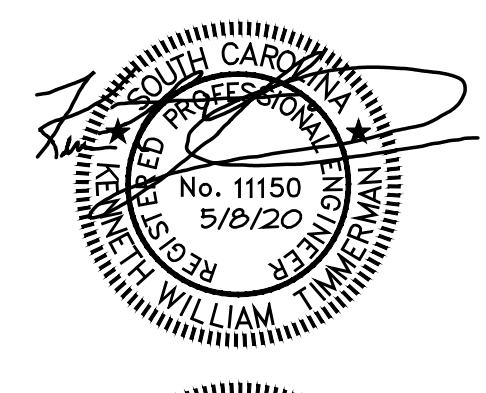
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Job Number: 20-114



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SECTIONS /
DETAILS AND
LINTEL SCHEDULE
S-203

FOR CONSTRUCTION

STRUCTURAL DESIGN CRITERIA:

- 1. APPLICABLE BUILDING CODES:
2018 INTERNATIONAL BUILDING CODE
ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
2. RISK FACTOR: II
3. LIVE LOADS: 100 PSF
ROOF:
ORDINARY, PITCHED AND CURVED ROOFS 20 PSF
4. BASIC LATERAL SYSTEM:
BEARING WALL SYSTEMS
SPECIAL REINFORCED MASONRY SHEAR WALLS
5. DEAD LOADS: USE ACTUAL LOADS OF ALL BUILDING MATERIALS
6. WIND LOADS:
BASIC DESIGN WIND VELOCITY ... V = 140 MPH (Vasd = 104 MPH)
WIND IMPORTANCE FACTOR (Iw) 1.0
WIND EXPOSURE CATEGORY B
INTERNAL PRESSURE COEFFICIENTS:
ENCLOSED BUILDING +/- 10%
PARTIALLY ENCLOSED +/- 55%
OPEN BUILDING +/- 0%

COMPONENTS AND CLADDING WIND PRESSURES PER ASCE:

Table with columns: WIND ZONE, AREA (SF), POSITIVE PRESS. (PSF), NEGATIVE PRESS. (PSF). Rows include ROOF 1, ROOF 2, ROOF 3, WALL 4, WALL 5 with various area and pressure values.

NOTES:

- A. WIDTH OF PRESSURE ZONE "A" = 4 FEET
B. THE DESIGN WIND PRESSURES INDICATED ABOVE ARE THE MINIMUM ALLOWED FOR EXTERIOR COMPONENTS AND CLADDING NOT SPECIFICALLY DESIGNED BY THE BY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THE BUILDING STRUCTURE.
C. COMPONENT AND CLADDING DESIGNS SHALL BE CERTIFIED BY A REGISTERED STRUCTURAL ENGINEER TO MEET THE WIND LOADS AS STATED PER THE APPLICABLE BUILDING CODES.
D. IN WIND BORNE REGIONS, GLAZED OPENINGS SHALL BE PROTECTED IN ACCORDANCE WITH THE IBC, ASCE AND LOCAL CODES REQUIREMENTS.
7. SNOW LOADS:
GROUND SNOW LOAD (PSF) ... Pg = 10 PSF
8. SEISMIC LOADS:
SOIL SITE CLASS D
IMPORTANCE FACTOR (Ie) ... 1.0 [FOR RISK II]
SPECTRAL RESPONSE ACCELERATIONS ... Ss = 0.45 Sl = 0.17
SPECTRAL RESPONSE COEFFICIENTS ... Sds = 0.45 Sdl = 0.25
SEISMIC BUILDING DESIGN CATEGORY .. D
RESPONSE MODIFICATION FACTOR ... R = 5
SEISMIC RESPONSE COEFFICIENT ... Cs = 0.04
DESIGN BASE SHEAR V = 7 KIIPS
SEISMIC ANALYSIS EQUIVALENT FORCE PROCEDURE

STRUCTURAL/GENERAL NOTES:

- 1. THE LEAD (ARCHITECTURAL) DRAWINGS SHALL BE CONSIDERED "THE ORIGINAL SOURCE" FOR THE DIMENSIONING FOR THE PROJECT AND THEREBY WILL NORMALLY TAKE PRECEDENCE OVER THE DRAWINGS BY OTHERS ON THE DESIGN TEAM.
2. AS PART OF MEANS AND METHODS, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN AND ERECTION OF TEMPORARY BRACING AND SHORING AS REQUIRED FOR STABILITY OF THE STRUCTURAL SYSTEM AND STRUCTURAL COMPONENTS DURING ALL PHASES OF CONSTRUCTION.
3. THE ENGINEER'S APPROVAL OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS IN THE CONTRACT DOCUMENTS AND/OR THE PROJECT SPECIFICATIONS.
4. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER AND ARCHITECT OF ANY UNUSUAL AND/OR EXCESSIVE LOADS DUE TO EQUIPMENT OR CONSTRUCTION REQUIREMENTS PRIOR TO CONSTRUCTION.
5. THE STRUCTURAL DRAWINGS AND RELATED INFORMATION SHALL BE USED IN CONJUNCTION WITH ALL ARCHITECTURAL DRAWINGS AS WELL AS OTHER INFORMATION AND DOCUMENTS RELATING TO ALL TRADES.
6. THE CONTRACTOR SHALL DETERMINE SIZES AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ANCHOR BOLTS, ETC. AS REQUIRED FOR ALL TRADES PRIOR TO CONSTRUCTING THAT PORTION OF THE PROJECT.
7. ALL SECTIONS AND DETAILS ARE TYPICAL AT SIMILAR LOCATIONS AND WHERE APPLICABLE.
8. CONTRACTOR SHALL MAKE NO DEVIATIONS FROM DESIGN DRAWINGS AND SPECIFICATIONS WITHOUT WRITTEN APPROVAL OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER.
9. THE CONTRACTOR SHALL CONSTRUCT THIS PROJECT IN ACCORDANCE TO ALL APPLICABLE BUILDING CODES AND SAFETY STANDARDS AND/OR REGULATIONS.
10. THE DESIGN PROFESSIONALS DO NOT CONTROL, OR HAVE TRAINING FOR, THE CONTRACTOR'S MEANS, METHODS, SEQUENCE, TECHNIQUES, PROCEDURES AND/OR QUALITY CONTROL IN PERFORMING THE WORK, SITE SAFETY OR SAFETY PROGRAMS IN CONNECTION WITH THIS PROJECT.
11. ALL SUSPENDED CEILING/SOFFIT SYSTEMS (INCLUDING LIGHT FIXTURES) SHALL BE SUPPORTED AS REQUIRED BY THE SPECIFIC PRODUCT MANUFACTURER.
12. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS (LEAD DRAWINGS) FOR ALL WALL OPENINGS (INCLUDING DOORS AND WINDOWS) AS WELL AS BUILDING CONFIGURATION AND ASSOCIATED DETAILS.
13. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND/OR VENDOR DRAWINGS FOR LOCATIONS OF DEPRESSED FLOOR AREAS, FLOOR DRAINS, FLOOR TOPPING, CMU COURSING AND ANY OTHER DETAILS NOT INDICATED IN THE STRUCTURAL DRAWINGS.
14. THESE STRUCTURAL DRAWINGS ARE BASED ON THE LATEST INFORMATION/ARCHITECTURAL DRAWINGS PRIOR TO THE SUBMITTAL DATE.
15. QUESTIONS RELATING TO THESE STRUCTURAL DRAWINGS MAY BE SUBMITTED IN WRITING, THROUGH THE ARCHITECT OR PRIME PROFESSIONAL TO THE STRUCTURAL ENGINEER.

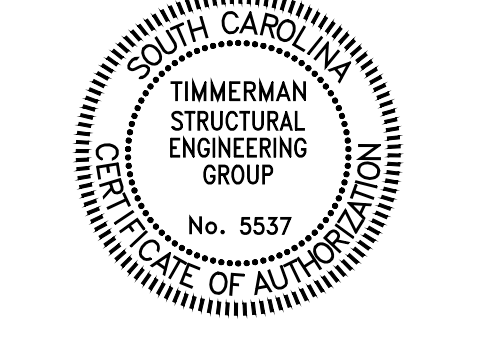
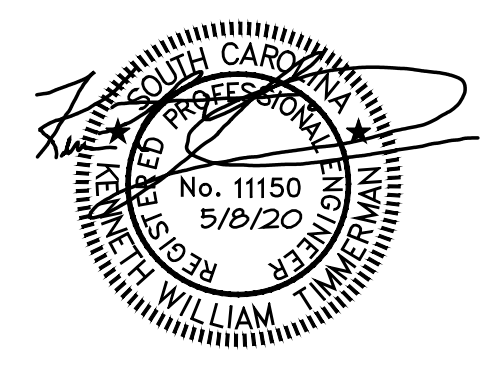
TIMMERMAN STRUCTURAL ENGINEERING GROUP
580 CHRIS DRIVE
WEST COLUMBIA, SC 29169
(803) 791-4511
(803) 791-4522 (FAX)

GEOTECHNICAL:

- 1. THE CONTRACTOR AND HIS SUBCONTRACTORS, SHALL FOLLOW ALL RECOMMENDATIONS INDICATED IN THE GEOTECHNICAL REPORT WHICH IS CONSIDERED AN INTEGRAL PART OF THESE STRUCTURAL DOCUMENTS.
2. A GEOTECHNICAL ENGINEER AND/OR TESTING LABORATORY SHALL BE RETAINED FOR THE PURPOSES OF ASSURING ADEQUATE SOIL SUPPORT FOR FOUNDATION AND SLABS-ON-GRADE.
3. ANY ELEVATIONS INDICATED ON THE FOUNDATION PLANS TYPICALLY REFER TO TOP OF FOOTINGS.
4. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXCAVATIONS AND SLOPES.
5. THE SIDES OF FOUNDATION CONCRETE (FOOTINGS, PILE CAPS, CAISSON CAPS, ETC.) MAY BE EARTH FORMED PROVIDED THE EXCAVATION CAN BE SAFELY KEPT VERTICAL, CLEAN AND STABLE.
6. TIMMERMAN STRUCTURAL ENGINEERING GROUP SHALL BE NOTIFIED OF ANY TRASH, DEBRIS, SOFT AREAS FOR ANY OTHER SUBSURFACE ANOMALY FOUND UNDER THE BUILDING SITE.

CONCRETE:

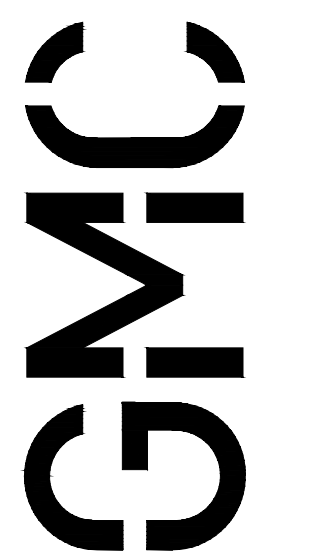
- 1. ALL CONCRETE AND REINFORCING BARS SHALL BE INSTALLED IN ACCORDANCE TO STANDARDS SET FORTH BY THE LATEST EDITION OF ACI-318.
2. REINFORCEMENT SHALL BE HELD IN PLACE DURING CONCRETE PLACEMENT.
3. 28 DAY MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:
SLABS ON GRADE 3000 PSI
GRADE BEAMS 4500 PSI
ALL OTHER CONCRETE 4500 PSI
NO CALCIUM CHLORIDE SHALL BE USED IN MIX.
4. SPECIFIED CONCRETE COVER FOR CONVENTIONAL REINFORCEMENT SHALL BE AS FOLLOWS:
CONCRETE CAST AGAINST AND EXPOSED TO EARTH, 3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 THRU #10 BARS..... 2 INCHES
#5 BARS AND SMALLER..... 1-1/2 INCHES
5. THE CONTRACTOR SHALL TAKE ADDITIONAL PRECAUTIONS WHEN CONCRETE IS TO BE PLACED AND CURED DURING COLD OR HOT WEATHER.
6. NO ADDITIONAL WATER SHALL BE ADDED TO THE CONCRETE ABOVE THAT PRESCRIBED IN THE MIX DESIGN UNLESS APPROVED BY THE ARCHITECT OR STRUCTURAL ENGINEER.
7. REINFORCING STEEL SHALL BE GRADE 60, MINIMUM LAPS IN CONCRETE SHALL BE IN ACCORDANCE W/ ACI-318.
8. WELDED WIRE FABRIC SHALL BE LAPPED A MINIMUM OF 1'-0".
9. ALL PLUMBING SLOTS SHALL BE FILLED WITH CONCRETE TO THE SAME DEPTH AS THE FLOOR SLAB AFTER PIPING IS INSTALLED.
10. EXTERIOR CONCRETE PADS SHALL BE SIZED AND LOCATED PER THE CONTRACT DOCUMENTS AND/OR EQUIPMENT SPECIFICATIONS/ REQUIREMENTS.
11. THE GENERAL CONTRACTOR SHALL SUBMIT REBAR SHOP DRAWINGS SHOWING NUMBER, SIZE AND LOCATION, INCLUDING BAR LISTS AND DIAGRAMS, TO THE DESIGN TEAM FOR APPROVAL.
12. REBAR DOWELS SHALL MATCH VERTICAL REINFORCING (IWO).
13. PROVIDE PROPERLY TIED SPACERS, CHAIRS, BOLSTERS, ETC, AS REQUIRED AND NECESSARY TO ASSEMBLE, PLACE AND SUPPORT ALL REINFORCING.
14. SEE ARCHITECTURAL DRAWINGS OR OWNER REQUIREMENTS FOR REQUIRED CONCRETE FINISH AND COLOR.
15. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO COLLECT CYLINDERS AND PERFORM THE NECESSARY CONCRETE TESTS.
16. REPAIR AND PATCH DEFECTIVE AREAS IMMEDIATELY AFTER REMOVAL OF FORMS.
17. 6" SLAB ON GRADE SHALL BE REINFORCED WITH W6X6-W2.9 x W2.9 WWF ON PROPERLY PREPARED BASE MATERIAL.
18. UNLESS SPECIFIED OTHERWISE, THE CONTRACTOR SHALL SPACE GRADE SLAB JOINTS NOT TO EXCEED 36 TIMES THE SLAB THICKNESS PER ACI (AMERICAN CONCRETE INSTITUTE).



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Drawn By: TAP
Job Number: 20-114



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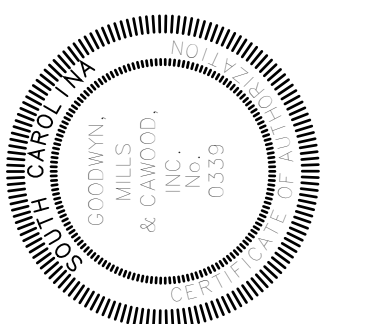


Table with columns: ISSUE DATE, BID SET, DRAWN BY, CHECKED BY. Includes date 05/08/20 and various initials.

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STRUCTURAL DESIGN CRITERIA
& GENERAL NOTES

S-300

FOR CONSTRUCTION

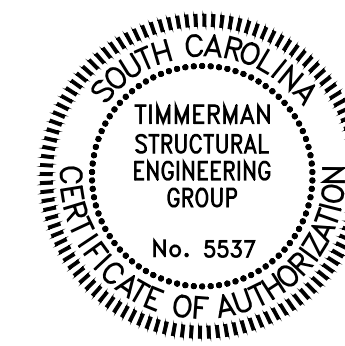
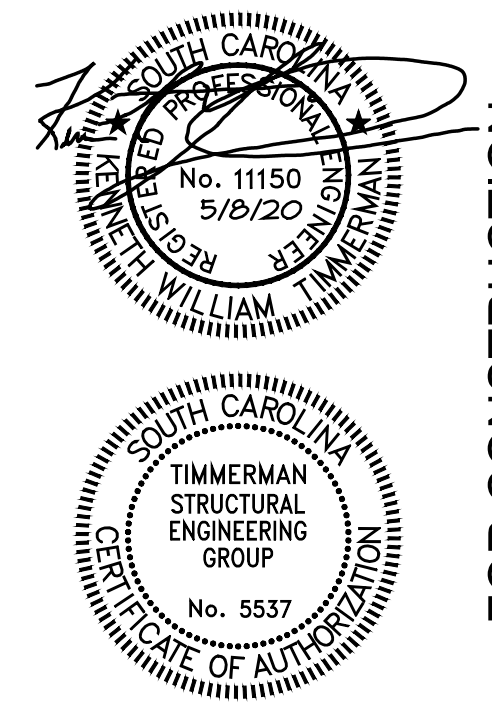
STATEMENT OF SPECIAL INSPECTIONS (PER CHAPTER 17)

SPECIAL INSPECTION COMPANY / COORDINATOR – TO BE RETAINED BY OWNER									
BUILDING SYSTEM OR COMPONENT	MATERIAL SUBMITTAL	TESTING			INSPECTION (PER IBC)			QUALITY ASSURANCE (PER IBC)	
		REQUIREMENTS	FREQUENCY	AGENCY	MONITORING	FREQUENCY	AGENCY	PART OF WIND	PART OF SEISMIC
SOILS (COMPACTED FILL) <small>NOTE: THIS SECTION MAY BE MODIFIED BY PROJECT GEOTECHNICAL ENGINEER BASED ON PROJECT SOIL CONDITIONS.</small>	N/A	1. TEST IN PLACE DRY DENSITY OF COMPACTED FILL.	1. AS APPROVED BY GEOTECHNICAL ENGINEER.	TESTING LAB TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL PER IBC	1. DETERMINE SITE IS PREPARED IN ACCORDANCE WITH APPROVED SOILS REPORT PRIOR TO PLACEMENT OF FILL. 2. DURING PLACEMENT AND COMPACTION OF FILL MATERIAL DETERMINE MATERIAL BEING USED AND MAXIMUM LIFT THICKNESS COMPLIES WITH SOILS REPORT. 3. VERIFY THAT IN PLACE DRY DENSITY TESTS OF COMPACTED FILL COMPLIES WITH SOILS REPORT.	1. PERIODIC 2. PERIODIC 3. CONTINUOUS	INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL PER IBC	1. COLUMNS AND SHEARWALLS ACCORDANCE WITH APPROVED SOILS REPORT PRIOR TO PLACEMENT OF FILL.	1. COLUMNS AND SHEARWALLS ACCORDANCE WITH APPROVED SOILS REPORT PRIOR TO PLACEMENT OF FILL.
CONCRETE FOUNDATIONS	1. SUBMIT CONCRETE MIX DESIGN. 2. SUBMIT FOUNDATION REINFORCEMENT SHOP DRAWINGS. 3. VERIFY PROPER CONCRETE STRENGTH.	1. TEST CONCRETE STRENGTH.	1. (1) SET OF CYLINDERS FOR EACH VERTICAL LIFT OR EACH 50 YARDS OF CONCRETE.	TESTING LAB TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL PER IBC	1. VERIFY APPROPRIATE MIX (STRENGTH) PROVIDE: A. REBAR SIZE B. REBAR QUANTITY C. REBAR PLACEMENT	1. PERIODIC	INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL PER IBC	1. SPREAD FOOTINGS AT BEARING WALLS AND SHEARWALL.	1. SPREAD FOOTINGS AT BEARING WALLS AND SHEARWALL.
CONCRETE MASONRY UNITS	1. SUBMIT TEST DATA ON CMU UNITS NET AREA OF COMPRESSIVE STRENGTH 1900 PSI OR GREATER. 2. TYPE 'S' MORTAR GROUT MIX 2000 PSI	1. TEST COMPRESSIVE STRENGTH OF MORTAR & GROUT.	1. (1) SET OF GROUT CUBES FROM EACH FLOOR AND/OR (1) SET OF CUBES FOR EACH 50 YARDS OF GROUT.	TESTING LAB TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL PER IBC	SEE MASONRY INSPECTION CHART	SEE MASONRY INSPECTION CHART	INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL PER IBC	1. YES	1. YES
STRUCTURAL STEEL HIGH - STRENGTH BOLTING (AND MECHANICAL FASTENING OF METAL DECK)	1. SUBMIT MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR HIGH-STRENGTH BOLTS, NUTS, WASHERS AND/OR FASTENERS.	N/A	N/A	N/A	1. VERIFY BOLTING IN BEARING-TYPE CONNECTIONS ARE INSTALLED IN ACCORDANCE WITH AISC SPECIFICATIONS. 2. VERIFY BOLTING IN SLIP-CRITICAL CONNECTIONS ARE INSTALLED IN ACCORDANCE WITH AISC SPECIFICATIONS. 3. VERIFY IDENTIFICATION MARKING ON HIGH-STRENGTH BOLTS, NUTS AND WASHERS CONFORMING TO ASTM STANDARDS SPECIFIED. 4. VERIFY FASTENER TYPE AND ADHERENCE TO SPECIFIED FASTENER ATTACHMENT PATTERN. 5. VERIFY PROPER STORAGE AND HANDLING OF BOLTS, NUTS, WASHERS.	1. PERIODIC 2. CONTINUOUS (MAY BE PERIODIC IF TURN-OF-NUT WITH MATCH MARKING METHODS, DIRECT TENSION INDICATOR OR ALTERNATE DESIGN FASTENER (TWIST-OFF) METHODS ARE USED) 3. PERIODIC 4. PERIODIC 5. PERIODIC	INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL PER IBC	1. FLOOR AND ROOF SYSTEM BOLTING	1. FLOOR AND ROOF SYSTEM BOLTING
COLD FORM FRAMING	1. SUBMIT MANUFACTURER'S CERTIFIED MILL TEST REPORTS FOR STRUCTURAL STEEL.	N/A	N/A	N/A	1. VERIFY ALL SIZES, SPACINGS, AND GAUGES ETC. CONFORM W/ CONSTRUCTION DOCUMENTS 2. VERIFY ALL CONNECTIONS AND FASTENERS CONFORM WITH CONSTRUCTION DOCUMENTS 3. VERIFY ALL BRIDGING AND BRACING CONFORMS WITH CONSTRUCTION DOCUMENTS	1. PERIODIC 2. PERIODIC 3. PERIODIC	INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL PER IBC	1. YES	1. YES

NOTE: ALL TESTING, INSPECTION & RELATED REPORTS SHALL BE SENT TO THE SPECIAL INSPECTION COORDINATOR & THE OWNER.
ANY DEFICIENCIES SHALL BE CLEARLY NOTED & BROUGHT TO THE ATTENTION OF THE SPECIAL INSPECTION COORDINATOR BEFORE THE END OF THE INSPECTOR'S SHIFT.

DEFINITIONS:

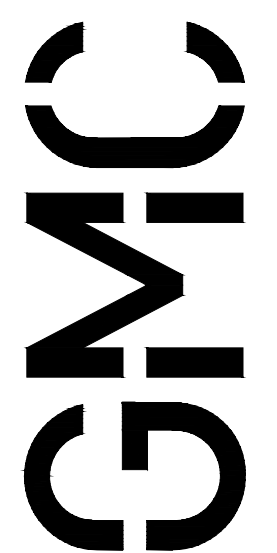
- SPECIAL INSPECTOR: PER IBC "A QUALIFIED PERSON EMPLOYED OR RETAINED BY AN APPROVED AGENCY AND APPROVED BY THE BUILDING OFFICIAL AS HAVING THE COMPETENCE NECESSARY TO INSPECT A PARTICULAR TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION".
- PERIODIC SPECIAL INSPECTION: PER IBC "SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED".
- CONTINUOUS SPECIAL INSPECTION: PER IBC "SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED". THIS IS INTENDED TO BE A CONTINUOUS INSPECTION.



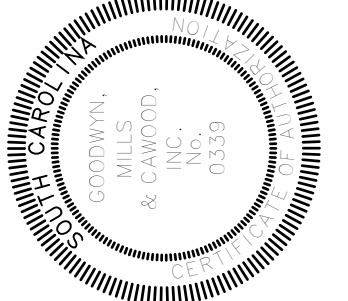
Designed By: KWT
Drawn By: TAP
Job Number: 20-114



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ISSUE DATE	BID SET	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10
05/08/20											

**INTERNATIONAL DRIVE
BOOSTER PUMP STATION**
CONWAY, SC

SPECIAL INSPECTIONS

FOR CONSTRUCTION

CGRE190054

S-302

DOOR SCHEDULE										
DOOR #	DOOR			FRAMES						COMMENTS
	SIZE		TYPE	MATERIAL	TYPE	MATERIAL	DETAILS			
	WIDTH	HEIGHT					HEAD	JAMB	SILL	
1	10'-0"	10'-0"	OD-1	STEEL	GUIDES	STEEL	HD-2	JD-2	SD-2	INSULATED OVERHEAD COILING DOOR WITH LOCK
2	3'-0"	7'-0"	HM-1	HM	F1	HM	HD-1	JD-1	SD-1	PAINTED HOLLOW METAL DOOR AND FRAME WITH ENTRY LOCKSET
3	3'-0"	7'-0"	HM-1	HM	F1	HM	HD-1	JD-1	SD-1	PAINTED HOLLOW METAL DOOR AND FRAME WITH ENTRY LOCKSET

APPLICABLE CODES & REGULATIONS

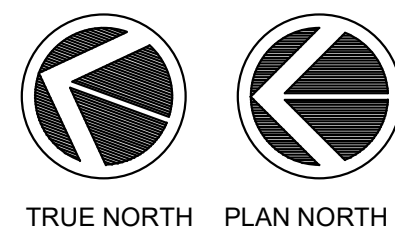
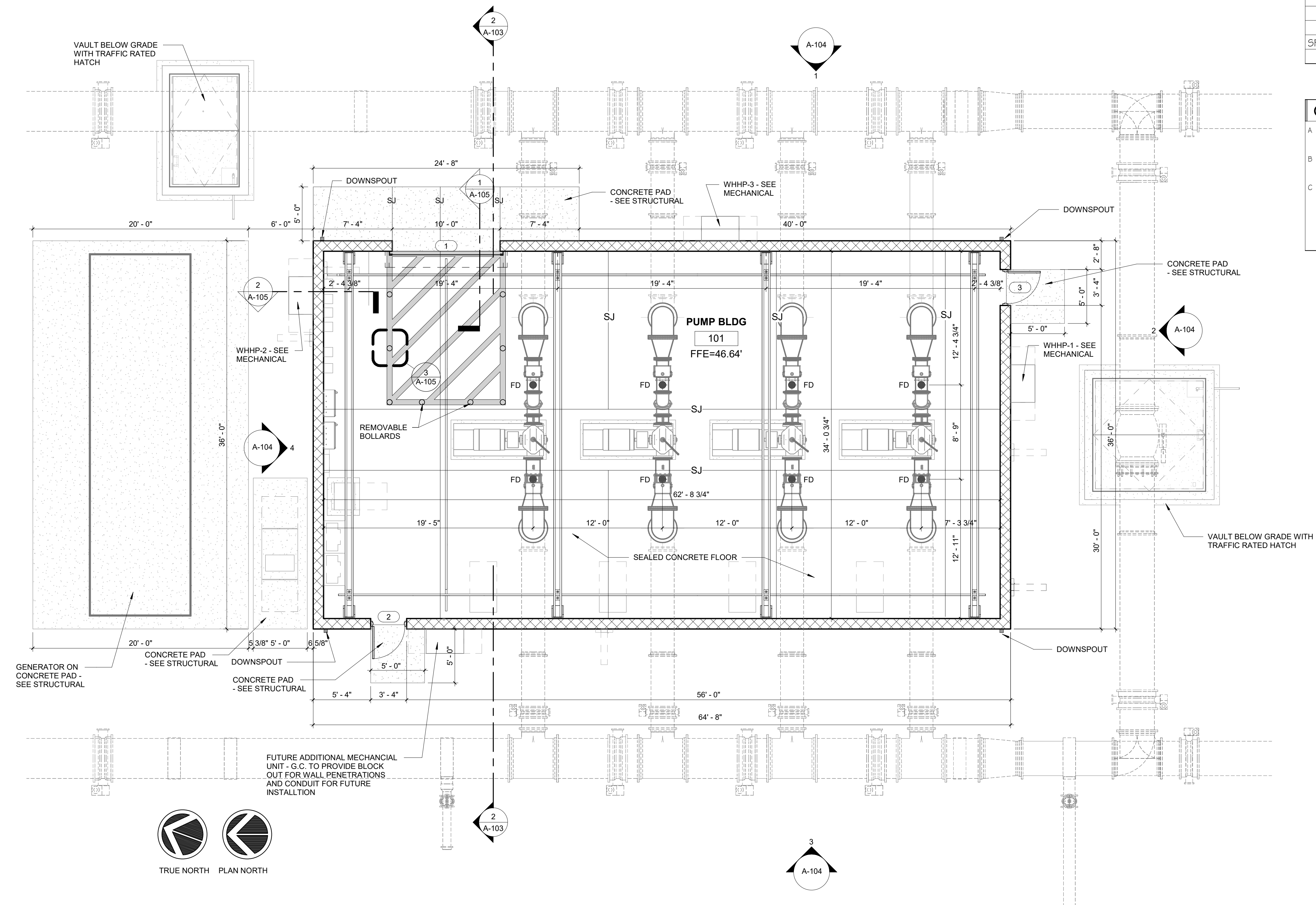
2018	INTERNATIONAL BUILDING CODE (IBC)
2018	INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2018	INTERNATIONAL FUEL GAS CODE (IFGC)
2018	INTERNATIONAL MECHANICAL CODE (IMC)
2018	INTERNATIONAL PLUMBING CODE (IPC)
2018	INTERNATIONAL FIRE CODE (IFC)
2017	NATIONAL ELECTRICAL CODE (NEC)
2009	INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
2017	ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

BASIC CODE INFORMATION

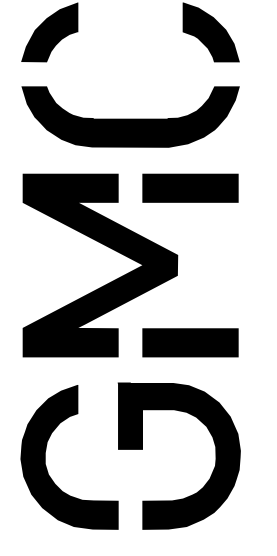
CONSTRUCTION TYPE	TYPE II-B
OCCUPANCY TYPE	S1 STORAGE
BUILDING AREA	2,386 SQ. FT.
BUILDING HEIGHT	
# OF STORIES	1 STORY
HEIGHT IN FEET	17' - AVERAGE ROOF HEIGHT
SPRINKLER	NO SPRINKLER SYSTEM PROVIDED

GENERAL NOTES

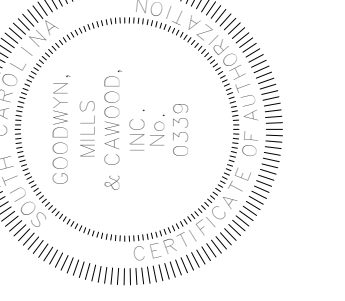
- A. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS. GENERAL CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ARCHITECT'S ATTENTION IMMEDIATELY, PRIOR TO PROCEEDING WITH WORK.
- B. COORDINATE ALL WORK DESCRIBED BY OTHER DRAWINGS AND DISCIPLINES. NOTIFY THE ARCHITECT OF ANY CONFLICTS PRIOR TO EXECUTION OF THE WORK.
- C. REFERENCE STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. ALSO, REFERENCE ALL EQUIPMENT DRAWINGS AND SCHEDULES FOR COORDINATION OF INFRASTRUCTURE SUCH AS POWER, DATA, WATER AND WASTE CONNECTIONS.



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



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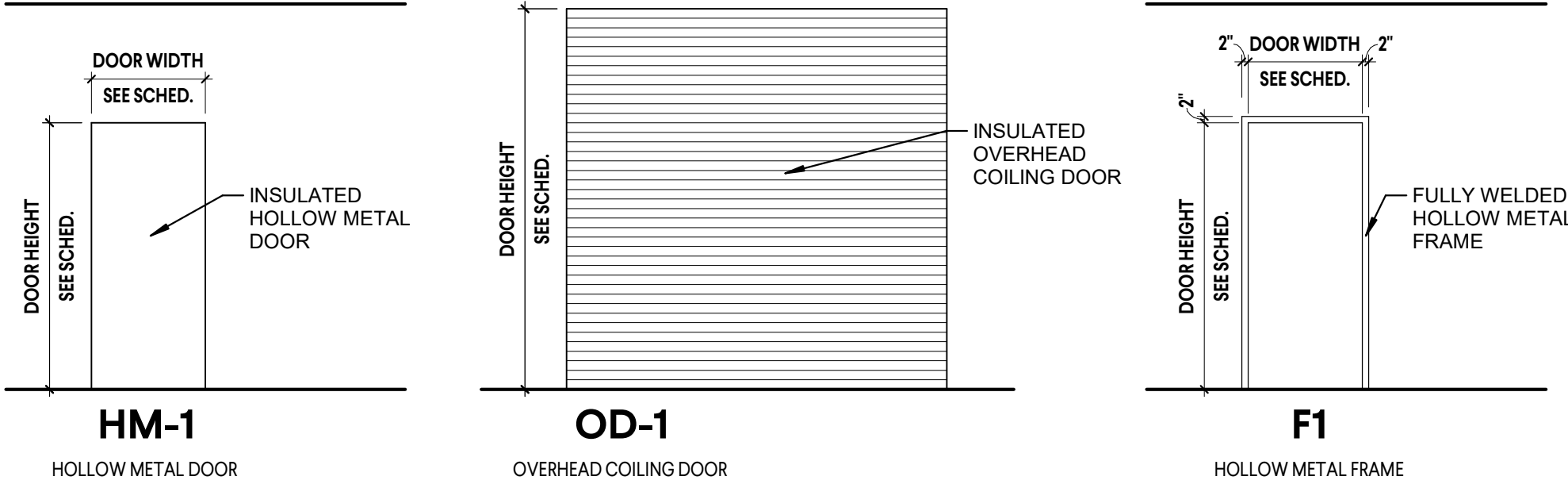
CGRE190054
NOT - RELEASED FOR CONSTRUCTION

BOOSTER PUMP
STATION - PLAN
A-101

DRAWN BY: MWW
CHECKED BY: MWW

DOOR SCHEDULE										
DOOR #	DOOR SIZE		DOOR			FRAMES			COMMENTS	
	WIDTH	HEIGHT	TYPE	MATERIAL	TYPE	MATERIAL	HEAD	JAMB		SILL
1	10' - 0"	10' - 0"	OD-1	STEEL	GUIDES	STEEL	HD-2	JD-2	SD-2	INSULATED OVERHEAD COILING DOOR WITH LOCK
2	3' - 0"	7' - 0"	HM-1	HM	F1	HM	HD-1	JD-1	SD-1	PAINTED HOLLOW METAL DOOR AND FRAME WITH ENTRY LOCKSET
3	3' - 0"	7' - 0"	HM-1	HM	F1	HM	HD-1	JD-1	SD-1	PAINTED HOLLOW METAL DOOR AND FRAME WITH ENTRY LOCKSET

DOOR TYPE SCALE: 1/4" = 1'-0"



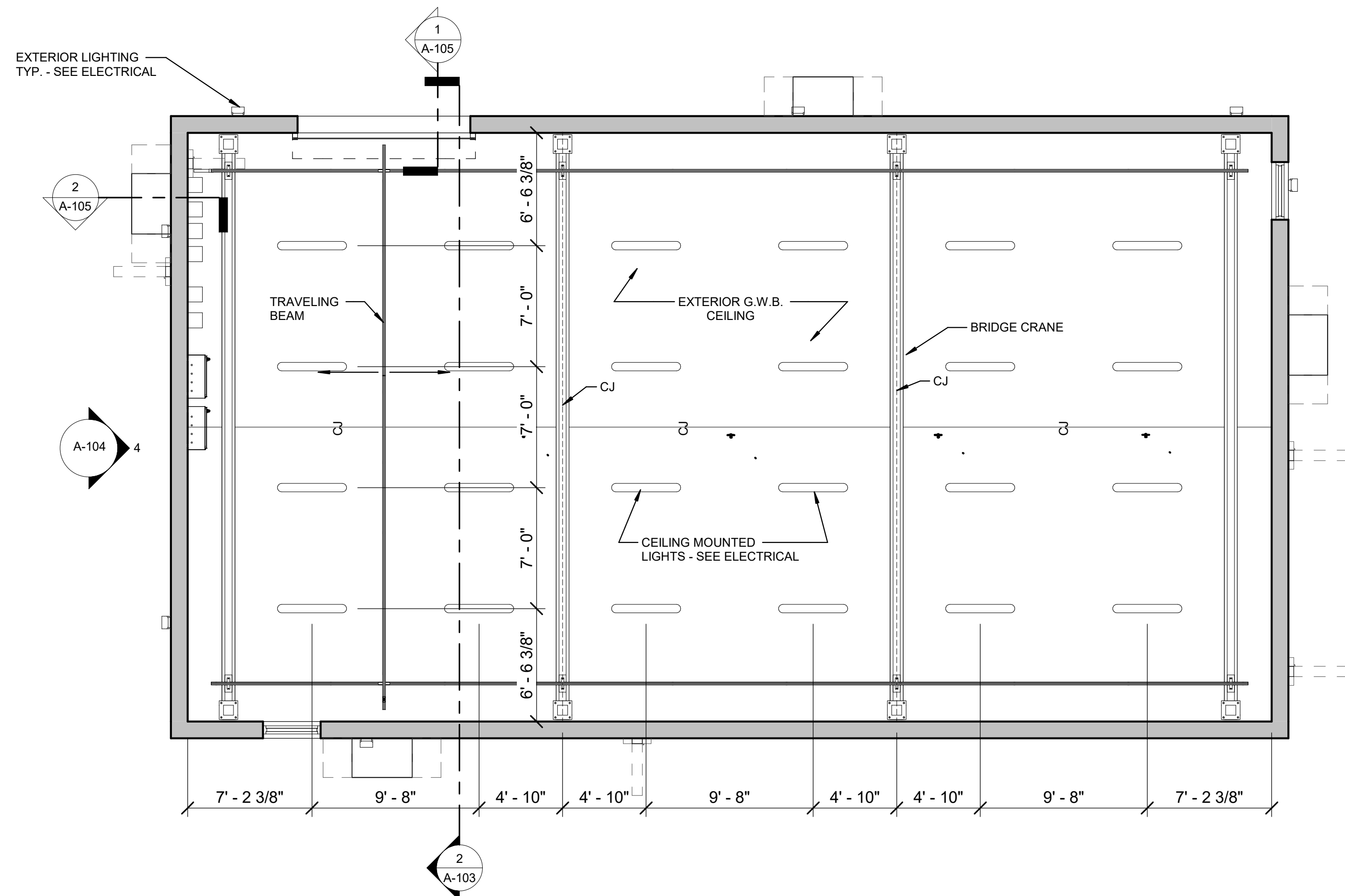
DOOR GENERAL NOTES

A FIELD VERIFY ALL DIMENSIONS AND CONDITIONS. COORDINATE ROUGH OPENING WITH DOOR MANUFACTURER / INSTALLER.

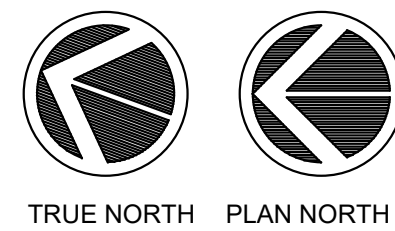
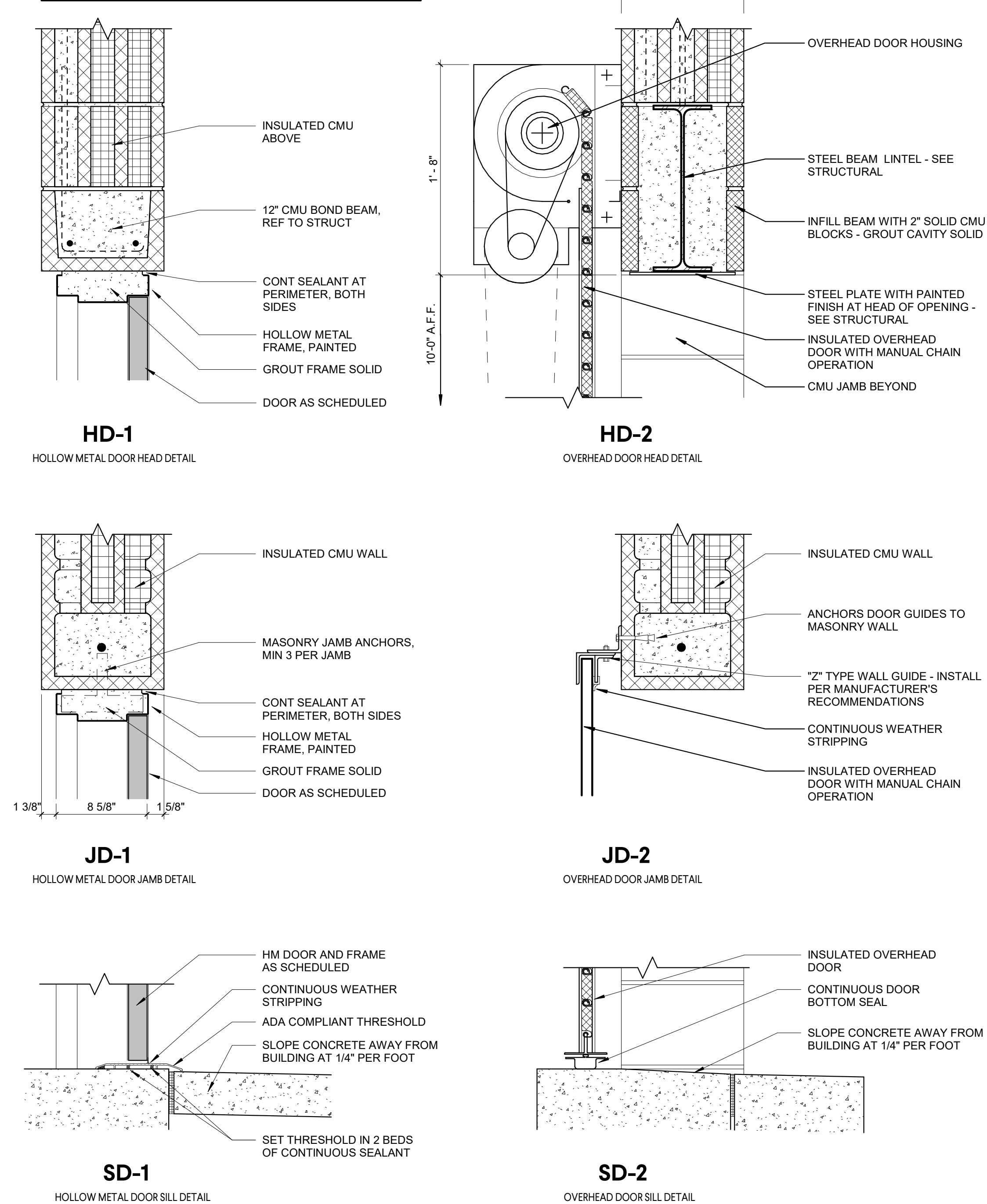
B PROVIDE MECHICAL PUSH/BUTTON LOCK WITH KEY OVERRIDE ON EACH DOOR, DORMAKABA SIMPLEX L1021 - KEY TO MATCH OWNER KEYING SYSTEM.

C PROVIDE THE FOLLOWING ON EACH SWING DOOR:
 1. ADA COMPLIANT THRESHOLD.
 2. CONTINUOUS WEATHERSTRIPPING AND DOOR SWEEP.
 3. CLOSER.
 4. PEEP HOLE.

D PROVIDE THE FOLLOWING ON EACH OVERHEAD COILING DOOR:
 1. CONTINUOUS WEATHERSTRIPPING AND COMPRESSIBLE DOOR BOTTOM.
 2. MANUAL CHAIN OPERATION.
 3. INTERIOR SLIDING LATCH MECHANISM CAPABLE OF SUPPORTING OWNER PROVIDED PAD LOCK.



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



1 REFLECTED CEILING PLAN
 SCALE: 3/16" = 1'-0"

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INTERNATIONAL DRIVE
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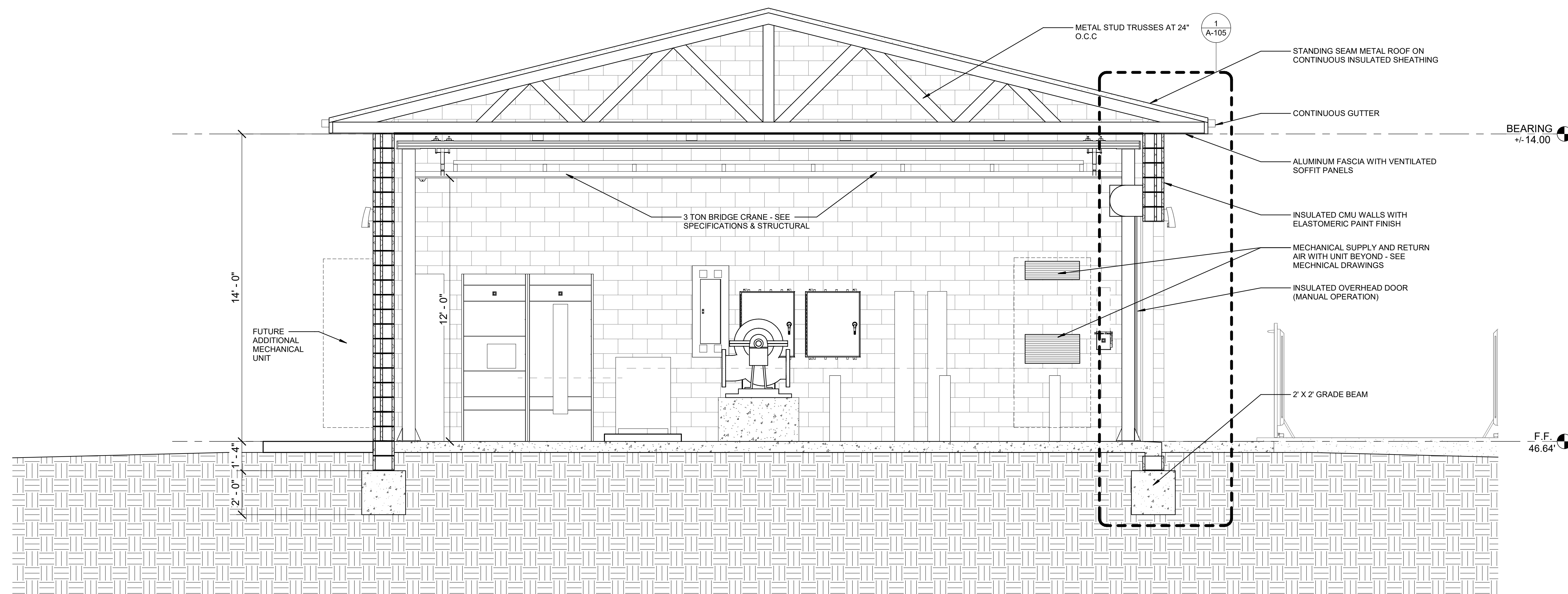
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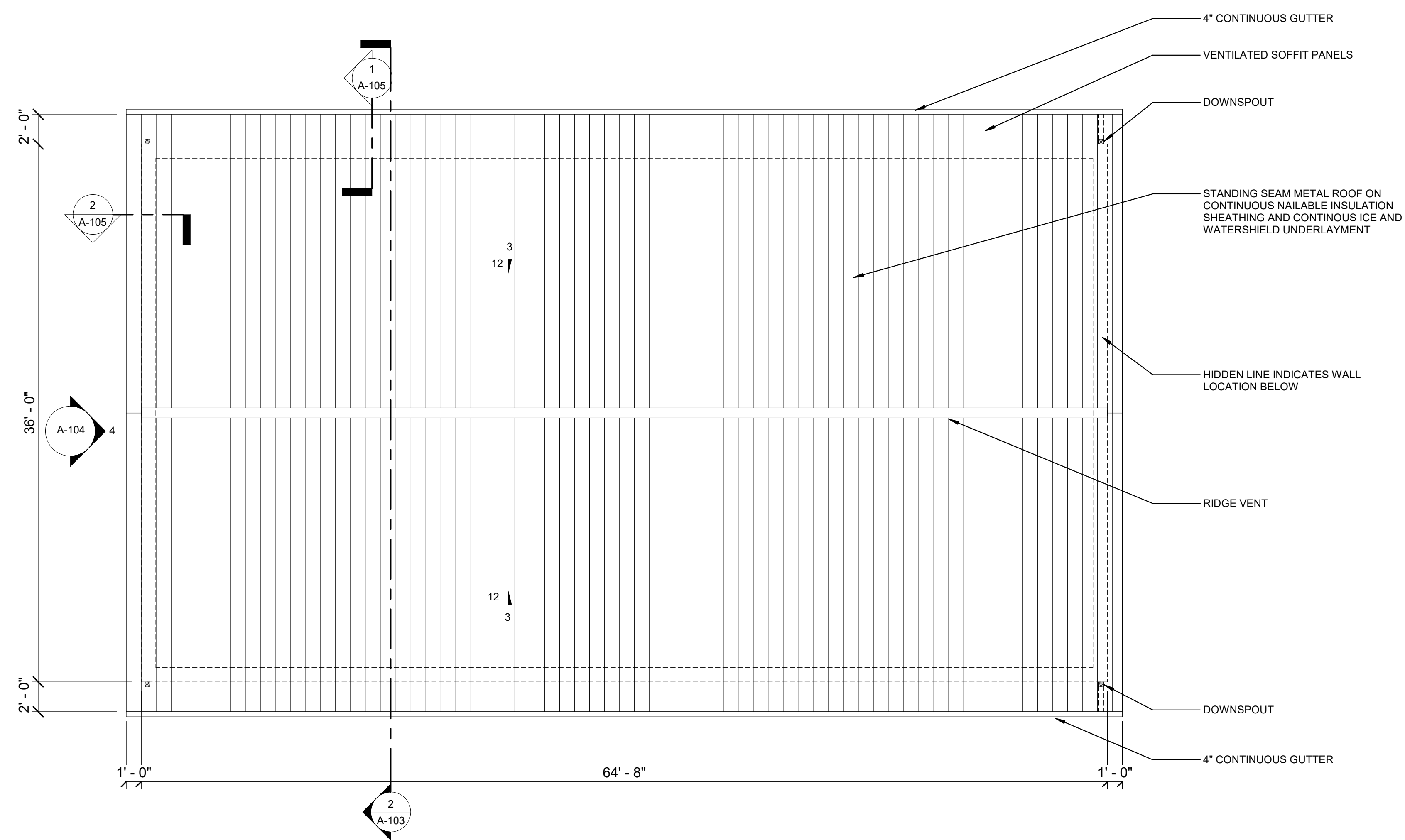
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 CHECKED BY: MWW



BOOSTER PUMP STATION - RCP
A-102



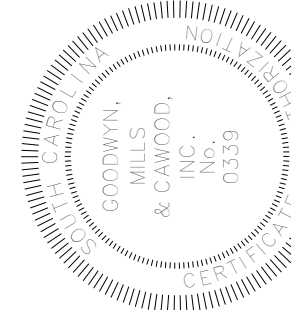
2
A-103 BUILDING SECTION
SCALE: 3/8" = 1'-0"



1
A-103 ROOF PLAN
SCALE: 3/16" = 1'-0"

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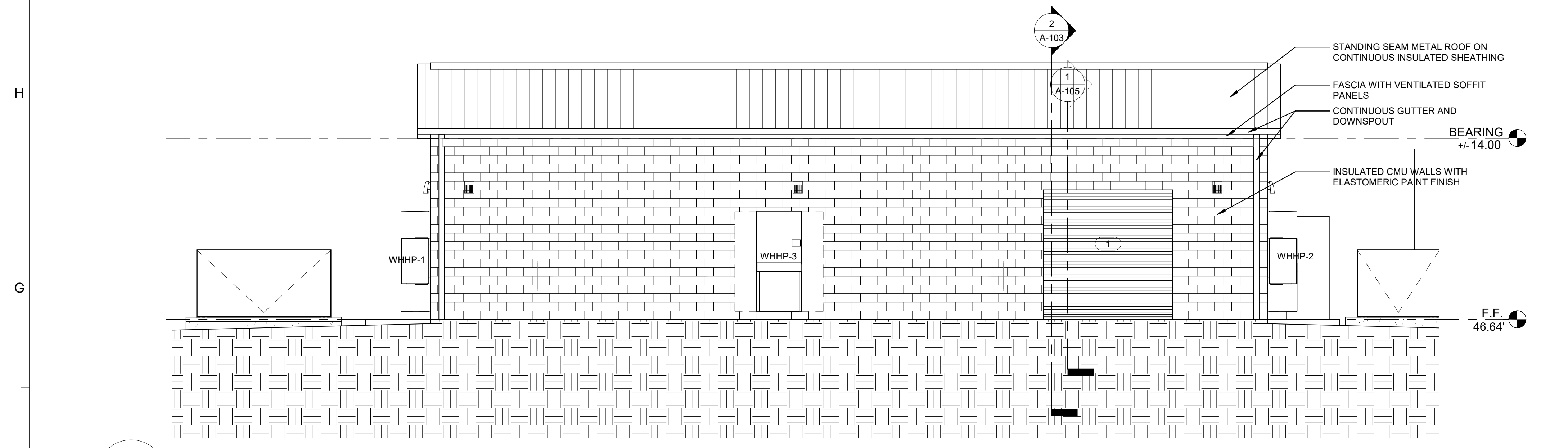
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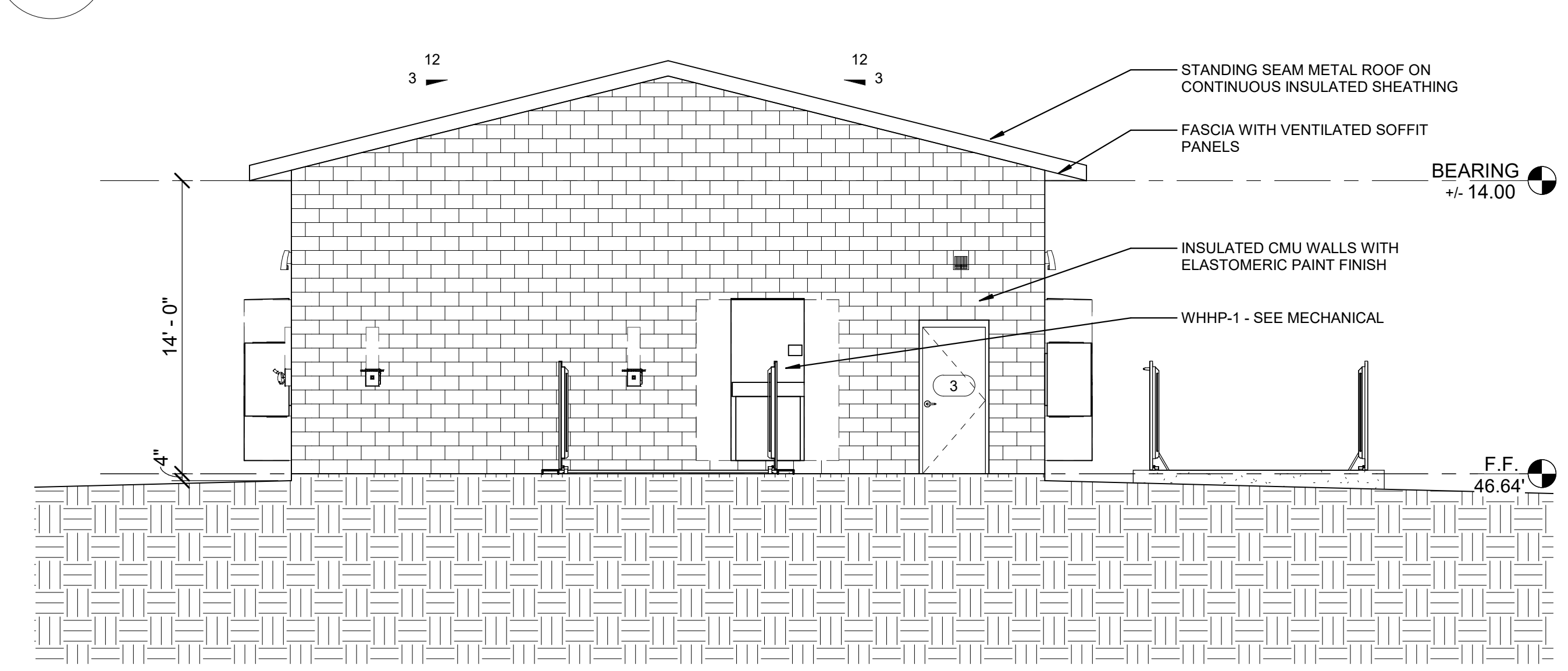


**BOOSTER PUMP
STATION - ROOF
PLAN & SECTION
A-103**

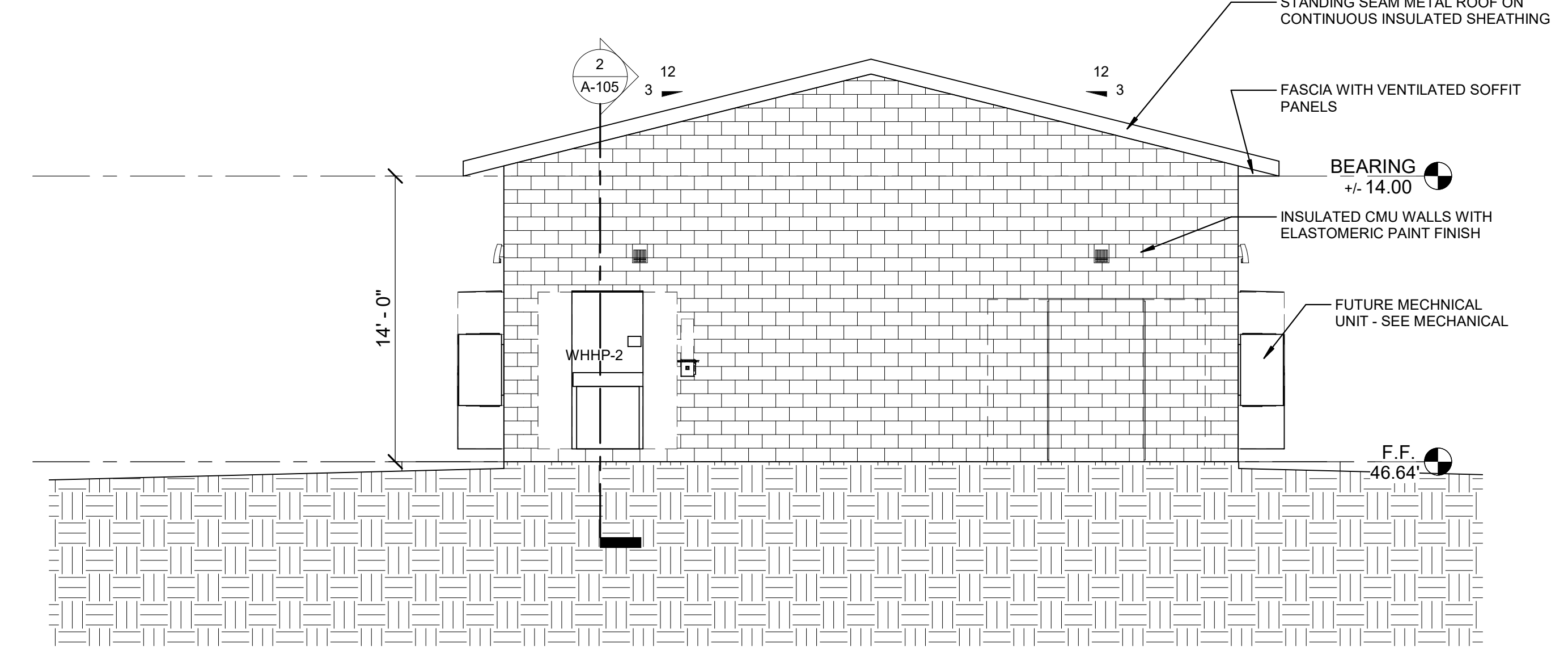
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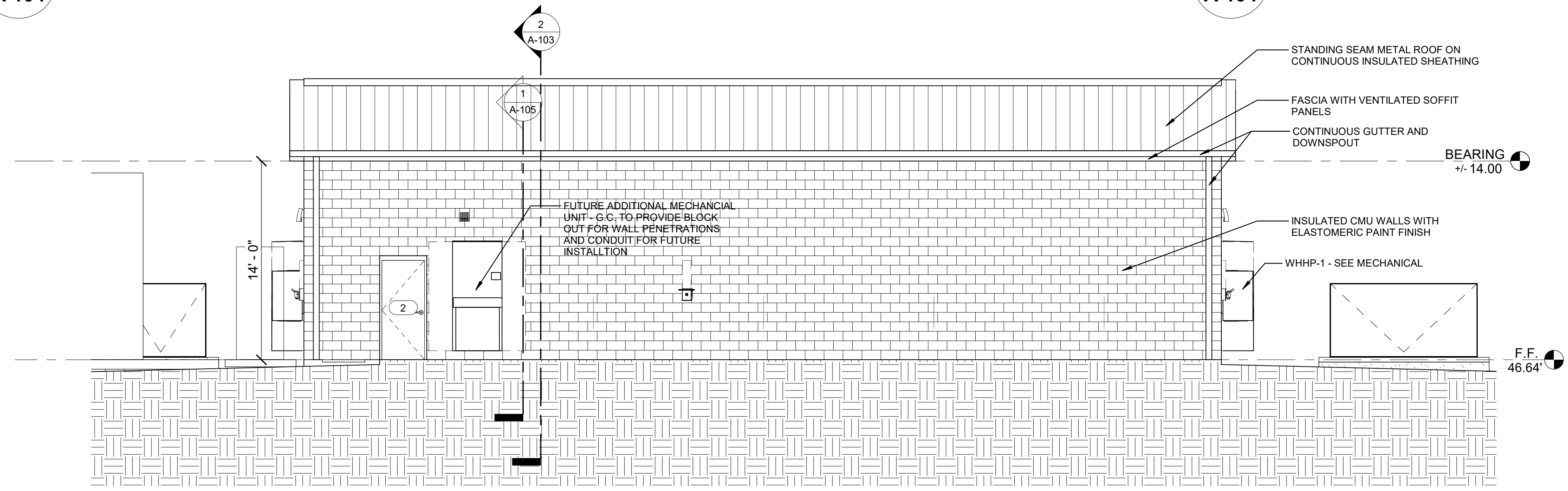
1 EAST ELEVATION
 SCALE: 3/16" = 1'-0"
A-104



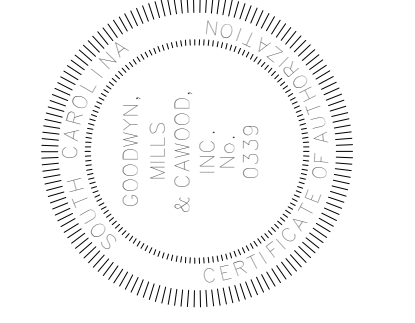
2 SOUTH ELEVATION
 SCALE: 3/16" = 1'-0"
A-104



4 NORTH ELEVATION
 SCALE: 3/16" = 1'-0"
A-104



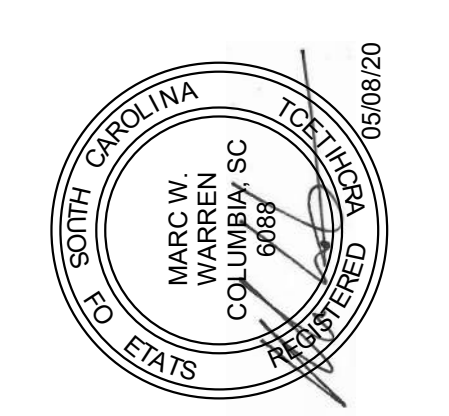
3 WEST ELEVATION
 SCALE: 3/16" = 1'-0"
A-104



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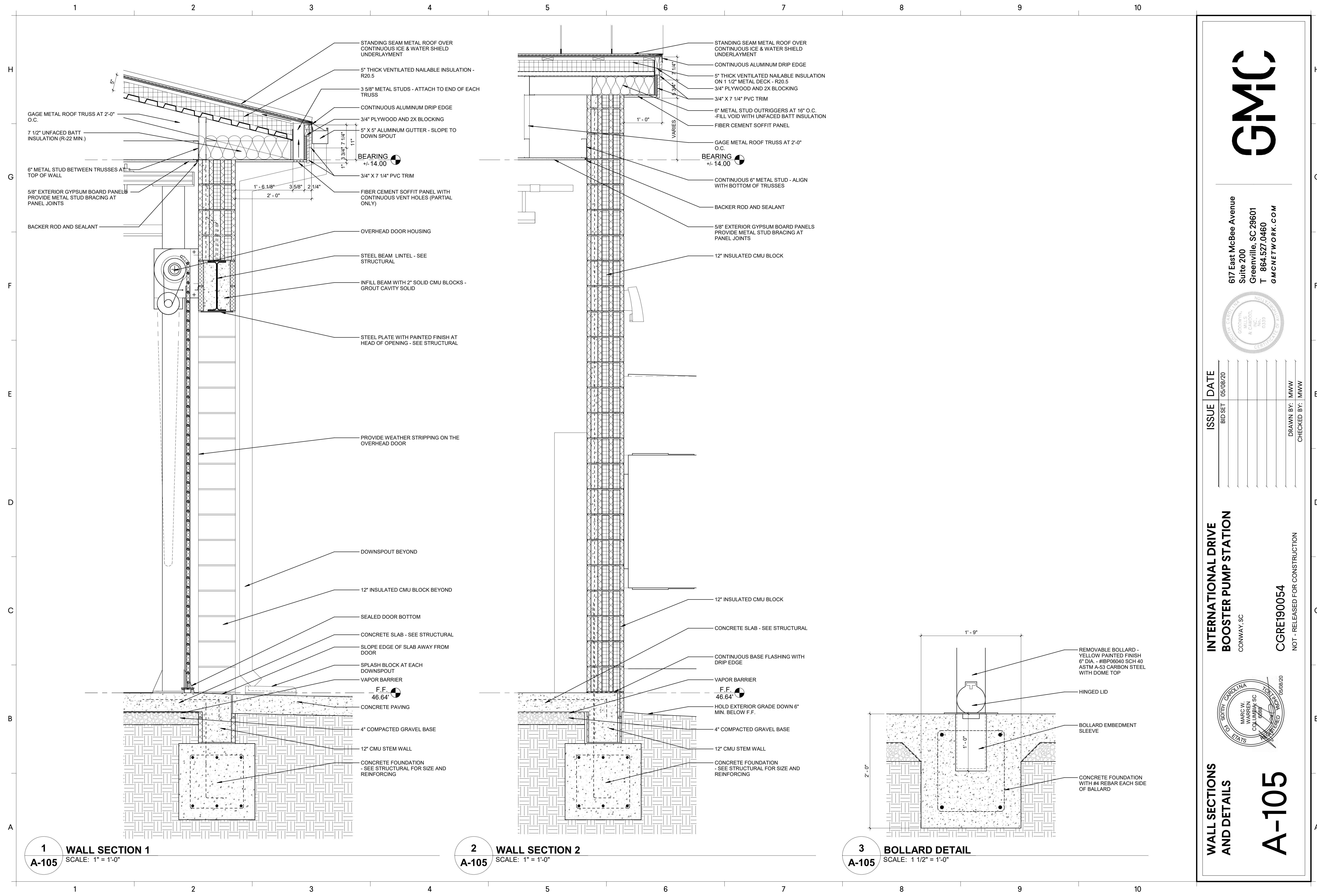
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**BOOSTER PUMP
 STATION - EXT.
 ELEVATIONS**
A-104

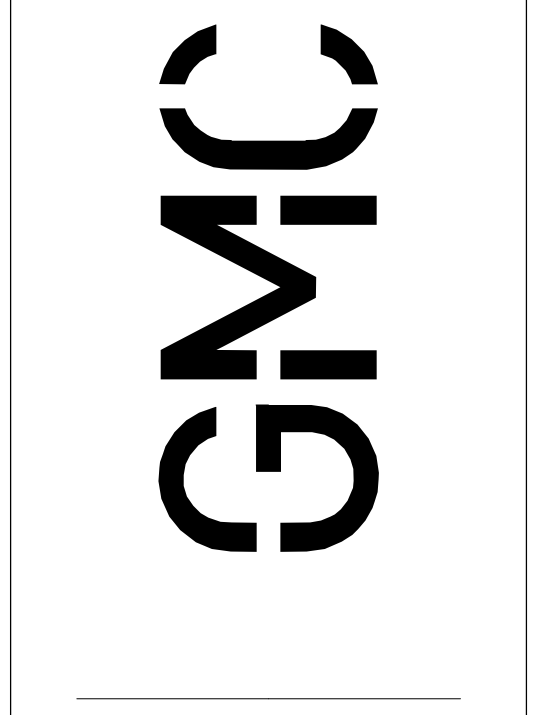
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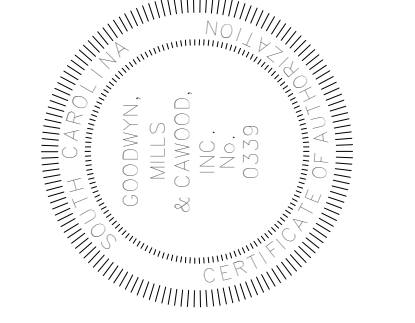
1 WALL SECTION 1
A-105 SCALE: 1" = 1'-0"

2 WALL SECTION 2
A-105 SCALE: 1" = 1'-0"

3 BOLLARD DETAIL
A-105 SCALE: 1 1/2" = 1'-0"



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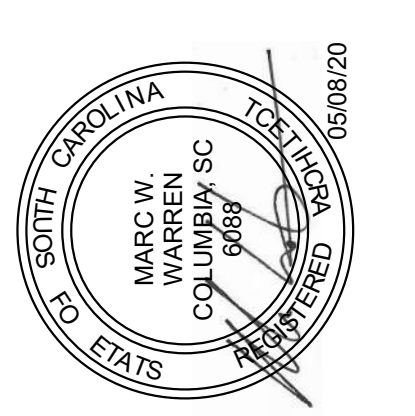


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WALL SECTIONS
AND DETAILS
A-105

PLUMBING FIXTURE SCHEDULE

P. NO.	FIXTURE	MFGR.	NAME	MFGRS. NO.	SIZE	MIN. SUPPLY		REMARKS
						CW	HW	
P-1	YARD HYDRANT	WOODFORD	---	MODEL Y2	---	1"	--	WITH BACKFLOW PREVENTER. SEE DETAIL.
FD	FLOOR DRAIN	ZURN	---	Z-541	---	--	--	WITH 12" ROUND STRAINER, P-TRAP.

GENERAL NOTES

- ALL WORK SHALL BE PERFORMED ACCORDING TO ALL LOCAL, STATE, NATIONAL CODES, AND THE 2018 INTERNATIONAL PLUMBING CODE.
- DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS, FIXTURE LOCATIONS, ETC.
- EXCEPT WHERE PIPE SPACE IS PROVIDED OR UNLESS NOTED OTHERWISE, ALL SUPPLY, WASTE AND VENT RISERS SHALL BE RUN IN WALLS AND PARTITIONS.
- COORDINATE CLOSELY WITH ALL WORK DONE UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID INTERFERENCE AND CONFLICT.
- PROVIDE FOR ACCESS TO ALL EQUIPMENT REQUIRING CLEANING OR ADJUSTMENT.

SPECIFICATIONS

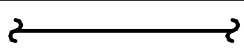
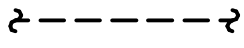
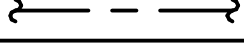

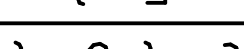
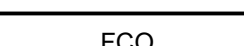
WASTE AND VENT PIPING:

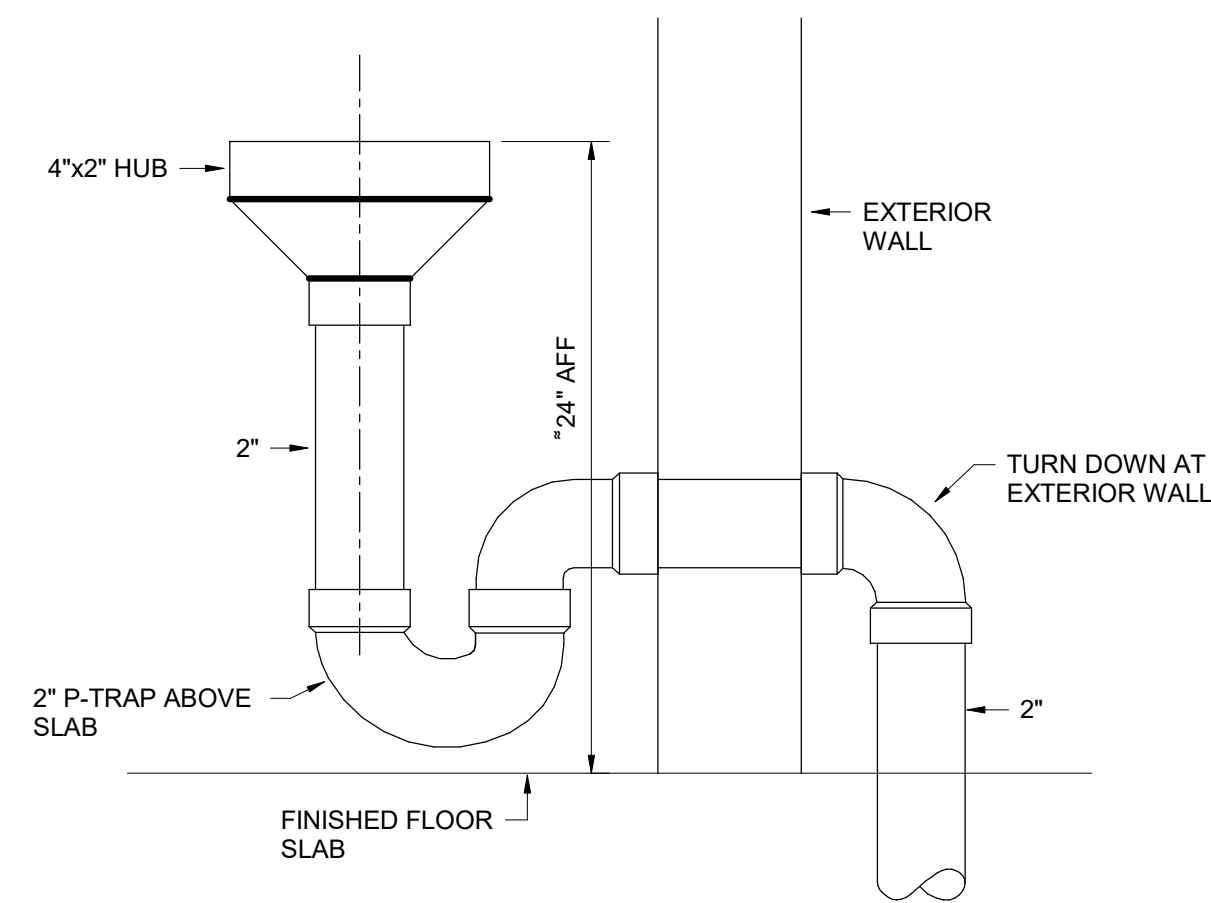
ALL WASTE AND VENT PIPING ABOVE AND BELOW SLAB SHALL BE SCHEDULE 40 PVC PLASTIC PIPE AND FITTINGS CONFORMING TO ASTM D 2665 OR ASTM 2661. JOINTS FOR PVC PIPE SHALL BE MADE USING SOLVENT CEMENT. "CO-EX" PIPING IS NOT APPROVED.

SUPPLY PIPING:

ALL SUPPLY PIPING AND FITTINGS SHALL BE CHLORINATED POLYVINYL CHLORIDE (CPVC) CONFORMING TO ASTM F-441 AND ASTM F-937. JOINTS FOR CPVC PIPE SHALL BE MADE USING SOLVENT CEMENT.

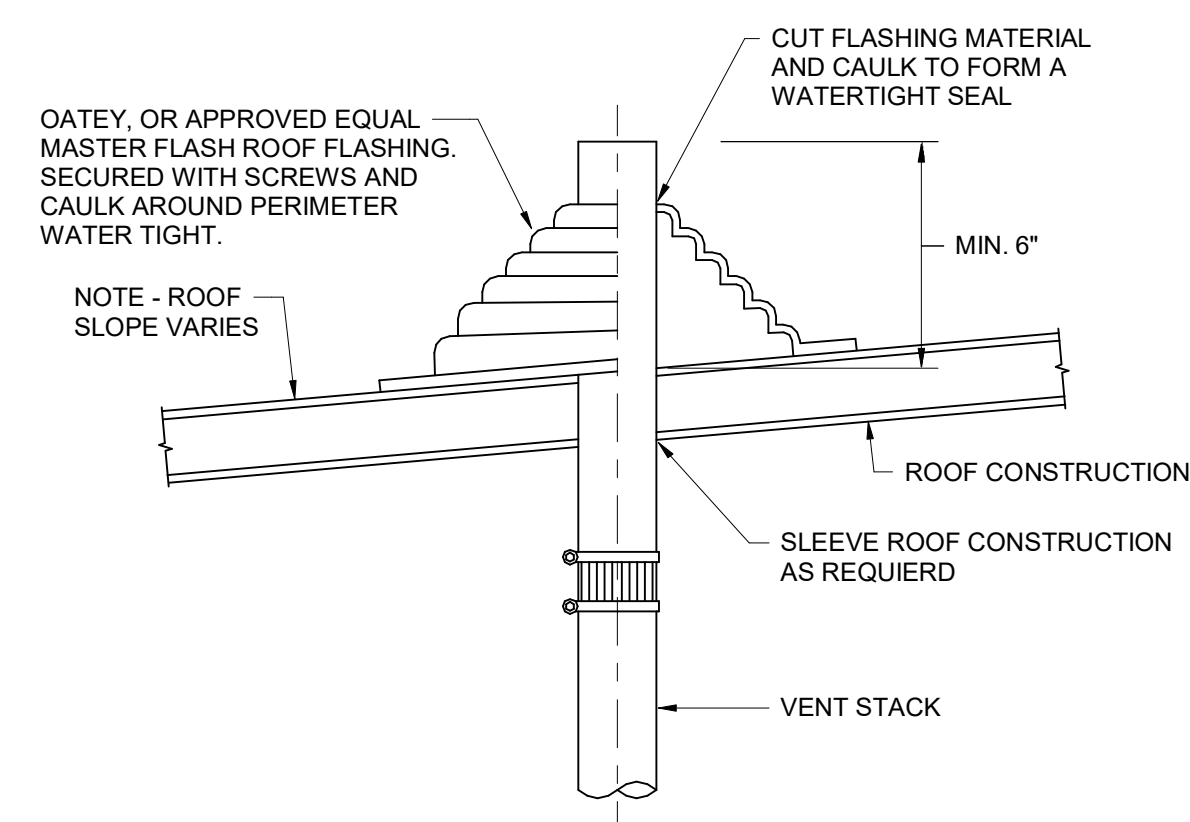
LEGEND

SYMBOL	DESCRIPTION
	SANITARY WASTE LINE
	SANITARY VENT LINE
	DOMESTIC COLD WATER LINE
	SHUTOFF VALVE
	PIPE CAP
	PIPE TURNS TO AWAY
FCO	FLOOR CLEANOUT
VTR	VENT THROUGH ROOF



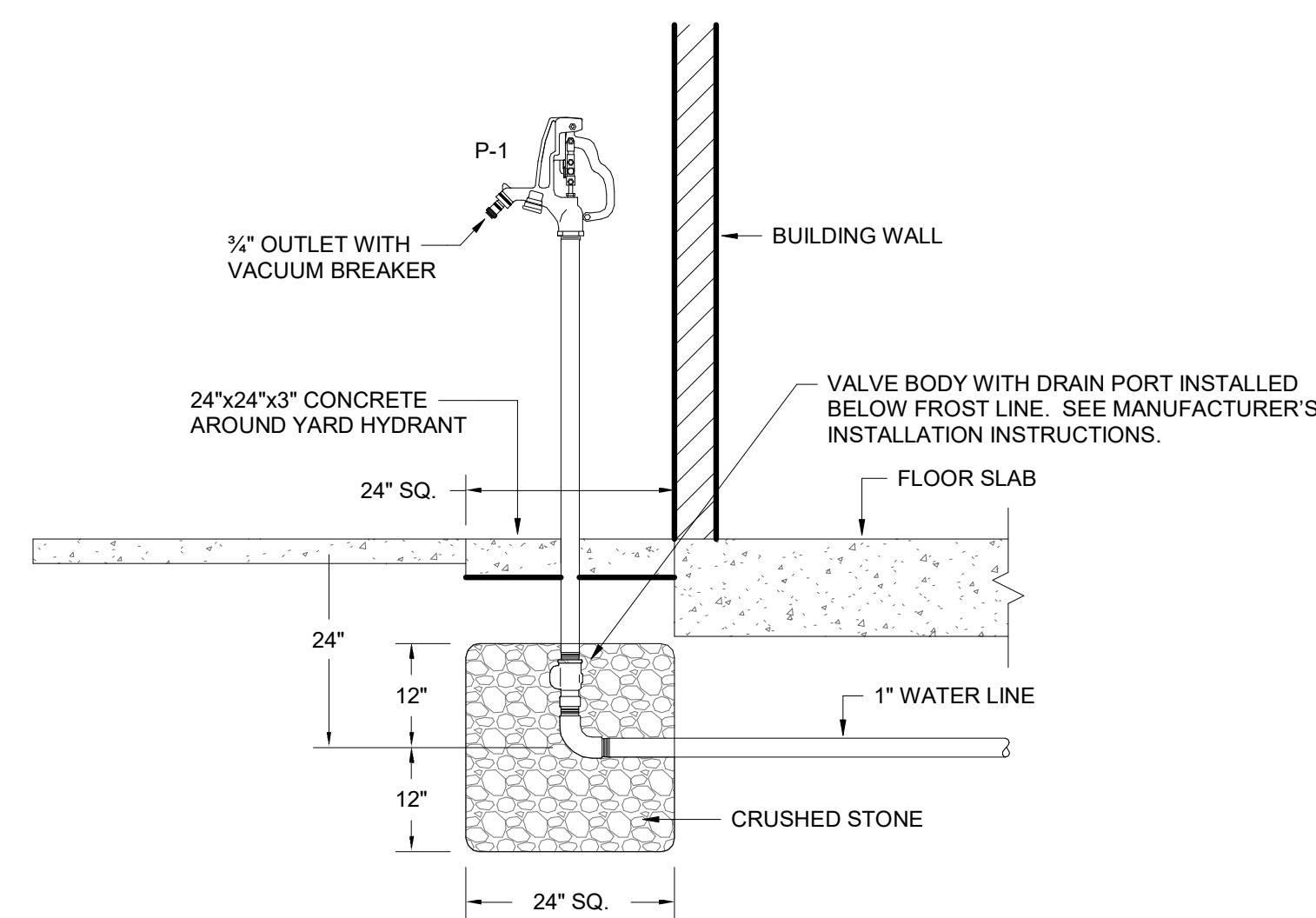
INSTRUMENT DRAIN DETAIL

NO SCALE



VENT THROUGH ROOF DETAIL

NO SCALE

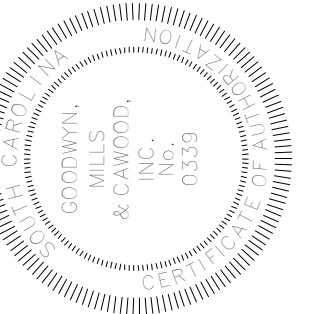


YARD HYDRANT DETAIL

NO SCALE

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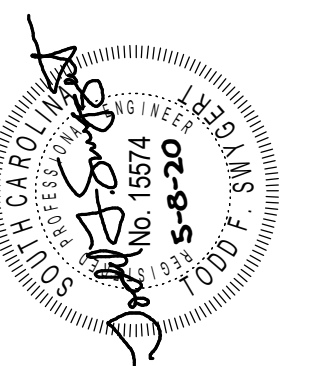


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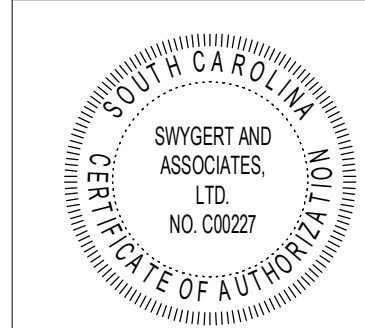
**INTERNATIONAL DRIVE
BOOSTER PUMP STATION**
CONWAY, SC

CGRE190054



**DETAILS, NOTES,
SCHEDULE, AND
LEGEND**

P-201



Swygert & Associates
CONSULTING ENGINEERS

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Columbus, S.C. 29211 mail@swygert-associates.com

WALL HUNG HEAT PUMP SCHEDULE										
TAG	MARVAIR MODEL	COOLING CAP. MBH @ 90/67/95 TOTAL/SENSIBLE	HTG. CAP. MBH @ 47°F	AUX. HT. KW	AIRFLOW CFM	OUTDOOR AIR CFM	E.S.P. IN. W.G	INDOOR FAN H.P.	EER/COP	REMARKS
WHHP-1	HVPSA60HP	56.0/39.0	50.5	5.0	2000	200	0.2	3/4	11.0/3.3	1, 2
WHHP-2	HVPSA60HP	56.0/39.0	50.5	5.0	2000	200	0.2	3/4	11.0/3.3	1, 2
WHHP-3	HVPSA60HP	56.0/39.0	50.5	5.0	2000	200	0.2	3/4	11.0/3.3	1, 2

1. PROVIDE WITH MANUAL OUTSIDE AIR DAMPER, FACTORY CIRCUIT BREAKER, AND TWO STAGE COMPRESSOR.
2. PROVIDE WITH 7-DAY AUTOMATIC CHANGEVER PROGRAMMABLE THERMOSTAT.

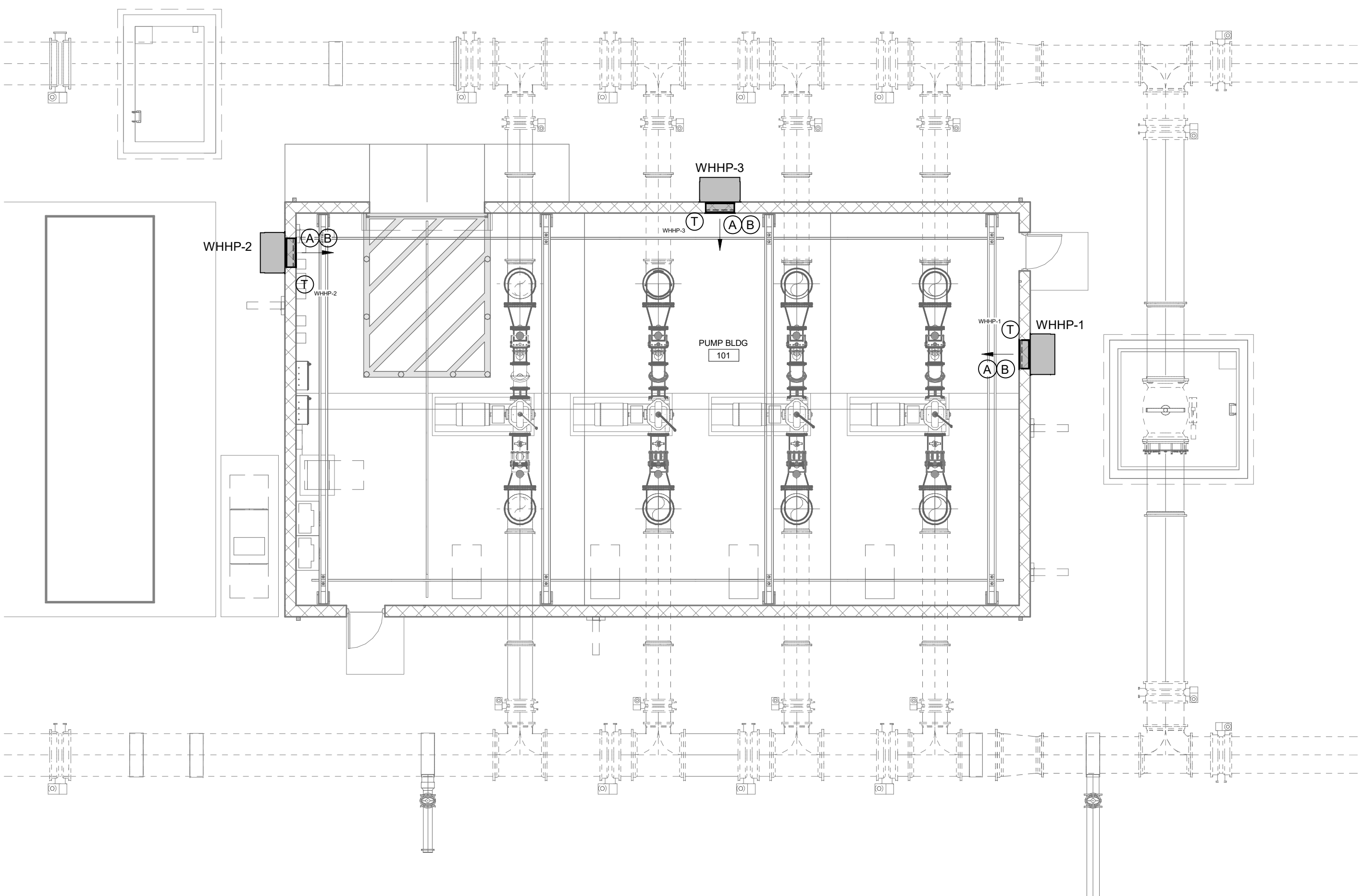
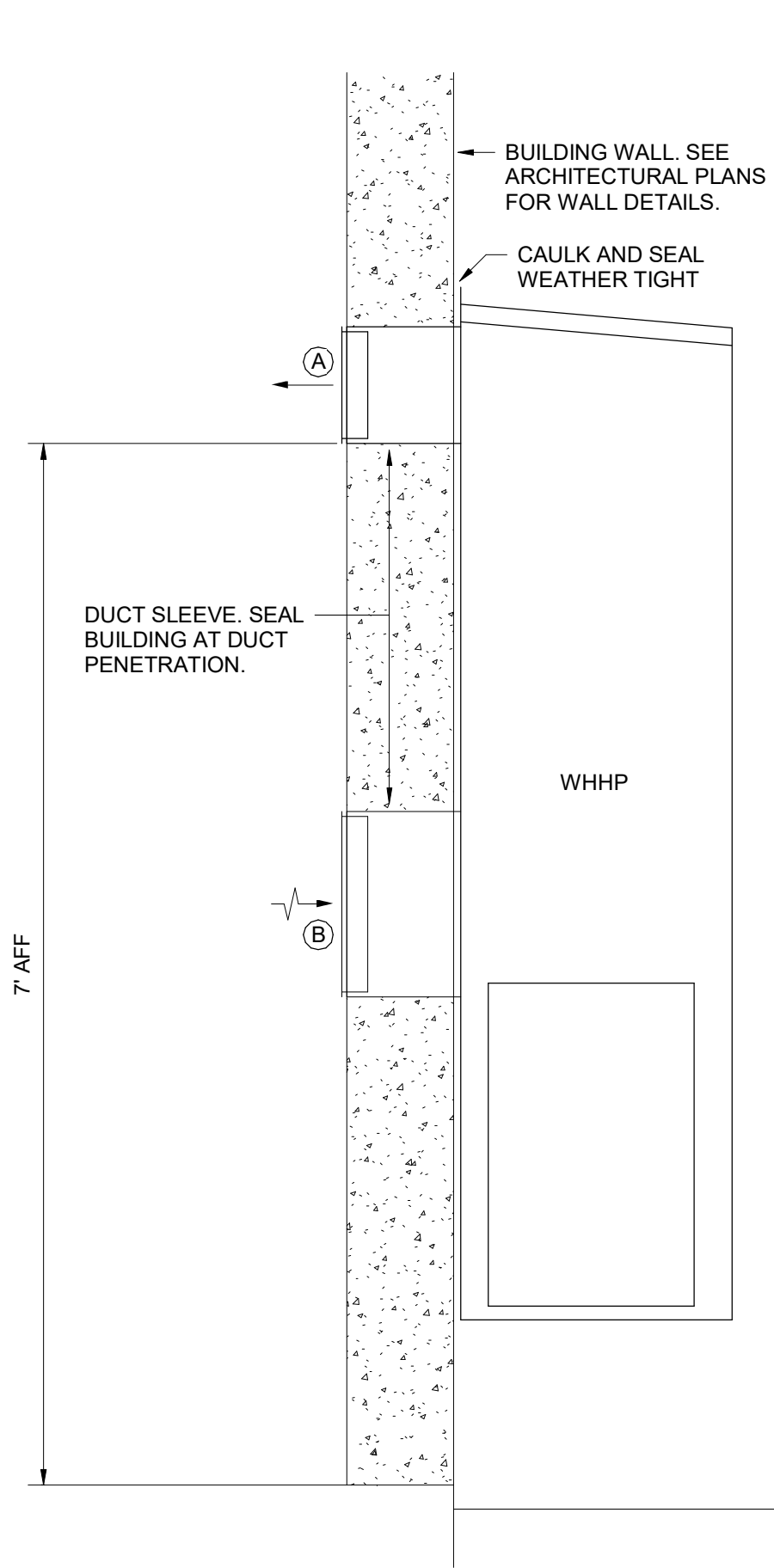
AIR DISTRIBUTION SCHEDULE									
TAG	DESCRIPTION	MANUFACTURER	MODEL	FRAME	CFM	NECK SIZE	FACE SIZE	MAX NC	REMARKS
(A)	SIDEWALL GRILLE	PRICE	620	SURFACE	2000	28"x8"	30"x10"	30	1, 2
(B)	FILTER GRILLE	PRICE	60FH	SURFACE	2000	28"x14"	30"x16"	30	1, 2

1. PROVIDE WITH STANDARD WHITE FINISH.
2. PROVIDE ALUMINUM OR ALUMINIZED STEEL CONSTRUCTION.

DESIGN CONDITIONS		
SEASON	OUTSIDE	INSIDE
SUMMER	93° FDB / 82° FWB	75° FDB / 50% - 60% RH
WINTER	25° FDB	70° FDB

- GENERAL NOTES**
- ALL WORK SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL MECHANICAL CODE, 2009 INTERNATIONAL ENERGY CONSERVATION CODE, AND 2006 SMACNA HVAC DUCT CONSTRUCTION STANDARD. ALL LOCAL CODES OR REQUIREMENTS STILL APPLY.
 - VISIT SITE PRIOR TO BIDDING. THIS CONTRACTOR SHALL DETERMINE DIFFICULTY OF INSTALLATION AND REFLECT THIS IN HIS BIDDING.
 - DO NOT SCALE DRAWINGS. THIS CONTRACTOR SHALL VERIFY ALL EXISTING ITEMS AND LOCATIONS IN THE FIELD.
 - THIS CONTRACTOR SHALL COORDINATE STEEL OPENINGS AND EQUIPMENT SUPPORT WITH EXISTING STEEL TO CONFIRM DIMENSIONS MATCH WITH EQUIPMENT SUPPLIED.
 - ALL DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH FLOORS, ROOFS AND PARTITIONS.
 - ALL MECHANICAL ITEMS EXTENDING THROUGH WALLS SHALL BE FLASHED. COORDINATE WITH METAL BUILDING PANELS.
 - PROVIDE FOR ACCESS TO ALL EQUIPMENT REQUIRING CLEANING OR ADJUSTMENT PER MANUFACTURER'S INSTRUCTIONS. PROVIDE FULL SPACE FOR COIL REMOVAL AND REPLACEMENT FOR ALL HOT WATER AND CHILLED WATER AIR HANDLING UNITS.
 - THIS CONTRACTOR SHALL PROVIDE ALL ITEMS OF MISCELLANEOUS STEEL AS REQUIRED FOR INSTALLATION OF ALL MECHANICAL ITEMS.
 - THIS CONTRACTOR SHALL DO ALL CONTROL WIRING. DIVISION 26 WILL DO ALL POWER WIRING. ALL WIRING SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE. CONTROL WIRING SHALL BE CONCEALED WITHIN WALL AND ALL CONTROL WIRING SHALL BE ROUTED IN EMT CONDUIT.
 - LOCATE ALL SPACE CONTROL INSTRUMENTS 4'-0" ABOVE FINISHED FLOOR.
 - THIS CONTRACTOR SHALL PATCH ALL WALLS AND FINISHES TO MATCH EXISTING WHERE ALL ITEMS OR EQUIPMENT ARE REMOVED.

LEGEND	
SYMBOL	DESCRIPTION
(A) 100	TYPE "A" DIFFUSER, 100 CFM
T	THERMOSTAT
AFF	ABOVE FINISHED FLOOR



Swygert & Associates
CONSULTING ENGINEERS

DBA Swygert & Assoc., Ltd. Telephone: (803) 791-9300
Post Office Box 11686 Facsimile: (803) 791-0830
Columbia, S.C. 29211 mail@swygert-associates.com

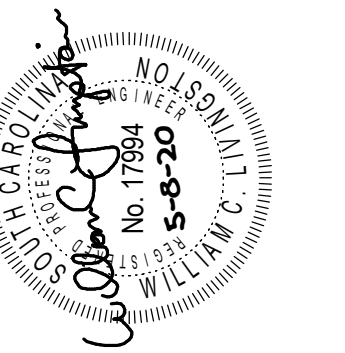
INTERNATIONAL DRIVE
BOOSTER PUMP STATION
CONWAY, SC

BOOSTER PUMP
STATION - PLAN
AND SCHEDULES

M-101

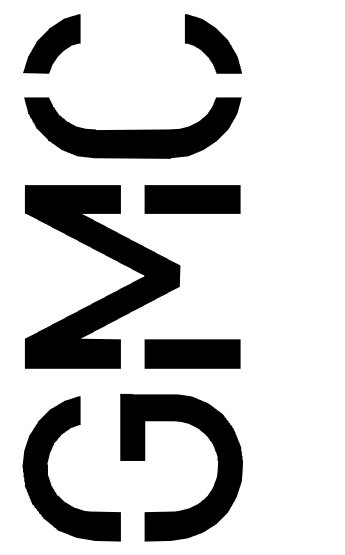
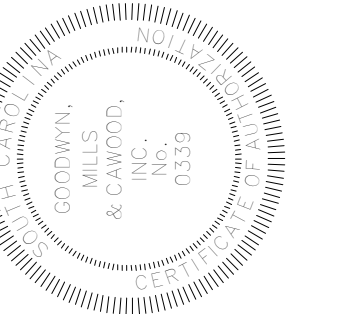
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BID SET	05/08/20

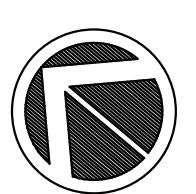
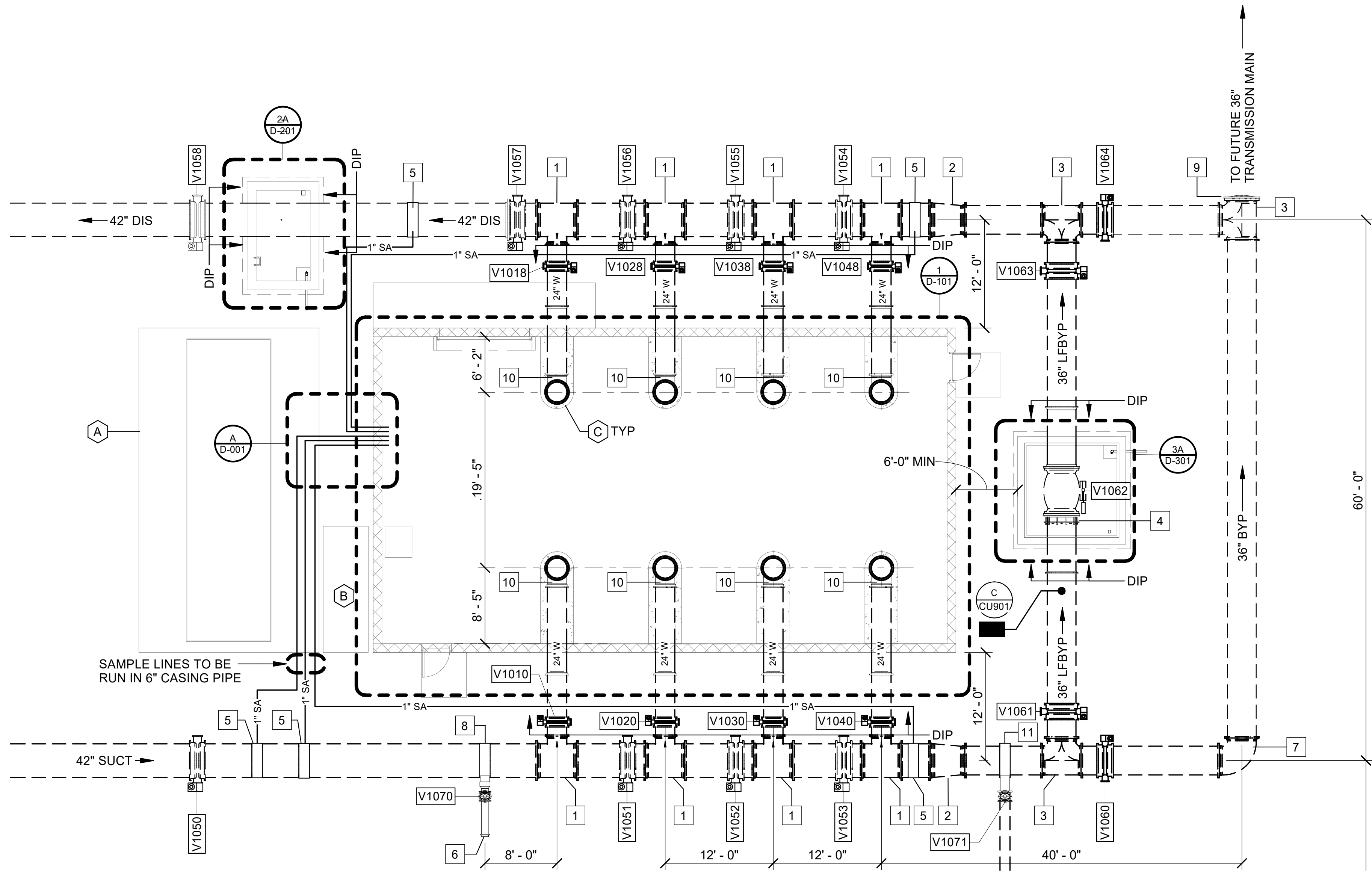
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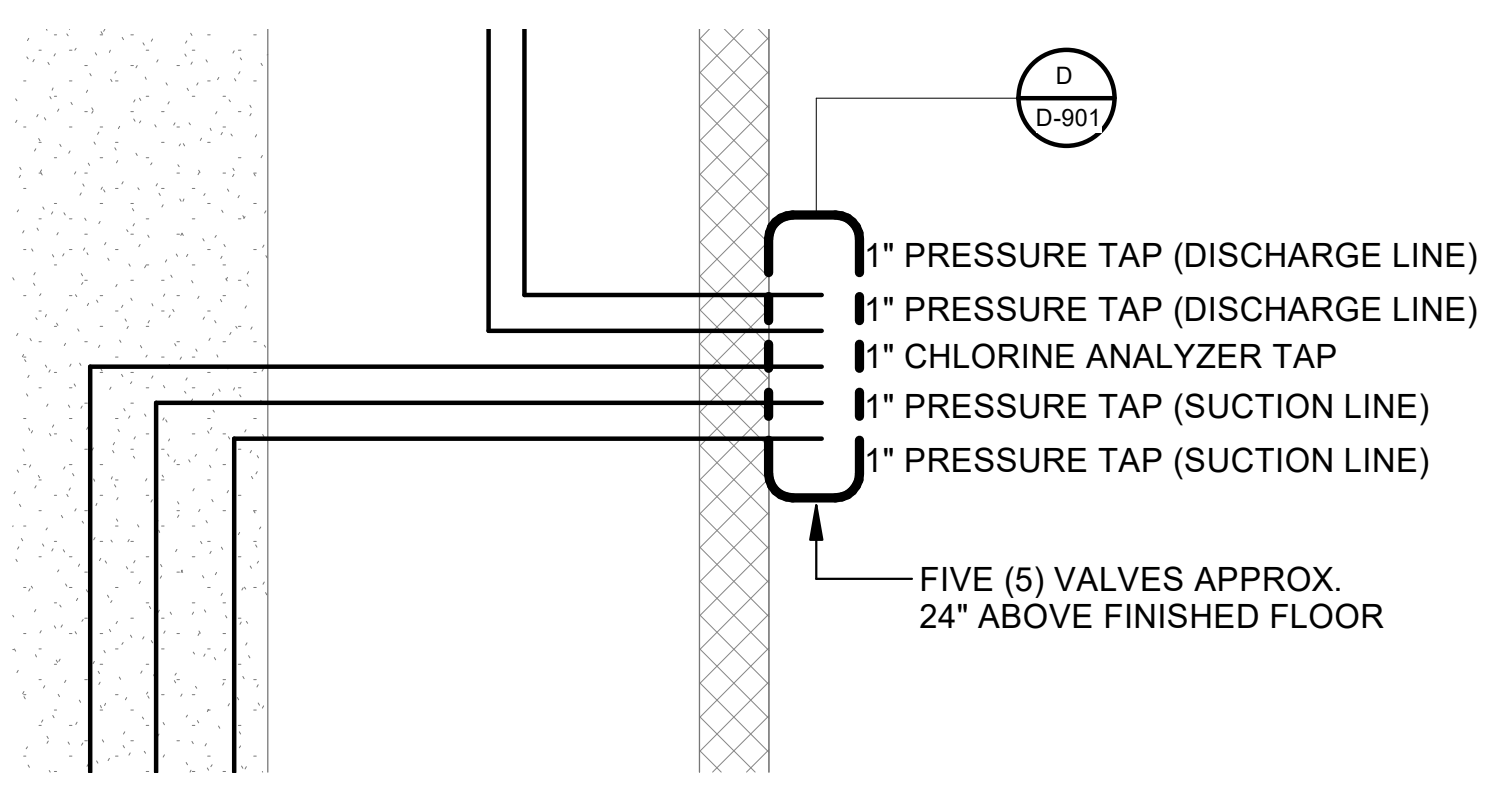
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1 PLAN
D-001 SCALE: 1/8" = 1'-0"



A PLAN
D-001 SCALE: 3/8" = 1'-0"

KEYED NOTES #

- 1. 42"X24" MJ TEE (RESTRAINED)
- 2. 42"X36" MJ REDUCER (RESTRAINED)
- 3. 36"X36" MJ TEE (RESTRAINED)
- 4. 36" FLANGED COUPLING ADAPTER (RESTRAINED)
- 5. 1" TAPPING SADDLE
- 6. 8" MJ PLUG
- 7. 36" 90 MJ BEND (RESTRAINED)
- 8. 8" TAPPING SADDLE
- 9. 36" MJ PLUG (RESTRAINED)
- 10. 24" MJ 90 BEND (RESTRAINED)
- 11. 12" TAPPING SADDLE
- 12. 12"X6" MJ TEE (RESTRAINED)

KEYED NOTES X

- A. GENERATOR PAD
- B. ATS
- C. MINIMUM 6" CONCRETE ENCASEMENT

NOTES

- 1. ALL PIPING SHALL BE PVC UNLESS NOTED OTHERWISE.
- 2. ALL BURIED PIPE JOINTS ON THIS SHEET SHALL BE RESTRAINED JOINTS.
- 3. DUCTILE IRON PIPE SHALL BE USED AT ALL PRECAST VAULT PIPE PENETRATIONS AND SHALL EXTEND A MINIMUM OF 3' BEYOND FACE OF PRECAST VAULT ON EACH SIDE.
- 4. PIPING UNDER CONCRETE SLAB SHALL BE ENCASED IN CONCRETE. CONCRETE ENCASEMENT SHALL TERMINATE ONE FOOT BEYOND CONCRETE SLAB.

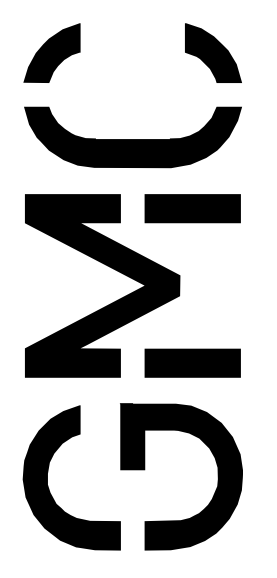
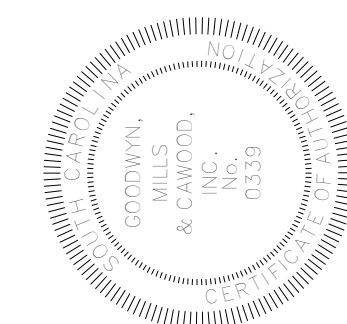
INTERNATIONAL DRIVE
BOOSTER PUMP STATION
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BOOSTER PUMP
STATION - YARD
PIPING PLAN
D-001

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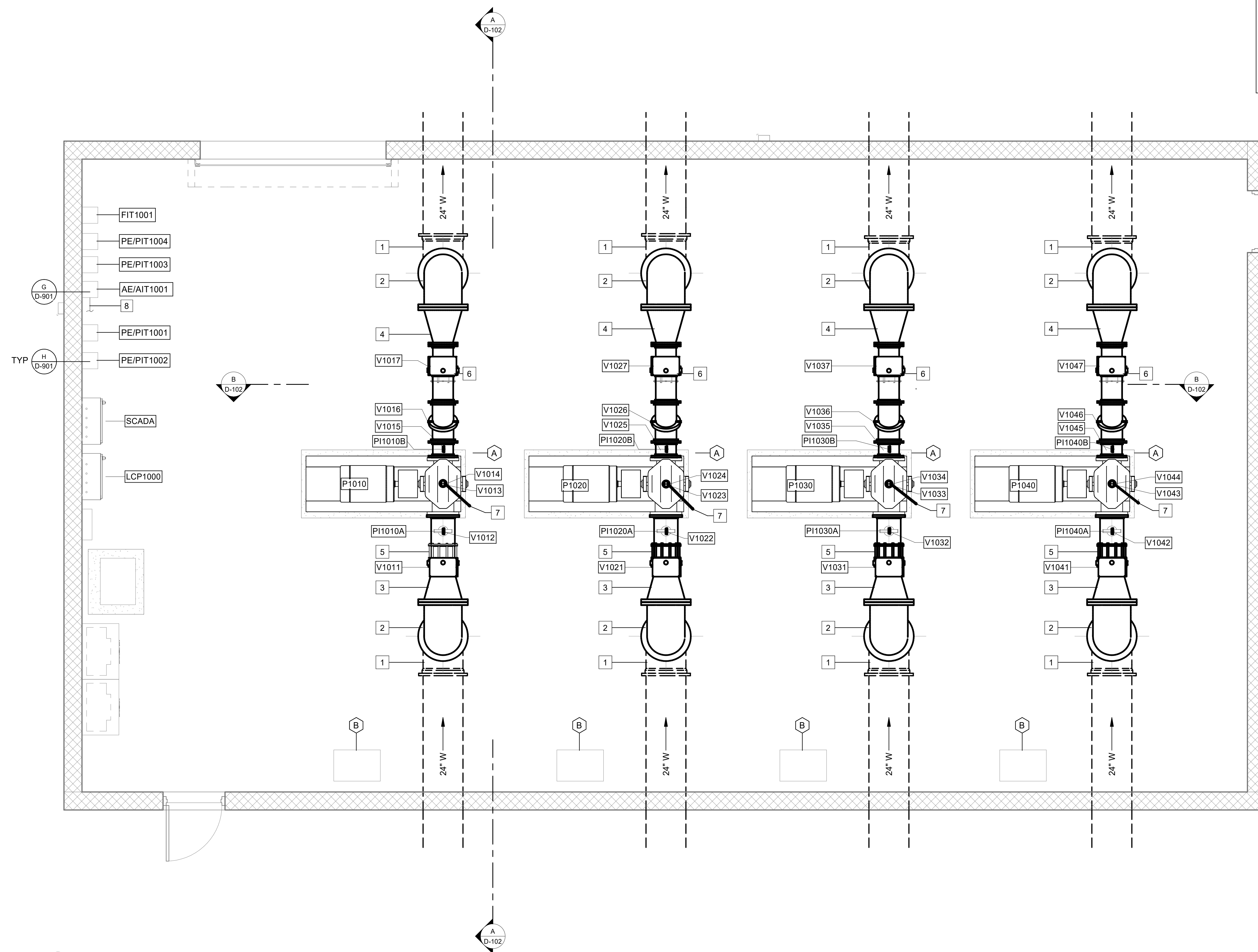


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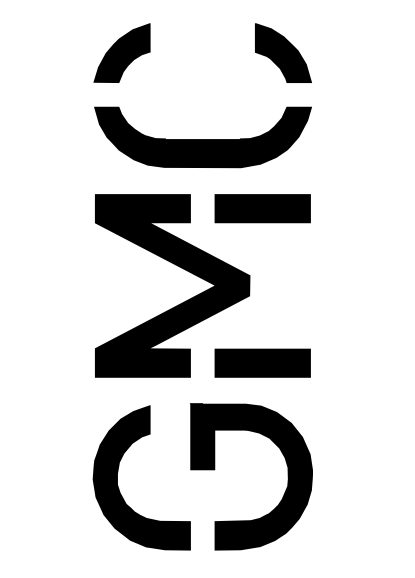
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H G F E D C B A

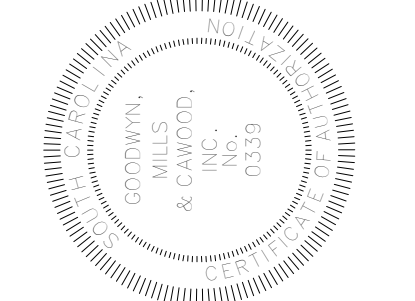
- KEYED NOTES #**
- 1. 24" 90° MJ BEND (RESTRAINED)
 - 2. 24" 90° FL BEND (RESTRAINED)
 - 3. 24"X14" FL ECCENTRIC REDUCER
 - 4. 24"X12" FL ECCENTRIC REDUCER
 - 5. 14" FLANGED COUPLING ADAPTER (RESTRAINED)
 - 6. 12" FLANGED COUPLING ADAPTER (RESTRAINED)
 - 7. 3/4" DRAIN PIPE DIRECTED TO FLOOR DRAIN - SEE SHEET P-101.
 - 8. 1/2" DRAIN PIPE DIRECTED TO OSD - SEE SHEET P-101
- KEYED NOTES X**
- A. CONCRETE HOUSEKEEPING PAD
 - B. VARIABLE FREQUENCY DRIVE



1 PLAN
D-101
 SCALE: 3/8" = 1'-0"



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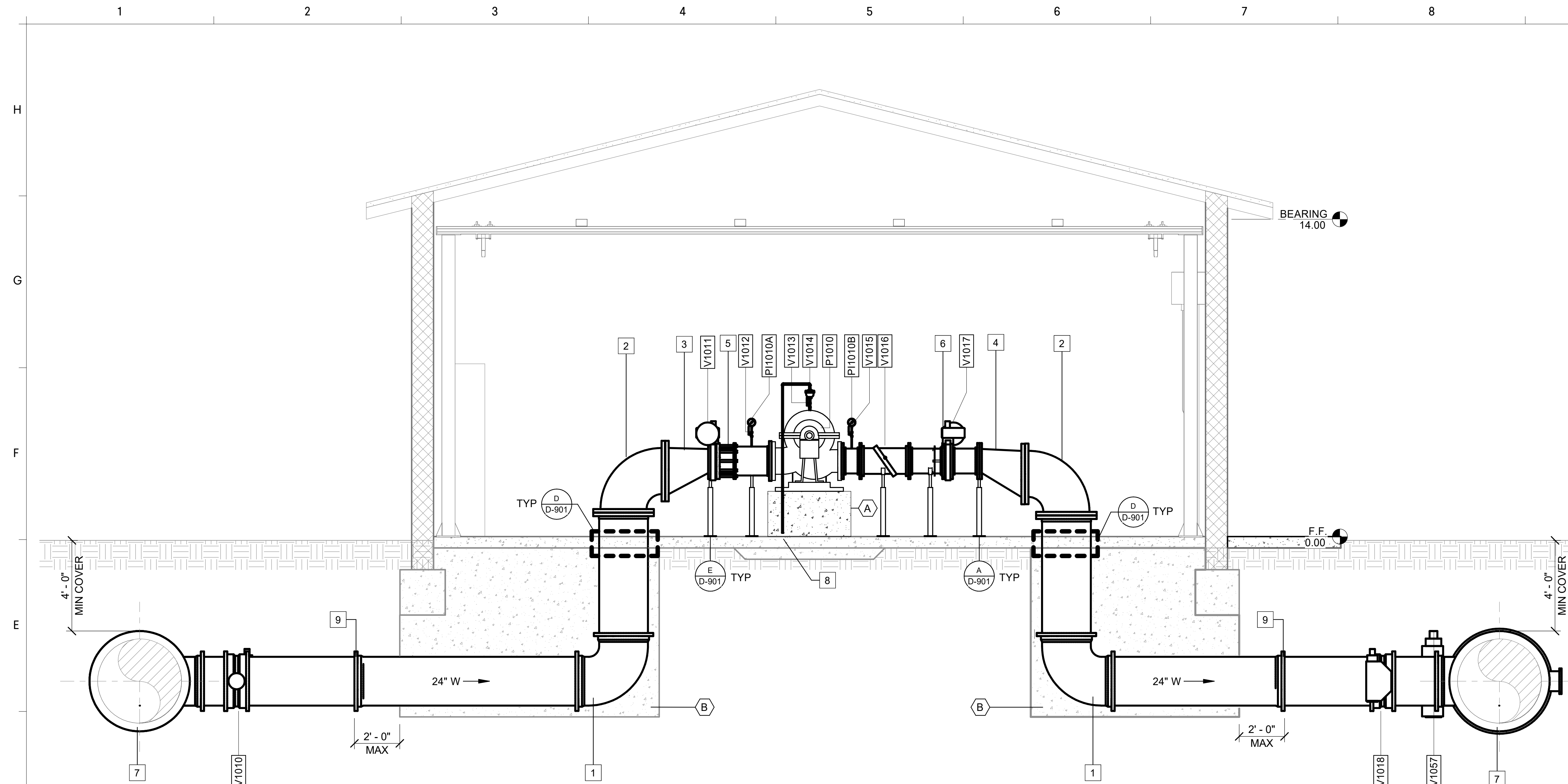
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 BOOSTER PUMP STATION**
 CONWAY, SC

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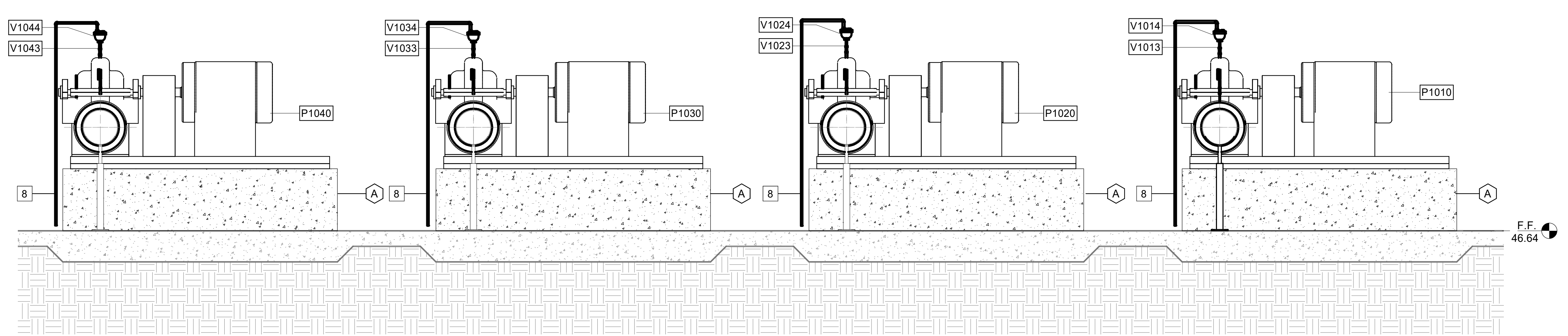


**BOOSTER PUMP
 STATION - PLAN**

D-101



A SECTION
D-101 SCALE: 3/8" = 1'-0"

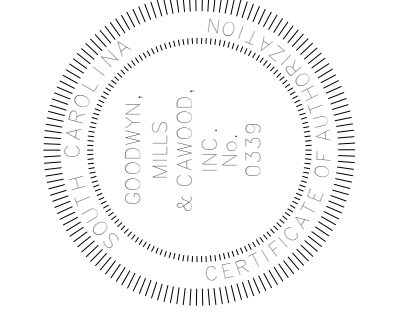


B SECTION
D-101 SCALE: 1/2" = 1'-0"

- KEYED NOTES** #
- 24" 90° MJ BEND (RESTRAINED)
 - 24" 90° FL BEND (RESTRAINED)
 - 24"X14" FL ECCENTRIC REDUCER
 - 24"X12" FL ECCENTRIC REDUCER
 - 14" FLANGED COUPLING ADAPTER (RESTRAINED)
 - 12" FLANGED COUPLING ADAPTER (RESTRAINED)
 - 42"X24" MJ TEE (RESTRAINED)
 - 3/4" DRAIN PIPE DIRECTED TO FLOOR DRAIN - SEE SHEET P-101
 - 24" RESTRAINED MECHANICAL JOINT
- KEYED NOTES** X
- CONCRETE HOUSEKEEPING PAD
 - 6" MINIMUM CONCRETE ENCASUREMENT
- NOTES**
- BUTTERFLY VALVE HANDWHEEL SHALL BE ROTATED TOWARD PUMP MOTOR.
 - ALL BURIED PIPE JOINTS ON THIS SHEET SHALL BE RESTRAINED JOINTS.
 - PIPING UNDER CONCRETE SLAB SHALL BE ENCASED IN CONCRETE. CONCRETE ENCASUREMENT SHALL TERMINATE ONE FOOT BEYOND CONCRETE SLAB.



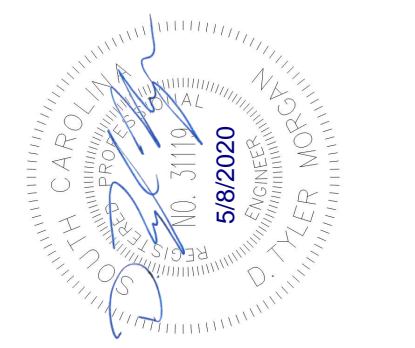
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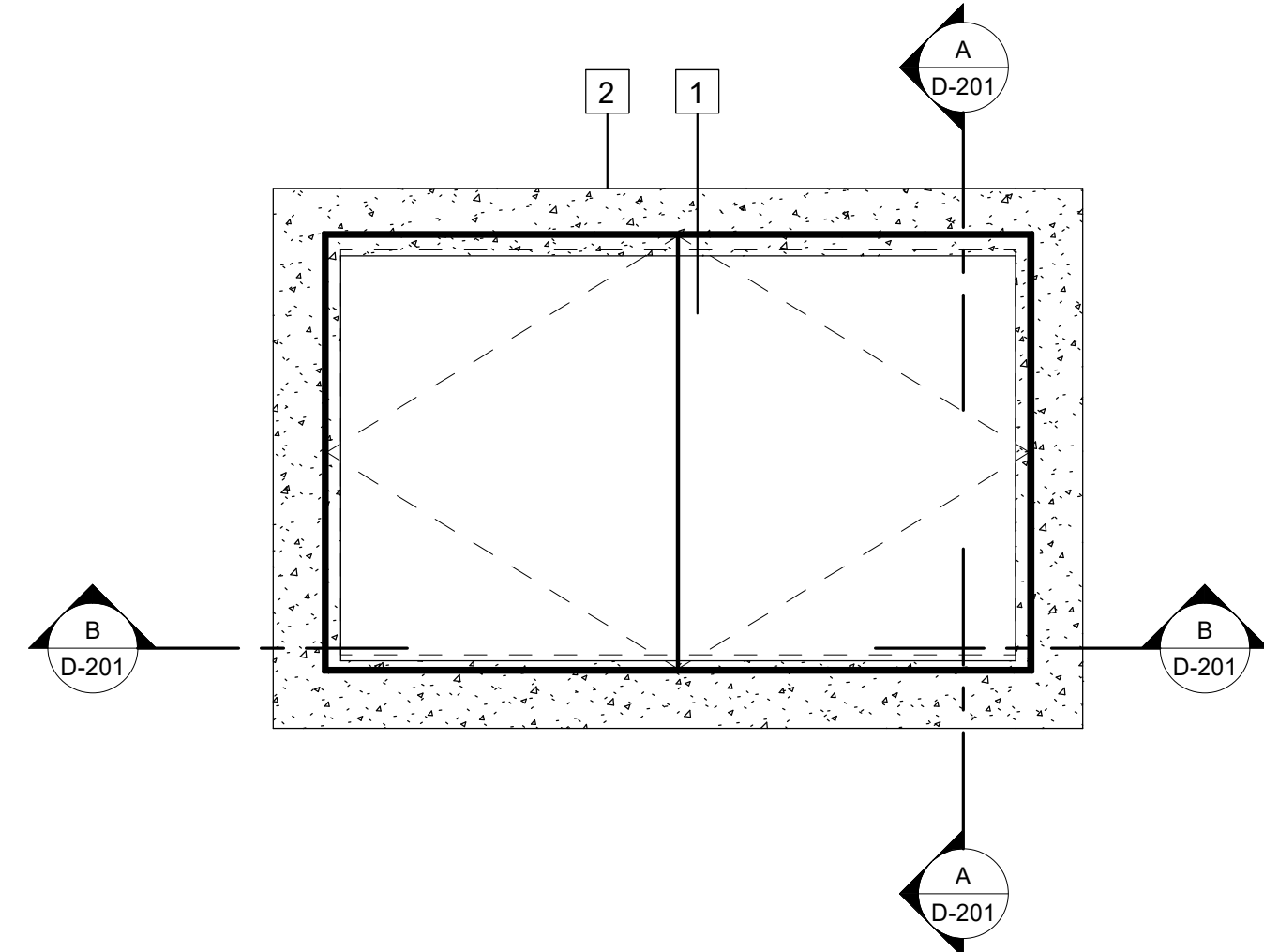
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**INTERNATIONAL DRIVE
BOOSTER PUMP STATION**
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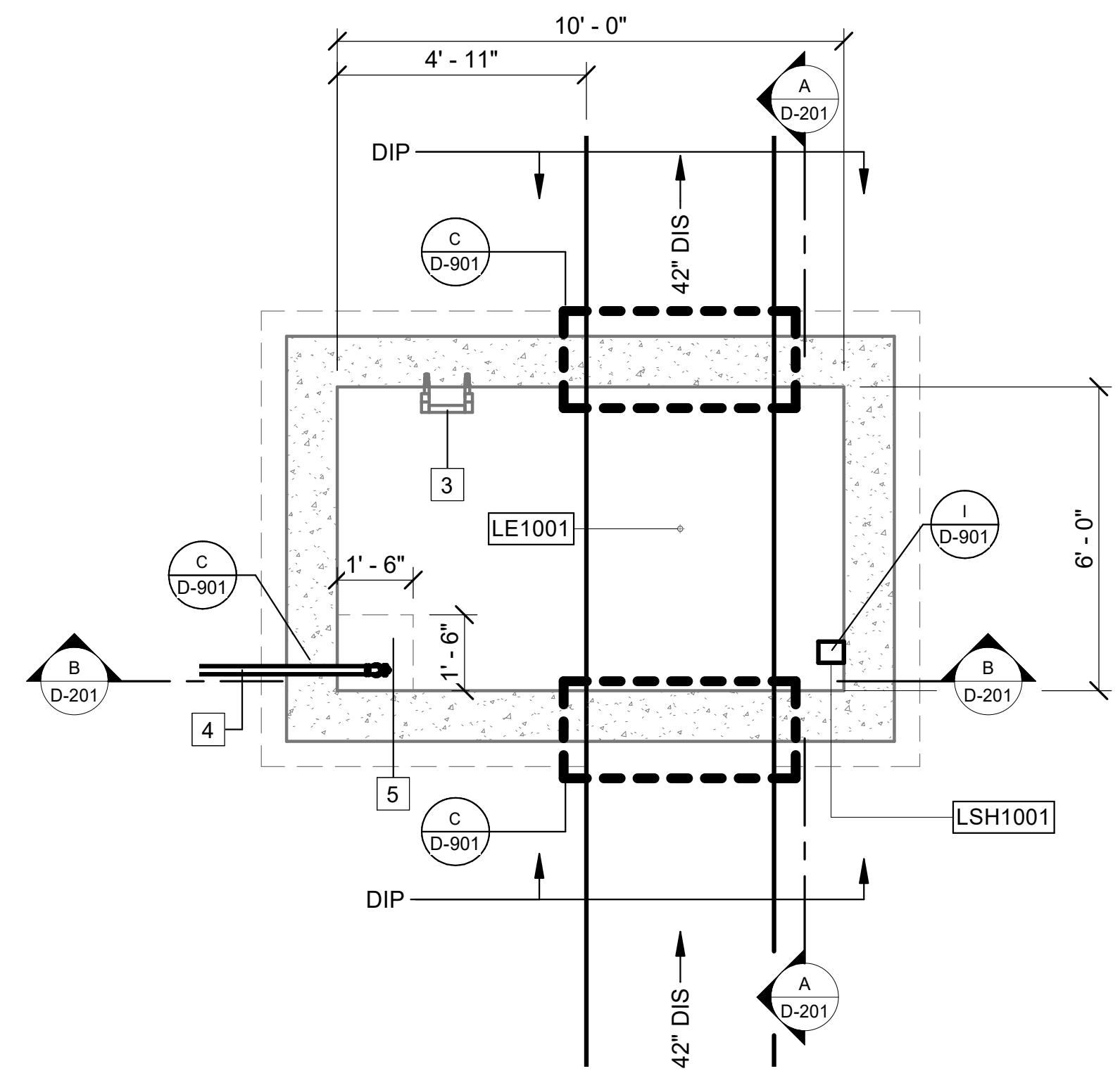


**BOOSTER PUMP
STATION -
SECTIONS**
D-102

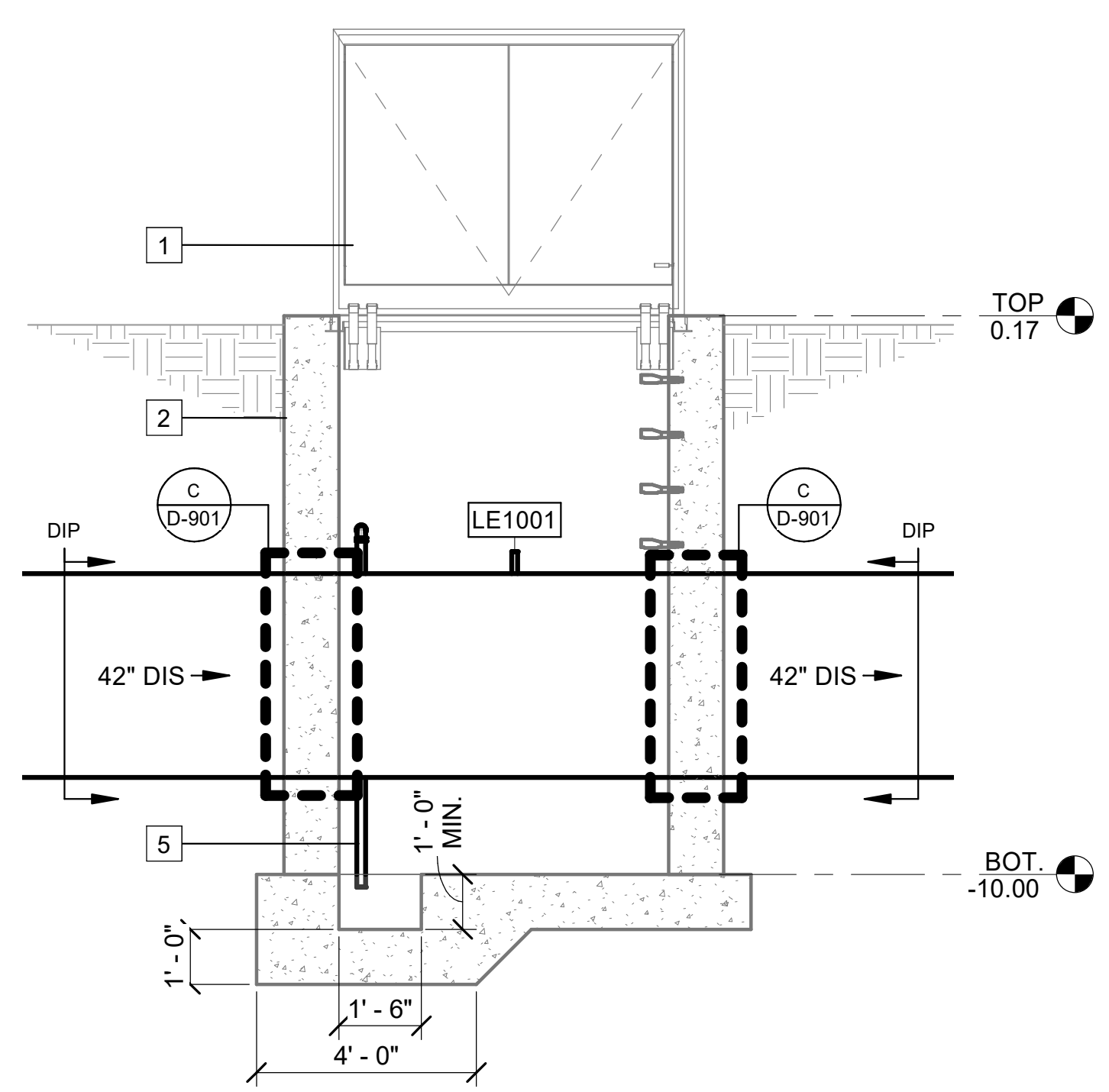
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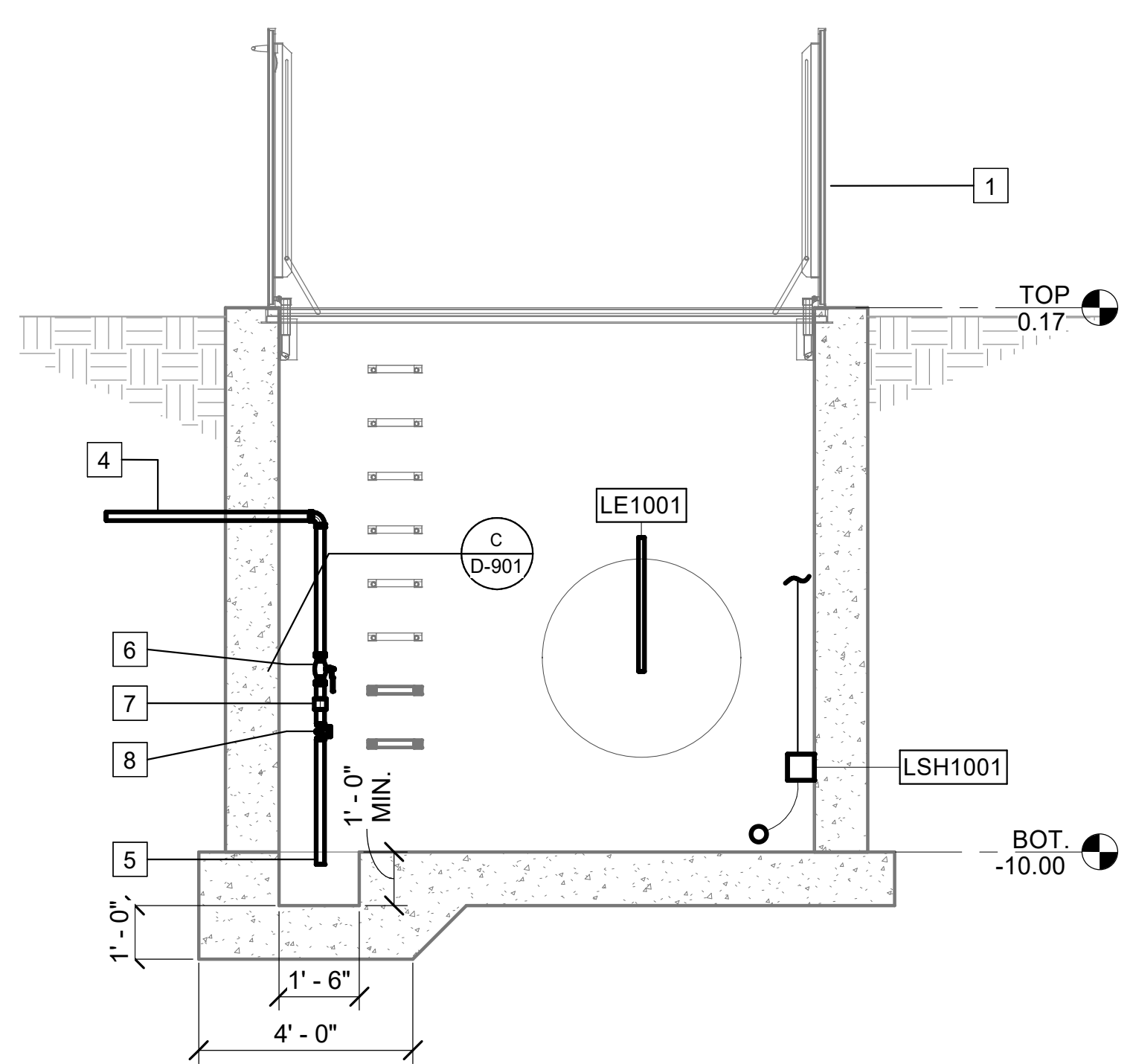
2A UPPER LEVEL
D-001 SCALE: 3/8" = 1'-0"



2B LOWER LEVEL
D-201 SCALE: 3/8" = 1'-0"



A SECTION
D-201 SCALE: 3/8" = 1'-0"



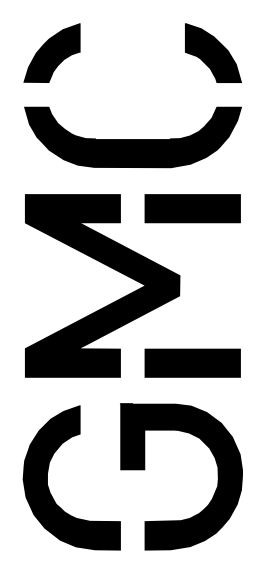
B SECTION
D-201 SCALE: 3/8" = 1'-0"

KEYED NOTES #

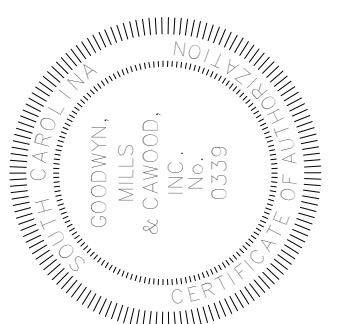
1. DRIP PROOF DOUBLE LEAF HATCH WITH FALL PROTECTION
2. PRE-CAST CONCRETE METERING VAULT
3. ACCESS STEPS
4. 1 1/2" PD, EXTEND AND CONNECT TO BUILDING DRAIN SYSTEM. SEE DWG P-101.
5. ZOELLER MODEL 98 OR EQUAL SUMP PUMP W/ INTEGRAL FLOAT SWITCH, 25 GPM @ 20' TDH, 0.5 HP, 115V.
6. 1 1/2" BALL VALVE
7. 1 1/2" UNION
8. 1 1/2" SWING CHECK VALVE

NOTES

1. CONCRETE VAULT FOUNDATION SHALL BE SLOPED FOR POSITIVE DRAINAGE TOWARD SUMP PUMP PIT.
2. DUCTILE IRON PIPE SHALL BE USED AT ALL PRECAST VAULT PIPE PENETRATIONS AND SHALL EXTEND A MINIMUM OF 3' BEYOND FACE OF PRECAST VAULT ON EACH SIDE




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BOOSTER PUMP STATION**
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**FLOW METER
VAULT - PLAN &
SECTIONS**

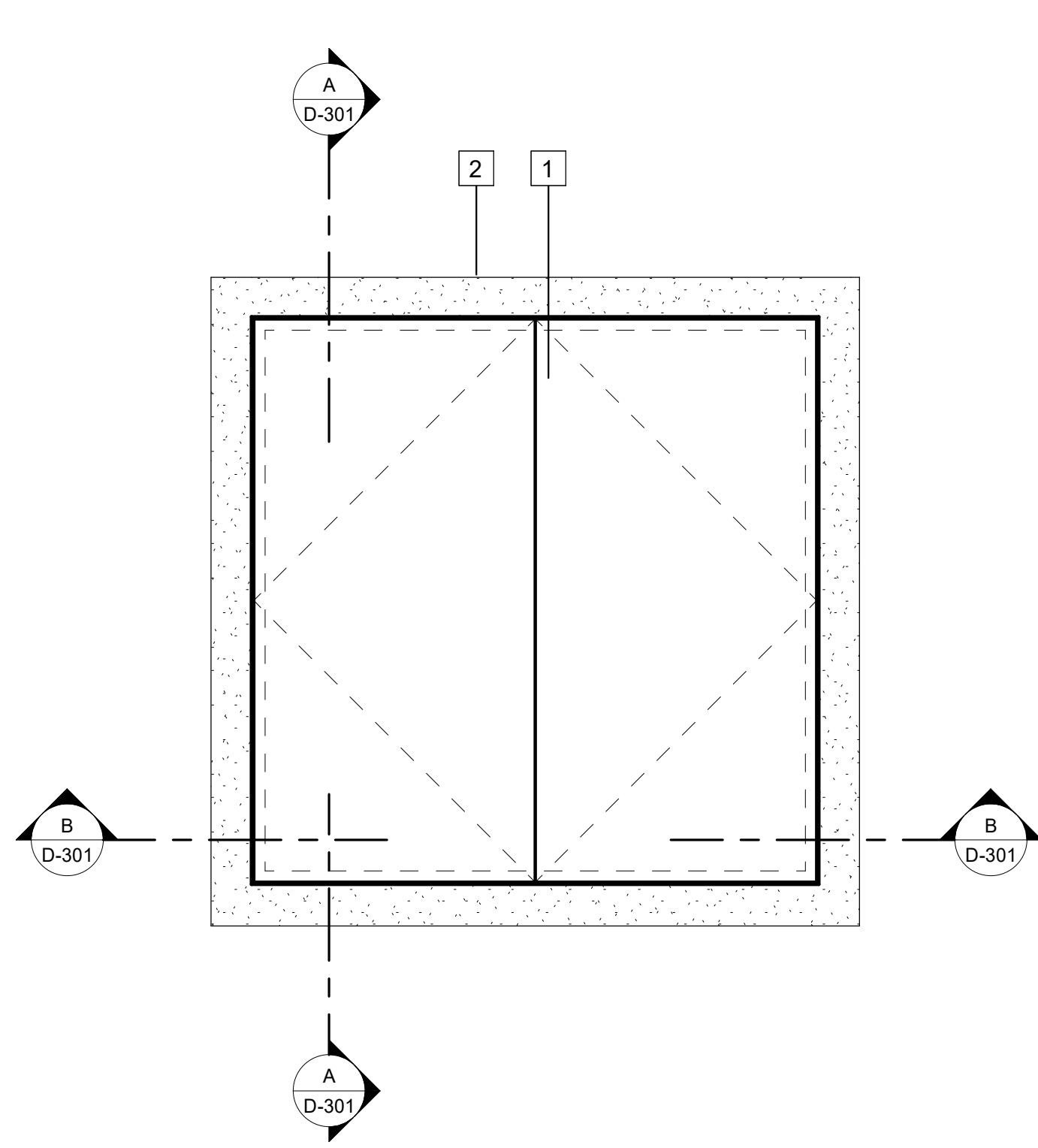
D-201

KEYED NOTES #

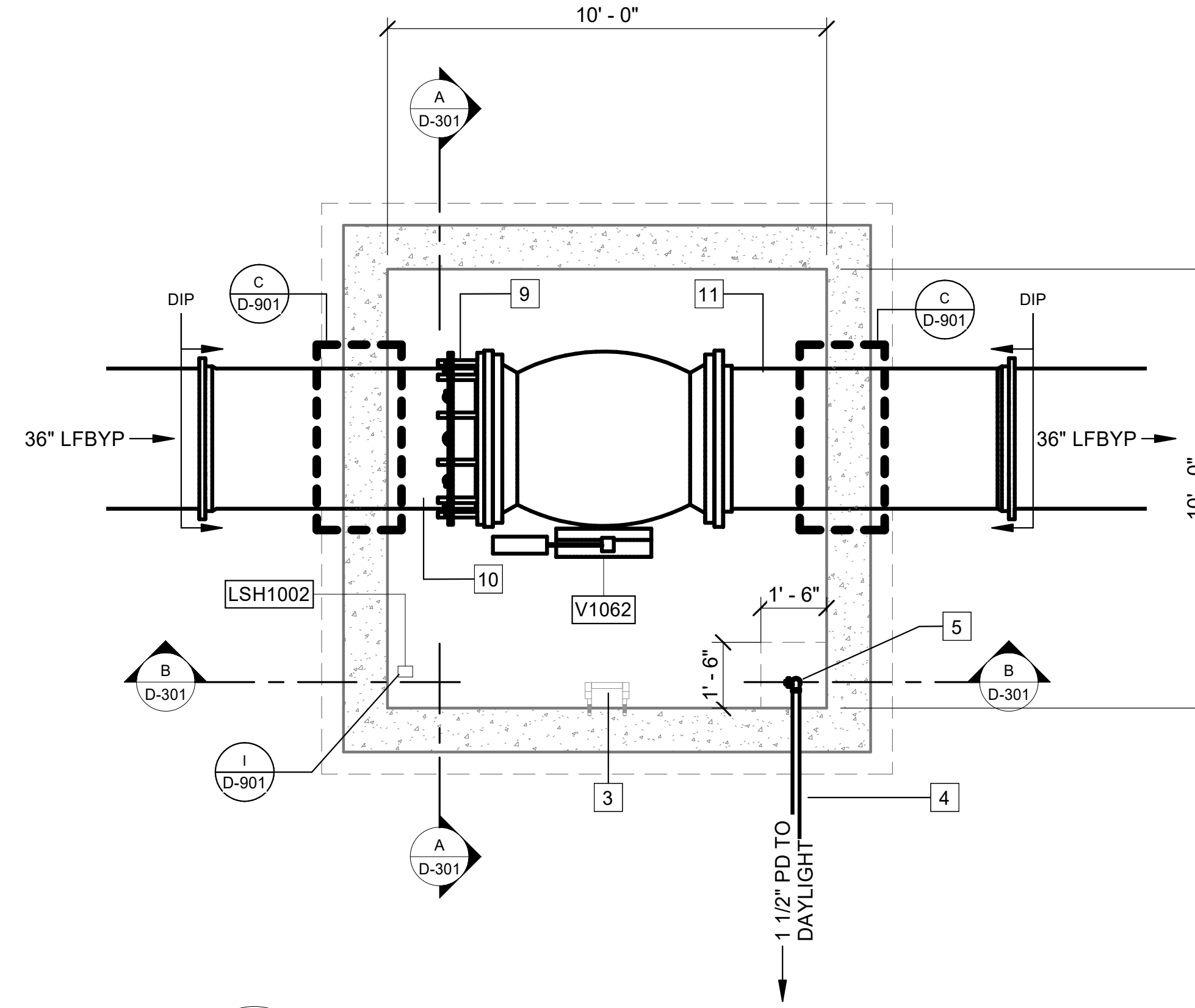
1. DRIP PROOF DOUBLE LEAF HATCH WITH FALL PROTECTION
2. PRE-CAST CONCRETE METERING VAULT
3. ACCESS STEPS
4. 1 1/2" PD TO DAYLIGHT.
5. ZOELLER MODEL 59 OR EQUAL SUMP PUMP W/ INTEGRAL FLOAT SWITCH, 20 GPM @ 20' TDH, 0.3 HP, 120V.
6. 1 1/2" BALL VALVE
7. 1 1/2" UNION
8. 1 1/2" SWING CHECK VALVE
9. 36" FLANGED COUPLING ADAPTER (RESTRAINED)
10. MJ X PE SPOOL PIECE (RESTRAINED)
11. FL X PE SPOOL PIECE (RESTRAINED)

NOTES

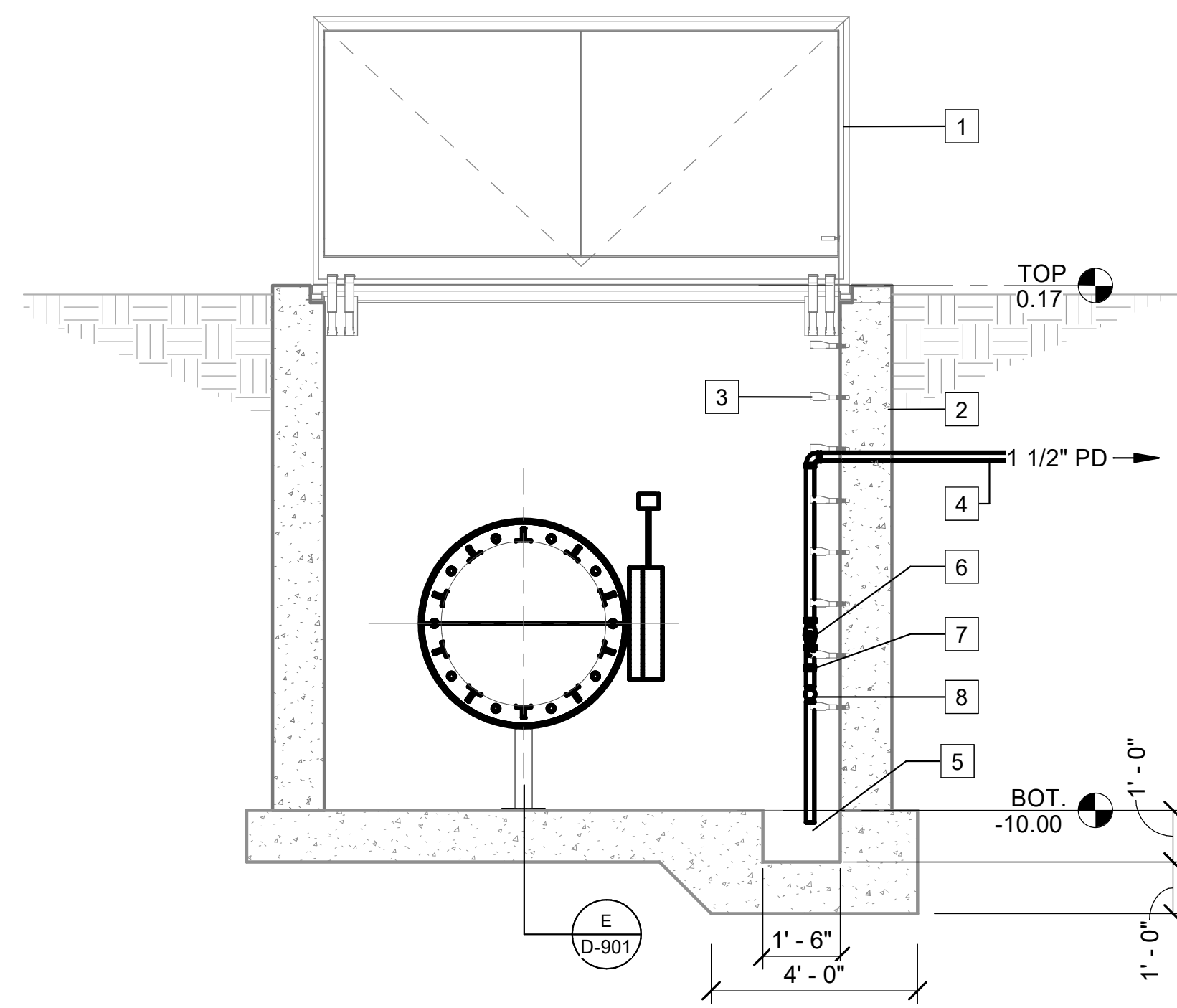
1. CONCRETE VAULT FOUNDATION SHALL BE SLOPED FOR POSITIVE DRAINAGE TOWARD SUMP PUMP PIT.
2. DUCTILE IRON PIPE SHALL BE USED AT ALL PRECAST VAULT PIPE PENETRATIONS AND SHALL EXTEND A MINIMUM OF 3' BEYOND FACE OF PRECAST VAULT ON EACH SIDE



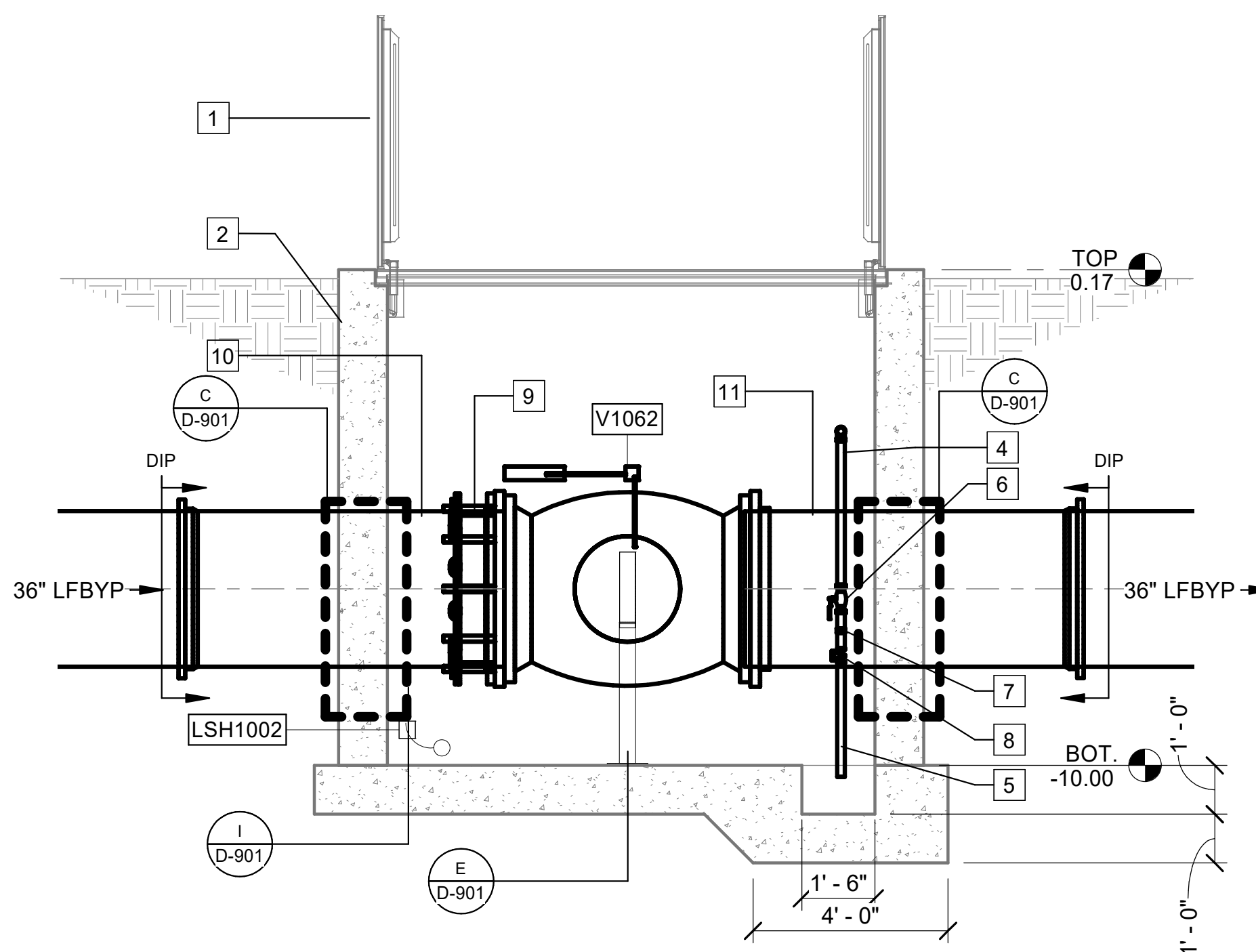
3A UPPER LEVEL
D-001 SCALE: 3/8" = 1'-0"



3B LOWER LEVEL
D-301 SCALE: 3/8" = 1'-0"

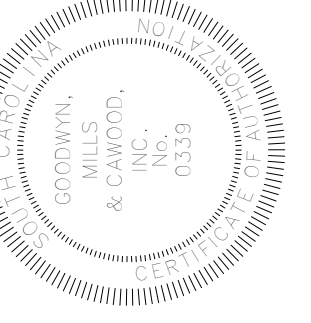


A SECTION
D-301 SCALE: 3/8" = 1'-0"



B SECTION
D-301 SCALE: 3/8" = 1'-0"

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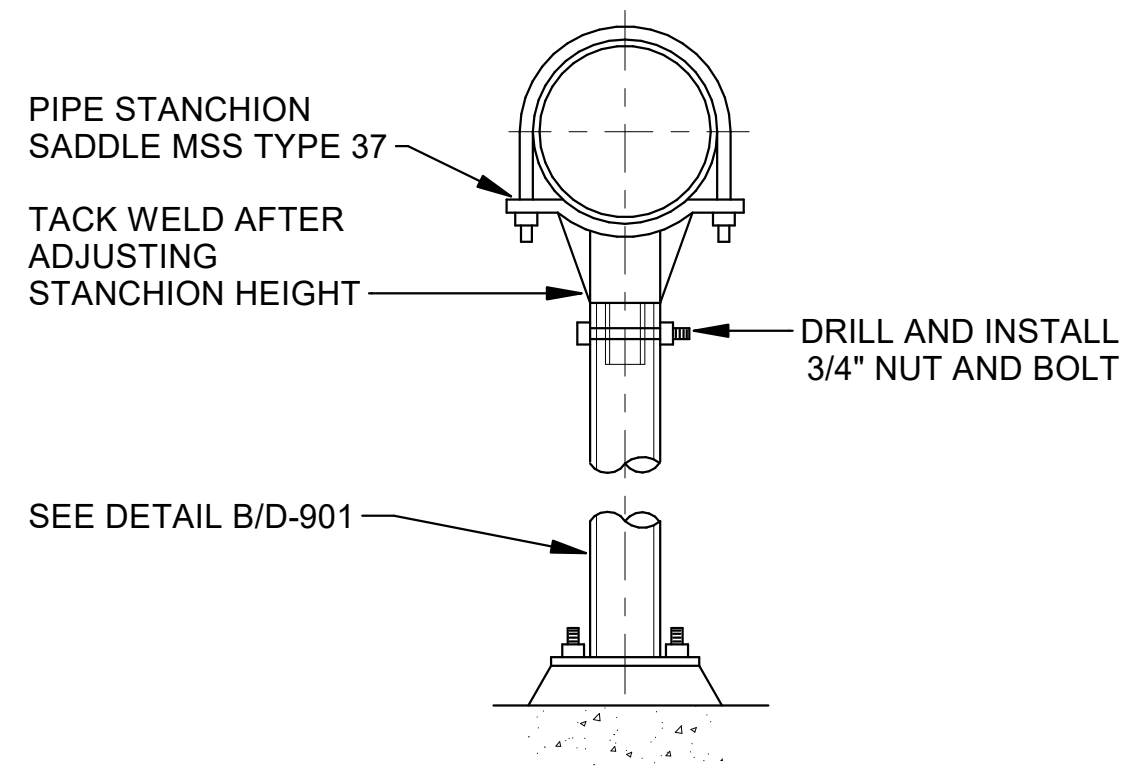
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**INTERNATIONAL DRIVE
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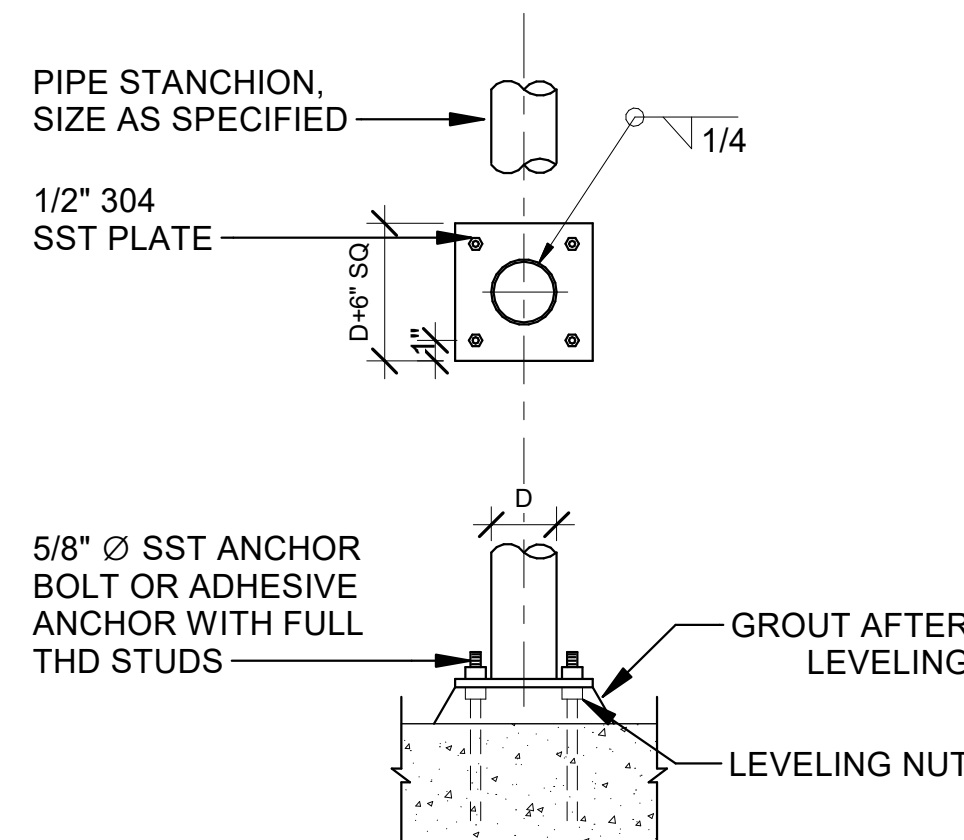


**VALVE VAULT -
PLAN & SECTIONS**
D-301

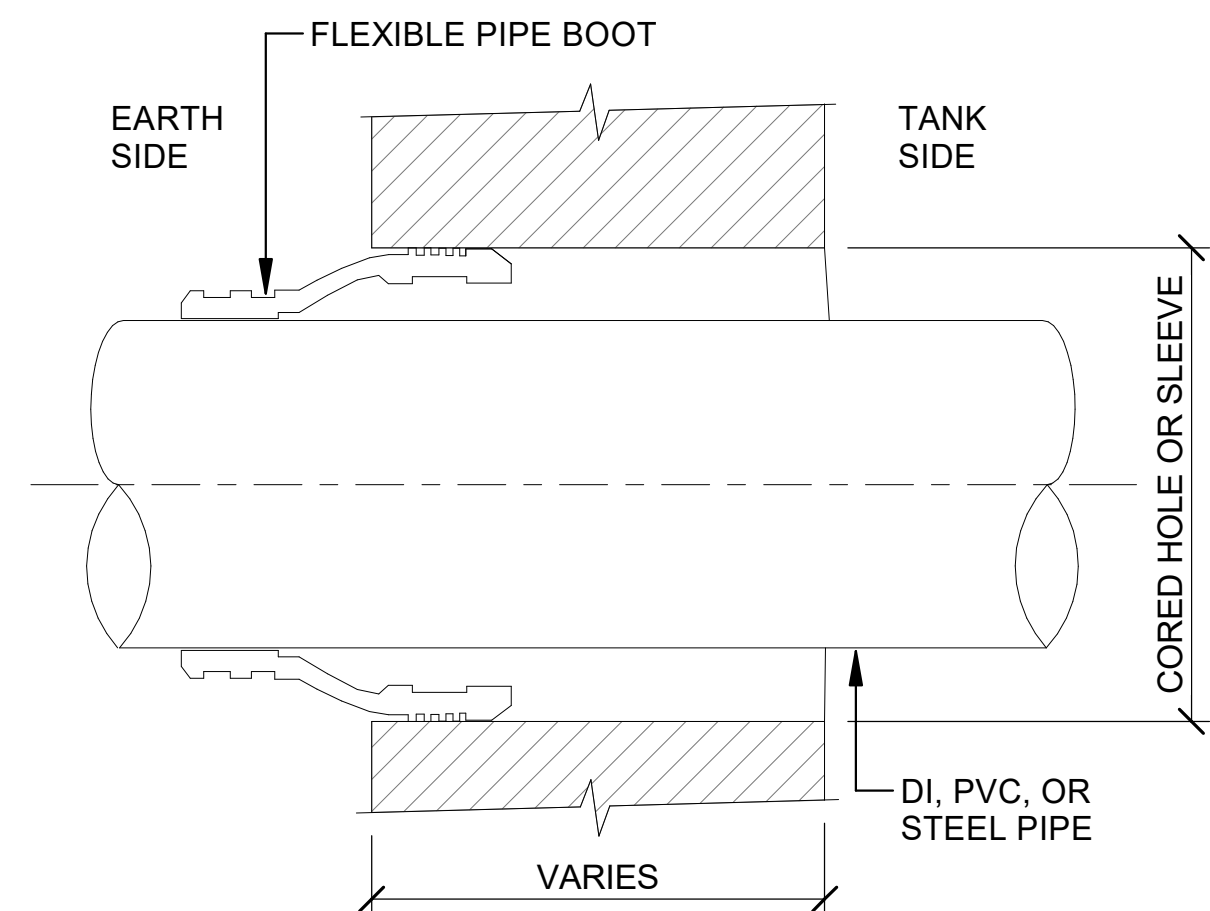


3" THROUGH 12" PIPE

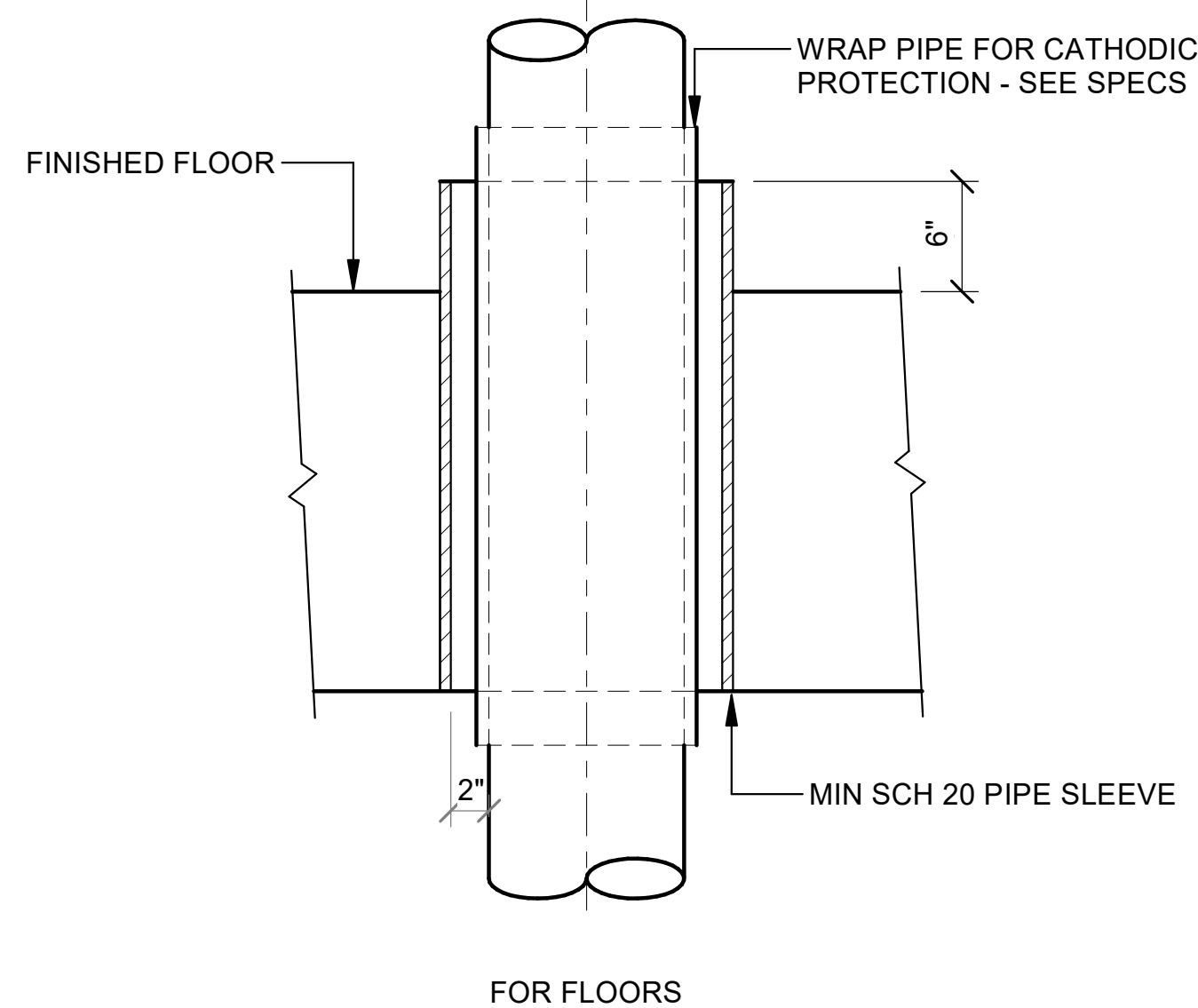
A **DETAIL - PIPE SUPPORT**
D-901 SCALE: NTS



B **DETAIL - ATTACHMENT**
D-901 SCALE: NTS

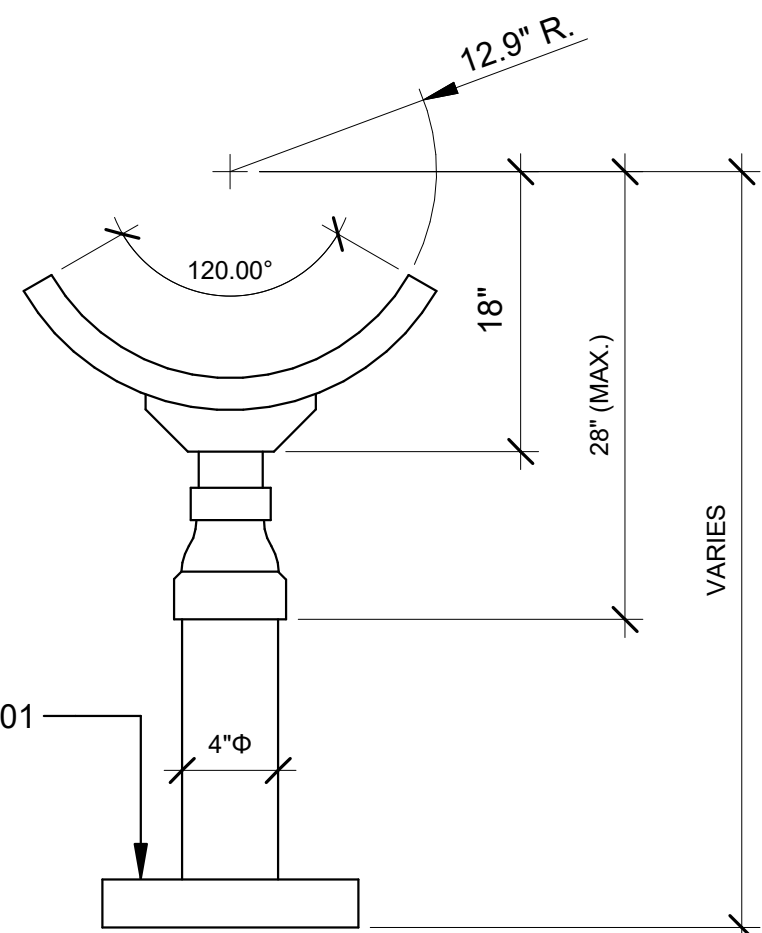


C **PIPE PENETRATION**
D-901 SCALE: NTS



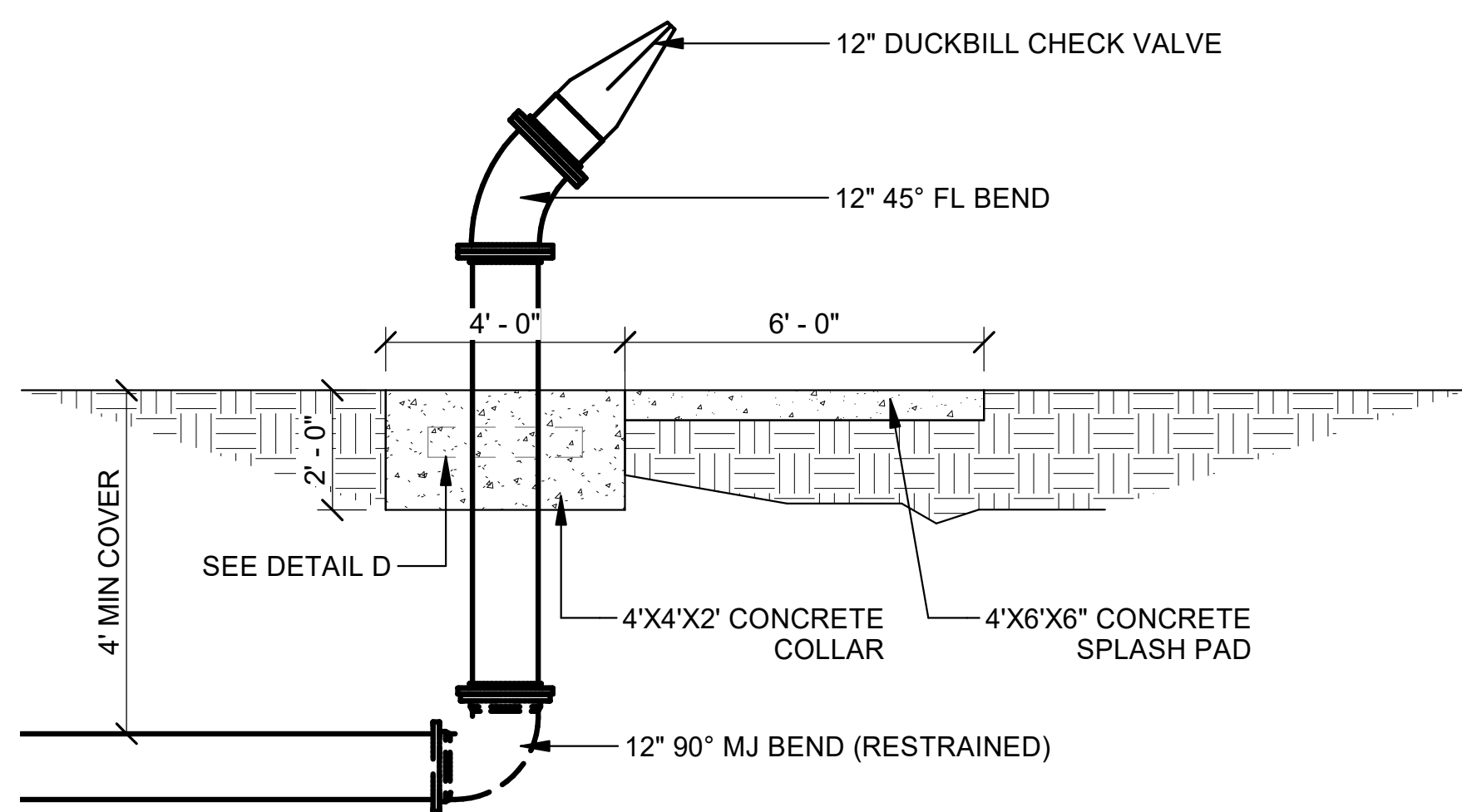
FOR FLOORS

D **DETAIL - PIPE PENETRATION**
D-901 SCALE: 1" = 1'-0"

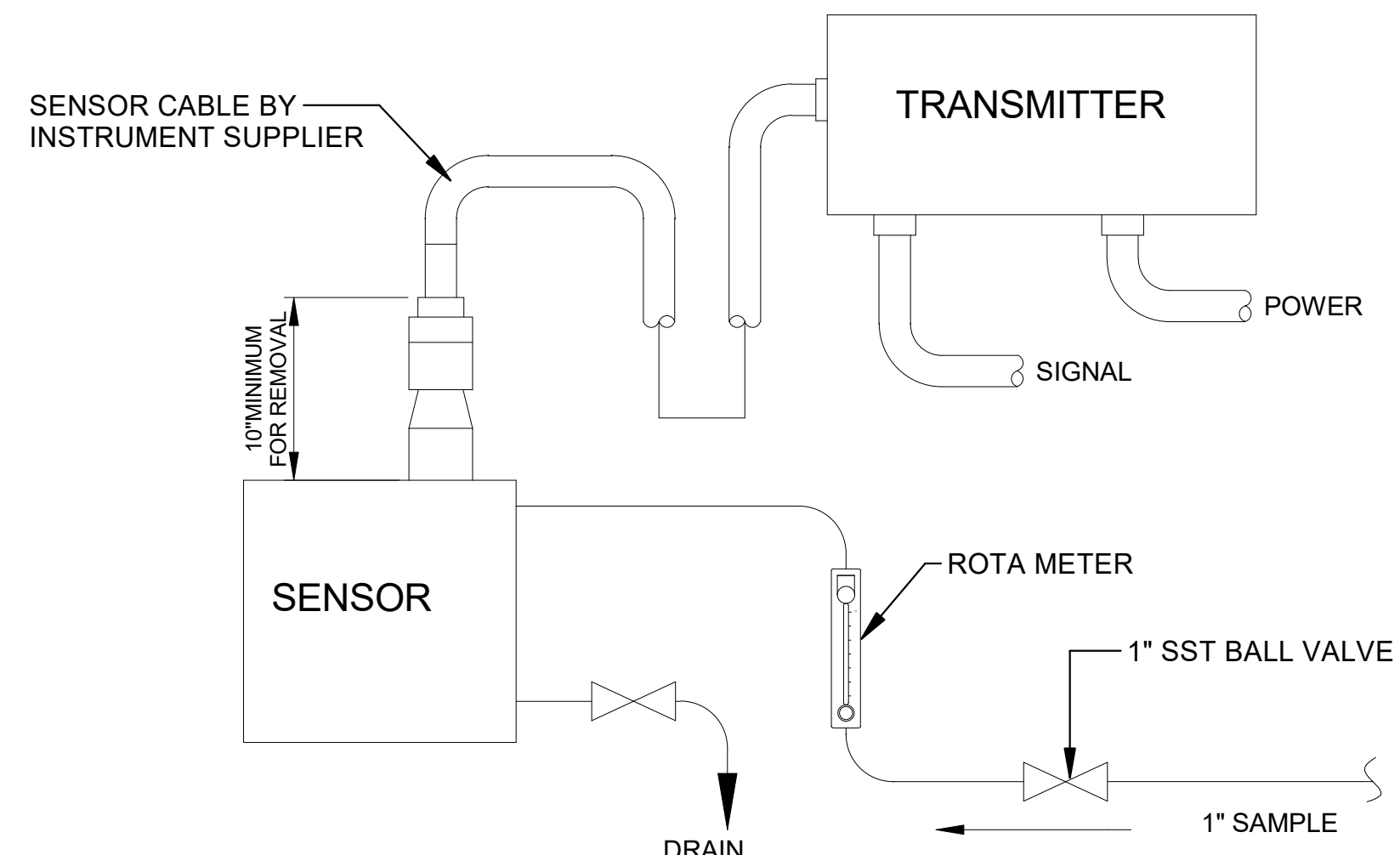


14" THROUGH 24" PIPE

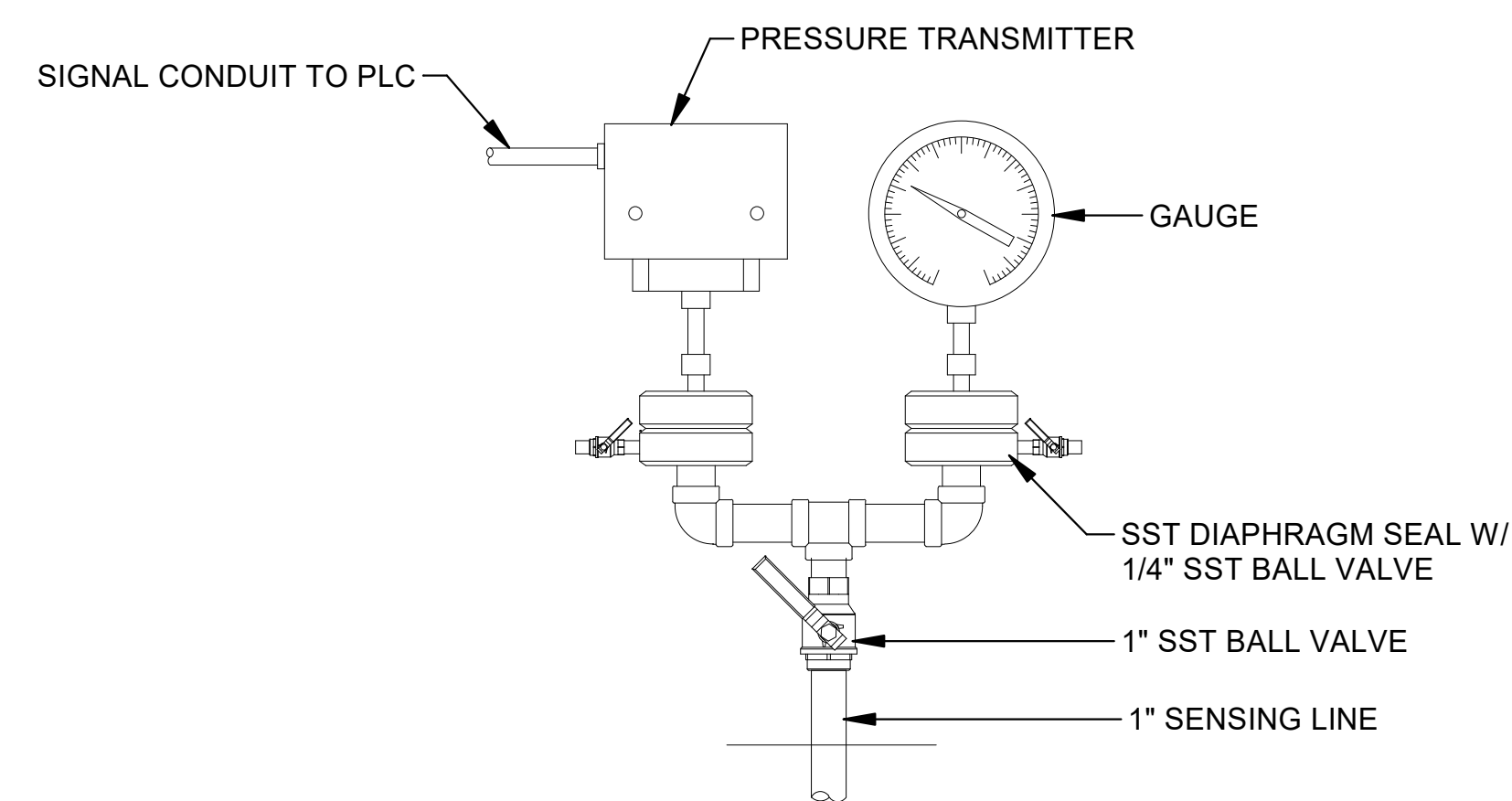
E **DETAIL - PIPE SUPPORT**
D-901 SCALE: NTS



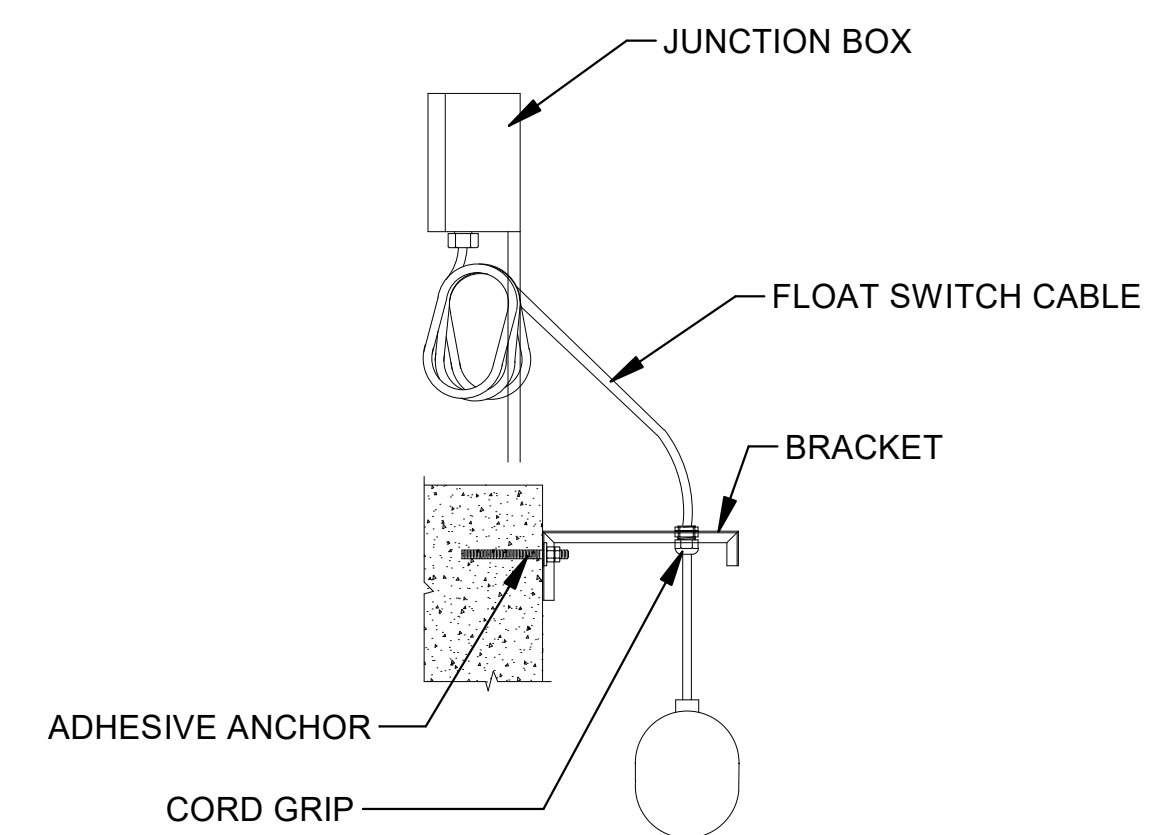
F **DETAIL - BLOW OFF**
D-901 SCALE: NTS



G **DETAIL - ANALYTICAL INSTRUMENT**
D-901 SCALE: NTS



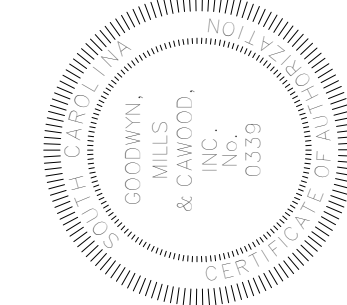
H **DETAIL - PRESSURE TRANSMITTER & GAUGE**
D-901 SCALE: NTS



I **FLOAT SWITCH**
D-901 SCALE: NTS

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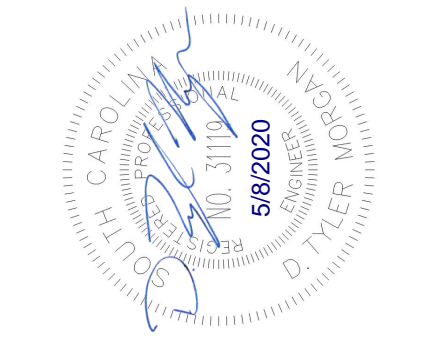
**STANDARD
DETAILS**
D-901

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VALVE SCHEDULE					
VALVE ID	SERVICE	TYPE	SIZE (INCHES)	CONNECTION	OPERATOR
V1001	W	BUTTERFLY	30	MJ	NUT
V1002	W	BUTTERFLY	24	MJ	NUT
V1003	W	BUTTERFLY	30	MJ	NUT
V1004	W	BUTTERFLY	24	MJ	NUT
V1005	W	BUTTERFLY	30	MJ	NUT
V1006	W	BUTTERFLY	24	MJ	NUT
V1007	W	AIR RELEASE	4	NPT	
V1010	W	BUTTERFLY	24	MJ	NUT
V1011	W	BUTTERFLY	14	FLG	HANDWHEEL
V1012	W	BALL	1/2	NPT	MANUAL LEVER
V1013	W	BALL	1/2	NPT	MANUAL LEVER
V1014	W	AIR RELEASE	1/2	NPT	
V1015	W	BALL	1/2	NPT	MANUAL LEVER
V1016	W	TILTED DISK	12	FLG	
V1017	W	BUTTERFLY	12	FLG	HANDWHEEL
V1018	W	BUTTERFLY	24	MJ	NUT
V1020	W	BUTTERFLY	24	MJ	NUT
V1021	W	BUTTERFLY	14	FLG	HANDWHEEL
V1022	W	BALL	1/2	NPT	MANUAL LEVER
V1023	W	BALL	1/2	NPT	MANUAL LEVER
V1024	W	AIR RELEASE	1/2	NPT	
V1025	W	BALL	1/2	NPT	MANUAL LEVER
V1026	W	TILTED DISK	12	FLG	
V1027	W	BUTTERFLY	12	FLG	HANDWHEEL
V1028	W	BUTTERFLY	24	MJ	NUT
V1030	W	BUTTERFLY	24	MJ	NUT
V1031	W	BUTTERFLY	14	FLG	HANDWHEEL
V1032	W	BALL	1/2	NPT	MANUAL LEVER
V1033	W	BALL	1/2	NPT	MANUAL LEVER
V1034	W	AIR RELEASE	1/2	NPT	
V1035	W	BALL	1/2	NPT	MANUAL LEVER
V1036	W	TILTED DISK	12	FLG	
V1037	W	BUTTERFLY	12	FLG	HANDWHEEL
V1038	W	BUTTERFLY	24	MJ	NUT
V1040	W	BUTTERFLY	24	MJ	NUT
V1041	W	BUTTERFLY	14	FLG	HANDWHEEL
V1042	W	BALL	1/2	NPT	MANUAL LEVER
V1043	W	BALL	1/2	NPT	MANUAL LEVER
V1044	W	AIR RELEASE	1/2	NPT	
V1045	W	BALL	1/2	NPT	MANUAL LEVER
V1046	W	TILTED DISK	12	FLG	
V1047	W	BUTTERFLY	12	FLG	HANDWHEEL
V1048	W	BUTTERFLY	24	MJ	NUT
V1050	SUCT	BUTTERFLY	42	MJ	NUT
V1051	SUCT	BUTTERFLY	42	MJ	NUT
V1052	SUCT	BUTTERFLY	42	MJ	NUT
V1053	SUCT	BUTTERFLY	42	MJ	NUT
V1054	DIS	BUTTERFLY	42	MJ	NUT
V1055	DIS	BUTTERFLY	42	MJ	NUT
V1056	DIS	BUTTERFLY	42	MJ	NUT
V1057	DIS	BUTTERFLY	42	MJ	NUT
V1058	DIS	BUTTERFLY	42	MJ	NUT
V1060	SUCT	BUTTERFLY	36	MJ	NUT
V1061	LFBYP	BUTTERFLY	36	MJ	NUT
V1062	LFBYP	CHECK	36	FLG	SWING
V1063	LFBYP	BUTTERFLY	36	MJ	NUT
V1064	DIS	BUTTERFLY	36	MJ	NUT
V1070	W	GATE	8	MJ	NUT
V1071	W	GATE	12	MJ	NUT
V1072	W	GATE	12	MJ	NUT
V1073	SA	BALL	1	NPT	MANUAL LEVER
V1074	D	NEEDLE	1/2	NPT	MANUAL LEVER
V1075	SA	BALL	1	NPT	MANUAL LEVER
V1076	SA	BALL	1	NPT	MANUAL LEVER
V1077	SA	BALL	1	NPT	MANUAL LEVER
V1078	SA	BALL	1	NPT	MANUAL LEVER

VALVE SCHEDULE

D-911



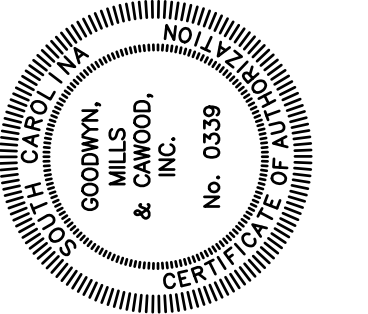
INTERNATIONAL DRIVE
BOOSTER PUMP STATION
CONWAY, SC

CGRE190054

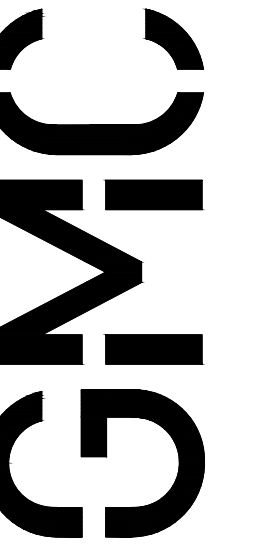
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ISSUE	DATE
BID SET	05.08.2020

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CHECKED BY: JDTM



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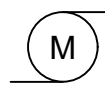


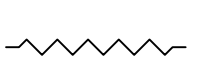



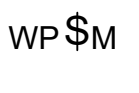
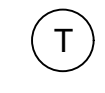


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GENERAL ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE N.E.C. AND THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
2. WIRING SYSTEMS SHALL CONSIST OF COPPER WIRING INSTALLED IN CONDUIT, MINIMUM WIRE SIZE SHALL BE #12AWG, MINIMUM CONDUIT SIZE SHALL BE 3/4".
3. CONDUIT ABOVE CEILINGS, IN WALLS, ETC. SHALL BE EMT, WHERE NOT SUBJECT TO MOISTURE OR DAMAGE. WHERE SUBJECT TO DAMAGE, OUTSIDE BUILDING SHALL BE GALVANIZED RIGID CONDUIT. CONDUITS (ALL SIZES) ROUTED EXPOSED SHALL BE GALVANIZED RIGID CONDUIT. CONDUITS SHALL BE SIZED IN ACCORDANCE WITH TABLE 1, CHAPTER NINE OF N.E.C.
4. CONDUCTORS SHALL BE 99% COPPER (NO ALUMINUM CONDUCTORS WILL BE ACCEPTED).
5. EQUIPMENT GROUNDING SHALL BE IN ACCORDANCE WITH N.E.C.
6. ALL ELECTRICAL EQUIPMENT SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.
7. ALL WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES TO AVOID INTERFERENCES AND CONFLICTS. REFER TO THE DRAWINGS OF THE RESPECTIVE SYSTEMS PRIOR TO SUBMISSION OF BIDS FOR ADDITIONAL WORK WHICH MAY BE REQUIRED AS PART OF THIS WORK. NO ALLOWANCES WILL BE MADE FOR THE LACK OF COORDINATION BETWEEN DISCIPLINES OR SYSTEMS AND EQUIPMENT.
8. THE WORK SHALL BE COORDINATED WITH THE ENGINEERING DOCUMENTS FOR THE EXACT LOCATION OF LIGHT FIXTURES, EQUIPMENT, DEVICES, ETC. TO ASSURE PROPER PLACEMENT OF SAID DEVICES AND EQUIPMENT. WHERE A CONFLICT EXISTS BETWEEN ANY TWO DOCUMENTS, NOTIFY THE ENGINEER PRIOR TO ANY INSTALLATION FOR RESOLUTION.
9. THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT BEING INSTALLED PRIOR TO INSTALLATION TO ASSURE THAT THE FEEDER, DISCONNECT, STARTER, OVER CURRENT PROTECTION, ETC. MATCHES THE ACTUAL NAMEPLATE DATA AS SUPPLIED BY THE MANUFACTURER.
10. SPECIFIC REQUIREMENTS REGARDING MATERIALS, WORKMANSHIP, AND THE WORK TO BE DONE ARE COVERED BY THE SPECIFICATIONS WHICH COMPLEMENT THE PLANS. WORK CALLED FOR BY THE SPECIFICATIONS OR THE PLANS IS REQUIRED THE SAME AS IF REQUIRED BY BOTH. WHERE A CONFLICT EXISTS BETWEEN THE PLANS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS OF THE TWO SHALL APPLY.
11. REFER TO EQUIPMENT CUT SHEETS AND MANUFACTURER'S DATA FOR ROUGH IN LOCATIONS OF ELECTRICAL CONNECTIONS AND INTERCONNECTIONS OF ALL EQUIPMENT.
12. INSTALL OVER CURRENT PROTECTION AND BRANCH CIRCUIT WIRING PER U.L. LISTING REQUIREMENTS FOR EQUIPMENT SERVED - REFER TO NAMEPLATE DATA.
13. PROVIDE START-UP ASSISTANCE TO OWNER PERSONNEL AND EQUIPMENT TECHNICIANS TO CONFIRM CORRECT PHASE ROTATION, PROPER OPERATION & SEQUENCE, AND CONTROLS.
14. ELECTRICAL CONTRACTOR TO FIELD MARK ELECTRICAL SERVICE EQUIPMENT WITH A CONSPICUOUS AND PERMANENT LABEL THAT INDICATES THE AVAILABLE FAULT CURRENT PER NEC 110.16 & 110.24.
15. ELECTRICAL CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF ANY EXCAVATION.
16. ELECTRICAL EQUIPMENT SHALL BE FULLY RATED FOR THE FAULT CURRENT INDICATED ON THE PLANS. NO SERIES RATING WILL BE ACCEPTED.
17. SUBSURFACE CONDUIT SHALL BE SCHEDULE 40PVC UNO. VERTICAL TURN UPS SHALL BE GRC SWEEP 90S WITH A BITUMASTIC COATING UNO.
18. ALL EMPTY CONDUITS SHALL HAVE A 200 LBS NYLON PULL STRING AND BE CAPPED AT BOTH ENDS. ALL CONDUITS SHALL BE ADEQUATELY SEALED TO PREVENT ENTRY OF RODENTS, WATER, AND OTHER FOREIGN MATTER. DUCT TAPE IS NOT AN ACCEPTABLE MEANS OF CAPPING.
19. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO VISIT THE SITE AND TO BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO BID DATE AS HE SHALL BE RESPONSIBLE FOR THE SAME.
20. ELECTRICAL CONTRACTOR WILL PROVIDE ALL MATERIAL TO FINALIZE A NEAT, COMPLETE, AND PROPERLY WORKING ELECTRICAL SYSTEM WHICH CONFORMS TO ALL LOCAL CODES AND THE NATIONAL ELECTRICAL CODE (N.E.C.), PLANS, AND SPECIFICATIONS.
21. CONTRACTOR SHALL REPAIR ANY DISTURBED AREA TO SAME COMPACTION, GRADE, SLOPE, ETC. AS ORIGINAL AREA INCLUDING REPLACEMENT OF SOD, GRASS, ROCK, GRAVEL, RIP-RAP, ETC. TO THE SATISFACTION OF THE OWNER AND ENGINEER.
22. SLOPE ALL AREAS AROUND CONCRETE PADS TO PREVENT WATER PONDING.
23. CLEAN UP ALL DEBRIS AROUND CONSTRUCTION SITE DAILY.
24. REMOVE ANY SPILLED DIRT, CONCRETE, ETC. FROM ANY DRIVEWAYS, ROADWAYS OR CONSTRUCTION SITE AS DIRECTED BY OWNER OR ENGINEER.
25. CONTRACTOR SHALL CUT AND PATCH ALL CONCRETE TO MATCH EXISTING WHERE REQUIRED TO INSTALL UNDERGROUND CONDUIT.

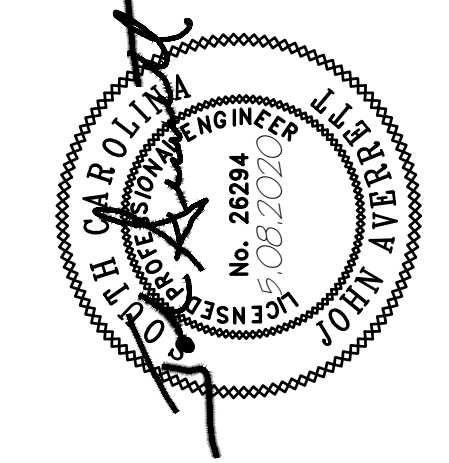
LEGEND

MOTOR - HORSEPOWER AS INDICATED.	
CONDUIT OR RACEWAY UNDERGROUND OR CONCEALED IN FLOOR SLAB.	
ABOVE GROUND CONDUIT.	
FLEX CONDUIT.	
PRESSURE TRANSMITTER.	
FLOW TRANSMITTER.	
FLOW ELEMENT	
MOTOR RATED TOGGLE SWITCH 120/277V RATED WEATHERPROOF.	
THERMOSTAT SUPPLIED BY OWNER	

ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
A	AMPERES	FIX	FIXTURE	P	POLE
AC	AIR CONDITIONING	FLUOR.	FLUORESCENT	PC	PHOTO CELL
ACT	ABOVE COUNTER TOP	GFI	GROUND FAULT INTERRUPTER	PMS	PROPERTY MANAGEMENT SYSTEM
AFF	ABOVE FINISHED FLOOR	GRC	GALVANIZED RIGID STEEL CONDUIT	PNL	PANEL
AIC	AMPERES INTERRUPTING CAPACITY (MIN)	GRND, G	GROUND	PVC	POLYVINYL CHLORIDE
APPROX.	APPROXIMATELY	HP	HORSEPOWER	RS	RAPID START
AWG	AMERICAN WIRE GAUGE	IAW	IN ACCORDANCE WITH	RSC	RIGID STEEL CONDUIT
ANN	ANNUNCIATOR	IF	INSIDE FROST	SD	SMOKE DETECTOR
BLDG	BUILDING	IG	ISOLATED GROUND	SIM	SIMILAR
BPS	BOLTED PRESSURE SWITCH	INCAN	INCANDESCENT	S/S	STAINLESS STEEL
C	CONDUIT	J	JUNCTION	SPST	SINGLE POLE SINGLE THROW
CAT	CATALOG	KVA	KILO-VOLT-AMPERE	T	TRANSFORMER
CATV	CABLE TELEVISION	KW	KILOWATT	TC	TRAY CABLE
CKT	CIRCUIT	LAHJ	LOCAL AUTHORITY HAVING JURISDICTION	TBB	TELEPHONE BACKBOARD
CONT	CONTINUATION	LGT	LIGHT	TEL	TELEPHONE
CR	CARD READER	M	METER	TM	TV MONITOR
DD	DUCT DETECTOR	MAT	MASTER ANTENNA TELEVISION	TYP	TYPICAL
DIA	DIAMETER	MAX	MAXIMUM	UNO	UNLESS OTHERWISE NOTED
DIM	DIMENSION	MCM	THOUSAND CIRCULAR MILS	V	VOLT
DP	DISTRIBUTION PANEL	MDP	MAIN DISTRIBUTION PANEL	W	WIRE
DWG	DRAWINGS	MIN	MINIMUM	WP	WEATHERPROOF
EA	EACH	MLO	MAIN LUGS ONLY	WW	WARM WHITE
EC	EMPTY CONDUIT	MPC	MAIN POWER CENTER	XFMR	TRANSFORMER
ELEC	ELECTRICAL	MTD, MTG	MOUNT (ED), (ING)	PDC	POWER DISTRIBUTION CONTROLLER
EMER	EMERGENCY	N	NORTH	E.W.	EACH WAY
EMT	ELECTRICAL METALLIC TUBING	NEC	NATIONAL ELECTRIC CODE		
EOL	END OF LINE RESISTOR	NIC	NOT IN CONTRACT		
EQUIP	EQUIPMENT	NO	NUMBER		
F	FUSED	NTS	NOT TO SCALE		
FA	FIRE ALARM	OC	ON CENTER		
FIN	FINISH	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION		

INTERNATIONAL DRIVE
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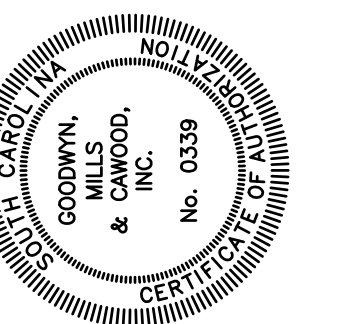


**ELECTRICAL NOTES,
ABBREVIATIONS,
& LEGEND**

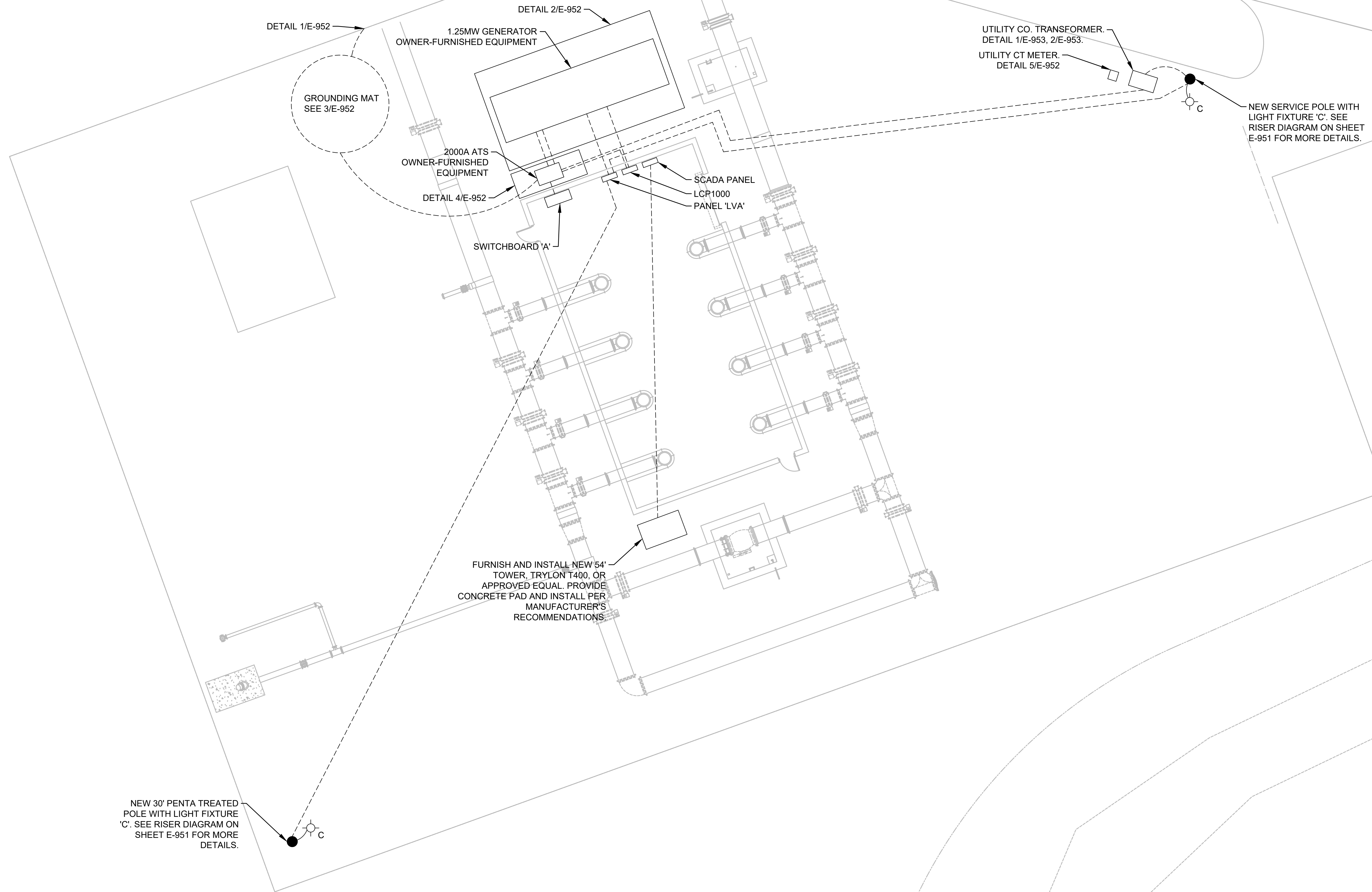
E-001

ISSUE DATE	05.08.2020
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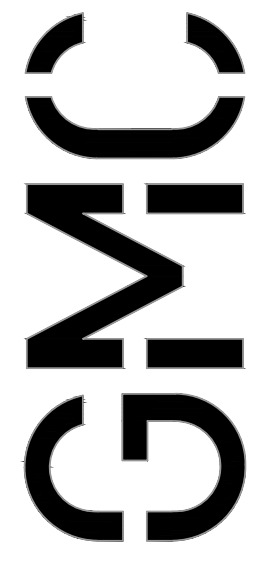


GENERAL NOTES:
 1. LIGHT FIXTURES SHALL BE FULL-CUTOFF AND MEET ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) CRITERIA. LIGHTING SHALL NOT PRODUCE ILLUMINATION THAT EXCEEDS 1 FOOTCANDLE OVER RESIDENTIAL LOT LINES.

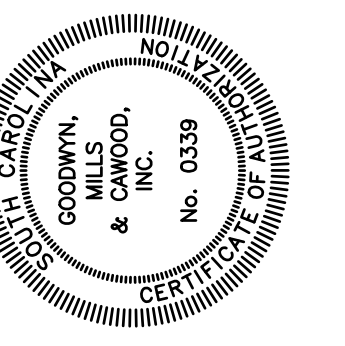


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 PLOTTED: Dec 15, 2020 - 7:40pm

1 ELECTRICAL SITE PLAN
E-101 SCALE: 1" = 10'- 0"



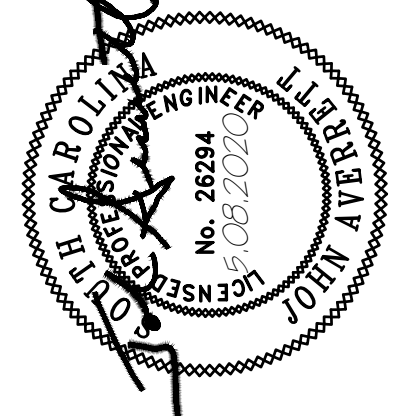
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INTERNATIONAL DRIVE
 BOOSTER PUMP STATION
 CONWAY, SC
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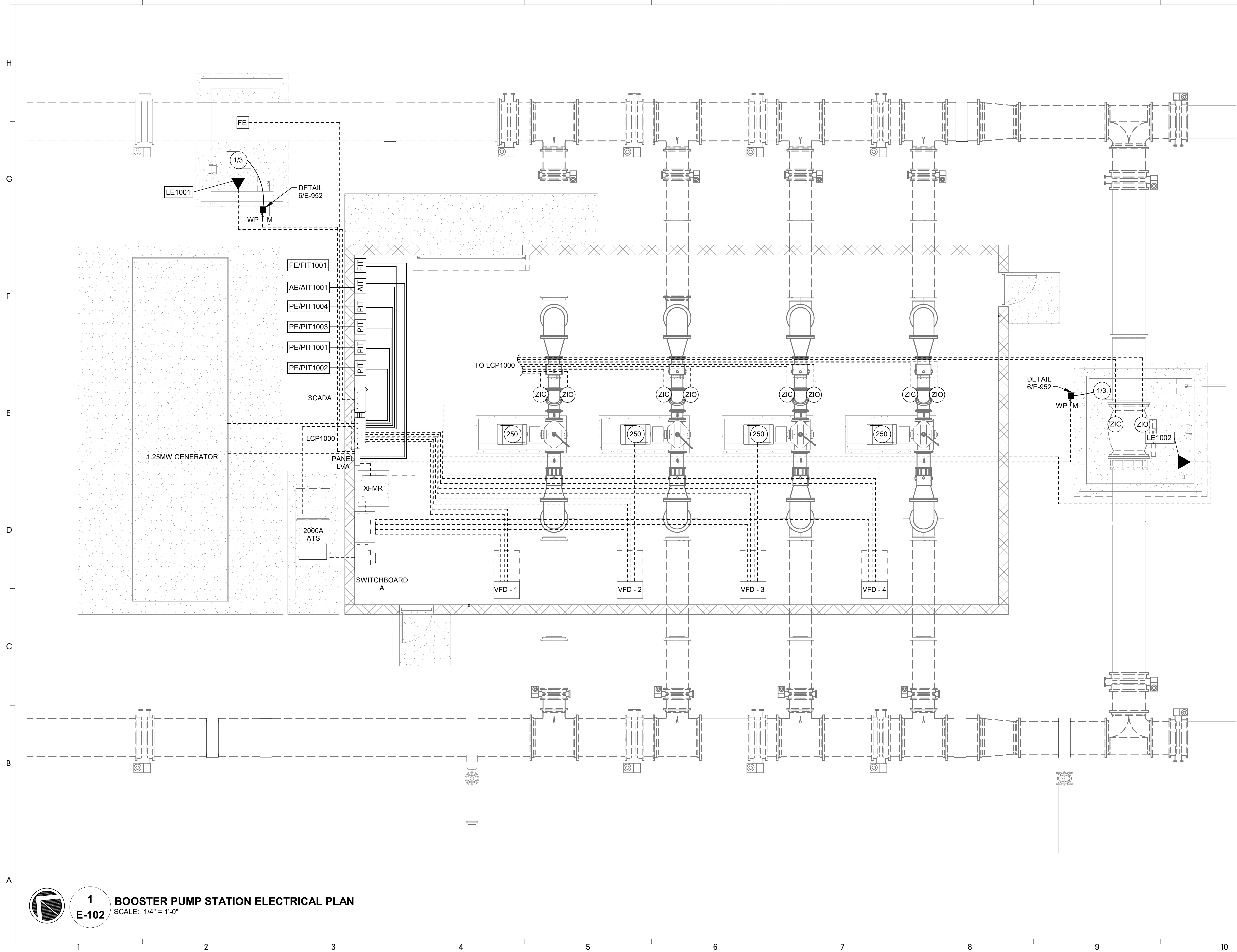
ELECTRICAL SITE PLAN
E-101

5/8/2020 2:10:02 PM



1
E-102

BOOSTER PUMP STATION ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"



**BOOSTER PUMP
STATION
ELECTRICAL PLAN**

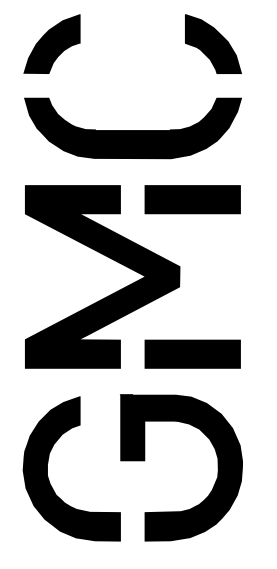
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**INTERNATIONAL DRIVE
BOOSTER PUMP STATION**
CONWAY, SC

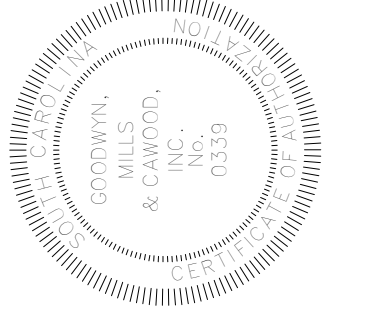
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ISSUE	DATE
BID SET	05.08.2020

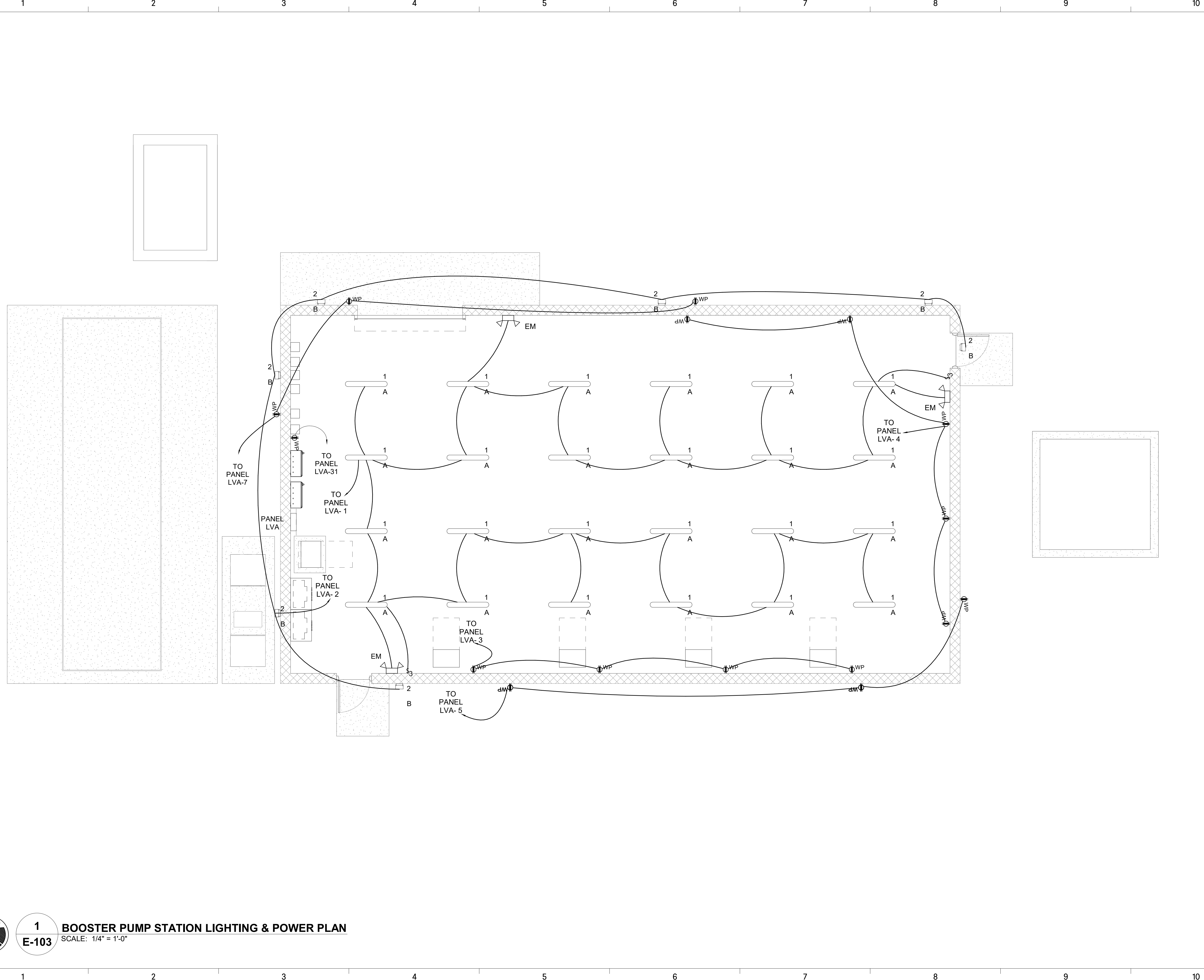
DRAWN BY: JRD/MBH
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5/8/2020 2:11:03 PM



1 BOOSTER PUMP STATION LIGHTING & POWER PLAN
E-103 SCALE: 1/4" = 1'-0"

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**INTERNATIONAL DRIVE
 BOOSTER PUMP STATION
 CONWAY, SC**

CGRE190054

**BOOSTER PUMP
 STATION LIGHTING
 & POWER PLAN**

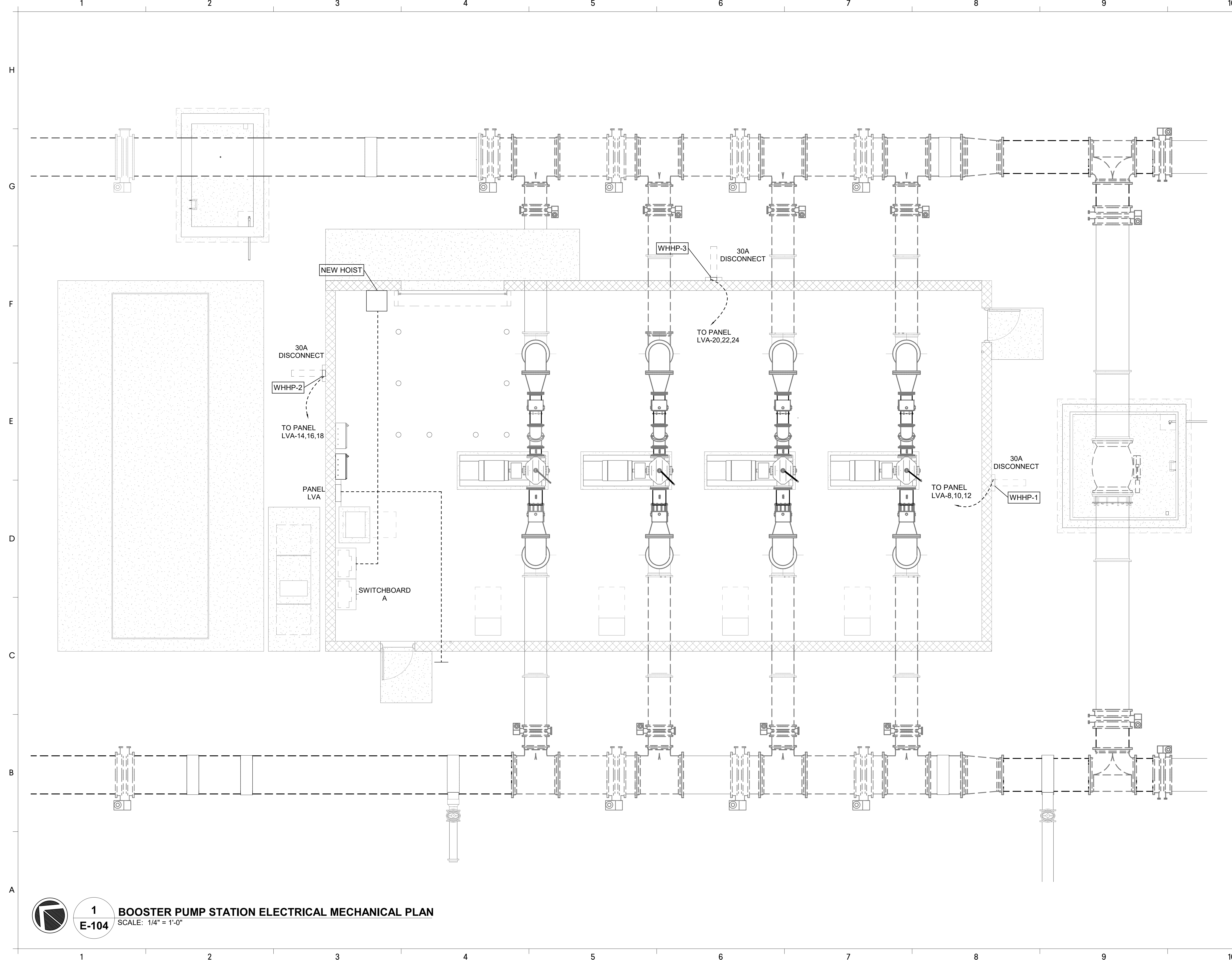
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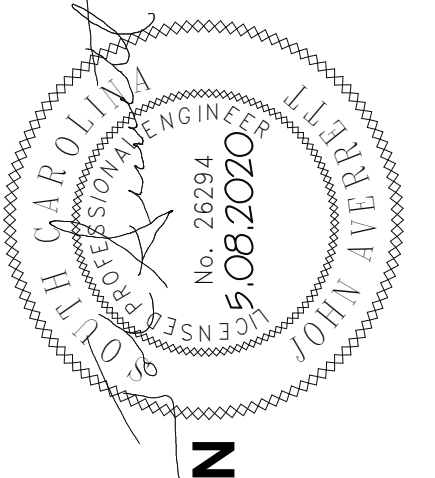


1
E-104

BOOSTER PUMP STATION ELECTRICAL MECHANICAL PLAN
SCALE: 1/4" = 1'-0"



**BOOSTER PUMP
STATION
ELECTRICAL
MECHANICAL PLAN
E-104**



**INTERNATIONAL DRIVE
BOOSTER PUMP STATION**
CONWAY, SC

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ISSUE DATE

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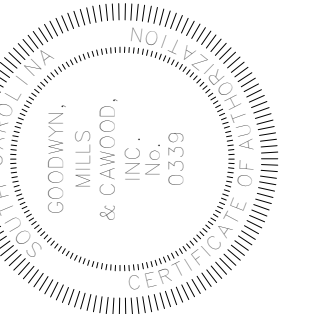
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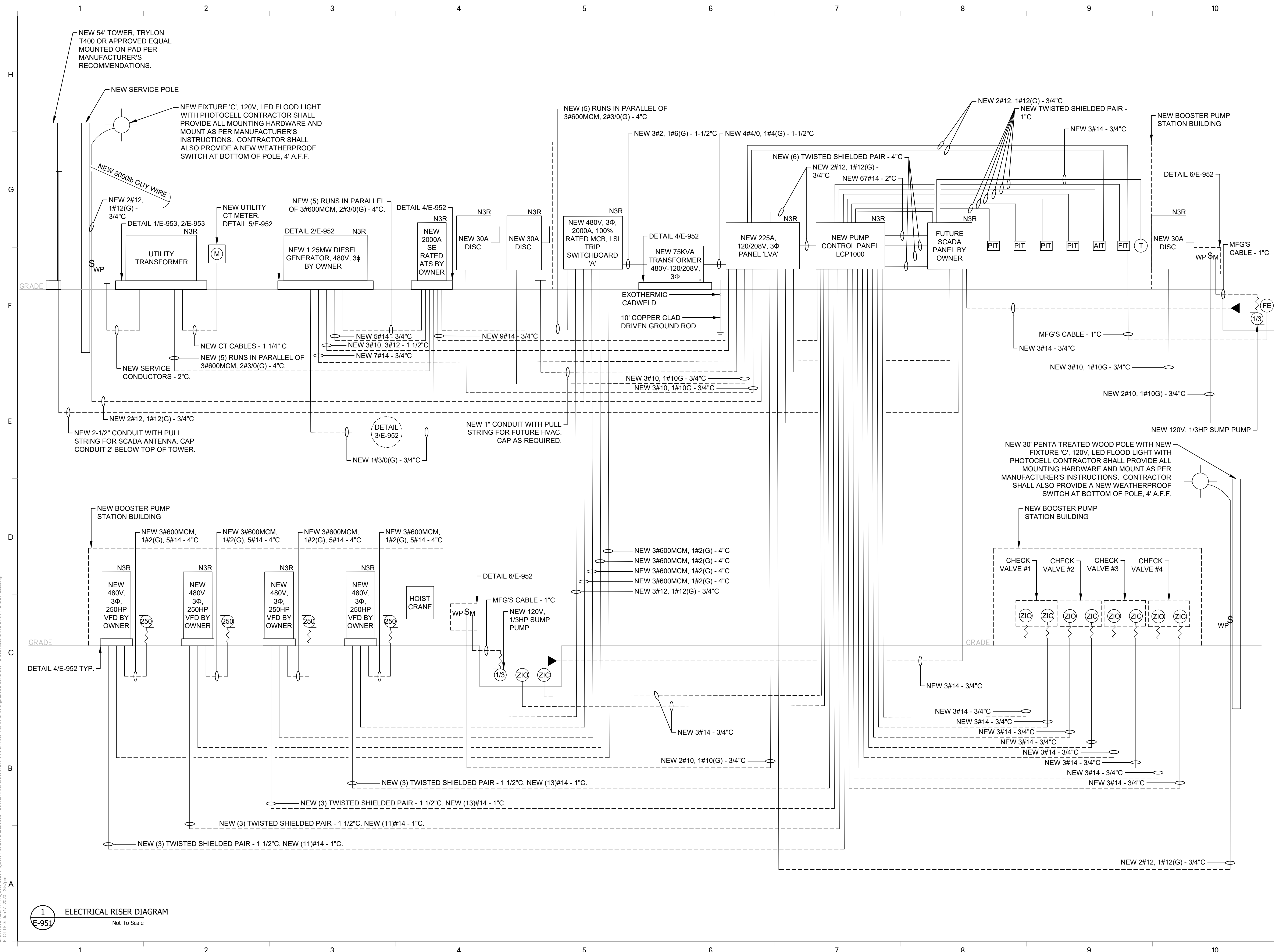
DRAWN BY: JRDMBH

CHECKED BY: MGDJEA

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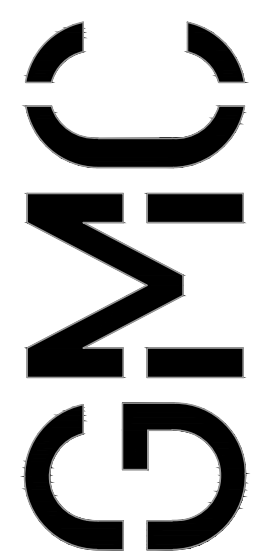


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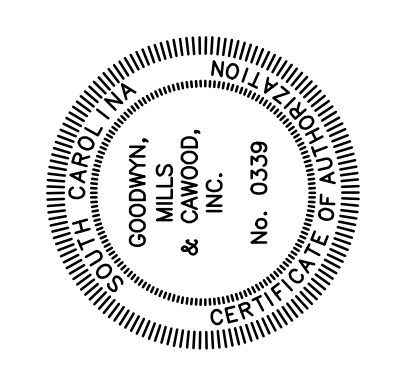


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 PLOTTED: Jun 17, 2020 - 2:58pm

1
E-951
 ELECTRICAL RISER DIAGRAM
 Not To Scale



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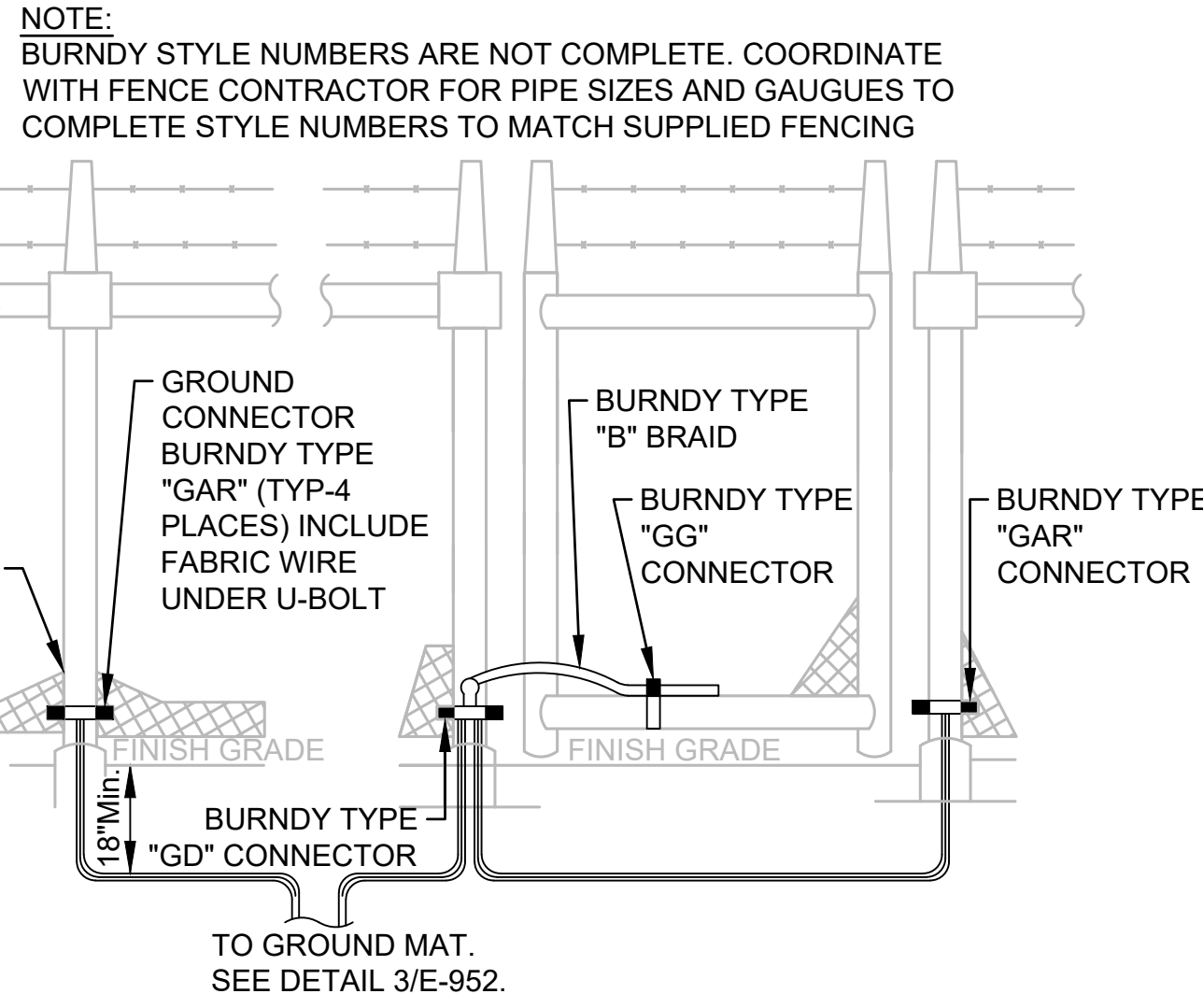
INTERNATIONAL DRIVE BOOSTER PUMP STATION
CONWAY, SC

CGRE190054

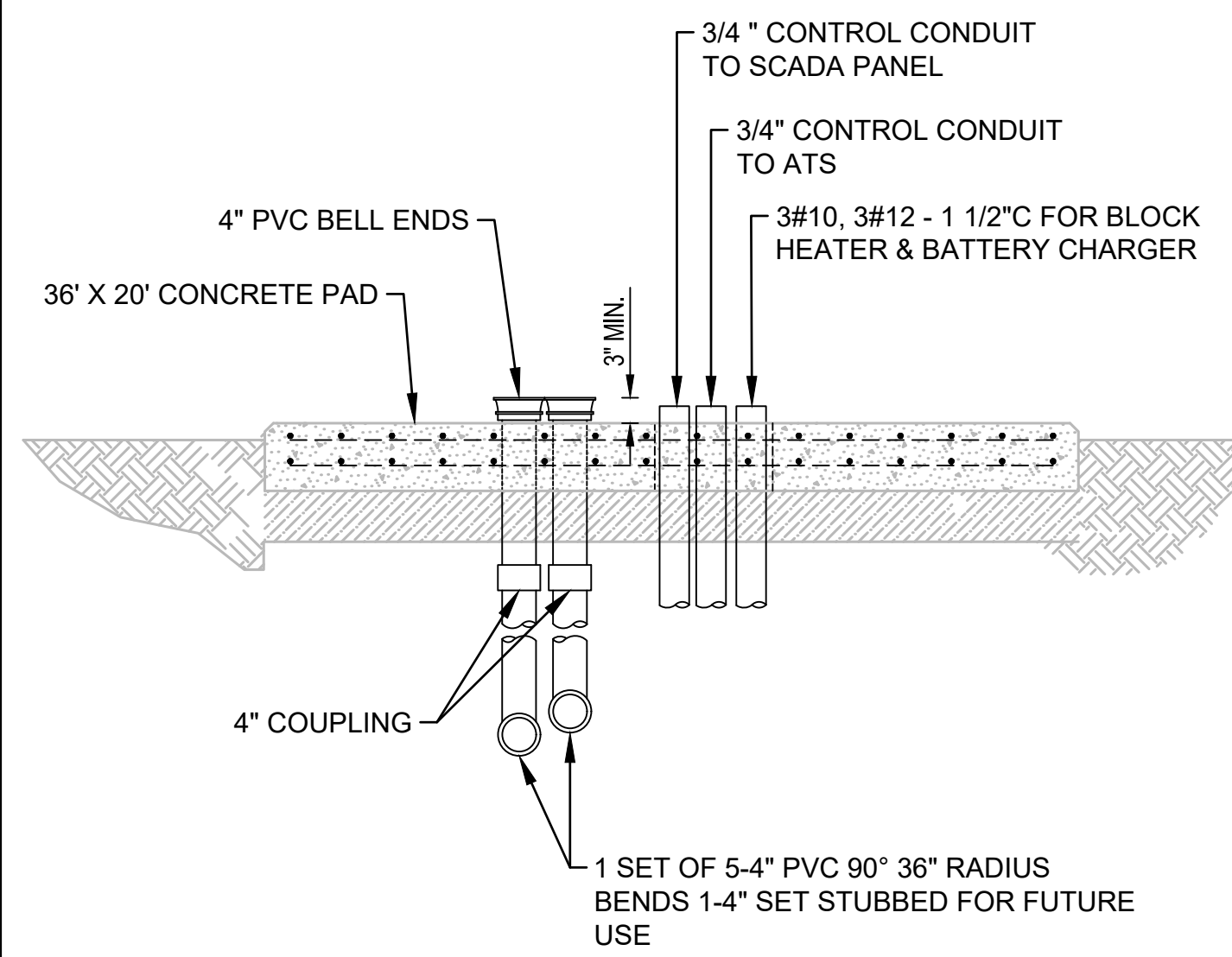
ELECTRICAL RISER DIAGRAM

E-951

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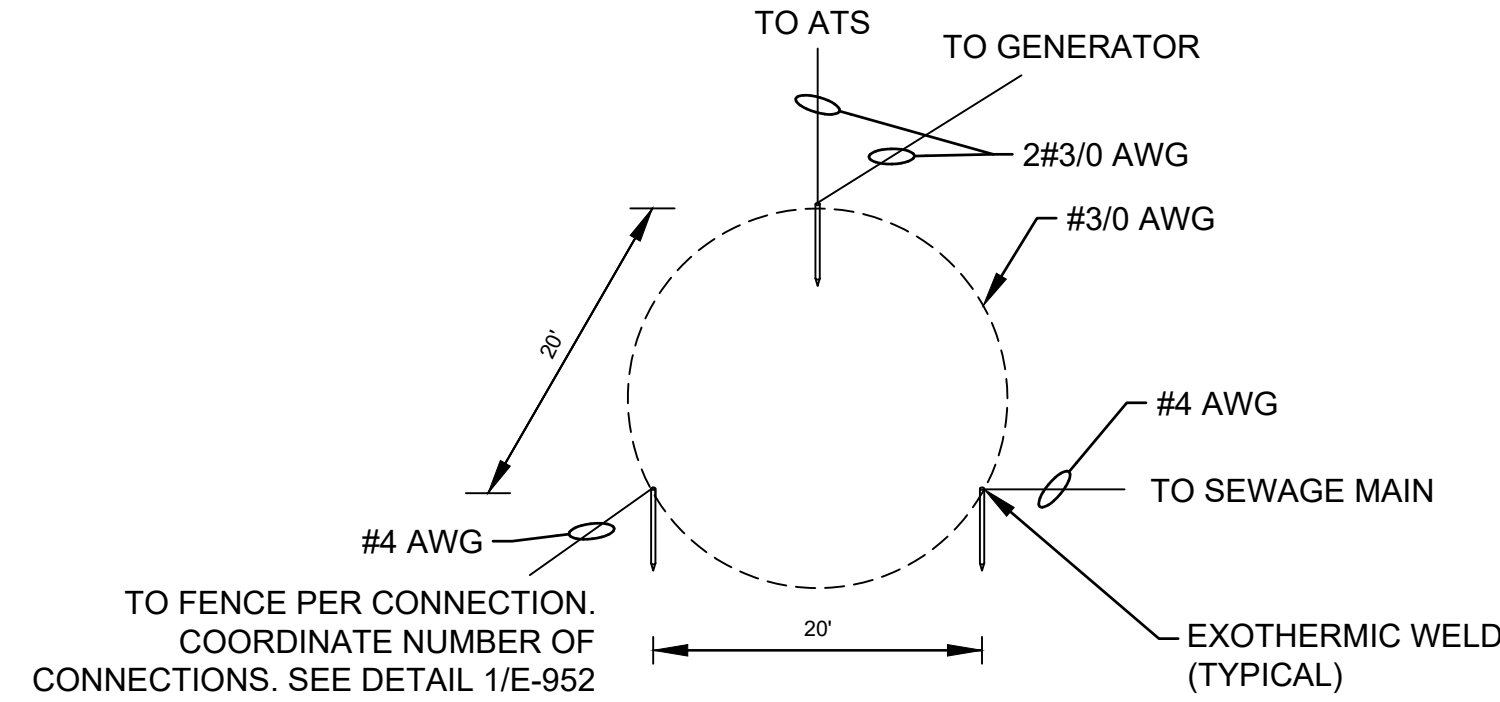


1
FENCE GROUNDING DETAIL
E-952
Not to Scale



NOTE:
SEE STRUCTURAL DETAILS FOR MORE INFORMATION ON GENERATOR PAD REQUIREMENTS.

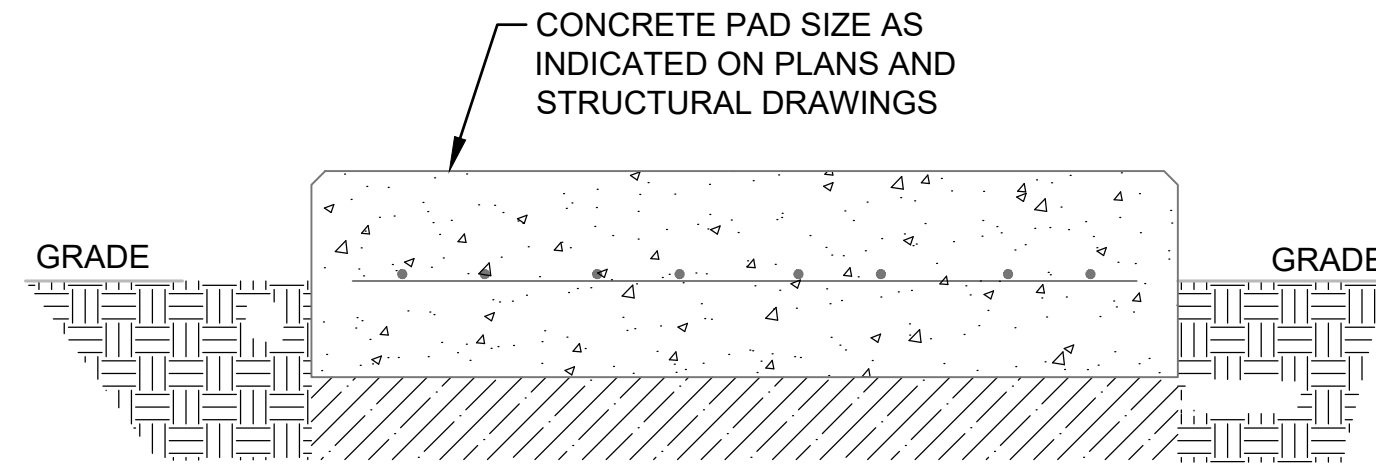
2
EMERGENCY GENERATOR PAD
E-952
Not to Scale



3
GROUND MAT
E-952
NOT TO SCALE

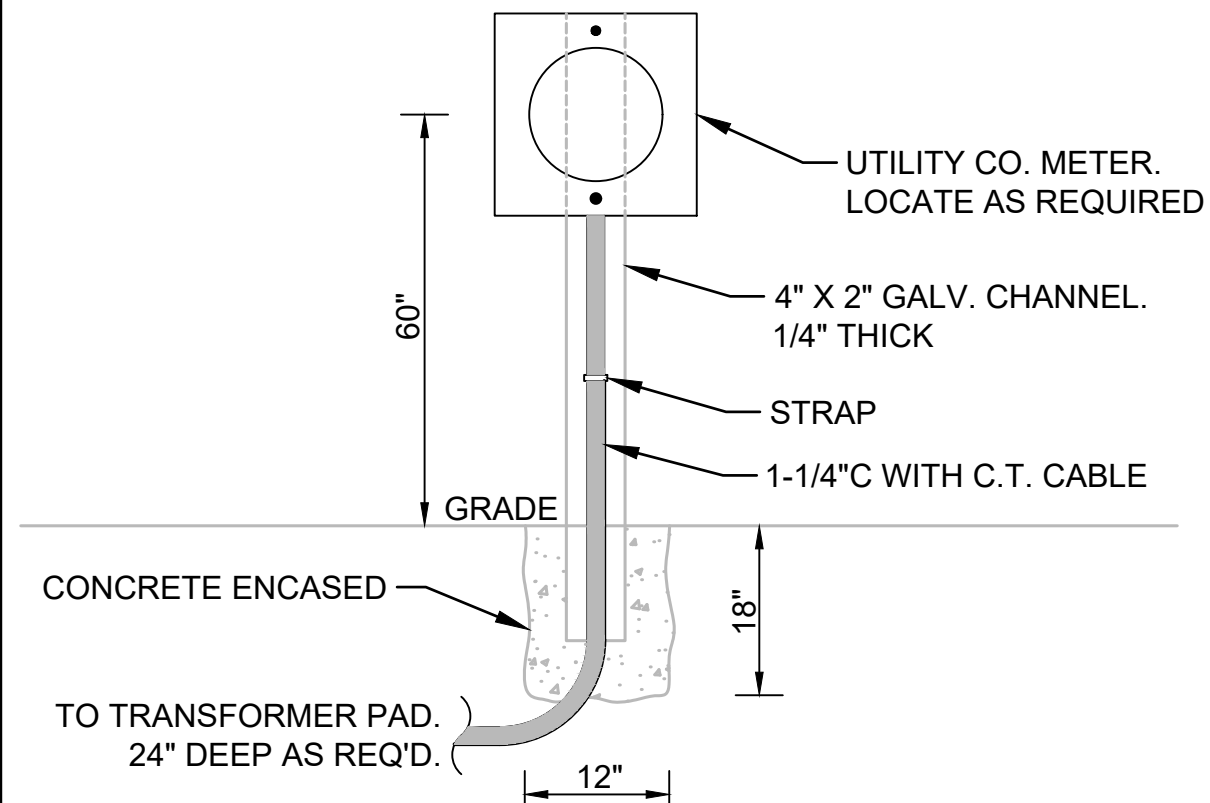
GROUND MAT DETAIL NOTES

1. ALL WIRE FOR GROUND MAT SHALL BE #3/0 AWG UNO.
2. GROUND RODS SHALL BE 3/4" X 20' SECTIONAL COPPER GROUND RODS.
3. ALL CONNECTIONS BETWEEN GROUND RODS AND GROUND CONDUCTORS SHALL BE EXOTHERMIC WELD.
4. GROUND MAT SHALL BE INSTALLED 24" BELOW GRADE MINIMUM.
5. IN ADDITION TO THE GROUND MAT, THE CONTRACTOR SHALL PROVIDE A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH N.E.C. ARTICLE 250.

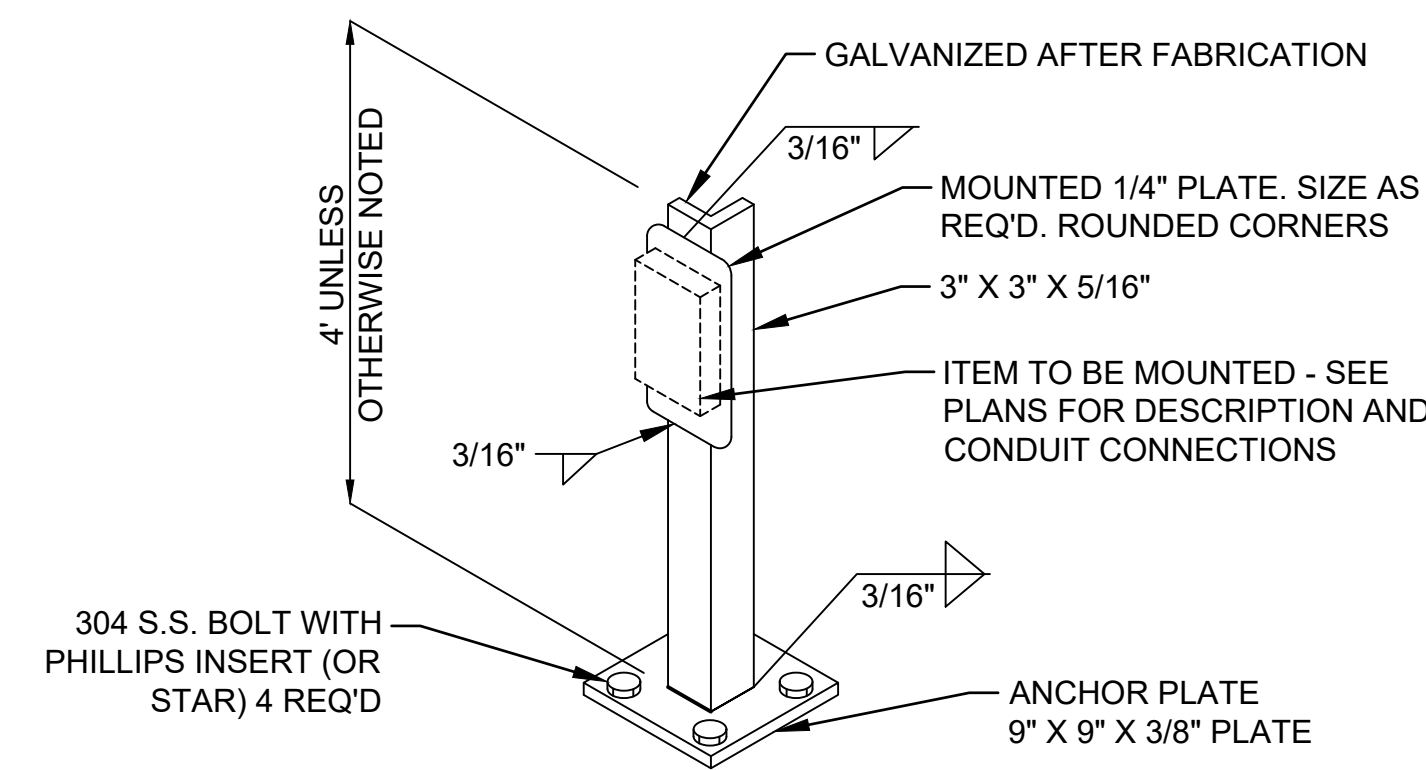


NOTE:
SEE STRUCTURAL DETAILS FOR MORE INFORMATION ON HOUSEKEEPING PAD REQUIREMENTS.

4
HOUSEKEEPING PAD DETAIL
E-952
Not to Scale



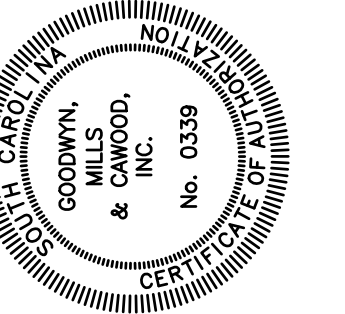
5
METER MOUNTING DETAIL
E-952
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6
PEDESTAL MOUNT DETAIL
E-952
Not to Scale

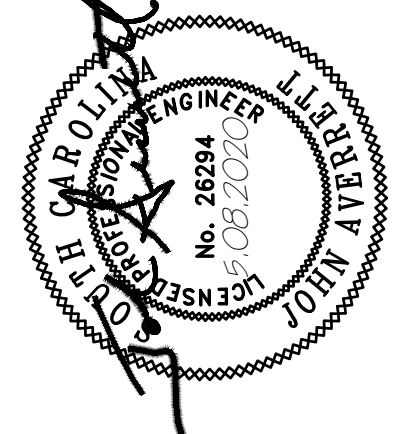
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INTERNATIONAL DRIVE
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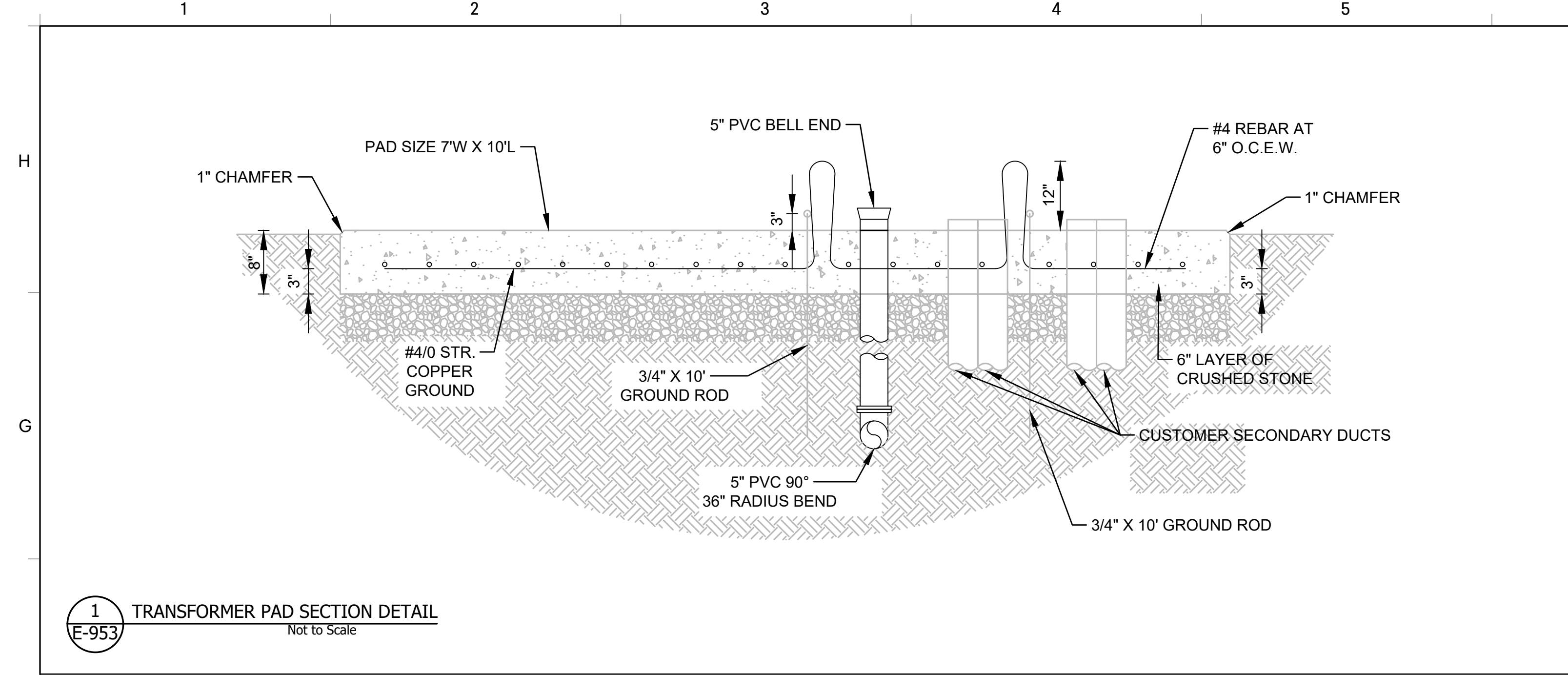


ELECTRICAL DETAILS

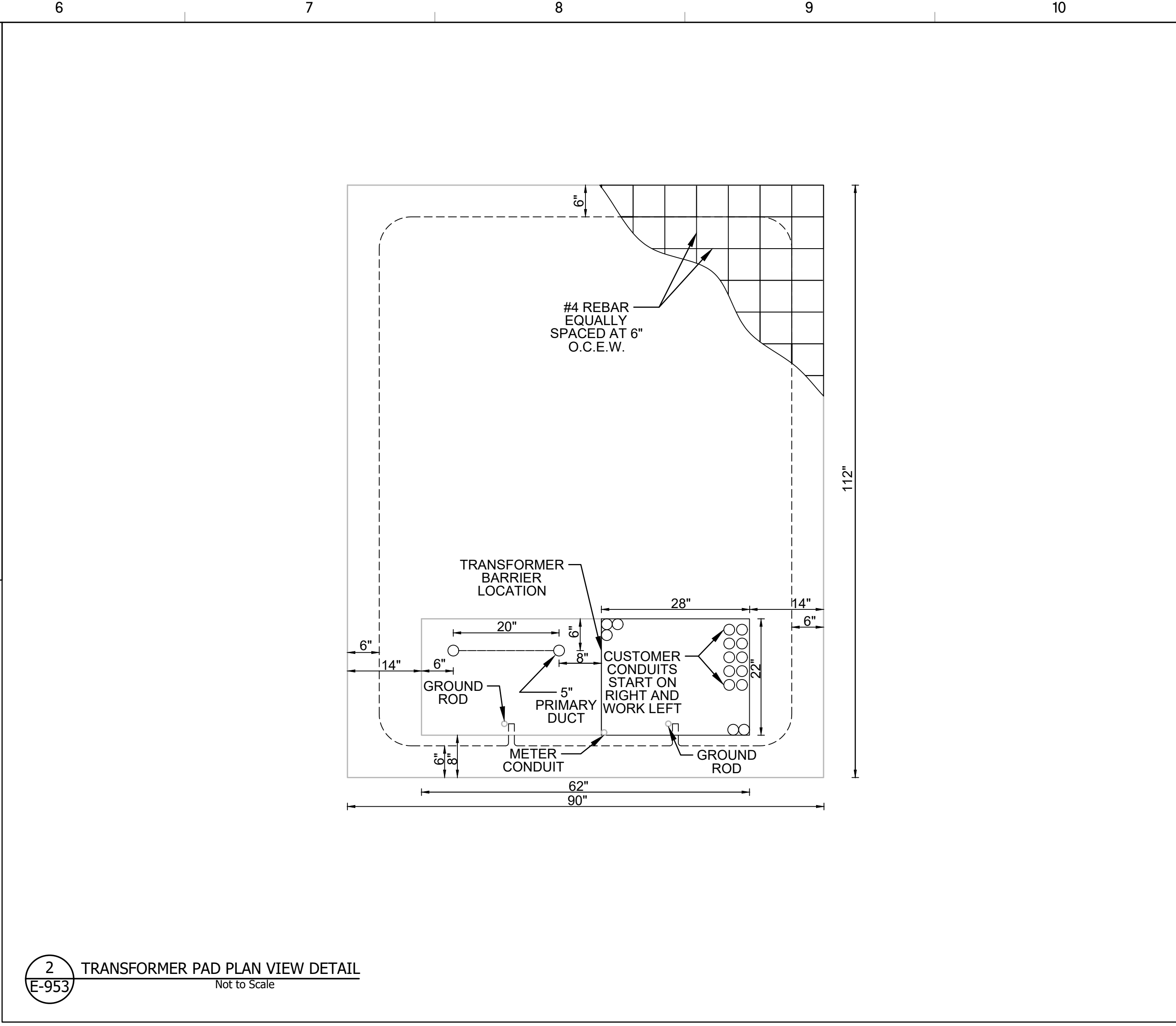
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E-952

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 PLOTTED: May 08, 2020 7:24pm



1 TRANSFORMER PAD SECTION DETAIL
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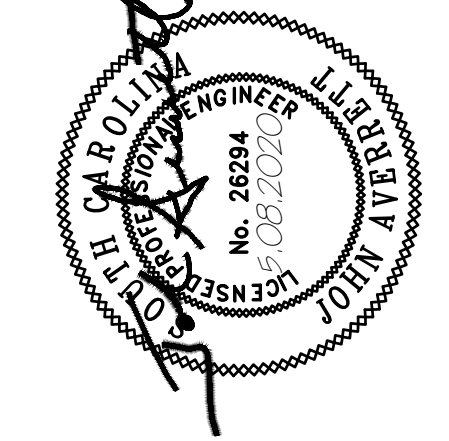
2 TRANSFORMER PAD PLAN VIEW DETAIL
 E-953 Not to Scale

ELECTRICAL DETAILS

E-953

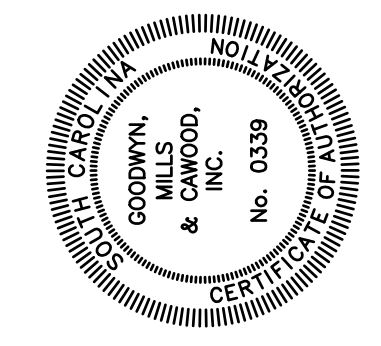
INTERNATIONAL DRIVE
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 CONWAY, SC

CGRE190054

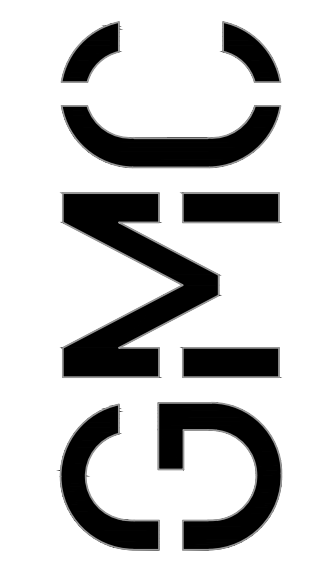


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SWITCHBOARD A SCHEDULE

LOCATION		BPS BUILDING		MAIN: 2000A LSI MCB 100% RATED						SERVICE ENTRANCE RATED			
VOLTAGE		277/480		SYSTEM: 3Ø 3 WIRE									
TRIM		SURFACE		INTERRUPTING RATING: 65k AIC									
CKT #	LOAD DESCRIPTION	BREAKER			PHASE (kVA)			BREAKER			LOAD DESCRIPTION	CKT #	
		P	TRIP		A	B	C	A	B	C			TRIP
1	PUMP #1 VFD	3	450							450	3	PUMP #3 VFD	2
3													4
5													6
7	PUMP #2 VFD	3	450							450	3	PUMP #4 VFD	8
9													10
11													12
13	FUTURE ASR PUMP	3	200							125	3	75kVA TRANSFORMER	14
15													16
17													18
19	HOIST CRANE	3	20							20	3	SPARE	20
21													22
23													24
25	SPARE	3	20										26
27													28
29													30
31													32
33													34
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37													38
39													40
41													42

PANELBOARD LVA SCHEDULE

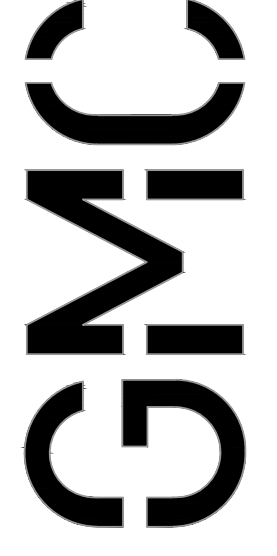
LOCATION		BPS BUILDING		MAIN: 250A MCB									
VOLTAGE		120/208V		SYSTEM: 3Ø 4 WIRE									
TRIM		SURFACE		INTERRUPTING RATING: 22K AIC									
CKT #	LOAD DESCRIPTION	BREAKER			PHASE (kVA)			BREAKER			LOAD DESCRIPTION	CKT #	
		P	TRIP		A	B	C	A	B	C			TRIP
1	BUILDING LIGHTING	1	20							20	1	BUILDING LIGHTING	2
3	BUILDING RECEPTACLES	1	20							20	1	BUILDING RECEPTACLES	4
5	EXTERIOR RECEPTACLES	1	20							20	1	LIGHTING	6
7	EXTERIOR RECEPTACLES	1	20										8
9	BLOCK HEATER	1	20							30	3	HVAC	10
11	BATTERY CHARGER	1	20										12
13	SCADA	1	20										14
15	PUMP CONTROL PANEL	1	20							30	3	HVAC	16
17	METER PIT SUMP PUMP	1	20										18
19	BYPASS PIT SUMP PUMP	1	20										20
21	CHLORINE ANALYZER	1	20							30	3	HVAC	22
23	RECEPTACLE	1	20										24
25	SPARE	1	20										26
27	SPARE	1	20							30	3	FUTURE HVAC	28
29	SPARE	1	20										30
31	SPARE	1	20										32
33	SPARE	1	20										34
35	SPARE	1	20										36
37	SPARE	1	20										38
39	SPARE	1	20										40
41	SPARE	1	20										42

LUMINAIRE SCHEDULE

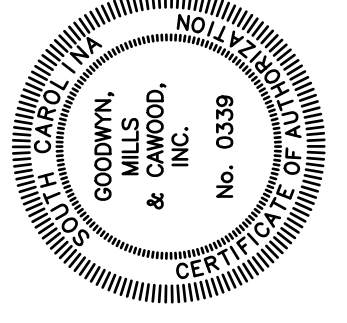
FIXTURE MARK	LAMPS			VOLTAGE	MAKE	MOUNTING TYPE	MODEL	DESCRIPTION
	NO	WATTS	TYPE					
A	1	26	LED	120	COOPER	CEILING	4VT3-LD5-4-G-120V-L840	4' LINEAR STRIP FIXTURE CEILING MOUNTED. WET LOCATION.
B	1	58	LED	120	COOPER	WALL	XTOR-W-BK	WALL MOUNT LED LIGHT FIXTURE BLACK FINISH WITH INTEGRAL PHOTO-CELL.
C	1	58	LED	120	PHILLIPS	POLE	FL40-NW-G1-PCB-S-FL-8-BZ	POLE MOUNTED FLOOD LIGHT.
EM	1	10.6	LED	MULTI	HOLOPHANE	WALL	CZA111LT W LP06VS LTP TD	WHITE THEROMPLASTIC HOUSING EMERGENCY LIGHT TWO LAMP HEADS

LUMINAIRE SCHEDULE NOTES:

- EQUIVALENT PRODUCTS WILL BE REVIEWED PROVIDED THE REQUIREMENTS FOR PRIOR APPROVAL OUTLINED IN THE SPECIFICATIONS ARE MET.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL FIXTURE MOUNTING PROVISIONS WITH THE ASSOCIATED CEILING TYPE(S) BEFORE ORDERING FIXTURES
- IN ORDER TO ENSURE PROPER COORDINATION AND LONG TERM SUPPORT FOR THE OWNER, ALL LIGHTING FIXTURES WILL BE PURCHASED THROUGH A MANUFACTURER'S REPRESENTATIVE AND DISTRIBUTORS LOCATED WITHIN ONE HUNDRED AND FIFTY (150) MILES OF THE PROJECT SITE. SUBMITTALS RECEIVED THAT DO NOT COMPLY WITH THIS WITH THIS REQUIREMENT WILL BE REJECTED WITHOUT REVIEW. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DELAYS CAUSED BY NON-COMPLIANCE WITH THIS REQUIREMENT.
- ALL EMERGENCY AND EXIT LIGHTS WILL BE CONNECTED TO UNSWITCHED HOT LEG SO THAT BATTERY OPERATES UPON POWER FAILURE.



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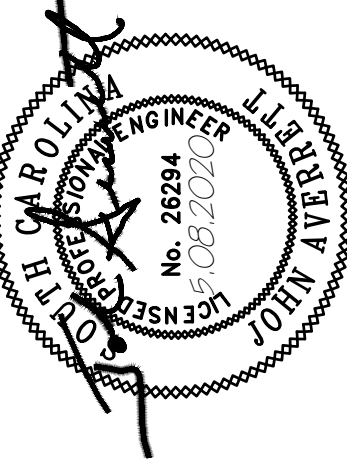


ISSUE	DATE
BID SET	05.08.2020

DRAWN BY: JRD,MBH
CHECKED BY: MGD,JE

INTERNATIONAL DRIVE
BOOSTER PUMP STATION
CONWAY, SC

CGRE190054



PANELBOARD SCHEDULES

E-954