

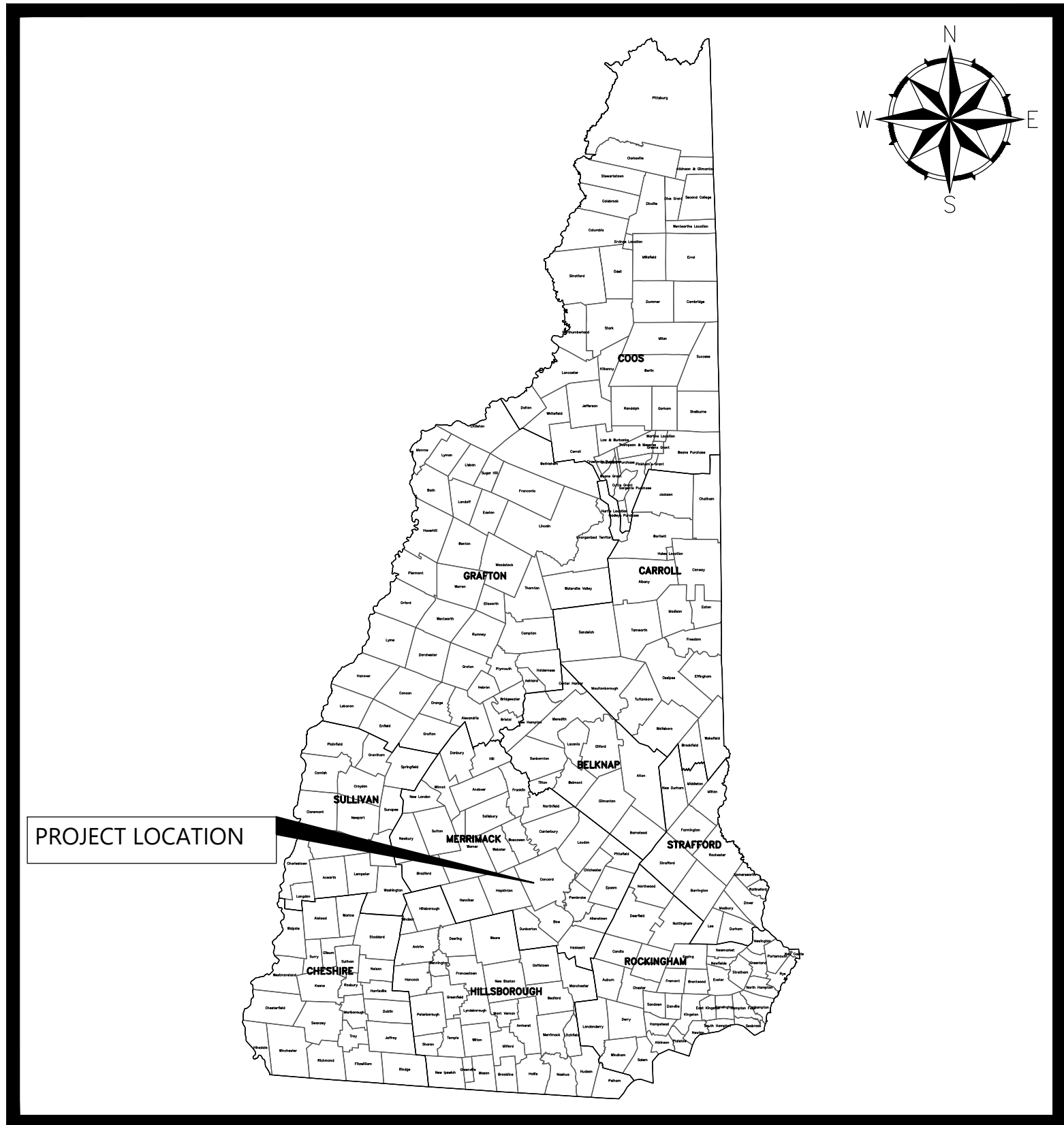
# RADIUS RECYCLING

# CONCORD, NH

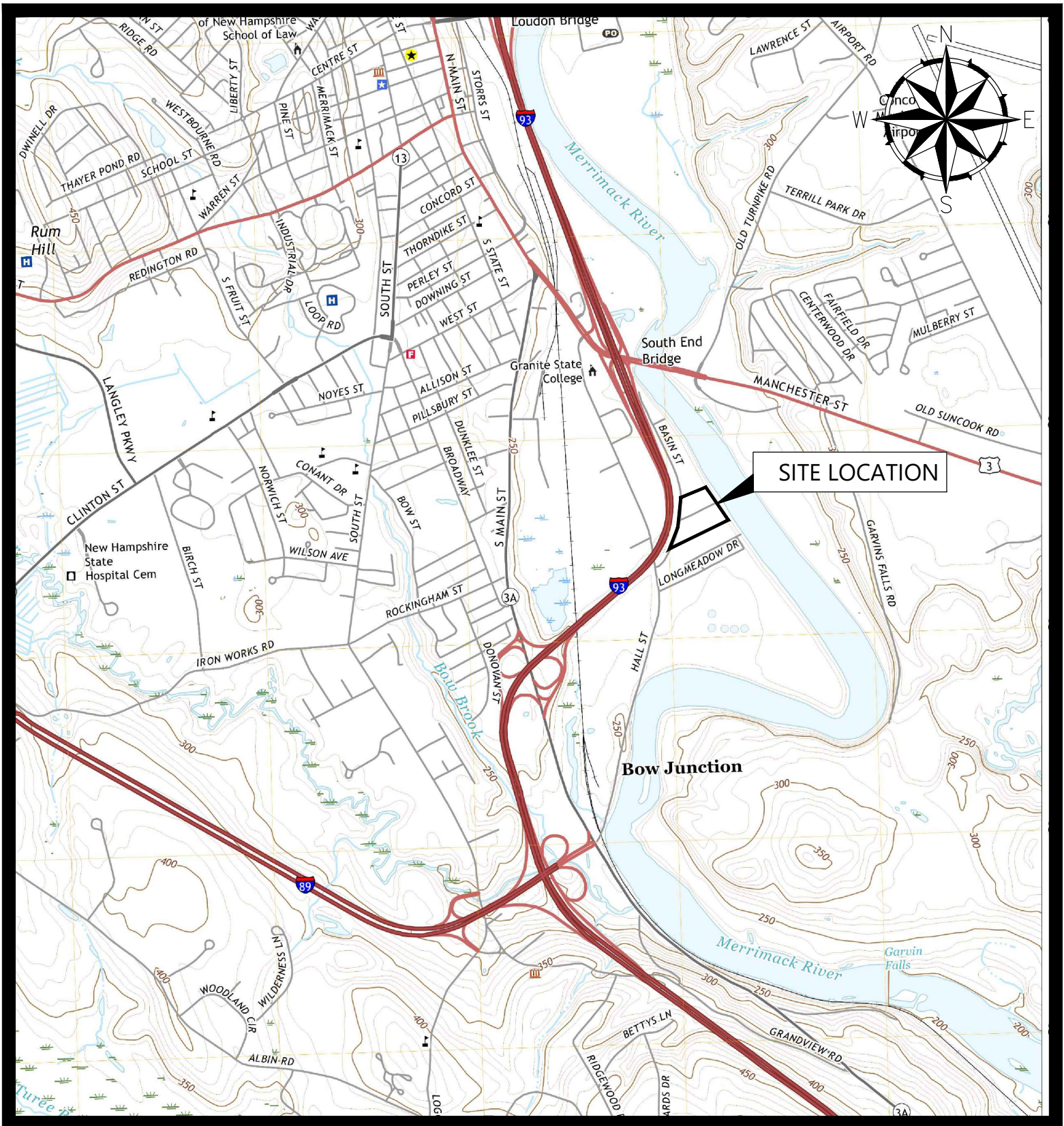
## SANDQUIST FACILITY STORMWATER IMPROVEMENTS

DRAFT 60% DESIGN NOT FOR CONSTRUCTION

NOVEMBER 2025



PROJECT LOCATION MAP



SITE LOCATION MAP

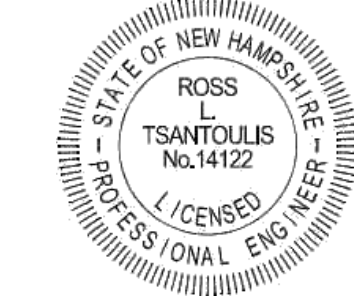
SOURCE: USGS TOPO QUADRANGLE



**Woodard  
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CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0224539.48
DATE:	NOVEMBER 2025
SCALE:	NO SCALE
DESIGNED BY:	YI
DRAWN BY:	KC
CHECKED BY:	RT
FILENAME:	0224539.48-G-000.dwg

DRAWING TITLE:  
**GENERAL  
COVER SHEET**

DRAWING NO:

**G-000**

\\woodardcurran.net\shared\Projects\0224539-48 Schnitzer - Concord Sandquist - Preliminary Design\Drawings\General\0224539-48-G-001.dwg, Nov 04, 2025 - 11:13 am, CLARZOLA

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G-001	SHEET INDEX
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C-002	GENERAL NOTES
C-100	EXISTING CONDITIONS PLAN
CD-100	SITE PREPARATION AND EROSION CONTROL PLAN
CD-101	STORMWATER TREATMENT AND STORAGE AREA SITE PREPARATION AND EROSION CONTROL PLAN
CI-100	OVERALL LAYOUT AND MATERIALS PLAN
CI-101	STORMWATER TREATMENT AND STORAGE AREA LAYOUT AND MATERIALS PLAN
CG-100	OVERALL GRADING AND DRAINAGE PLAN
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CG-102	GRADING AND DRAINAGE PLAN AND PROFILE 1
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I-109	SCADA PANEL EXPANSION I/O: DIGITAL INPUTS

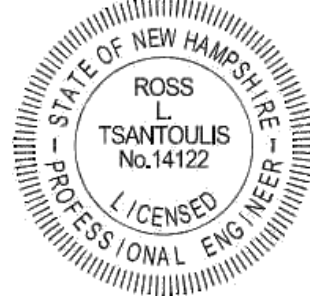


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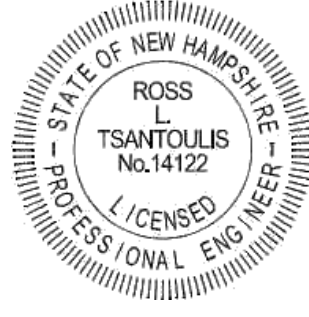
DRAWING NO:

**G-001**

**NOTE: THIS IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN HERE APPEAR ON THE CONTRACT DOCUMENT**

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GENERAL NOTES	DEMOLITION NOTES	WINTER SEDIMENTATION & EROSION CONTROL NOTES							
<div>1. EXISTING CONDITIONS SHOWN HEREON HAVE BEEN PROVIDED FROM AN AERIAL SURVEY PERFORMED BY CIVIL DESIGN CONSULTANTS, INC., IN AUGUST 2022 AND A FIELD SURVEY PERFORMED BY SEC &amp; ASSOCIATES INC., TITLED "EXISTING CONDITIONS PLAN FOR 25 SANDQUIST STREET, CONCORD, NH", DATED OCTOBER 2022 AND REVISED NOVEMBER 8, 2022.</div> <div>2. EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED ARE THOSE WHICH WERE FOUND DURING RESEARCH COMPLETED AT THE MERRIMACK COUNTY REGISTRY OF DEEDS. OTHER RIGHTS, RESTRICTIONS AND EASEMENTS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PARCEL WOULD DETERMINE.</div> <div>2.1. BOUNDARY REFERENCES: MERRIMACK COUNTY REGISTRY OF DEEDS (M.C.R.D.) SUBJECT DEED: BK 3537 PG. 0591. PLANS: M.C.R.D. #6510 (12-1980) M.C.R.D. #10923 (03-1989) M.C.R.D. #14267 (03-1998) M.C.R.D. #201600020983 (09-2016)</div> <div>3. PROPERTY IS PARTIALLY LOCATED WITHIN A DESIGNATED REGULATORY FLOODWAY, ZONE 'AE' AS SHOWN WITH A PUBLISHED BASE FLOOD ELEVATION OF 230. REMAINDER OF PROPERTY IS LOCATED WITHIN A 0.2 PERCENT ANNUAL CHANCE FLOOD HAZARD ZONE 'X' PER FLOOD INSURANCE RATE MAP NUMBER 33013C0542E DATED APRIL 19, 2010.</div> <div>4. MAN-MADE AND NATURAL JURISDICTIONAL WETLAND BOUNDARIES WERE DELINEATED BY MARC JACOBS, CERTIFIED WETLAND SCIENTIST NUMBER 090, INC SEPTEMBER 2022. ACCORDING TO THE STANDARDS OF THE U.S. ARMY CORPS OF ENGINEERS - 1987 WETLANDS DELINEATION MANUAL; THE 2012 REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL; NORTH CENTRAL AND NORTHEAST REGION; AND THE CODE OF ADMINISTRATIVE RULES, NH DEPARTMENT OF ENVIRONMENTAL SERVICES - WETLANDS BUREAU - ENV Wt 100-900. PREDOMINANT HYDRIC SOILS WERE IDENTIFIED UTILIZING THE FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4, JUNE 2020 AND THE FIELD INDICATORS OF THE HYDRIC SOILS IN THE UNITED STATES, VERSION 8, 2016. THE STATUS OF VEGETATION AS HYDROPHYTIC WAS DETERMINED ACCORDING TO THE U.S. ARMY CORPS OF ENGINEERS - NORTH CENTRAL AND NORTHEAST 2020 REGIONAL WETLAND PLANT LIST. COPIES OF SITE PLANS DEPICTING THE WETLAND DELINEATION WHICH HAVE BEEN REVIEWED BY THE WETLAND SCIENTIST ARE INDIVIDUALLY STAMPED, SIGNED, AND DATED. THIS NOTE HAS BEEN CUSTOMIZED FOR THIS PROJECT.</div> <div>5. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).</div> <div>6. ELEVATIONS REFERENCED TO NH STATE PLAN, NAD-83 AS DETERMINED BY G.P.Z. OBSERVATIONS.</div> <div>7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.</div> <div>8. EXISTING UTILITIES SHOWN ON THESE PLANS WERE COMPILED FROM A FIELD SURVEY PREPARED BY SEC &amp; ASSOCIATES INC. AND RECORD DRAINAGE AND SEWER PLANS PROVIDED BY THE CONCORD DEPARTMENT OF PUBLIC WORKS. THESE PLANS DO NOT NECESSARILY DEPICT THE EXACT LOCATIONS OF ALL UTILITIES, WHICH MAY EXIST AT THIS TIME WITHIN THE SURVEY LIMITS. THERE MAY BE EXISTING LINES OTHER THAN THOSE INDICATED. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY UTILITY CONNECTIONS OR CROSSINGS OF PROPOSED OR EXISTING UTILITIES. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IN WRITING. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATIONS AND ELEVATIONS OF THESE LINES. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND ACTUAL FIELD CONDITIONS ENCOUNTERED. THE CONTRACTOR IS RESPONSIBLE FOR HIS/HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE EXISTING UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE AND TO FACILITATE THE PROPOSED CONNECTION(S).</div> <div>9. THESE DOCUMENTS HAVE BEEN PREPARED TO SATISFY ASCE 38.02 MINIMUM UTILITY QUALITY LEVEL C ONLY. ASCE 38.02 MINIMUM QUALITY LEVEL C IS LIMITED TO THE COLLECTION AND REVIEW OF RECORD UTILITY DOCUMENTS AND A SITE FEATURES SURVEY TO MEASURE THE LOCATION AND ELEVATION OF THE EXISTING SEWER AND DRAIN SYSTEM. NO SUBSURFACE EXPLORATION IN THE FORM OF GPR, TEST PITS, BORING OR ANY OTHER GEOPHYSICAL METHODS WERE PERFORMED AS PART OF THIS SURVEY. ALL INFORMATION SHOWN IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGEMENT IN RELATING THIS INFORMATION WITH AVAILABLE RECORD DOCUMENTATION.</div> <div>10. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE SITE DRAWINGS, INCLUDING BUT NOT LIMITED TO ALL UTILITIES, STORM INFRASTRUCTURE, SIGNS, UTILITY POLES, FENCES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITY'S SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COSTS SHALL BE INCURRED BY THE CONTRACTOR.</div> <div>11. THE CONTRACTOR SHALL CALL "DIG SAFE NEW HAMPSHIRE" AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO EXCAVATION IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL SAFETY CODES.</div> <div>12. PRIOR TO CONSTRUCTION, THE ENGINEER AND CONTRACTOR WILL REVIEW THE PERMITTED LIMITS OF WORK.</div> <div>13. LAND OUTSIDE THE PROPOSED LIMIT OF WORK SHALL NOT BE DISTURBED BY THE CONTRACTOR.</div> <div>14. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, STREETS, PAVEMENTS, CURBING, TREES, PLANTINGS, LAWN, FENCING TO REMAIN ON OR OFF THE PREMISES, AND SHALL REPAIR AND REPLACE AT HIS/HER OWN EXPENSE, AS DIRECTED BY THE ENGINEER, ANY ITEMS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK.</div> <div>15. RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, RIPRAP, GRASS, ETC.) UNLESS OTHERWISE NOTED ON PLANS. RESTORATION OF ALL AREAS DAMAGED BY CONTRACTOR SHALL BE INCIDENTAL TO THE PROJECT.</div> <div>16. ALL SURFACES TO REMAIN THAT ARE DISTURBED BY THIS WORK SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, AS DETAILED, OR AS SPECIFIED BY THE ENGINEER.</div> <div>17. ALL CURB DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN KIND AND SHALL CONFORM TO STATE DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS. COST IS INCIDENTAL TO CONTRACT.</div> <div>18. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY.</div> <div>19. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL SAFETY CODES, REGULATIONS, LEGAL REQUIREMENTS, PERMIT CONDITIONS, ETC. PERMIT CONDITIONS RELATE TO THOSE OUTLINED IN THE STATE SPECIFICATIONS.</div> <div>20. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING OF ALL EXCAVATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNING CODES AND REGULATIONS.</div> <div>21. SAWCUTS IN EXISTING PAVEMENT SHALL BE SMOOTH AND STRAIGHT.</div> <div>22. WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL COMPLY WITH APPLICABLE MUNICIPAL AND STATE REQUIREMENTS.</div> <div>23. IF IMPORTED FILL MATERIAL IS REQUIRED, IT SHALL BE CERTIFIED IN WRITING BY A STATE LICENSED PROFESSIONAL ENGINEER AS NON-CONTAMINATED, CLEAN FILL SUITABLE FOR THE INTENDED USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING OF ENVIRONMENTAL PARAMETERS AS OUTLINED IN THE PROJECT SPECIFICATIONS.</div> <div>24. ALL STORMWATER MANAGEMENT AND SOIL EROSION AND SEDIMENT CONTROL FEATURES INCLUDED IN THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ARE THE RESPONSIBILITY OF THE CONTRACTOR. THIS INCLUDES, BUT IS NOT LIMITED TO, SEDIMENT BARRIER, STABILIZED CONSTRUCTION ENTRANCE, WATER QUALITY STRUCTURE, STORM INLET PROTECTION, SUBSURFACE DRAINAGE PIPES AND LAND GRADING.</div> <div>25. THE STORMWATER POLLUTION PREVENTION PLAN SHALL BE MONITORED BY A QUALIFIED PROFESSIONAL. A STATE TRAINED INDIVIDUAL POSSESSING A CERTIFICATION SHALL BE PRESENT AT ALL TIMES DURING CONSTRUCTION OF ALL ITEMS PERTINENT TO THE SWPPP.</div> <div>26. PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS, MONITORING WELLS, AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT WILL BE RESET AT THE CONTRACTOR'S EXPENSE BY A REGISTERED LAND SURVEYOR APPROVED BY THE ENGINEER.</div> <div>27. ALL MATERIAL SHALL BE FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.</div> <div>28. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS PRIOR TO START OF CONSTRUCTION.</div> <div>29. CLEAN AND/OR FLUSH ALL MANHOLES AND SITE PIPING AFTER THE WORK HAS BEEN COMPLETED. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.</div>	<div>1. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE CITY OF CONCORD, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.</div> <div>2. CONSTRUCTION/DEMOLITION DEBRIS NOT APPROVED FOR REUSE ON-SITE, SHALL BE REMOVED AND DISPOSED OFF SITE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. WASTE MANIFEST FORMS DOCUMENTING PROPER OFF-SITE DISPOSAL SHALL BE PROVIDED TO THE SITE/CIVIL ENGINEER AND THE CITY OF CONCORD.</div> <div>3. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED OR TO REMAIN PROTECTED DURING CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF THE CONFLICT.</div> <div>4. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN, ANY TEMPORARY SHUT DOWNS REQUIRED TO FACILITATE THE PROPOSED CONSTRUCTION, WHICH MAY AFFECT USES ON ADJACENT PROPERTIES SHALL BE COORDINATED BY THE CONTRACTOR AND THE CITY OF CONCORD.</div> <div>5. CONTRACTOR SHALL REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL PROCEED WITH CAUTION WITHIN THE PROPOSED WORK AREA TO PREVENT ANY INTERRUPTION TO EXISTING UTILITY SERVICE.</div> <div>6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) PLAN IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.</div> <div>7. CONTRACTOR SHALL COVER CONSTRUCTION DUMPSTERS AND ROLL-OFF CONTAINERS, AND STORE ALL CONSTRUCTION CHEMICALS INSIDE THE CONSTRUCTION TRAILER OR UNDER A COVERED AREA DURING PERIODS WHEN CONSTRUCTION CEASES.</div>	<div>THE CONTRACTOR SHALL FOLLOW WINTER CONSTRUCTION EROSION CONTROL METHODS AFTER OCTOBER 15TH AS FOLLOWS:</div> <div>1. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.</div> <div>2. INCOMPLETE ROAD OR PARKING SURFACES WHERE WORK HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM OF 3-INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.</div>							
		LAYOUT AND MATERIALS NOTES							
		1. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.							
		GRADING AND DRAINAGE NOTES							
		<div>1. CASTINGS FOR EXISTING STRUCTURES TO REMAIN AND PROPOSED STRUCTURES SHALL BE SET TO THE PROPOSED ELEVATIONS SHOWN ON THE DRAWINGS.</div> <div>2. THE FILLING OF SOIL OVER THE ROOTS OF TREES TO BE PRESERVED IS PROHIBITED.</div> <div>3. UNSUITABLE FILL AND BACKFILL MATERIALS ARE MATERIALS CONTAINING EXCESSIVE AMOUNT OF WATER, PLASTIC, CLAY, VEGETATION, ORGANIC MATTER, DEBRIS, PAVEMENT, STONES OR BOULDERS OVER X INCHES IN GREATEST DIMENSION, FROZEN MATERIAL, AND MATERIAL WHICH, IN THE OPINION OF THE ENGINEER, WILL NOT PROVIDE A SUITABLE FOUNDATION OR SUBGRADE.</div> <div>4. SUITABLE SOIL SHALL BE PLACED IN LAYERS TO THE REQUIRED ELEVATIONS AS SHOWN ON THE DRAWINGS. FILL, BACKFILL AND COMPACT TO PRODUCE MINIMUM SUBSEQUENT SETTLEMENT OF THE MATERIAL AND PROVIDE ADEQUATE SUPPORT FOR THE SURFACE TREATMENT OR STRUCTURE TO BE PLACED ON THE MATERIAL. PLACE MATERIAL IN APPROXIMATELY HORIZONTAL LAYERS OF BEGINNING AT LOWEST AREA TO BE FILLED. DO NOT IMPAIR DRAINAGE. DO NOT USE ON-SITE TOPSOIL AS FILL MATERIAL.</div> <div>5. CONTRACTOR SHALL PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN X INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN X INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. DO NOT PLACE BACKFILL OR FILL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE.</div> <div>6. FOR GROUND SURFACE PREPARATION, CONTRACTOR SHALL REMOVE VEGETATION, DEBRIS, UNSUITABLE SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACEMENT OF FILL. REMOVE MATERIAL TO THE FULL EXTENT OF ROOT PENETRATION. PROOF-ROLL EXISTING GROUND SURFACE PRIOR TO PLACEMENT OF FILL TO PROVIDE A DENSE, STABLE BASE FOR THE FIRST LIFTS OF THE STRUCTURAL FILL.</div> <div>7. CONTRACTOR SHALL COMPACT ALL MATERIAL TO THE FOLLOWING MINIMUM MODIFIED PROCTOR DENSITIES:<table><tr><td>FILL AND BACKFILL LOCATION</td><td>DENSITY</td></tr><tr><td>UNDER ROADWAY AND PARKING AREA</td><td>95%</td></tr><tr><td>LAWN AREAS</td><td>95%</td></tr></table></div> <div>8. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL DIG TEST PITS TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS, AND ADVISE THE ENGINEER IN WRITING OF ANY DISCREPANCIES.</div> <div>9. ALL PROPOSED UTILITIES AND THEIR CONNECTIONS, DISCONNECTION AND RELOCATION OF EXISTING UTILITIES SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION. ANY COORDINATION WITH THE MUNICIPALITY AND/OR UTILITY COMPANY, PERMITS OR APPROVALS REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.</div>	FILL AND BACKFILL LOCATION	DENSITY	UNDER ROADWAY AND PARKING AREA	95%	LAWN AREAS	95%	
FILL AND BACKFILL LOCATION	DENSITY								
UNDER ROADWAY AND PARKING AREA	95%								
LAWN AREAS	95%								
	UTILITIES NOTES								
	<div>1. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL WIRING DIAGRAMS, SCHEDULES, CONDUIT MATERIAL, POWER CONNECTIONS AND ENERGIZATION AND ALL OTHER APPURTENANCES RELATED TO ELECTRICAL WORK FOR THIS PROJECT.</div> <div>2. ALL PROPOSED ELECTRICAL AND LIGHTING WORK SHOWN ON THESE CIVIL DRAWINGS SHALL BE COORDINATED WITH THE ELECTRICAL PLANS AND SPECIFICATIONS SHOWN ON THE ELECTRICAL DRAWINGS. IN THE EVENT THERE IS A DISCREPANCY BETWEEN THE CIVIL AND ELECTRICAL DRAWINGS, THE ENGINEER SHALL BE NOTIFIED IN WRITING.</div>								
	CONSTRUCTION NOTES								
	<div>CONSTRUCTION SHALL BE PHASED SUCH THAT ALL DISTURBED AREAS SHALL FIRST BE PROTECTED WITH EROSION AND SEDIMENT CONTROLS AS INDICATED ON THE PLANS. THE CONSTRUCTION PHASING DESCRIBED BELOW IS FOR GENERAL PURPOSES ONLY, AND WILL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR HIS/HER MEANS AND METHODS OF CONSTRUCTION. GENERAL CONSTRUCTION SEQUENCING IS AS FOLLOWS:</div> <div>1. INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES AS INDICATED ON THE PLANS.</div> <div>2. DEMOLITION AND REMOVAL OF EXISTING PAVEMENT, CURB, TREES, UTILITIES, ETC.</div> <div>3. STRIP AND STOCKPILE TOPSOIL AT DESIGNATED ON-SITE STORAGE AREA.</div> <div>4. BEGIN ROUGH GRADING AND EARTHWORK ACTIVITIES (EMBANKMENT AND EXCAVATION OPERATIONS).</div> <div>5. INSTALL NEW STORM SEWER SYSTEM AND REMOVE OLD SYSTEM (BEGINNING AT FURTHEST DOWNSTREAM STRUCTURE).</div> <div>6. PLACE INLET PROTECTION ON PROPOSED CATCH BASINS AS SHOWN ON THE DRAWINGS.</div> <div>7. INSTALL UTILITIES (SANITARY SEWER, WATER, ELECTRIC, ETC.).</div> <div>8. INSTALL BITUMINOUS CONCRETE PAVEMENT SUBBASE AND BITUMINOUS CONCRETE BINDER COURSES AS SPECIFIED ON PLANS.</div> <div>9. FINISH GRADING, REDISTRIBUTE STOCKPILED TOPSOIL AND ESTABLISH VEGETATION ON ALL DISTURBED AND NEW PERVIOUS AREAS.</div> <div>10. CLEAN BITUMINOUS CONCRETE PAVEMENT AND STORM SEWER OF ALL DEBRIS AND SEDIMENT.</div> <div>11. COMPLETE SITE AND BUILDING CONSTRUCTION.</div> <div>12. INSTALLATION OF BITUMINOUS PAVEMENT CONCRETE TOP COURSE (THIS WEARING COURSE SHALL BE INSTALLED NEAR COMPLETION OF PROJECT).</div> <div>13. ACHIEVE PERMANENT AND FINAL STABILIZATION OF AREAS DISTURBED DURING CONSTRUCTION.</div> <div>14. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES FROM THE SITE.</div>								
	SEDIMENTATION & EROSION CONTROL NOTES								
	<div>1. SOIL AND EROSION CONTROLS SHALL BE PLACED PRIOR TO ANY CONSTRUCTION ACTIVITIES. CONTRACTOR TO NOTIFY THE ENGINEER AND THE OWNER AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES.</div> <div>2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL EROSION CONTROL MEASURES NECESSARY TO PREVENT OFF-SITE TRACKING OF EARTH, SEDIMENT AND DEBRIS.</div> <div>3. SEDIMENTATION AND EROSION CONTROL MEASURES TO BE ADJUSTED AS NEEDED WITHIN ACTIVE LIMIT OF DISTURBANCE.</div> <div>4. PERMANENT SEEDING SHALL OCCUR BETWEEN MARCH 1 AND JUNE 15, OR BETWEEN AUGUST 15 AND OCTOBER 15. INSTALL EROSION CONTROL BLANKETS OR SIMILAR EROSION CONTROL MEASURES OUTSIDE THE PERMANENT SEEDING TIME FRAME.</div> <div>5. ALL SITE SOILS TO BE STOCKPILED FOR MORE THAN 14 DAYS SHALL BE SURROUNDED BY EROSION CONTROL BARRIERS AND TEMPORARILY SEEDED AND MULCHED.</div> <div>6. EROSION CONTROL MEASURES SHALL BE INSPECTED AT A MINIMUM FREQUENCY OF ONCE EVERY WEEK, AND DURING AND AFTER EVERY RAIN EVENT GREATER THAN 0.25". ANY NECESSARY REPLACEMENT OR REPAIR SHALL BE PERFORMED PROMPTLY BY THE CONTRACTOR.</div> <div>7. DUST SHALL BE CONTROLLED AS NECESSARY THROUGH THE USE OF WATER. THE USE OF CALCIUM CHLORIDE FOR DUST CONTROL IS NOT ALLOWED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.</div> <div>8. CONTRACTOR SHALL COORDINATE LOCATION OF CONSTRUCTION ENTRANCE WITH OWNER.</div> <div>9. CONTRACTOR SHALL COORDINATE OF CONCRETE WASHOUT WITH OWNER. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY MANAGING CONCRETE WASHOUT WASTEWATER IN ACCORDANCE WITH LOCAL REGULATIONS.</div> <div>10. INVASIVE OR NOXIOUS SPECIES MAY NOT BE USED. PER THE WETLAND BUREAU, REED CANARY GRASS IS A LOCAL PROBLEMATIC SPECIES.</div> <div>11. AN AREA SHALL BE CONSIDERED "STABLE" IF ONE OF THE FOLLOWING HAS OCCURRED: INSTALLATION OF BASE COURSE GRAVELS IN AREAS TO BE PAVED, A MINIMUM OF 85% VEGETATION GROWTH IS ESTABLISHED, INSTALLATION OF STONE OR RIPRAP AT A MINIMUM OF 3-INCHES, OR PROPER INSTALLATION OF EROSION CONTROL BLANKETS.</div> <div>12. DURING CONSTRUCTION, THE MAXIMUM AREA OF DISTURBANCE SHALL NOT EXCEED TWO (2) ACRES AT ANY ONE TIME. THE AREA SHALL NOT BE LEFT UNSTABILIZED IN ORDER TO MAINTAIN THE SMALLEST PRACTICAL AREA OF DISTURBANCE.</div> <div>13. WITHIN 72 HOURS OF FINAL GRADING, CUT AND FILL AREAS, PARKING LOTS, AND ROADWAYS SHALL BE PERMANENTLY STABILIZED.</div> <div>14. ALL DISTURBED AREAS SHALL NOT BE EXPOSED AND STABILIZED WITHIN 45 DAYS.</div>								

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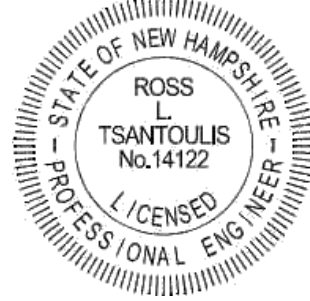


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RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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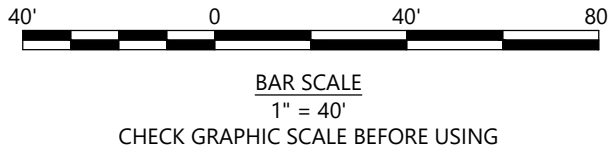
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DATE:	NOVEMBER 2025
SCALE:	NO SCALE
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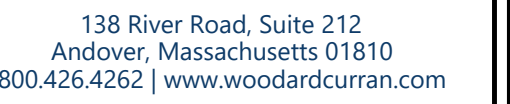
**CIVIL  
GENERAL NOTES**

DRAWING NO:

**C-002**



1. PROPERTY IS WITHIN THE ZONING DISTRICTS "OCP" (OPPORTUNITY CORRIDOR PERFORMANCE) AND "RO" (OPEN SPACE RESIDENTIAL DISTRICT).



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CLIENT INFO:

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

JOB NO:	0224539.48
DATE:	NOVEMBER 2025
SCALE:	1" = 40'
DESIGNED BY:	YI
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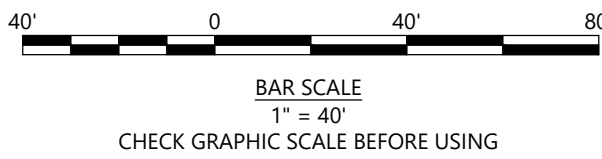
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# CIVIL

## EXISTING CONDITIONS PLAN

DRAWING NO:

## C-100



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CONCORD, NH

SANDQUIST FACILITY  
SEWAGE TREATMENT PLANT

REV	MM/DD/YY	DESCRIPTION
JOB NO:	0224539.48	
DATE:	NOVEMBER 2025	
SCALE:	1" = 40'	
DESIGNED BY:	YI	
DRAWN BY:	KC	
CHECKED BY:	RT	
FILENAME:	0224539.48-CD-100.dwg	

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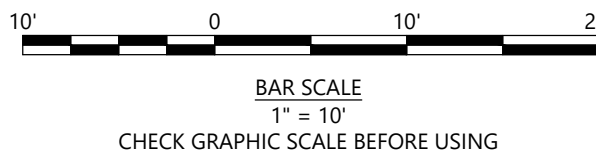
**CIVIL**

**SITE PREPARATION AND**

**EROSION CONTROL PLAN**

DRAWING NO

# CD-100



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STORMWATER IMPROVEMENTS

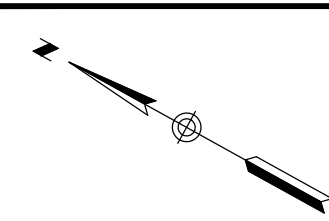
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**CIVIL**

**STORMWATER TREATMENT  
AND STORAGE AREA SITE  
PREPARATION AND  
EROSION CONTROL PLAN**

DRAFTING NO.

**CD-101**



**SHEET GENERAL NOTES**

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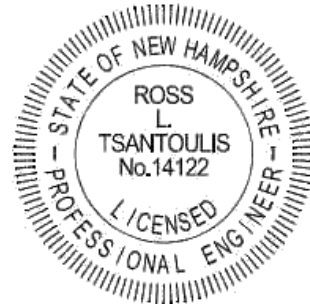


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SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0224539.48
DATE:	NOVEMBER 2025
SCALE:	1" = 40'
DESIGNED BY:	YI
DRAWN BY:	KC
CHECKED BY:	RT
FILENAME:	0224539.48-CI-100.dwg

DRAWING TITLE:

**CIVIL  
OVERALL LAYOUT AND  
MATERIALS PLAN**

DRAWING NO:

**CI-100**

40' 0 40' 80'

BAR SCALE

1" = 40'

CHECK GRAPHIC SCALE BEFORE USING

MERRIMACK RIVER

**N/F  
PROLERIZED NEW ENGLAND CO, LLC  
25 SANDQUIST ST  
AREA: 6.93-AC±**

**N/F  
34 BASIN ST REALTY TRUST  
BASIN ST**

**N/F  
EVERETT ASHTON INC  
121-123 HALL ST**

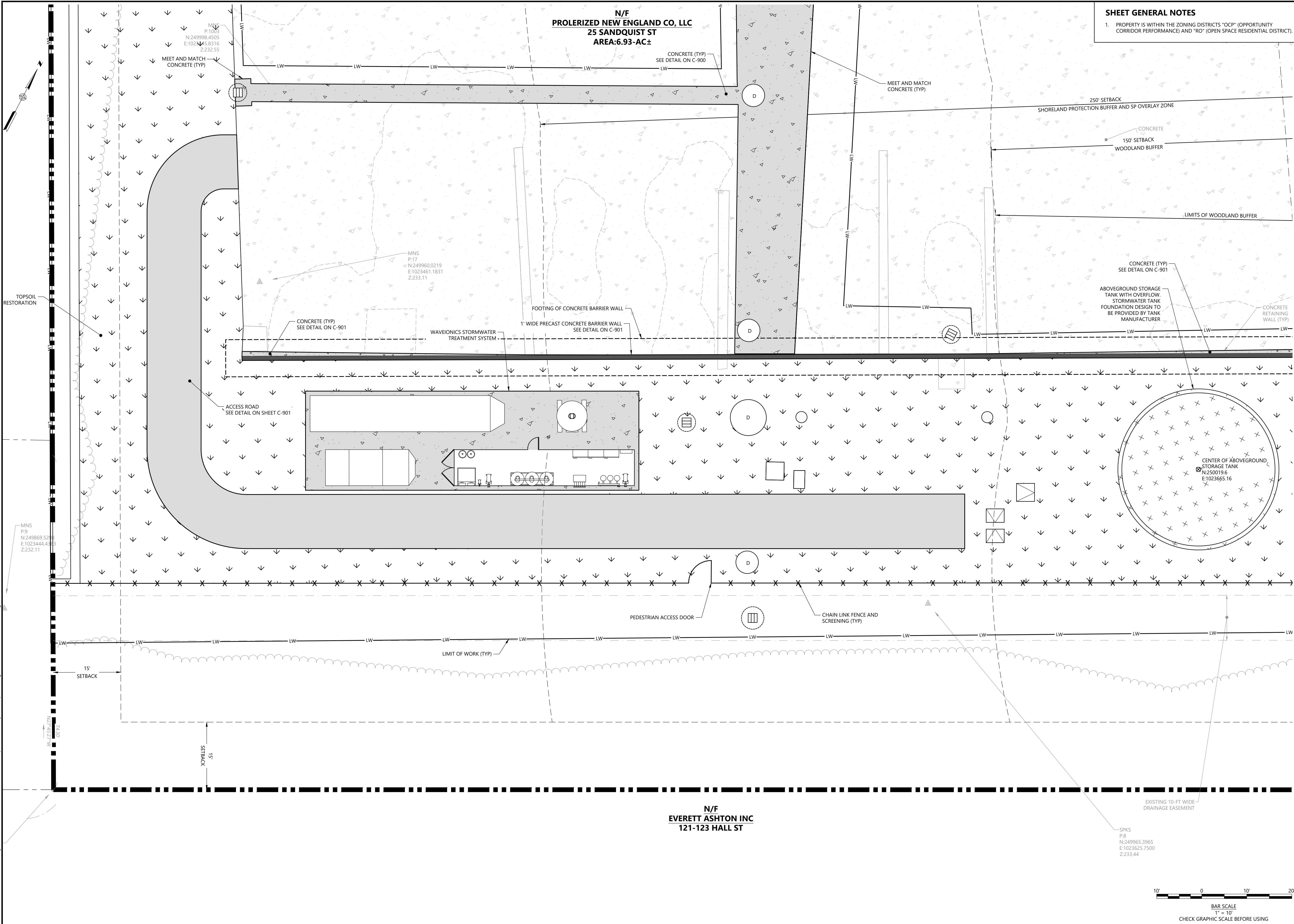
**N/F  
CFA CORPORATION  
12 SANDQUIST ST**

**N/F  
BASIN LLC  
10 BASIN ST**

**N/F  
34 BASIN ST REALTY TRUST  
34 BASIN ST**

**N/F  
CFA CORPORATION  
11 SANDQUIST ST**

**N/F  
CFA CORPORATION  
14 SANDQUIST ST**



**SHEET GENERAL NOTES**

1. PROPERTY IS WITHIN THE ZONING DISTRICTS "OCF" (OPPORTUNITY CORRIDOR PERFORMANCE) AND "RO" (OPEN SPACE RESIDENTIAL DISTRICT).

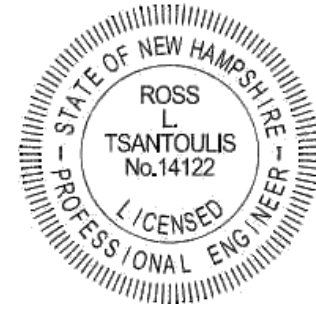


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CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION

JOB NO: 0224539.48

DATE: NOVEMBER 2025

SCALE: 1" = 10'

DESIGNED BY: YI

DRAWN BY: KC

CHECKED BY: RT

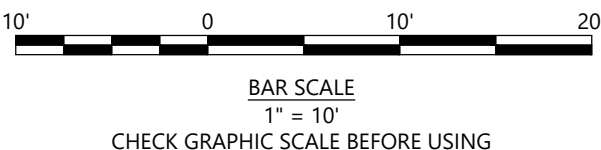
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DRAWING TITLE:

**CIVIL  
STORMWATER TREATMENT  
AND STORAGE AREA  
LAYOUT AND MATERIALS  
PLAN**

DRAWING NO:

**CI-101**



BAR SCALE  
1" = 10'  
CHECK GRAPHIC SCALE BEFORE USING

## SHEET GENERAL NOTES

1. PROPERTY IS WITHIN THE ZONING DISTRICTS "OCP" (OPPORTUNITY CORRIDOR PERFORMANCE) AND "RO" (OPEN SPACE RESIDENTIAL DISTRICT).



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CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV MM/DD/YY DESCRIPTION

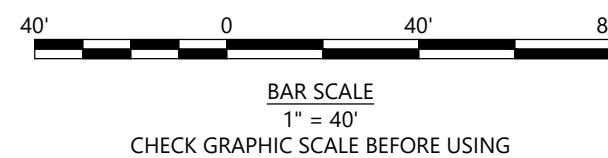
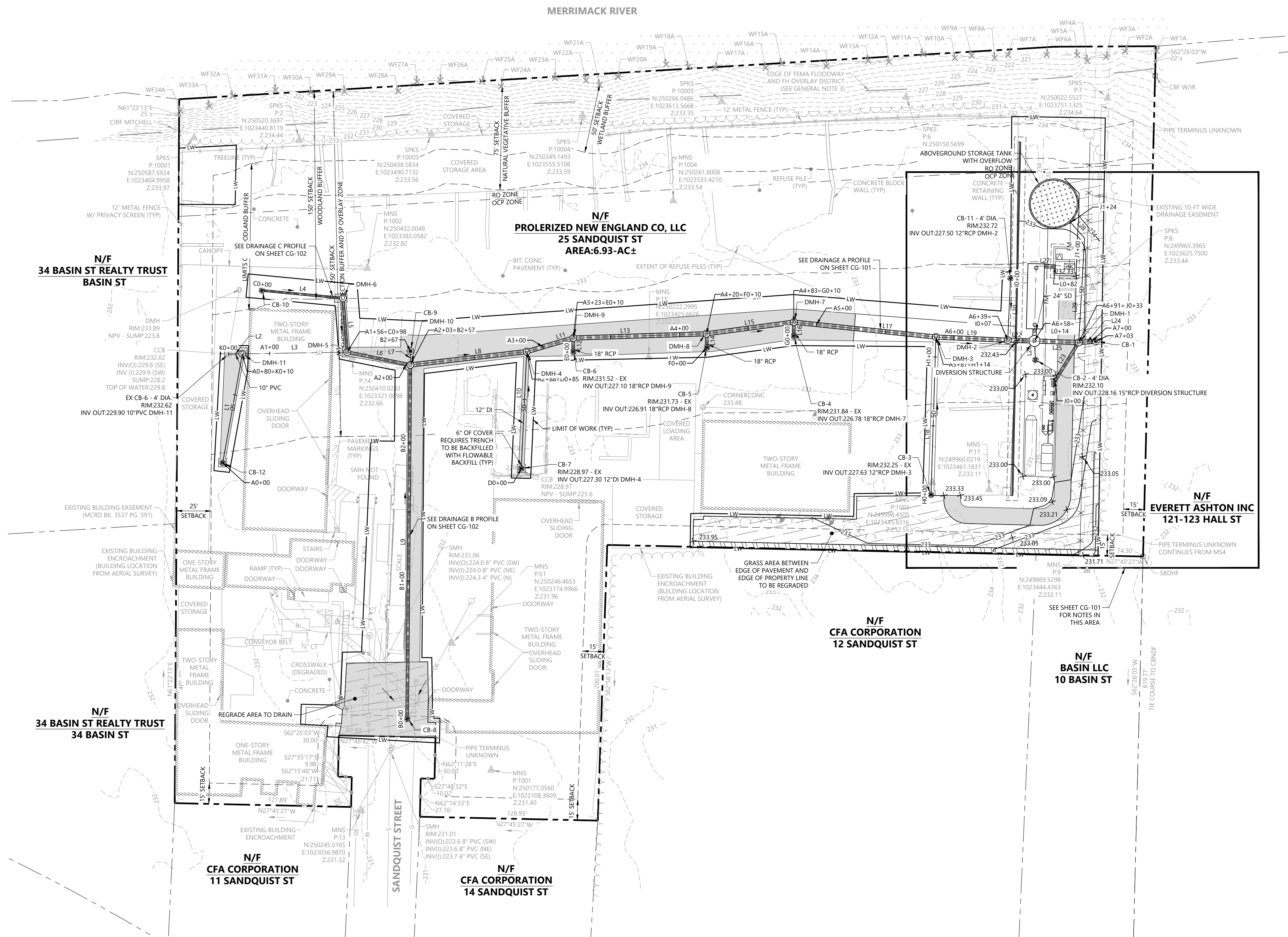
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DRAWN BY: KC  
CHECKED BY: RT  
FILENAME: 0224539.48-CG-100.dwg

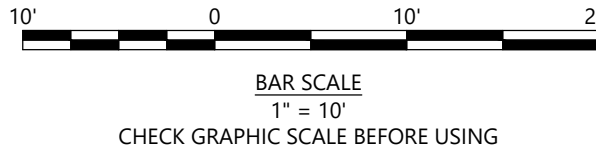
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OVERALL GRADING AND  
DRAINAGE PLAN**

DRAWING NO:

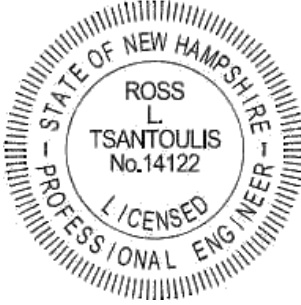
**CG-100**





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CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
JOB NO:	0224539.48	
DATE:	NOVEMBER 2025	
SCALE:	1" = 10'	
DESIGNED BY:	YI	
DRAWN BY:	KC	
CHECKED BY:	RT	
FILENAME:	0224539.48-CG-101.dwg	

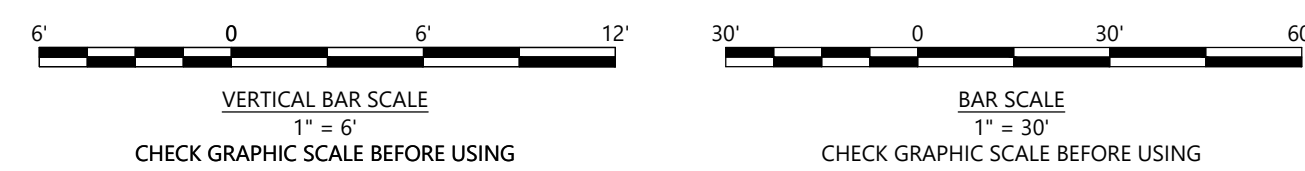
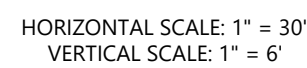
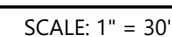
DRAWING TITLE:

**CIVIL**

**STORMWATER TREATMENT  
AND STORAGE AREA GRADING  
AND DRAINAGE PLAN**

DRAWING NO:

**CG-101**



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STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
JOB NO:	0224539.48	
DATE:	NOVEMBER 2025	
SCALE:	AS NOTED	
DESIGNED BY:	YI	
DRAWN BY:	KC	
CHECKED BY:	RT	
FILENAME:	0224539.48-CG-102.dwg	

DRAWING TITLE:

**CIVIL**

**GRADING AND DRAINAGE**

**PLAN AND PROFILE 1**

DRAWING NO:

CG-102

CG-102

SHEET GENERAL NOTES

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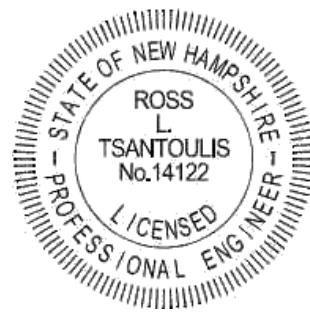


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CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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JOB NO: 0224539.48

DATE: NOVEMBER 2025

SCALE: AS NOTED

DESIGNED BY: YI

DRAWN BY: KC

CHECKED BY: RT

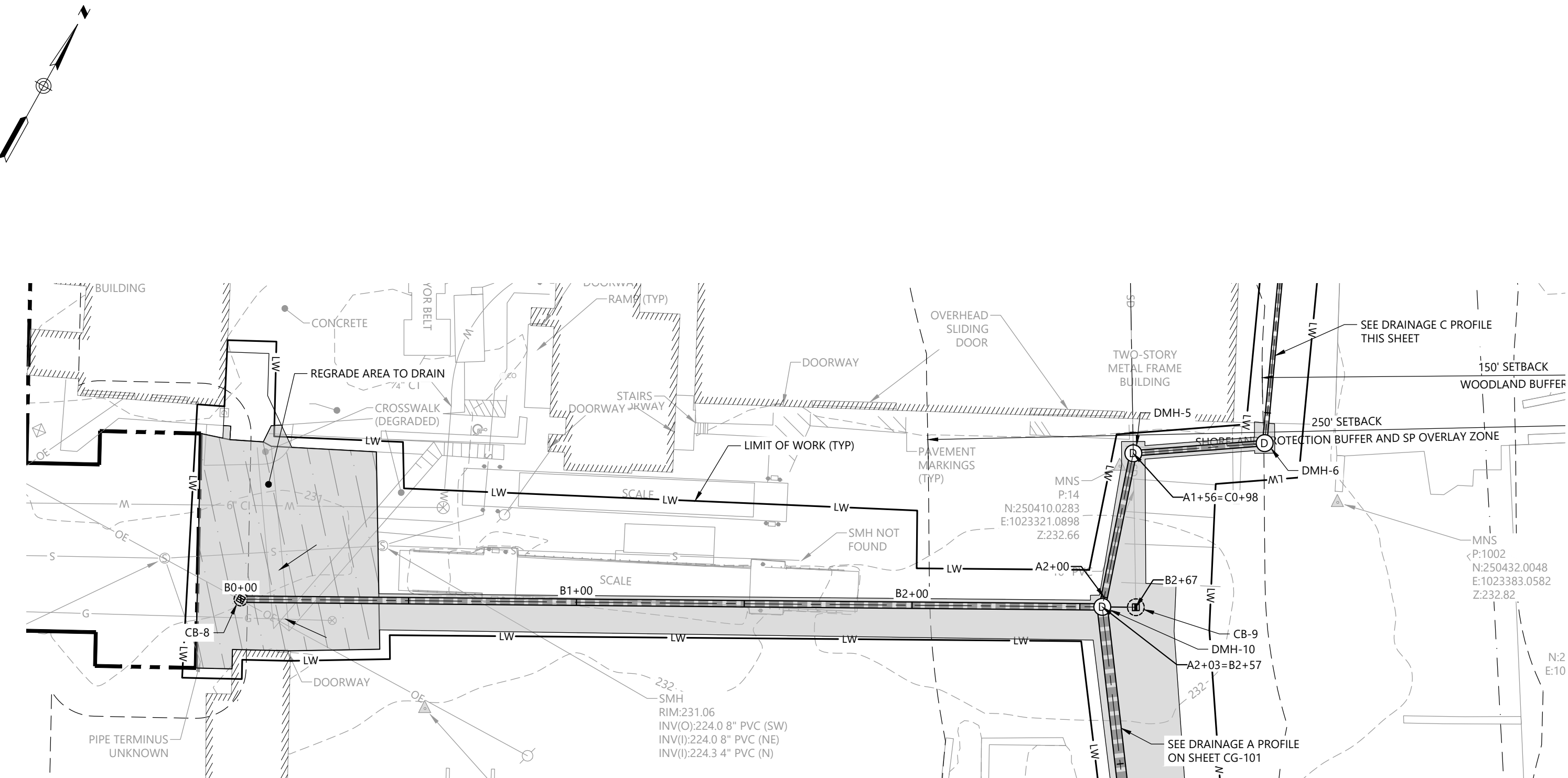
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DRAWING TITLE:

**CIVIL  
GRADING AND DRAINAGE  
PLAN AND PROFILE 2**

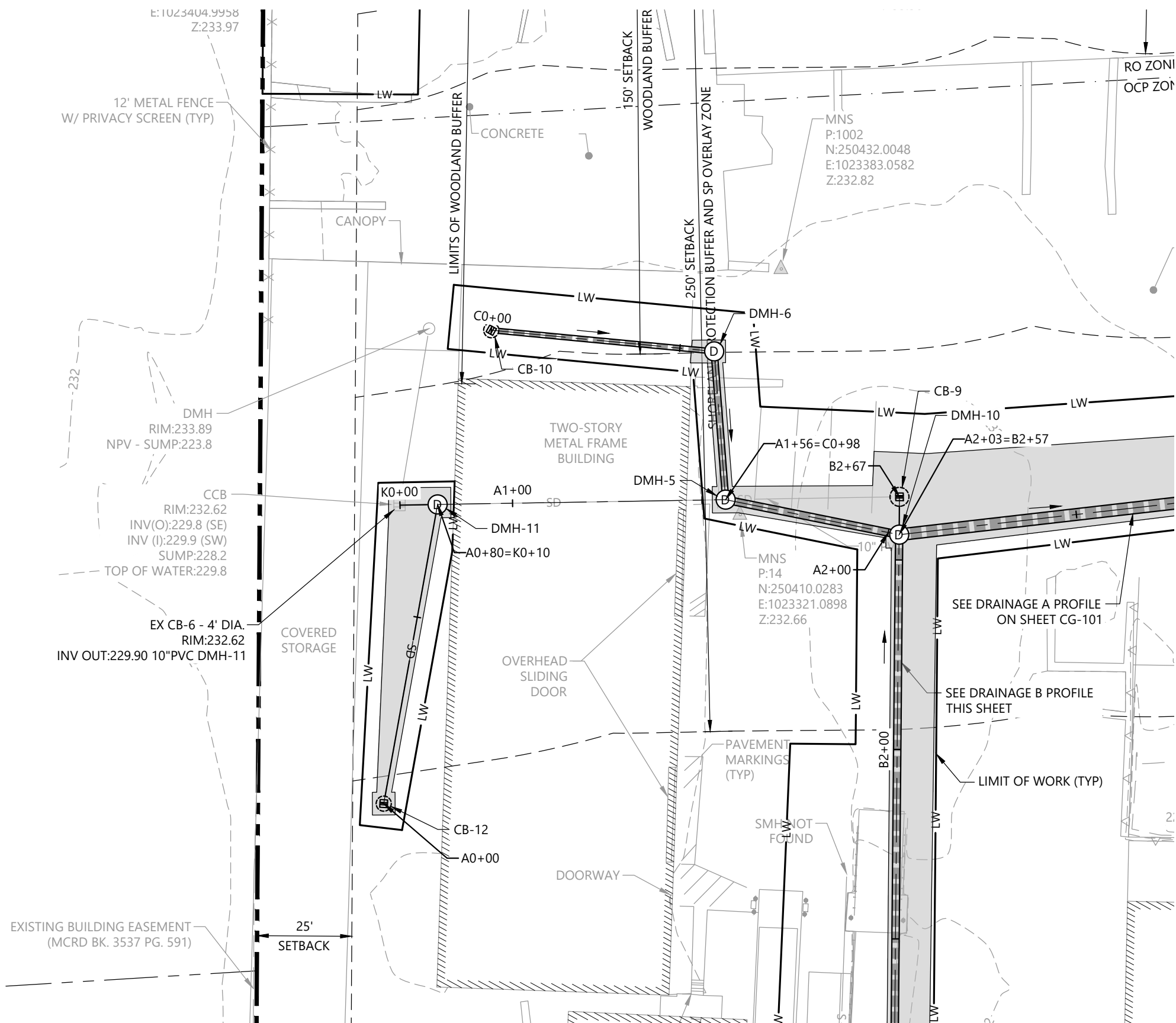
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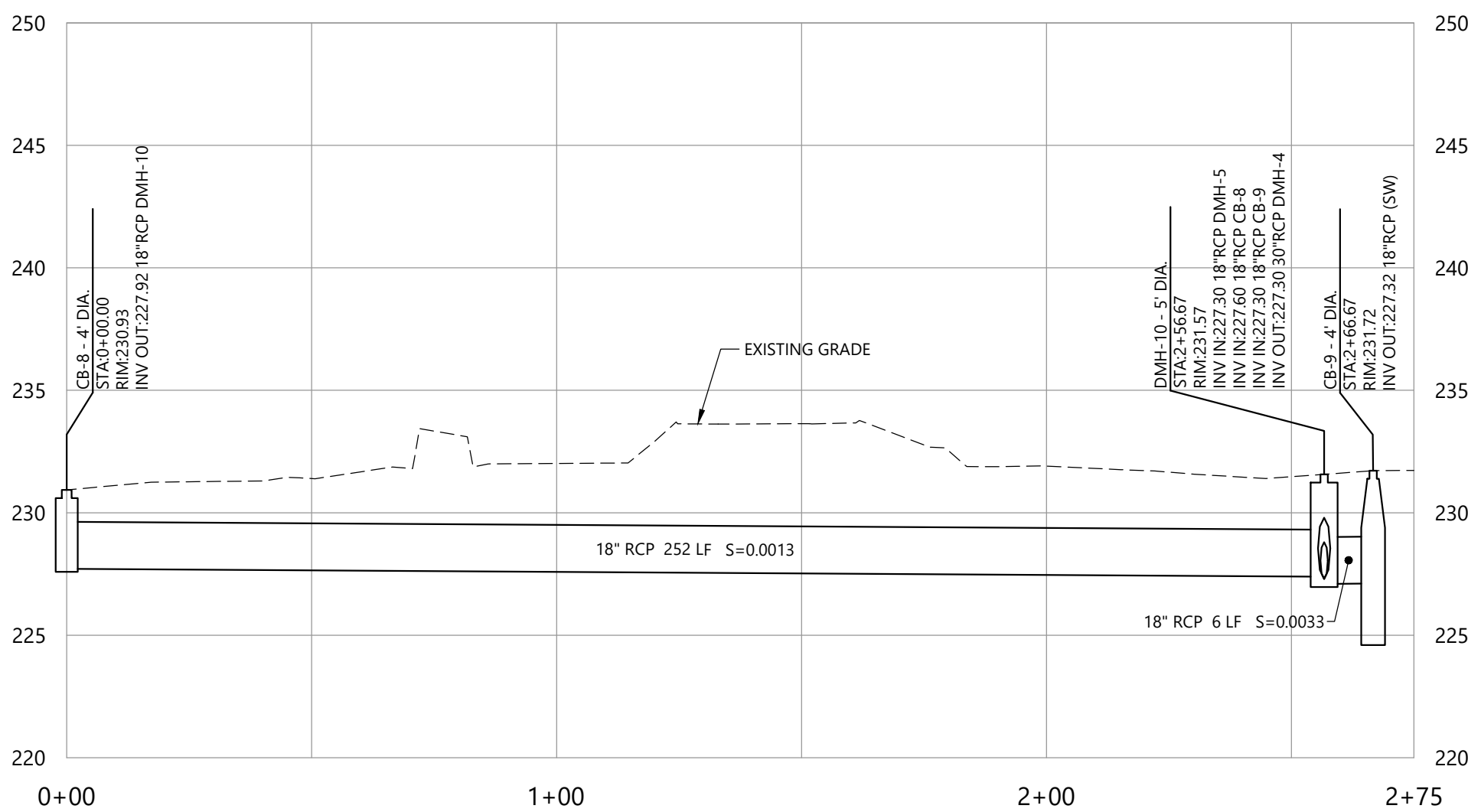
**DRAINAGE B PLAN**

SCALE: 1" = 30'



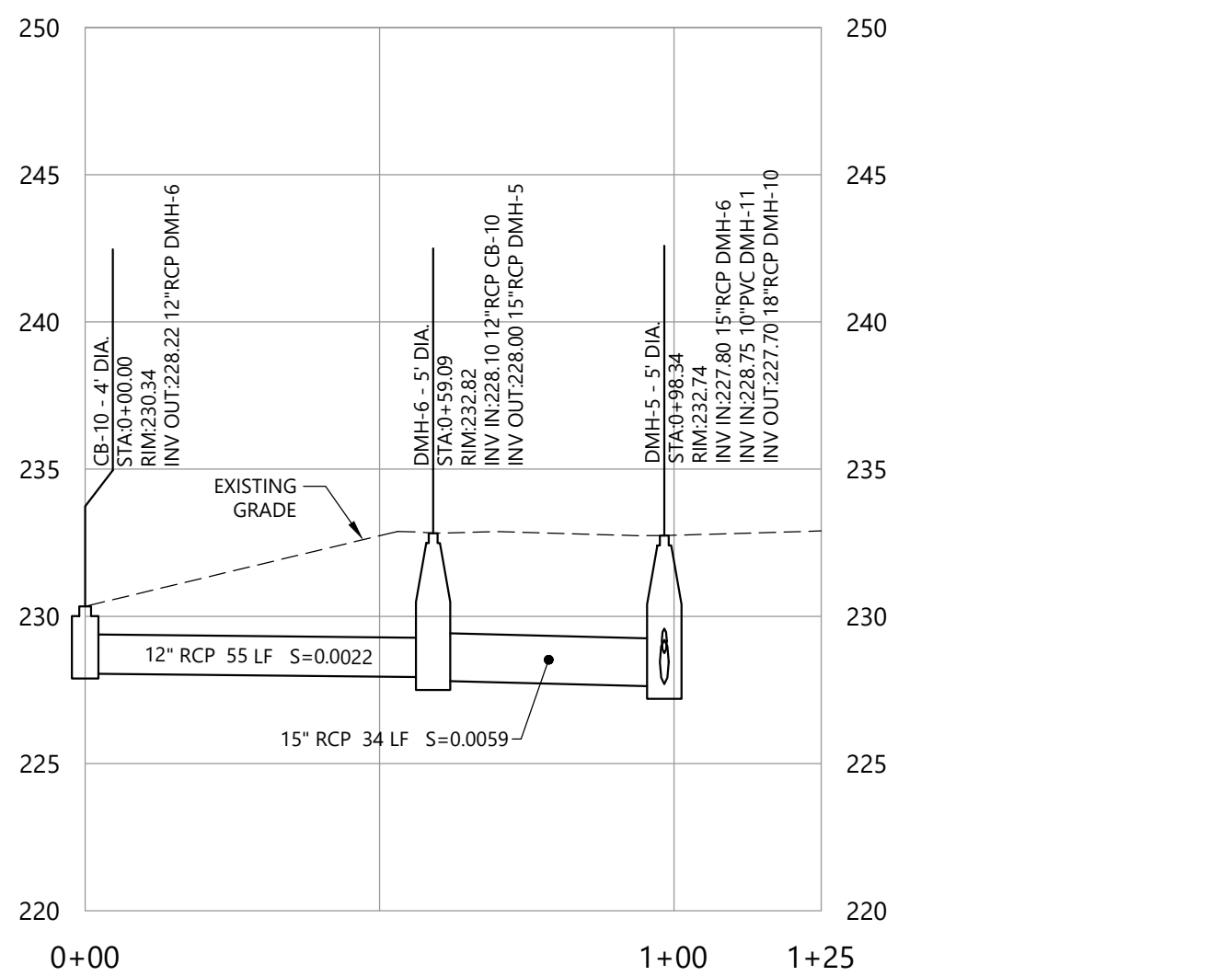
**DRAINAGE C PLAN**

SCALE: 1" = 30'



**DRAINAGE B-PROFILE STA. 0+00 TO STA. 2+75**

HORIZONTAL SCALE: 1" = 30'  
VERTICAL SCALE: 1" = 6'



**DRAINAGE C-PROFILE STA. 0+00 TO STA. 1+25**

HORIZONTAL SCALE: 1" = 30'  
VERTICAL SCALE: 1" = 6'

6' 0 6' 12'

VERTICAL BAR SCALE  
1" = 6'

CHECK GRAPHIC SCALE BEFORE USING

30' 0 30' 60'

BAR SCALE  
1" = 30'

CHECK GRAPHIC SCALE BEFORE USING

\\woodardcurran.net\shared\Projects\0224539-48-Schmitzer-Concord-Sandquist-Preliminary-Design\Drawings\Civil\0224539-48-CG-104.dwg, Nov 04, 2025 - 11:35am CBAZCJA

STRUCTURE TABLE							
NAME	DIA.	RIM	INV IN/SIZE/FROM	INV OUT/SIZE/TO	STA/OFFSET	NORTHING	EASTING
CB-1	4'	232.87	226.20/30"RCP/DMH-1 226.50/15"RCP/UPSTREAM	226.20/24"RCP/OUTFALL	A7+03/0.0'	249944.5538	1023592.6942
CB-2	4'	232.10		228.16/15"RCP/DIVERSION STRUCTURE	L0+00/0.0'	249976.2278	1023559.6069
CB-3	4'	232.25		227.63/12"RCP/DMH-3	H0+00/0.0'	249995.0353	1023437.3854
CB-4	4'	231.84		226.78/18"RCP/DMH-7	G0+00/0.0'	250137.9226	1023489.8873
CB-5	4'	231.73		226.91/18"RCP/DMH-8	F0+00/0.0'	250188.8362	1023452.0239
CB-6	4'	231.52		227.10/18"RCP/DMH-9	E0+00/0.0'	250272.1123	1023402.3452
CB-7	4'	228.97		227.30/12"DI/DMH-4	D0+00/0.0'	250264.0462	1023310.1462
CB-8	4'	230.93		227.92/18"RCP/DMH-10	B0+00/0.0'	250248.3743	1023111.2073
CB-9	4'	231.72		227.32/18"RCP/DMH-10	B2+67/0.0'	250375.5571	1023345.5959
CB-10	4'	230.34		228.22/12"RCP/DMH-6	C0+00/0.0'	250491.0807	1023331.8282
CB-11	4'	232.72		227.50/12"RCP/DMH-2	I0+00/0.0'	250020.7315	1023602.6226
CB-12	4'	232.85		230.44/10"PVC/DMH-11	A0+00/0.0'	250455.3235	1023208.8003
DIVERSION STRUCTURE	7'	232.30	226.38/30"RCP/DMH-2 226.32/24"RCP/DWS 228.00/15"RCP/CB-2	226.38/30"RCP/DMH-1	A6+58/0.1' L=L0+21/0.0'	249983.5331	1023571.2438
DMH-1	5'	232.30	226.27/6"PVC/TANK 226.24/30"RCP/DIVERSION STRUCTURE 226.27/18"RCP/TREATMENT	226.24/30"RCP/CB-1	A6+91/0.0' R=J0+33/0.0'	249954.9452	1023585.8838
DMH-2	5'	233.47	226.42/30"RCP/DMH-3 227.00/12"RCP/CB-11	226.42/30"RCP/DIVERSION STRUCTURE	A6+39/0.0' =I0+07/0.0'	250000.7313	1023562.3710
DMH-3	5'	233.09	226.52/30"RCP/DMH-7 227.08/12"RCP/CB-3	226.52/30"RCP/DMH-2	A5+87/0.0' =H1+14/0.0'	250047.4478	1023539.1461
DMH-4	5'	232.73	227.12/30"RCP/DMH-10 227.12/12"DI/CB-7	227.12/30"RCP/DMH-9	A2+88/0.0' =D0+85/0.0'	250301.6791	1023386.1250
DMH-5	5'	232.74	227.80/15"RCP/DMH-6 228.75/10"PVC/DMH-11	227.70/18"RCP/DMH-10	A1+56/0.0' =C0+98/0.0'	250415.3059	1023322.6937
DMH-6	5'	232.82	228.10/12"RCP/CB-10	228.00/15"RCP/DMH-5	C0+59/0.0'	250436.9231	1023355.4602
DMH-7	5'	232.47	226.73/30"RCP/DMH-8 226.73/18"RCP/CB-4	226.73/30"RCP/DMH-3	A4+83/0.0' =G0+10/0.0'	250142.6679	1023498.6897
DMH-8	5'	232.37	226.86/30"RCP/DMH-9 226.86/18"RCP/CB-5	226.86/30"RCP/DMH-7	A4+20/0.0' =F0+10/0.0'	250193.9594	1023460.6119
DMH-9	5'	232.22	227.05/30"RCP/DMH-4 227.05/18"RCP/CB-6	227.05/30"RCP/DMH-8	A3+23/0.0' =E0+10/0.0'	250276.9221	1023411.1125
DMH-10	5'	231.57	227.30/18"RCP/DMH-5 227.60/18"RCP/CB-8 227.30/18"RCP/CB-9	227.30/30"RCP/DMH-4	A2+03/0.0' =B2+57/0.0'	250370.7870	1023336.8057
DMH-11	5'	232.85	229.68/10"PVC/EX CB-6 229.68/10"PVC/CB-12	229.68/10"PVC/DMH-5	A0+80/0.0' =K0+10/0.0'	250481.1621	1023284.7499
EX CB-6	4'	232.62		229.90/10"PVC/DMH-11	K0+00/0.0'	250489.7618	1023279.7796

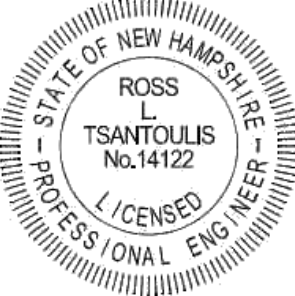
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L1	80	A	N71° 12' 40.77"E	250455.3235	1023208.8003	1023284.7499	250481.1621	A0+00	A0+80
L2	10	K	S30° 01' 34.00"E	250489.7618	1023279.7796	1023284.7499	250481.1621	K0+00	K0+10
L3	76	A	S29° 56' 59.45"E	250481.1621	1023284.7499	1023322.6919	250415.3115	A0+80	A1+56
L4	59	C	S23° 34' 27.67"E	250491.0807	1023331.8282	1023355.4602	250436.9231	C0+00	C0+59
L5	39	C	S56° 35' 08.51"W	250436.9231	1023355.4602	1023322.6937	250415.3059	C0+59	C0+98
L6	47	A	S17° 35' 16.56"E	250415.3115	1023322.6919	1023336.8055	250370.7873	A1+56	A2+03
L7	10	B	N61° 33' 59.53"E	250370.7952	1023336.8012	1023345.5959	250375.5571	B2+57	B2+67
L8	85	A	S35° 30' 49.73"E	250370.7873	1023336.8055	1023386.1250	250301.6791	A2+03	A2+88
L9	257	B	N61° 30' 47.06"E	250248.3743	1023111.2073	1023336.8012	250370.7952	B0+00	B2+57
L10	85	D	N63° 39' 01.41"E	250264.0462	1023310.1462	1023386.1250	250301.6791	D0+00	D0+85
L11	35	A	S45° 15' 55.80"E	250301.6791	1023386.1250	1023411.1125	250276.9221	A2+88	A3+23
L12	10	E	N61° 15' 01.47"E	250272.1123	1023402.3452	1023411.1125	250276.9221	E0+00	E0+10
L13	97	A	S30° 49' 20.02"E	250276.9221	1023411.1125	1023460.6119	250193.9594	A3+23	A4+20
L14	10	F	N59° 10' 53.89"E	250188.8362	1023452.0239	1023460.6119	250193.9594	F0+00	F0+10
L15	64	A	S36° 35' 22.21"E	250193.9594	1023460.6119	1023498.6897	250142.6679	A4+20	A4+83
L16	10	G	N61° 40' 16.12"E	250137.9226	1023489.8873	1023498.6897	250142.6679	G0+00	G0+10
L17	103	A	S23° 01' 09.49"E	250142.6679	1023498.6897	1023539.1461	250047.4478	A4+83	A5+87
L18	114	H	N62° 44' 56.23"E	249995.0353	1023437.3854	1023539.1461	250047.4478	H0+00	H1+14
L19	52	A	S26° 26' 02.49"E	250047.4478	1023539.1461	1023562.3710	250000.7313	A5+87	A6+39
L20	45	I	S63° 34' 41.00"W	250020.7315	1023602.6226	1023562.3710	250000.7313	I0+00	I0+45
L22	13	A	S27° 04' 04.41"E	250000.7313	1023562.3710	1023568.2389	249989.2484	A6+39	A6+52
L23	33	J	S87° 20' 47.14"E	249956.5131	1023553.2679	1023585.8497	249955.0031	J0+00	J0+33
L24	12	A	S33° 12' 30.81"E	249955.0053	1023585.8527	1023592.6942	249944.5538	A6+91	A7+03
L25	39	A	S27° 13' 12.45"E	249989.2484	1023568.2389	1023585.8527	249955.0053	A6+52	A6+91
L26	14	L	N57° 52' 50.24"E	249976.2278	1023559.6069	1023571.2438	249983.5331	L0+00	L0+14
L27	14	L	S27° 33' 57.28"E	250008.8410	1023619.3794	1023625.8190	249996.5053	L0+68	L0+82
L28	15	J	N19° 12' 27.47"E	249987.9217	1023654.1313	1023659.1422	250002.3049	J1+08	J1+24
L29	76	J	N64° 15' 40.39"E	249955.0031	1023585.8497	1023654.1313	249987.9217	J0+33	J1+08



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CONCORD, NH  
  
SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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JOB NO: 0224539.48

DATE: NOVEMBER 2025

SCALE: NO SCALE

DESIGNED BY: YI

DRAWN BY: KC

CHECKED BY: RT

FILENAME: 0224539.48-CG-104.dwg

DRAWING TITLE:

**CIVIL  
DRAINAGE TABLES**

DRAWING NO:

**CG-104**

## SHEET GENERAL NOTES

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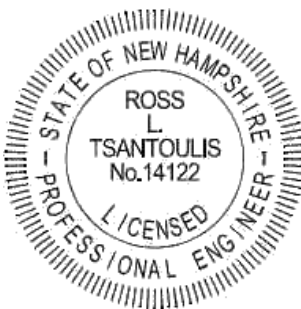


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REV	MM/DD/YY	DESCRIPTION

JOB NO: 0224539.48

DATE: NOVEMBER 2025

SCALE: 1" = 40'

DESIGNED BY: YI

DRAWN BY: KC

CHECKED BY: RT

FILENAME: 0224539.48-CU-100.dwg

DRAWING TITLE:

**CIVIL  
OVERALL UTILITY PLAN**

DRAWING NO:

**CU-100**

40' 0 40' 80'

BAR SCALE

1" = 40'

CHECK GRAPHIC SCALE BEFORE USING

MERRIMACK RIVER

**N/F  
PROLERIZED NEW ENGLAND CO, LLC  
25 SANDQUIST ST  
AREA: 6.93-AC±**

**N/F  
34 BASIN ST REALTY TRUST  
BASIN ST**

**N/F  
EVERETT ASHTON INC  
121-123 HALL ST**

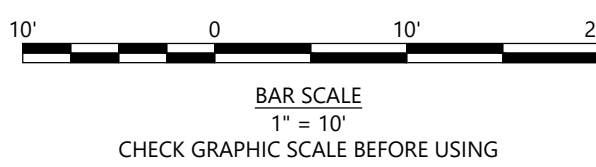
**N/F  
CFA CORPORATION  
12 SANDQUIST ST**

**N/F  
BASIN LLC  
10 BASIN ST**

**N/F  
34 BASIN ST REALTY TRUST  
34 BASIN ST**

**N/F  
CFA CORPORATION  
11 SANDQUIST ST**

**N/F  
CFA CORPORATION  
14 SANDQUIST ST**



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RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

[illegible]

REV	MM/DD/YY	DESCRIPTION
JOB NO:	0224539.48	
DATE:	NOVEMBER 2025	
SCALE:	1" = 10'	
DESIGNED BY:	YI	
DRAWN BY:	KC	
CHECKED BY:	RT	
FILENAME:	0224539.48-CU-101.dwg	

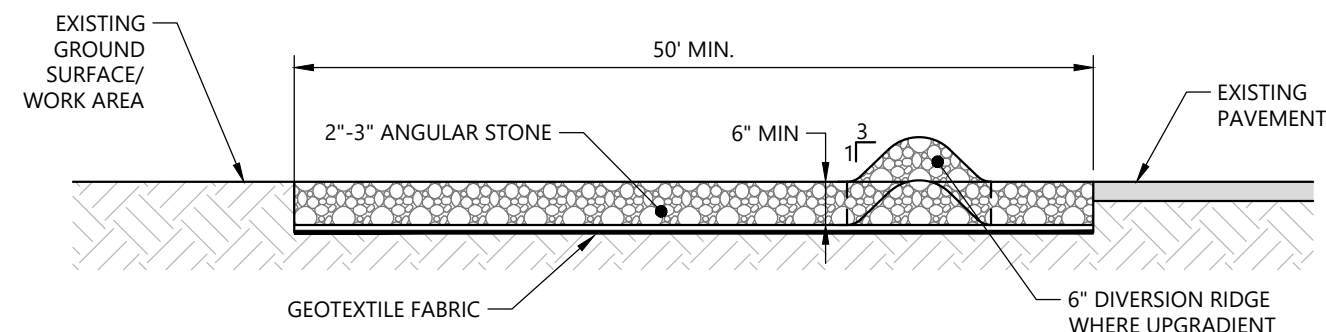
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**CIVIL**

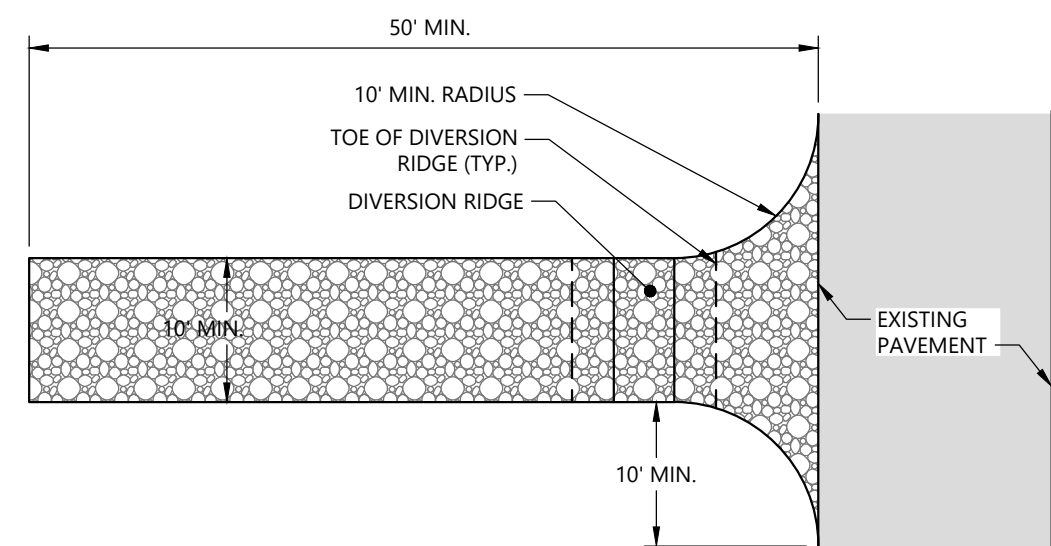
**STORMWATER TREATMENT  
AND STORAGE AREA UTILITY  
PLAN**

DRAWING NO:

**CU-101**



SECTION



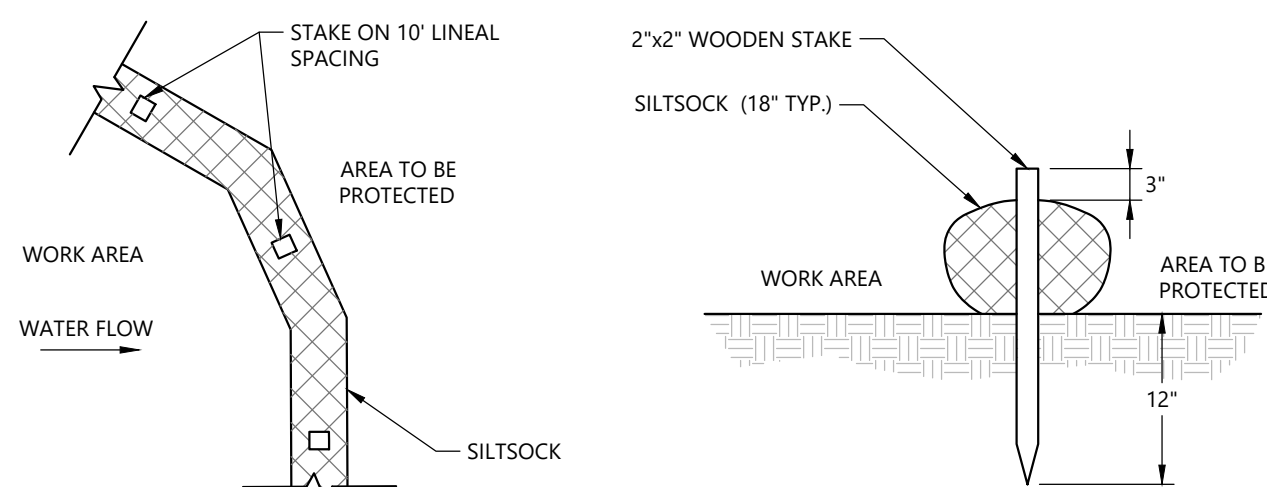
PLAN

## NOTES:

1. GRADE TOWARDS SEDIMENT BARRIER WHEN NECESSARY TO MANAGE FLOW.
2. INCREASE MINIMUM LENGTH TO 100' WHERE TRACKED SEDIMENTS CONTAIN LESS THAN 80% SAND OR AS NECESSARY FOR HEAVY CONSTRUCTION.

**STABILIZED CONSTRUCTION ENTRANCE/EXIT**

SCALE: NTS



PLAN VIEW

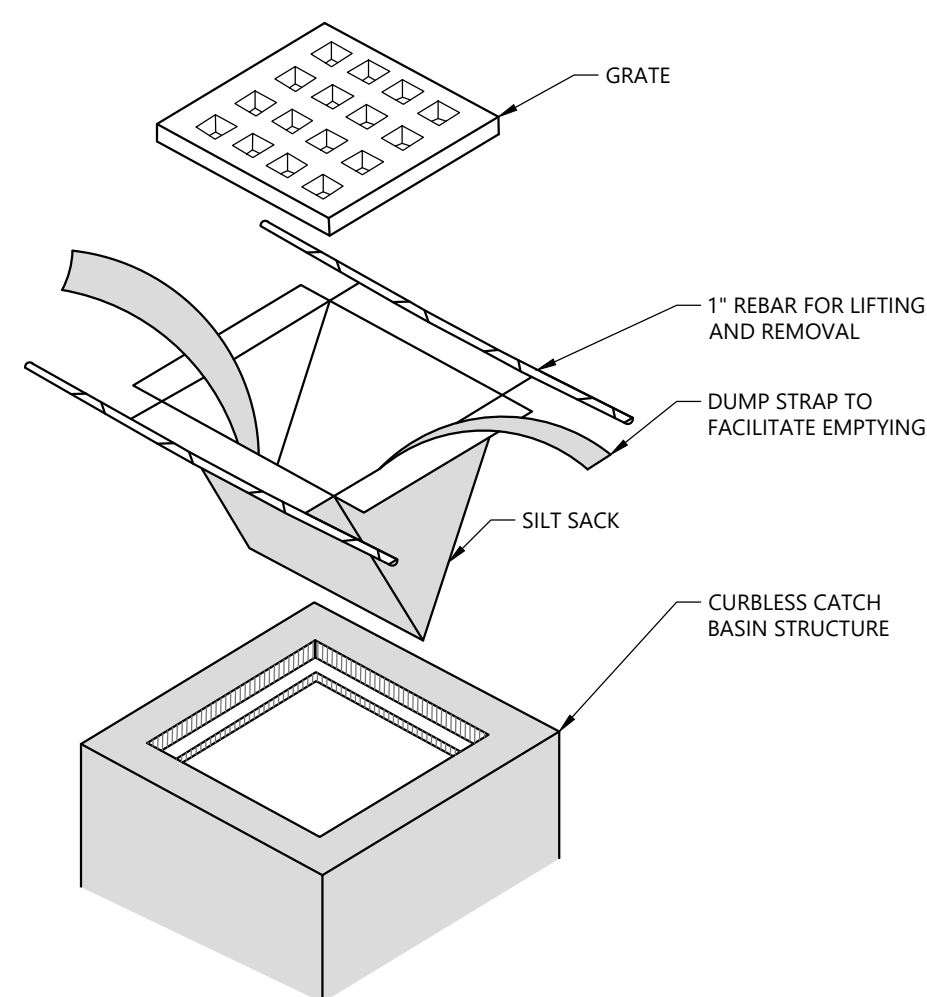
SECTION

## NOTE:

1. WHEN STAKING IS NOT POSSIBLE, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT CONTROL TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.

**SILT SOCK**

SCALE: NTS

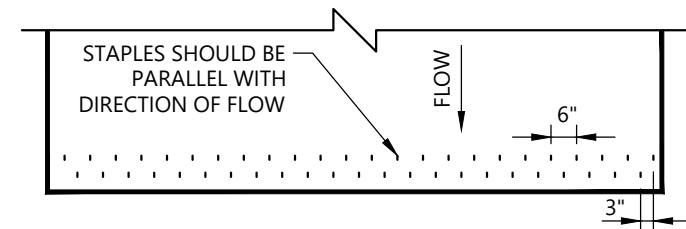
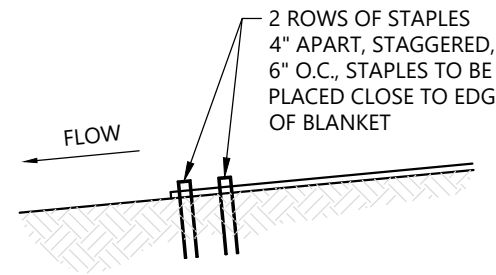
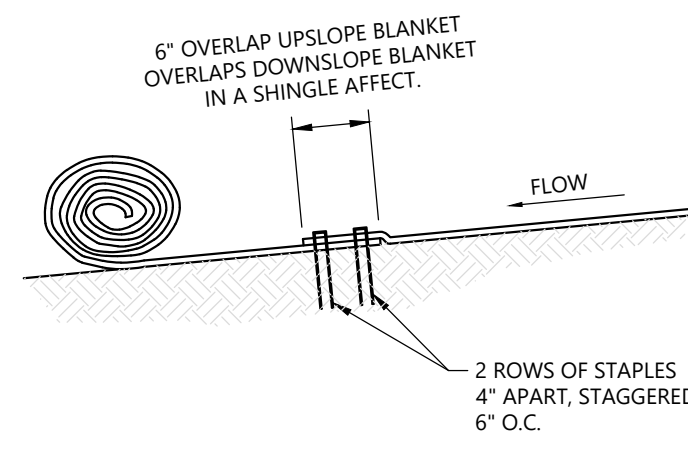
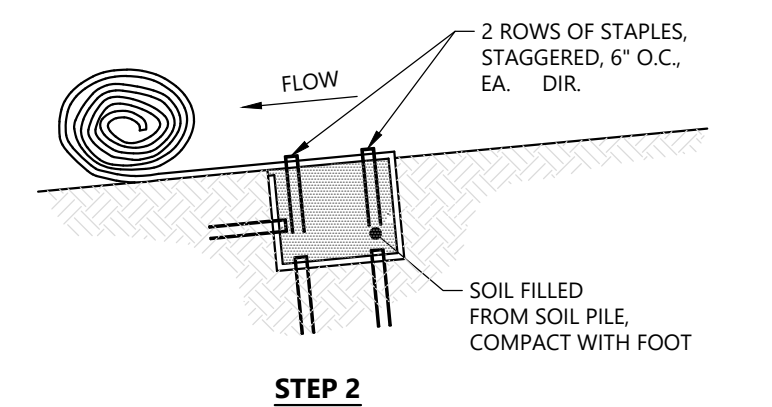


## NOTES:

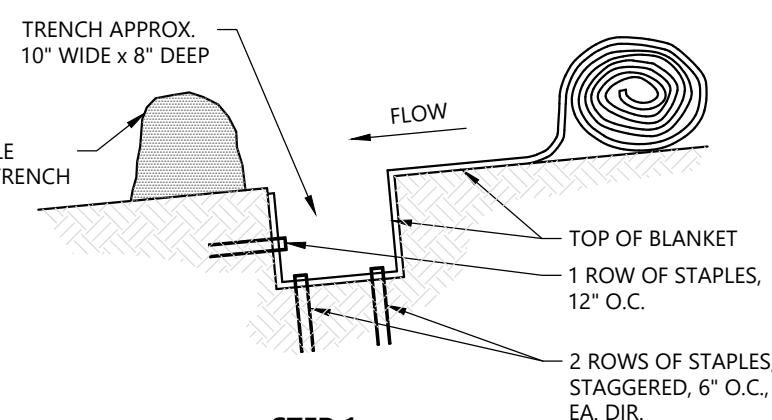
1. INSTALL SILT SACK PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
2. EMPTY OR REMOVE SEDIMENT FROM SILT SACK WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE, AND REPLACE AS NEEDED.
3. SILT SACKS TO BE INSTALLED WHEN THE POTENTIAL FOR SEDIMENT TO ENTER EXISTING & PROPOSED BASINS EXISTS.

**SILT SACK - CURBLESS INLET**

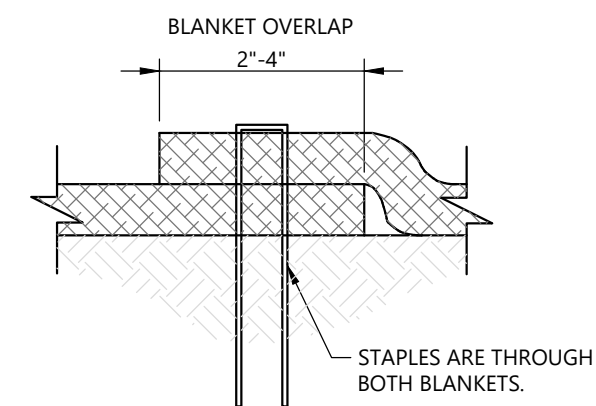
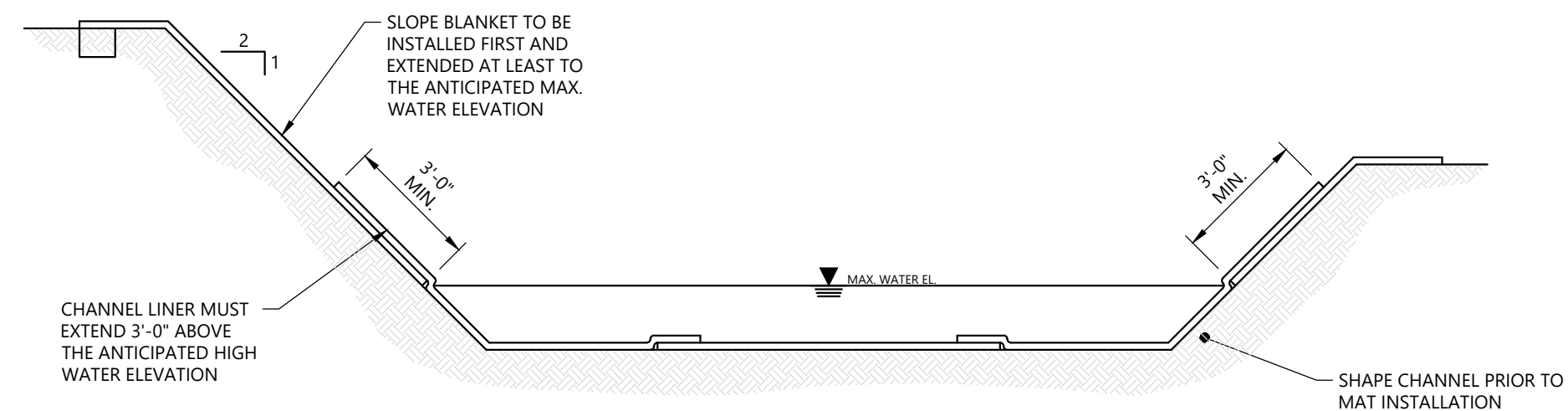
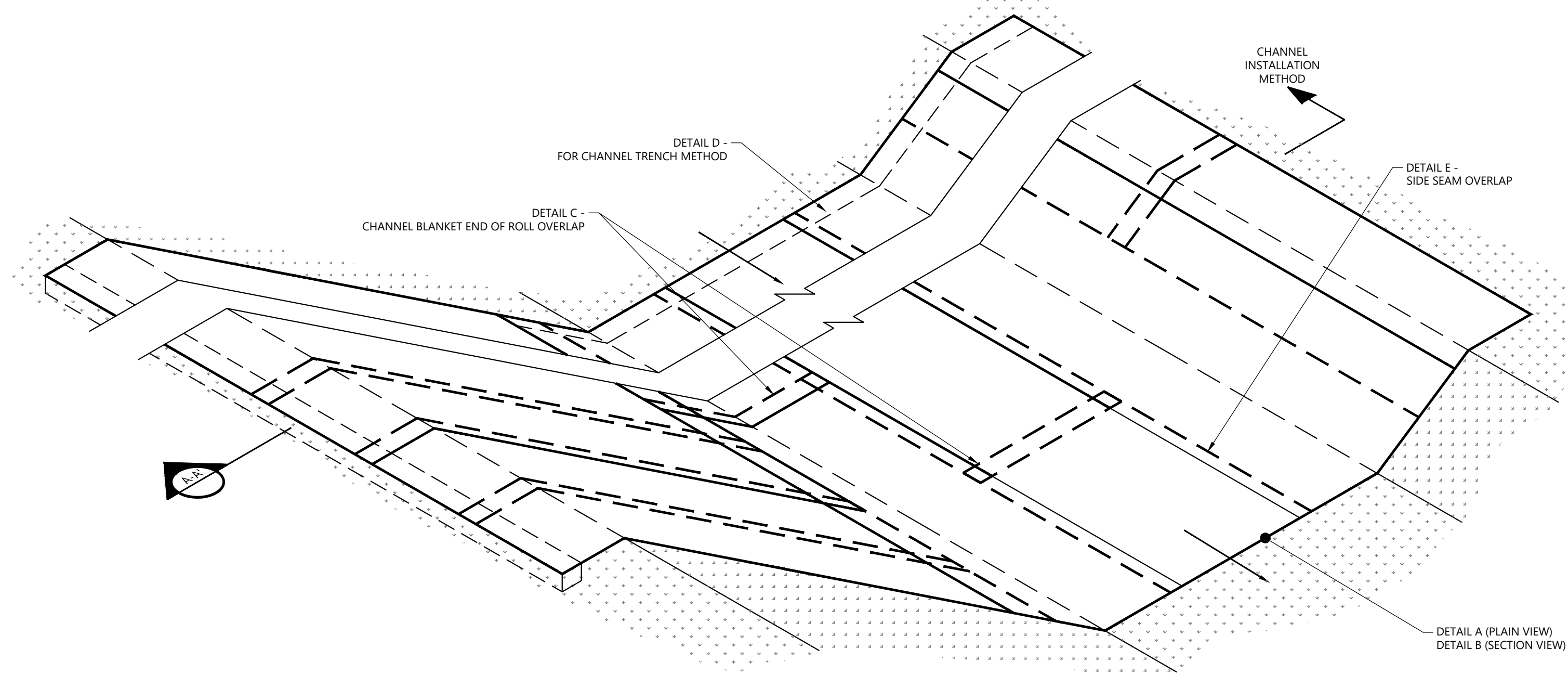
SCALE: NTS

DETAIL A - PLAN VIEW  
CHANNEL TERMINATION  
NOT TO SCALEDETAIL B - SECTION VIEW  
CHANNEL TERMINATION  
NOT TO SCALEDETAIL C - CHANNEL BLANKET  
END OF ROLL OVERLAP  
NOT TO SCALE

STEP 2



STEP 1

DETAIL D - CHANNEL  
TRENCHING METHOD  
NOT TO SCALEDETAIL E - SIDE SEAM OVERLAP  
NOT TO SCALECHANNEL INSTALLATION  
METHOD (SECTION A-A')  
NOT TO SCALECHANNEL DETAIL  
NOT TO SCALE

## NOTES:

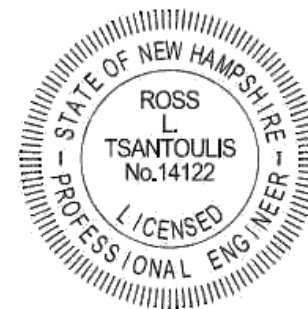
1. SEE MANUFACTURER'S RECOMMENDATION FOR PROPER SLOPE INSTALLATION.
2. STAPLE PATTERNS ARE DEPENDENT ON SITE CONDITIONS. INSTALL PER MANUFACTURERS RECOMMENDATION.
3. E-STAPLES MAY BE USED IN PLACE OF WIRE STAPLES.

**EROSION CONTROL BLANKET**

SCALE: NTS

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CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NHSANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV MM/DD/YY DESCRIPTION

JOB NO:	0224539.48
DATE:	NOVEMBER 2025
SCALE:	AS NOTED
DESIGNED BY:	YI
DRAWN BY:	KC
CHECKED BY:	RT
FILENAME:	0224539.48-C-900-903.dwg

DRAWING TITLE:

**CIVIL  
DETAILS 1**

DRAWING NO:

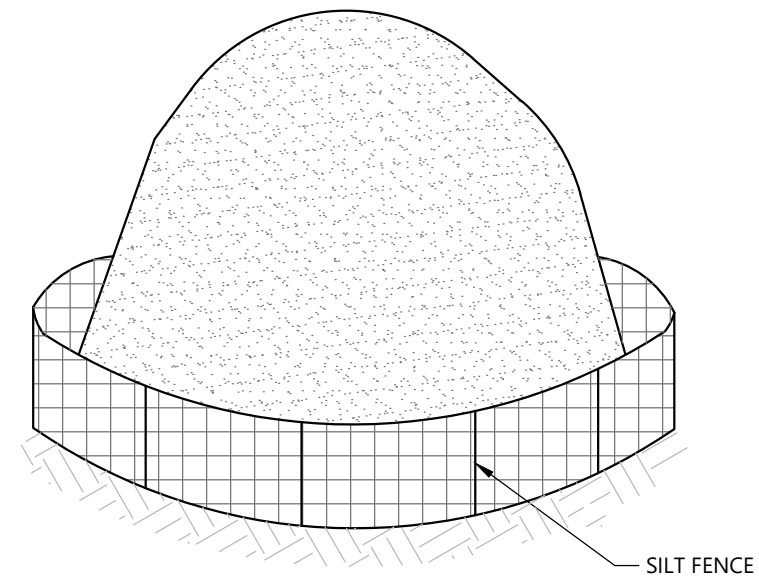
**C-900**



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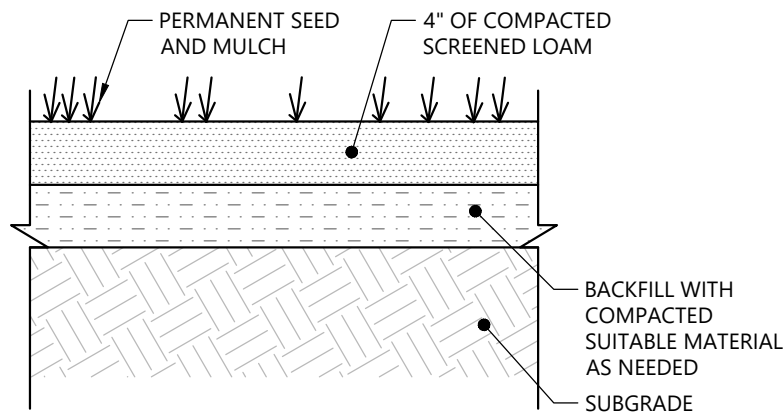


**NOTES:**

1. STOCKPILES SHALL BE SURROUNDED BY SILT FENCE.
2. STOCKPILES SHALL HAVE A MAXIMUM 2:1 (H:V) SIDE SLOPE.
3. REPAIR OR REPLACE DAMAGED SILT FENCE DUE TO CONSTRUCTION ACTIVITIES OR STOCKPILE MITIGATION.
4. STOCKPILE SHALL BE LOCATED IN AREAS AS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.

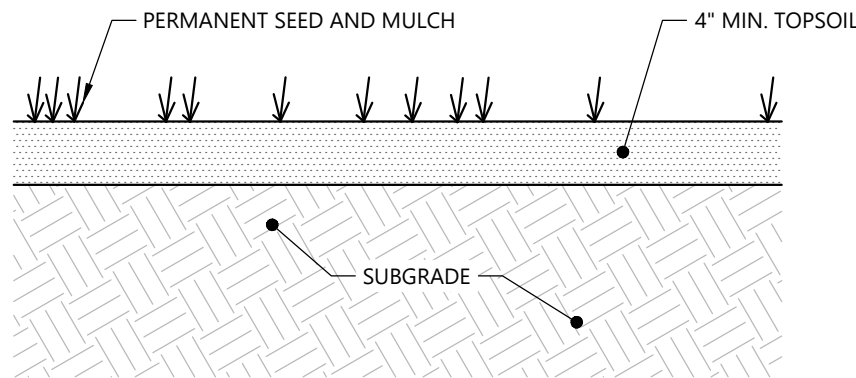
**TEMPORARY SOIL STOCKPILE**

SCALE: NTS



**LOAM AND SEED**

SCALE: NTS



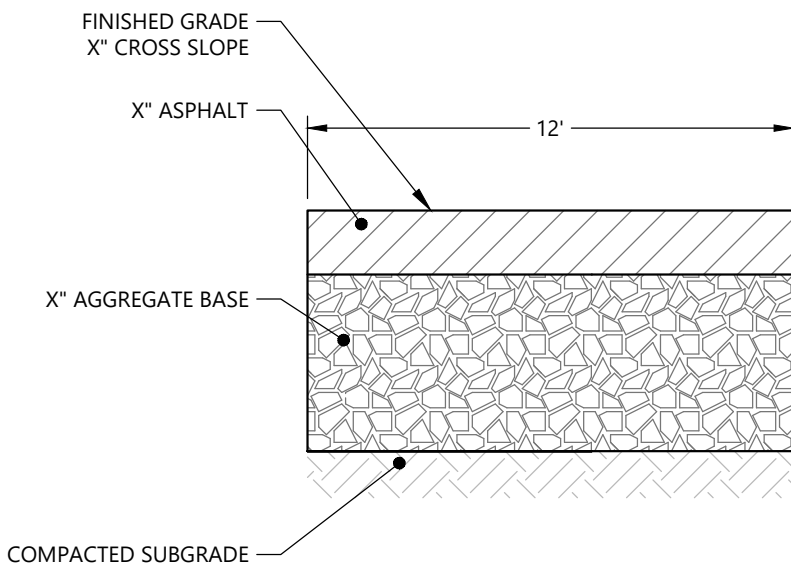
**NOTES:**

1. AVOID COMPACTION, UNLESS OTHERWISE NOTED ON PLANS.
2. TOPSOIL SHALL BE FERTILE, FRIABLE SOIL, TYPICAL OF PRODUCT SOILS IN THE SURROUNDING AREA AND SHALL CONTAIN BETWEEN 5% AND 20% ORGANIC MATTER.
3. TOPSOIL SHALL HAVE A MAXIMUM STONE SIZE OF 1" AND SHALL CONFORM TO THE FOLLOWING GRADATION:

SIEVE	% PASSING
1"	100
NO. 4	85-100
NO. 40	60-85
NO. 100	38-60
NO. 200	28-40
4. TOPSOIL SHALL NOT BE DISTRIBUTED OVER PARTLY OR FULLY FROZEN, MUDDY, SNOWY, ICY OR EXCESSIVELY WET SURFACES.
5. SOD AND SEED MIXTURE(S) SHALL BE APPROPRIATE FOR GROWING SEASON, CLIMATE AND SOIL CONDITIONS, AND SURFACE USAGE. REFER TO STATE GUIDELINES.
6. SEED SHALL BE APPLIED AT RATES RECOMMENDED BY STATE GUIDELINES.
7. APPLY MULCH OVER SEEDED AREAS IN ACCORDANCE WITH STATE GUIDELINES.
8. SODDING SHALL BE INSTALLED IN ACCORDANCE WITH SUPPLIER'S GUIDELINES. AT A MINIMUM, LAY SOD IN STAGGERED ROWS OVER DAMPENED AND LOOSENEED/SCARIFIED TOPSOIL. PLACE STRIPS PERPENDICULAR TO THE DIRECTION OF FLOW. ON SLOPES, ANCHOR SOD TO HOLD IN PLACE UNTIL SECURED BY PLANT GROWTH.
9. INSTALL AND/OR REPAIR EROSION AND SEDIMENT CONTROL MEASURES BEFORE LAYING TOPSOIL. MAINTAIN EROSION CONTROL MEASURES DURING TOPSOILING.
10. MAXIMUM SLOPE TOPSOIL CAN BE USED IS 2:1.

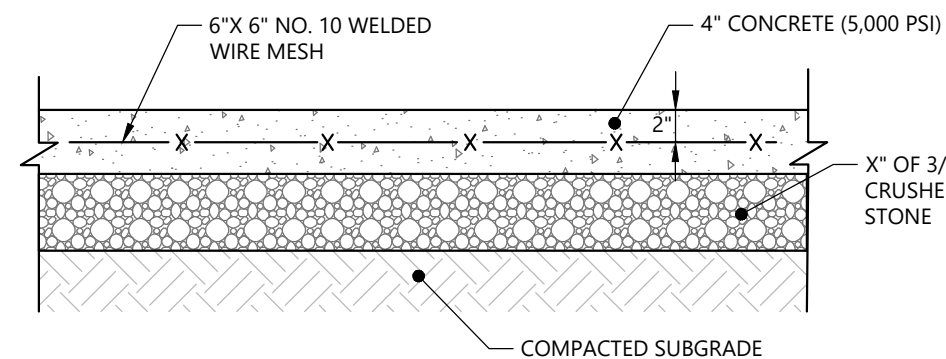
**TOPSOIL RESTORATION**

SCALE: NTS



**ASPHALT ACCESS ROAD**

SCALE: NTS

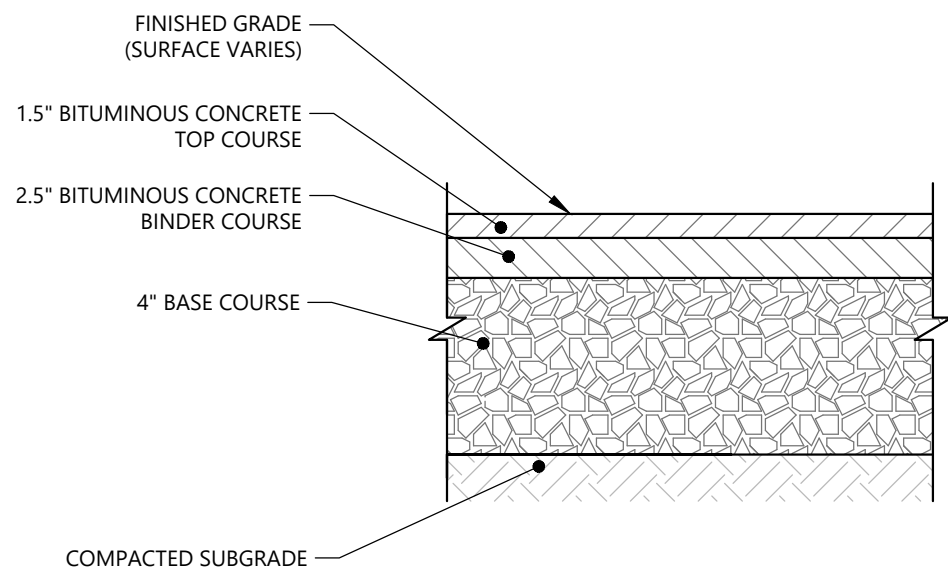


**NOTES:**

1. PROVIDE 1/2-INCH PREMOLED BITUMINOUS EXPANSION JOINTS AT 20 FT. INTERVALS.
2. PROVIDE CONTROL JOINTS AT 5-FOOT INTERVALS.
3. PROVIDE LIGHT BROOM FINISH WITH 3-INCH EDGE.

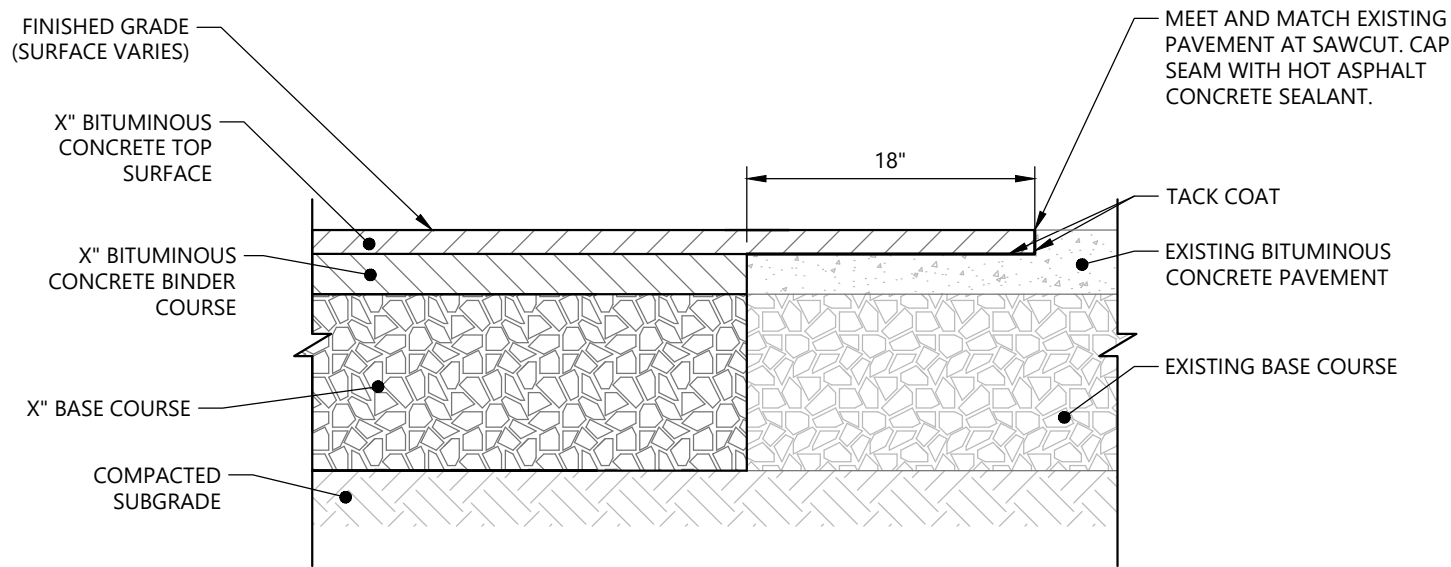
**CONCRETE REPAIR**

SCALE: NTS



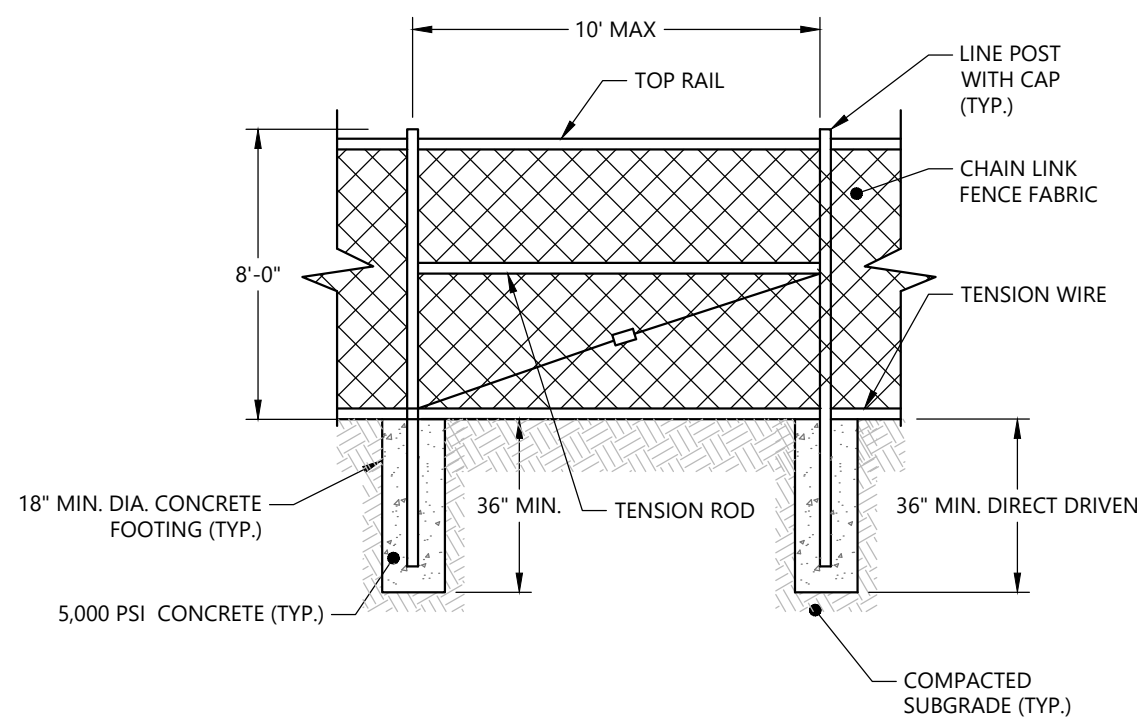
**BITUMINOUS CONCRETE PAVEMENT SECTION**

SCALE: NTS



**BITUMINOUS CONCRETE PAVEMENT BUTT JOINT**

SCALE: NTS

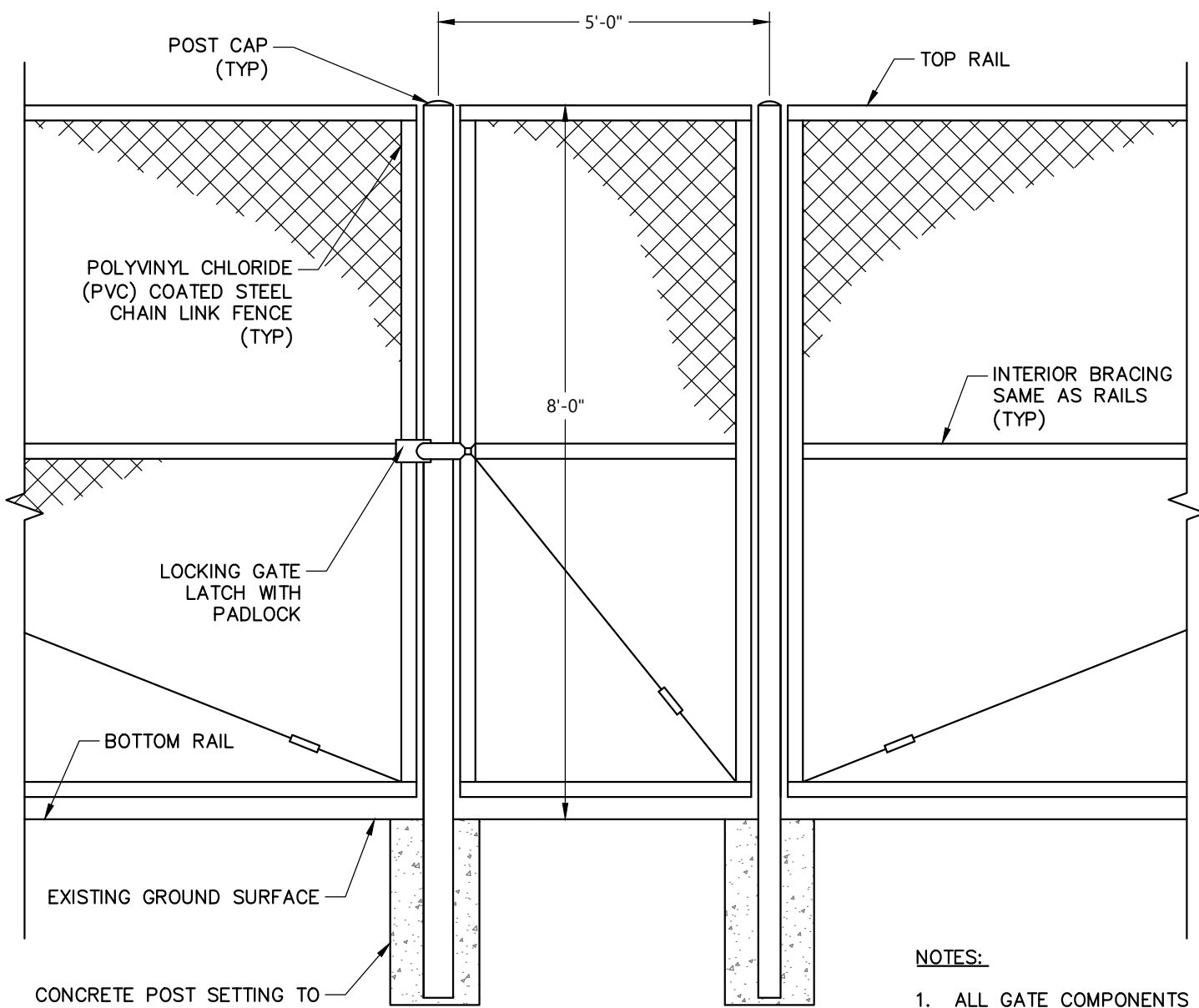


**NOTES:**

1. ALL FENCING AND HARDWARE TO BE LIST MATERIAL.
2. INSTALL ALL FENCING AND HARDWARE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

**CHAIN LINK FENCE**

SCALE: NTS

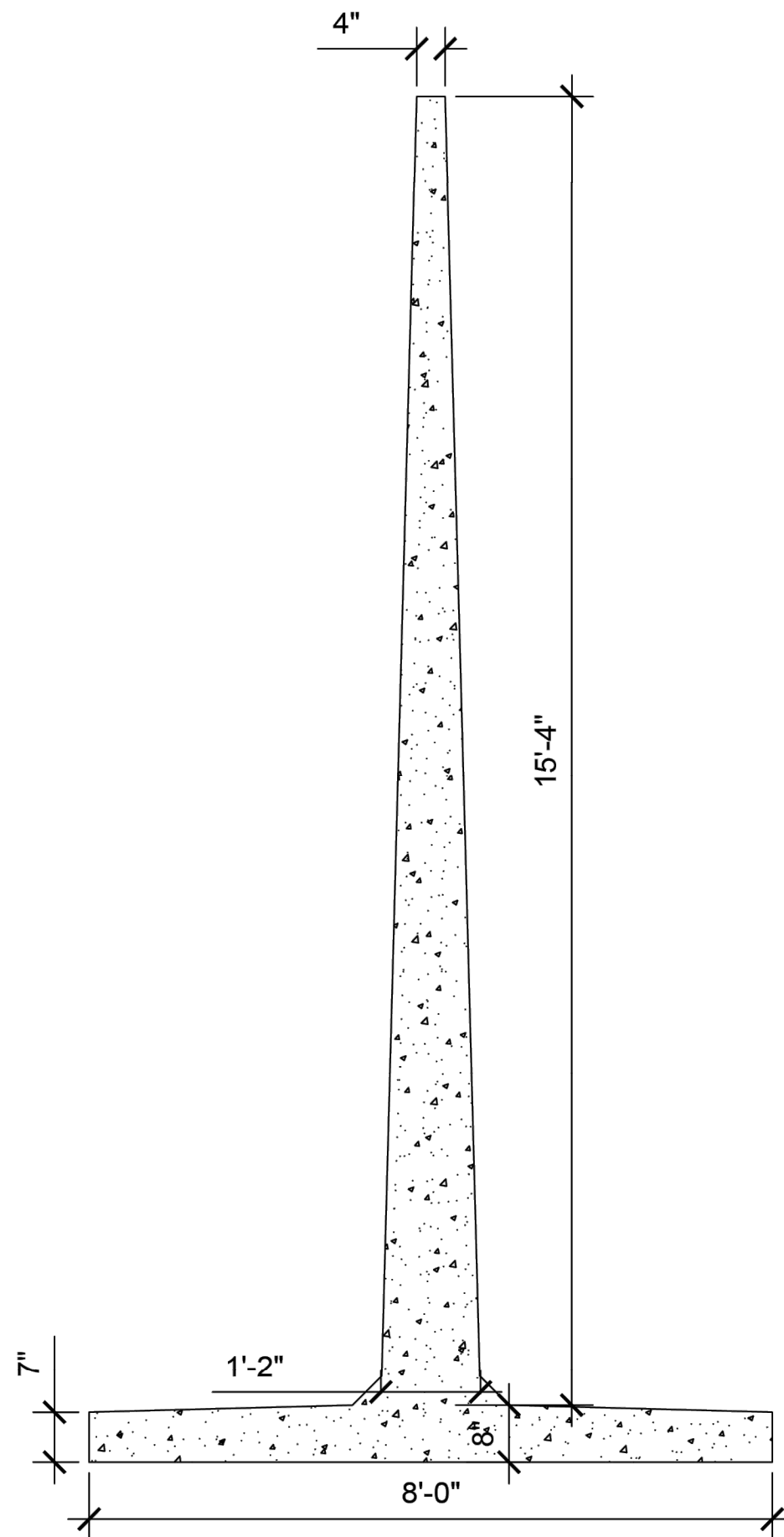


**NOTES:**

1. ALL GATE COMPONENTS SHALL MATCH FENCING MATERIAL AS SPECIFIED.

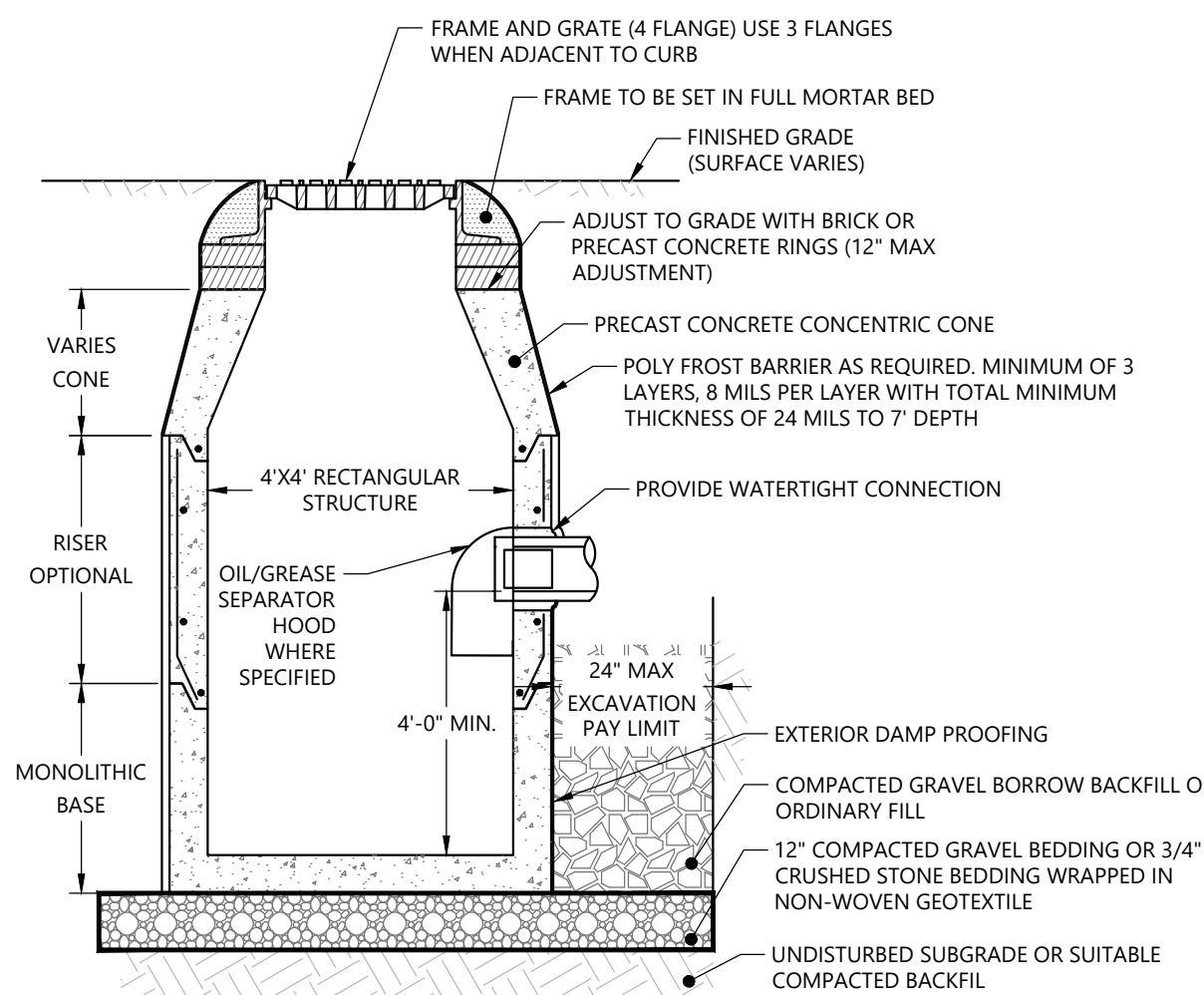
**PEDESTRIAN GATE**

SCALE: NTS



**PRECAST CONCRETE BARRIER WALL**

SCALE: NTS



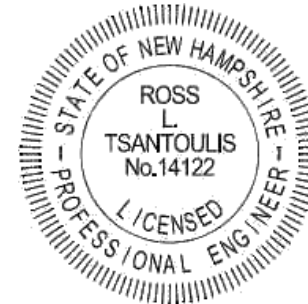
**NOTES:**

1. PRECAST CONCRETE STRUCTURES AND CASTINGS SHALL BE SUITABLE FOR HS-20 LOADINGS.
2. PRECAST CONCRETE STRUCTURES SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
3. ALTERNATE TOP SLAB MAY BE USED AS DICTATED BY DESIGN AND/OR FIELD CONDITIONS.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
5. PROVIDE MINIMUM 24" DIAMETER OPENING.
6. PROVIDE ANTIFLOATATION SLAB EXTENSION AS REQUIRED TO SATISFY ANTIFLOATATION REQUIREMENTS.

**PRECAST CONCRETE CATCH BASIN**

SCALE: NTS

**PE SEAL:**



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**CLIENT INFO:**

RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

**REV** **MM/DD/YY** **DESCRIPTION**

JOB NO: 0224539.48  
DATE: NOVEMBER 2025  
SCALE: AS NOTED  
DESIGNED BY: YI  
DRAWN BY: KC  
CHECKED BY: RT  
FILENAME: 0224539.48-C-900-903.dwg

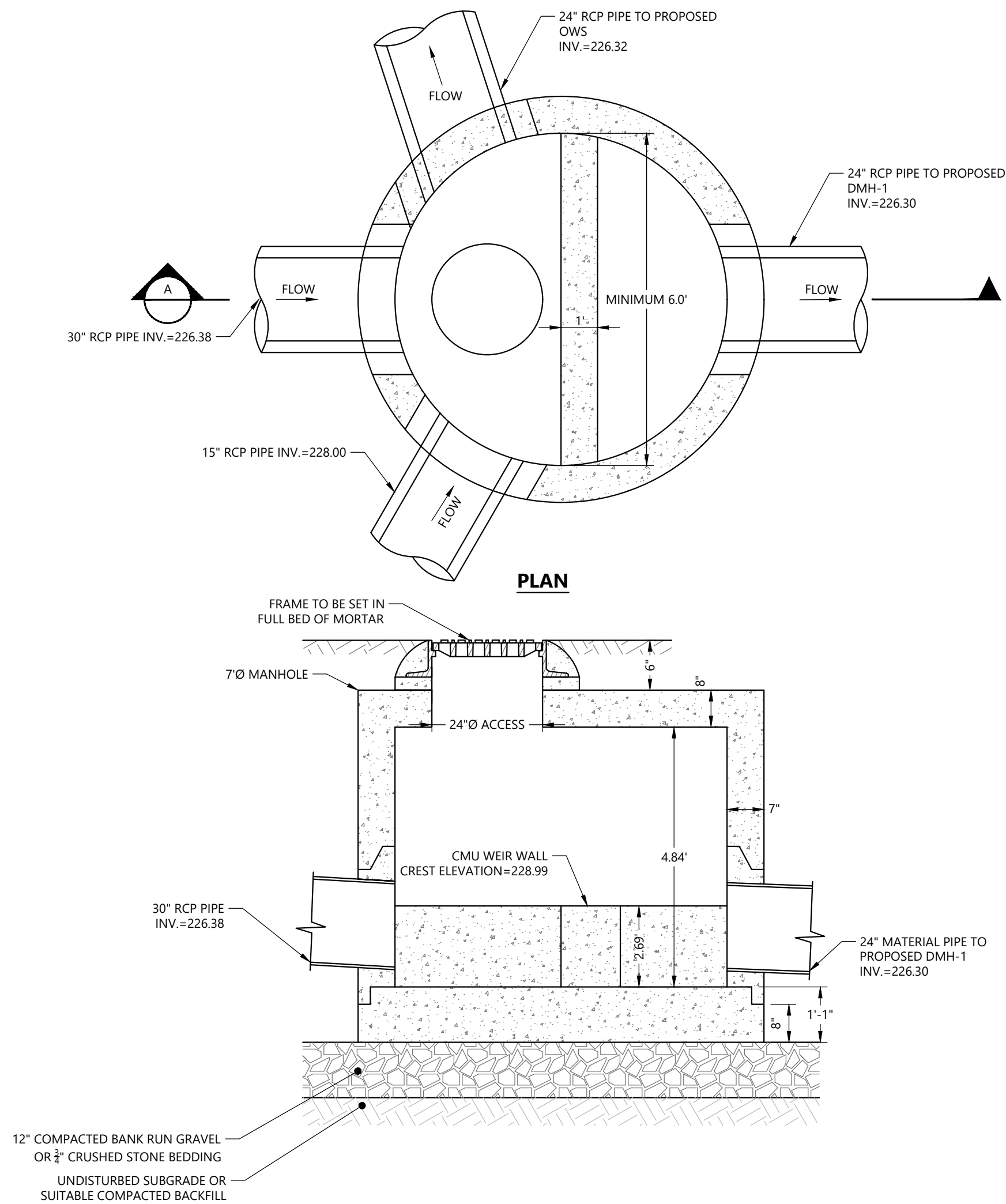
**DRAWING TITLE:**

**CIVIL  
DETAILS 2**

**DRAWING NO:**

**C-901**

\\woodardcurran.net\shared\Projects\0224539-48-Schmitzer-Concord\Sandquist-Preliminary-Drawings\Civil\0224539-48-C-900-903.dwg, Nov 04, 2025 - 11:35am CBAZOLA



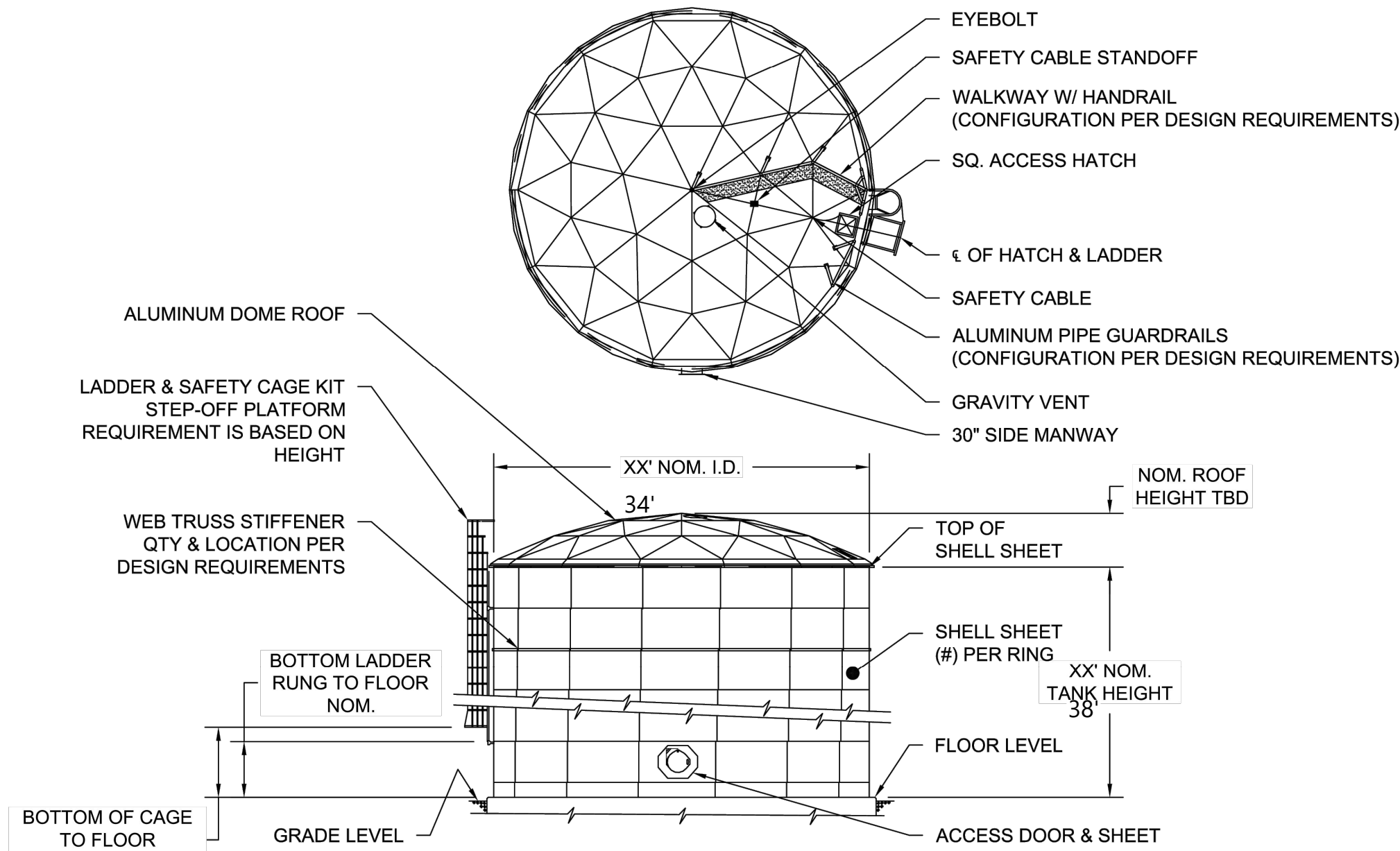
MANHOLE DIVERSION STRUCTURE GENERAL NOTES:

1. MANUFACTURED TO MEET OR EXCEED: ASTM C-478 & AASHTO M 199 SPECS.
2. CONCRETE = 4,000 PSI. MINIMUM CEMENT PER ASTM C-478 (6.1).
3. REINFORCED STEEL COMFORMS TO LATEST ASTM A 185 SPECIFICATIONS. 0.24 SQ. IN/LINEAR FT. AND 0.24 SQ. IN (BOTH WAYS) BASE BOTTOM.
4. STEEL REINFORCEMENT TO MEET OR EXCEED AASHTO HS-20 LOADING.
5. MANHOLE STEPS MEET LATEST OSHA REGULATION 29 CFR1910.27, SECTION 16 OF ASTM SPECIFICATION C478 AND SECTION 10 OF ASTM SPECIFICATION C497.
6. ONE POUR MONOLITHIC BASE.

DIVERSION MANHOLE

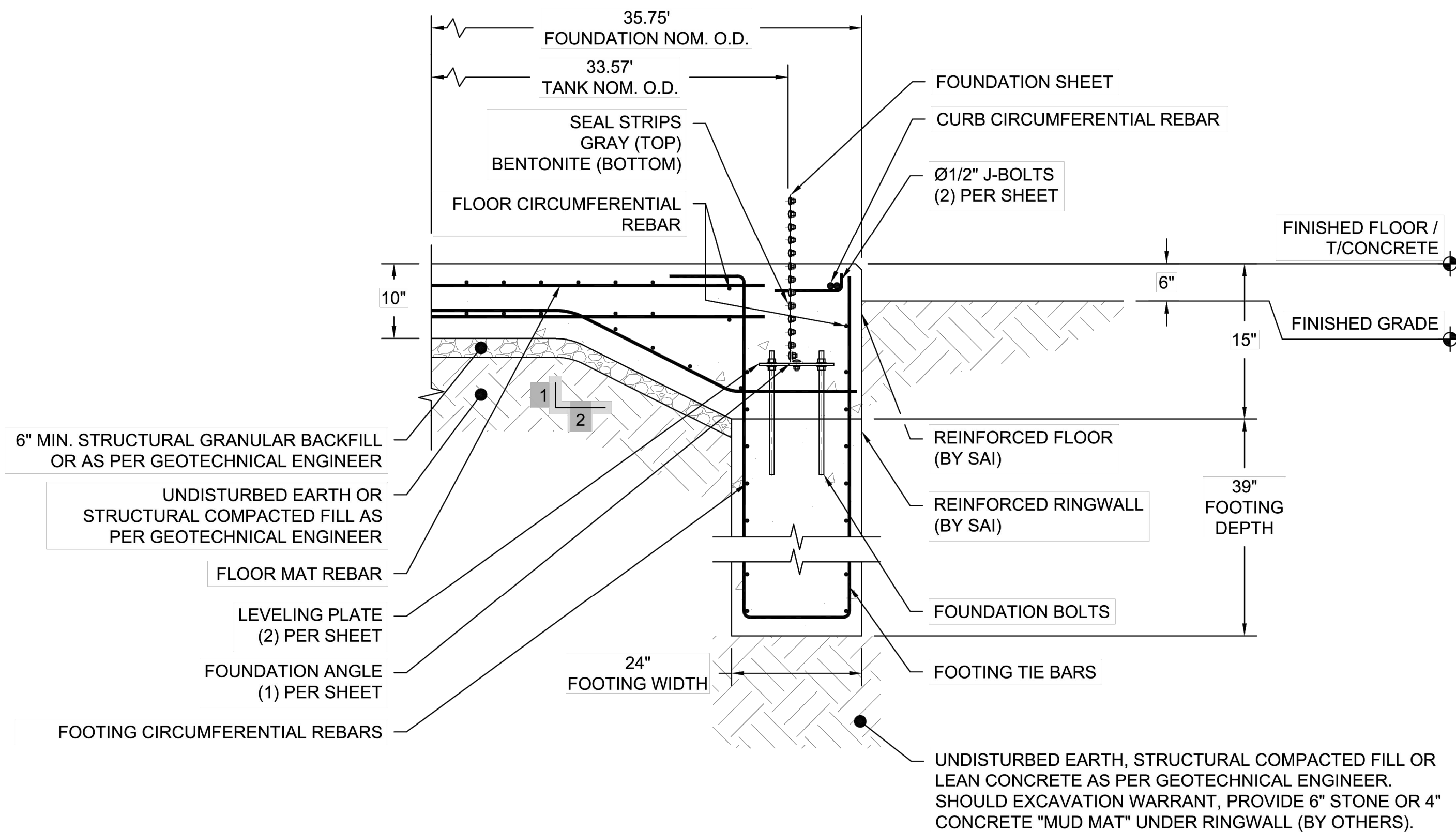
SCALE: NTS

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ABOVE GROUND STORAGE TANK

SCALE: NTS



NOTES:  
1. DRAWING IS NOT TO SCALE.

ABOVE GROUND STORAGE TANK

SCALE: NTS

REVISIONS		
REV	DESCRIPTION	DATE
A	INITIAL RELEASE	10/17/2019
B	ADDED PLAN VIEW	1/3/2020
C	REMOVED NOTES	8/28/2020
D	UPDATED TITLE BLOCK	11/10/2020

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REPRODUCED WITHOUT THE EXPRESSED  
WRITTEN CONSENT OF THE COMPANY.

BY: MK  
DATE: 10/17/2019  
REVISION: D

DESCRIPTION: CONSTRUCTION DETAIL WATER TANK W/  
CONCRETE FOUNDATION 63" OR LARGER  
DWG #: 261352-TYP  
SHEET # 1



REVISIONS		
REV	DESCRIPTION	DATE
1	PRELIMINARY	7/18/2024

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BY: MK  
DATE: 7/18/2024  
REVISION: 1

DESCRIPTION: CONCORD, NH  
MODEL 34-38 - PROJECT#5466  
SECTION THROUGH FOOTING  
DWG#: 5466-3438-FND  
SHEET#: 1



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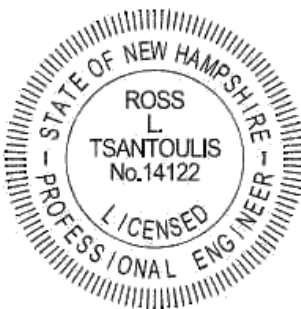


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CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV MM/DD/YY DESCRIPTION

JOB NO: 0224539-48  
DATE: NOVEMBER 2025  
SCALE: AS NOTED  
DESIGNED BY: YI  
DRAWN BY: KC  
CHECKED BY: RT  
FILENAME: 0224539-48-C-900-903.dwg

DRAWING TITLE:

CIVIL  
DETAILS 3

DRAWING NO:

C-902



- ## PRECAST CONCRETE DRAINAGE MANHOLE



- ANCILLARY PROVIDED EQUIPMENT
- |     |   |
|-----|---|
| (4) | 24" FIBREFLEX MANWAY GASKETS              |
| (4) | SETS OF NUTS/BOLTS/WASHERS FOR 24" MANWAY |

- 

# Highland Tank

U.S. Patent #4,722,800      Canadian Patent # 1,296,263

40000 GALLON OIL WATER SEPARATOR

CUSTOMER:

**PROJECT:**

QUOTE NO:

CHK'D BY:

SCALE:	DATE:
--------	-------

DWG. BY:
----------

DWG.

40000HGSWHTCHDS



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**CLIENT INFO:**

RADIUS RECYCLING  
CONCORD, NH

# SANDQUIST FACILITY STORMWATER IMPROVEMENTS

[illegible]

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0224539.48
DATE:	NOVEMBER 2025
SCALE:	AS NOTED
DESIGNED BY:	YI
DRAWN BY:	KC
CHECKED BY:	RT
FILENAME:	0224539.48-C-900-903.dwg

DRAWING TITLE:

**CIVIL  
DETAILS 4**

DRAWING NO:

# C-903

STRUCTURAL ABBREVIATIONS

&	AND	JT	JOINT
L	ANGLE		
@	CHANNEL	L	LONG
#	NUMBER	LB(S)	POUNDS
		LG	LONG
ACI	AMERICAN CONCRETE INSTITUTE	LLV	LONG LEG VERTICAL
ADD	ADDITIONAL	LP	LOW POINT
AFF	ABOVE FINISHED FLOOR		
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MATL	MATERIAL
ALT	ALTERNATE/ALTERNATING	MAX	MAXIMUM
ARCH	ARCHITECTURAL	MCJ	MASONRY CONTROL JOINT
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERING	MECH	MECHANICAL
ASTM	ASTM INTERNATIONAL	MFR	MANUFACTURER
		MID	MIDDLE
BLDG	BUILDING	MIN	MINIMUM
BM	BEAM	MISC	MISCELLANEOUS
BOC	BOTTOM OF CONCRETE		
BOF	BOTTOM OF FOOTING	N-S	NORTH-SOUTH
BOP	BOTTOM OF PIPE	NO	NUMBER
BOT	BOTTOM	NTS	NOT-TO-SCALE
C/C	CENTER TO CENTER	OC	ON-CENTER
C&C	COMPONENT & CLADDING	OCEF	ON-CENTER EACH FACE
CL	CENTERLINE	OCEW	ON-CENTER EACH WAY
CF	COLUMN FOOTING	OD	OUTSIDE DIAMETER
CHRC	CIRCULAR/CIRCUMFERENCE	OE	OPEN END
CJ	CONSTRUCTION JOINT	OPNG	OPENING
CLR	CLEAR	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
COL	COLUMN		
CONC	CONCRETE	P	CONCRETE PEDESTAL
CONT	CONTINUOUS/CONTINUE	PAF	POWDER ACTUATED FASTENER
COR	CORNER	PE	PLAIN END
		PEO	PEDESTAL
D	DEEP	PEN	PENETRATION
DBS/DI	DOWEL BAR SPLICES AND DOWEL INSERTS	PL	PLATE
DEG	DEGREE	PLF	POUNDS PER LINEAR FOOT
DET	DETAIL	PROJ	PROJECTION
DI	DUCTILE IRON	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DIA	DIAGONAL	PT	PRESSURE TREATED
DIR	DIRECTION	PTD	PAINTED
DN	DOWN		
DWG(S)	DRAWING(S)	R	RISERS
		RAD	RADIUS
E-W	EAST-WEST	REF	REFERENCE
EA	EACH	REINF	REINFORCE, REINFORCING
EF	EACH FACE	REQD	REQUIRED
EL	ELEVATION	RO	ROUGH OPENING
ELEC	ELECTRICAL	RW	RETAINING WALL
EMBED	EMBEDDED		
EQ	EQUALLY	SCH	SCHEDULE
EQUIP	EQUIPMENT	SHT	SHEET
EW	EACH WAY	SJ	SAWED JOINT
EXG	EXISTING	SLR	SEALER
EXP	EXPANSION OR EXPOSED	SPA	SPACE, SPACING
EXT	EXTERIOR	SPEC	SPECIFICATION, SPECIFIED
		SQ	SQUARE
FF	FINISHED FLOOR	SS	STAINLESS STEEL
FFE	FINISHED FLOOR ELEVATION	STD	STANDARD
FL	FLOOR, FEET	STL	STEEL
FND	FOUNDATION	STRU	STRUCTURAL
FRP	FIBERGLASS REINFORCED POLYESTER		
FT	FOOT, FEET	T	TREADS
FTG	FOOTING	T&B	TOP AND BOTTOM
		TOC	TOP OF CONCRETE
GA	GAGE	TOF	TOP OF FOOTING
GALV	HOT-DIP GALVANIZED	TOG	TOP OF GRATING
GC	GENERAL CONTRACTOR	TOM	TOP OF MASONRY
		TOS	TOP OF STEEL
HOR	HORIZONTAL	TOW	TOP OF WALL
HP	HIGH POINT	TYP	TYPICAL
ID	INTERIOR DIAMETER	UNO	UNLESS NOTED OTHERWISE
IJ	ISOLATION JOINT		
IN	INCH(ES)	VERT	VERTICAL
INT	INTERIOR		
INV	INVERT	W	WIDTH, WIDE
		W/	WITH
		WCJ	WALL CONSTRUCTION JOINT
		WP	WORK POINT

STRUCTURAL GENERAL NOTES

A. GENERAL STRUCTURAL NOTES:

- DESIGN IS IN ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE.
- THESE NOTES SHALL APPLY TO ALL WORK, EXCEPT AS NOTED OTHERWISE.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS AND SPECIFICATIONS OF ALL DISCIPLINES WHICH SHALL BE REFERRED TO FOR SIZES AND LOCATIONS OF ALL OPENINGS, PENETRATIONS, DRAINS, PADS, CONDUIT, EQUIPMENT, AND PIPE SUPPORTS, ETC.
- GEOTECHNICAL CONDITIONS AND DESIGN PARAMETERS ARE BASED ON OBSERVATIONS AND RECOMMENDATIONS FOUND IN GEOTECHNICAL ENGINEERING REPORT BY S.W. COLE, DATED JUNE 25, 2024.

B. SITE CONDITIONS, EXCAVATION, SHORING, AND DEWATERING:

- GENERAL FINDINGS
  - SITE FILLS PRESENT UNKNOWN RISK OF ADVERSE FOUNDATION PERFORMANCE. REMOVE AND REPLACE BELOW TANK FOUNDATION.
  - GROUND WATER ENCOUNTERED 10-12 FEET BELOW GRADE CORRESPONDING WITH MERRIMACK RIVER ELEVATION. FLUCTUATIONS IN GROUND WATER UNKNOWN.
  - EARTHWORK AND FOUNDATION CONSTRUCTION ACTIVITIES SHOULD OCCUR DURING DRIER, NON-FREEZING WEATHER OF SPRING, SUMMER, AND FALL. RUBBER TIRED CONSTRUCTION EQUIPMENT SHOULD NOT OPERATE DIRECTLY ON THE NATIVE SOILS, WHEN WET. EXCAVATION OF BEARING SURFACES SHOULD BE COMPLETED WITH A SMOOTH-EDGED BUCKET TO LESSEN SUBGRADE DISTURBANCE.

C. SUBGRADE PREPARATION, BACKFILL, AND COMPACTION:

- SOIL UNDER TANK FOUNDATION AND MAT SLAB SHALL BE EXCAVATED TO FROST DEPTH AND BACKFILLED WITH NON-FROST SUSCEPTIBLE STRUCTURAL FILL OR BE INSULATED TO PROTECT FROM ADVERSE FROST ACTION AS RECOMMENDED HEREIN.
- EXISTING FILLS WHERE ENCOUNTERED TO DEPTHS OF 6-6.5 FT WITHIN THE FOOTPRINT OF THE PROPOSED CONSTRUCTION AREA, EXISTING FILLS, RELIC STRUCTURES, FOUNDATIONS, UTILITIES AND DEBRIS SHALL BE COMPLETELY REMOVED FROM BENEATH THE PROPOSED STRUCTURES AND SLAB AREAS. EXTENT OF REMOVAL TO BE 1 FT PAST EDGE OF FOUNDATION ON ALL SIDES. THE OVER-EXCAVATED AREAS SHALL BE BACKFILLED WITH COMPACTED STRUCTURAL FILL. ALTERNATIVELY THE EXISTING FILLS MAY BE IMPROVED WITH STONE ONE AGGREGATE PIERS.

D. FOUNDATION AND SLAB DESIGN CRITERIA:

- ALL EXTERIOR FOOTINGS AND FOOTINGS WITHIN UNHEATED PORTIONS OF STRUCTURES SHALL BE CONSTRUCTED BELOW THE FROST DEPTH OF AT LEAST 4-FEET BELOW THE LOWEST ADJACENT FINAL GRADE
- ALLOWABLE SOIL BEARING CAPACITY = 3,000 PSF
- MODULUS OF SUBGRADE REACTION = 75 PCI
- BASE FRICTION FACTOR = 0.5
- TOTAL UNIT WEIGHT OF BACKFILL = 125 PCF
- INTERNAL FRICTION ANGLE = 30 DEGREES
- AT-REST LATERAL EARTH PRESSURE COEFFICIENT = 0.5

E. EMBEDDED CONDUITS AND PIPES:

- REFER TO SHEET S-002

F. GENERAL REINFORCED CONCRETE REQUIREMENTS:

- REFER TO SHEET S-002

G. SEQUENCE OF WORK:

- REFER TO SHEET S-002 FOR FORM REMOVAL, THERMAL PROTECTION PERIOD AND CURING PERIOD REQUIREMENTS.
- CONCRETE FOR TANK WALLS SHALL NOT BE PLACED UNTIL CONCRETE BASE SLABS HAVE ACHIEVED 75 PERCENT OF THE SPECIFIED 28-DAY CONCRETE COMPRESSIVE STRENGTH AND NO SOONER THAN 7-DAYS AFTER THE FINAL TANK SLAB PLACEMENT.
- CONCRETE TANK WALLS SHALL OBTAIN 100 PERCENT OF THE SPECIFIED 28-DAY CONCRETE COMPRESSIVE STRENGTH BEFORE COMMENCEMENT OF FILLING THE STRUCTURE WITH WATER TO COMPLETE TIGHTNESS TESTING. CONTRACTOR'S CONSTRUCTION SCHEDULE MUST INCLUDE TIME TO PERFORM TIGHTNESS TESTING AND TIME TO PERFORM ALL TANK LEAK REPAIRS.
- TANK WALLS SHALL NOT BE BACKFILLED UNTIL CONCRETE TANKS ARE TIGHTNESS TESTED AND ALL LEAKS IDENTIFIED DURING THE TIGHTNESS TEST ARE REPAIRED TO THE SATISFACTION OF THE ENGINEER, OWNER, AND OWNER'S REPRESENTATIVE AT CONTRACTOR'S OWN EXPENSE.

H. EXISTING CONDITIONS:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AS THEY RELATE TO NEW CONSTRUCTION. REPORT TO THE ENGINEER OF RECORD ALL OBSERVATIONS AND ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.
- WHERE DETAILS FOR SPECIFIC CONDITIONS ARE NOT SHOWN ON THESE PLANS, USE DETAILS FOR THE MOST NEARLY SIMILAR CONDITIONS SHOWN ON THE STRUCTURAL DRAWINGS AS DETERMINED BY THE STRUCTURAL ENGINEER. REPORT ANY COORDINATION ISSUES IMMEDIATELY TO THE ENGINEER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE FOR A SAFE AND EFFICIENT METHOD OF SHORING AND/OR BRACING THE STRUCTURE DURING ALL CONSTRUCTION PHASES. SUBMIT AN OUTLINE OF PROPOSED PROCEDURES BEFORE CONSTRUCTION COMMENCES.
- STRUCTURAL MEMBERS SHALL NOT BE MODIFIED IN THE FIELD WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER. IN THE EVENT OF A CONSTRUCTION OR FABRICATION ERROR, THE CONTRACTOR SHALL PREPARE A SKETCH WITH A PROPOSED REPAIR, AND SUBMIT IT TO THE ENGINEER FOR APPROVAL PRIOR TO PERFORMING ANY CORRECTIVE WORK.
- VERIFY ALL FIELD DIMENSIONS, LOCATIONS, AND GEOMETRY OF EXISTING STRUCTURES PRIOR TO CONSTRUCTION. ALL EXISTING DIMENSIONS ARE APPROXIMATE. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCY BETWEEN THE FIELD CONDITIONS AND THE CONTRACT DRAWINGS.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT THE EXISTING BUILDING ELEMENTS TO REMAIN DURING DEMOLITION. DO NOT CUT OR ALTER ANY OF THE EXISTING STRUCTURAL OR ARCHITECTURAL ELEMENTS TO REMAIN WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER. PROVIDE PROTECTION FOR EXISTING WALLS, COLUMNS, BRACES, AND OTHER BUILDING ELEMENTS TO REMAIN FROM FALLING DEBRIS. ANY DAMAGE TO EXISTING ELEMENTS TO REMAIN SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR OWN EXPENSE.

I. DESIGN LOADS AND BUILDING CODES:

- DESIGN LOADS ARE PER THE 2021 INTERNATIONAL BUILDING CODE AS AMENDED BY THE NEW HAMPSHIRE STATE BUILDING CODE.
- RISK CATEGORY OF BUILDING: II  
TERRAIN CATEGORY: C  
WIND-BORNE DEBRIS REGION: NO
- SOIL LOADS PER ASCE 7-16:  
REFER TO FOUNDATION AND SLAB DESIGN CRITERIA, THIS SHEET.
- ROOF LIVE LOADS PER ASCE 7-16:  
20 PSF NON-REDUCIBLE
- SNOW LOADS PER ASCE 7-16:  
GROUND SNOW LOAD Pg= 60 PSF  
EXPOSURE FACTOR Ce= 1.0  
THERMAL FACTOR Ct= 1.0  
IMPORTANCE FACTOR Is= 1.0
- WIND LOADS PER ASCE 7-16:  
DESIGN WIND SPEED (V)= 112 MPH  
EXPOSURE CATEGORY C  
HURRICANE PRONE REGION= NO  
EXPOSURE COEFFICIENT Kz= 1.0  
TOPOGRAPHIC FACTOR Kzt= 1.0  
DIRECTIONALITY FACTOR Kd= 0.85  
VELOCITY PRESSURE qz= 17.03 PSF
- FLOOD LOADS PER ASCE 7-16:  
FEMA ZONE X  
DESIGN FLOOD STILLWATER EL = <1.0 FT  
NOT IN MAPPED TSUNAMI ZONE
- SEISMIC LOAD PER ASCE 7-16:  
SHORT SPECTRAL RESP ACC (Ss)= 0.417  
1-SEC SPECTRAL RESP ACC (S1)= 0.085  
SITE CLASS E  
SEISMIC IMPORTANCE FACTOR (Ie)= 1.0  
SPECTRAL RESP COEF (Sds)= 0.537  
SPECTRAL RESP COEF (Sd1)= 0.238  
SEISMIC DESIGN CATEGORY (SDC)= D  
  
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE (BY ACI 350.3)  
RESPONSE MODIFICATION FACTOR R= 3.25 (BURIED)
- FLOOR LIVE LOADS PER ASCE 7-16:  
SLABS ON GRADE, STAIRS, PLATFORMS AND WALKWAYS = 100 PSF UNO  
REFER TO INDIVIDUAL AREA STRUCTURAL DRAWING NOTES. NON-REDUCIBLE, UNO.

NOTE: THIS IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN HERE APPEAR ON THE CONTRACT DOCUMENTS

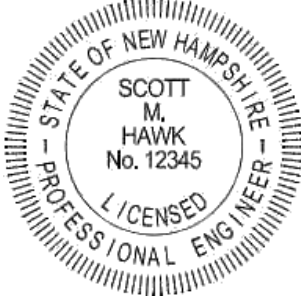


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CLIENT INFO:

**RADIUS RECYCLING  
CONCORD, NH**

**SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS**

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0224539.48
DATE:	NOVEMBER 2025
SCALE:	NO SCALE
DESIGNED BY:	JBH
DRAWN BY:	TPK
CHECKED BY:	SJT
FILENAME:	

DRAWING TITLE:

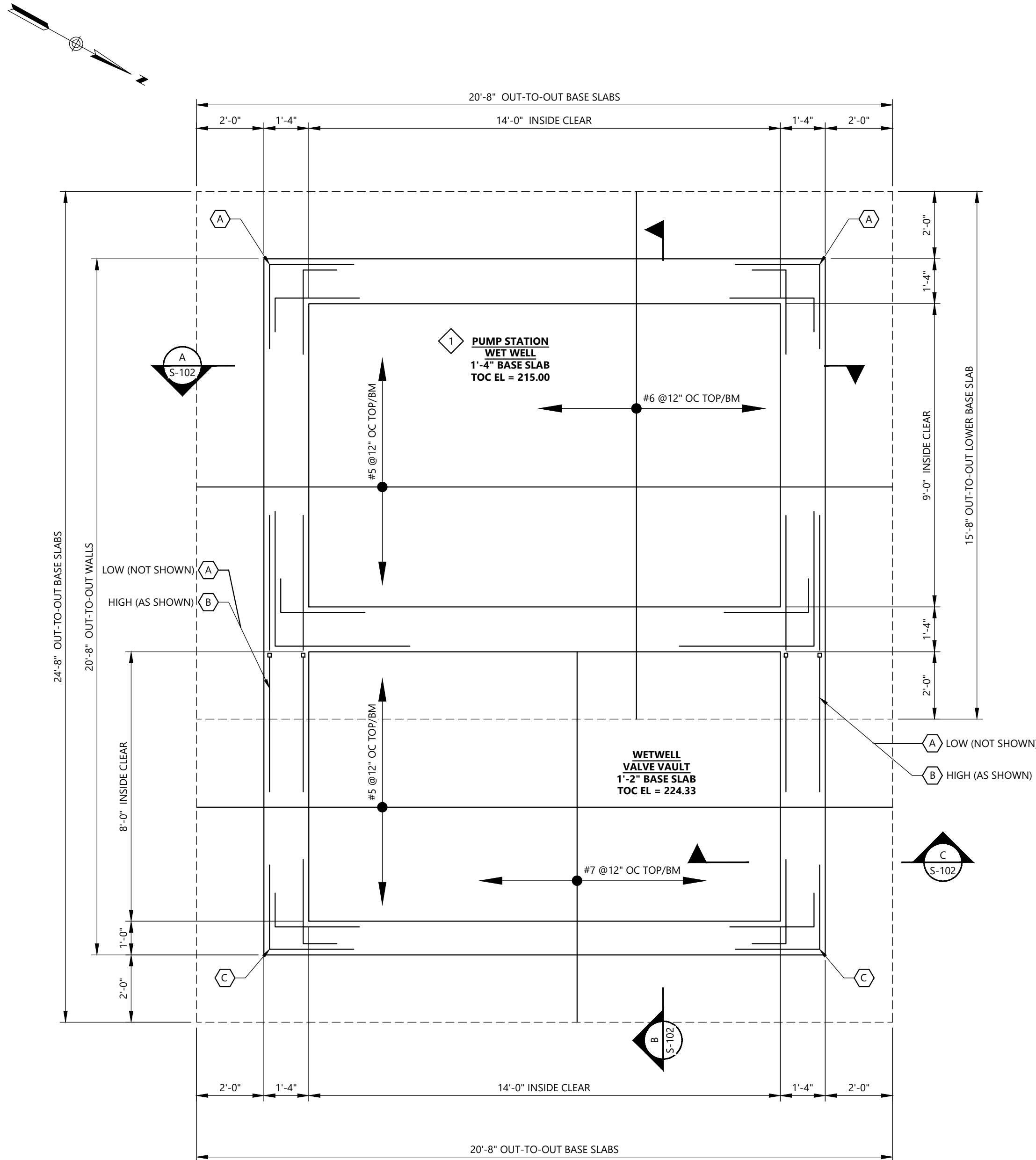
**STRUCTURAL  
ABBREVIATIONS, NOTES,  
AND DESIGN LOADS**

DRAWING NO:

**S-001**



\\woodardcurran.net\shared\Projects\022453948-Schmitzer-Concord-Sandquist-Preliminary-Design\Drawings\Structural\022453948-S-102\_103.dwg, Nov 04, 2025 - 12:45pm, CHAZZOLA



FOUNDATION PLAN

SCALE: 3/8" = 1' - 0"

STRUCTURAL GENERAL NOTES:

- CONTRACTOR MAY PROVIDE A PRECAST STRUCTURE PER SPECIFICATIONS AS AN ALTERNATE TO THE CAST-IN-PLACE CONSTRUCTION.

xx SHEET KEYNOTES:

- CONCRETE FILL USED TO SLOPE THE FLOOR OF THE WET WELL WILL BE SHOWN ON THE FINAL DESIGN DRAWINGS.

CONCRETE TANK NOTES:

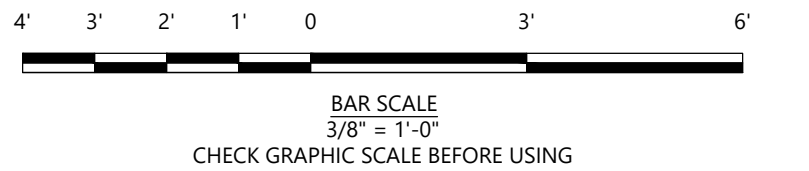
- REFER TO SHEET S-001 AND GEOTECHNICAL REPORT FOR SITE SUBGRADE PREPARATION, GROUNDWATER, DEWATERING, AND EXCAVATION REQUIREMENTS.
- "[XXXXXX]" INDICATES ELEVATION OF CONCRETE FILL. REFER TO SHEET S-002 FOR CONCRETE FILL REQUIREMENTS.
- CONCRETE CONTAINMENT TANK SHALL BE TIGHTNESS TESTED IN ACCORDANCE WITH ACI 350.1, AND NOTES ON SHEET S-002. UNLESS NOTED OTHERWISE ON THIS DRAWING, ALL EXTERIOR AND INTERIOR TANK WALLS SHALL OBTAIN SPECIFIED 28-DAY COMPRESSIVE STRENGTH PRIOR TO FILLING STRUCTURE WITH WATER TO COMMENCE TIGHTNESS TESTING.
- REFER TO SHEET S-930 FOR CONCRETE TANK STANDARD DETAILS. DETAILS SHOWN ON SHEET S-930 APPLY TO ALL WORK, UNLESS SPECIFICALLY NOTED OTHERWISE.
- ALL TANK SUBGRADE CONDITIONS SHALL BE SITE INSPECTED AND APPROVED BY GEOTECHNICAL ENGINEER, PRIOR TO PLACING REBAR.
- REFER TO SHEETS S-002 FOR CONCRETE TESTING REQUIREMENTS AND TESTING FREQUENCY.
- REFER TO CIVIL & MECHANICAL DRAWINGS FOR PIPE PENETRATION SIZES, LOCATIONS, ELEVATIONS AND QUANTITIES.
- CONCRETE CURING: MAINTAIN CONCRETE IN CONTINUOUSLY MOIST CONDITION FOR A MINIMUM OF 7 DAYS. CURING SHALL COMMENCE AS SOON AS POSSIBLE AFTER FINAL FINISHING WHEN IT WILL NOT MAR OR ERODE THE CONCRETE SURFACE. BASE SLABS SHALL BE WET CURED OR A DISSIPATING CURING COMPOUND SHALL BE APPLIED IMMEDIATELY AFTER FINISHING. WALLS SHALL BE CURED BY LEAVING FORMWORK IN-PLACE FOR 7 DAYS OR IF FORMS ARE REMOVED PRIOR TO 7 DAYS, WALL SURFACES SHALL BE IMMEDIATELY CURED WITH A CURING COMPOUND. NOT APPLYING CURING COMPOUND IN A TIMELY MANNER MAY INITIATE CRACKING. WAITING TO APPLY CURING COMPOUND TO THE DAY AFTER CONCRETE PLACEMENT OR STRIPPING OF FORMWORK IS NOT RECOMMENDED.
- TANK CONCRETE TOPPING WILL DEVELOP TEMPERATURE AND SHRINKAGE CRACKS WHICH ARE ACCEPTABLE AND NOT DETRIMENTAL TO THE PERFORMANCE OF THE TOPPING.

WALL CORNER BAR SCHEDULE:

MARK	DESCRIPTION	COMMENTS
A	(1) #7 x 4'-0" x 4'-0" @ 6" OC (2) #7 x 1'-2" x 4'-0" @ 6" OC	CORNER BARS
B	(1) #7 x 4'-0" x 4'-0" @ 6" OC (1) #7 x 1'-2" x 4'-0" @ 6" OC (2) #7 x 4'-0" x 4'-0" DBS/DI @ 6" OC	UPPER T-WALL INTERSECTION
C	(1) #6 x 2'-6" x 2'-6" @ 12" OC (2) #6 x 1'-0" x 2'-6" @ 12" OC	CORNER BARS

CORNER BAR SCHEDULE NOTES:

- TRIM BARS 2" CLR AT WALL OPENINGS/PENETRATIONS AND PROVIDE ADDITIONAL REINFORCEMENT PER STANDARD DETAIL.
- ALL REINFORCEMENT SHALL APPLY TO FULL HEIGHT OF ALL WALLS, UNO.

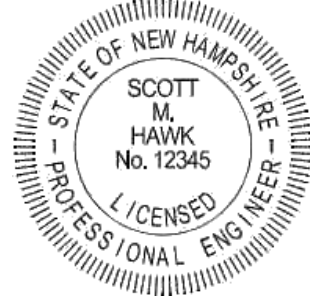


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CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	022453948
DATE:	NOVEMBER 2025
SCALE:	AS NOTED
DESIGNED BY:	SMH
DRAWN BY:	DMB
CHECKED BY:	SJT
FILENAME:	022453948-S-102_103.dwg

DRAWING TITLE:

**STRUCTURAL  
PUMP STATION  
FOUNDATION PLAN**

DRAWING NO:

**S-101**



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SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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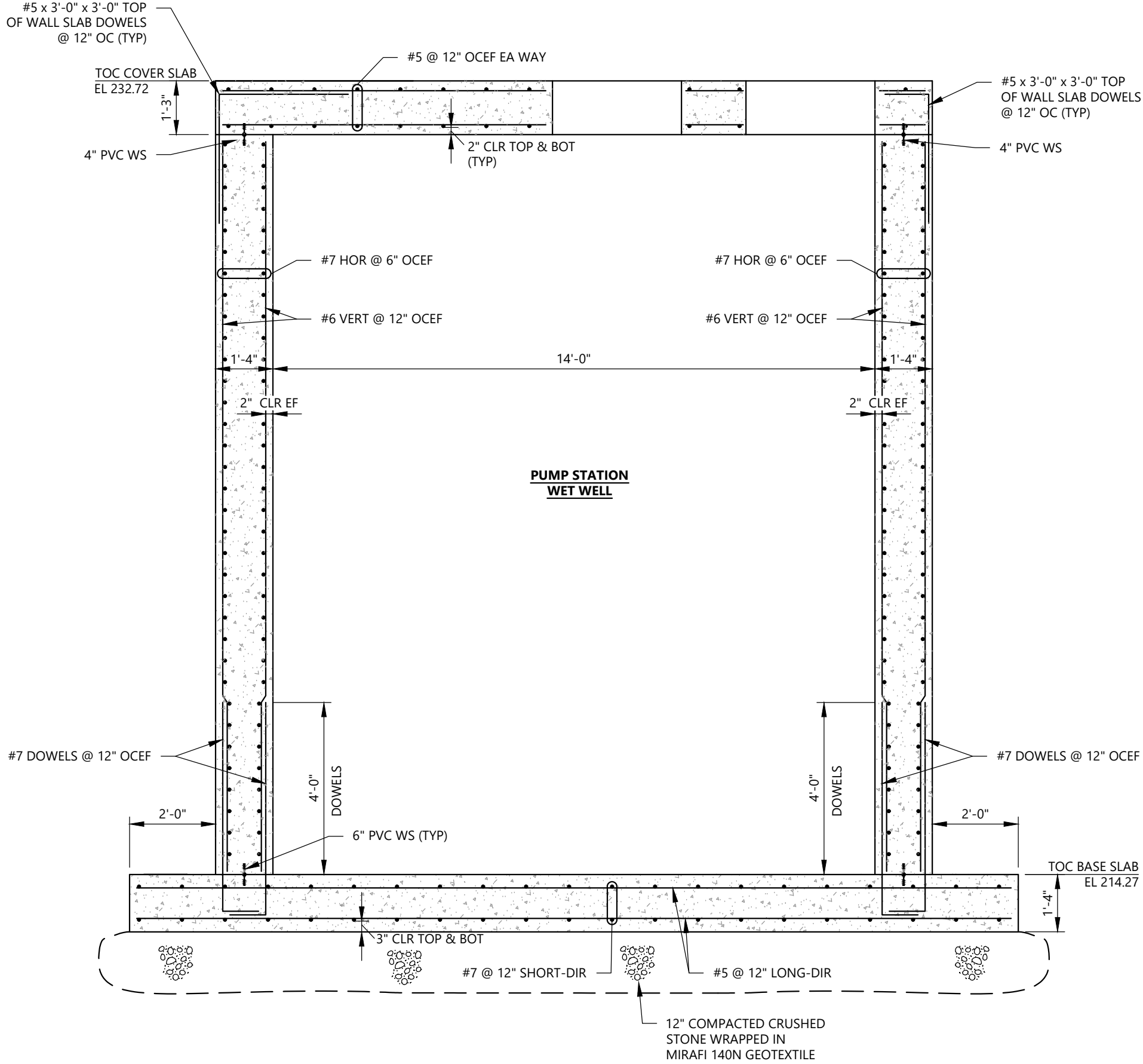
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DATE:	NOVEMBER 2025
SCALE:	AS NOTED
DESIGNED BY:	SMH
DRAWN BY:	DMB
CHECKED BY:	SJT
FILENAME:	022453948-S-102_103.dwg

DRAWING TITLE:

**STRUCTURAL  
PUMP STATION  
SECTIONS**

DRAWING NO:

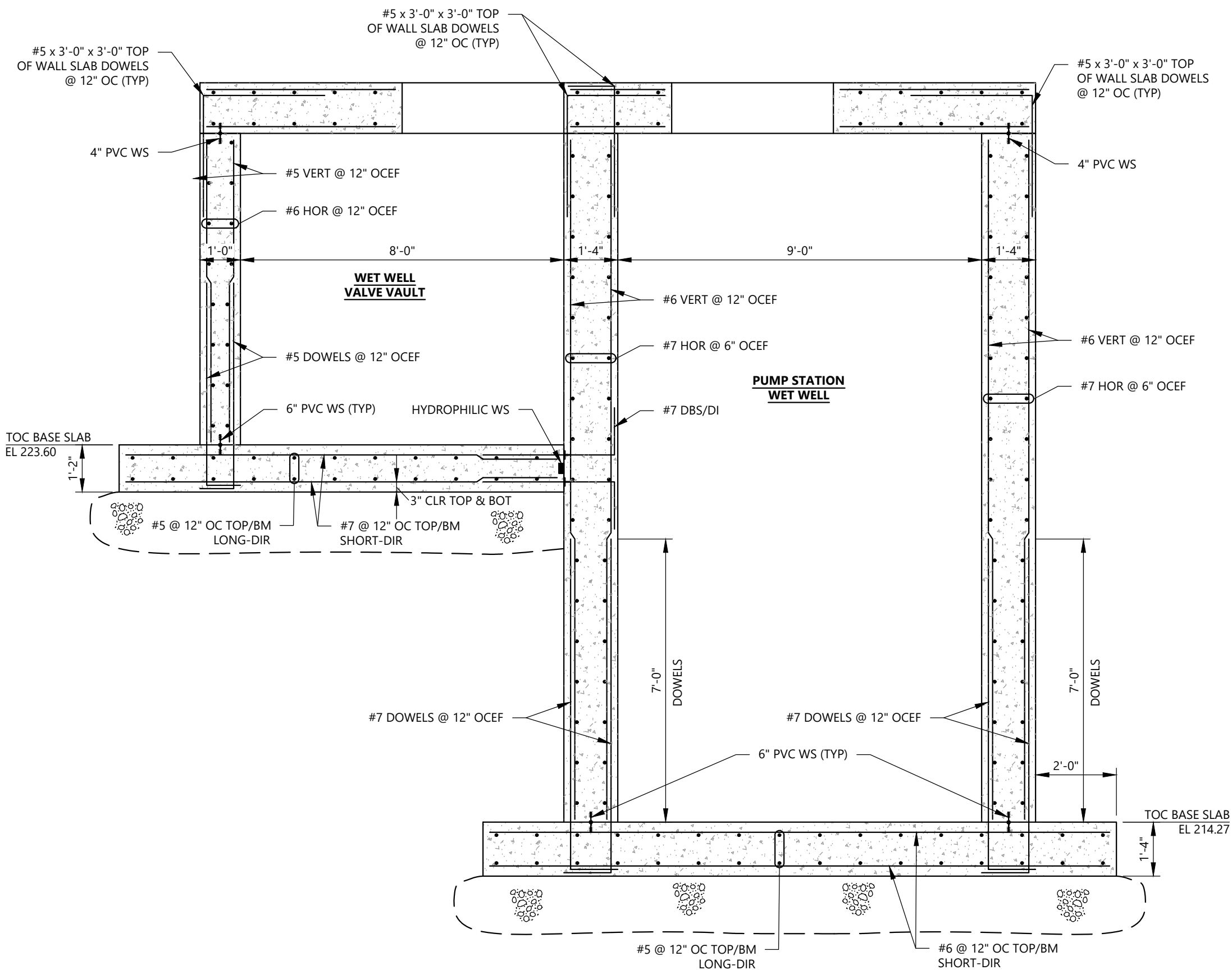
**S-102**



**SECTION A**

SCALE: 3/8" = 1' - 0"

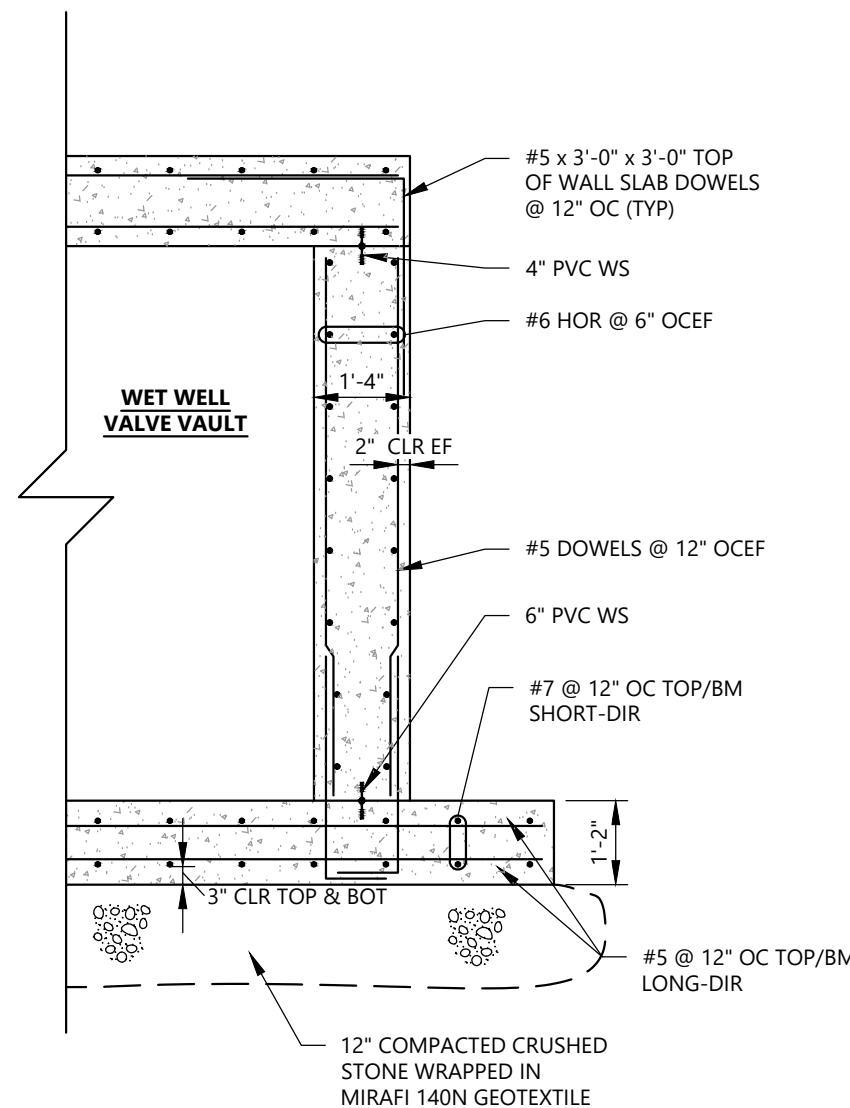
S-101



**SECTION B**

SCALE: 3/8" = 1' - 0"

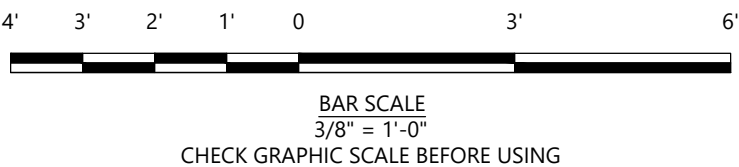
S-101



**PARTIAL SECTION C**

SCALE: 3/8" = 1' - 0"

S-101





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REV	MM/DD/YY	DESCRIPTION
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JOB NO: 0224539.48

DATE: NOVEMBER 2025

SCALE: AS NOTED

DESIGNED BY: JBH

DRAWN BY: TPK

CHECKED BY: SJT

FILENAME:

DRAWING TITLE:

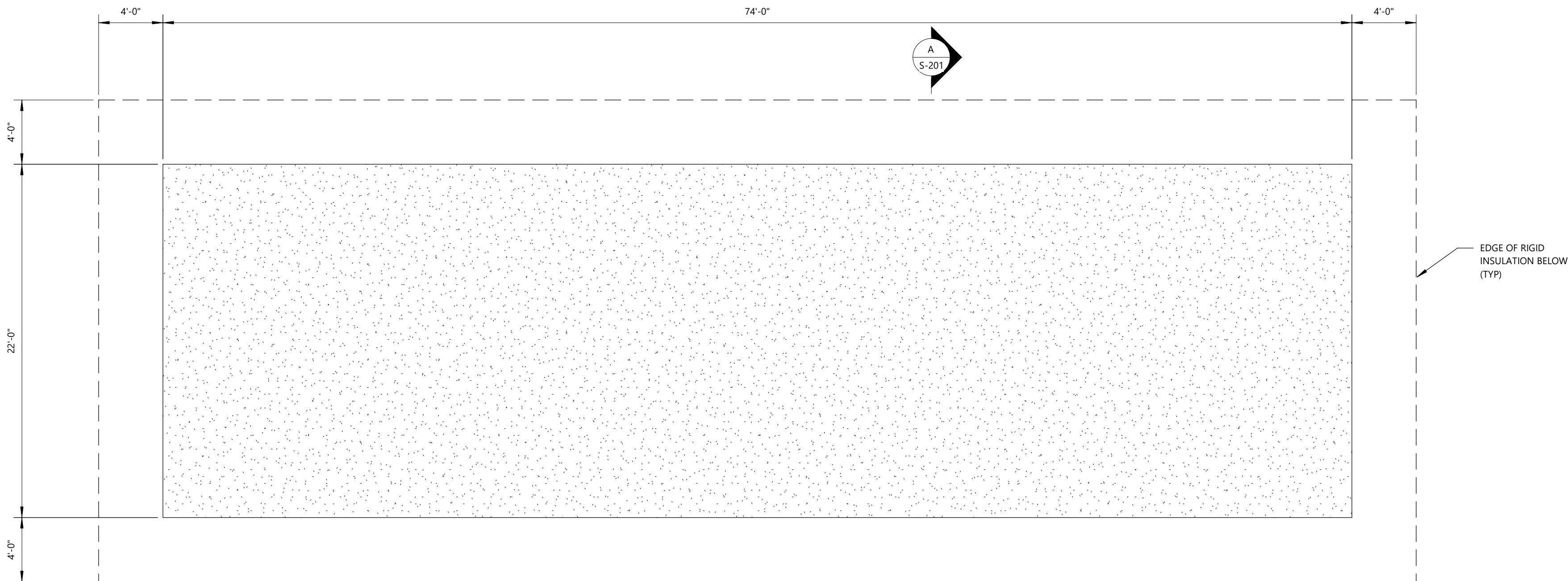
**STRUCTURAL  
PAD PLAN & SECTION**

DRAWING NO:

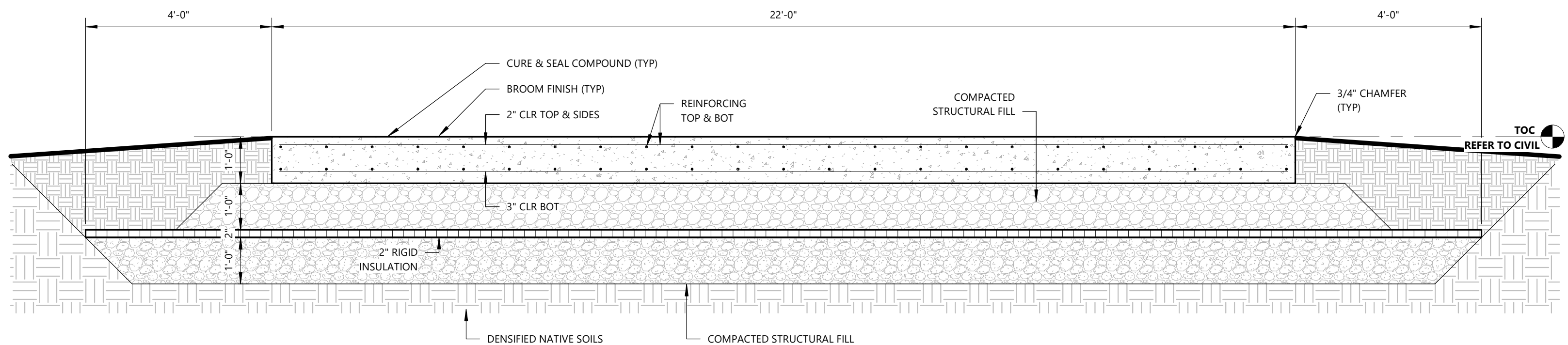
**S-201****STRUCTURAL GENERAL NOTES:**

- NOT ALL MECHANICAL SYSTEMS, PIPING, UTILITIES, AND PENETRATIONS ARE SHOWN. REFER TO ALL OTHER DISCIPLINES FOR ADDITIONAL DETAILS.
- REFER TO CIVIL PLANS FOR ELEVATIONS.
- DESIGN LOADS:

SYSTEM CONNEX	12,000 LB
SETTLING TANK	180,000 LB
BACKWASH TANK	85,000 LB
MEDIA FILTRATION SYSTEM	26,000 LB
CARBON VESSEL	18,000 LB

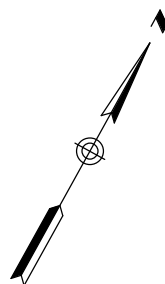
**1 PAD PLAN**

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

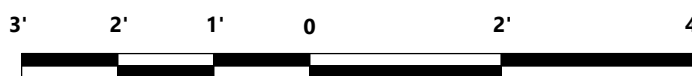
**SECTION A**

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

S-201

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

CHECK GRAPHIC SCALE BEFORE USING

BAR SCALE  
1/2" = 1'-0"

CHECK GRAPHIC SCALE BEFORE USING

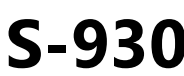


1. PROVIDE CLASS B SPLICE LENGTHS, UNO.
2. VERTICAL REINFORCING NOT SHOWN.
3. FOR SIZE AND SPACING OF REINFORCING, SEE SECTIONS



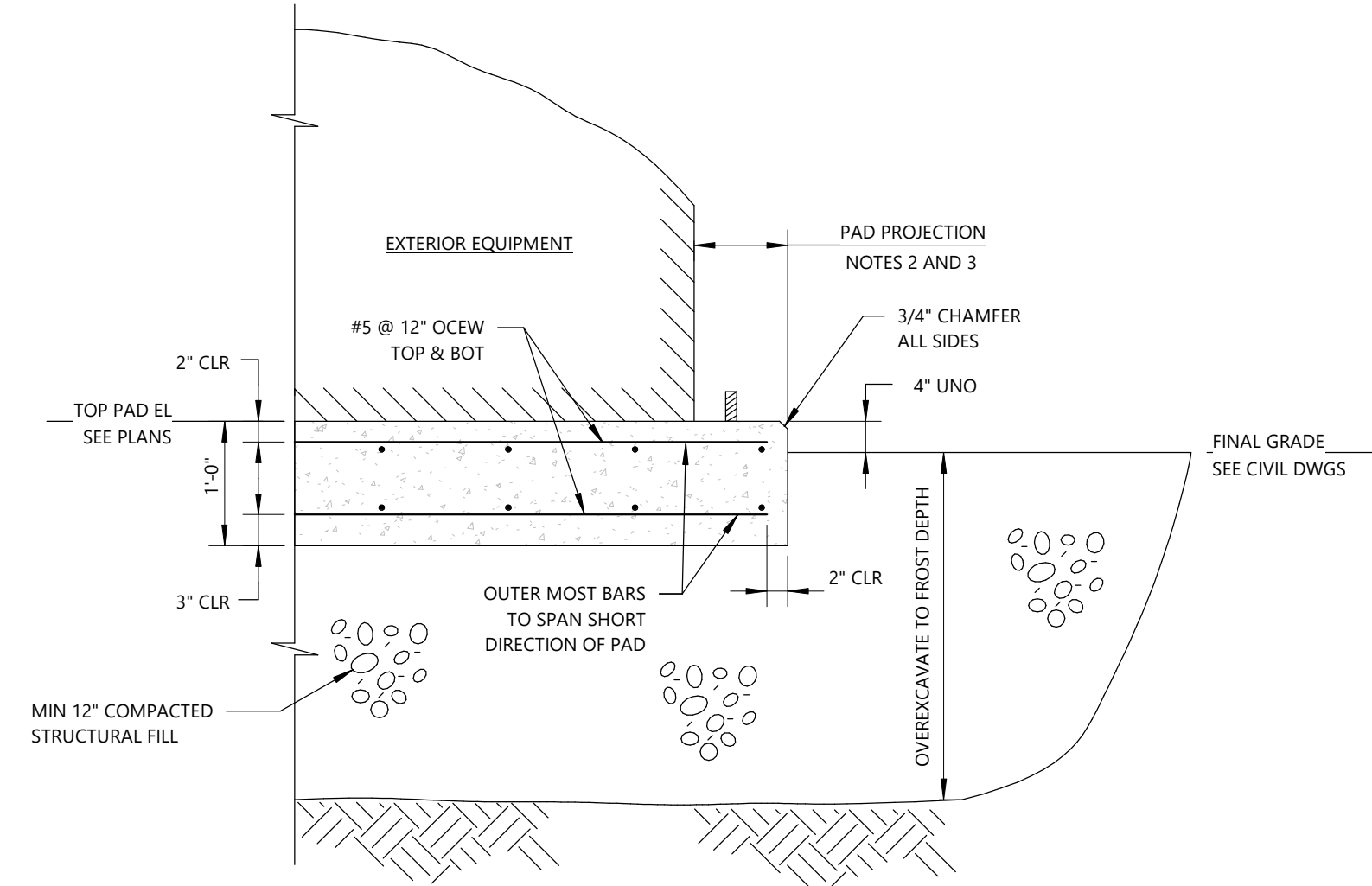
D. 1-1/2 INCH WHERE REQUIRED TO CLEAR WATERSTOP

D. FOR CONCRETE COMPRESSIVE STRENGTHS,  $f'_c$ , OTHER THAN 4,500 PSI, MULTIPLY THE VALUES BY THE SQUARE ROOT OF 4,500 DIVIDE BY THE SQUARE ROOT OF  $f'_c$



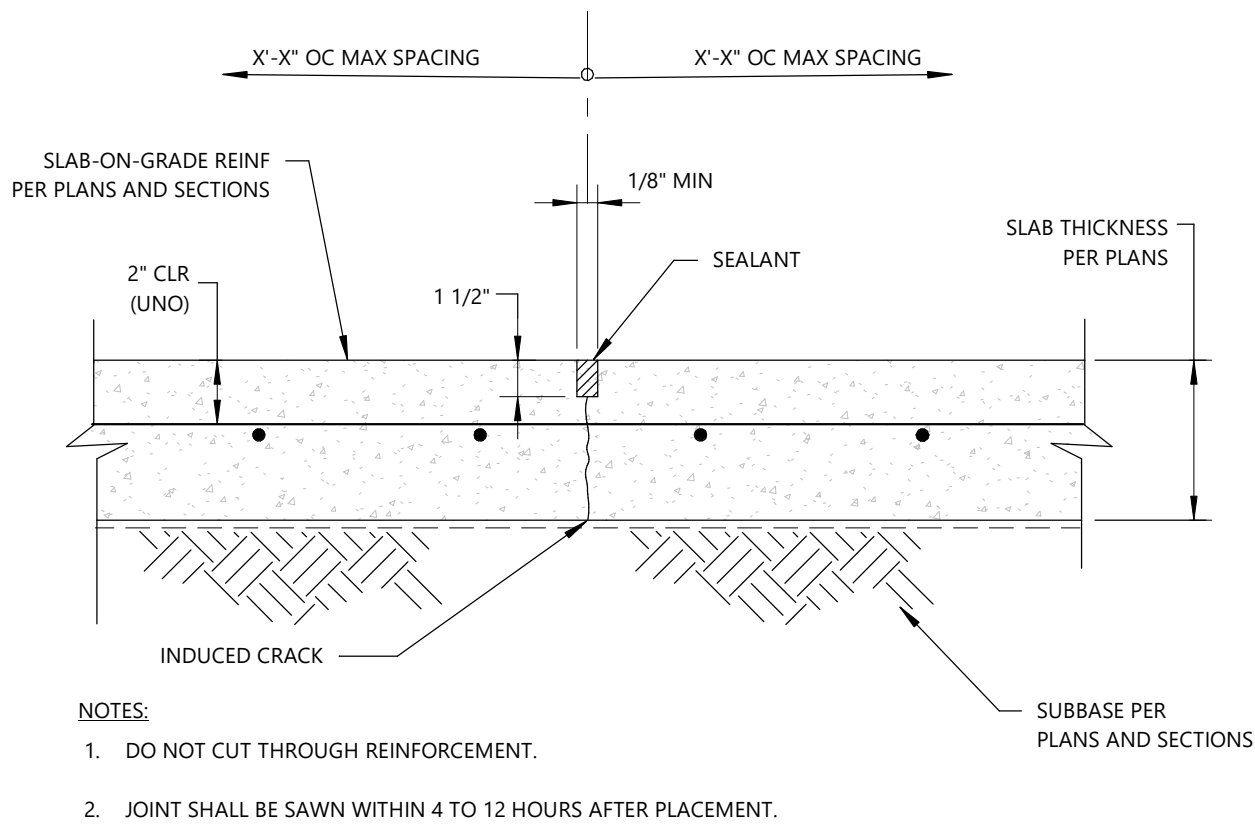
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C:\\_RevitStandards\ Revit Local Files\2024-022453948-S-ATS-PAD.dwg, charzhu@woodardcurran.com, rvt

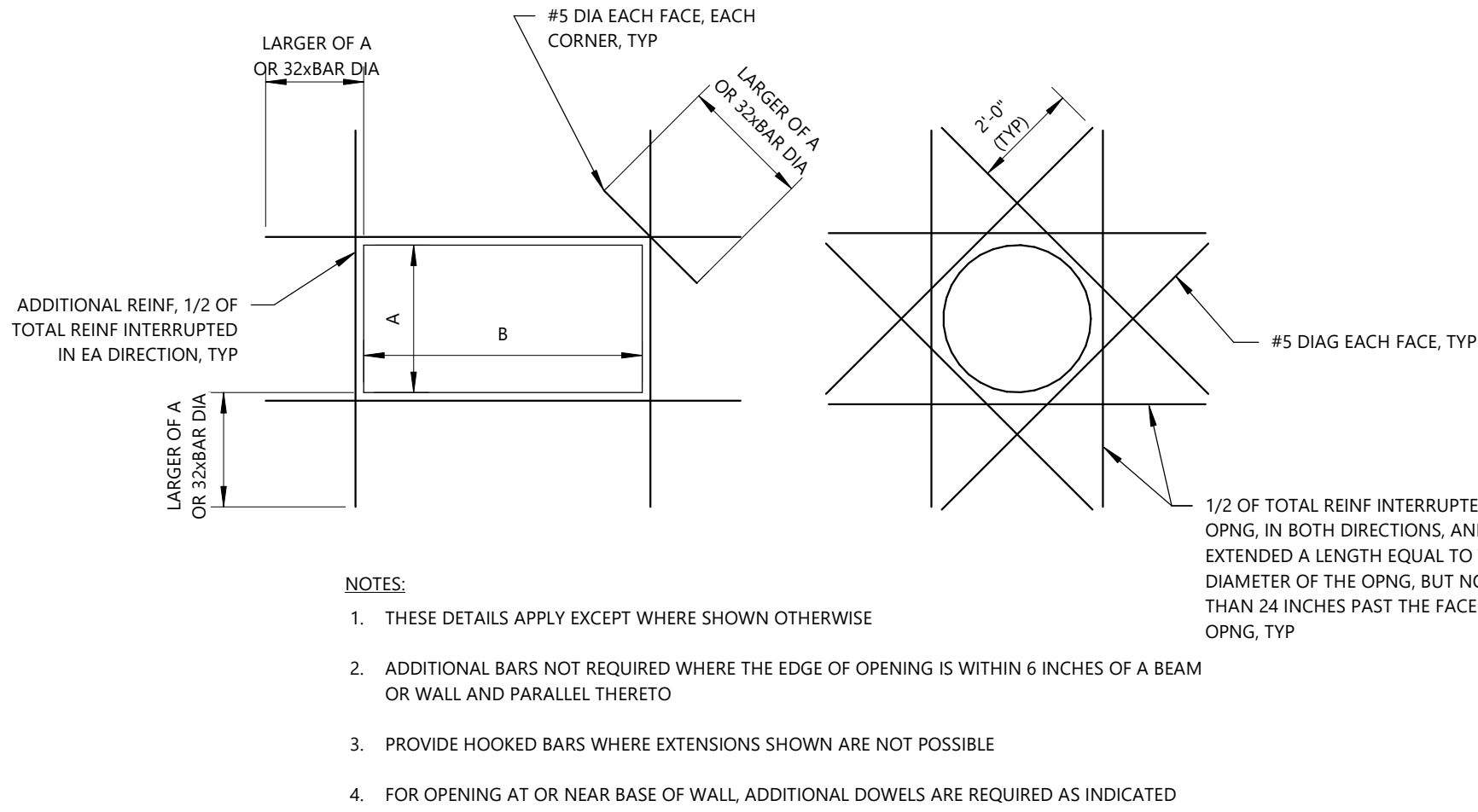


- NOTES:
- SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR EQUIPMENT AND EQUIPMENT PAD LOCATIONS, QUANTITIES, AND LAYOUT.
  - EQUIPMENT PAD PROJECTIONS PAST FACE OF MECHANICAL EQUIPMENT:  
FOR ANCHOR RODS GREATER THAN 5/8" DIA: MINIMUM 9-INCH PROJECTION  
FOR ANCHOR RODS 5/8" DIA OR LESS: MINIMUM 6-INCH PROJECTION
  - TOP OF PAD SHALL BE LEVEL WITHIN 1/8-INCH.
  - PROVIDE SACK-RUBBED FINISH TO ALL EXPOSED SIDES OF EQUIPMENT PAD AND A BROOM FINISH TO THE TOP SURFACE.
  - PROVIDE NON-FROST SUSCEPTIBLE COMPACTED STRUCTURAL FILL UNDER PAD FOOTPRINT TO FROST DEPTH TO PREVENT FROST HEAVE. IF OVEREXCAVATION IS NOT FEASIBLE, PROVIDE 3-INCH RIGID INSULATION UNDER ENTIRE PAD AND EXTENDING A MINIMUM OF 2-T BEYOND ALL SIDES OF THE EQUIPMENT PAD. PLACE CONCRETE DIRECTLY ON TOP OF RIGID INSULATION AND PROVIDE A MINIMUM OF 6-INCHES OF SOIL ABOVE INSULATION LAYER WHERE INSULATION EXTENDS BEYOND CONCRETE PAD.
  - ANCHOR RODS SHALL BE 316 AISI STAINLESS STEEL, UNLESS NOTED OTHERWISE.
  - PRIOR TO EQUIPMENT INSTALLATION, APPLY CURE AND SEAL COMPOUND TO EQUIPMENT PAD SURFACES.

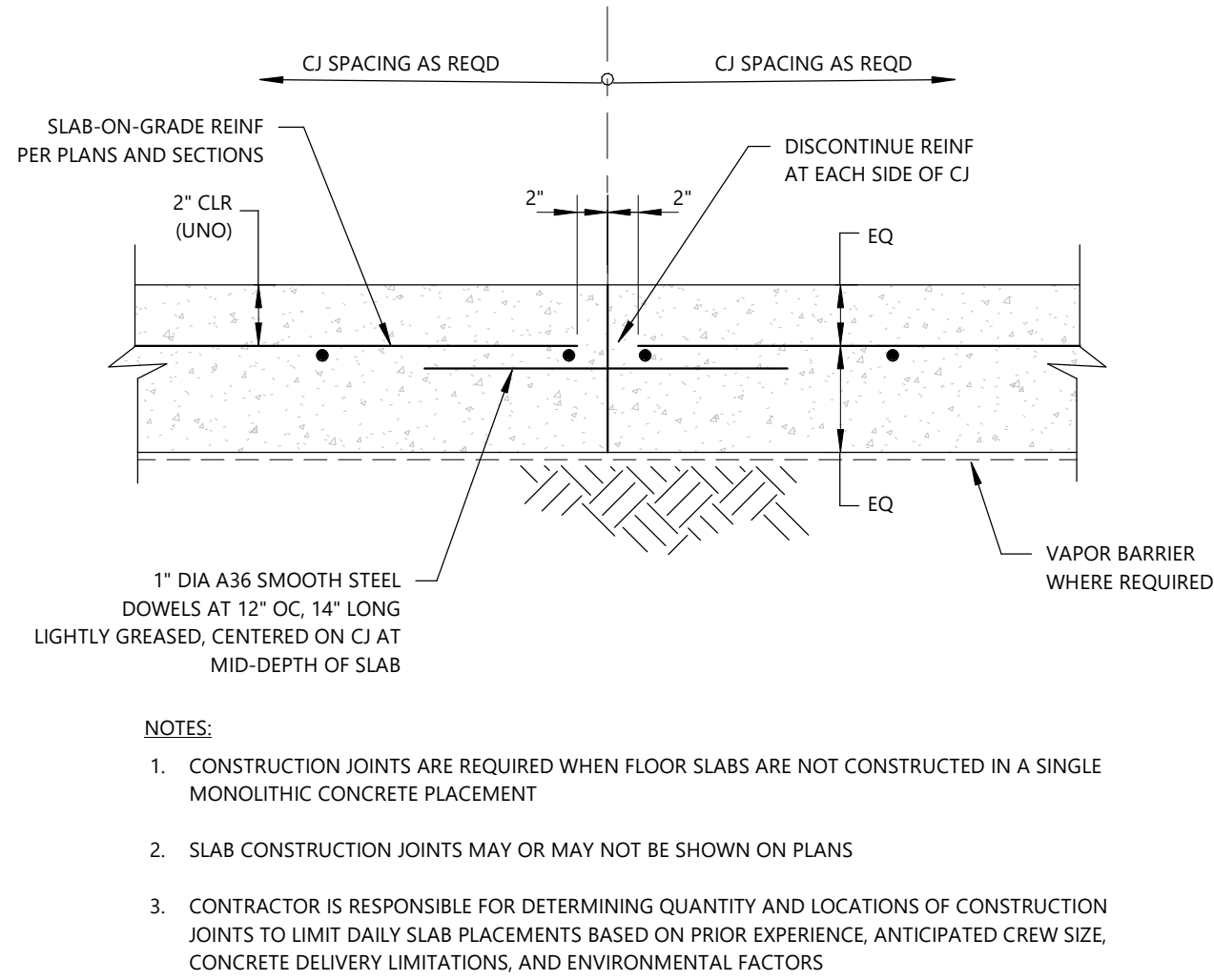
**320** EXTERIOR EQUIP PAD  
SCALE: NTS



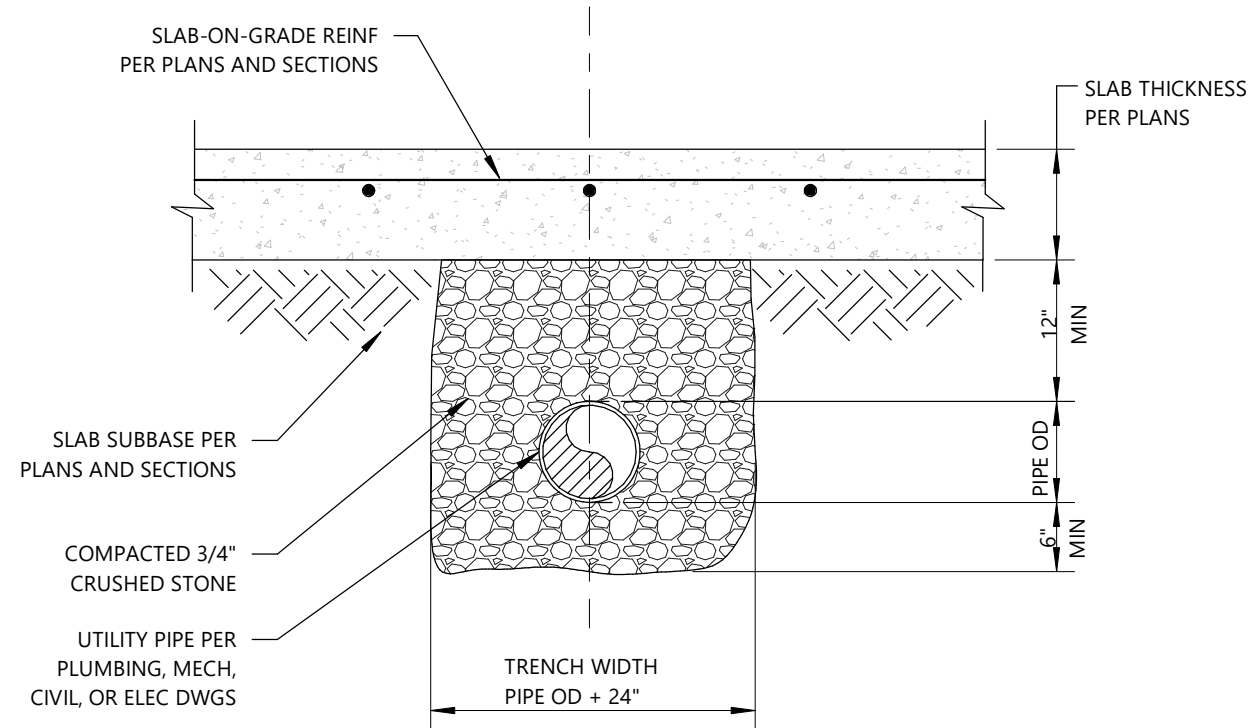
**S321** SLAB SAWED JOINT (SJ)  
SCALE: NTS



**S323** REINF AT OPENINGS  
SCALE: NTS



**S322** SLAB CONSTRUCTION JOINT (CJ)  
SCALE: NTS



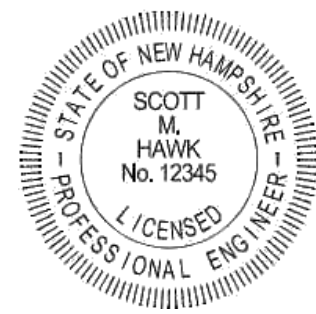
**S324** UNDERSLAB UTILITY TRENCH  
SCALE: NTS



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REV MM/DD/YY DESCRIPTION

JOB NO: 0224539.48

DATE: NOVEMBER 2025

SCALE: NO SCALE

DESIGNED BY: JBH

DRAWN BY: TPK

CHECKED BY: SJT

FILENAME:

DRAWING TITLE:

**STRUCTURAL  
CONCRETE FLOOR SLAB &  
WALL FOOTING DETAILS**

DRAWING NO:

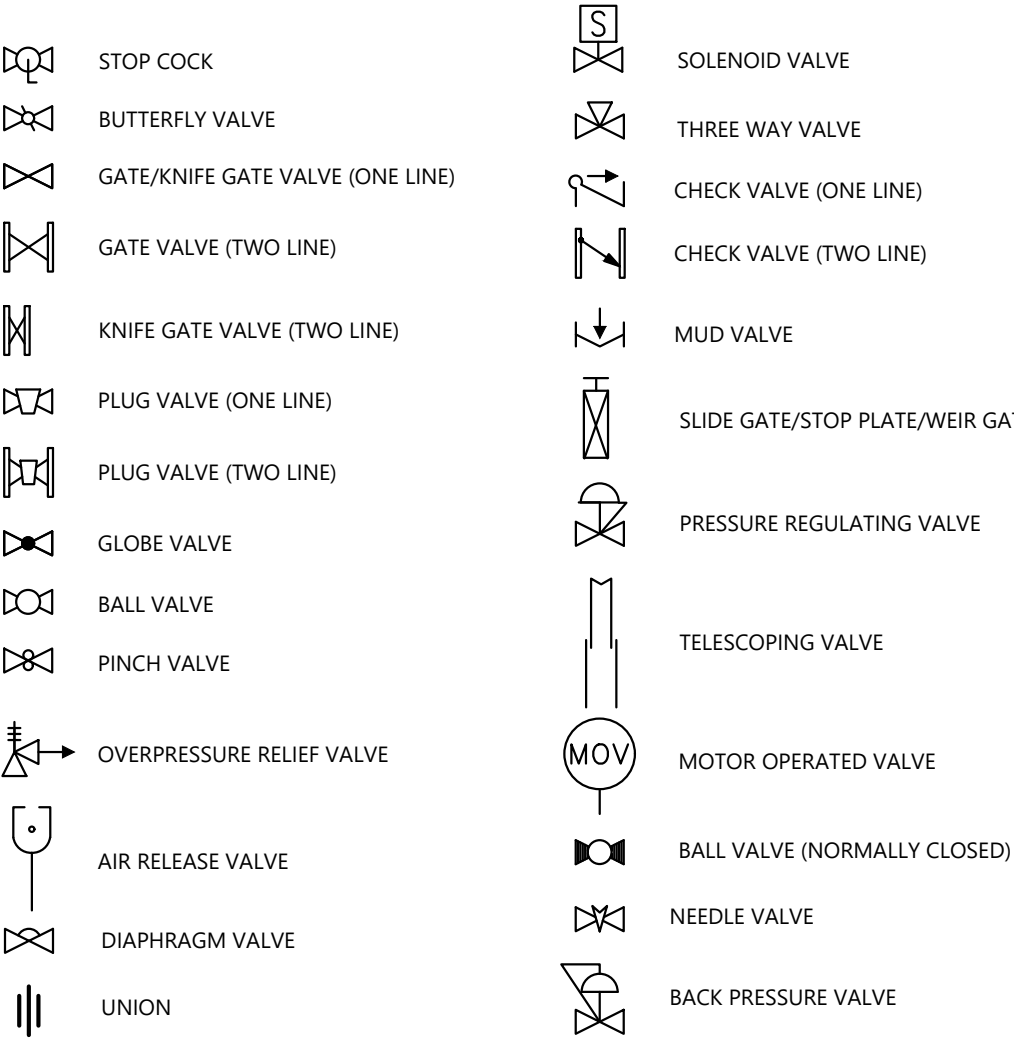
**S-932**

\\woodardcurran.net\shared\Projects\0224539-48 Sandquist - Concord Sandquist Preliminary Design\Drawings\Mechanical\0224539-48 M-9x.dwg, Nov 04, 2025 - 11:43am, CEARZOLA

GENERAL NOTES

1. THIS SHEET REPRESENTS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN WILL APPEAR ON THE CONTRACT DRAWINGS. ADDITIONAL ABBREVIATIONS, NOTES, OR LEGENDS MAY APPEAR TO INDICATE SPECIFIC CONDITIONS.
2. EQUIPMENT, PIPING, APPURTENANCES, ETC. SHOWN IN A "LIGHTER" LINE TYPE INDICATE THE ASSOCIATED ITEM IS "EXISTING". EQUIPMENT, PIPING, APPURTENANCES, ETC. SHOWN IN A "DARKER" LINE TYPE INDICATES THE ASSOCIATED ITEM IS "NEW". ITEMS SHOWN IN A "LIGHT" LINE TYPE WITH A "NOT IN CONTRACT" (N.I.C.) DESIGNATOR HAVE BEEN PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT IN THE CONTRACT SCOPE. THE CONTRACTOR SHALL NOTE THAT ALL EXISTING INFORMATION ON THE DRAWINGS IS SHOWN WITH A LIGHTER LINE WEIGHT WITH THE EXCEPTION OF SCANNED IMAGES UTILIZED FROM PREVIOUS CONSTRUCTION PROJECTS. SCANNED IMAGES ARE NOT TO SCALE.
3. ALL EQUIPMENT, DIMENSIONS, PIPING, SYSTEM LAYOUTS, APPURTENANCES, ETC., HAVE BEEN LAID OUT AND SELECTED BY THE ENGINEER TO ALLOW FOR EASE OF MAINTENANCE. IF THE CONTRACTOR PROPOSES AN ARRANGEMENT WHICH DIFFERS FROM THAT WHICH HAS BEEN SPECIFIED OR INDICATED ON THE CONTRACT DRAWINGS, THE CONTRACTOR SHALL PREPARE AND SUBMIT DETAILED ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, PROCESS AND INSTRUMENTATION, ELECTRICAL, HVAC, AND CONTROL DRAWINGS, EQUIPMENT LISTS, ETC. FOR REVIEW BY THE ENGINEER, AS APPLICABLE. A SUBMITTAL SHALL SPECIFICALLY OUTLINE ALL NECESSARY CHANGES AND CONTAIN ALL FEATURES OF THE ALTERNATE EQUIPMENT AND/OR PROCESS SYSTEM WHICH IS BEING PROPOSED. THE INFORMATION SHALL INCLUDE BUT IS NOT LIMITED TO: PLAN/SECTION DRAWINGS, SCHEMATICS, AND ALL THE NECESSARY APPURTENANCES REQUIRED SUCH AS SUPPLIES, ELECTRICAL WIRINGS, CONTROLS, ETC. ANY SUCH CHANGES (IF APPROVED BY THE ENGINEER) SHALL BE AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL ASSUME ALL COST AND LIABILITY FOR SATISFACTORILY ACCOMPLISHING ALL NECESSARY CHANGES AS REQUIRED FOR EQUIPMENT AND/OR ARRANGEMENTS WHICH DIFFER FROM THE CONTRACT DOCUMENTS. NO CHANGE IN CONTRACT TIME SHALL BE GRANTED FOR EQUIPMENT AND/OR ARRANGEMENTS WHICH DIFFER FROM THE CONTRACT DOCUMENTS. REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL DETAILS.
4. DIELECTRIC COUPLINGS, FLANGES, UNIONS, ETC., SHALL BE PROVIDED AT ALL CONNECTIONS OF DISSIMILAR METALLIC PIPING.
5. THE FOLLOWING MECHANICAL DRAWINGS MAY NOT SHOW ALL VALVES, GAUGES, SWITCHES, OPERATORS, DRAINS, VENTS, COUPLINGS, ETC., FOR COMPLETE AND OPERATIONAL SYSTEMS. SOME SMALL DIAMETER PIPING RUNS (2" AND SMALLER) MAY NOT BE SHOWN IN THEIR ENTIRETY FOR CLARITY ON THE DRAWINGS. SMALL DIAMETER PIPING IS GENERALLY SHOWN SCHEMATICALLY AND DIAGRAMMATICALLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD ROUTING ALL PIPING TO AVOID INTERFERENCES WITH OTHER DISCIPLINES OR CONSTRUCTION. ALL PIPE ROUTING SHALL BE AS APPROVED BY THE ENGINEER. PROVIDE, INSTALL, AND TEST ALL PIPING SYSTEMS AS SPECIFIED AND AS SHOWN ON THE PROCESS AND INSTRUMENTATION AND MECHANICAL DRAWINGS. ALL PIPING AND APPURTENANCES SHALL BE PROVIDED FOR COMPLETE AND OPERATIONAL SYSTEMS.
6. SIZES OF EQUIPMENT FOUNDATIONS AND CONCRETE PADS WHICH HAVE BEEN INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS FOR ALL FOUNDATIONS AND CONCRETE PADS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD FOR THE SPECIFIC EQUIPMENT PROVIDED. UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS ALL FLOOR MOUNTED EQUIPMENT SHALL BE PLACED ON CONCRETE PADS WHICH CONFORM TO THE DETAILS AND REQUIREMENTS SHOWN ON THE DRAWINGS.
7. NOT ALL AND ONLY CERTAIN TYPES OF PIPING SUPPORTS HAVE BEEN SHOWN ON THE DRAWINGS. PIPE SUPPORTS WHICH HAVE BEEN INDICATED ON THE DRAWINGS ARE SHOWN TO CONVEY THE INTENT OF THE PROCESS MECHANICAL DESIGN FOR A PARTICULAR SYSTEM. THE SUPPORTS WHICH HAVE BEEN SHOWN ARE NOT INTENDED TO REPRESENT A COMPLETE SYSTEM. ALL PIPING SUPPORTS, INCLUDING THOSE WHICH HAVE BEEN SHOWN FOR CONCEPTUAL PURPOSES, SHALL BE DESIGNED, FURNISHED, AND INSTALLED BY THE CONTRACTOR AS SPECIFIED AND AS APPROVED BY THE ENGINEER. ALL PIPING WHICH IS ADJACENT TO VALVES, COUPLINGS, INSTRUMENTS, EQUIPMENT, AND APPURTENANCES SHALL BE PROPERLY SUPPORTED AND/OR ANCHORED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PIPING MANUFACTURER. ALL PIPING SHALL BE INDEPENDENTLY SUPPORTED. THE SUPPORT OF PIPING FROM OTHER ASSOCIATED PIPING SHALL NOT BE ACCEPTABLE UNDER ANY CIRCUMSTANCES.
8. ALL VALVE AND GATE ACTUATORS SHALL BE PROVIDED WITH A SQUARE OPERATING NUT FOR OPERATION WITH A POWERNOT ALL AND ONLY CERTAIN TYPES OF VALVE AND GATE OPERATORS (EG. HAND WHEELS, CHAIN WHEELS, HAND CRANKS, LEVERS, ETC.) HAVE BEEN SHOWN FOR CLARITY. ALL VALVE AND GATE OPERATORS SHALL BE LOCATED TO ALLOW CONVENIENT AND UNOBSTRUCTED ACCESS FOR OPENING/CLOSING AS REQUIRED. THE FINAL INSTALLED ORIENTATION OF ALL OPERATORS SHALL BE AS APPROVED BY THE ENGINEER. UNDER NO CIRCUMSTANCES SHALL VALVES BE INSTALLED WITH OPERATORS OR STEMS ORIENTED IN THE VERTICAL DOWNWARD POSITION.
9. FIELD LOCATE AND PROVIDE TAGS ON ALL PROCESS VALVES. THE PROCESS VALVE IDENTIFICATION NUMBERS AND TAGS SHALL BE AS INDICATED ON THE PROCESS AND INSTRUMENTATION DRAWINGS. REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL DETAILS. SUBMIT SAMPLE TAG NUMBERING FOR REVIEW PRIOR TO ORDERING.
10. PORTIONS OF NON-PROCESS MECHANICAL ITEMS (STRUCTURAL, HVAC, AND PLUMBING) MAY BE SHOWN ON THE MECHANICAL DRAWINGS FOR CLARITY AND COORDINATION BETWEEN DISCIPLINES DURING CONSTRUCTION. REFER TO THE APPROPRIATE DRAWINGS AND/OR SPECIFICATIONS FOR ADDITIONAL DETAILS AND REQUIREMENTS.
11. ALL PROCESS PIPING SYSTEMS SHALL BE PROVIDED WITH VENTS AT HIGH POINTS AND DRAINS AT LOW POINTS. PROVIDE ADDITIONAL VENT AND DRAIN CONNECTIONS AS INDICATED ON THE DRAWINGS. FIELD ROUTE DRAIN PIPING TO END TERMINATION AS DIRECTED BY ENGINEER OR AS INDICATED ON THE DRAWINGS.
12. ALL PIPING SHALL BE INSTALLED SUCH THAT ANY PIPE, LAYER OF PIPING, OR EQUIPMENT CAN BE REMOVED WITHOUT DISTURBING REMAINING/ADJACENT PIPING AND ASSOCIATED PIPE SUPPORTS.
13. UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS ALL FLOOR, CONCRETE WALL/TANK, PEMB, AND CMU WALL PENETRATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS. IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY SUBSTITUTE ALTERNATE PENETRATION METHODS PROVIDED THAT THEY MEET THE INTENDED DESIGN REQUIREMENTS AND FUNCTIONALITY.
14. THE NUMBER OF UNIONS AND COUPLINGS SHOWN IS APPROXIMATE. PROVIDE ALL UNIONS OR DISMANTLING COUPLINGS WHETHER THEY HAVE BEEN SHOWN ON THE DRAWINGS OR NOT. UNIONS AND DISMANTLING COUPLINGS SHALL BE PROVIDED ON ALL PIPING WITH WELDED, THREADED, OR SOLVENT CEMENTED JOINTS: AT A MINIMUM OF EVERY 50 LINEAR FEET, AND IN BRANCH LINES TO ALLOW CONVENIENT REMOVAL OF PIPING, EQUIPMENT, AND APPURTENANCES.
15. UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, ALL PENETRATIONS THROUGH EXISTING STRUCTURAL WALLS, FOUNDATIONS, AND SLABS SHALL BE CORE DRILLED AND SEALED WITH MECHANICAL SEALS. ALL OPENINGS SHALL BE COMPATIBLE WITH REQUIRED PIPING AND STANDARD SEAL SIZES.
16. AFTER INSTALLATION IS COMPLETE ALL PIPING SYSTEMS SHALL BE PRESSURE TESTED. ALL LEAKS OR OTHER ASSOCIATED DEFECTS SHALL BE CORRECTED AND THE PIPING SHALL BE RETESTED AT NO ADDITIONAL COST TO THE OWNER. REFER TO SPECIFICATION DIVISION 40 "PROCESS INTEGRATION" FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
17. UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, PROVIDE REINFORCED CONCRETE PADS UNDER ALL EQUIPMENT, CONTROL PANELS, PIPE SUPPORTS, EQUIPMENT SUPPORTS, ETC. PROVIDE A MINIMUM THICKNESS OF 6 INCHES. PROVIDE INCREASED PAD THICKNESS AS INDICATED ON THE DRAWINGS.
18. THE CONTRACTOR SHALL NOT SCALE DISTANCES OFF THE DRAWINGS. WRITTEN DIMENSIONS SHALL PREVAIL OVER SCALED DIMENSIONS. REPORT ANY AND ALL DIMENSIONAL DISCREPANCIES TO THE ENGINEER.
19. UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, ALL VERTICALLY ORIENTED REDUCTION FITTINGS SHALL BE CONCENTRIC TYPE AND ALL HORIZONTALLY ORIENTED REDUCTION FITTINGS SHALL BE ECCENTRIC TYPE. ALL REDUCERS SHALL BE OF THE SAME MATERIAL AS THE CONNECTING PIPING UNLESS OTHERWISE INDICATED. ECCENTRIC REDUCERS IN HORIZONTAL PIPING SHALL BE INSTALLED WITH THE FLAT SIDE UP.
20. UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, ALL "METALLIC" PIPING SHALL BE CONNECTED THROUGH STANDARD ANSI FLANGED CONNECTIONS OR WELDED CONNECTIONS. PLASTIC PIPING CONNECTIONS SHALL BE SOLVENT CEMENT WELDED. PROVIDE FLANGED ATTACHMENTS AS REQUIRED AND AS INDICATED ON THE DRAWINGS FOR CONNECTION TO EQUIPMENT AND APPURTENANCES. UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, THE USE OF ALTERNATIVE JOINTING METHODS, INCLUDING BUT NOT LIMITED TO: COUPLINGS, FLANGED ADAPTORS, AND/OR GROOVED "VICTAULIC TYPE" CONNECTIONS SHALL NOT BE ACCEPTABLE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.
21. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, PROVIDE ALL ADAPTORS, FITTINGS, AND ADDITIONAL PIPING FOR A COMPLETE AND OPERATIONAL SYSTEM. THE USE OF UNI-FLANGES SHALL NOT BE ACCEPTABLE UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS.
22. ALL VALVES, PIPING, AND PIPING SPECIALTIES INCLUDING BUT NOT LIMITED TO PLAIN END PIPE, STRAINERS, ETC., SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURAL MEMBERS AS APPROVED BY THE ENGINEER. THE SUPPORT OF PIPING AND APPURTENANCES FROM OTHER ASSOCIATED PIPING SHALL NOT BE ACCEPTABLE.
23. SOME REDUCTION FITTINGS, EXPANSION FITTINGS, COUPLINGS, ETC. HAVE BEEN OMITTED FROM THE MECHANICAL DRAWINGS FOR CLARITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL PIPING, FITTINGS, COUPLINGS, APPURTENANCES, ETC. FOR COMPLETE OPERATIONAL PIPING SYSTEMS UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, ALL FITTINGS SHALL BE OF THE SAME TYPE, MATERIAL, STYLE, PRESSURE RATING AND DUTY AS THE CONNECTING PIPING.

VALVE SYMBOLS



FLUID DESIGNATIONS

- AE - AERATION TANK EFFLUENT  
AS - ALUMINUM SULFATE  
BIS - SODIUM BISULFITE  
BYP - BYPASS LINE  
CCS - CHEMICAL CLEANING SOLUTION  
CN - CENTRATE  
CA - COMPRESSED AIR  
CW - CITY WATER  
DRN - DRAIN  
DS - DEWATERED SLUDGE (CAKE)  
EFF - FINAL EFFLUENT  
FCL - FERRIC CHLORIDE  
FES - FINAL EFFLUENT SAMPLE  
GRT - GRIT SLURRY  
HWE - HEADWORKS EFFLUENT  
HYP - SODIUM HYPOCHLORITE  
IR - INTERNAL RECYCLE  
IS - INFLUENT SAMPLE  
LPA - LOW PRESSURE AIR  
MLSS - MIXED LIQUOR SUSPENDED SOLIDS  
MRC - MEMBRANE RECYCLE  
NPW - PLANT WATER (TREATED EFFLUENT)  
OD - ODOROUS AIR "FOUL"  
OV - OVERFLOW  
P - PROTECTED WATER  
PE - PRIMARY EFFLUENT  
PL - POLYMER SOLUTION  
POLY - BLENDED POLYMER  
PRM - MEMBRANE PERMEATE  
PSC - PRIMARY SCUM  
PSL - PRIMARY SLUDGE  
RCW - RECYCLED WATER  
RAS - RETURN ACTIVATED SLUDGE  
RAW - RAW WASTE WATER  
SA - SULFURIC ACID  
SC - SCUM  
SCR - SCREENINGS  
SCL - STORM DRAIN  
SE - SECONDARY EFFLUENT  
SEP - SEPTAGE  
SH - SODIUM HYDROXIDE (CAUSTIC)  
SN - SUPERNATANT  
SPD - SUMP PUMP DISCHARGE  
SS - SANITARY SEWER  
SSC - SECONDARY SCUM  
SSL - SECONDARY SLUDGE  
SW - SEAL WATER  
TE - TERTIARY EFFLUENT  
TWAS - THICKENED WASTE ACTIVATED SLUDGE  
TW - POTABLE TOWN WATER (COLD)  
UD - UNDERDRAIN  
UVE - UV SYSTEM EFFLUENT  
V - VENT  
WAS - WASTE ACTIVATED SLUDGE

EQUIPMENT DESIGNATIONS

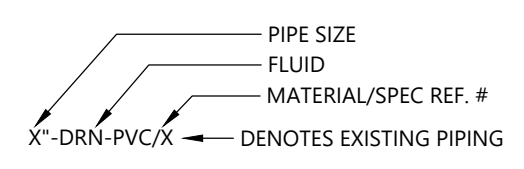
- AC - AIR COMPRESSOR  
AG - AGITATOR  
B - BLOWER  
CBA - COARSE BUBBLE AERATION SYSTEM  
CC - CROSS COLLECTOR  
CF - CENTRIFUGE  
CV - CONVEYOR  
CY - GRIT CYCLONE  
D - DECANter  
DC - DAVIT CRANE  
F - FAN  
FA - FLOATING AERATOR  
FBA - FINE BUBBLE AERATION SYSTEM  
FM - FLOATING MIXER  
G - GRINDER  
GC - GRIT CLASSIFIER  
H - HEATER  
HT - HEAT TRACE  
ICM - INDUCTION CHEMICAL MIXER  
M - MOTOR  
MC - MACERATOR  
MG - MOTOR-OPERATED GATE  
MV - MOTOR-OPERATED VALVE  
MX - MIXER (VERTICAL SHAFT)  
O - ODOR CONTROL SYSTEM  
P - PUMP  
PC - PRIMARY CLARIFIER  
PDC - POWER DISTRIBUTION CENTER  
PL - POLYMER FEED SYSTEM  
RT - RECEIVER TANK (COMPRESSED AIR)  
S - SCREEN  
SC - SECONDARY CLARIFIER  
SCL - SCUM COLLECTOR  
SG - SLIDE GATE  
SLG - SLUICE GATE  
SM - SUBMERSIBLE MIXER  
SMP - SAMPLER  
SMU - SUBMERSIBLE MEMBRANE UNIT  
SP - STOP PLATE  
SR - SEPTAGE RECEIVING STATION  
T - TANK  
TF - TERTIARY FILTER  
UV - ULTRAVIOLET DISINFECTION SYSTEM  
WG - WEIR GATE  
WP - WASH PRESS

GENERAL ABBREVIATIONS

- ACFM - ACTUAL CUBIC FEET PER MINUTE  
AFF - ABOVE FINISHED FLOOR  
ALGNMT - ALIGNMENT  
BF - BLIND FLANGE  
ECC - ECCENTRIC  
EL - ELEVATION  
FF - FINISHED FLOOR  
FLG - FLANGE  
FL - FLOOR  
FS - FLOW SWITCH  
GPD - GALLONS PER DAY  
GPH - GALLONS PER HOUR  
GPM - GALLONS PER MINUTE  
HB - HOSE BIB  
HWL - HIGH WATER LEVEL  
ICFM - INLET CUBIC FEET PER MINUTE  
INCL - INCLUDED WITH PURCHASED EQUIPMENT  
INV - INVERT  
LWL - LOW WATER LEVEL  
M - MILLIAMPS  
MGD - MILLION GALLONS PER DAY  
MG/L - MILLIGRAMS PER LITER  
MHW - MEAN HIGH WATER  
MJ - MECHANICAL JOINT  
MLW - MEAN LOW WATER  
MSL - MEAN SEA LEVEL  
NTS - NOT TO SCALE  
OL - OVERLOAD  
ON - ON CENTER  
PE - PLAIN END  
PLC - PROGRAMMABLE LOGIC CONTROLLER  
PPD - POUND PER DAY  
PSIA - POUNDS PER SQUARE INCH ABSOLUTE  
PSIG - POUNDS PER SQUARE INCH  
RED - REDUCER  
SCFM - CUBIC FEET PER MINUTE (STANDARD CONDITIONS)  
SCH - SCHEDULE  
SP - SET POINT (TYPICAL)  
STDBY - STANDBY  
TDH - TOTAL DYNAMIC HEAD  
TYP - TYPICAL  
UNO - UNLESS NOTED OTHERWISE  
VCP - VENDOR SUPPLIED CONTROL PANEL  
WS - WATER SURFACE

PIPE MATERIALS

- C/I/X - CAST IRON PIPE  
CU/1 - COPPER PIPE & TUBING  
DI/1 - DUCTILE IRON PIPE (FLANGED)  
DI/2 - DUCTILE IRON PIPE (MECHANICAL JOINT)  
DI/3 - DUCTILE IRON (PUSH-ON JOINT)  
DI/4 - DUCTILE IRON (RIGID GROOVED END)  
PVC/1 - PVC PIPE (SOCKET WELDED) - SCH. 80  
PVC/2 - PVC TUBING  
PVC/3 - PVC DOUBLE CONTAINMENT PIPE  
PVC/4 - PVC PIPE (CPVC)  
PVC/5 - PVC PIPE (BURIED SDR 35)  
PVC/6 - PVC PIPE (BURIED SDR 18)  
PVC/7 - PVC PIPE (SOCKET WELDED) - SCH. 40  
SS/1 - STAINLESS STEEL PIPE (SCH. 10S)  
SS/2 - STAINLESS STEEL PIPE (SCH. 40)  
SS/3 - STAINLESS STEEL TUBING  
SS/4 - STAINLESS STEEL HOSE  
CS/1 - CARBON STEEL PIPE  
CS/2 - TEFLON LINED STEEL PIPE (FLANGED)  
PE/1 - POLYETHYLENE PIPING (SOCKET WELDED)  
PE/2 - POLYETHYLENE TUBING (HIGH DENSITY)  
PE/3 - POLYETHYLENE TUBING (LOW DENSITY)  
PE/4 - POLYETHYLENE PIPING (BURIED) - DR-11  
PE/5 - POLYETHYLENE PIPING (BURIED STORM DRAIN)



PROCESS PIPE INSULATION TYPE LISTING

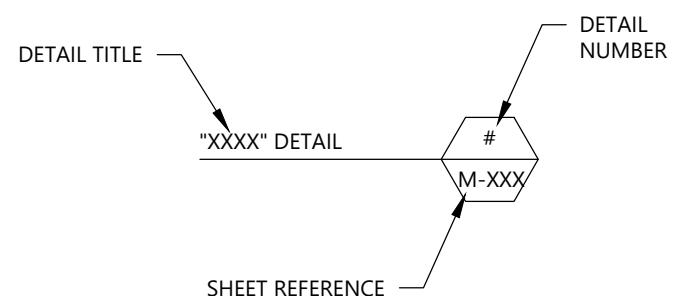
- I/1 - FIBROUS GLASS PIPE INSULATION  
I/2 - ELASTOMERIC FOAM PIPE INSULATION  
I/3 - MINERAL WOOL PIPE INSULATION  
I/4 - POLYISOCYANURATE PIPE INSULATION

INSULATION JACKET TYPE LISTING

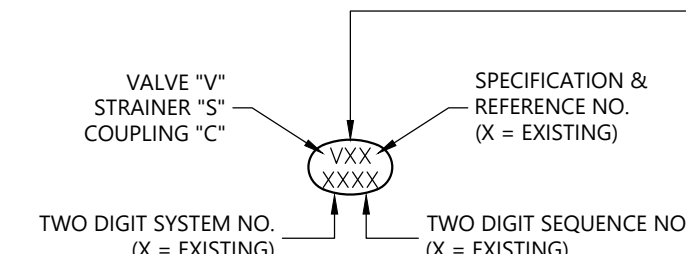
- J/1 - PVC INSULATION JACKET  
J/2 - ALUMINUM INSULATION JACKET  
J/3 - STAINLESS STEEL JACKET  
J/4 - SHEET MEMBRANE JACKET

- NOTES:  
1. REFER TO SPECIFICATION 40 42 13 "PROCESS PIPE INSULATION" FOR ADDITIONAL DETAILS AND REQUIREMENTS.

MECHANICAL DETAIL REFERENCE



VALVE, STRAINER & COUPLING TAG SYMBOL KEY



- VALVE TYPE  
1 GATE  
2 BALL  
3 BUTTERFLY  
4 PLUG  
5 GLOBE/NEEDLE  
6 CHECK  
7 ANGLE  
8 PINCH OR DIAPHRAGM  
9 3-WAY OR 4-WAY  
0 SPECIAL (SEE SPECIFICATIONS)

- NOTES:  
1. REFER TO SPECIFICATION 40 05 23 "PROCESS VALVES AND STRAINERS FOR ADDITIONAL DETAILS AND REQUIREMENTS.  
2. REFER TO SPECIFICATION 40 05 14 "PROCESS PIPE COUPLINGS & CONNECTORS FOR ADDITIONAL DETAILS AND REQUIREMENTS.

VALVE, STRAINER & COUPLING TYPE LISTING

SPECIALTY VALVES (TYPE V0#)

- V00 - BACK PRESSURE VALVE  
V01 - METALLIC PRESSURE REGULATING VALVE  
V02 - PVC PRESSURE REGULATING VALVE  
V03 - BACK FLOW PREVENTER (RPZ)  
V04 - METALLIC PRESSURE RELIEF VALVE  
V05 - PVC PRESSURE RELIEF VALVE  
V06 - WASTEWATER AIR RELEASE VALVE  
V07 - WASTEWATER AIR & VACUUM VALVE  
V08 - WASTEWATER COMBINATION AIR VALVE  
V09 - TELESCOPING VALVE

PLUG VALVES (TYPE V4#)

- V40 - METALLIC PLUG VALVE (FLANGED)  
V41 - BURIED PLUG VALVE (MECHANICAL JOINT)  
V42 - MUD VALVE (PLUG TYPE DRAIN VALVE)  
V43 - NOT USED  
V44 - NOT USED  
V45 - NOT USED  
V46 - NOT USED  
V47 - NOT USED  
V48 - NOT USED  
V49 - NOT USED

PINCH & DIAPHRAGM VALVES (TYPE V8#)

- V80 - PVC DIAPHRAGM VALVE  
V81 - METALLIC PINCH VALVE (CLOSED BODY)  
V82 - NOT USED  
V83 - NOT USED  
V84 - NOT USED  
V85 - NOT USED  
V86 - NOT USED  
V87 - NOT USED  
V88 - NOT USED  
V89 - NOT USED

GATE VALVES (TYPE V1#)

- V10 - KNIFE GATE VALVE (RESILIANT SEATED)  
V11 - KNIFE GATE VALVE (METAL SEATED)  
V12 - GATE VALVE (RESILIANT SEATED)  
V13 - GATE VALVE (METAL SEATED)  
V14 - BURIED GATE VALVE (RESILIANT SEATED)  
V15 - BURIED GATE VALVE (DOUBLE METAL DISK)  
V16 - PVC GATE VALVE  
V17 - BURIED INSERTION GATE VALVE (RESILIANT SEATED)  
V18 - NOT USED  
V19 - NOT USED

GLOBE & NEEDLE VALVES (TYPE V5#)

- V50 - METALLIC GLOBE VALVE  
V51 - PVC GLOBE VALVE  
V52 - METALLIC NEEDLE VALVE  
V53 - NOT USED  
V54 - NOT USED  
V55 - NOT USED  
V56 - NOT USED  
V57 - NOT USED  
V58 - NOT USED  
V59 - NOT USED

STRAINERS (TYPE S0#)

- S01 - PVC Y-STRAINER (CLEAR)  
S02 - METALLIC Y-STRAINER  
S03 - PVC SIMPLEX BASKET STRAINER  
S04 - METALLIC SIMPLEX BASKET STRAINER  
S05 - PVC DUPLEX BASKET STRAINER  
S06 - METALLIC DUPLEX BASKET STRAINER  
S07 - WATER FILTER  
S08 - NOT USED  
S09 - NOT USED  
S10 - NOT USED

BALL VALVES (TYPE V2#)

- V20 - PVC BALL VALVE (TRUE UNION SOCKET)  
V21 - PVC BALL VALVE (FLANGED)  
V22 - PVC BALL VALVE (THREADED)  
V23 - METALLIC BALL VALVE (FLANGED)  
V24 - METALLIC BALL VALVE (THREADED)  
V25 - STAINLESS STEEL BALL VALVE (FLANGED)  
V26 - STAINLESS STEEL BALL VALVE (THREADED)  
V27 - NOT USED  
V28 - NOT USED  
V29 - NOT USED

CHECK VALVES (TYPE V6#)

- V60 - PVC BALL CHECK VALVE  
V61 - PVC SWING CHECK VALVE  
V62 - METALLIC SWING CHECK VALVE  
V63 - METALLIC FLAP CHECK VALVE  
V64 - DOUBLE DISK SWING CHECK VALVE  
V65 - SLANTING DISK SWING CHECK VALVE  
V66 - WAFER STYLE SILENT CHECK VALVE  
V67 - GLOBE STYLE SILENT CHECK VALVE  
V68 - METALLIC BALL CHECK VALVE  
V69 - DUCK BILL CHECK VALVE

COUPLINGS (TYPE C#)

- C01 - SLEEVE TYPE COUPLINGS  
C02 - FLEXIBLE SLEEVE TYPE COUPLINGS  
C03 - FLEXIBLE SPLIT RING GROOVED END COUPLINGS  
C04 - FLEXIBLE SPLIT RING SHOULDERED END COUPLINGS  
C05 - RIGID SPLIT RING GROOVED END COUPLINGS  
C06 - RIGID SPLIT RING SHOULDERED END COUPLINGS  
C07 - SLEEVE TYPE FLANGED ADAPTORS  
C08 - STAINLESS STEEL SLEEVE TYPE FLANGED ADAPTORS  
C09 - SHORT BODY FLANGED ADAPTORS  
C10 - SPLIT TYPE FLANGED ADAPTORS  
C11 - LIQUID SERVICE EXPANSION JOINTS (FILLED ARCH)  
C12 - AIR SERVICE EXPANSION JOINTS (BELLOWS STYLE)  
C13 - QUICK CONNECT COUPLINGS  
C14 - RESTRAINED MECHANICAL JOINT COUPLINGS  
C15 - DUCTILE IRON EXPANSION JOINT  
C16 - EXPANSION JOINT

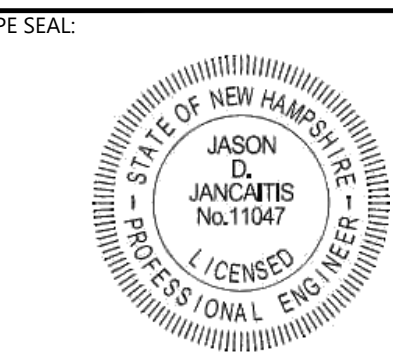
BUTTERFLY VALVES (TYPE V3#)

- V30 - METALLIC BUTTERFLY VALVE (LIQUID SERVICE)  
V31 - METALLIC BUTTERFLY VALVE (LIQUID SERVICE >24")  
V32 - METALLIC BUTTERFLY VALVE (AIR SERVICE)  
V33 - PVC BUTTERFLY VALVE (LIQUID SERVICE)  
V34 - PVC BUTTERFLY VALVE (AIR "DAMPER" SERVICE)  
V35 - METALLIC BUTTERFLY VALVE (BURIED LIQUID SERVICE)  
V36 - METALLIC BUTTERFLY VALVE (BURIED AIR SERVICE)  
V37 - METALLIC BUTTERFLY VALVE (AIR SERVICE HIGH PERFORMANCE)  
V38 - NOT USED  
V39 - NOT USED



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RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV MM/DD/YY DESCRIPTION

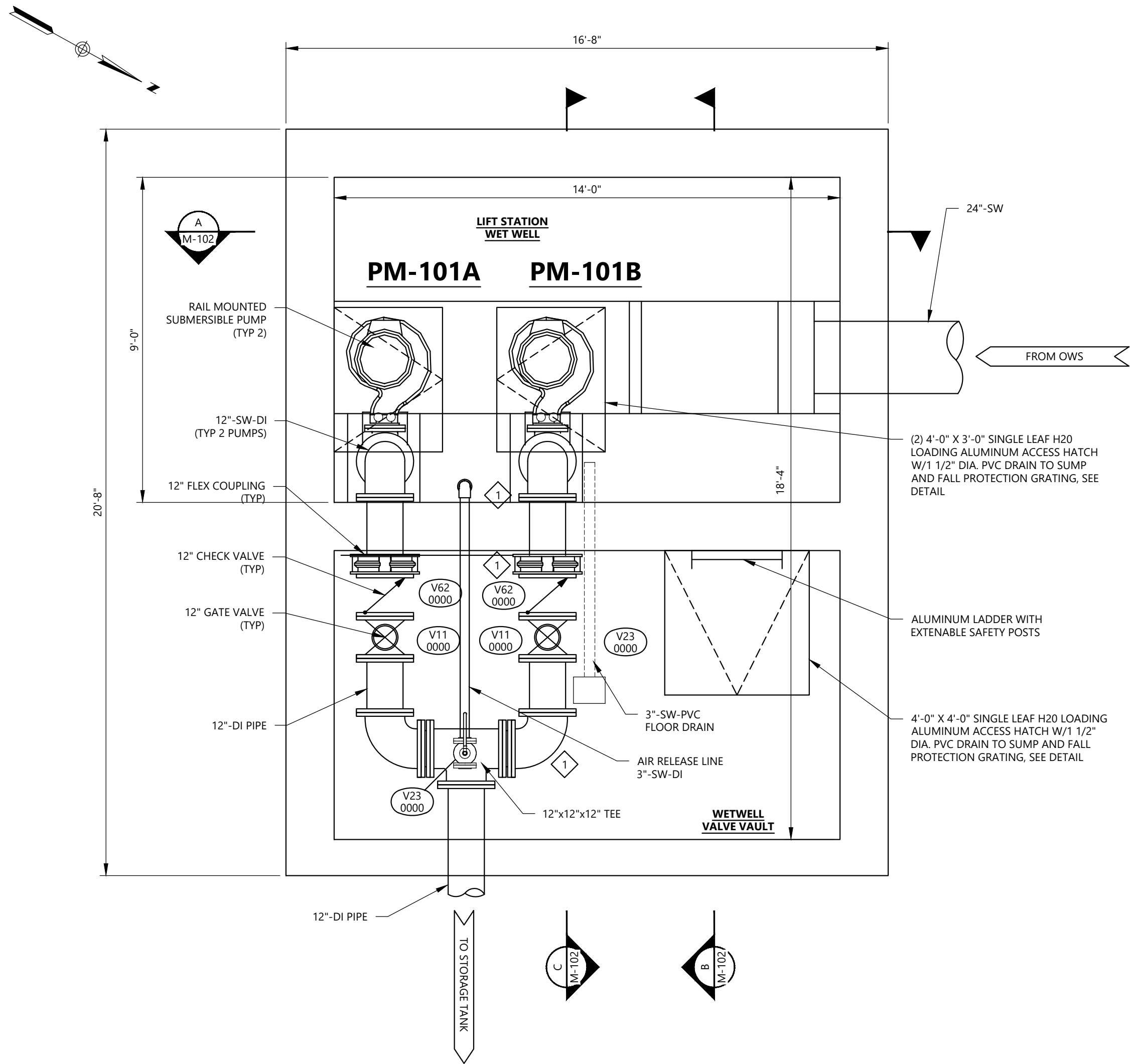
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MECHANICAL LEGEND

DRAWING NO:

M-001

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**PUMP STATION PLAN**

SCALE: 3/8" = 1' - 0"

**SHEET GENERAL NOTES:**

1. PRESSURE GAUGES NOT SHOWN FOR CLARITY.
2. FLOW TRANSMITTER SHALL BE LOCATED AS SHOWN ON ELECTRICAL DRAWINGS.

**XX SHEET KEYNOTES:**

1. CONTRACTOR TO HEAT TRACE AND INSULATE ALL PIPING WITHIN THE VALVE VAULT FOR FREEZE PROTECTION.

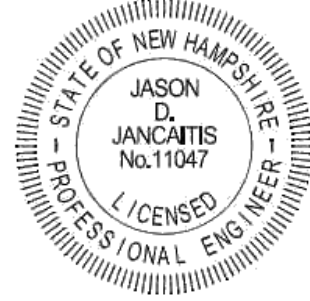


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REV	MM/DD/YY	DESCRIPTION
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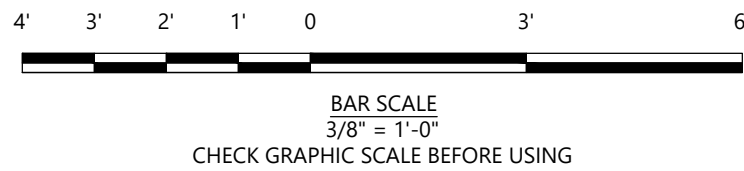
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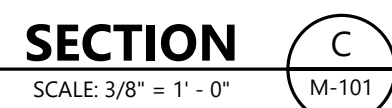
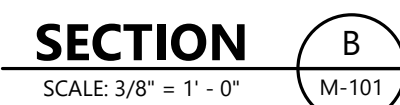
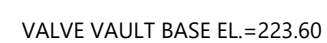
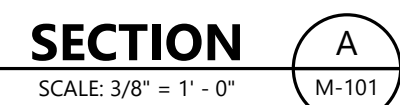
DRAWING TITLE:

**MECHANICAL  
PUMP STATION  
PLAN**

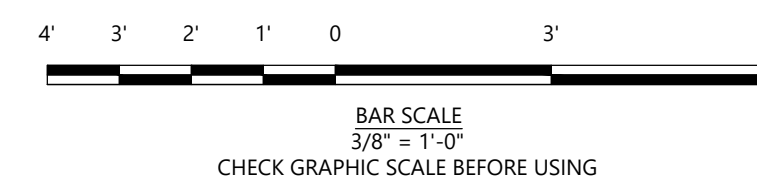
DRAWING NO:

**M-101**

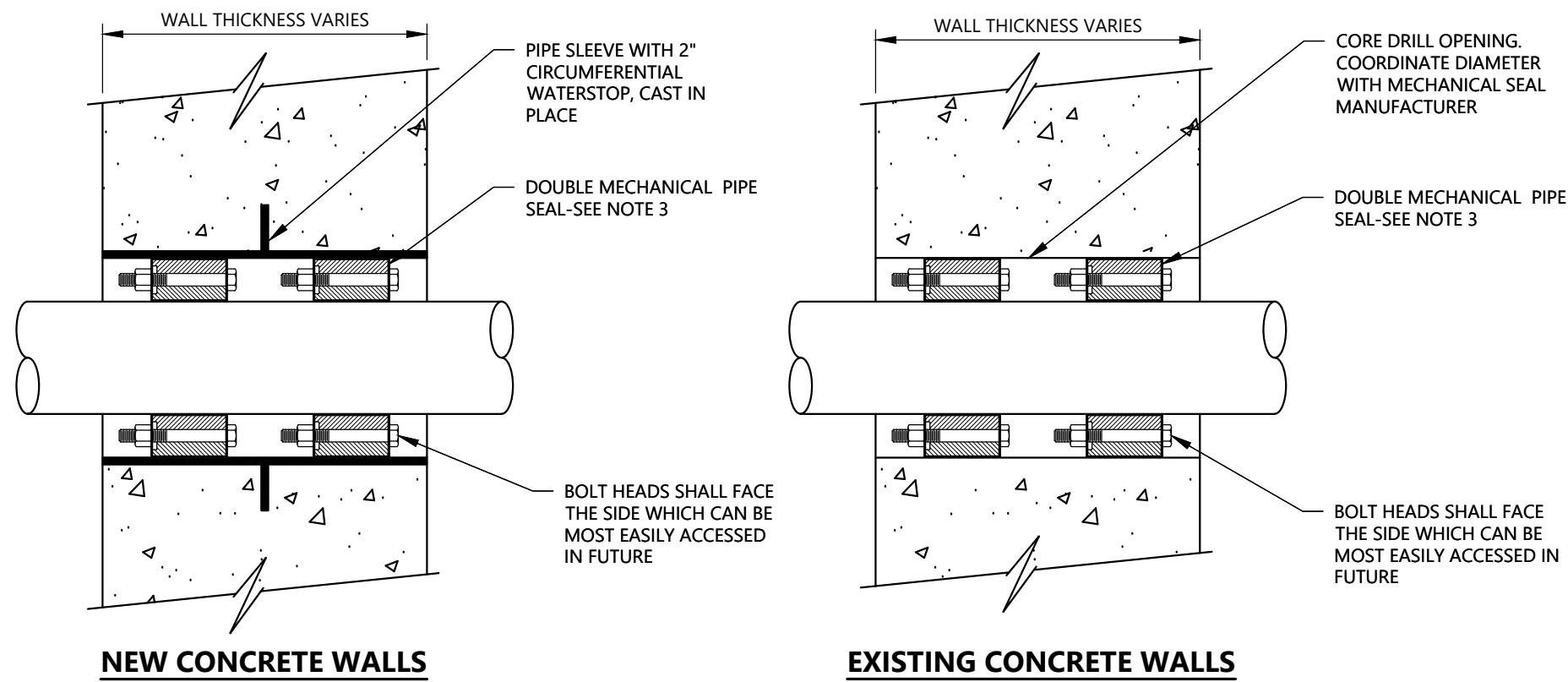




**M-102**



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NOTES:

- REFER TO MECHANICAL, HVAC AND PLUMBING DRAWINGS FOR PIPE PENETRATION LOCATIONS, TYPES, SIZES AND MATERIALS.
- MECHANICAL SEAL AND WALL SLEEVE SIZE SHALL BE SIZED AS RECOMMENDED BY MANUFACTURER FOR EACH APPLICATION.
- SINGLE MECHANICAL SEAL MAY BE USED FOR PENETRATIONS WHERE BOTH SIDES OF WALL ARE DRY.
- MECHANICAL SEAL SHALL BE FIRE-RATED TO MATCH FIRE-RATING OF WALLS. SEE DRAWINGS FOR LOCATIONS OF FIRE-RATED WALLS.
- FOR INSULATED PIPING, INSTALL INSULATION CONTINUOUS THROUGH PENETRATIONS AND PROVIDE 304 S.S. PROTECTION SHIELDS WITH 360° COVERAGE BETWEEN SEALS AND INSULATION.
- REFER TO SPECIFICATION SECTION 40 05 17 "PROCESS PIPE SLEEVES AND SEALS" FOR ADDITIONAL DETAILS AND REQUIREMENTS.

## 1 CONCRETE WALL DETAIL

SCALE: NTS

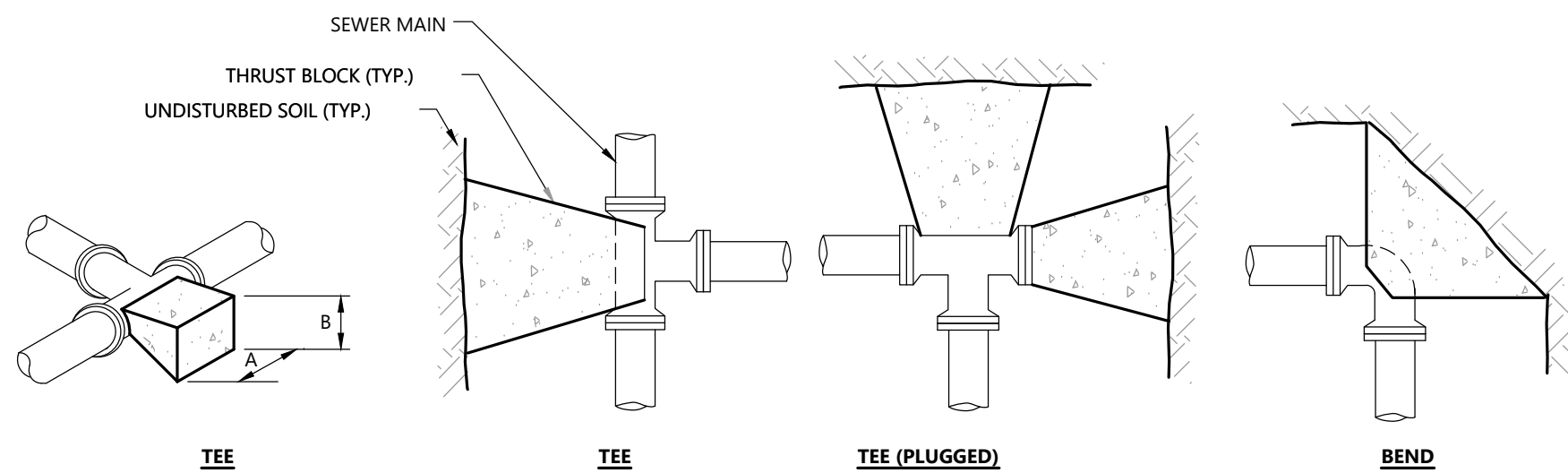


TABLE 1: 4" THRU 10" FITTINGS	TEES		BENDS	
	A	B	A	B
SOFT CLAY	48"	24"	48"	24"
SAND	24"	24"	24"	24"
GRAVEL	24"	18"	24"	18"

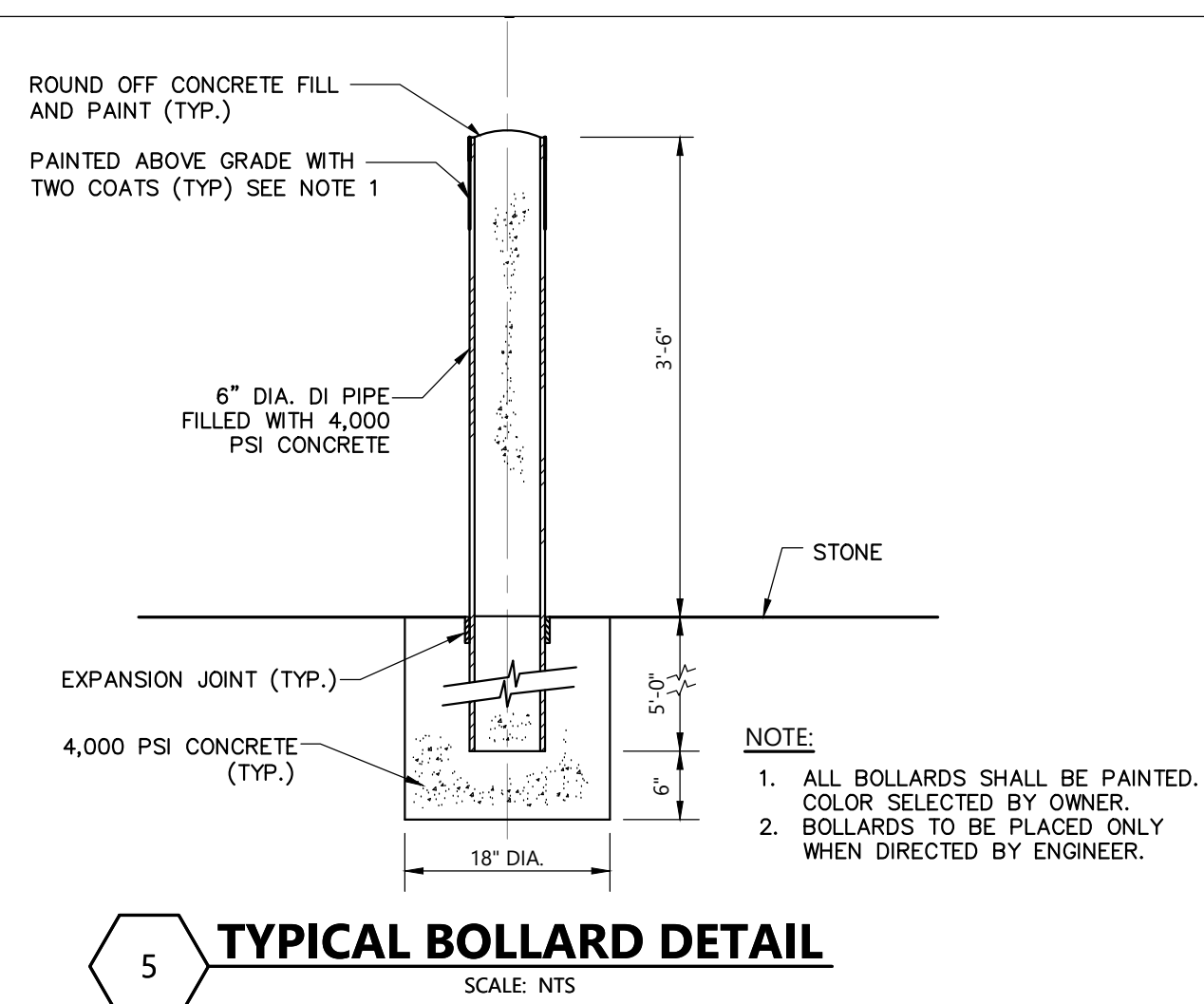
TABLE 2: 12" THRU 16" FITTINGS	TEES		BENDS	
	A	B	A	B
SOFT CLAY	60"	36"	72"	36"
SAND	36"	30"	48"	30"
GRAVEL	30"	24"	40"	24"

NOTES:

- CONCRETE FOR ALL THRUST BLOCKS TO BE MINIMUM 3,000 PSI, 28 DAY STRENGTH, TYPE I CEMENT, 3/4" STONE.
- WHERE POSSIBLE, CONSTRUCT THRUST BLOCKS AGAINST UNDISTURBED SOIL. WHERE NOT POSSIBLE, PLACE FILL BETWEEN THE THRUST BLOCK AND THE UNDISTURBED SOIL COMPACTED TO 90% STANDARD PROCTOR DENSITY.
- WRAP FITTINGS WITH POLYETHYLENE PRIOR TO CONSTRUCTING THRUST BLOCKS. NO JOINTS SHALL BE COVERED WITH CONCRETE.
- THRUST BLOCK DIMENSIONS ARE BASED ON A MAXIMUM WATER MAIN PRESSURE OF 150 PSI.

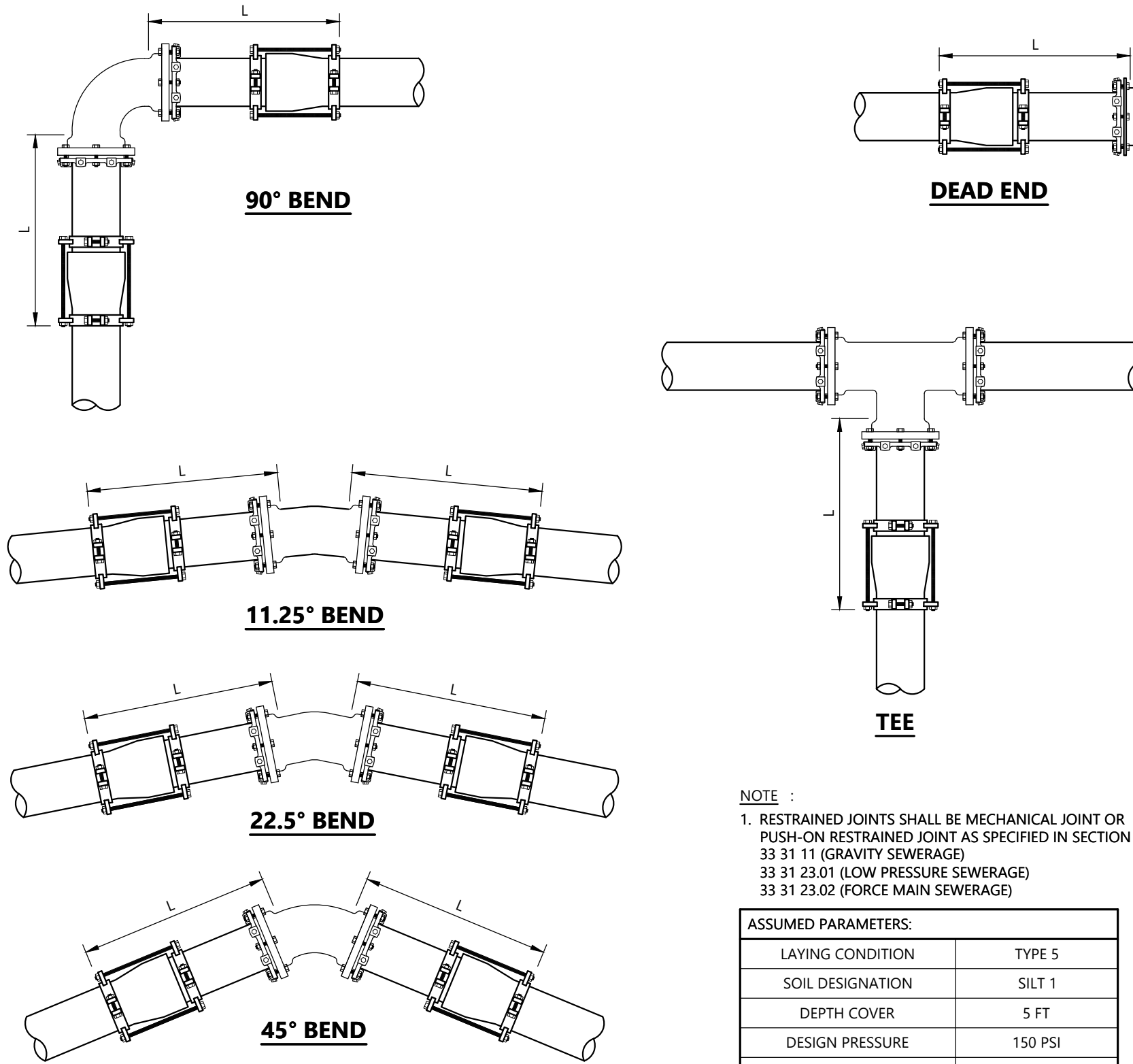
## 4 TYPICAL THRUST BLOCK DETAIL

SCALE: NTS



## 5 TYPICAL BOLLARD DETAIL

SCALE: NTS



NOTE :

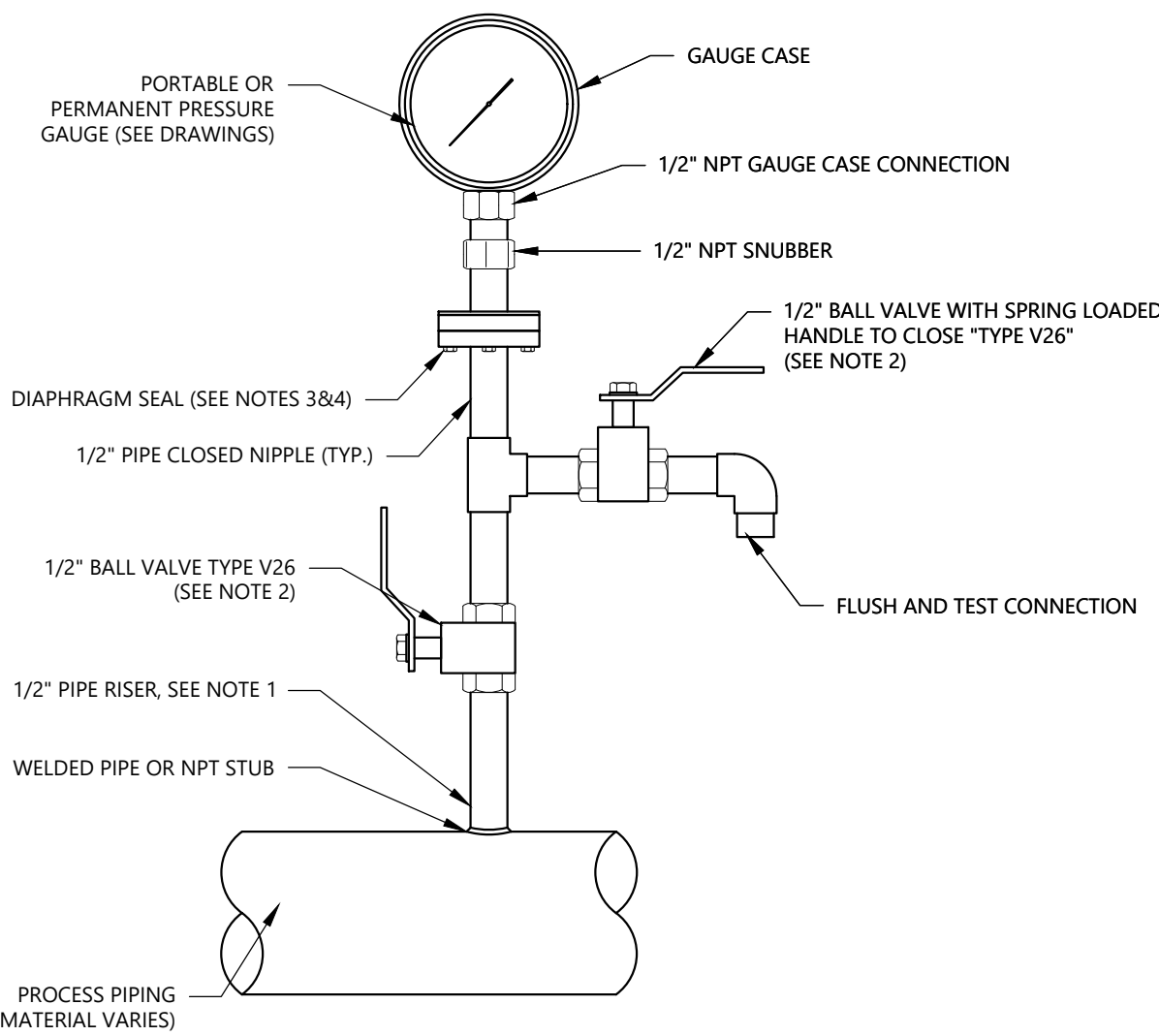
- RESTRAINED JOINTS SHALL BE MECHANICAL JOINT OR PUSH-ON RESTRAINED JOINT AS SPECIFIED IN SECTION 33 31 11 (GRAVITY SEWERAGE), 33 31 23.01 (LOW PRESSURE SEWERAGE), 33 31 23.02 (FORCE MAIN SEWERAGE)

ASSUMED PARAMETERS:	
LAYING CONDITION	TYPE 5
SOIL DESIGNATION	SILT 1
DEPTH COVER	5 FT
DESIGN PRESSURE	150 PSI
SAFETY FACTOR	1.5

DIAMETER	REQUIRED LEGTH RESTRAINED JOINT PIPE ON BOTH SIDES OF FITTING				REQUIRED LEGTH OF RESTRAINED JOINT PIPE
	HORIZONTAL BEND				
	11.25°	22.5°	45°	TEE/90°	
					DEAD END
6"	2'	3'	7'	16'	39'
8"	2'	4'	9'	20'	51'
10"	3'	5'	10'	24'	61'
12"	3'	6'	12'	28'	72'
16"	4'	8'	15'	36'	93'

## 2 THRUST RESTRAINT DETAIL

SCALE: NTS

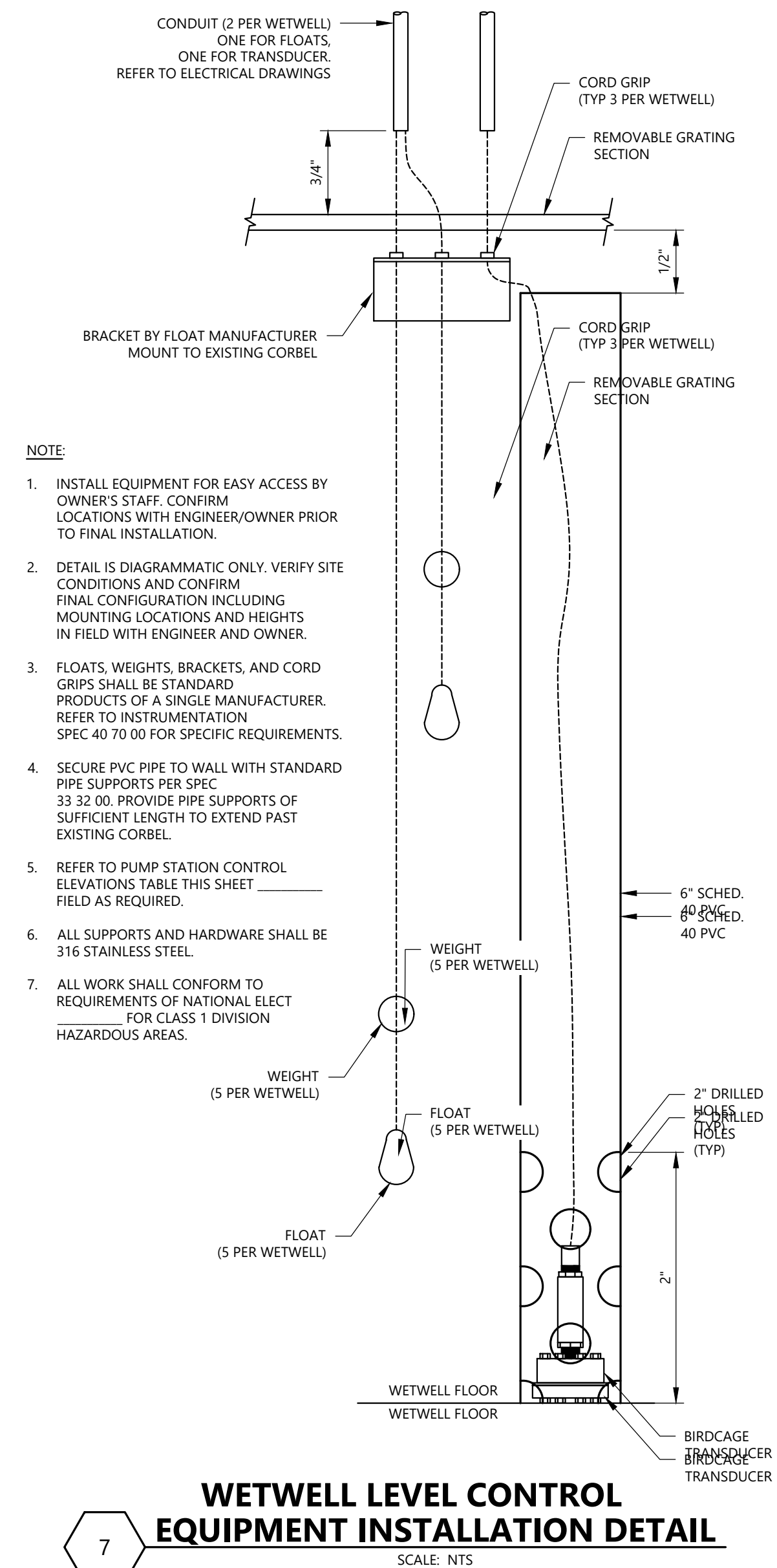


## 6 PRESSURE GAUGE DETAIL

SCALE: NTS

NOTES:

- PROVIDE 1/2"-PVC/1 RISER PIPES FOR ALL PVC PROCESS PIPES UNLESS NOTED OTHERWISE.
- PROVIDE DIAPHRAGM VALVES (TYPE V80) OR BALL VALVES (TYPE V20) FOR CHEMICAL SERVICE APPLICATIONS.
- PROVIDE PTFE DIAPHRAGM FOR CHEMICAL SERVICE APPLICATIONS.
- PROVIDE GLYCERIN FILLED DIAPHRAGM SEAL FOR PRESSURE APPLICATIONS. PROVIDE SILICONE FILLED DIAPHRAGM SEAL FOR VACUUM APPLICATIONS.
- REFER TO INSTRUMENT DATA SHEETS INCLUDED IN SPECIFICATION SECTION 40 70 00 "INSTRUMENTATION FOR PROCESS SYSTEMS" FOR ADDITIONAL DETAILS AND REQUIREMENTS.



## WETWELL LEVEL CONTROL EQUIPMENT INSTALLATION DETAIL

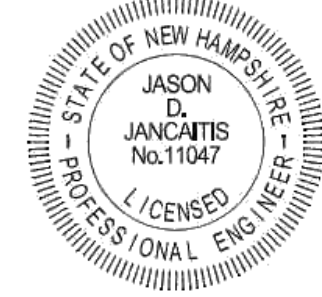
SCALE: NTS



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PE SEAL:



## DRAFT 60% DESIGN NOT FOR CONSTRUCTION

CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH

## SANDQUIST FACILITY STORMWATER IMPROVEMENTS

REV MM/DD/YY DESCRIPTION

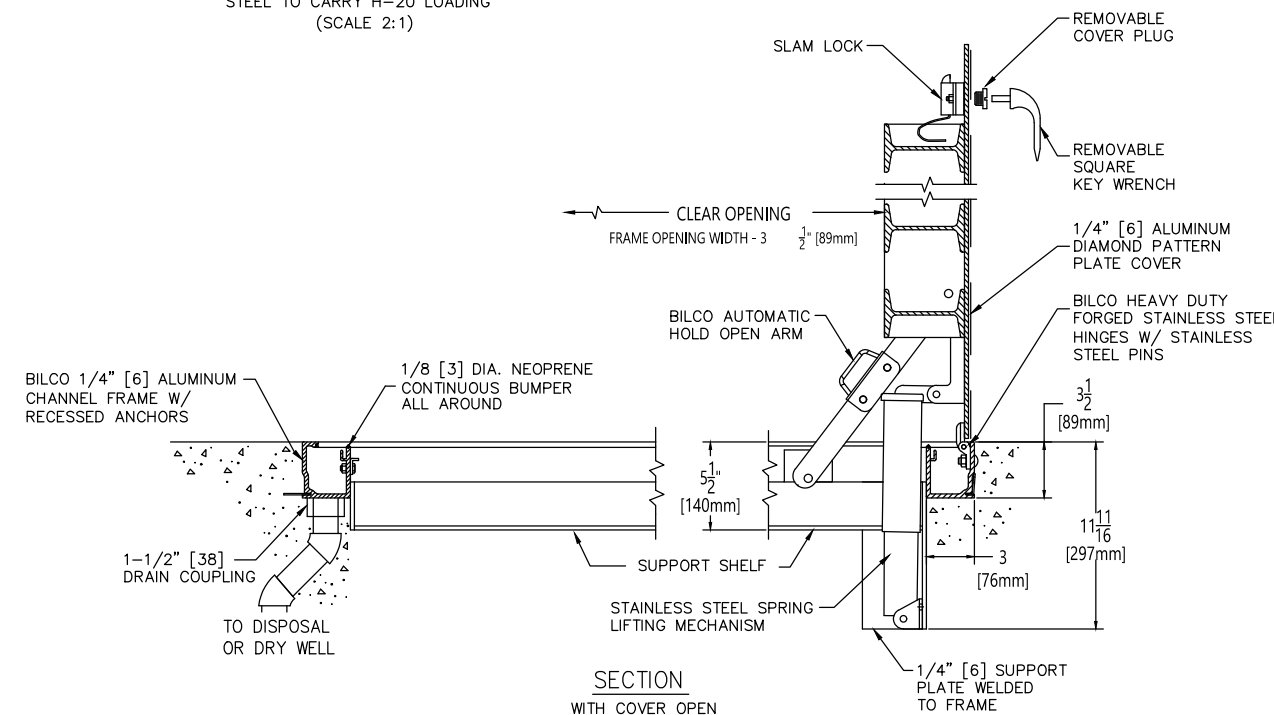
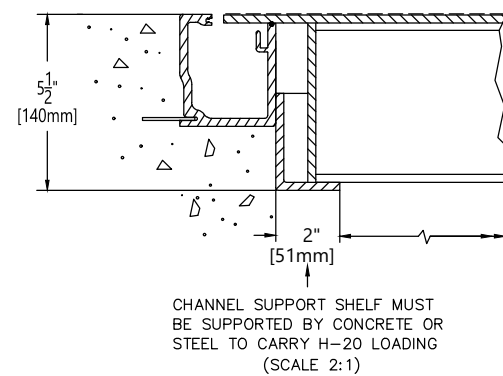
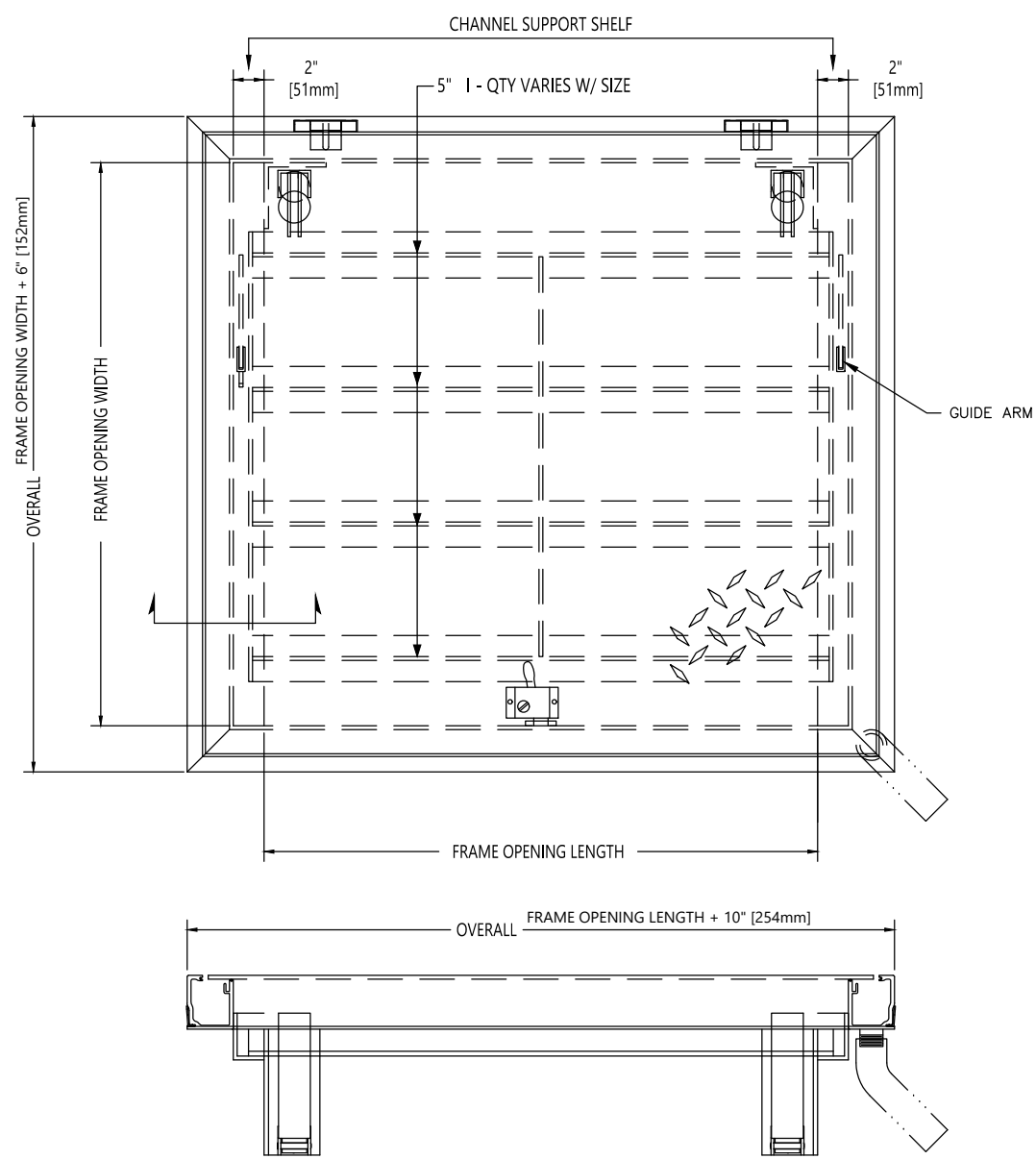
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DATE:	NOVEMBER 2025
SCALE:	AS NOTED
DESIGNED BY:	----
DRAWN BY:	EY
CHECKED BY:	MC
FILENAME:	0224539-48 M-90X.dwg

## DRAWING TITLE: MECHANICAL PUMP STATION DETAILS

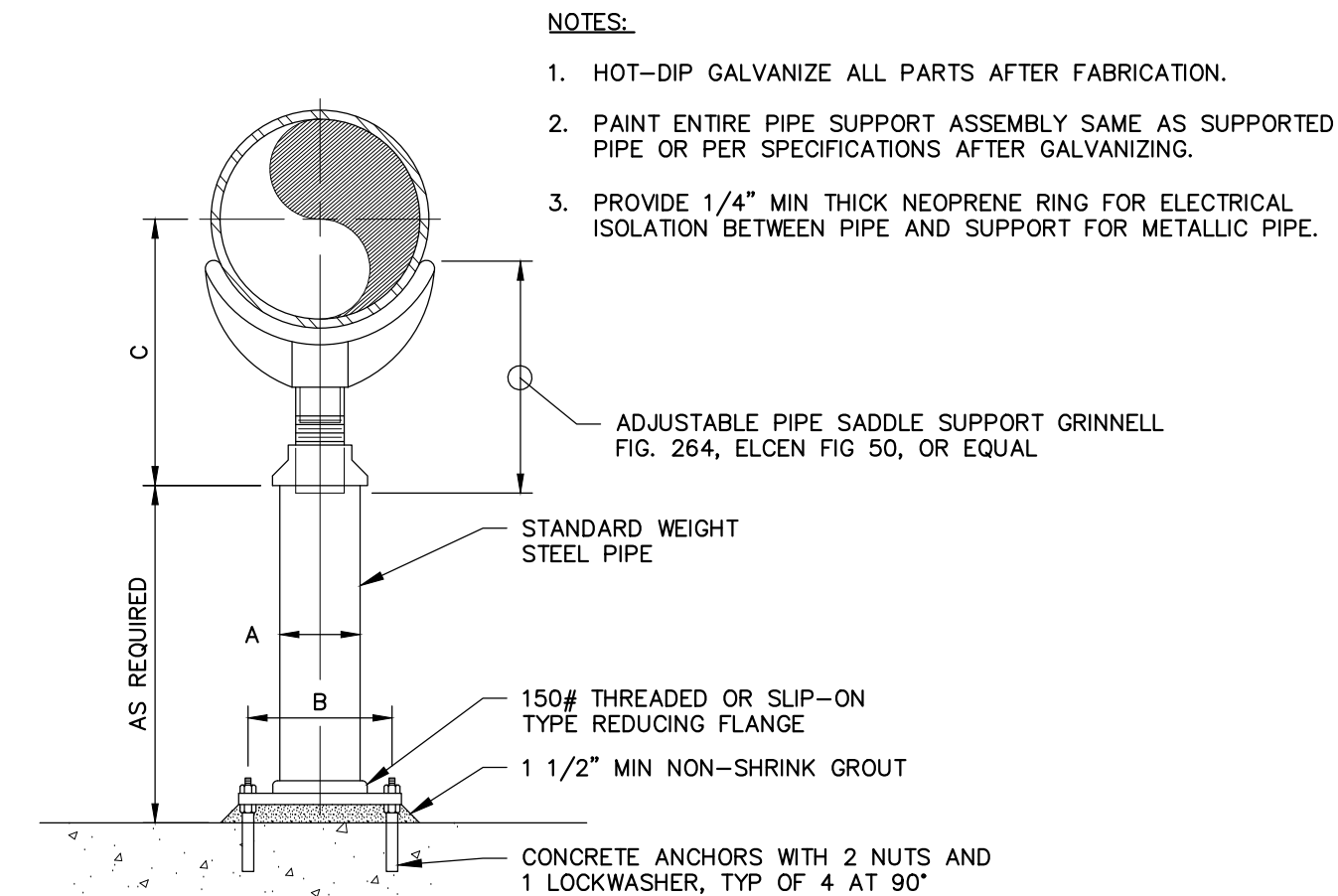
DRAWING NO:

M-901

\\woodardcurran.net\shared\Projects\0224539-48 Schmitzer - Concord Sandquist Mechanical\0224539-48 M-9xx.dwg, Nov 04, 2025 - 11:44am, CLEARZOLA

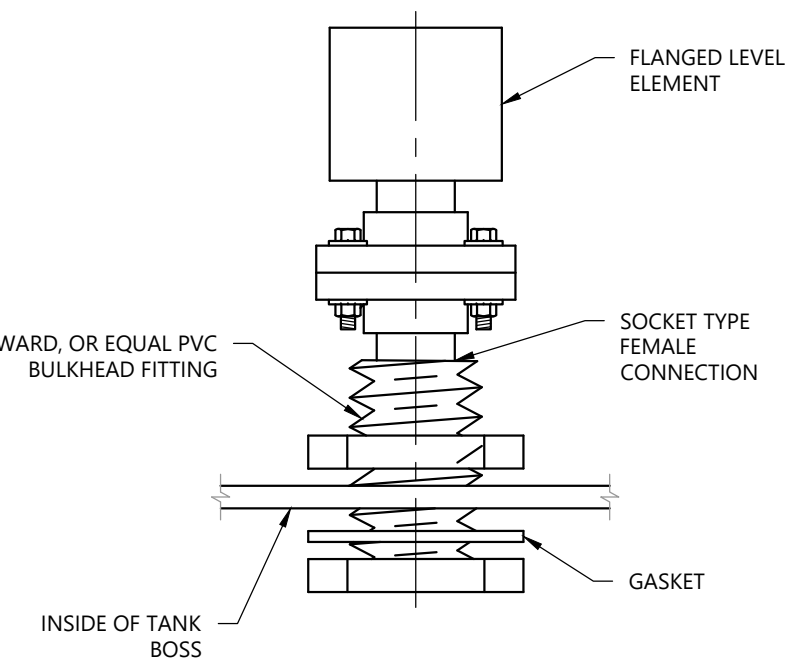


1 **ACCESS HATCH DETAIL**  
SCALE: NTS

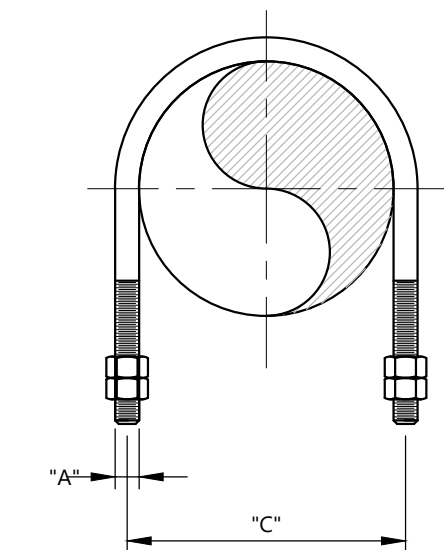


DIMENSIONS IN INCHES				
PIPE SIZE	A	B	C MIN	C MAX
2 1/2	2 7/8	9	8	13
3	2 7/8	9	8 1/4	13 1/4
3 1/2	2 7/8	9	8 1/2	13 1/2
4	3 1/2	9	9 1/4	14
5	3 1/2	9	10	14 3/4
6	3 1/2	9	10 1/2	15 1/4
8	3 1/2	9	11 3/4	16 1/2
10	3 1/2	9	13 1/2	18 1/4
12	3 1/2	9	15	19 3/4
14	4 1/2	11	16 1/4	20 3/4
16	4 1/2	11	17 3/4	22 1/4

4 **ADJUSTABLE PIPE SUPPORT**  
SCALE: NTS



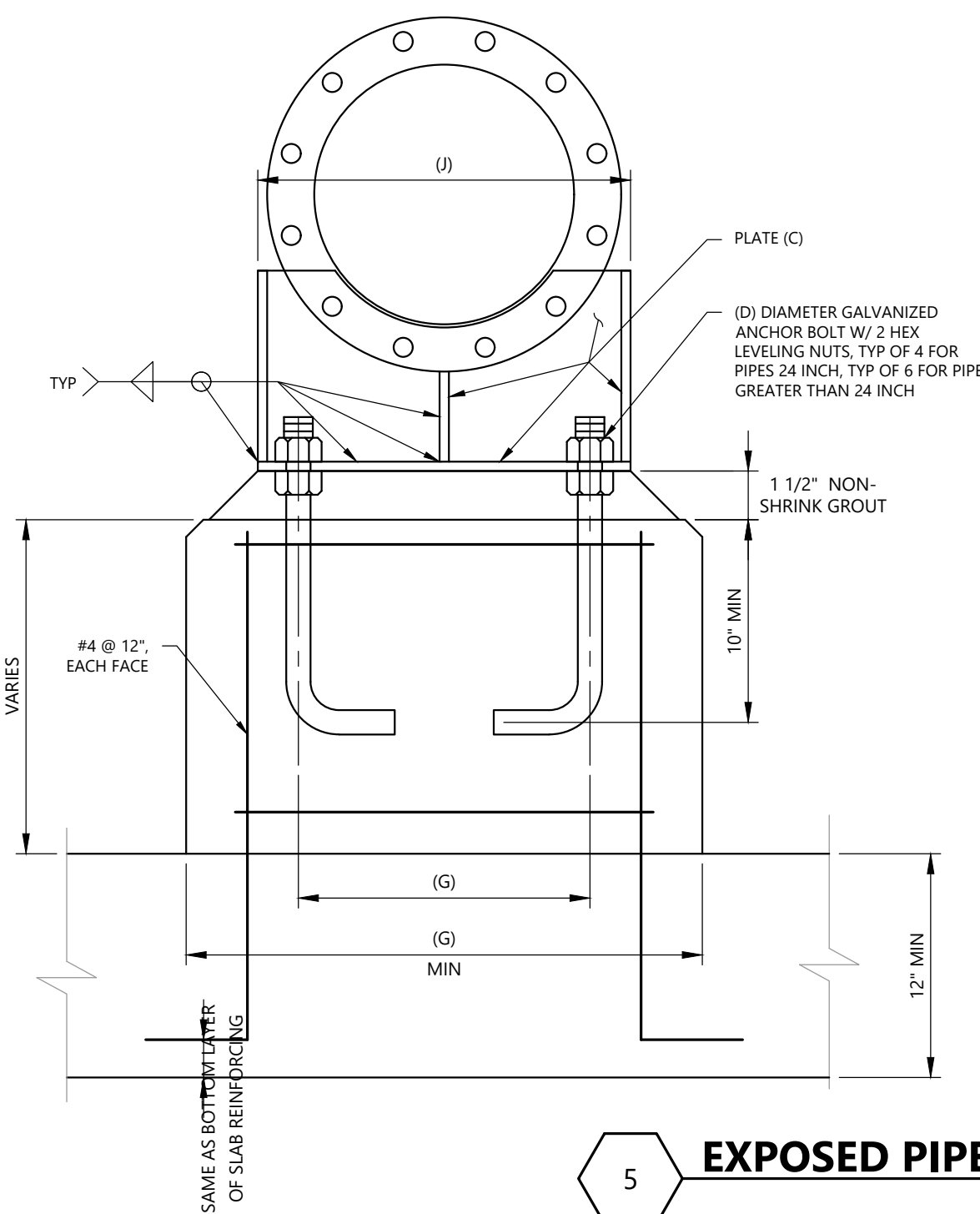
2 **FLANGED LEVEL ELEMENT**  
SCALE: NTS



NOTE: WHEN U-BOLT IS IDENTIFIED AS A GUIDE ON THE PIPING DRAWING, PROVIDE 1/16" CLEARANCE ALL AROUND.

3 **U-BOLT**  
SCALE: NTS

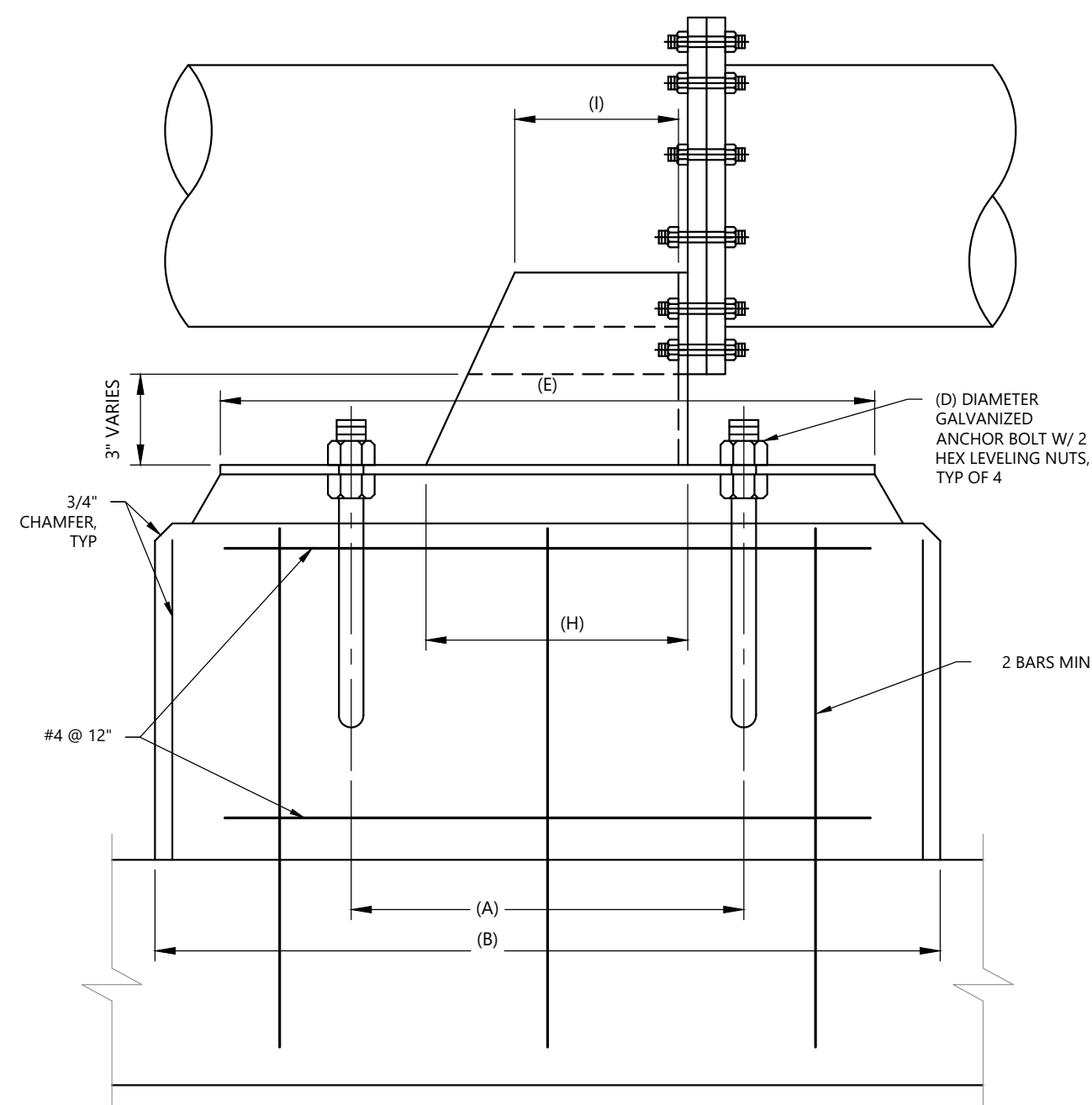
PIPE SIZE (IN)	A (IN)	C (IN)	MAX LOAD (LBS)
1	1/4	1 5/8	485
1 1/2	3/8	2 3/8	1220
2	3/8	2 13/16	1220
2 1/2	1/2	3 7/16	2260
3	1/2	4 1/16	2260
4	1/2	5 1/16	2260
5	1/2	6 1/8	2260
6	5/8	7 3/8	3620
8	5/8	9 3/8	3620
10	3/4	11 5/8	5420
12	7/8	13 3/4	7540
14	7/8	15	7540
16	7/8	17	7540
18	1	19 1/8	9920
20	1	21 1/8	9920
24	1	25 1/8	9920



5 **EXPOSED PIPE THRUST RESTRAINED**  
SCALE: NTS

PIPE SUPPORT SCHEDULE										
DIMENSIONS IN INCHES										
PIPE SIZE (IN)	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
8	12	24	1/2	3/4	20	9	16	8	5	12
16	16	24	1/2	3/4	20	21	25	12	4	21
18	19	30	1/2	3/4	26	23	26	15	5	22
30	24	40	3/4	1 1/4	36	36	40	20	6	36

- NOTES:
- HOT-DIP GALVANIZE STEEL COMPONENTS AFTER FABRICATION.
  - WHEN ATTACHING TO EXISTING CONCRETE, PROVIDE EQUIVALENT SIZE ADHESIVE ANCHORS.
  - VERIFY PIPE OD PRIOR TO FABRICATION.





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GENERAL		LIGHTING		COMMUNICATIONS		ONE-LINE DIAGRAM SYMBOLS		CONTROL DIAGRAM SYMBOLS			
<div><div><div><div><div><div>LP-01</div><div>←</div></div><div><div>HOME RUN. ARROWS INDICATE NUMBER OF CIRCUITS. CROSS LINES INDICATE NUMBER OF WIRES, OTHER THAN TWO (2) PLUS BOND. WIRE SIZE NOT SHOWN INDICATES #12AWG MIN.</div><div>INDICATES CIRCUIT NUMBER</div><div>PANEL DESIGNATION</div></div></div></div><div><div>-----</div><div>WIRING IN RACEWAY</div></div><div><div>-----</div><div>WIRING IN RACEWAY CONCEALED UNDERGROUND OR UNDERSLAB, MINIMUM 3/4"C</div></div><div><div>3/C #nn W/GND</div><div>EquipNo-P</div></div><div><div>○</div><div>CONDUIT TURNING UP</div></div><div><div>●</div><div>CONDUIT TURNING DOWN</div></div><div><div>└─┘</div><div>CONDUIT STUB</div></div><div><div>┌─┐</div><div>EY CONDUIT SEAL</div></div><div><div>     </div><div>FLEXIBLE NON-METALLIC CONDUIT</div></div><div><div>■</div><div>PANELBOARD</div></div><div><div>CP</div><div>CONTROL PANEL</div></div><div><div>ATC</div><div>AUTOMATIC TEMPERATURE CONTROL PANEL</div></div><div><div>ISBP</div><div>INTRINSIC SAFETY BARRIER PANEL</div></div><div><div>⌒</div><div>POWER COMPANY METER</div></div><div><div>HS</div><div>H/O/A</div></div><div><div>H/O/A</div><div>LOCAL SELECTOR SWITCH</div></div><div><div>H/O/R</div><div>H/O/R - HAND/OFF/AUTO</div></div><div><div>L/O/R</div><div>L/O/R - LOCAL/OFF/REMOTE</div></div><div><div>■</div><div>PUSHBUTTON STATION, WITH "EM" EMERGENCY</div></div><div><div>■</div><div>JUNCTION BOX</div></div><div><div>MD</div><div>MOTORIZED DAMPER</div></div><div><div>T</div><div>THERMOSTAT</div></div><div><div>R</div><div>RELAY</div></div><div><div>B T</div><div>DOOR BELL/BUZZER AND TRANSFORMER - MTD CL UP 7'-0" AFF</div></div><div><div>EQUIP#</div><div>Description</div></div><div><div>◇</div><div>KEYED NOTE TAG</div></div><div><div>△</div><div>REVISION TRIANGLE</div></div><div><div>}</div><div>BRACKET</div></div><div><div>2</div><div>SECTION #</div></div><div><div>SECTION CALL OUT</div></div><div><div>X-XXX</div><div>SHEET #</div></div><div><div>(TYP.)</div><div>1</div><div>X-0X</div></div><div><div>DETAIL CALL OUT</div></div></div></div>		<div><div><div><div><div><div>2x4 LIGHT FIXTURE</div><div>Ab</div><div>ASSOCIATED CONTROL DEVICE</div><div>FIXTURE TYPE (SEE LIGHT FIXTURE SCHEDULE)</div></div></div><div><div>1x4 LIGHT FIXTURE</div></div><div><div>2x2 LIGHT FIXTURE</div></div><div><div>FIXTURE WITH INTEGRAL EMERGENCY BATTERY PACK</div></div><div><div>FIXTURE WIRED TO UNSWITCHED EMERGENCY CIRCUIT</div></div><div><div>DOWN LIGHT</div></div><div><div>WALL MOUNTED FIXTURES</div></div><div><div>AA</div><div>POLE MOUNTED SITE LIGHTING FIXTURE</div></div><div><div>FIXTURE TYPE (SEE LIGHT FIXTURE SCHEDULE)</div></div><div><div>FLOOD LIGHT</div></div><div><div>EXIT SIGN, CEILING MOUNTED. ARROW INDICATES EGRESS DIRECTION. SHADING INDICATES SIGN FACE. NUMERAL INDICATES BATTERY UNIT CONNECTED</div></div><div><div>EXIT SIGN, WALL MOUNTED 7'-6" AFF OR 0'-6" ABOVE DOOR. SHADING INDICATES SIGN FACE. NUMERAL INDICATES BATTERY UNIT CONNECTED TO</div></div><div><div>DUAL HEAD EMERGENCY LIGHT BATTERY PACK WITH NUMBER OF HEADS AS INDICATED - WALL MOUNTED MTD 7'-6" AFF. NUMERAL INDICATES BATTERY ID NUMBER</div></div><div><div>TANDEM EMERGENCY LIGHT BATTERY PACK &amp; EXIT SIGN - WALL MOUNTED MTD 7'-6" AFF OR 0'-6" ABOVE DOOR. NUMERAL INDICATES BATTERY ID NUMBER</div></div><div><div>REMOTE EMERGENCY LIGHTING HEAD - WALL MOUNTED MTD 7'-6" AFF. NUMERAL INDICATES BATTERY UNIT CONNECTED TO</div></div><div><div>S</div><div>SINGLE POLE TOGGLE SWITCH - MTD CL UP 4'-0" AFF</div></div><div><div>S<sub>2</sub></div><div>DOUBLE POLE TOGGLE SWITCH - MTD CL UP 4'-0" AFF</div></div><div><div>S<sub>3</sub></div><div>3-WAY TOGGLE SWITCH - MTD CL UP 4'-0" AFF</div></div><div><div>S<sub>4</sub></div><div>4-WAY TOGGLE SWITCH - MTD CL UP 4'-0" AFF</div></div><div><div>S<sub>M</sub></div><div>WALL MOUNTED OCCUPANCY SENSOR - MTD CL UP 4'-0" AFF</div></div><div><div>S<sub>P</sub></div><div>TOGGLE SWITCH WITH PILOT LIGHT - MTD CL UP 4'-0" AFF</div></div><div><div>S<sub>D</sub></div><div>DIMMER SWITCH - MTD CL UP 4'-0" AFF</div></div><div><div>S<sub>LV</sub></div><div>LOW VOLTAGE SWITCH - MTD CL UP 4'-0" AFF</div></div><div><div>a</div><div>OCCUPANCY SENSOR</div></div><div><div>a</div><div>INDICATES CONTROLLED FIXTURE</div></div><div><div>PC</div><div>PHOTOCELL</div></div><div><div>LC</div><div>LIGHTING CONTACTOR</div></div><div><div>MS</div><div>MOTION SENSOR</div></div></div></div></div>		<div><div><div><div><div><div>TEL</div><div>TELEPHONE BACKBOARD</div></div><div><div>PROVISIONS FOR TELEPHONE OUTLET. TWO-GANG WALL BOX WITH ONE 1"C STUB TO ABOVE ACCESSIBLE CEILING - MTD CL UP SAME AS ASSOCIATED RECEPTACLE</div><div>W-INDICATES WALL MOUNTED AT 60" AFF</div><div>P-INDICATES PAYPHONE MOUNTED AT 4'-0" AFF</div><div>X-INDICATES NUMBER OF JACKS, SINGLE BOX</div></div><div><div>PROVISIONS FOR DATA OUTLET. TWO-GANG WALL BOX WITH ONE 1"C STUB TO ABOVE ACCESSIBLE CEILING - MTD CL UP SAME AS ASSOCIATED RECEPTACLE. SUBSCRIPTS AS NOTED ABOVE</div></div><div><div>PROVISIONS FOR TELEPHONE &amp; DATA OUTLET. TWO-GANG WALL BOX WITH ONE 1"C STUB TO ABOVE ACCESSIBLE CEILING - MTD CL UP SAME AS ASSOCIATED RECEPTACLE. SUBSCRIPTS AS NOTED ABOVE</div></div><div><div>PROVISIONS FOR SCADA SYSTEM OUTLET. TWO-GANG WALL BOX WITH ONE 1"C STUB TO ABOVE ACCESSIBLE CEILING - MTD CL UP SAME AS ASSOCIATED RECEPTACLE</div></div><div><div>CEILING MOUNTED TELEPHONE SYSTEM OUTLET</div></div><div><div>CEILING MOUNTED DATA SYSTEM OUTLET</div></div><div><div>CEILING MOUNTED TELEPHONE &amp; DATA OUTLET</div></div><div><div>FLUSH FLOOR MOUNTED TELEPHONE SYSTEM OUTLET</div></div><div><div>FLUSH FLOOR MOUNTED DATA SYSTEM OUTLET</div></div><div><div>FLUSH FLOOR MOUNTED TELEPHONE &amp; DATA OUTLET</div></div><div><div>TELEVISION COAXIAL OUTLET, MOUNTED UP SAME AS ASSOCIATED RECEPTACLE</div></div></div><div><div><div>SEC</div><div>SECURITY PANEL</div></div><div><div>DS</div><div>DOOR INTRUSION SWITCH</div></div><div><div>DE</div><div>ELECTRIC DOOR STRIKE</div></div><div><div>CR</div><div>CARD READER</div></div><div><div>KP</div><div>KEY PAD</div></div><div><div>MOTION DETECTOR</div></div><div><div>CAM</div><div>SECURITY CAMERA PTZ = PAN/TILT/ZOOM</div></div></div></div></div></div>		<div><div><div><div><div><div>S2</div><div>GCB1</div></div><div><div>↑</div><div>↓</div></div></div><div><div>CB</div><div>800A</div><div>E.O.</div></div><div><div>52</div><div>↑</div><div>↓</div></div></div><div><div>○</div><div>AT</div><div>AF</div><div>EO</div></div><div><div>ST</div><div>ST - SHUNT TRIP</div><div>GF - GROUND FAULT</div><div>EO - ELECTRICALLY OPERATED</div></div><div><div>DISCONNECT, ISOLATION OR SAFETY SWITCH</div></div><div><div>FUSED DISCONNECT SWITCH</div></div><div><div>MAGNETIC MOTOR STARTER. NUMERAL INDICATES NEMA SIZE</div><div>FVNR - UNLESS OTHERWISE NOTED</div><div>FVR - FULL VOLTAGE REVERSING</div><div>RVAT - REDUCING VOLTAGE AUTO TRANSFORMER</div><div>25 - TWO SPEED</div><div>YD - WYE DELTA REDUCED VOLTAGE STARTER</div></div><div><div>CAPACITOR</div></div><div><div>VFD - VARIABLE FREQUENCY DRIVE</div><div>SS - SOLID STATE STARTER</div><div>DC - DC VARIABLE DRIVE</div><div>NUMBER INDICATES AMP RATING</div></div><div><div>POWER TRANSFORMER</div><div>OA - LIQUID TYPE SELF COOLED</div><div>AA - DRY TYPE SELF COOLED</div><div>FA - FAN COOLED</div><div>CONNECTION</div></div><div><div>POTENTIAL TRANSFORMER</div><div>480/120</div><div>RATIO</div><div>NUMBER REQUIRED</div></div><div><div>CURRENT TRANSFORMER</div><div>600/5</div><div>RATIO</div><div>PHASE</div></div><div><div>MOTOR, NUMERAL INDICATES HORSEPOWER</div></div><div><div>GENERAL LOAD, NUMERAL INDICATES LOAD IN KVA</div></div><div><div>GENERATOR</div></div><div><div>ATS - AUTOMATIC TRANSFER SWITCH</div><div>MTS - MANUAL TRANSFER SWITCH</div></div><div><div>METER</div><div>A - AMMETER</div><div>V - VOLTMETER</div><div>W - WATTMETER</div><div>KWH - KILOWATT HOUR</div><div>KVAR - KILOVAR METER</div><div>VAR - VAR METER</div><div>HZ - FREQUENCY METER</div><div>PF - POWER FACTOR METER</div></div><div><div>LINE OR LOAD REACTOR</div><div>NUMERAL INDICATES % IMPEDANCE</div></div><div><div>DIGITAL POWER MONITOR</div></div><div><div>METER TRANSFER SWITCH</div><div>AS - AMMETER SWITCH</div><div>VS - VOLTMETER SWITCH</div></div><div><div>SPD - SURGE PROTECTION DEVICE</div><div>ENDN - ETHERNET TO DEVICENET LINKING DEVICE</div><div>DPS - DEVICENET POWER SUPPLY</div></div><div><div>MEDIUM VOLTAGE CABLE TERMINATION</div></div><div><div>DRAWOUT DEVICE</div></div><div><div>LIGHTNING ARRESTER</div></div><div><div>KEY INTERLOCK</div></div></div></div>		<div><div>NOTE: ALL CONTROL SYMBOLS ARE DRAWN ASSUMING DE-ENERGIZED CIRCUITS, EMPTY TANKS, UNPRESSURIZED LINES, ETC.</div><div><div><div>OPEN ON INCREASE</div><div>CLOSE ON INCREASE</div></div><div><div>PRESSURE SWITCH</div></div><div><div>LEVEL SWITCH</div></div><div><div>FLOW SWITCH</div></div><div><div>TEMPERATURE SWITCH</div></div><div><div>NORMALLY CLOSED</div><div>NORMALLY OPEN</div></div><div><div>PUSH BUTTON</div></div><div><div>INSTANTANEOUS CONTACT</div></div><div><div>TIMED CLOSE CONTACT</div></div><div><div>TIMED OPEN CONTACT</div></div><div><div>LIMIT SWITCH</div></div><div><div>SELECTOR SWITCH: QUANTITY OF ARROWS INDICATES NUMBER OF POSITIONS. XOO INDICATES UPPER CONTACT CLOSED IN LEFT POSITION AND OPEN IN CENTER AND RIGHT POSITIONS</div></div><div><div>INTERNAL WIRING</div></div><div><div>FIELD WIRING</div></div><div><div>RELAY COIL</div></div></div></div>			
POWER		FIRE ALARM DIAGRAM SYMBOLS		INTERCOM & PAGING SYSTEM		INSTRUMENTATION		ABBREVIATIONS			
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"H" HORN, "V" VOICE</div></div><div><div>L</div><div>FIRE ALARM VISUAL NOTIFICATION APPLIANCE CANDELA (CD) POWER PER NFPA 72 OR AS NOTED - WALL MTD BOTTOM UP 80" AFF</div></div><div><div>CEILING MOUNTED SMOKE DETECTOR</div></div><div><div>CEILING MOUNTED HEAT DETECTOR</div></div><div><div>DUCT SMOKE DETECTOR S=SUPPLY, R=RETURN</div></div><div><div>SPRINKLER SYSTEM FLOW SWITCH</div></div><div><div>SPRINKLER SYSTEM TAMPER SWITCH</div></div><div><div>SPRINKLER SYSTEM PRESSURE SWITCH</div></div><div><div>FIRE ALARM SYSTEM MAGNETIC DOOR HOLDER</div></div><div><div>MONITOR MODULE</div></div><div><div>CONTROL MODULE</div></div><div><div>RELAY MODULE</div></div></div></div></div></div>		<div><div><div><div><div><div>LS</div><div>XX</div></div><div>FIELD MOUNTED INSTRUMENT</div><div>INSTRUMENT IDENTIFICATION TYPE</div><div>INSTRUMENT LOOP NO.</div></div><div><div><div>FS</div><div>XX</div></div><div>VENDOR SUPPLIED INSTRUMENT</div></div><div><div>INSTRUMENT IDENTIFIER:</div><div>AE ANALYSIS ELEMENT</div><div>AIT ANALYSIS INDICATING TRANSMITTER</div><div>AT ANALYSIS TRANSMITTER</div><div>DPS DIFFERENTIAL PRESSURE SWITCH</div><div>FCV FLOW CONTROL VALVE</div><div>FE FLOW ELEMENT</div><div>FIT FLOW-INDICATING TRANSMITTER</div><div>FT FLOW TRANSMITTER</div><div>FS FLOW SWITCH</div><div>LE LEVEL ELEMENT</div><div>LIT LEVEL INDICATING TRANSMITTER</div><div>LT LEVEL TRANSMITTER</div><div>LS LEVEL SWITCH</div><div>LSH LEVEL SWITCH HIGH</div><div>LSL LEVEL SWITCH LOW</div><div>MOV MOTOR OPERATED VALVE</div><div>PE PRESSURE ELEMENT</div><div>PIT PRESSURE INDICATING TRANSMITTER</div><div>PT PRESSURE TRANSMITTER</div><div>PS PRESSURE SWITCH</div><div>SV SOLENOID VALVE</div><div>TE TEMPERATURE ELEMENT</div><div>TIT TEMPERATURE INDICATING TRANSMITTER</div><div>TT TEMPERATURE TRANSMITTER</div><div>ZS PROXIMITY SWITCH</div></div></div></div></div>		<div><div><div><div><div><div>A</div><div>MOTOR, NUMERAL INDICATES HORSEPOWER</div></div><div><div>GENERAL LOAD, NUMERAL INDICATES LOAD IN KVA</div></div><div><div>GENERATOR</div></div><div><div>ATS - AUTOMATIC TRANSFER SWITCH</div><div>MTS - MANUAL TRANSFER SWITCH</div></div><div><div>METER</div><div>A - AMMETER</div><div>V - VOLTMETER</div><div>W - WATTMETER</div><div>KWH - KILOWATT HOUR</div><div>KVAR - KILOVAR METER</div><div>VAR - VAR METER</div><div>HZ - FREQUENCY METER</div><div>PF - POWER FACTOR METER</div></div><div><div>LINE OR LOAD REACTOR</div><div>NUMERAL INDICATES % IMPEDANCE</div></div><div><div>DIGITAL POWER MONITOR</div></div><div><div>METER TRANSFER SWITCH</div><div>AS - AMMETER SWITCH</div><div>VS - VOLTMETER SWITCH</div></div><div><div>SPD - SURGE PROTECTION DEVICE</div><div>ENDN - ETHERNET TO DEVICENET LINKING DEVICE</div><div>DPS - DEVICENET POWER SUPPLY</div></div><div><div>MEDIUM VOLTAGE CABLE TERMINATION</div></div><div><div>DRAWOUT DEVICE</div></div><div><div>LIGHTNING ARRESTER</div></div><div><div>KEY INTERLOCK</div></div></div></div></div></div>		<div><div><div><div><div><div>A,AMP AMPERES</div><div>AC ALTERNATING CURRENT</div><div>AFF ABOVE FINISHED FLOOR</div><div>AFG ABOVE FINISHED GRADE</div><div>AHJ AUTHORITY HAVING JURISDICTION</div><div>AIC AMPERE INTERRUPT CAPACITY</div><div>AWG AMERICAN WIRE GAUGE</div><div>BFG BELOW FINISHED GRADE</div><div>CATV CABLE TELEVISION</div><div>CB CIRCUIT BREAKER</div><div>CCTV CLOSED CIRCUIT TELEVISION</div><div>CL CENTER LINE</div><div>CKT CIRCUIT</div><div>CP CONTROL PANEL</div><div>CPT CONTROL POWER TRANSFORMER</div><div>CT CURRENT TRANSFORMER</div><div>CU COPPER</div><div>E.C. ELECTRICAL CONTRACTOR</div><div>EMT ELECTRIC METALLIC TUBING</div><div>FAA FIRE ALARM ANNUNCIATOR</div><div>FACP FIRE ALARM CONTROL PANEL</div><div>FBO FURNISHED BY OTHERS</div><div>FWE FURNISHED WITH EQUIPMENT</div><div>G.C. 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POWER		FIRE ALARM DIAGRAM SYMBOLS		INTERCOM & PAGING SYSTEM		INSTRUMENTATION		ABBREVIATIONS			
<div><div><div><div><div><div>NON-FUSED SAFETY SWITCH</div></div><div><div>FUSED SAFETY SWITCH</div></div><div><div>NON-FUSED DISCONNECT/MAGNETIC MOTOR STARTER</div></div><div><div>MANUAL MOTOR SWITCH (MOTOR RATED SWITCH), TOGGLE OPERATED, SINGLE PHASE. 1 OR 2 POLE AS REQUIRED</div></div><div><div>ENCLOSED CIRCUIT BREAKER W/AMPERE RATING</div></div><div><div>ELECTRIC MOTOR, NUMBER INDICATES HORSEPOWER RATING, "F" INDICATES FRACTIONAL LESS THAN 1/20HP OR 100W</div></div><div><div>TRANSFORMER</div></div><div><div>POWER POLE</div></div><div><div>DUPLEX RECEPTACLE, NEMA 5-20R - MTD CL UP 24" OR AS NOTED;"WP" WEATHER PROOF, "G" PROTECTED BY GFCI RECEPTACLE OR BREAKER UPSTREAM, "H" MOUNTED 0'-6" BELOW CEILING, "TV" MOUNT 7'-6" UP</div></div><div><div>DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R - MTD</div></div></div></div></div></div>											

INTERCOM & PAGING SYSTEM

S

CEILING MOUNTED SPEAKER

PA

PAGING SYSTEM CONTROL PANEL

HS

PAGING SYSTEM HANDSET

INSTRUMENTATION

FIELD MOUNTED INSTRUMENT

LS

INSTRUMENT IDENTIFICATION TYPE

XX

INSTRUMENT LOOP NO.

VENDOR SUPPLIED INSTRUMENT

FS

XX

INSTRUMENT IDENTIFIER:

AE ANALYSIS ELEMENT

AIT ANALYSIS INDICATING TRANSMITTER

AT ANALYSIS TRANSMITTER

DPS DIFFERENTIAL PRESSURE SWITCH

FCV FLOW CONTROL VALVE

FE FLOW ELEMENT

FIT FLOW INDICATING TRANSMITTER

FT FLOW TRANSMITTER

LS LEVEL SWITCH

LE LEVEL ELEMENT

LIT LEVEL INDICATING TRANSMITTER

LT LEVEL TRANSMITTER

LSH LEVEL SWITCH HIGH

LSL LEVEL SWITCH LOW

MOV MOTOR OPERATED VALVE

PE PRESSURE ELEMENT

PIT PRESSURE INDICATING TRANSMITTER

PT PRESSURE TRANSMITTER

PS PRESSURE SWITCH

SV SOLENOID VALVE

TE TEMPERATURE ELEMENT

TIT TEMPERATURE INDICATING TRANSMITTER

TT TEMPERATURE TRANSMITTER

ZS PROXIMITY SWITCH

MISCELLANEOUS TERMINALS

ARROW, SMALL

ARROW, LARGE

ARROW, TRIANGULAR

CONTINUE, SMALL

CONTINUE, LARGE

DOT, SMALL

DOT, MEDIUM

DOT, LARGE

POLARITY SQUARE

SCREW TERMINAL

TERMINAL POINT, SMALL

TERMINAL POINT, LARGE

TERMINAL POINT, SQUARE

SHIELD

SHIELD W/TERMINAL POINT

ONE-LINE DIAGRAM SYMBOLS

HV VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER ELECTRICALLY OPERATED (E.O.)

MV VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER WITH MANUAL CONTROL SWITCH

LOW VOLTAGE CIRCUIT BREAKER

AF - AMP FRAME

AT - AMP TRIP

EO - ELECTRICALLY OPERATED

ST - SHUNT TRIP

GF - GROUND FAULT

EO - ELECTRICALLY OPERATED

DISCONNECT, ISOLATION OR SAFETY SWITCH

FUSED DISCONNECT SWITCH

MAGNETIC MOTOR STARTER. NUMERAL INDICATES NEMA SIZE

FVNR - FULL VOLTAGE REVERSING

RVAT - REDUCING VOLTAGE AUTO TRANSFORMER

ZS - TWO SPEED

YD - WYE DELTA REDUCED VOLTAGE STARTER

CAPACITOR

VFD - VARIABLE FREQUENCY DRIVE

SS - SOLID STATE STARTER

DC - DC VARIABLE DRIVE

NUMBER INDICATES AMP RATING

POWER TRANSFORMER

OA - LIQUID TYPE SELF COOLED

AA - DRY TYPE SELF COOLED

FA - FAN COOLED

CONNECTION

POTENTIAL TRANSFORMER

480/120

RATIO

NUMBER REQUIRED

CURRENT TRANSFORMER

600/5

RATIO

PHASE

MOTOR, NUMERAL INDICATES HORSEPOWER

GENERAL LOAD, NUMERAL INDICATES LOAD IN KVA

GENERATOR

ATS - AUTOMATIC TRANSFER SWITCH

MTS - MANUAL TRANSFER SWITCH

METER

A - AMMETER

V - VOLTMETER

W - WATTMETER

KWH - KILOWATT HOUR

KVAR - KILOVAR METER

VAR - VAR METER

HZ - FREQUENCY METER

PF - POWER FACTOR METER

LINE OR LOAD REACTOR

NUMERAL INDICATES % IMPEDANCE

DIGITAL POWER MONITOR

METER TRANSFER SWITCH

AS - AMMETER SWITCH

VS - VOLTMETER SWITCH

SPD - SURGE PROTECTION DEVICE

ENON - ETHERNET TO DEVICENET LINKING DEVICE

DPS - DEVICENET POWER SUPPLY

MEDIUM VOLTAGE CABLE TERMINATION

DRAWOUT DEVICE

LIGHTNING ARRESTER

KEY INTERLOCK

CONTROL DIAGRAM SYMBOLS

NOTE: ALL CONTROL SYMBOLS ARE DRAWN ASSUMING DE-ENERGIZED CIRCUITS, EMPTY TANKS, UNPRESSURIZED LINES, ETC.

OPEN ON INCREASE

CLOSE ON INCREASE

PRESSURE SWITCH

LEVEL SWITCH

FLOW SWITCH

TEMPERATURE SWITCH

NORMALLY CLOSED

NORMALLY OPEN

PUSH BUTTON

INSTANTANEOUS CONTACT

TIMED CLOSE CONTACT

TIMED OPEN CONTACT

LIMIT SWITCH

SELECTOR SWITCH: QUANTITY OF ARROWS INDICATES NUMBER OF POSITIONS. XOO INDICATES UPPER CONTACT CLOSED IN LEFT POSITION AND OPEN IN CENTER AND RIGHT POSITIONS

INTERNAL WIRING

FIELD WIRING

RELAY COIL

ABBREVIATIONS

A,AMP AMPERES

ACG ALTERNATING CURRENT

AFF ABOVE FINISHED FLOOR

AFG ABOVE FINISHED GRADE

AHJ AUTHORITY HAVING JURISDICTION

AIC AMPERE INTERRUPT CAPACITY

AWG AMERICAN WIRE GAUGE

BFG BELOW FINISHED GRADE

CATV CABLE TELEVISION

CB CIRCUIT BREAKER

CCTV CLOSED CIRCUIT TELEVISION

CL CENTER LINE

CKT CIRCUIT

CP CONTROL PANEL

CPT CONTROL POWER TRANSFORMER

CT CURRENT TRANSFORMER

CU COPPER

E.C. ELECTRICAL CONTRACTOR

EMT ELECTRIC METALLIC TUBING

FAA FIRE ALARM ANNUNCIATOR

FACP FIRE ALARM CONTROL PANEL

FBO FURNISHED BY OTHERS

FWE FURNISHED WITH EQUIPMENT

G.C. GENERAL CONTRACTOR

GEN GENERATOR

GFCI GROUND FAULT CIRCUIT INTERRUPTER

G.GND GROUND

HP HORSEPOWER

HZ FREQUENCY IN CYCLES/SECOND

IG ISOLATED GROUND

IMT INTERMEDIATE METALLIC CONDUIT

I/S INTRINSICALLY SAFE

JBOX JUNCTION BOX

K KILO

KCMIL 1000 CIRCULAR MILS

KVA KILOVOLT AMPERE

KVAR KILOVOLT AMPERE REACTIVE

KW KILOWATT

KWH KILOWATT HOUR

MCC MOTOR CONTROL CENTER

MCB MAIN CIRCUIT BREAKER

MFG MANUFACTURER

MH MANHOLE

MLO MAIN LUGS ONLY

MTD MOUNTED

MTR MOTOR

MV MEDIUM VOLTAGE

NC NORMALLY CLOSED

NEC NATIONAL ELECTRIC CODE

NEUT NEUTRAL

NO NORMALLY OPEN

OL OVERLOAD ELEMENT

PF POWER FACTOR

PH PHASE

PRI PRIMARY

PT POTENTIAL TRANSFORMER

PVC POLYVINYL CHLORIDE

RGS RIGID STEEL CONDUIT

RTD RESISTANCE TEMPERATURE DETECTOR

SEC SECONDARY

SS STAINLESS STEEL

SV SOLENOID VALVE

TEMP TEMPERATURE

TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR

TYP TYPICAL

UE UNDERGROUND ELECTRIC

UG UNDERGROUND

UPS UNINTERRUPTED POWER SUPPLY

V VOLTS

VA VOLT-AMPERES

VAR VOLT-AMPERE REACTIVE

W WATT

WM WATT METER

WP WEATHER PROOF

XFMR TRANSFORMER

XP EXPLOSION PROOF

CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV

MM/DD/YY

DESCRIPTION

JOB NO: 0224539.48

DATE: NOVEMBER 2025

SCALE: AS NOTED

DESIGNED BY: TR

DRAWN BY: SAA

CHECKED BY: AJF

FILENAME: E-001.dwg

DRAWING TITLE:

ELECTRICAL  
LEGEND

DRAWING NO:

E-001

138 River Road, Suite 212  
Andover, Massachusetts 01810  
800.426.4262 | [www.woodardcurran.com](http://www.woodardcurran.com)

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CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH

## SANDQUIST FACILITY STORMWATER IMPROVEMENTS

[illegible]

REV	MM/DD/YY	DESCRIPTION
JOB NO:	0224539.48	
DATE:	NOVEMBER 2025	
SCALE:	AS NOTED	
DESIGNED BY:	TR	
DRAWN BY:	SAA	
CHECKED BY:	AJF	
FILENAME:	E-002.dwg	

DRAWING TITLE

## ELECTRICAL RISER AND SCHEDULES

DRAWING NO

**E-002**

SHEET GENERAL NOTES

- ALL ITEMS SHOWN WITH LIGHT DESIGNATION INDICATE EXISTING EQUIPMENT TO REMAIN OR NON-ELECTRICAL CONSTRUCTION.
- ALL ITEMS SHOWN WITH BOLD DESIGNATION INDICATE NEW EQUIPMENT, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- EQUIPMENT SHOWN IS DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE AND FIELD VERIFY EXACT LOCATIONS PRIOR TO EXECUTION OF WORK.

**KEY** SHEET KEYNOTES

- EXISTING EXTERIOR PAD MOUNTED SERVICE SWITCHGEAR. 3000A, 480V, 3PH, 3W. UTILIZE AVAILABLE 600A FRAME SPARE CIRCUIT BREAKER TO PROVIDE POWER FEEDER TO NEW TREATMENT SYSTEM.
- PROVIDE CONCRETE ENCASED UNDERGROUND CONDUIT DUCTBANK WITH (4)-4" CONDUITS.
- PROVIDE H20 RATED PRECAST CONCRETE ELECTRICAL HANDHOLE.
- REFER TO SHEET E-101 FOR TREATMENT AREA ENLARGED PLAN.



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CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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DATE:	NOVEMBER 2025
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DESIGNED BY:	TR
DRAWN BY:	SAA
CHECKED BY:	AJF
FILENAME:	E-100.dwg

DRAWING TITLE:

**ELECTRICAL  
SITE PLAN**

DRAWING NO:

**E-100**



BAR SCALE  
1" = 40'  
CHECK GRAPHIC SCALE BEFORE USING

MERRIMACK RIVER

N/F  
PROLIERIZED NEW ENGLAND CO, LLC  
25 SANDQUIST ST  
AREA:6.93-AC±

N/F  
34 BASIN ST REALTY TRUST  
BASIN ST

N/F  
34 BASIN ST REALTY TRUST  
34 BASIN ST

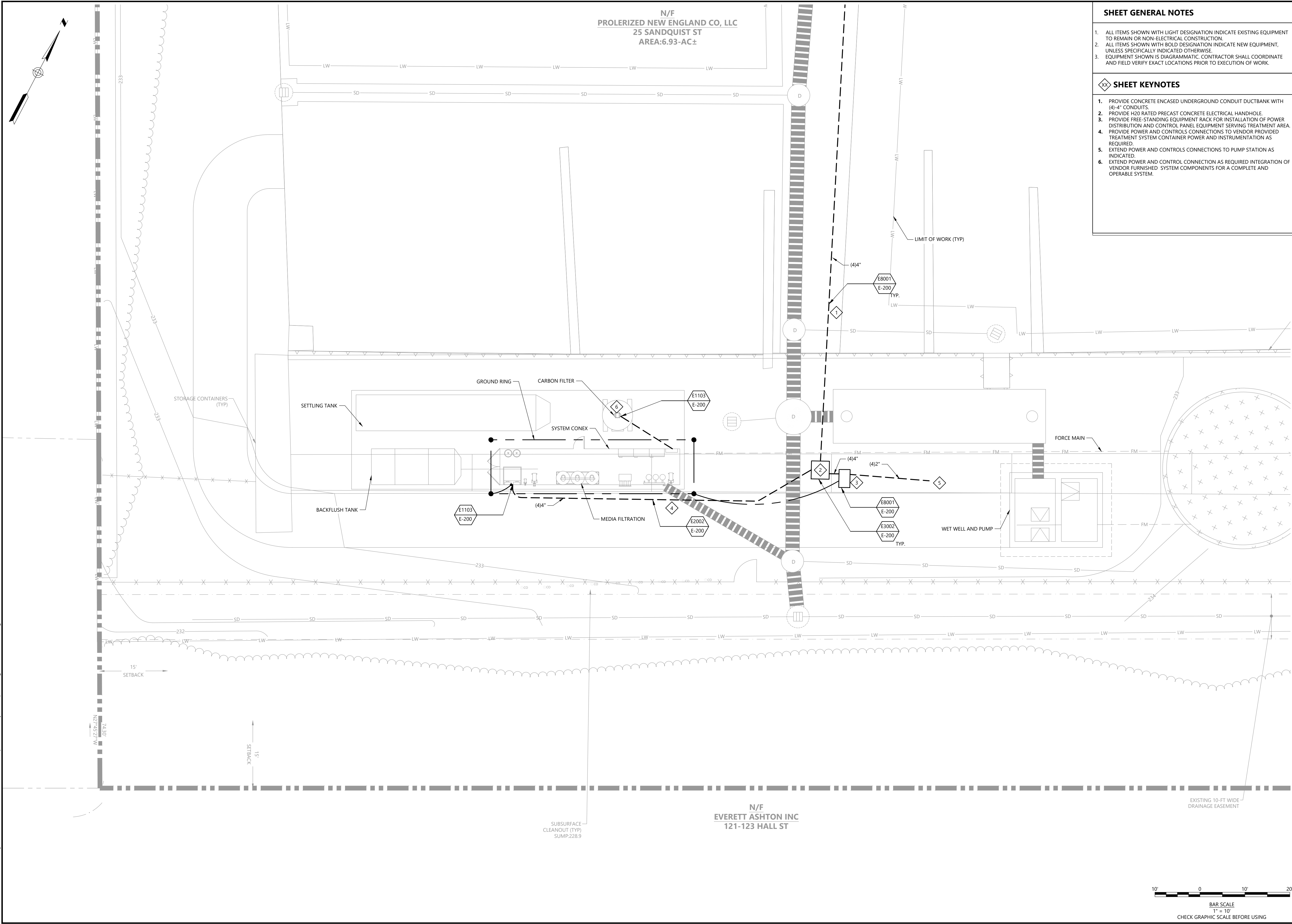
N/F  
CFA CORPORATION  
11 SANDQUIST ST

N/F  
CFA CORPORATION  
14 SANDQUIST ST

N/F  
CFA CORPORATION  
12 SANDQUIST ST

N/F  
BASIN LLC  
10 BASIN ST

N/F  
EVERETT ASHTON INC  
121-123 HALL ST



SHEET GENERAL NOTES

- 1. ALL ITEMS SHOWN WITH LIGHT DESIGNATION INDICATE EXISTING EQUIPMENT TO REMAIN OR NON-ELECTRICAL CONSTRUCTION.
- 2. ALL ITEMS SHOWN WITH BOLD DESIGNATION INDICATE NEW EQUIPMENT, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- 3. EQUIPMENT SHOWN IS DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE AND FIELD VERIFY EXACT LOCATIONS PRIOR TO EXECUTION OF WORK.

KEY SHEET KEYNOTES

- 1. PROVIDE CONCRETE ENCASED UNDERGROUND CONDUIT DUCTBANK WITH (4)-4" CONDUITS.
- 2. PROVIDE H20 RATED PRECAST CONCRETE ELECTRICAL HANDHOLE.
- 3. PROVIDE FREE-STANDING EQUIPMENT RACK FOR INSTALLATION OF POWER DISTRIBUTION AND CONTROL PANEL EQUIPMENT SERVING TREATMENT AREA.
- 4. PROVIDE POWER AND CONTROLS CONNECTIONS TO VENDOR PROVIDED TREATMENT SYSTEM CONTAINER POWER AND INSTRUMENTATION AS REQUIRED.
- 5. EXTEND POWER AND CONTROLS CONNECTIONS TO PUMP STATION AS INDICATED.
- 6. EXTEND POWER AND CONTROL CONNECTION AS REQUIRED INTEGRATION OF VENDOR FURNISHED SYSTEM COMPONENTS FOR A COMPLETE AND OPERABLE SYSTEM.



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CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH  
SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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DESIGNED BY:	TR
DRAWN BY:	SAA
CHECKED BY:	AJF
FILENAME:	E-101.dwg

DRAWING TITLE:

**ELECTRICAL  
POWER PLAN**

DRAWING NO:

**E-101**



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CONCORD, NH

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JOB NO: 0224539.48

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SCALE: AS NOTED

DESIGNED BY: TR

DRAWN BY: SAA

CHECKED BY: AJF

FILENAME: E-200.dwg

DRAWING TITLE:

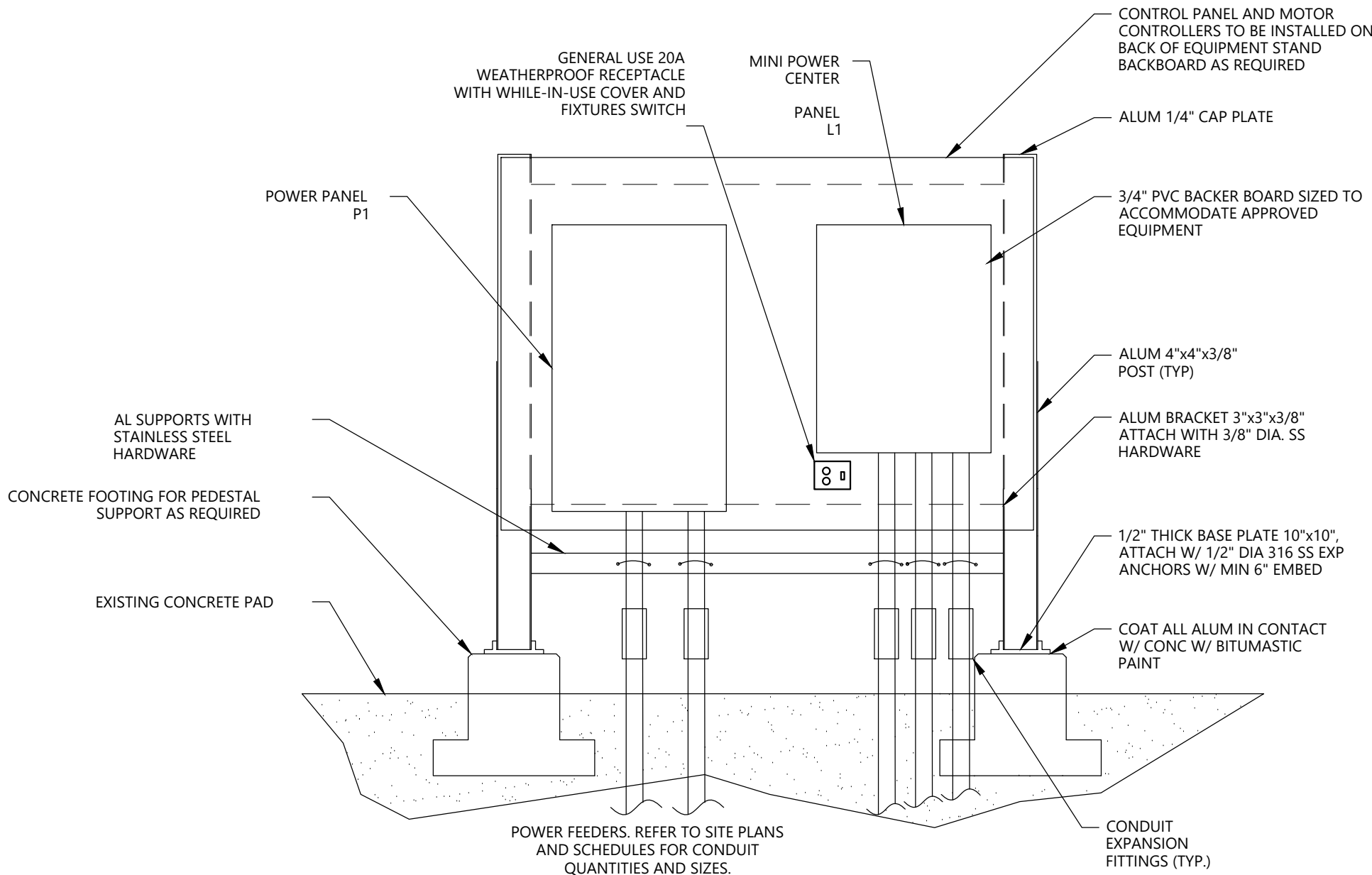
**ELECTRICAL  
DETAILS**

DRAWING NO:

**E-200**

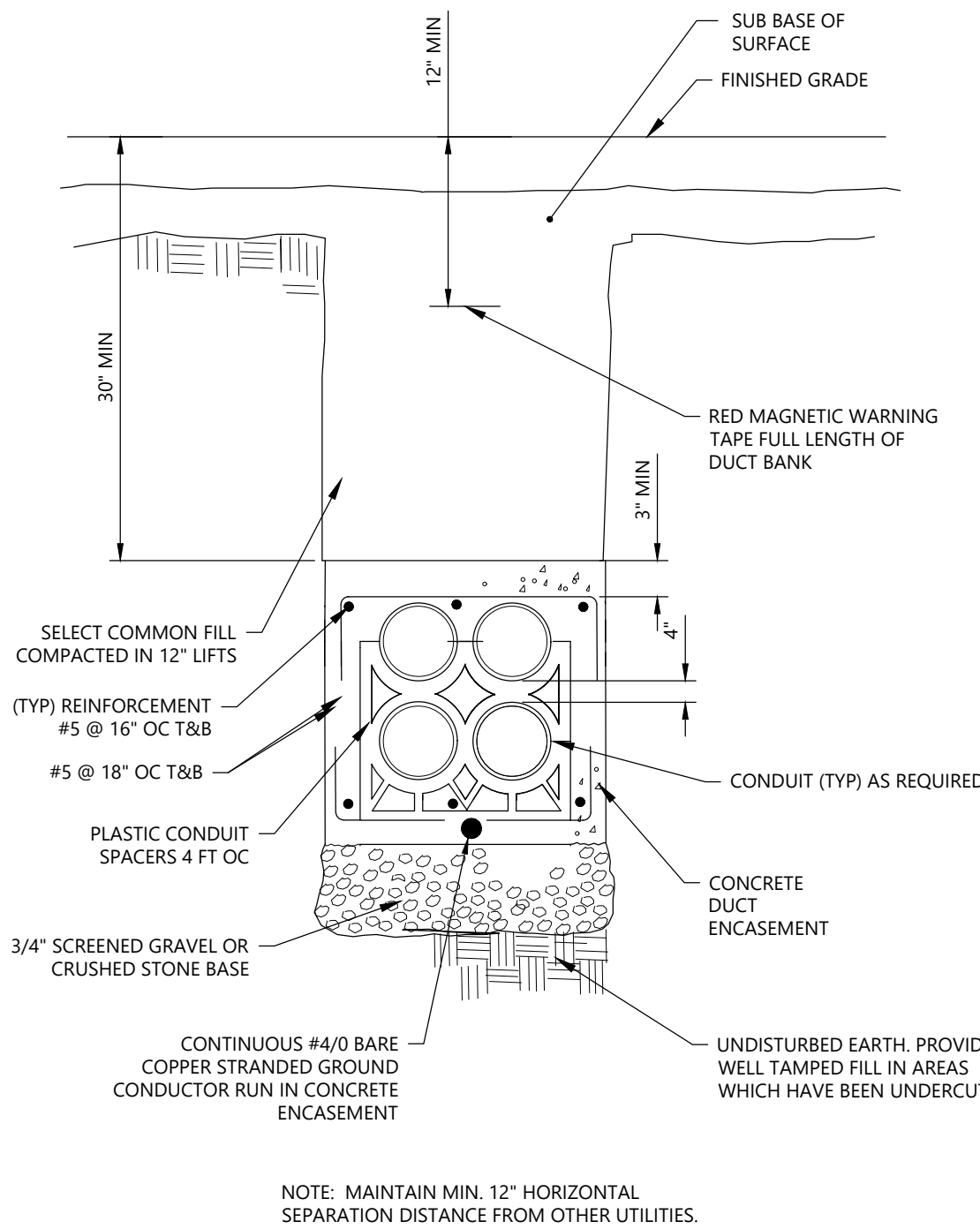
GENERAL NOTES:

- BACKBOARD TO BE MADE OF 3/4" PVC
- ATTACH TO ALUMINUM FRAMING W/ 3/8" DIAMETER SS HARDWARE EVERY 12" ON CENTER.



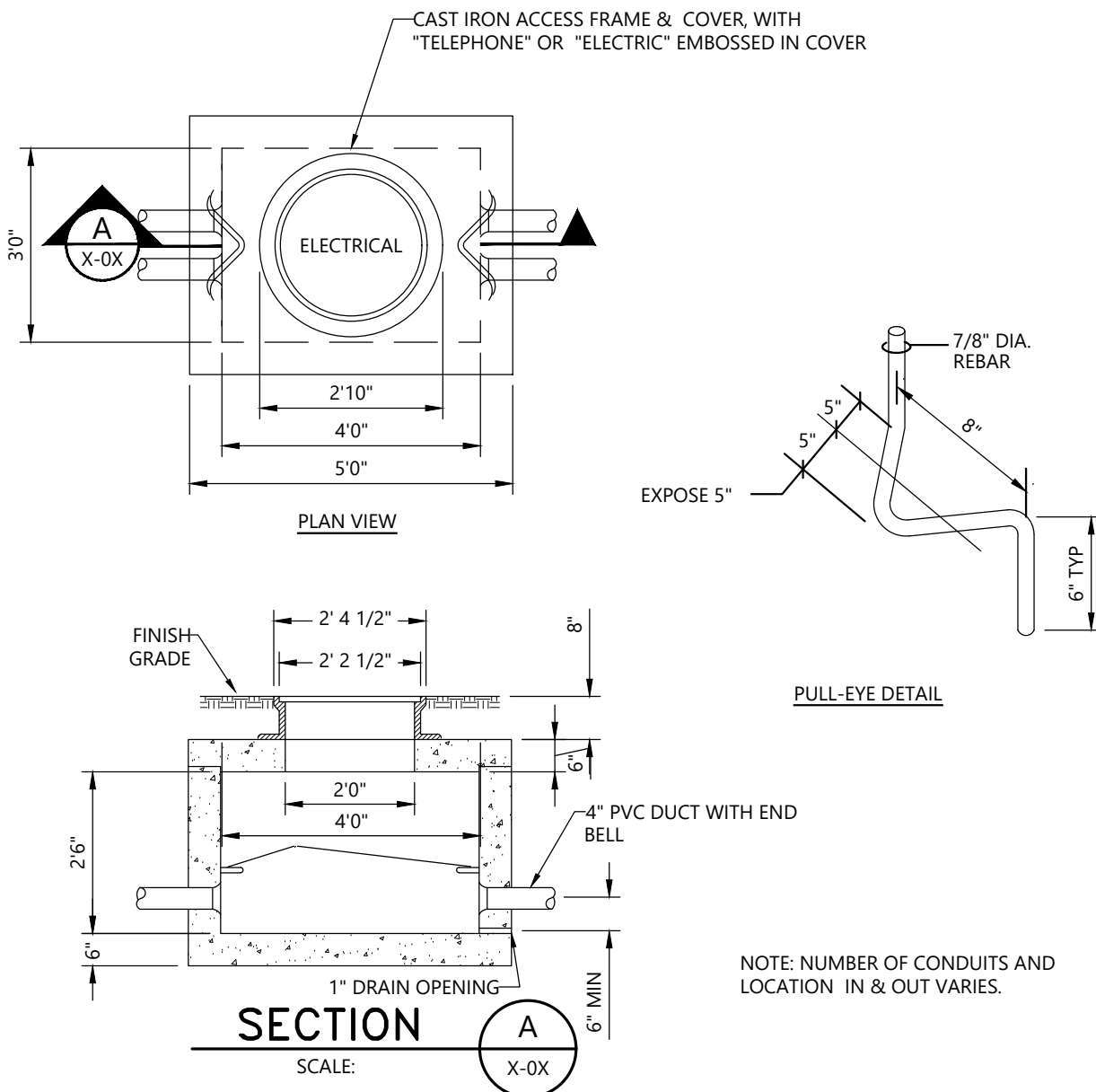
**E8001 ELECTRICAL EQUIPMENT STAND**

SCALE: NTS



**E3013 TYP. CONCRETE ENCASED UNDERGROUND DUCT BANK**

SCALE: NTS

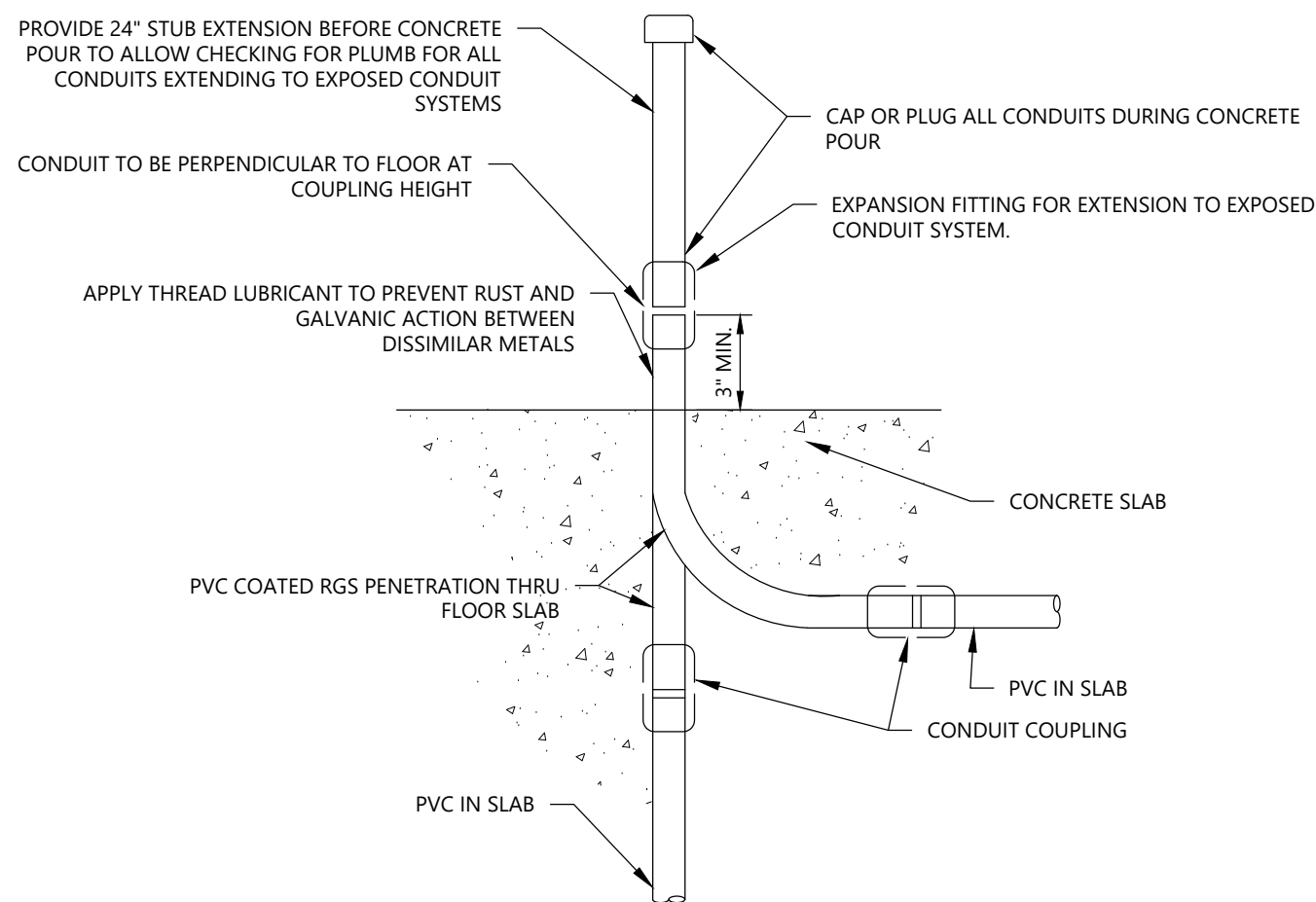


**E3002 36X48 ELECTRICAL PULL BOX**

SCALE: NTS

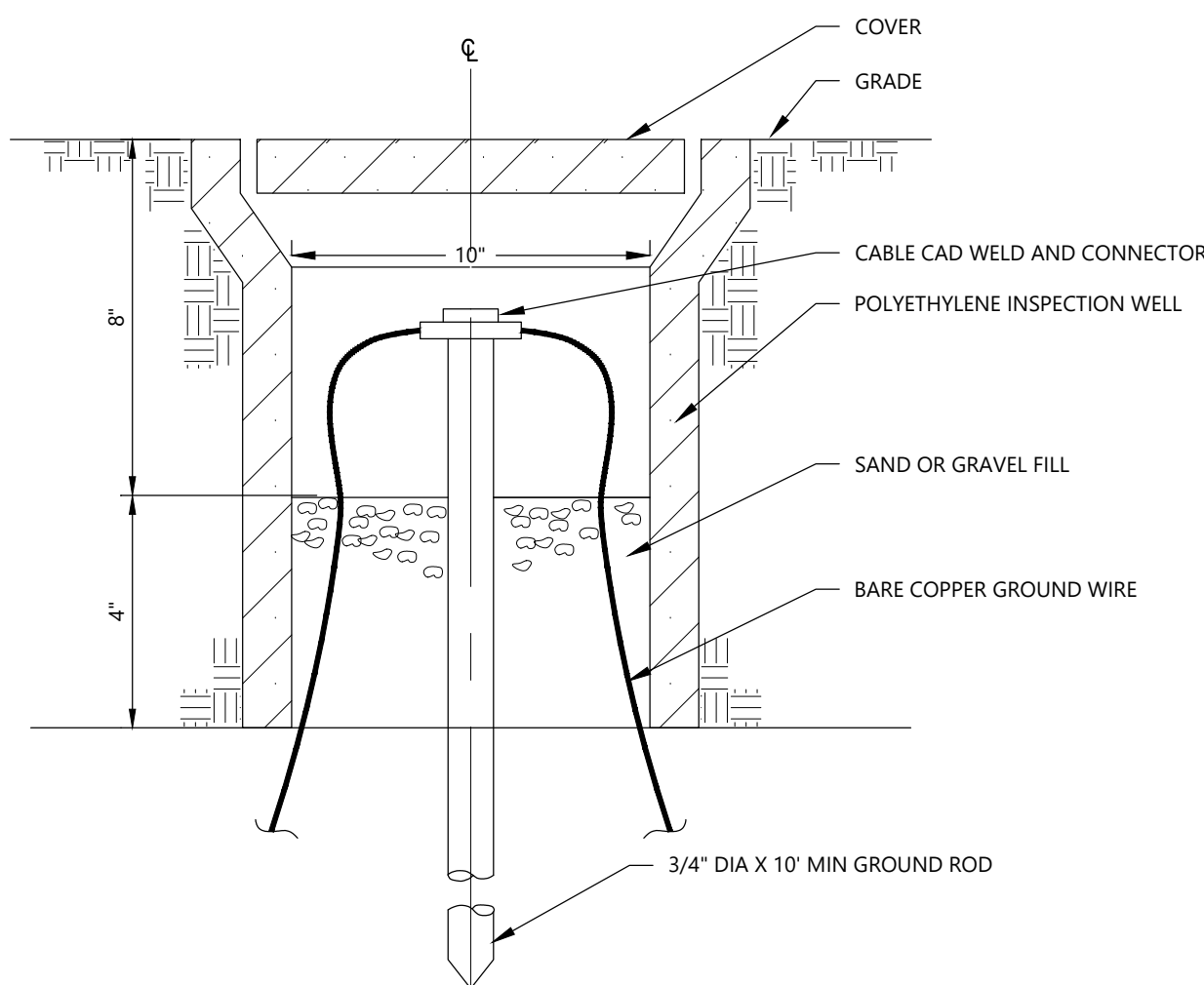
NOTES:

- APPLICABLE IN ALL AREAS UNLESS NOTED OTHERWISE



**E1103 CONDUIT STUB-UP**

SCALE: NTS



**E2002 GROUNDING WELL**

SCALE: NTS

\\woodardcurran.net\shared\Projects\0224539-48 Schnitzer - Concord Sandquist Preliminary Design\Drawings\B0224539-48 - 1001 - lvs.dwg, Nov 04, 2025 - 12:08pm CBAZDJA

ELECTRICAL SYMBOLS			PANEL NOTES			FIELD NOTES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	REVISION REFERENCE		PILOT LIGHT (W/ LENS COLOR)	<div>1. INCLUDE A DRAWING POCKET INSIDE THE PANEL LARGE ENOUGH TO STORE A COMPLETE SET OF SYSTEM DIAGRAMS, AND DRAWINGS.</div> <div>2. ANALOG CABLES: 2-CONDUCTOR WITH SHIELD. BELDEN #8760 OR EQUAL.</div> <div>3. LEAVE FREE SPACE ABOVE PLC FOR VENTILATION.</div> <div>4. IDENTIFY ALL WIRES AS SPECIFIED BY THE NATIONAL ELECTRICAL CODE HANDBOOK AND THE FOLLOWING:<div><div>POWER DISTRIBUTION WIRES.....BLACK NEUTRAL WIRES.....WHITE AC CONTROL CIRCUIT WIRES.....RED DC CONTROL CIRCUIT WIRES.....BLUE DC COMMON WIRES.....WHITE W/BBLUE STRIPE GROUND WIRES.....GREEN W/YELLOW STRIPE WIRES THAT MAY REMAIN.....ORANGE ENERGIZED WHEN THE MAIN DISCONNECT IS IN THE OFF POSITION</div></div></div> <div>5. SIZE ALL WIRE IN ACCORDANCE WITH NEC CODES. SINGLE CONDUCTORS: STRANDED COPPER WITH THWN INSULATION, RATED FOR 600 VAC, AND UL LISTED AS MTW, UNLESS NOTED OTHERWISE. MINIMUM CONDUCTOR SIZE #14AWG. #16 AWG MAY BE USED ONLY FOR THE INDIVIDUAL WIRES CONNECTING DIRECTLY TO AN I/O TERMINAL ON THE PLC SWING ARM. THE HOT AND NEUTRAL CONDUCTOR SUPPLYING EACH SWING ARM SHALL REMAIN #14 AWG. GROUND CONDUCTOR SIZE AS INDICATED ON THE DRAWINGS. WHERE NOT INDICATED, THEY SHALL BE #14 AWG OR LARGER.</div> <div>6. BOND PLC CHASSIS, PANEL DOORS, SIDE PANELS, BACK PANELS AND GROUND BUS TOGETHER WITH WIRES SIZED AS SHOWN ON THE DRAWING.</div> <div>7. TAG ALL WIRES AT EVERY TERMINATION POINT. SHORT WIRE LENGTHS, (LESS THAN 8") WHERE THE ENTIRE CONDUCTOR IS VISIBLE MAY BE TAGGED AT JUST ONE END. WIRE LABELS FOR WIRES SMALLER THAN NO. 4, SHALL BE VINYL, SELF ADHESIVE, WRAPAROUND, WITH MACHINE PRINTED, NUMBERS AND LETTERS. WIRE SIZES NO. 4 AND LARGER AND MULTI CONDUCTOR CABLES SHALL BE MARKED WITH ONE-PIECE, NYLON LOCKING MACHINE PRINTED MARKER TIES EQUAL TO PANDUIT PLM SERIES. WIRE TAG NUMBER SHALL BE AS INDICATED ON THE DRAWINGS</div> <div>8. DO NOT ROUTE ANY COMMUNICATION CABLES IN WIREWAYS WITH 120 VAC WIRING. ROUTE ALL THESE CABLES AWAY FROM 120 VAC WIRING. WHERE 120 VAC CONDUCTORS MUST BE CROSSED, DO SO AT RIGHT ANGLES AND PROVIDE AT LEAST 1" SEPARATION.</div> <div>9. CONNECT NO MORE THAN TWO WIRES TO ANY ONE TERMINAL. PROVIDE TERMINAL BLOCKS WITH A SAFETY COVER OR BE FINGER SAFE TO PROTECT PERSONNEL FROM SHOCK, MOUNT ALL TERMINAL BLOCKS ON DIN RAILS. SUPPLY ALL HARDWARE NEEDED TO PROVIDE A COMPLETE TERMINAL STRIP ASSEMBLY, INCLUDING BUT NOT LIMITED TO: MISCELLANEOUS SEPARATORS, TOP JUMPER BARS, SIDE JUMPER BARS, MACHINE PRINTED TERMINAL BLOCK TAGS, FASTENERS, BRACKETS FOR RAISING 35MM RAIL, ETC</div> <div>10. RAISE AND CENTER ALL TERMINAL STRIPS SET BETWEEN WIRE WAYS TO FACILITATE WIRING, UNLESS OTHERWISE NOTED. PROVIDE A MINIMUM OF 1-1/2" INCH BETWEEN TERMINALS AND WIRE WAY ON BOTH SIDES OF TERMINAL STRIP. INSTALL END BARRIERS FOR EACH STYLE OF TERMINAL. INSTALL END STOPS ON EACH SECTION OF TERMINALS OR RELAYS. USE MACHINE PRINTED TAGS TO MARK TERMINAL STRIPS. WHEREVER POSSIBLE, MAKE ALL TERMINAL BLOCK CONNECTIONS FOR THE PANEL WIRING ON THE TOP OR RIGHT SIDE OF THE TERMINAL STRIP AND LEAVE THE BOTTOM OR LEFT SIDE FREE FOR FIELD TERMINATIONS, UNLESS NOTED OTHERWISE.</div> <div>11. PROVIDE ENGRAVED PLASTIC NAMEPLATES. EITHER PAINT FILLED ENGRAVINGS OR 2 COLOR LAMINATIONS ARE ACCEPTABLE.</div> <div>12. ALL OPERATOR CONTROL DEVICES (BUTTONS, SWITCHES, METERS, DISPLAYS, ETC.) SHALL HAVE NAMEPLATES.</div> <div>13. PROVIDE A SET OF AS-BUILT DRAWINGS WITH THE PANEL. THESE SHALL BE COMPLETE, ALLOWING ENGINEER TO PRODUCE A SET OF "RECORD" DRAWINGS SHOWING ALL WIRE NUMBERS WITHIN THE PANEL AND THE DEVICE TERMINAL NUMBERS TO WHICH THEY CONNECT. REQUIRED INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO:<div><div>A. ALL WIRE TAG NUMBERS,</div><div>B. TERMINAL CONNECTION POINTS FOR POWER AND NEUTRAL FEEDS,</div><div>C. ANY DEVIATIONS FROM THE EQUIPMENT LOCATIONS SHOWN ON THE DRAWINGS. PRIOR APPROVAL SHOULD BE OBTAINED BEFORE MAKING SUCH CHANGES.</div></div></div> <div>14. SAVE ALL MATERIAL DATA SHEETS AND LITERATURE. WHERE PRODUCT DATA IS PROVIDED ON THE PACKAGE, MAKE A CLEAR COPY OF THE DATA AND INCLUDE WITH OTHER DATA SHEETS. INCLUDE ALL THIS MATERIAL WITH THE PANEL DURING DELIVERY.</div> <div>15. EQUIPMENT LOCATIONS SHALL BE AS SHOWN ON THE DRAWINGS. THE PANEL BUILDER SHALL NOTIFY ENGINEER OF ANY PHYSICAL CONFLICTS OR OTHER PROBLEMS THAT COULD CAUSE PROBLEMS WITH THE INSTALLATION OR OPERATION OF THE PANEL BEFORE ASSEMBLING THE PANEL. RESOLUTION OF SUCH CONFLICTS SHALL BE APPROVED BY ENGINEER. PRIOR TO PANEL ASSEMBLY.</div> <div>16. PROVIDE ALL EQUIPMENT AS SHOWN ON THE BILL OF MATERIALS INCLUDED IN THIS DRAWING PACKAGE. SUBMIT ANY DEVIATION FROM THE BILL OF MATERIALS FOR APPROVAL IN WRITING PRIOR TO FABRICATION.</div> <div><div>1. TAKE CARE WHEN CONDUIT ENTRY PENETRATIONS ARE MADE INTO ENCLOSURE TO PREVENT SCATTERING OF DRILL CHIPS &amp; KNOCK-OUT SLUGS. DE-BUR PENETRATIONS AND REMOVE DEBRIS. SEAL ALL CONDUIT ENTRIES INTO ENCLOSURE FROM LIQUIDS &amp; CONTAMINANTS. AVOID CONDUIT ENTRIES OVER CRITICAL COMPONENTS, SUCH AS PLCs AND DRIVES.</div><div>2. ANALOG CABLES: 2 CONDUCTOR WITH SHIELD. BELDEN #8760 OR EQUAL.</div><div>3. IDENTIFY ALL WIRES AS SPECIFIED BY THE NATIONAL ELECTRICAL CODE HANDBOOK AND THE FOLLOWING:<div><div>460 VAC (L1).....BROWN (L2).....ORANGE (L3).....YELLOW (NEUT).....GREY</div><div>120/208 VAC (L1).....BLACK (L2).....RED (L3).....BLUE (NEUT).....WHITE</div></div></div></div> <div><div>4. SIZE ALL WIRES IN ACCORDANCE WITH NEC CODES. SINGLE CONDUCTORS SHALL BE STRANDED COPPER WITH THWN INSULATION, RATED FOR 600 VAC, AND UL LISTED AS MTW, UNLESS NOTED OTHERWISE. MINIMUM CONDUCTOR SIZE SHALL BE #14 AWG. GROUND CONDUCTOR SIZE SHALL BE AS INDICATED ON THE DRAWINGS. WHERE NOT INDICATED, IT SHALL BE #14 AWG OR LARGER.</div><div>5. LOCATE CONDUIT ENTRIES INTO ENCLOSURES TO ASSURE ADEQUATE WIRE BENDING SPACE. ROUTE WIRING SO THAT DOOR MOUNTED EQUIPMENT WILL NOT INTERFERE WITH IT WHEN THE DOOR IS CLOSED.</div><div>6. LOCATE INTRINSICALLY SAFE WIRING CONDUIT ENTRIES INTO ENCLOSURE AS CLOSE AS POSSIBLE TO THE WIREWAY PROVIDED FOR INTRINSICALLY SAFE FIELD WIRING SO THAT ALL INTRINSIC WIRING IS ISOLATED (AT LEAST 2") FROM ALL OTHER FIELD AND PANEL WIRING AND SECURED. ROUTE INTRINSICALLY SAFE FIELD WIRING THROUGH THE WIREWAY PROVIDED EXCLUSIVELY FOR INTRINSICALLY SAFE WIRING. ALL WIRING SHALL BE IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 504. OTHER APPLICABLE ARTICLES INCLUDE 501 &amp; 515.</div><div>7. ENGINEER HAS IDENTIFIED AS MANY OF THE PLC INPUTS AND OUTPUTS AS POSSIBLE THAT WILL BE NEEDED TO MAKE THE CONTROL PROGRAM OPERATE AS REQUIRED. ADDITIONAL I/O MAY BE IDENTIFIED WHEN THE CONTROL PROGRAM IS WRITTEN AND REQUIRE WIRING. THESE SHALL BE CONSIDERED PART OF THESE SHOP DRAWINGS. THE INSTALLING CONTRACTOR SHALL INSTALL 10% SPARE CONDUCTORS TERMINATED ON TERMINAL BLOCKS ON BOTH ENDS TO MEET ADDITIONAL I/O REQUIREMENTS.</div><div>8. TAG ALL WIRES AT EVERY TERMINATION POINT. SHORT WIRE LENGTHS, (LESS THAN 8") WHERE THE ENTIRE CONDUCTOR IS VISIBLE MAY BE TAGGED AT JUST ONE END. WIRE LABELS FOR WIRES SMALLER THAN NO. 4, SHALL BE VINYL, SELF ADHESIVE, WRAPAROUND, WITH MACHINE PRINTED NUMBERS AND LETTERS. WIRE SIZES NO. 4 AND LARGER AND MULTI CONDUCTOR CABLES SHALL BE MARKED WITH ONE-PIECE, NYLON LOCKING MACHINE PRINTED MARKER TIES EQUAL TO PANDUIT PLM SERIES. WIRE TAG NUMBER SHALL BE AS INDICATED ON THE DRAWINGS.</div><div>9. DO NOT ROUTE ANY COMMUNICATION CABLES IN WIREWAYS WITH 120 VAC WIRING. ROUTE ALL THESE CABLES AWAY FROM 120 VAC WIRING. WHERE 120 VAC CONDUCTORS MUST BE CROSSED, DO SO AT RIGHT ANGLES AND PROVIDE AT LEAST 1" SEPARATION.</div><div>10. 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**Woodard  
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PE SEAL:



DRAFT 60% DESIGN  
NOT FOR CONSTRUCTION

CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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JOB NO: 0224539.48

DATE: NOVEMBER 2025

SCALE: AS NOTED

DESIGNED BY: VC

DRAWN BY: VC

CHECKED BY: RPM

FILENAME: 0224539.48 - 1001 - IXX\*.dwg

DRAWING TITLE:  
**INSTRUMENTATION  
NOTES & LEGEND**

DRAWING NO:

**I-101**

\\woodardcurran.net\shared\Projects\0224539-48 Schnitzer - Concord Sandquist Preliminary Design\Drawings\BOM\0224539-48 - I-102 - I-102.dwg, Nov 04, 2025 - 12:08pm CBAZC/A

BILL OF MATERIAL

ITEM	QTY.	MANUFACTURER	PART NUMBER	DESCRIPTION	DESIGNATION
***ENCLOSURE & RELATED EQUIPMENT***					
1	1	HOFFMAN	CSD363012SS	ENCLOSURE, STAINLESS STEEL, 36.00.00" x 30.00" x 12.00"	ENCLOSURE
2	1	HOFFMAN	CP3630	BACK PANEL, 34.25" x 28.25"	SUB PANEL
3	1	HOFFMAN	CSBP3630	CONCEPT SWING OUT PANEL	
4	1	HOFFMAN	ALFSWD	DOOR SWITCH	INTRUSION SWITCH
5	1	HOFFMAN	CMFKSS	MOUNTING BRACKET KIT	
6	1	STEGO	11101.0-00	THERMOSTAT, NO	INCLUDED WITH ITEM 10
7	1	HOFFMAN	ADLTEMP	DUAL THERMOSTAT	
8	1	PFANNENBERG	18040015407	400 WATT, 115VAC HEATER WITH THERMOSTAT	
9	1	HOFFMAN	CWHPTO	PADLOCKABLE HANDLE	
10					
11					
12					
13					
14					
15					
***PLC & RELATED EQUIPMENT***					
16	1	ALLEN BRADLEY	1769-L24ER-QBFC1B	COMPACTLOGIX PLC PROCESSOR	PLC
17	1	ALLEN BRADLEY	1769-IQ16	16 POINT 24VDC SINKING/SOURCING INPUT MODULE	PLC, SLOT 1
18					
19					
20					
21					
22					
23					
24					
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26					
27					
28					
29					
30					
***OPERATOR INTERFACE EQUIPMENT***					
36	1	AUTOMATION DIRECT	CM5-T10W	OPERATOR INTERFACE, COLOR TOUCHSCREEN, 10 INCH	
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
***TERMINAL BLOCKS & RELATED EQUIPMENT***					
50	45	ALLEN BRADLEY	1492-JD3	TERMINAL BLOCK 2 TIER	TB1
51	10	ALLEN BRADLEY	1492-EBJD3	TERMINAL BLOCK END BARRIER, 2 TIER	TB1
52	4	ALLEN BRADLEY	1492-EAJ35	TERMINAL BLOCK END ANCHOR	PLC, TB1
53	3	ALLEN BRADLEY	1492-CJJS-10	2-TIER TERMINAL BLOCK JUMPER, 10 POLE	TB1
54	7	ALLEN BRADLEY	1492-JG3	TERMINAL BLOCK, GROUNDING	TB1
55	1	ALLEN BRADLEY	199-DR1	DIN RAIL, STANDARD, 1 METER	MISC. COMPONENT MOUNTING
56	1	ALLEN BRADLEY	1492-DR6	DIN RAIL, RAISED, 1 METER	TB1
57	5	ALLEN BRADLEY	1492-H4	FUSED TERMINAL BLOCK, NEON INDICATOR	FU1-FU5
58	3	ALLEN BRADLEY	1492-N37	FUSED TERMINAL BLOCK END BARRIER	FU5, FU5A, FU15
59	2	ALLEN BRADLEY	1492-N49	FUSE BLOCK SIDE JUMPERS 10 POLE	FU1-FU5, FU6-FU15
60	2	ALLEN BRADLEY	1492-SJS	FUSE BLOCK SIDE JUMPER INSULATING SLEEVE	FU1-FU5, FU6-FU15
61	1	ALLEN BRADLEY	1492-M5X12	GROUNDING TERMINAL BLOCK BLANK MARKING TAGS, 144 CT.	TB1
62	1	ALLEN BRADLEY	1492-M5X8	TERMINAL BLOCK BLANK MARKING TAGS, 2 TIER, 144 CT.	TB1
63	1	ALLEN BRADLEY	1492-MS8X12	FUSE BLOCK BLANK MARKING TAGS, 100 CT.	FU1-FU15
64	11	ALLEN BRADLEY	1492-H5	FUSED TERMINAL BLOCK, LED INDICATOR	FU5A, FU6-FU15
65	4	ALLEN BRADLEY	1492-J4	TERMINAL BLOCK 1 TIER	TB1 (120VAC POWER)
66	2	ALLEN BRADLEY	1492-JG4	TERMINAL BLOCK GROUNDING	TB1 (120VAC POWER)
67	2	ALLEN BRADLEY	1492-EBJ3	TERMINAL BLOCK END BARRIER, 1 TIER	TB1 (120VAC POWER)
68	1	ALLEN BRADLEY	1492-M6X12	TERMINAL BLOCK BLANK MARKING TAGS, 1 TIER, 120 CT.	TB1 (120VAC POWER)
69	2	ALLEN BRADLEY	1492-CJJS-2	1-TIER TERMINAL BLOCK JUMPER, 2 POLE	TB1 (120VAC POWER)
70	1	ALLEN BRADLEY	700-HLT1L1	RELAY, SPDT, 120VAC COIL	PFR1
71	1	ALLEN BRADLEY	1492-MC6X10	RELAY BLANK MARKING TAGS	PFR1
72	6	ALLEN BRADLEY	700-HN121	RELAY SOCKET	CR0 - CR5
73	7	ALLEN BRADLEY	700-HK36Z24-4	RELAY, SPDT, 24VDC COIL	CR0 - CR5, PLUS SPARE
74	10	BUSSMANN	AGC-3	FUSE, 3A, 250V, FAST ACTING	
75	10	BUSSMANN	AGC-1	FUSE, 1A, 250V, FAST ACTING	FU2, FU7, FU8, FU10 - FU15, PLUS SPARES
76	3	BUSSMANN	AGC-2	FUSE, 2A, 250V, FAST ACTING	FU6, FU9, PLUS SPARE
77	2	BUSSMANN	MDL-5	FUSE, 5A, 250V, TIME DELAY	FU1, PLUS SPARE
78	2	BUSSMANN	MDL-7	FUSE, 7A, 250V, TIME DELAY	FU5, PLUS SPARE
79	2	BUSSMANN	AGC-15	FUSE, 15A, 32V, FAST ACTING	FU5A, PLUS SPARE
80	2	BUSSMANN	MDL-2-1/2-R	FUSE, 2-1/2A, 250V, TIME DELAY	FU3, PLUS SPARE
81	2	BUSSMANN	AGC-5	FUSE, 5A, 250V, FAST ACTING	FU4, PLUS SPARE
82	1	ALLEN BRADLEY	1489-M1C200	CIRCUIT BREAKER, 20 AMP, 1-POLE	CB1
83	2	PHOENIX CONTACT	2905348	VALVETRAB VAL-SEC-T2-1S-175-FM, 120VAC SURGE PROTECTOR	SUP1, PLUS SPARE
84	4	PHOENIX CONTACT	2906798	TERMITRAB ANALOG LOOP SURGE PROTECTOR	SUP2, SUP3, SUP4, PLUS 1 SPARE
85	1	PHOENIX CONTACT	0808710	ANALOG LOOP SURGE PROTECTOR MARKING STRIP	SUP2, SUP3, SUP4
86					
87					
88					
89					
***WIREDUCT***					
93	6FT	PANDUIT	F1X4LG6	WIRING DUCT, 1"W x 4"H	
94	6FT	PANDUIT	C1LG6	WIRING DUCT COVER, 1"W	
95	12FT	PANDUIT	F1.5X4LG6	WIRING DUCT, 1.5"W x 4"H	
96	12FT	PANDUIT	C1.5LG6	WIRING DUCT COVER, 1.5"W	
97					
98					

ITEM	QTY.	MANUFACTURER	PART NUMBER	DESCRIPTION	DESIGNATION
***WIREDUCT (CONT)***					
99					
100					
101					
102					
103					
104					
***HIGH VOLTAGE RELATED EQUIPMENT***					
108					
109					
110					
111					
112					
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129					
***POWER SUPPLIES***					
138	1	ALLEN BRADLEY	1606-XLE240EN	24VDC, 10 AMP POWER SUPPLY	PWS1
139	1	ALLEN BRADLEY	1606-XLS240-UPS	DC UPS MODULE	UPSM
140	1	POWERSONIC	PS-12180F2	SEALED RECHARGEABLE LEAD-ACID BATTERY, 12V, 18.0AH	
141	2	AMP	4-520448-2	FASTON .250 SERIES CRIMP-ON INSULATED RECEPTACLE TYPE LU	FOR BATTERY CONNECTIONS
142					
143					
144					
145					
***COMMUNICATIONS***					
146					
147					
148					
149					
150					
151	1	ALLEN BRADLEY	1783-LMS5	LIGHTLY MANAGED SWITCH, 5 PORT	
152	1	BLACK BOX	EVNSL641-0003	CAT6 ETHERNET STANDARD PATCH CORD LENGTH 3 FT.	SEE COMMUNICATIONS
153	1	BLACK BOX	EVNSL641-0006	CAT6 ETHERNET STANDARD PATCH CORD LENGTH 6 FT.	SEE COMMUNICATIONS
154					
155					
156					
157					
158					
159					
160					
161					
162					
***MISCELLANEOUS PANEL EQUIPMENT***					
164	1	PANDUIT	UGB2-0-414-6	GROUND BAR	
165					
166	1	PANEL FABRICATOR		NAMEPLATE, PHENOLIC, ENGRAVED	SEE SCHEDULE ON EQUIPMENT LAYOUT
167					
168	1	ALLEN BRADLEY	1492-REC15G	GFCI RECEPTACLE, 15 AMP, DIN RAIL MOUNT	PROGRAMMING RECEPTACLE
169					
170					
171					
172					
173					
174					
175	1	EMEDCO	QS3743	WARNING LABEL "ARC FLASH AND SHOCK HAZARD"	
176	1	EMEDCO	SQS110	WARNING LABEL "DEVICE POWERED FROM SEVERAL SOURCES"	
177					
178					
179					
***MISCELLANEOUS FIELD EQUIPMENT***					
185					
186					
187					
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189					
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CLIENT INFO:

RADIUS RECYCLING  
CONCORD, NH

SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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JOB NO: 0224539-48

DATE: NOVEMBER 2025

SCALE: AS NOTED

DESIGNED BY: VC

DRAWN BY: VC

CHECKED BY: RPM

FILENAME: 0224539-48 - I001 - IXX\*.dwg

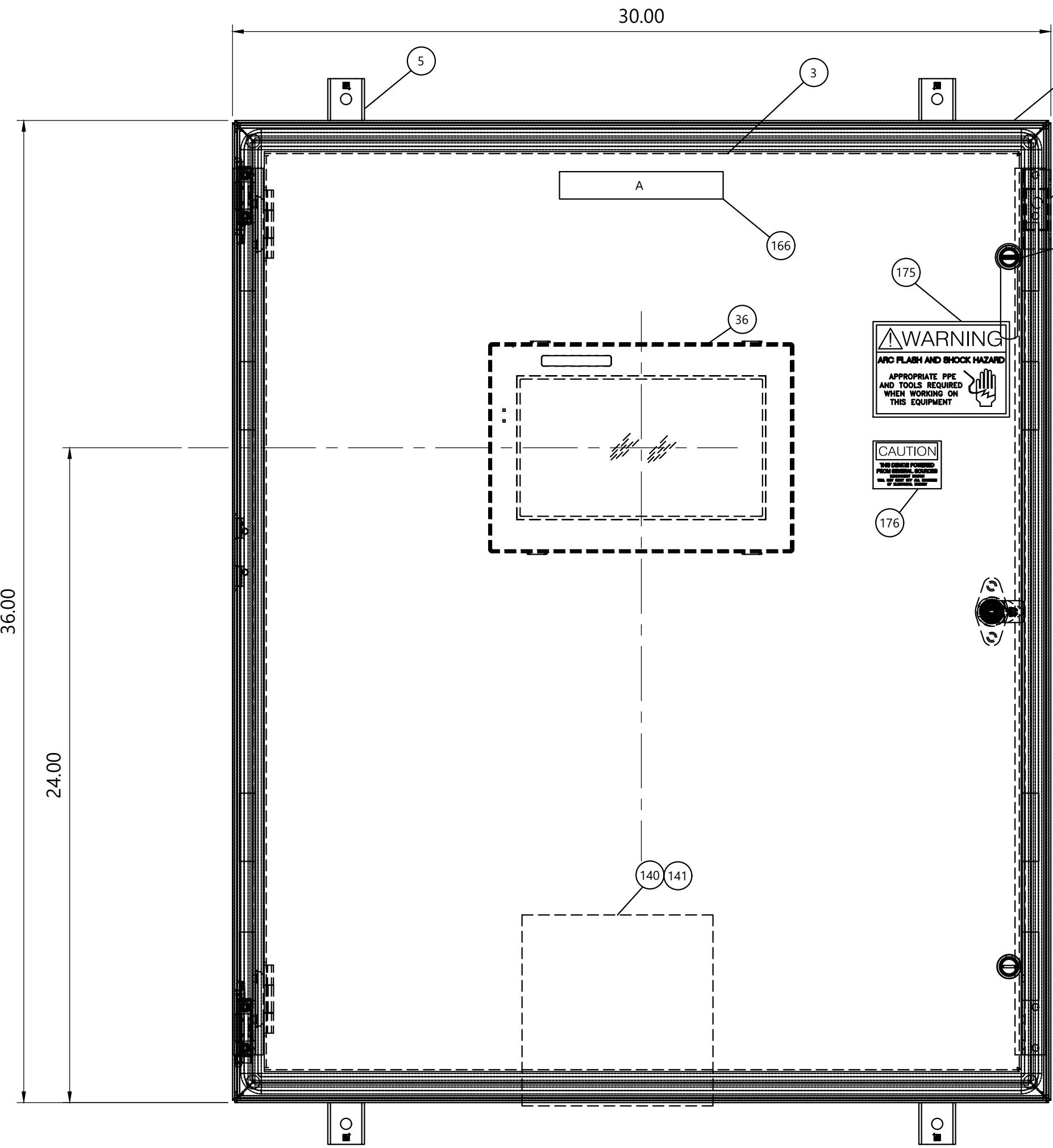
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INSTRUMENTATION  
SCADA PANEL BILL OF MATERIAL

DRAWING NO:

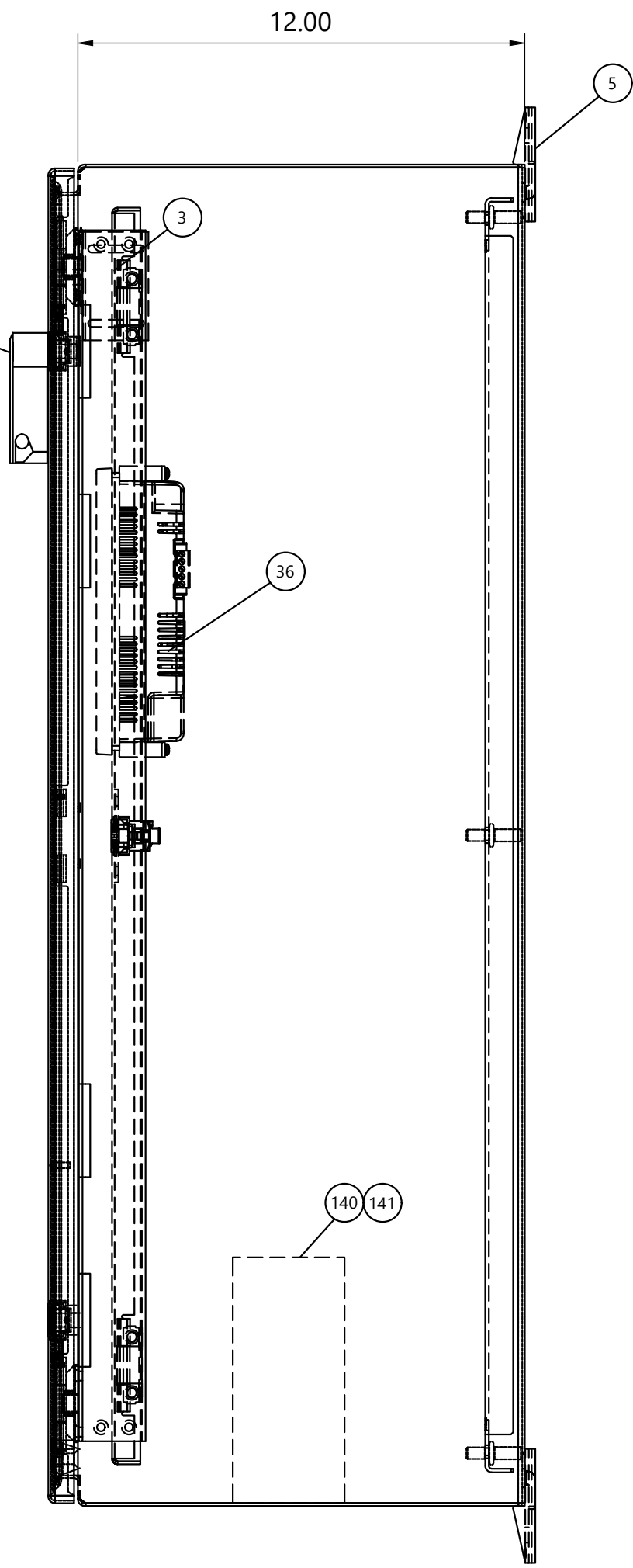
**I-102**

\\woodardcurran.net\shared\Projects\0224539-48 Schmitzer - Concord Sandquist Preliminary Design\Drawings\B&C\0224539-48 - 1001 - IXX.dwg, Nov 04, 2025 - 12:08pm CBAZD/LA

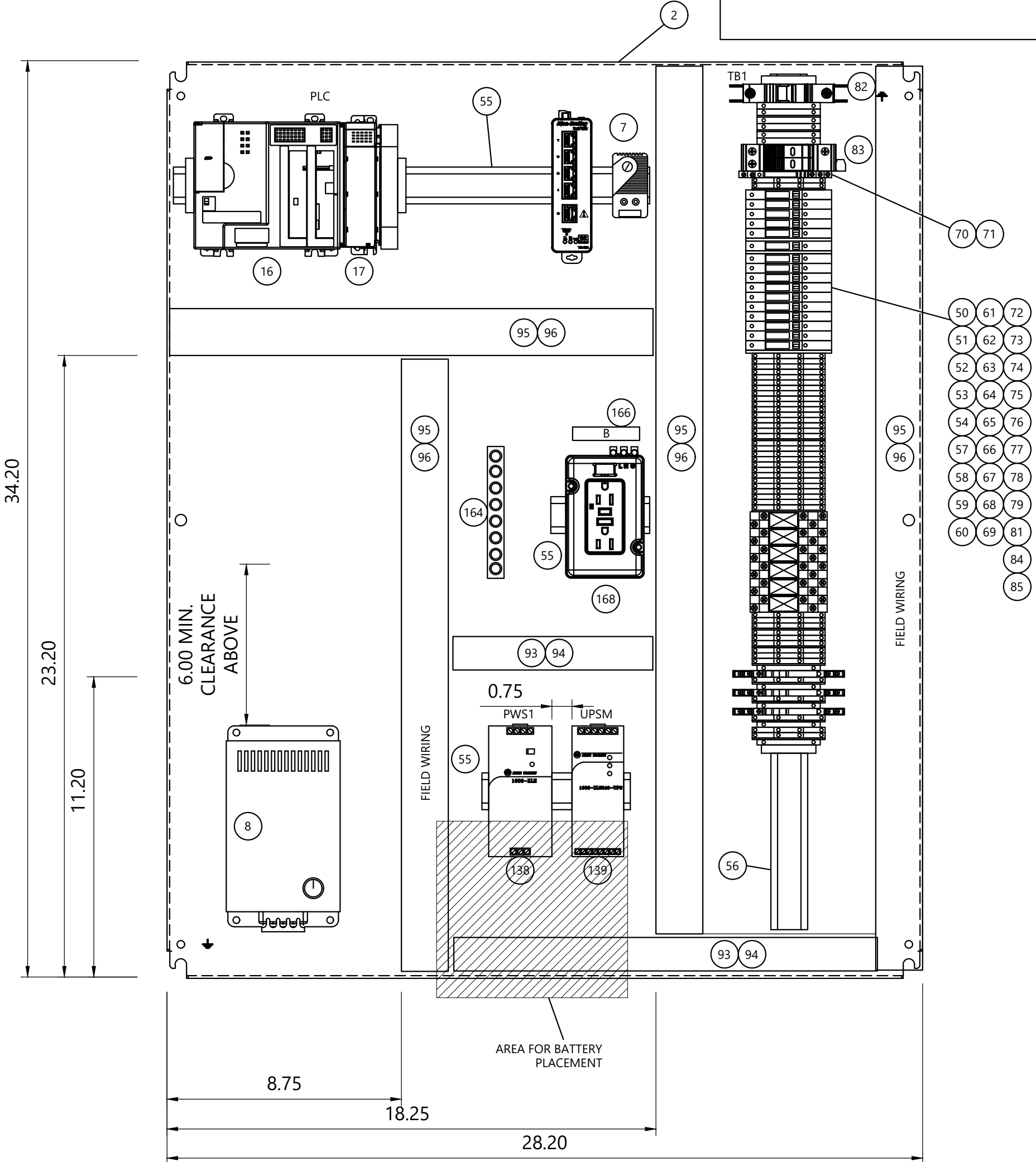
NAMEPLATE SCHEDULE			
ITEM	DIMENSION	DESCRIPTION	FABRICATION COMMENTS
A	5" x 1"	SCADA PANEL	NAMEPLATE TO BE BLACK WITH WHITE LETTERS WITH ADHESIVE BACK. TEXT SIZE TO BE .375
B	2.5" x .5"	FOR PROGRAMMING ONLY	NAMEPLATE TO BE RED WITH WHITE LETTERS WITH ADHESIVE BACK. TEXT SIZE TO BE .12



ENCLOSURE FRONT VIEW



ENCLOSURE RIGHT SIDE VIEW



SUB PANEL

SHEET GENERAL NOTES

- CONTRACTOR SHALL USE CAUTION WHEN LANDING CONDUITS IN THE BOTTOM OF ENCLOSURES TO AVOID INTERFERING WITH BATTERY PLACEMENT. (ITEM 140).
- PANEL FABRICATOR SHALL MAKE NECESSARY MODIFICATIONS TO SWING OUT PANEL (ITEM 3) TO ACCOMMODATE INTRUSION SWITCH (ITEM 4).
- CONTRACTOR SHALL INSTALL ENCLOSURE SO THAT THE BOTTOM OF THE PANEL IS APPROXIMATELY 36" FROM GROUND LEVEL AND POSITIONING THE OPERATOR INTERFACE TERMINAL (ITEM 36) AT APPROXIMATELY 60" AT EYE LEVEL.



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STORMWATER IMPROVEMENTS

REV MM/DD/YY DESCRIPTION

JOB NO: 0224539-48

DATE: NOVEMBER 2025

SCALE: AS NOTED

DESIGNED BY: VC

DRAWN BY: VC

CHECKED BY: RPM

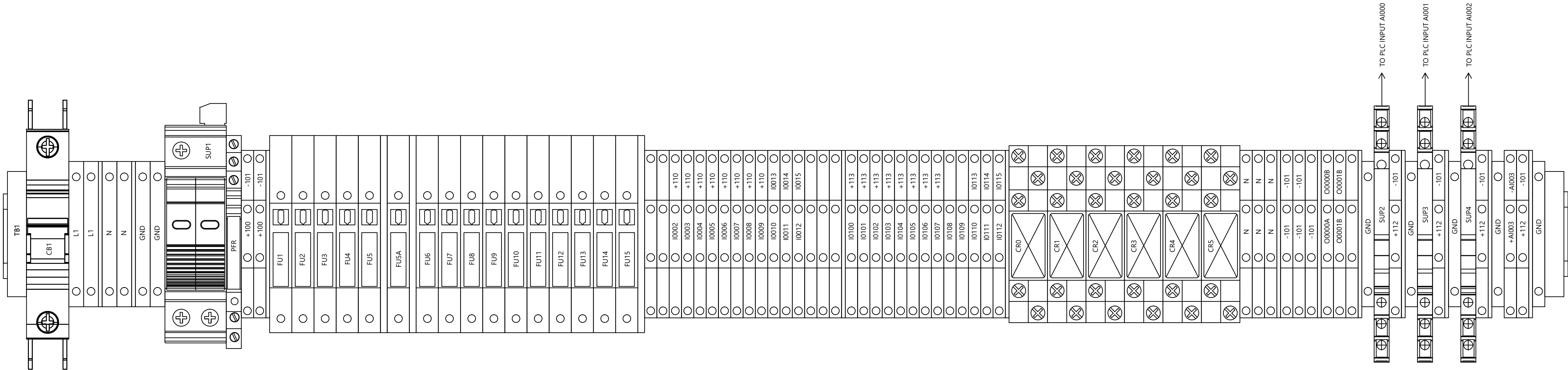
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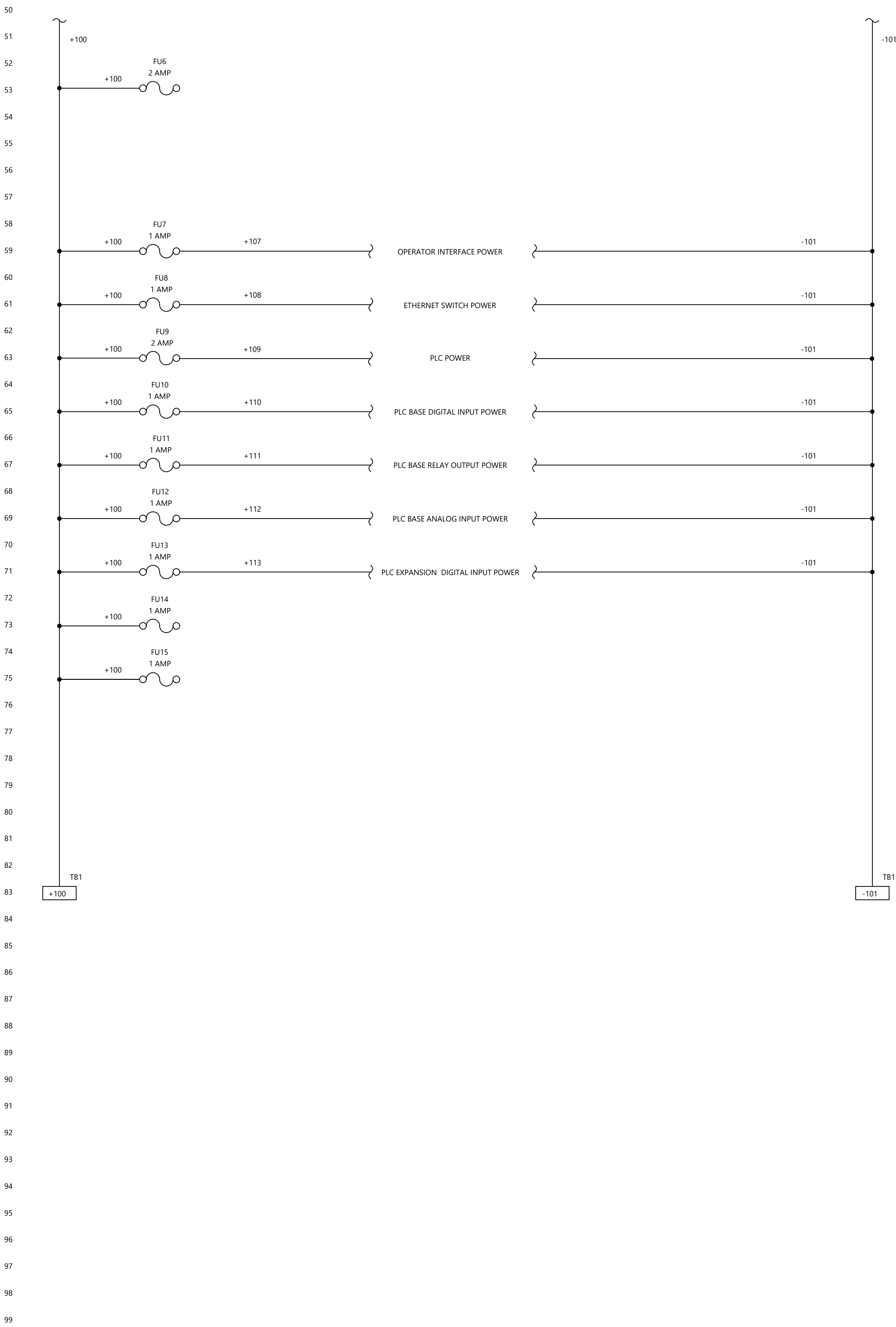
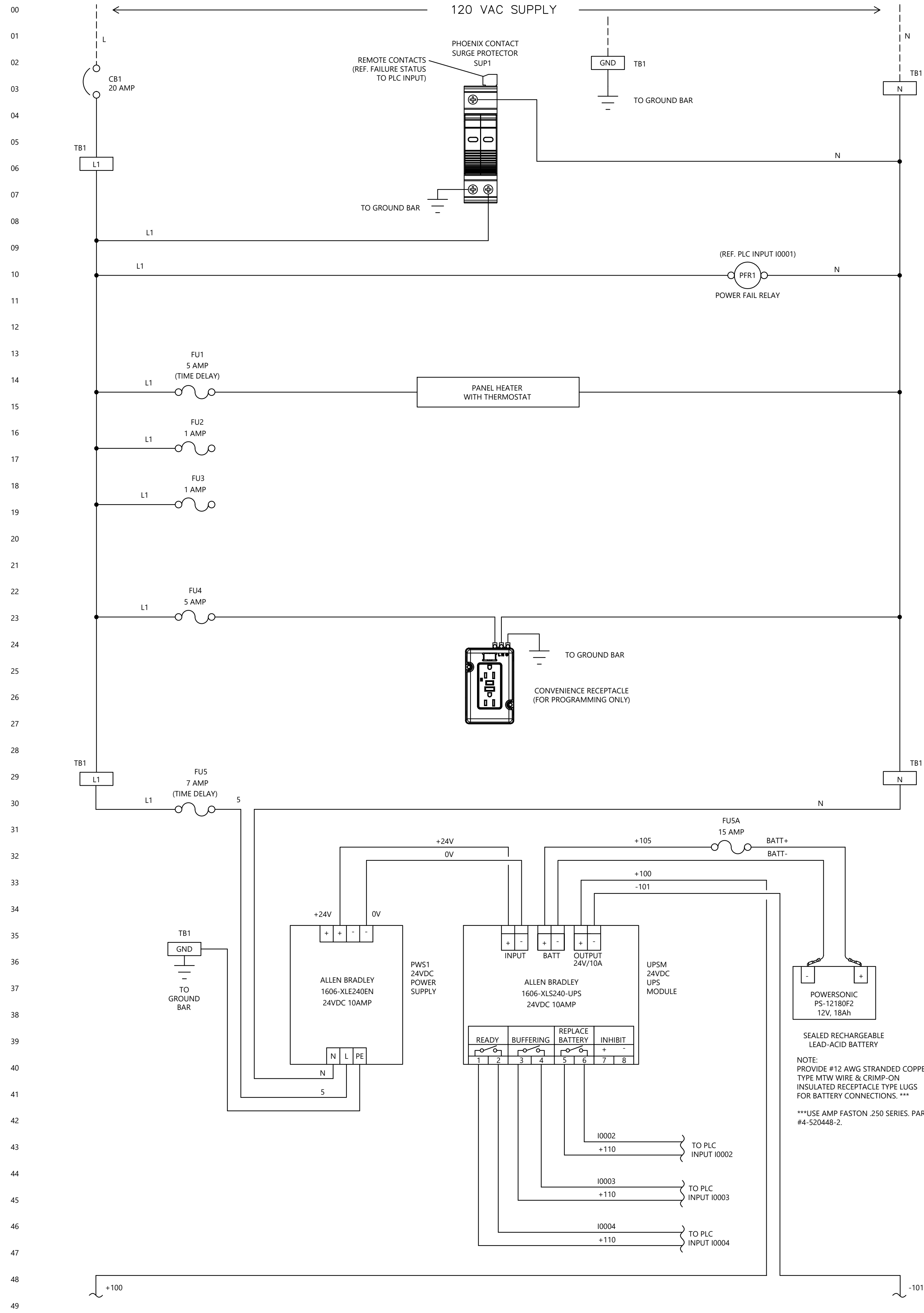
INSTRUMENTATION  
SCADA PANEL EQUIPMENT  
LAYOUT

DRAWING NO:

**I-103**



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FILENAME: 0224539-48 - I001 - I-105.dwg

DRAWING TITLE:

INSTRUMENTATION  
SCADA PANEL POWER  
DISTRIBUTION

DRAWING NO:

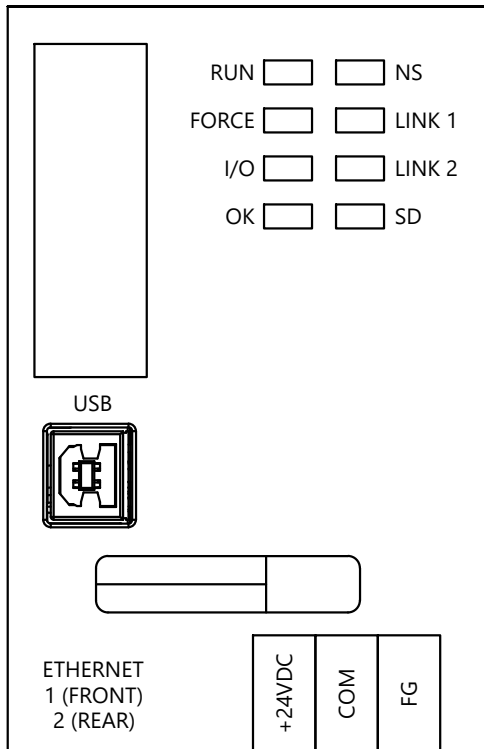
**I-105**

\\woodardcurran.net\shared\Projects\0224539-48\_Schnitzer\_Concord\_Sandquist\_Preliminary\_Design\Drawings\B&C\0224539-48 - 1001 - IXX.dwg, Nov 04, 2025 - 12:08pm CBAZJLA

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PLC  
PROCESSOR/POWER SUPPLY

ALLEN BRADLEY COMPACTLOGIX  
1769-L24ER-QBFC1B

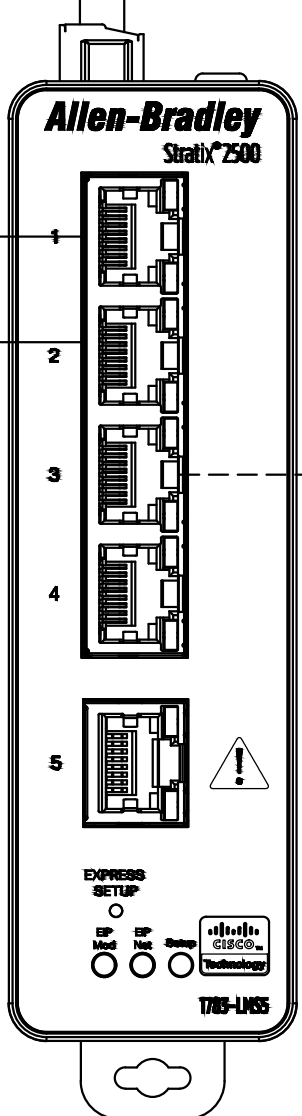


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SUBNET MASK: 255.255.255.0

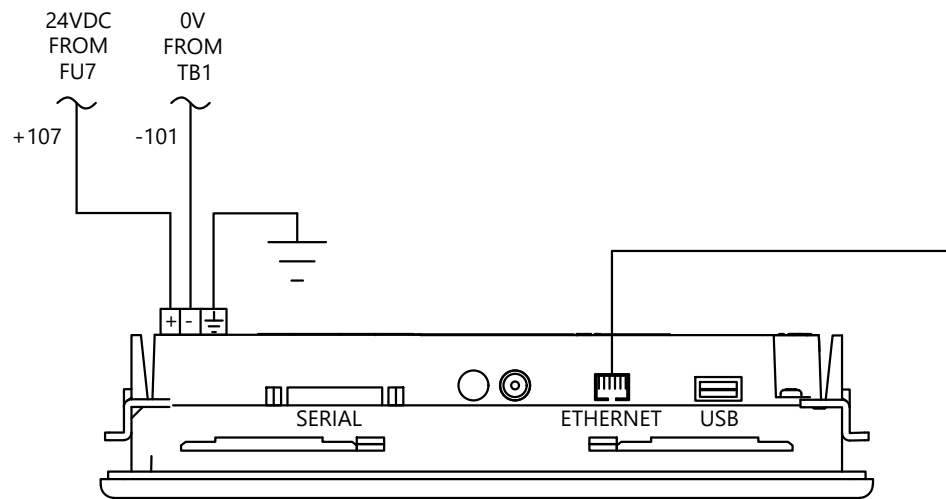
BLACK BOX  
EVNSL51-0003  
CAT5E ETHERNET  
STANDARD PATCH CORD  
LENGTH: 3 FT.

ETHERNET SWITCH  
ALLEN BRADLEY  
1783-LM55

24VDC FROM FU8  
0VDC FROM TB1



TO VENDOR EQUIPMENT



OPERATOR INTERFACE (OIT)  
AUTOMATION DIRECT C-more OIT PORT DETAIL  
CMS-T10W

BLACK BOX  
EVNSL641-0006  
CAT6 ETHERNET  
PATCH CABLE  
LENGTH: 6 FT.

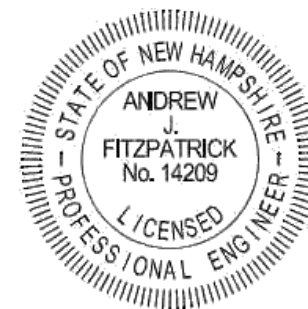


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STORMWATER IMPROVEMENTS

REV	MM/DD/YY	DESCRIPTION
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JOB NO: 0224539-48

DATE: NOVEMBER 2025

SCALE: AS NOTED

DESIGNED BY: VC

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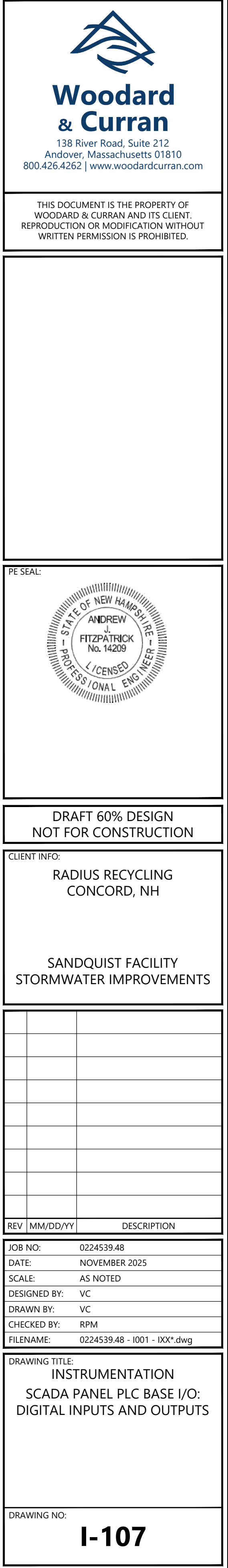
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DRAWING TITLE:

INSTRUMENTATION  
SCADA PANEL  
COMMUNICATIONS

DRAWING NO:

**I-106**





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## SANDQUIST FACILITY STORMWATER IMPROVEMENTS

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DRAWING TITLE:  
INSTRUMENTATION  
SCADA PANEL PLC BASE I/O:  
ANALOG INPUTS

**I-108**

\\woodardcurran-network\shared\Projects\0224539-48\Schnitzer-Concord\Sandquist-Preliminary-Design\Drawings\B0224539-48-1001-1001.dwg, Nov 04, 2025 - 12:09pm CBAZC/A



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SANDQUIST FACILITY  
STORMWATER IMPROVEMENTS

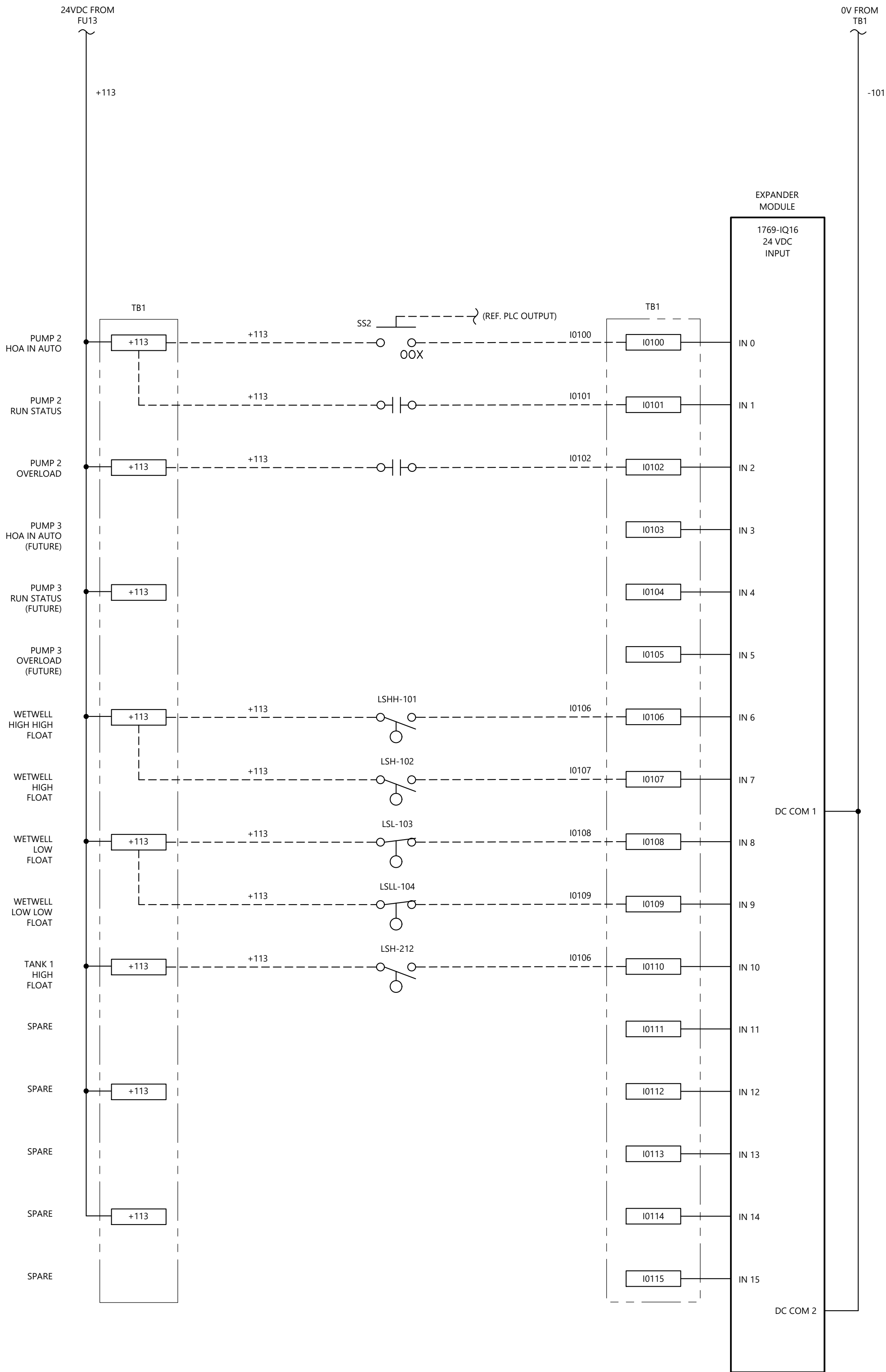
REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0224539-48
DATE:	NOVEMBER 2025
SCALE:	AS NOTED
DESIGNED BY:	VC
DRAWN BY:	VC
CHECKED BY:	RPM
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INSTRUMENTATION  
SCADA PANEL EXPANSION I/O:  
DIGITAL INPUTS

DRAWING NO:

**I-109**



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