



O'SHAUGHNESSY RESERVOIR REGIONAL PUMP STATION

SITUATED IN THE TOWNSHIP OF CONCORD, DELAWARE COUNTY
BEING PART OF VIRGINIA MILITARY SURVEY NO. 2897

DELAWARE COUNTY, OHIO



VICINITY MAP
NOT TO SCALE

BENCH MARKS (1988 DATUM)

B.M. #1 SOUTHWEST CORNER OF SOUTH WINGWALL OF BOX
CULVERT EAST SIDE OF STATE ROUTE 257, 100 FEET+/-
NORTH OF BUTTS ROAD.
ELEV.=876.82

B.M. #2 RAILROAD SPIKE SET IN NORTHWEST SIDE POWER
POLE AT THE SOUTHEAST CORNER OF BUTTS ROAD AND STAIL
ROUTE 257.
ELEV.=877.37

INDEX OF SHEETS

COVER	1
TRIBUTARY MAP	2
GENERAL	3-5
CIVIL	6-8
PROCESS	9-12
STRUCTURAL	13-19
ELECTRICAL	20-24
EROSION	25

COPYRIGHT: ALL RIGHTS RESERVED. ALL REPORTS, PLANS, SPECIFICATIONS, COMPUTER FILES, FIELD DATA, NOTES, DOCUMENTS, AND OTHER ITEMS PREPARED BY STANTEC CONSULTING SERVICES, INC. ("STANTEC") ARE INSTRUMENTS OF SERVICE AND REMAIN ITS PROPERTY. THE USE OF THESE ITEMS BY STANTEC'S CLIENT IS SUBJECT TO ALL OF THE TERMS, CONDITIONS AND LIMITATIONS SET FORTH IN THE AGREEMENT BETWEEN SUCH CLIENT AND STANTEC. ADDITIONAL USE IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF STANTEC.

THIS IS TO CERTIFY THAT GOOD ENGINEERING PRACTICES HAVE BEEN UTILIZED IN THE DESIGN OF THIS PROJECT AND THAT ALL MINIMUM STANDARDS AS DE- LINED IN THE DELAWARE COUNTY ENGINEERING AND SURVEYING STANDARDS FOR SUBDIVISION DEVELOPMENT HAVE BEEN MET, INCLUDING THOSE STANDARDS GREATER THAN MINIMUM WHERE, IN MY OPINION, THEY ARE NEEDED TO PROTECT THE SAFETY OF THE PUBLIC. ANY VARIANCES TO THE ABOVE STANDARDS ARE CONSISTENT WITH SOUND ENGINEERING PRACTICE AND ARE NOT DETRIMENTAL TO THE PUBLIC SAFETY AND CONVENIENCE. THESE VARIANCES HAVE BEEN LISTED HEREIN AND HAVE BEEN APPROVED BY THE DELAWARE COUNTY ENGINEER.



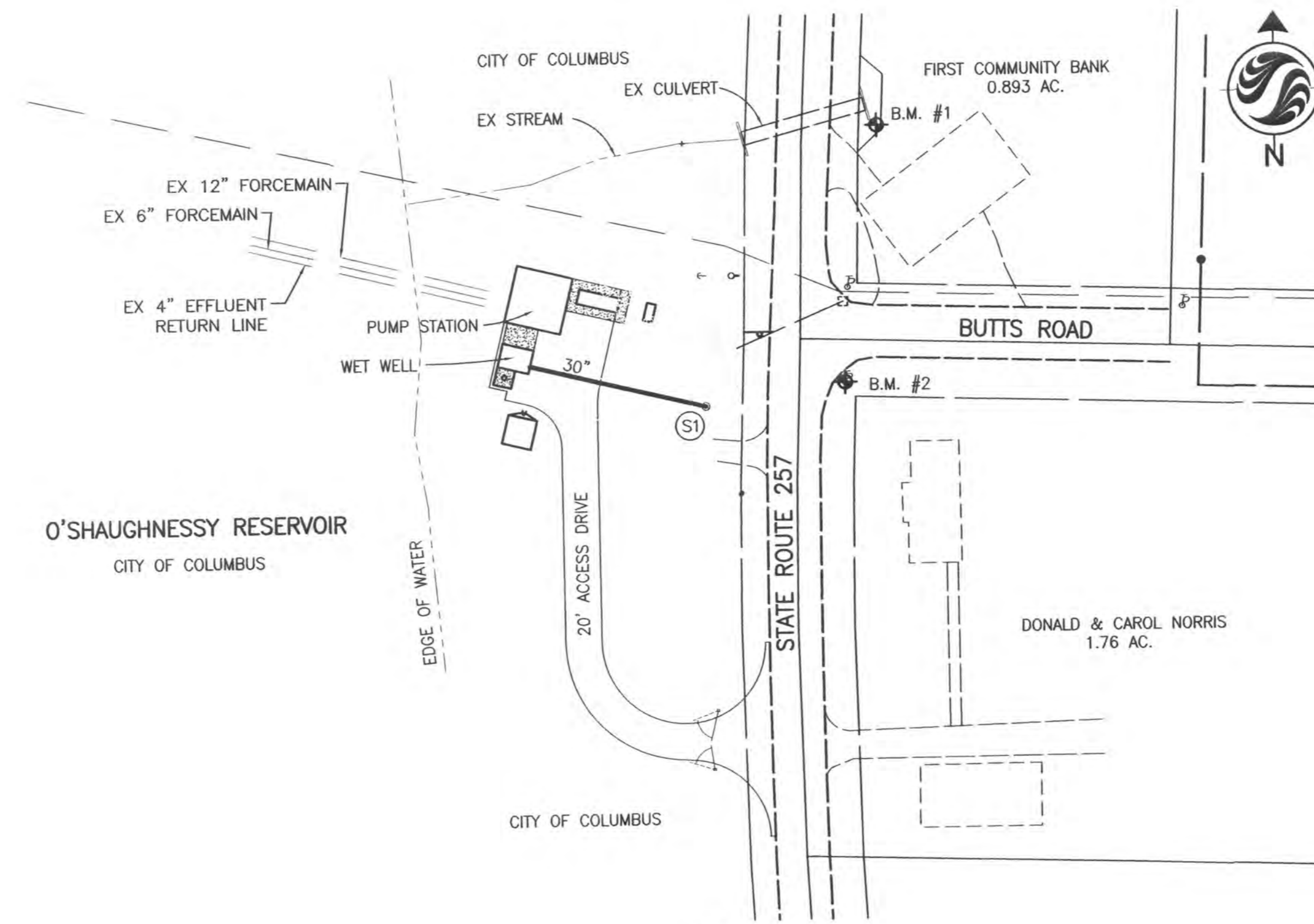
Stantec

PREPARED BY:

Stantec Consulting Services Inc.
1200 Lake Shore Drive, Suite 100, Columbus, Ohio 43204
(614) 486-4383 T-800-340-2743
FAX (614) 486-1351



REGISTERED ENGINEER E64492 DATE



INDEX MAP
SCALE: 1" = 50'

UNDERGROUND UTILITIES

Two Working Days
BEFORE YOU DIG

Call 800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS

CLIENT

CONCORD/SCIOTO COMMUNITY AUTHORITY
470 OLDE WORTHINGTON ROAD
WESTERVILLE, OHIO 43082

STANDARD DRAWINGS		
DELAWARE COUNTY		
SANITARY	STREET	STORM
01 SEWER INSTALLATION	DCED-R100	DCED-S102 DCED-S139
05 MANHOLE CHANNEL DETAIL	DCED-R2220	DCED-S106 DCED-S145
06 MANHOLE TYPE A	DCED-R2319	DCED-S107 DCED-S149
15 WATERTIGHT MANHOLE CASTING		DCED-S108 DCED-S150
		DCED-S112 DCED-S151
		DCED-S114 DCED-S155
		DCED-S115 DCED-S168
		DCED-S117 DCED-S169
		DCED-S119 DCED-S201
		DCED-S133

THE STANDARD DRAWINGS LISTED ABOVE SHALL BE CONSIDERED A PART OF THESE DRAWINGS.

THE DELAWARE COUNTY SIGNATURES ON THIS PLAN SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND LOCATION OF THE PROPOSED IMPROVEMENTS. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHO PREPARED AND CERTIFIED THESE PLANS

APPROVALS

APPROVED THIS 5th DAY OF July, 2014
Tiffany A. Jones
DELAWARE COUNTY SANITARY ENGINEER

APPROVED THIS 17th DAY OF July, 2014
Larry Merrill
DELAWARE COUNTY COMMISSIONER

APPROVED THIS 17th DAY OF July, 2014
Ron P. Squire
DELAWARE COUNTY COMMISSIONER

APPROVED THIS 17th DAY OF July, 2014
[Signature]
DELAWARE COUNTY COMMISSIONER

U:\173408605\04\173408605.dwg
 Date: 07/20/14 3:12 PM
 User: enlaman
 Plotter: 6/15/2014 6:16 PM
 Original Sheet: 1 of 25

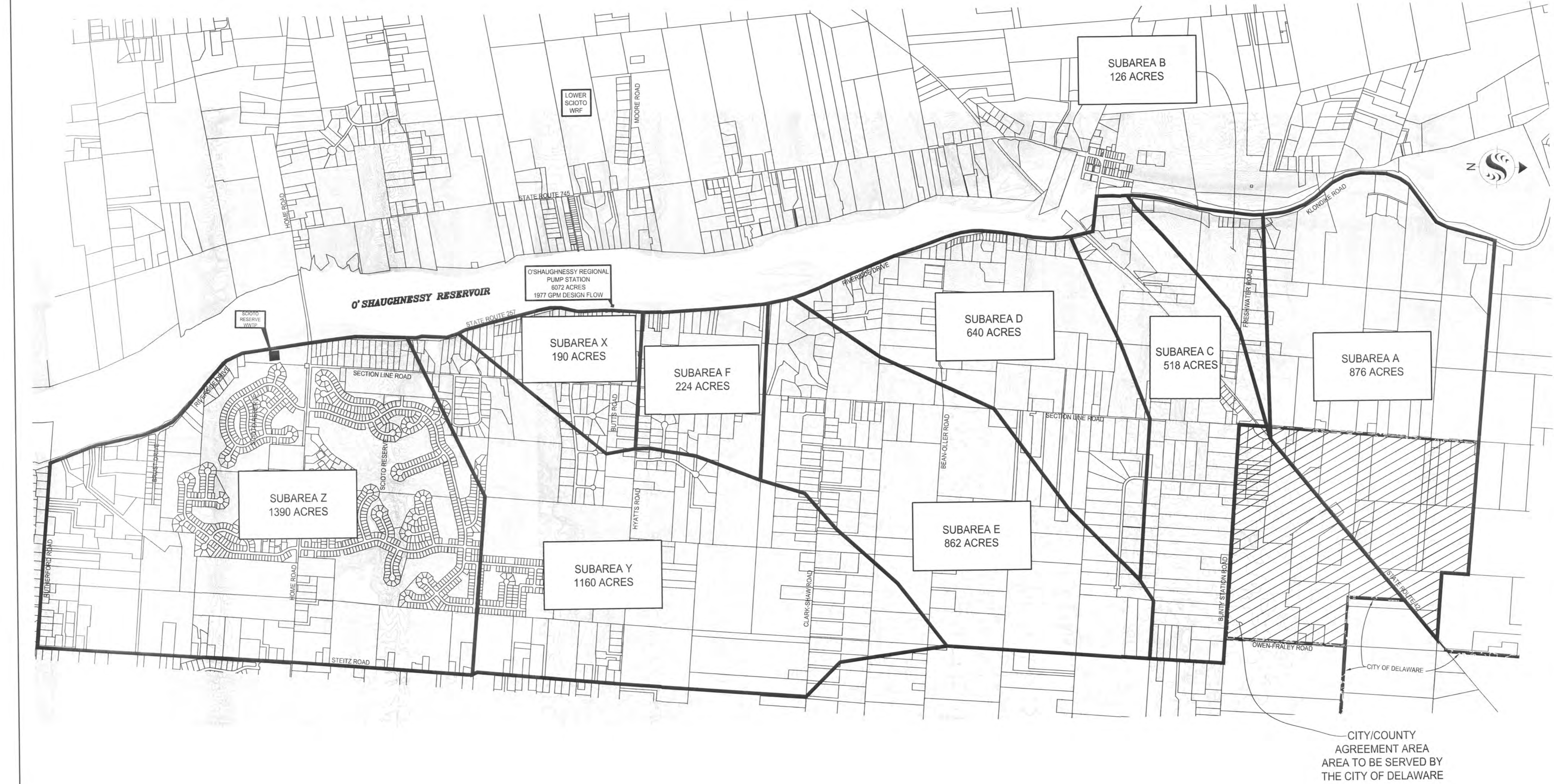
MAY 2014

Project Number: 173408605



Stantec

Copyright Reserved
 The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
 The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.



Revision	By	Appd.	YY.MM.DD

Issued	By	Appd.	YY.MM.DD

File Name:	Own.	Chkd.	Dsgn.	YY.MM.DD
Tributary_Areas.dwg				

Permit-Seal

Client/Project
CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR
 REGIONAL PUMP STATION
 Delaware County, Ohio

Title
TRIBUTARY AREA MAP

Project No.	Scale
173408605	NOT TO SCALE

Drawing No.	Sheet	Revision
	2 of 25	0

U:\173408605\Map\O'Shaughnessy_Areas.dwg
 Saved: 3/27/2013 3:31 PM By: emerson
 Printed: 7/16/2014 9:10 AM
 ORIGINAL SHEET - ANSI D

GENERAL NOTES

THE DELAWARE COUNTY DESIGN, CONSTRUCTION, AND SURVEYING STANDARDS MANUAL EFFECTIVE DATE JUNE 1, 1998 TOGETHER WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, INCLUDING ALL SUPPLEMENTS THERETO IN FORCE ON JANUARY 1, 2010, SHALL GOVERN ALL MATERIAL AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN IN THESE PLANS UNLESS OTHERWISE NOTED.

THE CONTRACTOR AND SUB-CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUB-CONTRACTOR TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

THE IDENTITY AND LOCATION OF THE EXISTING UNDERGROUND UTILITY FACILITIES KNOWN TO BE LOCATED IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UNDERGROUND UTILITY. THE COUNTY OF DELAWARE AND/OR ENGINEER ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS.

THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL CALL, TOLL FREE, THE OHIO UTILITIES PROTECTION SERVICES (1-800-362-2764) 72 HOURS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO WORK IN THE VICINITY OF THEIR UNDERGROUND LINES.

ANY MODIFICATION TO THE WORK AS SHOWN ON THESE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE DELAWARE COUNTY SANITARY ENGINEER.

THE CONTRACTOR SHALL NOTIFY THE COUNTY SANITARY ENGINEER'S OFFICE FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION, HOLIDAYS AND WEEKENDS INCLUDED.

SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS.

THE FOLLOWING UTILITIES AND/OR OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT AND MAY NOT SUBSCRIBE TO A REGISTERED UNDERGROUND UTILITY PROTECTION SERVICE.

Table with columns: UTILITY, CONTACTING AGENT ONLY, TELEPHONE. Rows include Storm Sewers, Water Mains, Sanitary Sewers, Gas Company, Electric Company, Telephone Company.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL RESIDENTS OF INTERRUPTION TO THEIR UTILITIES THAT WILL BE CAUSED BY CONSTRUCTION AT LEAST 48 HOURS IN ADVANCE.

SUPPORTING AND/OR PROTECTING EXISTING WATER LINES, GAS MAINS, TELEPHONE CONDUIT, STORM SEWERS, ETC., SHALL BE INCLUDED IN PAYMENT FOR THE VARIOUS CONTRACT ITEMS OF WORK.

ALL WORK REQUIRED FOR THE MAINTENANCE OF SERVICE OF EXISTING UTILITIES SHALL BE DONE BY, AND AT THE EXPENSE OF THE CONTRACTOR.

ALL MAINTENANCE, REPAIR AND/OR REPLACEMENT OF EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE VARIOUS UTILITY COMPANIES HAVING JURISDICTION. ALL EXISTING STORM SEWERS, DRIVEWAY DRAINS, AND OTHER SURFACE DRAIN PIPES, WHETHER SHOWN ON THE CONTRACT DRAWINGS OR NOT, REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AND RECONNECTED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER, AT NO COST TO THE COUNTY.

STORM SEWER

STORM SEWER ITEMS ARE TO BE PER DELAWARE COUNTY AND ODOT STANDARDS.

THE CONTRACTOR SHALL INCLUDE IN THE UNIT PRICE BID FOR ITEM 603, ALL TRENCHING, BACKFILLING PER PLAN, AND THE REMOVAL AND DISPOSAL OF BRUSH, TREES, AND STUMPS WITHIN THE AREA OF EXCAVATION OF THE TRENCH.

UNLESS OTHERWISE NOTED ON THE PLANS, STORM SEWERS SHALL BE AS HEREINAFTER SPECIFIED. (1) STORM SEWERS LOCATED WITHIN OR ACROSS PROPOSED OR EXISTING PAVEMENT AREAS SHALL BE TYPE "B" CONDUIT, 706.02. (2) STORM SEWERS LOCATED OUTSIDE PAVEMENT AREAS, BUT WITHIN RIGHT-OF-WAYS SHALL BE TYPE "B" CONDUIT, 706.02. (3) STORM SEWERS LOCATED OUTSIDE OF RIGHT-OF-WAY AREAS SHALL BE TYPE "C" CONDUIT, 706.02. ALL TYPE "B" AND "C" CONDUIT SHALL HAVE JOINTS PER STATE OF OHIO SPECIFICATIONS 603.06. FOR PIPE CLASS REFER TO DELAWARE COUNTY "MAXIMUM" HEIGHT OF COVER FOR ROUND CONCRETE PIPE.

TYPE I BEDDING SHALL BE PROVIDED FOR ALL TYPE "B" AND TYPE "C" CONDUIT PER DELAWARE COUNTY SPECIFICATIONS.

ALL PIPE OUTSIDE THE RIGHT-OF-WAY SHALL HAVE A COVER OF 1.5 FEET MINIMUM. WHEREVER THIS IS NOT THE CASE, EMBANKMENT SHALL BE PLACED TO PROVIDE A MINIMUM COVER.

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

THE CONTRACTOR SHALL CONNECT EXISTING FIELD TILES (CLAY, PVC, ETC.) FOUND IN THE AREA, TO THE PROPOSED STORM SEWER SYSTEM. COST TO BE INCLUDED IN THE PRICE BID FOR THE VARIOUS SEWER ITEMS.

OPTIONAL FLEXIBLE STORM PIPE

707.33 PIPE MAY BE SUBSTITUTED FOR ANY CONCRETE PIPE PROVIDING THAT THE SUBSTITUTION EXTENDS FROM STRUCTURE TO STRUCTURE, AND THAT ONLY BELL AND SPIGOT OR PUSH JOINT PIPE MAY BE USED. 707.33 PIPE WILL BE CONSTRUCTED IN ACCORDANCE WITH DELAWARE COUNTY STANDARD DRAWING DCE0-S149 AND MEET DELAWARE COUNTY BACKFILL REQUIREMENTS. FOR INSTALLATION OF PLASTIC PIPE, TRENCH EXCAVATION AND BEDDING REQUIREMENTS SHALL CONFORM TO DELAWARE COUNTY SPECIFICATIONS WHERE IT IS MORE RESTRICTIVE THAN SET FORTH ABOVE.

LANDSCAPE

PLANTING TREES, SHRUBS AND VINES: THE CONTRACTOR SHALL CONFORM TO SECTION 661 OF THE OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS.

TREE PRESERVATION: ALL TREES, WHETHER SHOWN OR NOT SHOWN ON THE PLANS, ARE TO BE PRESERVED UNLESS APPROVAL TO REMOVE IS GIVEN IN WRITING BY THE ENGINEER OR THEIR REMOVAL HAS BEEN DESIGNATED ON THE PLAN. TREES REMOVED BY EITHER OF THE TWO PRECEDING AUTHORITIES SHALL BE PAID FOR UNDER CMSC ITEM 201, CLEARING AND GRUBBING, UNLESS OTHERWISE PROVIDED FOR BY UNIT PRICE BID UNDER ITEM 201, TREE REMOVED, "I" SIZE. THE CONTRACTOR SHALL USE SPECIAL PRECAUTIONS TO AVOID DAMAGE TO ALL OTHER TREES. ALL TREES REMOVED SHALL INCLUDE STUMP REMOVAL TO 6 INCHES BELOW GRADE. ALL WOOD OVER 4-INCH DIAMETER SHALL, AT THE PROPERTY OWNER'S DISCRETION, BE CUT INTO LENGTHS NOT EXCEEDING 16 INCHES AND STACKED ON THE OWNER'S PROPERTY ADJACENT TO THE PERMANENT EASEMENT. THE COST FOR TREE, BRUSH, AND STUMP REMOVAL SHALL BE INCLUDED IN THE PRICE BID FOR CMSC ITEM 201, CLEARING AND GRUBBING.

PRUNING: BRANCHES OR GROWTH THAT INTERFERES WITH THE FREE CONSTRUCTION OF THE PROJECT MAY BE REMOVED FROM TREES/BUSHES THAT ARE TO BE SAVED BY THE USE OF PRUNING TOOLS WITH PRIOR APPROVAL FROM THE ENGINEER. ALL PRUNING TOOLS USED AND METHODS EMPLOYED SHALL MEET THE APPROVAL OF THE ENGINEER. THE BRANCHES SHALL BE REMOVED WITH A GOOD CLEAN CUT MADE FLUSH WITH THE PARENT TRUNK OR IF HAVING A GOOD HEALTHY LATERAL BRANCH, THE CUT SHALL BE A GOOD CLEAN SLANTING CUT CLOSE TO AND BEYOND THE HEALTHY BRANCH. ALL PRUNING CUTS SHALL BE PAINTED WITH AN ACCEPTED PRUNING PRESERVATION. THE COST OF ALL WORK AND EXPENSES CONNECTED WITH TREE PRUNING SHALL BE INCLUDED IN THE PRICE BID FOR CMSC ITEM 201, CLEARING AND GRUBBING. NO EXTRA PAYMENT SHALL BE MADE.

TREES DAMAGED OR DESTROYED THAT WERE NOT DESIGNATED FOR REMOVAL OR APPROVED BY THE ENGINEER FOR REMOVAL SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

TOPSOIL: THE REQUIREMENTS OF CMSC ITEM 653 SHALL GOVERN THE CONSTRUCTION OF THIS WORK. FOUR INCHES OF TOPSOIL SHALL BE PLACED OVER ALL DISTURBED AREAS THAT ARE TO BE SEEDED AND MULCHED. FINAL GRADES SHALL CONFORM TO THOSE SHOWN ON THE PLANS. TOPSOIL FOUND SUITABLE BY THE PROJECT ENGINEER DURING CLEARING AND GRUBBING SHALL BE SEGREGATED FROM THE OTHER EXCAVATED MATERIAL AND STOCKPILED FOR REUSE. PAYMENT FOR SEGREGATING, STOCKPILING AND REUSE OF STOCKPILED TOPSOIL SHALL BE INCLUDED IN THE AMOUNT BID FOR CMSC ITEM 901. IF STOCKPILED TOPSOIL IS INSUFFICIENT, THE ENGINEER MAY DIRECT THE CONTRACTOR TO IMPORT ADDITIONAL TOPSOIL. IMPORTED TOPSOIL SHALL BE PAID FOR UNDER THE UNIT PRICE BID FOR CMSC ITEM 653, TOPSOIL FURNISHED AND PLACED, AS DIRECTED BY THE ENGINEER.

SEEDING & SODDING: THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS IN CONFORMANCE WITH CMSC ITEM 659 - SEEDING & ANY DISTURBED AREAS OUTSIDE THE PROJECT LIMITS SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL WATER SEEDED AREAS AT A RATE OF 120 GALLONS PER 1,000 SQUARE FEET AS SOON AS THE SEED IS COVERED. THE CONTRACTOR SHALL WATER ALL SEEDED AREAS AT A RATE OF 120 GALLONS PER 1,000 SQUARE FEET EVERY OTHER DAY FOR FOUR WEEKS. WATERING SHALL BE PERFORMED IN THE MORNING BETWEEN 6:00AM AND 10:00AM AND SHALL BE APPLIED BY MEANS OF A HYDRO-SEEDER OR A WATER TANK UNDER PRESSURE WITH A NOZZLE THAT WILL PRODUCE A SPRAY THAT WILL NOT DISLodge THE MULCHING MATERIAL. THE COST FOR WATER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 659 SEEDING AND MULCHING.

MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER ANY AREA IS SEEDED AND SHALL CONTINUE FOR A MINIMUM FOUR-WEEK ACTIVE GROWING PERIOD FOLLOWING THE COMPLETION OF ALL SEEDING WORK, AND UNTIL FINAL ACCEPTANCE OF THE PROJECT. IN THE EVENT THAT SEEDING OPERATIONS ARE COMPLETED TOO LATE IN THE FALL FOR ADEQUATE GERMINATION AND GROWTH OF GRASS, THEN MAINTENANCE SHALL CONTINUE INTO THE FOLLOWING SPRING.

MAINTENANCE SHALL INCLUDE RESEEDING, MOWING TO MAINTAIN A HEIGHT OF 3 INCHES, WATERING, WEEDING, FERTILIZING AND RESETTING AND STRAIGHTENING OF PROTECTIVE BARRIERS. MAINTENANCE SHALL ALSO INCLUDE CHEMICAL TREATMENTS AS REQUIRED FOR FUNGUS AND/OR PEST CONTROL.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND MAINTAIN THE SEEDED AREAS. AFTER THE GRASS IN SEEDED AREAS HAS APPEARED, ALL AREAS AND PARTS OF AREAS THAT FAIL TO SHOW A UNIFORM STAND OF GRASS FOR ANY REASON WHATSOEVER SHALL BE RESEDED AND SUCH AREAS AND PARTS OF AREAS SHALL BE RESEDED REPEATEDLY UNTIL ALL AREAS ARE COVERED WITH A SATISFACTORY GROWTH OF GRASS. RESEEDING TOGETHER WITH NECESSARY GRADING, FERTILIZING, WATERING, AND TRIMMING SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR.

SEED MIX:

SUBMITTALS: SUBMIT SEED VENDOR'S CERTIFICATION FOR SPECIFIED SEED MIXTURE INDICATING THE FOLLOWING:

- A. BOTANICAL AND COMMON NAME
B. PERCENTAGE BY WEIGHT OF EACH SPECIES AND VARIETY
C. PERCENTAGE OF PURITY
D. GERMINATION RATES FOR EACH SPECIES AND VARIETY
E. PERCENTAGE OF WEED SEED
F. DATE OF ANALYSIS

SEED: SHALL BE FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH THE ASSOCIATION OF OFFICIAL SEED ANALYSTS "RULES FOR TESTING SEEDS" FOR PURITY AND GERMINATION TOLERANCES. SEED SHALL BE FURNISHED FROM A SEED DEALER OR GROWER WHOSE BRANDS ARE GRADES REGISTERED OR LICENSED BY THE STATE OF OHIO, DEPARTMENT OF AGRICULTURE OR FROM THE APPROVED LIST OF SEED DEALERS OR GROWERS ON FILE WITH THE DEPARTMENT. SEED OLDER THAN ONE (1) YEAR WILL NOT BE ACCEPTABLE.

SUBMIT CERTIFICATION FROM SEED SUPPLIER FOR ACCEPTANCE PRIOR TO PLACING ORDER. ALSO PROVIDE SPECIFICATION FOR TACKIFIER AND FIBER MULCH AS PROVIDED BY SUPPLIER.

SEED MIX FOR ALL DISTURBED AREAS:

Table with columns: SCIENTIFIC NAME, PERCENT SEED. Rows include Festuca ovina, Festuca rubra spp. commutata, Festuca rubra var. dawson, Festuca trachyphylla, Festuca trachyphylla var. osprey, Ospreyfestuca rubra.

APPLY AT A RATE OF 10 POUNDS PER 1000 SQUARE FEET. ALSO APPLY GULF ANNUAL RYEGRASS AT A RATE OF 7 POUNDS PER 1000 SQUARE FEET.

CELLULAR RETAINING WALL

THE CONTRACTOR SHALL CONFORM TO SECTION 610 OF THE OHIO DEPARTMENT OF TRANSPORTATION ELECTRICAL AND MATERIAL SPECIFICATIONS. PAYMENT FOR THE CELLULAR RETAINING WALL SHALL ALSO INCLUDE INSTALLATION OF THE GEOGRID AS SHOWN ON SHEET 7.

ROADWAY

ROADWAY ITEMS ARE TO BE PER O.D.O.T. AND DELAWARE COUNTY STANDARDS.

THE CONTRACTOR SHALL INCLUDE IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION, THE REMOVAL AND DISPOSAL OF DESIGNATED TREES, BRUSH AND STUMPS WITHIN THE LIMITS OF THE WORK.

SANITARY SEWERS

ANY FIELD TILE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AS DIRECTED BY THE COUNTY WITH PVC PIPE SPANNING THE TRENCH. THE TRENCH SHALL BE FILLED WITH COMPACTED GRANULAR BACKFILL.

FINISHED GRADE AT ALL SANITARY MANHOLES SHALL BE AT LEAST 6" BELOW TOP OF CASTING TO AVOID UNNECESSARY INFILTRATION INTO THE SANITARY SEWER SYSTEM.

THE IDENTITY AND LOCATION OF THE EXISTING UNDERGROUND UTILITY FACILITIES KNOWN TO BE LOCATED IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UNDERGROUND UTILITY. THE COUNTY OF DELAWARE AND/OR ENGINEER ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS.

FINAL CONNECTION SHALL NOT BE MADE TO THE RECEIVING SANITARY SEWER SYSTEM UNTIL THE PHASE PROJECT HAS BEEN FULLY INSTALLED.

THE SURFACES WITH WHICH THE RUBBER GASKET COMES IN CONTACT SHALL BE CLEANED THOROUGHLY JUST PRIOR TO ASSEMBLY.

IN ADDITION TO DIRECT REQUIREMENTS OF THE CONTRACT SPECIFICATION, THE CONTRACTOR SHALL OBSERVE AND CONFORM TO THE SPECIFIC REQUIREMENTS OF ALL RIGHT-OF-WAY, INCLUDING EASEMENTS, COURT ENTRIES, RIGHT-OF-ENTRY, OR ACTION FILED IN COURT IN ACCORDANCE WITH THE CODE OF APPLICABLE GOVERNING AGENCY.

THE CONTRACTOR SHALL NOT TRESPASS UPON OR IN ANY WAY DISTURB PROPERTY ADJACENT TO THE STREET RIGHT-OF-WAY WITHOUT FIRST OBTAINING WRITTEN PERMISSION FROM THE OWNER TO DO SO. A COPY OF SUCH WRITTEN PERMISSION SHALL BE FURNISHED TO THE ENGINEER AND SANITARY COUNTY ENGINEER.

IF THE CONTRACTOR FINDS IT NECESSARY TO OBTAIN ADDITIONAL WORKING AREA, IT SHALL BE HIS RESPONSIBILITY FOR ITS ACQUISITION. ALL REQUIREMENTS LISTED UNDER THE "USE OF PREMISES" SHALL APPLY IF ADDITIONAL AREA IS OBTAINED. COPIES OF EASEMENT SHALL BE FORWARDED TO THE COUNTY SANITARY ENGINEER.

THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, RESTORE SUCH PROPERTY TO THE FULL SATISFACTION OF THE OWNER, AND SHALL OBTAIN FROM THE OWNER A WRITTEN RELEASE STATING THAT RESTORATION HAS BEEN SATISFACTORILY MADE. A COPY OF THE WRITTEN RELEASE SHALL BE FURNISHED TO THE ENGINEER.

THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EARTH, STONE, OR OTHER EXCAVATED MATERIAL ON ANY PROPERTY WITHOUT FIRST OBTAINING WRITTEN PERMISSION OF THE OWNER OF THE PROPERTY AND SECURING THE APPROVAL OF THE ENGINEER. ONE COPY OF THE OWNER'S WRITTEN PERMISSION AND ONE COPY OF A WRITTEN RELEASE FROM THE OWNER STATING AT THE WORK HAS BEEN COMPLETED SATISFACTORILY, SHALL BE FURNISHED TO THE ENGINEER.

ALL ITEMS WITHIN THE STREET RIGHT-OF-WAY SHALL BE REMOVED, OR REMOVED AND REPLACED, OR RESTORED AS REQUIRED BY THE CONTRACT DRAWINGS AND DETAILED PROVISIONS, AS DIRECTED BY THE ENGINEER.

SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGES TO TREES AND THEIR ROOT SYSTEM. MACHINE EXCAVATION SHALL NOT BE USED WHEN, IN THE OPINION OF THE ENGINEER, IT WOULD ENDANGER TREE ROOTS. IN GENERAL, WHERE THE LINE OF TRENCH FALLS WITHIN THE LIMITS OF THE LIMB SPREAD, THE LEAVING OF HEADERS ACROSS THE TRENCH TO PROTECT ROOTS WILL BE REQUIRED. THE OPERATION OF ALL EQUIPMENT, PARTICULARLY WHEN EMPLOYING BOOMS; THE STORAGE OF MATERIALS; AND THE DEPOSITION OF EXCAVATION SHALL BE CONDUCTED IN THE MANNER WHICH WILL NOT INJURE TREES, TRUNKS, BRANCHES OR THEIR ROOTS UNLESS SUCH TREES ARE DESIGNATED BY THE ENGINEER FOR REMOVAL.

LIFT STATION GENERAL NOTES

THE CONTRACTOR SHALL COMPLY WITH THE MATERIAL AND CONSTRUCTION REQUIREMENTS OF THE DELAWARE COUNTY DOCUMENT ENTITLED STANDARD PLANS AND SPECIFICATIONS FOR CONSTRUCTION OF SANITARY FACILITIES. THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE BOARD OF HEALTH AND PAY ALL PERMIT FEES.

THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, TOOLS, TRANSPORTATION, INCIDENTALS AND APPURTENANCES TO COMPLETE IN EVERY DETAIL, AND LEAVE IN WORKING ORDER, ALL ITEMS OF WORK CALLED FOR AND/OR SHOWN ON THE DRAWINGS. ANY MATERIALS OR WORK NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, BUT NECESSARY TO COMPLETE THE WORK, SHALL BE FURNISHED.

THE CONTRACTOR IS REQUIRED TO VISIT THE SITE AND FULLY INFORM HIMSELF CONCERNING ALL CONDITIONS AFFECTING THE SCOPE OF THE WORK. FAILURE TO VISIT THE SITE SHALL NOT RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITY IN THE PERFORMANCE OF THIS CONTRACT.

THE CONTRACTOR SHALL PROVIDE 6" OF SAND OR GRIT LEVELING BASE, DEPENDING ON SUBSURFACE SOIL CONDITIONS, UNDER EACH CONCRETE STRUCTURE FOLLOWED BY A MINIMUM OF 6" COMPACTED GRANULAR FILL.

THE CONTRACTOR SHALL GRADE THE AREA AROUND THE LIFT STATION TO DRAIN SURFACE WATER AWAY FROM THE STRUCTURES.

ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AFTER FINAL GRADING ACCORDING TO THE LANDSCAPE PLAN.

ALL GENERAL NOTES SHOWN ON THIS SHEET, SHALL BE CONSIDERED A REQUIREMENT FOR THE CONSTRUCTION WORK OF THE LIFT STATION.

ELECTRICAL NOTES

THE CONTRACTOR SHALL PROVIDE ALL ELECTRICAL COMPONENTS AND DEVICES TO PROPERLY SERVE THE ELECTRICAL REQUIREMENTS OF THE LIFT STATION. ALL WORKMANSHIP, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE OHIO BASIC BUILDING CODE, THE NATIONAL ELECTRICAL CODE, LOCAL BUILDING CODES AND ALL OTHER REGULATIONS BY AUTHORITIES HAVING JURISDICTIONAL RIGHTS FOR THE ENFORCEMENT OF CONSTRUCTION AND SAFETY STANDARDS. THE CONTRACTOR SHALL OBTAIN AND PAY THE COSTS OR FEES FOR ANY PERMITS OR AGENCY INSPECTION CHARGES ASSOCIATED WITH THE ELECTRICAL WORK.

ELECTRICAL SERVICE SHALL BE PROVIDED BY OTHERS TO WITHIN APPROXIMATELY TEN (10) FEET OF THE PROPOSED TRANSFORMER LOCATION SHOWN ON THE SITE PLAN. ALL ELECTRICAL CONNECTION WORK SHALL BE PERFORMED BY THE LIFT STATION CONTRACTOR. THE COST FOR PURCHASING AND INSTALLING THE ELECTRIC METER SHALL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS AND PAY ALL FEES REQUIRED FOR MAKING THE PROPER CONNECTIONS TO THE SERVICE WIRING.

AN AUTOMATIC TRANSFER SWITCH SHALL BE PROVIDED TO TRANSFER LOADS FROM THE LINE SOURCE TO THE PORTABLE EMERGENCY GENERATOR. SEE PLAN SPECIFICATIONS.

PROVIDE AND INSTALL A LIGHTNING ARRESTOR PER DELAWARE COUNTY STANDARDS.

LEVEL SENSING EQUIPMENT SHALL BE MULTITRODE (LEVEL SENSING PROBE)



Stantec

Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus OH U.S.A.
43204
Tel. 614.486.4383
Fax. 614.486.4387
www.stantec.com

Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. (U)
NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Revision table with columns: Revision, By, Appd., YY.MM.DD. Includes Issued, Permit-SeaL entries.

Client/Project
CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR
REGIONAL PUMP STATION
Delaware County, Ohio

Title
GENERAL NOTES

Table with columns: Project No., Scale, Drawing No., Sheet, Revision. Values: 173408605, Sheet, Revision.

U:\173408605\Drawings\GENERAL NOTES.dwg
Saved: 4/25/2013 8:17 AM By: ewatson
Printed: 7/15/2014 8:10 AM

Copyright Reserved
 The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
 The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

- Legend
- T/C TOP OF CASTING OR TOP OF CURB ELEVATION
 - TW TOP OF WALL
 - BW BOTTOM OF WALL
 - E/P EDGE OF PAVEMENT
 - MAJOR FLOOD ROUTING PATH
 - CONCRETE
 - PROPOSED ELECTRIC SERVICE
 - SILT FENCE
 - STORM DRAIN INLET PROTECTION

Notes
 FIELD SURVEY PERFORMED BY STANTEC ON 04/07/09 AND 5/4/09. AERIAL TOPOGRAPHY PROVIDED BY DELAWARE COUNTY AUDITOR.

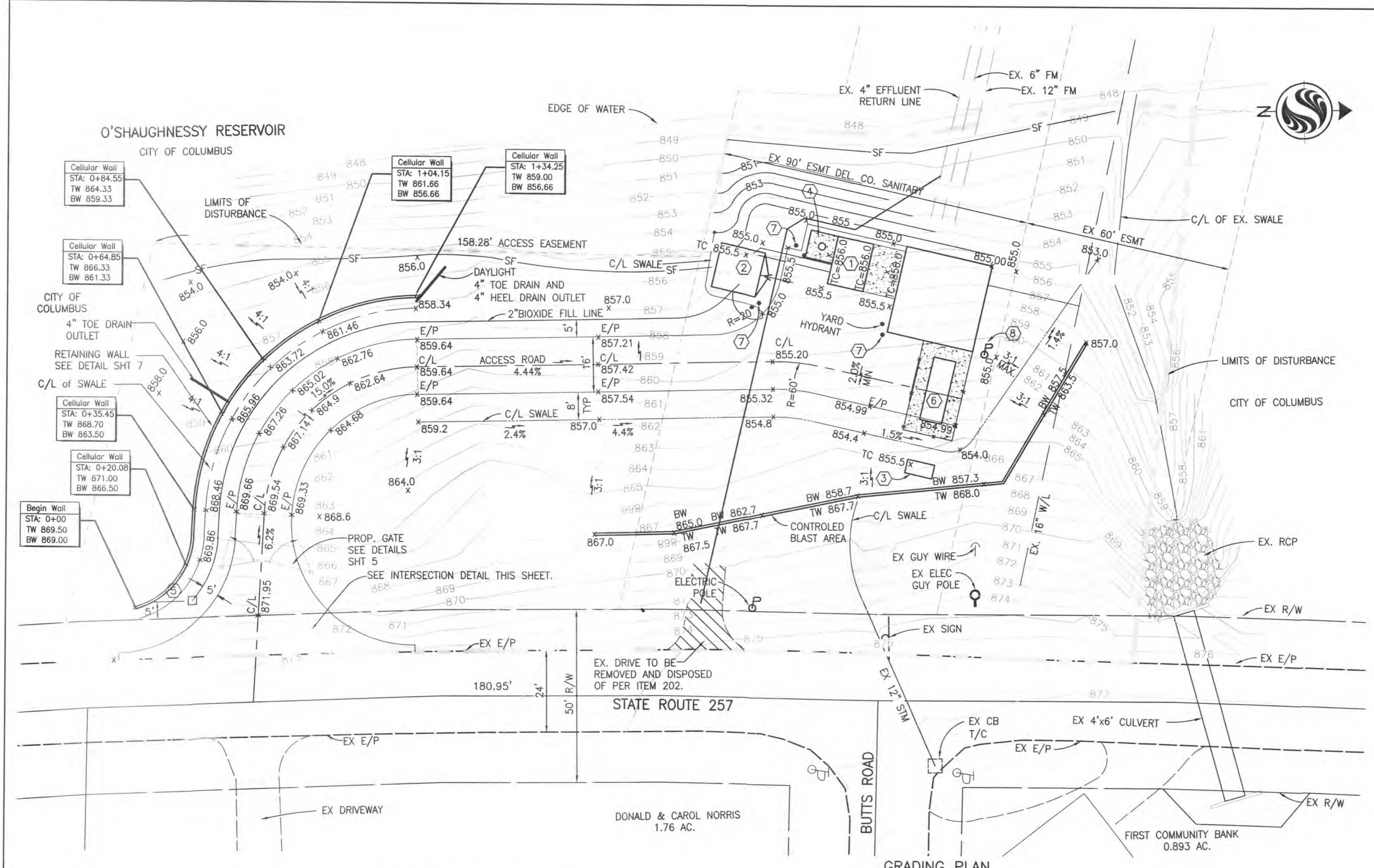
- ① PROPOSED WET WELL 10'-6" X 15' I.D.
- ② PROPOSED BIOXIDE TANK, SEE DETAIL SHEET 12.
- ③ PROPOSED 4'x8' CONCRETE AEP TRANSFORMER LOCATION.
- ④ PROPOSED JIB CRANE PER SPECIFICATION. SEE SHT 11 FOR FOUNDATION SPECIFICATIONS.
- ⑤ BIOXIDE FILL BOX, SEE DETAIL SHEET 12. FEMA BASE FLOOD ELEVATION = 854.1
- ⑥ 18"-6"x6"-6" GENERATOR PAD
- ⑦ BOLLARD, SEE DETAIL SHEET 5
- ⑧ TELEMETRY ANTENNA, SEE SPECIFICATION 16949.

Revision	By	Appd.	YY.MM.DD

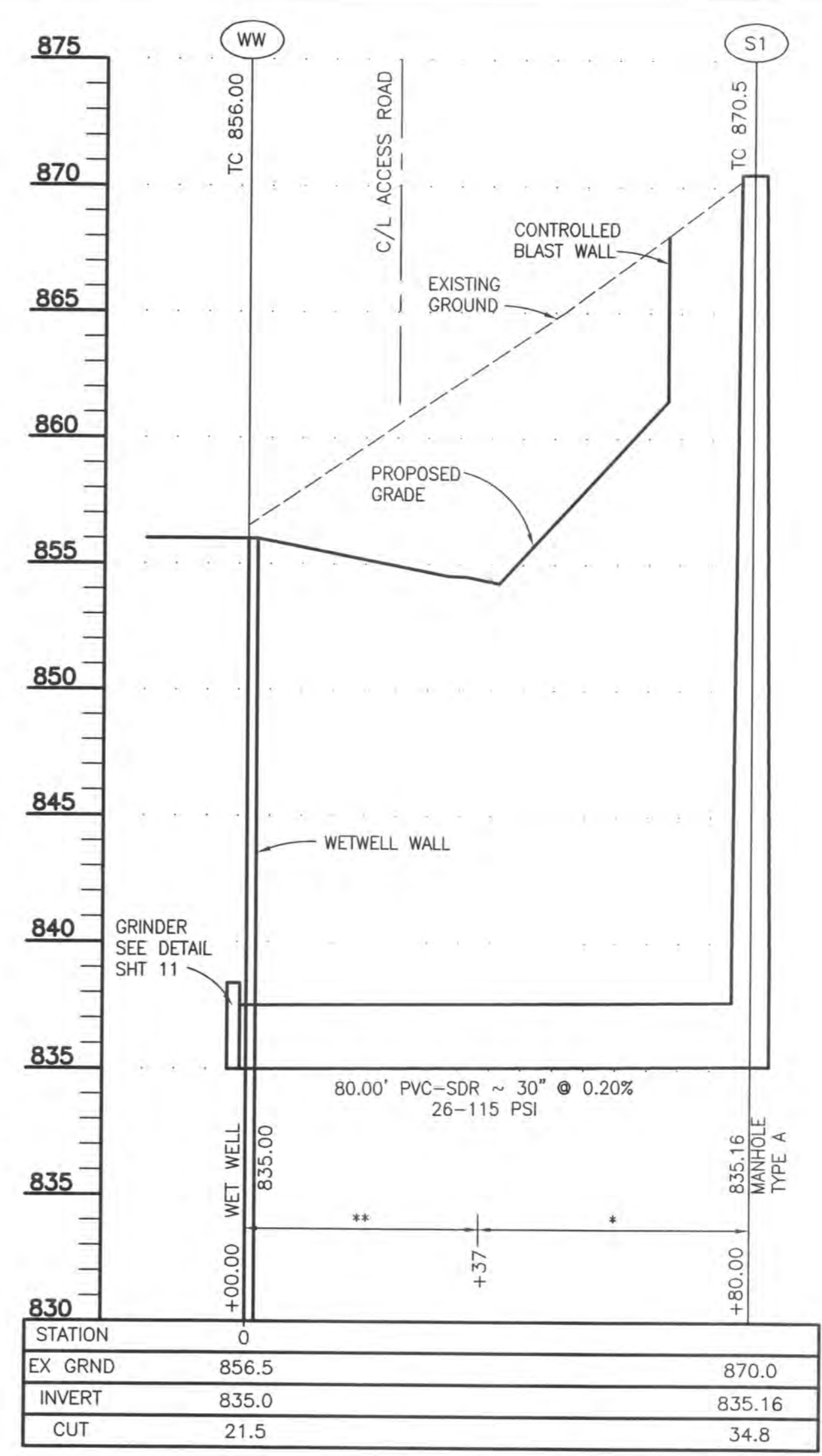
Client/Project
 CONCORD/SCIOTO COMMUNITY AUTHORITY
 O'SHAUGHNESSY RESERVOIR
 REGIONAL PUMP STATION
 Delaware County, Ohio

Title
 GRADING PLAN

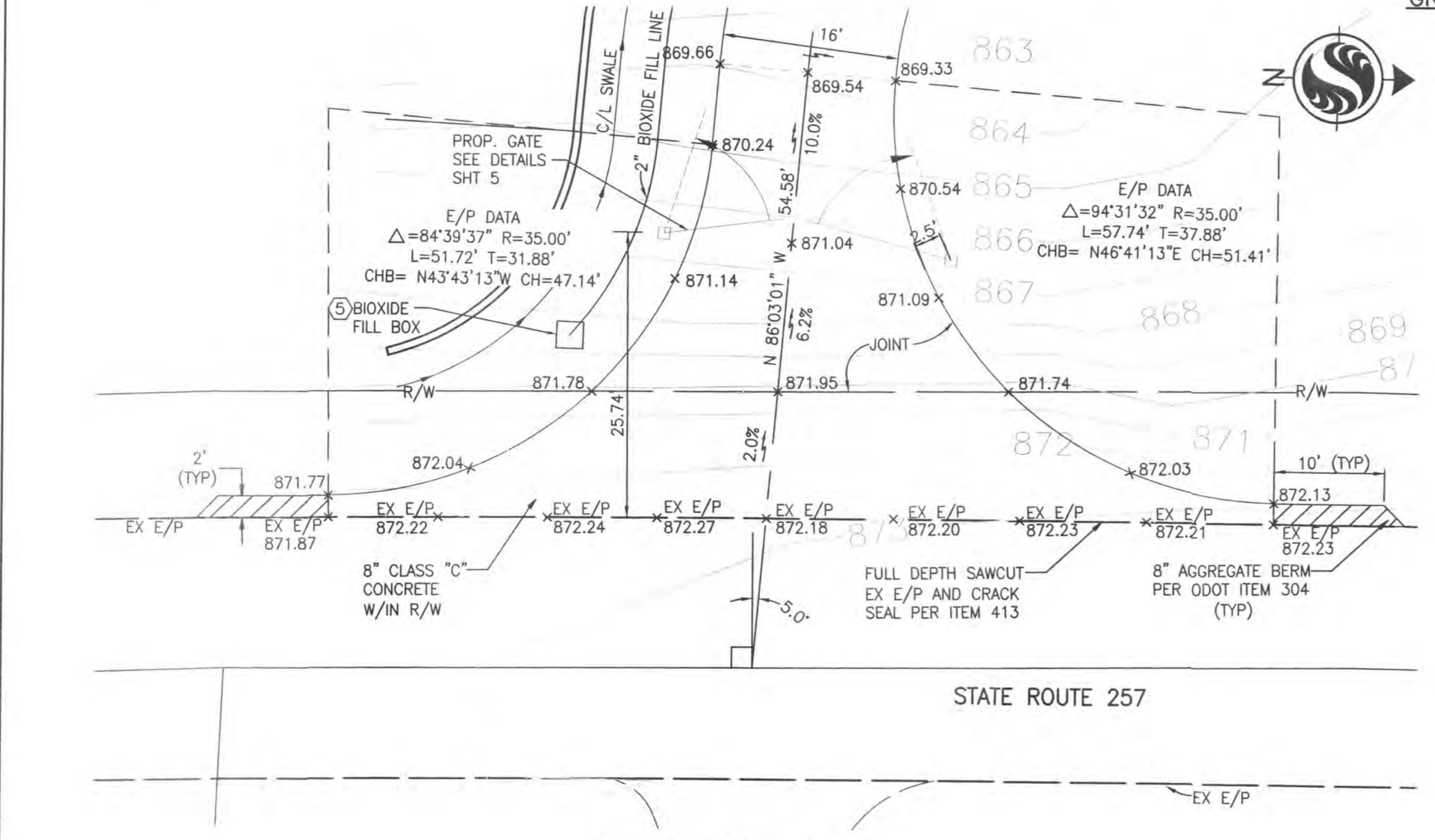
Project No. 173408605	Scale AS NOTED
Drawing No.	Sheet
	Revision



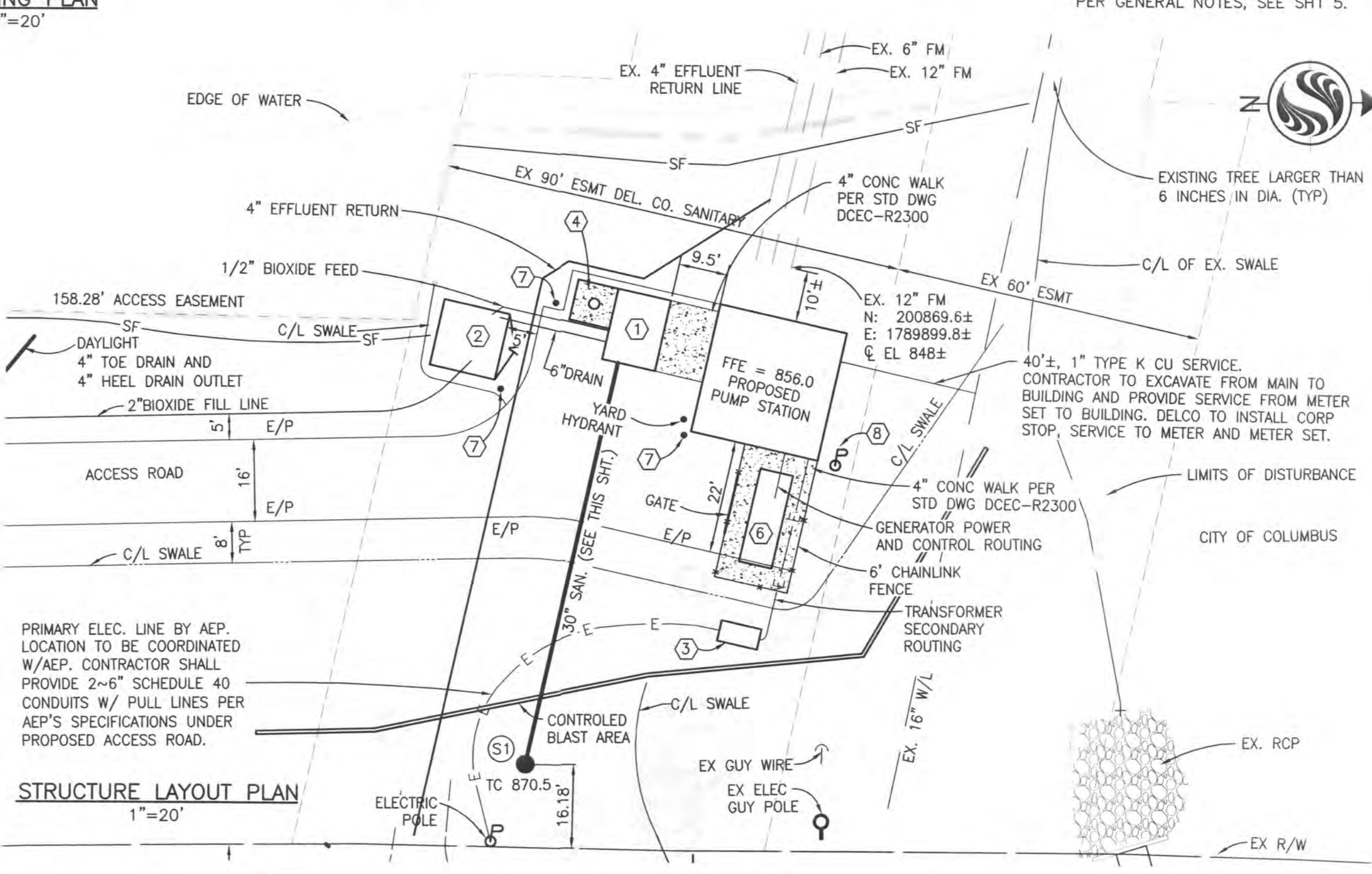
GRADING PLAN
 1"=20'



SCALE: HORIZ. 1"=20'
 VERT. 1"=5'



INTERSECTION DETAIL
 1"=10'



STRUCTURE LAYOUT PLAN
 1"=20'

U:\173408605\DWG\C\GRADING PLAN.dwg
 Date: 4/7/2014 11:34 AM By: emerson Printed: 7/15/2014 9:10 AM
 ORIGINAL SHEET - ANSI D

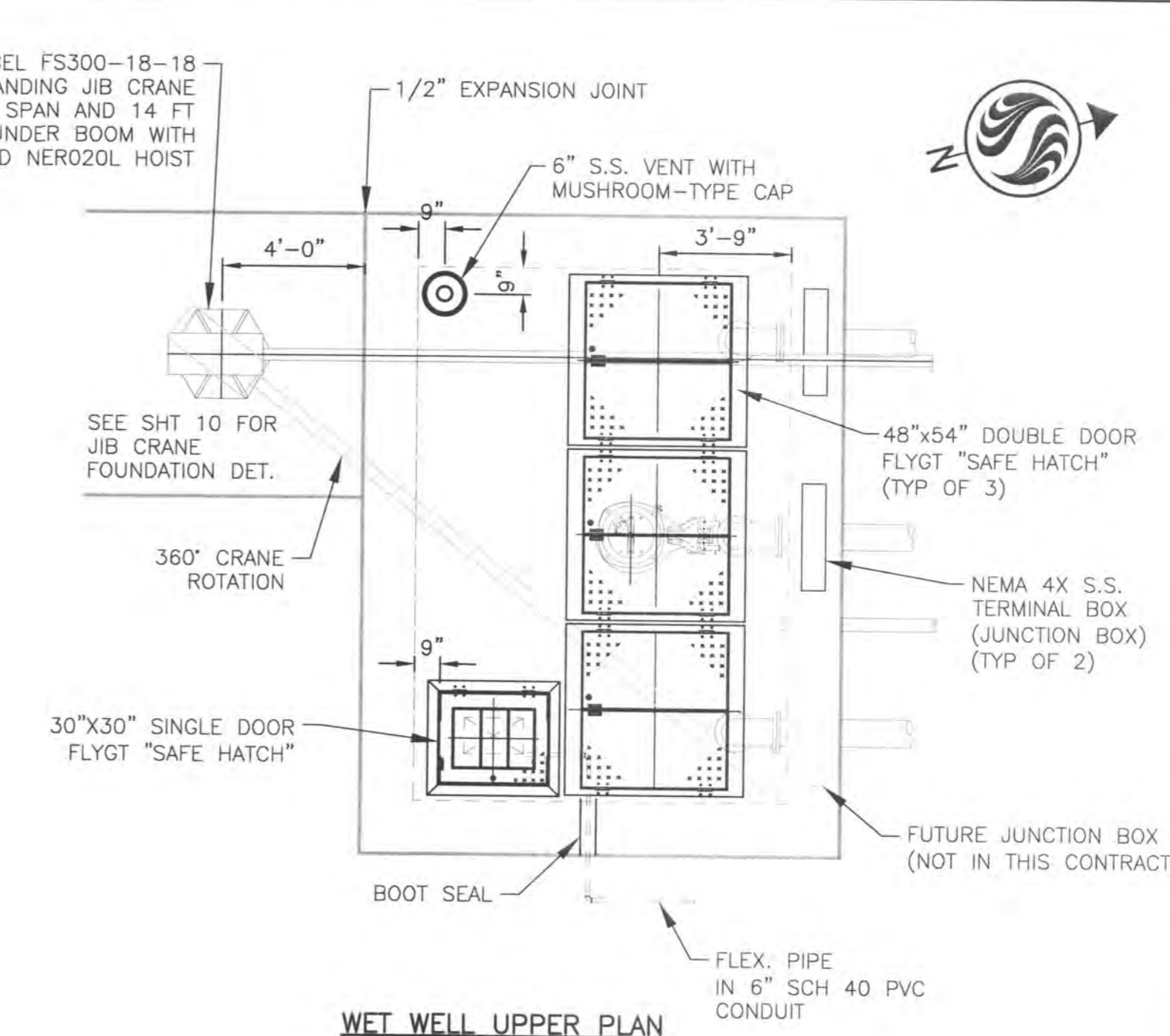
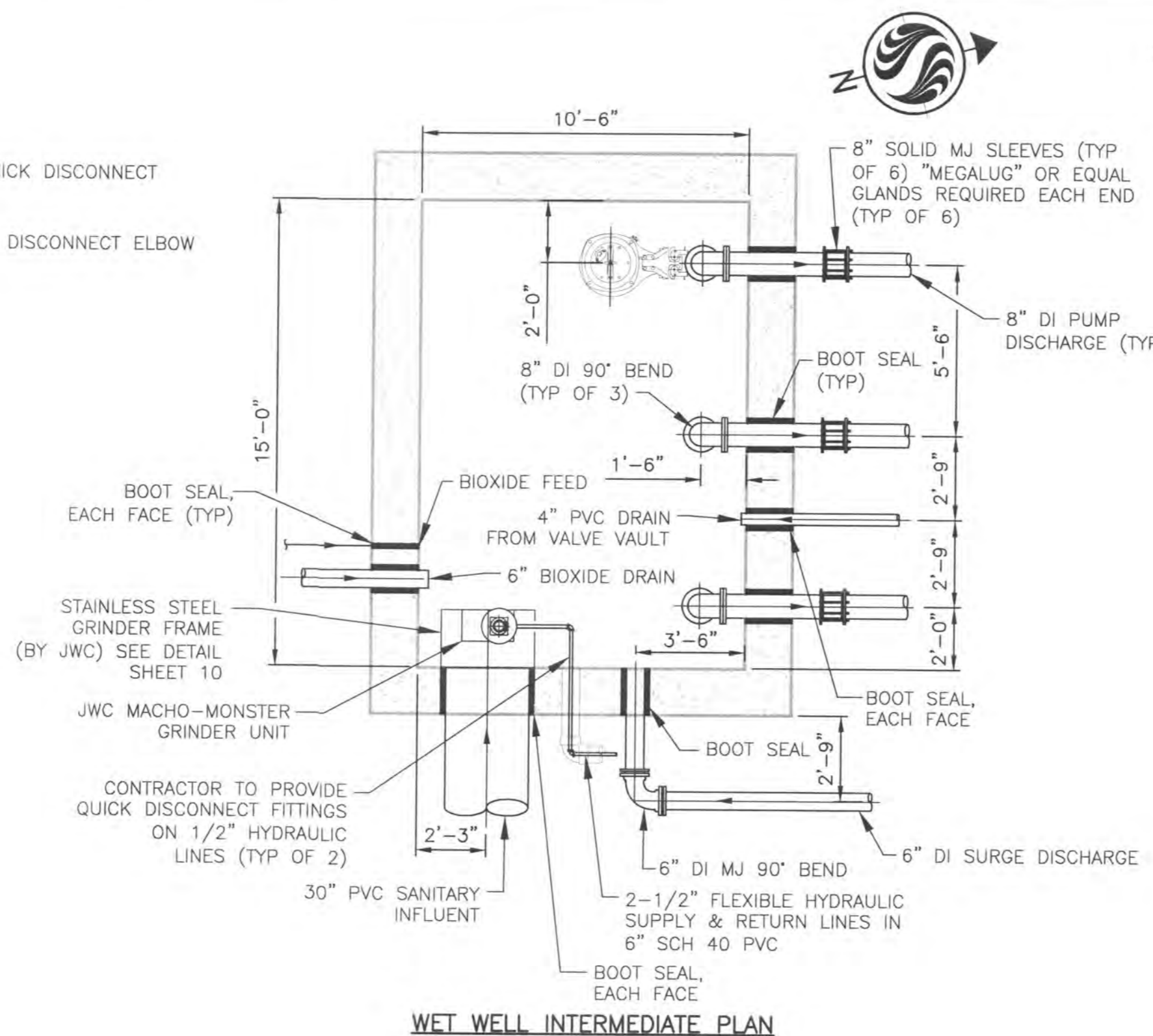
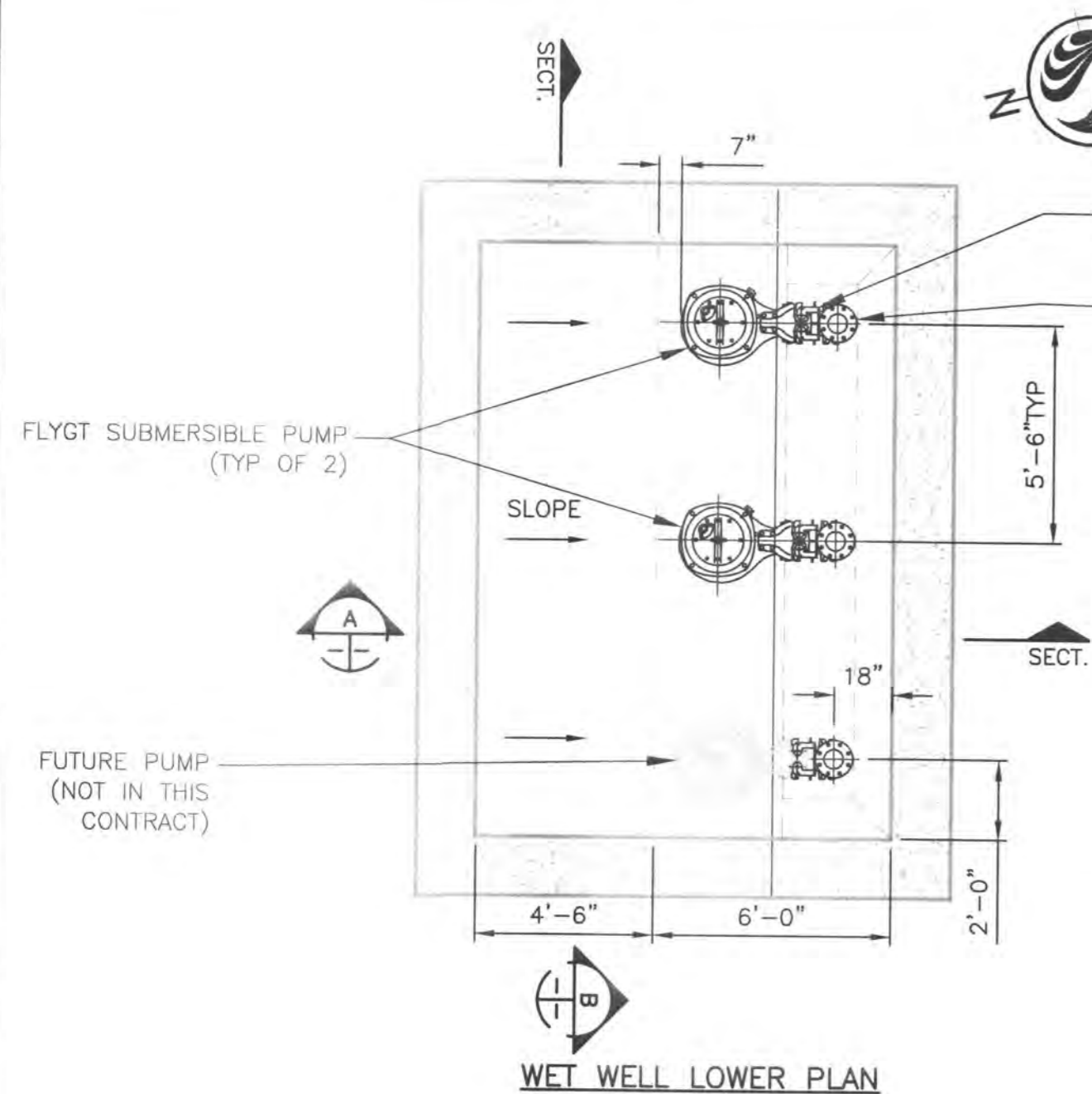
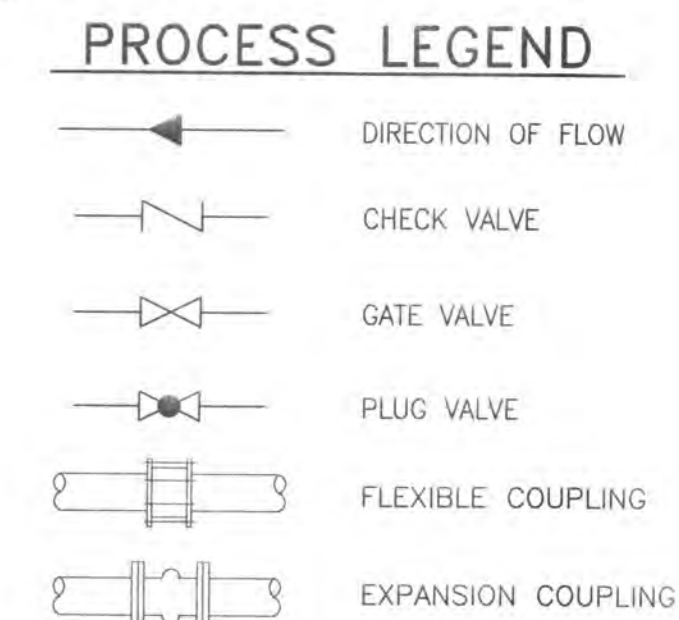


Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus OH U.S.A.
43204
Tel. 614.486.4383
Fax. 614.486.4387
www.stantec.com

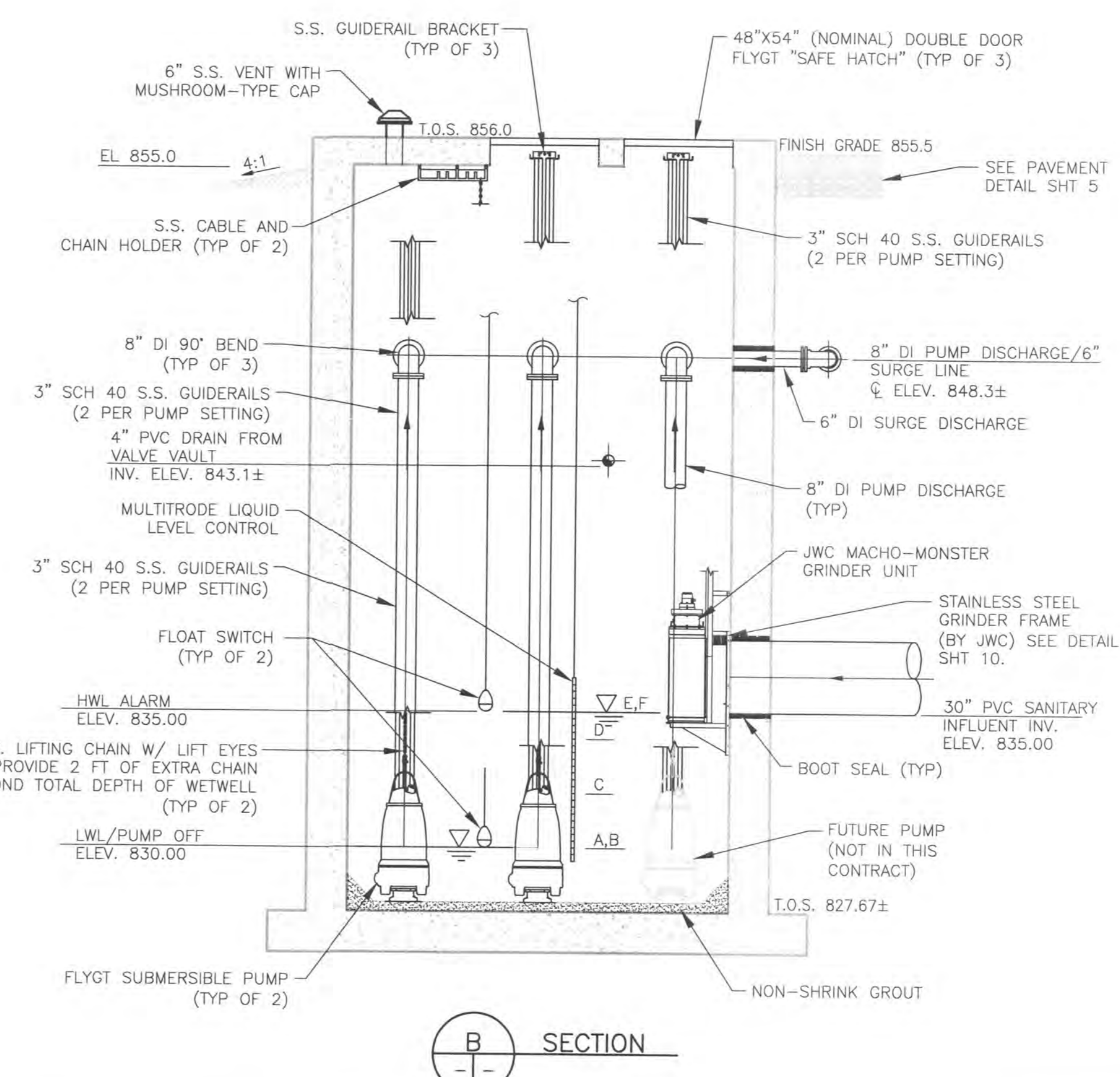
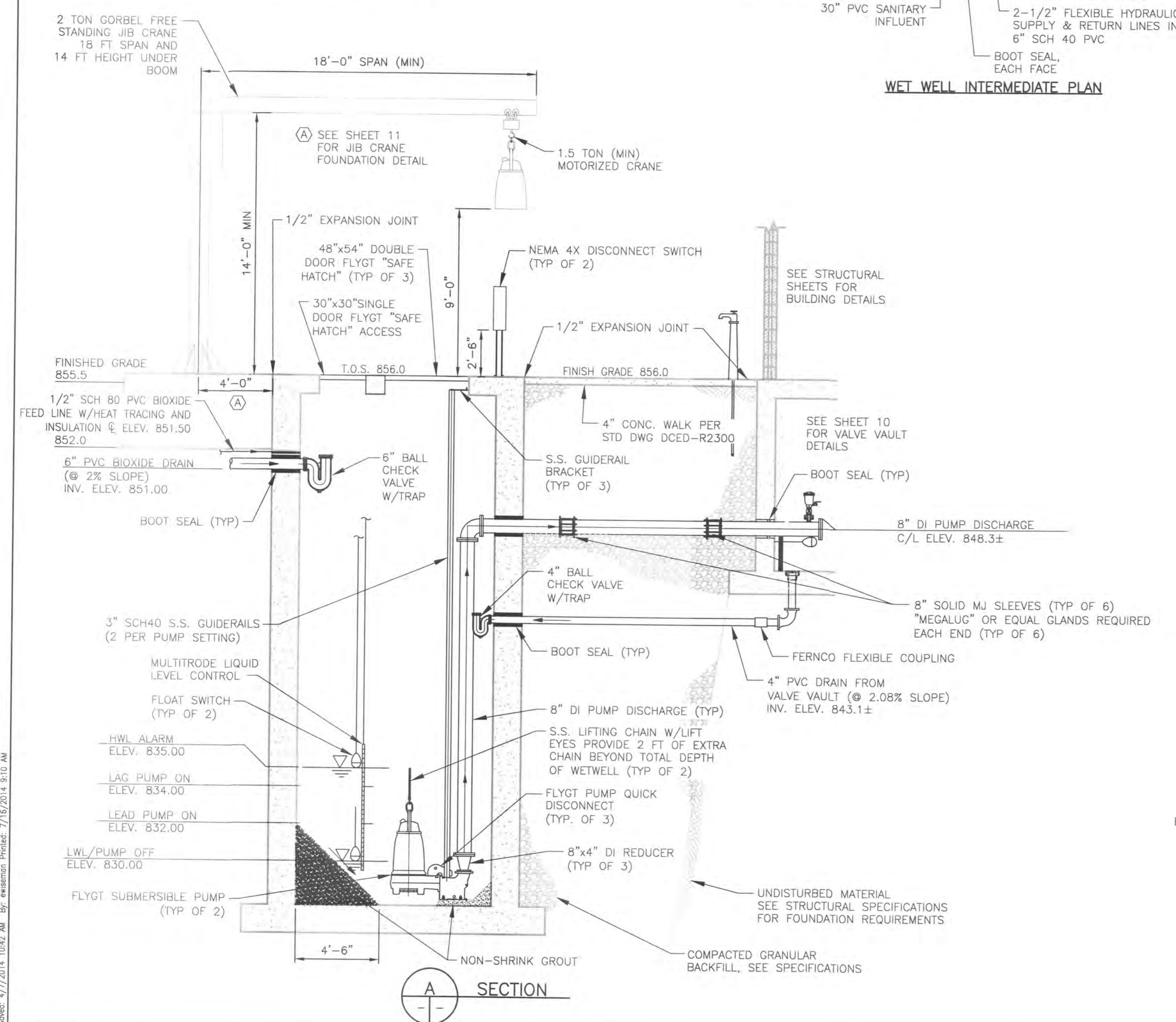
Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Legend



NO. OF PUMPS	TYPE	PUMP				REMARKS	PUMP CONTROL		
		DESIGN FLOW	TDH	HP	RPM		FLOAT ACTION	ELEV.	
2	SUB'M EXPLOSION PROOF 4" DISCHARGE	600 GPM	138 FT	35 MIN.	3520 MAX	NON-OVER LOADING FOR ALL POINTS ON THE CURVE FLYGT NT3171.181SH, 63-275-00-1070, 35 HP, 195mm IMPELLER	A	BACKUP FLOAT PUMP OFF	829.50
							B	PUMP OFF	830.0
							C	LEAD PUMP ON	832.0
							D	LAG PUMP ON	834.0
							E	ALARM ON	835.0
							F	BACKUP FLOAT PUMP ON	835.0



UNIVERSITY OF DELAWARE ENGINEERING DEPARTMENT, WELLS PLANS AND SECTIONS.dwg, 11/20/2014 9:10 AM, Saved: 4/7/2015 10:42 AM, By: emmanuel.miranda, 7/7/2014 9:10 AM

File Name: WET WELL PLANS AND SECTIONS.dwg
Dwn. Crkd. Dsgn. YY.MM.DD

Permit-Seal

Client/Project
CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR
REGIONAL PUMP STATION
Delaware County, Ohio

Title
WET WELL PLANS AND SECTIONS

Project No. 173408605
Scale 1/4" = 1'

Drawing No. Sheet Revision



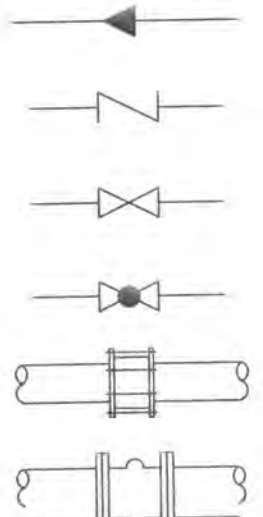
Stantec

Copyright Reserved

The Contractor shall verify and NOT scale the drawing - any error Stantec without delay. The Copyrights to all designs or Stantec. Reproduction or use for authorized by Stantec is forbidden.

Legend

PROCESS

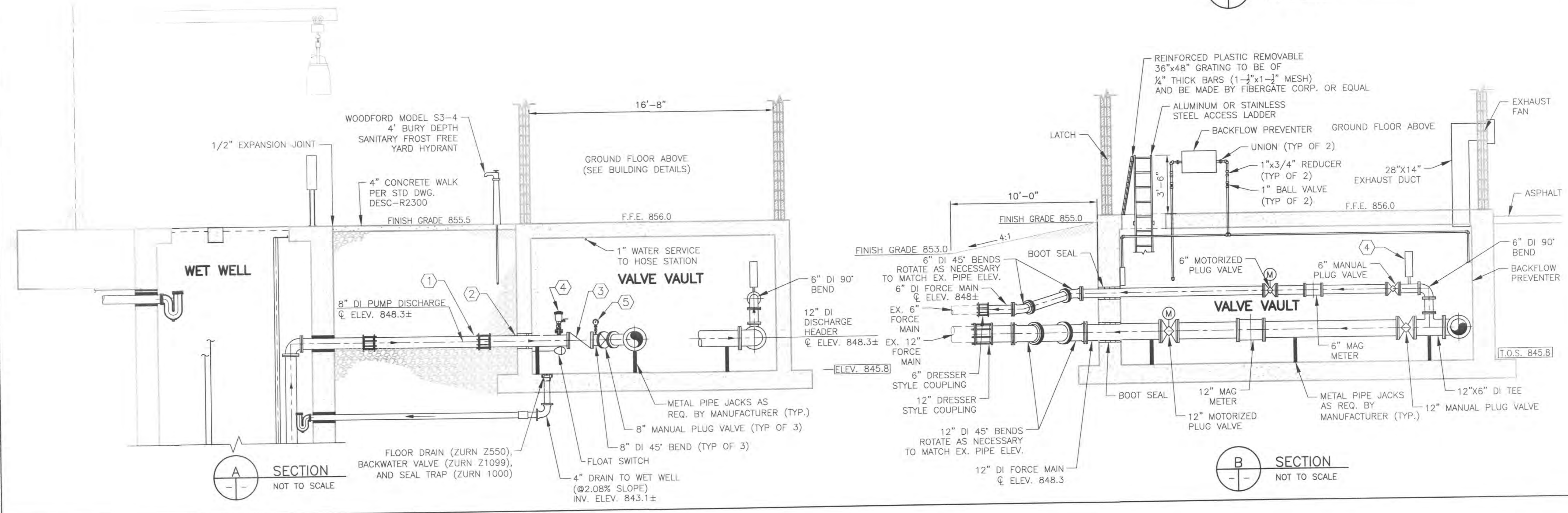
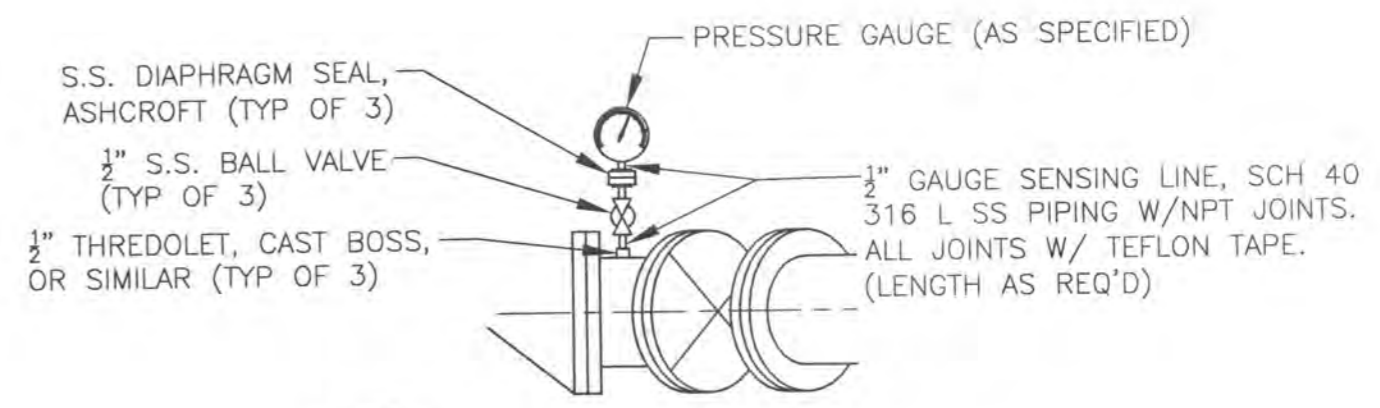
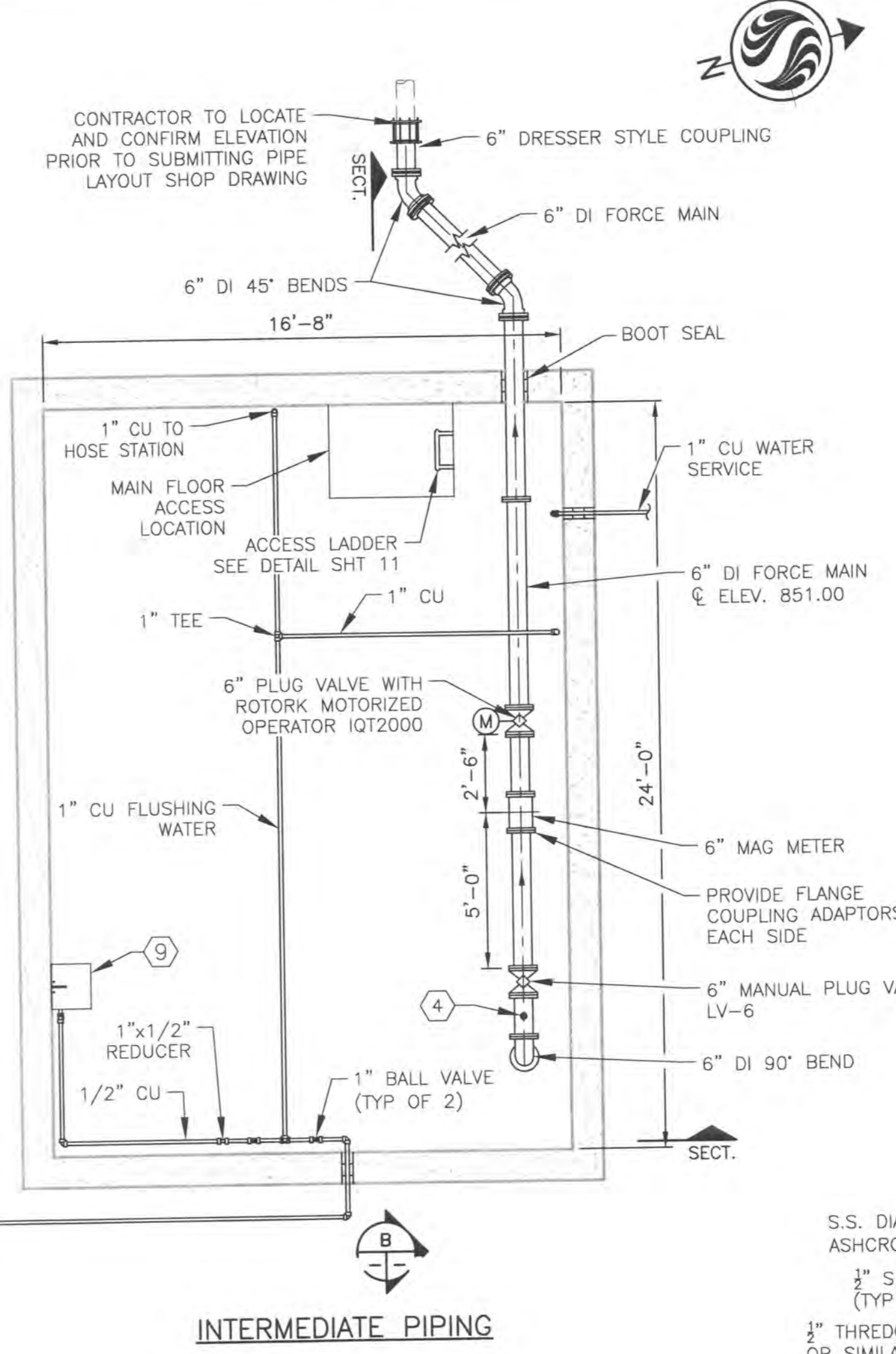
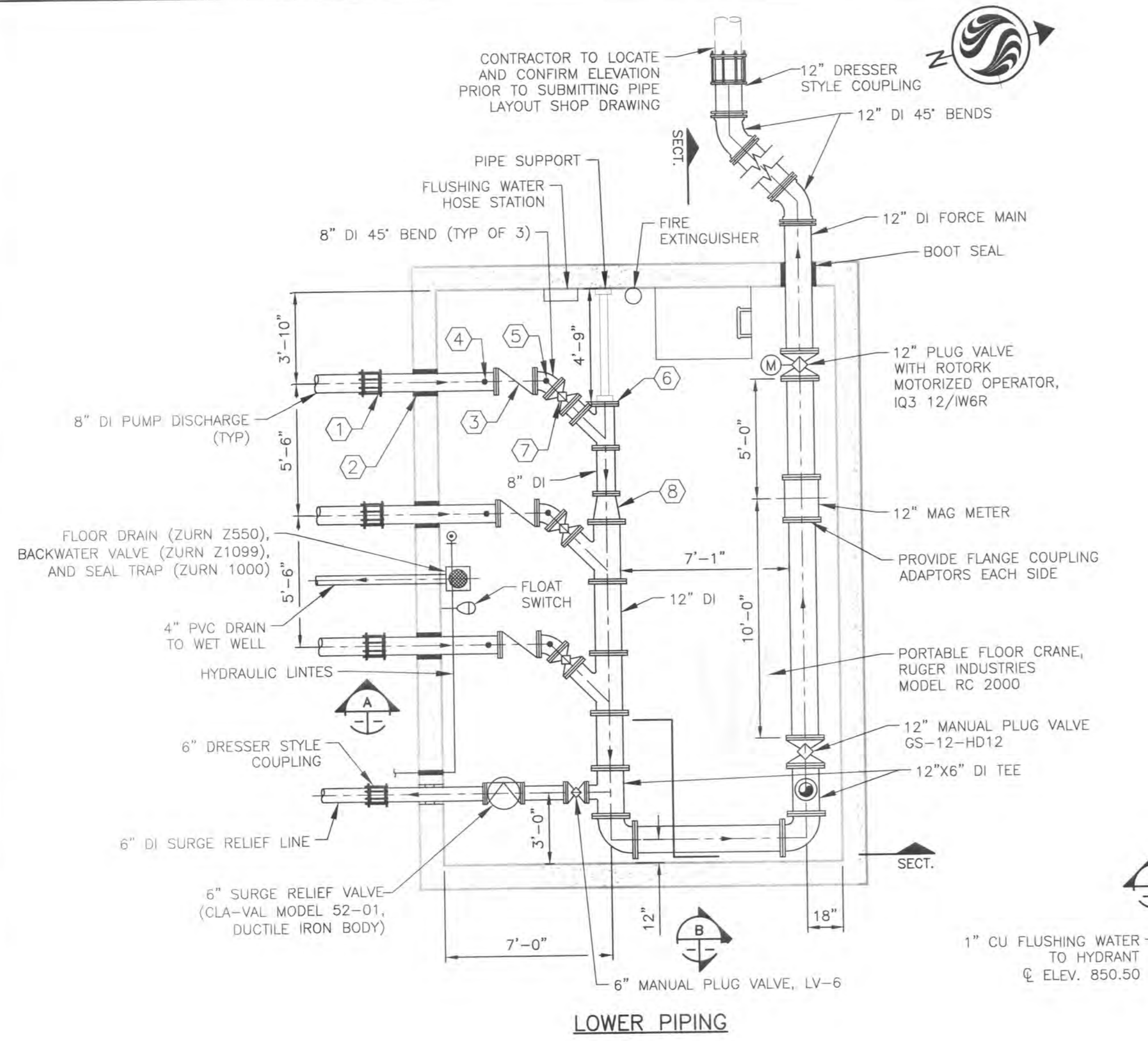


CODED NOTES

- ① 8" DRESSER STYLE COUPLING (TYP OF 6)
- ② 8" FLXPE DI PIPE W/BOOT SEALS (TYP OF 6)
- ③ 8" SWING CHECK VALVE, LUDDOW LEVER AND WEIGHT (TYP OF 3)
- ④ AIR/VACUUM RELEASE VALVE (TYP OF 4), SEE DETAIL 1014
- ⑤ PRESSURE GAUGES SHALL BE SOLID FRONT, LIQUID FILLED GAUGES WITH CLEAR GLASS WINDOWS, BOTTOM 1/4" NPT OUTLET AND STAINLESS STEEL BOURDON TUBE, 0-160 PSI. ALL GAUGES SHALL BE DUAL-CALIBRATED IN FEET OF WATER AND PSIG. GAUGES SHALL BE 4 1/2" IN DIAMETER. ALL GAUGES SHALL BE FITTED WITH AN APPROVED IMPULSE DAMPENER. GAUGES SHALL BE TYPE 1259 PROCESS PRESSURE GAGE WITH IMPULSE DAMPENER, BY ASHCROFT, OR APPROVED EQUAL BY U.S. GAUGE, H.O. TRERICE CO., HELICOID OF ROBERTSHAW. (TYP OF 3), SEE DETAIL 1014
- ⑥ 8" DI BLIND FLANGE
- ⑦ 8" MANUAL PLUG VALVE, LV-8 (TYP OF 3)
- ⑧ 12"x8" CONCENTRIC REDUCER
- ⑨ ADVANCE TABCO-HANDWASH SINK WITH WALL BRACKET AND FAUCET, MODEL# 7-PS-60; GRAINGER ITEM# 11U397. 1 1/2" PVC DISCHARGE PIPE TO FLOOR DRAIN. INSTALL TEE AND 1/2" MALE THREADED FITTING STAINLESS STEEL BRAIDED FLEXIBLE CONNECTOR TO BOTH HOT AND COLD FAUCET CONNECTIONS.

NOTES

- 1. PLUG VALVES SHALL BE DEZURIK PEC, F1, DI, NBR, NBR WITH SIZE AND OPERATOR CODE AS SHOWN.
- 2. WATER SERVICE SHALL BE COPPER TYPE "K" FROM MAINLINE TO BACKFLOW PREVENTER AND TYPE "M" AFTER THAT.
- 3. PROVIDE 6" AND 12" FLANGED DI SPOOL PIECES THE SAME LENGTH AS 6" AND 12" MAGMETERS.
- 4. ALL BURIED JOINTS ON THE 6" AND 12" FORCE MAINS SHALL BE RESTRAINED.



DATE: 06/25/14 BY: JAV/VAULT PLANS AND SECTIONS.dwg Scale: 1/16"=1'-0" PLOT: 7/15/2014 9:11 AM Saved: 4/7/2014 10:26 AM By: enlman

ORIGINAL SHEET - ANSI D

File Name: VALVE VAULT PLANS AND

Permit-Sea

Client/Project

CONCORD/SCIO

O'SHAUGHNESS

REGIONAL PUMP

Delaware County, Ohio

Title

VALVE VAULT

AND SECTION

Project No.

173408605

Drawing No.

Scale

1/4"

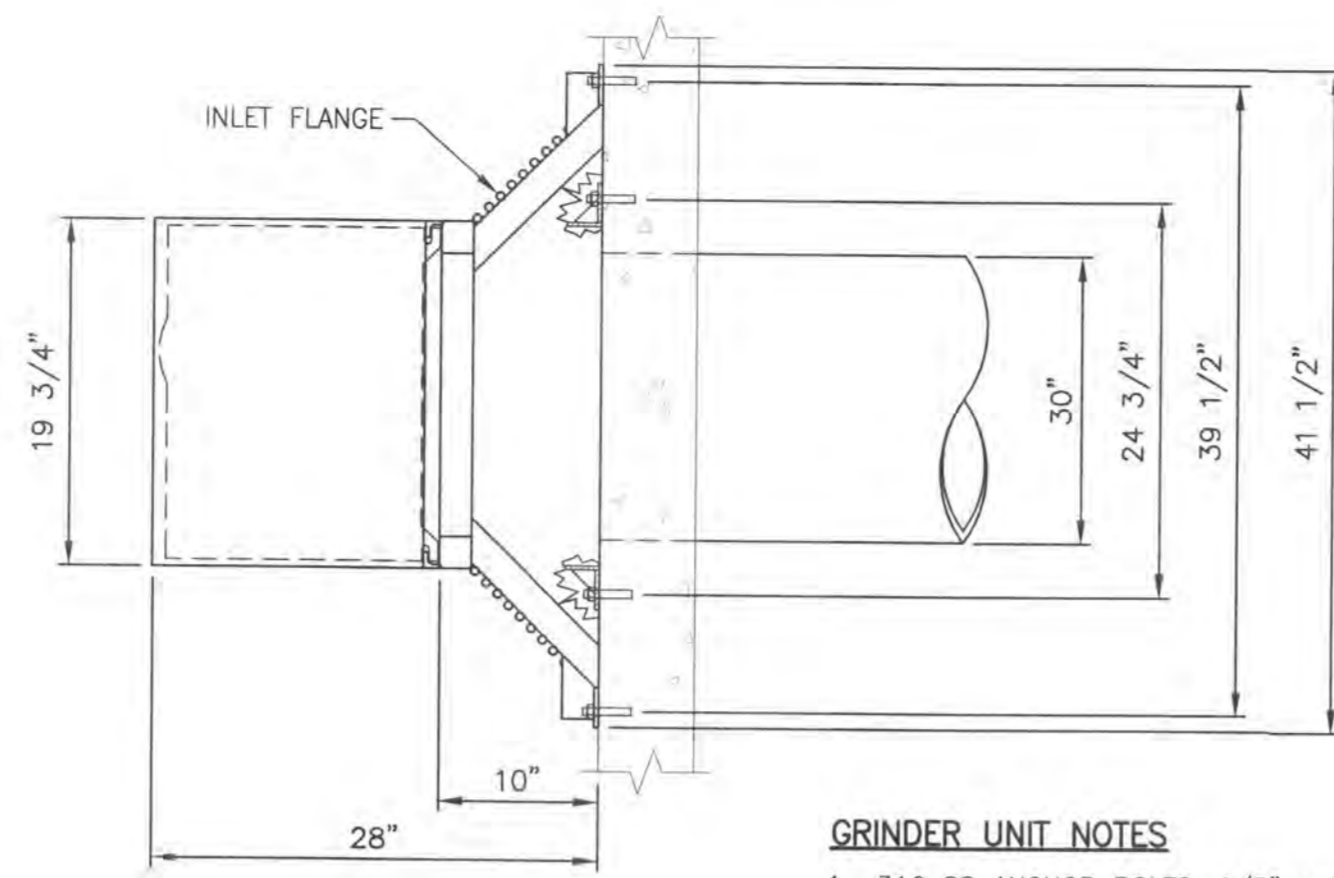
Sheet



Stantec

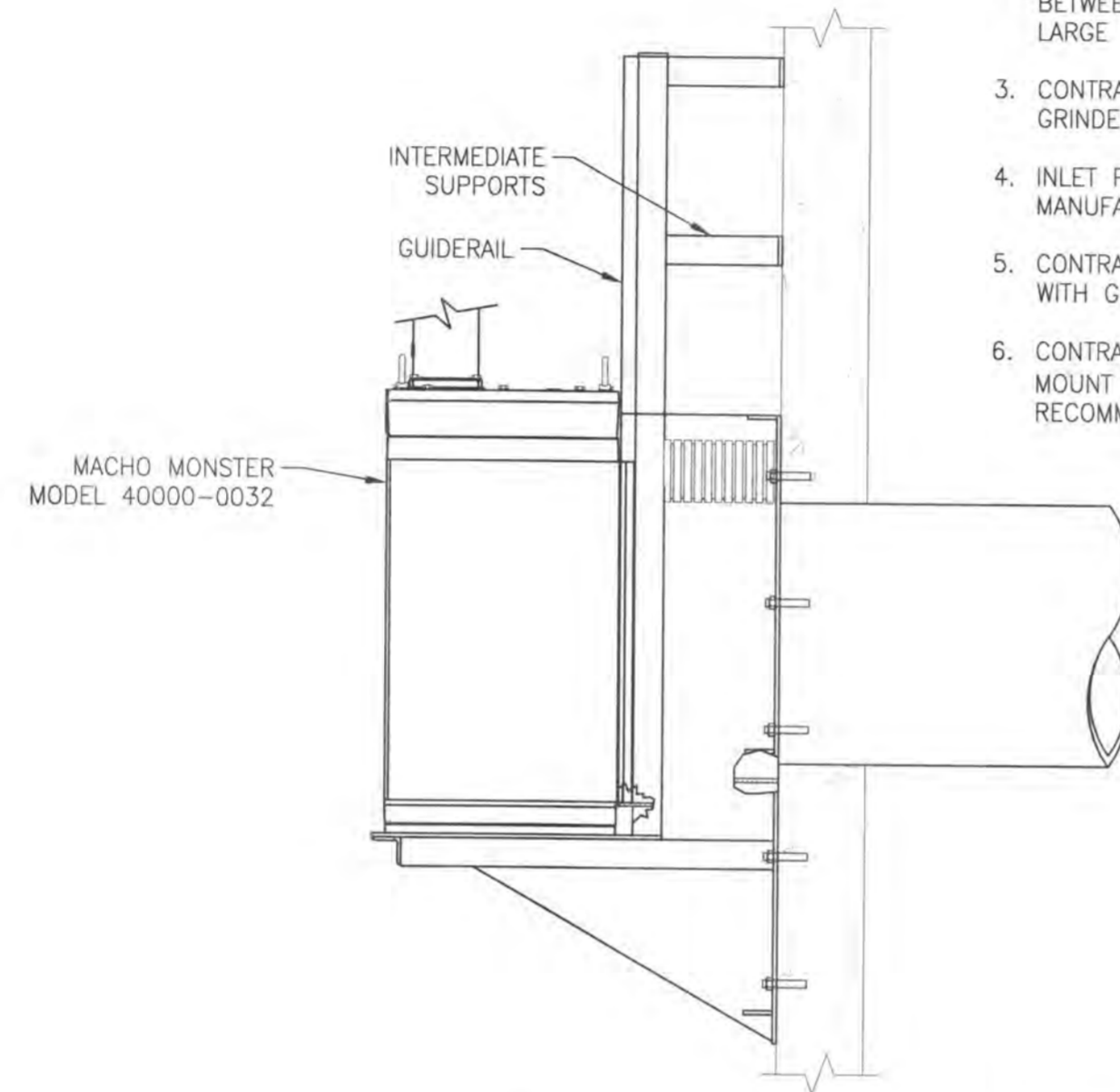
Copyright Reserved

The Contractor shall verify and be responsible for the accuracy of all dimensions and materials shown on this drawing. NOT scale the drawing - any error is the responsibility of the contractor. The Contractor shall verify and be responsible for the accuracy of all dimensions and materials shown on this drawing. NOT scale the drawing - any error is the responsibility of the contractor. The Contractor shall verify and be responsible for the accuracy of all dimensions and materials shown on this drawing. NOT scale the drawing - any error is the responsibility of the contractor.



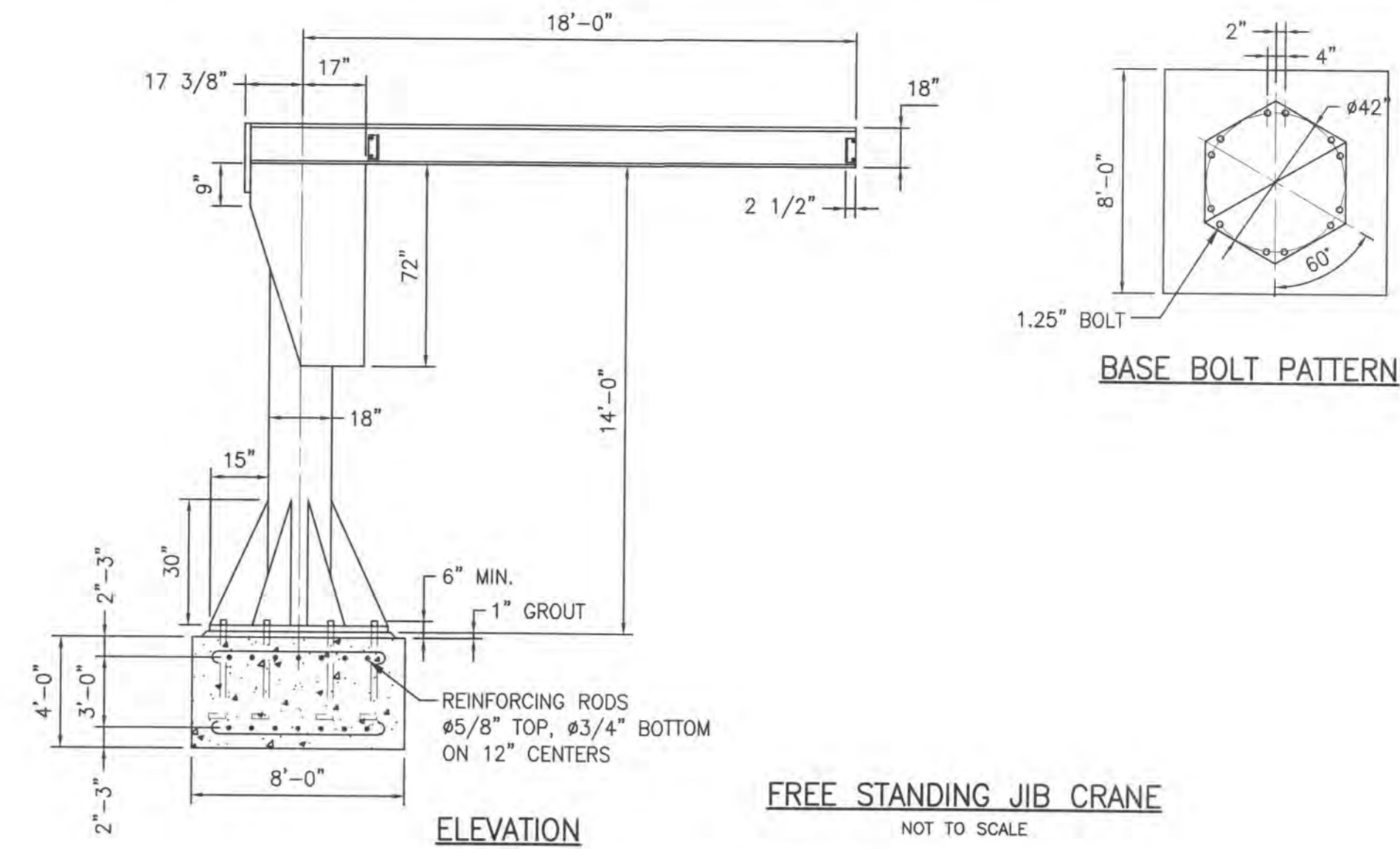
GRINDER UNIT NOTES

1. 316 SS ANCHOR BOLTS, 1/2" x 3 3/4"
2. CONTRACTOR SHALL GROUT OR SEAL GAPS BETWEEN FRAME AND WALL TO PREVENT ANY LARGE PARTICLES FROM PASSING.
3. CONTRACTOR TO COORDINATE DIMENSION AND GRINDER LOCATION WITH MANUFACTURER.
4. INLET FLANGE SHALL BE PROVIDED BY GRINDER MANUFACTURER.
5. CONTRACTOR TO COORDINATE HATCH LOCATION WITH GRINDER MANUFACTURER.
6. CONTRACTOR TO MOUNT UNIT AND PROVIDE AND MOUNT SUPPORTS PER MANUFACTURER'S RECOMMENDATIONS.



JWC MACHO-MONSTER GRINDER UNIT FLAT WALL FRAME

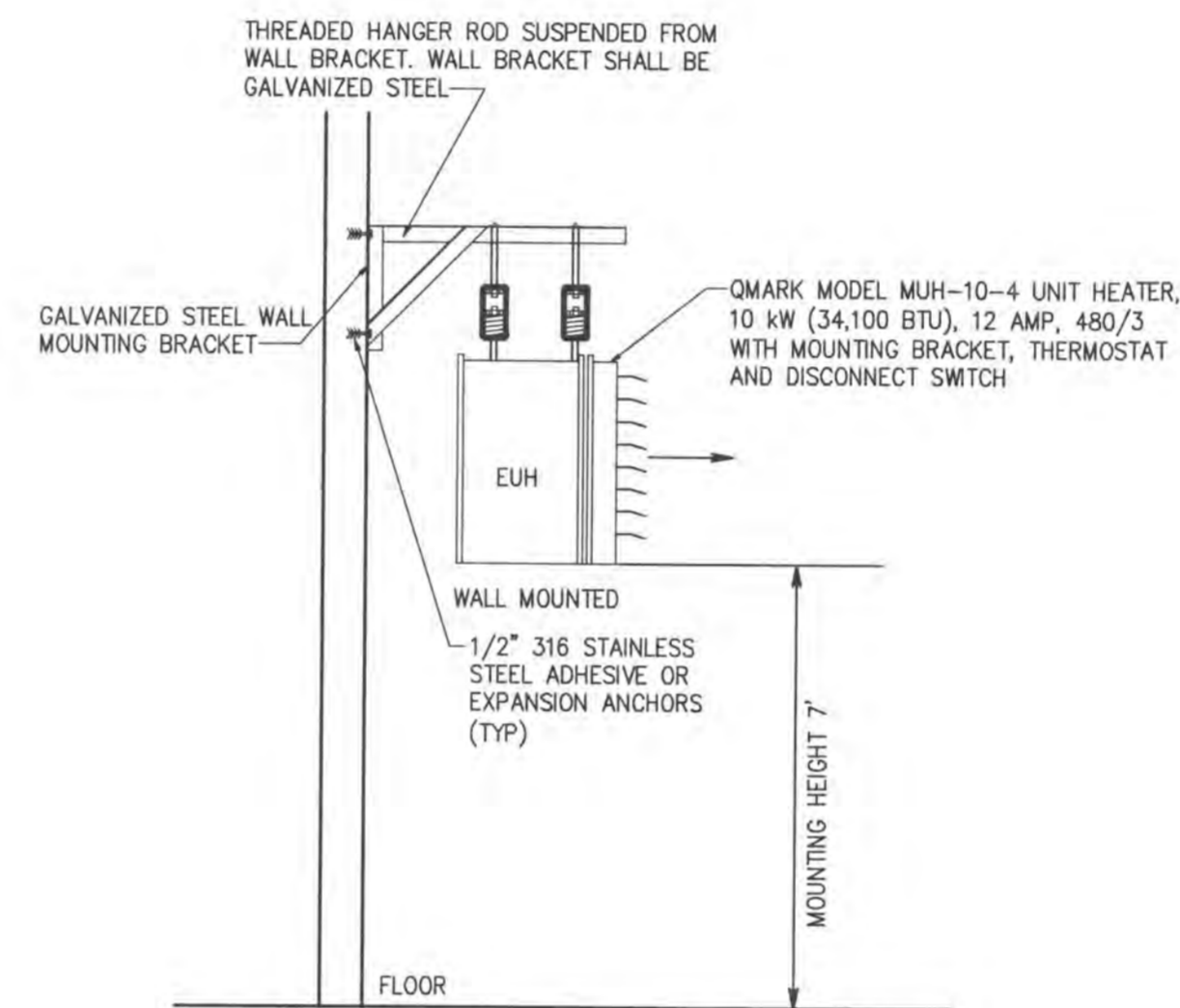
NOT TO SCALE
GUIDE RAIL INSTALLATION PROVIDED BY JWC. CONTRACTOR SHALL USE MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION.



FREE STANDING JIB CRANE

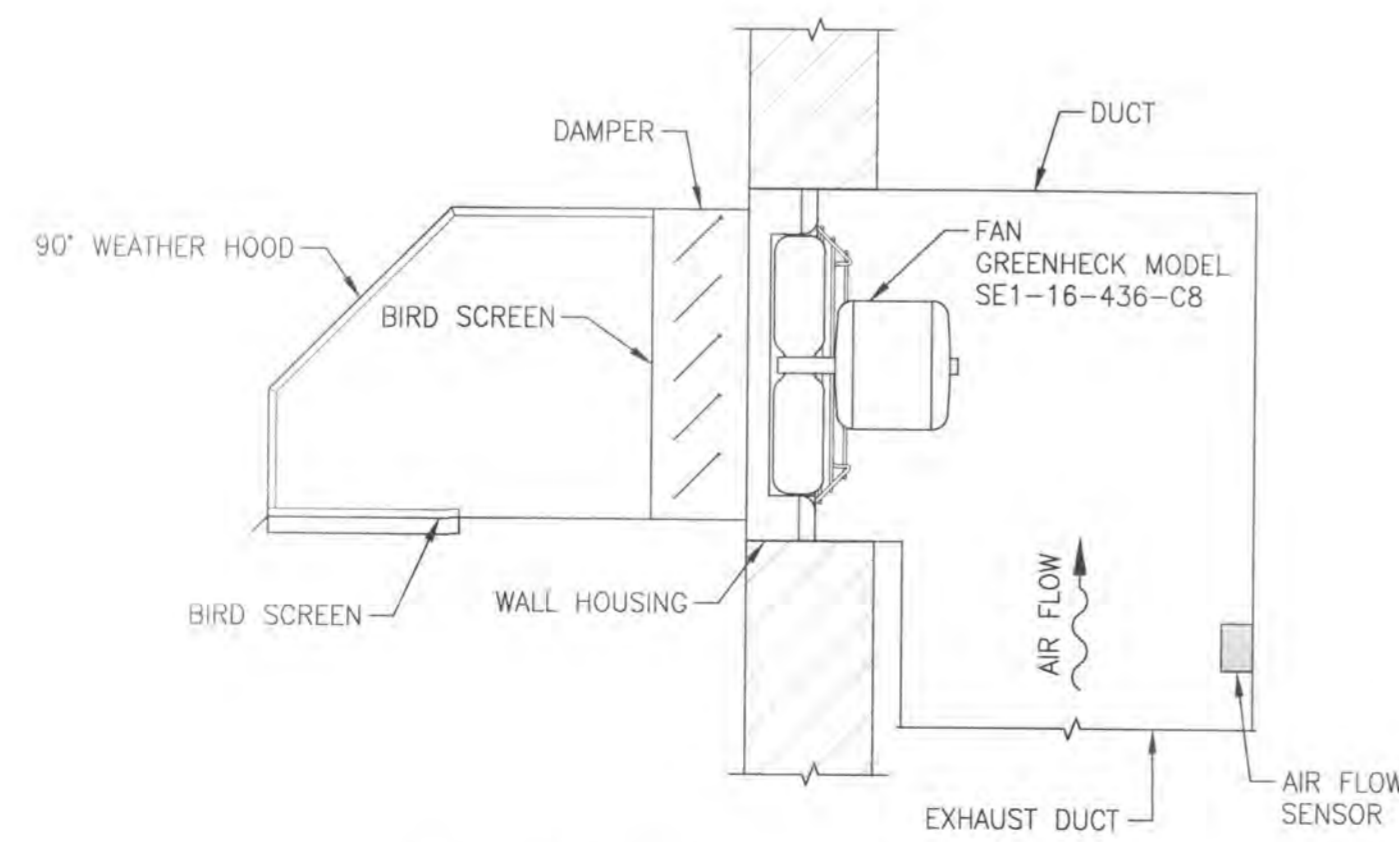
NOT TO SCALE

FOUNDATION AND CRANE DESIGN SHOWN BY GORBEL. CONTRACTOR SHALL USE MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION.



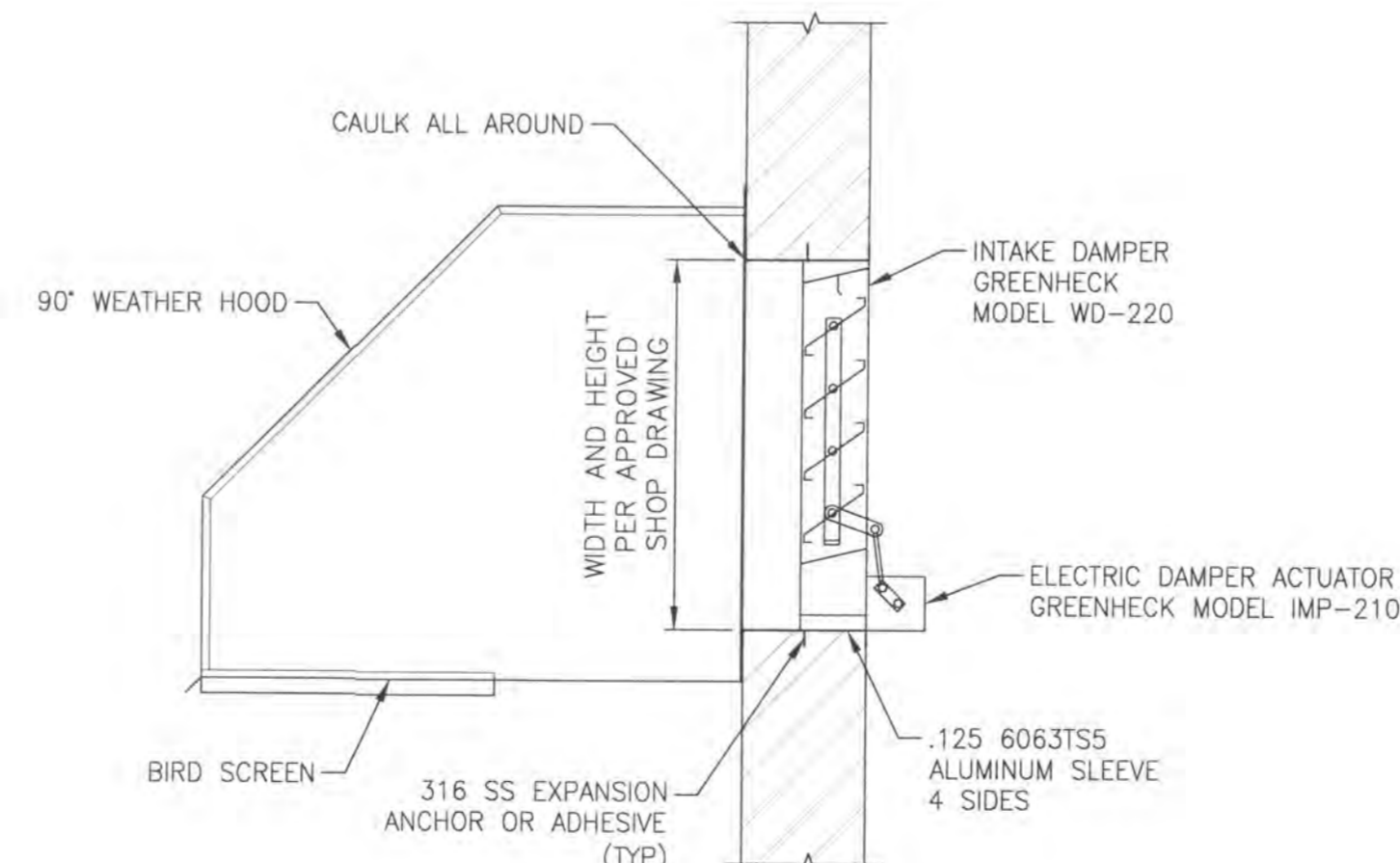
ELECTRIC UNIT HEATER DETAIL

NOT TO SCALE



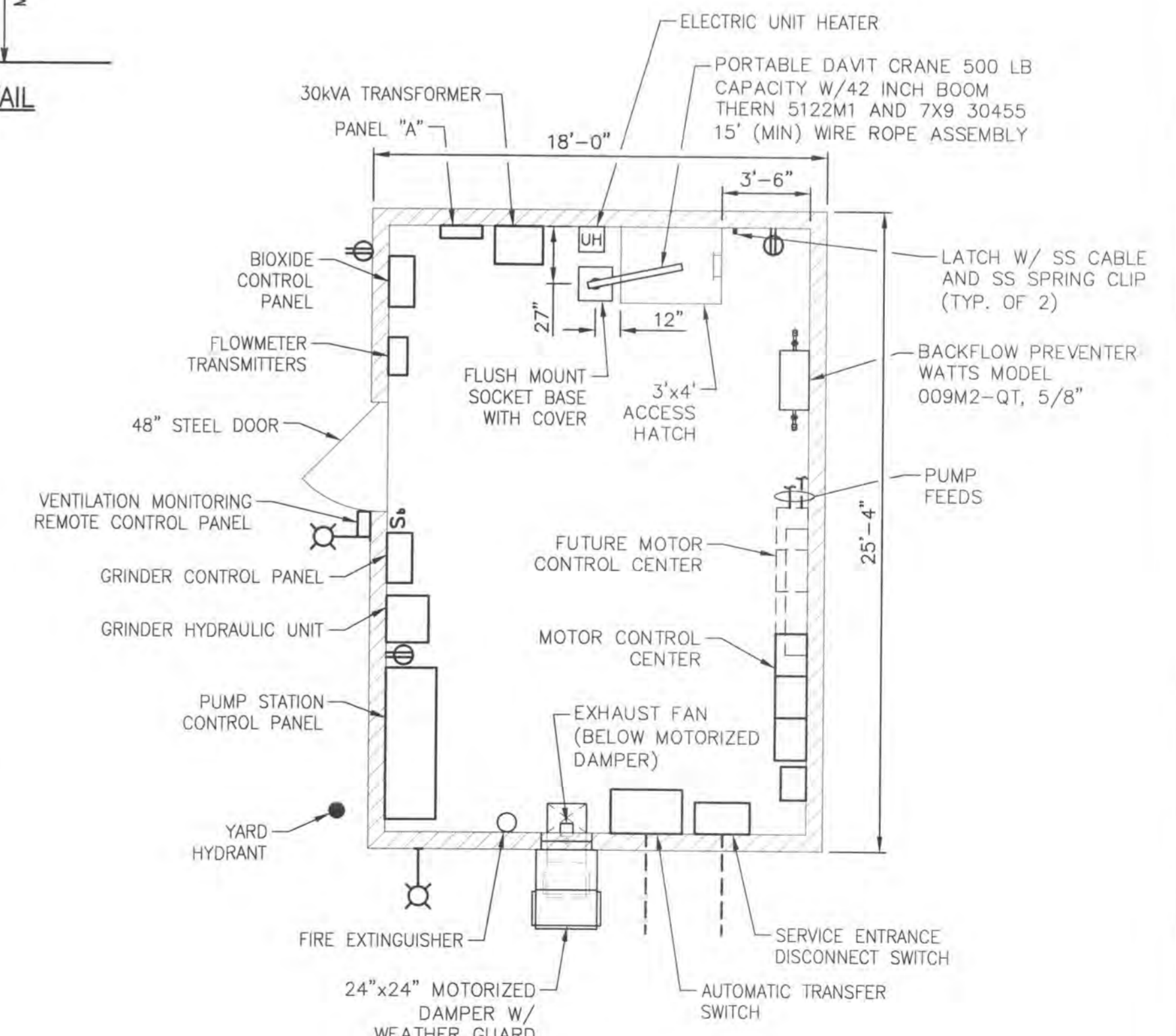
WALL MOUNTED EXHAUST FAN DETAIL

NOT TO SCALE



ELECTRIC MOTOR ACTUATED DAMPER DETAIL

NOT TO SCALE



PUMP STATION EQUIPMENT LAYOUT

NOT TO SCALE

U:\17408605\DWG\MISCELLANEOUS DETAILS.DWG
DATE: 3/2/2014 10:50 AM By: exmanian Printed: 7/16/2014 9:11 AM

ORIGINAL SHEET - ANSI D

File Name: MISCELLANEOUS DETAILS.dwg

Permit-Seal

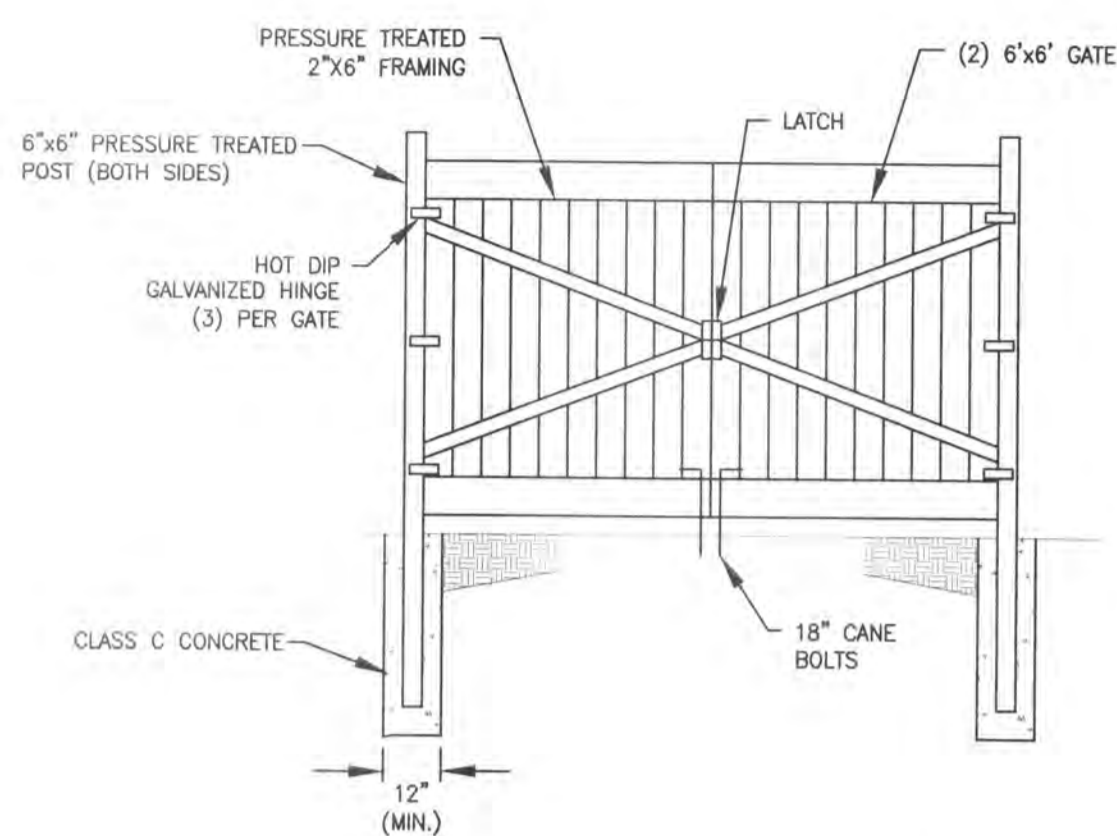
Client/Project
CONCORD/SCIOTO C

O'SHAUGHNESSY RE
REGIONAL PUMP STA
Delaware County, Ohio

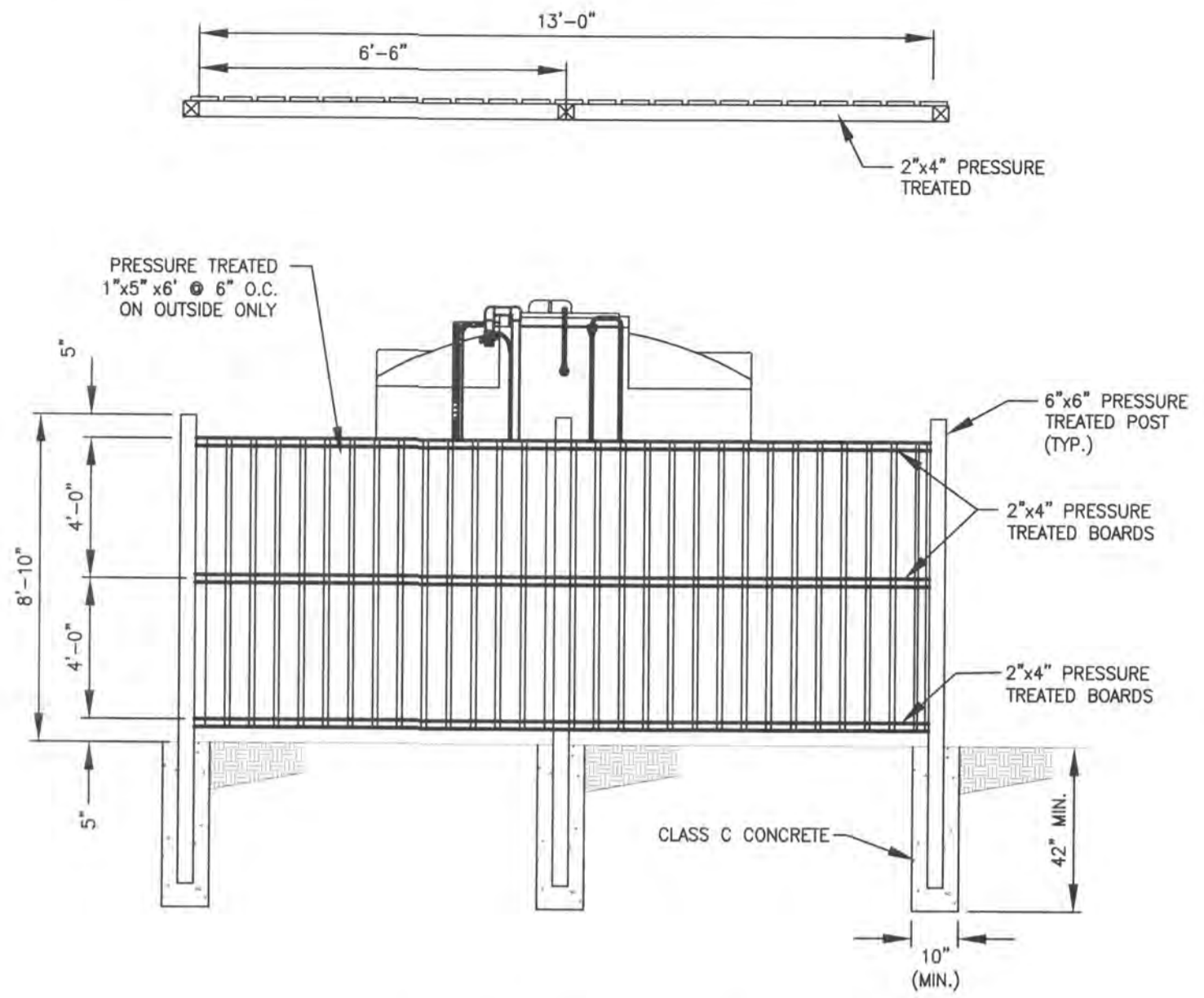
Title
MISCELLANEOUS D

Project No. 173408605 Scale AS

Drawing No. Sheet

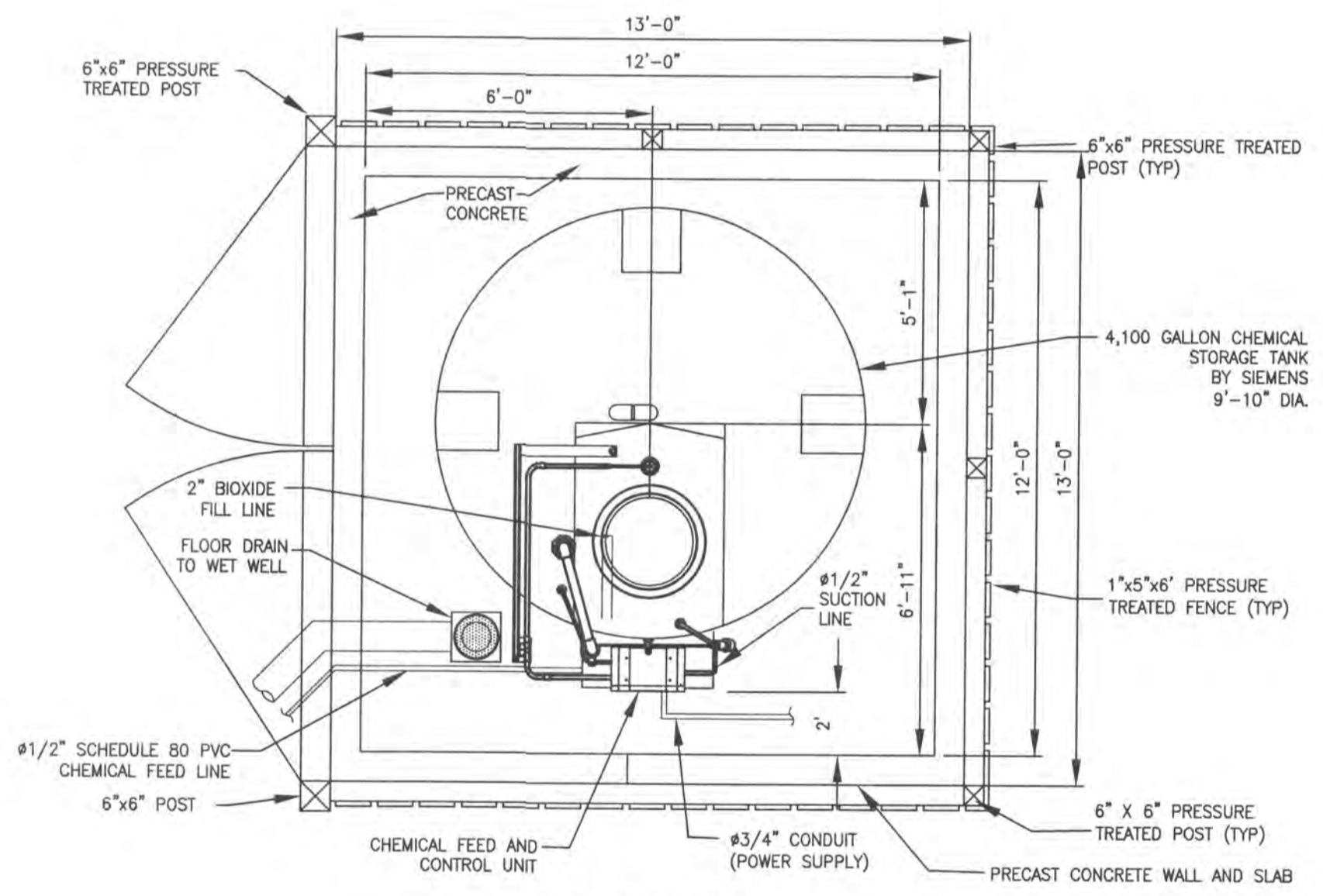


BIOXIDE SYSTEM
NOT TO SCALE

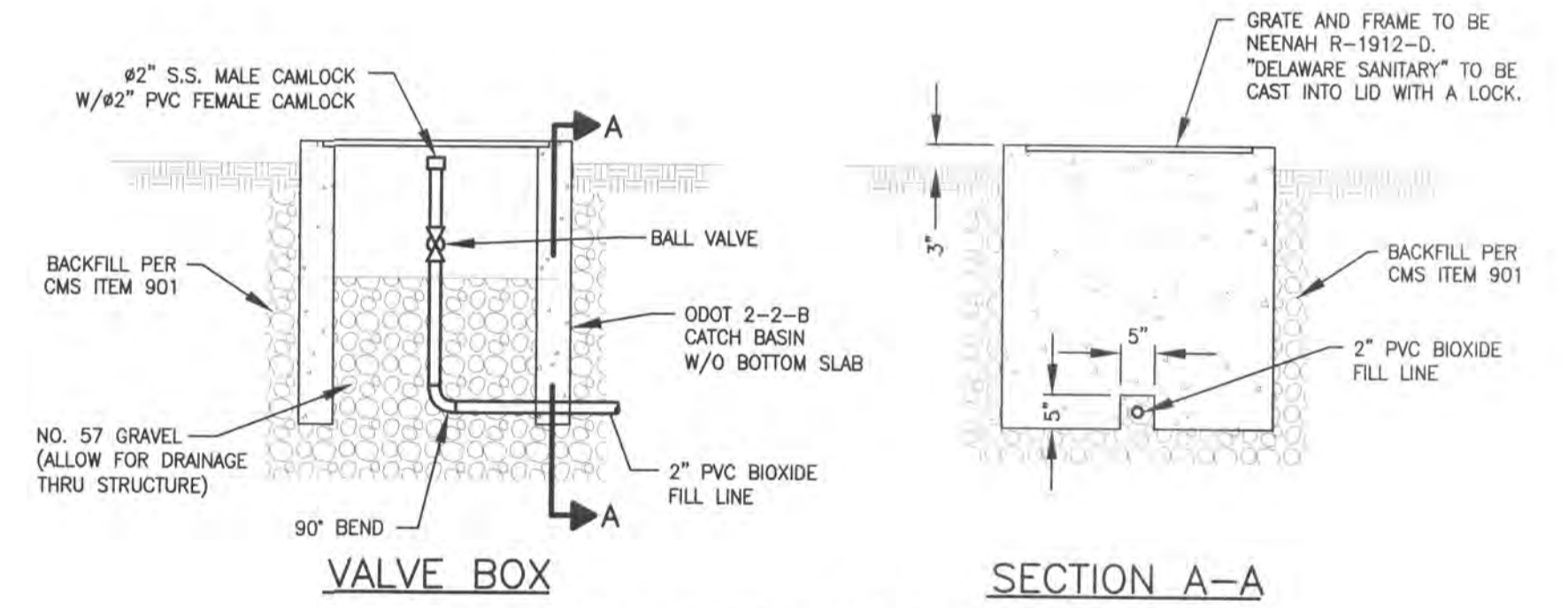


BIOXIDE SYSTEM FENCE DETAIL
NOT TO SCALE

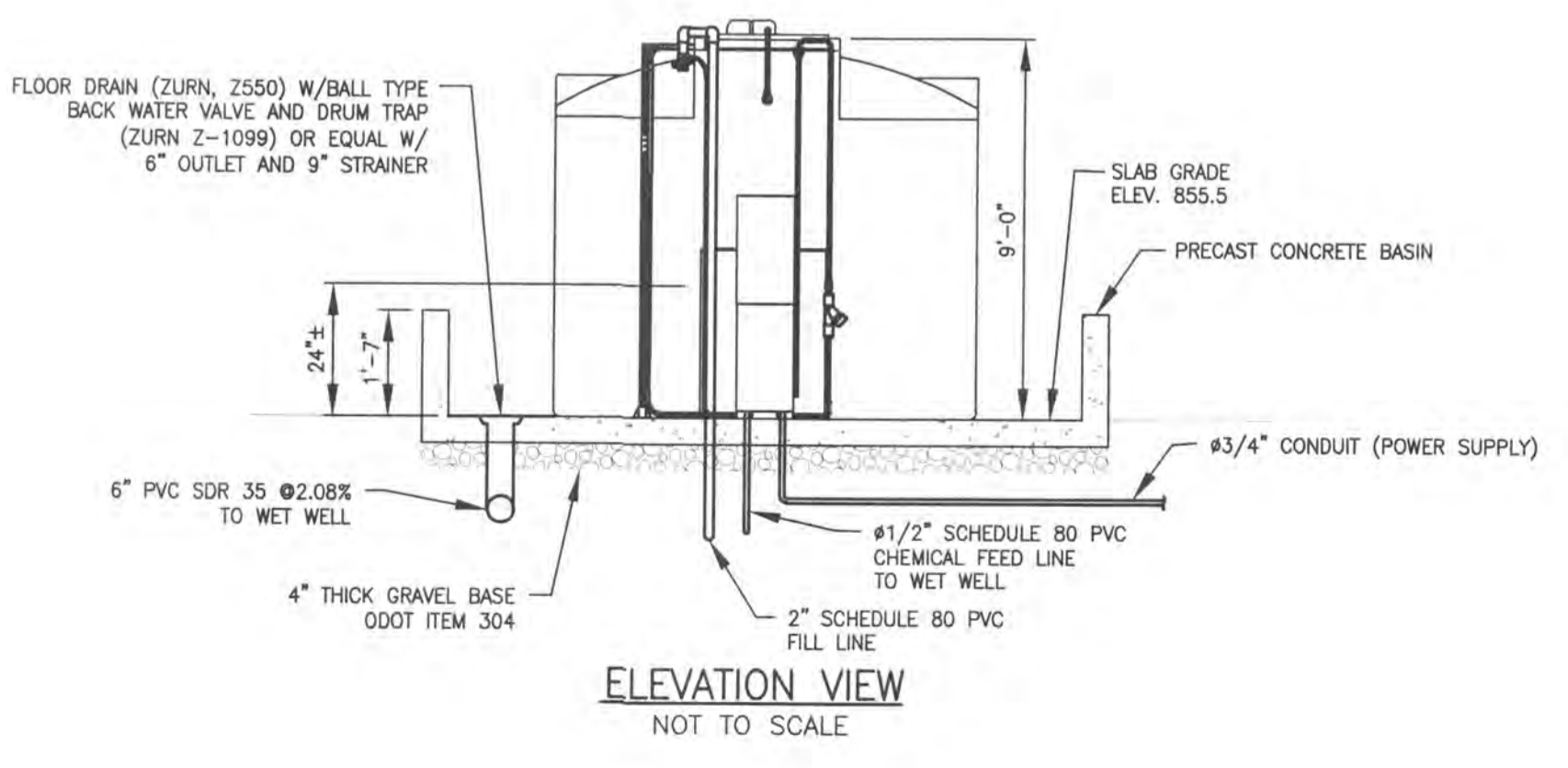
- NOTES:**
- CONTRACTOR TO FURNISH CONCRETE PAD WITH ALL IN-SLAB PIPING AND CONDUIT
 - ALL PIPING AND APPURTENANCES SHALL BE PVC, SCH 80
 - ALL ELECTRICAL CONDUIT AND WIRING BY CONTRACTOR
 - UTILIZE SWEEPS ONLY (NO ELBOWS) FOR CONDUIT DIRECTIONAL CHANGES
 - CONTRACTOR TO FURNISH AND INSTALL ALL NECESSARY SLAB OPENINGS, SLEEVES AND SEALANT
 - CONTRACTOR TO FURNISH AND INSTALL ALL NECESSARY HANGERS, SUPPORTS AND BLOCKING FOR PIPING
 - ALL HARDWARE REQUIRED FOR INSTALLATION SHALL BE STAINLESS STEEL, FURNISHED AND INSTALLED BY CONTRACTOR
 - SEE SUPPLEMENTAL STANDARD DETAILS FOR CHEMICAL FEED UNIT, CALIBRATION PEDESTAL, PIPING SUPPORT, STORAGE TANK, LEVEL GAUGE AND VARIOUS OTHER COMPONENTS
 - TWO COATS OF WEATHER PROOFING SEALER SHALL BE APPLIED TO ALL WOOD SURFACES
 - ALL WOOD SHALL BE PRESSURE TREATED OR APPROVE EQUAL
 - BIOXIDE TANK SHALL INCLUDE TWO VARIABLE FREQUENCY DRIVE PUMPS WITH ADJUSTABLE FEED RATE RANGE FROM 11-114 GPD AND A MAX DISCHARGE PRESSURE OF 40 PSI.
 - BIOXIDE TANK SHALL INCLUDE A LEVELING DEVICE CONNECTED TO THE STATIONS SCADA SYSTEM THAT MONITORS TANK LEVEL.



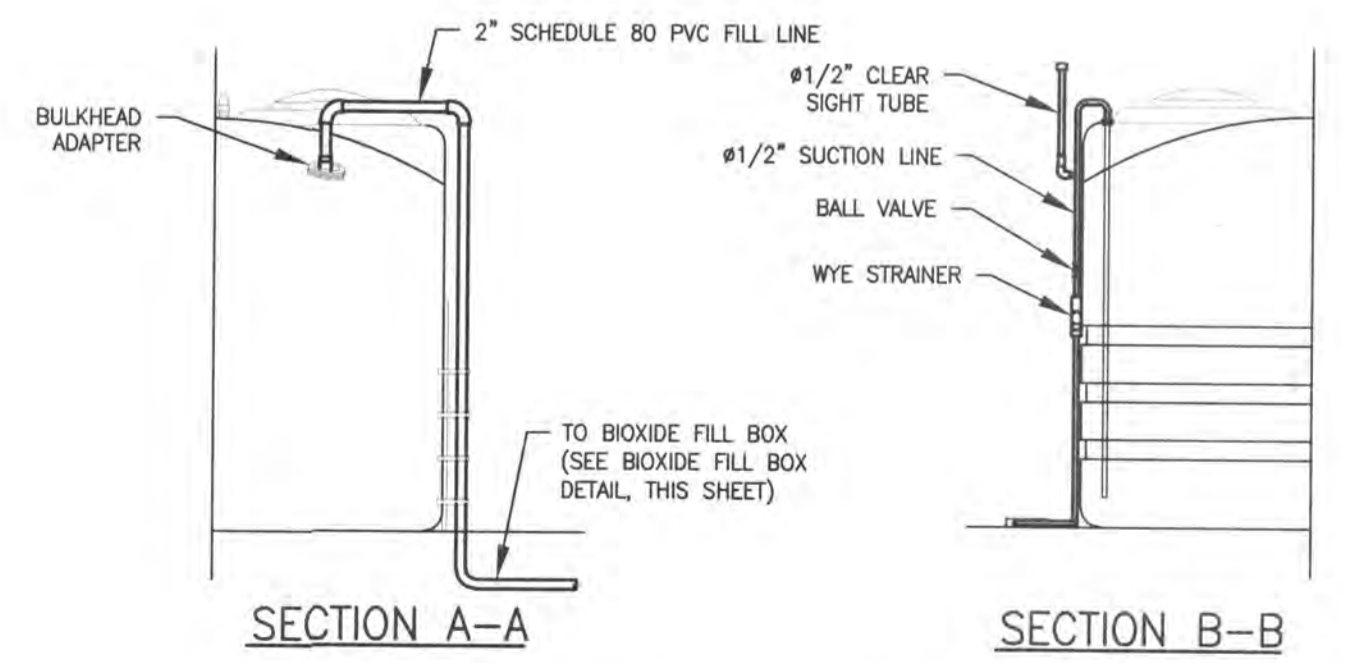
PLAN VIEW
NOT TO SCALE



BIOXIDE FILL BOX DETAIL AT EAST EDGE OF PUMP STATION ACCESS DRIVE
NOT TO SCALE



ELEVATION VIEW
NOT TO SCALE



FILL LINE DETAILS
NOT TO SCALE

U:\17408605\Delaware\BIOXIDE NOTES AND DETAILS.dwg
 Saved: 3/20/2014 5:19 PM By: aneamon Printer: 7/16/2014 8:11 AM
 ORIGINAL SHEET - ANSI D

File Name: BIOXIDE NOTES AND DET

Permit-Seal

Client/Project
CONCORD/SCIOT

O'SHAUGHNESSY
REGIONAL PUMP
Delaware County, Ohio

Title
BIOXIDE NOTES

Project No. 173408605 Scale

Drawing No. Sheet



Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus OH U.S.A.
43204
Tel. 614.486.4383
Fax. 614.486.4387
www.stantec.com

Copyright Reserved
The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Legend
SOIL BORING

Notes

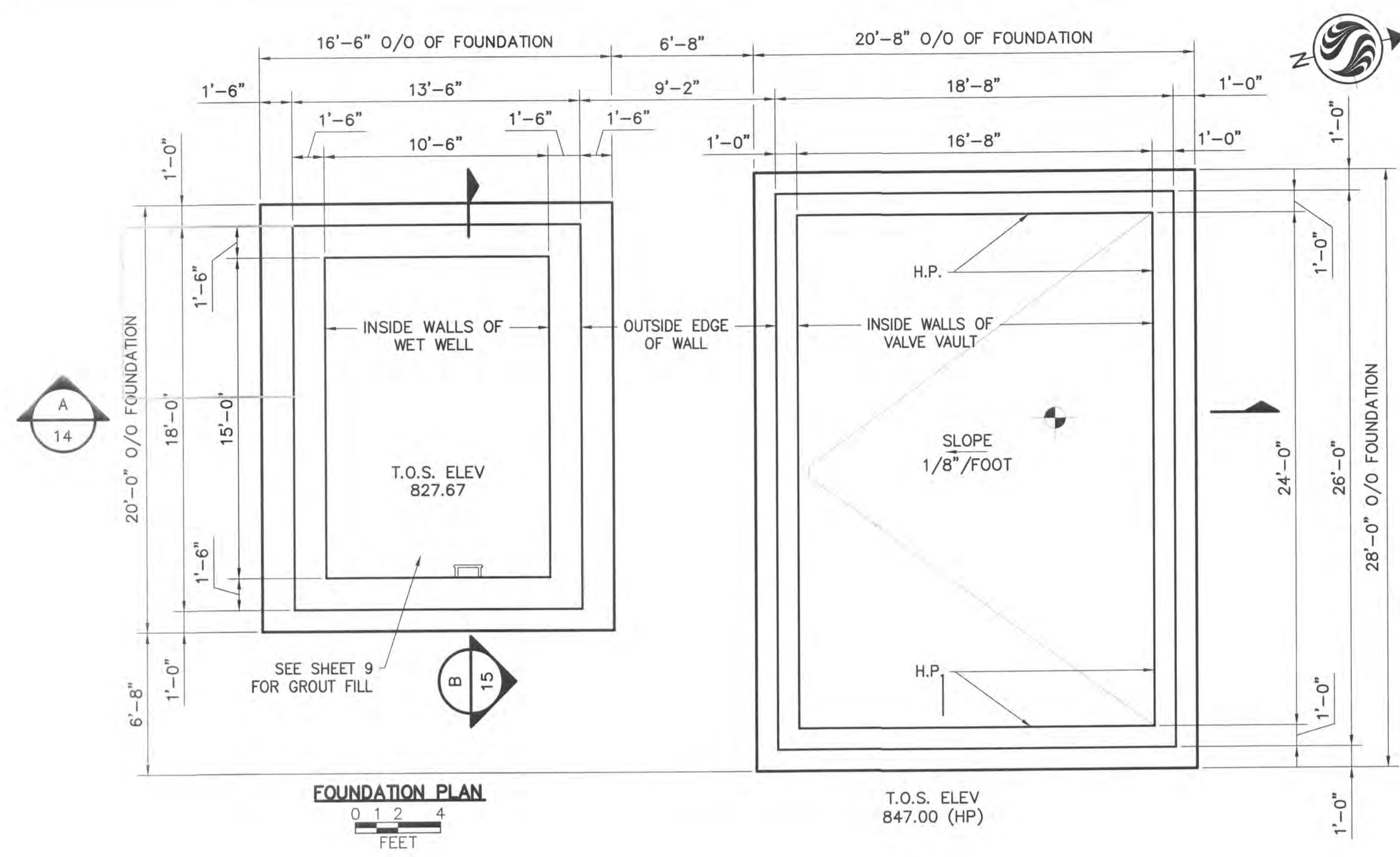
GENERAL STRUCTURAL NOTES

STRUCTURAL DESIGN CRITERIA

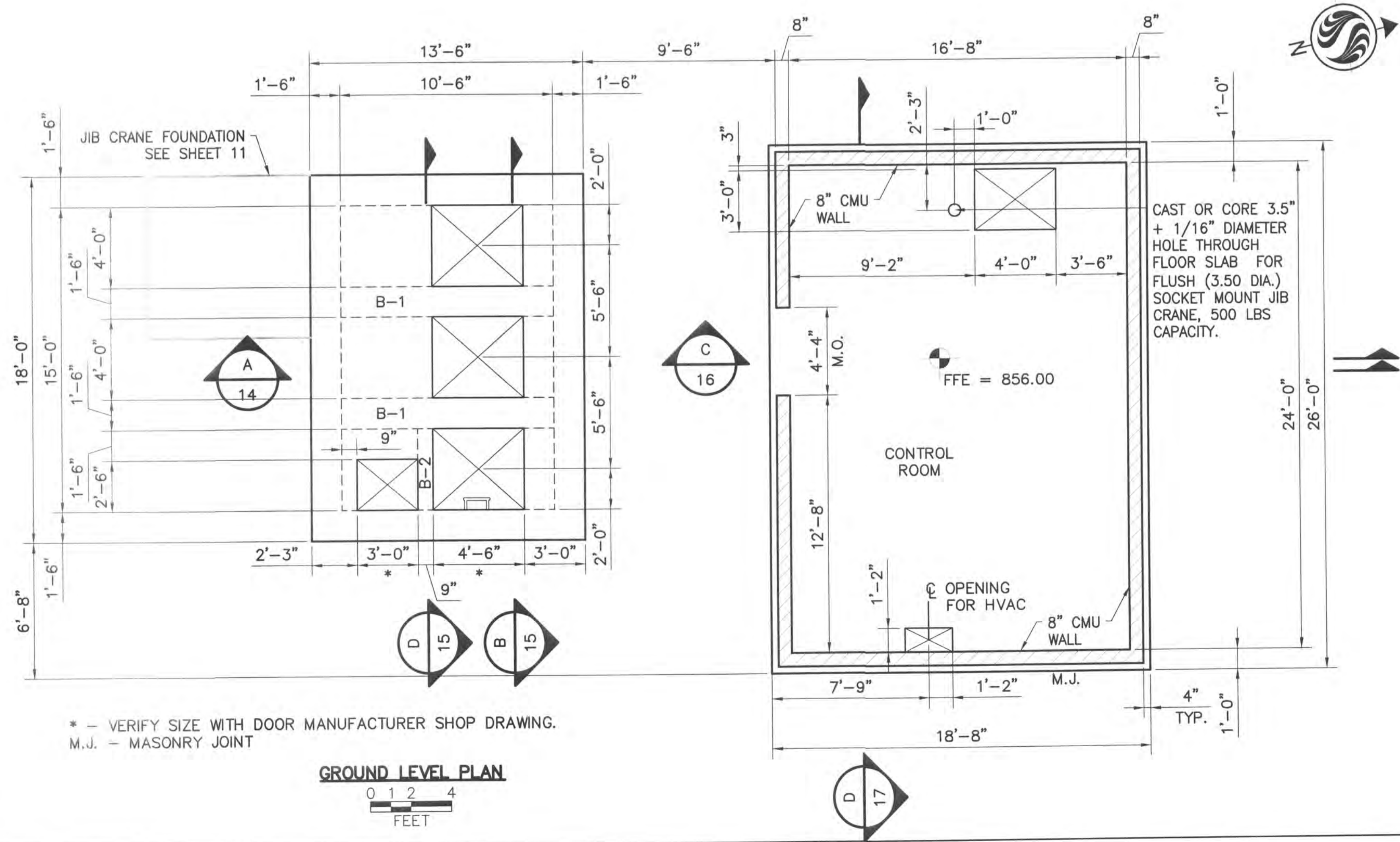
1. CONCRETE 28 DAY COMPRESSIVE STRENGTH EQUALS 4,000 PSI.
2. REINFORCING STEEL GRADE 60, ASTM A615, A616 OR A617.
3. CONCRETE STRUCTURES DESIGNED IN ACCORDANCE WITH "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES AND COMMENTARY (ACI 350-06).
4. WET WELL DESIGNED FOR BUOYANCY WITH 100 YEAR FLOOD ELEVATION EQUAL TO ELEVATION 854.1. FACTOR OF SAFETY (FOS) FOR THE FINAL CONDITION IS 1.32 WITH STRUCTURE EMPTY.
5. LATERAL EARTH PRESSURE PARAMETERS
 - a. DRAINED AT REST EQUIVALENT FLUID PRESSURE 51 PCF
 - b. UNDRAINED AT REST EQUIVALENT FLUID PRESSURE 86 PCF
6. FLOOR LIVE LOADS
 - a. WET WELL SLAB - 150 PSF
 - b. PUMP STATION SLAB CONTROL ROOM - 200 PSF
7. ROOF LIVE LOAD = 20 PSF
8. ROOF SNOW LOAD = 20 PSF

STRUCTURE SPECIFICATIONS

1. ODOT 2010 CONSTRUCTION AND MATERIAL SPECIFICATIONS
2. MASONRY
 - a. SPLIT FACE BLOCK ASTM C90
 - b. MORTAR - TYPE S
 - c. GROUT 3,000 PSI
 - d. COLOR SHALL BE LIGHT BUFF - OBERFIELD #1215
3. MANUFACTURED WOOD ROOF TRUSSES
 - a. SHOP DRAWINGS REQUIRED WITH A SEAL OF AN OHIO P.E. SEE SPECIFICATION 06172.
4. FIBERGLASS ASPHALT SHINGLES - 300 POUNDS PER SQUARE. SEE SPECIFICATION 07311.
 - a. 50 YEAR WARRANTY FOR MATERIAL. (NON-PRORATED)
 - b. 20 YEAR WARRANTY FOR WORKMANSHIP.
5. THE BUOYANCY UPLIFT (FOS) CALCULATED IS FOR THE FINAL CONDITION WITH THE WET WELL EMPTY. CONSTRUCTION CONDITIONS CAN OCCUR WHERE THE FOS MAY BE LESS THAN 1.2. THE CONTRACTOR SHALL TAKE SPECIAL MEANS DURING THESE EVENTS TO PREVENT FLOTATION FROM OCCURRING.
6. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AS NECESSARY TO SAFELY CONSTRUCT THESE STRUCTURES IN ACCORDANCE WITH OSHA 29 CFR 1926.0.
7. CONTRACTOR SHALL PROVIDE DEWATERING AS NECESSARY TO CONSTRUCT THESE STRUCTURES DRY.



FOUNDATION PLAN
0 1 2 4 FEET



GROUND LEVEL PLAN
0 1 2 4 FEET

* - VERIFY SIZE WITH DOOR MANUFACTURER SHOP DRAWING.
M.J. - MASONRY JOINT

U:\173408605\Drawings\SS-01.dwg
Sheet: 3/25/2014 3:19 PM BJC, cncocorator Printed: 7/16/2014 9:11 AM
ORIGINAL SHEET - ANS: 0

File Name: S-01.dwg
Permit-Seal

Client/Project
CONCORD/SCIOTO COMMUNITY AUTHORITY
O'SHAUGHNESSY RESERVOIR
REGIONAL PUMP STATION
Delaware County, Ohio

Title
WET WELL AND PUMP STATION
STRUCTURAL PLANS & GENERAL NOTES

Project No. 173408605
Scale AS NOTED
Drawing No. Sheet Revision

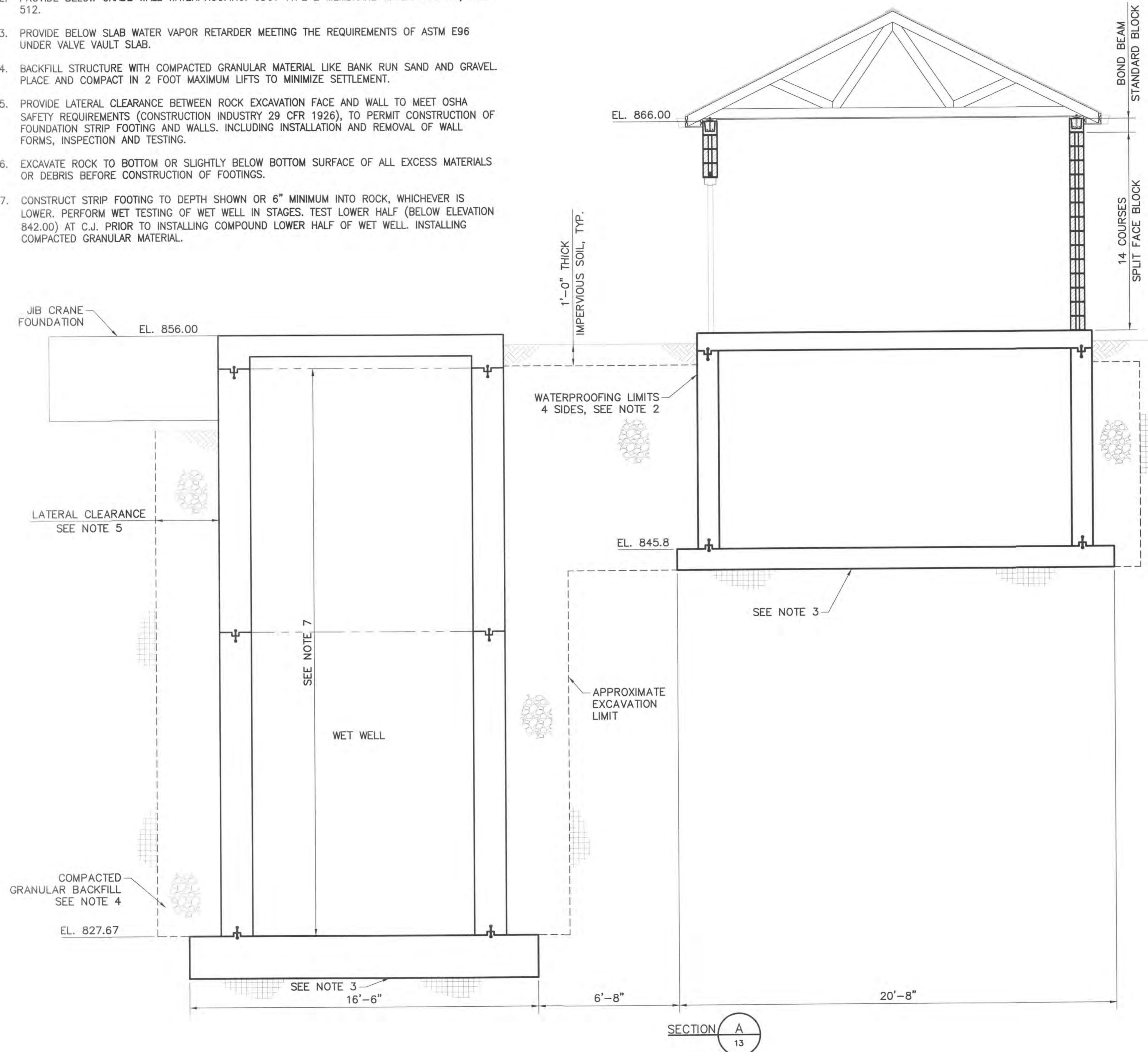


Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
 The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

NOTES:

1. SEE SHEET 13 FOR STRUCTURAL GENERAL NOTES.
2. PROVIDE BELOW GRADE WALL WATERPROOFING: ODOT TYPE 2 MEMBRANE WATERPROOFING, ITEM 512.
3. PROVIDE BELOW SLAB WATER VAPOR RETARDER MEETING THE REQUIREMENTS OF ASTM E96 UNDER VALVE VAULT SLAB.
4. BACKFILL STRUCTURE WITH COMPACTED GRANULAR MATERIAL LIKE BANK RUN SAND AND GRAVEL. PLACE AND COMPACT IN 2 FOOT MAXIMUM LIFTS TO MINIMIZE SETTLEMENT.
5. PROVIDE LATERAL CLEARANCE BETWEEN ROCK EXCAVATION FACE AND WALL TO MEET OSHA SAFETY REQUIREMENTS (CONSTRUCTION INDUSTRY 29 CFR 1926), TO PERMIT CONSTRUCTION OF FOUNDATION STRIP FOOTING AND WALLS. INCLUDING INSTALLATION AND REMOVAL OF WALL FORMS, INSPECTION AND TESTING.
6. EXCAVATE ROCK TO BOTTOM OR SLIGHTLY BELOW BOTTOM SURFACE OF ALL EXCESS MATERIALS OR DEBRIS BEFORE CONSTRUCTION OF FOOTINGS.
7. CONSTRUCT STRIP FOOTING TO DEPTH SHOWN OR 6" MINIMUM INTO ROCK, WHICHEVER IS LOWER. PERFORM WET TESTING OF WET WELL IN STAGES. TEST LOWER HALF (BELOW ELEVATION 842.00) AT C.J. PRIOR TO INSTALLING COMPOUND LOWER HALF OF WET WELL. INSTALLING COMPACTED GRANULAR MATERIAL.



SECTION A
13

File Name: S-02.dwg
 Dwn. Chkd. Dsgn. YY.MM.DD

Permit-Seal

Client/Project
 CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR
 REGIONAL PUMP STATION
 Delaware County, Ohio

Title
 SECTIONS 1 OF 4

Project No. 173408605
 Scale 3/8" = 1'
 Drawing No. Sheet Revision

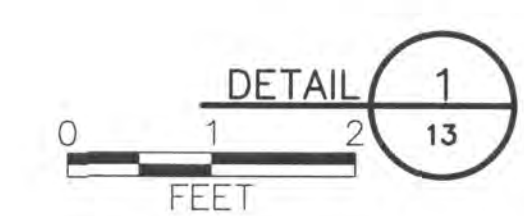
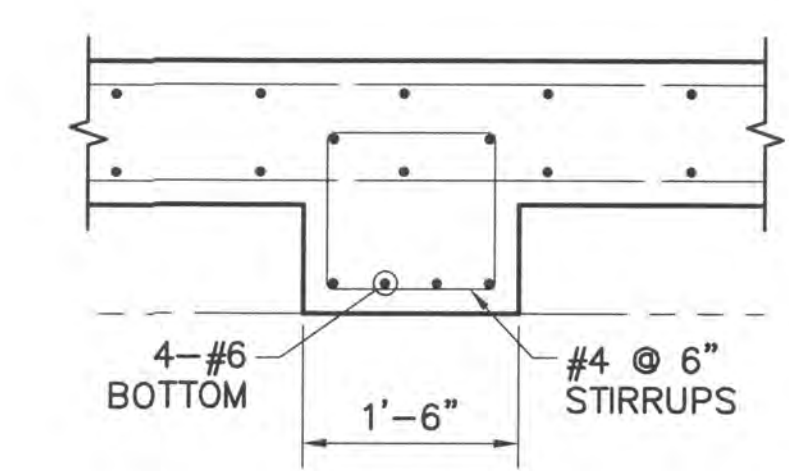
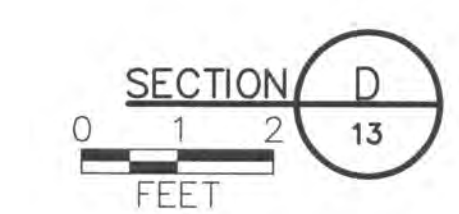
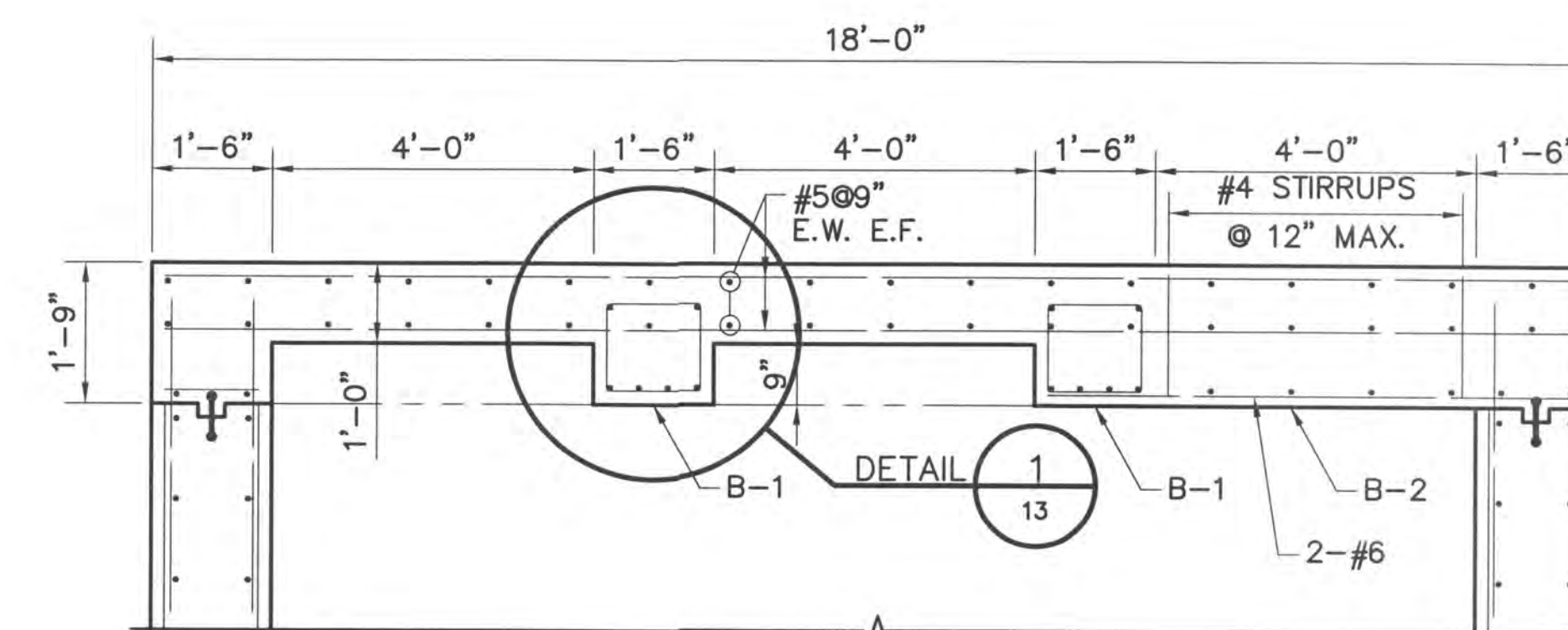
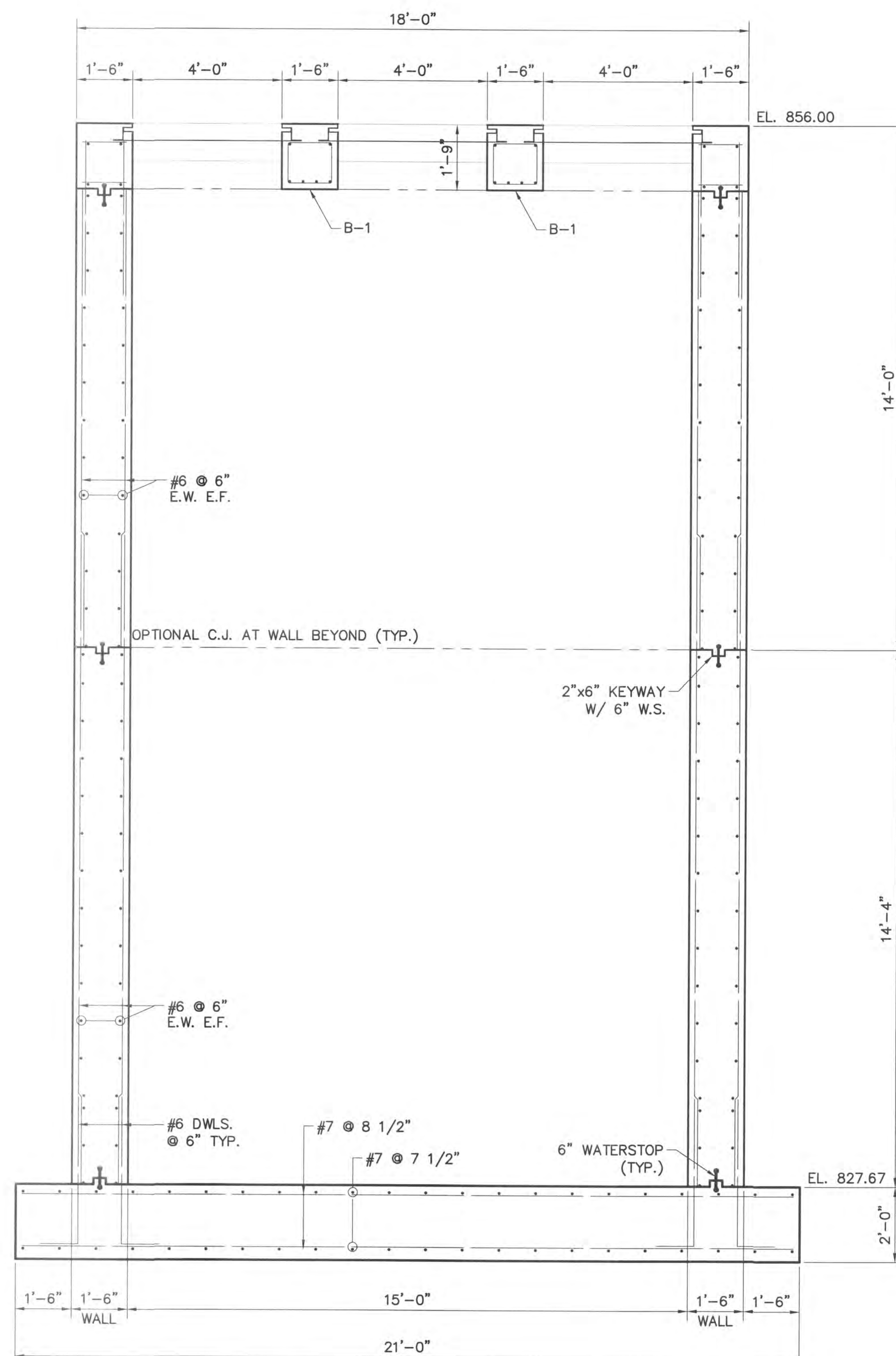
U:\173408605\Drawings\S\S-02.dwg
 Saved: 3/28/2014 5:19 PM By: libanilly Printed: 7/16/2014 9:11 AM
 ORIGINAL SHEET -- ANSI D



Stantec

Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
 The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.



U:\17408605\dwg\S\S-03.dwg Saved: 3/29/2014 5:15 PM By: ewhemmer Printed: 7/16/2014 9:11 AM ORIGINAL SHEET - ANSI D

File Name: S-03.dwg
 Dwn. Chkd. Dsgn. YY.MM.DD

Permit-Seal

Client/Project
 CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR
 REGIONAL PUMP STATION
 Delaware County, Ohio

Title
 WET WELL SECTIONS 2 OF 4

Project No. 173408605	Scale AS NOTED
Drawing No.	Sheet 15 of 25
Revision	0



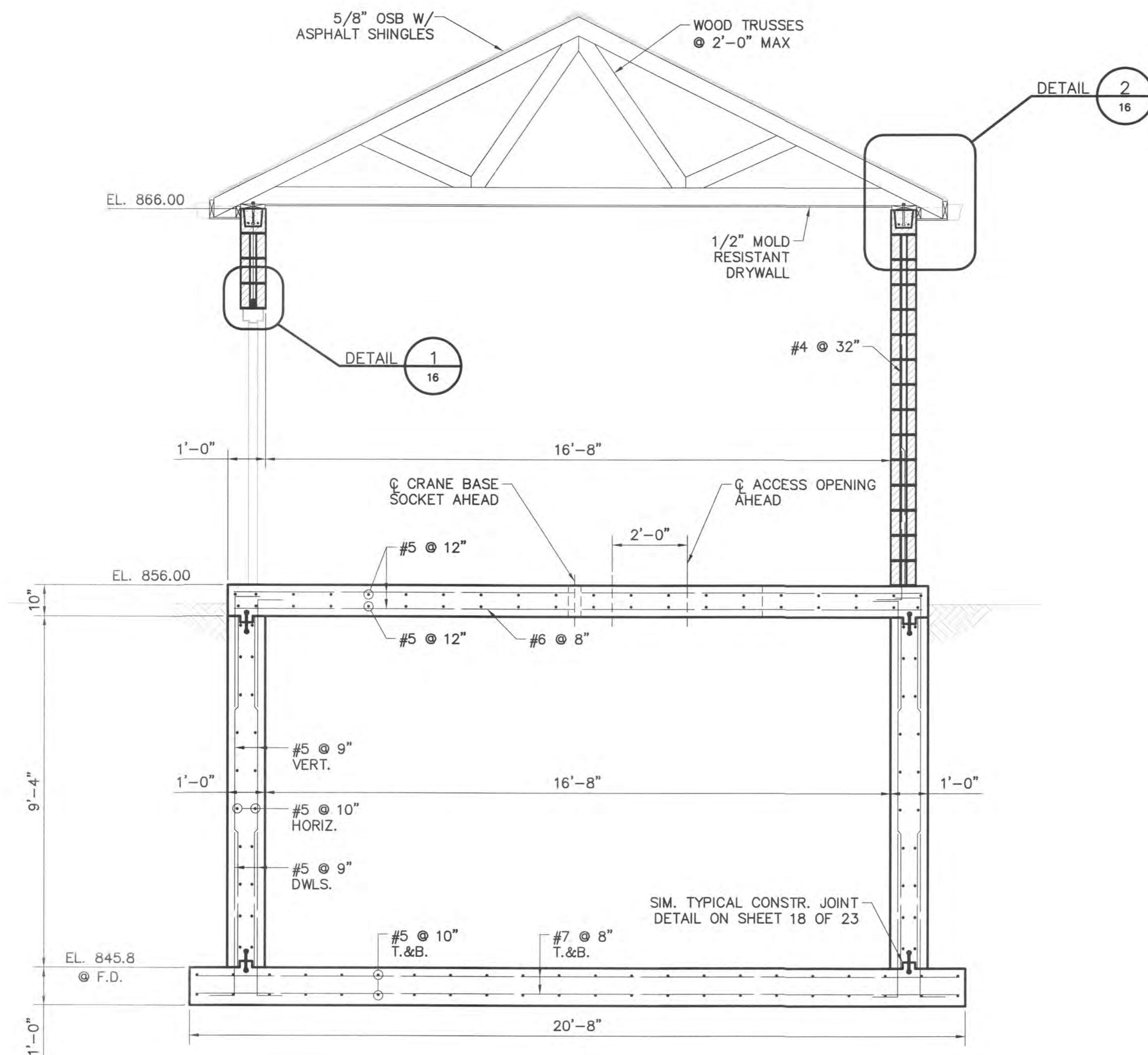
Stantec Consulting Services Inc.
 1500 Lake Shore Drive, Suite 100
 Columbus OH U.S.A.
 43204
 Tel. 614.486.4383
 Fax. 614.486.4387
 www.stantec.com

Stantec

Copyright Reserved

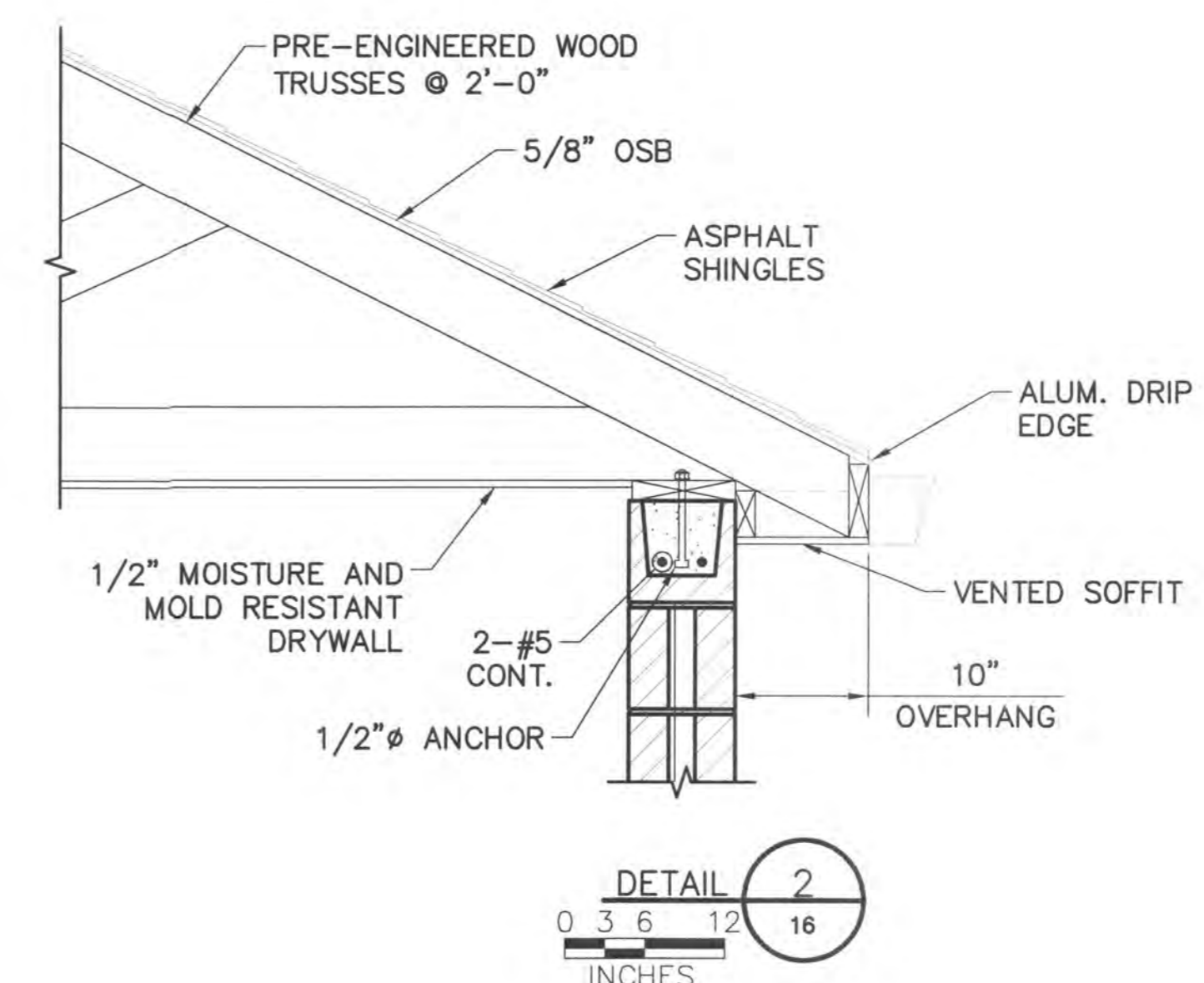
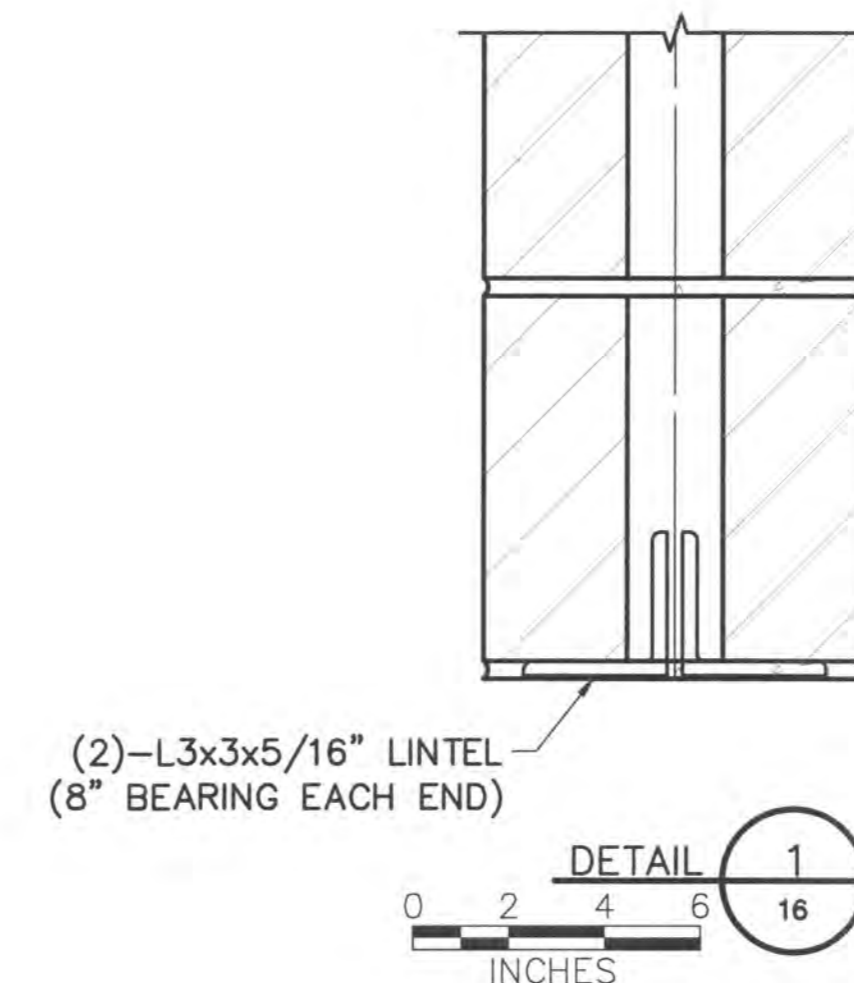
The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
 The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Notes



NOTES:

1. SEE SHEET 13 FOR STRUCTURAL GENERAL NOTES.
2. SEE SHEET 14 FOR EXCAVATION NOTES AND DETAILS.



I:\173408605\Drawings\173408605.dwg
 Saved: 3/28/2014 3:58 PM By: alicia.carter
 Printed: 7/16/2014 9:11 AM
 ORIGINAL SHEET - ANSI D

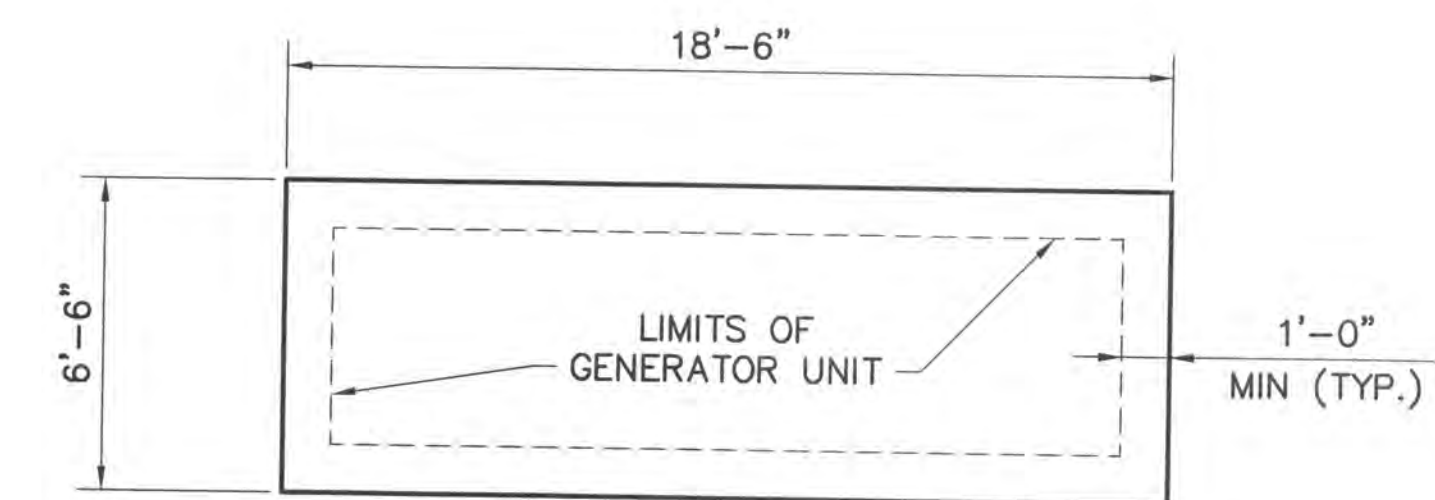
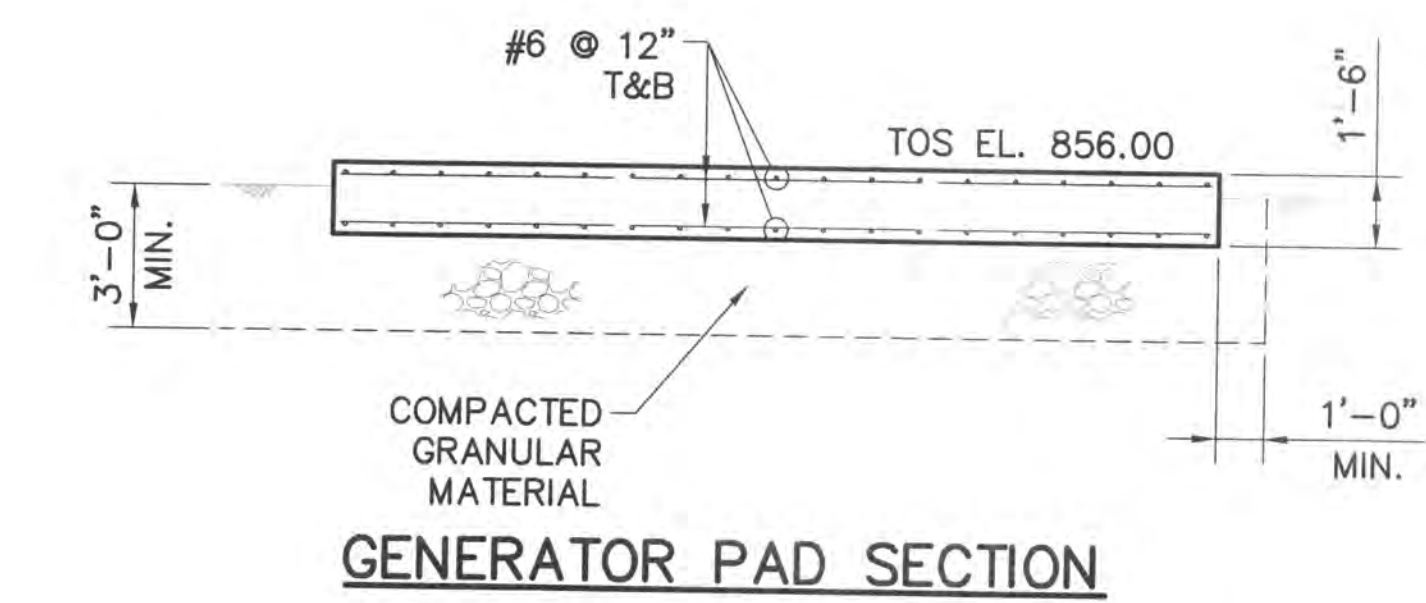
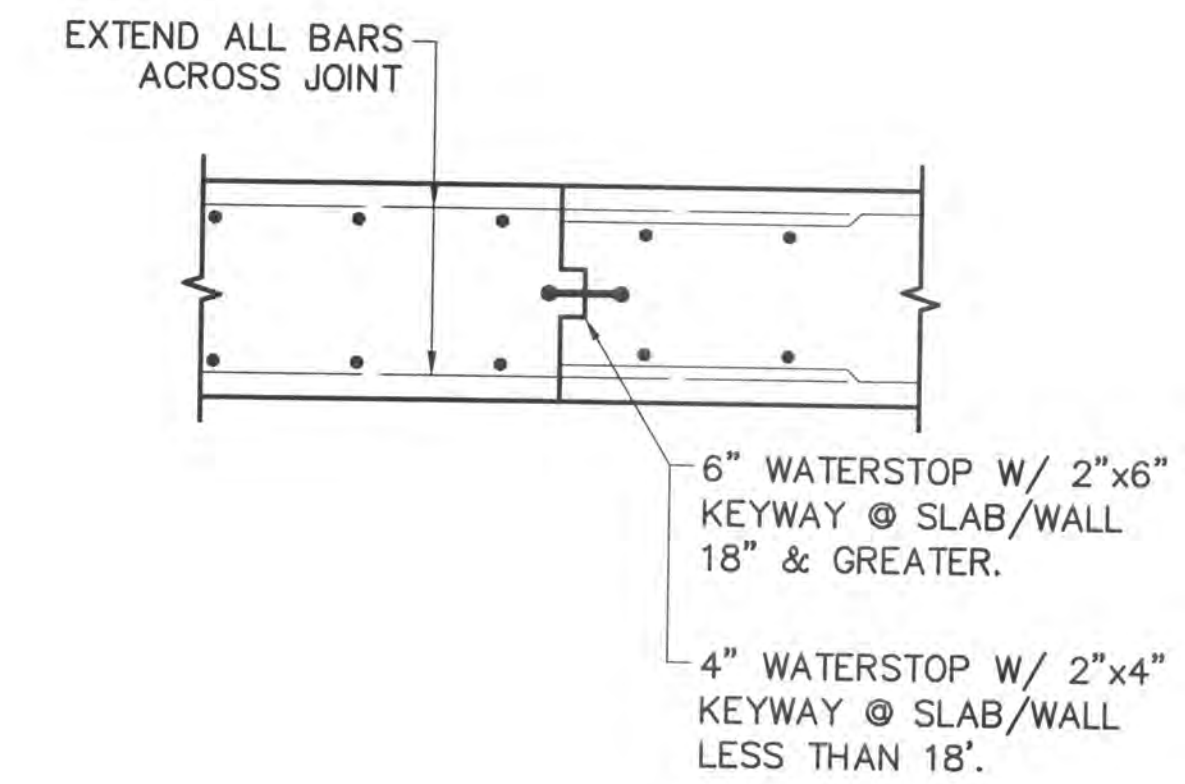
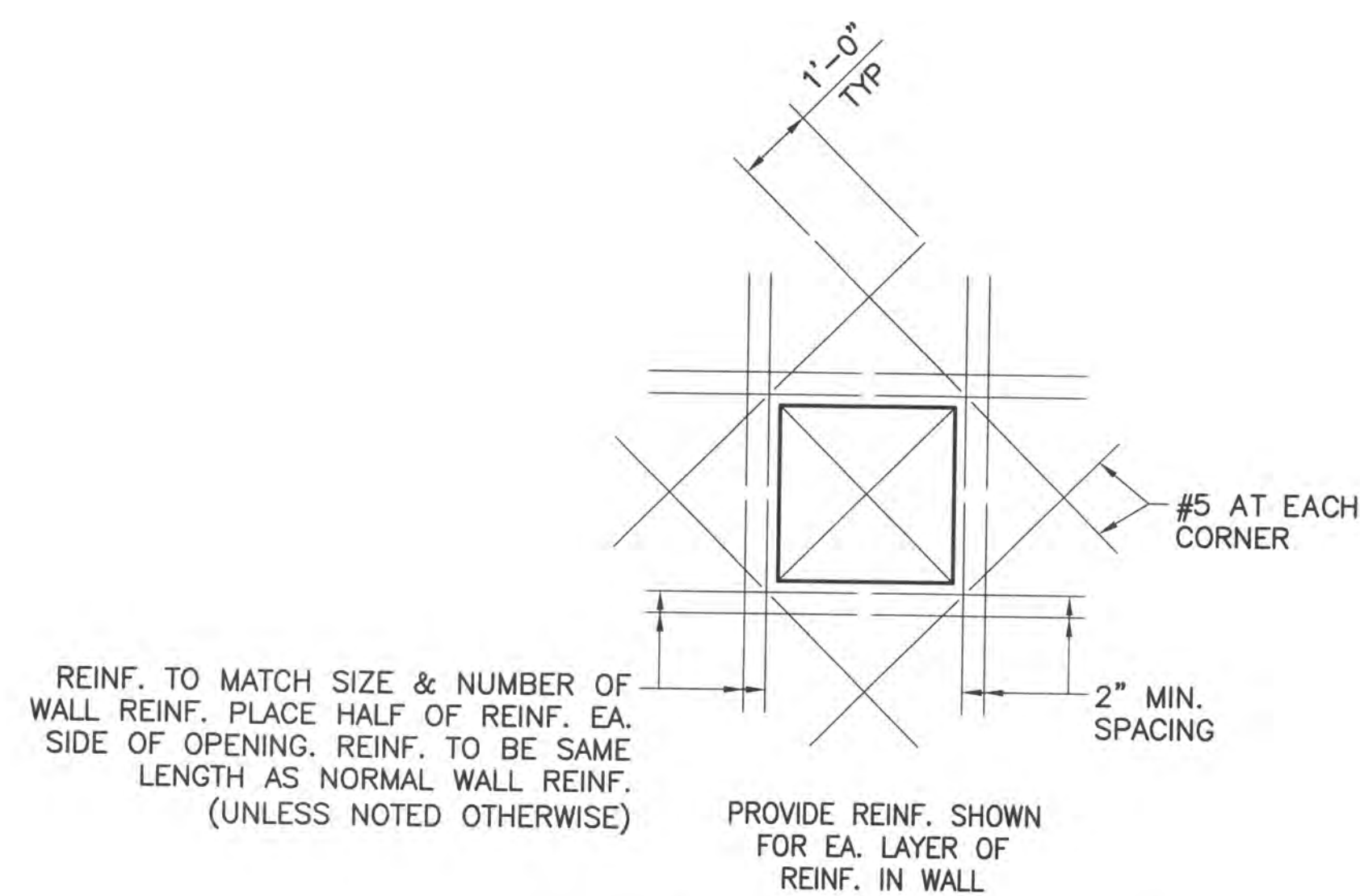
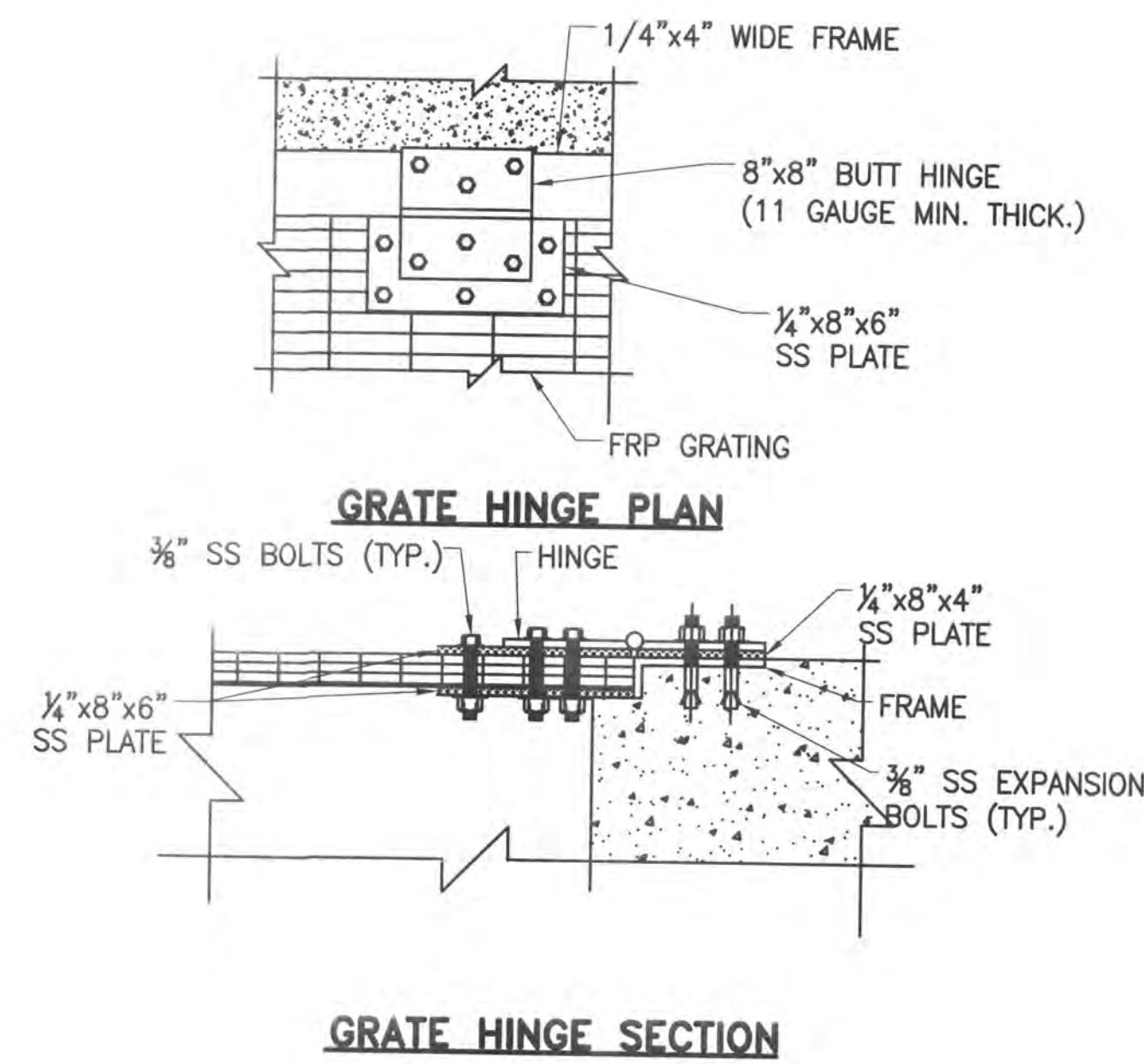
File Name: S-04.dwg
 Permit-Seal

Client/Project
 CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR
 REGIONAL PUMP STATION
 Delaware County, Ohio

Title
 SECTIONS 3 OF 4

Project No. 173408605
 Drawing No. 173408605
 Scale AS NOTED
 Sheet 16 of 25
 Revision 0



Stantec Consulting Services Inc.
 1500 Lake Shore Drive, Suite 100
 Columbus OH U.S.A.
 43204
 Tel. 614.486.4383
 Fax. 614.486.4387
 www.stantec.com

Copyright Reserved
 The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
 The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

File Name: S-07.dwg
 Permit-Seal
 Dwn. Chkd. Dsgn. YY.MM.DD

Client/Project
 CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR
 REGIONAL PUMP STATION
 Delaware County, Ohio

Title
 TYPICAL DETAILS

Project No. 173408605 Scale AS NOTED
 Drawing No. Sheet Revision

C:\173408605\Drawings\SS\07.dwg, Version: 1/18/2014 9:11 AM
 Scale: 1/2"=1'-0" Plot Date: 1/18/2014 9:11 AM
 Original Sheet - ANSI D



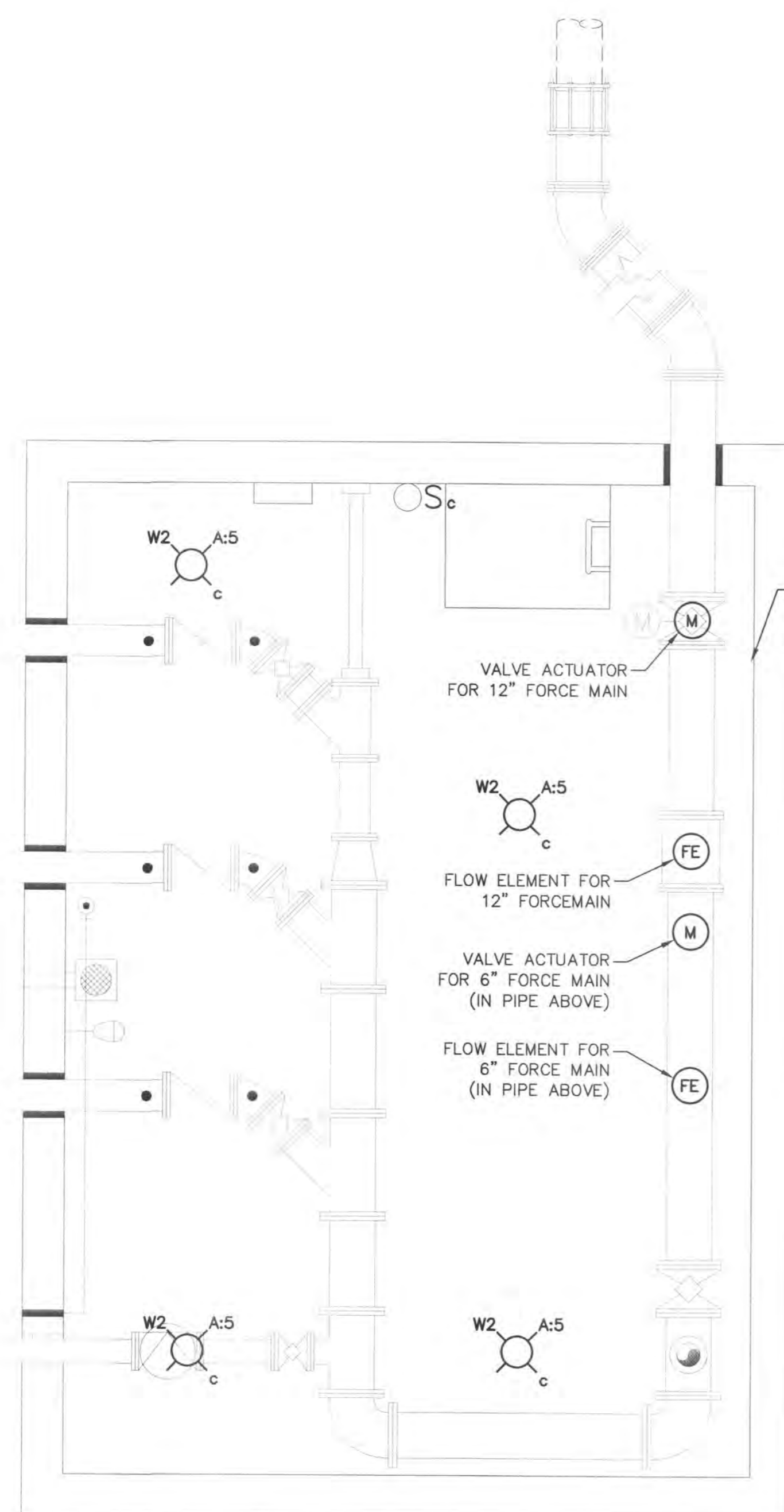
Stantec Consulting Services Inc.
 1500 Lake Shore Drive, Suite 100
 Columbus OH U.S.A.
 43204
 Tel. 614.486.4383
 Fax. 614.486.4387
 www.stantec.com

Stantec

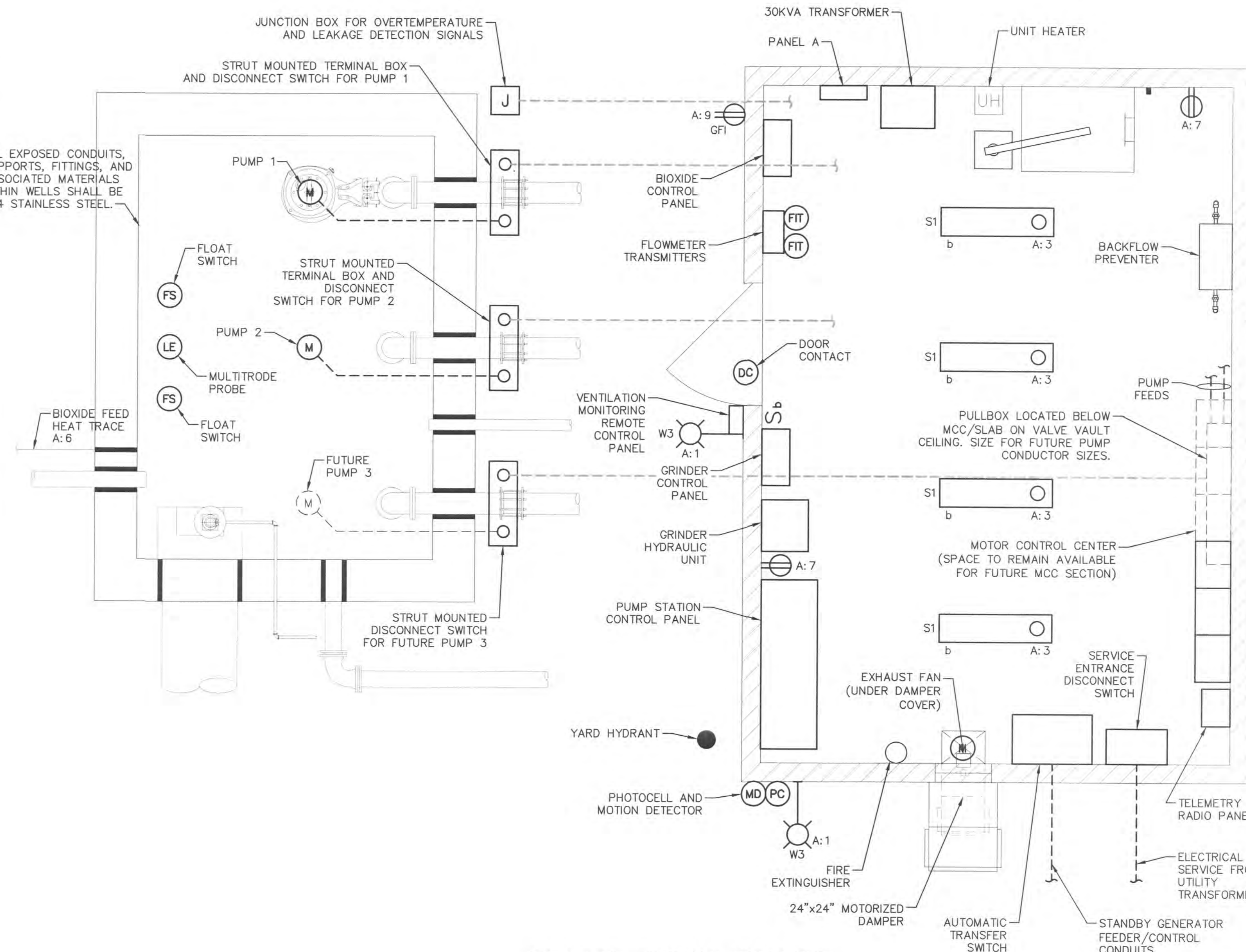
Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. Do NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
 The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

NOTE: FIXTURE SCHEDULE					
FIXTURE NUMBER, LETTER PREFIX INDICATES TYPE OF MOUNTING AS FOLLOWS:					
CL-CEILING MOUNTED; S-STEM SUSPENDED; W-WALL MOUNTED; R-CEILING RECESSED;					
WR-WALL RECESSED; CV-COVE MOUNTED; UC-UNDER CABINET; RF-ROOF MOUNTED;					
P-POST; GR-GROUND; H-MOUNTED IN HOOD.					
FIXTURE NUMBER	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	REMARKS
S1	ENCLOSED AND GASKETED ACRYLIC LENS FIXTURE WITH FIBERGLASS HOUSING AND ELECTRONIC BALLAST	LITHONIA	DMW 2 32 120 GEB	(2) 32W T8	CONTROL BY SWITCH NEAR DOOR. PROVIDE LABEL INDICATING USE.
W2	EXPLOSION PROOF LIGHT WITH COMPACT FLUORESCENT LAMP AND GLASS GLOBE WITH GUARD	CANLET	6B02FW26H120G-GSC	(1) 26W TRT	CONTROL BY SWITCH NEAR DOOR. PROVIDE LABEL INDICATING USE; MOUNT IN PIT, FIELD COORDINATE LOCATION
W3	WET LOCATION LISTED FLOODLIGHT WITH WIRE GUARD	GE	W1SR17M0H1LSN3DBQ	(1) 175 W MH	CONTROL BY MOTION DETECTOR AND PHOTO CELL (PRECISION LUMATROL ST-15) IN SERIES. PROVIDE LABEL INDICATING USE; FIELD COORDINATE LOCATION.



VALVE VAULT POWER PLAN



GRADE LEVEL ELECTRICAL POWER PLAN

File Name: Pump Station Electrical Power Plan.dwg
 Dwn. Chkd. Dsgn. YY.MM.DD

Permit-Seal

Client/Project
 CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR
 REGIONAL PUMP STATION
 Delaware County, Ohio

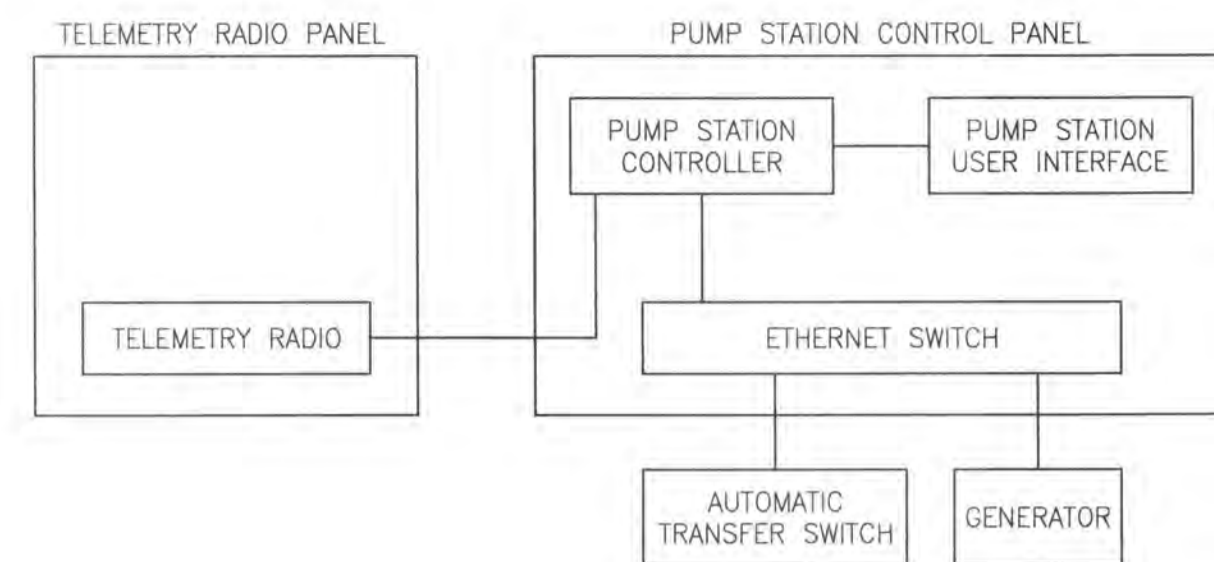
Title
 PUMP STATION POWER PLANS

Project No. 173408605
 Drawing No. _____
 Scale: NOT TO SCALE
 Sheet _____ of _____
 Revision _____

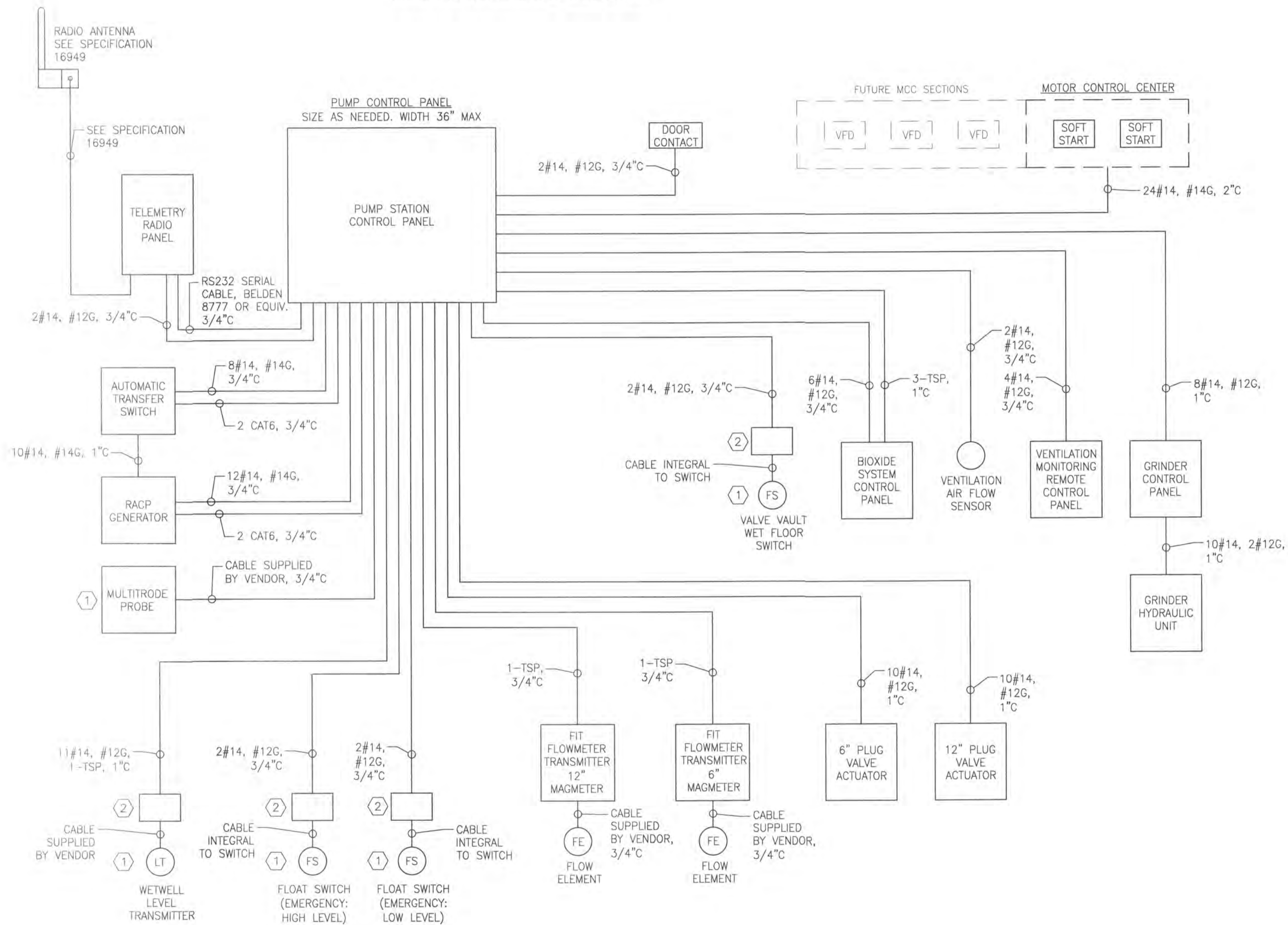


Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
 The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.



PUMP STATION NETWORK DIAGRAM



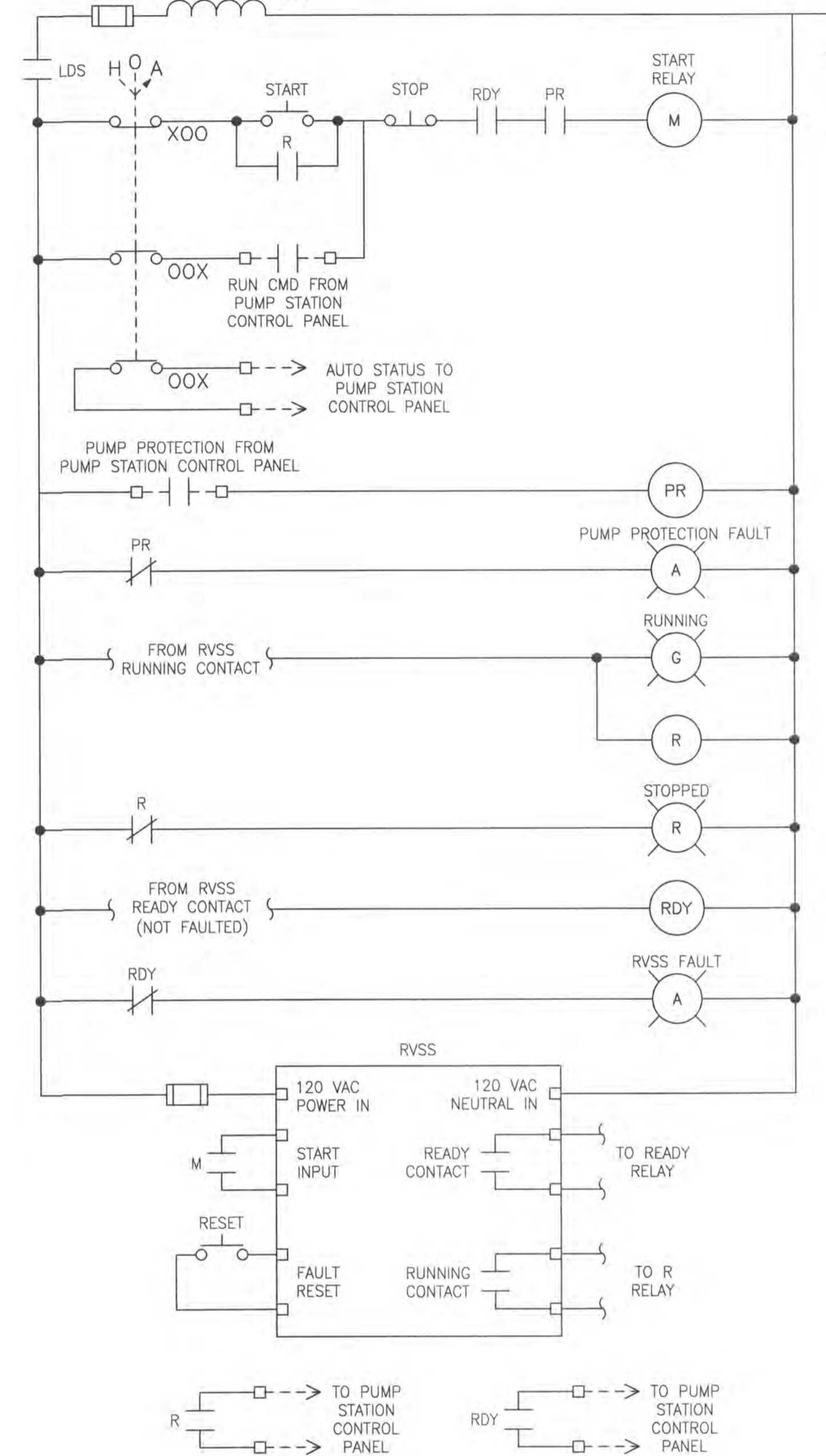
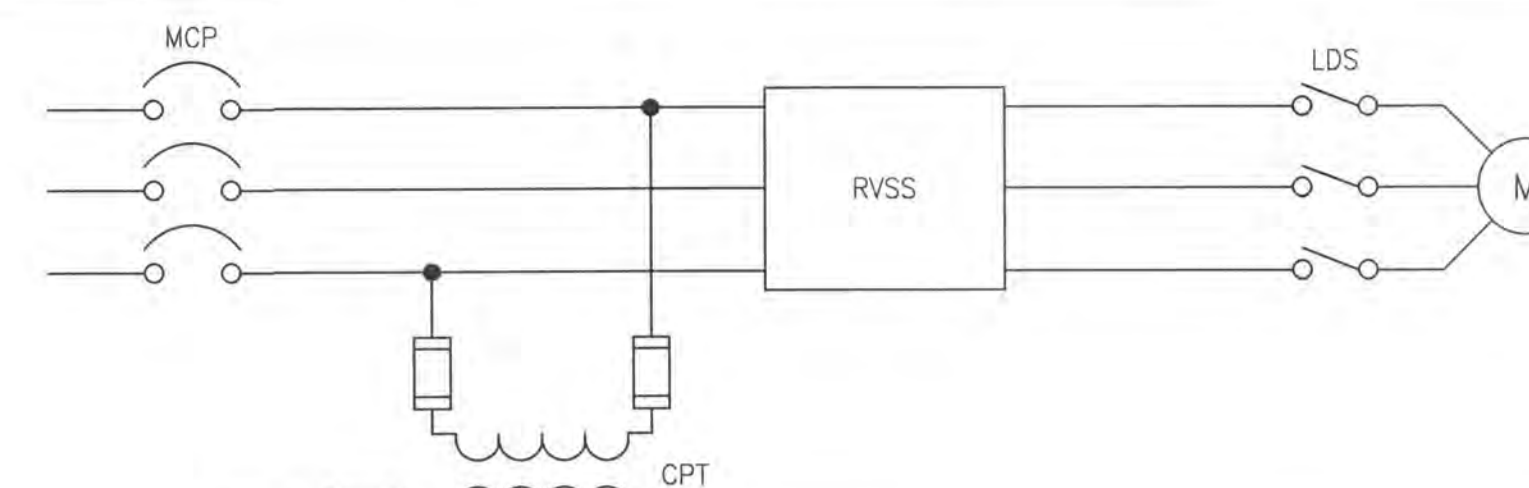
CONTROLS DIAGRAM

CONTROL PANEL INSTALLATION REQUIREMENTS

1. WIRE ALL POWER AND DEVICES TO THE CONTROL PANELS AS DETAILED ON THE CONTRACT DRAWINGS.
2. CLEARLY IDENTIFY AND MARK ALL CONDUITS ENTERING AND LEAVING THE CONTROL PANELS AS TO THEIR DESTINATION.
3. KEEP ALL FIELD WIRING NEAT AND BUNDLED INSIDE THE CONTROL PANELS. ALL FIELD WIRING SHALL BE CONTAINED IN WIREWAY PROVIDED WITHIN THE CONTROL PANELS.
4. TAKE CARE TO KEEP CONDUIT FILINGS FROM ENTERING PANELS WHEN INSTALLING CONDUITS.

CODED NOTES

1. ALL SIGNALS INTO AND OUT OF WET WELL TO BE SEALED PER NEC REQUIREMENTS.
2. NEMA 4X TERMINAL BOX WITH QUICK RELEASE SIZE LATCHES TO BE MOUNTED AT TOP OF WET WELL. SIZE TO BE COORDINATED WITH WIRING REQUIREMENTS.



PUMP CONTROL SCHEMATIC

- NOTES:
1. ALL COMPONENTS LOCATED WITHIN PUMP RVSS MCC SECTION EXCEPT WHERE NOTED OTHERWISE.
 2. TYPICAL FOR PUMP 1 AND PUMP 2

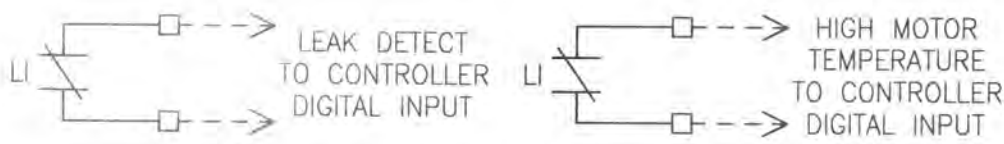
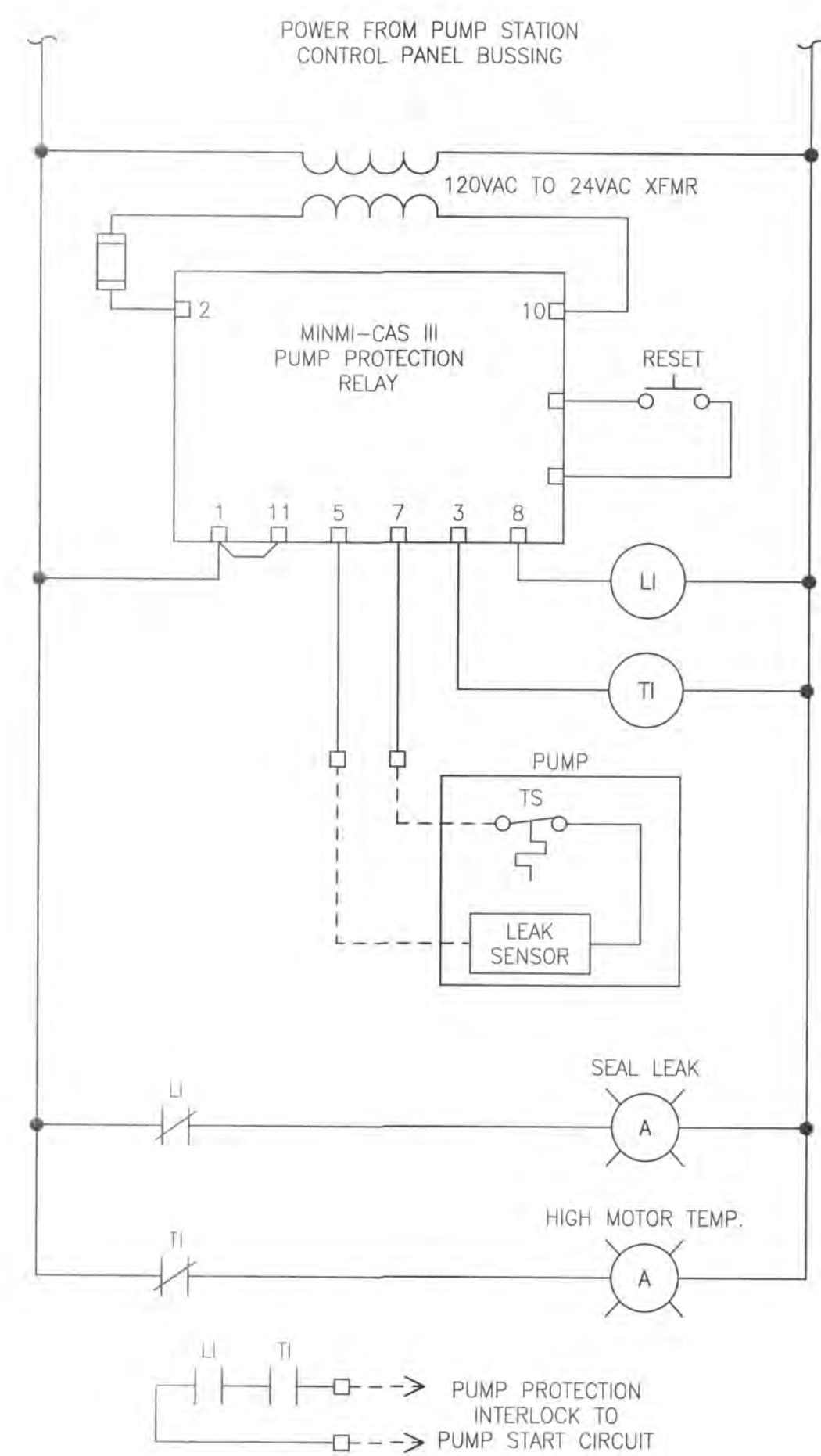
File Name: Pump Station Electrical Control Diagrams.dwg
 Dwn. Chkd. Dgnt. YY.MM.DD
 Permit-Seal

Client/Project
 CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR
 REGIONAL PUMP STATION
 Delaware County, Ohio

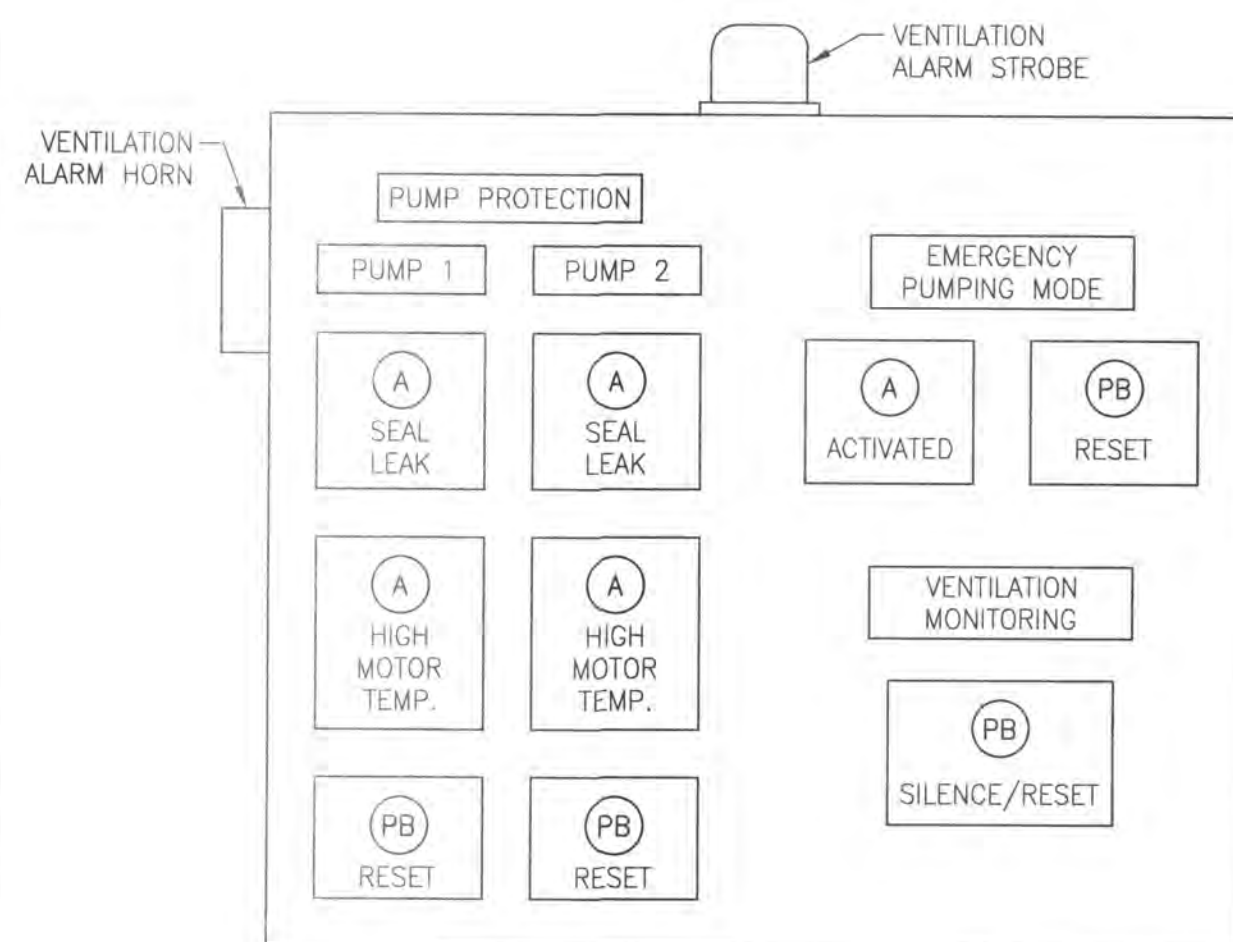
Title
 PUMP STATION ELECTRICAL
 CONTROL DIAGRAM

Project No. 173408605 Scale NOT TO SCALE
 Drawing No. Sheet Revision

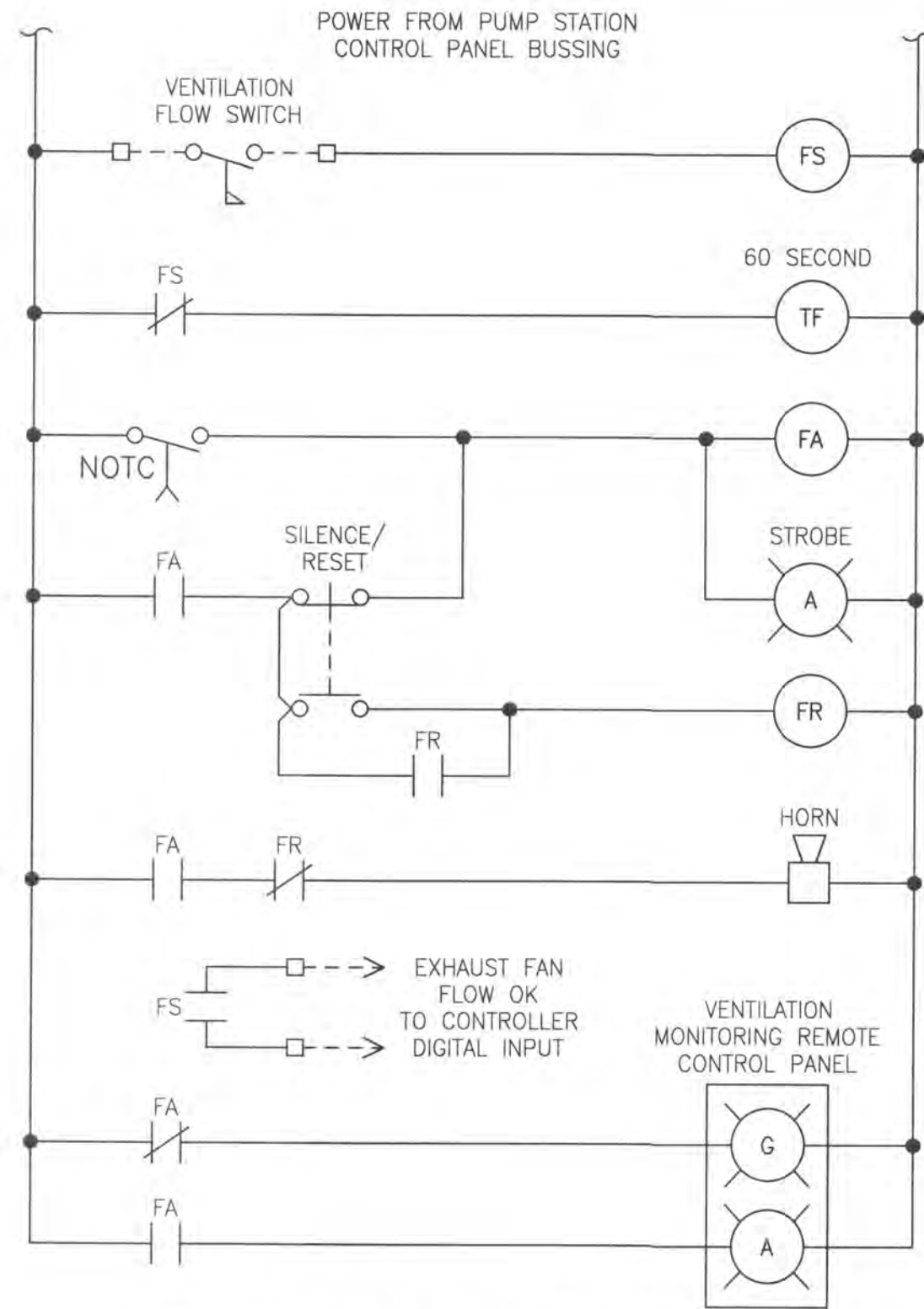


TYPICAL PUMP PROTECTION CIRCUIT

- NOTES:
- MINI-CAS II INTERNAL DESIGN IS SUBJECT TO REVISION BY MANUFACTURER. CONTRACTOR SHALL CONFIRM TERMINALS AND PROVIDE FUNCTIONALITY INDICATED.
 - DIAGRAM IS TYPICAL FOR 3 PUMPS. PROVIDE COMPONENTS AND WIRING FOR 2 PUMPS AND PROVIDE TERMINALS AND PANEL SPACE FOR 3 PUMPS, DESIGNATE COMPONENTS ASSOCIATED WITH THIRD PUMP ON ALL SHOP DRAWINGS.
 - ALL COMPONENTS LOCATED IN PUMP STATION CONTROL PANEL EXCEPT WHERE NOTED OTHERWISE.

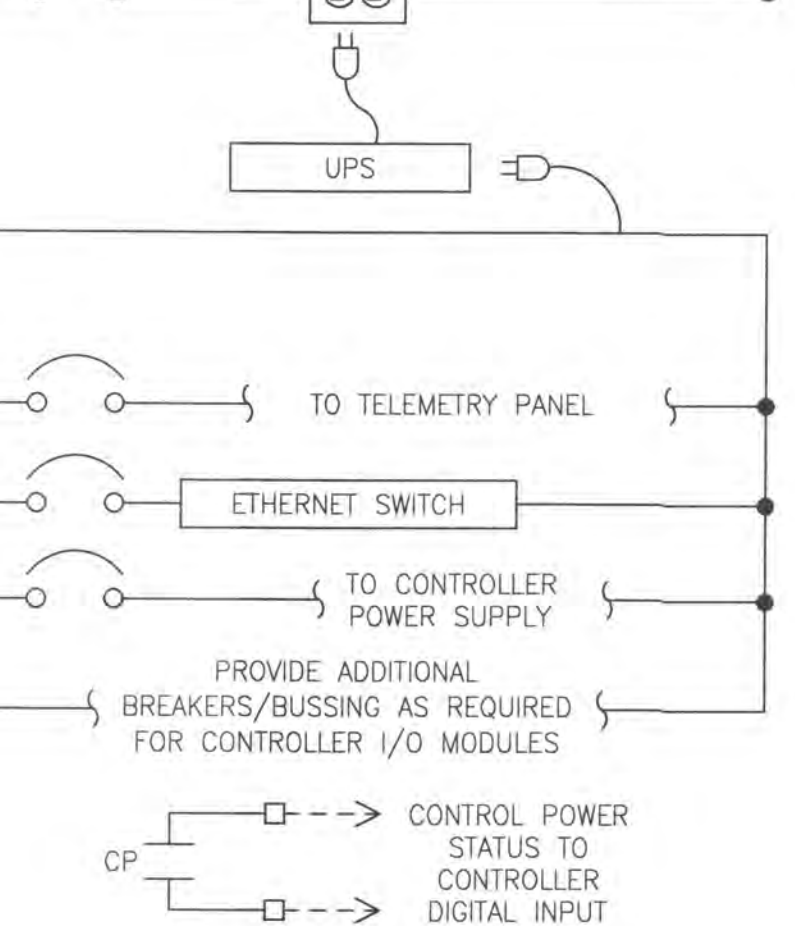
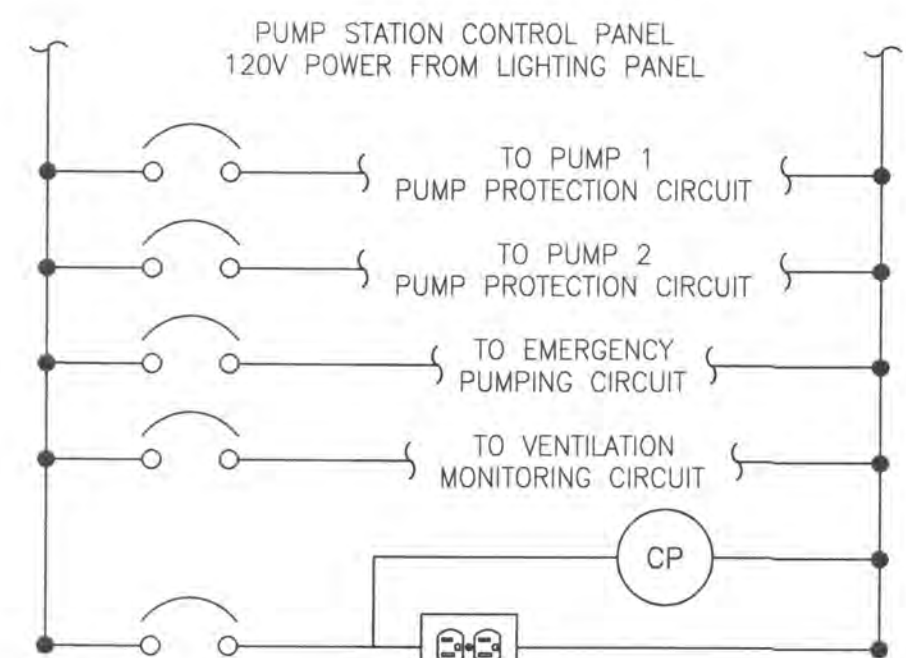


PUMP STATION CONTROL PANEL LAYOUT

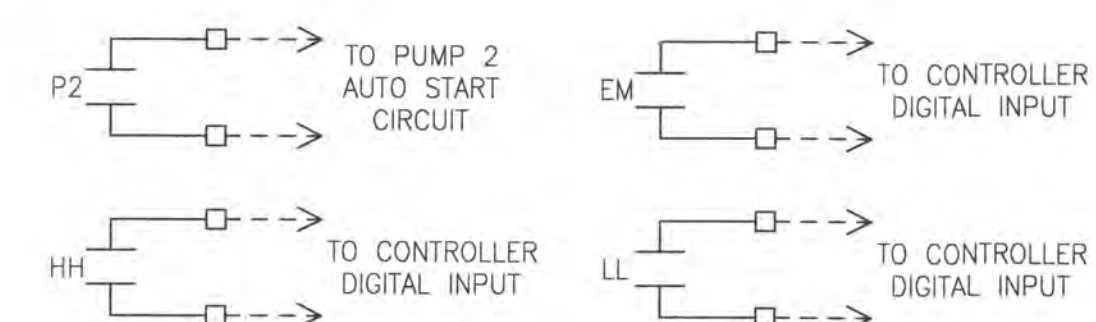
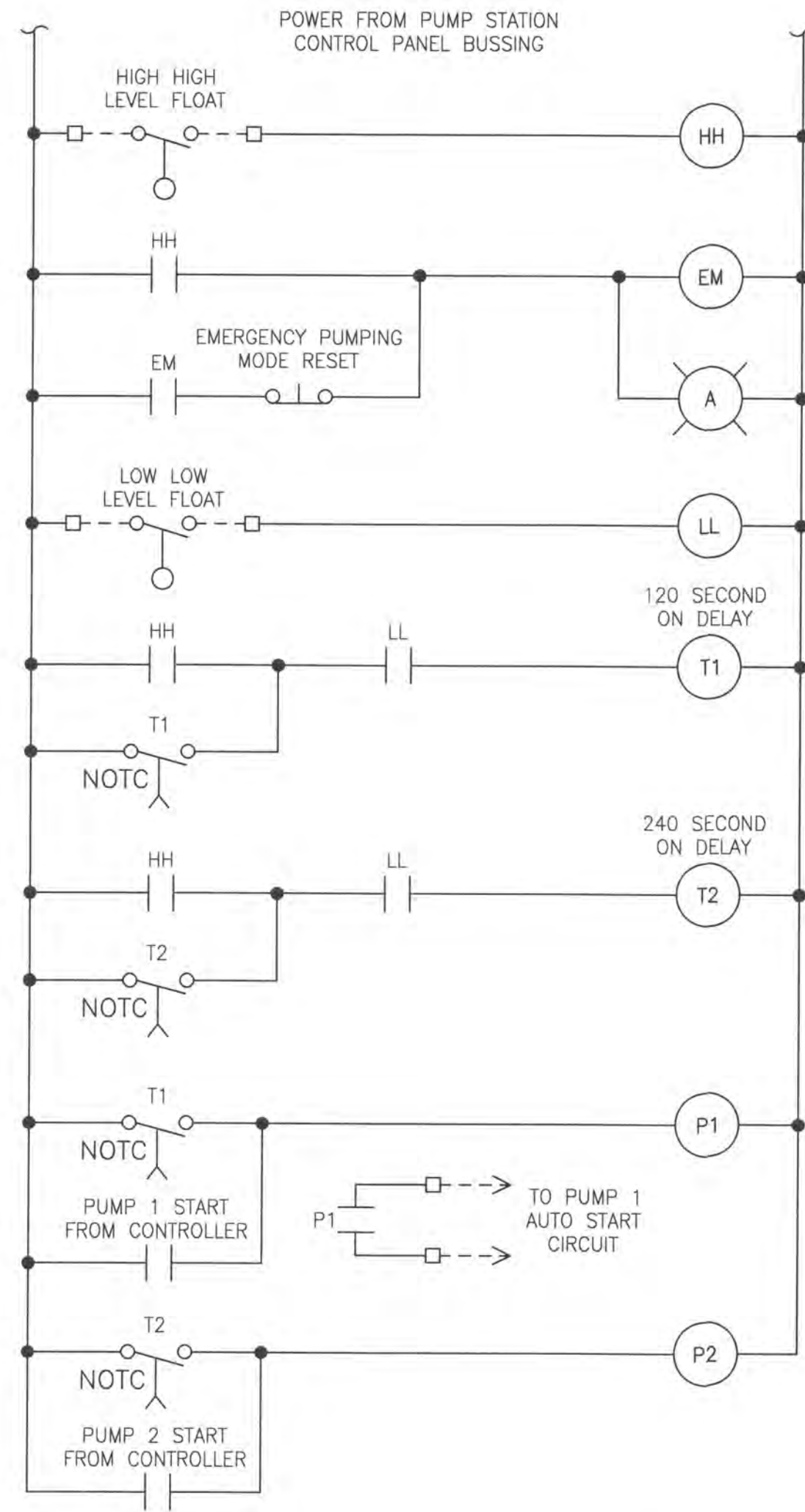


VENTILATION MONITORING CIRCUIT

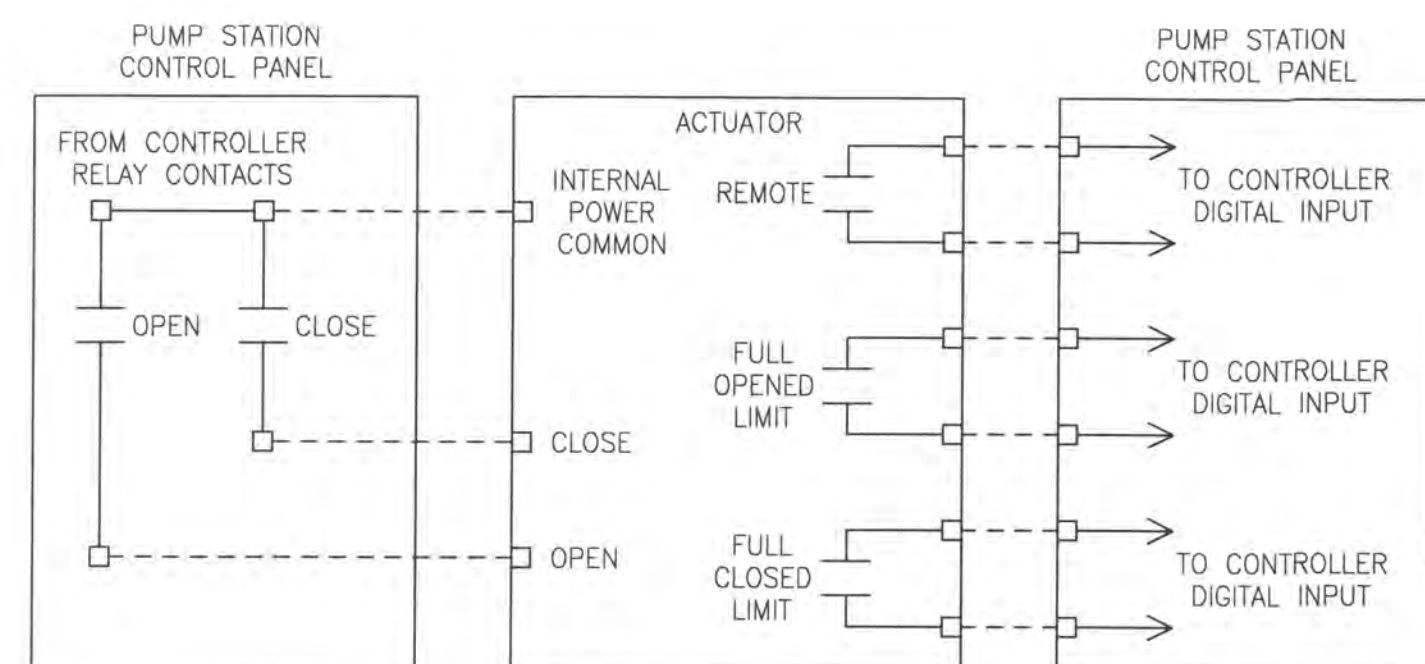
NOTES:
ALL COMPONENTS CONTAINED IN PUMP STATION CONTROL PANEL EXCEPT WHERE DENOTED OTHERWISE.



PUMP STATION CONTROL PANEL POWER BUSSING



EMERGENCY PUMPING CIRCUIT

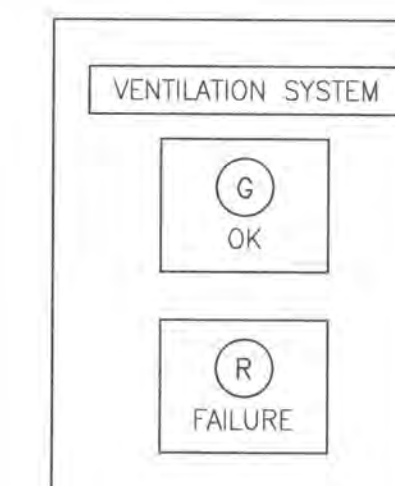


TYPICAL ACTUATOR WIRING DIAGRAM

PUMP STATION CONTROLLER I/O LISTING

TYPE	EQUIPMENT	DESCRIPTION	NOTES
DI	PUMP 1	REMOTE MODE	
DI	PUMP 1	RUNNING	
DI	PUMP 1	READY	
DI	PUMP 1	BYPASS MODE SELECTED	A
DI	PUMP 1	BYPASS CONTACTOR OVERLOAD	A
DI	PUMP 1	HIGH MOTOR TEMPERATURE	
DI	PUMP 1	SEAL LEAK	
DO	PUMP 1	START COMMAND	
AI	PUMP 1	SPEED FEEDBACK	A
AO	PUMP 1	SPEED COMMAND	A
DI	PUMP 2	REMOTE MODE	
DI	PUMP 2	RUNNING	
DI	PUMP 2	READY	
DI	PUMP 2	BYPASS MODE SELECTED	A
DI	PUMP 2	BYPASS CONTACTOR OVERLOAD	A
DI	PUMP 2	HIGH MOTOR TEMPERATURE	
DI	PUMP 2	SEAL LEAK	
DO	PUMP 2	START COMMAND	
AI	PUMP 2	SPEED FEEDBACK	A
AO	PUMP 2	SPEED COMMAND	A
DI	PUMP 3	REMOTE MODE	
DI	PUMP 3	RUNNING	
DI	PUMP 3	READY	
DI	PUMP 3	BYPASS MODE SELECTED	B
DI	PUMP 3	BYPASS CONTACTOR OVERLOAD	B
DI	PUMP 3	HIGH MOTOR TEMPERATURE	B
DI	PUMP 3	SEAL LEAK	B
DO	PUMP 3	START COMMAND	B
AI	PUMP 3	SPEED FEEDBACK	B
AO	PUMP 3	SPEED COMMAND	B
AI	WETWELL	LEVEL TRANSMITTER	
DI	WETWELL	HIGH HIGH LEVEL SWITCH	
DI	WETWELL	LOW LOW LEVEL SWITCH	
DI	WETWELL	EMERGENCY PUMPING MODE ACTIVATED	
DI	PUMP STATION	DOOR CONTACT SWITCH	
AI	6" FORCE MAIN	FLOW TRANSMITTER	
AI	12" FORCE MAIN	FLOW TRANSMITTER	
DI	12" FORCE MAIN ACTUATOR	REMOTE MODE	
DI	12" FORCE MAIN ACTUATOR	OPENED LIMIT	
DI	12" FORCE MAIN ACTUATOR	CLOSED LIMIT	
DO	12" FORCE MAIN ACTUATOR	OPEN COMMAND	
DO	12" FORCE MAIN ACTUATOR	CLOSE COMMAND	
DI	12" FORCE MAIN ACTUATOR	REMOTE MODE	
DI	12" FORCE MAIN ACTUATOR	OPENED LIMIT	
DI	12" FORCE MAIN ACTUATOR	CLOSED LIMIT	
DO	12" FORCE MAIN ACTUATOR	OPEN COMMAND	
DO	12" FORCE MAIN ACTUATOR	CLOSE COMMAND	
DI	GRINDER	REMOTE MODE	
DI	GRINDER	RUNNING	
DI	GRINDER	FAULT	
DO	GRINDER	START COMMAND	
DI	BIOXIDE SYSTEM	RUNNING	
DI	BIOXIDE SYSTEM	FAULT	
DO	BIOXIDE SYSTEM	START COMMAND	
AO	BIOXIDE SYSTEM	FLOW PAGING SIGNAL	
AI	BIOXIDE SYSTEM	FLOW FEEDBACK	
AI	BIOXIDE SYSTEM	LEVEL FEEDBACK	
DI	VALVE VAULT	WET FLOOR SWITCH	
DI	EXHAUST FAN	FLOW SWITCH	
DI	UPS	INPUT POWER AVAILABLE	
DI	AUTOMATIC TRANSFER SWITCH	UTILITY POWER AVAILABLE	
DI	AUTOMATIC TRANSFER SWITCH	UTILITY POWER SELECTED	
DI	AUTOMATIC TRANSFER SWITCH	GENERATOR POWER SELECTED	
DI	GENERATOR	RUNNING	
DI	GENERATOR	BATTERY/CHARGER FAULT	
DI	GENERATOR	WARNING COMMON ALARM	
DI	GENERATOR	SHUTDOWN COMMON ALARM	
DI	GENERATOR	LOW FUEL ALARM	
DI	GENERATOR	FUEL TANK LEAK ALARM	

- NOTES:
- PROVIDE I/O CAPACITY FOR THIS FUTURE SIGNAL
 - PROVIDE I/O CAPACITY FOR THIS FUTURE SIGNAL



VENTILATION MONITORING REMOTE CONTROL PANEL



Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus OH U.S.A.
43204
Tel. 614.486.4383
Fax. 614.486.4387
www.stantec.com

Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay. The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

File Name: Pump Station Electrical Control Panel Diagrams.dwg
Dwn. Chkd. Dsgn. YY.MM.DD

Permit-Seal

Client/Project
CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR REGIONAL PUMP STATION
Delaware County, Ohio

Title
PUMP STATION ELECTRICAL CONTROL PANEL DIAGRAMS

Project No. 173408605
Scale: NOT TO SCALE

Drawing No. Sheet Revision



SITE DATA

OWNER: DELAWARE COUNTY REGIONAL SANITARY SEWER DISTRICT
50 CHANNING STREET
DELAWARE, OHIO 43015

PLAN DESIGNER: STANTEC CONSULTING SERVICES INC.
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OHIO 43204

DEVELOPMENT TYPE: PUBLIC

SITE ACREAGE: 0.93 ACRES

DISTURBED ACREAGE: 0.93 ACRES

AVERAGE SLOPE: EXISTING - 2.0% - 33.0%
PROPOSED - 2.0% - 33.0%

SITE VEGETATION: EXISTING - HEAVILY TREED

ADJACENT AREAS: THE SITE IS BOUNDED BY STATE ROUTE 257 TO THE EAST, O'SHAUGHNESSY RESERVOIR TO THE WEST, AND THE CITY OF COLUMBUS PROPERTY TO THE NORTH AND SOUTH.

STORM WATER MANAGEMENT: STORM WATER MANAGEMENT WILL BE PROVIDED BY PROVIDING WATER QUALITY TREATMENT FOR SITE RUNOFF UTILIZING A BIO-SWALE.

SEEDING & MULCHING

GENERAL:

THE SEEDING, EITHER PERMANENT OR TEMPORARY, SHALL BE MADE WITHIN 2 DAYS AFTER FINAL GRADING IS COMPLETED OR FOLLOWING SEEDBED PREPARATION WITH A DISK OR OTHER SUITABLE EQUIPMENT.

THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO ACCOMPLISH BOTH TEMPORARY AND PERMANENT SEEDING.

ALL DITCHES, DIVERSIONS, SEDIMENT BASINS/TRAPS, RIGHT-OF-WAY AREAS, AND AREAS DISTURBED DURING CONSTRUCTION SHALL BE SEEDED AND MULCHED, OR SODDED.

THE LIMITS OF SEEDING AND MULCHING ARE AS SHOWN ON THE PLAN. SEEDING HAS BEEN ASSUMED TO A DISTANCE OF 5 FEET OUTSIDE THE WORK LIMITS OR RIGHT-OF-WAY, WHICHEVER IS GREATER. ALL AREAS NOT DESIGNATED TO BE SODDED SHALL REMAIN UNDER EXISTING GROUND COVER. THOSE AREAS DISTURBED OUTSIDE THE SEEDING LIMITS SHALL BE SEEDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.

PAYMENT FOR TEMPORARY SEEDING SHALL BE INCLUDED UNDER "EROSION CONTROL"

OTHER EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THEY ARE ORDERED REMOVED BY THE ENGINEER OR AS DIRECTED BY THE "SEQUENCE OF CONSTRUCTION."

MATERIALS:

KIND OF SEED	SEEDING DATES	PER 1000 SQ. FT.	PER ACRE
TALL FESCUE	MARCH 1 - SEPT. 15	2 lbs.	80 lbs.
ANNUAL RYEGRASS	MARCH 1 - SEPT. 15	1/2 lbs.	20 lbs.
SMALL GRAIN STRAW MULCH	MARCH 1 - SEPT. 15	100 lbs. OR 2 TO 3 BALES	2 TONS OR 50 BALES
FERTILIZER	MARCH 1 - SEPT. 15	25 lbs. OF 12-12-12 OR EQUIVALENT	1000 lbs. OF 12-12-12 OR EQUIVALENT
TEMPORARY SEEDING:			
RYE OR WHEAT	SEPT. 15 - OCT. 30	3 lbs.	2 BUSHELS
SOIL PROTECTION:			
SMALL GRAIN STRAW MULCH	OCT. 30 - MARCH 1	2 TO 3 BALES	2 TONS

LIME: AGRICULTURAL GROUND LIMESTONE.

FERTILIZER: 12-12-12 ANALYSIS.

MULCH: SMALL GRAIN STRAW, PREFERABLY WHEAT OR RYE.

ASPHALT EMULSION: RAPID SETTING, RS1 OR RS2.

MULCH NETTING: JUTE, COTTON OR PLASTIC NETTINGS.

INSTALLATION:

- GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AN ANCHORING, AND MAINTENANCE. AFTER THE GRADING OPERATION SPREAD TOPSOIL WHERE NEEDED.
- WHERE COMPACTED SOILS OCCUR, THEY SHOULD BE BROKEN UP SUFFICIENT TO CREATE A FAVORABLE ROOTING DEPTH OF 6-8 INCHES.
- FOR PERMANENT SEEDING, PLACE TOPSOIL TO A DEPTH OF 4 INCHES MINIMUM.
- APPLY LIME AT A RATE AS RECOMMENDED BY SOIL TESTS, OR AT A RATE OF 100 POUNDS PER 1000 SQUARE FEET OR TWO TONS PER ACRE OF AGRICULTURAL GROUND LIMESTONE. FOR BEST RESULTS MAKE A SOIL TEST.
- APPLY FERTILIZER AT A RATE AS RECOMMENDED BY SOIL TESTS, OR AT A RATE OF 25 POUNDS PER 1000 SQUARE FEET OR 1000 POUNDS PER ACRE OF 12-12-12 FOR BEST RESULTS MAKE A SOIL TEST.
- WORK THE LIME AND FERTILIZER INTO THE SOIL WITH A DISK HARROW, SPRINGTOOTH HARROW, OR OTHER SUITABLE FIELD EQUIPMENT TO A DEPTH THREE INCHES. ON SLOPING LAND THE FINAL OPERATION SHALL BE IN T CONTOUR.
- APPLY THE SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACK SEEDER OR HYDROSEEDER (SLURRY MAY INCLUDE SEED AND FERTILIZER) PREFERABLY ON A FIRM, MOIST SEEDBED. SEED WHEAT OR RYE NO DEEPER THAN ONE INCH. SEED RYEGRASS NO DEEPER THAN ONE-FOURTH INCH.
- WHEN FEASIBLE, EXCEPT WHERE A CULTIPACKER TYPE SEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTIPACKER, ROLLER, OR LIGHT DRAG. ON SLOPING LAND SEEDING OPERATIONS SHOULD BE ON THE CONTOUR WHEREVER POSSIBLE.
- APPLY MULCH AT A RATE OF TWO TONS PER ACRE OR 100 POUNDS (TWO TO THREE BALES) PER 1000 SQUARE FEET.
- SPREAD THE MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE IS COVERED.
- ANCHOR MULCH BY ONE ONE OF THE FOLLOWING METHODS:
 - MECHANICAL - USE A DISK CRIMPER, OR SIMILAR TYPE TOOL SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL
 - ASPHALT EMULSION - APPLY AT THE RATE OF 160 GALLONS PER ACRE INTO THE MULCH AS IT IS BEING APPLIED.
 - MULCH NETTINGS - USE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. USE IN AREAS OF WATER CONCENTRATION TO HOLD MULCH IN PLACE.

MAINTENANCE:

- IRRIGATION - IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS ADEQUATE WATER FOR PLANT GROWTH UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANT SEASON, IN ABNORMALLY DRY AND HOT SEASONS, OR ON ADVERSE SITES.
- REPAIRS - INSPECT ALL SEEDED AREAS FOR FAILURES AND MAKE NECESSARY REPAIRS, REPLACEMENTS, RESEEDINGS, AND REMULCHING WITHIN THE PLANT SEASON, IF POSSIBLE.
 - IF STAND IS INADEQUATE, OVERSEED AND FERTILIZE, USING HALF OF THE RATES ORIGINALLY APPLIED, AND MULCH.
 - IF STAND IS OVER 60 PERCENT DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER, SEEDBED PREPARATION, SEEDING RECOMMENDATIONS, AND MULCHING RECOMMENDATIONS.

MAINTENANCE FERTILIZATION AND MOWING FOR PERMANENT SEEDING

MIXTURE	FERTILIZER FORMULA	Rate Lbs./Ac.	Rate Lbs./1000 SQ.FT.	TIME	MOWING
CREeping RED FESCUE RYEGRASS KENTUCKY BLUEGRASS	12-12-12	1000	24	FALL	ER NOT CLOS YEARLY THAN 3". OR AS NEEDED.
TALL FESCUE	12-12-12	1000	24	FALL	ER NOT CLOS YEARLY THAN 4" OR AS NEEDED.
DWARF (TURF-TYPE) FESCUE	12-12-12	1000	24	FALL	ER NOT CLOS YEARLY THAN 2". OR AS NEEDED.
FLATPEA AND CROWN VETCH WITH FESCUE.	0-20-20	400	10	SPRING	DO NOT YEARLY MOW. FOLLOWING ESTABLISHMENT AND EVERY 4-7 YEARS THEREAFTER

SEQUENCE OF CONSTRUCTION

- CLEAR AND GRUB FOR THE NECESSARY INSTALLATION OF EROSION CONTROL DEVICES.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION INSTALL CONSTRUCTION ROAD STABILIZATION.
- INSTALL EROSION CONTROL DEVICES.
- PERFORM ROUGH EARTHWORK.
- BEGIN WET WELL & VALVE VAULT, CONSTRUCT SANITARY SEWER.
- CONSTRUCT STORM, PLACING INLET PROTECTION AS CATCH BASINS ARE CONSTRUCTED.
- GRADE SITE, REPAIR INLET PROTECTION AS NEEDED.
- BEGIN BUILDING CONSTRUCTION.
- CONSTRUCT UTILITY CONDUITS.
- CONSTRUCT ACCESS ROAD & PARKING AREAS.
- FINAL GRADE AND PAVE PARKING AREA.
- REMOVE EROSION CONTROL DEVICES UPON SITE STABILIZATION.

GENERAL LAND CONSERVATION NOTES

NO DISTURBED AREA WILL BE DENUDED FOR MORE THAN 30 DAYS IF IT IS TO BE DORMANT FOR MORE THAN 21 DAYS UNLESS AUTHORIZED BY THE GOVERNING JURISDICTION'S INSPECTOR. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.

SEEDING CONTROLS SHALL BE INSTALLED AND IMPLEMENTED FOR RECEIVING DRAINAGE AREA WITHIN 7 DAYS OF EARTH DISTURBANCES. PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO ANY EARTH-DISTURBING ACTIVITIES.

ANY AND/OR ALL DISTURBED AREAS SHALL BE SEEDED AND STRAW MULCHED IF TO REMAIN UNDISTURBED FOR 21 DAYS OR GREATER.

ANY AREA WITHIN 50 FEET OF A STREAM TO REMAIN UNDISTURBED GREATER THAN 21 DAYS SHALL BE SEEDED AND MULCHED WITH 2 DAYS ANY AREAS AT FINAL GRADE SHALL BE PERMANENTLY STABILIZED WITHIN 2 DAYS.

ADDITIONAL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED AS DIRECTED BY DELAWARE COUNTY AND/OR OHIO EPA.

ALL STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING FOR ALL SITES.

A INDIVIDUAL LOT DESC PERMIT IS REQUIRED FOR THIS PROJECT AND SHALL BE OBTAINED PRIOR TO BUILDING CONSTRUCTION.

ALL STORM SEWER, SANITARY SEWER, WATER MAIN AND SERVICE TRENCHES SHALL BE MULCHED AND SEEDED WITHIN 7 DAYS AFTER BACKFILL IF INSTALLATION IS THROUGH STABILIZED AREAS. NO MORE THAN 500 FEET OF TRENCH WILL BE OPEN AT ANY ONE TIME.

ELECTRIC POWER, TELEPHONE, CATV AND GAS SUPPLY TRENCHES SHALL BE COMPACTED, SEEDED AND MULCHED WITHIN 7 DAYS AFTER BACKFILL, IF INSTALLATION IS THROUGH STABILIZED AREAS.

ALL TEMPORARY DIVERSIONS, SEDIMENT BASIN EMBANKMENTS AND EARTH STOCKPILES SHALL BE SEEDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER WITHIN 7 DAYS AFTER GRADING. STRAW, HAY MULCH OR EQUIVALENT IS REQUIRED.

ALL STORM SEWER INLETS SHALL BE PROTECTED BY SEDIMENT TRAPS (INLET PROTECTION) WHICH WILL BE MAINTAINED AND MODIFIED AS REQUIRED AS CONSTRUCTION PROGRESSES.

ANY DISTURBED AREA NOT STABILIZED WITH SEEDING, SODDING, PAVING OR BUILT UPON BY NOVEMBER 1ST, OR AREAS DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND SEEDED BY APRIL 15TH.

AT THE COMPLETION OF CONSTRUCTION, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

MAINTENANCE NOTES

ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED BY THE OWNER'S REPRESENTATIVE WEEKLY AND WITHIN 24 HOURS AFTER EACH RAINFALL TO ASSURE THAT THE MEASURES ARE FUNCTIONING ADEQUATELY. SEDIMENT THAT IS COLLECTED WILL BE DISTRIBUTED ON THE PROTECTED PORTION OF THE SITE AND STABILIZED. ALL STOCKPILES OF EARTH AND TOPSOILS WILL BE PROTECTED WITH TEMPORARY SEEDING OR OTHER MEANS TO PREVENT EROSION.

CONSTRUCTION ROAD STABILIZATION / CONSTRUCTION ENTRANCE (CE)

BOTH TEMPORARY AND PERMANENT ROADS AND PARKING AREAS MAY REQUIRE PERIODIC TOP DRESSING WITH NEW GRAVEL. SEEDED AREAS ADJACENT TO THE ROADS AND PARKING AREAS SHOULD BE CHECKED PERIODICALLY TO ENSURE THAT A VIGOROUS STAND OF VEGETATION IS MAINTAINED. ROADSIDE DITCHES AND OTHER DRAINAGE STRUCTURES SHOULD BE CHECKED REGULARLY TO ENSURE THAT THEY DO NOT BECOME CLOGGED WITH SILT OR OTHER DEBRIS.

SILT FENCE (SF)

SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

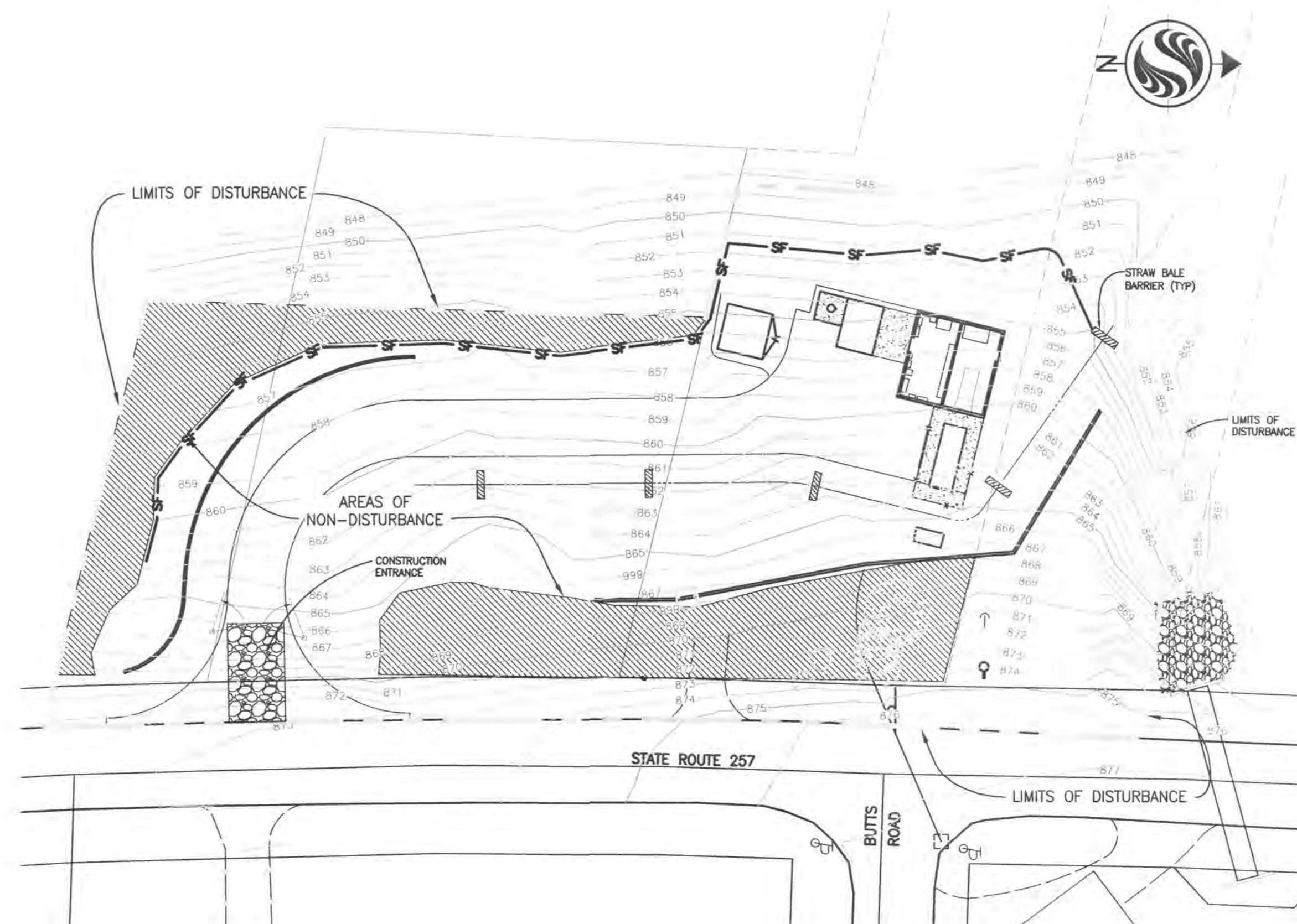
SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

ANY SEDIMENT DEPOSITS REMAINING IN-PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

SEDIMENT BASIN(S)

SEDIMENT SHALL BE REMOVED AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 40% (APPROXIMATELY 1/2 THE DESIGN DEPTH OF THE BASIN.) REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

SEDIMENT BASINS AND RISER STRUCTURES SHALL BE REMOVED UPON SITE STABILIZATION.



EROSION CONTROL PLAN

NOTE: SEE SHEET 7 FOR SEEDING AND PLANTING DETAILS

Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay. The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

File Name: EROSION CONTROL.dwg

Permit-Seal

Client/Project

CONCORD/SCIOTO COMMUNITY AUTHORITY

O'SHAUGHNESSY RESERVOIR REGIONAL PUMP STATION
Delaware County, Ohio

Title

EROSION CONTROL

Project No. 173408605

Scale 1"=30'

Drawing No. Sheet

Revision