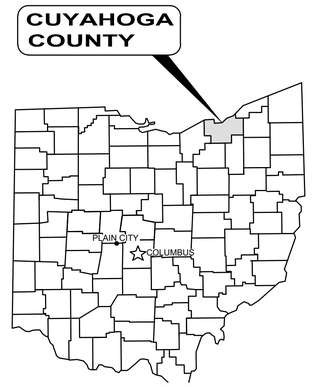
BID SET

CITY OF NORTH OLMSTED

SOUTH INTERCEPTOR EQUALIZATION FACILITY IMPROVEMENTS

CUYAHOGA COUNTY, OHIO

OCTOBER 2024



CITY OFFICIALS:

ADMINISTRATIVE:

Nicole Dailey Jones	Mayor
Carrie Copfer	Finance Director
Michael R. Gareau, Jr.	Director of Law
Max Upton	Director of Economic & Community Developement
Kevin Kearney	Service Director
Jeffrey J. Filarski, PE, BO	City Engineer
Brian Blum	City WWTP Superintendent

CITY COUNCIL MEMBERS

Louis J. Brossard	President
Christopher Scarl	Ward 1
Chris Glassburn	Ward 2
Mary Gilchrist	Ward 3
Mary Ellen Hemann	Ward 4
Paul Symske	At Large
Mark Madden	At Large
Duane H. Limpert	At Large

LOCATION MAP
NOT TO SCALE

C:\Users\marano\Downloads\ct-lockup-color-rgb.png

OHIO811.org Before You Dig

1. UNDERGROUND BUILDING SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING AND REPLACING AS NECESSARY TO ENSURE CONTINUAL SERVICE TO BUILDINGS.
2. THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE @ 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.

ENGINEER'S PROJECT No. 210888

CITY APPROVALS:

Nicole Dailey Jones — 09/14/22
MAYOR — NICOLE DAILEY JONES — DATE

J. Filarski — 8/19/24
CITY ENGINEER — JEFFREY J. FILARSKI, PE, BO — DATE

ENGINEER:

CT CONSULTANTS, INC.
8150 STERLING COURT
MENTOR, OH 44060

(440) 951-9000 PHONE
(440) 951-7487 FAX

Thomas E Voldrich — 47843 — 9/1/22
THOMAS E. VOLDRICH — P.E. No. — DATE

STATE OF OHIO · THOMAS E. VOLDRICH 47843 · REGISTERED PROFESSIONAL ENGINEER

CT consultants engineers • architects • planners
A Verdantas Company

NO	REVISION	DATE

ISSUED FOR: BID
ISSUE DATE: 10/10/24
SCALE: AS NOTED
DESIGNED BY: ELE
DRAWN BY: ELE
CHECKED BY: TEV

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
GENERAL - 00 SERIES
COVER SHEET

PROJECT NO. 210888
DISCIPLINE GENERAL
SHEET NAME 00G-01
SHEET 1 OF 53

INDEX EXPLAINATION:

INDEX OF SHEETS		
Sheet Number	Sheet Title	Sheet Name
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SEQUENTIAL SHEET NUMBER IN SET

DISCIPLINE IDENTIFIER LETTER

SEQUENTIAL ORDER

DISCIPLINE INFORMATION:

IDENTIFIER:	DISCIPLINE:
G	GENERAL
X	DEMOLITION
C	CIVIL
S	STRUCTURAL
A	ARCHITECTURAL
D	PROCESS
M	MECHANICAL (PLUMBING & HVAC)
E	ELECTRICAL
Y	INSTRUMENTATION

GENERAL SYMBOLOGY NOTES:

1. THIS IS A STANDARD SHEET SHOWING COMMONLY USED SYMBOLOGY.
2. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
3. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE NEW IMPROVEMENTS SO AS TO HIGHLIGHT SPECIFIC TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.
4. SYMBOLOGY OR DIAGRAMMATICAL LEGENDS MAY BE SHOWN ON INDIVIDUAL SHEETS FOR SCHEDULES, DIAGRAMS, DETAILS, SCHEMATICS OR EQUIPMENT.

DRAWING CODED NOTE TYPES:

1. CT CONTRACTUAL NOTES ARE DEPICTED WITH A HEXAGON, SQUARE, CIRCLE OR TRIANGLE. ALL OTHER EXISTING WRITTEN CALLOUTS SHOWN ON THE REUSED SCANNED PLANS FROM PREVIOUS CONTRACT DRAWINGS, (BACKGROUND IMAGES), SECTIONS & DETAILS ARE FOR EXISTING CONDITIONS AND REFERENCE ONLY, MANY OF THOSE NOTES FROM THE SCANNED DRAWINGS PERTAIN TO PREVIOUS WORK DONE. THESE BACKGROUND IMAGES ARE SHOWN IN GRAY.

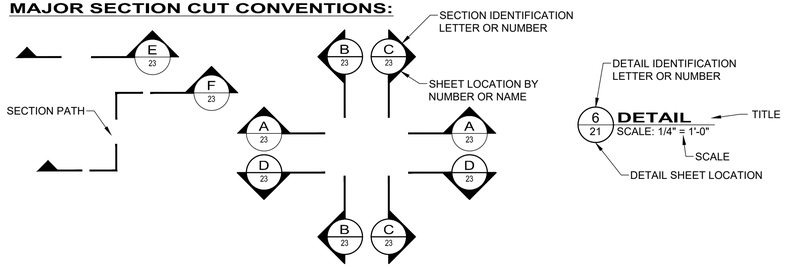
CODED NOTES:

(#) DESCRIPTION

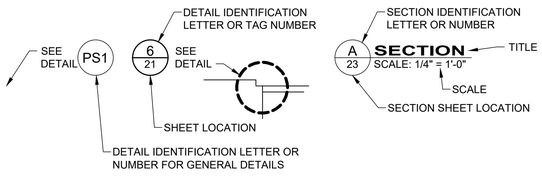
PLAN REVISIONS:

△A REVISION DESCRIPTION

MAJOR SECTION CUT CONVENTIONS:



DETAIL REFERENCES:

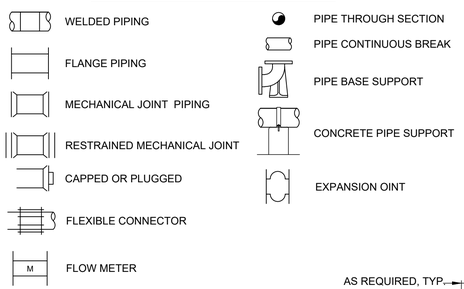


REFERENCE DIMENSION:

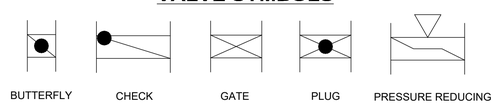
12'-4" (REF.)

REFERENCE DIMENSIONS ARE GIVEN FOR INFORMATION ONLY. THEY ARE CALCULATED DIMENSIONS NOT INTENDED TO BE USED WITHOUT FIELD VERIFICATION AND ARE USEFUL IN SHOWING INTENDED DESIGN.

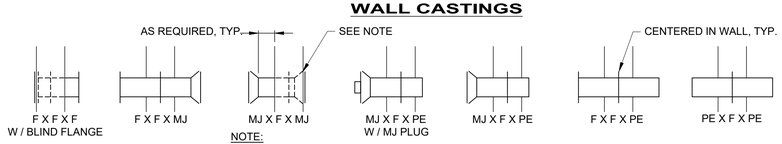
MISC PIPE SYMBOLOGY



VALVE SYMBOLS



WALL CASTINGS



NOTE:

WALL CASTINGS REQUIRING BELL ENDS IN LIEU OF MJ SHALL BE NOTED AS "B", ALL FLANGED (F) AND MECHANICAL JOINT (MJ) FLUSH WITH WALL (SEE DRAWINGS) ARE TO BE DRILLED, AND TAPPED FOR STUDS.

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STATE OF OHIO
THOMAS E. VOLDRICH
47843
REGISTERED
PROFESSIONAL ENGINEER

CT consultants
engineers • architects • planners
A Verdantas Company

NO	REVISION	DATE

ISSUED FOR:	BID
ISSUE DATE:	10/10/24
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DESIGNED BY:	ELE
DRAWN BY:	ELE
CHECKED BY:	TEV

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR
EQUALIZATION FACILITY
NORTH OLMSTED, OHIO
CUYAHOGA COUNTY

GENERAL - 00 SERIES

SHEET INDEX AND LEGEND

PROJECT NO.	
210888	
DISCIPLINE	
GENERAL	
SHEET NAME	
00G-02	
SHEET	OF
2	53

1. PROHIBITED CONSTRUCTION ACTIVITIES

A. DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER;

B. LOCATING STOCKPILE STORAGE AREAS IN ENVIRONMENTALLY SENSITIVE AREAS;

C. INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS;

D. PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS; ALL SUCH WATER WILL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE;

E. DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE AND OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO;

F. PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM;

G. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA;

H. DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS;

I. OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT;

J. DISCHARGING INJURIOUS SILICA DUST CONCENTRATIONS INTO THE ATMOSPHERE RESULTING FROM BREAKING, CUTTING, CHIPPING, RILLING, BUFFING, GRINDING, POLISHING, SHAPING OR SURFACING CLOSER THAN 200 FEET TO PLACES OF RESIDENCES OR COMMERCIAL, PROFESSIONAL, QUASI-PUBLIC OR PUBLIC PLACES OF HUMAN OCCUPATION;

K. STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES;

L. RUNNING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE PROPERTY OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER AND THE CONSENT OF THE ENGINEER;

M. OPERATIONS ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS OUTSIDE THE HOURS OR 8:00 AM AND 5:00 P.M. OR OUTSIDE THE HOURS ALLOWED FOR CONSTRUCTION BY LOCAL ORDINANCES OR REGULATIONS; AND

N. N. CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE ENGINEER, AND CLOSING CLEAR ACCESS:

- BY FIRE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES;

- BY THE PUBLIC TO ANY COMMERCIAL OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR PLACE OF RESIDENCE; OR

- BY VEHICLES TO DRIVEWAYS WITHOUT THE PROVISION OF ALTERNATIVE MEANS OF BUILDING INGRESS AND EGRESS.

2. MITIGATIVE MEASURES

EROSION/SEDIMENT CONTROL

1. SITE CLEARING AND GRUBBING SHALL NOT COMMENCE UNTIL SUCH TIME THAT THE CONTRACTOR IS PREPARED TO START CONSTRUCTION. REMOVE ONLY THOSE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED FOR CONSTRUCTION OF ACTUAL FACILITIES; PROTECT THE REST TO PRESERVE THEIR AESTHETIC, HABITAT, AND EROSION CONTROL VALUES.
2. IMMEDIATELY FOLLOWING SITE AND ACCESS CLEARING, TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED. THEY WILL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION DURING CONSTRUCTION UNTIL FINAL SEEDING AND SITE RESTORATION OCCURS.
3. AT THE WWTP CONSTRUCTION SITE, INSTALL SEDIMENT BASINS AND DIVERSION DIKES BEFORE DISTURBING THE LAND THAT DRAINS INTO THEM.
4. DIVERSION CHANNELS WILL BE CONSTRUCTED AROUND THE WWTP CONSTRUCTION SITE TO COLLECT RUNOFF AND PREVENT SILT AND OTHER ERODIBLE MATERIALS FROM ENTERING LOCAL DRAINAGE COURSES. DIVERSION CHANNELS WILL FLOW TO TEMPORARY SEDIMENT BASINS, AND ARE TO BE STABILIZED THROUGH SEEDING, RIP-RAPPING, OR LINING THEM WITH PLASTIC.
5. EXISTING TOPSOIL WILL BE STOCKPILED AND REPLACED UPON FINAL GRADING OF THE WWTP CONSTRUCTION SITE.
6. EXTENSIVE AREAS OF STOCKPILED TOPSOIL AT THE WWTP CONSTRUCTION SITE ARE TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING OR COVERING SUCH AS WITH ANCHORED STRAW MULCH. SILT BARRIERS WILL BE INSTALLED DOWN GRADIENT OF THESE AREAS ON CONTOUR AND WITH THEIR ENDS UP SLOPE OF THE CONTOUR TO PREVENT SILT LADEN RUNOFF FROM ENTERING WATERWAYS OR STORM SEWERS. WITHIN 15 DAYS OF COMPLETION OF CONSTRUCTION, ANY REMAINING SOIL MUST EITHER BE REMOVED OR PERMANENTLY STABILIZED.
7. SILT FENCES SHOULD BE TRENCHED SIX TO TWELVE INCHES DEEP, THE FABRIC LAID IN THE TRENCH, AND THE SOIL PROPERLY BACKFILLED INTO THE TRENCH TO PREVENT UNDERCUTTING.
8. WHERE TRENCH EXCAVATION OCCURS PARALLEL TO ANY WATERWAY, A VEGETATED BARRIER SHOULD BE MAINTAINED BETWEEN THE STREAM AND THE CONSTRUCTION SITE. ALL TRENCH SPOILS WILL BE STOCKPILED ON THE SIDE OF THE TRENCH AWAY FROM THE WATERWAY, AND A LINE OF SILT BARRIERS WILL BE ESTABLISHED ALONG THE EDGE OF CONSTRUCTION ON THE CONTOUR BETWEEN THE TRENCH AND THE WATERWAY.
9. NO MORE THAN 200 FEET OF TRENCH SHALL BE OPEN AT ANY GIVEN TIME. TRENCH OPENING AND LAYING OF PIPE SHOULD OCCUR SO AS TO MINIMIZE THE AMOUNT OF DISTURBED AREA. ALL TRENCHES ARE TO BE BACKFILLED AND COMPACTED IMMEDIATELY AFTER PIPE INSTALLATION. IMMEDIATELY FOLLOWING THE BACKFILLING OF THE TRENCH, THE GROUND SURFACE WILL BE ROUGH GRADED TO THE EXISTING CONTOURS TO ALLOW FOR PROPER DRAINAGE, AND WILL BE SEEDED AND/OR MULCHED IN STAGES TO PREVENT EROSION.
10. ANY DISTURBED AREA THAT WILL NOT BE ACTIVELY UNDER CONSTRUCTION FOR A PERIOD OF 15 DAYS OR MORE WILL BE TEMPORARILY STABILIZED IMMEDIATELY BY SEEDING AND MULCHING OR BY ANCHORED STRAW MULCH.
11. AS CONSTRUCTION IS COMPLETED, PERMANENTLY STABILIZE EACH DISTURBED AREA IN STAGES WITH PERENNIAL VEGETATION INSTALLED ACCORDING TO OHIO EPA (OR EQUIVALENT) STANDARDS AND SPECIFICATIONS. AFTER FINAL SOIL SETTLING OVER THE SANITARY SEWER, OUTFALL SEWER, AND FORCE MAIN ALIGNMENTS, THE CONTRACTOR SHALL BRING THE TRENCH BACK TO GRADE IF NECESSARY, PLACE TOPSOIL, AND FINE GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY ACTIVITIES ASSOCIATED WITH THE CONSTRUCTION OF THAT SECTION OF PIPE. FINAL GRADING WILL BE CONSISTENT WITH PRE-CONSTRUCTION TOPOGRAPHY FOR DRAINAGE AND AESTHETIC REASONS.
12. BORING PITS (FOR JACK AND BORE LOCATIONS) SHALL BE SURROUNDED WITH SILT BARRIERS TO PREVENT EROSION OF THE EXCAVATED PIT MATERIAL. STORM SEWER INLETS WILL BE SURROUNDED WITH SILT BARRIERS TO PREVENT SILTATION.
13. SLOPES EXCEEDING 15 PERCENT OR THAT TEND TO BE UNSTABLE REQUIRE SPECIAL TREATMENT SUCH AS WATER DIVERSION BERMS, SODDING, OR THE USE OF JUTE OR EXCELSIOR BLANKETS.
14. WHEN BORROW MATERIAL IS OBTAINED FROM OTHER THAN COMMERCIALLY OPERATED SOURCES, EROSION OF THE BORROW SITE WILL BE SO CONTROLLED BOTH DURING AND AFTER COMPLETION OF THE WORK THAT EROSION WILL BE MINIMIZED AND SEDIMENT WILL NOT ENTER STREAMS OR OTHER BODIES OF WATER. WASTE OR DISPOSAL AREAS AND CONSTRUCTION ROADS SHALL BE LOCATED AND CONSTRUCTED IN A MANNER THAT WILL KEEP SEDIMENT FROM ENTERING STREAMS. TEMPORARY EROSION CONTROL BARRIERS AND LIMITED SITE CLEARING WILL BE USED AS NEEDED.
15. IF WORK IS SUSPENDED FOR ANY REASON, THE CONTRACTOR SHALL MAINTAIN THE SOIL EROSION AND SEDIMENTATION CONTROLS IN GOOD OPERATING CONDITION DURING THE SUSPENSION OF THE WORK. ALSO, WHEN SEASONAL CONDITIONS PERMIT AND THE SUSPENSION OF WORK IS EXPECTED TO EXCEED A PERIOD OF ONE MONTH, THE CONTRACTOR SHALL SEED, FERTILIZE, AND MULCH ALL DISTURBED AREAS LEFT EXPOSED WHEN THE WORK IS STOPPED.
16. INSTALL THE ABOVE EROSION AND SEDIMENT CONTROL MEASURES, AS APPROPRIATE, REFERRING TO OHIO EPA, STORM WATER TECHNICAL ASSISTANCE, RAINWATER AND LAND DEVELOPMENT MANUAL STANDARDS AND SPECIFICATIONS (FORMERLY ODNR) OR EQUIVALENT FOR PARTICULAR TECHNIQUES. THESE MEASURES ARE TO BE MAINTAINED IN EFFECTIVE WORKING CONDITION DURING CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

    LINK:
    HTTP://EPA.OHIO.GOV/PORTALS/35/STORM/TECHNICALASSISTANCE/RLD11-6-14All.pdf

2. MITIGATIVE MEASURES - CONTINUED

TRAFFIC CONTROL

17. AT LEAST ONE LANE OF TRAFFIC MUST BE MAINTAINED ALONG THE TRAVEL ROUTE TO THE CONSTRUCTION SITE.
18. ACCESS MUST BE MAINTAINED FOR EMERGENCY VEHICLES AT ALL TIMES.
19. NO TRENCH WILL BE LEFT OPEN AT THE END OF A WORK DAY, WHERE PRACTICAL; ANY OPEN TRENCH WILL BE PROPERLY IDENTIFIED AND BARRICADED FOR SAFETY PURPOSES.
20. ANY CONSTRUCTION EQUIPMENT OR EXCAVATIONS NEAR ROADS MUST BE MARKED WITH LIGHTS, REFLECTORS, OIL LANTERNS, OR SMUDGE POTS.
21. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN ALL NECESSARY BARRICADES, WARNING SIGNS, DANGER SIGNALS, FLAG PERSON(S), WATCHERS, AND ALL OTHER APPROPRIATE PRECAUTIONS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR SAFETY.
22. PRIOR TO CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE, OR BOULEVARD, THE CONTRACTOR MUST HAVE CONSENT FROM LOCAL OFFICIALS AND THE ENGINEER.

AIR POLLUTION / NOISE CONTROL

23. CONSTRUCTION ACTIVITIES WILL BE LIMITED TO DAYTIME HOURS.
24. CONSTRUCTION EQUIPMENT WILL BE PROVIDED WITH INTAKE SILENCERS AND MUFFLERS, AS REQUIRED BY SAFETY STANDARDS.
25. ALL CONSTRUCTION VEHICLES SHOULD BE EQUIPPED WITH PROPER EMISSIONS CONTROL EQUIPMENT.
26. PERIODICALLY CHECK EQUIPMENT AND MACHINERY FOR PROPER TUNING TO MINIMIZE EXHAUST EMISSIONS AND NOISE.
27. UNPAVED AREAS WILL BE WET DOWN (AS NECESSARY) DURING CONSTRUCTION TO MINIMIZE DUST GENERATION.

TREE / VEGETATION PROTECTION

28. TREE REMOVAL WILL BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION AND WILL BE LIMITED FURTHER TO THE PERMANENT EASEMENT WHEREVER POSSIBLE.
29. NO TREE REMOVAL WILL BE PERMITTED OUTSIDE THE TEMPORARY EASEMENT WITHOUT PERMISSION OF THE ENGINEER.
30. TREES WHICH ARE NOT REMOVED WILL BE PROTECTED BY ENSURING THAT TREES TO BE REMOVED ARE FELLED SO AS NOT TO INJURE THE REMAINING TREES.
31. PRIOR TO CLEARING, THE CONTRACTOR AND ENGINEER, SHALL WALK THE ACQUIRED EASEMENTS IN AN EFFORT TO DESIGNATE THE TREES THAT ARE TO BE SAVED. TREES TO BE SAVED WILL BE CLEARLY MARKED BY PAINT WITH THE LETTER "S". TREES TO BE PROTECTED BY AN APPROPRIATE BARRIER SHALL BE MARKED WITH AN "S" ENCLOSED IN A CIRCLE.
32. SOIL AND OTHER MATERIAL WILL NOT BE STORED NEXT TO OR WITHIN THE DRIP-LINE OF TREES.
33. PRESERVATION OF LANDSCAPING SHOULD TAKE PRECEDENCE OVER REMOVAL. IF REMOVAL OR DAMAGE IS UNAVOIDABLE, EXISTING VEGETATION SHOULD BE REPAIRED OR REPLACED "IN-KIND" UNLESS THE HOMEOWNER SPECIFIES OTHERWISE.
34. IF TREES/SHRUBS CANNOT BE REPLACED IN THE SAME LOCATION DUE TO INSTALLATION OF THE SEWER SYSTEM, RELOCATION SHOULD BE CONSIDERED.
35. THE CONTRACTOR'S ARBORIST SHALL REPAIR ALL INJURIES TO BARK, TRUNKS, LIMBS, AND ROOTS OF REMAINING VEGETATION BY PROPERLY DRESSING, CUTTING, BRACING AND PAINTING, USING ONLY APPROVED TREE SURGERY METHODS, TOOLS, AND MATERIALS.
36. SELECTIVE PRUNING OF TREE LIMBS PRIOR TO INITIATION OF CONSTRUCTION SHOULD ONLY BE USED WITHIN ESTABLISHED EASEMENTS WHERE REMOVAL IS NECESSARY FOR OPERATION OF EQUIPMENT.
37. LIMIT THE USE OF RIP-RAP TO AREAS WHERE STREAM FLOW CONDITIONS PREEMPT VEGETATIVE STABILIZATION.

DEWATERING

38. ALL DEWATERING FLOWS ARE TO BE SETTLED IN SILTATION BASINS OR DIRECTED THROUGH FILTERING DEVICES BEFORE DISCHARGE TO STABILIZED SITES, SUCH AS STREAMS OR STORM SEWERS; NOT ONTO EXPOSED SOILS, STREAM BANKS, OR ANY OTHER SITE WHERE THE FLOW COULD CAUSE EROSION.
39. SILT FROM CONSTRUCTION OPERATIONS SHALL NOT BE PERMITTED TO ENTER THE STORM SEWER SYSTEM. WHEN CONSTRUCTION OCCURS NEAR STORM SEWER INLETS, EROSION CONTROL MEASURES SUCH AS INLET FILTERS AND HAY BALES SHALL BE USED TO PREVENT SILT FROM ENTERING THE STORM SEWERS.
40. CONVEY WATER FROM THE CONSTRUCTION SITE IN A CLOSED CONDUIT. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.

2. MITIGATIVE MEASURES - CONTINUED

STREAM CROSSINGS

41. WHEN CLEARING VEGETATION PRIOR TO INITIATING STREAM CROSSING WORK, STREAMBANK TREES, SHRUBS, AND OTHER VEGETATION SHOULD BE LEFT IN PLACE TO HELP CONTROL EROSION; WHERE EQUIPMENT OPERATION REQUIRES TREE REMOVAL, STUMPS AND ROOTS ARE TO REMAIN IN PLACE TO HELP ANCHOR THE STREAMBANKPRIOR TO THE ONSET OF ANY STREAM CROSSING, SILT BARRIERS SHALL BE PLACED ALONG THE BANKS WHERE VEGETATION REMOVAL HAS OCCURRED OR IS ANTICIPATED, EXPOSED SOIL EXISTS, AND/OR SPOILS OR OTHER FILL MATERIALS ARE TO BE STOCKPILED WITHIN 50 FEET OF THE STREAM.
42. PRIOR TO THE ONSET OF ANY STREAM CROSSING, SILT BARRIERS SHALL BE PLACED ALONG THE BANKS WHERE VEGETATION REMOVAL HAS OCCURRED OR IS ANTICIPATED, EXPOSED SOIL EXISTS, AND/OR SPOILS OR OTHER FILL MATERIALS ARE TO BE STOCKPILED WITHIN 50 FEET OF THE STREAM.
43. CONSTRUCTION WITHIN A STREAM WILL BE CONTINUED UNTIL COMPLETED. A STREAM CROSSING SHALL NOT BE INITIATED UNLESS THE CONTRACTOR IS PREPARED TO FINISH THE WORK IMMEDIATELY. ALSO, WORK MUST NOT BE INITIATED UNLESS TIME AND WEATHER CONSTRAINTS HAVE BEEN PROVIDED FOR. STREAM CROSSING WORK SHALL BE RESTRICTED TO PERIODS OF DRY WEATHER AND LOW-FLOW OR NO-FLOW CONDITIONS.
44. RESTORATION SHOULD INCLUDE THE RE-ESTABLISHING OF CHANNEL CONTOURS AND BANK STABILIZATION AND SHOULD BE INITIATED IMMEDIATELY AFTER THE CROSSING IS COMPLETED.
45. WHEN USING OPEN CUT METHODS FOR LAYING SEWER PIPE ACROSS INTERMITTENT OR VERY SMALL STREAMS, THE STREAM CROSSING AND ASSOCIATED RESTORATION MUST BE PERFORMED WITHIN A 48 HOUR PERIOD. THE STREAM CROSSING AND ASSOCIATED RESTORATION MUST BE PERFORMED WITHIN A ONE WEEK (SEVEN DAY) PERIOD IF THE CROSSING INVOLVES TEMPORARY DIVERSION OF A SMALL TO MODERATE SIZE STREAM AND ENCASEMENT OF THE SEWER IN CONCRETE.
46. THE WIDTH OF THE EASEMENT FOR THE STREAM CROSSING SHOULD BE RESTRICTED TO ONLY THAT NECESSARY TO PERFORM THE WORK.
47. BORING PITS (FOR JACK AND BORE CROSSINGS) SHOULD BE SURROUNDED WITH SILT FENCES OR HAY BALES TO PREVENT EROSION OF THE EXCAVATED PIT MATERIAL.
48. CONSTRUCTION EQUIPMENT SHALL BE KEPT OUT OF THE STREAM CHANNEL WHENEVER POSSIBLE.

ARCHAEOLOGICAL / HISTORICAL RESOURCES

49. CONTRACTORS AND SUBCONTRACTORS ARE REQUIRED UNDER OHIO REVISED CODE SECTION 149.53 TO NOTIFY THE OHIO HISTORICAL SOCIETY AND THE OHIO HISTORIC SITE PRESERVATION BOARD OF ARCHAEOLOGICAL DISCOVERIES LOCATED IN THE PROJECT AREA, AND TO COOPERATE WITH THOSE ENTITIES IN ARCHAEOLOGICAL AND HISTORIC SURVEYS AND SALVAGE EFFORTS IF SUCH DISCOVERIES ARE UNCOVERED WITHIN THE PROJECT AREA.

    CONTACT: STATE HISTORIC PRESERVATION OFFICE
    PHONE: 1-614-298-2000

STATE OF OHIO
THOMAS E. VOLDRICH
47843
REGISTERED
PROFESSIONAL ENGINEER

CT consultants
engineers • architects • planners
A Verdantas Company

NO	REVISION	DATE

ISSUED FOR: BID
ISSUE DATE: 10/10/24
SCALE: AS NOTED
DESIGNED BY: ELE
DRAWN BY: ELE
CHECKED BY: TEV

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR
EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

GENERAL - 00 SERIES
OHIO EPA GENERAL NOTES

PROJECT NO.: 210888
DISCIPLINE: GENERAL
SHEET NAME: 00G-03
SHEET: 3 OF 53

GENERAL

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE PLANS AND TECHNICAL SPECIFICATIONS, VISIT THE PROJECT SITE AND NOTIFY IN WRITING THE PROJECT ENGINEER OF ANY DISCREPANCIES IN THE PLANS OR SPECIFICATIONS PRIOR TO CONSTRUCTION.

2. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND SUBMIT ANY NECESSARY MODIFICATIONS TO THE ENGINEER FOR APPROVAL.

3. ANY REVISIONS TO THE ACCEPTED CONSTRUCTION PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION IN THE FIELD.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A CURRENT SET OF "AS BUILT" DRAWINGS.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND SHALL NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES.

6. NO WORK MAY COMMENCE WITHOUT AN EXECUTED NOTICE TO PROCEED.

7. NOTIFY THE CITY OF NORTH OLMSTED WASTEWATER TREATMENT PLANT SUPERINTENDENT 24-HOURS PRIOR TO STARTING CONSTRUCTION, BRIAN BLUM,440-777-1881

8. THE CONTRACTOR SHALL PROVIDE A PRE-CONSTRUCTION VIDEO TAPE SURVEY OF THE ENTIRE PROJECT AREA. VIDEO TAPE SURVEY, SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR MOBILIZATION, AS PER PLAN.

9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF AND AVOID INTERFERENCE TO TREATMENT OPERATION.

10. THE CONTRACTORS AND ALL SUBCONTRACTORS 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 CONTRACTORS AND SUBCONTRACTORS TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

11. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY AND ALL EXISTING WORK DAMAGED DURING OR DUE TO EXECUTION OF THIS CONTRACT AT HIS OWN EXPENSE. ALL SAID WORK TO BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER.

12. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCH MARKS, PROPERTY CORNERS, REFERENCE POINTS AND STAKES AND IN CASE OF WILLFUL OR CARELESS DESTRUCTION, HE SHALL BE CHARGED WITH THE RESULTING EXPENSE OF REPLACEMENT AND SHALL BE RESPONSIBLE FOR ANY MISTAKES THAT MAY BE CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE. ANY EXISTING PROPERTY CORNER PINS OR MONUMENTS DAMAGED OR DESTROYED BY CONSTRUCTION SHALL BE RESET BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE UPON COMPLETION OF THE PROJECT PRIOR TO FINAL PAYMENT. A CERTIFICATION SHALL BE FURNISHED BY A REGISTERED SURVEYOR, STATING THAT SAID DAMAGES HAVE BEEN RESTORED.

13. GEOTECHNICAL INVESTIGATION AND SOIL BORINGS WERE PERFORMED IN THE PROJECT AREA. REFER TO THE INTERTEK-PSI SUBSURFACE EXPLORATION REPORT, PSI PROJECT NO. 0142-2390, DATED OCTOBER 14, 2021.

14. THE INFORMATION PROVIDED WITHIN THESE PLANS IS SPECIFIC TO THE ANTICIPATED WORK AREAS AND IS NOT INCLUSIVE OF ALL TOPOGRAPHIC AND UTILITY FEATURES OUTSIDE OF THE AREA.

15. CONTRACTOR SHALL FURNISH ALL TEMPORARY FACILITIES AS REQUIRED TO MAINTAIN SANITARY FLOWS DURING THE COURSE OF HIS WORK.

16. ALL SEDIMENT AND EROSION CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

17. POSITIVE DRAINAGE SHALL BE PROVIDED ON OR NEAR SPOIL AREAS. NATURAL DRAINAGE WAYS SHALL BE MAINTAINED.

18. THE CONTRACTOR SHALL PROVIDE SITE EROSION CONTROL TO PREVENT RUNOFF WATER FROM THE SITE FROM CARRYING SAND, SILT, DIRT, ETC. ONTO PRIVATE PROPERTY, OR INTO ANY STORM SEWER OR DRAINAGE CHANNEL.

19. ANY DISTURBED AREAS NOT SCHEDULED FOR CONSTRUCTION ACTIVITIES WITHIN SIXTY DAYS OF DISTURBANCE SHALL BE TEMPORARILY STABILIZED.

20. THE CONTRACTOR SHALL COORDINATE WITH OWNER THE STORAGE OF STORED MATERIALS AND REMOVED EXISTING EQUIPMENT TO BE RETAINED.

21. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SECURITY OF ALL STORED MATERIALS ON OWNER'S SITE.

22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BARRICADING AND/OR FENCING AREAS THAT ARE DEEMED UNSAFE BY OWNER, ENGINEER.

23. OSHA PROHIBITS CRANE AND BACKHOE OPERATIONS WITHIN 10 FEET OF ENERGIZED PRIMARY CONDUCTORS. TEMPORARY RELOCATION OF ELECTRICAL UTILITIES, INCLUDING RESTRAINT OF POLES, RELOCATION OF POLES, AND RUBBER COVERING OF ENERGIZED CONDUCTORS MAY BE REQUIRED. THE COORDINATION AND COST OF THESE SERVICES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MAY RESTRAIN POLES IF THE METHOD OF SUPPORT HAS BEEN SUBMITTED TO AND APPROVED BY THE UTILITY COMPANY.

24. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN PEDESTRIAN, LOCAL ROADWAY AND DRIVEWAY ACCESS AT ALL TIMES.

25. THE CONTRACTOR MUST COORDINATE HIS WORK WITH THE OWNER. THE CONTRACTOR MUST MAINTAIN ADEQUATE ACCESS FOR ALL MAINTENANCE VEHICLES AS WELL AS LOCAL RESIDENTS THAT UTILIZE THE SURROUNDING WALKWAYS. A CONSTRUCTION SCHEDULE AND PHASING SHALL BE APPROVED BY THE ENGINEER.

26. NO TRACKED EQUIPMENT IS PERMITTED TO TRAVERSE CITY ROADS. TRACKED EQUIPMENT NEEDS TO BE DELIVERED TO THE SITE.

27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SIGNING AND TRAFFIC CONTROL AS DIRECTED BY THE LOCAL MUNICIPALITY. ALL SIGNS AND MATERIAL USED SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

28. CONTRACTOR SHALL CLEAR ALL DEBRIS, DIRT, VEHICLES AND EQUIPMENT FROM WALKWAY AND TRAFFIC ROUTES AT THE CONCLUSION OF WORK EACH DAY.

29. THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM HIS OPERATION AND RESTORE ALL SURFACES, STRUCTURES, DITCHES AND PROPERTIES TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER. ANY DITCHES DISTURBED DURING CONSTRUCTION SHALL BE REGRADED BY THE END OF THE SAME WORK DAY. ALL EXISTING STORM AND SANITARY SEWER FACILITIES, INCLUDING TILE, DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED OR RECONNECTED TO THE EXISTING OR PROPOSED SYSTEM AS DIRECTED BY THE ENGINEER. RESTORATION SHALL INCLUDE SEEDING AND MULCHING DISTURBED AREAS, RESTORATION OF EXISTING DRIVES AND FINAL CLEAN UP.

30. EXISTING UTILITIES SHOWN ARE FROM BEST AVAILABLE RECORDS AND FIELD INVESTIGATION, AND ARE NOT NECESSARILY COMPLETE OR EXACT. THE CONTRACTORS ARE RESPONSIBLE FOR INVESTIGATION, LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTORS SHALL EXPOSE BY PRE-EXCAVATING ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON THE PROPOSED CONSTRUCTION, AND SHALL MAKE ADJUSTMENTS IN ELEVATIONS AS DIRECTED BY THE ENGINEER TO PROVIDE SUFFICIENT CLEARANCE BETWEEN THE PROPOSED AND EXISTING UTILITIES.

31. ANY EXISTING UTILITY (GAS, ELECTRIC, CABLE TELEVISION, TELEPHONE, WATER LINE, STORM OR SANITARY APPURTENANCE, ETC.) IN OR OUTSIDE THE CONSTRUCTION LIMITS DAMAGED DURING THE CONSTRUCTION OF THE PROPOSED PROJECT, WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

32. APPROVAL BY THE OWNER AND/OR THEIR REPRESENTATIVE CONSTITUTES NEITHER EXPRESSED NOR IMPLIED WARRANTS AS TO THE FITNESS, ACCURACY, OR SUFFICIENCY OF PLANS, DESIGNS, OR SPECIFICATIONS.

33. IN THE CASE OF DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS, THE MOST STRINGENT PREVAILS.

DUST CONTROL

1. DUST CONTROL MEASURES TO BE PROVIDED BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE COUNTY DESIGNATED INSPECTOR. THE CONTRACTOR SHALL ANTICIPATE STREET SWEEPING ON A WEEKLY BASIS AT A MINIMUM. NO SEPARATE PAYMENT SHALL BE MADE.

NOISE CONTROL PRACTICES

1. CONSTRUCTION EQUIPMENT WILL BE PROVIDED WITH INTAKE SILENCERS AND MUFFLERS AS REQUIRED BY SAFETY STANDARDS AND LOCAL NOISE ORDINANCE.

EXISTING UTILITIES

1. THE LOCATIONS OF THE UNDERGROUND UTILITIES ARE PLOTTED ACCORDING TO THE INFORMATION FURNISHED BY THE UTILITIES CONCERNED AND THE COUNTY DOES NOT GUARANTEE THE ACCURACY THEREOF. CONTRACTOR TO CALL OUPS (1-800-362-2764) "48 HOURS BEFORE YOU DIG" AND CALL OIL & GAS PRODUCERS PROTECTIVE (1-800-925-0988). CONTRACTOR ALSO TO COORDINATE HIS WORK WITH UTILITY COMPANIES AS LISTED BELOW

2. IN THE EVENT OF DAMAGE TO EXISTING PUBLIC AND/OR PRIVATE UTILITIES, THE AGENCY CONCERNED SHALL BE NOTIFIED IMMEDIATELY AND ALL REPAIR WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE AGENCY AT NO ADDITIONAL EXPENSE TO THE COUNTY INCLUDING ANY INSPECTION FEES OR MAINTENANCE CREWS. CABLE (CEI, AT&T & TV) RELOCATION AND SUPPORT.

3. WHERE EXISTING POWER OR TELEPHONE POLES ARE IN CLOSE PROXIMITY TO WORK, THE CONTRACTOR SHALL COORDINATE HIS WORK EFFORTS WITH THOSE OF THE UTILITY COMPANIES SUCH THAT THEIR EXISTING FACILITIES CAN BE MAINTAINED AND PROTECTED DURING THE TIME WORK IS GOING ON ADJACENT TO THE POLE. THE COST FOR ANY REQUIRED PROTECTION OR RELOCATION OF EXISTING POWER OR TELEPHONE POLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NOT BE THE RESPONSIBILITY OF THE COUNTY.

4. WHERE EXCAVATION CROSSES EXISTING UTILITIES, THE CONTRACTOR SHALL USE EXCAVATION TECHNIQUES AND EQUIPMENT TO EXPOSE SUCH CROSSINGS.

THE UTILITY OWNERSHIPS ARE AS FOLLOWS:

(T.B.D.)

MATERIAL DISPOSAL AND TEMPORARY SURFACES

1. THE REMOVAL AND DISPOSAL OF ALL SURPLUS EXCAVATED MATERIAL AND CONSTRUCTION DEBRIS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ULTIMATE DISPOSAL. THE DISPOSAL OF ALL CONSTRUCTION DEBRIS SHALL BE AT AN APPROVED LANDFILL. THE DISPOSAL OF ALL "CLEAN" WASTE MATERIAL SHALL BE AT APPROVED LANDFILLS, AND/OR OTHER SITES APPROVED BY THE OWNER AND ENGINEER. THE DISPOSAL OF SEDIMENTS AND WASTEWATER SLUDGE SHALL BE AT AN APPROVED LANDFILL. THE CONTRACTOR SHALL OBTAIN ALL APPROVALS, PERMITS, LICENSES, ETC. FROM LOCAL, STATE AND FEDERAL AGENCIES AND/OR PRIVATE LANDOWNERS. THE CONTRACTOR SHALL FURNISH THE ENGINEER A COPY OF ALL APPROVALS OR WRITTEN PERMISSION PRIOR TO DISPOSING OF ANY WASTE AT SAID SITE.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE RESTORATION OF ALL MATERIAL WASTE AREAS USED IN THE COURSE OF THIS CONTRACT. THE RESTORATION WORK SHALL INCLUDE CLEANUP, SHAPING AND GRADING AND ESTABLISHMENT OF VEGETATIVE COVER BY SEEDING AND MULCHING IN ACCORDANCE WITH O.D.O.T. SPECIFICATION NO. 659. THE FINAL GRADING OF WASTE AREAS SHALL BE PROPERLY SLOPED TO PROVIDE DRAINAGE RUNOFF.

3. TEMPORARY SURFACES WHERE EXCAVATION ARE LOCATED IN STREETS, DRIVES AND PARKING AREAS SHALL BE FURNISHED AND PLACED BY THE CONTRACTOR AND SHALL BE FULLY MAINTAINED TO MINIMIZE INCONVENIENCE TO THE PUBLIC AT NO ADDITIONAL COST TO THE OWNER.

4. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL UNUSED EXCAVATIONS SO THAT THE ORIGINAL SITE CONTOURS ARE PRESERVED UNLESS NOTED OTHERWISE. WASTING ON SITE SHALL NOT BE ANTICIPATED.

5. DUMP SITES MUST BE APPROVED BY THE OWNER AND OHIO E.P.A.

PROTECTION OF EXISTING UTILITIES AND PIPES

1. THE CONTRACTOR SHALL BE REQUIRED, AT HIS EXPENSE, TO DO EVERYTHING NECESSARY TO PROTECT, SUPPORT AND SUSTAIN ALL SANITARY SEWERS, STORM DRAINS, WATER, PROCESS OR GAS PIPES, SERVICE PIPES, ELECTRIC LIGHTS, POWER AND TELEPHONE POLES, CONDUIT AND OTHER FIXTURES LAID ACROSS OR ALONG THE SITE OF THE WORK. THE ENGINEER AS WELL AS THE COMPANY OR CORPORATION OWNING SAID PIPES, POLES OR CONDUITS MUST BE NOTIFIED OF THE SAME BY THE CONTRACTOR, BEFORE ANY SUCH FIXTURES ARE REMOVED OR DISTURBED. IN CASE ANY OF THE SAID SEWER, DRAIN, GAS, PROCESS OR WATER PIPES, SERVICE PIPES, ELECTRIC LIGHT, POWER AND TELEPHONE POLES, CONDUITS OR OTHER FIXTURES ARE DAMAGED THEY SHALL BE REPAIRED BY THE AUTHORITIES HAVING CONTROL OF THE SAME AND THE EXPENSE OF SAID REPAIRS SHALL BE DEDUCTED FROM THE MONIES WHICH ARE DUE OR TO BECOME DUE THE CONTRACTOR UNDER THIS CONTRACT.

2. EXISTING UTILITY (GAS, ELECTRICAL, CABLE TELEVISION, TELEPHONE, WATER LINE, STORM OR SANITARY SEWER, WATER LINE OR STORM OR SANITARY SEWER APPURTENANCE, ETC.) IN OR OUTSIDE THE CONSTRUCTION LIMITS DAMAGED DURING THE CONSTRUCTION OF THE PROPOSED PROJECT, WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. INDIVIDUAL SANITARY, STORM, GAS, WATER, ELECTRIC AND TELEPHONE AND CABLE SERVICE CONNECTIONS ARE NOT SHOWN. THE CONTRACTOR SHALL LOCATE AND PROTECT SERVICE CONNECTIONS THROUGHOUT THE COURSE OF THE WORK. IN THE EVENT SERVICE CONNECTIONS ARE BROKEN OR DISTURBED, THE CONTRACTOR SHALL REPAIR OR REPLACE THE SERVICE CONNECTION TO THE SATISFACTION OF THE OWNER AT NO ADDITION COST TO THE OWNER

3. SHOULD IT BECOME NECESSARY TO CHANGE THE POSITION OR TEMPORARILY REMOVE ANY STORM DRAIN, SANITARY SEWER, ELECTRIC CONDUITS, WATER PIPES, GAS PIPES, PROCESS OR OTHER PIPES OR WIRES IN ORDER TO PERMIT THE CONTRACTOR TO USE A PARTICULAR METHOD OF CONSTRUCTION OR IN ORDER TO CLEAR THE STRUCTURES BEING BUILT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE LOCATION AND CIRCUMSTANCES IMMEDIATELY

4. NO SURFACE, GROUND OR TRENCH WATER SHALL BE ALLOWED TO FLOW INTO EXISTING SANITARY SEWERS.

PRELIMINARY EXCAVATIONS

1. THE CONTRACTOR SHALL PROVIDE PRELIMINARY SMALL EXCAVATIONS TO EXPOSE AND VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING PIPING AND STRUCTURES BEFORE COMMENCING ANY WORK.

DEWATERING PLAN

1. THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN PREPARED BY AN OHIO P.E. SHOWING 5 YEARS OF GEOTECHNICAL EXPERIENCE RELATED TO GROUNDWATER MANAGEMENT AND SITE DEWATERING. THE PLAN SHALL BE SUBMITTED AND APPROVED PRIOR TO ANY EXCAVATION.

CLEARING AND GRUBBING

1. THE CONTRACTOR SHALL INCLUDE ALL NECESSARY PRECAUTIONS TO PROTECT AND SAVE ALL TREES WHICH ARE ADJACENT TO THE LINE OF WORK AND SHALL REMOVE ONLY THOSE TREES WHICH ARE DESIGNATED FOR REMOVAL ON THE PLANS OR DIRECTED BY THE ENGINEER. TREE ROOTS AND OVERHANGING BRANCHES SHALL BE CUT, EXCEPT WITH SPECIAL PERMISSION OF THE ENGINEER. WHEN REQUIRED, THE CUTTING OF ROOTS AND BRANCHES SHALL BE DONE IN A MANNER TO LEAVE A SMOOTH END WITHOUT SPLITTING OR CRUSHING. THE CUT END SHALL BE NEATLY TRIMMED. ALL DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE SATISFACTION OF THE ENGINEER. WHERE MISCELLANEOUS SMALL TREES AND SHRUBS ARE NOTED TO BE REMOVED AND RESET, THE COST OF SUCH WORK SHALL BE CONSIDERED INCIDENTAL TO THE COMPLETION OF THE PROJECT.

RESTORATION

1. UNLESS DIRECTED OR SPECIFIED OTHERWISE, CONTRACTOR SHALL RESTORE ALL AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER"

MONUMENTS, PROPERTY CORNERS AND BENCH MARKS

1. MONUMENTS, PROPERTY CORNER MARKERS AND BENCH MARKS SHALL NOT BE DISTURBED BY THE CONTRACTOR. IN THE EVENT THAT IT IS NECESSARY TO REMOVE MONUMENTS, PROPERTY CORNER MARKERS OR BENCH MARKS FOR THE CONSTRUCTION OF THE WORK, THE CONTRACTOR SHALL HAVE A REGISTERED LAND SURVEYOR PROPERLY REFERENCE THE POINTS AND SHALL HAVE SAME RESET AFTER THE CONSTRUCTION HAS PASSED THE AREA.

TEMPORARY ON-SITE SOIL STORAGE

1. THE CONTRACTOR SHALL CONFINE TEMPORARY SOIL STORAGE TO THE DESIGNATED SITES WITH SUITABLE EROSION CONTROL SILT FENCING AND A 5 FEET SET BACK FROM FENCE AND TOE OF PILE SLOPES.

2. AN EXCAVATION, PIPE DELIVERY STORAGE AND INSTALLATION **SEQUENCING PLAN** SHOWING AN APPROXIMATE TIMELINE, SHALL BE SUBMITTED FOR THE ENGINEERS APPROVAL BEFORE INITIATION OF EXCAVATION OR DELIVERY OF MATERIALS.

3. PROVISIONS FOR ROUTING SURFACE WATER AROUND OR UNDER STORAGE PILES TO PREVENT PONDING SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND INCLUDED IN THE ABOVE **SEQUENCING PLAN.**

4. STORAGE PILE SIDE SLOPES SHALL NOT EXCEED 1:1.5 UNLESS APPROVED BY THE ENGINEER.

5. PROVISIONS FOR SOIL DRYING TO ACHIEVE FINAL BACKFILL COMPACTION REQUIREMENTS SHALL BE INCLUDED IN THE **SEQUENCING PLAN**.

6. COMPACTION OF STORED EXCAVATIONS IS NOT REQUIRED BUT CAN BE DONE AT THE CONTRACTOR'S DISCRETION TO REDUCE STORAGE AREA REQUIREMENTS AND OR ALLOW CONSTRUCTION VEHICLE MOVEMENTS DURING CONSTRUCTION.

7. TEMPORARY SEEDING AND OTHER EROSION CONTROL MEASURES SHALL BE AS REQUIRED TO PREVENT SOIL RUNOFF AND IN ACCORDANCE WITH THE SWPPP DRAWINGS.

8. FINAL SITE RESTORATION AND PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH SWPPP DRAWINGS.

9. PROVISIONS FOR DUST CONTROL FOR STORED SOIL PILES DURING EXTENDED DRY PERIODS PROVISIONS SHALL BE PROVIDED.

10. IF THE CONTRACTOR NEEDS ADDITIONAL STORAGE AREA, IT SHALL BE OFF-SITE AND, HE SHALL OBTAIN ALL APPLICABLE PERMITS AND ADVISE THE EXTENT OF SUCH ADDITIONAL STORAGE AND WHERE THIS WILL OCCUR AND PARTICULARLY THE ROUTES INTENDED TO TRAVEL TO AND FROM SUCH OFF-SITE LOCATIONS. THIS INFORMATION SHALL BE INCLUDED IN THE ABOVE REFERENCED **SEQUENCING PLAN**.

WETLANDS / NATIONWIDE PERMIT NOTES

1. APPROPRIATE MEASURES MUST BE TAKEN TO MAINTAIN NORMAL DOWNSTREAM FLOWS AND MINIMIZE FLOODING TO THE MAXIMUM EXTENT PRACTICABLE, WHEN TEMPORARY STRUCTURES, WORK, AND DISCHARGES, INCLUDING COFFERDAMS, ARE NECESSARY FOR CONSTRUCTION ACTIVITIES, ACCESS FILLS, OR DEWATERING OF CONSTRUCTION SITES.

2. TEMPORARY FILLS MUST CONSIST OF MATERIALS, AND BE PLACED IN A MANNER, THAT WILL NOT BE ERODED BY EXPECTED HIGH FLOWS AND IT WILL BE BACKFILLED OR REMOVED IN LESS THAN THREE (3) MONTHS.

3. TEMPORARY FILLS MUST BE REMOVED IN THEIR ENTIRETY AND THE AFFECTED AREAS RETURNED TO PRE-CONSTRUCTION ELEVATIONS. THE AREAS AFFECTED BY TEMPORARY FILLS MUST BE REVEGETATED, AS APPROPRIATE.

4. THE MAXIMUM DISTURBANCE WIDTH THROUGH THE WATER RESOURCES WILL BE LIMITED TO 50 FEET WIDE (25 FEET EITHER SIDE OF THE PIPE) FOR PIPELINE ACTIVITIES.

5. ALL HYDRIC SOILS UP TO TWELVE (12) INCHES IN DEPTH WITHIN THE WETLANDS SHALL BE STOCKPILED AND REPLACED AS THE TOPMOST BACKFILL LAYER.

6. THE TRENCH WILL BE BACKFILLED IN SUCH A MANNER AS TO AVOID DRAINING WATERS OF THE UNITED STATES.

7. EXPOSED SLOPES AND STREAM BANKS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF THE WORK AT EACH WATER BODY.

8. USE OF ACCESS ROADS WILL BE LIMITED TO MINIMUM WIDTH NECESSARY. ALL ACCESS ROADS USED SOLELY FOR CONSTRUCTION OF THE UTILITY LINE WILL BE REMOVED UPON COMPLETION OF THE WORK.

9. TEMPORARY IMPACTS TO CATEGORY 1 AND 2 WETLANDS ARE LESS THAN ONE-HALF ACRE. NO IMPACTS GREATER THAN 1/10 ACRE WILL OCCUR TO ANY INDIVIDUAL WATER OF THE U.S.

10. CONSTRUCTION ACTIVITIES WILL BE PERFORMED DURING LOW FLOW CONDITIONS TO THE MAXIMUM EXTENT POSSIBLE. NO IN-WATER WORK CAN OCCUR BETWEEN APRIL 15 AND JUNE 30 WITHOUT WRITTEN APPROVAL BY ODNR.

11. APPROPRIATE SITE SPECIFIC BEST MANAGEMENT PRACTICES FOR SEDIMENT AND EROSION CONTROL WILL BE FULLY IMPLEMENTED DURING CONSTRUCTION ACTIVITIES.

12. TREE CLEARING MAY ONLY OCCUR BETWEEN OCTOBER 1 AND MARCH 31.

13. NO AREA FOR WHICH GRADING HAS BEEN COMPLETED WILL BE UNSEEDED OR UNMULCHED FOR LONGER THAN 14 DAYS.

14. ALL DISTURBED AREAS WILL BE RE-SEEDED AND/OR RE-VEGETATED WITH NATIVE SPECIES AND APPROVED SEED MIXES.

STATE OF OHIO
THOMAS E. VOLDRICH
47843
REGISTERED
PROFESSIONAL ENGINEER

consultants
engineers • architects • planners
A Verdantas Company

NO	REVISION	DATE

ISSUED FOR:	BID
ISSUE DATE:	10/10/24
SCALE:	AS NOTED
DESIGNED BY:	ELE
DRAWN BY:	ELE
CHECKED BY:	TEV

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
NORTH OLMSTED, OHIO
CUYAHOGA COUNTY

GENERAL - 00 SERIES

GENERAL NOTES PROCESS

PROJECT NO.
210888
DISCIPLINE
GENERAL
SHEET NAME
00G-04
SHEET 4 OF 53

ABBREVIATIONS:

A/C	AIR CONDITIONING UNIT
ABDN	ABANDON
ADF	AVERAGE DAY FLOW
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE (ING)
ALUM.	ALUMINUM
ANOD	ANODIZE
APPROX	APPROXIMATE (LY)
ARCH	ARCHITECT (URAL) (URE)
AS	ACTIVATED SLUDGE
ASPH	ASPHALT
ASSOC	ASSOCIATION
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AUX	AUXILIARY
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
B	BOTTOM
BF	BLIND FLANGE
BV	BUTTERFLY VALVE
B'FLY	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BIT	BITUMINOUS
BL	BASE LINE
BLDG	BUILDING
BM	BENCHMARK
BO	BOTTOM OF
BOB	BOTTOM OF BANK
BOT	BOTTOM
BV	BALL VALVE
BWL	BOTTOM OPERATING WATER LEVEL
CB	CATCH BASIN
CC	CENTER TO CENTER
CCW	COUNTER CLOCKWISE
CF	CUBIC FOOT
CFM	CUBIC FOOT PER MINUTE
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CIGL	CAST IRON PIPE GLASS LINE
CIP	CAST IRON PIPE
CJ	CONSTRUCTION/CONTROL JOINT
℄ OR ℄	CENTER LINE
CL2	CHLORINE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRUGATED
CU	COPPER
CV	CHECK VALVE
CW	COLD WATER (POTABLE)
DEMO	DEMOLITION
DIA	DIAMETER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH	DISCHARGE
DN	DOWN
DNSPT	DOWNSPOUT
DPS	JOHNS STREET DUPLEX PUMP STATION
DWG	DRAWING
DWL	DOWEL
EA	EACH
ECC	ECCENTRIC
EC	ELECTRICAL CONTRACTOR
EF	EACH FACE
EFF	EFFLUENT
EL	ELEVATION
ELEC	ELECTRIC (AL)
EMERG	EMERGENCY
ENGR	ENGINEER
ENT	ENTERING
EQ	EQUALIZATION
ESMT	EASEMENT
EST	ESTIMATE (D)
ETC	ETCETERA
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
FB	FLOOR BOX
FD	FLOOR DRAIN
FG	FINISH GRADE
FIG	FIGURE
FIN	FINISH (ED)
FL	FLOOR
FLEX	FLEXIBLE
FLG	FLANGE (D)
FM	FORCE MAIN
FPM	FEET PER MINUTE
FPT	FEMALE PIPE THREAD
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET/FOOT
FTG	FOOTING/FITTING
FURN	FURNISHED
FV	FLAP CHECK VALVE
G	GAS
GA	GAGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GL	GLASS
GLDP	GLASS LINED DUCTILE IRON PIPE
GOV	GLOBE VALVE
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
GND	GROUND
GV	GATE VALVE
HB	HOSE BIBB
HDPE	HIGH DENSITY POLYETHYLENE
HOR	HORIZONTAL
H	HEIGHT
HSB	HEADWORKS SCREEN BUILDING
HW	HOT WATER
HYD	HYDRANT
HZ	HERTZ
IB	INLET BASIN
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH
INF	INFLUENT
INT	INTERIOR
INV	INVERT
IP	IRON PIPE BOUNDARY
JB	JUNCTION BOX
JT	JOINT
KGV	KNIFE GATE VALE
KSI	KIPS (1000 LBS.) PER SQUARE INCH
L	LENGTH OR STRUCTURAL ANGLE DESIGNATION
LAV	LAVATORY
LB	POUND
LBS	POUNDS
LF	LINEAL FEET
LG	LONG
LH	LEFT HAND
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNDG	LANDING
LOC	LOCATION/LOCATED
LONG	LONGITUDINAL
LR	LONG RADIUS
LSM	LOW STRENGTH MORTAR
LT	LIGHT
LWA	LOW WATER ALARM
LWL	LOW WATER LEVEL
MATL	MATERIAL
MAX	MAXIUM
MBR	MEMBRANE BIO-REACTOR
MC	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
MCJ	MASONRY CONTROL JOINT
MFD	MANUFACTURED
MFR	MANUFACTURER
MG/L	MILLIGRAMS PER LITER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MO	MOTOR OPERATED
M.O.	MASONRY OPENING
MON	MONUMENT
MPH	MILES PER HOUR
$NaHSO_3$	SODIUM BISULFITE
NaOCl	SODIUM HYPOCHLORITE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NO	NORMALLY OPEN
NPT	AMERICAN NATIONAL TAPER PIPE THREAD
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE
N/F	NOW / AND OR FORMALLY
OC	ON CENTER
OD	OUTSIDE DIAMETER
OE	OVERHEAD ELECTRIC
OF	OUTSIDE FACE
OH	OVER HEAD
OPB	OPERATIONS BUILDING
OPNG	OPENING
OPER	OPERATOR
OPP	OPPOSITE
OPT	OPTION (AL)
OT	OVERHEAD TELEPHONE
OTC	OHIO TURNPIKE COMMISSION
PB	PUSHBUTTON
P.C.	PLUMBING CONTRACTOR
PCF	POUND PER CUBIC FOOT
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PE	PLAIN END
pH	HYDROGEN ION CONCENTRATION
PH	PHASE
PI	POINT OF INTERSECTION
POT	POTABLE
PP	POWER POLE
PPM	PARTS PER MILLION
PRV	PRESSURE RELIEF VALVE
PS	PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAGE
PT	POINT OF TANGENT
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PW	POTABLE WATER
QTY	QUANTITY
R/W	RIGHT-OF-WAY
RAD	RADIUS
RAS	RETURN ACTIVATED SLUDGE
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RED	REDUCER
REF	REFERENCE
REINF'G	REINFORCING
REM	REMOVE
REQ'D	REQUIRED
RH	RIGHT HAND
RM	ROOM
R.O.	ROOF OPENING
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RT	RIGHT
RW	(NON-POTABLE) RAW WATER
SAN	SANITARY
SAN	SANITARY
SBR	SEQUENCING BATCH REACTOR
SCH	SCHEDULE
SD	STORM DRAIN
SG	SLIDE GATE
SIM	SIMILIAR
SHT	SLUDGE HOLDING TANK
SP	STOP PLATE
SPEC	SPECIFICATION, SPECIFIED
SS	STAINLESS STEEL
STA	STATION
STO	STORM
STIR	STIRRUP (S)
STL	STEEL
STRUC	STRUCTURE (S, URAL)
SW	SWITCH
SWBD	SWITCHBOARD
SWD	SIDE WATER DEPTH
SWGR	SWITCHGEAR
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TEL	TELEPHONE
TEMP	TEMPERATURE
THK	THICK
TO	TOP OF
TOB	TOP OF BERM/BANK
TOC	TOP OF CURB/CONCRETE
TOS	TOP OF STEEL
TOW	TOP OF WALL
TP	TURNING POINT
TV	TELEVISION
TWL	TOP OPERATING WATER LEVEL
TYP	TYPICAL
UG	UNDERGROUND
UGTC	UNDERGROUND TELEPHONE CABLE
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
UVT	ULTRAVIOLET TREATMENT TANK
VAC	VACUUM
VB	VALVE BOX
VCP	VITRIFIED CLAY PIPE
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIB	VIBRATION
VOL	VOLUME
VS	VARIABLE SPEED
VSD	VARIABLE SPEED DRIVE
VSP	VITRIFIED SEWER PIPE
W	WIDTH
W/	WITH
WAS	WASTE ACTIVATED SLUDGE
W/0	WITHOUT
WC	WATER CLOSET
WE	WASTE EFFLUENT
WHA	WATER HAMMER ARRESTOR
WL	WATER LEVEL
WM	WATER MAIN
WP	WEIR PLATE
WS	WASTE SLUDGE
WTP	WATER TREATMENT PLANT
WW	WASTE WATER
WWF	WELDED WIRE FABRIC
WPCF	WATER POLLUTION CONTROL FACILITY
XFMR	TRANSFORMER
YD	YARD DRAIN
YR	YEAR

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CHECKED BY:	TEV

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR
EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

GENERAL - 00 SERIES

ABBREVIATIONS

PROJECT NO.
210888

DISCIPLINE
GENERAL

SHEET NAME
00G-05

SHEET 5 OF 53

EXISTING LINETYPES

FENCE, GENERAL	
FENCE, BARBED WIRE	
FENCE, CHAIN LINK	
FENCE, DECORATIVE	
FENCE, ELECTRIC	
FENCE, VINYL	
FENCE, WOOD	
FENCE, WOVEN WIRE	
CABLE RAIL	
GUARDRAIL	
HANDRAIL	
CABLE T.V., ABANDONED	CATV-ABAN
CABLE T.V.	CATV
CABLE T.V., OH	CATV-OH
CABLE T.V., UG	CATV-UG
CABLE T.V., SERVICE	CATV
CABLE T.V., SERVICE OH	CATV-OH
CABLE T.V., SERVICE UG	CATV-UG
COMMUNICATION, ABANDONED	COMM-ABAN
COMMUNICATION	COMM
COMMUNICATION, OH	COMM-OH
COMMUNICATION, UG	COMM-UG
COMMUNICATION, SERVICE	COMM
COMMUNICATION, SERVICE OH	COMM-OH
COMMUNICATION, SERVICE, UG	COMM-UG
ELECTRIC, ABANDONED	ELEC-ABAN
ELECTRIC, DUCT BANK	
ELECTRIC	ELEC
ELECTRIC, OH	ELEC-OH
ELECTRIC, UG	ELEC-UG
ELECTRIC, SERVICE	ELEC
ELECTRIC, SERVICE OH	ELEC-OH
ELECTRIC, SERVICE, UG	ELEC-UG
FIBER OPTIC, ABANDONED	FOC-ABAN
FIBER OPTIC, DUCT BANK	
FIBER OPTIC	FOC
FIBER OPTIC, OH	FOC-OH
FIBER OPTIC, UG	FOC-UG
FIBER OPTIC, SERVICE	FOC
FIBER OPTIC, SERVICE OH	FOC-OH
FIBER OPTIC, SERVICE, UG	FOC-UG
GAS, ABANDONED	GAS-ABAN
GAS	GAS
GAS, SERVICE	GS
SANITARY, ABANDONED	SAN-ABAN
SANITARY FORCE MAIN	FM
SANITARY SEWER	SAN
SANITARY LEACH LINE	LCH
SANITARY SEWER, DOUBLE	
SANITARY SEWER, SERVICE	SS
STORM SEWER, ABANDONED	STM-ABAN
STORM CULVERT	
STORM SEWER	STM
STORM SEWER, DOUBLE	
STORM, ROOF DRAIN	RD
STORM, UNDERDRAIN	UD
TELEPHONE, ABANDONED	TEL-ABAN
TELEPHONE	TEL
TELEPHONE, OH	TEL-OH
TELEPHONE, UG	TEL-UG
TELEPHONE, SERVICE	TEL
TELEPHONE, SERVICE OH	TEL-OH
TELEPHONE, SERVICE, UG	TEL-UG
TRAFFIC, ABANDONED	TRAF-ABAN
TRAFFIC LINE	TRAF
TRAFFIC LINE, OH	TRAF-OH
TRAFFIC LINE, UG	TRAF-UG
TRAFFIC, LOOP WIRE	
TRAFFIC, SPAN WIRE	TRAF-SP
WATER LINE, ABANDONED	WAT-ABAN
WATER LINE	WAT
WATER LINE, DOUBLE	
WATER LINE, SERVICE	WS

EXISTING LINETYPES

BRUSH LINE	
BUSH LINE	
TREE LINE	
MAJOR CONTOUR	1005
MINOR CONTOUR	1001
WATER EDGE	
COUNTY LINE	
CORPORATION LINE	
ANNEXATION AREA	
SECTION LINE	
TOWNSHIP LINE	
FLOOD PLAIN LIMIT	
WETLAND LIMIT	
FARM LINE	
BOUNDARY LINE	
PROPERTY LINE	EX. P/L
LEASE LINE	LEASE
RIGHT-OF-WAY LINE	EX. R/W
RIGHT-OF-WAY C/L	
SURVEY STATIONING	1+00 2+00

PROPOSED LINETYPES

FENCE, GENERAL	
FENCE, BARBED WIRE	
FENCE, CHAIN LINK	
FENCE, DECORATIVE	
FENCE, ELECTRIC	
FENCE, VINYL	
FENCE, WOOD	
FENCE, WOVEN WIRE	
CABLE RAIL	
GUARDRAIL	
HANDRAIL	
ELECTRIC, DUCT BANK	
ELECTRIC, OH	ELEC-OH
ELECTRIC, UG	ELEC-UG
ELECTRIC, SERVICE OH	ELEC
ELECTRIC, SERVICE, UG	ELEC
GAS	GAS
GAS, SERVICE	GS
SANITARY FORCE MAIN	FM
SANITARY SEWER	SAN
SANITARY LEACH LINE	
SANITARY SEWER, DOUBLE	
SANITARY SEWER, SERVICE	SS
STORM SEWER	STM
STORM SEWER, DOUBLE	
STORM, ROOF DRAIN	RD
STORM, UNDERDRAIN	UD
WATER LINE	WAT
WATER LINE, DOUBLE	
WATER LINE, SERVICE	WS
BUSH LINE	
TREE LINE	
MAJOR CONTOUR	1005
MINOR CONTOUR	1001
WATER EDGE	
BOUNDARY LINE	
PROPERTY LINE	
EASEMENT LINE	
LEASE LINE	LEASE
RIGHT-OF-WAY LINE	
RIGHT-OF-WAY C/L	
PHASE LINE	
TEMPORARY RIGHT-OF-WAY	
WORK LIMIT	
SETBACK	
SURVEY STATIONING	1+00 2+00
CONSTRUCTION FENCE	CF
SILT FENCE	SF
FILTER FENCE	FF
FILTER SOCK	FS

EXISTING SYMBOLS

SANITARY MANHOLE
SANITARY CLEANOUT
SANITARY LINE CAP
SANITARY LINE PAINT MARKING
SANITARY STRUCTURE NUMBER
SANITARY VENT PIPE
STORM MANHOLE (SOLID LID)
STORM MANHOLE (OPEN GRATE)
CURB INLET
CURB INLET (DOUBLE)
CATCH BASIN
CATCH BASIN (ROUND LID)
CATCH BASIN (DOME)
CATCH BASIN (SIDE INLET)
DRAIN
DOWNSPOUT
STORM CLEANOUT
STORM LINE CAP
STORM ENDWALL
STORM HEADWALL
STORM LINE PAINT MARKING
STORM STRUCTURE NUMBER
ROCK CHANNEL PROTECTION
SURFACE DRAINAGE FLOW
STORM FLOOD ROUTING ARROW
FIRE HYDRANT
WATER SIAMESE CONNECTION
WATER VALVE
WATER VALVE BOX
WATER METER
WATER METER PIT
WATER LINE REDUCER
WATER LINE CAP
WATER LINE PLUG
WATER LINE PAINT MARKING
POST INDICATOR VALVE
WATER MANHOLE
WATER FLUSHING ASSEMBLY
WATER FIXTURE
WATER FITTING (TEE)
WATER FITTING (CROSS)
WATER FITTING (45° WYE)
WATER FITTING (11.25°)
WATER FITTING (22.50°)
WATER FITTING (45°)
WATER FITTING (90°)
IRRIGATION SPRINKLER HEAD
IRRIGATION CONTROL BOX
IRRIGATION BOX
STEAM MANHOLE
STEAM VENT
COMBINED SEWER MANHOLE
GAS LIGHT POST (YARD)
GAS MANHOLE
GAS VALVE
GAS VALVE BOX
GAS VALVE
GAS METER
GAS REGULATOR
GAS VENT PIPE
GAS LINE PAINT MARKING
GAS LINE FIXTURE
GAS TURBINE
ELECTRIC LIGHT POST (YARD)
ELECTRIC MANHOLE
ELECTRIC PULL BOX
ELECTRIC CONTROL BOX
ELECTRIC JUNCTION BOX
ELECTRIC VAULT BOX
ELECTRIC METER
ELECTRIC PEDESTAL
ELECTRIC RISER BOX
ELECTRIC TRANSFORMER
ELECTRIC HVAC UNIT
ELECTRIC GROUND LIGHT
ELECTRIC LINE PAINT MARKING
CABLE TV MANHOLE
CABLE TV PEDESTAL
CABLE TV PAINT MARKING
TELEPHONE MANHOLE
TELEPHONE PULL BOX
TELEPHONE PEDESTAL
TELEPHONE RISER BOX
TELEPHONE LINE PAINT MARKING

EXISTING SYMBOLS

TELEPHONE PAY PHONE
FIBER OPTIC CABLE MANHOLE
FIBER OPTIC CABLE PAINT MARKING
TRAFFIC CONTROL MANHOLE
TRAFFIC CONTROL BOX
TRAFFIC CONTROL PAINT MARKING
TRAFFIC PULL BOX
TRAFFIC SIGNAL PEDESTAL
UNKNOWN, PULL BOX
UNKNOWN, CLEANOUT
UNKNOWN, MANHOLE
UNKNOWN, VALVE
MONITORING WELL
TEST WELL
WATER WELL
SOIL BORING
SWAMP
POLE, ELECTRIC
POLE, TELEPHONE
POLE, LIGHT
POLE, LIGHT, DECORATIVE
POLE, LIGHT-OVERHEAD
POLE, CABLE TV
POLE, UTILITY
POLE, GENERAL
POLE, TRAFFIC CONTROL
POLE, GUY
POLE, BRACE
POLE, ELECTRIC/TELEPHONE
POLE, ELECTRIC W/LIGHT
POLE, ELECTRIC/CABLE TV
POLE, ELECTRIC/TELEPHONE/LIGHT
POLE, ELECTRIC/TELEPHONE/CABLE TV
POLE, ELEC./TELE./LIGHT/CABLE TV
POLE, TELEPHONE/LIGHT
POLE, TELEPHONE/CABLE TV
POLE, TELEPHONE/LIGHT/CABLE TV
POLE, CABLE TV W/LIGHT
POLE, CABLE TV W/LIGHT
POLE, FLAG
GUY WIRE
POST, SIGN (SINGLE SIDED)
POST, SIGN (DOUBLE SIDED)
POST, SIGN (DUAL POST)
POST (GENERAL)
BOLLARD
DELINEATOR POST
FENCE POST
PARKING COUNT
PARKING BUMPER BLOCK
HANDICAP PARKING SYMBOL
HANDICAP DETECTABLE WARNING
MAILBOX
PAPERBOX
PARKING METER
STREET SIGN
TRAFFIC CONTROL MANHOLE
TRAFFIC CONT. MANHOLE (ADJ)
TRAFFIC CONTROL BOX
TRAFFIC PULL BOX
TRAFFIC SIGNAL PEDESTAL
INLET PROTECTION
STRAW BALE CHECK DAM
TREE (DECIDUOUS)
TREE (EVERGREEN)
BUSH

EXISTING SYMBOLS

SPIKE FOUND
HUB FOUND
AXLE FOUND
WOOD POST FOUND
CORNER STONE FOUND
AERIAL TARGET FOUND
GPS CONTROL FOUND
BENCHMARK FOUND

PROPOSED SYMBOLS

SANITARY MANHOLE
SANITARY MANHOLE, ADJUST
SANITARY CLEANOUT
SANITARY LINE CAP
SANITARY STRUCTURE NUMBER
SANITARY VENT PIPE
STORM MANHOLE (SOLID GRATE)
STORM MANHOLE (OPEN GRATE)
STORM MANHOLE, ADJUST
CURB INLET
CURB INLET (DOUBLE)
CURB INLET, ADJUST
CURB INLET (DOUBLE), ADJUST
CATCH BASIN
CATCH BASIN (SOLID)
CATCH BASIN, ADJUST
CATCH BASIN (SIDE INLET)
DRAIN
DOWNSPOUT
STORM CLEANOUT
STORM LINE CAP
STORM HEADWALL
STORM STRUCTURE NUMBER
ROCK CHANNEL PROTECTION
SURFACE DRAINAGE FLOW
SURFACE DRAINAGE FLOW
STORM FLOOD ROUTING ARROW
FIRE HYDRANT
FIRE HYDRANT, ADJUST
WATER SIAMESE CONNECTION
WATER VALVE
WATER VALVE BOX
WATER METER
WATER LINE REDUCER
WATER LINE CAP
WATER LINE PLUG
POST INDICATOR VALVE
WATER MANHOLE
WATER CORPORATION STOP
WATER FLUSHING ASSEMBLY
WATER METER
GAS LIGHT POST (YARD)
GAS MANHOLE
GAS MANHOLE
GAS VALVE
GAS METER
GAS REGULATOR
GAS VENT PIPE
ELECTRIC LIGHT (GROUND)
ELECTRIC LIGHT POST (YARD)
ELECTRIC MANHOLE
ELECTRIC MANHOLE, ADJUST
ELECTRIC PULL BOX
ELECTRIC CONTROL BOX
ELECTRIC JUNCTION BOX
ELECTRIC VAULT BOX
ELECTRIC METER
ELECTRIC TRANSFORMER
ELECTRIC AIR CONDITION UNIT
POLE, ELECTRIC
POLE, TELEPHONE
POLE, LIGHT
POLE, LIGHT, DECORATIVE
POLE, LIGHT-OVERHEAD
POLE, CABLE TV
POLE, UTILITY
POLE, GENERAL

PROPOSED SYMBOLS

POLE, TRAFFIC CONTROL
POLE, GUY
POLE, BRACE
POLE, ELECTRIC/TELEPHONE
POLE, ELECTRIC W/LIGHT
POLE, ELECTRIC/CABLE TV
POLE, ELEC./TELE./LIGHT
POLE, ELEC./TELE./CABLE TV
POLE, ELEC./TELE./LIGHT/CABLE
POLE, TELEPHONE/LIGHT
POLE, TELEPHONE/CABLE TV
POLE, TELE./LIGHT/CABLE TV
POLE, CABLE TV W/LIGHT
POLE, FLAG
GUY WIRE
POST, SIGN (SINGLE SIDED)
POST, SIGN (DOUBLE SIDED)
POST, SIGN (DUAL POST)
POST (GENERAL)
BOLLARD
DELINEATOR POST
FENCE POST
PARKING COUNT
PARKING BUMPER BLOCK
HANDICAP PARKING SYMBOL
HANDICAP DETECTABLE WARNING
MAILBOX
PAPERBOX
PARKING METER
STREET SIGN
TRAFFIC CONTROL MANHOLE
TRAFFIC CONT. MANHOLE (ADJ)
TRAFFIC CONTROL BOX
TRAFFIC PULL BOX
TRAFFIC SIGNAL PEDESTAL
INLET PROTECTION
STRAW BALE CHECK DAM
TREE (DECIDUOUS)
TREE (EVERGREEN)
BUSH

ABBREVIATIONS

ABANDONED	ABAN.
ADJUST	ADJ.
AGGREGATE	AGG.
ASBESTOS PIPE	ASB.
ASPHALT	ASPH.
BACK TO BACK	B/B
BASEMENT FLOOR ELEVATION	BFE
BETWEEN	BTW.
BOTTOM OF CURB ELEVATION	BC
BOTTOM OF FOOTING ELEVATION	FTG.
BOTTOM OF WALL ELEVATION	BWE
BUILDING	BLDG.
BULKHEAD	BHD.
CABLE TELEVISION	CATV
CAST IRON PIPE	CIP
CATCH BASIN	CB
CENTERLINE	C/L
CENTER TO CENTER	C/C
CHAIN LINK FENCE	CLF
CHEMICAL STABILIZATION	CHEM. STABL.
CONCENTRIC	CON.
CONCRETE	CONC.
CONNECTION	CONN.
CONTROL JOINT	CJ
COPPER PIPE	COP.
CORRUGATED METAL PIPE	CMP
DEMOLITION	DEMO.
DEPRESSED	DEP.
DOWNSPOUT	DS
DROP MANHOLE	DMH
DUCTILE IRON PIPE	DIP
DUMPSTER	DUMP.
ECCENTRIC	ECC.

ABBREVIATIONS

EDGE OF PAVEMENT ELEVATION	EP
ELECTRIC	ELEC.
ENCLOSURE	ENCL.
EXISTING	EX.
FACE TO FACE	F/F
FINISHED FLOOR ELEVATION	FFE
FIRE HYDRANT	FH
FOUNDATION	FNDN.
FULL DEPTH RECLAMATION	FDR
FUTURE	FUT.
GAS	G
GALVANIZED PIPE	GP
GRADE BREAK ELEVATION	GB
GRAVEL	GVL.
GROUND ELEVATION	GND.
GUTTER ELEVATION	GUT.
HANDICAP (E.G. ACCESSIBLE)	HC
HIGH-DENSITY POLYETHYLENE PIPE	HDPE
HIGH POINT ELEVATION	HP
HORIZONTAL	HOR.
INSTALL	INSTL.
IRRIGATION	IRR.
JOINT	JT
JOINT FILLER	JF
JUNCTION	JCT.
KNOCKOUT	KO
LATERAL	LAT.
LOW POINT ELEVATION	LP
MAINTAIN	MAINT.
MATERIAL	MATL.
MOUNTED	MTD.
MISCELLANEOUS	MISC.
NOT TO SCALE	N.T.S.
ORNAMENTAL	ORN.
OUT TO OUT	O/O
OVERHEAD	OH
OXYGEN LINE	O
PARKING	PKG.
PAVEMENT	PVMT.
PEDESTAL	PED.
PERFORATE	PERF.
PIPE INVERT ELEVATION	INV.
POLYVINYL CHLORIDE PIPE	PVC
PREFORMED JOINT FILLER	PJF
PROPOSED	PR.
PULL BOX	PB
RAILROAD	RR
REINFORCED	REINF.
REINFORCED CONCRETE PIPE	RCP
REMOVE	RMV.
RETAINING WALL	RET.WALL
ROOF LEADER	RL
SALVAGE	SALV.
SANITARY SEWER	SAN.
SANITARY SERVICE (LATERAL)	SS
SERVICE	SERV.
SLEEVE	SLV.
STABILIZATION	STABL.
STEAM PIPE	STEA.
STEEL PIPE	STL.
STORM SEWER	STM.
SUMP PUMP	SP
TELEPHONE	TEL.
TEMPORARY	TEMP.
THICKENED	THK.
TOP OF CURB ELEVATION	TC
TOP OF HEADWALL ELEVATION	THW
TOP OF STRUCTURE ELEVATION	RIM
TOP OF WALL ELEVATION	TW
TRENCH DRAIN	TD
TYPICAL	TYP.
UNDERDRAIN	UD
UNDERGROUND	UG
VERTICAL	VERT.
VITRIFIED CLAY PIPE	VCP
WATER MAIN	W.
WINDOW ELEVATION	WIN.
WIRE MESH	WM
WOOD	WD.
YARD HYDRANT	YH

VALVE OPERATORS:

CH = CHAIN
EM = ELECTRIC MOTOR
ES = EXTENSION STEM
FB = FLOOR BOX
FS = FLOOR STAND
GE = GEAR
HC = HYDRAULIC CYLINDER
HW = HANDWHEEL
LE = LEVER
LW = "L" WRENCH
ON = OPERATING NUT
PC = PNEUMATIC CYLINDER
PD = PNEUMATIC DIAPHRAGM
TW = "T" WRENCH
VB = VALVE BOX

PIPE END JOINTS

BE = BELL
CM = COMPRESSION
F = FLARED
FL = FLANGED
GR = GROOVED
LU = LUG
MJ = MECHANICAL JOINT
NPT = NATIONAL PIPE THREAD
RJ = RESTRAINED JOINT
S = SOLDERED
SJ = SLIP JOINT (PUSH ON)
SW = SOLVENT WELDED
TH = THREADED
WE = WELDED

PIPE MATERIAL:

BR = BRASS
BS = BLACK STEEL
BZ = BRONZE
CI = GRAY CAST IRON
CU = COPPER
CS = CAST IRON
CT = CARBON STEEL TUBING
DIP = DUCTILE IRON PIPE
DR = DIAMETER RATIO
FRP = FIBERGLASS REINFORCED PLASTIC
GS = GALVANIZED STEEL
HDPE = HIGH-DENSITY POLYETHYLENE PIPE
PVC = POLYVINYL CHLORIDE PIPE
SS = STAINLESS STEEL
STL = STEEL PIPE
SDR = STANDARD DIAMETER RATIO
SCH = SCHEDULE

VALVES:

AC = AIR CHECK VALVE
AN = ANGLE VALVE
AR = AIR RELEASE VALVE
AV = AIR & VACUUM VALVE
BA = BALL VALVE
BFV = BUTTERFLY VALVE
BK = BACKPRESSURE VALVE
BP = BACKFLOW PREVENTER
CV = CHECK VALVE
CO = C0NE VALVE
GV = GATE VALVE
GL = GLOBE VALVE
KG = KNIFE GATE VALVE
KN = KNIFE VALVE
MV = MUD VALVE
PD = PLUG DRAIN VALVE
PF = PRESSURE RELIEF
PG = PRESSURE REGULATOR
PI = PINCH VALVE
PV = PLUG VALVE
PRV = PRESSURE REDUCING VALVE
PT = PRESSURE TEMPERATURE RELIEF
RF = RATE-OF-FLOW CONTROLLER
SV = SOLENOID VALVE
SU = SURGE VALVE
TE = TELESCOPING VALVE
TM = TEMPERATURE CONTROL VALVE

EQUIPMENT:

AC = AIR COMPRESSOR
AER = AERATOR
B = BLOWER
BFP = BELT FILTER PRESS
CLS = CLASSIFIER
C = COMMUNITOR
CMP = COMPACTOR
CFD = CHEMICAL FEEDER
CNV = CONVERYOR
CNT = CENTRIGUGE
CC = CALIBRATION CYLINDER
CFD = CHEMICAL FEEDER
CP = CONTROL PANEL
CR = CRANE
D = DECANTER
DR = DRIVE
DFL = DISC FILTER
F = FAN
FL = FILTER
FM = FLOW METER
GBT = GRAVITY BELT THICKENER
GR = GRINDER
GEN = GENERATOR
HB = HOSE BIB
M = MOTOR
MX = MIXER
P = PUMP
PS = PUMP STATION
SMP = SAMPLER
SCR = SCREEN

GATES:

BG - BULKHEAD GATE
SG - SLIDE GATE
SP - STOP PLATE
SL - STOP LOG

ALUM - ALUMINUM
SS - STAINLESS STEEL
CI - CAST IRON
POLY - POLYMER
B/C - BOTTOM OF CHANNEL
T/C - TOP OF CHANNEL
A - HEIGHT
B - WIDTH

STATE OF OHIO
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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
SITE IMPROVEMENT - 01 SERIES
SYMBOLOGY

PROJECT NO.	210888
DISCIPLINE	CIVIL
SHEET NAME	01C-01
SHEET	6
OF	53

H:\2021\210888\DWG\SHEET\SC_210888 - SITE LEGEND.DWG - 6 SYMBOLOGY - 10/9/2024 2:26:19 PM - BOB MARANO

CONTROL PLAN

STATE OF OHIO, COUNTY OF CUYAHOGA, CITY OF NORTH OLMSTED, PART OF ORIGINAL OLMSTED TOWNSHIP LOT NO. 19, TRACT 6

BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON ARE BASED ON GRID NORTH (N0°00'00"E) FROM GPS OBSERVATIONS UTILIZING THE OHIO STATE PLANE NORTH AMERICAN DATUM 1983 (SOUTH ZONE, 2011 ADJ.) COORDINATE SYSTEM. ALL DISTANCE SHOWN HEREON ARE EXPRESSED IN US SURVEY FEET.

IRON PINS

WHERE INDICATED HEREON, UNLESS OTHERWISE NOTED, ARE TO BE SET AND ARE 5/8" SOLID REBAR, THIRTY INCHES LONG WITH YELLOW PLASTIC CAP BEARING THE INSCRIPTION "CT CONSULTANTS."

SCALE IN FEET

0 50 100

2881.68' CALC. 2881.70' OBS.
TO I.P. MON. AT C/L LORAIN ROAD

121+46.56
60.00' R.

767A-WD
VOL. 14207
PG. 215
55.00'

95.00'

135-WD
VOL. 14681
PG. 223
75.23'

60.00'

PPN 234-21-012

388.26' REC. 389.02' OBS.

3016
Iron Pipe (Fnd)

354.28' REC. 354.31' OBS.

47.97' OBS.
48.02' REC.

BLOCK "C"

3010
Monument Box (Fnd)

685.00' REC. 685.04' OBS.

232.32' REC. & MSD.

PARK RIDGE HOMES SUBDIVISION
VOL. 185 PGS 17-20
CUY. CO. MAP RECS.

47 48 49

18.23'
REC. & MSD.

266.78' REC. & MSD.

89°17'36"
REC. & MSD.

110.33'
REC. & MSD.

I.P. MON. F'ND. & USED
P.T. STA. 120+00.00 CUY-80-0.00 =
20+00.00 EXIST. STEARNS RD.

3004
Mag Nail (Set)

3002
Monument Box (Fnd)

742.48' REC. 743.66' OBS.

250.00' REC. & MSD.

BM2

C/L RELOC.
STEARNS RD

PPN 234-21-034

PPN 234-21-021
GEOFFREY E. MOYSE, ET AL
AFN 202108190110

117.31'
REC. & MSD.

89°39'40"
REC. & MSD.

492.79' REC. 494.30' OBS.

71.50'

S. 89°30'44" E. 672.87'

BM1

360.13' REC. & MSD.

760-WL
VOL. 13888
PG. 257

35.18' REC. & MSD.

117+90.00
93.00' R.

3618
Mag Nail (Set)

CITY OF NORTH OLMSTED
AND
NORTH OLMSTED BOARD OF EDUCATION
D.B. VOL. 14667 PG. 81

117.55'
REC. & MSD.

3003
Iron Pin (Set)

C/L ORIG.
STEARNS RD

226.91' REC. & OBS.

315.00' REC. & MSD.
302.08' OBS.

430.08' OBS.
428.00' CALC.

15'

200.57' REC. & MSD.

465.25' REC. 465.45' OBS.

P.I. STA. 16+39.87
EXIST. STEARNS RD.

135-WL
VOL. 14681 PG. 221

3002
Iron Pin (Set)

443.00' REC. & MSD.

CITY OF NORTH OLMSTED
INST.2022 07190360

688.23' REC. & MSD.

204.16' REC. 203.54' OBS.

67.70'
REC. & MSD.

142.24'
REC. & MSD.

135-WL
VOL. 14681 PG. 221

115.41' REC. & MSD.

3001
Iron Pin (Set)

270.00' REC. 269.08' OBS.

BENCHMARK TABLE

BM #	POINT #	NORTHING	EASTING	ELEVATION	BENCHMARK LOCATION
1	3598	631590.07	2121120.76	783.61	TOP HYD WEST SIDE STEARNS ROAD
2	3764	631709.07	2121805.00	778.42	NAIL SET IN 18" TREE

LEGEND:

- CENTERLINE MONUMENT
- I.PIN SET
- I.PIN FOUND
- I.PIPE FOUND
- LIMITS OF PUBLIC R/W
- EXISTING LIMITED ACCESS R/W
- CENTERLINE PUBLIC R/W
- PARCEL LINES
- SUBDIVISION LINES

NOTES:

1. THIS PLAN HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND MAY BE SUBJECT TO EASEMENTS AND OTHER RESTRICTIONS, EITHER RECORDED OR UNRECORDED. THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS, RECORD ENCUMBRANCES, RESTRICTIVE COVENANTS OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
2. THESE PLANS MAY HAVE BEEN ALTERED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.
3. THE PROJECT CONTROL COORDINATE SYSTEM IS BASED UPON THE FOLLOWING:

   HORIZONTAL DATUM - PROJECT CONTROL COORDINATES FOR THIS PROJECT HAVE BEEN ESTABLISHED BY GPS/RTK OBSERVATIONS UTILIZING THE OHIO COORDINATE SYSTEM OF 1983 (ZONE 3401-OHIO NORTH). OHIO STATE PLANE GRID COORDINATE VALUES ARE EXPRESSED IN UNITS OF U.S. SURVEY FEET.

   VERTICAL DATUM - NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

4. THE SURVEY AND STREET ALIGNMENTS SHOWN HEREON WERE OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR OTHER PURPOSES. THE PROPERTY LINES SHOWN HEREON OUR SUBJECT TO AN ACCURATE BOUNDARY SURVEY AND ARE BASED ON FOUND MONUMENTS LOCATED IN THE FIELD BEST FIT TO THE RECORDS.
5. AN ALTA/ NSPS LAND TITLE SURVEY WAS NOT PERFORMED.
6. EASEMENTS, RECORD RESTRICTIONS AND SETBACKS WERE NOT ADDRESSED DURING THIS SURVEY.
7. ALL DIMENSIONS GIVEN ARE EXPRESSED IN US SURVEY FEET.
8. THE BENCHMARK ELEVATIONS SHOWN IN THE PROJECT CONTROL TABLE ARE AT THE TOP OF THE RED CAP OF THE IRON PIN SET.
9. IRON PINS SET ARE 5/8" IRON PINS SET WITH A RED CAP INSCRIBED WITH "CT REF"

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CITY OF NORTH OLMSTED
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CUYAHOGA COUNTY NORTH OLMSTED, OHIO

SITE IMPROVEMENT - 01 SERIES

SURVEY CONTROL PLAN

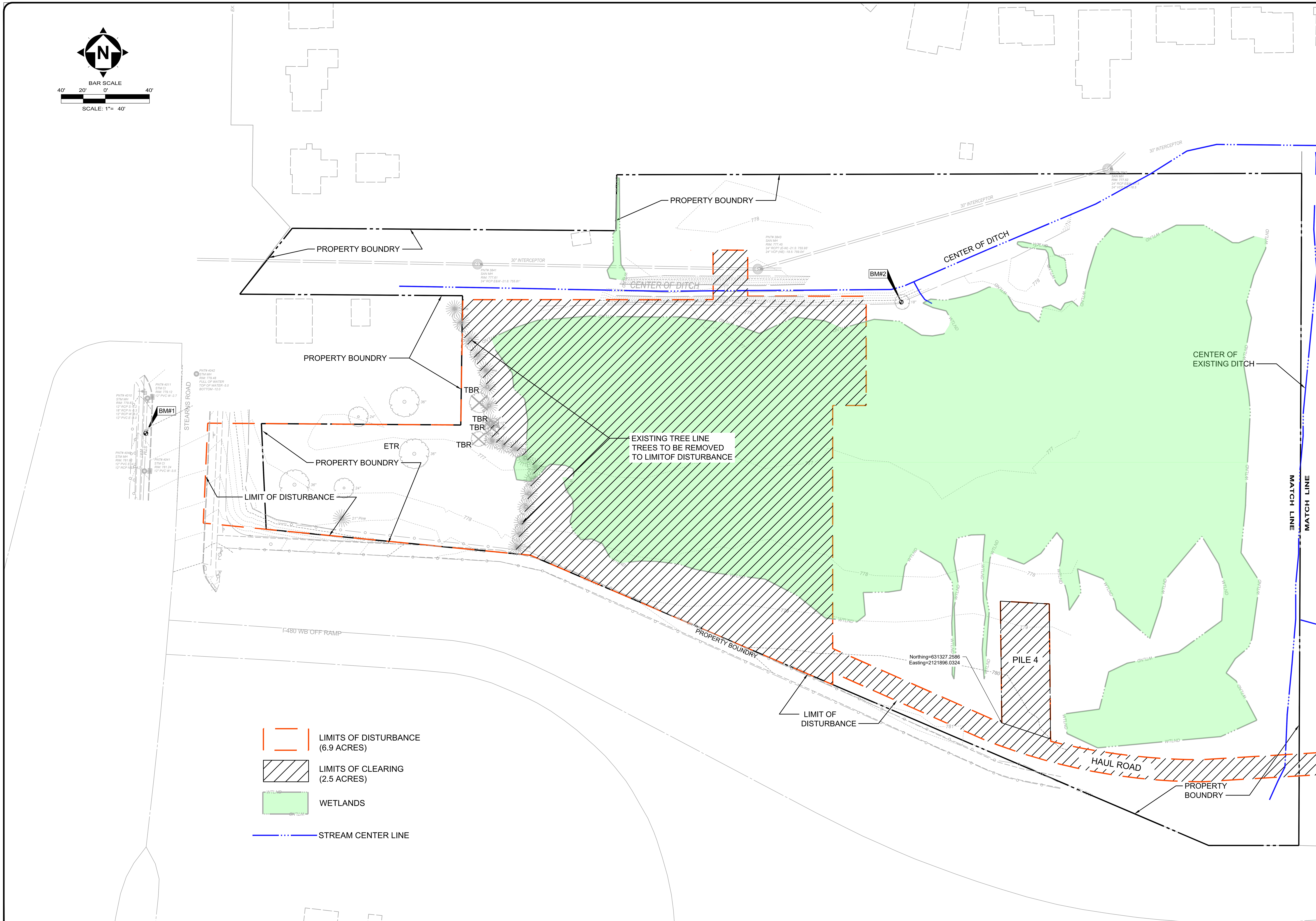
PROJECT NO.
210888

DISCIPLINE
CIVIL

SHEET NAME
01C-02

SHEET 7 OF 53

H:\2021\210888\DWG_SURVEY\V_210888_SURVEY_CONTROL TIM.DWG - 7 SURVEY CONTROL PLAN - 10/9/2024 2:26:09 PM - BOB MARANO



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CUYAHOGA COUNTY NORTH OLMSTED, OHIO

SITE IMPROVEMENT - 01 SERIES

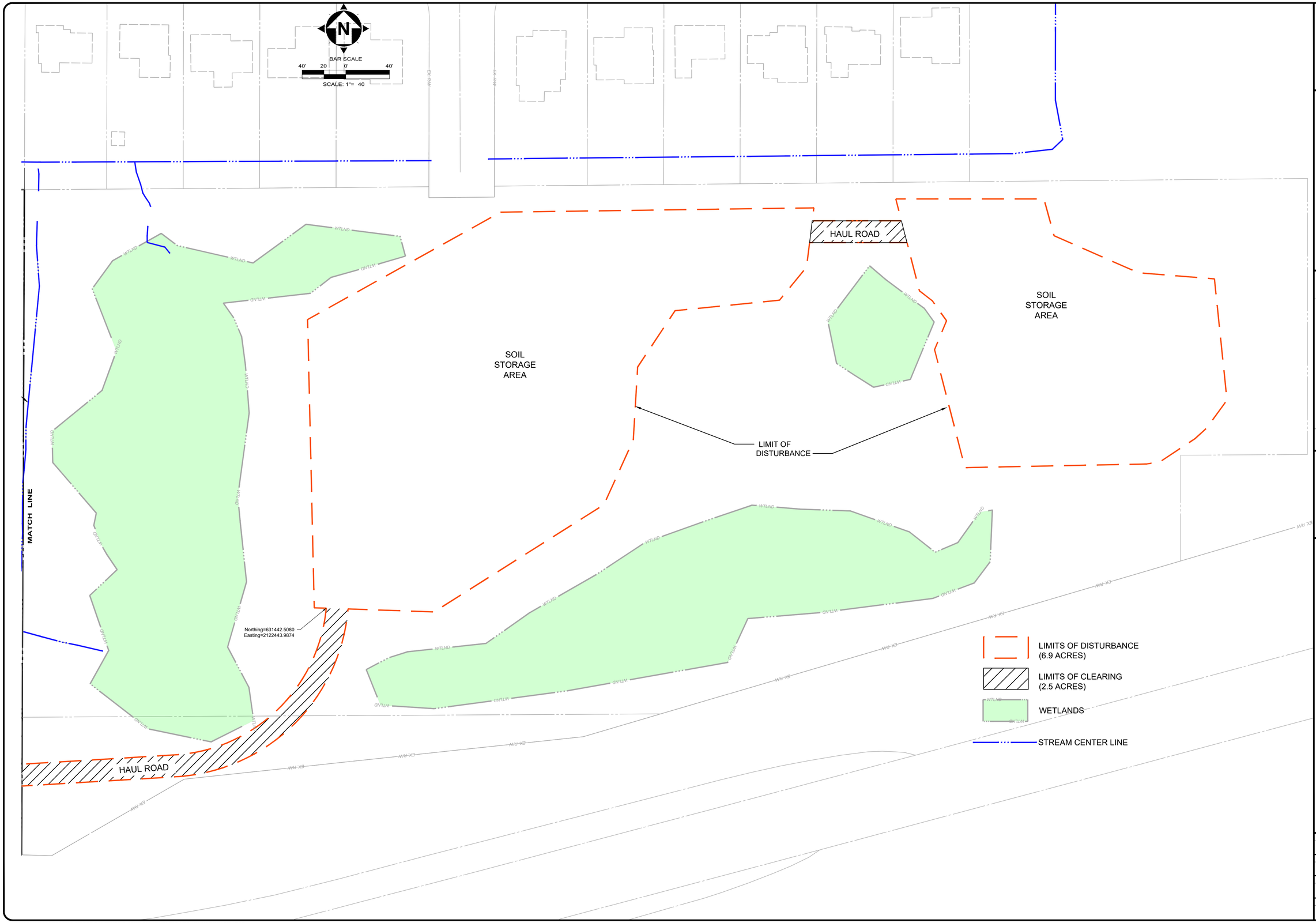
EXISTING CONDITIONS & DEMO 1 OF 2

PROJECT NO.
210888

DISCIPLINE
CIVIL

SHEET NAME
01C-03

SHEET	OF
8	53



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CUYAHOGA COUNTY NORTH OLMSTED, OHIO

SITE IMPROVEMENT - 01 SERIES

EXISTING CONDITIONS & DEMO 2 OF 2

PROJECT NO.
210888

DISCIPLINE
CIVIL

SHEET NAME
01C-04

SHEET 9 OF 53

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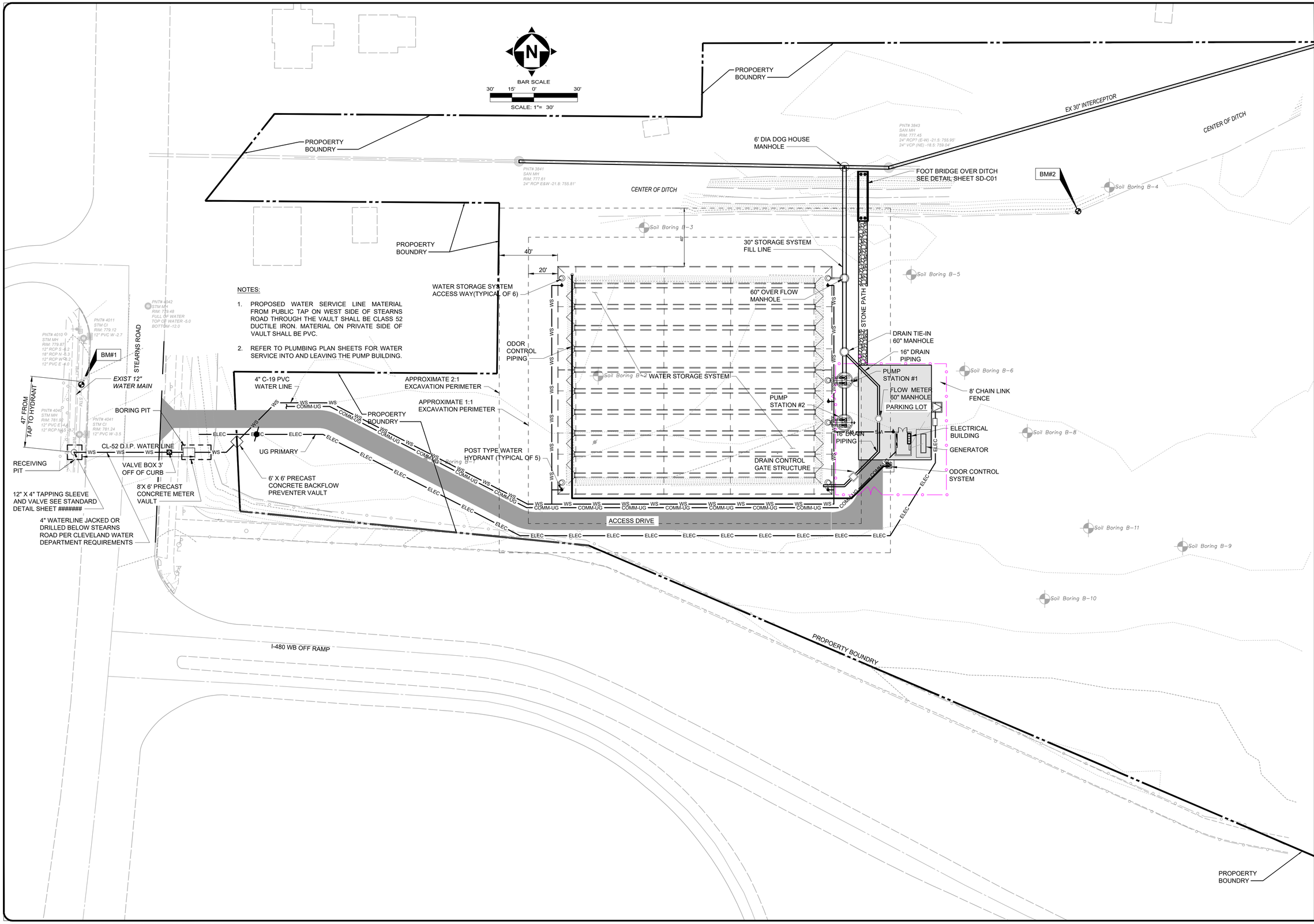

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CUYAHOGA COUNTY NORTH OLMSTED, OHIO
SITE IMPROVEMENT - 01 SERIES
PROPOSED EQUALIZATION SYSTEM PLAN

PROJECT NO.	210888
DISCIPLINE	CIVIL
SHEET NAME	01C-05
SHEET	10
OF	53

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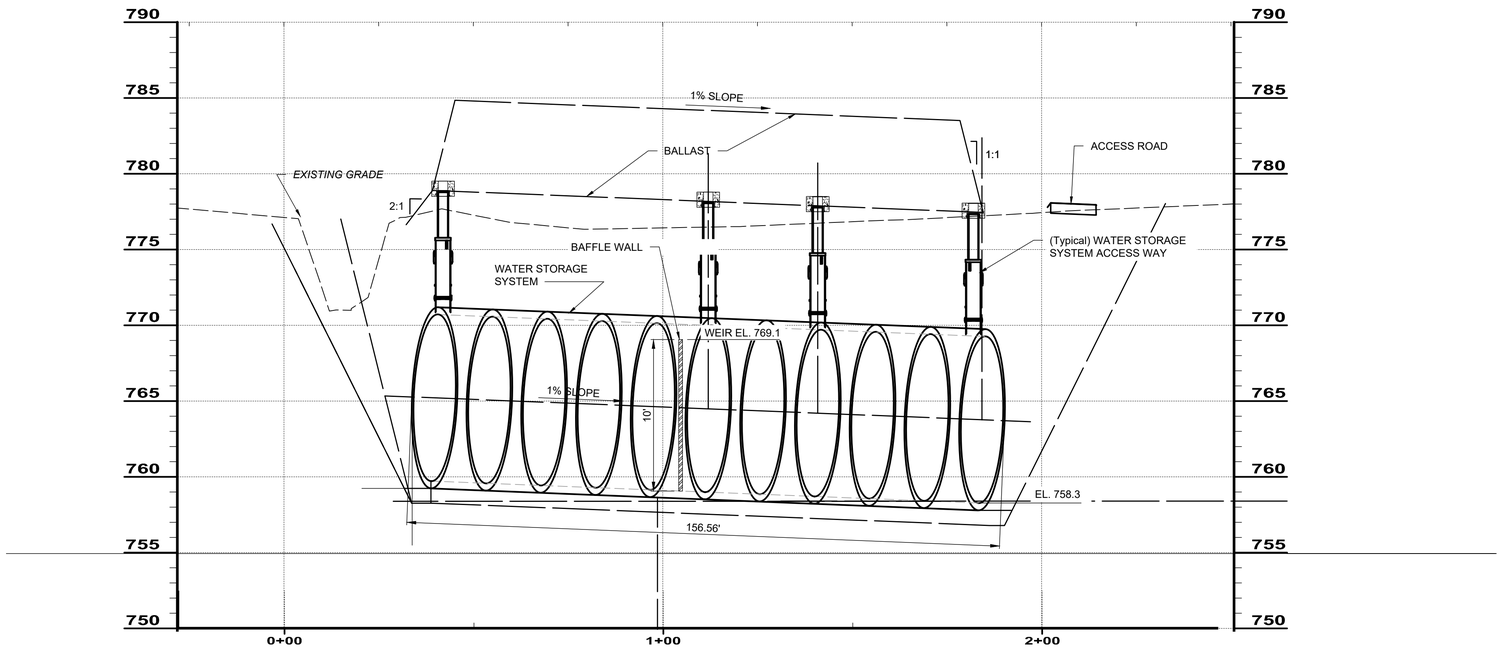
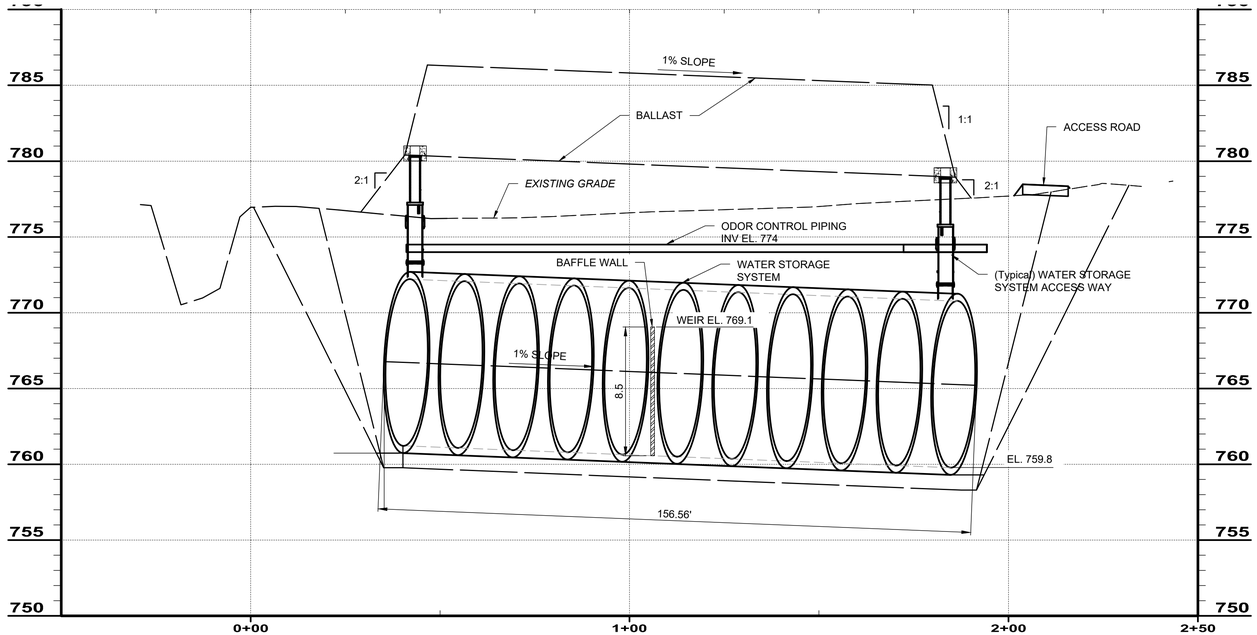


EAST PIPE 20:5



WEST PIPE 20:5

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PUMP STATION - 10 SERIES

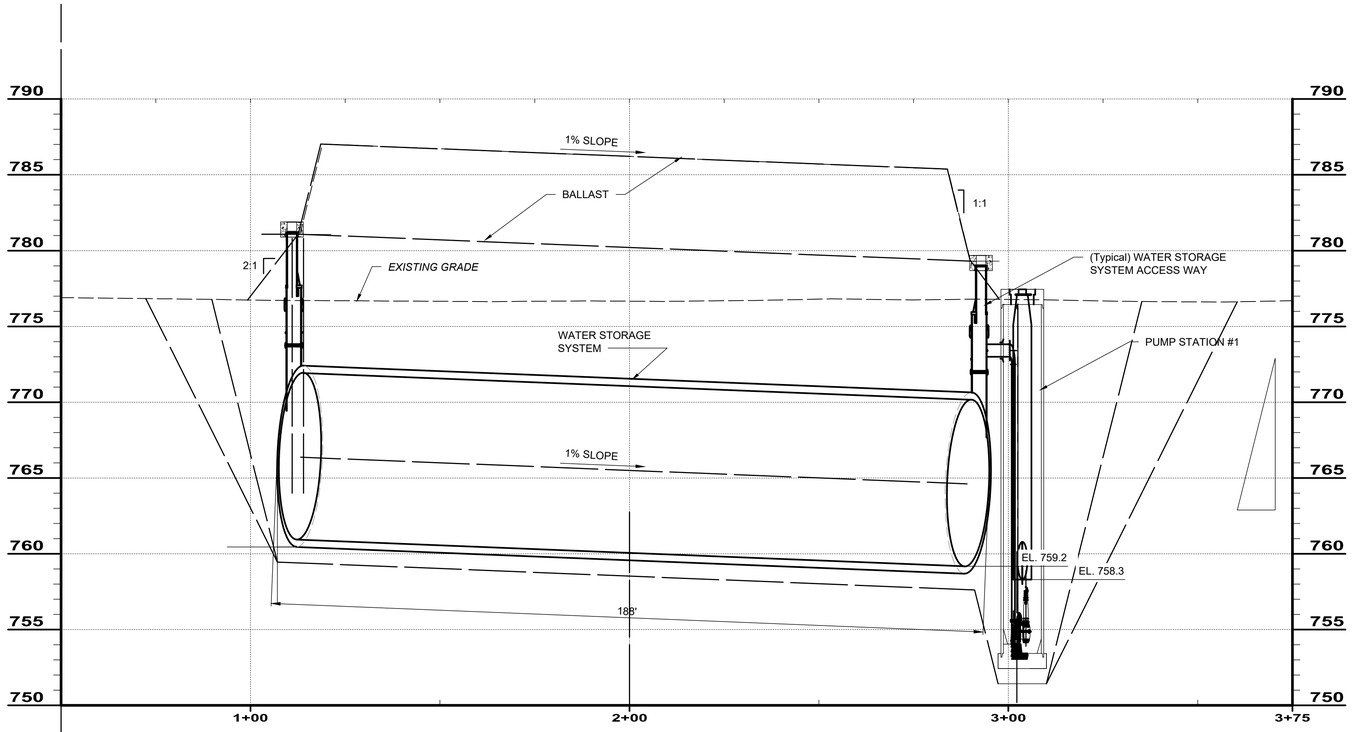
WATER STORAGE SYSTEM PROFILES (1)

PROJECT NO.
210888

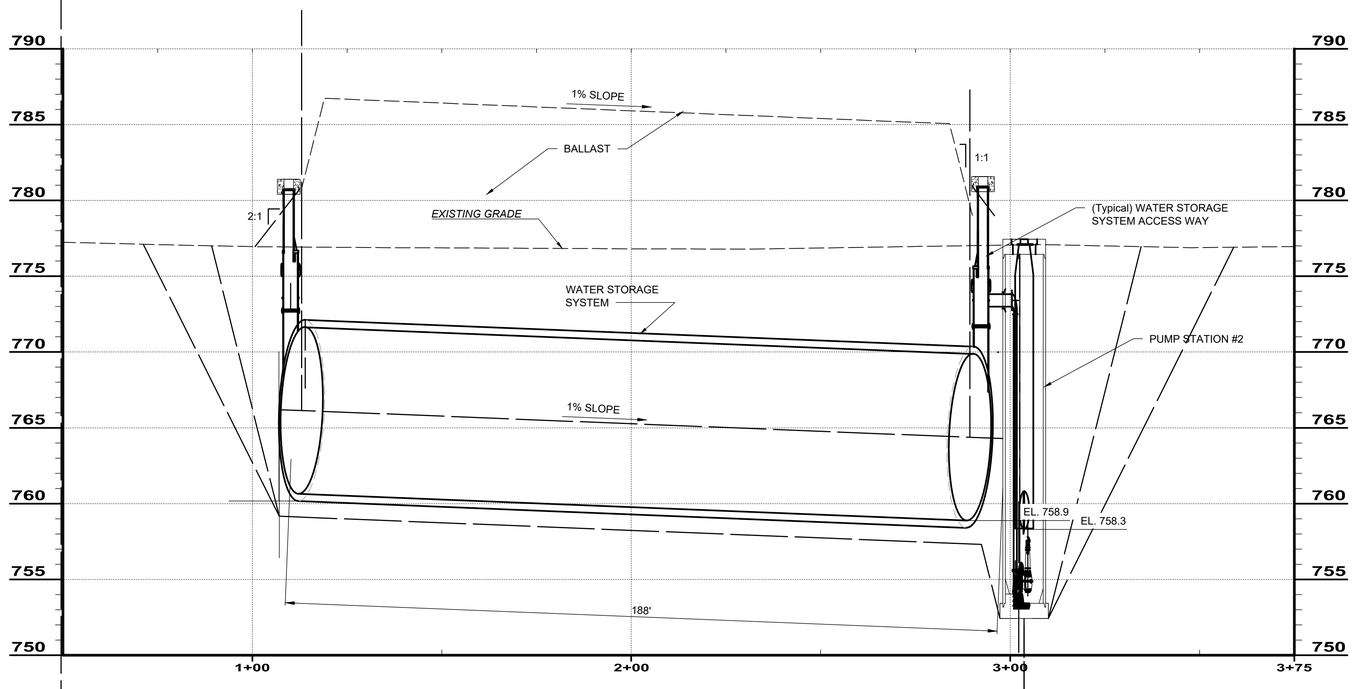
DISCIPLINE
CIVIL

SHEET NAME
01C-06

SHEET 11 OF 53



PIPE WEST TO EAST @ P S #1



PIPE WEST TO EAST @ P S #2

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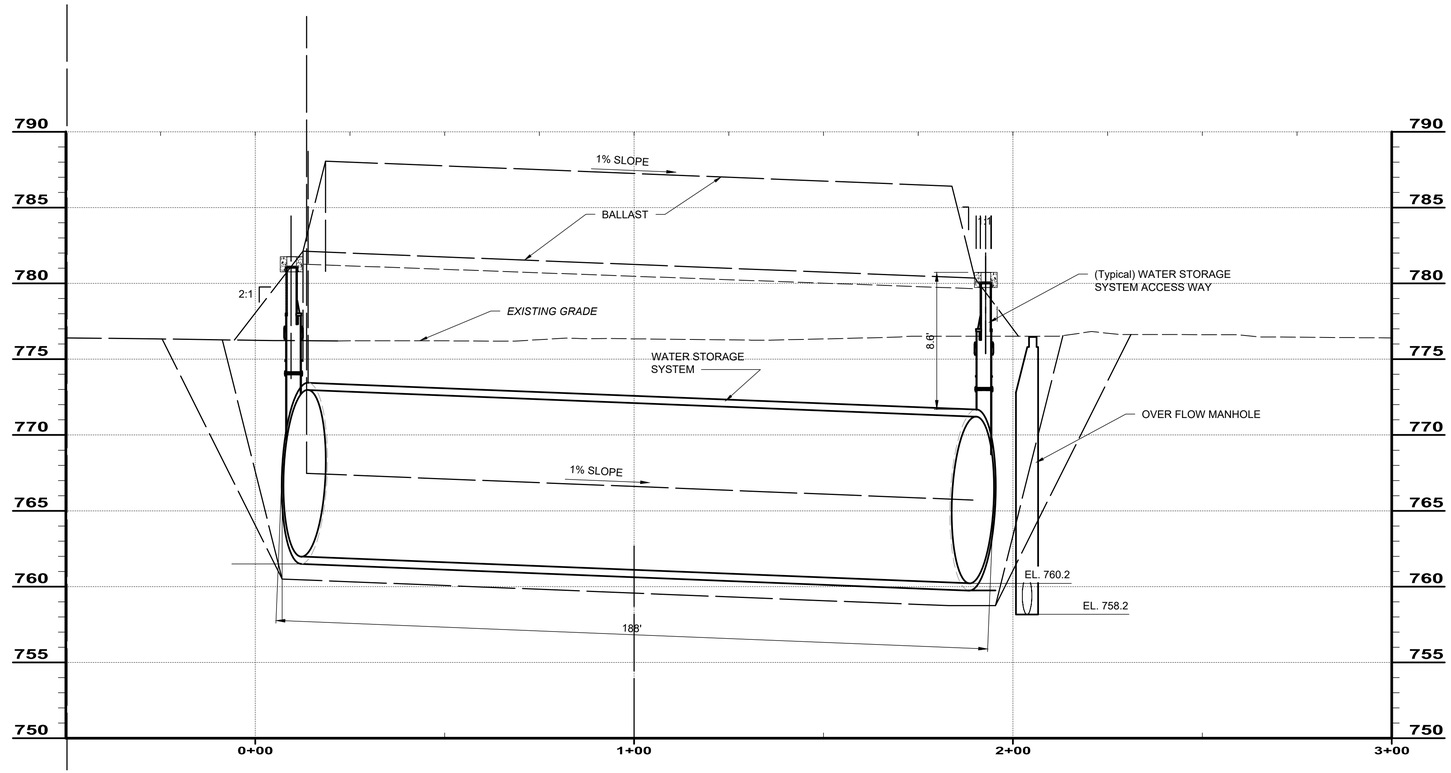
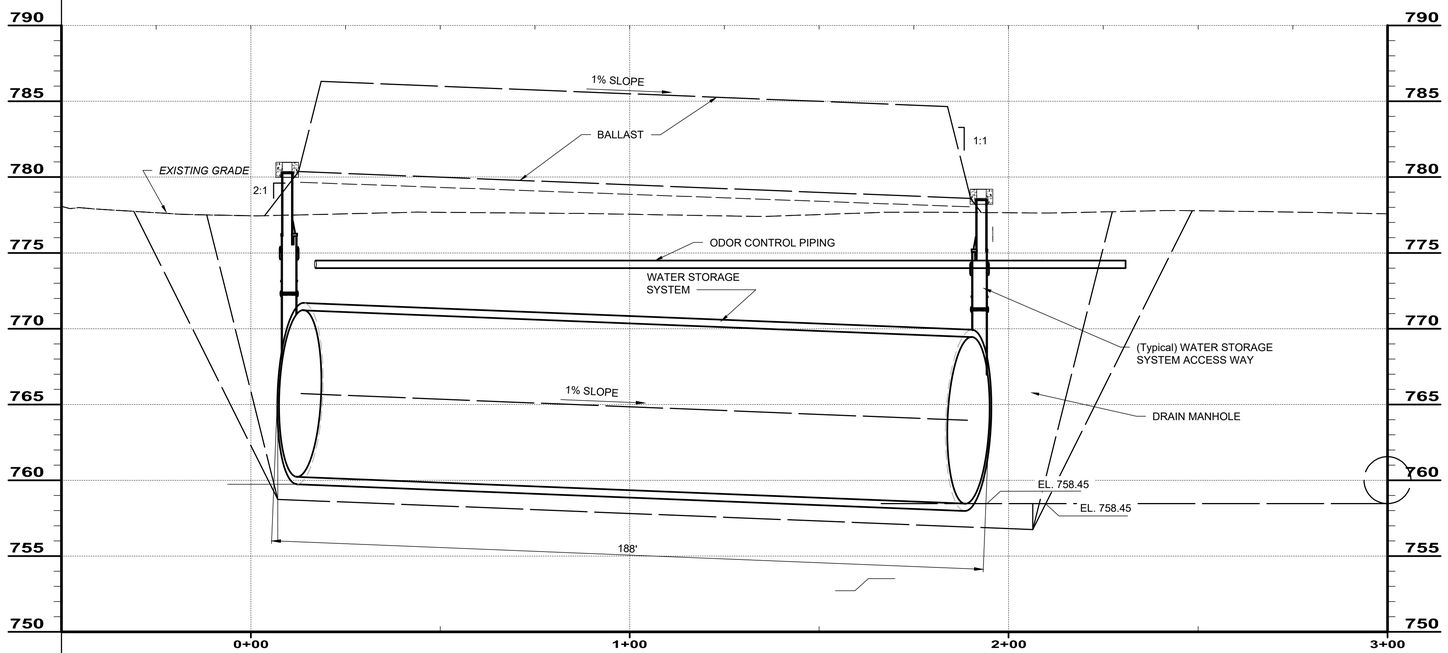
PUMP STATION - 10 SERIES

WATER STORAGE SYSTEM PROFILES (2)

PROJECT NO.	
210888	
DISCIPLINE	
CIVIL	
SHEET NAME	
01C-07	
SHEET	OF
12	53



NORTH PIPE 20:5



SOUTH PIPE 20:5 (1)

H:\2021\210888\DWG\SHEETS\C_210888 - PROFILES.DWG - 13 WATER STORAGE SYSTEM PROFILES (3) - 10/10/2024 11:11:11 AM - BOB MARANO

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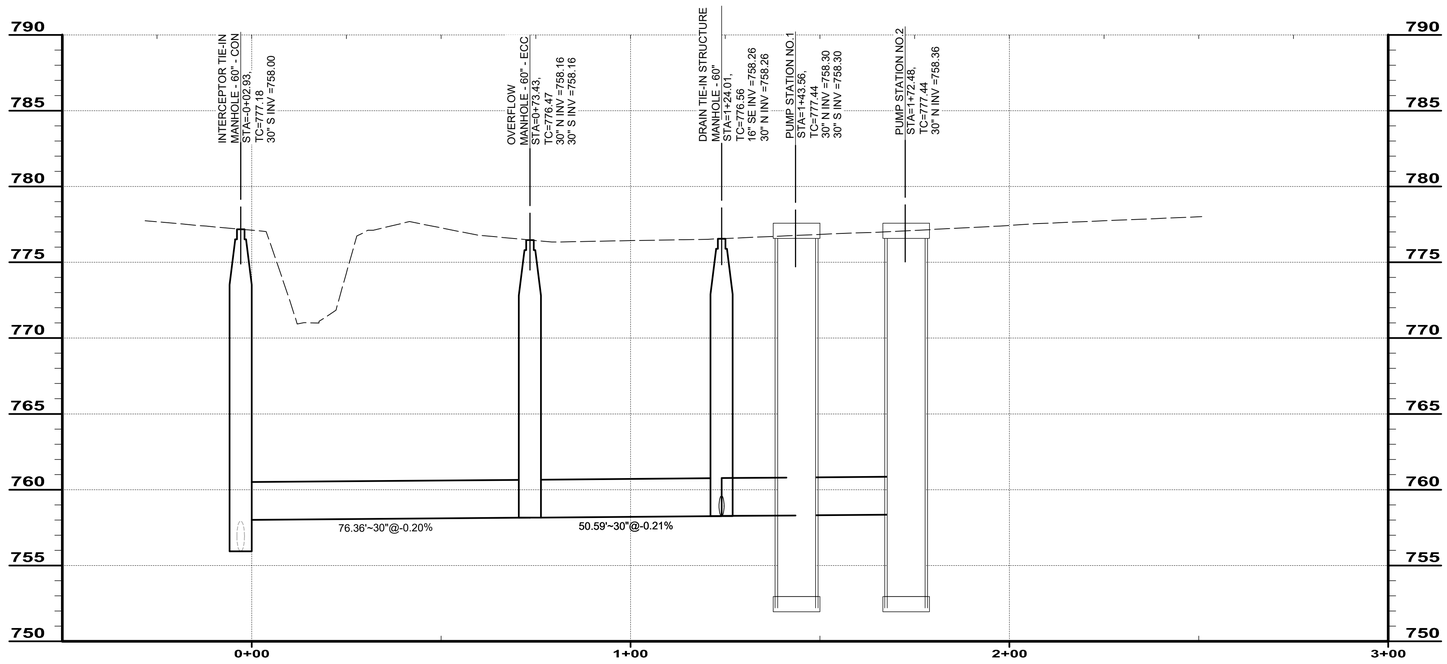
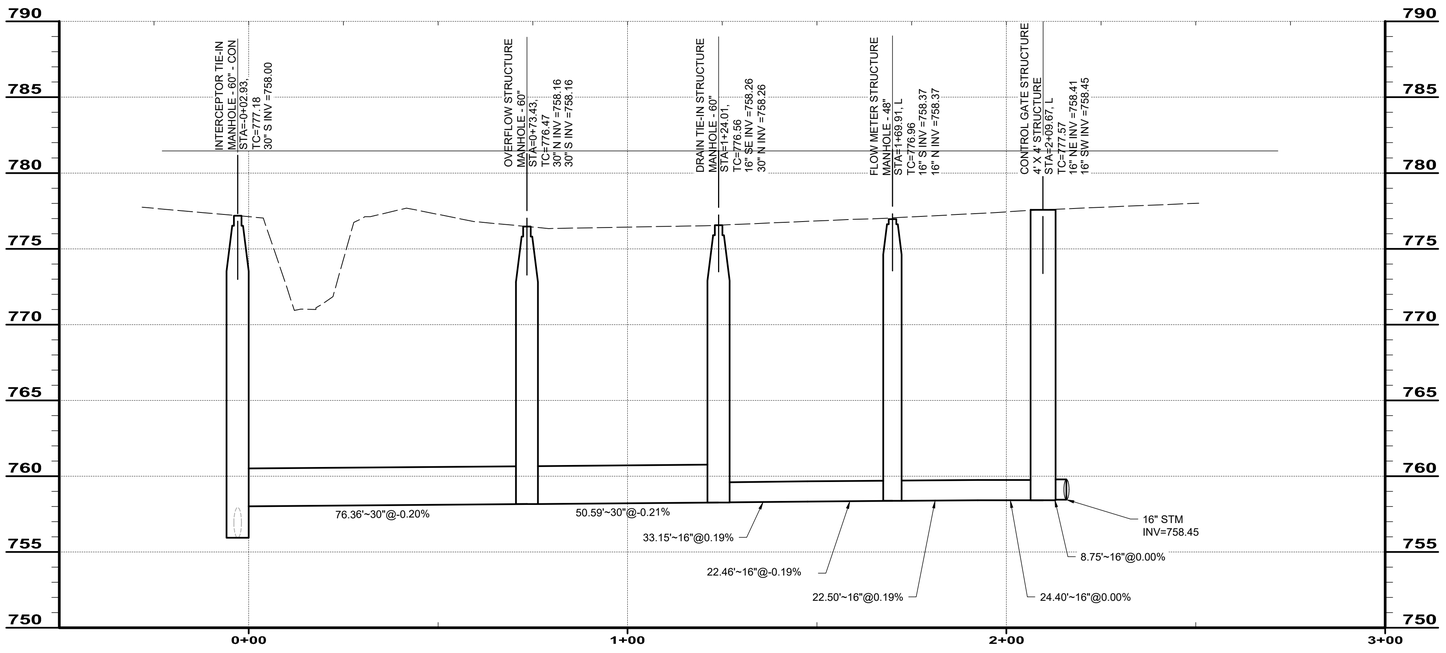
PUMP STATION - 10 SERIES

WATER STORAGE SYSTEM PROFILES (3)

PROJECT NO.	210888
DISCIPLINE	CIVIL
SHEET NAME	01C-08
SHEET	13
OF	53



STORAGE INLET PIPING



STORAGE DRAIN PIPING

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PUMP STATION - 10 SERIES

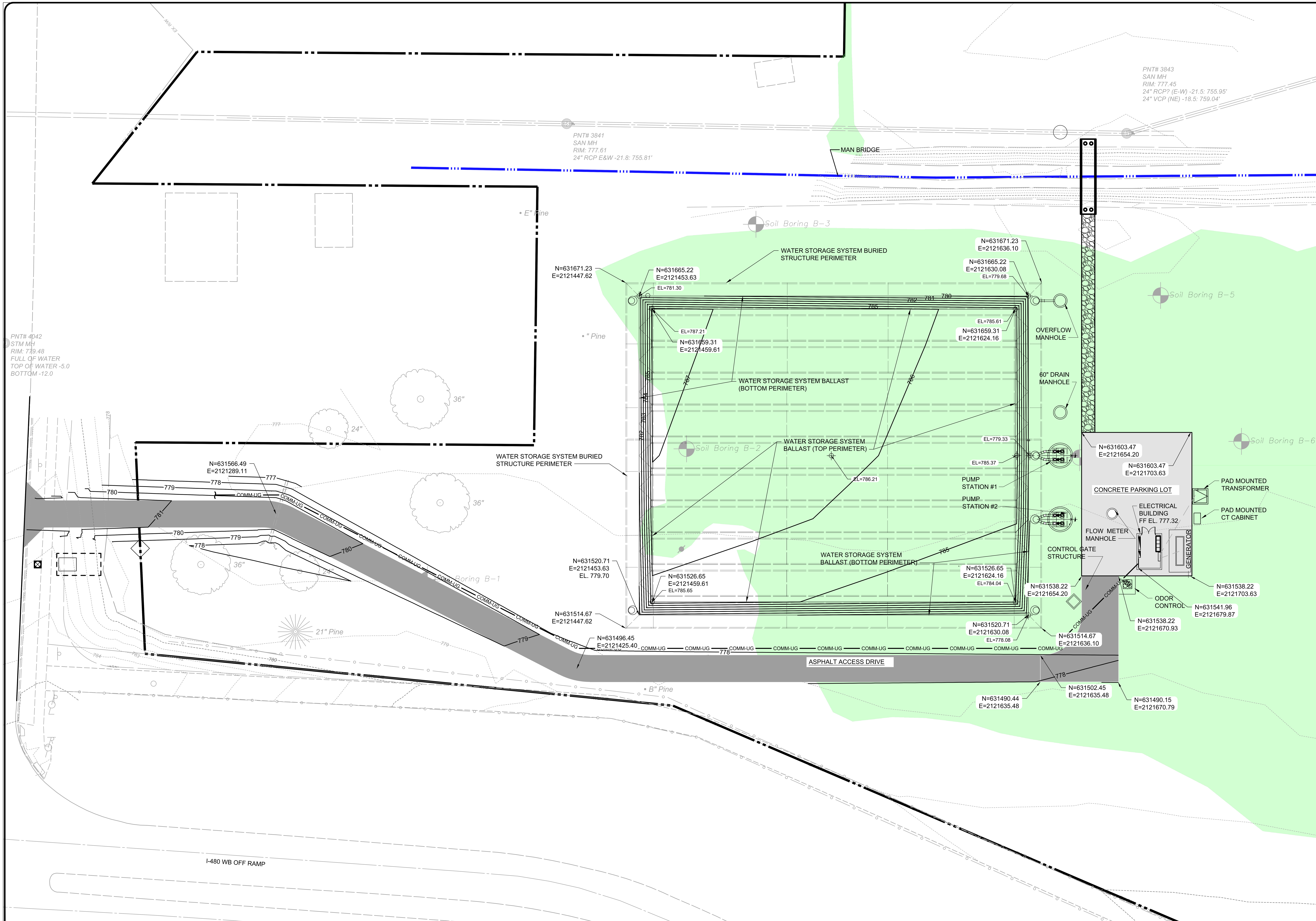
WATER STORAGE FILL-DRAIN - PROFILE

PROJECT NO.
210888

DISCIPLINE
CIVIL

SHEET NAME
01C-09

SHEET 14 OF 53



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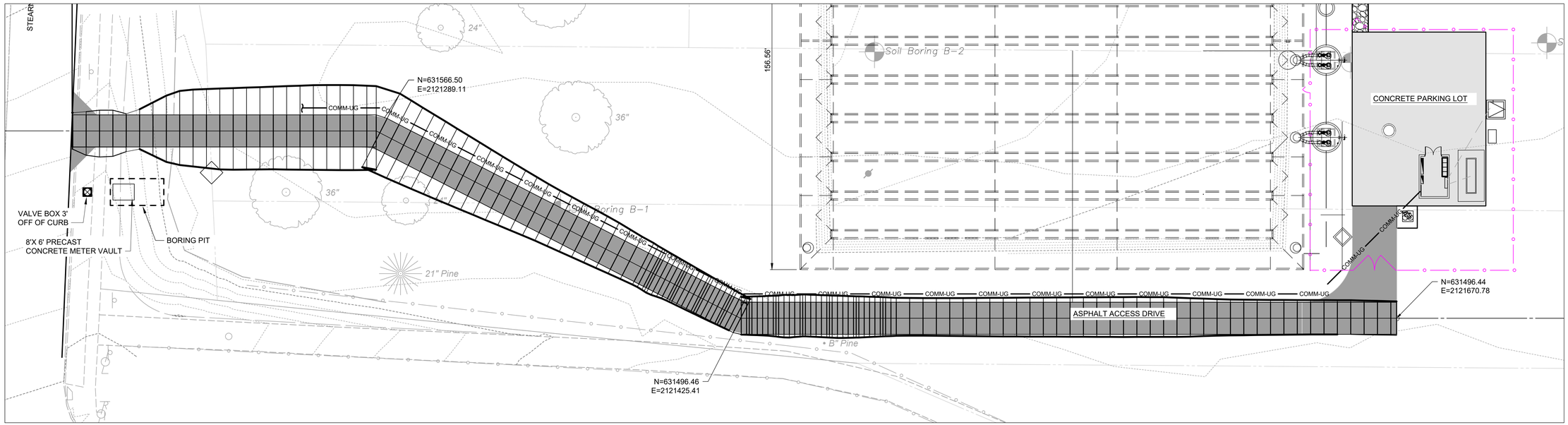
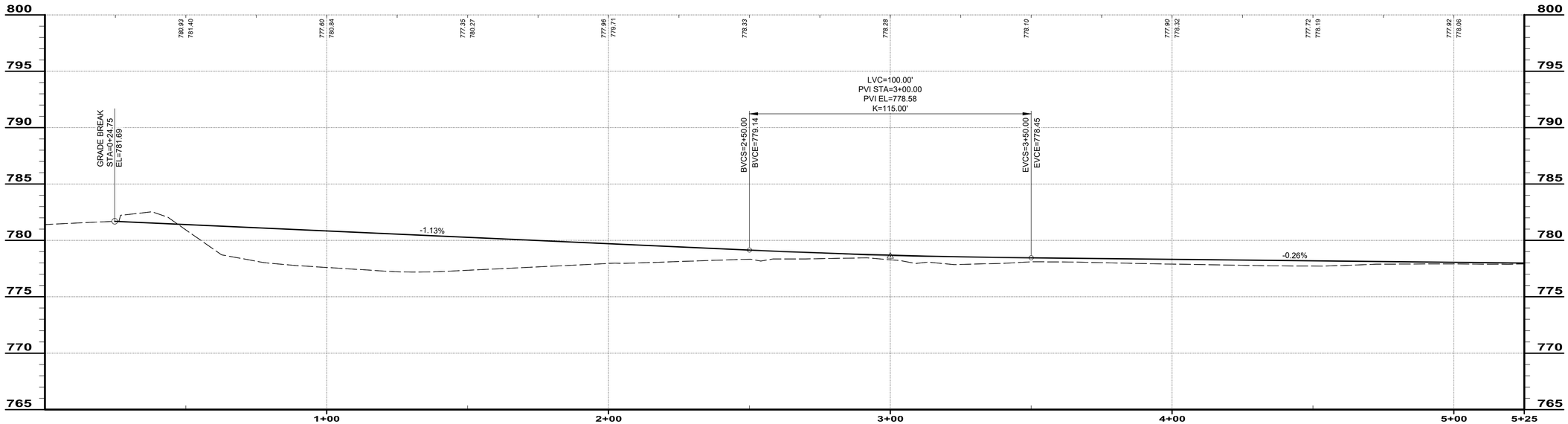
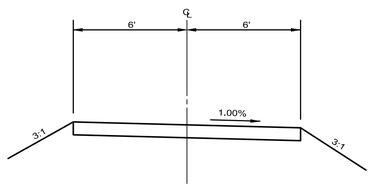
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
SITE IMPROVEMENT - 01 SERIES
PROPOSED GRADING AND PAVING PLAN

PROJECT NO. 210888
DISCIPLINE CIVIL
SHEET NAME 01C-10
SHEET 15 OF 53







TYPICAL SECTION LEGEND

1. ITEM 441 A.C. INTERMEDIATE COURSE, TYPE 2, PG 64-22, 1.50 INCHES TO 1.75"
3. ITEM 441 A.C. SURFACE COURSE, TYPE 1, PG 64-22, 1.25 INCHES
4. ITEM 407 TACK COAT, 0.1 GAL/SY

TYPICAL SECTION FOR DRIVEWAY

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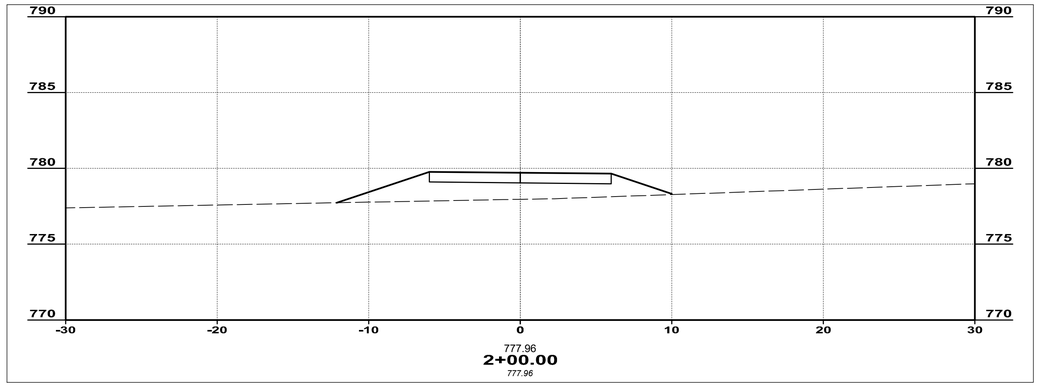
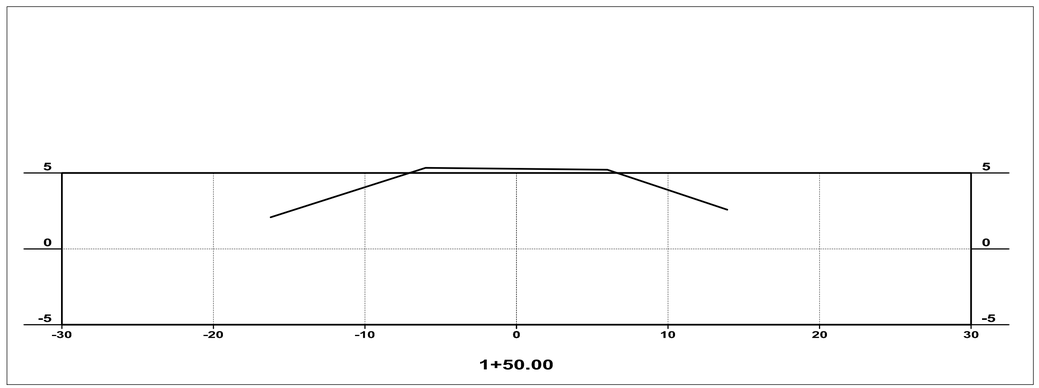
EQUALIZATION FACILITY
NORTH OLMSTED, OHIO
CUYAHOGA COUNTY

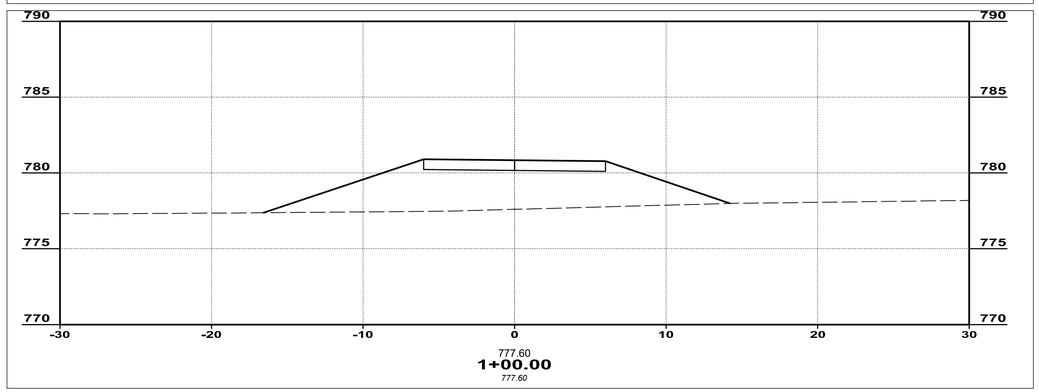
SITE IMPROVEMENT - 01 SERIES

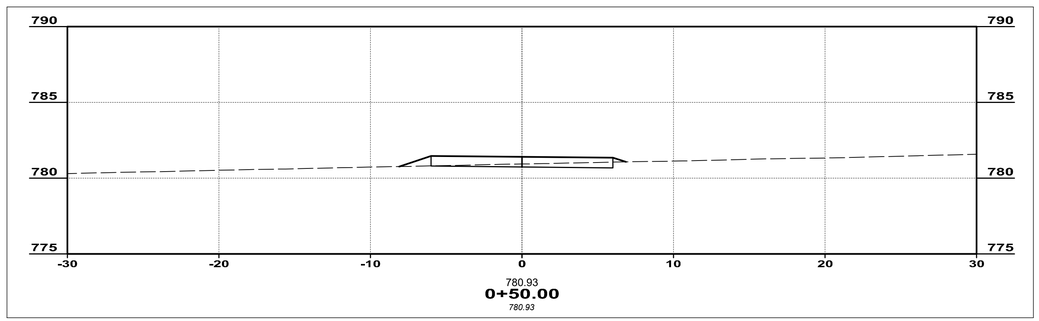
ACCESS ROAD PLAN & PROFILE

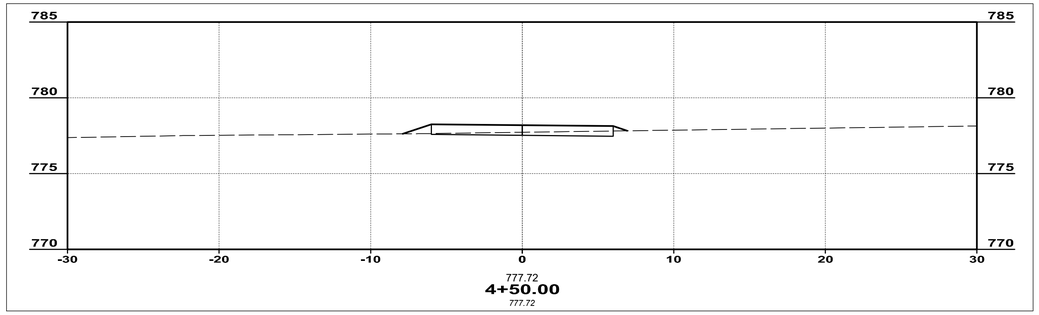
PROJECT NO.	210888
DISCIPLINE	CIVIL
SHEET NAME	01C-11
SHEET	16
OF	53

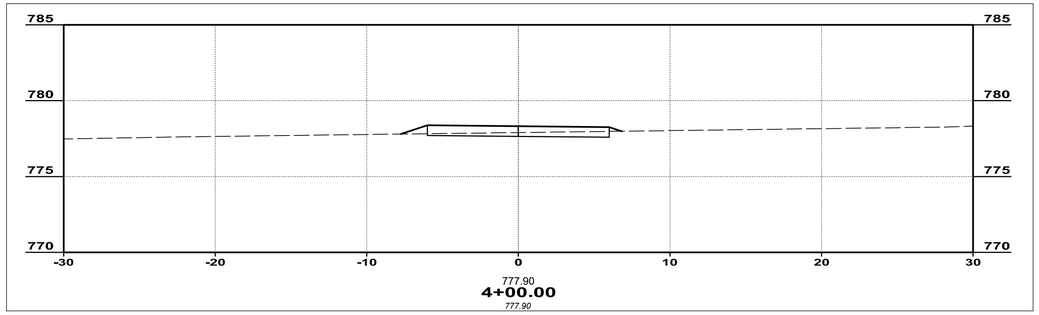


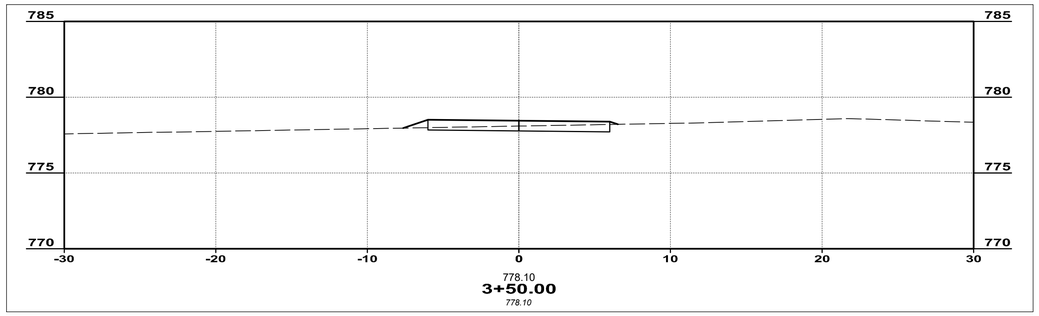


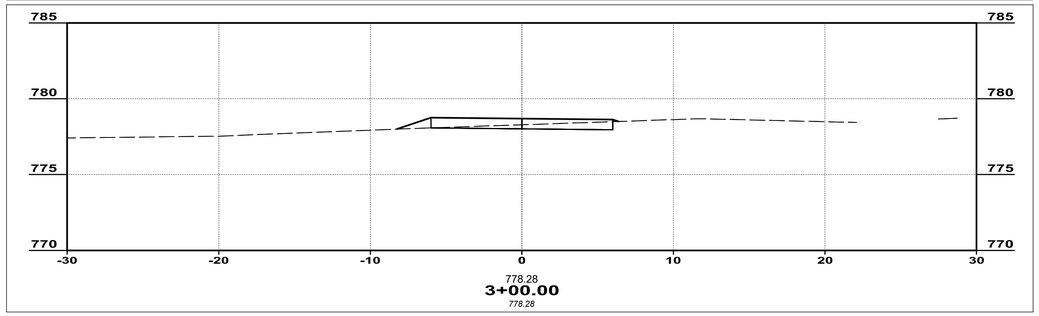


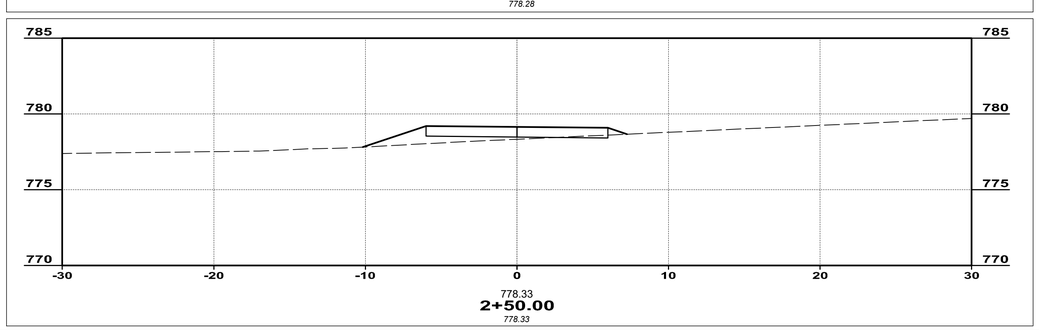












STATE OF OHIO
THOMAS E. VOLDRICH
47843
REGISTERED
PROFESSIONAL ENGINEER

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engineers • architects • planners
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ISSUE DATE: 10/10/24
SCALE: AS NOTED
DESIGNED BY: ELE
DRAWN BY: ELE
CHECKED BY: TEV

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR
EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

SITE IMPROVEMENT - 01 SERIES

ACCESS ROAD CROSS SECTIONS

PROJECT NO.
210888
DISCIPLINE
CIVIL
SHEET NAME
01C-12
SHEET 17 OF 53

STEARNS RD

STEARNS ROAD

BM#1

BM#2

PILE 1
14185. SF
.325 ACRES

PILE 2
18797 SF
.432 ACRES

PILE 3
12051 SF
.276 ACRES

PILE 4
5129 SF
.117
ACRES

HAUL ROAD

I-480 WB OFF RAMP

MATCH LINE

MATCH LINE

Soil Boring B-1
Soil Boring B-2
Soil Boring B-3
Soil Boring B-4
Soil Boring B-5
Soil Boring B-6
Soil Boring B-8
Soil Boring B-9
Soil Boring B-10
Soil Boring B-11

LIMITS OF DISTURBANCE

SOIL STORAGE SYSTEM AREA

WETLANDS

STREAM CENTER LINE

STATE OF OHIO
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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR
EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

SITE IMPROVEMENT - 01 SERIES

SOIL STORAGE AREA PLAN 1 OF 2

PROJECT NO.
210888

DISCIPLINE
CIVIL

SHEET NAME
01C-13

SHEET 18 OF 53

H:\2021\210888\DWG\SHEETS\C_210888 - STORAGE SYSTEM AREA.DWG - 18 SOIL STORAGE AREA PLAN 1 OF 2 - 10/9/2024 2:24:28 PM - BOB MARANO

WINDSOR DR

69.83'

EX RW

MATCH LINE

HAUL ROAD

N=631805.10
E=2122603.84

N=631809.06
E=2122890.67

N=631817.20
E=2122965.75

N=631817.17
E=2123101.44

N=631783.54
E=2123110.70

N=631749.65
E=2123187.84

N=631744.05
E=2123257.55

N=631706.82
E=2122427.07

N=631754.87
E=2122884.03

N=631733.12
E=2122987.38

N=631723.87
E=2122999.25

N=631724.56
E=2122859.24

N=631705.72
E=2123012.2

N=631714.95
E=2122763.58

N=631679.27
E=2123001.23

PILE 5
103541 SF
2.38 ACRES

PILE 6
56271 SF
1.29 ACRES

N=631663.44
E=2122729.35

N=631632.99
E=2123269.08

N=631606.98
E=2123249.94

N=631597.55
E=2123239.50

N=631596.51
E=2122725.27

N=631574.59
E=2123195.51

N=631576.40
E=2123207.41

N=631571.18
E=2123028.94

N=631537.24
E=2122698.36

N=631442.88
E=2122433.12

N=631439.16
E=2122542.89

HAUL ROAD

LIMITS OF DISTURBANCE

SOIL STORAGE SYSTEM AREA

WETLANDS

STREAM CENTER LINE

STATE OF OHIO
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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

PUMP STATION - 10 SERIES

SOIL STORAGE AREA PLAN 2 OF 2

PROJECT NO.	210888
DISCIPLINE	CIVIL
SHEET NAME	01C-14
SHEET	19
OF	53

BAR SCALE
30' 15' 0' 30'
SCALE: 1"= 30'

NEW MANHOLE
NEW MANBRIDGE
TRENCH
TRENCH
PROPOSED 30 LF 12" HDPE STORM PIPE
(11) 11' DIA X 163' LONG P.E. WATER STORAGE PIPES
PARKING LOT
PUMP STATIONS
ELECTRICAL BLDING
ACCESS DRIVE
MATCH LINE
MATCH LINE
PROPOSED 30 LF 12" HDPE STORM PIPE @ AREA WHERE HAUL ROAD CROSSES PERENNIAL STREAM. PIPE TO BE REMOVED AND AREA RESTORED AS PART OF PROJECT.

LEGEND

- EXISTING WETLANDS
- TOTAL LIMITS OF DISTURBANCE (LOD) (6.925 ACRES)
- WETLANDS WITHIN LIMITS OF DISTURBANCE (1.4512 ACRES)
- TRENCH CROSSING STREAM LIMITS OF DISTURBANCE 10' WIDE X 28' LONG TO BE RESTORED(0.06 ACRES)
- PROPOSED FENCE LINE
- STREAM CENTER LINE

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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
SITE IMPROVEMENT - 01 SERIES
WETLANDS MITIGATION CALC PLAN 1 OF 2

PROJECT NO. 210888
DISCIPLINE CIVIL
SHEET NAME 01C-15
SHEET 20 OF 53

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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

SITE IMPROVEMENT - 01 SERIES
WETLANDS MITIGATION CALC PLAN 2 OF 2

PROJECT NO.
210888
DISCIPLINE
CIVIL
SHEET NAME
01C-16
SHEET 21 OF 53

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BAR SCALE
40' 20' 0' 40'
SCALE: 1"= 40'

PROPOSED MAN-BRIDGE

PR. ODOT TYPE C, RIPRAP OUTLET PROTECTION

PR. 12", 40 LF CULVERT #6 @ 1.0% OUTLET INV. = 772.60'

BM#2

4' W EMERGENCY SPILLWAY ELEV. = 776.50'

PR. CB #6 RIM = 775.75' 3" ORIFICES INV. = 775.08' 12" INV. (N) = 773.00'

PR. STORMWATER POND #1 30'W x 55'L x 4'D BTM ELEV. = 773.50'

TOP OF BERM ELEV. = 777.50'

PR. 12", 35 LF CULVERT #5 @ 0.4%

PR. CB #5 RIM = 777 12" INV. (S) = 773.64' 12" INV. (N) = 773.64'

PR. INLET PROTECTION

PR. 12", 65 LF CULVERT #4 @ 0.5%

PR. INLET PROTECTION

PR. CB #4 RIM = 777.3 6" INV. (W) = TBD' 12" INV. (SW) = 773.97' 12" INV. (N) = 773.97'

PR. 12", 90 LF CULVERT #3 @ 0.5%

STOCKPILE 2 18797 SF .432 ACRES

PR. CB #3 RIM = 778 12" INV. (W) = 774.42' 12" INV. (NE) = 774.42'

PR. INLET PROTECTION

PR. 12", 220 LF CULVERT #2 @ 0.5%

PR. CB #2 RIM = 779 12" INV. (NW) = 775.52' 12" INV. (E) = 775.52'

PR. INLET PROTECTION

STOCKPILE 3 12051 SF .276 ACRES

PR. COMPOST FILTER SOCK (TYP)

STOCKPILE 4 5129 SF .117 ACRES

PR. SUPER SILT FENCE (TYP)

HAUL ROAD

PROPOSED 30 LF 12" HDPE STORM PIPE @ AREA WHERE HAUL ROAD CROSSES PERENNIAL STREAM. PIPE TO BE REMOVED AND AREA RESTORED AS PART OF PROJECT.

MATCH LINE

PR. INLET PROTECTION

BM#1

STEARNS ROAD

PR. ROCK CONSTRUCTION ENTRANCE (50' MIN. L)

PR. CONCRETE WASHOUT AREA

PR. CB #1 RIM = 778 12" INV. (SE) = 776.25'

PR. INLET PROTECTION (TYP)

STOCKPILE 1 14185. SF .326 ACRES

PR. 12", 145 LF CULVERT #1 @ 0.5%

PR. ACCESS DRIVE

UNDERGROUND WATER STORAGE SYSTEM

SWP

PR. 40LF, 1' D, 4' W GRASSED SWALE, (MIN. 1% SLOPE)

Soil Boring B-1
Soil Boring B-2
Soil Boring B-3
Soil Boring B-4
Soil Boring B-5
Soil Boring B-6
Soil Boring B-7
Soil Boring B-8
Soil Boring B-9
Soil Boring B-10
Soil Boring B-11

LEGEND:

- WETLANDS
- STOCKPILE 6 XXXX. SF X.XX ACRES — TEMP. SOIL STOCKPILE AREA
- (TEMPORARY) ROCK CONSTRUCTION ENTRY / ROAD
- GRAVEL WALK PATH
- LIMITS OF DISTURBANCE
- SF SF — PERIMETER FILTER FABRIC FENCE (OR FILTER SOCK). TO BE PLACED ON LEVEL CONTOURS WITH ENDS UPTURNED
- SUPER SILT FENCE
- SWP — STORM WATER POND
- STABLIZED GRASS LINED SWALE
- STABILIZED RIPRAP APRON
- STREAM
- PROPERTY BOUNDRY
- FLX — INLET PROTECTION
- CONCRETE WASHOUT

H:\2021\210888\DWG\SHEETS\C_210888 - SWPPP PLAN.DWG - 22 SWPPP PLAN 1 OF 2 - 10/10/2024 11:33:53 AM - BOB MARANO

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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
SITE IMPROVEMENT - 01 SERIES
SWPPP PLAN 1 OF 2

PROJECT NO.
210888
DISCIPLINE
CIVIL
SHEET NAME
SWPP-1
SHEET 22 OF 53

BAR SCALE
40' 20' 0' 40'
SCALE: 1"= 40'

MATCH LINE

STOCKPILE 5
103541 SF
2.38 ACRES

STOCKPILE 6
56271 SF
1.29 ACRES

HAUL ROAD

PR. SUPER SILT FENCE (TYP)

HAUL ROAD

EX R/W

WETLANDS

STOCKPILE 6 XXXX. SF X.XX ACRES — TEMP. SOIL STOCKPILE AREA

(TEMPORARY) ROCK CONSTRUCTION ENTRY / ROAD

GRAVEL WALK PATH

LIMITS OF DISTURBANCE

SF SF — PERIMETER FILTER FABRIC FENCE (OR FILTER SOCK). TO BE PLACED ON LEVEL CONTOURS WITH ENDS UPTURNED

SUPER SILT FENCE

SWP — STORM WATER POND

STABLIZED GRASS LINED SWALE

STABILIZED RIPRAP

STREAM

PROPERTY BOUNDRY

STATE OF OHIO
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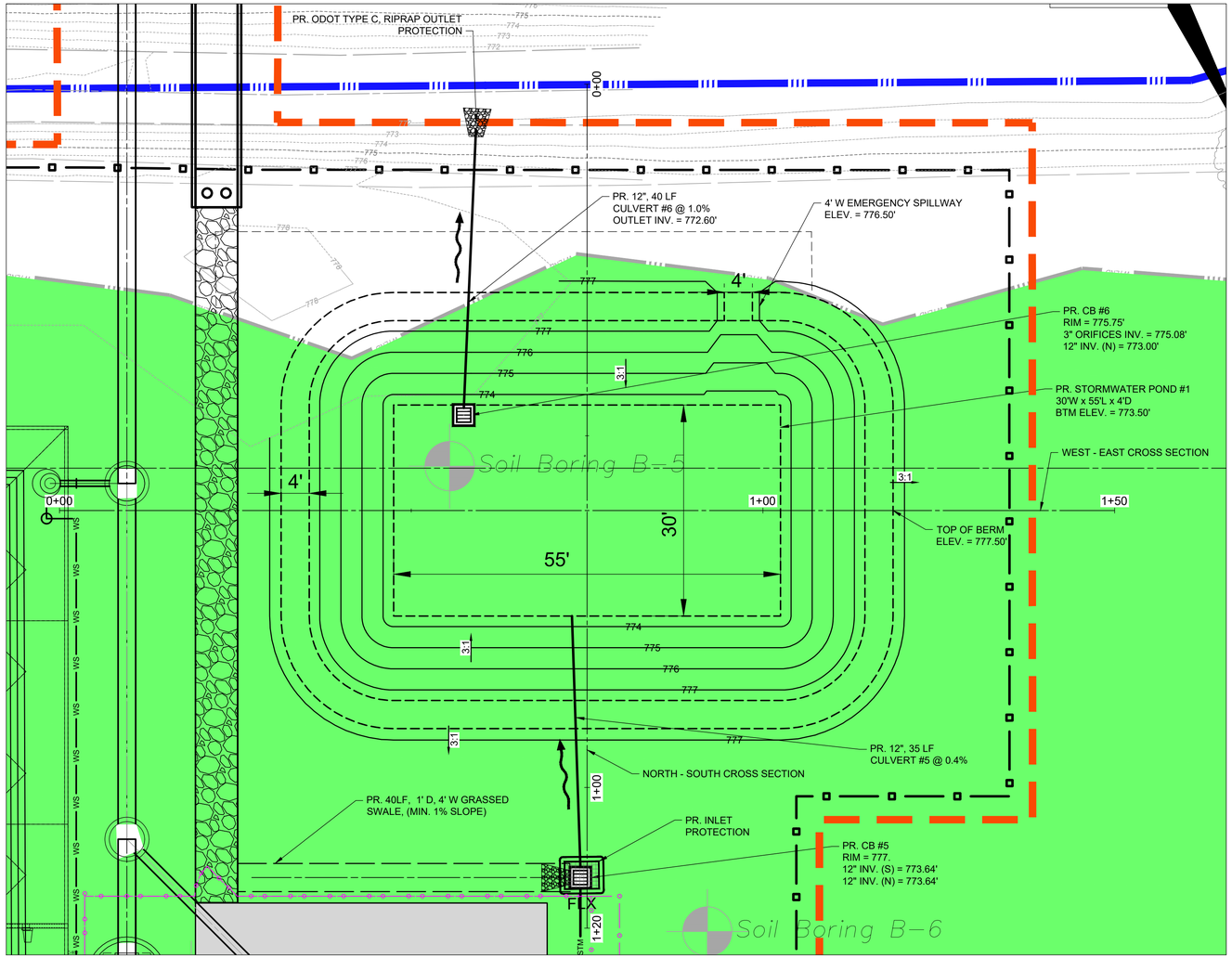
CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
SITE IMPROVEMENT - 01 SERIES
SWPPP PLAN 2 OF 2

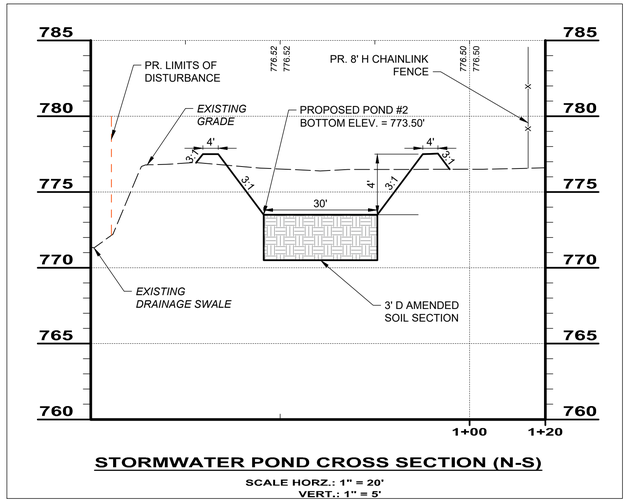
PROJECT NO.
210888
DISCIPLINE
CIVIL
SHEET NAME
SWPP-2
SHEET 23 OF 53

H:\2021\210888\DWG\SHEETS\C_210888 - SWPPP PLAN.DWG - 23 SWPPP PLAN 2 OF 2 - 10/9/2024 3:09:00 PM - BOB MARANO

BAR SCALE
10' 5' 0' 10'
SCALE: 1"= 10'



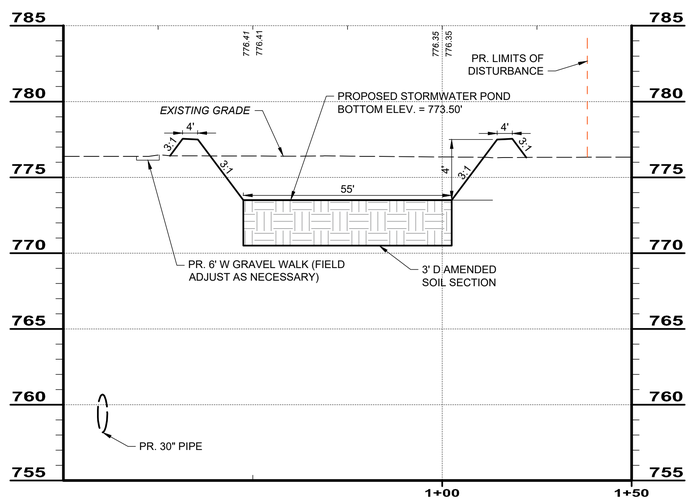
STORMWATER POND PLAN VIEW
SCALE: 1" = 10'



STORMWATER POND CROSS SECTION (N-S)
SCALE HORZ.: 1" = 20'
VERT.: 1" = 5'

20' 10' 0' 20'
SCALE: 1"= 20'

5' 0' 2.5' 5'
SCALE: 1"= 5'



STORMWATER POND CROSS SECTION (W-E)
SCALE HORZ.: 1" = 20'
VERT.: 1" = 5'

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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
SITE IMPROVEMENT - 01 SERIES
SWPPP PLAN - POND DETAIL & SECTIONS

PROJECT NO.
210888
DISCIPLINE
CIVIL
SHEET NAME
SWPP-3
SHEET 24 OF 53

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NORTH OLMSTED

SITE AND PROJECT INFORMATION

PROJECT NAME AND LOCATION:

SOUTH INTERCEPTOR EQUALIZATION FACILITY
EAST SIDE OF STEARNS ROAD, JUST NORTH OF I-480, EXIT 3 OFF RAMP.
NORTH OLMSTED
CUYAHOGA COUNTY

GENERAL CONTRACTOR INFORMATION:
(TO BE COMPLETED UPON AWARD OF CONTRACT)

_____
BUSINESS NAME

_____
STREET ADDRESS

_____ _____ _____
CITY STATE ZIP CODE

CONTACT THE CITY OF NORTH OLMSTED FOR PERSON RESPONSIBLE FOR AUTHORIZING AND AMENDING THE SWP3:

_____ _____
CONTACT NAME PHONE NUMBER

_____
EMAIL ADDRESS

PROJECT DESCRIPTION:

CONSTRUCTION OF A SANITARY EQUALIZATION FACILITY, UTILIZING UNDERGROUND STORAGE PIPES, AND A NEW CONTROL BUILDING/PUMP STATION AND ASSOCIATED PIPING AND ODOR CONTROL.

PRIOR LAND USE:
UNDEVELOPED

TYPE OF CONSTRUCTION:

_ MAINTENANCE	_ RETAIL DEVELOPMENT
_ REDEVELOPMENT	_ COMMERCIAL DEVELOPMENT
_ MANUFACTURING	_ RESIDENTIAL SUBDIVISION
_ HEALTH FACILITY	_ INDUSTRIAL PARK
X OTHER: EQUALIZATION TANK FACILITY	

SITE AREA SUMMARY:

TOTAL PROJECT SITE AREA:	8.9 AC.
AREA TO BE DISTURBED:	6.93 AC.
PRE-DEVELOPMENT IMPERVIOUS AREA:	0.07 AC.
POST-DEVELOPMENT IMPERVIOUS AREA:	0.33 AC.
PERCENT DIFFERENCE IN IMPERVIOUS AREA:	3.8 %

NAME OF RECEIVING STREAM OR SURFACE WATER:
UNNAMED STREAM
SUBSEQUENT RECEIVING WATERS:
LAKE ERIE

ESTIMATED CONSTRUCTION START DATE:	APRIL, 2025
ESTIMATED CONSTRUCTION COMPLETION DATE:	DECEMBER, 2025

SITE SOIL TYPES AND DESCRIPTIONS:
SOIL NAME

SOIL NAME	SOIL SYMBOL	HYDROLOGIC SOIL RATING	Ksat (IN/HR)
CONDIT SILTY CLAY LOAM	Ct	C/D	0.06-0.20
MAHONING SILT LOAM	MgA	D	0.00-0.14

SEE THE COMPLETE SOILS REPORT IN THE SWP3 DOCUMENT.

GENERAL NOTES

1. THE CONTRACTOR SHALL FOLLOW THE PRACTICES AND REQUIREMENTS IN THE CURRENT STANDARDS AND SPECIFICATIONS FOR:
   - ODNR RAINWATER AND LAND DEVELOPMENT MANUAL
   - OHIO EPA GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER NPDES OHC000006
   - LOCAL REGULATIONS
2. THE CONTRACTOR MUST SUBMIT A CO-PERMITTEE APPLICATION TO THE OHIO EPA PRIOR TO BEGINNING WORK AND BE RESPONSIBLE FOR ALL TERMS AND CONDITIONS OF THE NPDES GENERAL PERMIT UNTIL A NOTICE OF TERMINATION (NOT) IS APPROVED.
3. PRIOR TO COMMENCING WORK, SUBCONTRACTORS INVOLVED IN SWP3 IMPLEMENTATION OR ACTIVITIES THAT IMPACT STORM WATER SHALL COMPLETE THE "SUBCONTRACTOR CERTIFICATION /AGREEMENT FOR SWP3" ACKNOWLEDGING THEY UNDERSTOOD THE CONDITIONS AND THEIR RESPONSIBILITIES.
4. THE CONTRACTOR SHALL CLEAN & REMOVE ALL MUD, SOIL OR DEBRIS DEPOSITED ON ROADS AT THE END OF EACH WORK DAY OR AS REQUIRED DURING THE DAY.
5. THE CONTRACTOR SHALL USE EROSION CONTROL MEASURES AS NECESSARY TO PREVENT SEDIMENT MOVEMENT INTO STORM SEWERS, WETLANDS AND STREAMS. SPECIAL PRECAUTIONS IN CONSTRUCTION EQUIPMENT USE SHALL BE MADE TO PREVENT SITUATIONS THAT PROMOTE EROSION. CLEANUP SHALL BE DONE IN A MANNER THAT DOES NOT DISTURB EROSION CONTROL MEASURES.
6. SOIL STOCKPILES SHALL BE RINGED WITH SILT FENCE ALONG THE BOTTOM FOOTPRINT. IF THE STOCKPILE WILL BE INACTIVE FOR 14 DAYS OR MORE, THE SURFACE SHALL BE SEEDED OR STABILIZED WITHIN 7 DAYS OF LAST ACTIVITY.
7. IF UNFORESEEN CONDITIONS ARE ENCOUNTERED, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE NECESSARY. IF THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE THAT COULD DISCHARGE POLLUTANTS TO SURFACE WATERS, REVISIONS TO THE SWP3 MUST BE COMPLETED AS SOON AS PRACTICAL AND PRIOR TO THE NEXT STORM EVENT. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUESTED BY THE OWNER, SOIL AND WATER CONSERVATION DISTRICT OR OHIO EPA. ALL CHANGES WILL BE DOCUMENTED IN THE SWP3.
8. CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED SUCH THAT A MINIMUM AREA OF THE SITE IS DISTURBED AT A TIME.
9. THE CONTRACTOR MAY NEED ADDITIONAL DEWATERING OR EROSION AND SEDIMENTATION PREVENTION MEASURES TO CONTEND WITH GROUNDWATER. GROUNDWATER, STORM WATER AND SEDIMENT BEARING DRAINAGE SHALL BE FILTERED OR PONDED TO REMOVE SEDIMENT, DEBRIS AND OTHER POLLUTANTS PRIOR TO DISCHARGE FROM THE SITE (I.E. SETTLING IN PLACE, DEWATERING INTO A SUMP PIT OR FILTER BAG). SETTLED MATERIAL SHALL BE DISPOSED OF IN AN UPLAND, STABILIZED LOCATION WHERE IT WILL NOT BE CARRIED OFF-SITE OR INTO A STORM SEWER BY RAINFALL. WATER WITH A VISIBLE SHEEN MUST BE REMOVED BY A VACUUM TRUCK. THERE SHALL BE NO TURBID OR MURKY DISCHARGES TO SURFACE WATERS RESULTING FROM DEWATERING ACTIVITIES. GROUNDWATER DEWATERING WHICH DOES NOT CONTAIN SEDIMENT OR OTHER POLLUTANTS DOES NOT REQUIRE TREATMENT PRIOR TO DISCHARGE, BUT CARE MUST BE TAKEN SO IT DOES NOT BECOME POLLUTANT-LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES OR ERODE THE DISCHARGE AREA.
10. SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO CLEARING, GRUBBING, GRADING OR OTHER CONSTRUCTION ACTIVITY AND CONTINUE TO FUNCTION AND BE MAINTAINED UNTIL UPLAND DISTURBED AREAS ARE STABILIZED. APPROPRIATE CONTROLS SHALL BE CONSTRUCTED OR EXISTING CONTROLS ALTERED TO ADDRESS CHANGING DRAINAGE PATTERNS AS CONSTRUCTION PROGRESSES OR TOPOGRAPHY IS ALTERED.
11. A QUALIFIED INSPECTION PERSON SHALL COMPLETE AND SIGN A CHECKLIST AFTER EACH INSPECTION. INSPECTIONS SHALL BE COMPLETED ON A WEEKLY BASIS AND AFTER ALL RAIN EVENTS PRODUCING 1/2" OF RAIN PER 24 HOURS. INSPECTION FREQUENCY MAY BE REDUCED TO MONTHLY FOR DORMANT SITES IF THE ENTIRE SITE IS STABILIZED OR RUNOFF IS UNLIKELY DUE TO WEATHER CONDITIONS FOR EXTENDED PERIODS OF TIME. THE REPORT MUST INCLUDE THE FOLLOWING:
    - INSPECTION DATE;
    - INSPECTOR'S NAME, TITLE AND QUALIFICATION;
    - WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION, ESTIMATE OF THE BEGINNING OF EACH PRIOR STORM EVENT, DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT AND WHETHER ANY DISCHARGES OCCURRED;
    - WEATHER INFORMATION AND A DESCRIPTION OF ANY DISCHARGES OCCURRING AT THE TIME OF THE INSPECTION;
    - LOCATION OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE;
    - LOCATION OF BMP'S THAT NEED TO BE MAINTAINED;
    - LOCATION OF BMP'S THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A LOCATION;
    - LOCATION WHERE ADDITIONAL BMP'S WERE NEEDED, BUT DID NOT EXIST AT THE TIME OF INSPECTION; AND
    - CORRECTIVE ACTION REQUIRED INCLUDING CHANGES TO THE SWP3 AND IMPLEMENTATION DATES.
    - BMP REPAIR AFTER INSPECTION MUST TAKE PLACE NO LATER THAN THREE (3) DAYS FOR NON-SEDIMENT BASIN BMPS AND WITHIN TEN (10) DAYS FOR SEDIMENT BASIN REPAIRS.
12. COPIES OF THE FOLLOWING SHALL BE ON-SITE:
    - SIGNED NOI
    - NPDES CONSTRUCTION GENERAL PERMIT (OHC000006)
    - DELEGATION OF AUTHORITY FOR SWP3
    - THESE SWP3 AND ANY SWP3 AMENDMENT LOGS
    - GRADING AND STABILIZATION ACTIVITY LOG
    - INSPECTION LOGS
    - SWP3 DOCUMENT

POLLUTION PREVENTION PLAN INVENTORY

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE ANTICIPATED TO BE PRESENT ON-SITE DURING CONSTRUCTION:

X CONCRETE	X FERTILIZER	__ TAR
X ASPHALT	__ DETERGENT	X PAINT
X CMU BLOCK	X CLEANING SOLVENT	
X PETROLEUM BASED PRODUCT		

SPILL PREVENTION AND MATERIAL MANAGEMENT PRACTICES

1. STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN AN ORDERLY MANNER IN APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
2. PRODUCTS SHALL BE KEPT IN ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL UNLESS NOT RESEALABLE.
3. SUBSTANCES NOT TO BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
4. USE ALL OF A PRODUCT BEFORE DISPOSING OF THE CONTAINER WHENEVER POSSIBLE. FOLLOW LOCAL, STATE AND MANUFACTURERS' DISPOSAL METHODS IF SURPLUS PRODUCT IS TO BE DISPOSED OF.
5. INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON-SITE.
6. KEEP SAFETY DATA SHEETS (SDS) ON-SITE.
7. SPILL CONTROL PRACTICES:
   - MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP MUST BE POSTED AND SITE PERSONNEL MADE AWARE OF THE PROCEDURES, LOCATION OF THE INFORMATION AND LOCATION OF CLEANUP SUPPLIES.
   - SPILL CLEANUP MATERIAL OR EQUIPMENT SHALL BE KEPT IN A MATERIAL STORAGE AREA ON-SITE (I.E. DUST PANS, BROOMS, MOPS, RAGS, GLOVES, GOGGLES, SAWDUST, KITTY LITTER, SAND, AND PLASTIC OR METAL TRASH CONTAINERS).
   - SPILLS SHALL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING.
   - TOXIC OR HAZARDOUS MATERIAL SPILLS MUST BE REPORTED TO THE APPROPRIATE FEDERAL GOVERNMENT AGENCY, OHIO EPA (800-282-9378), LOCAL FIRE DEPARTMENT (911) AND LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) REGARDLESS OF SIZE AND WITHIN 30 MINUTES OF A SPILL.
   - ADJUST SPILL PREVENTION PLANS TO INCLUDE MEASURES HOW TO PREVENT A SPILL TYPE FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT AND THE CLEAN-UP MEASURES SHALL BE INCLUDED.
8. PRODUCT SPECIFIC PRACTICES: SOLID, SANITARY AND TOXIC WASTE SHALL BE DISPOSED IN A PROPER MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. IT IS PROHIBITED TO BURN, BURY OR POUR ONTO THE GROUND OR INTO A SEWER SOLVENTS, PAINT, STAINS, DIESEL FUEL, GASOLINE, MOTOR OIL, HYDRAULIC FLUID, CEMENT CURING COMPOUNDS, ANTIFREEZE, OR OTHER TOXIC OR HAZARDOUS WASTE.
9. PETROLEUM PRODUCTS: ON-SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS AND CLEARLY LABELED.
10. FERTILIZERS: APPLY FERTILIZER ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. CONTENTS OF PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
11. PAINTS: CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER, BUT PROPERLY DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS OR AS SPECIFIED BY THE MANUFACTURER.
12. CONCRETE TRUCKS: CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE. WASH OUT OF CONCRETE TRUCKS SHALL OCCUR IN A DESIGNATED AREA WHERE THE WASHING CAN COLLECT AND BE DISPOSED OF PROPERLY WHEN HARDENED.
13. WASTE MATERIALS: COLLECT WASTE MATERIALS INCLUDING TRASH AND CONSTRUCTION DEBRIS IN A SECURELY LIDDED DUMPSTER AND DISPOSE IN AN OHIO EPA APPROVED LANDFILL. MATERIALS WHICH CONTAIN ASBESTOS MUST COMPLY WITH OHIO EPA AIR POLLUTION REGULATIONS. THE DUMPSTER IS TO BE HAULED OFF-SITE AND EMPTIED AS NECESSARY.
14. HAZARDOUS WASTE: DISPOSE OF HAZARDOUS WASTE MATERIALS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS OR AS SPECIFIED BY THE MANUFACTURER.
15. SANITARY WASTE: CONTRACTOR SHALL PROVIDE TEMPORARY SANITARY FACILITIES AT THE SITE AND IT SHALL BE SERVICED BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS 1 TIME PER WEEK, OR MORE OFTEN IF NECESSARY.
16. OFF-SITE VEHICLE TRACKING: A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. ALL PAVED STREETS ADJACENT TO THE SITE SHALL BE SWEPT DAILY, OR MORE OFTEN IF NECESSARY, TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE SHALL BE COVERED WITH A TARPAULIN.
17. FUEL STORAGE TANKS: LOCATE FUEL STORAGE TANKS IN DIKED AREAS AND AWAY FROM DRAINAGE CHANNELS. DIKED AREAS MUST HOLD A VOLUME OF AT LEAST 110% OF THE LARGEST TANK. DIKED AREAS ARE NOT NECESSARY IF SELF-CONTAINED SPILL PROOF TANKS ARE USED. A MAXIMUM OF 1,000 GALLONS OF FUEL CAN BE STORED ON SITE.

STABILIZATION PRACTICES

1. IMPLEMENT AND MAINTAIN SOIL EROSION AND SEDIMENT CONTROL DEVICES IN AREAS TO REMAIN DISTURBED FOR 14 DAYS OR UNTIL PERMANENT STABILIZATION IS COMPLETE. PERMANENT VEGETATION SHALL BE GROUND COVER DENSE ENOUGH TO COVER 80% OF THE SOIL SURFACE AND MATURE ENOUGH TO SURVIVE WINTER WEATHER CONDITIONS.
2. ALL NEW AND EXISTING STORM INLET BASINS WITHIN THE WORK LIMITS SHALL HAVE INLET PROTECTION INSTALLED UNLESS THE SEWER IS INACTIVE DUE TO PRIOR WORK. DO NOT REMOVE INLET PROTECTION FROM EXISTING STORM INLET BASINS TO BE REMOVED OR ABANDONED UNTIL AFTER THE DOWNSTREAM STORM STRUCTURE IS PLUGGED FROM STORM FLOW.
3. DITCHES WITH GRADES GREATER THAN 2% AND OTHER SWALE SLOPES GREATER THAN 6% SHALL HAVE EROSION CONTROL BLANKETS/MATTING INSTALLED AS STABILIZATION MEASURES.
4. SEDIMENT PONDS/TRAPS AND PERIMETER CONTROLS SHALL BE IMPLEMENTED AS A FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING AND SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS ARE STABILIZED.
5. TEMPORARY STABILIZATION: DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR MORE THAN 21 DAYS, BUT LESS THAN 1 YEAR, SHALL FOLLOW THIS CHART:

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
DISTURBED AREAS WITHIN 50 FEET OF SURFACE WATER, NOT AT FINAL GRADE.	WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.
DISTURBED AREAS NOT WITHIN 50 FEET OF SURFACE WATER, TO BE DORMANT MORE THAN 14 DAYS, BUT LESS THAN 1 YEAR.	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE.
DISTURBED AREAS THAT WILL REMAIN IDLE OVER THE WINTER.	PRIOR TO THE ONSET OF WINTER WEATHER.
FOR AREAS TO BE PAVED, DISTURBED AREAS THAT WILL REMAIN DORMANT FOR THE TIME CONSTRAINTS MENTIONED IN THE ABOVE CRITERIA.	TEMPORARILY STABILIZE WITH GEOTEXTILE AND/OR STONE SUBBASE UNTIL PAVEMENT IS INSTALLED.

6. PERMANENT STABILIZATION: DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL FOLLOW THIS CHART:

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY CONTROLS
AREAS TO BE DORMANT FOR 1 YEAR OR MORE.	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE.
AREAS WITHIN 50 FEET OF SURFACE WATER AND AT FINAL GRADE.	WITHIN 2 DAYS OF REACHING FINAL GRADE.
DISTURBED AREAS THAT WILL REMAIN IDLE OVER THE WINTER.	WITHIN 7 DAYS OF REACHING FINAL GRADE.

SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES:

1. HOLD A PRE-CONSTRUCTION MEETING TO DISCUSS OHIO EPA NPDES PERMIT REQUIREMENTS.
2. CONTRACTOR SUBMITS CONSTRUCTION SCHEDULE FOR CONSTRUCTION ACTIVITIES.
3. BEGIN INSPECTION, MAINTENANCE, RECORD KEEPING AND SITE POSTING OF ALL EROSION CONTROLS.
4. ESTABLISH STAGING AREAS AND ALL NON-SEDIMENT POLLUTION CONTROLS.
5. INSTALL SILT FENCE, PERIMETER BMPS AND CONSTRUCTION ENTRANCE. RELOCATE OR ESTABLISH ALTERNATES DURING CONSTRUCTION AS NEEDED.
6. INSTALL ALL OTHER TEMPORARY SEDIMENTATION AND EROSION CONTROL ITEMS AS SOON AS POSSIBLE, BUT NO LATER THAN 7 DAYS OF FIRST SOIL DISTURBANCE. INSPECT CONTROLS AND MAINTAIN FOR THE PROJECT DURATION UNTIL UPSLOPE AREAS ARE PERMANENTLY STABILIZED.
7. BEGIN CLEARING, GRUBBING AND CONSTRUCTION. STRIP & STOCKPILE EXISTING TOPSOIL.
8. INSTALL DEWATERING MEASURES.
9. ASSEMBLE AND INSTALL EQUALIZATION FACILITY, INCLUDING CONTROL BUILDING AND ANY ASSOCIATED PIPING AND APPURTENANCES.
10. BEGIN EARTHWORK OPERATIONS. LIMIT BOTH AREA AND DURATION OF BARE SOIL EXPOSURE. ANY AREAS LEFT UNDISTURBED FOR MORE THAN 14 DAYS SHALL REQUIRE TEMPORARY SEEDING AND MULCHING WITHIN 7 DAYS OF LAST DISTURBANCE.
11. CONSTRUCT REMAINING UTILITIES INCLUDING SANITARY, WATER, ELECTRIC, GAS AND PHONE.
12. INSTALL STORMWATER BIORETENTION POND AND ASSOCIATED DRAINAGE SWALE. ENSURE AMENDED SOIL SECTION IS INSTALLED AS DESIGNED AND A QUALIFIED INSPECTOR IS ON SITE DURING OUTLET STRUCTURE INSTALLATION.
13. BEGIN PAVING OPERATIONS.
14. INSPECT AND TEST INSTALLED SANITARY SYSTEM.
15. PERMANENTLY SEED DISTURBED AREAS WITHIN 7 DAYS OF FINAL GRADING.
16. INSTALL LANDSCAPING.
17. CONTINUE INSPECTIONS, MAINTENANCE, RECORD KEEPING AND SITE POSTING UNTIL FINAL STABILIZATION IS ACHIEVED.
18. REMOVE AND DISPOSE OF TEMPORARY SEDIMENTATION AND EROSION CONTROL ITEMS MEASURES AFTER THE SITE IS STABILIZED AND 70% HEALTHY VEGETATIVE COVERAGE IS OBTAINED.
19. AT COMPLETION OF ALL WORK, CONTRACTOR SHALL:
    - DISPOSE OF ALL DEBRIS AND WASTE MATERIAL FROM THE SITE THAT RESULTED FROM CONSTRUCTION ACTIVITIES.
    - CLEAN ALL ROADS AND LAWNS OF DEBRIS AND DIRT.
    - OPEN GUTTERS AND DITCHES TO OBTAIN FREE DRAINAGE.

IN CASE OF DISCREPANCIES BETWEEN THE SPECIFICATION AND CONTRACT DRAWINGS, THE MOST STRINGENT STIPULATION PREVAILS.

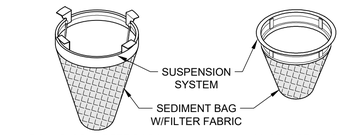
engineers • architects • planners
A Verdantas Company

NO	REVISION	DATE

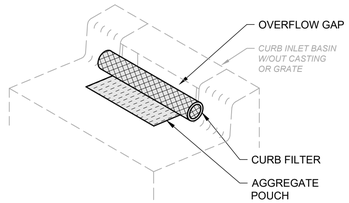
ISSUED FOR:	BID
ISSUE DATE:	10/10/24
SCALE:	AS NOTED
DESIGNED BY:	JC
DRAWN BY:	JC
CHECKED BY:	TEV

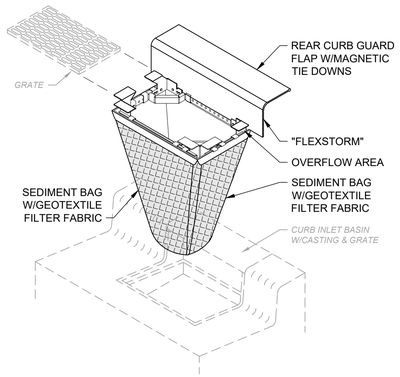
CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
NORTH OLMSTED, OHIO
CUYAHOGA COUNTY
SITE IMPROVEMENT - 01 SERIES
SWPPP NOTES

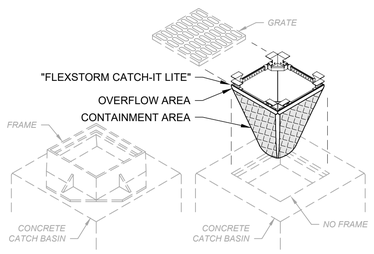
PROJECT NO.
210888
DISCIPLINE
CIVIL
SHEET NAME
SWPP-4
SHEET 25 OF 53

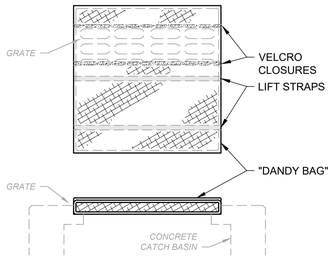


ROUND CONCRETE BASIN "NYLOPLAST" BASIN







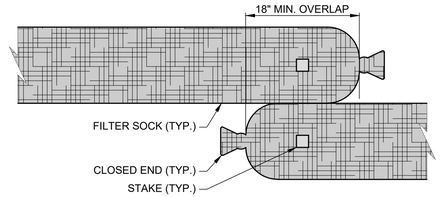


NOTES:

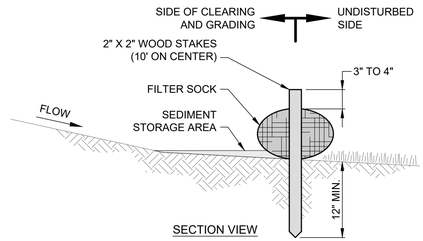
1. ALL NEW AND EXISTING STORM INLET BASINS WITHIN THE WORK LIMITS SHALL HAVE INLET PROTECTION INSTALLED.
2. INLET PROTECTION SHALL BE INSTALLED AS EACH STORM INLET IS CONSTRUCTED.
3. NOT ALL ITEMS SHOWN MAY APPLY OR DIFFERENT TYPES OR CONFIGURATIONS MAY BE REQUIRED. THE CONTRACTOR SHALL MEASURE EACH INLET TO CONFIGURE AND ASSEMBLE CUSTOMIZED INLET FILTERS.

INLET PROTECTION DETAIL

SCALE: NONE



FILTER SOCK CONNECTION



SECTION VIEW

NOTES:

1. FILTER SOCKS SHALL BE CONTINUOUS, TUBULAR, HDPE KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST.
2. COMPOST SHALL BE WEED, PATHOGEN AND INSECT FREE, FREE OF REFUSE, CONTAMINANTS OR MATERIALS TOXIC TO PLANT GROWTH, BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER, AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
3. FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE ACROSS SLOPES PARALLEL TO THE BASE OF THE SLOPE. ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND MID-SLOPE.
4. THE FLAT DIMENSION OF THE SOCK SHALL BE AT LEAST 1.5 TIMES THE NOMINAL DIAMETER.
5. FILTER SOCKS SHALL BE PLACED AT LEAST 5' FROM THE TOE OF SLOPE FOR SEDIMENT DEPOSIT.
6. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
7. BUILT UP SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED 1/3 THE FILTER SOCK HEIGHT.
8. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
9. WHEN A FILTER SOCK IS NO LONGER REQUIRED, IT SHALL BE DISPERSED ON-SITE.
10. THE MAXIMUM DRAINAGE AREA PER 100 FEET OF FILTER SOCK IS 1/2 ACRE AND IS DEPENDENT ON THE SLOPE PER THE CHARTS BELOW:

MAX. DRAINAGE AREA (AC.) PER 100-FT OF FILTER SOCK (*)	RANGE OF SLOPE PER INDIVIDUAL DRAINAGE AREA
0.50 AC.	<2% (50H:1V)
0.25 AC.	≥2% (50H:1V) BUT <20% (5H:1V)
0.125 AC.	≥20% (5H:1V) BUT <50% (2H:1V)

(*) FILTER SOCK CANNOT BE USED FOR SLOPES ≥50% (2H:1V).

MAX. SLOPE LENGTH ABOVE FILTER SOCK				
SLOPE (%)	RATIO (H:V)	12"	18"	24"
0% TO <2%	0 TO <50:1	250'	300'	350'
≥2% TO <10%	≥50:1 TO <10:1	125'	200'	25'
≥10% TO <20%	≥10:1 TO <5:1	100'	150'	200'
≥20% TO <50%	≥5:1 TO ≥2:1	50'	75'	100'

FILTER SOCK DETAIL

SCALE: NONE

MULCHING (M)

NOTES:

1. MULCH SHALL CONSIST OF ONE OF THE FOLLOWING:
   - UNROTTED SMALL GRAIN STRAW SPREAD UNIFORMLY AT 2 TONS/AC. (2 TO 3 BALES).
   - WOOD-CELLULOSE FIBER (I.E. HYDROSEEDING) APPLIED AT 1 TON/AC.
   - ROLLED EROSION CONTROL PRODUCT OR MULCH MATTING APPLIED PER MANUFACTURER RECOMMENDATION.
   - WOOD MULCH OR CHIPS APPLIED AT 6 TONS/AC.
2. MULCH SHALL BE ANCHORED IMMEDIATELY BY ONE OF THE FOLLOWING METHODS:
   - PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL USING A DISK, CRIMPER OR SIMILAR TOOL.
   - NETTING PER MANUFACTURER RECOMMENDATION IN CONCENTRATED RUNOFF AREAS OR CRITICAL SLOPES.
   - SYNTHETIC BINDERS AT MANUFACTURER RATE.
   - WOOD-CELLULOSE FIBER BINDER AT A NET DRY WEIGHT OF 750 LB/AC., MIXED WITH WATER, AND CONTAIN 50 LB/100 GAL. MAX. OF WOOD CELLULOSE FIBER.

TEMPORARY SEEDING (TS)

NOTES:

1. THE SEED BED SHALL BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION.
2. SOIL AMENDMENTS MAY BE REQUIRED TO ESTABLISH VEGETATION. PERFORM SOIL TESTS TO PREDICT THE NEED FOR LIME OR FERTILIZER. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS
3. APPLY SEED UNIFORMLY. COVER BROADCASTED SEED BY RAKING OR DRAGGING, AND LIGHTLY TAMPING INTO PLACE.
4. MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING.
5. INSPECT FOR SOIL EROSION OR VEGETATION LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED AND RE-MULCH AS NEEDED.

TEMPORARY SEEDING SPECIES SELECTION			
DATES	SPECIES	LB/1,000 SF	LB/AC.
MARCH 1 - AUGUST 15	OATS TALL FESCUE PERENNIAL RYEGRASS	3 1 1	128 40 40
	PERENNIAL RYEGRASS TALL FESCUE	2 1	40 40
AUGUST 16 - OCTOBER 31	RYE TALL FESCUE PERENNIAL RYEGRASS	3 1 1	112 40 40
	WHEAT TALL FESCUE PERENNIAL RYEGRASS	3 1 1	120 40 40
	PERENNIAL RYEGRASS TALL FESCUE	2 1	40 40
NOVEMBER 1 - FEBRUARY 28	ONLY MULCH OR DORMANT SEEDING.		

SODDING (S)

NOTES:

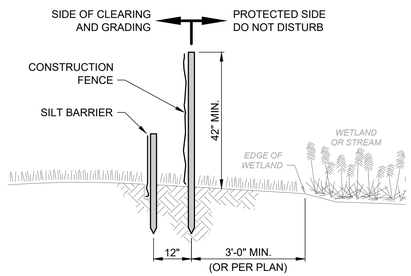
1. SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN 48 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO INSTALLATION.
2. SOD SHALL BE KEPT MOIST AND COVERED DURING HAULING AND PREPARATION FOR PLACEMENT.
3. SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" ±1/4", EXCLUDING TOP GROWTH AND THATCH.
4. AREAS SHALL BE GRADED AND TOPSOIL SPREAD AS NEEDED.
5. THE SEEDBED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND LIMESTONE OR FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY LIME AT 100 LB/1,000 S.F. OR FERTILIZER AT 12 LB/1,000 S.F. OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".
6. BEFORE LAYING SOD, THE SURFACE SHALL BE FINE GRADED AND CLEARED OF DEBRIS, STONES AND CLODS LARGER THAN 3" DIAMETER. KNOCK DOWN HIGH SPOTS AND FILL IN LOW SPOTS SO SOIL IS LEVEL AND 1" BELOW THE GRADE OF ANY PAVED SURFACE, SUCH AS CURBS, WALKS AND PAVEMENT.
7. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURES, THE SOIL SHALL BE LIGHTLY IRRIGATED PRIOR TO LAYING SOD.
8. DO NOT PLACE SOD ON FROZEN SOIL.
9. THE FIRST ROW OF SOD SHALL BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY WEDGED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED IN A BRICK-LIKE PATTERN. ENSURE SOD IS NOT STRETCHED OR OVERLAPPED, AND JOINTS ARE BUTTED TIGHT.
10. ON SLOPING AREAS WHERE EROSION MAY BE A PROBLEM, SOD SHALL BE LAID WITH THE LONG EDGE PARALLEL TO THE CONTOUR, WITH STAGGERED JOINTS AND BE SECURED WITH PEGS OR STAPLES.
11. AS SODDING IS COMPLETED IN ANY ONE SECTION, ROLL OR TAMP THE SOD TO ENSURE SOLID CONTACT OF ROOTS WITH THE SOIL. WATER IMMEDIATELY AFTER ROLLING OR TAMPING UNTIL THE SOD AND SURFACE BELOW ARE THOROUGHLY WET. THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD SHALL BE COMPLETED WITHIN 8 HOURS.
12. IN THE ABSENCE OF ADEQUATE RAINFALL DURING THE FIRST WEEK, WATER DAILY OR AS NECESSARY TO MAINTAIN MOIST SOIL. AFTER THE FIRST WEEK, WATER SOD AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE AND ENSURE ESTABLISHMENT.
13. DO NOT MOW UNTIL SOD IS FIRMLY ROOTED.

PERMANENT SEEDING NOTES (PS)

1. SUBSOILING SHALL OCCUR WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING IS NOT PERMITTED ON SLIP-PRONE AREAS.
2. THE SEED BED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND LIMESTONE OR FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".
3. APPLY SEED UNIFORMLY ON FIRM, MOIST SEED BED BETWEEN MARCH 1 AND MAY 31 OR AUGUST 1 AND SEPTEMBER 30. TILLAGE FOR SEEDBED PREPARATION SHALL OCCUR WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. SEEDING SHOULD NOT BE APPLIED BETWEEN OCTOBER 1 AND NOVEMBER 20 BECAUSE SEEDS MAY GERMINATE, BUT WILL NOT SURVIVE THE WINTER. IF SEEDING MUST OCCUR, INCREASE THE SEEDING RATE BY 50% AND ANCHOR. APPLY ADDITIONAL MULCH AND IRRIGATION AS REQUIRED TO ENSURE GERMINATION.
4. MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING.
5. SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS.
6. SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF SEEDING. DURING THIS PERIOD INSPECT FOR SOIL EROSION OR VEGETATION LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED AND RE-MULCH AS NEEDED.
7. ADEQUATE PERMANENT VEGETATION SHALL BE GROUND COVER DENSE ENOUGH TO COVER 80% OF THE SOIL SURFACE BASED ON VISUAL INSPECTION.

PERMANENT SEEDING FERTILIZATION AND MOWING CHART				
MIXTURE	FORMULA	LB/ AC.	TIME	MOW
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	FALL, YEARLY, OR AS NEEDED	≥3"
TALL FESCUE	10-10-10	500		≥4"
TURF-TYPE FESCUE	10-10-10	500		
CROWN VETCH FESCUE	0-20-20	400	SPRING, AND YEARLY AFTER ESTABLISHED	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400		

PERMANENT SEEDING SPECIES SELECTION		
SEED MIX	SEED RATE LB/AC.	NOTES:
GENERAL USE		
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	20 - 40 10 - 20 20 - 40	FOR CLOSE MOWING AND WATERWAYS WITH <2.0 FT./SEC. VELOCITY
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE	90	
STEEP BANKS OR CUT SLOPES		
TALL FESCUE	40 - 50	
CROWN VETCH TALL FESCUE	10 - 20 20 - 30	DO NOT SEED LATER THAN AUGUST
FLAT PEA TALL FESCUE	20 - 25 20 - 30	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES		
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE KENTUCKY BLUEGRASS	90 5	
LAWN		
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	100 - 120 100 - 120	
KENTUCKY BLUEGRASS CREEPING RED FESCUE	100 - 120 100 - 120	FOR SHADED AREAS



NOTES:

1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY BARRIERS AROUND NON-IMPACTED WETLANDS AND STREAMS TO PREVENT DISTURBANCE OR CONSTRUCTION ACTIVITIES WITHIN THE PROTECTED AREAS AND, UPON COMPLETION OF THE PROJECT, BE REMOVED.
2. CONSTRUCTION FENCE SHALL BE HIGH VISIBILITY, ORANGE COLOR, HIGH DENSITY POLYETHYLENE GRID SECURED TO STEEL POSTS LOCATED ON MAXIMUM 10' CENTERS.
3. THE FOLLOWING ACTIVITIES ARE PROHIBITED WITHIN OR THROUGH NON-IMPACTED WETLANDS AND STREAMS:
   - A. EXCAVATION OR OTHER DIGGING
   - B. IMPOUNDMENT OF WATER
   - C. STORAGE OF CONSTRUCTION MATERIALS, DEBRIS OR EXCAVATED MATERIAL
   - D. OPERATING OR PARKING VEHICLES OR EQUIPMENT
   - E. FOOT TRAFFIC
   - F. ATTACHMENT OF SIGNS TO OR WRAPPING MATERIALS AROUND TREES
   - G. ANYTHING THAT WOULD DISTURB THE GROUND

WETLAND BARRIER DETAIL

SCALE: NONE

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NO	REVISION	DATE

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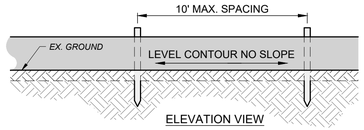
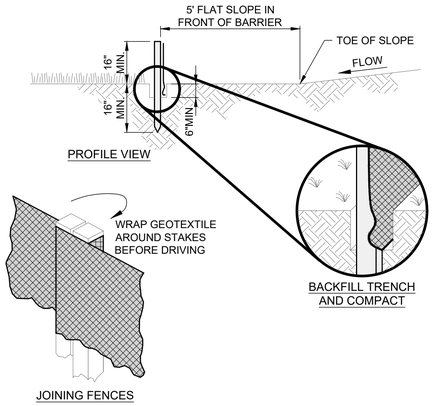
ISSUE DATE: 10/10/24
SCALE: AS NOTED
DESIGNED BY: JC
DRAWN BY: JC
CHECKED BY: TEV

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
SITE IMPROVEMENT - 01 SERIES
SWPPP DETAILS

PROJECT NO. 210888
DISCIPLINE CIVIL
SHEET NAME SWPP-5
SHEET 26 OF 53



ELEVATION VIEW



PROFILE VIEW

JOINING FENCES

NOTES:

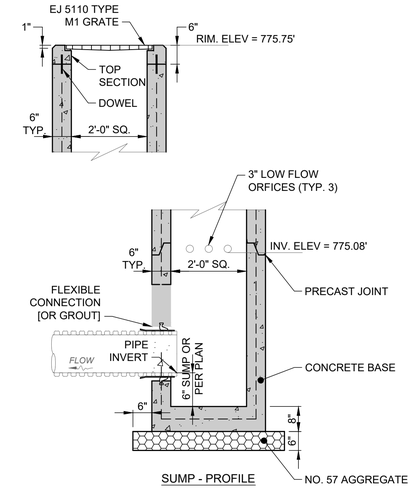
1. PRESERVE VEGETATION FOR 5 FEET OR AS MUCH AS POSSIBLE UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
2. SILT FENCE MAY ONLY PASS RUNOFF AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, THEN CHANGE THE LAYOUT OF THE SILT FENCE, REMOVE ACCUMULATED SEDIMENT OR INSTALL OTHER PRACTICES.
3. SILT FENCE SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, VERIFICATION FABRIC IS SECURELY ATTACHED TO FENCE POSTS, AND VERIFICATION FENCE POSTS ARE FIRMLY IN THE GROUND. BUILT UP SEDIMENT SHALL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED 1/3 THE FENCE HEIGHT.
4. THE MAXIMUM DRAINAGE AREA PER 100 FEET OF SILT FENCE IS 1/2 ACRE AND IS DEPENDENT ON THE SLOPE PER THE CHART BELOW:

MAX. DRAINAGE AREA (AC.) PER 100-FT OF SILT FENCE (*)	RANGE OF SLOPE PER INDIVIDUAL DRAINAGE AREA
0.50 AC.	<2% (50H:1V)
0.25 AC.	≥2% (50H:1V) BUT <20% (5H:1V)
0.125 AC.	≥20% (5H:1V) BUT <50% (2H:1V)

(*) SILT FENCE CANNOT BE USED FOR SLOPES ≥50% (2H:1V).

SILT FENCE DETAIL

SCALE: NONE



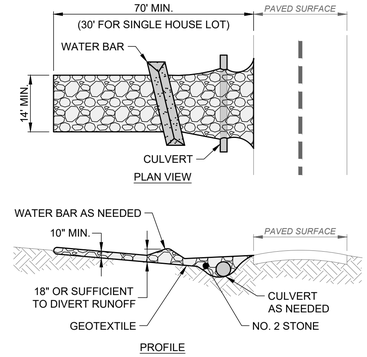
SUMP - PROFILE

NOTES:

1. CONCRETE SHALL BE ODOT ITEM 499, CLASS QC-1.
2. STRUCTURE SHALL MEET H-20 LOADING.
3. PRECAST CONCRETE STRUCTURE AND REINFORCEMENT SHALL CONFORM TO ASTM C-913.
4. PRECAST KNOCKOUT SIDES FOR CURB DRAIN AND PIPE CONNECTION HOLES, AS REQUIRED. PIPE OPENINGS SHALL BE O.D. OF PIPE PLUS 2", AND INTERSTITIAL SPACE FILLED WITH GROUT [. . . OR . . . . . ALL PIPE OPENINGS MUST BE PRECAST WITH FLEXIBLE CONNECTIONS (Z-LOK OR A-LOK) PER ASTM C-923].
5. IF TOP SECTION IS A SEPARATE CAST PIECE, 1/2"Ø X 6" L DOWELS SHALL BE USED AT EACH CORNER TO ATTACH THE TOP TO THE BOTTOM SECTIONS OF BASIN.
6. GRATE MUST INCLUDE LETTERING "DUMP NO WASTE" AND FISH IMAGE.
7. THIS DETAIL IS FOR REFERENCE AND DIMENSION CONTROL ONLY; SEE UTILITY PLAN FOR ACTUAL PIPE SIZES AND ELEVATIONS.

(CONCRETE 2'X2') INLET BASIN DETAIL

SCALE: NONE



PLAN VIEW

PROFILE

NOTES:

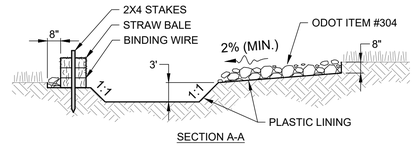
1. GEOTEXTILE SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS MEETING THE FOLLOWING:

TENSILE STRENGTH	200 LB
PUNCTURE STRENGTH	80 PSI
TEAR STRENGTH	50 LB
BURST STRENGTH	320 PSI
ELONGATION	20%
EQUIVALENT OPENING SIZE	< 0.6 MM
PERMITTIVITY	0.001 CM/SEC.

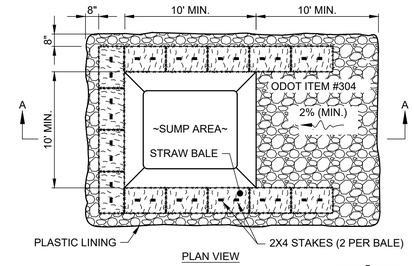
2. INSTALL WATER BAR, AS NEEDED, TO PREVENT SURFACE RUNOFF FROM FLOWING OUT ONTO PAVEMENT.
3. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND, REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6", AND REPLACE IF STONES BECOMES MUD-LADEN.
4. IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
5. CONSTRUCTION ENTRANCE SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
6. CONSTRUCTION ENTRANCE SHALL REMAIN UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY.

CONSTRUCTION ENTRANCE DETAIL (CE)

SCALE: NONE

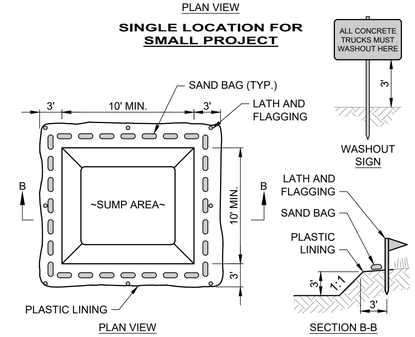


SECTION A-A



PLAN VIEW

SINGLE LOCATION FOR SMALL PROJECT



PLAN VIEW SECTION B-B

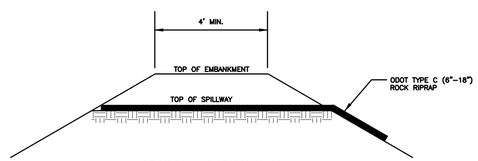
TEMPORARY LOCATION FOR MULTIPLE PHASE OR LARGE PROJECT

NOTES:

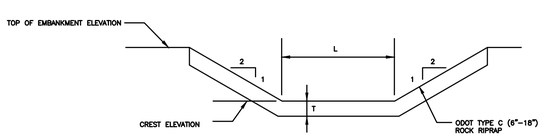
1. CONCRETE WASHOUT AREA SHALL BE LOCATED A MINIMUM OF 100' FROM STORM SEWER INLETS, STREAMS, WETLANDS OR ANY OTHER SURFACE WATERS.
2. IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO A CONSTRUCTION ENTRANCE.
3. CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. LARGE SITES MAY REQUIRE MULTIPLE CONCRETE WASHOUT AREAS.
4. PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-ML POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF LARGE ROCKS AND DEBRIS.
5. CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
6. CONCRETE WASHOUT AREA SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOW.
7. PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE.
8. CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR PLASTIC LINING SHALL BE REPAIRED IMMEDIATELY. REPLACE THE ENTIRE CONCRETE WASHOUT AREA WHEN IT IS 75% FULL.

CONCRETE WASHOUT DETAIL (CWA)

SCALE: NONE



SECTION ALONG SPILLWAY



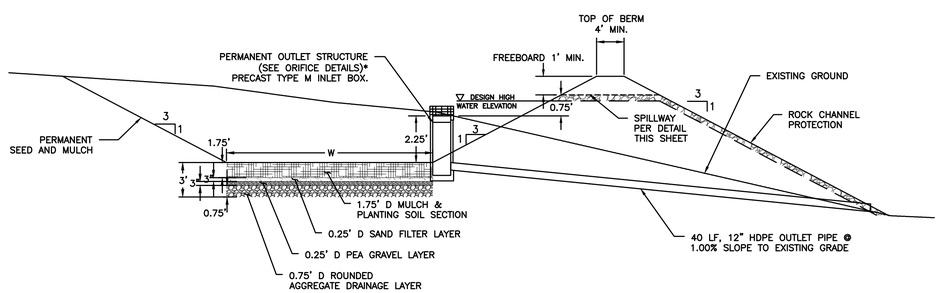
SECTION ALONG EMBANKMENT

	CREST ELEVATION	TOP OF EMBANKMENT	LENGTH (L)	THICKNESS (T)
BIORETENTION POND 1	776.50'	777.50'	4'	12"

BIORETENTION POND EMERGENCY SPILLWAY

SCALE: NONE

POND NO.	SIDE SLOPE (GRAD)	POND LENGTH (FT)	POND WIDTH (FT)	POND DEPTH (FT)	UNDERDRAIN DIA (IN)	UNDERDRAIN INLET ELEV (FT)	OUTLET BARREL DIA (IN)	OUTLET BARREL INLET ELEV (FT)	OUTLET BARREL MAT'L	OUTLET BARREL LENGTH (FT)	OUTLET BARREL OUTLET ELEV (FT)	EMBANKMENT TOP ELEV (FT)	EMBANKMENT BOTTOM ELEV (FT)	EMBANKMENT TOP WIDTH (FT)
1	3:1	55	30	4	–	N/A	12	773.00	HDPE	40	772.60	777.50	773.50	4



BIOTRETENTION POND

SCALE: NONE

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DRAWN BY:	JC
CHECKED BY:	TEV

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

SITE IMPROVEMENT - 01 SERIES

SWPPP DETAILS

PROJECT NO.	
210888	
DISCIPLINE	
CIVIL	
SHEET NAME	
SWPP-6	
SHEET	OF
27	53

GENERAL NOTES

1. CONCRETE: 5000 PSI @ 28 DAYS
2. AIR: 6% +/- 2%
3. REINFORCING: ASTM A615 GRADE 60
4. WALLS PRECAST CONCRETE
5. ROOF PRECAST CONCRETE
6. FLOOR PRECAST CONCRETE
7. CONCRETE MIX DESIGN AND PLACEMENT PER ACI-318-14
8. MINIMUM REQUIRED FIRE SEPARATION IS 10'-0"
9. BUILDING SHALL NOT BE PLACED WITHIN 60'-0" OF AN UNLIMITED AREA STRUCTURE
10. BUILDING IS A STAND ALONE STRUCTURE
11. EXTERIOR EGRESS COMPONENTS ARE TO BE SITE INSTALLED.
12. PROVIDE COMCHECK, OR STATE THAT IT WILL BE PROVIDED AS A PART OF THE IU DWGS.

OBC SECTION 108.2.13 INDUSTRIALIZED UNIT (I.U.) INSPECTIONS AT THE OHIO SITE OF INSTALLATION

APPROVED I.U.'S & THE ON-SITE CONSTRUCTION TO COMPLETE THE INSTALLATION OF THE I.U.'S & ARE TO BE INSPECTED BY THEIR INSPECTIONS **OF FACTORY COMPLETED WORK** ARE LIMITED TO:

1. CONNECTION TO ONSITE CONSTRUCTION, INTERCONNECTION OF MODULES, CONNECTION TO UTILITIES. THE INSPECTIONS AND CONDUCTING OF REQUIRED TESTS MUST NOT REQUIRE THE DESTRUCTION OR DISASSEMBLY OF ANY FACTORY CONSTRUCTED COMPONENT APPROVED BY THE OHIO BBS
2. INSPECTION OF THE UNITS FOR DAMAGE RESULTING FROM TRANSPORTATION, IMPROPER PROTECTION OF EXPOSED PARTS FROM INCLEMENT WEATHER OR OTHER CAUSES. DAMAGE MUST BE REPAIRED TO COMPLY WITH THE OHIO BBS APPROVED CONSTRUCTION DOCUMENTS.
3. INSPECTION OF EACH UNIT TO DETERMINE IF EACH IS MARKED BY AN ISIGNIA FURNISHED BY THE OHIO BBS.
4. INSPECT EACH UNIT TO DETERMINE IF THE FLOOR PLAN, EXTERIOR ELEVATIONS, & EXPOSED DETAILS IN GENERAL LOOK LIKE THE OHIO BBS APPROVED DOCUMENTS.

OBC SECTION 108.2

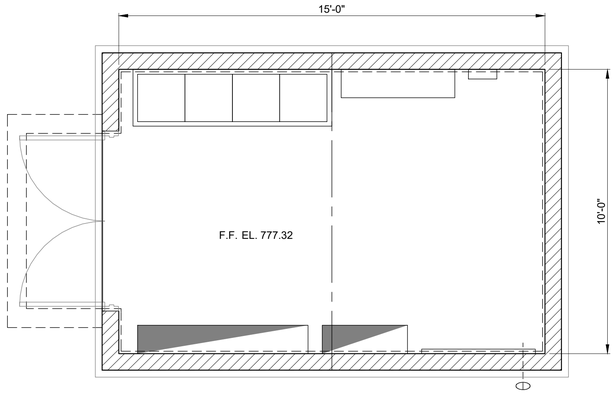
SITE INSTALLED WORK FOR U.I.'S IS WITHIN SCOPE OF AUTHORITY OF THE LOCAL A.H.J.

108.6.4 I.U.'S OBSERVATIONS OF NONCOMPLIANCE AT THE OHIO SITE OF INSTALLATION

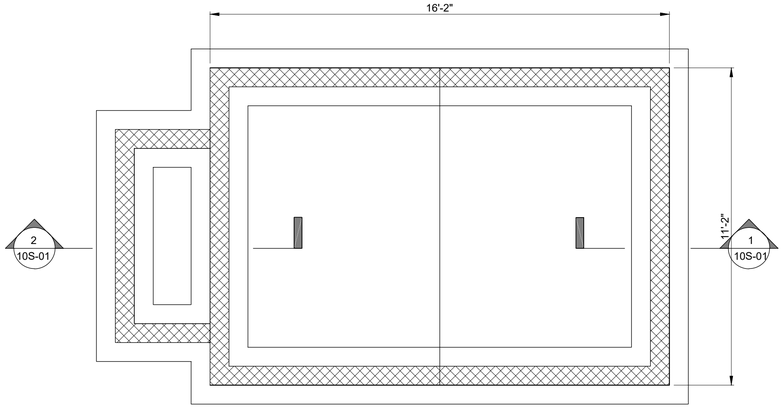
WHEN AN INSPECTOR FROM THE LOCAL A.H.J. FINDS THAT AN I.U. HAS BEEN CONSTRUCTED CONTRARY TO THE PLANS APPROVED BY THE OHIO BBS THE INSPECTOR SHALL REPORT THE NONCONFORMANCE TO THE LOCAL BUILDING OFFICIAL. THE LOCAL BUILDING OFFICIAL MUST NOTIFY THE OHIO BBS OF ALL VIOLATIONS. THE OHIO BBS OR ITS DESIGNEE & THE LOCAL BUILDING OFFICIAL MUST DETERMINE THE CORRECTIVE ACTION TO BE TAKEN BEFORE THE BUILDING IS APPROVED TO BE OCCUPIED.

OBC SECTION 113.5

I.U.'S APPROVED BY THE OHIO BBS MAY BE USED ANYWHERE IN OHIO SUBJECT TO THE CONDITIONS OF THEIR APPROVAL. THEY ARE NOT TO BE SUBJECTED TO REVIEW AND FURTHER INSPECTIONS. PERSONNEL WITH THE LOCAL A.H.J. ARE NOT TO REPORT NON-COMPLIANCE TO THE OWNERS AGENTS UNTIL INSTRUCTED TO DO SO BY THE OHIO BBS.



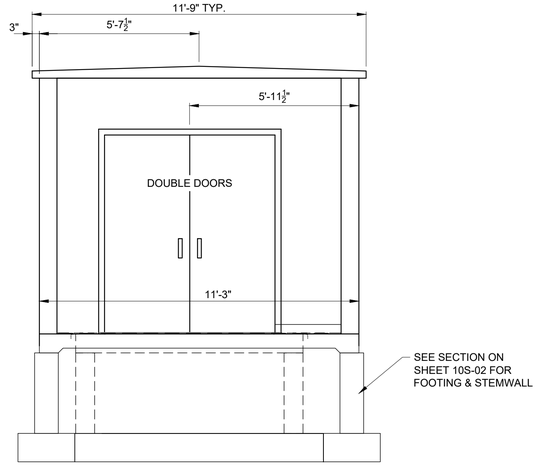
PLAN
SCALE: 3/8" = 1'-0"'



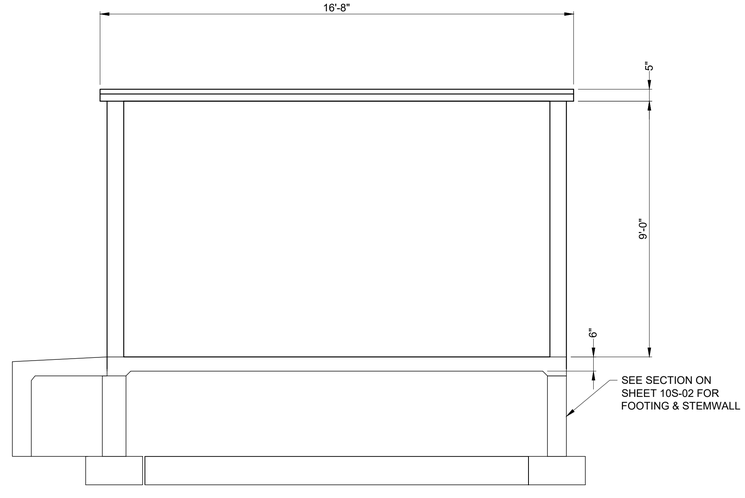
PLAN
SCALE: 3/8" = 1'-0"'

NOTES:

1. FOOTINGS DENOTED X'-X" x X'-X" @ (-X'-X") DENOTES WALL FOOTING SIZE AND DEPTH. DEPTH OF FOOTING IS TO THE TOP OF THE FOOTING REFERENCE FROM THE TOP OF THE SLAB ELEVATION 0'-0".
2. FLOOR CONSTRUCTION: 6" CONCRETE SLAB ON GRADE WITH #4 BARS @ 12" O.C., E.W. WITH 6" GRANULAR BASE WITH 15 MIL VAPOR RETARDER BELOW SLAB.



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



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

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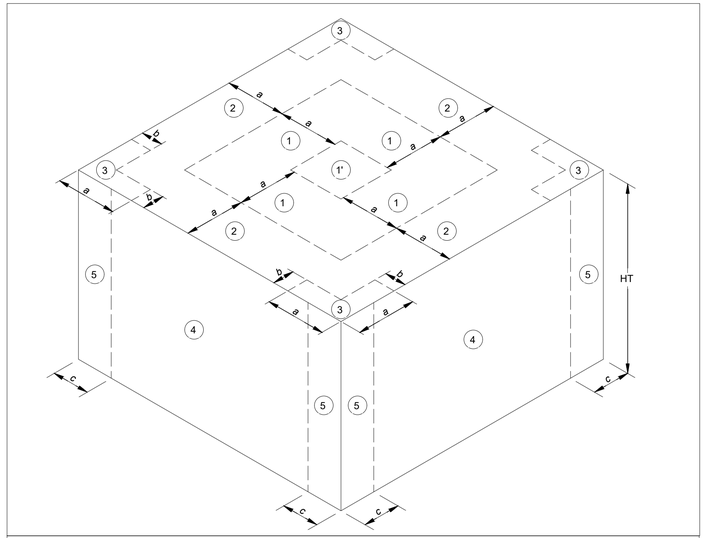
CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
NORTH OLMSTED, OHIO
CUYAHOGA COUNTY

PUMP STATION - 10 SERIES
ELECTRICAL BLDG PLAN & SECTIONS

PROJECT NO.
210888
DISCIPLINE
STRUCTURAL
SHEET NAME
10S-01
SHEET 28 OF 53



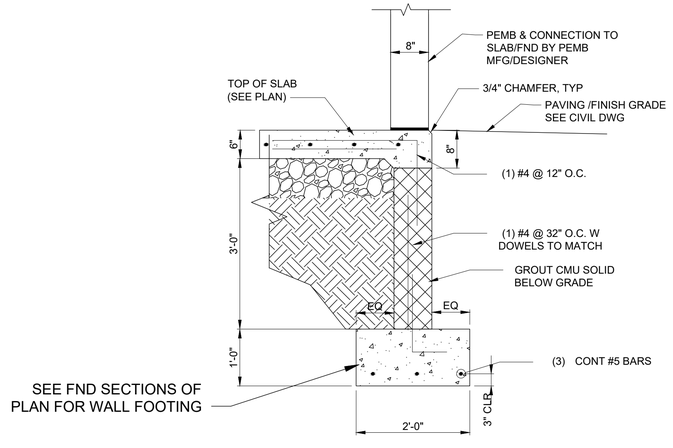
WIND PRESSURE (ASCE 7-16) FOR COMPONENTS & CLADDING

EFFECTIVE AREA OF OPENINGS, A (S.F.)	ZONE 1		ZONE 1'		ZONE 2		ZONE 3		ZONE 4		ZONE 5	
	PRESSURE (PSF)	SUCTION (PSF)	PRESSURE (PSF)	SUCTION (PSF)	PRESSURE (PSF)	SUCTION (PSF)	PRESSURE (PSF)	SUCTION (PSF)	PRESSURE (PSF)	SUCTION (PSF)	PRESSURE (PSF)	SUCTION (PSF)
A ≤ 10	16.00	-46.70	16.00	-26.80	16.00	-61.60	16.00	-84.00	26.80	-29.10	26.80	-35.80
10 < A ≤ 20	16.00	-43.60	16.00	-26.80	16.00	-57.70	16.00	-76.10	25.70	-27.90	25.70	-27.90
20 < A ≤ 50	16.00	-39.60	16.00	-26.80	16.00	-52.40	16.00	-65.60	24.10	-26.30	24.10	-26.30
50 < A ≤ 100	16.00	-36.50	16.00	-26.80	16.00	-48.50	16.00	-57.70	22.90	-25.10	22.90	-25.10

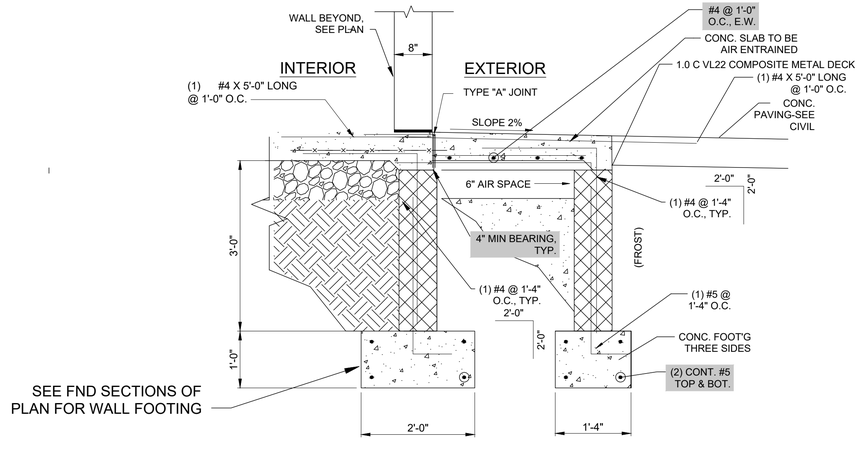
NOTES:
1. VALUES LISTED IN THE ABOVE TABLE ARE BASED UPON AN ENCLOSED BUILDING USING THE SPECIFIED WIND LOADING AS INDICATED IN THE 'DESIGN LOADS' SECTION OF THE GENERAL NOTES.
2. PRESSURE (POSITIVE) AND SUCTION (NEGATIVE) VALUES SIGNIFY LOADING ACTING TOWARDS AND AWAY FROM THE BUILDING SURFACES, RESPECTIVELY (FULL HEIGHT, UNLESS NOTED.)
3. VALUES LISTED IN THE ABOVE TABLE ARE ULTIMATE WIND PRESSURES. TO OBTAIN ALLOWABLE STRESS DESIGN WIND VALUES, MULTIPLY THE VALUES SHOWN IN THE ABOVE TABLE BY 0.6.
4. EFFECTIVE WIND AREAS, UNLESS NOTED OTHERWISE:
   "a" = 0.6h
   "b" = 0.2h
   "c" = 0.4h (3'-0" MIN)
5. SUCTION VALUES LISTED IN ROOF ZONES 1, 1', 2 & 3 INDICATE GROSS UPLIFT PRESSURES.

2024 OHIO BUILDING CODE

CODE COMPLIANCE			
X	NEW CONSTRUCTION		ADDITION
CONSTRUCTION TYPE	1B	RISK CATEGORY	II
OCCUPANT LOAD	2		
USE GROUP	U	DESCRIPTION	UTILITY BUILDING
PLUMBING: 2017 OPC	MECHANICAL: 2017 OMC	ELECTRIC: NEC 2017	ENERGY: ASHRAE 90.1-10
BUILDING HEIGHT	10'-4"	BUILDING AREA	192 SQR. FT.
REMARKS			
ACCESIBILITY COMPLIANCE	ICC / ANSI A117.1-2009		



SECTION 1 — N.T.S. — 10S-01



SECTION 2 — N.T.S. — 10S-01

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ISSUE DATE:	10/10/24
SCALE:	AS NOTED
DESIGNED BY:	ELE
DRAWN BY:	ELE
CHECKED BY:	TEV

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY — NORTH OLMSTED, OHIO

PUMP STATION - 10 SERIES

ELECTRICAL BLDG DETAILS

PROJECT NO.
210888

DISCIPLINE
STRUCTURAL

SHEET NAME
10S-02

SHEET 29 OF 53

GENERAL

1. THESE NOTES ARE GENERAL REQUIREMENTS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

2. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREINAFTER FOR USE ON THIS PROJECT.

3. IF MATERIALS, QUANTITIES, STRENGTHS OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES, THE CONTRACTOR SHALL CONTACT THE ARCHITECT/ENGINEER FOR CLARIFICATION.

4. TYPICAL DETAILS MAY NOT NECESSARILY BE CUT ON THE PLANS, BUT APPLY UNLESS NOTED OTHERWISE.

5. SHOP DRAWINGS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE ENGINEER/ARCHITECT.

6. SHOP DRAWINGS PREPARED BY THE CONTRACTORS, SUPPLIERS, ETC., WILL BE REVIEWED BY THE ENGINEER/ARCHITECT ONLY FOR CONFORMANCE WITH DESIGN CONCEPT. NO WORK AFFECTED BY THE SHOP DRAWINGS SHALL BE STARTED WITHOUT SUCH REVIEW.

7. THE GENERAL CONTRACTOR SHALL COORDINATE ALL REVISIONS, CORRECTIONS, AND COMMENTS INDICATED ON THE SHOP DRAWINGS BY THE ARCHITECT/ENGINEER.

8. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR AND SHALL CONFORM TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.

9. THE STRUCTURAL CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES.

10. ANY SUPPORT SERVICES PERFORMED BY THE ENGINEER DURING CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ENGINEER ARE SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. THEY DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.

11. ALL STRUCTURES ARE DESIGNED TO BE STABLE AND SELF-SUPPORTING AT THE COMPLETION OF CONSTRUCTION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE STABILITY AND SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS, AND THE ADEQUACY OF TEMPORARY OR INCOMPLETE CONNECTIONS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL IS NOT INDICATED ON THE DRAWINGS AND, IF PROVIDED, SHALL BE REMOVED, AS CONDITIONS PERMIT AND REMAIN THE PROPERTY OF THE CONTRACTOR.

12. ALL MATERIALS AND EQUIPMENT FURNISHED WILL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND EQUIPMENT BEING SUBSTITUTED.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

14. COORDINATE WITH THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR MISCELLANEOUS STEEL ITEMS, LINTELS, METAL PAN STAIRS, SIZE AND LOCATION OF FLOOR SLOPES, DEPRESSED AREAS, FINISH FILLS, CHAMFERS, GROOVES, RAILING SLEEVES, ROOF EDGES, INSERTS, ETC.

15. COORDINATE WITH CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS FOR PIPE SLEEVES, FLOOR DRAINS, ROOF DRAINS, INSERTS, HANGERS, TRENCHES, PITS, WALL AND SLAB OPENINGS, CONDUIT RUNS IN WALLS AND SLABS, SIZE AND LOCATION OF MACHINE OR EQUIPMENT SUPPORTS, BASE AND ANCHOR BOLTS, RAILING, ETC.

16. COORDINATE WITH SITE, ARCHITECTURAL, ELECTRICAL, MECHANICAL, AND CIVIL DRAWINGS FOR RETAINING WALLS, PADS, PAVEMENT AND OTHER SITE STRUCTURES.

17. EARTHWORK, FOUNDATION DRAINS, WATERPROOFING, PERIMETER INSULATION, MASONRY AND OTHER REQUIRED NON-STRUCTURAL ITEMS ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE WITH CIVIL/SITE AND ARCHITECTURAL DRAWINGS.

GOVERNING CODES AND STANDARDS:

OBC	- OHIO BUILDING CODE, 2017 EDITION
ASCE 7	- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, 2010 EDITION
ACI 318	- BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 2014 EDITION
ACI 301	- SPECIFICATIONS FOR STRUCTURAL CONCRETE, 2010 EDITION
ACI 305R	- HOT WEATHER CONCRETING, 2010 EDITION
ACI 306R	- COLD WEATHER CONCRETING, 2010 EDITION
ACI SP-66	- ACI DETAILING MANUAL, 2004
ACI 530	- BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, 2013 EDITION
ACI 530.1	- SPECIFICATIONS FOR MASONRY STRUCTURES, 2013 EDITION
ADM1	-ALUMINUM DESIGN MANUAL, 2015 EDITION

DESIGN LOADS:

1. LIVE LOADS: (REDUCIBLE PER GOVERNING CODE)	UNIFORM (PSF)	CONCENTRATED (LBS)
a. ROOF	30	300
b. FIRST FLOOR (STRUCTURAL SLAB)	250	2,000

2. SNOW LOADS:
   - a. GROUND SNOW LOAD, P_g — 20 PSF
   - b. FLAT ROOF SNOW LOAD, P_f — 30 PSF
   - c. SNOW EXPOSURE FACTOR, C_e — 0.9
   - d. SNOW LOAD IMPORTANCE FACTOR, I_s — 1.1
   - e. THERMAL FACTOR, C_t — 1.1

3. WIND LOADS
   - a. ULTIMATE DESIGN WIND SPEED (3-SECOND GUST), MPH — 116
   - b. NOMINAL DESIGN WIND SPEED (3-SECOND GUST), MPH — 90
   - c. RISK CATEGORY — III
   - d. WIND EXPOSURE — C
   - e. DESIGN WIND PRESSURE FOR COMPONENTS AND CLADDING SHALL BE COMPUTED PER GOVERNING BUILDING CODE USING EXPOSURE — C (SEE DIAGRAM ON SHEET SD-S-03)
   - f. INTERNAL PRESSURE COEFFICIENT (ENCLOSED) — ±0.18

4. EARTHQUAKE DESIGN DATA:
   - a. OCCUPANCY RISK CATEGORY — III
   - b. SEISMIC IMPORTANCE FACTOR, I_e — 1.25
   - c. MAPPED SPECTRAL RESPONSE ACCELERATIONS — $S_s = 0.133$, $S_1 = 0.05$
   - d. SITE CLASS — C
   - e. DESIGN SPECTRAL RESPONSE ACCELERATIONS — $S_{ds} = 0.114$, $S_{d1} = 0.050$
   - f. SEISMIC DESIGN CATEGORY — A
   - g. BASIC SEISMIC REINFORCING SYSTEM — ORDINARY REINFORCED CONCRETE SHEAR WALLS AND ORDINARY REINFORCED MASONRY WALLS
   - h. DESIGN BASE SHEAR — V = 0.029*W KIPS
   - i. SEISMIC RESPONSE COEFFICIENT — $C_s = 0.029$
   - j. RESPONSE MODIFICATION COEFFICIENT — R = 5 AND 2
   - k. ANALYSIS PROCEDURE USED — EQUIVALENT LATERAL FORCE

FOUNDATIONS:

1. FOUNDATION DESIGN IS BASED ON RECOMMENDATIONS IN THE GEOTECHNICAL REPORT NO. 0142-2390, PREPARED BY PROFESSIONAL SERVICE INDUSTRIES, INC., DATED OCTOBER 14, 2021. CONTRACTOR SHALL REVIEW GEOTECHNICAL REPORT PRIOR TO CONSTRUCTION.

2. FOUNDATIONS ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS OR PROPERLY COMPACTED ENGINEERED FILL WITH A ALLOWABLE BEARING CAPACITY OF 2000 PSF. (SEE GEOTECHNICAL REPORT)

3. TOPSOIL, FILL, AND/OR OTHER DELETERIOUS MATERIALS ENCOUNTERED DURING THE SITE PREPARATION MUST BE REMOVED AND REPLACED WITH SELECT ENGINEERED FILL COMPACTED TO 98% PER D-698 AND MEETING THE SPECIFIED DESIGN BEARING CAPACITY. (SEE GEOTECH REPORT FOR MORE INFORMATION).

4. OWNER SHALL EMPLOY A SOILS TESTING LABORATORY APPROVED BY THE ENGINEER TO PERFORM TESTING SERVICES AS REQUIRED BY THE SPECIFICATIONS AND TO INSPECT ALL BEARING SURFACES OF SLABS AND FOUNDATIONS.

5. NOTIFY ENGINEER IF FOUNDATION CONDITIONS ENCOUNTERED DIFFER FROM SOILS EXPLORATION INFORMATION MADE AVAILABLE TO THE CONTRACTOR.

6. REMOVE ALL EXISTING PAVEMENT, STRUCTURES AND FOUNDATIONS, AND TOPSOIL, UNSUITABLE FILLS AND ORGANIC SOILS ENCOUNTERED WITHIN AND BELOW THE AREA TO BE OCCUPIED BY SLABS ON GRADE AND FOUNDATIONS. THESE MATERIALS SHALL NOT BE USED FOR FILL WITHIN OR ADJACENT TO THE BUILDING.

7. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL PROVIDE TEMPORARY SHORING, BRACING, UNDERPINNING, AND OTHER MEASURES NECESSARY TO INSURE STABILITY AND SAFETY DURING ERECTION AND CONSTRUCTION AND TO PREVENT MOVEMENT OF SOIL THAT COULD DAMAGE EXISTING STRUCTURES, PAVEMENT, UTILITIES, ETC.

8. AFTER EXCAVATING FOR SLABS ON GRADE, THE EXPOSED NATURAL SOIL SHALL BE THOROUGHLY COMPACTED PRIOR TO PLACING THE GRANULAR MATERIAL.

9. CENTER FOOTINGS UNDER COLUMNS AND WALLS UNLESS NOTED.

10. THE DIFFERENCE IN ELEVATION OF THE BACKFILL ON THE INSIDE AND OUTSIDE OF WALLS SHALL NOT EXCEED TWO FEET UNTIL THE FIRST FLOOR STRUCTURE SUPPORTING THE WALLS IS IN PLACE, UNLESS THE WALL IS BRACED TO PREVENT MOVEMENT.

11. UNLESS NOTED OTHERWISE ON THE CIVIL/SITE DRAWINGS, PROVIDE A MINIMUM 2% GRADE WITHIN 10-FEET OF THE PERIMETER OF THE FOUNDATION SYSTEM TO ALLOW SURFACE WATER TO DRAIN AWAY.

12. DO NOT PLACE FILL OR CONCRETE ON FROZEN GROUND.

CAST-IN-PLACE CONCRETE AND REINFORCEMENT:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 318.

2. CONCRETE SHALL HAVE THE FOLLOWING 28-DAY COMPRESSIVE STRENGTHS:
   CAST-IN-PLACE CONCRETE: 4,500 PSI
   FILL CONCRETE: 1,500 PSI

3. USE 6% ±1.5%, ENTRAINED AIR PER ASTM C260 FOR ALL CONCRETE EXPOSED TO WEATHER.

4. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60. ALL REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706.

5. ADMIXTURES SHALL CONTAIN NO MORE THAN 0.05% CHLORIDE IONS BY WEIGHT OF CEMENT WHEN TESTED IN ACCORDANCE WITH AASHTO T260.

6. CONTRACTOR SHALL KEEP A COPY OF "FIELD REFERENCE MANUAL: STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE ACI 301 WITH SELECTED ACI REFERENCES", (ACI PUBLICATION SP-15) AT THE PROJECT FIELD OFFICE.

7. ALL REINFORCING DETAILS SHALL CONFORM TO "ACI DETAILING MANUAL, SP-66, 2004, UNLESS DETAILED OTHERWISE ON THE STRUCTURAL DRAWINGS.

8. SUBMIT FOR APPROVAL CONCRETE MIX DESIGN AND CERTIFICATION OF CONCRETE MATERIALS CONFORMING TO THE FOLLOWING EXPOSURE CATEGORIES:

   SLAB-ON-GRADE, FOOTINGS, TOPPING SLAB

CATEGORY	CLASS
FREEZE AND THAWING	F0
SULFATE	S1
IN CONTACT WITH WATER	W0
CORROSION PROTECTION	C1

9. THE CONTRACTOR SHALL EMPLOY A TESTING LABORATORY APPROVED BY THE ENGINEER/ARCHITECT TO PERFORM THE TESTING SPECIFIED PER PARAGRAPH 1.6.4 OF ACI 301. THE TESTING LABORATORY SHALL MEET THE REQUIREMENTS OF ASTM E329. TESTING SHALL BE MADE BY AN ACI CONCRETE FIELD TESTING TECHNICIAN GRADE 1 OR APPROVED EQUIVALENT. A TECHNICIAN GRADE 1 SHALL BE PRESENT DURING ALL CONCRETE PLACEMENT.

10. SUBMIT SHOP DRAWINGS FOR REVIEW. THESE DRAWINGS SHALL SHOW ALL CONCRETE MEMBER DIMENSIONS AND DOWELS FOR MASONRY WALLS.

11. PROVIDE DOWELS FROM FOUNDATIONS TO MATCH COLUMN, PIER AND WALL VERTICAL REINFORCING. WHERE SHOWN, PROVIDE DOWELS OUT OF WALLS TO MATCH SLAB REINFORCING.

12. PROVIDE CLASS "B" TENSION LAP SPLICE OR FULL MECHANICAL SPLICE (ACI 318, SECT. 12.14.3) FOR ALL VERTICAL STEEL IN WALLS, COLUMNS, AND SLABS. SEE LAP SCHEDULE ON SHEET SD-S-03 FOR LAP LENGTHS, U.N.O.

13. PROVIDE ADEQUATE BOLSTERS, HI-CHAIRS, SUPPORT BARS, ETC., TO MAINTAIN SPECIFIED CLEARANCES FOR THE ENTIRE LENGTH OF ALL REINFORCING BARS. SUPPORTS THAT BEAR DIRECTLY ON EXPOSED SURFACES SHALL BE STAINLESS STEEL.

14. ALL, SLABS, SHALL BE POURED MONOLITHICALLY, EXCEPT FOR THE REQUIRED CONSTRUCTION JOINTS.

15. PROVIDE PERIMETER INSULATION AGAINST EXTERIOR FOUNDATION WALLS AND UNDER THE SLAB ADJACENT TO THE EXTERIOR OF THE BUILDING AS SHOWN ON THE ARCHITECTURAL DRAWINGS.

16. PROVIDE 3/4 INCH CHAMFER ON ALL EXPOSED CORNERS OF SLABS, AND WALLS UNLESS OTHERWISE INDICATED ON THE ARCHITECTURAL DRAWINGS. MINIMUM CLEARANCES FOR REINFORCING STEEL SHALL BE MAINTAINED.

17. CURE ALL CONCRETE FOR A MINIMUM 7-DAYS. APPLY CURING COMPOUND AT THE MAXIMUM COVERAGE RATE OF 300 SQUARE FEET PER GALLON. USE PRODUCT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SEE SPECIFICATIONS.

18. ALL CONSTRUCTION JOINTS SHALL BE KEYED. PROVIDE KEYWAYS AT MEMBER CENTERLINE WITH A DEPTH OF 1-1/2 INCH AND HEIGHT EQUAL TO ONE-THIRD OF THE MEMBER'S DEPTH/THICKNESS.

19. CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS OF CONSTRUCTION JOINTS NOT INDICATED ON THE DRAWINGS FOR REVIEW BY THE ENGINEER/ARCHITECT.

20. ALL ALUMINUM IN CONTACT WITH CONCRETE OR DISSIMILAR METALS SHALL BE COATED WITH GRAY EPOXY PRIMER, APPROVED BY THE ENGINEER.

21. FORMWORK, FOR ALL CONCRETE THAT WILL BE EXPOSED IN THE COMPLETED STRUCTURE, SHALL BE CONSTRUCTED FROM A METAL OR SUITABLE SURFACE PLYWOOD THAT WILL PRODUCE AN ACCEPTABLY SMOOTH SURFACE. SEE SPECIFICATIONS.

22. PITCH CONCRETE SLABS TO FLOOR DRAINS SHOWN ON MECHANICAL, PROCESS, OR ARCHITECTURAL DRAWINGS.

23. ALL HORIZONTAL AND VERTICAL PIPE SLEEVE OPENINGS THROUGH BEAMS SHALL BE FORMED WITH STANDARD STEEL PIPE.

24. CONCRETE PROTECTION (CLEAR COVER) FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
   a. FOOTINGS:
      - 3 INCHES, BOTTOM AND UNFORMED EDGES
      - 2 INCHES, FORMED EDGES
      - 2 INCHES, EXPOSED TO EARTH, WATER OR WEATHER
      - 2 INCHES, BOTTOM, ON CONCRETE MUDMAT

   b. SLABS:
      - 3/4 INCHES TO REINFORCEMENT

28. ALL HOOKS SHALL BE ACI STANDARD HOOKS UNLESS DIMENSIONED OTHERWISE.

CONCRETE MASONRY:

1. MASONRY IS SUPPORTED IN THE COMPLETED CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SUPPORTING THE MASONRY DURING CONSTRUCTION IN CONFORMANCE WITH LOCAL, STATE AND NATIONAL LAWS AND AS REQUIRED.

2. MASONRY CONSTRUCTION AND MATERIAL SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6) EXCEPT AS MODIFIED IN THE SPECIFICATIONS AND BELOW. A COPY OF ACI 530.1/ASCE 6 SHALL BE ON THE JOB SITE AT ALL TIMES THAT MASONRY WORK IS BEING PERFORMED.

3. SUBMIT FOR REVIEW, PRIOR TO CONSTRUCTION, SHOP DRAWINGS SHOWING A PLAN AND ELEVATION VIEW OF ALL CMU WALL, AND A PLAN THAT SHOWS ALL DOWELS REQUIRED FOR VERTICAL CMU REINFORCING THAT EXTEND OUT OF CONCRETE. SHOW WALL THICKNESS, AND DIMENSION WALL LENGTH AND LOCATION. SHOWING TOP ELEVATIONS OF WALLS, BOND BEAMS AND GROUT POURS. SHOW LOCATION OF CONTROL JOINT LOCATIONS, SOLID UNITS, CELLS TO BE GROUT FILLED, OPENING, LINTEL, JOINT REINFORCEMENT, REINFORCING BAR AND EMBEDMENT.

4. SUBMIT FOR REVIEW, PRIOR TO CONSTRUCTION, DOCUMENTATION FOR THE BLOCK, MORTAR, GROUT, ADMIXTURES, REINFORCING, BAR POSITIONER AND OTHER ACCESSORIES PROPOSED FOR USE. SUBMIT A WRITTEN DESCRIPTION OF THE METHOD OF REINFORCEMENT AND GROUT, AND OF GROUT CONSOLIDATION.

5. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, NORMAL WEIGHT.

6. CONCRETE MASONRY UNITS WHICH CONTAIN VERTICAL REINFORCEMENT SHALL BE TWO CORE UNITS AND WITH CORES AND WEBS VERTICALLY ALIGNED.

7. MORTAR FOR CONCRETE MASONRY UNITS SHALL BE NON-AIR ENTRAINED PORTLAND CEMENT-LIME CONFORMING TO ASTM C270, TYPE S. CEMENT IN MORTAR SHALL BE LOW-ALKALI AND NON-STAINING. TYPE N MORTAR AND MASONRY CEMENT SHALL NOT BE USED FOR CMU CONSTRUCTION.

8. ADMIXTURES SHALL NOT BE USED IN THE MORTAR OR GROUT. ANTIFREEZE AND CALCIUM CHLORIDE SHALL NOT BE USED.

9. MINIMUM NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS SHALL BE:
   NET AREA COMPRESSIVE STRENGTH OF ASTM C90 CMU, f'_{cmu} = 2,000 PSI
   NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY, f'_m = 2,000 PSI

10. COARSE GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8" AND A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI.

11. ALL LOAD BEARING CONCRETE BLOCK WALLS SHALL BE REINFORCED VERTICALLY AS INDICATED ON PLAN, UNLESS NOTED OTHERWISE.

12. PROVIDE (1) VERTICAL BAR IN FIRST CORE AT EACH CORNER, END OF WALL, AND ADJACENT TO OPENINGS AND CONTROL JOINTS.

13. VERTICAL REINFORCEMENT SHALL EXTEND THROUGH BOND BEAMS AND TO WITHIN 2 INCHES OF THE TOP OF WALLS.

14. REINFORCING STEEL SPLICES SHALL BE LAPPED AS INDICATED IN MASONRY LAP SCHEDULE ON SHEET SD-S-03 BUT NO LESS THAN 12 INCHES, UNLESS NOTED OTHERWISE.

15. ANCHORAGE OF REINFORCING STEEL INTO CONCRETE SHALL BE AS INDICATED IN CONCRETE LAP SCHEDULE ON SHEET SD-S-03 BUT NO LESS THAN 12 INCHES, UNLESS NOTED OTHERWISE.

16. HORIZONTAL JOINT REINFORCING SHALL BE, UNLESS SHOWN OTHERWISE, STANDARD 9 GAGE, LADDER TYPE CONFORMING TO ASTM A951, SPACED VERTICALLY AT 8 INCH ON CENTERS ABOVE AND BELOW OPENINGS FOR THREE CONSECUTIVE COURSES AND AT 16 INCHES ON CENTERS ELSEWHERE. EXTEND REINFORCEMENT 2 FEET BEYOND EACH SIDE OF OPENINGS BUT DO NOT EXTEND THROUGH CONTROL JOINTS. PROVIDE FACTORY FABRICATED "T" AND "L" SHAPED PIECES AT INTERSECTIONS AND CORNERS.

17. JOINT REINFORCEMENT SHALL BE SPLICED BY LAPPING THE LONGITUDINAL WIRES AT LEAST 12 INCHES; THE CROSS-WIRES WITHIN THE LAP SHALL BE REMOVED SO THAT THE LONGITUDINAL WIRES ARE SIDE BY SIDE. ALTERNATELY WHERE JOINT REINFORCING IS NOT REQUIRED IN BETWEEN EACH COURSE, SPLICES MAY BE MADE BY ABUTTING THE ADJACENT SECTIONS OF JOINT REINFORCING AND CENTERING A 48 INCH LENGTH OF JOINT REINFORCING IN THE BED JOINT IMMEDIATELY ABOVE OR BELOW THE BUTT JOINT. SPLICE WITH "T" AND "L" SHAPED PIECES AT INTERSECTIONS AND CORNERS.

18. MECHANICALLY VIBRATE GROUT IN VERTICAL SPACES IMMEDIATELY AFTER POURING AND AGAIN MINUTES LATER.

19. PROVIDE CLEANOUTS IF GROUT LIFT EXCEEDS 4'-0" IN BLOCK WALLS. MAXIMUM GROUT LIFT SHALL BE 8'-0".

20. SEE VENEER ANCHORAGE NOTES FOR ATTACHMENT OF VENEER TO BLOCK WALLS.
WELD SHALL BE SUFFICIENT TO DEVELOP THE STRENGTH OF THE BAR.

PREFABRICATED WOOD TRUSSES:

1. FABRICATOR SHALL BE AN "APPROVED FABRICATOR" IN ACCORDANCE WITH IBC SECTION 1704.2.2, REGISTERED AND APPROVED BY THE LOCAL BUILDING DEPARTMENT.

2. DESIGN WOOD ROOF TRUSSES FOR THE FOLLOWING SUPERIMPOSED DESIGN LOADS. DEAD LOAD DOES NOT INCLUDE THE SELF-WEIGHT OF THE TRUSSES.

TOP CHORD:	DEAD LOAD	= 15 PSF
	LIVE LOAD	= 20 PSF
	WIND LOAD	= SEE WIND DIAGRAM ON SHEET #### (####).
BOTTOM CHORD:	DEAD LOAD	= 30 PSF
	LIVE LOAD	= 10 PSF

3. THE PROVIDED DESIGN LOADING SHALL BE APPLIED TO THE TRUSS IN ACCORDANCE WITH THE GOVERNING BUILDING CODE.

4. FOR WOOD TRUSSES DESIGNATED AS SPECIAL, SEE TRUSS LOADING DIAGRAMS FOR APPLICABLE DESIGN LOADS.

5. WOOD TRUSS MANUFACTURER SHALL SUPPLY SHOP DRAWINGS AND CALCULATIONS FOR THE WOOD TRUSSES INDICATING THE FOLLOWING INFORMATION FOR APPROVAL:
   b. TRUSS CONFIGURATION INCLUDING SPAN, PITCH AND SPACING OF PANEL POINTS.
   c. SPECIES, GRADE AND NOMINAL SIZE OF LUMBER USED.
   d. TRUSS CALCULATIONS SHALL INCLUDE, BUT NOT LIMITED TO DESIGN LOADS USED; PANEL POINT LOADS; TRUSS END REACTIONS; MEMBER AXIAL AND FLEXURAL FORCES, STRESSES AND COMBINED LOADING DESIGN; JOINT AND SPLICE CONNECTION DESIGN.
   e. JOINT AND SPLICE CONNECTION DESIGN SHALL INCLUDE TEST DATA VERIFYING LATERAL LOAD CAPACITY OF PLATES. METAL PLATES SHALL MEET THE REQUIREMENTS OF THE TRUSS PLATE INSTITUTE, ANSI/TPI 1, "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION."
   f. CALCULATIONS AND DRAWINGS SHALL BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.

6. DEFLECTION FOR WOOD TRUSSES SHALL BE LIMITED TO THE FOLLOWING UNLESS NOTED OTHERWISE:
   ROOF TRUSSES: VERTICAL DEFLECTION SHALL NOT EXCEED L/240 FOR 1.5 TIMES DEAD LOAD PLUS LIVE LOAD AND L/360 FOR LIVE LOAD. LIMIT MAXIMUM VERTICAL DEFLECTION TO 2".

   HORIZONTAL DEFLECTION SHALL NOT EXCEED 0.75 INCHES FOR LIVE LOAD AND 1.25 INCHES FOR TOTAL LOAD.

7. WOOD SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION OR THE WEST COAST LUMBER INSPECTION BUREAU.

8. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED GRADING AGENCY.

POST-INSTALLED FASTENERS:

1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS.

2. INSTALL BOLTS AND FASTENERS TO MISS REINFORCING.

3. PRIOR TO DRILLING FOR THE ANCHOR CONCRETE REINFORCING STEEL SHALL BE LOCATED WITH A MAGNETIC BAR LOCATOR.

4. FASTENERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND AS GIVEN BELOW. NOTIFY THE ENGINEER IF CONFLICTS EXIST BETWEEN THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND THE BELOW REQUIREMENTS.

5. FASTENERS SHALL BE INSTALLED AT NOT LESS THAN THE MANUFACTURER'S MINIMUM EDGE DISTANCES AND/OR SPACINGS INDICATED IN THE MANUFACTURER'S LITERATURE, UNLESS INDICATED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER OF RECORD.

6. DRILL HOLES USING ROTARY PERCUSSION DRILL WITH A DEPTH GAGE. DO NOT DRILL THROUGH FULL THICKNESS OF CONCRETE. CLEAN HOLES BY VIGOROUSLY BRUSHING AND THEN BLOW OUT LOOSE MATERIAL USING OIL-FREE COMPRESSED AIR. THE BRUSH SHALL HAVE THE STIFF NON-METALLIC BRISTLES OF TYPE AND DIAMETER RECOMMENDED BY THE ADHESIVE MANUFACTURER. IF CONCRETE IS DAMP BLOW DRY HOLE WITH OIL-FREE COMPRESSED AIR. CLEAN WITH WATER ONLY IF RECOMMENDED BY MANUFACTURER. ADHESIVE ANCHORS MAY NOT BE SET IF WATER IS SEEPING INTO HOLE; NOTIFY THE ENGINEER.

7. FOR EXPANSION ANCHORS: DRILL HOLE TO NOMINAL DIAMETER OF ANCHOR. IF METRIC ANCHORS ARE USED, METRIC BITS MUST BE USED. INSTALL ANCHOR AND TIGHTEN TO RECOMMENDED TORQUE.

8. EXPANSION BOLTS IN CONCRETE SHALL BE "KWIK BOLT 3" BY HILTI, "WEDGE-ALL" BY SIMPSON STRONG TIE OR APPROVED EQUAL.

9. ADHESIVE DOWELS AND ANCHORS IN CONCRETE SHALL BE OF THE TYPE SHOWN AND INSTALLED USING "HIT-HY 200" BY HILTI, "SET" BY SIMPSON STRONG TIE OR APPROVED EQUAL.

10. CONTRACTOR SHALL SUBMIT MANUFACTURERS LITERATURE FOR THE ANCHOR SYSTEM TO BE USED. THIS LITERATURE SHALL INCLUDE ANCHOR MATERIAL, STRENGTH DATA, EMBEDMENT LENGTH, DRILL BIT SIZE AND THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. FOR ADHESIVE ANCHORS INCLUDE ADHESIVE CHEMISTRY.

SPECIAL INSPECTIONS:

PER THE IBC SECTION 1704, SPECIAL INSPECTIONS ARE REQUIRED FOR THE FOLLOWING ITEMS:

1. CONCRETE:
   a. INSPECTION OF REINFORCING STEEL AND PLACEMENT. (PERIODIC)
   b. INSPECTION DURING WELDING OF REINFORCING STEEL:
      - VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706. (PERIODIC)
      - SHEAR REINFORCEMENT. (CONTINUOUS)
      - OTHER REINFORCING STEEL. (PERIODIC)

   c. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE. (CONTINUOUS)
   d. VERIFYING USE OF REQUIRED MIX DESIGN. (PERIODIC)
   e. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE. (CONTINUOUS)
   f. INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES. (CONTINUOUS)
   g. INSPECTION OF SPECIFIED CURING AND TEMPERATURE AND TECHNIQUES. (PERIODIC)
   h. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED. (PERIODIC)
   i. NO INSPECTION IS REQUIRED FOR SLABS ON GRADE.

2. MASONRY:
   a. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:
      - PROPORTIONS OF SITE-PREPARED MORTAR. (PERIODIC)
      - CONSTRUCTION OF MORTAR JOINTS. (PERIODIC)
      - LOCATION OF REINFORCEMENT, CONNECTORS AND ANCHORAGES. (PERIODIC)

   b. THE INSPECTION PROGRAM SHALL VERIFY:
      - SIZE AND LOCATION OF STRUCTURAL ELEMENTS. (PERIODIC)
      - TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION. (PERIODIC)
      - SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT. (PERIODIC)
      - WELDING OF REINFORCING BARS. (CONTINUOUS)
      - PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F). (PERIODIC)
      - APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE. (PERIODIC)

   c. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:
      - GROUT SPACE IS CLEAN. (PERIODIC)
      - PLACEMENT OF REINFORCEMENT AND CONNECTORS AND ANCHORAGES. (PERIODIC)
      - PROPORTIONS OF SITE-PREPARED GROUT. (PERIODIC)
      - CONSTRUCTION OF MORTAR JOINTS. (PERIODIC)

   d. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS. (CONTINUOUS)
   e. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED. (CONTINUOUS)
   f. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED. (PERIODIC)

3. GEOTECHNICAL:
   a. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY. (PERIODIC)
   b. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL. (PERIODIC)
   c. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS. (PERIODIC)
   d. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL. (CONTINUOUS)
   e. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PROPERLY PREPARED. (PERIODIC)

4. EXPANSION AND EPOXY ADHESIVE ANCHORS:
   a. RECORD PRODUCT DESCRIPTION INCLUDING THE ADHESIVE PRODUCT NAME AND EXPIRATION DATE, ADHESIVE MIXING PROCEDURE AND USE OF PROPER NOZZLES FOR ALL CARTRIDGES. (PERIODIC)
   b. VERIFY ANCHOR OR REINFORCEMENT BAR MATERIAL, GRADE, DIAMETER, LENGTH, AND CLEANLINESS. (PERIODIC)
   c. VERIFY DRILL BIT DIAMETER, INCLUDING VERIFICATION OF DIAMOND-CORE AND CARBIDE-TIPPED DRILL BIT COMPLIANCE WITH ANSI B212.15. (PERIODIC)
   d. VERIFY DEPTH AND CLEANLINESS OF HOLES. (PERIODIC)
   e. VERIFY CONCRETE COMPRESSIVE STRENGTH BY ASTM C42 METHODS. (PERIODIC)
   f. VERIFY PHYSICAL PROPERTIES OF THE CONCRETE MASONRY WALL CONSTRUCTION COMPONENTS. (PERIODIC)
   g. VERIFY SUBSTRATE TEMPERATURE AT TIME OF ANCHOR INSTALLATION. (PERIODIC)
   h. VERIFY ACTUAL GEL TIME WHEN INSTALLED ANCHORS ARE NOT DISTURBED. (PERIODIC)
   i. VERIFY THAT THE ANCHOR INSTALLATION AND LOCATION, INCLUDING SPACING AND EDGE DISTANCE, ARE IN COMPLIANCE WITH THE MANUFACTURER'S SPECIFICATIONS. (PERIODIC)

5. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
   a. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS TO THE APPROVED CONSTRUCTION DOCUMENTS.
   b. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN CHARGE.
   c. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.
   d. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
   e. PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL PROVIDE STATEMENT OF SPECIAL INSPECTIONS ACKNOWLEDGING THE REQUIREMENTS OF IBC SECTION 1710.

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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
PUMP STATION - 10 SERIES
STRUCTURAL GENERAL NOTES

PROJECT NO. 210888
DISCIPLINE STRUCTURAL
SHEET NAME 10S-03

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TABLE 1705.3 REQUIRED SPECIAL INSPECTIONS OF CONCRETE CONSTRUCTION

REQUIRED	TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD[a]	IBC REFERENCE
X	1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	-	X	ACI 318 CH. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
X	2. REINFORCING BAR WELDING:				
X	a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706;	-	X	AWS D1.4 ACI 318: 26.6.4	-
X	b. INSPECT SINGLE-PASS FILLET WELDS, MAZIMUM 5/16"; AND		X		
X	c. INSPECT ALL OTHER WELDS	X			
X	3. INSPECT ANCHORS CAST INTO CONCRETE.	-	X	ACI 318: 17.8.2	-
X	4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.[b]				
X	a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X		ACI 318: 17.8.2.4	-
X	b. MECHANICAL ANCHORS AND ASHESIVE ANCHORS NOT DEFINED IN 4.a.		X	ACI 318: 17.8.2	
X	5. VERIFY USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
X	6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C172 ASTM C31 ACI 318: 26.4, 26.12	1908.10
X	7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
X	8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	1908.9
X	9. INSPECT PRESTRESSED CONCRETE FOR:				
X	a. APPLICATION OF PRESTRESSING FORCES; AND	X	-	ACI 318: 2610	-
X	b. GROUTING OF BONDED PRESTRESSING TENDONS.	X	-		
X	10. INSPECT ERECTION OF PRESCAST CONCRETE MEMBERS.	-	X	ACI 318: CH. 26.8	-
X	11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X	ACI 318: 26.11.2	-
X	12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: CH. 26.11.2(b)	-

STRUCTURAL DRAWING ABBREVIATIONS

ADDL ADDITIONAL
ADJ ADJACENT
ALT ALTERNATE
& AND
ARCH ARCHITECT or ARCHITECTURAL
@ AT or SPACING

B/ BOTTOM OF
BL BUILDING LINE
BLDG BUILDING
BLKG BLOCKING
BM BEAM
BRDG BRIDGING
BRG BEARING
BTWN BETWEEN
BOT BOTTOM

CL CENTERLINE
CLR CLEAR
CTR CENTER
COL COLUMN
CONC CONCRETE
CONN CONNECTION
CONST CONSTRUCTION
CONT CONTINUOUS
CJ CONTROL/CONSTRUCTION JOINT
CMU CONCRETE MASONRY UNIT
CONT CONTINUOUS
CY CUBIC YARDS

DBL DOUBLE
DEG or ° DEGREE
DEMO DEMOLITION
DET DETAIL
DF DOUGLAS FIR LARCH
DIAG DIAGONAL
DIA or ø DIAMETER
DIM DIMENSION
DO DITTO
DN DOWN
DP DEEP
DWG DRAWING
DWL DOWEL

EA EACH
EF EACH FACE
EJ EXPANSION JOINT
EL ELEVATION
ELEC ELECTRICAL
EMBED EMBEDDED, EMBEDMENT
EQ EQUAL
EQUIP EQUIPMENT
ES EACH SIDE
EW EACH WAY
EX EXISTING
EXIST EXISTING
EXP EXPANSION
EXT EXTERIOR

FAB FABRICATE
FDN FOUNDATION
FIN FINISH
FLR FLOOR
FT FOOT, FEET
FTG FOOTING

GA GAGE
GALV GALVANIZED
GC GENERAL CONTRACTOR
GEN GENERAL
GLB GLUE LAMINATED BEAM
GR GRADE
GYP BD GYPSUM BOARD

HC HOLLOW CORE
HORIZ HORIZONTAL
HS HIGH STRENGTH
HT HEIGHT
HVY HEAVY

ID INSIDE DIAMETER
IF INSIDE FACE
IN INCH
INFO INFORMATION
INT INTERIOR

JST JOIST
JT JOINT

K KIPS
KSF KIPS PER SQUARE FOOT
KSI KIPS PER SQUARE INCH

L ANGLE
LBS POUNDS
LF LINEAL FEET
LG LONG
LL LIVE LOAD
LLV LONG LEG VERTICAL
LVL LEVEL
LOC LOCATION
LONG LONGITUDINAL
LSH LONG SIDE HORIZONTAL
LSV LONG SIDE VERTICAL

MANUF MANUFACTURER
MAS MASONRY
MAX MAXIMUM
MECH MECHANICAL
MFR MANUFACTURER
MIN MINIMUM
MISC MISCELLANEOUS

NO or # NUMBER
NOM NOMINAL
NTS NOT TO SCALE

OC ON CENTER
OD OUTSIDE DIAMETER
OF OUTSIDE FACE
O/O OUT TO OUT
OPNG OPENING
OPP OPPOSITE

PAR PARALLEL
PC PRECAST
PERP PERPENDICULAR
PL PLATE
PLYWD PLY WOOD
PREFAB PREFABRICATED
PSF POUNDS PER SQUARE FOOT
PSI POUNDS PER SQUARE INCH
PTR PRESSURE TREATED

RAD RADIUS
REF REFERENCE
REINF REINFORCEMENT, REINFORCING, REINFORCED
REQD REQUIRED
RM ROOM

SCHED SCHEDULE
SECT SECTION
SHT SHEET
SIM SIMILAR
SOG SLAB-ON-GRADE
SPA SPACING
SPEC(S) SPECIFICATION(S)
SPF SPRUCE PINE FIR
STD STANDARD
STIFF STIFFENER
STL STEEL
STR STRUCTURAL
STRUCT STRUCTURAL
SYP SOUTHERN YELLOW PINE

T TOP
T/ TOP OF
T&B TOP AND BOTTOM
THD THREAD
THK THICK
THRU THROUGH
TYP TYPICAL

UN or UNO UNLESS NOTED (OTHERWISE)

VERT VERTICAL

w/ WITH
w/o WITHOUT
WD WOOD
WT WEIGHT
WWF WELDED WIRE FABRIC

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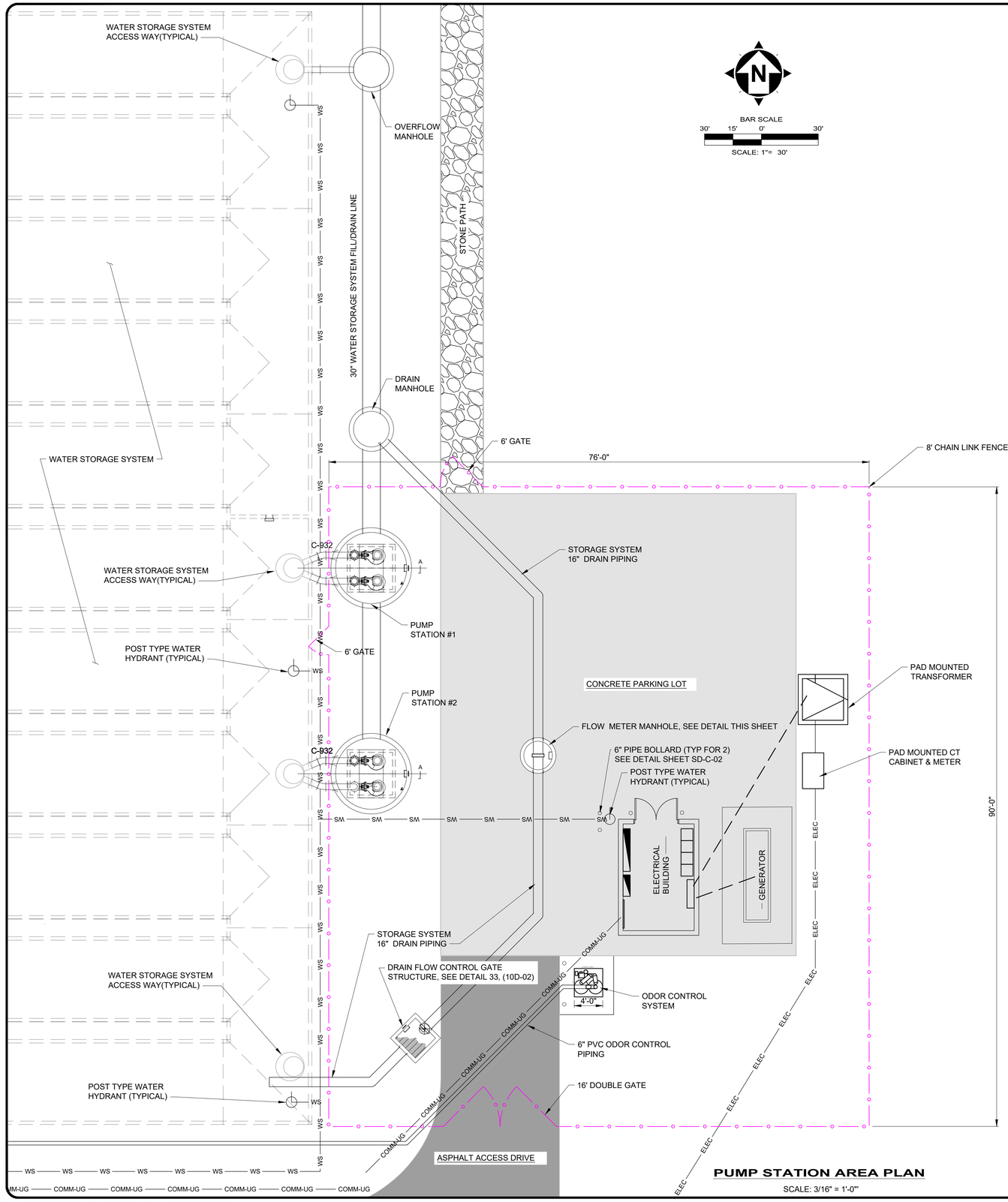
PUMP STATION - 10 SERIES
STRUCTURAL GENERAL NOTES

PROJECT NO.
210888

DISCIPLINE
STRUCTURAL

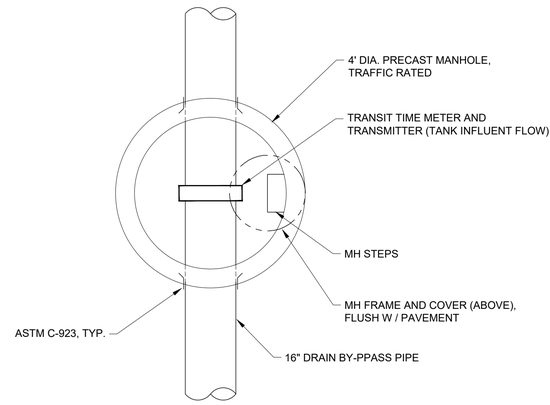
SHEET NAME
10S-04

SHEET 31 OF 53



PUMP STATION AREA PLAN

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



FLOW METER MANHOLE PLAN

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

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PUMP STATION - 10 SERIES
PUMP STATION AREA PLAN

PROJECT NO. 210888
DISCIPLINE PROCESS
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SHEET 32 OF 53

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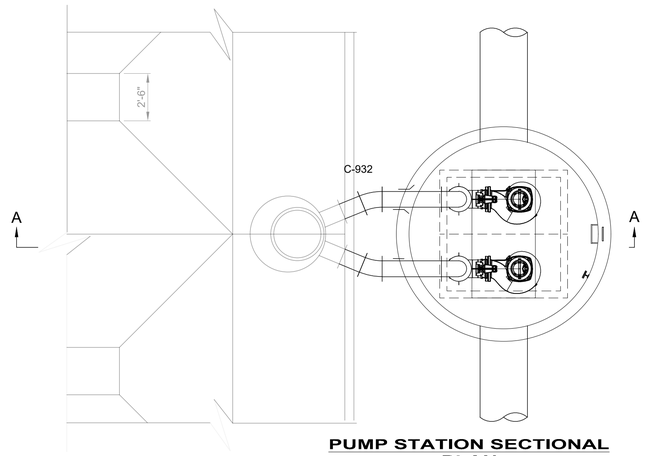
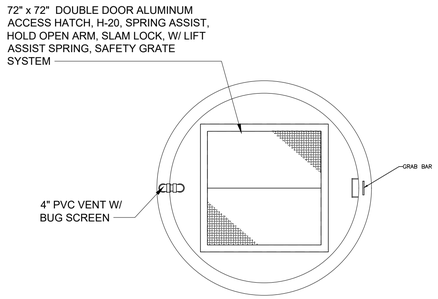


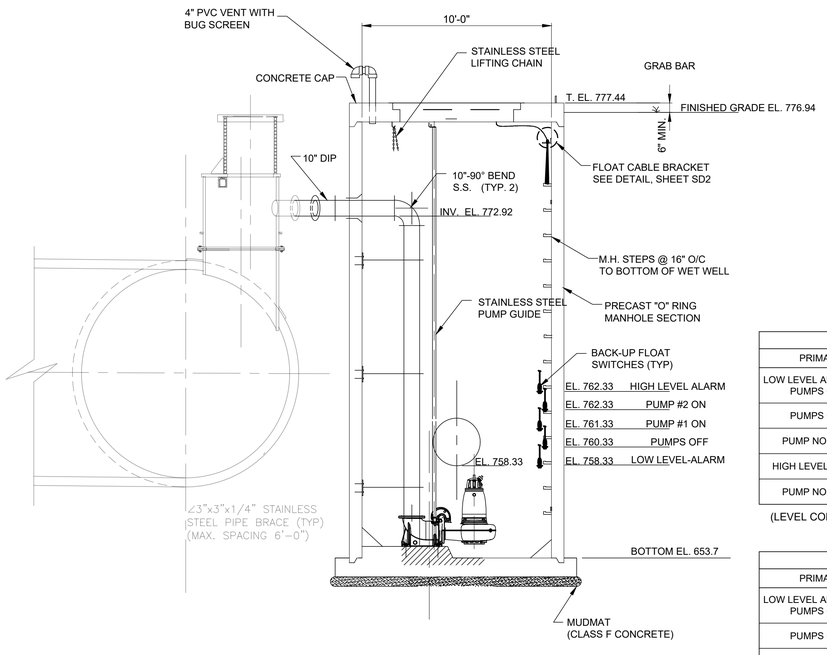
PUMP STATION SECTIONAL PLAN

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



PUMP STATION PLAN VIEW

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



SECTION A-A

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

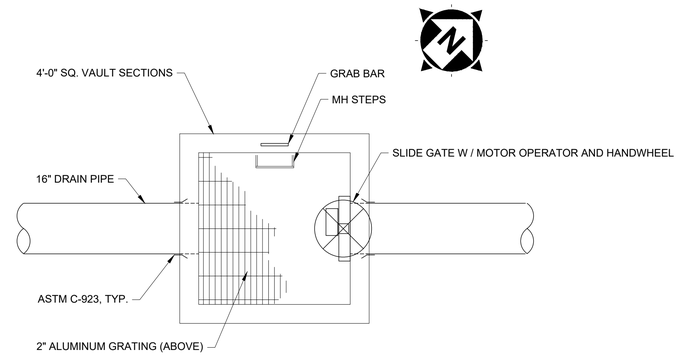
LEVEL CONTROL ELEVATIONS			
PRIMARY BUBBLER		SECONDARY (FLOATS)	
LOW LEVEL ALARM/ALL PUMPS OFF	758.30	LOW LEVEL ALARM/ALL PUMPS OFF	758.30
PUMPS OFF	760.30	PUMPS OFF	760.30
PUMP NO. 1 ON	761.30	PUMP NO. 1 ON	761.30
HIGH LEVEL ALARM	762.30	HIGH LEVEL ALARM	762.30
PUMP NO. 2 ON	762.30	PUMPS NO. 2 ON	762.30

(LEVEL CONTROL SYSTEMS TO BE ON SEPARATE CIRCUITS)

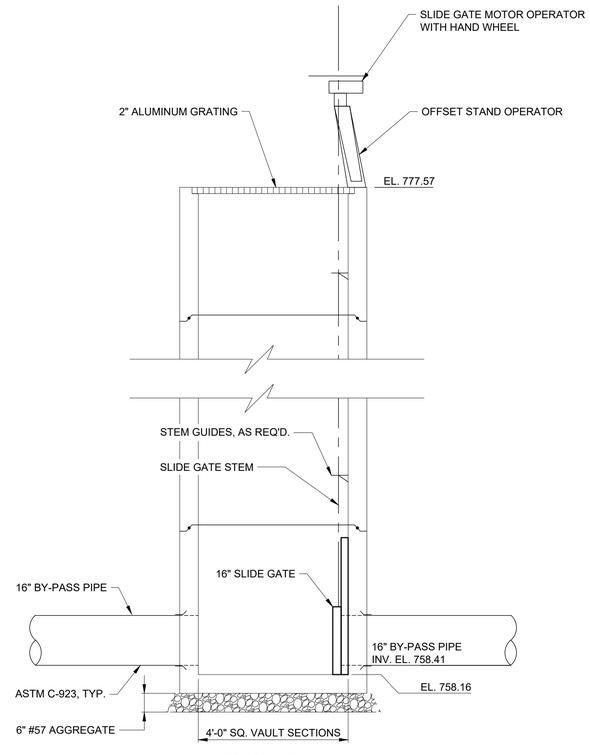
LEVEL CONTROL ELEVATIONS			
PRIMARY BUBBLER		SECONDARY (FLOATS)	
LOW LEVEL ALARM/ALL PUMPS OFF	758.36	LOW LEVEL ALARM/ALL PUMPS OFF	758.36
PUMPS OFF	760.36	PUMPS OFF	760.36
PUMP NO. 1 ON	761.36	PUMP NO. 1 ON	761.36
HIGH LEVEL ALARM	762.36	HIGH LEVEL ALARM	762.36
PUMP NO. 2 ON	762.36	PUMPS NO. 2 ON	762.36

(LEVEL CONTROL SYSTEMS TO BE ON SEPARATE CIRCUITS)

PUMP STATION



PLAN



SECTION

DRAIN CONTROL GATE STRUCTURE

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

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PUMP STATION - 10 SERIES

PUMP STATION PLAN AND SECTIONS

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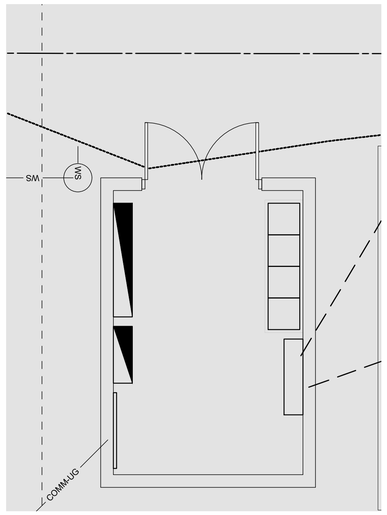
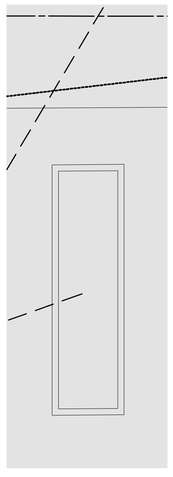
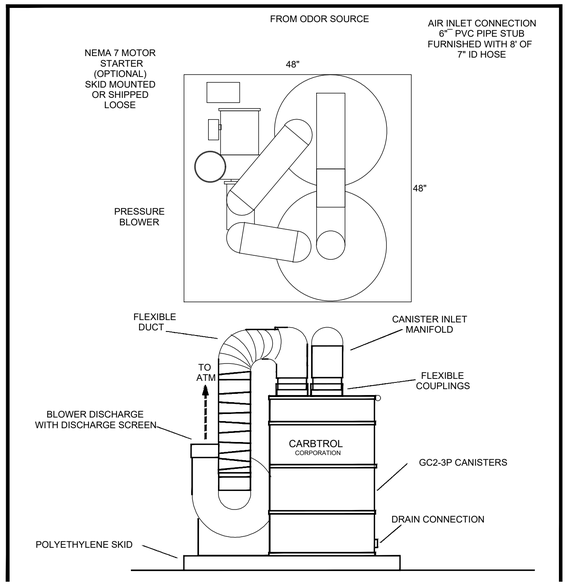


ELECTRICAL ROOM
SCALE: 1/4" = 1'-0"



GENERATOR
SCALE: 1/4" = 1'-0"



ODOR CONTROL SYSTEM
SCALE: 3/4" = 1'-0"

DRAIN CONNECTION

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PUMP STATION - 10 SERIES

PUMP STATION AREA STRUCTURES

PROJECT NO.
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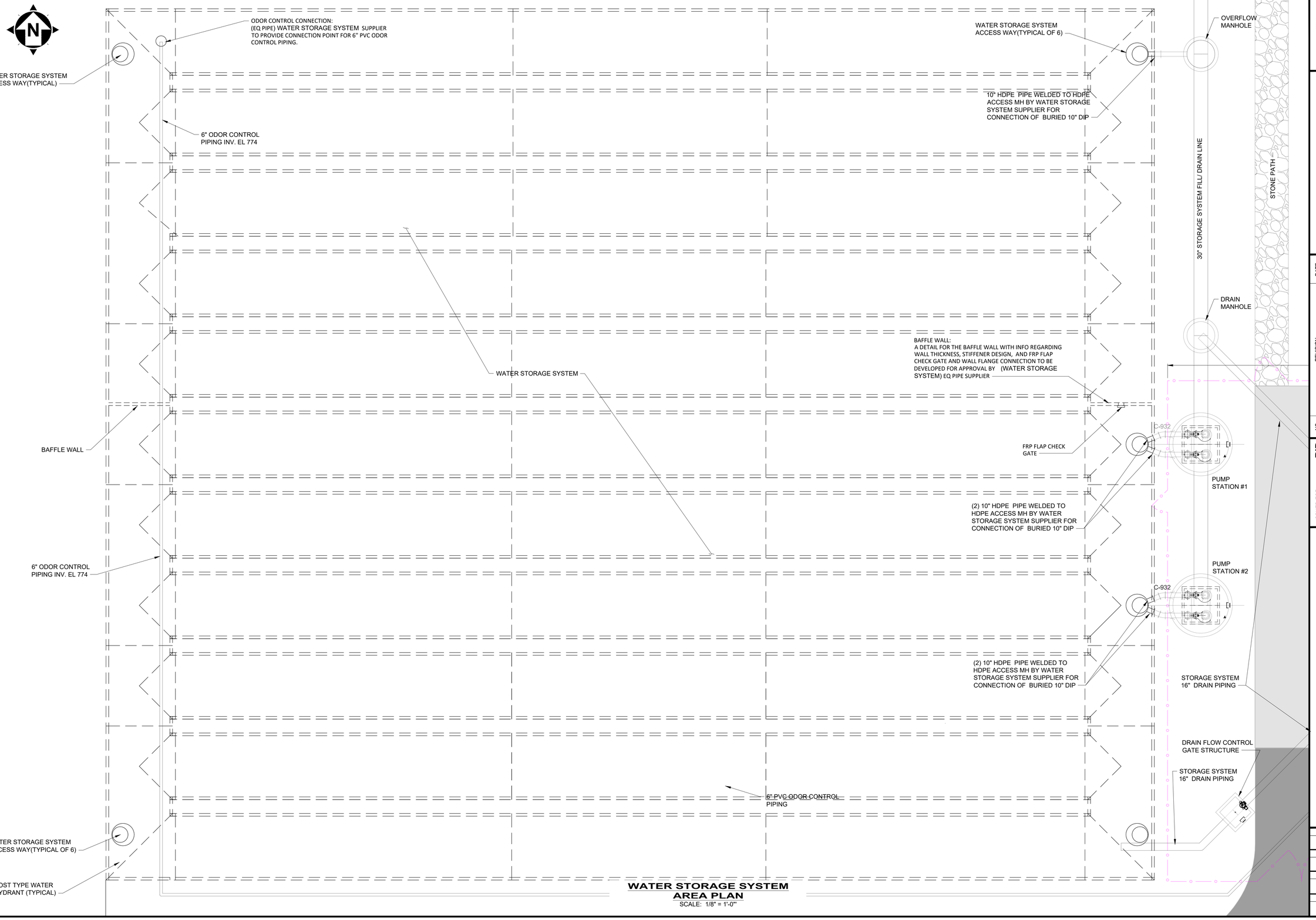

WATER STORAGE SYSTEM AREA PLAN

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

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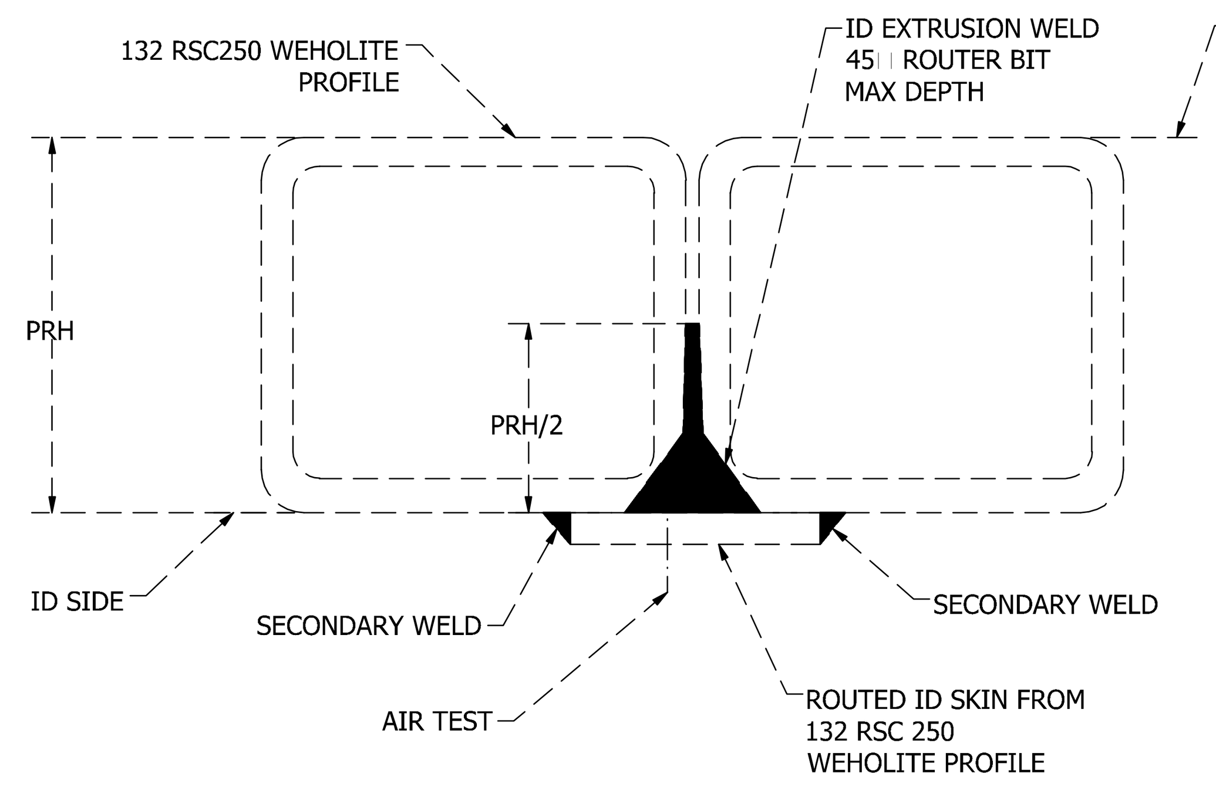
WATER STORAGE SYSTEM - 20 SERIES PLAN

PROJECT NO. 210888
DISCIPLINE PROCESS
SHEET NAME 20D-01
SHEET 35 OF 53



ID DUAL EXTRUSION WELD

ID WELD LEAK TEST PROCEDURE:

DRILL HOLE ON THE PLATE MADE OF ROUTED ID SKIN FROM 132 RSC250 WEHOLITE.
DRILL UNTIL THE BIT GOES THROUGH THE PLATE.
USE WRENCHES AND TAP FOR THE AIR LINE FITTING HOLE. ENSURE THREAD SHAVINGS ARE OUT OF THE TAPPED HOLE AS THIS CAN PLUG THE AIR WAY.
USE WRENCH TO INSTALL AIR LINE FITTING AND AIR REGULATOR VALVE. THE VALVE SHOULD BE IN THE CLOSED POSITION BEFORE ATTACHING THE AIR LINE.
ATTACH AIR LINE TO THE AIR REGULATOR.
BRING AIR PRESSURE UP TO 2 PSI FOR 5 MINS.
LOOK FOR LEAKS BY APPLYING A SOAPY SOLUTIONS TO THE ENTIRE ID AND OD AREA.
IF BUBBLES APPEAR, MARK THE LOCATION TO REPAIR AFTER TEST IS COMPLETE.

DRAWN BY: LL	4/12/2023	TITLE: 132 RSC250 ID WELD FOR LEAKING TEST
CHECKED BY: DP	4/12/2023	
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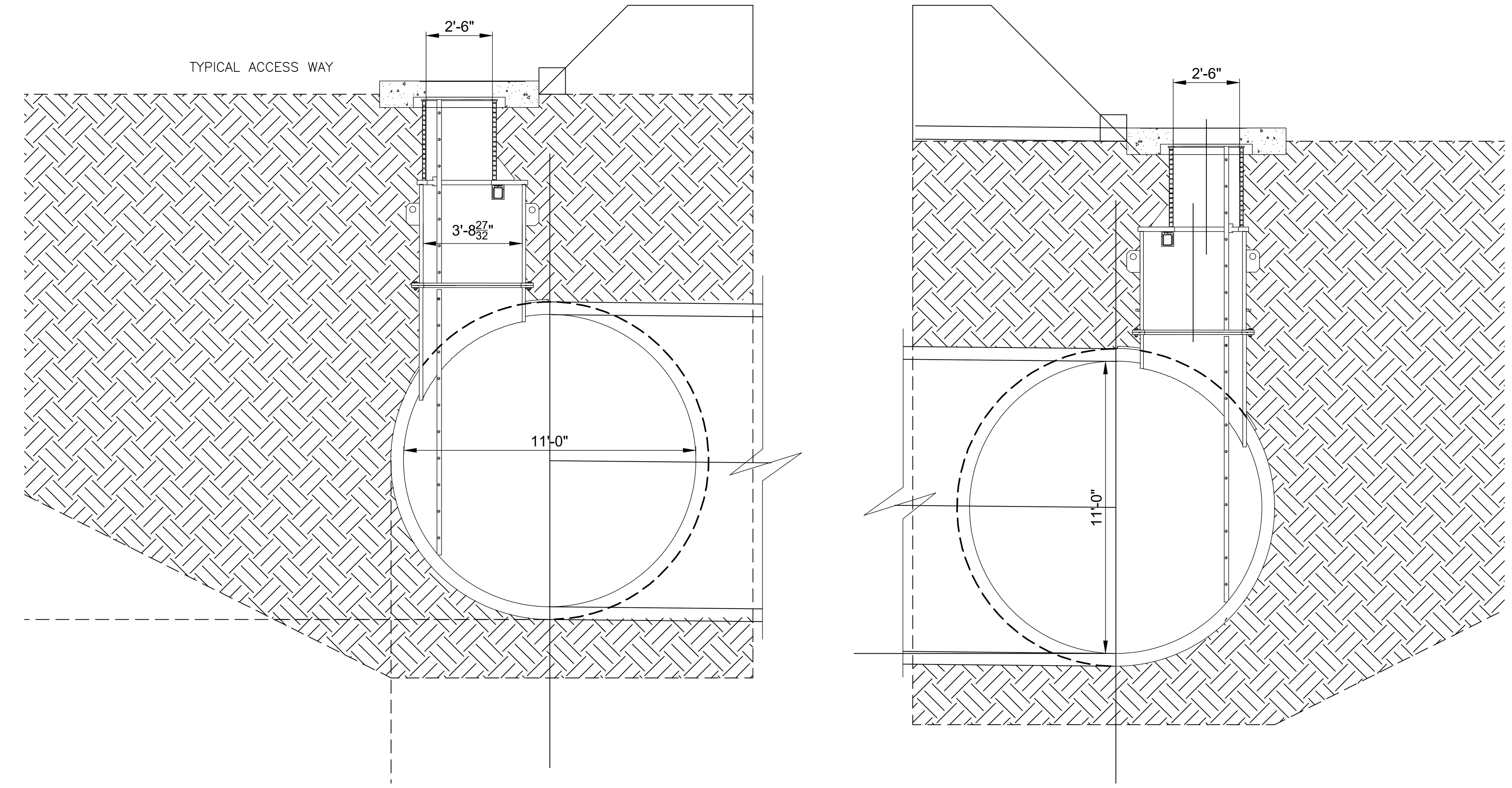


NOTES:

EXCAVATION

1. DURING TRENCH EXCAVATION, ENSURE THAT THE TRENCH SIDES SHALL BE STABLE UNDER ALL WORKING CONDITIONS. EXCAVATION PRACTICES SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OR PROVINCIAL AND LOCAL REGULATORS.
2. THE TRENCH WALLS SHALL BE SLOPED OR APPROPRIATE SUPPORTS PROVIDED TO COMPLY WITH APPLICABLE REGULATORY REQUIREMENTS FOR SAFETY.
3. THE WIDTH OF THE TRENCH SHALL BE SUFFICIENT TO ACCOMMODATE THE COMPACTION EQUIPMENT TO BE USED IN THE BACKFILL PIPE ZONE, BUT NOT LESS THAN THE LARGER OF THE PIPE OUTSIDE DIAMETER PLUS 16 IN OR 1.25 TIMES THE PIPE OUTSIDE DIAMETER PLUS 12 IN.
4. REFER TO ASTM D2321 FOR PROPER PLACEMENT AND MOVEMENT OF TRENCH BOXES. IMPROPER MOVEMENT OF TRENCH BOXES CAN AFFECT THE PERFORMANCE OF THE INSTALLATION.

GROUNDWATER

1. WHEN GROUNDWATER IS PRESENT IN THE WORK AREA, DEWATER TO MAINTAIN THE STABILITY OF THE IN-SITU AND IMPORTED MATERIALS. MAINTAIN THE GROUND WATER BELOW THE PIPE (OR OTHER FABRICATION) BELOW THE BEDDING AND FOUNDATION MATERIALS. USE, AS APPROPRIATE, SUMP PUMPS, WELL POINTS, DEEP WELLS, GEO-FABRICS, PERFORATED UNDER-DRAINS, OR STONE BLANKETS OF SUFFICIENT THICKNESS TO REMOVE AND CONTROL WATER IN THE TRENCH.
2. WHEN EXCAVATING WHILE DEPRESSING GROUND WATER, ENSURE THE GROUND WATER IS BELOW THE BOTTOM OF CUT AT ALL TIMES TO PREVENT WASHOUT FROM BEHIND SHEETING OR SLOUGHING OF EXPOSED TRENCH WALLS.
3. THE PROJECT SITE SHALL BE EVALUATED BY THE ENGINEER-OF-RECORD (EOR) FOR THE POSSIBILITY THAT THE PIPE OR OTHER FABRICATED ASSEMBLIES MIGHT 'FLOAT' WHEN FULLY OR PARTIALLY EMPTY DUE TO A HIGH WATER TABLE.
4. INFRA RECOMMENDS THAT DEWATERING OF EXCAVATION LIMITS BE MAINTAINED THROUGHOUT INSTALLATION UNTIL FINISHED GRADE IS ACHIEVED.

FOUNDATION AND BEDDING

1. THE EOR IS RESPONSIBLE TO ASSESS THE SUITABILITY OF THE EXISTING SOILS AND TO RECOMMEND THE USE OF IMPORTED FOUNDATION MATERIALS WHERE APPROPRIATE.
2. EXCAVATION FROM MINIMUM 6 INCHES BELOW THE UNIT SHOULD BE FILLED WITH ACCEPTABLE BEDDING MATERIAL AND COMPACTED TO 90% STANDARD PROCTOR DENSITY.
3. THE FOUNDATION MUST SUPPORT THE BEDDING, PIPE, EMBEDMENT, BACKFILL, AND ANY LIVE LOADS.

INITIAL BACKFILL AND COMPACTION

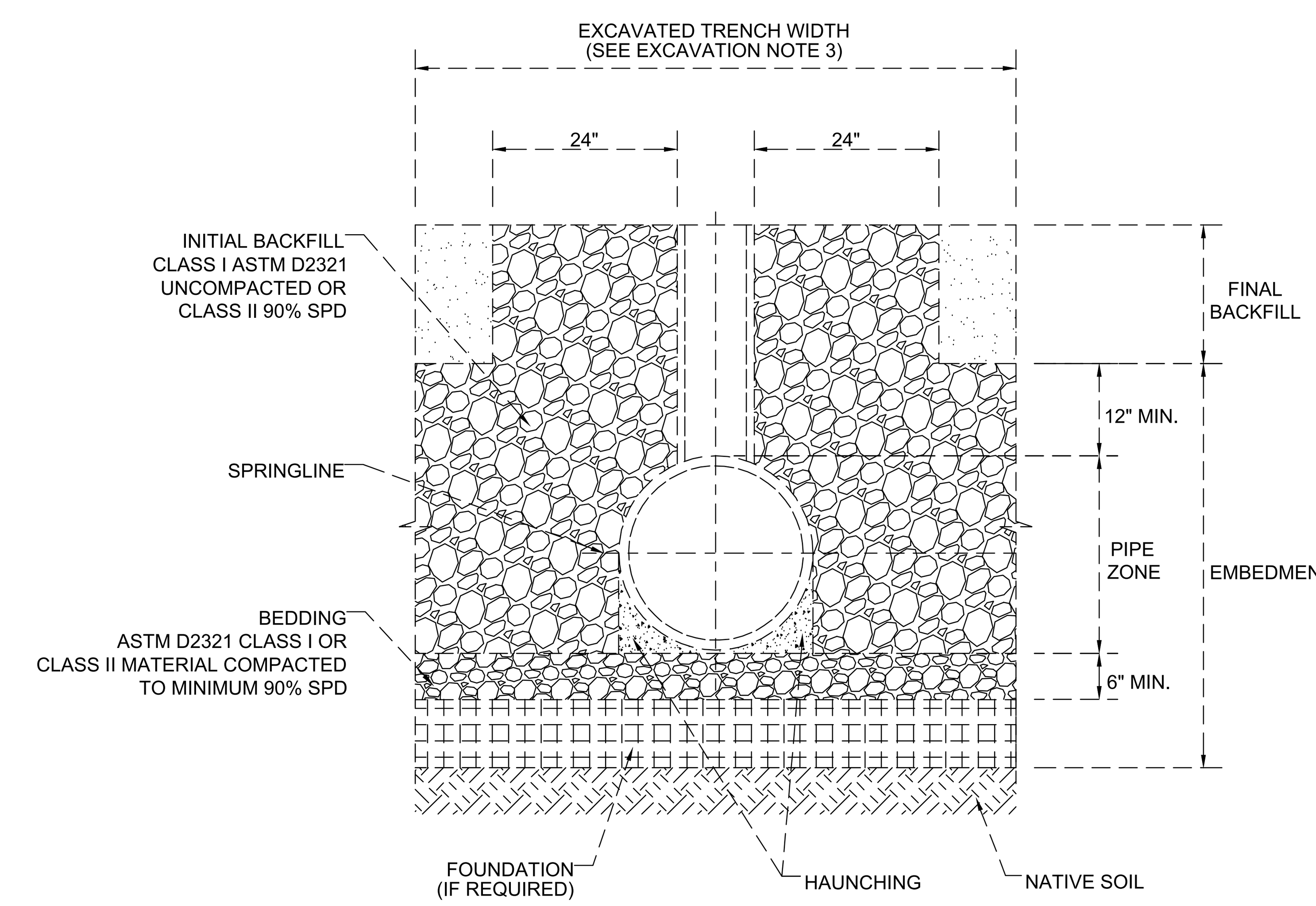
1. DO NOT PROCEED WITH BACKFILL AND COMPACTION UNTIL ANY CONCRETE USED AS PART OF AN ANTI-FLOTATION MEASURE HAS SET TO A COMPRESSIVE STRENGTH OF 2,000 PSI OR AS SPECIFIED BY THE EOR.
2. BEFORE BACKFILLING, CHECK THAT ALL REQUIRED CONNECTION PIPING AND SERVICES ARE INSTALLED AND PROPERLY SUPPORTED / PROTECTED DURING THE BACKFILL OPERATION.
3. CLASS I ASTM D2321 UNCOMPACTED OR CLASS II 90% SPD.
4. BACKFILL SHALL BE PLACE EVENLY ON BOTH SIDES OF THE PIPE OR OTHER FABRICATED ASSEMBLY IN LOOSE LIFTS OF 6 TO 12 INCHES AND COMPACTED.
5. THE INITIAL BACKFILL SHOULD EXTEND A MINIMUM 12 INCHES ABOVE TOP OF THE PIPE.

FINAL BACKFILL

1. SELECTION, PLACEMENT AND COMPACTION OF FINAL BACKFILL SHOULD BE INDICATED IN THE CONTRACT DOCUMENTS. REQUIREMENTS MAY VARY SIGNIFICANTLY DEPENDING ON TERRAIN, SURFACE USE, ETC.

NATIVE (IN-SITU) SOIL

1. NATIVE SOIL IN WHICH WEHOLITE PIPE IS INSTALLED NEED TO BE AS STRONG AND STIFF AS THE PIPE EMBEDMENT MATERIALS, IT SHOULD PROVIDE ADEQUATE SUPPORT AND STABLE CONTAINMENT OF EMBEDMENT MATERIAL SO THAT DENSITY OF THE EMBEDMENT MATERIAL DOES NOT DIMINISH. IF NATIVE SOIL CAN MIGRATE INTO THE BACKFILL, THE EOR SHOULD CONSIDER THE USE OF GEOTEXTILE FABRICS.



BACKFILL SECTION

STATE OF OHIO
THOMAS E. VOLDRICH
47843
REGISTERED
PROFESSIONAL ENGINEER

consultants
engineers • architects • planners
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NO	REVISION	DATE

ISSUED FOR:	BID
ISSUE DATE:	10/10/24
SCALE:	AS NOTED
DESIGNED BY:	ELE
DRAWN BY:	ELE
CHECKED BY:	TEV

CITY OF NORTH OLMSTED

SOUTH INTERCEPTOR
EQUALIZATION FACILITY

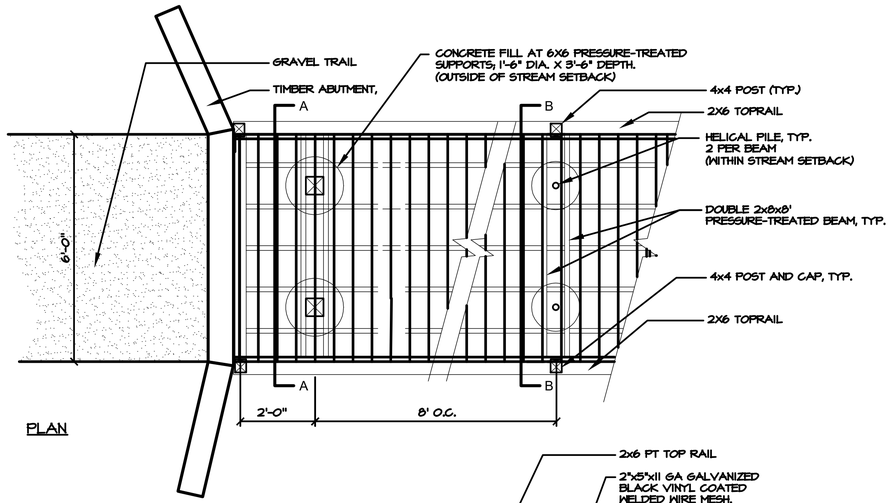
CUYAHOGA COUNTY — NORTH OLMSTED, OHIO

WATER STORAGE SYSTEM - 20 SERIES

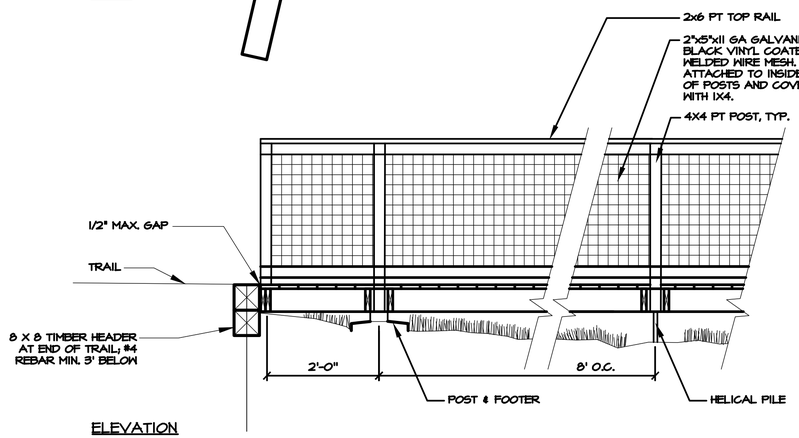
INSTALLATION DETAILS

PROJECT NO.
210888
DISCIPLINE
PROCESS
SHEET NAME
20D-02

SHEET	OF
36	53

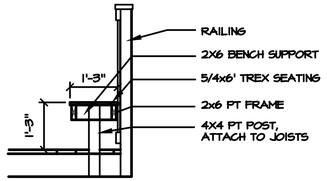


PLAN

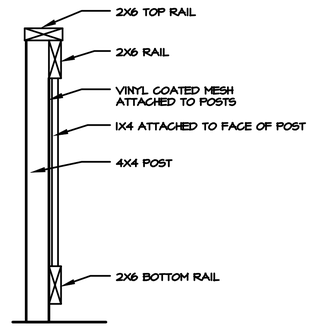


ELEVATION

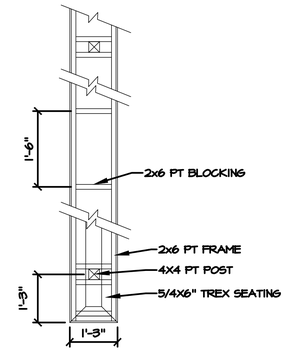
NOTES:
1. DECKS AT 3' AND HIGHER REQUIRE DIAGONAL BRACING.
2. MATERIAL TO BE A: DECKING - TREX TRANSCEND , COLOR -"TREE HOUSE".
   B: STRUCTURAL - PRESSURE TREATED SOUTHERN YELLOW PINE.
3. DRAWINGS SHOWN FOR DESIGN INTENT. CONTRACTOR TO DESIGN-BUILD/ENGINEER.
4. PROVIDE SHOP DRAWINGS FOR REVIEW BY LANDSCAPE ARCHITECT.



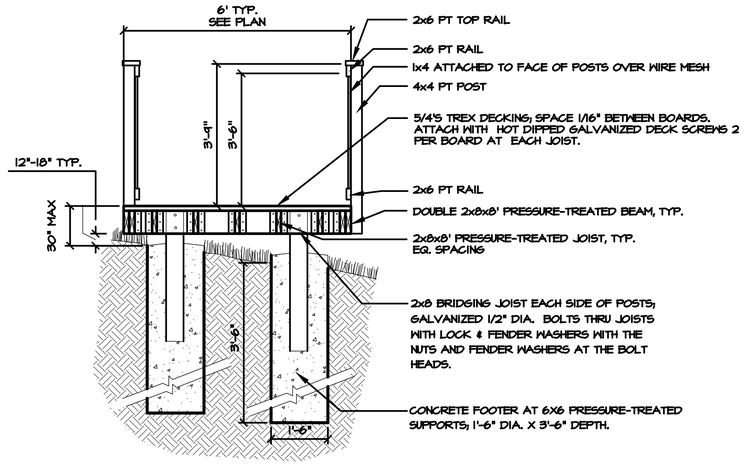
BENCH SECTION



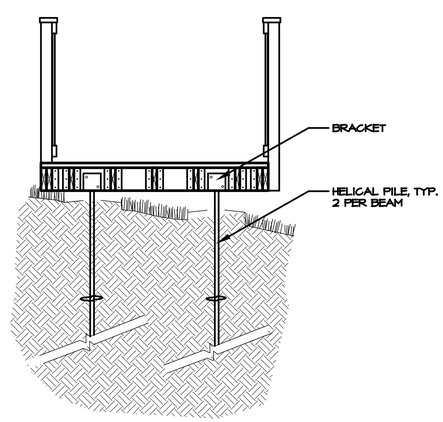
POST SECTION
1"=1'-0"



BENCH PLAN



SECTION A - CONCRETE FOOTERS - USE OUTSIDE STREAM SETBACK



SECTION B - HELICAL PILES - USE INSIDE STREAM SETBACK

1 SD8 TREX BOARDWALK / BRIDGES

1/2"=1'-0"

STATE OF OHIO
THOMAS E. VOLDRICH 47843
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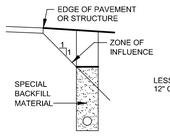
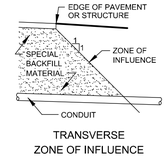
CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

STANDARD DETAILS - SD SERIES
STANDARD DETAILS

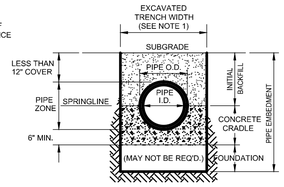
PROJECT NO.
210888
DISCIPLINE
CIVIL
SHEET NAME
SD-C-01
SHEET 37 OF 67



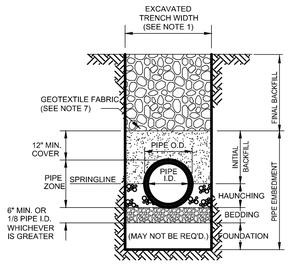
PARALLEL
ZONE OF INFLUENCE



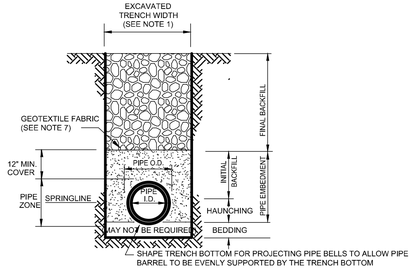
TRANSVERSE
ZONE OF INFLUENCE



CLASS `A` PIPE EMBEDMENT



CLASS `B` PIPE EMBEDMENT



CLASS `C` PIPE EMBEDMENT

NOTES:

1. MAXIMUM EXCAVATED TRENCH WIDTH: THE MAXIMUM EXCAVATED TRENCH WIDTH FROM THE BOTTOM OF THE TRENCH TO 12" OVER THE TOP OF THE PIPE (WITHIN PIPE EMBEDMENT) SHALL BE O.D. + 24" FOR ALL PIPES UP TO AND INCLUDING 24" I.D. + 30" FOR PIPE FROM 24" I.D. TO 54" I.D. AND O.D. + 48" FOR PIPES SIZES 60" I.D. AND OVER.

2. FOUNDATION: WHERE AN UNSTABLE TRENCH BOTTOM CONDITION IS ENCOUNTERED, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH MATERIAL AS DIRECTED BY THE ENGINEER.

3. PIPE EMBEDMENT:
   CLASS A: CLASS A PIPE EMBEDMENT SHALL BE USED FOR ALL PIPING UNDER PAVEMENT OR STRUCTURES WITH LESS THAN 12 INCHES OF PIPE COVER TO THE SUBGRADE. THE CONCRETE CRADLE SHALL BE IN ACCORDANCE WITH ODOT ITEM 499, CLASS "C". THE INITIAL BACKFILL SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT.

   CLASS B: CLASS B PIPE EMBEDMENT SHALL BE USED FOR ALL PIPING UNLESS OTHERWISE NOTED ON THE PLANS OR AUTHORIZED BY THE ENGINEER. THE BEDDING AND HAUNCHING SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT. IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE, THE INITIAL BACKFILL SHALL BE AASHTO NO. 57 OR NO. 67 STONE GRANULAR PIPE EMBEDMENT. IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE, THE INITIAL BACKFILL SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER FOR ONLY REINFORCED CONCRETE PIPE AND DUCTILE IRON PIPE. THE INITIAL BACKFILL FOR ALL OTHER PIPES SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT.

   CLASS C: CLASS C PIPE EMBEDMENT SHALL ONLY BE USED FOR DUCTILE IRON WATER MAIN, DUCTILE IRON FORCE MAINS OR AS AUTHORIZED BY THE ENGINEER. THE PIPE EMBEDMENT SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT IN ALL AREAS UNDER PAVEMENT. STRUCTURES OR WITHIN THE ZONE OF INFLUENCE. THE PIPE EMBEDMENT SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE. WHERE ROCK OR SHALE IS ENCOUNTERED, A MINIMUM 6-INCHES OF AASHTO NO. 57 OR NO. 67 GRANULAR PIPE BEDDING OR SAND BEDDING SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

4. FINAL BACKFILL: IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE THE FINAL BACKFILL SHALL BE SPECIAL BACKFILL MATERIAL. IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE, THE FINAL BACKFILL SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER.

5. SPECIFICATIONS: ALL TRENCHING, PIPE EMBEDMENT AND BACKFILL MATERIALS SHALL BE IN ACCORDANCE WITH SPECIFICATION 02300CT - EARTHWORK.

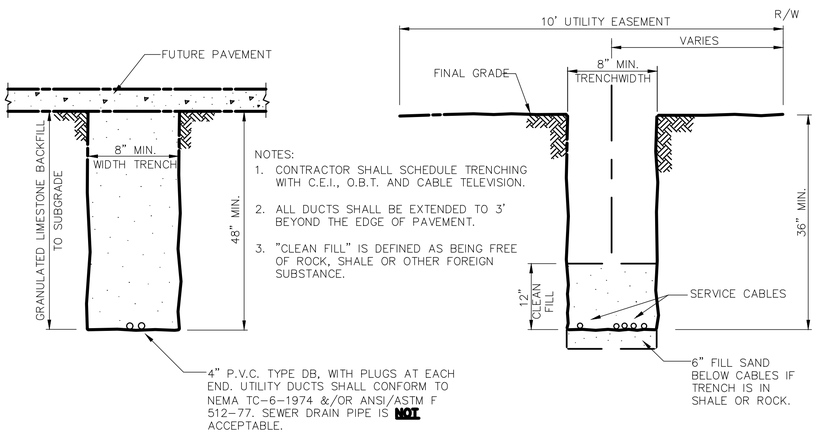
6. CLAY TRENCH DAMS: CLAY TRENCH DAMS SHALL BE REQUIRED AS SHOWN ON PLANS OR WHEN AND WHERE NECESSARY AS DIRECTED BY THE ENGINEER.

7. GEOTEXTILE FABRIC: INSTALL A GEOTEXTILE FABRIC IN ACCORDANCE WITH ODOT 712.09, TYPE A, AFTER ALL INITIAL BACKFILL CONSISTING OF AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT.

8. DETECTOR TAPE: IF REQUIRED IN THE SPECIFICATIONS, INSTALL DETECTABLE WARNING TAPE ABOVE UTILITIES, 12" BELOW FINISHED GRADE, EXCEPT 6 INCHES BELOW SUBGRADE UNDER PAVEMENT AND SLABS.

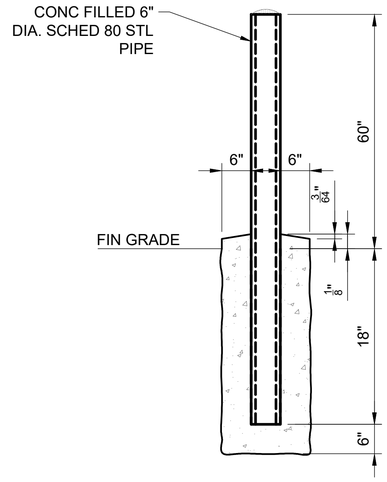
TRENCHING, EMBEDMENT AND BACKFILL DETAIL

6/04 NO SCALE SD-1-1



TRENCH DETAILS FOR UTILITIES

1/89 SD-1-4



PIPE BOLLARD

SCALE: NTS

STATE OF OHIO
THOMAS E. VOLDRICH
47843
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ISSUED FOR:	90%
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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

STANDARD DETAILS - SD SERIES

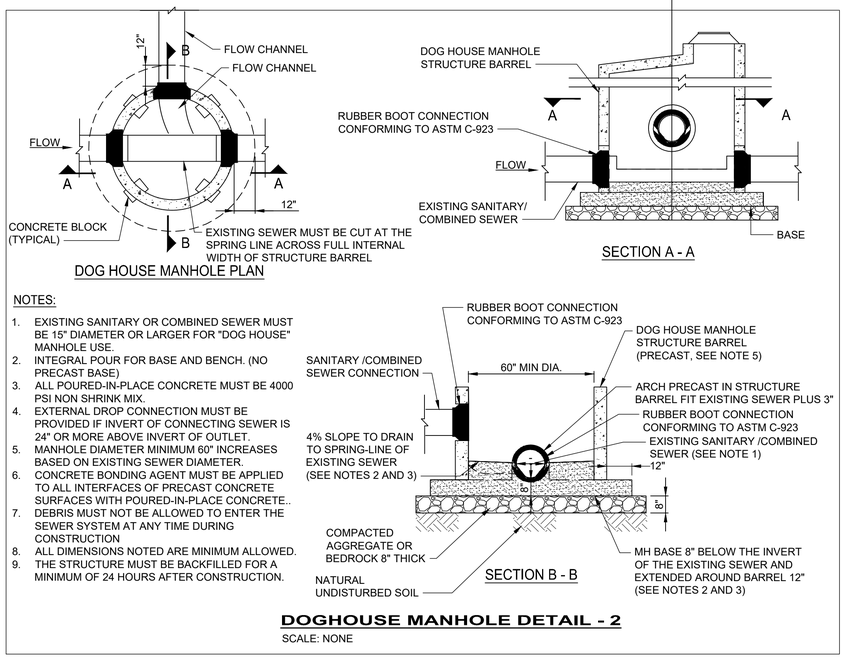
STANDARD DETAILS

PROJECT NO.
210888

DISCIPLINE
CIVIL

SHEET NAME
SD-C-02

SHEET 38 OF 67

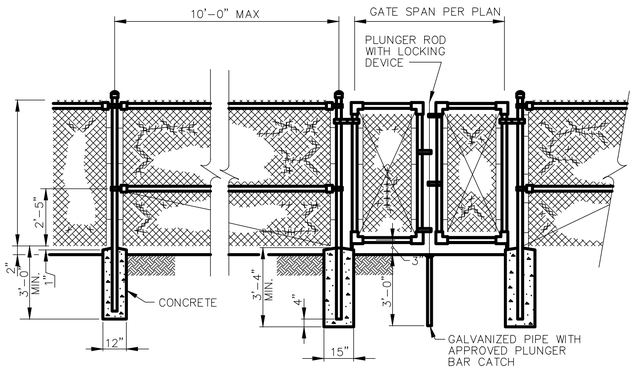


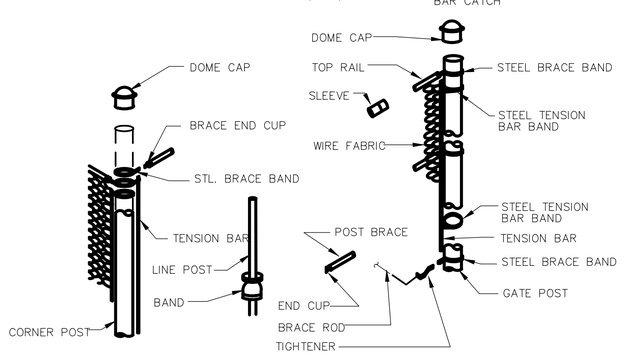
NOTES:

1. EXISTING SANITARY OR COMBINED SEWER MUST BE 15" DIAMETER OR LARGER FOR "DOG HOUSE" MANHOLE USE.
2. INTEGRAL POUR FOR BASE AND BENCH. (NO PRECAST BASE)
3. ALL POURED-IN-PLACE CONCRETE MUST BE 4000 PSI NON SHRINK MIX.
4. EXTERNAL DROP CONNECTION MUST BE PROVIDED IF INVERT OF CONNECTING SEWER IS 24" OR MORE ABOVE INVERT OF OUTLET.
5. MANHOLE DIAMETER MINIMUM 60" INCREASES BASED ON EXISTING SEWER DIAMETER.
6. CONCRETE BONDING AGENT MUST BE APPLIED TO ALL INTERFACES OF PRECAST CONCRETE SURFACES WITH POURED-IN-PLACE CONCRETE..
7. DEBRIS MUST NOT BE ALLOWED TO ENTER THE SEWER SYSTEM AT ANY TIME DURING CONSTRUCTION
8. ALL DIMENSIONS NOTED ARE MINIMUM ALLOWED.
9. THE STRUCTURE MUST BE BACKFILLED FOR A MINIMUM OF 24 HOURS AFTER CONSTRUCTION.

DOGHOUSE MANHOLE DETAIL - 2

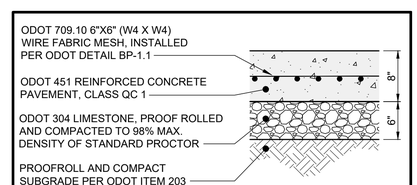
SCALE: NONE





TYPICAL FENCE ASSEMBLY

11/88 SD-6-6

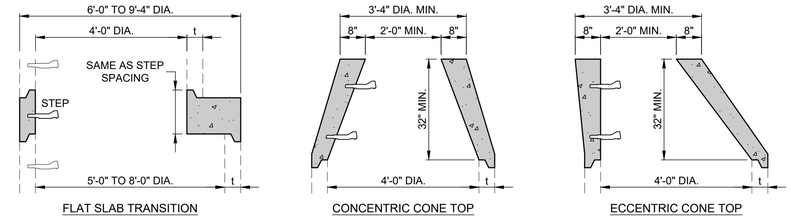


NOTES:

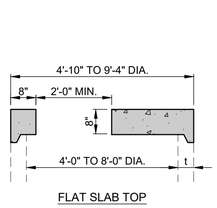
1. SEE LAYOUT PLAN FOR JOINT LOCATIONS. IF JOINTS ARE NOT SHOWN, THEN THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL JOINTS. DIVIDE JOINTS INTO EQUALLY SPACED RECTANGULAR BLOCKS.
2. IF UNSUITABLE SOILS EXISTS, UNDERCUT SUBGRADE AND REPLACE WITH ODOT ITEM 304 CRUSHED LIMESTONE, 12" MIN.
3. APPLY LIQUID-MEMBRANE CURING COMPOUND (200 S.F./GAL.)

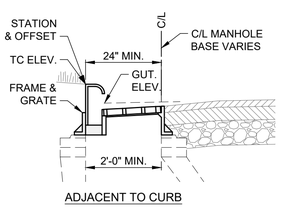
REINFORCED CONCRETE PAVEMENT DETAIL

SCALE: NONE



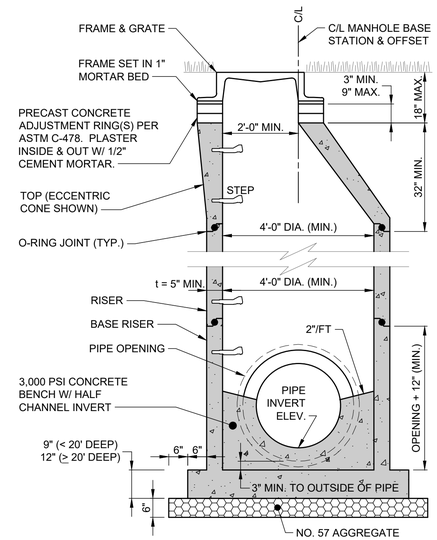
MANHOLE		MAX. PIPE I.D.	
BASE I.D.	MIN. WALL "t"	STRAIGHT THRU INSTALLATION	RIGHT ANGLE INSTALLATION
4'-0"	5"	27"	24"
5'-0"	5"	36"	30"
6'-0"	6"	42"	36"
7'-0"	7"	54"	42"
8'-0"	8"	60"	48"





NOTES:

1. TOP SECTION SHALL BE AN ECCENTRIC CONE. ROTATE CONE TO OFFSET MANHOLE CASTING TO AVOID SIDEWALKS, UNDERDRAINS AND CURBS. USE FLAT SLAB TOP IF MANHOLE IS LESS THAN 6'-3" DEEP.
2. LARGER BASE WITH TRANSITION SECTION MAY REQUIRED BASED ON PIPE SIZES, QUANTITIES AND ANGLES.
3. PRECAST MANHOLE AND REINFORCEMENT SHALL CONFORM TO ASTM C-478.
4. STRUCTURE SHALL MEET H-20 LOADING.
5. BASE MUST BE PRECAST MONOLITHIC WITH BASE RISER.
6. ALL PRECAST CONCRETE SECTIONS SHALL BE MANUFACTURED AND FURNISHED AS SOLID SECTIONS WITHOUT LIFT HOLES OF ANY KIND.
7. O-RING JOINT BETWEEN PRECAST MANHOLE SECTIONS SHALL BE RESILIENT WATERTIGHT GASKET PER ASTM C-443.
8. ALL PIPE OPENINGS MUST BE PRECAST WITH FLEXIBLE CONNECTIONS (Z-LOK OR A-LOK) PER ASTM C-923. [OR: PIPE OPENINGS <24" MUST BE PREFABRICATED WITH FLEXIBLE CONNECTIONS (Z-LOK OR A-LOK) PER ASTM C-923. LARGER PIPES MAY USE FLEXIBLE CONNECTIONS OR FILL INTERSTITIAL SPACE WITH GROUT.]
9. USE REINFORCED PLASTIC MANHOLE STEPS.
10. FIRST STEP SHALL NOT BE MORE THAN 2'-0" BELOW TOP OF FRAME. MAKE PROJECTION 3-1/2" IF IN 24" DIA. SECTION.
11. CASTING TYPE VARIES BASED ON MANHOLE LOCATION AND SHALL BE AS FOLLOWS OR PER PLAN:
    A. IN PAVEMENT: EJ 1040 FRAME WITH TYPE "B" VENTED COVER LABELED "STORM".
    B. IN PAVEMENT ADJACENT TO CURB: EJ 7010 FRAME WITH TYPE "M4" VANE GRATE AND "T1" BACK.
    C. IN SIDEWALK: EJ 1040 FRAME WITH TYPE "A" SOLID COVER LABELED "STORM".
    D. IN GRASS: EJ 1040 FRAME WITH TYPE "N" OVAL GRATE.
12. ANY PRECAST CONCRETE SECTION DAMAGED IN TRANSIT OR ON-SITE AND WHERE THE WATER TIGHTNESS OF THE SECTION HAS BEEN ADVERSELY AFFECTED SHALL BE REPLACED AND NOT UTILIZED IN THE CONSTRUCTION OF THE MANHOLE.



PRECAST CONCRETE MANHOLE DETAIL

SCALE: NONE

STATE OF OHIO
THOMAS E. VOLDRICH
47843
REGISTERED
PROFESSIONAL ENGINEER

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CITY OF NORTH OLMSTED
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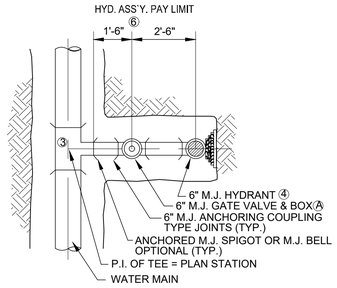
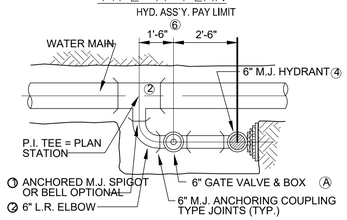
STANDARD DETAILS - SD SERIES

STANDARD DETAILS

PROJECT NO.	
210888	
DISCIPLINE	
CIVIL	
SHEET NAME	
SD-C-05	
SHEET	OF
39	67



TYPE 'A' PLAN



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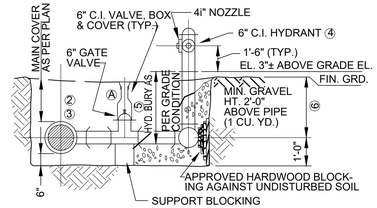


SECTION

TYPICAL HYDRANT ASSEMBLY

12/88 SD-4-3

IF CAST IRON PIPE: USE APPROPRIATE TEE FITTINGS. *
IF P.C.C.P.: USE SIDE OUTLET AS REQUIRED. *

* TEE FITTING OR SIDE OUTLET IS NOT PART OF HYDRANT ASSEMBLY. PRICE OF SUCH TO BE INCLUDED WITH UNIT BID OF C.I.P. & FITTINGS OR OF MAIN PIPE SIZE ITEM PER CONTRACT BASIS OF PAYMENT.

NOTE:
Ⓐ VALVE BOX TO BE SUPPORTED AT ITS BASE SO AS TO NOT CAUSE DAMAGE TO ANY OF THE OPERATING MECHANISM. (TOP OF BOX TO BE FLUSH WITH FINISH GRADE.

HYDRANT NOTES

① ANCHORED M.J. SPIGOT OR M.J. BELL - OPTIONAL AS REQUIRED FOR LATEREL CLEARANCE.

② HYDRANT TEE (CLOW NO. F-1224 OR APPROVED EQUAL) ON DUCTILE OR GRAY CAST IRON PIPE FOR MAIN SIZES 6" THRU 12" DIA.

STANDARD M.J. TEE WITH 6" BRANCH ON DUCTILE OR GRAY CAST IRON PIPE FOR MAIN SIZES 16" & LARGER OR 6" C.I. M.J. OUTLET FOR ALL PRESTRESSED CONRETE CYLINDER PIPE, ALONG WITH 6" C.I. M.J. 90° ELBOW.

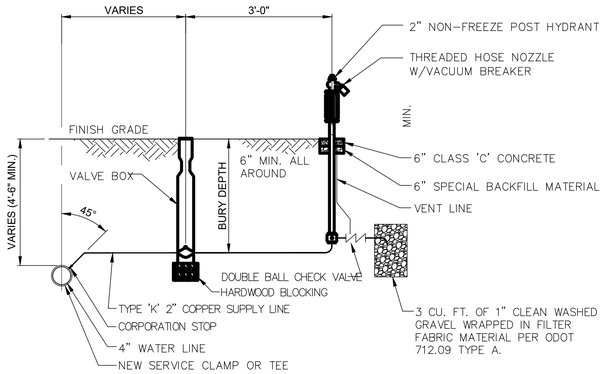
③ STANDARD M.J. TEE WITH 6" BRANCH FOR ALL SIZES OF DUCTILE OR GRAY CAST IRON PIPE OR 6" C.I. M.J. OUTLET FOR ALL PRESTRESSED CONCRETE CYLINDER PIPE - ONLY.

④ HYDRANT TO BE IN ACCORDANCE WITH SPECIFICATIONS.

⑤ THE STANDARD HYD. BURY IS . HOWEVER, TO MEET THE SPECIFIED AND ILLUSTRATED MAIN COVER AND HYDRANT SETTINGS RESPECTIVE TO EACH HYDRANT LOCATION, IT WILL BE NECESSARY TO INSTALL A HYDRANT BURY THAT IS COMMENSURATE WITH THE LOCAL DEPTH REQUIREMENTS. IN EACH SUCH CASE , THE CONTRACTOR SHALL PROVIDE, AS PART OF HYDRANT ITEM INVOLVED, A LENGTHENED OR SHORTENED HYDRANT BURY, AS NECESSARY TO ACHIEVE PROPER ASSEMBLY.

⑥ ADDITIONAL LENGTH IF REQUIRED AND APPROVED BY THE ENGINEER , TO BE PAID UNDER ITEM FOR CAST IRON PIPE & FITTINGS.

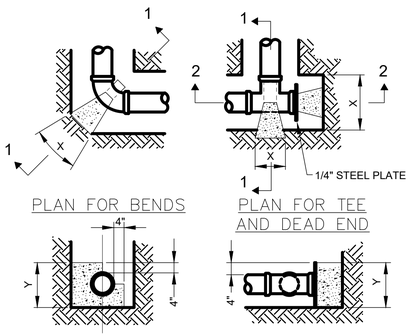
* DENOTES DESIGNER SPECIFICATION REQUIRED.



POST HYDRANT DETAIL

7/11 SD-4-5B

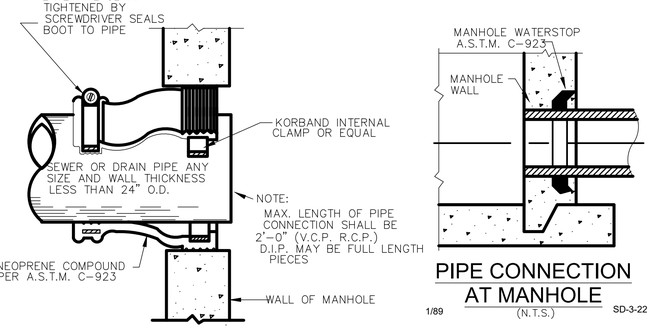
SIZING SCHEDULE	BEARING FACE (X Y) IN SQ. FT.					
PIPE SIZE	22 1/2° BEND SOIL BEARING CAPACITY			45° BEND SOIL BEARING CAPACITY		
	1000 P.S.F	3000 P.S.F	5000 P.S.F	1000 P.S.F	3000 P.S.F	5000 P.S.F
1-1/2	0.28	0.09	0.06	0.54	0.18	0.11
2	0.44	0.15	0.09	0.84	0.28	0.17
2-1/2	0.63	0.21	0.12	1.22	0.41	0.24
3	0.94	0.31	0.19	1.81	0.60	0.36
	90° BEND SOIL BEARING CAPACITY			TEE OR DEAD END SOIL BEARING CAPACITY		
	1000 P.S.F	3000 P.S.F	5000 P.S.F	1000 P.S.F	3000 P.S.F	5000 P.S.F
1-1/2	1.00	0.33	0.20	0.71	0.24	0.14
2	1.50	0.52	0.33	1.09	0.36	0.22
2-1/2	2.20	0.75	0.44	1.58	0.53	0.32
3	3.30	1.12	0.67	2.36	0.79	0.47



ALTERNATE BLOCKING:
ALTERNATE SECTION 1 - 1 MAY BE USED FOR FILLINGS REQUIRING LESS THAN 0.50 S.F. OF BEARING FACE FOR THRUST BLOCKING.

ALL CONCRETE BLOCKING MUST HAVE ITS ENTIRE FACE (X & Y) BEARING SURFACE AGAINST UNDISTURBED SOIL AND ALL VERTICAL NON-BEARING SURFACES SHALL BE FORMED SO AS TO KEEP CONCRETE FROM JOINTS. BLOCKING DESIGN BASED ON COMBINED WORKING PRESSURE PLUS WATER HAMMER OF 240 PSI AND FOR BEARING CAPACITY FOR SAND - 1000 PSF, SAND AND GRAVEL - 3000 PSF, SHALE - 5000 PSF.

12/91 # THRUST BLOCKING DETAIL SD-4-6A

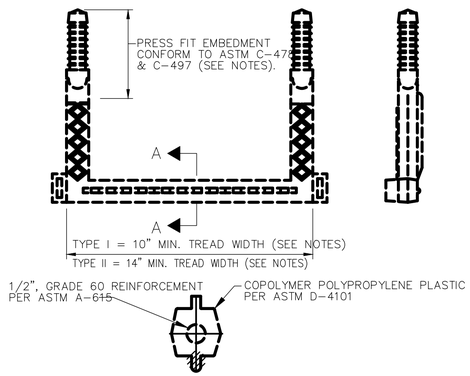


SANITARY SEWER FLEXIBLE GASKET DETAIL

6/90 (LAKE COUNTY SANITARY ENGINEER ONLY) SD-3-25

PIPE CONNECTION AT MANHOLE

1/89 (N.T.S.) SD-3-22

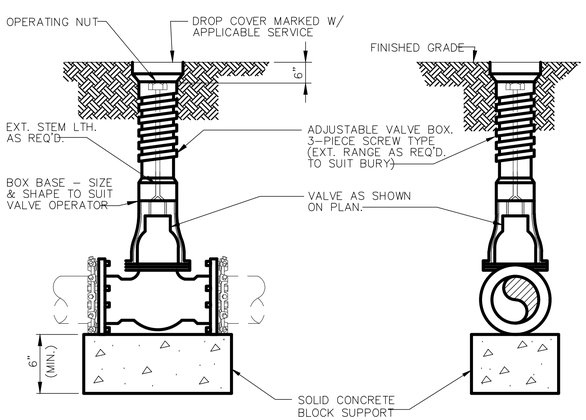


SECTION A – A

NOTES:
1.) USE TYPE I STEP FOR MANHOLES OR CIRCULAR STRUCTURES OF 5'-0" DIA. OR LESS – USE 16" C/C SPACING.
2.) USE TYPE II STEP FOR FLAT WALL STRUCTURES SUCH AS VAULTS, WELLS, ETC. OR CIRCULAR STRUCTURES OVER 5'-0" DIA. – USE 12" C/C SPACING.
3.) MOUNTING REQUIREMENTS SHALL BE IN ACCORDANCE WITH MFR'S RECOMMENDATIONS.

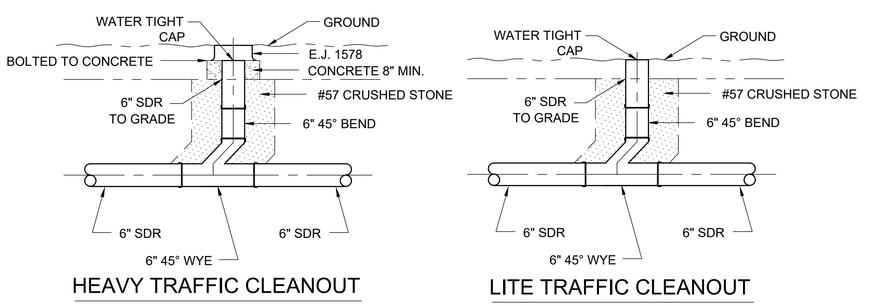
TYPICAL MANHOLE STEP DETAIL

7/91 (N.T.S.) SD-3-27E



TYPICAL VALVE AND VALVE BOX SETTING

1/11 SD-4-12



HEAVY TRAFFIC CLEANOUT

LITE TRAFFIC CLEANOUT

LATERAL CLEANOUT DETAIL

TRUMBULL COUNTY SANITARY ENGINEERING DEPARTMENT

STATE OF OHIO
THOMAS E. VOLDRICH
47843
REGISTERED
PROFESSIONAL ENGINEER

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ISSUED FOR:	90%
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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
STANDARD DETAILS - SD SERIES
STANDARD DETAILS

PROJECT NO.
210888
DISCIPLINE
CIVIL
SHEET NAME
SD-C-04
SHEET 40 OF 67

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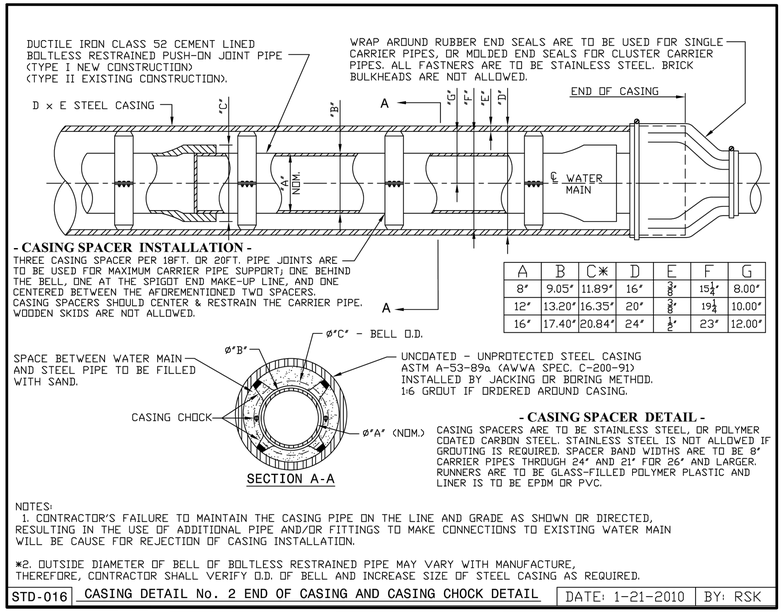
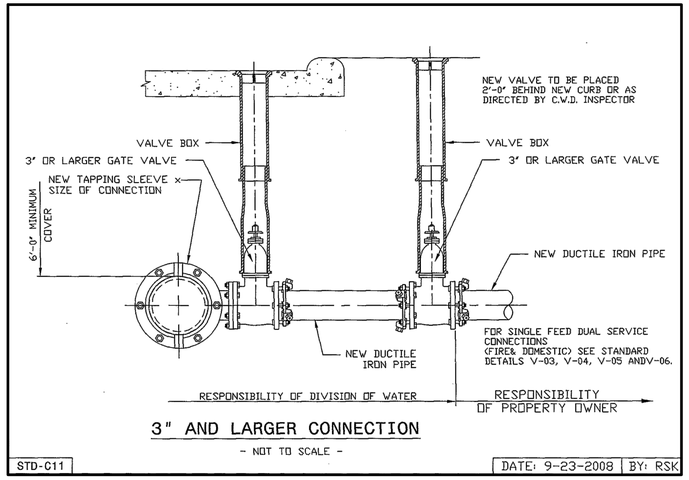
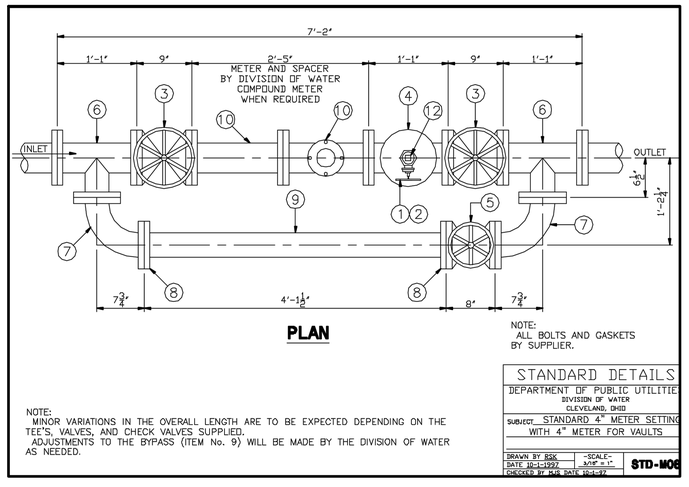


A	B	C*	D	E	F	G
8"	9.05"	11.89"	16"	3/4"	15 1/2"	8.00"
12"	13.20"	16.35"	20"	3/4"	19 1/2"	10.00"
16"	17.40"	20.84"	24"	1"	23"	12.00"

CLEVELAND WATER DETAIL (STD-016)
N.T.S.



CLEVELAND WATER DETAIL (STD-C11)
N.T.S.



CLEVELAND WATER DETAIL (STD-M08)
N.T.S.

CLEVELAND WATER DETAIL NOTES:

1. **THE CLEVELAND WATER DETAILS ON THIS SHEET HAVE BEEN PROVIDED BY CLEVELAND WATER. THE CONTRACTOR IS RESPONSIBLE TO ADHERE TO CLEVELAND WATER'S STANDARDS & REQUIREMENTS. REFER TO WWW.CLEVELANDWATER.COM.**

STATE OF OHIO
THOMAS E. VOLDRICH
47843
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ISSUE DATE:	10/21/22
SCALE:	AS NOTED
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DRAWN BY:	ELE
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CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO
STANDARD DETAILS - SD SERIES
STANDARD DETAILS

PROJECT NO.
210888
DISCIPLINE
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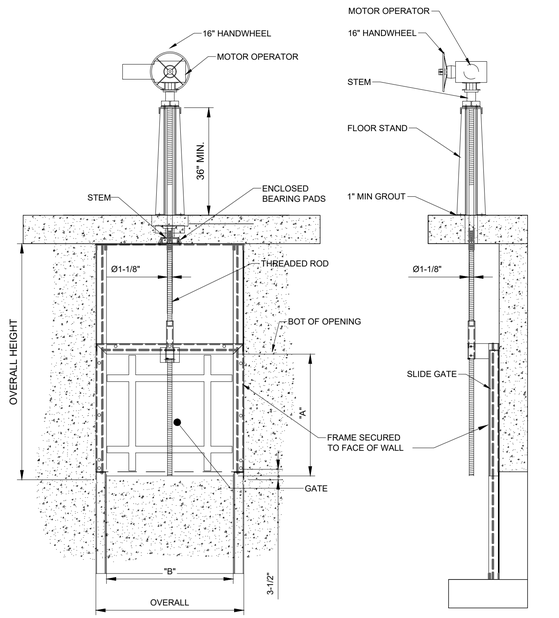
SHEET NAME
SD-C-03
SHEET 41 OF 67



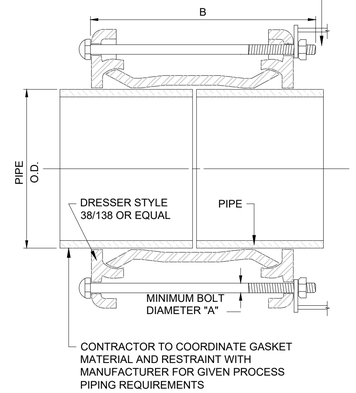
ELEVATION SIDE SECTION

SLIDE GATE DETAIL-"B"

NOT TO SCALE

THRUST RESTRAINT (AS REQUIRED)

PIPE SIZE	A (IN)	B (IN)
3" - 8"	5/8	8-1/4
10" - 24"	5/8	10-3/4
30" - 48"	5/8	15



FLEXIBLE CONNECTOR DETAIL

NOT TO SCALE

STATE OF OHIO
THOMAS E. VOLDRICH
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ISSUE DATE: 09-18-2022
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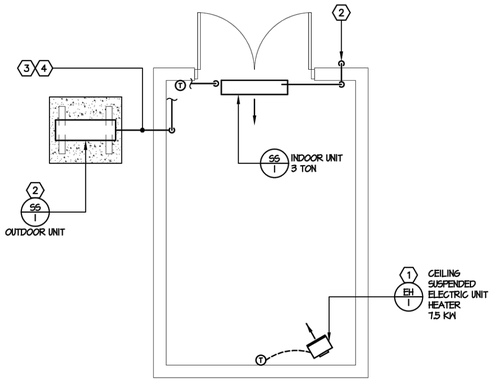
CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

STANDARD DETAILS - SD SERIES
STANDARD DETAILS

PROJECT NO.
210888
DISCIPLINE
PROCESS
SHEET NAME
SD-D-02
SHEET 42 OF 68

CONTRACTOR MUST VERIFY ALL CLEARANCES AND DIMENSIONS IN FIELD



MECHANICAL FLOOR PLAN

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

GENERAL NOTES

A. CONFORM TO OSHA, FIRE MARSHAL, LOCAL BUILDING DEPARTMENT AND OTHER APPLICABLE CODES AND REGULATIONS. OBTAIN PERMITS, PAY ALL FEES, AND ARRANGE FOR REQUIRED INSPECTIONS.

B. COMPLY WITH ALL PORTAGE COUNTY FACILITY STANDARDS AND REQUIREMENTS OF THE CONTRACT AS SPECIFIED BY PORTAGE COUNTY OFFICIALS AND ENGINEER.

C. VISIT SITE, CHECK EXISTING CONDITIONS AND TAKE INTO CONSIDERATION IN BID.

D. SYSTEMS ARE TO BE COMPLETE AND WORKABLE IN ALL RESPECTS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND PROPERLY ADJUST AND START UP.

E. DRAWINGS ARE DIAGRAMMATIC. FIELD VERIFY EXISTING CONDITIONS AND CONNECTION POINTS PRIOR TO STARTING WORK. FULLY COORDINATE WORK WITH OTHER TRADES.

F. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, CONSTRUCTION SEQUENCES, AND WORKMEN SAFETY.

G. PERFORM ALL DEMOLITION WORK REQUIRED FOR PROJECT AND DISPOSE OF DEMOLITION MATERIALS IN A CODE APPROVED MANNER.

H. ALL PENETRATIONS OF FIRE RATED WALLS SHALL BE SEALED WITH UL. LISTED FIRE RATED SEALANT TO COMPLY WITH MANUFACTURER'S INSTALLATION DETAILS. SEALANTS TO BE AS MANUFACTURED BY 3M, STI, OR APPROVED EQUAL.

I. ALL CUTTING AND PATCHING OF EXISTING SURFACES INCIDENTAL TO THIS WORK SHALL BE PERFORMED BY THIS CONTRACTOR. DO NOT CUT ANY STRUCTURAL MEMBERS. CUTTING AND PATCHING SHALL BE PERFORMED IN COMPLIANCE WITH ARCHITECTURAL REQUIREMENTS.

MECHANICAL LEGEND

M.C.	MECHANICAL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
G.C.	GENERAL CONTRACTOR
AFF	ABOVE FINISHED FLOOR
BOD	BOTTOM OF DUCT ABOVE FINISHED FLOOR
BOB	BOTTOM OF BEAM ABOVE FINISHED FLOOR
E.A.	EXHAUST AIR
O.A.	OUTSIDE AIR
R.A.	RETURN AIR
S.A.	SUPPLY AIR
ATD	AIR TRANSFER DUCT
ATO	AIR TRANSFER OPENING
MVD	MANUAL VOLUME DAMPER
(5)	VARIABLE SPEED WALL SWITCH
(T)	THERMOSTAT

CODED NOTES

1. INSTALL BOTTOM OF UNIT HEATER AS HIGH AS POSSIBLE.
2. SECURE CONDENSING UNIT TO 16"H PATE SERIES ES-2 SUPPORT RAILS ANCHORED TO 4" THICK CONCRETE PAD.
3. INSULATE ALL REFRIGERANT SUCTION LINE PIPING WITH 1" ARMAFLEX CLOSED CELL PIPING INSULATION. INSULATION ON EXPOSED PIPING OUTSIDE BUILDING SHALL BE COVERED WITH ALUMINUM EMBOSSED JACKET.
4. ROUTE REFRIGERANT PIPING FROM INDOOR UNIT TO CONDENSING UNIT ON GRADE PER MANUFACTURER'S SIZING RECOMMENDATIONS. INSULATE ALL SUCTION LINE PIPING WITH 1" ARMAFLEX CLOSED CELL PIPING INSULATION.
5. EXTEND CONDENSATE DRAIN FROM INDOOR UNIT THRU WALL AND TERMINATE ABOVE STORM DRAIN WITH AIR GAP BY P.C.

STATE OF OHIO
MICHAEL A. BANDWEN
E-63384
REGISTERED PROFESSIONAL ENGINEER
09-16-24

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NO	REVISION	DATE
		2/7/2023

ISSUED FOR:	BID
ISSUE DATE:	10/10/24
SCALE:	AS NOTED
DESIGNED BY:	MJH
DRAWN BY:	MAB
CHECKED BY:	PBL

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

MECHANICAL - M SERIES

MECHANICAL FLOOR PLANS

PROJECT NO.
210888

DISCIPLINE
MECHANICAL

SHEET NAME
00M-01

SHEET 43 OF 53

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CONTRACTOR MUST VERIFY ALL CLEARANCES AND DIMENSIONS IN FIELD

STATE OF OHIO
MICHAEL J. BNIDOWEN
E-63384
REGISTERED PROFESSIONAL ENGINEER
09-16-24

CONTROLS SPECIFICATION

1. FURNISH AND INSTALL ALL CONTROLS FOR HVAC SYSTEMS. PROVIDE ALL RELAYS AND DEVICES REQUIRED FOR COMPLETE OPERATION. MOUNT ALL CONTROLS FURNISHED AS ACCESSORIES TO EQUIPMENT AND PROVIDE ALL CONTROL (LOW VOLTAGE) WIRING OR POWER WIRING REQUIRED FOR CONTROL SYSTEM WHERE NOT SPECIFICALLY SHOWN ON ELECTRICAL PLANS. ALL POWER WIRING AND CONTROL WIRING SHALL BE IN RIGID GALVANIZED STEEL CONDUIT. ALL CONDUIT SHALL BE INSTALLED PER N.E.C. ALL HVAC EQUIPMENT SHALL BE MONITORED THROUGH S.C.A.D.A. SYSTEM PROVIDED BY OTHERS.
2. ANY ELECTRICAL WORK IN PUMP ROOM SHALL MEET NEC CLASS I, DIVISION I, GROUP D REQUIREMENTS.
3. CONTROL SEQUENCE SHALL BE AS FOLLOWS:
   A. ELECTRIC ROOM:
      1. SS-1 DUCTLESS SPLIT SYSTEM: INDOOR UNIT FAN AND OUTDOOR CONDENSING UNIT SHALL CYCLE FROM WALL-MOUNTED THERMOSTAT/MICROPROCESSOR CONTROLLER FURNISHED AS AN ACCESSORY TO THE SYSTEM.
      2. EH-1 ELECTRIC UNIT HEATER: HEATER SHALL CYCLE FROM WALL-MOUNTED THERMOSTAT TO MAINTAIN ROOM HEATING SETPOINT.

ELECTRIC HEATERS								
MARK	TYPE	MAKE	MODEL	KW	CFM	ELECTRICAL	SIZE	REMARKS
EH/1	UNIT HEATER	MARKEL	5100 SERIES	7.5	700	480/3/60	25"H X 22"W X 7"	1

NOTES:

EQUIVALENT BY Q-MARK OR ELECTROMODE

1. U.L. LISTED, COMPLETE WITH AUTOMATIC RESET THERMAL CUTOUT, WALL-MOUNTED T-STAT, CEILING SUSPENSION BRACKET AND N.F. DISCONNECT.

DUCTLESS SPLIT SYSTEMS - INDOOR UNITS										
MARK	SERVICE	MAKE	MODEL	FAN SPEED	SEER2	COOLING CAPACITY	INDOOR FLA	MOCP	ELECTRICAL	REMARKS
SS/1	ELECTRICAL ROOM	DAIKIN	FTX36WVJU9	900 HIGH	15.90	33,200	0.37	NOTE 2	208/1/60	1,2

NOTES: EQUIVALENT BY: SANYO, LG AND MITSUBISHI.

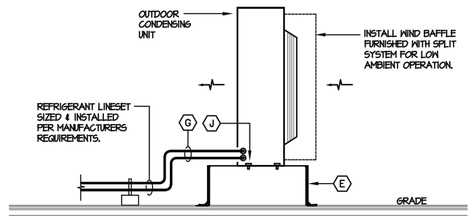
1. COMPLETE WITH WIRED WALL MOUNTED CONTROLLER PROGRAMMABLE THERMOSTAT WITH REMOTE SUPPLY DISCHARGE LOUVER, WASHABLE FILTERS, REFRIGERANT R-410A.
2. INDOOR UNIT POWERED BY OUTDOOR UNIT, SEE CONDENSING UNIT SCHEDULE FOR SYSTEM MOCP.

DUCTLESS SPLIT SYSTEMS - CONDENSING UNITS								
MARK	SERVICE	MAKE	MODEL	ARI CAP MBH	SAT. SUCT.	MCA / MOCP	ELECTRICAL	REMARKS
SS/1	ELECTRICAL ROOM	DAIKIN	RX36WMVJU9	33.2	45	18.6 / 20	208 / 1 / 60	1, 2

NOTES:

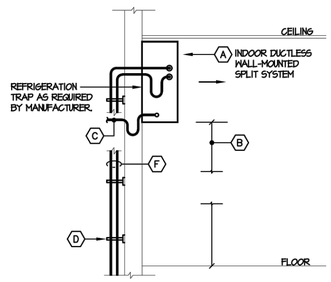
EQUIVALENT BY: SANYO, LG AND MITSUBISHI.

1. AIR-COOLED CONDENSING UNIT WITH VARIABLE SPEED, INVERTER COMPRESSOR WITH LOW AMBIENT COOLING TO -20 DEG. F AND 5 YEAR COMPRESSOR WARRANTY, COMPLETE REFRIGERANT ACCESSORIES, CRANKCASE HEATER, CONTROL TRANSFORMER, WIND BAFFLE, FAN RELAYS, COMPRESSOR TIME DELAY RELAY.
2. MANUFACTURER SHALL SUBMIT RECOMMENDED REFRIGERANT PIPING DIAGRAM WITH SHOP DRAWING. INCLUDE ALL REFRIGERATION ACCESSORIES REQUIRED.



DUCTLESS SPLIT SYSTEM - OUTDOOR UNIT

SCALE: NONE



DUCTLESS SPLIT SYSTEM - INDOOR UNIT

SCALE: NONE

CODED NOTES:

- (A) SUPPORT UNIT FROM WALL WITH WALL-MOUNTING BRACKETS.
- (B) REFER TO PLANS FOR MOUNTING HEIGHT - CONFIRM ELEVATION IN FIELD PRIOR TO ANY WORK.
- (C) ¾" TRAPPED CONDENSATE DRAIN - REFER TO PLANS FOR TERMINATION LOCATION.
- (D) SUPPORT RS & RL PIPING FROM WALL WITH GALVANIZED STEEL UNISTRUT SUPPORTS - TYPICAL.
- (E) 16" HIGH EQUIPMENT RAIL - PATE OR EQUAL.
- (F) ALL REFRIG SUCTION PIPING SHALL BE INSULATED AS INDICATED IN SPECIFICATIONS.
- (G) ALL EXTERIOR REFRIG SUCTION PIPING SHALL BE INSULATED AS INDICATED IN SPECIFICATIONS WITH STAINLESS STEEL OR ALUMINUM EMBOSSED EXTERIOR JACKET.
- (H) ORIENTATION OF CONDENSING UNIT ON ROOF SHALL BE SUCH THAT THE CONDENSER FAN MILL DISCHARGE AIR IN THE DIRECTION OF THE PREVAILING WINDS.
- (I) DURA-BLOCK DB6 SERIES OR EQUAL. PIPING SUPPORT SHALL BE LARGE ENOUGH TO ACCOMMODATE REFRIGERANT LINESET(S), POWER AND CONTROL CONDUITS.
- (J) SECURE CONDENSING UNIT TO SUPPORT RAIL PER MANUFACTURER'S RECOMMENDATIONS.

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DESIGNED BY: MJH
DRAWN BY: MAB
CHECKED BY: PLB

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

MECHANICAL - M SERIES

MECHANICAL SCHEDULES AND DETAILS

PROJECT NO. 210888
DISCIPLINE: MECHANICAL
SHEET NAME: 00M-02
SHEET 44 OF 53

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VOLTAGE DROP SCHEDULE

120 VOLT BRANCH CIRCUITS UP TO 8 AMPS

RUN DISTANCE IN FEET	WIRE SIZE AWG
1' - 120'	#12
121' - 190'	#10
191' - 300'	#8
301' - 410'	#6

120 VOLT BRANCH CIRCUITS 9 AMPS TO 14 AMPS

RUN DISTANCE IN FEET	WIRE SIZE AWG
1' - 65'	#12
66' - 110'	#10
111' - 170'	#8
171' - 270'	#6

277 VOLT BRANCH CIRCUITS UP TO 14 AMPS

RUN DISTANCE IN FEET	WIRE SIZE AWG
1' - 160'	#12
161' - 250'	#10
251' - 390'	#8
391' - 620'	#6

ALL HOME RUNS SHALL BE #12 (MINIMUM) WIRE SIZES. CONTRACTOR SHALL UPSIZE WIRES BASED ON LOAD AND LENGTH OF RUN AS INDICATED IN SCHEDULE ABOVE.

SYMBOLS

$	20A-120/277V SINGLE POLE TOGGLE SWITCH, HUBBELL, TYPE HBL 1221
$_{WP}$	SAME AS $ WITH GASKETED SELF CLOSING WEATHER - RESISTANT COVER
$_{3}$	20A-120/277V THREE WAY TOGGLE SWITCH, HUBBELL, TYPE HBL 1223
$_{P}$	20A-120/277V TOGGLE SWITCH WITH "ON" PILOT, HUBBELL, TYPE HBL 1221 PL
$_{T}$	20A-300V MANUAL STARTING SWITCH W/ THERMAL OVERLOAD RELAY- IF NOT INTEGRAL TO MOTOR - SURFACE MOUNTED AT DEVICE IN ACCESSIBLE LOCATION. SWITCH SHALL BE LOCKABLE IN OPEN POSITION.
$OS	120/277V INFRARED WALL SWITCH OCCUPANCY SENSOR - WATTSTOPPER #PM-100. OCCUPANCY SENSORS SHALL BE SET TO OPERATE AS VACANCY SENSORS - AUTOMATIC OFF AFTER 30 MINUTES, MANUAL ON ONLY.
	20A-125 V DUPLEX RECEPTACLE, HUBBELL, TYPE 5362
	20A-125 V DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER
GFI	20A-125 V DUPLEX RECEPTACLE WITH INTEGRAL "GFI" PROTECTION, HUBBELL TYPE GF5352
	20A-125 V DUPLEX RECEPTACLE 2 MOUNTED IN 2 GANG BOX WITH SINGLE COVER PLATE.
WP	IN-USE, WEATHERPROOF COVER AND INTEGRAL GFCI WEATHER RESISTANT PROTECTION, HUBBELL REC-GFR53625GGY, COVER-RW67500
	125/250V, 3 WIRE GROUNDED TYPE OUTLET, VERIFY EXACT CONFIGURATION REQUIRED, AMPS AS SHOWN ON PLAN
	480V, 4 WIRE GROUNDED TYPE OUTLET, VERIFY EXACT CONFIGURATION REQUIRED, AMPS AS SHOWN ON PLAN
W	4" SQ x 2-1/8" DEEP BOX TO MATCH DEVICE FOR TELEPHONE AND/OR DATA OUTLET - PROVIDE 1" RGS CONDUIT AND EXTEND TO LOCATION SHOWN ON PLAN WITH PULL WIRE. PROVIDE BLANK STAINLESS STEEL COVER IF NOT USED BY OWNER. W = DENOTES MOUNTED AT WALL PHONE HEIGHT - 46" AFF
	STANDARD JUNCTION BOX SIZED PER N.E.C. AND SUPPORTED INDEPENDENT OF CONDUIT SYSTEM
	HEVI-DUTY 3 POLE FUSIBLE DISCONNECT SWITCH W/FUSETRONS SIZED AS NOTED OR AT 125% OF ACTUAL MOTOR NAMEPLATE RATING-SWITCH SIZE AS NOTED - NEMA 4X. N.F. DENOTES NON-FUSIBLE-MOUNTED AT EQUIPMENT W.P. DENOTES WEATHERPROOF-MOUNTED AT EQUIPMENT 00/000 = DISCONNECT SIZE / FUSE SIZE - MOUNTED AT EQUIPMENT SS = STAINLESS STEEL
	PREMIRED UNIT CONTROL PANEL-CONNECT AND WIRE PER MFGRS. WIRING DIAGRAMS. PROVIDE DISCONNECT SWITCH AS REQUIRED BY N.E.C. ELECTRICIAN SHALL PROVIDE HOT DIPPED GALVANIZED CHANNEL, FITTINGS AND ACCESSORIES FOR A COMPLETE METAL FRAMING SYSTEM FOR FIELD MOUNTED PANELS AS REQUIRED. APPROVED SHOP DRAWINGS SHALL BE USED FOR MEANS AND METHODS OF INSTALLATION.
	COMBINATION MAGNETIC STARTER WITH 120V CONTROL XFMR 3 OL'S, H-O-A SELECTOR SWITCH, PUSH TO TEST "ON" PILOT LIGHT, 2 N.O. AND 2 N.C. CONTROL CONTACTS (SIZE 1 MINIMUM) FURNISHED AND INSTALLED BY E.C.
M WT	MOTOR CONNECTION AS NOTED-CONNECT WITH FLEXIBLE OR SEALTIGHT CONDUIT, M = WATER SENSOR IN MOTOR, T = WINDING TEMPERATURE SENSORS IN MOTOR
M WT	VARIABLE SPEED INVERTER DUTY MOTOR CONNECTION AS NOTED-CONNECT WITH FLEXIBLE OR SEALTIGHT CONDUIT, M = WATER SENSOR IN MOTOR, T = WINDING TEMPERATURE SENSORS IN MOTOR
T	TIMECLOCK: TORK #N200L WITH CARRY OVER OR EQUAL
TH	HVAC THERMOSTAT CONNECTION, THERMOSTAT PROVIDED BY OTHERS, WIRED & INSTALLED BY E.C.
	120/208V -3 PHASE-4 WIRE ELECTRICAL BRANCH CIRCUIT PANEL
	480V - 3 PHASE - 3 WIRE ELECTRICAL BRANCH CIRCUIT PANEL
NEUTRAL HOT GROUND	RGS CONDUIT RUN EXPOSED, OVERHEAD, ON CEILING OR ON WALL. CROSSHATCHES DENOTE NUMBER OF #12 AWG COPPER CONDUCTORS UNLESS NOTED OTHERWISE. IF NO CONDUCTORS ARE SHOWN PROVIDE 2 #12 + GND. - 3/4" RGS MINIMUM OR AS REQUIRED. PVC SCHED 80 IN THE CHEMICAL FEED BUILDING.
NEUTRAL HOT GROUND	PVC SCHED 40 CONDUIT RUN BELOW GRADE, BELOW FLOOR SLABS OR IN MANHOLES- MAINTAIN 2" MINIMUM COVER BETWEEN FLOOR SLAB AND TOP OF CONDUIT - CROSSHATCHES DENOTE NUMBER OF #12 AWG COPPER CONDUCTORS UNLESS NOTED OTHERWISE. IF NO CONDUCTORS ARE SHOWN, PROVIDE 2 #12 + GND. - 3/4" PVC MINIMUM OR AS REQUIRED.
	CONDUIT SEALING FITTING WITH DRAIN RATED FOR CLASS I, DIV. 1 APPLICATIONS FOR SEALING IN VERTICAL OR HORIZONTAL POSITIONS. PROVIDE FIBER AND SEALING COMPOUND AS REQUIRED TO MAKE THE SEAL.

SYMBOL LEGEND GENERAL NOTES:

TREATMENT PLANT DEVICES

1. ALL TOGGLE SWITCHES ARE TO BE SURFACE MOUNTED AT 46" A.F.F. TO CENTER LINE OF BOX IN A SURFACE MOUNTED "FS" CAST DEVICE BOX SUITABLE FOR RIGID GALVANIZED STEEL CONDUIT, AND BE PROVIDED WITH A STAINLESS STEEL COVER PLATE TO MATCH DEVICE UNLESS OTHERWISE SPECIFIED. COLOR OF DEVICE TO BE GRAY OR AS SELECTED BY PROJECT MANAGER. COMPLY WITH CURRENT ADA REQUIREMENTS.
2. ALL RECEPTACLES, TELEPHONE, ETC. ARE TO BE SURFACE MOUNTED AT 36" A.F.F. TO CENTER LINE OF BOX IN A SURFACE MOUNTED "FS" CAST DEVICE BOX SUITABLE FOR RIGID GALVANIZED STEEL CONDUIT, AND BE PROVIDED WITH A STAINLESS STEEL COVER PLATE TO MATCH THE DEVICE UNLESS OTHERWISE SPECIFIED. COLOR OF DEVICE TO BE GRAY OR AS SELECTED BY PLANT PERSONNEL. COMPLY WITH CURRENT ADA REQUIREMENTS.

ADMINISTRATION BUILDING DEVICES

1. ALL TOGGLE SWITCHES ARE TO BE FLUSH MOUNTED AT 46" A.F.F. TO CENTER LINE OF BOX AND BE PROVIDED WITH A THERMOPLASTIC COVER PLATE TO MATCH DEVICE UNLESS OTHERWISE SPECIFIED. COLOR OF DEVICE TO BE SELECTED BY ARCHITECT. COMPLY WITH CURRENT ADA REQUIREMENTS.
2. ALL RECEPTACLES, TELEPHONE, ETC. ARE TO BE FLUSH MOUNTED AT 18" A.F.F. TO CENTER LINE AND BE PROVIDED WITH A THERMOPLASTIC COVER PLATE TO MATCH THE DEVICE UNLESS OTHERWISE SPECIFIED. COLOR OF THE DEVICE TO BE SELECTED BY ARCHITECT. ALL BACK-TO-BACK DEVICES TO BE OFFSET HORIZONTALLY 6" MINIMUM. COMPLY WITH CURRENT ADA REQUIREMENTS.

ENTIRE FACILITY

1. THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL SWITCHES, OUTLETS, ETC. ARE TO BE CONFIRMED PRIOR TO ROUGH-IN. IF LOCATIONS AND MOUNTING HEIGHTS ARE NOT SHOWN, REQUEST LOCATIONS PRIOR TO ROUGH-IN. CONFIRM EQUIPMENT OUTLET LOCATIONS WITH EQUIPMENT REQUIREMENTS. COMPLY WITH A.D.A. REQUIREMENTS.
2. SWITCHES AND DEVICES TO BE AS SPECIFIED. LEVITON AND PASS & SEYMOUR ARE ACCEPTABLE EQUALS IF SPECIFICATION GRADES.
3. NO ITEMS ARE TO BE SCALED OFF THE ELECTRICAL DRAWINGS. ALL DIMENSIONS SHOWN MUST BE VERIFIED WITH ALL TRADES PRIOR TO ROUGH-IN.

GENERAL NOTES: (APPLY TO ALL DRAWINGS)

A. ELECTRICIAN TO FIRE STOP ALL WALL AND FLOOR PENETRATIONS TO MATCH FIRE RATING.

B. ELECTRICIAN TO VISIT SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID.

C. ALL ROOF PENETRATIONS TO BE SEALED PER ROOFING CONTRACTORS REQUIREMENTS. CONDUITS SHALL BE SEALED WATERTIGHT.

D. NO DUCTWORK OR PIPING TO BE RUN ABOVE ELECTRICAL PANELS OR THROUGH ELECTRICAL EQUIPMENT ROOMS. ELECTRICIAN SHALL COORDINATE WITH ALL TRADES FOR EQUIPMENT LAYOUTS PRIOR TO ROUGH-IN OF ALL SYSTEMS.

E. ELECTRICIAN TO CONFIRM LIGHT FIXTURE CATALOG NUMBERS WITH ALL LIGHT FIXTURES SPECIFIED ON PLANS FOR AREA RATING, FIXTURE VOLTAGES, LAMPS ETC.

F. ELECTRICIAN TO COORDINATE CHAIN ON PENDANT HUNG LIGHTING FIXTURES WITH ALL MECHANICAL DUCTWORK AND PROCESS PIPING. WHERE INTERFERENCES OCCUR, ELECTRICIAN TO ADJUST LOCATION OF FIXTURES BELOW ALL DUCTWORK AND PIPING, SUBMIT AN RFI FOR CORRECTIVE ACTION FROM ENGINEER. CHAINS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE STAINLESS STEEL.

G. ELECTRICIAN TO CONFIRM LOCATIONS OF ALL ELECTRICAL EQUIPMENT AND ELECTRICAL CHARACTERISTICS OF PROCESS EQUIPMENT PROVIDED BY OTHER TRADES PRIOR TO INSTALLING ROUGH-INS AS SHOWN ON THE ELECTRICAL PLANS. ALL SHOP DRAWING REQUIREMENTS WILL BE CONSIDERED AS THE MEANS AND METHODS OF INSTALLATION.

H. THE ELECTRICIAN IS REQUIRED TO REVIEW THE SPECIFICATION PACKAGE AND COMPARE IT TO THE DRAWING PACKAGE. THE ELECTRICIAN SHALL INCLUDE IN THEIR BIDS, ALL REQUIREMENTS FOUND IN SPECIFICATIONS. IN THE EVENT OF A DISCREPANCY, THE CONTRACTOR SHALL PROVIDE THE BETTER QUALITY OR GREATER AMOUNT OF WORK IN THEIR BIDS. UPON AWARD OF THE CONTRACT, THE CONTRACTOR SHALL REQUEST GUIDANCE ON HOW TO PROCEED WITH CONSTRUCTION PRIOR TO ROUGH-IN. SPECIFICATIONS RELATED TO ELECTRICAL TRADE ARE SECTIONS 260000, 260500, 262400, 262418, 264100 AND 265000.

I. THIS PROJECT INVOLVES RENOVATION OF AN EXISTING INDUSTRIAL FACILITY (WASTE WATER TREATMENT PLANT) AND THE CONTRACTOR IS EXPECTED TO PROVIDE CRAFTSMANSHIP REFLECTING THE NATURE OF THE FACILITY. CONDUITS IN PROCESS AREAS ARE TO BE SURFACE MOUNTED RIGID GALVANIZED STEEL (RGS). IN CLASSIFIED AREAS SEAL ALL CONDUITS TO RESTRICT THE PASSAGE OF GASSES AND VAPORS, AND ARRANGE SEALING FITTING DRAINS IN CONDUIT SYSTEMS TO PREVENT ACCUMULATION OF CONDENSATE ABOVE SEALS. ALL CONDUITS LARGER THAN 1 1/4" ENTERING OR LEAVING A MOTOR CONTROL CENTER, CONTROL PANEL, VALVE ACTUATOR, INSTRUMENT, A BUILDING OR PANELBOARD SHALL BE MADE WATERTIGHT USING AN INFLATABLE, SEALED, BLADDER, DUCT SEALING SYSTEM, RAYCHEM 'RAYPLATE' DUCT SEALING SYSTEM RDSS OR APPROVED EQUAL. CONDUITS 1 1/4" AND SMALLER SHALL USE A FOAM SEALANT AS MANUFACTURED BY POLYWATER FST DUCT SEALANT OR EQUAL. ALL HARDWARE IS TO BE STAINLESS STEEL UNLESS OTHERWISE DIRECTED.

ALL ENCLOSURES ARE TO BE RATED AS FOLLOWS:

- OUTDOORS: NEMA 4X (STAINLESS STEEL)
- CLASSIFIED AREAS: NEMA 7
- INDOORS (WET AREAS): NEMA 4X (STAINLESS STEEL), U.O.N.
- INDOORS (CONTROLLED ENVIRONMENT) NEMA 1, UNLESS OTHERWISE NOTED.
- INDOORS (CHEMICAL STORAGE) NEMA 4X (POLYCARBONATE).

K. ELECTRICIAN SHALL REVIEW ALL OTHER TRADES CONSTRUCTION DOCUMENTS AND/OR COORDINATE WITH OTHER TRADES AND VERIFY IF THERE ARE ANY ADDITIONAL ELECTRICAL REQUIREMENTS NOT SHOWN ON ELECTRICAL DRAWINGS. COST FOR WORK SHOWN ON OTHER TRADES DRAWINGS SHALL BE INCLUDED IN BASE BID. ALL FIELD WIRING AND TERMINATIONS OF PROCESS EQUIPMENT AND INSTRUMENTATION AND CONTROLS SHALL BE THE RESPONSIBILITY OF THE ELECTRICIAN. ALL CABLES AND WIRES PROVIDED BY VENDORS SHALL BE INSTALLED AND TERMINATED BY THE ELECTRICIAN. WIRE ALL MISCELLANEOUS POWER AND CONTROLS AS REQUIRED TO PROVIDE A COMPLETE FUNCTIONING SYSTEM.

L. A 4-20MA SIGNAL IS AN ANALOG SIGNAL USED TO TRANSMIT DATA (LEVEL, FLOW, ETC.) FOR PROCESS CONTROLS. THE ELECTRICIAN SHALL PROVIDE, INSTALL AND TERMINATE #16 TWISTED SHIELDED PAIRS (T.S.P.) WIRING IN RIGID GALVANIZED STEEL CONDUIT (RGS). RGS IS USED IN AN ATTEMPT TO REDUCE THE DISTORTION AFFECT FROM EMI AND RFI. BELOW GRADE CONDUITS SHALL BE PVC SCHED-40. PARALLEL RUNS OF DATA CONDUITS AND POWER CONDUITS SHALL BE SEPARATED BY 2 FEET. THE #16 T.S.P. SHIELD SHALL BE GROUNDED AT THE CONTROL PANEL ONLY (DO NOT GROUND AT BOTH ENDS).

M. THE ELECTRICIAN SHALL BE RESPONSIBLE FOR LAYOUT AND COORDINATION OF OPENINGS AND CHASES AND SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED TO INSTALL THEIR WORK. ALL CONCRETE HOUSE KEEPING PADS SHALL BE FRAMED AND POURED BY THE ELECTRICIAN. PADS SHALL HAVE A 45 DEGREE, 1" CHAMFER AROUND UPPER EDGE.

N. DO NOT INSTALL DEVICES SCALED FROM THESE DRAWINGS. THE ELECTRICIAN SHALL REVIEW ALL OTHER TRADES DRAWINGS AND SHOP DRAWINGS AND PRODUCE CONDUIT/ DEVICE LAYOUT DRAWINGS. SUBMIT THESE DRAWINGS TO ALL TRADES FOR COORDINATION AND APPROVAL. SEND APPROVED LAYOUT DRAWINGS TO ENGINEER FOR FINAL APPROVAL.

O. ALL ELECTRICAL EQUIPMENT, DEVICES, LIGHTING FIXTURES, CONDUIT AND WIRING SHOWN ON THE ELECTRICAL DRAWINGS IS NEW UNLESS CLEARLY CALLED OUT AS EXISTING. ALL EXISTING ELECTRICAL EQUIPMENT THAT IS CALLED OUT TO BE REUSED SHALL BE INSPECTED IN THE FIELD BY THE ELECTRICIAN AND THE CONSTRUCTION MANAGER TO DETERMINE ITS CONDITION PRIOR TO STARTING ANY WORK. PROVIDE DOCUMENTATION TO OWNER INDICATING CONDITION OF THE EXISTING EQUIPMENT, AND REUSE EXISTING EQUIPMENT ONLY IF ALL PARTIES AGREE THE CONDITION IS ACCEPTABLE. ALL EXISTING EQUIPMENT DETERMINED TO BE UNUSABLE SHALL BE REPLACED WITH LIKE KIND AS DIRECTED BY THE OWNER. ANY OF THE OWNERS EQUIPMENT DETERMINED TO BE REUSED THAT IS DAMAGED BY ANY CONTRACTOR DURING SHUTDOWN SHALL BE REPLACED BY THAT CONTRACTOR. ALL EXISTING EQUIPMENT IS THE PROPERTY OF THE OWNER (NOT THE CONTRACTOR) AND SHALL BE TREATED ACCORDINGLY.

P. IN INDUSTRIAL APPLICATIONS, SUCH AS THIS ONE WHERE QUALIFIED PERSONS WILL SERVICE EQUIPMENT, A DISCONNECTING MEANS IS NOT REQUIRED AT A MOTOR AS LONG AS THE DISCONNECTING MEANS AT THE CONTROLLER IS CAPABLE OF BEING LOCKED IN THE OPEN POSITION. THE ELECTRICIAN SHALL BE HELD RESPONSIBLE TO ENSURE ALL CONTROLLERS TO BE INSTALLED ARE CAPABLE OF LOCKOUT / TAGOUT PRIOR TO INSTALLATION. THIS IS IMPORTANT.

Q. CONFORM TO THE NEC, OSHA, FIRE MARSHAL, BUILDING DEPARTMENT AND OTHER APPLICABLE CODES AND REGULATIONS. OBTAIN PERMITS, PAY ALL FEES, AND ARRANGE FOR REQUIRED INSPECTIONS.

R. THE ELECTRICIAN IS RESPONSIBLE FOR PROVIDING A LICENSED LIGHTNING PROTECTION CONTRACTOR TO DESIGN AND INSTALL A LIGHTNING PROTECTION SYSTEM ON ALL NEW BUILDINGS AS CALLED OUT IN SPECIFICATION 264100.

STATE OF OHIO
CHRISTIAN A. TODD
No. 71955
REGISTERED PROFESSIONAL ENGINEER
09-16-24

CT consultants
engineers • architects • planners
A Verdantas Company

NO	REVISION	DATE
		2/7/2023

ISSUED FOR:	BID
ISSUE DATE:	10/10/24
SCALE:	AS NOTED
DESIGNED BY:	CAT
DRAWN BY:	CAT
CHECKED BY:	CAT

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
NORTH OLMSTED, OHIO
CUYAHOGA COUNTY

ELECTRICAL - E SERIES

ELECTRICAL LEGEND AND NOTES

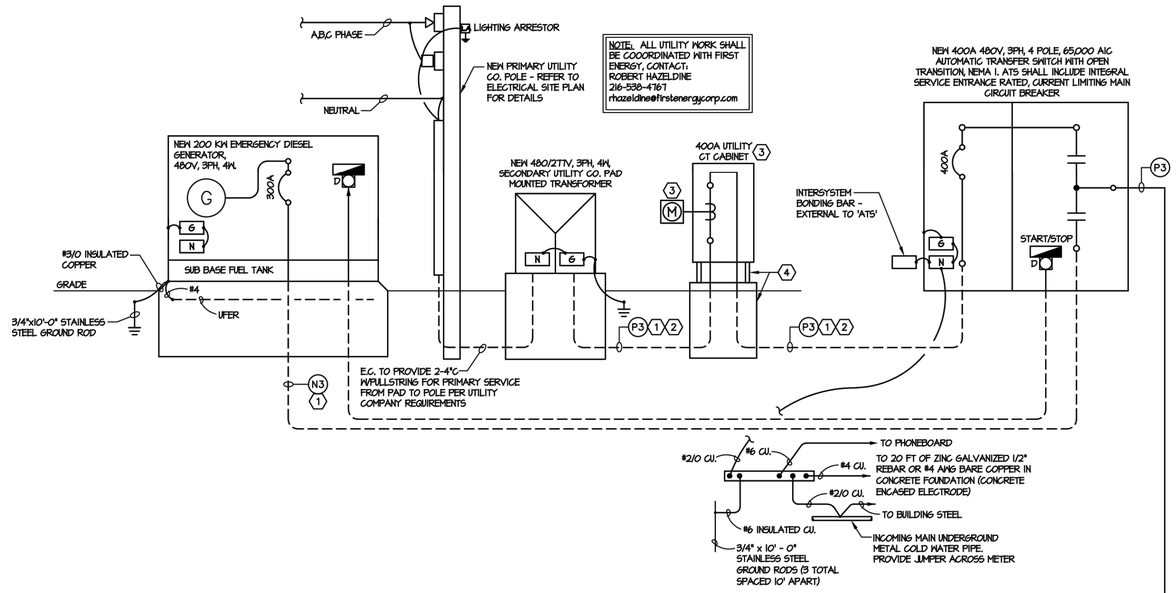
PROJECT NO.
210888

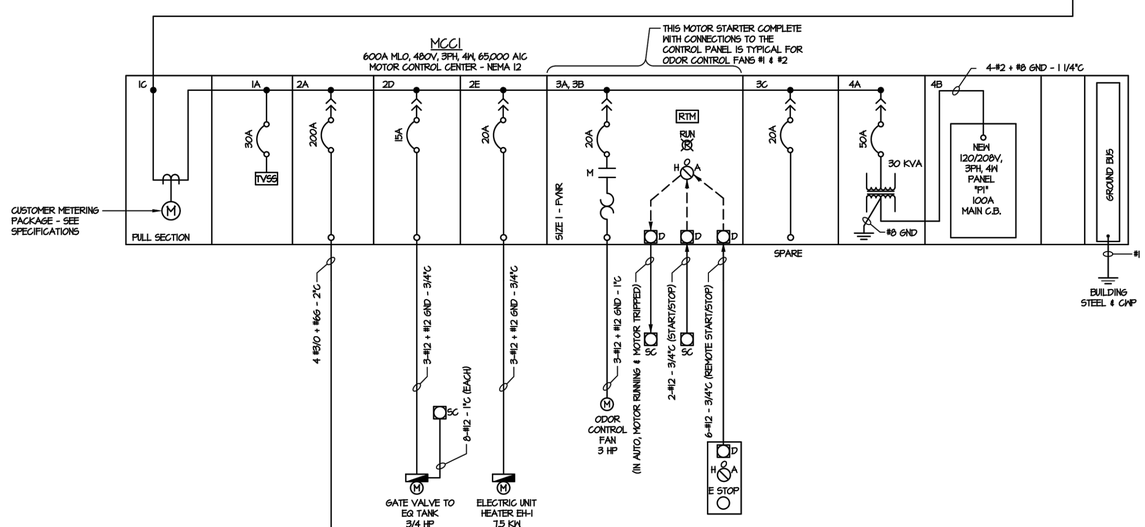
DISCIPLINE
ELECTRICAL

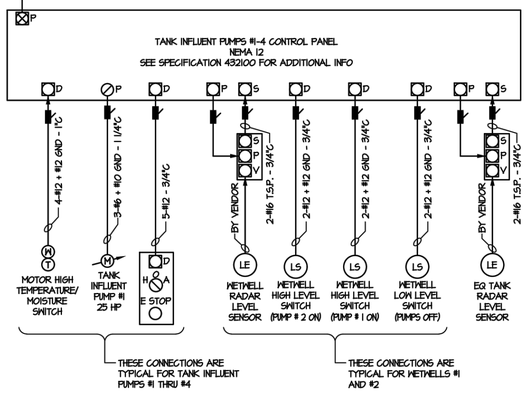
SHEET NAME
00E-01

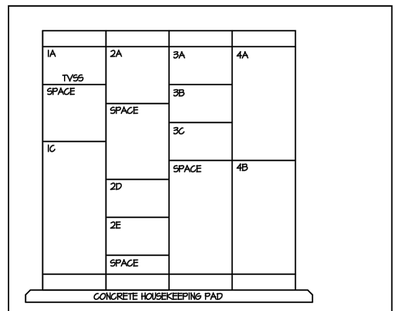
SHEET 45 OF 53

CONTRACTOR MUST VERIFY ALL CLEARANCES AND DIMENSIONS IN FIELD









MCC1 LAYOUT
NO SCALE

ONE-LINE CODED NOTES

1. PROVIDE FEEDER IN SCH. 40 PVC BELOW GRADE CONDUIT, AND PROVIDE (1) SPARE CONDUIT. SPARE CONDUIT TO MATCH THE CONDUIT SIZE OF THE ASSOCIATED FEEDER.
2. THIS IS THE SERVICE ENTRANCE SECONDARY FEEDER. DO NOT INCLUDE THE EQUIPMENT GROUND WITH THIS FEEDER. THIS FEEDER SHOULD INCLUDE 3 UNGROUNDED CONDUCTORS AND A GROUNDED (NEUTRAL) CONDUCTOR ONLY, SIZED PER THE SCHEDULE.
3. E.C. TO PROVIDE BUSSED 600A CT CABINET PER UTILITY COMPANY SPECIFICATIONS. ALSO PROVIDE METER SOCKET PER UTILITY COMPANY SPECIFICATIONS.
4. PROVIDE GALVANIZED UNISTRUT FRAME AND CONCRETE FOUNDATION SYSTEM TO SUPPORT CT CABINET AND METER ADJACENT TO PAD MOUNT TRANSFORMER. LOCATION MUST BE APPROVED BY UTILITY COMPANY.

ENCLOSURE NOTE:

ENCLOSURE TYPES FOR ALL ELECTRICAL EQUIPMENT INCLUDING MOTOR CONTROL CENTERS, PANELBOARDS, DISTRIBUTION PANELBOARDS, TRANSFORMERS, DISCONNECT SWITCHES, CONTROL PANELS, CONTROL STATIONS, ETC. SHALL BE BASED ON EQUIPMENT LOCATION ENVIRONMENT. REFERENCE THE GENERAL NOTES ON DRAWING 00E-01 FOR THE NEMA DESIGNATIONS OF ENCLOSURE TYPES REQUIRED.

TERMINAL BLOCK LEGEND

- ☐V = TERMINAL BLOCK FOR VENDOR SUPPLIED CABLE CONNECTION
- ☐P = TERMINAL BLOCK FOR 120 VOLT POWER CONNECTION
- ☐D = TERMINAL BLOCK FOR DRY CONTACT - INTERLOCK CONTROL / ALARM WIRING AT FIELD DEVICE
- ☒V = TERMINAL BLOCK FOR VENDOR SUPPLIED CABLE AT 480 VOLT, 3 PHASE POWER CONNECTION
- ☒P = TERMINAL BLOCK FOR 480 VOLT, 3 PHASE POWER CONNECTION
- ☐S = TERMINAL BLOCK FOR SIGNAL WIRING 4-20mA SIGNAL
- ☐T = TERMINAL BLOCK FOR TELEPHONE WIRING
- ☐SC = TERMINAL BLOCK FOR DRY CONTACT - INTERLOCK CONTROL / ALARM WIRING AT SCADA SYSTEM
- ☐C = TERMINAL BLOCK FOR CAT-6 WIRING
- ☐E = TERMINAL BLOCK FOR ETHERNET CONNECTION TCP/IP
- ⊘P = TERMINAL BLOCK FOR VFD 480 VOLT, 3 PHASE POWER CONNECTION
- ⊘D = TERMINAL BLOCK FOR VFD DRY CONTACT - INTERLOCK CONTROL WIRING AT FIELD DEVICE
- ⊘S = TERMINAL BLOCK FOR VFD SIGNAL WIRING 4-20mA SIGNAL
- ⊘E = TERMINAL BLOCK FOR VFD ETHERNET CONNECTION TCP/IP

BRANCH CIRCUIT + FEEDER SCHEDULE - 1 PHASE

DESIGNATION	PHASE	QTY. OF SETS	UNGROUNDED CONDUCTORS		GROUNDED CONDUCTOR	EQUIPMENT GROUND CONDUCTOR	CONDUIT
			Qty.	Size	Size	Size	Size
A1	1	1	1	#12	#12	#12	3/4"
B1	1	1	1	#10	#10	#10	3/4"
C1	1	1	1	#8	#8	#10	3/4"
D1	1	1	1	#6	#6	#10	1"
E1	1	1	1	#4	#4	#8	1 1/4"
F1	1	1	1	#3	#3	#8	1 1/4"
G1	1	1	1	#2	#2	#8	1 1/4"
A2	1	1	2	#12	#12	#12	3/4"
B2	1	1	2	#10	#10	#10	3/4"
C2	1	1	2	#8	#8	#10	3/4"
D2	1	1	2	#6	#6	#10	1"
E2	1	1	2	#4	#4	#8	1 1/4"
F2	1	1	2	#3	#3	#8	1 1/4"
G2	1	1	2	#2	#2	#8	1 1/4"
H2	1	1	2	#1	#1	#6	1 1/2"
I2	1	1	2	#1/0	#1/0	#6	2"
J2	1	1	2	#2/0	#2/0	#6	2"
K2	1	1	2	#3/0	#3/0	#6	2"
L2	1	1	2	#4/0	#4/0	#4	2 1/2"
M2	1	1	2	#250 KCMIL	#250 KCMIL	#4	2 1/2"
N2	1	1	2	#350 KCMIL	#350 KCMIL	#4	3"
O2	1	1	2	#400 KCMIL	#400 KCMIL	#3	3 1/2"
P2	1	1	2	#500 KCMIL	#500 KCMIL	#3	4"
Q2	1	2	2	#4/0	#4/0	#2	2 1/2"
R2	1	2	2	#250 KCMIL	#250 KCMIL	#2	2 1/2"
S2	1	2	2	#350 KCMIL	#350 KCMIL	#1	3"
T2	1	2	2	#500 KCMIL	#500 KCMIL	#1/0	3 1/2"
U2	1	2	2	#600 KCMIL	#600 KCMIL	#1/0	4"

ALL WIRING ABOVE IS COPPER
FEEDER DESIGNATION SUBSCRIPTS:
n = WHEN ADJACENT TO FEEDER DESIGNATION, INDICATES THAT GROUNDED CONDUCTOR IS NOT REQUIRED FOR INDICATED FEEDER
ig = WHEN ADJACENT TO FEEDER DESIGNATION, INDICATES FEEDER SHALL INCLUDE ISOLATED GROUND CONDUCTOR SIZED EQUAL TO THE EQUIPMENT GROUND CONDUCTOR

FEEDER SCHEDULE - 3 PHASE

DESIGNATION	PHASE	QTY. OF SETS	UNGROUNDED CONDUCTORS		GROUNDED CONDUCTOR	EQUIPMENT GROUND CONDUCTOR	CONDUIT
			Qty.	Size	Size	Size	Size
A3	3	1	3	#12	#12	#12	3/4"
B3	3	1	3	#10	#10	#10	3/4"
C3	3	1	3	#8	#8	#10	3/4"
D3	3	1	3	#6	#6	#10	1"
E3	3	1	3	#4	#4	#8	1 1/4"
F3	3	1	3	#3	#3	#8	1 1/4"
G3	3	1	3	#2	#2	#8	1 1/2"
H3	3	1	3	#1	#1	#6	1 1/2"
I3	3	1	3	#1/0	#1/0	#6	2"
J3	3	1	3	#2/0	#2/0	#6	2"
K3	3	1	3	#3/0	#3/0	#6	2"
L3	3	1	3	#4/0	#4/0	#4	2 1/2"
M3	3	1	3	#250 KCMIL	#250 KCMIL	#4	2 1/2"
N3	3	1	3	#350 KCMIL	#350 KCMIL	#4	3"
O3	3	1	3	#400 KCMIL	#400 KCMIL	#3	3 1/2"
P3	3	1	3	#500 KCMIL	#500 KCMIL	#3	4"
Q3	3	2	3	#4/0	#4/0	#2	2 1/2"
R3	3	2	3	#250 KCMIL	#250 KCMIL	#2	2 1/2"
S3	3	2	3	#350 KCMIL	#350 KCMIL	#1	3"
T3	3	2	3	#500 KCMIL	#500 KCMIL	#1/0	4"
U3	3	2	3	#600 KCMIL	#600 KCMIL	#1/0	4"
V3	3	3	3	#400 KCMIL	#400 KCMIL	#2/0	3 1/2"
W3	3	3	3	#600 KCMIL	#600 KCMIL	#3/0	4"
X3	3	4	3	#600 KCMIL	#600 KCMIL	#4/0	4"
Y3	3	5	3	#600 KCMIL	#600 KCMIL	#250 KCMIL	4"
Z3	3	6	3	#600 KCMIL	#600 KCMIL	#350 KCMIL	4"
A4	3	8	3	#500 KCMIL	#500 KCMIL	#400 KCMIL	4"
B4	3	10	3	#600 KCMIL	#600 KCMIL	#500 KCMIL	4"
TRANSFORMER PRIMARY FEEDERS							
T1P	3	1	3	#10	–	#10	3/4"
T2P	3	1	3	#6	–	#10	1"
T3P	3	1	3	#4	–	#8	1"
T4P	3	1	3	#1	–	#6	1 1/2"
T5P	3	1	3	#2/0	–	#6	2"
T6P	3	1	3	#4/0	–	#4	2 1/2"
T7P	3	1	3	#500 KCMIL	–	#3	3"
T8P	3	2	3	#250 KCMIL	–	#2	2 1/2"
T9P	3	2	3	#600 KCMIL	–	#1/0	3 1/2"
T10P	3	3	3	#600 KCMIL	–	#3/0	3 1/2"
TRANSFORMER SECONDARY FEEDERS							
T1S	3	1	3	#4	#4	#8	1 1/4"
T2S	3	1	3	#1	#1	#8	1 1/4"
T3S	3	1	3	#1/0	#1/0	#6	2"
T4S	3	1	3	#250 KCMIL	#250 KCMIL	#2	2 1/2"
T5S	3	1	3	#600 KCMIL	#600 KCMIL	#1/0	4"
T6S	3	2	3	#250 KCMIL	#250 KCMIL	#2	2 1/2"
T7S	3	2	3	#600 KCMIL	#600 KCMIL	#1/0	4"
T8S	3	3	3	#400 KCMIL	#400 KCMIL	#2/0	3"
T9S	3	4	3	#600 KCMIL	#600 KCMIL	#4/0	4"
T10S	3	6	3	#600 KCMIL	#600 KCMIL	#350 KCMIL	4"

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FEEDER DESIGNATION SUBSCRIPTS:
n = WHEN ADJACENT TO FEEDER DESIGNATION, INDICATES THAT GROUNDED CONDUCTOR IS NOT REQUIRED FOR INDICATED FEEDER
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STATE OF OHIO
CHRISTIAN A. TODD
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CHECKED BY:	CAT

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
CUYAHOGA COUNTY NORTH OLMSTED, OHIO

ELECTRICAL - E SERIES

ONE LINE DIAGRAM

PROJECT NO. 210888
DISCIPLINE ELECTRICAL
SHEET NAME 00E-02
SHEET 46 OF 53

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MCC1

VOLTAGE: 480/277 | MAINS: LUGS ONLY | LOCATION:
PH & WIRES: 3P 4W | AIC RATING: 65,000 | FEEDER AMPACITY: 400
BUSSING AMPS: 600 | MOUNTING: FLOOR | REMARKS:

ID	SERVING	BUCKET TYPE	SIZE	FLA	KVA	NOTES
1A	TVSS	BREAKER	30A	0.0		
1B	SPACE	–	–	0.0		
1C	PULL SECTION	LUGS	–	0.0		
2A	TANK INFLUENT PUMPS C.P.	BREAKER	200A	160.0		
2B	SPACE	–	–	0.0		
2C	SPACE	–	–	0.0		
2D	GATE VALVE TO EQ TANK	BREAKER	15A	1.6		
2E	UNIT HEATER EH–1	BREAKER	20A	9.0		
3A	ODOR CONTROL FAN #1	FVNR SIZE 1	20A	4.8		
3B	ODOR CONTROL FAN #2	FVNR SIZE 1	20A	4.8		
3C	SPARE	BREAKER	20A	0.0		
4A	30 KVA XFMR FOR 'P1'	BREAKER/XFMR	50A	0.0		
3B	PANEL 'P1'	PANEL	–	27.9		
				0.0		
				0.0		
				0.0		
				0.0		
				0.0		
				0.0		
				0.0		
	CONNECTED AMPS:					

MCC1 FEEDER CALCULATION:

SUBTOTAL OF MOTOR LOAD FLA:	171.20
LARGEST MOTOR LOAD FLA x 25%	50.00
SUBTOTAL OF NONCONTINUOUS NON–MOTOR LOAD FLA:	36.92
SUBTOTAL OF CONTINUOUS NON–MOTOR LOAD FLA x 125%:	0.00
TOTAL FLA:	**258.12**

MCC1 SCHEDULE NOTES

A = NOT USED

Demand Load Amps = 258.12

PANEL P1

VOLTAGE: 208/120 | MAINS: 100A MCB | LOCATION: ELECTRICAL ROOM
PH & WIRES: 3P 4W | AIC RATING: 10,000 | FEEDER AMPACITY: 100
BUSSING AMPS: 125 | MOUNTING: MCC1 | REMARKS:

						KVA LOADS								
LOAD DESCRIPTION	KVA	P	AMP	CCT	WIRE	PH A	PH B	PH C	WIRE	CCT	AMP	P	KVA	LOAD DESCRIPTION
LTG – ELEC BLDG	0.10	1	20	1	A1	0.10	---	---		2	20	1	0.00	SPARE
SPARE	0.00	1	20	3		---	0.36	---	A1	4	20	1	0.36	RECEPT – ELEC BLDG
SPARE	0.00	1	20	5		---	---	0.36	A1	6	20	1	0.36	RECEPT – PHONEBOARD
SPARE	0.00	1	20	7		0.00	---	---		8	20	1	0.00	SPARE
SPARE	0.00	1	20	9		---	0.00	---		10	20	1	0.00	SPARE
SPARE	0.00	1	20	11		---	---	0.18	A1	12	20	1	0.18	RECEPT – ELEC BLDG EXTERIOR
SPLIT SYSTEM SS–1	1.77	2	20	13	B2n	1.77	---	---		14	20	1	0.00	SPARE
	1.77			15		---	1.77	---		16	20	1	0.00	SPARE
GENSET JACKET HEATER	2.50	2	40	17	C2n	---	---	2.60	A1	18	20	1	0.10	WET WELL LEVEL SENSORS
	2.50			19		2.60	---	---	A1	20	20	1	0.10	EQ TANK LEVEL SENSOR
GENSET CONTROL POWER	0.20	1	20	21	A1	---	0.30	---	A1	22	20	1	0.10	EQ TANK EFFLUENT FLOW METER
SPARE	0.00	1	20	23		---	---	0.00		24	20	1	0.00	SPARE
SPARE	0.00	1	20	25		0.00	---	---		26	20	1	0.00	SPARE
SPARE	0.00	1	20	27		---	0.00	---		28	20	1	0.00	SPARE
SPARE	0.00	1	20	29		---	---	0.00		30	20	1	0.00	SPARE
SPARE	0.00	1	20	31		0.00	---	---		32	20	1	0.00	SPARE
SPARE	0.00	1	20	33		---	0.00	---		34	20	1	0.00	SPARE
SPARE	0.00	1	20	35		---	---	0.00		36	20	1	0.00	SPARE
SPARE	0.00	1	20	37		0.00	---	---		38	20	1	0.00	SPARE
SPARE	0.00	1	20	39		---	0.00	---		40	20	1	0.00	SPARE
SPARE	0.00	1	20	41		---	---	0.00		42	20	1	0.00	SPARE
	CONNECTED AMPS:		27.85			4.47	2.43	3.14		CONNECTED KVA:			10.03	

NOTES: PROVIDE SOLID NEUTRAL BUS & GROUND BAR.
PROVIDE LUG SIZES AS REQUIRED FOR FEEDER SIZE SHOWN ON ONE–LINE DIAGRAM
L = INDICATES LOCK–ON CIRCUIT BREAKER
G = INDICATES 5 mA TRIP GFCI TYPE CIRCUIT BREAKER
HT = INDICATES 30 mA TRIP GFCI TYPE CIRCUIT BREAKER

Demand Load Amps = 27.92

LIGHTING FIXTURE SCHEDULE - LED LUMINAIRES

TYPE	FIXTURE DESCRIPTION	MOUNTING	VOLTS	WATTS	DELIVERED LUMENS	CRI	CCT	MANUFACTURER	CATALOG NO.	DRIVER TYPE	EQUIVALENT
V1E	SAME AS TYPE 'V1' EXCEPT WITH INTEGRAL EMERGENCY BATTERY DRIVER	CEILING OR WALL SURFACE	120–277	52	6000 1400 (EM)	80	3500	COLUMBIA	HEM–4–35–HL–RFA–E–U–ELL14HAZ	FIXED OUTPUT	COOPER HE WILLIAMS
W1E	SAME AS TYPE 'W1' EXCEPT WITH INTEGRAL EMERGENCY BATTERY DRIVER	WALL 12'–0" AFF	120–277	45	5500	70	4000	HUBBELL	RWL1–48L–45–4K7–4W–UNV–BLT–PC–EH	FIXED OUTPUT	COOPER HE WILLIAMS
X1	NEMA 4X EXIT SIGN WITH INTEGRAL BATTERY, BLACK HOUSING AND RED LETTERS	WALL 7'–0" AFF	120–277	4	–	–	–	DUAL LITE	SEWL–S–R–B–E	–	COOPER HE WILLIAMS

NOTES:
1. CONFIRM ALL FIXTURE VOLTAGES WITH CIRCUITING ON PLAN.
2. MANUFACTURER TO VERIFY FIXTURE CATALOG NUMBER WITH THE DESCRIPTION OF THE FIXTURE AND CIRCUITING ON THE PLANS.
3. ALL EXIT SIGNS TO HAVE RED LETTERS WITH 6" X 3/4" LETTERS AND 90 MINUTES OF BATTERY BACKUP.
4. ALL ACRYLIC LENSES ARE TO BE .125" THICK MINIMUM.
5. REFER TO ARCHITECTURAL ELEVATIONS FOR CONFIRMATION OF MOUNTING HEIGHTS OF ALL LIGHT FIXTURES.
6. CONTRACTOR SHALL PROVIDE ALL REQUIRED MOUNTING HARDWARE. ALL MOUNTING HARDWARE TO BE PAINTED TO MATCH CEILING OR WALL AS DIRECTED.
7. ALL LUMINAIRE TRIM COLORS SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL. DO NOT ORDER FIXTURES WITHOUT APPROVED COLORS
8. ALL MOUNTING HEIGHTS OF LIGHT FIXTURES INDICATED ARE TO BE MEASURED FROM THE BOTTOM OF THE LIGHT FIXTURE TO THE FINISHED FLOOR UNLESS NOTED OTHERWISE.
9. ALL BATTERY BACKUP FIXTURES SHALL HAVE MINIMUM LUMEN OUTPUT AS LISTED, AND PROVIDE A MINIMUM 3–YEAR WARRANTY.

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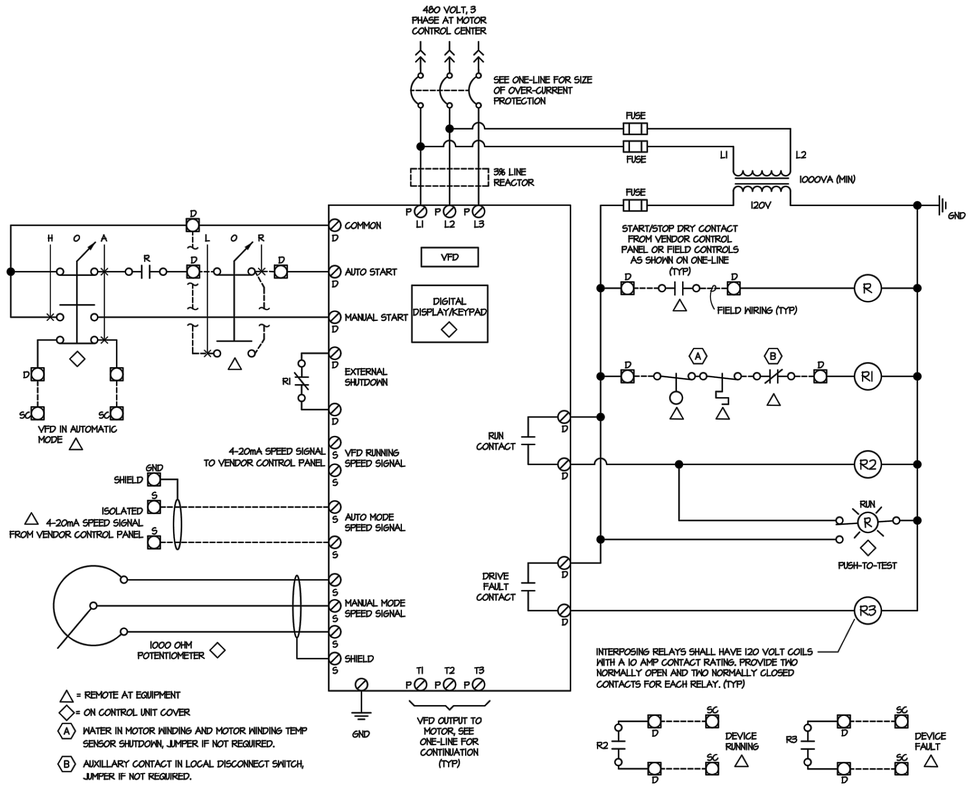
ELECTRICAL - E SERIES

ELECTRICAL SCHEDULES

PROJECT NO. 210888
DISCIPLINE ELECTRICAL
SHEET NAME 00E-03
SHEET 47 OF 53



VARIABLE FREQUENCY DRIVE (VFD) GENERAL NOTES:

A. THE HARMONICS INTRODUCED BY THE VARIABLE FREQUENCY DRIVES (VFD) AT THE POINT OF COMMON COUPLING (PCC) SHALL MEET THE REQUIREMENTS OF IEEE519-1992. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THEIR BASE BID THE COST TO HAVE A HARMONIC ANALYSIS COMPLETED BY THE VFD MANUFACTURER. THE SHORT CIRCUIT AMPERES AVAILABLE (SCA) AT THE PCC, THE RATED VOLTAGE AT THE PCC, THE LOCATION OF THE PCC, THE MAXIMUM DEMAND LOAD AT THE PCC AND ANY OTHER INFORMATION REQUIRED SHALL BE FIELD VERIFIED BY THE ELECTRICAL CONTRACTOR AND PROVIDED TO THE VFD MANUFACTURER IN ORDER TO PERFORM A HARMONIC ANALYSIS. THIS ELECTRICAL SYSTEM HAS AN EMERGENCY GENERATOR AND THIS WILL REQUIRE THAT THE ELECTRICAL CONTRACTOR PROVIDE THE VOLTAGE, KH, KVA, AND SUBTRANSIENT REACTANCE FOR THE GENERATOR. THE VFD MANUFACTURER IS TO PERFORM HARMONIC ANALYSIS CALCULATIONS AND INCLUDE CALCULATIONS WITH BID PACKAGE. IF THESE CALCULATIONS SHOW IEEE519 AT UTILITY POINT OF COMMON COUPLING IS NOT MET, THE VFD AND SWITCHGEAR PACKAGE WILL NOT BE APPROVED, THE VFD MANUFACTURER SHALL INCLUDE FILTERING AS REQUIRED TO MEET IEEE519 REQUIREMENTS. UPON COMPLETION OF THE INSTALLATION, THE VFD MANUFACTURER SHALL PERFORM HARMONIC MEASUREMENTS AT THE POINT OF COMMON COUPLING TO VERIFY COMPLIANCE WITH IEEE519-1992. A REPORT OF THE VOLTAGE THD AND CURRENT TDD SHALL BE SENT TO THE ENGINEER. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LABOR, MATERIAL, AND PROTECTION AS NEEDED TO ACCESS TEST POINTS. THE READINGS SHALL BE TAKEN WITH ALL VFD'S AND ALL OTHER LOADS AT FULL LOADS, OR AS CLOSE AS FIELD CONDITIONS ALLOW.

B. IT SHALL BE THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO COORDINATE WITH THE GENERAL TRADES CONTRACTOR AND VERIFY THAT THE PROVIDED MOTORS ARE COMPATIBLE WITH THE VFDS. ALL MOTOR NAMEPLATE DATA SHALL BE PROVIDED TO THE VFD MANUFACTURER. THE VFD MANUFACTURER SHALL PROVIDE A VFD THAT IS PERFORMANCE MATCHED TO THE MOTOR. THE VFD MANUFACTURER SHALL PROVIDE DOCUMENTATION INDICATING THE MOTOR IS COMPATIBLE, SUITABLE FOR VFD USAGE AND IS PERFORMANCE MATCHED TO THEIR VFD. THIS DOCUMENT SHALL BE INCLUDED IN THE VFD SUBMITTAL FOR APPROVAL.

C. THE dv/dt PHENOMENON, ASSOCIATED WITH IGBT TRANSISTORS, HAS POTENTIALLY SERIOUS EFFECTS ON MOTOR WINDINGS. DUE TO THIS PHENOMENON THERE ARE DISTANCE LIMITATIONS FOR MOTOR CABLE LENGTH FROM THE VFD TO THE MOTOR FOR MOST VFD MANUFACTURERS. THE CONTRACTOR SHALL PROVIDE THE MANUFACTURER WITH ALL CABLE LENGTHS (NOT THE DISTANCE FROM VFD TO MOTOR). IF REQUIRED THE MANUFACTURER SHALL PROVIDE A dv/dt FILTER IN THE BASE BID TO ENSURE A PROPER WAVEFORM TO THE MOTOR. THIS FILTER SHALL BE MOUNTED IN THE VFD ENCLOSURE.

D. ALL VFDS WILL BE LOCATED IN THE MOTOR CONTROL CENTERS AND IT IS ASSUMED WILL BE BY THE SAME MANUFACTURER. ALL NECESSARY COOLING DEVICES REQUIRED TO ACCOMODATE THIS INSTALLATION SHALL BE THE RESPONSIBILITY OF THE VFD AND MOTOR CONTROL CENTER MANUFACTURER. THIS MEANS THE VFD WILL OPERATE RELIABLY WITHOUT TRIPPING OFF DUE TO VFD OVERTEMPERATURE.

E. INCOMING LINE REACTORS MUST BE INSTALLED INSIDE THE VFD HOUSING AND SHALL BE AN INTEGRAL PART OF THE VFD. LINE REACTOR IMPEDANCES TO BE 3%. LINE REACTORS SHALL PROTECT THE FRONT END OF THE VFD FROM TRANSIENTS AND REDUCE HARMONICS GENERATED TO THE REST OF THE DISTRIBUTION SYSTEM.

F. THE ELECTRICAL CONTRACTORS BASE BID SHALL INCLUDE THE SERVICES OF A VFD FIELD SERVICE ENGINEER. THE SERVICE ENGINEER SHALL PROVIDE TECHNICAL DIRECTION AND ASSISTANCE TO ALL CONTRACTORS ASSOCIATED WITH GENERAL ASSEMBLY OF THIS FACILITY. THE FIELD SERVICE ENGINEER SHALL VERIFY THAT THE UNIT IS INSTALLED AS SPECIFIED IN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, THE FIELD WIRING IS INSTALLED CORRECTLY, ALL APPLICABLE ADJUSTMENTS HAVE BEEN PERFORMED AND THE VFD IS OPERATING PROPERLY. THE FIELD SERVICE ENGINEER SHALL PROVIDE 4 HOURS OF START-UP ASSISTANCE FOR EACH VFD. ALL START-UP ASSISTANCE COSTS AND THE LOCATION OF THE CLOSEST ENGINEERING SERVICE FACILITY SHALL BE INCLUDED IN THE BASE BID.

G. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AN EIGHT (8) HOUR TRAINING SESSION FOR UP TO FIVE (5) OWNERS REPRESENTITIVES DURING NORMAL WORK DAYS AT THE OWNERS FACILITY.

H. THE ELECTRICAL CONTRACTOR IS REQUIRED TO REVIEW THE SPECIFICATION PACKAGE AND COMPARE IT TO THESE GENERAL NOTES. IN THE EVENT OF A DISCREPANCY, THE CONTRACTOR SHALL PROVIDE THE BETTER QUALITY OR GREATER AMOUNT OF WORK IN THEIR BIDS. UPON AWARD OF THE CONTRACT, THE CONTRACTOR SHALL REQUEST GUIDANCE ON HOW TO PROCEED WITH CONSTRUCTION PRIOR TO ROUGH-IN.

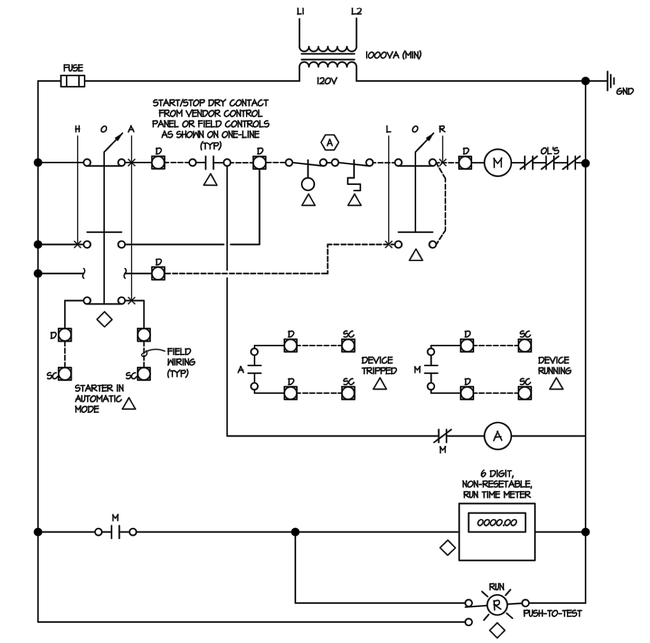
I. ALL CONTROL PANELS WILL BE PROVIDED WITH THE MAJOR EQUIPMENT, AND TURNED OVER TO THE ELECTRICAL CONTRACTOR FOR INSTALLATION. ALL FIELD WIRING AND TERMINATIONS SHALL BE BY THE ELECTRICAL CONTRACTOR. THE CONTROL PANELS APPROVED SHOP DRAWINGS SHALL BE CONSIDERED AS THE MEANS AND METHODS OF INSTALLATION.

J. 4-20 mA SPEED SIGNALS FROM REMOTE CONTROL PANELS SHALL BE ISOLATED AND THE SHIELD SHALL BE GROUNDED AT THE CONTROL PANEL ONLY.

WIRING DIAGRAM FOR:

VARIABLE FREQUENCY DRIVES (VFD)

SCALE: NONE



WIRING DIAGRAM FOR:

FULL VOLTAGE NON-REVERSING (FVNR) STARTERS

SCALE: NONE, NEMA SIZE AS SHOWN

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ELECTRICAL - E SERIES

ELECTRICAL DETAILS

PROJECT NO. 210888
DISCIPLINE: ELECTRICAL
SHEET NAME: 00E-04
SHEET 48 OF 53

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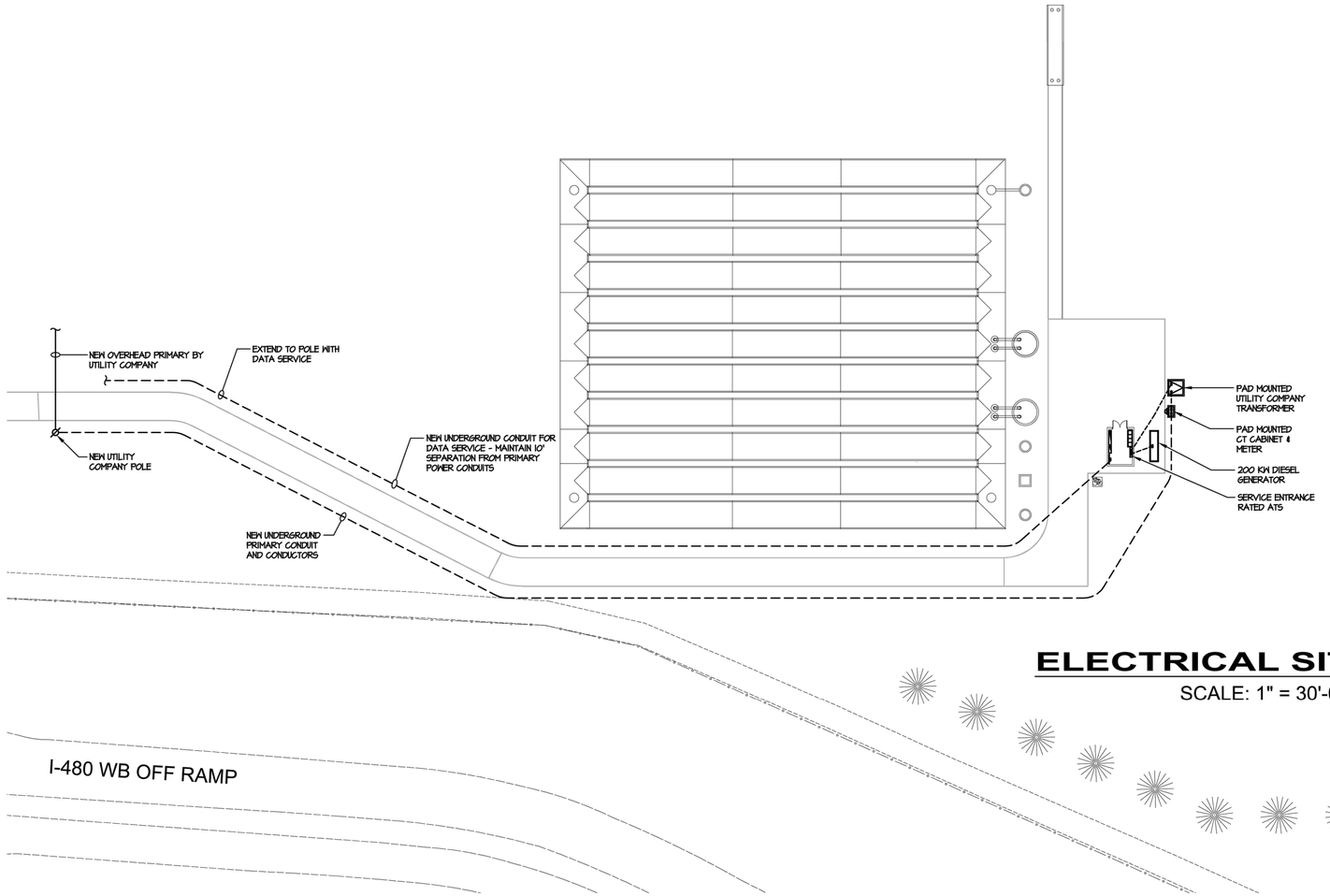
CONTRACTOR MUST VERIFY ALL CLEARANCES AND DIMENSIONS IN FIELD



ELECTRICAL SITE PLAN

SCALE: 1" = 30'-0"

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ELECTRICAL - E SERIES

ELECTRICAL SITE PLAN

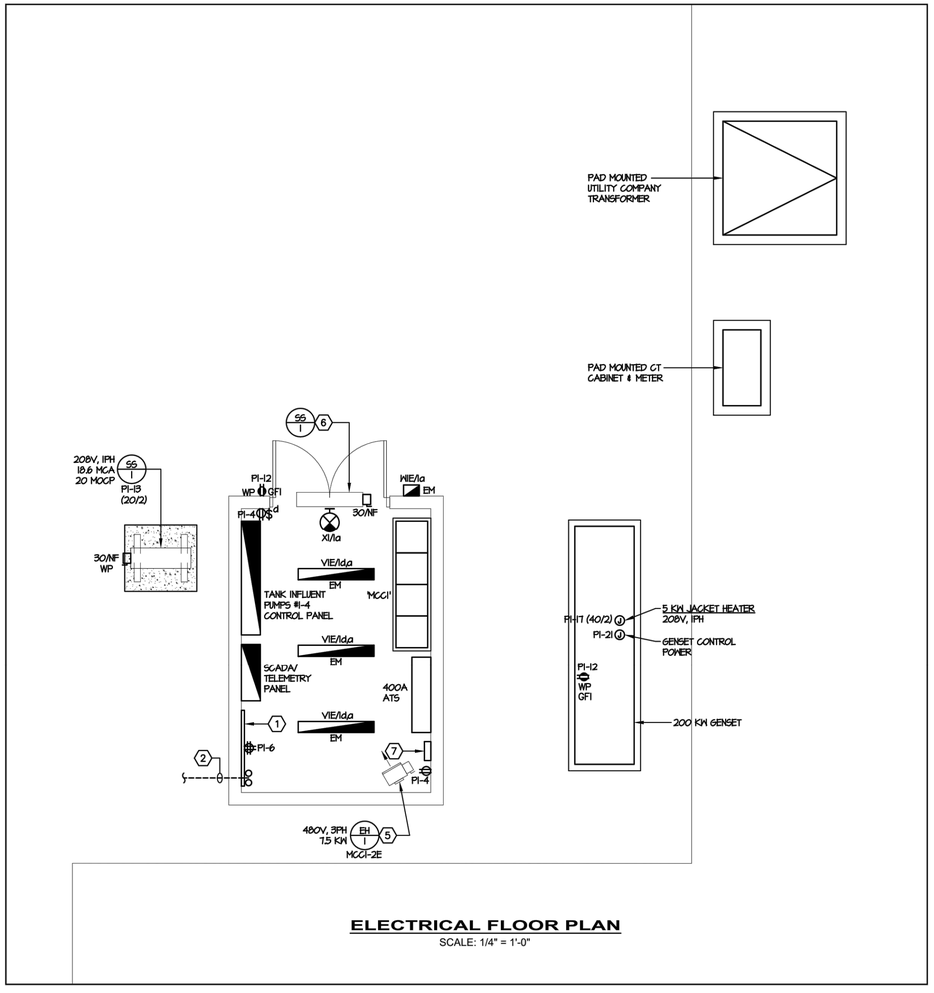
PROJECT NO.
210888

DISCIPLINE
ELECTRICAL

SHEET NAME
01E-01

SHEET 49 OF 53

CONTRACTOR MUST VERIFY ALL CLEARANCES AND DIMENSIONS IN FIELD



ELECTRICAL FLOOR PLAN

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

BRANCH CIRCUITING GENERAL NOTES:

A. ON 20 AMP, 1 POLE CIRCUITS, HOMERUNS SHALL BE 2 #12 AWG + GND IN 3/4" CONDUIT MINIMUM. INCREASE WIRE SIZE PER VOLTAGE DROP TABLE.

B. ALL CIRCUITS SHALL HAVE INDIVIDUAL NEUTRAL CONDUCTORS CONTINUOUS FROM PANEL. SHARED NEUTRALS ARE NOT PERMITTED.

VOLTAGE DROP SCHEDULE

120 VOLT BRANCH CIRCUITS UP TO 10 AMPS

TOTAL WIRE LENGTH (FEET)			WIRE SIZE (AWG)
1'	-	100'	#12
101'	-	150'	#10
151'	-	240'	#8
241'	-	380'	#6

120 VOLT BRANCH CIRCUITS UP TO 14 AMPS

TOTAL WIRE LENGTH (FEET)			WIRE SIZE (AWG)
1'	-	75'	#12
76'	-	115'	#10
116'	-	185'	#8
186'	-	290'	#6

MINIMUM BRANCH CIRCUIT WIRING IS #12 AWG. CONTRACTOR SHALL INCREASE WIRE SIZE BASED ON SCHEDULE ABOVE.

LEGEND

bc,$d — SWITCH LEG
OS c
A / 2 — LIGHT FIXTURE TYPE, CIRCUIT #
b — SWITCH LEG

GENERAL NOTES

A. LETTER SHOWN 'a' INDICATES AN UNSWITCHED CIRCUIT FOR NIGHT/EMERGENCY LIGHTS (NL/EM) OR AN EXIT SIGN. THIS DESIGNATION IS AN UNCONTROLLED HOT.
NL = NIGHT LIGHT, ALWAYS ON.
EM = FIXTURE WITH INTEGRAL BATTERY BACKUP.
⊠ = STANDARD FIXTURES DESIGNATED EM.

B. ALL HOMERUNS SHALL BE #12 AWG + GND IN 3/4" CONDUIT MINIMUM. INCREASE WIRE SIZE PER VOLTAGE DROP TABLE.

C. ALL LIGHTING CIRCUITS SHALL HAVE INDIVIDUAL NEUTRAL CONDUCTORS CONTINUOUS FROM PANEL.

D. THE EXACT LOCATION OF ALL LIGHT FIXTURES SHALL BE FIELD COORDINATED WITH ALL PIPING, DUCTWORK, STRUCTURE, ETC.

E. ALL LIGHTING SHALL BE CIRCUITED TO PANEL 'P1' UNLESS NOTED OTHERWISE.

CODED NOTES

1. PROVIDE 3/4" X 48"W X 96"H FIRE TREATED PLYWOOD TELEPHONE DEMARK BACKBOARD.
2. PROVIDE 2-4" CONDUITS UNDERGROUND FOR INCOMING PHONE SERVICE. REFERENCE CIVIL PLANS FOR CONTINUATION.
3. PROVIDE POWER FOR OVERHEAD COIL UP GARAGE DOOR. WIRE ALL MISCELLANEOUS MANUFACTURER FURNISHED CONTROLS INCLUDING PUSHBUTTON STATIONS, LIMIT SWITCHES, ETC. COORDINATE WITH APPROVED SHOP DRAWINGS.
4. PROVIDE POWER FOR MOTORIZED WINCH CONTROL PANEL. COORDINATE WITH APPROVED SHOP DRAWINGS.
5. HVAC EQUIPMENT TO BE PROVIDED BY M.C. WITH INTEGRAL DISCONNECTING MEANS. WIRE AS INDICATED.
6. INTERIOR UNIT IS FED DOWNSTREAM OF ASSOCIATED EXTERIOR UNIT. EXTEND 2 #10 + #10G IN 1"C TO OUTDOOR UNIT FOR POWER.
7. GENERATOR REMOTE ANNUNCIATOR PANEL. PROVIDE 1"C FROM ANNUNCIATOR TO GENERATOR CONTROLLER AND INSTALL ALL MANUFACTURER REQUIRED WIRING BETWEEN.

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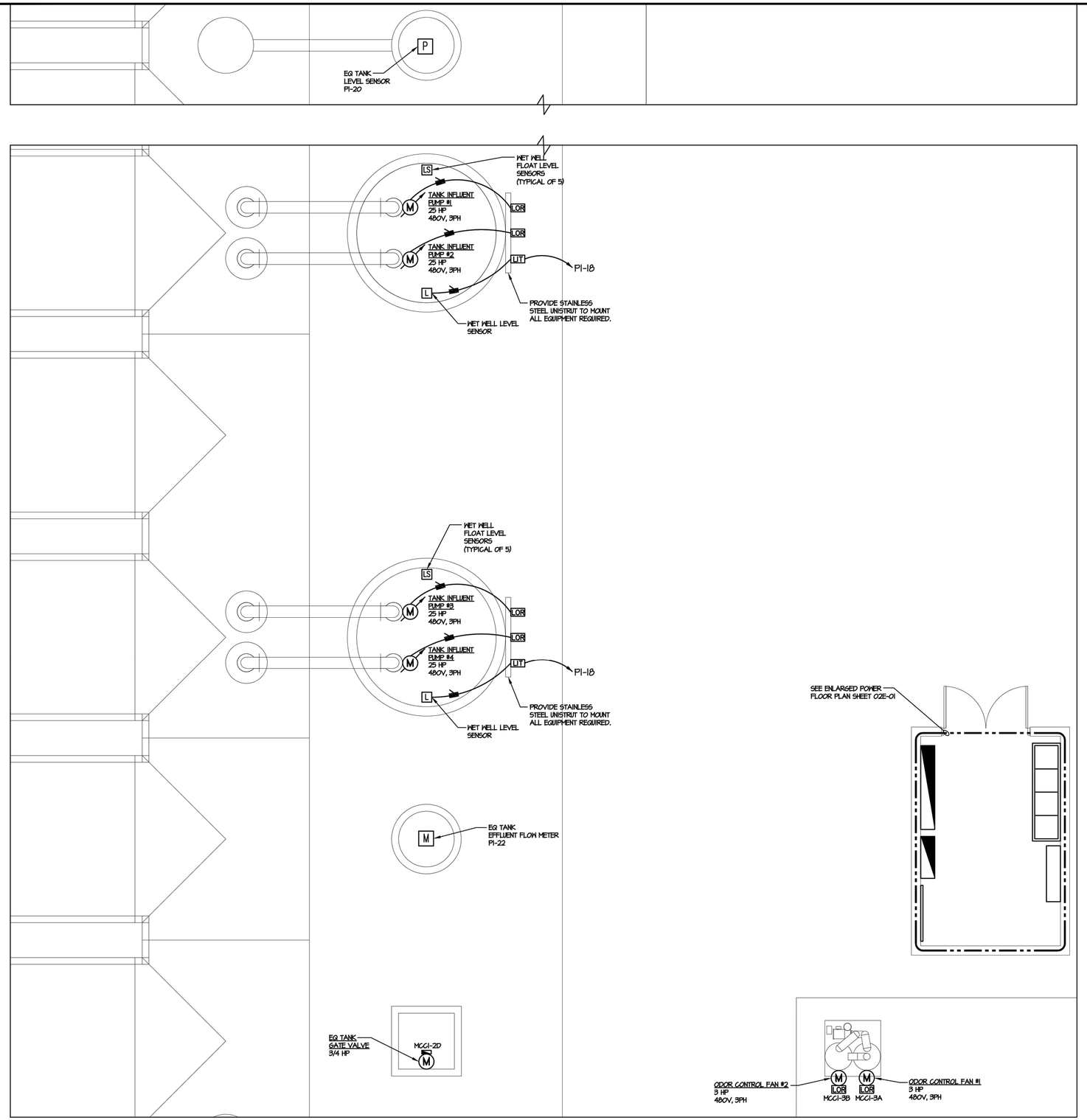
CUYAHOGA COUNTY

ELECTRICAL - E SERIES

ELECTRICAL FLOOR PLANS

PROJECT NO. 210888
DISCIPLINE: ELECTRICAL
SHEET NAME: 10E-01
SHEET 50 OF 53



PUMP STATION AND ODOR CONTROL FLOOR PLAN

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

CONTRACTOR MUST VERIFY ALL CLEARANCES AND DIMENSIONS IN FIELD

BRANCH CIRCUITING GENERAL NOTES:

A. ON 20 AMP, 1 POLE CIRCUITS, HOMERUNS SHALL BE 2 #12 AWG + GND IN 3/4" CONDUIT MINIMUM. INCREASE WIRE SIZE PER VOLTAGE DROP TABLE.

B. ALL CIRCUITS SHALL HAVE INDIVIDUAL NEUTRAL CONDUCTORS CONTINUOUS FROM PANEL. SHARED NEUTRALS ARE NOT PERMITTED.

VOLTAGE DROP SCHEDULE

120 VOLT BRANCH CIRCUITS UP TO 10 AMPS

TOTAL WIRE LENGTH (FEET)			WIRE SIZE (AWG)
1'	-	100'	#12
101'	-	150'	#10
151'	-	240'	#8
241'	-	380'	#6

120 VOLT BRANCH CIRCUITS UP TO 14 AMPS

TOTAL WIRE LENGTH (FEET)			WIRE SIZE (AWG)
1'	-	75'	#12
76'	-	115'	#10
116'	-	185'	#8
186'	-	290'	#6

MINIMUM BRANCH CIRCUIT WIRING IS #12 AWG. CONTRACTOR SHALL INCREASE WIRE SIZE BASED ON SCHEDULE ABOVE.

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ELECTRICAL - E SERIES

PUMP STATION & ODOR CONTROL PLANS

PROJECT NO.
210888

DISCIPLINE
ELECTRICAL

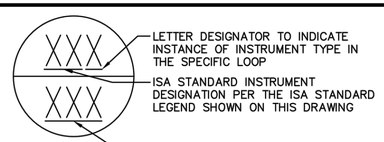
SHEET NAME
10E-02

SHEET 51 OF 53

MEANINGS OF IDENTIFICATION LETTERS

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER FLAME		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY (ELECTRICAL)			CONTROL	
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL			
E	VOLTAGE (EMF)		PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GENERAL		GLASS		
H	HAND (MANUALLY INITIATED)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME OR TIME–SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOISTURE OR HUMIDITY				MIDDLE OR INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	ON/OFF		ORIFICE (RESTRICTION)		
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY OR EVENT	INTIGRATE OR TOTALIZE			
R	RADIOACTIVITY		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VISCOSITY			VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	STATUS			RELAY OR COMPUTE	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

INSTRUMENT TAGGING LEGEND



LETTER DESIGNATOR TO INDICATE INSTANCE OF INSTRUMENT TYPE IN THE SPECIFIC LOOP

ISA STANDARD INSTRUMENT DESIGNATION PER THE ISA STANDARD LEGEND SHOWN ON THIS DRAWING

3 DIGIT LOOP DESIGNATION. FIRST DIGIT CORRELATES TO THE PROCESS SERIES NUMBERS SHOWN IN THE ADJACENT LEGEND

L E G E N D

- INSTRUMENT - LOCALLY MOUNTED
- INSTRUMENT - PANEL MOUNTED
- INSTRUMENT - REAR OF PANEL MOUNTED
- INSTRUMENT OR DEVICE- FURNISHED BY OTHERS OR EXISTING
- INSTRUMENT - COMPUTER DISPLAY COMPUTER OPERATED
- STATUS LIGHT-PANEL MOUNTED
- STATUS LIGHT-COMPUTER DISPLAY
- CPU/PLC ANALOG INPUT/OUTPUT
- CPU/PLC DISCRETE INPUT/OUTPUT
- COMPUTER/ PLC FUNCTION (LAH 501B)
- GENERAL INTERLOCK LOGIC OR SEQUENCE CONTROL
- FUNCTION SYMBOL-AVERAGING

- F FLOW ELEMENT
- L LEVEL ELEMENT
- P PRESSURE SENSOR
- S SOLENOID
- T TURBIDITY ELEMENT
- G GAS DETECTION ELEMENT
- Do Do PROBE
- E UNSPECIFIED PRIMARY ELEMENT
- TM TEMPERATURE/MOISTURE ELEMENT FOR SUBMERSIBLE MOTORS
- ZS LIMIT/ POSITION SWITCH
- S SAMPLER
- M MOTOR - SINGLE SPEED
- M MOTOR - VARIABLE SPEED
- PUMP
- BLOWER
- CAMERA

- PARSHALL FLUME
- VENTURI TUBE
- BUTTERFLY VALVE
- GATE VALVE
- BALL VALVE
- CHECK VALVE
- PLUG VALVE
- SLUICE GATE

LINE SYMBOLOGY

- DATA HIGHWAY OR SOFTWARE LINK
- ANALOG SIGNAL WIRING
- DIGITAL SIGNAL WIRING
- V / IS ELECTRICAL SUPPLY
- PROCESS FLOW
- FLOW DIRECTION THRU PIPE
- FLOW DIRECTION THRU CHANNEL OR TANK

THIS IS A GENERAL LEGEND AND NOT ALL SYMBOLS SHOWN ARE USED UNDER THIS CONTRACT.

NOTES:

GENERAL NOTES (APPLY TO ALL DRAWINGS):

A. THE PLANT PLANT SYSTEM INTEGRATOR (PSI) IS REQUIRED TO REVIEW THE SPECIFICATION PACKAGE AND COMPARE IT TO THE DRAWING PACKAGE. IN THE EVENT OF A DISCREPANCY, THE PSI SHALL PROVIDE THE BETTER QUALITY OR GREATER AMOUNT OF WORK IN THEIR BIDS. UPON AWARD OF THE CONTRACT, THE PLANT SYSTEM INTEGRATOR SHALL REQUEST GUIDANCE ON HOW TO PROCEED WITH CONSTRUCTION PRIOR TO ROUGH-IN.

B. NO DUCTWORK OR PIPING TO BE RUN ABOVE I & C PANELS. SI SHALL COORDINATE WITH ALL TRADES FOR EQUIPMENT LAYOUTS PRIOR TO ROUGH-IN OF ALL SYSTEMS.

C. THE PLANT PLANT SYSTEM INTEGRATOR TO CONFIRM LOCATIONS OF ALL PROCESS EQUIPMENT AND THE CHARACTERISTICS OF PROCESS EQUIPMENT PROVIDED BY OTHER TRADES PRIOR TO INSTALLING I & C SYSTEM. ALL SHOP DRAWING REQUIREMENTS WILL BE CONSIDERED AS THE MEANS AND METHODS OF INSTALLATION.

D. THE PLANT PLANT SYSTEM INTEGRATOR TO VISIT SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID.

E. THIS PROJECT INVOLVES RENOVATION OF AN EXISTING INDUSTRIAL FACILITY (WASTE WATER TREATMENT PLANT) AND THE PLANT SYSTEM INTEGRATOR IS EXPECTED TO PROVIDE CRAFTSMANSHIP REFLECTING THE NATURE OF THE FACILITY. PROVIDE A SYSTEM THAT CAN BE STARTED UP MANUALLY OR OPERATED MANUALLY SHOULD PLANT OPERATORS NEED OR WANT TO. PROVIDE A NON-PROPRIETORY SYSTEM THAT CAN BE MAINTAINED BY ANOTHER PLANT SYSTEM INTEGRATOR IF THIS FIRM IS NO LONGER CAPABLE OF DOING SO.

F. THE PLANT SYSTEM INTEGRATOR SHALL REVIEW ALL OTHER TRADES CONSTRUCTION DOCUMENTS AND/OR COORDINATE WITH OTHER TRADES AND VERIFY IF THERE ARE ANY ADDITIONAL INSTRUMENTATION AND CONTROLS REQUIREMENTS NOT SHOWN ON THESE DRAWINGS. COST FOR WORK SHOWN ON OTHER TRADES DRAWINGS SHALL BE INCLUDED IN BASE BID. ALL FIELD WIRING AND TERMINATIONS OF PROCESS EQUIPMENT AND INSTRUMENTATION AND CONTROLS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL CABLES AND WIRES PROVIDED BY VENDORS SHALL BE INSTALLED AND TERMINATED BY THE CONTRACTOR. THE PLANT SYSTEM INTEGRATOR SHALL COORDINATE WITH THE CONTRACTOR TO PROVIDE ALL MISCELLANEOUS POWER AND CONTROLS AS REQUIRED TO PROVIDE A COMPLETE FUNCTIONING SYSTEM.

G. A 4-20MA SIGNAL IS AN ANALOG SIGNAL USED TO TRANSMIT DATA (LEVEL, FLOW, ETC.) FOR PROCESS CONTROLS. THE CONTRACTOR SHALL PROVIDE, INSTALL AND TERMINATE #16 TWISTED SHIELDED PAIRS (T.S.P.) WIRING IN RIGID GALVANIZED STEEL CONDUIT (RGS). RGS IS USED IN AN ATTEMPT TO REDUCE THE DISTORTION AFFECT FROM EMI. BELOW GRADE CONDUITS SHALL BE PVC CONDUIT. PARALLEL RUNS OF DATA CONDUITS AND POWER CONDUITS SHALL BE SEPARATED BY 2 FEET. THE #16 T.S.P. SHIELD SHALL BE GROUNDED AT THE CONTROL PANEL ONLY. (DO NOT GROUND AT BOTH ENDS).

H. THE PLANT SYSTEM INTEGRATOR SHALL BE RESPONSIBLE FOR LAYOUT AND COORDINATION OF OPENINGS AND CHASES AND SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED TO INSTALL THEIR WORK.

I. FOR BEST PERFORMANCE AND MAXIMUM RANGE, THE SELECTED ULTRASONIC LEVEL SENSOR SHOULD BE POSITIONED VERTICALLY AT THE TOP OF THE WET WELL, 18" (MINIMUM) ABOVE WATER SURFACE, IN A LOCATION WHICH MAXIMIZES ITS RETURNED ECHO SIGNAL AND MINIMIZES WET WELL OBSTRUCTIONS IN ITS LINE OF SIGHT. MAXIMIZING THE RETURNED ECHO IS GENERALLY ACCOMPLISHED BY AVOIDING MOUNTINGS WHICH EITHER SIGHT INTO THE FILL STREAM OR POSITION THE SENSOR SUCH THAT A LARGE PART OF ITS DETECTION BEAM IS LOST INTO THE WET WELL. INDIVIDUAL MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION SHALL BE FOLLOWED.

J. FOR BEST PERFORMANCE AND MAXIMUM RANGE, THE SELECTED DO OR NADH PROBE SHOULD BE POSITIONED VERTICALLY IN TANK. PROBES SHOULD BE INSTALLED SO THAT THE PROBE IS AT LEAST 2" BELOW DESIRED CONTROL POINT. INDIVIDUAL MANUFACTURER RECOMMENDATIONS FOR INSTALLATION SHALL BE FOLLOWED.

K. ONE OF THE MOST IMPORTANT INSTALLATION CONSIDERATIONS WITH ELECTROMAGNETIC FLOWMETERS IS A PROPER "BONDING" OF THE FLOWMETER TO THE ADJACENT PIPING TO MINIMIZE ZERO SHIFTS. THE INTENT OF THE BONDING IS TO PREVENT STRAY CURRENT FROM PASSING THROUGH THE FLOWMETER NEAR THE ELECTRODES. THE CONTRACTOR SHALL INSTALL A SUITABLE GROUND STRAP FROM FLANGE TO FLANGE ON BOTH SIDES OF FLOWMETER AND THEN TO GROUND ROD, COLD WATER PIPE, OR STRUCTURAL STEEL. INDIVIDUAL MANUFACTURER'S RECOMMENDATIONS FOR STRAIGHT PIPE DIAMETERS AHEAD OF TRANSMITTER AND AFTER TRANSMITTER AND ORIENTATION IN THE PIPE SHALL BE FOLLOWED.

L. FOR THE BEST PERFORMANCE, REPEATABILITY AND LOW FLOW TURN DOWNS, THE SELECTED AIR FLOW TRANSMITTER SHOULD BE POSITIONED IN A LOCATION THAT PROVIDES LAMINAR AIR FLOW. INDIVIDUAL MANUFACTURER'S RECOMMENDATIONS FOR STRAIGHT PIPE DIAMETERS AHEAD OF TRANSMITTER AND AFTER TRANSMITTER AND ORIENTATION IN THE PIPE SHALL BE FOLLOWED.

M. ALL INSTRUMENTATION ASSOCIATED WITH THE MBR SYSTEM AND THE MBR SCADA SYSTEM IS FURNISHED AND INSTALLED BY THE MBR EQUIPMENT MANUFACTURER.

STATE OF OHIO
CHRISTIAN A. TODD
No. 71955
REGISTERED PROFESSIONAL ENGINEER
09-16-24

CT consultants
engineers • architects • planners
A Verdantas Company

NO	REVISION	DATE
		2/7/2023

ISSUED FOR:	BID
ISSUE DATE:	10/10/24
SCALE:	AS NOTED
DESIGNED BY:	CAT
DRAWN BY:	CAT
CHECKED BY:	CAT

CITY OF NORTH OLMSTED
SOUTH INTERCEPTOR EQUALIZATION FACILITY
NORTH OLMSTED, OHIO
CUYAHOGA COUNTY

ELECTRICAL - E SERIES

GENERAL P & ID LEGEND & NOTES

PROJECT NO.
210888

DISCIPLINE
ELECTRICAL

SHEET NAME
00I-01

SHEET 52 OF 53

CONTRACTOR MUST VERIFY ALL CLEARANCES AND DIMENSIONS IN FIELD

WET WELL HIGH LEVEL ALARM — LAA 102
WET WELL LOW LEVEL ALARM — LAB 102
INFLUENT PUMPS PERMISSIVE SIGNAL — YC 101
INTERCEPTOR LEVEL — LI 108
WET WELL LEVEL — LI 102
PUMP IN RUNNING — YIA 101
PUMP IN SPEED — SI 101
PUMP IN IN "AUTO" — YIB 101
PUMP IN TRIPPED — YIC 101
THESE SCADA FUNCTIONS ARE TYPICAL FOR PUMPS #1 THRU 4
1
WET WELL HIGH LEVEL ALARM — LAA 102
WET WELL LOW LEVEL ALARM — LAB 102
FLOW SIGNAL — FI 104
EQ TANK GATE VALVE POSITION CONTROLLER — ZC 106
% OPEN — ZI 106
EQ TANK LEVEL — LI 103
EQ TANK HIGH LEVEL ALARM — LAH 103
ODOR CONTROL FAN #1 RUN SIGNAL — YC 107
DEVICE TRIPPED — YI 107
ODOR CONTROL FAN #2 RUN SIGNAL — YC 107
DEVICE TRIPPED — YI 107

PLANT SCADA
MCC
PANEL
FIELD

HIGH LEVEL ALARM
LOW LEVEL ALARM
LEVEL SIGNAL
LEVEL SIGNAL
EQ TANK EFFLUENT FLOW SIGNAL
POSITION CONTROL SIGNAL
POSITION SIGNAL
EQ TANK LEVEL SIGNAL
HSA 107 H-O-A RUN
LR 107
480V E5
LOR SIGNAL
HSB 107 H-O-A E-STOP
HSC 107

TANK INFLUENT PUMPS #1-4 CONTROL PANEL
480V E5

PUMPS OFF (LOW LEVEL)
PUMP #1 ON (HIGH LEVEL)
PUMP #2 ON (HIGH LEVEL)
WATER/TEMP SHUTDOWN
LOR SIGNAL
480V E5
WATER/TEMP SHUTDOWN
LOR SIGNAL
480V E5
LEVEL SIGNAL
WATER/TEMP SHUTDOWN
480V E5
LOR SIGNAL
WATER/TEMP SHUTDOWN
480V E5
LOR SIGNAL
LEVEL SIGNAL
PUMP #2 ON (HIGH LEVEL)
PUMP #1 ON (HIGH LEVEL)
PUMPS OFF (LOW LEVEL)

HSA 106 H-O-A OPEN
HSB 106 CLOSE
HSC 106
LG 106 OPEN
LR 106 CLOSED
LA 106 PWR
480V E5
EQ TANK GATE VALVE CONTROL STATION
POSITION SIGNAL
OPEN/CLOSE SIGNAL
M

ODOR CONTROL FAN #1
ODOR CONTROL FAN #2

120V E5
EQ TANK LEVEL
LIT 103
L
TO OVERFLOW MANHOLE
EQ TANK

OVERFLOW MANHOLE
WET WELL #1
WET WELL #2
HSA 101 H-O-A
HSB 101 E-STOP
LIT 101
LIT 102
WET WELL LEVEL
LSA 102
LSB 102
LSC 102
LSD 102
LSE 102
T/M
TANK INFLUENT PUMP #1 101-1
TANK INFLUENT PUMP #2 101-2
TANK INFLUENT PUMP #3 101-3
TANK INFLUENT PUMP #4 101-4
TO / FROM INTERCEPTOR
FLOW METER MANHOLE
FIT 104
CONTROL GATE STRUCTURE
EQ TANK GATE VALVE
DRAIN MANHOLE

STATE OF OHIO
CHRISTIAN T. CODD
No. 71955
REGISTERED PROFESSIONAL ENGINEER
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CUYAHOGA COUNTY NORTH OLMSTED, OHIO

INSTRUMENTATION & CONTROLS - I SERIES

PROCESS & INSTRUMENTATION DIAGRAM

PROJECT NO. 210888
DISCIPLINE I & C
SHEET NAME 01I-01
SHEET 53 OF 53

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