THE VILLAGE OF SOUTH LEBANON WARREN COUNTY, OHIO

RIVER CORRIDOR PUBLIC SANITARY SEWER EXTENSION

40% PLANS

NOTES:

- 1. ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SEWER SYSTEM ARE PROHIBITED
- 2. THE LOCATION OF UNDERGROUND STRUCTURES ARE NOT GUARANTEED.
- 3. NO WATER OR DEBRIS FROM THE CONSTRUCTION OPERATIONS SHALL ENTER THE EXISTING SEWER.
- 4. ALL HOUSE CONNECTIONS SHALL BE TYPE "B" CONDUIT WITH RESILIENT AND FLEXIBLE JOINTS; OR, EITHER PVC OR ABS CONDUIT, SDR 35, WITH ASTM D-3212 FLEXIBLE ELASTOMERIC SEALS.
- 5. SILT FROM CONSTRUCTION OPERATIONS SHALL NOT BE PERMITTED TO ENTER STORM SEWER SYSTEMS. WHEN CONSTRUCTION OCCURS NEAR STORM SEWER INLETS, EROSION CONTROL MEASURES SUCH AS INLET FILTERS SHALL BE USED TO PREVENT SILT FROM ENTERING THE STORM SEWERS.
- 6. LOCATION OF UTILITY SERVICES ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF HIS OPERATIONS.
- 7. ALL SANITARY SEWERS SHALL BE CONSTRUCTED UNDER THE INSPECTION OF THE VILLAGE OF SOUTH LEBANON.
- 8. THE TOP OF THE SANITARY SEWER MANHOLE FRAMES & RIMS IN BIKE PATH PAVEMENT SHALL BE FLUSH WITH THE PAVEMENT AND ARE TO BE BICYCLE

PROJECT DESCRIPTION:

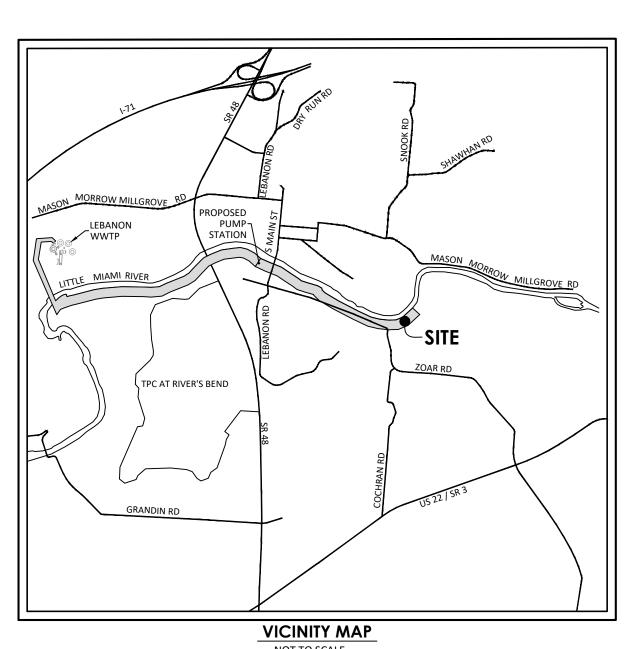
THIS PROJECT INCLUDES THE DESIGN OF A PUBLIC SANITARY SEWER LOCATED PRIMARILY ALONG THE LOVELAND BIKE PATH. THE DESIGN INCLUDES APPROXIMATELY 6,000 LINEAR FEET OF PUBLIC GRAVITY SANITARY SEWER, PUMP STATION, AND 8,000 LINEAR FEET OF PUBLIC FORCEMAIN.

2013 SPECIFICATIONS:

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS PROJECT.

NOTE:

UNDERGROUND UTILITIES ARE PLOTTED FROM A COMBINATION OF RECORD INFORMATION AND SURFACE INDICATIONS OF UNDERGROUND STRUCTURES. ALL UTILITIES MAY NOT BE SHOWN. EXACT LOCATIONS CANNOT BE VERIFIED. PLEASE NOTIFY THE OHIO UTILITY PROTECTION SERVICE AT 1-800-362-2764 BEFORE ANY EXCAVATION OR CONSTRUCTION ACTIVITY.



SHEET INDEX

SHEET	DESCRIPTION
1	COVER SHEET
2-13	PLAN & PROFILE
14	NOTES
15-16	DETAILS

PUBLIC SANITARY SEWER EXTENSIC

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OHIO
Utilities Protection
SERVICE
Call Before You Dig

1-800-362-2764
CALL TWO WORKING DAYS BEFORE YOU DIV

COVER SHEET

 $\begin{array}{lll} \text{Project Number} & 06308.12 \\ \text{Drawing Scale} & \text{AS NOTED} \\ \text{Sheet Number} & 1 / 16 \\ \text{File Number} & 06308 \end{array}$

THESE CONDITIONS SHOULD BE INCORPORATED INTO THE GENERAL NOTES OF THE PROJECT PLAN SET. THESE CONDITIONS SHOULD BE IMPLEMENTED BEFORE EARTHWORK COMMENCES AND ADHERED TO FOR THE DURATION OF THE PROJECT:

1. PROJECT DESIGN

- A.METHOD: ALL WILD, SCENIC AND RECREATIONAL RIVER CROSSINGS SHOULD BE ACCOMPLISHED THROUGH THE USE OF DIRECTIONAL DRILLING OR OTHER SUB-SURFACE INSTALLATION TECHNIQUES WHERE EVER POSSIBLE. SUFFICIENT GEOTECHNICAL DATA SHOULD BE DEVELOPED FOR ALL PROPOSED STREAM AND RIVER CROSSING SITES SHOWING THE SOILS, GEOLOGY AND STRATIFICATION OF THE PROPOSED CROSSING LOCATIONS. AN EXPLORATION PLAN SHOULD BE SUBMITTED TO OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) SHOWING THE PROPOSED LOCATIONS OF THE PIPELINE CROSSING AND HAVE A DETAILED DESCRIPTION OF THE SUBSURFACE FEATURES ALONG THE CROSSING TO ENSURE A SUCCESSEUL BORE SUCH DATA CAN BE EXTREMELY IMPORTANT TO FACILITATE CROSSINGS ON STATE SCENIC RIVERS ESPECIALLY IN AREAS WHERE RIVERS FLOW THROUGH GLACIATED REGIONS OF THE STATE AND HAVE CHANNELS AND RIVER VALLEYS COMPRISED OF PREDOMINATELY UNCONSOLIDATED GLACIAL MATERIALS WHICH CAN BE HIGHLY SUSCEPTIBLE TO FRAC-OUTS.
- B. STREAM CROSSINGS OF STATE SCENIC RIVERS AND THEIR PERENNIAL TRIBUTARIES (BORING): FOR STREAM CROSSINGS THAT ARE COMPLETED THROUGH DIRECTIONAL DRILLING OR OTHER SUB-SURFACE INSTALLATION TECHNIQUES. BORE PITS SHOULD BE LOCATED BEYOND THE 100 YEAR FLOOD ELEVATION OF THE STATE SCENIC RIVER AND THEIR TRIBUTARIES. THIS WILL GREATLY REDUCE THE POSSIBILITY OF BORE PITS BEING INUNDATED DURING A FLOOD EVENT. ALL BORING AND EXCAVATED MATERIALS FROM THE BORE PIT SHOULD ALSO BE STORED BEYOND THE BOUNDARY OF THE 100 YEAR FLOODPLAIN TO REDUCE THE RISK OF THESE MATERIALS BEING INUNDATED AND WASHED BACK INTO THE RIVER OR TRIBUTARY. ANY STOCK PILES OF EXCAVATED MATERIALS SHOULD BE PROTECTED WITH APPROPRIATE SEDIMENT AND EROSION CONTROLS TO REDUCE RUNOFF. THE BORE PITS SHOULD BE RECLAIMED AND SEEDED AND MULCHED WITHIN TWO DAYS FOLLOWING THE COMPLETION OF THE CROSSING. COMPLETION OF THE CROSSING SHOULD BE DEFINED AS THE PLACEMENT OF PIPE IN THE TUNNEL FROM BORE PIT TO BORE PIT, EACH END OF THE CROSSING. BORE PITS AND OTHER DISTURBED AREAS LOCATED WITHIN THE WOODEN RIPARIAN CORRIDOR OF STATE SCENIC RIVERS OR THEIR TRIBUTARY STREAMS SHOULD ALSO BE RE-VEGETATED WITH NATIVE TREE SPECIES. A LIST OF NATIVE TREES CAN BE PROVIDED BY REGIONAL SCENIC RIVER MANAGERS.
- C.STREAM CROSSINGS OF INTERMITTENT/EPHEMERAL TRIBUTARIES (NON-BORING): WHERE THE TRENCH CROSSES A STREAM WITH A SOLID OR LAYERED ROCK BOTTOM. THE CONTRACTOR SHOULD SAW CUT THE TRENCH EDGES TO A MINIMUM DEPTH OF 4 INCHES. THE TRENCH SHOULD BE BACKFILLED WITH CONCRETE ENCASEMENT AS INDICATED IN THE STREAM CROSSING DETAIL ON THE APPROVED PLANS. THE CONTRACTOR SHOULD ALSO PROVIDE NECESSARY MEANS TO PREVENT FRACTURING OF THE BEDROCK DUE TO EQUIPMENT CROSSINGS.
- D.IN-STREAM WORK AND OPEN TRENCH STREAM CROSSINGS: STREAM CROSSINGS SHOULD BE CONSTRUCTED DURING DRY PERIODS OR PERIODS OF EXTREMELY LOW FLOW (AUGUST 1 THROUGH OCTOBER 31). STREAM CROSSINGS SHOULD NOT BE PERFORMED FROM MARCH 15-JUNE 30 UNLESS THE STREAMBED IS DRY. STABILIZATION OF THE CROSSING AREA SHOULD BE CONDUCTED IMMEDIATELY UPON COMPLETION OF THE STREAM CROSSING. SOD OR EROSION CONTROL MATTING SHOULD BE UTILIZED TO STABILIZE STREAM BANKS AT CROSSING LOCATIONS. STREAM BANKS AND BOTTOMS SHOULD BE RESTORED TO PREVIOUSLY EXISTING CONTOURS AND ELEVATIONS. STREAM ELEVATIONS SHOULD BE DETERMINED BEFORE IN-STREAM WORK COMMENCES TO ENSURE THAT ALL FILL MATERIAL AND DEBRIS IS COMPLETELY REMOVED BEFORE CONSTRUCTION IS COMPLETED. RESTORATION SHOULD ALSO INCLUDE TREE PLANTINGS WITH SPECIES FROM THE APPROVED SCENIC RIVER TREE LIST.
- E. TRENCH OPENING: NO MORE THAN 500 FEET OF TRENCH SHOULD BE OPEN AT ANY GIVEN TIME. TRENCH OPENING, INSTALLATION OF PIPE AND BACKFILLING SHOULD OCCUR SO AS TO MINIMIZE THE AMOUNT OF AREA DISTURBED. ALL OPEN TRENCHES SHOULD IMMEDIATELY BE BACKFILLED AND SEEDED AND MULCHED WITHIN SEVEN DAYS OF COMPLETION OF PIPE INSTALLATION.
- F. MITIGATION FOR STREAM IMPACTS: IN ADDITION TO THE PRECEDING BEST MANAGEMENT PRACTICES OUTLINED ABOVE, ADDITIONAL MITIGATION MAY BE REQUIRED TO OFFSET THE NEGATIVE IMPACTS TO STATE SCENIC RIVERS AND THEIR TRIBUTARIES CAUSED DURING THE INSTALLATION OF THE UTILITY LINE. ANY MITIGATION REQUIRED UNDER SECTIONS 401 AND 404 OF THE CLEAN WATER ACT FOR SCENIC RIVER STREAM CROSSINGS SHOULD BE IMPLEMENTED AS PROTECTION OR RESTORATION PROJECTS WITHIN THE ASSOCIATED WATERSHED, PREFERABLY DIRECTLY ON THE DESIGNATED SCENIC RIVER SECTIONS. THIS WILL HELP TO ENSURE THE LONG TERM PROTECTION OF THESE SENSITIVE, HIGH QUALITY RIVER SYSTEMS. THE REGIONAL SCENIC RIVERS MANAGER MAY BE ABLE TO ASSIST WITH THE IDENTIFICATION AND IMPLEMENTATION OF LOCAL MITIGATION

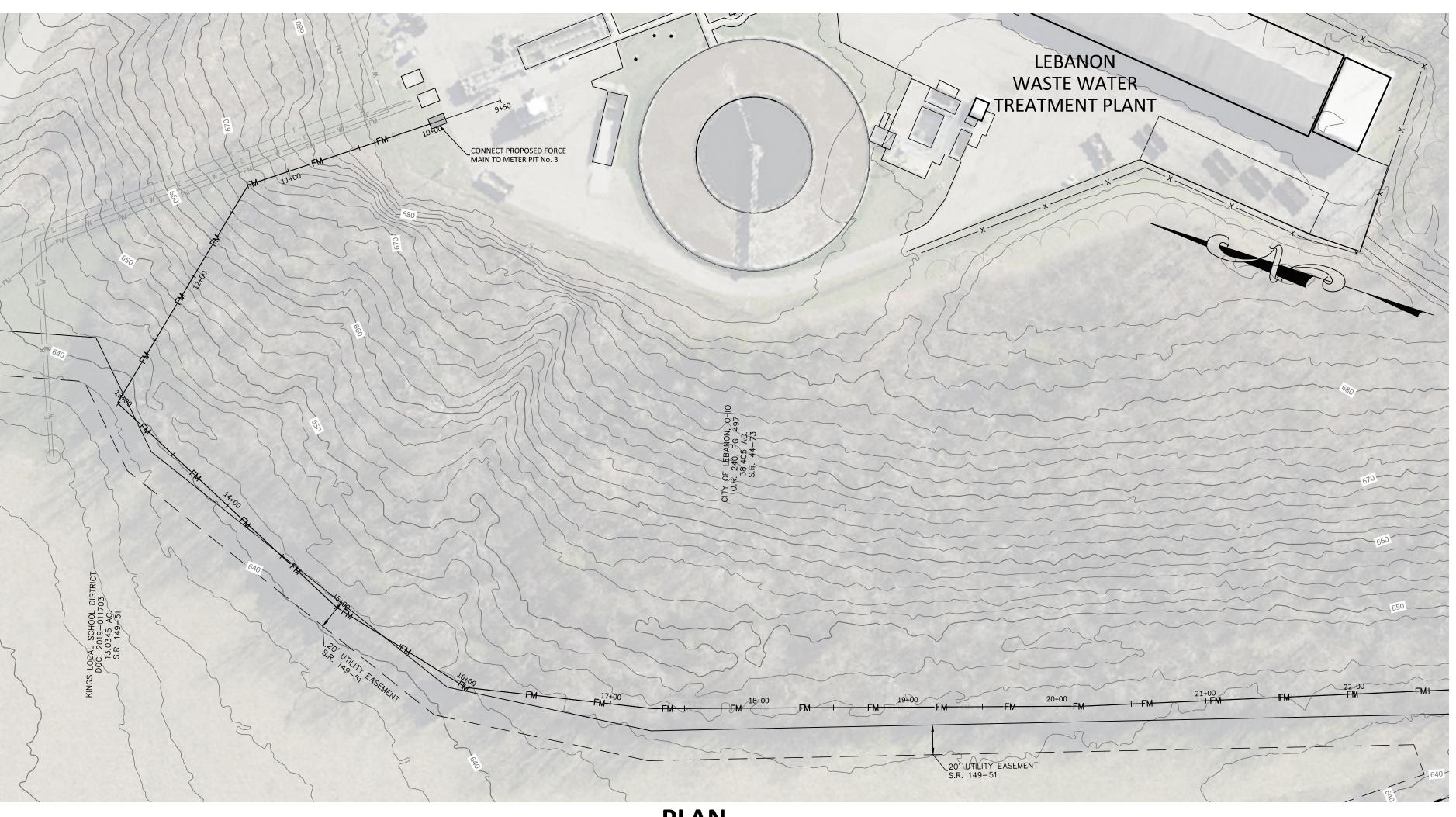
2. <u>DIRECTIONAL DRILL BEST MANAGEMENT PRACTICES</u>

OF FRAC-OUTS.

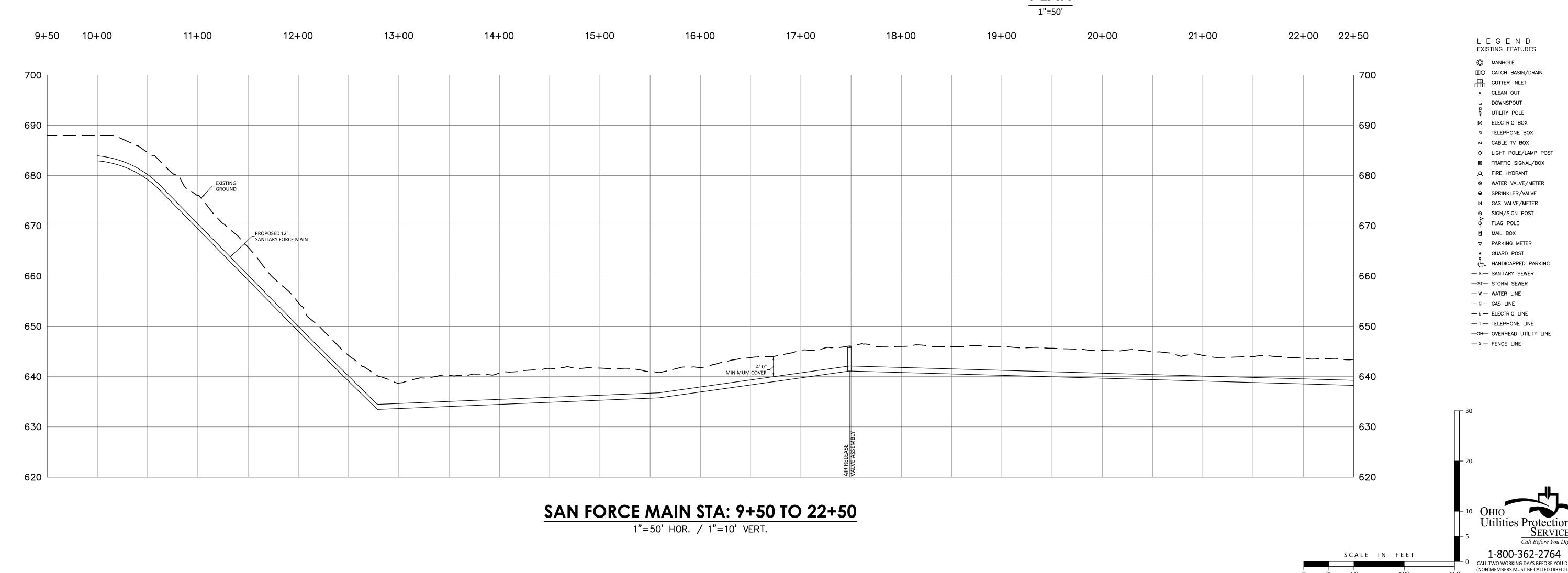
- A. WORK HOURS: THE DRILLING OPERATION WILL BE DURING DAYLIGHT HOURS IN ORDER TO FACILITATE MONITORING OF FRAC-OUTS IN THE STATE SCENIC RIVER AND SURROUNDING AREAS. B. OPERATION: THE DRILLING OPERATOR MUST USE THE MINIMAL AMOUNT OF PRESSURE OR GALLONS PER MINUTE OF DRILLING FLUID NECESSARY FOR THE DRILLING, TO HELP REDUCE THE PROBABILITY
- C.INSPECTION: DURING THE OPERATION, THE DRILLING CREW MUST MONITOR THE STATE SCENIC RIVER FOR ANY FRAC-OUTS. THE RIVER SHOULD BE INSPECTED EVERY HALF HOUR AND THE TIME RECORDED IN A LOGBOOK THAT CAN BE REVIEWED BY OTHER INSPECTORS.

3. BEST MANAGEMENT PRACTICES

- A.STORM WATER POLLUTION PREVENTION PLAN (SWPPP): A NOTICE OF INTENT (NOI) MUST BE SUBMITTED TO OBTAIN COVERAGE UNDER A GENERAL STORMWATER PERMIT, IF THE PROJECT WILL RESULT IN A LAND DISTURBANCE GREATER THAN ONE ACRE. THE NOI MUST BE SUBMITTED 21 DAYS PRIOR TO CONSTRUCTION COPIES OF NOLFORMS AND INSTRUCTIONS CAN BE FOUND AT HTTP://EPA.OHIO.GOV/DSW/STORM/STORMFORM.ASP. A SWPPP MUST BE DEVELOPED SPECIFIC FOR THE PROJECT. THE SWPPP MUST BE DEVELOPED TO ADDRESS SEDIMENT AND EROSION CONTROLS IN COMPLIANCE WITH THE GENERAL STORM WATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES. THE SWPPP MUST BE SUBMITTED FOR REVIEW TO THE ATTENTION OF THE APPROPRIATE DISTRICT OFFICE'S OHIO EPA STORM WATER COORDINATOR, PRIOR TO CONSTRUCTION, IF THE PROJECT IS WITHIN THE OLENTANGY RIVER OR BIG DARBY CREEK WATERSHED, SPECIFIC GUIDELINES FOR STORM WATER PERMITS CAN BE FOUND AT THE ABOVE
- B. EROSION CONTROLS: A SEDIMENT AND EROSION CONTROL PLAN SHOULD BE DEVELOPED FOR THE SITE AND IMPLEMENTED BEFORE EARTHWORK COMMENCES. ONCE THE SITE IS CLEARED AND GRUBBED. TEMPORARY SEDIMENT AND EROSION CONTROLS SHOULD BE IMPLEMENTED AND MAINTAINED UNTIL FINAL SITE STABILIZATION IS ACHIEVED. PARTICULAR ATTENTION SHOULD BE GIVEN TO ANY DRAINAGE WAYS. DITCHES AND STREAMS THAT COULD CONVEY SEDIMENT LADEN WATER DIRECTLY TO STATE SCENIC RIVERS. PROPERLY INSTALLED (FRAMED AND ENTRENCHED) SEDIMENT FENCE SHOULD BE UTILIZED AROUND THE WORK SITE PERIMETER AND STORM WATER INLETS. APPROPRIATELY DESIGNED ROCK-CHECK DAMS AND OTHER EROSION CONTROLS SHOULD BE UTILIZED IN DITCHES AND DRAINAGE WAYS. ALL TEMPORARY SEDIMENT AND EROSION CONTROLS SHOULD BE REMOVED UPON COMPLETION OF SITE STABILIZATION. ANY AREA WHERE THE UTILITY LINE HAS BEEN COMPLETELY INSTALLED, STABILIZATION WILL BE REQUIRED WITHIN SEVEN DAYS, ALL DENUDED AREAS, INCLUDING DITCHES, CULVERTS AND RIVER/STREAM BANKS. SHOULD BE PERMANENTLY SEEDED AND MULCHED (OR FIBER MAT) IMMEDIATELY UPON COMPLETION OF EARTHWORK OR TEMPORARILY SEEDED AND MULCHED (OR FIBER MAT). FOR THE DISTURBED AREAS WITHIN 120 FEET OF THE STREAM, TEMPORARY AND/OR PERMANENT EROSION CONTROL COVER SHOULD BE REQUIRED WITHIN TWO DAYS FOLLOWING THE INSTALLATION OF THE UTILITY LINE. TEMPORARY SEEDING AND MULCHING SHOULD BE NO MORE THAN 500 FEET BEHIND THE POINT OF INSTALLATION OF THE UTILITY LINE AT ANY GIVEN TIME. STRAW BALES SHOULD NOT BE PERMITTED AS A FORM OF EROSION CONTROL. ACCESS ROADS CONSTRUCTED ON SLOPES SHOULD BE GRAVELED TO PREVENT EROSION FROM SURFACE RUNOFF.
- C. STORAGE OF FUELS, PETROCHEMICALS AND EQUIPMENT: IDLE EQUIPMENT, PETROCHEMICALS AND TOXIC/HAZARDOUS MATERIALS SHOULD NOT BE STORED IN THE FLOODPLAIN OR NEAR ANY DRAINAGE WAYS, DITCHES OR STREAMS THAT COULD CONVEY SUCH MATERIALS TO STATE SCENIC RIVERS OR ANY OF THEIR TRIBUTARIES. PETROCHEMICALS AND TOXIC/HAZARDOUS MATERIALS SHOULD NOT BE DISCHARGED INTO ANY STATE SCENIC RIVER, THEIR FLOODPLAINS OR ANY OF THEIR TRIBUTARY DRAINAGE WAYS, DITCHES OR STREAMS. REFUELING OF EQUIPMENT SHOULD NOT
- OCCUR IN FLOODPLAINS OR NEAR ANY TRIBUTARY DRAINAGE WAYS, DITCHES OR STREAMS. D. SPILL PREVENTION: THE PERMITTEE SHOULD DEVELOP A SPILL PREVENTION COUNTERMEASURE AND CONTINGENCY PLAN (SPCC) IN THE EVENT OF A SPILL OR BREAK IN AN EQUIPMENT HYDRAULIC LINE, WHICH MAY DISCHARGE INTO WATERS OF THE STATE. ALL SPILLS MUST BE REPORTED TO THE OHIO SPILL LINE (1-800-282-9378) IN ACCORDANCE WITH OAC 3750.06.
- E. TRENCH AND GROUNDWATER DE-WATERING: NO WASTEWATER OF ANY KIND SHOULD BE DIRECTLY DISCHARGED INTO STATE SCENIC RIVERS OR ANY OF THEIR TRIBUTARY STREAMS, DRAINAGE WAYS OR DITCHES. ANY WATER PUMPED FROM OPEN TRENCHES SHOULD BE PASSED THROUGH A SEDIMENT IMPOUNDMENT STRUCTURE THAT PROVIDES FOR COMPLETE SETTLING OF ALL SUSPENDED SOLIDS OR PUMPED ONTO A VEGETATED AREA A SUFFICIENT DISTANCE FROM THE STREAM SO AS TO PROVIDE FOR COMPLETE INFILTRATION. ADEQUATE OUTLET PROTECTION MUST BE PROVIDED FOR EACH IMPOUNDMENT. THERE SHOULD BE NO DISCHARGES OF TURBID WATER TO STATE SCENIC RIVERS OR THEIR TRIBUTARIES.
- F. CLEARING AND GRUBBING: CLEARING AND GRUBBING IN THE AREAS DIRECTLY ADJACENT TO ANY OF THE STREAM CROSSINGS OR ANY STATE SCENIC RIVER SHOULD NOT TAKE PLACE UNTIL 72 HOURS BEFORE INSTALLATION OF THE UTILITY CROSSING. ALL STREAMBANK VEGETATION SHOULD BE LEFT UNDISTURBED TO THE MAXIMUM EXTENT POSSIBLE. AREAS WHERE VEGETATION IS REMOVED SHOULD BE RE-VEGETATED WITH NATIVE TREE SPECIES. ANY DISTURBED STREAMBANKS SHOULD BE RETURNED TO PREVIOUSLY EXISTING CONTOURS AND ELEVATIONS. A NATIVE TREE SPECIES LIST CAN BE PROVIDED BY THE APPROPRIATE REGIONAL SCENIC RIVERS MANAGER. TREES SHOULD BE ONE INCH IN DIAMETER AND BALLED/ BURLAP NURSERY STOCK. AFTER A FULL GROWING SEASON FOR THE TREES, ANY STAKES AND GUIDE WIRES SHOULD BE REMOVED AND PROPERLY DISPOSED OF. ANY TREES THAT DIE DURING THE FIRST GROWING SEASON SHOULD BE REPLACED. CARE SHOULD BE TAKEN NOT TO GIRDLE OR SCUFF TREE TRUNKS OR DAMAGE ANY
- G.EQUIPMENT CROSSING: ALL EQUIPMENT CROSSINGS SHOULD BE CONSTRUCTED WITH WASHED OF NON-ERODIBLE FILL A MINIMUM OF THREE INCHES IN DIAMETER. EQUIPMENT OR VEHICLE CROSSING OF ALL STREAMS WITHOUT THE USE OF A STABILIZED NON-ERODIBLE CROSSING WILL BE
- 4. NOTIFICATION: THE APPROPRIATE REGIONAL SCENIC RIVER MANAGER SHOULD BE INVITED TO A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR PRESENT AND BE NOTIFIED OF THE PROJECT START DATE ONE WEEK PRIOR TO THE COMMENCEMENT OF WORK. PERIODIC INSPECTIONS OF THE PROJECT SHOULD TAKE PLACE TO ENSURE SCENIC RIVER REQUIREMENTS ARE BEING MET. THE APPROPRIATE REGIONAL SCENIC RIVERS MANAGER SHOULD ALSO BE CONTACTED ONE WEEK PRIOR TO COMPLETION OF THE PROJECT TO CONDUCT A FINAL SITE INSPECTION. THE FINAL SITE INSPECTION SHOULD BE SCHEDULED WHILE THE CONTRACTOR IS PRESENT TO ENSURE THAT FINAL SITE STABILIZATION HAS BEEN ACHIEVED.

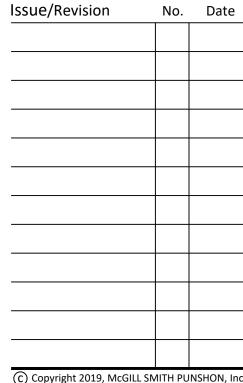






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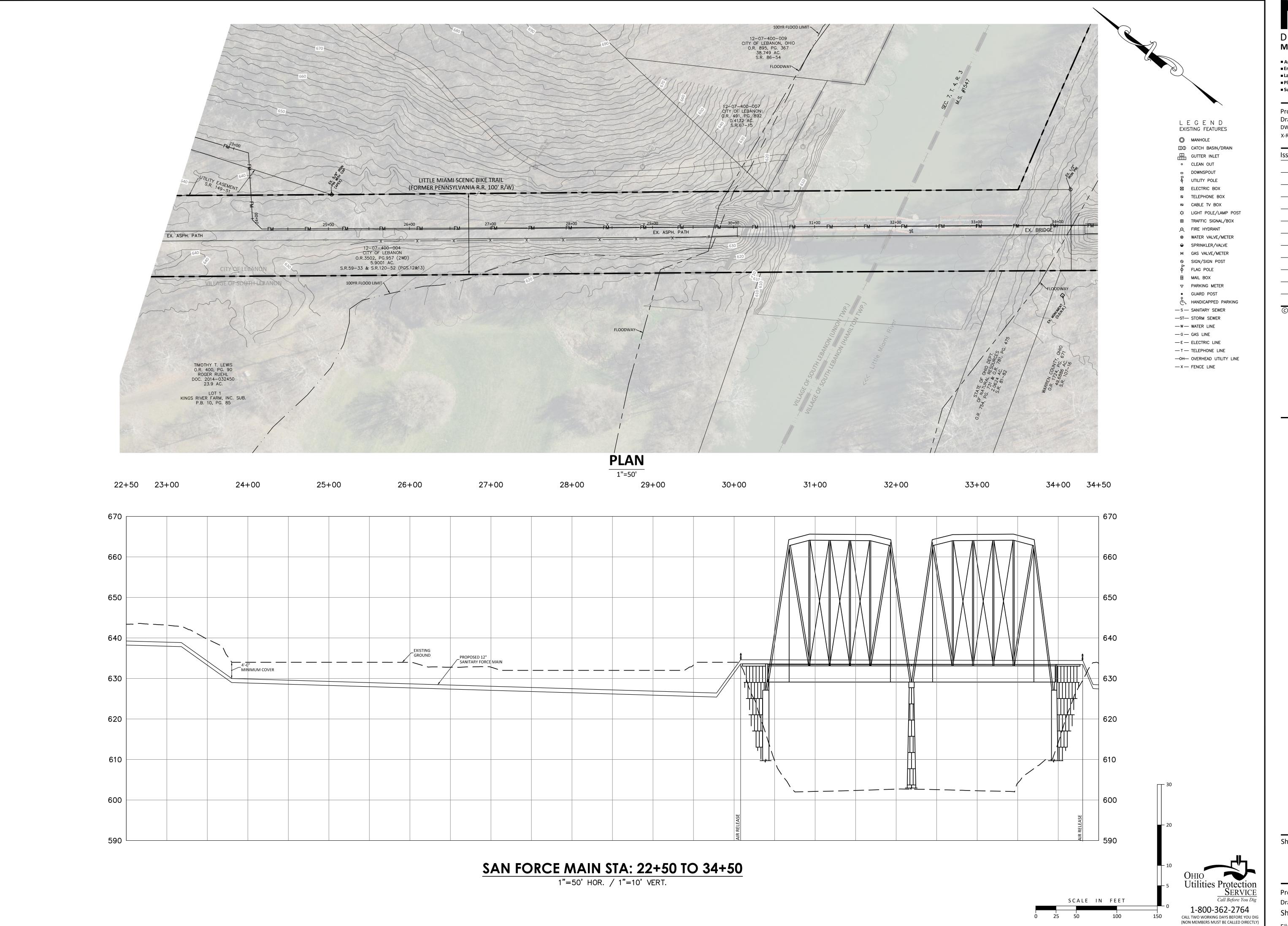


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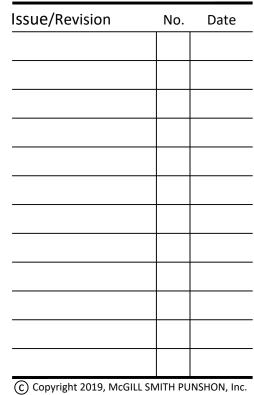
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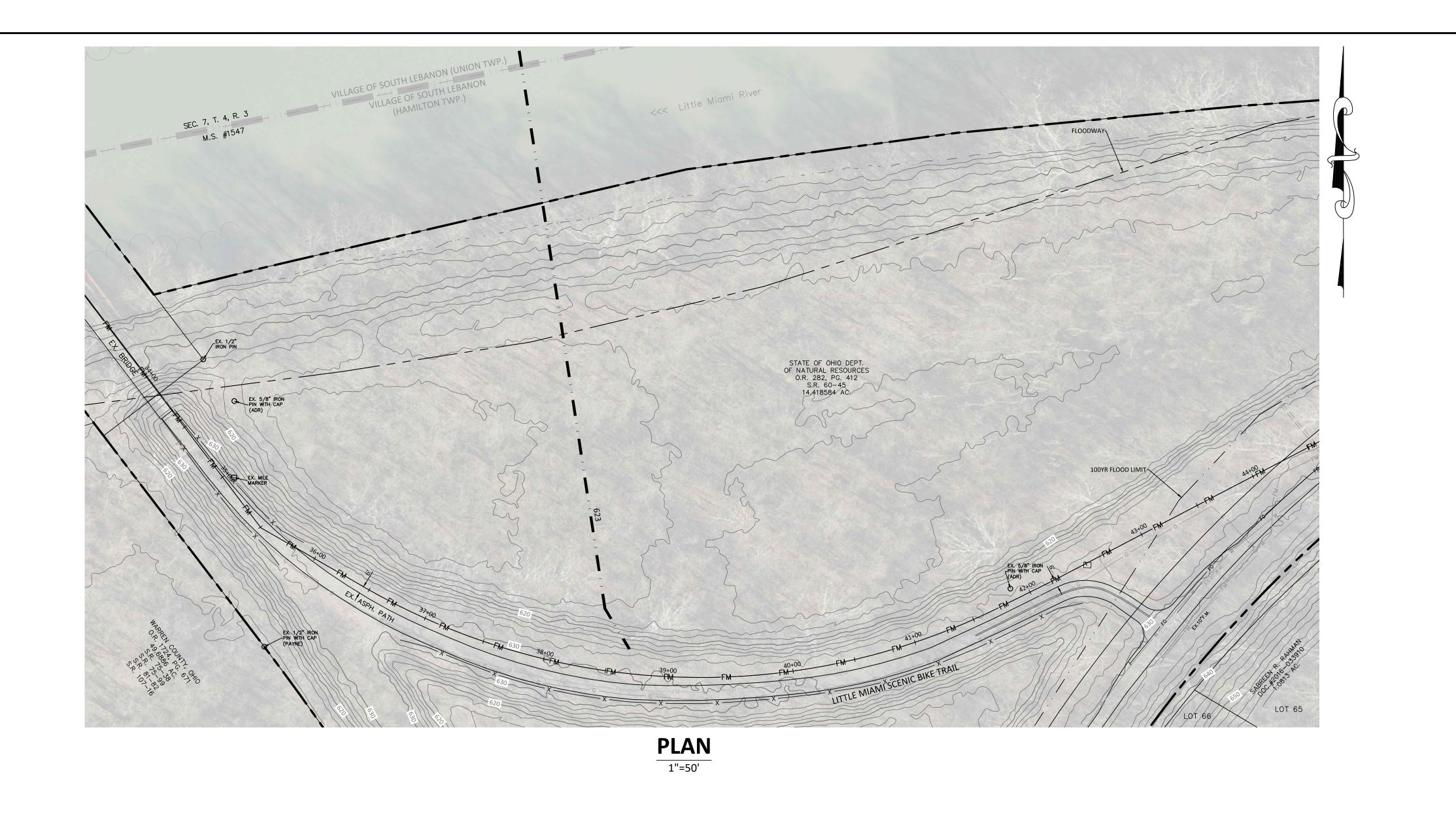
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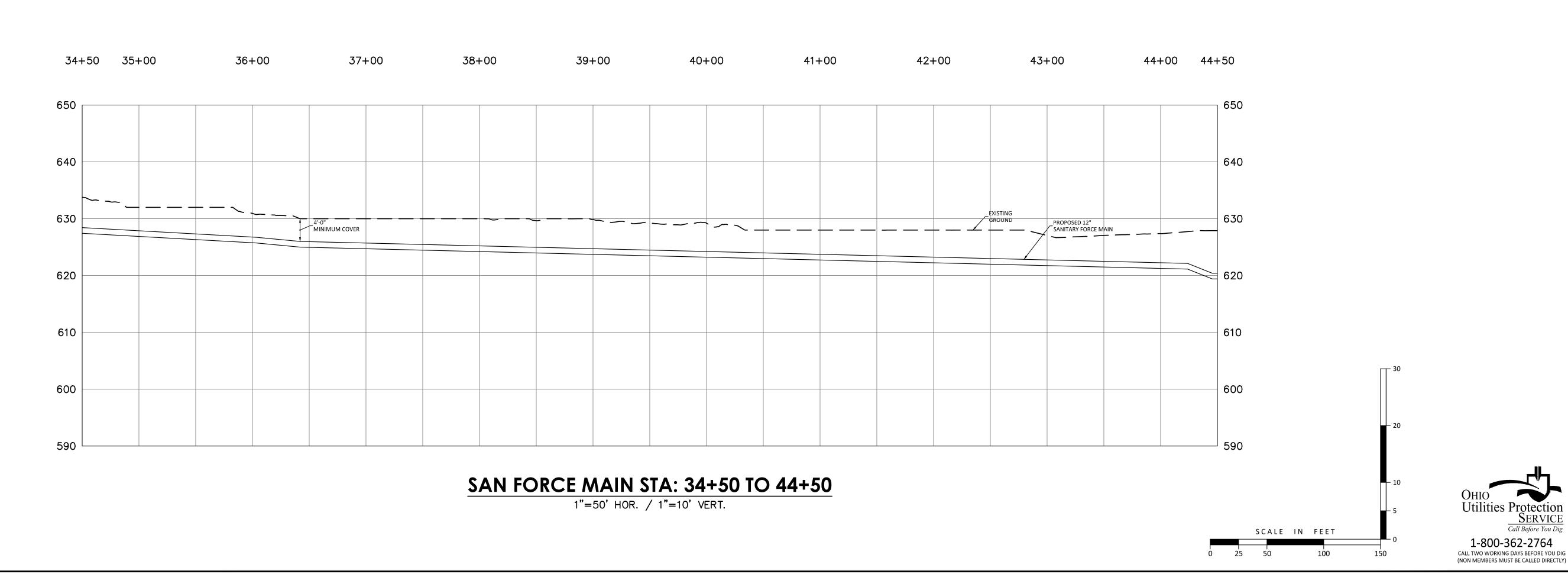
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L E G E N D EXISTING FEATURES

□① CATCH BASIN/DRAIN GUTTER INLET

MANHOLE

 CLEAN OUT DOWNSPOUT F UTILITY POLE

☑ ELECTRIC BOX

A FIRE HYDRANT

⊗ WATER VALVE/METER

→ SPRINKLER/VALVE SIGN/SIGN POST

FLAG POLE MAIL BOX ◆ GUARD POST HANDICAPPED PARKING

— S — SANITARY SEWER -ST- STORM SEWER

-W- WATER LINE — G — GAS LINE -E - ELECTRIC LINE -T- TELEPHONE LINE —OH— OVERHEAD UTILITY LINE

-X- FENCE LINE

■ TELEPHONE BOX □ CABLE TV BOX

☆ LIGHT POLE/LAMP POST TRAFFIC SIGNAL/BOX

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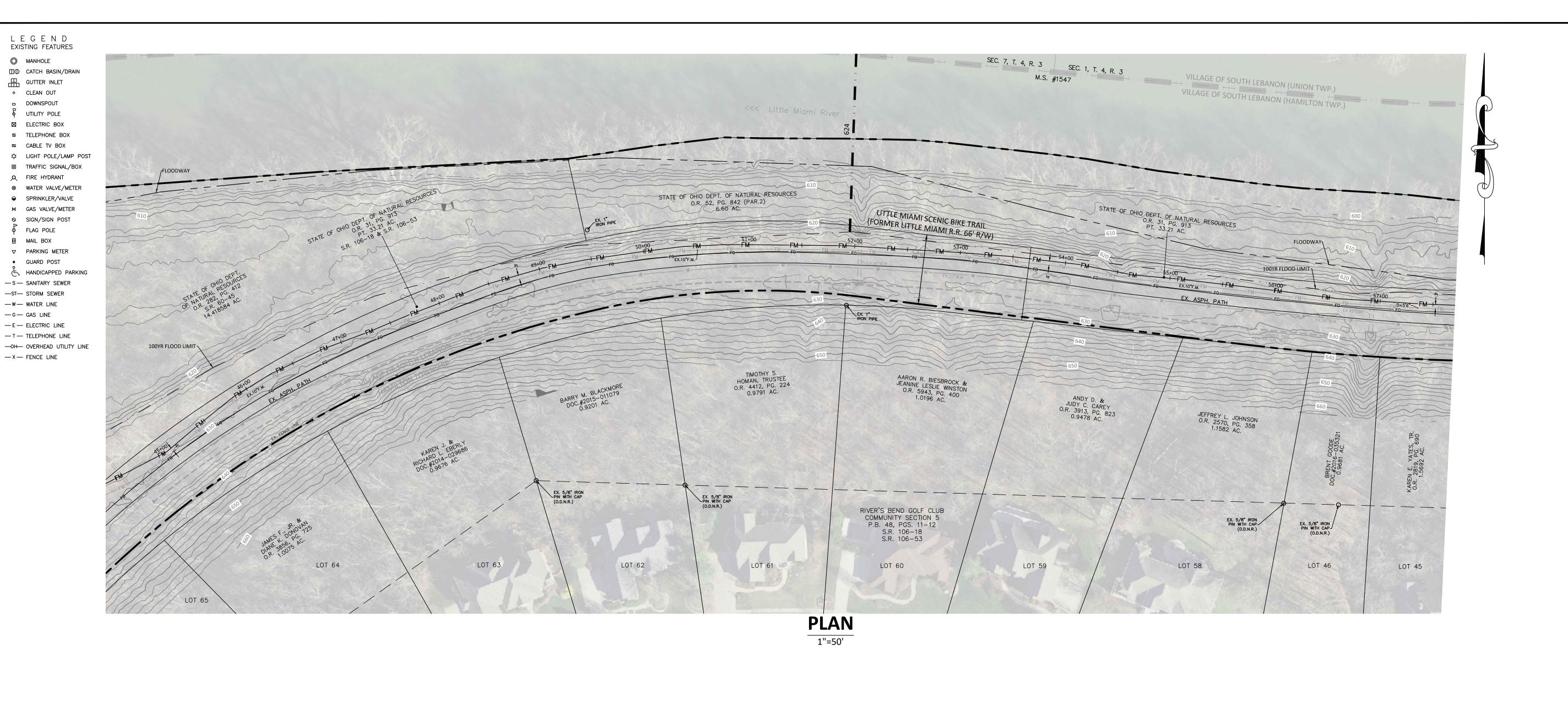
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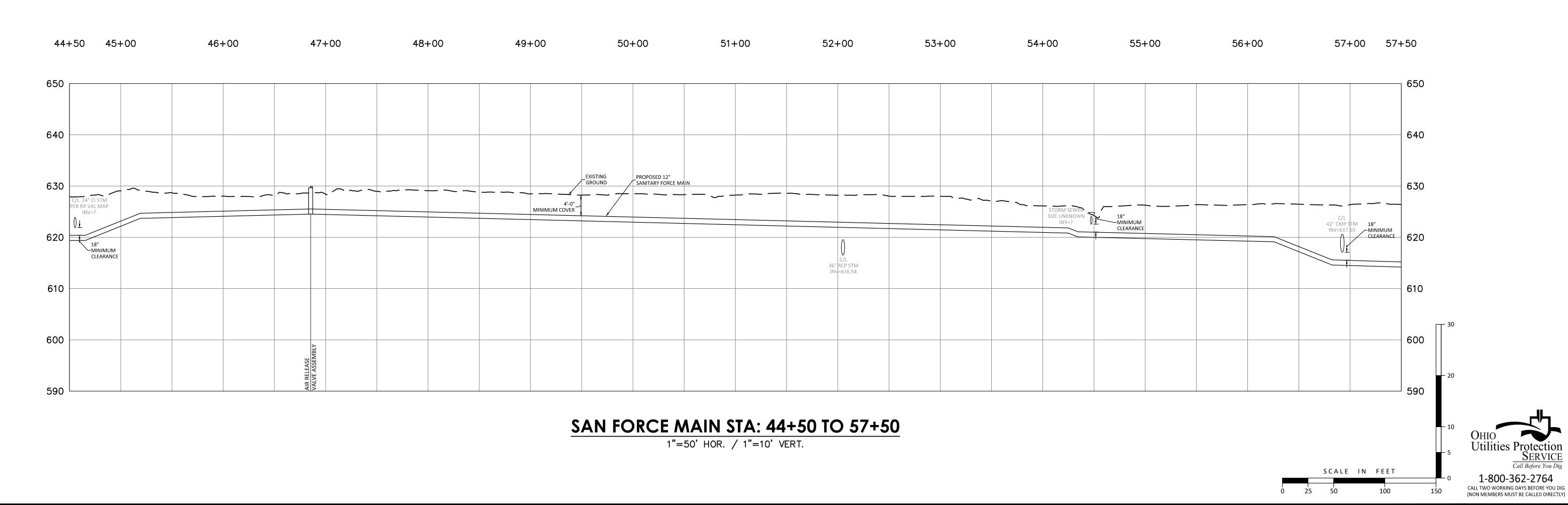
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Call Before You Dig

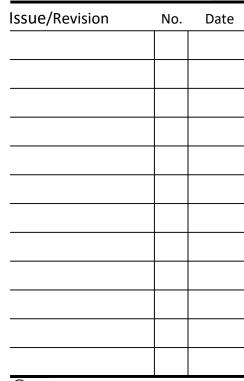






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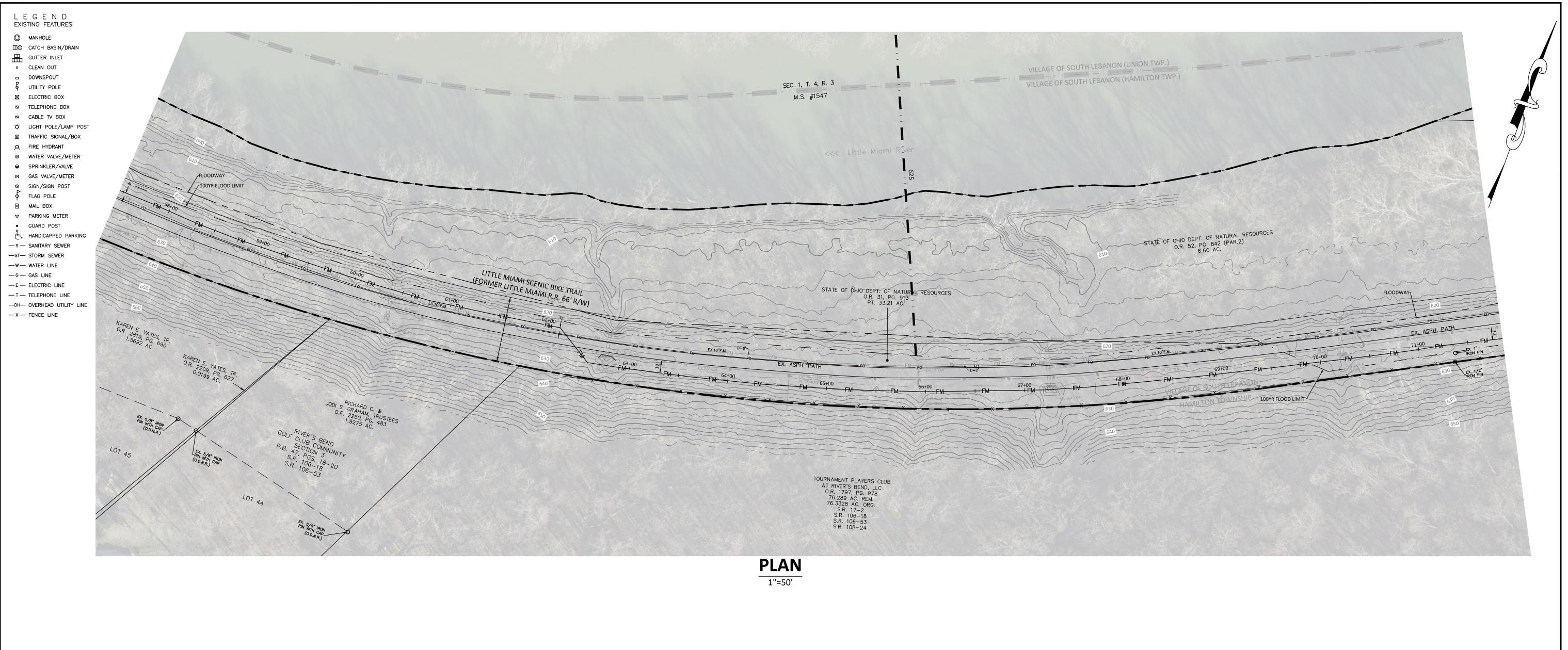
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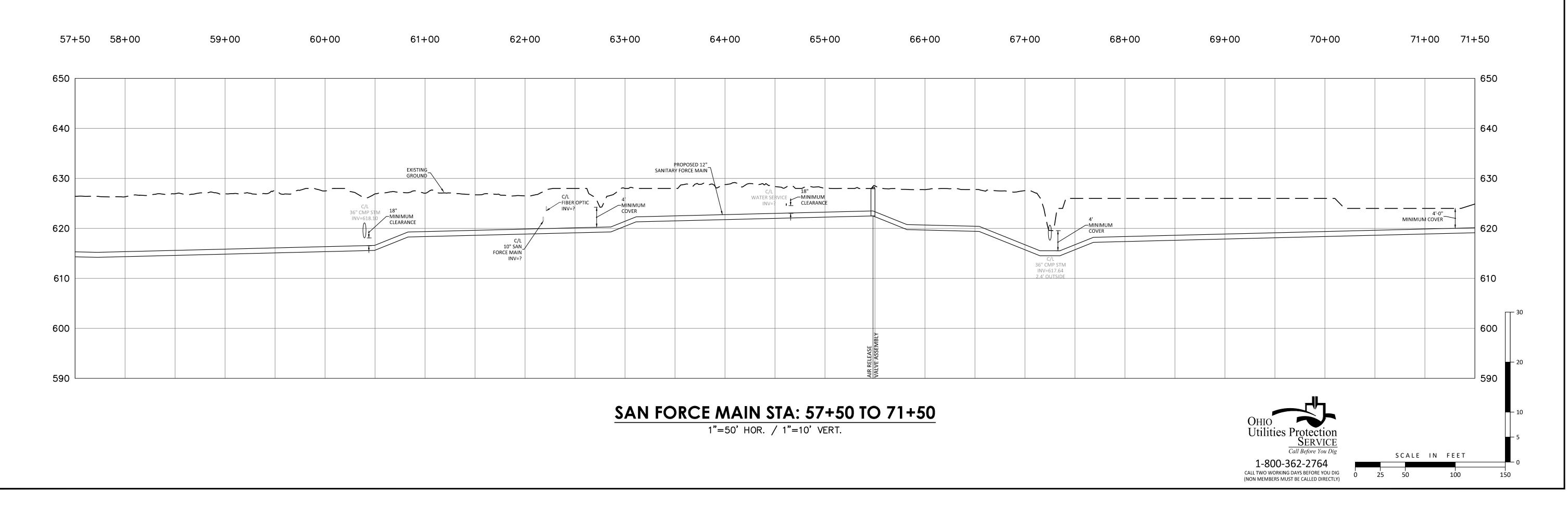
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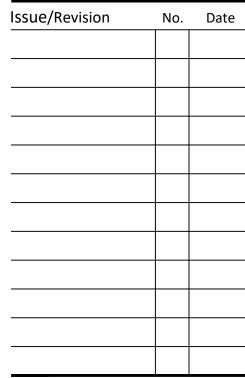






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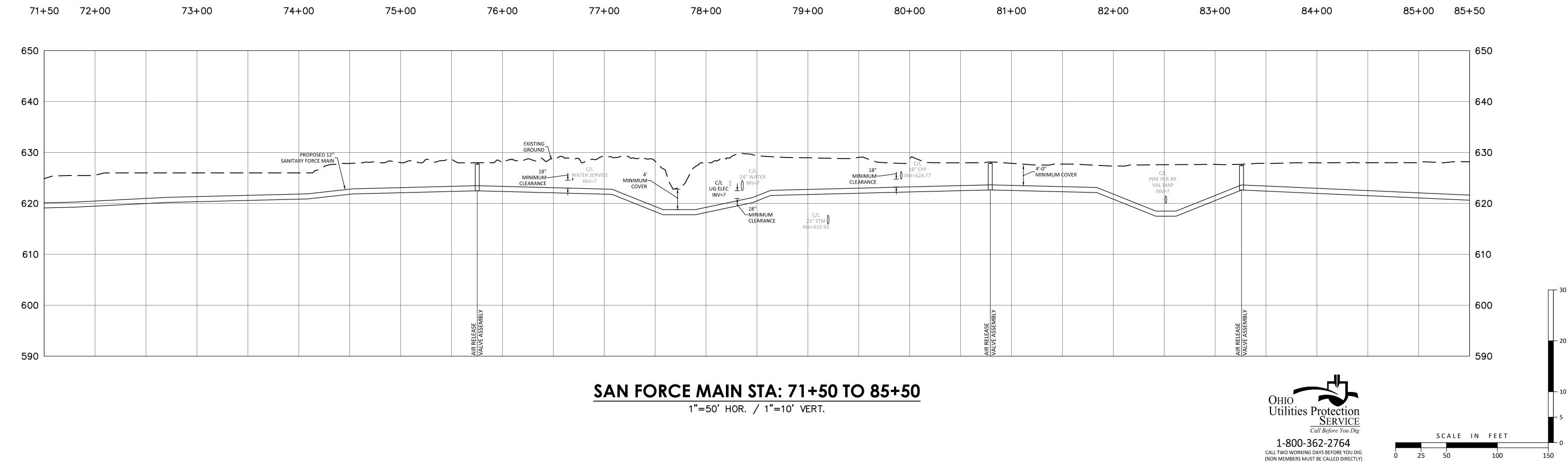
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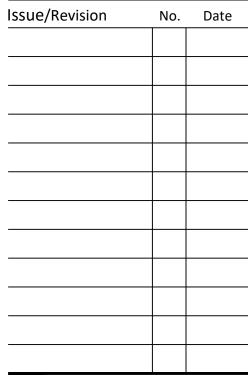






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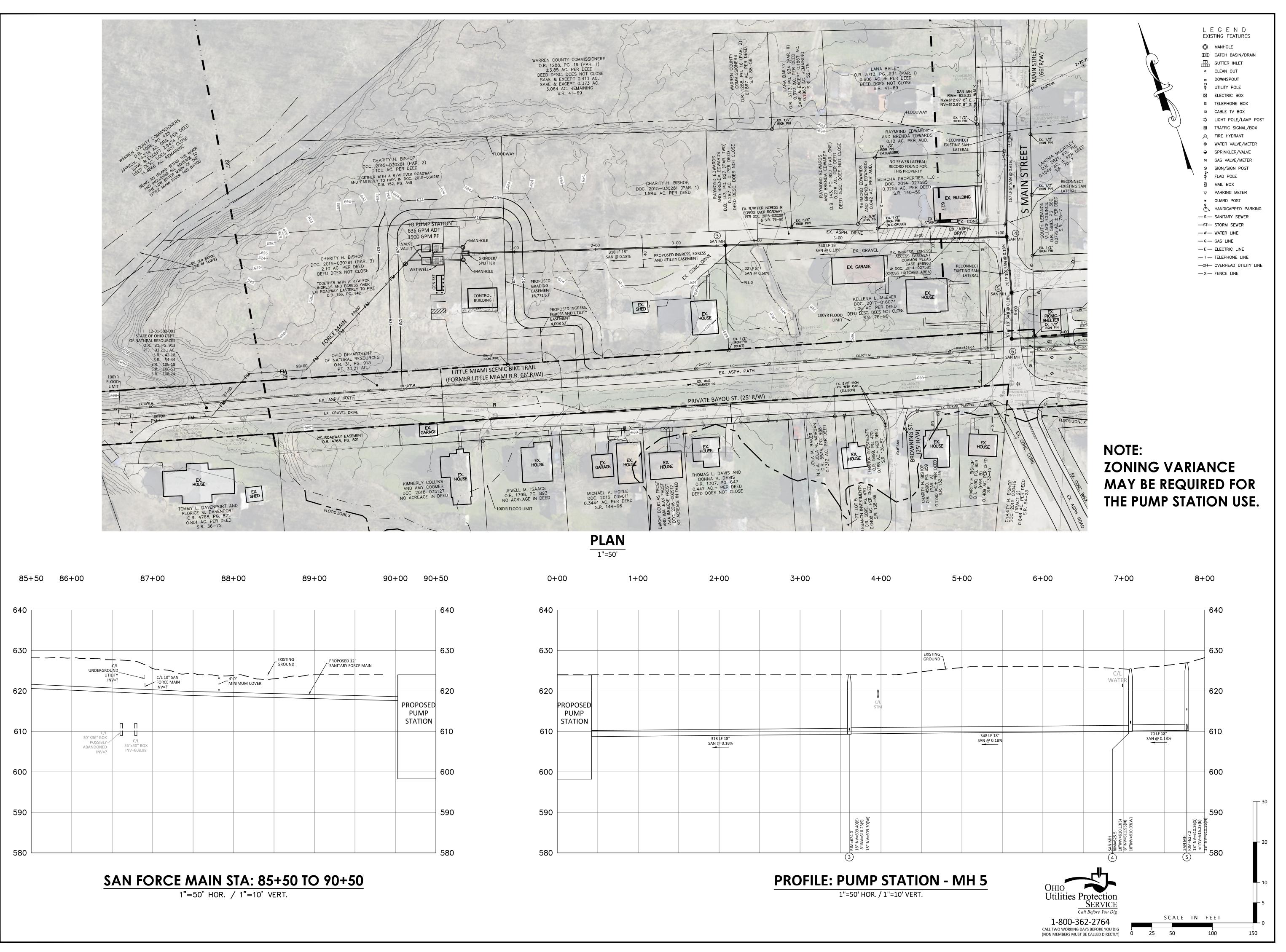
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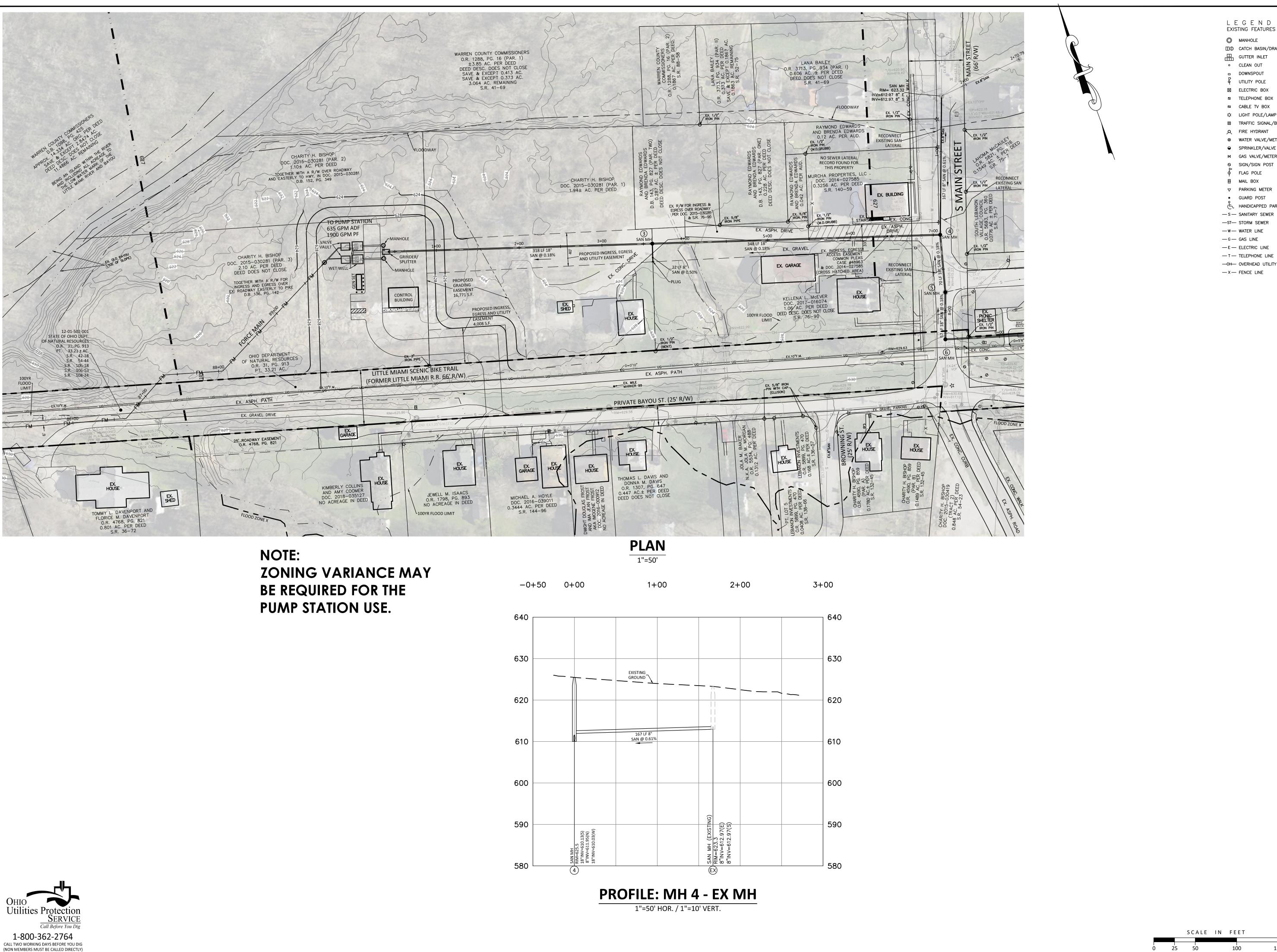
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□① CATCH BASIN/DRAIN GUTTER INLET

 CLEAN OUT DOWNSPOUT

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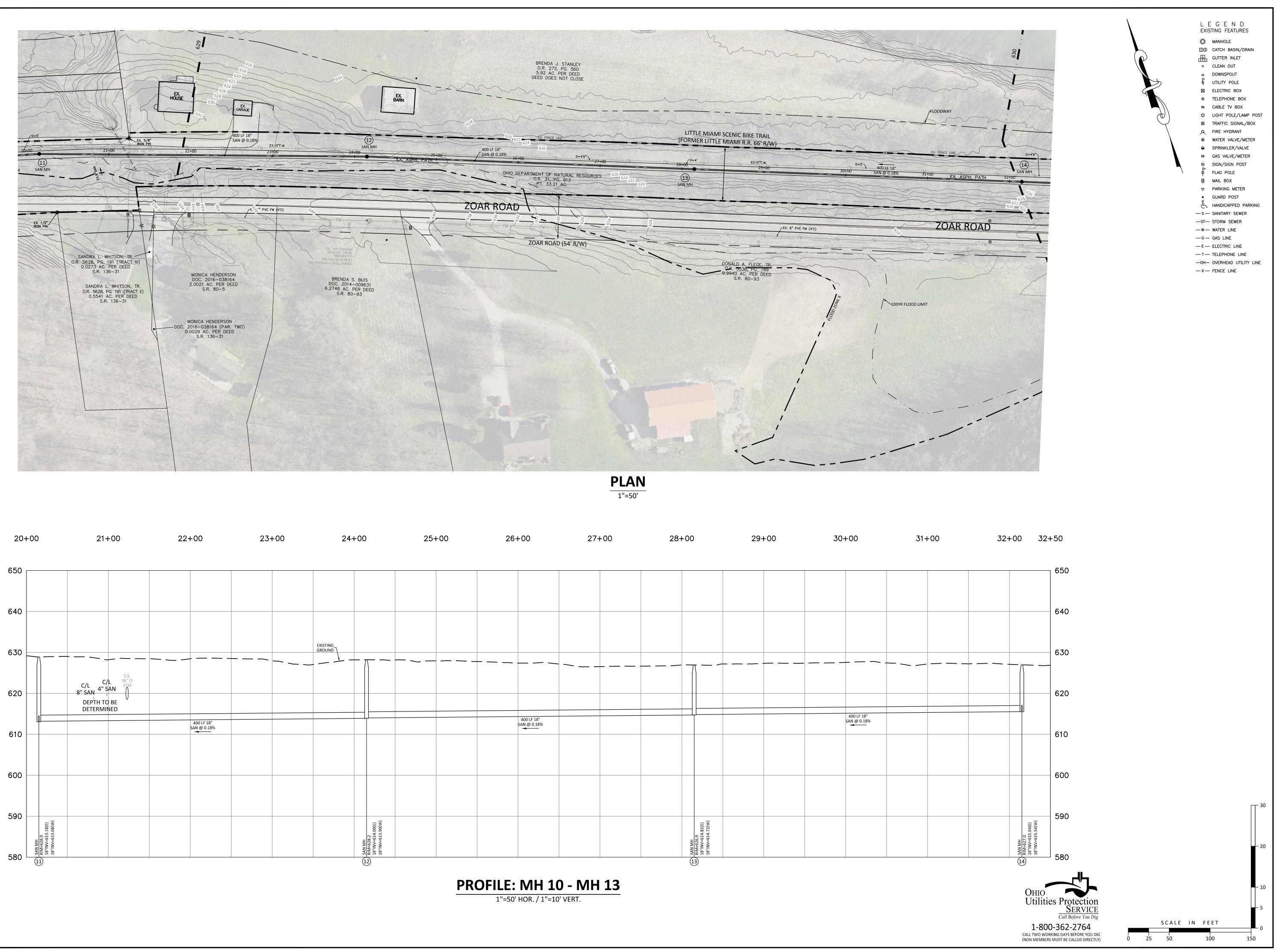
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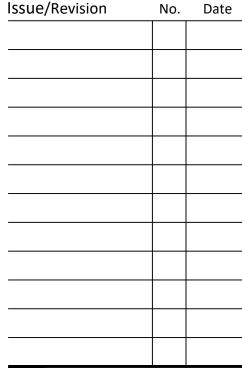
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Project Number **Drawing Scale** Sheet Number

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STREAM CROSSING DETAILS

THE OHIO EPA HAS CONCERNS ABOUT ANY SEWERS WHICH CROSSES OR RUNS PARALLEL TO ANY FLOWING STREAMS. FOR STREAMS WHICH DRAINS ONE SQUARE MILE OR GREATER, COMMUNITIES ARE REQUIRED TO IMPLEMENT CONTROL PRACTICES IN THESE AREAS AS MUCH AS POSSIBLE. FOR STREAMS WITH LESS THAN ONE SQUARE MILE OF DRAINAGE, COMMUNITIES MUST IMPLEMENT CONTROL PRACTICES AS MUCH AS PRACTICABLE. THE AREA OF CONCERN INCLUDES 2.5 TIMES THE FULL BANK WIDTH OF THE STREAM ON EACH BOTH SIDES OF THE STREAM (RIPARIAN AREA). FOR THESE STREAM CROSSINGS OR OTHER AREAS WHERE THE SEWERS ARE IN THIS RIPARIAN AREA, THE ENTITY SHOULD SPECIFY THE MEANS FOR MITIGATING ANY IMPACTS ON THESE STREAMS WHICH COULD RESULT FROM THIS ACTIVITY. THESE FACTORS WOULD INCLUDE THE FOLLOWING:

- a. THE CONSTRUCTION CLEARING LIMITS SHOULD BE AS NARROW AS POSSIBLE OR PRACTICABLE DEPENDING ON THE SIZE OF THE STREAM. IN MOST CASES, A CLEARING LIMIT IN THE RIPARIAN AREA OF NO MORE THAN 20 FEET IS USUALLY APPROPRIATE. FOR ALL SANITARY SEWERS RUNNING PARALLEL TO THE STREAM, THE CLEARING LIMIT SHOULD BE SHIFTED AS FAR FROM THE STREAM AS POSSIBLE. THE CLEARING LIMIT MUST BE CLEARLY SHOWN ON THE DETAILED PLANS.
- b. THE CONSTRUCTION OF THE STREAM CROSSING SHOULD BE COMPLETED AS SOON AS POSSIBLE BUT SHOULD NOT EXCEED MORE THAN ONE DAY.
- c. THE MATERIAL REMOVED FROM THE TRENCH EXCAVATION SHOULD BE STORED OUTSIDE OF THE RIPARIAN AREA. THIS AREA SHOULD BE ENCLOSED BY A SILTATION FENCE.
- d. TREES WITHIN THE RIPARIAN AREA SHOULD AVOIDED AS MUCH AS POSSIBLE. OLDER TREES ALONG THE STREAM SHOULD BE GIVEN THE GREATEST LEVEL OF PROTECTION POSSIBLE. IN THE EVENT THAT A TREE MUST BE REMOVED SO THAT THE SEWERS CAN BE CONSTRUCTED. THE TREE SHOULD BE EITHER CUT AT THE GROUND OR 1 TO 2 FEET ABOVE THE GROUND SO THAT THE ROOT MASS IS MAINTAINED AND THAT THE TREE MAY REGROW AFTER THE PROJECT. ALL OTHER VEGETATION IN THE RIPARIAN AREA SHOULD BE CUT AT THE GROUND SURFACE.
- e. COFFER DAMS SHOULD BE USED TO BYPASS THE TRENCH EXCAVATION DURING THE CONSTRUCTION OF THE STREAM CROSSING.
- f. FINAL BANK STABILIZATION SHOULD BE COMPLETED IMMEDIATELY AFTER COMPLETION OF THE STREAM CROSSING. THE BANK STABILIZATION METHOD SHOULD BE CLEARLY INDICATED ALONG WITH THE TIME FRAME FOR THE COMPLETION OF THE METHOD. IN MOST CASES, THE STREAM BANK SHOULD BE STABILIZED WITHIN ONE DAY OF COMPLETION OF THE STREAM CROSSING.

STREAM CROSSING DETAILS - CONTINUE

- g. THE TYPE OF BACKFILL FOR THE STREAM TRENCH CROSSING SHOULD BE CLEARLY INDICATED. IN THE EVENT THAT BEDROCK IS ENCOUNTERED, CEMENT IS USUALLY USED TO FILL THE TRENCH UP TO THE EXISTING BEDROCK SURFACE AND IS EXTENDED AT LEAST ONE FULL STREAM BANK WIDTH ON BOTH SIDES OF THE STREAM. MATERIAL EXCAVATED OUT OF THE TRENCH MAY THEN BE USED TO COMPLETE THE REMAINING BACKFILL OPERATION. RIP RAP MAY ALSO BE USED AS A FINAL COVER IN AREAS WHERE THE NATIVE SOILS CONSIST OF GLACIAL OUTWASH MATERIAL.
- h. THE STOCKPILE LOCATIONS FOR THE PIPE BEDDING MATERIAL AND THE BACKFILL MATERIAL SHOULD BE SHOWN ON THE DETAILED PLANS. THIS AREA SHOULD BE LOCATED OUTSIDE OF THE RIPARIAN AREA.

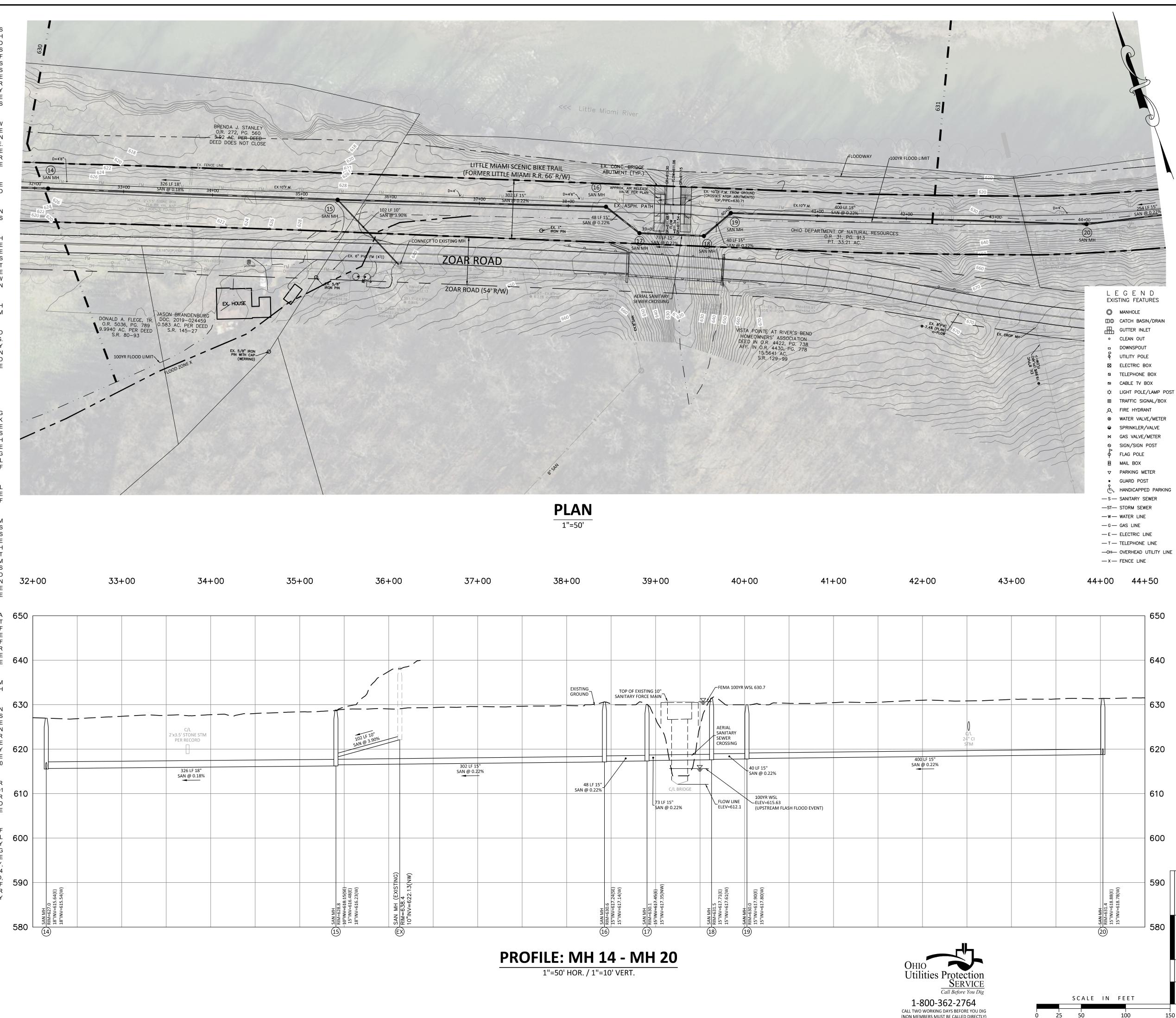
ANY LOCATIONS WHERE EQUIPMENT WILL CROSS THE STREAM SHOULD HAVE A TEMPORARY STREAM CROSSINGS CONSTRUCTED. CONSTRUCTION EQUIPMENT CROSSINGS SHOULD ONLY BE USED WHEN THERE IS NO OTHER FEASIBLE METHOD SUCH AS CONSTRUCTING THE SEWERS FROM BOTH SIDE OF THE STREAM. FOR SITUATIONS WHERE THIS MAY NOT BE PRACTICABLE, TWO WAYS TO CONSTRUCT A STREAM CROSSING WHICH IS COMMON IS USING TREE TRUNKS REMOVED FROM OTHER LOCATIONS OF THE PROJECT AND LAID LENGTH WISE IN THE STREAM OR TO CONSTRUCT A CULVERT IN THE STREAM WITH BACK FILL PLACE ON TOP OF IT. THE PROPOSED EQUIPMENT CROSSING LOCATIONS SHOULD BE SHOWN ON THE PLANS.

- J ALL TRENCH DEWATERING SHALL BE PASSED THROUGH A 650 SEDIMENT IMPOUNDMENT STRUCTURE. ADEQUATE OUTLET PROTECTION MUST BE PROVIDED FOR EACH IMPOUNDMENT. IF ANY GROUNDWATER DEWATERING SHOULD OCCUR, THE CONTRACTOR SHALL CONTACT THE OHIO DEPARTMENT OF NATURE RESOURCES, DIVISION OF WATER, TO ASSURE PROPER WELL INSTALLATION AND ABANDONMENT OF WELLS. THE CONTRACTOR SHALL NOT DIRECT THE GROUNDWATER TO THE 640 IMPOUNDMENT INTENDED FOR TRENCH WATER.
- k. SILT FENCING SHOULD BE PROVIDED DOWN GRADIENT FROM ANY EARTH MOVING ACTIVITIES IN THE RIPARIAN AREA WITH STEEP SLOPE.

ONCE THESE EARTH MOVING ACTIVITIES ARE COMPLETED IN THE RIPARIAN AREA/PROJECT AREA, THE DISTURBED AREAS MUST BE SEEDED AND/OR MULCHED AS REQUIRED FOR THE PERMANENT STABILIZATION AND TEMPORARY STABILIZATION REQUIREMENTS DETAILED IN THE GENERAL STORM WATER PERMIT FOR CONSTRUCTION ACTIVITY. FINALLY, PLEASE BE ADVISED THAT A CONSTRUCTION STORM WATER PERMIT MAY 620 BE REQUIRED FOR ACTIVITIES THAT DISTURB 1 OR MORE ACRES. (1 ACRE OR MORE OF EARTH DISTURBANCES: 2200 FEET OF SEWER WITH 20' CLEARING LIMIT)

- m. IN THE EVENT THAT MORE THAN 3 STREAM CROSSINGS PER MILE ARE PROPOSED AS PART OF THIS PROJECT, A 401 CERTIFICATION WILL BE REQUIRED BY THE OHIO EPA DSW. FOR EWH, CWH, AND OSRW, ANY STREAM CROSSING WOULD ALSO REQUIRE THIS CERTIFICATION. PLEASE CONTACT LAURIE MOORE WITH QUESTIONS ABOUT THIS REQUIREMENT.
- n. FOR PROJECTS INVOLVING CONSTRUCTION OR PLACEMENT OF FILL IN A STREAM OR WETLAND, THE APPLICANT SHALL 600 CONTACT THE APPROPRIATE DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS FOR A DETERMINATION REGARDING POTENTIAL IMPACTS TO WATER OF THE STATE AS WELL AS THE REQUIREMENTS FOR OBTAINING, IF NECESSARY, CERTIFICATION. THE APPLICANT SHALL ACQUIRE A SECTION 404 PERMIT AND 401 WATER QUALITY CERTIFICATION, IF NEEDED, BEFORE IMPACTING ANY WATERS OF THE STATE AS PART OF 590 THIS PROJECT. THESE REQUIREMENTS MAY BE REQUIRED FOR THE PROPOSED STREAM CROSSINGS AND FOR ANY SANITARY SEWER CONSTRUCTED IN A WETLAND.

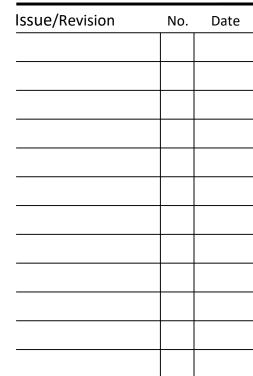
THESE DETAILS SHOULD BE CLEARLY SHOWN ON THE DETAILED PLANS. FINALLY, THE DISTANCE FROM THE STREAMS THAT CONSTITUTES THE RIPARIAN AREA MUST ALSO BE CLEARLY SHOWN ON THE DETAILED PLANS.





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Project Manager STG Drawn By 06308124-PRE-00 X-Ref(s)



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Sheet Title

PLAN & PROFILE

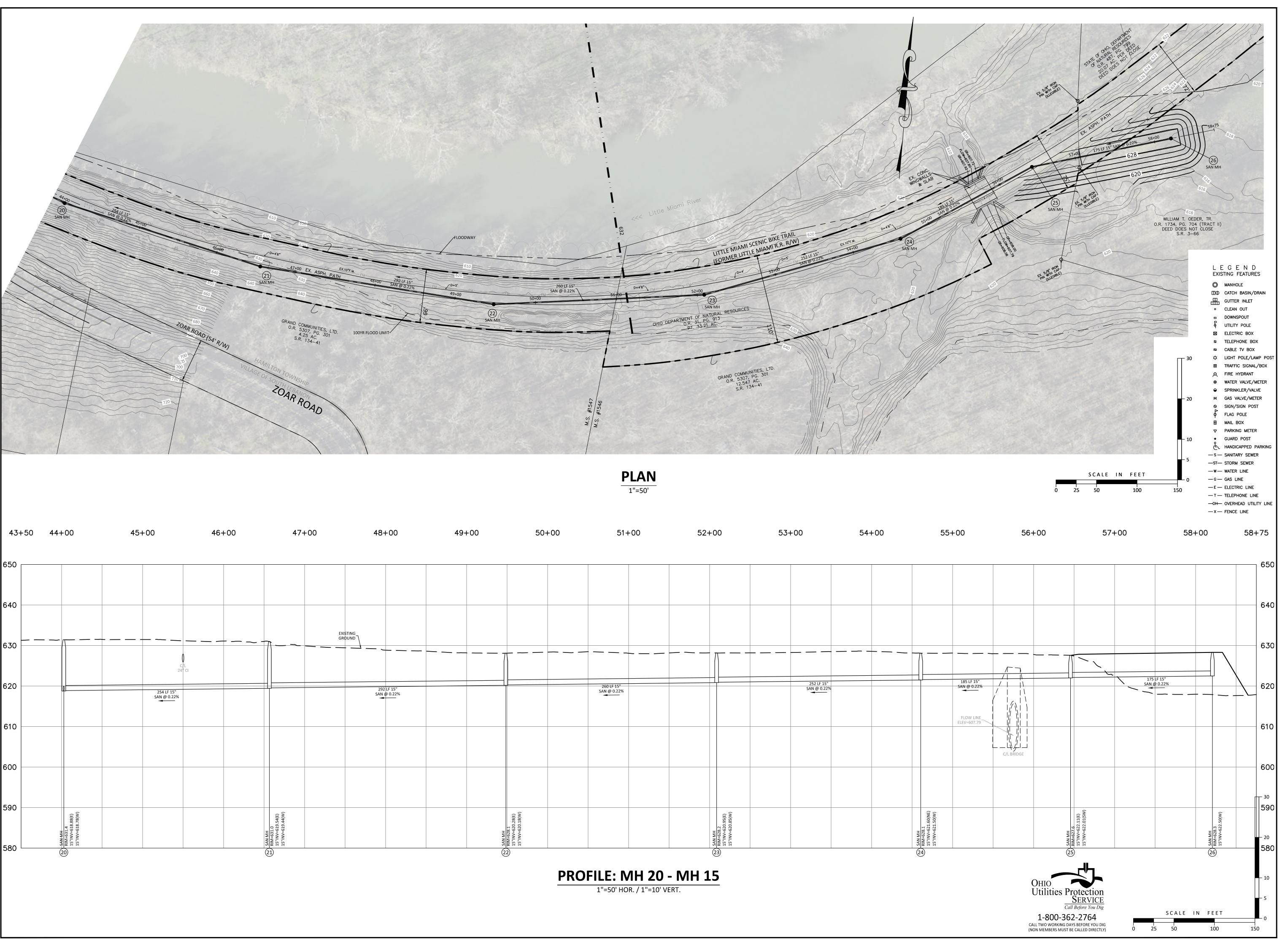
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1" = 50'

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Project Number **Drawing Scale Sheet Number**

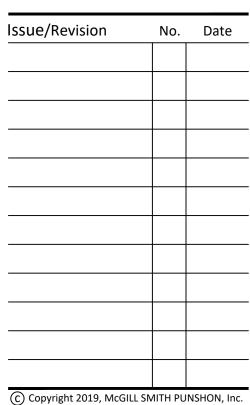
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Sheet Title

PLAN & PROFILE

Project Number 06308.12 1" = 50' **Drawing Scale** Sheet Number

File Number

PUBLIC

DETAILED PROCEDURES FOR SANITARY SEWER

- PROCEDURE FOR MAKING SEWER LATERAL CONNECTIONS TO EXISTING SEWER:
- A. IF ABS COMPOSITE EXCAVATE TO POINT OF LATERAL ON MAIN: CLEAN EXISTING PIPE; ALIGN SADDLE TO PROPER POSITION AND MARK AREA TO BE CUT: CUT HOLE IN PIPE AS REQUIRED MAKING SURE THE CUT OUT DOESN'T ENTER THE MAIN; ATTACH AND SEAL SADDLE WITH STAINLESS STEEL STRAPS AND MASTIC SEALER BETWEEN SADDLE AND PIPE. INSERTA TEES ARE NOT PERMITTED.
- B. IF CLAY OR CONCRETE EXCAVATE TO POINT OF LATERAL ON MAIN; PLUG OUTLET PIPE AT UPSTREAM MANHOLE - PUMP TO DOWNSTREAM MANHOLE IF NECESSARY; REMOVE CLOSEST LENGTH OF PIPE AND REPLACE WITH TEE LATERAL SECTION OF PIPE OR CORE EXISTING PIPE IN PLACE.
- 2. PROCEDURE FOR MAKING SEWER EXTENSIONS FROM EXISTING MANHOLES: CONSTRUCT LINE TO WITHIN ONE JOINT OF EXISTING MANHOLE; AFTER LINE PASSES LEAKAGE TEST AND WARREN COUNTY SANITARY ENGINEER GIVES GO AHEAD - CONNECTION IS TO BE MADE; PLUG OUTLET PIPE AT UPSTREAM MANHOLE - PUMP TO DOWNSTREAM MANHOLE IF NECESSARY; A HOLE IS CUT AT THE PROPOSED INLET POINT AND THE LAST JOINT IS LAID; EXISTING BENCH AND CHANNEL OF MANHOLE IS REBUILT AND SHAPED AS REQUIRED; NEW CONNECTION IS TO BE SEALED AS REQUIRED.
- . PROCEDURE FOR MAKING NEW MANHOLES ON EXISTING SEWER MAINS: EXCAVATE AND EXPOSE EXISTING SEWER AT POINT OF NEW MANHOLE: BUILD MANHOLE OVER EXISTING LINE WHILE NOT DISTURBING EXISTING LINE; BUILD NEW LINE(S) FROM NEW MANHOLE; AFTER NEW LINE(S) PASS(ES) LEAKAGE TEST AND WARREN COUNTY SANITARY ENGINEER GIVES GO AHEAD - PLUG OUTLET PIPE AT EXISTING UPSTREAM MANHOLE (PUMP TO EXISTING DOWNSTREAM MANHOLE IF NECESSARY): BREAKOUT TOP OF EXISTING SEWER AS REQUIRED AND FORM A BENCH AND CHANNEL AS REQUIRED.
- 4. STORM WATER AND EXTRANEOUS FLOWS ARE PROHIBITED FROM ENTERING THE EXISTING SYSTEM DURING CONSTRUCTION. NO OPEN CUT TRENCHES WILL BE ALLOWED TO REMAIN OPEN OVERNIGHT. STORM DRAINS, DIVERSION DITCHES, PUMPS ETC., SHALL BE USED AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE SYSTEM AT ALL TIMES.
- 5. ALL SANITARY SEWER PIPE MUST BE BEDDED WITH NUMBER 57 STONE EXTENDING FROM A POINT NOT LESS THAN 6" BELOW THE BOTTOM OF THE PIPE TO THE SPRINGLINE OF THE PIPE. BACKFILL WITH NUMBER 9 GRITS FROM THE SPRINGLINE TO A POINT NOT LESS THAN 12" ABOVE THE CROWN OF THE PIPE. BEDDING SHALL PROVIDE A UNIFORM SUPPORT ALONG THE ENTIRE PIPE BARREL, WITHOUT LOAD CONCENTRATION AT JOINT COLLARS OR BELLS. BEDDING DISTURBED BY PIPE MOVEMENT OR BY REMOVAL OF SHORING OR MOVEMENT OF THE TRENCH SHIELD OR BOX SHALL BE RECONSOLIDATED PRIOR TO BACKFILL. BEDDING TO BE COMPACTED TO 95% PROCTOR

APPROVED/REVISED MARCH, 2018

WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER

STANDARD NUMBER SG-

SEWER TESTING

- I. THE CONTRACTOR MUST INSTALL MECHANICAL PLUG(S) AT THE POINT(S) OF CONNECTION TO THE EXISTING SEWER PRIOR TO INITIATING ANY CONSTRUCTION. THE MECHANICAL PLUG(S) SHALL REMAIN IN PLACE UNTIL THE NEW MAINS HAVE BEEN FLUSHED, CLEANED, TESTED, TELEVISED, AND APPROVED FOR USE BY WARREN COUNTY. THE MECHANICAL PLUG(S) CAN ONLY BE REMOVED IN THE PRESENCE OF A WARREN COUNTY SEWER INSPECTOR.
- ALL NEW MANHOLES SHALL BE VACUUM TESTED. A VACUUM OF 10" OF MERCURY SHALL BE DRAWN ON THE MANHOLE. FOR A 4' MANHOLE LESS THAN 20' DEEP, MANHOLE SHALL HOLD 9" OF MERCURY FOR AT LEAST 1 MINUTE.
- 3. ALL SANITARY SEWER MAINS MUST BE AIR TESTED. THE STANDARD TEST IS AN AIR PRESSURE TEST OF 5.0 PSI FOR A FIVE (5) MINUTE PERIOD WITH A MAXIMUM OF 1.0 PSI LOSS.
- 4. ALL NON-TRUSS PIPE SHALL BE TESTED FOR DEFLECTION AFTER BACKFILLING IS COMPLETED (30 DAY MINIMUM REQUIRED). A DEFLECTION TEST WITH A NINE POINT MANDREL WILL BE REQUIRED. NO MECHANICAL PULLING DEVICE SHALL BE USED. A VERTICAL RING DEFLECTION GREATER THAN FIVE PERCENT (5%) WILL NOT BE ALLOWED THIS DEFLECTION IS DEFINED AS A FIVE PERCENT REDUCTION IN THE VERTICAL BASE OR AVERAGE INSIDE DIAMETER.
- 5. AT THE TIME THE SANITARY SEWER IS TESTED, THE SEWER MUST BE CLEANED AND TELEVISED WITH VIDEO DOCUMENTATION (DVD) PROVIDED TO WARREN COUNTY. THE VIDEO MUST INCLUDE AUDIO IDENTIFICATION OF PIPE SPANS FROM MANHOLE TO MANHOLE, FLOW DIRECTION, TILT AND PAN OF ALL LATERALS AND CALL OUT ANY SUSPECT PROBLEMS IN THE SYSTEM. ALL PROBLEMS MUST BE IDENTIFIED BY THE CONTRACTOR. THE NECESSARY REPAIRS MUST BE MADE AND THE SEWER MUST THEN BE RE-CLEANED, RE-TESTED AND RE-TELEVISED.
- 6. A SECOND VIDEO INSPECTION IS REQUIRED ONE YEAR AFTER INSTALLATION AND/OR PRIOR TO THE RELEASE OF THE MAINTENANCE BOND. IF A DEFICIENCY IS IDENTIFIED DURING THIS TELEVISED INSPECTION, THE FAILED SEWER PIPE MUST BE TESTED AND REPAIRED TO THE SATISFACTION OF THE COUNTY SANITARY ENGINEER.
- 7. THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE THE TELEVISING, TESTING AND REPAIRS OF THE SANITARY SEWER.

APPROVED/REVISED MARCH, 2018

WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER

STANDARD NUMBER

SEWER

- ALL SANITARY PIPE SHALL CONFORM TO ASTM D-2680 FOR ABS/PVC GASKETED COMPOSITE PIPE (TRUSS), ASTM D-3034 FOR SDR 26 GASKETED 4" - 15" DIAMETER OR ASTM F-679 FOR SDR 26 GASKETED 18" - 30" DIAMETER. PIPE LARGER THAN 15" SHALL CONFORM TO ASTM F-949 (A2000) OR ASTM F-1803. CERAMIC COATED CLASS 53 DUCTILE IRON PIPE OR EQUAL MUST BE USED WHERE SPECIFIED BY THE COUNTY SANITARY ENGINEER. JOINTS FOR PVC GRAVITY SEWER PIPE SHALL BE PUSH-ON TYPES WITH RUBBER GASKETS. PIPE ENDS SHALL NOT BE BEVELED. PIPE ENDS MUST BE SEALED.
- ROOF DRAINS, FOUNDATION DRAINS AND OTHER STORM WATER CONNECTIONS TO THE SANITARY SYSTEM ARE PROHIBITED.
- 3. NO MANHOLE, OR ANY PORTION OF THE MANHOLE, SHALL BE LOCATED UNDER A SIDEWALK OR DRIVEWAY.
- 4. SANITARY SEWER LATERALS SHALL BE CONSTRUCTED OF THE FOLLOWING MATERIALS: A) ABS PIPE - ASTM D-2751 WITH SDR 23.5 (6" GLUE JOINT)

B) PVC PIPE - ASTM D-3034 WITH SDR 23.5 (6" GLUE OR GASKET JOINT) ASTM D-2665 SCHEDULE 40 ASTM D-3034 WITH SDR 35 (6" ONLY)

C) DUCTILE IRON — CLASS 53 (6")

SEWER LATERALS MUST BE EXTENDED TO THE HOUSE SIDE OF UTILITY EASEMENTS AND SHALL BE MARKED BY TWO INCHES (2") BY FOUR INCHES (2" X 4") OR LARGER POSTS. POSTS SHALL BE PAINTED GREEN. A SIX FOOT (6') LENGTH OF #6 REINFORCED BAR SHALL BE INSTALLED AGAINST THE POST. END OF SEWER LATERAL SHALL NOT EXCEED 4' IN DEPTH UNLESS APPROVED BY THE COUNTY SANITARY ENGINEER. SEE DETAIL S-14A.

- ONLY SANITARY WYES WITH 45° BENDS SHALL BE USED FOR SANITARY LATERAL INSTALLATION. ALL WYES TO BE GLUE JOINTS ON TRUSS AND COMPOSITE PIPE ALL SANITARY LATERALS MUST BE SIX INCHES (6") IN DIAMETER WITHIN THE RIGHT-OF-WAY NO CONNECTION SHALL BE MADE TO THE CROWN OF THE SEWER MAIN.
- 7. ALL LATERALS TO BE NOT LESS THAN SIX INCHES (6") INSIDE DIAMETER.
- 8. THE LOCATION OF SEWER LATERALS MUST BE STAMPED IN THE CURB AT THE TIME THE CURB IS PLACED TO PERMANENTLY INDICATE THE LOCATION OF SAID LATERALS.
- 9. THE LOCATION OF ALL SEWER LATERALS MUST BE PROVIDED ON THE AS-BUILT
- 10. MANHOLE LATERALS SHALL HAVE AN INVERT TWO INCHES (2") ABOVE MAIN-LINE

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SPECIFICATIONS AND STANDARD CONSTRUCTION DRAWINGS ILLAGE OF SOUTH LEBANON ORDINANCE No. 2018-17 ADOPTED NOVEMBER 1, 2018 AND THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, 2013 CONSTRUCTION AND MATERIALS SPECIFICATIONS, AND THE NOTED STANDARD CONSTRUCTION DRAWINGS SHALL GOVERN THIS IMPROVEMENT. IF THERE IS A CONFLICT IN SPECIFICATIONS AND STANDARDS BETWEEN THE TWO GOVERNING AUTHORITIES, ORDINANCE

No. 2018-17 SHALL GOVERN. WHEREVER THE WORD "STATE" OCCURS, IT IS TO MEAN THE OHIO DEPARTMENT OF TRANSPORTATION

FOLLOWING THE AWARD OF THE CONTRACT AND BEFORE STARTING ANY WORK, THE CONTRACTOR AND HIS SUPERINTENDENT SHALL MEET WITH THE OWNER FOR A PRE-CONSTRUCTION MEETING. THE PURPOSE TO REVIEW ANY RESTRICTIONS AND REGULATIONS GOVERNING THE WORK. ANY SCHEDULES, REQUEST PAPERS, APPROVALS, SUBMITTALS, SHOP DRAWINGS, CHANGES, ETC. AS CALLED FOR IN THE CONTRACT DOCUMENTS SHALL BE DONE AT THIS TIME UNLESS OTHERWISE DIRECTED.

THE CONTRACTOR SHALL OBTAINED AT HIS EXPENSE ANY AND ALL PERMITS AND INSPECTIONS REQUIRED FOR THE CONSTRUCTION OF THE SANITARY SEWER BY LOCAL LAWS, ORDINANCES, RULES AND

INLESS OTHERWISE SPECIFIED, ALL MATERIALS SHALL BE NEW AND BOTH WORKMANSHIP AND MATERIALS SHALL BE OF FIRST QUALITY PROPER AND SUFFICIENT FOR THE PURPOSE CONTEMPLATED. THE CONTRACTOR SHALL FURNISH. IF SO REQUIRED, SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND WORKMANSHIP. ALL ITEMS OF EQUIPMENT AND/OR MATERIALS PROPOSED FOR SUBSTITUTION MUST BE APPROVED BY THE OWNER IN WRITING AND SHALL BE EQUAL OR BE SUPERIOR TO THE ITEMS SPECIFIED IN THE CONTRACT DOCUMENTS. IF SAID SUBSTITUTION PROPOSED BY THE CONTRACTOR FOR A SPECIFIED ITEM REQUIRED ENGINEERING REVISIONS. THE EXPENSE OF SUCH REVISIONS SHALL BE PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

T SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM HIS WORK IN SUCH A MANNER AS NOT TO DAMAGE OR DESTROY ANY EXISTING FACILITIES. IF ANY SUCH DAMAGE DOES OCCUR DUE TO THE CONTRACTOR'S OPERATIONS, HE SHALL REPLACE THE DAMAGED PORTION AT HIS EXPENSE AND TO THE SATISFACTION OF THE FACILITY OWNER.

THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE OF THE PROPOSED WORK. THE PLANS AND SPECIFICATIONS. THE SUBMISSION OF A BID SHALL BE CONSIDERED EVIDENCE THAT THE CONTRACTOR HAS MADE SUCH EXAMINATION AND IS SATISFIED AS TO THE CONDITIONS TO BE ENCOUNTERED IN PERFORMING THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL RESTRICT ALL OF HIS ACTIVITIES, EQUIPMENT STORAGE, AND STAGING WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE ACTUAL CONSTRUCTION LIMITS ARE SHOWN ON THE PLANS OR THE EXISTING OR PROPOSED R/W. WHICHEVER IS NEAREST. SHOULD THE CONTRACTOR WISH TO USE ANY AREA OUTSIDE THESE LIMITS, HE MUST SUBMIT HIS REQUEST IN WRITING TO THE OWNER. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA THAT THE CONTRACTOR PLANS TO USE AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. THE OWNER SHALL APPROVE THE REQUEST IN WRITING BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA. PRIOR TO THE BEGINNING OF WORK, THE CONTRACTOR, SUPERINTENDENT OR HIS REPRESENTATIVE, THE OWNER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY SHALL REVIEW AND RECORD ALL ADJACENT SITES WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE OWNER'S AND CONSTRUCTION MANAGER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF THE ADJACENT SITES WILL BE MADE ANY AREAS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPAIRED OR REPLACED, AT THE CONTRACTOR'S EXPENSE, IN KIND OR AS DIRECTED BY THE OWNER.

PROTECTING EXISTING UNDERGROUND UTILITIES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING, MARKING, OR OTHERWISE DESIGNATING THE LOCATIONS OF THE UNDERGROUND UTILITIES IN THE CONSTRUCTION AREAS IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH OF WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF PLANNED CONSTRUCTION. EXTREME CARE SHALL BE TAKEN IN THE VICINITY OF THE EXISTING UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ISOLATE, BRACE, SUPPORT, SHEET FTC AND PROTECT THE EXISTING UTILITY FROM MOVING EITHER HORIZONTALLY OR VERTICALLY, IF SUCH MOVEMENT DOES OCCUR DUE TO THE CONTRACTOR'S OPERATIONS. THE CONTRACTOR SHALL REPAIR THE UTILITY AT HIS EXPENSE. THE CONTRACTOR MAY ELECT TO REMOVE AND RECONSTRUCT PORTIONS OF THE EXISTING UTILITY AT HIS OWN EXPENSE IF HE SO DESIRES.

SHOULD AN UNLOCATED OR AN EXTREME VARIANCE IN LOCATION OF A UTILITY BE ENCOUNTERED DURING EXCAVATION. CONSULT THE OWNER IMMEDIATELY FOR DIRECTION.

DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE OWNER AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED. COOPERATION WITH THE OWNER IN KEEPING RESPECTIVE SERVICES AND FACILITIES IN OPERATION IS ESSENTIAL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM HIS WORK IN SUCH A MANNER AS NOT TO DAMAGE OR DESTROY ANY EXISTING UTILITY. IF ANY SUCH DAMAGE DOES OCCUR DUE TO THE CONTRACTOR'S OPERATIONS, HE SHALL NOTIFY THE OWNER IMMEDIATELY AND REPLACE THE DAMAGED PORTION IMMEDIATELY. AND AT HIS EXPENSE.

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN ON THE PLAN.

THE OWNER OF THE UNDERGROUND FACILITY SHALL, WITHIN 48 HOURS (EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS), MARK THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE AND THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

SEWER (CONTINUED)

- EXISTING MANHOLE CASTINGS ARE TO BE RAISED BY EITHER A MANHOLE ADJUSTING RING OR A BARREL SECTION ADDED. IF THE HEIGHT OF NECESSARY ADJUSTMENT IS OVER ONE FOOT (1') OR THERE IS ALREADY AN EXISTING ADJUSTMENT RING BEING USED, THE CONTRACTOR IS TO USE A NEW BARREL SECTION ONLY. EXTRA CARE IS TO BE TAKEN TO INSURE A PROPER AND TIGHT SEAL AT ALL NEW JOINTS.
- 12. THE CONTRACTOR MUST INSTALL MECHANICAL PLUGS(S) AT THE POINT(S) OF CONNECTION TO THE EXISTING SEWER PRIOR TO INITIATING ANY CONSTRUCTION. THE BULK HEAD(S) OR MECHANICAL PLUG(S) SHALL REMAIN IN PLACE UNTIL THE NEW MAINS HAVE BEEN FLUSHED, CLEANED, TESTED, TELEVISED, AND APPROVED FOR USE BY WARREN COUNTY. THE MECHANICAL PLUG(S) CAN ONLY BE REMOVED IN THE PRESENCE OF A WARREN COUNTY SEWER INSPECTOR.
- TRENCH SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MUST INSURE THAT ALL APPLICABLE OSHA OPEN TRENCH SAFETY REQUIREMENTS ARE FOLLOWED. IT IS NOT WARREN COUNTY'S RESPONSIBILITY TO INSPECT EACH SITE FOR COMPLIANCE.
- 4. HDPE PIPE MAY BE USED FOR DIRECTIONAL BORING OF FORCE MAINS WITH APPROVAL FROM THE COUNTY SANITARY ENGINEER. ALL DIRECTIONAL DRILLING SHOULD BE ACCOMPANIED BY DRILLING LOGS AT 25' STATION INCREMENTS, PVC PIPE SHALL BE PERMITTED FOR FORCE MAINS SIX INCHES (6") OR SMALLER IN DIAMETER. FORCE MAINS EIGHT INCHES (8") OR LARGER MUST BE CLASS 53 DUCTILE IRON WITH AN INTERIOR LINING OF EPOXY OR CERAMIC. PVC SHALL CONFORM TO AWWA C900 REQUIREMENTS AND HAVE AN EQUIVALENT OUTSIDE DIAMETER OF DR 14.

15. MINIMUM SLOPE SHALL BE AS FOLLOWS:

PIPE SIZE			MINIMIIM SLOPE				
6"			2.00				
8"			.50				
10"			.35 28				
15"			.19				
18"		111111	16				

16 ALL MATERIALS USED SHALL BE DOMESTIC, MADE IN THE UNITED STATES OF AMERICA

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CTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS. ANY POWER - OPERATED CONSTRUCTION - TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOLIRS OF 8:00 AM AND 7:00 PM IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE

REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT. NO CONSTRUCTION SHALL BE DONE DURING STORMY, FREEZING, OR INCLEMENT WEATHER

UNLESS PERMISSION IS GIVEN BY THE OWNER. WHENEVER WORK PROCEEDS DURING SUCH WEATHER, THE CONTRACTOR SHALL PROVIDE APPROVED FACILITIES, INCLUDING HEAT (IF REQUIRED). THE CONTINGENCY QUANTITIES HAVE BEEN INCLUDED TO BE USED AS DIRECTED BY THE OWNER. FOR THE PROTECTION OF ALL MATERIALS AND FINISHED WORK

NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE

APPROVED/I

THE CONTRACTOR SHALL PROVIDE FOR PROTECTION OF THE FOLLOWING: EXISTING STREETS, DRIVEWAYS. SIDEWALKS, CURBS, GUTTERS, RE-SEEDING/RE-SODDING, REMOVAL OF TREES, RESTORATION OF AGRICULTURAL LAND. THE MAINTENANCE OF THE CONSTRUCTION AREA DURING PROGRESS OF THE WORK AND THE COMPLETE RESTORATION OF THE CONSTRUCTION AREA AFTER THE BACKFILLING IS COMPLETED, AND HE SHALL PROCEED TO RESTORE TO ITS ORIGINAL CONDITION ALL STREETS. DRIVEWAYS, SIDEWALKS. CURBS, GUTTERS, STRUCTURES, AND ALL AREAS THAT WERE DAMAGED, DISTURBED, OR OCCUPIED BY THE CONTRACTOR IN CONNECTION WITH ANY PHASE OF THE WORK.

PAVEMENTS, TREES, SHRUBS, FENCES, POLES, OR OTHER PROPERTY AND SURFACE STRUCTURES WHICH HAVE BEEN DAMAGED, REMOVED, OR DISTURBED BY THE CONTRACTOR. WHETHER DELIBERATELY OR THROUGH FAILURE TO CARRY OUT THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, STATE LAWS, MUNICIPAL ORDINANCES, THE SPECIFIC DIRECTION OF THE OWNER, OR THROUGH FAILURE TO EMPLOY USUAL AND REASONABLE SAFEGUARDS SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

ALL TEMPORARY SIGNS, SPRINKLER SYSTEMS, LANDSCAPING, ORNAMENTAL FENCING, ETC., LOCATED WITHIN THE PROJECT LIMITS MUST BE REPLACED UPON COMPLETION OF THE

THE ESTIMATED QUANTITIES UPON WHICH THIS PROPOSAL IS BASED ARE APPROXIMATE ONLY. THEY SHALL BE USED TO DETERMINE THE LOWEST AND BEST BIDDER. DURING THE TERM OF THE CONTRACT, AND AT THE OPTION OF THE OWNER, THEY MAY BE INCREASED, DECREASED, OR NON-PERFORMED AS CONDITIONS DICTATE AND/OR WHEN THE NEED FOR ANY ITEM CANNOT BE DETERMINED UNTIL THE COMPLETION OF OTHER CONTRACTUAL ITEMS AND/OR THE PROPER INSPECTIONS HAVE BEEN MADE. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY CLAIM OR LOSS OF PROFITS OR OTHER DAMAGES SHOULD THE ACTUAL QUANTITIES OF ANY OR ALL ITEMS BE GREATER THAN OR LESS THAN THE STATED ESTIMATED QUANTITIES

WHERE THE PLANS PROVIDE FOR THE PROPOSED CONDUIT TO BE CONNECTED TO OR TO CROSS OVER/UNDER AN EXISTING SEWER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO CONSTRUCT THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT OR EXISTING APPURTENANCE TO BE CONNECTED DIFFERS FROM THE PLAN FLEVATION, OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE. THE OWNER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN. THE OWNER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

WHERE PLANS REQUIRE PAVEMENT REMOVED, SAWING OF PAVEMENT PRIOR TO PAVEMENT

REMOVAL IS INCIDENTAL TO ITEM 202, PAVEMENT REMOVED. SAW CUTS ARE TO BE MADE USING A DIAMOND EDGE BLADE. IF FULL DEPTH PAVEMENT IS NOT ENCOUNTERED, IT IS THE INTENT TO REPLACE WITH FULL DEPTH TO THE EXISTING EDGE OF FULL DEPTH PAVEMENT.

ALL PUBLIC FORCE MAINS SHALL BE AT LEAST 2-INCH NOMINAL DIAMETER. FORCE MAINS 3-INCH NOMINAL DIAMETER AND LARGER SHALL BE THICKNESS CLASS 53 DUCTILE IRON. FORCE MAINS SMALLER THAN 3-INCH

NOMINAL DIAMETER SHALL BE SDR 21 PVC (200 PSI) WITH GASKETED IOINTS. DETECTABLE MAGNETIC MARKING TAPE SHALL BE INSTALLED IN THE DITCH LINE FOR NON-METALLIC PUBLIC FORCE MAINS BOTH ONE FOOT (1') BELOW THE FINAL SURFACE GRADE AND ONE FOOT (1') ABOVE THE FORCE MAIN.

WHEREVER POSSIBLE, COMMON/PUBLIC FORCE MAINS SHOULD BE INSTALLED WITH A CONTINUOUS POSITIVE GRADE TO THE DISCHARGE INTO THE GRAVITY SEWER. APPROVED AIR/VACUUM RELEASE VALVES SHALL BE INSTALLED WHERE LOCALIZED HIGH POINTS EXIST OR LONG RUNS (GREATER THAN 2.500 FEET) WITH NO CLEARLY DEFINED HIGH POINT OCCUR. AIR/VACUUM RELEASE VALVES SHALL BE INSTALLED ON UPWARD TURNED TEES; TAPS OR TAPPING SADDLES ARE NOT ALLOWED. THE ENGINEER AND PLUMBER SHOULD ALSO EVALUATE THE NEED FOR AIR RELEASE VALVE(S) AT HIGH POINTS ON PRIVATE FORCE MAINS

PUBLIC FORCE MAINS SHALL DISCHARGE INTO A GRAVITY SEWER THROUGH A SEPARATE MANHOLE WITH NO UPSTREAM GRAVITY SEWER CONNECTIONS. THE FORCE MAIN SHALL BE EXTENDED ALONG THE BOTTOM OF THE MANHOLE AND APPROXIMATELY10 FEET (10') INTO THE GRAVITY SEWER AT THE SEWER'S INVERT. A FLOW CHANNEL AND BENCHES SHALL BE FORMED IN THE MANHOLE TO ALLOW ANY WATER OR SEWAGE TO DRAIN INTO THE GRAVITY SEWER BUT STILL ALLOW ACCESS TO THE SEWER FOR MAINTENANCE. NO LATERALS MAY BE CONNECTED TO THE GRAVITY SEWER WITHIN 12 FEET (12') OF THIS MANHOLE.

A HYDROSTATIC PRESSURE TEST AT 150 PSI FOR AT LEAST TWO (2) HOURS SHALL BE PERFORMED IN ACCORDANCE WITH THE HYDROSTATIC TESTING REQUIREMENTS OF AWWA C600 ON ALL FORCE MAINS AND SERVICE LATERALS. IF THE PRESSURE DROPS MORE THAN FIVE (5) PSI IN TWO (2) HOURS OR LEAKAGE IS GREATER THAN ALLOWABLE AS DETERMINED BY THE FORMULA IN AWWA C600, THE TEST SHALL BE CONSIDERED FAILED.

PIPE CONNECTIONS INTO MANHOLES

SEWER PIPE TO MANHOLE CONNECTIONS ON ALL SANITARY SEWERS SHALL BE FLEXIBLE AND WATERTIGHT. SEWER PIPE SHALL BE SEALED IN THE MANHOLE SECTION PIPE OPENINGS WITH A RESILIENT CONNECTOR MEETING THE REQUIREMENTS OF ASTM C923. THE CONNECTION MAY BE ANY OF THE FOLLOWING TYPES:

- 1. RUBBER SLEEVE WITH STAINLESS STEEL BANDING
- A) KOR-N-SEAL AS MANUFACTURED BY POLLUTION CONTROL SYSTEMS.
- B) LOCK JOINT FLEXIBLE MANHOLE SLEEVE AS MANUFACTURED BY INTERSPACE CORPORATION
- C) OR EQUAL

RUBBER GASKET COMPRESSION

- A) PRESS WEDGE II AS MANUFACTURED BY PRESS-SEAL GASKET CORPORATION
- B) DURA-SEAL MANUFACTURED BY DURA TECH, INC.
- C) OR EQUAL

RESILIENT CONNECTOR SHALL BE CAST INTEGRALLY INTO THE WALL OF THE MANHOLE SECTION AT TIME OF MANUFACTURE OR SHALL BE INSTALLED BY MECHANICAL MEANS IN OPENINGS CUT INTO MANHOLE WALL PER ASTM C923.

ANY CONNECTION TO AN EXISTING MANHOLE MUST BE MADE BY CORING THE MANHOLE. ANY CORE TO A MANHOLE MUST BE CENTERED IN THE BARREL SECTION. NO CORE SHALL BE MADE ALONG THE SEAM OF THE BARREL SECTION(S)

APPROVED/REVISED WARREN COUNTY STANDARD DETAILS

DEPARTMENT OF WATER & SEWER

SCHEDULES TO COMPLETE THE PROJECT AT THE PRE-CONSTRUCTION MEETING.

CONSTRUCTION WHETHER LISTED ON THIS PAGE OR NOT.

STANDARD NUMBER **SG-3**

EEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE

MARCH, 2008

REPLACED WITH SUITABLE MATERIAL. THE LOCATIONS AND DIMENSIONS WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER UNDER CONTRACT WITH THE OWNER.

F UNSUITABLE SOILS ARE ENCOUNTERED IN THE PROPOSED ROAD BED AREA THEY SHALL BE REMOVED &

MAINTENANCE OF SEWER FLOY

BASED ON THESE LIMITS.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN SEWER FLOWS AT ALL TIMES THROUGH EXISTING FACILITIES WHICH ARE TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED LINTIL NEW FACILITIES ARE COMPLETED AND PLACED IN LISE

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE

ALL EXISTING SEWERS SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS WITHIN THE CONSTRUCTION

LIMITS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF THIS STORM WATER POLITION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE

ANY SILT FENCING, STRAW BALES, ETC. FOR EROSION CONTROL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE AFTER THE OWNER DEEMS SUFFICIENT GROWTH PREVENTS EROSION.

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE SOUTH LEBANON, OH 45065 PERFORMED BY THE CONTRACTOR. ALL REASONABLE ATTEMPTS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND.

AREAS TO REMAIN DORMANT FOR MORE THAN 21 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES.

THE CONTRACTOR SHALL PERFORM THE NECESSARY PRECAUTIONS TO AVOID EXCESSIVE SOIL EROSION AND THE RUNOFF OF SEDIMENT INSIDE AND DOWNSTREAM OF THE PROJECT TO THE SATISFACTION OF THE OWNER. THIS SHALL INCLUDE. BUT IS NOT LIMITED TO. ERECTION OF SILT FENCE (SF) ALONG THE PERIMETER OF THE CONSTRUCTION LIMITS AND PLACEMENT OF STRAW BALE BARRIERS (SBB) AND/OR FILTER BARRIERS (FB) AS DITCH CHECKS. DITCH CHECKS SHALL BE PLACED AT A MAXIMUM SPACING OF 50

FEET ALONG ALL PROPOSED DITCHES.

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE OWNER AND THE CONTRACTOR, ALONG WITH THE OWNER. SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE OWNER.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE

ALL EXISTING SEWERS TO REMAIN AND INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION ACTIVITY.

ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS, SIGN SUPPORTS, AND BARRICADES AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL ADVANCE TRAFFIC SIGNAGE, INCLUDING CONSTRUCTION WORK ZONE APPROACH AND BARRICADES REQUIRED FOR THIS PROJECT SHALL BE FURNISHED, ERECTED, MAINTAINED AND SUBSEQUENTLY REMOVED BY THE

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CONSTRUCTION AND MATERIAL SPECIFICATIONS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE OWNER. THE QUANTITIES HAVE BEEN INCLUDED FOR USE AS DIRECTED BY THE OWNER FOR DUST CONTROL PURPOSES.

VHILE THE WORK OF THIS CONTRACT IS BEING PERFORMED, THE UTILITY COMPANIES MAY BE WORKING IN THE AREA ADJUSTING AND RESETTING EXISTING FACILITIES. THE CONTRACTOR SHALL FULLY COOPERATE WITH UTILITY COMPANIES SO THAT THE ENTIRE WORK IS COMPLETED IN A MANNER CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. THE CONTRACTOR, UTILITY COMPANIES AND OWNER SHALL DISCUSS THE NECESSARY CONSTRUCTION

DUKE ENERGY

(513) 287-1101

TIME WARNER

CINCINNATI BELL

(513)-566-7043

ROOM 103

MR. JOHN PROFFITT

7745 EAST KEMPER ROAD

11252 CORNELL PARK DRIVE

CINCINNATI, OH 45242

201 EAST FOURTH STREET

CINCINNATI, OH 45202

CINCINNATI, OH 45249

THE FOLLOWING IS A LIST OF THE KNOWN EXISTING UTILITIES IN THE PROJECT AREA ALONG WITH THE RESPECTIVE OWNERS. THE LIST IS INCLUDED FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITY OWNERS IN THE PROJECT AREA PRIOR TO START OF

DUKE ENERGY 7745 FAST KEMPER ROAD CINCINNATI, OH 45249

(513) 287-1101 MR. IOHN PROFFIT

(513) 489-5000

VILLAGE OF SOUTH LEBANON 99 N. HIGH STREET SOUTH LEBANON, OH 45065

VILLAGE OF SOUTH LEBANON 99 N. HIGH STREET

STORM SEWER VILLAGE OF SOUTH LEBANON

99 N. HIGH STREET SOUTH LEBANON, OH 45065

NLL UTILITIES WHICH ARE SHOWN OR LOCATED DURING THE COURSE OF CONSTRUCTION THAT ARE FOUND TO BE IN CONFLICT WITH THESE PLANS ARE TO BE RELOCATED OR ADJUSTED BY THE CONTRACTOR AS DIRECTED BY THE RESPECTIVE UTILITY COMPANY

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE AS OBTAINED FROM THE OWNERS OF THE UTILITIES AS REQUIRED BY SECTION 153.64 OF THE OHIO REVISED CODE

THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN LOCATED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT. THE VILLAGE OF SOUTH LEBANON WARREN COUNTY, OHIO AND MCGILL SMITH PUNSHON, INC. DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

Sheet Title

Project Number Drawing Scale Sheet Number

File Number

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McGill Smith Punshon

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Phone 513.759.0004

www.mspdesign.com

06308124-DET-00

No. Date

Suite 190B

STG

■ Architecture

■ Engineering

■ Planning

■ Surveying

Drawn By

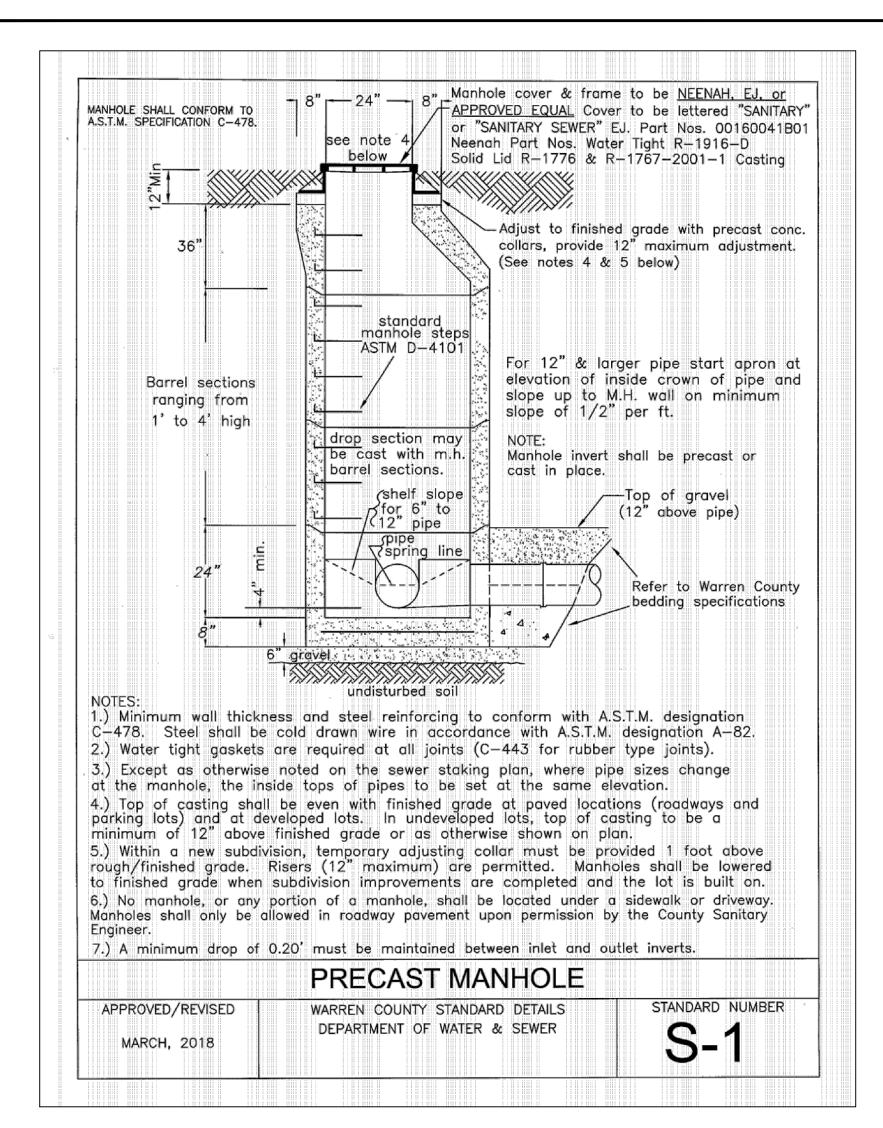
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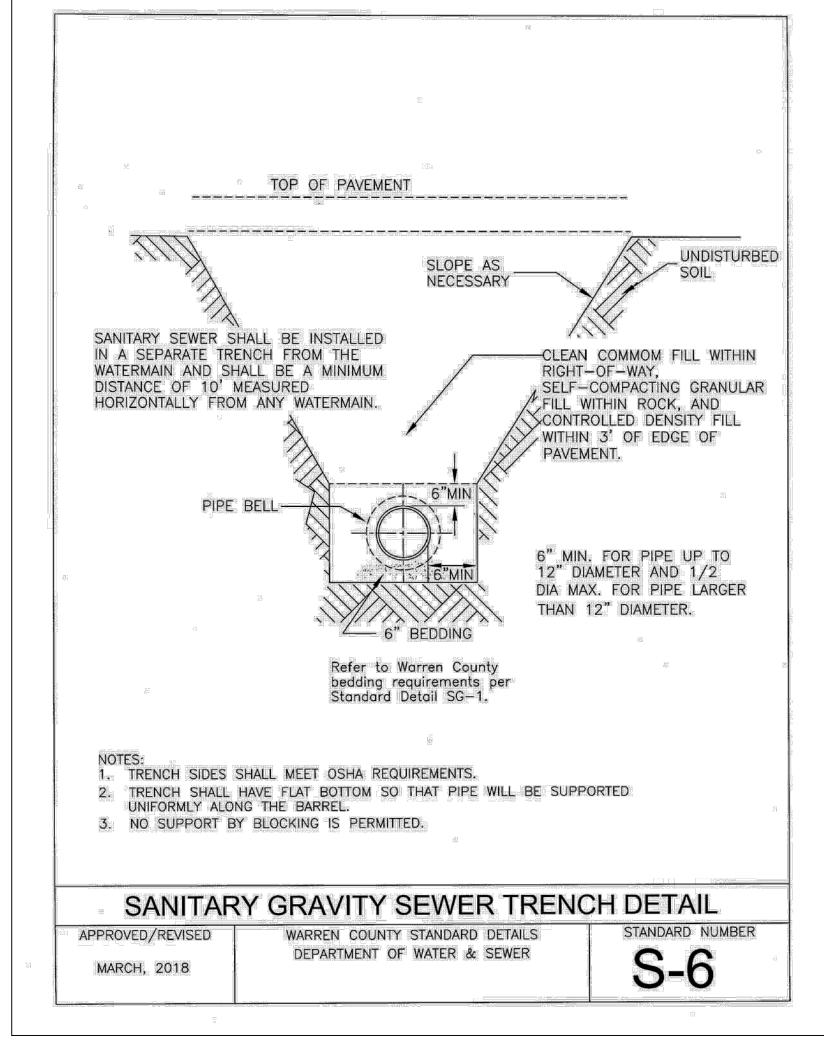
■ Landscape Architecture

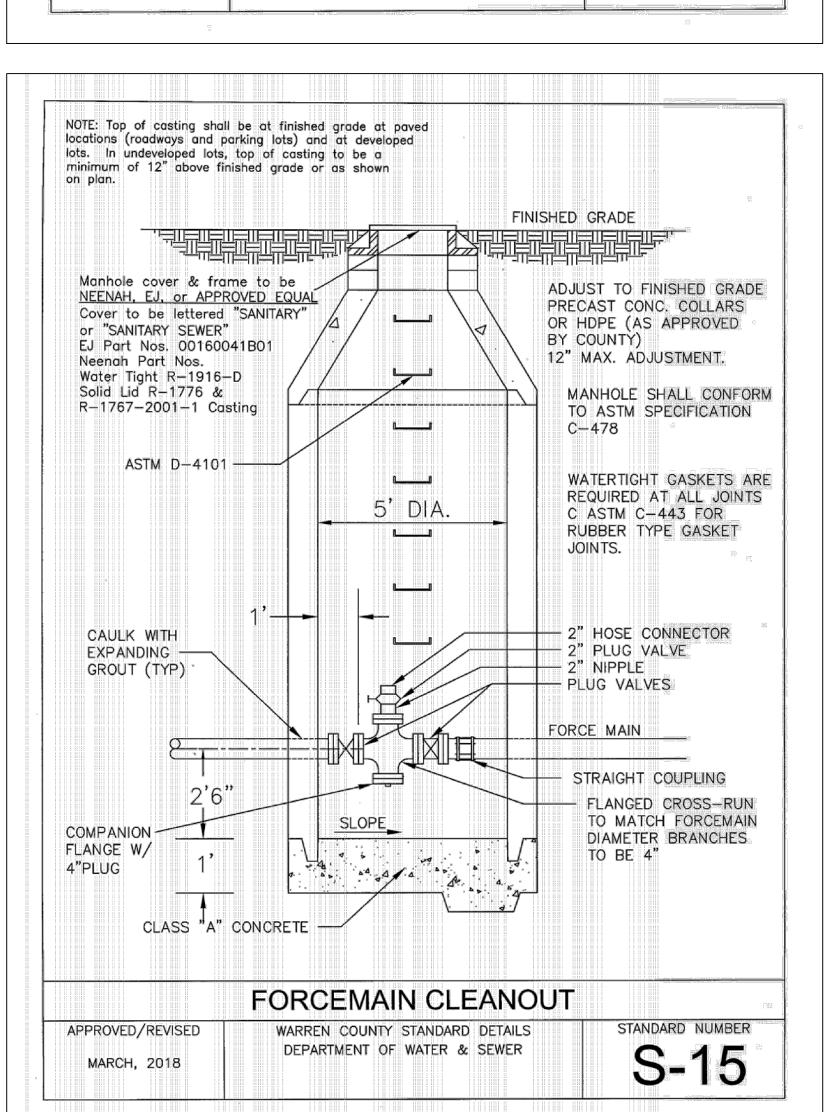
Project Manager

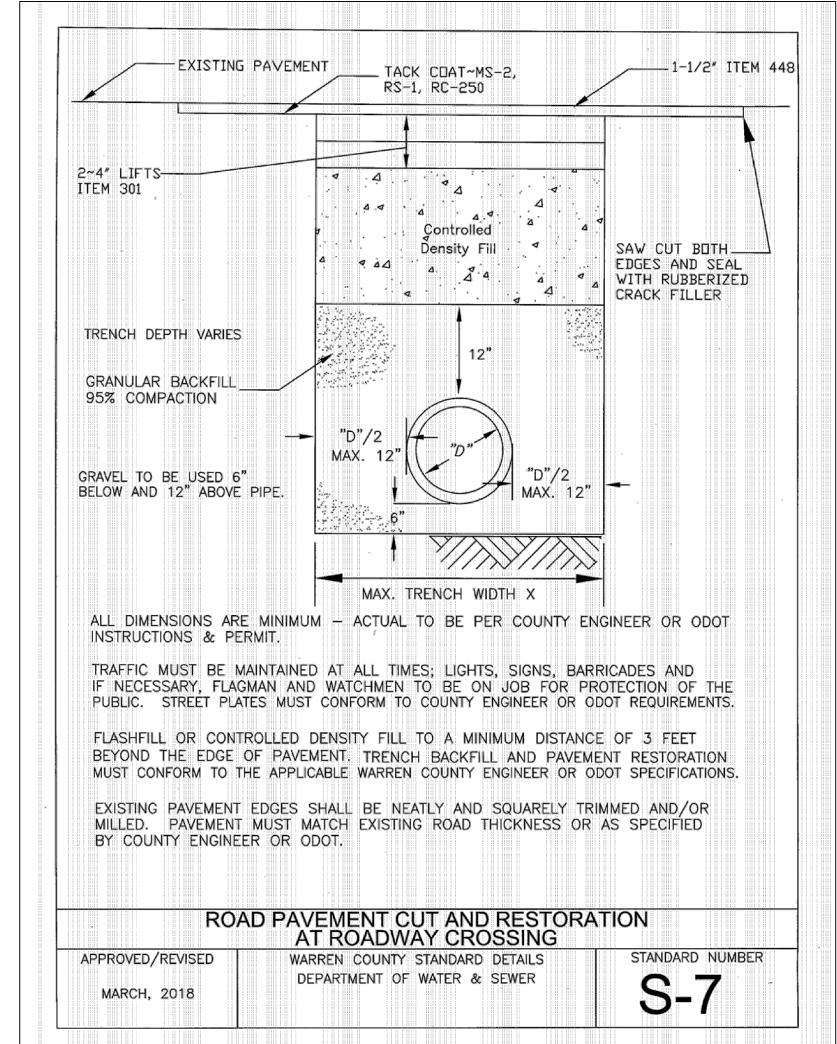
Issue/Revision

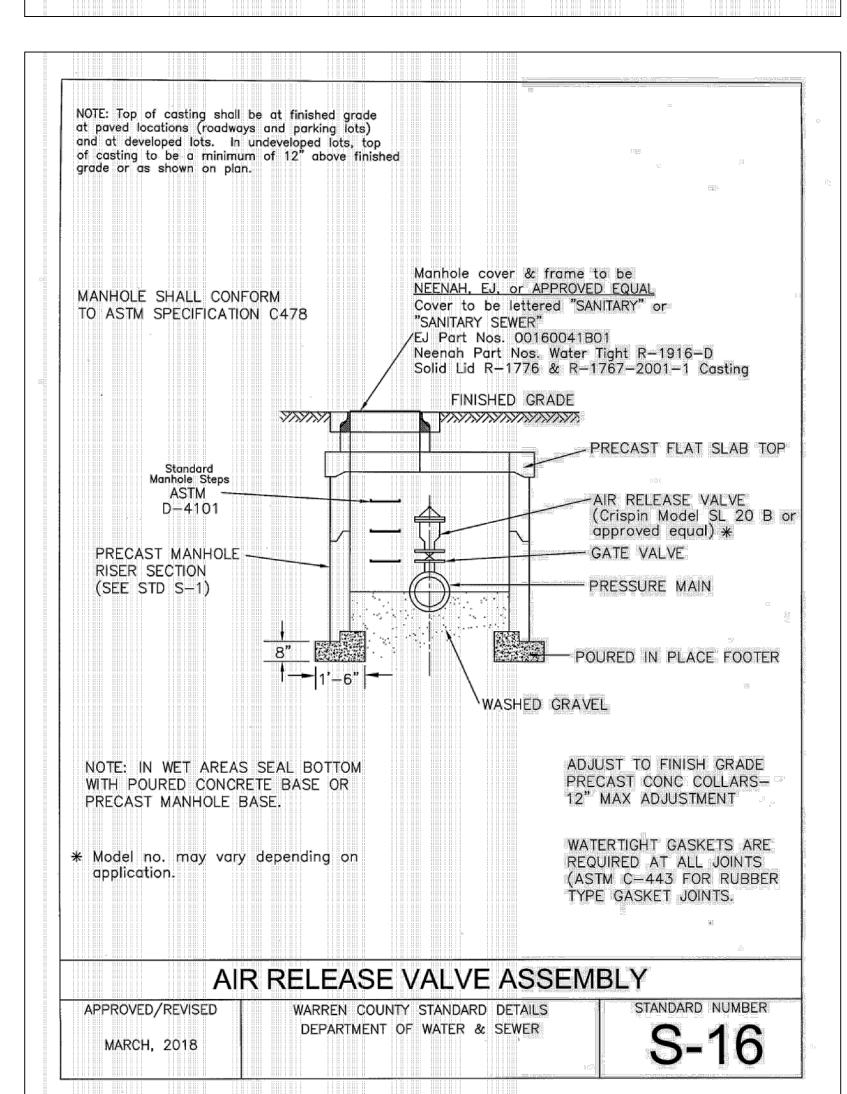
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Project Manager STG Drawn By 06308124-DET-00

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SERVICE

Call Before You Dig

DETAILS 06308.12

06308

Project Number AS NOTED Drawing Scale 15 / 16 **Sheet Number**



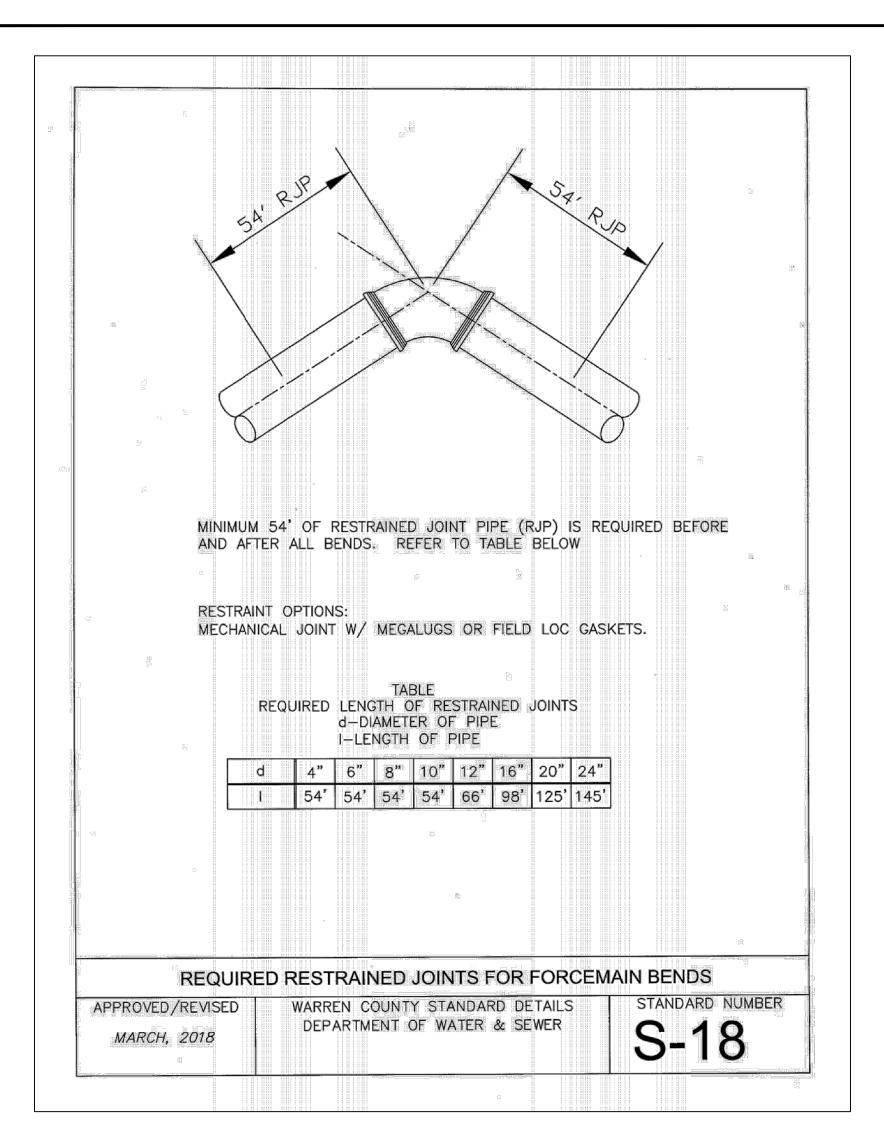
LIMIT DUCTILE PIPE D.I.P SAN. SEWER MIN 18"MIN ELEVATION 1. Structural design, calculations and drawing shall be prepared and stamped by an Ohio registered Professional Engineer and submitted to the County for review. Submit complete drawings including, but not limited to:
 a. Complete details with structural section and material properties for all proposed sections (beams, columns, decking, etc.) Cast—in—place concrete. c. Structural calculations, prepared and stamped by an Ohio registered Professional d. Protective coatings.

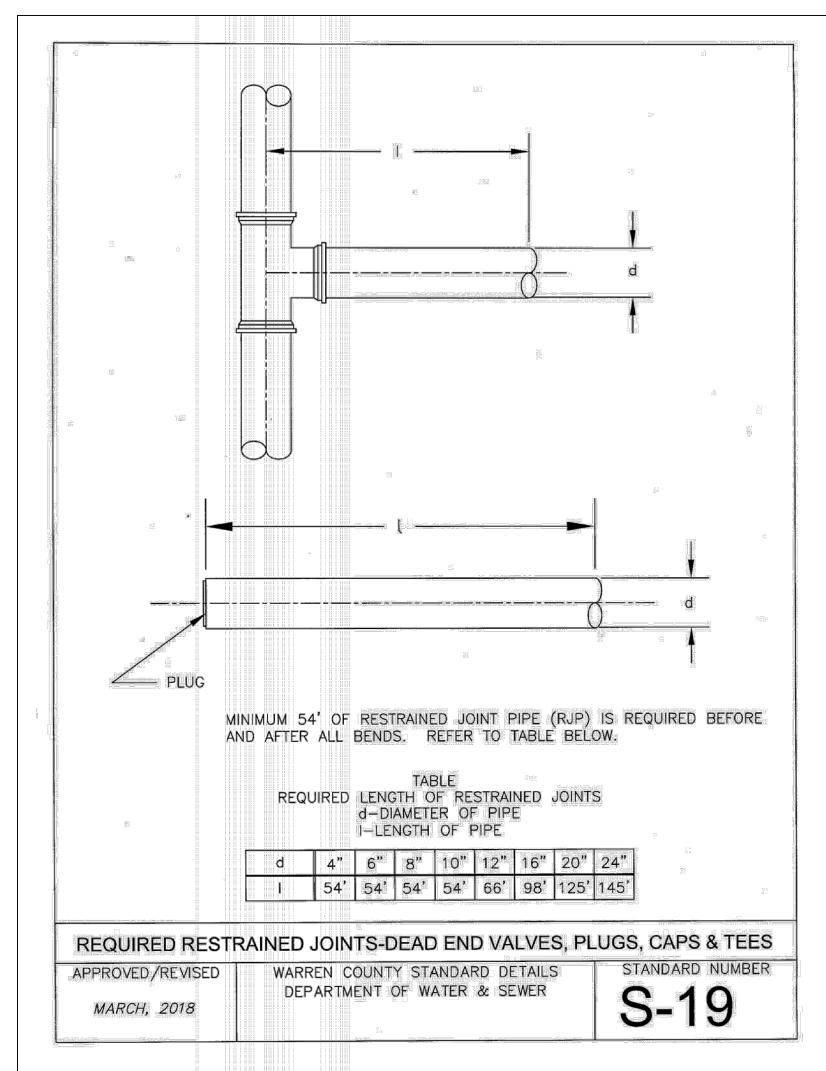
PLAN

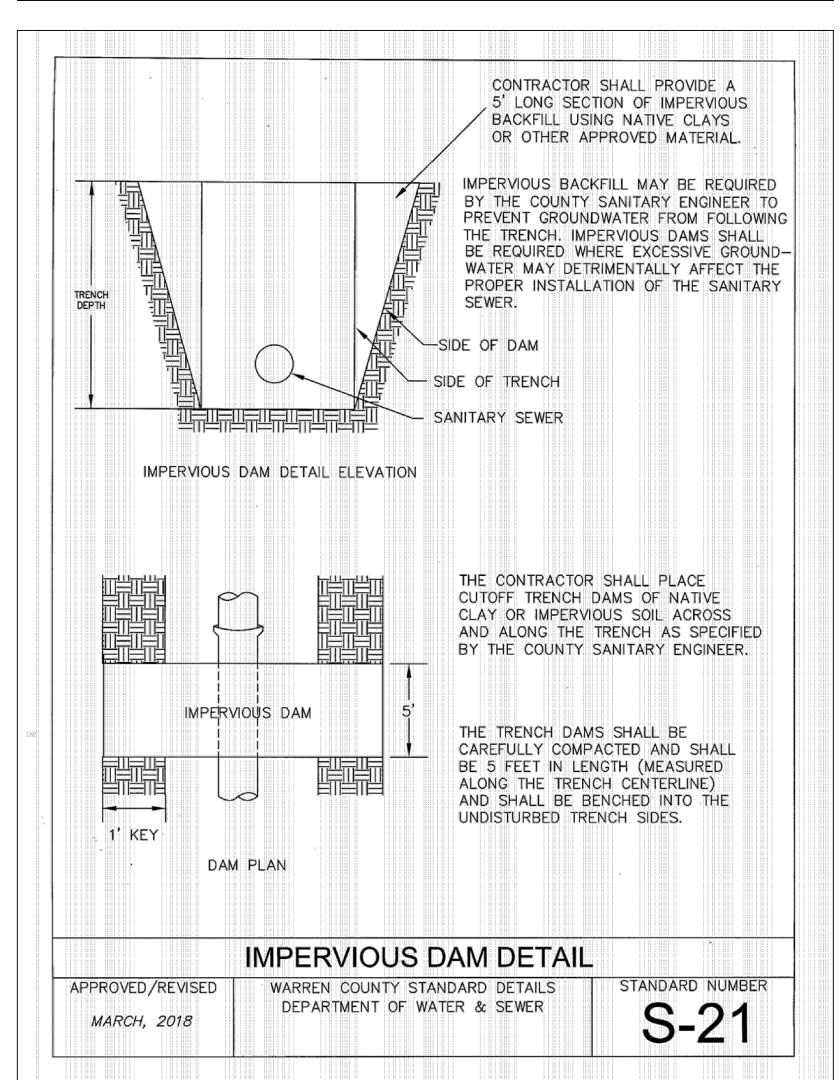
AERIAL SANITARY SEWER CROSSING APPROVED/REVISED

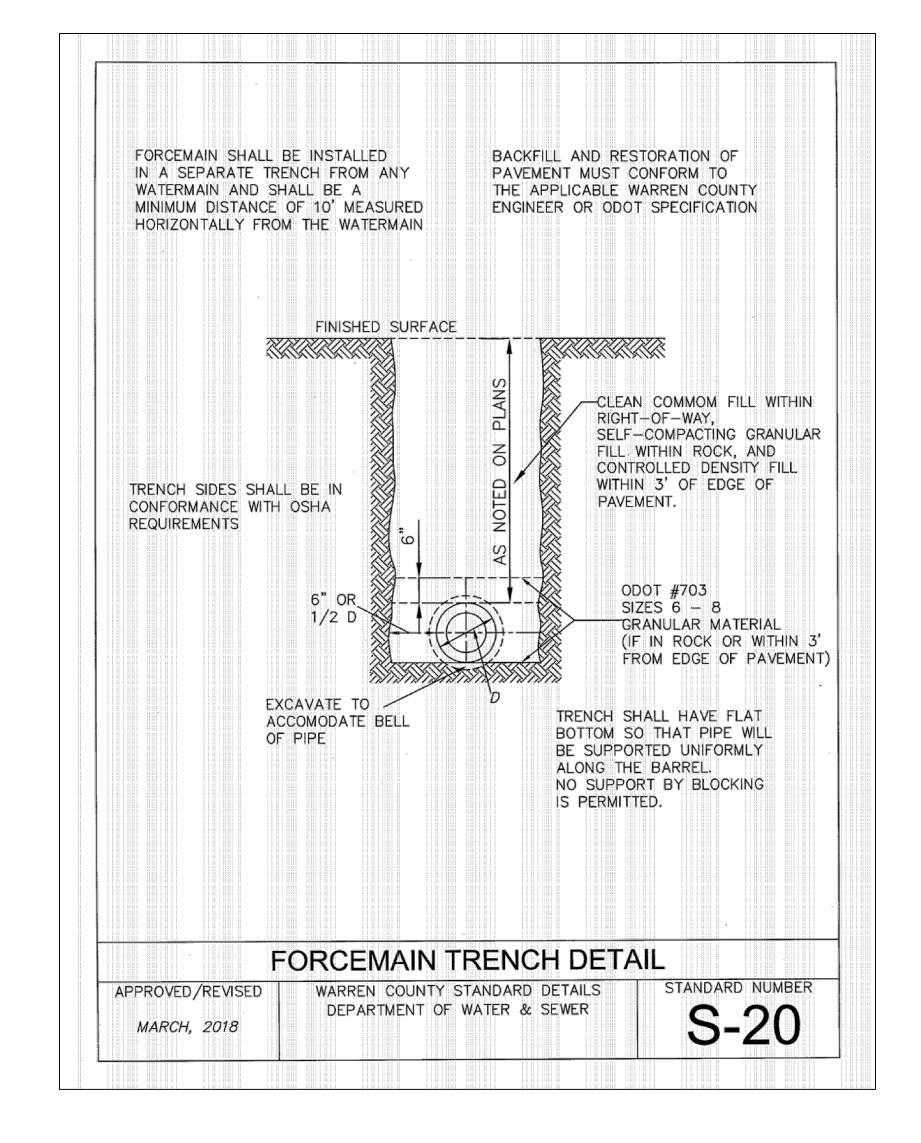
ADJUST TO_18"

MINIMUM TO ACCOMMODATE PIPE











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Project Manager RA
Drawn By STG
DWG 06308124-DET-00
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UBLIC SANITARY SEWER EXTENSION THE VILLAGE OF SOUTH LEBANON WARREN COLINITY OFFICE

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Sheet Number 16