

THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO



MSP

DESIGN

McGill Smith Punshon

■ Architecture

■ Engineering

■ Landscape Architecture

■ Planning

■ Surveying

3700 Park 42 Drive

Suite 190B

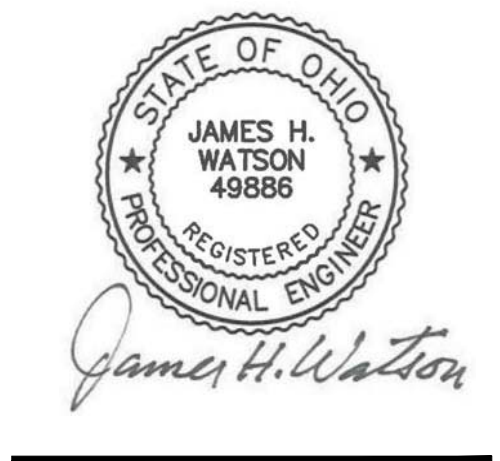
Cincinnati OH 45241

Phone 513.759.0004

www.mspsdesign.com

Project Manager RA  
Drawn By REL  
DWG 06308124-COV-00 - FINAL  
X-Ref(s) ---

Issue/Revision	No.	Date
PTI SUBMITTAL		10/18/22



RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION

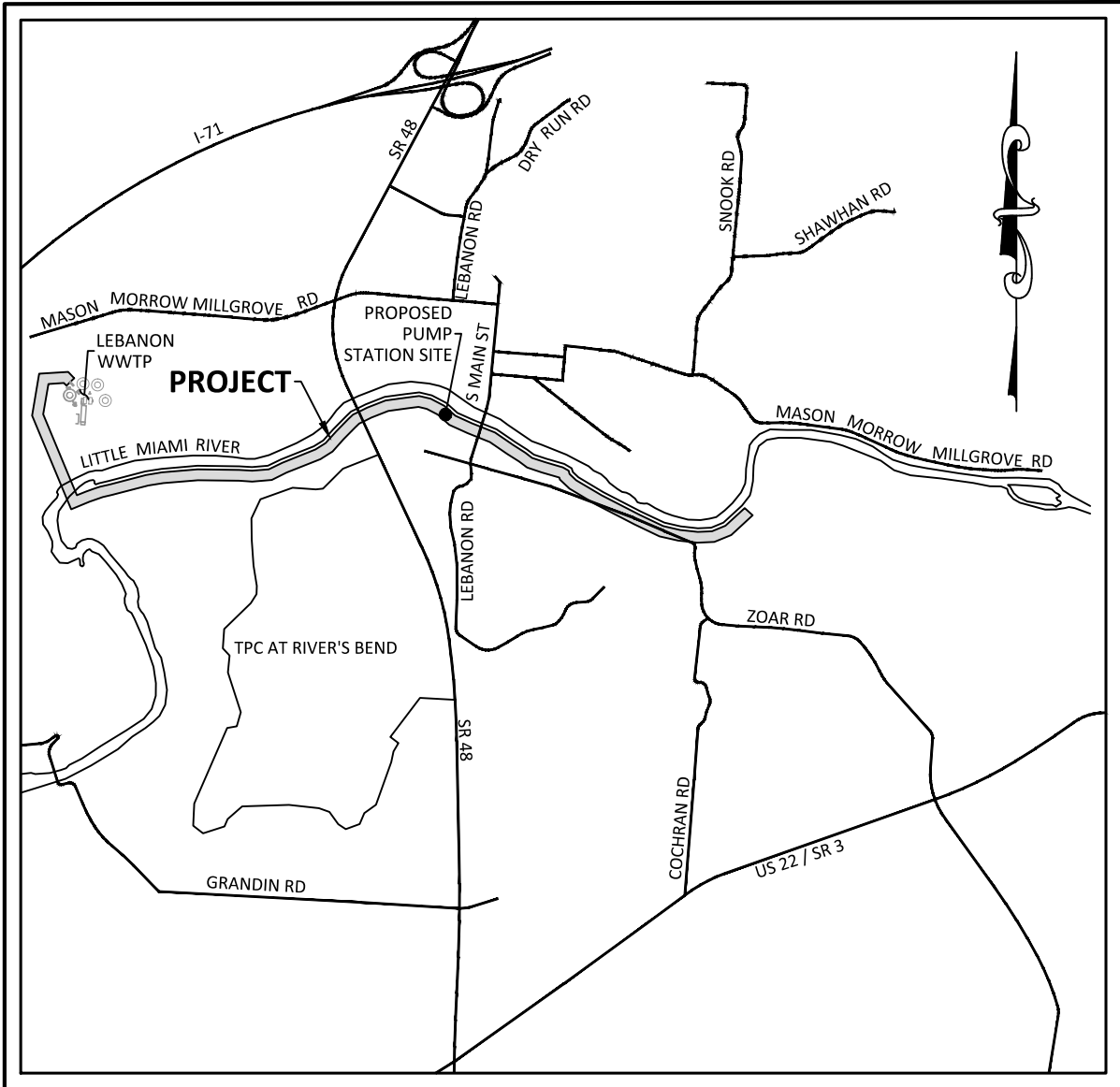


PROJECT DESCRIPTION:  
THIS PROJECT INCLUDES THE DESIGN OF A PUBLIC SANITARY SEWER AND A PUBLIC FORCE MAIN THAT IS LOCATED PRIMARILY ALONG THE LITTLE MIAMI SCENIC TRAIL. THE DESIGN INCLUDES APPROXIMATELY 5,000 FEET OF PUBLIC GRAVITY SANITARY SEWER, 2 PUMP STATIONS, AND 8,000 FEET OF PUBLIC FORCE MAIN.

BENCHMARKS

BM #	DESCRIPTION	ELEVATION	NORTHING	EASTING
	IRON PIPE LOCATED AT THE NORTHWEST CORNER OF MAIN STREET AND BAYOU STREET	630.47	502237.98	1482707.17
100				
104	NAIL SET IN ASPHALT PATH	630.40	502052.22	1483405.36
107	NAIL SET IN ASPHALT PATH	627.61	501671.97	1484505.27
110	NAIL SET IN ASPHALT PATH	630.12	501234.82	1485584.46
114	NAIL SET IN ASPHALT PATH	628.17	501071.44	1487064.47
121	NAIL SET IN ASPHALT PATH	633.04	502305.29	1476557.39
124	NAIL SET IN ASPHALT PATH	629.90	501695.37	1477258.79
128	NAIL SET IN ASPHALT PATH	628.12	502103.84	1478536.75
132	NAIL SET IN ASPHALT PATH	626.56	502183.43	1479852.52
135	NAIL SET IN ASPHALT PATH	627.46	502630.42	1480879.84
138	NAIL SET IN ASPHALT PATH	627.42	502468.14	1481981.24
6374	NAIL SET IN ASPHALT PATH	689.28	503541.43	1476501.50

CONTROL BASIS:  
THE BEARINGS ARE BASED ON US STATE PLANE NAD 83 (OHIO SOUTH ZONE 3402). ELEVATIONS BASED ON NAVD88. BOTH DERIVED FROM ODOT'S VRS RTK NETWORK USING STATIONS OHDT AND LEB4.



VICINITY MAP  
NOT TO SCALE

SHEET INDEX

G1	COVER SHEET
G2	CODE NOTES
C1	NOTES
C2	NOTES
C3	FORCE MAIN PLAN & PROFILE
C4	FORCE MAIN PLAN & PROFILE
C5	FORCE MAIN PLAN & PROFILE
C6	FORCE MAIN PLAN & PROFILE
C7	FORCE MAIN PLAN & PROFILE
C8	FORCE MAIN PLAN & PROFILE
C9	FORCE MAIN PLAN & PROFILE
C10	SANITARY SEWER PLAN & PROFILE
C11	SANITARY SEWER PLAN & PROFILE
C12	SANITARY SEWER PLAN & PROFILE
C13	SANITARY SEWER PLAN & PROFILE
C14	SANITARY SEWER PLAN & PROFILE
C15	WWTP SITE DEMOLITION PLAN AND METER PIT DETAILS
C16	WWTP SITE - YARD PIPING PLAN
C17	CONTROL BUILDING SITE - DEMOLITION PLAN
C18	CONTROL BUILDING SITE - SITE AND UTILITY PLAN
C19	CONTROL BUILDING SITE - GRADING PLAN
C20	FORCE MAIN AND SANITARY SEWER DETAILS
C21	FORCE MAIN AND SANITARY SEWER DETAILS
C22	WATER MAIN NOTES & DETAILS
C23	WATER MAIN DETAILS
C24	MISCELLANEOUS DETAILS
C25	FORCE MAIN ON BRIDGE
C26	FORCE MAIN ON BRIDGE SECTIONS
S1	FOUNDATION PLAN & SECTIONS
S2	ROOF FRAMING PLAN & SECTIONS
S3	GENERAL STRUCTURAL NOTES
A1	FLOOR AND CEILING PLANS
A2	BUILDING ELEVATIONS
A3	BUILDING SECTIONS
A4	WALL SECTIONS & DETAILS
A5	MISC SECTIONS & DETAILS
A6	SCHEDULES AND DETAILS
H1	HVAC FLOOR PLAN, NOTES & SCHEDULES
P1	PLUMBING FLOOR PLAN, NOTES & SCHEDULE
P2	PLUMBING STACK & DETAILS
E1	ELECTRICAL SCHEDULES, LEGENDS & ABBREVIATIONS
E2	ELECTRICAL LIGHTING & POWER AND FIRE ALARM PLAN
E3	ELECTRICAL SITE PLAN & METER PIT
E4	ELECTRICAL ONE LINE DIAGRAM
E5	ELECTRICAL DETAILS
PS1	PUMP STATION PLAN
PS2	PUMP STATION SECTIONS

OHIO

Utilities Protection

SERVICE

Call Before You Dig

811 or 1-800-362-2764

CALL TWO WORKING DAYS BEFORE YOU DIG  
(NON MEMBERS MUST BE CALLED DIRECTLY)

COVER SHEET		
Project Number	06308.12	
Drawing Scale	N/A	
Sheet Number	G1	
File Number	06308	







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:

**NOTE:** ALL WILD, SCENIC AND RECREATIONAL RIVER CROSSINGS SHOULD BE AVOIDED THROUGH THE USE OF DIRECTIONAL DRILLING OR OTHER SURFACE-BASED INSTALLATION TECHNIQUES WHERE AVAILABLE. THE STATE ENGINEERING DIVISION HAS BEEN DEVELOPED FOR ALL PROPOSED STREAM AND RIVER CROSSING SITES SHOWING THE SOILS, GEOLOGY AND STRATIFICATION OF THE SUBSURFACE CROSSING. THE INFORMATION IS BEING SUBMITTED TO THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) SHOWING THE PROPOSED LOCATIONS OF THE PIPELINE CROSSINGS AND HAVE A DETAILED DESCRIPTION OF THE SUBSURFACE FEATURES ALONG WITH THE LOCATION TO BE DRILLED. THE INFORMATION IS EXTREMELY IMPORTANT TO FACILITATE CROSSINGS ON STATE SCENIC RIVERS, ESPECIALLY IN AREAS WHERE RIVERS FLOW THROUGH DETAILED REGIONS OF THE STATE AND HAVE CHANNELS AND RIVER BEDS COMPOSED OF MATERIALS THAT ARE HIGHLY SUSCEPTIBLE TO FRACTURES.

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.

**DOWNSTREAM WORK AND OPEN TRENCH STREAM CROSSINGS:** STREAM CROSSINGS SHOULD BE CONSTRUCTED DURING DRY PERIODS OR PERIODS OF EXTREMELY LOW FLOW (AUGUST THROUGH OCTOBER). STREAM CROSSINGS SHOULD BE CONSTRUCTED FROM MAY 15-JUNE 15 UNLESS THE FLOW IS BEING FLOW 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 THE LOCAL SCALE. LOCAL VEGETATION SHOULD BE PLANTED AND 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 STREAM RESTORATION IS COMPLETED. REMOVAL OF SOD AND VEGETATION MATTINGS WITH SPECIES FROM THE APPROVED SPECIES RIVER TREE LIST.

**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 ACTION 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 PROJECTS.

**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.

**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.

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 NOI FORMS 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 CLENTANGY RIVER OR BIG DARBY CREEK WATERSHED, SPECIFIC GUIDELINES FOR STORM WATER PERMITS CAN BE FOUND AT THE ABOVE WEB ADDRESS.

TEMPORARY EROSION CONTROL MEASURES SHOULD BE IMPLEMENTED AND MAINTAINED UNTIL FINAL SITE STABILIZATION IS COMPLETED. UNCONTROLLED EROSION OF EXPOSED SOILS, SEDIMENTATION, LAKE WATER DIRECTLY TO STATE SCENIC RIVERS AND STREAMS, AND EROSION OF EXPOSED SOILS TO ADJACENT AREAS SHOULD BE UTILIZED AROUND THE WORK SITE PERIMETER AND STORAGE AREAS. APPROPRIATE EROSION CONTROL MEASURES AND OTHER EROSION CONTROLS SHOULD BE UTILIZED IN DITCHES AND DRAINAGE WAYS. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE APPROVED BY THE DISTRICT ENGINEER. IN AN AREA WHERE THE UTILITY LINE HAS BEEN COMPLETELY INSTALLED, STABILIZATION WILL BE REQUIRED WITHIN SEVEN DAYS. ALL DENUDED AREAS SHOULD BE SEEDING WITH GRASS OR OTHER APPROPRIATE SEEDS. SHOULD BE PERMANENTLY SEEDED AND MULCHED OR FIBER MAT. MULCH SHOULD BE APPLIED FROM 100 FEET TO 200 FEET FROM THE SEEDED AND MULCHED OR FIBER MAT. FOR THE DISTURBED AREAS WITHIN 100 FEET OF THE STREAM, TEMPORARY AND/OR PERMANENT EROSION CONTROL MEASURES SHOULD BE INSTALLED. FOLLOWING THE INSTALLATION OF THE UTILITY LINE, TEMPORARY SEEDING AND MULCHING SHOULD BE NO MORE THAN 500 FEET BEHIND THE PERMANENTLY INSTALLED EROSION CONTROL MEASURES. STRAW BALES SHOULD NOT BE PERMITTED AS A FORM OF EROSION CONTROL. MULCH SHOULD BE APPLIED TO THE SOILS SHOULD BE GRAVELLED TO PREVENT EROSION FROM SURFACE RUNOFF.

C. STORAGE OF FUELS, PETROCHEMICALS AND EQUIPMENT: FUEL 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 A 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.

[illegible]

**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 INSPECTION 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.

THE OHIO DEPA 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, AND EACH BANK OF THE STREAM RIPARIAN AREA, FOR THE STREAM CROSSINGS OR OTHER AREAS WHERE THE SEWERS ARE IN THE 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:

- c. THE CONSTRUCTION CLEANING LIMITS SHOULD BE AS NARROW AS POSSIBLE OR PRACTICABLE DEPENDING ON THE SIZE OF THE STREAM. IN MOST CASES A MINIMUM CLEANING LIMIT IN THE RIPARIAN AREA OF NO MORE THAN 20 FEET IS USUALLY APPROPRIATE. FOR ALL SANITARY SEWERS RUNNING PARALLEL TO THE STREAM, THE CLEANING LIMIT SHOULD BE CLEARLY INDICATED ON THE DETAILS.
- d. THE CONSTRUCTION OF THE STREAM CROSSING SHOULD BE COMPLETED AS SOON AS POSSIBLE BUT SHOULD NOT EXCEED MORE THAN ONE DAY.
- e. THE MATERIAL REMOVED FROM THE TRENCH EXCAVATION SHOULD BE STORED OUTSIDE THE RIPARIAN AREA. THIS AREA SHOULD BE ENCLOSED BY A FENCE.
- f. TREES WITHIN THE RIPARIAN AREA SHOULD AVOIDED AS MUCH AS POSSIBLE. OLDER TREES ALONG THE STREAM SHOULD BE GIVEN THE GREATEST LEVEL OF PROTECTION. POSITION SIGN TO CONVEY THAT THE TREES MUST BE REMOVED. THAT THE SIGN THIS CAN BE EXCEEDED. THE SIGN SHOULD BE EITHER CUT AT THE GROUND OR 1 TO 2 FEET ABOVE THE GROUND SO THAT THE ROOT MASS IS NOT EXPOSED. THAT THE SIGN THAT THE SIGN SHOULD BE CUT AT THE GROUND SURFACE.
- g. COFFER DAMS SHOULD BE USED TO BYPASS THE TRENCH EXCAVATION DURING THE CONSTRUCTION OF THE STREAM CROSSING.
- h. **FINAL BANK STABILIZATION SHOULD BE COMPLETED IMMEDIATELY AFTER THE 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 YEAR OF THE COMPLETION OF THE STREAM CROSSING.

---

1. THE TYPE OF BACKFILL FOR THE STREAM TRENCH CROSSINGS SHOULD BE CLEARLY INDICATED. IN THE EVENT THAT BEDROCK IS ENCOUNTERED, CEMENT CONCRETE SHALL BE USED TO FILL THE TRENCH TO THE SURFACE OF THE STREAM AND IS EXTENDED AT LEAST ONE FULL STREAM BANK WIDTH ON BOTH SIDES OF THE TRENCH. MATERIALS OTHER THAN BEDROCK OR CEMENT CONCRETE MAY BE USED TO COMPLETE THE REMAINING BACKFILL OPERATION. IF RAP MAY ALSO BE USED AS A FINAL COVER IN AREAS WHERE THE NATURAL SOILS CONSIST OF GLACIAL OUTWASH MATERIALS.
2. THE STOPPING LOCATION FOR THE TRENCH SHALL BE SHOWN ON THE DETAILED PLANS. THIS TRENCH SHALL BE LOCATED OUTSIDE OF THE RIPARIAN AREA.
3. ANY LOCATIONS WHERE EQUIPMENT WILL CROSS THE STREAM SHOULD HAVE A TEMPORARY STREAM CROSSINGS CONSTRUCTED. CONSTRUCTION EQUIPMENT SHALL BE LIMITED TO ONE WHEEL TRACK AND SHALL BE LIMITED TO ONE WHEEL TRACK AS CONSTRUCTING THE SEWERS FROM BOTH SIDES OF THE STREAM. FOR SITUATIONS WHERE THIS MAY NOT BE PRACTICABLE, TWO WAYS SHALL BE CONSTRUCTED. THE SEWERS SHALL BE CONSTRUCTED AND DEEPSHOWN AND REMOVED FROM OTHER LOCATIONS OF THE PROJECT AND LINE LENGTHS WILL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS TO BE PLACED ON TOP OF IT. THE PROPOSED EQUIPMENT CROSSING LOCATIONS SHALL BE SHOWN ON THE PLANS.
4. ALL TRENCH DEWATERING SHALL BE PASSED THROUGH A SEDIMENTATION TANK. ALL TRENCH DEWATERING SHALL BE PASSED AS WELL AS THE REQUIREMENTS PROVIDED FOR EACH IMPROVEMENT. IF ANY GROUNDWATER DEWATERING SHOULD OCCUR, THE CONTRACTOR SHALL CONTACT THE OHIO DEPARTMENT OF PUBLIC SAFETY, DIVISION OF WATER RESOURCES, FOR APPROVAL OF THE DEWATERING INSTALLATION AND ABANDONMENT OF WELLS. THE CONTRACTOR SHALL NOT DIRECT THE GROUNDWATER TO THE IMPROVEMENT INTENDED FOR TRENCH DEWATERING.
5. SILT FENCING SHOULD BE PROVIDED DOWN GRAD FROM ANY EARTH MOVED ACTIVITIES IN THE RIPARIAN AREA WITH STEEP SLOPE.
6. ONCE THESE EARTH MOVING ACTIVITIES ARE COMPLETED IN THE RIPARIAN AREA/PROJECT AREA, THE DISTURBED AREAS MUST BE SEEDED AND ANNUAL MAINTENANCE SHALL BE REQUIRED. THE CONTRACTOR SHALL FOLLOW THE STABILIZATION REQUIREMENTS DETAILED IN THE GENERAL STORM WATER MANAGEMENT PLAN. THE CONTRACTOR SHALL BE AWARED THAT ANY EARTH DISTURBANCE OF 1000 SQUARE FEET OR MORE SHALL BE REQUIRED FOR ACTIVITIES THAT CAUSE DISTURBANCE 100 FEET OR MORE ACROSS, 1.5 ACRES OR MORE OF EARTH DISTURBANCES: 2000 FEET OF SEWER WITH 20' CLEANING LINE).
7. IN THE EVENT THAT MORE THAN 3 STREAM CROSSINGS PER MILE ARE PROPOSED AND THE CONTRACTOR REQUESTS A VARIATION, THE VARIATION WILL BE REQUIRED BY THE OHIO DEPT. OF PWT, FOR EWH, CWH, AND OSRW. ANY STREAM CROSSING SHALL ALSO REQUIRE THIS CERTIFICATION. PLEASE CONTACT LAURIE MOORE WITH QUESTIONS.
8. FOR PROJECTS INVOLVING CONSTRUCTION ON A CEMENT OF FILL STREAM OR WETLAND, THE APPLICANT SHALL CONTACT THE APPROPRIATE DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS FOR A DETERMINATION REGARDING NECESSARY PERMITS AND REQUIREMENTS. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN FOR ANY CERTIFICATION. IF ANY CERTIFICATION IS REQUIRED, THE CONTRACTOR OBTAIN A SECTION 404 PERMIT AND 401 WATER QUALITY CERTIFICATION. IF A SECTION 401 PERMIT IS NOT REQUIRED, THE CONTRACTOR SHALL OBTAIN A SECTION 404 PERMIT. 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.

1. FORCE MAIN AND APPURTENANCE MATERIALS, INSTALLATION AND TESTING SHALL BE PER THE REQUIREMENTS OF THE WARREN COUNTY SEWER AND WATER DEPARTMENT AND THEN THE 2019 OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS.

- [illegible]

1. SANITARY SEWER (8" AND 15") AND LATERALS SHALL BE POLYVINYL CHLORIDE (PVC) PIPE AND SHALL BE SDR 26 PER ASTM D3034. FITTINGS SHALL BE PVC, SDR 26 PER ASTM D3034. JOINTS FOR PIPE AND FITTINGS SHALL BE PER ASTM D3212 WITH ELASTOMERIC GASKETS PER ASTM F477.

18. SANITARY SEWER SHALL BE POLYETHYLENE CHLORIDE (PVC) PIPE AND SHALL BE SDR 26 PER ASTM F477. FITTINGS SHALL BE PVC. SDR 26 PER ASTM F479. JOINTS FOR PIPE AND FITTINGS SHALL BE PER ASTM D3212 WITH ELASTOMERIC GASKETS PER ASTM F477.
19. THE ADEAL SANITARY SEWER PIPE MATERIAL SHALL BE DUCTILE IRON, CLASS 50 DESIGNED IN ACCORDANCE WITH AWWA C151/C152 AND AASHTO M254. MANHOLES SHALL BE AWWA C157/C158. THE PIPE SHALL HAVE PUSH-ON JOINTS WHERE THE JOINT AND RUBBER GASKET MEET ANNUALLY WITH AWWA C112/A21. ASPHALTIC COATING PER ANSI/AASHTO M254/S152/S153. THE INTERIOR SHALL BE UNPAINTED WITH A MINIMUM OF 10% MOISTURE. ALL MANHOLE RINGS SHALL BE CAST IRON TO SDR 35 PER ASTM F477. SANITARY SEWER PIPE SHALL HAVE EXTERNAL INSULATION PER SPECIFICATIONS SECTION 33 OR 29.23. THE PIPE SHALL BE INSULATED BETWEEN THE MANHOLES INCLUDING WHERE IT IS BURIED UNDERGROUND.
4. ALL MANHOLES SHALL BE PRECAST CONCRETE MANHOLES PER STANDARD DETAILS 4-S ON SHEET CD.
5. SEWER AND MANHOLE TESTING SHALL BE PER STANDARD DETAIL 4-S ON SHEET C1. IF TESTING RESULTS IN REPAIRS BEING MADE TO THE SEWERS AND/OR MANHOLES, THE COSTS SHALL BE THE RESPONSIBILITY OF THE BIDDER.

- Architecture 3700 Park 42 Drive
- Engineering Suite 190B
- Landscape Architecture Cincinnati OH 45241
- Planning Phone 513.759.0004

Project Manager	RA
Drawn By	REL
DWG	06308124-DET-00 - FINAL
X-Ref(s)	---

Issue/Revision	No.	Date
PTI SUBMITTAL		10/18/22

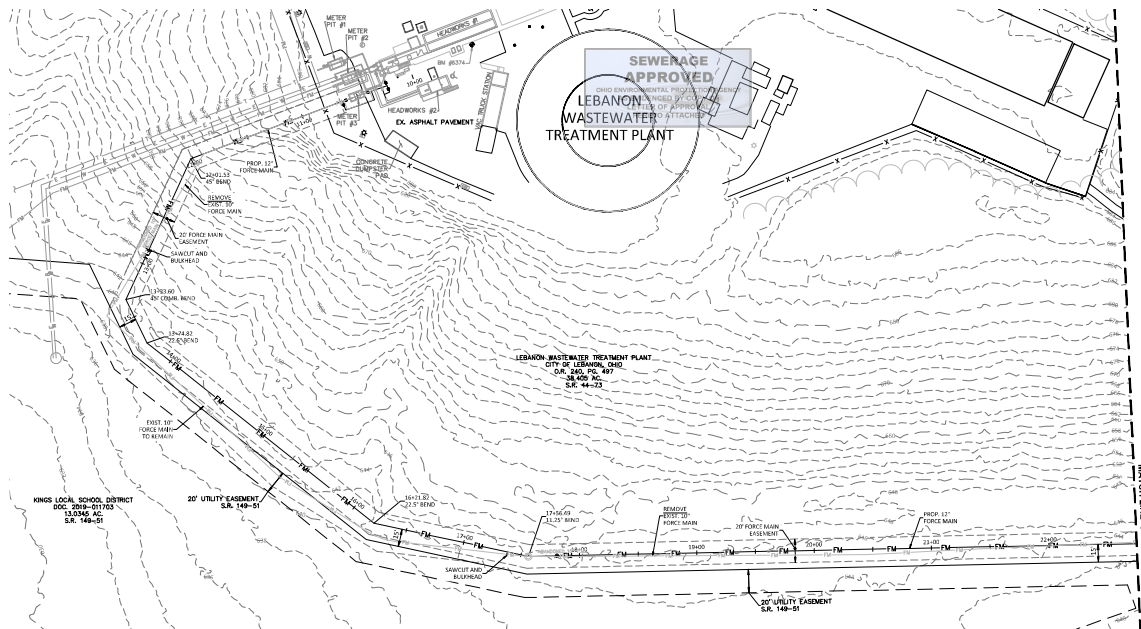
© Copyright 2022, MCGILL SMITH PUNSHON, Inc.

**RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

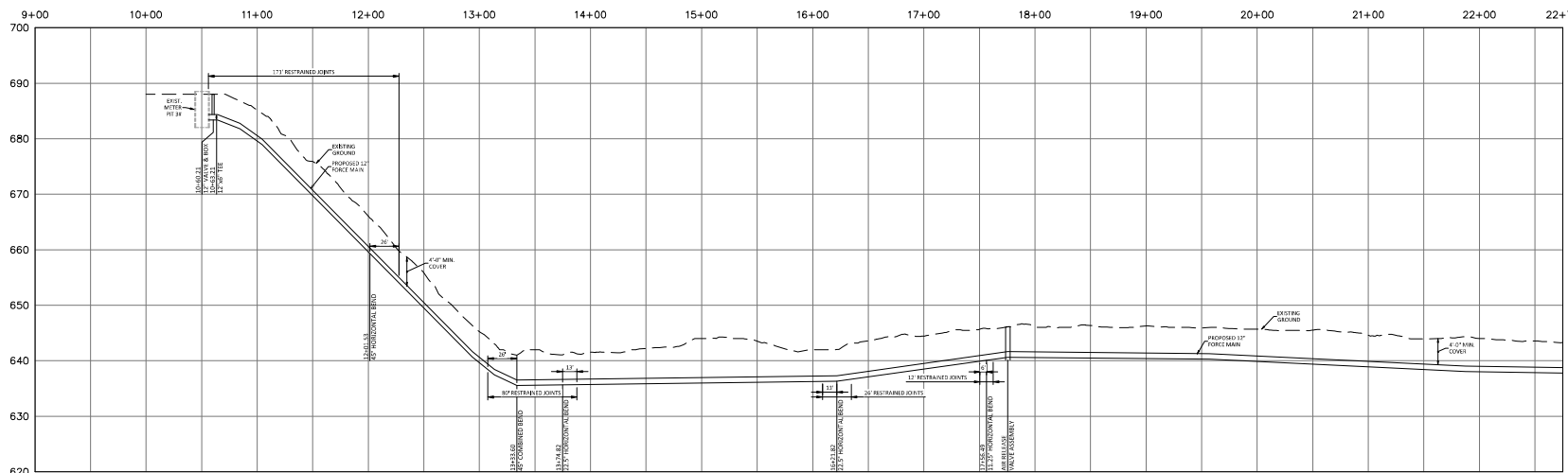
Sheet Title

NOTES	
Project Number	06308.12
Drawing Scale	N/A
Sheet Number	C2
File Number	06308





**PLAN**  
1"=50'



**FORCE MAIN: STA 9+00 TO 22+75**  
1"=50' HOR. / 1"=10' VERT.

NOTE:  
PROVIDE THRUST BLOCKS AT ALL  
BENDS, REDUCERS AND TEES ALONG  
WITH THE RESTRAINING JOINTS AS  
SHOWN ON THE PROFILES.

SCALE IN FEET  
0 25 50 100 150

OHIO  
Utilities  
Protection  
SERVICE  
Call Before You Dig  
811 or 1-800-362-2764  
CALL THE HOISTING SERVICE YOU USE  
(NON-PAIDERS MUST BE CALLED DIRECTLY)

**MSP**  
DESIGN  
McGill Smith Punshon

Architecture 3700 Park 42 Drive Suite 1000  
Engineering Cincinnati, OH 45241  
Landscaping Architecture Phone 513.759.0004  
Planning www.mspdesign.com  
Surveying

Project Manager RA  
Drawn By REL  
DWG 06308124-IMP - FINAL  
K-Ref(s) -

Issue/Revision	No.	Date
PT1 SUBMITTAL		10/18/22

Copyright 2022, MCGILL SMITH PUNSHON, INC.

**RIVER CORRIDOR**  
**PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

Sheet Title

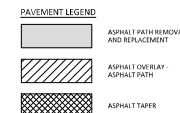
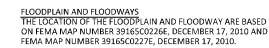
**FORCE MAIN  
PLAN & PROFILE**

Project Number 06308.12  
Drawing Scale 1" = 50'  
Sheet Number C3  
File Number 06308

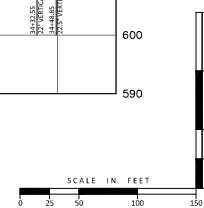


[illegible]

© Copyright 2022, MCGILL SMITH PUNSHON, Inc.



1"=50' HOR. / 1"=10' VERT.



**OHIO  
Utilities Protection  
SERVICE**  
*Call Before You Dig*

**811 or 1-800-362-2764**  
CALL TWO WORKING DAYS BEFORE YOU DIG  
(NON MEMBERS MUST BE CALLED DIRECTLY)

**RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

Sheet Title

## FORCE MAIN PLAN & PROFILE

Project Number 06308.12  
Drawing Scale 1" = 50'  
Sheet Number C4  
File Number 06308





Project Manager	RA
Drawn By	RE
DWG	D6308124-IMP - FINAL
X-Ref(s)	

[illegible]

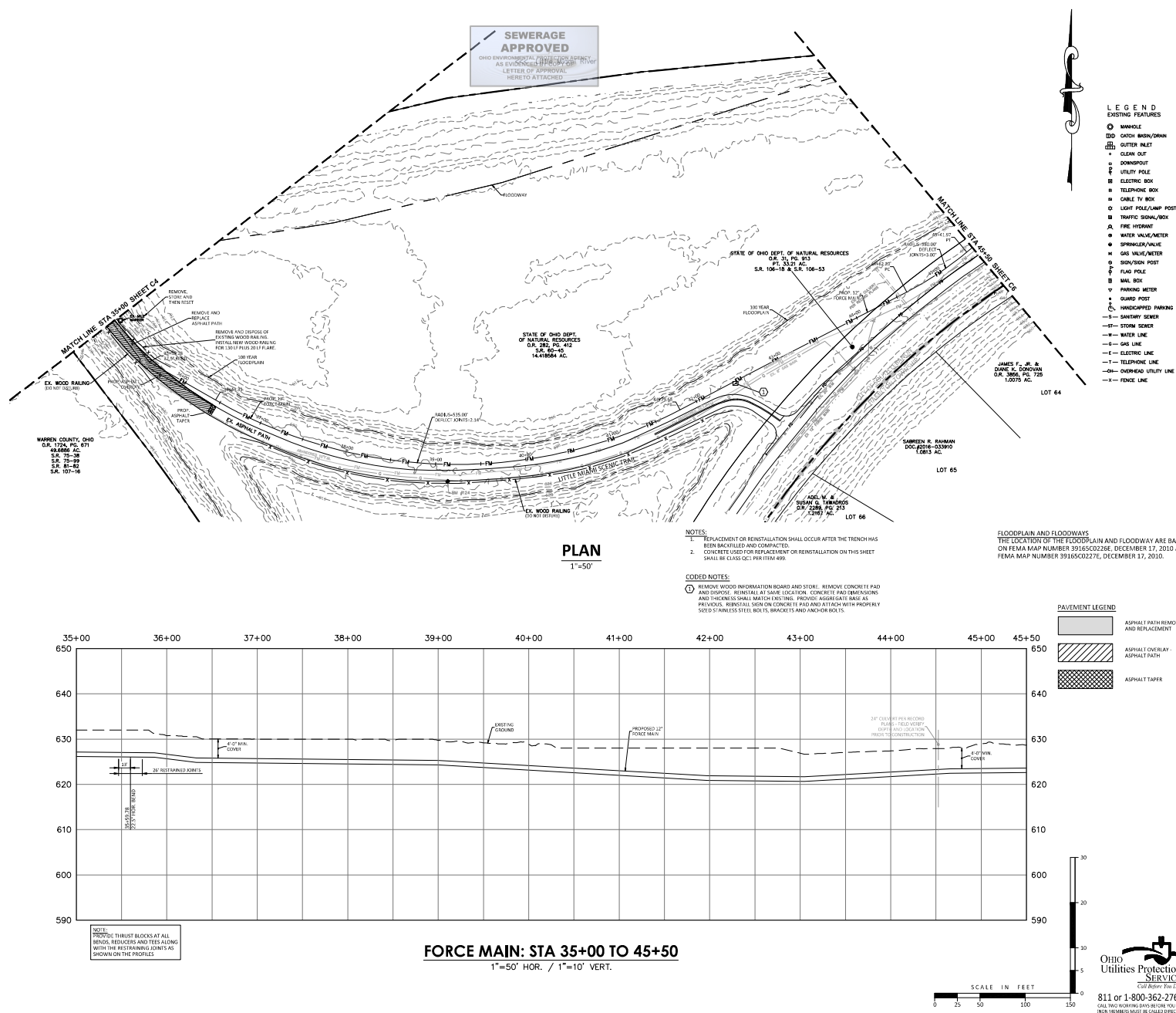
© Copyright 2022, MCGILL SMITH PUNSHON, Inc.

**RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

Sheet Title

## FORCE MAIN PLAN & PROFILE

Project Number	06308.12
Drawing Scale	1" = 50'
Sheet Number	C5
File Number	06308





[illegible]

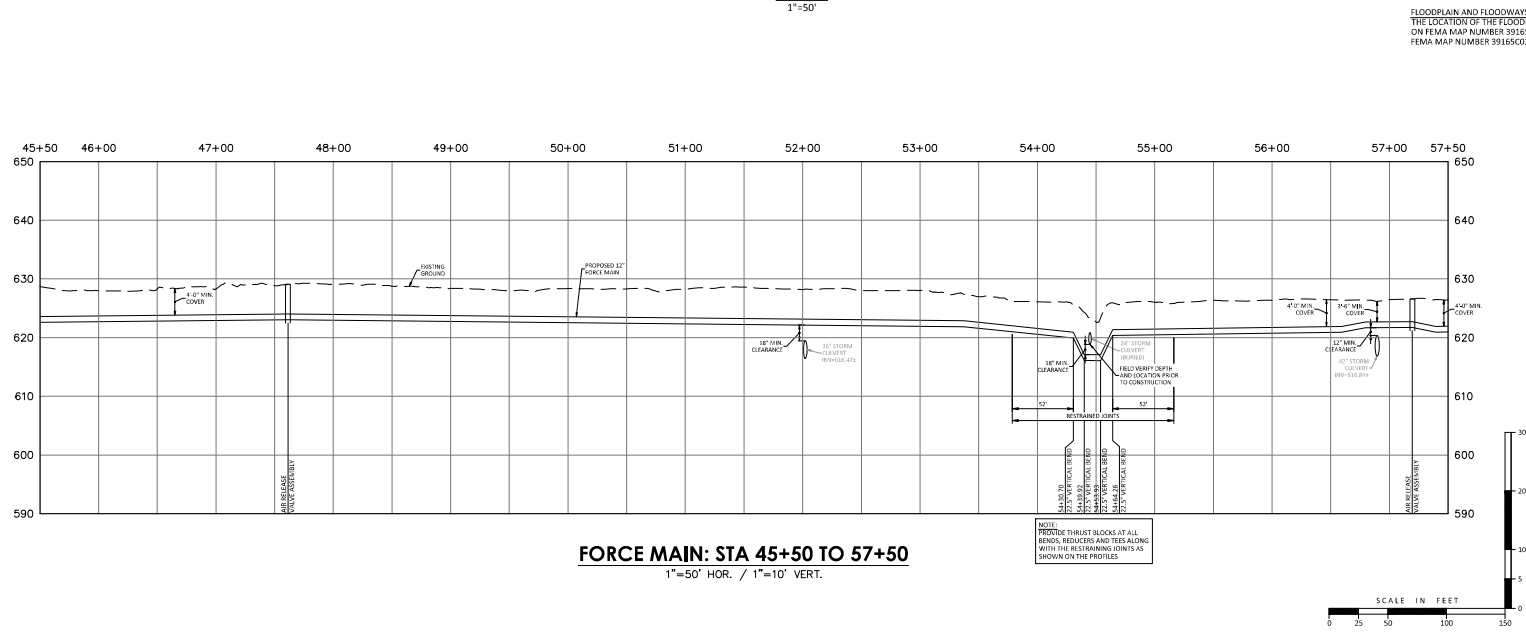
© Copyright 2022, MCGILL SMITH PUNSHON, Inc.

**RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

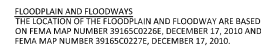
Sheet Title

## FORCE MAIN PLAN & PROFILE

Project Number	06308.12
Drawing Scale	1" = 50'
Sheet Number	C6
File Number	06308



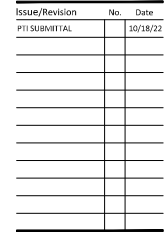




© Copyright 2022, MCGILL SMITH PUNSHON, Inc.

Project Number	06308.12
Drawing Scale	1" = 50'
Sheet Number	C7
File Number	06308





**FLOODPLAIN AND FLOODWAYS**  
THE LOCATION OF THE FLOODPLAIN AND FLOODWAY ARE BASED  
ON FEMA MAP NUMBER 39165C0226E, DECEMBER 17, 2010 AND  
FEMA MAP NUMBER 39165C0227E, DECEMBER 17, 2010.



Sheet Title	
<b>FORCE MAIN PLAN &amp; PROFILE</b>	
Project Number	06308.12
Drawing Scale	1" = 50'
Sheet Number	C8
File Number	06308



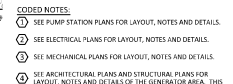


Issue/Revision	No.	Date
PTI SUBMITTAL		10/18/22

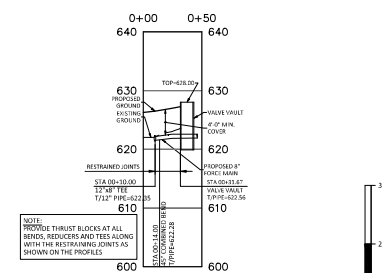
[illegible]

## Sheet Title

Project Number	06308.12
Drawing Scale	1" = 50'
Sheet Number	C9
File Number	06308



**FLOODPLAIN AND FLOODWAYS**  
THE LOCATION OF THE FLOODPLAIN AND FLOODWAY ARE BASED ON FEMA MAP NUMBER 39165C0226E, DECEMBER 17, 2010 AND FEMA MAP NUMBER 39165C0227E, DECEMBER 17, 2010.



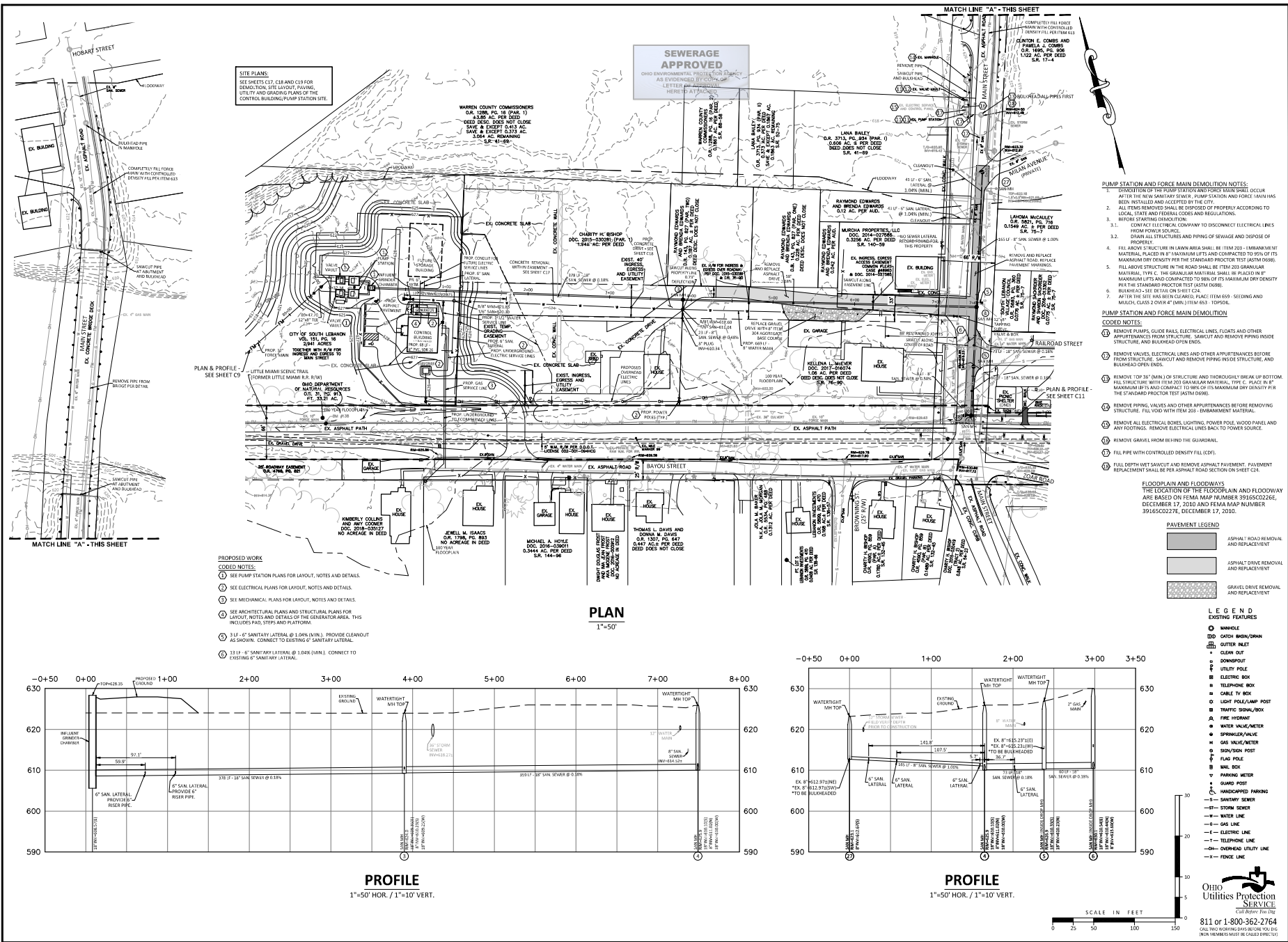
1"=50' HOR. / 1"=10' VERT



**OHIO  
Utilities Protection  
SERVICE**  
*Call Before You Dig*

**811 or 1-800-362-2764**  
CALL TWO WORKING DAYS BEFORE YOU DIG  
(NON MEMBERS MUST BE CALLED DIRECTLY)





**RIVER CORRIDOR**  
**PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO





Issue/Revision	No.	Date
PTI SUBMITTAL		10/18/22

---

---

## N

**IC**

7

## References

## CONCLUSION

## OR BAC

**WILLIS TOWERS WATSON**

## REFERENCES

OSs

## CONCLUSIONS

## E. A. ACERRA

# IN THE

## АИ

0  
(

117

# JE

**P**

Sheet Title



## SANITARY SEWER

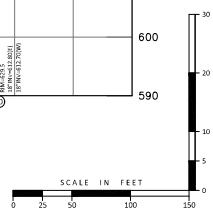
Project Number 06308.12

Sheet Number C11



**PAVEMENT LEGEND**

	ASPHALT PATH REMOVAL AND REPLACEMENT
	CONCRETE SIDEWALK REMOVAL AND REPLACEMENT



<b>SANITARY SEWER PLAN &amp; PROFILE</b>	
Project Number	06308.12
Drawing Scale	1" = 50'
Sheet Number	<b>C11</b>
File Number	06308



[illegible]

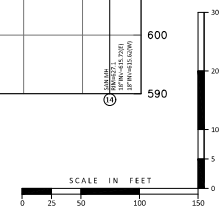
## Sheet Title

Project Number	06308.12
Drawing Scale	1" = 50'
Sheet Number	C12
File Number	06308



**PAVEMENT LEGEND**

	ASPHALT PATH REMOVAL AND REPLACEMENT
---	--------------------------------------







Project Manager	RA
Drawn By	REE
DWG	D6308124-IMP - FINAL
X-Ref(s)	---

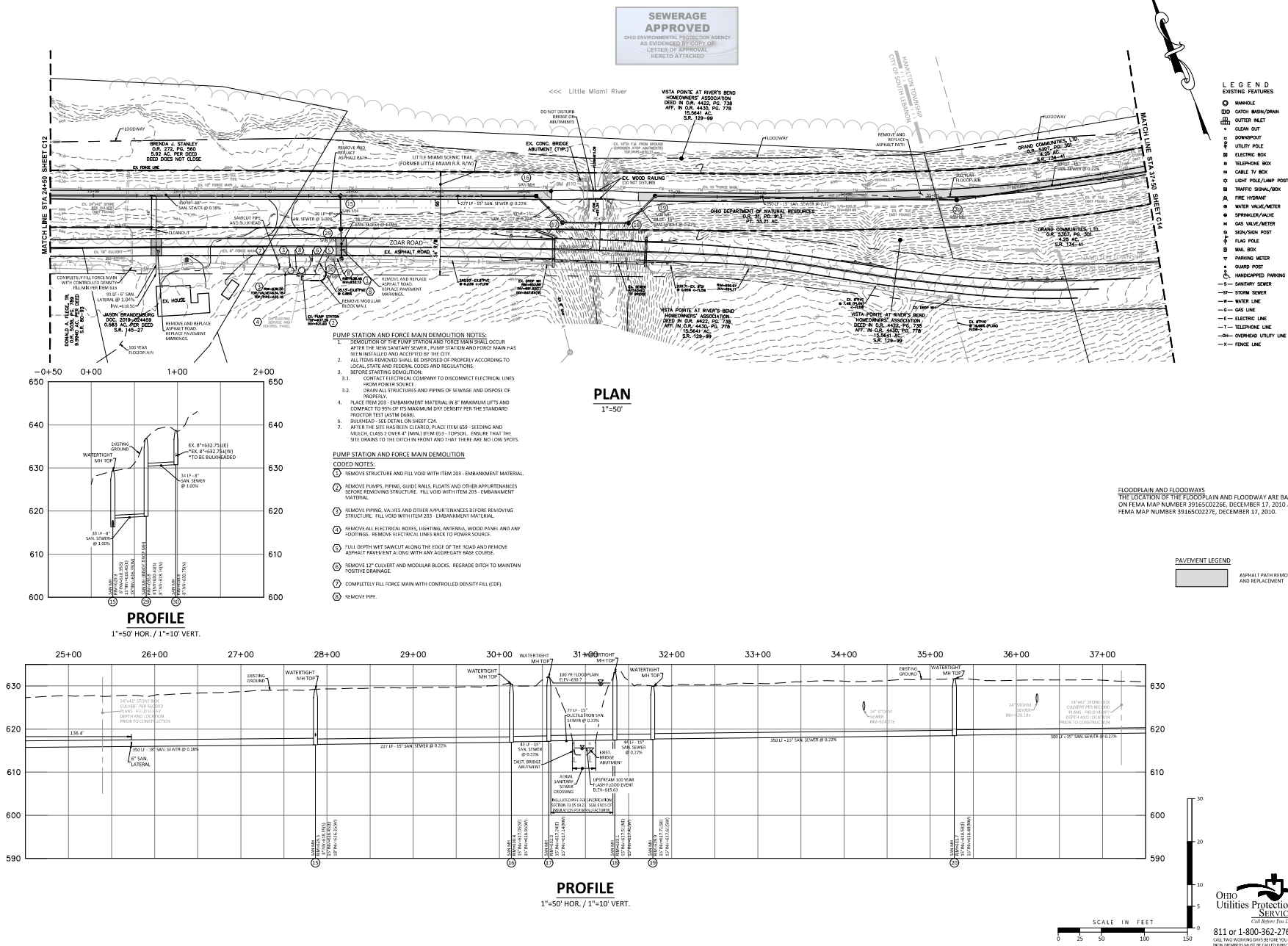
[illegible]

© Copyright 2022, MCGILL SMITH PUNSHON, Inc.

**RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

## SANITARY SEWER PLAN & PROFILE

Project Number	06308.12
Drawing Scale	1" = 50'
Sheet Number	C13
File Number	06308







Issue/Revision	No.	Date
PTI SUBMITTAL		10/18/22

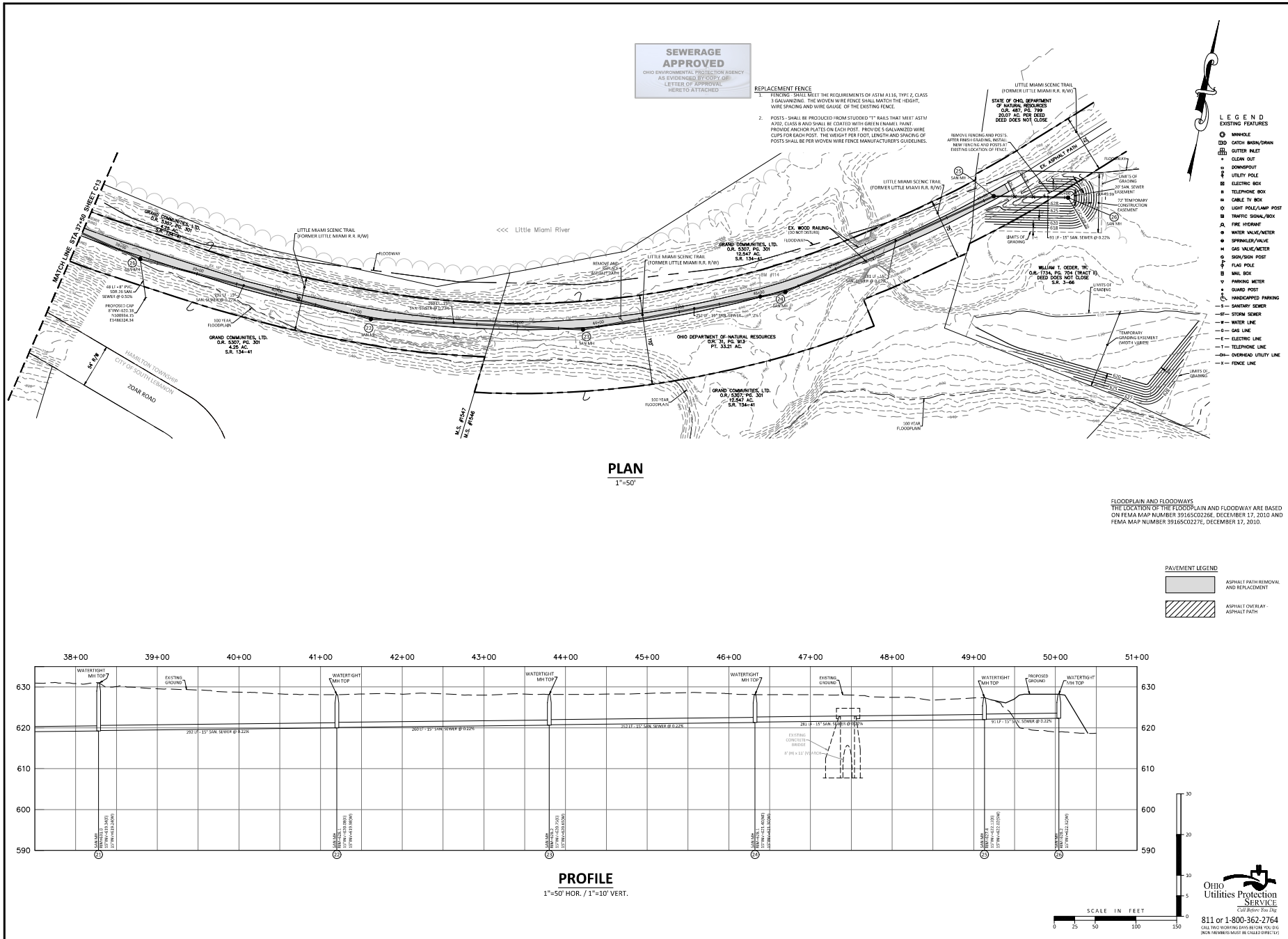
[illegible]

© Copyright 2022, MCGILL SMITH PUNSHON, Inc.

**RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

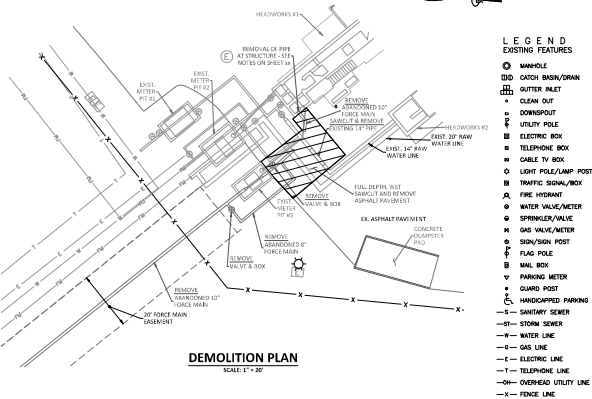
**SANITARY SEWER  
PLAN & PROFILE**

Project Number	06308.12
Drawing Scale	1" = 50'
Sheet Number	C14
File Number	06308





**SEWERAGE  
APPROVED**  
OHIO ENVIRONMENTAL PROTECTION AGENCY  
AS EVIDENCED BY COPY OF  
LETTER OF APPROVAL  
HERETO ATTACHED



**LEGEND**  
EXISTING FEATURES

- MANHOLE
- CATCH BASIN/DRAIN
- GUTTER INLET
- CLEAN OUT
- DOWNSPOUT
- UTILITY POLE
- ELECTRIC BOX
- TELEPHONE BOX
- CABLE TV BOX
- LIGHT POLE/LAMP POST
- TRAFFIC SIGNAL/BOX
- FIRE HYDRANT
- WATER VALVE/METER
- SPRINKLER/VALVE
- GAS VALVE/METER
- SIGN/SIGN POST
- FLAG POLE
- MAIL BOX
- PARKING METER
- GUARD POST
- HANDICAPPED PARKING
- SANITARY SEWER
- STORM SEWER
- WATER LINE
- GAS LINE
- ELECTRIC LINE
- TELEPHONE LINE
- OVERHEAD UTILITY LINE
- FENCE LINE



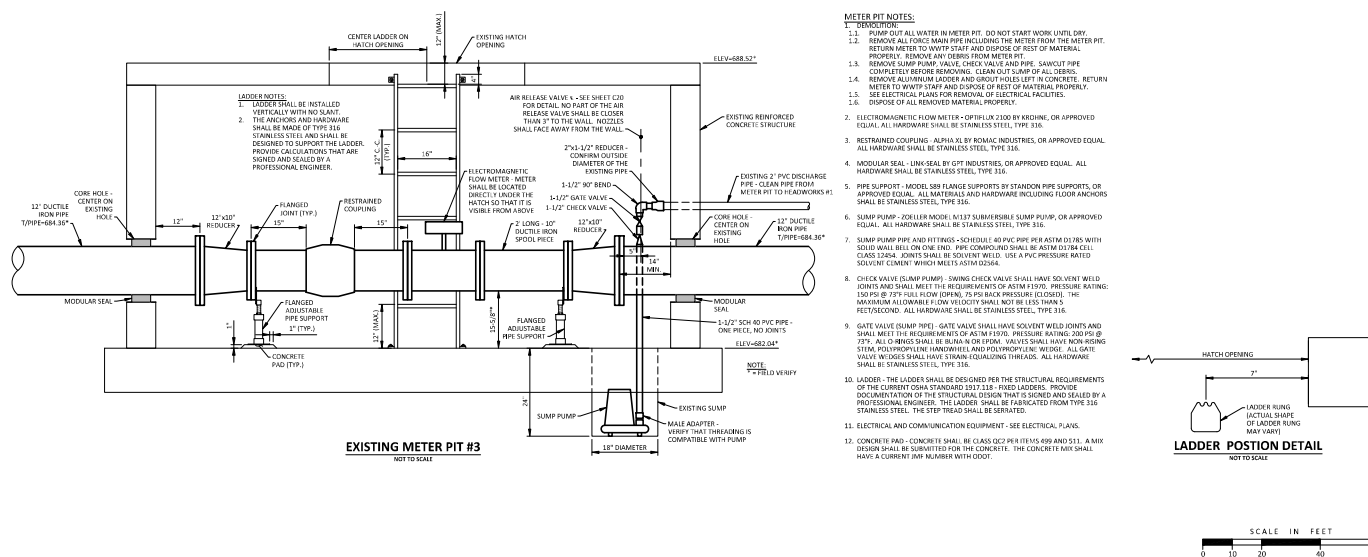
**MSP**  
DESIGN  
McGill Smith Punshon

- Architecture 3700 Park 42 Drive
- Engineering Suite 190B
- Landscape Architecture Cincinnati OH 45241
- Planning Phone 513.759.0004
- Surveying [www.mspdesign.com](http://www.mspdesign.com)

Project Manager	RA
Drawn By	REL
DWG	06308124-SITE - FINAL
X-Ref(s)	---

[illegible]

Copyright 2022, MCGILL SMITH PUNSHON, Inc.



**OHIO**  
Utilities Protection  
**SERVICE**  
*Call Before You Dig*  
**811 or 1-800-362-2764**  
CALL TWO WORKING DAYS BEFORE YOU DIG  
(NON MEMBERS MUST BE CALLED DIRECTLY)

**RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

Sheet Title	
<b>WWTP SITE DEMOLITION PLAN AND METER PIT DETAILS</b>	
Project Number	06308.12
Drawing Scale	AS NOTED
Sheet Number	<b>C15</b>
File Number	06308





Project Manager	RA
Drawn By	RE
DWG	06308124-SITE - FINAL
X-Ref(s)	

[illegible]

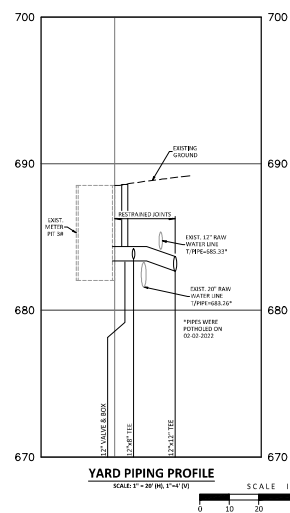
Copyright 2022, McGraw-Hill, a division of The McGraw-Hill Companies, Inc.

**RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

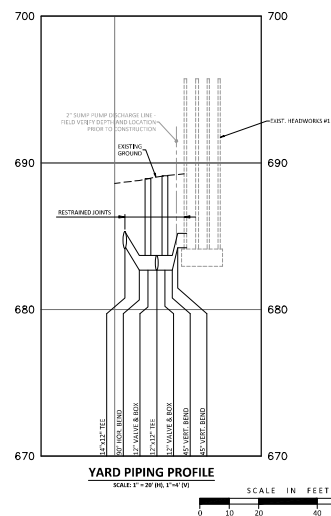
Sheet Title

WWTP SITE - YARD  
PIPING PLAN

Project Number	06308.12
Drawing Scale	AS NOTED
Sheet Number	C16
File Number	06308



**NOTE:**  
PROVIDE THRUST BLOCKS AT ALL  
BENDS, REDUCERS AND TEES ALONG  
WITH THE RESTRAINING JOINTS AS  
SHOWN ON THE PROFILES.

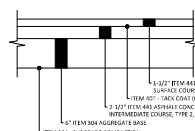


NOTES:  
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE

2. A MIX DESIGN SHALL BE SUBMITTED FOR ALL ASPHALT CONCRETE PAVEMENT MATERIALS THAT ARE USED ON THE PROJECT. ALL ASPHALT PAVEMENT MIXES SHALL HAVE A CURRENT JMF NUMBER WITH THE OHIO DEPARTMENT OF TRANSPORTATION.
3. RESTRAINED COUPLING - ALPHA JIF BY ROMAC INDUSTRIES, OR APPROVED EQUIV. KILL HARDWARE SHALL BE STAINLESS STEEL, TYPE 316.
4. NEW ELECTRICAL WORK - NOT ALL PROPOSED EXTERNAL ELECTRICAL WORK IS SHOWN. SEE THE ELECTRICAL PLANS FOR LAYOUT, NOTES AND DETAILS.
5. SEEDING AND MULCHING SHALL FOLLOW THE MATERIAL AND INSTALLATION REQUIREMENTS OF ITEM 659. TOPSOIL SHALL BE PER ITEM 653 AND SHALL BE PLACED PER ITEM 659. TOPSOIL SHALL BE PLACED AT A MINIMUM THICKNESS OF 4". TEMPORARY SEED SHALL BE CLASS 7 SEED.

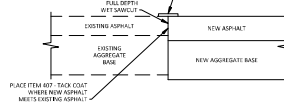
## YARD PIPING PLAN

SCALE: 1" = 2'



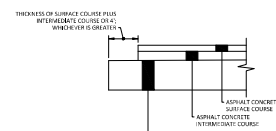
### ASPHALT PAVEMENT SECTION

NOT TO SCALE



**NEW ASPHALT PAVEMENT ABUTS  
EXISTING ASPHALT PAVEMENT DETAIL**

NOT TO SCALE



### EDGE OF ASPHALT PAVEMENT DETAIL

NOT TO SCALE



**811 or 1-800-362-2764**  
CALL TWO WORKING DAYS BEFORE YOU DIG  
(NON MEMBERS MUST BE CALLED DIRECTLY)



BEING AN ISLAND WITHIN THE RIVER  
AND INCLUDING ALL ACREAGE TO  
THE LOW WATER MARK OF THE  
LITTLE MIAMI RIVER AND BAYOU

DEED DESC. DOES NOT CLOSE  
SAVE & EXCEPT 0.413 AC.  
SAVE & EXCEPT 0.373 AC.  
3.064 AC. REMAINING  
S.B. 41-09

1. *Journal of Management Studies*, 1996, 33, 1, 1-14.

-  MANHOLE
-  CATCH BASIN/DRAIN
-  GUTTER INLET
-  CLEAN OUT
-  DOWNSPOUT
-  UTILITY POLE
-  ELECTRIC BOX
-  TELEPHONE BOX
-  CABLE TV BOX
-  LIGHT POLE/LAMP POST
-  TRAFFIC SIGNAL/BOX
-  FIRE HYDRANT
-  WATER VALVE/METER
-  SPRINKLER/VALVE
-  GAS VALVE/METER
-  SIGN/SIGN POST
-  FLAG POLE
-  MAIL BOX
-  PARKING METER
-  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
-  F—FENCE LINE

- Architecture
- Engineering
- Landscape Architecture
- Planning
- Surveying

- Architecture 3700 Park 42 Drive
- Engineering Suite 190B
- Landscape Architecture Cincinnati OH 45241
- Planning Phone 513.753.0004
- Surveying [www.msdesign.com](http://www.msdesign.com)

Project Manager	RA
Drawn By	REL
DWG	06308124-SITE - FINAL
X-Ref(s)	---

Issue/Revision	No.	Date
PTI SUBMITTAL		10/18/22
CONCRETE DEMOLITION		02/09/22
CONCRETE DEMOLITION		02/21/22

[illegible]

Copyright 2022, MCGILL SMITH PUNSHON, Inc.

**RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

Sheet Title

CONTROL  
BUILDING SITE -  
DEMOLITION PLAN

Project Number	06308.12
Drawing Scale	1" = 20'
Sheet Number	C17
File Number	06308



OHIO  
Utilities Protection  
SERVICE

811 or 1-800-362-2764

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE REMAINING STRUCTURE.

- [illegible]

FLOODPLAIN AT CONTROL BUILDING AND PUMP STATIONS  
THE ELEVATION OF THE FLOODPLAIN IN THIS AREA IS 627.00  
PER FEMA MAP NUMBER 39165C0226E, DECEMBER 17, 2010

SCALE IN FEET

0 15 30 60 90

A horizontal number line with tick marks at 0, 15, 30, 60, and 90. The segment from 0 to 15 is shaded black. The segment from 30 to 60 is also shaded black.

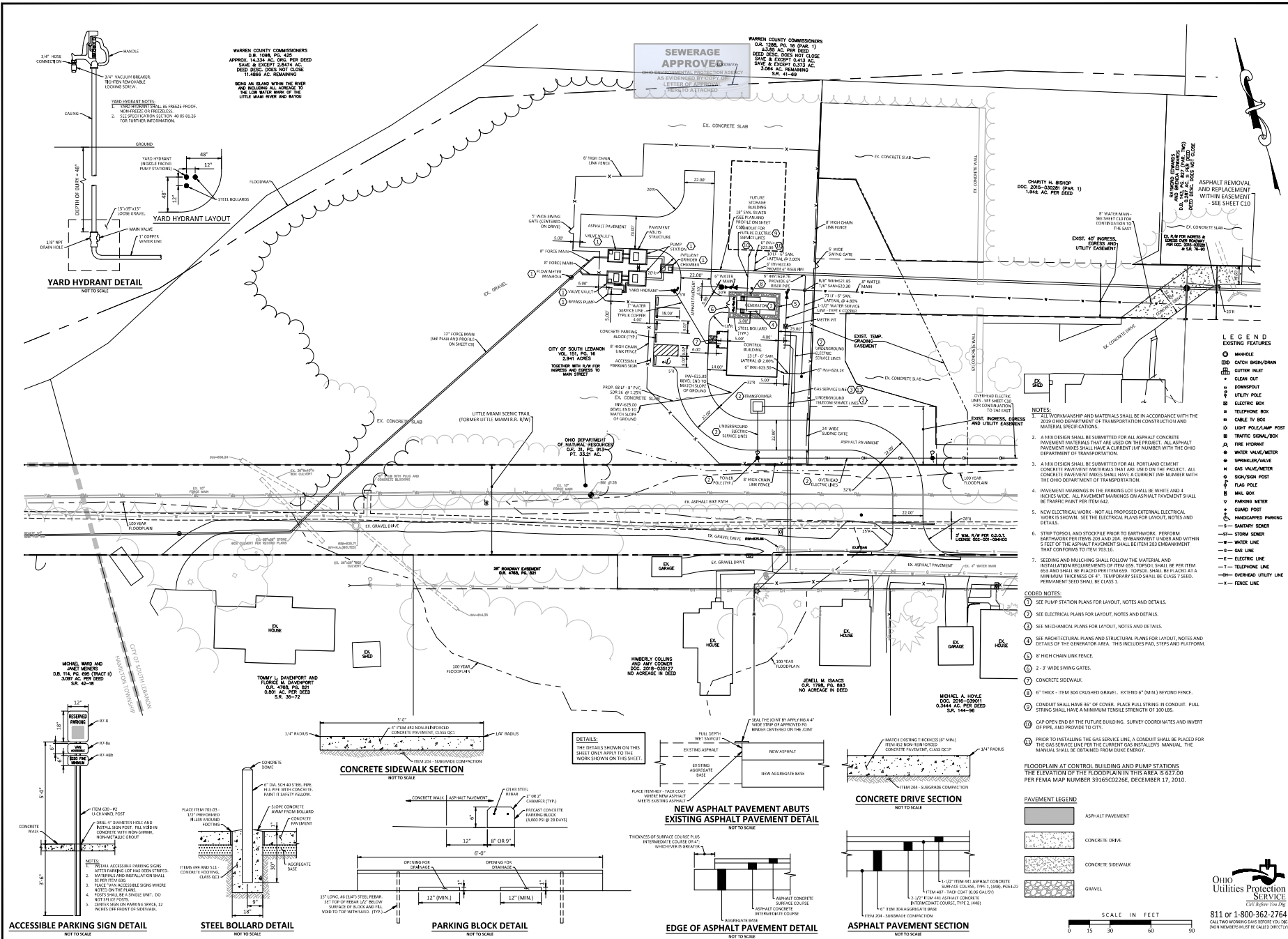


# RIVER CORRIDOR PUBLIC SANITARY SEWER EXTENSION THE VILLAGE OF SOUTH LEBANON WARREN COUNTY, OHIO

Sheet Title

**CONTROL BUILDING  
SITE - SITE AND  
UTILITY PLAN**

Project Number 06308.12  
Drawing Scale 1" = 20'  
Sheet Number C18  
File Number 06308





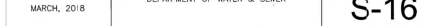






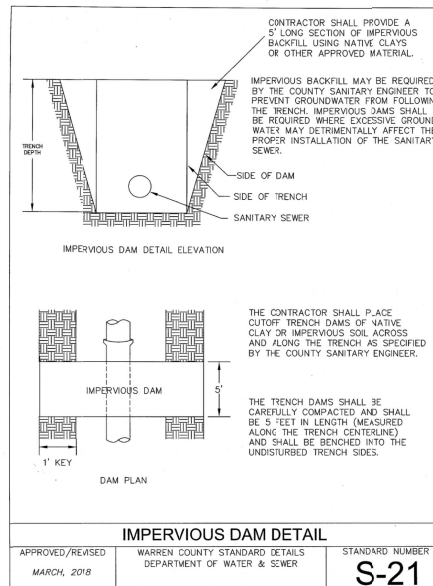
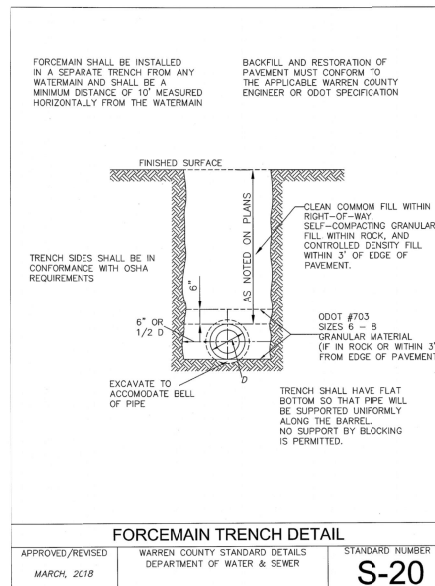
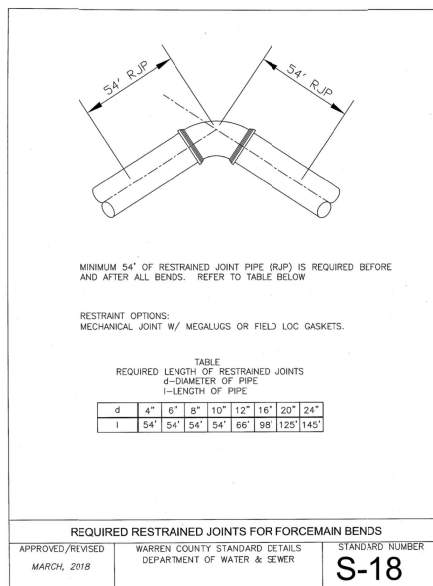
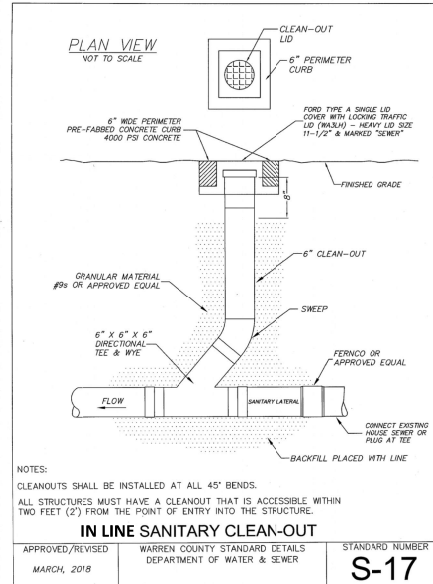
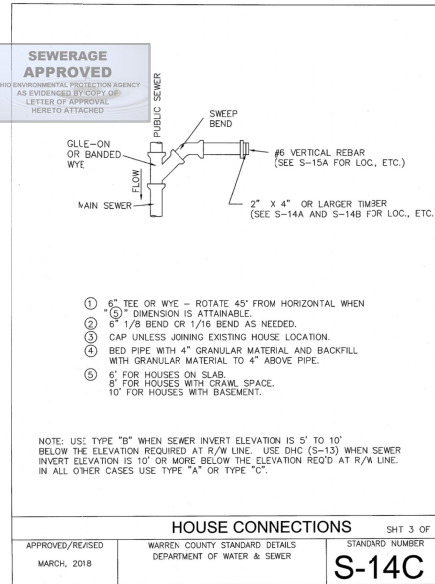
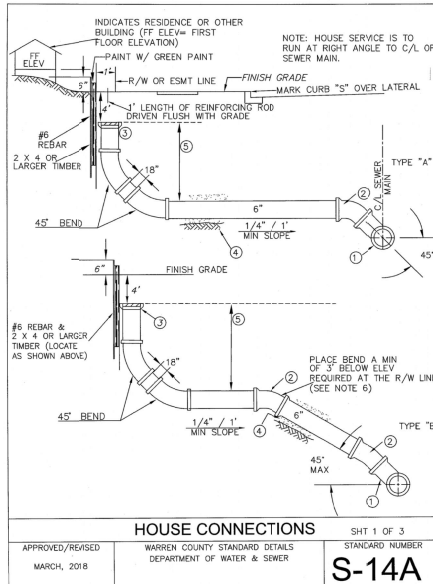
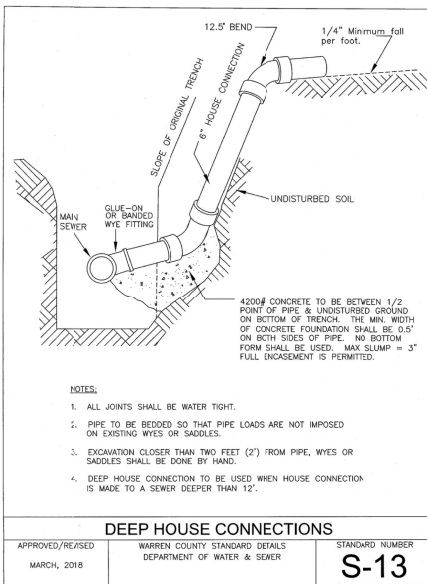
Issue/Revision	No.	Date
PTI SUBMITTAL		10/18/22


Project Number 06308.12  
Drawing Scale AS NOTED  
Sheet Number C20  
File Number 06308



Project Number 06308.12  
Drawing Scale AS NOTED  
Sheet Number C20  
File Number 06308





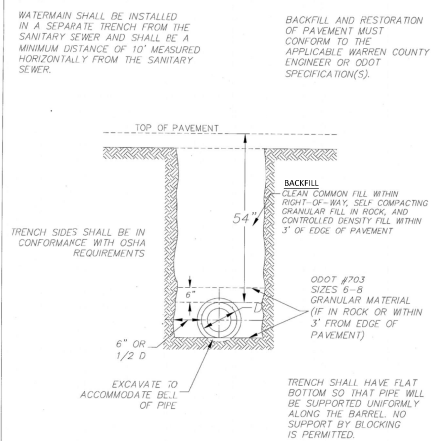
Issue/Revision	No.	Date
P11 SUBMITTAL		10/18/22

THRUST BLOCKS, AND ANCHORS AND  
BUTTRESSES FOR FORCE MAIN - USE  
WATER MAIN DETAILS OF THE SAME  
AS SHOWN ON SHEET C23



- WATER
- ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 4'-6".
  - ALL WATER SERVICE LATERALS SHALL HAVE A MINIMUM COVER OF 42".
  - ALL WATER MAINS SHALL BE DUCTILE IRON CONFORMING WITH AWWA SPEC. C-151 CLASS 52 IN SIZES 4"-16" AND PSI CLASS 350 FOR 20" AND ABOVE.
  - COMPACT FITTINGS ARE PERMITTED.
  - ALL WATER VALVES MUST OPEN LEFT. ALL VALVE BOX LIDS MUST BE CAST/STAMPED "WCO" IN 1 1/2" LETTERS AND BE NEENAH NF-19130002 OR EQUAL. ALL VALVE EXTENSIONS TO HAVE SET SCREWS.
  - A CONCRETE SLAB MUST BE PROVIDED AT FINAL GRADE AROUND ALL MAIN VALVE BOXES. THE SLABS MUST BE EIGHTEEN INCHES (18") SQUARE /CIRCLE AND NINE INCHES (9") THICK. PRE-FABRICATED CONCRETE RINGS ARE ACCEPTABLE.
  - WATER AND SEWER LINES SHALL HAVE A MINIMUM OF TEN FEET (10') HORIZONTAL SEPARATION AND /OR TWO FEET (2') VERTICAL SEPARATION.
  - NO GATE VALVE, METER PIT, BLOW OFF OR CORPORATION STOP SHALL BE LOCATED UNDER OR WITHIN THREE FEET (3') OF DRIVEWAYS, ROADWAYS OR SIDEWALKS.
  - NO DRIVEWAY SHALL BE INSTALLED WITHIN FIVE FEET (5') OF A FIRE HYDRANT.
  - A MINIMUM OF THREE FEET (3') IS REQUIRED BETWEEN CORPORATION STOPS. NO TAP SHALL BE MADE WITHIN THREE (3') OF A BELL.
  - THE LOCATION OF WATER SERVICE LATERALS MUST BE STAMPED IN THE CURB AT THE TIME THE CURB IS PLACED TO PERMANENTLY INDICATE THE LOCATION OF SAE LATERALS.
  - THE LOCATION OF ALL WATER SERVICE LATERALS, BENDS, TEES, ETC. MUST BE PROVIDED ON THE AS-BUILT PLANS. ALL OF THESE APPURTENANCES SHOULD BE SURVEYED IN STATE PLANE COORDINATES AND ELECTRONICALLY DELIVERED WITH AS-BUILTS.
  - CONTRACTOR SHALL SUBMIT AS-BUILT PLANS OF SANITARY AND WATER LATERALS TO THE OWNER.
  - ALL WATER MAINS CROSSING UNDER STORM DRAINS SHALL BE BACKMAINTAINED WITH GRANULAR MATERIAL, O.D.O.T. ITEM 310.02, BETWEEN MAINS AND DRAINS.

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		<b>WG-1A</b>



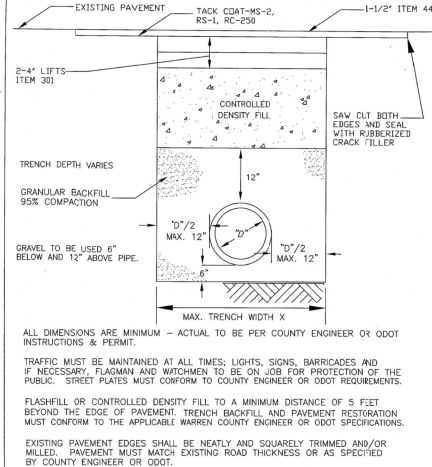
APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
JUNE, 2012		<b>W-2</b>

**BACKFILL NOTES:**

- THE FILL SHALL BE FORMED FROM MATERIAL FREE OF VEGETATIVE MATTER, RUBBER, LARGE ROCK, AND OTHER DEBRIS IN A MANNER.
- THE FILL MATERIAL SHOULD BE PLACED IN LAYERS NOT TO EXCEED EIGHT INCHES IN LOCAL THICKNESS AND SHOULD BE SPRINKLED WITH WATER AS REQUIRED TO ACHIEVE SPECIFIED COMPACTIONS.
- MATERIAL CONTAINING AN EXCESS OF WATER OR THE SPECIFIED COMPACTION LIMITS CANNOT BE ATTAINED SHOULD BE SPREAD AND DRYED TO A MOISTURE CONTENT THAT WILL PERMIT PROPER COMPACTION.
- ALL CLEAN COMMON FILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY OBTAINED IN ACCORDANCE WITH AASHTO T-99 OR ASTM D-1557.
- ALL GRANULAR FILL SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY OBTAINED IN ACCORDANCE WITH AASHTO T-99 OR ASTM D-1557.
- SHOULD THE RESULTS OF THE IN-ACTUITY TESTS INDICATE THAT THE SPECIFIED COMPACTION LIMITS HAVE NOT OBTAINED, THE AREA REPRESENTED BY SUCH TESTS SHOULD BE REWORKED AND RETESTED AS REQUIRED UNTIL THE SPECIFIED LIMITS ARE REACHED.

- WATER
- EACH SERVICE LATERAL MUST BE A CONTINUOUS PIECE OF PIPE FROM THE CORP STOP TO THE METER. COUPLINGS SHALL NOT BE ALLOWED. TYPE K COPPER SHALL BE USED FOR 3/4" AND 1" SERVICES. POLYETHYLENE 200 PSI (COPPER TUBE SIZE) MAY BE USED FOR 1 1/2" AND 2" SERVICES. TRACER WIRE MUST BE USED WITH POLY AND SDR 21.
  - SERVICE LINES 1" AND LARGER MUST BE EITHER TYPE K COPPER, POLY 200 PSI (ASTM D-2737) OR SDR 21 (SIP JUNT) (ASTM-2241). TRACER WIRE MUST BE TAPED EVERY 3' ON POLY AND SDR 21 FROM THE METER PIT INTO THE STRUCTURE BEING SERVED (A 3' LEAD IS REQUIRED INSIDE THE PIT).
  - 1 1/2" AND 2" SERVICE LINES FROM THE CORP STOP TO THE METER PIT MUST BE TYPE K COPPER OR POLYETHYLENE 200 PSI. POLY MUST HAVE A TRACER WIRE. SEE W-10B.
  - FIRE HYDRANTS MUST BE PROVIDED AT THE ENTRANCE TO ALL SUBDIVISIONS AND AT ALL STREET INTERSECTIONS.
  - AN APPROVED BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED ON ALL WATER SERVICE LATERALS BY THE PROPERTY OWNER PRIOR TO ANY POINT OF CONNECTION OR USAGE. THE FOLLOWING DEVICES AND LOCATIONS ARE REQUIRED:
    - RESIDENTIAL DWELLING UNITS (3 FAMILY OR LESS): LOCATED IMMEDIATELY UPON ENTRY OF STRUCTURE. DOUBLE CHECK VALVE A.S.S.E. 1024.
    - LANDSCAPE IRRIGATION SYSTEMS: REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY A.S.S.E. 1013. LOCATED IMMEDIATELY UPON ENTRY OF STRUCTURE.
    - FIRE PROTECTION SYSTEMS: DOUBLE CHECK DETECTOR CHECK ASSEMBLY A.S.S.E. 1048 OR REDUCED PRESSURE PRINCIPLE DETECTOR CHECK A.S.S.E. 1047 IF SYSTEM CONTAINS ADDITIVES; A.S.S.E. 1048 LOCATED IN VAULT AND A.S.S.E. 1047 LOCATED IN BUILDING.
    - NON-RESIDENTIAL SERVICES: REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY A.S.S.E. 1013. LOCATED IMMEDIATELY UPON ENTRY OF STRUCTURE.
  - SWAB PIPE WITH 50 PPM CHLORINE SOLUTION BEFORE INSTALLATION.
  - ALL NEW WATER MAINS SHALL BE PRESSURE TESTED FOR 2 HOURS AT 200 PSI, WHICHEVER IS GREATER. ALLOWABLE LEAKAGE SHALL BE PER TABLE 6A OF AWWA C-900.
  - DEDUCT METERS SHALL NOT BE ALLOWED.
  - NO IRRIGATION CONNECTIONS SHALL BE ALLOWED IN THE METER PIT.
  - BACK FLOW PREVENTER THAT COMPLIES WITH A.S.S.E. 1013 IS TO BE INSTALLED AHEAD OF ANY SPRINKLER BUT NOT IN METER PIT.
  - ALL MATERIALS USED SHALL BE DOMESTIC, MADE IN THE UNITED STATES OF AMERICA.
  - THRUST BLOCKS AND RESTRAINING JOINTS SHALL BE USED AT ALL FITTINGS (BENDS, TEES, REDUCERS, ETC) ALONG THE WATER MAINS.

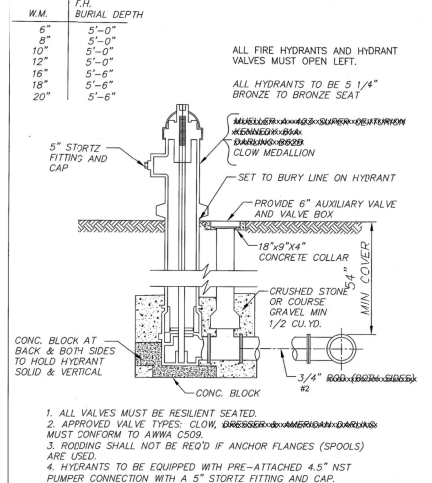
APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		<b>WG-1B</b>



APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		<b>W-20</b>

- PROCEDURE FOR CONNECTION TO EXISTING WATER SYSTEM
- SEWERAGE**
- WARREN COUNTY WATER DEPARTMENT THREE (3) DAYS IN ADVANCE OF ANY SHUT DOWN. WARREN COUNTY WILL ISSUE THE SHUT DOWN NOTICE AND/OR BOIL ADVISORY TO AFFECTED CUSTOMERS PER 3410 EPA REQUIREMENTS DETERMINED NECESSARY BY WARREN COUNTY.
- EXISTING MAIN AT PROPOSED CONNECTION POINT. NO WET TAP SHALL BE MADE WITHIN THREE (3) FEET OF A BELL OR PIPE CONNECTION.
- COUNTY PERSONNEL TO OPERATE CLOSING OF APPROPRIATE VALVES TO ISOLATE LINE TO BE TAPPED.
  - INSTALL PROPER TAPPING SLEEVE AND TAPPING VALVE. THE TAPPING SLEEVE AND VALVE SHALL BE TESTED AT 200 PSI FOR A PERIOD OF AT LEAST 5 MINUTES. THE PIPE SLUG MUST BE REMOVED AND INSPECTED BY COUNTY PERSONNEL.
  - IF THE TAPPING SLEEVE AND VALVE WILL BE UNDER FUTURE PAVEMENT, THE BURIED VALVE MUST BE LEFT OPEN AND A NEW VALVE SET OUT OF FAVEMENT.
  - FIELD CUT EXISTING MAIN AS NECESSARY TO ACCOMMODATE TEE AND CLOSE COUPLED VALVES AT EACH END OF TEE. CARE IS TO BE TAKEN SO AS NOT TO GET DIRT IN EXISTING MAIN.
  - THOROUGHLY CLEAN AND DISINFECT PIPE AND APPURTENANCES TO BE INSTALLED.
  - INSTALL TEE AND VALVES - DRESSER COUPLINGS CAN BE USED IF NECESSARY. PROPOSED MAIN VALVE IS TO BE CAPPED AND SHUT OFF. EXISTING MAIN IS THEN TO BE RETURNED TO SERVICE BY COUNTY PERSONNEL.
  - CONSTRUCTION OF PROPOSED MAIN IS TO BE COMPLETED WITHIN A JOINT OF CONNECTION TO TEE AND VALVES INSTALLED ABOVE.
  - ENTIRE LINE IS TO BE PRESSURE TESTED AND DISINFECTED TO COUNTY STANDARDS.
  - ENTIRE LENGTH OF PIPE IS TO BE THOROUGHLY CLEANED AND DISINFECTED PRIOR TO INSTALLATION. PERMATEX CHLORING TABLETS TO BE USED FOR DISINFECTION. DOSAGE SHALL BE PER MANUFACTURER'S SPECIFICATIONS BASED ON PIPE MATERIAL.
  - NEW MAIN IS TO BE PUT INTO SERVICE BY COUNTY PERSONNEL.
  - TAPPING SLEEVES/SADDLES TO BE TWO-PIECE CAST IRON OR DUCTILE IRON (MUELLER H615). JCM412 OR FORD FTSS TAPPING SLEEVES PERMITTED ON C-900. SIZE OR SIZE TAPPING SLEEVES ARE NOT PERMITTED.

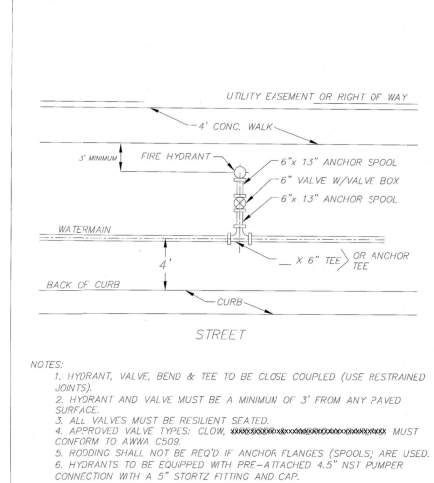
APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		<b>WG-2</b>



APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		<b>W-8</b>

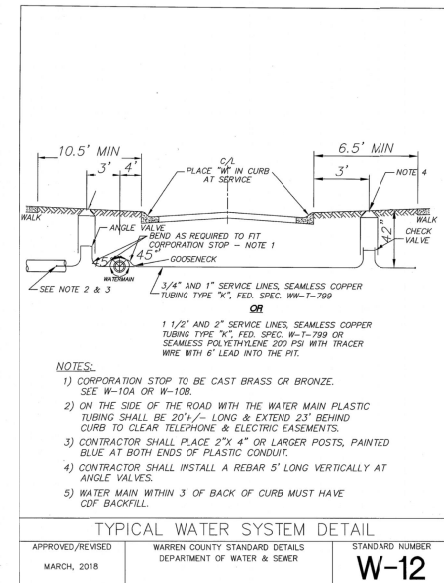
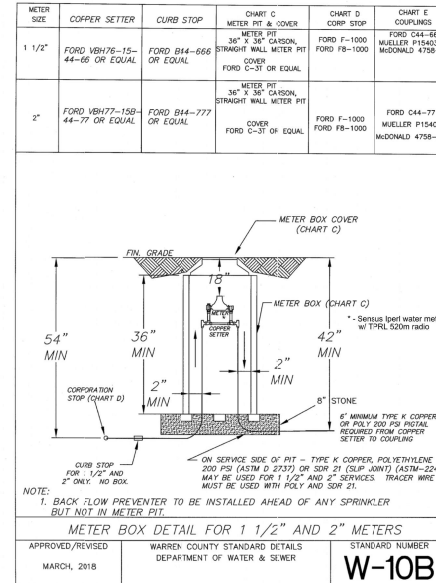
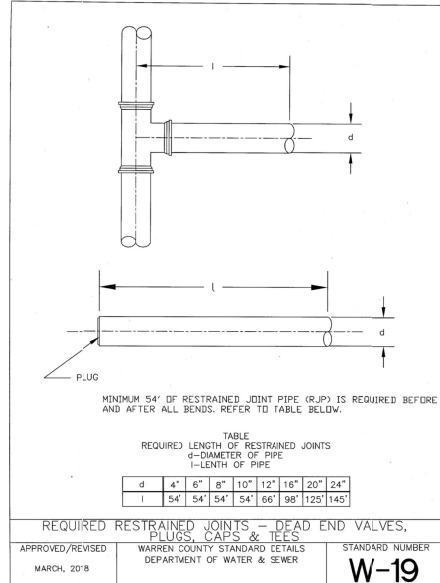
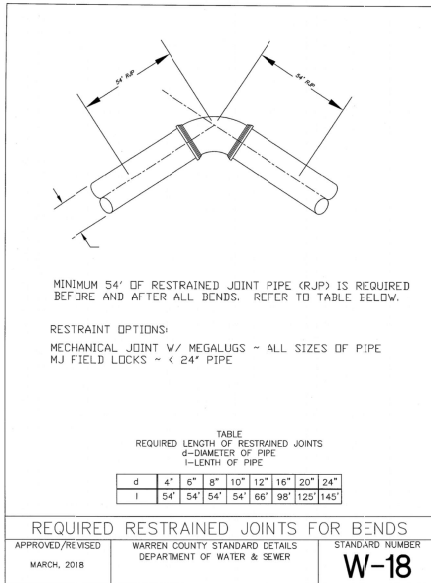
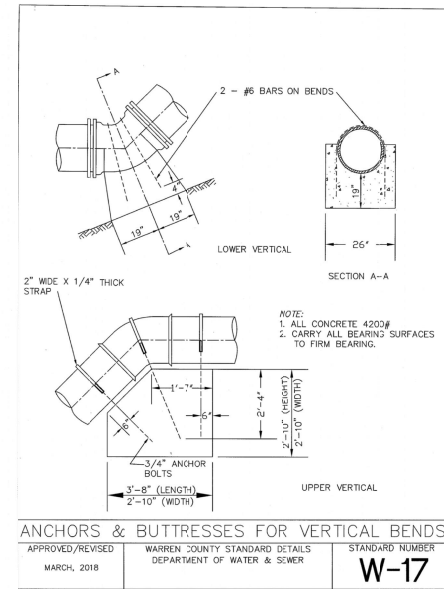
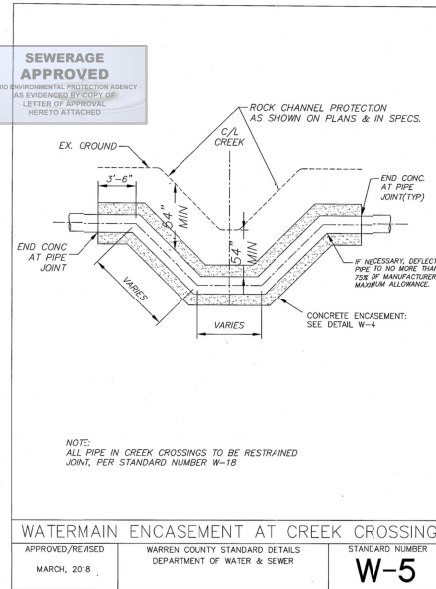
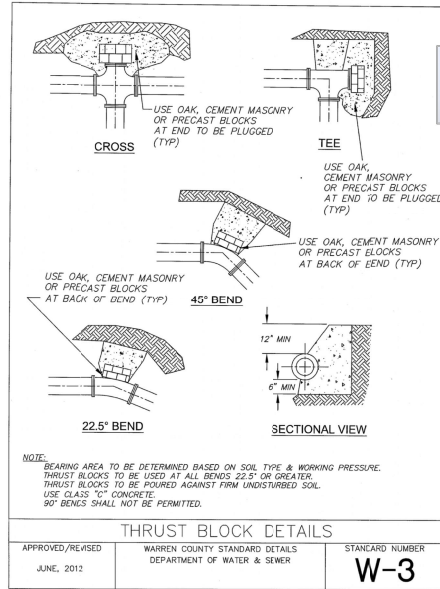
- Village of South Lebanon, Ohio Fire Hydrant Specification
- Fire Hydrant shall be manufactured in accordance with AWWA Standard C502, be listed by Underwriters Laboratories, Inc. and be FM Approved.
  - Fire Hydrant shall be designed for 250PSI working pressure and tested to 500 PSI hydrostatic pressure.
  - Fire hydrant shall be backed by manufacturer's 10 year limited warranty.
  - Fire hydrant shall be dry top, center stem, 4 ball bottom construction having an O-ring sealed lubrication reservoir.
  - Fire hydrant shall be manufactured with operating nut and thrust nut made of copper alloy, with bearings located both above and below the thrust collar and with operating nut protected by a cast iron weather shield.
  - All valves and hydrants shall open left and be fitted with National Standards threads.
  - Fire hydrant shall be manufactured with nozzles mechanically locked into the nozzle section and having O-ring seals.
  - Fire hydrant shall be a Traffic Model complete with safety latches and stainless steel stem coupling. Nozzle section must rotate 360 degrees.
  - Fire hydrant shall be manufactured with a main valve seat ring of copper alloy drain ring, 3/80 degree drain channel shall have a minimum of two tapped drain outlets.
  - Fire hydrant shall have a solid copper alloy upper valve plate with two rubber facings that activate the drain ports.
  - Fire hydrant shall be manufactured with a bronze lower valveplate that bottoms out in the shoe for maximum opening.
  - Fire hydrant shall have the 8" store connection.
  - Nozzle section shall be coated inside and out with TOIC coating, OSHA Safety Red
  - Fire hydrant shall be the Clow Medallion as manufactured by the Clow Valve Company.

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		<b>WG-2</b>



APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
JUNE, 2012		<b>W-9</b>



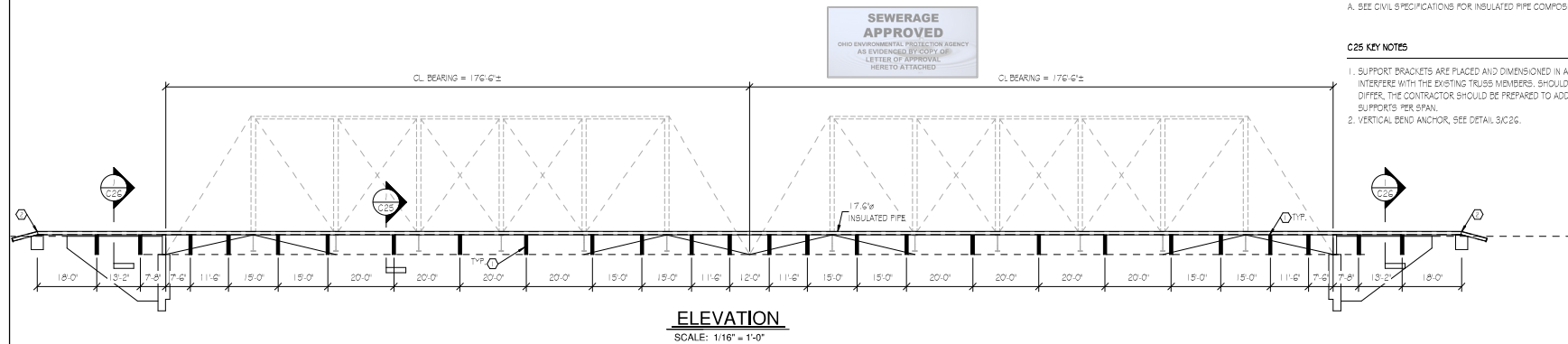



THE THRUST BLOCK, AND ANCHOR AND BUTTRESS DETAILS SHOWN ON THIS SHEET APPLY TO BOTH WATER MAINS AND FORCE MAINS





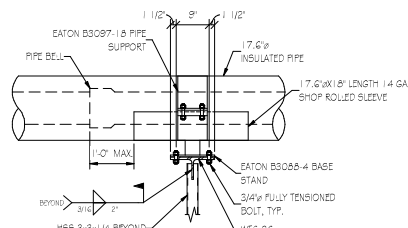
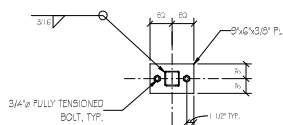
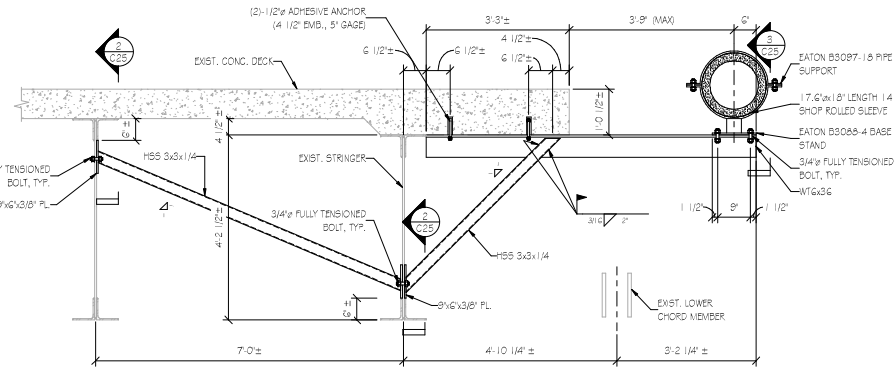


**C25 GENERAL NOTES**

A. SEE CIVIL SPECIFICATIONS FOR INSULATED PIPE COMPOSITION.

**C25 KEY NOTES**

1. SUPPORT BRACKETS ARE PLACED AND DIMENSIONED IN A WAY THAT SHOULD NOT INTERFERE WITH THE EXISTING TRUSS MEMBERS. SHOULD FIELD CONDITIONS DIFFER, THE CONTRACTOR SHOULD BE PREPARED TO ADD TWO ADDITIONAL SUPPORTS PER SPAN.
2. VERTICAL BEND ANCHOR, SEE DETAIL 3/C25.

**PROJECT GENERAL STRUCTURAL NOTES****GENERAL**

1. THE TERM "ENGINEER" HEREIN SHALL MEAN THE STRUCTURAL ENGINEER, PINNACLE ENGINEERING, INC.
2. PROJECT GENERAL STRUCTURAL NOTES APPLY THROUGHOUT THE STRUCTURAL DRAWING SET EXCEPT WHERE OTHERWISE INDICATED OR NOTED.
3. IF A CONFLICT EXISTS BETWEEN THE STRUCTURAL DRAWINGS, ARCHITECTURAL DRAWINGS, SPECIFICATIONS, OR ANY OTHER CONSTRUCTION DOCUMENTS, THE MORE STRINGENT APPLICATION SHALL BE UTILIZED UNLESS A REQUEST FOR INFORMATION IS SENT TO THE ENGINEER TO DETERMINE IN WRITING THE CORRECT DESIGN INTENT.

**DESIGN LOADS**

1. LIVE LOAD:
  - A. 100 PSF PEDESTRIAN LIVE LOAD (ORIGINAL BRIDGE DESIGN TRAIN LIVE LOAD BASED OFF OF 100 TON LOCOMOTIVE WITH 8 KIP PER LINEAR FOOT TRAIN OF INFINITE LENGTH).
2. INSULATED DUCTILE IRON PIPE DEAD LOAD: 1.25 LB/FT
3. DEAD LOADS USED FOR DESIGN INCLUDE THE SELF-WEIGHT OF STRUCTURE

**CONSTRUCTION AND SAFETY**

1. ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR.
2. CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS. WHEN ON SITE, ENGINEER IS RESPONSIBLE FOR HIS/HER OWN SAFETY BUT HAS NO RESPONSIBILITY FOR THE SAFETY OF OTHER PERSONNEL OR SAFETY CONDITIONS AT THE SITE.
3. BRACE THE STRUCTURE AS REQUIRED DURING CONSTRUCTION TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETE AND FUNCTIONING AS THE DESIGNED UNIT.
4. VERIFY EXISTING CONDITIONS AND DIMENSIONS. SHOULD ANY DISCREPANCY BE FOUND, NOTIFY ENGINEER IMMEDIATELY.
5. NO MODIFICATION SHOULD BE MADE TO THE EXISTING STRUCTURE THAT IS NOT DETAILED IN THE CONSTRUCTION DOCUMENTS.

**POST-INSTALLED THREADED ANCHORS AND REINFORCING BARS**

1. PERFORM ANCHOR INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. THE FOLLOWING ANCHORS AND ADHESIVE HAVE BEEN USED AS THE BASIS FOR DESIGN:
  - A. SCREW ANCHOR (3/16" AND 1/4" INCH DIAMETER): HILTI KWIK-CON II
  - B. SCREW ANCHOR (3/8" INCH AND LARGER DIAMETER): HILTI KWIK-HUS EZ
  - C. SLEEVE ANCHOR: HILTI HLC
  - D. ADHESIVE ANCHOR IN CONCRETE: HILTI HAS ANCHOR RODS WITH HIT-HY 200
3. THE ANCHORS NOTED ABOVE FOR THE BASIS OF DESIGN SHALL BE PROVIDED UNLESS A SUBSTITUTION IS APPROVED BY THE ENGINEER. PRIOR TO MAKING ANY SUBSTITUTIONS THE CONTRACTOR SHALL SUBMIT PROPOSED SUBSTITUTIONS TO ENGINEER FOR APPROVAL. THE SUBMITTAL SHALL INCLUDE CALCULATIONS SHOWING EACH ANCHOR'S CAPACITY IN THE INSTALLED CONDITION. MANUFACTURER'S STANDARD TABLES AND WEBSITE INFORMATION IS NOT ADEQUATE TO MEET THIS REQUIREMENT.

**STRUCTURAL STEEL FRAMING**

1. COMPLY WITH APPLICABLE PROVISIONS OF THE FOLLOWING SPECIFICATIONS AND DOCUMENTS:
  - A. AISC'S 'CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES'
  - B. AISC'S 'SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS'
  - C. AISC'S 'SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS'
  - D. AWS D1.1, 'STRUCTURAL WELDING CODE - STEEL'

2. CONNECTIONS: PROVIDE DETAILS COMPLYING WITH DETAILS ON THE CONSTRUCTION DOCUMENTS.

3. FIELD CONNECTIONS SHALL BE BOLTED EXCEPT WHERE WELDED CONNECTIONS ARE INDICATED ON THE DRAWINGS.
4. SUBMIT SHOP DRAWINGS SHOWING FABRICATION OF STRUCTURAL STEEL COMPONENTS.

5. A CONTINGENCY OF FOUR ADDITIONAL SUPPORT BRACKETS SHOULD BE INCLUDED IN BIDDING THIS PROJECT.

6. STRUCTURAL STEEL MATERIALS
  - A. W-SHAPES: ASTM A992
  - B. SQUARE AND RECTANGULAR CORROSION-FORMED HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE B, STRUCTURAL TUBING.
  - C. PLATES: ASTM A572

7. WELDING ELECTRODES: COMPLY WITH AWS REQUIREMENTS. ELECTRODES FOR FIELD WELDING SHALL BE E70XX, LOW-HYDROGEN ELECTRODES.

8. BOLTS, CONNECTORS, AND ANCHORS
  - A. HIGH-STRENGTH BOLTS, NUTS, AND WASHERS: ASTM A325, TYPE I, HEAVY HEX STEEL STRUCTURAL BOLTS; ASTM A563 HEAVY HEX CARBON STEEL NUTS; AND ASTM F436 HARDENED CARBON STEEL WASHERS. FINISH: PLAIN.

9. PRIMER

- A. STANDARD PRIMER: SSPC-PAINT 25, TYPE II, IRON OXIDE, ZINC OXIDE, RAW UNSOIL OIL, AND ALKID.
- B. RUST-INHIBITING PRIMER: FABRICATORS STANDARD LEAD- AND CHROMATE-FREE, NONASPHALTIC, RUST-INHIBITING PRIMER.

10. FABRICATION

- A. DRILL OR PUNCH HOLES. DO NOT THERMALLY CUT BOLT HOLES OR ENLARGE HOLES BY BURNING.

11. SHOP PRIMING

- A. PRIME STEEL SURFACES EXCEPT THE FOLLOWING:
  - I. SURFACES TO BE FIELD WELDED.

- B. CLEAN SURFACES TO BE PAINTED. REMOVE LOOSE RUST, MILL SCALE, SPATTER, SLAG, OR FLUX DEPOSITS. PREPARE SURFACES ACCORDING TO SSPC SP 2, "HAND TOOL CLEANING."

- C. APPLY PRIMER IMMEDIATELY AFTER SURFACE PREPARATION ACCORDING TO MANUFACTURER'S INSTRUCTIONS AT RATE RECOMMENDED BY SSPC TO PROVIDE A DRY FILM THICKNESS OF NOT LESS THAN 1.5 MILS.

12. FIELD CONNECTIONS

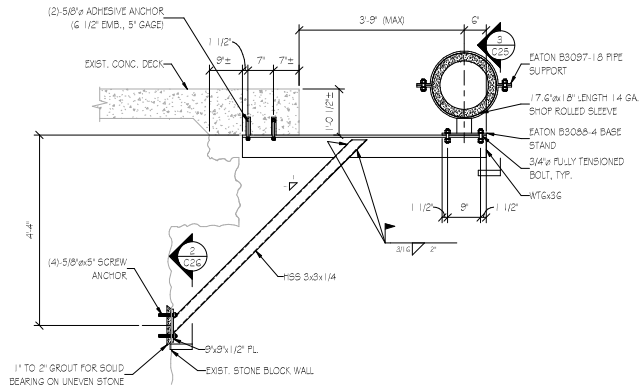
- A. HIGH-STRENGTH BOLTS: INSTALL BOLTS TO A SNUG TIGHTENED CONDITION UNLESS NOTED OTHERWISE.

- B. WELD CONNECTIONS: COMPLY WITH AWS D1.1 AND WITH AISC'S 'CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES' AND 'STEEL CONSTRUCTION MANUAL' FOR REMOVAL OF PAINT ON SURFACES ADJACENT TO FIELD WELDS.

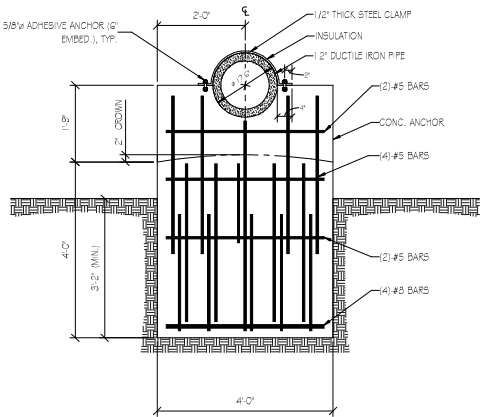
- DO NOT DRILL ADDITIONAL HOLES IN EXISTING STRUCTURAL MEMBERS THAT ARE NOT NOTED IN THE PLANS WITHOUT WRITTEN CONSENT FROM THE ENGINEER.

Issue/Revision	No.	Date

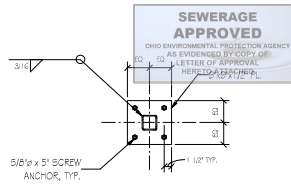




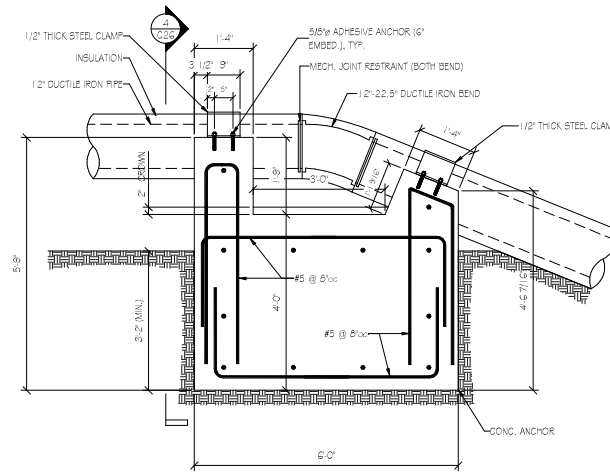
**SECTION 1**  
SCALE: 3/4\"/>



**SECTION 4**  
SCALE: 3/4\"/>



**SECTION 2**  
SCALE: 1\"/>



**SECTION 3**  
SCALE: 3/4\"/>

Issue/Revision	No.	Date

# RIVER CORRIDOR PUBLIC SANITARY SEWER EXTENSION

## THE VILLAGE OF SOUTH LEBANON WARREN COUNTY, OHIO

Sheet Title

SECTIONS

Project Number 06308.12  
Drawing Scale As indicated

Sheet Number C26

NOTES:  
1. SEE SHEET C25 FOR  
GENERAL NOTES AND  
SPECIFICATIONS.  
2. SEE SHEET C25 FOR  
GENERAL NOTES AND  
SPECIFICATIONS.  
3. SEE SHEET C25 FOR  
GENERAL NOTES AND  
SPECIFICATIONS.







POWER OFF BUTTON FOR GENERATOR.

CIRCUIT FOR ACCESS CONTROL.

IF COMPLIANT FOR GROUND BUS KIT WITH MINIMUM 6 AWG STR  
SERVICE ENTRANCE GROUND BUS. TERMINATE ENDS WITH COM  
#10 CO-6 AWG & HARDWARE KIT SHOWN IN KIT OR EQUAL. REF

LETTER OF APPROVAL

HERE TO ATTACHED

- [illegible]

LIGHT SWITCH TO COME ON WHEN LIGHTS ARE TURNED ON,  
1 WBO, 1 1/4".

ROUND CONDUITS BETWEEN ATS, DOCKING STATION, MCB, O&AT

17. PROVIDE MEET TRACE TAPE FOR COLD WATER PIPING IN ATTIC. COORDINATE WITH PLUMBING CONTRACTOR. PROVIDE CHROMALOX SRL SERIES 277V, 5 WATTS PER FOOT.
18. LOCATED IN ATTIC
19. CONNECT FAN TO LIGHT SWITCH TO COME ON WHEN LIGHTS ARE TURNED ON.
20. PROVIDE WITH 2x12, #400, 1 1/2".
21. PROVIDE UNDERGROUND CONDENSERS BETWEEN ATTS, COOKING STATION, MCD, OATS, AND GENERATOR
22. PROVIDE TWO 4" PVC CONDENSERS STUBBED FROM PANEL TO BEYOND GENERATOR FOR POWER TO FUTURE BUILDING. PROVIDE WATER AND GAS TIGHT MECHANICAL PLUGS AT BOTH CONDENSER ENDS.
23. PROVIDE TWO 4" PVC CONDENSERS STUBBED FROM PANEL BACKWARD TO POINT BEYOND GENERATOR FOR PHONE, AV, OR ACCESS CONTROL TO FUTURE BUILDING.

WITH PANEL AND CIRCUIT NUMBER, PROVIDE #10 WIRE FOR ALL 30 AMP CIRCUITS.

- [illegible]



HANA TIGAL NO. 21082

DESIGNED BY  
J.J. MINSLOW

DRAWN BY  
JAI

CHECKED BY  
BBS

Sheet Title	
<b>ELECTRICAL LIGHTING, POWER, &amp; FIRE ALARM FLOOR PLAN</b>	
Project Number	06308.12
Drawing Scale	AS NOTED
Sheet Number	E2
File Number	

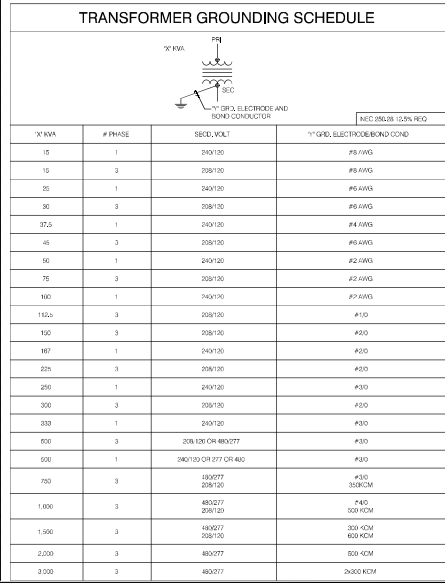






LOW VOLTAGE COPPER FEEDER SCHEDULE		
AMP	CODE	DESCRIPTION
20	20-A	4#12 & 1#12 @ -34" C.
20	20-B	3#12 & 1#12 @ -34" C.
25	25-A	4#10 & 1#10 @ -34" C.
25	25-B	3#10 & 1#10 @ -34" C.
30	30-A	4#10 & 1#10 @ -34" C.
30	30-B	3#10 & 1#10 @ -34" C.
35	35-A	4#8 & 1#10 @ -34" C.
35	35-B	3#8 & 1#10 @ -34" C.
40	40-A	4#8 & 1#10 @ -34" C.
40	40-B	3#8 & 1#10 @ -34" C.
45	45-A	4#6 & 1#10 @ -34" C.
45	45-B	3#6 & 1#10 @ -34" C.
50	50-A	4#6 & 1#10 @ -34" C.
50	50-B	3#6 & 1#10 @ -34" C.
60	60-A	4#4 & 1#10 @ -34" C.
60	60-B	3#4 & 1#10 @ -34" C.
60	60-N	3#4, 1#10 & 1#10 @ -1.14" C.
70	70-A	4#4 & 1#8 @ -1.14" C.
70	70-B	3#4 & 1#8 @ -1" C.
80	80-A	4#3 & 1#8 @ -1.14" C.
80	80-B	3#3 & 1#8 @ -1" C.
90	90-A	4#2 & 1#8 @ -1.14" C.
90	90-B	3#2 & 1#8 @ -1.14" C.
100	100-A	4#1 & 1#8 @ -1.14" C.
100	100-B	3#1 & 1#8 @ -1.14" C.
100	100-N	3#1, 1#20 & 1#8 @ -1.12" C.
110	110-A	4#1 & 1#6 @ -1.14" C.
110	110-B	3#1 & 1#6 @ -1.14" C.
125	125-A	4#1 & 1#6 @ -1.14" C.
125	125-B	3#1 & 1#6 @ -1.14" C.
150	150-A	4#10 & 1#6 @ -1" C.
150	150-B	3#10 & 1#6 @ -1.12" C.
150	150-N	3#10, 1#20 & 1#6 @ -2" C.
175	175-A	4#10 & 1#6 @ -2" C.
175	175-B	3#10 & 1#6 @ -2" C.
200	200-A	4#10 & 1#6 @ -2" C.
200	200-B	3#10 & 1#6 @ -2" C.
200	200-N	3#10, 1#20 & 1#6 @ -2.12" C.
225	225-A	4#40 & 1#4 @ -2.12" C.
225	225-B	3#40 & 1#4 @ -2" C.
225	225-N	3#40, 2#20 & 1#4 @ -2.12" C.
250	250-A	4#20 & 1#4 @ -2" C.
250	250-B	3#20 & 1#4 @ -2.12" C.
250	250-N	3#20, 2#40 & 1#4 @ -2" C.
300	300-A	4#10 & 1#4 @ -2" C.
300	300-B	3#10 & 1#4 @ -2" C.
300	300-N	3#10, 2#20 & 1#4 @ -2" C.
350	350-A	4#10 & 1#3 @ -3.12" C.
350	350-B	3#10 & 1#3 @ -3" C.
350	350-N	3#10, 2#20 & 1#3 @ -3" C.
400	400-A	3 SETS 4#10 & 1#3 @ -3" C.
400	400-B	2 SETS 3#10 & 1#3 @ -3" C.
400	400-N	3#40, 2#40 & 1#3 @ -3.12" C.
400	400-C	4#10 & 1#3 @ -3.12" C.
400	400-D	3#10 & 1#3 @ -3" C.
450	450-A	2 SETS 4#40 & 1#2 @ -2.12" C.
450	450-B	2 SETS 3#40 & 1#2 @ -2" C.
450	450-N	2 SETS 3#40 & 1#2 @ -2.12" C.
500	500-A	2 SETS 4#10 & 1#2 @ -2" C.
500	500-B	2 SETS 3#10 & 1#2 @ -3" C.
500	500-N	2 SETS 3#10 & 1#2 @ -3.12" C.
500	500-C	2 SETS 3#20 & 1#2 @ -3" C.
600	600-A	2 SETS 4#10 & 1#1 @ -3" C.
600	600-B	2 SETS 3#20 & 1#1 @ -3" C.
600	600-N	2 SETS 3#20, 2#100 & 1#1 @ -3" C.
700	700-A	2 SETS 4#10 & 1#1 @ -3.12" C.
700	700-B	2 SETS 3#10 & 1#1 @ -3" C.
700	700-N	2 SETS 3#10 & 1#1 @ -3" C.
800	800-A	2 SETS 4#10 & 1#1 @ -3" C.
800	800-B	2 SETS 3#10 & 1#1 @ -3.12" C.
800	800-U	2 SETS 3#40, 2#100 - 4" C.
1000	1000-A	4 SETS 4#10 & 1#1 @ -3" C.
1000	1000-B	3 SETS 3#40 & 1#1 @ -3" C.
1000	1000-A	3 SETS 4#10 & 1#1 @ -4" C.
1000	1000-B	3 SETS 3#40 & 1#1 @ -3.12" C.
1000	1000-A	4 SETS 4#10 & 1#1 @ -4" C.
1000	1000-B	4 SETS 3#40 & 1#1 @ -3.12" C.
2000	2000-A	5 SETS 4#10 & 1#1 @ -4" C.
2000	2000-A	6 SETS 4#10 & 1#1 @ -4" C.
3500	3500-A	8 SETS 4#10 & 1#1 @ -4" C.

LOW VOLTAGE COPPER FEEDER SCHEDULE		
AMP	CODE	DESCRIPTION
20	20-A	4#12 & 1#12 @ -34" C.
20	20-B	3#12 & 1#12 @ -34" C.
25	25-A	4#10 & 1#10 @ -34" C.
25	25-B	3#10 & 1#10 @ -34" C.
30	30-A	4#10 & 1#10 @ -34" C.
30	30-B	3#10 & 1#10 @ -34" C.
35	35-A	4#8 & 1#10 @ -34" C.
35	35-B	3#8 & 1#10 @ -34" C.
40	40-A	4#8 & 1#10 @ -34" C.
40	40-B	3#8 & 1#10 @ -34" C.
45	45-A	4#6 & 1#10 @ -34" C.
45	45-B	3#6 & 1#10 @ -34" C.
50	50-A	4#6 & 1#10 @ -34" C.
50	50-B	3#6 & 1#10 @ -34" C.
60	60-A	4#4 & 1#10 @ -34" C.
60	60-B	3#4 & 1#10 @ -34" C.
60	60-N	3#4, 1#10 & 1#10 @ -1.14" C.
70	70-A	4#4 & 1#8 @ -1.14" C.
70	70-B	3#4 & 1#8 @ -1" C.
80	80-A	4#3 & 1#8 @ -1.14" C.
80	80-B	3#3 & 1#8 @ -1" C.
90	90-A	4#2 & 1#8 @ -1.14" C.
90	90-B	3#2 & 1#8 @ -1.14" C.
100	100-A	4#1 & 1#8 @ -1.14" C.
100	100-B	3#1 & 1#8 @ -1.14" C.
100	100-N	3#1, 1#20 & 1#8 @ -1.12" C.
110	110-A	4#1 & 1#6 @ -1.14" C.
110	110-B	3#1 & 1#6 @ -1.14" C.
125	125-A	4#1 & 1#6 @ -1.14" C.
125	125-B	3#1 & 1#6 @ -1.14" C.
150	150-A	4#10 & 1#6 @ -1" C.
150	150-B	3#10 & 1#6 @ -1.12" C.
150	150-N	3#10, 1#20 & 1#6 @ -2" C.
175	175-A	4#10 & 1#6 @ -2" C.
175	175-B	3#10 & 1#6 @ -2" C.
200	200-A	4#10 & 1#6 @ -2" C.
200	200-B	3#10 & 1#6 @ -2" C.
200	200-N	3#10, 1#20 & 1#6 @ -2.12" C.
225	225-A	4#40 & 1#4 @ -2.12" C.
225	225-B	3#40 & 1#4 @ -2" C.
225	225-N	3#40, 2#20 & 1#4 @ -2.12" C.
250	250-A	4#20 & 1#4 @ -2" C.
250	250-B	3#20 & 1#4 @ -2.12" C.
250	250-N	3#20, 2#40 & 1#4 @ -2" C.
300	300-A	4#10 & 1#4 @ -2" C.
300	300-B	3#10 & 1#4 @ -2" C.
300	300-N	3#10, 2#20 & 1#4 @ -2" C.
350	350-A	4#10 & 1#3 @ -3.12" C.
350	350-B	3#10 & 1#3 @ -3" C.
350	350-N	3#10, 2#20 & 1#3 @ -3" C.
400	400-A	3 SETS 4#10 & 1#3 @ -3" C.
400	400-B	2 SETS 3#10 & 1#3 @ -3" C.
400	400-N	3#10, 2#40 & 1#3 @ -3.12" C.
400	400-D	4#10 & 1#3 @ -3.12" C.
400	400-D	3#10 & 1#3 @ -3" C.
450	450-A	2 SETS 4#40 & 1#2 @ -2.12" C.
450	450-B	2 SETS 3#40 & 1#2 @ -2" C.
450	450-N	2 SETS 3#40 & 1#2 @ -2.12" C.
500	500-A	2 SETS 4#10 & 1#2 @ -2" C.
500	500-B	2 SETS 3#10 & 1#2 @ -3" C.
500	500-N	2 SETS 3#10 & 1#2 @ -3.12" C.
500	500-D	2 SETS 3#20 & 1#2 @ -3" C.
600	600-A	2 SETS 4#10 & 1#1 @ -3" C.
600	600-B	2 SETS 3#10 & 1#1 @ -3" C.
600	600-N	2 SETS 3#10 & 1#1 @ -3.12" C.
700	700-A	2 SETS 4#10 & 1#1 @ -3.12" C.
700	700-B	2 SETS 3#10 & 1#1 @ -3" C.
700	700-N	2 SETS 3#10 & 1#1 @ -3" C.
800	800-A	2 SETS 4#10 & 1#1 @ -3" C.
800	800-B	2 SETS 3#10 & 1#1 @ -3.12" C.
800	800-U	2 SETS 3#40 & 1#10 @ -4" C.
1000	1000-A	4 SETS 4#10 & 1#1 @ -3" C.
1000	1000-B	3 SETS 3#40 & 1#1 @ -3" C.
1000	1000-A	3 SETS 4#10 & 1#1 @ -4" C.
1000	1000-B	3 SETS 3#40 & 1#1 @ -3.12" C.
1000	1000-A	4 SETS 4#10 & 1#1 @ -4" C.
1000	1000-B	4 SETS 3#40 & 1#1 @ -3.12" C.
2000	2000-A	5 SETS 4#10 & 1#1 @ -4" C.
2000	2000-A	6 SETS 4#10 & 1#1 @ -4" C.
3500	3500-A	8 SETS 4#10 & 1#1 @ -4" C.



## GENERAL NOTES

- ALL SWITCHES AND CIRCUIT BREAKERS ARE SPARE UNLESS OTHERWISE NOTED.
- AVAILABLE FAULT CURRENT AVAILABLE AT ALL AVAILABLE FAULT CURRENT VALUES ON PLANS ARE PRELIMINARY AND BASED ON ASSUMED VALUES. THEREIN, ALL ELECTRICAL EQUIPMENT SHALL BE SELECTED AND COMPLY WITH INPUT COMING FROM THE CORRESPONDING PROJECTS. THE USER COORDINATE WITH ALL OTHER RELATED TO INSTALLED COMPONENTS.
- SPEC INDICATES AN EXTERNALLY MOUNTED SURGE PROTECTION DEVICES, REFER TO SPECIFICATIONS.
- TRANSFORMER GROUNDING SHALL BE REQUIRED TO THE SERVICE ENTRANCE GROUND BUS LOCATED IN MAIN ELECTRICAL ROOM.

---

## CODED NOTES ○

- COORDINATE WITH OLIVE ENERGY FOR THE METER BASE, SCHEDULE AND CIG CAMBRIE REQUIREMENTS.
- PREPARE ONE PHOTOGRAPH FOR GENERATOR CONTROL MONITORING. COORDINATE WITH GENERAL MANUFACTURERS.
- PROVIDE 100% RATED BREAKER.

FUTURE  
JET STATION  
PUMP #4  
75 MW

FUTURE  
JET STATION  
PUMP #4  
75 MW

---

## ACRAM NOTES

	<p><b>HAWA</b> Incorporated 8600 GOLF COURSE ROAD COLLEGE PARK, MD 20740 PH: 301-771-0000 WWW.HAWA-ENGINEERS.COM</p>
	<p>HAWA TECHNOLOGIES 10000 WOODBURY DUBLIN, CA 94568 PH: 925-835-7111 WWW.HAWA-TECH.COM</p>

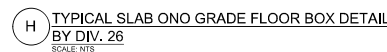
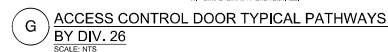
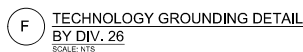
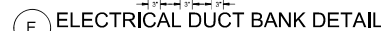
- ## GENERAL NOTES
1. ALL SWITCHES AND CIRCUI BREAKERS ARE 3POLE UNLESS OTHERWISE NOTED.
  2. xxxxx INDICATES APPROXIMATE FAULT CURRENT AVAILABLE, ALL AVAILABLE FAULT CURRENT VALUES ON PLAYS ARE PRELIMINARY AND BASED ON ASSUMED VALUES OF DESIGN, ALL ELECTRICAL EQUIPMENT SHALL BE SELECTED AND SIZED WITH INCREASED FACTOR FROM THE CORRESPONDING PROTECTIVE DEVICE COORDINATION STUDY AND ACTUAL INSTALLED CONDITIONS.
  3. SPD INDICATES AN EXTERNALLY VOLTAGE SURGE PROTECTION DEVICE, REFER TO SPECIFICATIONS.
  4. TRANSFORMER ROOMS SHALL BE ROUTED TO THE BUILDING ENTRANCE CIRCUIT AND BE LOCATED IN NON-ELECTRICAL ZONE
- ## CODED NOTES

1. COORDINATE WITH OLIVE ENERGY FOR THE METER BASE, SOCKET AND C/C CABINET REQUIREMENTS.
2. PROVIDE ONE (1) CONDUIT FOR GENERATOR CONTROL MONITORING, COORDINATE WITH GENERATOR MANUFACTURER.
3. PROVIDE 800V FUSED BREAKER.

1. COORDINATE WITH OLIVE ENERGY FOR THE METER BASE, SOCKET AND C/C CABINET REQUIREMENTS.
2. PROVIDE ONE (1) CONDUIT FOR GENERATOR CONTROL MONITORING, COORDINATE WITH GENERATOR MANUFACTURER.
3. PROVIDE 800V FUSED BREAKER.







1. REFERENCE INDIVIDUAL DETAIL NOTES

© Copyright 2021, MCGILL SMITH PUNSHON, Inc.

Project Number	06308.12
Drawing Scale	AS NOTED
Sheet Number	E5
File Number	





- NOTE:
1. COMPACT TO A MINIMUM DENSITY OF 95% OF THE SOILS MODIFIED PROCTOR MAXIMUM DENSITY TO A DEPTH OF 1 FOOT BELOW SLAB.
  2. PROVIDE 10 MIL VAPOR BARRIER BELOW CONCRETE SLAB.
  3. DIMENSIONS MAY VARY BASED ON BASE TANK MANUFACTURER. THE CONTRACTOR TO VERIFY DIMENSIONS SHOWN PRIOR TO INSTALLATION. IN THE EVENT THE PUMP DIMENSIONS ARE DIFFERENT THAN SHOWN THE PUMP SUPPLIER SHALL PROVIDE A REVISED PAD DRAWING.

**RIVER CORRIDOR  
PUBLIC SANITARY SEWER EXTENSION**  
THE VILLAGE OF SOUTH LEBANON  
WARREN COUNTY, OHIO

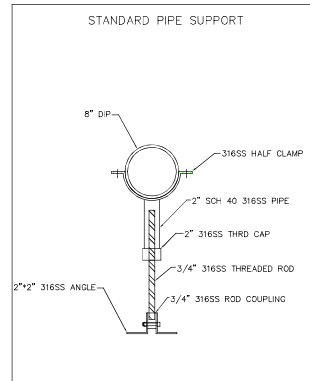
Sheet Title

### PUMP STATION PLAN

Project Number 06308.12  
Drawing Scale NONE  
Sheet Number PS1  
File Number N/A



MONORAIL WITH  
ELECTRIC WINCH,  
MINIMUM 2 TON  
CAPACITY  
115 VOLT



- Architecture 3700 Park 42 Drive
- Engineering Suite 190
- Landscape Architecture Cincinnati OH 45244
- Planning Phone 513.759.0000
- Surveying [www.mcgdesign.com](http://www.mcgdesign.com)

Project Manager	XX
Drawn By	XX
DWG	XX
X-Ref(s)	

Issue/Revision	No.	Date
Rev.	1	03/01/2017
Rev.	2	05/09/2017

## Sheet Title

### PUMP STATION SECTION

Project Number	06308.1
Drawing Scale	NONE
Sheet Number	PS2
File Number	N/A