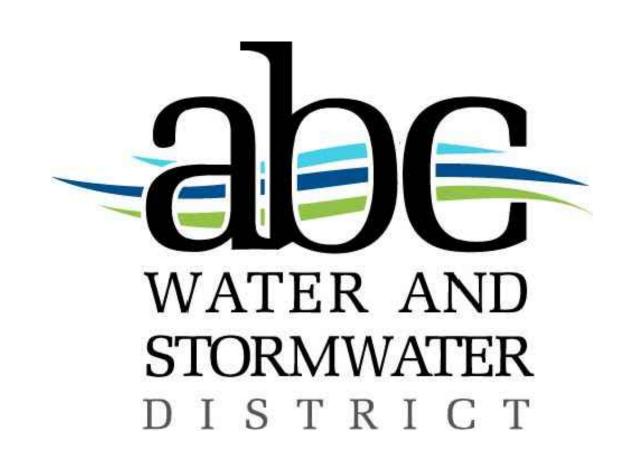
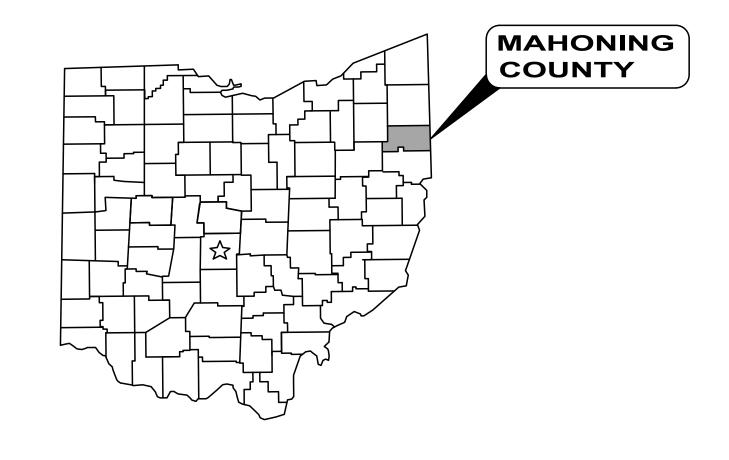
# ABC WATER & STORMWATER DISTRICT

# PIERCE DRIVE STORMWATER IMPROVEMENTS



MAHONING COUNTY, OHIO



# **ABC WATER & STORMWATER DISTRICT BOARD:**

**JASON LOREE** 

**BOARD MEMBER** 

KEITH ROGERS

**BOARD MEMBER** 

**ROBERT SANTOS** 

STEPHANIE LANDERS

ADMINISTRATIVE ASSISTANT



# **OHIO 811 DESIGN SERIAL NUMBER & UTILITY LIST:**

TICKET A425404934-00A

KIM BLASCO **BOARDMAN TOWNSHIP ROAD DEPARTMENT** 8299 MARKET STREET BOARDMAN, OHIO 44512 330-726-4190

MAHONING COUNTY SANITARY ENGINEERS PATRICK GINNETTI, PE, PS 761 INDUSTRIAL ROAD YOUNGSTOWN, OHIO 44509 330-793-5514

DOMINION EAST OHIO (GAS) **GINO MINNITI** 320 SPRINGSIDE DR. SUITE 320 AKRON, OHIO 44333 (330) 608-2576 GINO.A.MINNITI@DOMINIONENERGY.COM

MICHAEL BECK 730 SOUTH AVENUE YOUNGSTOWN, OHIO 44502 BECKM@FIRSTENERGYCORP.COM

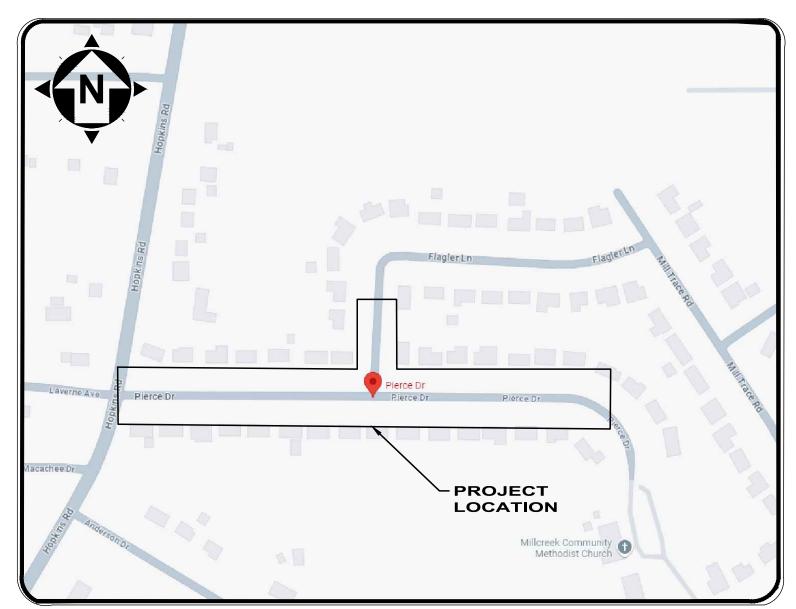
ARMSTRONG CABLE (COMMUNICATIONS) ROB WOLTHERS 330-610-0170 RWOLTHERS@AGOC.COM

AT&T (COMMUNICATIONS) TORRICE ROBINSON 50 WEST BOWERY STREET AKRON, OHIO 44308 330-734-5117 TR3463@ATT.COM

THE CITY OF YOUNGSTOWN WATER DEPARTMENT LOU ZORELLA, CHIEF ENGINEER P.O. BOX 6219, YOUNGSTOWN,

330-742-5338

# **JUNE 2025**



**LOCATION MAP** 

NOT TO SCALE

**JASON LOREE** 

**OWNER:** 

**BOARD MEMBER** 

# **OFFICE:**

ABC WATER AND STORMWATER DISTRICT P.O. BOX 3554 YOUNGSTOWN, OHIO 44512

(330) 729-2080 PHONE (330) 729-2054 FAX

BOARDMAN PROJECTS COORDINATOR MARILYN SFERRA KENNER, P.E.

# **ENGINEER:**

VERDANTAS LLC, 908 SAHARA TRAIL SUITE 2 YOUNGSTOWN, OH 44514

# **PROJECT SITE:**

THIS PROJECT INCLUDES A BASE BID AND AN ALTERNATIVE TO ADDRESS THE PRESENCE OF SINK HOLES ALONG THE STRETCH OF STORM SEWER ON PIERCE DRIVE. THE BASE BID IS A TOTAL REPLACEMENT OF THE STORM SEWER ON PIERCE DRIVE AND FLAGLER LANE. ALTERNATIVE ONE INVOLVES REPLACMENT OF SOME STORM SEWER ON PIERCE DRIVE. CIPP LINING, JOINT REHABILITATION, POINT REPAIRS, AND REPLACEMENT OF STORM SEWER ON FLAGLER LANE.

UNDERGROUND BUILDING SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING AND REPLACING AS NECESSARY TO ENSURE CONTINUAL SERVICE TO BUILDINGS.

2. THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.



PATRICK A. BLAKE, P.E.

PE

NO. 88436

DRIVE

0

PROJECT NO:

242260

DRAWING NAME

G-01

15

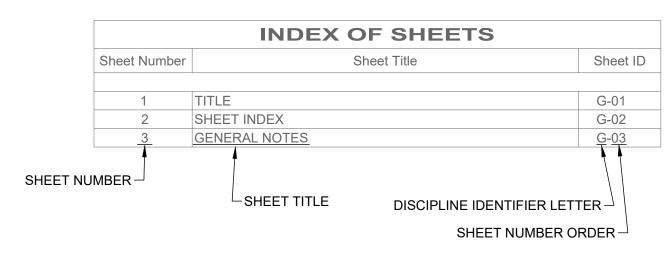
SHEET

**ENGINEER'S PROJECT No. 242260** 

# **DISCIPLINE INFORMATION:**

DISCIPLINE: **GENERAL** CIVIL STRUCTURAL

# **INDEX EXPLAINATION:**



# **GENERAL SYMBOLOGY NOTES:**

1. THIS IS A STANDARD SHEET SHOWING COMMONLY USED SYMBOLOGY. 1. CT CONTRACTUAL NOTES ARE DEPICTED WITH A HEXAGON, SQUARE,

2. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.

3. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE NEW IMPROVEMENTS SO AS TO HIGHLIGHT SPECIFIC TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

4. SYMBOLOGY OR DIAGRAMMATICAL LEGENDS MAY BE SHOWN ON INDIVIDUAL SHEETS FOR SCHEDULES, DIAGRAMS, DETAILS, SCHEMATICS OR EQUIPMENT.

### **DEMOLITION CODED NOTES:** PLAN REVISIONS:

A REVISION DESCRIPTION B REVISION DESCRIPTION

1 DEMOLITION DESCRIPTION 2 DEMOLITION DESCRIPTION

# **REFERENCE DIMENSION:**

**DRAWING CODED NOTE TYPES:** 

DONE.

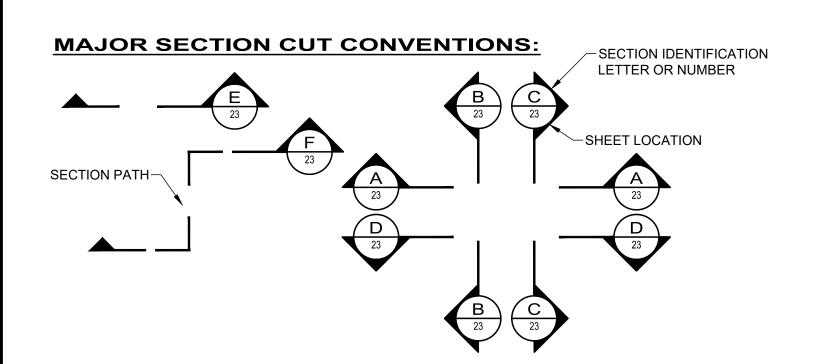
CIRCLE OR TRIANGLE. ALL OTHER EXISTING WRITTEN CALLOUTS

SHOWN ON THE REUSED SCANNED PLANS, SECTIONS & DETAILS ARE FOR EXISTING CONDITIONS AND REFERENCE ONLY, MANY OF THOSE

NOTES FROM THE SCANNED DRAWINGS PERTAIN TO PREVIOUS WORK

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

12'-4" (REF.)



# **GENERAL ABBREVIATIONS:**

		_			
	AIR RELEASE VALVE	FRP	FIBERGLASS REINFORCED PLASTIC	PT	PRESSURE TEMPERATURE RELIEF
	AIR & VACUUM VALVE	FTG	FITTING	PV	PLUG VALVE
	BALL VALVE	GL	GLOBE VALVE	PVC	POLYVINYL CHLORIDE PIPE
'	BUTTERFLY VALVE	GS	GALVANIZED STEEL	R/W	RIGHT OF WAY
	BACKPRESSURE VALVE	GV	GATE VALVE	RJ	RESTRAINED JOINT
	BENCH MARK	HDPE	HIGH-DENSITY POLYETHYLENE PIPE	SAN	SANITARY
	BACKFLOW PREVENTER	KG	KNIFE GATE VALVE	SCH	SCHEDULE
	CATCH BASIN	KN	KNIFE VALVE	SB	SOIL BORING
	CENTER LINE	MH	MANHOLE	SDR	STANDARD DIAMETER RATIO
	CONE VALVE	MIN	MINIMUM	SS	STAINLESS STEEL
)	CORRUGATED PLASTIC PIPE	MJ	MECHANICAL JOINT	STA	STATION
	CHECK VALVE	MV	MUD VALVE	STL	STEEL PIPE
	DUCTILE IRON PIPE	N	NORTHING	STM	STORM
	EASTING	OH	OVERHEAD	SU	SURGE VALVE
	EXISTING GRADE	PD	PLUG DRAIN VALVE	SV	SOLENOID VALVE
	ELEVATION	PF	PRESSURE RELIEF	TYP	TYPCIAL
	EXISTING	PG	PRESSURE REGULATOR	UG	UNDERGROUND
	FINISHED GRADE	PI	PINCH VALVE	VB	VALVE BOX
	FIRE HYDRANT	PR	PROPOSED	WAT	WATER
	FLANGED	PRV	PRESSURE REDUCING VALVE	WV	WATER VALVE

# **SITE SYMBOL LEGEND:**

EX

FG

FΗ

EX:	PR:	
[MB]	MB	POST, MAILBOX
-0	•	POST, SIGN
	=	POST, SIGN - DOUBLE
0 0	• •	POST, SIGN - DUAL
	£33	BUSH
	$\bigcirc$	TREE, DECIDUOUS
	***	TREE, EVERGREEN
Q.		TREE, STUMP
Ø	ø	NAIL - MAG
0	•	PIN - IRON
<b>©</b>	0	PIPE - IRON
<u>^</u>	<b>A</b>	SPIKE
GM.	GM	GAS METER
$\otimes$	<b>⊗</b>	GAS VALVE
$\bigcirc$	Ø	GAS VENT
\$	$ ot\!\!/$	POLE - ELECTRIC (POWER)
$\phi$		POLE - GENERAL
G	$\phi$	POLE - GUY
(	(	POLE - GUY ANCHOR
$\phi$	þ	POLE - LIGHT
		SANITARY MANHOLE - 48"
		CATCH BASIN - 2X2
		CURB INLET - 2X3
⊟	₫	STORM DRAIN
		STORM MANHOLE - 48"
Q	₫	WATER HYDRANT, FDC
0	ଡ	WATER HYDRANT, FIRE
W\W∨ ⊗	W∨ <b>⊗</b>	WATER VALVE W/TEXT

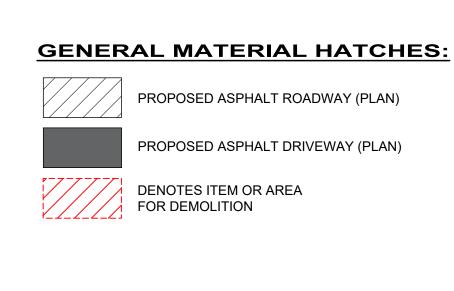
WATER METER PIT

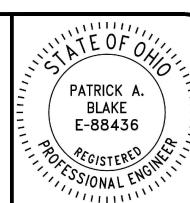
# SITE LINE LEGEND:

HT-OF-WAY PROXIMATE NOT SURVEYED) DPERTY LINE PROXIMATE NOT SURVEYED) LDING OUTLINES NTOURS - MAJOR NTOURS - MINOR CH CENTERLINE DPE - BREAKLINE DPE - TOP DPE - TOE TER EDGE GE OF ROAD
DPERTY LINE PROXIMATE NOT SURVEYED)  LDING OUTLINES  NTOURS - MAJOR  NTOURS - MINOR  CH CENTERLINE  DPE LINE  DPE - BREAKLINE  DPE - TOP  DPE - TOE  TER EDGE
LDING OUTLINES NTOURS - MAJOR NTOURS - MINOR CH CENTERLINE DPE LINE DPE - BREAKLINE DPE - TOP DPE - TOE TER EDGE
NTOURS - MAJOR NTOURS - MINOR CH CENTERLINE DPE LINE DPE - BREAKLINE DPE - TOP DPE - TOE TER EDGE
NTOURS - MINOR  CH CENTERLINE  PPE LINE  PPE - BREAKLINE  PPE - TOP  PPE - TOE  TER EDGE
CH CENTERLINE  OPE LINE  OPE - BREAKLINE  OPE - TOP  OPE - TOE  TER EDGE
DPE LINE DPE - BREAKLINE DPE - TOP DPE - TOE TER EDGE
DPE - BREAKLINE DPE - TOP DPE - TOE TER EDGE
DPE - TOP DPE - TOE TER EDGE
PPE - TOE TER EDGE
TER EDGE
JE OF ROAD
ICE CENEDAL
ICE - GENERAL
ICE - CHAIN LINK
E LINE
ECTRIC LINE
ECTRIC LINE - OH
ECTRIC LINE - UG
SLINE
S SERVICE
IITARY LINE
DRM LINE
TER LINE
TER SERVICE
ITERLINE

---- WORK LIMITS 

### **Sheet List Table** Sheet Sheet **Sheet Title** Number Name **COVER SHEET** G-01 LEGENDS SYMBOLS & SHEET INDEX G-02 **GENERAL NOTES** G-03 CONSTRUCTION DETAILS - 01 C-01 CONSTRUCTION DETAILS - 02 C-02 CONSTRUCTION DETAILS - 03 C-03 CONSTRUCTION DETAILS - 04 C-04 C-05 CONSTRUCTION DETAILS - 05 9 BASE BID - PROPOSED STM REPLACEMENT (1 OF 3) C-06 10 C-07 BASE BID - PROPOSED STM REPLACEMENT (2 OF 3) 11 BASE BID - PROPOSED STM REPLACEMENT (3 OF 3) C-08 12 ALT ONE - PROPOSED REHAB (1 OF 2) C-09 13 ALT ONE - PROPOSED LINING (2 OF 2) C-10 14 PIERCE DR AND FLAGLER LN STORM C-11 REPLACEMENTS 15 SWPPP NOTES & DETAILS C-12





ALE: AS NOTED	OZ	REVISION	DATE
<b>FE:</b> 6/04/25			
SIGNED BY:	Π		
WN BY: JBB			
ECKED BY: PAB			

PROJECT NO: 242260 DRAWING NAME G-02

# **GENERAL**:

- 1. THE STANDARD SPECIFICATIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION, LATEST EDITION, INCLUDING ALL SUPPLEMENTAL SPECIFICATIONS AND STANDARD DRAWINGS SHALL GOVERN ALL WORK NOT COVERED BY THESE DRAWINGS. ALL WORK CONTEMPLATED SHALL BE COVERED BY THE PROJECT SPECIFIC CONTRACT DOCUMENTS.
- 2. THE CONTRACTOR WILL DO ALL OF THE WORK AND FURNISH ALL OF THE LABOR AND MATERIALS NECESSARY FOR THE FINAL COMPLETION OF THIS CONTRACT IN THE MANNER AND UNDER THE CONDITIONS HEREIN SPECIFIED AND PROVIDED AND IN ACCORDANCE WITH THE CONTRACT DRAWINGS.
- 3. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED BY THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK. IN ADDITION, THE CONTRACTOR SHALL PROVIDE 48 HOUR NOTICE TO THE OWNER PRIOR TO THE COMMENCEMENT OF WORK.
- 4. THE CONTRACTOR SHALL PROVIDE FOR UNINTERRUPTED OPERATION OF ALL PUBLIC UTILITY SERVICE TO PRIVATE PROPERTIES. THE CONTRACTOR SHALL NOTIFY ALL PROPERTY OWNERS OF ANY SCHEDULED SHUT-OFF AT LEAST 48 HOURS IN ADVANCE IN WRITING.
- 5. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE LOCAL ACCESS, VEHICULAR AND PEDESTRIAN, TO ALL PROPERTIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR WILL FURNISH, MAINTAIN AND SUBSEQUENTLY REMOVE ALL NECESSARY SAFEGUARDS SUCH AS BARRICADES, BARRIERS, TEMPORARY PAVEMENT, NO PARKING SIGNS, LIGHTING, FLAGGERS, SIGNING AND OTHER TRAFFIC CONTROLS TO INSURE THE SAFETY OF PERSONS AND VEHICLES DURING CONSTRUCTION WITHIN THE PROJECT LIMITS.
- 6. MAINTAINING TRAFFIC SHALL BE IN ACCORDANCE WITH ODOT ITEM 614 AND THE CURRENT OHIO MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE OPERATIONS.
- 7. ALL SHOP DRAWINGS WILL BE SUBMITTED TO THE ENGINEER FOR PRELIMINARY CHECKING. THE ENGINEER SHALL FORWARD THE CHECKED SHOP DRAWINGS TO THE OWNER FOR FINAL CHECKING AND APPROVAL. SHOP DRAWINGS MUST BE APPROVED PRIOR TO ORDERING ANY MATERIALS.
- 8. BEFORE THE OWNER WILL APPROVE AND ACCEPT THE WORK AND RELEASE THE GUARANTEE RETAINER, THE CONTRACTOR WILL FURNISH THE OWNER A WRITTEN REPORT INDICATING THE RESOLUTION OF ANY AND ALL PROPERTY DAMAGE CLAIMS FILED WITH THE CONTRACTOR BY ANY PARTY DURING THE CONSTRUCTION PERIOD. THE INFORMATION TO BE SUPPLIED SHALL INCLUDE, BUT NOT BE LIMITED TO, NAME OF CLAIMANT, DATE FILED WITH CONTRACTOR, NAME OF INSURANCE COMPANY AND/OR ADJUSTER HANDLING CLAIM, HOW CLAIM WAS RESOLVED AND IF CLAIM WAS NOT RESOLVED FOR THE FULL AMOUNT, A STATEMENT INDICATING THE REASON FOR SUCH ACTION.
- 9. ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT WILL BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, PAVEMENT STRIPING GRINDING, AND ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 7:00 PM AND 8:00 AM MONDAY THROUGH SATURDAY. NO WORK ON SUNDAY OR LEGAL HOLIDAYS, UNLESS OTHERWISE APPROVED BY THE OWNER. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME OR SUCH MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEED THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT. THE OWNER HAS THE AUTHORITY TO PROHIBIT THE USE OF ANY EQUIPMENT THAT VIOLATES THESE REQUIREMENTS.
- 10. SAFE PEDESTRIAN INGRESS AND EGRESS FOR ALL PROPERTIES ADJACENT TO THE IMPROVEMENT MUST BE PROVIDED AT ALL TIMES.
- 11. ALL CATCH BASINS WITHIN 100 FEET OF THE PROJECT AREA SHALL BE COMPLETELY AND THOROUGHLY CLEANED AT THE CONCLUSION OF CONSTRUCTION AND PRIOR TO PROJECT ACCEPTANCE.
- 12. ANY REVISIONS TO THE ACCEPTED CONSTRUCTION PLANS SHALL BE REVIEWED AND APPROVED BY THE OWNER PRIOR TO IMPLEMENTATION IN THE FIELD.
- 13. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH OSHA SAFETY REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL VISITORS, EMPLOYEES AND WORKERS ON THE CONSTRUCTION SITE.
- 14. THE CONTRACTOR SHALL CONSTRUCT THIS PROJECT IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL BUILDING
- 15. ALL EXCAVATIONS ARE TO BE SECURED AND PROTECTED AT ALL TIMES.
- 16. ALL SEDIMENT AND EROSION CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- 17. ANY DISTURBED AREAS WHICH ARE NOT SCHEDULED FOR CONSTRUCTION ACTIVITIES WITHIN FOURTEEN (14) DAYS OF DISTURBANCE SHALL BE TEMPORARILY STABILIZED.
- 18. ALL POLLUTANTS OTHER THAN SEDIMENT THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND LEGALLY DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORM OR SURFACE WATERS. POLLUTANTS OF CONCERN INCLUDE, BUT ARE NOT LIMITED TO, FUELS, LUBRICANTS, SOLVENTS, CONCRETE BI-PRODUCTS AND CONSTRUCTION MATERIALS.
- 19. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SECURITY OF ALL STORED MATERIALS.
- 20. CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL EXISTING BARNS, SHEDS, STRUCTURES, FENCES, RETAINING WALLS, STEPS, UTILITY POLES, MONUMENTS, UTILITY APPURTENANCES, SIGNAGE AND LANDSCAPE BEDS. IF DAMAGED, THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT OF THESE ITEMS AT NO ADDITIONAL COST TO THE OWNER.
- 21. AS BUILT RECORDS THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SET OF PROJECT RECORD DOCUMENTS. THESE DOCUMENTS SHALL INCLUDE REVIEWED SHOP DRAWINGS, CHANGE ORDERS, EQUIPMENT OPERATING INSTRUCTIONS, FIELD TEST RECORDS, AND AS BUILT DRAWINGS. THE AS BUILT DRAWINGS SHALL BE MARKED LEGIBLY IN RED WITH THE ACTUAL LOCATION OF EQUIPMENT AND CONDUITS AS CONSTRUCTED. ALL EQUIPMENT AND UNDERGROUND CONDUITS INSTALLED SHALL HAVE LOCATIONS MARKED IN DISTANCE OFF A LANDMARK AT LEAST EVERY 25 FEET AND AS NECESSARY AT BENDS FOR LOCATING AT A LATER DATE. FINAL DOCUMENTS AND PLANS SHALL BE DELIVERED TO THE OWNER.

# **DRAINAGE, SOIL EROSION, SEDIMENT, AND DUST CONTROL:**

- 1. POSITIVE DRAINAGE OF ALL CONSTRUCTION AREAS SHALL BE MAINTAINED AT ALL TIMES.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH ODOT ITEM 832, OHIO RAINWATER AND LAND DEVELOPMENT MANUAL AND AS REQUIRED BY THE MAHONING COUNTY SOIL AND WATER CONSERVATION DISTRICT.
- 3. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY, SUCH AS CALCIUM CHLORIDE, WATER OR A MOTORIZED DUST-FREE STREET SWEEPING DEVICE PERFORMED DAILY OR AS DIRECTED BY THE OWNER, TO MAINTAIN ALL PAVED AREAS AFFECTED BY THE CONSTRUCTION.

# MATERIAL DISPOSAL AND TEMPORARY SURFACES:

- 1. THE REMOVAL AND DISPOSAL OF ALL SURPLUS EXCAVATED MATERIAL AND CONSTRUCTION DEBRIS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ULTIMATE DISPOSAL. THE DISPOSAL OF ALL CONSTRUCTION DEBRIS SHALL BE AT A LOCATION APPROVED BY THE OWNER. THE DISPOSAL OF ALL "CLEAN" WASTE MATERIAL SHALL BE AT APPROVED LANDFILLS, AND/OR OTHER SITES APPROVED BY THE OWNER. THE DISPOSAL OF EXISTING PIPELINE AND TANK SEDIMENTS AND WASTEWATER SLUDGE SHALL BE AT AN APPROVED LOCATION. THE CONTRACTOR SHALL OBTAIN ALL APPROVALS, PERMITS, LICENSES, ETC. FROM LOCAL, STATE AND FEDERAL AGENCIES AND/OR PRIVATE LANDOWNERS. THE CONTRACTOR SHALL FURNISH THE OWNER A COPY OF ALL APPROVALS OR WRITTEN PERMISSION PRIOR TO DISPOSING OF ANY WASTE AT SAID SITE.
- 2. TEMPORARY SURFACES WHERE EXCAVATION ARE LOCATED IN STREETS, DRIVES AND PARKING AREAS SHALL BE FURNISHED AND PLACED BY THE CONTRACTOR AND SHALL BE FULLY MAINTAINED TO MINIMIZE INCONVENIENCE TO THE PUBLIC AT NO ADDITIONAL COST TO THE OWNER.
- THE ABOVE DESCRIBED WORK SHALL BE CONSIDERED INCIDENTAL TO THE COMPLETION OF ALL WORK AND INCLUDED IN THE RESPECTIVE PAY ITEMS AND SHALL NOT BE A SEPARATE PAY ITEM.

# **UTILITIES**:

- 1. THE EXISTING UNDERGROUND UTILITIES WERE OBTAINED FROM VARIOUS SOURCES INCLUDING, BUT NOT LIMITED TO, FIELD OBSERVATIONS (E.G. ABOVE GROUND FEATURES, FLAGGED OR PAINTED MARKED UNDERGROUND UTILITIES) AND RECORDS MADE AVAILABLE (E.G. ORIGINAL CONSTRUCTION PLANS, AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICE MAPS, GIS DATABASES) TO CREATE A COMPOSITE DRAWING OF EXISTING CONDITIONS. ALTHOUGH GRAPHICALLY SHOWN AS ACCURATELY AS POSSIBLE FROM THE INFORMATION MADE AVAILABLE, THERE IS NO GUARANTEE OR WARRANTY, EXPRESSED OR IMPLIED, OF THE COMPLETENESS, CORRECTNESS OR ACCURACY OF SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE CONTRACTOR SHALL PERFORM A FIELD INVESTIGATION TO CONFIRM LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND STRUCTURES IN THE WORK AREA. IN THE EVENT UTILITY LOCATIONS OR DEPTHS DIFFER IN FILED FROM PLAN; THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE OWNER. CONTRACTOR TO CALL OHIO811 (1-800-362-2764) "48 HOURS BEFORE YOU DIG" AND CALL OIL & GAS PRODUCERS PROTECTIVE (1-800-925-0988). CONTRACTOR ALSO TO COORDINATE HIS WORK WITH THE UTILITIES LISTED.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS CFR 1926 SUBPART P EXCAVATIONS. NO EXTRA PAYMENTS WILL BE CONSIDERED FOR ANY AND ALL COSTS INCURRED WHILE MEETING THIS REQUIREMENT. THE CONTRACTOR SHALL SUPPLY AND DESIGNATE THE "COMPETENT PERSON" PER CFR 1926.650(B). THE NAME OF THIS PERSON SHALL BE SUBMITTED TO THE CITY OF LAKEWOOD ENGINEERING DEPARTMENT PRIOR TO THE START OF CONSTRUCTION.
- 3. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL PUBLIC AND PRIVATE UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, WHICH MAY BE AFFECTED BY THE CONSTRUCTION. THE LOCATION OF UTILITIES AND STRUCTURES, BOTH SURFACE AND SUBSURFACE, ARE SHOWN ON THE DRAWINGS FROM DATA AVAILABLE AT THE TIMES OF SURVEY AND ARE NOT NECESSARILY COMPLETE OR CORRECT. THE EXACT LOCATION AND PROTECTION OF UTILITIES AND STRUCTURES ARE THE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS WITH PROPOSED IMPROVEMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER AND THE DESIGN ENGINEER.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES WITHIN AND ADJACENT TO THE GENERAL LIMITS OF THESE IMPROVEMENTS INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS, ELECTRIC LINES, ETC. THIS MAY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME EXISTING UTILITIES WERE INSTALLED AT TYPICAL OR STANDARD DEPTHS OR AT UNIFORM SLOPES, GRADES OR DEPTHS BETWEEN ACCESS POINTS (CATCH BASINS, MANHOLES, JUNCTION CHAMBERS, ETC.)
- 5. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST THREE WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, PRIOR TO CONSTRUCTION TO HAVE UTILITIES STAKED, MARKED OR OTHERWISE DESIGNATED IN THE CONSTRUCTION AREA IN SUCH A MANNER OR LOCATING SHALL BE COORDINATED TO STAY 48 HOURS AHEAD OF THE PLANNED CONSTRUCTION.
- 6. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF THE UTILITY OR STRUCTURE AND ITS EFFECT ON THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY OWNER AND PROPERTY OWNER.
- 7. OSHA STANDARDS PROHIBIT CRANE OR BACKHOE OPERATIONS WITHIN TEN (10) FEET OF ENERGIZED PRIMARY CONDUCTORS. TEMPORARY RELOCATION OF ELECTRICAL UTILITIES, INCLUDING RESTRAINT POLES, RELOCATION OF POLES AND RUBBER COVERING OF ENERGIZED CONDUCTORS MAY BE REQUIRED. THE COORDINATION AND COST OF THESE SERVICES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MAY RESTRAIN POLES IF THE METHOD OF SUPPORT HAS BEEN SUBMITTED TO AND APPROVED BY THE UTILITY OWNER.
- 8. IN THE EVENT OF DAMAGE TO EXISTING PUBLIC AND/OR PRIVATE UTILITIES, THE AGENCY CONCERNED SHALL BE NOTIFIED IMMEDIATELY AND ALL REPAIR WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE AGENCY AT NO ADDITIONAL EXPENSE TO THE OWNER INCLUDING ANY INSPECTION FEES OR MAINTENANCE CREWS. CABLE RELOCATION AND SUPPORT COST SHALL BE INCLUDED IN OTHER BID ITEMS.
- 9. WHERE EXISTING POWER OR TELEPHONE POLES ARE IN CLOSE PROXIMITY TO WORK, THE CONTRACTOR SHALL COORDINATE HIS WORK EFFORTS WITH THOSE OF THE UTILITY COMPANIES SUCH THAT THEIR EXISTING FACILITIES CAN BE MAINTAINED AND PROTECTED DURING THE TIME WORK IS GOING ON ADJACENT TO THE POLE. THE COST FOR ANY REQUIRED PROTECTION OR RELOCATION OF EXISTING POWER OR TELEPHONE POLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NOT BE THE RESPONSIBILITY OF THE OWNER.
- 10. SHOULD IT BECOME NECESSARY TO CHANGE THE POSITION OR TEMPORARILY REMOVE ANY STORM DRAIN, SANITARY SEWER, ELECTRIC CONDUITS, WATER PIPES, GAS PIPES, PROCESS OR OTHER PIPES OR WIRES IN ORDER TO PERMIT THE CONTRACTOR TO USE A PARTICULAR METHOD OF CONSTRUCTION OR IN ORDER TO CLEAR THE STRUCTURES BEING BUILT, THE CONTRACTOR SHALL NOTIFY THE OWNER OF THE LOCATION AND CIRCUMSTANCES AND SHALL CEASE WORK, IF NECESSARY, UNTIL SATISFACTORY ARRANGEMENTS HAVE BEEN MADE BY THE OWNERS OF SAID PIPES OR WIRES TO PROPERLY CARE FOR THE SAME. NO CLAIMS FOR DAMAGES WILL BE ALLOWED ON ACCOUNT OF ANY DELAY OCCASIONED THEREBY. THE ENTIRE COST OF THE CHANGES OR TEMPORARY REMOVAL MUST BE INCLUDED IN THE PRICES STIPULATED FOR THE VARIOUS ITEMS OF WORK TO BE DONE UNDER THIS CONTRACT.

# PROHIBITED CONSTRUCTION ACTIVITIES:

- 1. THE USE OF EXPLOSIVES WITHIN MUNICIPAL LIMITS, UNLESS A PERMIT IS ISSUED BY THE OWNER.
- 2. PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, STREAM CORRIDORS, OR STORM SEWERS; ALL SUCH WATER WILL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE.
- 3. DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE, OR ANY OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.
- 4. NO SURFACE, GROUND OR TRENCH WATER SHALL BE ALLOWED TO FLOW INTO EXISTING SANITARY SEWERS.
- 5. OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT.
- 6. STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES.
- 7. RUNNING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT PERMISSION OF THE PROPERTY OWNER AND THE CONSENT OF OWNER.
- 8. CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE OWNER AND CLOSING CLEAR ACCESS:
- 8.1. BY FIRE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES;
- 8.2. BY THE PUBLIC TO ANY COMMERCIAL OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR PLACE OF RESIDENCE; OR
- 8.3. BY VEHICLES TO DRIVEWAYS WITHOUT THE PROVISION OF ALTERNATIVE MEANS OF BUILDING INGRESS AND EGRESS.

# **STORM SEWER SYSTEM NOTES:**

- CONTRACTOR SHALL FILL ALL VOIDS AT PIPE CONNECTIONS TO EXISTING & NEW CATCH BASINS INSIDE & OUTSIDE WITH NON-SHRINK GROUT. GROUT WATER-TIGHT AND FLUSH TO ALL INTERIOR WALLS.
- 2. CONTRACTOR SHALL RE-CONNECT ALL ENCOUNTERED DOWN SPOUT DRAINS AND OTHER STORM SEWER DRAIN LINES UNLESS DIRECTED OTHERWISE WITHIN.
- 3. FINAL MANHOLE AND CATCH BASIN RIMS TO BE FLUSH WITH FINAL GRADE IN PAVED AREAS & 3" BELOW FINAL LAWN GRADE IN UNPAVED AREAS.
- 4. WHEN CONNECTING EXISTING STORM SEWER OR STORM UNDERDRAIN LINES TO A NEW STORM SEWER OR STRUCTURE, CONTRACTOR SHALL MAKE CONNECTION BY INSTALLING A MIN 5'-0" NEW STORM SEWER DRAIN LINE (MATCH EXISTING DIA. & TYPE) & A WATER TIGHT COUPLING OR CONCRETE ENCASED JOINT AS APPROVED BY THE OWNER. SEE "DRAIN PIPE CONNECTION DETAIL".
- 5. PROPOSED STORM SEWER PIPE JOINTS AND FITTINGS SHALL BE WATERTIGHT.
- 6. INSTALL SILT SACK IN ALL CATCH BASINS, REMOVE WHEN DISTURBED AREAS ARE STABILIZED.
- 7. EACH CATCH BASIN SHALL BE OF THE ODOT TYPE AS NOTED IN THESE PLANS AND CONSTRUCTED IN ACCORDANCE WITH THE ODOT 2023 CONSTRUCTION AND MATERIAL SPECIFICATIONS (OR MOST CURRENT VERSION) UNLESS STATED OTHERWISE IN THE CONTRACT DOCUMENTS.
- 8. ALL GRATES SHALL BE BICYCLE SAFE, UNLESS OTHERWISE NOTED.
- 9. NO PIPES SHALL ENTER ANY INLET BOXES OR CATCH BASINS AT THE CORNERS.
- 10. PRIOR TO ORDERING CATCH BASIN AND MANHOLE STRUCTURES FOR REPLACEMENT/INSTALLATION, THE CONTRACTOR SHALL INSPECT EACH LOCATION TO FIELD VERIFY EXISTING STORM CATCH BASIN AND MANHOLE SIZES AND INVERTS, AS WELL AS ALL PIPE MATERIALS, SIZES, ALIGNMENT AND INVERTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECONNECTION OF ALL EXISTING, ACTIVE SEWERS AT EACH STRUCTURE LOCATION, UNLESS OTHERWISE NOTED IN THE PLANS.THE COSTS FOR INSPECTIONS SHALL BE INCLUDED IN THE UNIT PRICE STIPULATED FOR STRUCTURES TO BE REMOVED AND REPLACED OR INSTALLED. THE RESULTS OF THE CONTRACTOR SURVEY SHALL ALSO BE SHARED WITH THE ENGINEER'S REPRESENTATIVE PRIOR TO ORDERING MATERIALS. AN ALLOWANCE OF 5 WORKING DAYS SHALL BE ALLOTTED FOR THE REVIEW OF THE MATERIAL PROVIDED BY THE CONTRACTOR.
- 11. ALL SAW CUTS, SHALL BE FULL DEPTH ACCOMPLISHED USING A DIAMOND BLADE SAW. SAW CUTS ARE INCIDENTAL TO THE PROJECT.
- 12. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM AND VERIFY ALL INLETS (ACTIVE OR INACTIVE) ENTERING INTO THE SEWER. ALL INLETS SHALL REMAIN ACTIVE OR RESTORED AT THE COMPLETION OF CONSTRUCTION.
- 13. THE CONTRACTOR SHALL CLEAN NOTED SECTIONS OF SEWER PRIOR TO ANY POINT REPAIRS OR LINING. LINING THE EXISTING STORM SEWER SHALL BE COMPLETED USING CURED-IN-PLACE LINING.
- 14. POINT REPAIRS AND DEPOSIT CUTS NOTED ON THE PLANS ARE APPROXIMATE AND BASED ON PREVIOUS CCTV REVIEW COMPLETED BY THE ENGINEER. THE CONTRACTOR SHALL COMPLETE CCTV PRIOR TO STARTING ANY REPAIRS TO CONFIRM LOCATION OF ALL NOTED REPAIRS. CCTV SHALL BE REVIEWED FOR ANY FURTHER REPAIRS NEEDED.

# **GENERAL SITE RESTORATION:**

- 1. CONTRACTOR SHALL RESTORE ANY DISTURBED AREAS CAUSED FROM CONSTRUCTION TO PRE-CONSTRUCTION CONDITIONS OR BETTER; INCLUDING PAVEMENT, LAWN, LANDSCAPING, STRUCTURES, YARD APPURTENANCES, OR ANY OTHER AREAS DISTURBED BY CONSTRUCTION.
- 2. ALL GRASS AREAS ARE TO BE RESTORED UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.
- 3. ALL EXISTING STORM SEWER FACILITIES, INCLUDING TILE, DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED, OR RECONNECTED TO THE EXISTING OR PROPOSED SYSTEM. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK. THE CONTRACTOR SHALL INCLUDE THE COST OF SUCH WORK IN THE UNIT PRICE FOR OTHER RELATED ITEMS OF WORK.

# **EXCAVATION, BACKFILL AND COMPACTION:**

- 1. ALL EXCAVATION WILL BE CONSIDERED UNCLASSIFIED, NO ADDITIONAL COMPENSATION WILL BE ALLOWED THE CONTRACTOR FOR ROCK OR SHALE EXCAVATION.
- 2. ALL AGGREGATE FILL WILL BE AS DESCRIBED IN THE SPECIFICATIONS FOR SPECIFIC SITE WORK. ALL EXCAVATION FROM THIS SITE WILL BE REMOVED FROM SITE AND WILL NOT BE CONSIDERED ACCEPTABLE AS BACKFILL, UNLESS APPROVED BY OWNER. UPON REQUEST, THE OWNER WILL PROVIDE ACCESS TO THE SITE FOR THE CONTRACTOR TO CONDUCT SUCH INVESTIGATION AND TESTS DEEMED NECESSARY TO MAKE HIS DETERMINATION. NO EXTRA PAYMENT WILL BE MADE TO DISPOSE OF UNSUITABLE MATERIAL OR FURNISH AND PLACE SUITABLE MATERIAL MEETING THE ODOT REQUIREMENTS FOR "COMPACTED BACKFILL".
- 3. SLAG PRODUCTS OR CRUSHED CONCRETE WILL NOT BE PERMITTED FOR BEDDING, BACKFILL, OR TRAFFIC COMPACTED SURFACE.
- 4. ALL UTILITY LINES CROSSING THE NEW EXCAVATION, (I.E. STORM SEWERS, STORM LATERALS, WATERLINES, WATERLINE CONNECTIONS, SANITARY SEWERS, SANITARY LATERALS, GAS MAINS, GAS SERVICE CONNECTIONS, UNDERGROUND OCT CONDUITS, CABLE TV LINES) SHALL BE PROTECTED AND SUPPORTED WITH HARDWOOD PLANKS OR REMOVED AND REPLACED, RECONNECTED AND SUPPORTED ACROSS THE ENTIRE WIDTH OF THE EXCAVATION. NO ADDITIONAL COMPENSATION WILL BE PAID FOR THE ABOVE WORK UNLESS ANY OF THE ABOVE UTILITIES ARE ENCOUNTERED AND NOT SHOWN ON THE DRAWINGS.
- 5. ANY COMPACTION TESTING REQUIRED AT THE SOLE DISCRETION OF THE ENGINEER SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND MANAGEMENT OF ALL GROUNDWATER AND SURFACE WATER AS NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS.



rdantas

REVISION DATE

SCALE: AS NOTED
NO
DATE: 6/04/25
DESIGNED BY: JBB
DRAWN BY: JBB

YE STORMWATEF SVEMENTS BOARDMAN, OHIO

PROJECT NO:
242260

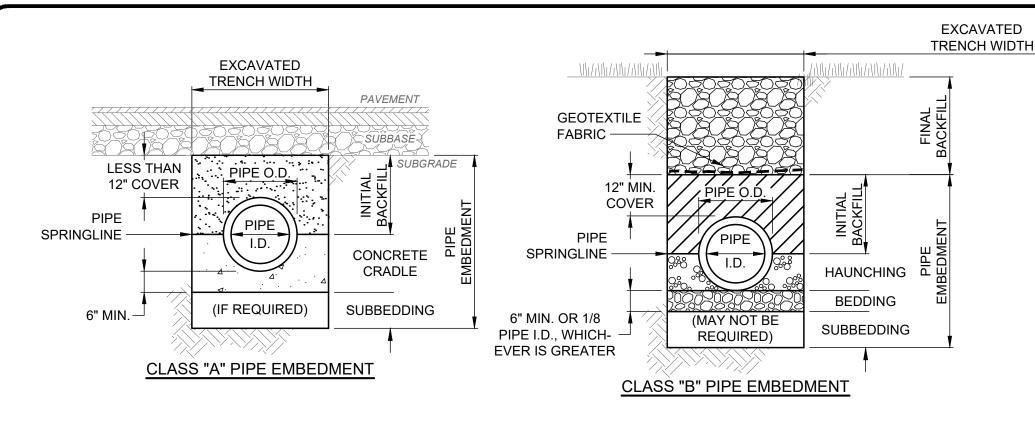
DRAWING NAME

G-03

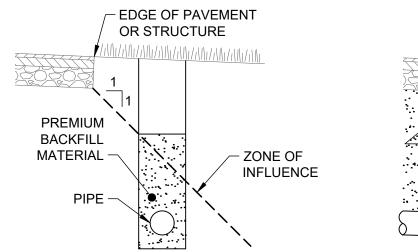
15

SHEET

H:\2024\242260\DWG\SHEETS\G\_242260 - GENERAL NOTES.DWG - 2 - NOTES - 4/23/2025 10:44:29 AM - JARED BORDNER

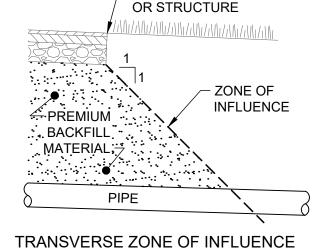


- EXCAVATED TRENCH WIDTH: MEASURED FROM BOTTOM OF TRENCH TO 12" OVER TOP OF PIPE (WITHIN THE PIPE EMBEDMENT), THE MIN. TRENCH WIDTH SHALL BE 9" AND THE MAX. SHALL BE:
- O.D.+24" FOR 24" AND SMALLER I.D. PIPE
- O.D.+30" FOR 27" THRU 72" I.D. PIPE
- 2. FINAL BACKFILL: ALL AREAS UNDER AND WITHIN 5-FT OF PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE SHALL BE PREMIUM BACKFILL (ODOT ITEM 304 LIMESTONE). PAVEMENT INCLUDES ROADWAY, SHOULDER AND DRIVEWAY, BUT NOT SIDEWALK. NO SLAG OR SLACKER AGGREGATES ALLOWED. IN ALL OTHER AREAS, THE FINAL BACKFILL SHALL BE SUITABLE ON-SITE MATERIAL
- 3. <u>PIPE EMBEDMENT:</u>
- 3.1. CLASS "A": SHALL BE USED FOR ALL PIPES UNDER PAVEMENT OR STRUCTURES WITH LESS THAN 12" OF PIPE COVER TO THE SUBGRADE. THE CONCRETE CRADLE SHALL BE IN ACCORDANCE WITH ODOT ITEM 499, CLASS QC-1. THE INITIAL BACKFILL SHALL BE NO. 57 COURSE INTERLOCKING LIMESTONE AGGREGATE.



PARALLEL ZONE OF INFLUENCE

AGGREGATE FOR FLEXIBLE PIPE.

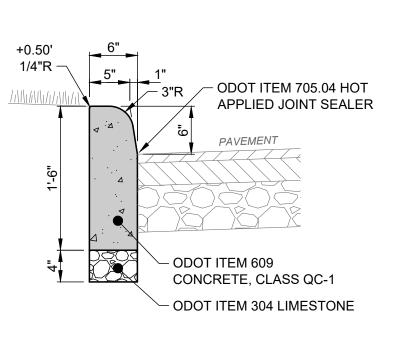


EDGE OF PAVEMENT

- 3.2. CLASS "B": SHALL BE USED FOR ALL PIPES UNLESS OTHERWISE NOTED ON THE PLANS. BEDDING AND HAUNCHING SHALL BE NO. 8 OR 57 COURSE INTERLOCKING LIMESTONE AGGREGATE. IN AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE, THE INITIAL BACKFILL SHALL BE NO. 8 OR 57 COURSE INTERLOCKING LIMESTONE AGGREGATE. IN ALL OTHER AREAS, THE INITIAL BACKFILL MAY BE
- SUBBEDDING: WHERE AN UNSTABLE TRENCH BOTTOM CONDITION IS ENCOUNTERED, EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH MATERIAL AS DIRECTED BY THE ENGINEER. THIS SHALL NOT BE CONSIDERED FOR ADDITIONAL PAYMENT

SUITABLE ON-SITE MATERIAL FOR RIGID PIPE, AND SHALL BE NO. 8 OR 57 COURSE INTERLOCKING LIMESTONE

5. GEOTEXTILE FABRIC SHALL BE PER ODOT 712.09, TYPE A, AND INSTALLED AFTER ALL INITIAL BACKFILL.



# NOTES:

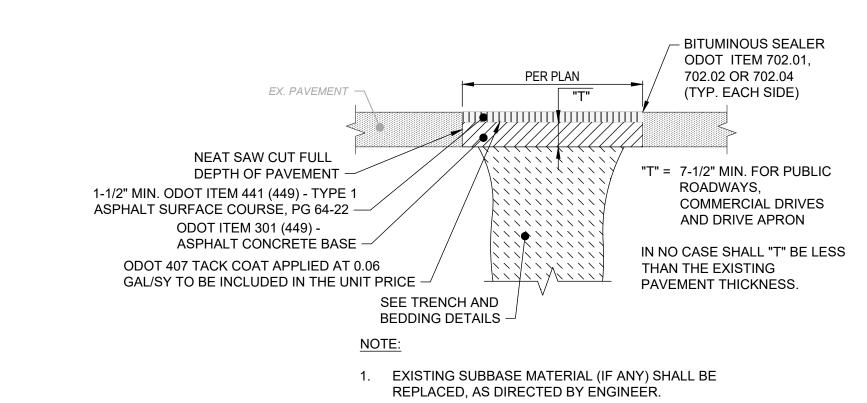
- 1. INSTALL 1/2" PREFORMED JOINT MATERIAL AND USE 5/8"Ø X 18" LONG DOWELS INTO COLD JOINTS TOP AND BOTTOM WHERE NEW CURB MEETS EXISTING CURB.
- 2. PROVIDE CONTRACTION JOINTS AT 10' O.C.
- APPLY LIQUID-MEMBRANE CURING COMPOUND.
- THIS DETAIL SHOWS ASPHALT PAVEMENT FOR REFERENCE ONLY. SEE SITE PLAN FOR ACTUAL TYPE OF PAVEMENT

(ODOT TYPE 6) **6" CURB DETAIL** 

SCALE: NONE

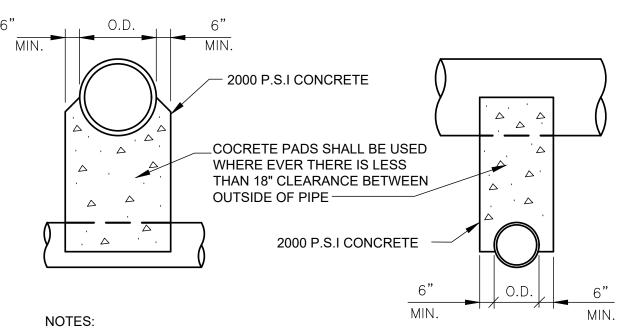
TRENCHING, EMBEDMENT AND BACKFILL DETAIL

NOT TO SCALE



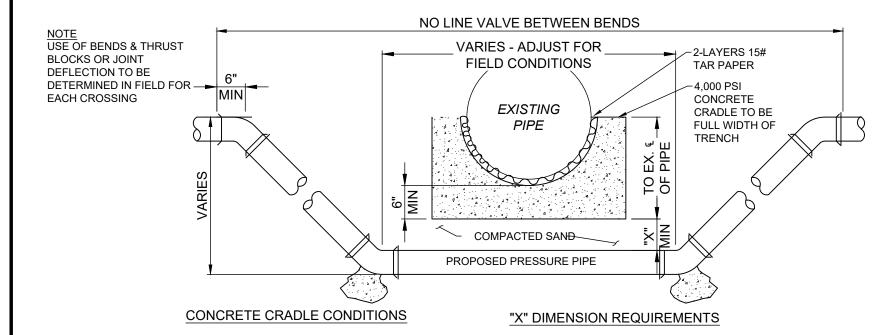
TYPE 'C' PAVEMENT REPLACEMENT (ASPHALT), ROADWAY

NOT TO SCALE



UNLESS OTHERWISE DIRECTED BY THE ENGINEER, WHERE TWO PIPES (SEWER & WATER CROSS EACH OTHER, A CONCRETE PAD AND CRADLE SEPARATOR SHALL BE PLACED BETWEEN THEM AS INDICATED ABOVE. WHERE PERMISSION IS GRANTED TO OMIT THE CONCRETE PADS, GRANULAR BACKFILL SHALL BE TAMPED IN 6" LAYERS AROUND BOTH PIPES. SUCH TAMPED BACKFILL SHALL BE CONTINUOUS FROM THE CRADLE OF THE LOWER PIPE TO THE TOP OF THE UPPER PIPE AND AT THE BOTTOM SHALL EXTEND IN BOTH DIRECTIONS, FOR THE FULL WIDTH OF THE TRENCH.

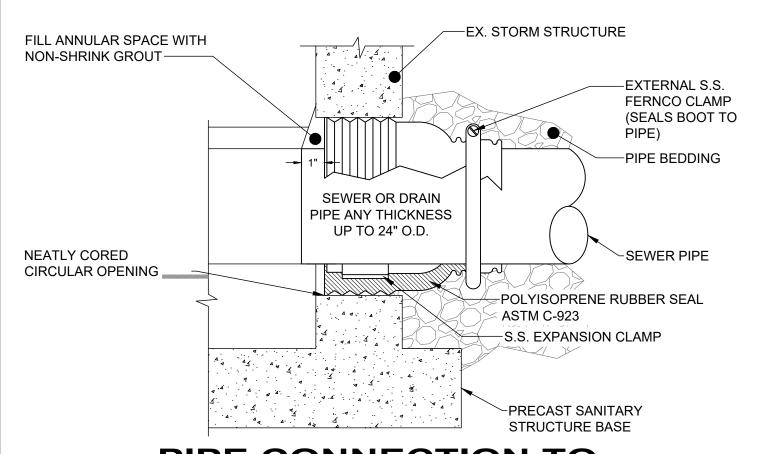
PIPE CROSSING DETAIL NOT TO SCALE



- 1. IF SANITARY OR STORM SEWER PIPE JOINT IS WITHIN PROPOSED IMPROVEMENT TRENCH LIMIT
- 2. IF CROSSING A WATERLINE AT ANY POINT
- 3. IF CROSSING SPACE IS LESS THAN MIN. SPACE OF CRADLE BELOW PIPE BOTTOM PLUS "X" DIMENSION THEN OMIT SAND FILL AND USE CONCRETE
- 1. 6" FOR WATERLINE CROSSING (ALSO FOR GAS & O.B.T. LINES W/ NO CRADLE NEEDED)
- 2. 18" FOR SANITARY OR STORM SEWER PIPE
- 3. IF CROSSING SPACE IS MORE THAN MIN. SPACE OF CRADLE BELOW PIPE BOTTOM PLUS AFOREMENTIONED "X" DIMENSION THEN EXTEND "X" DIMENSION TO MAKE UP DIFFERENCE

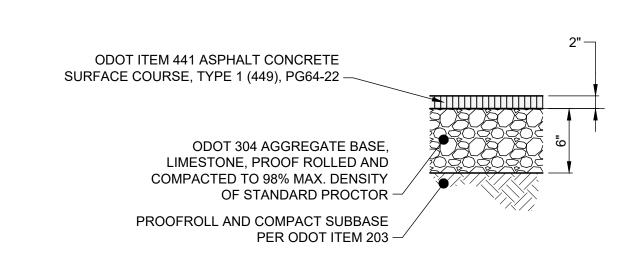
# PIPE LOWERING DETAIL

NOT TO SCALE



# PIPE CONNECTION TO **EXISTING STRUCTURE DETAIL**

CONTRACTOR SHALL REFER TO MANUFACTURER DETAILS AND SPECIFICATIONS FOR SPECIFIC REQUIREMENTS NOT EXPLICITLY NOTED ON THESE DETAILS FOR INSTALLING NEW PIPE INTO AN EXISTING OR STRUCTURE.



TPYE C PAVEMENT REPLACEMENT (ASPHALT), DRIVEWAY

NOT TO SCALE

# PROJECT NO: 242260 **DRAWING NAME** C-01

SHEET

15

LATE OF O

PATRICK A

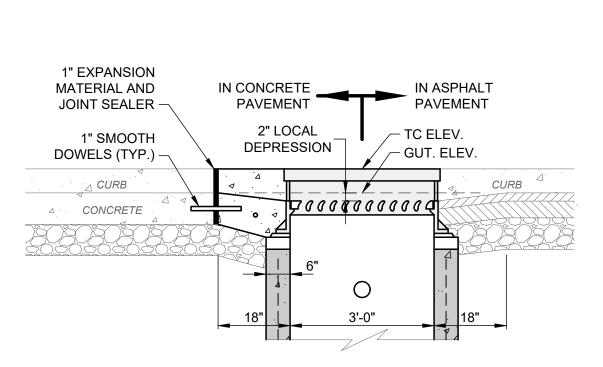
BLAKE

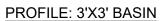
E-88436

PEGISTERED

SSONAL ENG

MILLIAN



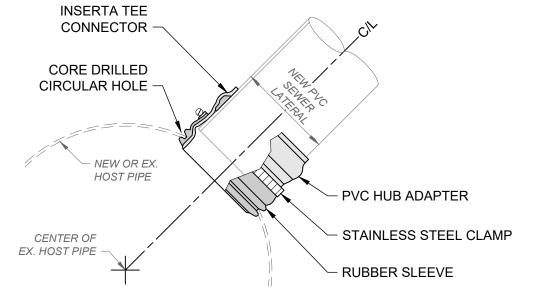


# TC ELEV. 24" 18" FRAME SET IN MORTAR CURB DRAIN CONNECTION (IF REQUIRED) 6" NO. 57 AGGREGATE

SECTION: 3'X3'

## NOTES:

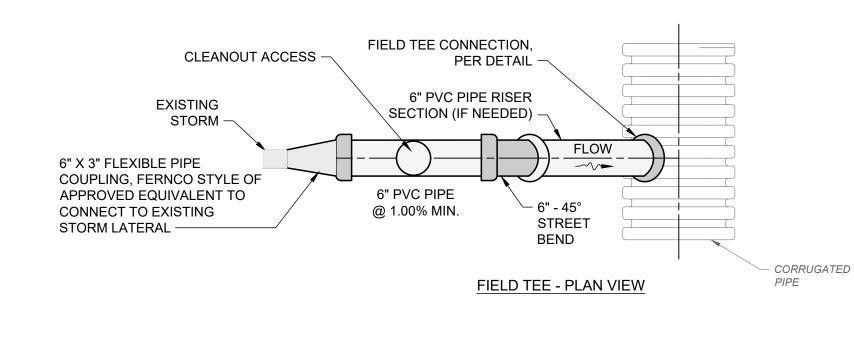
- 1. ALL CONCRETE SHALL BE ODOT ITEM 499, CLASS QC-1.
- 2. STRUCTURE SHALL MEET H-20 LOADING.
- 3. PRECAST CONCRETE STRUCTURE AND REINFORCEMENT SHALL CONFORM TO ASTM C-913.
- 4. INSTALL STEPS IF STRUCTURE IS MORE THAN 5' DEEP ( NOT SHOWN FOR CLARITY). USE REINFORCED PLASTIC MANHOLE STEPS. FIRST STEP SHALL NOT BE MORE THAN 2'-0" BELOW TOP OF FRAME.
- 5. ALL PIPE OPENINGS MUST BE PREFABRICATED WITH FLEXIBLE CONNECTIONS (Z-LOK OR A-LOK) PER ASTM C-923.
- 6. GRADE ADJUSTMENT BY PRE-CAST CONCRETE ADJUSTING COLLAR OR MAX. 2 COURSES ASTM C-32 BRICK MASONRY SET IN MORTAR.
- 7. (\*) IF TOP SECTION IS A SEPARATE CAST PIECE, 1/2"Ø X 6" L DOWELS SHALL BE USED AT EACH CORNER TO ATTACH THE TOP TO THE BOTTOM SECTIONS OF BASIN.
- 8. FRAME AND GRATE SHALL BE EJ 7030 WITH TYPE M6 VANE GRATE AND T1 BACK FOR A 3'X3' BASIN, PER PLAN.
- 9. ALL GRATES SHALL INCLUDE LETTERING "DUMP NO WASTE" AND FISH IMAGE.

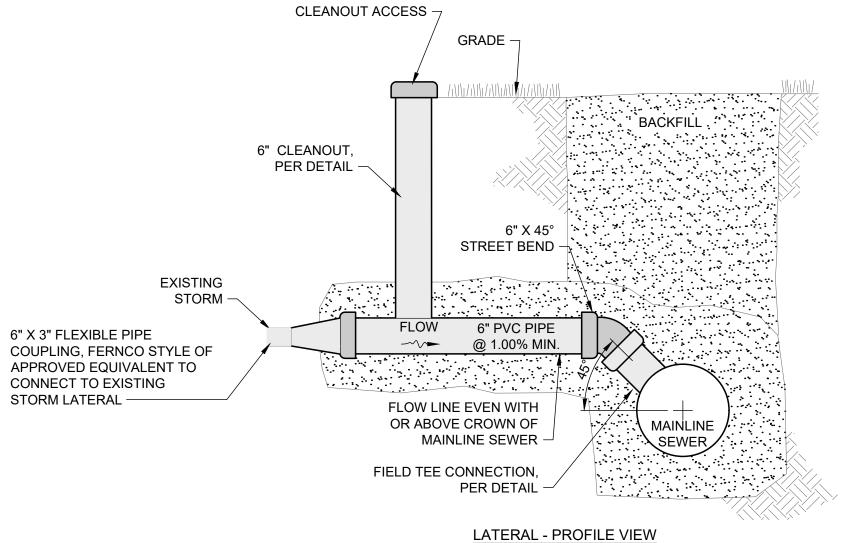


# NOTES:

1. HOLE IN HOST PIPE MUST BE FIELD CORED TO THE SIZE PER MANUFACTURER RECOMMENDATION USING INSERTA TEE HOLE SAW.

# STORM FIELD TEE CONNECTION DETAIL SCALE: NONE



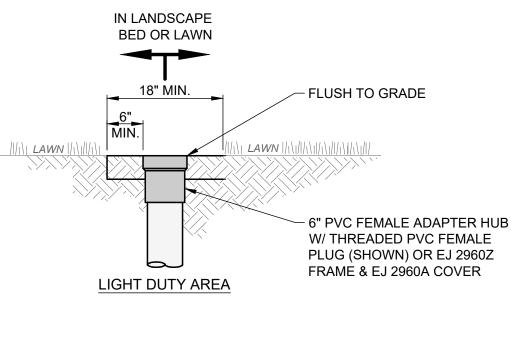


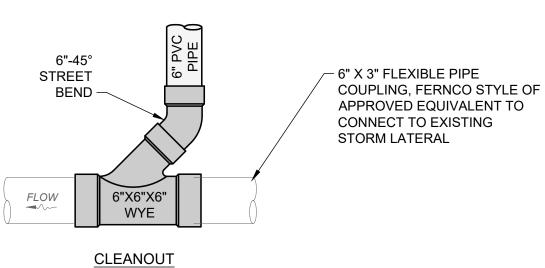
# STORM LATERAL CONNECTION DETAIL

SCALE: NONE

# PRECAST CONCRETE 3'X3' CURB INLET BASIN DETAIL

SCALE: NONE





# IOTES:

THIS DETAIL SHOWS A 6" CLEANOUT AND TEST TEE FOR REFERENCE ONLY.

# **STORM CLEANOUT DETAIL**

SCALE: NONE

<b>O</b>

TE OF OH

PATRICK A.

E-88436

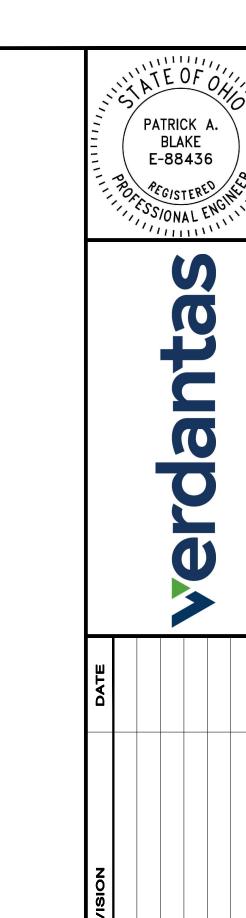
PEGISTERED

SSIONAL ENG

0/9	
6   5	PAB
DESIGNED BY:	CHECKED BY:

N L N L N L	BOARDMAN, OHIO	TRUCTION DETAILS - 02
MTTOVEMEN IN	SOUNTY	TRUCTION

DRIVE



MH-3 P.1

the top slab.

# LEGEND

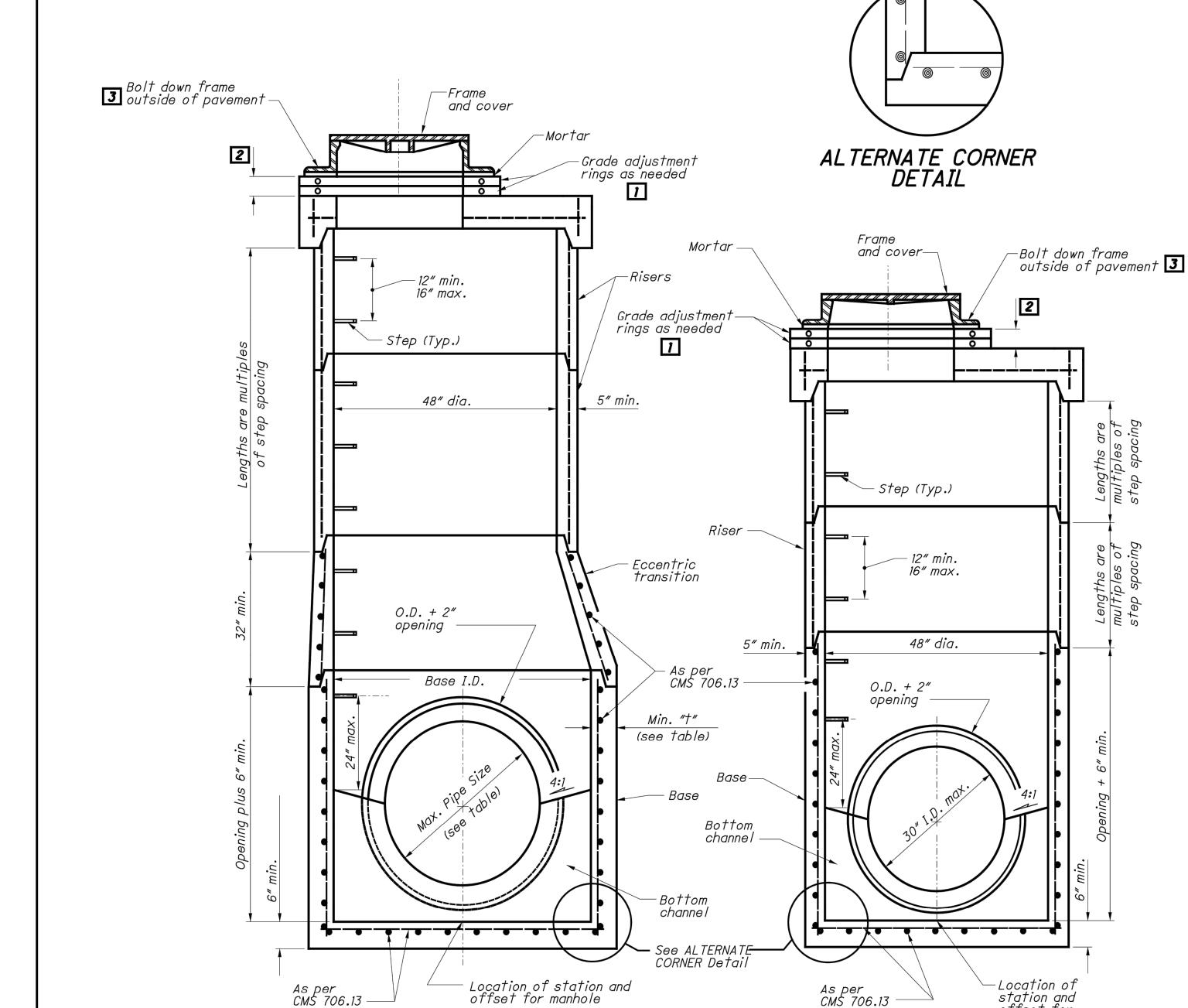
Grade rings cannot exceed 12" height when adjusting Drainage Structures to Grade per 611.10 D.

Grade rings cannot exceed 6" height when reconstructing Drainage Structures to Grade per 611.10 C.

Grade rings cannot exceed 6" height when constructing new Drainage Structures to Grade per 611.10 A&B.

Where frames are outside of the pavement; Mechanically connect the frame to the manhole top slab through the four bolt holes using 5/8" minimum stainless steel wedge anchor bolts. Embed the bolts a minimum of 3" into the slab. Secure the frame with stainless steel nuts and washers.

MAXIN	NUM PIPE	SIZES
BASE I.D.	MIN. "†"	MAX. PIPE SIZE
60″	5″	36"
72″	6"	48"
84"	7″	<i>54"</i>
90″	71/2"	60"
96″	8"	66"
108″	9"	72"



60" to 108" PRECAST BASE SEE TABLE FOR MAXIMUM PIPE SIZES

48" PRECAST BASE FOR 30" AND SMALLER PIPE

station and offset for

manhole

SECTION VIEWS OF REINFORCED PRECAST MANHOLES

**NOTES** 

**GENERAL:** With normal soil and site conditions, this standard precast manhole may be used for any required manhole depth.

Cast and assemble sections of the precast manhole with either all tongue or all groove ends up. Lift holes may be provided in each section for handling.

Leave handling device for the flat slab in place.

**TOP:** Provide a flat slab for this section unless an eccentric cone is specified.

TRANSITION (OR REDUCER): This section can be either eccentric cone or flat slab.

**BASE:** Manhole No. 3 is shown with a monolithic floor and riser which may be cast in one or two operations. A permissible alternate is to cast and ship the floor and barrel separately. Provide openings for inlet and outlet pipes, either when the unit is cast or later, to meet project requirements. Bottom channels may be formed of concrete, precast in the base or field constructed as shown on **SCD MH-1 and MH-2**.

**RISER SECTIONS:** Openings for 18" and smaller inlet pipes may be either prefabricated or cut in the field provided the sides of the pipe at the springline do not project into the

**CONNECTIONS:** Connections between precast manhole sections and pipes on sanitary sewers may be sealed with resilient connectors conforming to ASTM C 923.

JOINT SEAL: Furnish resilient seal between precast manhole sections on sanitary sewers and flexible gasket joints per CMS 706.11.

**OPENINGS:** Ensure pipe openings are the O.D. of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per CMS 611.

**MATERIALS:** Provide materials for bases and other precast sections, including reinforcement not specified here, that meet the requirements of CMS 706.13.

**DROP PIPE:** When specified on the plans, construct drop pipe as shown on **SCD MH-2.** 

STEPS, FRAMES AND COVERS: Meet the requirements shown on SCD MH-1.

TOP SLAB REBAR: Use epoxy coated reinforcing steel within

Approved materials are kept on file by the Office of Materials Management.

MAXIN	<i>NUM PIPE</i>	SIZES
BASE I.D.	MIN. "†"	MAX. PIPE SIZE
60″	<i>5″</i>	<i>36″</i>
72"	6"	48"
84"	7″	<i>54"</i>
90"	71/2"	60″
<i>96"</i>	8"	66"
108"	9"	72"

OFFICE OF **HYDRAULIC** 

**ENGINEERING** 1-20-2006 7-20-2012 1-18-2013 1-15-2016 7-16-2021 7-21-2023 1-19-2024 7-19-2024 TDS ENGINEER

K. Brandon

Syar نى effery

DRAWING

CONSTRUCTION I HYDRAULIC C MANHC STANDARD

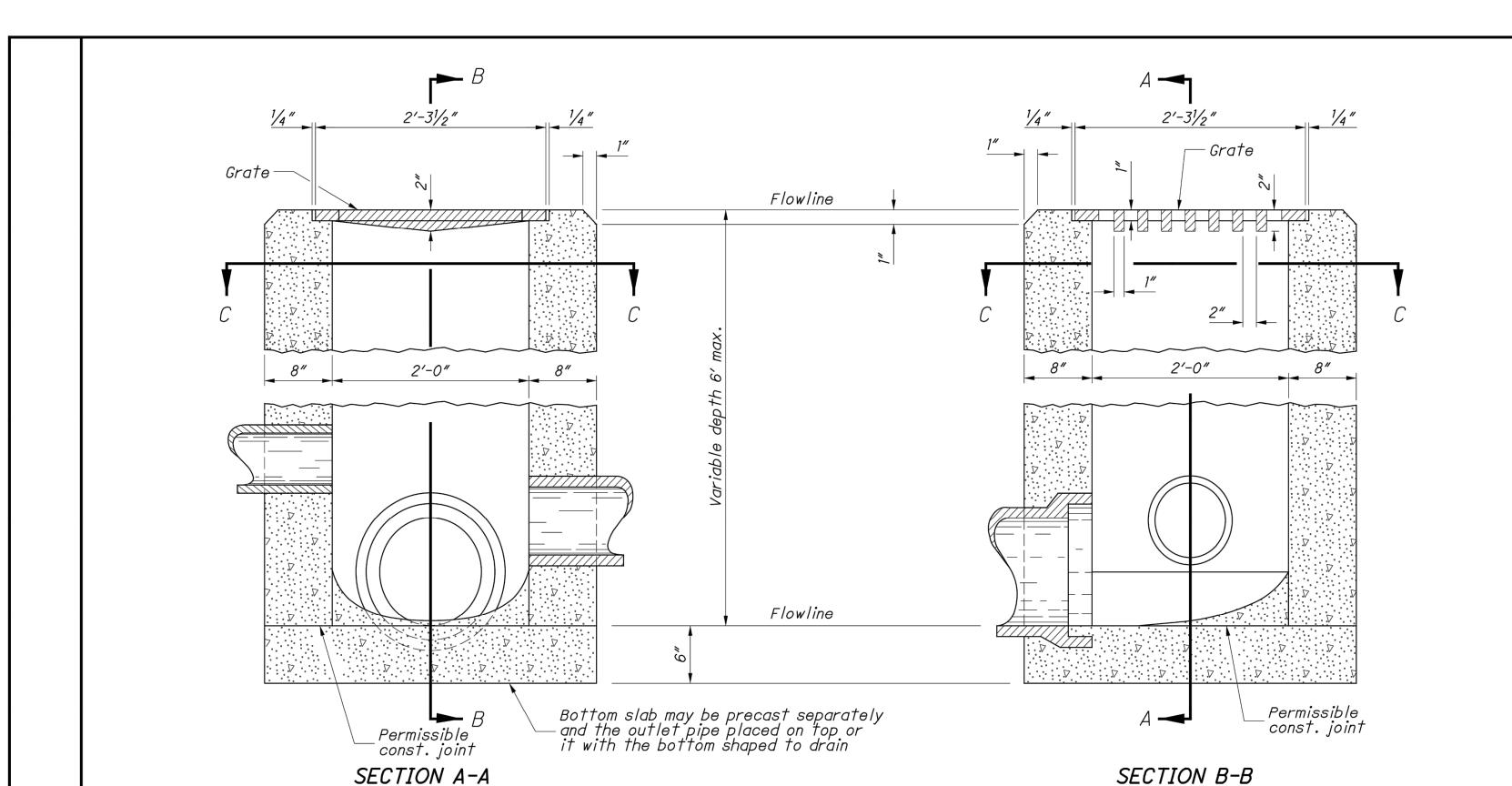
ESIGN AGENCY

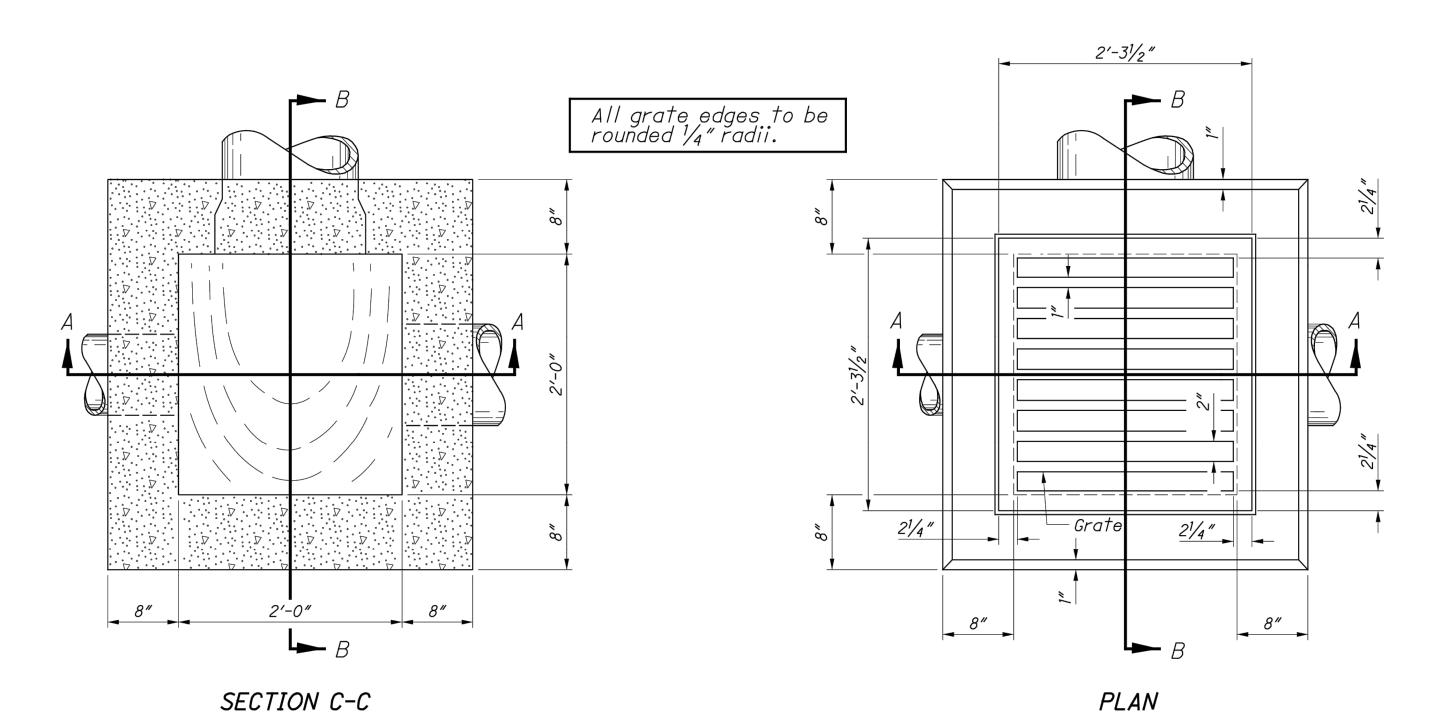
PROJECT NO: 242260 DRAWING NAME C-03

15

SHEET

PROJECT NO: 242260 DRAWING NAME C-04 SHEET 15





CATCH BASIN No. 2-2B

# **NOTES**

CATCH BASINS 2-2A, 2-2B & 2-2C: This sheet depicts Catch Basin 2-2B & 2-2C. See Sheet 1 of 2 for Catch Basin 2-2A.

**CB-2-2B GRATE:** Furnish a design essentially the same and equally as strong as the one shown (see Construction Information table), or meet the requirements of CMS 711.14. Provide grate openings and dimensions as shown here unless otherwise shown in the plans.

If necessary, bicycle safe grates will be specified in the plans. Furnish Neenah No. R-4859-S or EJ No. 5110M3 (00511043) grates or approved equals.

Place grate elevation 4" to 6" below normal ditch and return to normal 10' to 15' each side of inlet.

**CB-2-2C FRAME & GRATE:** Where the catch basin is specified for use in a parking lot, Furnish Neenah No. R-1878-A5G or EJ No. V-5622 (45622010) frame and V-5622 (45622030) grate or approved equals. If necessary, bicycle safe grates will be specified in the plans. Furnish Neenah No. R-3405 grate or EJ No. 5250M (00525031) grate or approved equals.

CB-2-2C APRON: On cast-in-place and precast units, provide a level surface on the catch basin 4" below the plan grate elevation for setting the frame and grate assembly. Install a 4000 psi concrete apron to encase and secure the frame with a minimum width not less than the thickness of the catch basin walls. Slope the apron to provide a local depression. Include a 1" expansion joint where the apron abuts PCC pavement. The cost is included in the catch basin

GRATE TEXT: Cast the following text into the top of the grate:

# "DRAINS TO WATERWAY" and "DUMP NO WASTE"

Print text in bold, capital letters at least 1/2" high. "WATERWAY" may be substituted with "STREAM", "RIVER", "LAKE", etc. Actual placement and logo may vary per manufacturer.

**WALLS:** Construct cast-in-place walls with a nominal 8" thickness. Provide precast walls at least 6" thick with sufficient reinforcement to permit shipping and handling without damage.

**CONCRETE:** Provide Class QC1 concrete for cast-in-place structures. When precast, provide concrete meeting the requirements of CMS 706.13. Mark the catch basin number on the structure.

**PRECAST BASE:** If a precast base is used, set it deep enough so that the top can be placed on the base to provide the grate elevation specified in the plans. Do not use brick layers to adjust the top elevation.

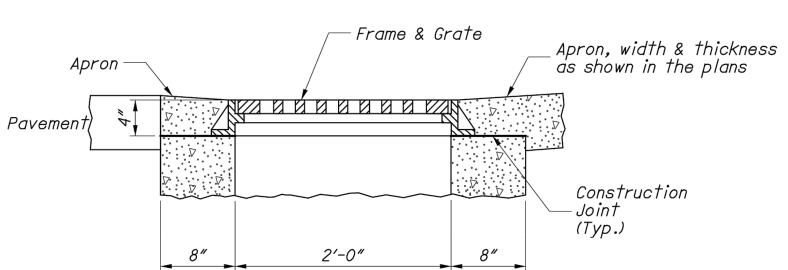
LOCATION AND ELEVATION: When given on the plans, location and elevation are at the top center of the grate.

MINIMUM DEPTH: The minimum depth of CB No. 2-2B is the outside diameter (O.D.) of the outlet pipe plus 4". The minimum depth of CB No. 2-2C is the outside diameter (O.D.) of the outlet pipe plus 8".

**OPENINGS:** Ensure pipe openings are the O.D. of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per C&MS 611.

**PAYMENT:** All materials and labor, including excavation and backfilling, are paid for under **Item 611 - Catch Basin, No. 2-(2B or 2C).** 

CONSTRUCTION INFORMATION Minimum weight of grate, 120 lbs.



CATCH BASIN No. 2-2C

DESIGN AGENCY

OFFICE OF **HYDRAULIC** ENGINEERING

1-15-2016 7-20-2018

7-19-2019 1-18-2013

7-16-2021

7-15-2022

1-20-2023 7-19-2024 TDS ENGINEER K. Brandon

Syar

ш

effery

DRAWING -2C

USTRUCTION I 2-2A, 2-2B, 2-3

Ż Ż

COI s.'s

) HYDRAULIC C TCH BASIN No.

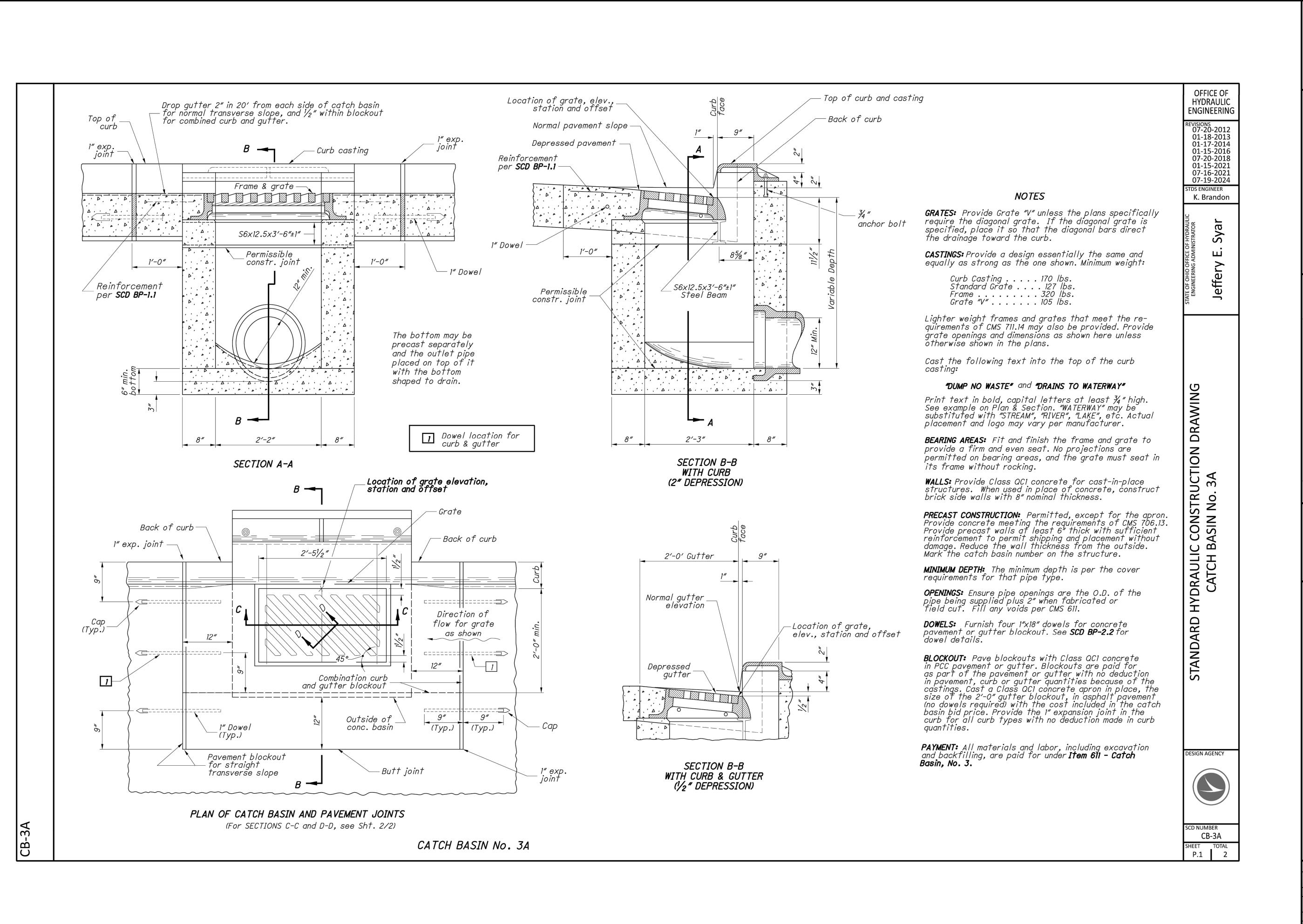
STANDARD F

SCD NUMBER CB-2-2A,2B,2 P.2 2

2C

2B,

-2A,

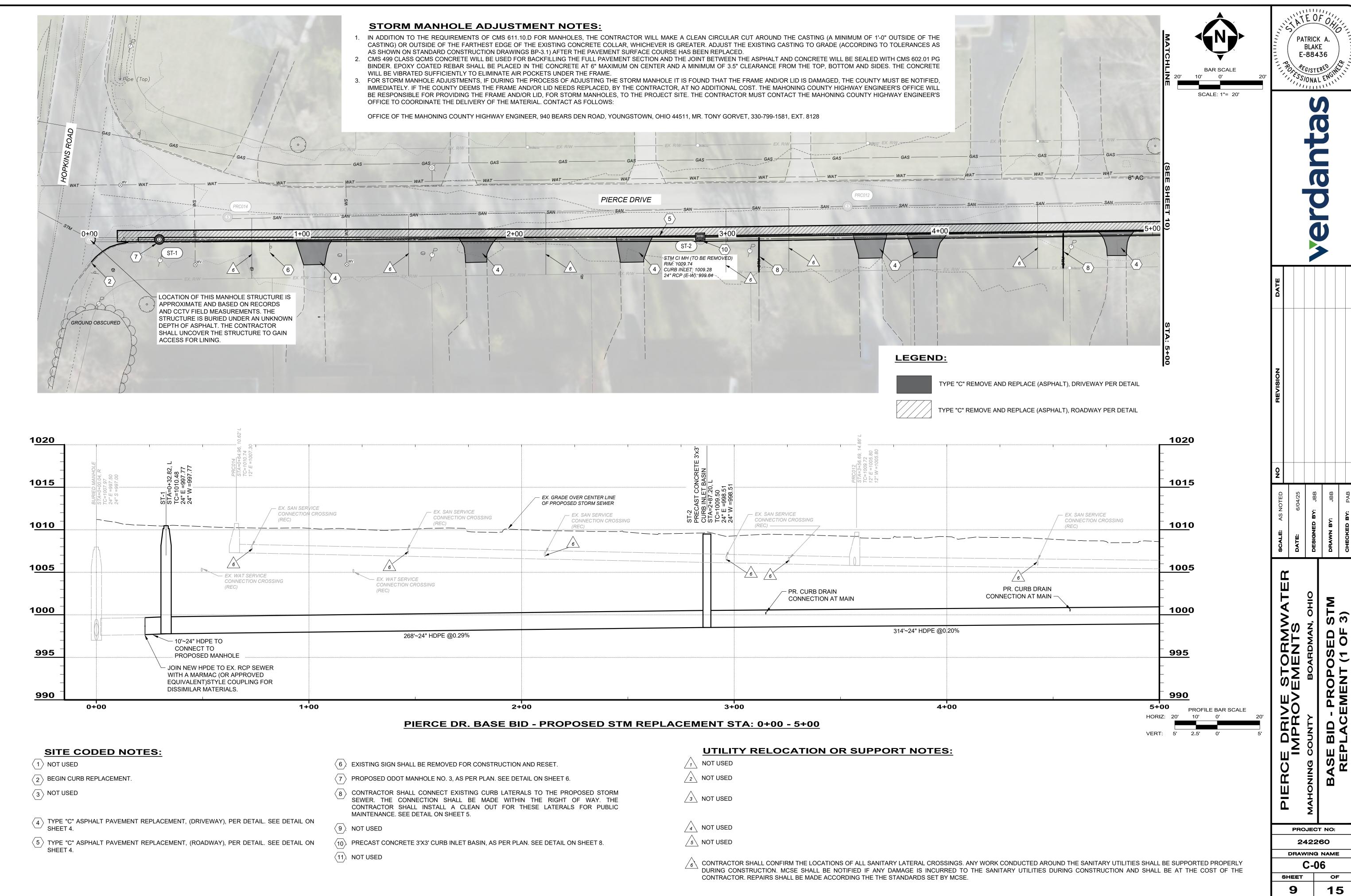


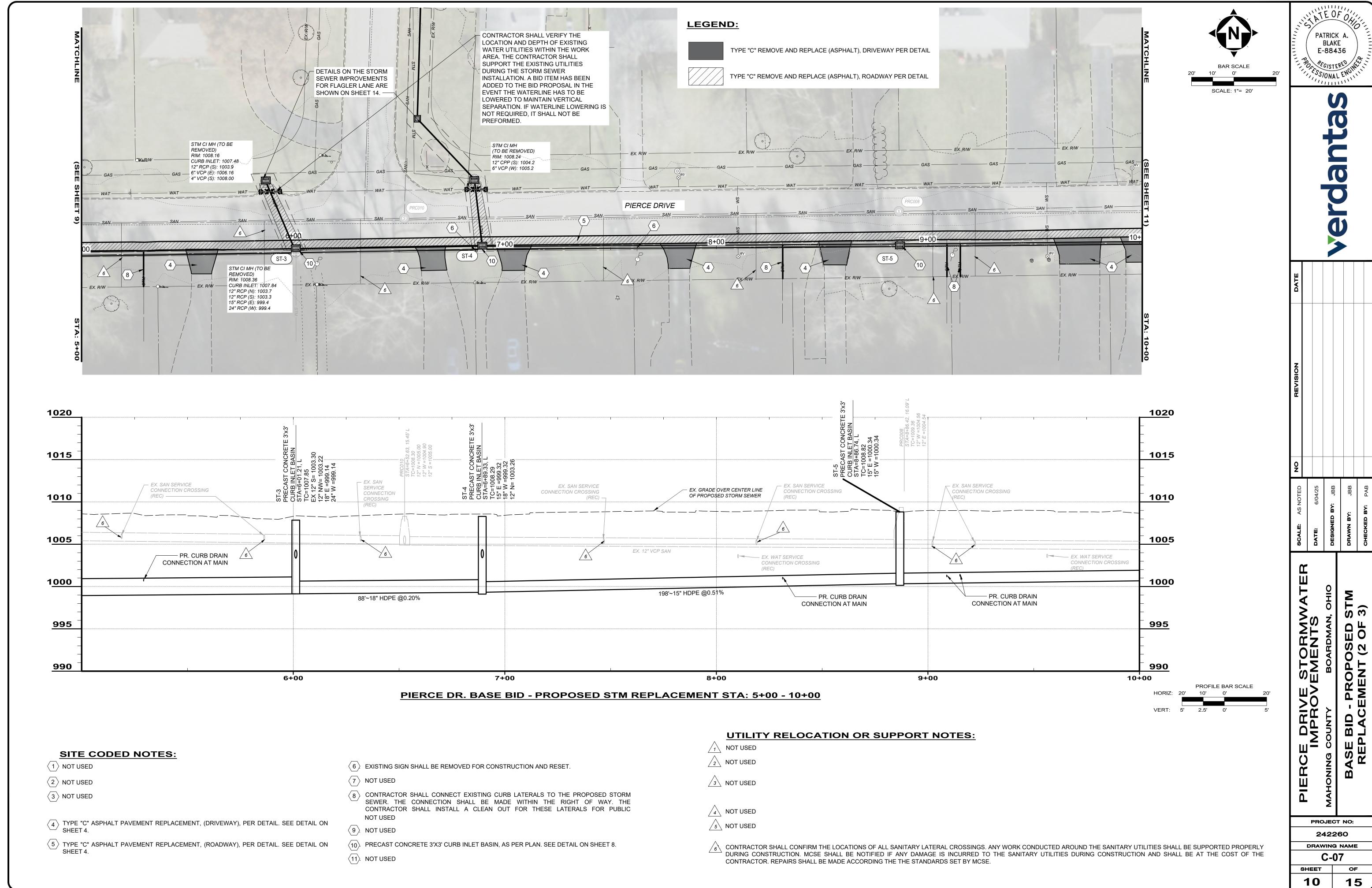
TE OF ON PATRICK A. BLAKE E-88436 PEGISTERED NEWS

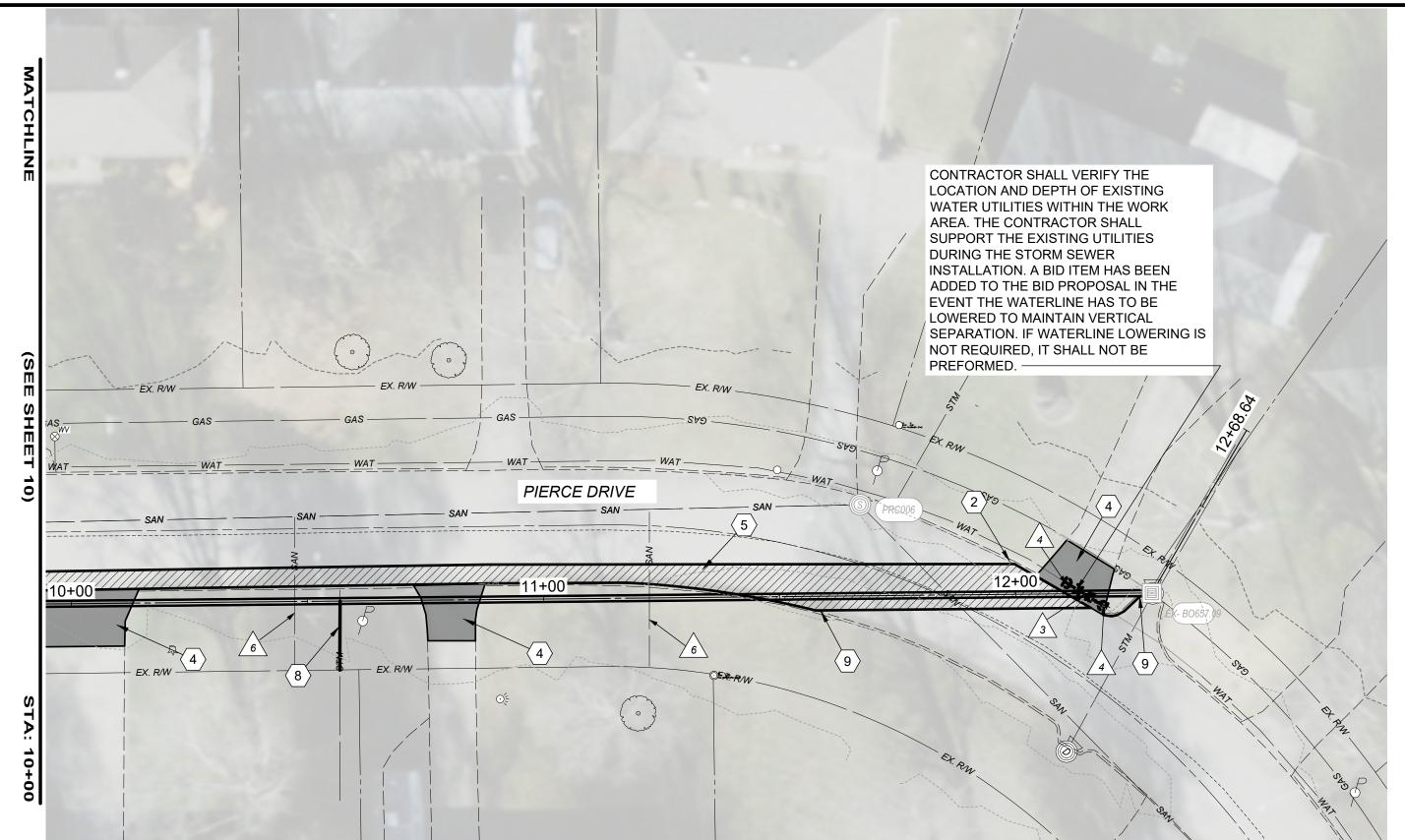
0

E DRIVE IMPROV

PROJECT NO: 242260 DRAWING NAME C-05 SHEET

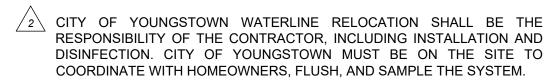






# **UTILITY RELOCATION OR SUPPORT NOTES:**

/1\ CONTRACTOR SHALL COORDINATE AND COMMUNICATE WITH UTILITY COMPANIES PRIOR TO WORK IN AND AROUND BURIED UTILITIES.



/3\ LOWERING EX 6" WATER LINE, USE 45° LONG SWEEPING BENDS, PLACE NEW 6" DIP WATER LINE (10-LF) W/ POLYWRAP INSIDE 12" DIAMETER STEEL CASING (5 LF) WITH SPACERS. COORDINATE LOWERING WITH YOUNGSTOWN WATER DEPARTMENT. CONTRACTOR SHALL ABIDE BY ALL CERTIFICATIONS, LAWS AND STATE REGULATIONS PERTAINING TO ASBESTOS PIPE CUTTING AND REMOVAL. LOWERING WILL REQUIRE CONTACTING YOUNGSTOWN WATER DEPARTMENT IN ADVANCE TO PLACE USERS UNDER A BOIL ADVISORY.

/4\ MAKE NEW WATER PIPE CONNECTION TO EXISTING WATER LINE WITH A YOUNGSTOWN WATER DEPARTMENT APPROVED PIPE COUPLING (TYP 2)

5 EXISTING WATER LINE TO BE LOWERED TO PROVIDE A MINIMUM 18" VERTICAL SEPARATION BETWEEN THE WATERLINE AND NEW SEWER. PROPOSED PIPE ELEVATION SHALL BE APPROVED THE YOUNGSTOWN WATER DEPARTMENT PRIOR TO RELOCATION.

6 CONTRACTOR SHALL CONFIRM THE LOCATIONS OF ALL SANITARY LATERAL CROSSINGS. ANY WORK CONDUCTED AROUND THE SANITARY UTILITIES SHALL BE SUPPORTED PROPERLY DURING CONSTRUCTION. MCSE SHALL BE NOTIFIED IF ANY DAMAGE IS INCURRED TO THE SANITARY UTILITIES DURING CONSTRUCTION AND SHALL BE AT THE COST OF THE CONTRACTOR. REPAIRS SHALL BE MADE ACCORDING THE THE STANDARDS SET BY MCSE.

PROFILE BAR SCALE

# 1020 1015 - EX. GRADE OVER CENTER LINE OF PROPOSED STORM SEWER \_\_ EX. SAN SERVICE \_ EX. SAN SERVICE 1010 1005 CROSSING CROSSING (REC) EX. 12" VCP SAN EX. SAN 1000 342'~15" HDPE @0.30% **CORE INTO EXISTING** - PR. CURB DRAIN STRUCTURE CONNECTION AT MAIN 18" MIN CLEARANCE CRADLE, PER DETAIL —

# PIERCE DR. BASE BID - PROPOSED STM REPLACEMENT STA: 10+00 - END

# **SITE CODED NOTES:**

- $\langle 1 \rangle$  NOT USED
- $\langle 2 \rangle$  BEGIN CURB REPLACEMENT.
- $\langle 3 \rangle$  NOT USED
- 4 TYPE "C" ASPHALT PAVEMENT REPLACEMENT, (DRIVEWAY), PER DETAIL. SEE DETAIL ON

1020

1015

1010

1005

1000

995

990

- 5 TYPE "C" ASPHALT PAVEMENT REPLACEMENT, (ROADWAY), PER DETAIL. SEE DETAIL ON
- 6 NOT USED

11÷00

- $\overline{7}$  NOT USED
- $\langle 8 
  angle$  contractor shall connect existing curb laterals to the proposed storm SEWER. THE CONNECTION SHALL BE MADE WITHIN THE RIGHT OF WAY. THE CONTRACTOR SHALL INSTALL A CLEAN OUT FOR THESE LATERALS FOR PUBLIC MAINTENANCE. SEE DETAIL ON SHEET 5.
- (9). END CURB REPLACEMENT. SEE DETAIL ON SHEET 4.
- (11). NOT USED

# **LEGEND:**



TYPE "C" REMOVE AND REPLACE (ASPHALT), DRIVEWAY PER DETAIL



12+00

TYPE "C" REMOVE AND REPLACE (ASPHALT), ROADWAY PER DETAIL

995

990

13+00

TE OF OL PATRICK A. BLAKE E-88436 PEGISTERED SSONAL ENG

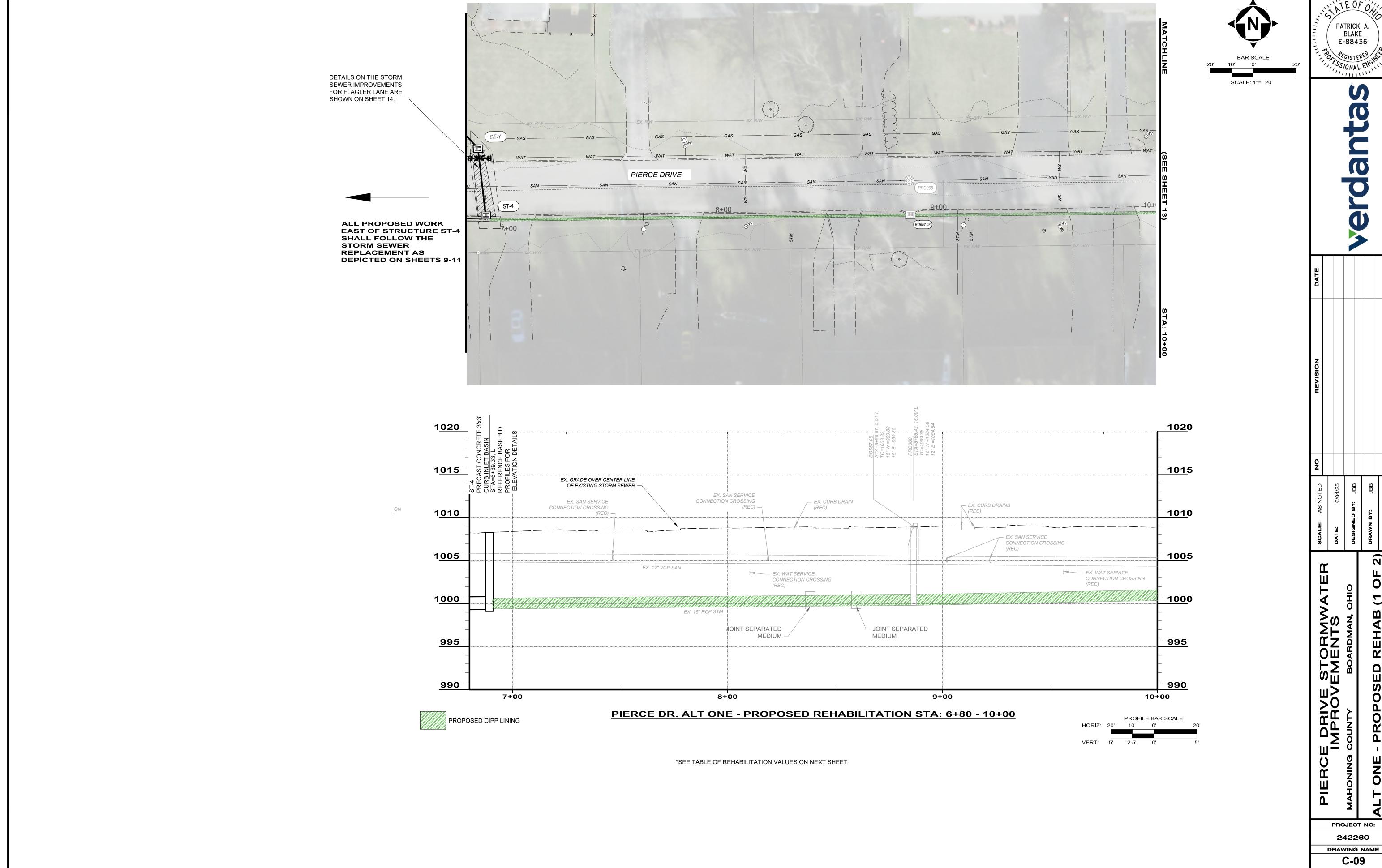
SCALE: 1"= 20'

MILLIAN

֝֟֝֟֝֟֝֝֟֝֝֟֝	SCALE	SCALE: AS NOTED	NO REVI	REVISION	
T U					
	DATE:	6/04/25			
	DESIGNE	DESIGNED BY: JBB			
	DRAWN BY:	BY: JBB			
	CHECKE	CHECKED BY: PAB			

IERCE DRIVE IMPROV

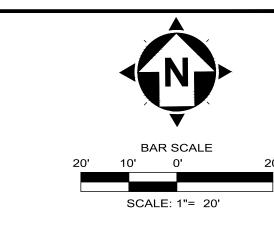
PROJECT NO: 242260 DRAWING NAME C-08 SHEET

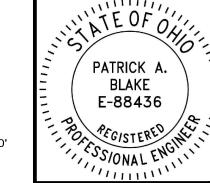


TE OF OH

DRAWING NAME

SHEET 15





	SCALE: AS NOTED	NO REVISION
Т Ш		
	<b>DATE:</b> 6/04/25	
0	DESIGNED BY: JBB	
L (	DRAWN BY: JBB	
	CHECKED BY: PAB	

PIERCE DRIVE STORMWATIMPROVEMENTS
AAHONING COUNTY BOARDMAN, OHIT PROJECT NO:

> 242260 DRAWING NAME

> > C-10

15

SHEET

REPAIR IMPROVEMENTS HOST MATERIAL CIPP CIPP SEWER ID DS MH ID DS MH STA US MH STA LENGTH (FT) DIAMETER (IN) US MH ID POINT REPAIR LENGTH **THICKNESS** NOTES POINT REPAIR STA (MM) (FT) PACKER JOINT INJECTION - 8+38 & 8+60 BO657.08 TO BO657.05 BO657.05 BO657.08 8+86 197' 15" RCP YES YES 197' MEDIUM JOINT OFFSETS 6+89 PACKER JOINT INJECTION -11+32, 11+82, 12+16 & 12+22 YES BO657.09 12+28 15" RCP YES 342' BO657.09 TO BO657.08 BO657.08 8+86 342' 8 SEVERAL MEDIUM/LARGE JOINT OFFSETS

13+00

EX. GAS

CROSSING (REC)

— JOINT SEPARATED LARGE

PIERCE DRIVE STORM SEWER REHABILITATION SCHEDULE

<u> 102</u>0

<u>101</u>5

<u>101</u>0

<u>100</u>5

1000

995

990

13<del>+</del>50

H:\2024\242260\DWG\SHEETS\G\_242260 - PROPOSED BASE BID.DWG - STA 10+00-END - 5/29/2025 10:48:45 AM - JARED BORDNER

PROPOSED CIPP LINING

EX. GRADE OVER CENTER LINE OF EXISTING STORM SEWER

EX. SAN CROSSING (REC) -

PIERCE DR. ALT ONE - PROPOSED REHABILITATION STA: 10+00 - END

12+00

– JOINT SEPARATED MEDIUM –

\_\_ EX. CURB DRAIN

EX. SAN SERVICE

11+00

CONNECTION CROSSING

1<u>020</u>

1<u>015</u>

1<u>010</u>

1<u>005</u>

1<u>000</u>

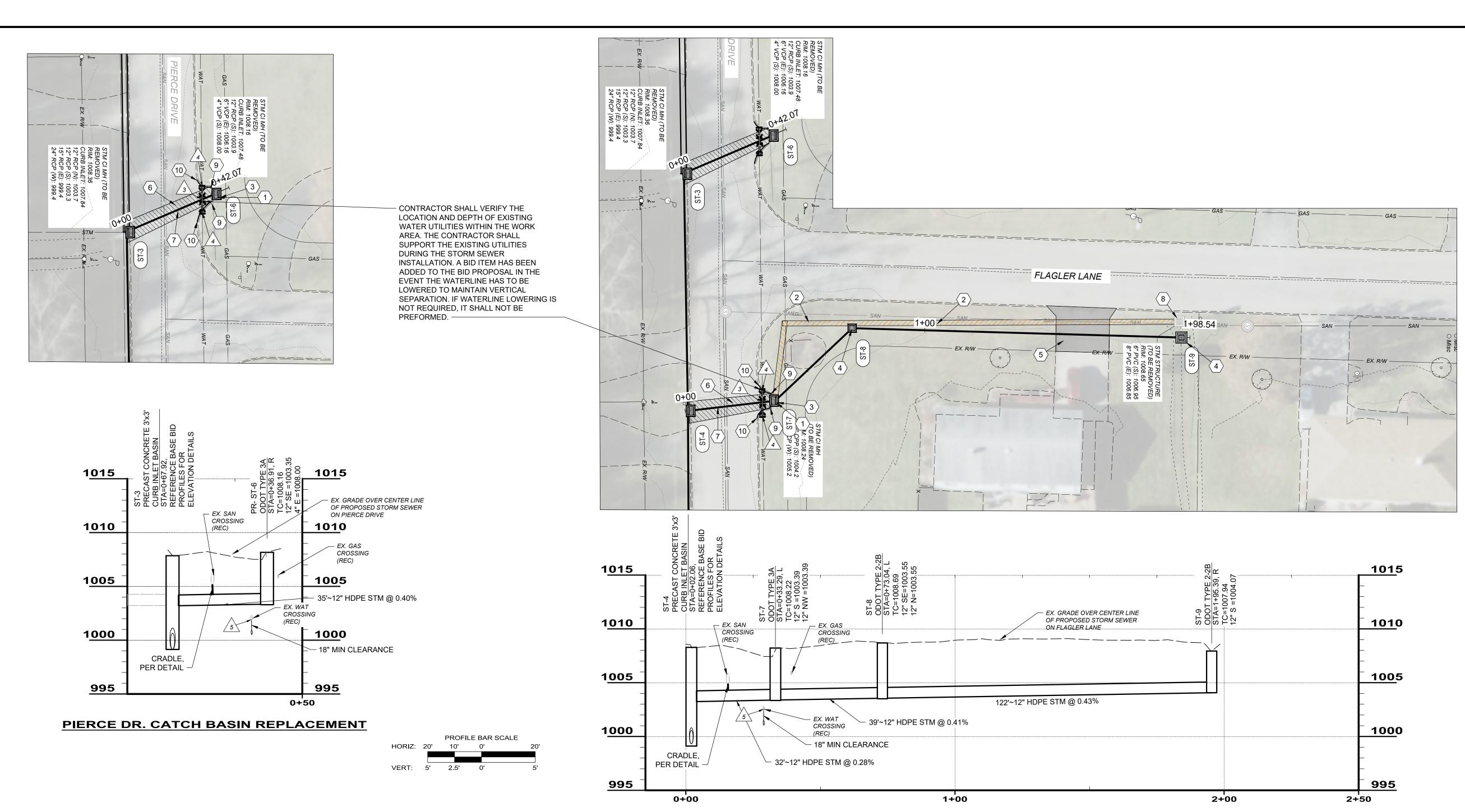
995

990

EX. SAN SERVICE

EX. 12" VCP SAN

CONNECTION CROSSING



# FLAGLER LANE STORM IMPROVEMENTS

# SITE CODED NOTES:

- CONTRACTOR SHALL REMOVE NOTED CATCH BASIN AND RECONNECT ALL ACTIVE EXISTING DRAIN LINES. SEE DETAIL ON SHEET 4.
- 6" STORM SEWER TO BE REMOVED. LOCATION IS APPROXIMATE BASED UPON RECORD AND CCTV DATA. CONTRACTOR SHALL CONFIRM ALIGNMENT TO PIERCE DRIVE IN THE FIELD.
- $\overline{\langle 3 \rangle}$  PROPOSED ODOT CATCH BASINS NO. 3A. SEE DETAIL ON SHEET 8.
- $\overline{\langle}4\rangle$  PROPOSED ODOT 2-2B CATCH BASIN. SEE DETAIL ON SHEET 7.
- $\langle 5 \rangle$  TYPE "C" ASPHALT PAVEMENT REPLACEMENT, (DRIVEWAY), PER DETAIL. SEE DETAIL ON SHEET 4.
- $\langle 6 \rangle$  TYPE "C" ASPHALT PAVEMENT REPLACEMENT, (ROADWAY), PER DETAIL. SEE DETAIL ON SHEET 4.
- 7 REMOVE AND REPLACE EXISTING 12" STORM SEWER
- $\left\langle 8\right\rangle$  REMOVE EXISTING CATCH BASIN
- 9 BEGIN CURB REPLACEMENT.
- $\left\langle 10 \right\rangle$  END CURB REPLACEMENT. SEE DETAIL ON SHEET 4.

# **SITE GENERAL NOTES:**

- 1. EXISTING UNDERGROUND UTILITY ROUTING IS PER TOPOGRAPHIC SURVEY AND BEST AVAILABLE RECORD PLAN INFORMATION. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING EXISTING UTILITY LOCATIONS AND DEPTHS IN THE FIELD PRIOR TO CONSTRUCTION. IN THE EVENT UTILITY LOCATION DIFFERS IN FIELD FROM PLAN, CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER.
- 2. CONTRACTOR TO RECONNECT ALL ACTIVE EXISTING DRAIN LINES AND ROOF DRAINS, SHOWN OR NOT SHOWN IN THE PLANS, TO THE PROPOSED STORM SEWER SYSTEM SEE 'DRAIN PIPE CONNECTION DETAIL. ANY AND ALL STORM STRUCTURES, PIPES, DRAINS, ETC. NOT ILLUSTRATED IN THE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER AND DYE-TESTED TO DETERMINE THE FLOW PATH.
- 3. ALL INTERFACES BETWEEN PROPOSED CONCRETE CURBING AND ASPHALT PAVEMENT, ASPHALT JOINTS AT PROPOSED SAWCUTS, AND BETWEEN PROPOSED CONCRETE AND ASPHALT SURFACES SHALL BE NEATLY SEALED WITH A RUBBERIZED ASPHALT SEALANT
- 4. CONTRACTOR TO COORDINATE WITH HOMEOWNER(S) AND NOTIFY HOMEOWNER(S) OF TEMPORARY DISTURBANCES TO BE EXPECTED RESULTING FROM CONSTRUCTION INCLUDING START DATES AT LEAST 48 HOURS IN ADVANCE.

# **LEGEND:**





EXISTING 6" STORM SEWER TO BE REMOVED

# **UTILITY RELOCATION NOTES:**

CONTRACTOR SHALL COORDINATE AND COMMUNICATE WITH UTILITY COMPANIES PRIOR TO WORK IN AND AROUND BURIED UTILITIES.

HORIZ: 20' 10'

2.5'

CITY OF YOUNGSTOWN WATERLINE RELOCATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING INSTALLATION AND DISINFECTION. CITY OF YOUNGSTOWN MUST BE ON THE SITE TO COORDINATE WITH HOMEOWNERS, FLUSH, AND SAMPLE THE SYSTEM.

PROFILE BAR SCALE

LOWERING EX 6" WATER LINE, USE 45° LONG SWEEPING BENDS, PLACE NEW 6" DIP WATER LINE (10-LF) W/ POLYWRAP INSIDE 12" DIAMETER STEEL CASING (5 LF) WITH SPACERS. COORDINATE LOWERING WITH YOUNGSTOWN WATER DEPARTMENT. CONTRACTOR SHALL ABIDE BY ALL CERTIFICATIONS, LAWS AND STATE REGULATIONS PERTAINING TO ASBESTOS PIPE CUTTING AND REMOVAL. LOWERING WILL REQUIRE CONTACTING YOUNGSTOWN WATER DEPARTMENT IN ADVANCE TO PLACE USERS UNDER A BOIL ADVISORY.

MAKE NEW WATER PIPE CONNECTION TO EXISTING WATER LINE WITH A YOUNGSTOWN WATER DEPARTMENT APPROVED PIPE COUPLING (TYP 2)

EXISTING WATER LINE TO BE LOWERED TO PROVIDE A MINIMUM 18"
VERTICAL SEPARATION BETWEEN THE WATERLINE AND NEW SEWER.
PROPOSED PIPE ELEVATION SHALL BE APPROVED THE YOUNGSTOWN
WATER DEPARTMENT PRIOR TO RELOCATION.



10'

SCALE: 1"= 20'

verdantas

DESIGNED BY: JBB	Œ	SCALE: AS NOTED DATE: 6/04/25	NO	DATE
		VED BY:		
		CHECKED BY: PAB		

SE DRIVE STORMWATER IMPROVEMENTS

G COUNTY BOARDMAN, OHIO

DR AND FLAGLER LN STORN

REPLACEMENTS

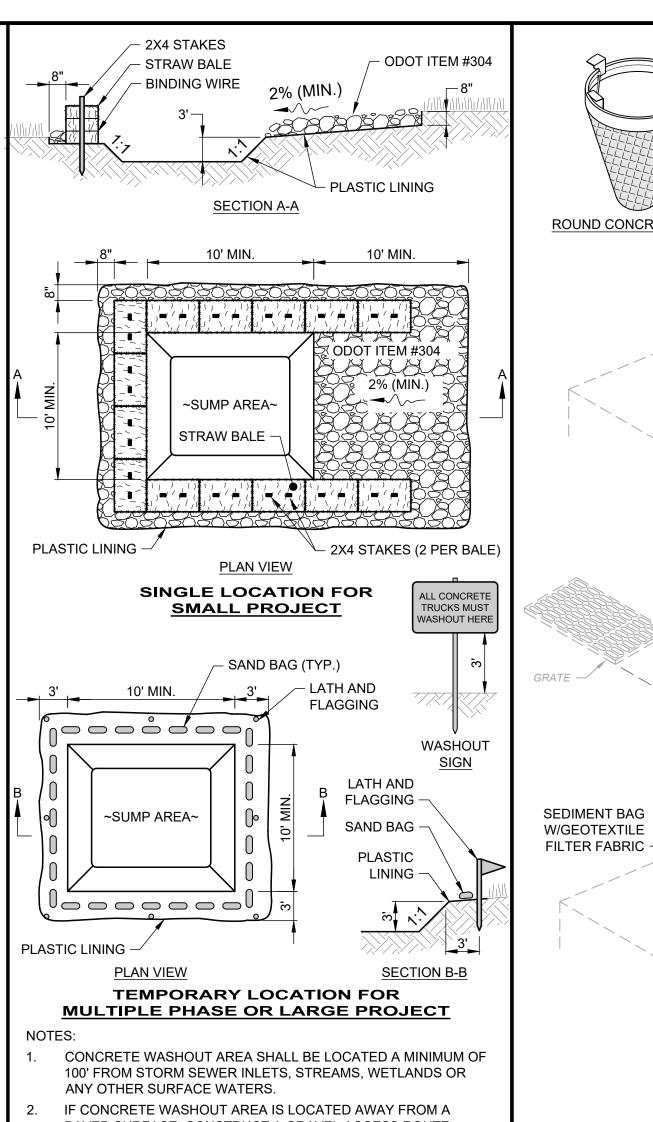
PROJECT NO:

242260

DRAWING NAME

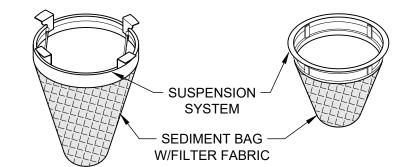
C-11

SHEET OF



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

# **CONCRETE WASHOUT DETAIL** SCALE: NONE



**ROUND CONCRETE BASIN** 

"NYLOPLAST" BASIN

CURB FILTER

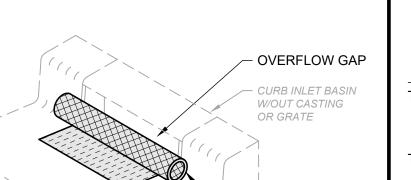
SEDIMENT BAG

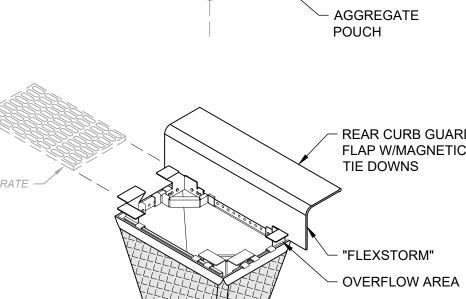
W/GEOTEXTILE

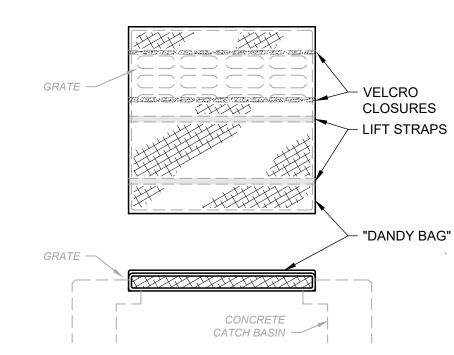
FILTER FABRIC

CURB INLET BASIN

W/CASTING & GRATE







# NOTES:

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

# **INLET PROTECTION DETAIL**

SCALE: NONE

# SITE INFORMATION

# PROJECT INFORMATION:

FULL EXTENT OF ALL OF THE HOMES ON THE SOUTHERN END OF PIERCE DR., 606 PIERCE DR., 566 FLAGLER LN. TOWNSHIP OF BOARDMAN, MAHONING COUNTY, OHIO 44512

# **ENGINEER INFORMATION:**

VERDANTAS LLC 8150 STERLING COURT

MENTOR, OHIO 44060 CONTACT: PATRICK BLAKE, PE PHONE: 440-530-2341

# TYPE OF CONSTRUCTION:

(x) NEW () MAINTENANCE () REDEVELOPMENT

# TYPE OF PROJECT

(x ) UTILITY

BASE BID-

# **DESCRIPTION OF PROJECT:**

REMOVE OF EXISTING 24"-15" STORM SEWER. INSTALL NEW SEWERS FROM WEST SIDE OF PIERCE DRIVE TO THE EAST END OF PIERCE DRIVE. REMOVE 6" & 12" STORM SEWER CROSSING PIERCE DRIVE INSTALL NEW 12" STORM SEWER ACROSS PIERCE AND FLAGLER LANE.

# ALTERNATE ONE-

PERFORM REHABILITATION OF SEGMENT OF EXISTING SEWERS. REMOVE OF EXISTING 24"-15" STORM SEWER. INSTALL NEW SEWERS FROM WEST SIDE OF PIERCE DRIVE TO THE EAST OF 573 PIERCE DRIVE.REMOVE 6" & 12" STORM SEWER CROSSING PIERCE DRIVE. INSTALL NEW 12" STORM SEWER ACROSS PIERCE AND FLAGLER LANE.

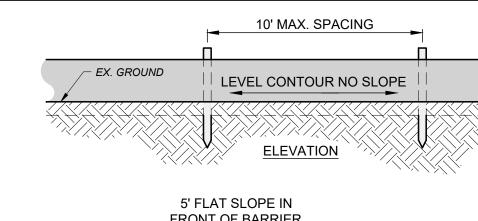
# SOIL DISTURBING ACTIVITIES INCLUDE:

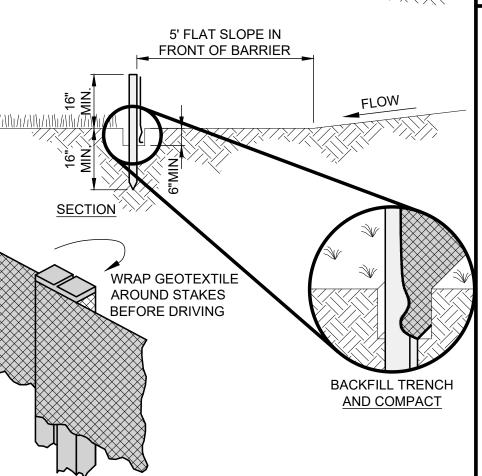
EROSION AND SEDIMENT CONTROL INSTALLATION; REMOVAL OF VEGETATION, TOPSOIL, UTILITIES AND SOIL BENEATH PAVEMENT SUBBASE; EARTHWORK GRADING; AND INSTALL OF NEW UTILITIES

# SITE AREA INFORMATION:

PROJECT LIMIT/CONSTRUCTION AREA: <u>0.20</u> AC. AREA OF SOIL DISTURBANCE 0.10 AC. INCREASE/DECREASE OF IMPERVIOUS AREA:

## NAME OF RECEIVING STREAM, SURFACE WATER OR MS4: BOARDMAN TOWNSHIP MS4 TO UNNAMED DITCH EAST OF LOCKWOOD BLVD.





# JOINING SECTIONS

- SILT FENCE MAY ONLY PASS RUNOFF AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, THEN CHANGE THE LAYOUT OF THE SILT FENCE, REMOVE ACCUMULATED SEDIMENT OR INSTALL OTHER PRACTICES.
- SILT FENCE SHALL BE INSPECTED FOR DEPTH OF SEDIMENT TEARS, VERIFICATION FABRIC IS SECURELY ATTACHED TO FENCE POSTS, AND VERIFICATION FENCE POSTS ARE FIRMLY IN THE GROUND. BUILT UP SEDIMENT SHALL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED 1/3 THE FENCE HEIGHT.

# SILT FENCE DETAIL

SCALE: NONE

# **EROSION CONTROL NOTES**

- SPECIAL MEASURES SHALL BE TAKEN TO STABILIZE DRAINAGE CHANNELS AND STORM WATER OUTFALLS.
  - DIVERT SURFACE RUNOFF AWAY FROM DISTURBED AREAS AND STEEP SLOPES WHEREVER PRACTICABLE.
- STABILIZATION OF DISTURBED AREAS SHALL BE INITIATED WITHIN THE TIME FRAMES IN THE FOLLOWING TABLES:

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY CONTROLS
ANY OTHER AREA TO BE DORMANT MORE THAN 14 DAYS, BUT LESS THAN 1 YEAR	WITHIN 7 DAYS OF MOST RECENT DISTURBANCE
AREA TO REMAIN IDLE OVER WINTER	PRIOR TO ONSET OF WINTER WEATHER
AREA TO BE PAVED	STABILIZE WITH STONE SUBBASE UNTIL PAVED

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY CONTROLS
ANY AREA AT FINAL GRADE	WITHIN 7 DAYS OF REACHING FINAL GRADE

# OTHER WASTE CONTROL NOTES

- CONCRETE TRUCKS ARE NOT PERMITTED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONTO THE GROUND OR INTO STORM INLETS, DITCHES, STREAMS, WETLANDS OR ANY OTHER SURFACE WATERS. ALL EXCESS CONCRETE AND CONCRETE WASHOUT, INCLUDING FROM HAND MIXERS AND LIGHT EQUIPMENT, MUST BE DISPOSED OF IN A CONCRETE WASHOUT AREA TO COLLECT AND HARDEN.
- OFF-SITE TRACKING OF SEDIMENT BY CONSTRUCTION VEHICLES MUST BE MINIMIZED. THE CONTRACTOR SHALL SWEEP ALL ADJACENT ROADS TO REMOVE MUD. DIRT OR ROCK TRACKED FROM THE SITE AT THE END OF EACH WORK DAY OR AS REQUIRED DURING THE DAY. DUMP TRUCKS HAULING MATERIAL FROM THE SITE SHALL BE COVERED WITH A TARPAULIN
- IT IS PROHIBITED TO BURN, BURY OR POUR ONTO THE GROUND OR INTO STORM INLETS, DITCHES, STREAMS, WETLANDS OR ANY OTHER SURFACE WATERS SOLID OR LIQUID WASTE INCLUDING TRASH, CONSTRUCTION DEBRIS, SOLVENTS, PAINT, DIESEL FUEL GASOLINE, MOTOR OIL, HYDRAULIC FLUID, CEMENT CURING COMPOUND, ANTIFREEZE OR OTHER TOXIC OR HAZARDOUS WASTE. WASTE MATERIALS SHALL BE COLLECTED IN A SECURELY LIDDED DUMPSTER, DISPOSED OF IN AN APPROVED LANDFILL AND EMPTIED AS NECESSARY.
- FUEL TANKS, DRUMS AND OTHER CONTAINERS HOLDING CHEMICALS MUST BE STORED WITHIN A DIKED AREA WITH A VOLUME OF AT LEAST 110% OF THE LARGEST TANK. A DIKED AREA IS NOT NECESSARY IF A SELF-CONTAINED SPILL PROOF
- SIZE, MUST BE REPORTED WITHIN 30 MINUTES TO THE LOCAL FIRE DEPARTMENT AND OHIO EPA. CONTAMINATED SOIL, SOIL WHERE CONSTRUCTION CHEMICALS

ANY TOXIC OR HAZARDOUS MATERIAL SPILL, REGARDLESS OF

- HAVE BEEN SPILLED OR HAZARDOUS WASTE MATERIALS MUST BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS
- STORM WATER THAT COMES IN CONTACT WITH CONTAMINATED SOIL OR HAS A VISIBLE SHEEN MUST BE COLLECTED BY A VACUUM TRUCK AND DISPOSED OF AS A WASTE WATER.

# **GENERAL NOTES**

- THE CONTRACTOR SHALL REVIEW AND FOLLOW THE PRACTICES AND REQUIREMENTS PROVIDED IN THE CURRENT. ACTIVE OHIO EPA NPDES PERMIT NO. 3IN00000\*HD.
- THIS SWP3 HAS BEEN PREPARED SHOWING THE ITEMS LISTED BELOW, BUT THE CONTRACTOR MAY NEED TO MOVE OR ADD ITEMS AS CONSTRUCTION PROGRESSES OR DURING THE VARIOUS STAGES OF CONSTRUCTION.
- LIMITS OF EARTH DISTURBING ACTIVITY
- EROSION AND SEDIMENT CONTROL MEASURES
- INLET PROTECTIONS
- CONCRETE WASHOUT PIT
- ANY OTHER EROSION CONTROL REQUIRED
- ALL WORK REQUIRED TO IMPLEMENT THE SW3P INCLUDING INSPECTION FEES, MAINTENANCE AND REPAIRS SHALL BE DONE BY AND AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL AMEND THE SW3P WHEN THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE THAT REQUIRES INSTALLATION OF BMPS OR MODIFICATION TO EXISTING BMPS.
- THE CONTRACTOR SHALL FOLLOW THE PRACTICES AND REQUIREMENTS PROVIDED IN THE OHIO EPA NPDES CONSTRUCTION SITE STORMWATER GENERAL PERMIT OHC00000 AND THE ODNR RAINWATER AND LAND DEVELOPMENT MANUAL. THE CONTRACTOR SHALL SELECT INDIVIDUALS TO BE
- RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND COMPLETING INSPECTION AND MAINTENANCE REPORTS. THE CONTRACTOR SHALL COMPLETE A "DELEGATION OF AUTHORITY FOR STORMWATER POLLUTION PREVENTION PLAN" AND PROVIDE A COPY TO THE OWNER AND SWCD.
- ALL PROCEDURES AND REQUIREMENTS CONTAINED IN THIS SW3P APPLY TO ALL GENERAL AND SUBCONTRACTORS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT, INFORM, REQUIRE AND ENFORCE ALL ASPECTS AND PROCEDURES OF THE SW3P. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS THAT ARE OR MAY BE ENGAGED IN ACTIVITIES THAT COULD IMPACT STORMWATER COMPLETE A "SUBCONTRACTOR AGREEMENT FOR EROSION AND SEDIMENT CONTROL", AND PROVIDE A COPY TO THE OWNER AND SWCD AS NEEDED. EACH CONTRACTOR SHALL ACCEPT FULL RESPONSIBILITY FOR ALL FINES, DAMAGES AND LIABILITY RESULTING FROM FAILURE TO PROVIDE THE REQUIRED POLLUTION CONTROL.
- THE CONTRACTOR SHALL KEEP ON-SITE COPIES OF THE, SW3P AND INSPECTION LOGS/REPORTS.

ALL EROSION AND SEDIMENT CONTROL WORK SHALL BE SUBJECT

- MAINTENANCE REQUIREMENTS
- BMPS SHALL BE MAINTAINED IN GOOD WORKING ORDER UNTIL UPSLOPE AREAS THEY CONTROL ARE STABILIZED.
- THE CONTRACTOR SHALL PROVIDE A QUALIFIED PERSON KNOWLEDGEABLE IN THE PRINCIPLES AND PRACTICES OF EROSION AND SEDIMENT CONTROLS, POSSESS THE TECHNICAL SKILLS TO ASSESS SITE CONDITIONS THAT COULD IMPACT STORM WATER QUALITY, AND CAN ASSESS THE
- EFFECTIVENESS OF ANY BMP SELECTED. TO DETERMINE IF THE SWP3 WAS PROPERLY IMPLEMENTED. THE QUALIFIED PERSON MUST PREPARE A WRITTEN REPORT AFTER EACH INSPECTION SUMMARIZING INSPECTION RESULTS
  - DATE OF INSPECTION

INCLUDING THE FOLLOWING:

- NAME AND QUALIFICATION OF THE INSPECTOR
- WEATHER CONDITIONS
- LOCATIONS WHERE IN-STREAM OR OFF-SITE SEDIMENTATION OR OTHER POLLUTANTS WERE
- LOCATIONS OF BMPS NEEDING MAINTENANCE. LOCATIONS OF BMPS FAILING TO OPERATE CORRECTLY
- OR PROVIDE ADEQUATE PROTECTION. LOCATION OF AREAS IN NEED OF ADDITIONAL BMPS NOT IN PLACE AT THE TIME OF INSPECTION.
- CORRECTIVE ACTIONS REQUIRED, CHANGES TO THE SW3P AND IMPLEMENTATION DATES.
- EROSION AND SEDIMENT CONTROL AMENDMENT LOG ALL INCIDENCES OF NON-COMPLIANCE MUST BE IDENTIFIED IN THE REPORT. IF A REPORT DOES NOT IDENTIFY INCIDENCES OF NON-COMPLIANCE, IT MUST CONTAIN A CERTIFICATION THE SITE IS IN COMPLIANCE AT THE TIME OF INSPECTION.
- THE INSPECTION FREQUENCY MAY BE REDUCED TO 1 TIME PER MONTH IF THE ENTIRE SITE IS TEMPORARILY STABILIZED OR RUNOFF IS UNLIKELY DUE TO WINTER WEATHER (I.E. SUSTAINED SNOW COVER OR FROZEN GROUND CONDITIONS). A WAIVER OF INSPECTION REQUIREMENTS IS AVAILABLE UNTIL 1 MONTH BEFORE THAWING CONDITIONS ARE EXPECTED IF ALL THE FOLLOWING CONDITIONS ARE MET:
- FROZEN CONDITIONS ARE ANTICIPATED TO CONTINUE FOR EXTENDED PERIODS OF TIME (I.E. MORE THAN 1 MONTH).

# SEQUENCE OF MAJOR **CONSTRUCTION ACTIVITIES**

- CONTRACTOR SUBMITS CONSTRUCTION SCHEDULE FOR **CONSTRUCTION ACTIVITIES**
- 2. BEGIN INSPECTION, MAINTENANCE, RECORD KEEPING AND SITE POSTING OF BMPS.
- ESTABLISH STAGING AREA AND NON-SEDIMENT BMPS.
- 4. INSTALL SILT FENCE, INLET PROTECTION
- INSTALL OTHER TEMPORARY EROSION AND SEDIMENT CONTROL ITEMS AS SOON AS POSSIBLE, BUT NO LATER THAN 7 DAYS AFTER FIRST SOIL DISTURBANCE. INSPECT AND MAINTAIN BMPS FOR THE PROJECT DURATION UNTIL UPSLOPE AREAS ARE PERMANENTLY STABILIZED.
- BEGIN SITE DEMOLITION AND CONSTRUCTION.
- BEGIN EARTHWORK OPERATIONS.
- APPLY TEMPORARY SEED.
- 9. INSTALL STORM SEWERS AND INLETS.
- 10. INSPECT AND CLEAN EXISTING AND NEW STORM SEWERS AND
- APPLY PERMANENT SEED.
- 12. INSTALL LANDSCAPING.
- 13. CONTINUE INSPECTIONS, MAINTENANCE, RECORD KEEPING, AND SITE POSTING UNTIL FINAL STABILIZATION ACHIEVED.
- 14. REMOVE TEMPORARY BMPS FROM STORM SEWER AND INLETS, AND OPEN GUTTERS AND DITCHES TO OBTAIN FREE DRAINAGE.
- 15. DISPOSE OF ALL DEBRIS AND WASTE MATERIAL

# **EROSION CONTROL TIMETABLE**

=							ΥE	AR					
006	STABILIZATION TYPE	J	F	М	Α	М	J	J	Α	s	0	N	D
	TEMPORARY SEEDING			0	0	8	8	8	8	0	0		
	PERMANENT SEEDING				0	8	8	8	8	0	0		
	SODDING			8	8	8	8	8	8	8	8		
	MULCHING	0	0	0	0	0	0	0	0	0	0	0	0
	PAVING					0	0	0	0	0	0	0	
	·												

**⊗** IRRIGATION NEEDED

# **SEDIMENT CONTROL NOTES**

- INLET PROTECTION AND SEDIMENT BARRIERS MUST BE INSTALLED PRIOR TO CLEARING AND GRUBBING.
- PERIMETER SEDIMENT BARRIERS MUST BE INSTALLED AS THE FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF CLEARING AND GRUBBING, AND CONTINUE TO FUNCTION UNTIL ALL DISTURBED UPLAND AREAS ARE STABILIZED.
- SEDIMENT CONTROLS MUST POND RUNOFF TO BE CONSIDERED FUNCTIONAL.
  - TRENCH AND GROUND WATER FREE FROM SEDIMENT OR OTHER POLLUTANTS MAY BE DISCHARGED WITHOUT TREATMENT, PROVIDED THIS WATER DOES NOT BECOME POLLUTANT-LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES.
- 5. SETTLED MATERIAL SHALL BE DISPOSED OF IN A STABILIZED LOCATION WHERE IT WILL NOT BE CARRIED OFF-SITE OR INTO A STORM SEWER BY RAINFALL



PROJECT NO: 242260 DRAWING NAME C-12

15

SHEET