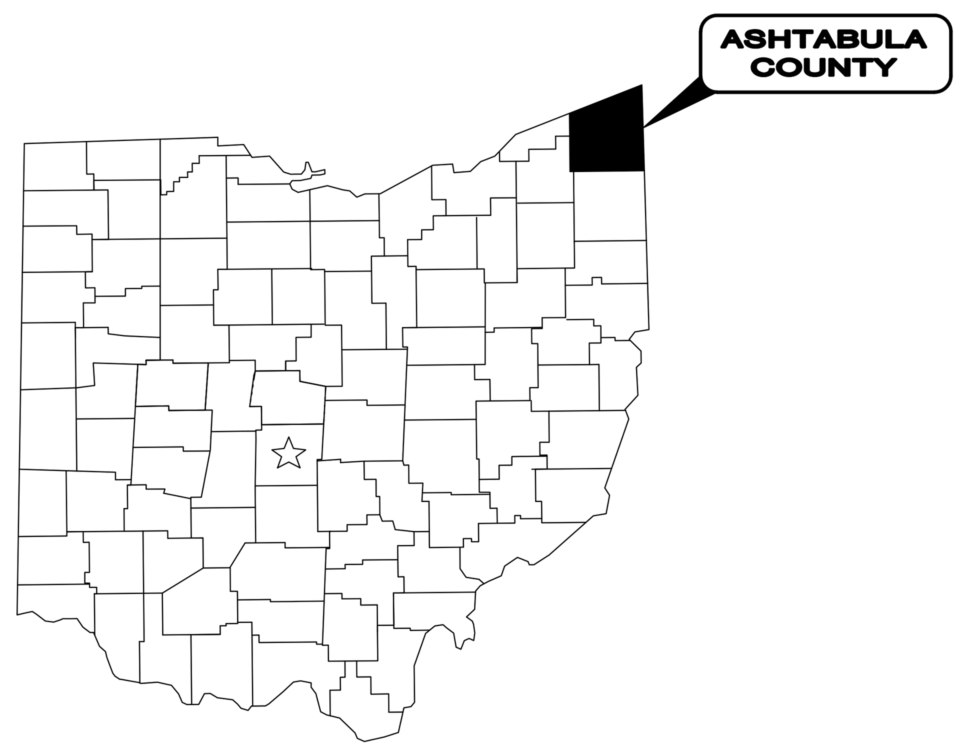
ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES

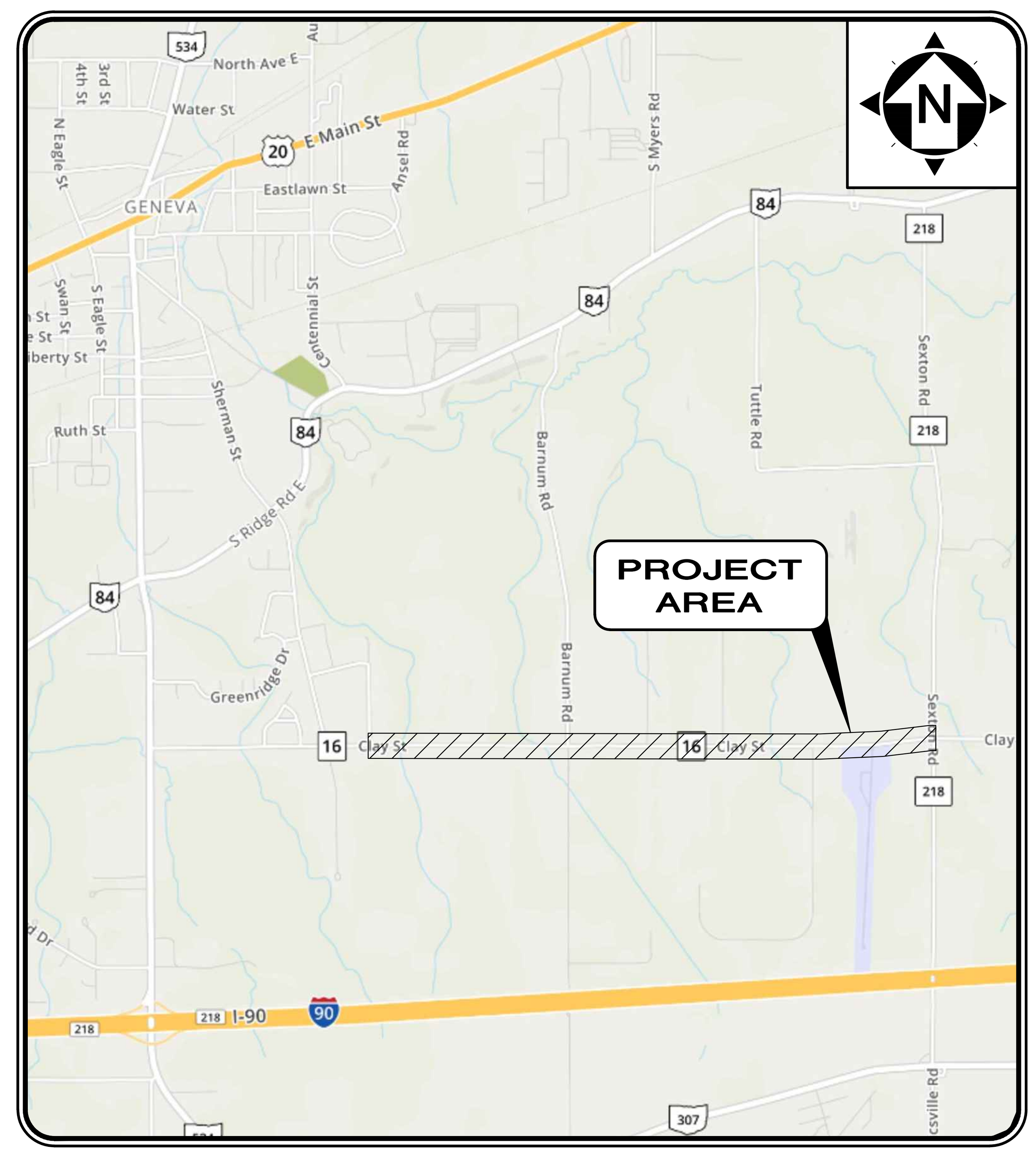
CLAY STREET WATERLINE IMPROVEMENTS PROJECT

HARPERSFIELD & AUSTINBURG TOWNSHIPS

ACDES 2019-W-01
ARC FUNDED S-P-18-1AD-1



APRIL, 2020



LOCATION MAP
NOT TO SCALE

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ASHTABULA COUNTY APPROVALS:

COUNTY COMMISIONER — KATHRYN L. WHITTINGTON — DATE

COUNTY COMMISIONER — CASEY R. KOZLOWSKI — DATE

COUNTY COMMISIONER — J.P. DUCRO IV — DATE

DIRECTOR, ACDES — KYLE BUTCHER — DATE

ENGINEER/ARCHITECT:

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

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NOTE:

THE SURVEY SHOWN ON THESE PLANS WAS OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR ANY OTHER PURPOSE.

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STATE OF OHIO ★ LESLEY A. GORDON 72293 REGISTERED PROFESSIONAL ENGINEER

Lesley Gordon — April 7, 2020

LESLEY A. GORDON — P.E. No. 72293 — DATE

ENGINEER'S PROJECT No. 190709

STATE OF OHIO ★ LESLEY A. GORDON 72293 REGISTERED PROFESSIONAL ENGINEER

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NO	REVISION	DATE
		12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
CHECKED BY:	LAG

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY AUSTINBURG, OHIO

COVER SHEET

PROJECT NO. 190709
DISCIPLINE CIVIL
SHEET NAME 01G-00
SHEET 01 OF 25

EXISTING LINETYPES

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

EXISTING LINETYPES

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

PROPOSED LINETYPES

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

EXISTING SYMBOLS

SANITARY MANHOLE	S
SANITARY CLEANOUT	
SANITARY LINE CAP	
SANITARY LINE PAINT MARKING	
SANITARY STRUCTURE NUMBER	00
SANITARY VENT PIPE	V
STORM MANHOLE (SOLID LID)	D
STORM MANHOLE (OPEN GRATE)	
CURB INLET	
CURB INLET (DOUBLE)	
CATCH BASIN	
CATCH BASIN (ROUND LID)	
CATCH BASIN (DOME)	
CATCH BASIN (SIDE INLET)	
DRAIN	
DOWNSPOUT	
STORM CLEANOUT	
STORM LINE CAP	
STORM ENDWALL	
STORM HEADWALL	
STORM LINE PAINT MARKING	
STORM STRUCTURE NUMBER	00
ROCK CHANNEL PROTECTION	
SURFACE DRAINAGE FLOW	
STORM FLOOD ROUTING ARROW	
FIRE HYDRANT	
WATER SIAMESE CONNECTION	
WATER VALVE	
WATER VALVE BOX	
WATER METER	WM
WATER METER PIT	WMP
WATER LINE REDUCER	
WATER LINE CAP	
WATER LINE PLUG	
WATER LINE PAINT MARKING	
POST INDICATOR VALVE	PIV
WATER MANHOLE	W
WATER FLUSHING ASSEMBLY	
WATER FIXTURE	
WATER FITTING (TEE)	
WATER FITTING (CROSS)	
WATER FITTING (45° WYE)	
WATER FITTING (11.25°)	
WATER FITTING (22.50°)	
WATER FITTING (45°)	
WATER FITTING (90°)	
IRRIGATION SPRINKLER HEAD	
IRRIGATION CONTROL BOX	
IRRIGATION BOX	
STEAM MANHOLE	
STEAM VENT	
COMBINED SEWER MANHOLE	
GAS LIGHT POST (YARD)	
GAS MANHOLE	
GAS VALVE	
GAS VALVE BOX	
GAS _____	
GAS METER	GM
GAS REGULATOR	GR
GAS VENT PIPE	V
GAS LINE PAINT MARKING	
GAS LINE FIXTURE	
GAS _____	
ELECTRIC LIGHT POST (YARD)	
ELECTRIC MANHOLE	E
ELECTRIC PULL BOX	PB
ELECTRIC CONTROL BOX	CTL
ELECTRIC JUNCTION BOX	JCT
ELECTRIC VAULT BOX	VLT
ELECTRIC METER	EM
ELECTRIC PEDESTAL	EP
ELECTRIC RISER BOX	
ELECTRIC TRANSFORMER	TR
ELECTRIC HVAC UNIT	AC
ELECTRIC GROUND LIGHT	
ELECTRIC LINE PAINT MARKING	
CABLE TV MANHOLE	C
CABLE TV PEDESTAL	CP
CABLE TV PAINT MARKING	
TELEPHONE MANHOLE	T
TELEPHONE PULL BOX	PB
TELEPHONE PEDESTAL	TP
TELEPHONE RISER BOX	TR
TELEPHONE LINE PAINT MARKING	

EXISTING SYMBOLS

TELEPHONE PAY PHONE	
FIBER OPTIC CABLE MANHOLE	
FIBER OPTIC CABLE PAINT MARKING	
TRAFFIC CONTROL MANHOLE	TR
TRAFFIC CONTROL BOX	TC
TRAFFIC CONTROL PAINT MARKING	
TRAFFIC PULL BOX	
TRAFFIC SIGNAL PEDESTAL	
UNKNOWN, PULL BOX	
UNKNOWN, CLEANOUT	
UNKNOWN, MANHOLE	U
UNKNOWN, VALVE	
MONITORING WELL	MW
TEST WELL	TW
WATER WELL	WW
SOIL BORING	
SWAMP	
POLE, ELECTRIC	
POLE, TELEPHONE	
POLE, LIGHT	
POLE, LIGHT, DECORATIVE	
POLE, LIGHT–OVERHEAD	
POLE, CABLE TV	
POLE, UTILITY	
POLE, GENERAL	
POLE, TRAFFIC CONTROL	
POLE, GUY	
POLE, BRACE	
POLE, ELECTRIC/TELEPHONE	
POLE, ELECTRIC W/LIGHT	
POLE, ELECTRIC/CABLE TV	
POLE, ELECTRIC/TELEPHONE/LIGHT	
POLE, ELECTRIC/TELEPHONE/CABLE TV	
POLE, ELEC./TELE./LIGHT/CABLE TV	
POLE, TELEPHONE/LIGHT	
POLE, TELEPHONE/CABLE TV	
POLE, TELEPHONE/LIGHT/CABLE TV	
POLE, CABLE TV W/LIGHT	
POLE, GUY WIRE	
SIGN	
SIGN, DOUBLE SIDED	
SIGN, DUAL POST	
SIGN, RAILROAD	
POST	
BOLLARD	
DELINEATOR POST	
PARKING BUMPER BLOCK	
HANDICAP PARKING SYMBOL	
HANDICAP PARKING SYMBOL	
HANDICAP DETECTABLE WARNING	
MAILBOX	
PAPERBOX	
PARKING METER	
GRAVE HEADSTONE	
EX. BARBEQUE GRILL	BBQ
FUEL PUMP	FUEL
FLAG POLE	
RAISED PAVEMENT MARKER	
GUARDRAIL, CENTER POST	
GUARDRAIL, TERMINAL POST	
GUARDRAIL, BOTTOM POST	
GUARDRAIL, TOP POST	
FENCE POST	
PICNIC TABLE	
BENCH	
DECIDUOUS TREE	
EVERGREEN TREE	
STUMP	
BUSH	
IRON PIN FOUND	
SOLID IRON PIN FOUND	
IRON PIPE FOUND	
DRILL HOLE FOUND	
CHISELED "X" FOUND	
MONUMENT BOX FOUND	
MONUMENT CONCRETE FOUND	
MONUMENT RIGHT–OF–WAY FOUND	
PK NAIL FOUND	
MAG NAIL FOUND	

EXISTING SYMBOLS

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

PROPOSED SYMBOLS

SANITARY MANHOLE	S
SANITARY MANHOLE, ADJUST	
SANITARY CLEANOUT	
SANITARY LINE CAP	
SANITARY STRUCTURE NUMBER	00
SANITARY VENT PIPE	V
STORM MANHOLE (SOLID GRATE)	D
STORM MANHOLE (OPEN GRATE)	
STORM MANHOLE, ADJUST	
CURB INLET	
CURB INLET (DOUBLE)	
CURB INLET, ADJUST	
CURB INLET (DOUBLE), ADJUST	
CATCH BASIN	
CATCH BASIN (SOLID)	
CATCH BASIN, ADJUST	
CATCH BASIN (SIDE INLET)	
DRAIN	
DOWNSPOUT	
STORM CLEANOUT	
STORM LINE CAP	
STORM HEADWALL	
STORM STRUCTURE NUMBER	00
ROCK CHANNEL PROTECTION	
SURFACE DRAINAGE FLOW	
SURFACE DRAINAGE FLOW	
STORM FLOOD ROUTING ARROW	
FIRE HYDRANT	
FIRE HYDRANT, ADJUST	
WATER SIAMESE CONNECTION	
WATER VALVE	
WATER VALVE BOX	
WATER METER	WM
WATER LINE REDUCER	
WATER LINE CAP	
WATER LINE PLUG	
POST INDICATOR VALVE	PIV
WATER MANHOLE	W
WATER CORPORATION STOP	
WATER FLUSHING ASSEMBLY	
WATER METER	WM
GAS LIGHT POST (YARD)	
GAS MANHOLE	G
GAS MANHOLE	
GAS VALVE	
GAS METER	GM
GAS REGULATOR	GR
GAS VENT PIPE	V
ELECTRIC LIGHT (GROUND)	
ELECTRIC LIGHT POST (YARD)	
ELECTRIC MANHOLE	E
ELECTRIC MANHOLE, ADJUST	
ELECTRIC PULL BOX	PB
ELECTRIC CONTROL BOX	CTL
ELECTRIC JUNCTION BOX	JCT
ELECTRIC VAULT BOX	VLT
ELECTRIC METER	EM
ELECTRIC PEDESTAL	EP
ELECTRIC TRANSFORMER	TR
ELECTRIC AIR CONDITION UNIT	AC
POLE, ELECTRIC	P
POLE, TELEPHONE	T
POLE, LIGHT	L
POLE, LIGHT, DECORATIVE	
POLE, LIGHT–OVERHEAD	
POLE, CABLE TV	C
POLE, UTILITY	U
POLE, GENERAL	

PROPOSED SYMBOLS

POLE, TRAFFIC CONTROL	TP
POLE, GUY	GP
POLE, BRACE	BP
POLE, ELECTRIC/TELEPHONE	PT
POLE, ELECTRIC W/LIGHT	PL
POLE, ELECTRIC/CABLE TV	PC
POLE, ELEC./TELE./LIGHT	PTL
POLE, ELEC./TELE./CABLE TV	PTC
POLE, ELEC./TELE./LIGHT/CABLE	PTLC
POLE, TELEPHONE/LIGHT	TL
POLE, TELEPHONE/CABLE TV	TC
POLE, TELE./LIGHT/CABLE TV	TLC
POLE, CABLE TV W/LIGHT	CL
POLE, FLAG	
GUY WIRE	
POST, SIGN (SINGLE SIDED)	
POST, SIGN (DOUBLE SIDED)	
POST, SIGN (DUAL POST)	
POST (GENERAL)	
BOLLARD	
DELINEATOR POST	
FENCE POST	
PARKING COUNT	00
PARKING BUMPER BLOCK	
HANDICAP PARKING SYMBOL	
HANDICAP DETECTABLE WARNING	
MAILBOX	MB
PAPERBOX	PB
PARKING METER	P
STREET SIGN	
TRAFFIC CONTROL MANHOLE	TR
TRAFFIC CONT. MANHOLE (ADJ)	
TRAFFIC CONTROL BOX	TRAF
TRAFFIC PULL BOX	PB
TRAFFIC SIGNAL PEDESTAL	TP
INLET PROTECTION	
STRAW BALE CHECK DAM	
TREE (DECIDUOUS)	
TREE (EVERGREEN)	
BUSH	

ABBREVIATIONS

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

ABBREVIATIONS

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

STATE OF OHIO · LESLEY GORDON 72293 · REGISTERED PROFESSIONAL ENGINEER

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
	.	

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
CHECKED BY:	LAG

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

LEGENDS, SYMBOLS & LIST OF ABBREVIATIONS

PROJECT NO. 190709
DISCIPLINE: CIVIL
SHEET NAME: 01G-01
SHEET 02 OF 25

C:\CIVIL 3D PROJECTS\190709\DWG\SHEETS\G_190709_GENERAL NOTES.DWG - 02- 01G-01 - 4/7/2020 1:33:39 PM - PHILIP TATE

GENERAL

1. THE WORK CONTEMPLATED UNDER THIS CONTRACT COMPRISES THE FURNISHING AND INSTALLATION OF A WATER MAIN COMPLETE WITH VALVES, OTHER APPURTENANCES, AND THE PERFORMANCE OF OTHER INCIDENTAL WORK.

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. ALL WORK COMPLETED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.

4. A PRE–CONSTRUCTION MEETING SCHEDULED BY THE ENGINEER SHALL BE HELD PRIOR TO ANY WORK STARTING. IN ADDITION, THE CONTRACTOR SHALL PROVIDE 48 HOUR NOTICE TO THE ENGINEER, PRIOR TO THE COMMENCEMENT OF WORK.

4. ACCESS TO ALL DRIVEWAYS WILL BE MAINTAINED AT ALL TIMES EXCEPT THE TIME WHEN WATER MAIN INSTALLATION AND PAVEMENT REPLACEMENT WILL NOT PERMIT.

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, LIGHTING, FLAGGERS, SIGNING AND OTHER TRAFFIC CONTROLS TO INSURE THE SAFETY OF PERSONS AND VEHICLES DURING CONSTRUCTION WITHIN THE PROJECT LIMITS.

6. THE CONTRACTOR SHALL PROVIDE A PRE–CONSTRUCTION VIDEO SURVEY OF THE ENTIRE PROJECT AREA.

7. ANY DEFECT IN MATERIAL OR WORKMANSHIP REVEALED BY INSPECTION MUST BE CORRECTED BY THE CONTRACTOR AT NO COST TO THE COUNTY AND TO THE FULL SATISFACTION OF THE COUNTY AND ENGINEER BEFORE ACCEPTANCE OF THE WORK AND RELEASE OF FINAL ESTIMATE AND PAYMENT THEREOF.

8. THE CONTRACTOR WILL BE RESPONSIBLE FOR SECURING A SITE FOR DISPOSAL OF ALL EXCAVATED MATERIAL THAT IS UNSUITABLE FOR USE AS BACKFILL AND ALL OTHER EXCESS EXCAVATED MATERIALS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH THE LOCATION OF THE DISPOSAL SITE AND WRITTEN PERMISSION FOR USE OF THE SITE FROM THE PROPERTY OWNER. THE COST FOR SECURING AND MAINTAINING THE DISPOSAL SITE WILL BE INCLUDED IN THE UNIT PRICES STIPULATED FOR THE VARIOUS ITEMS IN THE BID PROPOSAL.

9. ALL OVER–THE–ROAD VEHICLES USED ON THE PROJECT BY ALL CONTRACTORS AND SUBCONTRACTORS WILL BE CLEARLY MARKED SHOWING ITS COMPANY AFFILIATION.

10. 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.

11. 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.

12. THE CONTRACTOR SHALL NOTIFY THE VILLAGE OF GENEVA–ON–THE–LAKE POLICE AND FIRE DEPARTMENTS, AND THE ASHTABULA COUNTY ENGINEER AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSING OR TRAFFIC CHANGE.

13. MAINTAINING TRAFFIC SHALL BE IN ACCORDANCE WITH ODOT ITEM 614 AND THE OHIO MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE OPERATIONS – REVISION 20.

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

15. ALL AREAS DISTURBED BY THE CONSTRUCTION OF THE PROJECT SHALL BE RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR PRIOR TO ACCEPTANCE BY THE OWNER.

14. THE ENGINEER SHALL PROVIDE A STAKING COORDINATE PLAN FOR ALL STRUCTURES.

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 BACKFILL WILL BE AS DESCRIBED IN SPECIFICATION SECTION 02300CT "EARTHWORK."

   THE OWNER AND THE ENGINEER DO NOT GUARANTEE NOR SUGGEST THE IN–SITU MATERIAL TO BE EXCAVATED WILL BE SUITABLE OR IN ITS PRESENT STATE WILL CONSIST OF THE PROPER MOISTURE CONTENT TO ACHIEVE THE COMPACTION REQUIREMENTS. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AS TO THE BACKFILL MATERIAL HE WILL USE. 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 REQUIREMENTS OF SECTION 02300 "EARTHWORK".

3. SLAG PRODUCTS OR CRUSHED CONCRETE WILL NOT BE PERMITTED FOR BEDDING, BACKFILL, OR TRAFFIC COMPACTED SURFACE.

4. ALL UTILITY LINES CROSSING THE NEW WATERLINE TRENCH, (i.e. STORM SEWERS, SANITARY SEWERS, 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 TRENCH. 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. BACKFILL UNDER DRIVEWAYS SHALL CONSIST OF ODOT #304 LIMESTONE COMPACTED WITH MACHINE MOUNTED COMPACTION EQUIPMENT TO 100% OF MAXIMUM DRY LABORATORY DENSITY PER DETAIL. SUITABLE EXCAVATED MATERIAL MAY BE UTILIZED FOR TRENCH BACKFILL IN AREAS OUTSIDE THREE (3') FEET OF PAVEMENT. COMPACTION SHALL BE BY SUITABLE MECHANICAL EQUIPMENT AND SHALL CONFORM TO ODOT.

6. ANY COMPACTION TESTING REQUIRED AT THE SOLE DISCRETION OF THE COUNTY ENGINEER SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

7. BACKFILL UNDER ALL STREET PAVEMENT SHALL BE COMPACTED 304 LIMESTONE IN ACCORDANCE WITH THE TRENCH AND BEDDING DETAIL.

8. BACKFILL IN ALL SEWER OR WATER MAIN TRENCHES OR OTHER EXCAVATIONS IN AREAS NOT DESIGNATED AS "SPECIAL COMPACTED GRANULAR BACKFILL" SHALL BE SELECT EXCAVATED MATERIAL THOROUGHLY TAMPED IN DEPTHS OF LAYERS NOT TO EXCEED 12 INCHES. NO BACKFILLING OF ANY TRENCHES OR EXCAVATIONS SHALL BE PERMITTED WITHOUT TAMPING EQUIPMENT BEING USED.

9. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND MANAGEMENT OF ALL GROUNDWATER AND SURFACE WATER AS NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS. ALL CONDUIT SHALL BE INSTALLED IN A DRY AND STABLE TRENCH.

MONUMENT PROTECTION

1. PROPERTY PINS AND MONUMENTS ALONG THE ROUTE OF THE IMPROVEMENT, WHICH MAY BE DISTURBED BY THE CONTRACTOR, SHALL BE REFERENCED BY A PROFESSIONAL SURVEYOR, SO THEY CAN BE REPLACED IN THE EVENT THAT THEY ARE DISTURBED DURING CONSTRUCTION. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT ALL PINS, MONUMENTS AND REFERENCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF LOCATING AND REFERENCING AND REPLACING THE PROPERTY PINS AND MONUMENTS.

TREE PROTECTION

1. SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGE TO TREES AND THEIR ROOT SYSTEM. THE OPERATION OF ALL EQUIPMENT, PARTICULARLY WHEN EMPLOYING BOOMS, THE STORAGE OF MATERIALS AND THE DISPOSITION OF EXCAVATED MATERIALS SHALL BE CONDUCTED IN A MANNER WHICH WILL NOT INJURE TREES, TRUNKS, BRANCHES OR THEIR ROOTS UNLESS SUCH TREES ARE DESIGNATED BY THE ENGINEER FOR REMOVAL.

MAILBOXES, FENCES, NEWSPAPER BOXES OR STREET SIGNS AND SUPPORTS

1. WHEN MAILBOXES, FENCES, NEWSPAPER BOXES OR STREET SIGNS AND SUPPORTS INTERFERE WITH CONSTRUCTION, THE CONTRACTOR SHALL REMOVE AND ERECT THEM IN A TEMPORARY LOCATION DURING CONSTRUCTION (EXCEPT FENCES). AFTER COMPLETION OF THE CONSTRUCTION AND BEFORE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL ERECT THE MAILBOXES, FENCES, NEWSPAPER BOXES OR STREET SIGNS AND SUPPORTS IN A PERMANENT LOCATION IN ACCORDANCE WITH THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE WORK SHALL BE INCLUDED IN THE UNIT PRICES BID FOR OTHER ITEMS.

ROADWAY EXCAVATION AND PAVEMENT

1. ALL PAVEMENT REMOVAL AND REPLACEMENT, NEW PAVEMENT AND ASSOCIATED ROADWAY WORK WILL BE IN ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, STANDARD CONSTRUCTION DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS, LASTEST EDITION.

SUBSURFACE CONDITIONS

1. IT IS THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO MAKE HIS OWN INVESTIGATION OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING HIS BID.

STATIONING AND LOCATIONS

1. ALL LOCATIONS AND ITEMS CALLED OUT BY STATION ARE SUBJECT TO ADJUSTMENT IN THE FIELD AS APPROVED BY THE ENGINEER.

EXISTING UTILITIES

1. EACH CONTRACTOR SHALL VISIT THE SITE PERSONALLY TO ASCERTAIN THE NATURE OF THE WORK AND THOROUGHLY FAMILIARIZE HIMSELF WITH THE SITE PRIOR TO BID SUBMISSION.

2. THE DATA SHALL BE VERIFIED IN THE FIELD BY THE CONTRATOR. THE EXISTENCE OF FACILITIES ABOVE OR BELOW GROUND, WHICH MAY NOT BE SHOWN, WILL NOT BE A BASIS FOR A CLAIM FOR EXTRA WORK.

3. THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY FIELD CHECKS, SEARCHES OF AVAILABLE RECORDS AND INFORMATION FURNISHED BY THE UTILITIES CONCERNED. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE OWNER DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

4. 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.

5. 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.

6. DELAYS TO THE CONTRACTOR AS A RESULT OF TIMING OF POLE RELOCATION OR PROTECTION SHALL NOT BE CONSIDERED COMPENSABLE DELAYS, AS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS WORK IN CONFORMANCE TO THE UTILITY COMPANY'S SCHEDULE.

7. NO SEPARATE PAYMENT WILL BE MADE FOR UTILITY SUPPORT, POLE SUPPORT OR POLE RELOCATION. THE CONTRACTOR SHALL INCLUDE THE COST OF UTILITY SUPPORT, POLE SUPPORT AND POLE RELOCATION IN THE UNIT PRICE(S) BID FOR OTHER RELATED ITEMS OF WORK.

8. BEFORE ANY WORK IS STARTED THAT WILL INTERFERE WITH THE EXISTING UTILITIES, THE CONTRACTOR SHALL CALL THE "OHIO UTILITIES PROTECTION SERVICE" AT 1–800–362–2764, FORTY–EIGHT (48) HOURS IN ADVANCE OF THE WORK. NON–MEMBER UTILITIES MUST BE CONTACTED DIRECTLY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS, AT NO ADDITIONAL EXPENSE TO THE OWNER, TO AVOID DAMAGE TO EXISTING UNDERGROUND AND OVERHEAD UTILITY LINES DURING THE ENTIRE PROJECT. 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.

9. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL THE EXISTING GAS, WATER, ELECTRIC, CABLE, TELEPHONE, SANITARY OR OTHER UNDERGROUND UTILITIES PRIOR TO THE INSTALLATION OF ANY PROPOSED IMPROVEMENT INDICATED ON THE PLANS. SHOULD A CONFLICT EXISTING AT A UTILITY CROSSING, THE PROJECT ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

10. GAS SERVICE CONNECTIONS AND STORM/SANITARY SEWER LATERALS ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL LOCATE AND PROTECT CONNECTIONS AND LATERALS DURING CONSTRUCTION AND REPAIR ANY DAMAGE DUE TO CONSTRUCTION. NO ADDITIONAL PAYMENT WILL BE MADE FOR LOCATION, PROTECTION, AND/OR REPAIR.

DRAINAGE, SOIL EROSION, SEDIMENT AND DUST CONTROL

1. ALL SWALES, OR DITCHES DISTURBED OR DESTORYED BY THE CONSTRUCTION ACTIVITIES SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

2. POSITIVE DRAINAGE OF ALL CONSTRUCTION AREAS SHALL BE MAINTAINED AT ALL TIMES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH ODOT ITEM 207 AND AS REQUIRED BY THE ASHTABULA COUNTY SOIL AND WATER CONSERVATION DISTRICT.

4. TEMPORARY OR PERMANENT EROSION CONTROL MATTING PER SPECIFICATION SECTION 01091CT SHALL BE UTILIZED FOR STABILIZATION OF ALL DISTURBED SLOPE AREAS GREATER THAN 2:1 (HORZ:VERT). PERMANENT EROSION CONTROL SHALL BE UTILIZED ON SEVER SLOPES GREATER THAN 1–1/2:1, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

5. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY, SUCH AS CALCIUM CHLORIDE, WATER OR A MOTORIZED DUST–FREE STREET SWEEPING DEVICE, AS DIRECTED BY THE ENGINEER, TO MAINTAIN ALL PAVED AREAS AFFECTED BY THE CONSTRUCTION.

   PAYMENT FOR ALL SOIL EROSION, SEDIMENT AND DUST CONTROL MEASURES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER VARIOUS ITEMS.

GRASS RESTORATION

1. GRASS AREAS TO BE RESTORED SHALL BE SEEDED UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.

2. SEEDING AND/OR SODDING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 02901 OF THE DETAILED SPECIFICATIONS.

3. ALL GRASSED AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY SEEDING AND MULCHING RATHER THAN SODDING UNLESS OTHERWISE SHOWN ON PLANS, DETAILS, OR SPECIFICATIONS.

4. SEEDING AND MULCHING OF ALL DISTURBED AREAS SHALL IMMEDIATELY FOLLOW EXCAVATION AND WATERLINE INSTALLATION OPERATIONS. IN NO CASE SHALL THE LENGTH OF THE UNSEEDED AREA ALONG THE PROJECT BE GREATER THAN 1000 FEET. THE ONLY EXCEPTION TO THIS SHALL BE DURING WINTER WEATHER CONDITIONS.

5. ALL EXPOSED SLOPES ARE TO BE SEEDED AND MULCHED IMMEDIATELY AFTER GRADING WORK IS COMPLETED. IF, IN THE OPINION OF THE ENGINEER, ADDITIONAL EROSION AND SEDIMENTATION CONTROLS ARE REQUIRED, THEY SHALL BE INSTALLED UNDER HIS DIRECTION IN ACCORDANCE WITH APPLICABLE SECTIONS OF ODOT ITEM 207 AND STANDARD CONSTRUCTION DRAWING NO. MC–11.

RESTORATION

1. THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM HIS OPERATION AND RESTORE ALL SURFACES, STRUCTURES, DITCHES AND PROPERTY TO ITS ORIGINAL CONDITION. ANY DITCHES DISTURBED DURING CONSTRUCTION SHALL BE REGRADED BY THE END OF THE SAME WORK DAY.

2. 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

MATERIAL TESTING

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL MATERIAL AND EQUIPMENT TESTING. THE OWNER MAY REQUIRE SUBGRADE COMPACTION TESTING AND CONCRETE QUALITY CONTROL TESTING WHICH WILL BE PAID FOR BY THE CONTRACTOR.

LIMITS OF WORK

1. THE CONTRACTOR'S CONSTRUCTION OPERATIONS ARE CONFINED TO THE AREA WITHIN THE ROAD RIGHT–OF–WAY OR EASEMENT AREA. THE CONTRACTOR SHALL USE THE APPROPRIATE CONSTRUCTION METHODS TO PREVENT DISTURBING ANY AREA OUTSIDE THE ROAD RIGHT–OF–WAY OR EASEMENT AREA.

MATERIAL STORAGE

1. ALL EXCAVATED MATERIAL AND ALL MATERIAL USED IN CONSTRUCTION OF THE WORK SHALL BE STORED IN A MANNER THAT WILL NOT ENDANGER THE WORK AND THAT WILL LEAVE DRIVEWAYS, HYDRANTS UNDER PRESSURE, VALVE PIT COVERS, VALVE BOXES, CURB STOP BOXES OR OTHER UTILITY CONTROLS UNOBSTRUCTED AND ACCESSIBLE WHILE THE WORK IS BEING COMPLETED. GUTTERS SHALL BE KEPT CLEAR AND MAINTAINED AT ALL TIMES OR OTHER SATISFACTORY PROVISIONS SHALL BE MADE FOR STREET DRAINAGE. NATURAL DRAINAGE COURSES SHALL NOT BE OBSTRUCTED. DURING THE PROGRESS OF WORK, ALL MATERIALS SHALL BE KEPT TRIMMED UP AND MAINTAINED IN A NEAT MANNER.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL TREES, STUMPS, BROKEN PAVEMENT AND ALL CONSTRUCTION DEBRIS OF WHATEVER NATURE OUTSIDE THE WORK LIMITS OF THE PROJECT. NO EXTRA PAYMENT WILL BE MADE BY THE OWNER FOR THE REMOVAL AND DISPOSAL OF DEBRIS.

TRAFFIC CONTROL

1. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". THE CONTRACTOR SHALL SUBMIT A PROPOSED TRAFFIC CONTROL PLAN FOR VARIOUS STAGES OF CONSTRUCTION FOR REVIEW AND ACCEPTANCE OF THE ENGINEER PRIOR TO BEGINNING WORK.

2. ACCESS MUST BE MAINTAINED FOR RESIDENCES AT ALL TIMES.

3. THE CONTRACTOR SHALL NOTIFY SAFETY SERVICES OF ANY TRAFFIC DISRUPTIONS.

NOISE CONTROL

1. CONSTRUCTION ACTIVITIES WILL BE LIMITED TO WEEKDAY DAYTIME HOURS UNLESS APPROVED 48 HOURS IN ADVANCE BY THE ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES (ACDES).

CONSTRUCTION OBSERVATION AND INSPECTION

1. THE CONTRACTOR SHALL NOT COMMENCE WITH ANY FORM OF CONSTRUCTION WITHOUT CONTACTING THE ASHTABULA DEPT. OF ENVIRONMENTAL SERVICES AT (440) 576–3722 A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION ACTIVITY TO ARRANGE FOR OBSERVATION. IF ANY CHANGE IN THE WORK SCHEDULE BECOMES NECESSARY, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTRACT THE COUNTY TO AVOID UNNECESSARY OBSERVATION COSTS. IF NO NOTIFICATION IS MADE IN REGARDS TO CANCELLATION OF WORK, THE CONTRACTOR WILL BE CHARGED FOR TIME INCURRED.

2. INSPECTION SERVICES SHALL BE PERFORMED BY ASHTABULA COUNTY. THE COST OF INSPECTION SHALL BE INCLUDED AS PART OF THIS CONSTRUCTION PROJECT AT BASE RATE OF $360 PER 8 HOUR DAY. OVERTIME SHALL BE PAID AFTER AN 8 HOUR DAY, A 40 HOUR WEEK, WEEKENDS AND HOLIDAYS AND SHALL BE AT A RATE OF 1.5 TIMES THE BASE RATE. COST OF INSPECTION SHALL BE PAID BY THE CONTRACTOR TO THE COUNTY. THE CONTRACTOR SHALL INCLUDE THE COST OF INSPECTION IN THE UNIT PRICES BID FOR RELATED ITEMS OF WORK. NO SEPARATE PAYMENT TO THE CONTRACTOR WILL BE MADE FOR INSPECTION.

PIPE MATERIALS

1. WATERLINE – AWWA C909 DR 18
   BEDDING – ASTM 2122
   JOINTS – D 2122

   WATERLINE DIRECTIONALLY DRILLED – HDPE PIPE

   DRIVE CULVERTS – REPLACE IN KIND PER ODOT ITEM 707

   HYDRANT – EAST JORDAN IRON WORKS (EJIW) HYDRANT WITH TWO 2 1/2" NST THREADS AND ONE 4" STORTZ NOZZLE; ONLY STORTZ WILL BE ACCEPTED. HYDRANTS SHALL BE POSITIONED SUCH THAT STEAMER NOZZLES POINT TOWARD THE STREET.

TRENCH NOTES

1. DETECTABLE WARNING TAPE INSTALLED ABOVE THE PIPE AT A DEPTH OF 24"–36".

2. GEOTEXTILE FABRIC BETWEEN #57 AND 304 IS NOT REQUIRED.

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NO	REVISION	DATE
		12/3/18

ISSUED FOR: BID
ISSUE DATE: 4/7/2020
SCALE: AS SHOWN
DESIGNED BY: PMT
DRAWN BY: PMT
CHECKED BY: LAG

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY — AUSTINBURG, OHIO

GENERAL NOTES 1

PROJECT NO. 190709
DISCIPLINE: CIVIL
SHEET NAME: 01G-02
SHEET 03 OF 25

WATERLINE

1. EACH PROPOSAL MUST BE ACCOMPANIED BY A COPY OF THE BIDDERS CURRENT SEWER/WATER BUILDERS LICENSE WHICH HAS BEEN ISSUED BY THE ASHTABULA COUNTY COMMISSIONERS.

2. ANY AND ALL CONSTRUCTION OF WATER MAIN FACILITIES REQUIRED BY THIS PROJECT IS TO BE GOVERNED BY THE DRAWINGS AND SPECIFICATIONS FOR THIS JOB.

3. ALL WATER MAINS ON THIS PROJECT WILL BE LAID AT THE ELEVATIONS AND GRADES SHOWN ON THE DRAWINGS. HIGH POINTS IN THE WATER MAIN MUST OCCUR AT THE STATIONED HYDRANT TEE LOCATIONS OR AIR VENT ASSEMBLY.

4. ALL FITTINGS, INCLUDING BENDS, TEES OFFSETS, REDUCERS, AND PLUGS WILL BE RESTRAINED WITH MEGALUG AS WELL AS THRUST BLOCKING MECHANICAL JOINT RESTRAINTS AS MANUFACTURED BY EBAA OR APPROVED EQUAL. THE RESTRAINT SHALL BE 2000PV SERIES FOR PVC AND 1100 SERIES FOR DUCTILE IRON PIPE. ALL PIPE JOINTS WITHIN THE RESTRAINING DISTANCES SHOWN ON THE PLANS SHALL BE RESTRAINED.

5. ALL DUCTILE IRON PIPE, FITTINGS, AND APPURTENANCES SHALL BE ENCASED WITH POLYETHYLENE FILM CONFORMING TO AWWA C105 AND INSTALLED PER US PIPE AND FOUNDRY COMPANY SPECIFICATIONS, 2004 EDITION. ALL BOLTS UTILIZED ON THE WATER MAIN IMPROVEMENTS SHALL HAVE ZINC ANODE PROTECTOR CAPS. COST FOR FINISHING AND PLACING CAPS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER WATER MAIN ITEMS.

6. THE OWNER SHALL PROVIDE WATER FOR FLUSHING AND FILLING THE NEW WATER MAIN WITHOUT COST TO THE CONTRACTOR FOR THE INITIAL FILLING OPERATION. ALL WATER FOR ANY SUBSEQUENT FLUSHING OPERATIONS WILL BE PAID FOR BY THE CONTRACTOR AT A RATE OF $2.60 PER 100 CUBIC FEET OF WATER USED.

6. AFTER SATISFACTORY HYDROSTATIC TESTING, THE COMPLETED WATER WORK SHALL BE DISINFECTED. DISINFECTING PROCEDURES MUST MEET OR EXCEED AWWA C651.

7. LOCATION OF STERILIZATION AND TESTING CONNECTIONS AT VALVES SHALL BE AS DIRECTED BY THE OWNER AND ALL COSTS ASSOCIATED WITH PLACING AND UTILIZING SAID STERILIZATION AND TESTING CONNECTIONS WILL BE INCLUDED IN THE PRICE BID PER LINEAL FOOT OF THE WATER MAINS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL TESTING AND SHALL BE INCLUDED IN THE PRICE OF THE BID ITEM. THE CONTRACTOR WILL BE CHARGED FOR ADDITIONAL TESTING DUE TO FAILED RESULTS.

8. THE PROPOSED WATER MAIN WILL HAVE 4'–0" MINIMUM COVER, UNLESS OTHERWISE SPECIFICALLY SHOWN ON THE PLANS.

9. ALL VALVE BOXES, ETC. WILL BE SET AS SHOWN ON THE PLANS. RIMS WILL BE RAISED OR LOWERED AND BOXES PLUMBED BY THE CONTRACTOR AS REQUIRED TO MEET PROPOSED OR EXISTING GRADE.

10. BACKFILL OF WATER MAIN TRENCHES SHALL BE IN ACCORDANCE WITH EXCAVATION, BACKFILLED AND COMPACTION NOTE 2.

11. ALL EXISTING WATER SYSTEM VALVES SHALL BE OPERATED BY THE OWNER. THE CONTRACTOR SHALL SCHEDULE WITH THE OWNER 24 HOURS IN ADVANCE.

12. A MINIMUM OF 35 PSI SHALL BE MAINTAINED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.

13. BOOSTER PUMPS WILL NOT BE PERMITTED ON SERVICE CONNECTIONS.

14. THE SYSTEM SHALL BE DESIGNED TO MAINTAIN A MINIMUM PRESSURE OF 35 PSI AT GROUND LEVEL AT ALL POINTS IN THE DISTRIBUTION SYSTEM UNDER ALL CONDITIONS OF FLOW.

15. ALL PIPE INSTALLATION AND PRESSURE TESTING SHALL BE IN ACCORDANCE WITH AWWA C605.

GENERAL SYMBOLOGY NOTES

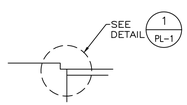
1. THIS IS A STANDARD SHEET SHOWING THE COMMONLY USED SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.

2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE–EMPHASIZE NEW IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

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

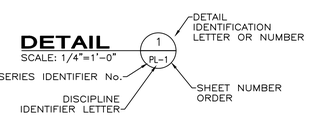
MATCH LINE FROM SHEET X OF X

MATCH LINE TO SHEET X OF X



DETAIL DESIGNATION:

SEE CORRESPONDING NOTE(S) ON PAGE



SECTIONS & DETAILS CONVENTION:

STATE OF OHIO ★ ENGINEER ★ PROFESSIONAL
LESLEY GORDON 72293 REGISTERED

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NO	REVISION	DATE
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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

GENERAL NOTES 2

PROJECT NO.
190709

DISCIPLINE
CIVIL

SHEET NAME
01G-03R

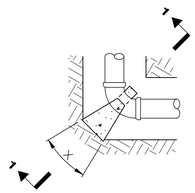
SHEET 04 OF 25

SIZING SCHEDULE

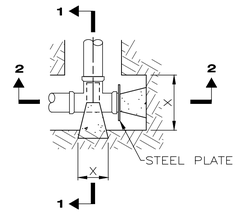
BEARING FACE (X Y) IN SQ. FT.
CONCRETE VOLUME IN CU. YD.

PIPE SIZE	22-1/2° BEND SOIL BEARING CAPACITY			45° BEND SOIL BEARING CAPACITY		
	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.
4	1.40 / 0.14	0.46 / 0.09	0.26 / 0.06	2.70 / 0.12	0.90 / 0.06	0.54 / 0.06
6	2.80 / 1.15	0.93 / 0.10	0.56 / 0.07	5.50 / 0.15	1.83 / 0.10	1.10 / 0.07
8	4.80 / 0.20	1.60 / 0.13	0.96 / 0.09	9.60 / 0.23	3.20 / 0.15	1.92 / 0.09
10	7.90 / 0.53	2.63 / 0.34	1.96 / 0.22	15.70 / 0.34	5.23 / 0.20	3.14 / 0.13
12	11.30 / 0.62	3.76 / 0.40	2.26 / 0.26	22.30 / 0.75	7.43 / 0.49	4.46 / 0.32
14	15.30 / 0.74	5.10 / 0.48	3.06 / 0.31	30.20 / 0.98	10.06 / 0.64	6.04 / 0.42
16	19.80 / 1.17	6.60 / 0.76	3.96 / 0.49	39.10 / 1.21	13.03 / 0.79	7.82 / 0.51

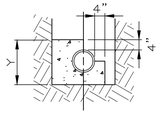
PIPE SIZE	90° BEND SOIL BEARING CAPACITY			TEE OR DEAD END SOIL BEARING CAPACITY		
	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.	1,000 P.S.F.	3,000 P.S.F.	5,000 P.S.F.
4	4.90 / 0.14	1.63 / 0.09	0.96 / 0.06	3.50 / 0.12	1.16 / 0.06	0.70 / 0.06
6	10.20 / 0.22	3.40 / 0.14	2.04 / 0.09	7.20 / 0.17	2.40 / 0.11	1.44 / 0.07
8	17.70 / 0.35	5.54 / 0.23	3.54 / 0.15	12.50 / 0.25	4.16 / 0.16	2.50 / 0.14
10	28.90 / 0.54	9.60 / 0.35	5.76 / 0.23	20.40 / 0.38	6.80 / 0.25	4.06 / 0.16
12	41.10 / 1.31	13.70 / 0.85	8.22 / 0.55	29.10 / 0.97	9.70 / 0.63	5.82 / 0.42
14	55.80 / 1.70	18.60 / 1.11	11.16 / 0.72	39.50 / 1.22	13.16 / 0.79	7.90 / 0.51
16	72.20 / 2.14	24.06 / 1.39	14.44 / 0.90	51.10 / 1.54	17.03 / 1.00	10.22 / 0.65



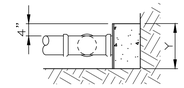
PLAN FOR BENDS



PLAN FOR TEE AND DEAD END



SECTION 1 – 1



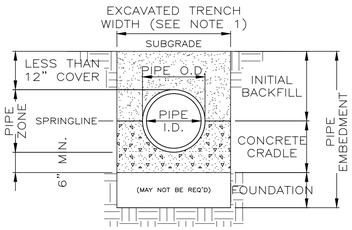
SECTION 2 – 2

NOTE:

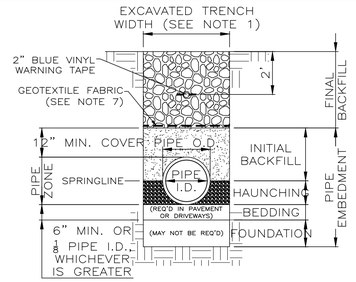
ALL CONCRETE BLOCKING MUST HAVE ITS ENTIRE FACE (X & Y) BEARING SURFACE AGAINST UNDISTURBED SOIL AND ALL VERTICAL NON–BEARING SURFACES SHALL BE FORMED SO AS TO KEEP CONCRETE FROM JOINTS. BLOCKING DESIGN BASED ON COMBINED WORKING PRESSURE PLUS WATER HAMMER OF 240 PSI AND FOR BEARING CAPACITY FOR SAND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

THRUST BLOCKING DETAIL

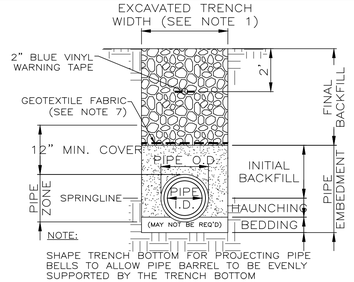
NOT TO SCALE



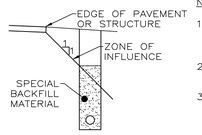
CLASS 'A' PIPE EMBEDMENT



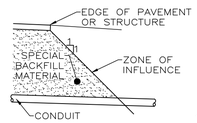
CLASS 'B' PIPE EMBEDMENT



CLASS 'C' PIPE EMBEDMENT



PARALLEL ZONE OF INFLUENCE



TRANSVERSE ZONE OF INFLUENCE

NOTES:

1. MAXIMUM EXCAVATED TRENCH WIDTH: THE MAXIMUM EXCAVATED TRENCH WIDTH FROM THE BOTTOM OF THE TRENCH TO 12" OVER THE TOP OF THE PIPE (WITHIN PIPE EMBEDMENT) SHALL BE O.D. + 24" FOR ALL PIPES UP TO AND INCLUDING 24" I.D. + 30" FOR PIPE FROM 24" I.D. TO 54" I.D. AND O.D. + 48" FOR PIPES SIZES 60" I.D. AND OVER.
2. FOUNDATION: WHERE AN UNSTABLE TRENCH BOTTOM CONDITION IS ENCOUNTERED, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH MATERIAL AS DIRECTED BY THE ENGINEER.
3. PIPE EMBEDMENT:

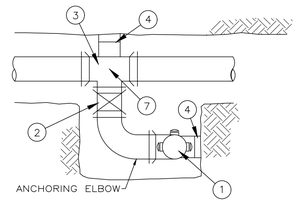
   CLASS A: CLASS A PIPE EMBEDMENT SHALL BE USED FOR ALL PIPING UNDER PAVEMENT OR STRUCTURES WITH LESS THAN 12 INCHES OF PIPE COVER TO THE SUBGRADE. THE CONCRETE CRADLE SHALL BE IN ACCORDANCE WITH ODOT ITEM 499, CLASS "C". THE INITIAL BACKFILL SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT.

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

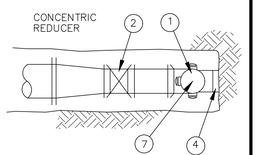
   CLASS C: CLASS C PIPE EMBEDMENT SHALL ONLY BE USED FOR DUCTILE IRON WATER MAIN, DUCTILE IRON FORCE MAINS OR AS AUTHORIZED BY THE ENGINEER. THE PIPE EMBEDMENT SHALL BE AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE. THE PIPE EMBEDMENT SHALL BE SUITABLE ON–SITE MATERIAL APPROVED BY THE ENGINEER IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE. WHERE ROCK OR SHALE IS ENCOUNTERED, A MINIMUM 6–INCHES OF AASHTO NO. 57 OR NO. 67 GRANULAR PIPE BEDDING OR SAND BEDDING SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
4. FINAL BACKFILL: IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE THE FINAL BACKFILL SHALL BE SPECIAL BACKFILL MATERIAL. IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE, THE FINAL BACKFILL SHALL BE SUITABLE ON–SITE MATERIAL APPROVED BY THE ENGINEER.
5. SPECIFICATIONS: ALL TRENCHING, PIPE EMBEDMENT AND BACKFILL MATERIALS SHALL BE IN ACCORDANCE WITH SPECIFICATION 02300CT – EARTHWORK.
6. GEOTEXTILE FABRIC: INSTALL A GEOTEXTILE FABRIC IN ACCORDANCE WITH ODOT 712.09, TYPE A, AFTER ALL INITIAL BACKFILL CONSISTING OF AASHTO NO. 57 OR NO. 67 GRANULAR PIPE EMBEDMENT.
7. DETECTOR TAPE: IF REQUIRED IN THE SPECIFICATIONS, INSTALL DETECTABLE WARNING TAPE ABOVE UTILITIES, 24" BELOW FINISHED GRADE, EXCEPT 6 INCHES BELOW SUBGRADE UNDER PAVEMENT AND SLABS.

TRENCHING, EMBEDMENT, AND BACKFILL DETAIL

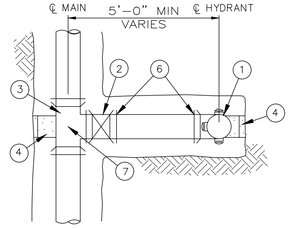
NOT TO SCALE



TYPE "A" HYDRANT ASSEMBLY

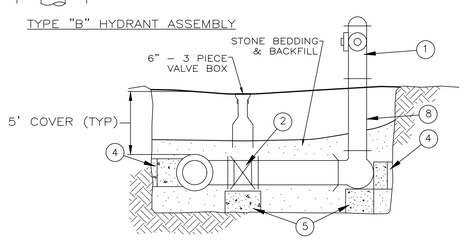


TYPE "C" HYDRANT ASSEMBLY



TYPE "B" HYDRANT ASSEMBLY

1. HYDRANT, PER SPECIFICATIONS
2. 6" GATE VALVE
3. ANCHORING TEE
4. CONCRETE BLOCKING WITH OAK WEDGES AGAINST UNDISTURBED EARTH
5. CONCRETE SUPPORT BLOCKING
6. RETAINER GLANDS
7. PLAN STATION & OFFSET
8. ANCHORING SPOOL

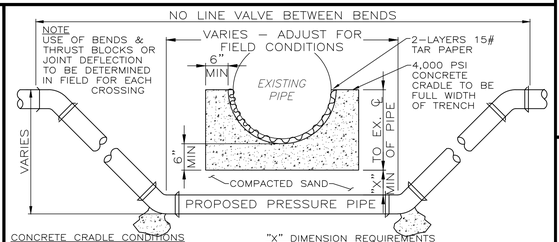


TYPICAL HYDRANT ASSEMBLY ELEVATION

TYPICAL HYDRANT DETAIL

NOT TO SCALE

NO LINE VALVE BETWEEN BENDS



CONCRETE CRADLE CONDITIONS

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

"X" DIMENSION REQUIREMENTS

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

STATE OF OHIO ★ ENGINEER ★ LESLEY GORDON 72293 REGISTERED PROFESSIONAL ENGINEER

your trusted advisor consultants engineers architects planners

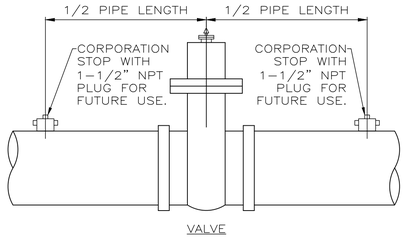
NO	REVISION	DATE
		12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
CHECKED BY:	LAG

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

CONSTRUCTION DETAILS 1

PROJECT NO.	
190709	
DISCIPLINE	
CIVIL	
SHEET NAME	
01C-01	
SHEET	OF
05	25

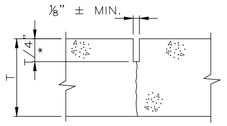


NOTES:

1. CORPORATION STOPS TO BE PLUGGED AFTER STERILIZATION & TESTING.
2. 1-1/2"ø CORPORATION STOPS ON ALL LINES 16"ø & GREATER.
3. 1"ø CORPORATION STOPS ON ALL LINES 12"ø & LESS.

STERILIZATION & TESTING CONNECTIONS AT VALVES

NOT TO SCALE

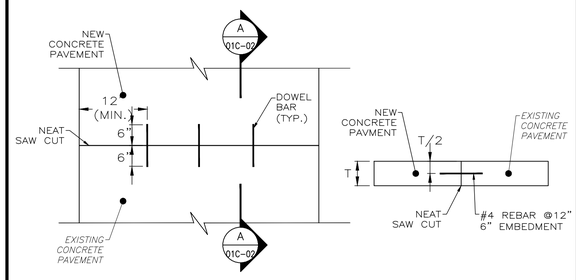


NOTES:

1. CONTROL JOINTS ARE THAT ARE TOOL CUT SHALL BE FILLED WITH JOINT SEALANT.
2. CONTROL JOINT SPACING SHALL EQUAL NEW SIDEWALK WIDTH, ADD ADDITIONAL DIAGONAL JOINTS AS NECESSARY TO CONTROL CRACKING AT ANGLES, BUILDS OR OR STRUCTURES.

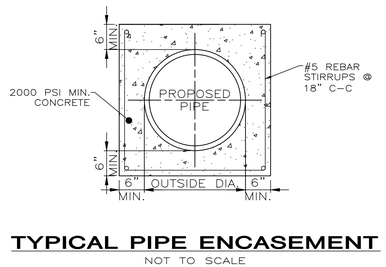
CONTROL JOINT TYPE "C.J."

NOT TO SCALE



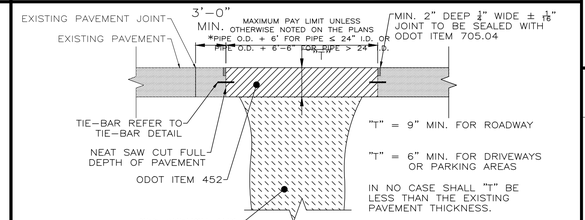
TIE BAR DETAIL

NOT TO SCALE



TYPICAL PIPE ENCASEMENT

NOT TO SCALE



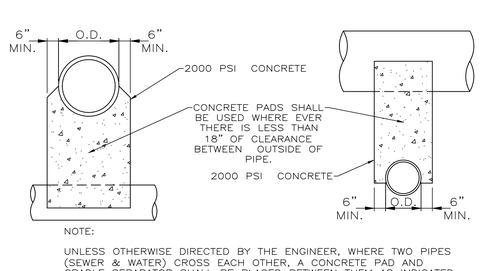
NOTES:

1. EXISTING SUBBASE MATERIAL (IF ANY) SHALL BE REPLACED, AS DIRECTED BY ENGINEER.
2. REPLACEMENT SHALL BE REINFORCED AS PER O.D.O.T. ITEM 709.10 OR 709.12 IF EXISTING PAVEMENT IS REINFORCED.
3. 5/8"ø HOOKBOLT @ 30" O.C. MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.

* WHERE WIDTH IS LESS THAN 3'-0" OR EXISTING PAVEMENT IS DETERIORATED, THE CONTRACTOR SHALL REPLACE ADDITIONAL PAVEMENT AS DIRECTED BY THE ENGINEER. PAYMENT FOR ADDITIONAL PAVEMENT REPLACEMENT AS DIRECTED BY THE ENGINEER SHALL BE AT THE SAME UNIT PRICE BID.

TYPE A PAVEMENT REPLACEMENT

NOT TO SCALE

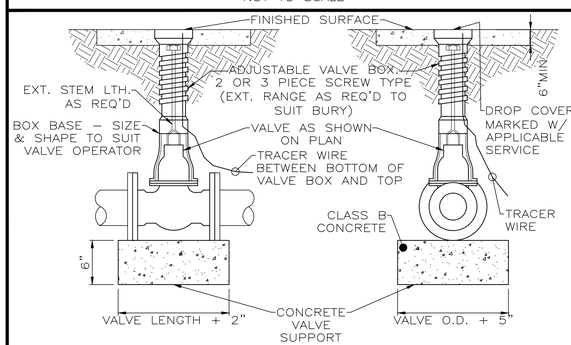


NOTE:

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.

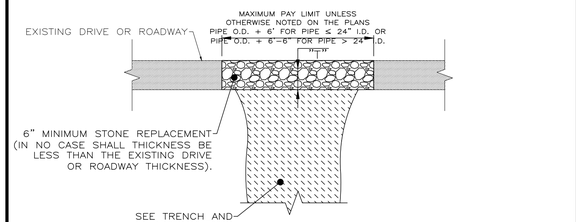
PIPE CROSSING DETAIL

NOT TO SCALE



TYPICAL VALVE AND VALVE BOX SETTING

NOT TO SCALE

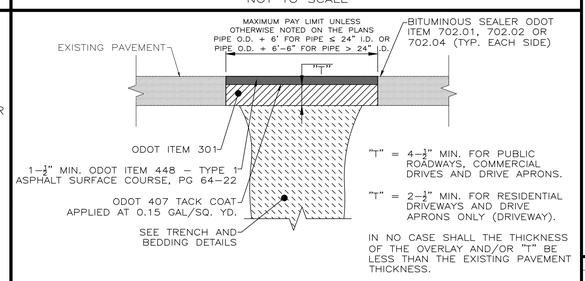


NOTE:

1. REPLACEMENT MATERIAL SHALL BE THE SAME TYPE AND SIZE AS EXISTING.

TYPE F PAVEMENT REPLACEMENT

NOT TO SCALE



NOTE:

1. EXISTING SUBBASE MATERIAL (IF ANY) SHALL BE REPLACED, AS DIRECTED BY ENGINEER.

TYPE C PAVEMENT REPLACEMENT

NOT TO SCALE

STATE OF OHIO ENGINEER
LESLEY GORDON 72293 REGISTERED PROFESSIONAL

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NO	REVISION	DATE
		12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
CHECKED BY:	LAG

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY, OHIO

CONSTRUCTION DETAILS 2

PROJECT NO.
190709

DISCIPLINE
CIVIL

SHEET NAME
01C-02

SHEET 06 OF 25

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CONTRACTOR'S RESPONSIBILITIES:

1. CONTRACTORS MUST USE ENVIRONMENTAL DUE DILIGENCE TO ENSURE THAT THE FILL MATERIAL ASSOCIATED WITH THIS PROJECT QUALIFIES AS CLEAN FILL. DEFINITIONS OF CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE ARE PROVIDED BELOW.

2. CLEAN FILL: UNCONTAMINATED, NON–WATER SOLUBLE, NON–DECOMPOSIBLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT THAT HAS BEEN PROCESSED FOR RE–USE) REFER TO STANDARD DETAILS AND PROJECT MANUAL FOR SPECIFIC PROJECT REQUIREMENTS.

3. ENVIRONMENTAL DUE DILIGENCE: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTIC TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL.

4. FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.

SITE RESTORATION:

1. ALL DISTURBED PROPERTY SHALL BE RESTORED TO ITS PRE–CONSTRUCTION CONDITION, AS NEAR AS POSSIBLE WITHIN 20 DAYS.

2. ONCE AN AREA IS GRADED TO ITS FINAL GRADE IT MUST BE STABILIZED WITH THE PERMANENT SEED MIX SPECIFICATION ACCORDING TO ITS SLOPE.

INSPECTION AND MAINTENANCE:

1. ALL EROSION AND SEDIMENTATION CONTROL FACILITIES SHALL BE INSPECTED WEEKLY AND AFTER EACH

2. FABRIC FENCES: REPAIR DAMAGE TO FENCES. BACKFILL UNDERCUTTING. OVERTOPPED AREAS SHALL BE REPLACED WITH AN OUTLET ROCK FILTER. IF SEDIMENT REACHES ONE HALF THE FENCE HEIGHT, IT SHALL BE REMOVED AND PLACED IN THE TOPSOIL AND FILL STOCKPILE AREA. REPLACEMENT FENCE AND STAKES SHALL BE KEPT ON SITE.

3. CONSTRUCTION ENTRANCE: WHEN UTILIZED, INSPECTED DAILY. EXCESS SEDIMENT SHALL BE REMOVED AND STORED IN THE TOPSOIL AND FILL STOCKPILE AREA AND USED AS FILL OR ROAD SUBBASE. A STOCKPILE OF REPLACEMENT ROCK SHALL BE KEPT ON SITE.

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF SEDIMENTATION AND EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AS OUTLINED HEREIN. AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY SOIL CONSERVATION DISTRICT AND THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

2. ALL EROSION CONTROL MEASURES SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLAN ARE TO BE INSTALLED PRIOR TO BEGINNING ANY OTHER EARTH DISTURBING ACTIVITY.

3. EROSION AND SEDIMENT BMPs (BEST MANAGEMENT PRACTICES) MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTRIBUTION BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPs.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING INSPECTIONS OF ALL EROSION CONTROL DEVICES ON A WEEKLY BASIS AND AFTER ALL STORMS THAT PRODUCE MORE THAN ½" TOTAL RAINFALL. ANY NEEDED REPAIRS SHALL BE PERFORMED IMMEDIATELY.

5. THE CONTRACTOR SHALL DOCUMENT ALL INSPECTIONS AND REPAIRS THAT ARE DONE TO MAINTAIN EFFICIENCY. COPIES OF EROSION CONTROL INSPECTION REPORTS SHALL BE SUBMITTED TO THE COUNTY SOIL CONSERVATION DISTRICT. CONTRACTOR SHALL USE DEP FORM 3150–FM–BWEW0083, VISUAL SITE INSPECTION REPORT.

6. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs MUST BE STABILIZED IMMEDIATELY.

7. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

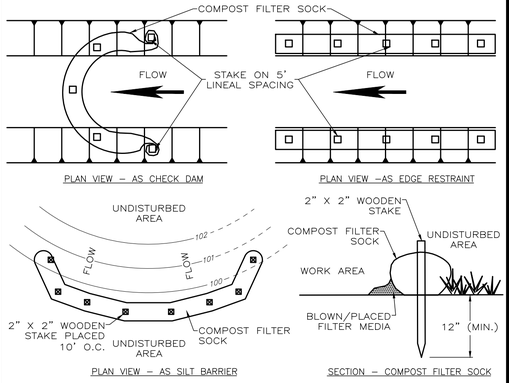
RECYCLING/DISPOSAL OF WASTE REQUIREMENTS:

1. ALL CONSTRUCTION/DEMOLITION WASTE MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED IN ACCORDANCE WITH THE DEPARTMENTS SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET. SEQ., 287.1 ET. SEQ. THIS INCLUDES SOLID WASTE RESULTING FROM THE CONSTRUCTION OR DEMOLITION OF BUILDINGS OR OTHER STRUCTURES, INCLUDING BUT NOT LIMITED TO: WOOD, PLASTER, METALS, ASPHALTIC SUBSTANCES, BRICKS, BLOCK AND UNSEGREGATED CONCRETE. THIS DOES NOT INCLUDE: UNCONTAMINATED SOIL, ROCK, STONE, GRAVEL, BRICK, BLOCK, CONCRETE, USED ASPHALT, WASTE FROM LAND CLEARING, GRUBBING AND EXCAVATION, INCLUDING TREES, BRUSH, STUMPS AND VEGETATIVE MATERIAL IF THEY ARE SEPARATE FROM OTHER WASTE AND ARE USED AS CLEAN FILL.

2. CONSTRUCTION WASTES (INCLUDING BUT NOT LIMITED TO EXCESS SOIL, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC.) ARE TO BE DISPOSED OF OR RECYCLED AT APPROPRIATE, PERMITTED FACILITIES.

3. THE CONTRACTOR MUST USE ENVIRONMENTAL DUE DILIGENCE TO ENSURE THAT THE FILL MATERIAL ASSOCIATED WITH THIS PROJECT (IF ANY) QUALIFIES AS CLEAN FILL MATERIAL. THE CONTRACTOR IS RESPONSIBLE FOR SECURING ANY REQUIRED PERMITS.

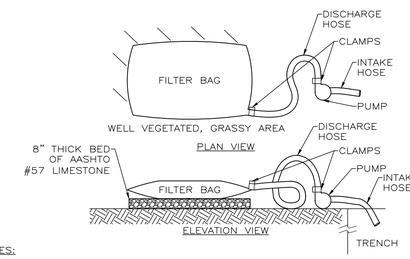
4. ANTICIPATED CONSTRUCTION WASTE:
   A. FILL MATERIAL FROM EXCAVATION – LANDFILL
   B. CONSTRUCTION DEMOLITION FROM BUILDINGS, TANKS, ETC. – LANDFILL OR RECYCLE IF FEASIBLE
   C. CONCRETE WASHOUT – USE WASHOUT FACILITY



NOTES:

1. THIS PROJECT REQUIRES THE USE OF 8" DIA. COMPOST FILTER SOCK.
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8' UP SLOPE AT 45° TO THE MAIN SOCK ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN IN THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCK.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED IN THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL.
5. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. SOCK FABRIC AND COMPOST SHALL MEET THE STANDARDS OF THE LATEST VERSION OF THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL.
7. BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
8. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
9. SACKS MAY BE LEFT IN PLACE OR REMOVED. IN THE FORMER CASE, THE SOCK MATERIAL SHALL BE CUT OPEN AND THEN MULCH SPREAD AS A SOIL SUPPLEMENT.

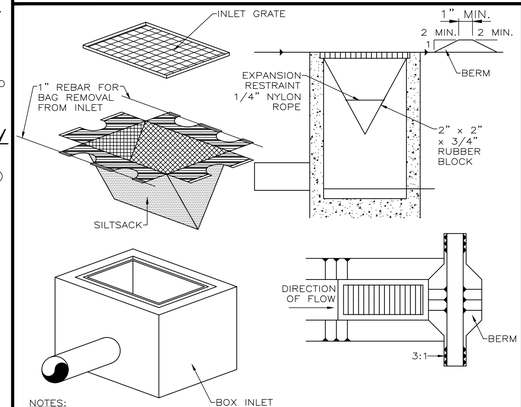
COMPOST FILTER SOCK
NOT TO SCALE



NOTES:

1. USE FILTER BAGS MADE FROM NON–WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS, CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. REPLACE FILTER BAGS WHEN THEY BECOME 1/2 FULL. KEEP SPARE BAGS AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
3. PLACE BAGS IN WELL–VEGETATED (GRASSY) AREAS, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, PROVIDE A GEOTEXTILE FLOW PATH. DO NOT PLACE BAGS ON SLOPES GREATER THAN 5%.
4. INSERT PUMP DISCHARGE HOSE INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
5. THE PUMPING RATE SHOULD BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.
6. INSPECT FILTER BAGS DAILY. IF ANY PROBLEM IS DETECTED, CEASE PUMPING IMMEDIATELY AND DO NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

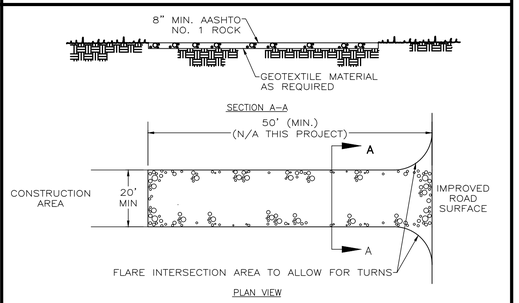
PUMPED WATER FILTER BAG DETAIL
NOT TO SCALE



NOTES:

1. MAXIMUM DRAINAGE AREA =1/2 ACRE.
2. INLET PROTECTION IS NOT REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP.
3. BERMS REQUIRED FOR ALL INSTALLATIONS.
   3.1. EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED.
   3.2. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED.
   3.3. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.

SILT SACK DETAIL
NOT TO SCALE



NOTES

1. ROCK CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS AND CONSTRUCTED TO THE MINIMUM WIDTH, LENGTH AND THICKNESS DIMENSIONS SHOWN.
2. ROCK SHALL BE AASHTO NO.1 AS SPECIFIED IN SECTION 703.2 OF THE PENNDOT PUBLICATION 408.
3. FOR INSTALLATION ON CLAYEY OR POORLY DRAINED SOILS, A GEOTEXTILE FABRIC UNDERLAYMENT, OF A TYPE RECOMMENDED FOR SUCH APPLICATIONS BY THE MANUFACTURER, SHALL BE USED.
4. MAINTENANCE: THE ROCK CONSTRUCTION ENTRANCE SHALL BE REDRESSED WHEN VOIDS BECOME CHOKED WITH SEDIMENT. THE STRUCTURES THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY CLEANING OR ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON THE SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON DRIVEWAYS AND PUBLIC ROADWAYS, SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. WASHING OF THE DRIVEWAYS OR ROADWAYS WITH WATER IS NOT PERMITTED.

ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE

PERMANENT SEED MIX:

TYPE	GERMINATION RATE	APPLICATION RATE
PERMANENT SEED MIXTURE FOR SLOPES 3:1 AND LESS		
50% KENTUCKY BLUEGRASS	85%	1 LBS. PER
20% PERENNIAL RYEGRASS	90%	1250 SF
30% CREEPING RED FESCUE	88%	
98% PURE LIVE SEED		
PERMANENT SEED MIXTURE FOR SLOPES GREATER THAN 3:1		
30% ANNUAL RYEGRASS	90%	1 LBS. PER
25% KENTUCKY BLUEGRASS	90%	1000 SF
31% TALL FESCUE	90%	
15% BIRDSFOOT TREFOIL	90%	
15% WHITE CLOVER	90%	
10% CLIMAX TIMOTHY	90%	
5% REDTOP	90%	
98% PURE LIVE SEED		

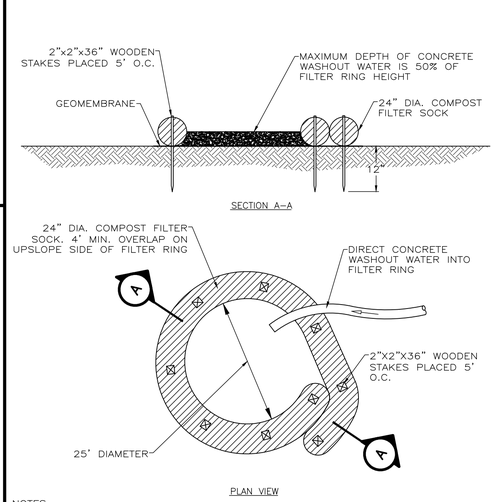
APPLICATION RATE: 100 LB/ACRE
FERTILIZER 10–20–20, APPLICATION RATE: 680 LB/ACRE
LIMING RATE: 2.0 TON/ACRE
MULCH: STRAW – MULCHING RATE: 3.0 TON/ACRE
PROTECT SEED WITH: NAG 575 OR APPROVED SUBSTITUTE
SEEDING SEASONS: MARCH 15 – JUNE 1 & AUG 1 – OCT 15

BIODEGRADABLE EROSION CONTROL MATTING/BLANKET

A TEMPORARY DEGRADABLE ROLLED EROSION CONTROL PRODUCT COMPOSED OF PROCESSED NATURAL FIBERS MECHANICALLY BOUND TOGETHER TO FORM A CONTINUOUS MATRIX. AREAS WITH SLOPES GREATER THAN 3:1 SHALL BE PROTECTED WITH NORTH AMERICAN GREEN S75BN EROSION CONTROL BLANKET (ECB) OR APPROVED SUBSTITUTE.

TEMPORARY SEED MIX:

SPECIES: ANNUAL RYE
% PURE LIVE SEED: 98%
APPLICATION RATE: 50 LB/ACRE
FERTILIZER: 10–20–20
FERTILIZER APPLICATION RATE: 680 LB/ACRE
LIMING RATE: 2.0 TON/ACRE
MULCH: STRAW
MULCHING RATE: 3.0 TON/ACRE



NOTES:

1. PROVIDE PROPER SIGNAGE FOR CONCRETE DELIVERY VEHICLE DRIVERS SO THAT THEY ARE AWARE OF THE PRESENCE OF WASHOUT FACILITIES.
2. WASHOUT FACILITIES SHOULD NOT BE PLACED WITHIN 50' OF STORM DRAINS, OPEN DITCHES, OR SURFACE WATERS. UNDER NO CIRCUMSTANCES SHOULD WASH WATER BE ALLOWED TO ENTER ANY SURFACE WATERS.
3. WHEREVER POSSIBLE, CONCRETE WASHOUTS SHOULD BE LOCATED ON SLOPES NOT EXCEEDING A 2% GRADE.
4. A SUITABLE IMPERVIOUS GEOMEMBRANE SHOULD BE PLACED AT THE LOCATION OF THE WASHOUT. COMPOST SOCKS SHOULD BE STAKED IN THE MANNER RECOMMENDED BY THE MANUFACTURER AROUND PERIMETER OF THE GEOMEMBRANE SO AS TO FORM A RING WITHIN THE ENDS OF THE SOCK LOCATED AT THE UPSLOPE CORNER. CARE MUST BE TAKEN TO ENSURE CONTINUOUS CONTACT OF THE SOCK WITH THE GEOMEMBRANE AT ALL LOCATIONS. WHERE NECESSARY, 18" SOCKS MAY BE STACKED ONTO 24" SOCKS AND STAKED SO AS TO FORM A TRIANGULAR CROSS SECTION.

TYPICAL COMPOST SOCK WASHOUT INSTALLATION DETAIL
NOT TO SCALE

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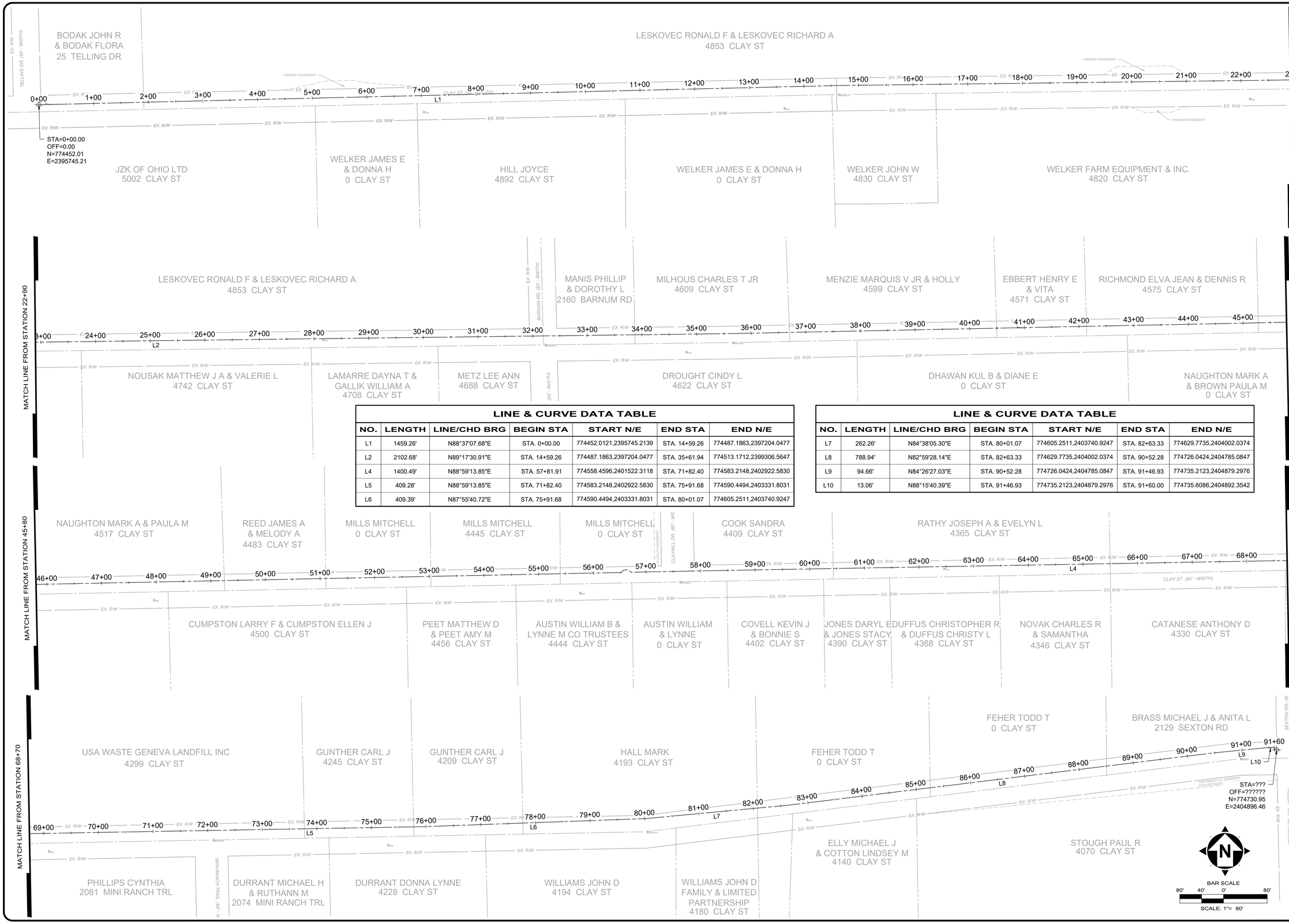
ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

EROSION & SEDIMENTATION CONTROL NOTES & DETAILS

PROJECT NO.	190709
DISCIPLINE	CIVIL
SHEET NAME	01C-03
SHEET	07
OF	25



LINE & CURVE DATA TABLE

NO.	LENGTH	LINE/CHD BRG	BEGIN STA	START N/E	END STA	END N/E
L1	1459.26'	N88°37'07.68"E	STA. 0+00.00	774452.0121,2395745.2139	STA. 14+59.26	774487.1863,2397204.0477
L2	2102.68'	N89°17'30.91"E	STA. 14+59.26	774487.1863,2397204.0477	STA. 35+61.94	774513.1712,2399306.5647
L4	1400.49'	N88°59'13.85"E	STA. 57+81.91	774558.4596,2401522.3118	STA. 71+82.40	774583.2148,2402922.5830
L5	409.28'	N88°59'13.85"E	STA. 71+82.40	774583.2148,2402922.5830	STA. 75+91.68	774590.4494,2403331.8031
L6	409.39'	N87°55'40.72"E	STA. 75+91.68	774590.4494,2403331.8031	STA. 80+01.07	774605.2511,2403740.9247

LINE & CURVE DATA TABLE

NO.	LENGTH	LINE/CHD BRG	BEGIN STA	START N/E	END STA	END N/E
L7	262.26'	N84°38'05.30"E	STA. 80+01.07	774605.2511,2403740.9247	STA. 82+63.33	774629.7735,2404002.0374
L8	788.94'	N82°59'28.14"E	STA. 82+63.33	774629.7735,2404002.0374	STA. 90+52.28	774726.0424,2404785.0847
L9	94.66'	N84°26'27.03"E	STA. 90+52.28	774726.0424,2404785.0847	STA. 91+46.93	774735.2123,2404879.2976
L10	13.06'	N88°15'40.39"E	STA. 91+46.93	774735.2123,2404879.2976	STA. 91+60.00	774735.6086,2404892.3542

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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY AUSTINBURG, OHIO

SURVEY CONTROL

PROJECT NO.	190709
DISCIPLINE	CIVIL
SHEET NAME	02C-01
SHEET	08
OF	25

WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-1	8" X 6" REDUCER	0+10.96	778.22	774452.28	2395756.1698		
CF-2	8" X 6" TEE	0+20.34	778.12	774452.50	2395765.5488		

WATERLINE APPURTENANCE TABLE

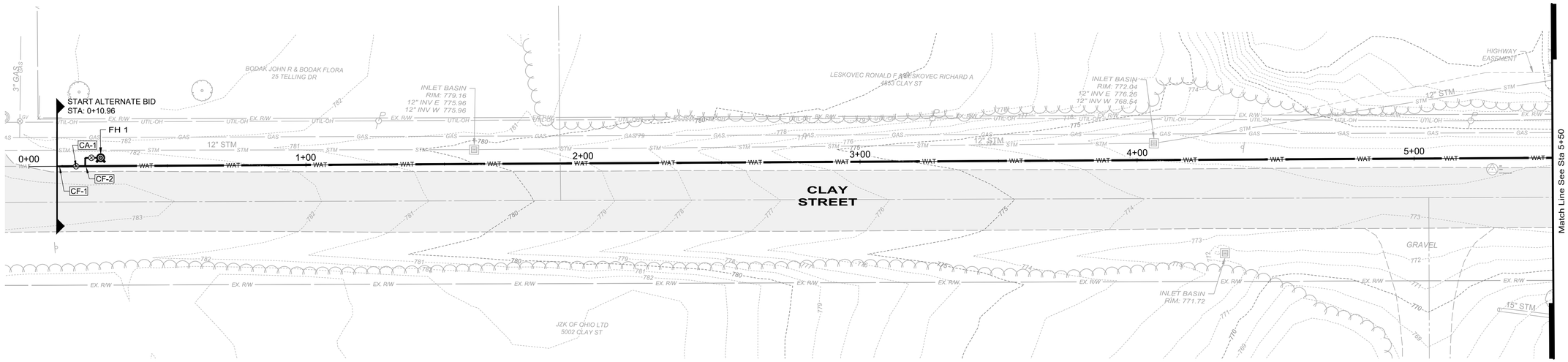
NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS BUILT)
CA-1	8" Valve	0+17.01	778.15	774452.42	2395762.22		

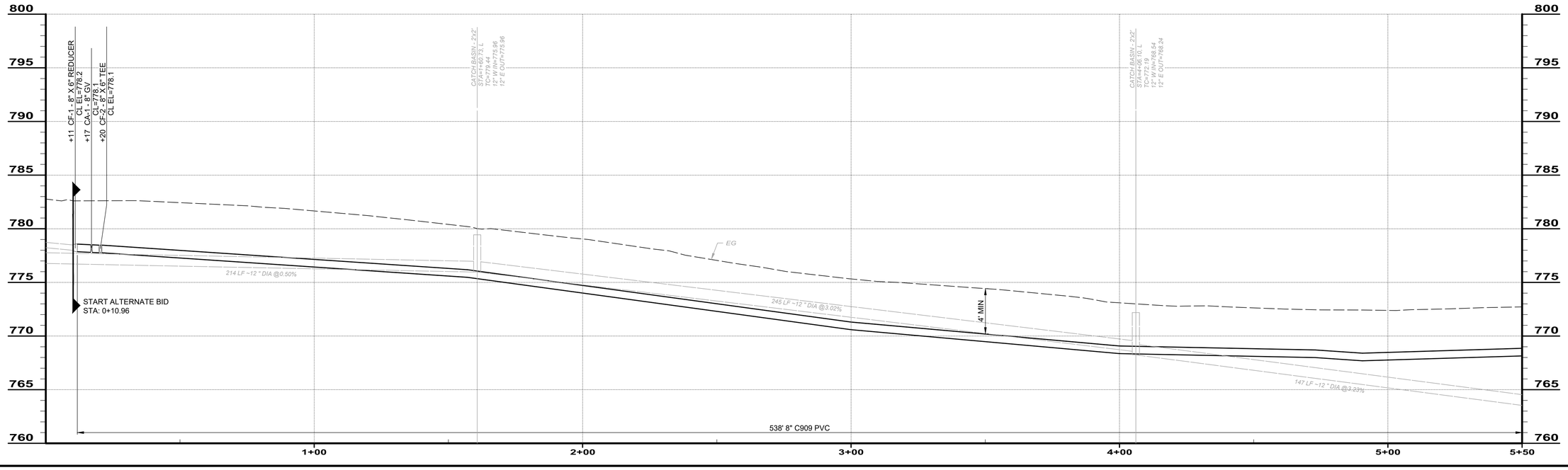
DRAWING PLAN NOTES:

1. CONTRACTOR TO CLOSE EXISTING VALVE ON THE WEST SIDE OF TELLING DRIVE AND REMOVE EXISTING 6" PLUG AND MAKE CONNECTION TO WATER MAIN.

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

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'





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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 0+00 TO 5+50

PROJECT NO. 190709
DISCIPLINE CIVIL
SHEET NAME 02C-02
SHEET 09 OF 25

WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-3	8" X 6" TEE	10+19.51	778.46	774476.59	2396764.4311		

WATERLINE APPURTENANCE TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS BUILT)
CA-2	8" Valve	10+14.83	778.40	774476.47	2396759.75		

BAR SCALE
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SCALE: 1"= 20'

PROFILE BAR SCALE
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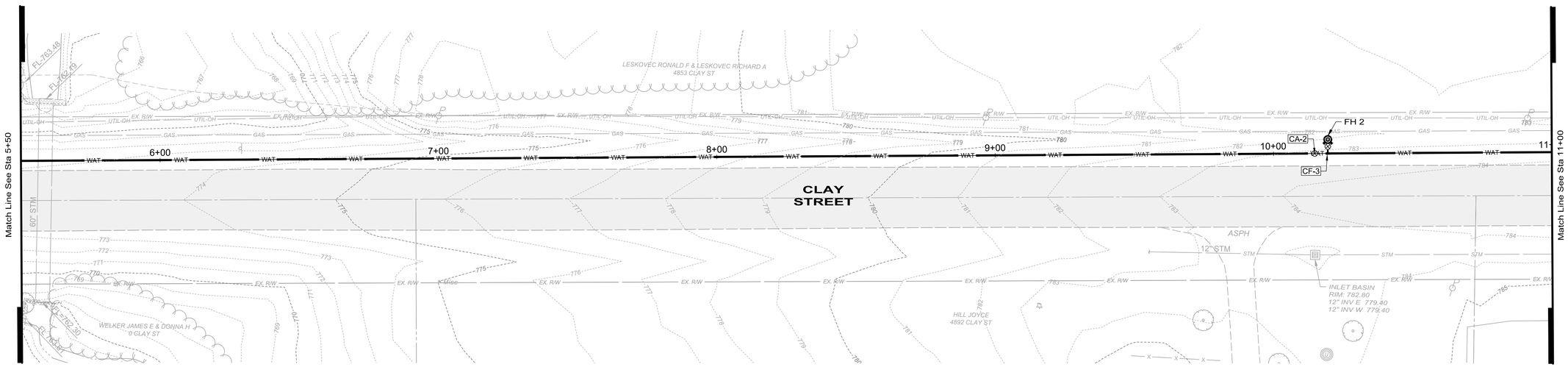
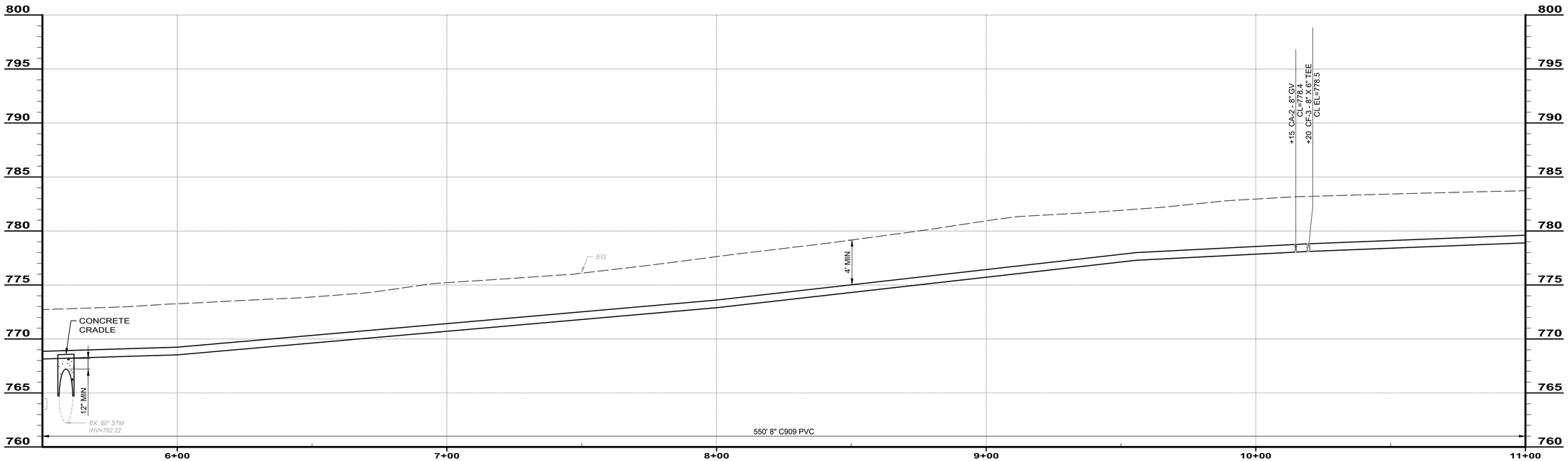
VERT: 5' 2.5' 0' 5'





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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 5+50 TO 11+00

PROJECT NO.
190709
DISCIPLINE
CIVIL
SHEET NAME
02C-03
SHEET 10 OF 25

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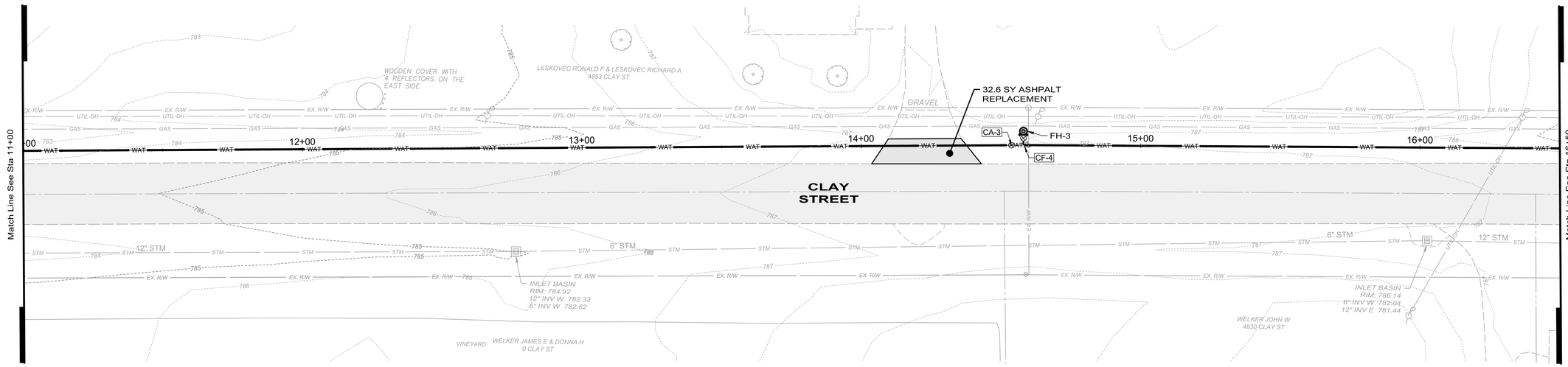
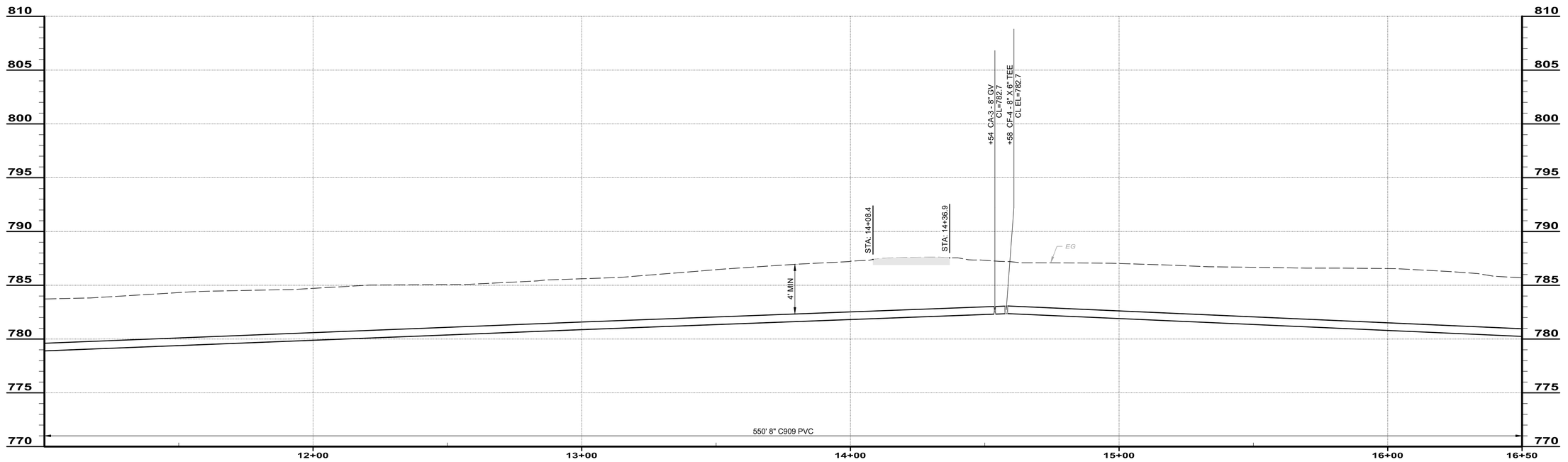
WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-4	8" X 6" TEE	14+58.01	782.71	774487.16	2397202.8006		

WATERLINE APPURTENANCE TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS BUILT)
CA-3	8" Valve	14+53.77	782.67	774487.05	2397198.56		





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

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'

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ASHTABULA COUNTY
AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 11+00 TO 16+50

PROJECT NO.
190709
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CIVIL
SHEET NAME
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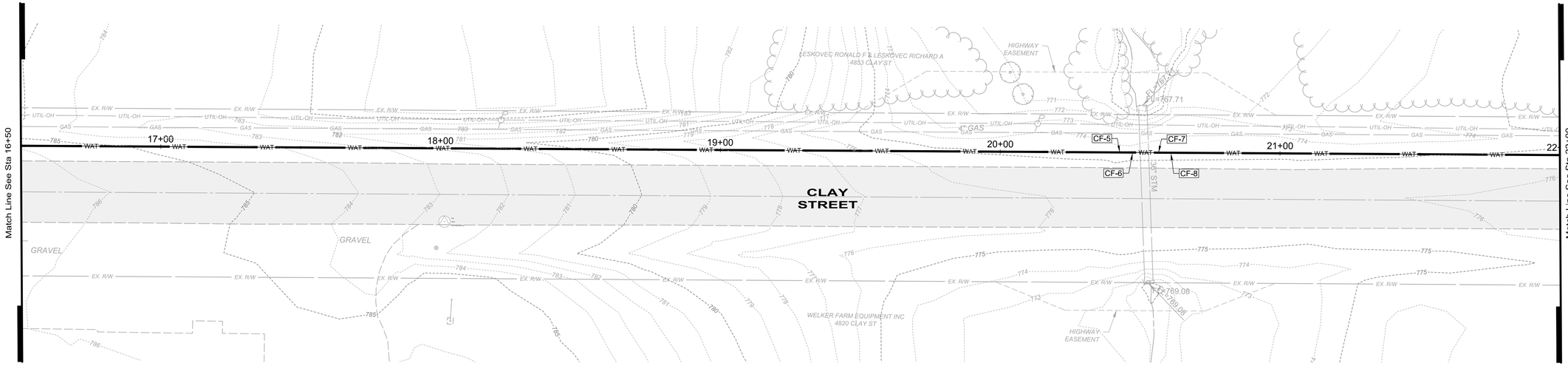
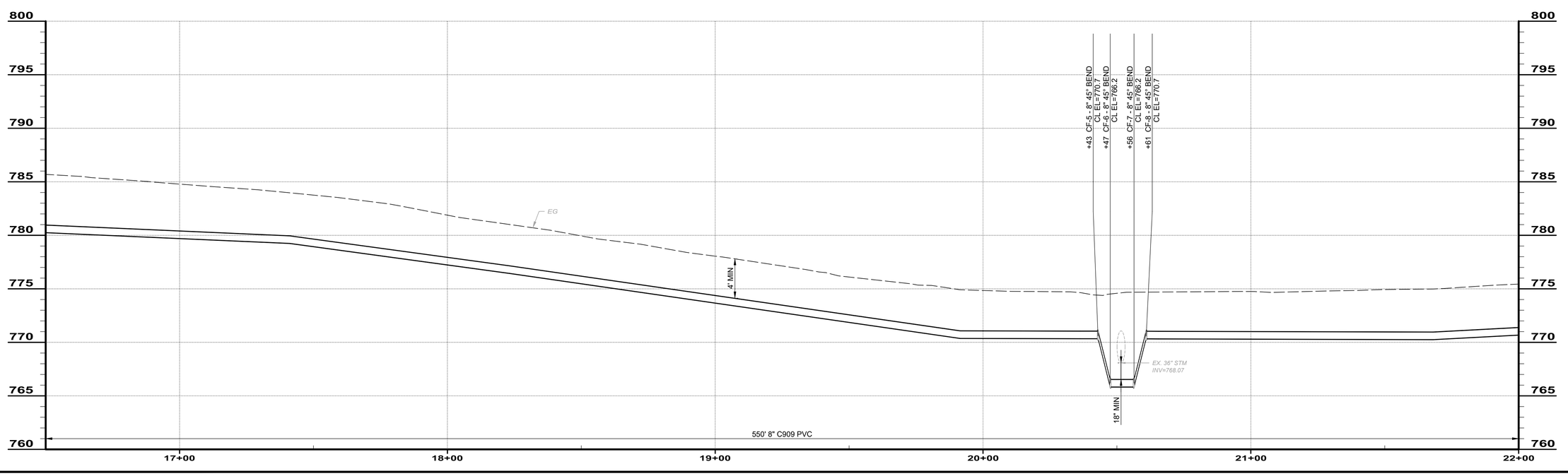
WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-5	8" 45° BEND	20+42.97	770.69	774494.32	2397787.7159		
CF-6	8" 45° BEND	20+47.49	766.18	774494.38	2397792.2318		
CF-7	8" 45° BEND	20+56.38	766.18	774494.49	2397801.1267		
CF-8	8" 45° BEND	20+60.89	770.68	774494.54	2397805.6317		





BAR SCALE
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SCALE: 1"= 20'

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'

STATE OF OHIO ★ ENGINEER ★ LESLEY GORDON 72293 REGISTERED PROFESSIONAL

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NO	REVISION	DATE
	.	12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
CHECKED BY:	LAG

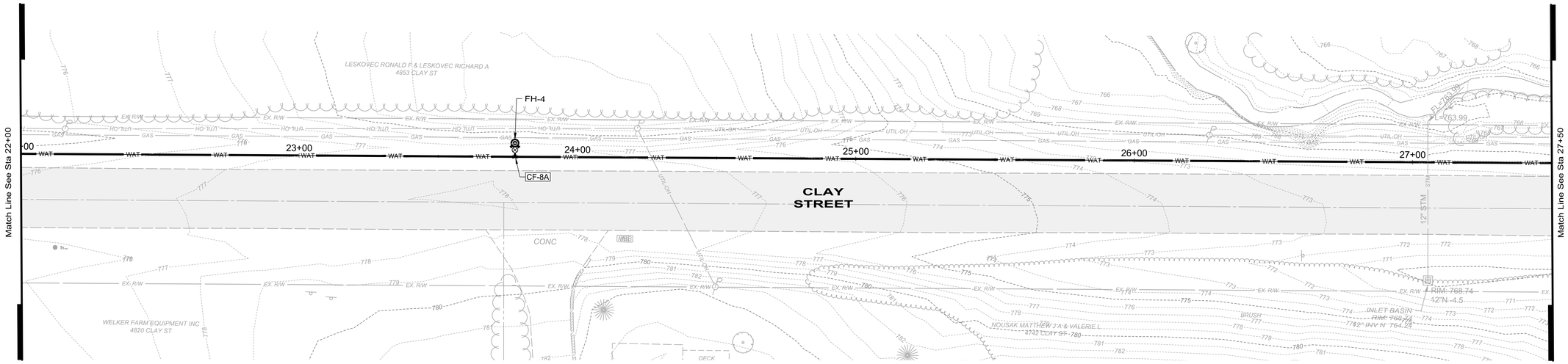
ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

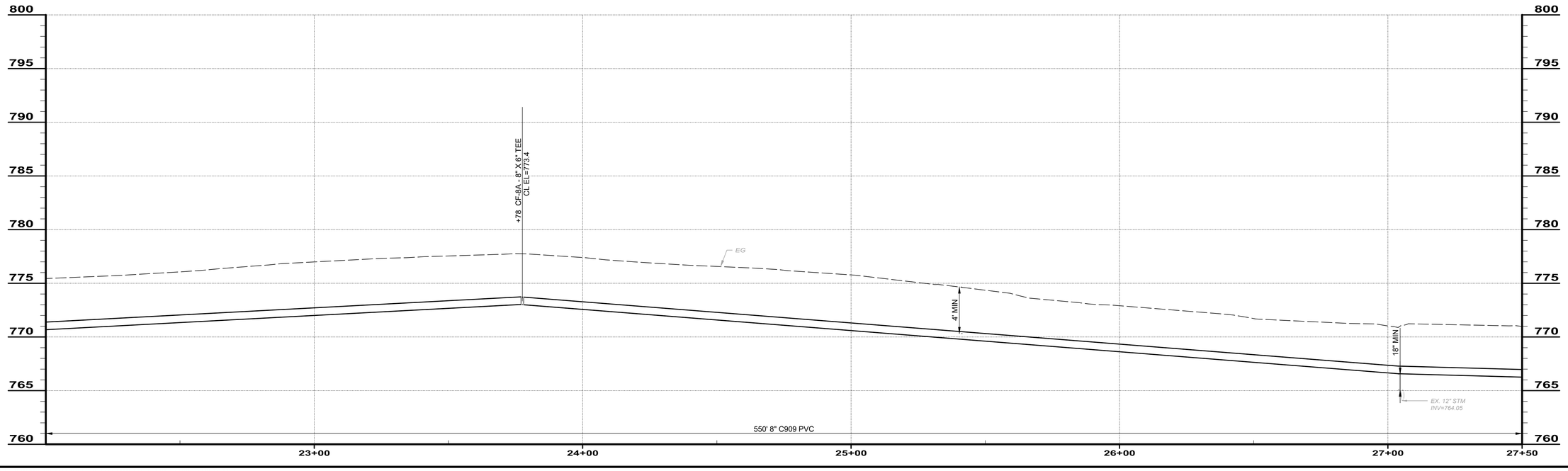
PLAN AND PROFILE
STA: 16+50 TO 22+00

PROJECT NO.
190709
DISCIPLINE
CIVIL
SHEET NAME
02C-05
SHEET 12 OF 25

C:\CIVIL 3D PROJECTS\190709\DWG\SHEETS\C_190709_PLAN AND PROFILE-1.DWG - 12- 02C-05 - 4/7/2020 1:35:22 PM - PHILIP TATE

WATERLINE FITTING TABLE							
NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-8A	8" X 6" TEE	23+77.54	773.36	774498.47	2398122.2589		





STATE OF OHIO ★ ENGINEER ★ LESLEY GORDON 72293 REGISTERED PROFESSIONAL

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NO	REVISION	DATE
		12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
CHECKED BY:	LAG

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY

PLAN AND PROFILE STA: 22+00 TO 27+50

PROJECT NO.	190709
DISCIPLINE	CIVIL
SHEET NAME	02C-6
SHEET	13
OF	25

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

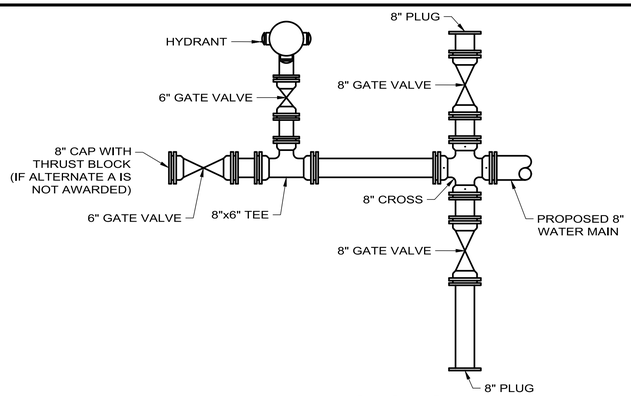
PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'

WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-9	8" 45° BEND	29+28.13	767.49	774505.31	2398672.8124		
CF-10	8" 45° BEND	29+32.63	762.99	774505.36	2398677.3075		
CF-11	8" 45° BEND	29+51.76	762.99	774505.60	2398696.4374		
CF-12	8" 45° BEND	29+57.01	768.24	774505.66	2398701.6812		
CF-13	8" X 6" TEE	31+90.17	774.97	774508.56	2398934.8247		
CF-13A	8" CROSS	32+00.24	775.35	774508.68	2398944.8995		

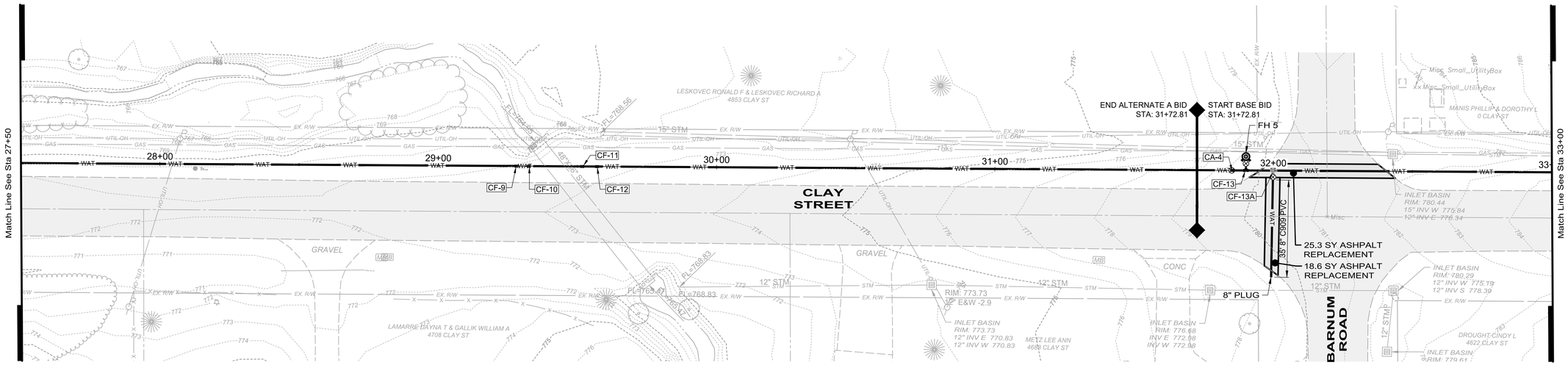
WATERLINE APPURTENANCE TABLE

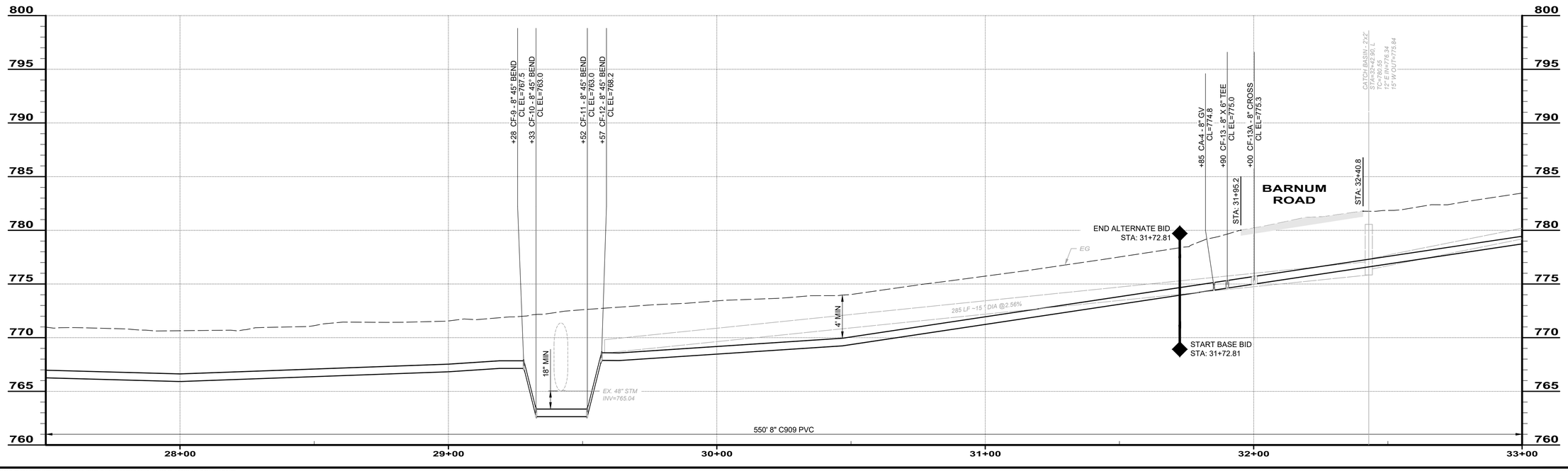
NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS BUILT)
CA-4	8" Valve	31+85.20	774.78	774508.50	2398929.85		



BARNUM INTERSECTION DETAIL

NOT TO SCALE





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

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'

NO	REVISION	DATE
	.	

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
CHECKED BY:	LAG

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 27+50 TO 33+00

PROJECT NO.
190709
DISCIPLINE
CIVIL
SHEET NAME
02C-07
SHEET 14 OF 25

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BAR SCALE
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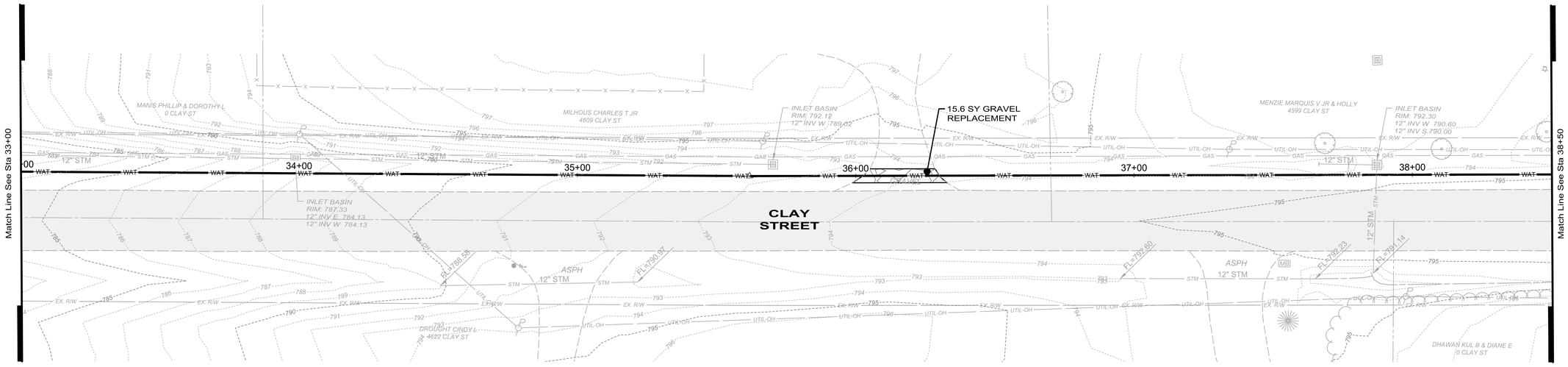
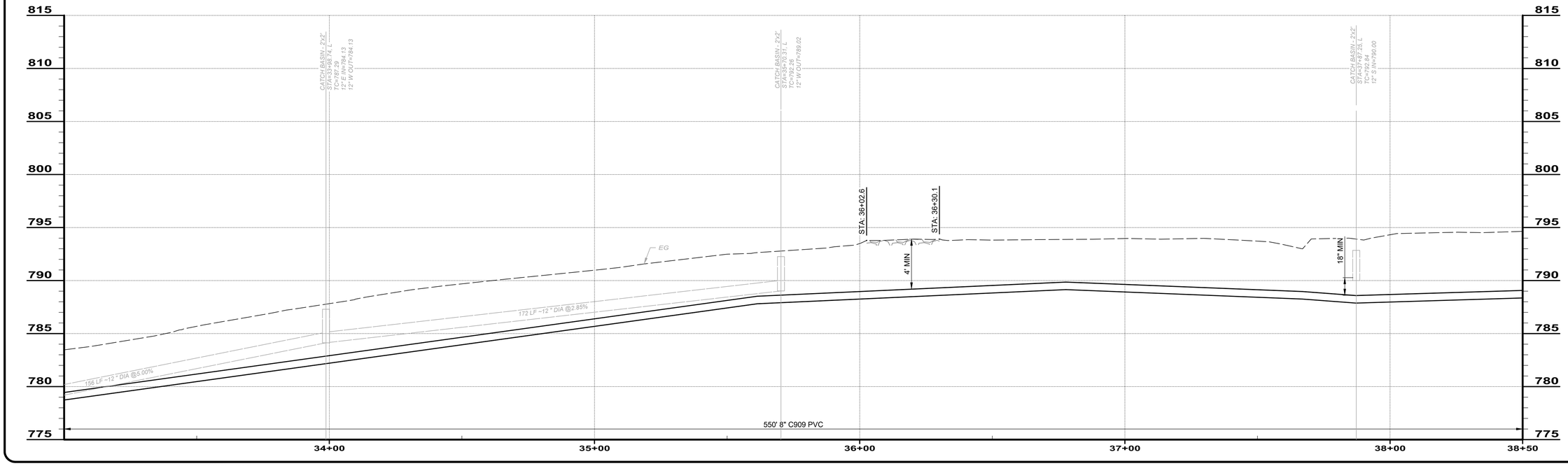
SCALE: 1"= 20'

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'





ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 33+00 TO 38+50

NO	REVISION	DATE
		12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
CHECKED BY:	LAG

PROJECT NO.
190709
DISCIPLINE
CIVIL
SHEET NAME
02C-08
SHEET 15 OF 25

STATE OF OHIO ★ ENGINEER ★ LESLEY GORDON 72293 REGISTERED PROFESSIONAL

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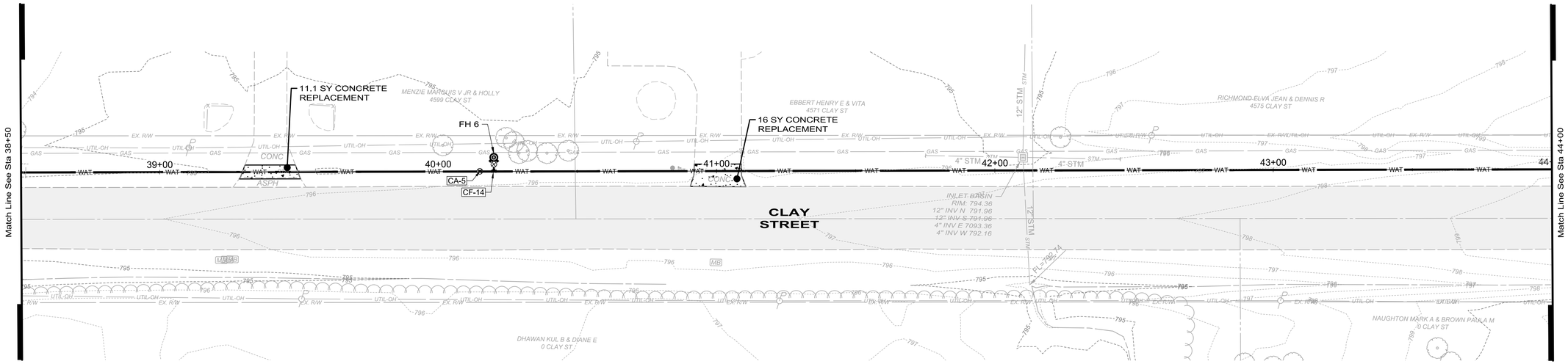
WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-14	8" X 6" TEE	40+20.01	790.02	774522.62	2399764.5456		

WATERLINE APPURTENANCE TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS BUILT)
CA-5	8" Valve	40+15.02	789.98	774522.51	2399759.55		



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

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'

STATE OF OHIO ★ ENGINEER ★ LESLEY GORDON 72293 REGISTERED PROFESSIONAL

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		12/3/18

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ISSUE DATE:	4/7/2020
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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY

PLAN AND PROFILE STA: 38+50 TO 44+00

PROJECT NO.
190709
DISCIPLINE
CIVIL
SHEET NAME
02C-09
SHEET 16 OF 25

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WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-14A	8" X 6" TEE	46+12.91	795.02	774534.70	2400357.3188		

BAR SCALE
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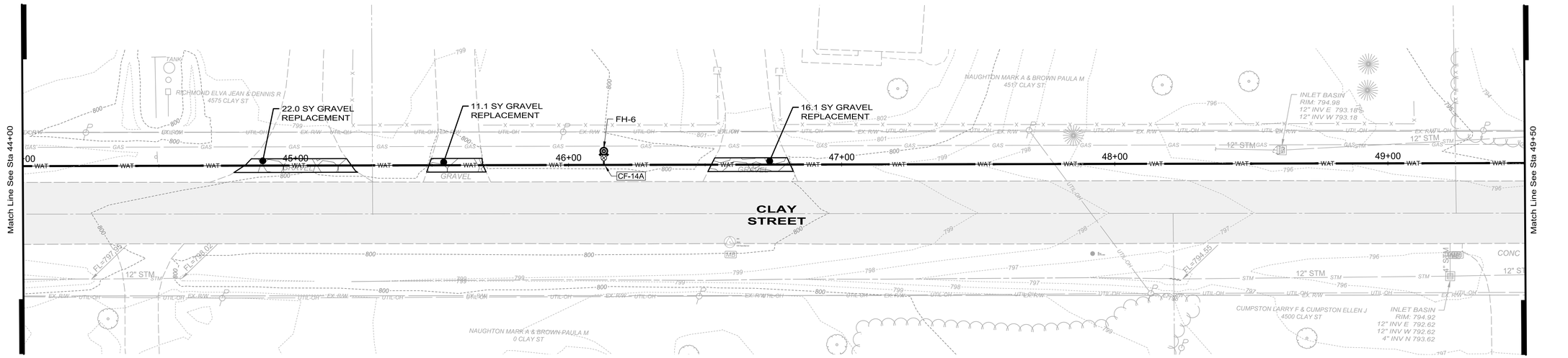
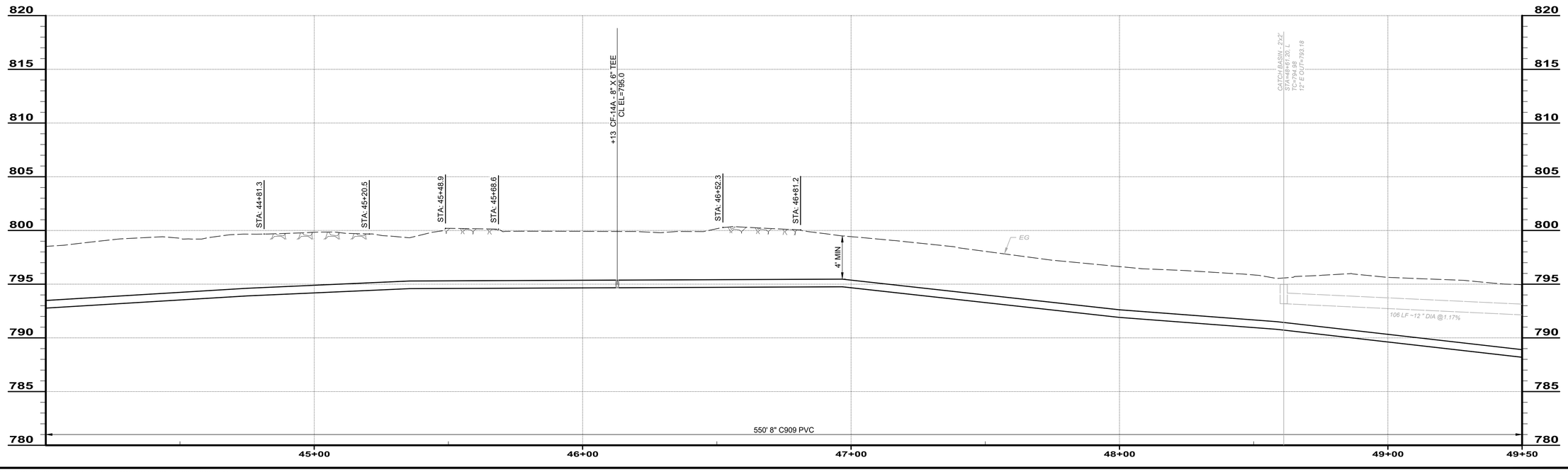
SCALE: 1"= 20'

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'





STATE OF OHIO ★ ENGINEER ★ LESLEY GORDON 72293 REGISTERED PROFESSIONAL

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NO	REVISION	DATE
		12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
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CHECKED BY:	LAG

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY AUSTINBURG, OHIO

PLAN AND PROFILE STA: 44+00 TO 49+50

PROJECT NO. 190709
DISCIPLINE CIVIL
SHEET NAME 02C-10
SHEET 17 OF 25

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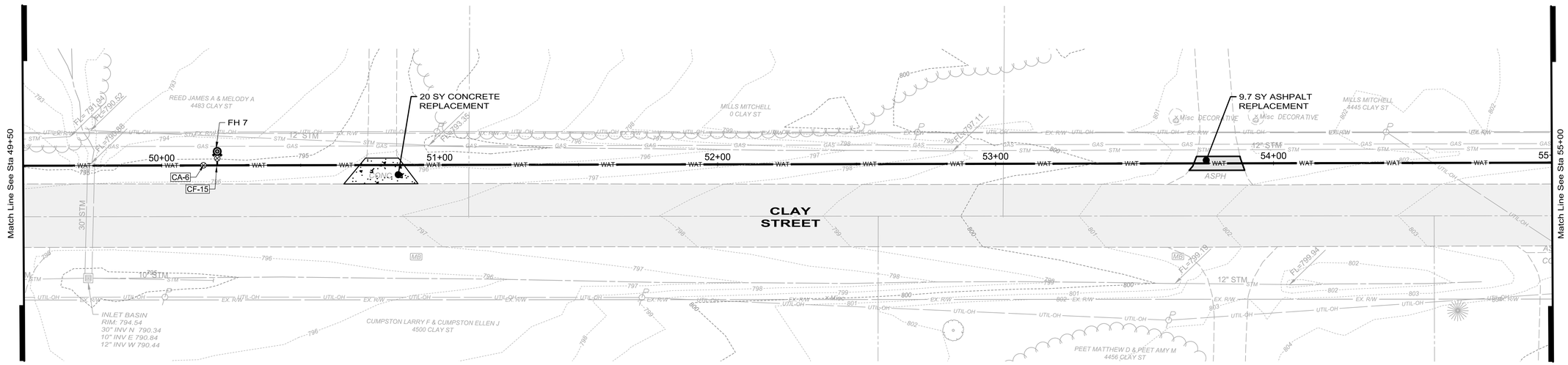
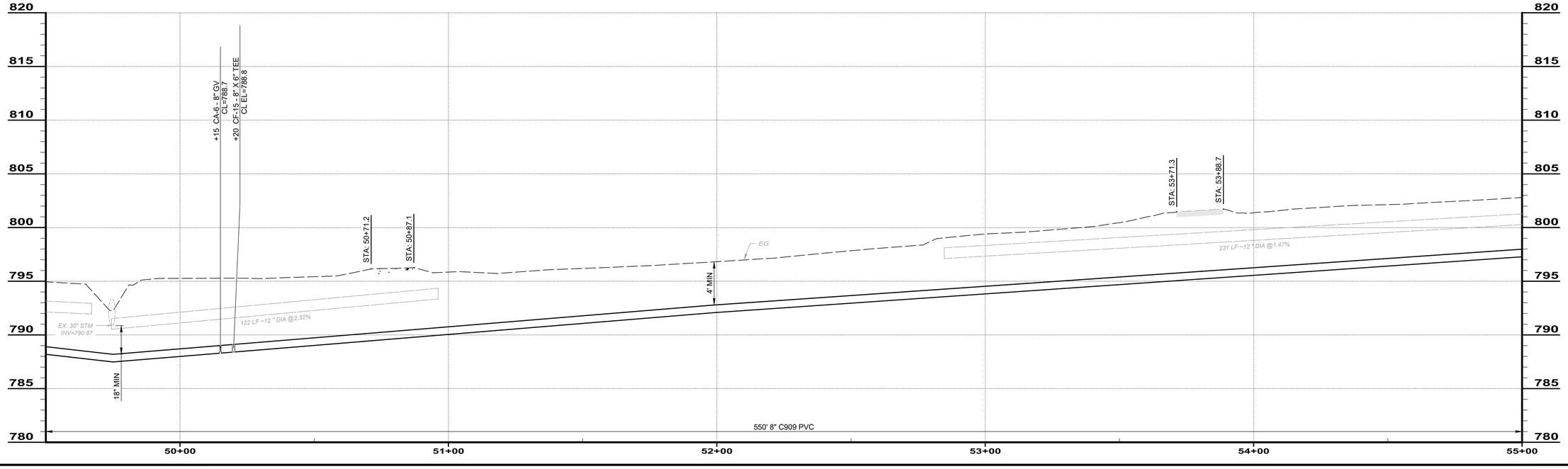
WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-15	8" X 6" TEE	50+19.96	788.76	774543.00	2400764.2826		

WATERLINE APPURTENANCE TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS BUILT)
CA-6	8" Valve	50+15.05	788.66	774542.90	2400759.37		





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

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'

STATE OF OHIO ★ ENGINEER ★ LESLEY GORDON 72293 REGISTERED PROFESSIONAL

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NO	REVISION	DATE
		12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 49+50 TO 55+00

PROJECT NO. 190709
DISCIPLINE CIVIL
SHEET NAME 02C-11
SHEET 18 OF 25

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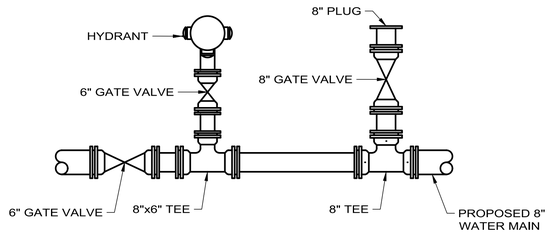
WATERLINE FITTING TABLE

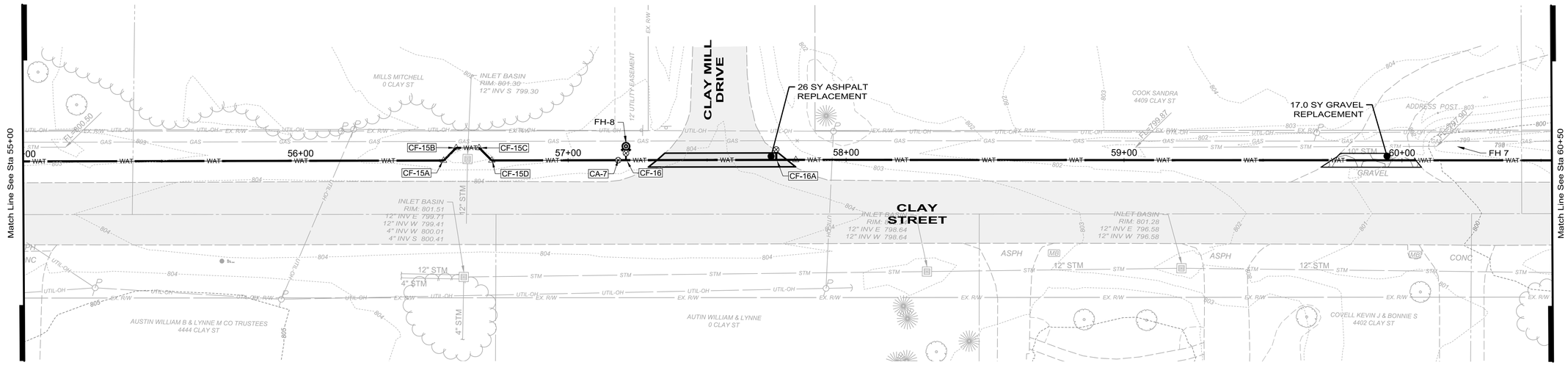
NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-15A	8" 45° BEND	56+51.44	797.36	774555.88	2401395.6343		
CF-15B	8" 45° BEND	56+57.86	797.46	774560.50	2401400.0791		
CF-15C	8" 45° BEND	56+66.09	797.58	774560.67	2401408.3070		
CF-15D	8" 45° BEND	56+72.50	797.67	774556.23	2401412.9276		
CF-16	8" X 6" TEE	57+20.81	798.89	774557.21	2401461.2259		
CF-16A	8" TEE	57+74.87	798.89	774558.32	2401515.2717		

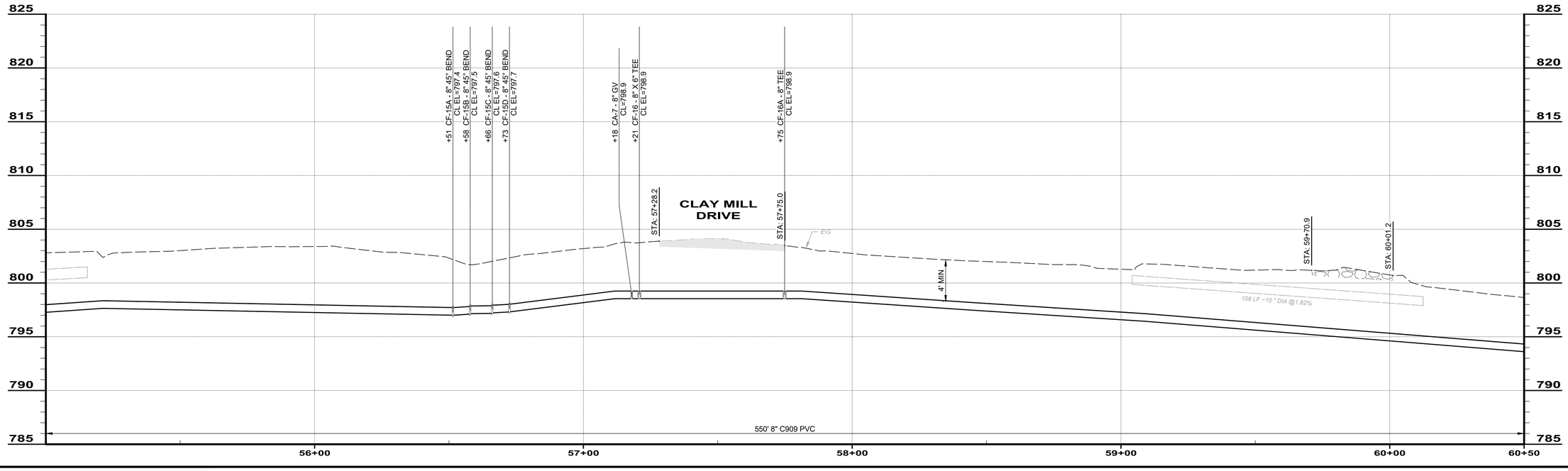
WATERLINE APPURTENANCE TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS BUILT)
CA-7	8" Valve	57+17.99	798.89	774557.16	2401458.40		



CLAYMILL INTERSECTION DETAIL
NOT TO SCALE





ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 55+00 TO 60+50

NO	REVISION	DATE
		12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
CHECKED BY:	LAG

PROJECT NO. 190709
DISCIPLINE: CIVIL
SHEET NAME: 02C-12
SHEET 19 OF 25

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BAR SCALE
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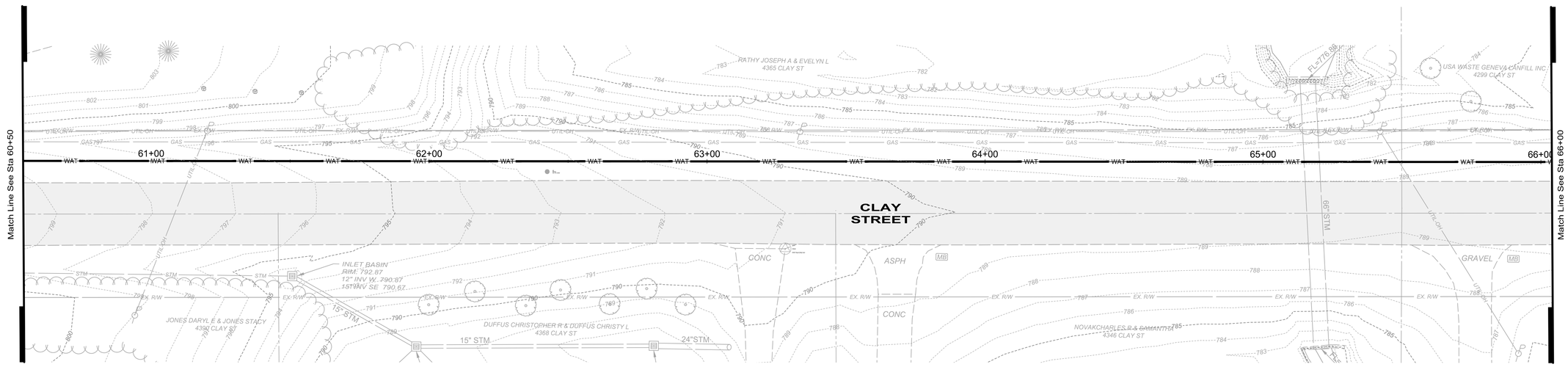
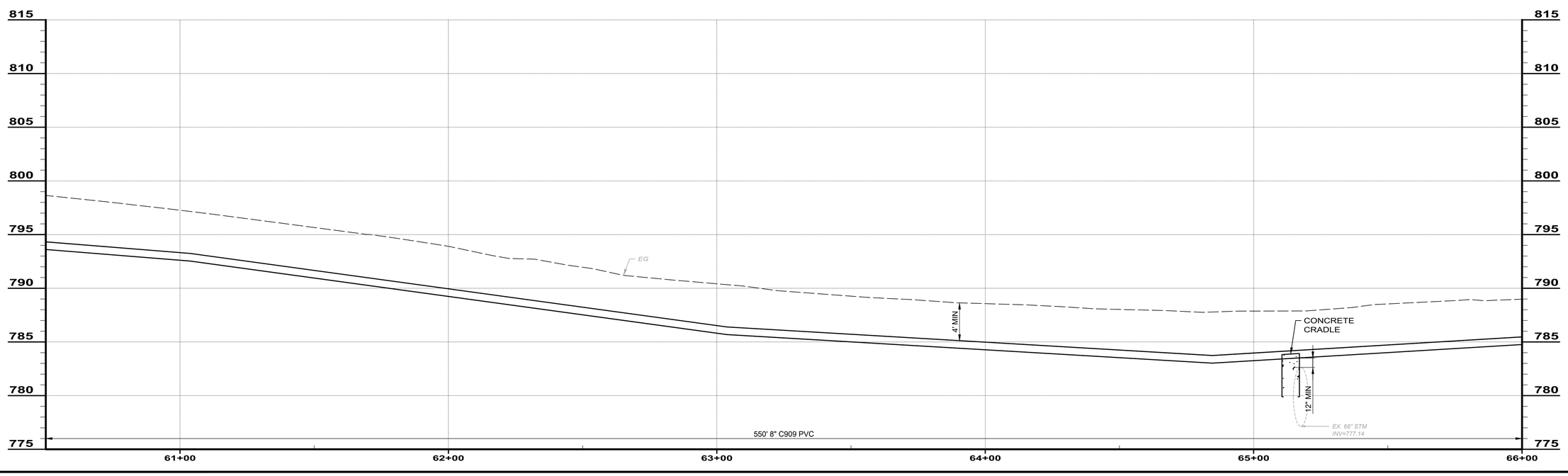
SCALE: 1"= 20'

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'





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consultants
engineers
architects
planners

NO	REVISION	DATE
		12/3/19

BID	
ISSUED FOR:	4/7/2020
ISSUE DATE:	AS SHOWN
SCALE:	PMT
DESIGNED BY:	PMT
DRAWN BY:	LAG
CHECKED BY:	

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 60+50 TO 66+00

PROJECT NO.
190709
DISCIPLINE
CIVIL
SHEET NAME
02C-13
SHEET 20 OF 25

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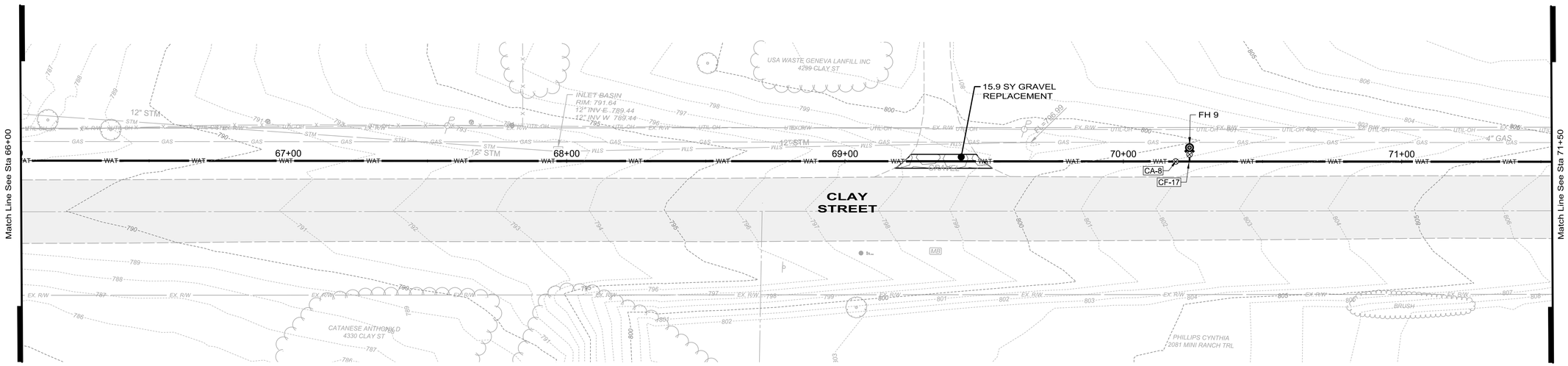
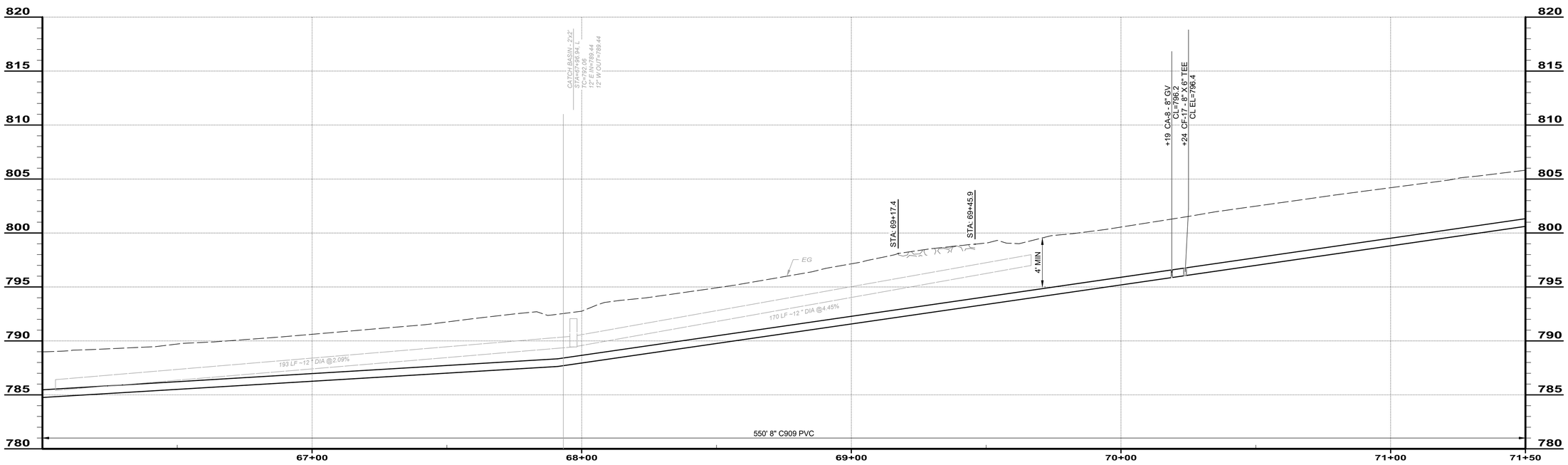
WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-17	8" X 6" TEE	70+23.75	796.40	774580.40	2402763.9613		

WATERLINE APPURTENANCE TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS BUILT)
CA-8	8" Valve	70+18.83	796.22	774580.31	2402759.04		





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

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'

STATE OF OHIO ★ ENGINEER ★ LESLEY GORDON 72293 REGISTERED PROFESSIONAL

your trusted advisor consultants engineers architects planners

NO	REVISION	DATE
		12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
DRAWN BY:	PMT
CHECKED BY:	LAG

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 66+00 TO 71+50

PROJECT NO. 190709
DISCIPLINE CIVIL
SHEET NAME 02C-14
SHEET 21 OF 25

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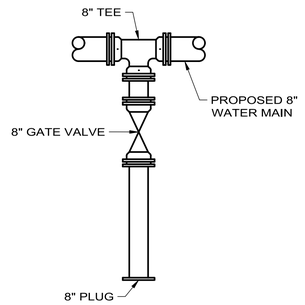
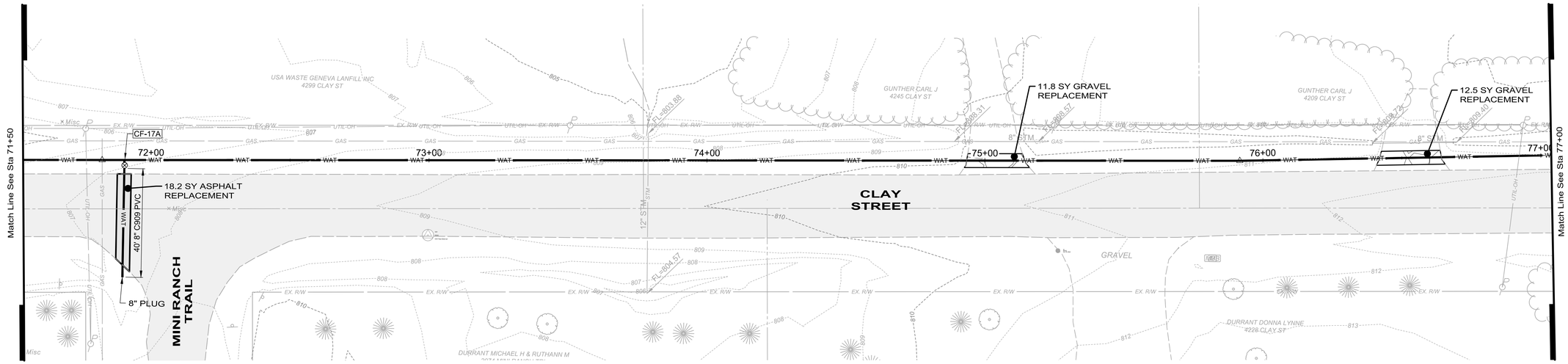
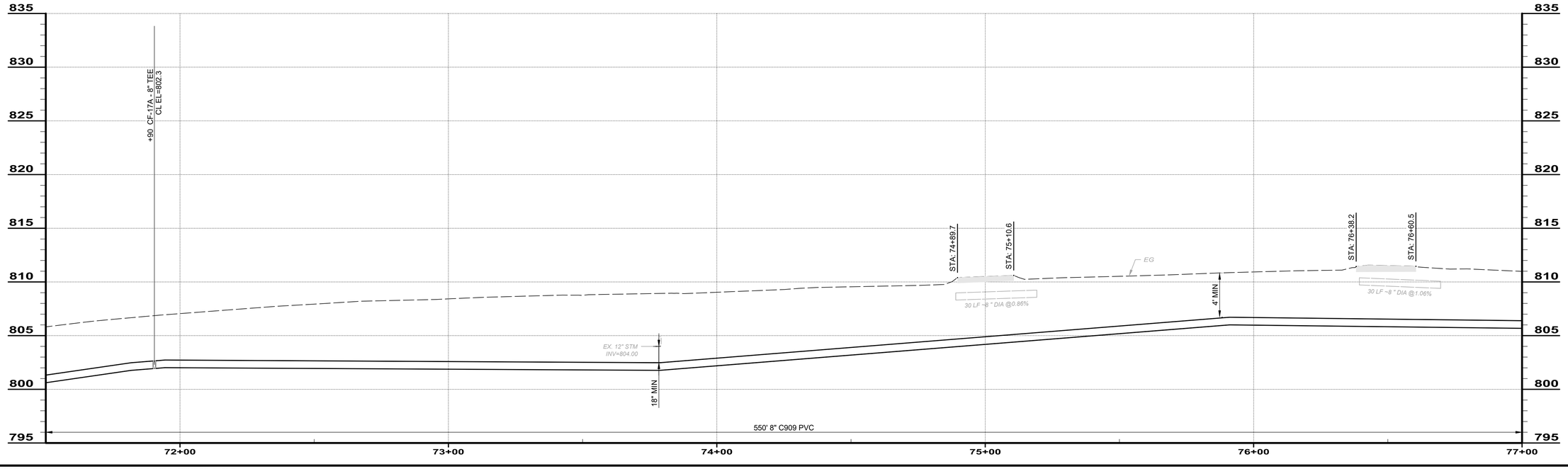
WATERLINE FITTING TABLE							
NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-17A	8" TEE	71+90.45	802.29	774583.36	2402930.6314		



MINI RANCH INTERSECTION DETAIL

NOT TO SCALE





BAR SCALE

20' 10' 0' 20'

SCALE: 1"= 20'

PROFILE BAR SCALE

HORIZ: 20' 10' 0' 20'

VERT: 5' 2.5' 0' 5'

STATE OF OHIO LESLEY A. GORDON 72293 REGISTERED PROFESSIONAL ENGINEER

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NO	REVISION	DATE
		12/3/18

ISSUED FOR:	BID
ISSUE DATE:	4/7/2020
SCALE:	AS SHOWN
DESIGNED BY:	PMT
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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 71+50 TO 77+00

PROJECT NO. 190709

DISCIPLINE CIVIL

SHEET NAME 02C-15

SHEET 22 OF 25

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WATERLINE FITTING TABLE							
NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-18	8" X 6" TEE	79+93.72	810.85	774604.99	2403733.5780		

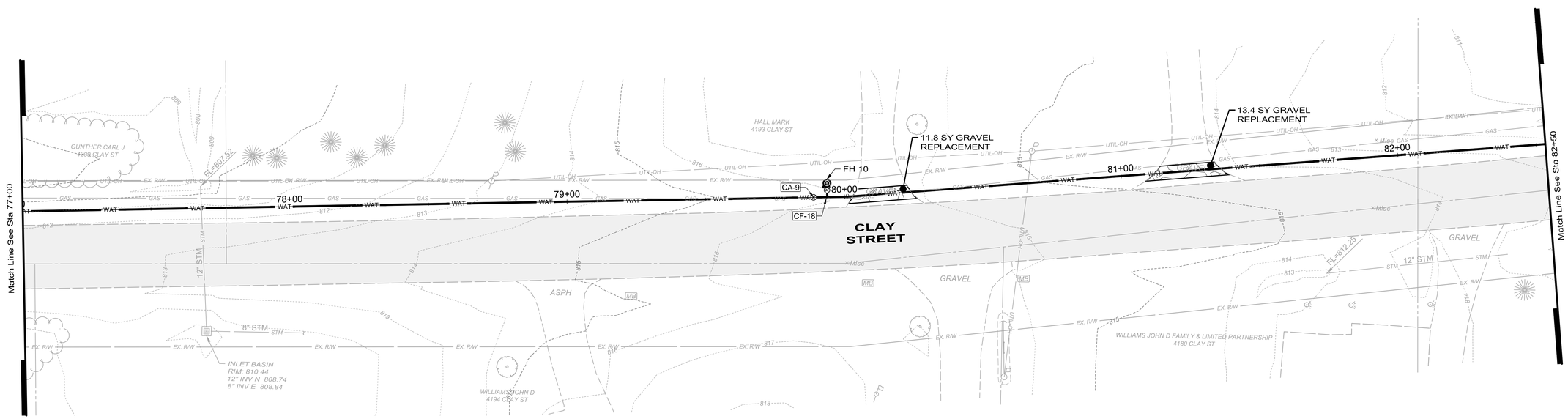
WATERLINE APPURTENANCE TABLE							
NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS BUILT)
CA-9	8" Valve	79+88.90	810.73	774604.81	2403728.76		

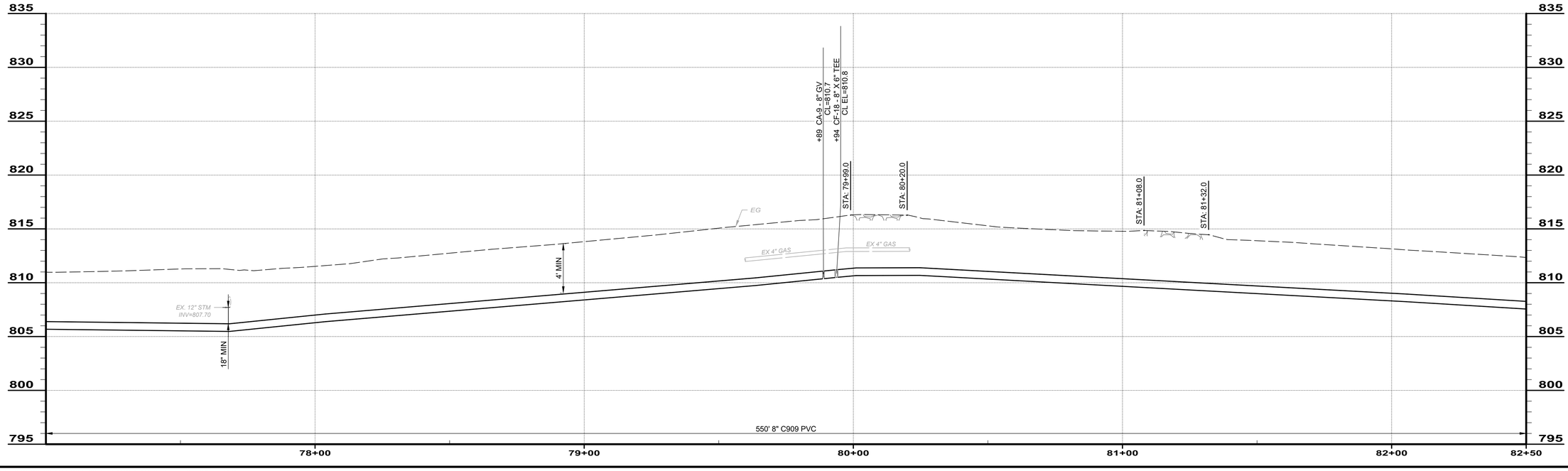
DRAWING PLAN WRITTEN NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL UTILITIES THAT CROSS THE PROPOSED WATER MAIN. IN THE EVENT A UTILITY IS DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF THE REPAIR AT NO ADDITIONAL COST TO THE OWNER.
2. FOR ADDITIONAL NOTES FOR EXISTING UTILITIES, REFER TO SHEET 01G-02.

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

PROFILE BAR SCALE
HORIZ: 20' 10' 0' 20'
VERT: 5' 2.5' 0' 5'





STATE OF OHIO ★ ENGINEER ★ LESLEY GORDON 72293 REGISTERED PROFESSIONAL

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NO	REVISION	DATE
		12/3/18

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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 77+00 TO 82+50

PROJECT NO.
190709
DISCIPLINE
CIVIL
SHEET NAME
02C-16
SHEET 23 OF 25

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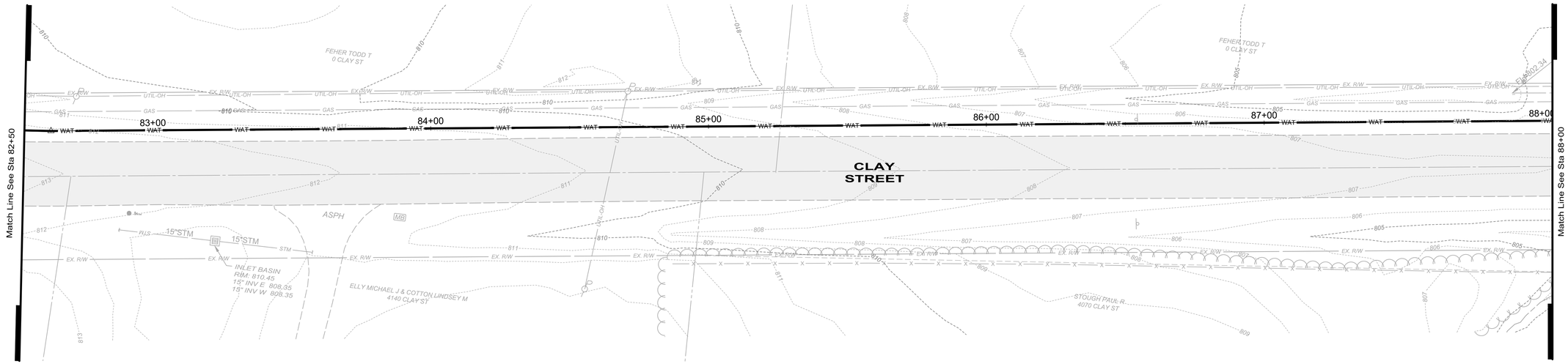

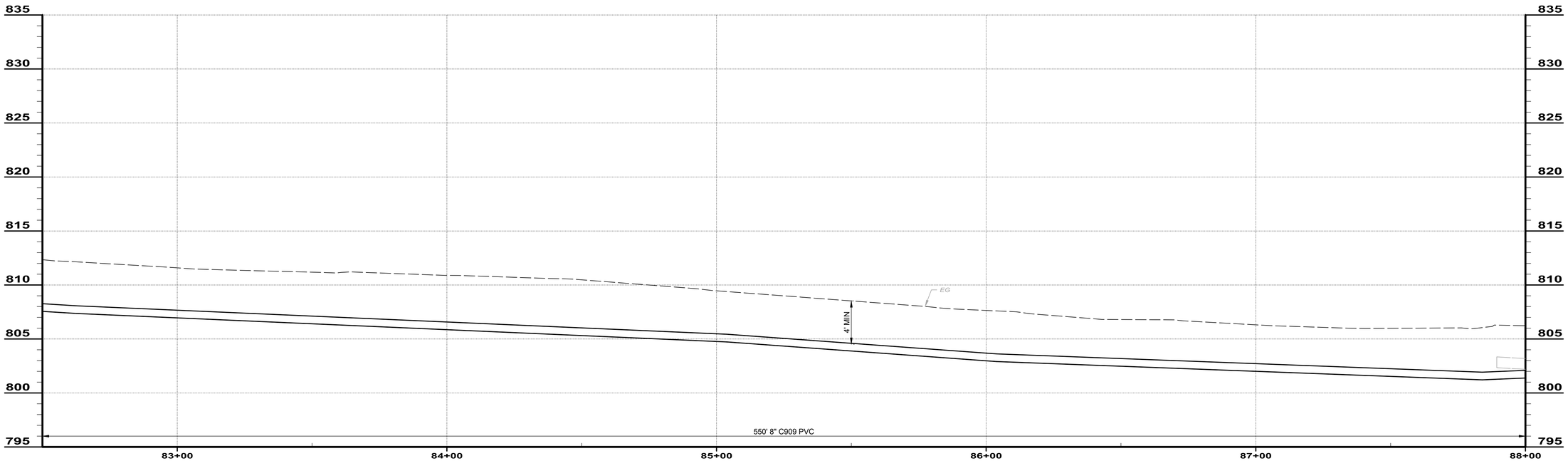

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STATE OF OHIO ★ ENGINEER ★ PROFESSIONAL
LESLEY GORDON 72293 REGISTERED

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NO	REVISION	DATE
		12/3/18

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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
CLAY STREET WATERLINE IMPROVEMENTS PROJECT
ASHTABULA COUNTY
AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 82+50 TO 88+00

PROJECT NO.	190709
DISCIPLINE	CIVIL
SHEET NAME	02C-17
SHEET	24
OF	25

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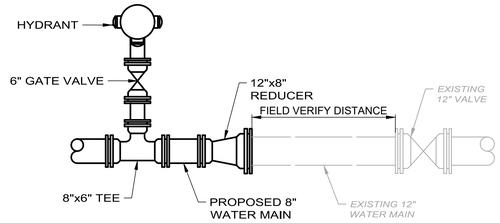
WATERLINE FITTING TABLE

NO	DESCRIPTION	W/L STA	C/L EL	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (AS-BUILT)	EASTING (AS-BUILT)
CF-19	8" 45° BEND	88+25.14	801.95	774698.35	2404559.6477		
CF-20	8" 45° BEND	88+27.44	799.65	774698.63	2404561.9297		
CF-21	8" 45° BEND	88+37.14	799.65	774699.82	2404571.5547		
CF-22	8" 45° BEND	88+39.68	802.18	774700.12	2404574.0707		
CF-23	8" X 6" TEE	91+49.69	805.68	774735.28	2404882.0512		
CF-24	12" X 8" REDUCER	91+52.67	805.70	774735.38	2404885.0295		

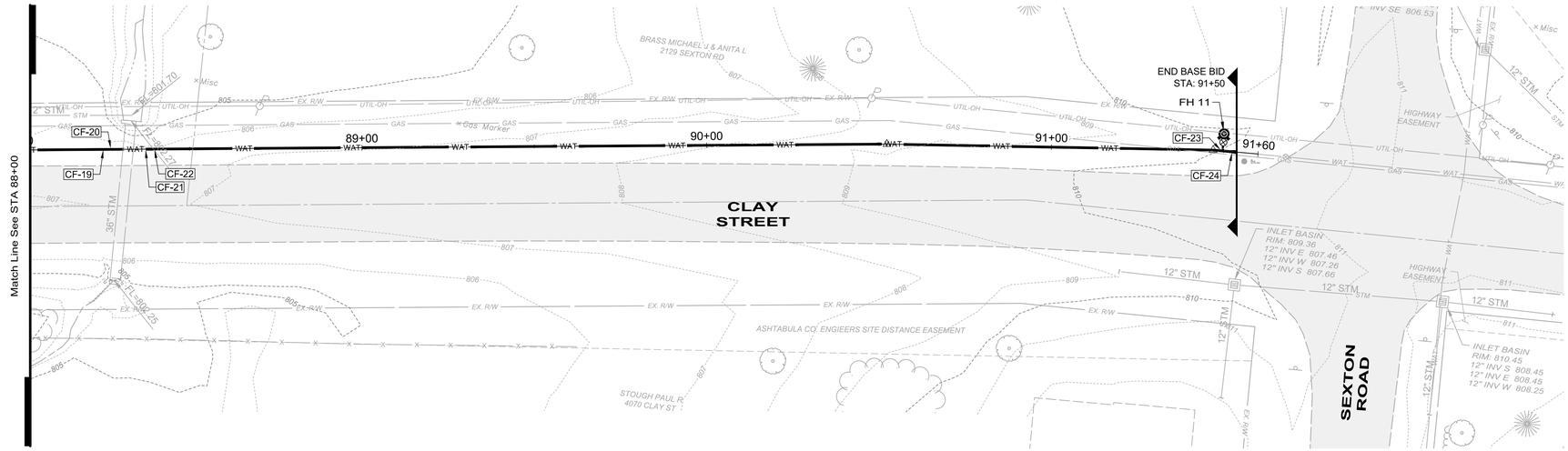
DRAWING PLAN NOTES:

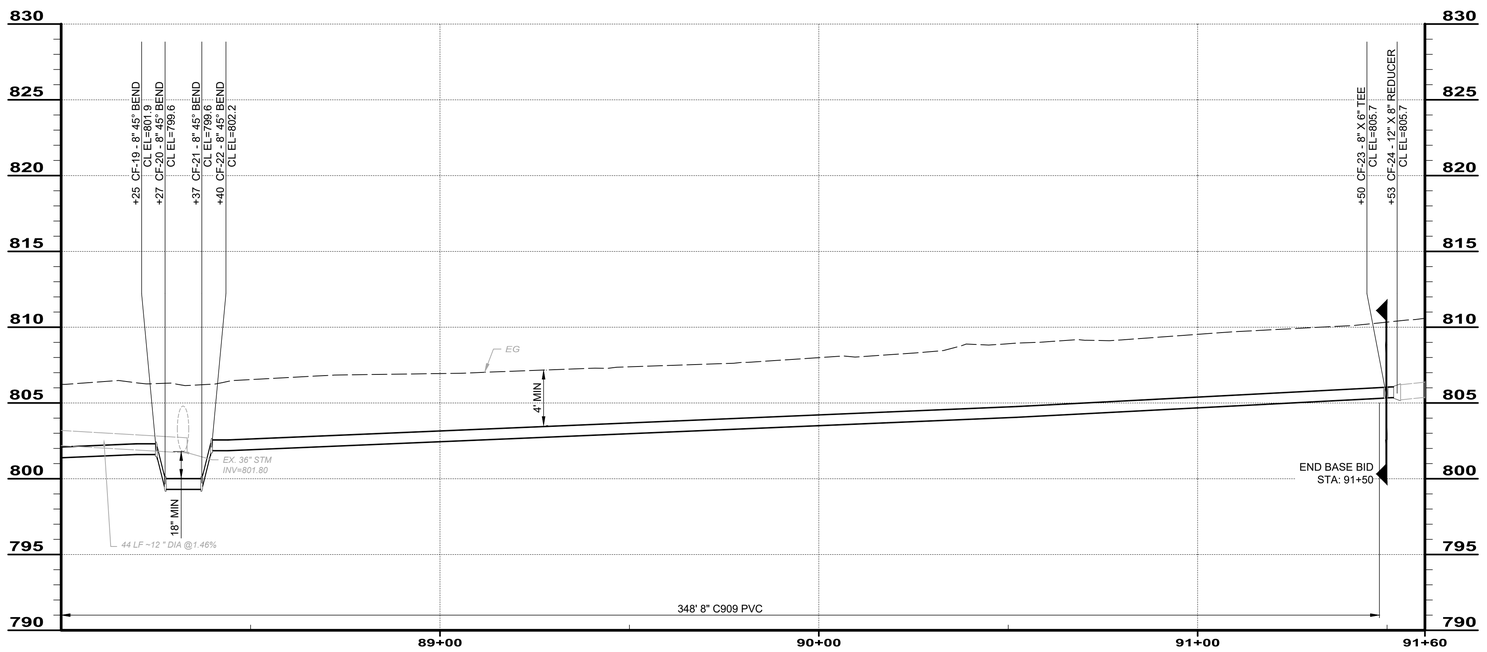
1. CONTRACTOR TO CLOSE EXISTING VALVE ON THE WEST SIDE OF SEXTON ROAD AND REMOVE EXISTING 12" PLUG AND MAKE CONNECTION TO WATER MAIN.



SEXTON ROAD CONNECTION DETAIL

NOT TO SCALE





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ASHTABULA COUNTY AUSTINBURG, OHIO

PLAN AND PROFILE
STA: 88+00 TO 91+60

PROJECT NO.
190709
DISCIPLINE
CIVIL
SHEET NAME
02C-18
SHEET 25 OF 25

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