NEW HOLLAND PIKE LOW–PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY

PA ONE CALL UNDERGROUND UTILITY PROTECTION ACT

PURSUANT TO THE PROVISIONS OF ACT NO. 287 OF 1974, AS AMENDED BY ACT 187 OF 1996, ACT 181 OF 2006, ACT 160 OF 2016 AND ACT 50 OF 2017 OF THE PENNSYLVANIA STATE LEGISLATURE, RETTEW ASSOCIATES, INC. HAS PERFORMED THE FOLLOWING IN PREPARING THESE DRAWINGS REQUIRING EXCAVATION OR DEMOLITION WORK AT SITES WITHIN THE POLITICAL SUBDIVISION(S) SHOWN ON THE DRAWINGS:

1. PURSUANT TO SECTION 4, CLAUSE (2) OF SAID ACT, RETTEW ASSOCIATES, INC. REQUESTED FROM EACH FACILITY OWNER DESIGNATED ON SUCH LIST PROVIDED BY THE ONE CALL SYSTEM NOTIFICATION, THE INFORMATION PRESCRIBED BY SECTION 2, CLAUSE (4) OF SAID ACT, NOT LESS THAN TEN (10) NOR MORE THAN NINETY (90) BUSINESS DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED.
2. PURSUANT TO SECTION 4, CLAUSE (5) OF SAID ACT, RETTEW ASSOCIATES, INC. HAS MET THEIR OBLIGATIONS OF CLAUSE (2) BY CALLING THE PENNSYLVANIA ONE CALL SYSTEM SERVING THE LOCATION WHERE THE WORK IS TO BE PERFORMED, AND SHOWING THE ASSOCIATED SERIAL NUMBER(S) ON THIS/THESE DRAWING(S).
3. PURSUANT TO SECTION 4, CLAUSE (3) OF SAID ACT, RETTEW ASSOCIATES, INC. HAS SHOWN UPON THIS/THESE DRAWING(S) THE POSITION AND TYPE OF EACH FACILITY, AS DERIVED PURSUANT TO THE REQUEST MADE AS REQUIRED BY CLAUSE (2),
4. PURSUANT TO SECTION 4, CLAUSE (5) OF SAID ACT, RETTEW ASSOCIATES, INC. HAS SHOWN UPON THIS/THESE DRAWING(S) THE TOLL-FREE NUMBER FOR THE ONE CALL SYSTEM AND THE SERIAL NUMBER(S) FOR THE ASSOCIATED ONE CALL SYSTEM NOTIFICATION(S),

ADDITIONALLY, RETTEW ASSOCIATES, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTEE THAT THE INFORMATION RECEIVED PURSUANT TO SAID REQUEST, AND AS REFLECTED ON THIS/THESE DRAWING(S), IS CORRECT OR ACCURATE. INFORMATION REFLECTED ON THIS/THESE DRAWING(S) IS SHOWN AS REQUIRED BY SAID ACT NO. 160 OF 2016, AND AS PROVIDED BY THE FACILITY OWNER PURSUANT TO SECTION 2, CLAUSE (4) OF SAID ACT.

DATE: 09/22/2026

ONE CALL SYSTEM SERIAL NUMBER: 20262612747

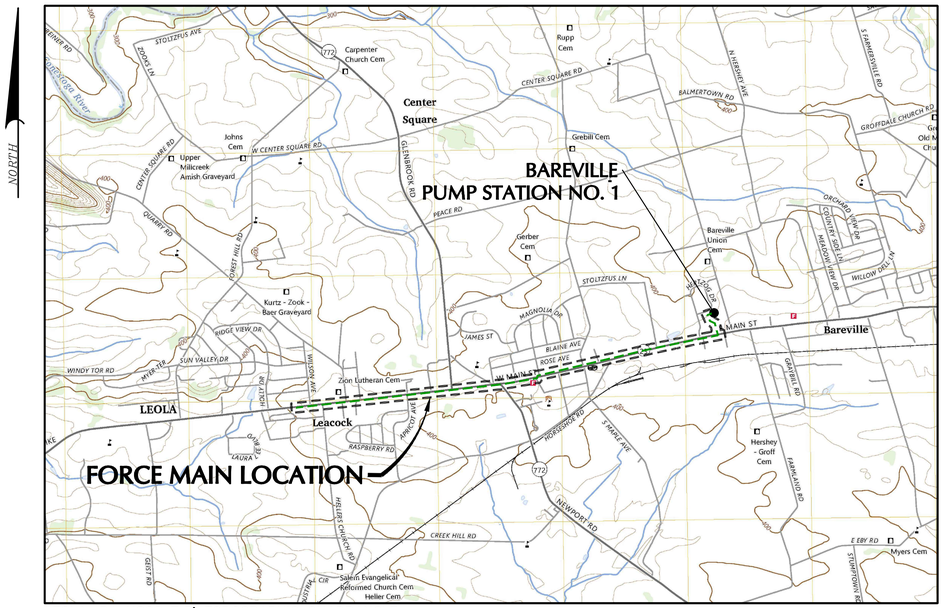
Pennsylvania811
A Privately funded non-profit Pennsylvania Corporation
1-800-242-1776

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES THREE (3) WORKING DAYS NOTICE FOR CONSTRCTION PHASE AND TEN (10) WORKING DAYS IN DESIGN STAGE - STOP CALL

ONE CALL MATRIX

Response Due Date: 10/02/26		Survey Review Completed by:			Date:		
UTILITY/COMPANY		RESPONSE RCVD (select one) KARL Auto Response	TICKET #	RETTEW ACTION Map/No Map	CONTACT NAME	CONTACT EMAIL	CONTACT PHONE
Electric							
PPL Electric Utilities Corporation					Pamela Seitzer	pdseitzer@pplweb.com	(570) 368-5394
Gas							
Buckeye Partners	9/18/26		20262612747		Brian Barr	bbarr@buckeye.com	(610) 904-4156
UGI Utilities Inc	9/18/26		20262612747		Geoffrey Ferguson	gferguson@UGI.com	(610) 807-3118
	9/24/26				Luke MacNair	macnairl@ugi.com	(717) 413-1080
Communication							
Comcast/Cable Protection Services Inc	9/18/26		20262612747		Debbie King	debbie_king@cableps.com	(804) 562-3409
Frontier Communications of PA Inc					Michael Navich	Michael.Navich@FTR.com	(570) 208-3375
Verizon Pennsylvania					Office Personnel	1Call-Verizon-PADE@verizon.com	
Water/Sewer							
Upper Leacock Township Municipal Authority/Upper Leacock Township	9/22/26		20262612747		Robert Fricke	rfricke@ultwp.com	(717) 656-9755
							ext 532
USDI Utility Safety and Design Inc					Jason Brangers	jason@usdi.us	(502) 819-1338
Upper Leacock TMA/Upper Leacock Twp					Derek Martin	Dmartrin@ultwp.com	(717) 656-9755
							ext 554

UPPER LEACOCK TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA



LEOLA, PA USGS 7.5' TOPOGRAPHIC QUADRANGLE

SITE LOCATION MAP
SCALE: 1" = 2000'

OCTOBER 2026

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C–03	PROPOSED SANITARY PLAN AND PROFILE III
C–04	PROPOSED SANITARY PLAN AND PROFILE IV
C–05	PROPOSED SANITARY PLAN AND PROFILE V
C–06	PROPOSED SANITARY PLAN AND PROFILE VI
C–07	PROPOSED SANITARY PLAN AND PROFILE VII
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C–17	PROPOSED SANITARY PLAN AND PROFILE XVII
EC–01	EROSION & SEDIMENTATION CONTROL NOTES
EC–02	EROSION & SEDIMENTATION CONTROL DETAILS
EC–03	EROSION & SEDIMENT CONTROL PLAN I, II & III
EC–04	EROSION & SEDIMENT CONTROL PLAN IV, V & VI
EC–05	EROSION & SEDIMENT CONTROL PLAN VII & VIII
EC–06	EROSION & SEDIMENT CONTROL PLAN IX & X
D–01	CIVIL DETAILS I
D–02	SANITARY PIPING DETAILS I
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D–04	SANITARY PIPING DETAILS III

CONTRACT No. 2026–04

ISSUED FOR BIDDING

NO.	DATE	REVISION
0	10/05/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE093300
10/05/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FIELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

NTS

RETTEW
RETTEW Associates, Inc.
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Website: www.rettew.com
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

NEW HOLLAND PIKE LOW–PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
COVER SHEET
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. G–01

SURVEY NOTES

1. BASIS OF BEARINGS IS PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, PA SOUTH ZONE, NAD 83–2011.

2. BENCHMARKS: NAVD–88 DATUM.

   BENCHMARK "A" TOP OF A CAPPED REBAR SET LOCATED (±) 858' OF WEST OF THE CENTERLINE OF HELLERS CHURCH ROAD (SR 1003) AND SOUTH (±) 4' OF THE SOUTH EDGE OF PAVED SHOULDER OF WEST MAIN STREET (SR 0023).
   ELEVATION=407.32'. NORTHING=277729.68' EASTING=2399306.39'.

   BENCHMARK "B" TOP OF CAPPED REBAR SET LOCATED (±) 30' SOUTH OF THE CENTERLINE OF WEST MAIN STREET (SR 0023) AND WEST (±) 36' OF THE CENTERLINE OF APRICOT AVENUE T–768
   ELEVATION=423.90'. NORTHING=278116.82' EASTING=2402345.46'.

   BENCHMARK "C" TOP OF THE SOUTHWESTERN MOST BOLT OF A TRAFFIC SIGNAL POLE LOCATED NORTH OF THE CENTERLINE INTERSECTION OF MAIN STREET (SR 0023) AND NEWPORT AVENUE (SR 0772).
   ELEVATION=421.14', NORTHING=277729.68' EASTING=2399306.39'.

   BENCHMARK "D" TOP OF CAPPED REBAR SET LOCATED (±) 72' NORTH OF THE CENTERLINE OF WEST MAIN STREET (SR 0023) AND WEST (±) 33' OF THE CENTERLINE OF NORTH MAPLE AVENUE (T–657).
   ELEVATION=426.56'. NORTHING=279029.70' EASTING=2406970.75'.

   BENCHMARK "E" TOP OF CAPPED REBAR SET LOCATED (±) 28' NORTH OF THE CENTERLINE OF WEST MAIN STREET (SR 0023) AND WEST (±) 45' OF THE CENTERLINE OF STAUFFER COURT.
   ELEVATION=435.87'. NORTHING=279926.53' EASTING=2410620.94'.

3. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND WERE DETERMINED FROM VISIBLE LOCATIONS, PA ONE CALL UTILITY RESPONSES, SUBSURFACE UTILITY LOCATIONS AND/OR BEST AVAILABLE PLAN INFORMATION. PA ONE CALL NOTIFICATION SERIAL NUMBER IS 20252162133–000, DATED 8/04/25. NOTE: SUBSURFACE UTILITY LOCATIONS (QLB LEVEL) WERE PERFORMED BY RETTEW ON THE FORCE MAIN ONLY, NOT ANY LATERALS. (RETTEW CANNOT GUARANTEE THE EXACT LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES. AN EXACT LOCATION CAN ONLY BE OBTAINED BY SUBSURFACE EXPLORATION, WHICH IS NOT A PART OF THIS CONTRACT PERFORMANCE).

4. ROAD RIGHT OF WAYS WERE BASED ON A PLAN THE FOLLOWING PENNDOT PLANS:

   PENNDOT PLAN DISTRICT 8–0, LANCASTER COUNTY, UPPER LEACOCK TOWNSHIP, ROUTE 244 & APPL 390, SHEET 1 OF 1.

   PENNDOT PLAN DISTRICT 8–0, COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION DRAWINGS AUTHORIZING ACQUISITION OF RIGHT–OF–WAY FOR STATE ROUTE # 0023, SECTIONS 032 R/W, FROM STATION 328+90.00 TO STA. 357+00.00, LENGTH 2530.49 FT, 0.479 MILES. FROM SEG. 0370 OFFSET 2789 TO SEG. 0390 OFFSET 0912 & STATE ROUTE # 1003, SECTIONS 023 R/W, FROM STATION 209+00.00 TO STA. 211+16.00, LENGTH 167.00 FT, 00329 MILES. FROM SEG. 0080 OFFSET 2362 TO SEG. 0090 OFFSET 0102. TOTAL LENGTH 2697.49 FT. 0.511 MI. SHEETS 1–50, APPROVED 6/13/17. RECORDED IN LANCASTER COUNTY HIGHWAY PLANS BOOK 2017–0022–V.

   SR 23, SEGMENT 380, OFFSET 1261 TO SEGMENT 430, OFFSET 229 IS 50' BASED ON LANCASTER CO. PAMPHLET LAW, DATED 3/20/1810, STATE LAW LIBRARY, PG. 205 AND LANCASTER CO., ACT 13 DATED 1/26/1849.
   PENNDOT HAS NO RECORDS OF A DESIGNED GEOMETRY CREATED FOR THIS SECTION OF SR 23, AND A BEST–FIT GEOMETRY BASED ON THE EXISTING ROADWAY WILL HAVE TO BE CREATED.

5. SURVEY PERFORMED BY RETTEW ASSOCIATES, INC. IN SEPTEMBER 2025.

SEWER NOTES

1. THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME SHOULD NOT EXCEED THE TOTAL LENGTH OF UTILITY LINE THAT CAN BE PLACED IN THE TRENCH AND BACK–FILLED IN ONE WORKING DAY.
2. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR ANY SANITARY SEWER OVERFLOW (SSO) THAT OCCURS AS A RESULT FOR THE WORK. THIS INCLUDES ALL LIABILITY FOR DAMAGES, AS WELL AS ANY FINES, PENALTIES, OR ENFORCEMENT ACTIONS IMPOSED BY LOCAL, STATE, OR FEDERAL REGULATORY AGENCIES.
3. FORCEMAIN AND GRAVITY SEWER SHALL BE INSTALLED WITH A MINIMUM OF 4' COVER.
4. WORK OF THE PROJECT SHALL BE IN ACCORDANCE WITH THE APPROVED PERMITS, AS IDENTIFIED IN THE PROJECT MANUAL.
5. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING UNINTERRUPTED SANITARY SEWER FLOW THROUGH THE MAIN LINE DURING THE DURATION OF THE PROJECT. THIS INCLUDES PROVIDING AND OPERATING ALL NECESSARY BYPASS PUMPING EQUIPMENT AND ASSOCIATED SYSTEMS. INDIVIDUAL SERVICE SHUT DOWNS ARE ADDRESSED IN SECTION 011400 MAINTENANCE OF OPERATIONS.
6. AT CONNECTIONS TO EXISTING SANITARY SEWER LINES, THE CONTRACTOR SHALL EXPOSE THE EXISTING PIPE PRIOR TO INSTALLATION TO VERIFY THE LOCATION AND EXISTING PIPE MATERIAL AND OUTSIDE DIAMETER PRIOR TO INITIATING WORK IN THE AREA OF CONNECTION.

GENERAL NOTES

1. PRIOR TO THE START OF CONSTRUCTION, INFORM ALL AREA UTILITY COMPANIES OF PLANNED CONSTRUCTION IN ACCORDANCE WITH THE PENNSYLVANIA ACT 187 REQUIREMENTS.
2. CONTACT THE PA ONE CALL SYSTEM AT 1–800–242–1776 THREE WORKING DAYS BEFORE EXCAVATION BEGINS FOR FIELD LOCATION OF FACILITIES.
3. THE PROJECT DRAWINGS ARE GENERALLY DIAGRAMMATIC IN INDICATING THE PRESENCE OF EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL MAKE EVERY REASONABLE ATTEMPT TO LOCATE ALL UTILITY LINES PRIOR TO COMMENCING WITH THE EXCAVATION OF ANY AFFECTED AREA. WHEN THE UTILITIES ARE TO BE LEFT IN PLACE, THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION DURING THE EXCAVATION AND BACKFILLING OPERATIONS. THERE SHALL BE NO CLAIM AGAINST THE OWNER MADE BY THE CONTRACTOR FOR WORK PERTAINING TO MODIFICATIONS, AS MAY BE REQUIRED, DUE TO ANY DIFFERENCE BETWEEN ACTUAL FIELD CONDITIONS AND THOSE SHOWN BY THE DETAILS AND DIMENSIONS ON THE CONTRACT PLANS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF DAMAGED OR DESTROYED LANDSCAPE.
5. ANY ADJUSTMENTS MADE BY THE CONTRACTOR TO THE LINE AND GRADE OF ANY SEWER LINE SHOWN ON THE CONTRACT DRAWINGS SHALL BE REVIEWED BY THE ENGINEER AND ANY OTHER AGENCIES HAVING JURISDICTION PRIOR TO ITS INCORPORATION INTO THE WORK
6. UNLESS OTHERWISE INDICATED AT A SPECIFIC LOCATION, ALL FINISHED GRADES ARE TO CONFORM TO AND MATCH EXISTING GRADES.
7. OSHA REGULATIONS MAKE IT UNLAWFUL TO OPERATE CRANES, BOOMS, HOISTS, ETC. WITHIN TEN (10) FEET OF ANY ELECTRIC LINE UNDER 50 KV. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A COPY OF ALL PERMITS RELATED TO THE CONSTRUCTION SHOWN ON THESE PLANS ON THE JOB SITE AT ALL TIMES. ALL WORK SHALL CONFORM TO THE PERMIT CONDITIONS AND REQUIREMENTS.
9. CONTRACTOR MUST STORE MATERIALS AT THE STAGING AREA AS SHOWN IN THE E&S PLANS, DIRECT HAUL IS REQUIRED. NO STOCKING PILING WILL BE PERMITTED ON SITE.
10. AT CONNECTIONS TO EXISTING SANITARY SEWER LINES, THE CONTRACTOR SHALL EXPOSE THE EXISTING PIPE PRIOR TO INSTALLATION TO VERIFY THE LOCATION AND EXISTING PIPE MATERIAL AND OUTSIDE DIAMETER PRIOR TO INITIATING WORK IN THE AREA OF CONNECTION.
11. WHEN THE EDGE OF ANY EXCAVATION IS WITHIN FIVE FEET OF ANY POWER POLE, THE CONTRACTOR SHALL CONTACT THE POLE OWNER A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK TO REQUEST THAT THE POLE BE SUPPORTED BY THE POLE OWNER.
12. DISTURBED AREAS OUTSIDE OF THE PAVEMENT SHALL BE RESTORED WITHIN 3 DAYS OF THE COMPLETION OF THE WORK IN EACH AREA.
13. CURB AND SIDEWALK REPLACEMENT SHALL CONFORM TO THE APPLICABLE TOWNSHIP STANDARDS AND PENNDOT STANDARDS. CONCRETE SHALL BE PLACED ON COMPACTED SUBGRADE.
14. PAVEMENT MARKINGS DISTURBED BY THE CONTRACTOR DURING THE PROJECT SHALL BE REPLACED WITH PAINTED MARKINGS CONFORMING TO PENNDOT STANDARDS THE PROJECT SPECIFICATIONS.
15. THE PLAN LOCATIONS AND DIMENSIONS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PLAN CHANGES, SHOULD THEY BE REQUIRED, ARE SUBJECT TO APPROVAL BY THE ENGINEER.
16. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ADEQUATE EROSION AND DUST CONTROL AT ALL TIMES.
17. CONSTRUCTION WARRANTY AND WARRANTY SECURITY PERIOD: CONTRACTOR SHALL WARRANTY OWNER AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP. THE CONTRACTOR SHALL PROVIDE A WRITTEN AND FULLY ASSIGNABLE WARRANTY THAT THE SYSTEM INSTALLED WILL BE AND REMAIN FREE FROM ALL DEFECTS, LATENT OR OTHERWISE WITH RESPECT TO WORKMAN–SHIP, MATERIALS, INSTALLATION, AND ACCURACY OF THE AS–BUILT DRAWINGS IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE BENEFICIAL USE OF THE FACILITIES.

ABBREVIATIONS

AWWA = AMERICAN WATER WORKS ASSOCIATION
AC = TRANSITE (ASBESTOS CEMENT)
BV = BUTTERFLY VALVE
CE = CONSTRUCTION EASEMENT
CI = CAST–IRON
CO = CLEANOUT
DEP = DEPARTMENT OF ENVIRONMENTAL PROTECTION
DI = DUCTILE IRON
DICL = DUCTILE IRON CEMENT LINED
DIA = DIAMETER
DIP = DUCTILE IRON PIPE
EL = ELEVATION
EP = EDGE OF PAVEMENT
EX = EXISTING
EXIST = EXISTING
E&SC = EROSION AND SEDIMENTATION CONTROL
GR = GRADE
GV = GATE VALVE
H = HORIZONTAL
HDPE = HIGH DENSITY POLYETHYLENE PIPE
HOP = HIGHWAY OCCUPANCY PERMIT
ID = INSIDE DIAMETER
INV = INVERT
IE = INVERT ELEVATION
MATL = MATERIAL
MAX = MAXIMUM
MIN = MINIMUM
MJ = MECHANICAL JOINT
NMAS = NOMINAL MAXIMUM AGGREGATE SIZE
OAE = OR APPROVED EQUAL
OD= OUTSIDE DIAMETER
OSHA = OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
PVC = POLYVINYL CHLORIDE PIPE
RED = REDUCER
R/W = RIGHT–OF–WAY
ROW = RIGHT–OF–WAY
STA = STATION
STD = STANDARD
TYP = TYPICAL
UE = UNDERGROUND ELECTRIC
ULTMA = UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
V = VERTICAL
W = WATER LINE
WV = WATER VALVE

LEGEND

EXISTING

- GUIDERAIL
- FENCE LINE
- W — WATER LINE
- G — GAS LINE
- S — SANITARY SEWER LINE
- UE — UNDERGROUND ELECTRIC
- UC — UNDERGROUND COMMUNICATIONS LINE
- SS — SS — EXISTING SANITARY FORCE MAIN LATERAL
- 15" SLCPP — 15" SMOOTH LINED CORRUGATED PLASTIC PIPE
- 15" CMP — 15" CORRUGATED METAL PIPE
- 15" RCP — 15" REINFORCED CONCRETE PIPE
- CORRUGATED CONCRETE SEPARATOR
- Y/4" — 4" YELLOW PAINT LINE
- BY/4" — 4" BROKEN YELLOW PAINT LINE
- W/6" — 6" WHITE PAINT LINE
- W/4" — 4" WHITE PAINT LINE
- W/24" — 24" WHITE PAINT LINE (STOP BAR)
- DY/4" — 4" DOUBLE YELLOW PAINT LINE
- RIGHT OF WAY LINE
- GIS PROPERTY LINE
- EASEMENT LINE
- EVERGREEN TREE
- DECIDUOUS TREE
- BENCHMARK
- MB — MAILBOX
- SIGN
- BOLLARD
- LP — LIGHT POLE
- GLP — GROUND LIGHT
- GUY WIRE
- UP — UTILITY POLE
- TRAFFIC SIGNAL POLE
- SIGNAL BOX
- ELECTRIC BOX
- GM — GAS METER
- GV — GAS VALVE
- WV — WATER VALVE
- WM — WATER METER
- SV — SEWER VALVE
- SANITARY VALVE (FORCEMAIN)
- C/O — CLEANOUT
- HYDRANT
- INLET
- MH — MANHOLE (UNKNOWN)
- WM — WATER MANHOLE
- GM — GAS MANHOLE
- S — SANITARY MANHOLE
- SM — STORM MANHOLE
- T — TELEPHONE MANHOLE
- GP — GRINDER PUMP
- SHRUB

PROPOSED

- PROPOSED SITE PAVING
- PROPOSED RESTORATION AND PAVING OVERLAY
- PENNDOT SHOULDER RESTORATION
- S — PROPOSED SANITARY SEWER LINE
- FM — PROPOSED SANITARY FORCE MAIN
- SS — PROPOSED SANITARY FORCE MAIN LATERAL & RECONNECT
- EXISTING SANITARY PIPE TO BE REMOVED/CUT AND RECONNECTED
- MH–XXX — PROPOSED SANITARY SEWER STRUCTURE (MANHOLE)
- ITEMS TO BE DEMOLISHED
- OR — ITEMS TO BE ABANDONED
- EXISTING/PERMANENT EASEMENT
- CF — TEMPORARY CONSTRUCTION FENCE
- MANHOLE/SEWER MARKERS
- SANITARY ISOLATION/PLUG VALVES
- AIR RELEASE VALVE ASSEMBLIES
- SANITARY INSERTION VALVE

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE093300 — 10/06/2026

MANAGER: ABRAHAM KING | CHKD BY: AJK | FIELDBOOK NO.: N/A
DESIGN BY: ADF | CHKD BY: ADF
DRAWN BY: JNW | SURV. CHIEF: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

NTS

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Engineers • Planners • Surveyors • Landscape Architects
Environmental Scientists

NEW HOLLAND PIKE LOW–PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
NOTES AND LEGENDS
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. G–02

CONTRACT No. 2026–04

ISSUED FOR BIDDING

RECOMMENDED SEQUENCE OF CONSTRUCTION

1. IT IS RECOMMENDED THAT THE CONTRACTOR BEGIN WITH THE INSTALLATION OF FORCEMAIN IN THE PENNDOT SIDEWALK PROJECT AREA. SEE SHEET C-08 IN ORDER TO AVOID CONFLICTS WITH PROPOSED PENNDOT SIDEWALK PROJECT. SIDEWALK INSTALLATION IS ANTICIPATED IN FEBRUARY 2027.

2. INSTALL MANHOLES 621A AND 621B AT THE DOWNSTREAM END OF THE PROJECT TO ESTABLISH A NEW GRAVITY DISCHARGE TO THE ULTMA GRAVITY INTERCEPTOR.

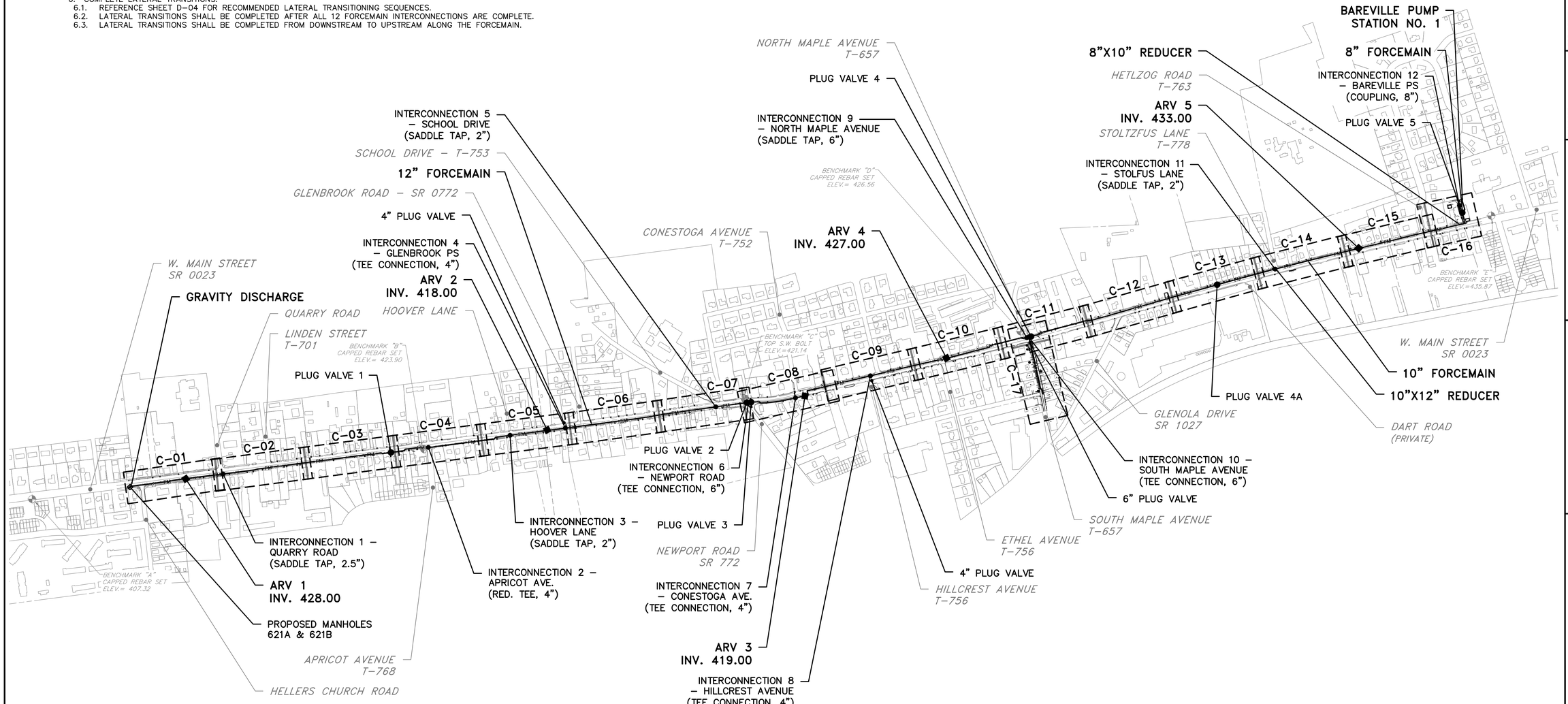
3. INSTALL ALL 6", 8", 10", AND 12"FORCEMAIN ALONG NEW HOLLAND PIKE AND SOUTH MAPLE AVENUE, INCLUDING REDUCING TEES TO BE USED FOR FINAL CONNECTION OF TRIBUTARY FORCEMAINS, PLUG VALVES, AIR RELEASE VALVES, AND ALL OTHER APPURTENANCES.

4. MAKE CONNECTION BETWEEN THE PROPOSED FORCEMAIN AND THE FORCEMAIN THAT WAS PREVIOUSLY INSTALLED DURING THE PENNDOT SIDEWALK PROJECT BETWEEN STATIONS 49+81 AND 53+56.

5. COMPLETE FORCEMAIN INTERCONNECTIONS:
   - 5.1. BEGINNING AT THE DOWNSTREAM END, CLOSE PLUG VALVE 1 AND COMPLETE INTERCONNECTION 1 VIA SADDLE TAP
   - 5.2. CLOSE PLUG VALVE INSIDE ARV 2. COMPLETE INTERCONNECTIONS 2 & 3, AND OPEN PLUG VALVE 1.
   - 5.3. CLOSE PLUG VALVE 2, COMPLETE INTERCONNECTION 4&5. OPEN PLUG VALVE IN ARV 2.
   - 5.4. CLOSE PLUG VALVE 3. MAKE INTERCONNECTION 6. OPEN PLUG VALVE 2.
   - 5.5. CLOSE PLUG VALVE IN ARV 3. MAKE INTERCONNECTION 7. OPEN PLUG VALVE 3.
   - 5.6. CLOSE PLUG VALVE IN ARV 4. MAKE INTERCONNECTION 8. OPEN PLUG VALVE IN ARV 3.
   - 5.7. CLOSE PLUG VALVE 4. MAKE INTERCONNECTION 9&10. OPEN PLUG VALVE IN ARV 4.
   - 5.8. CLOSE PLUG VALVE IN ARV 5. MAKE INTERCONNECTION 11. OPEN PLUG VALVE 4.
   - 5.9. CLOSE PLUG VALVE 5. COMPLETE INTERCONNECTION 12 TO BAREVILLE PUMP STATION. OPEN PLUG VALVE IN ARV 5 AND PLUG VALVE 5.

6. COMPLETE LATERAL TRANSITIONS.
   - 6.1. REFERENCE SHEET D-04 FOR RECOMMENDED LATERAL TRANSITIONING SEQUENCES.
   - 6.2. LATERAL TRANSITIONS SHALL BE COMPLETED AFTER ALL 12 FORCEMAIN INTERCONNECTIONS ARE COMPLETE.
   - 6.3. LATERAL TRANSITIONS SHALL BE COMPLETED FROM DOWNSTREAM TO UPSTREAM ALONG THE FORCEMAIN.

NORTH



DRAWING PLAN INDEX

SCALE: 1" = 400'

CONTRACT No. 2026-04

ISSUED FOR BIDDING

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE098300 — 10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FIELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

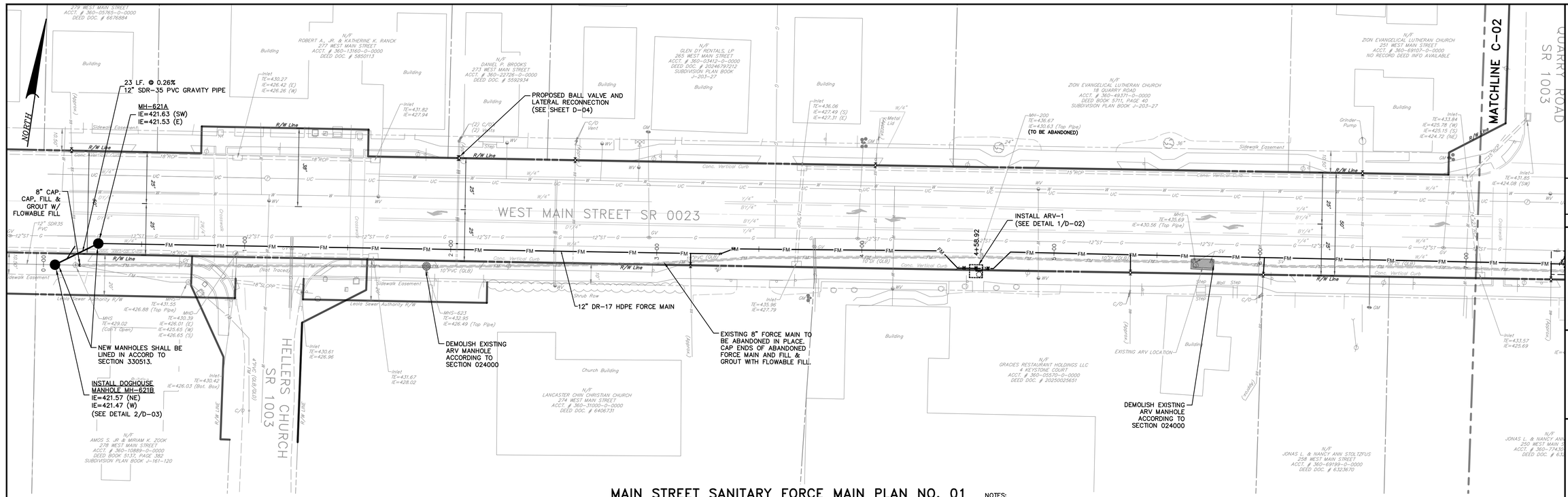
SCALE: 1"=400' — 0, 200', 400', 800', 1200'

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
DRAWING PLAN INDEX
UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

PROJ. NO. 0571404139

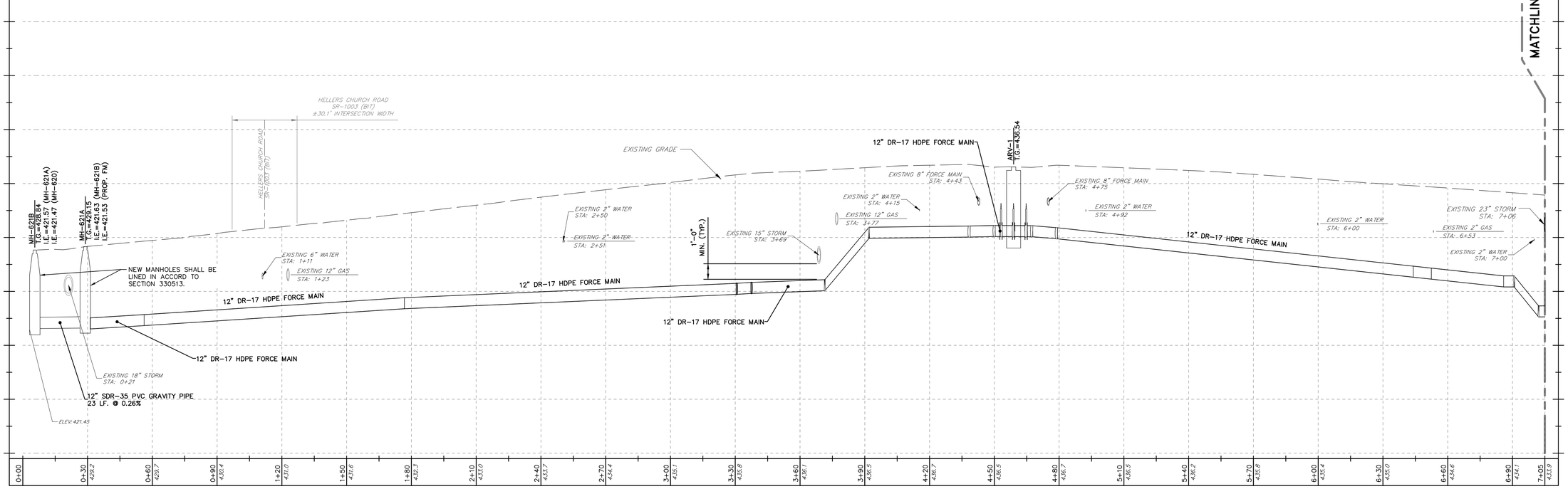
DWG. NO. G-03



MAIN STREET SANITARY FORCE MAIN PLAN NO. 01

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 01

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/05/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE098300 — 10/05/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FIELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE: 0 12.5' 25' 50' 75' — 1"=25'

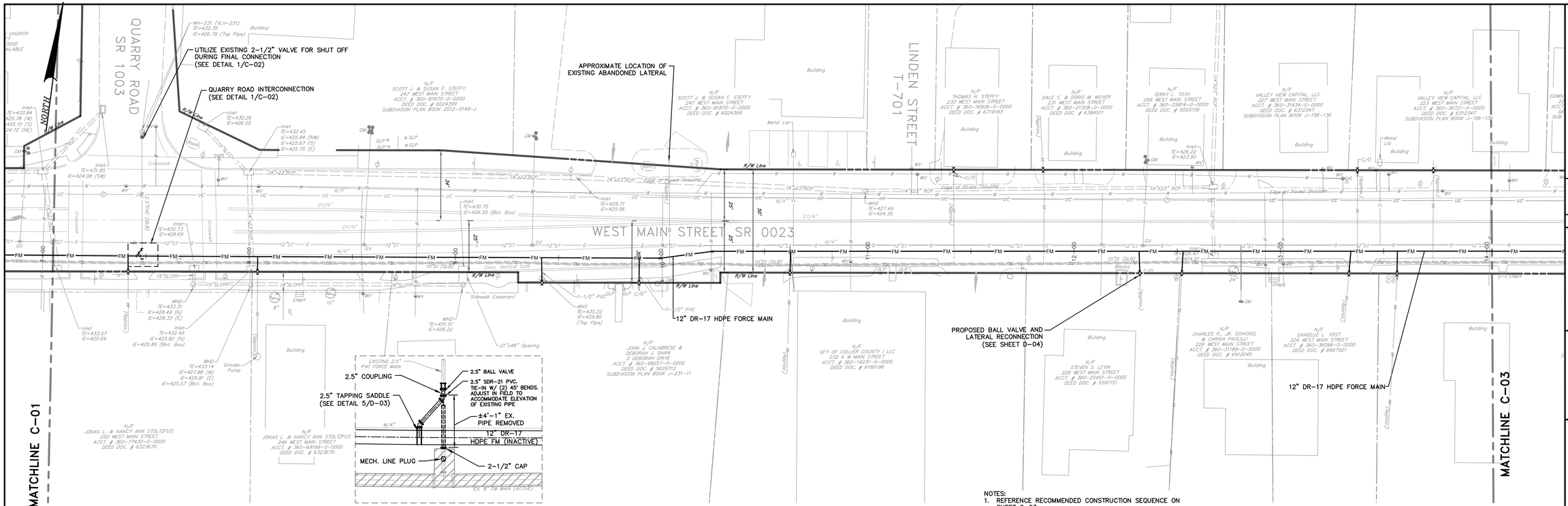
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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE I

UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-01

ISSUED FOR BIDDING



QUARRY ROAD INTERCONNECTION 1

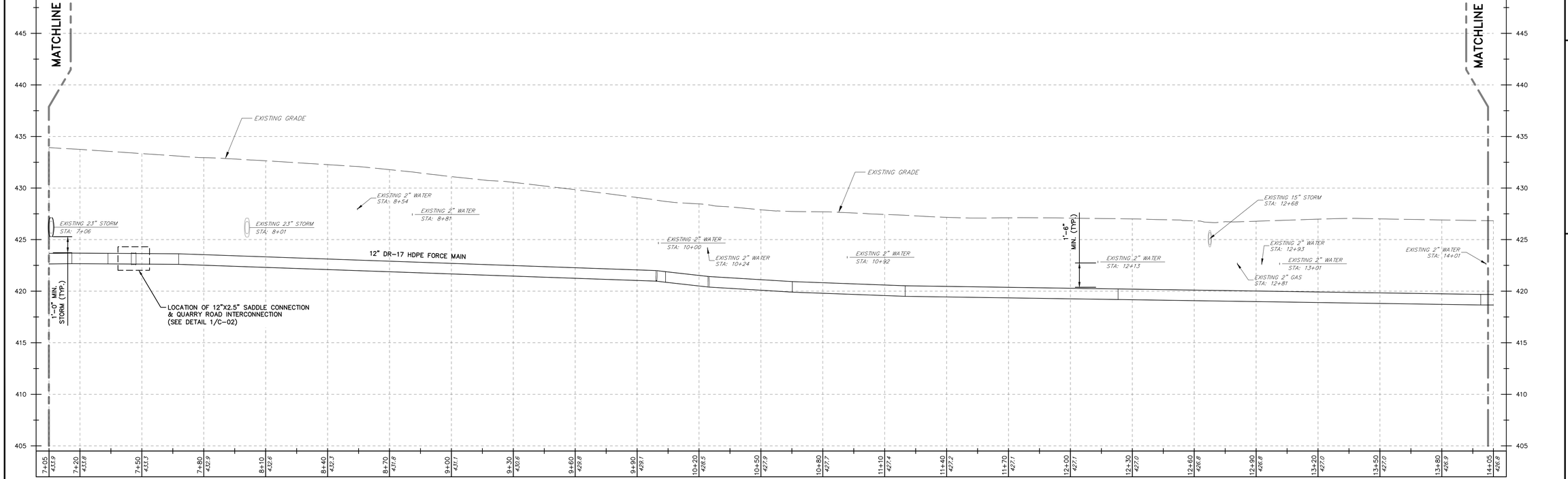
SCALE: 1/4" = 1'-0"

DETAIL 1/C-02

MAIN STREET SANITARY FORCE MAIN PLAN NO. 02

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 02

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE093800 — 10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF — CHKD BY: AJK
DRAWN BY: JNW — CHKD BY: ADF
SURV. CHIEF: N/A — FELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP
MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

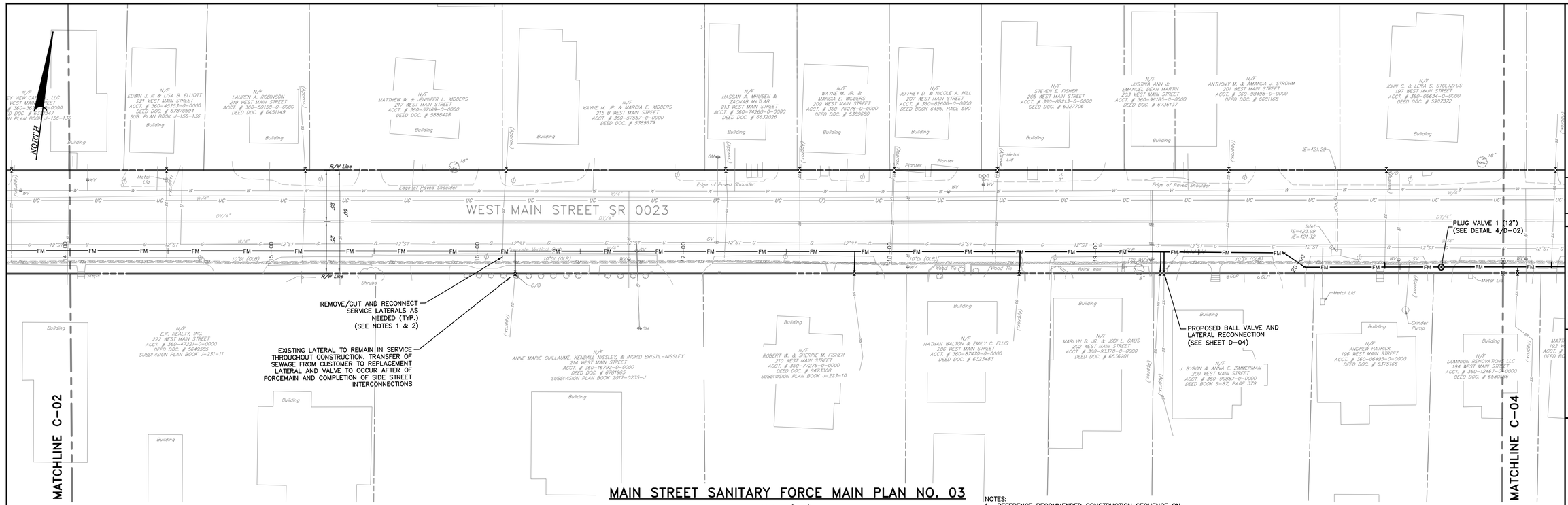
SCALE: 1"=25' — 0, 12.5', 25', 50', 75'

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE II
UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-02

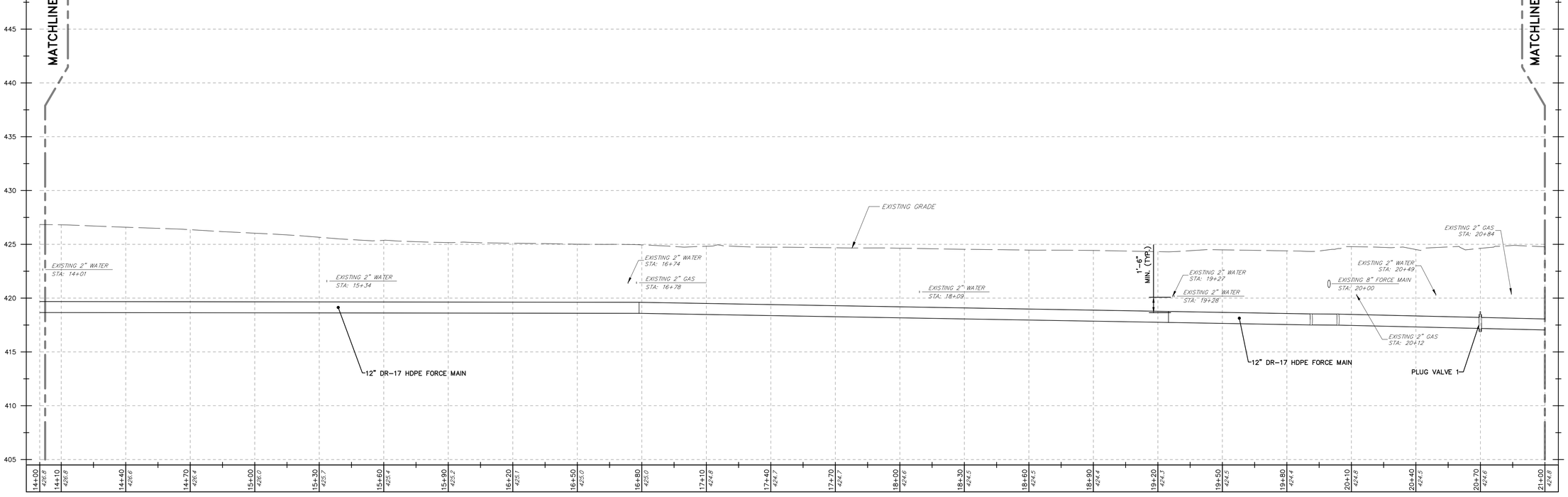
ISSUED FOR BIDDING



MAIN STREET SANITARY FORCE MAIN PLAN NO. 03

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 03

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE098300 — 10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FIELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

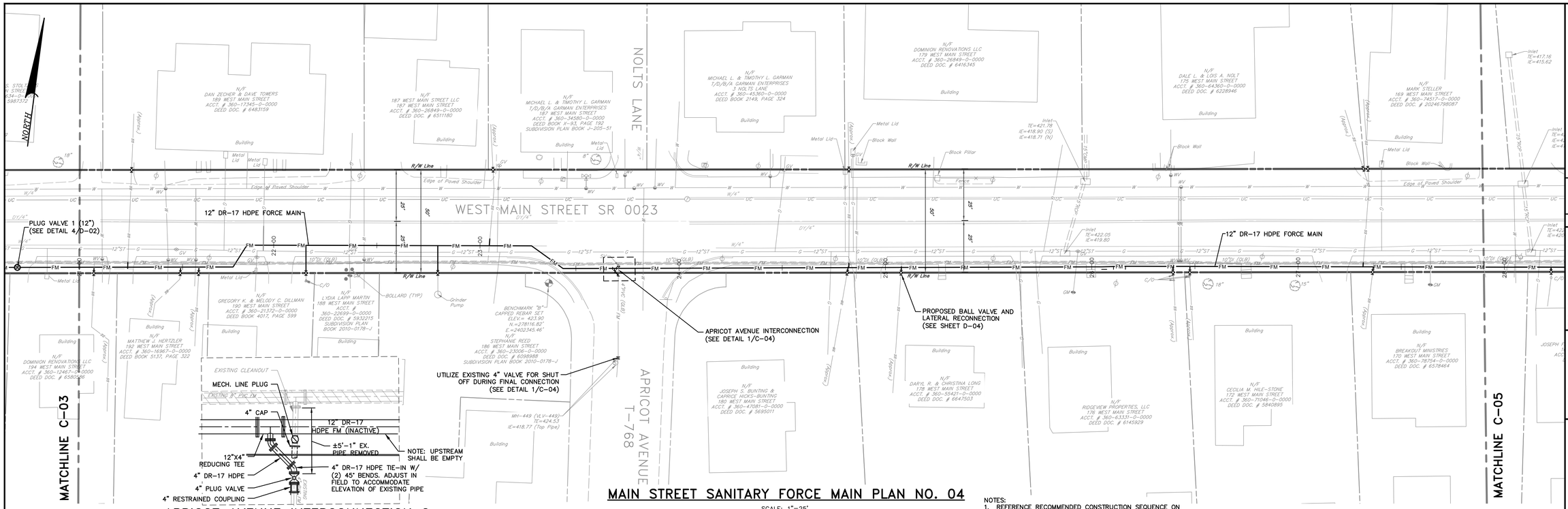
SCALE: 1"=25' — 0, 12.5', 25', 50', 75'

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE III
UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-03

ISSUED FOR BIDDING



APRICOT AVENUE INTERCONNECTION 2

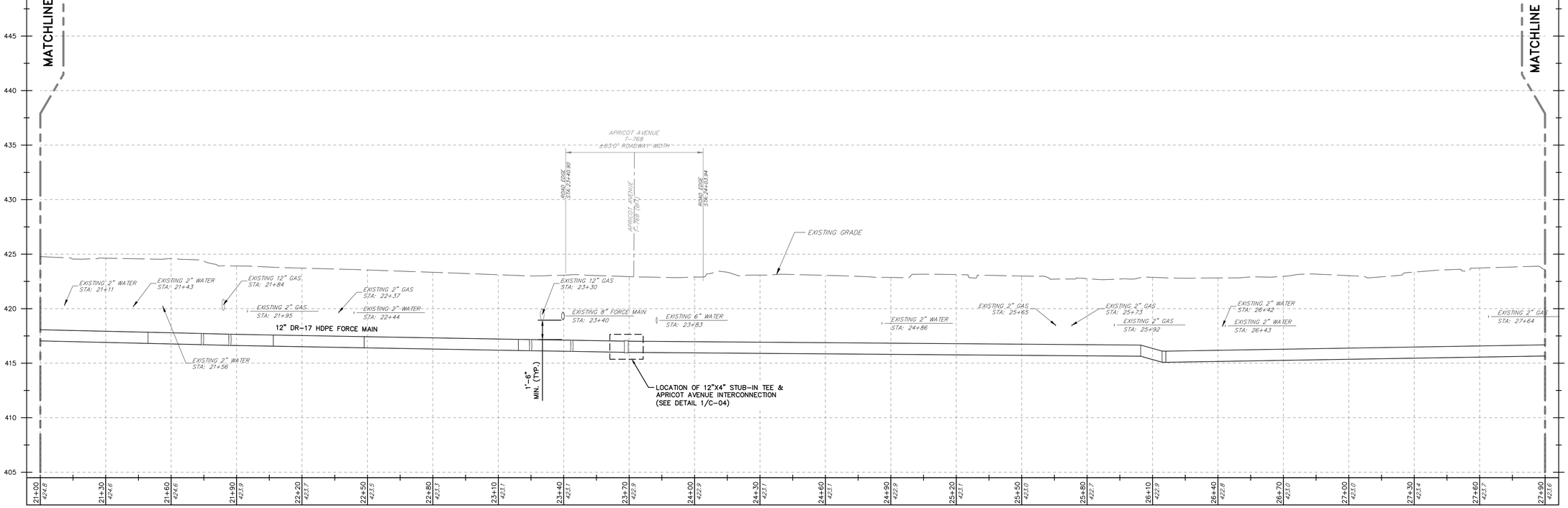
SCALE: 1/4" = 1'-0"

DETAIL 1/C-04

MAIN STREET SANITARY FORCE MAIN PLAN NO. 04

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 04

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/05/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE093300
10/05/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FIELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP
MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

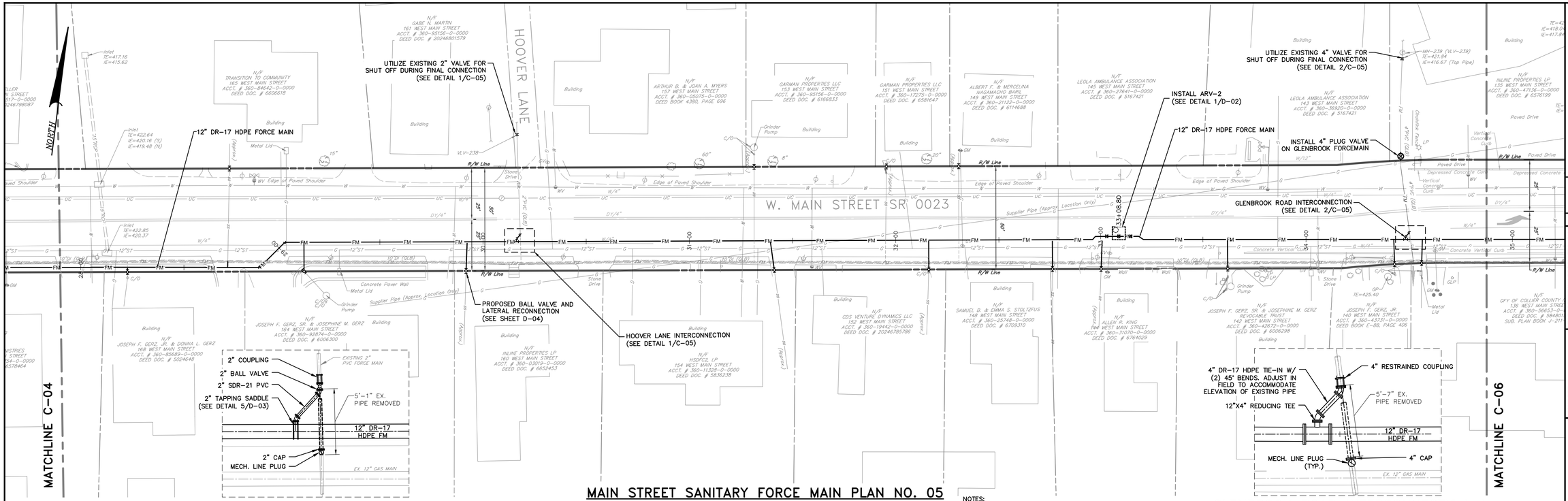
SCALE: 0 12.5' 25' 50' 75' — 1"=25'

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
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SANITARY FORCE MAIN PLAN AND PROFILE IV
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-04

ISSUED FOR BIDDING



HOOVER LANE INTERCONNECTION 3

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

DETAIL 1/C-05

MAIN STREET SANITARY FORCE MAIN PLAN NO. 05

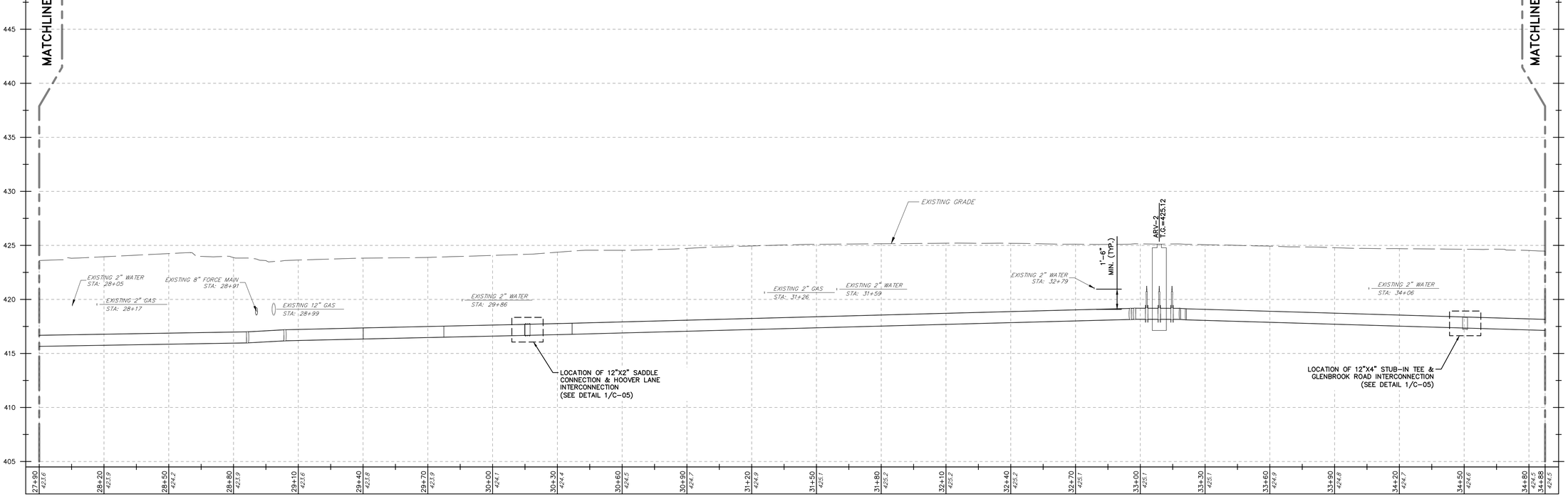
SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.

GLENBROOK ROAD INTERCONNECTION 4

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

DETAIL 2/C-05



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 05

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE098300
10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FIELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP
MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE: 1"=25' (75' 50' 25' 12.5' 0)

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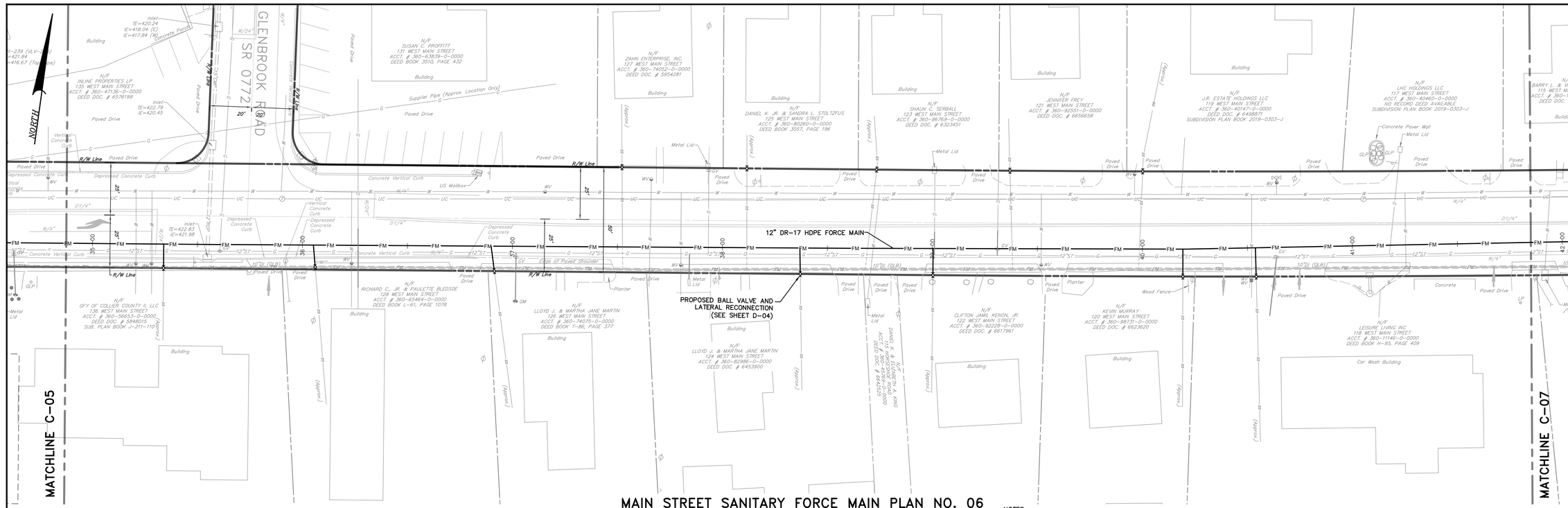
NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE V

UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

PROJ. NO. 0571404139

DWG. NO. C-05

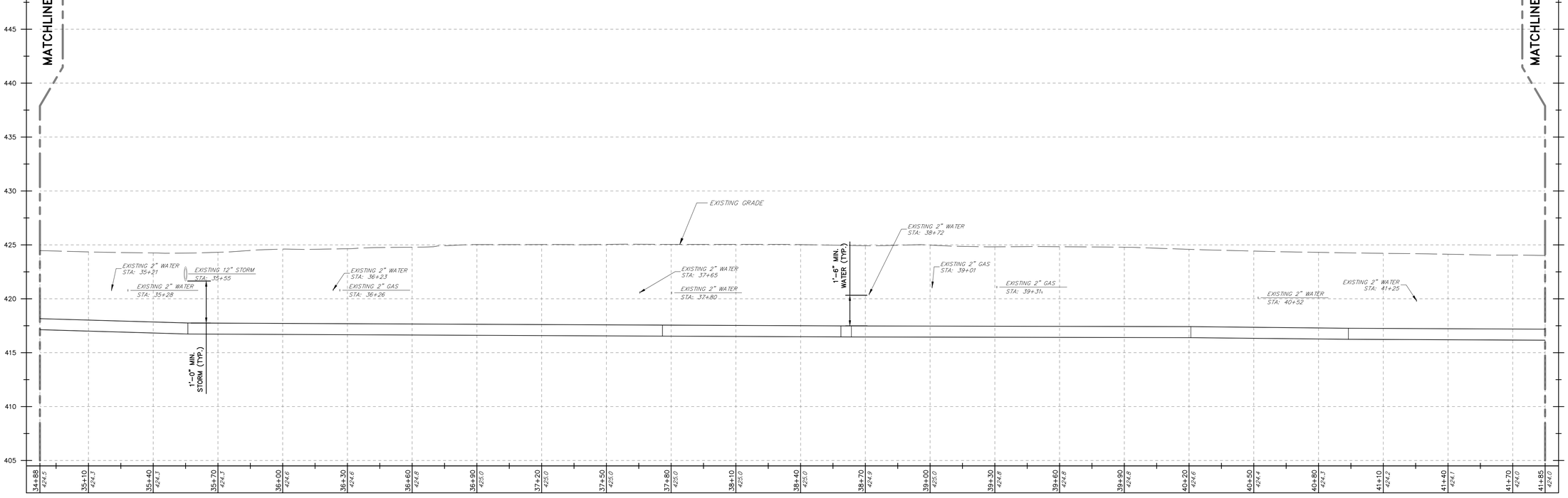
ISSUED FOR BIDDING



MAIN STREET SANITARY FORCE MAIN PLAN NO. 06

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 06

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE093300 — 10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

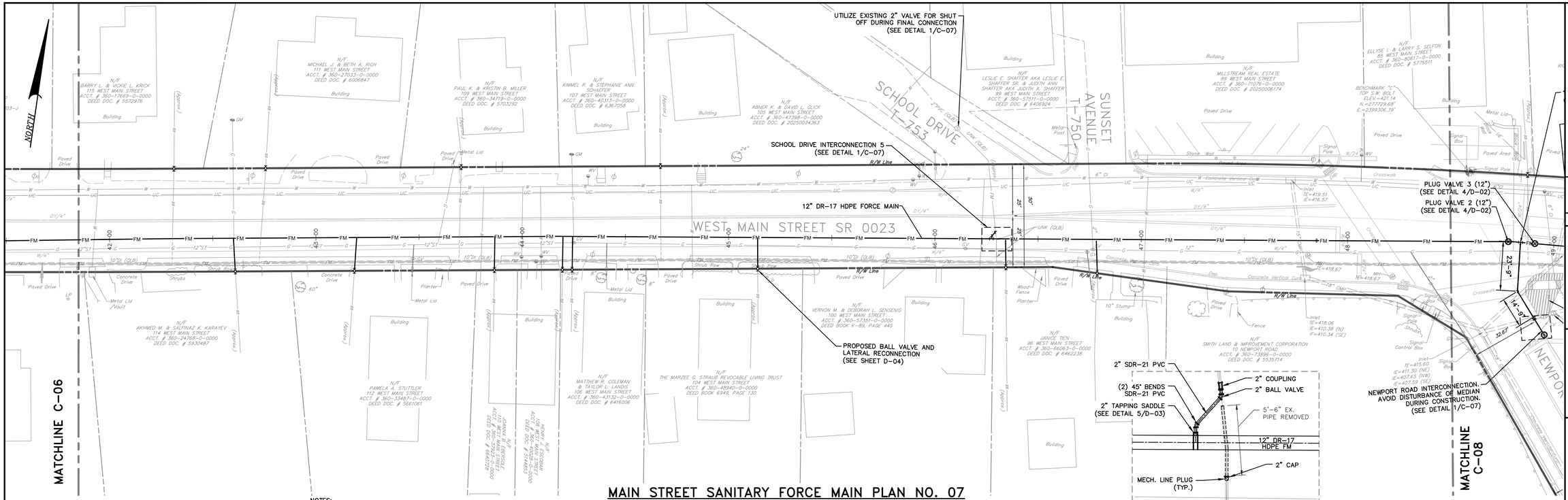
SCALE: 0 12.5' 25' 50' 75' — 1"=25'

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE VI
UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-06

ISSUED FOR BIDDING



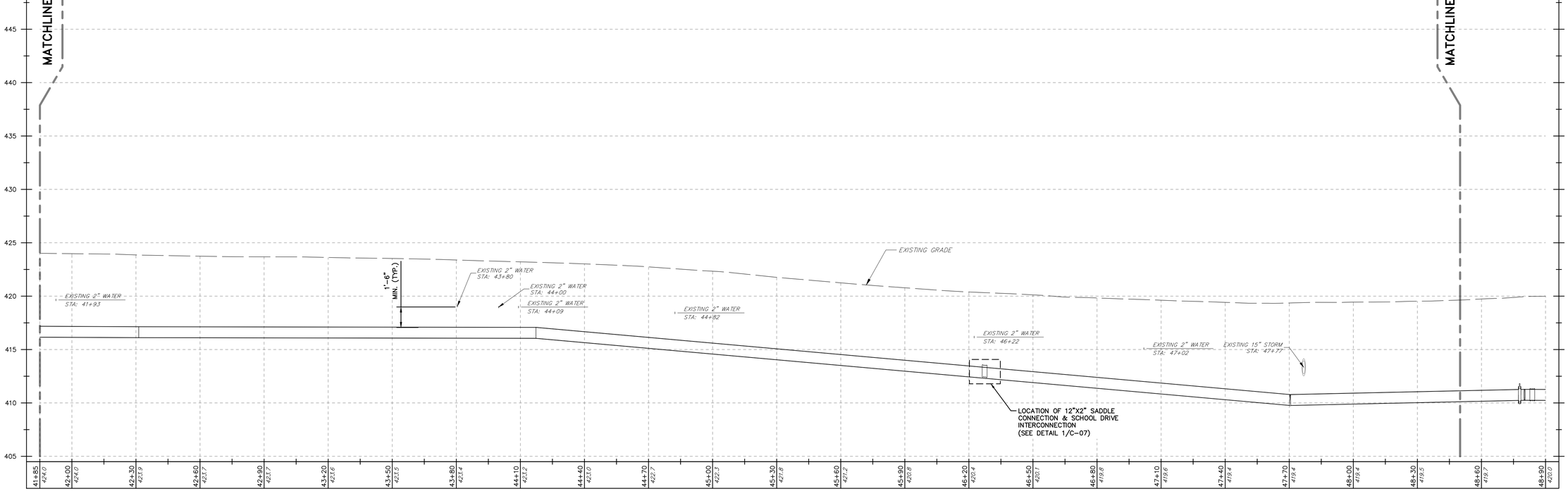
NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.

MAIN STREET SANITARY FORCE MAIN PLAN NO. 07

SCALE: 1"=25'

SCHOOL DRIVE INTERCONNECTION 5

SCALE: 1/4" = 1'-0"
DETAIL 1/C-07



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 07

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE098300
10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FIELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

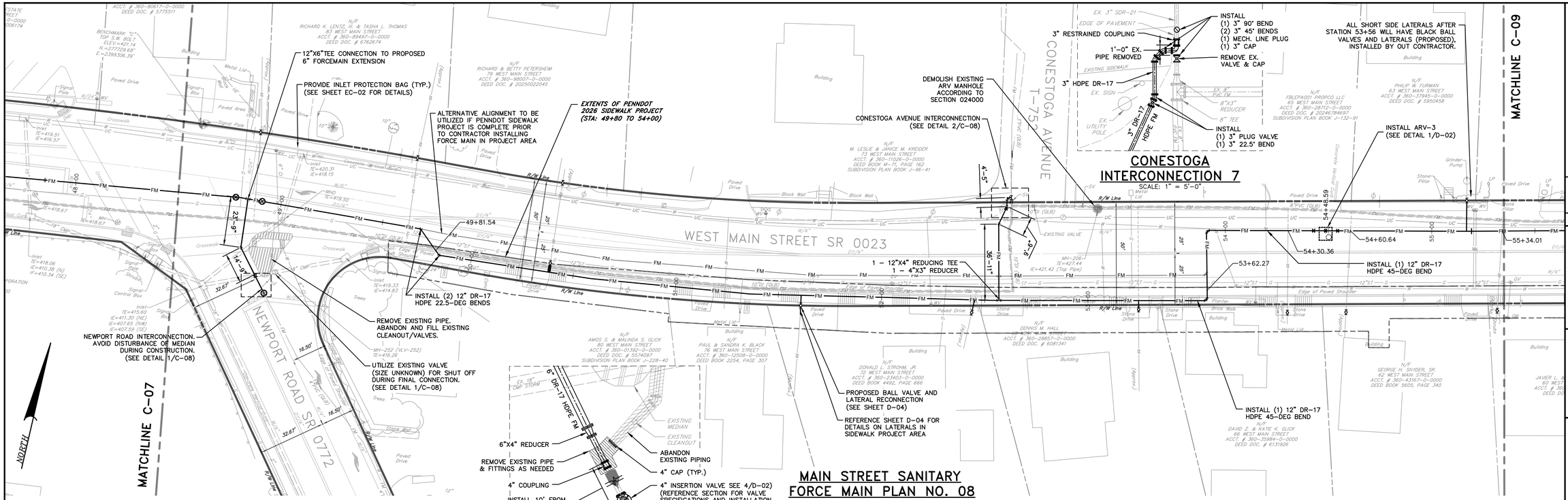
SCALE: 1"=25' (75' 50' 25' 12.5' 0)

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE VII
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-07

ISSUED FOR BIDDING



NEWPORT ROAD INTERCONNECTION 6

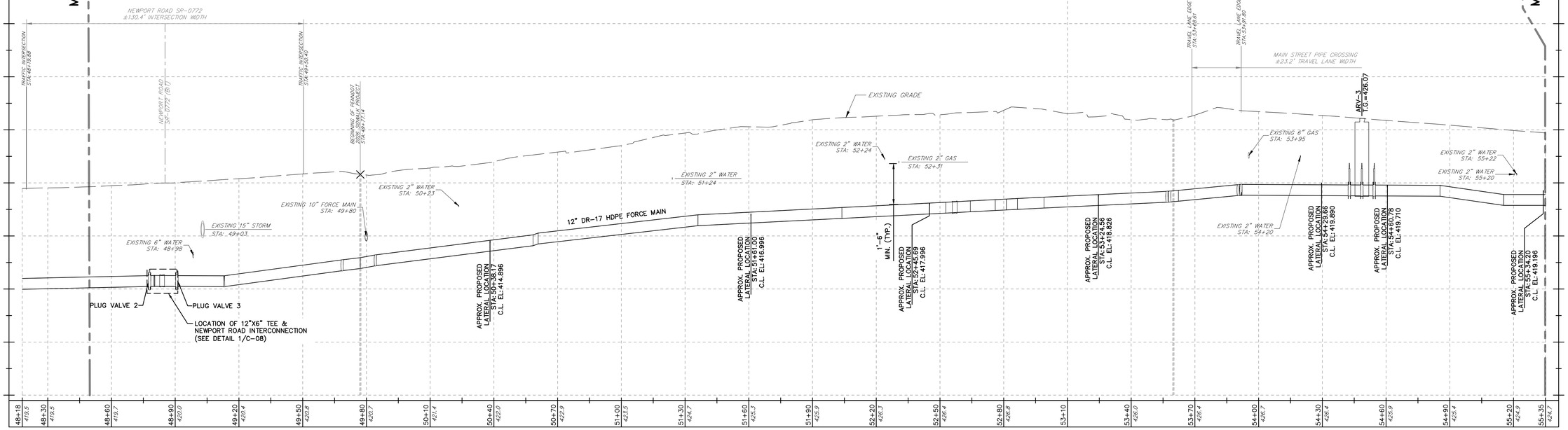
SCALE: 1/4" = 1'-0"

DETAIL 1/C-08

MAIN STREET SANITARY FORCE MAIN PLAN NO. 08

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 08

HORIZONTAL SCALE - 1"=25'
VERTICAL SCALE - 1"=5'

CONTRACT No. 2026-04

ISSUED FOR BIDDING

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE093300 — 10/06/2026

MANAGER: ABRAHAM KING | CHKD BY: AJK
DESIGN BY: ADF | CHKD BY: ADF
DRAWN BY: JNW | FIELDBOOK NO: N/A
SURV. CHIEF: N/A

CLIENT
UPPER LEACOCK TOWNSHIP
MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE: 0 12.5' 25' 50' 75' — 1"=25'

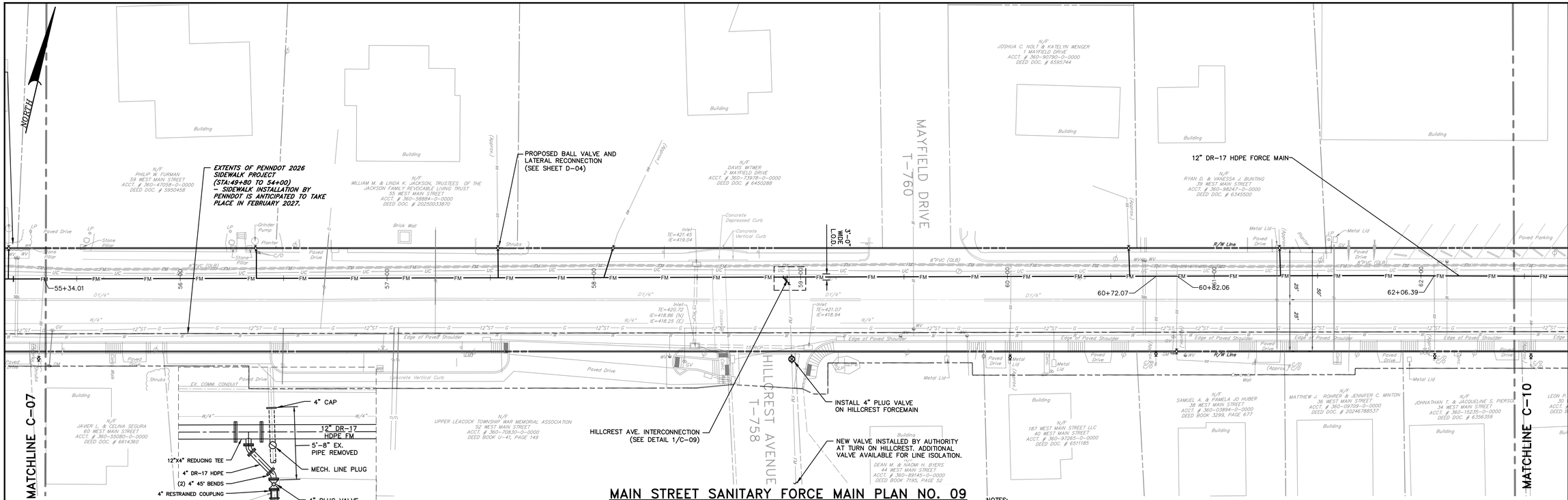
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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
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SANITARY FORCE MAIN PLAN AND PROFILE VIII

UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

PROJ. NO. 0571404139

DWG. NO. C-08



HILLCREST AVENUE INTERCONNECTION 8

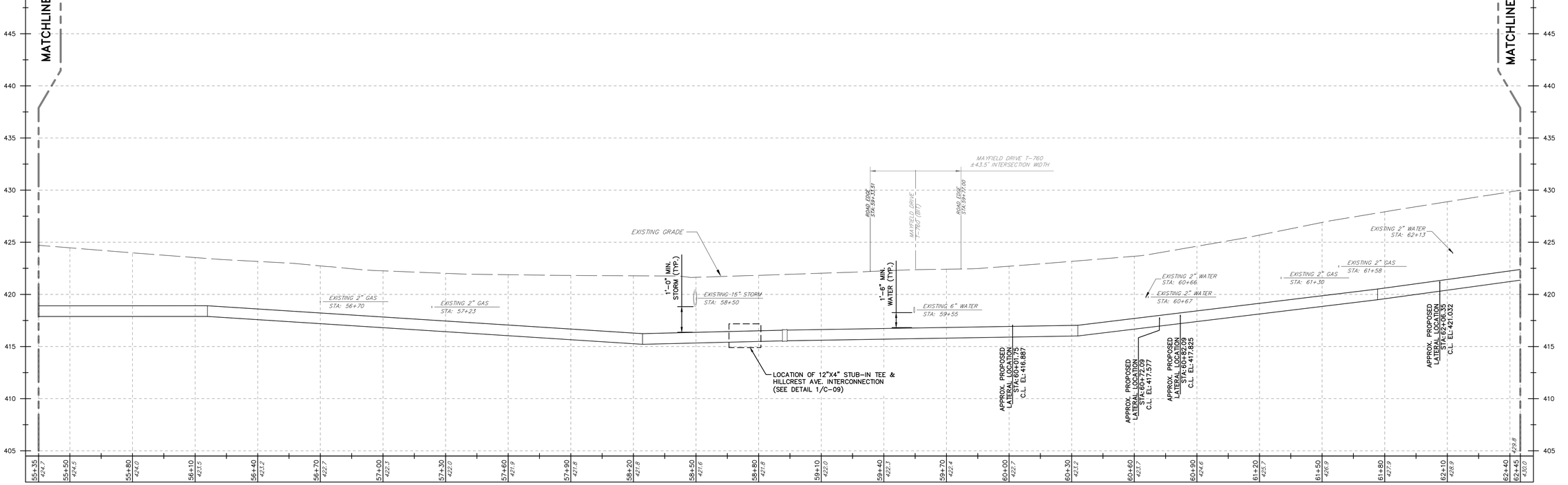
SCALE: 1/4" = 1'-0"

DETAIL 1/C-09

MAIN STREET SANITARY FORCE MAIN PLAN NO. 09

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 09

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

ISSUED FOR BIDDING

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA – REGISTERED PROFESSIONAL – ANDREW D FERKO IV – ENGINEER – No. PE098300 – 10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE: 0 12.5' 25' 50' 75' — 1"=25'

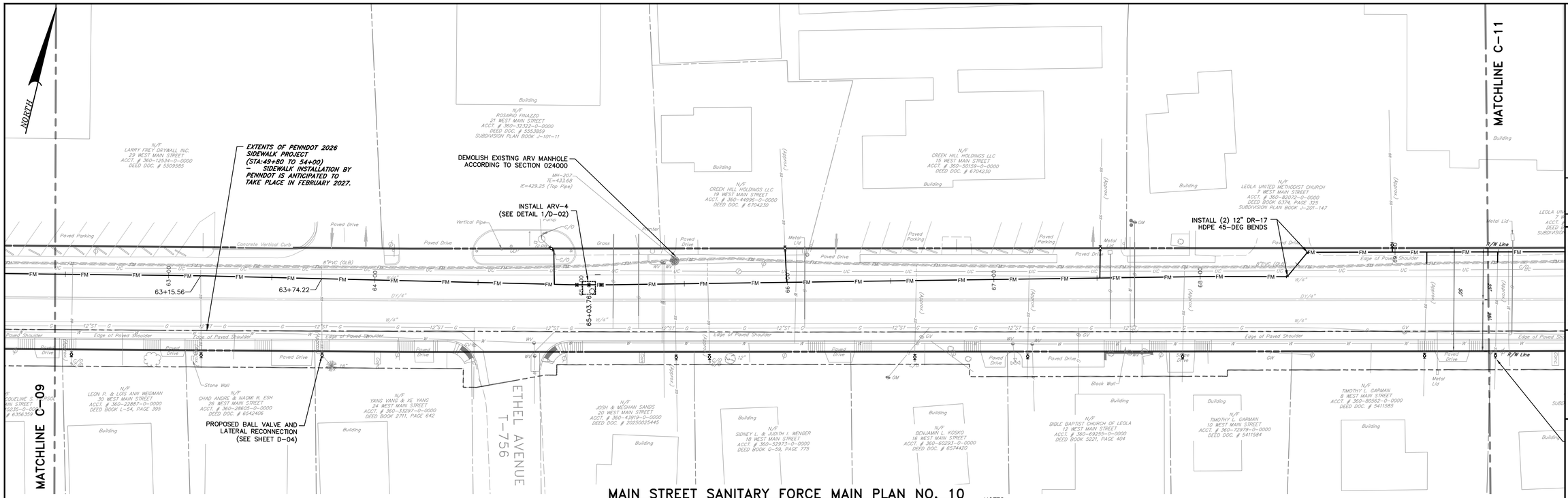
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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE IX

UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139

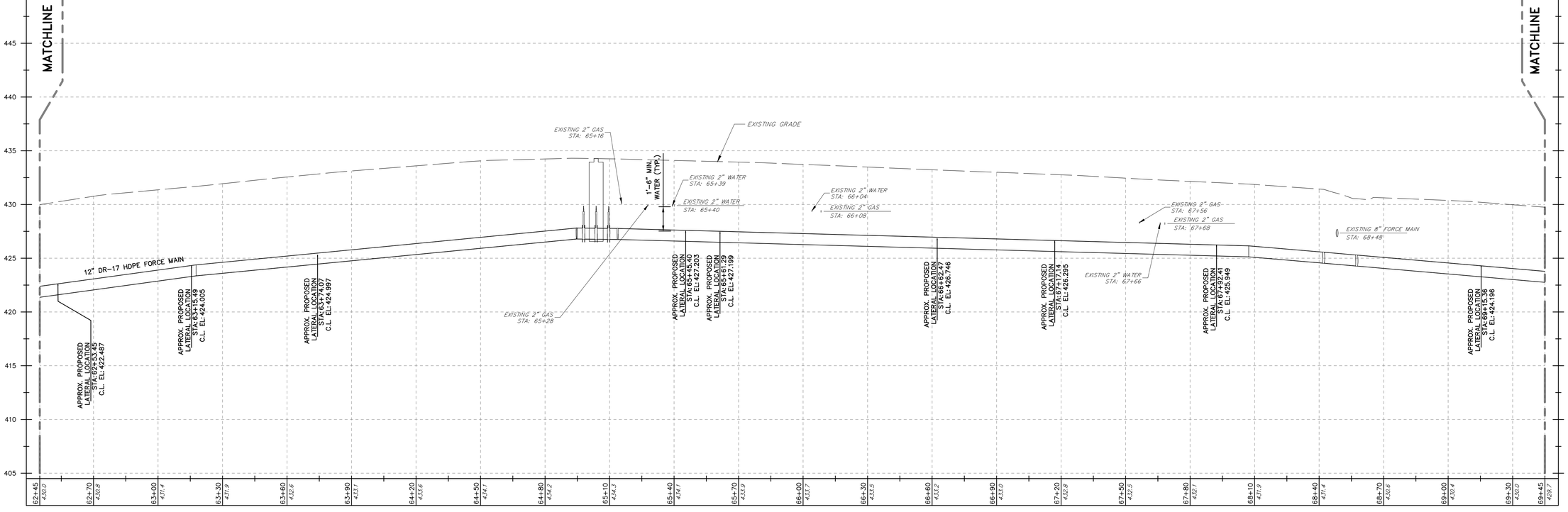
DWG. NO. C-09



MAIN STREET SANITARY FORCE MAIN PLAN NO. 10

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 10

HORIZONTAL SCALE - 1"=25'
VERTICAL SCALE - 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/05/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE098300
10/05/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FIELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE: 1"=25' (75' 50' 25' 12.5' 0)

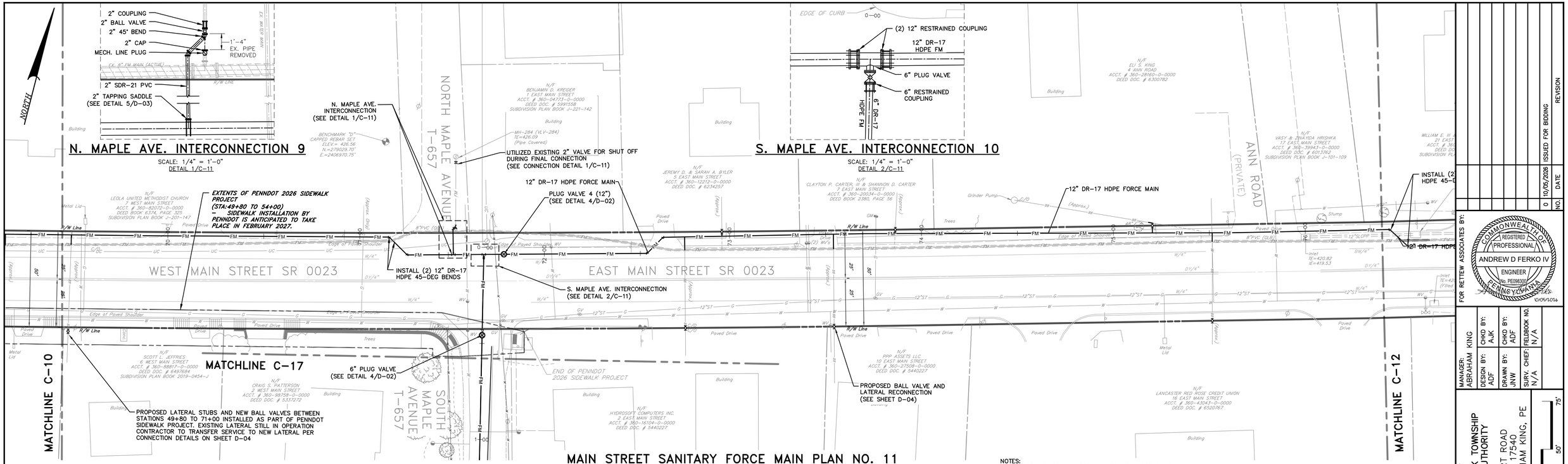
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3020 Columbia Avenue, Lancaster, PA 17603
Phone: (717) 435-8305
Email: rettew@rettew.com
Website: www.rettew.com
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Environmental Consultants

NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE X

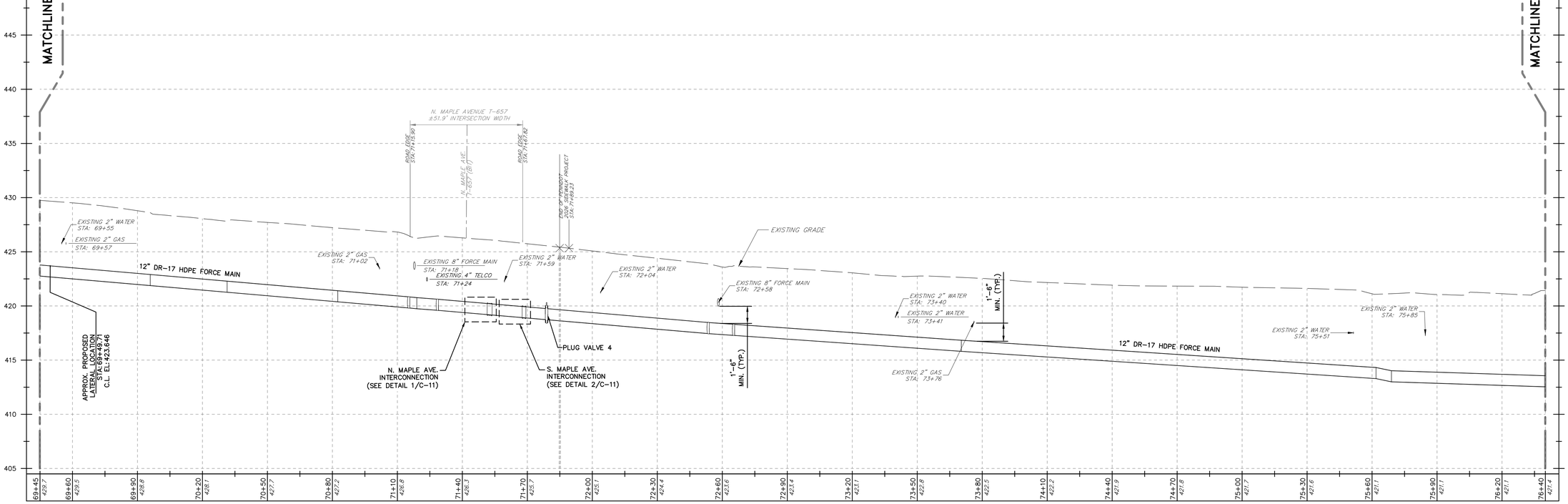
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-10

ISSUED FOR BIDDING



NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 11
HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/05/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE093800
10/05/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FIELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

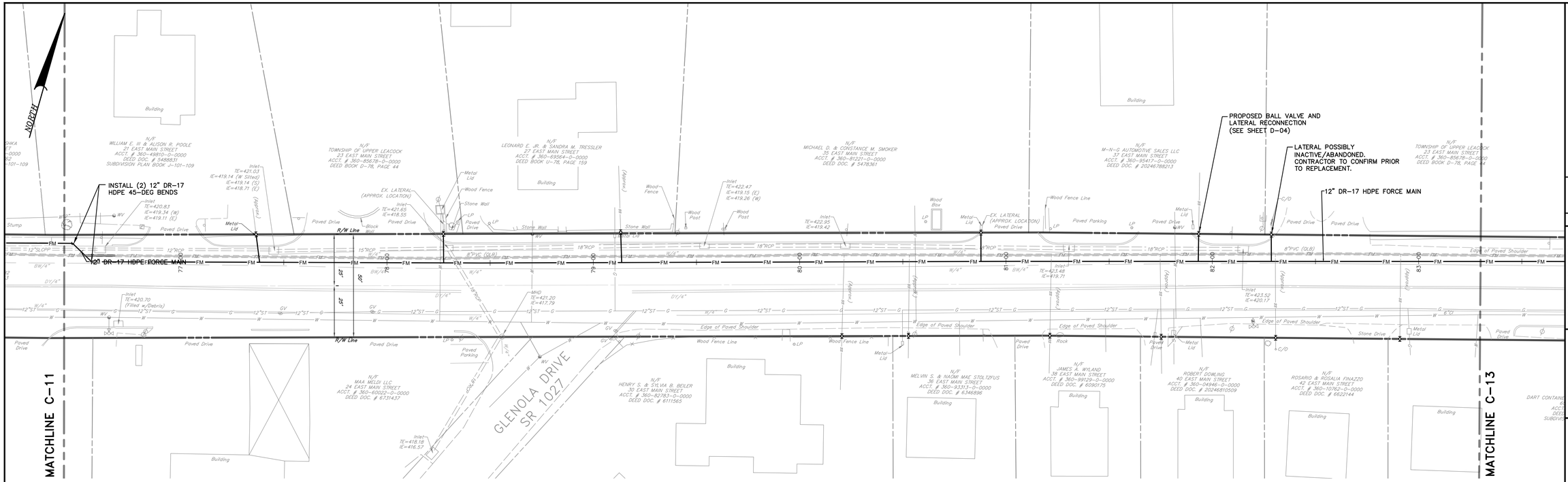
SCALE
0 12.5' 25' 50' 75'
1"=25'

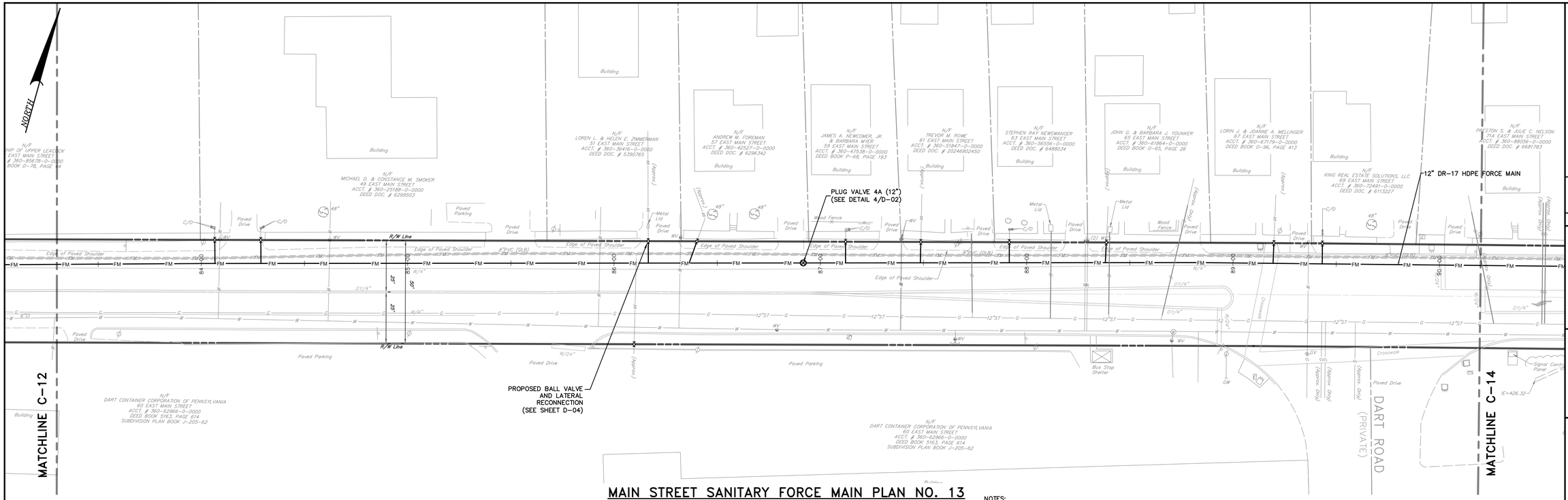
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Environmental Consultants

NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE XI
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-11

ISSUED FOR BIDDING

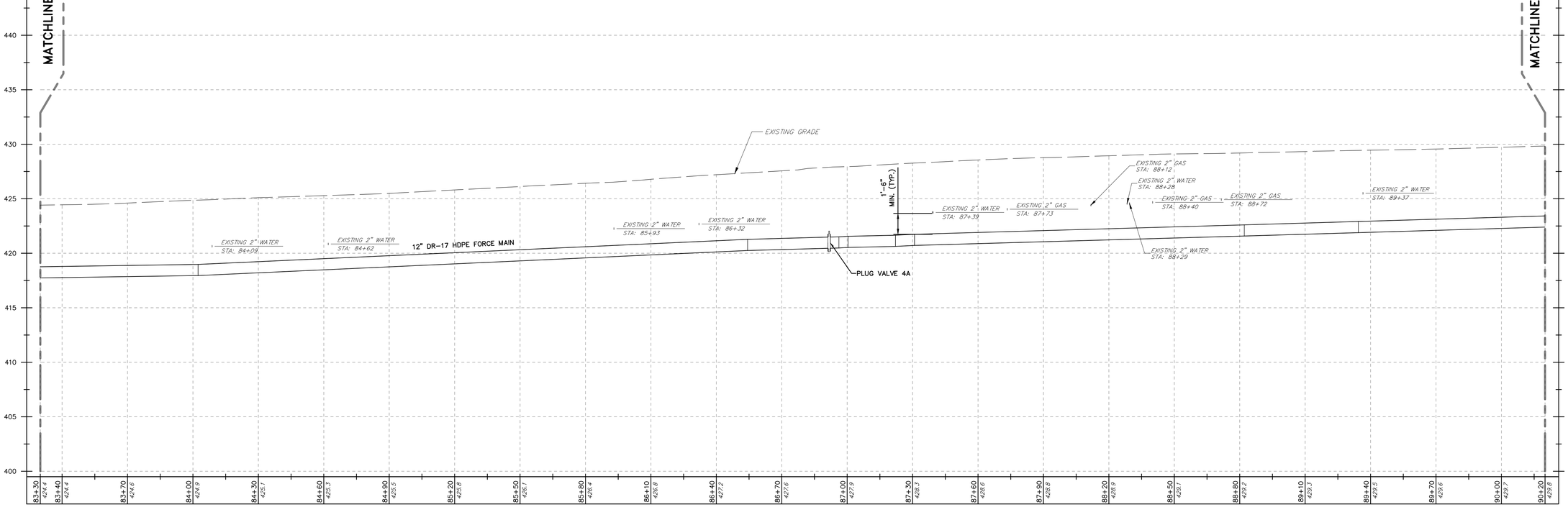

NORTH
MATCHLINE C-11
MATCHLINE C-13
INSTALL (2) 12" DR-17 HDPE 45-DEG BENDS
12" DR-17 HDPE FORCE MAIN
PROPOSED BALL VALVE AND LATERAL RECONNECTION (SEE SHEET D-04)
LATERAL POSSIBLY INACTIVE/ABANDONED. CONTRACTOR TO CONFIRM PRIOR TO REPLACEMENT.
GLENOLA DRIVE SR 1027
R/W Line
Edge of Paved Shoulder
Wood Fence Line
Stone Wall
Paved Drive
Paved Parking
Building
N/F WILLIAM E. III & ALISON R. POOLE 21 EAST MAIN STREET ACCT. # 360-49810-0-0000 DEED DOC. # 54888131 SUBDIVISION PLAN BOOK J-101-109
N/F TOWNSHIP OF UPPER LEACOCK 23 EAST MAIN STREET ACCT. # 360-85678-0-0000 DEED BOOK D-78, PAGE 44
N/F LEONARD E. JR. & SANDRA M. TRESSLER 27 EAST MAIN STREET ACCT. # 360-83954-0-0000 DEED BOOK U-78, PAGE 159
N/F MICHAEL D. & CONSTANCE M. SMOKER 35 EAST MAIN STREET ACCT. # 360-81221-0-0000 DEED DOC. # 5478361
N/F M-N-G AUTOMOTIVE SALES LLC 37 EAST MAIN STREET ACCT. # 360-95417-0-0000 DEED DOC. # 20246785213
N/F TOWNSHIP OF UPPER LEACOCK 23 EAST MAIN STREET ACCT. # 360-85678-0-0000 DEED BOOK D-78, PAGE 44
N/F MAA MELDI LLC 24 EAST MAIN STREET ACCT. # 360-60032-0-0000 DEED DOC. # 6731437
N/F HENRY S. & SYLVIA B. BEILER 30 EAST MAIN STREET ACCT. # 360-82783-0-0000 DEED DOC. # 6111565
N/F MELVIN S. & NAOMI MAE STOLTZFUS 36 EAST MAIN STREET ACCT. # 360-83313-0-0000 DEED DOC. # 6346896
N/F JAMES A. WYLAND 38 EAST MAIN STREET ACCT. # 360-99129-0-0000 DEED DOC. # 6090175
N/F ROBERT DOWLING 40 EAST MAIN STREET ACCT. # 360-04946-0-0000 DEED DOC. # 20246810509
N/F ROSARIO & ROSALIA FINAZZO 42 EAST MAIN STREET ACCT. # 360-10762-0-0000 DEED DOC. # 6622144
DART CONTAINER 65 ACCT. LEED SUBDIVIS
12" DR-17 HDPE FORCE MAIN
8"PVC (DLB)
18"RCP
15"RCP
12"RCP
12"CPP
12"ST
8"GV
Inlet TE=421.03 IE=419.14 (W Sltwd) IE=419.14 (S) IE=416.71 (E)
Inlet TE=420.83 IE=419.34 (W) IE=419.11 (E)
Inlet TE=421.65 IE=418.55
Inlet TE=420.70 (Filled w/Debris)
Inlet TE=422.47 IE=419.15 (E) IE=419.26 (W)
Inlet TE=422.95 IE=419.42
Inlet TE=423.48 IE=419.71
Inlet TE=423.52 IE=420.17
Inlet TE=418.18 IE=416.57
MH TE=421.20 IE=417.79
Metal Lid
Wood Box
Wood Post
Block Wall
Stump
C/O
Metal Lid
Stone Drive
E. Rock
Paved Drive
Paved Parking
Wood Fence
Wood Fence Line
Edge of Paved Shoulder
Stone Wall
Block Wall
Paved Drive
Paved Parking
Building
Metal Lid
Wood Box
Wood Post
Wood Fence
Wood Fence Line
Edge of Paved Shoulder
Stone Drive
Metal Lid



MAIN STREET SANITARY FORCE MAIN PLAN NO. 13

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 13

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

ISSUED FOR BIDDING

NO.	DATE	REVISION
0	10/05/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE093300 — 10/05/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FELDBOOK NO.: N/A

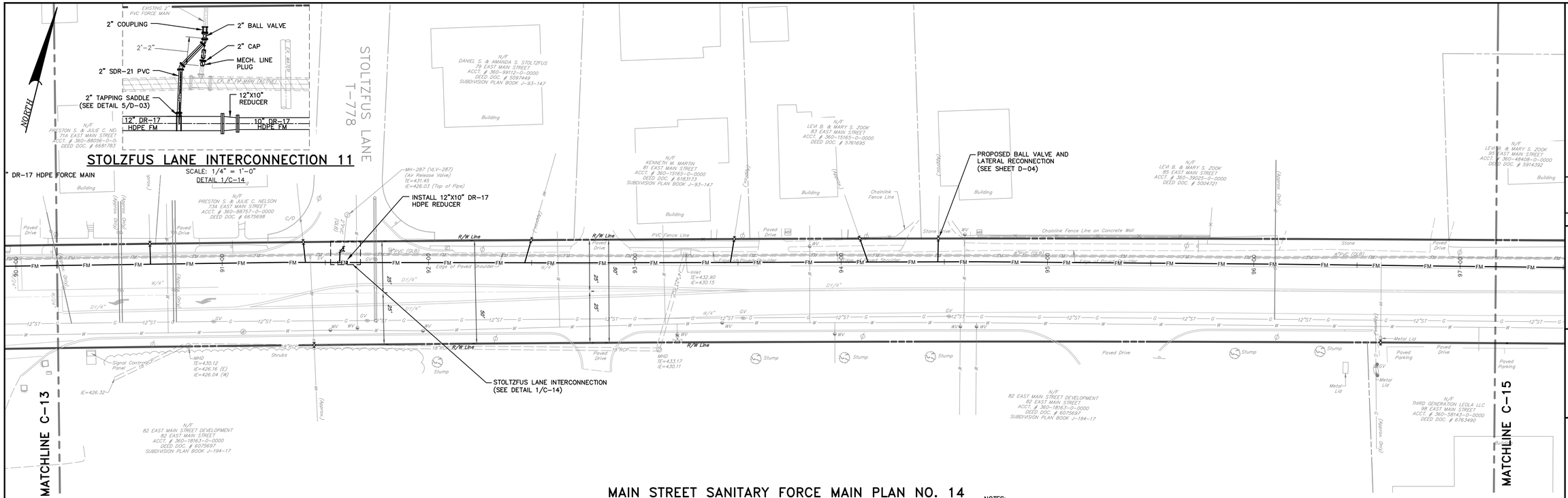
CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE: 1"=25' (0, 12.5', 25', 50', 75')

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE XIII
UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

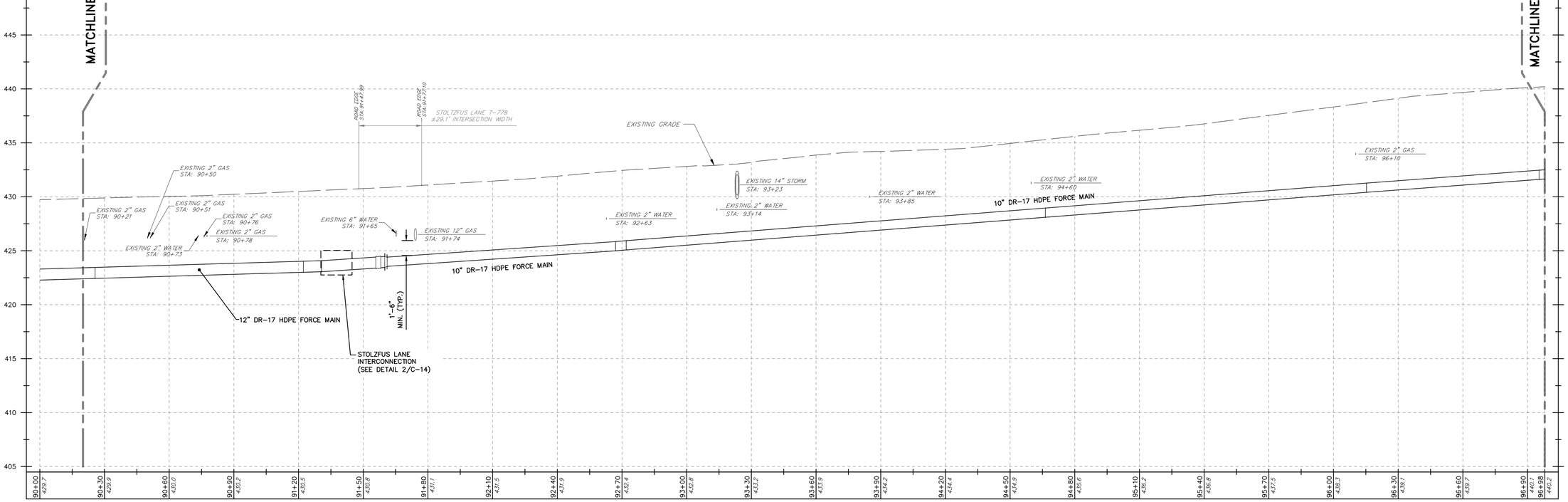
PROJ. NO. 0571404139
DWG. NO. C-13



MAIN STREET SANITARY FORCE MAIN PLAN NO. 14

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 14

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:
COMMONWEALTH OF PENNSYLVANIA – REGISTERED PROFESSIONAL – ANDREW D FERKO IV – ENGINEER – No. PE098300 – 10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

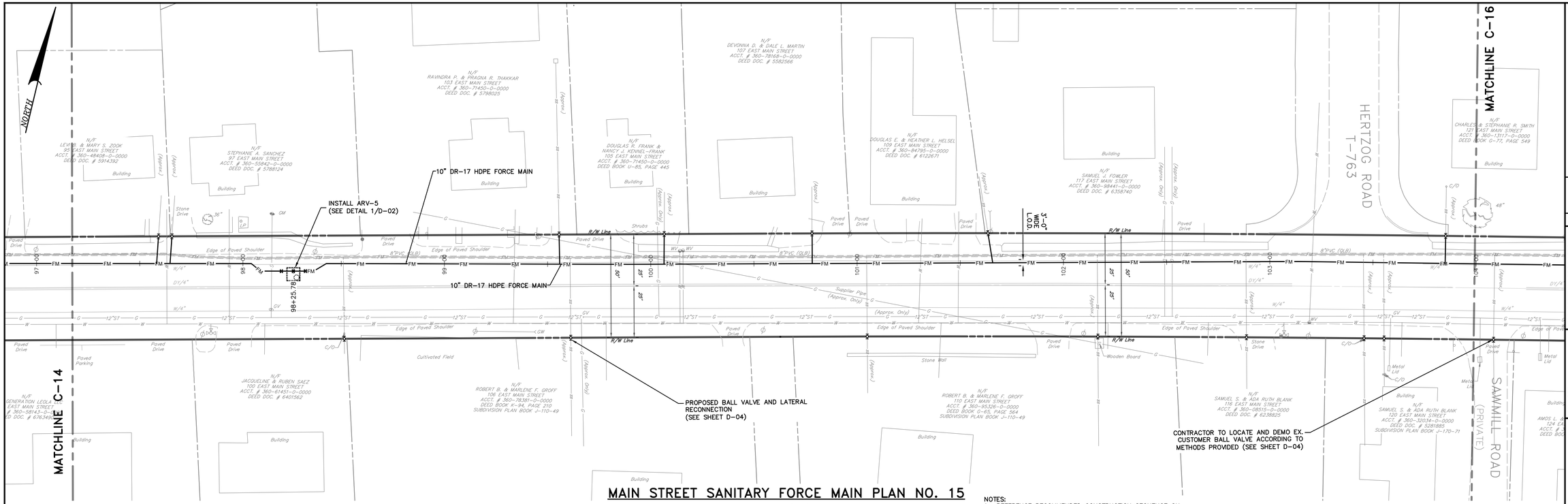
SCALE: 0 12.5' 25' 50' 75' — 1"=25'

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE XIV
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-14

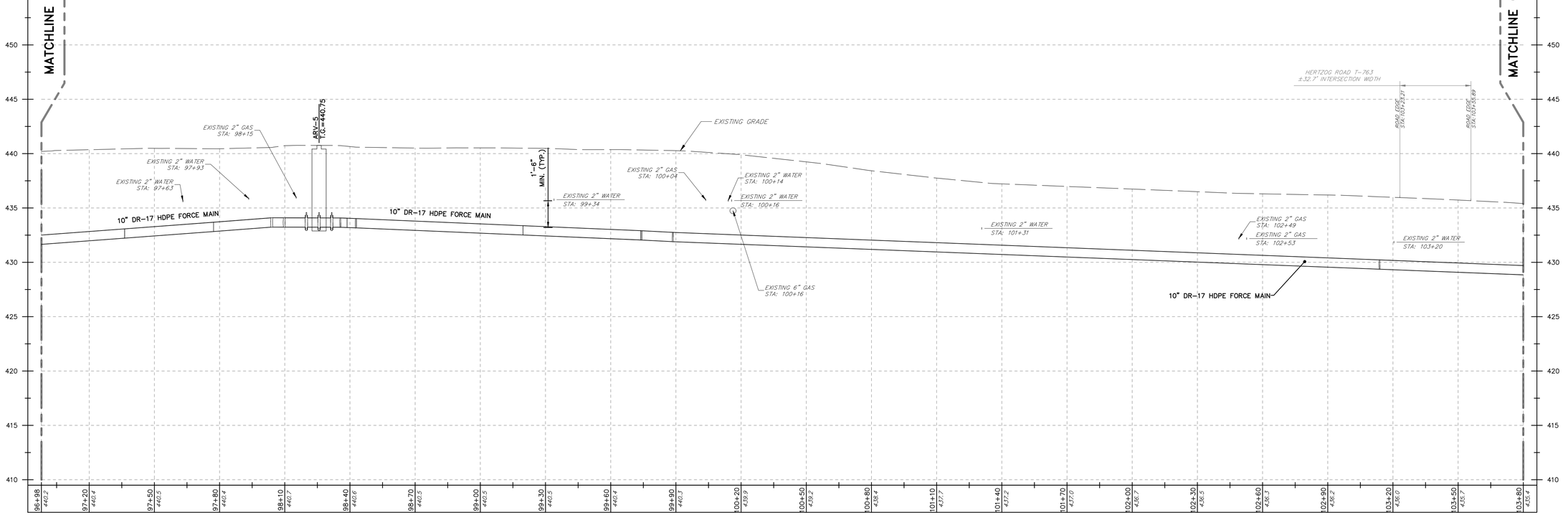
ISSUED FOR BIDDING



MAIN STREET SANITARY FORCE MAIN PLAN NO. 15

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 15

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE098300
10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FIELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

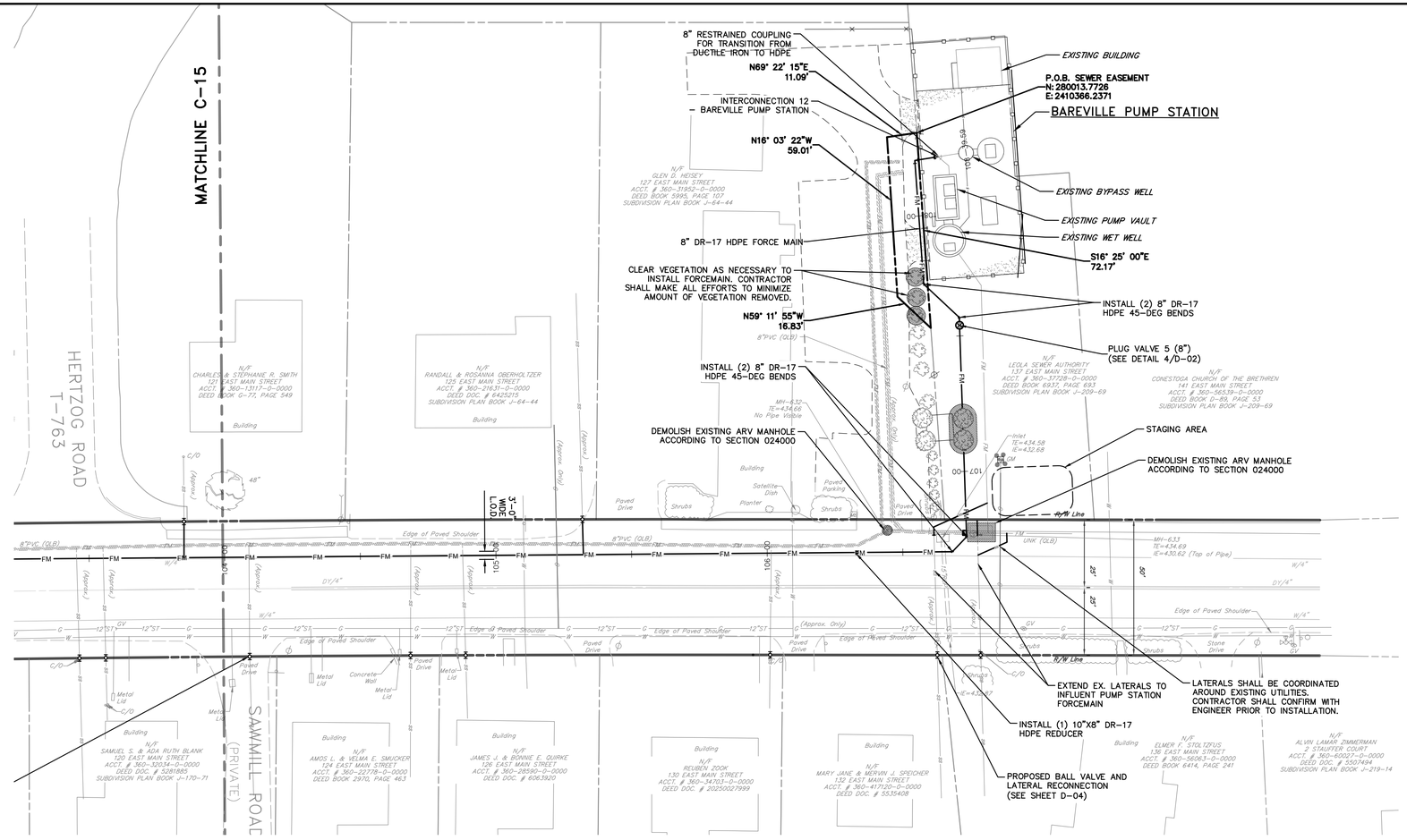
SCALE
1"=25'
0 12.5' 25' 50' 75'

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE XV
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-15

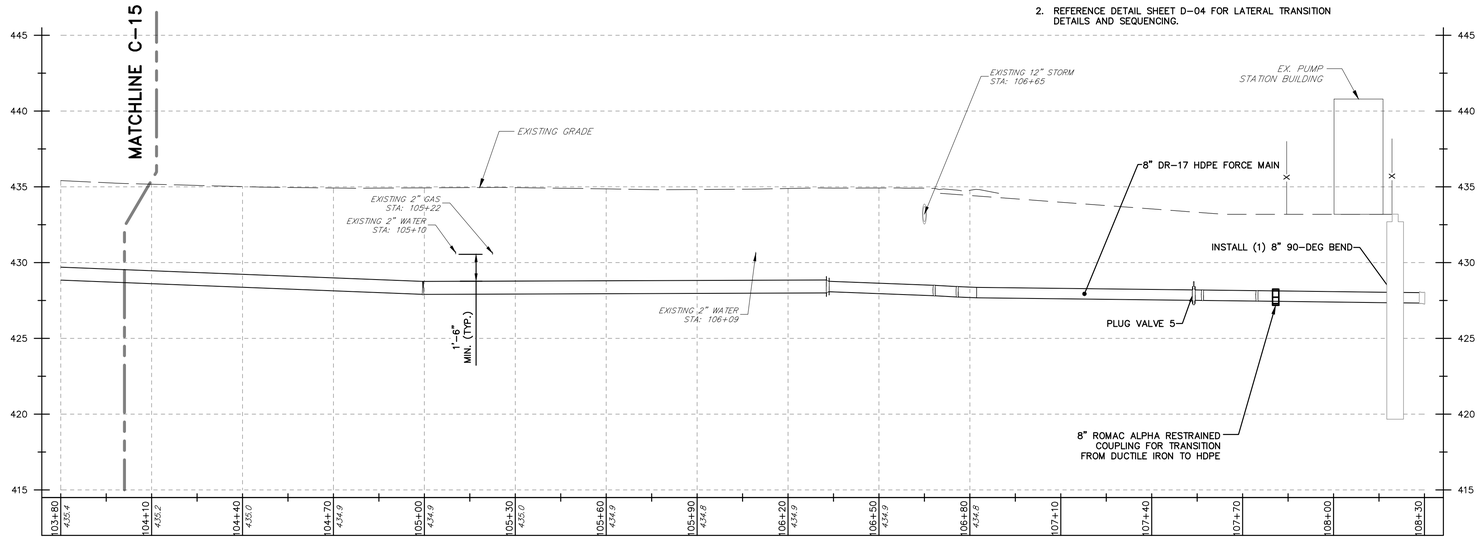
ISSUED FOR BIDDING



MAIN STREET SANITARY FORCE MAIN PLAN NO. 16

SCALE: 1"=25'

NOTES:
1. REFERENCE RECOMMENDED CONSTRUCTION SEQUENCE ON SHEET G-03.
2. REFERENCE DETAIL SHEET D-04 FOR LATERAL TRANSITION DETAILS AND SEQUENCING.



MAIN STREET SANITARY FORCE MAIN PROFILE NO. 16

HORIZONTAL SCALE - 1"=25'
VERTICAL SCALE - 1"=5'

CONTRACT No. 2026-04

ISSUED FOR BIDDING

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE098300
10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FIELDBOOK NO.: N/A

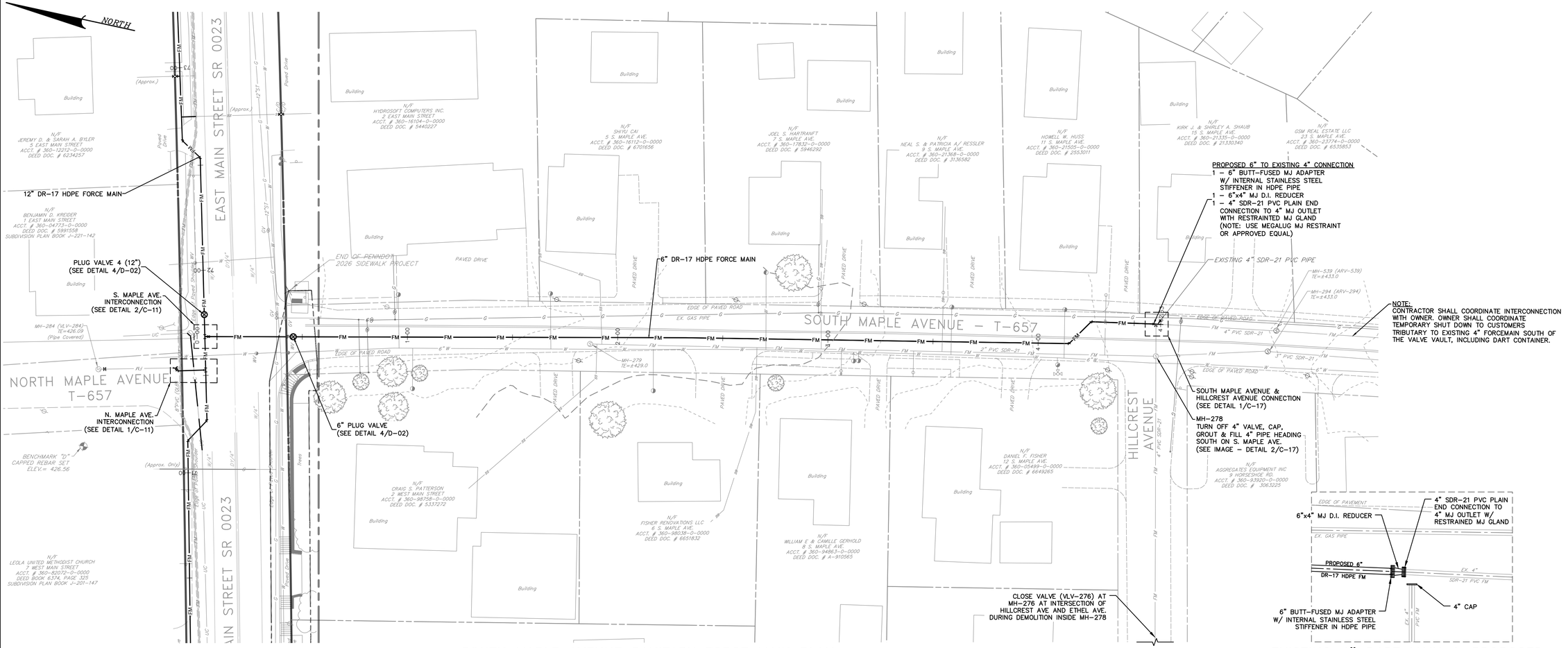
CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE
1"=25'
0 12.5' 25' 50' 75'

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Phone: (717) 435-8305
Email: rettew@rettew.com
Website: www.rettew.com
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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE XVI
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. C-16

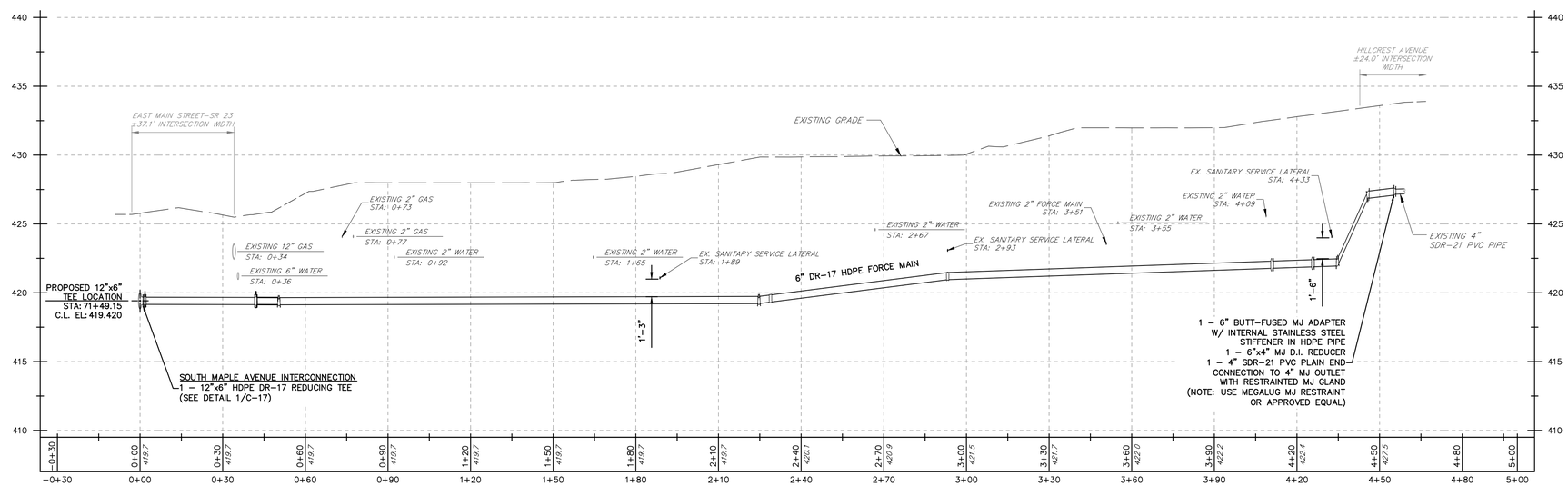


SOUTH MAPLE AVENUE SANITARY FORCE MAIN PLAN

SCALE: 1"=25'

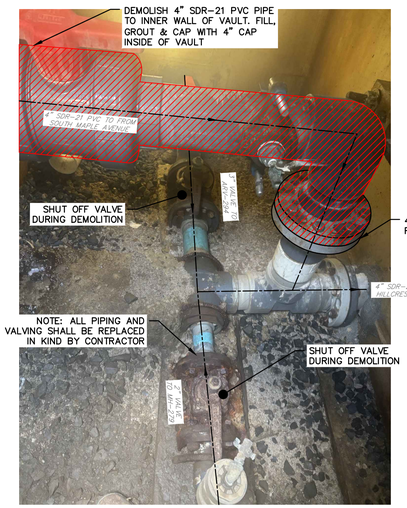
EXISTING 4" DART MAIN & PROPOSED 6" MAIN CONNECTION DETAIL

SCALE: 1/4" = 1'-0"
DETAIL 1/C-17



S. MAPLE AVE. SANITARY FORCE MAIN PROFILE

HORIZONTAL SCALE – 1"=25'
VERTICAL SCALE – 1"=5'



MH-278 SANITARY VAULT – DETAIL 2

SCALE: N.T.S.

CONTRACT No. 2026-04

ISSUED FOR BIDDING

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE093800
10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE
1"=25' 50' 75'
12.5' 25'
0

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Phone: (800) 738-8395
Email: rettew@rettew.com
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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY FORCE MAIN PLAN AND PROFILE XVII

UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139

DWG. NO. C-17

GENERAL SEDIMENT AND EROSION CONTROL METHODS/PROCEDURES

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE E&S PLAN.
2. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
3. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
4. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
5. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
6. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
7. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
8. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
9. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL 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 THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
10. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
11. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
12. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
13. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
14. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 12 INCHES IN THICKNESS.
15. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
16. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
17. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED.
18. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
19. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
20. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP.
21. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
22. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
23. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE THE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED AND FULLY IMPLEMENTED E&S CONTROL PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE/FEDERAL REGULATIONS.
25. THE TOWNSHIP AND THE SITE ENGINEER SHALL BE NOTIFIED IN THE EVENT SINKHOLES OR OTHER UNSUITABLE SUB-SURFACE CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION. IN ADDITION, THE SERVICES OF A REGISTERED GEOLOGIST SHOULD BE OBTAINED TO ASSIST IN RECOMMENDING CONSTRUCTION TECHNIQUES AND PERMANENT FACILITIES NECESSARY TO AVOID FURTHER SINKHOLE CREATION, REPAIR ANY EXISTING SINKHOLES, AND MAKE RECOMMENDATION ON ANY ENCOUNTERED UNSUITABLE SUB-SURFACE CONDITIONS.

SCHEDULE OF MAINTENANCE OF EROSION & SEDIMENT CONTROLS

THE SOIL EROSION AND SEDIMENT CONTROLS UTILIZED IN THE DEVELOPMENT OF THIS PLAN SHALL BE MAINTAINED AND REPAIRED IN ORDER TO KEEP THEM IN EFFECTIVE CONDITION UNTIL PERMANENT STABILIZATION OCCURS. THE CONTRACTOR SHALL INSPECT AND PERFORM NEEDED MAINTENANCE AT A MINIMUM ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5" OF RAIN PER 24 HOUR PERIOD. IN ORDER TO ASSURE PROPER FUNCTION, MAINTENANCE OF THE CONTROLS SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING MAINTENANCE PROCEDURES FOR UTILIZED CONTROLS:

INSPECTIONS MUST BE BY A QUALIFIED PERSON TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT AND DOCUMENTED IN AN INSPECTION LOG DEP FORM 3150-PM-BWEW0083 DATED 2/2012, TO BE MAINTAINED ON SITE AT ALL TIMES.

ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, RE-SEEDING, RE-MULCHING, AND RE-NETTING, MUST BE PERFORMED IMMEDIATELY.

MISCELLANEOUS ADJUSTMENTS AND CORRECTIONS SHALL BE MADE TO ANY EROSION CONTROL STRUCTURE AS DEEMED NECESSARY BY THE ENVIRONMENTAL INSPECTOR. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED.

TOPSOILING
1. AFTER TOPSOIL APPLICATION, FOLLOW PROCEDURES FOR SEEDBED PREPARATION.
2. TAKE CARE TO AVOID EXCESSIVE MIXING OF TOPSOIL INTO THE SUBSOIL.
3. PERMANENTLY STABILIZE THE SITE FOLLOWING APPROPRIATE PRACTICE STANDARDS AS QUICKLY AS PRACTICABLE.
4. PERIODICALLY INSPECT THE SITE UNTIL PERMANENT STABILIZATION IS ACHIEVED.
5. MAKE NECESSARY REPAIRS TO ERODED AREAS OR AREAS OF LIGHT VEGETATIVE COVER.

TEMPORARY SEEDING
1. AREAS THAT FAIL TO ESTABLISH A VEGETATIVE COVER ADEQUATE TO PREVENT RILL EROSION SHOULD BE RE-SEEDED AS SOON AS SUCH AREAS ARE IDENTIFIED.

PERMANENT SEEDING
1. EVEN WITH CAREFUL, WELL-PLANNED SEEDING OPERATIONS, FAILURES OCCUR. WHEN IT IS CLEAR THAT PLANTS HAVE NOT GERMINATED ON AN AREA OR HAVE DIED, THESE AREAS MUST BE PREPARED AND RESEEDED IMMEDIATELY TO PREVENT EROSION DAMAGE. IT IS EXTREMELY IMPORTANT TO DETERMINE WHY GERMINATION DID NOT TAKE PLACE AND MAKE ANY NECESSARY CORRECTIVE ACTIONS. HEALTHY VEGETATION IS THE MOST EFFECTIVE EROSION CONTROL AVAILABLE. SOME HIGHLY ACIDIC SOILS (ESPECIALLY AROUND VARIOUS COAL SEAMS IN THE COALFIELDS) WILL RESIST THE BEST EFFORTS TO REVEGETATE THEM. IN THESE CASES, TOPSOILING WILL BE THE ONLY WAY TO ESTABLISH VEGETATION.

MULCHING
1. ALL MULCHES AND SOIL COVERINGS SHOULD BE INSPECTED PERIODICALLY (PARTICULARLY AFTER RAINSTORMS AND HIGH WINDS) TO CHECK FOR EROSION AND DISPLACEMENT. WHERE EROSION IS OBSERVED IN MULCHED AREAS, ADDITIONAL MULCH SHOULD BE APPLIED AND EROSION REPAIRED IF NECESSARY.
2. NETS AND MATS SHOULD BE INSPECTED AFTER RAINSTORMS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, REINSTALL NETTING OR MATTING AS NECESSARY AFTER REGRADING TO REPAIR DAMAGE TO THE SLOPE OR DITCH. INSPECTIONS SHOULD TAKE PLACE UP UNTIL GRASSES ARE FIRMLY ESTABLISHED OR THE AREA IS REDISTURBED.

ROLLED EROSION CONTROL PRODUCTS (IF REQUIRED)
1. BASIC MONITORING SHOULD CONSIST OF VISUAL INSPECTIONS TO DETERMINE MAT INTEGRITY AND ATTACHMENT PERFORMANCE. RILL DEVELOPMENT BENEATH THE MAT OR EDGE LIFTING IS EVIDENCE OF INADEQUATE ATTACHMENT. UNTIL THE VEGETATION IS FULLY ESTABLISHED, THE GROUND SURFACE SHOULD BE INSPECTED FOR SIGNS OF RILL OR GULLY EROSION BELOW THE MATTING.
2. ANY SIGNS OF EROSION, TEARING OF THE MATTING, OR AREAS WHERE THE MATTING IS NO LONGER ANCHORED FIRMLY TO THE GROUND, SHOULD BE REPAIRED. REPAIR ANY DAMAGED AREAS IMMEDIATELY BY RESTORING SOIL TO FINISHED GRADE, RE-APPLYING SOIL AMENDMENTS AND SEED, AND REPLACING THE R.E.C.P.S. ADDITIONAL STAKING AND TRENCHING CAN BE EMPLOYED TO CORRECT DEFECTS. RECENTLY PLACED MATS MAY BE REPLACED, BUT ONCE VEGETATION BECOMES ESTABLISHED, REPLACEMENT IS NOT A REASONABLE OPTION UNLESS LARGE FAILURES HAVE OCCURRED. IF THE R.E.C.P.S ARE VEGETATED, THE VEGETATION SHOULD BE WATERED AS NEEDED. GETTING GRASS ESTABLISHED AS QUICKLY AS POSSIBLE IS VERY IMPORTANT.

DEWATERING BAG (IF REQUIRED)
1. THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY DURING PUMPING OPERATIONS AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.
2. THE ACCUMULATED SEDIMENT THAT IS REMOVED FROM A DEWATERING DEVICE MUST BE SPREAD ON-SITE AND STABILIZED OR DISPOSED OF AT AN APPROVED DISPOSAL SITE AS PER APPROVED PLAN.

COMPOST SOCK AND CONCRETE WASHOUT
SEE STANDARD DETAIL FIGURE 3.1 FOR INSTALLATION MAINTENANCE REQUIREMENTS.

INLET FILTER BAG
1. INLET FILTER BAGS SHALL BE INSPECTED FREQUENTLY, AT A MINIMUM ONCE PER DAY AND AFTER EACH STORM EVENT. BAGS SHALL BE CLEANED, REPAIRED, OR REPLACED WHEN SEDIMENT ACCUMULATION REDUCES FLOW CAPACITY OR CAUSES BYPASS.
2. SEDIMENT REMOVED FROM INLET FILTER BAGS SHALL BE DISPOSED OF IN A STABILIZED UPLAND AREA OR AT AN APPROVED DISPOSAL LOCATION IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.

CONSTRUCTION SEQUENCE

1. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE PUBLIC ROAD OR SIDEWALK FREE OF ALL MUD FROM CONSTRUCTION AND DELIVERY VEHICLES. AFTER EACH VEHICLE LEAVES THE SITE, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS MUST BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY. THE CONTRACTOR IS TO TAKE GREAT CARE TO PREVENT SEDIMENT TRACKING. STABILIZED ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED WHEREVER IT IS KNOWN THAT CONSTRUCTION VEHICLES WILL BE EXITING ONTO A ROADWAY (PUBLIC OR PRIVATE). THE CONTRACTOR SHALL CONSTRUCT A STABILIZED ROCK CONSTRUCTION ENTRANCE WHEREVER NEEDED, EVEN IF NOT SPECIFICALLY IDENTIFIED ON THE PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
2. CONTRACTOR SHALL REFERENCE SEQUENCE OF CONSTRUCTION ON INDEX SHEET (G-03) FOR ENGINEER RECOMMENDED SEQUENCE FOR FORCE MAIN CONSTRUCTION, INTERCONNECTIONS, AND SERVICE TRANSITIONS. THIS SEQUENCE IS INTENDED TO DICTATE THE REQUIRED ORDER OF OPERATIONS FOR EROSION AND SEDIMENTATION CONTROL.
3. CONTRACTOR TO HAVE EROSION CONTROL DEVICES ON SITE AND IN PLACE BEFORE BEGINNING ALL EXCAVATIONS.
4. CONTRACTORS WILL CAREFULLY WASH ALL VEHICLES AND CONSTRUCTION EQUIPMENT BEFORE IT IS BROUGHT ON SITE. IF VEHICLES AND CONSTRUCTION EQUIPMENT REMAIN ON THE SITE THROUGHOUT THE DURATION OF THE PROJECT, THEY NEED NOT BE WASHED EACH DAY. ANY TIME A PIECE OF CONSTRUCTION EQUIPMENT LEAVES THE SITE, IT SHOULD BE WASHED BEFORE RETURNING TO THE SITE.
5. INSTALL FILTER SOCK AND FILTER BAG INLET PROTECTION AT LOCATIONS DOWNSTREAM OF WORK AREAS AND COMPOST SOCK WASHOUT AS SHOWN ON THE CONTRACT DRAWINGS.
6. PUMPED WATER FILTER BAGS SHALL BE KEPT ON SITE AND USED WHEN TRENCH DEWATERING IS REQUIRED. THESE AREAS MAY OCCUR DURING A RAINFALL OR RUNOFF EVENT AND WILL BE ADDRESSED ON A CASE BY CASE BASIS.
7. AFTER THE FINAL GRADE HAS BEEN ESTABLISHED, PAVING, SEEDING, AND MULCHING SHALL BE COMPLETED. THE CONTRACTOR SHALL SPREAD SILT COLLECTED FROM FILTER BAG INLET PROTECTION ON SITE, SEED, AND MULCH. USED PUMP WATER FILTER BAGS SHALL BE DISCARDED AT AN APPROVED LANDFILL.
8. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AFTER RESTORATION IS COMPLETE AND AFTER A UNIFORM 70% PERENNIAL VEGETATIVE COVER IS ESTABLISHED IN UNPAVED AREAS.

SEEDING SPECIFICATIONS

TEMPORARY COVER - PENNDOT FORMULA E (OR EQUAL)

SPECIES	ANNUAL RYE GRASS (98% PURE LIVE SEED)
APPLICATION RATE	10 LBS PER 1000 SQUARE YARDS
APPLICATION DATE	MARCH 15 TO OCTOBER 15

PERMANENT COVER - PENNDOT FORMULA B (OR EQUAL)

SPECIES PERENNIAL GRASS MIXTURE (20% BY WEIGHT, 98% PURE LIVE SEED)
CREEPING RED FESCUE (30% BY WEIGHT, 98% PURE LIVE SEED)
KENTUCKY BLUE GRASS MIXTURE (50% BY WEIGHT, PURE LIVE
APPLICATION RATE 21 LBS PER 1000 SQUARE YARD
APPLICATION DATE MARCH 15 TO JUNE 1
AUGUST 1 TO OCTOBER 15

*VEGETATIVE STABILIZATION WILL BE PERIODICALLY INSPECTED FOR PROPER GROWTH. ANY AREAS NOT RESPONDING WILL BE PROMPTLY RESEEDED. AREAS, WHICH SHOW SIGNS OF EROSION, PRIOR TO STABILIZATION, SHALL BE GRADED, RESEEDED, AND RE-MULCHED AS SOON AS POSSIBLE.

MULCHING SPECIFICATIONS

1. HAY OR STRAW -- AIR-DRIED, FREE OF SEED AND COARSE MATERIAL. INSTALLATION RATE FOR PERMANENT AND TEMPORARY STABILIZATION IS THREE (3) TONS PER ACRE.
2. THE MULCHING WILL BE UTILIZED DURING WINTER MONTHS AS A GOOD GROUND COVER ON TOPSOIL STOCKPILES, GRADED SLOPES AND OTHER AREAS TO BE GRASSED.
3. THE DISTURBED AREAS WILL BE SEEDED WITHIN THE FIRST WEEK OF THE DESIGNATED GROWING SEASON, OR BEFORE, IF THE WEATHER IS FAVORABLE.
4. STRAW MULCH SHALL BE APPLIED AT THE RATE OF 3.0 TONS PER ACRE. ON STEEP SLOPES OF 3:1 OR GREATER, MULCH SHALL BE ANCHORED THROUGH THE USE OF JUTE NETTING, EROSION CONTROL BLANKETS, OR MIXING WITH ASPHALT AT THE RATE OF 100 GALLONS PER 3 TONS OF STRAW MULCH.
5. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.

SOIL SUPPLEMENT SPECIFICATIONS

ALL TOPSOIL SHALL BE LOOSENED TO A DEPTH OF AT LEAST 4". ALL OBJECTIONABLE MATERIAL LARGER THAN 2" SHALL BE REMOVED.

DUE TO THE NATURE OF THE SOILS AT THE SITE IT MAY BE NECESSARY TO IMPORT TOPSOIL WITH SUFFICIENT ORGANIC MATERIAL AND WATER CAPACITY TO SUSTAIN THE SPECIFIED SEED MIXTURE.

LIMESTONE AND FERTILIZER SHALL BE APPLIED UNIFORMLY TO AREAS TO BE SEEDED, AND WORKED INTO THE SOIL TO A DEPTH OF 6".

SUPPLEMENTS SHALL CONFORM TO THE REQUIREMENTS OF PENNDOT PUBLICATION 408, SECTION 804.

ONSITE SOIL TESTING IS HIGHLY RECOMMENDED.

TEMPORARY
LIMING - PULVERIZED AGRICULTURAL LIMESTONE -- APPLIED AT 800 LBS/ 1000 SY
FERTILIZER - 10-20-10 ANALYSIS COMMERCIAL FERTILIZER - APPLIED AT 140 LBS PER 1000 SY

PERMANENT
LIMING - PULVERIZED AGRICULTURAL LIMESTONE -- APPLIED AT 800 LBS/ 1000 SY
FERTILIZER - 10-20-10 ANALYSIS COMMERCIAL FERTILIZER - APPLIED AT 140 LBS PER 1000 SY
38-0-0 UREAFORM FERTILIZER - APPLIED AT 50 LBS/1000 SY
OR 32-0-0 TO 38-0-0 SULFUR COATED UREA FERTILIZER - APPLIED AT 59 LBS/1000 SY TO 50 LBS/1000 SY
OR 31-0-0 IBDU FERTILIZER - 61 LBS/1000 SY

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE093300
10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FIELDBOOK NO. N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

NTS

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Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
EROSION & SEDIMENTATION CONTROL NOTES
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139
DWG. NO. EC-01

CONTRACT No. 2026-04

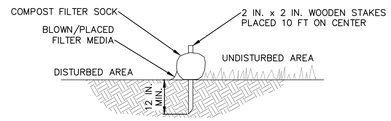
ISSUED FOR BIDDING

NOTE: MINIMUM SPECIFICATIONS FOR FILTER SOCK FABRIC SHALL MEET THE FOLLOWING PER TABLE 4.1:

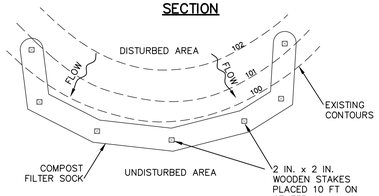
MATERIAL TYPE:	5 MIL HDPE
MATERIAL CHARACTERISTICS:	PHOTO-DEGRADABLE
MESH OPENING:	⅜"
TENSILE STRENGTH:	26 PSI
MINIMUM FUNCTIONAL LONGEVITY:	9 MONTHS

TABLE 4.2
COMPOST STANDARDS

ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.5
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	30% - 50% PASS THROUGH ¾" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 dS/m (mmhos/cm) MAXIMUM



SECTION



PLAN VIEW

NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER 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.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

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.

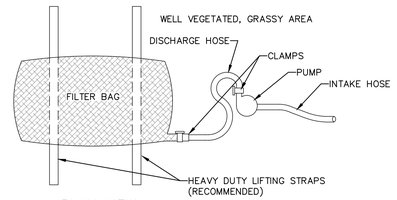
HEAVY CONCRETE BLOCKS OR SIMILAR SHALL BE USED BEHIND COMPOST FILTER SOCKS FOR STABILIZATION WHEN STAKING IS NOT POSSIBLE (SUCH AS ON PAVED SURFACES). BLOCKS SHALL BE SPACED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS FOR STAKES.

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK

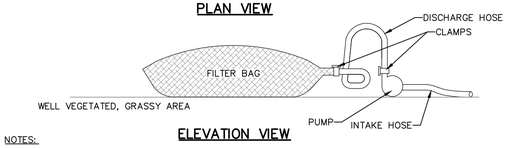
NOT TO SCALE

TABLE 4.1 - COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12", 18"	12", 18", 24", 32"	12", 18", 24", 32"	12", 18", 24"32"	12", 18", 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS
TWO-PLY SYSTEMS					
INNER CONTAINMENT NETTING	HDPE BIAXIAL NET				
	CONTINUOUSLY WOUND				
	FUSION-WELDED JUNCTURES				
	3/4"x3/4" MAX. APERTURE SIZE				
OUTER FILTRATION MESH	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)				
	3/16" MAX. APERATURE SIZE				
SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS					



PLAN VIEW



ELEVATION VIEW

NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5% FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

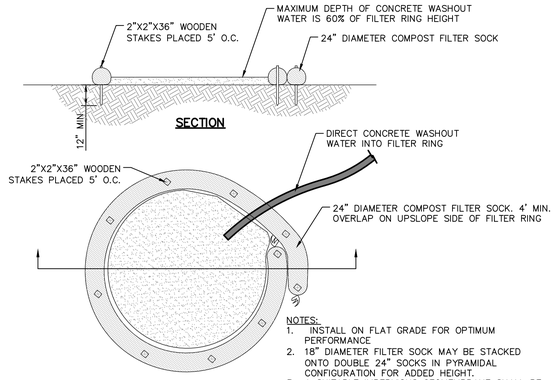
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16
PUMPED WATER FILTER BAG

NOT TO SCALE



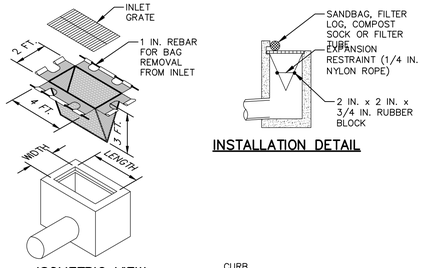
SECTION

PLAN

NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
3. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.

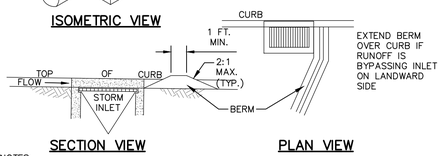
FIGURE #3.18
TYPICAL COMPOST SOCK WASHOUT INSTALLATION

NOT TO SCALE



ISOMETRIC VIEW

INSTALLATION DETAIL



SECTION VIEW PLAN VIEW

NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

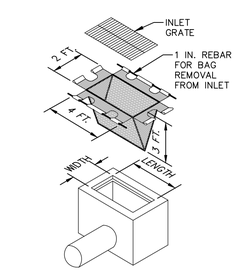
ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

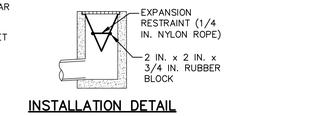
DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL
#4-15 FILTER BAG INLET
PROTECTION – TYPE C INLET

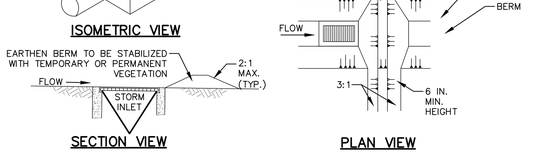
NOT TO SCALE



ISOMETRIC VIEW



INSTALLATION DETAIL



SECTION VIEW PLAN VIEW

NOTES: MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

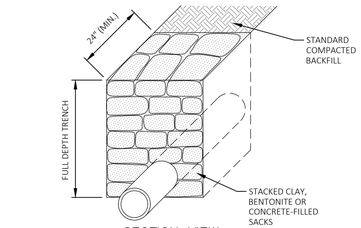
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

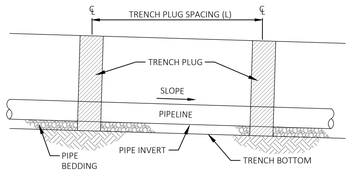
DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL
#4-16 FILTER BAG INLET
PROTECTION – TYPE M INLET

NOT TO SCALE
PADEP 4-15



SECTION VIEW



PROFILE VIEW

PA DEP EROSION CONTROL MANUAL TABLE 13.1
MAXIMUM SPACING AND MATERIALS FOR TRENCH PLUGS

TRENCH SLOPE (%)	SPACING L (FT)	PLUG MATERIAL
< 5	1000	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
5 - 15	500	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
15 - 25	300	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
25 - 35	200	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
35 - 100	100	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
> 100	50	CEMENT BAGS (WETTED) OR MORTARED STONE

* TOPSOIL MAY NOT BE USED TO FILL SACKS

NOTES:

IMPERVIOUS TRENCH PLUGS ARE REQUIRED FOR ALL STREAM, RIVER, WETLAND, OR OTHER WATER BODY CROSSINGS.

STANDARD CONSTRUCTION DETAIL #13-4
TRENCH PLUG INSTALLATION

NOT TO SCALE

NO.	DATE	REVISION
0	10/05/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE098300
10/05/1016

MANAGER: ABRAHAM KING			
DESIGN BY: ADF	CHKD BY: AJK	FIELDBOOK NO. N/A	
DRAWN BY: JNW	CHKD BY: ADF		
SURV. CHIEF: N/A			

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

AS NOTED

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Website: www.rettew.com
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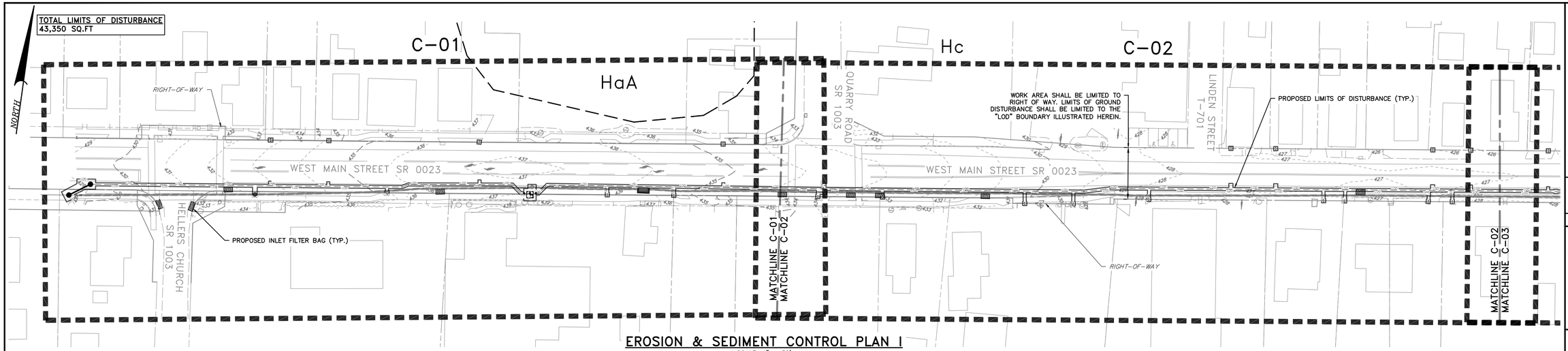
NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
EROSION & SEDIMENTATION CONTROL DETAILS
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139

DWG. NO. EC-02

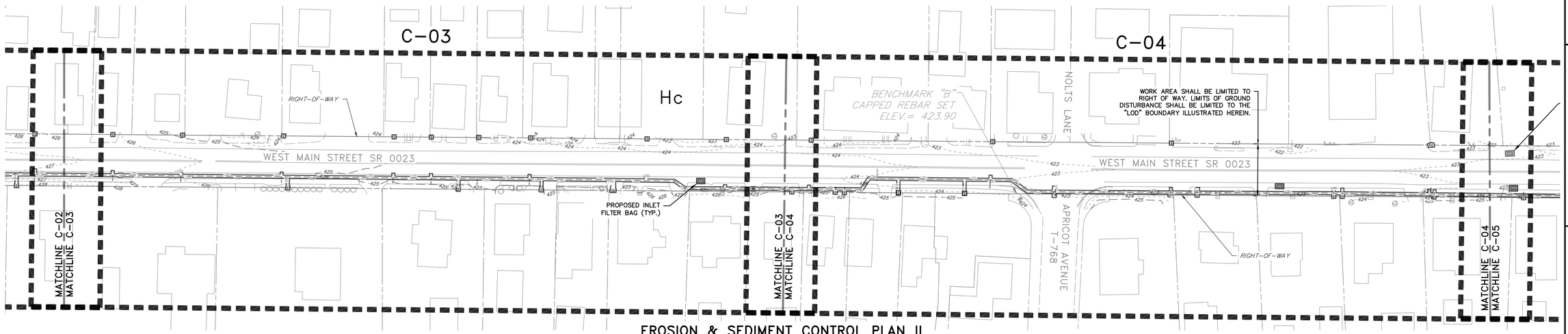
CONTRACT No. 2026-04

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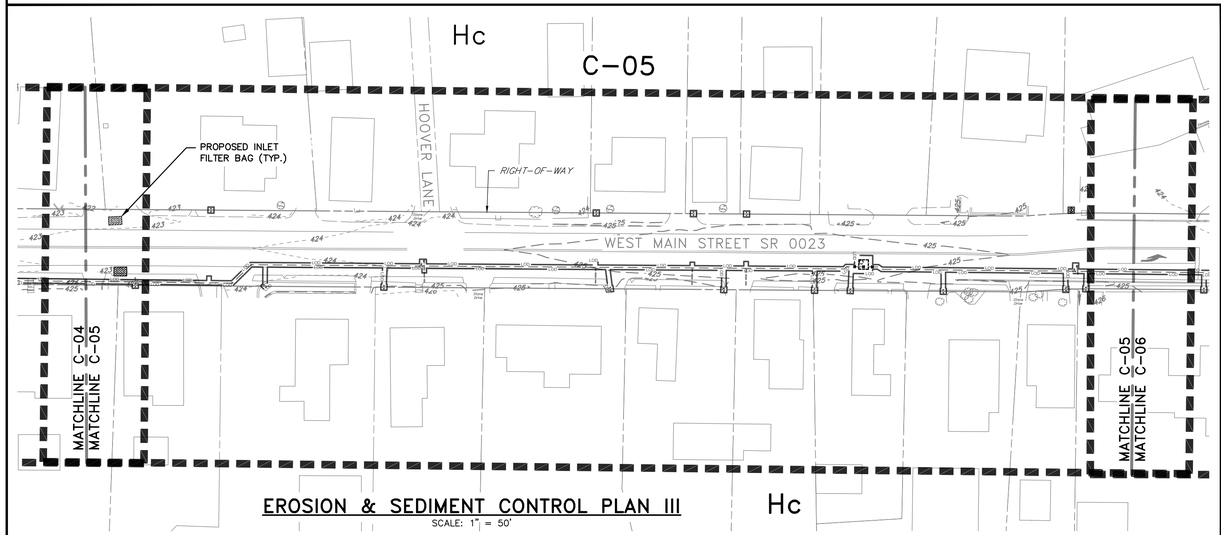
EROSION & SEDIMENT CONTROL PLAN I

SCALE: 1" = 50'



EROSION & SEDIMENT CONTROL PLAN II

SCALE: 1" = 50'



EROSION & SEDIMENT CONTROL PLAN III

SCALE: 1" = 50'

NOTES

1. ALL WORK OF THIS PROJECT IS CONTAINED WITHIN THE MILL CREEK WATERSHED, PRIMARILY FEEDING UNNAMED TRIBUTARIES TO MILL CREEK. MILL CREEK AND ITS ASSOCIATED UNNAMED TRIBUTARIES AROUND THE PROJECT AREA ARE CLASSIFIED AS WWF.

2. CONTRACTOR SHALL PROVIDE INLET FILTER BAGS AT ALL EXISTING INLETS DOWN GRADIENT OF THE WORK AREA. INLET FILTER BAGS ARE SHOWN IN THE PLAN DRAWINGS.

3. STOCKPILING WILL NOT BE PERMITTED IN THE PROJECT AREA. CONTRACTOR MUST UTILIZE A DIRECT HAUL OPERATION IN WHICH EXCAVATED MATERIAL IS LOADED DIRECTLY TO A TRUCK AND HAULED OFF SITE.

LEGEND

LIMITS OF DISTURBANCE	LOD
TEMPORARY INLET PROTECTION	
SHEET AREA BOUNDARY	
SOIL TYPE BOUNDARY LINE	
SOIL TYPE DESIGNATION	Du

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE098300
10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FIELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP
MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE: 1"=50' (0, 25', 50', 100', 150')

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Website: www.rettew.com

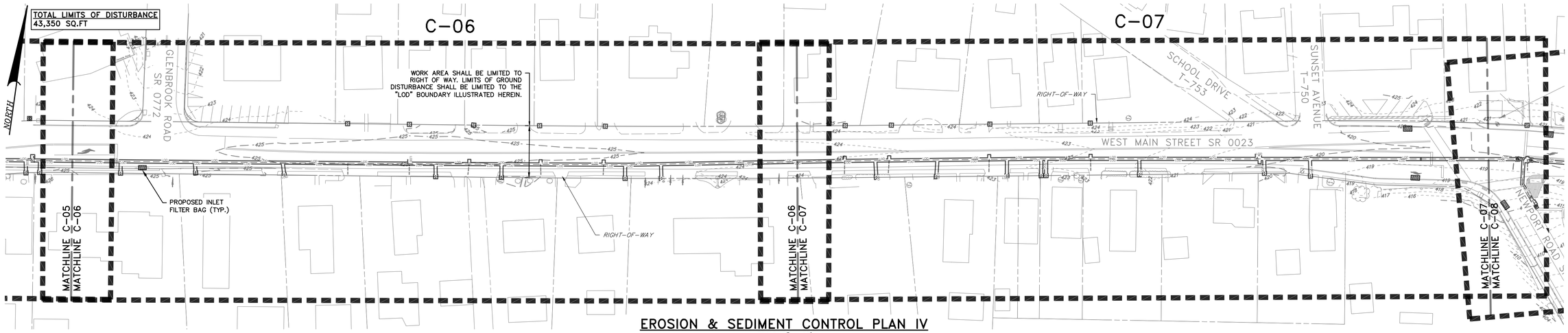
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Environmental Consultants

NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
EROSION & SEDIMENT CONTROL PLAN I, II & III
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139

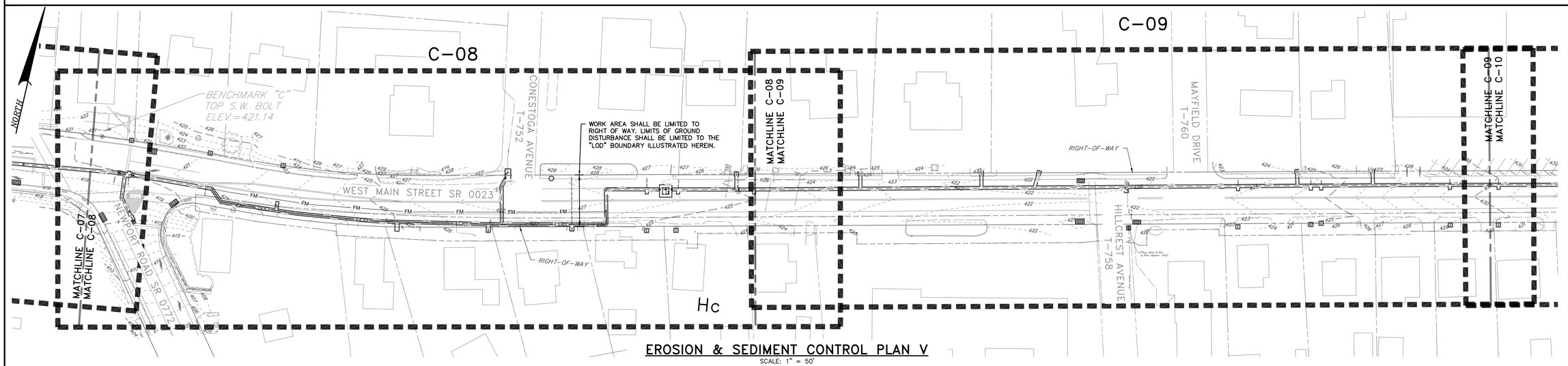
DWG. NO. EC-03

ISSUED FOR BIDDING



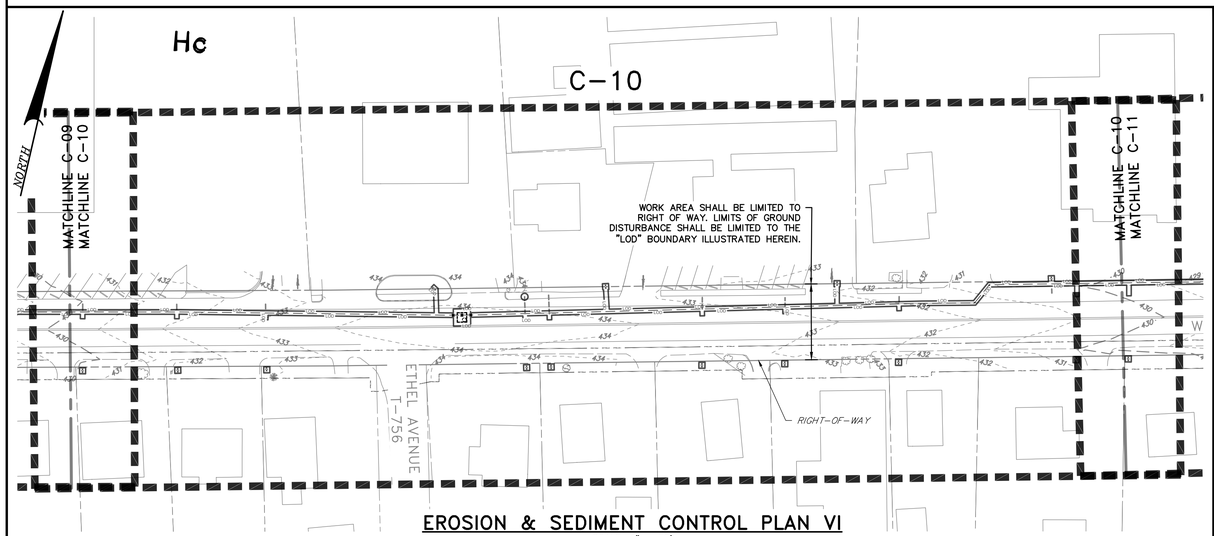
EROSION & SEDIMENT CONTROL PLAN IV

SCALE: 1" = 50'



EROSION & SEDIMENT CONTROL PLAN V

SCALE: 1" = 50'



EROSION & SEDIMENT CONTROL PLAN VI

SCALE: 1" = 50'

NOTES

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LEGEND

LIMITS OF DISTURBANCE	LOD
TEMPORARY INLET PROTECTION	
SHEET AREA BOUNDARY	
SOIL TYPE BOUNDARY LINE	
SOIL TYPE DESIGNATION	Du

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE098300
10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FIELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP
MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE: 0 25' 50' 1"=50' 100' 150'

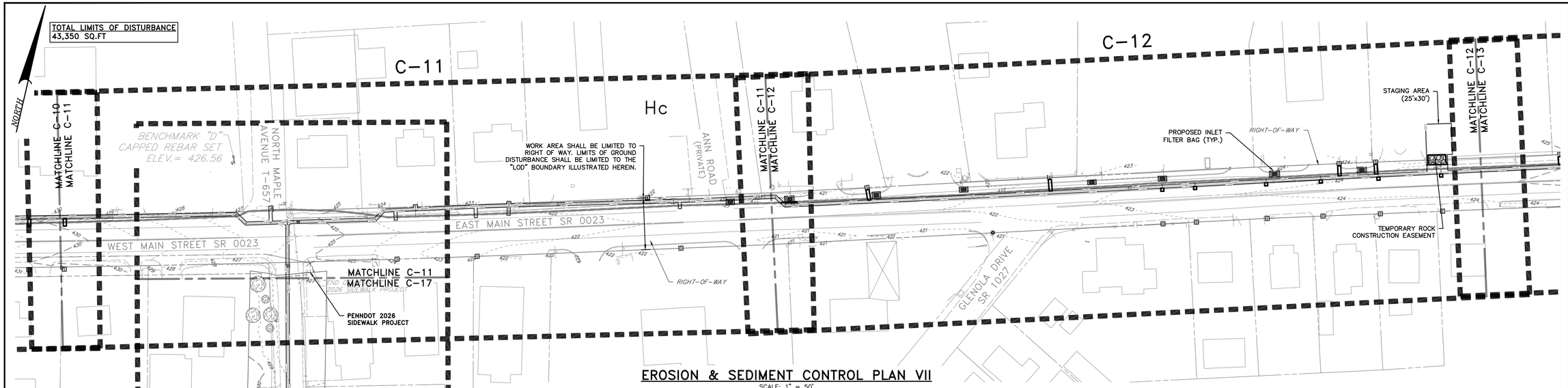
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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
EROSION & SEDIMENT CONTROL PLAN IV, V & VI
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139

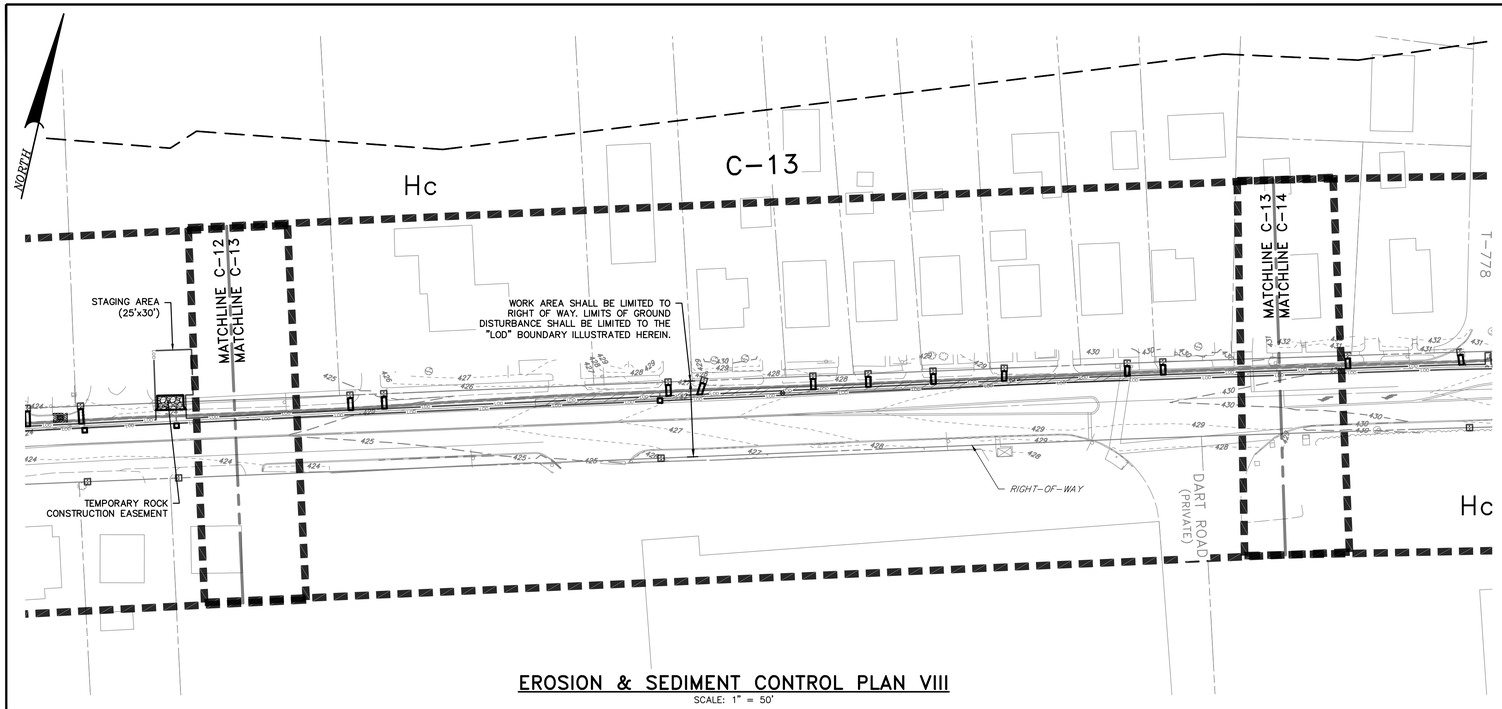
DWG. NO. EC-04

ISSUED FOR BIDDING



EROSION & SEDIMENT CONTROL PLAN VII

SCALE: 1" = 50'



EROSION & SEDIMENT CONTROL PLAN VIII

SCALE: 1" = 50'

NOTES

1. ALL WORK OF THIS PROJECT IS CONTAINED WITHIN THE MILL CREEK WATERSHED, PRIMARILY FEEDING UNNAMED TRIBUTARIES TO MILL CREEK. MILL CREEK AND ITS ASSOCIATED UNNAMED TRIBUTARIES AROUND THE PROJECT AREA ARE CLASSIFIED AS WWF.

2. CONTRACTOR SHALL PROVIDE INLET FILTER BAGS AT ALL EXISTING INLETS DOWN GRADIENT OF THE WORK AREA. INLET FILTER BAGS ARE SHOWN IN THE PLAN DRAWINGS.

3. STOCKPILING WILL NOT BE PERMITTED IN THE PROJECT AREA. CONTRACTOR MUST UTILIZE A DIRECT HAUL OPERATION IN WHICH EXCAVATED MATERIAL IS LOADED DIRECTLY TO A TRUCK AND HAULED OFF SITE.

LEGEND

LIMITS OF DISTURBANCE	LOD
TEMPORARY INLET PROTECTION	
SHEET AREA BOUNDARY	
SOIL TYPE BOUNDARY LINE	
SOIL TYPE DESIGNATION	Du

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE098300
10/06/2026

MANAGER: ABRAHAM KING

DESIGN BY: ADF	CHKD BY: AJK
DRAWN BY: JNW	CHKD BY: ADF
SURV. CHIEF: N/A	FIELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP
MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE: 0, 25', 50', 1"=50', 100', 150'

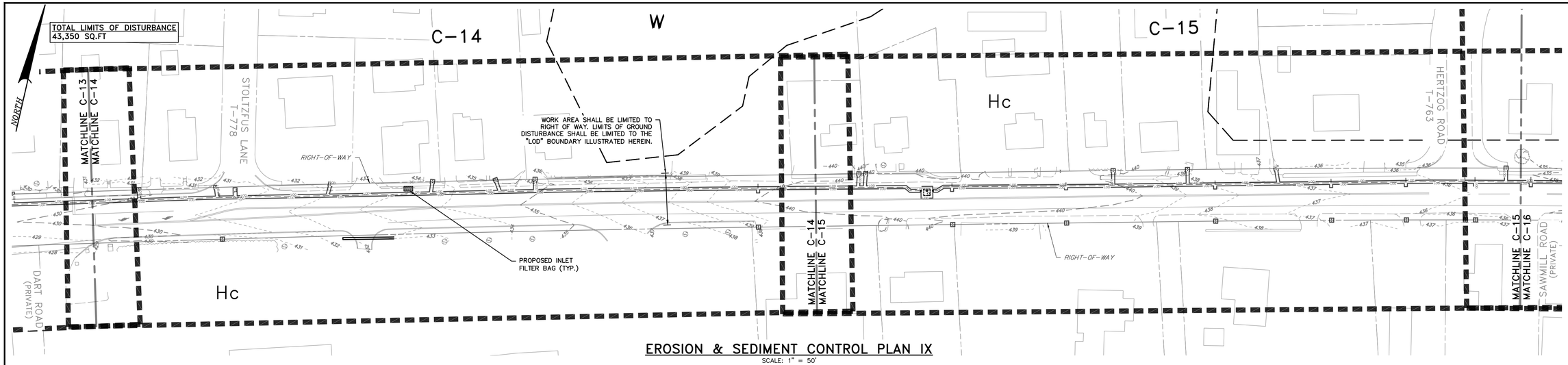
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Phone: (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com
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Environmental Consultants

NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
EROSION & SEDIMENT CONTROL PLAN VII & VIII
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139

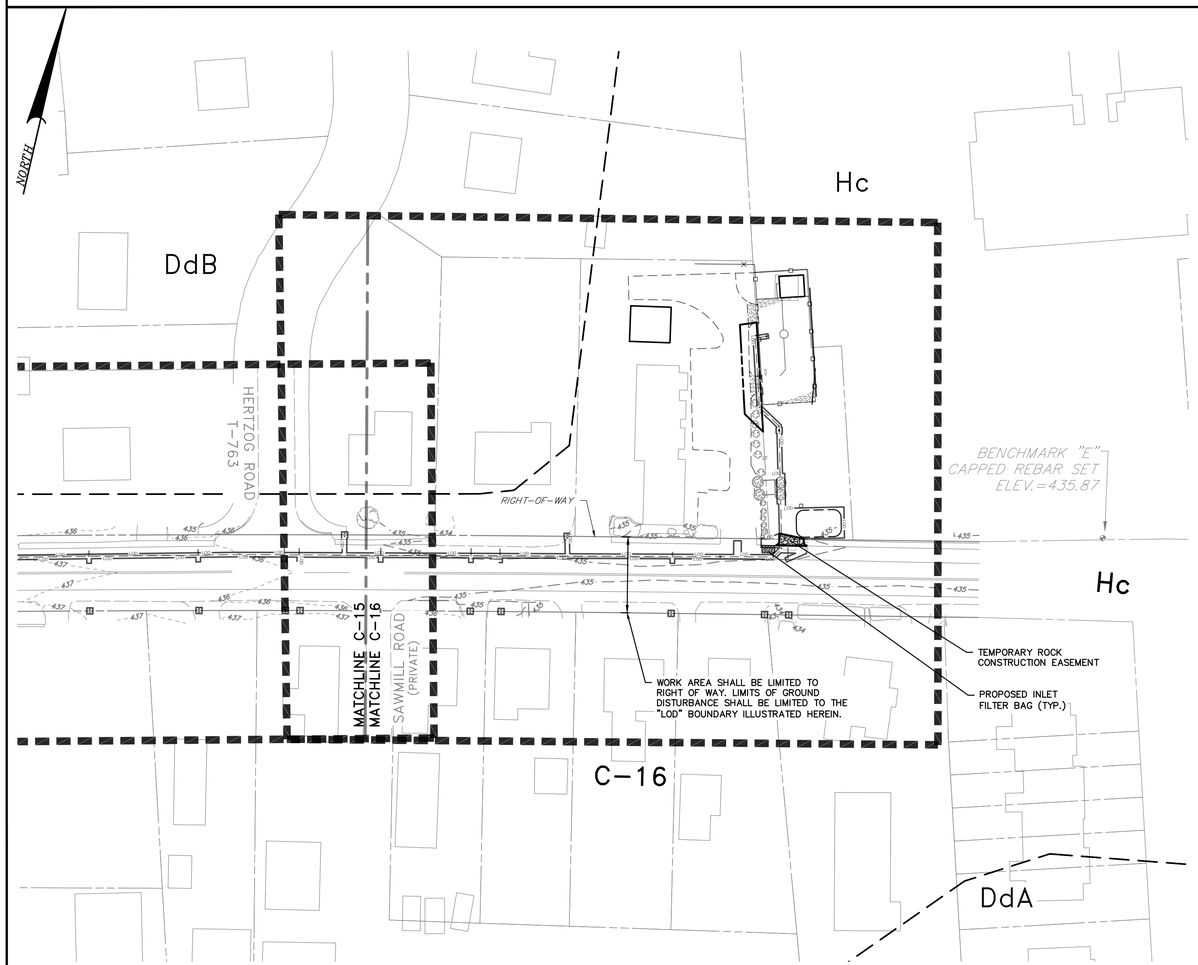
DWG. NO. EC-05

ISSUED FOR BIDDING



EROSION & SEDIMENT CONTROL PLAN IX

SCALE: 1" = 50'



EROSION & SEDIMENT CONTROL PLAN X

SCALE: 1" = 50'

NOTES

1. ALL WORK OF THIS PROJECT IS CONTAINED WITHIN THE MILL CREEK WATERSHED, PRIMARILY FEEDING UNNAMED TRIBUTARIES TO MILL CREEK. MILL CREEK AND ITS ASSOCIATED UNNAMED TRIBUTARIES AROUND THE PROJECT AREA ARE CLASSIFIED AS WWF.

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3. STOCKPILING WILL NOT BE PERMITTED IN THE PROJECT AREA. CONTRACTOR MUST UTILIZE A DIRECT HAUL OPERATION IN WHICH EXCAVATED MATERIAL IS LOADED DIRECTLY TO A TRUCK AND HAULED OFF SITE.

LEGEND

- LIMITS OF DISTURBANCE — LOD
- TEMPORARY INLET PROTECTION
- SHEET AREA BOUNDARY
- SOIL TYPE BOUNDARY LINE
- SOIL TYPE DESIGNATION — Du

CONTRACT No. 2026-04

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ANDREW D FERKO IV
ENGINEER
No. PE093300
10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FIELDBOOK NO: N/A

CLIENT
UPPER LEACOCK TOWNSHIP
MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

SCALE
1"=50'
0 25' 50' 100' 150'

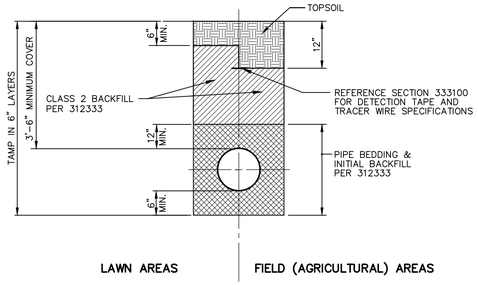
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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
EROSION & SEDIMENT CONTROL PLAN IX & X
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139

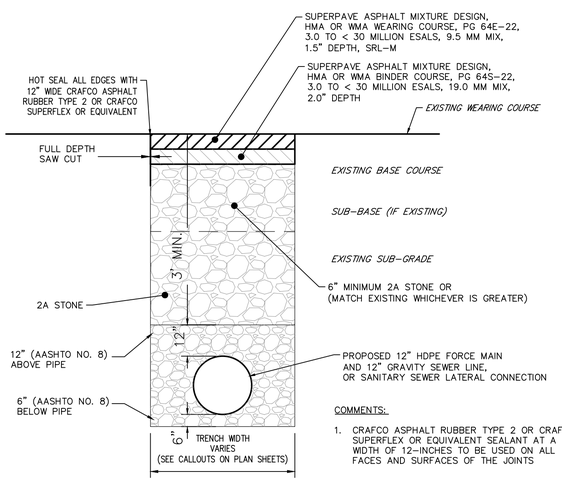
DWG. NO. EC-06

ISSUED FOR BIDDING



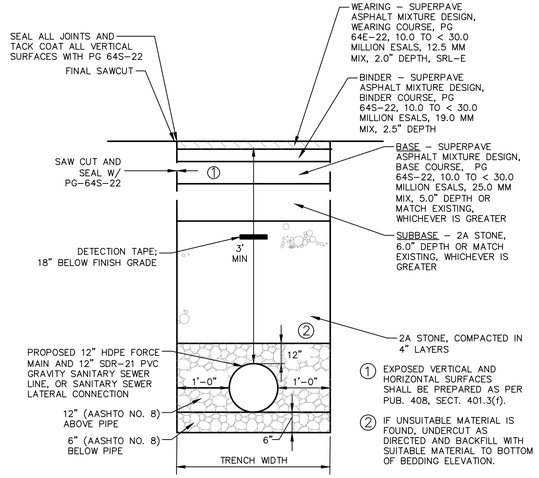
1 D-01 TRENCH RESTORATION LAWN/FIELD AREAS

NOT TO SCALE



COMMENTS:

1. CRAFCO ASPHALT RUBBER TYPE 2 OR CRAFCO SUPERFLEX OR EQUIVALENT SEALANT AT A WIDTH OF 12-INCHES TO BE USED ON ALL FACES AND SURFACES OF THE JOINTS

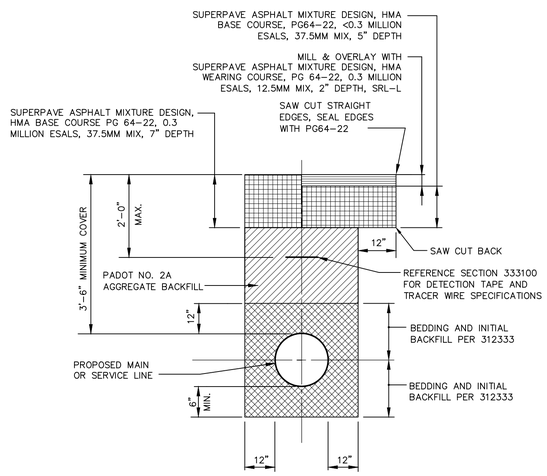


① EXPOSED VERTICAL AND HORIZONTAL SURFACES SHALL BE PREPARED AS PER PUB. 408, SECT. 401.3(f).

② IF UNSUITABLE MATERIAL IS FOUND, UNDERCUT AS DIRECTED AND BACKFILL WITH SUITABLE MATERIAL TO BOTTOM OF BEDDING ELEVATION.

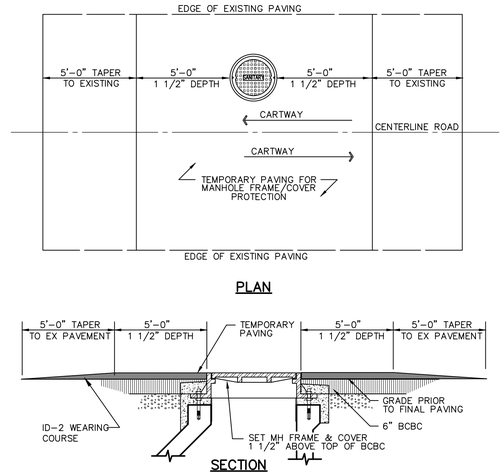
2 D-01 PAVEMENT RESTORATION DETAIL FOR STATE ROADS

NOT TO SCALE



3 D-01 PAVEMENT RESTORATION DETAIL FOR EXISTING TOWNSHIP ROADS

NOT TO SCALE

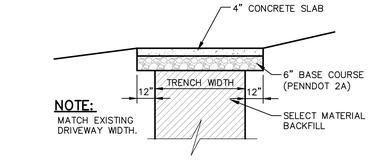


NOTE: TEMPORARY PAVING TO BE PLACED AT ALL MANHOLES WITHIN CARTWAYS, TO PROTECT MH FRAMES & COVERS FROM SNOW PLOWS.

USE THIS DETAIL FOR UPPER LEACOCK AND WEST EARL TOWNSHIP ALONG WITH STATE ROADS.

4 D-01 MANHOLE FRAME/COVER PROTECTION DETAIL PRIOR TO FINAL PAVING

NOT TO SCALE

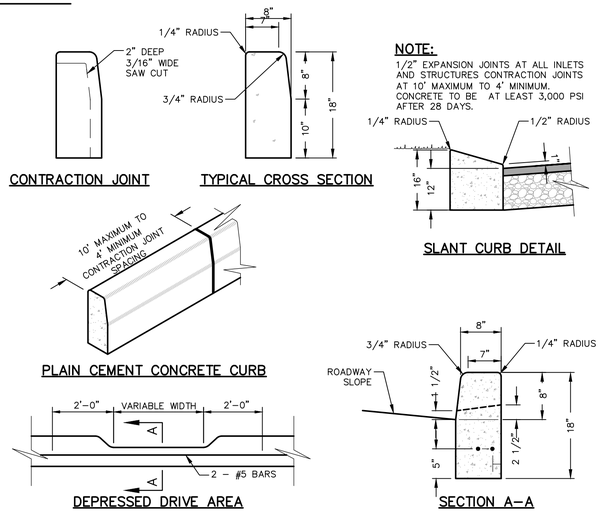


5 D-01 CONCRETE DRIVEWAY RESTORATION

NOT TO SCALE

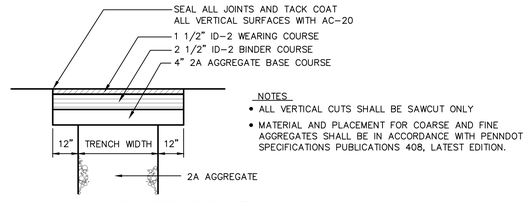
NOTES

- ALL VERTICAL CUTS SHALL BE SAWCUT ONLY
- MATERIAL AND PLACEMENT FOR COARSE AND FINE AGGREGATES SHALL BE IN ACCORDANCE WITH PENNDOT SPECIFICATIONS PUBLICATIONS 408, LATEST EDITION.



6 D-01 CURB REPLACEMENT (MUNICIPAL ROADS)

NOT TO SCALE

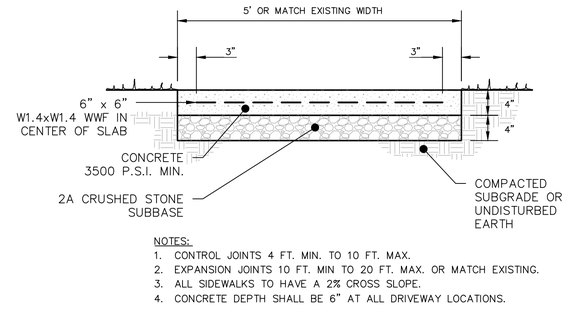


NOTES

- ALL VERTICAL CUTS SHALL BE SAWCUT ONLY
- MATERIAL AND PLACEMENT FOR COARSE AND FINE AGGREGATES SHALL BE IN ACCORDANCE WITH PENNDOT SPECIFICATIONS PUBLICATIONS 408, LATEST EDITION.

9 D-01 PAVED DRIVEWAY RESTORATION

NOT TO SCALE



NOTES:

1. CONTROL JOINTS 4 FT. MIN. TO 10 FT. MAX.
2. EXPANSION JOINTS 10 FT. MIN TO 20 FT. MAX. OR MATCH EXISTING.
3. ALL SIDEWALKS TO HAVE A 2% CROSS SLOPE.
4. CONCRETE DEPTH SHALL BE 6" AT ALL DRIVEWAY LOCATIONS.

8 D-01 CONCRETE SIDEWALK RESTORATION

NOT TO SCALE

NO.	DATE	REVISION
0	10/06/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE098300 — 10/06/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF | CHKD BY: AJK
DRAWN BY: JNW | CHKD BY: ADF
SURV. CHIEF: N/A | FIELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP
MUNICIPAL AUTHORITY
161 NEWPORT ROAD
LEOLA, PA 17540
CONTACT: ABRAHAM KING, PE

AS NOTED

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Engineers • Planners • Surveyors • Landscape Architects
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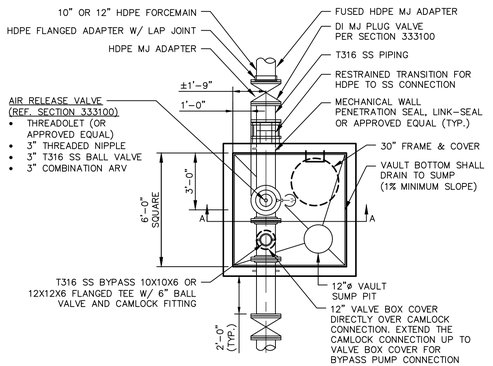
NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
CIVIL DETAILS I
UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

PROJ. NO. 0571404139

DWG. NO. D-01

CONTRACT No. 2026-04

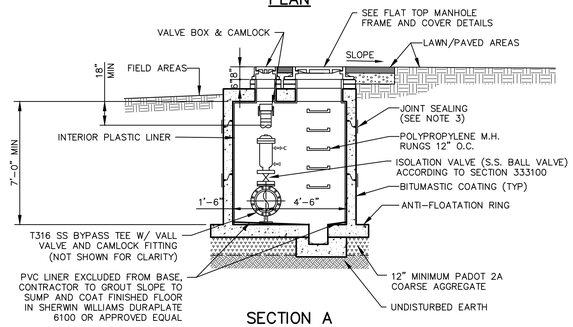
ISSUED FOR BIDDING



PLAN

NOTES:

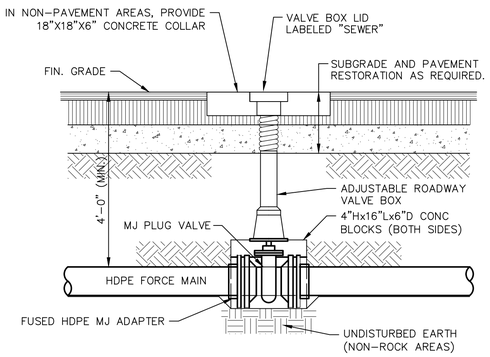
1. ADJUST TO GRADE WITH CONCRETE GRADE RINGS (MAXIMUM VERTICAL ADJUSTMENT 6") SEE FRAME & COVER DETAILS.
2. MECHANICALLY VIBRATED PRECAST CONCRETE SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. PROVIDE 2 RINGS OF PREFORMED BUTYL RUBBER SEALING COMPOUND (INSIDE & OUTSIDE) WITH 12" WIDE BAND OF EXTERNAL SEALING SYSTEM (OUTSIDE) AT ALL MANHOLE JOINTS.
4. FILL ALL LIFTING HOLES WITH NON-SHRINK GROUT.
5. INTERIOR PVC LINE ACCORDING TO SECTION 330513. LINER TO PROVIDE CONTINUOUS, IMPERMEABLE LINING TO SHIELD CONCRETE AGAINST DETERIORATION CAUSED BY CORROSIVE ATMOSPHERE.
6. PROVIDE (2) BURIED PLUG VALVES ACCORDING TO SECTION 333100.



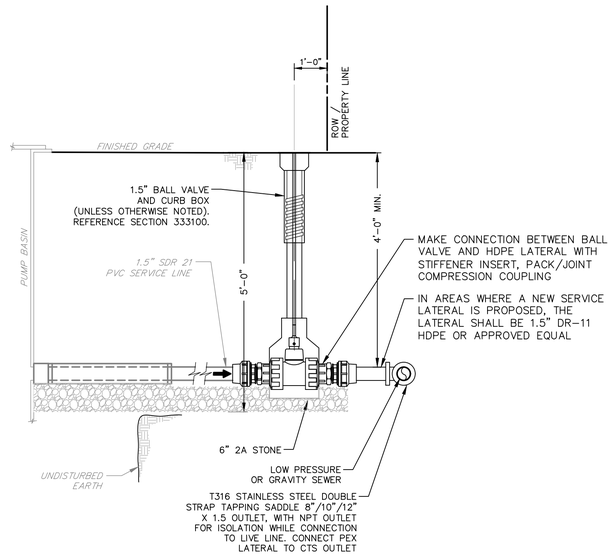
SECTION A

SPECIAL NOTE: DEPTH OF MAIN MUST BE INCREASED FROM THE 3'-6" STANDARD TO ALLOW FOR INSTALLATION OF THE AIR RELEASE VALVE WITH 18 INCH MINIMUM CLEARANCE. THE PIPE SHALL BE CONTINUOUSLY RISING WITH THE AIR RELEASE VALVE AT THE HIGHEST ELEVATION POINT IN THE PIPING.

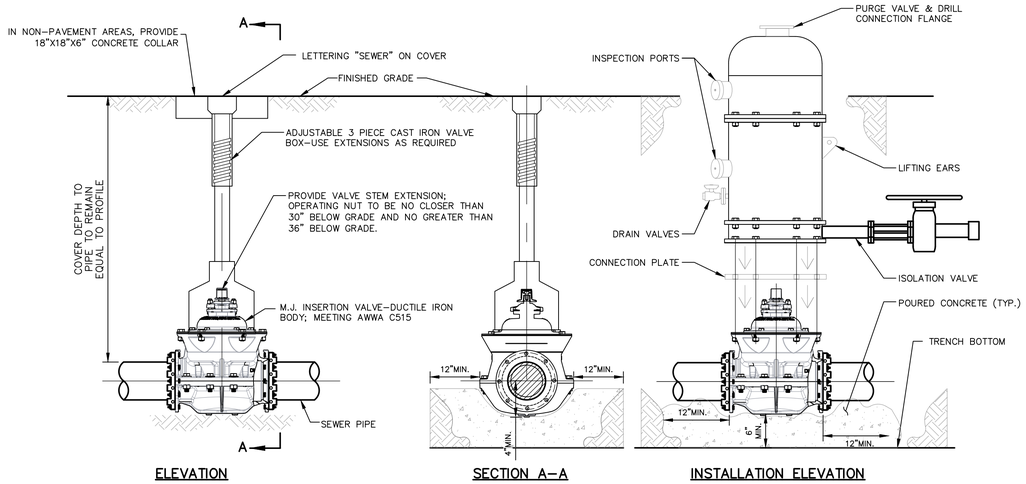
1 / D-02 **COMBINATION AIR RELEASE/VACUUM VALVE VAULT DETAIL**
NOT TO SCALE



2 / D-02 **STANDARD/PLUG VALVE INSTALLATION**
NOT TO SCALE



3 / D-02 **SERVICE LATERAL VALVE REPLACEMENT**
NOT TO SCALE
REFERENCE SECTION 3331000



ELEVATION

NOTE:

IF EXTENSIONS ARE NECESSARY CONTRACTOR SHALL SET "PLUMB" AND ALIGN PROPERLY FOR ACCESS TO OPERATING NUT.

SECTION A-A

INSTALLATION ELEVATION

NOTE:

DETAIL IS FOR REFERENCE PURPOSES. CONTRACTOR TO UTILIZE INSERTION VALVE MANUFACTURER INSTRUCTIONS AND INSTALLTION GUIDE FOR FULL INSTALL SPECIFICATIONS.

4 / D-02 **INSERTION VALVE & VALVE BOX DETAILS**
NOT TO SCALE

NO.	DATE	REVISION
0	10/05/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE098300 — 10/05/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF — CHKD BY: AJK
DRAWN BY: JNW — CHKD BY: ADF
SURV. CHIEF: N/A — FELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
161 NEWPORT ROAD
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CONTACT: ABRAHAM KING, PE

AS NOTED

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
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SANITARY PIPING DETAILS I
UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

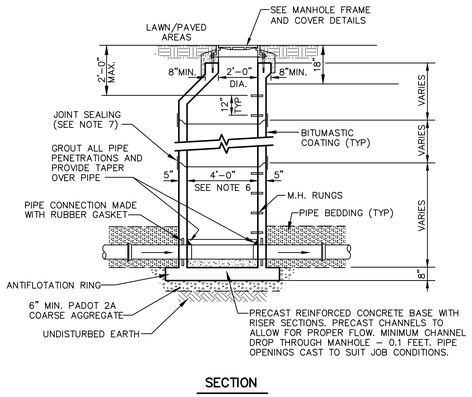
PROJ. NO. 0571404139
DWG. NO. D-02

CONTRACT No. 2026-04

ISSUED FOR BIDDING

NOTES:

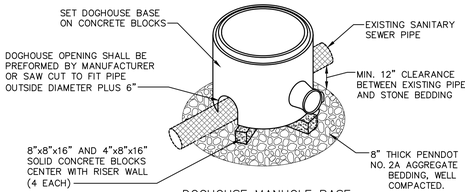
1. ADJUST TO GRADE WITH POURED-IN-PLACE CONCRETE RISER. SEE FRAME & COVER DETAILS.
2. MECHANICALLY VIBRATED PRECAST CONCRETE SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 6", SEE INSIDE SPLASH/INSIDE DROP MANHOLE DETAILS.
4. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
5. FILL ALL LIFTING HOLES WITH NON-SHRINK GROUT.
6. LARGER DIAMETER MANHOLE REQUIRED ON INSIDE DROP AND INSIDE SPLASH CONNECTION GREATER THAN 12", SEE DETAIL 15.
7. PROVIDE 2 RINGS OF PREFORMED BUTYL, RUBBER SEALING COMPOUND (INSIDE & OUTSIDE) WITH 12" WIDE BAND OF EXTERNAL SEALING SYSTEM (OUTSIDE) AT ALL MANHOLE JOINTS.



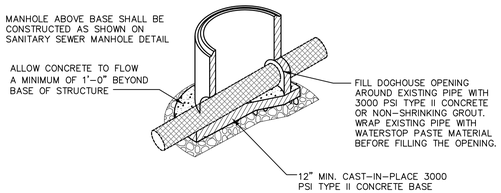
SECTION

1 / D-03 PRECAST MANHOLE 8" THRU 24" SEWERS

NOT TO SCALE



DOGHOUSE MANHOLE BASE



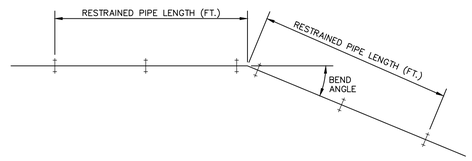
FOUNDATION SECTION VIEW

NOTES:

1. CONSTRUCT A FORMED INVERT FROM EXISTING SEWER PIPE TO ALLOW FLOW TO THE NEW SEWER LINE.
2. POUR A SHELF TO THE CROWN OF THE EXISTING PIPE.
3. CUT AND REMOVE THE TOP HALF OF EXISTING PIPE TO WITHIN 6" OF THE MANHOLE WALLS AFTER THE INVERT AND SHELF HAVE BEEN FORMED, AND THE MANHOLE HAS BEEN FULLY TESTED IN ACCORDANCE WITH THE SPECIFICATIONS. INTERIOR LINING OF MANHOLE CAN BE COMPLETED PRIOR TO CUTTING AND REMOVING THE TOP HALF OF THE EXISTING PIPE.
4. 8' DIAMETER DOG HOUSE MANHOLE SHALL BE LINED.

2 / D-03 DOGHOUSE SANITARY MANHOLE BASE

NOT TO SCALE



HORIZONTAL RESTRAINED PIPE LENGTH SCHEDULE				
PIPE DIAMETER	HORIZONTAL ELBOW DEFLECTION ANGLE			
	90°	45°	22 1/2°	11 1/4°
1 1/2" THRU 4"	15'	6'	3'	2'
6"	20'	9'	4'	2'
8"	26'	11'	6'	3'
10"	31'	13'	7'	4'
12"	37'	16'	8'	4'

VERTICAL RESTRAINED PIPE LENGTH SCHEDULE			
PIPE DIAMETER	VERTICAL ELBOW DEFLECTION ANGLE		
	45°	22 1/2°	11 1/4°
1 1/2" THRU 4"	13'	7'	4'
6"	19'	9'	5'
8"	24'	12'	6'
10"	29'	14'	7'
12"	34'	17'	9'

NOTE: THE TABLE VALUES ARE BASED ON DEPTH OF COVER = 4 FEET; SILT SOILS; PIPE BEDDING PER ULTMA DETAIL; TEST PRESSURE = 150 PSI; SAFETY FACTOR = 150%.

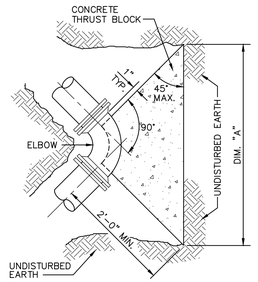
3 / D-03 RESTRAINED PIPE LENGTH SCHEDULE

NOT TO SCALE

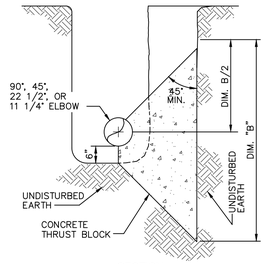
THRUST BLOCK DIMENSION SCHEDULE - ELBOWS(*)					
PIPE DIAM.	DIM.	ELBOW DEFLECTION ANGLE			
		11 1/4°	22 1/2°	45°	90°
1 1/2" THRU 4"	A	A11.25	A22.5	A45	A90
	B	B11.25	B22.5	B45	B90
PIPE	A	A11.25	A22.5	A45	A90
	B	B11.25	B22.5	B45	B90
PIPE	A	A11.25	A22.5	A45	A90
	B	B11.25	B22.5	B45	B90
PIPE	A	A11.25	A22.5	A45	A90
	B	B11.25	B22.5	B45	B90

(*) THRUST BLOCK DESIGN BASED ON THE MINIMUM SOIL HORIZONTAL BEARING STRENGTH OF 3000 PSF AND 150 PSI WORKING PRESSURE PLUS 50% WATER HAMMER ALLOWANCE.

FOR PIPE SIZES GREATER THAN 12", SUBMIT ENGINEERING CALCULATIONS TO VERIFY PROPOSED THRUST BLOCK SIZES.



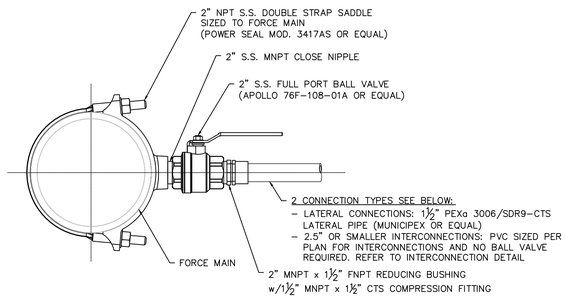
PLAN



SECTION

4 / D-03 HORIZONTAL & VERTICAL UP RESTRAINT THRUST BLOCKING DETAIL - ELBOWS (PVC)

NOT TO SCALE



NOTES:
1. CONTRACTOR SHALL DRILL 1½" (MIN.) HOLE THROUGH BALL VALVE

6 / D-03 SANITARY TAPPING SADDLE

NOT TO SCALE

NO.	DATE	REVISION
0	10/05/2026	ISSUED FOR BIDDING

FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANDREW D FERKO IV No. PE098300 10/05/2026

MANAGER: ABRAHAM KING
DESIGN BY: ADF
CHKD BY: AJK
DRAWN BY: JNW
CHKD BY: ADF
SURV. CHIEF: N/A
FIELDBOOK NO.: N/A

CLIENT
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
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NTS

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY PIPING DETAILS II
UPPER LEACOCK TOWNSHIP LANCASTER COUNTY, PA

PROJ. NO. 0571404139

DWG. NO. D-03

CONTRACT No. 2026-04

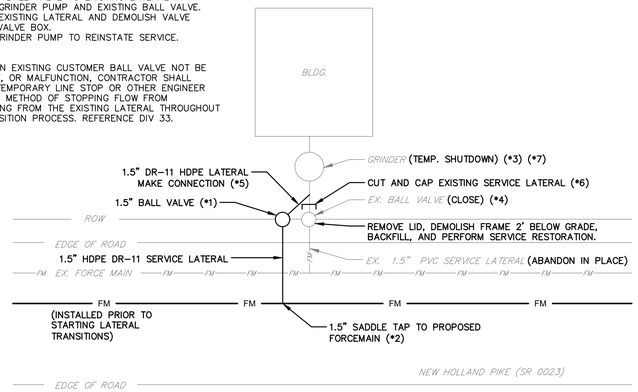
ISSUED FOR BIDDING

SEQUENCE:

1. INSTALL NEW CUSTOMER BALL VALVE AT ROW LINE.
2. SADDLE TAP NEW LATERAL
3. TEMPORARILY DISABLE CUSTOMER GRINDER PUMP.
4. CLOSE EXISTING CUSTOMER BALL VALVE TO PREVENT FLOW DISCHARGING TO LATERAL FROM EXISTING FORCEMAIN.
5. MAKE CONNECTION BETWEEN AND NEW BALL VALVE, AND FROM NEW BALL VALVE TO EXISTING LATERAL IN BETWEEN GRINDER PUMP AND EXISTING BALL VALVE.
6. CAP THE EXISTING LATERAL AND DEMOLISH VALVE EXISTING VALVE BOX.
7. RESUME GRINDER PUMP TO REINSTATE SERVICE.

NOTE:

1. SHOULD AN EXISTING CUSTOMER BALL VALVE NOT BE AVAILABLE, OR MALFUNCTION, CONTRACTOR SHALL PROVIDE TEMPORARY LINE STOP OR OTHER ENGINEER APPROVED METHOD OF STOPPING FLOW FROM DISCHARGING FROM THE EXISTING LATERAL THROUGHOUT THE TRANSITION PROCESS. REFERENCE DIV 33.



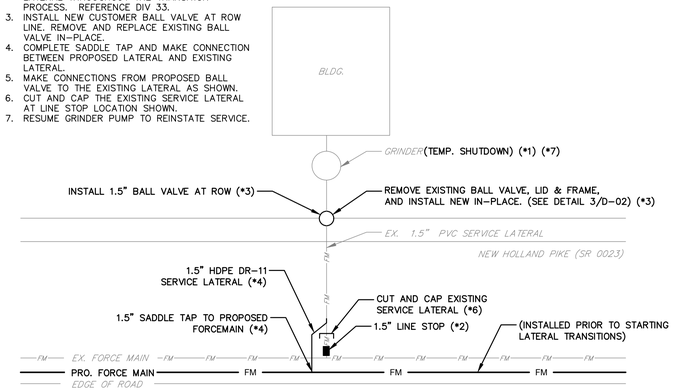
LATERAL TRANSITION DETAIL
SHORT SIDE LATERAL TRANSITIONS
(HOUSE ON SAME SIDE OF ROAD AS FORCEMAIN)

1 / D-04

NOT TO SCALE

SEQUENCE:

1. TEMPORARILY DISABLE CUSTOMER GRINDER PUMP.
2. PROVIDE TEMPORARY LINE STOP OR OTHER ENGINEER APPROVED METHOD OF STOPPING FLOW FROM DISCHARGING FROM THE EXISTING LATERAL THROUGHOUT THE TRANSITION PROCESS. REFERENCE DIV 33.
3. INSTALL NEW CUSTOMER BALL VALVE AT ROW LINE. REMOVE AND REPLACE EXISTING BALL VALVE IN-PLACE.
4. COMPLETE SADDLE TAP AND MAKE CONNECTION BETWEEN PROPOSED LATERAL AND EXISTING LATERAL.
5. MAKE CONNECTIONS FROM PROPOSED BALL VALVE TO THE EXISTING LATERAL AS SHOWN.
6. CUT AND CAP THE EXISTING SERVICE LATERAL AT LINE STOP LOCATION SHOWN.
7. RESUME GRINDER PUMP TO REINSTATE SERVICE.



LATERAL TRANSITION DETAIL
LONG SIDE LATERAL TRANSITIONS
(HOUSE ON OPPOSITE SIDE OF ROAD AS FORCEMAIN)

2 / D-04

NOT TO SCALE

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FOR RETTEW ASSOCIATES BY:

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ANDREW D FERKO IV — ENGINEER — No. PE098300 — 10/05/2026

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NEW HOLLAND PIKE LOW-PRESSURE FORCE MAIN REPLACEMENT PROJECT
FOR
UPPER LEACOCK TOWNSHIP MUNICIPAL AUTHORITY
SANITARY PIPING DETAILS III

UPPER LEACOCK TOWNSHIP — LANCASTER COUNTY, PA

PROJ. NO. 0571404139

DWG. NO. D-04

CONTRACT No. 2026-04

ISSUED FOR BIDDING