



VARIANCES GRANTED 8-18-25

\$200-22 - TO ALLOW A LOT AREA OF 15,018 SF FOR LOT 4 WHERE 16,500 SF IS THE MINIMUM.

\$200-23.B - TO ALLOW AN IMPERVIOUS SURFACE COVERAGE RATIO OF 23.03% FOR LOT 4 WHERE 18% IS THE MAXIMUM ALLOWED.

BUCKS COUNTY PLANNING COMMISSION NOTATION

BCP NO. _____
PROCESSED AND REVIEWED. REPORT PREPARED BY THE
BUCKS COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE
MUNICIPALITIES PLANNING CODE.
CERTIFIED THIS DATE _____

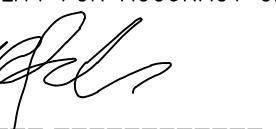
EXECUTIVE DIRECTOR, BUCKS COUNTY PLANNING COMMISSION.

TOWNSHIP BOARD OF SUPERVISORS

APPROVED BY RESOLUTION OF THE SUPERVISORS OF LOWER MAKEFIELD TOWNSHIP,
BUCKS COUNTY, COMMONWEALTH OF PENNSYLVANIA AT A MEETING HELD ON THE
____ DAY OF _____ 20____

ENGINEERS CERTIFICATION

THESE RECORD PLANS HAVE BEEN COMPLETED AND CERTIFIED BY VINCENT W. FIORAVANTI PE,
36598 E, AS REFLECTING CONSTRUCTED CONDITIONS WITH FIELD CHANGES INCORPORATED.
RESPONSIBILITY FOR ACCURACY OF THE RECORD PLAN RESTS WITH THE ABOVE ENGINEER.


VINCENT W. FIORAVANTI,

OWNERSHIP CERTIFICATION

TO ALL TO WHOM THESE PRESENTS MAY COME: KNOW YE THAT I
(WE), _____ HAVE LAID OUT UPON
OUR LAND SITUATED IN THE TOWNSHIP OF LOWER MAKEFIELD,
COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, CERTAIN
LOTS ACCORDING TO THIS PLAN WHICH IS INTENDED TO BE
FORTHWITH RECORDED. WITNESS OUR HAND AND SEAL THIS DAY OF
____ 20____

OWNER _____

OWNER _____

CERTIFICATION OF OWNERSHIP

COMMONWEALTH OF PENNSYLVANIA

SS:

COUNTY OF BUCKS

ON THIS _____ DAY OF _____ 20____ AD BEFORE ME, THE UNDERSIGNED, A
NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN BUCKS COUNTY,
PERSONALLY APPEARED _____ SATISFACTORILY PROVEN TO
BE THE PERSONS WHOSE NAME(S) ARE SUBSCRIBED BELOW, AND ACKNOWLEDGE THAT THEY
ARE THE REGISTERED OWNER OF THE DESIGNATED LAND; THAT ALL NECESSARY APPROVAL OF
THE PLAN HAS BEEN OBTAINED AND IS ENDORSED THEREON, AND THAT THEY DESIRE THAT
THE FOREGOING PLAN BE RECORDED ACCORDING TO LAW. WITNESS MY HAND AND NOTARIAL
SEAL THE DAY AND YEAR AFORESAID. NOTARY PUBLIC BY

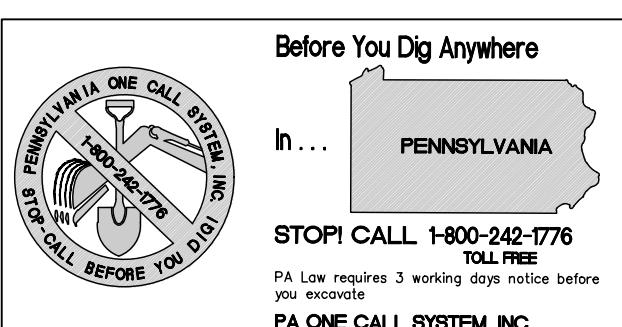
OWNER _____

NOTARY PUBLIC _____

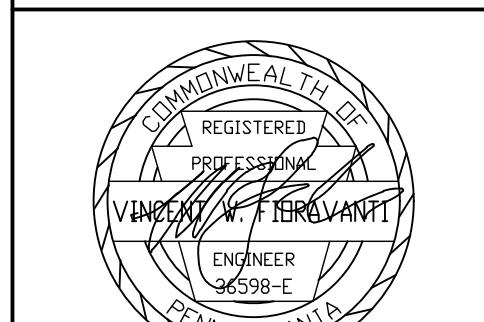
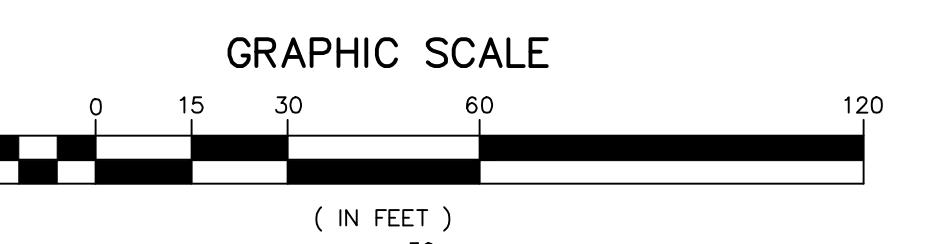
OUR COMMISSION EXPIRES: _____

LEGEND

WL	EXISTING WETLANDS
	EXISTING BUILDINGS
	EXISTING LEGAL ROW LINE
	PROPOSED BUILDINGS
	PROPOSED BUFFER
	PROPOSED EASEMENT
	PROPOSED MONUMENT/PIN TO BE SET
	PROPOSED CURB
	PROPOSED SCREENING FENCE
	PROPOSED RIGHT OF WAY
	PROPOSED CLEAR SIGHT TRIANGLE
	PROPOSED BUILDING SETBACK
	PROPOSED LOT LINE



ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES
SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY
RECORDS AND/OR ABOVE-GROUND INSPECTION OF THE SITE
COMPLETED OR APPROXIMATELY. THE SITE PLAN SHOWS THE HORIZONTAL
LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE
GUARANTEED. CONTRACTORS ARE ADVISED TO VERIFY THE LOCATION
LEGISLATIVE ACT NUMBER 38, CONTRACTORS MUST VERIFY LOCATION
AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO
START OF CONSTRUCTION. THE PA ONE CALL SYSTEM, INC. IS THE
PENNSYLVANIA ONE CALL SERIAL NUMBER FOR THIS SITE: # 2025-002-0719
UTILITIES:
PA: AMERICAN WATER YARDLEY
AQUA PA DESIGN
PECO EXELON COMPANY
COMCAST CABLE SURVEILLANCE
LOWER MAKEFIELD TOWNSHIP
TOWNSHIP OF FALLS AUTHORITY



REVISIONS		
NO.	DESCRIPTION	DATE
1	EE, INC. REVIEW DATED 9-19-25	9-30-25

DATE: 3/24/2025
SCALE: 1"=30'
JOB #: 2292 FB #: ---
DRAWN: GMF CHECKED: VWF

1 SUTPHIN ROAD SUBDIVISION
LOWER MAKEFIELD TOWNSHIP
PREFEDED FOR:
GIAGNACOVA, ALBERT & LUCILLE
YARDLEY, PA,
19067, USA

RECORD PLAN
1 OF 9
SHEET

ACKNOWLEDGEMENT

COMMONWEALTH OF PENNSYLVANIA:

SS:

COUNTY OF BUCKS
ON THE _____ DAY OF _____ BEFORE ME THE
SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN
PERSONALLY APPEARED
(NAME OR NAMES OF ALL OWNERS), KNOWN TO ME (OR SATISFACTORILY PROVEN) TO
BE THE PERSONS WHOSE NAMES (IS/ARE) SUBSCRIBED TO THE FOREGOING PLAN, AND
ACKNOWLEDGE THAT (HE/SHE/ THEY) (IS/ARE) THE REGISTERED OWNER(OWNERS) OF
THE DESIGNATED PLAN, THAT ALL NECESSARY APPROVAL OF THE PLAN HAS BEEN
OBTAINED AND IS ENDORSED THEREON, AND THAT (HE/SHE/ THEY) DESIRE THAT THE
FOREGOING PLAN BE RECORDED ACCORDING TO LAW.
WITNESS MY HAND AND NOTARIAL SEAL, THE DAY AND YEAR AFORESAID.

NOTARY PUBLIC

MY COMMISSION EXPIRES

LAND SURVEYOR
I, THE REGISTERED LAND SURVEYOR, CERTIFY THAT THE PLAN REPRESENTS A SURVEY
MADE BY ME, THAT THE MONUMENTS SHOWN HEREON EXIST AS LOCATED, AND THAT THE
DIMENSIONAL AND GEODETIC DETAILS ARE CORRECT.

LAND SURVEYOR DATE

RECORDING CERTIFICATION

THIS PLAN WAS RECORDED IN THE OFFICE FOR THE RECORDER OF
DEEDS IN AND FOR THE COUNTY OF BUCKS AT DOYLESTOWN
PENNSYLVANIA IN PLAN BOOK _____ PAGE _____

RECORDER OF DEEDS

DATE

APPLICANT AGREEMENT

AS THE APPLICANT OF THIS PROJECT, I ACKNOWLEDGE THAT ANY
REVISION TO THE APPROVED SWM PLAN MUST BE APPROVED BY
LOWER MAKEFIELD TOWNSHIP IN WRITING.

APPLICANT

DATE

TOWNSHIP ENGINEER

THIS PLAN WAS REVIEWED BY THE LOWER MAKEFIELD
TOWNSHIP ENGINEER ON THE _____ DAY
OF _____ 20____

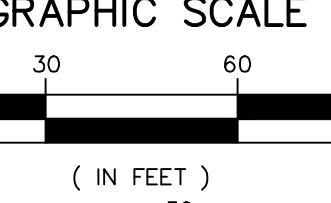
TOWNSHIP ENGINEER

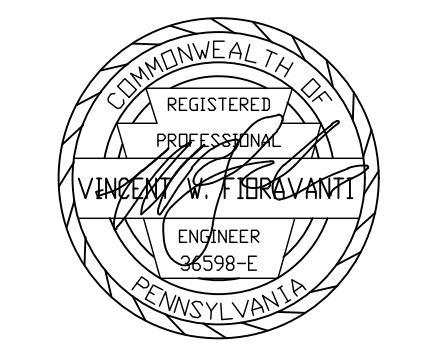
LOT AREA SUMMARY

ITEM	LOT AREA
EX LOT 1	68,974
EX LOT 2	17,971
TOTAL LOT AREA	86,945
PR LOT 1	17,466
PR LOT 2	16,500
PR LOT 3	36,004
PR LOT 4	15,018
PR ROW DEDICATION	1,957
TOTAL LOT AREA +ROW DEDICATION	86,945

SHEET INDEX	
S01	RECORD PLAN
S02	EX FEATURES PLAN
S03	GRADING PLAN
S04	ES PLAN
S05	LANDSCAPE CONSERVATION PLAN
S06	ES NOTES
S07	ES DETAILS
S08	SANITARY SEWER DETAILS AND PROFILES
S09	SITE DETAILS

GRAPHIC SCALE





LOCATION MAP
1" = 200'

GENERAL NOTES

1. PROJECT NARRATIVE:
THIS PLAN DEPICTS THE EXISTING FEATURES OF THE SITE LOCATED AT 1 SUTPHIN ROAD IN YARDLEY, PA 19067. THE PARCEL IS PROPOSED TO BE SUBDIVIDED INTO THREE LOTS.
2. MUNICIPALITY: LOWER MAKEFIELD TOWNSHIP
ZONING DISTRICT: R-2 RESIDENTIAL MEDIUM-DENSITY DISTRICT
PRINCIPAL USE: A(2) - DWELLING, SINGLE-FAMILY DETACHED.
3. IMPERVIOUS SUMMARY:
MAX IMPERVIOUS = 68,974 SF * (0.18) = 12,415 SF
4. OWNER:
GIAGNACOVA, ALBERT & LUCILLE
12 ST JAMES PL
YARDLEY, PA 19067
5. TOPOGRAPHIC AND BOUNDARY DATA SHOWN ON THIS PLAN IS BASED UPON FIELD SURVEYS PERFORMED BY THIS OFFICE IN NOVEMBER 2024.
6. TAX PARCEL NUMBER: 20-042-109
7. PA ONE CALL SN: 2025-002-0719
8. EXISTING SOILS ON SITE:
UIB - URBAN LAND-DELAWARE COMPLEX
KSAT: 2.00 TO 6.00 IN/HR
DEPTH TO WATER TABLE: > 80 INCHES

UIB - URBAN LAND-MATAPAKEE COMPLEX
KSAT: 0.20 TO 2.00 IN/HR
DEPTH TO WATER TABLE: > 80 INCHES

LEGEND

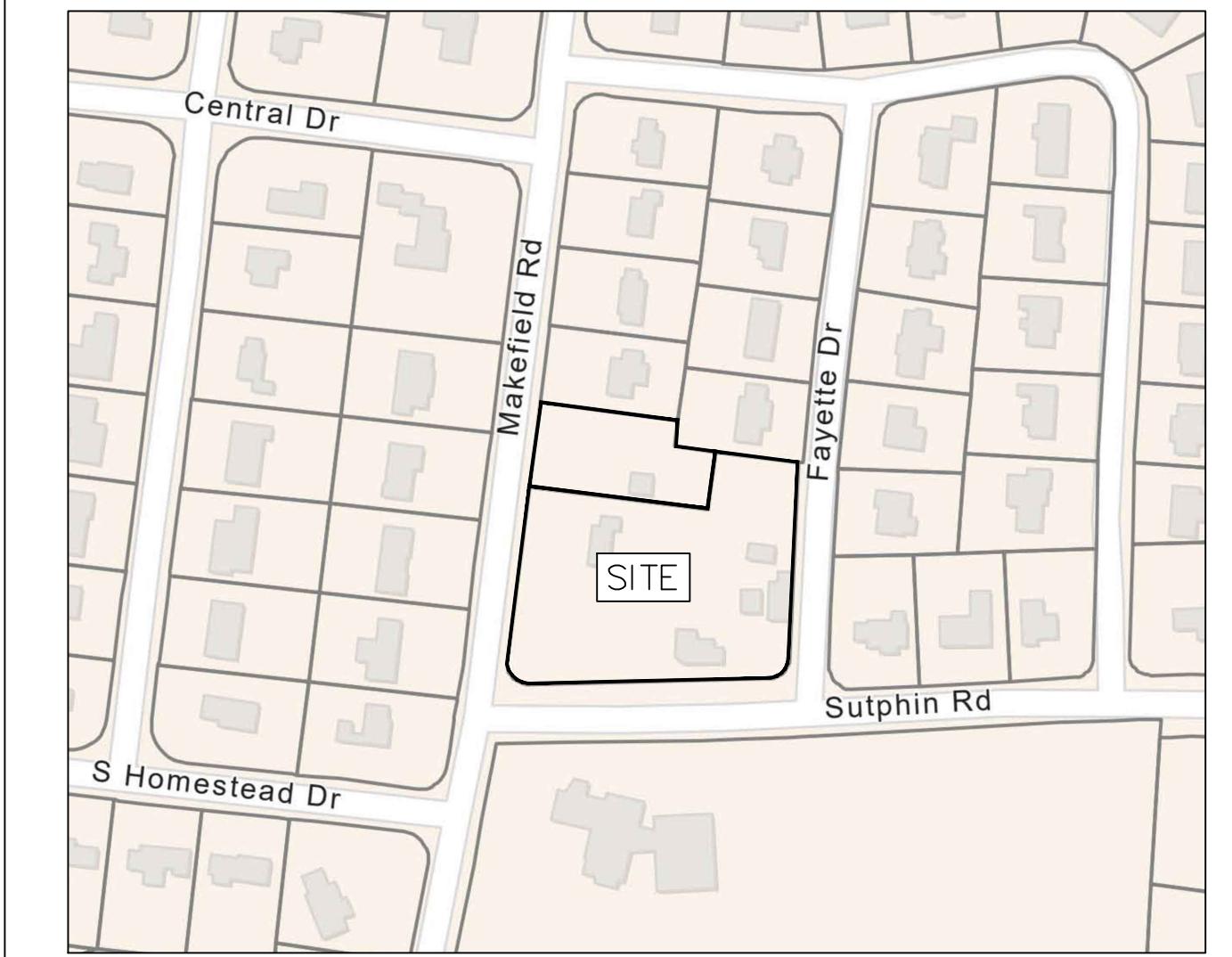
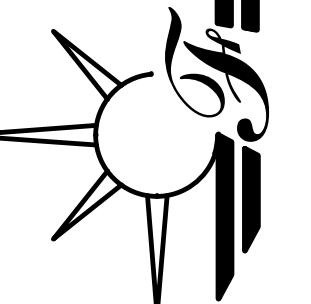
—	—	FEMA FLOODPLAIN
—	—	SOILS
—	—	STREAM
—	—	EXISTING WETLANDS
—	—	EXISTING BUILDINGS
—	—	EXISTING ROW LINE
—	—	EXISTING 1 FOOT CONTOUR
—	—	EXISTING 5 FOOT CONTOUR
—	—	EXISTING CURB
—	—	EXISTING PAVED DRIVEWAY
X	—	EXISTING FENCE
—	—	EXISTING TREE MASS
—	—	EXISTING EASEMENT
—	—	EDGE OF EXISTING PAVED ROAD
—	—	EXISTING POLES
—	—	EXISTING STORM SEWER
—	—	EXISTING SANITARY SEWER
—	—	EXISTING WATER MAIN
G	—	EXISTING GAS MAIN
E	—	EXISTING ELECTRIC LINE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

EXISTING FEATURES PLAN

1 SUTPHIN ROAD SUBDIVISION
LOWER MAKEFIELD TOWNSHIP
PREFEDED FOR:
GIAGNACOVA, ALBERT & LUCILLE
YARDLEY, PA,
19067, USA





LOCATION MAP

1" = 200'

GENERAL NOTES

1. PROJECT NARRATIVE:

THIS PLAN DEPICTS THE PROPOSED SUBDIVISION AND LAND DEVELOPMENT OF AN EXISTING SITE LOCATED AT 1 SUTPHIN ROAD IN YARDLEY, PA 19067. THE EXISTING PARCEL IS PROPOSED TO BE SUBDIVIDED INTO THREE LOTS. IT ALSO DEPICTS A LOT LINE CHANGE BETWEEN PROPOSED LOT 2 AND AN EXISTING LOT 4.

2. MUNICIPALITY: LOWER MAKEFIELD TOWNSHIP
ZONING DISTRICT: R-2 - RESIDENTIAL MEDIUM-DENSITY DISTRICT
PRINCIPAL USE: A(2) - DWELLING, SINGLE-FAMILY DETACHED

ITEM	REQUIRED	EX LOT 1	EX LOT 2	EX LOT 4
MIN LOT AREA	16,500 SF	17,971 SF	68,974 SF	
LOT WIDTH @ FRONT	110 FT	62.76 FT	95.6 FT*	
FRONT YARD	40 FT	18.6 FT*	58.8 FT	
SIDE YARD (EACH)	15 FT	N/A	15 FT	
REAR YARD	50 FT	15.0 FT*	54.6 FT	
ACCESS. BLDG SY/RY	10 FT	0 FT*	58.8 FT	
MAX BLDG HEIGHT	35 FT	< 35 FT	6.6 FT*	
MAX ACCESS. BLDG HEIGHT	15 FT	< 15 FT	21.3 FT	
MAX IMP COVERAGE	18%	15.8%	19.2%*	

* EXISTING NONCONFORMITY

** EXISTING NONCONFORMITY

** VARIANCE GRANTED 8-18-25

3. OWNER:

GIAGNACOVA, ALBERT & LUCILLE
12 ST JAMES PL
YARDLEY, PA 19067

4. TOPOGRAPHIC AND BOUNDARY DATA SHOWN ON THIS PLAN IS BASED UPON FIELD SURVEYS PERFORMED BY THIS OFFICE IN NOVEMBER 2024.

5. TAX PARCEL NUMBER: 20-042-109

6. PA ONE CALL SN: 2025-002-0719

7. EXISTING SOILS ON SITE:

UIB - URBAN LAND-DELAWARE COMPLEX

KSAT: 2.00 TO 6.00 IN/HR

DEPTH TO WATER TABLE: > 80 INCHES

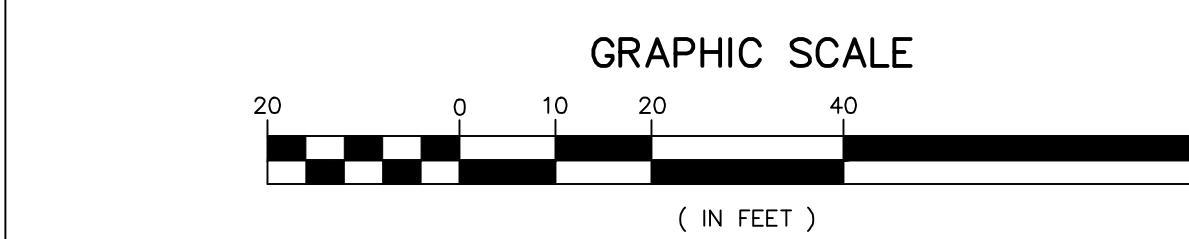
UTB - URBAN LAND-MATAPEAKE COMPLEX

KSAT: 0.20 TO 2.00 IN/HR

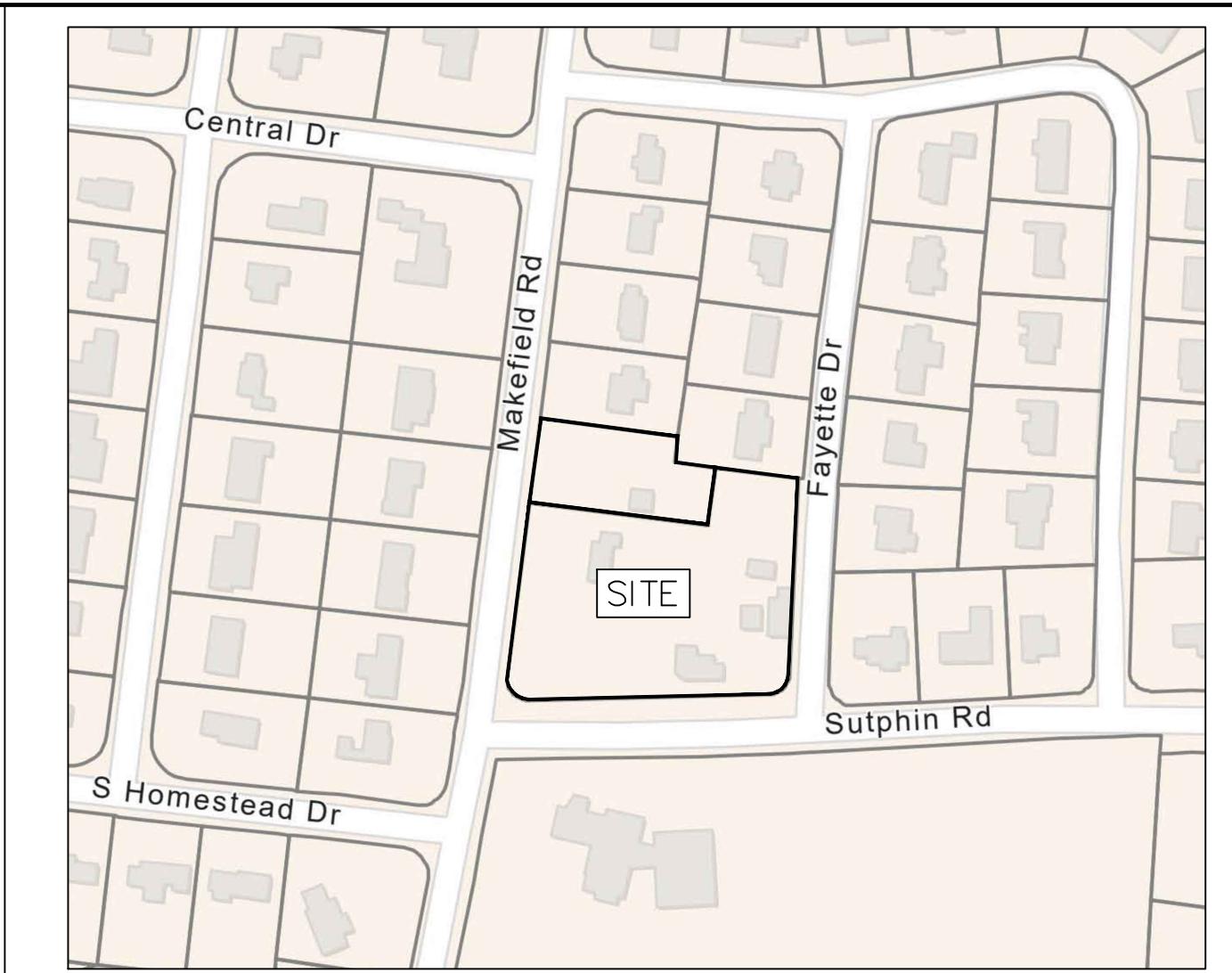
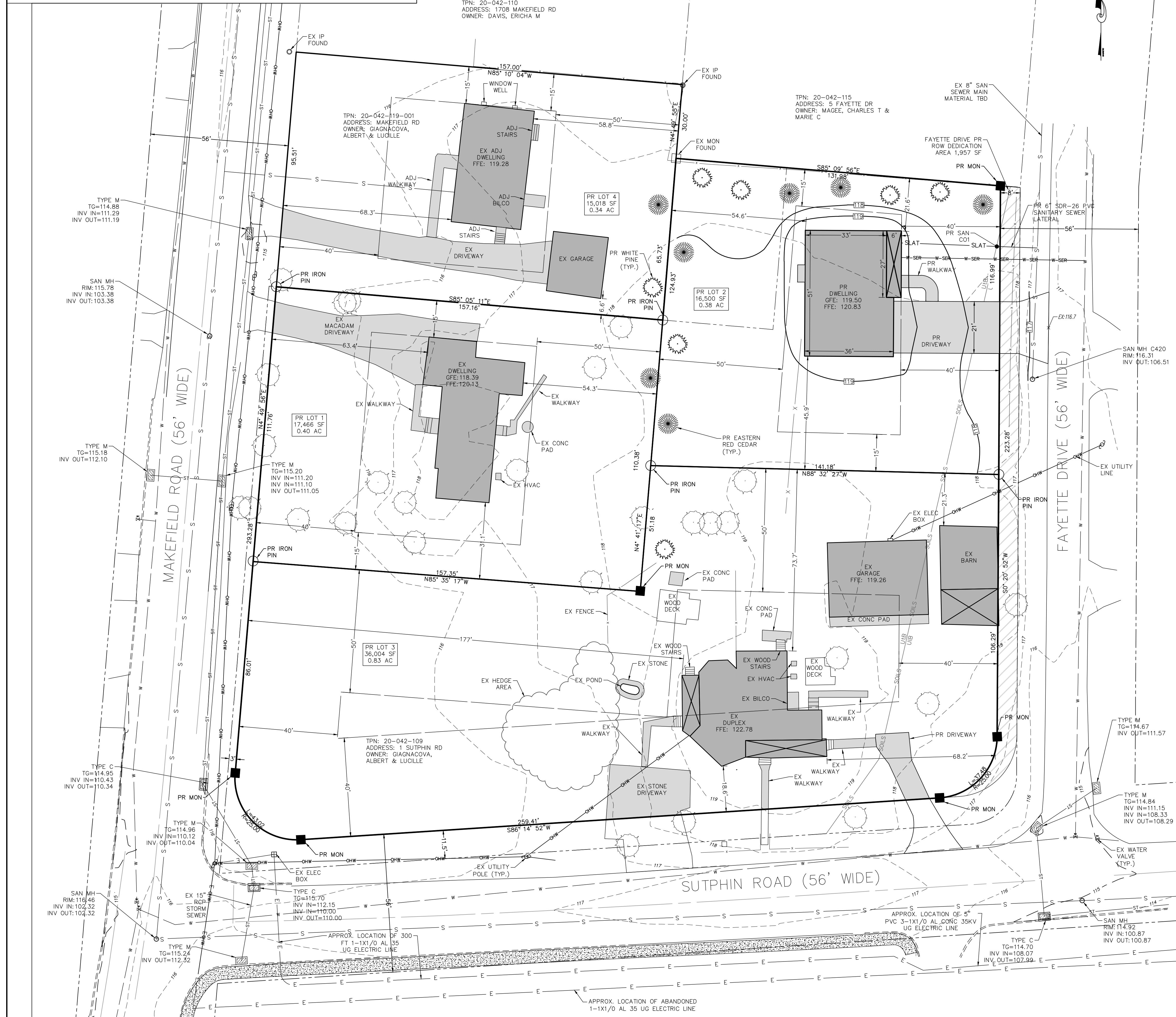
DEPTH TO WATER TABLE: > 80 INCHES

1 SUTPHIN ROAD SUBDIVISION
LOWER MAKEFIELD TOWNSHIP
PREFEDED FOR:
YARDLEY, PA,
GIAGNACOVA, ALBERT & LUCILLE
19067, USA

LEGEND	SYMBOL
FEMA FLOODPLAIN	SOILS
SOILS	WL
STREAM	EXISTING WETLANDS
EXISTING BUILDINGS	EXISTING LEGAL ROW LINE
EXISTING 1 FOOT CONTOUR	EXISTING 5 FOOT CONTOUR
EXISTING CURB	EXISTING PAVED DRIVEWAY
EXISTING FENCE	EXISTING FENCE
EXISTING TREE MASS	EXISTING TREES AND BUSHES TO REMAIN
EXISTING EASEMENT	EXISTING EASEMENT
EDGE OF EXISTING PAVED ROAD	OHW
EXISTING POLES	OHW
EXISTING STORM SEWER	ST
EXISTING SANITARY SEWER	S
EXISTING WATER MAIN	W
EXISTING GAS MAIN	G
EXISTING ELECTRIC LINE	E
PROPOSED CONTOUR LINE	117



TREE PLANTING SCHEDULE				
SCIENTIFIC NAME	COMMON NAME	QUANTITY	SYMBOL	CALIPERS
PINUS STROBUS	WHITE PINE	7		2.5 INCH
JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	7		2.5 INCH



LOCATION MAP

LEGEND

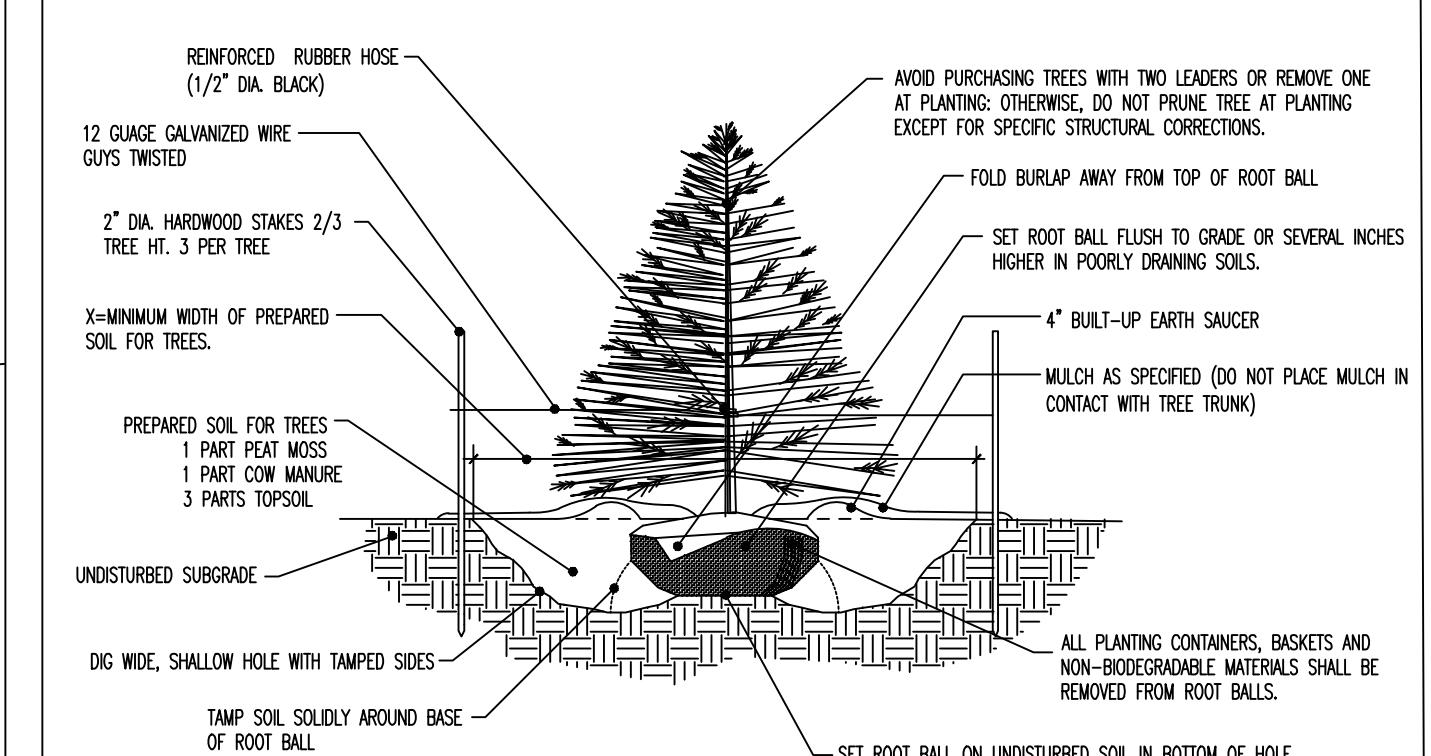
— SOILS —	FEMA FLOODPLAIN
— WL —	SOILS
— — — — —	STREAM
— — — — —	EXISTING WETLANDS
— — — — —	EXISTING BUILDINGS
— — — — —	EXISTING LEGAL ROW LINE
— — — — —	EXISTING 1 FOOT CONTOUR
— — — — —	EXISTING 5 FOOT CONTOUR
— — — — —	EXISTING CURB
— — — — —	EXISTING PAVED DRIVEWAY
— X —	EXISTING FENCE
— — — — —	EXISTING TREE MASS
	EXISTING TREES AND BUSHES TO REMAIN
— — — — —	EXISTING EASEMENT
— — — — —	EDGE OF EXISTING PAVED ROAD
— OHW —  OHW —	EXISTING POLES
— ST — ST —	EXISTING STORM SEWER
— S —  S —	EXISTING SANITARY SEWER
— ► — W — — —	EXISTING WATER MAIN
— G — — — G —	EXISTING GAS MAIN
— E — — — E —	EXISTING ELECTRIC LINE
— 117 —	PROPOSED CONTOUR LINE

SUTPHIN ROAD SUBDIVISION
LOWER MAKEFIELD TOWNSHIP
PREPARED FOR:
GIAGNACOVA, ALBERT & LUCILLE
YARDLEY, PA,
19067, USA

LANDSCAPE CONSERVATION PLAN

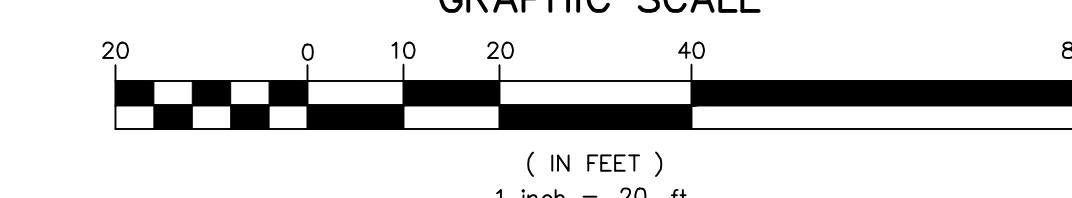
NOTES:

- 1.) NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
- 2.) REMOVE ALL NON-Biodegradable MATERIAL AND ROPE FROM TRUNK & TOP OF ROOT BALL. FOLD BURLAP BACK 1/3 FROM ROOT BALL.
- 3.) PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
- 4.) THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
- 5.) THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE ROUGH TO AVOID MATTING OF SOIL LAYERS AS NEW SOIL IS ADDED. IT IS PREFERABLE TO TILL THE FIRST LIFT (2 TO 3 IN.) OF PLANTING SOIL INTO THE SUBSOIL.
- 6.) REFER TO THE CHART "GENERAL RANGE OF SOIL MODIFICATIONS & VOLUMES FOR VARIOUS SOIL CONDITIONS" TO DETERMINE MINIMUM WIDTH OF PREPARED SOIL (Y).



EVERGREEN TREE PLANTING DETAIL

CRABLING, SC



Priority Note:
Prior to the start of construction activities the Owner/Responsible Person (O/RP) for management of the construction site work shall be familiar with:

Pennsylvania Department of Environmental Protection Erosion and Sedimentation Pollution Control Manual, Technical Guidance Number: 3663-2134-008
Dated: March 2012, latest edition

PAGE AND TABLE NUMBERS REFER TO THIS MANUAL.

I Standard E&S Plan Notes from the Pennsylvania Erosion and Sediment Pollution Control Manual, Appendix C

1 ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) SHALL BE KEPT ON-SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.

2 SEE BCCD NOTE 1.

3 AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-2542-1776 FOR LOCATION OF EXISTING UNDERGROUND UTILITIES.

4 ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.

5 AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.

6 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 SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.

7 AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING.

8 TOPSOIL REQUIRE FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP. THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST NOT EXCEED 2H:1V OR FLATTER.

9 SEE BCCD NOTE 7, THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT SHALL BE NOTIFIED.

10 SEE BCCD NOTE 14.

11 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.

12 THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON THE 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.

13 ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, FOR UNDISTURBED VEGETATED AREAS.

14 VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM LOTS (SPECIFY LOT NUMBERS) ONTO (SPECIFY ROAD NAMES).

15 SEE BCCD NOTE 6.

16 A LOG SHOWING THE DATES THAT THE E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND MADE AVAILABLE TO THE REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.

17 SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

18 ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. SEE ALSO BCCD NOTE 12.

19 AREAS WHICH ARE TO BE TOPSOLED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES -- 6 TO 12 INCHES ON COMPACTED SOILS -- PRIOR TO PLACEMENT OF THE TOP SOIL. 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.

20 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.

21 ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

22 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.

23 FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

24 FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

25 SEEPs OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

26 ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.

27 SEE BCCD NOTE 15.

28 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.

29 E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THE ARE ARE REPLACED BY ANOTHER BMP BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.

30 UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE O/RP SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO THE REMOVAL/CONVERSION OF THE E&S BMPs.

31 AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPs. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPs SHALL BE STABILIZED IMMEDIATELY, IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS. SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY THE GERMINATION SEASON.

32 UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE O/RP SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.

33 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.

I Appendix C – Optional E&S Plan Notes

USE THE FOLLOWING NOTES ONLY IF APPLICABLE.

- 1 CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
- 2 ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.
- 3 UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
- 4 CHANNELS HAVING RIPRAP, REIN MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
- 5 SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
- 6 SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
- 7 ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL IMMEDIATELY REPAIRED BY THE PERMITTER IN A PERMANENT MANNER SATISFACTORY MANNER TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
- 8 UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- 9 EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 5 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
- 10 FILL MATERIALS FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS.

I BCCD GENERAL NOTES

- 1 AT LEAST SEVEN DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER AND THE BCCD TO A PRE-CONSTRUCTION MEETING.

BUCKS COUNTY CONSERVATION DISTRICT (BCCD)
1456 FERRY ROAD, SUITE 704
DOYLESTOWN, PA 18901-5550
PH: 215-345-7577
FAX: 215-345-7584

ALSO, AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. 1-800-242-1776 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.

2 A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.

3 THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

4 THE OPERATOR/RESPONSIBLE PERSON (O/RP) SHALL ASSURE THAT AN EROSION AND SEDIMENTATION CONTROL PLAN HAS BEEN PREPARED AND APPROVED BY THE BUCKS COUNTY DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOILS AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR LOCATIONS.

5 EROSION AND SEDIMENT BMPs MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPs.

6 UNTIL A SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF THE EROSION CONTROL BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY, IF EROSION AND SEDIMENT CONTROL BMPs FAIL FOR AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OR THOSE INSTALLED, WILL BE REQUIRED.

7 IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

8 ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER UNDISTURBED AREAS.

9 STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2:1.

10 DISTURBED AREAS THAT AREA AT A FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

11 UPON THE INSTALLATION OF TEMPORARY SEDIMENT BASIN RISER(S), A QUALIFIED SITE REPRESENTATIVE SHALL CONDUCT AN IMMEDIATE INSPECTION OR THE RISER(S), WHEREUPON THE BUCKS COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED, IN WRITING, THAT THE RISER IS SEALED (WATERTIGHT).

12 SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED ON IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.

13 AT STREAM CROSSINGS, A 50-FOOT BUFFER --SHALL BE MAINTAINED. ON BUFFERS, CLEARINGS, SOIL DISTURBANCE AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITIES SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGED RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES.

14 ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.) AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

15 IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.

16 AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERCENT VEGETATIVE OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION AND SEDIMENT POLLUTION. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

17 AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.

18 MUD, SEDIMENT OR DEBRIS THAT IS TRACKED FROM THE SITE ONTO PUBLIC RIGHT OF WAY, SHALL BE IMMEDIATELY REMOVED TO THE SATISFACTION OF THE TOWNSHIP AND/OR THE BUCKS COUNTY CONSERVATION DISTRICT.

19 UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE O/RP SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.

20 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.

II. EROSION AND SEDIMENT CONTROL MEASURES

A. STABILIZED CONSTRUCTION ENTRANCE

1. STABILIZED CONSTRUCTION TRAFFIC WILL ENTER PAVED ROADS, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO PREVENT THE TRACKING OR FLOW OF SEDIMENT INTO PUBLIC RIGHTS-OF-WAY. SEE "STABILIZED CONSTRUCTION ENTRANCE" DETAIL.

B. SILT SOCK

1. SILT SOCK SHALL BE PROVIDED AS INDICATED ON THE DRAWINGS, ALONG THE LOWER PERIPHERY OF THE ACTIVE WORK AREA WHERE SEDIMENT Laden WATER MAY BE EXPECTED TO FLOW INTO INACTIVE AREAS. SEE "SILT SOCK" DETAIL.

2. SYNTHETIC SILT SOCK FILTER FABRIC SHALL BE A PERVERSIVE SHEET OF PROPYLENE, NYLON, POLYESTER, OR ETHYLENE YARN PRODUCED BY A REPUTABLE MANUFACTURER FOR THE SPECIFIC PURPOSE OF BEING USED AS A SILT SOCK MEDIA.

C. STOCKPILE

1. ALL STRIPPED TOPSOIL AND EXCAVATED EARTHEN MATERIAL TO BE USED WITHIN THE PROJECT SITE SHALL BE PROPERLY STOCKPILED. MATERIAL FOUND TO BE UNSUITABLE FOR SUBSEQUENT USE OR IN EXCESS OF THE REQUIREMENT FOR STOCKPILES SHALL BE DISPOSED OF IN AN APPROPRIATE MANNER. THE LOCATION, METHOD OF DISPOSAL AND MEANS OF TRANSPORT SHALL BE IN ACCORDANCE WITH STATE AND LOCAL LAWS.

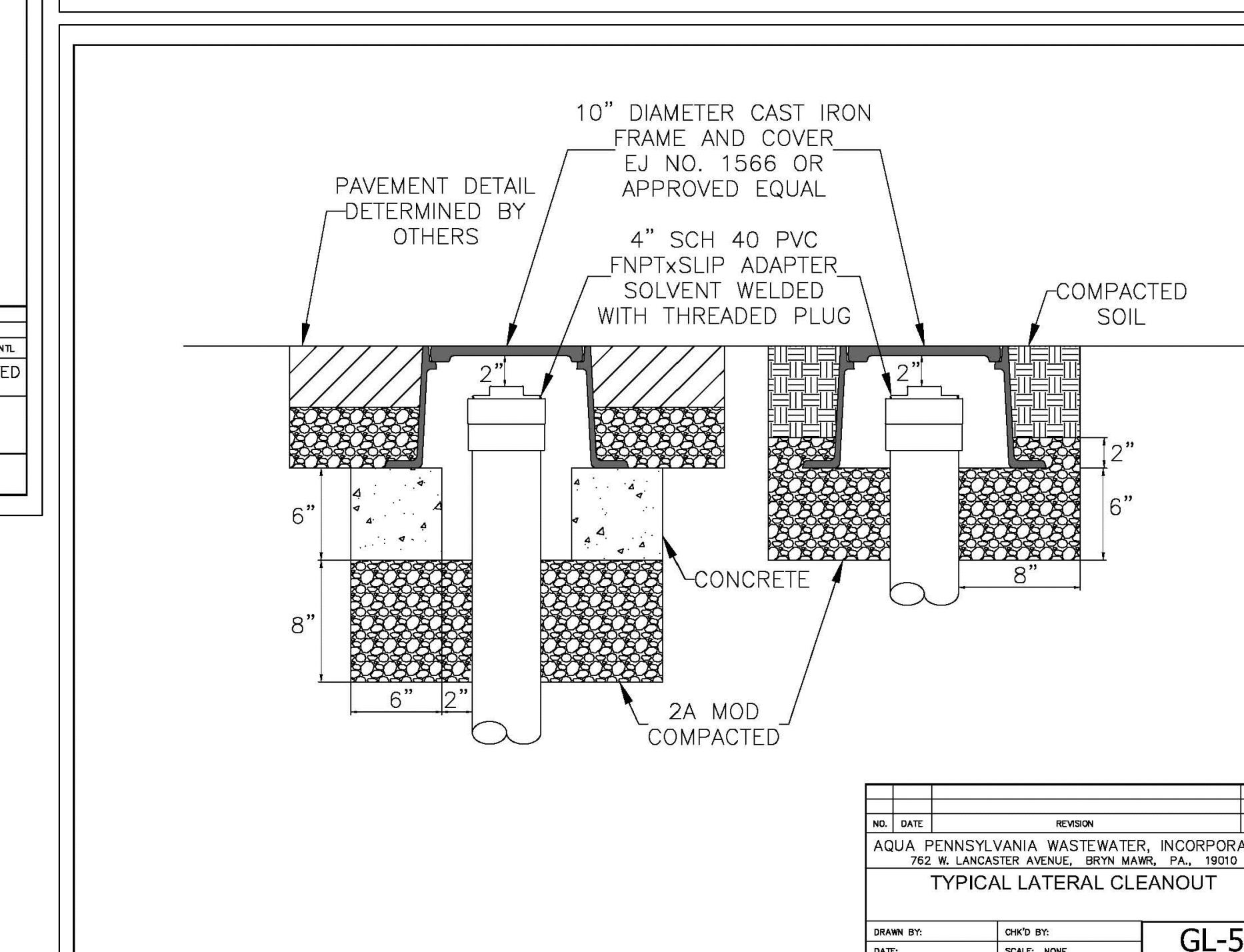
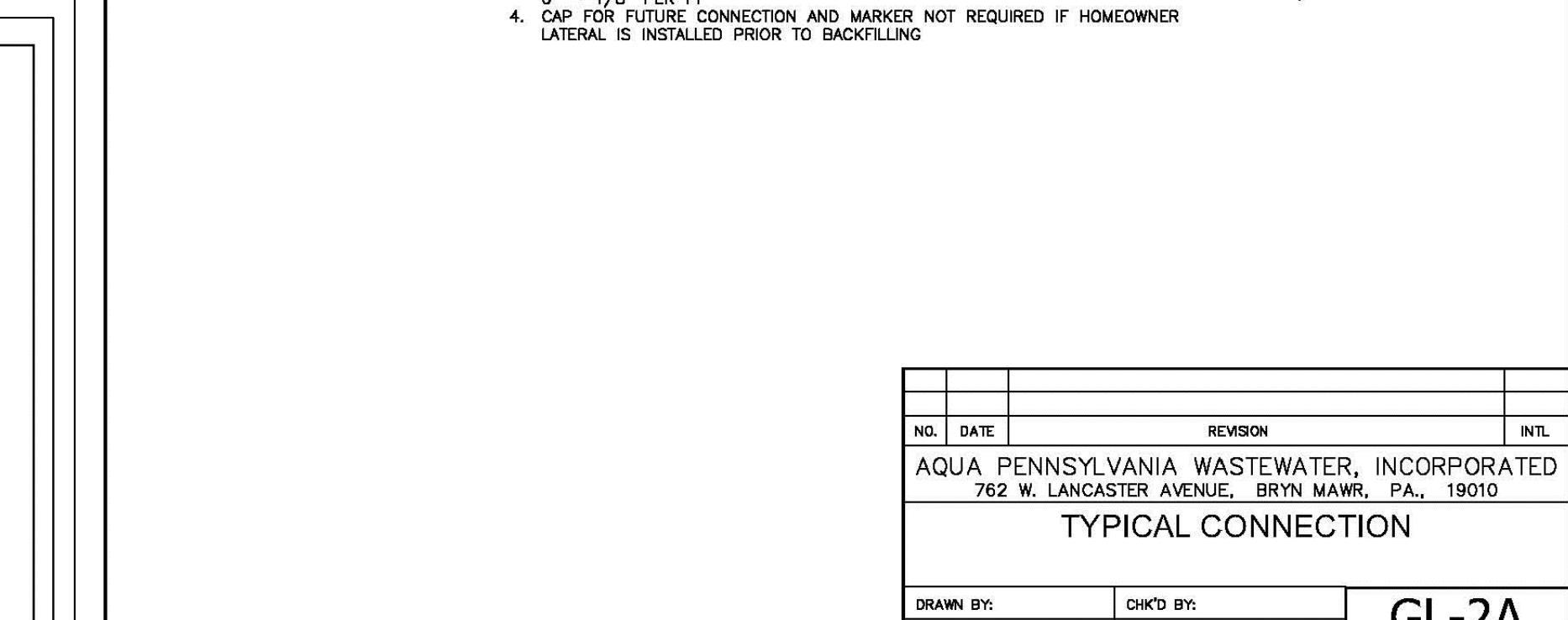
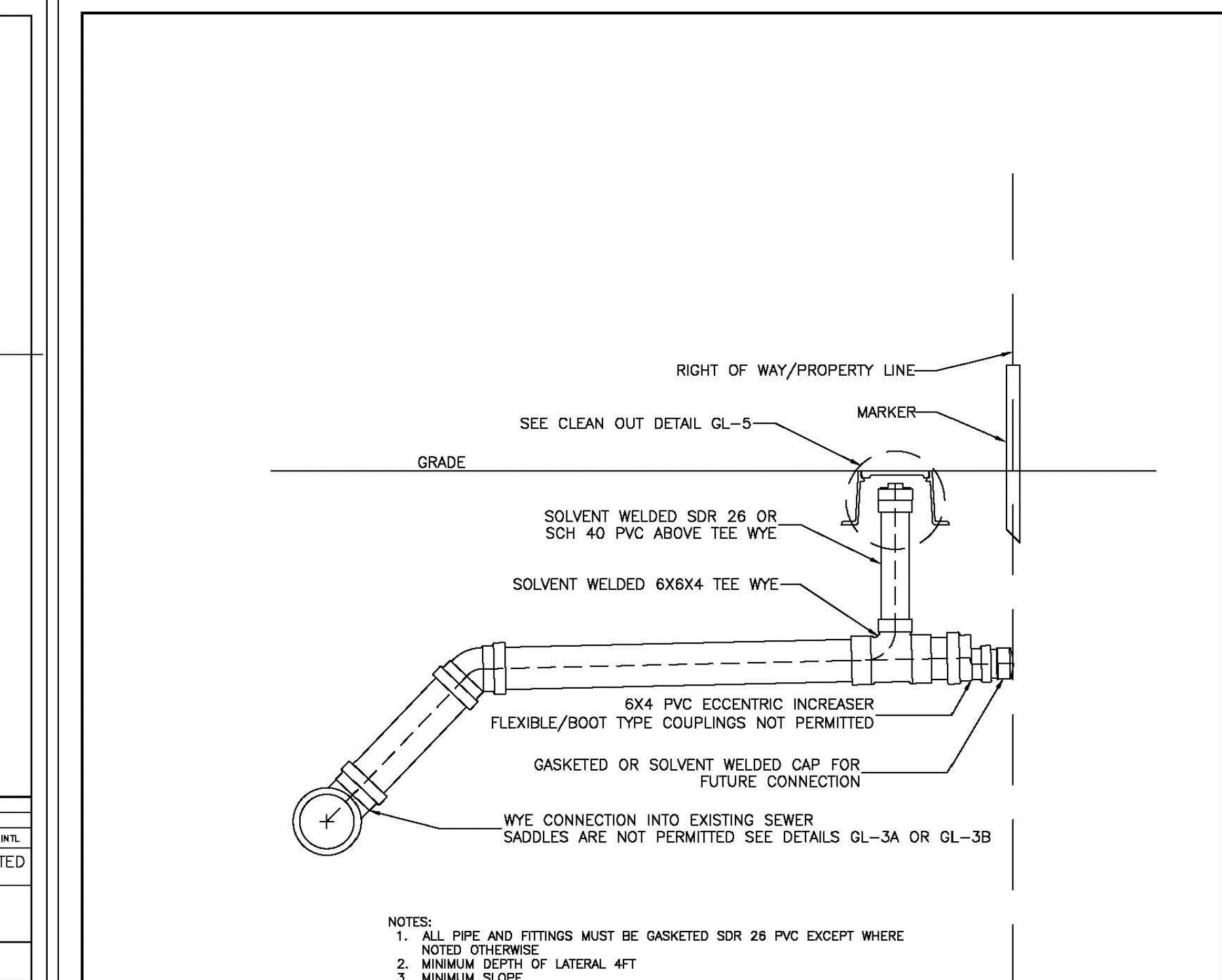
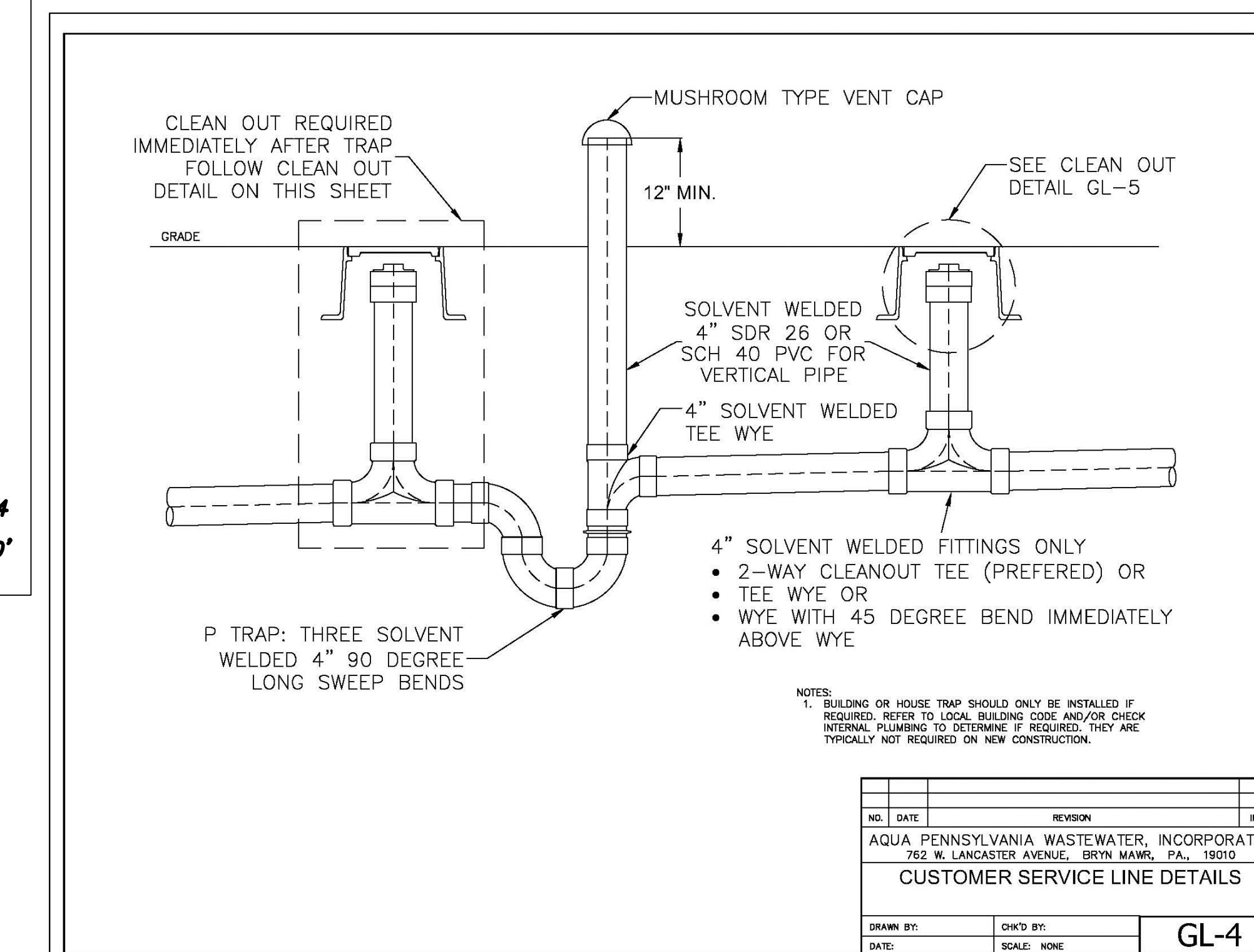
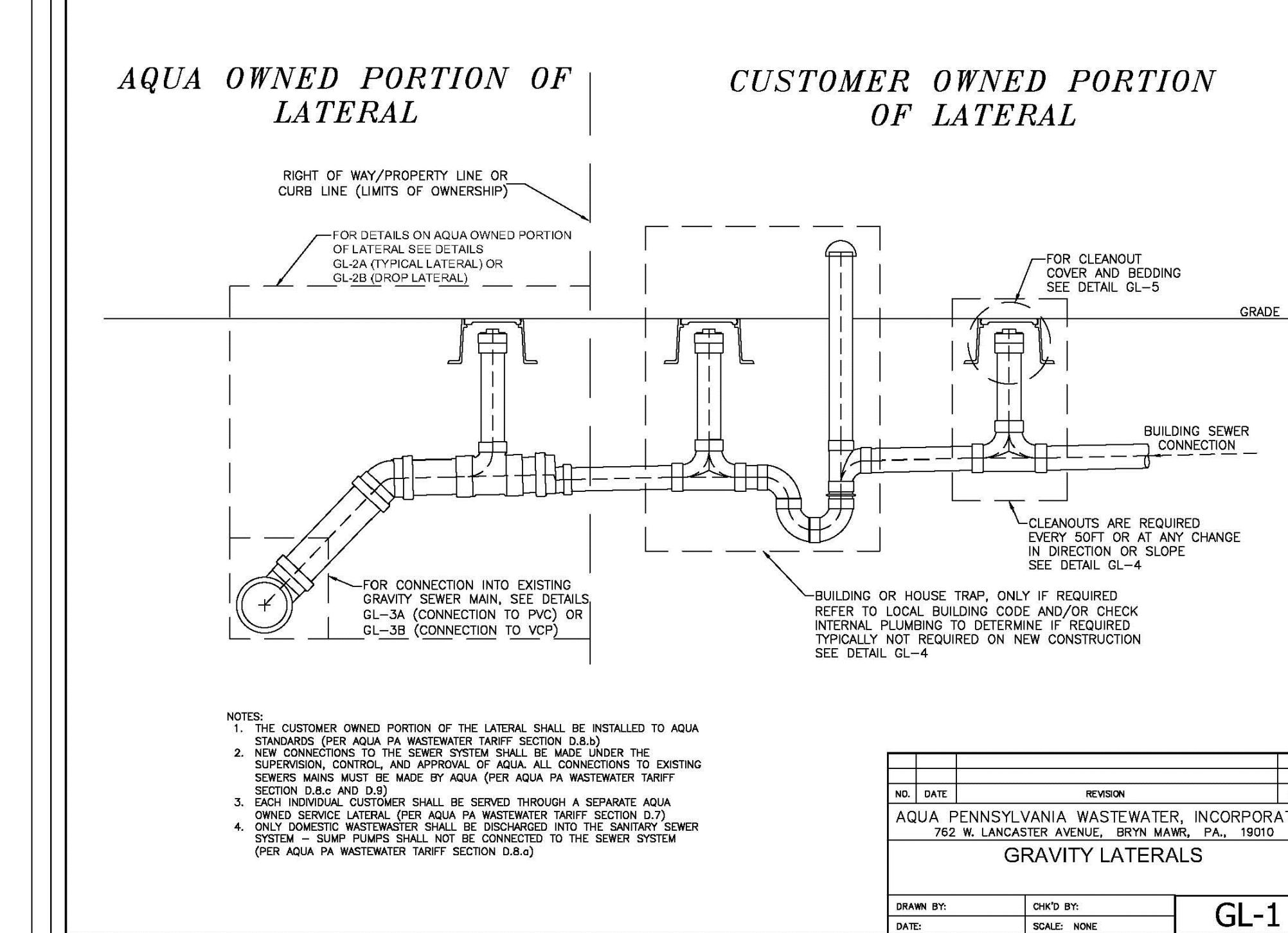
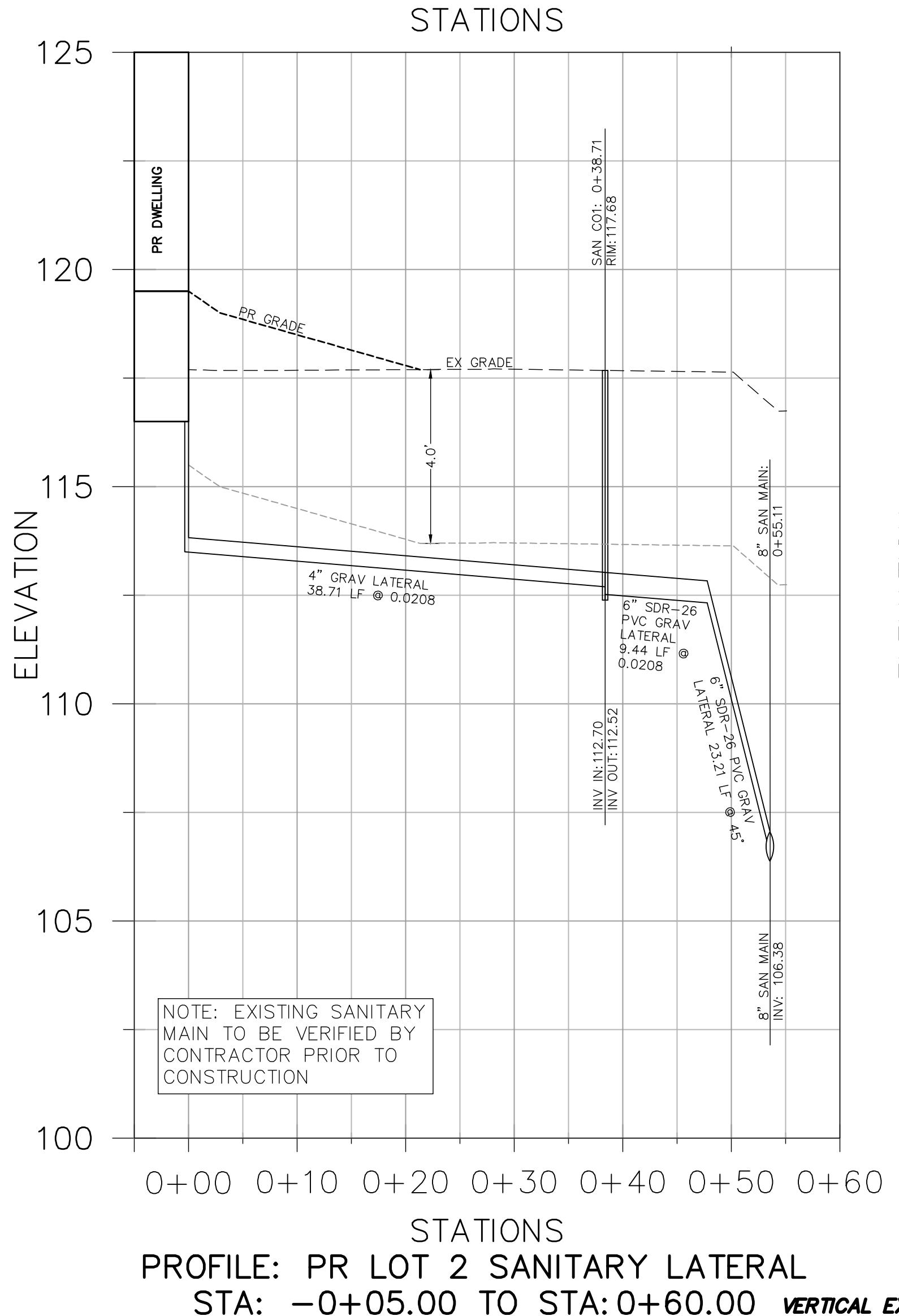
2. IMMEDIATELY AFTER STOCKPILING OPERATIONS HAVE BEEN COMPLETED, THE STOCKPILE SHALL BE TEMPORARILY STABILIZED AS DESCRIBED IN THE "TEMPORARY STABILIZATION" SECTION OF THESE SPECIFICATIONS.

3. SILT SOCK SHALL BE PROVIDED AT THE BASE OF ALL OF THE STOCKPILES FOR ADDITIONAL PROTECTION. SEE STOCKPILE CONTROL DETAIL.

III. TEMPORARY STABILIZATION

A. SOIL AMENDMENT APPLICATION RATE EQUIVALENTS
TABLE 11.2, Pg 266

Per Acre	Per 1000 s.f.	Notes
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SANITARY SEWER DETAILS AND PROFILES

DATE:	3/24/2025	
SCALE:	N/A	
JOB #	2292	FB #
DRAWN:	GMF	CHECKED: <input checked="" type="checkbox"/>
<p>SUTPHIN ROAD SUBDIVISION</p> <p>LOWER MAKEFIELD TOWNSHIP</p> <p>PREPARED FOR:</p> <p>IAGNACOVA, ALBERT & LUCILLE</p> <p>YARDLEY, PA,</p> <p>10007 USA</p>		

FIORAVANTI, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SOUTHAMPTON PA 18966
618 STREET ROAD * * * * *

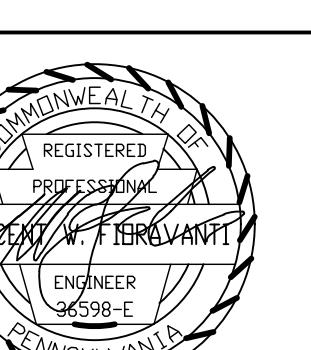
The seal is circular with a scalloped outer edge. The words "COMMONWEALTH OF MASSACHUSETTS" are written in a circular pattern along the top. The words "REGISTERED PROFESSIONAL ENGINEER" are in the center. The name "VINCENT W. FERRAVANTI" is written across the bottom. The number "36598-E" is at the bottom right. The seal is set against a white background with a thin black border.

DATE:	3/24/2025		
SCALE:	N/A		
JOB #	2292	FB #	--
DRAWN:	CME	CHECKED:	X

DRAWN: GMF CHECKED: ✓

SUTPHIN ROAD SUBDIVISION
LOWER MAKEFIELD TOWNSHIP
PREPARED FOR:
MAGNACOVA, ALBERT & LUCILLE
YARDLEY, PA,
10087-112A

SHEET
8 OF 9



REVISIONS
NO. DESCRIPTION DATE
1 EE, INC. REVIEW 9-30-25
DATED 9-19-25

DATE: 3/24/2025
SCALE: N/A
JOB #: 2292 FB #: ---
DRAWN: GMF CHECKED: VWF

1 SUTPHIN ROAD SUBDIVISION
LOWER MAKEFIELD TOWNSHIP
PREFEDED FOR:
GAGNACOVA, ALBERT & LUCILLE
YARDLEY, PA,
19067, USA

SITE DETAILS

SHEET
9 OF 9

GENERAL NOTES:

- THE CONTRACTOR MUST NOTIFY AQUA THAT CONSTRUCTION WILL BEGIN ON THE SANITARY SEWERS A MINIMUM OF 48 HOURS IN ADVANCE.
- ALL SANITARY SEWER CONSTRUCTION IS SUBJECT TO INSPECTION, TESTING, AND APPROVAL BY AQUA. THE CONTRACTOR IS RESPONSIBLE FOR TESTING ALL SANITARY SEWER CONSTRUCTION ACCORDING TO AQUA'S STANDARDS AND TESTING IS SUBJECT TO INSPECTION AND APPROVAL BY AQUA.
- AQUA'S STANDARDS AND REQUIREMENTS APPLY TO ALL LATERALS, SEWER MAINS, MANHOLES, AND OTHER SANITARY SEWER STRUCTURES AND FACILITIES.
- REQUIREMENTS ARE SUBJECT CHANGE BY AQUA

GRAVITY MAIN NOTES:

- PVC BELL AND SPIGOT SEWER PIPE / SDR 26 IF DEPTH OF COVER IS LESS THAN 18 FEET AT FINAL GRADE AND AT ALL TIMES DURING CONSTRUCTION.
- CLASS 52 DUCTILE IRON PIPE WITH PROTECTO 401 COATING IF DEPTH OF COVER IS GREATER THAN OR EQUAL TO 18 FEET AT FINAL GRADE OR AT ANY POINT DURING CONSTRUCTION.
- SEWER MAINS MUST HAVE A MINIMUM OF 4 FT OF COVER AT FINAL GRADE.
- GRAVITY SEWER MAINS MUST BE 8" NOMINAL SIZE OR LARGER.
- MINIMUM SLOPE FOR GRAVITY MAINS:
8" - 0.0050 FT/FT
10" - 0.0028 FT/FT
12" - 0.0022 FT/FT
- SEWER MAINS SHOULD HAVE A 10 FT HORIZONTAL AND 18 INCH VERTICAL SEPARATION FROM WATER MAINS.
- AT UTILITY CROSSINGS, SEWER MAINS SHOULD RUN UNDER OTHER UTILITIES WITH A MINIMUM SEPARATION OF 18". IF AN 18" SEPARATION CANNOT BE ACHIEVED, THEN CONCRETE ENCASEMENTS ARE REQUIRED.
- MANHOLES MUST BE LOCATED AT EVERY BEND OR CHANGE IN SLOPE.
- MANHOLES SHOULD BE LOCATED A MAXIMUM OF 400 FT APART.
- MINIMUM DIFFERENCE BETWEEN MANHOLE INVERTS IS 0.1 FT.
- DROP MANHOLES ARE REQUIRED FOR 8" SEWER MAINS ENTERING 2 FT ABOVE INVERT OUT.

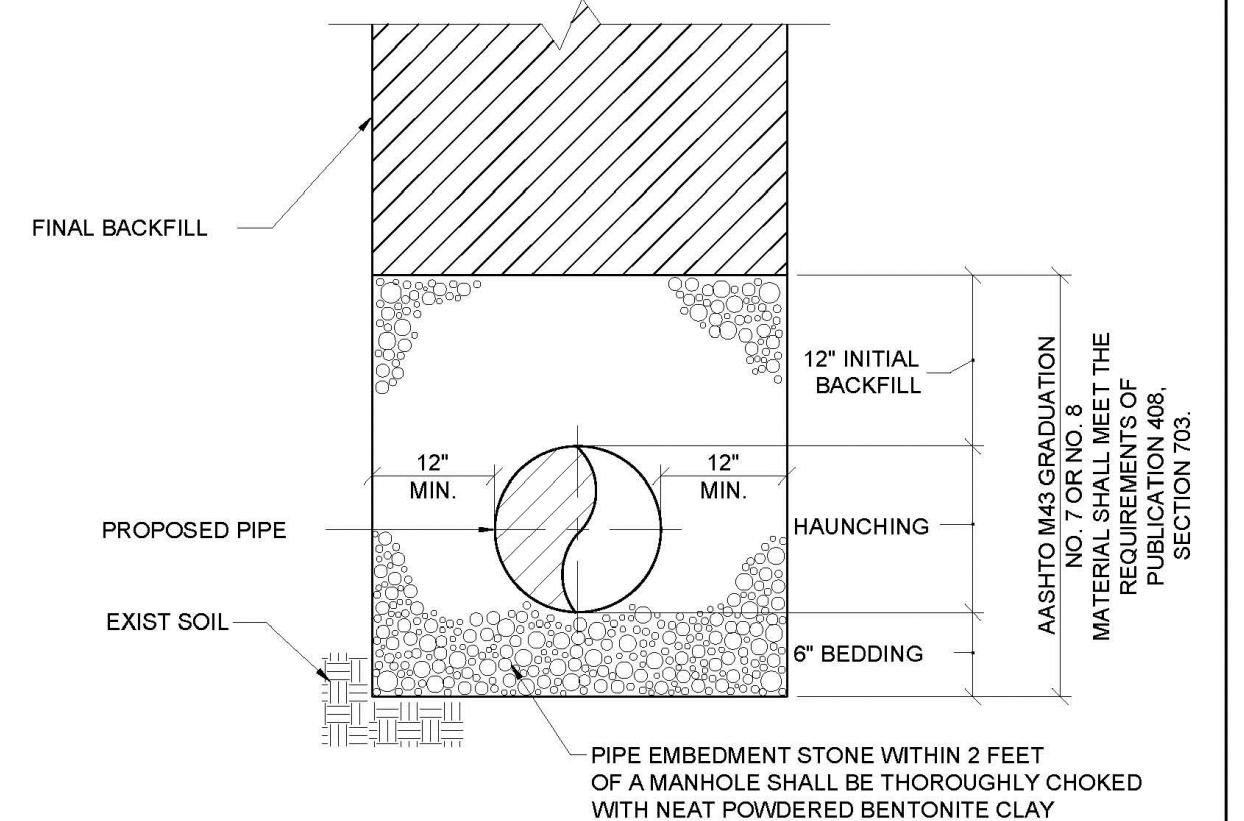
LOW PRESSURE:
1. HDPE OR PVC SDR 21
2. MINIMUM DIAMETER: 1 1/4 INCH

AQUA PENNSYLVANIA WASTEWATER, INC.
AQUA

762 WEST LANCASTER AVE.
BRYN MAWR, PA 19010

SEWER MAIN NOTES
SCALE: NONE
S-3B

PREPARED BY MAH CHECKED BY RH APPROVED BY BAK PROJECT NO. 4111.89



TYPICAL EXCAVATION, BACKFILL & PIPE EMBEDMENT DETAIL

SCALE: NONE

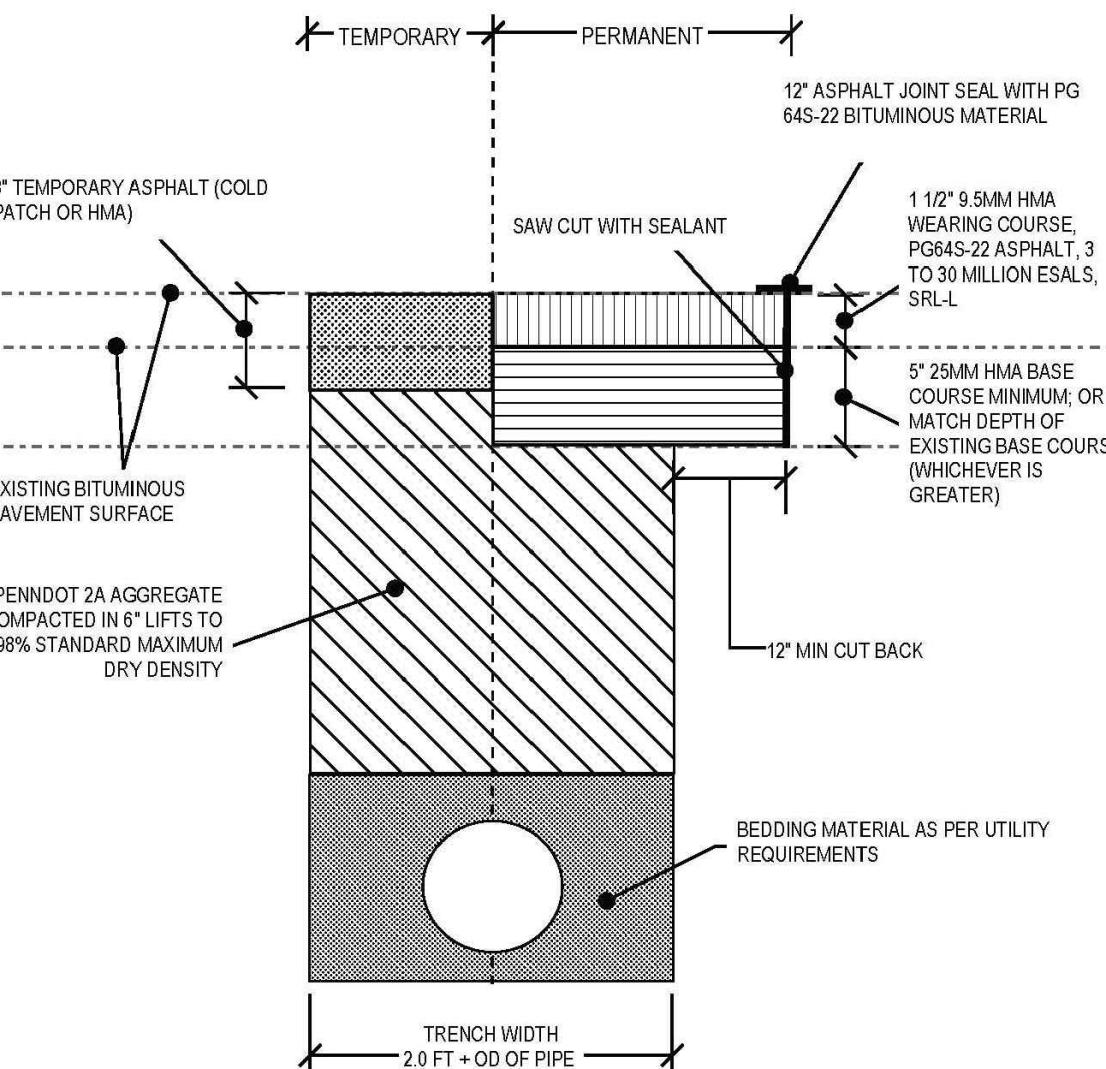
AQUA PENNSYLVANIA WASTEWATER, INC.
AQUA

762 WEST LANCASTER AVE.
BRYN MAWR, PA 19010

TYPICAL EXCAVATION, BACKFILL & PIPE EMBEDMENT DETAIL
DATE: 12/19/19 DRAWING NO. **S-4**

PREPARED BY MAH CHECKED BY RH APPROVED BY BAK PROJECT NO. 4111.89

<p>1. THE LOWER MAKEFIELD TOWNSHIP DIRECTOR OF PUBLIC WORKS MUST BE NOTIFIED 48 HOURS PRIOR TO ANY STREET OR RIGHT-OF-WAY OPENING REPAIR TO PROVIDE SUFFICIENT TIME TO SCHEDULE CONSTRUCTION OBSERVATION.</p> <p>2. NO OPENING MAY BE MADE FOR MORE THAN 200 LINEAR FEET AT ONE TIME, UNLESS AUTHORIZED BY LOWER MAKEFIELD TOWNSHIP DIRECTOR OF PUBLIC WORKS.</p> <p>3. THE EDGES OF THE EXISTING PAVEMENT SHALL BE NEATLY AND CLEANLY CUT TO STRAIGHT LINES. THE EDGES OF PAVEMENT SHALL BE CUT BACK FROM THE EDGES OF THE TRENCH AT A MINIMUM DISTANCE OF ONE (1) FOOT ON EACH SIDE.</p> <p>4. ALL BACKFILLING FOR STREET OPENINGS ARE UNDER THE JURISDICTION OF THE DIRECTOR OF PUBLIC WORKS AND THE SCHEDULING OF RESTORATION SHALL BE AT HISHER DISCRETION.</p> <p>5. FOR ALL TOWNSHIP ROADWAYS: THE CONTRACTOR SHALL BACKFILL THE STREET OPENING TRENCH WITH PENNDOT 2A AGGREGATE THOROUGHLY COMPAKTED, PER THE APPROPRIATE PAVEMENT CROSS SECTION DETAILS FOR TOWNSHIP ROADWAYS.</p> <p>6. MILL & OVERLAY: WHERE A TRENCH IS CUT LONGITUDINALLY IN TRAVEL LANE(S) OF ROADWAY, FULL WIDTH OF SAID TRAVEL LANE SHALL RECEIVE MILL AND OVERLAY OF WEARING COURSE. IF TRENCH LIES WITHIN CENTER OF ROADWAY MILL AND OVERLAY SHALL EXTEND 15 FEET BEFORE AND AFTER TRENCH ADDITIONALLY:</p> <ul style="list-style-type: none"> • ALL TRENCH RESTORATION FOR ANY ROADWAY WHICH HAS BEEN RESURFACED WITHIN YEARS 1 THROUGH 3 SHALL INCLUDE MILL AND OVERLAY FOR FULL WIDTH OF ROADWAY CURB TO CURB AND INTERSECTION TO INTERSECTION. (THIS RESTORATION METHOD IS ONLY APPLICABLE FOR ROADWAYS WHICH HAVE BEEN RESURFACED WITHIN 3 YEARS OF THE RESTORATION). • ALL TRENCH RESTORATION FOR ANY ROADWAY WHICH HAS BEEN RESURFACED WITHIN YEARS 4 & 5 SHALL INCLUDE MILL AND OVERLAY FOR FULL WIDTH OF ROADWAY CURB TO CURB AND 15 FEET ON BOTH SIDES OF EXCAVATION. ALL JOINTS SHALL BE SEALED USING INFRARED PAVEMENT RESTORATION AS DETAILED BELOW. (THIS RESTORATION METHOD IS ONLY APPLICABLE WHEN PERMIT IS ISSUED UNDER SPECIAL CIRCUMSTANCES). • WHERE WIDTH OF ROADWAY IS LESS THAN 15 FEET, FULL WIDTH OF ROADWAY SHALL RECEIVE MILL AND OVERLAY. <p>7. WHERE THERE IS MORE THAN ONE LATERAL TRENCH WITHIN 100 FEET OF ROADWAY BY SAME PERMITTEE WITHIN 5 YEARS, THE ROADWAY SHALL RECEIVE A TRAVEL LANE MILL AND OVERLAY OF WEARING COURSE WHICH SHALL EXTEND 15 FEET BEFORE AND AFTER OPENINGS.</p> <p>8. EXISTING ROADWAYS ALONG THE FRONTAGE OF NON-PAVED RIGHT-OF-WAY WORKS AREAS SHALL RECEIVE MILL AND OVERLAY OF WEARING COURSE IF ANY OF THE FOLLOWING CONDITIONS ARE NOTED AT THE CONCLUSION OF CONSTRUCTION ACTIVITIES:</p> <ul style="list-style-type: none"> • ALLIGATOR, SURFACE CRACKING OR OTHER DETERIORATION. • DIPS, DEPRESSIONS OR OTHER IRREGULARITIES CAUSING PONDING. • POTHOLES OR OTHER SURFACE BREAKS. • EXCESSIVE SURFACE SCARRING CAUSED BY CONTRACTOR'S EQUIPMENT (EX. BULLDOZER TRACKS). <p>9. THE CONTRACTOR SHALL PROTECT ITS OPENINGS TO PROVIDE SAFETY FOR THE TRAVELING PUBLIC, INCLUDING MOTORISTS, BICYCLISTS, AND PEDESTRIANS.</p> <p>10. DISTURBED PORTIONS OF A PUBLIC SPACE, INCLUDING BUT NOT LIMITED TO SLOPES, APPURTENANCES, AND STRUCTURES SUCH AS GUARDRAIL, CURB, SIGNS, PAVEMENT MARKINGS, DRAINPIPES, DRIVEWAYS, AND VEGETATION, SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THAT WHICH EXISTED BEFORE THE START OF WORK.</p> <p>11. THE CONTRACTOR WHO PERFORMED THE STREET OPENING SHALL BE RESPONSIBLE FOR ITS MAINTENANCE FOR A PERIOD OF 18 MONTHS FROM THE LOWER MAKEFIELD TOWNSHIP DIRECTOR OF PUBLIC WORKS APPROVAL AND ACCEPTANCE OF THE REPAIR.</p> <p>12. INCLUDED DETAILS ARE NOT TO SCALE AND ARE NOT ALL INCLUSIVE OF EVERY SITUATION LISTED ABOVE.</p>
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RESTORATION DETAIL FOR TOWNSHIP PAVED ROADWAYS

LOWER MAKEFIELD TOWNSHIP
DEPARTMENT of PUBLIC WORKS
1100 EDGEWOOD ROAD, YARDLEY, PA 19067 - 267-274-1130

RIGHT-OF-WAY &
ROADWAY OCCUPANCY
DESIGN STANDARDS

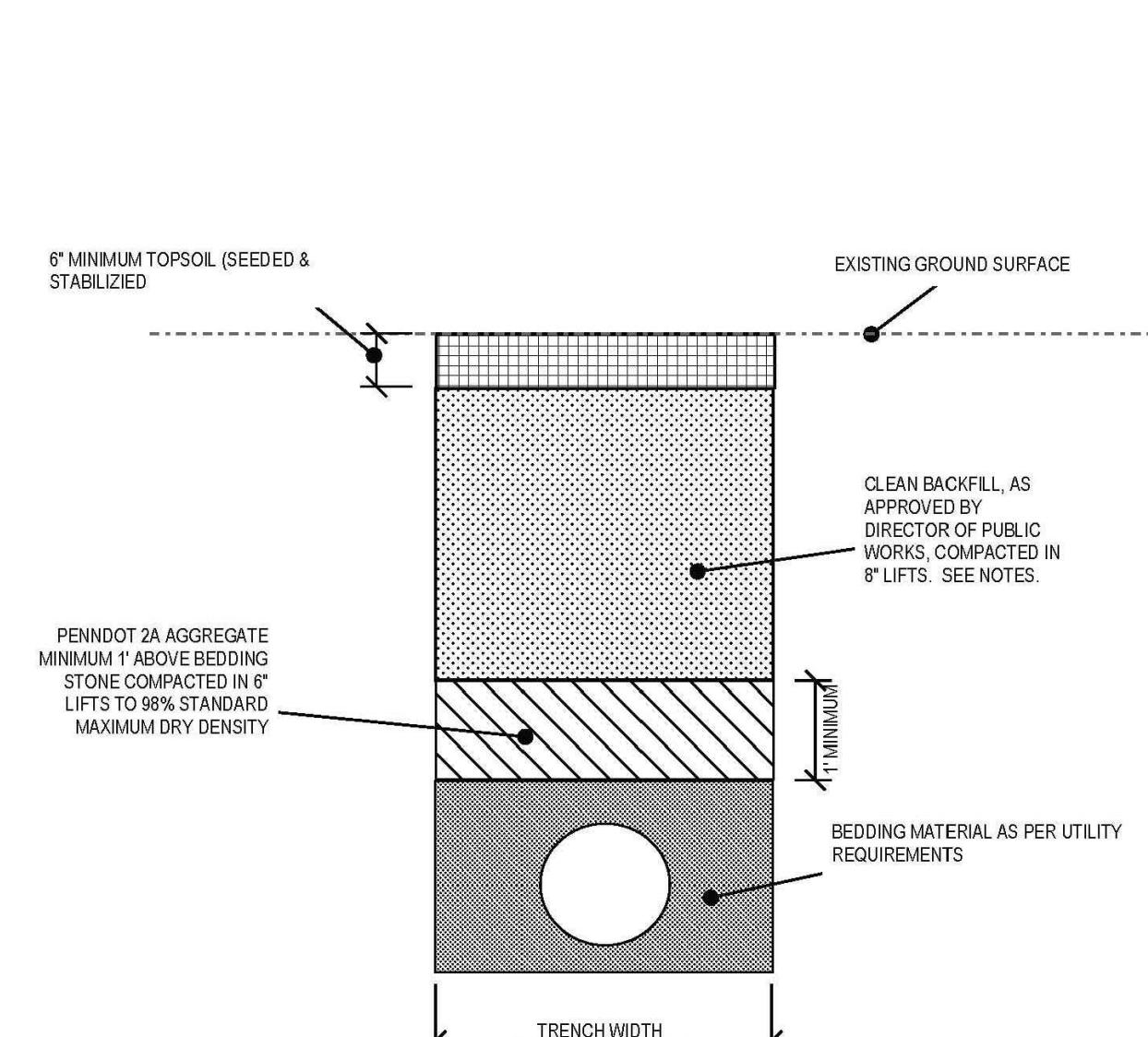
DATE: OCT 2022

RIGHT-OF-WAY &
ROADWAY OCCUPANCY
DESIGN STANDARDS

DATE: OCT 2022

DETAIL
GC-01

1 SUTPHIN ROAD SUBDIVISION LOWER MAKEFIELD TOWNSHIP PREFEDED FOR: GAGNACOVA, ALBERT & LUCILLE YARDLEY, PA, 19067, USA
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RESTORATION DETAIL FOR NON-PAVED RIGHT-OF-WAY AREAS

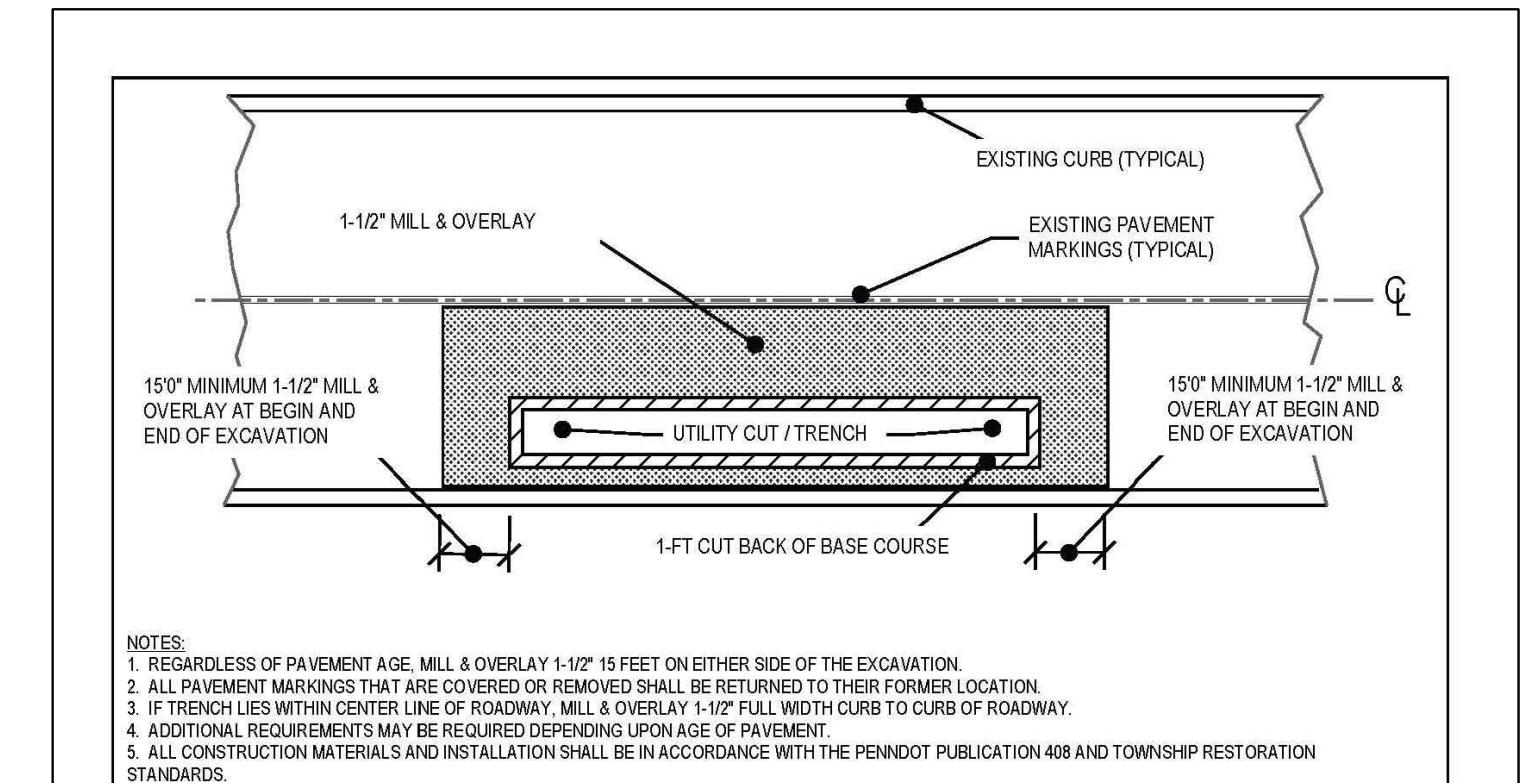
LOWER MAKEFIELD TOWNSHIP
DEPARTMENT of PUBLIC WORKS
1100 EDGEWOOD ROAD, YARDLEY, PA 19067 - 267-274-1130



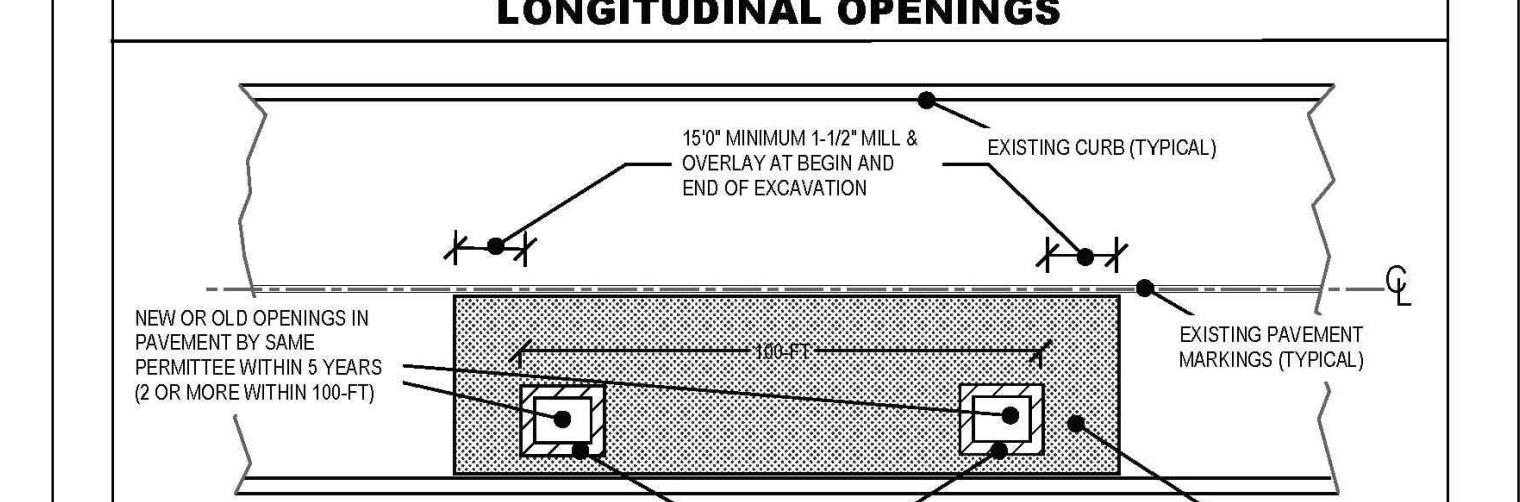
RIGHT-OF-WAY &
ROADWAY OCCUPANCY
DESIGN STANDARDS

DATE: OCT 2022

11



LONGITUDINAL OPENINGS



MULTIPLE TRANSVERSE OPENINGS (SPOT REPAIRS OR SERVICE CONNECTIONS)

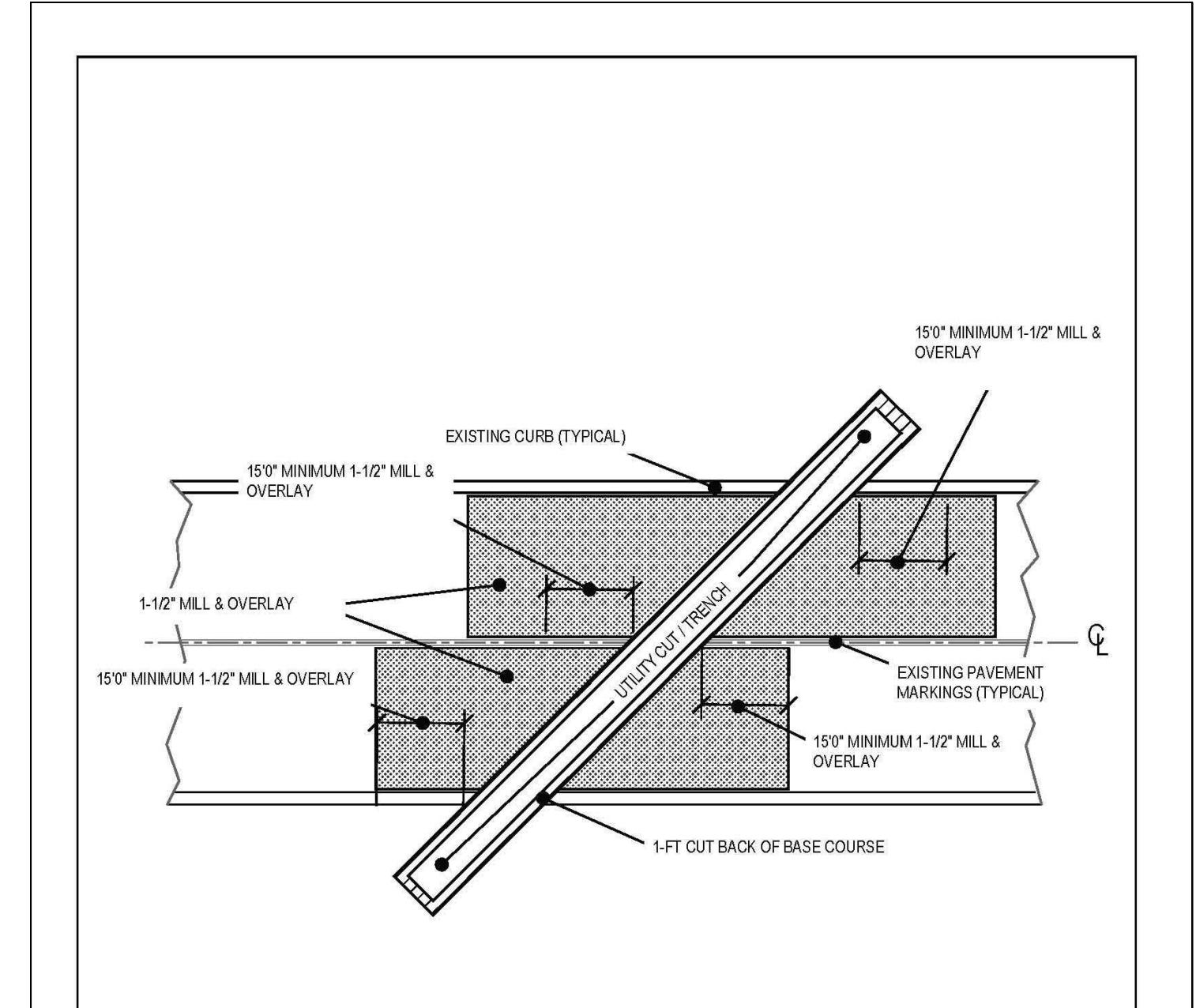
LOWER MAKEFIELD TOWNSHIP
DEPARTMENT of PUBLIC WORKS
1100 EDGEWOOD ROAD, YARDLEY, PA 19067 - 267-274-1130



RIGHT-OF-WAY &
ROADWAY OCCUPANCY
DESIGN STANDARDS

DATE: OCT 2022

12



ANGLED TRENCH CROSSINGS

LOWER MAKEFIELD TOWNSHIP
DEPARTMENT of PUBLIC WORKS
1100 EDGEWOOD ROAD, YARDLEY, PA 19067 - 267-274-1130



RIGHT-OF-WAY &
ROADWAY OCCUPANCY
DESIGN STANDARDS

DATE: OCT 2022

13