

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC ATLANTIC SUNRISE PROJECT PROPOSED 42" CENTRAL PENN LINE SOUTH

BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET

DRUMORE, MARTIC, CONESTOGA, MANOR, WEST HEMPFIELD, RAPHO, MT. JOY BOROUGH, MT. JOY, PEQUEA, EAST DONEGAL, EDEN
TOWNSHIPS

LANCASTER COUNTY

BMP DETAIL SUMMARY

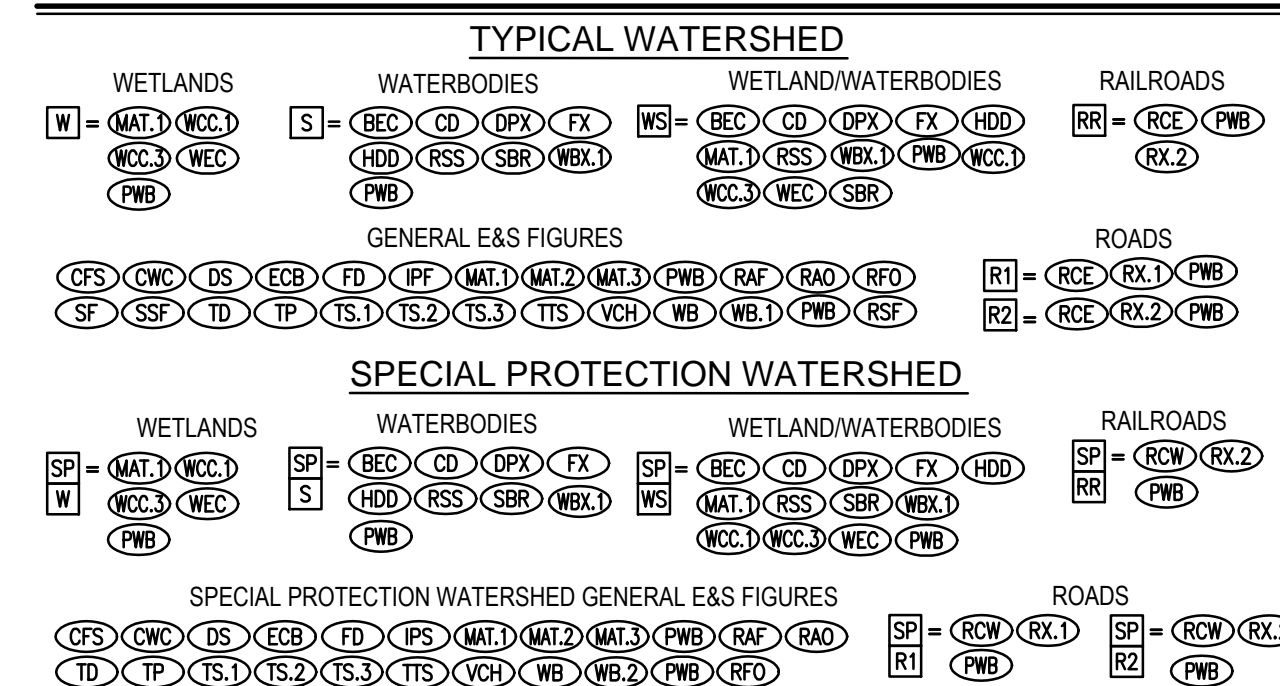
| FIGURE | FIGURE TITLE | SHEET NO. |
|--------|--|-----------|
| ARF | ABACT ROCK FILTER | 1 |
| BBD | BROAD-BASED DIP | |
| BEC | BRIDGE EQUIPMENT CROSSING | |
| CD | COFFERDAM STREAM CROSSING | |
| CDM | CHECK DAM | 2 |
| CFS | COMPOST FILTER SOCK | |
| CS | CLEANOUT STAKE | |
| CST | COMPOST SOCK SEDIMENT TRAP | |
| CWC | CLEAN WATER CROSSING | 3 |
| DPX | DAM AND PUMP STREAM CROSSING | |
| DS | HYDROSTATIC DEWATERING STRUCTURE | |
| ECB | EROSION CONTROL BLANKET | |
| FD | FILTER SOCK DIVERSION | 4 |
| FEN | CONSTRUCTION FENCE | |
| FX | FLUME STREAM CROSSING | |
| HDD | HORIZONTAL DIRECTIONAL DRILL | |
| IPF | FILTER BAG INLET PROTECTION TYPE M | 5 |
| IPS | STONE AND CONCRETE INLET PROTECTION TYPE M | |
| MAT.1 | TIMBER MATTING CONSTRUCTION | |
| MAT.2 | TIMBER MATTING WITH FILL OVER EXISTING PIPELINES | |
| MAT.3 | TIMBER MATTING AIR BRIDGE | 6 |
| PWB | PUMP WATER FILTER BAG | |
| RAO | RIP RAP APRON AT PIPE OUTLET WITHOUT FLARED END SECTION | |
| RAP | RIP RAP GRADATION | |
| RCE | ROCK CONSTRUCTION ENTRANCE | 7 |
| RCW | ROCK CONSTRUCTION ENTRANCE WITH WASH RACK | |
| RFO | ROCK FILTER OUTLET | |
| RSF | REINFORCED SILT FENCE (30" HIGH) | |
| RSS | RIP RAP STREAM BANK STABILIZATION | 8 |
| RX.1 | TRENCHED ROAD CROSSING | |
| RX.2 | BORED ROAD/RAILROAD CROSSING | |
| SBR | STREAM BANK STABILIZATION WITH REINFORCEMENT BLANKET | |
| SF | STANDARD SILT FENCE (18" HIGH) | 9 |
| SSF | SUPER SILT FENCE (33" HIGH) | |
| TD | TRENCH DEWATERING | |
| TP | TRENCH PLUG INSTALLATION | |
| TRV | TRASH RACK AND ANTI-VORTEX DEWEGE | 10 |
| TS.1 | TOPSOIL SEGREGATION (1) | |
| TS.2 | TOPSOIL SEGREGATION (2) | |
| TS.3 | TOPSOIL SEGREGATION (3) | |
| TTS | SIDE SLOPE (TWO-TONE) CONSTRUCTION PROCEDURE | 11 |
| VCH | VEGETATED CHANNEL | |
| WB | WATERBAR | |
| WB.1 | WATERBAR LAYOUT DETAIL | |
| WB.2 | COMPOST FILTER SOCK AND SUMP (PADEP APPROVED ALTERNATE DETAIL) AT WATERBAR DISCHARGE | 11 |
| WBX.1 | BORED WATERBODY CROSSING | |
| WCC.1 | WETLAND INSTALLATION PROCEDURE | |
| WCC.3 | "INUNDATED WETLAND" INSTALLATION PROCEDURE | |
| WD | WATER DEFLECTOR | |
| WEC | WETLAND EQUIPMENT CROSSING | |

DETAILS THAT ARE NOT UTILIZED IN THIS COUNTY ARE STRUCK THROUGH IN THIS TABLE. THESE DETAILS ARE ALSO CROSSED OUT WITH A NOTE THAT READS "DETAILS ARE NOT UTILIZED IN THIS COUNTY" ON THEIR RESPECTIVE SHEET.

DRAWING INDEX

| DRAWING NUMBER | SHEET NO. | DRAWING NAME |
|-----------------------------------|-----------|---|
| 24-1600-70-28-A/LL113_9-BMP | 1-1 | COVER SHEET |
| ASR-BMP-GN | 1-3 | GENERAL NOTES |
| ASR-BMP | 1-11 | BEST MANAGEMENT PRACTICES STANDARD CONSTRUCTION DETAILS |
| 24-1601-70-28-A/LL113_9-BMP-LA-TB | 1-6 | QUANTITY, CROSSING, AND ACIDIC SOIL TABLES |

E&S DETAIL GROUP LEGEND FOR PIPELINE CROSSINGS



DETAILS IN THIS LEGEND ARE NOT COMPREHENSIVE AND ONLY REFER TO BMPs RELATED TO PIPELINE CROSSINGS. ADDITIONAL BMPs ARE PROVIDED FOR ACCESS ROADS.
E&S DETAIL GROUP LEGEND IS ALSO PROVIDED ON THE PIPELINE E&S PLANS. LEGEND IS SHOWN HERE FOR COORDINATION PURPOSES.



| REVISIONS | | | | | |
|-----------|------------|----|--|----------|-----------|
| NO. | DATE | BY | DESCRIPTION | W.O. NO. | CHK. APP. |
| 0 | 08/26/2015 | BL | ISSUED FOR PADEP SUBMITTAL | W0572385 | JLK SMK |
| 1 | 12/02/2015 | BL | ISSUED FOR PADEP RESUBMITTAL | W0572385 | JLK SMK |
| 2 | 02/04/2016 | BL | ISSUED FOR PADEP RESUBMITTAL | W0572385 | JLK SMK |
| 3 | 3/28/2016 | BL | ISSUED FOR PADEP RESUBMITTAL | W0572385 | JLK AJB |
| 4 | Oct. 2016 | BL | PADEP TECHNICAL DEFICIENCY RESPONSE #1 | W0572385 | JLK SMK |
| 5 | April 2017 | BL | PADEP TECHNICAL DEFICIENCY RESPONSE #2 | W0572385 | JLK AJB |
| 6 | AUG. 2017 | BL | PADEP TECHNICAL DEFICIENCY RESPONSE #3 | W0572385 | JLK AJB |

| TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC | | | |
|--|-----------------------------|-------------|--------------|
| ATLANTIC SUNRISE PROJECT | | | |
| PROPOSED 42" CENTRAL PENN LINE SOUTH | | | |
| PENNSYLVANIA BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET | | | |
| LANCASTER COUNTY, PENNSYLVANIA | | | |
| COVER SHEET | | | |
| DRAWN BY: | ELZ | DATE: | 05/15/15 |
| CHECKED BY: | JLK | DATE: | 07/02/15 |
| APPROVED BY: | SMK | DATE: | 07/08/15 |
| ISSUED FOR: | CONSTRUCTION | ISSUED FOR: | CONSTRUCTION |
| DRAWING NUMBER: | 24-1600-70-28-A/LL113_9-BMP | | SHEET 1 |
| SCALE: | | | OF 1 |



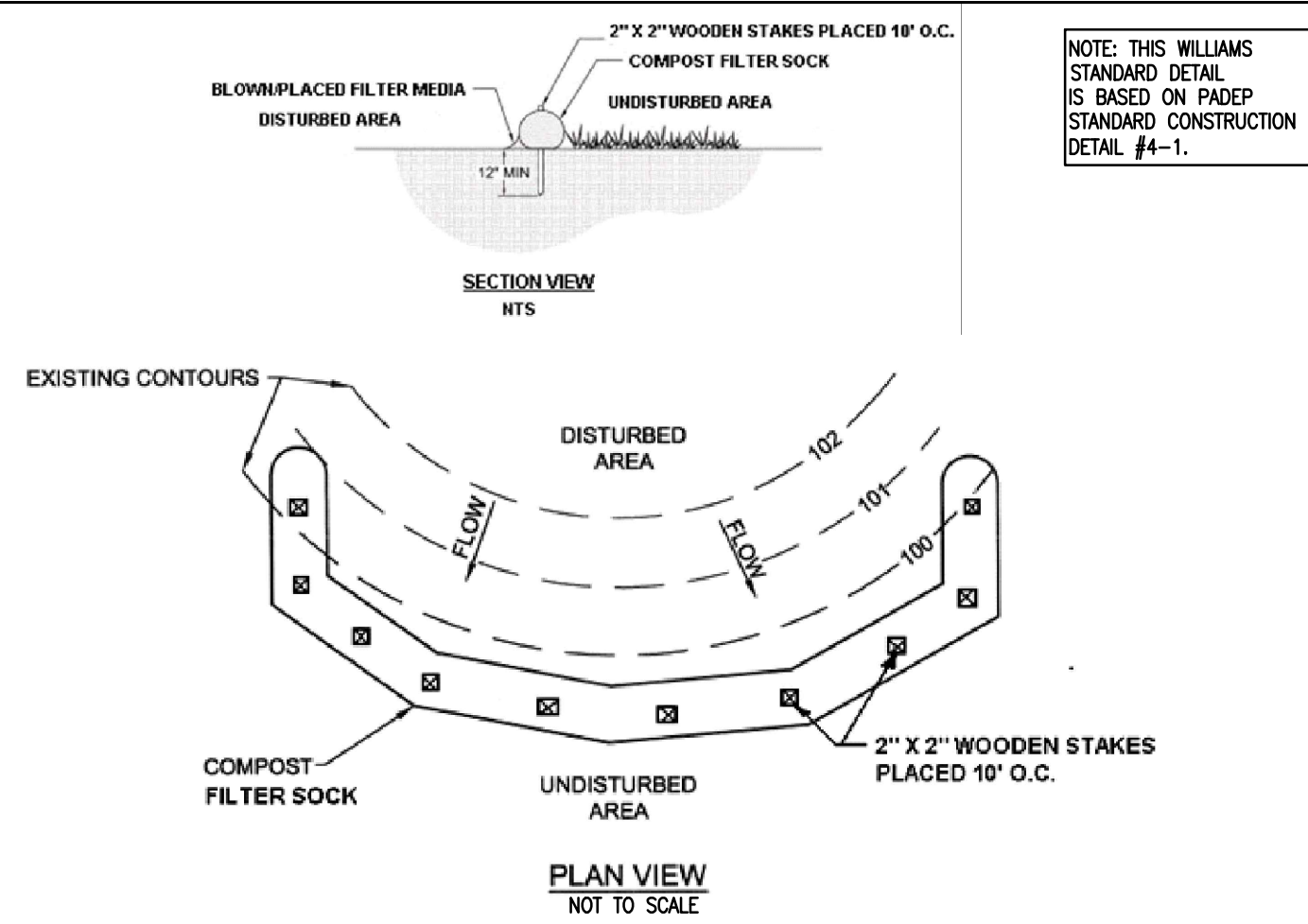


FIGURE 4.1 Sediment Barrier Alignment

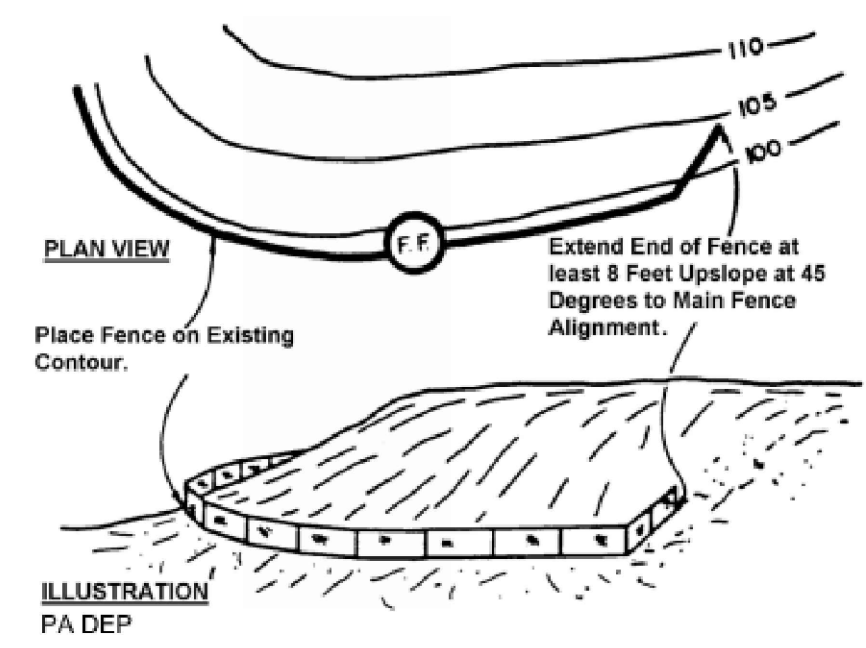
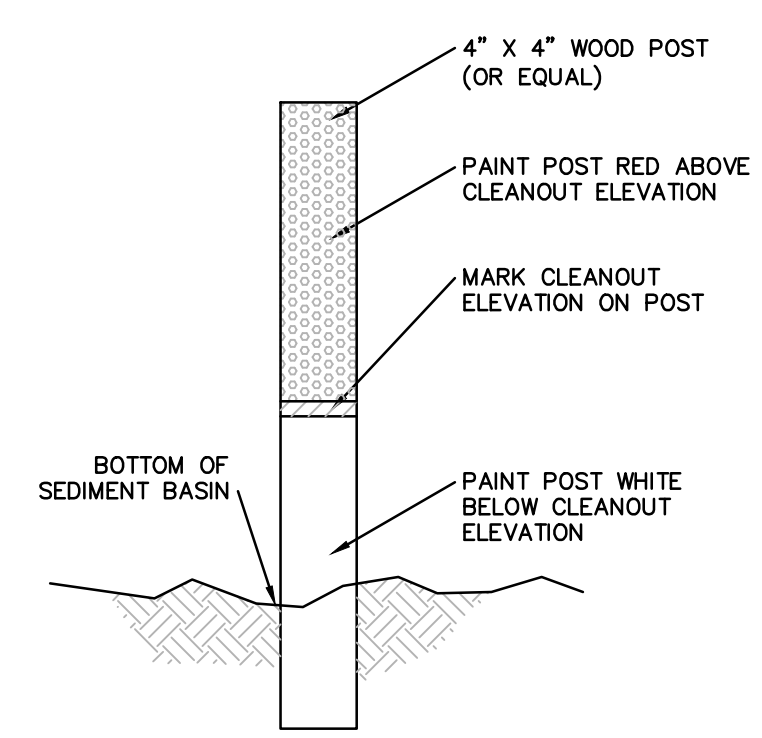


FIGURE 4.2 MAXIMUM PERMISSIBLE SLOPE LENGTH ABOVE COMPOST FILTER SOCKS

NOTE: 8" diameter socks should only be used to control small (< 1/4 acre) disturbed areas on individual house lots.



NOTE: THIS WILLIAMS STANDARD DETAIL IS BASED ON PADEP STANDARD CONSTRUCTION DETAIL #4-1.

| NO. | DATE | BY | REVISION DESCRIPTION | NO. | NO. | CHK. | APP. |
|-----|------|----|---|-----|-----|------|------|
| | | | TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL | | | | |
| | | | (CFS) COMPOST FILTER SOCK | | | | |

1 OF 3

TABLE 4.1 COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

| Material Type | 3 mil HDPE | 4 mil HDPE | 5 mil HDPE | Multi-Filament Polypropylene (MFPP) | Multi-Filament Polypropylene (HDMFPP) |
|--|------------------|------------------|--------------------|-------------------------------------|---------------------------------------|
| Material Characteristics | Photo-degradable | Photo-degradable | Bio-degradable | Photo-degradable | Photo-degradable |
| Sock Diameters | 12", 18" | 12", 18", 24" | 12", 18", 24", 32" | 12", 18", 24", 32" | 12", 18", 24", 32" |
| Mesh Opening | 3/8" | 3/8" | 3/8" | 3/8" | 3/8" |
| 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 | 6 months | 6 months | 1 year | 2 years |

Two-ply systems: HDPE biaxial net, Continuously wound, Fusion-welded junctures, 3/4" X 3/4" Max. aperture size

Outer Filtration Mesh: Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch), 3/16" Max. aperture size

SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.

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 3/8" SIEVE |
| SOLUBLE SALT CONCENTRATION | 5.0 DS/M (MMHOS/CM) MAXIMUM |

NOTES:

- SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2. (SEE SHEET 2 OF 3 OF THIS DETAIL.)
- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. (SEE SHEET 3 OF 3 OF THIS DETAIL.) STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
- TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
- 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 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.
- SOCKS SHALL BE INSTALLED PARALLEL TO THE CONTOURS, TYPICALLY, IN AREAS WHERE THE SLOPE OF THE CATCHMENT AREA IS LESS THAN FIVE PERCENT, THE SOCKS MAY BE INSTALLED AS NECESSARY TO MINIMIZE THE NUMBER OF SEPARATE SOCK SEGMENTS ALONG THE EDGE OF DISTURBANCE.

| NO. | DATE | BY | REVISION DESCRIPTION | NO. | NO. | CHK. | APP. |
|-----|------|----|---|-----|-----|------|------|
| | | | TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL | | | | |
| | | | (CFS) COMPOST FILTER SOCK | | | | |

2 OF 3

| NO. | DATE | BY | REVISION DESCRIPTION | NO. | NO. | CHK. | APP. |
|-----|------|----|---|-----|-----|------|------|
| | | | TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL | | | | |
| | | | (CFS) COMPOST FILTER SOCK | | | | |

3 OF 3

| NO. | DATE | BY | REVISION DESCRIPTION | NO. | NO. | CHK. | APP. |
|-----|------|----|---|-----|-----|------|------|
| | | | TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL | | | | |
| | | | (CS) CLEANOUT STAKE | | | | |

NOTE: THIS WILLIAMS STANDARD DETAIL IS BASED ON PADEP STANDARD CONSTRUCTION DETAIL #3-11.

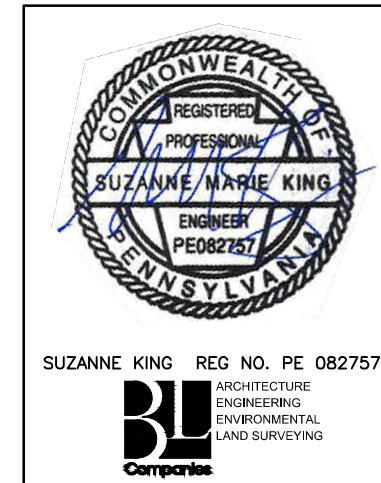
NOTES:

- SEE COMPOST FILTER SOCK (CFS) DETAIL FOR MORE INFORMATION. SOCK MATERIAL SHALL MEET THE STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.
- COMPOST SOCK SEDIMENT TRAPS SHALL NOT EXCEED THREE SOCKS IN HEIGHT AND SHALL BE STACKED IN PYRAMIDAL FORM AS SHOWN ABOVE. MINIMUM TRAP HEIGHT IS ONE 24" DIAMETER SOCK. ADDITIONAL STORAGE MAY BE PROVIDED BY MEANS OF AN EXCAVATED SUMP 12" DEEP EXTENDING 1 TO 3 FEET UPSLOPE OF THE SOCKS ALONG THE LOWER SIDE OF THE TRAP.
- THE MAXIMUM TRIBUTARY DRAINAGE AREA IS 5.0 ACRES. SINCE COMPOST SOCKS ARE "FLOW-THROUGH," NO SPILLWAY IS REQUIRED.
- COMPOST SOCK SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3 THE HEIGHT OF THE SOCKS.
- PHOTODEGRADABLE AND BIODEGRADABLE SOCKS SHALL NOT BE USED FOR MORE THAN 1 YEAR.
- DESIGN NOTES:
 - COMPOST SOCK SEDIMENT TRAP SHALL BE SIZED TO PROVIDE 2,000 CUBIC FEET OF STORAGE CAPACITY WITH 12" FIBERBOARD FOR EACH ACRE TRIBUTARY TO THE TRAP.
 - MINIMUM BASE WIDTH IS EQUIVALENT TO THE HEIGHT.
 - SEDIMENT ACCUMULATION SHALL NOT EXCEED 1/3 THE TOTAL HEIGHT OF THE TRAP.
 - SOCKS SHALL BE OF LARGER DIAMETER AT THE BASE OF THE TRAP AND DECREASE IN DIAMETER FOR SUCCESSIVE LAYERS AS INDICATED TO THE LEFT.
 - ENDS OF THE TRAP SHALL BE A MINIMUM OF 1 FOOT HIGHER IN ELEVATION THAN THE MID-SECTION, WHICH SHALL BE LOCATED AT THE POINT OF DISCHARGE.

| NO. | DATE | BY | REVISION DESCRIPTION | NO. | NO. | CHK. | APP. |
|-----|------|----|---|-----|-----|------|------|
| | | | TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL | | | | |
| | | | (CST) COMPOST SOCK SEDIMENT TRAP | | | | |

REFER TO THE QUANTITY, CROSSING AND ACIDIC SOIL TABLES FOR DETAIL AND DESIGN

| NO. | DATE | BY | REVISION DESCRIPTION | NO. | NO. | CHK. | APP. |
|-----|------|----|---|-----|-----|------|------|
| | | | TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL | | | | |
| | | | (CWC) CLEAN WATER CROSSING | | | | |



| REVISIONS | | | | | | | |
|-----------|------------|----|--|----------|------|------|--|
| NO. | DATE | BY | DESCRIPTION | W.O. NO. | CHK. | APP. | |
| 0 | 08/26/2015 | BL | ISSUED FOR PADEP SUBMITTAL | W0572385 | JLK | SMK | |
| 1 | 12/02/2015 | BL | ISSUED FOR PADEP RESUBMITTAL | W0572385 | JLK | SMK | |
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| 4 | AUG 2017 | BL | PADEP TECHNICAL DEFICIENCY RESPONSE #3 | W0572385 | JLK | SMK | |

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
ATLANTIC SUNRISE PROJECT

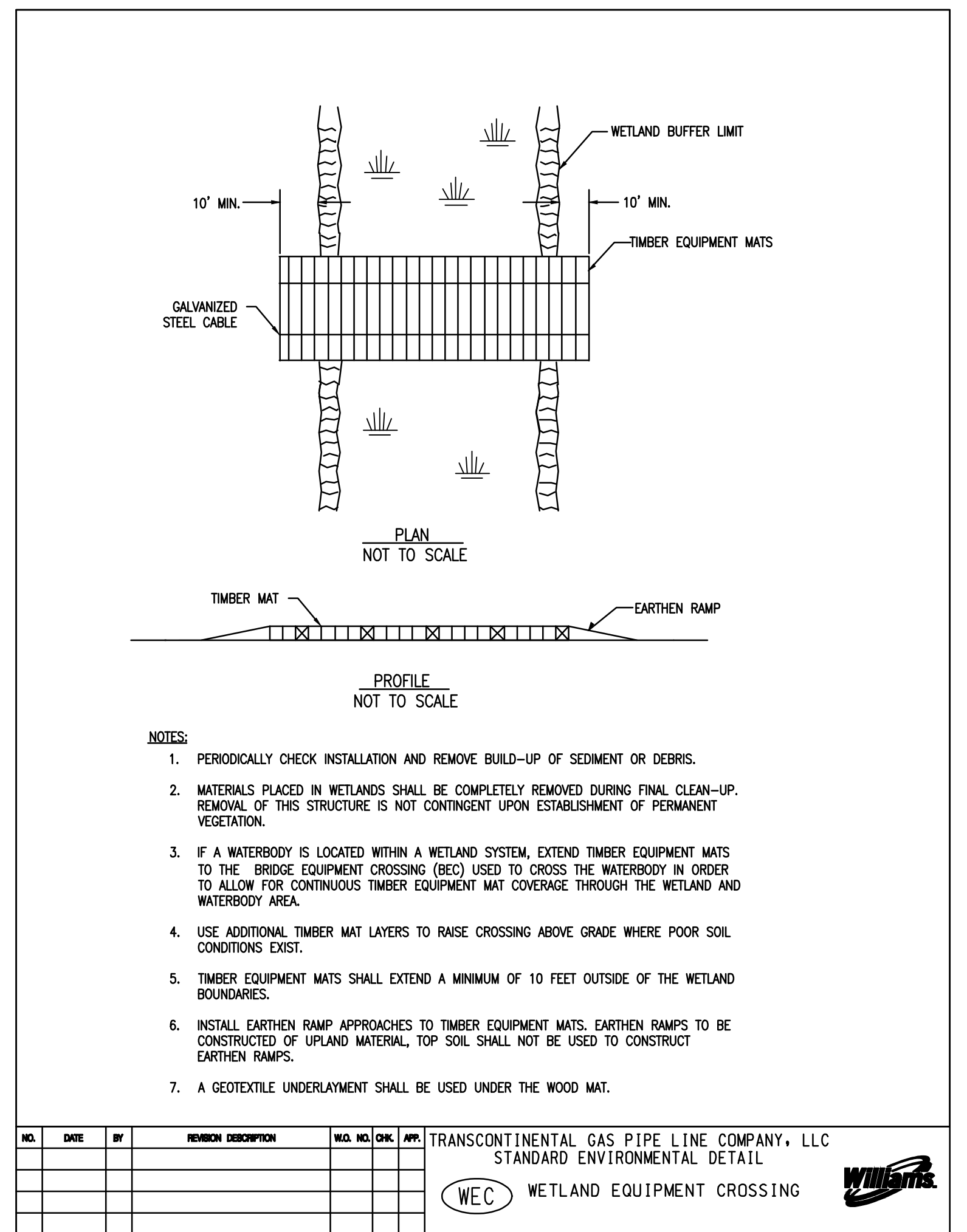
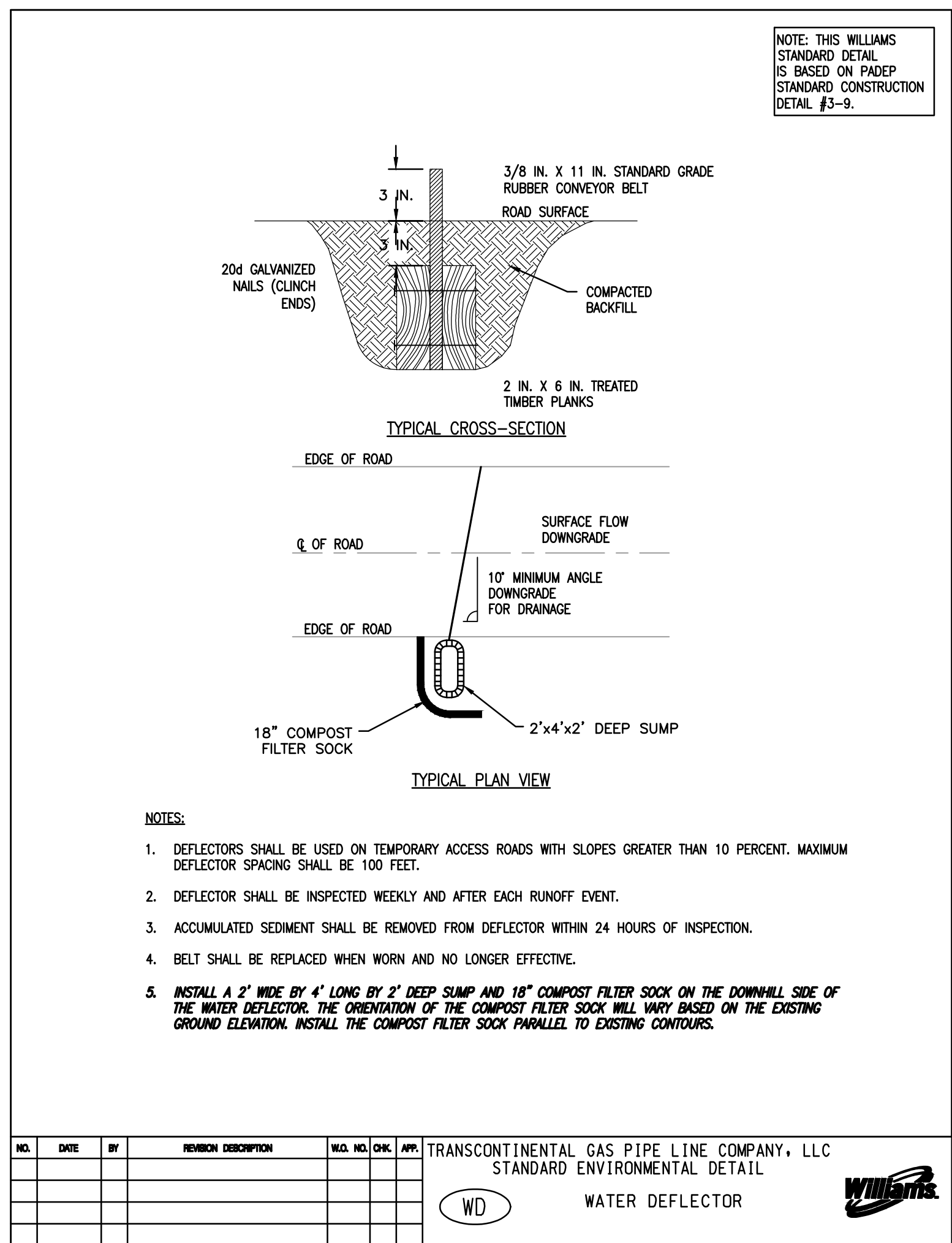
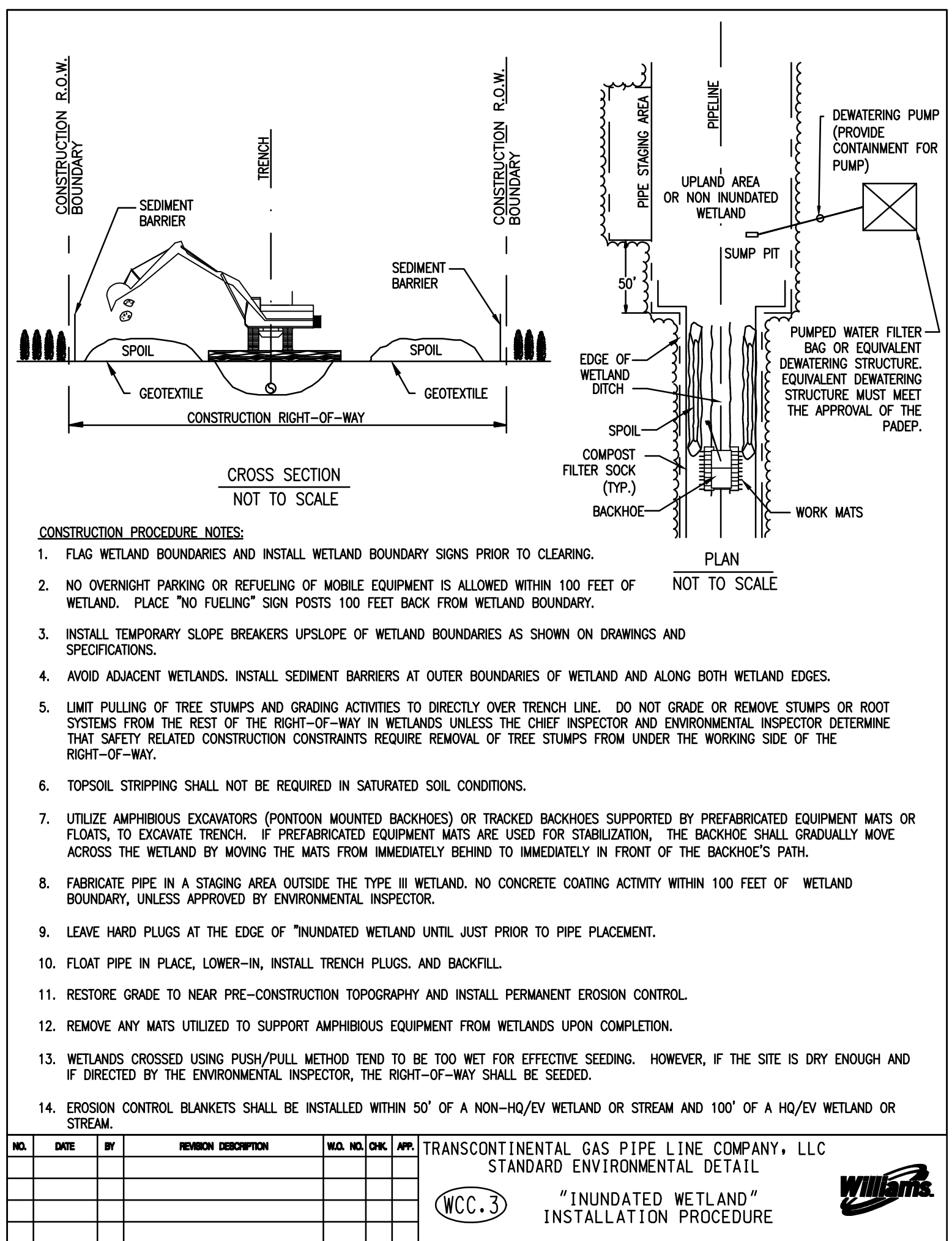
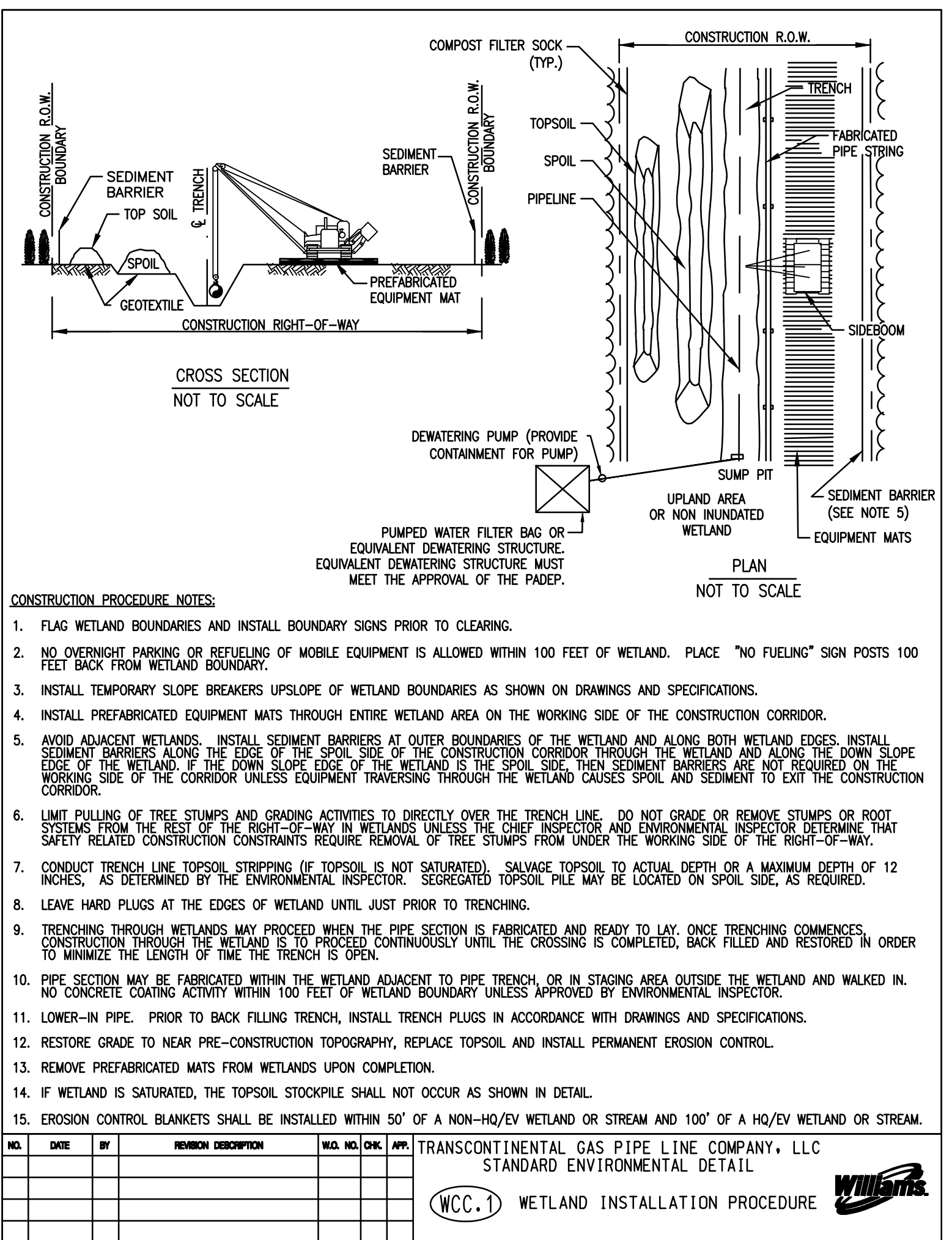
BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET

BEST MANAGEMENT PRACTICES DETAILS

| | | | | | |
|--------------|-----|-------|----------|--------------------------|-----------|
| DRAWN BY: | ELZ | DATE: | 05/15/15 | ISSUED FOR BID: | SCALE: |
| CHECKED BY: | JLK | DATE: | 07/02/15 | ISSUED FOR CONSTRUCTION: | REVISION: |
| APPROVED BY: | SMK | DATE: | 07/08/15 | DRAWING NUMBER: | ASR-BMP |
| W.O.: | | | | | |

SHEET 2 OF 11

Drawn By & Date/Time: CScanzello Jul 27, 2017 4:30pm
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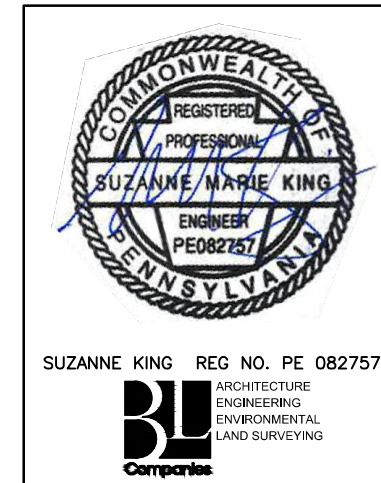
| NO. | DATE | BY | REVISION DESCRIPTION | W.D. | NO. | CHK. | APP. |
|--|------|----|----------------------|------|-----|------|------|
| TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL | | | | | | | |
| (WCC-1) WETLAND INSTALLATION PROCEDURE | | | | | | | |

| NO. | DATE | BY | REVISION DESCRIPTION | W.D. | NO. | CHK. | APP. |
|--|------|----|----------------------|------|-----|------|------|
| TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL | | | | | | | |
| (WCC-3) "INUNDATED WETLAND" INSTALLATION PROCEDURE | | | | | | | |

| NO. | DATE | BY | REVISION DESCRIPTION | W.D. | NO. | CHK. | APP. |
|--|------|----|----------------------|------|-----|------|------|
| TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL | | | | | | | |
| (WD) WATER DEFLECTOR | | | | | | | |

| NO. | DATE | BY | REVISION DESCRIPTION | W.D. | NO. | CHK. | APP. |
|--|------|----|----------------------|------|-----|------|------|
| TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL | | | | | | | |
| (WEC) WETLAND EQUIPMENT CROSSING | | | | | | | |

Drawn By & Date/Time: CScanzello Jul 27, 2017 - 4:37pm
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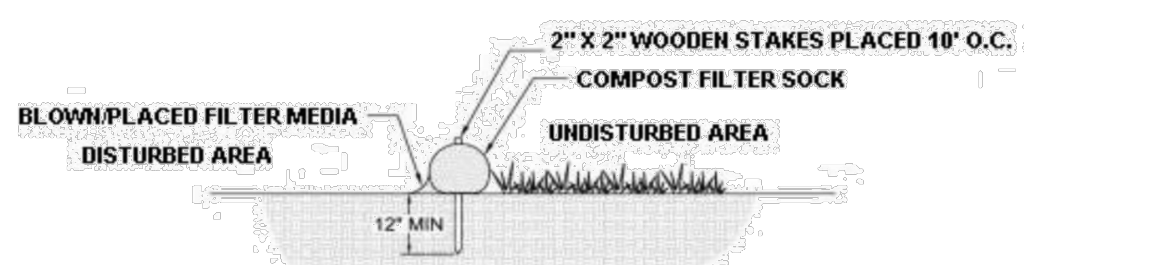
| REVISIONS | | | | | | | |
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| | | | | | | | |
|---|--|--|--|--|--|--|--|
| TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC ATLANTIC SUNRISE PROJECT | | | | SCALE | | | |
| BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET | | | | REVISION: 4 | | | |
| BEST MANAGEMENT PRACTICES DETAILS | | | | DRAWN BY: ELZ DATE: 05/15/15 ISSUED FOR BID: | | | |
| CHECKED BY: JLK DATE: 07/02/15 ISSUED FOR CONSTRUCTION: | | | | DRAWING NUMBER: ASR-BMP | | | |
| APPROVED BY: SMK DATE: 07/08/15 | | | | SHEET 11 OF 11 | | | |



TABLE 1: SEDIMENT BARRIER SUMMARY (CONTINUED)

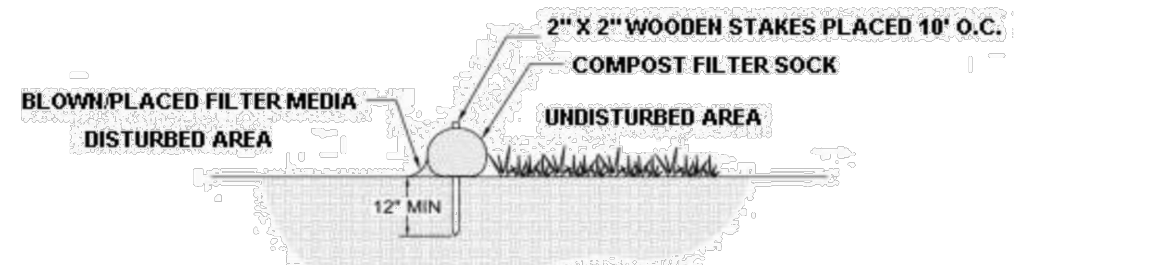
E&S WORKSHEET #1
#1A
Compost Filter Sock
 PROJECT NAME: ATLANTIC SUNRISE PROPOSED GAS PIPELINE
 LOCATION: LANCASTER COUNTY
 PREPARED BY: ESS DATE: 03/20/2017
 CHECKED BY: AJB DATE: 04/10/2017



| MILEPOST NO. | Sta. In. | Sta. Out. | LOCATION | TYPE | SLOPE PERCENT | SLOPE LENGTH ABOVE BARRIER (FT) |
|--------------|----------|-----------|----------------|--------|---------------|---------------------------------|
| 0 | 24 | 5+00 | 12+75 | | 22 | 75 |
| 0 | 12 | 12+75 | 13+50 | Stream | 8 | 63 |
| 0 | 24 | 14+00 | 16+25 | | 22 | 100 |
| 32 | 16+75 | 19+25 | | | 12 | 327 |
| 24 | 19+50 | 22+25 | | | 13 | 170 |
| 12 | 22+25 | 23+00 | Road | 11 | 112 | |
| 24 | 27+50 | 31+00 | | | 11 | 150 |
| 24 | 32+25 | 41+50 | | | 8 | 150 |
| 24 | 41+50 | 45+25 | | | 2 | 780 |
| 12 | 43+75 | 46+75 | Road | 6 | 140 | |
| M-0147 | 24 | 45+50 | 0+00 | | 7 | 150 |
| 32 | 0+00 | 4+25 | | | 8 | 365 |
| 12 | 4+50 | 6+00 | | | 11 | 129 |
| 1 | 24 | 6+25 | 12+00 | | 10 | 140 |
| 12 | 12+25 | 16+00 | | | 7 | 145 |
| 24 | 16+00 | 19+25 | | | 7 | 90 |
| 12 | 19+25 | 25+75 | | | 9 | 150 |
| 24 | 26+00 | 28+50 | | | 23 | 100 |
| 12 | 28+50 | 30+50 | | | 5 | 160 |
| 12 | 29+50 | 32+00 | Wetland/Stream | 6 | 152 | |
| 24 | 33+00 | 40+50 | | | 14 | 150 |
| 24 | 40+50 | 41+25 | Road | 5 | 200 | |
| 24 | 41+25 | 100+50 | | | 5 | 150 |
| 24 | 42+00 | 44+50 | Road | 5 | 200 | |
| 12 | 102+00 | 102+00 | Road | 4 | 50 | |
| 2 | 12 | 109+00 | 109+00 | Road | 14 | 44 |
| 24 | 109+00 | 110+00 | | | 9 | 83 |
| 18 | 110+50 | 111+00 | Road | 30 | 45 | |
| 24 | 111+00 | 116+75 | Road | 20 | 100 | |
| 12 | 115+75 | 116+75 | Road | 22 | 54 | |
| M-0324 | 24 | 0+00 | 3+00 | | 6 | 426 |
| 12 | 3+00 | 3+25 | Road | 7 | 105 | |
| 24 | 4+25 | 6+00 | | | 6 | 426 |
| 24 | 6+50 | 8+25 | | | 9 | 130 |
| 12 | 8+50 | 9+25 | Road | 9 | 89 | |
| 12 | 9+25 | 10+00 | Road | 9 | 100 | |
| 12 | 10+00 | 11+00 | Road | 10 | 107 | |
| M-0224 | 24 | 3+00 | 4+75 | | 9 | 150 |
| 24 | 5+00 | 147+00 | | | 4 | 518 |

Re-route Area
 SOURCE: Pennsylvania Erosion and Sediment Pollution Control Manual, Page 372

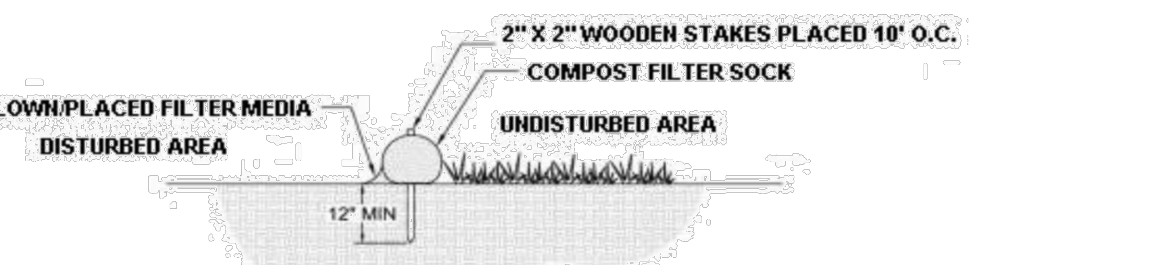
E&S WORKSHEET #1
Compost Filter Sock
 PROJECT NAME: ATLANTIC SUNRISE PROPOSED GAS PIPELINE
 LOCATION: LANCASTER COUNTY
 PREPARED BY: ESS DATE: 03/20/2017
 CHECKED BY: AJB DATE: 04/10/2017



| MILEPOST NO. | Sta. In. | Sta. Out. | LOCATION | TYPE | SLOPE PERCENT | SLOPE LENGTH ABOVE BARRIER (FT) |
|--------------|----------|-----------|----------------|--------|---------------|---------------------------------|
| 6 | 24 | 318+00 | 321+75 | | 6 | 287 |
| 24 | 322+00 | 324+50 | | | 13 | 150 |
| 12 | 324+00 | 324+50 | Road | 9 | 112 | |
| 24 | 326+00 | 327+00 | | | 4 | 187 |
| 12 | 327+50 | 331+00 | | | 7 | 137 |
| 12 | 331+50 | 331+75 | Road | 17 | 42 | |
| 24 | 333+00 | 335+25 | | | 9 | 234 |
| 12 | 335+50 | 338+50 | | | 2 | 98 |
| 12 | 338+75 | 339+00 | Road | 2 | 217 | |
| 12 | 338+50 | 340+00 | | | 2 | 103 |
| 18 | 340+25 | 345+00 | | | 4 | 346 |
| 24 | 345+50 | 350+00 | | | 9 | 200 |
| 12 | 350+00 | 352+50 | Road | 10 | 119 | |
| 12 | 360+00 | 361+50 | | | 15 | 300 |
| 24 | 361+50 | 362+50 | | | 18 | 100 |
| 24 | 365+00 | 366+00 | | | 40 | 50 |
| 24 | 366+00 | 366+50 | Road | 39 | 66 | |
| 24 | 367+50 | 368+00 | | | 22 | 31 |
| 12 | 368+25 | 369+00 | Road | 20 | 20 | |
| 7 | 24 | 368+75 | 371+50 | | 25 | 89 |
| 12 | 372+00 | 373+00 | Road | 6 | 27 | |
| 24 | 372+75 | 373+50 | | | 58 | 48 |
| 12 | 373+50 | 374+50 | Road | 27 | 16 | |
| 32 | 374+50 | 378+25 | Wetland/Stream | 15 | 325 | |
| 24 | 378+75 | 382+50 | | | 45 | 50 |
| 24 | 382+00 | 383+50 | Road | 11 | 50 | |
| M-0227 | 24 | 382+75 | 6+25 | | 28 | 100 |
| 12 | 6+00 | 393+00 | Road | 2 | 150 | |
| 12 | 393+00 | 395+00 | Wetland/Stream | 4 | 90 | |
| 12 | 395+00 | 403+00 | Wetland/Stream | 4 | 90 | |
| 12 | 403+00 | 407+00 | | | 2 | 126 |
| 18 | 408+00 | 410+50 | | | 11 | 140 |
| 18 | 409+50 | 410+75 | Road | 50 | 27 | |
| 24 | 411+00 | 412+25 | | | 48 | 50 |
| 32 | 412+25 | 416+00 | | | 29 | 120 |
| 12 | 416+00 | 419+25 | | | 12 | 75 |
| 24 | 419+50 | 421+50 | | | 21 | 51 |
| 8 | 24 | 421+50 | 422+75 | Stream | 28 | 54 |
| 32 | 422+75 | 425+00 | | | 5 | 128 |

Re-route Area
 SOURCE: Pennsylvania Erosion and Sediment Pollution Control Manual, Page 372

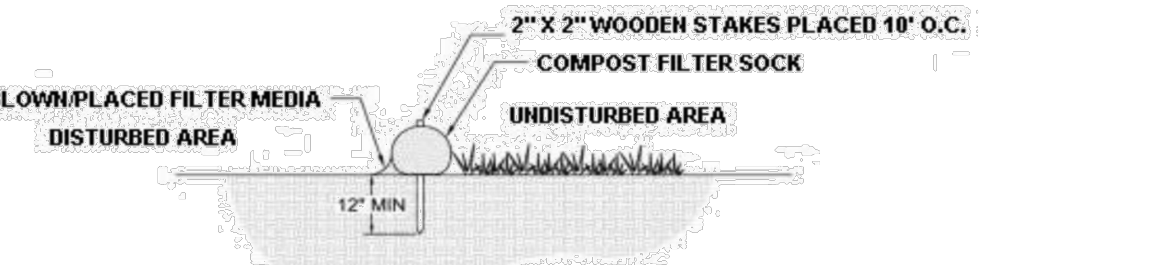
E&S WORKSHEET #1
Compost Filter Sock
 PROJECT NAME: ATLANTIC SUNRISE PROPOSED GAS PIPELINE
 LOCATION: LANCASTER COUNTY
 PREPARED BY: ESS DATE: 03/20/2017
 CHECKED BY: AJB DATE: 04/10/2017



| MILEPOST NO. | Sta. In. | Sta. Out. | LOCATION | TYPE | SLOPE PERCENT | SLOPE LENGTH ABOVE BARRIER (FT) |
|--------------|----------|-----------|----------------|-------------|---------------|---------------------------------|
| 8 | 32 | 425+25 | 428+25 | | 14 | 350 |
| 18 | 428+25 | 429+50 | Stream | 5 | 255 | |
| 32 | 428+50 | 432+25 | | | 14 | 350 |
| 24 | 434+00 | 434+00 | Stream/Road | 2 | 500 | |
| 24 | 434+00 | 438+00 | | | 5 | 290 |
| M-0405 | 24 | 438+25 | 5+25 | | 17 | 156 |
| 12 | 440+00 | 440+00 | | | 6 | 474 |
| 18 | 8+50 | 12+00 | | | 11 | 131 |
| 12 | 12+00 | 12+75 | | | 8 | 40 |
| 12 | 12+75 | 22+00 | | | 16 | 107 |
| 9 | 12 | 22+25 | 22+75 | Stream/Road | 9 | 69 |
| 18 | 22+75 | 23+50 | | | 35 | 46 |
| 18 | 13+50 | 25+25 | | | 12 | 133 |
| 18 | 25+50 | 29+75 | | | 23 | 75 |
| 18 | 29+75 | 32+25 | Wetland/Stream | 68 | 17 | |
| M-0503 | 18 | 32+25 | 0+00 | | 17 | 222 |
| 24 | 51+25 | 55+75 | | | 24 | 114 |
| 18 | 56+00 | 59+50 | | | 14 | 193 |
| M-0405 | 18 | 11+75 | 46+50 | | 7 | 250 |
| 12 | 46+50 | 47+50 | Road | 18 | 28 | |
| 32 | 47+00 | 51+00 | | | 20 | 235 |
| 24 | 51+25 | 55+75 | | | 24 | 114 |
| 18 | 56+00 | 59+50 | | | 14 | 193 |
| 12 | 59+50 | 60+00 | Stream | 22 | 40 | |
| 12 | 178+00 | 62+00 | | | 30 | 34 |
| 32 | 62+25 | 64+00 | | | 11 | 298 |
| 32 | 68+25 | 68+25 | | | 27 | 21 |
| 18 | 70+25 | 71+50 | | | 11 | 140 |
| 12 | 71+00 | 72+00 | | | 12 | 121 |
| 12 | 75+75 | 76+50 | Stream/Road | 40 | 12 | |
| 18 | 76+50 | 84+29 | | | 14 | 125 |
| M-0417 | 18 | 0+00 | 1+50 | | 33 | 208 |
| 18 | 3+50 | 3+50 | Stream | 17 | 117 | |
| 24 | 3+50 | 53+75 | | | 18 | 200 |
| 10 | 18 | 53+75 | 53+50 | Stream | 46 | 25 |
| 24 | 53+50 | 53+50 | | | 19 | 96 |
| 18 | 53+50 | 53+50 | | | 7 | 279 |
| 18 | 53+75 | 53+75 | Road | 5 | 260 | |
| 12 | 540+00 | 540+00 | Road | 33 | 14 | |

Re-route Area
 SOURCE: Pennsylvania Erosion and Sediment Pollution Control Manual, Page 372

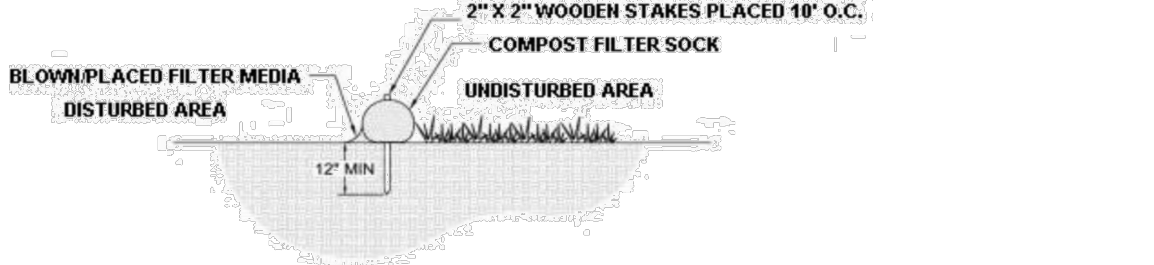
E&S WORKSHEET #1
Compost Filter Sock
 PROJECT NAME: ATLANTIC SUNRISE PROPOSED GAS PIPELINE
 LOCATION: LANCASTER COUNTY
 PREPARED BY: ESS DATE: 03/20/2017
 CHECKED BY: AJB DATE: 04/10/2017



| MILEPOST NO. | Sta. In. | Sta. Out. | LOCATION | TYPE | SLOPE PERCENT | SLOPE LENGTH ABOVE BARRIER (FT) |
|--------------|----------|-----------|---------------------|--------------------|---------------|---------------------------------|
| 12 | 540+25 | 545+50 | | | 8 | 145 |
| 24 | 547+00 | 550+00 | | | 8 | 134 |
| 24 | 550+00 | 555+00 | | | 7 | 328 |
| 24 | 553+75 | 563+00 | | | 19 | 87 |
| 18 | 563+00 | 569+75 | | | 16 | 146 |
| 24 | 569+75 | 574+00 | | | 8 | 147 |
| 12 | 574+50 | 575+00 | Stream | 2 | 138 | |
| 11 | 32 | 575+25 | 580+00 | | 6 | 521 |
| 12 | 580+25 | 581+25 | Wetland/Stream | 3 | 36 | |
| 12 | 581+50 | 586+75 | | | 4 | 141 |
| 12 | 586+75 | 587+75 | Wetland/Stream | 5 | 70 | |
| 12 | 587+75 | 589+75 | | | 8 | 77 |
| 24 | 589+75 | 597+00 | | | 7 | 147 |
| 18 | 597+25 | 599+25 | | | 10 | 223 |
| 12 | 600+75 | 603+00 | | | 7 | 105 |
| 18 | 603+50 | 603+50 | Road | 25 | 83 | |
| 12 | 604+00 | 604+00 | Road | 36 | 10 | |
| 18 | 604+25 | 608+75 | | | 12 | 150 |
| 12 | 609+00 | 639+00 | | | 9 | 148 |
| 12 | 673+00 | 674+00 | | | 12 | 70 |
| 24 | 674+00 | 681+00 | | | 10 | 137 |
| 18 | 681+50 | 684+50 | | | 11 | 175 |
| M-0248 | 32 | 684+75 | 2+00 | | 10 | 320 |
| 13 | 18 | 0+00 | 0+00 | HDD Pull Back Area | 16 | 109 |
| 24 | 2+00 | 7+75 | | | 15 | 90 |
| 18 | 7+50 | 9+25 | Road/Stream | 18 | 138 | |
| 18 | 9+50 | 16+50 | | | 20 | 86 |
| 18 | 16+50 | 18+25 | | | 23 | 62 |
| 32 | 17+50 | 20+75 | Road | 29 | 152 | |
| 18 | 20+75 | 21+00 | | | 19 | 131 |
| M-0434 | 18 | 21+50 | 2+00 | | 17 | 72 |
| 12 | 215+00 | 215+00 | Road | 18 | 72 | |
| 12 | 0+00 | 2+25 | | | 15 | 69 |
| 12 | 2+25 | 3+00 | Wetland/Road | 14 | 71 | |
| 12 | 2+75 | 4+75 | | | 13 | 95 |
| 12 | 4+75 | 5+25 | Stream | 8 | 87 | |
| 12 | 5+25 | 7+00 | | | 9 | 113 |
| 12 | 7+00 | 9+25 | Wetland/Stream/Road | 11 | 102 | |
| 12 | 8+50 | 13+00 | | | 19 | 69 |

Re-route Area
 SOURCE: Pennsylvania Erosion and Sediment Pollution Control Manual, Page 372

E&S WORKSHEET #1
Compost Filter Sock
 PROJECT NAME: ATLANTIC SUNRISE PROPOSED GAS PIPELINE
 LOCATION: LANCASTER COUNTY
 PREPARED BY: ESS DATE: 03/20/2017
 CHECKED BY: AJB DATE: 04/10/2017



| MILEPOST NO. | Sta. In. | Sta. Out. | LOCATION | TYPE | SLOPE PERCENT | SLOPE LENGTH ABOVE BARRIER (FT) |
|--------------|----------|-----------|----------|---------|---------------|---------------------------------|
| M-0434 | 18 | 23+00 | 23+50 | Stream | 19 | 86 |
| 12 | 23+50 | 24+00 | Road | 18 | 45 | |
| 24 | 24+00 | 24+00 | | | 16 | 185 |
| 18 | 24+00 | 24+00 | | | 14 | 155 |
| 12 | 24+00 | 24+00 | Wetland | 15 | 90 | |
| 24 | 24+00 | 24+00 | | | 14 | 110 |
| 14 | 12 | 24+00 | 24+00 | Road | 12 | 73 |
| 18 | 24+00 | 24+00 | | | 17 | 123 |
| 24 | 24+00 | 24+00 | | | 12 | 91 |
| 12 | 24+00 | 24+00 | Road | 7 | 83 | |
| M-0206 | 24 | 250+50 | 2+50 | | 13 | 105 |
| 12 | 2+25 | 2+50 | Road | 4 | 46 | |
| 12 | 2+25 | 3+00 | Wetland | 12 | 46 | |
| M-0208 | 4 | 3+25 | 3+25 | | 12 | 159 |
| M-0188 | 18 | 3+75 | 3+75 | Wetland | 23 | 97 |
| 18 | 5+25 | 5+50 | Wetland | 12 | 199 | |
| 18 | 5+25 | 5+50 | Wetland | 23 | 72 | |
| 12 | 5+50 | 6+25 | Road | 18 | 46 | |
| 18 | 6+25 | 11+00 | Wetland | 10 | 169 | |
| 18 | 11+00 | 12+25 | Wetland | 12 | 107 | |
| 18 | 12+50 | 12+50 | | | 12 | 140 |
| 24 | 12+50 | 12+50 | | | 24 | 89 |
| 12 | 12+50 | 12+50 | Stream | 6 | 59 | |
| 24 | 12+50 | 12+50 | | | 10 | 139 |
| 12 | 12+50 | 12+50 | | | 3 | 13 |
| 18 | 12+50 | 12+50 | | | 19 | 82 |
| 15 | 18 | 788+25 | 788+00 | Road | 12 | 180 |
| 12 | 795+00 | 796+25 | Road | 7 | 35 | |
| 12 | 796+25 | 796+25 | Road | 8 | 167 | |
| 18 | 796+75 | 799+75 | | | 15 | 131 |
| 18 | 799+75 | 801+25 | | | 15 | 96 |
| 18 | 801+25 | 806+00 | | | 14 | 100 |
| 24 | 806+00 | 809+25 | | | 32 | 46 |
| 18</ | | | | | | |

TABLE 1: SEDIMENT BARRIER SUMMARY

E&S WORKSHEET #1
Compost Filter Sock

PROJECT NAME: ATLANTIC SUNRISE PROPOSED GAS PIPELINE
 LOCATION: LANCASTER COUNTY
 PREPARED BY: ESS DATE: 03/20/2017
 CHECKED BY: AUB DATE: 04/10/2017

| MILEPOST NO. | Sta. In. | BEGIN STA. | END STA. | TYPE | SLOPE PERCENT | SLOPE LENGTH ABOVE BARRIER (FT) |
|--------------|----------|------------|-----------|--------|---------------|---------------------------------|
| 15 | 12 | 824+00 | to 824+00 | | 2 | 281 |
| 16 | 24 | 824+00 | to 849+75 | Road | 7 | 122 |
| | 24 | 849+75 | to 849+00 | | 3 | 12 |
| | 24 | 849+00 | to 850+75 | | 4 | 157 |
| | 12 | 851+00 | to 853+25 | | 2 | 144 |
| M-0185 | 24 | 0+25 | to 4+00 | | 4 | 136 |
| | 12 | 5+00 | to 5+00 | Road | 9 | 121 |
| | 24 | 5+00 | to 868+50 | | 6 | 242 |
| M-0289 | 24 | 869+00 | to 0+75 | | 4 | 615 |
| | 18 | 0+75 | to 4+75 | | 13 | 151 |
| | 12 | 4+75 | to 6+00 | | 2 | 133 |
| | 12 | 6+50 | to 7+00 | Road | 10 | 17 |
| M-0289 | 12 | 7+50 | to 8+50 | | 3 | 132 |
| | 12 | 8+50 | to 10+00 | | 8 | 139 |
| | 12 | 12+75 | to 14+25 | Road | 4 | 62 |
| | 12 | 18+25 | to 21+00 | | 7 | 116 |
| 17 | 24 | 895+75 | to 897+25 | | 7 | 145 |
| | 12 | 897+75 | to 898+00 | Stream | 12 | 71 |
| | 24 | 898+00 | to 907+50 | | 12 | 118 |
| | 18 | 907+50 | to 910+50 | Road | 9 | 248 |
| | 12 | 910+50 | to 910+50 | | 9 | 42 |
| | 24 | 911+00 | to 923+50 | | 20 | 108 |
| | 32 | 923+75 | to 925+00 | | 2 | 1200 |
| | 18 | 929+50 | to 932+00 | | 8 | 257 |
| | 24 | 933+75 | to 938+25 | | 10 | 301 |
| | 12 | 938+25 | to 941+50 | | 4 | 307 |
| | 12 | 941+75 | to 941+75 | Road | 4 | 121 |
| | 18 | 942+25 | to 942+25 | Road | 8 | 264 |
| | 32 | 942+25 | to 944+50 | | 4 | 764 |
| | 12 | 944+50 | to 955+25 | | 6 | 139 |
| 18 | 12 | 955+25 | to 956+00 | Stream | 3 | 126 |
| | 24 | 955+75 | to 958+50 | | 7 | 190 |
| | 32 | 959+00 | to 964+50 | | 5 | 600 |
| | 12 | 964+50 | to 964+50 | Road | 8 | 163 |
| | 12 | 964+75 | to 964+75 | Road | 8 | 303 |
| | 24 | 965+00 | to 974+50 | | 5 | 374 |
| | 12 | 973+75 | to 975+25 | Road | 3 | 40 |
| | 24 | 978+50 | to 994+75 | | 2 | 400 |
| | 12 | 994+75 | to 995+25 | Stream | 5 | 186 |

Reroute Area
 SOURCE: Pennsylvania Erosion and Sediment Pollution Control Manual, Page 372

E&S WORKSHEET #1
Compost Filter Sock

PROJECT NAME: ATLANTIC SUNRISE PROPOSED GAS PIPELINE
 LOCATION: LANCASTER COUNTY
 PREPARED BY: ESS DATE: 03/20/2017
 CHECKED BY: AUB DATE: 04/10/2017

| MILEPOST NO. | Sta. In. | BEGIN STA. | END STA. | TYPE | SLOPE PERCENT | SLOPE LENGTH ABOVE BARRIER (FT) |
|--------------|----------|------------|------------|----------------|---------------|---------------------------------|
| 32 | 18 | 1688+00 | to 1690+75 | | 5 | 180 |
| | 12 | 1690+75 | to 1691+25 | Road | 5 | 100 |
| | 12 | 1691+25 | to 1698+25 | | 7 | 180 |
| | 24 | 1698+50 | to 1703+25 | | 6 | 149 |
| | 12 | 1703+50 | to 1704+25 | Wetland/Stream | 6 | 160 |
| | 24 | 1704+25 | to 1707+50 | | 13 | 177 |
| | 24 | 1708+00 | to 1718+00 | | 6 | 455 |
| | 24 | 1718+00 | to 1722+25 | | 8 | 126 |
| | 24 | 1722+25 | to 1728+25 | | 6 | 386 |
| | 24 | 1728+25 | to 1728+00 | | 6 | 200 |
| 33 | 12 | 1740+25 | to 1743+00 | Stream | 2 | 200 |
| | 24 | 1745+50 | to 1747+00 | | 6 | 117 |
| | 12 | 1747+50 | to 1747+50 | Road | 4 | 85 |
| | 24 | 1747+75 | to 1761+25 | | 9 | 114 |
| | 12 | 1761+50 | to 1765+00 | | 4 | 301 |
| | 12 | 1765+00 | to 1765+50 | Road | 3 | 200 |
| | 24 | 1765+50 | to 1771+75 | | 4 | 221 |
| | 12 | 1772+50 | to 1772+75 | Stream | 10 | 30 |
| | 12 | 1773+75 | to 1773+75 | | 9 | 113 |
| | 12 | 1775+00 | to 1779+25 | Wetland | 3 | 69 |
| | 24 | 1779+50 | to 1787+50 | | 4 | 177 |
| | 12 | 1789+00 | to 1789+00 | Road | 2 | 50 |
| | 12 | 1791+00 | to 1795+00 | | 11 | 85 |
| | 18 | 1796+00 | to 1797+50 | | 14 | 193 |
| | 24 | 1797+00 | to 1798+00 | Stream | 15 | 230 |
| M-0164 | 32 | 1798+00 | to 2+25 | | 10 | 115 |
| | 24 | 2+25 | to 50+25 | | 6 | 149 |
| | 12 | 50+25 | to 77+50 | Road | 6 | 135 |
| | 18 | 77+50 | to 181+00 | | 7 | 271 |
| | 24 | 181+00 | to 1820+00 | | 2 | 197 |
| | 12 | 1820+00 | to 1820+50 | Stream | 4 | 81 |
| | 24 | 1820+50 | to 1825+00 | | 5 | 235 |
| | 12 | 1825+00 | to 1825+75 | Road | 2 | 175 |
| | 24 | 1826+00 | to 1830+00 | | 3 | 189 |
| | 24 | 1830+25 | to 1831+00 | | 4 | 5 |
| | 24 | 1830+75 | to 1843+25 | Road | 4 | 166 |
| | 18 | 1843+25 | to 1849+50 | | 3 | 424 |
| | 24 | 1849+50 | to 1851+00 | | 10 | 75 |
| | 12 | 1851+75 | to 1851+50 | Road | 9 | 122 |
| | 32 | 1852+50 | to 1862+50 | | 11 | 336 |
| | 24 | 1862+75 | to 1866+75 | | 5 | 157 |

Reroute Area
 SOURCE: Pennsylvania Erosion and Sediment Pollution Control Manual, Page 372

E&S WORKSHEET #1
Compost Filter Sock

PROJECT NAME: ATLANTIC SUNRISE PROPOSED GAS PIPELINE
 LOCATION: LANCASTER COUNTY
 PREPARED BY: ESS DATE: 03/20/2017
 CHECKED BY: AUB DATE: 04/10/2017

| MILEPOST NO. | Sta. In. | BEGIN STA. | END STA. | TYPE | SLOPE PERCENT | SLOPE LENGTH ABOVE BARRIER (FT) |
|--------------|----------|------------|------------|----------------|---------------|---------------------------------|
| 35 | 24 | 1871+75 | to 1871+75 | | 3 | 302 |
| | 12 | 1872+25 | to 1874+75 | | 3 | 251 |
| M-0278 | 12 | 1875+00 | to 3+00 | | 8 | 185 |
| | 12 | 4+50 | to 4+50 | Road | 8 | 68 |
| | 12 | 4+50 | to 4+75 | Road | 8 | 57 |
| | 12 | 4+75 | to 1+00 | Road | 7 | 181 |
| | 12 | 6+00 | to 18+25 | | 5 | 93 |
| 36 | 24 | 1897+75 | to 1900+50 | | 4 | 207 |
| | 12 | 1900+50 | to 1904+25 | Stream/Wetland | 5 | 158 |
| | 12 | 1904+50 | to 1905+00 | Road | 7 | 40 |
| | 24 | 1905+00 | to 1914+25 | | 9 | 122 |
| | 32 | 1914+50 | to 1919+50 | | 6 | 484 |
| | 32 | 1919+75 | to 1921+00 | | 10 | 377 |
| | 24 | 1923+50 | to 1921+00 | | 10 | 61 |

Reroute Area
 SOURCE: Pennsylvania Erosion and Sediment Pollution Control Manual, Page 372

E&S WORKSHEET #1
Compost Filter Sock

PROJECT NAME: ATLANTIC SUNRISE PROPOSED GAS PIPELINE
 LOCATION: LANCASTER COUNTY
 PREPARED BY: ESS DATE: 03/20/2017
 CHECKED BY: AUB DATE: 04/10/2017

| MILEPOST NO. | Sta. In. | BEGIN STA. | END STA. | TYPE | SLOPE PERCENT | SLOPE LENGTH ABOVE BARRIER (FT) |
|--------------|----------|------------|------------|------|---------------|---------------------------------|
| 37 | 24 | 1921+75 | to 1921+75 | | 3 | 302 |
| | 12 | 1922+25 | to 1924+75 | | 3 | 251 |
| M-0278 | 12 | 1925+00 | to 3+00 | | 8 | 185 |
| | 12 | 4+50 | to 4+50 | Road | 8 | 68 |
| | 12 | 4+50 | to 4+75 | Road | 8 | 57 |
| | 12 | 4+75 | to 1+00 | Road | 7 | 181 |
| | 12 | 6+00 | to 18+25 | | 5 | 93 |
| 38 | 24 | 1921+75 | to 1921+75 | | 3 | 302 |
| | 12 | 1922+25 | to 1924+75 | | 3 | 251 |
| M-0278 | 12 | 1925+00 | to 3+00 | | 8 | 185 |
| | 12 | 4+50 | to 4+50 | Road | 8 | 68 |
| | 12 | 4+50 | to 4+75 | Road | 8 | 57 |
| | 12 | 4+75 | to 1+00 | Road | 7 | 181 |
| | 12 | 6+00 | to 18+25 | | 5 | 93 |
| 39 | 24 | 1921+75 | to 1921+75 | | 3 | 302 |
| | 12 | 1922+25 | to 1924+75 | | 3 | 251 |
| M-0278 | 12 | 1925+00 | to 3+00 | | 8 | 185 |
| | 12 | 4+50 | to 4+50 | Road | 8 | 68 |
| | 12 | 4+50 | to 4+75 | Road | 8 | 57 |
| | 12 | 4+75 | to 1+00 | Road | 7 | 181 |
| | 12 | 6+00 | to 18+25 | | 5 | 93 |
| 40 | 24 | 1921+75 | to 1921+75 | | 3 | 302 |
| | 12 | 1922+25 | to 1924+75 | | 3 | 251 |
| M-0278 | 12 | 1925+00 | to 3+00 | | 8 | 185 |
| | 12 | 4+50 | to 4+50 | Road | 8 | 68 |
| | 12 | 4+50 | to 4+75 | Road | 8 | 57 |
| | 12 | 4+75 | to 1+00 | Road | 7 | 181 |
| | 12 | 6+00 | to 18+25 | | 5 | 93 |

Reroute Area
 SOURCE: Pennsylvania Erosion and Sediment Pollution Control Manual, Page 372

TABLE 3: WATERBODIES CROSSED BY CPLS PIPELINE AND ACCESS ROADS IN LANCASTER COUNTY

| Waterbody ID | Waterbody Name | Milepost | County | Township | Stream Type | State Water Quality Use Classification - Designated Use | State Fishery Classification | Crossing Method | Crossing Window |
|--------------|---------------------------------------|----------------|-----------|-----------|--------------|---|------------------------------|-------------------|--------------------------------|
| WW-T81-1001 | UNT to Pequea Creek (WW-T81-1001) | M-04050.43 | Lancaster | Conestoga | Ephemeral | WWF, MF | None | Dam-and-Pump | None |
| WW-T81-001 | UNT to Pequea Creek (WW-T81-001) | M-04050.57 | Lancaster | Conestoga | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T65-1005 | UNT to Pequea Creek (WW-T65-1005) | M-0405 1.13 | Lancaster | Conestoga | Intermittent | WWF, MF | None | | None |
| WW-T25-1001 | UNT to Pequea Creek (WW-T25-1001) | M-04051.45 | Lancaster | Conestoga | Intermittent | WWF, MF | None | Dam-and-Pump | None |
| WW-T65-1002 | UNT to Pequea Creek (WW-T65-1002) | M-04170.06 | Lancaster | Conestoga | Ephemeral | WWF, MF | None | Dam-and-Pump | None |
| WW-T10-1003 | UNT to Pequea Creek (WW-T10-1003) | 10.11 | Lancaster | Conestoga | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T35-1002 | UNT to Conestoga River (WW-T35-1002) | 10.88 | Lancaster | Conestoga | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T35-1002A | UNT to Conestoga River (WW-T35-1002A) | 11.00 | Lancaster | Conestoga | Perennial | WWF, MF | None | Conventional Bore | None |
| WW-T86-1001 | UNT to Conestoga River (WW-T86-1001) | 11.12 | Lancaster | Conestoga | Intermittent | WWF, MF | None | Dam-and-Pump | None |
| WW-T84-1001 | UNT to Conestoga River (WW-T84-1001) | 11.17 | Lancaster | Conestoga | Perennial | WWF, MF | None | N/A | None |
| WW-T85-1002 | UNT to Conestoga River (WW-T85-1002) | 12.13 | Lancaster | Conestoga | Intermittent | WWF, MF | None | HDD | None |
| WW-T10-001 | UNT to Fishing Creek (WW-T10-001) | 0.25 | Lancaster | Drumore | Perennial | HQ-CWF, MF | Wild Trout Waters | Flume | January 1 through September 30 |
| WW-T10-003 | Muddy Run (WW-T10-003) | MOC-0147 0.59 | Lancaster | Drumore | Perennial | TSF, MF | Approved Trout Waters | Dam-and-Pump | None |
| WW-T10-003 | Muddy Run (WW-T10-003) | MOC-0147 0.59 | Lancaster | Drumore | Perennial | TSF, MF | Approved Trout Waters | Dam-and-Pump | None |
| WW-T10-003A | UNT to Muddy Run (WW-T10-003A) | MOC-0147 0.59 | Lancaster | Drumore | Ephemeral | TSF, MF | Approved Trout Waters | Dam-and-Pump | None |
| WW-T20-1001 | UNT to Conestoga River (WW-T20-1001) | 12.32 | Lancaster | Manor | Perennial | WWF, MF | None | HDD | None |
| WW-T36-1001A | UNT to Conestoga River (WW-T36-1001A) | 12.40 | Lancaster | Manor | Perennial | WWF, MF | None | HDD | None |
| WW-T49-1001 | UNT to Witmer Run (WW-T49-1001) | M-02480.16 | Lancaster | Manor | Perennial | WWF, MF | None | Flume | None |
| WW-T36-1002A | UNT to Witmers Run (WW-T36-1002A) | M-0248 0.34 | Lancaster | Manor | Perennial | WWF, MF | None | | None |
| WW-T92-1002 | UNT to Witmers Run (WW-T92-1002) | M-0434 0.10 | Lancaster | Manor | Ephemeral | WWF, MF | None | N/A | None |
| WW-T36-1004 | UNT to Witmers Run (WW-T36-1004) | M-0434 0.16 | Lancaster | Manor | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T92-1003 | UNT to Witmer Run (WW-T92-1003) | M-0434 0.25 | Lancaster | Manor | Ephemeral | WWF, MF | None | Dam-and-Pump | None |
| WW-T36-1006 | UNT to Witmers Run (WW-T36-1006) | 13.88 | Lancaster | Manor | Intermittent | WWF, MF | None | Dam-and-Pump | None |
| WW-T36-1007 | Indian Run (WW-T36-1007) | 14.64 | Lancaster | Manor | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T20-1005 | UNT to Indian Run (WW-T20-1005) | 15.33 | Lancaster | Manor | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T24-1001 | Witmers Run (WW-T24-1001) | 17.01 | Lancaster | Manor | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T11-2001 | Stamans Run (WW-T11-2001) | 18.10 | Lancaster | Manor | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T11-2002 | UNT to Stamans Run (WW-T11-2002) | 18.85 | Lancaster | Manor | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T10-004 | Tuquan Creek (WW-T10-004) | MOC-0184 0.849 | Lancaster | Martic | Perennial | HQ-CWF, MF | Wild Trout Waters | Dam-and-Pump | January 1 through September 30 |
| WW-T62-001 | UNT to Trout Run (WW-T62-001) | 5.34 | Lancaster | Martic | Intermittent | HQ-CWF, MF | Class A Wild Trout | Dam-and-Pump | April 2 through September 30 |
| WW-T10-100 | UNT to Climbers Run (WW-T10-100) | 7.15 | Lancaster | Martic | Perennial | CWF, MF | None | Dam-and-Pump | None |
| WW-T20-002 | Climbers Run (WW-T20-002) | 7.47 | Lancaster | Martic | Perennial | CWF, MF | None | Dam-and-Pump | None |
| WW-T31-002A | UNT to Pequea Creek (WW-T31-002A) | 8.00 | Lancaster | Martic | Ephemeral | WWF, MF | None | Dam-and-Pump | None |
| WW-T31-002 | UNT to Pequea Creek (WW-T31-002) | 8.00 | Lancaster | Martic | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T65-001 | UNT to Pequea Creek (WW-T65-001) | 8.11 | Lancaster | Martic | Perennial | WWF, MF | None | Dam-and-Pump | None |
| WW-T31-003 | Pe | | | | | | | | |

TABLE 2: TEMPORARY CLEAN WATER DIVERSION SUMMARY

| MILE POST | TEMPORARY DIVERSION SUMMARY - LANCASTER COUNTY, PENNSYLVANIA | | | | | | | | | | | WATERBODY** | | | | TEMP. PIPE (CLEAN WATER) CROSSING | | | |
|-----------|--|----------------|---------------------|--------------|------------------|---------|---------|------------------|-------------------------|----------------|--------------------|--------------------|-------------|-----------------|------------------------|-----------------------------------|---------|-----------------------------------|------------|
| | DIVERSION ID | DIVERSION TYPE | BOTTOM WIDTH B (FT) | DEPTH D (FT) | TOP WIDTH W (FT) | Z1 (FT) | Z2 (FT) | TEMPORARY LINING | PERMANENT LINING | DISCHARGE TYPE | INITIAL WIDTH (FT) | INITIAL WIDTH (FT) | LENGTH (FT) | RIP RAP SIZE*** | RIP RAP THICKNESS (IN) | R.O.W. SLOPE (%) | Q (CFS) | TEMPORARY PIPE SIZE DIAMETER (IN) | # OF PIPES |
| 0 | 0.01* | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | WATERBODY | 2 | 2 | 8 | R-4 | 18 | N/A | 1.58 | N/A | N/A |
| 0 | 0.02* | SWALE | 2 | 2 | 10 | 2 | 2 | SC250 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 15 | 9.68 | 12 | 2 |
| 0 | 0.03* | SWALE | 2 | 3 | 14 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 6 | 26.78 | 12 | 5 |
| 0 | 0.04* | SWALE | 2 | 3 | 14 | 2 | 2 | W3000 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 6 | 49.28 | 18 | 5 |
| 1 | 1.01A | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 11 | 2.08 | 12 | 1 |
| 1 | 1.01B | SWALE | 2 | 2 | 10 | 2 | 2 | P550 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 10 | 7.52 | 12 | 2 |
| 1 | 1.02 | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 8 | 2.4 | 12 | 1 |
| 1 | 1.03A | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 5 | 3.52 | 12 | 1 |
| 1 | 1.03B | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 6 | 6.56 | 12 | 2 |
| 1 | 1.03C | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 6 | 5.12 | 12 | 1 |
| 1 | 1.04 | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 9 | 2.08 | 12 | 1 |
| 2 | 2.01A | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 10 | 3.52 | 12 | 1 |
| 2 | 2.01B | SWALE | 2 | 3 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 10 | 5.76 | 12 | 1 |
| 4 | 4.01* | SWALE | 2 | 2 | 10 | 2 | 2 | SC250 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 4 | 20.48 | 12 | 4 |
| 4 | 4.02* | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 16 | 6.08 | 12 | 1 |
| 5 | 5.01* | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 13 | 8.78 | 12 | 2 |
| 5 | 5.02* | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 15 | 3.83 | 12 | 1 |
| 5 | 5.03* | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 2 | 7.43 | 12 | 2 |
| 6 | 6.01 | SWALE | 2 | 3 | 14 | 2 | 2 | SC250 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 7 | 49.44 | 18 | 5 |
| 6 | 6.02 | FILTER SOCK | 0 | 1.25 | 8.1 | 0 | 6.5 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 11 | 2.56 | 12 | 1 |
| 6 | 6.03 | FILTER SOCK | 0 | 1 | 9.0 | 0 | 9 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 9 | 0.96 | 12 | 1 |
| 6 | 6.04 | SWALE | 2 | 2 | 10 | 2 | 2 | W3000 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 21 | 19.2 | 12 | 4 |
| 7 | 7.01 | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | WATERBODY | 2 | 2 | 8 | R-4 | 18 | N/A | 2.24 | N/A | N/A |
| 7 | 7.02A | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 1 | 5.6 | 12 | 2 |
| 7 | 7.02B | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 2 | 3.84 | 12 | 1 |
| 7 | 7.02C | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 1 | 7.68 | 12 | 2 |
| 7 | 7.02D | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 1 | 7.84 | 12 | 2 |
| 7 | 7.02E | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 1 | 6.72 | 12 | 2 |
| 7 | 7.02F | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 1 | 3.52 | 12 | 1 |
| 7 | 7.03 | FILTER SOCK | 0 | 1 | 7.0 | 0 | 7 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 21 | 0.8 | 12 | 1 |
| 8 | 8.01 | FILTER SOCK | 0 | 1.6 | 8.5 | 0 | 5.4 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 18 | 1.76 | 12 | 1 |
| 8 | 8.02 | FILTER SOCK | 0 | 1.25 | 10.0 | 0 | 8 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 8 | 1.28 | 12 | 1 |
| 9 | 9.01 | FILTER SOCK | 0 | 1.6 | 7.1 | 0 | 4.5 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 18 | 1.44 | 12 | 1 |
| 9 | 9.02 | FILTER SOCK | 0 | 1.6 | 7.9 | 0 | 5 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 22 | 0.8 | 12 | 1 |
| 9 | 9.03 | FILTER SOCK | 0 | 1.6 | 4.7 | 0 | 3 | W3000 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 20 | 0.96 | 12 | 1 |
| 9 | 9.04 | FILTER SOCK | 0 | 1.6 | 4.0 | 0 | 2.5 | W3000 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 7 | 0.32 | 12 | 1 |
| 10 | 10.01 | FILTER SOCK | 0 | 1.6 | 8.1 | 0 | 5.1 | C125 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 13 | 3.04 | 12 | 1 |
| 10 | 10.02 | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 10 | 3.04 | 12 | 1 |
| 10 | 10.03 | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 18 | 7.2 | 12 | 2 |
| 11 | 11.01 | SWALE | 2 | 2 | 10 | 2 | 2 | SC250 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 4 | 4.96 | 12 | 1 |
| 11 | 11.02 | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 8 | 2.72 | 12 | 1 |
| 13 | 13.01A | SWALE | 2 | 2 | 10 | 2 | 2 | SC250 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 22 | 2.88 | 12 | 1 |
| 13 | 13.01B | SWALE | 2 | 2 | 10 | 2 | 2 | P550 | REINFORCED VEGETATION | WATERBODY | 2 | 2 | 8 | R-4 | 18 | N/A | 2.72 | N/A | N/A |
| 13 | 13.02 | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 18 | 6.72 | 12 | 2 |
| 13 | 13.03A | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 17 | 6.72 | 12 | 2 |
| 13 | 13.03B | SWALE | 2 | 2 | 10 | 2 | 2 | C125 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 10 | 7.04 | 12 | 2 |
| 13 | 13.04 | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 9 | 21.6 | 12 | 4 |
| 13 | 13.05 | FILTER SOCK | 0 | 1 | 6.5 | 0 | 6.5 | SC150 | REINFORCED VEGETATION | WATERBODY | 2 | 2 | 8 | R-4 | 18 | N/A | 0.64 | N/A | N/A |
| 13 | 13.06 | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | WATERBODY | 2 | 2 | 8 | R-4 | 18 | N/A | 7.04 | N/A | N/A |
| 14 | 14.01 | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 13 | 7.68 | 12 | 2 |
| 14 | 14.02A | FILTER SOCK | 0 | 1.6 | 7.4 | 0 | 4.6 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 11 | 5.12 | 12 | 1 |
| 14 | 14.02B | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 13 | 7.04 | 12 | 2 |
| 14 | 14.03A | SWALE | 2 | 2 | 10 | 2 | 2 | C125 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 9 | 6.24 | 12 | 2 |
| 14 | 14.03B | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 10 | 4.96 | 12 | 1 |
| 14 | 14.04 | SWALE | 2 | 2 | 10 | 2 | 2 | P550 | REINFORCED VEGETATION | WATERBODY | - | - | - | - | - | 6 | 45.6 | 18 | 5 |
| 15 | 15.01 | SWALE | 2 | 2 | 10 | 2 | 2 | C125 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 9 | 5.76 | 12 | 1 |
| 15 | 15.02A | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 14 | 8 | 12 | 2 |
| 15 | 15.02B | SWALE | 2 | 2 | 10.0 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 11 | 3.36 | 12 | 1 |
| 15 | 15.03 | FILTER SOCK | 0 | 1.25 | 8.1 | 0 | 6.5 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 11 | 3.2 | 12 | 1 |
| 16 | 16.01 | SWALE | 2 | 2.5 | 12 | 2 | 2 | SC250 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 2 | 35.2 | 18 | 4 |
| 16 | 16.02 | SWALE | 2 | 2.5 | 12 | 2 | 2 | SC250 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 2 | 38.08 | 18 | 4 |
| 16 | 16.03 | SWALE | 2 | 2.5 | 12 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 3 | 15.04 | 12 | 3 |
| 17 | 17.01 | SWALE | 2 | 2 | 10 | 2 | 2 | SC250 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 5 | 9.6 | 12 | 2 |
| 17 | 17.02 | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 1 | 3.52 | 12 | 1 |
| 21 | 21.01 | FILTER SOCK | 0 | 1.6 | 5.5 | 0 | 3.5 | P550 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 26 | 0.8 | 12 | 1 |
| 21 | 21.02 | FILTER SOCK | 0 | 1 | 6.5 | 0 | 6.5 | W3000 | REINFORCED VEGETATION | WATERBODY | 2 | 2 | 8 | R-4 | 18 | N/A | 0.96 | N/A | N/A |
| 23 | 23.01 | FILTER SOCK | 0 | 1.6 | 6.3 | 0 | 4 | SC250 | REINFORCED VEGETATION | WATERBODY | 2 | 2 | 8 | R-4 | 18 | N/A | 0.64 | N/A | N/A |
| 23 | 23.02A | FILTER SOCK | 0 | 1.25 | 9.1 | 0 | 7.3 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 19 | 3.68 | 12 | 1 |
| 23 | 23.02B | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 12 | 7.36 | 12 | 2 |
| 23 | 23.02C | SWALE | 2 | 2 | 10 | 2 | 2 | C125 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 12 | 6.88 | 12 | 2 |
| 24 | 24.01 | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 5 | 3.68 | 12 | 1 |
| 24 | 24.02A | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 7 | 6.4 | 12 | 2 |
| 24 | 24.02B | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 2 | 7.04 | 12 | 2 |
| 30 | 30.01A | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 9 | 5.92 | 12 | 1 |
| 30 | 30.01B | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 9 | 5.6 | 12 | 1 |
| 31 | 31.01 | FILTER SOCK | 2 | 2 | 10 | 2 | 2 | C125 | REINFORCED VEGETATION | WATERBODY | 2 | 2 | 8 | R-4 | 18 | N/A | 2.72 | N/A | N/A |
| 31 | 31.02A | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 14 | 7.2 | 12 | 2 |
| 31 | 31.02B | FILTER SOCK | 0 | 1.25 | 9.5 | 0 | 7.6 | P550 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 11 | 4 | 12 | 1 |
| 32 | 32.01A | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 7 | 4.96 | 12 | 1 |
| 32 | 32.01B | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 7 | 3.84 | 12 | 1 |
| 35 | 35.01 | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 2 | 6.56 | 18 | 1 |
| 35 | 35.02A | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 1 | 7.68 | 18 | 1 |
| 35 | 35.02B | SWALE | 2 | 2 | 10 | 2 | 2 | SC150 | REINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 1 | 4.96 | 12 | 2 |
| 35 | 35.02C | SWALE | 2 | 2 | 10 | 2 | 2 | S75 | UNREINFORCED VEGETATION | TEMP. PIPE | - | - | - | - | - | 1 | 7.52 | 12 | 2</ |

TABLE 5: LOCATIONS OF ACID SOILS ALONG CPLS PIPELINE IN LANCASTER COUNTY

| MP Begin | MP End | County | Map Unit Symbol | pH | MP Begin | MP End | County | Map Unit Symbol | pH | MP Begin | MP End | County | Map Unit Symbol | pH | MP Begin | MP End | County | Map Unit Symbol | pH |
|-------------|-------------|-----------|-----------------|-----|-------------|-------------|-----------|-----------------|-------|-------------|-------------|-----------|-----------------|-----|-------------|-------------|-----------|-----------------|-----|
| M-0352.0.00 | M-0352.0.03 | LANCASTER | Gbb | 6.0 | M-0503.0.06 | M-0503.0.17 | LANCASTER | MaC | 6.2 | 17.19 | 17.30 | LANCASTER | LdB | 5.8 | M-0162.0.74 | M-0162.0.78 | LANCASTER | HaB | 5.7 |
| 0.04 | 0.18 | LANCASTER | Gbb | 6.0 | M-0503.0.17 | M-0503.0.23 | LANCASTER | MaD | 5.3 | 17.30 | 17.35 | LANCASTER | PeC | 5.8 | M-0162.0.78 | M-0162.0.94 | LANCASTER | HaA | 6.5 |
| 0.18 | 0.19 | LANCASTER | MaB | 5.0 | M-0405.0.87 | M-0405.0.91 | LANCASTER | MaD | 6.2 | 17.35 | 17.43 | LANCASTER | PeD | 6.5 | M-0162.0.94 | M-0162.0.98 | LANCASTER | HaB | 5.7 |
| 0.19 | 0.19 | LANCASTER | MbD | 6.2 | M-0405.0.91 | M-0405.0.97 | LANCASTER | MaC | 5.3 | M-0225.0.00 | M-0225.0.06 | LANCASTER | PeD | 6.5 | M-0162.0.98 | M-0162.1.02 | LANCASTER | HaA | 6.5 |
| 0.19 | 0.24 | LANCASTER | MaB | 5.0 | M-0405.0.97 | M-0405.1.03 | LANCASTER | MaD | 6.2 | 17.50 | 17.60 | LANCASTER | PeD | 6.5 | 29.02 | 29.17 | LANCASTER | HaA | 6.5 |
| 0.24 | 0.27 | LANCASTER | GbB | 6.8 | M-0405.1.03 | M-0405.1.08 | LANCASTER | PeC | 6.5 | 17.60 | 17.78 | LANCASTER | LdB | 5.8 | 29.17 | 29.23 | LANCASTER | BdB | 5.1 |
| 0.27 | 0.32 | LANCASTER | MaD | 6.2 | M-0405.1.08 | M-0405.1.15 | LANCASTER | PeE | 5.3 | 17.78 | 17.86 | LANCASTER | GdB | 6.8 | 29.23 | 29.23 | LANCASTER | DBA | 6.2 |
| 0.32 | 0.35 | LANCASTER | GbC | 5.4 | M-0405.1.15 | M-0405.1.20 | LANCASTER | MbD | 6.2 | 17.86 | 17.90 | LANCASTER | LdB | 5.8 | 29.23 | 29.38 | LANCASTER | BdB | 5.1 |
| 0.35 | 0.41 | LANCASTER | MaD | 6.2 | M-0405.1.20 | M-0405.1.34 | LANCASTER | GbB | 6.0 | 17.90 | 17.97 | LANCASTER | LdA | 6.5 | 29.38 | 29.42 | LANCASTER | BdC | 5.1 |
| 0.41 | 0.44 | LANCASTER | GbD | 5.9 | M-0405.1.34 | M-0405.1.40 | LANCASTER | LdB | 6.2 | 17.97 | 18.06 | LANCASTER | LdB | 5.8 | 29.42 | 29.49 | LANCASTER | BdB | 5.1 |
| 0.44 | 0.49 | LANCASTER | CbC | 5.0 | M-0405.1.40 | M-0405.1.43 | LANCASTER | MaC | 5.3 | 18.06 | 18.12 | LANCASTER | Ln | 6.5 | 29.49 | 29.55 | LANCASTER | BdC | 5.1 |
| 0.49 | 0.52 | LANCASTER | CbB | 5.0 | M-0405.1.43 | M-0405.1.49 | LANCASTER | MbF | 5.3 | 18.12 | 18.14 | LANCASTER | PeD | 6.5 | 29.55 | 29.61 | LANCASTER | BdB | 5.1 |
| 0.52 | 0.55 | LANCASTER | CbC | 5.0 | M-0405.1.49 | M-0405.1.52 | LANCASTER | PeC | 6.5 | 18.14 | 18.22 | LANCASTER | PeC | 6.5 | 29.61 | 29.73 | LANCASTER | BdA | 5.0 |
| 0.55 | 0.60 | LANCASTER | GbD | 5.9 | M-0405.1.52 | M-0405.1.58 | LANCASTER | LdB | 5.8 | 18.22 | 18.42 | LANCASTER | CnB | 5.8 | 29.73 | 29.93 | LANCASTER | BdB | 5.1 |
| 0.60 | 0.65 | LANCASTER | CbC | 5.0 | M-0405.1.58 | M-0405.1.60 | LANCASTER | PeE | 5.3 | 18.42 | 18.52 | LANCASTER | CbB | 5.0 | 29.93 | 30.19 | LANCASTER | BeD | 5.0 |
| 0.65 | 0.70 | LANCASTER | CbB | 5.0 | M-0405.1.60 | M-0417.0.09 | LANCASTER | PeE | 5.3 | M-0417.0.00 | M-0417.0.09 | LANCASTER | GbC | 5.4 | 30.19 | 30.24 | LANCASTER | BdB | 5.1 |
| 0.70 | 0.72 | LANCASTER | CbC | 5.0 | M-0417.0.09 | M-0417.0.13 | LANCASTER | PeC | 6.5 | 18.59 | 18.78 | LANCASTER | MaD | 6.2 | 30.24 | 30.28 | LANCASTER | BdA | 5.0 |
| 0.72 | 0.85 | LANCASTER | CbC | 5.0 | 10.02 | 10.09 | LANCASTER | PeE | 6.5 | 18.78 | 18.83 | LANCASTER | CbB | 5.0 | 30.28 | 30.31 | LANCASTER | BdB | 5.1 |
| 0.85 | 0.96 | LANCASTER | CbC | 5.0 | 10.09 | 10.14 | LANCASTER | PeE | 5.3 | 18.83 | 18.97 | LANCASTER | GbC | 5.4 | 30.31 | 30.32 | LANCASTER | BdC | 5.1 |
| M-0147.0.00 | M-0147.0.23 | LANCASTER | CbB | 5.0 | 10.14 | 10.20 | LANCASTER | PeD | 6.5 | M-0466.0.00 | M-0466.0.02 | LANCASTER | BdC | 5.1 | M-0466.0.00 | M-0466.0.02 | LANCASTER | BdC | 5.1 |
| M-0147.0.23 | M-0147.0.33 | LANCASTER | CbB | 5.0 | 10.20 | 10.26 | LANCASTER | GbB | 6.0 | 19.03 | 19.17 | LANCASTER | CbC | 5.0 | M-0308.0.01 | M-0308.0.01 | LANCASTER | BdC | 5.1 |
| M-0147.0.33 | M-0147.0.50 | LANCASTER | CbB | 5.0 | 10.26 | 10.43 | LANCASTER | GbC | 5.4 | 19.17 | 19.27 | LANCASTER | CbB | 5.0 | M-0308.0.01 | M-0308.0.09 | LANCASTER | BdC | 5.0 |
| M-0147.0.50 | M-0147.0.55 | LANCASTER | MbF | 5.3 | 10.43 | 10.48 | LANCASTER | MaD | 6.2 | 19.27 | 19.36 | LANCASTER | MaB | 5.0 | M-0308.0.09 | M-0308.0.13 | LANCASTER | BdC | 5.1 |
| M-0147.0.55 | M-0147.0.60 | LANCASTER | Hg | 6.7 | 10.48 | 10.55 | LANCASTER | GbC | 5.4 | 19.36 | 19.39 | LANCASTER | MaC | 5.3 | 30.46 | 30.48 | LANCASTER | BdC | 5.1 |
| M-0147.0.60 | M-0147.0.63 | LANCASTER | MbD | 6.2 | 10.55 | 10.88 | LANCASTER | MaD | 6.2 | 19.39 | 19.51 | LANCASTER | CbC | 5.0 | 30.48 | 30.58 | LANCASTER | BdB | 5.1 |
| M-0147.0.63 | M-0147.0.77 | LANCASTER | CbB | 5.0 | 10.88 | 11.05 | LANCASTER | Nc | 6.7 | 19.51 | 19.65 | LANCASTER | CbB | 5.0 | 30.58 | 30.63 | LANCASTER | BdC | 5.1 |
| M-0147.0.77 | M-0147.0.81 | LANCASTER | MaD | 6.2 | 11.05 | 11.17 | LANCASTER | PeD | 6.5 | 19.65 | 19.81 | LANCASTER | MaD | 6.2 | 30.63 | 30.70 | LANCASTER | BeD | 5.0 |
| M-0147.0.81 | M-0147.0.86 | LANCASTER | MaB | 5.0 | 11.17 | 11.27 | LANCASTER | PeC | 6.5 | 19.81 | 19.86 | LANCASTER | MbF | 5.3 | 30.70 | 30.80 | LANCASTER | BdB | 5.1 |
| M-0147.0.86 | M-0147.0.92 | LANCASTER | MaB | 5.0 | 11.27 | 11.30 | LANCASTER | GbD | 5.9 | M-0389.0.00 | M-0389.0.11 | LANCASTER | MbF | 5.3 | 30.80 | 30.84 | LANCASTER | BdA | 5.0 |
| 1.81 | 1.82 | LANCASTER | MaB | 5.0 | 11.30 | 11.36 | LANCASTER | MaC | 5.3 | M-0389.0.11 | M-0389.0.16 | LANCASTER | FF | 5.0 | 30.84 | 30.87 | LANCASTER | BdB | 5.1 |
| 1.82 | 2.02 | LANCASTER | GbB | 6.0 | 11.36 | 11.41 | LANCASTER | GbD | 5.9 | 20.02 | 20.03 | LANCASTER | FF | 5.0 | 30.87 | 30.89 | LANCASTER | BeD | 5.0 |
| 2.02 | 2.08 | LANCASTER | MaC | 5.3 | 11.41 | 11.46 | LANCASTER | GbC | 5.4 | 20.03 | 20.14 | LANCASTER | LdB | 5.8 | 30.89 | 31.03 | LANCASTER | BdC | 5.1 |
| 2.08 | 2.13 | LANCASTER | MbD | 5.3 | 11.46 | 11.55 | LANCASTER | MbD | 6.2 | 20.14 | 20.19 | LANCASTER | PeD | 6.5 | 31.03 | 31.09 | LANCASTER | BdB | 5.1 |
| 2.13 | 2.21 | LANCASTER | MbD | 6.2 | 11.55 | 11.67 | LANCASTER | GbC | 5.4 | 20.19 | 20.24 | LANCASTER | PeC | 6.5 | 31.09 | 31.14 | LANCASTER | BdC | 5.1 |
| M-0324.0.00 | M-0324.0.20 | LANCASTER | MbD | 6.2 | 11.67 | 11.76 | LANCASTER | MbF | 5.3 | 20.24 | 20.42 | LANCASTER | MaB | 5.0 | 31.14 | 31.17 | LANCASTER | BeD | 5.0 |
| M-0324.0.20 | M-0324.0.22 | LANCASTER | CbC | 5.0 | 11.76 | 11.99 | LANCASTER | MaC | 5.3 | 20.42 | 20.81 | LANCASTER | DdB | 6.2 | 31.17 | 31.19 | LANCASTER | Bm | 4.8 |
| M-0324.0.22 | M-0324.0.05 | LANCASTER | CbC | 5.0 | 11.99 | 12.05 | LANCASTER | MaD | 6.2 | 20.81 | 21.03 | LANCASTER | CbB | 5.0 | 31.19 | 31.31 | LANCASTER | BeD | 5.0 |
| M-0324.0.05 | M-0324.0.11 | LANCASTER | CbC | 5.0 | 12.05 | 12.20 | LANCASTER | CbC | 5.0 | M-0396.0.00 | M-0396.0.17 | LANCASTER | CbB | 5.0 | 31.31 | 31.35 | LANCASTER | BdC | 5.1 |
| M-0324.0.11 | M-0324.0.28 | LANCASTER | GbB | 6.0 | 12.20 | 12.26 | LANCASTER | MbF | 5.3 | M-0396.0.17 | M-0396.0.25 | LANCASTER | GdB | 6.8 | 31.35 | 31.52 | LANCASTER | BdB | 5.0 |
| M-0324.0.28 | M-0324.0.30 | LANCASTER | CbA | 5.0 | 12.26 | 12.29 | LANCASTER | GbB | 6.0 | M-0396.0.25 | M-0396.0.32 | LANCASTER | CbB | 5.0 | 31.52 | 31.57 | LANCASTER | BeD | 5.0 |
| 2.73 | 2.99 | LANCASTER | CbA | 5.0 | 12.29 | 12.31 | LANCASTER | Nc | 6.7 | M-0396.0.32 | M-0396.0.39 | LANCASTER | MaB | 5.0 | 31.57 | 31.60 | LANCASTER | Bm | 4.8 |
| 2.99 | 3.03 | LANCASTER | CbB | 5.0 | 12.31 | 12.34 | LANCASTER | W | Water | 21.44 | 21.58 | LANCASTER | MaB | 5.0 | 31.60 | 31.67 | LANCASTER | BdC | 5.1 |
| 3.03 | 3.06 | LANCASTER | MaC | 5.3 | 12.34 | 12.43 | LANCASTER | PeE | 5.3 | 21.58 | 21.65 | LANCASTER | CbB | 5.0 | 31.67 | 31.98 | LANCASTER | BdB | 5.1 |
| M-0184.0.00 | M-0184.0.02 | LANCASTER | MaC | 5.3 | 12.43 | 12.43 | LANCASTER | LdB | 5.8 | 21.65 | 21.72 | LANCASTER | MbF | 5.3 | 31.98 | 32.13 | LANCASTER | BdC | 5.1 |
| M-0184.0.02 | M-0184.0.38 | LANCASTER | CbB | 5.0 | 12.43 | 12.52 | LANCASTER | PeC | 6.5 | M-0484.0.00 | M-0484.0.13 | LANCASTER | MbF | 5.3 | 32.13 | 32.21 | LANCASTER | BdB | 5.1 |
| M-0184.0.38 | M-0184.0.49 | LANCASTER | GbB | 6.0 | 12.52 | 12.56 | LANCASTER | PeE | 5.3 | 21.84 | 21.85 | LANCASTER | MbF | 5.3 | 32.21 | 32.25 | LANCASTER | BdC | 5.1 |
| M-0184.0.49 | M-0184.0.66 | LANCASTER | CbB | 5.0 | 12.56 | 12.60 | LANCASTER | PeD | 6.5 | 21.85 | 21.89 | LANCASTER | MaC | 5.3 | 32.25 | 32.29 | LANCASTER | BdA | 5.0 |
| M-0184.0.66 | M-0184.0.82 | LANCASTER | GbC | 5.4 | 12.60 | 12.62 | LANCASTER | PeC | 6.5 | 21.89 | 21.99 | LANCASTER | CbC | 5.0 | 32.29 | 32.32 | LANCASTER | BeD | 5.0 |
| M-0184.0.82 | M-0184.0.85 | LANCASTER | GdB | 6.8 | 12.62 | 12.69 | LANCASTER | PeD | 6.5 | 21.99 | 22.10 | LANCASTER | CbB | 5.0 | 32.32 | 32.34 | LANCASTER | BdC | 5.1 |
| M-0184.0.85 | M-0184.0.88 | LANCASTER | GbD | 5.9 | 12.69 | 12.77 | LANCASTER | PeC | 6.5 | 22.10 | 22.16 | LANCASTER | MaB | 5.0 | 32.34 | 32.36 | LANCASTER | BdB | 5.1 |
| M-0184.0.88 | M-0184.0.90 | LANCASTER | GbC | 5.4 | 12.77 | 12.81 | LANCASTER | PeD | 6.5 | 22.16 | 22.26 | LANCASTER | MbF | 5.3 | 32.36 | 32.38 | LANCASTER | BdC | 5.1 |
| M-0184.0.90 | M-0184.1.03 | LANCASTER | CbB | 5.0 | 12.81 | 12.87 | LANCASTER | PeC | 6.5 | 22.26 | 22.31 | LANCASTER | MaD | 6.2 | 32.38 | 32.40 | LANCASTER | BeD | 5.0 |
| M-0184.1.03 | M-0184.1.11 | LANCASTER | CbA | 5.0 | 12.87 | 13.00 | LANCASTER | PeD | 6.5 | 22.31 | 22.39 | LANCASTER | Ln | 6.5 | 32.40 | 32.46 | LANCASTER | BdC | 5.1 |
| M-0184.1.11 | M-0184.1.14 | LANCASTER | CbB | 5.0 | 13.00 | 13.00 | LANCASTER | PeC | 6.5 | 22.39 | 22.55 | LANCASTER | MaD | 6.2 | 32.46 | 32.74 | LANCASTER | BdB | 5.1 |
| 4.19 | 4.41 | LANCASTER | CbB | 5.0 | M-0248.0.00 | M-0248.0.02 | LANCASTER | PeC | 6.5 | 22.55 | 22.57 | LANCASTER | MbD | 6.2 | 32.74 | 32.78 | LANCASTER | BdC | 5.1 |
| 4.41 | 4.47 | LANCASTER | MaC | 5.3 | M-0248.0.02 | M-0248.0.14 | LANCASTER | PeD | 6.5 | M-0248.0.02 | M-0248.0.14 | LANCASTER | PeD | 6.5 | 32.78 | 32.84 | LANCASTER | BeD | 5.0 |
| 4.47 | 4.50 | LANCASTER | GbC | 5.4 | M-0248.0.14 | M-0248.0.19 | LANCASTER | Nc | 6.7 | 22.66 | 22.68 | LANCASTER | MbB | 5.3 | 32.84 | 32.88 | LANCASTER | BdC | 5.1 |
| 4.50 | 4.58 | LANCASTER | MbD | 6.2 | M-0248.0.19 | M-0248.0.33 | LANCASTER | MaD | 6.2 | M-0192.0.00 | M-0192.0.09 | LANCASTER | MbB | 5.3 | 32.88 | 32.93 | LANCASTER | BdB | |

TABLE 7: RESOURCE SPECIFIC AVOIDANCE AND MINIMIZATION MEASURES

| Resource Type (Stream or Wetland) | Resource Name | Resource ID | MP | Chapter 93 Classification, Wetland Classification | Stream Type (Perennial, Intermittent, Ephemeral) | Stream Trout Status (Class A Wild Trout, Wild Trout, Trout Stocked) | Cowardin Classification | Limits of Disturbance (LOD) Adjustments (Supporting Information for Technical Deficiencies #18 and 21) | Field Routing Adjustments within 600-foot Wide Corridor (Supporting Information for Technical Deficiency #15)* | Stream Bank Stabilization BMP | Width of Erosion Control Blanket Required for Stream Bank Stabilization (ft) |
|-----------------------------------|---------------------------------------|------------------------|-------------|---|--|---|-------------------------|--|---|-------------------------------|--|
| Stream | UNT to Fishing Creek | WW-T10-001A | 0.24 | HQ-CWF, MF | Perennial | None | R3 | The LOD was modified to eliminate impacts to WW-T10-001A. | This feature is no longer impacted based on LOD reductions. | N/A | N/A |
| Stream | UNT to Fishing Creek (WW-T10-001) | WW-T10-001 | 0.25 | HQ-CWF, MF | Perennial | Wild Trout Waters | R3 | LOD has been reduced to 90' to minimize impacts to WW-T10-001. | The pipeline was routed in this location to avoid stream WW-T10-001 (with LOD reduction) and wetland W-T10-001, cross stream WW-T10-001 at a perpendicular angle, and minimize clearing of the riparian forest buffer of the stream. | SBR with S125 fabric | 100 |
| Wetland | W-T31-001B | W-T31-001B | M-0147 0.57 | EV | N/A | N/A | P55 | The LOD was modified to eliminate impacts to W-T31-001B. | This feature is no longer impacted based on LOD reductions. | N/A | N/A |
| Stream | Muddy Run (WW-T10-003) | WW-T10-003 | M-0147 0.59 | TSF, MF | Perennial | Approved Trout Waters | R3 | LOD has been reduced to 75' to minimize impacts to WW-T10-003. | This wetland and stream system (WW-T10-003, WW-T10-003A, W-T10-003C) is associated with a documented bog turtle population. The crossing of this system was field routed to occur in an area previously disturbed by existing powerline ROWs, thereby reducing habitat fragmentation and construction in previously unimpacted areas. The proposed route also avoids bog turtle core habitat patches, including an occupied habitat patch northeast of the route. Based on approximately two years of radio telemetry tracking within this habitat patch, bog turtles have not moved to within 570 feet of the LOD. Finally, several nearby tributaries and wetland areas are also avoided by utilizing this crossing area. These include Streams WW-T30-001, WW-T30-001A and wetlands W-T31-001A and W-T31-001B. Complete avoidance of this wetland system was not possible because it extends a significant distance along Muddy Run. | SBR with S125 fabric | 50 |
| Stream | UNT to Muddy Run (WW-T10-003A) | WW-T10-003A | M-0147 0.59 | TSF, MF | Ephemeral | Approved Trout Waters | R6 | LOD has been reduced to 75' to minimize impacts to WW-T10-003A. | Refer to the notes for WW-T10-003 for a discussion of routing considerations at this location. | SBR with S125 fabric | 50 |
| Wetland | N/A | W-T10-003C | M-0147 0.60 | EV | N/A | N/A | PFD | LOD has been reduced to 75' to minimize impacts to W-T10-003C. | Refer to the notes for WW-T10-003 for a discussion of routing considerations at this location. | N/A | N/A |
| Stream | Tuquan Creek (WW-T10-004) | WW-T10-004 | M-0184 0.85 | HQ-CWF, MF | Perennial | Wild Trout Waters | R3 | LOD has been reduced to 75' to minimize impacts to WW-T10-004. | The pipeline was routed in this location to provide a perpendicular crossing of stream WW-T10-004, and to avoid a bridge/culvert area of the stream. | SBR with S125 fabric | 100 |
| Wetland | N/A | W-T62-001A/ W-T62-001C | M-0354 0.00 | EV | N/A | N/A | PEM, PFO | LOD has been reduced to 75' to minimize impacts to W-T62-001. | The pipeline was routed in this location to provide a perpendicular crossing of wetland W-T62-001. In addition, a PI was shifted further north during field routing in order to execute a turn outside of the system. | N/A | N/A |
| Stream | UNT to Trout Run (WW-T62-001) | WW-T62-001 | 5.34 | HQ-CWF, MF | Intermittent | Class A Wild Trout | N/A | LOD has been reduced to 75' to minimize impacts to WW-T62-001. | The pipeline was routed in this location to provide a perpendicular crossing of stream WW-T62-001. In addition, a PI was shifted further north during field routing in order to execute a turn outside of the system. | SBR with S125 fabric | 100 |
| Wetland | N/A | W-T10-101A W-T10-101C | 7.11 | None | N/A | N/A | PEM, PFO | LOD reduced to 90' to minimize impacts to W-T10-101. Further LOD reduction was not possible due to adjacent stream and road crossings, and steep topography on both sides of the wetland. The additional workpiece will be used for equipment crossing and spoil storage to accommodate a safe and efficient crossing. | The pipeline was routed in this location to collocate with a transmission line ROW, thereby reducing forest clearing and habitat fragmentation. This alignment also allows stream WW-T10-101 to be crossed at a perpendicular angle, and W-T10-101 to be crossed along its eastern margin, and W-T10-101 to be avoided entirely. Other route alignments in this area to avoid this wetland are constrained by steep slopes, road and trail crossings, and residential areas to the east and west of the current alignment. | N/A | N/A |
| Stream | UNT to Climbers Run (WW-T10-100) | WW-T10-100 | 7.15 | CWF, MF | Perennial | None | R3 | LOD has been reduced to 90' to minimize impacts to WW-T10-100. | The pipeline was routed in this location to collocate with a transmission line ROW, thereby reducing forest clearing and habitat fragmentation. This alignment also allows stream WW-T10-100 to be crossed at a perpendicular angle, wetland W-T10-101 to be crossed along its eastern margin, and W-T10-101 to be avoided entirely. Other route alignments in this area to avoid this wetland are constrained by steep slopes, road and trail crossings, and residential areas to the east and west of the current alignment. | SBR with S125 fabric | 50 |
| Wetland | N/A | W-T10-100 | 7.15 | None | N/A | N/A | PFO | The LOD was modified to eliminate impacts to W-T10-100. | This feature is no longer impacted based on LOD reductions. | N/A | N/A |
| Stream | Climbers Run (WW-T20-002) | WW-T20-002 | 7.47 | CWF, MF | Perennial | None | R3 | LOD has been reduced to 90' to minimize impacts to WW-T20-002. | The pipeline was routed in this location to follow the edge of an agricultural field and minimize impacts to the riparian forest buffer of this stream, as well as to provide a perpendicular crossing of the stream. | SBR with S125 fabric | 50 |
| Wetland | N/A | W-T20-002 | 7.47 | None | N/A | N/A | P55 | The LOD was modified to eliminate impacts to W-T20-002. | This feature is no longer impacted based on LOD reductions. | N/A | N/A |
| Stream | UNT to Pequea Creek (WW-T31-002A) | WW-T31-002A | 8 | WWF, MF | Ephemeral | None | R3 | LOD has been reduced to 90' to minimize impacts to WW-T31-002A. | The pipeline was routed in this location to avoid paralleling the floodplain and riparian corridor of Pequea Creek by remaining east of the floodplain. The crossing location and orientation of streams WW-T31-002A and WW-T31-002 was constrained by the need to avoid side slope construction in a forested area. Nevertheless, both streams are crossed at roughly perpendicular angles and a meandering portion of stream WW-T31-002 in the western portion of the routing corridor is avoided. | SBR with S125 fabric | 50 |
| Stream | UNT to Pequea Creek (WW-T31-002) | WW-T31-002 | 8 | WWF, MF | Perennial | None | R3 | LOD has been reduced to 90' to minimize impacts to WW-T31-002. | The pipeline was routed in this location to avoid paralleling the floodplain and riparian corridor of Pequea Creek by remaining east of the floodplain. The crossing location and orientation of streams WW-T31-002A and WW-T31-002 was constrained by the need to avoid side slope construction in a forested area. Nevertheless, both streams are crossed at roughly perpendicular angles and a meandering portion of stream WW-T31-002 in the western portion of the routing corridor is avoided. | SBR with S125 fabric | 50 |
| Stream | UNT to Pequea Creek (WW-T65-001) | WW-T65-001 | 8.11 | WWF, MF | Perennial | None | N/A | The full LOD is needed at this crossing due to the adjacent steep slopes and P's. | The pipeline was routed in this location to cross the narrowest portion of the riparian forest buffer at a perpendicular angle. | SBR with S125 fabric | 50 |
| Stream | Pequea Creek (WW-T31-003) | WW-T31-003 | 8.2 | WWF, MF | Perennial | None | R3 | The full LOD is needed at this crossing due to a steep and rocky slope west of the stream, adjacent open cut road crossing, and the fence being a navigable water requiring A's to Navigation (ATON). | The pipeline was routed in this location to allow a PI and ATWS for the stream crossing to be located in agricultural fields on either side of the stream, limiting impacts to the riparian forest buffer. | SBR with S125 fabric | 50 |
| Stream | UNT to Pequea Creek (WW-T81-1001) | WW-T81-1001 | M-0405 0.43 | WWF, MF | Ephemeral | None | R6 | LOD has been reduced to 90' to minimize impacts to WW-T81-1001. | The pipeline was routed in this location to cross WW-T81-1001 at a perpendicular angle. | SBR with S125 fabric | 50 |
| Stream | UNT to Pequea Creek (WW-T81-001) | WW-T81-001 | M-0405 0.57 | WWF, MF | Perennial | None | R3 | LOD has been reduced to 85' to minimize impacts to WW-T81-001. | The pipeline was routed in this location to cross WW-T81-001 at a perpendicular angle, to avoid feeder stream WW-T81-001A, and to minimize impacts to wetland W-T81-001. | SBR with S125 fabric | 50 |
| Wetland | N/A | W-T81-001 | M-0405 0.58 | None | N/A | N/A | PEM | LOD has been reduced to 75' to minimize impacts to W-T81-001. | The pipeline was routed in this location to cross the western margin of the wetland and to cross stream WW-T81-001 at a perpendicular angle. | N/A | N/A |
| Wetland | N/A | W-T87-1001 | M-0405 1.13 | None | N/A | N/A | P55 | LOD has been reduced to 75' to minimize impacts to W-T87-1001. | The pipeline was routed in this location to only impact the southeast corner of the wetland and to entirely avoid the steep feeding wetland. | N/A | N/A |
| Stream | UNT to Pequea Creek (WW-T65-1005) | WW-T65-1005 | M-0405 1.13 | WWF, MF | Intermittent | None | R4 | LOD has been reduced to 75' to minimize impacts to WW-T65-1005. | The pipeline was routed in this location to cross the stream at a roughly perpendicular angle in an area where an existing powerline ROW and dirt road have already impacted the stream. | SBR with S125 fabric | 50 |
| Stream | UNT to Pequea Creek (WW-T25-1001) | WW-T25-1001 | M-0405 1.45 | WWF, MF | Intermittent | None | N/A | LOD has been reduced to 85' to minimize impacts to WW-T25-1001. | The pipeline was routed in this location to cross the narrowest portion of the riparian forest buffer at a perpendicular angle. | SBR with S125 fabric | 50 |
| Stream | UNT to Pequea Creek (WW-T65-1002) | WW-T65-1002 | M-0417 0.06 | WWF, MF | Ephemeral | None | N/A | LOD has been reduced to 90' to minimize impacts to WW-T65-1002. | The pipeline was routed in this location to avoid a braided area of the stream and a riparian wetland area (W-T70-1001) containing several seeps in the northern and southern portions of the routing corridor, respectively. | SBR with S125 fabric | 50 |
| Stream | UNT to Pequea Creek (WW-T10-1003) | WW-T10-1003 | 10.1 | WWF, MF | Perennial | None | R3 | LOD has been reduced to 90' to minimize impacts to WW-T10-1003. | The pipeline was routed in this location to cross the narrowest section of the riparian forest buffer and to avoid a braided area of the stream in the northern portion of the routing corridor. | SBR with S125 fabric | 50 |
| Stream | UNT to Conestoga River (WW-T35-1002) | WW-T35-1002 | 10.88 | WWF, MF | Perennial | None | R3 | LOD has been reduced to 90' to minimize impacts to WW-T35-1002. | The pipeline was routed in this location to follow the edge of an agricultural field and avoid impacting the riparian forest buffer, as well as to avoid impacting stream WW-T35-1002B in the southern portion of the routing corridor. | SBR with S125 fabric | 50 |
| Stream | UNT to Conestoga River (WW-T35-1002A) | WW-T35-1002A | 11 | WWF, MF | Perennial | None | R3 | WW-T35-1002A is being crossed via conventional bore. | The pipeline was routed in this location to follow the edge of an agricultural field and avoid impacting the riparian forest buffer of this stream. In addition, the proposed route allows for a safe and effective conventional bore crossing. | SBR with S125 fabric | 50 |
| Wetland | N/A | W-T35-1001 | 11 | None | N/A | N/A | PEM | W-T35-1001 is being crossed via conventional bore. | The pipeline was routed in this location to follow the edge of an agricultural field and avoid impacting the riparian forest buffer of stream WW-T35-1002A. In addition, the proposed route allows for a safe and effective conventional bore crossing. | N/A | N/A |
| Stream | UNT to Conestoga River (WW-T86-1001) | WW-T86-1001 | 11.12 | WWF, MF | Intermittent | None | R4 | LOD has been reduced to 75' to minimize impacts to WW-T86-1001. | The pipeline was routed in this location to cross the stream at a perpendicular angle in an active pasture where the riparian corridor has been cleared and the stream is regularly impacted by horses/livestock. | SBR with S125 fabric | 50 |
| Wetland | N/A | W-T86-1001 | 11.13 | None | N/A | N/A | PEM | LOD has been reduced to 75' to minimize impacts to W-T86-1001. | The pipeline was routed in this location to cross the riparian wetland at a perpendicular angle in an active pasture where the riparian corridor has been cleared and the stream is regularly impacted by horses/livestock. | N/A | N/A |
| Stream | UNT to Conestoga River (WW-T84-1001) | WW-T84-1001 | 11.17 | WWF, MF | Perennial | None | R3 | LOD has been reduced to 75' to minimize impacts to this stream that is not crossed by the pipeline centerline. | The pipeline was routed in this location to avoid steep side slopes immediately to the north. | SBR with S125 fabric | 50 |
| Stream | UNT to Conestoga River (WW-T85-1002) | WW-T85-1002 | 12.13 | WWF, MF | Intermittent | None | R4 | This unnamed tributary to the Conestoga River is being crossed via HDD. | The workspace for the Conestoga River HDD was developed to minimize tree clearing as much as possible. | N/A | N/A |
| Stream | Conestoga River (WW-T20-1001) | WW-T20-1001 | 12.32 | WWF, MF | Perennial | None | R3 | The Conestoga River is being crossed via HDD. | The workspace for the Conestoga River HDD was developed to minimize tree clearing as much as possible. | N/A | N/A |
| Stream | UNT to Conestoga River (WW-T36-1001A) | WW-T36-1001A | 12.4 | WWF, MF | Perennial | None | R3 | This unnamed tributary to the Conestoga River is being crossed via HDD. | The workspace for the Conestoga River HDD was developed to minimize tree clearing as much as possible. | N/A | N/A |
| Stream | UNT to Wimer Run (WW-T49-1001) | WW-T49-1001 | M-0248 0.16 | WWF, MF | Perennial | None | N/A | The full LOD is needed at this crossing due to steep slopes and an adjacent open cut road crossing. | The pipeline was routed in this location to cross the stream at a perpendicular angle, and to avoid additional small tributaries in the northern portion of the routing corridor. | SBR with S125 fabric | 50 |
| Stream | UNT to Wimer Run (WW-T36-1002A) | WW-T36-1002A | M-0248 0.34 | WWF, MF | Perennial | None | R3 | The LOD was reduced to 90' to minimize impacts to WW-T36-1002A. | The alignment in this area was shifted 150' southwest and upslope to avoid impacts to several other wetlands and streams. The current crossing of WW-T36-1002A occurs in the upper reaches of the stream where it is entirely ephemeral. By executing the realignment in this area, wetlands W-T36-1001, W-T36-1001-1 and streams WW-T36-1002, WW-T36-1002B, and WW-T42-1006 are avoided entirely. | SBR with S125 fabric | 50 |

Note: *The FERC Alignment Sheets provided in Attachment H-1 show field delineated streams and wetlands within the 300-foot wide environmental survey corridor, and surrounding land use features on an aerial base map.



| REVISIONS | | | | | | |
|-----------|------------|----|--|-------------|----------|-----------|
| NO. | DATE | BY | ISSUED FOR | DESCRIPTION | W.O. NO. | CHK. APP. |
| 0 | 08/26/2015 | BL | ISSUED FOR PADEP SUBMITTAL | | W0572385 | JLK SMK |
| 1 | 12/02/2015 | BL | ISSUED FOR PADEP RESUBMITTAL | | W0572385 | JLK SMK |
| 2 | Oct. 2016 | BL | PADEP TECHNICAL DEFICIENCY RESPONSE #1 | | W0572385 | JLK SMK |
| 3 | April 2017 | BL | PADEP TECHNICAL DEFICIENCY RESPONSE #2 | | W0572385 | JLK SMK |
| 4 | AUG 2017 | BL | PADEP TECHNICAL DEFICIENCY RESPONSE #3 | | W0572385 | JLK SMK |

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
 ATLANTIC SUNRISE PROJECT
 PROPOSED 42" CENTRAL PENN LINE SOUTH
 PENNSYLVANIA BEST MANAGEMENT PRACTICES AND
 QUANTITIES PLAN SET
 LANCASTER COUNTY, PENNSYLVANIA
 QUANTITY, CROSSING AND ACIDIC SOIL TABLES

WILLIAMS GAS PIPELINE

DRAWN BY: ELZ DATE: 05/15/15 ISSUED FOR BID: SCALE: _____
 CHECKED BY: JLK DATE: 07/02/15 ISSUED FOR CONSTRUCTION: REVISION: 4
 APPROVED BY: SMK DATE: 07/08/15 DRAWING NUMBER: 24-1600-70-28-A/LL113.9-BMP-LA-TB SHEET 6 OF 6

Drawn By & Date/Time: CScanzello Jul 28, 2017 -- 4:46pm
 Drawing Location & Name: G:\JOBS\14\14C\14C4909\DWG\BMP&DETAILS\PL_DNT14C4909(205)_LA-TB.dwg