

*Atlantic Sunrise Project – PA DEP Chapter 105 Joint Permit Application
Transcontinental Gas Pipe Line Company, LLC
Wyoming County*

**ATTACHMENT H -2
COUNTY SPECIFIC IMPACT MAPPING
(UNDER SEPARATE COVER)**

Revised July 2017

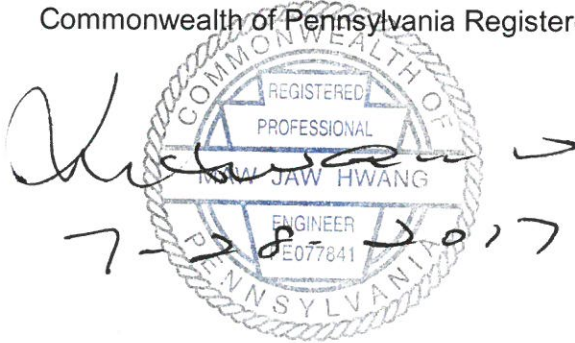
Project Name: Atlantic Sunrise Project – Wyoming County

PA DEP Application Number: E66-160

PA DEP APS Number: 878960

“I, Maw Jaw Hwang, do hereby certify pursuant to the penalties of 18 PA C.S.A. Sec 4904 to the best of my knowledge, information and belief, that the information contained in the accompanying plans, specifications and reports has been prepared in accordance with accepted engineering practice, is true and correct, and is in conformance with Chapter 105 of the rules and regulations of the Department of Environmental Protection.”

Commonwealth of Pennsylvania Registered Professional Engineer, PE 077841



7-28-2017



Transcontinental Gas Pipe Line Company LLC
ATLANTIC SUNRISE PROJECT
PROPOSED 30" CENTRAL PENN LINE NORTH
WATER OBSTRUCTION AND
ENCROACHMENT PERMIT IMPACT MAPS

M.P. 27.21 TO M.P. 50.58

WYOMING COUNTY, PENNSYLVANIA

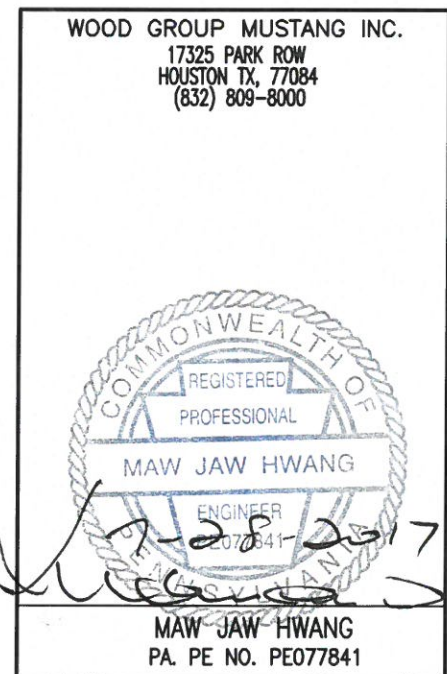
24-1601-70-09-A-02_Wyoming-PKG
Issued for PADEP Submittal #4
Rev. 5
07-28-2017

ISSUED DATE: JULY 28, 2017



Transcontinental Gas Pipe Line Company LLC
ATLANTIC SUNRISE PROJECT
PROPOSED 30" CENTRAL PENN LINE NORTH
WATER OBSTRUCTION AND
ENCROACHMENT PERMIT IMPACT MAPS

M.P. 27.21 TO M.P. 50.58
WYOMING COUNTY, PENNSYLVANIA



ISSUED FOR PADEP SUBMITTAL #4
ISSUED DATE: JULY 28, 2017

DRAWING NUMBER	DESCRIPTION	SHEET	REVISION
24-1601-70-20-A/27.21-02	INDEX SHEET	1 OF 8	5
24-1601-70-20-A/27.21-01	INDEX SHEET	2 OF 8	3
24-1601-70-20-A/27.21-01	INDEX SHEET	3 OF 8	0
24-1601-70-20-A/27.21-02	NOTES SHEET	4 OF 8	3
24-1601-70-14-A/27.21-02	PROJECT LOCATION KEY MAP	5 OF 8	4
24-1601-70-14-A/27.21-02	PROJECT LOCATION KEY MAP	6 OF 8	4
24-1601-70-14-A/27.21-02	PROJECT LOCATION KEY MAP	7 OF 8	4
24-1601-70-14-A/27.21-02	PROJECT LOCATION KEY MAP	8 OF 8	4
24-1601-70-20-A/M-0179-1.20-01	W-T76-18009A-1 / W-T76-18009A-2 / W-T76-18009A-3 & W-T76-18009C-1	1 OF 1	1
24-1601-70-09-A/M-0179-1.23-01	WW-T76-18005A	1 OF 3	1
24-1601-70-09-A/M-0179-1.23-01	WW-T76-18005A	2 OF 3	0
24-1601-70-09-A/M-0179-1.23-01	WW-T76-18005A	3 OF 3	0
24-1601-70-20-A/M-0179-1.36-01	W-T76-18007	1 OF 1	0
24-1601-70-09-A/M-0179-2.12-01	WW-T81-18003	1 OF 1	0
24-1601-70-20-A/M-0179-2.15-01	W-T81-18001A & W-T81-18001B	1 OF 1	0
24-1601-70-20-A/M-0179-3.21-01	W-T82-18005A-1 / W-T82-18005A-2	1 OF 1	0
24-1601-70-09-A/M-0179-3.21-01	WW-T82-18006 & WW-T82-18006C	1 OF 2	0
24-1601-70-09-A/M-0179-3.21-01	WW-T82-18006 & WW-T82-18006C	2 OF 2	0
24-1601-70-09-A/M-0179-3.54-01	WW-T82-18004	1 OF 1	0
24-1601-70-09-A/M-0179-3.64-01	WW-T82-18003	1 OF 1	0
24-1601-70-20-A/M-0179-3.88-01	W-T82-18003	1 OF 1	0
24-1601-70-09-A/M-0179-4.83-01	WW-T76-18001	1 OF 2	0
24-1601-70-09-A/M-0179-4.83-01	WW-T76-18001	2 OF 2	0
24-1601-70-20-A/M-0179-4.90-01	W-T83-18001 / W-T83-18001-1	1 OF 1	0
24-1601-70-09-A/M-0179-5.00-01	WW-T82-18008, WW-T82-18007A & WW-T76-18002	1 OF 2	0
24-1601-70-09-A/M-0179-5.00-01	WW-T82-18008, WW-T82-18007A & WW-T76-18002	2 OF 2	0
24-1601-70-09-A/M-0179-5.20-01	WW-T81-18001	1 OF 1	0
24-1601-70-20-A/M-0179-5.23-01	W-T81-18003C	1 OF 1	0
24-1601-70-20-A/M-0179-5.32-01	W-T81-18003A-2	1 OF 1	0
24-1601-70-20-A/M-0179-5.42-01	W-T82-18007, W-T82-18006C & W-T82-18006A-1 / W-T82-18006A-2	1 OF 2	0
24-1601-70-20-A/M-0179-5.42-01	W-T82-18007, W-T82-18006C & W-T82-18006A-1 / W-T82-18006A-2	2 OF 2	0
24-1601-70-09-A/M-0179-5.58-01	WW-T76-18007	1 OF 1	0
24-1601-70-09-A/M-0179-6.21-01	WW-T76-18003	1 OF 1	0

DRAWING NUMBER	DESCRIPTION	SHEET	REVISION
24-1601-70-20-A/M-0179-6.25-01	W-T76-18005A-1 / W-T76-18005A-2 & W-T76-18005B-1	1 OF 1	0
24-1601-70-09-A/M-0179-6.43-01	WW-T76-18003	1 OF 1	0
24-1601-70-20-A/AR-WY-021-01	W-T54-18010	1 OF 1	0
24-1601-70-20-A/M-0088-2.81-01	W-T57-18002-2	1 OF 1	0
24-1601-70-20-A/M-0088-3.15-01	W-T54-18005	1 OF 1	0
24-1601-70-09-A/M-0088-3.20-01	WWW-T54-18002A, WW-T54-18002 & WWW-T54-18002B	1 OF 1	0
24-1601-70-20-A/M-0088-3.73-01	W-T54-18006-3 / W-T54-18006-1 & W-T54-18007C	1 OF 2	0
24-1601-70-20-A/M-0088-3.73-01	W-T54-18006-3 / W-T54-18006-1 & W-T54-18007C	2 OF 2	0
24-1601-70-09-A/M-0088-3.80-01	WWW-T54-18003	1 OF 1	0
24-1601-70-09-A/30.25-01	WW-T69-18001, WW-T69-18002, WW-T69-18003 & WW-T69-18004	1 OF 2	1
24-1601-70-09-A/30.25-01	WW-T69-18001, WW-T69-18002, WW-T69-18003 & WW-T69-18004	2 OF 2	1
24-1601-70-20-A/30.25-01	W-T69-18002C & W-T69-18002A	1 OF 1	1
24-1601-70-20-A/31.08-02	W-T08-18001	1 OF 1	0
24-1601-70-20-A/31.22-02	W-T05-18002A & W-T05-18002B-1 & W-T05-18002C	1 OF 1	0
24-1601-70-09-A/31.24-02	WWW-T05-18001	1 OF 1	0
24-1601-70-20-A/32.45-02	W-T95-19008 / W-T95-19008-2	1 OF 1	0
24-1601-70-09-A/32.49-02	WWW-T13-19001	1 OF 1	0
24-1601-70-20-A/32.53-02	W-T13-19001 / W-T13-19001-1	1 OF 3	0
24-1601-70-20-A/32.53-02	W-T13-19001 / W-T13-19001-1	2 OF 3	0
24-1601-70-20-A/32.53-02	W-T13-19001 / W-T13-19001-1	3 OF 3	0
24-1601-70-09-A/32.66-02	WWW-T13-19002	1 OF 1	0
24-1601-70-09-A/32.72-02	WWW-T13-19003	1 OF 1	0
24-1601-70-20-A/M-0071-0.52-01	W-T08-18001	1 OF 1	2
24-1601-70-20-A/M-0071-0.66-01	W-T05-18002A, W-T05-18002B-1 & W-T05-18002C	1 OF 1	2
24-1601-70-09-A/M-0071-0.68-01	WW-T05-18001	1 OF 2	2
24-1601-70-09-A/M-0071-0.68-01	WW-T05-18001	2 OF 2	0
24-1601-70-20-A/M-0071-1.89-01	W-T95-19008 / W-T95-19008-2	1 OF 1	2
24-1601-70-09-A/M-0071-1.92-01	WWW-T13-19001	1 OF 1	2
24-1601-70-20-A/M-0071-1.99-01	W-T13-19001A / W-T13-19001A-1 & W-T13-19001C	1 OF 3	2
24-1601-70-20-A/M-0071-1.99-01	W-T13-19001A / W-T13-19001A-1 & W-T13-19001C	2 OF 3	2
24-1601-70-20-A/M-0071-1.99-01	W-T13-19001A / W-T13-19001A-1 & W-T13-19001C	3 OF 3	2
24-1601-70-09-A/M-0071-2.06-01	WWW-T92-19002	1 OF 1	1
24-1601-70-09-A/M-0071-2.09-01	WWW-T13-19002	1 OF 1	2
24-1601-70-09-A/M-0071-2.16-01	WWW-T13-19003	1 OF 1	2
24-1601-70-09-A/34.98-02	WWW-T21-19001 & WWW-T93-19001	1 OF 3	4

THIS DRAWING SUPERCEDES 24-1601-70-20-A/27.21-01



DRAWING NO.		REFERENCE TITLE		TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS ATLANTIC SUNRISE PROJECT PROPOSED 30" CENTRAL PENN LINE NORTH INDEX SHEET M.P. 27.21 TO M.P. 50.58 WYOMING COUNTY, PENNSYLVANIA							
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: MBS	DATE: 05/14/15	ISSUED FOR BID:	SCALE: N.T.S.	
2	02/03/16	TL	ISSUED FOR INTERNAL USE	1161481	CLR	MJH	CHECKED BY: JM	DATE: 05/14/15	ISSUED FOR CONSTRUCTION:	REVISION: 5	
3	10/13/16	MP	ISSUED FOR PADEP SUBMITTAL #2	1161481	CLR	MJH	APPROVED BY: MJH	DATE: 05/14/15	DRAWING NUMBER: 24-1601-70-20-A/27.21-02	SHEET 1	
4	04/12/17	CG	ISSUED FOR PADEP SUBMITTAL #3	1161481	CLR	MJH	IWO: 1161481	7/27/2017	K:\LP1375\Maping\Waterbodies\PADEP_Sub_#4-28-17\01-CPLN_PDEP_INDEX_VYDMING.dwg	OF 8	
5	07/28/17	THL	ISSUED FOR PADEP SUBMITTAL #4	1161481	CLR	MJH					

DRAWING NUMBER	DESCRIPTION	SHEET	REVISION
24-1601-70-09-A/34.98-02	WW-T21-19001 & WW-T93-19001	2 OF 3	2
24-1601-70-09-A/34.98-02	WW-T21-19001 & WW-T93-19001	3 OF 3	2
24-1601-70-09-A/35.08-02	WW-T95-19004A	1 OF 1	4
24-1601-70-20-A/35.08-02	W-T21-19001 / W-T21-19001-1	1 OF 1	3
24-1601-70-09-A/35.89-02	WW-T21-19002	1 OF 1	2
24-1601-70-20-A/35.89-02	W-T19-19007	1 OF 1	3
24-1601-70-20-A/36.41-02	W-T19-19006	1 OF 1	2
24-1601-70-09-A/36.83-02	WW-T19-19002	1 OF 1	2
24-1601-70-20-A/36.85-02	W-T19-19004	1 OF 1	2
24-1601-70-20-A/36.91-02	W-T19-19003	1 OF 1	3
24-1601-70-09-A/37.07-02	WW-T19-19001 & WW-T95-19002	1 OF 1	3
24-1601-70-20-A/37.07-02	W-T19-19002A-1 & W-T19-19002B	1 OF 1	2
24-1601-70-20-A/37.27-02	W-T19-19001 / W-T19-19001-1	1 OF 1	2
24-1601-70-09-A/37.28-02	WW-T15-4001 & WW-T15-4002	1 OF 1	2
24-1601-70-20-A/37.60-02	W-T15-4001A / W-T15-4001A-1 & W-T15-4001B / W-T15-4001B-1 / W-T15-4001B-2 / W-T15-4001B-3	1 OF 1	3
24-1601-70-09-A/37.68-02	WW-T24-19001B, WW-T24-19001 & WW-T24-19001A	1 OF 2	3
24-1601-70-09-A/37.68-02	WW-T24-19001B, WW-T24-19001 & WW-T24-19001A	2 OF 2	0
24-1601-70-20-A/37.85-02	W-T95-19006A / W-T95-19006A-1	1 OF 1	3
24-1601-70-09-A/38.07-02	WW-T19-19003	1 OF 1	3
24-1601-70-09-A/38.53-01	WW-T54-19001	1 OF 1	1
24-1601-70-20-A/39.31-02	W-T12-19001	1 OF 1	3
24-1601-70-09-A/39.44-02	WW-T12-19001	1 OF 1	3
24-1601-70-20-A/39.99-02	W-T12-19002	1 OF 1	3
24-1601-70-09-A/40.00-02	WW-T12-19002	1 OF 1	2
24-1601-70-20-A/40.84-02	W-T12-19003C-1 & W-T12-19003A	1 OF 1	2
24-1601-70-09-A/40.87-02	WW-T93-20002	1 OF 1	2
24-1601-70-20-A/40.96-02	W-T12-19004	1 OF 1	2
24-1601-70-09-A/42.13-02	WW-T19-20006	1 OF 1	2
24-1601-70-20-A/M-0054-0.08-02	W-T19-20004 / W-T19-20004-1 / W-T19-20004-2	1 OF 2	3
24-1601-70-20-A/M-0054-0.08-02	W-T19-20004 / W-T19-20004-1 / W-T19-20004-2	2 OF 2	3
24-1601-70-09-A/M-0054-0.10-02	WW-T19-20005	1 OF 1	2
24-1601-70-20-A/43.61-02	W-T14-20004	1 OF 1	3
24-1601-70-20-A/AR-WY-032-01	W-T68-20001	1 OF 1	0
24-1601-70-09-A/43.63-02	WW-T14-20004	1 OF 1	2

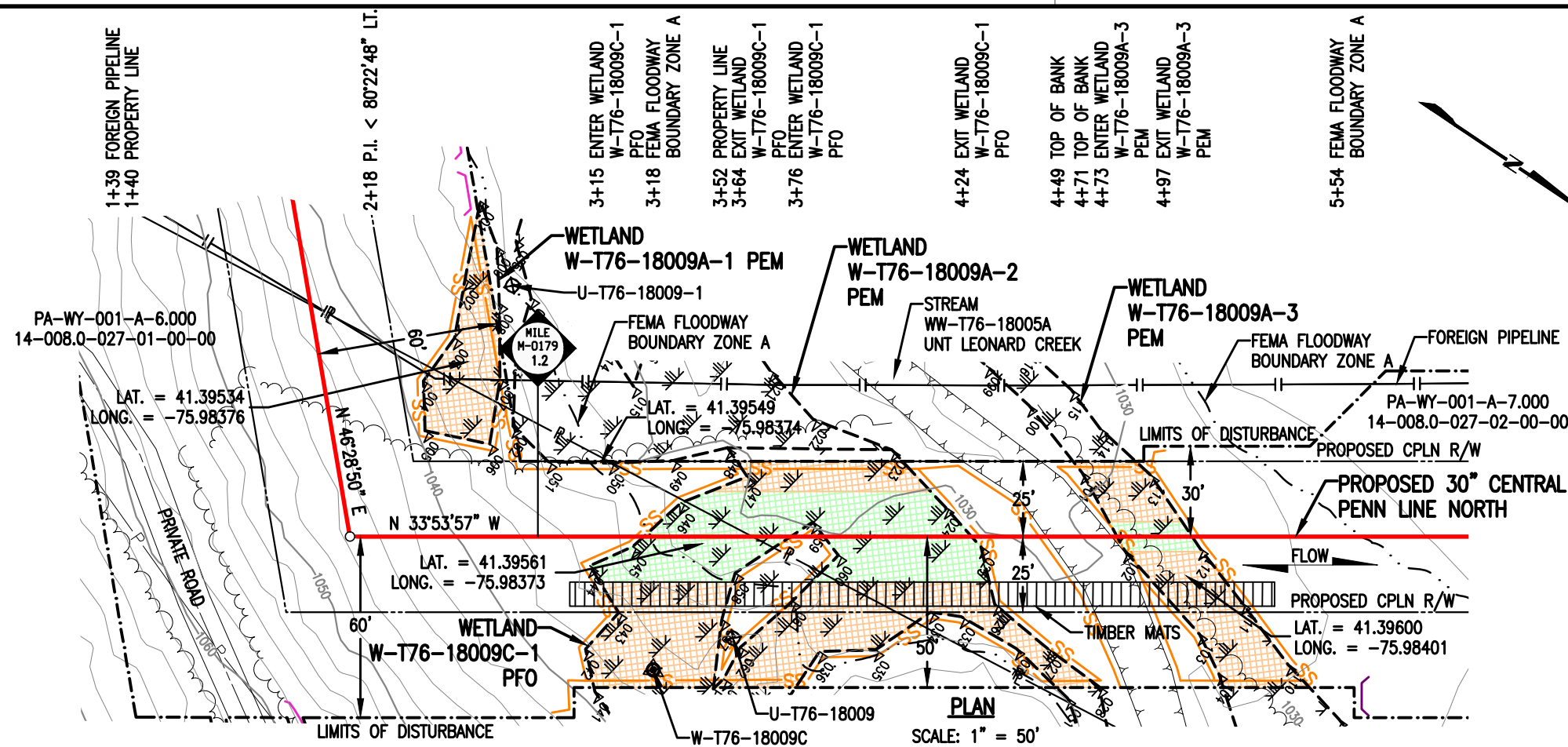
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24-1601-70-09-A/44.42-02	WW-T14-20002 & WW-T14-20002A	1 OF 2	3
24-1601-70-09-A/44.42-02	WW-T14-20002 & WW-T14-20002A	2 OF 2	0
24-1601-70-20-A/44.43-02	W-T14-20002	1 OF 1	2
24-1601-70-09-A/M-0063-0.25-01	WW-T21-CS605ZI01	1 OF 1	1
24-1601-70-20-A/45.23-02	W-T19-20003A / W-T19-20003A-1	1 OF 1	2
24-1601-70-09-A/45.32-02	WW-T19-20004	1 OF 2	1
24-1601-70-09-A/45.32-02	WW-T19-20004	2 OF 2	4
24-1601-70-20-A/45.32-02	W-T19-20003B	1 OF 1	2
24-1601-70-20-A/45.76-02	W-T10-20001C / W-T10-2001C-1, W-T10-20001B, W-T10-20001A & W-T10-20001C-1	1 OF 2	3
24-1601-70-20-A/45.76-02	W-T10-20001C / W-T10-2001C-1, W-T10-20001B, W-T10-20001A & W-T10-20001C-1	2 OF 2	3
24-1601-70-09-A/AR-WY-036-01	WW-T10-20001	1 OF 1	4
24-1601-70-09-A/45.78-02	WW-T10-20001	1 OF 2	3
24-1601-70-09-A/45.78-02	WW-T10-20001	2 OF 2	3
24-1601-70-09-A/45.94-02	WW-T10-20002	1 OF 1	3
24-1601-70-09-A/46.09-01	WW-T54-20001	1 OF 1	1
24-1601-70-20-A/46.11-01	W-T54-20002	1 OF 1	1
24-1601-70-09-A/46.17-01	WW-T54-20002	1 OF 1	1
24-1601-70-20-A/46.33-02	W-T28-20001	1 OF 1	1
24-1601-70-09-A/M-0058-0.22-02	WW-T10-20003	1 OF 1	3
24-1601-70-09-A/46.92-02	WW-T19-20002	1 OF 1	2
24-1601-70-09-A/47.23-02	WW-T19-20003	1 OF 1	3
24-1601-70-20-A/48.22-01	W-T65-20001A & W-T65-20001C	1 OF 1	1
24-1601-70-20-A/48.69-02	W-T19-20001	1 OF 1	2
24-1601-70-09-A/48.74-02	WW-T19-20001	1 OF 1	3
24-1601-70-09-A/M-0051-0.08-01	WW-T54-21001	1 OF 5	2
24-1601-70-09-A/M-0051-0.08-01	WW-T54-21001	2 OF 5	1
24-1601-70-09-A/M-0051-0.08-01	WW-T54-21001	3 OF 5	1
24-1601-70-09-A/M-0051-0.08-01	WW-T54-21001	4 OF 5	1
24-1601-70-09-A/M-0051-0.08-01	WW-T54-21001	5 OF 5	0
24-1601-70-20-A/49.53-02	W-T17-20001	1 OF 1	1
24-1601-70-20-A/M-0080-0.23-01	W-T17-20001	1 OF 1	1
24-1601-70-20-A/M-0080-0.65-01	W-T57-21006	1 OF 1	1



DRAWING NO.	REFERENCE TITLE

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS
ATLANTIC SUNRISE PROJECT
PROPOSED 30" CENTRAL PENN LINE NORTH
INDEX SHEET
M.P. 27.21 TO M.P. 50.58
WYOMING COUNTY, PENNSYLVANIA

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY:	AT	DATE:	02/03/16	ISSUED FOR BID:	SCALE:	N.T.S.
0	02/03/16	TL	ISSUED FOR INTERNAL USE	1161481	CLR	MJH	CHECKED BY:	CLR	DATE:	02/03/16	ISSUED FOR CONSTRUCTION:	REVISION:	3
1	10/13/16	MP	ISSUED FOR PADEP SUBMITTAL #2	1161481	CLR	MJH	APPROVED BY:	MJH	DATE:	02/03/16	DRAWING NUMBER:	24-1601-70-20-A/27.21-01	SHEET 2
2	04/12/17	CG	ISSUED FOR PADEP SUBMITTAL #3	1161481	CLR	MJH	W.O.:	1161481	7/26/2017	5:21pm	K:\NLP1375\Mapping\Waterbodies\PADEP_Sub_#4_07-28-17\01-CPLN_PDEP_INDEX_WYOMING.dwg	OF 8	
3	07/28/17	THL	ISSUED FOR PADEP SUBMITTAL #4	1161481	CLR	MJH							

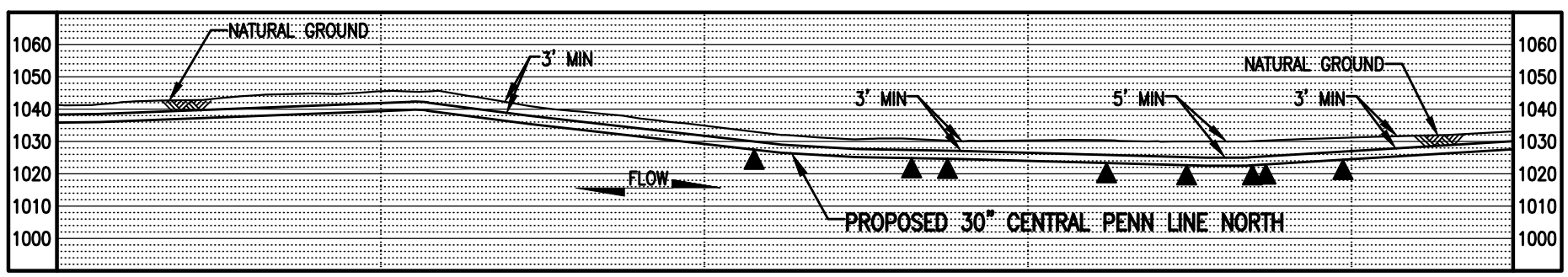


WETLAND DISTURBANCE:

WETLAND W-T76-18009C-1 (EV)	ACRE
TEMPORARY DISTURBANCE	0.0903
PERMANENT DISTURBANCE	0.0660
TOTAL DISTURBANCE	0.1563

WETLAND W-T76-18009A-1 / W-T76-18009A-2	ACRE
TEMPORARY DISTURBANCE	0.0596
TOTAL DISTURBANCE	0.0596

WETLAND W-T76-18009A-3 (EV)	ACRE
PERMANENT DISTURBANCE	0.0057
TOTAL DISTURBANCE	0.0057

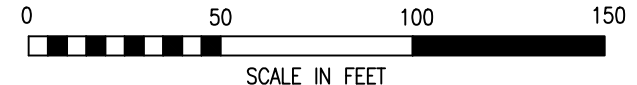


GENERAL NOTES:

- UTILIZE A WETLAND EQUIPMENT CROSSING (WEC) AND WCC.1.
- STATION 3+00 SHOWN IS EQUAL TO M-0179 STATION 63+56 ON THE EROSION AND SEDIMENT CONTROL PLAN.

SURVEY NOTES:

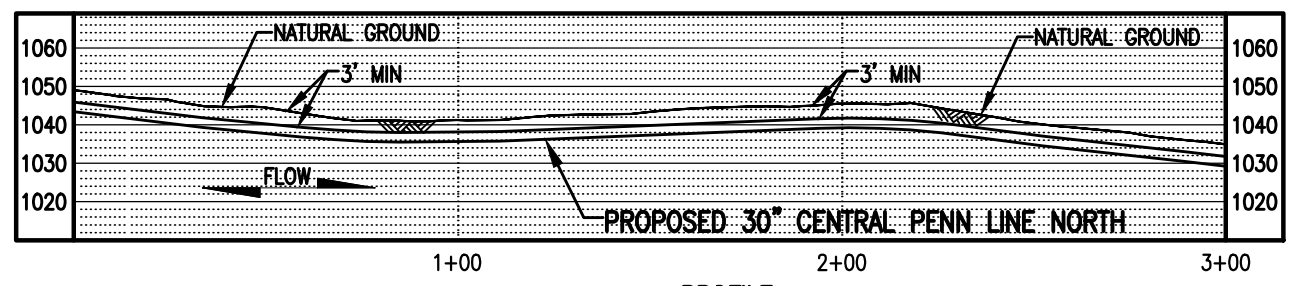
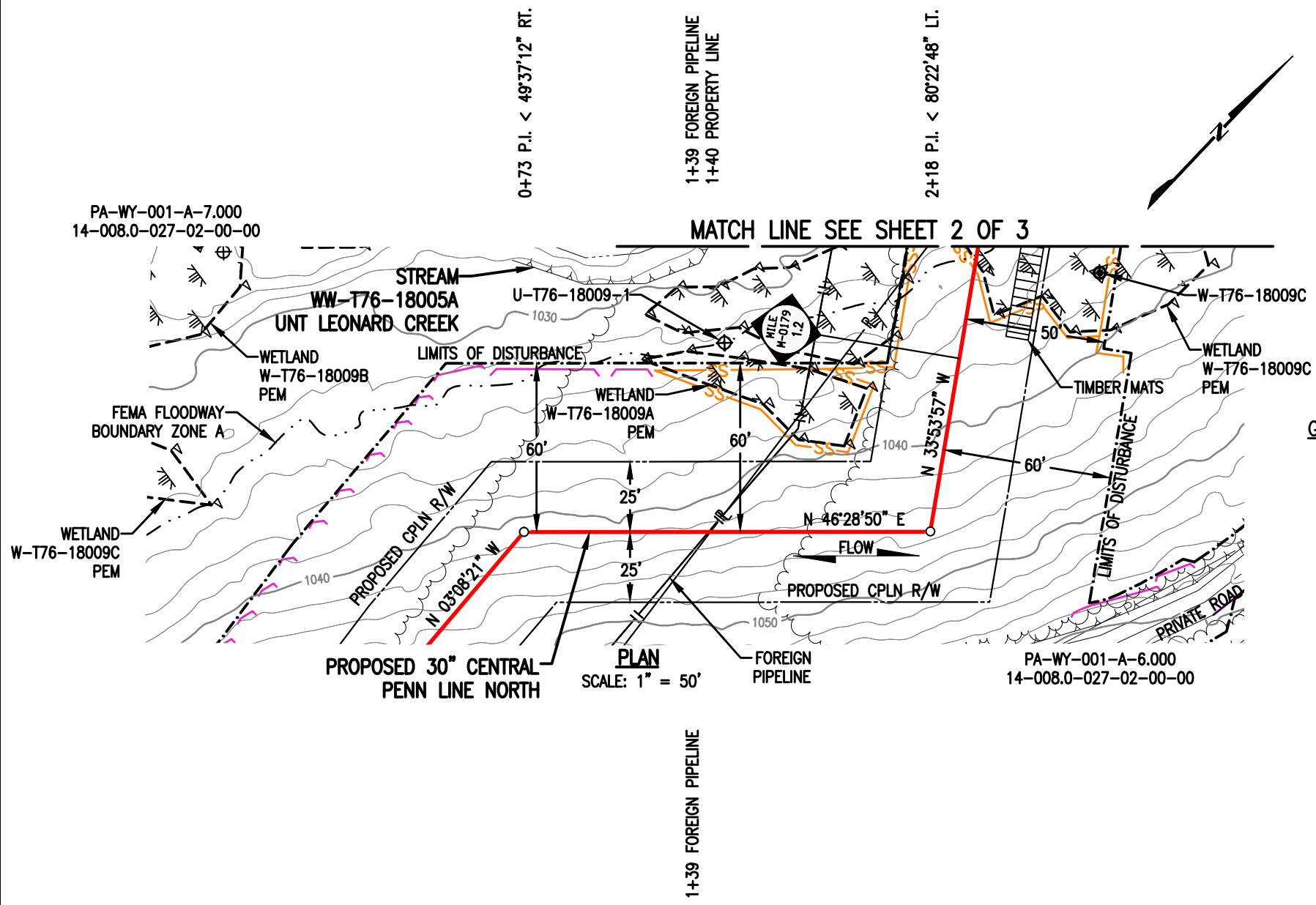
- T.B.M. SURVEY CONTROL POINT - 67.98' LT. OF M-0179 M.P. 1.21, ELEV. = 1029.45' (NAVD88).



LEGEND

PROPOSED 30" CENTRAL PENN LINE NORTH	WETLAND FLAGS	WOOD GROUP USA, INC.
EXISTING PIPELINES	PHOTO DATA POINT	12" SEDIMENT BARRIER
EXISTING TGPL R/W	WETLAND DATA POINT	18" SEDIMENT BARRIER
LIMITS OF DISTURBANCE	UPLAND DATA POINT	24" SEDIMENT BARRIER
PROPOSED CPLN R/W	WELL POINT	32" SEDIMENT BARRIER
PROPERTY LINE	TRENCH PLUG	TOP OF BANK
FOREIGN PIPELINE	WATERBODY	PERMANENT WETLAND IMPACT
WETLAND AREA	TREE LINE	TEMPORARY WETLAND IMPACT
EXISTING POWER LINE	FLOODWAY BOUNDARY	
EXISTING FENCE	FEMA FLOODWAY BOUNDARY	

DRAWING NO.		REFERENCE TITLE		TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS ATLANTIC SUNRISE PROJECT PROPOSED 30" CENTRAL PENN LINE NORTH WETLAND CROSSING W-T76-18009A-1/ W-T76-18009A-2/ W-T76-18009A-3 & W-T76-18009C-1 @ M-0179 M.P. 1.20 MONROE TOWNSHIP, WYOMING COUNTY, PENNSYLVANIA						
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: MF	DATE: 04/04/17	ISSUED FOR BID:	SCALE: 1" = 50'
0	04/12/17	MF	ISSUED FOR PADEP SUBMITTAL #3	1161481	CLR	MJH	CHECKED BY: AT	DATE: 04/04/17	ISSUED FOR CONSTRUCTION:	REVISION: 1
1	07/28/17	THL	ISSUED FOR PADEP SUBMITTAL #4	1161481	CLR	MJH	APPROVED BY: MJH	DATE: 04/12/17	DRAWING NUMBER: 24-1601-70-20-A/M-0179-1.20-01	SHEET 1
						W.O. NO.: 1161481 DATE: 7/26/2017 SCALE: 1" = 50'				OF 1



STREAM DISTURBANCE:

STREAM WW-T76-18005A (HQ)	ACRE
TEMPORARY STREAM DISTURBANCE	0.0292
PERMANENT STREAM DISTURBANCE	0.0050
TOTAL STREAM DISTURBANCE	0.0342
TEMPORARY FLOODWAY DISTURBANCE	0.5566
PERMANENT FLOODWAY DISTURBANCE	0.0400
TOTAL FLOODWAY DISTURBANCE	0.5966

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	21.61
STREAM TEMPORARY IMPACT LENGTH	79.77
STREAM PERMANENT IMPACT LENGTH	12.28
STREAM TOTAL IMPACT LENGTH	92.05

STREAM CROSSING METHOD	
PRIMARY	DAM AND PUMP (DPX)
SECONDARY	COFFER DAM (CD)

GENERAL NOTES:

- PIPELINE INSTALLATION WILL BE COMPLETED UTILIZING THE PRIMARY CROSSING METHOD REFERENCED ABOVE; EQUIPMENT TO CROSS STREAM USING A BRIDGE EQUIPMENT CROSSING (BEC). ALL TYPICALS FOR THE CROSSING METHODS AND BMPS REFERENCED WITHIN THIS PACKAGE ARE INCLUDED WITHIN THE "BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET" (BMP PLAN SET), WHICH IS INCLUDED AT THE BACK OF THIS PACKAGE. THE BMP PLAN SET IS ALSO INCLUDED WITHIN ATTACHMENT M OF THE JOINT PERMIT APPLICATION, ALONG WITH THE EROSION AND SEDIMENT CONTROL PLANS AND NARRATIVES.
- THE SECONDARY CROSSING METHOD WOULD UTILIZE THE SAME WORKSPACE AS THE PROPOSED PRIMARY CROSSING METHOD. THEREFORE, STREAM DISTURBANCE ACREAGE WOULD BE THE SAME FOR EITHER CROSSING METHOD.
- THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
- TRANSCO WILL REPLANT THE RIPARIAN FOREST BUFFER OF STREAMS WW-T76-18005 AND WW-T76-18005A WITHIN THE ENTIRE RIPARIAN BUFFERS, AS THESE CROSSINGS REQUIRE RIPARIAN BUFFER WAIVERS (SEE SHEET 2).
- TRANSCO WILL REPLANT THE RIPARIAN FOREST BUFFER OF STREAM WW-T76-18005A WITHIN THE ENTIRE RIPARIAN BUFFER, AS THESE CROSSING REQUIRES RIPARIAN BUFFER WAIVER (SEE SHEET 3).
- THE CALCULATION OF FILL VOLUMES PROVIDED WITHIN THE CHAPTER 105 APPLICATION IS BASED ON THE EXTENT OF THE ACCESS ROAD LOD WITHIN THE FLOODPLAIN/FLOODWAY TO ACCOUNT FOR WORST-CASE FIELD SCENARIOS REQUIRING THE ADDITION OF A ONE FOOT-DEPTH OF GRAVEL FOR MAINTENANCE AND/OR MINOR ACCESS ROAD WIDENING FOR IMPROVED ACCESS. AS SUCH, THE FILL VOLUME IS AN OVERESTIMATION AND DOES NOT REFLECT THE ACTUAL VOLUME OF FILL REQUIRED BY THE CURRENT ACCESS ROAD DESIGN, AS PRESENTED WITHIN THE CHAPTER 102 PERMIT. THE INCLUSION OF THE OVERESTIMATED FILL VOLUMES WITHIN THE CHAPTER 105 APPLICATION LIMITS FUTURE REVISIONS TO THE CHAPTER 105 APPLICATION DUE TO MINOR FIELD ADJUSTMENTS; CONVERSELY, REVISIONS TO ACCESS ROAD DESIGN AFTER THE 102 PERMIT ISSUANCE WILL BE COORDINATED WITH PADEP/CCD.
- STATION 3+00 SHOWN IS EQUAL TO M-0179 STATION 63+56 ON THE EROSION AND SEDIMENT CONTROL PLAN.

SURVEY NOTES:

- T.B.M. SURVEY CONTROL POINT - 67.98' LT. OF M-0179 M.P. 1.21, ELEV. = 1029.45' (NAVD88).



LEGEND

	PROPOSED 30" CENTRAL PENN LINE NORTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
	PROPOSED C/PLN R/W		WELL POINT
	PROPERTY LINE		TRENCH PLUG
	FOREIGN PIPELINE		WATERBODY
	WETLAND AREA		TREE LINE
	STREAM FLOW		FLOODWAY BOUNDARY
	EXISTING POWER LINE		FEMA FLOODWAY BOUNDARY
	EXISTING FENCE		

WOOD GROUP USA, INC.

	12" SEDIMENT BARRIER
	18" SEDIMENT BARRIER
	24" SEDIMENT BARRIER
	32" SEDIMENT BARRIER
	TOP OF BANK
	PERMANENT STREAM IMPACT
	TEMPORARY STREAM IMPACT

DRAWING NO.	REFERENCE TITLE	TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS ATLANTIC SUNRISE PROJECT PROPOSED 30" CENTRAL PENN LINE NORTH STREAM CROSSING WW-T76-18005A ● M-0179 M.P. 1.23 MONROE TOWNSHIP, WYOMING COUNTY, PENNSYLVANIA								
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: CG	DATE: 04/01/17	ISSUED FOR BID:	SCALE: 1" = 50'
0	04/12/17	VT	ISSUED FOR PADEP SUBMITTAL #3	1161481	CLR	MJH	CHECKED BY: AT	DATE: 04/01/17	ISSUED FOR CONSTRUCTION:	REVISION: 1
1	07/28/17	LL	ISSUED FOR PADEP SUBMITTAL #4	1161481	CLR	MJH	APPROVED BY: MJH	DATE: 04/12/17	DRAWING NUMBER: 24-1601-70-09-A/M-0179-1.23-01	SHEET 1
							WO: 1161481		9/26am 7/26/2017 nlu	OF 3

STREAM DISTURBANCE FOR PRIMARY CROSSING METHOD HDD:

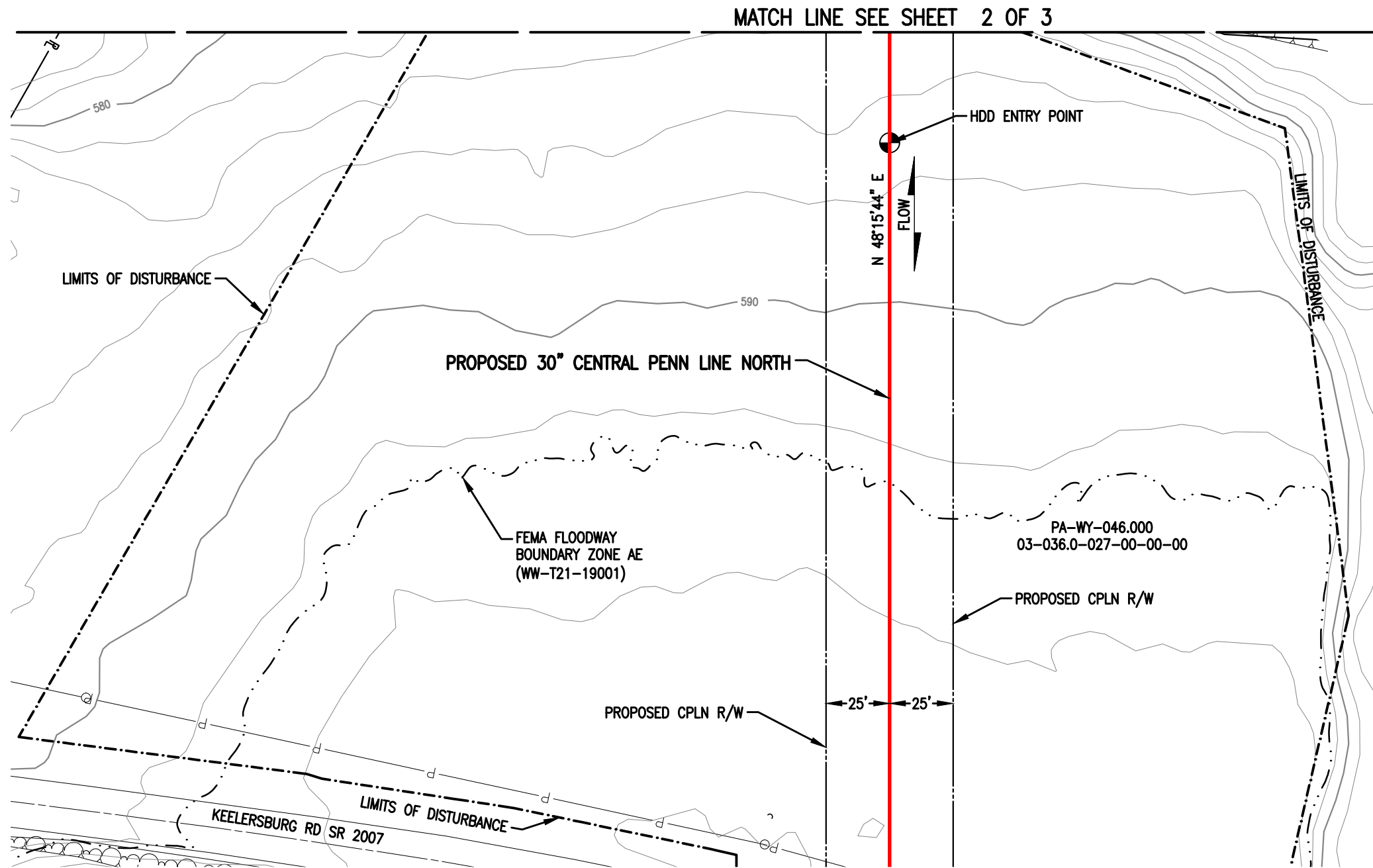
STREAM WW-T21-19001	ACRE
TEMPORARY STREAM DISTURBANCE	6.6149
PERMANENT STREAM DISTURBANCE	0.1834
TOTAL STREAM DISTURBANCE	6.7983
TEMPORARY FLOODWAY DISTURBANCE	2.0395
PERMANENT FLOODWAY DISTURBANCE	0.0958
TOTAL FLOODWAY DISTURBANCE	2.1353

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	798.73
STREAM TEMPORARY IMPACT LENGTH	0.00
STREAM PERMANENT IMPACT LENGTH	50.00
STREAM TOTAL IMPACT LENGTH	50.00

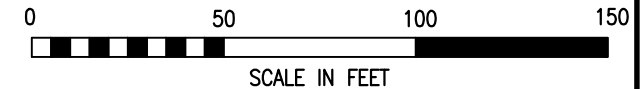
STREAM CROSSING METHOD	
PRIMARY	HORIZONTAL DIRECTIONAL DRILL (HDD)
SECONDARY	COFFER DAM (CD)

STREAM WW-T93-19001	ACRE
TEMPORARY STREAM DISTURBANCE	0.0032
PERMANENT STREAM DISTURBANCE	0.0000
TOTAL STREAM DISTURBANCE	0.0032
TEMPORARY FLOODWAY DISTURBANCE	0.0000
PERMANENT FLOODWAY DISTURBANCE	0.0000
TOTAL FLOODWAY DISTURBANCE	0.0000

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	20.08
STREAM TEMPORARY IMPACT LENGTH	235.29
STREAM PERMANENT IMPACT LENGTH	0.00
STREAM TOTAL IMPACT LENGTH	235.29



PLAN
SCALE: 1" = 50'



THIS DRAWING SUPERCEDES 24-1601-70-09-A/34.98-01

LEGEND

- PROPOSED 30" CENTRAL PENN LINE NORTH
- EXISTING PIPELINES
- EXISTING TGPL R/W
- - - - - LIMITS OF DISTURBANCE
- - - - - PROPOSED CPLN R/W
- PROPERTY LINE
- FOREIGN PIPELINE
- WETLAND AREA
- ▶ STREAM FLOW
- P EXISTING POWER LINE
- X EXISTING FENCE

WOOD GROUP USA, INC.

- 12" SEDIMENT BARRIER
- 18" SEDIMENT BARRIER
- 24" SEDIMENT BARRIER
- 32" SEDIMENT BARRIER
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT

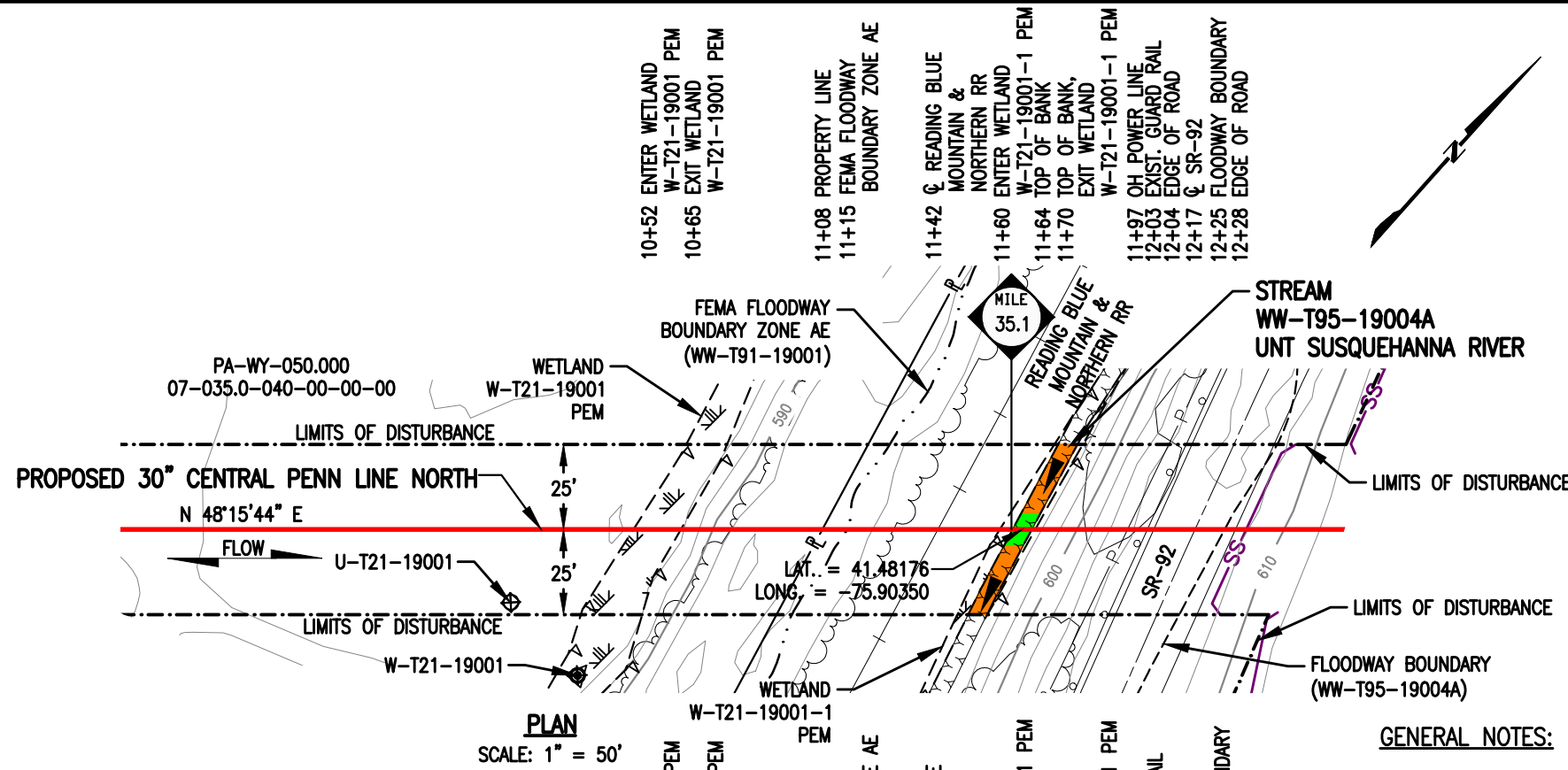
- ▲ WETLAND FLAGS
- ⊗ PHOTO DATA POINT
- ⊗ WETLAND DATA POINT
- ⊗ UPLAND DATA POINT
- ☀ WELL POINT
- ▲ TRENCH PLUG
- WATERBODY
- TREE LINE
- - - - - FLOODWAY BOUNDARY
- - - - - FEMA FLOODWAY BOUNDARY

DRAWING NO.		REFERENCE TITLE				
24-1601-70-09A-A/34.98-02		CONTINGENCY PLAN IMPACT MAPS				
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1	02/03/15	TL	ISSUED FOR INTERNAL USE	1161481	CLR	MJH
2	10/13/16	KB	ISSUED FOR PADEP SUBMITTAL #2	1161481	CLR	MJH
3	04/12/17	LL	ISSUED FOR PADEP SUBMITTAL #3	1161481	CLR	MJH
4	07/28/17	THL	ISSUED FOR PADEP SUBMITTAL #4	1161481	CLR	MJH

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS
ATLANTIC SUNRISE PROJECT
PROPOSED 30" CENTRAL PENN LINE NORTH
STREAM CROSSINGS WW-T21-19001 @ M.P. 34.97 &
WW-T93-19001 @ M.P. 35.05
EATON TOWNSHIP, WYOMING COUNTY, PENNSYLVANIA

Williams

DRAWN BY: LL	DATE: 01/07/15	ISSUED FOR BID:	SCALE: 1" = 50'
CHECKED BY: ML	DATE: 04/13/15	ISSUED FOR CONSTRUCTION:	REVISION: 4
APPROVED BY: MJH	DATE: 04/17/15	DRAWING NUMBER: 24-1601-70-09-A/34.98-02	SHEET 1
IWO: 1161481	7/26/2017	3:45pm	OF 3



PLAN
SCALE: 1" = 50'

STREAM DISTURBANCE FOR PRIMARY CROSSING METHOD HDD:

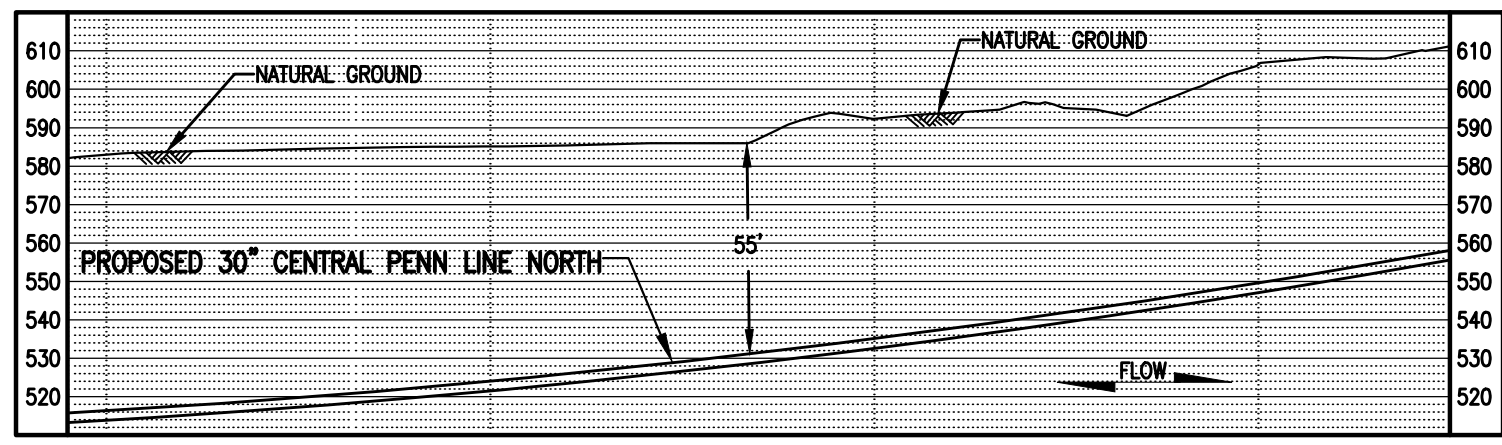
STREAM WW-T95-19004A	ACRE
TEMPORARY STREAM DISTURBANCE	0.0093
PERMANENT STREAM DISTURBANCE	0.0013
TOTAL STREAM DISTURBANCE	0.0106
TEMPORARY FLOODWAY DISTURBANCE	0.1942
PERMANENT FLOODWAY DISTURBANCE	0.0232
TOTAL FLOODWAY DISTURBANCE	0.2174

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	5.65
STREAM TEMPORARY IMPACT LENGTH	45.25
STREAM PERMANENT IMPACT LENGTH	11.34
STREAM TOTAL IMPACT LENGTH	56.59

STREAM CROSSING METHOD	
PRIMARY	HORIZONTAL DIRECTIONAL DRILL (HDD)
SECONDARY	CONVENTIONAL BORE (WBX.1)

GENERAL NOTES:

- PIPELINE INSTALLATION WILL BE COMPLETED UTILIZING THE PRIMARY CROSSING METHOD REFERENCED ABOVE; EQUIPMENT TO CROSS STREAM USING A BRIDGE EQUIPMENT CROSSING (BEC). ALL TYPICALS FOR THE CROSSING METHODS AND BMPs REFERENCED WITHIN THIS PACKAGE ARE INCLUDED WITHIN THE "BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET" (BMP PLAN SET), WHICH IS INCLUDED AT THE BACK OF THIS PACKAGE. THE BMP PLAN SET IS ALSO INCLUDED WITHIN ATTACHMENT M OF THE JOINT PERMIT APPLICATION, ALONG WITH THE EROSION AND SEDIMENT CONTROL PLANS AND NARRATIVES.
- TRANSCO PROPOSAL PRIMARY CROSSING METHOD FOR THESE FEATURES IS HDD, HOWEVER, IN THE EVENT THE HDD IS UNSUCCESSFUL PLEASE SEE THE CONTINGENCY CROSSING METHOD AND ASSOCIATED IMPACTS IN DRAWING NUMBER: 24-1601-70-09A-A/35.08-01, ATTACHMENT H-3.
- WATERBODIES WITHOUT A FEMA-ESTABLISHED FLOODPLAIN, THE FLOODWAY IS COINCIDENT WITH A 50-FOOT OFFSET MEASURED Laterally FROM THE PHYSICAL TOP OF BANK OF THE WATERBODY.
- STATION 10+00 SHOWN IS EQUAL TO STATION 1851+65 ON THE EROSION AND SEDIMENT CONTROL PLAN.
- THE CALCULATION OF FILL VOLUMES PROVIDED WITHIN THE CHAPTER 105 APPLICATION IS BASED ON THE EXTENT OF THE ACCESS ROAD LOD WITHIN THE FLOODPLAIN/FLOODWAY TO ACCOUNT FOR WORST-CASE FIELD SCENARIOS REQUIRING THE ADDITION OF A ONE FOOT-DEPTH OF GRAVEL FOR MAINTENANCE AND/OR MINOR ACCESS ROAD WIDENING FOR IMPROVED ACCESS. AS SUCH, THE FILL VOLUME IS AN OVERESTIMATION AND DOES NOT REFLECT THE ACTUAL VOLUME OF FILL REQUIRED BY THE CURRENT ACCESS ROAD DESIGN, AS PRESENTED WITHIN THE CHAPTER 102 PERMIT. THE INCLUSION OF THE OVERESTIMATED FILL VOLUMES WITHIN THE CHAPTER 105 APPLICATION LIMITS FUTURE REVISIONS TO THE CHAPTER 105 APPLICATION DUE TO MINOR FIELD ADJUSTMENTS; CONVERSELY, REVISIONS TO ACCESS ROAD DESIGN AFTER THE 102 PERMIT ISSUANCE WILL BE COORDINATED WITH PADEP/CCD.



PROFILE
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL

SURVEY NOTES:

- T.B.M. SURVEY CONTROL POINT - 36' RT. OF M.P. 35.11, ELEV. = 608.83' (NAVD88).



THIS DRAWING SUPERCEDES 24-1601-70-09-A/35.08-01

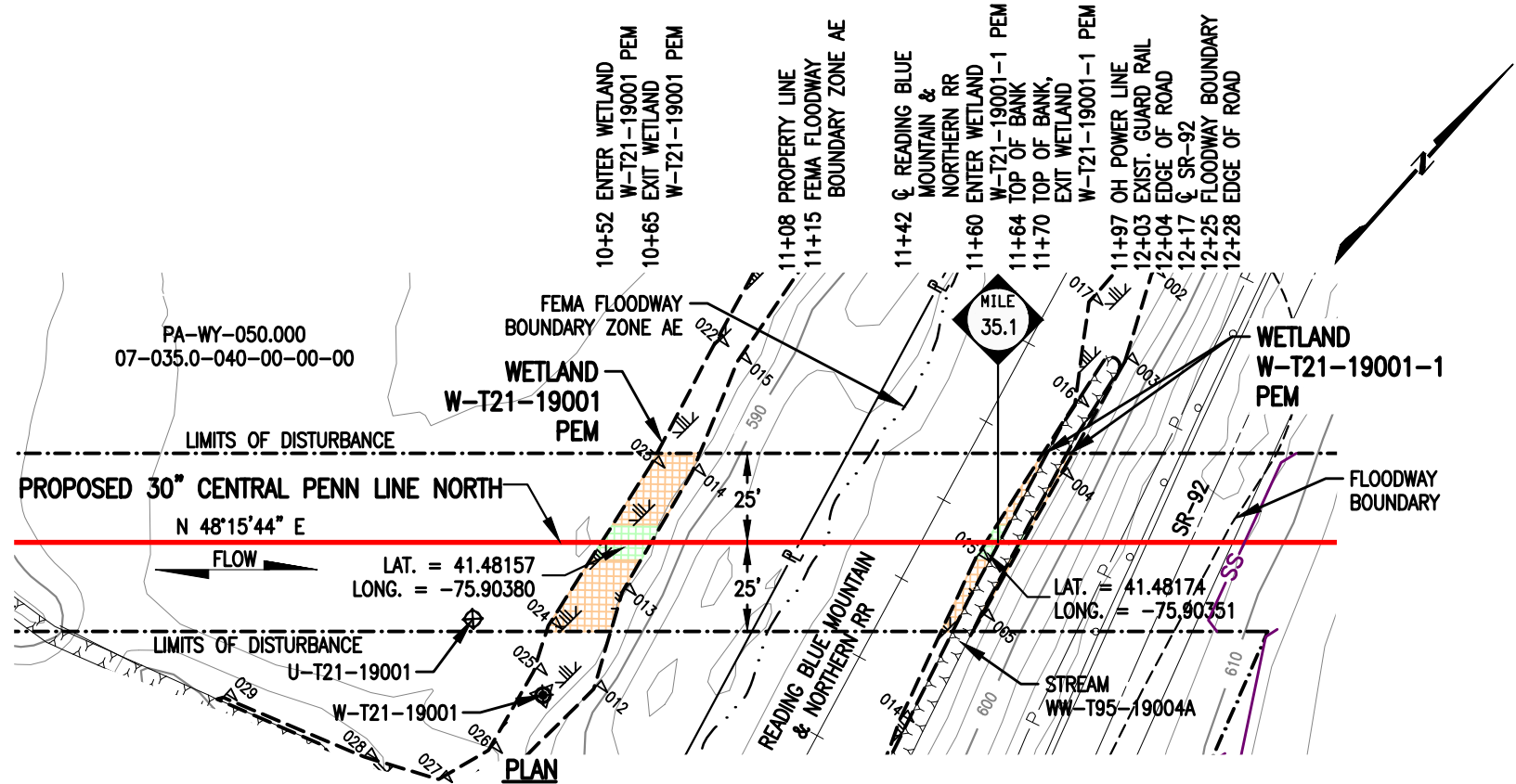
LEGEND

- PROPOSED 30" CENTRAL PENN LINE NORTH
- EXISTING PIPELINES
- EXISTING TGPL R/W
- - - LIMITS OF DISTURBANCE
- - - PROPOSED CPLN R/W
- P — PROPERTY LINE
- FOREIGN PIPELINE
- WETLAND AREA
- ▲ STREAM FLOW
- P — EXISTING POWER LINE
- X — EXISTING FENCE

WOOD GROUP USA, INC.

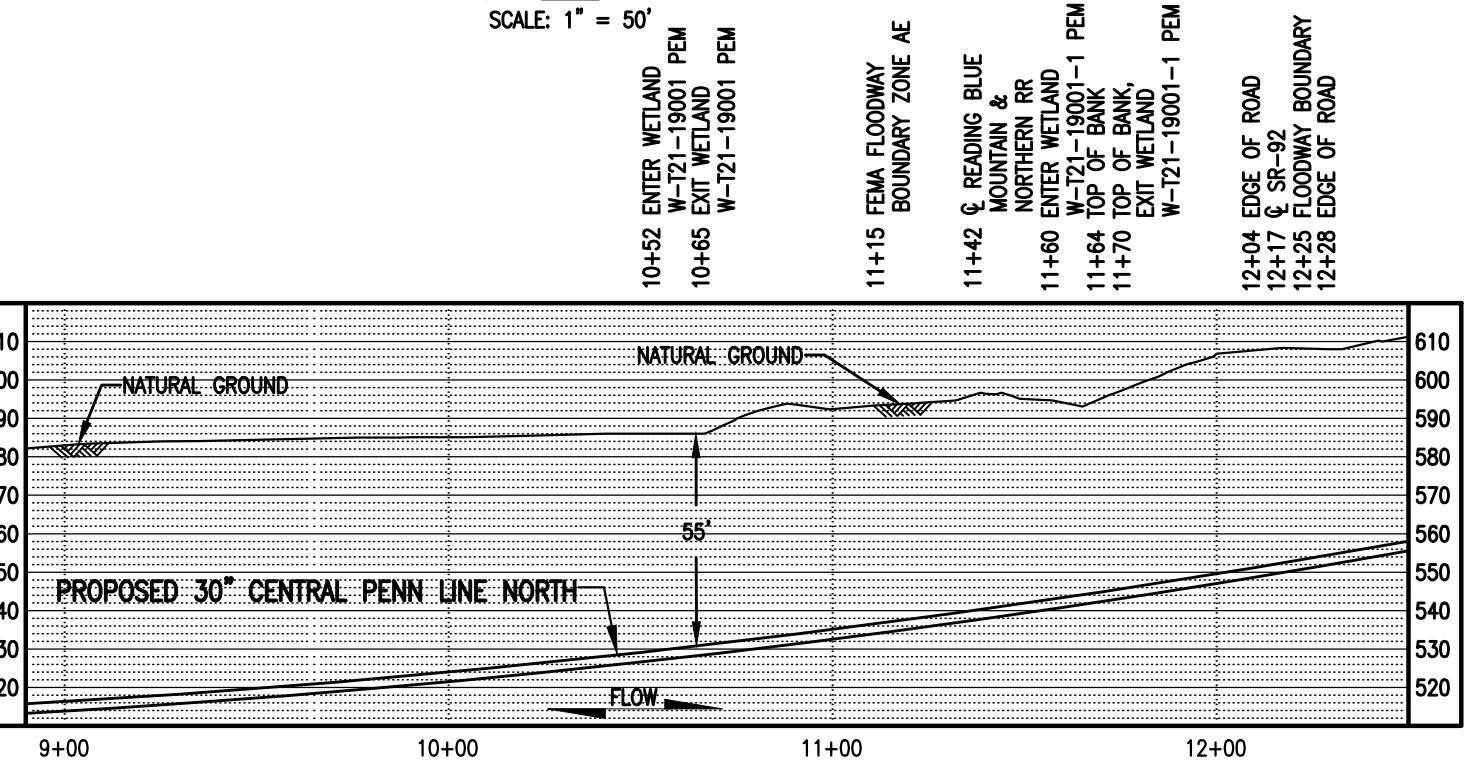
- WETLAND FLAGS
- PHOTO DATA POINT
- WETLAND DATA POINT
- UPLAND DATA POINT
- WELL POINT
- TRENCH PLUG
- WATERBODY
- TREE LINE
- FLOODWAY BOUNDARY
- FEMA FLOODWAY BOUNDARY
- SS 12" SEDIMENT BARRIER
- SS 18" SEDIMENT BARRIER
- SS 24" SEDIMENT BARRIER
- SS 32" SEDIMENT BARRIER
- TOP OF BANK
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT

DRAWING NO. 24-1601-70-09A-A/35.08-01		REFERENCE TITLE CONTINGENCY PLAN IMPACT MAPS		TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS ATLANTIC SUNRISE PROJECT PROPOSED 30" CENTRAL PENN LINE NORTH STREAM CROSSING WW-T95-19004A © M.P. 35.10 FALLS TOWNSHIP, WYOMING COUNTY, PENNSYLVANIA						
NO. DATE BY		REVISION DESCRIPTION		W.O. NO.	CHK.	APP.	DRAWN BY: LL	DATE: 07/30/15	ISSUED FOR BID:	SCALE: 1" = 50'
1 02/03/16 TL		ISSUED FOR INTERNAL USE		1161481	CLR	MJH	CHECKED BY: ML	DATE: 07/30/15	ISSUED FOR CONSTRUCTION:	REVISION: 4
2 10/13/16 AT		ISSUED FOR PADEP SUBMITTAL #2		1161481	CLR	MJH	APPROVED BY: MJH	DATE: 07/31/15	DRAWING NUMBER: 24-1601-70-09-A/35.08-02	SHEET 1
3 04/12/17 LL		ISSUED FOR PADEP SUBMITTAL #3		1161481	CLR	MJH	W.O. NUMBER: 1161481	DATE: 7/26/2017	10-56am	OF 1
4 07/28/17 THL		ISSUED FOR PADEP SUBMITTAL #4		1161481	CLR	MJH				



WETLAND DISTURBANCE FOR PRIMARY CROSSING METHOD HDD:

WETLAND W-T21-19001 / W-T21-19001-1	ACRE
TEMPORARY DISTURBANCE	0.1421
PERMANENT DISTURBANCE	0.0043
TOTAL DISTURBANCE	0.1464



NOTES:

1. WETLAND PRIMARY CROSSING METHOD SHALL BE HDD AND THE SECONDARY CROSSING METHOD WILL BE CONVENTIONAL BORE (WBX.1).
2. STATION 10+00 SHOWN IS EQUAL TO STATION 1851+65 ON THE EROSION AND SEDIMENT CONTROL PLAN.
3. TRANSCO PROPOSED PRIMARY CROSSING METHOD FOR THESE FEATURES IS HDD. HOWEVER, IN THE EVENT THE HDD IS UNSUCCESSFUL. PLEASE SEE THE CONTINGENCY CROSSING METHOD AND ASSOCIATED IMPACTS IN DRAWING NUMBER: 24-1601-70-20A-A/35.08-01, ATTACHMENT H-3.

SURVEY NOTES:

1. T.B.M. SURVEY CONTROL POINT - 36' RT. OF M.P. 35.11, ELEV. = 608.83' (NAVD88).

PROFILE
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



THIS DRAWING SUPERCEDES 24-1601-70-20-A/35.08-01

LEGEND

	PROPOSED 30" CENTRAL PENN LINE NORTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
	PROPOSED CPLN R/W		WELL POINT
	PROPERTY LINE		TRENCH PLUG
	FOREIGN PIPELINE		WATERBODY
	WETLAND AREA		TREE LINE
	STREAM FLOW		FLOODWAY BOUNDARY
	EXISTING POWER LINE		FEMA FLOODWAY BOUNDARY
	EXISTING FENCE		PERMANENT STREAM IMPACT
			TEMPORARY STREAM IMPACT

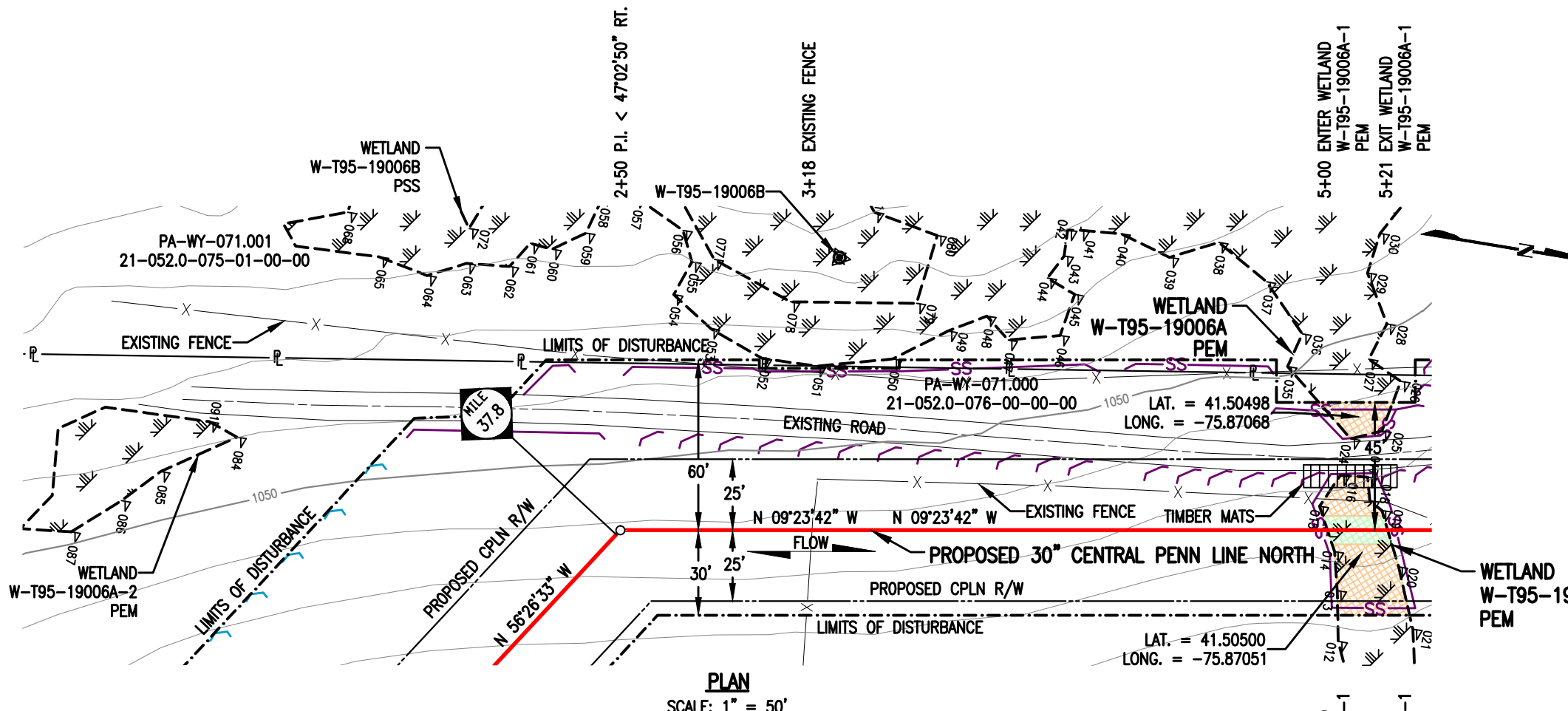


DRAWING NO.		REFERENCE TITLE	
24-1601-70-20A-A/35.08-01		CONTINGENCY PLAN IMPACT MAPS	

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
0	08/11/15	TL	ISSUED FOR PADEP 105 PERMIT	1161481	CLR	MJH
1	10/13/16	MA	ISSUED FOR PADEP SUBMITTAL #2	1161481	CLR	MJH
2	04/12/17	LL	ISSUED FOR PADEP SUBMITTAL #3	1161481	CLR	MJH
3	07/28/17	THL	ISSUED FOR PADEP SUBMITTAL #4	1161481	CLR	MJH

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS
ATLANTIC SUNRISE PROJECT
PROPOSED 30" CENTRAL PENN LINE NORTH
WETLAND CROSSINGS W-T21-19001 / W-T21-19001-1
© M.P. 35.08
FALLS TOWNSHIP, WYOMING COUNTY, PENNSYLVANIA

DRAWN BY: LL	DATE: 03/06/15	ISSUED FOR BID:	SCALE: 1" = 50'
CHECKED BY: ML	DATE: 04/13/15	ISSUED FOR CONSTRUCTION:	REVISION: 3
APPROVED BY: MJH	DATE: 04/17/15	DRAWING NUMBER: 24-1601-70-20-A/35.08-02	SHEET 1
IWO: 1161481		12:38pm 7/26/2017 t3le	OF 1



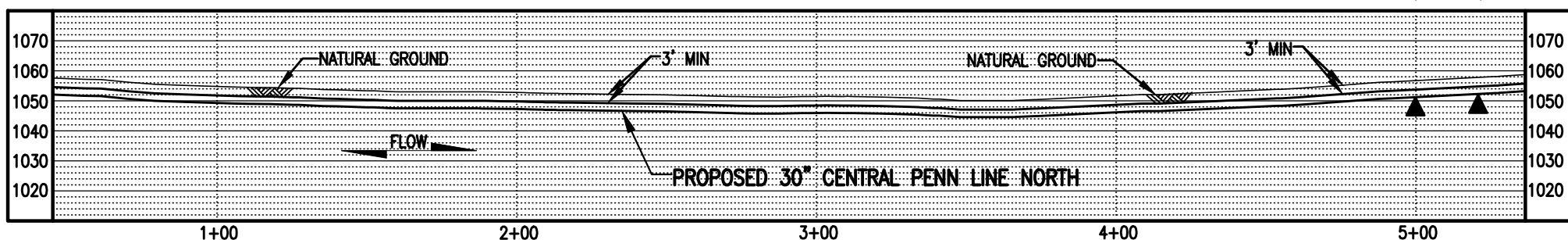
WETLAND DISTURBANCE:

WETLAND W-T95-19006A / W-T95-19006A-1	ACRE
TEMPORARY DISTURBANCE	0.0232
TOTAL DISTURBANCE	0.0232

WETLAND W-T95-19006A-1	ACRE
PERMANENT DISTURBANCE	0.0049
TOTAL DISTURBANCE	0.0049

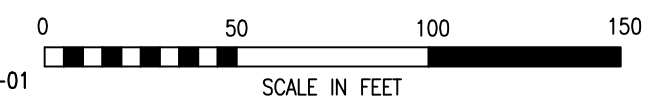
PLAN
SCALE: 1" = 50'

- NOTES:**
- UTILIZE A WETLAND EQUIPMENT CROSSING (WEC) AND WCC.3.
 - STATION 3+00 SHOWN IS EQUAL TO STATION 1996+36 ON THE EROSION AND SEDIMENT CONTROL PLAN.



PROFILE
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL

- SURVEY NOTES:**
- T.B.M. SURVEY CONTROL POINT - 13' LT. OF M.P. 37.88, ELEV. = 1062.58' (NAVD88).



THIS DRAWING SUPERCEDES 24-1601-70-20-A/37.85-01

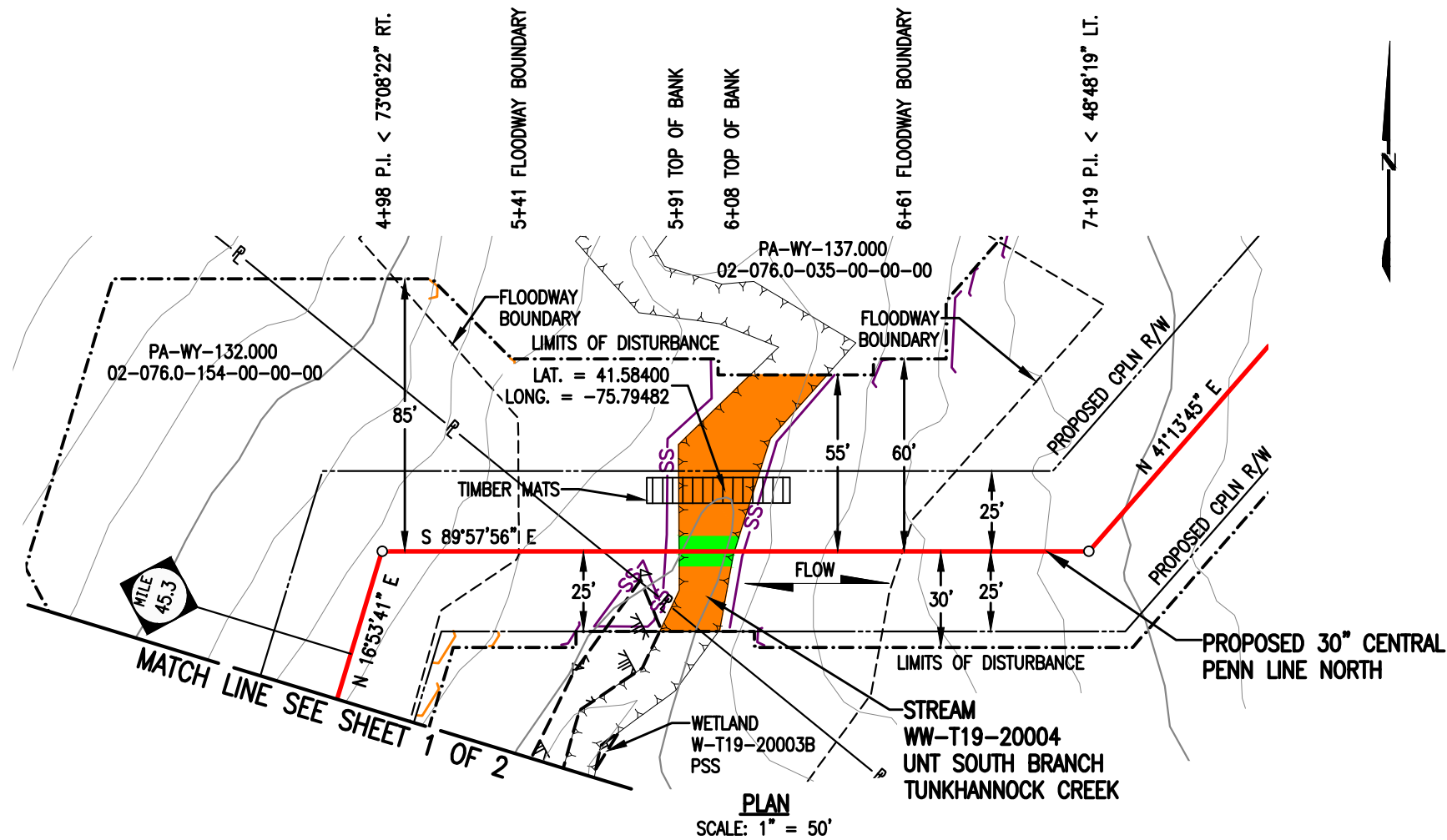
LEGEND

PROPOSED 30" CENTRAL PENN LINE NORTH	WETLAND FLAGS	WOOD GROUP USA, INC.
EXISTING PIPELINES	PHOTO DATA POINT	12" SEDIMENT BARRIER
EXISTING TGPL R/W	WETLAND DATA POINT	18" SEDIMENT BARRIER
LIMITS OF DISTURBANCE	UPLAND DATA POINT	24" SEDIMENT BARRIER
PROPOSED CPLN R/W	WELL POINT	32" SEDIMENT BARRIER
PROPERTY LINE	TRENCH PLUG	TOP OF BANK
FOREIGN PIPELINE	WATERBODY	PERMANENT WETLAND IMPACT
WETLAND AREA	TREE LINE	TEMPORARY WETLAND IMPACT
EXISTING POWER LINE	FLOODWAY BOUNDARY	
EXISTING FENCE	FEMA FLOODWAY BOUNDARY	

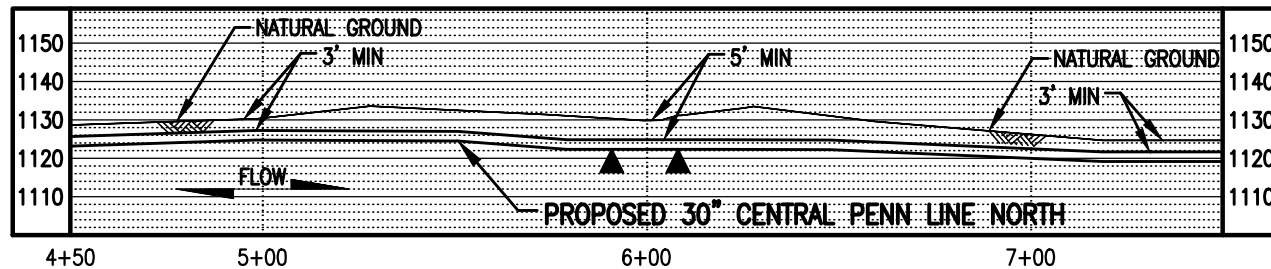
DRAWING NO.		REFERENCE TITLE		TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC						
				WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS						
				ATLANTIC SUNRISE PROJECT						
				PROPOSED 30" CENTRAL PENN LINE NORTH						
				WETLAND CROSSINGS W-T95-19006A / W-T95-19006A-1						
				M.P. 37.85						
				FALLS TOWNSHIP, WYOMING COUNTY, PENNSYLVANIA						
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: PGM	DATE: 03/06/15	ISSUED FOR BID:	SCALE: 1" = 50'
0	08/11/15	TL	ISSUED FOR PADEP 105 PERMIT	1161481	CLR	MJH	CHECKED BY: ML	DATE: 04/13/15	ISSUED FOR CONSTRUCTION:	REVISION: 3
1	10/13/16	MA	ISSUED FOR PADEP SUBMITTAL #2	1161481	CLR	MJH	APPROVED BY: MJH	DATE: 04/17/15	DRAWING NUMBER: 24-1601-70-20-A/37.85-02	SHEET 1
2	04/12/17	ML	ISSUED FOR PADEP SUBMITTAL #3	1161481	CLR	MJH	W.O. NO.: 1161481			OF 1
3	07/28/17	THL	ISSUED FOR PADEP SUBMITTAL #4	1161481	CLR	MJH				

ALL TABLES:

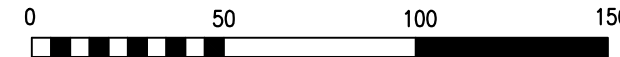
SEE SHEET 1 OF 2



PLAN
SCALE: 1" = 50'



PROFILE
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



THIS DRAWING SUPERCEDES 24-1601-70-09-A/45.32-01

SCALE IN FEET

LEGEND

- PROPOSED 30" CENTRAL PENN LINE NORTH
- EXISTING PIPELINES
- EXISTING TGPL R/W
- LIMITS OF DISTURBANCE
- PROPOSED CPLN R/W
- PROPERTY LINE
- FOREIGN PIPELINE
- WETLAND AREA
- STREAM FLOW
- EXISTING POWER LINE
- EXISTING FENCE
- WETLAND FLAGS
- PHOTO DATA POINT
- WETLAND DATA POINT
- UPLAND DATA POINT
- WELL POINT
- TRENCH PLUG
- WATERBODY
- TREE LINE
- FLOODWAY BOUNDARY
- FEMA FLOODWAY BOUNDARY
- 12" SEDIMENT BARRIER
- 18" SEDIMENT BARRIER
- 24" SEDIMENT BARRIER
- 32" SEDIMENT BARRIER
- TOP OF BANK
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT



DRAWING NO.	REFERENCE TITLE											
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY:	LL	DATE:	12/29/14	ISSUED FOR BID:	SCALE: 1" = 50'
1	02/03/16	TL	ISSUED FOR INTERNAL USE	1161481	CLR	MJH	CHECKED BY:	ML	DATE:	03/07/15	ISSUED FOR CONSTRUCTION:	REVISION: 4
2	10/13/16	AT	ISSUED FOR PADEP SUBMITTAL #2	1161481	CLR	MJH	APPROVED BY:	MJH	DATE:	04/17/15	DRAWING NUMBER:	24-1601-70-09-A/45.32-02 SHEET 2
3	04/12/17	CG	ISSUED FOR PADEP SUBMITTAL #3	1161481	CLR	MJH	IWO:	1161481	DATE:	7/26/2017	11:21am	t3le OF 2
4	07/28/17	THL	ISSUED FOR PADEP SUBMITTAL #4	1161481	CLR	MJH						

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS
ATLANTIC SUNRISE PROJECT
PROPOSED 30" CENTRAL PENN LINE NORTH
STREAM CROSSING WW-T19-20004
© M.P. 45.33
CLINTON TOWNSHIP, WYOMING COUNTY, PENNSYLVANIA

STREAM DISTURBANCE:

STREAM WW-T10-20001	ACRE
TEMPORARY STREAM DISTURBANCE	0.0000
PERMANENT STREAM DISTURBANCE	0.0000
TOTAL STREAM DISTURBANCE	0.0000
TEMPORARY FLOODWAY DISTURBANCE	0.1296
PERMANENT FLOODWAY DISTURBANCE	0.0000
TOTAL FLOODWAY DISTURBANCE	0.1296

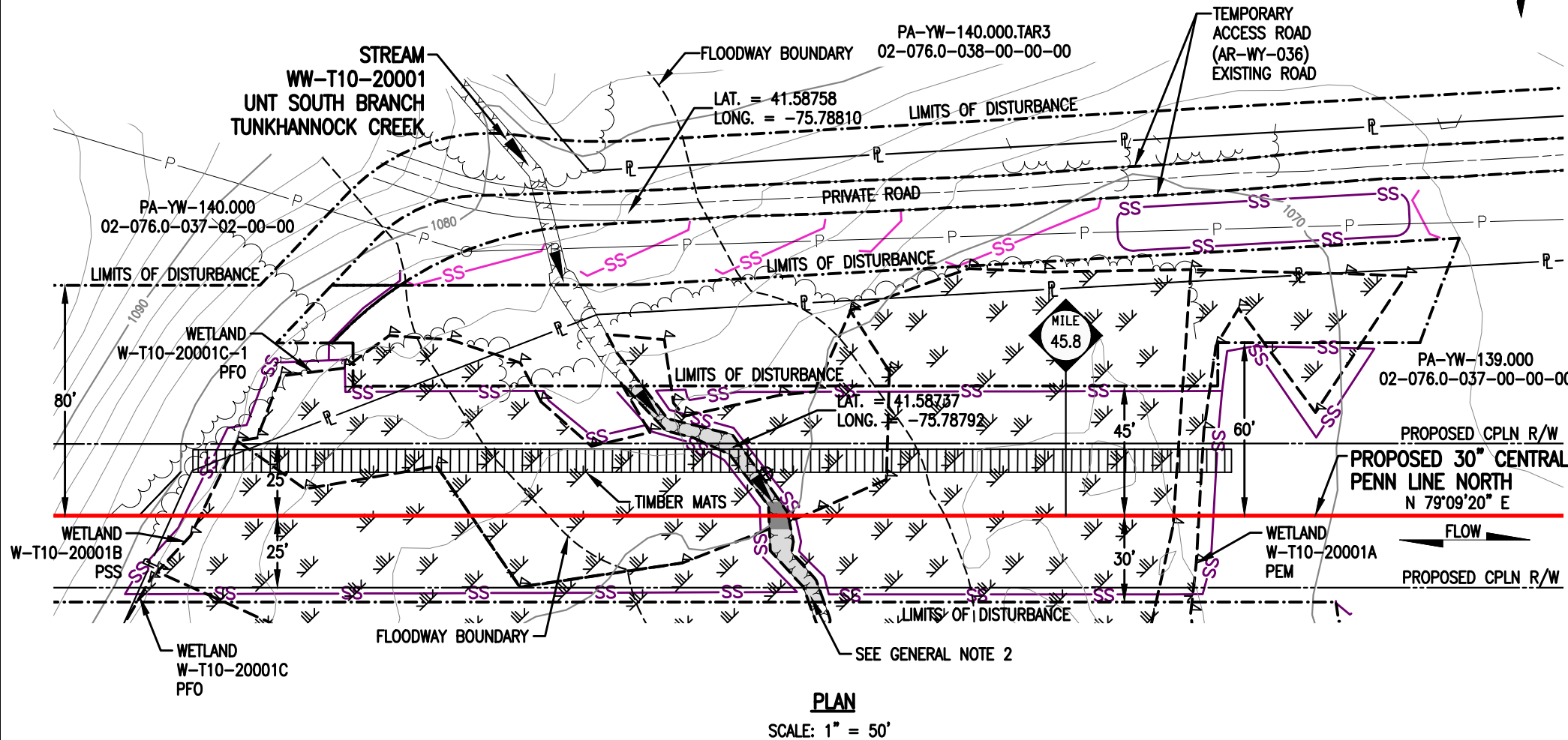
STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	0.00
STREAM TEMPORARY IMPACT LENGTH	0.00
STREAM PERMANENT IMPACT LENGTH	0.00
STREAM TOTAL IMPACT LENGTH	0.00
FLOODWAY FILL (CU. YDS.)	209.04

GENERAL NOTES:

1. THE TEMPORARY FLOODWAY IMPACT SHOWN ON THE DRAWING REPRESENTS THE FULL EXTENT OF THE FLOODWAY ACROSS THE EXISTING ACCESS ROAD. CONSTRUCTION ACTIVITIES WITHIN THE FLOODWAY WILL BE LIMITED TO PLACEMENT OF TIMBER MATTING OVER THE EXISTING CULVERT ON THE GRAVEL ROAD SURFACE AND INSTALLATION OF THE ROCK CONSTRUCTION ENTRANCE, AS WELL AS VEHICLE TRAFFIC ALONG THE EXISTING ACCESS ROAD. NO PERMANENT FILL WILL BE PLACED OR GRADING COMPLETED WITHIN THE FLOODWAY.
2. IMPACT FOR STREAM WW-T10-20001 ON THE PIPELINE IS SHOWN ON DRAWING 24-1601-70-09-A/45.78-02 AND WETLAND W-T10-20001A IMPACTS ON THE PIPELINE ARE SHOWN ON DRAWING 24-1601-70-20-A/45.76-02.
3. WATERBODIES WITHOUT A FEMA-ESTABLISHED FLOODPLAIN, THE FLOODWAY IS COINCIDENT WITH A 50-FOOT OFFSET MEASURED LATERALLY FROM THE PHYSICAL TOP OF BANK OF THE WATERBODY.
4. THE CALCULATION OF FILL VOLUMES PROVIDED WITHIN THE CHAPTER 105 APPLICATION IS BASED ON THE EXTENT OF THE ACCESS ROAD LOD WITHIN THE FLOODPLAIN/FLOODWAY TO ACCOUNT FOR WORST-CASE FIELD SCENARIOS REQUIRING THE ADDITION OF A ONE FOOT-DEPTH OF GRAVEL FOR MAINTENANCE AND/OR MINOR ACCESS ROAD WIDENING FOR IMPROVED ACCESS. AS SUCH, THE FILL VOLUME IS AN OVERESTIMATION AND DOES NOT REFLECT THE ACTUAL VOLUME OF FILL REQUIRED BY THE CURRENT ACCESS ROAD DESIGN, AS PRESENTED WITHIN THE CHAPTER 102 PERMIT. THE INCLUSION OF THE OVERESTIMATED FILL VOLUMES WITHIN THE CHAPTER 105 APPLICATION LIMITS FUTURE REVISIONS TO THE CHAPTER 105 APPLICATION DUE TO MINOR FIELD ADJUSTMENTS; CONVERSELY, REVISIONS TO ACCESS ROAD DESIGN AFTER THE 102 PERMIT ISSUANCE WILL BE COORDINATED WITH PADEP/CCD.

SURVEY NOTES:

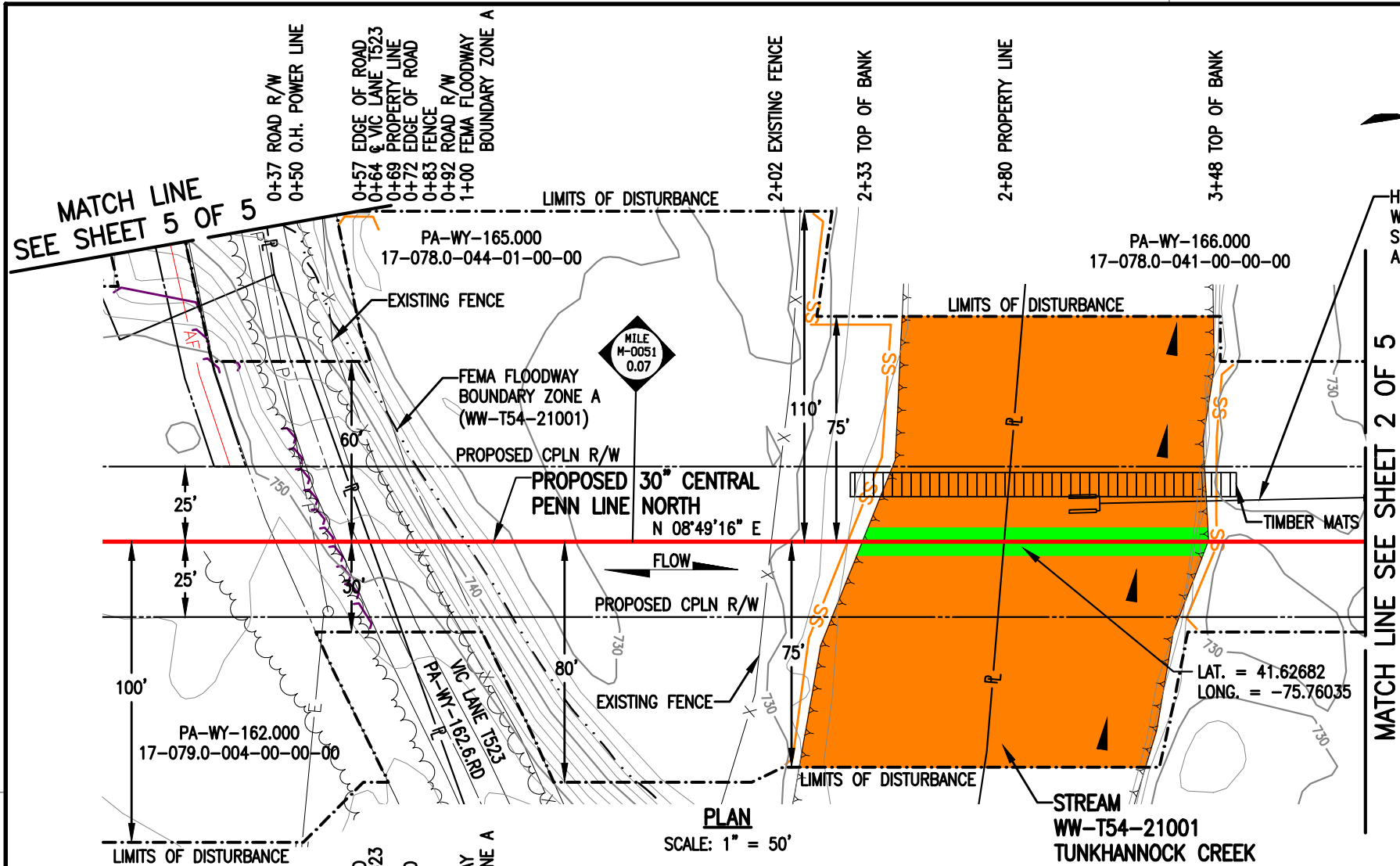
1. T.B.M. SURVEY CONTROL POINT - 137' LT. OF M.P. 45.84, ELEV. = 1076.36' (NAVD88).



LEGEND

	PROPOSED 30" CENTRAL PENN LINE NORTH		WETLAND FLAGS		WOOD GROUP USA, INC.
	EXISTING PIPELINES		PHOTO DATA POINT		12" SEDIMENT BARRIER
	EXISTING TGPL R/W		WETLAND DATA POINT		18" SEDIMENT BARRIER
	LIMITS OF DISTURBANCE		UPLAND DATA POINT		24" SEDIMENT BARRIER
	PROPOSED CPLN R/W		WELL POINT		32" SEDIMENT BARRIER
	PROPERTY LINE		TRENCH PLUG		PERMANENT STREAM IMPACT
	FOREIGN PIPELINE		WATERBODY		TEMPORARY STREAM IMPACT
	WETLAND AREA		TREE LINE		
	STREAM FLOW		FLOODWAY BOUNDARY		
	EXISTING POWER LINE		FEMA FLOODWAY BOUNDARY		
	EXISTING FENCE				

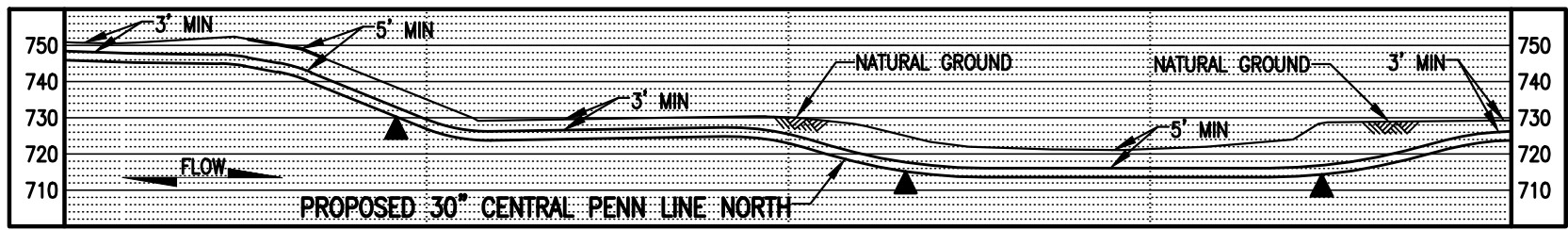
DRAWING NO.	REFERENCE TITLE	TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS ATLANTIC SUNRISE PROJECT PROPOSED 30" CENTRAL PENN LINE NORTH STREAM CROSSING WW-T10-20001 © M.P. 45.74 CLINTON TOWNSHIP, WYOMING COUNTY, PENNSYLVANIA								
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: THL	DATE: 11/17/15	ISSUED FOR BID:	SCALE: 1" = 50'
1	02/03/16	TL	ISSUED FOR INTERNAL USE	1161481	CLR	MJH	CHECKED BY: CLR	DATE: 11/17/15	ISSUED FOR CONSTRUCTION:	REVISION: 4
2	10/13/16	AT	ISSUED FOR PADEP SUBMITTAL #2	1161481	CLR	MJH	APPROVED BY: MJH	DATE: 11/17/15	DRAWING NUMBER: 24-1601-70-09-A/AR-WY-036-01	SHEET 1
3	04/12/17	CG	ISSUED FOR PADEP SUBMITTAL #3	1161481	CLR	MJH	W.O. NUMBER: 1161481	DATE: 11/17/15	8:30am 7/26/2017 nlu	OF 1
4	07/28/17	AB	ISSUED FOR PADEP SUBMITTAL #4	1161481	CLR	MJH				



HYDROSTATIC TEST WATER WITHDRAWAL EQUIPMENT. SEE ATTACHMENT L-5 APPENDIX 4

MATCH LINE SEE SHEET 2 OF 5

PLAN SCALE: 1" = 50'



PROFILE SCALE: 1" = 50' HORIZONTAL 1" = 50' VERTICAL

STREAM DISTURBANCE:

STREAM WW-T54-21001	ACRE
TEMPORARY STREAM DISTURBANCE	0.3552
PERMANENT STREAM DISTURBANCE	0.0263
TOTAL STREAM DISTURBANCE	0.3815
TEMPORARY FLOODWAY DISTURBANCE	4.3227
PERMANENT FLOODWAY DISTURBANCE	0.4952
TOTAL FLOODWAY DISTURBANCE	4.8179

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	115.08
STREAM TEMPORARY IMPACT LENGTH	142.23
STREAM PERMANENT IMPACT LENGTH	10.14
STREAM TOTAL IMPACT LENGTH	152.37

STREAM CROSSING METHOD	
PRIMARY	DAM AND PUMP (DPX)
SECONDARY	COFFER DAM (CD)

GENERAL NOTES:

- PIPELINE INSTALLATION WILL BE COMPLETED UTILIZING THE PRIMARY CROSSING METHOD REFERENCED ABOVE; EQUIPMENT TO CROSS STREAM USING A BRIDGE EQUIPMENT CROSSING (BEC). ALL TYPICALS FOR THE CROSSING METHODS AND BMPS REFERENCED WITHIN THIS PACKAGE ARE INCLUDED WITHIN THE "BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET" (BMP PLAN SET), WHICH IS INCLUDED AT THE BACK OF THIS PACKAGE. THE BMP PLAN SET IS ALSO INCLUDED WITHIN ATTACHMENT M OF THE JOINT PERMIT APPLICATION, ALONG WITH THE EROSION AND SEDIMENT CONTROL PLANS AND NARRATIVES.
- THE SECONDARY CROSSING METHOD WOULD UTILIZE THE SAME WORKSPACE AS THE PROPOSED PRIMARY CROSSING METHOD. THEREFORE, STREAM DISTURBANCE ACREAGE WOULD BE THE SAME FOR EITHER CROSSING METHOD.
- THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
- TRANSCO WILL REPLANT THE RIPARIAN FOREST BUFFER OF STREAM WW-T54-21001 WITHIN THE LIMITS OF THE FEMA FLOODWAY BOUNDARY.
- STATION 2+00 SHOWN IS EQUAL TO M-0051 STATION 4+35 ON THE EROSION AND SEDIMENT CONTROL PLAN.

SURVEY NOTES:

- T.B.M. IRON ROD - 79.53' LT. OF M-0051 M.P. 0.04, ELEV. = 745.41' (NAVD88).



LEGEND

	PROPOSED 30" CENTRAL PENN LINE NORTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
	PROPOSED CPLN R/W		WELL POINT
	PROPERTY LINE		TRENCH PLUG
	FOREIGN PIPELINE		WATERBODY
	WETLAND AREA		TREE LINE
	STREAM FLOW		FLOODWAY BOUNDARY
	EXISTING POWER LINE		FEMA FLOODWAY BOUNDARY
	EXISTING FENCE		PERMANENT STREAM IMPACT
			TEMPORARY STREAM IMPACT

WOOD GROUP USA, INC.

	12" SEDIMENT BARRIER
	18" SEDIMENT BARRIER
	24" SEDIMENT BARRIER
	32" SEDIMENT BARRIER
	TOP OF BANK

DRAWING NO.	REFERENCE TITLE	TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS ATLANTIC SUNRISE PROJECT PROPOSED 30" CENTRAL PENN LINE NORTH STREAM CROSSING WW-T54-21001 M-0051 M.P. 0.08 NICHOLSON TOWNSHIP, WYOMING COUNTY, PENNSYLVANIA								
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: TL	DATE: 06/16/16	ISSUED FOR BID:	SCALE: 1" = 50'
0	10/13/16	DG	ISSUED FOR PADEP SUBMITTAL #21161481	1161481	CLR	MJH	CHECKED BY: CLR	DATE: 06/28/16	ISSUED FOR CONSTRUCTION:	REVISION: 2
1	04/12/17	TL	ISSUED FOR PADEP SUBMITTAL #31161481	1161481	CLR	MJH	APPROVED BY: MJH	DATE: 06/29/16	DRAWING NUMBER: 24-1601-70-09-A/M-0051-0.08-01	SHEET 1
2	07/28/17	MP	ISSUED FOR PADEP SUBMITTAL #41161481	1161481	CLR	MJH	WC: 1161481	7/26/2017	m2steve	OF 5

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC ATLANTIC SUNRISE PROJECT PROPOSED 30" CENTRAL PENN LINE NORTH

BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET

MONROE, NORTHMORELAND, EATON, FALLS, OVERFIELD, CLINTON, NICHOLSON AND LENOX
TOWNSHIP

WYOMING COUNTY

BMP DETAIL SUMMARY

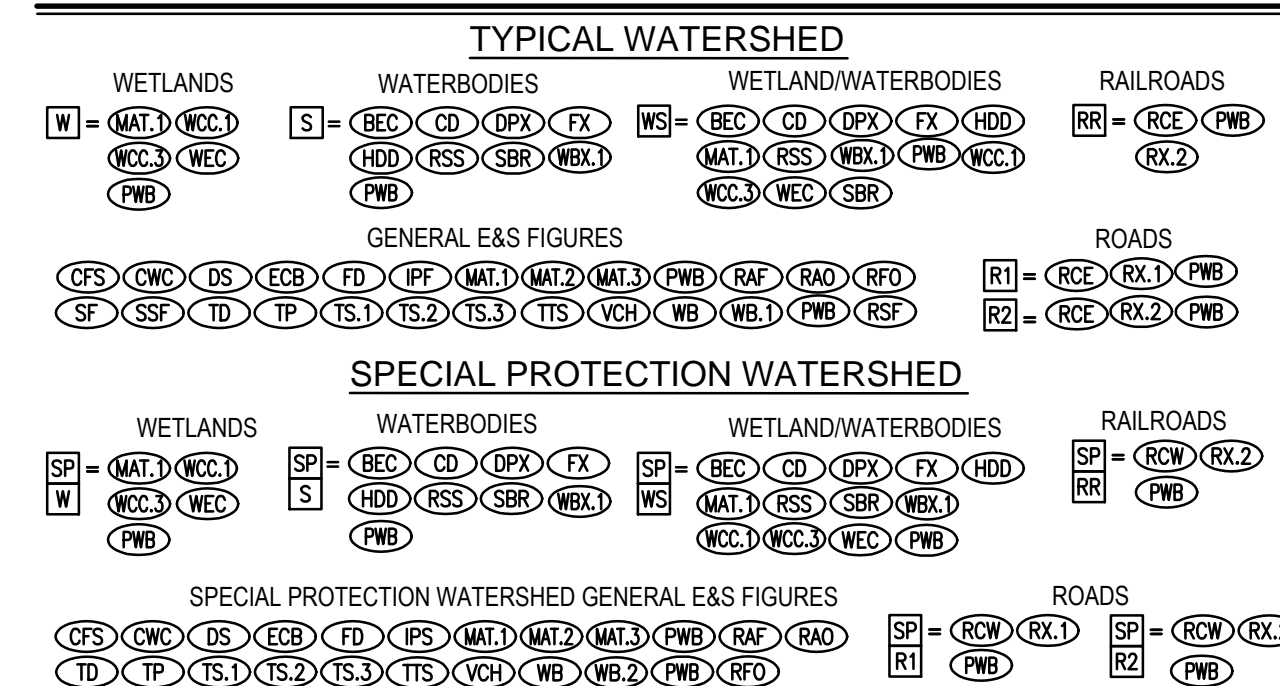
FIGURE	FIGURE TITLE	SHEET NO.
ARF	ABACT ROCK FILTER	1
BBD	BROAD-BASED DIP	
BEC	BRIDGE EQUIPMENT CROSSING	
CD	COFFERDAM STREAM CROSSING	
CDM	CHECK DAM	2
CFS	COMPOST FILTER SOCK	
CS	CLEANOUT STAKE	
CST	COMPOST SOCK SEDIMENT TRAP	
CWC	CLEAN WATER CROSSING	3
DPX	DAM AND PUMP STREAM CROSSING	
DS	HYDROSTATIC 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 DEWICE	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.

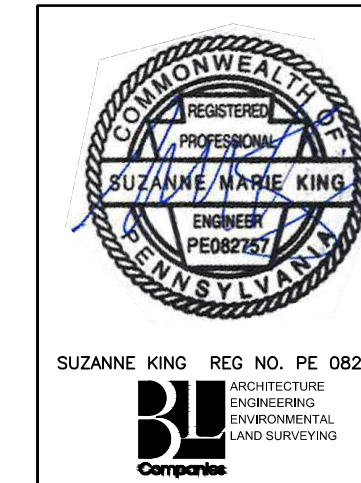
DRAWING INDEX

DRAWING NUMBER	SHEET NO.	DRAWING NAME
24-1601-70-28-A/1683_3-BMP	1-1	COVER SHEET
ASR-BMP-GN	1-3	GENERAL NOTES
ASR-BMP	1-11	BEST MANAGEMENT PRACTICES STANDARD CONSTRUCTION DETAILS
24-1600-70-28-A/1683_3-BMP-WY-TB	1-7	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.



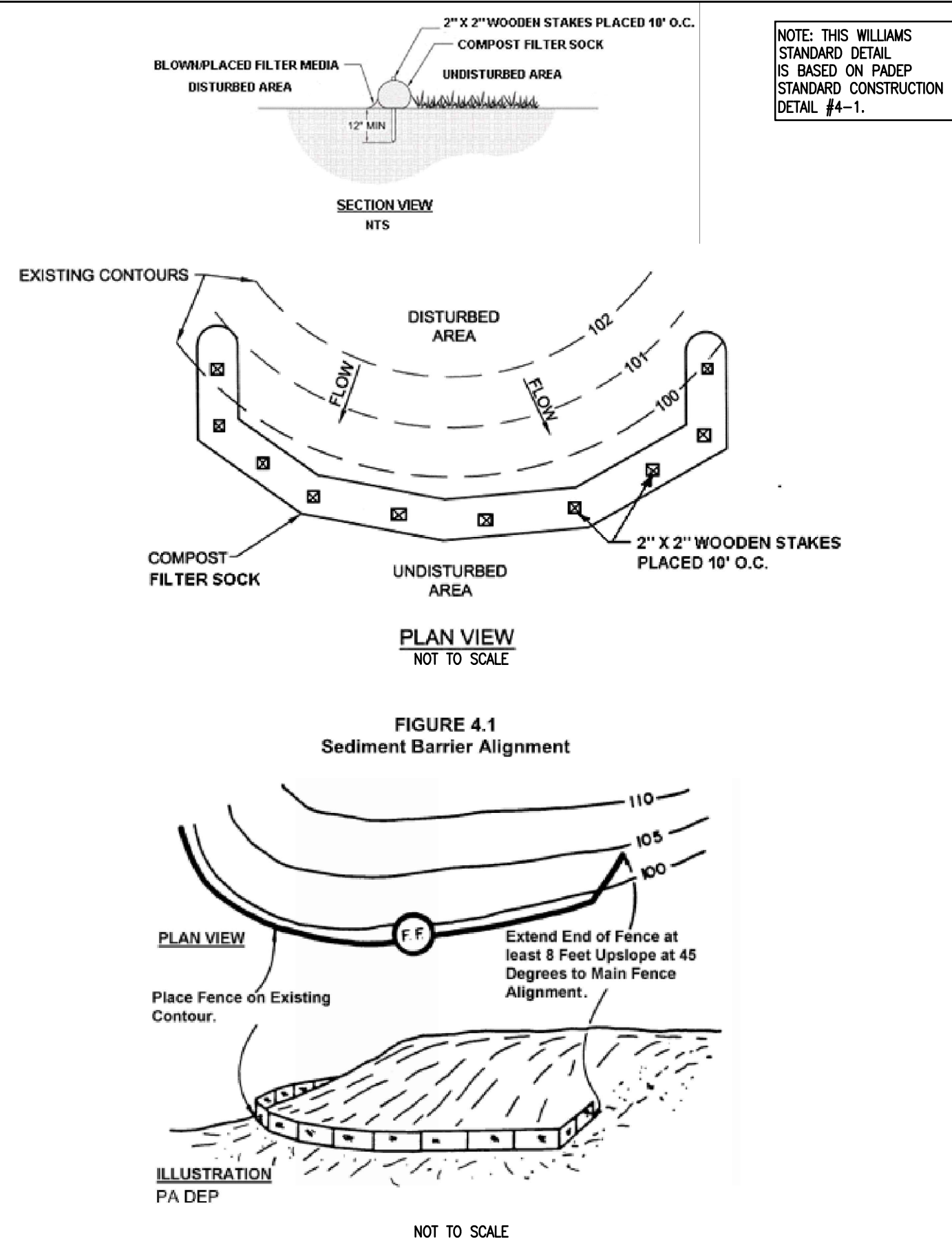
REVISIONS						
NO.	DATE	BY	DESCRIPTION	W.O. NO.	CHK.	APP.
0	08/26/2015	BL	ISSUED FOR PADEP SUBMITTAL	W0572385	JLK	SMK
1	12/02/2015	BL	ISSUED FOR PADEP RESUBMITTAL	W0572385	JLK	SMK
2	Oct. 2016	BL	PADEP TECHNICAL DEFICIENCY RESPONSE #1	W0572385	JLK	AJB
3	April 2017	BL	PADEP TECHNICAL DEFICIENCY RESPONSE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

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
ATLANTIC SUNRISE PROJECT
PROPOSED 30" CENTRAL PENN LINE NORTH
PENNSYLVANIA BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET
WYOMING COUNTY, PENNSYLVANIA

Williams
GAS PIPELINE

COVER SHEET

DRAWN BY: ELZ	DATE: 05/15/15	ISSUED FOR: CONSTRUCTION	SCALE:
CHECKED BY: JLK	DATE: 07/02/15	ISSUED FOR: CONSTRUCTION	REVISION: 3
APPROVED BY: SMK	DATE: 07/08/15	DRAWING NUMBER: 24-1601-70-28-A/1683_3-BMP	SHEET 1 OF 1



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

FIGURE 4.1 Sediment Barrier Alignment

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



TABLE 4.1 COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

Material Type	3 mil HDPE	5 mil HDPE	8 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. Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch), 3/16" Max. aperture size.

Inner Containment Netting: 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

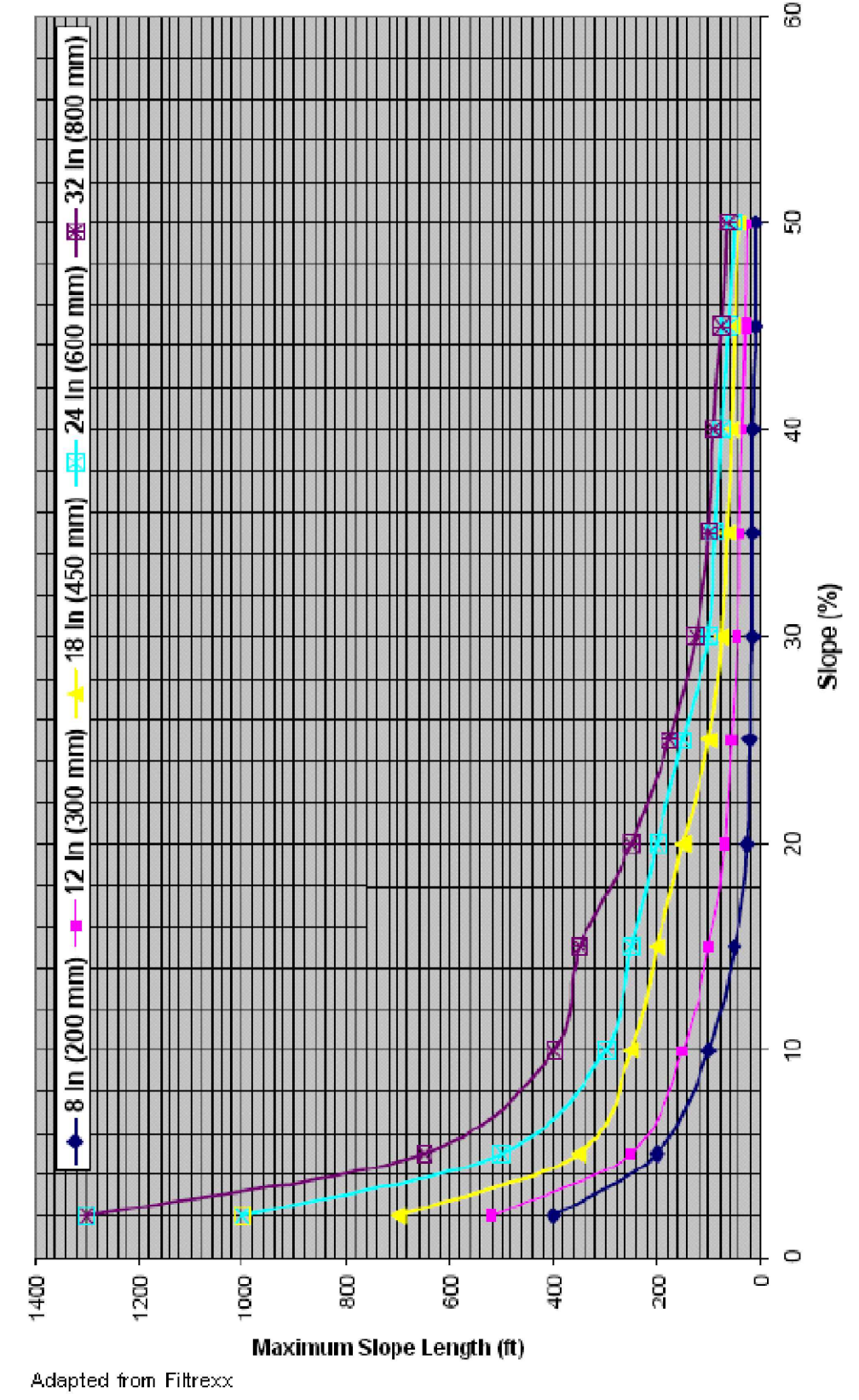
ORGANIC MATTER CONTENT	25%-100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.5
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	30%-50% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 DS/M (MMHOS/CM) MAXIMUM

- 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				

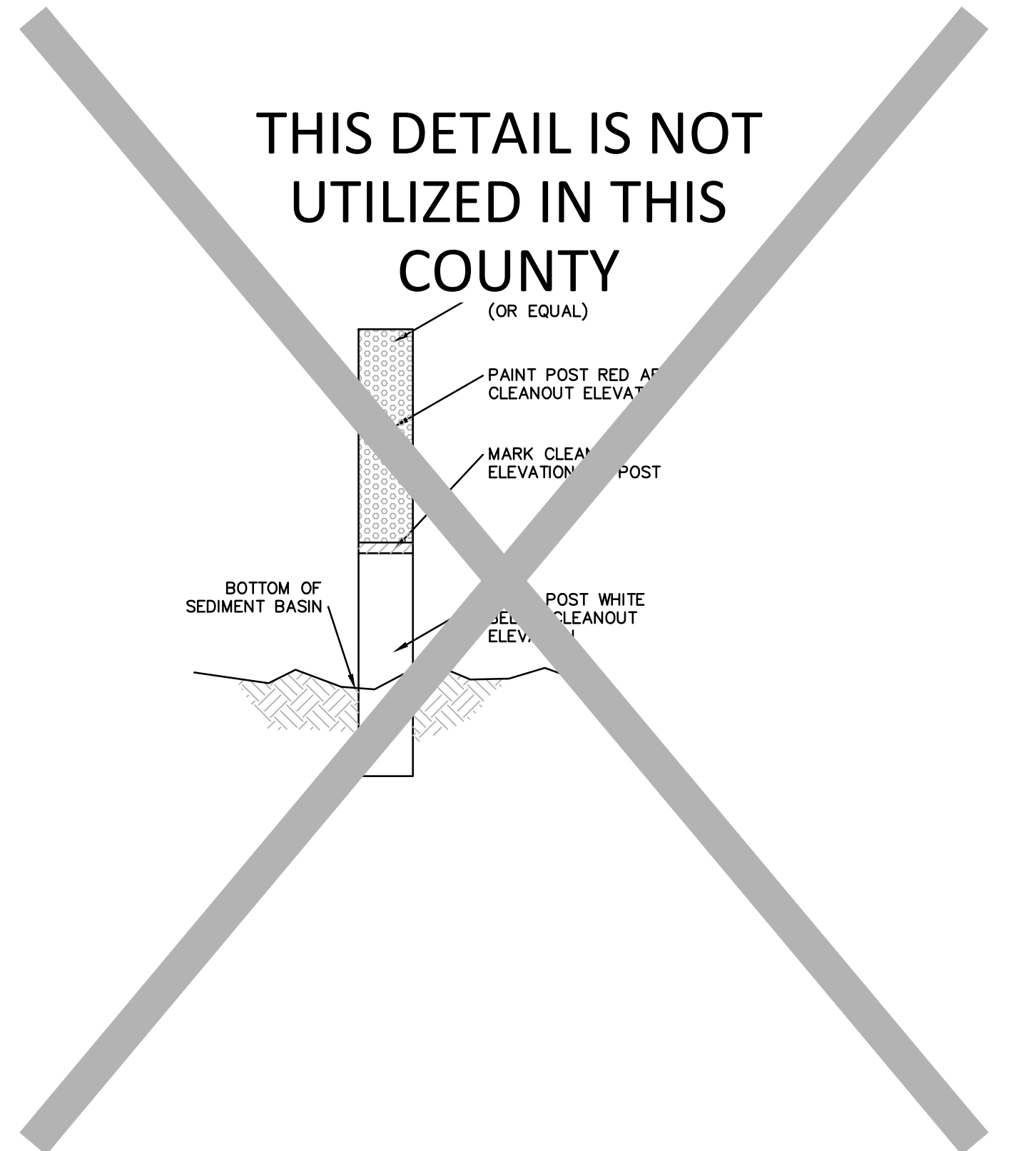


FIGURE 4.2 MAXIMUM PERMISSIBLE SLOPE LENGTH ABOVE COMPOST FILTER SOCKS



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

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

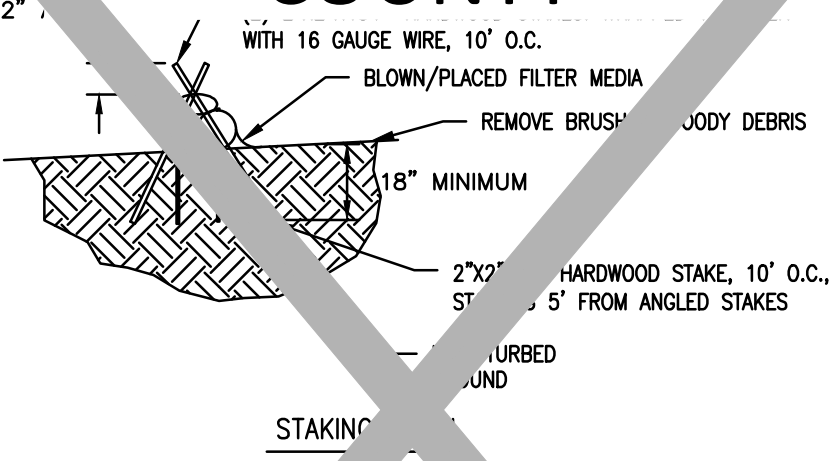


THIS DETAIL IS NOT UTILIZED IN THIS COUNTY (OR EQUAL)

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



THIS DETAIL IS NOT UTILIZED IN THIS COUNTY



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. ADDITIONAL STORAGE MAY BE PROVIDED BY MEANS OF AN EXCAVATED SUMP 12" DEEP EXTENDING 1 TO 3 FEET UPSLOPE OF THE SOCKS.
 - THE MAXIMUM TRIBUTARY DRAINAGE AREA SHALL BE 0.5 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 PER 12" FREEBOARD FOR EACH AC 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 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

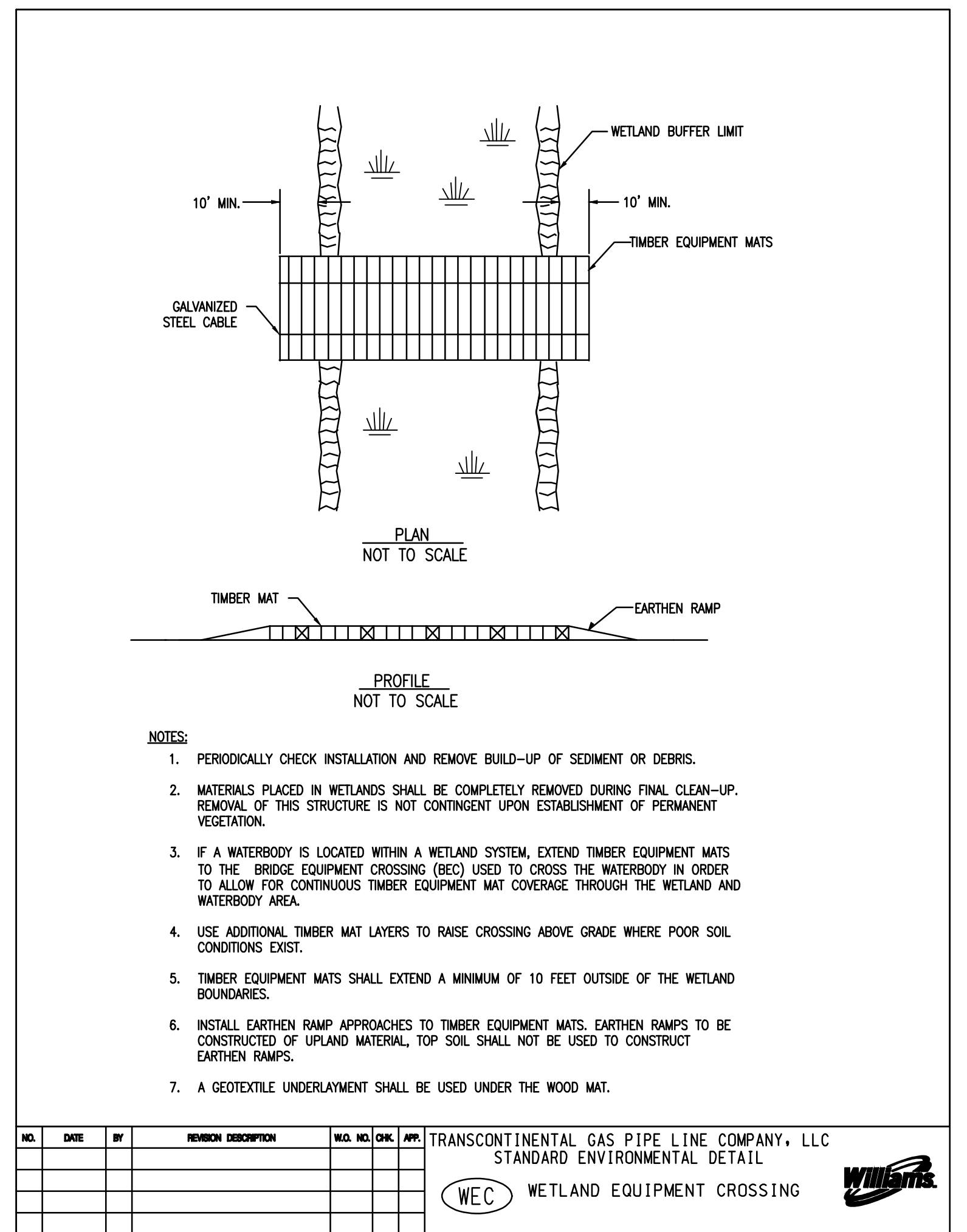
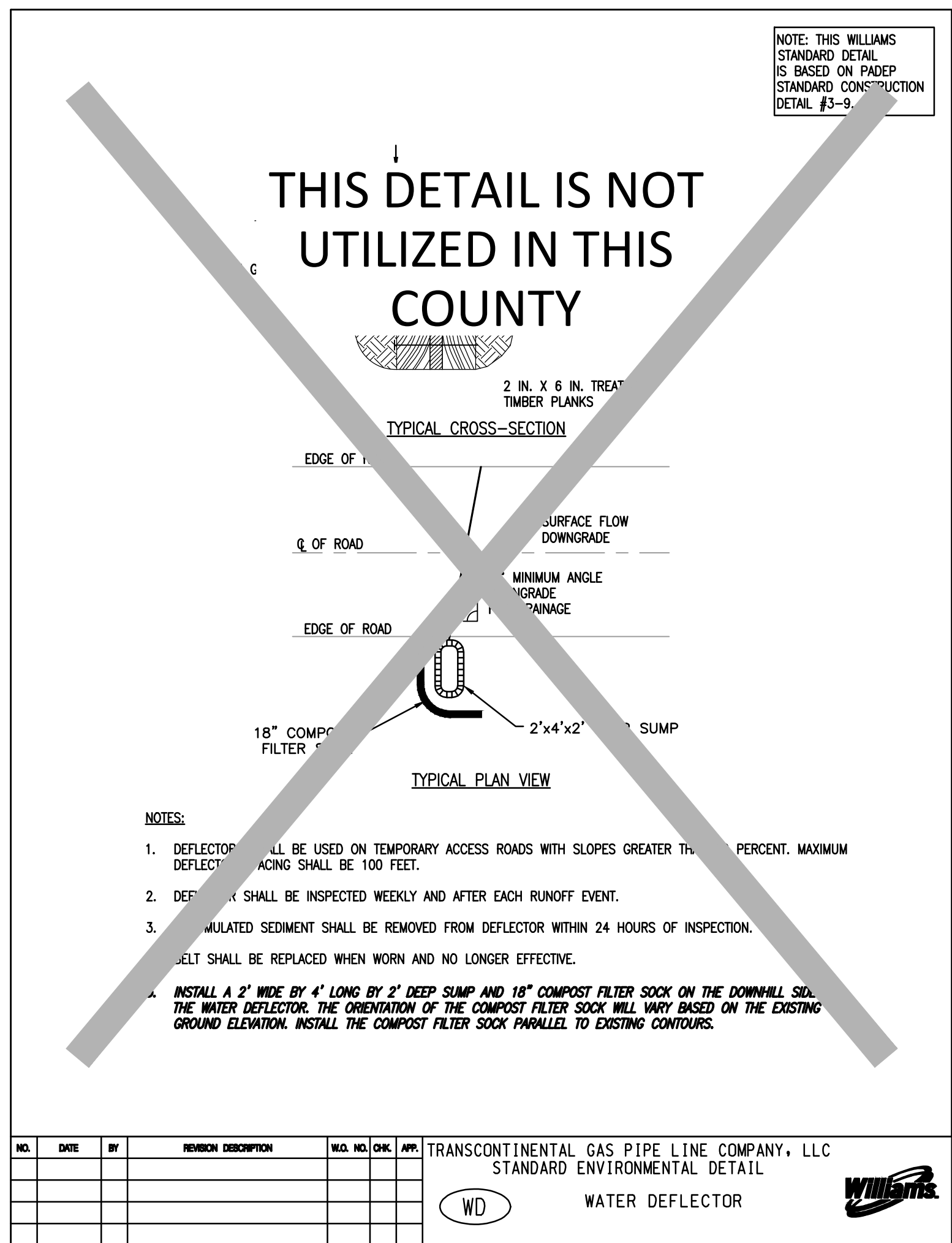
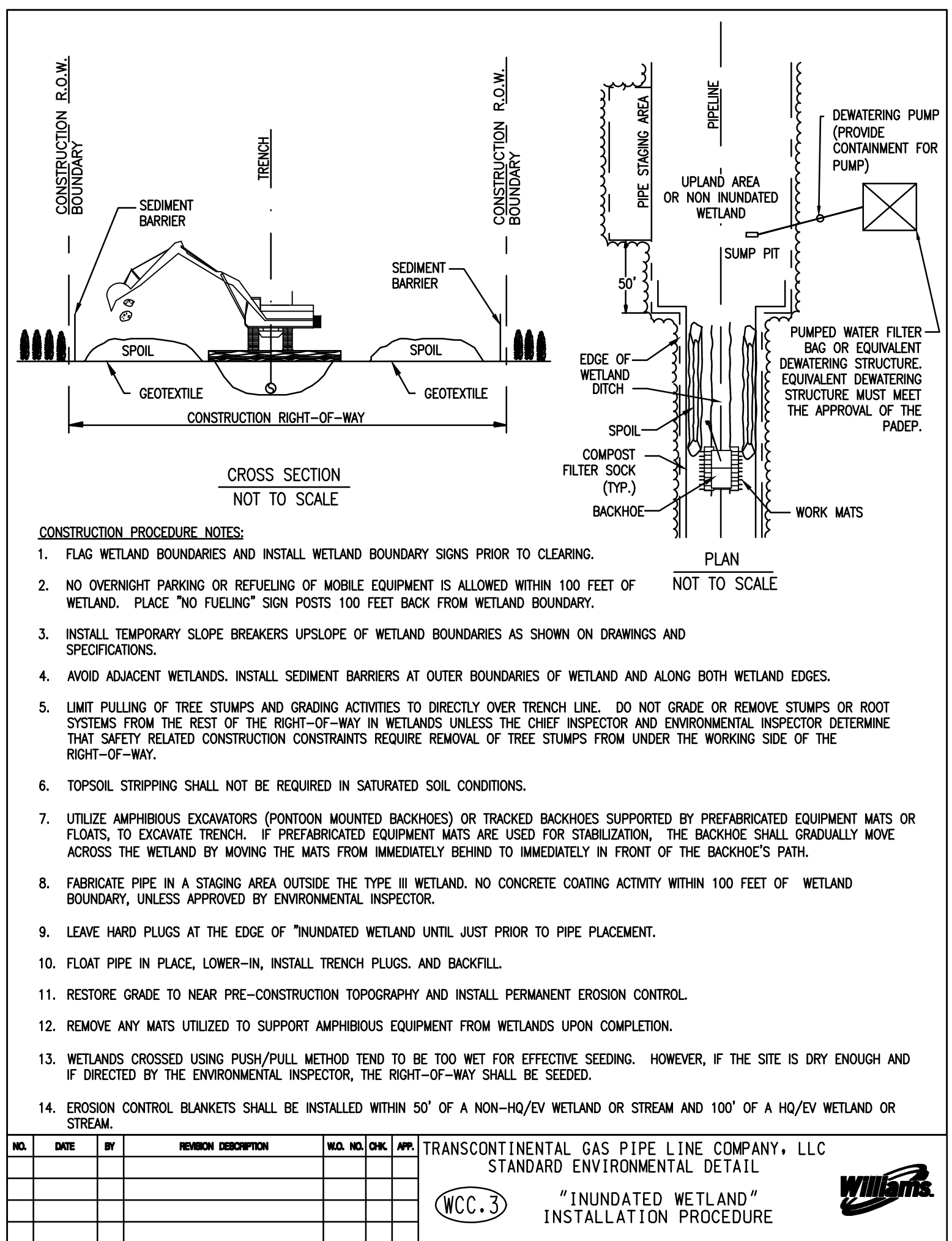
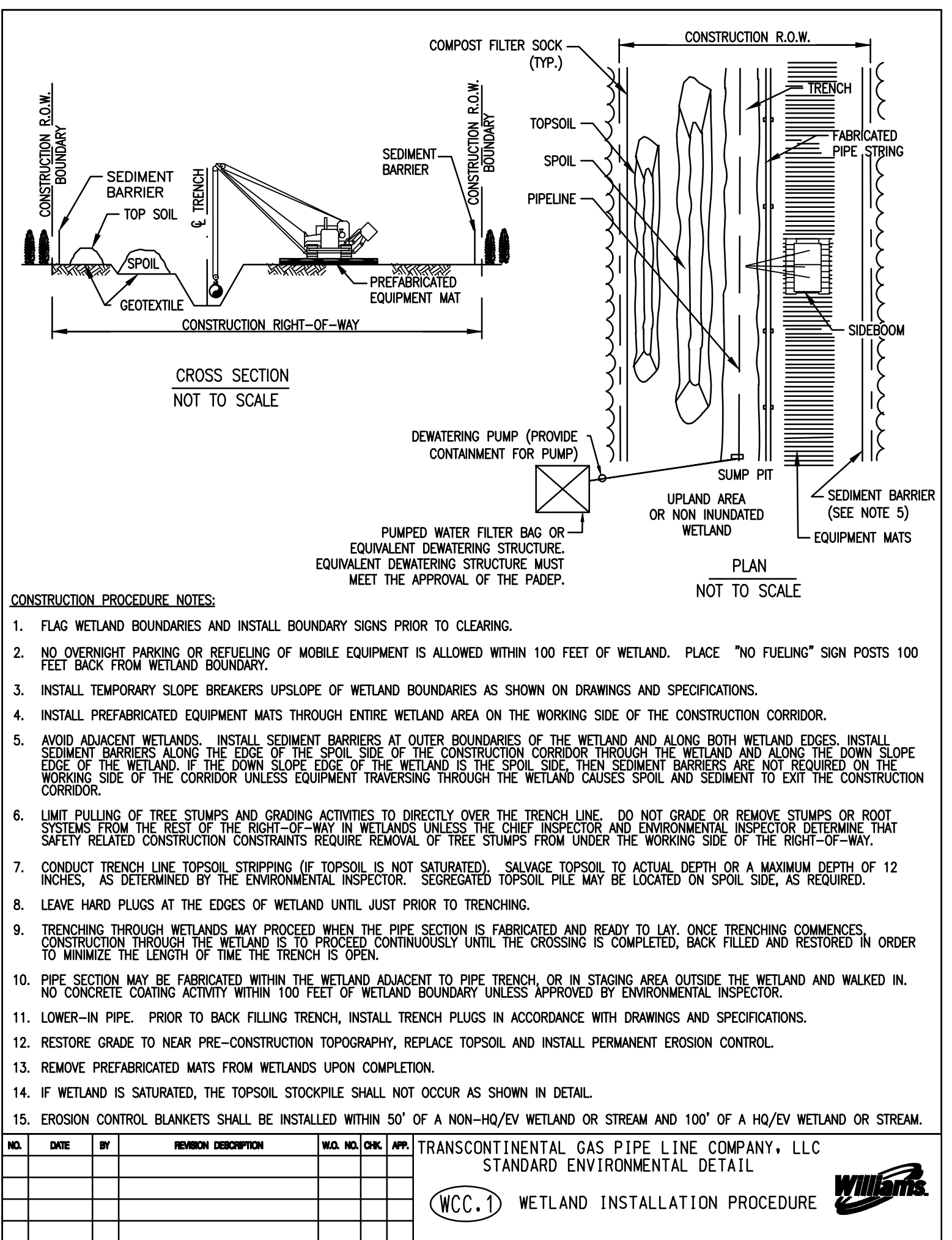
NO.	DATE	BY	REVISION DESCRIPTION	NO.	NO.	CHK.	APP.
			TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL				
			(CWC) CLEAN WATER CROSSING				



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	
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							
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:	4
APPROVED BY:	SMK	DATE:	07/08/15	DRAWING NUMBER:	ASR-BMP	SHEET	2
W.O.:						OF	11





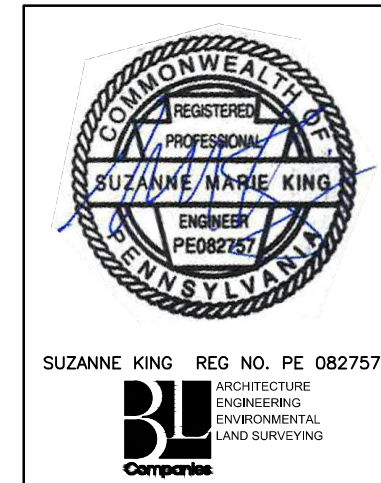
NO.	DATE	BY	REVISION DESCRIPTION	W.D. NO.	CHK.	APP.
			TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STANDARD ENVIRONMENTAL DETAIL			
			(WCC-1) WETLAND INSTALLATION PROCEDURE			

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 - 4:35pm
 Drawing Location & Name: G:\JOBS\14\14C\14C4909\DWG\BMPs&DETAILS\PL_DNT14C4909(10)_WY-BMP-11.dwg

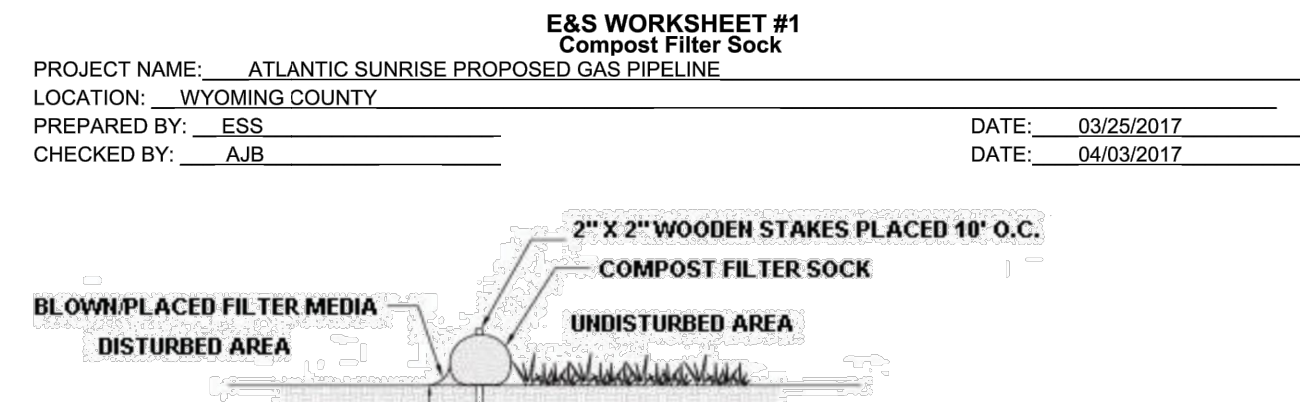


REVISIONS						
NO.	DATE	BY	DESCRIPTION	W.D. NO.	CHK.	APP.
0	08/26/2015	BL	ISSUED FOR PADEP SUBMITTAL	W0572385	JLK	SMK
1	12/02/2015	BL	ISSUED FOR PADEP RESUBMITTAL	W0572385	JLK	SMK
2	Oct. 2016	BL	PADEP TECHNICAL DEFICIENCY RESPONSE #1	W0572385	JLK	SMK
3	April 2017	BL	PADEP TECHNICAL DEFICIENCY RESPONSE #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			
BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET			
BEST MANAGEMENT PRACTICES DETAILS			
DRAWN BY:	ELZ	DATE:	05/15/15
CHECKED BY:	JLK	DATE:	07/02/15
APPROVED BY:	SMK	DATE:	07/08/15
ISSUED FOR:	ISSUED FOR CONSTRUCTION	REVISION:	4
DRAWING NUMBER:	ASR-BMP	SHEET:	11
		OF:	11

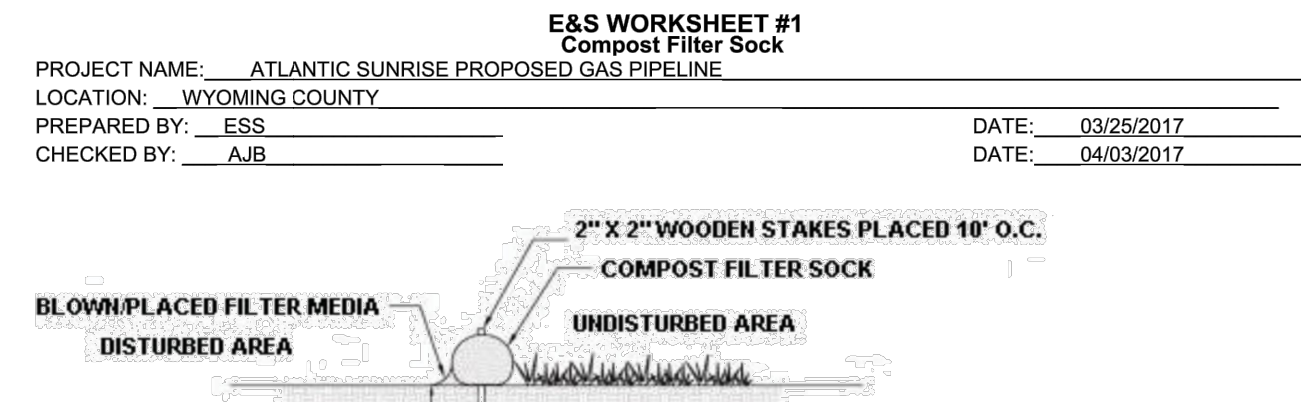


TABLE 1: SEDIMENT BARRIER SUMMARY



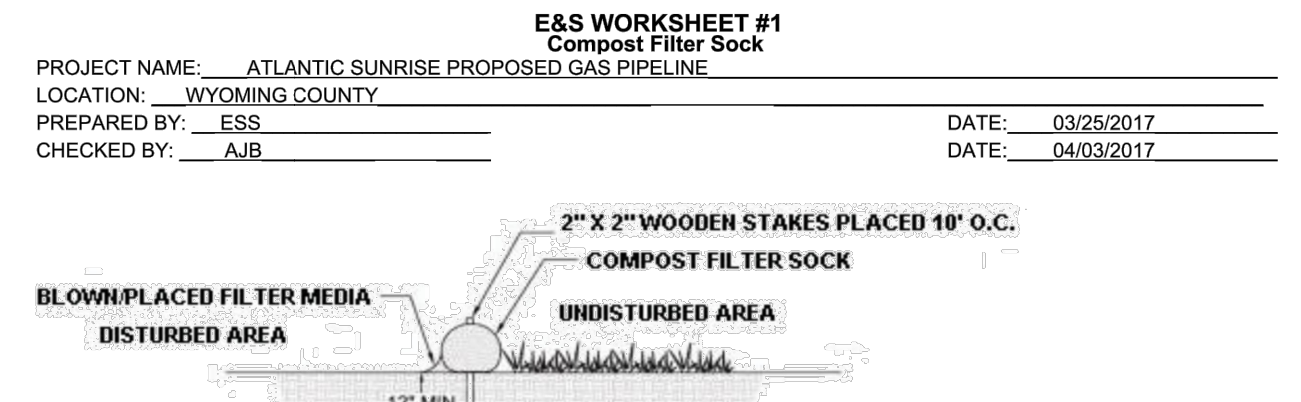
MILEPOST NO.	Dia. In.	LOCATION			SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER FT
		BEGIN STA.	END STA.	TYPE		
M-0179	32	46+00	to 61+75		39	90
	18	61+75	to 65+50	Wetland/Stream	22	108
	12	66+00	to 67+75		3	307
	12	67+00	to 68+75	Road	1	88
	32	69+00	to 70+25		2	1222
	12	70+50	to 71+75	Wetland	5	90
	18	72+00	to 82+25		24	85
	32	82+25	to 90+50	Wetland	49	155
	24	90+50	to 93+75		26	91
	18	93+75	to 99+00		19	106
	32	99+00	to 10+75		12	305
	18	104+75	to 160+00		17	167
	12	106+00	to 109+00		12	102
	12	109+25	to 110+75	Wetland	12	54
	12	111+00	to 114+75	Wetland/Stream	4	117
	12	115+25	to 115+50	Road	16	12
	12	116+50	to 117+00		15	45
	18	117+00	to 118+25	Wetland	12	126
	18	117+00	to 119+75		23	104
	18	120+00	to 120+25	Road	20	21
	18	120+25	to 124+00		21	84
	24	124+00	to 125+00		14	249
	12	125+00	to 129+25		14	78
	12	129+25	to 133+50		15	85
	18	133+50	to 140+50		21	108
	24	140+50	to 143+25		26	122
	32	143+25	to 158+25		31	114
	24	158+25	to 166+00		28	98
	12	166+25	to 167+00	Road	31	28
	12	167+00	to 168+50		5	153
	12	168+00	to 169+00	Wetland/Stream	24	13
	12	169+00	to 172+50		20	65
	18	173+00	to 174+00		28	69
	12	174+00	to 175+75		7	94
	18	176+00	to 178+25		26	80
	24	179+00	to 182+75		26	111
	18	182+75	to 186+50		21	131
	12	186+50	to 187+00	Stream		

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



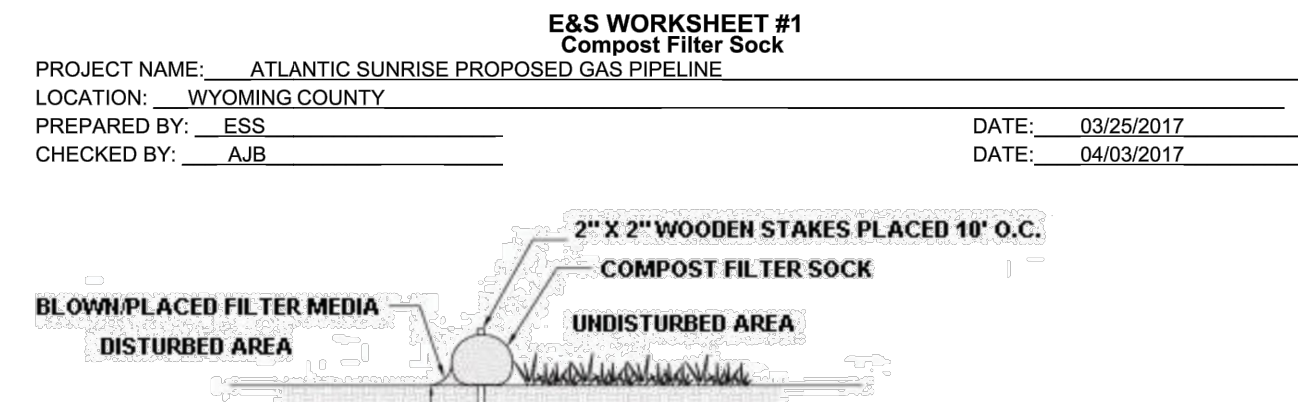
MILEPOST NO.	Dia. In.	LOCATION			SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER FT
		BEGIN STA.	END STA.	TYPE		
M-0179	18	186+75	to 191+25		20	72
	12	191+25	to 192+00	Stream	42	23
	18	191+75	to 196+00		17	126
	18	197+50	to 198+50		33	50
	32	199+75	to 204+00		2	1222
	12	204+50	to 206+00	Wetland	3	269
	18	208+75	to 210+50		22	69
	24	212+00	to 212+00		16	206
	18	212+00	to 216+75		14	126
	12	218+00	to 229+50		13	83
	24	229+50	to 230+25		26	91
	32	230+25	to 231+00		29	120
	12	231+00	to 233+75		13	110
	12	234+50	to 239+00		2	86
	12	239+00	to 240+75		22	50
	12	241+00	to 246+25		14	85
	12	246+50	to 246+50	Road	10	15
	18	247+50	to 250+00		17	100
	12	250+00	to 254+75		16	72
	12	254+25	to 256+00		12	118
	12	256+25	to 258+50		12	73
	12	258+50	to 259+25	Wetland	11	64
	18	259+25	to 261+75		15	119
	12	261+75	to 263+50	Stream	14	83
	18	263+50	to 263+50		14	111
	12	263+50	to 263+75	Stream	12	88
	32	263+75	to 264+25		13	294
	12	264+25	to 264+50	Stream	15	87
	18	264+50	to 267+00		17	131
	24	267+50	to 268+25	Road	13	241
	32	267+50	to 273+00		16	248
	18	273+00	to 274+25		18	115
	32	274+25	to 275+00	Stream	18	105
	12	275+00	to 275+50		35	30
	18	275+50	to 281+50	Wetland	21	99
	12	281+00	to 283+25		13	66
	18	283+50	to 285+75		14	132
	12	285+75	to 286+50	Wetland	13	67

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



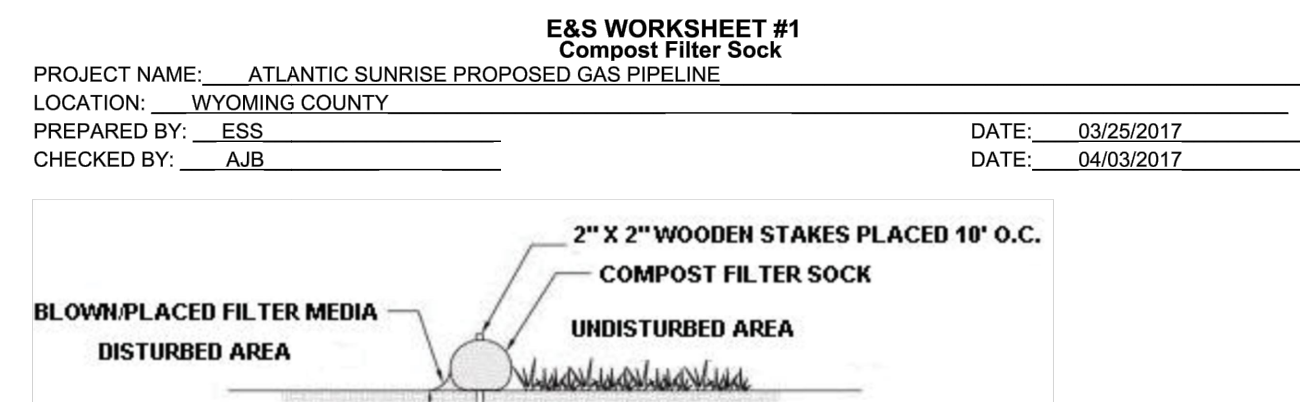
MILEPOST NO.	Dia. In.	LOCATION			SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER FT
		BEGIN STA.	END STA.	TYPE		
M-0179	12	286+25	to 287+75		13	76
	18	287+00	to 292+00	Wetland	11	136
	18	291+50	to 295+75		17	98
	12	292+50	to 293+50	Wetland	14	81
	32	296+00	to 302+50		2	1222
	12	303+25	to 310+50		9	132
	12	311+00	to 323+25		8	117
	12	323+50	to 324+00	Road	4	193
	12	324+50	to 327+25		4	148
	12	327+50	to 331+00	Wetland	4	172
	12	331+50	to 338+75		4	204
	12	338+75	to 339+00	Stream	8	61
	30	339+00	to 339+50		6	66
	24	339+50	to 339+75		6	175
	32	339+75	to 350+25	Wetland/Stream	5	185
	24	350+25	to 360+00		6	139
	18	360+25	to 360+25		18	82
	12	360+50	to 369+25		6	78
	12	369+25	to 369+50		9	126
M-0071	12	1603+25	to 2+00		5	208
	12	2+75	to 7+50		4	220
	18	7+00	to 9+50		14	130
	24	9+50	to 18+75		15	87
	18	19+00	to 24+75		15	125
	12	25+00	to 27+25		11	98
	12	27+25	to 27+50	Wetland	11	98
	12	27+50	to 34+00		13	98
	12	34+00	to 36+50	Wetland	7	47
	24	36+75	to 40+00		9	132
	12	40+50	to 45+00		1	50
M-0120	12	1+00	to 62+50	Road	25	30
	24	62+75	to 80+25		11	102
	24	81+00	to 84+75		27	68
	12	84+75	to 89+00		1	248
	12	89+25	to 90+00		6	89
	24	90+25	to 99+50		22	147
	18	99+50	to 102+00	Wetland/Stream	18	68
	18	102+00	to 105+25		16	138
	18	103+50	to 104+25	Road	16	84
	18	105+25	to 117+50	Wetland/Stream	16	163

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



MILEPOST NO.	Dia. In.	LOCATION			SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER FT	
		BEGIN STA.	END STA.	TYPE			
M-0120	24	118+00	to 123+00		11	72	
	24	120+25	to 123+00	Wetland	3	158	
	24	123+25	to 131+75		11	78	
	12	132+00	to 132+25	Road	12	64	
	32	134+00	to 151+50		2	1222	
	12	151+25	to 154+50		10	98	
	32	155+00	to 167+00		26	97	
	24	163+25	to 163+75		6	41	
	12	163+50	to 167+00		4	92	
	24	167+25	to 174+00		19	107	
	18	173+75	to 180+50		21	101	
	24	180+75	to 186+50		12	92	
	24	186+00	to 191+50		20	50	
	24	191+50	to 193+00		6	167	
	24	193+25	to 183+50		33	80	
	18	183+75	to 1838+00		14	156	
	24	1839+00	to 1842+50		3	300	
	35	12	185+75	to 185+50	Road	14	15
	24	1856+75	to 1859+00		12	130	
	24	1859+00	to 1881+50		15	110	
	24	1869+50	to 1871+00	Pull-back area	6	367	
	12	1881+75	to 1885+75		3	215	
	24	1887+00	to 1895+00		19	102	
	24	1889+50	to 1895+00		17	90	
	12	1896+00	to 1896+75	Stream/Wetland	14	108	
	36	24	1896+75	to 1918+00		22	146
	12	1916+75	to 1926+00		5	90	
	32	1922+00	to 1923+00	Wetland	25	150	
	24	1927+00	to 1933+50		21	80	
	18	1933+50	to 1939+25		17	90	
	13	1939+25	to 1943+50		16	79	
	18	1941+50	to 1944+00		20	121	
	18	1944+00	to 1946+50	Stream/Wetland	18	90	
	18	1946+25	to 1449+75		13	144	
	18	1948+75	to 1950+75	Wetland	12	138	
	18	1950+75	to 1954+75		12	145	
	37	24	1954+50	to 1957+50		12	124
	12	1957+25	to 1958+50	Stream/Wetland	11	50	

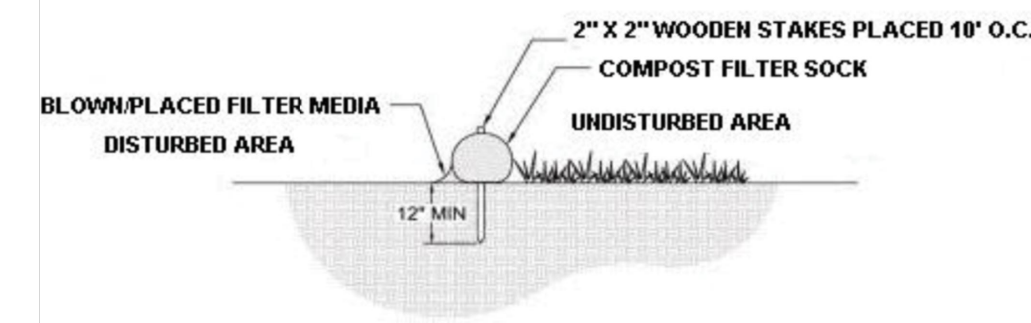
SOURCE: Pennsylvania Erosion and Sediment Pollution Control Manual, Page 372



MILEPOST NO.	Dia. In.	LOCATION			SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER FT
		BEGIN STA.	END STA.	TYPE		
37	24	1959+50	to 1962+00		22	126
	18	1962+00	to 1963+75		16	157
	24	1964+00	to 1967+50		14	87
	12	1967+50	to 1970+50	Stream/Wetland	8	90
	32	1970+50	to 1985+00		2	1222
	12	1985+00	to 1990+75	Stream/Wetland	3	90
	24	1991+00	to 1995+50		9	115
	12	1994+00	to 1994+00	Pull Back Area	8	151
	12	1995+50	to 1999+00	Wetland/Road	9	90
	12	1999+00	to 2006+25		6	80
	32	1999+00	to 2007+00	Road	14	309
38	24	2007+25	to 2010+00		18	88
	18	2010+00	to 2010+50	Stream	18	91
	24	2010+25	to 2014+75		24	94
	24	2015+00	to 2028+00		34	50
	12	2028+25	to 2028+25	Road	26	10
	24	2030+00	to 2030+25		29	90
	24	2032+25	to 2034+75		3	90
	18	2034+50	to 2035+50	Stream	13	130
	24	2035+25	to 2040+50		25	150
	24	2040+50	to 2048+50		15	90
	12	2048+75	to 2049+00	Road	4	137
39	24	2049+00	to 2075+75		10	25
	12	2075+75	to 2079+50	Wetland	5	55
	12	2079+00	to 2081+25		2	67
	12	2081+75	to 2082			

TABLE 1: SEDIMENT BARRIER SUMMARY (CONTINUED)

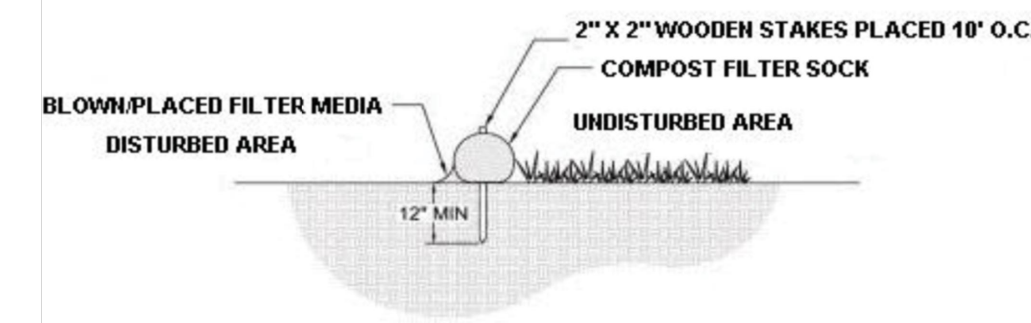
E&S WORKSHEET #1
Compost Filter Sock
PROJECT NAME: ATLANTIC SUNRISE PROPOSED GAS PIPELINE
LOCATION: WYOMING COUNTY
PREPARED BY: ESS DATE: 03/25/2017
CHECKED BY: AJB DATE: 04/03/2017



MILEPOST NO.	Dia. In.	LOCATION			SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER FT
		BEGIN STA.	END STA.	TYPE		
M-0080	24	23+50	to 24+00		5	457
	12	26+75	to 28+50		28	160
	12	28+50	to 29+25		16	76
	12	28+00	to 29+50		16	158
	32	30+00	to 34+50		2	1222
50	12	34+50	to 34+75	Wetland	30	6
	12	35+25	to 39+50	Road	20	47
	24	34+75	to 39+75		28	72
	24	40+50	to 40+50	Wetland	14	19
	24	41+50	to 50+00		27	125
	18	50+00	to 52+00		6	262
	18	52+00	to 57+50		10	155
	18	57+50	to 58+00	Wetland/Stream	10	155
	18	57+75	to 59+50		11	150
	18	59+75	to 62+50	Wetland	10	175
	18	61+25	to 66+50		20	75
	12	66+50	to 67+25	Stream	12	100
	18	67+25	to 69+50		13	140
	18	68+50	to 70+25	Wetland	11	172
	12	70+25	to 72+50		10	100
	18	72+50	to 80+75		12	185
	18	2663+90	to 2665+00		9	185
	12	2665+50	to 2665+75	Wetland	2	25
	12	2665+75	to 2670+50		10	100

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: WYOMING COUNTY
PREPARED BY: ESS DATE: 03/25/2017
CHECKED BY: AJB DATE: 04/03/2017



MILEPOST NO.	Dia. In.	LOCATION			SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER FT
		BEGIN STA.	END STA.	TYPE		
M-0080	24	23+50	to 24+00		5	457
	12	26+75	to 28+50		28	160
	12	28+50	to 29+25		16	76
	12	28+00	to 29+50		16	158
	32	30+00	to 34+50		2	1222
50	12	34+50	to 34+75	Wetland	30	6
	12	35+25	to 39+50	Road	20	47
	24	34+75	to 39+75		28	72
	24	40+50	to 40+50	Wetland	14	19
	24	41+50	to 50+00		27	125
	18	50+00	to 52+00		6	262
	18	52+00	to 57+50		10	155
	18	57+50	to 58+00	Wetland/Stream	10	155
	18	57+75	to 59+50		11	150
	18	59+75	to 62+50	Wetland	10	175
	18	61+25	to 66+50		20	75
	12	66+50	to 67+25	Stream	12	100
	18	67+25	to 69+50		13	140
	18	68+50	to 70+25	Wetland	11	172
	12	70+25	to 72+50		10	100
	18	72+50	to 80+75		12	185
	18	2663+90	to 2665+00		9	185
	12	2665+50	to 2665+75	Wetland	2	25
	12	2665+75	to 2670+50		10	100

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

Drawn By & Date/Time: CScanzello Jul 28, 2017 - 4:44pm
Drawing Location & Name: G:\JOBS\14\14C4909\DWG\BMPs&DETAILS\PL_DNT_14C4909(10)_WY-TB.dwg



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	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 30" CENTRAL PENN LINE NORTH
PENNSYLVANIA BEST MANAGEMENT PRACTICES AND
QUANTITIES PLAN SET
WYOMING 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:	24-1601-70-28-A/1683_3-BMP-WY-TB SHEET 2 OF 7

TABLE 5: LOCATIONS OF ACID SOILS ALONG CPLN PIPELINE IN WYOMING 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
M-0179 0.13	M-0179 0.18	Wyoming	WID	5.30	M-0071 2.73	M-0071 2.83	Wyoming	OcB	4.80	M-0054 0.70	M-0054 0.76	Wyoming	LdD	4.80
M-0179 0.18	M-0179 0.25	Wyoming	DF	4.80	M-0071 2.83	M-0071 2.87	Wyoming	ArC	4.80	43.01	43.40	Wyoming	LdD	4.80
M-0179 0.25	M-0179 0.34	Wyoming	BrB	5.30	M-0071 2.87	M-0071 2.87	Wyoming	OcB	4.80	43.40	43.45	Wyoming	MCC	6.60
M-0179 0.34	M-0179 0.43	Wyoming	OpD	4.80	M-0071 2.87	M-0071 2.89	Wyoming	ArC	4.80	43.45	43.50	Wyoming	MIC	5.50
M-0179 0.43	M-0179 0.53	Wyoming	ChC	5.30	M-0071 2.89	M-0071 2.99	Wyoming	OcD	4.80	43.50	43.71	Wyoming	LdD	4.80
M-0179 0.53	M-0179 0.58	Wyoming	OpD	4.80	M-0071 2.99	M-0071 3.07	Wyoming	OYE	4.80	43.71	43.72	Wyoming	W Water	
M-0179 0.58	M-0179 0.66	Wyoming	XD	4.80	M-0071 3.07	M-0071 3.22	Wyoming	ArC	4.80	43.72	43.87	Wyoming	Pp	4.60
M-0179 0.66	M-0179 0.67	Wyoming	WYf	4.80	M-0071 3.22	M-0071 3.25	Wyoming	OYE	4.80	43.87	43.89	Wyoming	WYB	4.80
M-0179 0.67	M-0179 0.68	Wyoming	XDf	4.80	M-0071 3.25	M-0071 3.38	Wyoming	ArC	4.80	43.89	44.05	Wyoming	WcD	5.20
M-0179 0.68	M-0179 0.72	Wyoming	BrC	5.80	M-0071 3.38	M-0071 3.55	Wyoming	OYE	4.80	44.05	44.18	Wyoming	WcC	5.30
M-0179 0.72	M-0179 0.86	Wyoming	Hm	6.50	M-0071 3.55	M-0071 3.64	Wyoming	ArC	4.80	44.18	44.32	Wyoming	WcD	5.20
M-0179 0.86	M-0179 0.88	Wyoming	Hm	6.50	M-0071 3.64	M-0071 3.70	Wyoming	OYE	4.80	44.32	44.36	Wyoming	Mrc	5.30
M-0179 0.88	M-0179 1.15	Wyoming	LdD	4.80	34.26	34.53	Wyoming	OYE	4.80	44.36	44.40	Wyoming	Mrc	5.30
M-0179 1.15	M-0179 1.22	Wyoming	BbD	4.90	34.53	34.64	Wyoming	LCE	4.80	44.40	44.47	Wyoming	NrB	4.80
M-0179 1.22	M-0179 1.24	Wyoming	Hm	6.50	34.64	34.78	Wyoming	BbD	4.90	44.47	44.76	Wyoming	Mrc	5.30
M-0179 1.24	M-0179 1.34	Wyoming	WYf	4.80	34.78	34.83	Wyoming	WYf	4.80	M-0121 0.00	M-0121 0.01	Wyoming	Mrc	5.30
M-0179 1.34	M-0179 1.36	Wyoming	MhB	4.80	34.83	34.92	Wyoming	Pp	4.60	M-0121 0.01	M-0121 0.10	Wyoming	WcD	5.20
M-0179 1.36	M-0179 1.72	Wyoming	OYE	4.80	34.92	35.03	Wyoming	W Water	4.60	M-0121 0.10	M-0121 0.13	Wyoming	WcC	5.30
M-0179 1.72	M-0179 1.97	Wyoming	LdD	4.80	35.03	35.06	Wyoming	Pp	4.60	M-0121 0.13	M-0121 0.21	Wyoming	Mrc	5.30
M-0179 1.97	M-0179 1.99	Wyoming	LeD	5.10	35.06	35.09	Wyoming	Ph	5.30	M-0063 0.17	M-0063 0.20	Wyoming	Mrc	5.30
M-0179 1.99	M-0179 2.08	Wyoming	Mrc	6.60	35.09	35.33	Wyoming	UnC	5.30	M-0063 0.20	M-0063 0.22	Wyoming	Mrc	5.30
M-0179 2.08	M-0179 2.13	Wyoming	MhB	4.80	35.33	35.39	Wyoming	UnB	5.30	M-0063 0.22	M-0063 0.22	Wyoming	WcD	5.20
M-0179 2.13	M-0179 2.17	Wyoming	ReA	5.80	35.39	35.66	Wyoming	UnC	5.30	M-0063 0.22	M-0063 0.31	Wyoming	Mrc	5.30
M-0179 2.17	M-0179 2.18	Wyoming	MhB	4.80	35.66	35.79	Wyoming	UnB	5.30	M-0063 0.31	M-0063 0.31	Wyoming	Mrc	5.30
M-0179 2.18	M-0179 2.25	Wyoming	Mrc	6.60	35.79	35.83	Wyoming	UnC	5.30	45.10	45.23	Wyoming	Mrc	5.30
M-0179 2.25	M-0179 2.37	Wyoming	Bad	5.30	35.83	35.85	Wyoming	OYE	4.80	45.23	45.31	Wyoming	WcC	5.30
M-0179 2.37	M-0179 2.42	Wyoming	Bac	5.80	35.85	35.87	Wyoming	ASE	4.80	45.31	45.32	Wyoming	Mrc	5.30
M-0179 2.42	M-0179 2.45	Wyoming	BbB	5.80	35.87	35.93	Wyoming	VcB	6.00	45.32	45.33	Wyoming	NrB	4.80
M-0179 2.45	M-0179 2.52	Wyoming	BaC	5.80	35.93	36.07	Wyoming	BbD	4.90	45.33	45.38	Wyoming	Mrc	5.30
M-0179 2.52	M-0179 2.85	Wyoming	BbD	4.90	36.07	36.48	Wyoming	LdD	4.80	45.38	45.59	Wyoming	Mrc	5.30
M-0179 2.85	M-0179 3.05	Wyoming	OxD	4.80	36.48	36.60	Wyoming	WgD	5.30	45.59	45.66	Wyoming	Mrc	5.30
M-0179 3.05	M-0179 3.19	Wyoming	WcD	4.90	36.60	36.63	Wyoming	Mrc	5.30	45.66	45.72	Wyoming	Mrc	5.30
M-0179 3.19	M-0179 3.21	Wyoming	Hm	6.50	36.63	36.71	Wyoming	Mrc	5.30	45.72	45.75	Wyoming	WcC	5.20
M-0179 3.21	M-0179 3.32	Wyoming	WYf	4.80	36.71	36.71	Wyoming	WcC	5.30	45.75	45.79	Wyoming	Mrc	5.30
M-0179 3.32	M-0179 3.35	Wyoming	LCE	4.80	36.71	36.80	Wyoming	WcC	5.30	45.79	45.85	Wyoming	OrB	4.80
M-0179 3.35	M-0179 3.56	Wyoming	LaD	4.90	36.80	36.92	Wyoming	WcC	5.30	45.85	45.91	Wyoming	AD	5.10
M-0179 3.56	M-0179 3.60	Wyoming	LaC	4.90	36.92	36.96	Wyoming	Mrc	5.30	45.91	45.94	Wyoming	NrB	4.80
M-0179 3.60	M-0179 3.66	Wyoming	LaD	4.90	36.96	37.03	Wyoming	WcC	5.30	45.94	46.00	Wyoming	Mrc	5.30
M-0179 3.66	M-0179 3.72	Wyoming	WYf	4.80	37.03	37.10	Wyoming	Mrc	5.30	46.00	46.07	Wyoming	WcC	5.20
M-0179 3.72	M-0179 3.78	Wyoming	WYf	4.80	37.10	37.22	Wyoming	WcC	5.30	46.07	46.18	Wyoming	MhD	5.50
M-0179 3.78	M-0179 3.87	Wyoming	WYf	4.80	37.22	37.62	Wyoming	Mrc	5.30	46.18	46.35	Wyoming	LdD	4.80
M-0179 3.87	M-0179 3.94	Wyoming	WYf	4.80	37.62	37.72	Wyoming	NrB	4.80	M-0058 0.00	M-0058 0.16	Wyoming	LdD	4.80
M-0179 3.94	M-0179 4.00	Wyoming	WYf	4.80	37.72	38.01	Wyoming	OcC	4.80	M-0058 0.16	M-0058 0.24	Wyoming	MhD	5.50
M-0179 4.00	M-0179 4.14	Wyoming	WYf	4.80	38.01	38.16	Wyoming	OxD	4.80	M-0058 0.24	M-0058 0.29	Wyoming	Mrc	5.30
M-0179 4.14	M-0179 4.18	Wyoming	LbD	4.90	38.16	38.22	Wyoming	OFC	4.80	M-0058 0.29	M-0058 0.47	Wyoming	MhD	5.50
M-0179 4.18	M-0179 4.36	Wyoming	LbD	4.90	38.22	38.30	Wyoming	OYE	4.80	46.83	46.89	Wyoming	MhD	5.50
M-0179 4.36	M-0179 4.56	Wyoming	WcB	5.30	38.30	38.49	Wyoming	OxD	4.80	46.89	46.94	Wyoming	WcC	5.30
M-0179 4.56	M-0179 4.57	Wyoming	MhB	4.80	38.49	38.50	Wyoming	LbD	4.80	46.94	46.95	Wyoming	Mrc	5.30
M-0179 4.57	M-0179 4.61	Wyoming	LdD	4.80	38.50	38.53	Wyoming	NrB	4.80	46.95	47.06	Wyoming	Mrc	5.30
M-0179 4.61	M-0179 4.65	Wyoming	MhB	4.80	38.53	38.59	Wyoming	WgD	5.30	47.06	47.33	Wyoming	WcD	5.20
M-0179 4.65	M-0179 4.68	Wyoming	LdD	4.80	38.59	38.67	Wyoming	WfB	5.10	47.33	47.36	Wyoming	NrB	5.30
M-0179 4.68	M-0179 4.84	Wyoming	MhB	4.80	38.67	38.72	Wyoming	NrB	4.80	47.36	47.29	Wyoming	WgD	5.30
M-0179 4.84	M-0179 4.93	Wyoming	MhB	5.20	38.72	38.73	Wyoming	WcC	5.30	47.29	47.33	Wyoming	WcC	5.20
M-0179 4.93	M-0179 5.01	Wyoming	WgD	5.30	38.73	38.80	Wyoming	WfC	5.20	47.33	47.41	Wyoming	Mrc	6.00
M-0179 5.01	M-0179 5.16	Wyoming	Mrc	6.60	38.80	38.86	Wyoming	WgB	4.90	47.41	47.52	Wyoming	WcC	5.30
M-0179 5.16	M-0179 5.19	Wyoming	WcD	5.20	38.86	38.93	Wyoming	WcC	5.30	47.52	47.63	Wyoming	MhB	4.80
M-0179 5.19	M-0179 5.22	Wyoming	LCE	4.80	38.93	39.16	Wyoming	WcB	5.30	47.63	47.67	Wyoming	MhD	5.50
M-0179 5.22	M-0179 5.28	Wyoming	WgD	5.30	39.16	39.24	Wyoming	WfC	5.20	47.67	47.73	Wyoming	Mrc	6.60
M-0179 5.28	M-0179 5.37	Wyoming	WcC	5.30	39.24	39.32	Wyoming	Mrc	5.30	47.73	47.84	Wyoming	Mrc	6.60
M-0179 5.37	M-0179 5.49	Wyoming	WcC	5.90	39.32	39.37	Wyoming	NrB	4.80	47.84	47.90	Wyoming	VcB	6.00
M-0179 5.49	M-0179 5.58	Wyoming	MhD	5.50	39.37	39.42	Wyoming	Mrc	5.30	47.90	47.97	Wyoming	Mrc	6.60
M-0179 5.58	M-0179 5.87	Wyoming	Mrc	6.60	39.42	39.46	Wyoming	Mrc	5.30	47.97	47.99	Wyoming	MhD	5.50
M-0179 5.87	M-0179 5.99	Wyoming	Mrc	6.60	39.46	39.48	Wyoming	Mrc	5.20	47.99	48.00	Wyoming	Mrc	6.60
M-0179 5.99	M-0179 6.01	Wyoming	MhB	4.80	39.48	39.53	Wyoming	WcC	5.30	48.00	48.00	Wyoming	MhD	5.50
M-0179 6.01	M-0179 6.08	Wyoming	BaB	5.80	39.53	39.60	Wyoming	Mrc	5.30	48.00	48.06	Wyoming	Mrc	6.60
M-0179 6.08	M-0179 6.21	Wyoming	Mrc	6.00	39.60	39.62	Wyoming	WcC	5.30	48.06	48.21	Wyoming	Mrc	6.60
M-0179 6.21	M-0179 6.27	Wyoming	VfB	5.50	39.62	39.66	Wyoming	Mrc	5.20	48.21	48.26	Wyoming	NrA	5.20
M-0179 6.27	M-0179 6.38	Wyoming	Mrc	6.00	39.66	39.75	Wyoming	WfC	5.20	48.26	48.27	Wyoming	NrB	4.80
M-0179 6.38	M-0179 6.44	Wyoming	MhB	4.80	39.75	39.82	Wyoming	WfB	5.10	48.27	48.30	Wyoming	Mrc	6.00
M-0179 6.44	M-0179 6.48	Wyoming	VfB	5.50	39.82	39.86	Wyoming	WcB	5.30	48.30	48.34	Wyoming	BaC	5.80
M-0179 6.48	M-0179 6.48	Wyoming	Mrc	6.60	39.86	39.91	Wyoming	WcC	5.30	48.34	48.44	Wyoming	LeB	5.20
30.20	30.25	Wyoming	Mrc	6.60	39.91	39.95	Wyoming	WfC	5.20	48.44	48.48	Wyoming	LdD	4.80
30.25	30.26	Wyoming	VcB	6.00	39.95	40.03	Wyoming	NrB	4.80	48.48	48.53	Wyoming	LdD	4.80
30.26	30.30	Wyoming	NrA	5.20	40.03	40.06	Wyoming	WcD	5.20	48.53	48.57	Wyoming	OYE	4.80
30.30	30.38	Wyoming	MhB	4										

Drawn By & Date/Time: CScanzello, Jul 28, 2017 - 4:45pm
Drawing Location & Name: G:\JOBS\14\14C\14C4909\DWG\BMPs&DETAILS\PL_DNT14C4909(10)_WT-TB.dwg

WYOMING COUNTY Temporary Perforated Pipe Level Spreader Calculations

NON-WOVEN GEOTEXTILE UNDERLAYMENT
R - ROCK PROTECTION THICKNESS 36-INCH MINIMUM R-3 THICKNESS 9-INCH SEE CHART FOR RIPRAP SIZING

BASIN DEPTH = D
BASIN MUST BE OVEREXCAVATED BY MAXIMUM STONE SIZE TO ALLOW FOR RIPRAP PLACEMENT

PIPE DIAMETER (D)	BASIN LENGTH (6D)	BASIN INSIDE WIDTH (3D)	BASIN DEPTH (BD)
12"	6'	3'	1'
18"	9'	4.5'	1.5'

PIPE DIAMETER (D)	BASIN LENGTH (6D)	BASIN INSIDE WIDTH (3D)	BASIN DEPTH (BD)
12"	6'	*	1'
18"	9'	*	1.5'

* BASIN INSIDE WIDTH IS 3 X DIAMETER(FT) X # OF PIPES

**STANDARD CONSTRUCTION DETAIL #8-6
SEDIMENT TRAP OUTLET BASIN DETAIL
NO SCALE**

NOTES:

1. ALL SEDIMENT TRAP OUTLET BASINS SHALL BE INSPECTED ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT.
2. DISPLACED RIPRAP WITHIN THE OUTLET BASIN SHALL BE REPLACED IMMEDIATELY.
3. SIDE SLOPES SHALL NOT EXCEED 1.5H:1V.
4. IF NOT ON LEVEL GROUND, AREA NEAR PIPE SHALL BE EXCAVATED TO MAKE GENERALLY LEVEL TRAP.
5. RIPRAP WILL BE REMOVED AND DISTURBED AREA TO BE RESTORED IN ACCORDANCE WITH E AND S PLAN.
6. RIPRAP WILL HAVE NON-WOVEN GEOTEXTILE UNDERLAYMENT BETWEEN THE STONE AND THE SOIL.
7. CONTRACTOR SHALL USE SEDIMENT TRAP OUTLET BASIN WHEN FIELD CONDITIONS PREVENT THE EFFECTIVENESS OF THE LEVEL SPREADER.
8. DESIGN AND CALCULATIONS PROVIDED BY STV ENERGY SERVICES, INC.

LINE NO.	DATE	BY	REVISION DESCRIPTION	W.D. NO.	CHK.	APP.

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
STANDARD ENVIRONMENTAL DETAIL

CWC CLEAN WATER CROSSING
(OUTLET BASIN DETAIL
STANDARD CONSTRUCTION DETAIL #8-6)

LINE NO.	DATE	BY	REVISION DESCRIPTION	W.D. NO.	CHK.	APP.

WYOMING COUNTY Temporary Perforated Pipe Level Spreader Calculations

LINE NO.	DATE	BY	REVISION DESCRIPTION	W.D. NO.	CHK.	APP.

ROCK FILTER
SANDBAG DAM 24" HIGH
LIMIT OF DISTURBANCE
TEMPORARY SLOPE PIPES
TEE CONNECTS WITHIN MANIFOLD FOR MULTIPLE PIPES
CLEAN WATER DIVERSION
COMPOST FILTER SOCK
12-INCH PERFORATED PIPE LEVEL SPREADER
LIMIT OF DISTURBANCE

SECTION A-A

TEMPORARY SLOPE PIPE CROSSING
NO SCALE

NOTES:

1. LEVEL SPREADER PIPES TO BE 12-INCH JM EAGLE EAGLE CORR PE PERFORATED PIPE (OR APPROVED EQUAL) AND SHALL BE CAPPED AT BOTH ENDS.
2. LEVEL SPREADER TO BE INSTALLED PARALLEL TO CONTOURS AT LEVEL ELEVATION.
3. PERFORATED PIPE TO BE UNDERLAIN WITH GEOTEXTILE FABRIC AND COVERED WITH AASHTO NO. 1 STONE. MINIMUM STONE COVER SHALL BE 4-INCHES OVER PERFORATED PIPE.
4. ALL LEVEL SPREADER STONE WILL BE REMOVED AND DISTURBED AREA TO BE RESTORED IN ACCORDANCE WITH E&S PLAN.
5. LEVEL SPREADERS TO BE INSTALLED AT ALL TEMPORARY SLOPE PIPE DISCHARGES AT LOW POINTS OF DIVERSION BERM.
6. LEVEL SPREADERS TO BE INSPECTED WEEKLY OR AFTER MEASURABLE RAINFALL EVENT AND SHALL BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.
7. TOTAL REQUIRED LEVEL SPREADER LENGTH TO BE L1 + L2.
8. THE EDGE TO EDGE DIMENSION OF THE MULTIPLE SLOPE PIPES IS CALLED OUT AS A MINIMUM AND MAY BE INCREASED TO FACILITATE INSTALLATION OF SANDBAGS, T-CONNECTIONS, AND ACCESS ACROSS THE SLOPE PIPES.

**TEMPORARY MULTIPLE PIPE LEVEL SPREADER DETAIL
NO SCALE**

NOTES:

1. LEVEL SPREADER PIPES TO BE 12-INCH JM EAGLE EAGLE CORR PE PERFORATED PIPE (OR APPROVED EQUAL) AND SHALL BE CAPPED AT BOTH ENDS.
2. LEVEL SPREADER TO BE INSTALLED PARALLEL TO CONTOURS AT LEVEL ELEVATION.
3. PERFORATED PIPE TO BE UNDERLAIN WITH GEOTEXTILE FABRIC AND COVERED WITH AASHTO NO. 1 STONE. MINIMUM STONE COVER SHALL BE 4-INCHES OVER PERFORATED PIPE.
4. ALL LEVEL SPREADER STONE WILL BE REMOVED AND DISTURBED AREA TO BE RESTORED IN ACCORDANCE WITH E&S PLAN.
5. LEVEL SPREADERS TO BE INSTALLED AT ALL TEMPORARY SLOPE PIPE DISCHARGES AT LOW POINTS OF DIVERSION BERM.
6. LEVEL SPREADERS TO BE INSPECTED WEEKLY OR AFTER MEASURABLE RAINFALL EVENT AND SHALL BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.
7. TOTAL REQUIRED LEVEL SPREADER LENGTH TO BE L1 + L2.
8. THE EDGE TO EDGE DIMENSION OF THE MULTIPLE SLOPE PIPES IS CALLED OUT AS A MINIMUM AND MAY BE INCREASED TO FACILITATE INSTALLATION OF SANDBAGS, T-CONNECTIONS, AND ACCESS ACROSS THE SLOPE PIPES.

LINE NO.	DATE	BY	REVISION DESCRIPTION	W.D. NO.	CHK.	APP.

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
STANDARD ENVIRONMENTAL DETAIL

CWC CLEAN WATER CROSSING
(TEMP. MULTIPLE PIPE
LEVEL SPREADER)

HEATH KEARNEY
REGISTERED PROFESSIONAL ENGINEER
NO. 1620402
STATE OF PENNSYLVANIA

SUZANNE KING
REGISTERED PROFESSIONAL ENGINEER
NO. 082757
STATE OF PENNSYLVANIA

REVISIONS

NO.	DATE	BY	DESCRIPTION	W.D. NO.	CHK.	APP.
0	08/28/2015	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 30" CENTRAL PENN LINE NORTH
PENNSYLVANIA BEST MANAGEMENT PRACTICES AND
QUANTITIES PLAN SET
WYOMING COUNTY, PENNSYLVANIA
QUANTITY, CROSSING AND ACIDIC SOIL TABLES

DRAWN BY:	ELZ	DATE:	05/15/15	ISSUED FOR BLDG:	SCALE:
CHECKED BY:	JLK <td>DATE:</td> <td>07/02/15 <td>ISSUED FOR CONSTRUCTION:</td> <td>REVISION: 4</td> </td>	DATE:	07/02/15 <td>ISSUED FOR CONSTRUCTION:</td> <td>REVISION: 4</td>	ISSUED FOR CONSTRUCTION:	REVISION: 4
APPROVED BY:	SMK <td>DATE:</td> <td>07/08/15 <td>DRAWING NUMBER:</td> <td>24-1601-70-28-A/1683_3-BMP-WY-TB SHEET 4</td> </td>	DATE:	07/08/15 <td>DRAWING NUMBER:</td> <td>24-1601-70-28-A/1683_3-BMP-WY-TB SHEET 4</td>	DRAWING NUMBER:	24-1601-70-28-A/1683_3-BMP-WY-TB SHEET 4
W.D.:					OF 7

TABLE 2: TEMPORARY CLEAN WATER DIVERSION SUMMARY

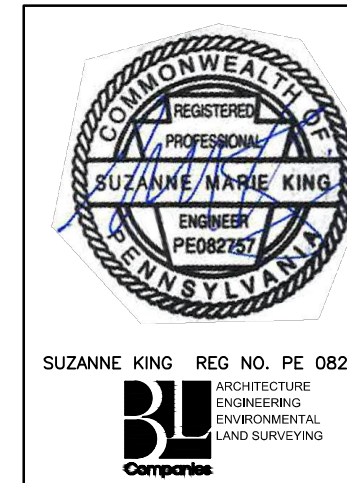
TEMPORARY DIVERSION SUMMARY - WYOMING COUNTY, PENNSYLVANIA																			
MILE POST	DIVERSION								WATERBODY**					TEMP. PIPE (CLEAN WATER) CROSSING					
	DIVERSION ID	DIVERSION TYPE	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	TEMPORARY LINING	PERMANENT LINING	DISCHARGE TYPE	INITIAL WIDTH (FT)	TERMINAL WIDTH (FT)	LENGTH (FT)	RIP RAP SIZE***	RIP RAP THICKNESS (IN)	R.O.W. SLOPE (%)	Q (CFS)	TEMPORARY PIPE SIZE DIAMETER (IN)	# OF PIPES
26	26.03D*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	31	7.43	12	2
26	26.03F*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	35	8.78	12	2
26	26.03F*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	32	7.88	12	2
26	26.04*	FILTER SOCK	0	1.6	6.3	0	4	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	20	4.73	12	1
26	26.05*	FILTER SOCK	0	1.6	6.3	0	4	W3000	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	21	5.63	12	1
26	26.06*	FILTER SOCK	0	1.6	8.7	0	5.5	P550	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	19	5.40	12	1
26	26.07*	FILTER SOCK	0	1.25	8.1	0	6.5	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	23	4.73	12	1
26	26.08*	FILTER SOCK	0	1.6	4.7	0	3	P550	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	17	5.18	12	1
26	26.09*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	27	6.08	12	1
27	27.01A*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	28	9.90	12	2
27	27.01B*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	20	10.35	12	2
27	27.01C*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	19	11.25	12	2
27	27.01D*	SWALE	2	2	10	2	2	P550	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	19	5.40	12	1
27	27.02*	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	10	6.53	12	2
27	27.03*	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	17	2.93	12	1
27	27.04*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	2	2	12	R-6	36	N/A	10.13	N/A	N/A
27	27.05*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	7	6.30	12	2
27	27.06A*	SWALE	2	2	10	2	2	C125	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	15	7.65	12	2
27	27.06B*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	16	6.75	12	2
27	27.07A*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	24	11.25	12	2
27	27.07B*	SWALE	2	2	10	2	2	P550	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	21	11.03	12	2
27	27.07C*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	28	10.35	12	2
27	27.07D*	SWALE	2	2	10	2	2	C125	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	29	7.88	12	2
27	27.07E*	SWALE	2	2	10	2	2	C125	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	24	8.78	12	2
27	27.08*	FILTER SOCK	0	1.6	7.1	0	4.5	W3000	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	28	2.25	12	1
27	27.09*	FILTER SOCK	0	1.6	5.5	0	3.5	C125	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	27	2.93	12	1
28	28.01A*	SWALE	2	2	10	2	2	P550	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	22	10.58	12	2
28	28.01B*	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	23	7.65	12	2
28	28.01C*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	32	7.43	12	2
28	28.01D*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	30	11.03	12	2
28	28.02*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	22	7.65	12	2
28	28.03A*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	19	9.00	12	2
28	28.03B*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	19	9.45	12	2
28	28.04*	FILTER SOCK	0	1.25	8.1	0	6.5	S75	UNREINFORCED VEGETATION	TEMP. PIPE	2	2	8	R-4	18	N/A	1.58	N/A	N/A
28	28.05*	FILTER SOCK	0	1.6	7.1	0	4.5	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	10	0.68	12	1
28	28.06*	FILTER SOCK	0	1.6	6.3	0	4	C125	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	24	0.68	12	1
28	28.07*	FILTER SOCK	0	1.6	4.7	0	3	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	17	1.13	12	1
28	28.08*	FILTER SOCK	0	1.25	8.1	0	6.5	P550	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	7	2.03	12	1
28	28.09*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	22	0.90	12	1
28	28.10*	SWALE	2	2	10	2	2	C125	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	17	3.15	12	2
28	28.11A*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	12	10.80	12	2
28	28.11B*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	8	2.70	12	1
28	28.12*	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	13	7.43	12	2
28	28.13*	FILTER SOCK	0	1	8.5	0	8.5	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	2	2.48	12	1
28	28.14*	FILTER SOCK	0	1.6	8.7	0	5.5	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	2	2.03	12	1
29	29.01*	FILTER SOCK	0	1.6	4.0	0	2.5	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	13	2.03	12	1
29	29.02*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	6	5.85	12	1
29	29.03*	FILTER SOCK	0	1	9.0	0	9	SC150	REINFORCED VEGETATION	TEMP. PIPE	2	2	8	R-4	18	N/A	1.80	N/A	N/A
29	29.04*	FILTER SOCK	0	1.6	9.5	0	6	S75	UNREINFORCED VEGETATION	TEMP. PIPE	2	2	8	R-4	18	N/A	0.90	N/A	N/A
29	29.05A*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	12	7.20	12	2
29	29.05B*	SWALE	2	2	10	2	2	C125	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	16	5.18	12	1
29	29.06*	FILTER SOCK	0	1	6.5	0	6.5	SC250	REINFORCED VEGETATION	TEMP. PIPE	2	2	8	R-4	18	N/A	0.45	N/A	N/A
29	29.07*	FILTER SOCK	0	1.25	8.1	0	6.5	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	14	2.25	12	1
29	29.08A*	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	14	3.60	12	1
29	29.08B*	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	15	9.90	12	2
29	29.08C*	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	13	9.00	12	2
29	29.09*	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	14	3.83	12	1
29	29.10*	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	15	9.45	12	2
30	30.01	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	6	4.00	12	1
30	30.02	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	1	3.68	12	1
30	30.03A	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	5	6.88	12	2
30	30.03B	FILTER SOCK	0	1.25	8.1	0	6.5	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	15	4.48	12	2
31	31.01	FILTER SOCK	0	1.6	9.5	0	6	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	12	4.00	12	1
31	31.02A	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	10	4.80	12	1
31	31.02B	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	11	7.52	12	2
31	31.03	FILTER SOCK	0	1.6	6.3	0	4	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	1	4.96	12	2
32	32.01	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	17	6.40	12	2
32	32.02A	SWALE	2	2	10	2	2	C125	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	16	9.44	12	2
32	32.02B	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	7	11.84	12	2
32	32.03	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	2	2	12	R-4	18	N/A	15.20	N/A	N/A
32	32.04	SWALE	2	2	10	2	2	W3000	REINFORCED VEGETATION	TEMP. PIPE	2	2	18	R-4	18	N/A	21.28	N/A	N/A
32	32.05	FILTER SOCK	0	1.6	7.9	0	5	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	15	1.44	12	1
32	32.06	SWALE	2	2	10	2	2	SC250	REINFORCED VEGETATION	TEMP. PIPE	2	2	8	R-4	18	N/A	7.52	N/A	N/A
32	32.07	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	2	2	8	R-4	18	N/A	4.00	N/A	N/A
32	32.08	FILTER SOCK	0	1.6	4.0	0	2.5	P550	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	14	3.68	12	1
34	34.01	FILTER SOCK	0	1.6	7.9	0	5	P550	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	13	0.96	12	1
36	36.01	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	5	7.20	12	2
36	36.02	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	5	5.28	12	1
36	36.03	FILTER SOCK	0	1.6	7.9	0	5	SC250	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	7	4.48	12	1
36	36.04A	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	17	5.12	12	1
36	36.04B	SWALE	2	2	10	2	2	S75	UNREINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	18	3.52	12	1
36	36.05A	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-	-	-	19	7.04	12	2
36	36.05B	SWALE	2	2	10	2	2	SC150	REINFORCED VEGETATION	TEMP. PIPE	-	-	-</						

TABLE 7: RESOURCE SPECIFIC AVOIDANCE AND MINIMIZATION MEASURES (CONTINUED)

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)	Wetland (Cowardin Classification)	Limits of Disturbance (LOD) Adjustments (Supporting Information for Technical Deficiencies #25 and #29)	Field Routing Adjustments within 600-foot Wide Corridor (Supporting Information for Technical Deficiency #13)*	Stream Bank Stabilization BMP	Width of Erosion Control Blanket Required for Stream Bank Stabilization (ft)
Wetland	N/A	W-183-18001 / W-183-18001-1	M-0179 4.91	EV	N/A	N/A	PFO	LOD has been reduced on both the north and south sides of the ROW by up to 25' to minimize impacts to W-183-18001.	The pipeline was routed in this location to cross between the two wetland segments along a dirt road, reducing both upland forest clearing and PFO impacts. Only the extreme northern and southern margins of the wetland are impacted.	N/A	N/A
Stream	UNT to Marsh Creek (WW-182-18008)	WW-182-18008	M-0179 4.97	HQ-CWF, MF	Perennial	Wild Trout Waters	R3	LOD for WW-182-18008 has been reduced to 80' to minimize impacts.	The pipeline was routed in this location to cross the stream at a perpendicular angle in an area where the stream is already impacted by a gravel driveway. The alignment also avoids entirely avoids impacts to wetlands W-182-18009, W-176-18002, W-176-18003, W-182-18008-1 and W-182-18008-2.	SBR with SC150 fabric	100
Stream	UNT to Marsh Creek (WW-182-18007A)	WW-182-18007A	M-0179 5.00	HQ-CWF, MF	Intermittent	Wild Trout Waters	R4	LOD for WW-182-18007A has been reduced to 80' to minimize impacts.	The pipeline was routed in this location to cross the stream at a perpendicular angle in an area where the stream is already impacted by a gravel driveway. The alignment also avoids entirely avoids impacts to wetlands W-182-18009, W-176-18002, W-176-18003, W-182-18008-1 and W-182-18008-2.	SBR with SC150 fabric	100
Stream	UNT to Marsh Creek (WW-176-18002)	WW-176-18002	M-0179 5.01	HQ-CWF, MF	Perennial	Wild Trout Waters	R3	LOD for WW-176-18002 has been reduced to 80' to minimize impacts.	The pipeline was routed in this location to cross the stream at a perpendicular angle in an area where the stream is already impacted by a gravel driveway. The alignment also avoids entirely avoids impacts to wetlands W-182-18009, W-176-18002, W-176-18003, W-182-18008-1 and W-182-18008-2.	SBR with SC150 fabric	100
Stream	UNT to Marsh Creek (WW-181-18001)	WW-181-18001	M-0179 5.21	HQ-CWF, MF	Perennial	Wild Trout Waters	R3	LOD for WW-181-18001 has been reduced to 80' to minimize impacts.	The pipeline was routed in this location to cross the stream at a perpendicular angle in an area that allows impacts to PFO wetland W-181-18003C to be minimized by crossing at a relatively narrow portion of the wetland.	SBR with SC150 fabric	100
Wetland	N/A	W-181-18003C / W-181-18003A-2	M-0179 5.27	EV	N/A	N/A	PEM, PFO	LOD has been reduced to 85' to minimize impacts to W-181-18003C. W-181-18003A-2 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. However, the portion of the LOD within this wetland was reduced by 5' to minimize impacts.	The pipeline was routed in this location to cross a narrow portion of the wetland near its southern margin.	N/A	N/A
Wetland	N/A	W-182-18007	M-0179 5.43	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-182-18007.	The pipeline was routed in this location to cross the southern margin of the wetland only. Impacting this disturbed PEM wetland situated in a ditch is necessary to limit impacts to the much larger PEM/PSS/PFO complex of W-182-18006 located to the east.	N/A	N/A
Wetland	N/A	W-182-18006A-1 / W-182-18006A-2 / W-182-18006C	M-0179 5.46	None	N/A	N/A	PEM, PFO	LOD has been reduced to 65' to minimize impacts to W-182-18006A-1 and W-182-18006C. W-182-18006A-2 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. In addition, an LOD reduction at this location would only be possible in the adjacent upland area and would not result in minimization of wetland impacts.	The pipeline was routed in this location to cross the wetland at its narrowest and most disturbed location. The crossing location and orientation takes advantage of an upland berm and minimizes PFO and PSS impacts as much as possible. The crossing occurs in a roughly perpendicular angle in an area that is previously impacted by both an existing powerline ROW and artificial drainage ditches.	N/A	N/A
Wetland	N/A	W-176-18005A-1 / W-176-18005A-2 / W-176-18005B-1	M-0179 6.25	EV	N/A	N/A	PEM, PSS	LOD has been reduced to 65' to minimize impacts to W-176-18005A-1 / W-176-18005A-2 / W-176-18005B-1.	The pipeline was routed in this location to cross the wetland at a roughly perpendicular angle through a relatively narrow portion of the wetland. The original alignment in this area passed further to the south and impacted additional wetlands. Routing modifications in this area allowed W-176-18005B-3 to be avoided entirely. The realignment also increased the distance from a historical dam around wetland W-176-18005-B and stream W-176-18003.	N/A	N/A
Stream	UNT to Whitlock Creek (WW-176-18003)	WW-176-18003	M-0179 6.43	CWF, MF	Ephemeral	Wild Trout Waters	R6	LOD for WW-176-18003 has been reduced to 80' to minimize impacts.	The pipeline was routed in this location to cross the stream at a roughly perpendicular angle where the stream is partially within an agricultural field, thereby reducing riparian forest impacts.	SBR with SC150 fabric	50
Stream	UNT to Whitlock Creek (WW-169-18001)	WW-169-18001	30.25	CWF, MF	Ephemeral	Wild Trout Waters	R6	LOD has been reduced to 75' to minimize impacts to WW-169-18001.	The pipeline was routed in this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.	SBR with SC150 fabric	50
Stream	UNT to Whitlock Creek (WW-169-18002)	WW-169-18002	30.28	CWF, MF	Perennial	Wild Trout Waters	R3	LOD has been reduced to 75' to minimize impacts to WW-169-18002.	The pipeline was routed in this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.	SBR with SC150 fabric	50
Stream	UNT to Whitlock Creek (WW-169-18003)	WW-169-18003	30.28	CWF, MF	Ephemeral	Wild Trout Waters	R6	LOD has been reduced to 75' to minimize impacts to WW-169-18003.	The pipeline was routed in this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.	SBR with SC150 fabric	50
Wetland	N/A	W-169-18002C	30.29	EV	N/A	N/A	PFO	LOD has been reduced to 75' to minimize impacts to W-169-18002C.	The pipeline was routed in this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.	N/A	N/A
Stream	UNT to Whitlock Creek (WW-169-18004)	WW-169-18004	30.30	CWF, MF	Perennial	Wild Trout Waters	R3	LOD has been reduced to 75' to minimize impacts to WW-169-18004.	The pipeline was routed in this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, minimize impact to wetland W-169-18002C, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.	SBR with SC150 fabric	50
Wetland	N/A	W-169-18002A	30.30	EV	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-169-18002A.	The pipeline was routed in this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, minimize impact to wetland W-169-18002C, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.	N/A	N/A
Wetland	N/A	W-108-18001	M-0071 0.52	None	N/A	N/A	PEM	LOD has been reduced to 85' to minimize impacts to W-108-18001.	The pipeline was routed in this location to maintain collocation with a foreign pipeline.	N/A	N/A
Wetland	N/A	W-105-18002A / W-105-18002B-1 / W-105-18002C	M-0071 0.67	EV	N/A	N/A	PEM, PSS, PFO	LOD has been reduced to 80' to minimize impacts to W-105-18002.	The pipeline was routed in this location to maintain collocation with a foreign pipeline and to provide a perpendicular crossing of WW-176-18003.	N/A	N/A
Stream	Mill Creek (WW-105-18001)	WW-105-18001	M-0071 0.68	CWF, MF	Perennial	Wild Trout Waters	R3	LOD for WW-105-18001 has been reduced to 80' to minimize impacts.	The pipeline was routed in this location to maintain collocation with a foreign pipeline and to provide a perpendicular crossing of the wetland.	SBR with SC150 fabric	50
Wetland	N/A	W-195-19008 / W-195-19008-2	M-0071 1.89	None	N/A	N/A	PEM	LOD for W-195-19008 has been reduced to 85' to minimize impacts.	The pipeline was routed in this location to maintain collocation with a foreign pipeline and to avoid impacting a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.	N/A	N/A
Stream	UNT to Martin Creek (WW-113-19001)	WW-113-19001	M-0071 1.92	CWF, MF	Ephemeral	None	R6	LOD for WW-113-19001 has been reduced to 80' to minimize impacts.	The pipeline was routed in this location to maintain collocation with a foreign pipeline and to avoid impacting a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.	SBR with SC150 fabric	50
Wetland	N/A	W-113-19001A / W-113-19001A-1 / W-113-19001C-1 / W-113-19001C-2	M-0071 2.04	None	N/A	N/A	PEM, PFO	LOD has been reduced to either 75' or 85' to minimize impacts to W-113-19001.	The pipeline was routed in this location to minimize wetland habitat fragmentation by generally crossing wetland W-113-19001 on the margin of the system. Additionally, the crossing was field routed to maintain collocation with a foreign pipeline, and to avoid impacts to a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.	N/A	N/A
Stream	UNT to Martin Creek (WW-192-19002)	WW-192-19002	M-0071 2.06	CWF, MF	Perennial	None	R3	WW-192-19002 does not extend across the full width of the LOD. LOD reduction is not possible at this location due to the adjacent PI and wetland crossing.	The pipeline was routed in this location to provide a perpendicular crossing of the stream, maintain collocation with a foreign pipeline, and avoid impacts to a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.	SBR with SC150 fabric	50
Stream	UNT to Martin Creek (WW-113-19002)	WW-113-19002	M-0071 2.10	CWF, MF	Intermittent	None	R4	LOD has been reduced to 75' to minimize impacts to WW-113-19002.	The pipeline was routed in this location to provide a perpendicular crossing of the stream, maintain collocation with a foreign pipeline, and avoid impacts to a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.	SBR with SC150 fabric	50
Stream	UNT to Martin Creek (WW-113-19003)	WW-113-19003	M-0071 2.16	CWF, MF	Intermittent	None	R4	LOD has been reduced to 80' to minimize impacts to WW-113-19003.	The pipeline was routed in this location to provide a perpendicular crossing of the stream, maintain collocation with a foreign pipeline, and avoid impacts to a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.	SBR with SC150 fabric	50
Wetland	N/A	W-113-19001A-1	M-0071 2.3	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-113-19001A.	The pipeline was routed in this location to maintain collocation with a foreign pipeline and to avoid large ponds located immediately north and south of the LOD.	N/A	N/A
Stream	Susquehanna River (WW-171-19001)	WW-171-19001	34.97	WWF, MF	Perennial	WWCW Fisheries Streams	R3	WW-171-19001 is being crossed via HDD. No impacts will result from crossing.	The pipeline was routed in this location to provide a perpendicular crossing of the Susquehanna River in an area with adjacent uplands suitable for the workspace necessary for HDD operations.	SBR with SC150 fabric	50

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)	Wetland (Cowardin Classification)	Limits of Disturbance (LOD) Adjustments (Supporting Information for Technical Deficiencies #25 and #29)	Field Routing Adjustments within 600-foot Wide Corridor (Supporting Information for Technical Deficiency #13)*	Stream Bank Stabilization BMP	Width of Erosion Control Blanket Required for Stream Bank Stabilization (ft)
Stream	UNT to Susquehanna River (WW-193-19001)	WW-193-19001	35.05	CWF, MF	Intermittent	None	R4	WW-193-19001 is being crossed via HDD. No impacts will result from crossing.	N/A - stream will be crossed by Susquehanna River HDD.	SBR with SC150 fabric	50
Wetland	N/A	W-121-19001 / W-121-19001-1	35.08	None	N/A	N/A	PEM	W-121-19001 and W-121-19001-1 are being crossed via HDD. No impacts will result from crossing.	N/A - wetland will be crossed by Susquehanna River HDD.	N/A	N/A
Stream	UNT to Susquehanna River (WW-195-19004A)	WW-195-19004A	35.10	CWF, MF	Intermittent	None	R4	WW-195-19004A is being crossed via HDD. No impacts will result from crossing.	N/A - stream will be crossed by Susquehanna River HDD.	SBR with SC150 fabric	50
Stream	UNT to Susquehanna River (WW-171-19002)	WW-171-19002	35.89	CWF, MF	Perennial	None	R3	LOD for WW-171-19002 has been reduced to 75' to minimize impacts.	The pipeline was routed in this area to provide a perpendicular crossing of the stream and reduce impacts to W-119-19007.	SBR with SC150 fabric	50
Wetland	N/A	W-119-19007	35.91	None	N/A	N/A	PSS	LOD has been reduced to 75' to minimize impacts to W-119-19007.	The pipeline was routed at this location to cross the wetland at its most narrow point and to provide a perpendicular crossing of WW-171-19002.	N/A	N/A
Wetland	N/A	W-119-19006	36.41	None	N/A	N/A	PEM	W-119-19006 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. In addition, an LOD reduction at this location would only be possible in the adjacent upland area and would not result in minimization of wetland impacts.	The pipeline was routed at this location to reduce impacts by crossing the margin of the wetland.	N/A	N/A
Stream	UNT to Susquehanna River (WW-119-19002)	WW-119-19002	36.83	CWF, MF	Ephemeral	None	R6	LOD for WW-119-19002 has been reduced to 80' to minimize impacts.	The pipeline was routed at this location to provide a perpendicular crossing of the stream and to minimize impact to the adjacent wetland W-119-19004.	SBR with SC150 fabric	50
Wetland	N/A	W-119-19004	36.86	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-119-19004.	The pipeline was routed at this location to reduce impacts by crossing the margin of the wetland and provide a perpendicular crossing of adjacent stream WW-119-19002.	N/A	N/A
Wetland	N/A	W-119-19003	36.93	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-119-19003.	The pipeline was routed at this location to provide a perpendicular crossing of adjacent stream WW-119-19002. Close proximity to WW-119-002 and W-119-19004 precluded the avoidance of this wetland, or further minimization of impacts.	N/A	N/A
Stream	UNT to Susquehanna River (WW-119-19001)	WW-119-19001	37.08	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 75' to minimize impacts to WW-119-19001.	The pipeline was routed at this location to avoid impacting a spring located directly north of the resource crossing, avoid impacting the confluence of streams WW-119-19001 and WW-195-19002, and to provide a perpendicular crossing of the stream.	SBR with SC150 fabric	50
Wetland	N/A	W-119-19002A-1 / W-119-19002B	37.08	None	N/A	N/A	PEM, PSS	LOD has been reduced to 75' to minimize impacts to W-119-19002.	The pipeline was routed at this location to avoid impacting a spring located directly north of the resource crossing, avoid impacting the confluence of streams WW-119-19001 and WW-195-19002, and to minimize impacts to the scrub-shrub portion of the wetland.	N/A	N/A
Stream	UNT to Susquehanna River (WW-195-19002)	WW-195-19002	37.08	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 75' to minimize impacts to WW-119-19002.	The pipeline was routed at this location to avoid impacting a spring located directly north of the resource crossing, avoid impacting the confluence of streams WW-119-19001 and WW-195-19002, and to provide a perpendicular crossing of the stream.	SBR with SC150 fabric	50
Stream	UNT to Susquehanna River (WW-115-4001)	WW-115-4001	37.28	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 75' to minimize impacts to WW-115-4001.	The pipeline was routed at this location to provide a perpendicular crossing of the nearby public road, provide a perpendicular crossing of the stream, and to minimize tree clearing by routing along the edge of the adjacent agricultural field.	SBR with SC150 fabric	50
Wetland	N/A	W-119-19001	37.27	None	N/A	N/A	PFO	LOD has been reduced to 75' to minimize impacts to WW-119-19001.	The pipeline was routed at this location to provide a perpendicular crossing of the nearby public road, provide a perpendicular crossing of the wetland, and to minimize tree clearing by routing along the edge of the adjacent agricultural field.	N/A	N/A
Stream	UNT to Susquehanna River (WW-115-4002)	WW-115-4002	37.29	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 75' to minimize impacts to WW-115-4002.	The pipeline was routed at this location to provide a perpendicular crossing of the nearby public road, provide a perpendicular crossing of the stream, and to minimize tree clearing by routing along the edge of the adjacent agricultural field.	SBR with SC150 fabric	50
Wetland	N/A	W-115-4001A / W-115-4001B / W-115-4001B-1 / W-115-4001B-2 / W-115-4001B-3	37.61	None	N/A	N/A	PEM	LOD reduction to 75' was not possible due to the saturated nature of the wetland complex, unconsolidated soils in area, and adjacent stream. The additional workspace will provide storage for spoil within the wetland and will result in less impact than transporting material to a stockpile area outside the wetland.	Pipeline routing was constrained in this location by the large, linear nature of wetland W-115-4001, with the wetland extending west to a pond and east for at least 600 feet. The pipeline was routed at this location to provide a perpendicular crossing of adjacent stream WW-124-19001.	N/A	N/A
Stream	UNT to Susquehanna River (WW-124-19001B)	WW-124-19001B	37.65	CWF, MF	Perennial	None	R3	LOD reduction not possible at this crossing (per justification provided for wetland W-115-4001 crossing).	The pipeline was routed at this location to avoid direct impacts to this stream.	SBR with SC150 fabric	50
Stream	UNT to Susquehanna River (WW-124-19001)	WW-124-19001	37.68	CWF, MF	Perennial	None	R3	LOD reduction not possible at this crossing (per justification provided for wetland W-115-4001 crossing).	The pipeline was routed at this location to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Stream	UNT to Susquehanna River (WW-124-19001A)	WW-124-19001A	37.68	CWF, MF	Perennial	None	R3	LOD reduction not possible at this crossing (per justification provided for wetland W-115-4001 crossing).	The pipeline was routed at this location to avoid direct impacts to this stream.	SBR with SC150 fabric	50
Wetland	N/A	W-195-19006A-1	37.85	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-195-19006A.	The pipeline was routed at this location to minimize impacts by crossing the wetland at its most narrow point.	N/A	N/A
Stream	UNT to Susquehanna River (WW-119-19003)	WW-119-19003	38.07	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 80' to minimize impacts to WW-119-19003.	The pipeline was routed at this location to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Stream	UNT to Mill Run (WW-154-19001)	WW-154-19001	38.54	CWF, MF	Perennial	Wild Trout Waters	R3	LOD has been reduced to 80' to minimize impacts to WW-154-19001.	The pipeline was routed in this location to provide a perpendicular crossing of this stream and to avoid impacts to stream WW-154-19001A.	SBR with SC150 fabric	50
Wetland	N/A	W-112-19001	39.35	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-112-19001.	Pipeline routing was constrained at this location due to adjacent homes and a pond abutting the workspace. Additionally, wetland W-112-19001 is large and extends across the entire field. Impacts were minimized by routing the pipeline perpendicular across the wetland.	N/A	N/A
Wetland	N/A	W-112-19002	39.99	CWF, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to W-112-19002.	The wetland extends across the entire routing corridor and therefore could not be avoided; impacts were minimized by routing a perpendicular crossing.	N/A	N/A
Stream	UNT to Beaver Creek (WW-112-19002)	WW-112-19002	40.00	CWF, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to WW-112-19002.	The pipeline was routed at this location to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Wetland	N/A	W-112-19003C-1 / W-112-19003C-2 / W-112-19003A	40.84	None	N/A	N/A	PEM, PFO	LOD has been modified to eliminate impacts to W-112-19003C-2. LOD has been reduced to 50' for conventional bore crossing to minimize impacts to W-112-19003C-1 and W-112-19003A.	The pipeline was routed at this location around the edge of the wetland complex to minimize impacts. Further avoidance was constrained by an adjacent house, a public road, and a pond.	N/A	N/A
Stream	UNT to Trout Brook (WW-193-20002)	WW-193-20002	40.87	CWF, MF	Perennial	None	R3	LOD has been reduced to 50' for conventional bore crossing to minimize impacts. WW-193-20002.	The pipeline was routed to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Wetland	N/A	W-112-19004	40.96	None	N/A	None	PFO	LOD has been reduced to 75' to minimize impacts to WW-112-19004.	The pipeline was routed to provide a perpendicular crossing of the narrowest portion of the wetland.	N/A	N/A
Wetland	N/A	W-119-20004 / W-119-20004-1 / W-119-20004-2	M-0054 0.10	None	N/A	N/A	PFO	LOD reduction was not possible due to the saturated nature of the wetland complex, unconsolidated soils in area, and adjacent stream. The additional workspace will provide storage for spoil within the wetland and will result in less impact than transporting material to a stockpile area outside the wetland.	The pipeline was routed in this location to provide a perpendicular crossing of both the wetland and adjacent public road.	N/A	N/A
Stream	Trout Brook (WW-119-20005)	WW-119-20005	M-0054 0.10	CWF, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to WW-119-20005.	The pipeline was routed in this location to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50

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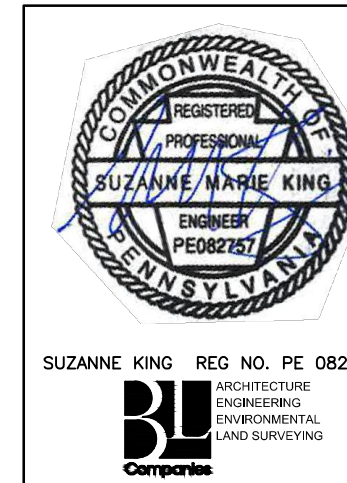
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TABLE 7: RESOURCE SPECIFIC AVOIDANCE AND MINIMIZATION MEASURES (CONTINUED)

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)	Wetland (Cowardin Classification)	Limits of Disturbance (LOD) Adjustments (Supporting Information for Technical Deficiencies #25 and #29)	Field Routing Adjustments within 600-foot Wide Corridor (Supporting Information for Technical Deficiency #13)*	Stream Bank Stabilization BMP	Width of Erosion Control Blanket Required for Stream Bank Stabilization (ft)
Wetland	N/A	W-T14-2004	43.61	None	N/A	N/A	PEM	W-T14-2004 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. In addition, an LOD reduction at this location would only be possible in the adjacent upland area and would not result in minimization of wetland impacts.	The pipeline was routed in this location to avoid impacting the adjacent stream WW-T14-2004.	N/A	N/A
Stream	UNT South Branch Tunkhannock Creek (WW-T14-2004)	WW-T14-2004	43.63	TSF, MF	Ephemeral	Approved Trout Waters; Trout Stocked Stream	R6	The LOD for W-T14-2004 was necked down to eliminate impacts.	This feature is no longer impacted based on LOD reductions.	SBR with SC150 fabric	50
Stream	South Branch Tunkhannock Creek (WW-T14-2003)	WW-T14-2003	43.72	TSF, MF	Perennial	Approved Trout Waters; Trout Stocked Stream	R3	LOD reduction not feasible due to complex stream crossing and two P's located north and south of the feature.	The pipeline was routed to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Wetland	N/A	W-T14-2003	43.89	None	N/A	N/A	PEM	The majority of W-T14-2003 is located beyond the LOD. Two areas of W-T14-2003 are impacted within the LOD. One area is a linear feature that extends perpendicular across the entire width of the ROW. In this location the LOD is reduced to 75'. The second area is a wetland lobe that does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction at this location. Therefore, the LOD width has not been reduced.	The pipeline was routed to avoid habitat fragmentation and minimize impacts by crossing the margin of the wetland.	N/A	N/A
Wetland	N/A	W-T14-2002	44.43	None	N/A	N/A	PEM	LOD reduction to 75' was not possible due to the saturated nature of the wetland complex, unconsolidated soils in area, and adjacent stream. The additional workspace will provide storage for spoil within the wetland and will result in less impact than transporting material to a stockpile area outside the wetland.	The pipeline was routed in this location to avoid impacting a much larger wetland to the southeast. Minimization of impacts to wetland W-T14-2002 was constrained by adjacent homes and ponds. On a wider scale, the pipeline was routed in this area to minimize tree clearing/forest fragmentation and minimize wetland impact. During routing an alternate route was considered 0.5 miles north of this crossing, but was found to require greater forest and wetland impacts than the proposed route.	N/A	N/A
Stream	UNT to South Branch Tunkhannock Creek (WW-T14-2002/ WW-T14-2002A)	WW-T14-2002/ WW-T14-2002A	44.43	CFW, MF	Perennial	Approved Trout Waters; Trout Stocked Stream	R3	LOD reduction not possible at this crossing (per justification provided for wetland W-T14-2002 crossing)	Minimization of impacts to this stream system was constrained by the adjacent public road and barn. On a wider scale, the pipeline was routed in this area to minimize tree clearing/forest fragmentation and minimize wetland impact. During routing an alternate route was considered 0.5 miles north of this crossing, which was found to require greater forest and wetland impacts than the proposed route.	SBR with SC150 fabric	50
Wetland	N/A	W-T19-2003A/ W-T19-2003A-1	45.23	None	N/A	N/A	PEM, PSS	W-T19-2003 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. However, the portion of the LOD within this wetland has been reduced by 5 feet to minimize impacts.	The pipeline was routed at this location to maximize use of an agricultural field and avoid habitat fragmentation by crossing the margin of the wetland.	N/A	N/A
Stream	UNT to South Branch Tunkhannock Creek (WW-T19-2004)	WW-T19-2004	45.33	CFW, MF	Perennial	Approved Trout Waters	R3	LOD has been reduced to 80' to minimize impacts to WW-T19-2004.	The pipeline was routed in this location to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Wetland	N/A	W-T10-2001C-1/ W-T10-2001B/ W-T10-2001A	45.76	None	N/A	N/A	PFO	LOD has been reduced to 75' to minimize impacts to W-T10-2001.	Pipeline routing was constrained at this location due to an adjacent public road to the north and residence to the south. Additionally, the wetland extends across the entire routing corridor. Impacts were minimized by routing the pipeline perpendicular across the wetland.	N/A	N/A
Stream	UNT to South Branch Tunkhannock Creek (WW-T10-2001)	WW-T10-2001	45.78	CFW, MF	Intermittent	None	R4	LOD has been reduced to 75' to minimize impacts to WW-T10-2001.	Pipeline routing was constrained at this location due to an adjacent public road to the north and residence to the south. Additionally, the wetland extends across the entire routing corridor. Impacts were minimized by routing the pipeline perpendicular across the wetland.	SBR with SC150 fabric	50
Stream	UNT to South Branch Tunkhannock Creek (WW-T10-2002)	WW-T10-2002	45.93	CFW, MF	Perennial	None	R3	LOD has been reduced to 80' to minimize impacts to WW-T10-2002.	The pipeline in this area was shifted south to avoid a large wetland complex (W-T10-2002) identified in the northern end of the routing corridor. The pipeline was also routed in this location to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Wetland	N/A	W-T54-2002	46.11	None	N/A	N/A	PEM	LOD reduction to 75' was not possible due to steep slopes and the multiple P's occurring along the route immediately after the crossing.	The pipeline in this area was shifted south to avoid a much larger wetland complex (W-T10-2002) identified in the northern end of the routing corridor. The pipeline was also routed in this location to provide a perpendicular crossing of this wetland.	N/A	N/A
Stream	UNT to South Branch Tunkhannock Creek (WW-T54-2002)	WW-T54-2002	46.18	CFW, MF	Intermittent	None	R4	LOD reduction not possible at this crossing (per justification provided for wetland W-T54-2002 crossing)	The pipeline was routed to provide a perpendicular crossing of this stream.	SBR with C125 fabric	50
Wetland	N/A	W-T28-2001	46.34	None	N/A	N/A	PEM	The LOD for W-T28-2001 was necked down to eliminate impacts.	This feature is no longer impacted based on LOD reductions.	N/A	N/A
Stream	UNT to South Branch Tunkhannock Creek (WW-T10-2003)	WW-T10-2003	MOC-0058.0.23	CFW, MF	Perennial	None	R3	LOD has been reduced to 80' to minimize impacts to WW-T10-2003.	The pipeline was routed to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Stream	UNT to South Branch Tunkhannock Creek (WW-T19-2002)	WW-T19-2002	46.92	CFW, MF	Ephemeral	None	R6	LOD has been reduced to 80' to minimize impacts to WW-T19-2002.	The pipeline was routed in this location to avoid impacting W-T19-2002, located 30 feet east of the proposed LOD. The route also provides a perpendicular crossing of WW-T19-2002.	SBR with SC150 fabric	50
Stream	UNT to South Branch Tunkhannock Creek (WW-T19-2003)	WW-T19-2003	47.22	CFW, MF	Perennial	None	R3	LOD has been reduced to 80' to minimize impacts to WW-T19-2003.	The pipeline was routed to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Wetland	N/A	W-T65-2001A/ W-T65-2001C	48.22	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to WW-T65-2001.	The pipeline was routed at this location to minimize impacts by crossing the wetland at its most narrow point. Additional minimization was constrained by adjacent residences.	N/A	N/A
Wetland	N/A	W-T19-2001	48.72	EV	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T19-2001.	The pipeline was routed at this location to minimize impact to stream WW-T19-2001. The original route crossed an area with a braided stream channel. The pipeline was moved to cross a single channel at a perpendicular angle.	N/A	N/A
Stream	UNT to Tunkhannock Creek (WW-T19-2001)	WW-T19-2001	48.74	CFW, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to WW-T19-2001.	The pipeline was routed at this location to minimize impact to this stream. The original route crossed an area with a braided stream channel. The pipeline was moved to cross a single channel at a perpendicular angle.	SBR with SC150 fabric	50
Stream	Tunkhannock Creek (WW-T54-21001)	WW-T54-21001	M-0051.0.08	TSF, MF	Perennial	Approved Trout Waters; WWCW Fisheries Stream	R3	LOD reduction to 75' was not possible due to the feature being a navigable water requiring Aids To Navigation (ATON), and because the stream is a hydrostatic test water source.	The pipeline was routed at this location to avoid crossing this stream on a steep slope and to provide a perpendicular crossing.	SBR with SC150 fabric	50
Wetland	N/A	W-T17-2001	M-0080.0.25	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T17-2001.	The pipeline was routed at this location to minimize wetland impact by crossing at a perpendicular angle. Adjacent site constraints including residential homes and the public road crossing precluded full wetland avoidance.	N/A	N/A
Wetland	N/A	W-T57-21006	M-0080.0.66	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T57-21006.	The pipeline was routed at this location to cross the wetland at its most narrow point.	N/A	N/A
Wetland	N/A	W-T57-21005	M-0080.0.77	None	N/A	N/A	PEM	LOD has been modified to eliminate impacts to W-T57-21005.	This feature is no longer impacted based on LOD reductions.	N/A	N/A
Stream	UNT to Tunkhannock Creek (WW-T57-21003)	WW-T57-21003	M-0080.1.09	CFW, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to WW-T57-21003.	The pipeline was routed to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Wetland	N/A	W-T57-21004	M-0080.1.10	None	N/A	N/A	PSS	LOD has been reduced to 75' to minimize impacts to W-T57-21004.	The pipeline was routed to provide a perpendicular crossing of this narrow linear wetland.	N/A	N/A
Wetland	N/A	W-T57-21003B/ W-T57-21003C	M-0080.1.13	None	N/A	N/A	PSS, PFO	LOD has been reduced to 75' to minimize impacts to W-T57-21003.	The pipeline was routed in this location to avoid impacting the forested portion of the wetland.	N/A	N/A
Stream	UNT to Tunkhannock Creek (WW-T57-21002)	WW-T57-21002	M-0080.1.27	CFW, MF	Intermittent	None	R4	LOD has been reduced to 80' to minimize impacts to WW-T57-21002.	The pipeline was routed to provide a perpendicular crossing of this stream.	SBR with SC150 fabric	50
Wetland	N/A	W-T57-21002	M-0080.1.32	None	N/A	N/A	PEM	W-T57-21002 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. In addition, an LOD reduction at this location would only be possible in the adjacent upland area and would not result in minimization of wetland impacts.	The pipeline was routed in this location to provide a perpendicular crossing of stream WW-T57-21002, avoid workspace being placed parallel and abutting stream WW-T57-21002, and to avoid wetland W-T57-21001, located 30 feet east of the proposed LOD.	N/A	N/A
Wetland	N/A	W-T31-21001	50.48	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T31-21001.	The pipeline was routed to provide a perpendicular crossing of the narrow, linear wetland.	N/A	N/A

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.

Drawn By & Date/Time: CScanzello Jul 28, 2017 4:45pm
 Drawing Location & Name: G:\00514\14C\404909\DWG\BMPs&DETAILS\PL_DNT14C4909(10)_WY-TB.dwg



REVISIONS						
NO.	DATE	BY	DESCRIPTION	W.O. NO.	CHK.	APP.
0	08/28/2015	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 30" CENTRAL PENN LINE NORTH PENNSYLVANIA BEST MANAGEMENT PRACTICES AND QUANTITIES PLAN SET			
WYOMING COUNTY, PENNSYLVANIA			
QUANTITY, CROSSING AND ACIDIC SOIL TABLES			
DRAWN BY:	ELZ	DATE:	05/15/15
CHECKED BY:	JLK	DATE:	07/02/15
APPROVED BY:	SMK	DATE:	07/08/15
ISSUED FOR:	CONSTRUCTION	REVISION:	4
DRAWING NUMBER:	24-1601-70-28-A/1683_3-BMP-WY-TB SHEET 7 OF 7		

