



October 28, 2016

East Hanover Township  
Floodplain Administrator  
1117 School House Road  
Annville, PA 17003

Re: Atlantic Sunrise Project  
Central Penn Line South  
East Hanover Township, Lebanon County  
Floodplain Management Analysis

Dear Sir or Madam:

Transcontinental Gas Pipeline Company, LLC (Transco) proposes to construct and operate the Atlantic Sunrise Project (Project) to provide 1.7 million dekatherms per day of incremental firm transportation of natural gas from the Marcellus Shale production areas in northern Pennsylvania (PA) to its existing market areas, extending to as far south as the Station 85 Pooling Point in Choctaw County, Alabama. The Project includes modifications to the existing Transco Mainline System to reverse the direction of flow, enabling new north-to-south capabilities (bi-directional flow) to transport this new source of natural gas to existing markets. The Project consists of the following primary components within PA:

- Installing greenfield pipeline facilities of approximately 58.6 miles of new 30-inch-diameter pipe from Susquehanna County, PA to Columbia County, PA.
- Installing greenfield pipeline facilities of approximately 127.3 miles of 42-inch-diameter pipe from Columbia County, PA to Lancaster County, PA.;
- Installing two pipeline loops (pipeline laid parallel to existing facilities):
  - 8.56 miles of 42-inch pipeline loop located in Lycoming County, PA known as the Unity Loop;
  - 2.50 miles of 36-inch pipeline in Clinton County, PA, known as the Chapman Loop;
- Constructing two new compressor stations, one in Wyoming County and one in Columbia County, PA;
- Additional ancillary facilities, such as mainline valves, cathodic protection, communication facilities, and internal inspection device (e.g., pig) launchers and receivers;
- Two new meter stations and three new regulator stations with interconnecting piping;
- Additional compression and related modifications to one existing compressor station; and,
- Modification to an existing meter station for use of shared facilities with a new meter station.

Transco's consultants, BL Companies and TRC Solutions (TRC), have completed an analysis of potential impacts on FEMA delineated floodways from the Project in accordance with 25 Pa. Code § 105.13. The analysis for East Hanover Township is provided below for your review and comment.

East Hanover Township  
October 28, 2016  
BL Project No. 14C4909  
Page 1 of 2

**ATLANTIC SUNRISE PROJECT  
FEMA FLOODPLAIN CROSSINGS  
EAST HANOVER TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA**

Description of Impact	Structure Type and Dimensions	Resource ID	Resource Name	Chapter 93 Classification, Wetland Classification (EV or Other), or Floodway Type	Floodway Fill (cu. yds.)	Impact area (acres)		Latitude	Longitude
						Temporary	Permanent		
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T14-5006	Floodway to Swatara Creek	FEMA Detailed	N/A	1.7411	0.0870	40.36975	-76.53528

The floodway crossings listed above are depicted on the enclosed plans from the Project's PADEP Chapter 105 Permit Application.

Please note that construction activities are not expected to create permanent loss of flood storage capacity or hydraulic capacity, as all pre-construction surface elevations will be re-established during restoration. The temporary and permanent impacts noted above are associated with vegetation management, underground pipe installation, and temporary contractor staging area use only, and do not represent a permanent modification of ground elevation or loss of flood storage capacity or hydraulic capacity. No structures are proposed within the FEMA 100-year floodplain, no fill will be placed in the floodways, and no increase in 100-year flood elevation is anticipated as a result of the proposed Project.

On behalf of Transco, BL and TRC respectfully request that East Hanover Township review this analysis and, if applicable, provide comments to:

Steve Crescenzo  
TRC Environmental Corporation  
2200 Liberty Avenue, Suite 100  
Pittsburgh, PA 15222

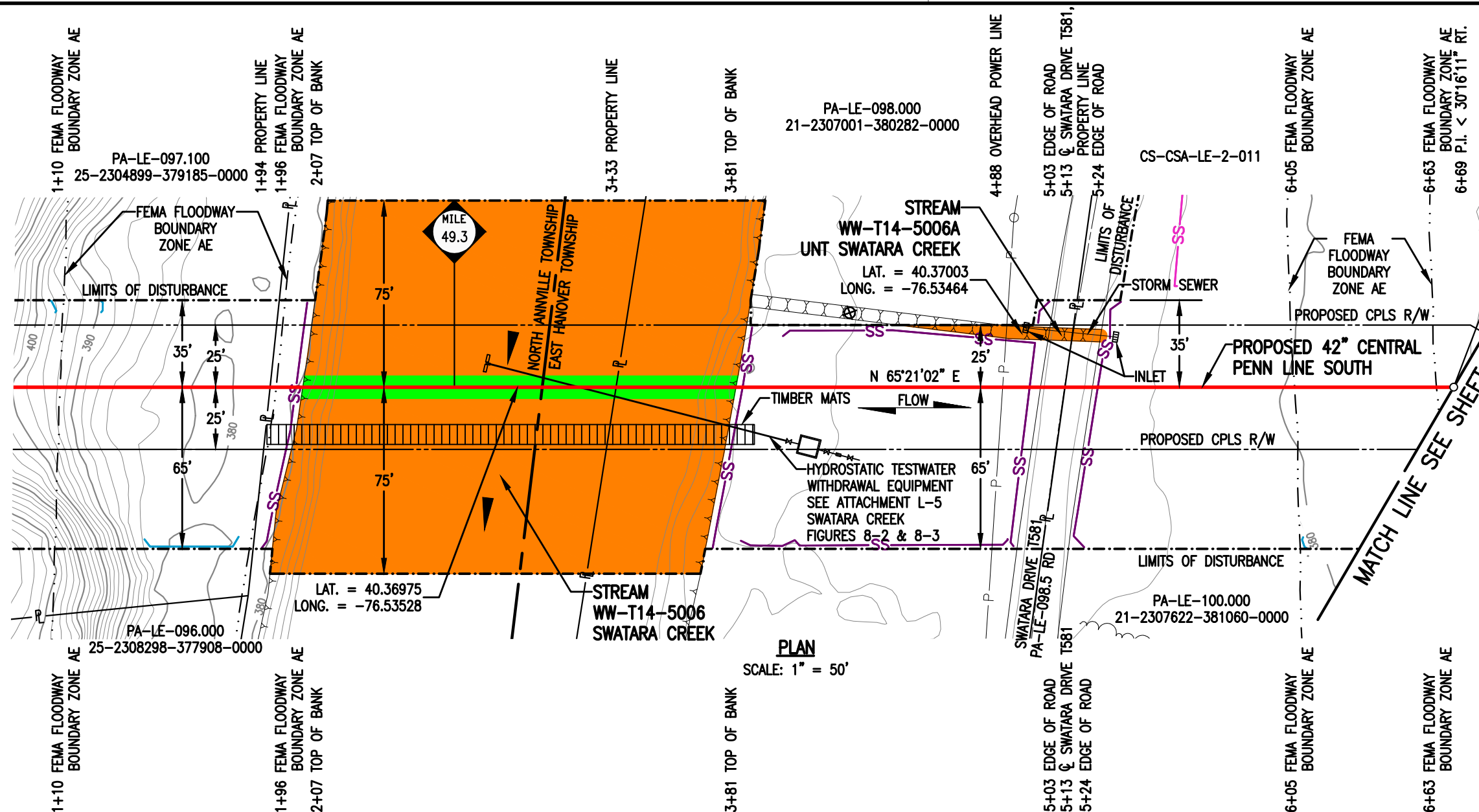
**Please do not send comments directly to the PADEP,** as we must include them with our permit application. Should you have any questions or concerns regarding this notification, please contact Al Busher at (717)-651-9850 or via email at [abusher@blcompanies.com](mailto:abusher@blcompanies.com).

Sincerely,

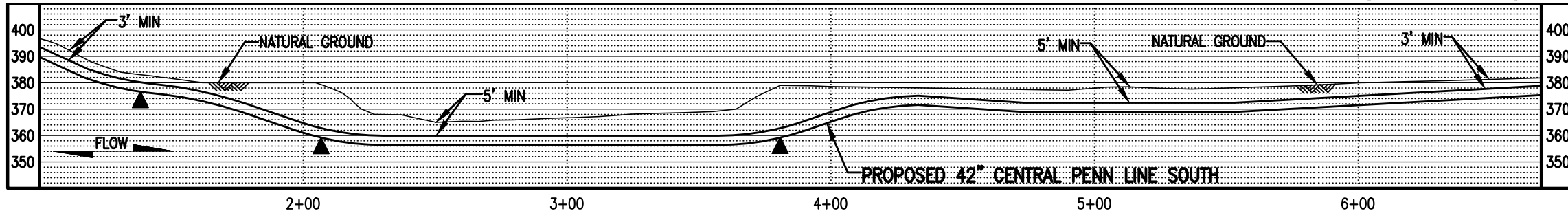


Alaric J. Busher, PE  
Senior Engineer

Enclosures: Water Obstruction and Encroachment Permit Impact Maps



**PLAN**  
SCALE: 1" = 50'



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

**STREAM DISTURBANCE:**

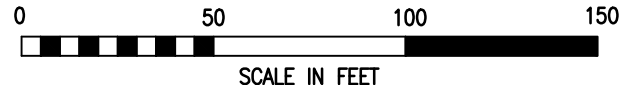
STREAM WW-T14-5006	ACRE
TEMPORARY STREAM DISTURBANCE	0.5616
PERMANENT STREAM DISTURBANCE	0.0400
<b>TOTAL STREAM DISTURBANCE</b>	<b>0.6016</b>
TEMPORARY FLOODWAY DISTURBANCE	1.7411
PERMANENT FLOODWAY DISTURBANCE	0.0870
<b>TOTAL FLOODWAY DISTURBANCE</b>	<b>1.8281</b>

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	174.09
STREAM LENGTH	151.83

**STREAM DISTURBANCE:**

STREAM WW-T14-5006A	ACRE
TEMPORARY STREAM DISTURBANCE	0.0072
PERMANENT STREAM DISTURBANCE	0.0000
<b>TOTAL STREAM DISTURBANCE</b>	<b>0.0072</b>
TEMPORARY FLOODWAY DISTURBANCE	0.0000
PERMANENT FLOODWAY DISTURBANCE	0.0000
<b>TOTAL FLOODWAY DISTURBANCE</b>	<b>0.0000</b>

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	6.71
STREAM LENGTH	157.11



**LEGEND**

	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
	PROPOSED CPLS 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



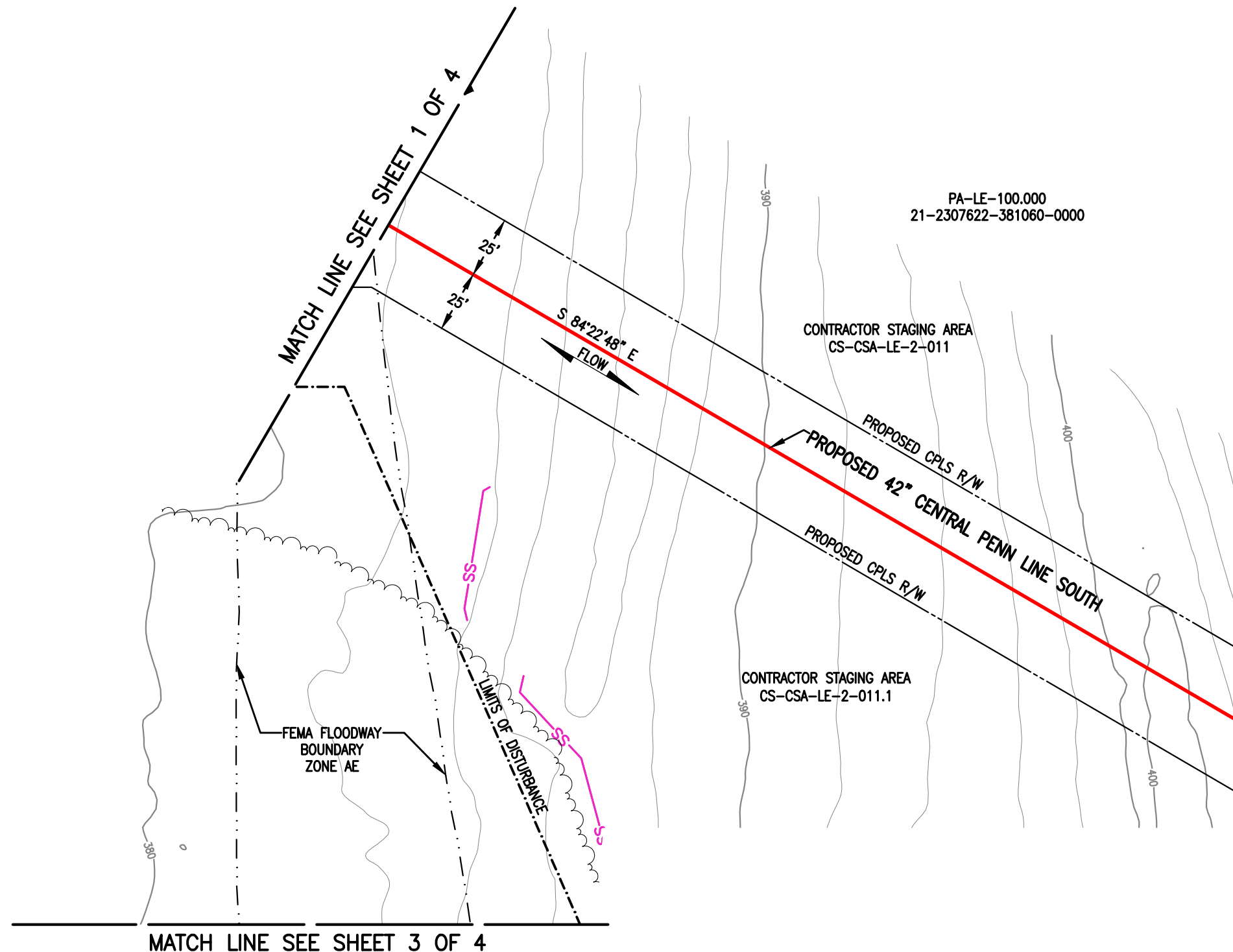
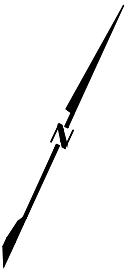
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
0	08/19/15	CL	ISSUED FOR PADEP 105 PERMIT	1161503	CLR	MJH
1	02/03/16	AT	ISSUED FOR INTERNAL USE	1161503	CLR	MJH
2	11/02/16	AT	ISSUED FOR PADEP SUBMITTAL #2	1161503	CLR	MJH

**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC**  
**WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS**  
**ATLANTIC SUNRISE PROJECT**  
**PROPOSED 42" CENTRAL PENN LINE SOUTH**  
**STREAM CROSSINGS WW-T14-5006 @ M.P. 49.30 & WW-T14-5006A @ M.P. 49.34**  
**NORTH ANNVILLE AND EAST HANOVER TOWNSHIPS, LEBANON COUNTY, PENNSYLVANIA**

**Williams**

DRAWING NO.	REFERENCE TITLE	DRAWN BY: LL	DATE: 10/17/14	ISSUED FOR BID:	SCALE: 1" = 50'
		CHECKED BY: ML	DATE: 05/26/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
		APPROVED BY: MJH	DATE: 05/29/15	DRAWING NUMBER: 24-1600-70-09-A/49.30-01	SHEET 1
		W.O. NUMBER: 1161503		10/12/2016 nlabell	OF 4

STREAM DISTURBANCE:  
SEE TABLE ON SHEET 1 OF 4

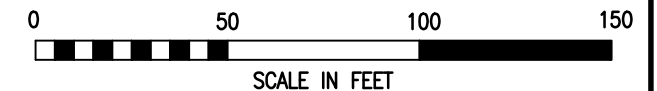


**GENERAL NOTES:**

1. STREAM CROSSING METHOD FOR WW-T14-5006 SHALL BE FLUME (FX). EQUIPMENT TO CROSS STREAM UTILIZING A BRIDGE EQUIPMENT CROSSING (BEC).
2. STREAM WW-T14-5006A DOES NOT CROSS PROPOSED PIPELINE.
3. THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
4. TEMPORARY FLOODWAY IMPACTS FOR CS-CSA-LE-2-011 AND CS-CSA-LE-2-011.1 ARE INCLUDED IN STREAM WW-T14-5006 TEMPORARY FLOODWAY DISTURBANCE.
5. STATION 1+00 SHOWN IS EQUAL TO STATION 2601+35 ON THE EROSION AND SEDIMENT CONTROL PLAN.

**SURVEY NOTES:**

1. T.B.M. SURVEY CONTROL POINT - 40' RT. OF M.P. 49.32, ELEV. = 378.90' (NAVD88).



LEGEND		WOOD GROUP MUSTANG, INC.	
	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
	PROPOSED CPLS 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		12" SEDIMENT BARRIER
			18" SEDIMENT BARRIER
			24" SEDIMENT BARRIER
			32" SEDIMENT BARRIER
			TOP OF BANK
			PERMANENT STREAM IMPACT
			TEMPORARY STREAM IMPACT

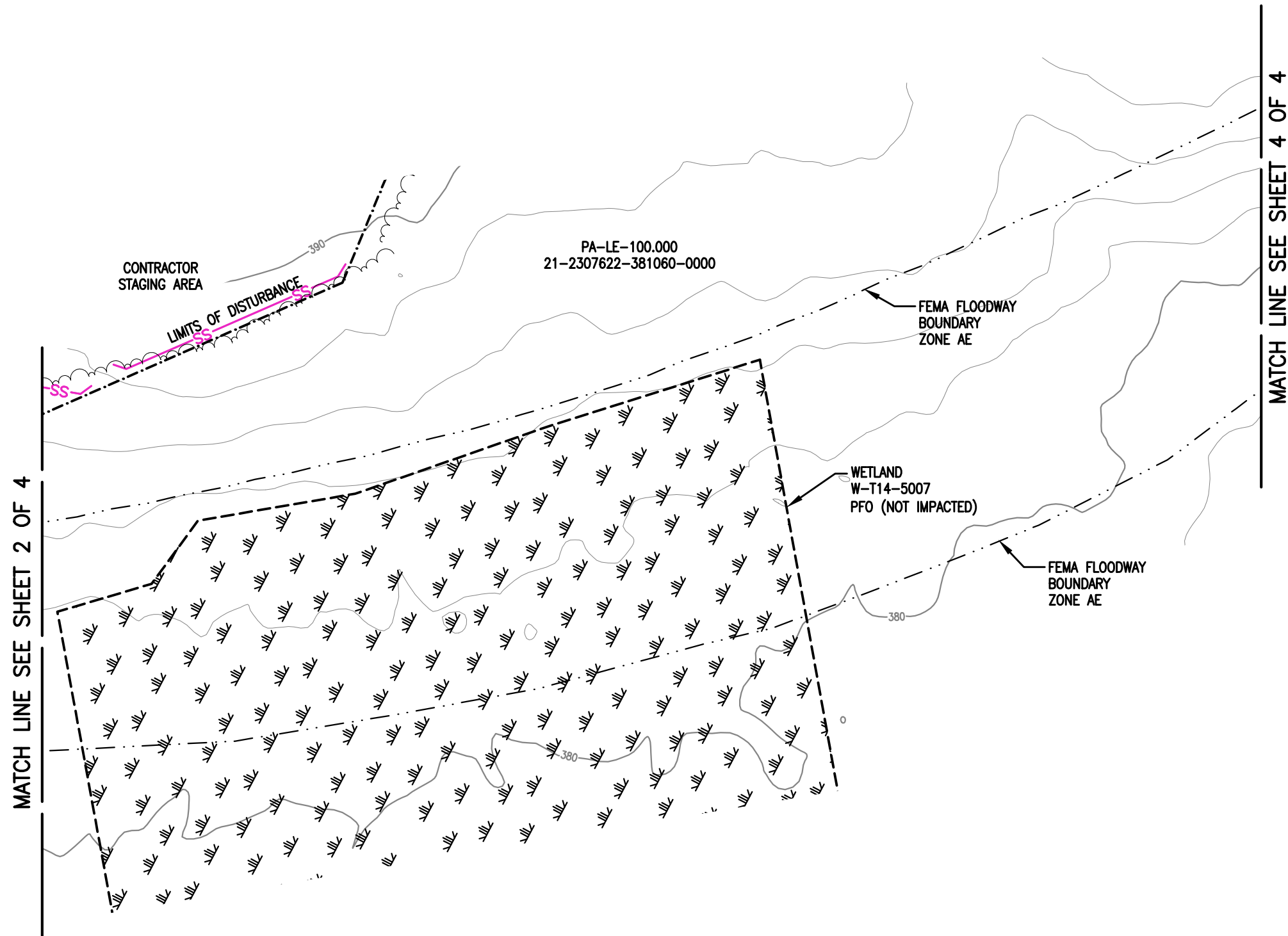
DRAWING NO.		REFERENCE TITLE	
NO.	DATE	BY	REVISION DESCRIPTION
0	08/19/15	CL	ISSUED FOR PADEP 105 PERMIT
1	11/02/16	AT	ISSUED FOR PADEP SUBMITTAL #2

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC  
 WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS  
 ATLANTIC SUNRISE PROJECT  
 PROPOSED 42" CENTRAL PENN LINE SOUTH  
 STREAM CROSSINGS WW-T14-5006 @ M.P. 49.30 & WW-T14-5006A @ M.P. 49.34  
 NORTH ANNVILLE AND EAST HANOVER TOWNSHIPS, LEBANON COUNTY, PENNSYLVANIA

**Williams**

DRAWN BY: LL	DATE: 10/17/14	ISSUED FOR BID:	SCALE: 1" = 50'
CHECKED BY: ML	DATE: 05/26/15	ISSUED FOR CONSTRUCTION:	REVISION: 1
APPROVED BY: MJH	DATE: 05/29/15	DRAWING NUMBER: 24-1600-70-09-A/49.30-01	SHEET 2 OF 4
WO: 1161503			

STREAM DISTURBANCE:  
SEE TABLE ON SHEET 1 OF 4

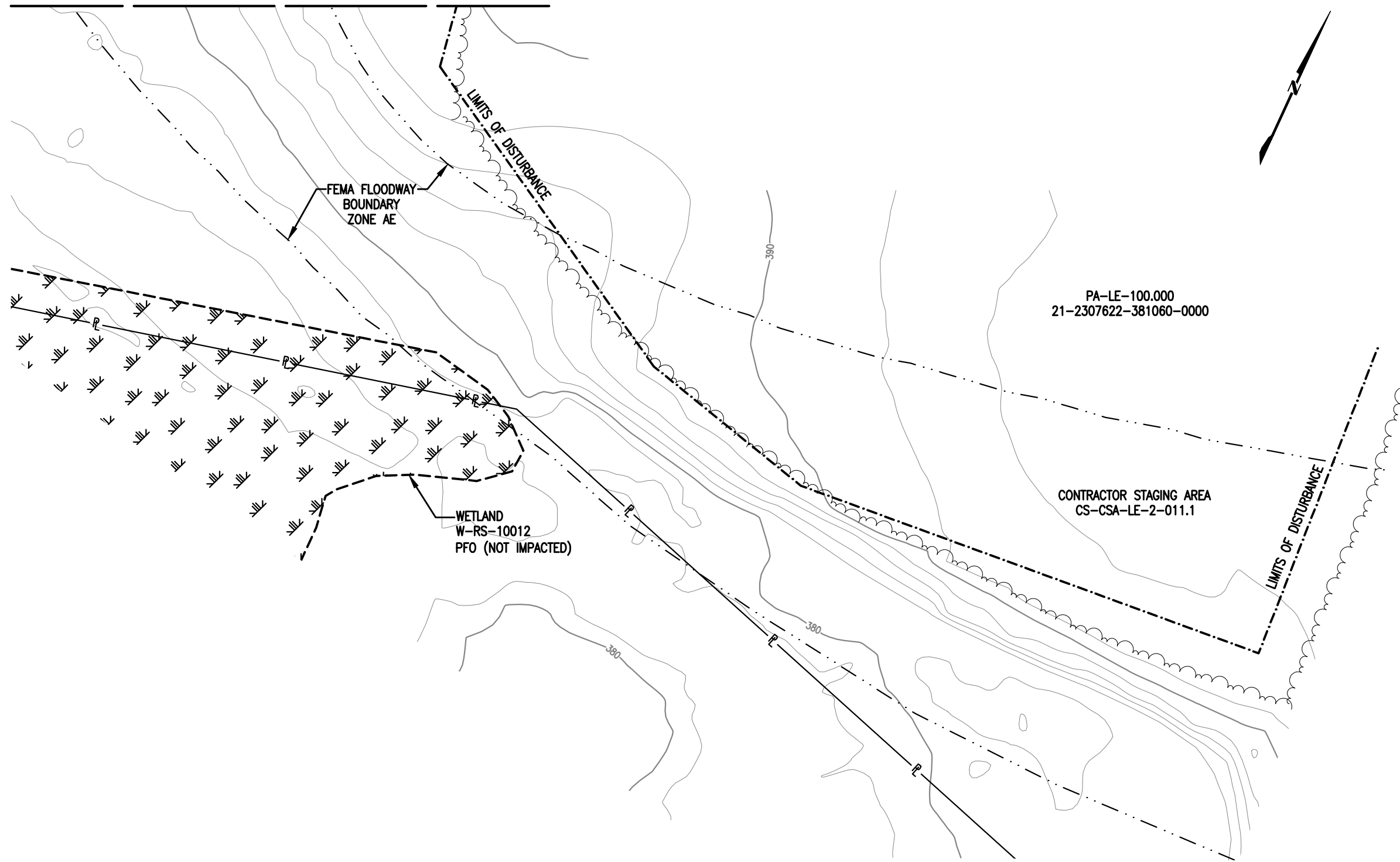


LEGEND		WOOD GROUP MUSTANG, INC.	
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	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
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	12" SEDIMENT BARRIER		
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	24" SEDIMENT BARRIER		
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	TOP OF BANK		

DRAWING NO.		REFERENCE TITLE	
NO.	DATE	BY	REVISION DESCRIPTION
0	11/02/16	AVD	ISSUED FOR PADEP SUBMITTAL #2

<p>TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC          WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS          ATLANTIC SUNRISE PROJECT          PROPOSED 42" CENTRAL PENN LINE SOUTH          STREAM CROSSINGS WW-T14-5006 @ M.P. 49.30 &amp; WW-T14-5006A @ M.P. 49.34          NORTH ANNVILLE AND EAST HANOVER TOWNSHIPS, LEBANON COUNTY, PENNSYLVANIA</p>			
<p>ISSUED FOR BID: 07/06/16          CHECKED BY: CLR          APPROVED BY: MJH          W.O. NO. 1161503</p>	<p>DATE: 07/06/16          DATE: 07/06/16          DATE: 07/06/16</p>	<p>ISSUED FOR CONSTRUCTION: 24-1600-70-09-A/49.30-01          DRAWING NUMBER: 24-1600-70-09-A/49.30-01          10/13/2016 t2le          K:\03643-CPLS\Mapping\Waterbodies\CPLS_PAS\Revised 105\24-1600-70-09-A_49.30-01.dwg</p>	<p>SCALE: 1" = 50'          REVISION: 0          SHEET 3 OF 4</p>





LEGEND		WOOD GROUP MUSTANG, INC.	
	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
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TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC  
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 PROPOSED 42" CENTRAL PENN LINE SOUTH  
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 NORTH ANNVILLE AND EAST HANOVER TOWNSHIPS, LEBANON COUNTY, PENNSYLVANIA

**Williams**

DRAWN BY: AVD	DATE: 07/06/16	ISSUED FOR BID:	SCALE: 1" = 50'
CHECKED BY: CLR	DATE: 07/06/16	ISSUED FOR CONSTRUCTION:	REVISION: 0
APPROVED BY: MJH	DATE: 07/06/16	DRAWING NUMBER: 24-1600-70-09-A/49.30-01	SHEET 4
WO: 1161503			OF 4

10/13/2016 t2le  
K:\03643-CPLS\Mapping\Waterbodies\CPLS\_PAS\Revised 105\24-1600-70-09-A\_49.30-01.dwg



October 28, 2016

North Annville Township  
Floodplain Administrator  
1020 North Route 934  
Annville, PA 17003

Re: Atlantic Sunrise Project  
Central Penn Line South  
North Annville Township, Lebanon County  
Floodplain Management Analysis

Dear Sir or Madam:

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Transco's consultants, BL Companies and TRC Solutions (TRC), have completed an analysis of potential impacts on FEMA delineated floodways from the Project in accordance with 25 Pa. Code § 105.13. The analysis for North Annville Township is provided below for your review and comment.

North Annville Township  
October 28, 2016  
BL Project No. 14C4909  
Page 1 of 2

**ATLANTIC SUNRISE PROJECT  
FEMA FLOODPLAIN CROSSINGS  
NORTH ANNVILLE TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA**

Description of Impact	Structure Type and Dimensions	Resource ID	Resource Name	Chapter 93 Classification, Wetland Classification (EV or Other), or Floodway Type	Floodway Fill (cu. yds.)	Impact area (acres)		Latitude	Longitude
						Temporary	Permanent		
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T43-5003	Floodway to Quittapahilla Creek	FEMA Detailed	N/A	0.2611	0.0294	40.33221	-76.53899
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T14-5006	Floodway to Swatara Creek	FEMA Detailed	N/A	1.7411	0.0870	40.36975	-76.53528

The floodway crossing listed above is depicted on the enclosed plans from the Project’s PADEP Chapter 105 Permit Application.

Please note that construction activities are not expected to create permanent loss of flood storage capacity or hydraulic capacity, as all pre-construction surface elevations will be re-established during restoration. The temporary and permanent impacts noted above are associated with vegetation management and underground pipe installation only, and do not represent a permanent modification of ground elevation or loss of flood storage capacity or hydraulic capacity. No structures are proposed within the FEMA 100-year floodplain, no fill will be placed in the floodways, and no increase in 100-year flood elevation is anticipated as a result of the proposed Project.

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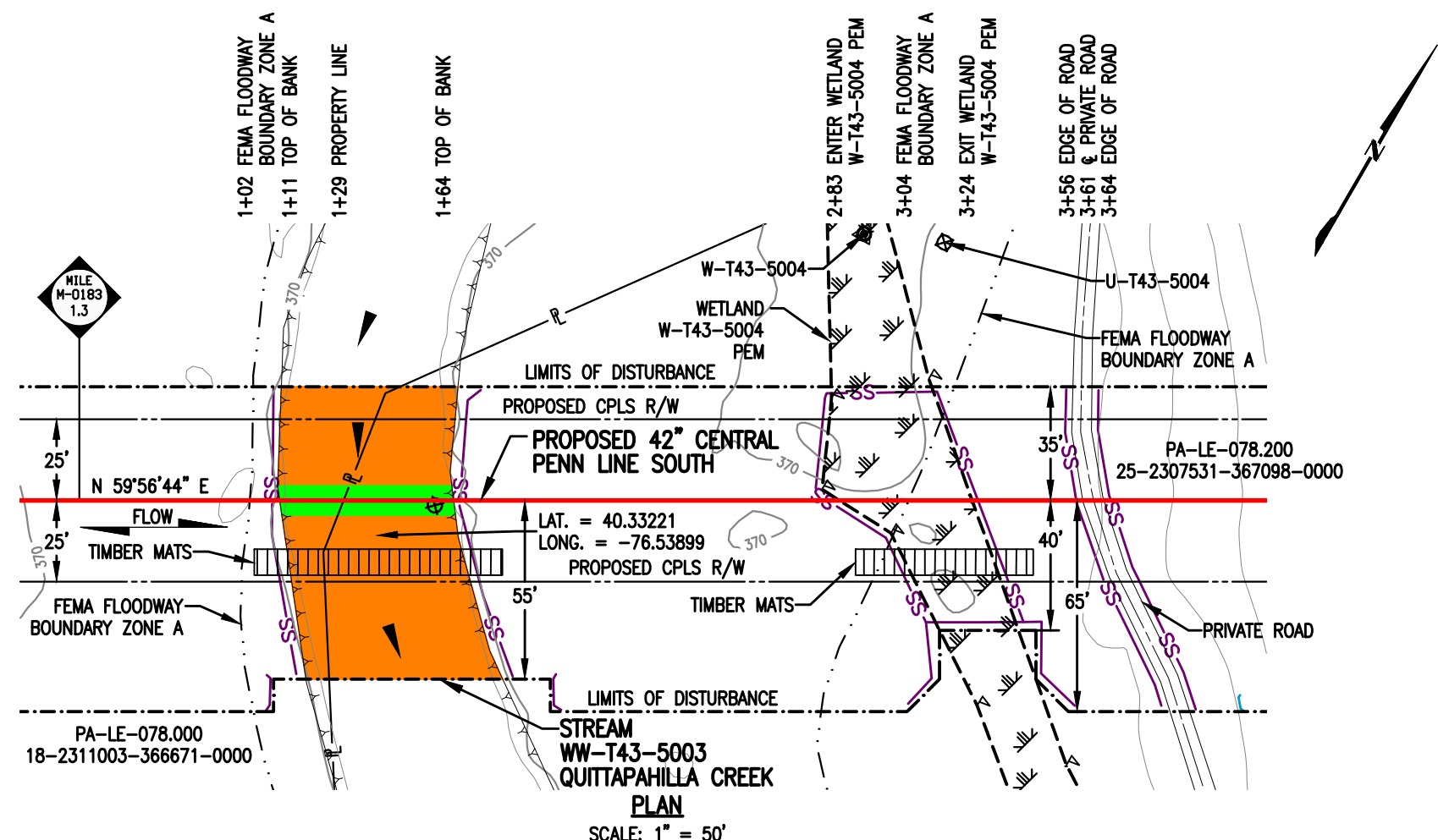
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Enclosures: Water Obstruction and Encroachment Permit Impact Maps



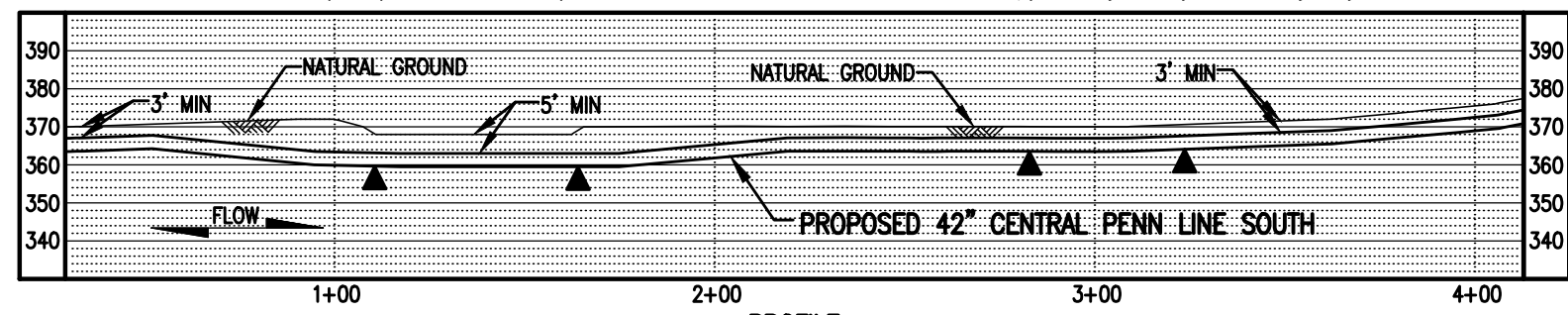


**STREAM DISTURBANCE:**

STREAM WW-T43-5003	ACRE
TEMPORARY STREAM DISTURBANCE	0.1010
PERMANENT STREAM DISTURBANCE	0.0123
TOTAL STREAM DISTURBANCE	0.1133
TEMPORARY FLOODWAY DISTURBANCE	0.2611
PERMANENT FLOODWAY DISTURBANCE	0.0294
TOTAL FLOODWAY DISTURBANCE	0.2905

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	53.49
STREAM LENGTH	93.54



**GENERAL NOTES:**

1. STREAM CROSSING METHOD SHALL BE FLUME (FX). EQUIPMENT TO CROSS STREAM UTILIZING A BRIDGE EQUIPMENT CROSSING (BEC).
2. THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
3. STATION 1+00 SHOWN IS EQUAL TO M-0183 STATION 69+18 ON THE EROSION AND SEDIMENT CONTROL PLAN.

**SURVEY NOTES:**

1. T.B.M. SURVEY CONTROL POINT - 14' RT. OF M-0183 M.P. 1.32, ELEV. = 371.09' (NAVD88).



**LEGEND**

	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
	PROPOSED CPLS R/W		WELL POINT
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**WOOD GROUP MUSTANG, INC.**

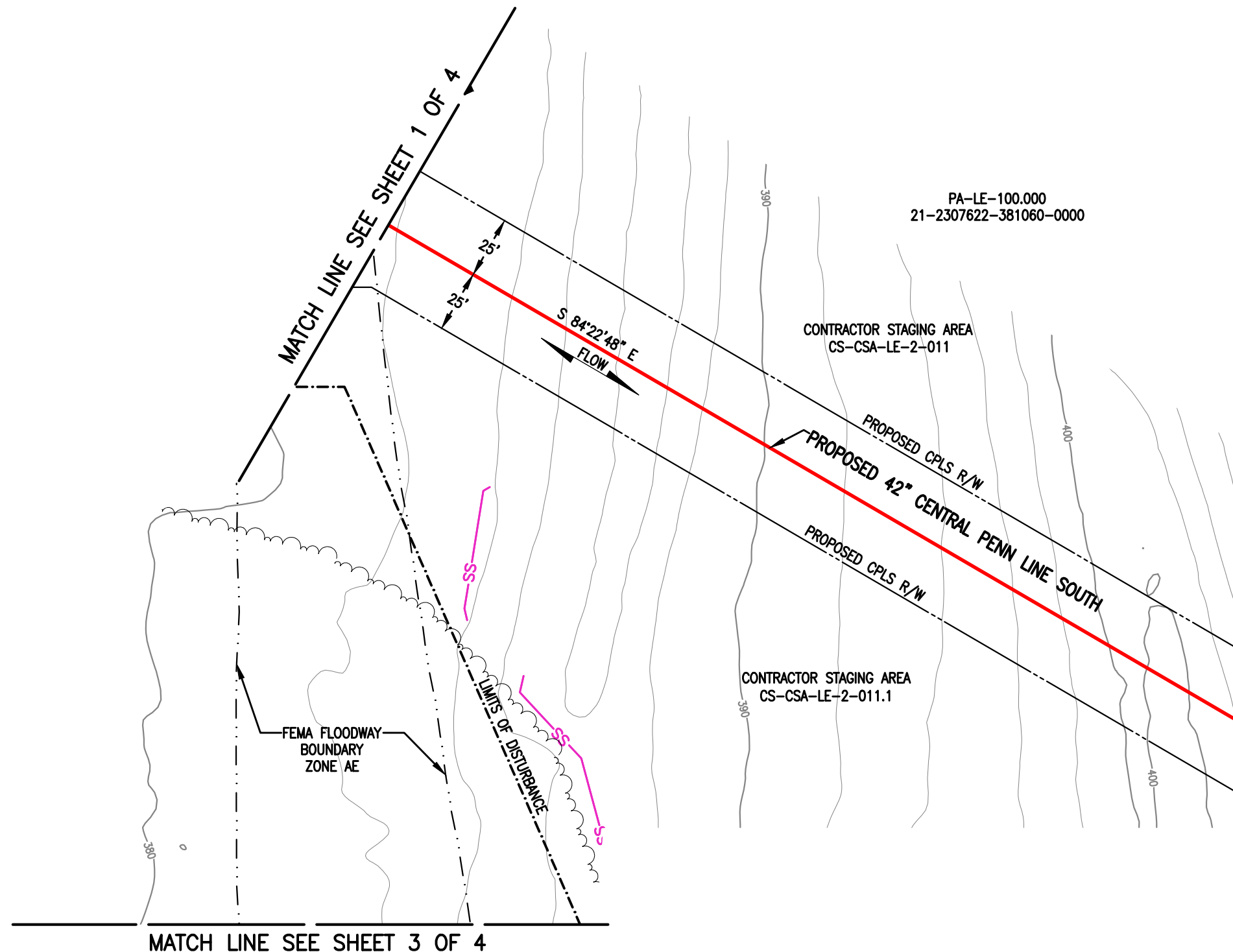
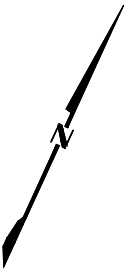
DRAWING NO.	REFERENCE TITLE

**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC**  
**WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS**  
**ATLANTIC SUNRISE PROJECT**  
**PROPOSED 42" CENTRAL PENN LINE SOUTH**  
**STREAM CROSSING WW-T43-5003**  
**M-0183 M.P. 1.32**  
**NORTH ANNVILLE TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA**

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: FH	DATE: 07/15/15	ISSUED FOR BID:	SCALE: 1" = 50'
0	08/19/15	FH	ISSUED FOR PADEP 105 PERMIT	1161503	CLR	MJH	CHECKED BY: CLR	DATE: 07/15/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
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2	11/02/16	LL	ISSUED FOR PADEP SUBMITTAL #2	1161503	CLR	MJH	IWO: 1161503		12:40pm 10/13/2016 nlabell	OF 1



STREAM DISTURBANCE:  
SEE TABLE ON SHEET 1 OF 4

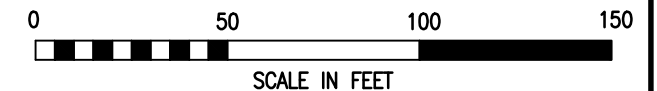


**GENERAL NOTES:**

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3. THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
4. TEMPORARY FLOODWAY IMPACTS FOR CS-CSA-LE-2-011 AND CS-CSA-LE-2-011.1 ARE INCLUDED IN STREAM WW-T14-5006 TEMPORARY FLOODWAY DISTURBANCE.
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	STREAM FLOW		FLOODWAY BOUNDARY
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			32" SEDIMENT BARRIER
			TOP OF BANK
			PERMANENT STREAM IMPACT
			TEMPORARY STREAM IMPACT

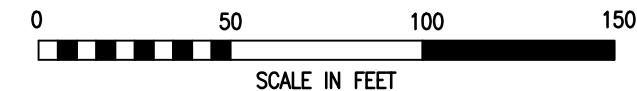
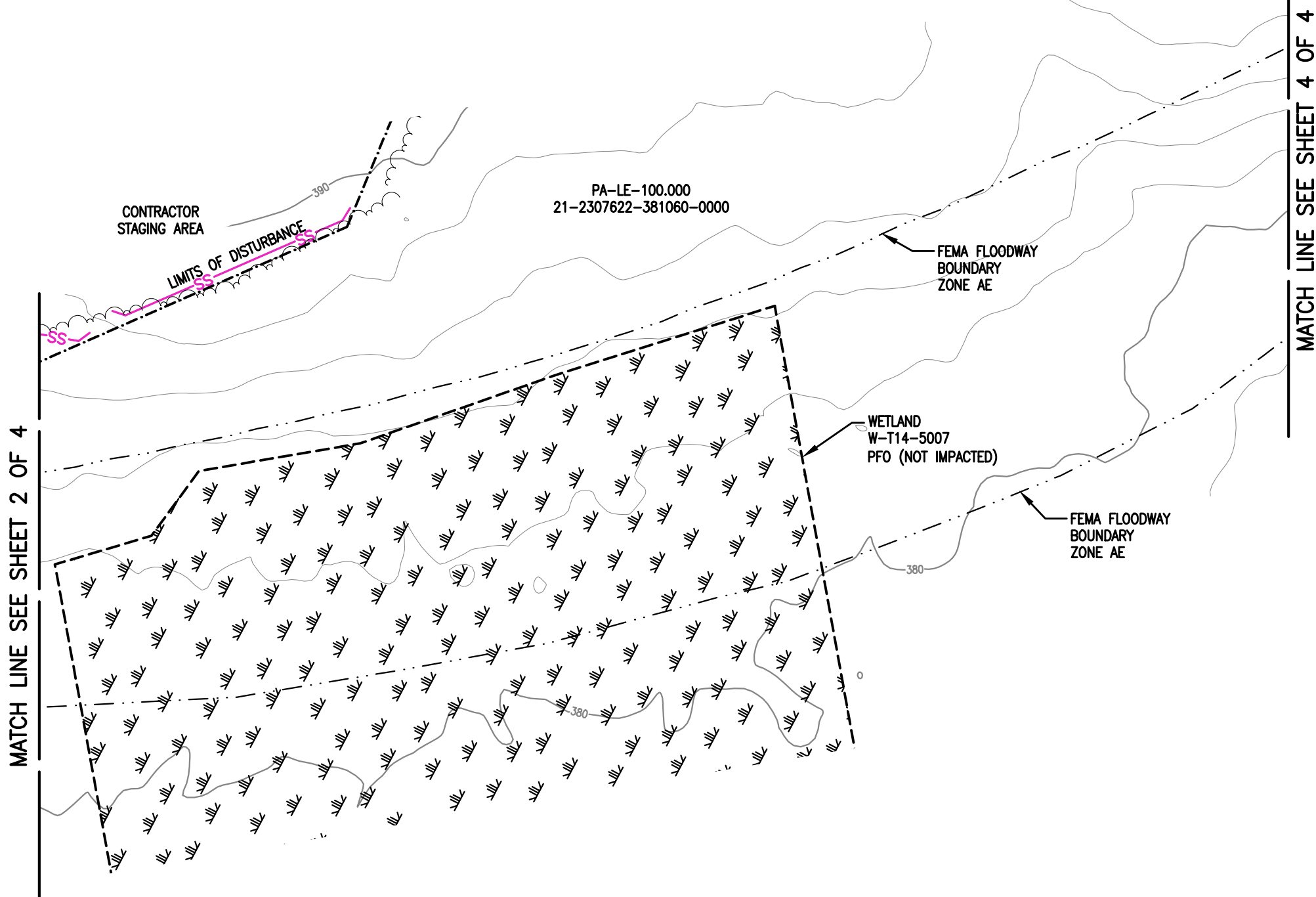
DRAWING NO.		REFERENCE TITLE	
NO.	DATE	BY	REVISION DESCRIPTION
0	08/19/15	CL	ISSUED FOR PADEP 105 PERMIT
1	11/02/16	AT	ISSUED FOR PADEP SUBMITTAL #2

**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC**  
**WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS**  
**ATLANTIC SUNRISE PROJECT**  
**PROPOSED 42" CENTRAL PENN LINE SOUTH**  
**STREAM CROSSINGS WW-T14-5006 @ M.P. 49.30 &**  
**WW-T14-5006A @ M.P. 49.34**  
**NORTH ANNVILLE AND EAST HANOVER TOWNSHIPS, LEBANON COUNTY, PENNSYLVANIA**

DRAWN BY: LL	DATE: 10/17/14	ISSUED FOR BID:	SCALE: 1" = 50'
CHECKED BY: ML	DATE: 05/26/15	ISSUED FOR CONSTRUCTION:	REVISION: 1
APPROVED BY: MJH	DATE: 05/29/15	DRAWING NUMBER: <b>24-1600-70-09-A/49.30-01</b>	SHEET 2
WO: 1161503		1/40pm 10/13/2016 t2le	OF 4



STREAM DISTURBANCE:  
SEE TABLE ON SHEET 1 OF 4



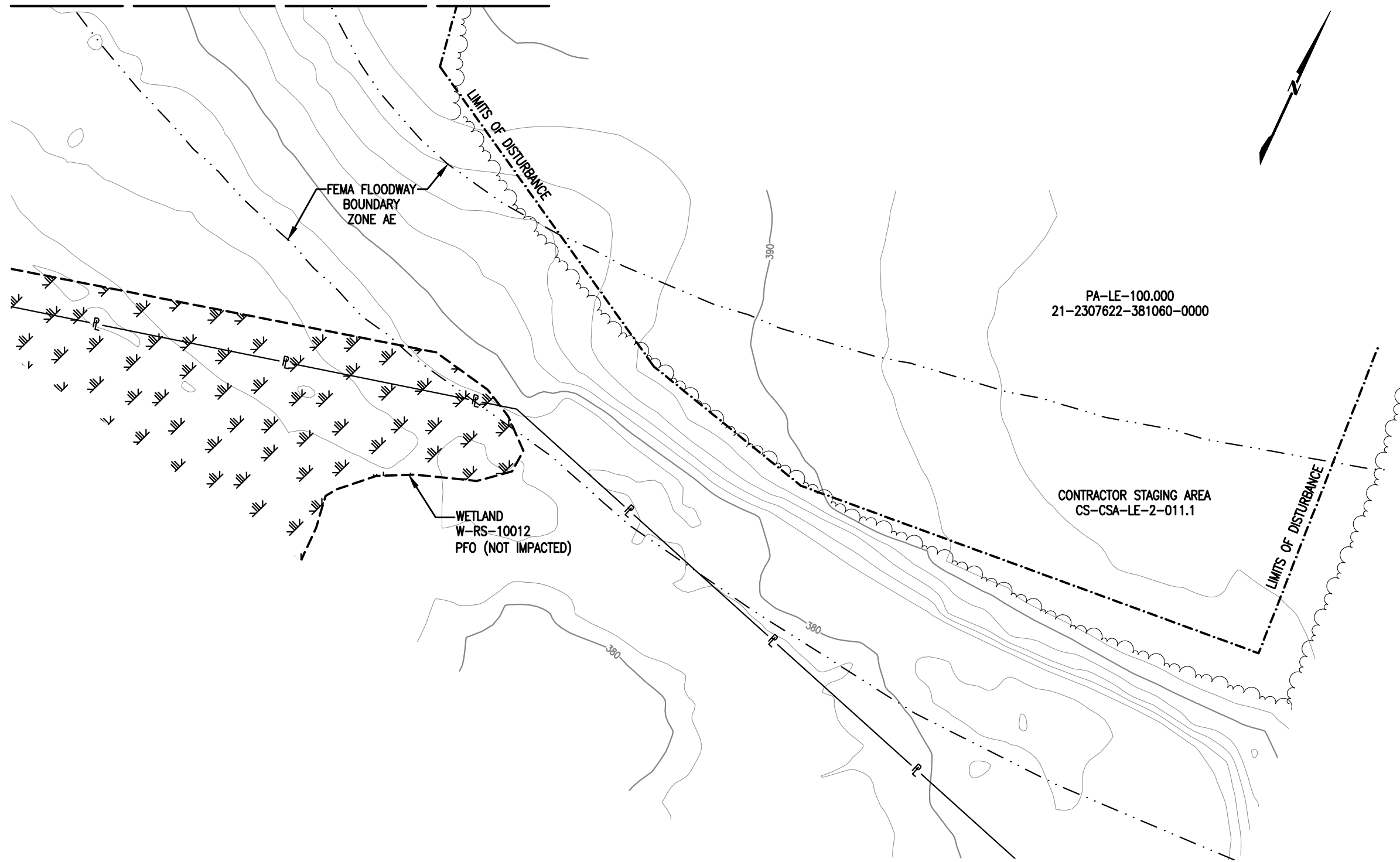
LEGEND		WOOD GROUP MUSTANG, INC.	
	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
	PROPOSED CPLS R/W		WELL POINT
	PROPERTY LINE		TRENCH PLUG
	FOREIGN PIPELINE		WATERBODY
	WETLAND AREA		TREE LINE
	STREAM FLOW		FLOODWAY BOUNDARY
	EXISTING POWER LINE		FEMA FLOODWAY BOUNDARY
	EXISTING FENCE		PERMANENT STREAM IMPACT
			TEMPORARY STREAM IMPACT
	12" SEDIMENT BARRIER		
	18" SEDIMENT BARRIER		
	24" SEDIMENT BARRIER		
	32" SEDIMENT BARRIER		
	TOP OF BANK		

DRAWING NO.		REFERENCE TITLE	
NO.	DATE	BY	REVISION DESCRIPTION
0	11/02/16	AVD	ISSUED FOR PADEP SUBMITTAL #2
			W.O. NO. CHK. APP.
			1161503 CLR MJH

**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC**  
**WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS**  
**ATLANTIC SUNRISE PROJECT**  
**PROPOSED 42" CENTRAL PENN LINE SOUTH**  
**STREAM CROSSINGS WW-T14-5006 @ M.P. 49.30 & WW-T14-5006A @ M.P. 49.34**  
**NORTH ANNVILLE AND EAST HANOVER TOWNSHIPS, LEBANON COUNTY, PENNSYLVANIA**

DRAWN BY: AVD	DATE: 07/06/16	ISSUED FOR BID:	SCALE: 1" = 50'
CHECKED BY: CLR	DATE: 07/06/16	ISSUED FOR CONSTRUCTION:	REVISION: 0
APPROVED BY: MJH	DATE: 07/06/16	DRAWING NUMBER: <b>24-1600-70-09-A/49.30-01</b>	SHEET 3
WO: 1161503		10/13/2016 t2le	OF 4

K:\03643-CPLS\Mapping\Waterbodies\CPLS\_PAS\Revised 105\24-1600-70-09-A\_49.30-01.dwg



LEGEND		WOOD GROUP MUSTANG, INC.	
	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
	PROPOSED CPLS 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
			TOP OF BANK

DRAWING NO.		REFERENCE TITLE	
NO.	DATE	BY	REVISION DESCRIPTION
0	11/02/16	AVD	ISSUED FOR PADEP SUBMITTAL #2

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC  
 WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS  
 ATLANTIC SUNRISE PROJECT  
 PROPOSED 42" CENTRAL PENN LINE SOUTH  
 STREAM CROSSINGS WW-T14-5006 @ M.P. 49.30 & WW-T14-5006A @ M.P. 49.34  
 NORTH ANNVILLE AND EAST HANOVER TOWNSHIPS, LEBANON COUNTY, PENNSYLVANIA

**Williams**

DRAWN BY: AVD	DATE: 07/06/16	ISSUED FOR BID:	SCALE: 1" = 50'
CHECKED BY: CLR	DATE: 07/06/16	ISSUED FOR CONSTRUCTION:	REVISION: 0
APPROVED BY: MJH	DATE: 07/06/16	DRAWING NUMBER: 24-1600-70-09-A/49.30-01	SHEET 4
WO: 1161503			OF 4

10/13/2016 t2le  
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October 28, 2016

South Annville Township  
Floodplain Administrator  
1042 Horseshoe Pike  
Lebanon, PA 17042

Re: Atlantic Sunrise Project  
Central Penn Line South  
South Annville Township, Lebanon County  
Floodplain Management Analysis

Dear Sir or Madam:

Transcontinental Gas Pipeline Company, LLC (Transco) proposes to construct and operate the Atlantic Sunrise Project (Project) to provide 1.7 million dekatherms per day of incremental firm transportation of natural gas from the Marcellus Shale production areas in northern Pennsylvania (PA) to its existing market areas, extending to as far south as the Station 85 Pooling Point in Choctaw County, Alabama. The Project includes modifications to the existing Transco Mainline System to reverse the direction of flow, enabling new north-to-south capabilities (bi-directional flow) to transport this new source of natural gas to existing markets. The Project consists of the following primary components within PA:

- Installing greenfield pipeline facilities of approximately 58.6 miles of new 30-inch-diameter pipe from Susquehanna County, PA to Columbia County, PA.
- Installing greenfield pipeline facilities of approximately 127.3 miles of 42-inch-diameter pipe from Columbia County, PA to Lancaster County, PA.;
- Installing two pipeline loops (pipeline laid parallel to existing facilities):
  - 8.56 miles of 42-inch pipeline loop located in Lycoming County, PA known as the Unity Loop;
  - 2.50 miles of 36-inch pipeline in Clinton County, PA, known as the Chapman Loop;
- Constructing two new compressor stations, one in Wyoming County and one in Columbia County, PA;
- Additional ancillary facilities, such as mainline valves, cathodic protection, communication facilities, and internal inspection device (e.g., pig) launchers and receivers;
- Two new meter stations and three new regulator stations with interconnecting piping;
- Additional compression and related modifications to one existing compressor station; and,
- Modification to an existing meter station for use of shared facilities with a new meter station.

Transco's consultants, BL Companies and TRC Solutions (TRC), have completed an analysis of potential impacts on FEMA delineated floodways from the Project in accordance with 25 Pa. Code § 105.13. The analysis for South Annville Township is provided below for your review and comment.

South Annville Township  
October 28, 2016  
BL Project No. 14C4909  
Page 1 of 2



**ATLANTIC SUNRISE PROJECT  
FEMA FLOODPLAIN CROSSINGS  
SOUTH ANNVILLE TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA**

Description of Impact	Structure Type and Dimensions	Resource ID	Resource Name	Chapter 93 Classification, Wetland Classification (EV or Other), or Floodway Type	Floodway Fill (cu. yds.)	Impact area (acres)		Latitude	Longitude
						Temporary	Permanent		
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T64-5001	Floodway to Gingrich Run	FEMA Detailed	N/A	0.5006	0.0480 <sup>1</sup>	40.28045	-76.53061

<sup>1</sup> Permanent impacts associated with utility pipeline crossings are based on the permanent pipe footprint within the floodplain (pipe trench width x pipe crossing length). No permanent alternation to the floodway contours and elevation is associated with these permanent impacts.

The floodway crossing listed above is depicted on the enclosed plans from the Project's PADEP Chapter 105 Permit Application.

Please note that construction activities are not expected to create permanent loss of flood storage capacity or hydraulic capacity, as all pre-construction surface elevations will be re-established during restoration. The temporary and permanent impacts noted above are associated with vegetation management and underground pipe installation only, and do not represent a permanent modification of ground elevation or loss of flood storage capacity or hydraulic capacity. No structures are proposed within the FEMA 100-year floodplain, no fill will be placed in the floodways, and no increase in 100-year flood elevation is anticipated as a result of the proposed Project.

On behalf of Transco, BL and TRC respectfully request that South Annville Township review this analysis and, if applicable, provide comments to:

Steve Crescenzo  
TRC Environmental Corporation  
2200 Liberty Avenue, Suite 100  
Pittsburgh, PA 15222

**Please do not send comments directly to the PADEP.** as we must include them with our permit application. Should you have any questions or concerns regarding this notification, please contact Al Busher at (717)-651-9850 or via email at [abusher@blcompanies.com](mailto:abusher@blcompanies.com).

Sincerely,



Alaric J. Busher, PE  
Senior Engineer

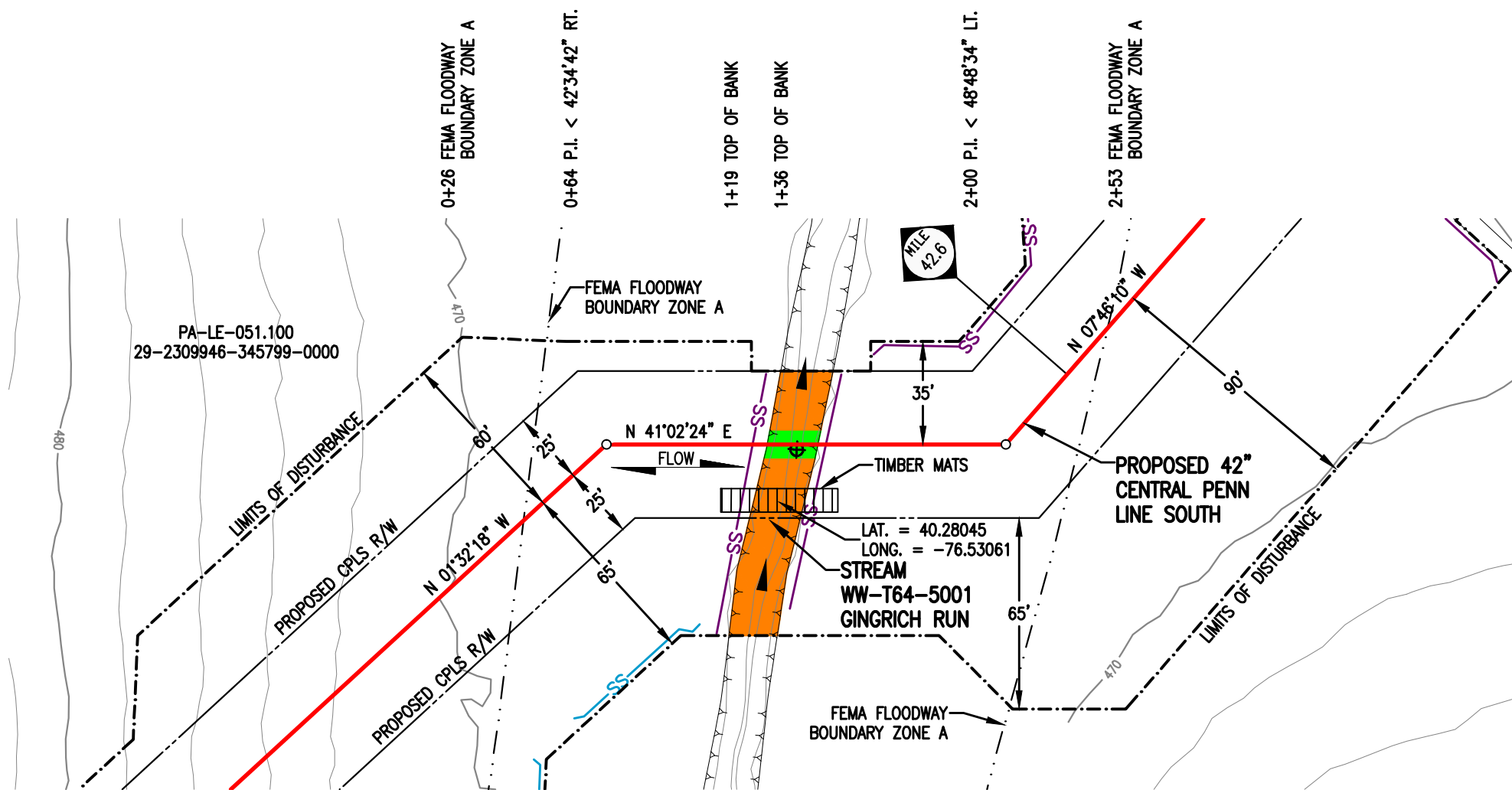
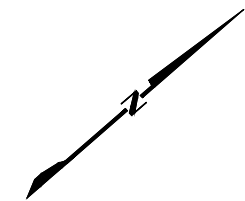
Enclosures: Water Obstruction and Encroachment Permit Impact Maps

PA-LE-051.100  
29-2309946-345799-0000

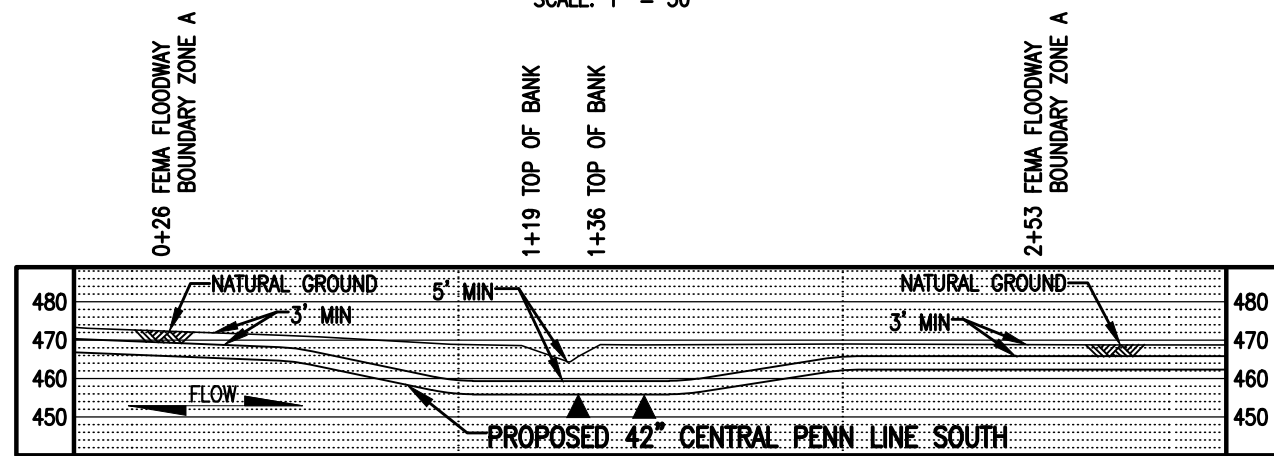
**STREAM DISTURBANCE:**

STREAM WW-T64-5001	ACRE
TEMPORARY STREAM DISTURBANCE	0.0316
PERMANENT STREAM DISTURBANCE	0.0040
<b>TOTAL STREAM DISTURBANCE</b>	<b>0.0356</b>
TEMPORARY FLOODWAY DISTURBANCE	0.5006
PERMANENT FLOODWAY DISTURBANCE	0.0480
<b>TOTAL FLOODWAY DISTURBANCE</b>	<b>0.5486</b>

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	17.19
STREAM LENGTH	91.82



**PLAN**  
SCALE: 1" = 50'



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

**GENERAL NOTES:**

1. STREAM CROSSING METHOD SHALL BE FLUME (FX). EQUIPMENT TO CROSS STREAM UTILIZING A BRIDGE EQUIPMENT CROSSING (BEC).
2. THIS SITE IS LOCATED WITHIN THE 100 YEAR PLAIN PER FEMA FLOOD MAP DATA.
3. STATION 1+00 SHOWN IS EQUAL TO STATION 2247+96 ON THE EROSION AND SEDIMENT CONTROL PLAN.

**SURVEY NOTES:**

1. T.B.M. SURVEY CONTROL POINT - 32' RT. OF M.P. 42.62, ELEV. = 468.93' (NAVD88).



**LEGEND**

	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS		<b>WOOD GROUP MUSTANG, INC.</b>
	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 CPLS R/W		WELL POINT		32" SEDIMENT BARRIER
	PROPERTY LINE		TRENCH PLUG		TOP OF BANK
	FOREIGN PIPELINE		WATERBODY		PERMANENT STREAM IMPACT
	WETLAND AREA		TREE LINE		TEMPORARY STREAM IMPACT
	STREAM FLOW		FLOODWAY BOUNDARY		
	EXISTING POWER LINE		FEMA FLOODWAY BOUNDARY		
	EXISTING FENCE				

DRAWING NO.		REFERENCE TITLE		<b>TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC</b> <b>WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS</b> <b>ATLANTIC SUNRISE PROJECT</b> <b>PROPOSED 42" CENTRAL PENN LINE SOUTH</b> <b>STREAM CROSSING WW-T64-5001</b> <b>M.P. 42.58</b> <b>SOUTH ANNVILLE TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA</b>			
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: DLK CHECKED BY: CLR APPROVED BY: MJH W.O.: 1161503
0	11/02/16	DLK	ISSUED FOR PADEP SUBMITTAL #2	1161503	CLR	MJH	DATE: 07/05/16 DATE: 07/05/16 DATE: 07/06/16 ISSUED FOR BID: ISSUED FOR CONSTRUCTION: DRAWING NUMBER: <b>24-1600-70-09-A/42.58-01</b> SCALE: 1" = 50' REVISION: 0 SHEET 1 OF 1



October 28, 2016

South Londonderry Township  
Floodplain Administrator  
20 West Market Street  
P.O. Box 3  
Campbelltown, PA 17010-0003

Re: Atlantic Sunrise Project  
Central Penn Line South  
South Londonderry Township, Lebanon County  
Floodplain Management Analysis

Dear Sir or Madam:

Transcontinental Gas Pipeline Company, LLC (Transco) proposes to construct and operate the Atlantic Sunrise Project (Project) to provide 1.7 million dekatherms per day of incremental firm transportation of natural gas from the Marcellus Shale production areas in northern Pennsylvania (PA) to its existing market areas, extending to as far south as the Station 85 Pooling Point in Choctaw County, Alabama. The Project includes modifications to the existing Transco Mainline System to reverse the direction of flow, enabling new north-to-south capabilities (bi-directional flow) to transport this new source of natural gas to existing markets. The Project consists of the following primary components within PA:

- Installing greenfield pipeline facilities of approximately 58.6 miles of new 30-inch-diameter pipe from Susquehanna County, PA to Columbia County, PA.
- Installing greenfield pipeline facilities of approximately 127.3 miles of 42-inch-diameter pipe from Columbia County, PA to Lancaster County, PA.;
- Installing two pipeline loops (pipeline laid parallel to existing facilities):
  - 8.56 miles of 42-inch pipeline loop located in Lycoming County, PA known as the Unity Loop;
  - 2.50 miles of 36-inch pipeline in Clinton County, PA, known as the Chapman Loop;
- Constructing two new compressor stations, one in Wyoming County and one in Columbia County, PA;
- Additional ancillary facilities, such as mainline valves, cathodic protection, communication facilities, and internal inspection device (e.g., pig) launchers and receivers;
- Two new meter stations and three new regulator stations with interconnecting piping;
- Additional compression and related modifications to one existing compressor station; and,
- Modification to an existing meter station for use of shared facilities with a new meter station.

Transco's consultants, BL Companies and TRC Solutions (TRC), have completed an analysis of potential impacts on FEMA delineated floodways from the Project in accordance with 25 Pa. Code § 105.13. The analysis for South Londonderry Township is provided below for your review and comment.

South Londonderry Township  
October 28, 2016  
BL Project No. 14C4909  
Page 1 of 3

**ATLANTIC SUNRISE PROJECT  
FEMA FLOODPLAIN CROSSINGS  
SOUTH LONDONDERRY TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA**

Description of Impact	Structure Type and Dimensions	Resource ID	Resource Name	Chapter 93 Classification, Wetland Classification (EV or Other), or Floodway Type	Floodway Fill (cu. yds.)	Impact area (acres)		Latitude	Longitude
						Temporary	Permanent		
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T30-4002	Floodway to Conewago Creek	FEMA Detailed <sup>1</sup>	N/A	1.5265	0.1012 <sup>2</sup>	40.21718	-76.54416
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T53-4001	Floodway to UNT to Little Conewago Creek	FEMA Detailed	N/A	0.1869	0.0283 <sup>2</sup>	40.23945	-76.53918

<sup>1</sup> Multiple streams are included in these calculations as the floodways overlap.

<sup>2</sup> Permanent impacts associated with utility pipeline crossings are based on the permanent pipe footprint within the floodplain (pipe trench width x pipe crossing length). No permanent alternation to the floodway contours and elevation is associated with these permanent impacts.

The floodway crossing listed above is depicted on the enclosed plans from the Project's PADEP Chapter 105 Permit Application.

Please note that construction activities are not expected to create permanent loss of flood storage capacity or hydraulic capacity, as all pre-construction surface elevations will be re-established during restoration. The temporary and permanent impacts noted above are associated with vegetation management and underground pipe installation only, and do not represent a permanent modification of ground elevation or loss of flood storage capacity or hydraulic capacity. No structures are proposed within the FEMA 100-year floodplain, no fill will be placed in the floodways, and no increase in 100-year flood elevation is anticipated as a result of the proposed Project.

On behalf of Transco, BL and TRC respectfully request that South Londonderry Township review this analysis and, if applicable, provide comments to:

Steve Crescenzo  
TRC Environmental Corporation  
2200 Liberty Avenue, Suite 100  
Pittsburgh, PA 15222

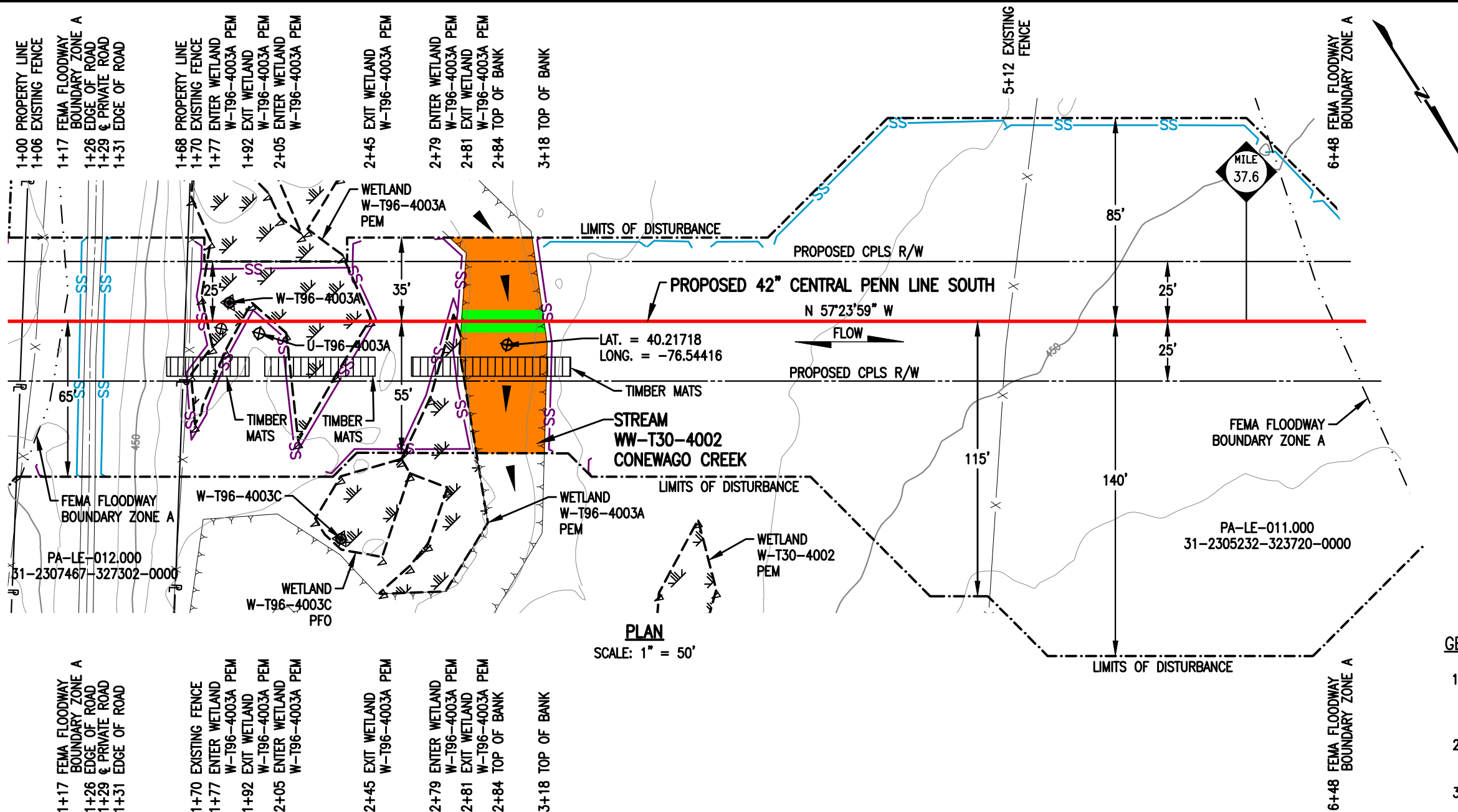
**Please do not send comments directly to the PADEP**, as we must include them with our permit application. Should you have any questions or concerns regarding this notification, please contact Al Busher at (717)-651-9850 or via email at [abusher@blcompanies.com](mailto:abusher@blcompanies.com).

Sincerely,



Alaric J. Busher, PE  
Senior Engineer

Enclosures: Water Obstruction and Encroachment Permit Impact Maps



**PLAN**  
SCALE: 1" = 50'

**STREAM DISTURBANCE:**

STREAM WW-T30-4002	ACRE
TEMPORARY STREAM DISTURBANCE	0.0594
PERMANENT STREAM DISTURBANCE	0.0079
<b>TOTAL STREAM DISTURBANCE</b>	<b>0.0673</b>
TEMPORARY FLOODWAY DISTURBANCE	1.5265
PERMANENT FLOODWAY DISTURBANCE	0.1012
<b>TOTAL FLOODWAY DISTURBANCE</b>	<b>1.6277</b>

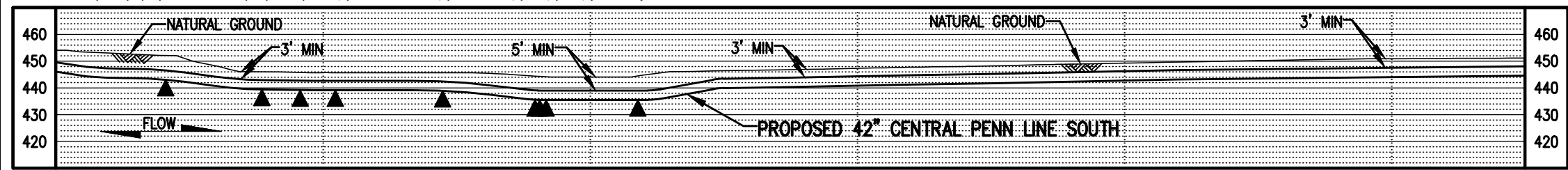
STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	34.39
STREAM LENGTH	90.80

**GENERAL NOTES:**

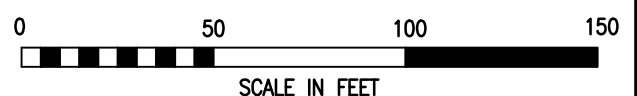
1. STREAM CROSSING METHOD SHALL BE DAM AND PUMP (DPX). EQUIPMENT TO CROSS STREAM UTILIZING A BRIDGE EQUIPMENT CROSSING (BEC).
2. THIS IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
3. STATION 2+00 SHOWN IS EQUAL TO STATION 1981+10 ON THE EROSION AND SEDIMENT CONTROL PLAN.

**SURVEY NOTES:**

1. T.B.M. IRON ROD - 280' RT. OF M.P. 37.51, ELEV.= 447.65' (NAVD88).



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



**LEGEND**

	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
	PROPOSED CPLS 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 MUSTANG, INC.**

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

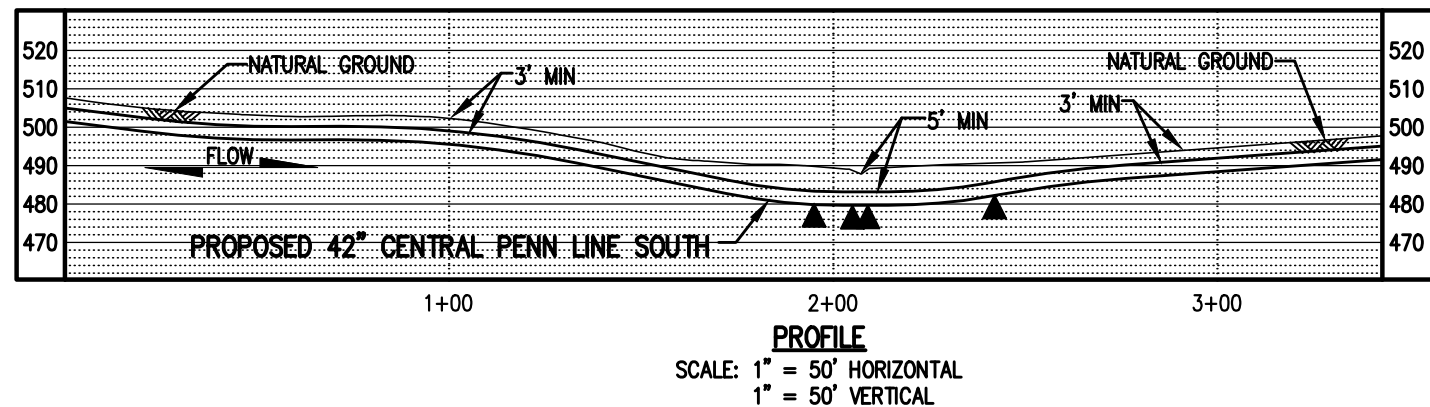
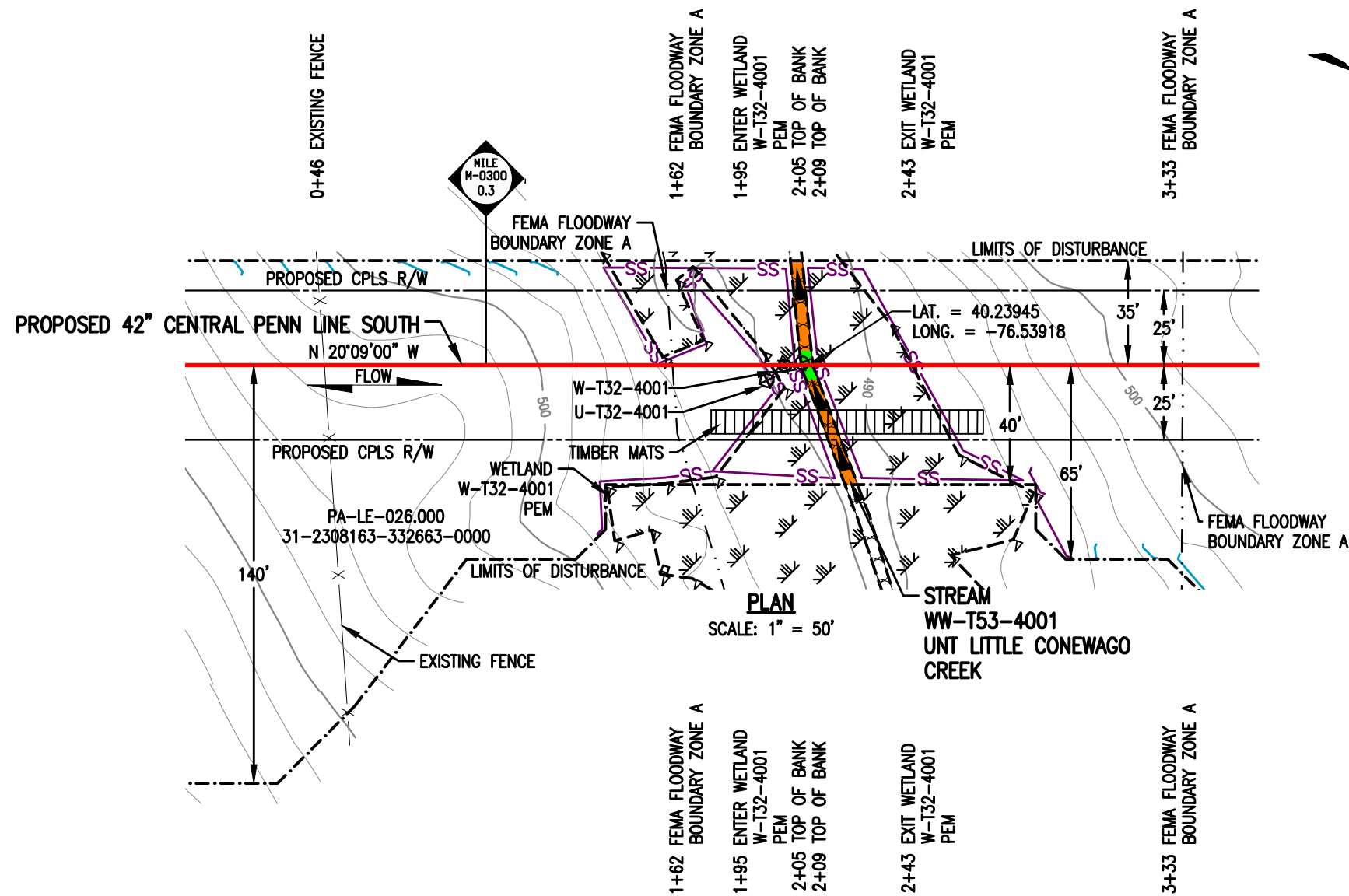
DRAWING NO.		REFERENCE TITLE		<b>TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC</b> <b>WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS</b> <b>ATLANTIC SUNRISE PROJECT</b> <b>PROPOSED 42" CENTRAL PENN LINE SOUTH</b> <b>STREAM CROSSING WW-T30-4002</b> <b>© M.P. 37.54</b> <b>SOUTH LONDONDERRY TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA</b>	
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.
0	08/19/15	AT	ISSUED FOR PADEP 105 PERMIT	1161503	CLR MJH
1	02/03/16	AT	ISSUED FOR INTERNAL USE	1161503	CLR MJH
2	11/02/16	MGJ	ISSUED FOR PADEP SUBMITTAL #2	1161503	CLR MJH
DRAWN BY: THL		DATE: 05/01/15	ISSUED FOR BID:	SCALE: 1" = 50'	
CHECKED BY: JM		DATE: 05/29/15	ISSUED FOR CONSTRUCTION:	REVISION: 2	
APPROVED BY: MJH		DATE: 05/29/15	DRAWING NUMBER: 24-1600-70-09-A/37.54-01	SHEET 1	
IWO: 1161503			10/13/2016	OF 1	



**STREAM DISTURBANCE:**

STREAM WW-T53-4001	ACRE
TEMPORARY STREAM DISTURBANCE	0.0060
PERMANENT STREAM DISTURBANCE	0.0009
<b>TOTAL STREAM DISTURBANCE</b>	<b>0.0069</b>
TEMPORARY FLOODWAY DISTURBANCE	0.1862
PERMANENT FLOODWAY DISTURBANCE	0.0283
<b>TOTAL FLOODWAY DISTURBANCE</b>	<b>0.2145</b>

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	3.88
STREAM LENGTH	79.69



**GENERAL NOTES:**

1. STREAM CROSSING METHOD SHALL BE DAM AND PUMP (DPX). EQUIPMENT TO CROSS STREAM UTILIZING A BRIDGE EQUIPMENT CROSSING (BEC).
2. THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOODPLAIN PER FEMA FLOOD MAP DATA.
3. STATION 0+00 SHOWN IS EQUAL TO M-0300 STATION 15+84 ON THE EROSION AND SEDIMENT CONTROL PLAN.

**SURVEY NOTES:**

1. T.B.M. IRON ROD - 155' LT. OF M-0300 M.P. 0.41, ELEV. = 525.48' (NAVD88).



**LEGEND**

- PROPOSED 42" CENTRAL PENN LINE SOUTH
- EXISTING PIPELINES
- EXISTING TGPL R/W
- - - - - LIMITS OF DISTURBANCE
- PROPOSED CPLS R/W
- PROPERTY LINE
- FOREIGN PIPELINE
- WETLAND AREA
- ▲ STREAM FLOW
- P — EXISTING POWER LINE
- X — 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

**WOOD GROUP MUSTANG, INC.**

- SS — 12" SEDIMENT BARRIER
- SS — 18" SEDIMENT BARRIER
- SS — 24" SEDIMENT BARRIER
- SS — 32" SEDIMENT BARRIER
- Y — Y — Y — Y — Y — Y — Y — Y — TOP OF BANK
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT

DRAWING NO.		REFERENCE TITLE		<p><b>TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC</b>  <b>WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS</b>  <b>ATLANTIC SUNRISE PROJECT</b>  <b>PROPOSED 42" CENTRAL PENN LINE SOUTH</b>  <b>STREAM CROSSING WW-T53-4001</b>  <b>M-0300 M.P. 0.32</b>  <b>SOUTH LONDONDERRY TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA</b></p>	
NO.		DATE			
0	11/02/16	DLK	ISSUED FOR PADEP SUBMITTAL #2	1161503	CLR MJH
DRAWN BY: TL		DATE: 06/30/15		ISSUED FOR BID:	
CHECKED BY: CLR		DATE: 06/30/15		ISSUED FOR CONSTRUCTION:	
APPROVED BY: MJH		DATE: 07/16/15		DRAWING NUMBER: 24-1600-70-09-A/M-0300-0.35-01	
W.O. NO. 1161503		CHK. CLR		APP. MJH	
SCALE: 1" = 50'		REVISION: 0		SHEET 1 OF 1	



October 28, 2016

Union Township  
Floodplain Administrator  
3111 S.R. 72  
Jonestown, PA 17038

Re: Atlantic Sunrise Project  
Central Penn Line South  
Union Township, Lebanon County  
Floodplain Management Analysis

Dear Sir or Madam:

Transcontinental Gas Pipeline Company, LLC (Transco) proposes to construct and operate the Atlantic Sunrise Project (Project) to provide 1.7 million dekatherms per day of incremental firm transportation of natural gas from the Marcellus Shale production areas in northern Pennsylvania (PA) to its existing market areas, extending to as far south as the Station 85 Pooling Point in Choctaw County, Alabama. The Project includes modifications to the existing Transco Mainline System to reverse the direction of flow, enabling new north-to-south capabilities (bi-directional flow) to transport this new source of natural gas to existing markets. The Project consists of the following primary components within PA:

- Installing greenfield pipeline facilities of approximately 58.6 miles of new 30-inch-diameter pipe from Susquehanna County, PA to Columbia County, PA.
- Installing greenfield pipeline facilities of approximately 127.3 miles of 42-inch-diameter pipe from Columbia County, PA to Lancaster County, PA.;
- Installing two pipeline loops (pipeline laid parallel to existing facilities):
  - 8.56 miles of 42-inch pipeline loop located in Lycoming County, PA known as the Unity Loop;
  - 2.50 miles of 36-inch pipeline in Clinton County, PA, known as the Chapman Loop;
- Constructing two new compressor stations, one in Wyoming County and one in Columbia County, PA;
- Additional ancillary facilities, such as mainline valves, cathodic protection, communication facilities, and internal inspection device (e.g., pig) launchers and receivers;
- Two new meter stations and three new regulator stations with interconnecting piping;
- Additional compression and related modifications to one existing compressor station; and,
- Modification to an existing meter station for use of shared facilities with a new meter station.

Transco's consultants, BL Companies and TRC Solutions (TRC), have completed an analysis of potential impacts on FEMA delineated floodways from the Project in accordance with 25 Pa. Code § 105.13. The analysis for Union Township is provided below for your review and comment.

Union Township  
October 28, 2016  
BL Project No. 14C4909  
Page 1 of 3

**ATLANTIC SUNRISE PROJECT  
FEMA FLOODPLAIN CROSSINGS  
UNION TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA**

Description of Impact	Structure Type and Dimensions	Resource ID	Resource Name	Chapter 93 Classification, Wetland Classification (EV or Other), or Floodway Type	Floodway Fill (cu. yds.)	Impact area (acres)		Latitude	Longitude
						Temporary	Permanent		
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T32-6001	Floodway to Forge Creek	FEMA Detailed	N/A	0.3167	0.0380 <sup>1</sup>	40.45347	-76.53286
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T23-6003	Floodway to Trout Run	FEMA Detailed	N/A	0.2584	0.0306 <sup>1</sup>	40.48026	-76.55555
Temporary Road Crossing	Equipment Access and E&S Controls	WW-T40-6002	Floodway to Forge Creek	FEMA Detailed	0.00 <sup>2</sup>	0.2357	0.000	40.45851	-76.54185

<sup>1</sup> Permanent impacts associated with utility pipeline crossings are based on the permanent pipe footprint within the floodplain (pipe trench width x pipe crossing length). No permanent alternation to the floodway contours and elevation is associated with these permanent impacts.  
<sup>2</sup> Floodway fill is associated with a temporary access road. Pre development contours will be restored prior to permit termination.

The floodway crossings listed above are depicted on the enclosed plans from the Project’s PADEP Chapter 105 Permit Application.

Please note that construction activities are not expected to create permanent loss of flood storage capacity or hydraulic capacity, as all pre-construction surface elevations will be re-established during restoration. The temporary and permanent impacts noted above are associated with vegetation management and underground pipe installation and temporary access road grading only, and do not represent a permanent modification of ground elevation or loss of flood storage capacity or hydraulic capacity. No structures are proposed within the FEMA 100-year floodplain, no permanent fill will be placed in the floodways, and no increase in 100-year flood elevation is anticipated as a result of the proposed Project.

On behalf of Transco, BL and TRC respectfully request that Union Township review this analysis and, if applicable, provide comments to:

Steve Crescenzo  
TRC Environmental Corporation  
2200 Liberty Avenue, Suite 100  
Pittsburgh, PA 15222

**Please do not send comments directly to the PADEP**, as we must include them with our permit application. Should you have any questions or concerns regarding this notification, please contact Al Busher at (717)-651-9850 or via email at [abusher@blcompanies.com](mailto:abusher@blcompanies.com).

Sincerely,

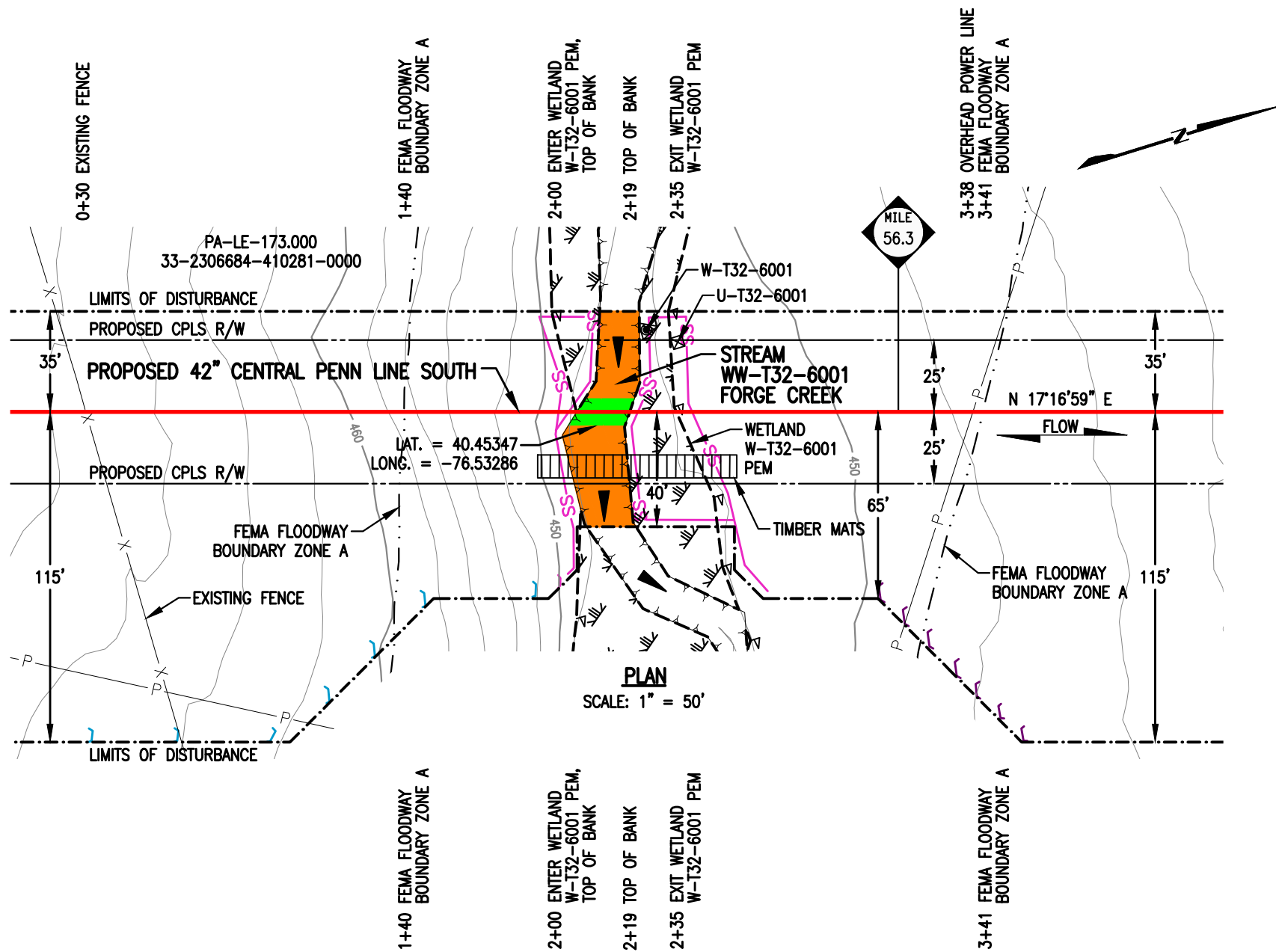


Alaric J. Busher, PE  
Senior Engineer

Enclosures: Water Obstruction and Encroachment Permit Impact Map

Union Township  
October 28, 2016  
BL Project No. 14C4909  
Page 2 of 3





**PLAN**  
SCALE: 1" = 50'

**STREAM DISTURBANCE:**

STREAM WW-T32-6001	ACRE
TEMPORARY STREAM DISTURBANCE	0.0259
PERMANENT STREAM DISTURBANCE	0.0042
TOTAL STREAM DISTURBANCE	0.0301
TEMPORARY FLOODWAY DISTURBANCE	0.3167
PERMANENT FLOODWAY DISTURBANCE	0.0380
TOTAL FLOODWAY DISTURBANCE	0.3547

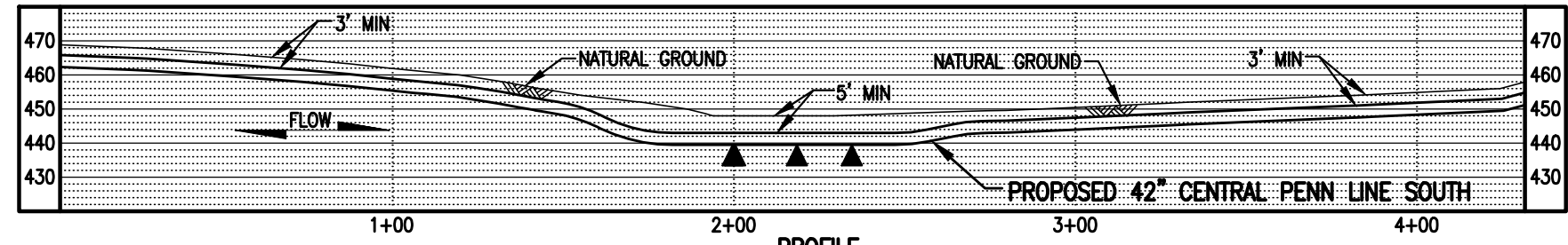
STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	18.39
STREAM LENGTH	75.85

**GENERAL NOTES:**

1. STREAM CROSSING METHOD SHALL BE DAM AND PUMP (DPX). EQUIPMENT TO CROSS STREAM UTILIZING A BRIDGE EQUIPMENT CROSSING (BEC).
2. THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
3. STATION 1+00 SHOWN IS EQUAL TO STATION 2970+52 ON THE EROSION AND SEDIMENT CONTROL PLAN.

**SURVEY NOTES:**

1. T.B.M. I.R. POINT - 941' RT. OF M.P. 56.30, ELEV.= 459.18' (NAVD88).



**PROFILE**

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



**LEGEND**

	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS
	EXISTING PIPELINES		PHOTO DATA POINT
	EXISTING TGPL R/W		WETLAND DATA POINT
	LIMITS OF DISTURBANCE		UPLAND DATA POINT
	PROPOSED CPLS 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 MUSTANG, INC.**

	12" SEDIMENT BARRIER		PERMANENT STREAM IMPACT
	18" SEDIMENT BARRIER		TEMPORARY STREAM IMPACT
	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 42" CENTRAL PENN LINE SOUTH						
				STREAM CROSSING WW-T32-6001						
				M.P. 56.28						
				UNION TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA						
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: TL	DATE: 03/13/15	ISSUED FOR BID:	SCALE: 1" = 50'
0	08/19/15	CR	ISSUED FOR PADEP 105 PERMIT	1161503	CLR	MJH	CHECKED BY: CLR	DATE: 05/22/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
1	02/03/16	AT	ISSUED FOR INTERNAL USE	1161503	CLR	MJH	APPROVED BY: MJH	DATE: 05/25/15	DRAWING NUMBER: 24-1600-70-09-A/56.28-01	SHEET 1
2	11/02/16	AT	ISSUED FOR PADEP SUBMITTAL #2	1161503	CLR	MJH	W.O. NUMBER: 1161503		10/12/2015	OF 1



**GENERAL NOTES:**

- THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.

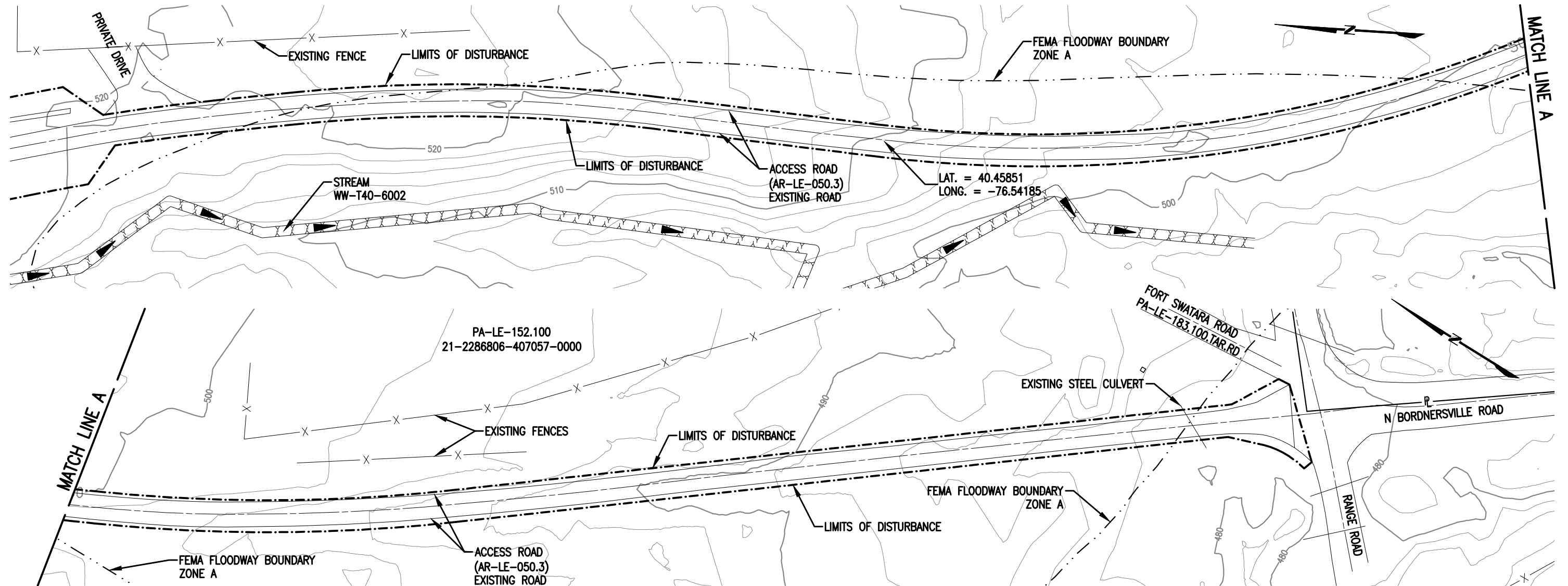
**SURVEY NOTES:**

- T.B.M. SURVEY CONTROL POINT - 31' LT. OF M-0205 M.P. 0.15, ELEV. = 575.39' (NAVD88).

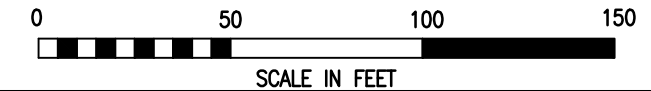
**STREAM DISTURBANCE:**

STREAM	ACRE
WW-T40-6002	
TEMPORARY STREAM DISTURBANCE	0.0000
PERMANENT STREAM DISTURBANCE	0.0000
TOTAL STREAM DISTURBANCE	0.0000
TEMPORARY FLOODWAY DISTURBANCE	0.2375
PERMANENT FLOODWAY DISTURBANCE	0.0000
TOTAL FLOODWAY DISTURBANCE	0.2375

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	0.00
STREAM LENGTH	0.00



**PLAN**  
SCALE: 1" = 50'

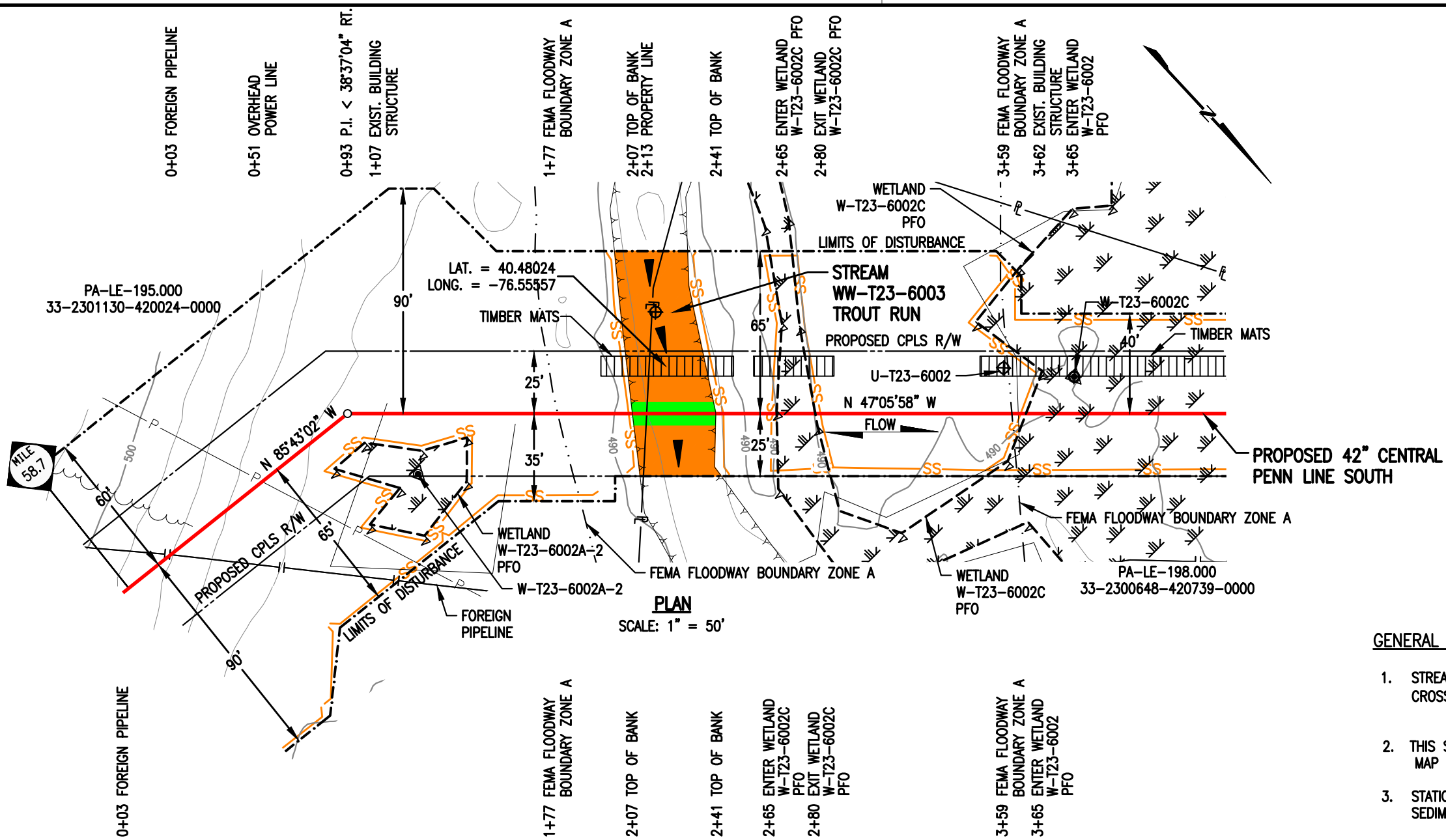


**LEGEND**

	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS		<b>WOOD GROUP MUSTANG, INC.</b>
	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 CPLS 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		PROJECT INFORMATION	
				<b>TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC</b> <b>WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS</b> <b>ATLANTIC SUNRISE PROJECT</b> <b>PROPOSED 42" CENTRAL PENN LINE SOUTH</b> <b>STREAM CROSSING WW-T40-6002</b> <b>M-0205 M.P. 0.15</b> <b>UNION TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA</b>	
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK. APPR.
0	11/02/16	MF	ISSUED FOR PADEP SUBMITTAL #2	1161503	CLR MJH
DRAWN BY: MF		DATE: 06/20/16		ISSUED FOR BID: SCALE: 1" = 50'	
CHECKED BY: CLR		DATE: 07/06/16		ISSUED FOR CONSTRUCTION: REVISION: 0	
APPROVED BY: MJH		DATE: 07/06/16		DRAWING NUMBER: 24-1600-70-09-A/AR-LE-050.3-01 SHEET 1	
W.O. NO.: 1161503		10/12/2016		11-38am vqtrn	



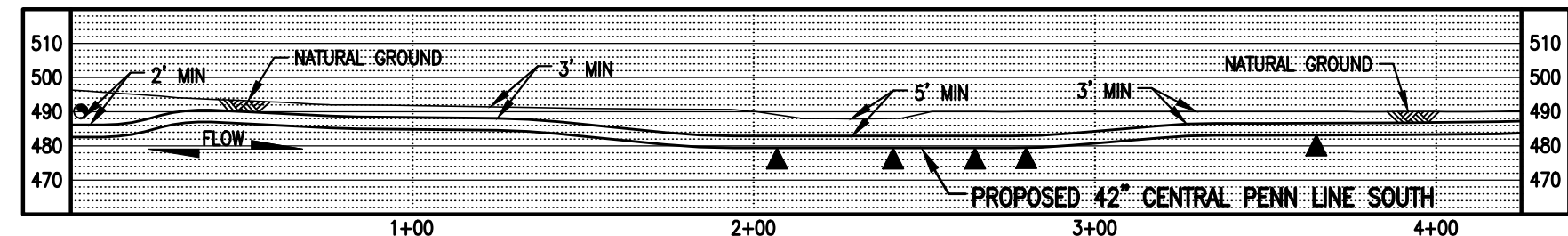


**STREAM DISTURBANCE:**

STREAM WW-T23-6003	ACRE
TEMPORARY STREAM DISTURBANCE	0.0560
PERMANENT STREAM DISTURBANCE	0.0076
TOTAL STREAM DISTURBANCE	0.0636
TEMPORARY FLOODWAY DISTURBANCE	0.2584
PERMANENT FLOODWAY DISTURBANCE	0.0306
TOTAL FLOODWAY DISTURBANCE	0.2890

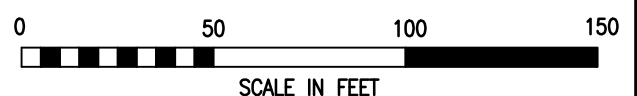
  

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	33.26
STREAM LENGTH	96.62



- GENERAL NOTES:**
1. STREAM CROSSING METHOD SHALL BE DAM AND PUMP (DPX). EQUIPMENT TO CROSS STREAM UTILIZING A BRIDGE EQUIPMENT CROSSING (BEC).
  2. THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
  3. STATION 1+00 SHOWN IS EQUAL TO STATION 3100+54 ON THE EROSION AND SEDIMENT CONTROL PLAN.

- SURVEY NOTES:**
1. T.B.M. SURVEY CONTROL POINT - 20' RT. OF M.P. 58.71, ELEV.= 492.39' (NAVD88).



**LEGEND**

	PROPOSED 42" CENTRAL PENN LINE SOUTH		WETLAND FLAGS	
	EXISTING PIPELINES		PHOTO DATA POINT	
	EXISTING TGPL R/W		WETLAND DATA POINT	
	LIMITS OF DISTURBANCE		UPLAND DATA POINT	
	PROPOSED CPLS 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	

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

**WOOD GROUP MUSTANG, INC.**

DRAWING NO.	REFERENCE TITLE					
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
0	08/19/15	CR	ISSUED FOR PADEP 105 PERMIT	1161503	CLR	MJH
1	02/03/16	AT	ISSUED FOR INTERNAL USE	1161503	CLR	MJH
2	11/02/16	AT	ISSUED FOR PADEP SUBMITTAL #2	1161503	CLR	MJH

**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC**  
**WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS**  
**ATLANTIC SUNRISE PROJECT**  
**PROPOSED 42" CENTRAL PENN LINE SOUTH**  
**STREAM CROSSING WW-T23-6003**  
**© M.P. 58.75**  
**UNION TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA**

**Williams**

DRAWN BY: TL	DATE: 03/13/15	ISSUED FOR BID:	SCALE: 1" = 50'
CHECKED BY: CLR	DATE: 05/23/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
APPROVED BY: MJH	DATE: 05/25/15	DRAWING NUMBER: 24-1600-70-09-A/58.75-01	SHEET 1
IWO: 1161503		10/12/2016	OF 1