EQUITRANS℠

Paul W. Diehl
Counsel-Midstream
412.395.5540 Direct
412.553.7781 Fax
pdiehl@eqt.com

March 30, 2017

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Equitrans, L.P.
Docket No. CP16-13-000
Equitrans Expansion Project – Response to data request
OEP/DG2E/G3

Dear Ms. Bose:

On March 21, 2017, the Office of Energy Projects ("OEP") issued a data request to Equitrans, LP ("Equitrans") with respect to Equitrans' certificate application in Docket No. CP16-13-000. Attached is the response of Equitrans to that data request. Also attached are the verifications of the individuals providing those responses.

If you have any questions about the data response, please do not hesitate to contact me at (412) 395-5540 or pdiehl@eqt.com.

Respectfully submitted,

Equitrans, L.P.

Paul W. Diehl
Counsel-Midstream

Enclosures

cc: Paul Friedman – OEP (w/enclosures)
Lavinia DiSanto – Cardno, Inc. (w/enclosures)
Doug Mooneyhan – Cardno, Inc. (w/enclosures)
Service list (w/enclosures)

VERIFICATION

Pursuant to Rule 2005 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("Commission"), 18 C.F.R. § 385.2005, Stephanie Frazier, being duly sworn, upon her oath says that she is Supervisor Environmental Permitting; that she has read and is familiar with the foregoing response to the Commission's March 21, 2017 data request in Docket No. CP16-13-000; that the contents of the response are true and correct to the best of her knowledge, information and belief; and that she has full power and authority to prepare the response and execute this verification.

Stephanie Frazier
Supervisor Environmental Permitting

Subscribed and sworn before me this 30 day of March 2017.

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Noelle M. Nuckels, Notary Public
City of Pittsburgh, Allegheny County
My Commission Expires Sept. 7, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Noelle M Nuckels
Notary Public

COUNTY OF ALLEGHENY
STATE OF PENNSYLVANIA

VERIFICATION

Pursuant to Rule 2005 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("Commission"), 18 C.F.R. § 385.2005, James Sabol, being duly sworn, upon his oath says that he is Project Manager; that he has read and is familiar with the foregoing response to the Commission's March 21, 2017 data request in Docket No. CP16-13-000; that the contents of the response are true and correct to the best of his knowledge, information and belief; and that he has full power and authority to prepare the response and execute this verification.

James Sabol
Project Manager

Subscribed and sworn before me this 30 day of March 2017.

Noelle M Nuckels
Notary Public

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Noelle M. Nuckels, Notary Public
City of Pittsburgh, Allegheny County
My Commission Expires Sept. 7, 2020
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COUNTY OF ALLEGHENY
STATE OF PENNSYLVANIA

Equitrans, L.P.
Equitrans Expansion Project
Docket No. CP16-13-000

Responses to Environmental Information Request
Post-DEIS EIR #2 Dated March 21, 2017

General

1. Provide a copy of the Pennsylvania Game Commission letter dated October 4, 2016 referenced in updates to table 1.5-1 filed by Mountain Valley on March 3, 2017.

Response:

A letter was received from the Pennsylvania Department of Conservation and Natural Resources on October 4, 2016, not the Pennsylvania Game Commission. This letter was previously filed on October 31, 2016 (Accession number 20161031-5278) as Attachment General-1.

Respondent: Stephanie Frazier
Position: Supervisor Permitting – Environmental, EQT Corporation
Phone Number: 412-553-5798
Date: March 30, 2017

Equitrans, L.P.
Equitrans Expansion Project
Docket No. CP16-13-000

Responses to Environmental Information Request
Post-DEIS EIR #2 Dated March 21, 2017

2. Provide updated alignment sheets, so as to be referenced in table 2.4-2 of the environmental impact statement (EIS). Confirm that the alignment sheets depict adoption of the New Cline Variation as part of the EEP proposed pipeline route.

Response:

Attachment General-2 consists of a complete set of alignment sheets for the H-318 portion of the Project, incorporating the New Cline Variation as part of the EEP proposed pipeline route. Alignment sheets for the remainder of the Project have not been revised since the last filing on October 31, 2016 (Accession number 20161031-5278) as Attachment B-1 and B-2.

Respondent: James Sabol
Position: Project Manager
Phone Number: 412-395-3597
Date: March 30, 2017

Equitrans, L.P.
Equitrans Expansion Project
Docket No. CP16-13-000

Responses to Environmental Information Request
Post-DEIS EIR #2 Dated March 21, 2017

3. Confirm that environmental surveys have been completed for the New Cline Variation, and reference where and when that data was filed with the FERC.

Response:

Environmental surveys have not been completed for the New Cline Variation at this time. Equitrans will submit the completed surveys to the FERC not later than the date it files its implementation plan.

Respondent: Stephanie Frazier
Position: Supervisor Permitting – Environmental, EQT Corporation
Phone Number: 412-553-5798
Date: March 30, 2017

Equitrans, L.P.
Equitrans Expansion Project
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Responses to Environmental Information Request
Post-DEIS EIR #2 Dated March 21, 2017

4. Provide updated and/or track change versions of the following draft EIS appendices:
   a. Appendix Q – Roads and Railways Crossed;
   b. Appendix S – Visual Simulations (including photo simulations and descriptive narrative text); and
   c. Appendix T – Traffic Counts.

Response:

a. Equitrans filed a track changes version of Appendix Q-2, Public Roadways and Railroads Crossed by the Equitrans Expansion Project, with the FERC on February 16, 2017.

b. There have been no changes to aboveground facilities since the issuance of the draft EIS; therefore, there are no updates needed to the visual simulations presented in Appendix S-2.

c. Appendix T-2 has been updated and is included as Attachment General-4c.

Respondent: Stephanie Frazier
Position: Supervisor Permitting – Environmental, EQT Corporation
Phone Number: 412-553-5798
Date: March 30, 2017

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Responses to Environmental Information Request
Post-DEIS EIR #2 Dated March 21, 2017

Water Resources

1. In its response to the January 30, 2017 EIR, Equitrans stated that public sources regarding water wells in Pennsylvania are not available and that there are no wells within 150 feet of the EEP construction workspace. However, in its June 24, 2016 filing with the FERC, Equitrans stated that 3 wells were identified within 150 feet on the construction area using the Pennsylvania Department of Conservation and Natural Resource's public well database. Clarify this apparent discrepancy.

Response:

The response to the January 30, 2017 EIR that public sources were not available in Pennsylvania for water wells was incorrect. The response provided for Resource Report 2 Water Resource comment #3 dated June 24, 2016 correctly identified the publicly accessible database from the Pennsylvania Department of Conservation and Natural Resources (PADCNR) website, which was the source for the locations provided for the 3 water wells located within 150 feet of the Project.

Respondent: Stephanie Frazier
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Date: March 30, 2017

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Responses to Environmental Information Request
Post-DEIS EIR #2 Dated March 21, 2017

2. Revise table 4.3.2-10 to reflect the current construction schedule which could include testing in 2018.

Response:

Attachment Water Resources-2 presents an updated version of Table 4.3.2-10, which reflects the current construction schedule for the Equitrans Expansion Project.

Respondent: Stephanie Frazier
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Phone Number: 412-553-5798
Date: March 30, 2017

Equitrans, L.P.
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Responses to Environmental Information Request
Post-DEIS EIR #2 Dated March 21, 2017

Soils

1. Attachment DR4 General 3d filed by Mountain Valley on February 23, 2017 stated "EEP is developing a slip mitigation report that identifies slip-prone areas prior to construction and provides recommendations to mitigate the risk of slip." Provide a copy of the slip-prone soils mitigation report.

Response:

Equitrans is currently developing the Equitrans Expansion Project Slip Mitigation Report and anticipates filing this report in May 2017.

Respondent: Stephanie Frazier
Position: Supervisor Permitting – Environmental, EQT Corporation
Phone Number: 412-553-5798
Date: March 30, 2017

Responses to Environmental Information Request
Post-DEIS EIR #2 Dated March 21, 2017

2. Equitrans' response to Soils No. 1a regarding discrepancies between Appendix N-9 and summary table 4.2.1-2 stated that: "Milepost data only includes soils that hit, or touch the pipeline; not the outlying access roads, ATWS, yards, etc. Milepost data cannot be assigned to those features because they are not connected spatially." However, Appendix N-9 contains a general note that stated: "Includes acreages for associated yards, roads, and ATWS." Clarify this apparent discrepancy.

Response:

The note stating "Includes acreages for associated yards, roads, and ATWS" for Appendix N-9 was included in error and has been deleted as shown in Attachment Soils-2.

Respondent: Stephanie Frazier
Position: Supervisor Permitting – Environmental, EQT Corporation
Phone Number: 412-553-5798
Date: March 30, 2017

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Responses to Environmental Information Request
Post-DEIS EIR #2 Dated March 21, 2017

3. Discrepancies appear to exist between updated table 4.2.1-2 and associated appendices N-9 through N-13. For example, table 4.2.1-2 indicates a total of 1.02 (0.56 permanent, 0.46 temporary) acres of soils with the potential for water erosion would be affected by construction and operation of the EEP H-305 pipeline and that total includes (according to the table note) associated ATWS, access roads, and yards. However, the total impacts due to the H-305 pipeline summed from appendices N-9, N-11, N-12, and N-13 (pipeline, ATWS, access roads, yards, respectively) indicated that 3.13 acres of soils that are potentially erodible by water would be impacted. Equitrans' response to Soils #1a indicates that Appendix N-9 only includes soils that would be affected by the pipeline and would not include outlying access roads, ATWS, yards, etc. because it is not spatially connected, therefore the addition of total impacts for the H-305 pipeline from each of the appendices should not "double count" any impacts. Clarify these apparent discrepancies, and provide error free soil tables and appendices. We recommend including subtotals for each facility within the appendices and using those subtotals to generate the summary table 4.2.1-2.

Response:

Attachment Soils-3 includes updated versions of table 4.2.1-2 and appendices N-10, N-11, N-12, and N-13 with previous discrepancies addressed. Attachment Soils-2 includes the updated version of appendix N-9. Subtotals were added to each appendix, for each facility within the appendix, and those subtotals were used to revise summary table 4.2.1-2.

Respondent: Stephanie Frazier
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Phone Number: 412-553-5798
Date: March 30, 2017

Equitrans, L.P.
Equitrans Expansion Project
Docket No. CP16-13-000

Responses to Environmental Information Request
Post-DEIS EIR #2 Dated March 21, 2017

Air Quality and Noise

1. Provide a complete estimate of revised construction emissions for the project in order to update table 4.11.1-6. Estimate should account for the current construction schedule.

Response:

Attachment Air Quality-1 includes an updated version of table 4.11.1-6, which presents revised construction emissions accounting for the current construction schedule. Note that because so many values in this table changed, redline strikeout was not used.

Respondent: Stephanie Frazier
Position: Supervisor Permitting – Environmental, EQT Corporation
Phone Number: 412-553-5798
Date: March 30, 2017

Attachment General-2

Project Alignment Sheets
(H-318 Portion incorporating the New Cline Alternative)

RIGHT-OF-WAY & OWNERSHIP DATA

EEP-281.03	0+00 – 1+92	192 LF, 193 SLOPE
EEP-281.03 / EEP-220	1+92 – 2+15	23 LF, 23 SLOPE
EEP-220	2+15 – 22+75	2060 LF, 2067 SLOPE
EEP-220 / EEP-219	22+75 – 23+27	52 LF, 52 SLOPE
EEP-219	23+27 – 31+95	868 LF, 872 SLOPE

DESIGN

PIPE / COATING	1
SLOPE DISTANCE	3207'
CLASS LOCATION / HCA	1

ENVIRONMENTAL

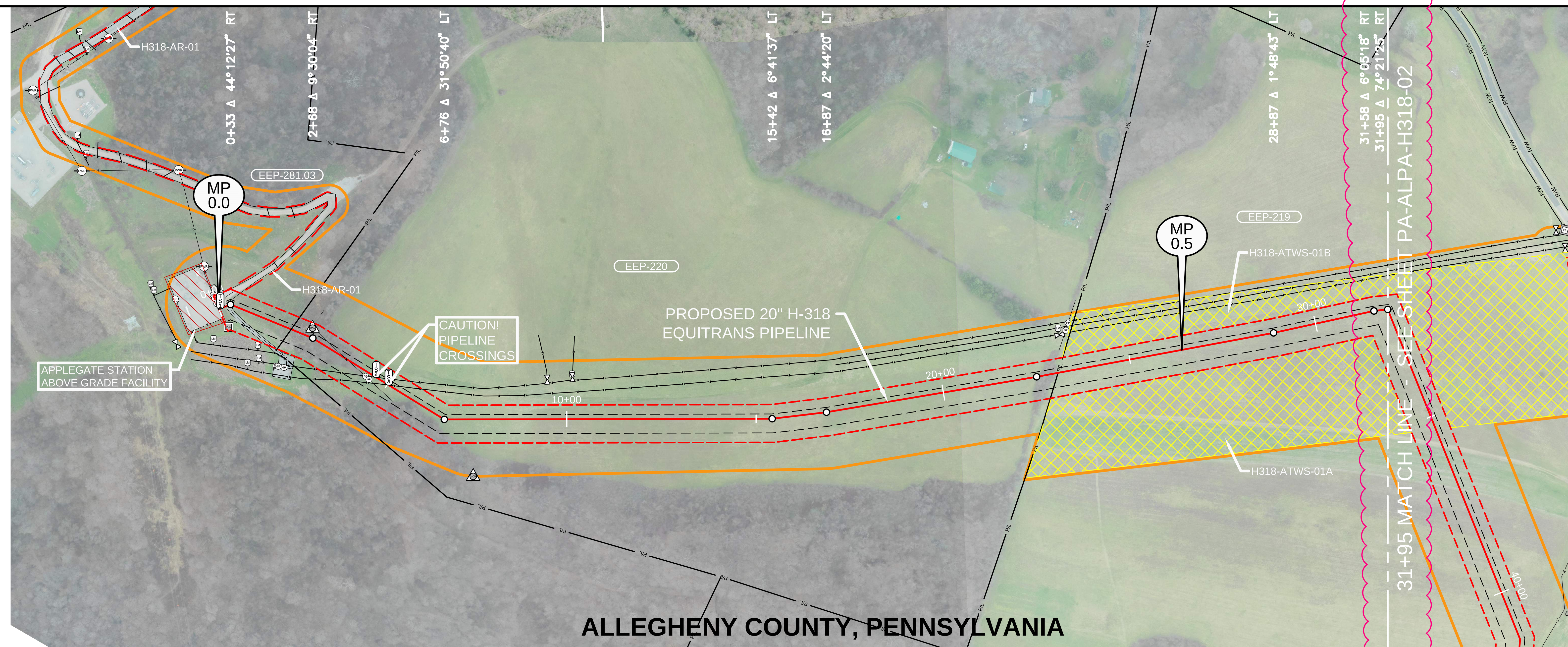
CONSTRUCTION EXCLUSION
WETLAND / STREAM
SEDIMENT BARRIER LEFT
SEDIMENT BARRIER RIGHT

0' 100' 200' 400'

PLAN VIEW

LEGEND

- STUDY CORRIDOR
- PROPOSED PIPELINE
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRACADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY



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REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION

ISSUED TO FERC

HORIZONTAL STATIONING

- 0+00 BEGIN SURVEY, FENCE
- 0+05 PROPOSED TYPE 1 TEST STATION
- 0+06 PEDESTAL - CATHODIC 53'RT
- 0+19 BEGIN ROCK
- 0+26 ℄ FIELD ROAD(ROCK)
- 0+32 END ROCK
- 0+41 ACCESS RD - PERMANENT(H318-AR-01)25'LT
- 1+47 LINE MARKER, 87'RT
- 2+06 ℙ
- 2+55 PROPERTY CORNER 29'LT
- 2+71 BEGIN WOODS
- 3+70 FENCE
- 4+16 END WOODS
- 4+65 PIPELINE - EQT - 16"GSF-369(5.3'COVER), PROPOSED TYPE 4 TEST STATION
- 5+04 PIPELINE - EQT - 16"H-129(4.9'COVER), PROPOSED TYPE 4 TEST STATION
- 5+83 BEGIN WOODS
- 5+97 END WOODS
- 22+89 ℙ
- 23+30 VALVE - GAS 98'LT
- 32+00 MATCH LINE

WORK SPACE

- PROPOSED PIPELINE
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)

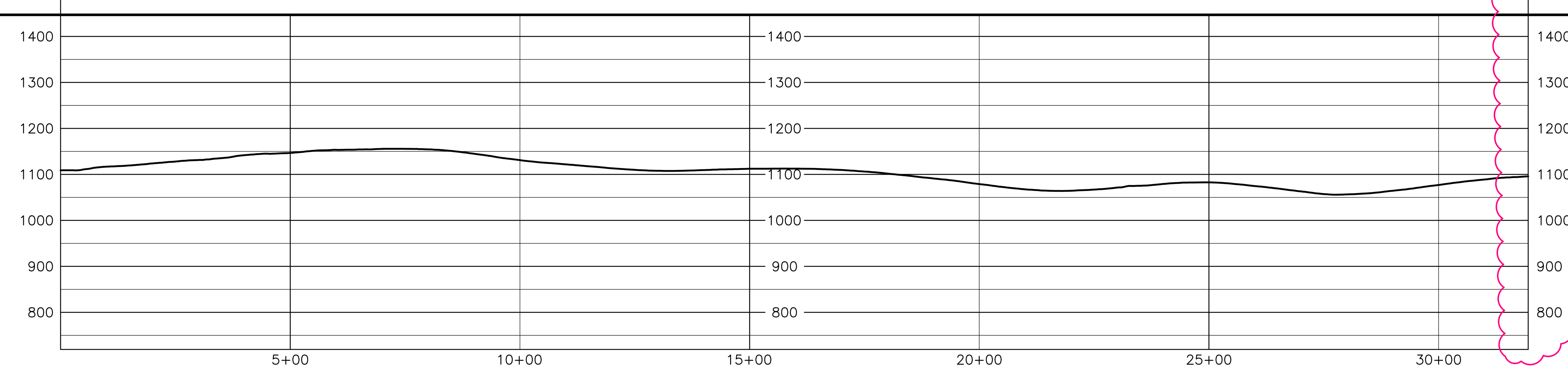
APPLEGATE STATION — BEGIN SURVEY — H318-AR-01 — 6"EQT GSW-3899 — 8"EQT GSW-3911 — 16"EQT GSF-369 — 16"EQT H-129 — 16"EQT H-129:L01 — CAUTION! PIPELINE CROSSINGS — 25' / 12.5' / 37.5' / 25' — 23+26 — 22+75 — MATCH LINE — 32+00

CONSTRUCTION METHOD

CONSTRUCTION METHOD KEY

- 14 - NON-PARALLEL CONSTRUCTION WITH TOP SOIL SEGREGATION
- 15 - WETLAND CONSTRUCTION WORKING AREA NON-SATURATED
- 16 - SIDE HILL CONSTRUCTION
- 17 - TWO TONE METHOD
- 18 - NON-PARALLEL CONSTRUCTION EXTRA DEEP DITCH (5' COVER)
- 19 - OPEN CUT ROAD CROSSING
- 20 - BORED ROAD CROSSING
- 21 - BORED RAIL ROAD CROSSING
- 22A - OPEN CUT - DAM AND PUMP
- 22B - OPEN CUT - FLUME
- 23 - PIPELINE CROSSING
- 24 - WETLAND CROSSING
- 25 - TYPICAL DIRECTIONAL DRILL ENTRY SITE PLAN & PROFILE
- 26 - TYPICAL DIRECTIONAL DRILL EXIT SITE PLAN & PROFILE

PROFILE



HOLLAND ENGINEERING

220 Hoover Boulevard, Suite 2, Holland, Michigan 49423 — 26555 Evergreen Rd. Suite 430, Southfield, Michigan 48076 — www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10/23/15	ISSUED TO FERC
1	HEI	02/05/16	RESPONSE TO FERC DATA REQUEST
3	HEI	08/03/16	ISSUED FOR REVIEW
4	HEI	03/29/17	CLINE REROUTE - ISSUED TO FERC

AERIAL PHOTOGRAPHY DATE: MAY 2015

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	3207'	20"O.D. X 0.312"W.T. X70, FUSION BOND EPOXY
		SEDIMENT BARRIER
	2	TYPE 4 TEST STATION - FOREIGN CROSSING

APPROVED FOR CONSTRUCTION — REV. / BY / DATE

APPROVED FOR BIDDING — REV. / BY / DATE

APPROVED FOR FERC		
REV.	BY	DATE
0	JSW	10/23/15
1	JSW	02/05/16

EQUITRANS

PIPELINE ALIGNMENT
EQUITRANS EXPANSION PROJECT - H318 LINE
FORWARD TWP, ALLEGHENY CO., PA.
STA. 0+00 TO STA. 31+95

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(JDB)	3/28/2017
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
DRAWING NO.: PA-ALPA-H318-01	
SHEET 1 OF 6	REV. 4
DATE OF PLOT: 3/29/2017 1:19 PM	

RIGHT-OF-WAY & OWNERSHIP DATA	31+95 EEP-219 1444 LF 1460 SLOPE	46+39 EEP-219 / EEP-218 31 LF 31 SLOPE	46+70 EEP-218 735 LF 779 SLOPE	54+05 RACOON RUN ROAD / EEP-218 19 LF 19 SLOPE	54+24 RACOON RUN ROAD 14 LF 14 SLOPE	54+38 EEP-255 RACOON RUN ROAD 20 LF 20 SLOPE	54+58 EEP-255 1395 LF 1431 SLOPE	68+53 EEP-216 / EEP-255 13 LF 13 SLOPE	68+66

DESIGN				
PIPE / COATING	31+95 — 1	53+89 — 3	54+69 — 1	68+66
SLOPE DISTANCE	2254'	80'	1433'	
CLASS LOCATION / HCA	1			

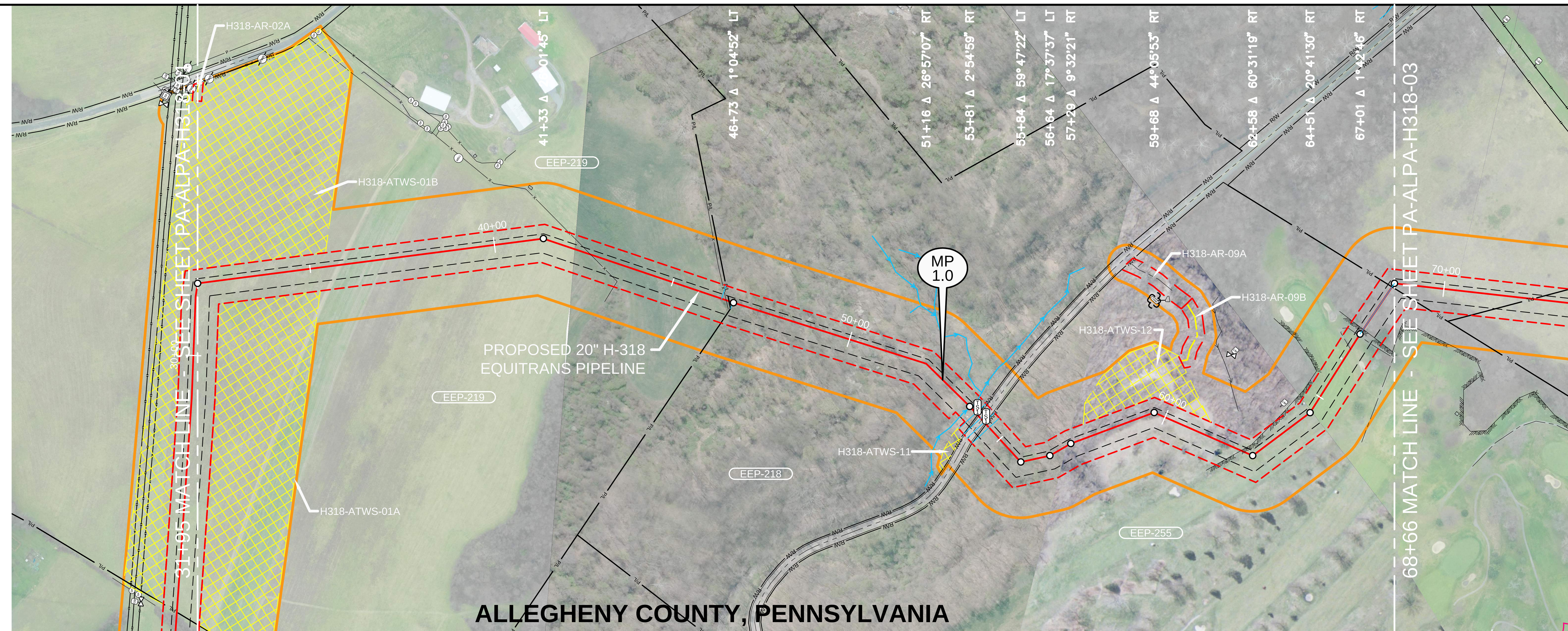
ENVIRONMENTAL	
CONSTRUCTION EXCLUSION	
WETLAND / STREAM	
SEDIMENT BARRIER LEFT	
SEDIMENT BARRIER RIGHT	

0' 100' 200' 400'

PLAN VIEW

LEGEND

- STUDY CORRIDOR
- PROPOSED PIPELINE
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRACADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY



ISSUED TO FERC

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REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION

HORIZONTAL STATIONING

31+95 MATCH LINE
42+67 FENCE
46+52 BEGIN WOODS
46+60 FENCE
46+70 ℄
53+84 ℄ STREAM(KELLY RUN)
54+09 END WOODS
54+12 PROPOSED TYPE 1 TEST STATION, RIGHT-OF-WAY ℄
54+16 BEGIN ASPHALT
54+29 ℄ RACOON RUN ROAD(ASPHALT)
54+41 END ASPHALT
54+45 PROPOSED TYPE 1 TEST STATION, RIGHT-OF-WAY ℄
54+49 BEGIN WOODS
60+03 END WOODS
61+15 BEGIN WOODS
62+14 END WOODS
62+23 BEGIN GOLF COURSE
66+96 ℄ ASPHALT PATH
67+17 END GOLF COURSE
68+55 ℄
68+66 MATCH LINE

WORK SPACE

- PROPOSED PIPELINE
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)

MATCH LINE 31+95 — 35+47 — 35+20 — 25' 12.5' 37.5' 25' — 54+02 — 54+23 — H318-ATWS-11 — 57+79 — 61+17 — 25' 12.5' 37.5' 25' — MATCH LINE 68+66

CONSTRUCTION METHOD

CONSTRUCTION METHOD KEY
14 - NON-PARALLEL CONSTRUCTION WITH TOP SOIL SEGREGATION
15 - WETLAND CONSTRUCTION WORKING AREA NON-SATURATED
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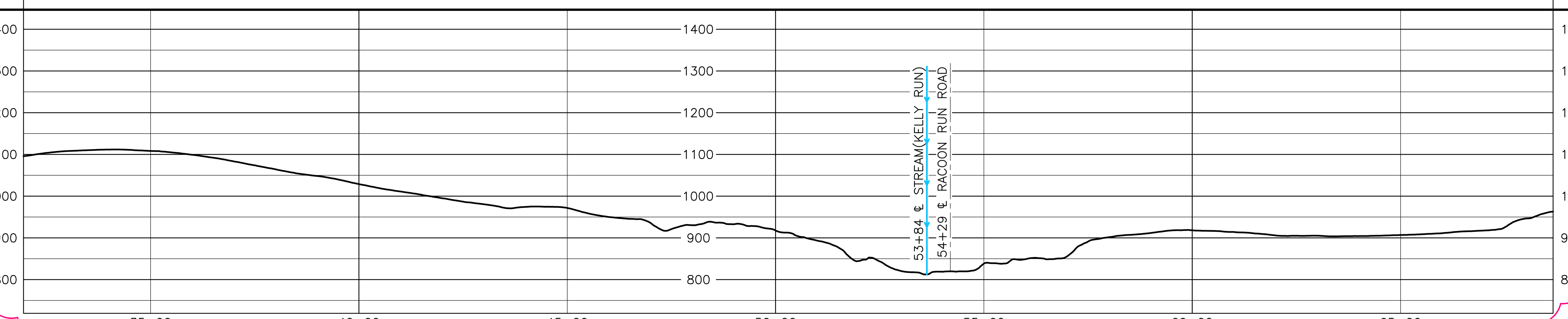
24 - WETLAND CROSSING
25 - TYPICAL DIRECTIONAL DRILL ENTRY SITE PLAN & PROFILE
26 - TYPICAL DIRECTIONAL DRILL EXIT SITE PLAN & PROFILE

PROFILE



HOLLAND ENGINEERING
220 Hoover Boulevard, Suite 2
Holland, Michigan 49423-3766
T 616-392-5938 F 616-392-2116
26555 Evergreen Rd. Suite. 430
Southfield, Michigan 48076
T 248-827-7322 F 248-827-7549
www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10/23/15	ISSUED TO FERC
1	HEI	02/05/16	RESPONSE TO FERC DATA REQUEST
3	HEI	08/03/16	ISSUED FOR REVIEW
4	HEI	03/28/17	CLINE REROUTE - ISSUED TO FERC

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	3687'	20"O.D. X 0.312"W.T., X70, FUSION BOND EPOXY
3	80'	20"O.D. X 0.375"W.T., X70, FBE AND ARO
	.	SEDIMENT BARRIER
	2	TYPE 1 TEST STATION - PIPELINE

AERIAL PHOTOGRAPHY DATE: MAY 2015

APPROVED FOR CONSTRUCTION REV.	BY	DATE
.	.	.

APPROVED FOR BIDDING REV.	BY	DATE
.	.	.

APPROVED FOR FERC REV.	BY	DATE
0	JSW	10/23/15
1	JSW	02/05/16

EQUITRANS

PIPELINE ALIGNMENT

EQUITRANS EXPANSION PROJECT - H318 LINE
FORWARD TWP, ALLEGHENY CO., PA.
STA. 31+95 TO STA. 68+66

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(JDB)	3/28/2017
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
DRAWING NO.: PA-ALPA-H318-02	
SHEET 2 OF 6	REV. 4
DATE OF PLOT: 3/29/2017 1:19 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

EEP-216 / EEP-255	EEP-216	EEP-216 / EEP-297.02		EEP-297.02
51 LF / 51 SLOPE	162 LF / 162 SLOPE	258 LF / 258 SLOPE	EQUATION: 76+62 BACK = 101+85 AHEAD	1711 LF / 1713 SLOPE

DESIGN

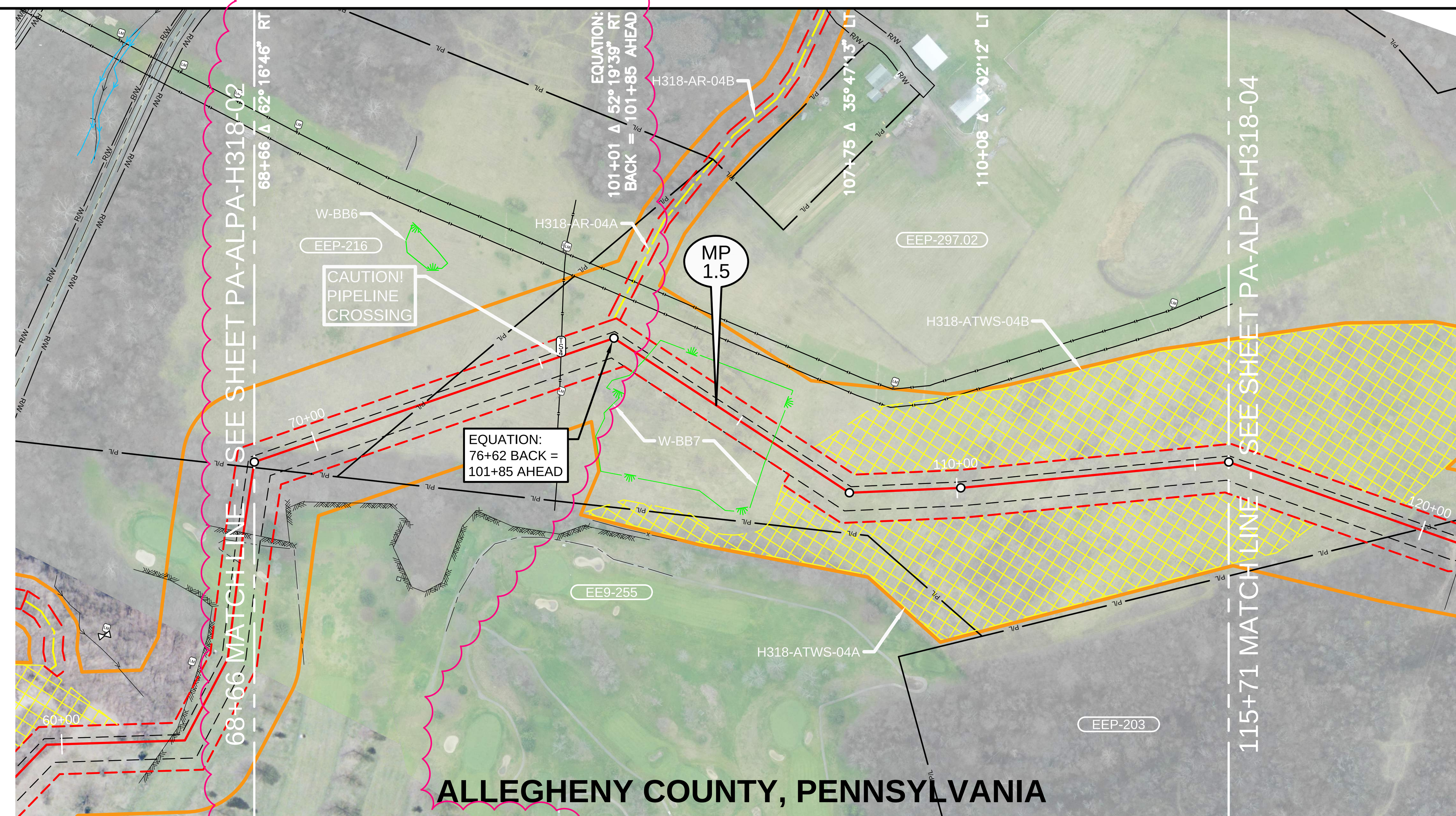
PIPE / COATING	1
SLOPE DISTANCE	2184'
CLASS LOCATION / HCA	

ENVIRONMENTAL

CONSTRUCTION EXCLUSION	
WETLAND / STREAM	W-BB7 / 333 LF
SEDIMENT BARRIER LEFT	
SEDIMENT BARRIER RIGHT	

PLAN VIEW

0' 100' 200' 400'



LEGEND

STUDY CORRIDOR; PROPOSED PIPELINE; 500' TICK MARK; EXISTING PIPELINE; PERMANENT EASEMENT; WORK SPACE LIMITS; PERMANENT ACCESS RD; TEMPORARY ACCESS RD; ANCILLARY SITE; COUNTY LINE; PROPERTY LINE; ROAD RIGHT-OF-WAY; FENCE LINE; OVERHEAD POWER; OVERHEAD TELEPHONE; C/L ROAD; C/L RAILROAD; DELINEATED STREAM; DELINEATED WETLAND; BARRACADE FENCE; PI SYMBOL; PROPOSED TEST STATION; MAILBOX; LINE MARKER - VENT PIPE; POWER/TELE POLE; SIGN; TOWER LEG; TREE; GUY ANCHOR; TANK; GAS VALVE; WELL - GAS/OIL/WATER/MONITORING; POST - GATE/FENCE; ELEC/GAS/WTR METER; PEDESTAL - UTILITY; MH - SANITARY/WATER; CATCH BASIN - CULVERT; ADDITIONAL TEMPORARY WORK SPACE(ATWS); ABOVE GROUND FACILITY

AERIAL PHOTOGRAPHY DATE: MAY 2015/UNKNOWN

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REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION

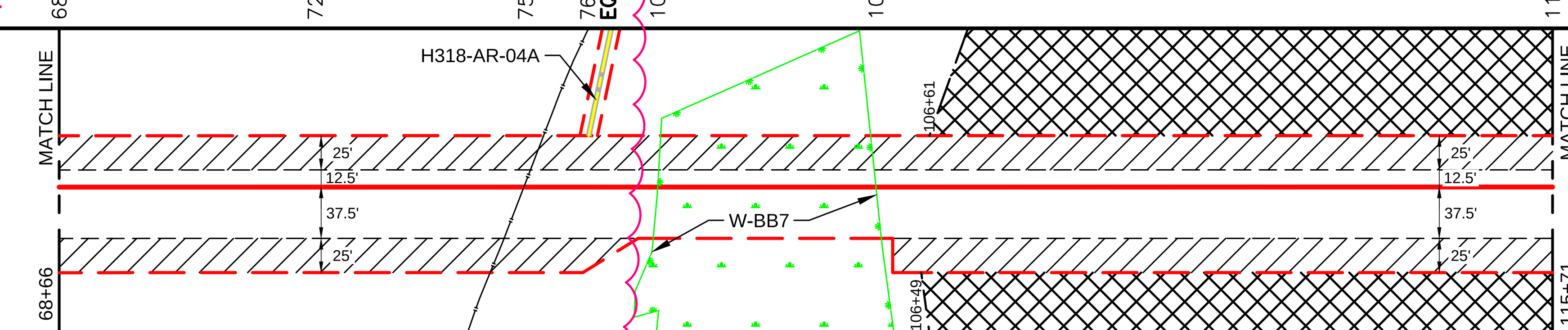
ISSUED TO FERC

HORIZONTAL STATIONING

68+66 MATCH LINE
72+40 ℄
75+45 PIPELINE - FOREIGN - UNKNOWN, PROPOSED TYPE 4 TEST STATION
76+62 ACCESS RD - TEMPORARY(H318-AR-04A)40'LT
EQUATION: 76+62 BACK =101+85 AHEAD
102+57 BEGIN WETLAND(W-BB7)(PEM)
105+90 END WETLAND(W-BB7)(PEM)
115+71 MATCH LINE

WORK SPACE

PROPOSED PIPELINE; EXISTING PIPELINE; WORK SPACE LIMITS; PERMANENT EASEMENT; TEMPORARY WORK SPACE(TWS); ADD. TEMPORARY WORK SPACE(ATWS)

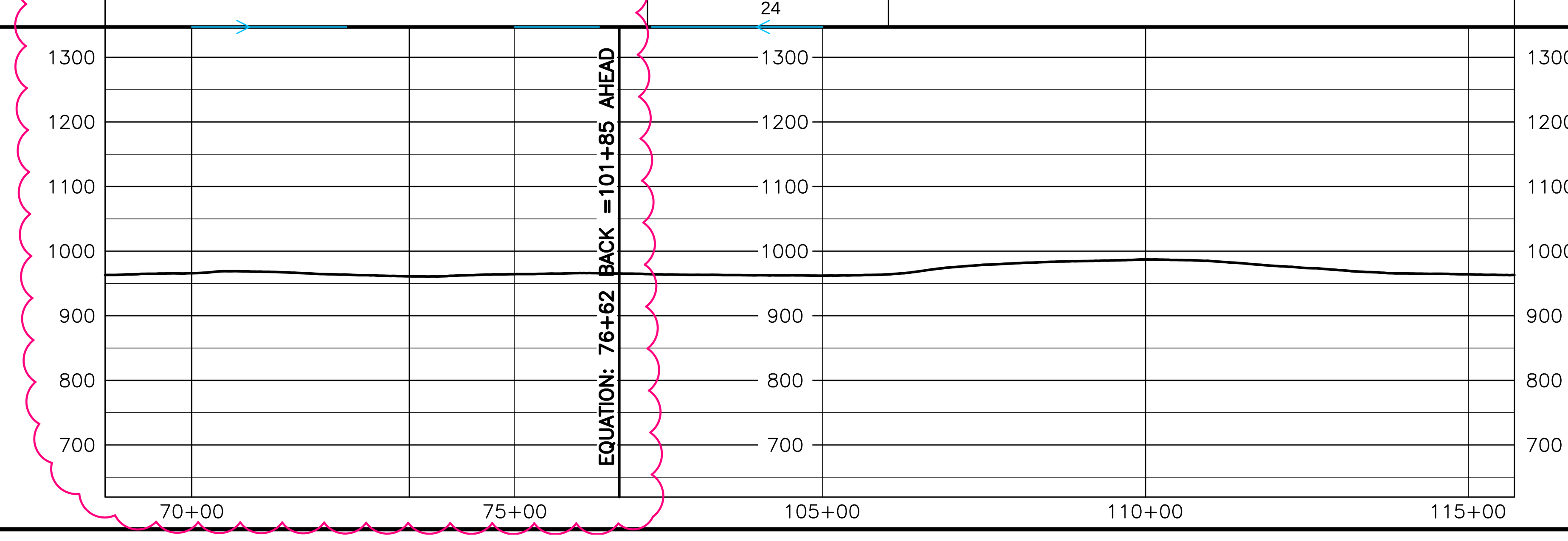


CONSTRUCTION METHOD

24

CONSTRUCTION METHOD KEY
14 - NON-PARALLEL CONSTRUCTION WITH TOP SOIL SEGREGATION
15 - WETLAND CONSTRUCTION WORKING AREA NON-SATURATED
16 - SIDE HILL CONSTRUCTION
17 - TWO TONE METHOD
18 - NON-PARALLEL CONSTRUCTION EXTRA DEEP DITCH (5' COVER)
19 - OPEN CUT ROAD CROSSING
20 - BORED ROAD CROSSING
21 - BORED RAIL ROAD CROSSING
22A - OPEN CUT - DAM AND PUMP
22B - OPEN CUT - FLUME
23 - PIPELINE CROSSING
24 - WETLAND CROSSING
25 - TYPICAL DIRECTIONAL DRILL ENTRY SITE PLAN & PROFILE
26 - TYPICAL DIRECTIONAL DRILL EXIT SITE PLAN & PROFILE

PROFILE



REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10/23/15	ISSUED TO FERC
1	HEI	02/05/16	RESPONSE TO FERC DATA REQUEST
2	HEI	04/15/16	RESPONSE TO FERC DATA REQUEST #2
3	HEI	08/03/16	ISSUED FOR REVIEW
4	HEI	03/28/17	C-LINE REROUTE - ISSUED TO FERC

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	2184'	20"O.D. X 0.312"W.T., X70, FUSION BOND EPOXY
		SEDIMENT BARRIER
	4	TYPE 1 TEST STATION - PIPELINE
	2	TYPE 4 TEST STATION - FOREIGN CROSSING

APPROVED FOR CONSTRUCTION — REV. / BY / DATE

APPROVED FOR BIDDING — REV. / BY / DATE

APPROVED FOR FERC

REV.	BY	DATE
0	JSW	10/23/15
1	JSW	02/05/16

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220 Hoover Boulevard, Suite 2, Holland, Michigan 49423-4790 T 616-392-5938
26555 Evergreen Rd, Suite 430, Southfield, Michigan 48076 F 616-392-2116 T 248-827-7322 F 248-827-7549
www.hollandengineering.com

EQUITRANS

PIPELINE ALIGNMENT
EQUITRANS EXPANSION PROJECT - H318 LINE
FORWARD TWP, ALLEGHENY CO., PA.
STA. 68+66 TO STA. 115+71

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(JDB)	3/28/2017
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
DRAWING NO.: PA-ALPA-H318-03	
SHEET 3 OF 6	REV. 4
DATE OF PLOT: 3/29/2017 1:19 PM	

PIPELINE ALIGNMENT

EQUITRANS EXPANSION PROJECT - H318 LINE
FORWARD TWP, ALLEGHENY CO., PA.
STA. 115+71 TO STA. 159+58

EQUITRANS

ISSUED TO FERC

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Owner	Length / Slope
115+71 to 118+98	EEP-297.02	327 LF / 327 SLOPE
118+98 to 120+51	EEP-297.02 / EEP-203	153 LF / 153 SLOPE
120+51 to 140+48	EEP-203	1997 LF / 2005 SLOPE (EQUATION: 129+16 BACK= 129+31 AHEAD)
140+48 to 141+52	EEP-203 / EEP-221	104 LF / 108 SLOPE
141+52 to 143+40	EEP-221	188 LF / 195 SLOPE
143+40 to 146+96	EEP-203	356 LF / 362 SLOPE
146+96 to 147+34	BUNOLA RIVER ROAD / EEP-203	38 LF / 38 SLOPE
147+34 to 147+90	EEP-266 / BUNOLA RIVER ROAD	56 LF / 56 SLOPE
147+90 to 149+96	EEP-266	206 LF / 209 SLOPE
149+96 to 150+19	EEP-266 / EEP-203	23 LF / 23 SLOPE
150+19 to 151+71	EEP-203	152 LF / 155 SLOPE
151+71 to 152+17	EEP-286	46 LF / 47 SLOPE
152+17 to 153+96	EEP-203	179 LF / 180 SLOPE
153+96 to 154+80	EEP-209 / EEP-203	84 LF / 84 SLOPE
154+80 to 155+52	EEP-209	72 LF / 72 SLOPE
155+52 to 155+79	EEP-209 / MONONGAHELA RIVER	27 LF / 27 SLOPE
155+79 to 159+62	MONONGAHELA RIVER	383 LF - 383 SLOPE

DESIGN

	115+71 to 147+10	147+10 to 147+90	147+90 to 149+00	149+00 to 159+62
PIPE / COATING	1	3	1	4
SLOPE DISTANCE	3164'	80'	110'	1070'

	115+71 to 150+74	150+74 to 159+62
CLASS LOCATION / HCA	1	2

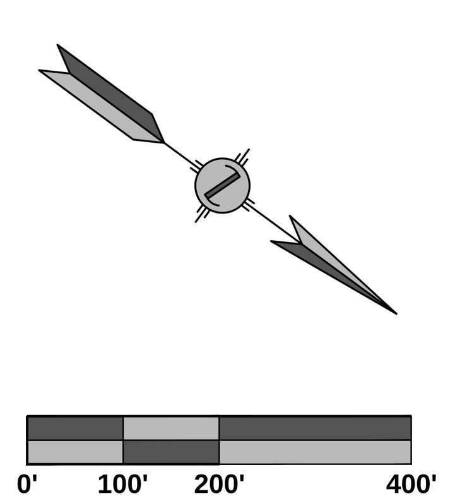
ENVIRONMENTAL

CONSTRUCTION EXCLUSION

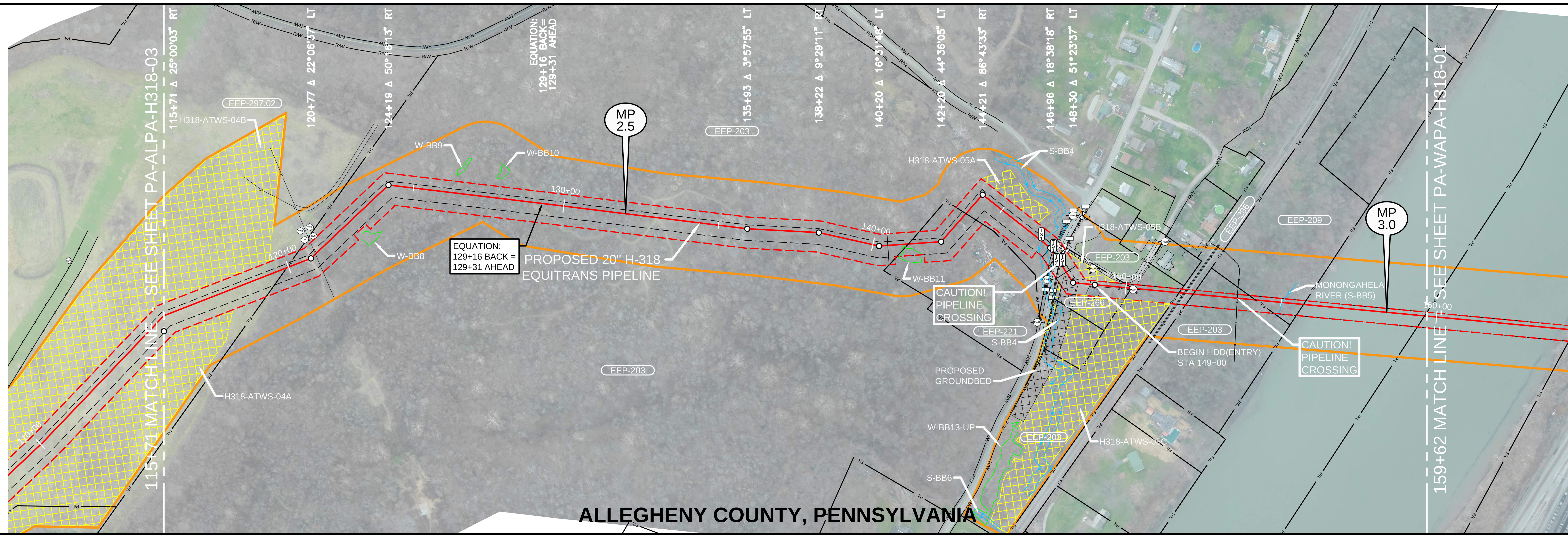
WETLAND / STREAM	W-BB11	S-BB4
	68 LF	76 LF

SEDIMENT BARRIER LEFT

SEDIMENT BARRIER RIGHT



PLAN VIEW



LEGEND

- STUDY CORRIDOR
- PROPOSED PIPELINE
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRACADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY

REFERENCE DRAWINGS

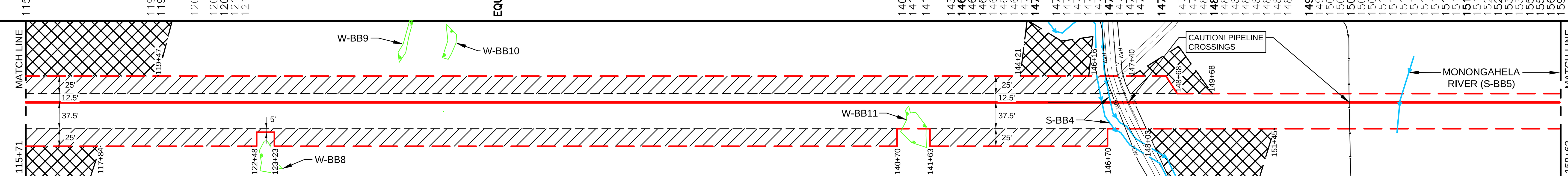
DRAWING NO.	DESCRIPTION

HORIZONTAL STATIONING

- 115+71 MATCH LINE
- 119+27 BEGIN WOODS
- 119+56 ℙ
- 120+52 END WOODS
- 120+86 TOWER LEG 62'LT
- 120+96 OHP LINE
- 121+16 TOWER LEG 60'LT
- 121+32 BEGIN WOODS
- EQUATION: 129+15 BACK = 129+31 AHEAD
- 140+84 BEGIN WETLAND(W-BB11)(PFO)
- 141+14 ℙ
- 141+52 END WETLAND(W-BB11)(PFO)
- 143+40 ℙ
- 146+60 PROPOSED TYPE 1 TEST STATION
- 146+63 STREAM BANK(S-BB4)(PER)
- 146+89 STREAM BANK(S-BB4)(PER)
- 146+92 GUY ANCHOR 15'LT
- 146+94 GUY ANCHOR 15'LT
- 146+96 END WOODS, SIGN 83'LT
- 147+01 POWER POLE 19'LT
- 147+14 PROPOSED TYPE 1 TEST STATION, RIGHT-OF-WAY, ℙ
- 147+18 OHP LINE
- 147+21 VALVE(WATER) 39'LT, SIGN 59'LT
- 147+22 BEGIN ASPHALT
- 147+26 VALVE(WATER)31'LT
- 147+28 VALVE(WATER)36'LT
- 147+36 ℄ BUNOLA RIVER ROAD
- 147+49 END ASPHALT
- 147+51 UNGRD UTILITY - WATER
- 147+52 PIPELINE - FOREIGN - PEOPLES GAS, PROPOSED TYPE 4 TEST STATION
- 147+68 PROPOSED TYPE 1 TEST STATION, RIGHT-OF-WAY, ℙ
- 147+75 POWER POLE 65'RT
- 147+89 SIGN 72'RT
- 148+15 SIGN 95'RT
- 148+20 PROPOSED RECTIFIER & GROUNDBED
- 148+27 POWER POLE 79'LT
- 148+29 BEGIN WOODS
- 148+30 SIGN 76'RT
- 148+71 BUILDING - HOUSE(BURNED)43'RT
- 148+82 GUY ANCHOR 33'LT
- 148+83 GUY ANCHOR 34'LT
- 148+84 BUILDING - HOUSE(BURNED)6'RT
- OHP LINE
- 149+00 BEGIN HDD(ENTRY)
- 149+20 BUILDING - HOUSE(BURNED)18'RT
- 150+18 GUY ANCHOR 16'RT
- 150+24 POWER POLE 4'RT
- 150+26 OHP LINE
- 150+38 GUY ANCHOR 15'RT
- 150+89 BUILDING - HOUSE 89'LT
- 151+11 END WOODS
- 151+17 BUILDING - HOUSE, DECK 73'LT
- 151+26 BEGIN WOODS
- 151+34 DECK 67'LT
- 151+46 DECK 78'LT
- 151+69 END WOODS
- 151+75 ℙ
- 151+86 ℄ RAIL
- 151+89 ℄ CSX RAILROAD
- 151+92 ℄ RAIL
- 152+10 BEGIN WOODS
- 152+20 ℙ
- 153+59 PIPELINE - FOREIGN - PEOPLES GAS
- 153+63 LINE MARKER 94'LT
- 155+03 MONONGAHELA RIVER BANK(S-BB5)(PER)
- 155+18 ℙ
- 156+09 ℙ
- 159+62 MATCH LINE, COUNTY LINE, ℙ

WORK SPACE

- PROPOSED PIPELINE
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)



CONSTRUCTION METHOD

Station range	Method
122+48 to 123+23	24
140+70 to 141+63	24
146+70 to 147+40	22A or 22B
148+03 to 149+00	25
149+00 to 159+62	HDD

CONSTRUCTION METHOD KEY

- 14 - NON-PARALLEL CONSTRUCTION WITH TOP SOIL SEGREGATION
- 15 - WETLAND CONSTRUCTION WORKING AREA NON-SATURATED
- 16 - SIDE HILL CONSTRUCTION
- 17 - TWO TONE METHOD
- 18 - NON-PARALLEL CONSTRUCTION EXTRA DEEP DITCH (5' COVER)
- 19 - OPEN CUT ROAD CROSSING
- 20 - BORED ROAD CROSSING
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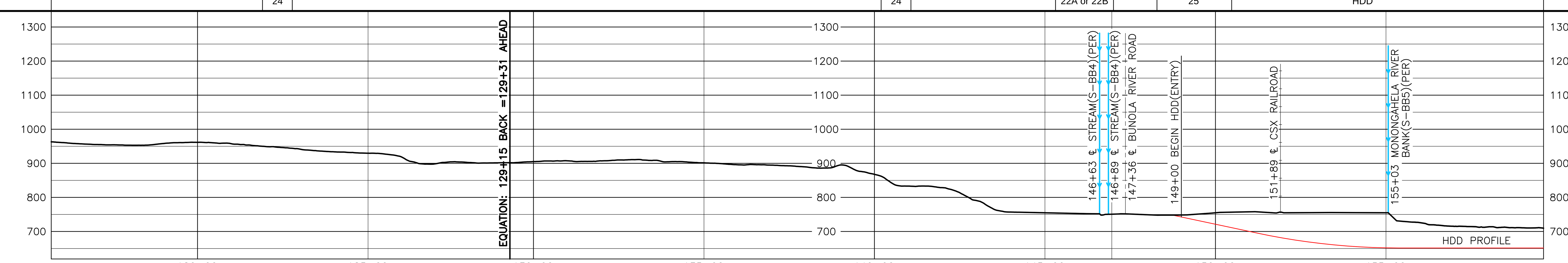
- 24 - WETLAND CROSSING
- 25 - TYPICAL DIRECTIONAL DRILL ENTRY SITE PLAN & PROFILE
- 26 - TYPICAL DIRECTIONAL DRILL EXIT SITE PLAN & PROFILE

PROFILE



AERIAL PHOTOGRAPHY DATE: UNKNOWN

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	3274'	20"O.D. X 0.312"W.T., X70, FUSION BOND EPOXY
3	80'	20"O.D. X 0.375"W.T., X70, FBE AND ARO
4	1070'	20"O.D. X 0.312"W.T., X70, FBE AND ARO
	.	SEDIMENT BARRIER
	3	TYPE 1 TEST STATION - PIPELINE
	2	TYPE 4 TEST STATION - FOREIGN CROSSING

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10/23/15	ISSUED TO FERC
1	HEI	02/05/16	RESPONSE TO FERC DATA REQUEST
2	HEI	04/15/16	RESPONSE TO FERC DATA REQUEST #2
3	HEI	08/03/16	ISSUED FOR REVIEW
4	HEI	03/28/17	CLINE REROUTE - ISSUED TO FERC

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
.	.	.

APPROVED FOR BIDDING

REV.	BY	DATE
.	.	.

APPROVED FOR FERC

REV.	BY	DATE
0	JSW	10/23/15
1	JSW	02/05/16
2	JSW	04/15/16

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www.hollandengineering.com

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(JDB)	3/28/2017
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
DRAWING NO.: PA-ALPA-H318-04	
SHEET 4 OF 6	REV. 4
DATE OF PLOT: 3/29/2017 1:19 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Owner / Parcel	Length
159+62 – 164+30	MONONGAHELA RIVER	468 LF, 469 SLOPE
164+30 – 164+51	MONONGAHELA RIVER / EEP-169	21 LF, 21 SLOPE
164+51 – 167+93	EEP-169	342 LF, 347 SLOPE
167+93 – 168+11	EEP-169 / STATE HWY 837	18 LF, 18 SLOPE
168+11 – 168+46	STATE HWY 837, 35 LF - 36 SLOPE	
168+46 – 168+64	STATE HWY 837 / EEP-170	18 LF, 18 SLOPE
168+64 – 171+47	EEP-170	283 LF, 289 SLOPE
171+47 – 171+60	EEP-170 / EEP-171	13 LF, 13 SLOPE
171+60 – 177+13	EEP-171	553 LF, 565 SLOPE
177+13 – 177+63	EEP-172 / EEP-171	50 LF, 51 SLOPE
177+63 – 184+41	EEP-172	678 LF, 693 SLOPE
184+41 – 184+65	EEP-171 / EEP-172	24 LF, 25 SLOPE
184+65 – 192+18	EEP-171	753 LF, 769 SLOPE

DESIGN

PIPE / COATING	159+62	4	188+04	1 (to 192+18)
SLOPE DISTANCE		2891'		423'
CLASS LOCATION / HCA	2	160+44 1	173+42 2	

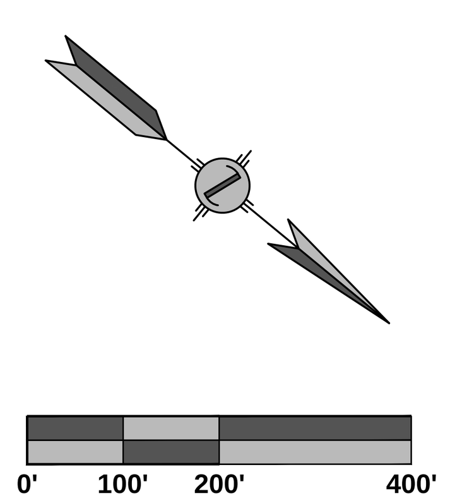
ENVIRONMENTAL

CONSTRUCTION EXCLUSION

WETLAND / STREAM

SEDIMENT BARRIER LEFT

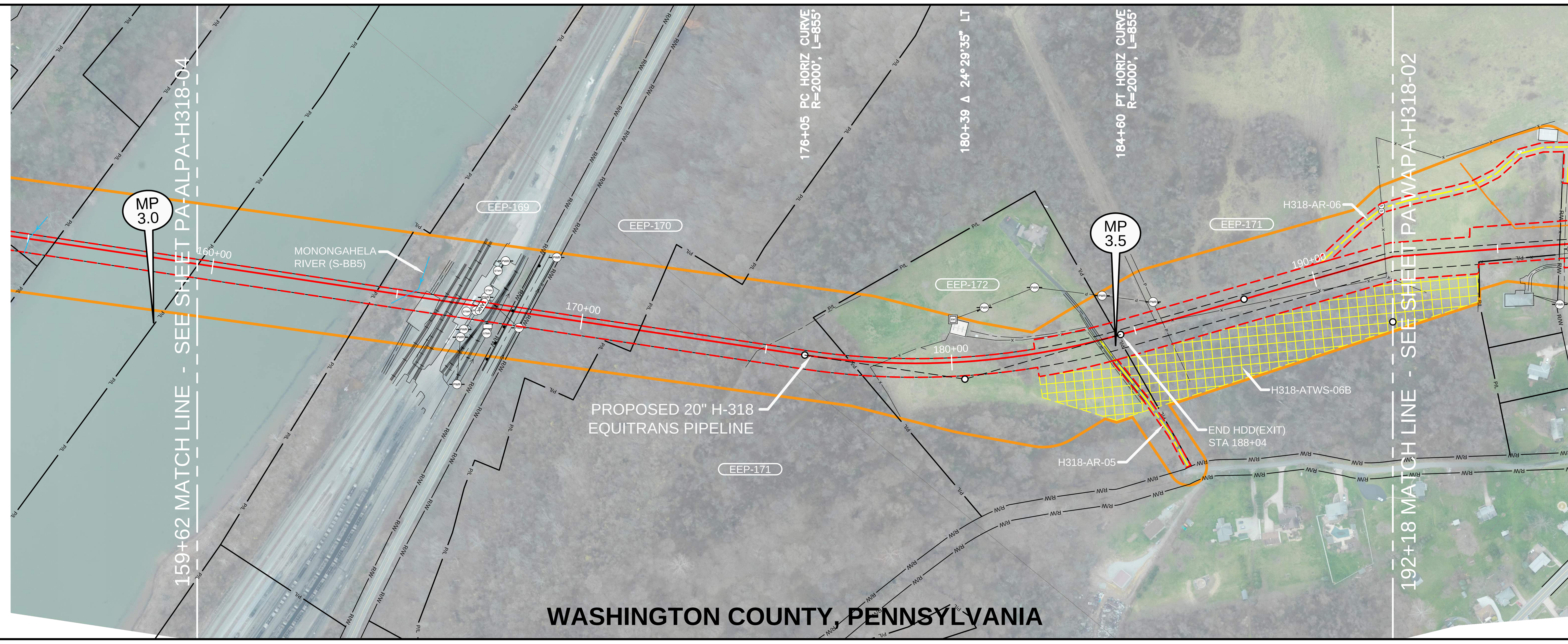
SEDIMENT BARRIER RIGHT



PLAN VIEW

LEGEND

- STUDY CORRIDOR
- PROPOSED PIPELINE
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRACADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY



REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION

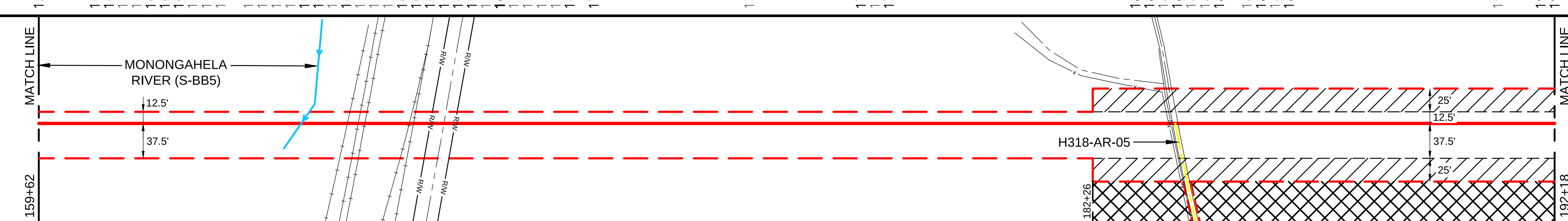
ISSUED TO FERC

HORIZONTAL STATIONING

159+62 MATCH LINE, COUNTY LINE, ℞
164+42 ℞
165+26 MONONGAHELA RIVER BANK(S-BB5)(PER)
165+68 BEGIN ASPHALT
166+14 END ASPHALT
166+25 ℄ NORFOLK SOUTHERN/CONRAIL RAILROAD
166+48 ℄ NORFOLK SOUTHERN/CONRAIL RAILROAD
166+62 ℄ NORFOLK SOUTHERN/CONRAIL RAILROAD
166+81 BEGIN ASPHALT
166+85 POWER POLE 89'RT
166+91 STORM MANHOLE 19'RT, POWER POLE 67'RT
166+99 BUILDING - INDUSTRIAL 54'RT
167+13 END ASPHALT, BEGIN CONCRETE
167+15 END CONCRETE
167+16 POWER POLE, 13'RT
167+19 BEGIN TANK(OIL)
167+25 OHP LINE
167+36 POWER POLE, 26'LT
167+39 END TANK(OIL)
167+42 STORM MANHOLE 46'LT
167+53 STORM MANHOLE 69'RT
167+56 SIGN, 68'RT
167+58 ℄ NORFOLK SOUTHERN/CONRAIL RAILROAD
167+67 ℄ NORFOLK SOUTHERN/CONRAIL RAILROAD
167+75 OHP LINE
167+81 ℄ BAR DITCH
168+03 RIGHT-OF-WAY, ℞
168+16 GUARDRAIL
168+18 BEGIN ASPHALT
168+32 ℄ STATE HWY(ASPHALT)
168+36 POWER POLE 41'RT
168+47 END ASPHALT
168+50 ℄ BAR DITCH
168+51 OHP LINE
168+56 RIGHT-OF-WAY, ℞
171+54 ℞
174+88 ℄ FIELD ROAD(DIRT)
177+28 ℞
177+86 END WOODS
177+93 FENCE
183+89 FENCE
183+94 UNGRD UTILITY - WATER
183+97 BEGIN ASPHALT
184+03 ACCESS RD - TEMPORARY(H318-AR-05)
184+09 END ASPHALT
184+10 BEGIN WOODS
184+48 ℞
185+67 POWER POLE 60'LT
185+77 OHP LINE
185+82 GUY ANCHOR 53'LT
185+97 FENCE
190+96 END WOODS
191+97 FENCE
192+18 MATCH LINE

WORK SPACE

- PROPOSED PIPELINE
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)



CONSTRUCTION METHOD

HDD	26	

CONSTRUCTION METHOD KEY
14 - NON-PARALLEL CONSTRUCTION WITH TOP SOIL SEGREGATION
15 - WETLAND CONSTRUCTION WORKING AREA NON-SATURATED
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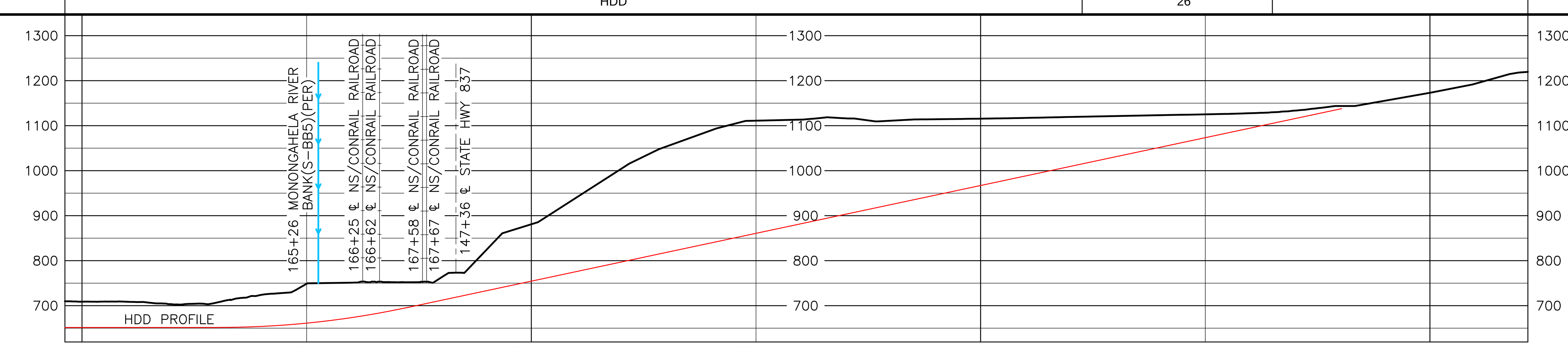
26 - TYPICAL DIRECTIONAL DRILL EXIT SITE PLAN & PROFILE

PROFILE



AERIAL PHOTOGRAPHY DATE: UNKNOWN

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10/23/15	ISSUED TO FERC
1	HEI	02/05/16	RESPONSE TO FERC DATA REQUEST
2	HEI	04/15/16	RESPONSE TO FERC DATA REQUEST #2
3	HEI	08/03/16	ISSUED FOR REVIEW
4	HEI	03/28/17	CLINE REROUTE - ISSUED TO FERC

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	423'	20"O.D. X 0.312"W.T., X70, FUSION BOND EPOXY
4	2891'	20"O.D. X 0.562"W.T., X70, FBE AND ARO
	.	SEDIMENT BARRIER

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
.	.	.

APPROVED FOR BIDDING

REV.	BY	DATE
.	.	.

APPROVED FOR FERC

REV.	BY	DATE
0	JSW	10/23/15
1	JSW	02/05/16
2	JSW	04/15/16

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EQUITRANS

PIPELINE ALIGNMENT
EQUITRANS EXPANSION PROJECT - H318 LINE
UNION TWP, WASHINGTON CO., PA.
STA. 159+58 TO STA. 192+18

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(JDB)	3/28/2017
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
DRAWING NO.: PA-WAPA-H318-01	
SHEET 5 OF 6	REV. 4
DATE OF PLOT: 3/29/2017 1:20 PM	

PIPELINE ALIGNMENT

EQUITRANS EXPANSION PROJECT - H318 LINE
UNION TWP, WASHINGTON CO., PA.
STA. 192+18 TO STA. 224+50

EQUITRANS

ISSUED TO FERC

RIGHT-OF-WAY & OWNERSHIP DATA

Station range	Owner(s)	Length
192+18 – 194+47	EEP-171	229 LF / 229 SLOPE
194+47 – 196+67	EEP-171 / EEP-173	220 LF / 221 SLOPE
196+67 – 197+17	SENECA DRIVE	50 LF - 51 SLOPE
197+17 – 211+39	EEP-171	1434 LF / 1448 SLOPE
211+39 – 211+74	EEP-171 / EEP-141	35 LF / 36 SLOPE
211+74 – 213+73	EEP-171 / EEP-140	199 LF / 200 SLOPE
213+73 – 221+08	EEP-140	735 LF / 749 SLOPE
221+08 – 221+44	FINLEY-ELRAMA ROAD / EEP-140	38 LF / 39 SLOPE
221+44 – 221+58	EEP-131 / FINLEY-ELRAMA ROAD / EEP-140	14 LF / 14 SLOPE
221+58 – 221+80	EEP-131 / EEP-127 / FINLEY-ELRAMA ROAD	22 LF / 22 SLOPE
221+80 – 222+90	EEP-131 / EEP-127	110 LF / 111 SLOPE
222+90 – 224+50	EEP-127	160 LF / 160 SLOPE

DESIGN

Station range	Pipe / Coating	Slope Distance
192+18 – 196+41	1	425'
196+41 – 197+19	3	80'
197+19 – 220+99	1	2407'
220+99 – 221+79	3	80'
221+79 – 224+50	1	272'
223+47 – 224+50 (H-318 PIPE TO H-148 TAP)	1	103'

H-318 / PIPE TO H-148 TAP

CLASS LOCATION / HCA: 2

ENVIRONMENTAL

CONSTRUCTION EXCLUSION

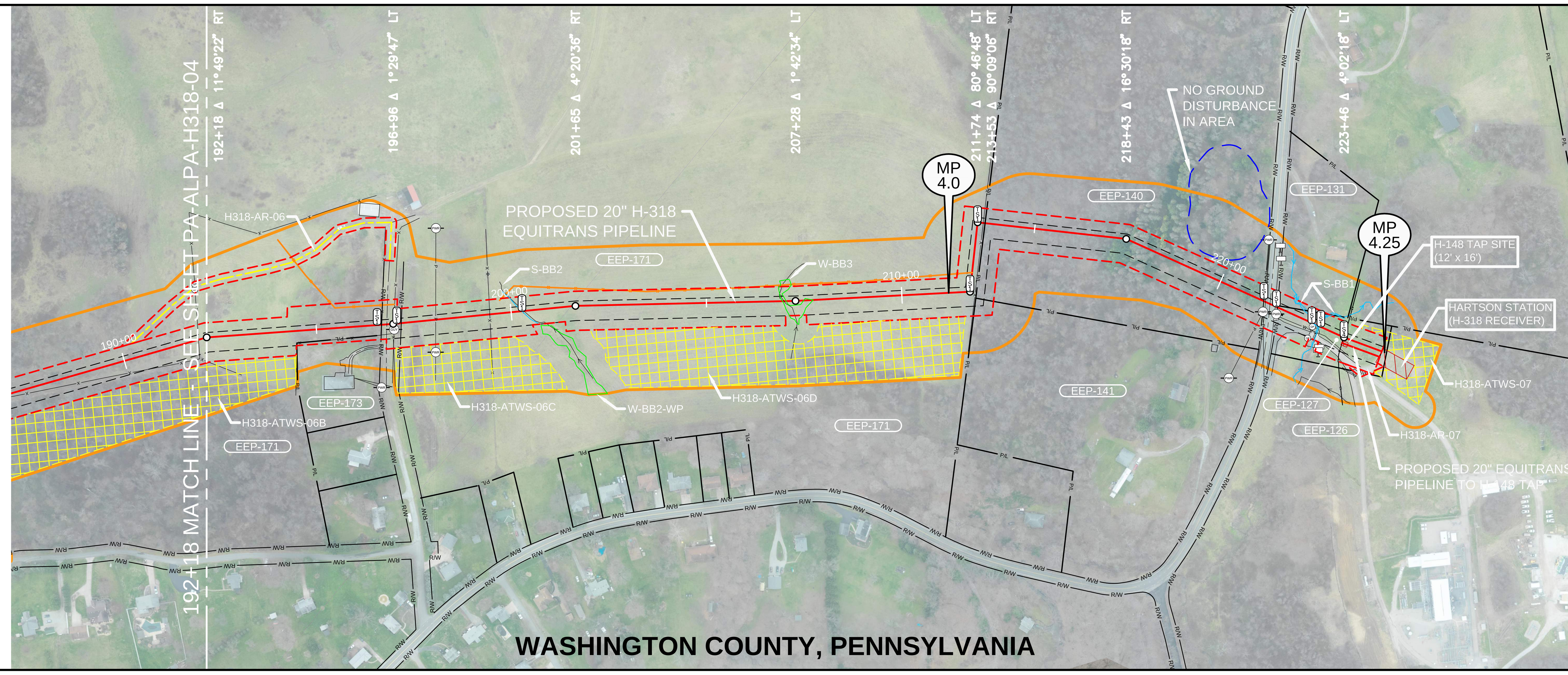
WETLAND / STREAM	S-BB2	W-BB2-WP	W-BB3	S-BB1
	68 LF	NO IMPACT	88 LF	92 LF

SEDIMENT BARRIER LEFT

SEDIMENT BARRIER RIGHT

PLAN VIEW

0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED PIPELINE
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRACADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY

REFERENCE DRAWINGS

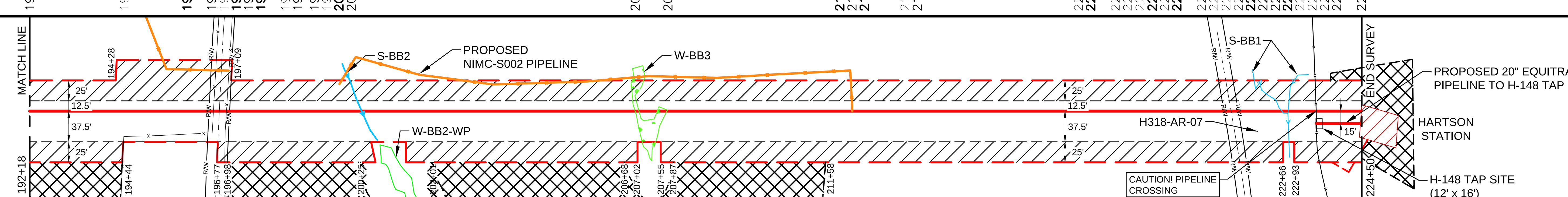
DRAWING NO.	DESCRIPTION

HORIZONTAL STATIONING

- 192+18 MATCH LINE
- 194+51 BEGIN WOODS
- **196+55 PROPOSED TYPE 1 TEST STATION, RIGHT-OF-WAY, ℞**
- 196+66 FENCE
- 196+70 END WOODS
- **196+80 ℄ SENECA DRIVE(GRAVEL)**
- 196+98 FENCE
- **197+05 PROPOSED TYPE 1 TEST STATION, RIGHT-OF-WAY, ℞**
- 197+98 POWER POLE 83'RT
- 198+06 OHP LINE
- 199+45 FENCE
- 199+50 BUILDING - SPRING CATCHER 99'LT
- **200+28 PROPOSED TYPE 1 TEST STATION,**
- 200+32 ℄ STREAM(S-BB2)(EPH)
- 206+95 BEGIN WETLAND(W-BB3)(PEM)
- 206+73 END WETLAND(W-BB3)(PEM)
- **211+74 PROPOSED TYPE 1 TEST STATION**
- 212+24 PIPELINE - PROPOSED(NIMC-S002)
- **213+53 PROPOSED TYPE 1 TEST STATION**
- 213+61 BEGIN WOODS
- 213+67 FENCE, ℞
- 221+15 END WOODS
- **221+21 PROPOSED TYPE 1 TEST STATION,** OHP LINE, RIGHT-OF-WAY, ℞
- 221+19 GUY ANCHOR 30'RT
- 221+26 BEGIN ASPHALT
- 221+31 POWER POLE 26'RT
- **221+39 ℄ FINLEY-ELRAMA ROAD**
- 221+53 END ASPHALT
- **221+60 PROPOSED TYPE 1 TEST STATION, RIGHT-OF-WAY, ℞**
- 221+64 POWER POLE 17'RT, VALVE(WATER)21'RT
- 221+80 GUY ANCHOR 12'RT
- 222+37 BEGIN WOODS
- 222+59 END WOODS
- **222+57 PROPOSED TYPE 1 TEST STATION**
- 222+62 ℄ STREAM(S-BB1)(INT)
- 222+77 ℄ STREAM(S-BB1)(INT)
- **222+82 PROPOSED TYPE 1 TEST STATION**
- 223+06 SIGN 64'RT
- 223+07 SIGN 73'RT
- 223+39 LINE MARKER 53'LT
- 223+47 PIPELINE - EQT - H148, PROPOSED TYPE 4 TEST STATION
- 224+50 END SURVEY

WORK SPACE

- PROPOSED PIPELINE
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)

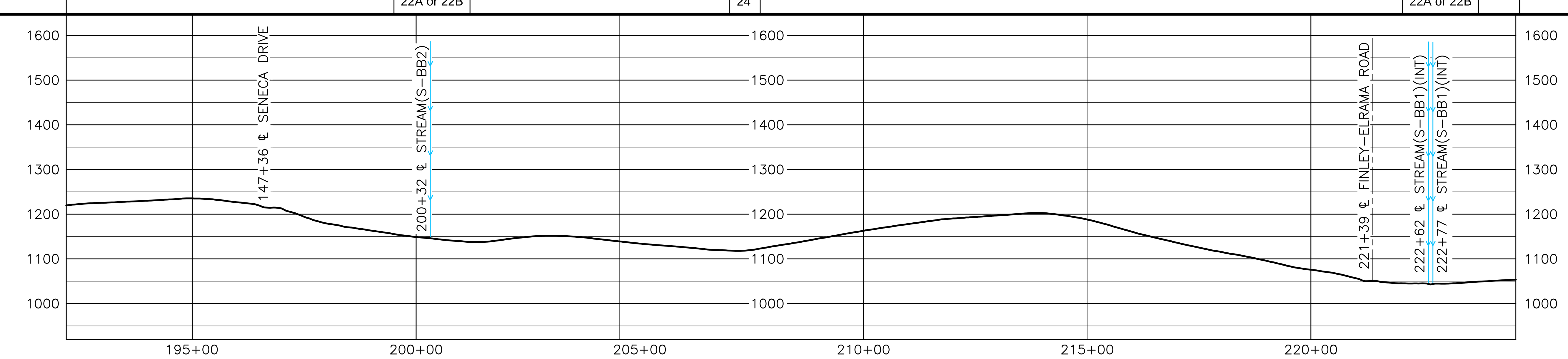


CONSTRUCTION METHOD

Location	Method
S-BB2	22A or 22B
W-BB3	24
S-BB1	22A or 22B

CONSTRUCTION METHOD KEY
14 - NON-PARALLEL CONSTRUCTION WITH TOP SOIL SEGREGATION
15 - WETLAND CONSTRUCTION WORKING AREA NON-SATURATED
16 - SIDE HILL CONSTRUCTION
17 - TWO TONE METHOD
18 - NON-PARALLEL CONSTRUCTION EXTRA DEEP DITCH (5' COVER)
19 - OPEN CUT ROAD CROSSING
20 - BORED ROAD CROSSING
21 - BORED RAIL ROAD CROSSING
22A - OPEN CUT - DAM AND PUMP
22B - OPEN CUT - FLUME
23 - PIPELINE CROSSING
24 - WETLAND CROSSING
25 - TYPICAL DIRECTIONAL DRILL ENTRY SITE PLAN & PROFILE
26 - TYPICAL DIRECTIONAL DRILL EXIT SITE PLAN & PROFILE

PROFILE



AERIAL PHOTOGRAPHY DATE: MAY 2015/UNKNOWN

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	3209'	20"O.D. X 0.312"W.T., X70, FUSION BOND EPOXY
3	160'	20"O.D. X 0.375"W.T., X70, FBE AND ARO
	-	SEDIMENT BARRIER
	6	TYPE 1 TEST STATION - PIPELINE

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10/23/15	ISSUED TO FERC
1	HEI	02/05/16	RESPONSE TO FERC DATA REQUEST
2	HEI	04/15/16	RESPONSE TO FERC DATA REQUEST #2
3	HEI	08/03/16	ISSUED FOR REVIEW
4	HEI	03/28/17	CLINE REROUTE - ISSUED TO FERC

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
-	-	-

APPROVED FOR BIDDING

REV.	BY	DATE
-	-	-

APPROVED FOR FERC

REV.	BY	DATE
0	JSW	10/23/15
1	JSW	02/05/16
2	JSW	04/15/16

HOLLAND ENGINEERING
220 Hoover Boulevard, Suite 2 Holland, Michigan 49423-3766 T 616-392-5938 F 616-392-2116
26555 Evergreen Rd. Suite 430 Southfield, Michigan 48076 T 248-827-7322 F 248-827-7549
www.hollandengineering.com

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(JDB)	5/11/2015
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
DRAWING NO.: PA-WAPA-H318-02	
SHEET 6 OF 6	REV. 4
DATE OF PLOT: ----	

Attachment General-4c

Appendix T-2 Access Road Traffic Counts for the Equitrans Expansion Project

(Track Changes and Changes Accepted)

DEIS APPENDIX T-2

(Revised March 30, 2017)

Access Road Traffic Counts for the Equitrans Expansion Project

Jurisdiction	AADT a/	Year of AADT Records	Peak ADT	Route Number	Official DOT/911 Designation	Surface Type	County, State
State	1,000	2011	(4 pm) 160	CR-15	North Fork Road	Asphalt	Wetzel, WV
State	10	2011	1	CR-15/3	Mobley Run	Surface treatment	Wetzel, WV
Federal	~~16~~12,~~866~~292	~~2016~~2016	N/A	I-79	I-79	N/A	Greene, PA
State	8,~~300~~366	~~2016~~2015	N/A	21/1 88	E. Roy Furman Highway	N/A	Greene, PA
State	7,~~172~~200	~~2016~~2015	N/A	188	Jefferson Road	N/A	Greene, PA
County	N/A	N/A	N/A	N/A	Prison Rd	Asphalt	Greene, PA
County	N/A	N/A	N/A	N/A	Homeville ~~RD~~Rd	Asphalt	Greene, PA
County	N/A	N/A	N/A	N/A	Baker Rd	Asphalt	Greene, PA
County	~~N/A~~250	~~N/A~~2015	N/A	N/A	Crayne School Rd	Asphalt	Greene, PA
County	N/A	N/A	N/A	N/A	Ridge Rd	Asphalt	Greene, PA
County	N/A	N/A	N/A	N/A	McNeely Rd	Asphalt	Greene, PA
County	N/A	N/A	N/A	N/A	~~Ankron~~ Ankrom Rd	Asphalt	Greene, PA
State	8,~~224~~806	~~2016~~2015	N/A	43	PA 43 Turnpike	N/A	Washington, PA
State	3,~~809~~927	~~2016~~2016	N/A	837	PA 837	N/A	Washington, PA
County	1,~~299~~300	~~2016~~2015	N/A	1006	Finley~~ville~~-Elrama Road	N/A	Washington, PA
County	N/A	N/A	N/A	N/A	Gun Club Rd	Asphalt	Allegheny, PA
County	~~876~~850	~~2016~~2015	N/A	2001	Bunola River Road	N/A	Allegheny, PA
County	~~133~~150	~~2016~~2015	N/A	2003	Church Hollow Road	N/A	Allegheny, PA
County	N/A	N/A	N/A	N/A	McVicker Ln	Asphalt	Allegheny, PA
County	N/A	N/A	N/A	N/A	~~Ripple~~ Rippel Rd	Asphalt	Allegheny, PA
County	~~148~~150	~~2016~~2015	N/A	2005	Raccoon Run Road North	N/A	Allegheny, PA
County	N/A	N/A	N/A	N/A	Pangburn Hollow Rd	Asphalt	Allegheny, PA
County	~~198~~200	~~2016~~2015	N/A	2005	Raccoon Run Road South	N/A	Allegheny, PA

N/A = Not available

a/ AADT = Annual average daily traffic.

DEIS APPENDIX T-2

(Revised March 30, 2017)

Access Road Traffic Counts for the Equitrans Expansion Project

Jurisdiction	AADT a/	Year of AADT Records	Peak ADT	Route Number	Official DOT/911 Designation	Surface Type	County, State
State	1,000	2011	(4 pm) 160	CR-15	North Fork Road	Asphalt	Wetzel, WV
State	10	2011	1	CR-15/3	Mobley Run	Surface treatment	Wetzel, WV
Federal	12,292	2016	N/A	I-79	I-79	N/A	Greene, PA
State	8,366	2015	N/A	21/1 88	E. Roy Furman Highway	N/A	Greene, PA
State	7,200	2015	N/A	188	Jefferson Road	N/A	Greene, PA
County	N/A	N/A	N/A	N/A	Prison Rd	Asphalt	Greene, PA
County	N/A	N/A	N/A	N/A	Homeville Rd	Asphalt	Greene, PA
County	N/A	N/A	N/A	N/A	Baker Rd	Asphalt	Greene, PA
County	250	2015	N/A	N/A	Crayne School Rd	Asphalt	Greene, PA
County	N/A	N/A	N/A	N/A	Ridge Rd	Asphalt	Greene, PA
County	N/A	N/A	N/A	N/A	McNeely Rd	Asphalt	Greene, PA
County	N/A	N/A	N/A	N/A	Ankrom Rd	Asphalt	Greene, PA
State	8,806	2015	N/A	43	PA 43 Turnpike	N/A	Washington, PA
State	3,927	2016	N/A	837	PA 837	N/A	Washington, PA
County	1,300	2015	N/A	1006	Finleyville-Elrama Road	N/A	Washington, PA
County	N/A	N/A	N/A	N/A	Gun Club Rd	Asphalt	Allegheny, PA
County	850	2015	N/A	2001	Bunola River Road	N/A	Allegheny, PA
County	150	2015	N/A	2003	Church Hollow Road	N/A	Allegheny, PA
County	N/A	N/A	N/A	N/A	McVicker Ln	Asphalt	Allegheny, PA
County	N/A	N/A	N/A	N/A	Rippel Rd	Asphalt	Allegheny, PA
County	150	2015	N/A	2005	Raccoon Run Road North	N/A	Allegheny, PA
County	N/A	N/A	N/A	N/A	Pangburn Hollow Rd	Asphalt	Allegheny, PA
County	200	2015	N/A	2005	Raccoon Run Road South	N/A	Allegheny, PA

N/A = Not available

a/ AADT = Annual average daily traffic.

Attachment Water Resources-2

Table 4.3.2-10 Hydrostatic Test Water Sources and Discharge Locations for the Mountain Valley Project and the Equitrans Expansion Project

(Track Changes and Changes Accepted)

DEIS TABLE 4.3.2-10

(Revised March 30, 2017)

Hydrostatic Test Water Sources and Discharge Locations for the Mountain Valley Project and the Equitrans Expansion Project

Segment/Facility Name	Start MP	End MP	Required Water (gallons)	Proposed Water Source			Proposed Test Water Discharge Location			
				MP	Proposed Water	Watershed	MP	Watershed	Volume (gallons)	Proposed Discharge Month
Mountain Valley Project										
01A	0.0	12.2	4,367,359		Reuse from Test Section 1B	Fishing Creek	0.0	Fishing Creek	4,367,359	Oct/Nov 2017
01B	12.2	25.9	4,904,330	26.0	Salem Fork Creek	Tenmile Creek	12.2	Tenmile Creek	536,970	
02A	25.9	41.3	5,512,896	26.0	Salem Fork Creek	Tenmile Creek	25.9	Tenmile Creek		
02B	41.3	48.0	2,398,468		Reuse from Test Section 2A		41.3	Middle West Fork River	3,114,428	Oct/Nov 2017
03A	48.0	65.5	6,264,655	74.9	Little Kanawha River	Leading Creek	48.0	Leading Creek	2,398,468	
03B	65.5	77.6	4,331,561		Reuse from Test Section 3A		65.5	Upper Little Kanawha	1,933,094	Oct/Nov 2017
04A	77.6	87.7	3,615,601		Reuse from Test Section 4B		77.3	Upper Little Kanawha	7,947,162	
04B	87.7	104.7	6,085,665	87.4	Elk River	Middle Elk River	87.7	Middle Elk River	2,470,064	Oct/Nov 2017
05A	104.7	120.1	5,512,896	120.0	Little Laurel Creek	Birch Creek	104.7	Birch Creek		
05B	120.1	127.8	2,756,448		Reuse from Test Section 5A		120.1	Outlet Gauley River	2,756,448	Oct/Nov 2017

DEIS TABLE 4.3.2-10 (continued)
(Revised March 30, 2017)

Hydrostatic Test Water Sources and Discharge Locations for the Mountain Valley Project and the Equitrans Expansion Project

				Proposed Water Source			Proposed Test Water Discharge Location			
Segment/Facility Name	**Start MP**	**End MP**	**Required Water (gallons)**	**MP**	**Proposed Water**	**Watershed**	**MP**	**Watershed**	**Volume (gallons)**	**Proposed Discharge Month**
06A	127.8	143.7	5,691,886	143.7	Meadow River	Hominy Creek	127.8	Hominy Creek	2,756,448	
06B	143.7	154.5	3,866,187		Reuse from Test Section 6A		143.7	Meadow River	1,825,699	Oct/Nov 2017
07A	154.5	170.6	5,763,483	170.6	Greenbrier River	Meadow Rive	154.5	Meadow River	3,866,187	
07B	170.6	181.8	4,009,379		Reuse from Test Section 7A		170.6	Wolf Creek – Greenbrier River	5,763,483	Oct/Nov 2017
08A	181.8	191.0	3,293,419		Reuse from Test Section 8B		181.8	Indian Creek	3,293,419	
08B	191.0	204.7	4,904,330	181.9	Indian Creek	East River – New River	191.0	East River – New River	1,610,911	Oct/Nov 2018
09A	204.7	218.1	4,796,936		Reuse from Test Section 9B		204.7	Sinking Creek – New River	4,796,936	
09B	218.1	234.0	5,691,886	233.8	Roanoke River	Upper Craig Creek	218.1	Upper Craig Creek	894,951	Oct/Nov 2018
10A	234.0	247.1	4,689,542	262.8	Blackwater River		234.0	Mason Creek-Roanoke River		
10B	247.1	256.9	3,508,207		Reuse from Test Section 10A		247.1	Upper Blackwater	1,181,335	
10C	256.9	262.7	2,076,286		Reuse from Test Section 10B		256.9	Upper Blackwater	1,431,921	Oct/Nov 2018

DEIS TABLE 4.3.2-10 (continued)
(Revised March 30, 2017)

Hydrostatic Test Water Sources and Discharge Locations for the Mountain Valley Project and the Equitrans Expansion Project

				Proposed Water Source			Proposed Test Water Discharge Location			
Segment/Facility Name	**Start MP**	**End MP**	**Required Water (gallons)**	**MP**	**Proposed Water**	**Watershed**	**MP**	**Watershed**	**Volume (gallons)**	**Proposed Discharge Month**
11A	262.7	265.2	894,951		Reuse from Test Section 11B		262.7	Upper Blackwater		
11B	265.2	279.9	5,262,310	262.1	Blackwater River	Upper Blackwater	265.2	Upper Blackwater	715,961	
11C	279.9	292.6	4,546,350		Reuse from Test Section 11B		279.9	Upper Pigg River	1,539,315	
11D	292.6	301.0	3,007,034		Reuse from Test Section 11C		292.6	Cherrystone Creek – Banister River	3,007,034	Oct/Nov 2018
Equitrans Expansion Project										
H-158	0	0.2	7,085	N/A	Municipal	N/A	-	Lower Monongahela	7,085	~~Nov 2017~~April 2018
H-305	0	0.1	12,043	N/A	Municipal	N/A	-	Lower Monongahela	12,043	~~Nov 2017~~April 2018
H-316	0	3.0	551,423	N/A	Municipal	N/A	-	Lower Monongahela	551,423	~~Nov 2017~~May 2018
H-318	0	0.6	44,666	N/A	Municipal	N/A	-	Lower Monongahela	44,666	~~Nov 2017~~May 2018
H-318	0.6	4.3	304,613	N/A	Municipal	N/A	-	Lower Monongahela	304,613	~~Nov 2017~~May 2018
H-319	0	<0.1	1,900	N/A	Municipal	N/A	-	Little Muskingum-Middle Island	1,900	~~Nov 2017~~March 2018
M-80	0	<0.1	1,810	N/A	Municipal	N/A	-	Lower Monongahela	1,810	~~Nov 2017~~April 2018

DEIS TABLE 4.3.2-10 (continued)
(Revised March 30, 2017)

Hydrostatic Test Water Sources and Discharge Locations for the Mountain Valley Project and the Equitrans Expansion Project

				Proposed Water Source			Proposed Test Water Discharge Location			
Segment/Facility Name	**Start MP**	**End MP**	**Required Water (gallons)**	**MP**	**Proposed Water**	**Watershed**	**MP**	**Watershed**	**Volume (gallons)**	**Proposed Discharge Month**
Mobley Tap	N/A	N/A	1,174	N/A	Municipal	N/A	-	Little Muskingum-Middle Island	1,174	~~Nov. 2017~~Jan 2018
Redhook Compressor Station	N/A	N/A	25,000	N/A	Municipal	N/A	-	Lower Monongahela	25,000	~~Nov 2017~~Sept 2018
Webster Interconnect	N/A	N/A	1,565	N/A	Municipal	N/A	-	Little Muskingum-Middle Island	1,565	~~Nov 2017~~March 2018

Note: Equitrans would either pump hydrostatic test water to the next segment for testing or discharge hydrostatic test water to uplands.

N/A = Not Applicable

DEIS TABLE 4.3.2-10

(Revised March 30, 2017)

Hydrostatic Test Water Sources and Discharge Locations for the Mountain Valley Project and the Equitrans Expansion Project

Segment/Facility Name	Start MP	End MP	Required Water (gallons)	Proposed Water Source			Proposed Test Water Discharge Location			
				MP	Proposed Water	Watershed	MP	Watershed	Volume (gallons)	Proposed Discharge Month
Mountain Valley Project										
01A	0.0	12.2	4,367,359		Reuse from Test Section 1B	Fishing Creek	0.0	Fishing Creek	4,367,359	Oct/Nov 2017
01B	12.2	25.9	4,904,330	26.0	Salem Fork Creek	Tenmile Creek	12.2	Tenmile Creek	536,970	
02A	25.9	41.3	5,512,896	26.0	Salem Fork Creek	Tenmile Creek	25.9	Tenmile Creek		
02B	41.3	48.0	2,398,468		Reuse from Test Section 2A		41.3	Middle West Fork River	3,114,428	Oct/Nov 2017
03A	48.0	65.5	6,264,655	74.9	Little Kanawha River	Leading Creek	48.0	Leading Creek	2,398,468	
03B	65.5	77.6	4,331,561		Reuse from Test Section 3A		65.5	Upper Little Kanawha	1,933,094	Oct/Nov 2017
04A	77.6	87.7	3,615,601		Reuse from Test Section 4B		77.3	Upper Little Kanawha	7,947,162	
04B	87.7	104.7	6,085,665	87.4	Elk River	Middle Elk River	87.7	Middle Elk River	2,470,064	Oct/Nov 2017
05A	104.7	120.1	5,512,896	120.0	Little Laurel Creek	Birch Creek	104.7	Birch Creek		
05B	120.1	127.8	2,756,448		Reuse from Test Section 5A		120.1	Outlet Gauley River	2,756,448	Oct/Nov 2017

DEIS TABLE 4.3.2-10 (continued)
(Revised March 30, 2017)

Hydrostatic Test Water Sources and Discharge Locations for the Mountain Valley Project and the Equitrans Expansion Project

				Proposed Water Source			Proposed Test Water Discharge Location			
Segment/Facility Name	**Start MP**	**End MP**	**Required Water (gallons)**	**MP**	**Proposed Water**	**Watershed**	**MP**	**Watershed**	**Volume (gallons)**	**Proposed Discharge Month**
06A	127.8	143.7	5,691,886	143.7	Meadow River	Hominy Creek	127.8	Hominy Creek	2,756,448	
06B	143.7	154.5	3,866,187		Reuse from Test Section 6A		143.7	Meadow River	1,825,699	Oct/Nov 2017
07A	154.5	170.6	5,763,483	170.6	Greenbrier River	Meadow Rive	154.5	Meadow River	3,866,187	
07B	170.6	181.8	4,009,379		Reuse from Test Section 7A		170.6	Wolf Creek – Greenbrier River	5,763,483	Oct/Nov 2017
08A	181.8	191.0	3,293,419		Reuse from Test Section 8B		181.8	Indian Creek	3,293,419	
08B	191.0	204.7	4,904,330	181.9	Indian Creek	East River – New River	191.0	East River – New River	1,610,911	Oct/Nov 2018
09A	204.7	218.1	4,796,936		Reuse from Test Section 9B		204.7	Sinking Creek – New River	4,796,936	
09B	218.1	234.0	5,691,886	233.8	Roanoke River	Upper Craig Creek	218.1	Upper Craig Creek	894,951	Oct/Nov 2018
10A	234.0	247.1	4,689,542	262.8	Blackwater River		234.0	Mason Creek-Roanoke River		
10B	247.1	256.9	3,508,207		Reuse from Test Section 10A		247.1	Upper Blackwater	1,181,335	
10C	256.9	262.7	2,076,286		Reuse from Test Section 10B		256.9	Upper Blackwater	1,431,921	Oct/Nov 2018

DEIS TABLE 4.3.2-10 (continued)
(Revised March 30, 2017)

Hydrostatic Test Water Sources and Discharge Locations for the Mountain Valley Project and the Equitrans Expansion Project

				Proposed Water Source			Proposed Test Water Discharge Location			
Segment/Facility Name	**Start MP**	**End MP**	**Required Water (gallons)**	**MP**	**Proposed Water**	**Watershed**	**MP**	**Watershed**	**Volume (gallons)**	**Proposed Discharge Month**
11A	262.7	265.2	894,951		Reuse from Test Section 11B		262.7	Upper Blackwater		
11B	265.2	279.9	5,262,310	262.1	Blackwater River	Upper Blackwater	265.2	Upper Blackwater	715,961	
11C	279.9	292.6	4,546,350		Reuse from Test Section 11B		279.9	Upper Pigg River	1,539,315	
11D	292.6	301.0	3,007,034		Reuse from Test Section 11C		292.6	Cherrystone Creek – Banister River	3,007,034	Oct/Nov 2018
Equitrans Expansion Project										
H-158	0	0.2	7,085	N/A	Municipal	N/A	-	Lower Monongahela	7,085	April 2018
H-305	0	0.1	12,043	N/A	Municipal	N/A	-	Lower Monongahela	12,043	April 2018
H-316	0	3.0	551,423	N/A	Municipal	N/A	-	Lower Monongahela	551,423	May 2018
H-318	0	0.6	44,666	N/A	Municipal	N/A	-	Lower Monongahela	44,666	May 2018
H-318	0.6	4.3	304,613	N/A	Municipal	N/A	-	Lower Monongahela	304,613	May 2018
H-319	0	<0.1	1,900	N/A	Municipal	N/A	-	Little Muskingum-Middle Island	1,900	March 2018
M-80	0	<0.1	1,810	N/A	Municipal	N/A	-	Lower Monongahela	1,810	April 2018

DEIS TABLE 4.3.2-10 (continued)
(Revised March 30, 2017)

Hydrostatic Test Water Sources and Discharge Locations for the Mountain Valley Project and the Equitrans Expansion Project

				Proposed Water Source			Proposed Test Water Discharge Location			
Segment/Facility Name	**Start MP**	**End MP**	**Required Water (gallons)**	**MP**	**Proposed Water**	**Watershed**	**MP**	**Watershed**	**Volume (gallons)**	**Proposed Discharge Month**
Mobley Tap	N/A	N/A	1,174	N/A	Municipal	N/A	-	Little Muskingum-Middle Island	1,174	Jan 2018
Redhook Compressor Station	N/A	N/A	25,000	N/A	Municipal	N/A	-	Lower Monongahela	25,000	Sept 2018
Webster Interconnect	N/A	N/A	1,565	N/A	Municipal	N/A	-	Little Muskingum-Middle Island	1,565	March 2018

Note: Equitrans would either pump hydrostatic test water to the next segment for testing or discharge hydrostatic test water to uplands.

N/A = Not Applicable

Attachment Soils-2

Appendix N-9 Soils and Soil Limitation Crossed by the Equitrans Expansion Project in Acres

(Track Changes and Changes Accepted)

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Soils and Soil Limitation Crossed by the Equitrans Expansion Project in Acres

Start MP	End MP	Distance (mile)	Map Unit Symbol	County	Soil Name	Prime Farmland a/	Farmland of Statewide Importance a/	Hydric Soils b/	Shallow Depth to Ground-water c/	Stony/ Rocky Soils d/	Poor Drainage Potential e/	Soils Prone to Erosion by Water f/	Soils Prone to Compaction g/	Poor Re-vegetation Potential h/
H-158/M-80 Pipelines														
0.0	0.0	0.0	CaD	Greene, PA	Calvin silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	2.1
0.0	0.1	0.0	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~1.9~~0.9
0.1	0.1	0.0	Nw	Greene, PA	Newark silt loam	0.0	1.9	0.0	0.0	0.0	0.0	1.9	1.9	1.9
0.1	0.1	0.0	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~1.9~~0.9
0.1	0.2	0.1	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
0.2	0.2	0.1	DaB	Greene, PA	Dekalb channery loam, 3 to 8 percent slopes	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
					SUBTOTAL	1	1.9	0.0	0.0	0.0	0.0	6	4	6.8~~8.8~~
H-305 Pipeline														
0.0	0.0	0.0	GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.1	0.1	DoC	Greene, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	~~1.3~~1.9	0.0	0.0	0.0	0.0	~~1.3~~1.9	~~1.3~~1.9	~~1.3~~1.9
0.1	0.1	0.0	DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~1.3~~0	1.3	1.3
					SUBTOTAL	0.0	1.9~~1.3~~	0.0	0.0	0.0	0.0	1.9~~2.6~~	3.2~~2.6~~	3.2~~2.6~~
H-316 Pipeline														
0.0	0.0	0.0	DoC	Greene, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.3	0.3
0.0	0.1	0.0	GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	~~0.7~~0.9	0.0	0.0	0.0	0.0	0.0	~~0.7~~0.9	~~0.7~~0.9	0.0

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0.1	0.1	0.0	DaB	Greene, PA	Dekalb channery loam, 3 to 8 percent slopes	~~0.1~~0.2	0.0	0.0	0.0	0.0	0.0	~~0.1~~0.2	0.0	0.0
0.1	0.1	0.1	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~0.9~~1.2	0.0	~~0.8~~1.2
0.1	0.2	0.0	Du	Greene, PA	Dunning silt loam	0.0	0.0	~~0.6~~0.8	~~0.6~~0.8	0.0	~~0.6~~0.8	0.0	~~0.6~~0.8	~~0.6~~0.8
0.2	0.2	0.1	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~0.8~~1.1
~~0.2~~	~~0.2~~	~~0.0~~	~~DtD~~	~~Greene, PA~~	~~Dunmore channery silt loam, 15 to 25 percent slopes~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~3.7~~	~~3.7~~
0.2	0.3	0.0	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~0.5~~0.6	0.0	~~0.5~~0.6
0.3	0.5	0.2	DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~3.7~~5.2	~~3.7~~5.2
0.5	0.5	0.0	WeB	Greene, PA	Westmorel and silt loam, 3 to 8 percent slopes	0.5	0.0	0.0	0.0	0.0	0.0	0.5	~~0.5~~0.7	~~0.5~~0.7
0.5	0.6	0.1	DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~1.7~~2.5	~~1.7~~2.5
0.6	0.9	0.3	DoC	Greene, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	~~5.4~~2.6	0.0	0.0	0.0	0.0	~~5.4~~2.6	~~5.4~~2.6	~~5.4~~2.6
0.9	1.0	0.1	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~2.5~~0.5	0.0	~~2.5~~0.5
1.0	1.0	0.0	UdB	Greene, PA	Udorthents , smoothed, gently sloping	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~0.9~~1.1	~~0.9~~1.1
1.0	1.1	0.1	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~2.5~~3.1	0.0	~~2.5~~3.1
1.1	1.2	0.1	DaB	Greene, PA	Dekalb channery loam, 3 to 8 percent slopes	~~1.5~~2.1	0.0	0.0	0.0	0.0	0.0	~~1.5~~2.1	0.0	0.0

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1.2	1.2	0.0	DaC	Greene, PA	Dekalb channery loam, 8 to 15 percent slopes	0.0	~~0.4~~0.6	0.0	0.0	0.0	0.0	~~0.4~~0.6	0.0	~~0.4~~0.6
1.2	1.3	0.0	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~0.6~~0.8	0.0	~~0.6~~0.8
1.3	1.3	0.1	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~0.9~~1.4
1.3	1.3	0.0	W	Greene, PA	Water	-	-	-	-	-	-	-	-	-
1.3	1.4	0.0	Nw	Greene, PA	Newark silt loam	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
1.4	1.4	0.0	GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	~~0.6~~0.8	0.0	0.0	0.0	0.0	0.0	~~0.6~~0.8	~~0.6~~0.8	0.0
1.4	1.5	0.1	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~1.4~~2.0	0.0	~~1.4~~2.0
1.5	1.5	0.0	DaC	Greene, PA	Dekalb channery loam, 8 to 15 percent slopes	0.0	~~1.0~~1.2	0.0	0.0	0.0	0.0	~~1.0~~1.2	0.0	~~1.0~~1.2
1.5	1.6	0.1	DaF	Greene, PA	Dekalb channery loam, 35 to 65 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~2.7~~3.4	0.0	~~2.7~~3.4
1.6	1.6	0.1	AgB	Greene, PA	Allegheny silt loam, 3 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~1.2~~2.1	~~1.2~~2.1	0.0
1.6	1.6	0.0	AgC	Greene, PA	Allegheny silt loam, 8 to 15 percent slopes	0.0	~~0.9~~1.2	0.0	0.0	0.0	0.0	~~0.9~~1.2	~~0.9~~1.2	~~0.9~~1.2
1.6	1.7	0.0	DaF	Greene, PA	Dekalb channery loam, 35 to 65 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~2.7~~0.7	0.0	~~2.7~~0.7
~~1.7~~	~~1.7~~	~~0.0~~	~~DaD~~	~~Greene, PA~~	~~Dekalb channery loam, 15 to 25 percent slopes~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~1.4~~	~~0.0~~	~~1.4~~
1.7	1.7	0.0	AgC	Greene, PA	Allegheny silt loam, 8 to 15 percent slopes	0.0	~~0.9~~1.2	0.0	0.0	0.0	0.0	~~0.9~~1.2	~~0.9~~1.2	~~0.9~~1.2
~~1.7~~	~~1.8~~	~~0.1~~	~~DtF~~	~~Greene, PA~~	~~Dormont- Culleoka complex, 25 to 50 percent slopes~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~1.8~~

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1.8	1.8	0.0	DaC	Greene, PA	Dekalb channery loam, 8 to 15 percent slopes	0.0	~~0.3~~0.5	0.0	0.0	0.0	0.0	~~0.3~~0.5	0.0	~~0.3~~0.5
1.8	1.9	0.0	DaF	Greene, PA	Dekalb channery loam, 35 to 65 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~0.5~~0.7	0.0	~~0.5~~0.7
1.9	2.0	0.1	AgB	Greene, PA	Allegheny silt loam, 3 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~1.9~~2.6	~~1.9~~2.6	0.0
2.0	2.1	0.1	DaB	Greene, PA	Dekalb channery loam, 3 to 8 percent slopes	~~1.1~~1.6	0.0	0.0	0.0	0.0	0.0	~~1.1~~1.6	0.0	0.0
2.1	2.1	0.0	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~1.8~~0.0
2.1	2.1	0.1	GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	~~2.7~~3.0	0.0	0.0	0.0	0.0	0.0	~~2.7~~3.0	~~2.7~~3.0	0.0
2.1	2.2	0.0	WeD	Greene, PA	Westmorel and silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~0.3~~0.5	~~0.3~~0.5	~~0.3~~0.5
2.2	2.3	0.1	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~1.8~~2.8
2.3	2.3	0.0	W	Greene, PA	Water	-	-	-	-	-	-	-	-	-
~~2.3~~	~~2.4~~	~~0.1~~	~~DtF~~	~~Greene, PA~~	~~Dormont- Culleoka complex, 25 to 50 percent slopes~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~18.2~~
2.4	2.5	0.1	DoC	Greene, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	~~0.5~~1.0	0.0	0.0	0.0	0.0	~~0.5~~1.0	~~0.5~~1.0	~~0.5~~1.0
~~2.5~~	~~2.6~~	~~0.1~~	~~DtF~~	~~Greene, PA~~	~~Dormont- Culleoka complex, 25 to 50 percent slopes~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~18.2~~
2.6	2.6	0.0	DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~0.8~~0.0	~~0.8~~0.0
2.6	2.6	0.0	BoB	Greene, PA	Brooke silty clay loam, 3 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~0.2~~0.5	~~0.2~~0.5	~~0.2~~0.5

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2.6	2.7	0.1	DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~0.8~~1.5	~~0.8~~1.5
2.7	2.8	0.1	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~18.2~~1.9
2.8	2.8	0.0	GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	~~1.0~~1.5	0.0	0.0	0.0	0.0	0.0	~~1.0~~1.5	~~1.0~~1.5	0.0
2.8	3.0	0.1	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~18.2~~3.5
					SUBTOTAL	~~8.2~~10.6	~~9.8~~8.7	~~0.6~~0.8	~~0.6~~0.8	~~0~~0	~~0.6~~0.8	~~37.2~~37.9	~~29.4~~30.1	~~118.5~~45.2
H-318 Pipeline														
0.0	0.1	0.1	GuB	Allegheny, PA	Guernsey silt loam, 3 to 8 percent slopes	~~1.2~~1.0	0.0	0.0	0.0	0.0	0.0	~~1.2~~1.0	~~1.2~~1.0	0.0
0.1	0.1	~~0.1~~0.0	CuD	Allegheny, PA	Culleoka- Dormont- Urban land complex, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~2.2~~0.2	~~2.2~~0.2	~~2.2~~0.2
0.1	0.2	0.1	GuC	Allegheny, PA	Guernsey silt loam, 8 to 15 percent slopes	0.0	~~1.0~~1.5	0.0	0.0	0.0	0.0	~~1.0~~1.5	0.0	0.0
0.2	0.2	0.0	CuD	Allegheny, PA	Culleoka- Dormont- Urban land complex, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~2.2~~3.2	~~2.2~~3.2	~~2.2~~3.2
0.2	0.3	0.1	GuD	Allegheny, PA	Guernsey silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~0.4~~0.6	~~0.4~~0.6	~~0.4~~0.6
~~0.3~~	~~0.4~~	~~0.1~~	~~CuD~~	~~Allegheny, PA~~	~~Culleoka- Dormont- Urban land complex, 15 to 25 percent slopes~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~2.2~~	~~2.2~~	~~2.2~~
0.4	~~0.6~~0.7	0.3	GuC	Allegheny, PA	Guernsey silt loam, 8 to 15 percent slopes	0.0	~~12.6~~12.9~~15~~.6	0.0	0.0	0.0	0.0	~~12.6~~12.9 15.6	0.0	0.0
~~0.6~~0.7	0.7	~~0.1~~0.0	GuD	Allegheny, PA	Guernsey silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~4.0~~0.9	~~4.0~~0.9	~~4.0~~0.9
~~0.7~~	~~0.8~~	~~0.1~~	~~GuC~~	~~Allegheny, PA~~	~~Guernsey silt loam, 8 to 15 percent slopes~~	~~0.0~~	~~12.6~~12.9	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~12.6~~12.9	~~0.0~~	~~0.0~~

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0.8	0.80.9	0.1	GSFSmF	Allegheny, PA	Gilpin, Weikert, and Culleoka shaly silt loams, very steep Strip mines, 25 to 75 percent slopes	0.0	0.0	0.0	0.0	2.13.5	0.0	2.13.5	0.03.5	2.13.5
0.80.9	0.9	0.10.0	GuCSmD	Allegheny, PA	Guernsey silt loam, 8 to 15 percent slopes Strip mines, 8 to 25 percent slopes Strip	0.0	1.20.0	0.0	0.0	0.00.40.6	0.0	1.20.0	0.00.40.6	0.00.40.6
0.9	1.0	0.1	CuDSfM	Allegheny, PA	Culleoka- Dormont- Urban land complex, 15 to 25 percent slopes Strip mines, 25 to 75 percent slopes	0.0	0.0	0.0	0.0	0.03.5	0.0	1.93.5	1.93.5	1.93.5
1.0	1.11.0	0.10.0	GSFGQF	Allegheny, PA	Gilpin, Weikert, and Culleoka shaly silt loams, very steep Gilpin- Upshur complex, very steep	0.0	0.0	0.0	0.0	2.10.0	0.0	2.10.9	0.00.9	2.10.9
1.1	1.21.1	0.10.0	DoCSfMSmF	Allegheny, PA	Dormont silt loam, 8 to 15 percent slopes Strip mines, 25 to 75 percent slopes	0.0	1.70.0	0.0	0.0	0.03.51.2	0.0	1.73.51.2	1.73.51.2	1.73.51.2
1.21.1	1.21,.1	0.10.0	CuDSmB	Allegheny, PA	Culleoka- Dormont- Urban land complex, 15 to 25 percent slopes Strip mines, 0 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	1.90.03.4	1.90.03.4	1.90.03.4
1.21.1	1.31.2	0.1	DoCSmF	Allegheny, PA	Dormont silt loam, 8 to 15 percent slopes Strip mines, 25 to 75 percent slopes	0.0	1.60.0	0.0	0.0	0.03.5	0.0	1.63.5	1.63.5	1.63.5
1.31.2	1.3	0.1	CwDSmB	Allegheny, PA	Culleoka- Westmorel and silt loams, 15 to 25 percent slopes Strip mines, 0 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.70.0	0.70.0	0.70.0
1.3	1.4	0.0	DoB	Allegheny, PA	Dormont silt loam, 3 to 8 percent slopes	1.7	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0

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Start MP	End MP	Distance (mile)	Map Unit Symbol	County	Soil Name	Prime Farmland a/	Farmland of Statewide Importance a/	Hydric Soils b/	Shallow Depth to Ground-water c/	Stony/ Rocky Soils d/	Poor Drainage Potential e/	Soils Prone to Erosion by Water f/	Soils Prone to Compaction g/	Poor Re-vegetation Potential h/
1.4	1.4	0.0	DoD	Allegheny, PA	Dormont silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
1.4	1.5	0.1	DoB	Allegheny, PA	Dormont silt loam, 3 to 8 percent slopes	1.7	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0
1.5	1.6	0.0	DoC	Allegheny, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	0.8	0.0	0.0	0.0	0.0	0.5	0.5	0.5
1.6	1.6	0.1	DoD	Allegheny, PA	Dormont silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
1.6	1.7	0.1	DoE	Allegheny, PA	Dormont silt loam, 25 to 35 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
1.7	1.8	0.1	GSF	Allegheny, PA	Gilpin, Weikert, and Culleoka shaly silt loams, very steep	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	1.7
1.81.3	1.81.3	0.10.0	SmF	Allegheny, PA	Strip mines, 25 to 75 percent slopes	0.0	0.0	0.0	0.0	1.33.5	0.0	1.33.5	1.33.5	1.33.5
1.81.3	1.91.3	0.10.0	CwC	Allegheny, PA	Culleoka- Westmorel and silt loams, 8 to 15 percent slopes	0.0	0.90.5	0.0	0.0	0.0	0.0	0.90.5	0.0	0.90.5
1.91.3	2.01.5	0.10.2	RaB	Allegheny, PA	Rayne silt loam, 3 to 8 percent slopes Allegheny	4.8	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.85.5
2.01.5	2.21.7	0.2	AgB	Allegheny, PA	Allegheny silt loam, 3 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	8.19.3	8.19.3	0.0
2.21.7	2.21.7	0.0	SmF	Allegheny, PA	Strip mines, 25 to 75 percent slopes	0.0	0.0	0.0	0.0	3.44.5	0.0	3.44.5	3.44.5	3.44.5
2.21.7	2.31.8	0.1	RaB	Allegheny, PA	Rayne silt loam, 3 to 8 percent slopes	4.85.52.1	0.0	0.0	0.0	0.0	0.0	0.0	4.85.52.1	4.85.52.1
2.31.8	2.41.9	0.1	SmF	Allegheny, PA	Strip mines, 25 to 75 percent slopes	0.0	0.0	0.0	0.0	3.41.4	0.0	3.41.4	3.41.4	3.41.4
1.9	1.9	0.0	SmB	Allegheny, PA	Strip mines, 0 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.02.4	0.02.4	0.02.4

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Start MP	End MP	Distance (mile)	Map Unit Symbol	County	Soil Name	Prime Farmland a/	Farmland of Statewide Importance a/	Hydric Soils b/	Shallow Depth to Ground-water c/	Stony/ Rocky Soils d/	Poor Drainage Potential e/	Soils Prone to Erosion by Water f/	Soils Prone to Compaction g/	Poor Re-vegetation Potential h/
~~1.9~~	~~1.9~~	~~0.0~~	~~SmF~~	~~Allegheny, PA~~	~~Strip mines, 25 to 75 percent slopes~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~3.4~~	~~0.0~~	~~3.4~~	~~3.4~~	~~3.4~~
~~2.41~~.9	~~2.62~~.2	0.3	SmD	Allegheny, PA	Strip mines, 8 to 25 percent slopes Strip	0.0	0.0	0.0	0.0	~~2.33.04~~.6	0.0	0.0	~~2.33.04~~.6	~~2.33.04~~.6
~~2.62.2~~	~~2.72.2~~	~~0.0~~	~~SmF~~	~~Allegheny, PA~~	~~Strip mines, 25 to 75 percent slopes~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~3.4~~	~~0.0~~	~~3.4~~	~~3.4~~	~~3.4~~
~~2.72~~.2	~~2.82~~.3	0.1	GQF	Allegheny, PA	Gilpin- Upshur complex, very steep	0.0	0.0	0.0	0.0	0.0	0.0	~~3.01.01~~.5	~~3.01.01~~.5	~~3.01.01~~.5
~~2.82~~.3	~~2.82~~.3	~~0.1~~0.0	RaB	Allegheny, PA	Rayne silt loam, 3 to 8 percent slopes	~~0.7~~1.6	0.0	0.0	0.0	0.0	0.0	0.0	~~0.7~~1.6	~~0.7~~1.6
~~2.82~~.3	~~2.82~~.3	0.0	GQF	Allegheny, PA	Gilpin- Upshur complex, very steep	0.0	0.0	0.0	0.0	0.0	0.0	~~1.00~~.1	~~1.00~~.1	~~1.00~~.1
~~2.82~~.3	~~2.92~~.4	0.1	URB	Allegheny, PA	Urban land- Rainsboro complex, gently sloping	0.0	0.0	0.0	0.0	0.0	0.0	~~1.8~~2.6	0.0	0.0
~~2.92.4~~	~~2.92.4~~	~~0.0~~	~~RaB~~	~~Allegheny, PA~~	~~Rayne silt loam, 3 to 8 percent slopes Rainsboro~~	~~0.7~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.7~~	~~0.7~~
~~2.92~~.4	~~3.02~~.5	0.1	RaA	Allegheny, PA	Rainsboro silt loam, 0 to 3 percent slopes	~~0.4~~0.7	0.0	0.0	0.0	0.0	0.0	0.0	~~0.4~~0.7	0.0
~~3.02~~.5	~~3.12~~.6	~~0.2~~0.1	W		Water	-	-	-	-	-	-	-	-	-
~~3.12~~.6	~~3.22~~.7	0.1	Us	Washington, PA	Udorthents , smoothed	~~0.6~~1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
~~3.22~~.7	~~3.32~~.8	~~0.0~~0.1	DtF	Washington, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~1.5~~1.9
~~3.32~~.8	~~3.42~~.9	0.1	CaC	Washington, PA	Calvin silt loam, 8 to 15 percent slopes	0.0	~~0.7~~1.3	0.0	0.0	0.0	0.0	~~0.7~~1.3	~~0.7~~1.3	~~0.7~~1.3
~~3.42~~.9	~~3.53~~.0	0.1	DtF	Washington, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5

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~~3.53~~.0	~~3.63~~.1	0.1	DoC	Washington, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	~~2.4~~5.0	0.0	0.0	0.0	0.0	~~2.4~~5.0	~~2.4~~5.0	~~2.4~~5.0
~~3.63~~.1	~~3.73~~.2	~~0.0~~0.1	DtF	Washington, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~1.7~~2.4
~~3.73~~.2	~~3.73~~.2	~~0.1~~0.0	WeB	Washington, PA	Westmorel and silt loam, 3 to 8 percent slopes	~~1.1~~1.5	0.0	0.0	0.0	0.0	0.0	~~1.1~~1.5	~~1.1~~1.5	~~1.1~~1.5
~~3.73~~.2	~~3.73~~.2	0.0	WeC	Washington, PA	Westmorel and silt loam, 8 to 15 percent slopes	0.0	0.5	0.0	0.0	0.0	0.0	0.5	0.5	0.5
~~3.73~~.2	~~3.83~~.3	~~0.0~~0.1	DtF	Washington, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~1.7~~0.7
~~3.83~~.3	~~3.83~~.3	0.0	CaC	Washington, PA	Calvin silt loam, 8 to 15 percent slopes	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.6	0.6
~~3.83~~.3	~~3.83~~.3	~~0.1~~0.0	DoC	Washington, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	~~1.8~~1.5	0.0	0.0	0.0	0.0	~~1.8~~1.5	~~1.8~~1.5	~~1.8~~1.5
~~3.83~~.3	~~3.83~~.3	0.0	DtF	Washington, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	~~1.7~~0.2
~~3.83~~.3	~~3.93~~.4	0.1	CaC	Washington, PA	Calvin silt loam, 8 to 15 percent slopes	0.0	~~1.8~~2.2	0.0	0.0	0.0	0.0	~~1.8~~2.2	~~1.8~~2.2	~~1.8~~2.2
~~3.93~~.4	~~3.93~~.4	0.0	CaD	Washington, PA	Calvin silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4
~~3.93~~.4	~~4.03~~.5	0.1	DoC	Washington, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	~~1.3~~1.6	0.0	0.0	0.0	0.0	~~1.3~~1.6	~~1.3~~1.6	~~1.3~~1.6
~~4.03~~.5	~~4.03~~.5	~~0.1~~0.0	CaD	Washington, PA	Calvin silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	~~3.4~~1.1	~~3.4~~1.1	~~3.4~~1.1
~~4.03~~.5	~~4.13~~.6	0.1	CaB	Washington, PA	Calvin silt loam, 3 to 8 percent slopes	0.0	~~0.9~~1.4	0.0	0.0	0.0	0.0	~~0.9~~1.4	~~0.9~~1.4	~~0.9~~1.4
~~4.13.6~~	~~4.23.7~~	~~0.1~~	~~CaD~~	~~Washington, PA~~	~~Calvin silt loam, 15 to 25 percent slopes~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~3.4~~	~~3.4~~	~~3.4~~

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Start MP	End MP	Distance (mile)	Map Unit Symbol	County	Soil Name	Prime Farmland a/	Farmland of Statewide Importance a/	Hydric Soils b/	Shallow Depth to Ground-water c/	Stony/ Rocky Soils d/	Poor Drainage Potential e/	Soils Prone to Erosion by Water f/	Soils Prone to Compaction g/	Poor Re-vegetation Potential h/
~~4.2~~3.7	~~4.3~~3.8	0.1	Fa	Washington, PA	Fairplay (marl) silt loam	0.0	0.0	~~0.5~~0.8	~~0.5~~0.8	0.0	~~0.5~~0.8	0.0	0.0	~~0.5~~0.8
~~4.3~~3.8	~~4.3~~3.8	0.0	WeD	Washington, PA	Westmorel and silt loam, 15 to 25 percent slopes	~~0.6~~0.8	0.0	0.0	0.0	0.0	0.0	~~0.6~~0.8	~~0.6~~0.8	~~0.6~~0.8
					SUBTOTAL	~~16.3~~13.6	~~37.3~~31.7	~~0.5~~0.8	~~0.5~~0.8	~~34.5~~15.8	~~0.5~~0.8	~~102.2~~75.2	~~89.3~~69.4	~~88.7~~66.4
H-319 Pipeline														
0.0	0.0	0.0	Sk	Wetzel. WV	Skidmore gravelly loam	0.0	~~0.8~~1.1	0.0	0.0	~~0.8~~1.1	0.0	0.0	0.0	0.0
					SUBTOTAL 0.0	1.1~~0.8~~		0.0	0.0	1.1~~0.8~~	0.0	0.0	0.0	0.0

USDA, 2015a; 2015b

Note: Totals may not sum correctly due to rounding.

~~Note: Includes acreages for associated Yards, Roads, and ATWS.~~

a/ Areas identified as prime farmland and farmland of statewide importance are identified as lands that meet the "all prime farmland" or "farmland of statewide and local importance" criteria as determined by NRCS, SSURGO.

~~b~~d/ Areas identified to have a severe compaction potential are limited to silt loam or finer based on particle size and ranked "somewhat poor," "poor," and "very poor" drainage as determined by SSURGO.

~~c~~f/ Areas identified as highly water erodible soils are ranked as "very severe" or "severe" by SSURGO erosion hazard (Off-Road, Off-Trail) criteria.

d/ ~~Areas identified as highly wind erodible soils have a wind erodibility index of 1 or 2 as determined by SSURGO.~~

~~e~~h/ Areas identified to have poor revegetation potential are lands that have a Capability Class 3 or greater, a low available water capacity and slopes greater than 8 percent as determined by SSURGO.

~~f~~b/ Areas identified to have a hydric rating include the all and partial criteria as determined by SSURGO.

~~g~~e/ Areas identified to have poor drainage potential are ranked as "poor" or "very poor" as determined by SSURGO.

~~h~~d/ Areas identified to have ~~stoney~~stony/rocky soils are soils that as determined by SSURGO. Include stone, rocky or cobbles in the soil name (does not include rock outcrops).

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H-158/M-80 Pipelines														
0.0	0.0	0.0	CaD	Greene, PA	Calvin silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	2.1
0.0	0.1	0.0	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
0.1	0.1	0.0	Nw	Greene, PA	Newark silt loam	0.0	1.9	0.0	0.0	0.0	0.0	1.9	1.9	1.9
0.1	0.1	0.0	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
0.1	0.2	0.1	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
0.2	0.2	0.1	DaB	Greene, PA	Dekalb channery loam, 3 to 8 percent slopes	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
					SUBTOTAL	1	1.9	0.0	0.0	0.0	0.0	6	4	6.8
H-305 Pipeline														
0.0	0.0	0.0	GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.1	0.1	DoC	Greene, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	1.9	0.0	0.0	0.0	0.0	1.9	1.9	1.9
0.1	0.1	0.0	DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0	1.3	1.3
					SUBTOTAL	0.0	1.9	0.0	0.0	0.0	0.0	1.9	3.2	3.2
H-316 Pipeline														
0.0	0.0	0.0	DoC	Greene, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.3	0.3
0.0	0.1	0.0	GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	0.9	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.0

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0.1	0.1	0.0	DaB	Greene, PA	Dekalb channery loam, 3 to 8 percent slopes	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
0.1	0.1	0.1	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.2
0.1	0.2	0.0	Du	Greene, PA	Dunning silt loam	0.0	0.0	0.8	0.8	0.0	0.8	0.0	0.8	0.8
0.2	0.2	0.1	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
0.2	0.3	0.0	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6
0.3	0.5	0.2	DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	5.2
0.5	0.5	0.0	WeB	Greene, PA	Westmorel and silt loam, 3 to 8 percent slopes	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.7
0.5	0.6	0.1	DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5
0.6	0.9	0.3	DoC	Greene, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6
0.9	1.0	0.1	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5
1.0	1.0	0.0	UdB	Greene, PA	Udorthents , smoothed, gently sloping	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
1.0	1.1	0.1	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	3.1
1.1	1.2	0.1	DaB	Greene, PA	Dekalb channery loam, 3 to 8 percent slopes	2.1	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
1.2	1.2	0.0	DaC	Greene, PA	Dekalb channery loam, 8 to 15 percent slopes	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.6

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1.2	1.3	0.0	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8
1.3	1.3	0.1	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
1.3	1.3	0.0	W	Greene, PA	Water	-	-	-	-	-	-	-	-	-
1.3	1.4	0.0	Nw	Greene, PA	Newark silt loam	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
1.4	1.4	0.0	GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	0.8	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0
1.4	1.5	0.1	DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0
1.5	1.5	0.0	DaC	Greene, PA	Dekalb channery loam, 8 to 15 percent slopes	0.0	1.2	0.0	0.0	0.0	0.0	1.2	0.0	1.2
1.5	1.6	0.1	DaF	Greene, PA	Dekalb channery loam, 35 to 65 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	3.4
1.6	1.6	0.1	AgB	Greene, PA	Allegheny silt loam, 3 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	0.0
1.6	1.6	0.0	AgC	Greene, PA	Allegheny silt loam, 8 to 15 percent slopes	0.0	1.2	0.0	0.0	0.0	0.0	1.2	1.2	1.2
1.6	1.7	0.0	DaF	Greene, PA	Dekalb channery loam, 35 to 65 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.7
1.7	1.7	0.0	AgC	Greene, PA	Allegheny silt loam, 8 to 15 percent slopes	0.0	1.2	0.0	0.0	0.0	0.0	1.2	1.2	1.2
1.8	1.8	0.0	DaC	Greene, PA	Dekalb channery loam, 8 to 15 percent slopes	0.0	0.5	0.0	0.0	0.0	0.0	0.5	0.0	0.5
1.8	1.9	0.0	DaF	Greene, PA	Dekalb channery loam, 35 to 65 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.7

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Start MP	End MP	Distance (mile)	Map Unit Symbol	County	Soil Name	Prime Farmland a/	Farmland of Statewide Importance a/	Hydric Soils b/	Shallow Depth to Ground-water c/	Stony/ Rocky Soils d/	Poor Drainage Potential e/	Soils Prone to Erosion by Water f/	Soils Prone to Compaction g/	Poor Re-vegetation Potential h/
1.9	2.0	0.1	AgB	Greene, PA	Allegheny silt loam, 3 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6	0.0
2.0	2.1	0.1	DaB	Greene, PA	Dekalb channery loam, 3 to 8 percent slopes	1.6	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
2.1	2.1	0.0	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.1	2.1	0.1	GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0
2.1	2.2	0.0	WeD	Greene, PA	Westmorel and silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
2.2	2.3	0.1	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
2.3	2.3	0.0	W	Greene, PA	Water	-	-	-	-	-	-	-	-	-
2.4	2.5	0.1	DoC	Greene, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
2.6	2.6	0.0	DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.6	2.6	0.0	BoB	Greene, PA	Brooke silty clay loam, 3 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
2.6	2.7	0.1	DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
2.7	2.8	0.1	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
2.8	2.8	0.0	GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	1.5	0.0	0.0	0.0	0.0	0.0	1.5	1.5	0.0

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2.8	3.0	0.1	DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
					SUBTOTAL	10.6	8.7	0.8	0.8	0	0.8	37.9	30.1	45.2
H-318 Pipeline														
0.0	0.1	0.1	GuB	Allegheny, PA	Guernsey silt loam, 3 to 8 percent slopes	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0
0.1	0.1	0.0	CuD	Allegheny, PA	Culleoka- Dormont- Urban land complex, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
0.1	0.2	0.1	GuC	Allegheny, PA	Guernsey silt loam, 8 to 15 percent slopes	0.0	1.5	0.0	0.0	0.0	0.0	1.5	0.0	0.0
0.2	0.2	0.0	CuD	Allegheny, PA	Culleoka- Dormont- Urban land complex, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	3.2	3.2	3.2
0.2	0.3	0.1	GuD	Allegheny, PA	Guernsey silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6
0.4	0.7	0.3	GuC	Allegheny, PA	Guernsey silt loam, 8 to 15 percent slopes	0.0	15.6	0.0	0.0	0.0	0.0	15.6	0.0	0.0
0.7	0.7	0.0	GuD	Allegheny, PA	Guernsey silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
0.9	0.9	0.0	SmD	Allegheny, PA	Strip mines, 8 to 25 percent slopes Strip	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.6
1.0	1.0	0.0	GQF	Allegheny, PA	Gilpin- Upshur complex, very steep	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9

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1.1	1.1	0.0	SmF	Allegheny, PA	Strip mines, 25 to 75 percent slopes	0.0	0.0	0.0	0.0	1.2	0.0	1.2	1.2	1.2
1.1	1,.1	0.0	SmB	Allegheny, PA	Strip mines, 0 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4
1.3	1.3	0.0	SmF	Allegheny, PA	Strip mines, 25 to 75 percent slopes	0.0	0.0	0.0	0.0	3.5	0.0	3.5	3.5	3.5
1.3	1.3	0.0	CwC	Allegheny, PA	Culleoka- Westmorel and silt loams, 8 to 15 percent slopes	0.0	0.5	0.0	0.0	0.0	0.0	0.5	0.0	0.5
1.3	1.5	0.2	RaB	Allegheny, PA	Rayne silt loam, 3 to 8 percent slopes Allegheny	4.8	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.8
1.5	1.7	0.2	AgB	Allegheny, PA	Allegheny silt loam, 3 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	9.3	9.3	0.0
1.7	1.7	0.0	SmF	Allegheny, PA	Strip mines, 25 to 75 percent slopes	0.0	0.0	0.0	0.0	4.5	0.0	4.5	4.5	4.5
1.7	1.8	0.1	RaB	Allegheny, PA	Rayne silt loam, 3 to 8 percent slopes	2.1	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1
1.8	1.9	0.1	SmF	Allegheny, PA	Strip mines, 25 to 75 percent slopes	0.0	0.0	0.0	0.0	1.4	0.0	1.4	1.4	1.4

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Start MP	End MP	Distance (mile)	Map Unit Symbol	County	Soil Name	Prime Farmland a/	Farmland of Statewide Importance a/	Hydric Soils b/	Shallow Depth to Ground-water c/	Stony/ Rocky Soils d/	Poor Drainage Potential e/	Soils Prone to Erosion by Water f/	Soils Prone to Compaction g/	Poor Re-vegetation Potential h/
1.9	1.9	0.0	SmB	Allegheny, PA	Strip mines, 0 to 8 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.4
1.9	2.2	0.3	SmD	Allegheny, PA	Strip mines, 8 to 25 percent slopes Strip	0.0	0.0	0.0	0.0	4.6	0.0	0.0	4.6	4.6
2.2	2.3	0.1	GQF	Allegheny, PA	Gilpin- Upshur complex, very steep	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
2.3	2.3	0.0	RaB	Allegheny, PA	Rayne silt loam, 3 to 8 percent slopes	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
2.3	2.3	0.0	GQF	Allegheny, PA	Gilpin- Upshur complex, very steep	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
2.3	2.4	0.1	URB	Allegheny, PA	Urban land- Rainsboro complex, gently sloping	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0
2.4	2.5	0.1	RaA	Allegheny, PA	Rainsboro silt loam, 0 to 3 percent slopes	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
2.5	2.6	0.1	W		Water	-	-	-	-	-	-	-	-	-
2.6	2.7	0.1	Us	Washington, PA	Udorthents , smoothed	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.7	2.8	0.1	DtF	Washington, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
2.8	2.9	0.1	CaC	Washington, PA	Calvin silt loam, 8 to 15 percent slopes	0.0	1.3	0.0	0.0	0.0	0.0	1.3	1.3	1.3
2.9	3.0	0.1	DtF	Washington, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
3.0	3.1	0.1	DoC	Washington, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	5.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0

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3.1	3.2	0.1	DtF	Washington, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
3.2	3.2	0.0	WeB	Washington, PA	Westmorel and silt loam, 3 to 8 percent slopes	1.5	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
3.2	3.2	0.0	WeC	Washington, PA	Westmorel and silt loam, 8 to 15 percent slopes	0.0	0.5	0.0	0.0	0.0	0.0	0.5	0.5	0.5
3.2	3.3	0.1	DtF	Washington, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
3.3	3.3	0.0	CaC	Washington, PA	Calvin silt loam, 8 to 15 percent slopes	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.6	0.6
3.3	3.3	0.0	DoC	Washington, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	1.5	0.0	0.0	0.0	0.0	1.5	1.5	1.5
3.3	3.3	0.0	DtF	Washington, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
3.3	3.4	0.1	CaC	Washington, PA	Calvin silt loam, 8 to 15 percent slopes	0.0	2.2	0.0	0.0	0.0	0.0	2.2	2.2	2.2
3.4	3.4	0.0	CaD	Washington, PA	Calvin silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4
3.4	3.5	0.1	DoC	Washington, PA	Dormont silt loam, 8 to 15 percent slopes	0.0	1.6	0.0	0.0	0.0	0.0	1.6	1.6	1.6
3.5	3.5	0.0	CaD	Washington, PA	Calvin silt loam, 15 to 25 percent slopes	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
3.5	3.6	0.1	CaB	Washington, PA	Calvin silt loam, 3 to 8 percent slopes	0.0	1.4	0.0	0.0	0.0	0.0	1.4	1.4	1.4
3.7	3.8	0.1	Fa	Washington, PA	Fairplay (marl) silt loam	0.0	0.0	0.8	0.8	0.0	0.8	0.0	0.0	0.8

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3.8	3.8	0.0	WeD	Washington, PA	Westmorel and silt loam, 15 to 25 percent slopes	0.8	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8
					SUBTOTAL	13.6	31.7	0.8	0.8	15.8	0.8	75.2	69.4	66.4
H-319 Pipeline														
0.0	0.0	0.0	Sk	Wetzel. WV	Skidmore gravelly loam	0.0	1.1	0.0	0.0	1.1	0.0	0.0	0.0	0.0
				SUBTOTAL	0.0	1.1		0.0	0.0	1.1	0.0	0.0	0.0	0.0

USDA, 2015a; 2015b

Note: Totals may not sum correctly due to rounding.

a/ Areas identified as prime farmland and farmland of statewide importance are identified as lands that meet the “all prime farmland” or “farmland of statewide and local importance” criteria as determined by NRCS, SSURGO.

g/ Areas identified to have a severe compaction potential are limited to silt loam or finer based on particle size and ranked “somewhat poor,” “poor,” and “very poor” drainage as determined by SSURGO.

f/ Areas identified as highly water erodible soils are ranked as “very severe” or “severe” by SSURGO erosion hazard (Off-Road, Off-Trail) criteria.

h/ Areas identified to have poor revegetation potential are lands that have a Capability Class 3 or greater, a low available water capacity and slopes greater than 8 percent as determined by SSURGO.

b/ Areas identified to have a hydric rating include the all and partial criteria as determined by SSURGO.

e/ Areas identified to have poor drainage potential are ranked as “poor” or “very poor” as determined by SSURGO.

d/ Areas identified to have stony/rocky soils are soils that as determined by SSURGO. Include stone, rocky or cobbles in the soil name (does not include rock outcrops).

Attachment Soils-3

Table 4.2.1-2	Soil Limitations along the Equitrans Expansion Project in Acres
Appendix N-10	Soils and Soil Limitation at the Equitrans Expansion Project Aboveground Facilities in Acres
Appendix N-11	Soils and Soil Limitations at the Equitrans Expansion Project Additional Temporary Workspaces in Acres
Appendix N-12	Soils and Soil Limitations at the Equitrans Expansion Project Access Roads in Acres
Appendix N-13	Soils and Soil Limitations at the Equitrans Expansion Project Contractor Yards and Staging Areas in Acres

(Track Changes and Changes Accepted)

DEIS TABLE 4.2.1-2
(Revised March 30, 2017)

Soil Limitations along the Equitrans Expansion Project in Acres a/

Facility b/	Water Erosion Potential c/		Wind Erosion Potential d/		Prime Farmland e/		Farmland of Statewide Importance e/		Hydric Soils e/		Compaction Potential f/		Stony / Rocky Soils e/		Revegetation Potential g/		Poor Drainage Potential e/	
	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp
H-305 Pipeline	~~0.56~~0.6	~~0.46~~1.83	0	0	0	0	~~0.55~~0.6	~~0.46~~1.83	0	0	~~0.56~~0.66	~~1.67~~3.88	0	0	~~0.61~~0.66	~~1.85~~3.88	0	0
H-316 Pipeline	~~10.87~~11.18	~~19.90~~33.50	0	0	~~2.76~~3.07	~~5.15~~10.47	3.76	~~7.25~~8.61	0.26	~~0.32~~0.54	~~9.72~~10.05	~~11.57~~27.80	~~0.34~~0.26	~~0.57~~0.54	~~18.20~~12.91	~~32.80~~53.2	0.26	~~0.32~~0.54
H-318 Pipeline	~~16.62~~17.62	~~43.82~~89.44	0	0	~~4.67~~4.94	~~7.31~~13.60	~~6.22~~6.26	~~17.67~~38.14	0.26	~~0.26~~0.54	~~15.62~~10.20	~~36.27~~84.82	~~2.89~~6.14	~~1.73~~10.39	~~19.14~~5.58	~~49.21~~96.17	0.26	~~0.26~~0.54
H-319 Pipeline	0	0	0	0	0	0	~~0.29~~0.63	~~0.53~~0.84	0	0	0	0	~~0.29~~0.63	~~0.53~~0.84	0	0	0	0
H-158/M-80 Pipelines	~~1.73~~2.85	~~2.87~~5.58	0	0	0.69	0.76	~~0.38~~1.45	~~1.58~~1.80	0	0	~~0.79~~0.85	~~4.18~~7.03	0	~~00~~.25	~~2.30~~5.67	~~4.72~~7.66	0	0
Pratt Compressor Station	1.45	0	0	0	5.95	0	0.08	0	0	0	6.0~~43~~	0	0	0	1.53	0	0	0
Redhook Compressor Station	~~24.88~~9.19	~~0~~18.72	0	0	~~15.26~~7.09	~~0~~8.33	~~7.89~~1.94	~~0.92~~6.9	0	0	~~17.65~~7.2	~~0~~3.42	0	0	~~11.00~~6.46	~~1.50~~17.15	0	0
Webster Interconnect	0	~~0.02~~0.04	0	0	0	0	~~0.82~~0.83	~~1.26~~3.41	0	0	0	0	~~0.82~~0.83	~~1.28~~3.41	0	~~0.02~~0	0	0
Mobley Tap Site (H-306)	0	0	0	0	0	0	~~0.72~~0.5	~~1.14~~2.7	0	0	0	0	~~0.72~~0.5	~~1.14~~2.7	0	0	0	0
Applegate L/R Site	~~0.40~~0.39	0	0	0	~~0.40~~0.39	0	0	0	0	0	~~0.40~~0.39	0	0	0	~~0.40~~0.39	0	0	0
Hartson L/R Site (H-148)	0.08	0	0	0	0	0	0	0	0	0	0.08	0	0	0	0.09	0	0	0
H-302 Tap L/R Site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0	0	0
Subtotal	***~~43.36~~56.~~59~~***	***~~149.11~~67.~~07~~***	***0***	***0***	***~~22.13~~29.~~73~~***	***~~33.16~~13.~~22~~***	***~~16.05~~20.~~71~~***	***~~64.23~~30.~~81~~***	***0.52***	***~~1.08~~0.~~58~~***	***~~35.46~~50.~~86~~***	***~~126.95~~53.~~69~~***	***~~8.36~~5.~~06~~***	***~~18.16~~5.~~25~~***	***~~33.45~~3.~~38~~***	***~~178.06~~90.~~1~~0***	***~~0.52~~0.~~52~~***	***~~1.08~~0.~~58~~***
Total Acres	~~123.66~~192.47		**0**		~~42.95~~55.29		~~51.52~~80.31		~~1.1~~1.6		~~104.55~~162.41		~~10.31~~26.52		~~143.48~~211.46		~~1.1~~1.6	

~~Source: USDA, 2015a; 2015b~~

Note: The values in each row do not necessarily add up to the total acreage for each facility, because of minor rounding

a/ The soil limitation impacts presented are the total impacts due to construction and operation of the EEP.

b The list of facilities includes the associated access roads, additional temporary workspaces, yards, and staging areas in the acreage calculations for each facility.

c/ Based on K factor for the whole soil (Kw), the representative slope, and the non-irrigated land capability rating; a Kw rating of “moderate” was elevated to “high” when associated with steep slopes and when the Non-irrigated Capability Subclass included an “e,” which indicates that erosion is a potential hazard for the soil type.

d/ Based on the Wind Erodibility Group scale; soils with a rating of 1 to 4 were ranked with a high potential for erosion due to wind.

e/ As designated by the NRCS.

f/ Based on 1) soils with poor drainage (somewhat poorly drained to poorly drained), 2) a high clay content (greater than 20 percent), or 3) a surface soil texture characterized as sandy clay loam or dominated by finer particles.

g/ Based on soils 1) that have a surface texture of sandy loam or coarser, 2) are somewhat excessively drained to excessively drained, 3) have slopes greater than 15 percent, or 4) have severe limitations (i.e., a Non-irrigated Capability Class of 3 or higher).

DEIS TABLE 4.2.1-2
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Soil Limitations along the Equitrans Expansion Project in Acres a/

Facility b/	Water Erosion Potential c/		Wind Erosion Potential d/		Prime Farmland e/		Farmland of Statewide Importance e/		Hydric Soils e/		Compaction Potential f/		Stony / Rocky Soils e/		Revegetation Potential g/		Poor Drainage Potential e/	
	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp
H-305 Pipeline	0.6	1.83	0	0	0	0	0.6	1.83	0	0	0.66	3.88	0	0	0.66	3.88	0	0
H-316 Pipeline	11.18	33.50	0	0	3.07	10.47	3.76	8.61	0.26	0.54	10.05	27.80	0.26	0.54	12.91	53.2	0.26	0.54
H-318 Pipeline	17.62	89.44	0	0	4.94	13.60	6.26	38.14	0.26	0.54	10.20	84.82	6.14	10.39	5.58	96.17	0.26	0.54
H-319 Pipeline	0	0	0	0	0	0	0.63	0.84	0	0	0	0	0.63	0.84	0	0	0	0
H-158/M-80 Pipelines	2.85	5.58	0	0	0.69	0.76	1.45	1.80	0	0	0.85	7.03	0	0.25	5.67	7.66	0	0
Pratt Compressor Station	1.45	0	0	0	5.95	0	0.08	0	0	0	6.03	0	0	0	1.53	0	0	0
Redhook Compressor Station	9.19	18.72	0	0	7.09	8.33	1.94	6.9	0	0	7.2	3.42	0	0	6.46	17.15	0	0
Webster Interconnect	0	0.04	0	0	0	0	0.83	3.41	0	0	0	0	0.83	3.41	0	0	0	0
Mobley Tap Site (H-306)	0	0	0	0	0	0	0.5	2.7	0	0	0	0	0.5	2.7	0	0	0	0
Applegate L/R Site	0.39	0	0	0	0.39	0	0	0	0	0	0.39	0	0	0	0.39	0	0	0
Hartson L/R Site (H-148)	0.08	0	0	0	0	0	0	0	0	0	0.08	0	0	0	0.09	0	0	0
H-302 Tap L/R Site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0	0	0
Subtotal	***43.36***	***149.11***	***0***	***0***	***22.13***	***33.16***	***16.05***	***64.23***	***0.52***	***1.08***	***35.46***	***126.95***	***8.36***	***18.16***	***33.4***	***178.060***	***0.52***	***1.08***
Total Acres	**192.47**		**0**		**55.29**		**80.31**		**1.6**		**162.41**		**26.52**		**211.46**		**1.6**	

Note: The values in each row do not necessarily add up to the total acreage for each facility, because of minor rounding

a/ The soil limitation impacts presented are the total impacts due to construction and operation of the EEP.

b The list of facilities includes the associated access roads, additional temporary workspaces, yards, and staging areas in the acreage calculations for each facility.

c/ Based on K factor for the whole soil (Kw), the representative slope, and the non-irrigated land capability rating; a Kw rating of “moderate” was elevated to “high” when associated with steep slopes and when the Non-irrigated Capability Subclass included an “e,” which indicates that erosion is a potential hazard for the soil type.

d/ Based on the Wind Erodibility Group scale; soils with a rating of 1 to 4 were ranked with a high potential for erosion due to wind.

e/ As designated by the NRCS.

f/ Based on 1) soils with poor drainage (somewhat poorly drained to poorly drained), 2) a high clay content (greater than 20 percent), or 3) a surface soil texture characterized as sandy clay loam or dominated by finer particles.

g/ Based on soils 1) that have a surface texture of sandy loam or coarser, 2) are somewhat excessively drained to excessively drained, 3) have slopes greater than 15 percent, or 4) have severe limitations (i.e., a Non-irrigated Capability Class of 3 or higher).

DEIS APPENDIX N-10
(Revised March 30, 2017)

Soils and Soil Limitation at the Equitrans Expansion Project Aboveground Facilities in Acres

Soil Map Unit Symbol	County	Soil Map Unit Name	Temporary Impact Acres	Temporary Impact % of Site	Permanent Impact Acres	Permanent Impact % of Site	Prime Farmland a/	Farmland of Statewide Importance a/	Hydric Soils b/	Shallow Depth to Groundwater c/	Stony/ Rocky Soils d/	Poor Drainage Potential e/	Soils Prone to Erosion by Water f/	Soils Prone to Compaction g/	Poor Revegetation Potential h/
Pratt Compressor Station															
DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	1.611.45	21	1.611,45	21	0	0	0	0	0	0	1.6145	0	1.6145
Hu	Greene, PA	Huntington silt loam	5.965.95	78	5.965.95	78	65.95	0	0	0	0	0	0	5.965	0
Nw	Greene, PA	Newark silt loam	0.10.08	1	0.10.08	1	0	0	0	0	0	0	0	0.108	0.081
W	Greene, PA	Water	0.01	<0.01	0.01	<0.01	0	0	-	-	-	-	-	-	-
		SUBTOTAL	7.49		7.49		5.95	0	0	0	0	0	1.45	6.03	1.53
Redhook Compressor Station															
DaB	Greene, PA	Dekalb channery loam, 3 to 8 percent slopes	3.083.07	179	3.082.58	179	05.65	30	0	0	0	0	3.085.65	0	0
DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	1.681.56	94	1.680.16	94	0	0	0	0	0	0	1.681.72	0	1.681.72
DoC	Greene, PA	Dormont silt loam, 8 to 15 percent slopes	65.98	3417	61.92	3417	0	67.9	0	0	0	0	67.9	67.9	67.9
DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent slopes	0.14	1<0.01	0.140	10	0	0	0	0	0	0	0	0.14	0.14
DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	1.351.81	8<0.01	1.350	80	0	0	0	0	0	0	0	0	1.81
GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	5.55.26	3115	5.54.35	3115	69.61	0	0	0	0	0	5.59.61	0	09.61
Nw	Greene, PA	Newark silt loam	0.9	<0.01	0	0	0	0	0	0	0	0	0	0.9	0.9
		SUBTOTAL	18.72		9.01		15.26	7.9	0	0	0	0	24.88	8.94	22.08
Webster Interconnect															
GpF	Wetzel, WV	Gilpin- Peabody complex, 35 to 70 percent slopes	0.02	<0.01	0.02	<0.01	0	0	0	0	0	0	0.02	0	0.02
Sk	Wetzel, WV	Skidmore gravelly loam	2.462.11	>9971	2.460.82	>9928	0	22.93	0	0	2.462.93	0	0	0	0
		SUBTOTAL	2.13		0.82		0	2.93	0	0	2.93	0	0.02	0	0.02
Mobley Tap Site (H-306)															
Sk	Wetzel, WV	Skidmore gravelly loam	0.51.63	10077	0.5	10023	0	12.13	0	0	0.52.13	0	0	0	0
		SUBTOTAL	1.63		0.5		0	2.13	0	0	2.13	0	0	0	0
Applegate L/R Site															
Gub	Allegheny, PA	Guernsey silt loam, 3 to 8 percent slopes	0.390	1000	0.39	100	0	0	0	0	0	0	0.39	0.39	0
		SUBTOTAL	0		0.39								0.39	0.39	
Hartson L/R Site (H-148)															
WeD	Washington, PA	Westmorel and silt loam, 15 to 25 percent slopes	0.110	1000	0.110.08	100	0	0	0	0	0	0	0.110.08	0.110.08	0.110.08
		SUBTOTAL	0		0.08								0.08	0.08	0.08
H-302 Tap L/R Site															
DtF	Greene, PA	Dormont-Culleoka complex, 25 to 50 percent slopes	0.330	1000	0.330.11	100	0	0	0	0	0	0	0	0	0.330.11
		SUBTOTAL	0		0.11		0	0	0	0	0	0	0	0	0.11

USDA, 2015a; 2015b

Note: Totals may not sum correctly due to rounding.

Note: Includes acreages for associated Yards, Roads, and ATWS.

a/ Areas identified as prime farmland and farmland of statewide importance are identified as lands that meet the “all prime farmland” or “farmland of statewide and local importance” criteria as determined by NRCS, SSURGO.

bg/ Areas identified to have a severe compaction potential are limited to silt loam or finer based on particle size and ranked “somewhat poor,” “poor,” and “very poor” drainage as determined by SSURGO.

cf/ Areas identified as highly water erodible soils are ranked as “very severe” or “severe” by SSURGO erosion hazard (Off-Road, Off-Trail) criteria.

d/ Areas identified as highly wind erodible soils have a wind erodibility index of 1 or 2 as determined by SSURGO.

eh/ Areas identified to have poor revegetation potential are lands that have a Capability Class 3 or greater, a low available water capacity and slopes greater than 8 percent as determined by SSURGO.

fb/ Areas identified to have a hydric rating include the all and partial criteria as determined by SSURGO.

ge/ Areas identified to have poor drainage potential are ranked as “poor” or “very poor” as determined by SSURGO.

hd/ Areas identified to have stoneystony/rocky soils are soils that as determined by SSURGO. Include stone, rocky or cobbles in the soil name (does not include rock outcrops).

DEIS APPENDIX N-10
(Revised March 30, 2017)

Soils and Soil Limitation at the Equitrans Expansion Project Aboveground Facilities in Acres

Soil Map Unit Symbol	County	Soil Map Unit Name	Temporary Impact Acres	Temporary Impact % of Site	Permanent Impact Acres	Permanent Impact % of Site	Prime Farmland a/	Farmland of Statewide Importance a/	Hydric Soils b/	Shallow Depth to Groundwater c/	Stony/ Rocky Soils d/	Poor Drainage Potential e/	Soils Prone to Erosion by Water f/	Soils Prone to Compaction g/	Poor Revegetation Potential h/
Pratt Compressor Station															
DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	1.45	21	1,45	21	0	0	0	0	0	0	1.45	0	1.45
Hu	Greene, PA	Huntington silt loam	5.95	78	5.95	78	5.95	0	0	0	0	0	0	5.95	0
Nw	Greene, PA	Newark silt loam	0.08	1	0.08	1	0	0	0	0	0	0	0	0.08	0.08
W	Greene, PA	Water	0.01	<0.01	0.01	<0.01	0	0	-	-	-	-	-	-	-
		SUBTOTAL	7.49		7.49		5.95	0	0	0	0	0	1.45	6.03	1.53
Redhook Compressor Station															
DaB	Greene, PA	Dekalb channery loam, 3 to 8 percent slopes	3.07	9	2.58	9	5.65	0	0	0	0	0	5.65	0	0
DaD	Greene, PA	Dekalb channery loam, 15 to 25 percent slopes	1.56	4	0.16	4	0	0	0	0	0	0	1.72	0	1.72
DoC	Greene, PA	Dormont silt loam, 8 to 15 percent slopes	5.98	17	1.92	17	0	7.9	0	0	0	0	7.9	7.9	7.9
DtD	Greene, PA	Dunmore channery silt loam, 15 to 25 percent slopes	0.14	<0.01	0	0	0	0	0	0	0	0	0	0.14	0.14
DtF	Greene, PA	Dormont- Culleoka complex, 25 to 50 percent slopes	1.81	<0.01	0	0	0	0	0	0	0	0	0	0	1.81
GdB	Greene, PA	Glenford silt loam, 3 to 8 percent slopes	5.26	15	4.35	15	9.61	0	0	0	0	0	9.61	0	9.61
Nw	Greene, PA	Newark silt loam	0.9	<0.01	0	0	0	0	0	0	0	0	0	0.9	0.9
		SUBTOTAL	18.72		9.01		15.26	7.9	0	0	0	0	24.88	8.94	22.08
Webster Interconnect															
GpF	Wetzel, WV	Gilpin- Peabody complex, 35 to 70 percent slopes	0.02	<0.01	0.0	<0.01	0	0	0	0	0	0	0.02	0	0.02
Sk	Wetzel, WV	Skidmore gravelly loam	2.11	71	0.82	28	0	2.93	0	0	2.93	0	0	0	0
		SUBTOTAL	2.13		0.82		0	2.93	0	0	2.93	0	0.02	0	0.02
Mobley Tap Site (H-306)															
Sk	Wetzel, WV	Skidmore gravelly loam	1.63	77	0.5	23	0	2.13	0	0	2.13	0	0	0	0
		SUBTOTAL	1.63		0.5		0	2.13	0	0	2.13	0	0	0	0
Applegate L/R Site															
Gub	Allegheny, PA	Guernsey silt loam, 3 to 8 percent slopes	0	0	0.39	100	0	0	0	0	0	0	0.39	0.39	0
		SUBTOTAL	0		0.39								0.39	0.39	
Hartson L/R Site (H-148)															
WeD	Washington, PA	Westmorel and silt loam, 15 to 25 percent slopes	0	0	0.08	100	0	0	0	0	0	0	0.08	0.08	0.08
		SUBTOTAL	0		0.08								0.08	0.08	0.08
H-302 Tap L/R Site															
DtF	Greene, PA	Dormont-Culleoka complex, 25 to 50 percent slopes	0	0	0.11	100	0	0	0	0	0	0	0	0	0.11
		SUBTOTAL	0		0.11		0	0	0	0	0	0	0	0	0.11

USDA, 2015a; 2015b

Note: Totals may not sum correctly due to rounding.

Note: Includes acreages for associated Yards, Roads, and ATWS.

a/ Areas identified as prime farmland and farmland of statewide importance are identified as lands that meet the “all prime farmland” or “farmland of statewide and local importance” criteria as determined by NRCS, SSURGO.

g/ Areas identified to have a severe compaction potential are limited to silt loam or finer based on particle size and ranked “somewhat poor,” “poor,” and “very poor” drainage as determined by SSURGO.

f/ Areas identified as highly water erodible soils are ranked as “very severe” or “severe” by SSURGO erosion hazard (Off-Road, Off-Trail) criteria.

h/ Areas identified to have poor revegetation potential are lands that have a Capability Class 3 or greater, a low available water capacity and slopes greater than 8 percent as determined by SSURGO.

b/ Areas identified to have a hydric rating include the all and partial criteria as determined by SSURGO.

e/ Areas identified to have poor drainage potential are ranked as “poor” or “very poor” as determined by SSURGO.

d/ Areas identified to have stony/rocky soils are soils that as determined by SSURGO. Include stone, rocky or cobbles in the soil name (does not include rock outcrops).

DEIS APPENDIX N-11
(Revised March 30, 2017)

Soils and Soil Limitations at the Equitrans Expansion Project Additional Temporary Workspaces in Acres

Facility a/	County	~~Total Area (acres)~~	~~Slopes >15 percent b/ (acres)~~	Designated Farmland c/		Hydric Soils d/ (acres)	Shallow Depth to Groundwater d/ (acres)	Stony / Rocky Soils d/ (acres)	Poor Drainage Potential d/ (acres)	Soils Prone to Erosion		Soils Prone to Soil Compaction g/ (acres)	Poor Revegetation Potential h/ (acres)
				Prime (acres)	Statewide Importance (acres)					By Water e/ (acres)	By Wind f/ (acres)		
H-305 Pipeline	Greene/PA	~~1.01~~	~~0.82~~	0	0.19	0	0	0	0	0.19	0	~~1.01~~1.0	~~1.01~~1.0
H-316 Pipeline	Greene/PA	~~20.43~~	~~14.17~~	~~2.21~~2.26	1.03	0	0	0	0	~~4.38~~4.44	0	~~2.95~~4.21	~~14.73~~14.69
H-318 Pipeline	Allegheny, Washington/PA	~~44.44~~	~~7.39~~	~~3.61~~3.25	~~12.06~~12.27	0.01	0.01	0	0.01	~~18.81~~29.47	0	~~10.30~~17.22	~~11.04~~26.62
H-319 Pipeline	Wetzel/WV	~~0.34~~	~~0~~	0	0.09	0	0	0.09	0	0	0	0	0
H-158/M-80 Pipelines	Greene/PA	~~3.87~~	~~0.05~~	0	0.48	0	0	0	0	0	0	0.48	0.53
Pratt Compressor Station	Greene/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Redhook Compressor Station	Greene/PA	~~1.50~~	~~0~~	0	0.92	0	0	0	0	0	0	1.50	1.50
Webster Interconnect	Wetzel/WV	~~1.55~~	~~0.02~~	0	~~1.53~~1.18	0	0	~~0.02~~1.18	0	0.02	0	~~1.53~~0	0.02
Mobley Tap Site (H-306)	Wetzel/WV	~~0.11~~	~~0~~	0	~~0.11~~1.07	0	0	~~0.11~~1.07	0	0	0	~~0.11~~0	0
Applegate L/R Site	Allegheny/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Hartson L/R Site (H-148)	Washington/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
H-302 Tap L/R Site	Greene/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Total Acres		~~**73.25**~~	~~**22.45**~~	~~**5.82**~~5.51	~~**16.41**~~17.23	**0.01**	**0.01**	~~**0.22**~~2.34	**0.01**	~~**23.40**~~34.12	**0**	~~**17.88**~~24.41	~~**28.83**~~44.36
~~**Percent of Total Acres**~~			~~**31%**~~	~~**8%**~~	~~**22%**~~	~~**0.01%**~~	~~**0.04%**~~	~~**0%**~~	~~**0.01%**~~	~~**32%**~~	~~**0%**~~	~~**24%**~~	~~**39%**~~

* The values in each row do not necessarily add up to the total acreage for each facility, because of minor rounding or mapping inconsistencies.

a/ The list of facilities includes the associated access roads, additional temporary workspaces, contractor yards, and staging areas in the acreage calculations for each facility. However, the additional temporary workspaces, access roads, contractor yards and staging areas are also reported separately.

b/ Soils characterized by the NRCS as having representative slopes of 15 percent or greater.

c/ As designated by the NRCS.

d/ As designated by the NRCS.

e/ Based on K factor for the whole soil (Kw), the representative slope, and the nonirrigated land capability rating; a Kw rating of “moderate” was elevated to “high” when associated with steep slopes and when the Nonirrigated Capability Subclass included an “e,” which indicates that erosion is a potential hazard for the soil type.

f/ Based on the Wind Erodibility Group scale; soils with a rating of 1 to 4 were ranked with a high potential for erosion due to wind.

g/ Based on 1) soils with poor drainage (somewhat poorly drained to poorly drained), 2) a high clay content (greater than 20 percent), or 3) a surface soil texture characterized as sandy clay loam or dominated by finer particles.

h/ Based on soils 1) that have a surface texture of sandy loam or coarser, 2) are somewhat excessively drained to excessively drained, 3) have slopes greater than 15 percent, or 4) have severe limitations (i.e., a Nonirrigated Capability Class of 3 or higher).

Sources: Soil Survey Staff 2015a, 2015b

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(Revised March 30, 2017)

Soils and Soil Limitations at the Equitrans Expansion Project Additional Temporary Workspaces in Acres

Facility a/	County	Designated Farmland c/		Hydric Soils d/ (acres)	Shallow Depth to Groundwater d/ (acres)	Stony / Rocky Soils d/ (acres)	Poor Drainage Potential d/ (acres)	Soils Prone to Erosion		Soils Prone to Soil Compaction g/ (acres)	Poor Revegetation Potential h/ (acres)
		Prime (acres)	Statewide Importance (acres)					By Water e/ (acres)	By Wind f/ (acres)		
H-305 Pipeline	Greene/PA	0	0.19	0	0	0	0	0.19	0	1.0	1.0
H-316 Pipeline	Greene/PA	2.26	1.03	0	0	0	0	4.44	0	4.21	14.69
H-318 Pipeline	Allegheny, Washington/PA	3.25	12.27	0.01	0.01	0	0.01	29.47	0	17.22	26.62
H-319 Pipeline	Wetzel/WV	0	0.09	0	0	0.09	0	0	0	0	0
H-158/M-80 Pipelines	Greene/PA	0	0.48	0	0	0	0	0	0	0.48	0.53
Pratt Compressor Station	Greene/PA	0	0	0	0	0	0	0	0	0	0
Redhook Compressor Station	Greene/PA	0	0.92	0	0	0	0	0	0	1.50	1.50
Webster Interconnect	Wetzel/WV	0	1.18	0	0	1.18	0	0.02	0	0	0.02
Mobley Tap Site (H-306)	Wetzel/WV	0	1.07	0	0	1.07	0	0	0	0	0
Applegate L/R Site	Allegheny/PA	0	0	0	0	0	0	0	0	0	0
Hartson L/R Site (H-148)	Washington/PA	0	0	0	0	0	0	0	0	0	0
H-302 Tap L/R Site	Greene/PA	0	0	0	0	0	0	0	0	0	0
Total Acres		**5.51**	**17.23**	**0.01**	**0.01**	**2.34**	**0.01**	**34.12**	**0**	**24.41**	**44.36**

* The values in each row do not necessarily add up to the total acreage for each facility, because of minor rounding or mapping inconsistencies.

a/ The list of facilities includes the associated access roads, additional temporary workspaces, contractor yards, and staging areas in the acreage calculations for each facility. However, the additional temporary workspaces, access roads, contractor yards and staging areas are also reported separately.

b/ Soils characterized by the NRCS as having representative slopes of 15 percent or greater.

c/ As designated by the NRCS.

d/ As designated by the NRCS.

e/ Based on K factor for the whole soil (Kw), the representative slope, and the nonirrigated land capability rating; a Kw rating of “moderate” was elevated to “high” when associated with steep slopes and when the Nonirrigated Capability Subclass included an “e,” which indicates that erosion is a potential hazard for the soil type.

f/ Based on the Wind Erodibility Group scale; soils with a rating of 1 to 4 were ranked with a high potential for erosion due to wind.

g/ Based on 1) soils with poor drainage (somewhat poorly drained to poorly drained), 2) a high clay content (greater than 20 percent), or 3) a surface soil texture characterized as sandy clay loam or dominated by finer particles.

h/ Based on soils 1) that have a surface texture of sandy loam or coarser, 2) are somewhat excessively drained to excessively drained, 3) have slopes greater than 15 percent, or 4) have severe limitations (i.e., a Nonirrigated Capability Class of 3 or higher).

Sources: Soil Survey Staff 2015a, 2015b

DEIS APPENDIX N-12

(Revised March 30, 2017)

Soils and Soil Limitations at the Equitrans Expansion Project Access Roads in Acres

Facility a/	County	~~Total Area (acres)~~	~~Slopes >15 percent b/ (acres)~~	Designated Farmland c/		Hydric Soils d/ (acres)	Shallow Depth to Groundwater d/ (acres)	Stony / Rocky Soils d/ (acres)	Poor Drainage Potential d/ (acres)	Soils Prone to Erosion		Soils Prone to Soil Compaction g/ (acres)	Poor Revegetation Potential h/ (acres)
				Prime (acres)	Statewide Importance (acres)					By Water e/ (acres)	By Wind f/ (acres)		
H-305 Pipeline	Greene/PA	~~0.52~~	~~0.34~~	0	0	0	0	0	0	0.34	0	0.34	0.34
H-316 Pipeline	Greene/PA	~~3.43~~	~~1.47~~	0.68	~~0.63~~0.82	0	0	0	0	~~2.15~~2.34	0	~~1.44~~1.72	~~2.41~~4.40
H-318 Pipeline	Allegheny, Washington/PA	~~3.80~~	~~0.75~~	~~0.76~~1.32	~~0.44~~0.31	0	0	~~0.14~~0.79	0	~~1.20~~2.02	0	~~1.46~~2.54	~~1.52~~3.29
H-319 Pipeline	Wetzel/WV	~~0.02~~	~~0~~	0	0.02	0	0	0.02	0	0	0	0	0
H-158/M-80 Pipelines	Greene/PA	~~0.49~~	~~0.23~~	0	~~0.13~~0.26	0	0	0	0	~~0.35~~0.22	0	~~0.35~~0.48	~~0.36~~0.49
Pratt Compressor Station	Greene/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Redhook Compressor Station	Greene/PA	~~0~~	~~0~~	~~0~~0.16	~~0~~0.02	0	0	0	0	~~0~~0.18	0	~~0~~0.18	~~0~~0.03
Webster Interconnect	Wetzel/WV	~~0.12~~	~~0~~	0	0.12	0	0	0.12	0	0	0	0	0
Mobley Tap Site (H-306)	Wetzel/WV	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Applegate L/R Site	Allegheny/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Hartson L/R Site (H-148)	Washington/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
H-302 Tap L/R Site	Greene/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Total Acres		~~8.38~~	~~2.79~~	~~1.44~~2.16	~~1.34~~1.55	0.00	0.00	~~0.28~~0.93	0.00	~~4.04~~5.1	0	~~3.59~~5.26	~~4.63~~8.55
~~Percent of Total Acres~~			~~33%~~	~~17%~~	~~16%~~	~~0.00%~~	~~0.00%~~	~~3%~~	~~0.00%~~	~~48%~~	~~0%~~	~~43%~~	~~55%~~

* The values in each row do not necessarily add up to the total acreage for each facility, because of minor rounding or mapping inconsistencies.

a/ The list of facilities includes the associated access roads, additional temporary workspaces, contractor yards, and staging areas in the acreage calculations for each facility. However, the additional temporary workspaces, access roads, contractor yards and staging areas are also reported separately.

b/ Soils characterized by the NRCS as having representative slopes of 15 percent or greater.

c/ As designated by the NRCS.

d/ As designated by the NRCS.

e/ Based on K factor for the whole soil (Kw), the representative slope, and the nonirrigated land capability rating; a Kw rating of “moderate” was elevated to “high” when associated with steep slopes and when the Nonirrigated Capability Subclass included an “e,” which indicates that erosion is a potential hazard for the soil type.

f/ Based on the Wind Erodibility Group scale; soils with a rating of 1 to 4 were ranked with a high potential for erosion due to wind.

g/ Based on 1) soils with poor drainage (somewhat poorly drained to poorly drained), 2) a high clay content (greater than 20 percent), or 3) a surface soil texture characterized as sandy clay loam or dominated by finer particles.

h/ Based on soils 1) that have a surface texture of sandy loam or coarser, 2) are somewhat excessively drained to excessively drained, 3) have slopes greater than 15 percent, or 4) have severe limitations (i.e., a Nonirrigated Capability Class of 3 or higher).

Sources: Soil Survey Staff 2015a, 2015b

DEIS APPENDIX N-12

(Revised March 30, 2017)

Soils and Soil Limitations at the Equitrans Expansion Project Access Roads in Acres

Facility a/	County	Designated Farmland c/		Hydric Soils d/ (acres)	Shallow Depth to Groundwater d/ (acres)	Stony / Rocky Soils d/ (acres)	Poor Drainage Potential d/ (acres)	Soils Prone to Erosion		Soils Prone to Soil Compaction g/ (acres)	Poor Revegetation Potential h/ (acres)
		Prime (acres)	Statewide Importance (acres)					By Water e/ (acres)	By Wind f/ (acres)		
H-305 Pipeline	Greene/PA	0	0	0	0	0	0	0.34	0	0.34	0.34
H-316 Pipeline	Greene/PA	0.68	0.82	0	0	0	0	2.34	0	1.72	4.40
H-318 Pipeline	Allegheny, Washington/PA	1.32	0.31	0	0	0.79	0	2.02	0	2.54	3.29
H-319 Pipeline	Wetzel/WV	0	0.02	0	0	0.02	0	0	0	0	0
H-158/M-80 Pipelines	Greene/PA	0	0.26	0	0	0	0	0.22	0	0.48	0.49
Pratt Compressor Station	Greene/PA	0	0	0	0	0	0	0	0	0	0
Redhook Compressor Station	Greene/PA	0.16	0.02	0	0	0	0	0.18	0	0.18	0.03
Webster Interconnect	Wetzel/WV	0	0.12	0	0	0.12	0	0	0	0	0
Mobley Tap Site (H-306)	Wetzel/WV	0	0	0	0	0	0	0	0	0	0
Applegate L/R Site	Allegheny/PA	0	0	0	0	0	0	0	0	0	0
Hartson L/R Site (H-148)	Washington/PA	0	0	0	0	0	0	0	0	0	0
H-302 Tap L/R Site	Greene/PA	0	0	0	0	0	0	0	0	0	0
Total Acres		**2.16**	**1.55**	**0.00**	**0.00**	**0.93**	**0.00**	**5.1**	**0**	**5.26**	**8.55**

* The values in each row do not necessarily add up to the total acreage for each facility, because of minor rounding or mapping inconsistencies.

a/ The list of facilities includes the associated access roads, additional temporary workspaces, contractor yards, and staging areas in the acreage calculations for each facility. However, the additional temporary workspaces, access roads, contractor yards and staging areas are also reported separately.

b/ Soils characterized by the NRCS as having representative slopes of 15 percent or greater.

c/ As designated by the NRCS.

d/ As designated by the NRCS.

e/ Based on K factor for the whole soil (Kw), the representative slope, and the nonirrigated land capability rating; a Kw rating of “moderate” was elevated to “high” when associated with steep slopes and when the Nonirrigated Capability Subclass included an “e,” which indicates that erosion is a potential hazard for the soil type.

f/ Based on the Wind Erodibility Group scale; soils with a rating of 1 to 4 were ranked with a high potential for erosion due to wind.

g/ Based on 1) soils with poor drainage (somewhat poorly drained to poorly drained), 2) a high clay content (greater than 20 percent), or 3) a surface soil texture characterized as sandy clay loam or dominated by finer particles.

h/ Based on soils 1) that have a surface texture of sandy loam or coarser, 2) are somewhat excessively drained to excessively drained, 3) have slopes greater than 15 percent, or 4) have severe limitations (i.e., a Nonirrigated Capability Class of 3 or higher).

Sources: Soil Survey Staff 2015a, 2015b

DEIS APPENDIX N-13

(Revised March 30, 2017)

Soils and Soil Limitations at the Equitrans Expansion Project Contractor Yards and Staging Areas in Acres

Facility a/	County	~~Total Area (acres)~~	~~Slopes >15 percent b/ (acres)~~	Designated Farmland c/		Hydric Soils d/ (acres)	Shallow Depth to Groundwater d/ (acres)	Stony / Rocky Soils d/ (acres)	Poor Drainage Potential d/ (acres)	Soils Prone to Erosion		Soils Prone to Soil Compaction g/ (acres)	Poor Revegetation Potential h/ (acres)
				Prime (acres)	Statewide Importance (acres)					By Water e/ (acres)	By Wind f/ (acres)		
H-305 Pipeline	Greene/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
H-316 Pipeline	Greene/PA	~~1.82~~	~~0~~	0	1.82	0	0	0	0	0	0	1.82	1.82
H-318 Pipeline	Allegheny, Washington/PA	~~6.21~~	~~2.19~~	0.37	0.12	0	0	0	0	0.37	0	~~3.415~~.86	5.84
H-319 Pipeline	Wetzel/WV	~~0.25~~	~~0~~	0	0.25	0	0	~~0~~0.25	0	0	0	0	0
H-158/M-80 Pipelines	Greene/PA	~~3.34~~	~~1.88~~	~~0.000~~.76	0.71	0	0	0	0	~~1.452~~.21	0	~~2.162~~.92	2.59
Pratt Compressor Station	Greene/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Redhook Compressor Station	Greene/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Webster Interconnect	Wetzel/WV	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Mobley Tap Site (H-306)	Wetzel/WV	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Applegate L/R Site	Allegheny/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Hartson L/R Site (H-148)	Washington/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
H-302 Tap L/R Site	Greene/PA	~~0~~	~~0~~	0	0	0	0	0	0	0	0	0	0
Total Acres		~~11.62~~	~~4.07~~	~~0.371~~.13	~~2.902~~.9	**0**	**0**	~~0~~0.25	**0**	~~1.822~~.58	**0**	~~7.39~~10.60	**10.25**
~~Percent of Total Acres~~			~~35%~~	~~3%~~	~~25%~~	~~0%~~	~~0%~~	~~0%~~	~~0%~~	~~16%~~	~~0%~~	~~64%~~	~~88%~~

* The values in each row do not necessarily add up to the total acreage for each facility, because of minor rounding or mapping inconsistencies.

a/ The list of facilities includes the associated access roads, additional temporary workspaces, contractor yards, and staging areas in the acreage calculations for each facility. However, the additional temporary workspaces, access roads, contractor yards and staging areas are also reported separately.

b/ Soils characterized by the NRCS as having representative slopes of 15 percent or greater.

c/ As designated by the NRCS.

d/ As designated by the NRCS.

e/ Based on K factor for the whole soil (Kw), the representative slope, and the nonirrigated land capability rating; a Kw rating of “moderate” was elevated to “high” when associated with steep slopes and when the Nonirrigated Capability Subclass included an “e,” which indicates that erosion is a potential hazard for the soil type.

f/ Based on the Wind Erodibility Group scale; soils with a rating of 1 to 4 were ranked with a high potential for erosion due to wind.

g/ Based on 1) soils with poor drainage (somewhat poorly drained to poorly drained), 2) a high clay content (greater than 20 percent), or 3) a surface soil texture characterized as sandy clay loam or dominated by finer particles.

h/ Based on soils 1) that have a surface texture of sandy loam or coarser, 2) are somewhat excessively drained to excessively drained, 3) have slopes greater than 15 percent, or 4) have severe limitations (i.e., a Nonirrigated Capability Class of 3 or higher).

Sources: Soil Survey Staff 2015a, 2015b

DEIS APPENDIX N-13

(Revised March 30, 2017)

Soils and Soil Limitations at the Equitrans Expansion Project Contractor Yards and Staging Areas in Acres

Facility a/	County	Designated Farmland c/		Hydric Soils d/ (acres)	Shallow Depth to Groundwater d/ (acres)	Stony / Rocky Soils d/ (acres)	Poor Drainage Potential d/ (acres)	Soils Prone to Erosion		Soils Prone to Soil Compaction g/ (acres)	Poor Revegetation Potential h/ (acres)
		Prime (acres)	Statewide Importance (acres)					By Water e/ (acres)	By Wind f/ (acres)		
H-305 Pipeline	Greene/PA	0	0	0	0	0	0	0	0	0	0
H-316 Pipeline	Greene/PA	0	1.82	0	0	0	0	0	0	1.82	1.82
H-318 Pipeline	Allegheny, Washington/PA	0.37	0.12	0	0	0	0	0.37	0	5.86	5.84
H-319 Pipeline	Wetzel/WV	0	0.25	0	0	0.25	0	0	0	0	0
H-158/M-80 Pipelines	Greene/PA	0.76	0.71	0	0	0	0	2.21	0	2.92	2.59
Pratt Compressor Station	Greene/PA	0	0	0	0	0	0	0	0	0	0
Redhook Compressor Station	Greene/PA	0	0	0	0	0	0	0	0	0	0
Webster Interconnect	Wetzel/WV	0	0	0	0	0	0	0	0	0	0
Mobley Tap Site (H-306)	Wetzel/WV	0	0	0	0	0	0	0	0	0	0
Applegate L/R Site	Allegheny/PA	0	0	0	0	0	0	0	0	0	0
Hartson L/R Site (H-148)	Washington/PA	0	0	0	0	0	0	0	0	0	0
H-302 Tap L/R Site	Greene/PA	0	0	0	0	0	0	0	0	0	0
Total Acres		**1.13**	**2.9**	**0**	**0**	**0.25**	**0**	**2.58**	**0**	**10.60**	**10.25**

* The values in each row do not necessarily add up to the total acreage for each facility, because of minor rounding or mapping inconsistencies.

a/ The list of facilities includes the associated access roads, additional temporary workspaces, contractor yards, and staging areas in the acreage calculations for each facility. However, the additional temporary workspaces, access roads, contractor yards and staging areas are also reported separately.

b/ Soils characterized by the NRCS as having representative slopes of 15 percent or greater.

c/ As designated by the NRCS.

d/ As designated by the NRCS.

e/ Based on K factor for the whole soil (Kw), the representative slope, and the nonirrigated land capability rating; a Kw rating of “moderate” was elevated to “high” when associated with steep slopes and when the Nonirrigated Capability Subclass included an “e,” which indicates that erosion is a potential hazard for the soil type.

f/ Based on the Wind Erodibility Group scale; soils with a rating of 1 to 4 were ranked with a high potential for erosion due to wind.

g/ Based on 1) soils with poor drainage (somewhat poorly drained to poorly drained), 2) a high clay content (greater than 20 percent), or 3) a surface soil texture characterized as sandy clay loam or dominated by finer particles.

h/ Based on soils 1) that have a surface texture of sandy loam or coarser, 2) are somewhat excessively drained to excessively drained, 3) have slopes greater than 15 percent, or 4) have severe limitations (i.e., a Nonirrigated Capability Class of 3 or higher).

Sources: Soil Survey Staff 2015a, 2015b

Attachment Air Quality-1

Table 4.11.1-6 Estimated Construction Emissions for the Equitrans Expansion Project

DEIS TABLE 4.11.1-6
(Revised March 30, 2017)

Estimated Construction Emissions for the Equitrans Expansion Project

Emission Source a/	Annual Pollutant Emissions (tpy)						
	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$	VOC	GHG b/
Year 1 Construction Emissions							
H-318 Pipeline (Allegheny and Washington Counties, Pennsylvania) c/							
Construction Equipment	1.3	0.9	0.1	0.1	0.1	0.1	313.3
Commuting Vehicles	0.1	0.3	<0.1	0.4	<0.1	<0.1	34.7
Fugitive Dust				0.3	0.1		
H-316 Pipeline (Greene County, Pennsylvania) c/							
Construction Equipment	1.3	0.9	0.1	0.1	0.1	0.1	310.2
Commuting Vehicles	0.1	0.3	<0.1	0.4	<0.1	<0.1	34.7
Fugitive Dust				0.3	0.1		
Mobley Tap (Wetzel County, West Virginia)							
Fugitive Dust				0.3	0.1		
Redhook Compressor Station, H-305, H-158, and M-80 Pipelines (Greene County, Pennsylvania) c/							
Construction Equipment	1.7	2.9	0.1	0.2	0.2	0.3	451.5
Commuting Vehicles	<0.1	0.2	<0.1	0.1	<0.1	<0.1	18.9
Fugitive Dust				0.1	0.1		
Webster Interconnect and H-319 Pipeline (Wetzel County, West Virginia)							
Construction Equipment	0.7	1.3	<0.1	0.1	0.1	0.8	267.2
Commuting Vehicles	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	2.6
Fugitive Dust				0.2	0.1		
Year 1 Total Emissions (tpy)	**5.1**	**6.8**	**0.2**	**2.7**	**1.1**	**0.7**	**1,433.1**
Year 2 Construction Emissions							
H-318 Pipeline (Allegheny and Washington Counties, Pennsylvania) c/							
Construction Equipment	6.5	4.5	0.3	0.6	0.6	0.7	1591.3
Commuting Vehicles	0.5	1.6	<0.1	2.1	0.2	0.1	366.4
Fugitive Dust				2.0	0.6		
H-316 Pipeline (Greene County, Pennsylvania) c/							
Construction Equipment	6.4	4.4	0.3	0.6	0.6	0.7	1575.8
Commuting Vehicles	0.5	1.5	<0.1	2.1	0.2	0.1	366.4
Fugitive Dust				1.9	0.6		
Mobley Tap (Wetzel County, West Virginia)							
Construction Equipment	10.9	12.1	0.8	1.5	1.5	1.7	4,450.3
Commuting Vehicles	<0.1	0.2	<0.1	3.9	0.4	<0.1	16.4
Fugitive Dust				2.0	0.6		
Redhook Compressor Station, H-305, H-158, and M-80 Pipelines (Greene County, Pennsylvania)							
Construction Equipment	10.3	17.8	0.5	1.1	1.1	1.6	2,844.6
Commuting Vehicles	0.2	2.1	<0.1	1.3	0.1	0.1	196.5
Fugitive Dust				1.0	0.4		
Webster Interconnect and H-319 Pipeline (Wetzel County, West Virginia)							
Construction Equipment	3.7	6.7	0.2	0.5	0.5	0.7	1,335.8
Commuting Vehicles	<0.1	0.1	<0.1	0.7	0.1	<0.1	13.0
Fugitive Dust				0.9	0.5		
Year 2 Total Emissions (tpy)	**39.3**	**51.2**	**2.1**	**22.1**	**7.9**	**5.7**	**12,756.6**
Year 3 Construction Emissions							
Pratt Station Decommissioning (Greene County, Pennsylvania)							
Construction Equipment	6.2	12.8	0.4	0.7	0.7	1.1	2,229.3
Commuting Vehicles	0.1	1.0	<0.1	0.6	0.1	<0.1	90.1

DEIS TABLE 4.11.1-6

(Revised March 30, 2017)

Estimated Construction Emissions for the Equitrans Expansion Project

Emission Source a/	Annual Pollutant Emissions (tpy)						
	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$	VOC	GHG b/
Fugitive Dust				0.6	0.3		
Year 3 Total Emissions (tpy)	**6.3**	**13.7**	**0.4**	**1.9**	**1.1**	**1.1**	**2,319.4**

a/ Emission sources for each project component are sorted by type of construction activity, as follows: Construction equipment include tailpipe emissions from heavy equipment; Commuting Vehicles include fugitives from on-road and off-road vehicle travel; Fugitive Dust includes fugitive dust from earthmoving fugitives and wind erosion.

b/ GHG includes only CO_2 emissions.

c/ Pipeline emissions are total emissions from all segments covered, including all construction activities pertaining to pipeline installation and associated access roads and facilities, as indicated in the pipeline milepost numbers and/or the pipeline name. H-318 include pipeline construction in two counties in PA [Allegheny (MPs 0.00 to 3.03) and Washington (MPs 3.03 to 4.26)]; H-316 (MPs 0.0 to 2.99), H-305 (MPs 0.0 to 0.10), H-158 (MPs 0.0 to 0.24), and M-80 (MPs 0.0 to 0.24) include pipeline construction in Greene County, PA; and H-319 include pipeline construction in Wetzel County, WV.

Document Content(s)