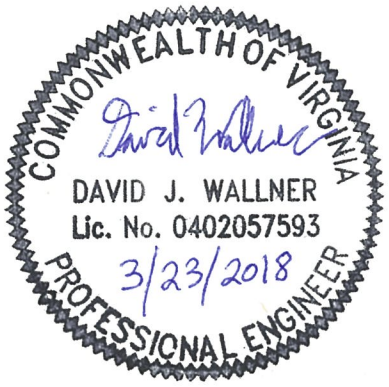
By virtue of this seal and signature, all supporting documents included in this package are accurate and support the design presented herein.



EXISTING TEMPORARY ACCESS ROAD MVP-GI-243.01

EXISTING TEMPORARY ACCESS ROAD MVP-GI-242.01

EXISTING TEMPORARY ACCESS ROAD MVP-GI-242

EXISTING TEMPORARY ACCESS ROAD MVP-GI-244

EXISTING TEMPORARY ACCESS ROAD MVP-GI-245.01

EXISTING TEMPORARY ACCESS ROAD MVP-GI-245.02

EXISTING TEMPORARY ACCESS ROAD MVP-CR-258.02

EXISTING TEMPORARY ACCESS ROAD MVP-CR-258.01

EXISTING TEMPORARY ACCESS ROAD MVP-GI-256.01

EXISTING PERMANENT ACCESS ROAD MVP-GI-256

EXISTING PERMANENT ACCESS ROAD MVP-GI-253.01

EXISTING TEMPORARY ACCESS ROAD MVP-MN-258.05

EXISTING TEMPORARY ACCESS ROAD MVP-MN-258.04

EXISTING TEMPORARY ACCESS ROAD MVP-MN-258.03

EXISTING TEMPORARY ACCESS ROAD MVP-MN-266.02

EXISTING TEMPORARY ACCESS ROAD MVP-MN-266.03

EXISTING PERMANENT ACCESS ROAD MVP-MN-268

PROPOSED TEMPORARY ACCESS ROAD MVP-MN-262.01

PROPOSED PERMANENT ACCESS ROAD MVP-MN-262

EXISTING TEMPORARY ACCESS ROAD MVP-MN-266

EXISTING TEMPORARY ACCESS ROAD MVP-MN-270

EXISTING TEMPORARY ACCESS ROAD MVP-GI-256.02

EXISTING TEMPORARY ACCESS ROAD MVP-GI-253.02

EXISTING TEMPORARY ACCESS ROAD MVP-GI-253.01

EXISTING PERMANENT ACCESS ROAD MVP-MLV-AR-25

EXISTING TEMPORARY ACCESS ROAD MVP-GI-249.02

EXISTING TEMPORARY ACCESS ROAD MVP-GI-249.01

EXISTING PERMANENT ACCESS ROAD MVP-GI-249.03

EXISTING PERMANENT ACCESS ROAD MVP-GI-249

MP 206.0 MP 206.5 MP 207.0 MP 207.5 MP 208.0 MP 208.5 MP 209.0 MP 209.5 MP 210.0 MP 210.5 MP 211.0 MP 211.5 MP 212.0 MP 212.5 MP 213.0 MP 213.5 MP 214.0 MP 214.5 MP 215.0 MP 215.5 MP 216.0 MP 216.5 MP 217.0 MP 217.5 MP 218.0 MP 218.5 MP 219.0 MP 219.5 MP 220.0 MP 220.5 MP 221.0 MP 221.5 MP 222.0 MP 222.5 MP 223.0 MP 223.5 MP 224.0 MP 224.5 MP 225.0 MP 225.5 MP 226.0 MP 226.5 MP 227.0 MP 227.5 MP 228.0 MP 228.5 MP 229.0

13.01 13.02 13.03 13.04 13.05 13.06 13.07 13.08 13.09 13.10 13.11 13.12 13.13 13.14 13.15 13.16 13.17 13.18 13.19 13.20 13.21 13.22 13.23 13.24 13.25 13.26 13.27 13.28 13.29 13.30 13.31 13.32 13.33 13.34 13.35 13.36 13.37 13.38 13.39 13.40 13.41 13.42 13.43 13.44 13.45 13.46 13.60 13.61 13.62 13.63 13.64 13.65 13.66 13.67 13.68 13.69 13.70 13.71 13.72 13.73 13.74 13.75 13.76 13.77 13.78

Spread G

Spread H

MATCHLINE SHEET 13.02PC

The following locations where waterbars occur on ridges will have 10-ft end treatments at both ends of the waterbar. All other waterbars will have single 20-ft end treatments

SPREAD 9				
11137+00	11590+00/ 48+80	12142+80	12190+75	12266+10
11340+10	11590+00/ 50+00	12143+25	12191+50	12266+75
11365+30	11590+00/ 51+00	12143+75	12193+00	12317+00
11541+25	11590+00/ 51+50	12144+10	12193+75	12318+75
11563+80	11590+00/ 52+00	12144+60	12197+00	
11564+30	11590+00/ 52+50	12145+10	12199+50	
11564+80	11590+00/ 65+80	12145+90	12200+00	
11565+30	11590+00/ 75+50	12150+00	12201+30	
11565+80	11735+50	12150+50	12252+25	
11566+30	11783+80	12151+00	12252+75	
11566+80	11789+00	12176+30	12257+75	
11567+30	11865+10	12177+25	12258+25	
11567+80	11856+60	12178+25	12258+75	
11568+30	12117+75	12179+25	12259+25	
11568+80	12120+50	12185+00	12261+50	
11569+30	12121+00	12187+00	12263+50	
11569+80	12142+40	12190+00	12265+50	

SCALE: 1" = 3,200'

3,200 0 3,200 6,400

PERMANENT WATER BARS/SLOPE BREAKERS/RIGHT-OF-WAY DIVERSIONS WILL NOT BE INSTALLED IN THE FOLLOWING AREAS: AGRICULTURAL AREAS (CULTIVATED FIELDS, MEADOW/HAYFIELDS, PASTURE LANDS, TREE FARMS, ETC.), RESIDENTIAL AREAS (MANAGED TURF AREAS) OR AS REQUESTED BY THE LANDOWNER. NON EARTHEN TEMPORARY BREAKERS CONSTRUCTED OF MATERIALS SUCH AS SILT FENCE, STAKED STRAW BALES OR COMPOST FILTER SOCK MAY BE IMPLEMENTED IN THE ABOVE MENTIONED AREAS BASED ON FIELD CONDITIONS AND UPON LANDOWNER APPROVAL. FOLLOWING REVEGETATION OF THE DISTURBED LIMITS, THESE TEMPORARY BMPS WILL BE REMOVED.

ALL SHEETS IN THIS SPREAD DEVELOPED USING THE FOLLOWING DATA SOURCES: IMAGERY FROM ESRI STREAMING DATA 2014, DELINEATED STREAMS SURVEYED BY TETRA TECH INC. 2014 TO 2017, ELEVATION DATA DERIVED FROM LIDAR PROVIDED BY EQT 2016, SOILS FROM NRCS GRIDDED SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE 2014, FOREST COVER LAND USE FROM THE VGIN LAND COVER DATASET, TRANSPORTATION DATA FROM VITA MAP LAYER 2016, EXISTING AND PROPOSED ROADS WERE SURVEYED BY EQT

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.01(S9).dwg PLOTTED ON: 3/21/2018 3:00 PM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

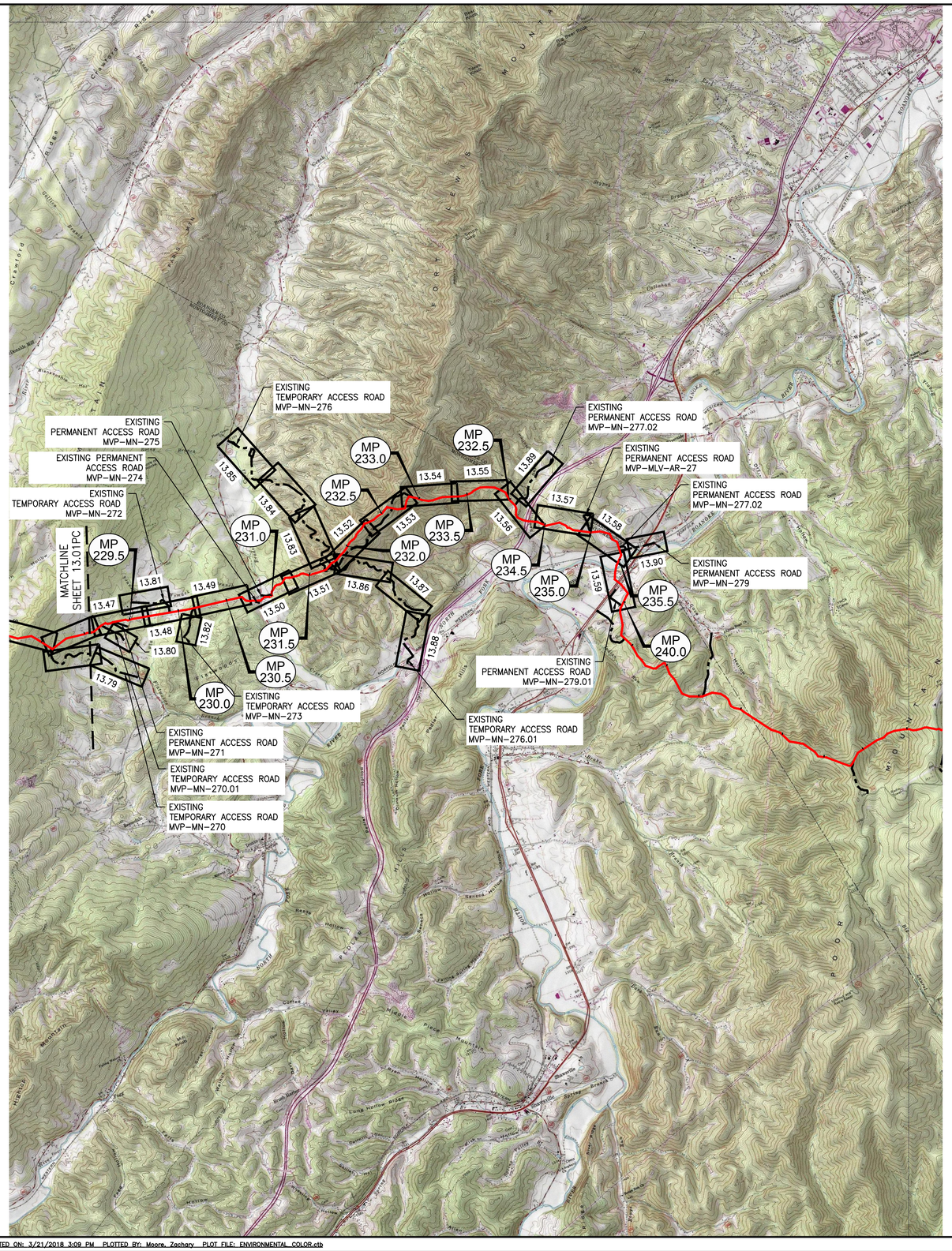
MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	
SHT. NO. 13.01PC OF 13.90PC	



The following locations where waterbars occur on ridges will have 10-ft end treatments at both ends of the waterbar. All other waterbars will have single 20-ft end treatments

SPREAD 9

11137+00	11590+00/ 48+80	12142+80	12190+75	12266+10
11340+10	11590+00/ 50+00	12143+25	12191+50	12266+75
11365+30	11590+00/ 51+00	12143+75	12193+00	12317+00
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11563+80	11590+00/ 52+00	12144+60	12197+00	
11564+30	11590+00/ 52+50	12145+10	12199+50	
11564+80	11590+00/ 65+80	12145+90	12200+00	
11565+30	11590+00/ 75+50	12150+00	12201+30	
11565+80	11735+50	12150+50	12252+25	
11566+30	11783+80	12151+00	12252+75	
11566+80	11789+00	12176+30	12257+75	
11567+30	11865+10	12177+25	12258+25	
11567+80	11856+60	12178+25	12258+75	
11568+30	12117+75	12179+25	12259+25	
11568+80	12120+50	12185+00	12261+50	
11569+30	12121+00	12187+00	12263+50	
11569+80	12142+40	12190+00	12265+50	

SCALE: 1" = 3,200'

3,200 0 3,200 6,400

PERMANENT WATER BARS/SLOPE BREAKERS/RIGHT–OF–WAY DIVERSIONS WILL NOT BE INSTALLED IN THE FOLLOWING AREAS: AGRICULTURAL AREAS (CULTIVATED FIELDS, MEADOW/HAYFIELDS, PASTURE LANDS, TREE FARMS, ETC.), RESIDENTIAL AREAS (MANAGED TURF AREAS) OR AS REQUESTED BY THE LANDOWNER. NON EARTHEN TEMPORARY BREAKERS CONSTRUCTED OF MATERIALS SUCH AS SILT FENCE, STAKED STRAW BALES OR COMPOST FILTER SOCK MAY BE IMPLEMENTED IN THE ABOVE MENTIONED AREAS BASED ON FIELD CONDITIONS AND UPON LANDOWNER APPROVAL. FOLLOWING REVEGETATION OF THE DISTURBED LIMITS, THESE TEMPORARY BMPS WILL BE REMOVED.

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N

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

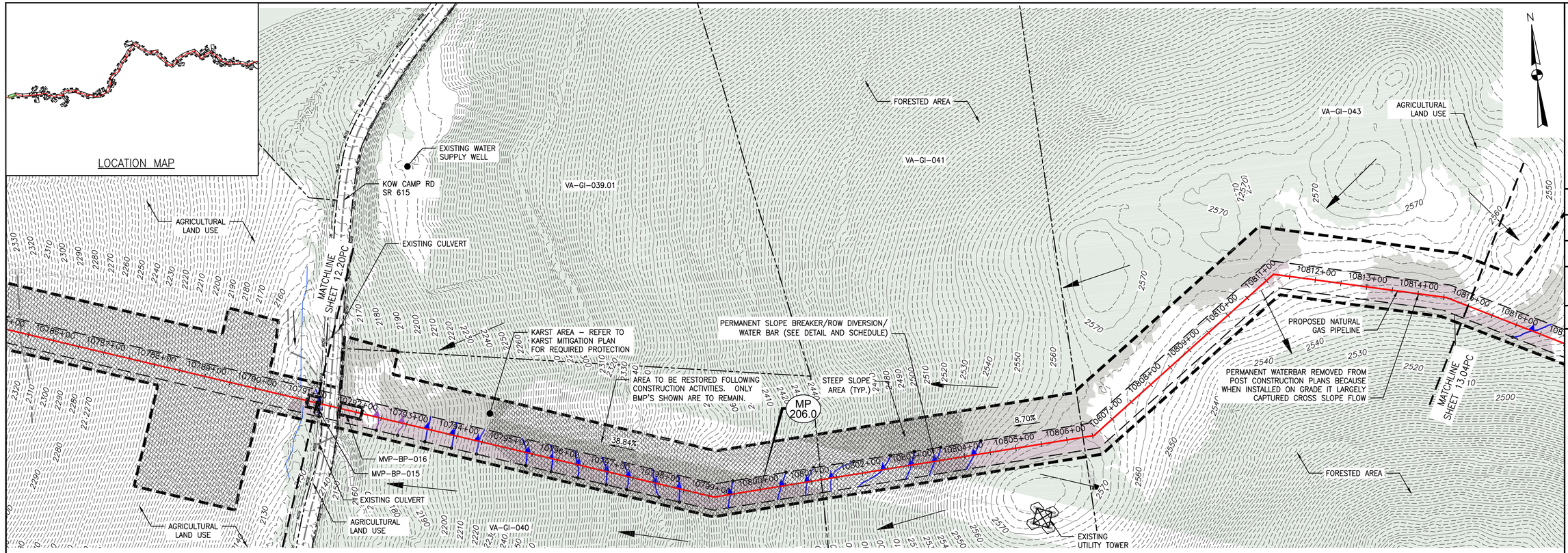
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	

SHT. NO. 13.02PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.02(S9).dwg PLOTTED ON: 3/21/2018 3:09 PM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

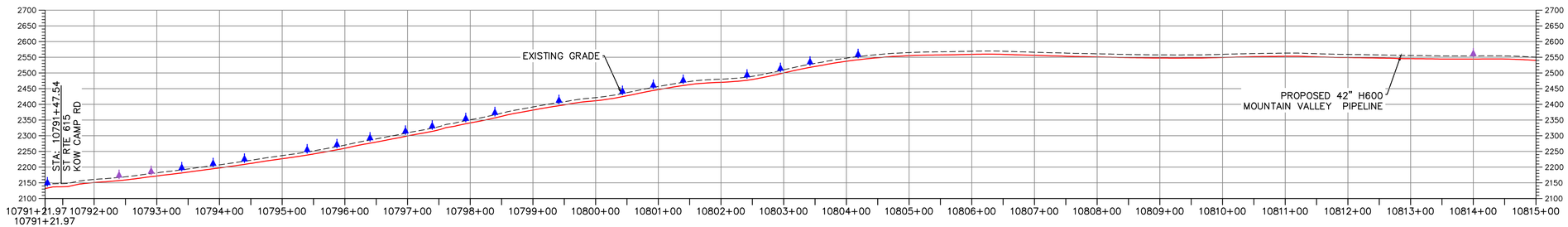
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus_Shale_Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.03(S9).dwg PLOTTED ON: 3/20/2018 12:34 PM PLOTTED BY: Najeski, Nichole PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

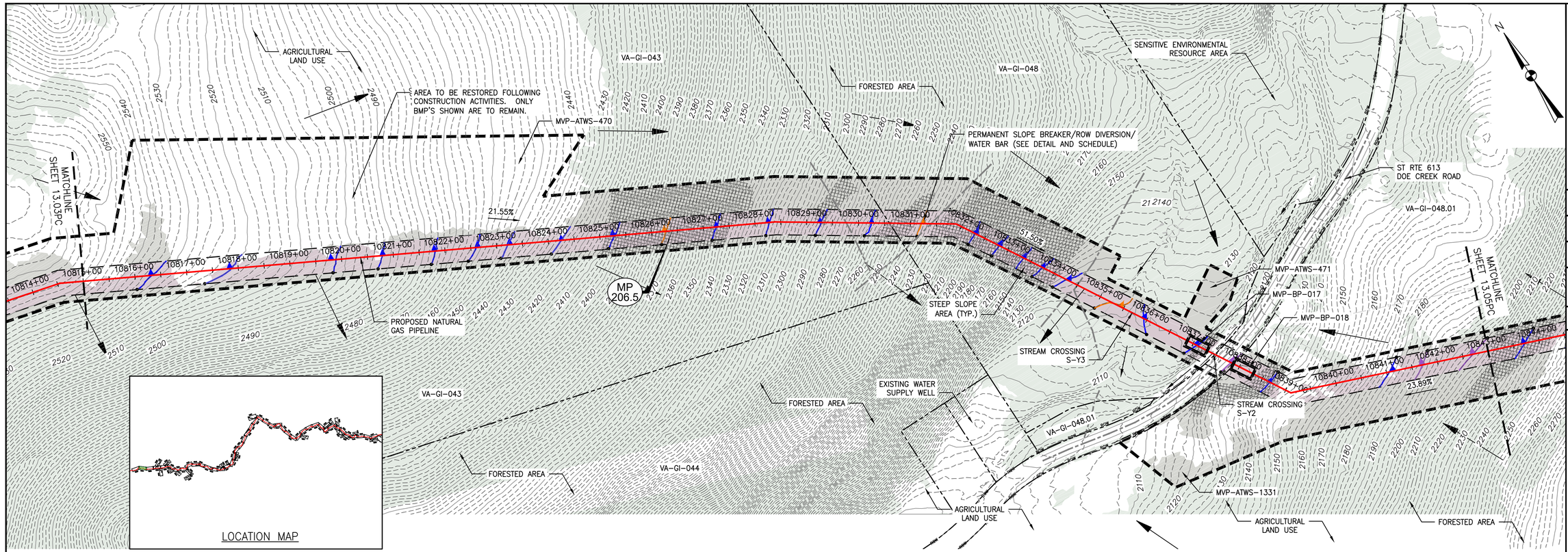
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

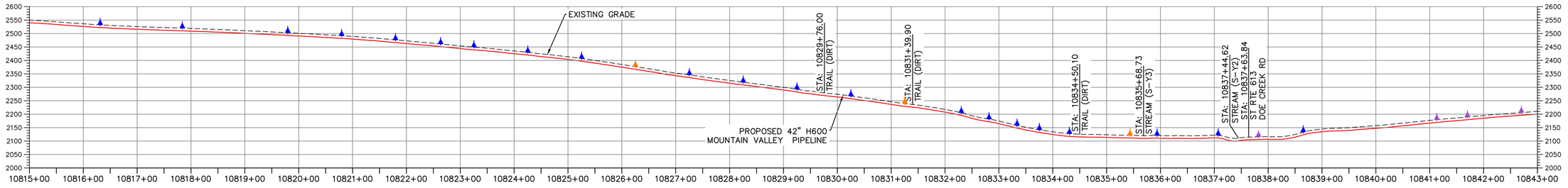
SHT. NO. 13.03PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.04(S9).dwg PLOTTED ON: 3/20/2018 12:14 PM PLOTTED BY: Najeski, Nichole PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
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CANONSBURG, PA 15311

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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

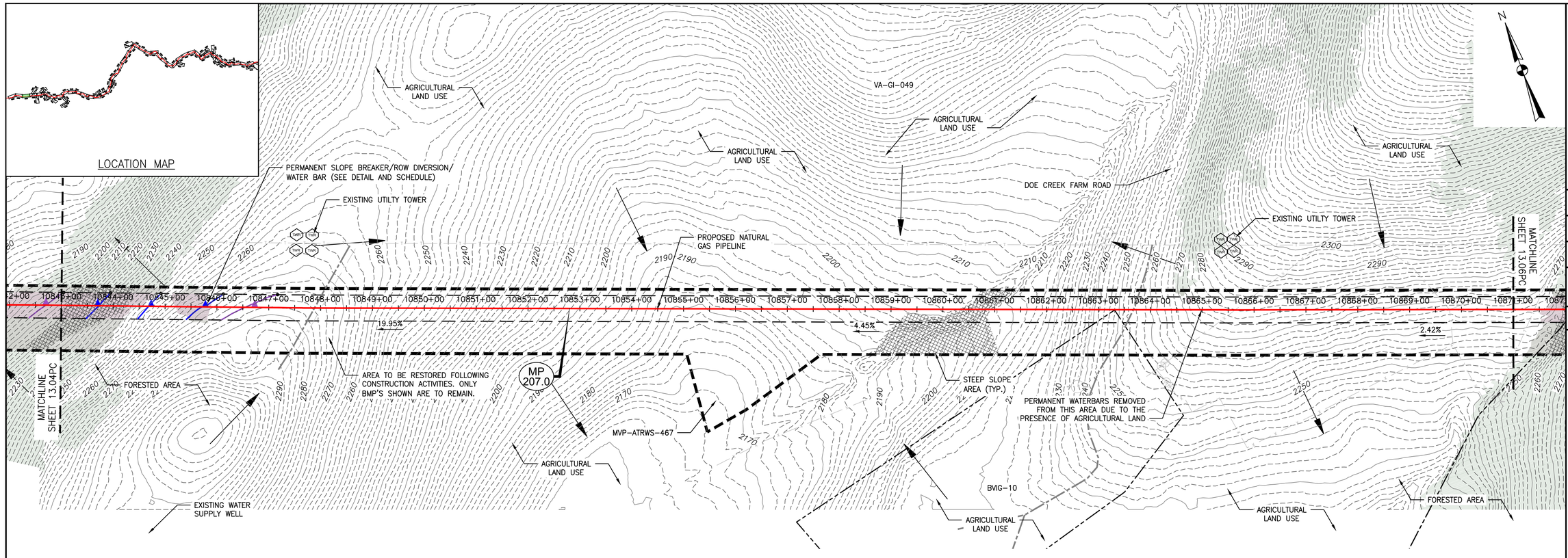
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.04PC OF 13.90PC

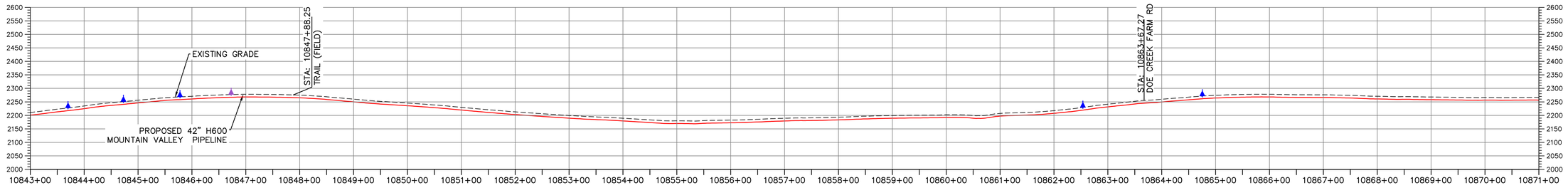
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL (ANST)
- ACID FORMING MATERIAL (AFM)
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
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REVISIONS:

NO.:	DATE:	DWN.:	CHK'D.:	APP'D.:	DESCRIPTION:
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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

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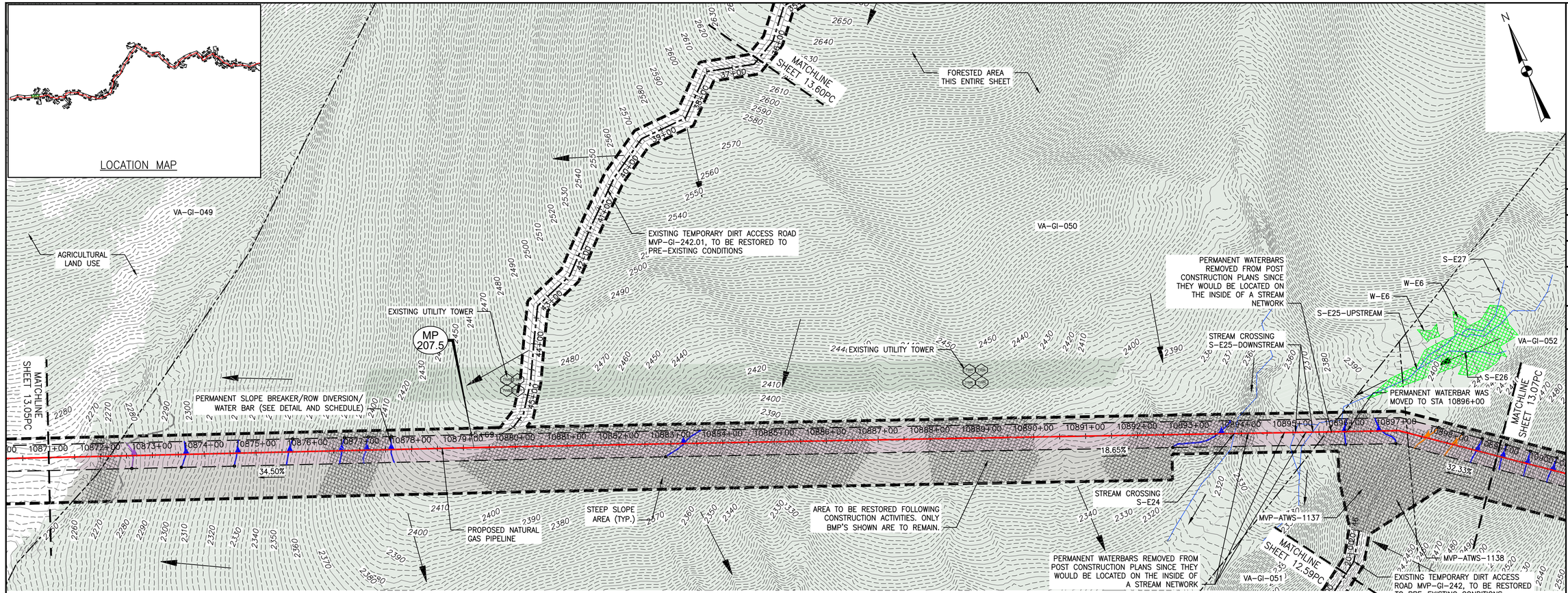
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COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

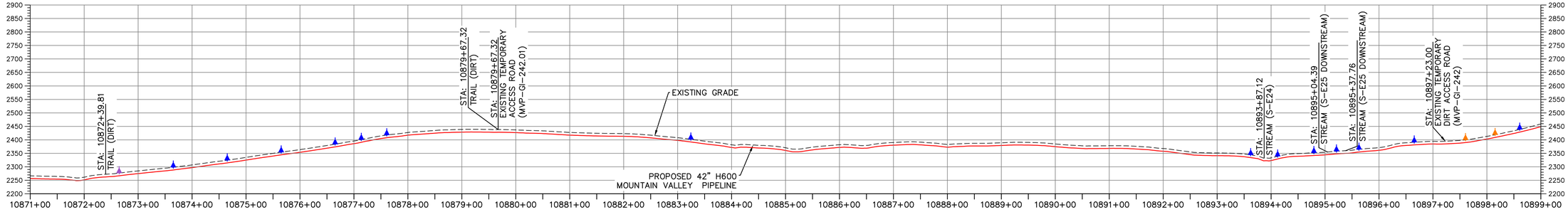
SHT. NO. 13.05PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.06(S9).dwg PLOTTED ON: 3/20/2018 12:19 PM PLOTTED BY: Najeski, Nichole PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

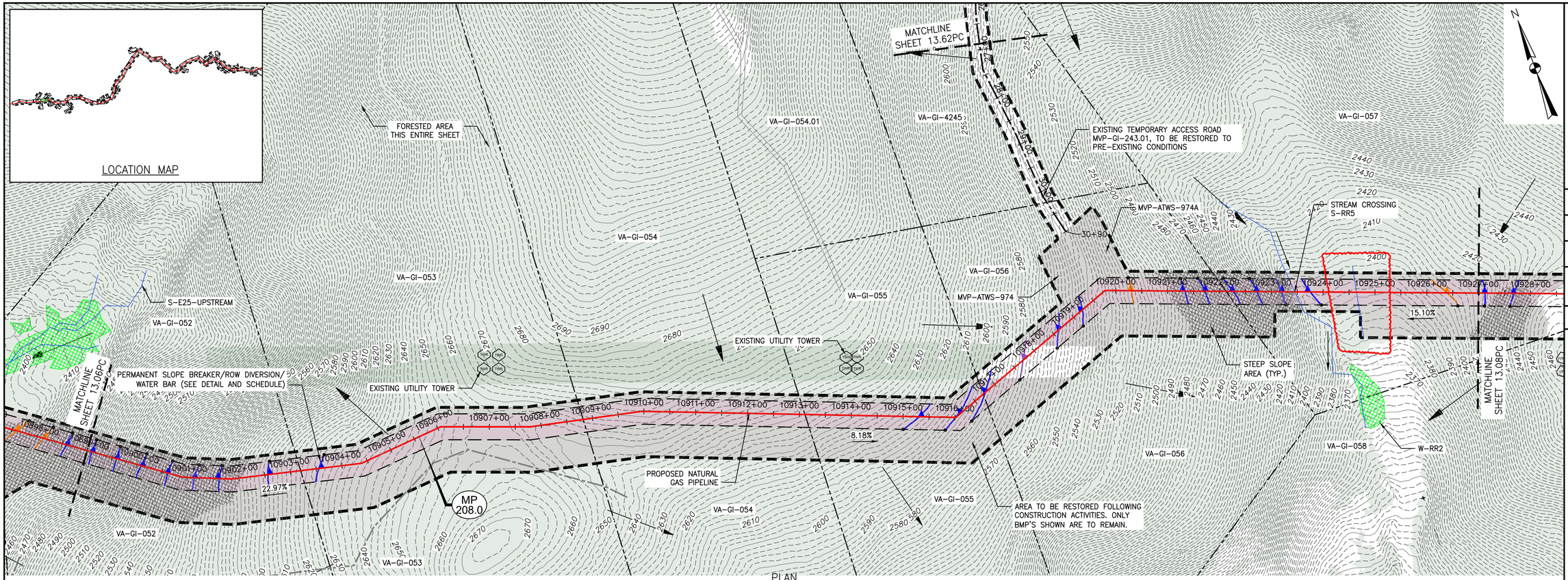
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

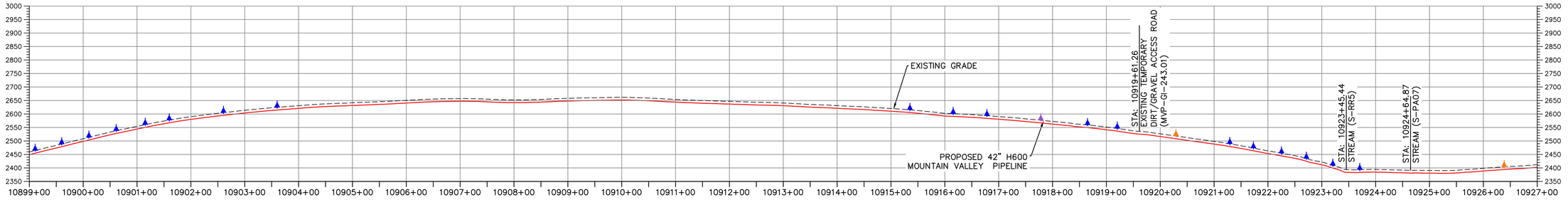
SHT. NO. 13.06PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- PROPOSED BAFFLE LOCATION (SEE DETAILS MVP-ES33.1/MVP-ES33.1A, AND MVP-ES33.2/MVP-ES33.2A)
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
–	7/7/20	BH	JRE	DJW	CHANGES TO AQUATIC RESOURCES DELINEATIONS
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

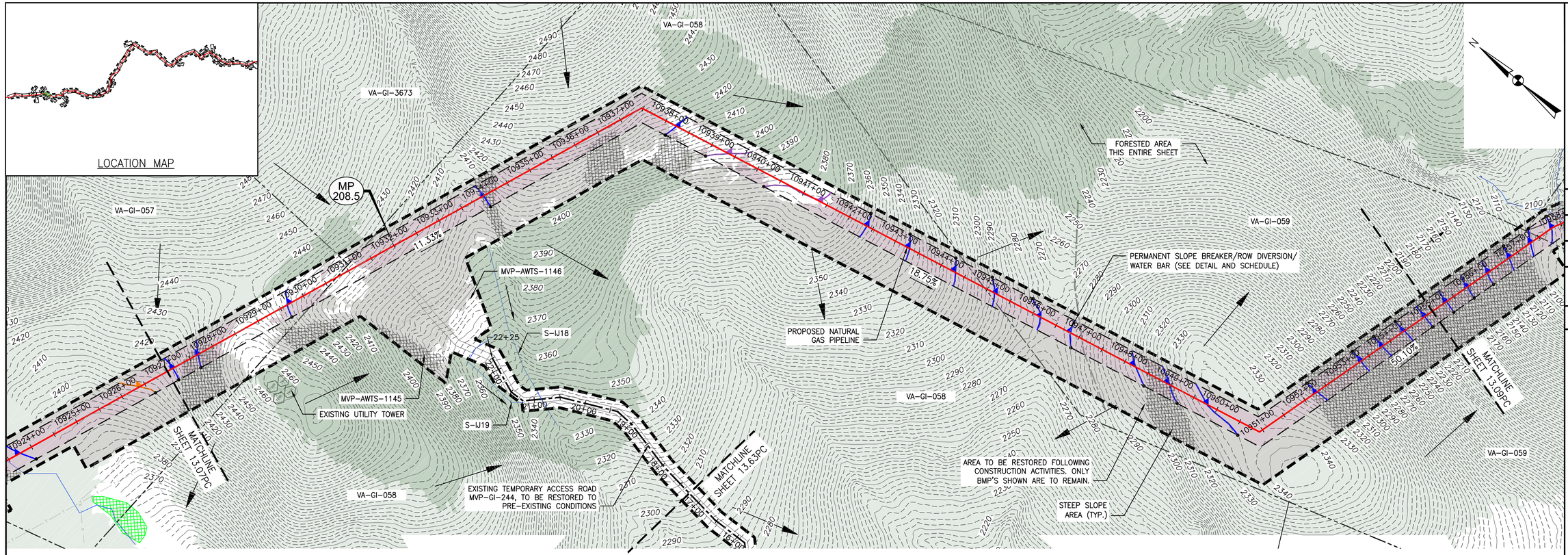
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	07/07/2020
SCALE:	AS SHOWN
REVISION	

SHT. NO. 13.07PC OF 13.90PC

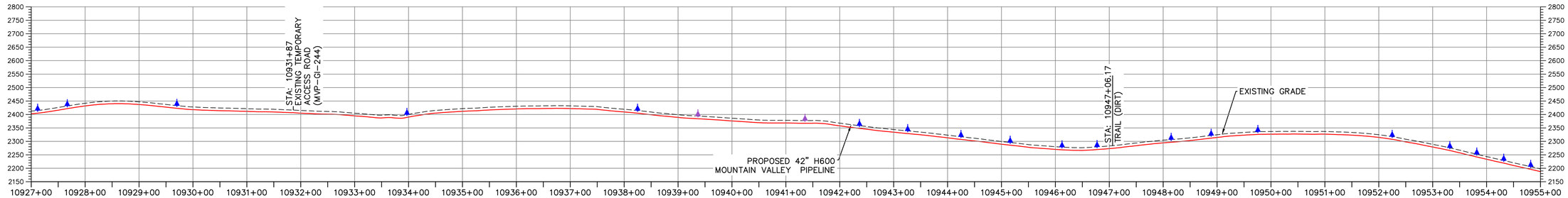
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.08(S8).dwg PLOTTED ON: 3/21/2018 6:01 AM PLOTTED BY: Najeski, Nichole PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – GILES COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
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PITTSBURGH, PA 15220

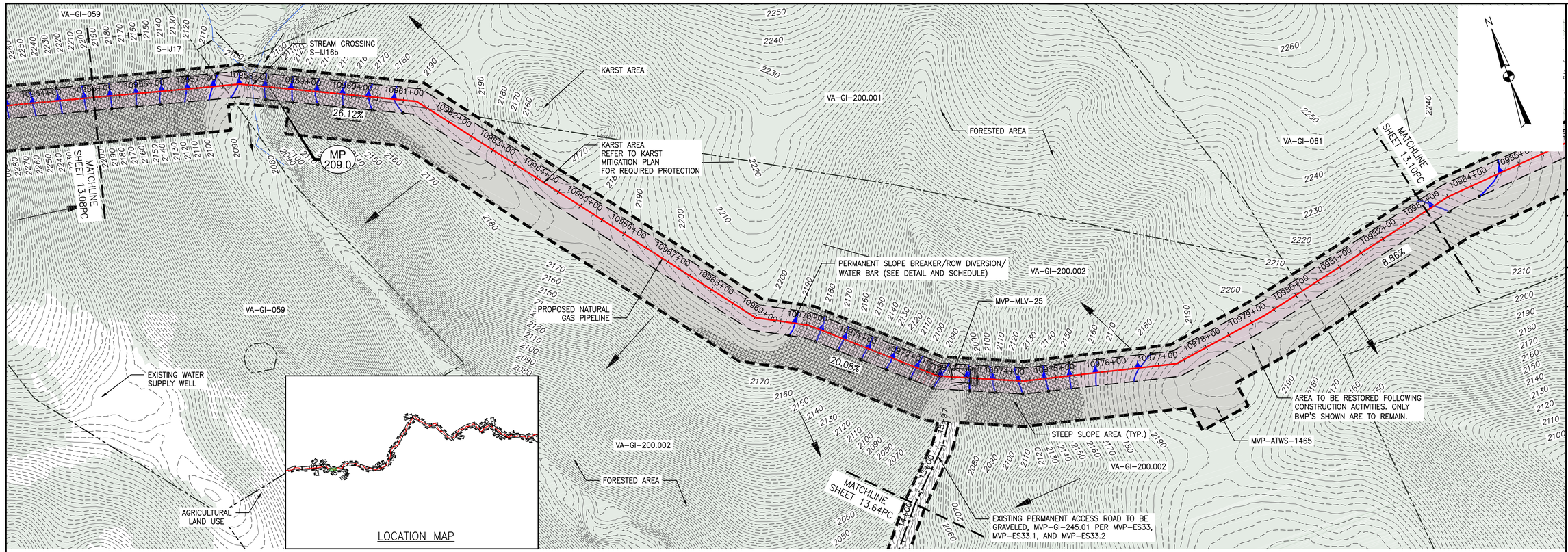
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

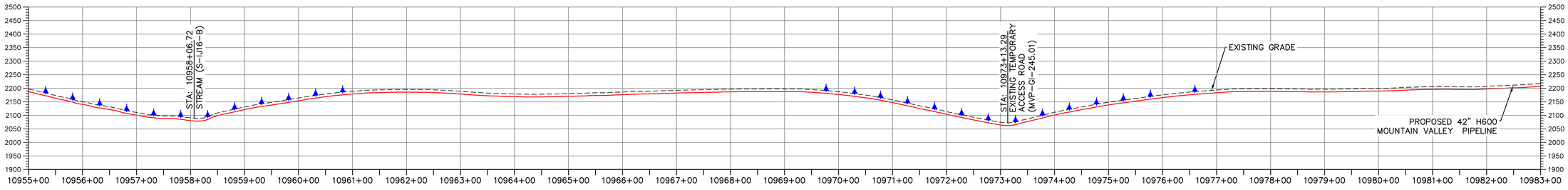
SHT. NO. 13.08PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.09(S9).dwg PLOTTED ON: 3/20/2018 1:24 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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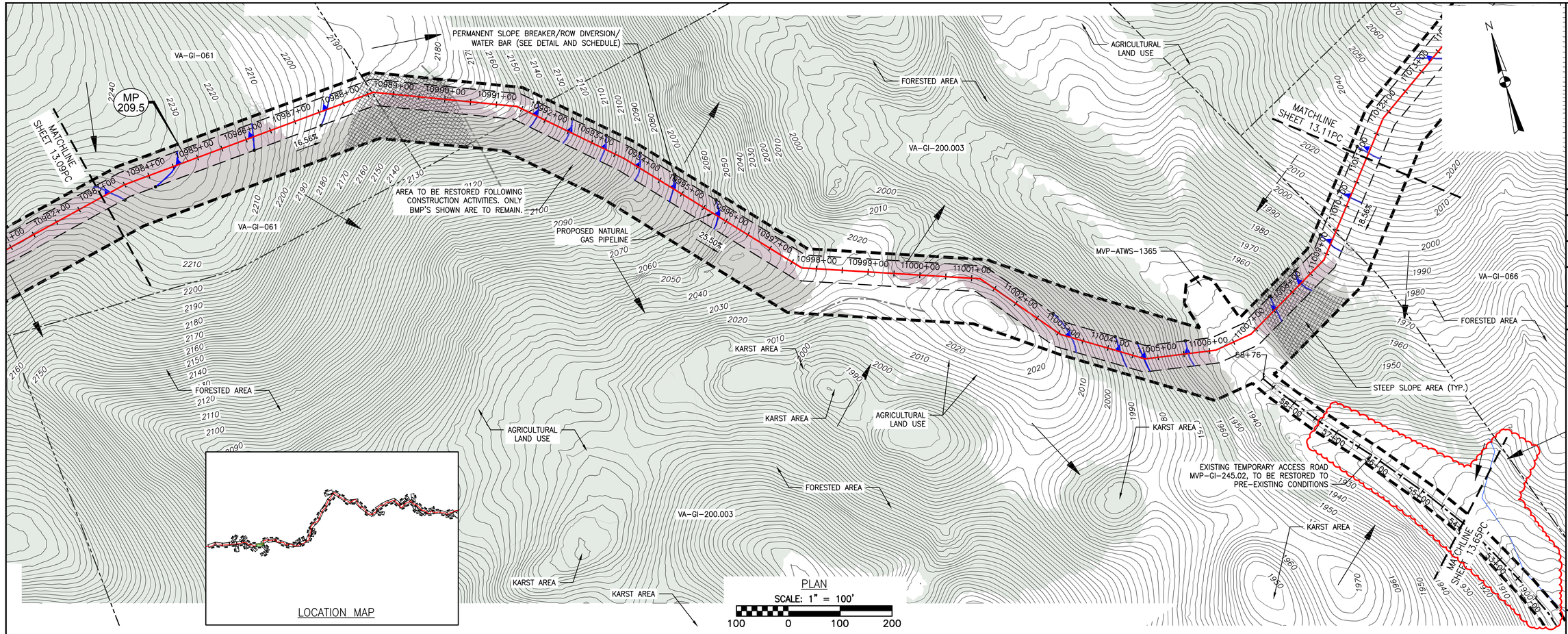
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

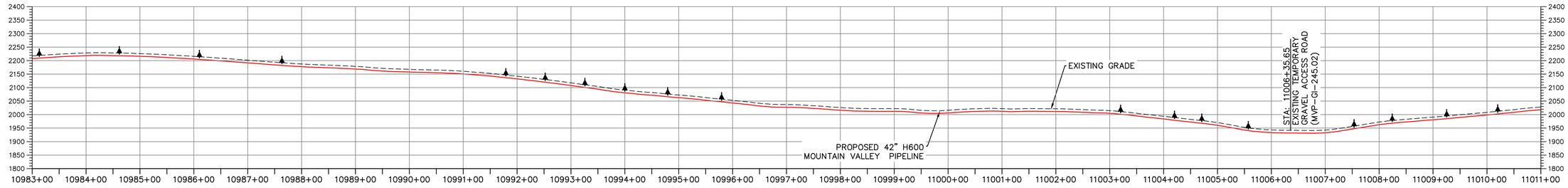
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	

SHT. NO. 13.09PC OF 13.90PC





PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'
100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'
200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

REVISIONS:

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	10/23/18	BH	JRE	DJW	FIELD MODIFICATIONS
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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FOSTER PLAZA 7
PITTSBURGH, PA 15220

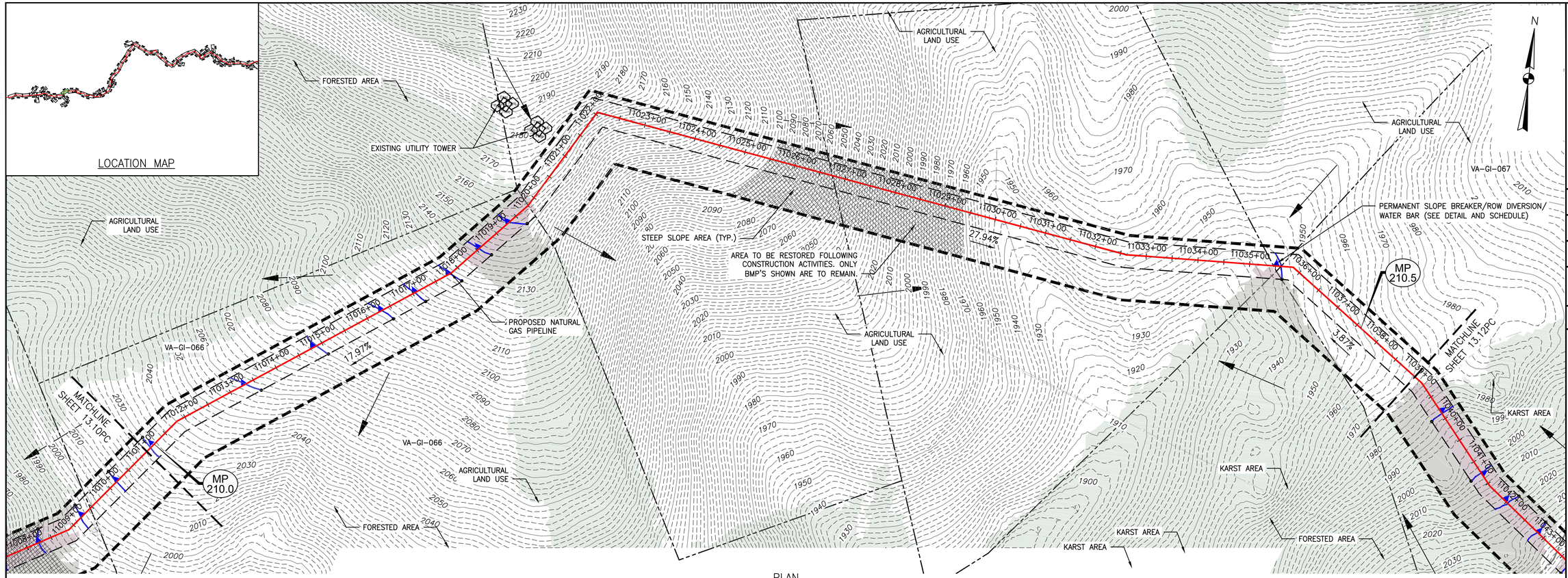
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	10/23/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	13.10PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.10(S9).dwg PLOTTED ON: 11/8/2018 11:07 AM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

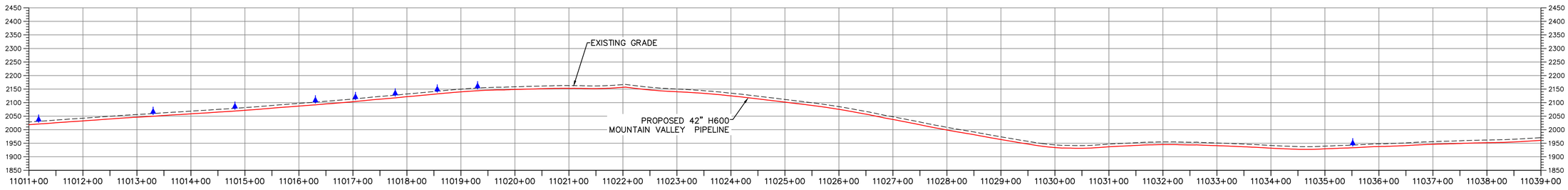
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.11(S9).dwg PLOTTED ON: 3/20/2018 1:27 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHK'D.:	APP'D.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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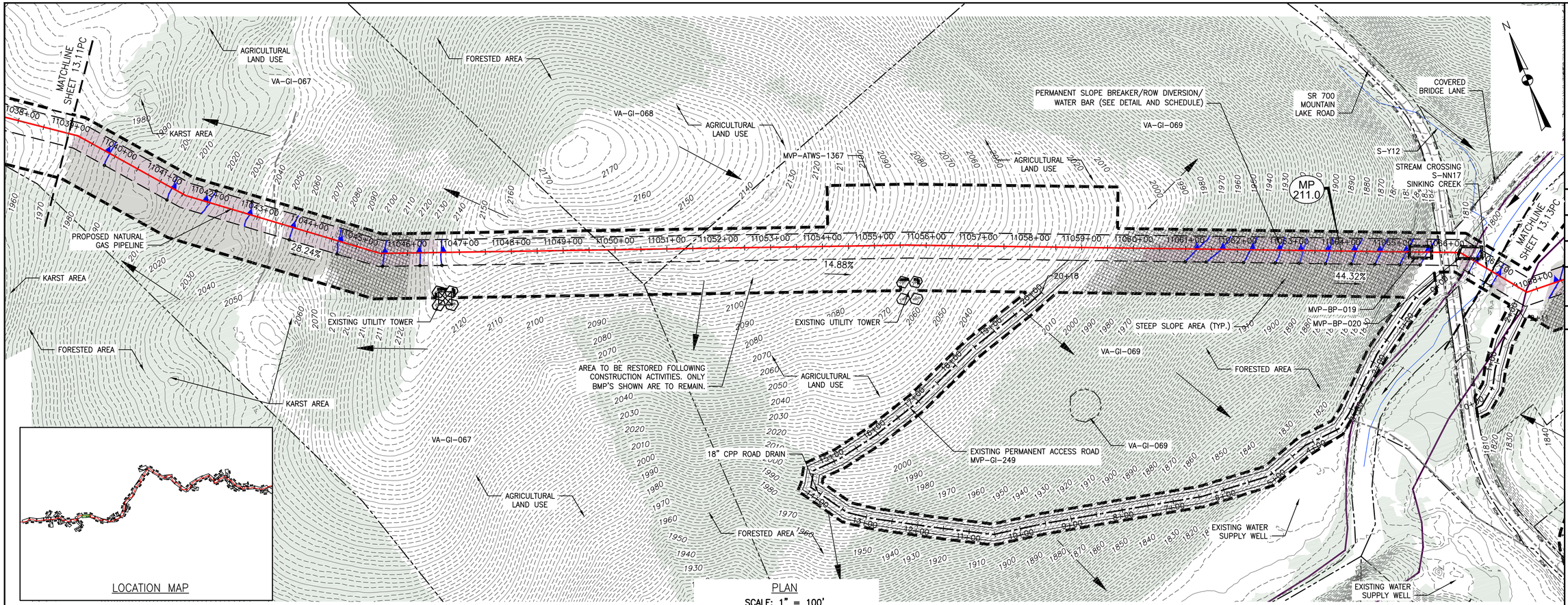
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

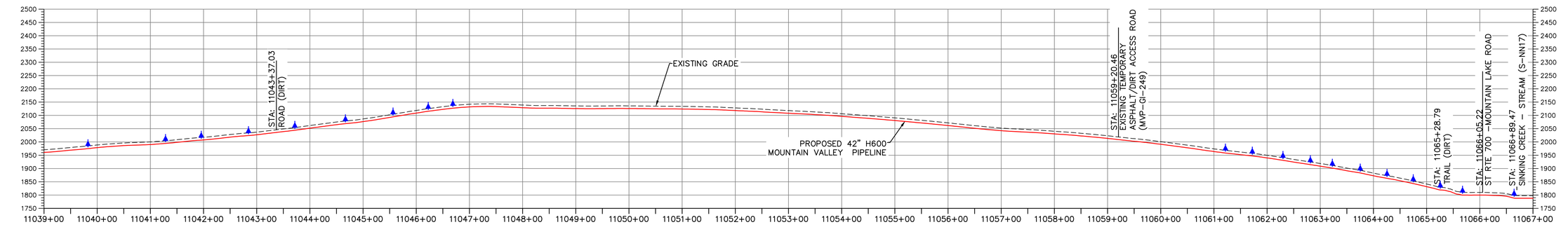
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	

SHT. NO. 13.11PC OF 13.90PC





LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – GILES COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

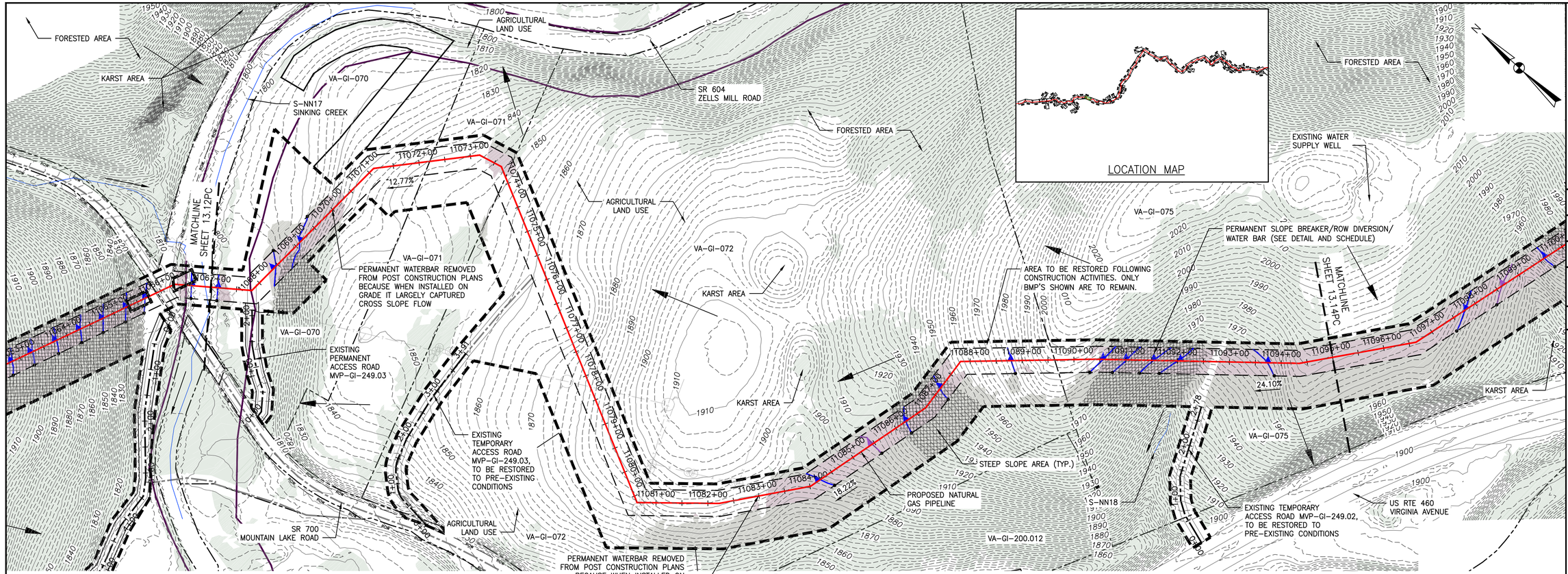
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

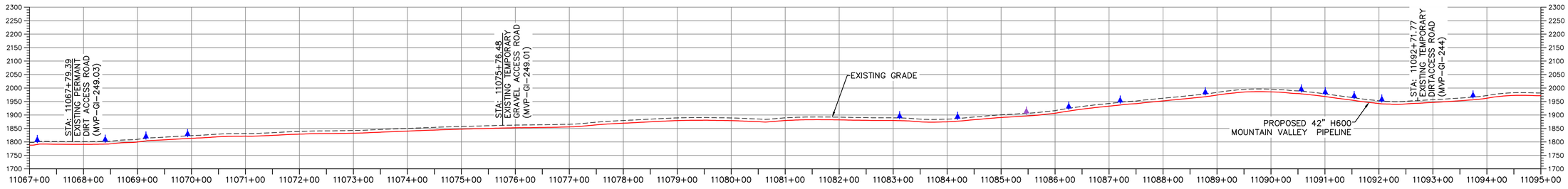
DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.12PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.12(S9).dwg PLOTTED ON: 3/20/2018 12:53 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb





LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

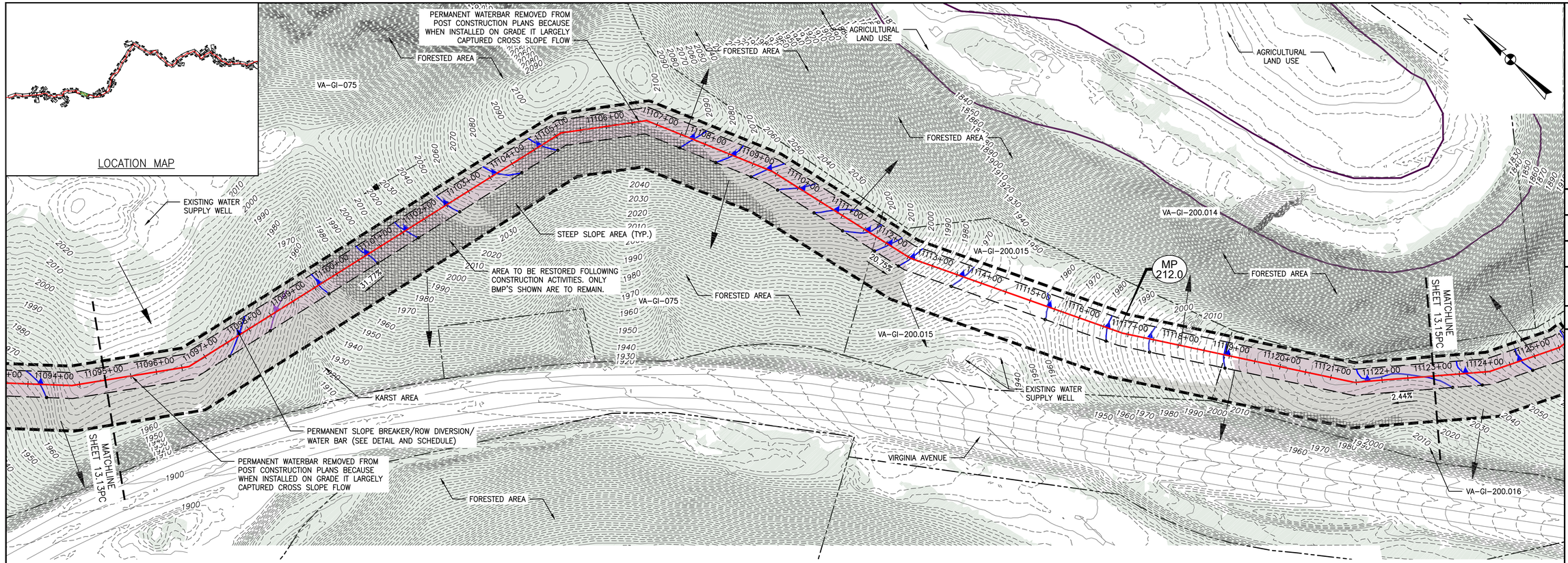
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

SHT. NO. 13.13PC OF 13.90PC

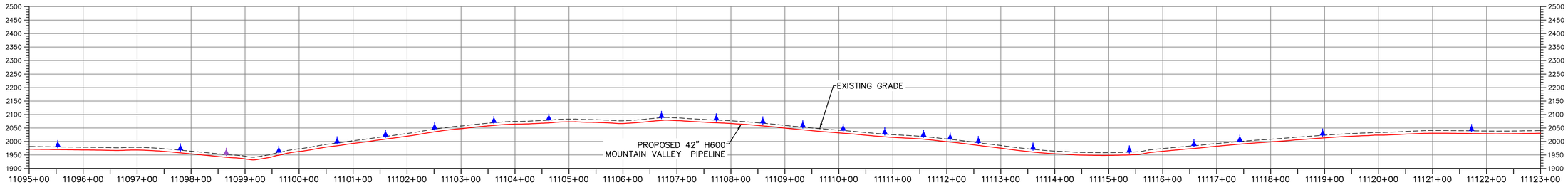
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
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- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.14(S9).dwg PLOTTED ON: 3/20/2018 12:57 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

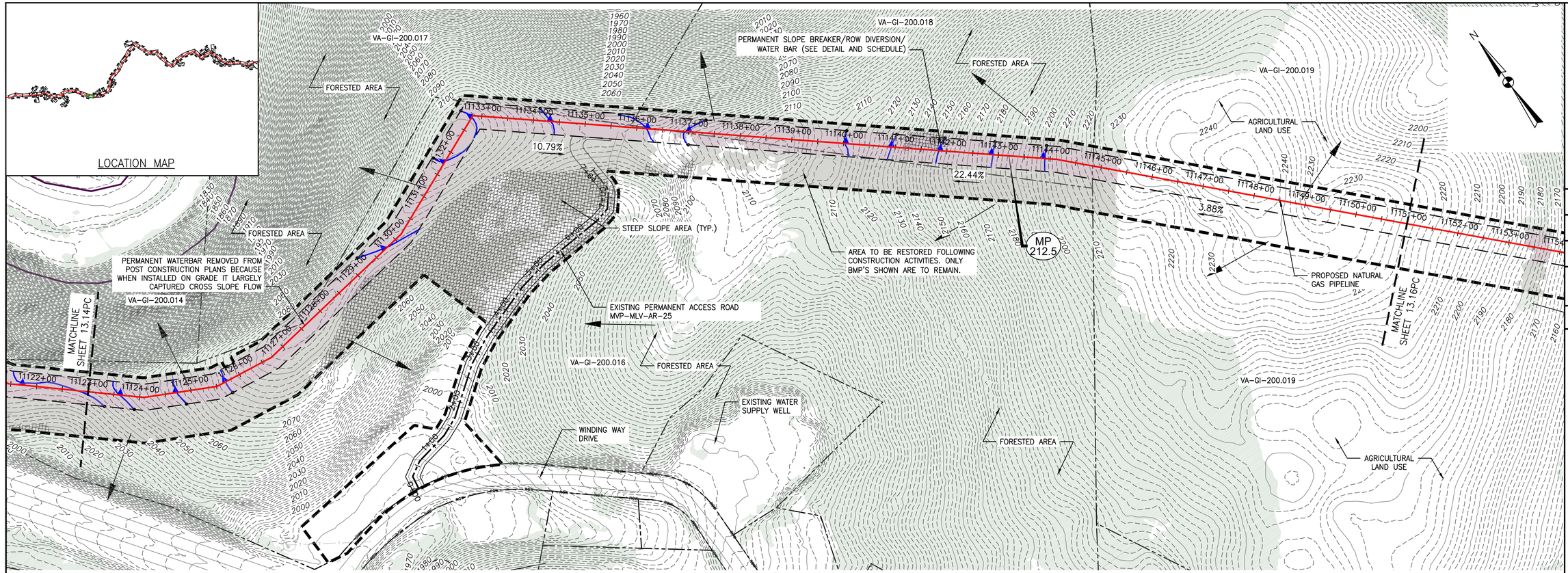
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF PENNSYLVANIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	4

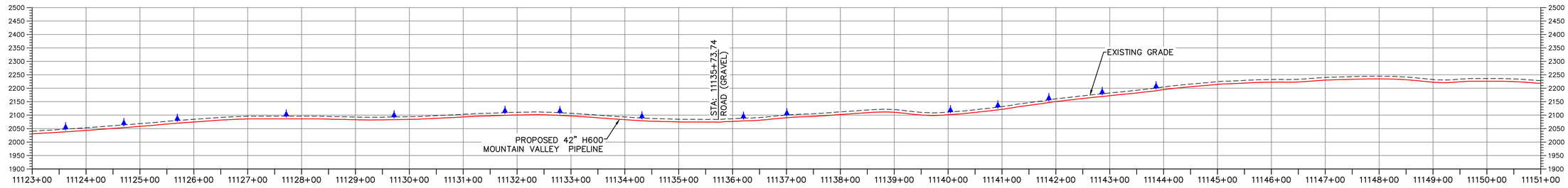
SHT. NO. 13.14PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
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- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
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- POND
- WETLAND
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- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
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2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

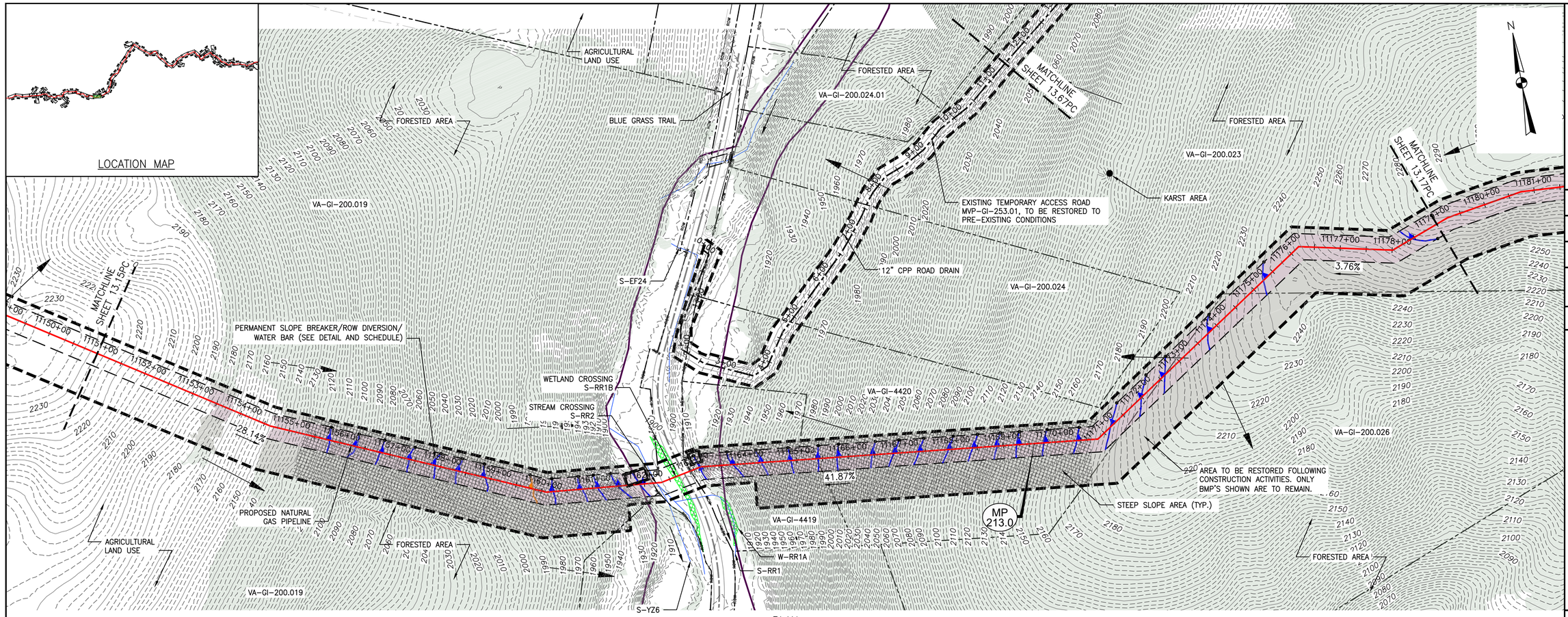
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.15PC OF 13.90PC

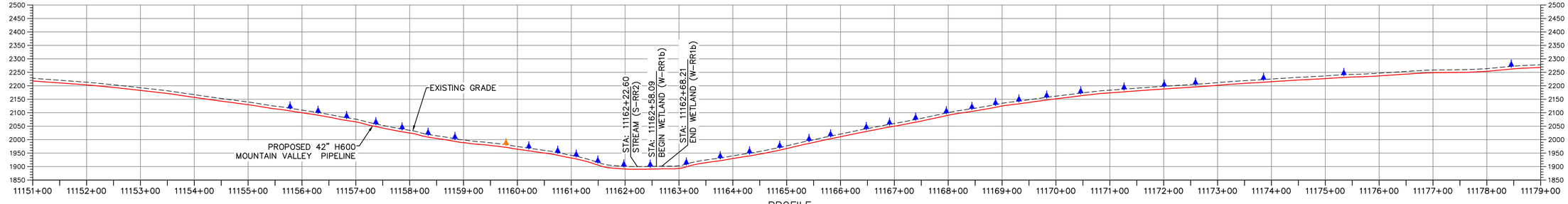
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
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- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
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2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

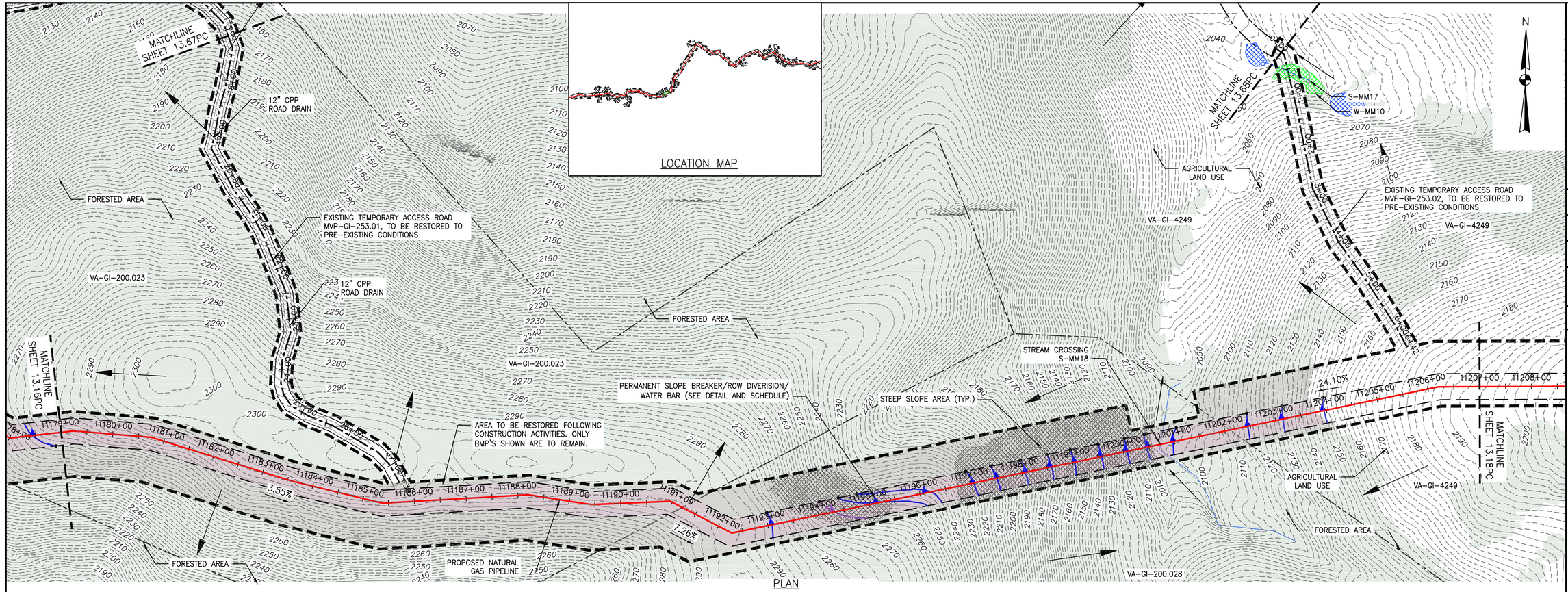
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	4

SHT. NO. 13.16PC OF 13.90PC

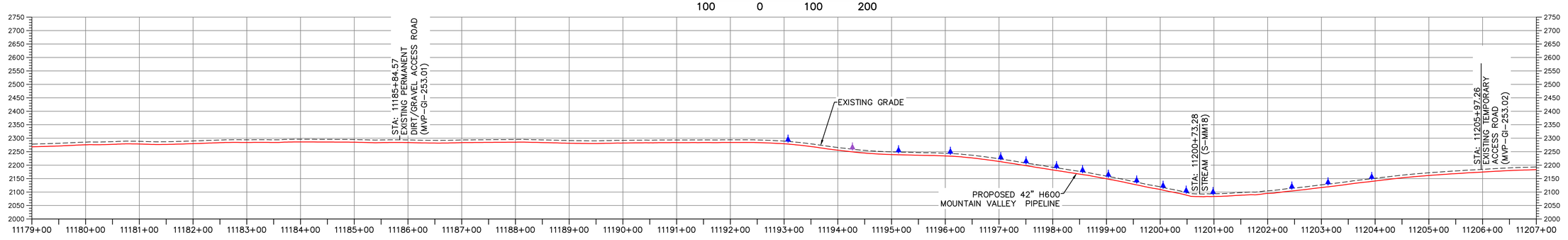
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LOCATION MAP

PLAN

SCALE: 1" = 100'



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
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- PROPOSED LEVEL SPREADER DIVERSION
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- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.17(S9).dwg PLOTTED ON: 3/20/2018 1:01 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
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3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
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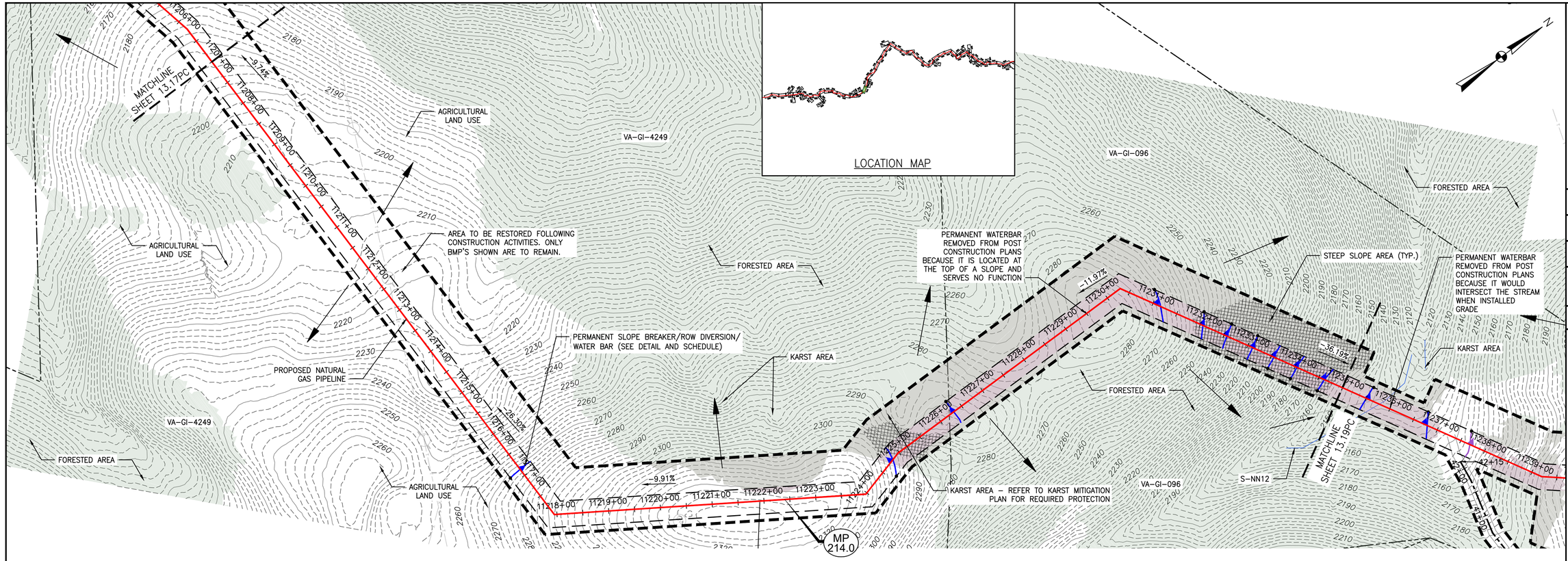
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.17PC OF 13.90PC

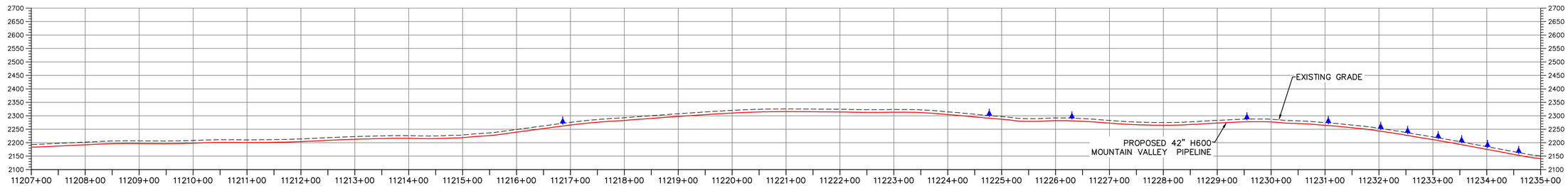


LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.18(S9).dwg PLOTTED ON: 3/20/2018 1:02 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

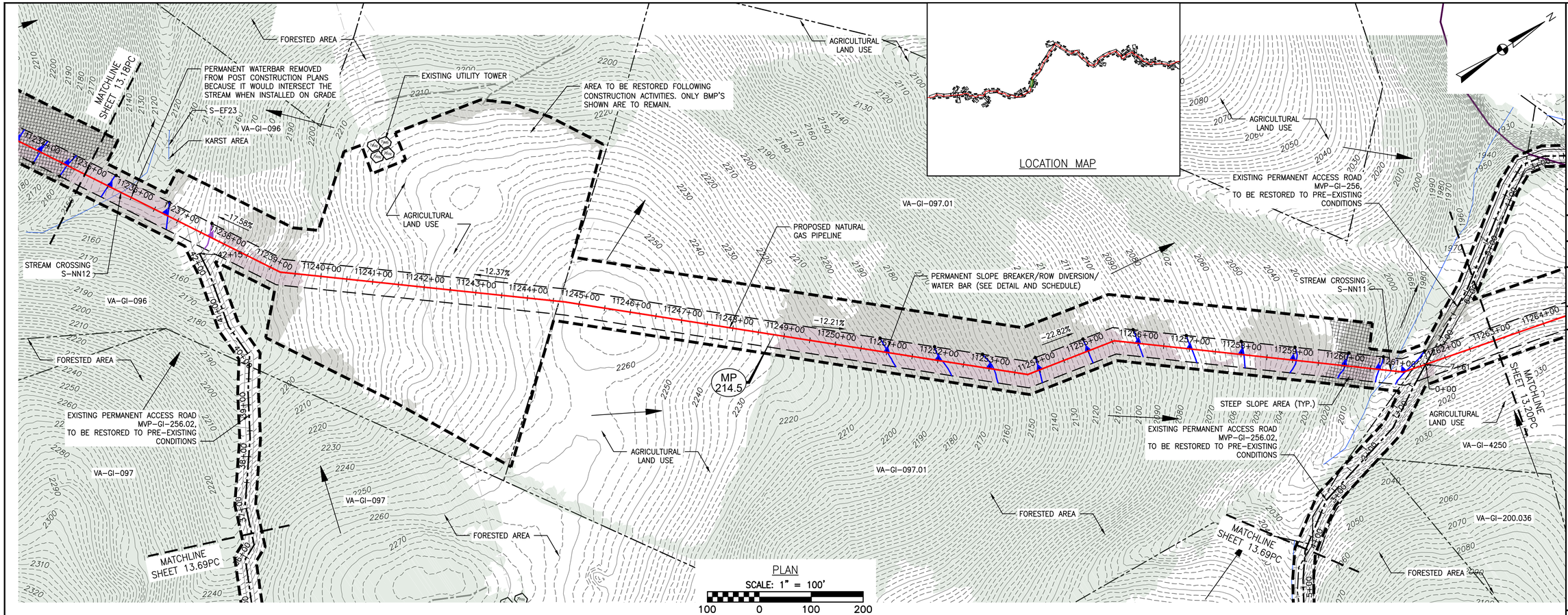
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

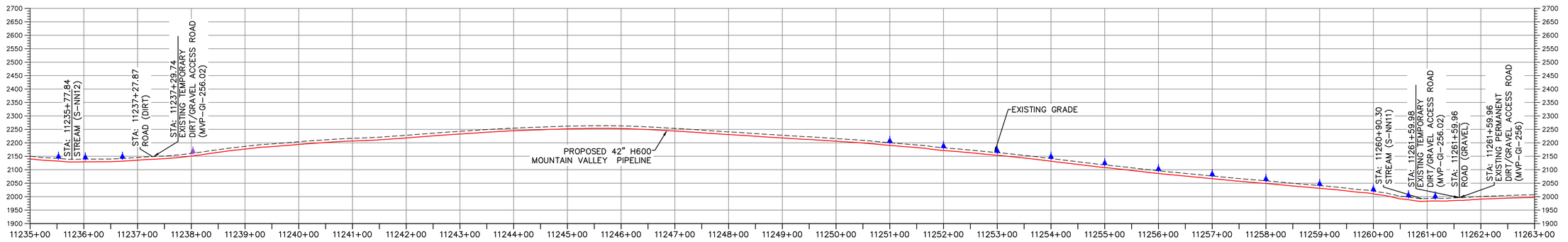
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

SHT. NO. 13.18PC OF 13.90PC





LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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TETRA TECH CAD FILE PATH: R:_Marcellus_Shale_Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.19(S9).dwg PLOTTED ON: 3/20/2018 1:03 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.19PC OF 13.90PC

EXISTING PERMANENT ACCESS ROAD MVP-GI-256.01, TO BE RESTORED TO PRE-EXISTING CONDITIONS

AGRICULTURAL LAND USE

EXISTING WATER SUPPLY WELL

VA-GI-4250

MP 215.0

VA-GI-200.039

36" CPP CULVERT

S-NN9

S-NN10

S-NN11

PROPOSED NATURAL GAS PIPELINE

AREA TO BE RESTORED FOLLOWING CONSTRUCTION ACTIVITIES. ONLY BMP'S SHOWN ARE TO REMAIN.

KARST AREA

MATCHLINE SHEET 13.21PC

MATCHLINE SHEET 13.20PC

VA-GI-097.01

PERMANENT SLOPE BREAKER/ROW DIVERSION/ WATER BAR (SEE DETAIL AND SCHEDULE)

STREAM CROSSING S-KL43

FORESTED AREA

EXISTING PERMANENT ACCESS ROAD MVP-GI-256, TO BE RESTORED TO PRE-EXISTING CONDITIONS

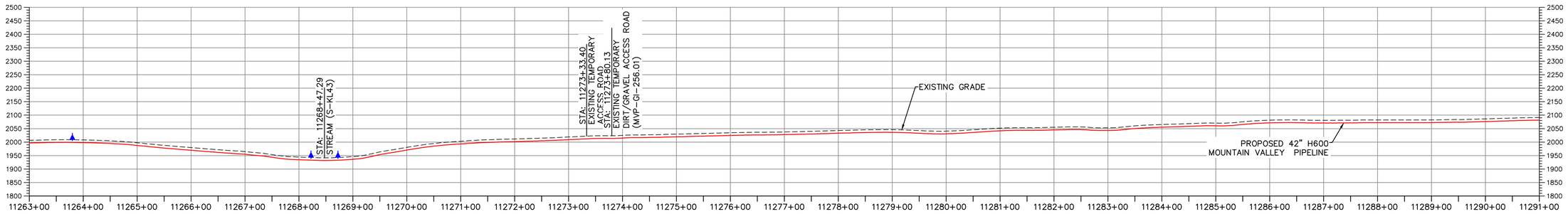
PERMANENT WATERBAR REMOVED FROM POST CONSTRUCTION PLANS BECAUSE WHEN INSTALLED ON GRADE IT LARGELY CAPTURED CROSS SLOPE FLOW

LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.20(S9).dwg PLOTTED ON: 3/20/2018 1:04 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

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Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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PITTSBURGH, PA 15220

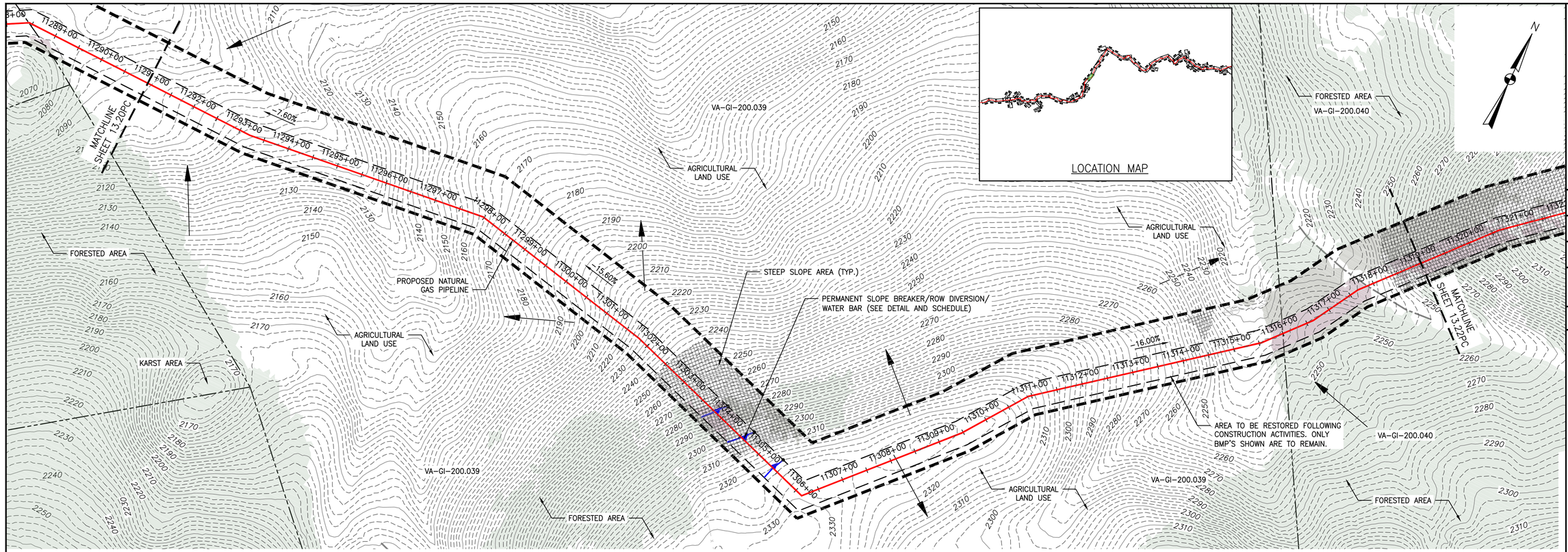
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

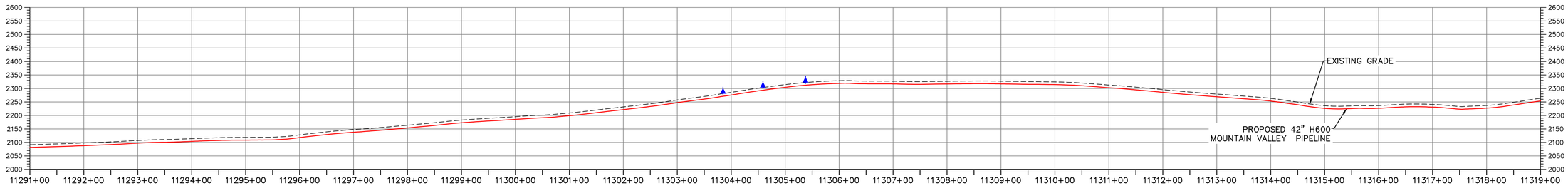
SHT. NO. 13.20PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.21(S9).dwg PLOTTED ON: 3/20/2018 1:39 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

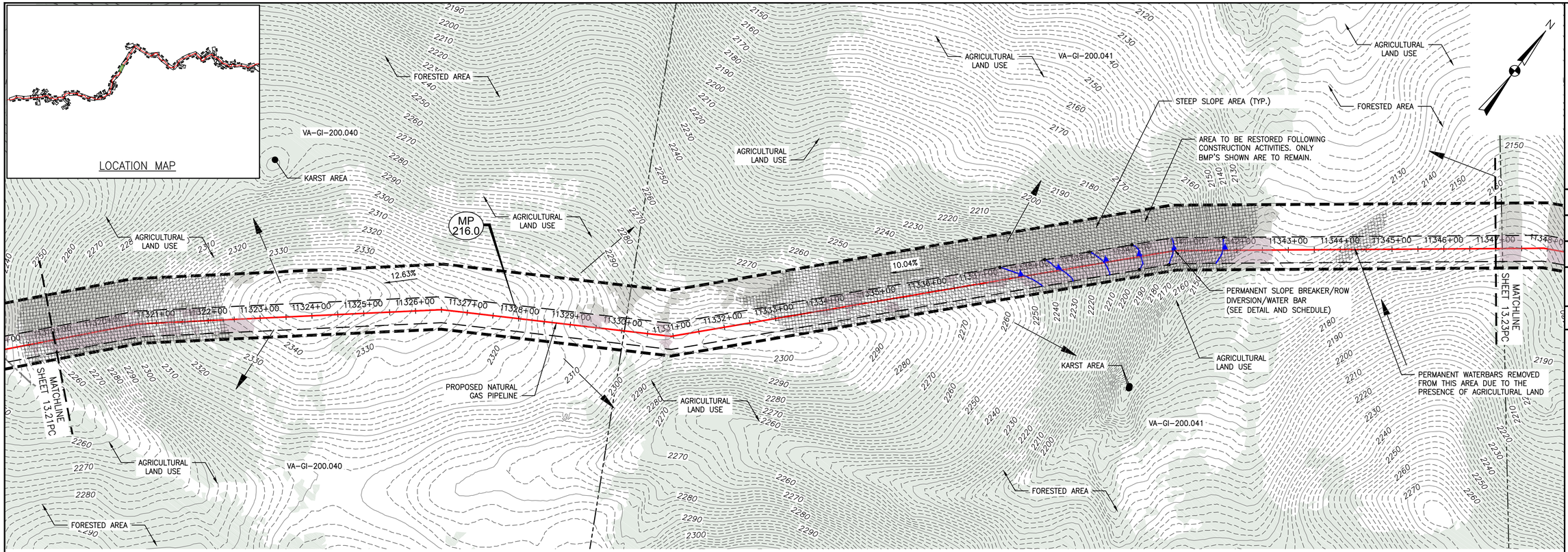
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	

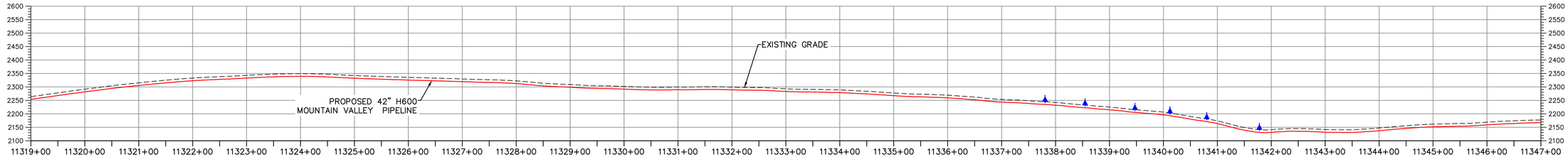
SHT. NO. 13.21PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.22(S9).dwg PLOTTED ON: 3/20/2018 1:30 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.22PC OF 13.90PC

LOCATION MAP

PLAN
SCALE: 1" = 100'
100 0 100 200

PROFILE
HORIZONTAL SCALE: SCALE: 1" = 100'
100 0 100 200
VERTICAL SCALE: SCALE: 1" = 200'
200 0 200 400

LEGEND

- EXISTING CULVERT
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.23(S9).dwg PLOTTED ON: 3/20/2018 1:24 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – GILES COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

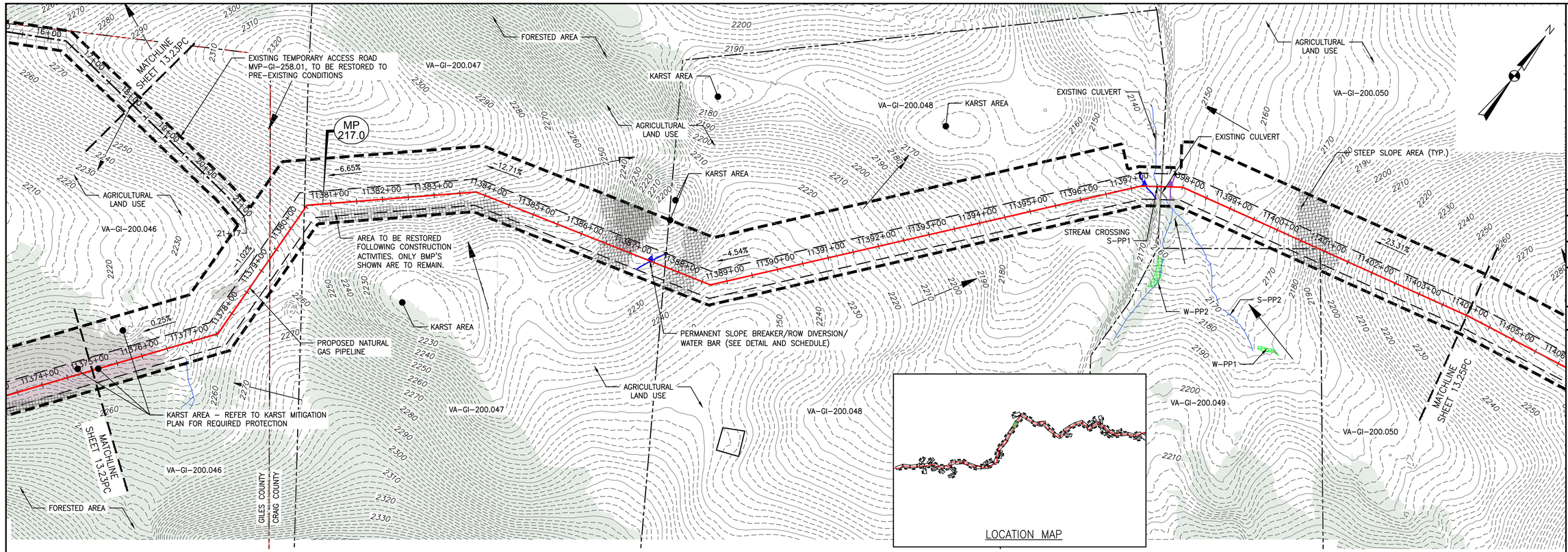
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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
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APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

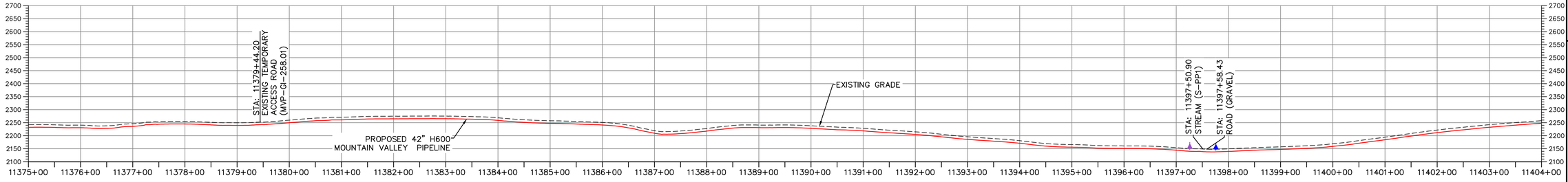
SHT. NO. 13.23PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

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- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.24(S9).dwg PLOTTED ON: 3/20/2018 1:15 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

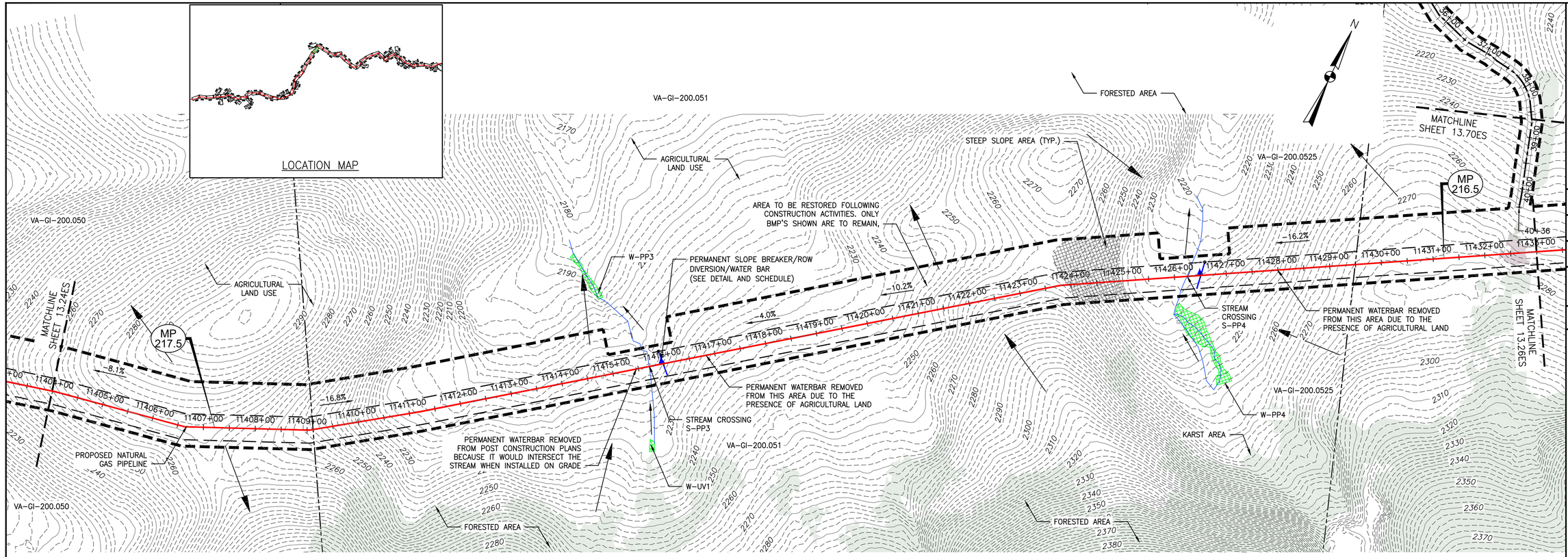
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

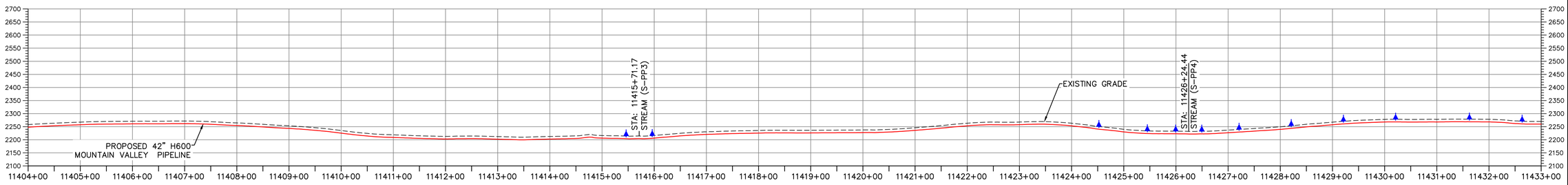
SHT. NO. 13.24PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
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NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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FOSTER PLAZA 7
PITTSBURGH, PA 15220

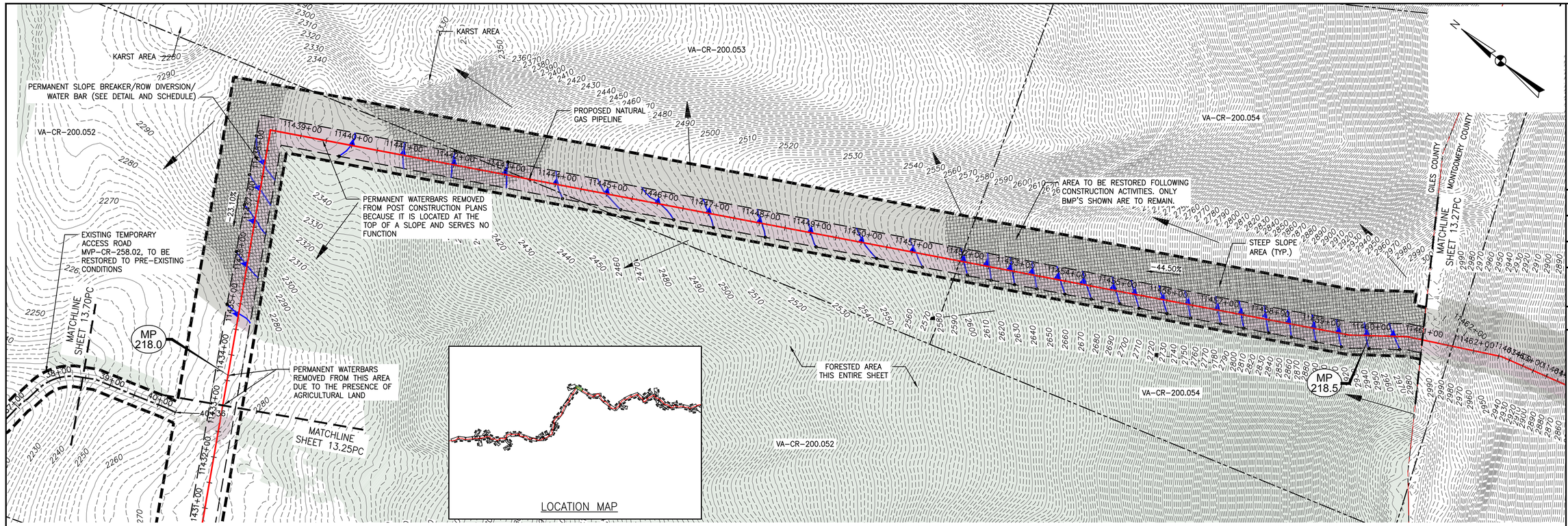
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

SHT. NO. 13.25PC OF 13.90PC

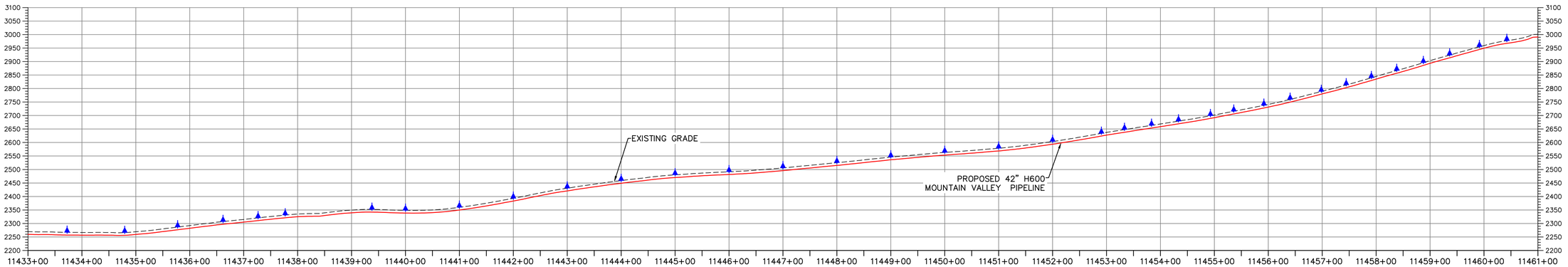
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
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- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.26(S9).dwg PLOTTED ON: 3/20/2018 1:01 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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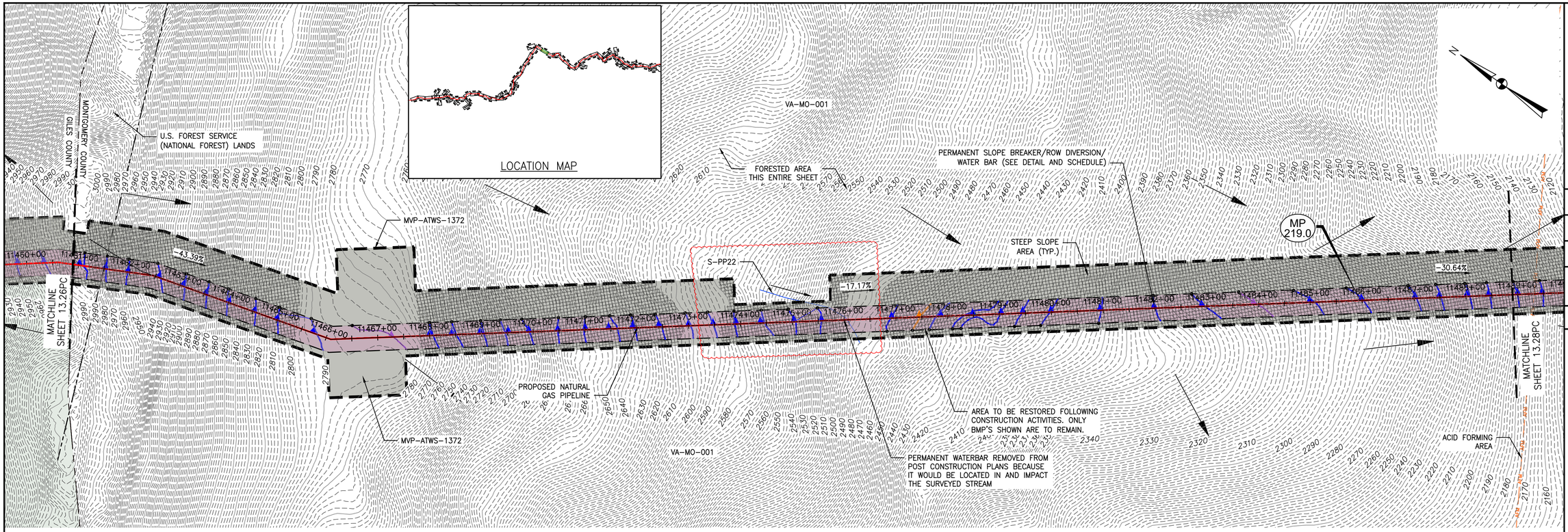
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

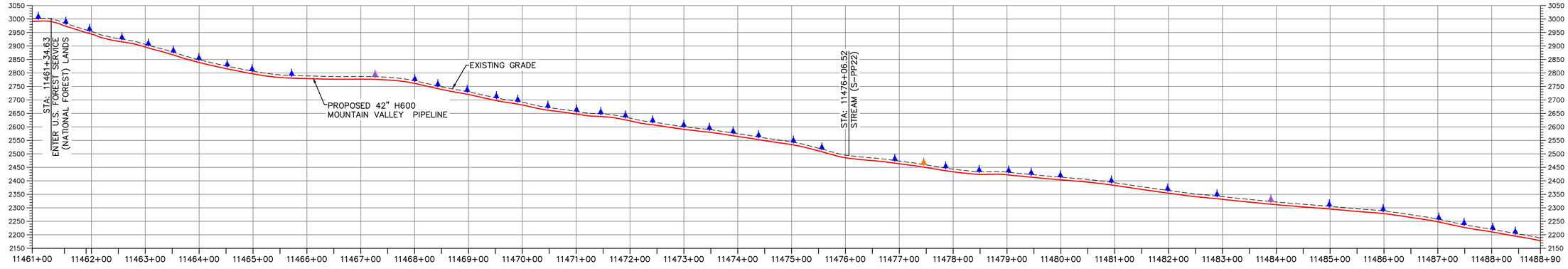
SHT. NO. 13.26PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
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NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
–	7/2/20	BH	JRE	DJW	CHANGES TO AQUATIC RESOURCES DELINEATIONS
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	7/7/20
SCALE:	AS SHOWN

5 REVISION

SHT. NO. 13.27PC OF 13.90PC

PERMANENT WATERBAR REMOVED FROM POST CONSTRUCTION PLANS BECAUSE WHEN INSTALLED ON GRADE IT LARGELY CAPTURED CROSS SLOPE FLOW

FORESTED AREA

STEEP SLOPE AREA (TYP.)

ACID FORMING AREA

IF THE USE OF STABILIZATION NETTING IS REQUIRED/PERMITTED, WILDLIFE FRIENDLY GEOTEXTILES MUST BE USED. THE PRODUCTS MUST EITHER NOT CONTAIN NETTING, OR NETTING MUST BE MADE OF 100% BIODEGRADABLE NON-PLASTIC MATERIALS SUCH AS JUTE, SISAL, OR COIR FIBER. PLASTIC NETTING (SUCH AS POLYPROPYLENE, NYLON, POLYETHYLENE, AND POLYESTER), EVEN IF ADVERTISED AS BIODEGRADABLE, IS NOT AN ACCEPTABLE ALTERNATIVE. ANY NETTING USED MUST ALSO HAVE A LOOSE-WEAVE DESIGN WITH MOVABLE JOINTS BETWEEN HORIZONTAL AND VERTICAL TWINES TO REDUCE THE CHANCE FOR WILDLIFE ENTANGLEMENT, INJURY, OR DEATH. (CA COASTAL COMMISSION, 2012)

EXISTING TEMPORARY ACCESS ROAD MVP-GI-258.03. TO BE RESTORED TO PRE-EXISTING CONDITIONS

PERMANENT SLOPE BREAKER/ROW DIVERSION/ WATER BAR (SEE DETAIL AND SCHEDULE)

MATCHLINE SHEET 13.27PC

MATCHLINE SHEET 13.29PC

CRAIG CREEK RD.

STREAM CROSSING S-PP21

STREAM CROSSING S-PP20

STREAM CROSSING S-006

-7.78%

PROPOSED NATURAL GAS PIPELINE

MP 219.5

ACID FORMING AREA

PERMANENT WATERBAR REMOVED FROM POST CONSTRUCTION PLANS BECAUSE IT WOULD INTERSECT THE STREAM WHEN INSTALLED ON GRADE

AREA TO BE RESTORED FOLLOWING CONSTRUCTION ACTIVITIES. ONLY BMP'S SHOWN ARE TO REMAIN.

S-007

AGRICULTURAL LAND USE

U.S. FOREST SERVICE (NATIONAL FOREST) LAND

PERMANENT WATERBAR REMOVED FROM POST CONSTRUCTION PLANS BECAUSE THE REQUIRED SPACING IS SATISFIED

FORESTED AREA

MVP-BP-023

MVP-BP-024

VA-MO-200.056

AGRICULTURAL LAND USE

VA-MO-200.056

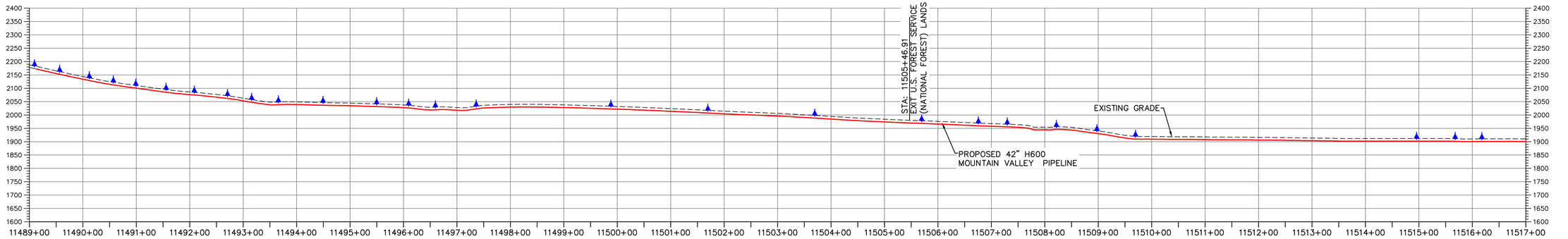
S-006

MVP-ATWS-1373

ACID FORMING AREA

LOCATION MAP

PLAN
SCALE: 1" = 100'
100 0 100 200



PROFILE

HORIZONTAL SCALE:
SCALE: 1" = 100'
100 0 100 200

VERTICAL SCALE:
SCALE: 1" = 200'
200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
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- EXISTING COUNTY LINE
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- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

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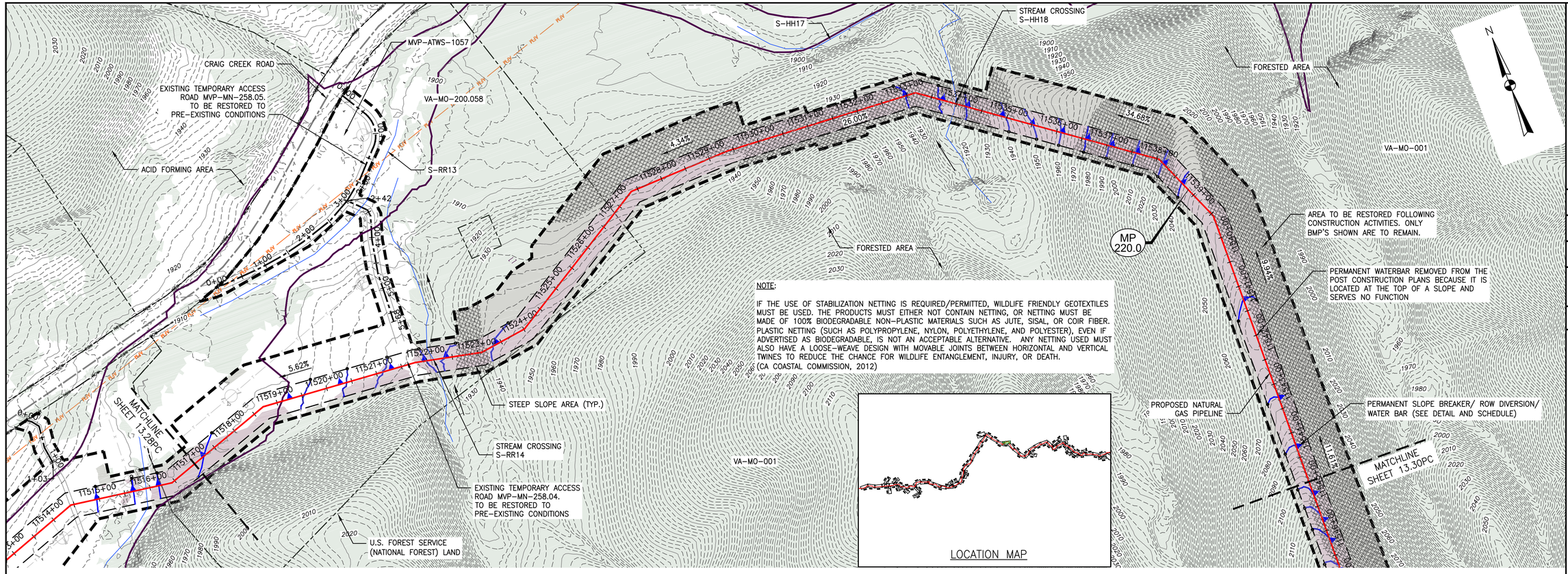
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

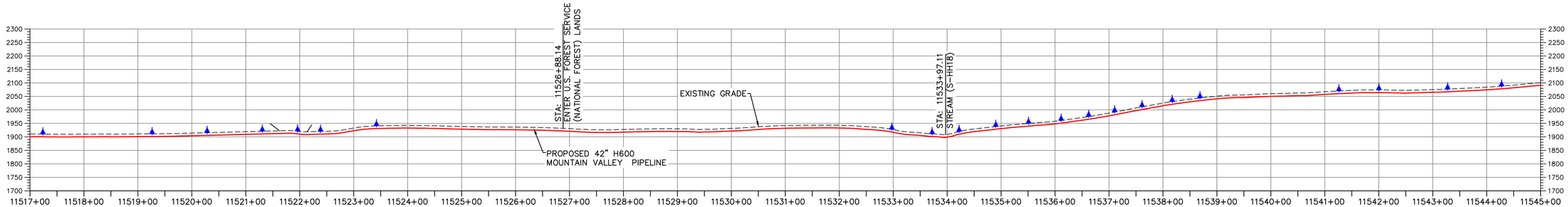
SHT. NO. 13.28PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
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- EXISTING STATE LINE
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REVISIONS:

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

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TETRA TECH

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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.29PC OF 13.90PC

NOTE:

IF THE USE OF STABILIZATION NETTING IS REQUIRED/PERMITTED, WILDLIFE FRIENDLY GEOTEXTILES MUST BE USED. THE PRODUCTS MUST EITHER NOT CONTAIN NETTING, OR NETTING MUST BE MADE OF 100% BIODEGRADABLE NON-PLASTIC MATERIALS SUCH AS JUTE, SISAL, OR COIR FIBER. PLASTIC NETTING (SUCH AS POLYPROPYLENE, NYLON, POLYETHYLENE, AND POLYESTER), EVEN IF ADVERTISED AS BIODEGRADABLE, IS NOT AN ACCEPTABLE ALTERNATIVE. ANY NETTING USED MUST ALSO HAVE A LOOSE-WEAVE DESIGN WITH MOVABLE JOINTS BETWEEN HORIZONTAL AND VERTICAL TWINES TO REDUCE THE CHANCE FOR WILDLIFE ENTANGLEMENT, INJURY, OR DEATH.
(CA COASTAL COMMISSION, 2012)

MATCHLINE SHEET 13.29PC

VA-MO-001

AREA TO BE RESTORED FOLLOWING CONSTRUCTION ACTIVITIES. ONLY BMP'S SHOWN ARE TO REMAIN.

FORESTED AREA THIS ENTIRE SHEET

PERMANENT SLOPE BREAKER/ROW DIVERSION/ WATER BAR (SEE DETAIL AND SCHEDULE)

STEEP SLOPE AREA (TYP.)

MP 220.5

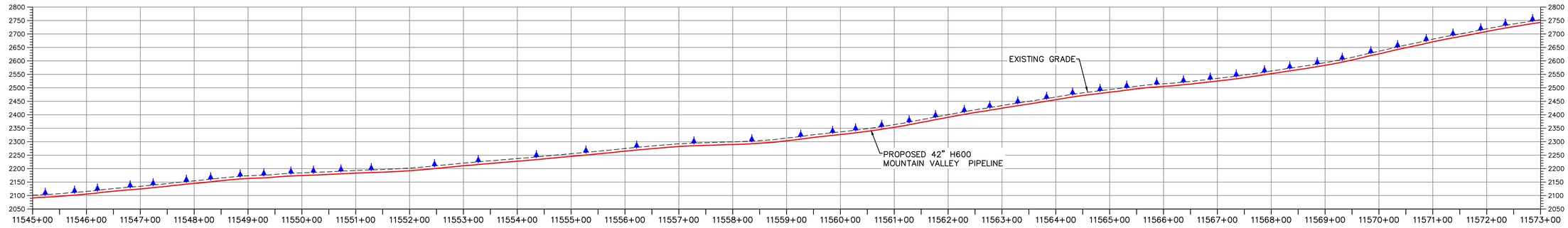
MATCHLINE SHEET 13.31PC

PROPOSED NATURAL GAS PIPELINE

-20.09%
-20.58%
-12.57%
-21.47%
-50.12%

LOCATION MAP

PLAN
SCALE: 1" = 100'
100 0 100 200



PROFILE

HORIZONTAL SCALE:
SCALE: 1" = 100'
100 0 100 200

VERTICAL SCALE:
SCALE: 1" = 200'
200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.30(S9).dwg PLOTTED ON: 3/21/2018 10:40 AM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

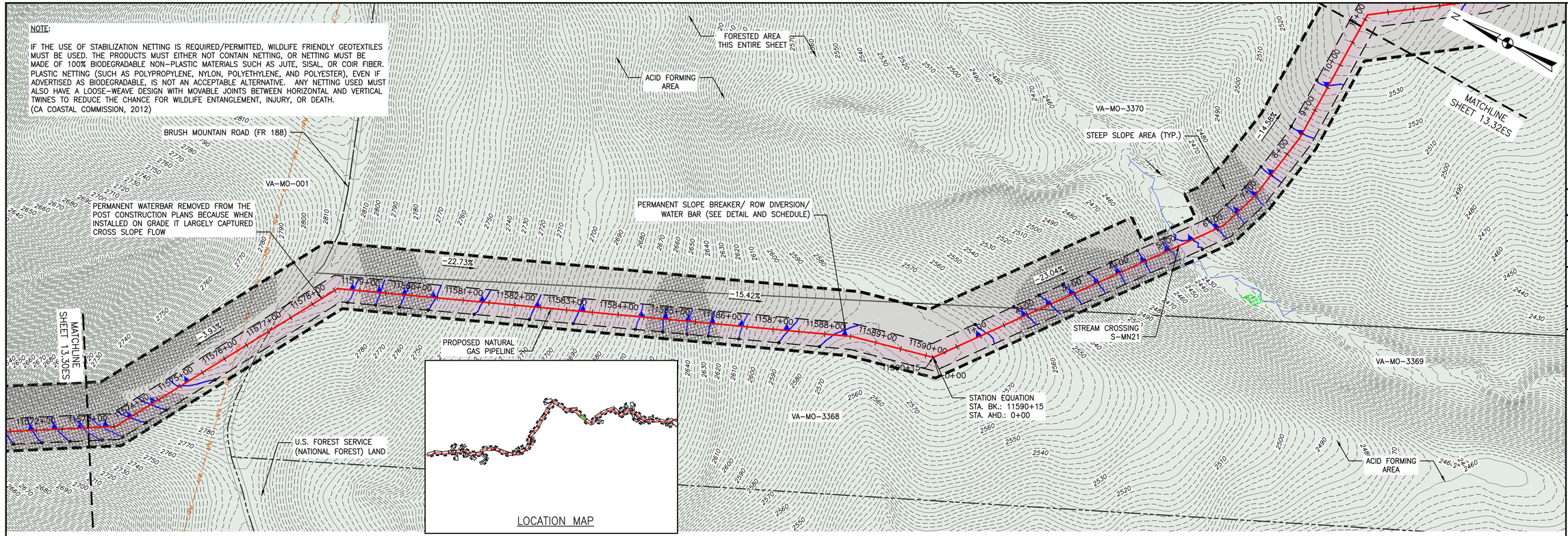
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CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.30PC OF 13.90PC

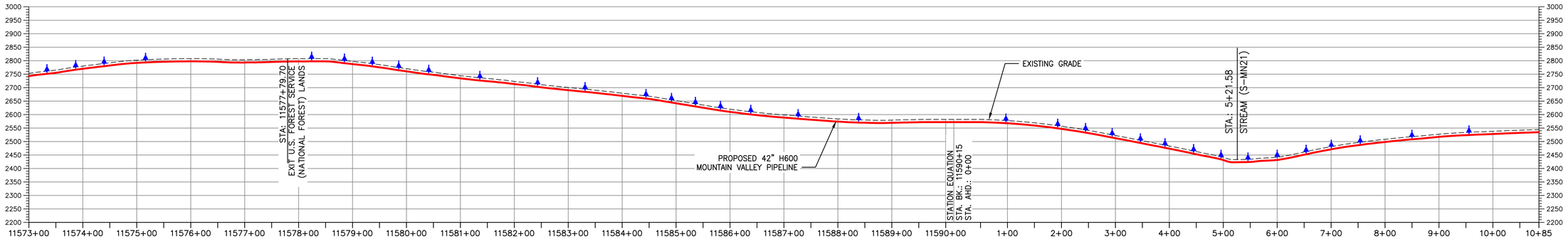
NOTE:

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PLAN

SCALE: 1" = 100'



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

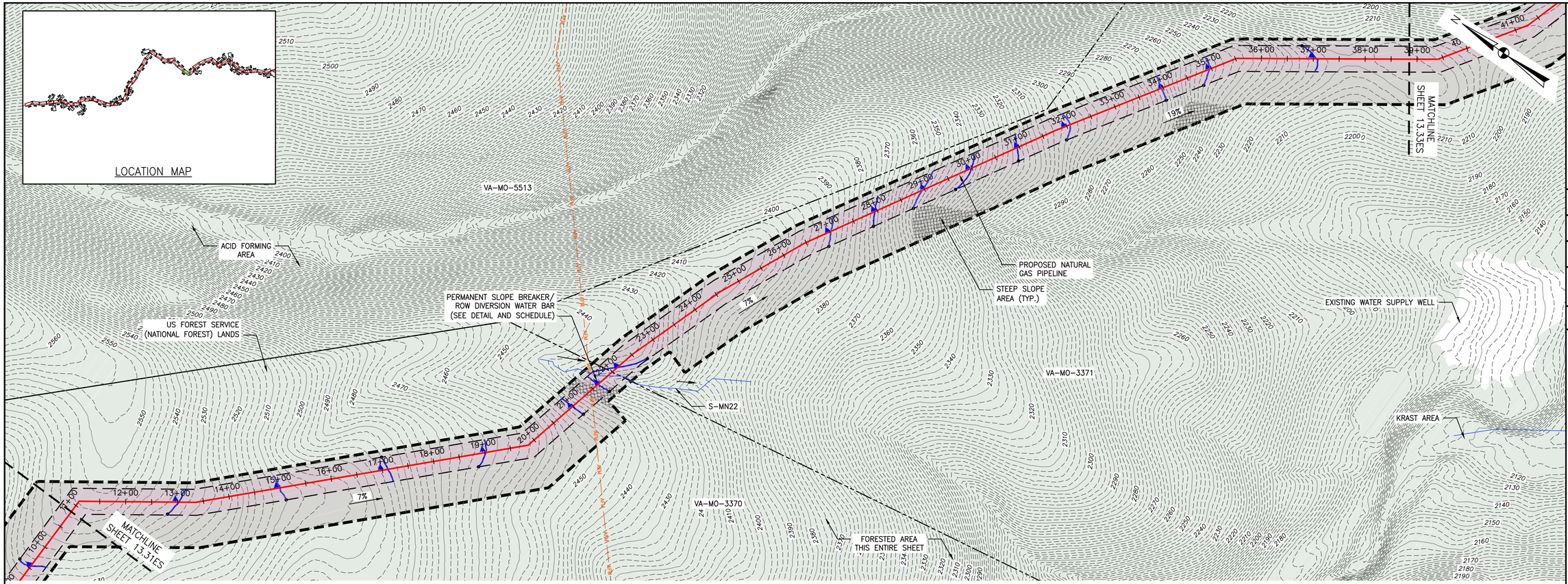
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.31PC OF 13.90PC

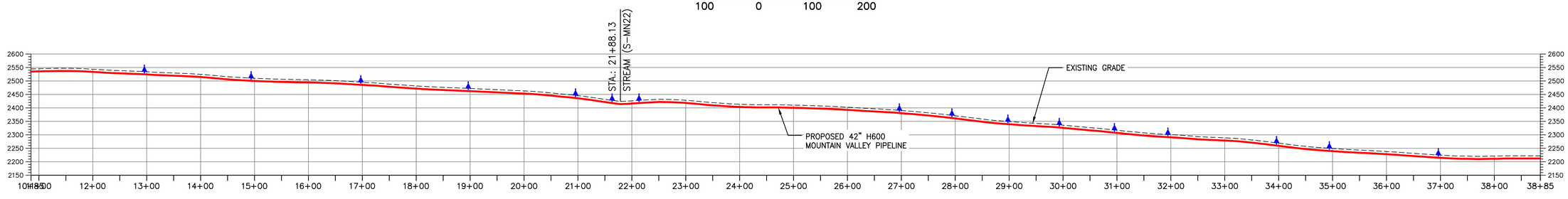
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
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- PROPOSED LEVEL SPREADER
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- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.32(S9).dwg PLOTTED ON: 3/20/2018 12:45 PM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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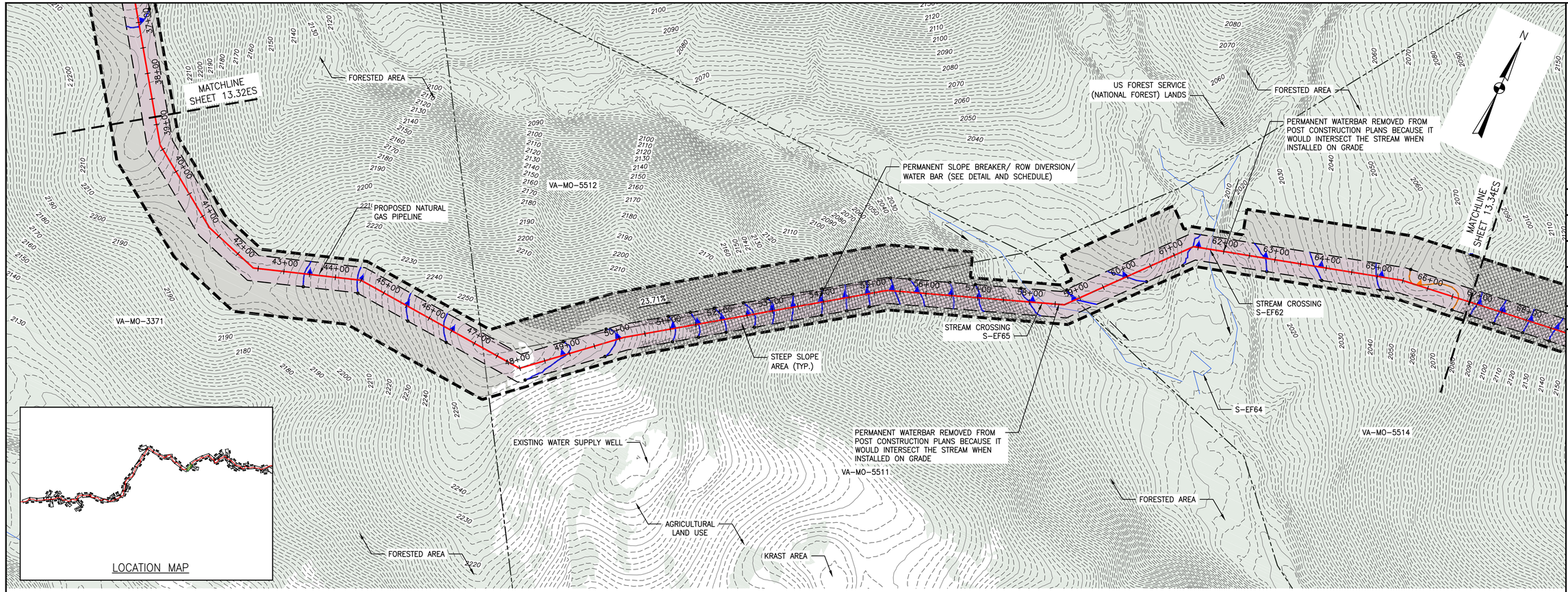
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF PENNSYLVANIA
DAVID J. WALLNER
Lic. No. 040205793
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	4

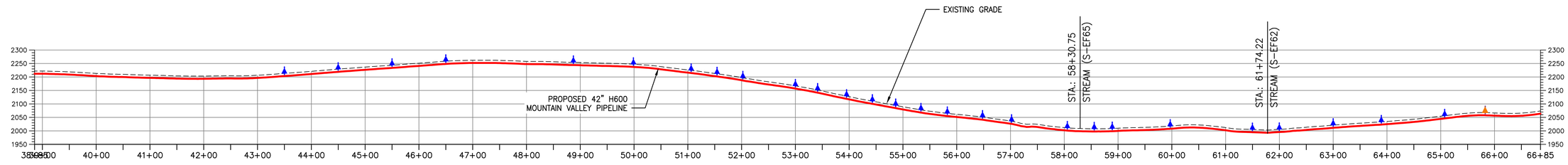
SHT. NO. 13.32PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
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- PROPOSED PIPELINE
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- PERMANENT WATER BAR 10' END TREATMENT
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- EXISTING FOREST
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- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

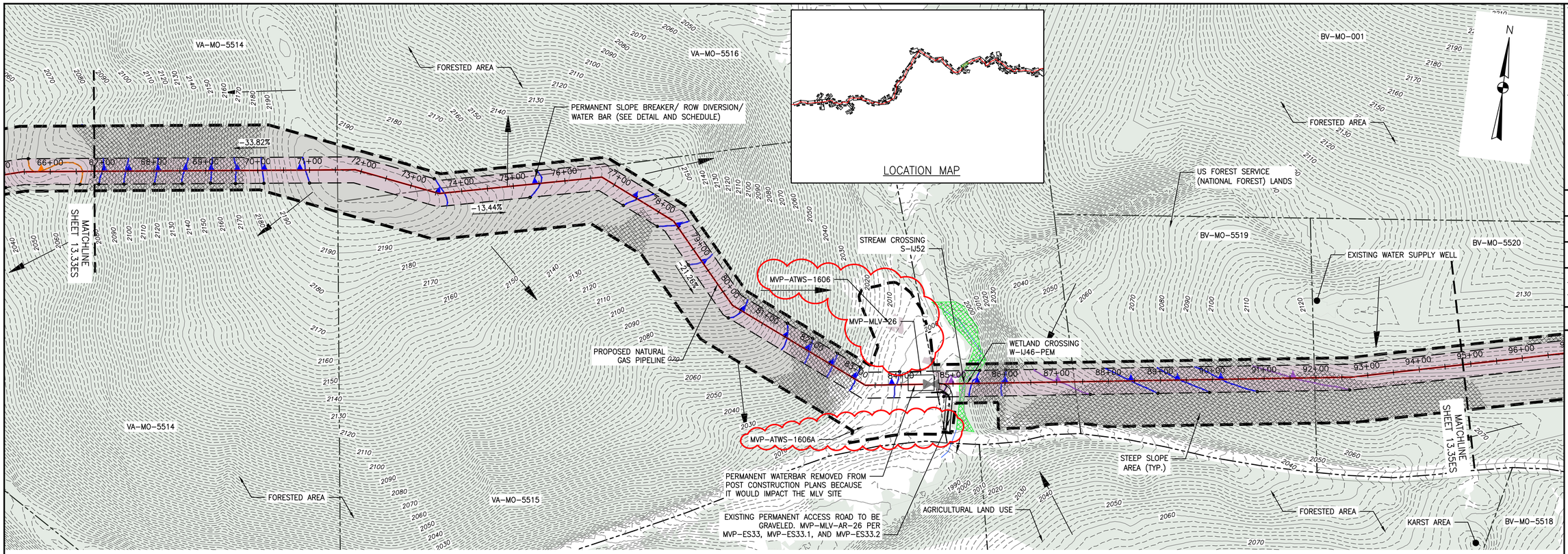
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.33PC OF 13.90PC

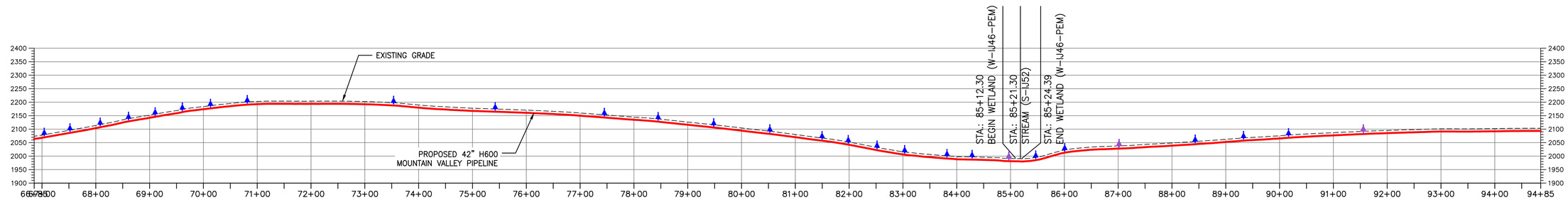
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
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- PROPOSED LEVEL SPREADER
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- PROPOSED PIPELINE
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- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
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- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

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TETRA TECH CAD FILE PATH: R:_Marcellus_Shale_Projects\EQT\7157_-_MVP_Construction_Spread_9\13_-_Montgomery\PC\7157PC13.34(S9).dwg PLOTTED ON: 4/3/2020 9:52 AM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
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5	4/30/18	ZM	JRE	DJW	FIELD MODIFICATION
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

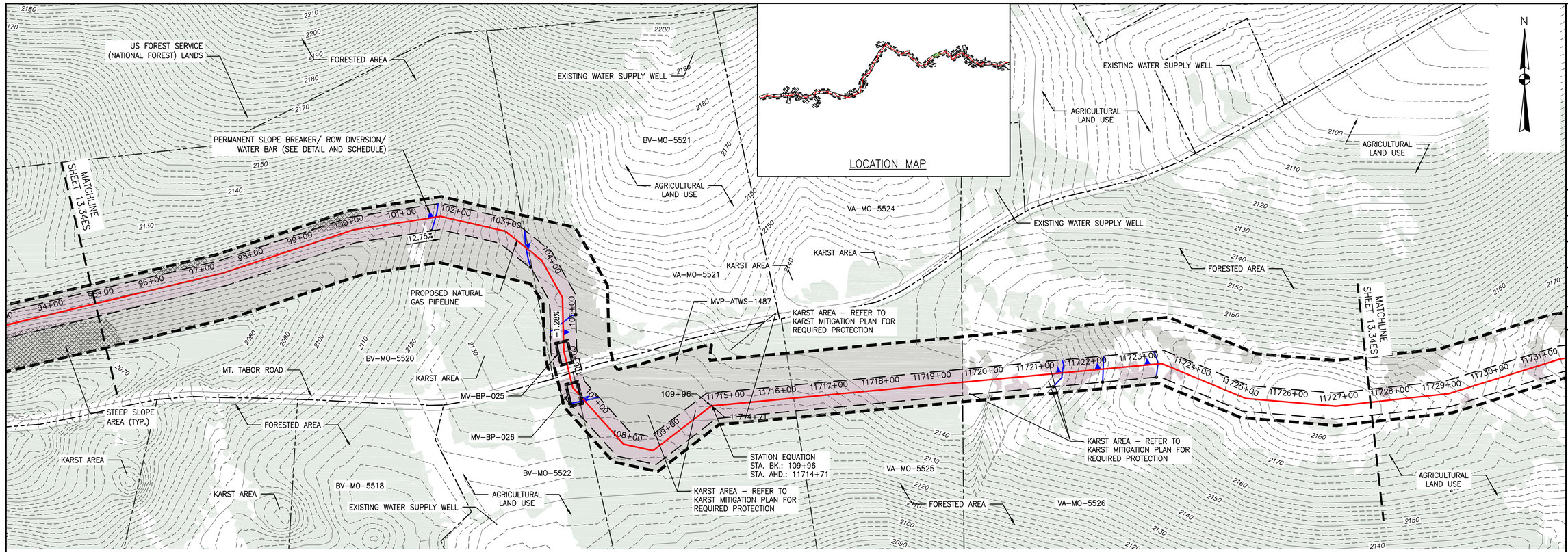
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

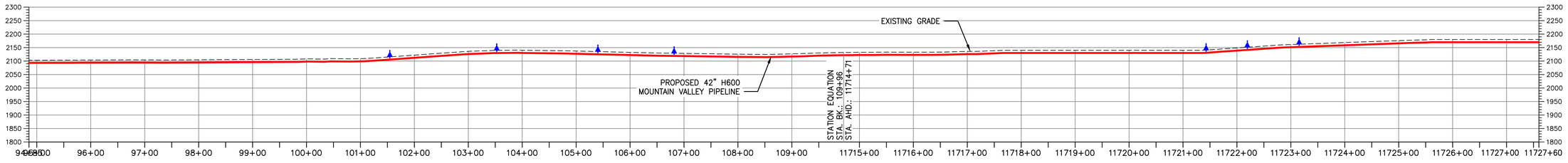
DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	3/25/20
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.34PC OF 13.90PC



PLAN
SCALE: 1" = 100'



PROFILE
HORIZONTAL SCALE: SCALE: 1" = 100'
VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
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- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
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NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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REVISIONS:				
NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

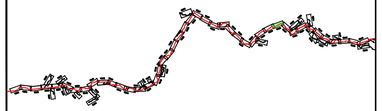
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

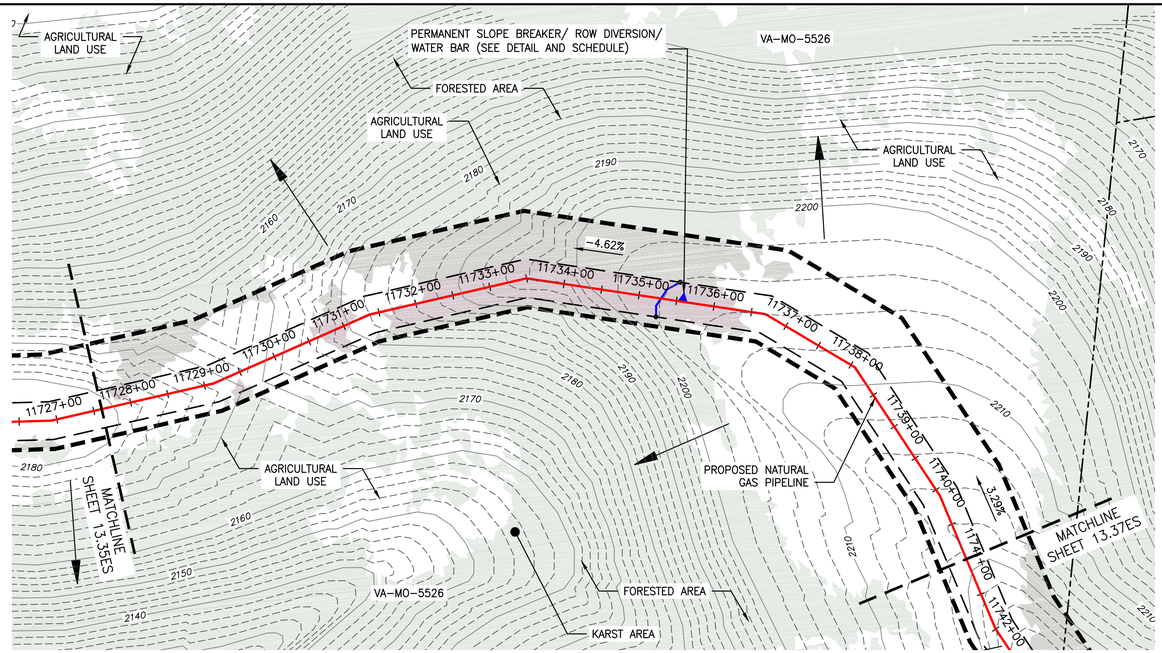
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CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

SHT. NO. 13.35PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.35(S9).dwg PLOTTED ON: 3/20/2018 1:28 PM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb



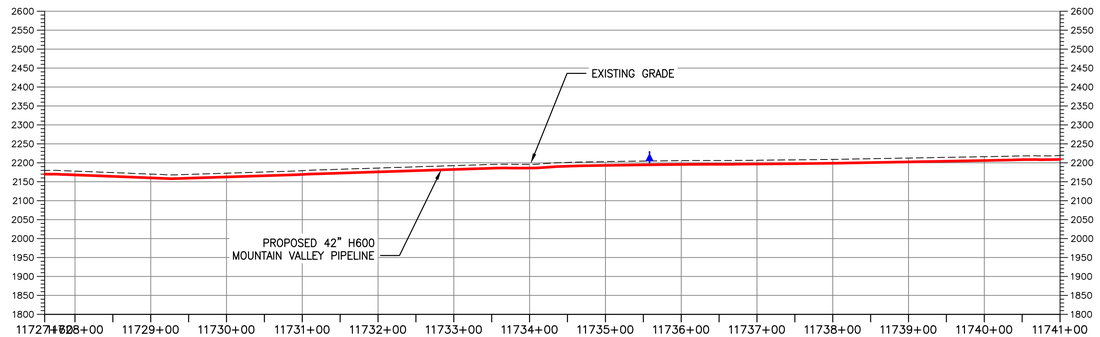
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.36(S9).dwg PLOTTED ON: 3/20/2018 2:00 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

N

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

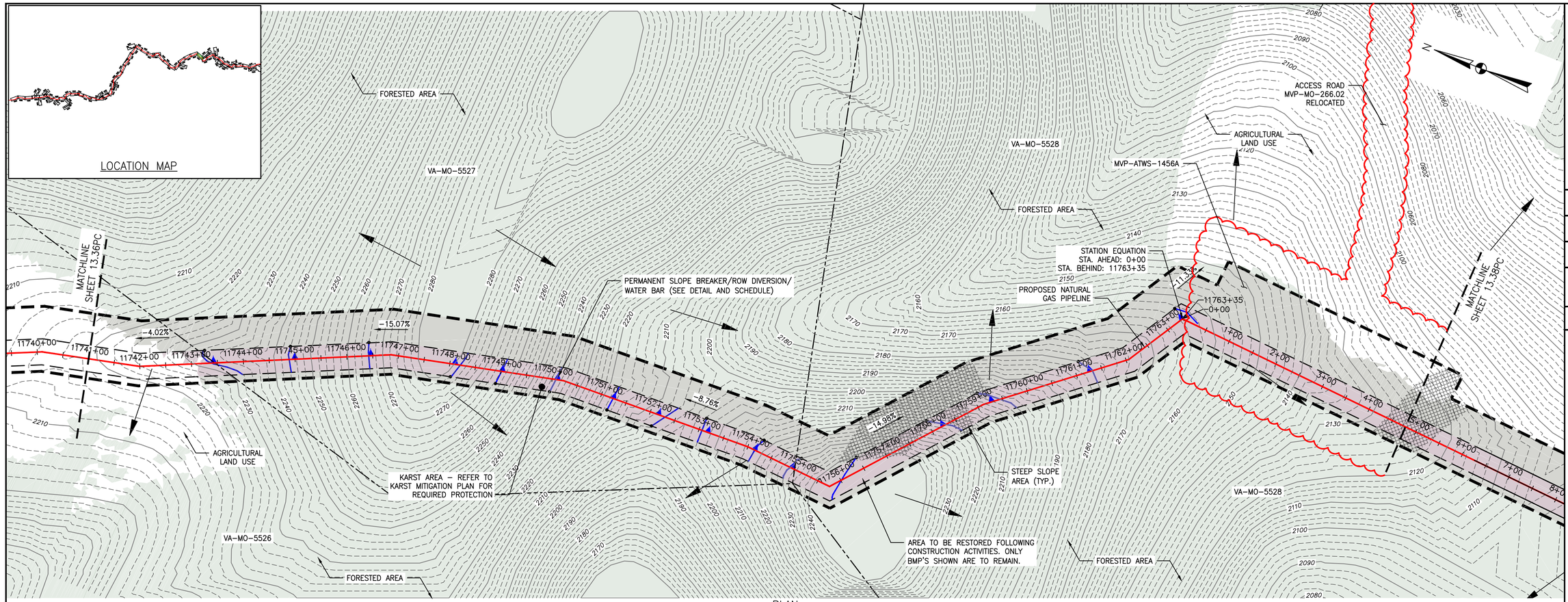


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CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.36PC OF 13.90PC

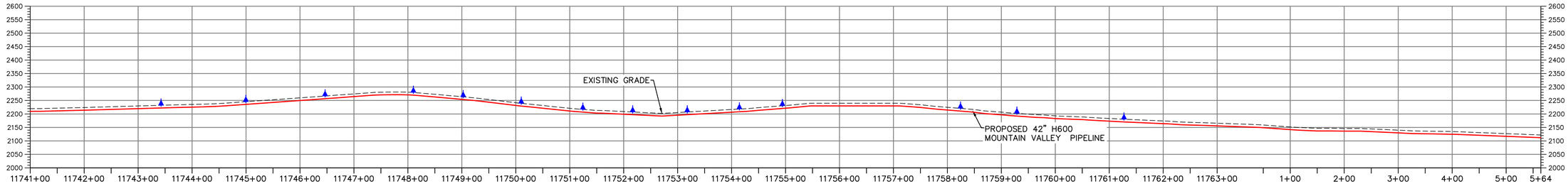
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
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- WETLAND
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- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.37(S9).dwg PLOTTED ON: 7/19/2018 11:03 AM PLOTTED BY: Zindren, Dan PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	4/30/18	KAL	JRE	DJW	FIELD MODIFICATION
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

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CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.37PC OF 13.90PC

MATCHLINE SHEET 13.37PC

MATCHLINE SHEET 13.73ES

MATCHLINE SHEET 13.39PC

AGRICULTURAL LAND USE

VA-MO-5528

VA-MO-5529

FORESTED AREA

KARST AREA

KARST AREA – REFER TO KARST MITIGATION PLAN FOR REQUIRED PROTECTION

PERMANENT SLOPE BREAKER/ROW DIVERSION/ WATER BAR (SEE DETAIL AND SCHEDULE)

STEEP SLOPE AREA (TYP.)

AREA TO BE RESTORED FOLLOWING CONSTRUCTION ACTIVITIES. ONLY BMP'S SHOWN ARE TO REMAIN.

POND CROSSING P-KL2

PROPOSED NATURAL GAS PIPELINE

MP 224.5

11+36

11274+71

-13.89%

-7.51%

-10.83%

-8.42%

-14.43%

N

LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200

EXISTING GRADE

PROPOSED 42" H600 MOUNTAIN VALLEY PIPELINE

PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	4/30/18	KAL	JRE	DJW	FIELD MODIFICATION
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

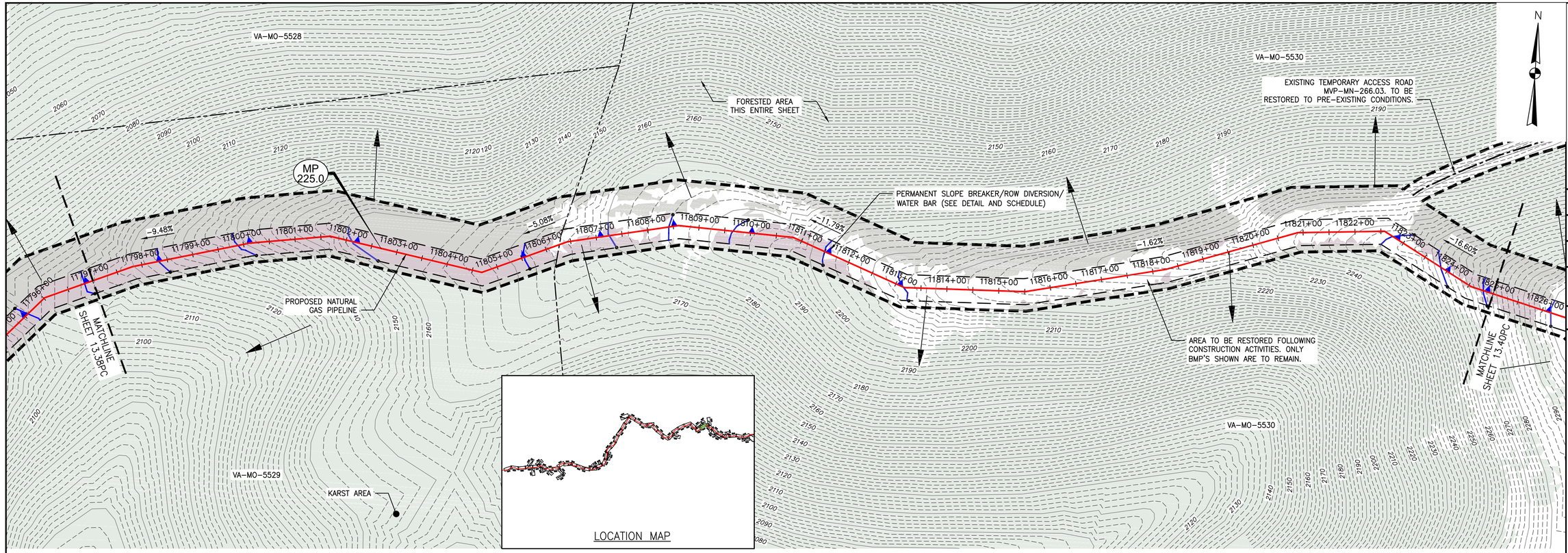
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.38PC OF 13.90PC

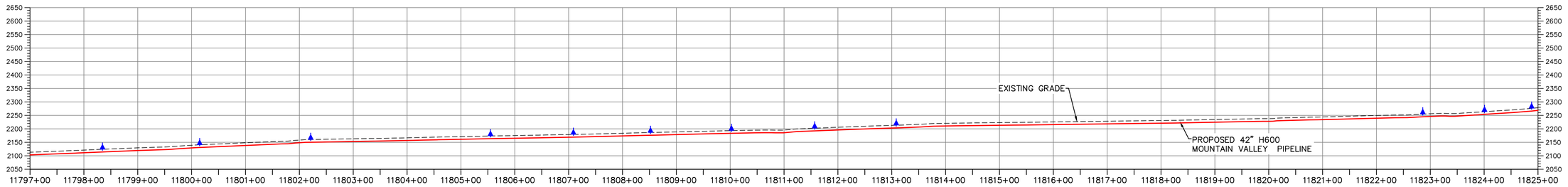
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
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- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
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- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
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- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.39(S9).dwg PLOTTED ON: 3/20/2018 2:17 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.:	DATE:	DWN.:	CHK'D.:	APP'D.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.39PC OF 13.90PC

LOCATION MAP

PLAN
SCALE: 1" = 100'
100 0 100 200

PROFILE
HORIZONTAL SCALE: SCALE: 1" = 100'
100 0 100 200
VERTICAL SCALE: SCALE: 1" = 200'
200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.40(S9).dwg PLOTTED ON: 3/20/2018 2:16 PM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE
SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

REVISIONS:

NO.:	DATE:	DWN.:	CHK'D.:	APP'D.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

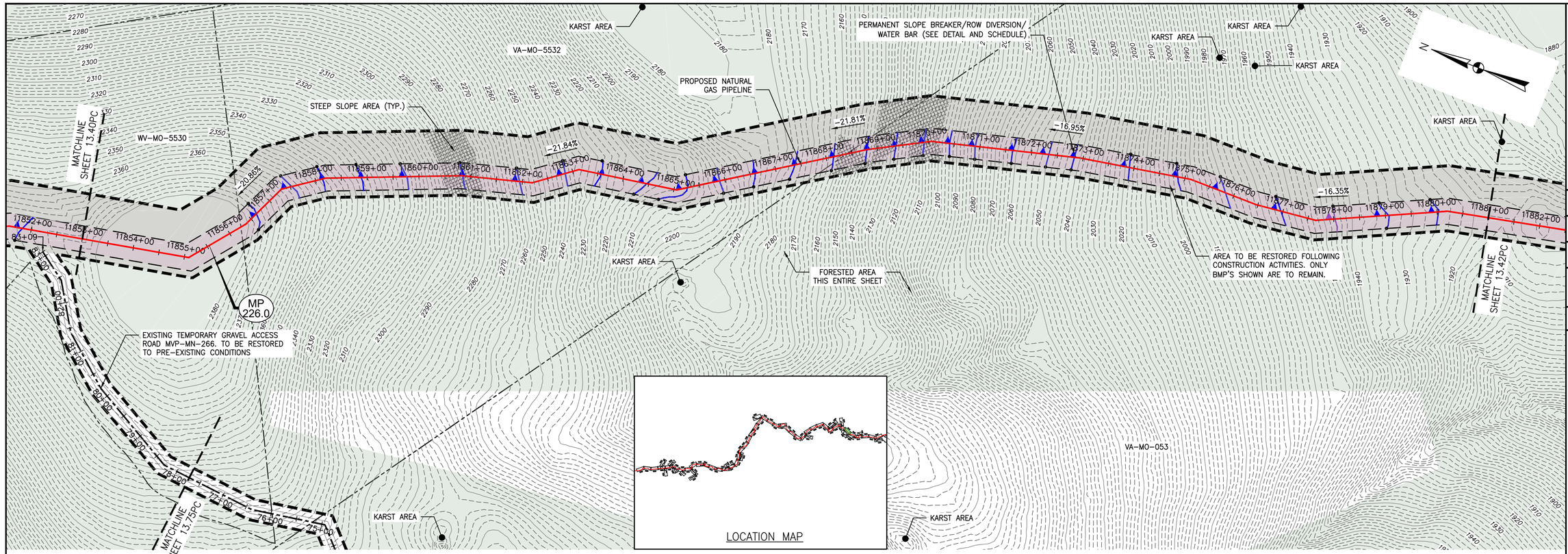
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PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF PENNSYLVANIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	4

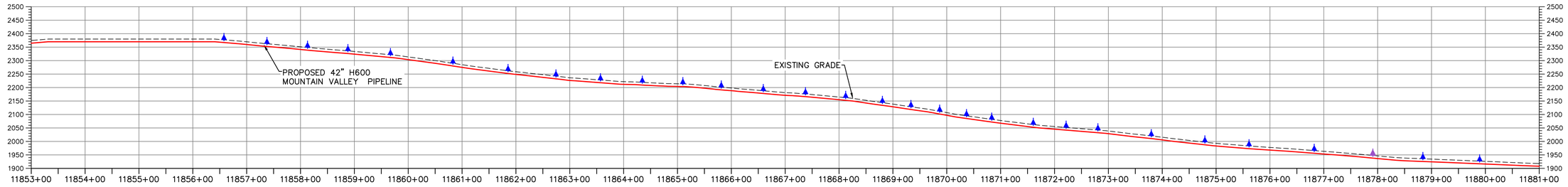
SHT. NO. 13.40PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

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2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

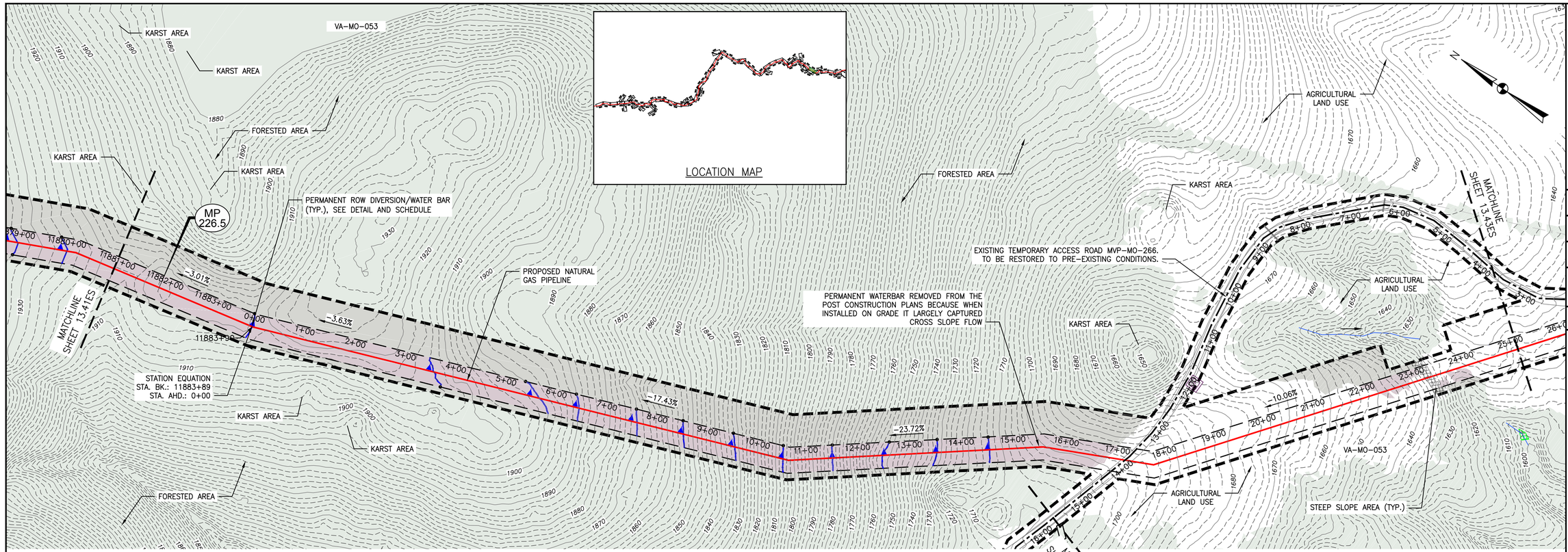
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

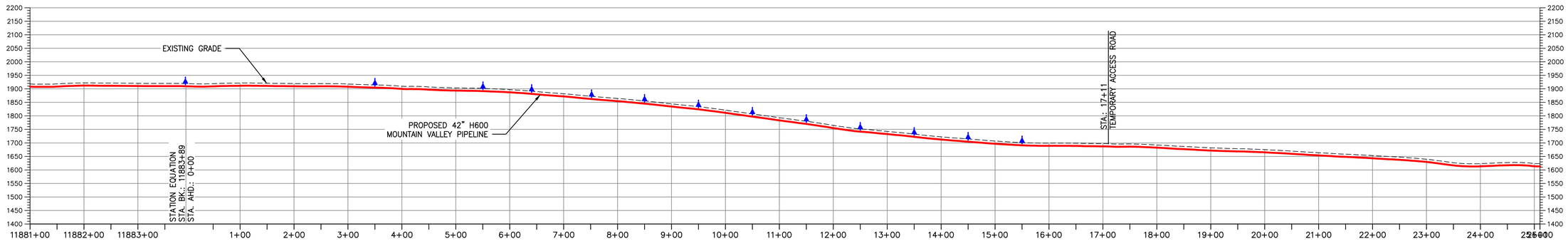
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CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.41PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.41(S9).dwg PLOTTED ON: 3/21/2018 10:47 AM PLOTTED BY: Najeski, Nichole PLOT FILE: ENVIRONMENTAL_COLOR.ctb





PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus_Shale_Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.42(S9).dwg PLOTTED ON: 3/20/2018 2:00 PM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

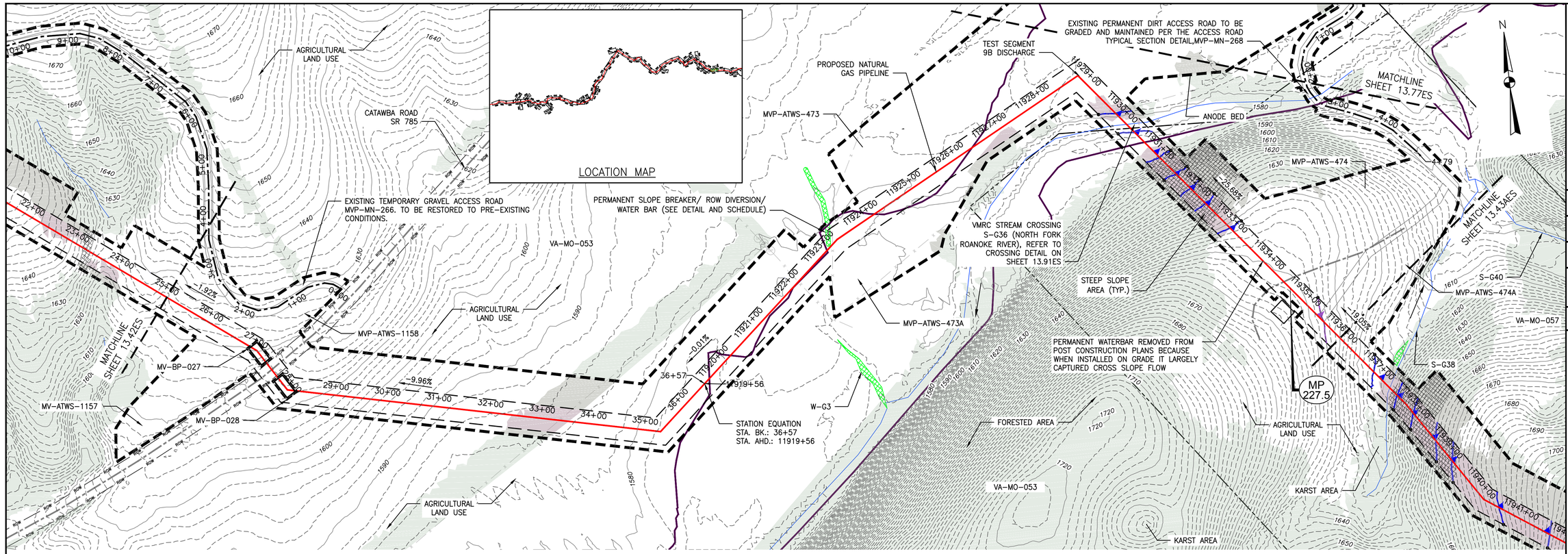
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

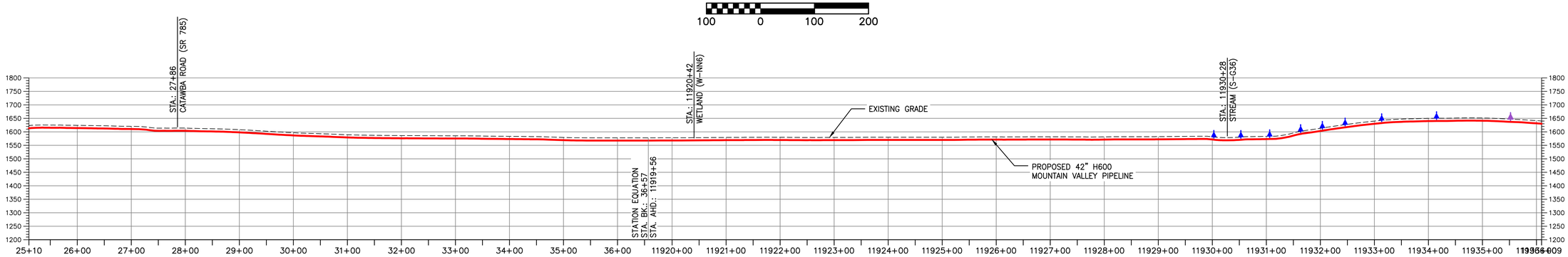
SHT. NO. 13.42PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
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- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
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- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

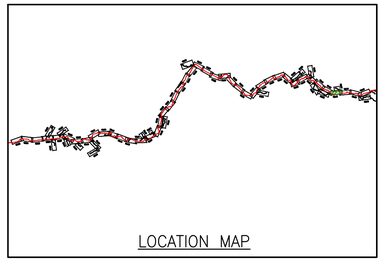
DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

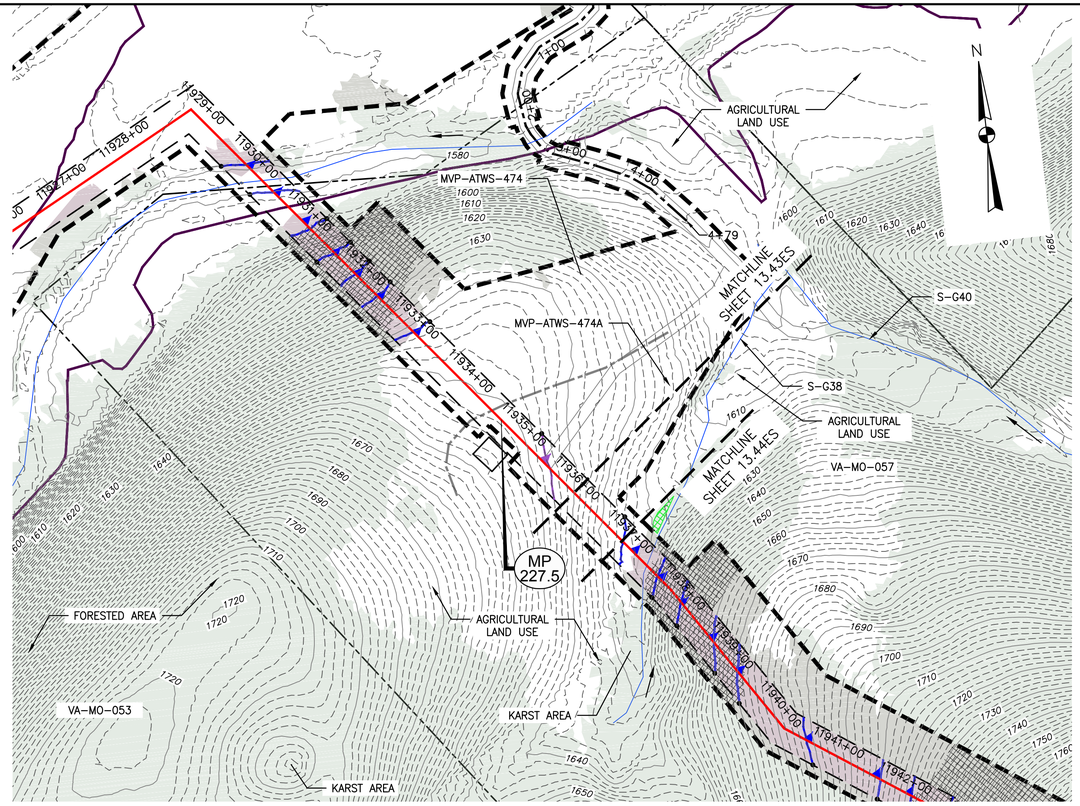
REVISION

SHT. NO. 13.43PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.43(S9).dwg PLOTTED ON: 3/20/2018 2:20 PM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

LOCATION MAP

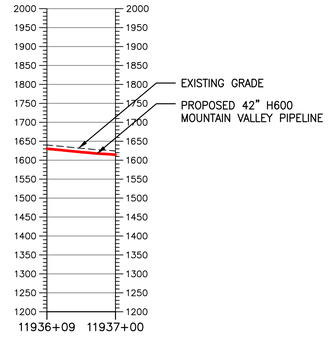




PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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NOTES:

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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.43AES9.dwg PLOTTED ON: 3/20/2018 4:49 PM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
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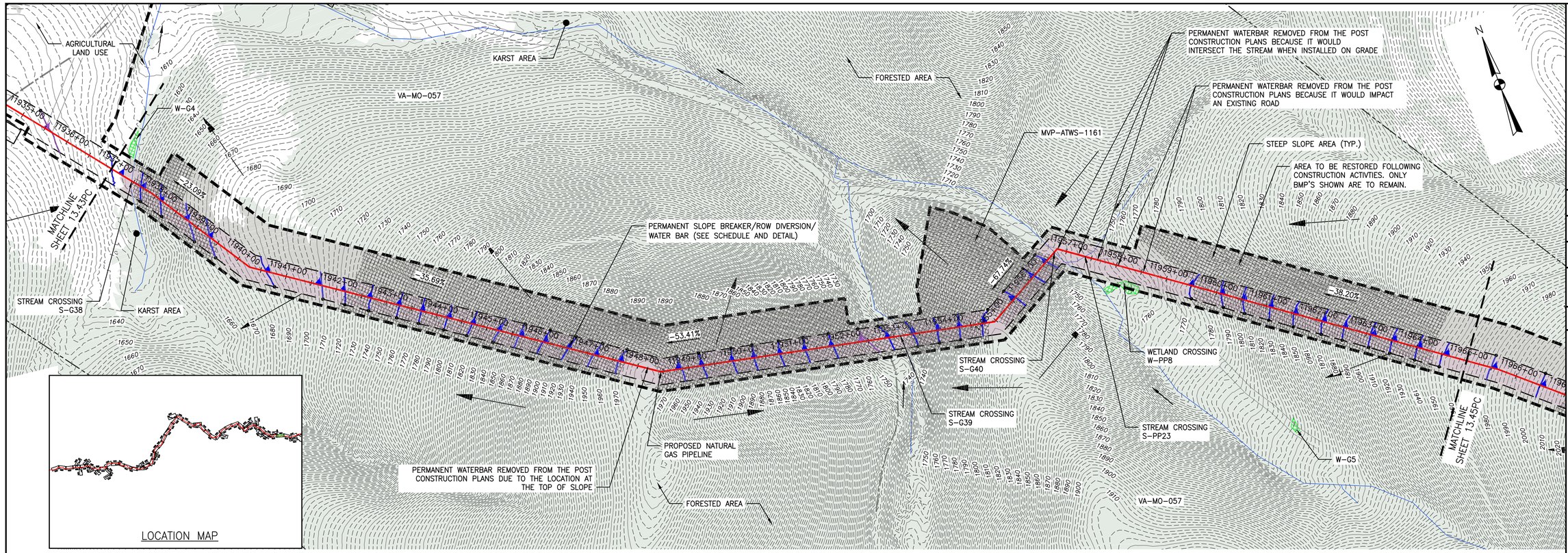
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

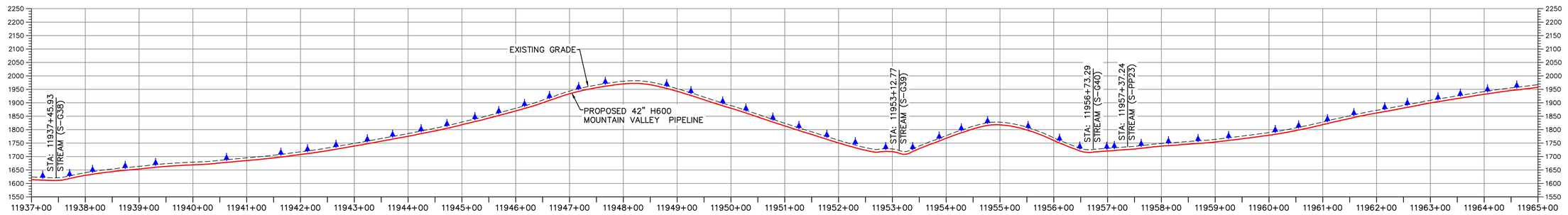
SHT. NO. 13.43AES OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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NOTES:

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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.44(S9).dwg PLOTTED ON: 3/21/2018 10:38 AM PLOTTED BY: Najeski, Nichole PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

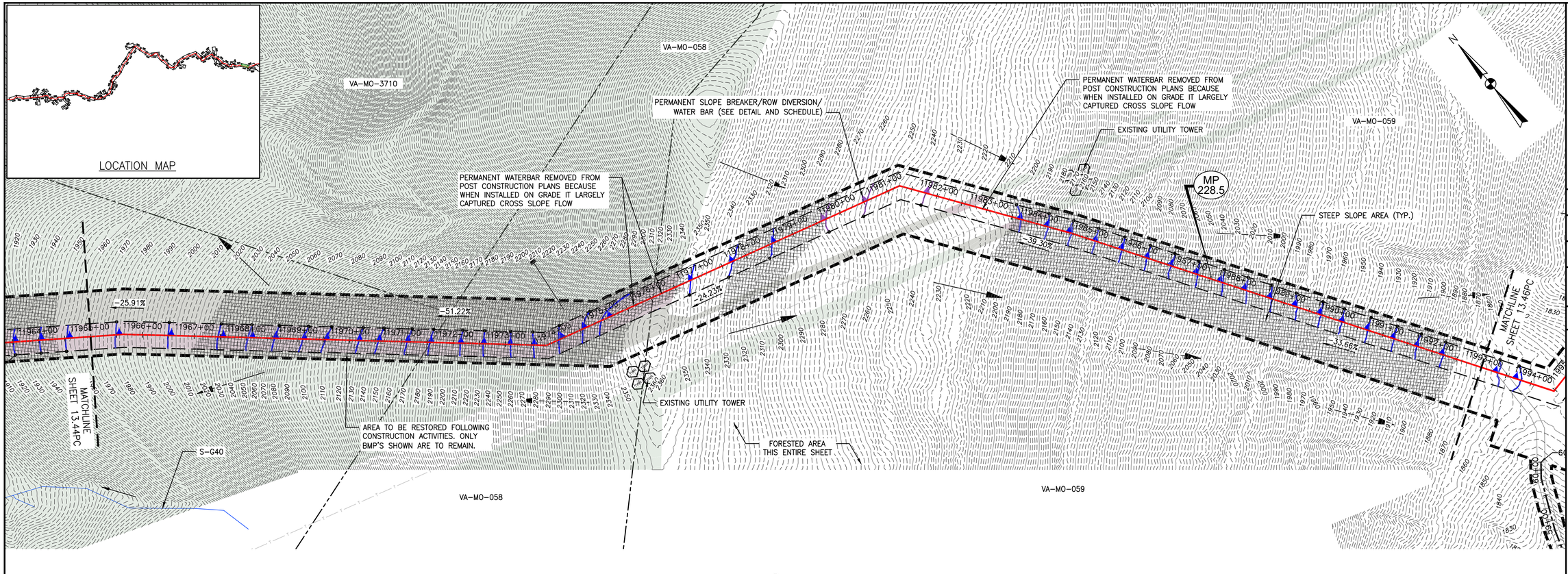
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

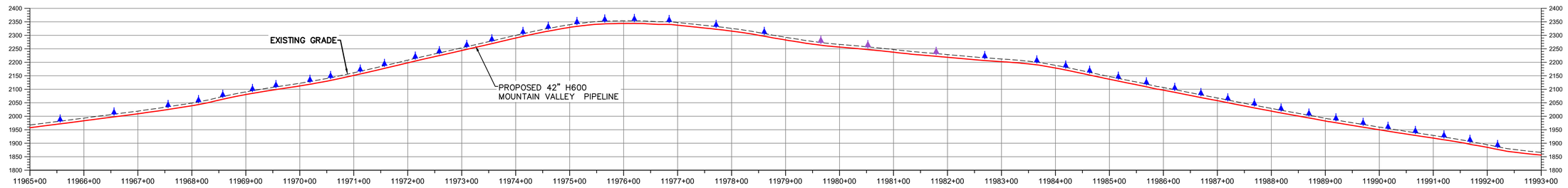
SHT. NO. 13.44PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
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- PROPOSED PIPELINE
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- POND
- WETLAND
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- PERMANENT WATER BAR 20' END TREATMENT
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NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

Mountain Valley PIPELINE

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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

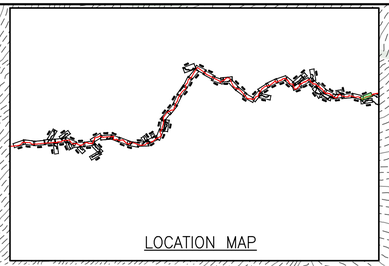
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.45PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.45(S9).dwg PLOTTED ON: 3/21/2018 10:49 AM PLOTTED BY: Najeski, Nichole PLOT FILE: ENVIRONMENTAL_COLOR.ctb



PERMANENT WATERBAR REMOVED FROM POST CONSTRUCTION PLANS BECAUSE IT WOULD INTERSECT THE STREAM WHEN INSTALLED ON GRADE

STREAM CROSSING S-MM15

FORESTED AREA

AREA TO BE RESTORED FOLLOWING CONSTRUCTION ACTIVITIES. ONLY BMP'S SHOWN ARE TO REMAIN.

VA-MO-059

STREAM CROSSING S-MM14

PERMANENT WATERBAR REMOVED FROM POST CONSTRUCTION PLANS BECAUSE IT WOULD INTERSECT THE STREAM WHEN INSTALLED ON GRADE

AGRICULTURAL LAND USE

VA-MO-060

POND

ACID FORMING AREA

MP 229.0

STREAM CROSSING S-MM13

MATCHLINE SHEET 13.47PC

MATCHLINE SHEET 13.45PC

MATCHLINE SHEET 13.78PC

PROPOSED NATURAL GAS PIPELINE

FORESTED AREA

STEEP SLOPE AREA (TYP.)

EXISTING TEMPORARY DIRT ACCESS ROAD MVP-MN-270. TO BE RESTORED TO PRE-EXISTING CONDITIONS

PERMANENT SLOPE BREAKER/ROW DIVERSION/ WATER BAR (SEE DETAIL AND SCHEDULE)

MVP-ATWS-1162

MVP-ATWS-1163

VA-MO-059

VA-MO-3711

ACID FORMING AREA

VA-MN-0052

VA-MO-061

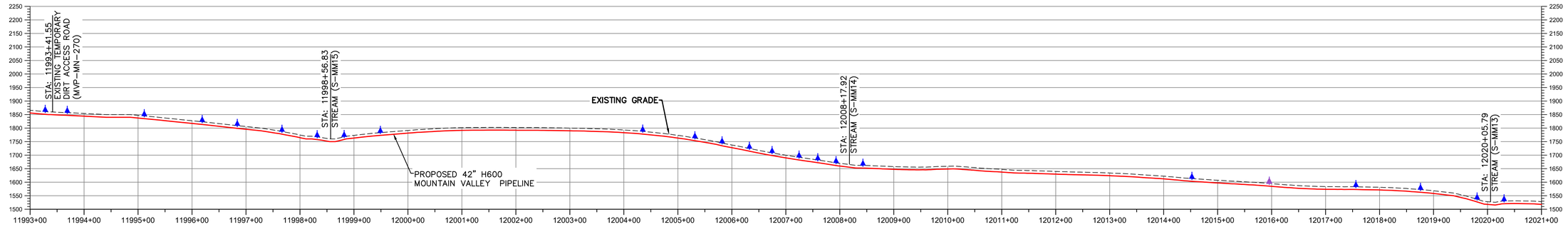
PERMANENT WATERBAR REMOVED FROM POST CONSTRUCTION PLANS BECAUSE WHEN INSTALLED ON GRADE IT LARGELY CAPTURED CROSS SLOPE FLOW

-22.63%
-13.56%
-32.69%
-5.56%
-0.87%

PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
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NOTES:

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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.46(S9).dwg PLOTTED ON: 3/21/2018 11:14 AM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE
SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

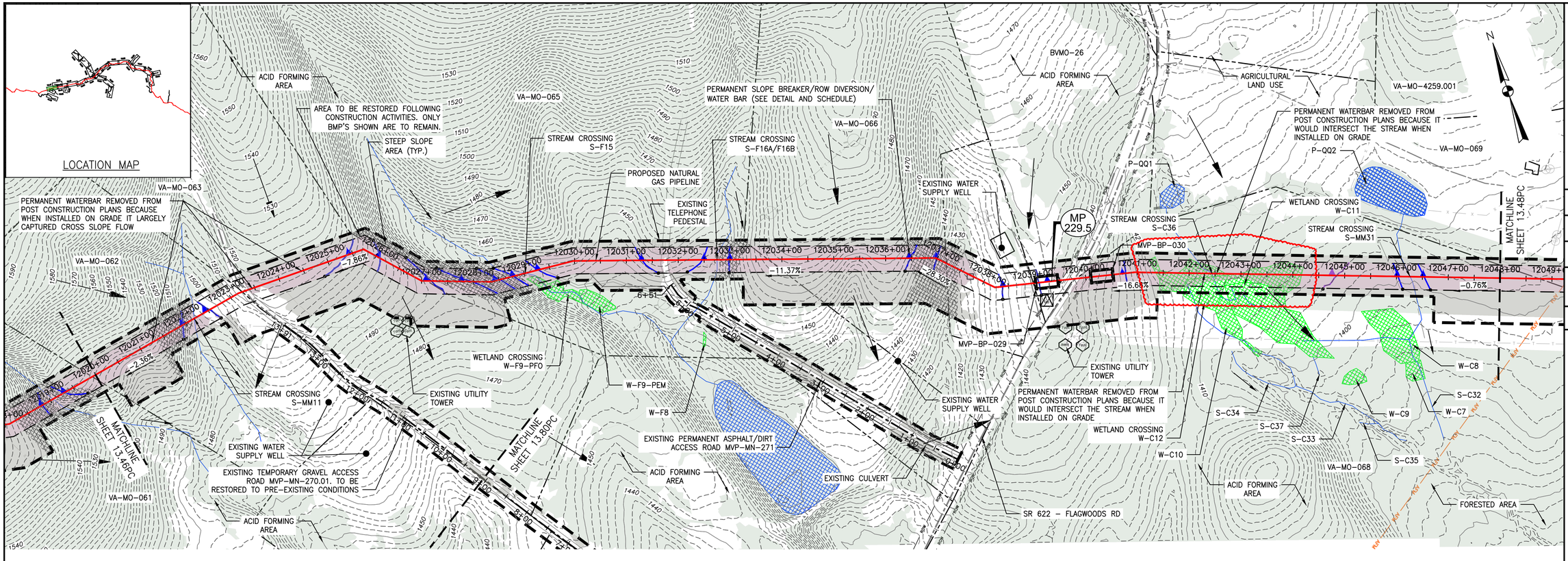
TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	4

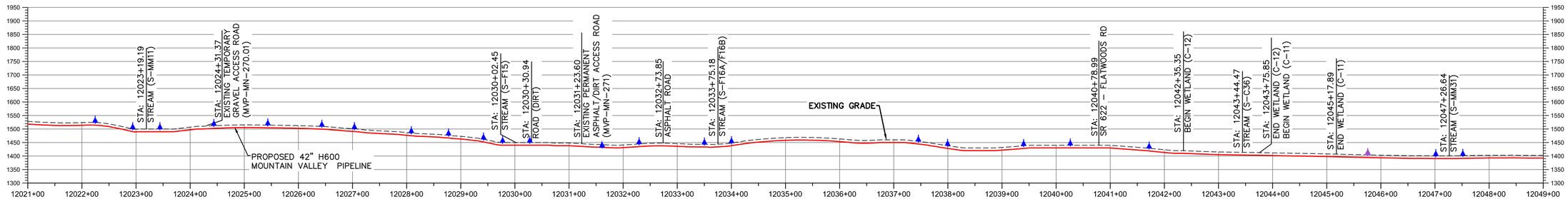
SHT. NO. 13.46PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

REVISIONS:

NO.:	DATE:	DESCRIPTION:	APPD.:
–	7/2/20	CHANGES TO AQUATIC RESOURCES DELINEATION	DJW
4	3/5/18	ADDRESS VADEQ COMMENTS	DJW
3	2/16/18	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY	DJW
2	11/21/17	ADDRESS VADEQ COMMENTS	DJW
1	9/21/17	PLAN SUBMISSION	DJW

NO.:	DWN.:	CHKD.:	APPD.:
–	BH	JRE	DJW
4	KAL	JRE	DJW
3	KAL	JRE	DJW
2	KAL	JRE	DJW
1	KAL	JRE	DJW

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

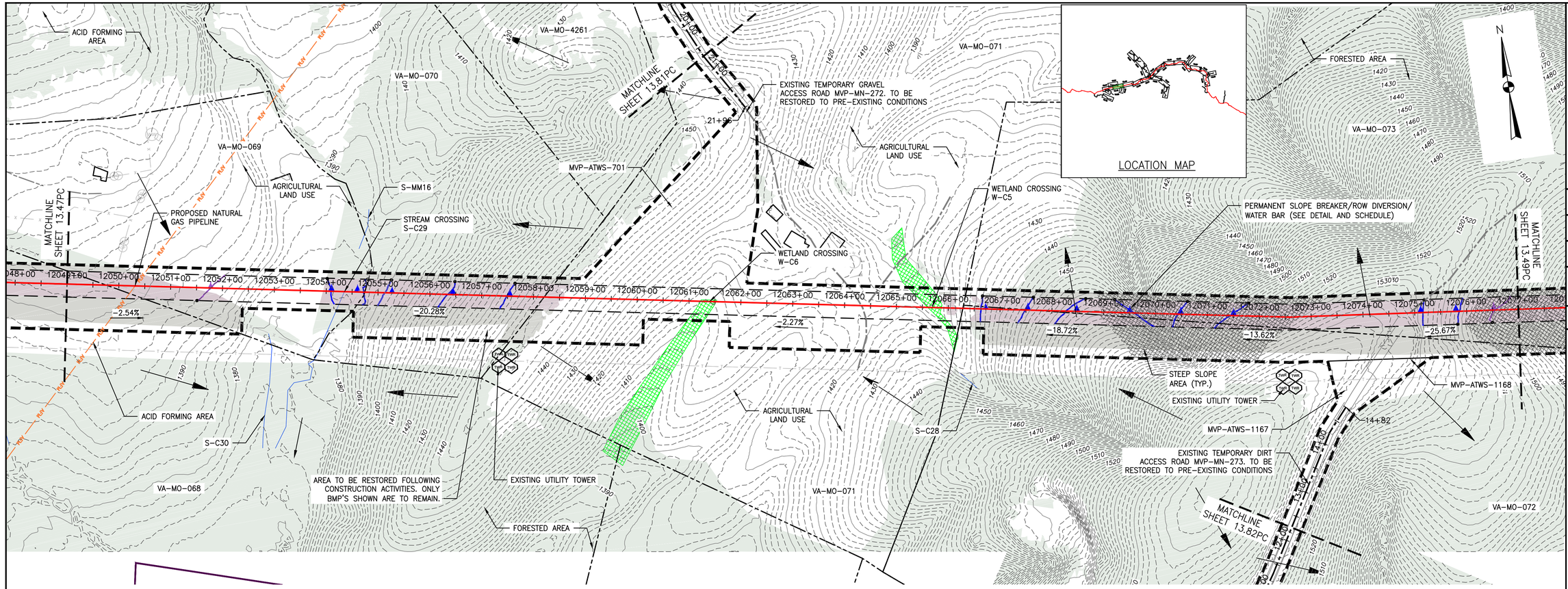
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	7/7/20
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.47PC OF 13.90PC

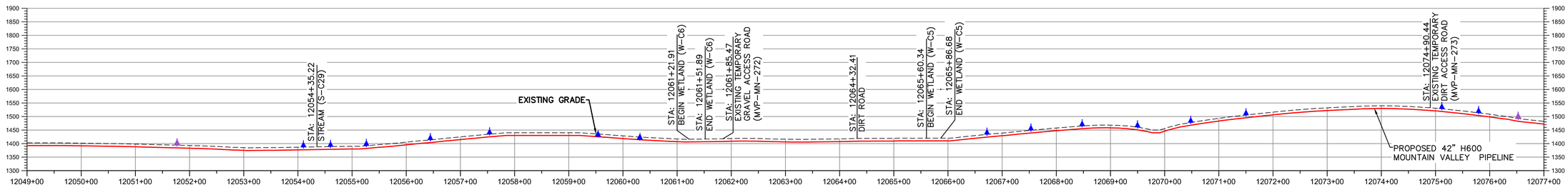
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.48(S9).dwg PLOTTED ON: 3/21/2018 11:16 AM PLOTTED BY: Hoppe, Ben PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

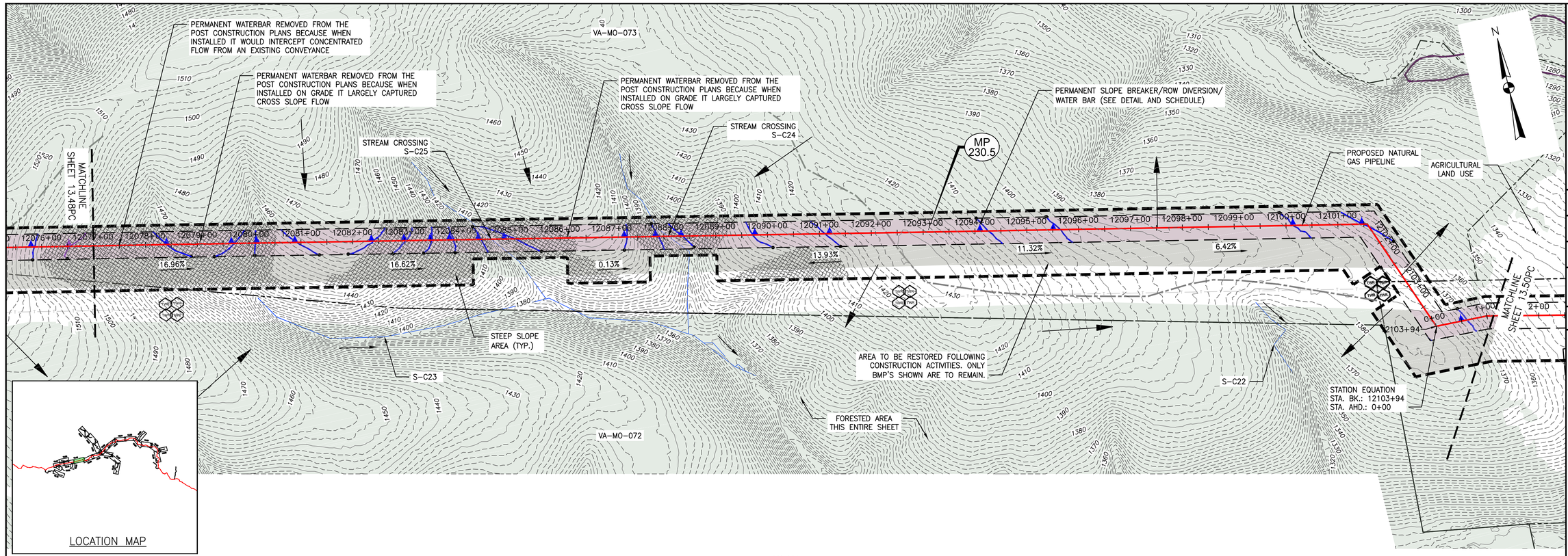
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.48PC OF 13.90PC

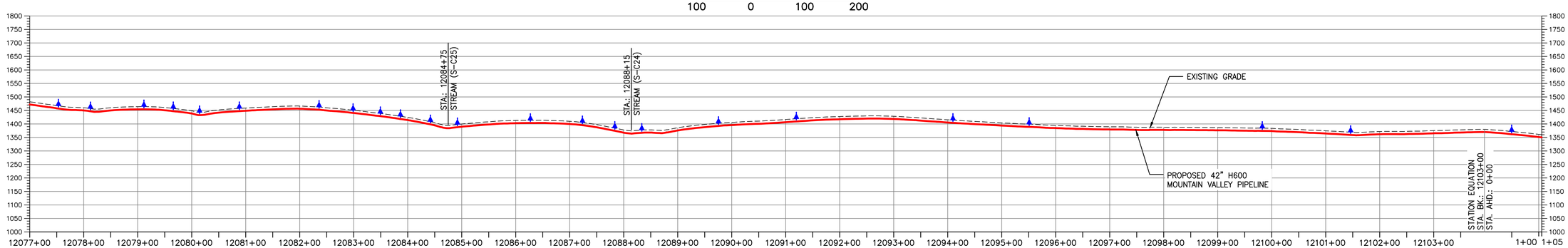


LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
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- PROPOSED PIPELINE
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- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
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- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.49(S9).dwg PLOTTED ON: 3/20/2018 4:49 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHK'D.:	APP'D.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

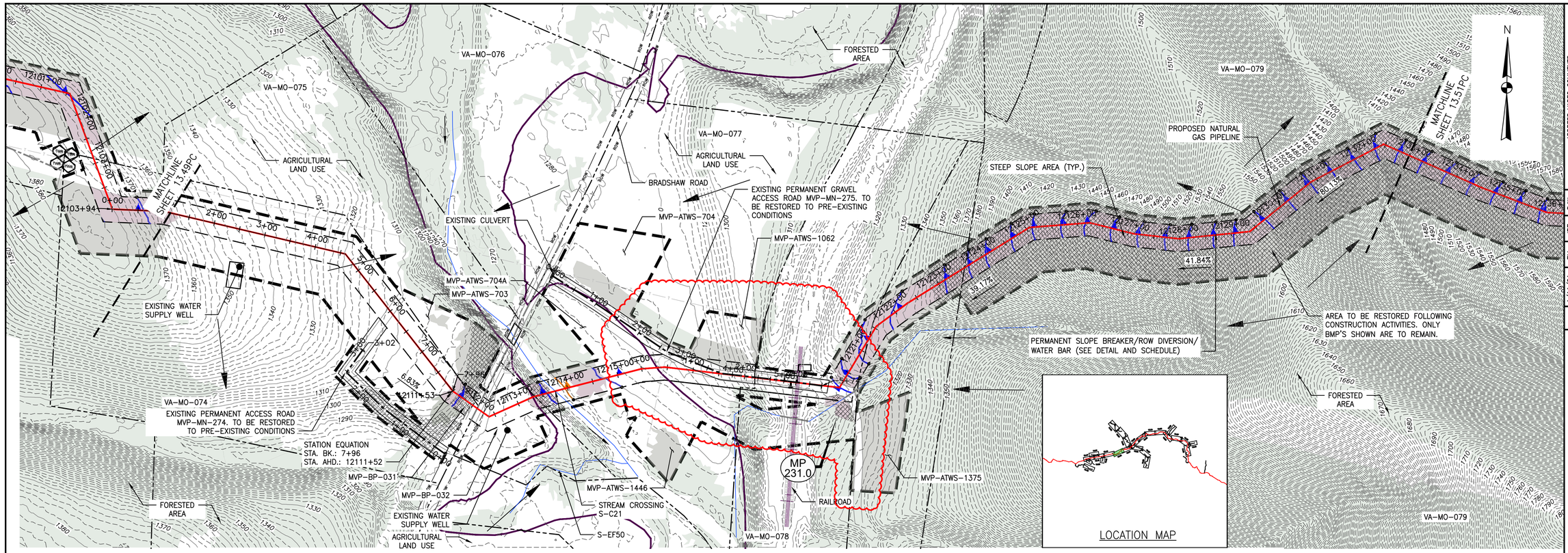
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

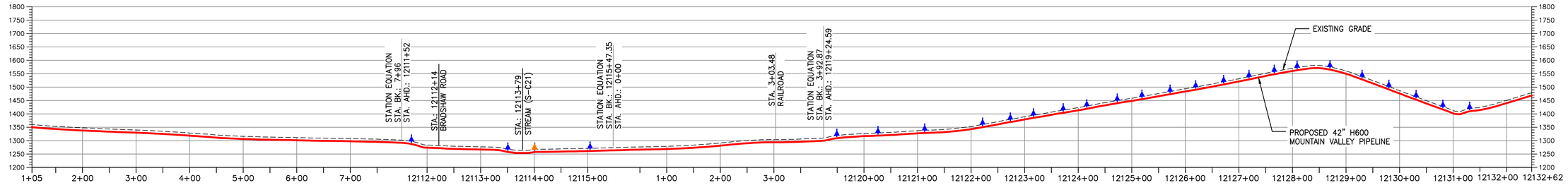
SHT. NO. 13.49PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
–	1/11/21	ZM	JRE	DJW	ADDRESS VADEQ COMMENTS
–	7/7/20	BH	JRE	DJW	FIELD MODIFICATION – MP 230.8 (PIPELINE RE-ROUTE)
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

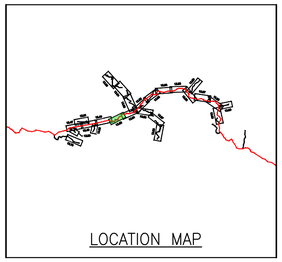
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

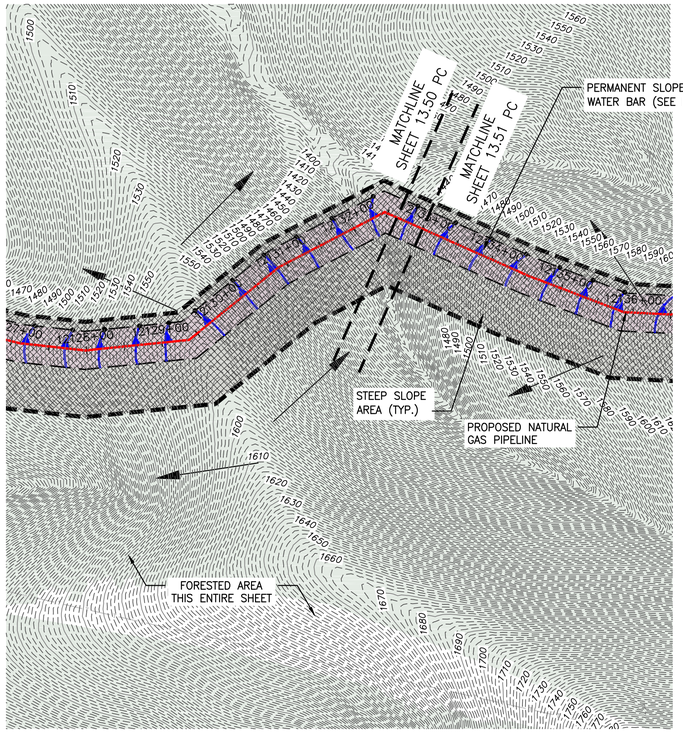
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	1/11/21
SCALE:	AS SHOWN
REVISION	

SHT. NO. 13.50PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus_Shale_Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.50(S9).dwg PLOTTED ON: 2/22/2021 8:39 AM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

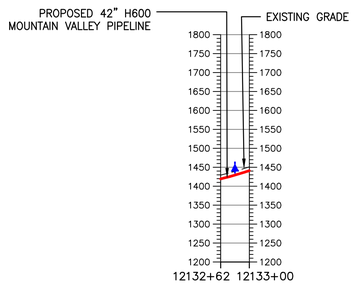




PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

N

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
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- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.50A(S9).dwg PLOTTED ON: 3/20/2018 1:18 PM PLOTTED BY: Warman, Sarah PLOT FILE: ENVIRONMENTAL_COLOR.ctb

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

TETRA TECH

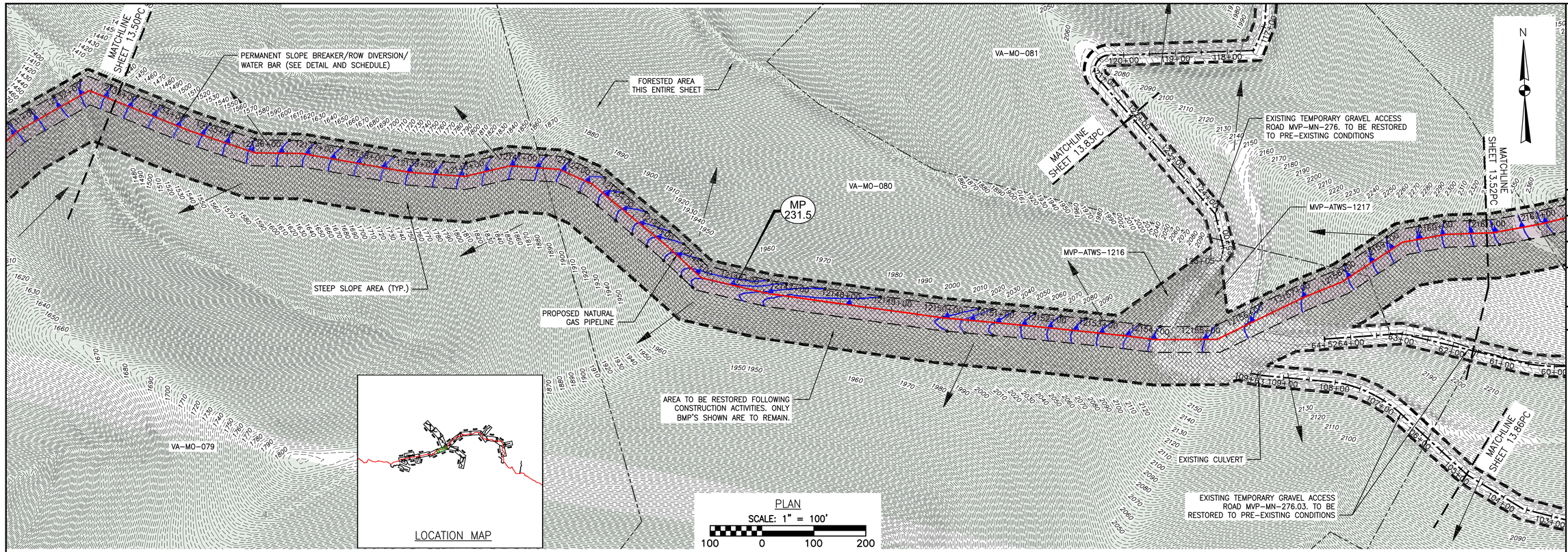
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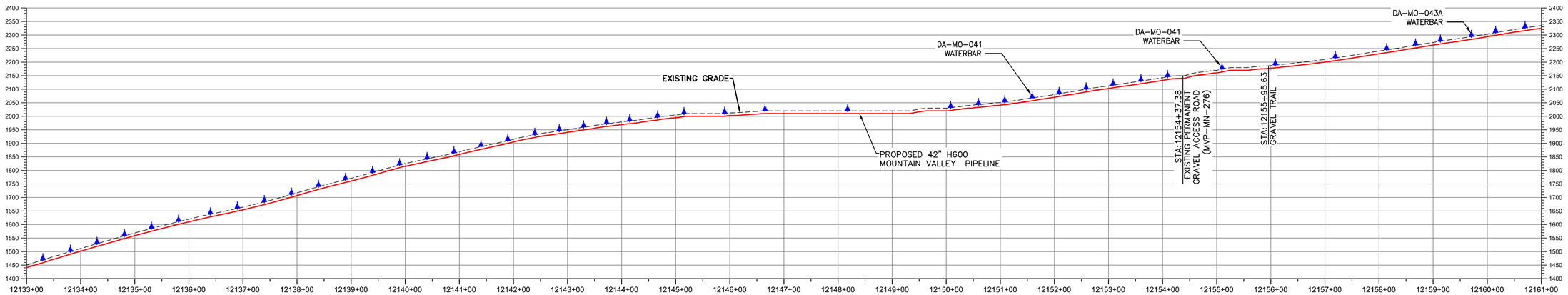
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	
SHT. NO. 13.50APC OF 13.90PC	





PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'
100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'
200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
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- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
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- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
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- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.51(S9).dwg PLOTTED ON: 3/20/2018 1:43 PM PLOTTED BY: Warman, Sarah PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

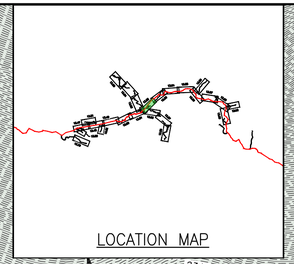
TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
SHT. NO.	13.51PC OF 13.90PC

REVISION



MATCHLINE SHEET 13.51PC

MATCHLINE SHEET 13.53PC

MP 232.0

VA-MO-080

VA-MO-082

BVMO-29

PROPOSED NATURAL GAS PIPELINE

PERMANENT SLOPE BREAKER/ROW DIVERSION/ WATER BAR (SEE DETAIL AND SCHEDULE)

AREA TO BE RESTORED FOLLOWING CONSTRUCTION ACTIVITIES. ONLY BMP'S SHOWN ARE TO REMAIN.

STEEP SLOPE AREA (TYP.)

PERMANENT WATERBAR REMOVED FROM POST CONSTRUCTION PLANS BECAUSE WHEN INSTALLED ON GRADE IT LARGELY CAPTURES CROSS SLOPE FLOW

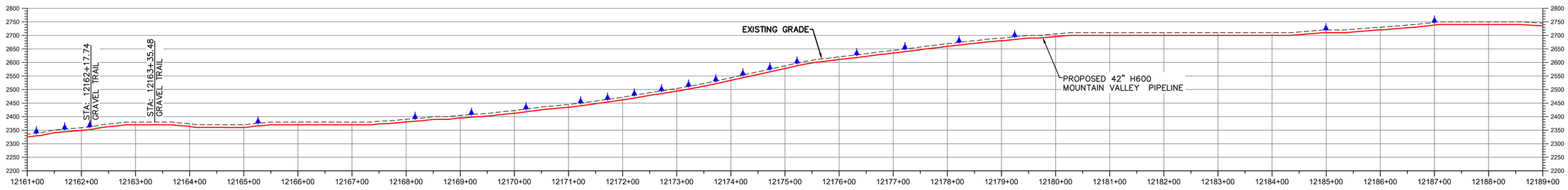
EXISTING 25' TEMPORARY GRAVEL ACCESS ROAD MVP-MN-276.01. TO BE RESTORED TO PRE-EXISTING CONDITIONS

12" CCP CULVERT

FORESTED AREA THIS ENTIRE SHEET

N

PLAN
SCALE: 1" = 100'



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

Mountain Valley PIPELINE

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

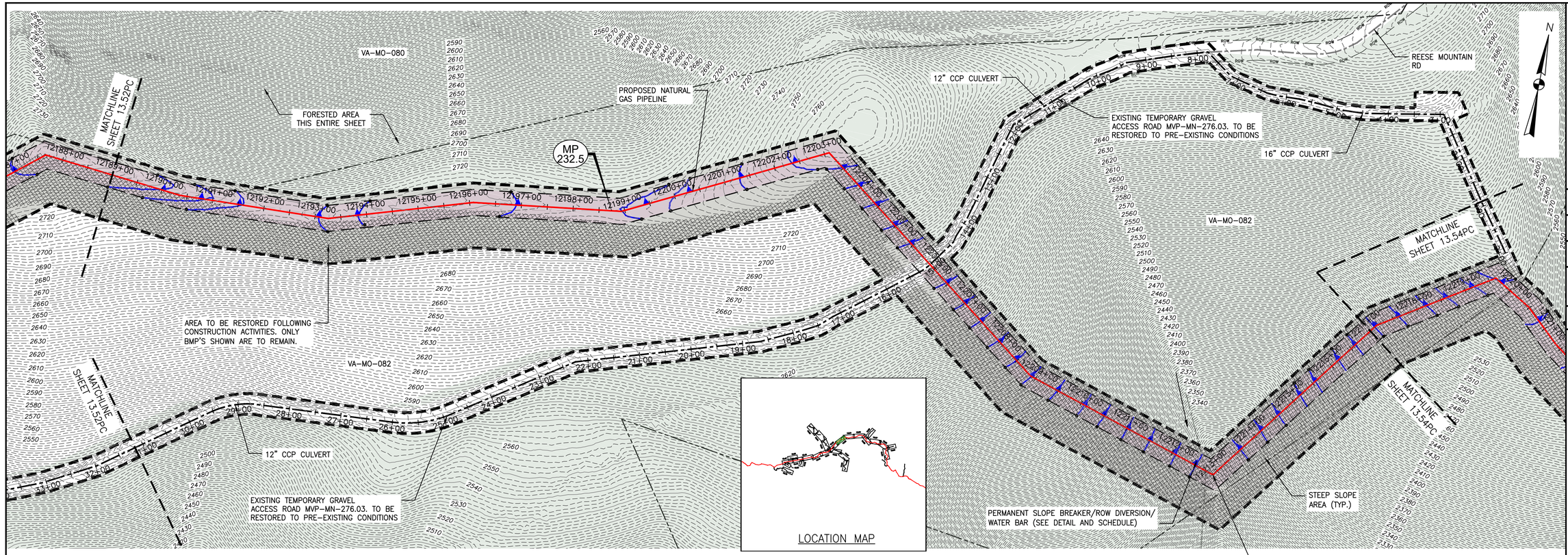
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.52PC OF 13.90PC

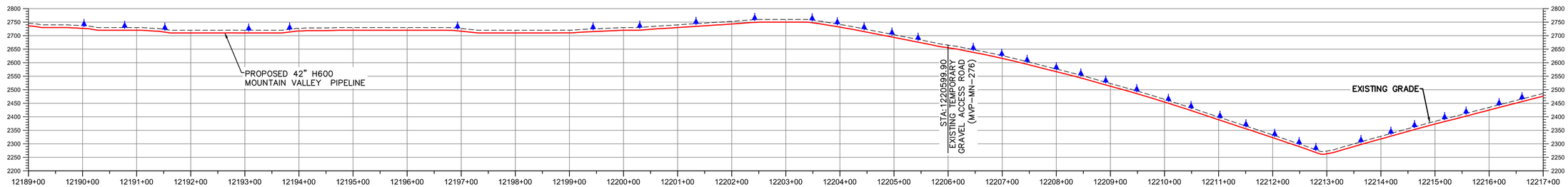
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.53(S9).dwg PLOTTED ON: 3/21/2018 10:49 AM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

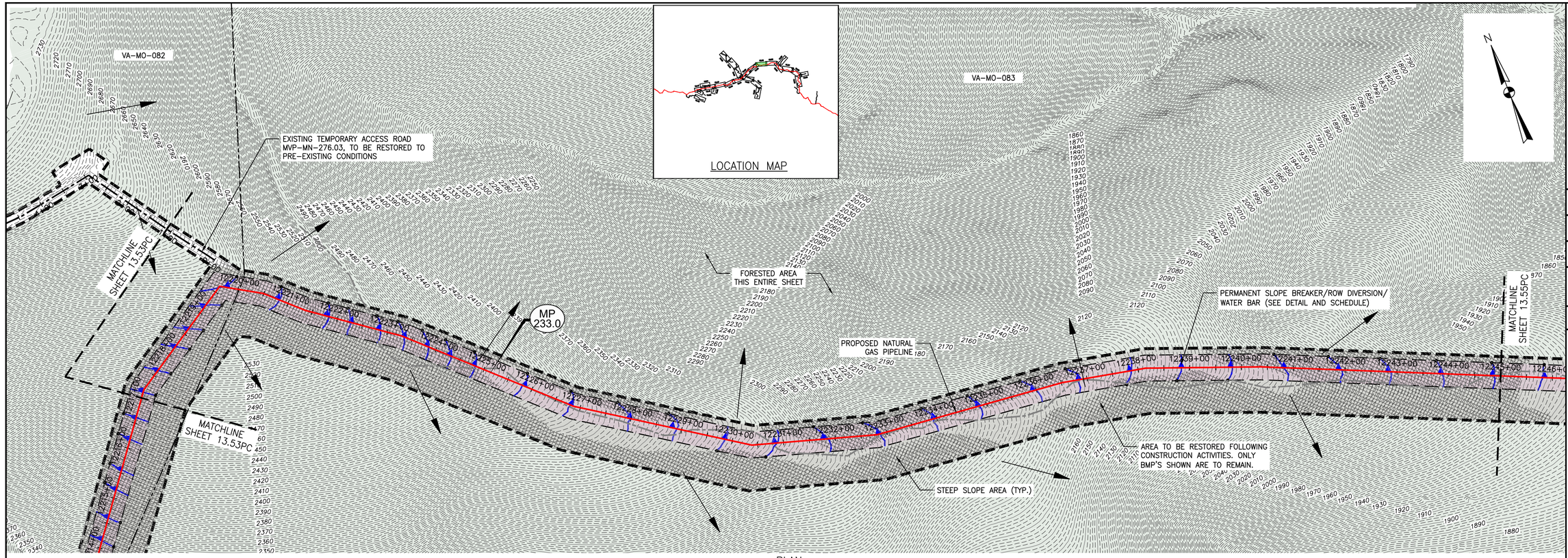
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF PENNSYLVANIA
DAVID J. WALLNER
Lic. No. 042025763
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

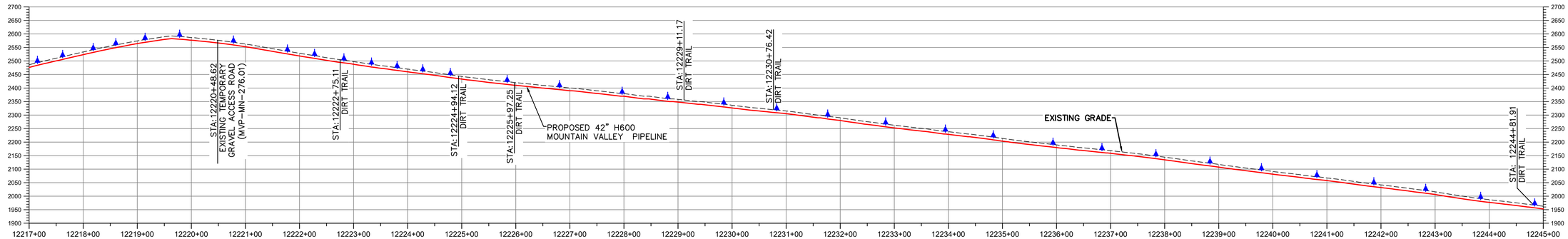
SHT. NO. 13.53PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
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- PROPOSED PIPELINE
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- WETLAND
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- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.54(S9).dwg PLOTTED ON: 3/21/2018 12:19 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

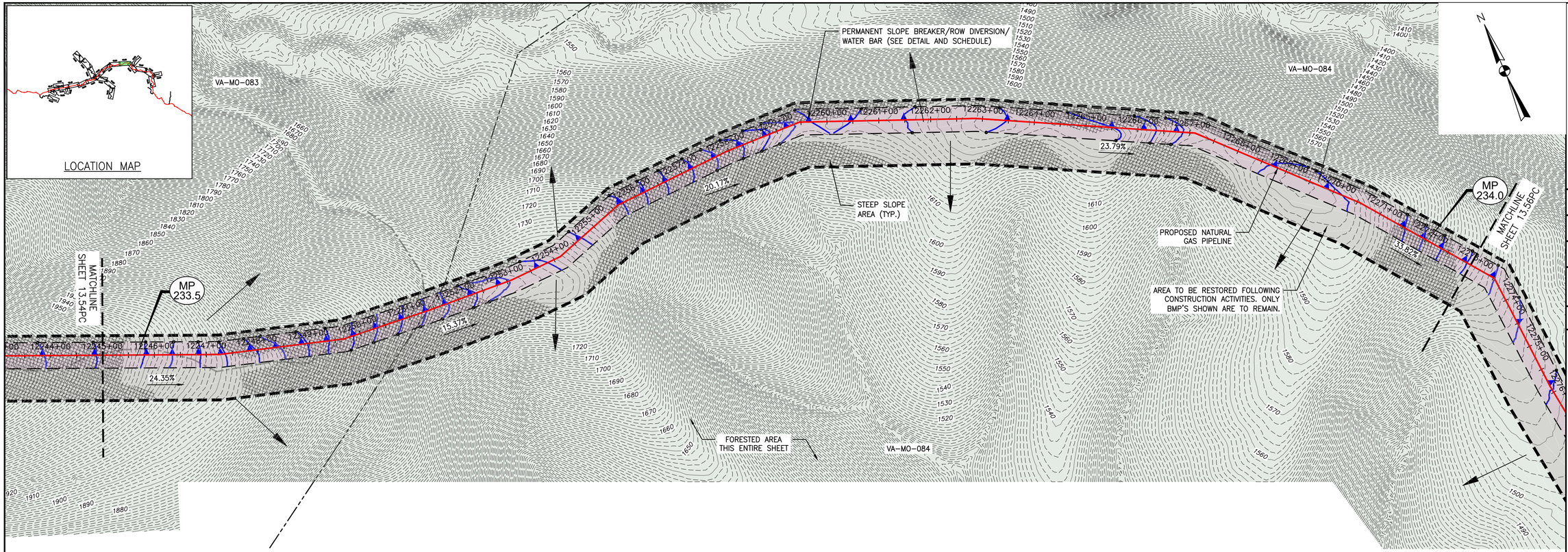
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

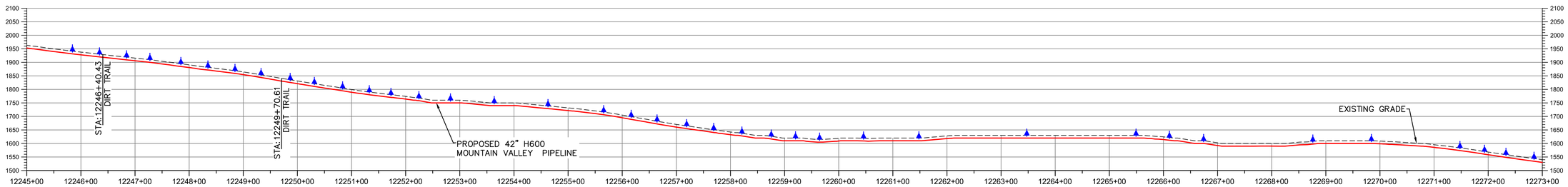
SHT. NO. 13.54PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

NO.	DATE:	DWN.:	CHK'D.:	APP'D.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

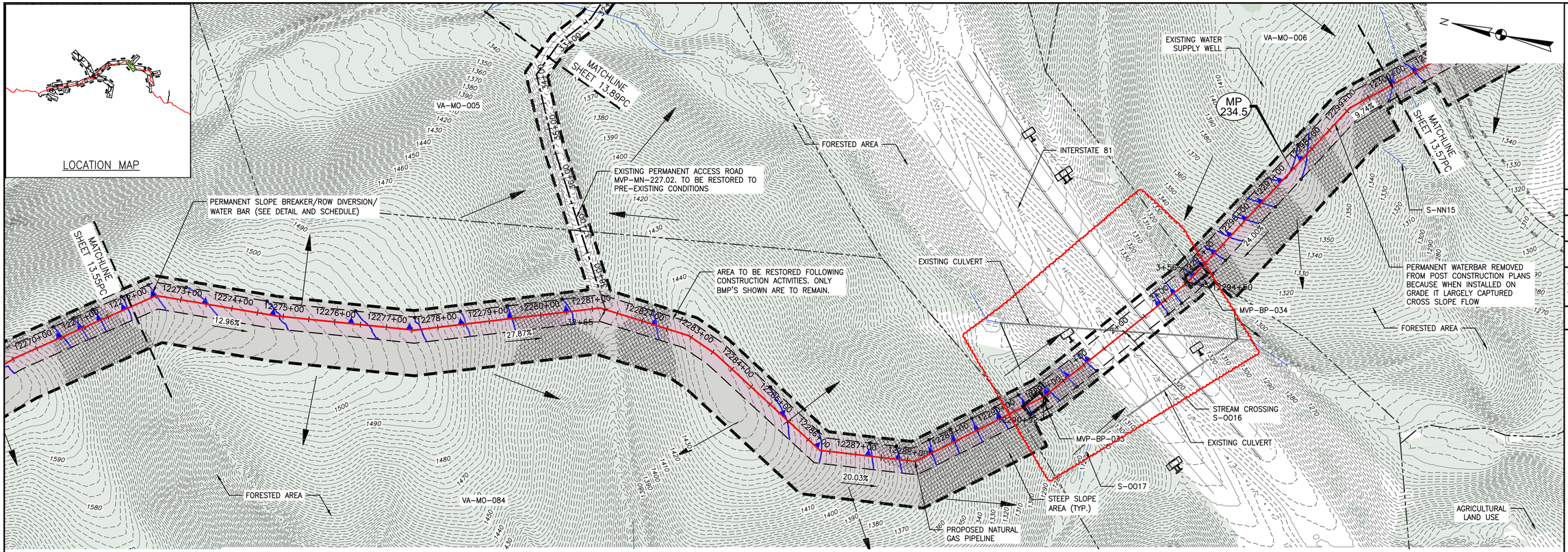
DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.55PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.55(S9).dwg PLOTTED ON: 3/21/2018 10:31 AM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

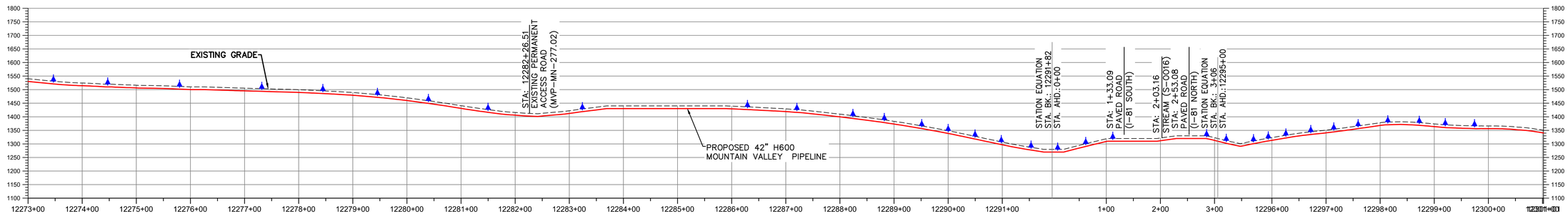
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL (ANST)
- ACID FORMING MATERIAL (AFM)
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
–	7/2/20	ZM	JRE	DJW	CHANGES TO AQUATIC RESOURCES DELINEATION
5	4/30/18	KAL	JRE	DJW	FIELD MODIFICATION
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

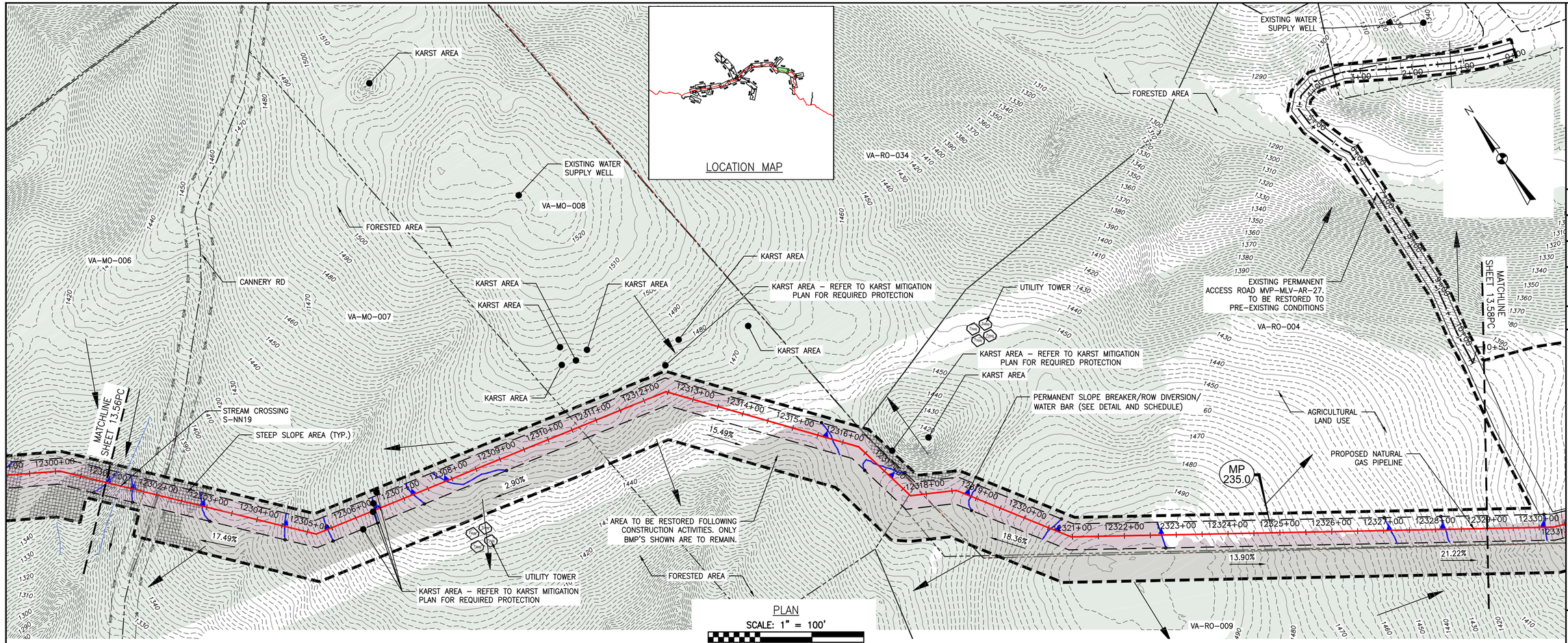
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

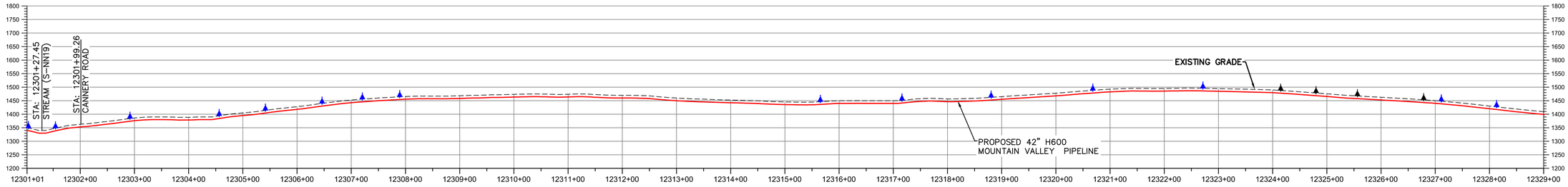
DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	7/7/20
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.56PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus_Shale_Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.56(S9).dwg PLOTTED ON: 7/10/2020 2:54 PM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb





PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'
100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'
200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	
SHT. NO. 13.57PC OF 13.90PC	

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.57(S9).dwg PLOTTED ON: 3/21/2018 10:07 AM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

LOCATION MAP

PLAN

SCALE: 1" = 100'

PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.58(S9).dwg PLOTTED ON: 3/20/2018 3:02 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.:	DATE:	DWN.:	CHK'D.:	APP'D.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

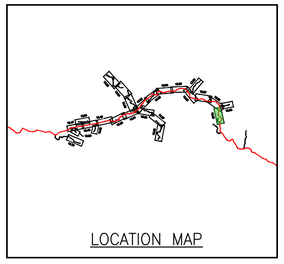
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

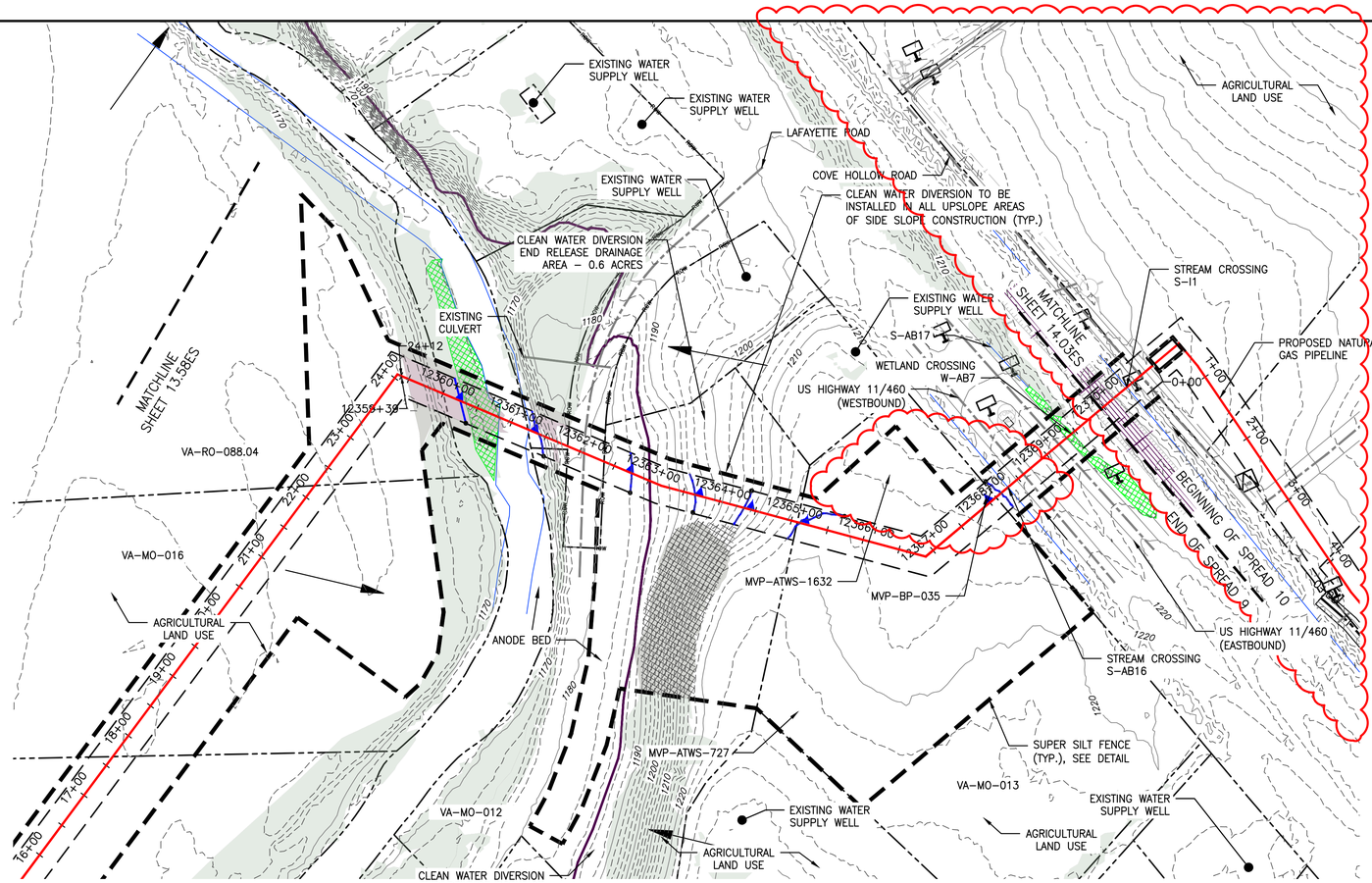
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF PENNSYLVANIA
DAVID J. WALLNER
Lic. No. 040205793
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
SHT. NO.	13.58PC OF 13.90PC



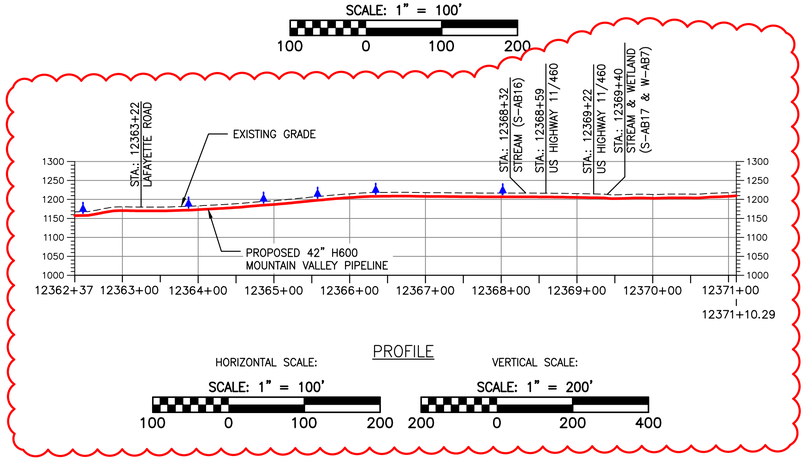
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL (ANST)
- ACID FORMING MATERIAL (AFM)
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.59(S9).dwg PLOTTED ON: 1/23/2020 8:03 AM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.:	DATE:	BH	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
8	11/25/19	BH	JRE	JRE	DJW	ADDRESS VADEQ COMMENTS TO FIELD MODIFICATION SUBMITTAL
7	4/5/19	BH	JRE	JRE	DJW	FIELD MODIFICATION-MP 235.5 (ADDED MVP-ATWS-1632)
6	4/30/18	KAL	JRE	KAL	DJW	FIELD MODIFICATION
5	4/30/18	KAL	JRE	KAL	DJW	FIELD MODIFICATION
4	3/5/18	KAL	JRE	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

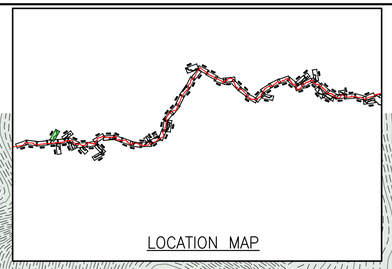
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

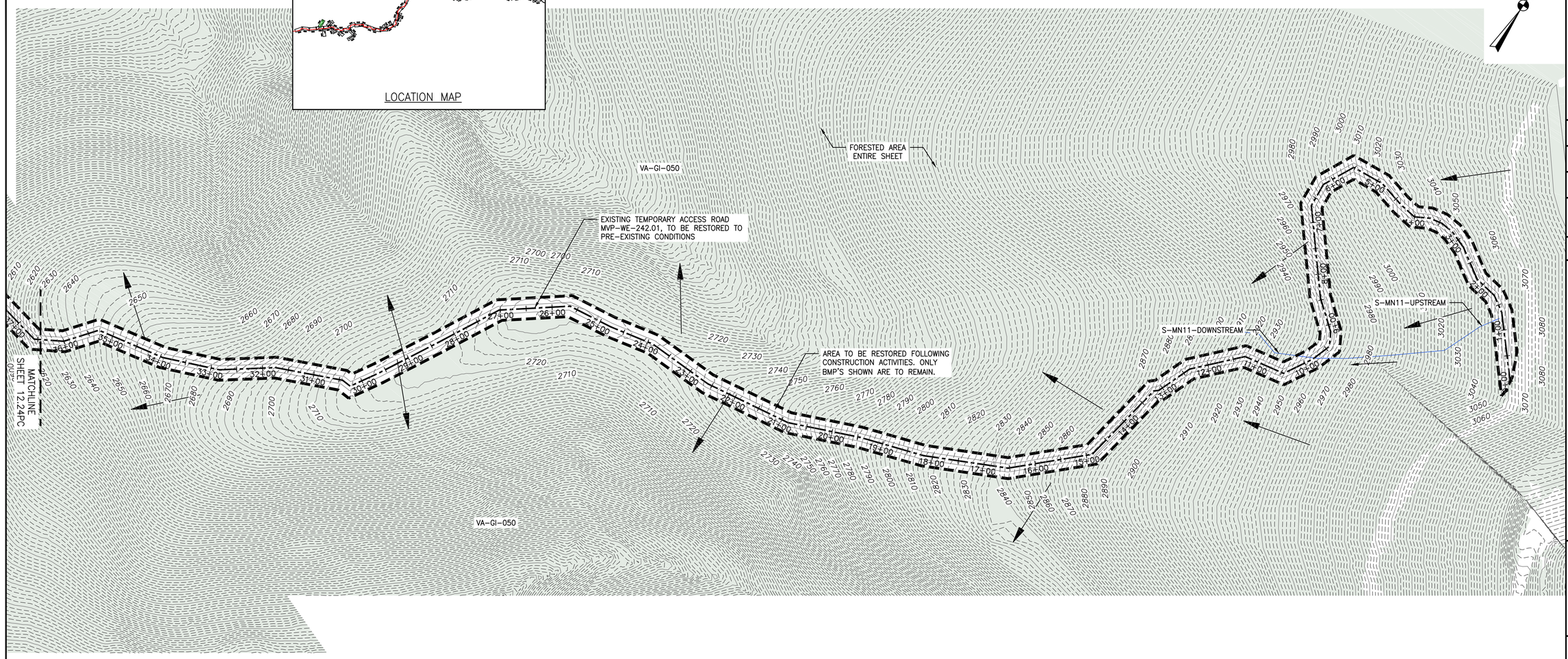
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/25/19
SCALE:	AS SHOWN

8 REVISION

SHT. NO. 13.59PC OF 13.90PC





PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.60(S9).dwg PLOTTED ON: 3/20/2018 12:55 PM PLOTTED BY: Scobilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

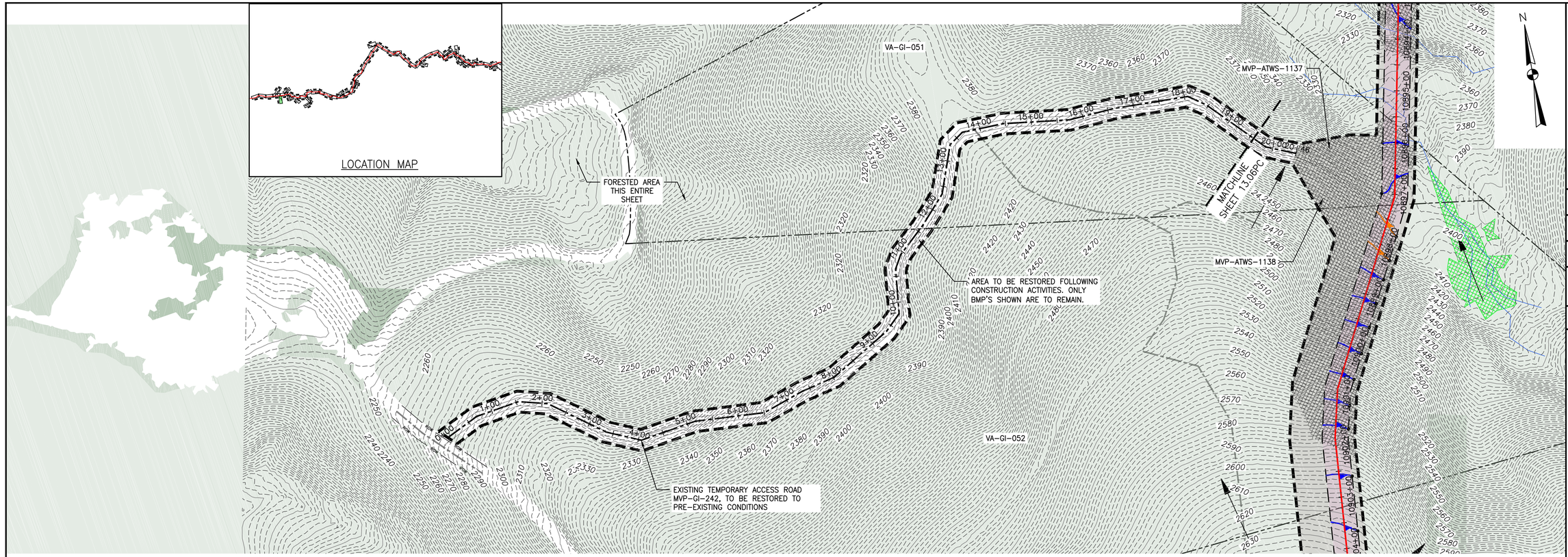
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	

SHT. NO. 13.60PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
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- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
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- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.61(S9).dwg PLOTTED ON: 3/20/2018 12:47 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

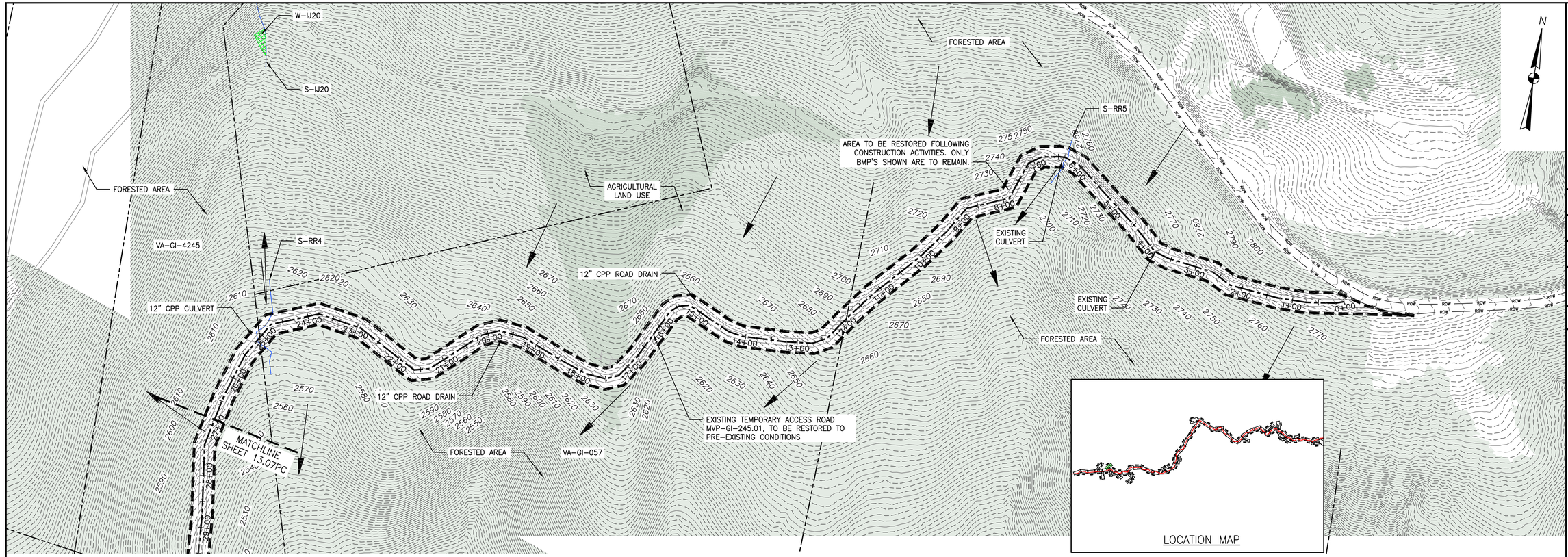
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.61PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
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- PROPOSED PIPELINE
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- WETLAND
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- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.62(S9).dwg PLOTTED ON: 3/20/2018 12:43 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

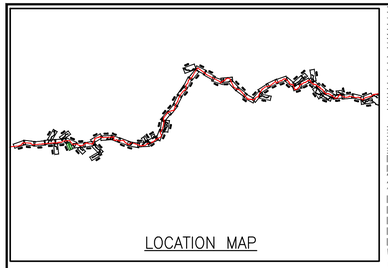
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

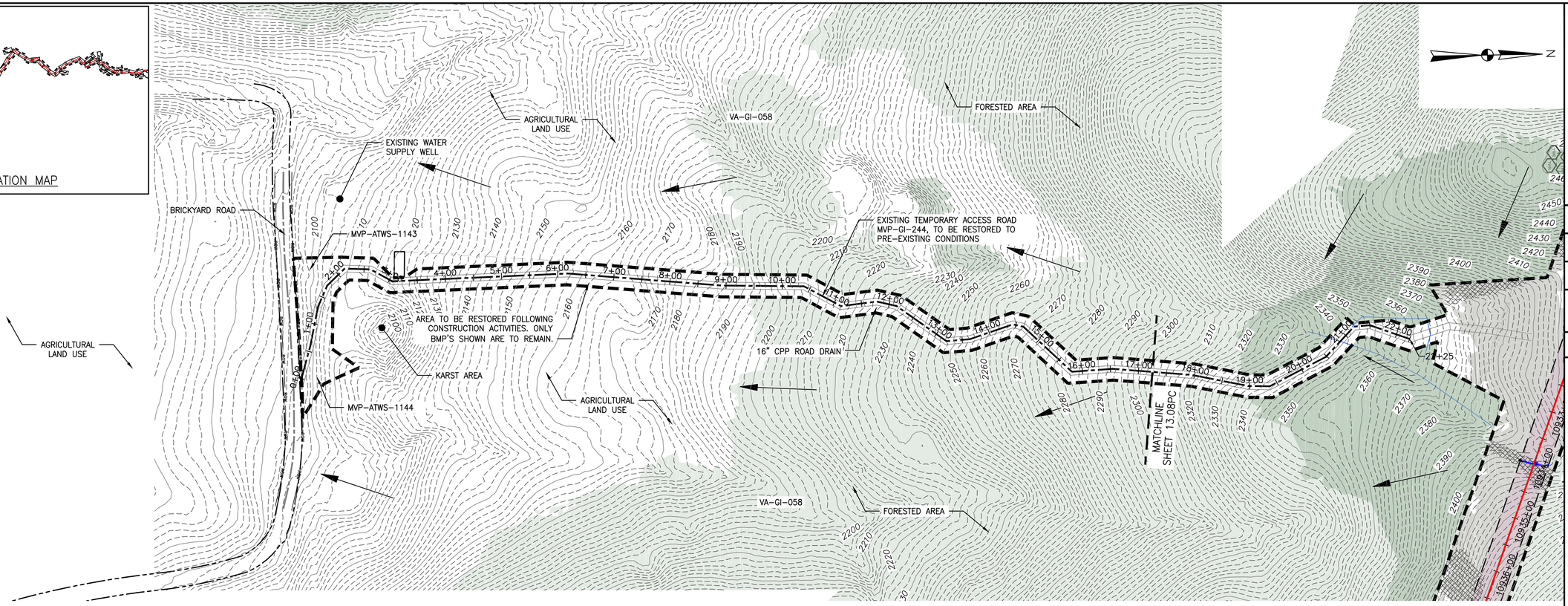
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.62PC OF 13.90PC





PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
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- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
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- PERMANENT WATER BAR 20' END TREATMENT
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- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.63(S9).dwg PLOTTED ON: 3/20/2018 12:40 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE
SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

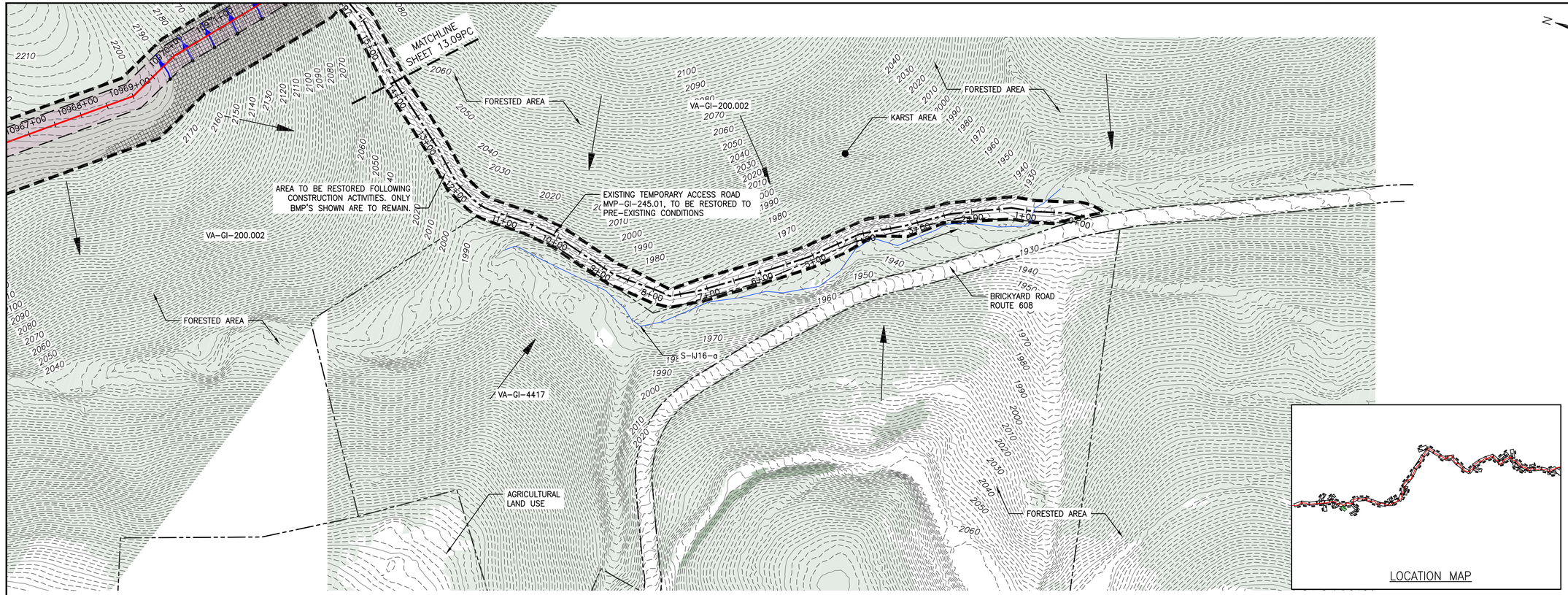
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.63PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.64(S9).dwg PLOTTED ON: 3/20/2018 12:36 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.64PC OF 13.90PC

KARST AREA
FORESTED AREA
S-QQ3
S-QQ3-b
VA-GI-066
FORESTED AREA
AGRICULTURAL LAND USE
EXISTING CULVERT
12" CPP ROAD DRAIN
EXISTING TEMPORARY ACCESS ROAD MVP-GI-245.02, TO BE RESTORED TO PRE-EXISTING CONDITIONS
MATCHLINE SHEET 13.10PC
12" CPP ROAD DRAIN
AGRICULTURAL LAND USE
EXISTING CULVERT
EXISTING CULVERT
AGRICULTURAL LAND USE
EXISTING CULVERT
AREA TO BE RESTORED FOLLOWING CONSTRUCTION ACTIVITIES. ONLY BMP'S SHOWN ARE TO REMAIN.
KARST AREA
FORESTED AREA
VA-GI-200.003
AGRICULTURAL LAND USE
EXISTING WATER SUPPLY WELL
MATCHLINE SHEET 13.66PC
KARST AREA

LOCATION MAP

PLAN
SCALE: 1" = 100'
100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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- PROPOSED LEVEL SPREADER
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- STEEP SLOPE AREA
- EXISTING FOREST
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.65(S9).dwg PLOTTED ON: 11/8/2018 11:08 AM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	10/23/18	BH	JRE	DJW	FIELD MODIFICATIONS
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE
SPREAD 9 - GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

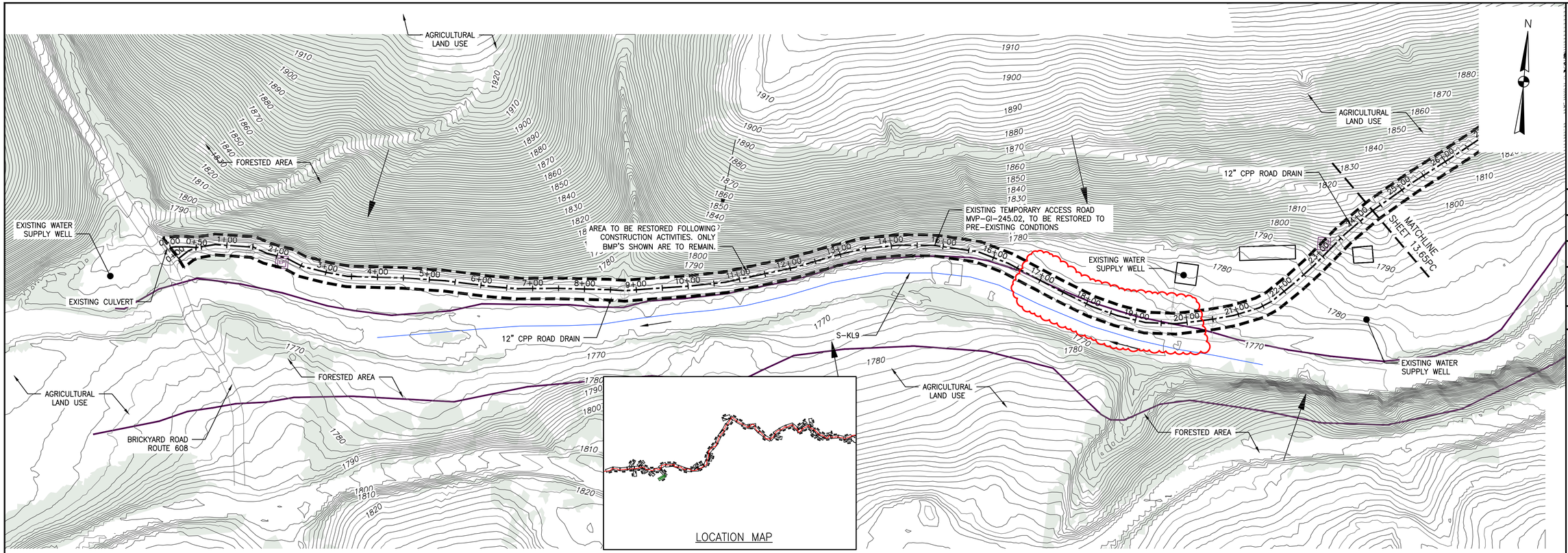
TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	10/23/2018
SCALE:	AS SHOWN
REVISION	5

SHT. NO. 13.65PC OF 13.90PC



PLAN
SCALE: 1" = 100'
100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
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1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
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CANONSBURG, PA 15311

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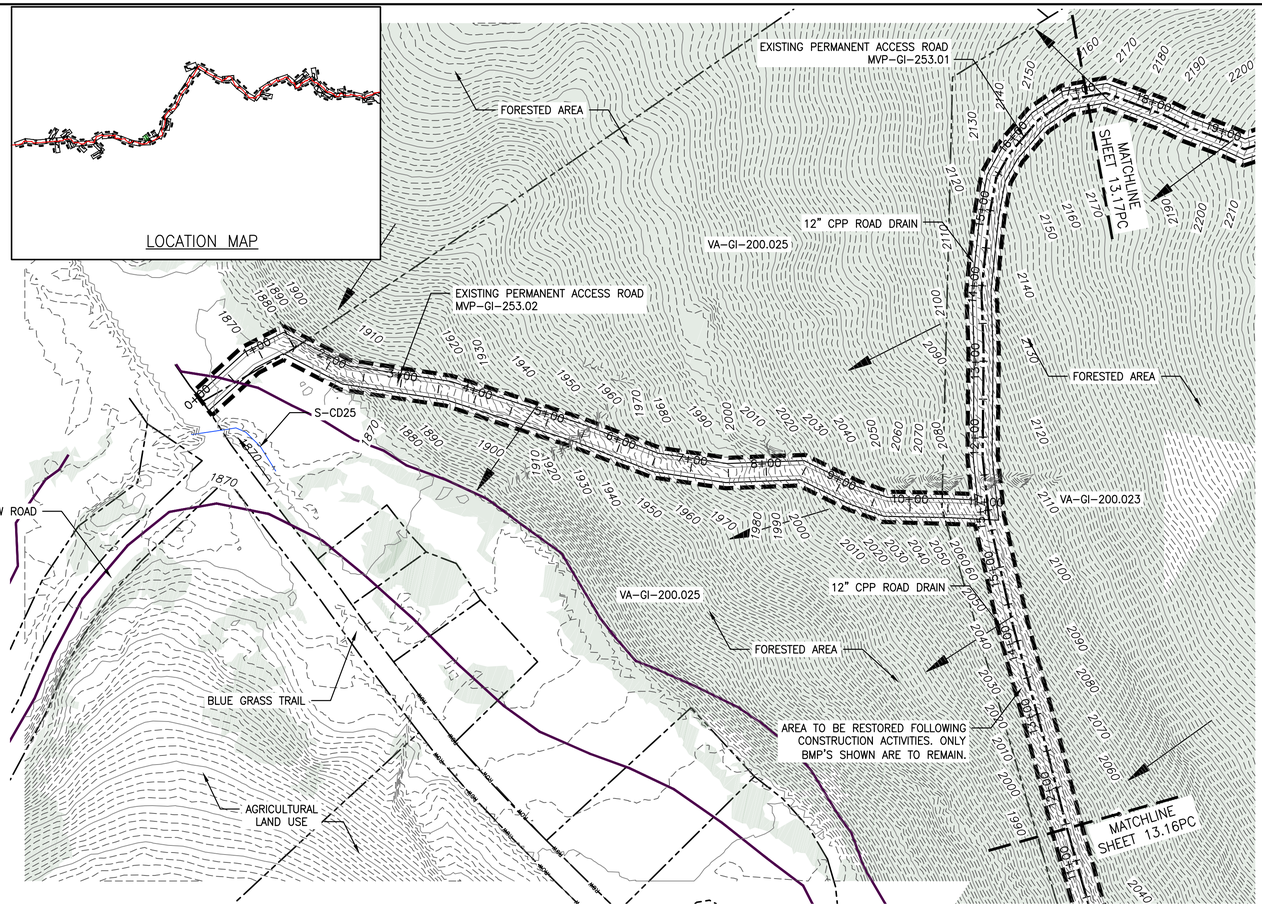
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	10/23/2018
SCALE:	AS SHOWN
	5 REVISION

SHT. NO. 13.66PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.66(S9).dwg PLOTTED ON: 11/8/2018 11:09 AM PLOTTED BY: Moore, Zachary PLOT FILE: ENVIRONMENTAL_COLOR.ctb



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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- ACID FORMING MATERIAL (AFM)
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\12 - Giles\PC\7157PC13.67(S9).dwg PLOTTED ON: 3/20/2018 12:26 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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PITTSBURGH, PA 15220

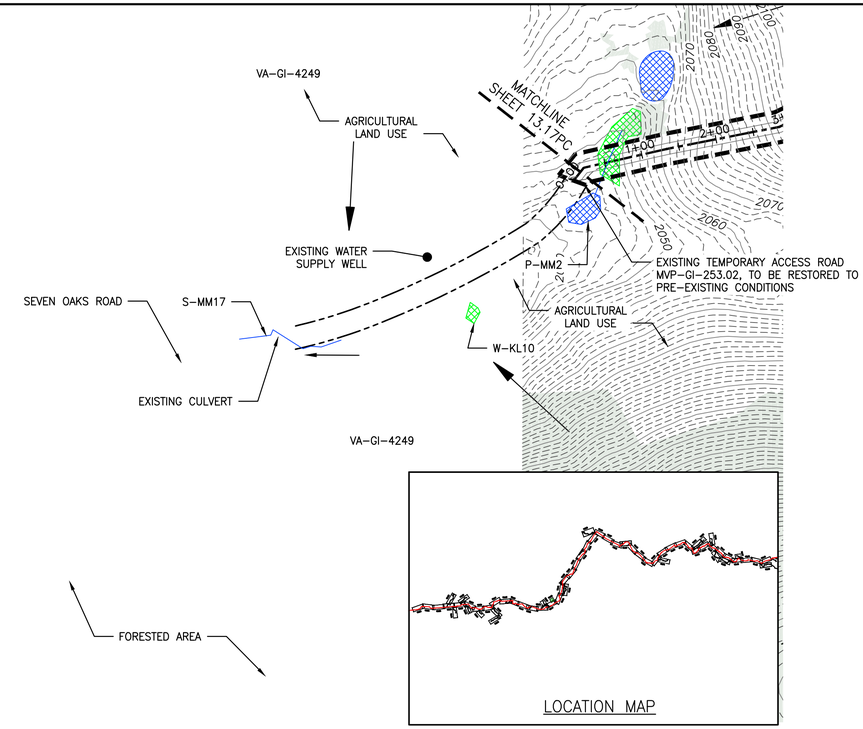
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.67PC OF 13.90PC



PLAN
SCALE: 1" = 100'
100 0 100 200

N

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.68(S9).dwg PLOTTED ON: 3/20/2018 12:22 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

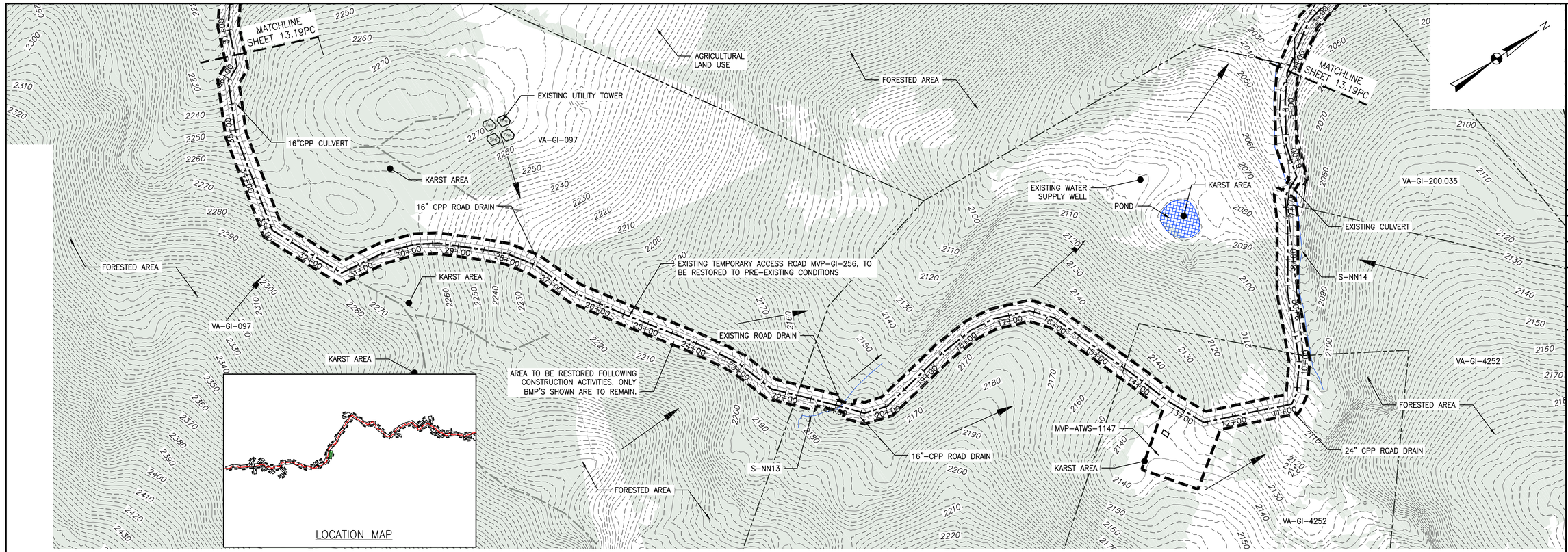
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.68PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\12 – Giles\PC\7157PC13.69(S9).dwg PLOTTED ON: 3/20/2018 12:18 PM PLOTTED BY: Scabilloni, Joy PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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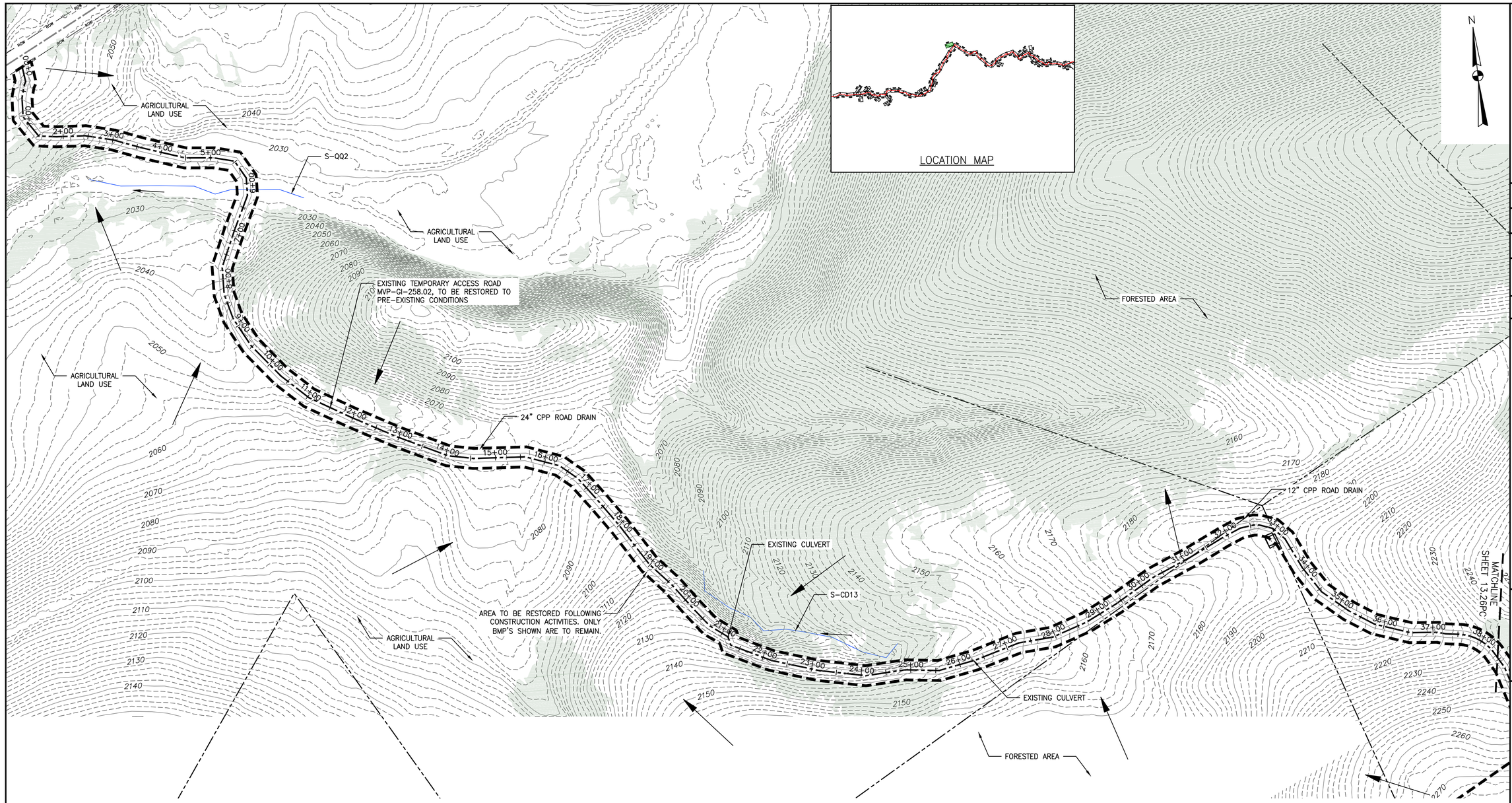
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.69PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

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NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
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1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – GILES COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.70PC OF 13.90PC

ACCESS ROAD MVP-MN-262.01
REMOVED FROM PROJECT

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.71(S9).dwg PLOTTED ON: 3/20/2018 1:58 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE
SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

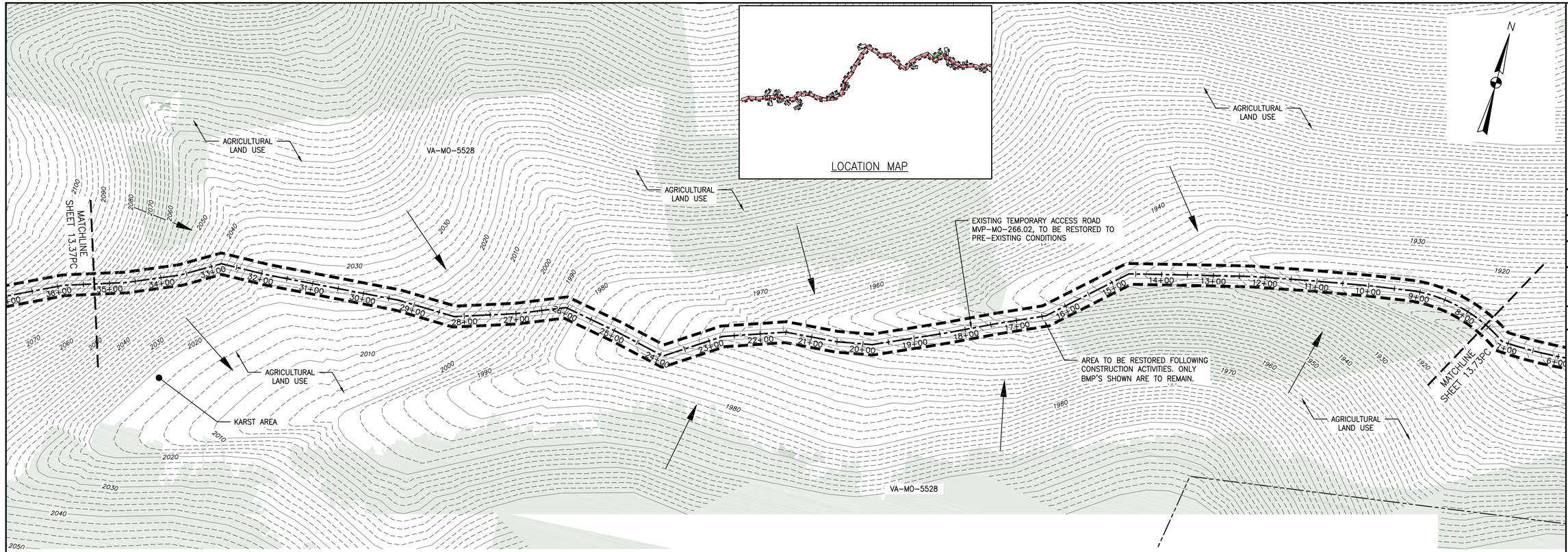
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.71PC OF 13.90PC



PLAN
SCALE: 1" = 100'
100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
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- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

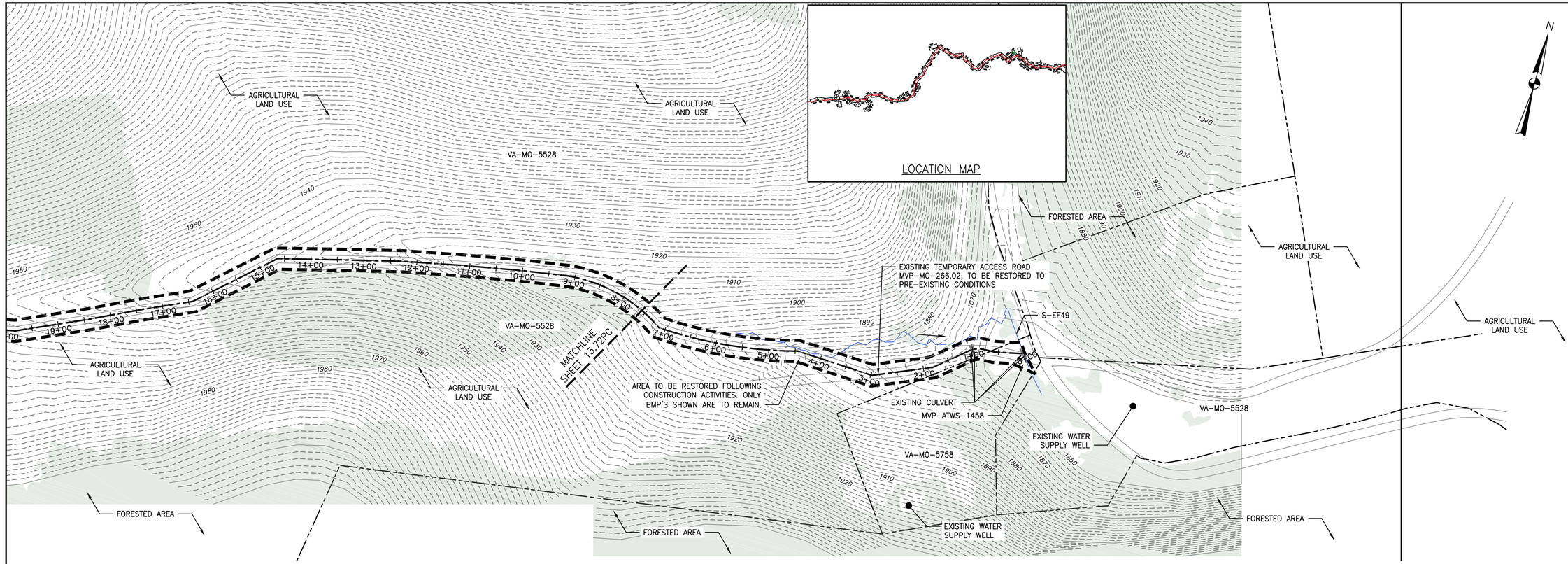
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.72PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.72(S9).dwg PLOTTED ON: 3/21/2018 9:36 AM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb



PLAN
SCALE: 1" = 100'
100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
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- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
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- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

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2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

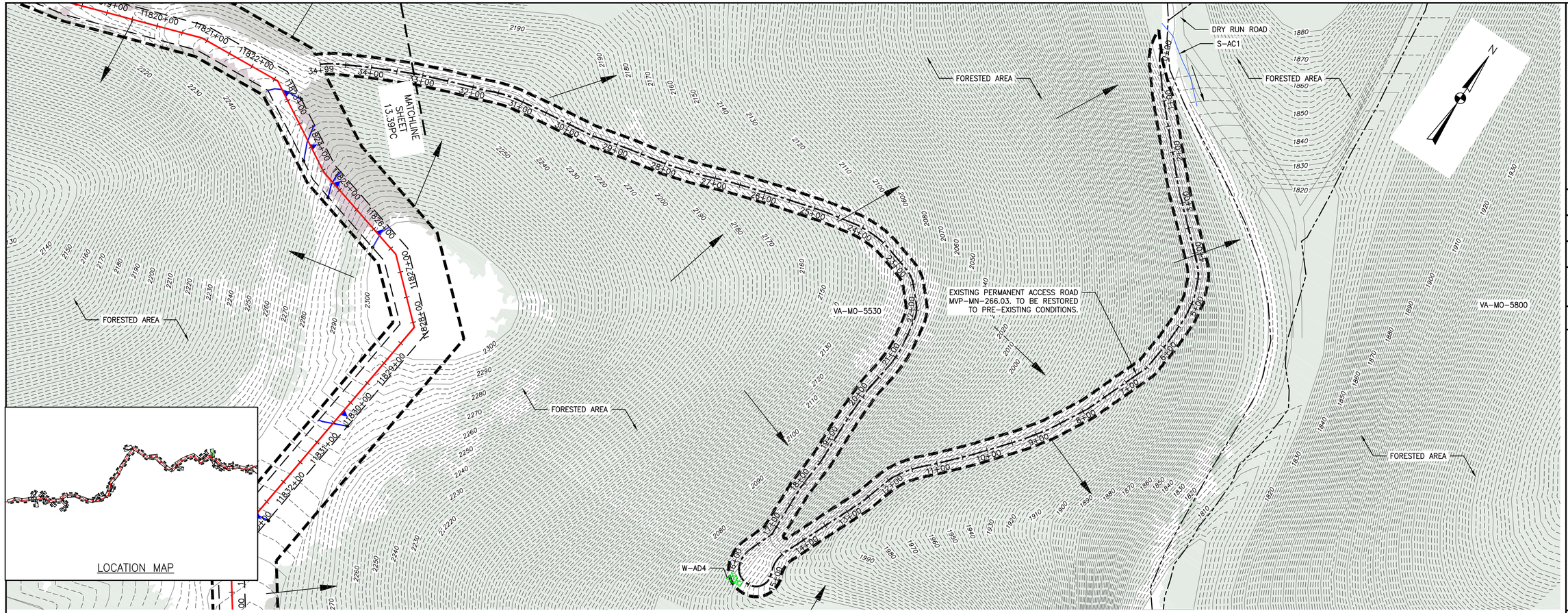
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.73PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.73(S9).dwg PLOTTED ON: 3/21/2018 11:42 AM PLOTTED BY: Najeski, Nichole PLOT FILE: ENVIRONMENTAL_COLOR.ctb



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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NOTES:

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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.74(S9).dwg PLOTTED ON: 3/20/2018 1:50 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

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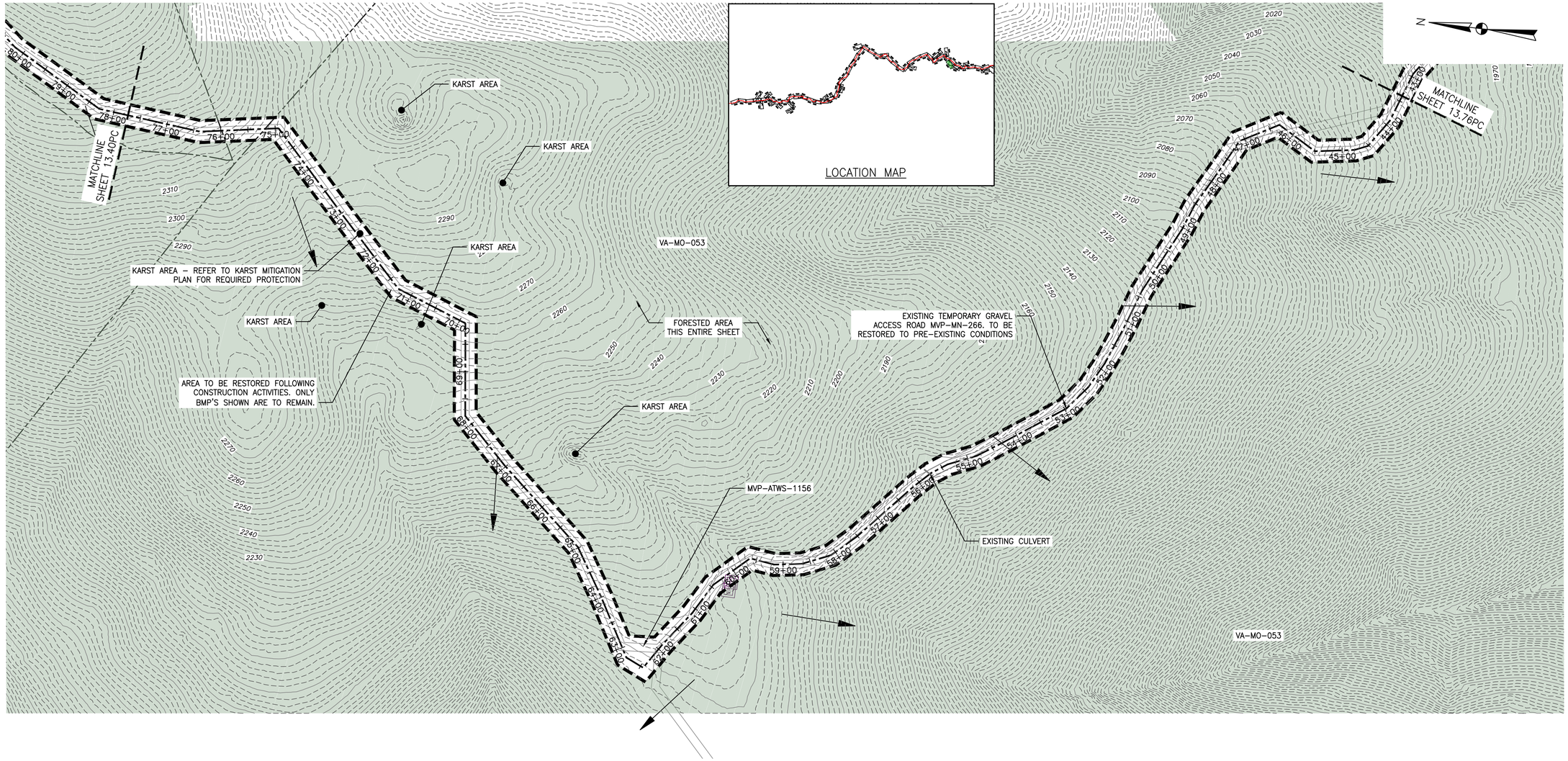
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

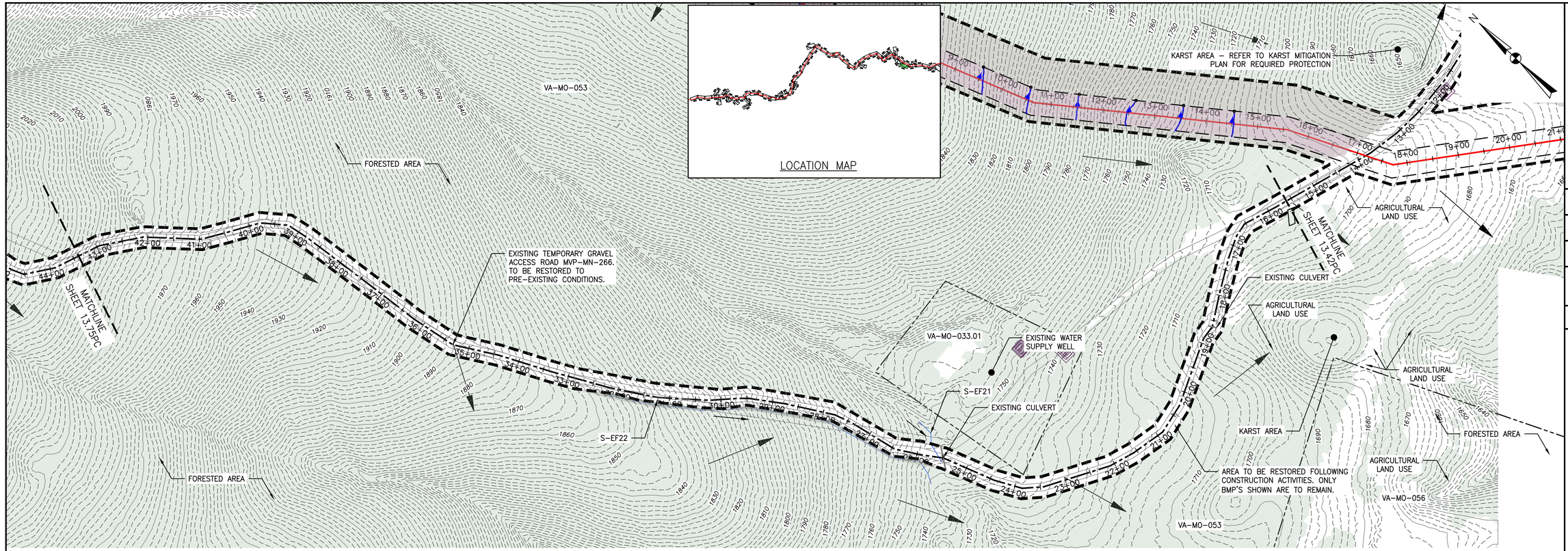
COMMONWEALTH OF PENNSYLVANIA
DAVID J. WALLNER
Lic. No. 04022057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.74PC OF 13.90PC


KARST AREA
KARST AREA
KARST AREA
KARST AREA
KARST AREA
KARST AREA – REFER TO KARST MITIGATION PLAN FOR REQUIRED PROTECTION
AREA TO BE RESTORED FOLLOWING CONSTRUCTION ACTIVITIES. ONLY BMP'S SHOWN ARE TO REMAIN.
FORESTED AREA THIS ENTIRE SHEET
EXISTING TEMPORARY GRAVEL ACCESS ROAD MVP-MN-266. TO BE RESTORED TO PRE-EXISTING CONDITIONS
MVP-ATWS-1156
EXISTING CULVERT
VA-MO-053
VA-MO-053
MATCHLINE SHEET 13.40PC
MATCHLINE SHEET 13.76PC
50+00
51+00
52+00
53+00
54+00
55+00
56+00
57+00
58+00
59+00
60+00
61+00
62+00
63+00
64+00
65+00
66+00
67+00
68+00
69+00
70+00
71+00
72+00
73+00
74+00
75+00
76+00
77+00
78+00
79+00
80+00
81+00
82+00
83+00
84+00
85+00
86+00
87+00
88+00
89+00



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
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- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
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- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.76(S9).dwg PLOTTED ON: 3/20/2018 1:43 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
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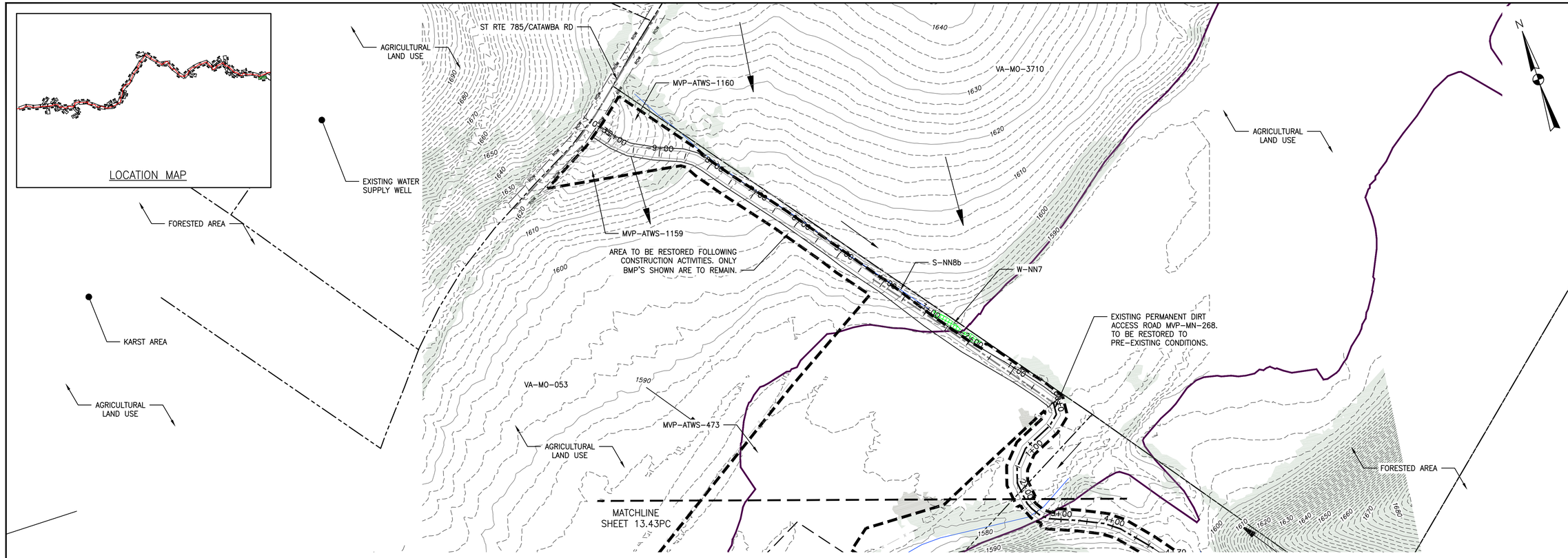
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.76PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL (ANST)
- ACID FORMING MATERIAL (AFM)
- PROPOSED LEVEL SPREADER DIVERSION
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REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

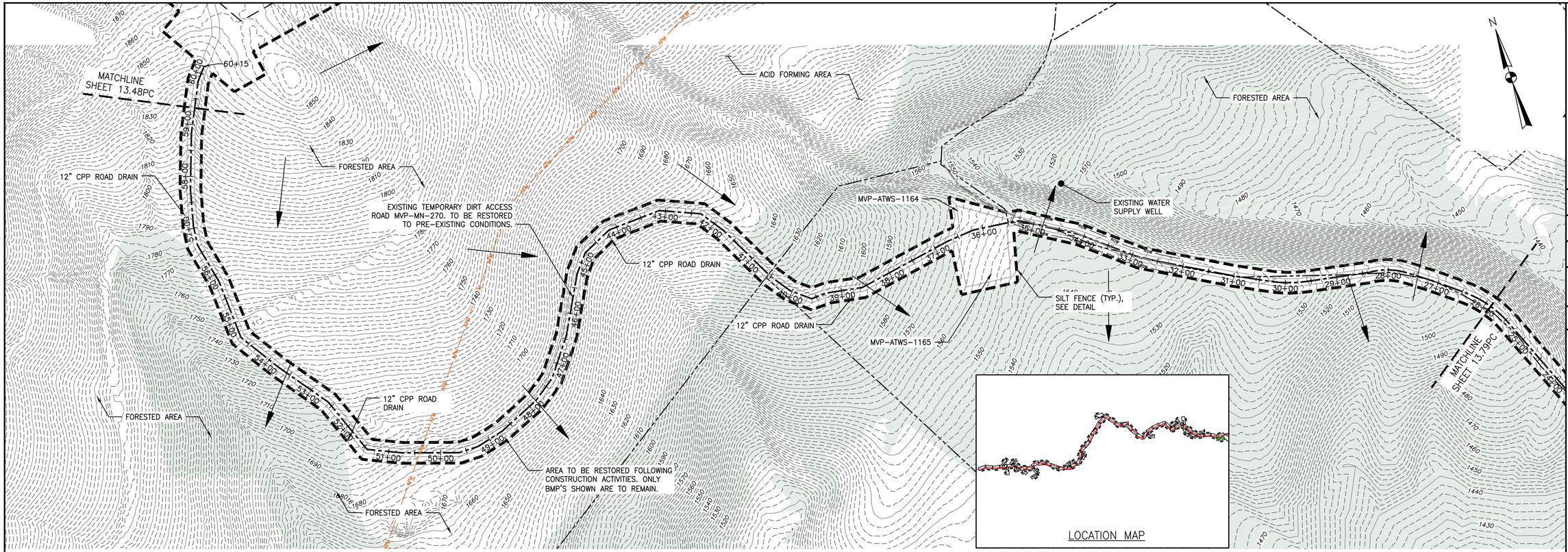
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.77PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.77(S9).dwg PLOTTED ON: 3/20/2018 1:39 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
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- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

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1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.78(S9).dwg PLOTTED ON: 3/21/2018 9:05 AM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

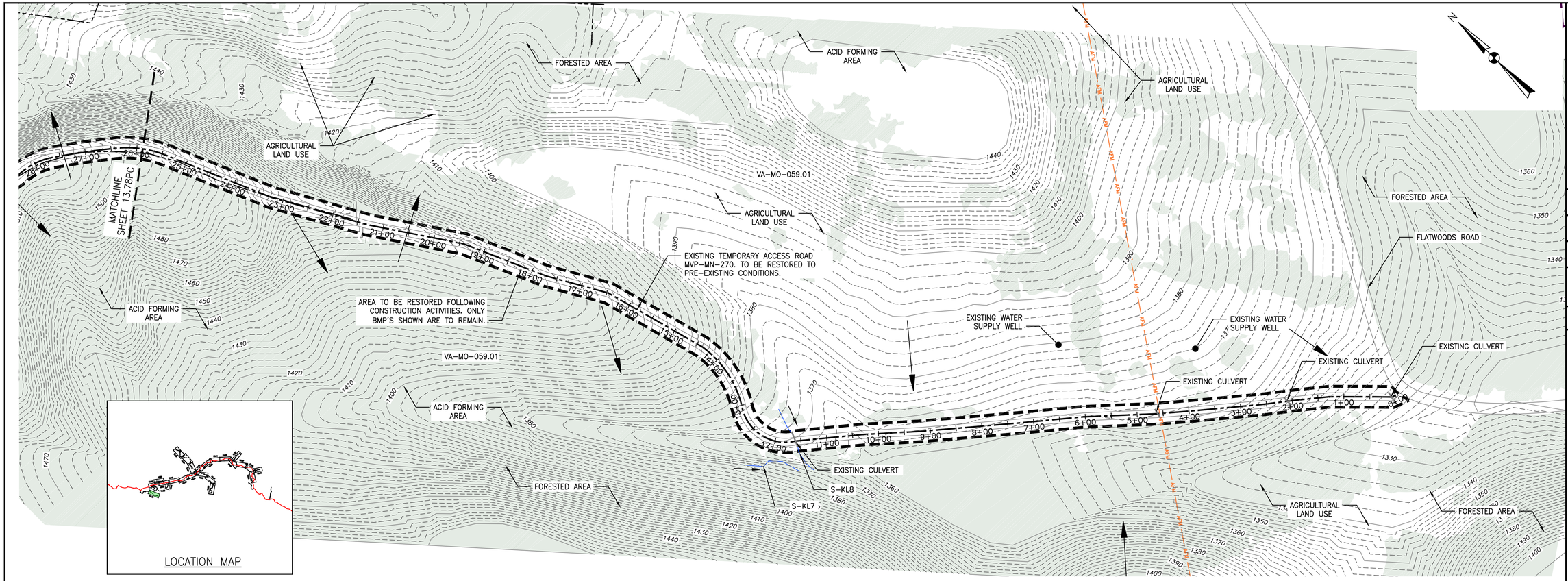
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.78PC OF 13.90PC



LOCATION MAP

PLAN
SCALE: 1" = 100'
100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.79(S9).dwg PLOTTED ON: 3/20/2018 1:34 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:				
NO.:	DATE:	DWN.:	CHKD.:	APPD.:
				DESCRIPTION:
1	9/21/17	KAL	JRE	DJW
				PLAN SUBMISSION
2	11/21/17	KAL	JRE	DJW
				ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW
				RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
4	3/5/18	KAL	JRE	DJW
				ADDRESS VADEQ COMMENTS

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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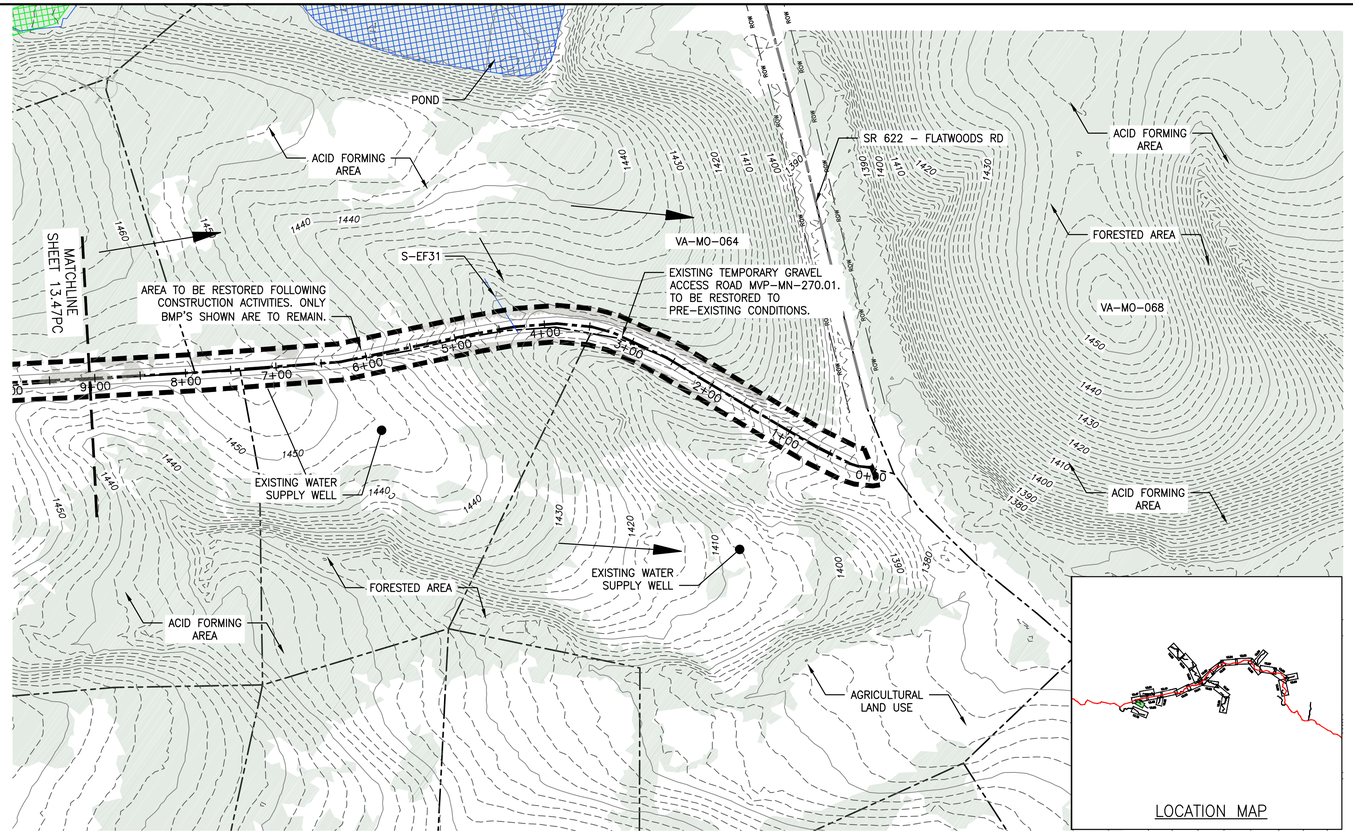
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.79PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS–LINED CHANNEL (SEE DETAIL MVP–ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
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- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
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- POND
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- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.80(S9).dwg PLOTTED ON: 3/20/2018 1:32 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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PITTSBURGH, PA 15220

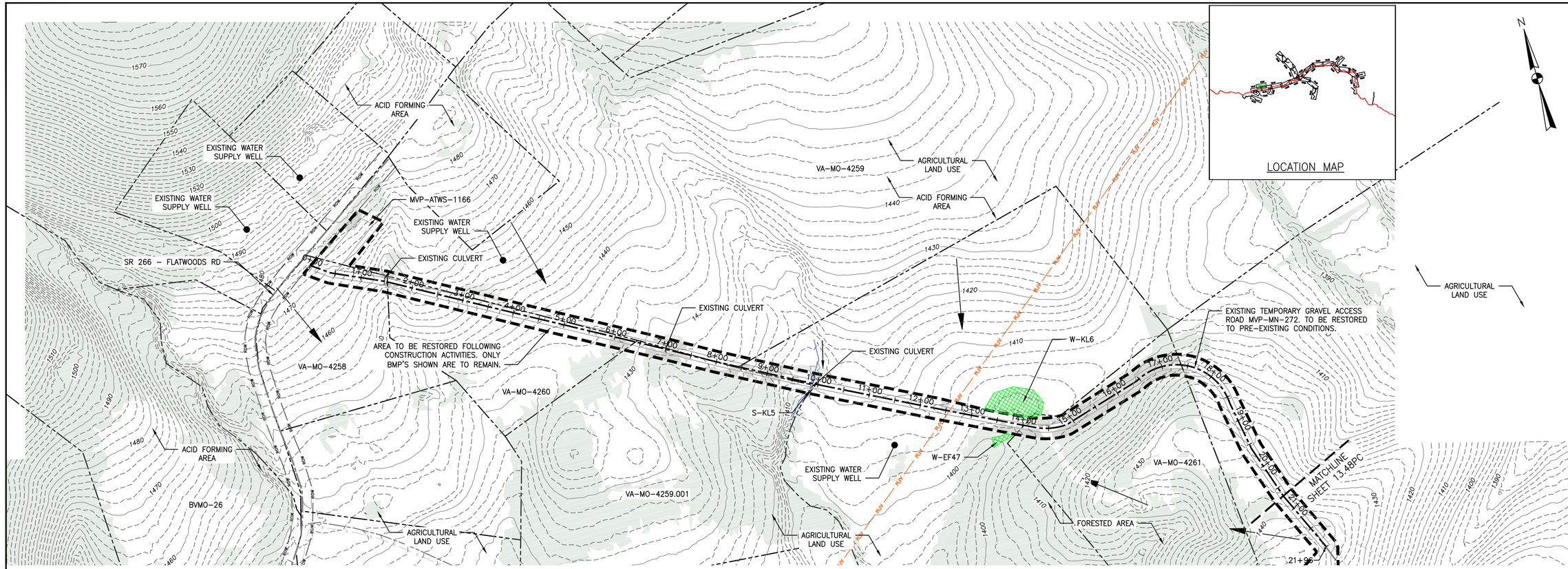
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.80PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
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- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
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- PROPOSED LEVEL SPREADER
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- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.81(S9).dwg PLOTTED ON: 3/20/2018 1:30 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

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CANONSBURG, PA 15311

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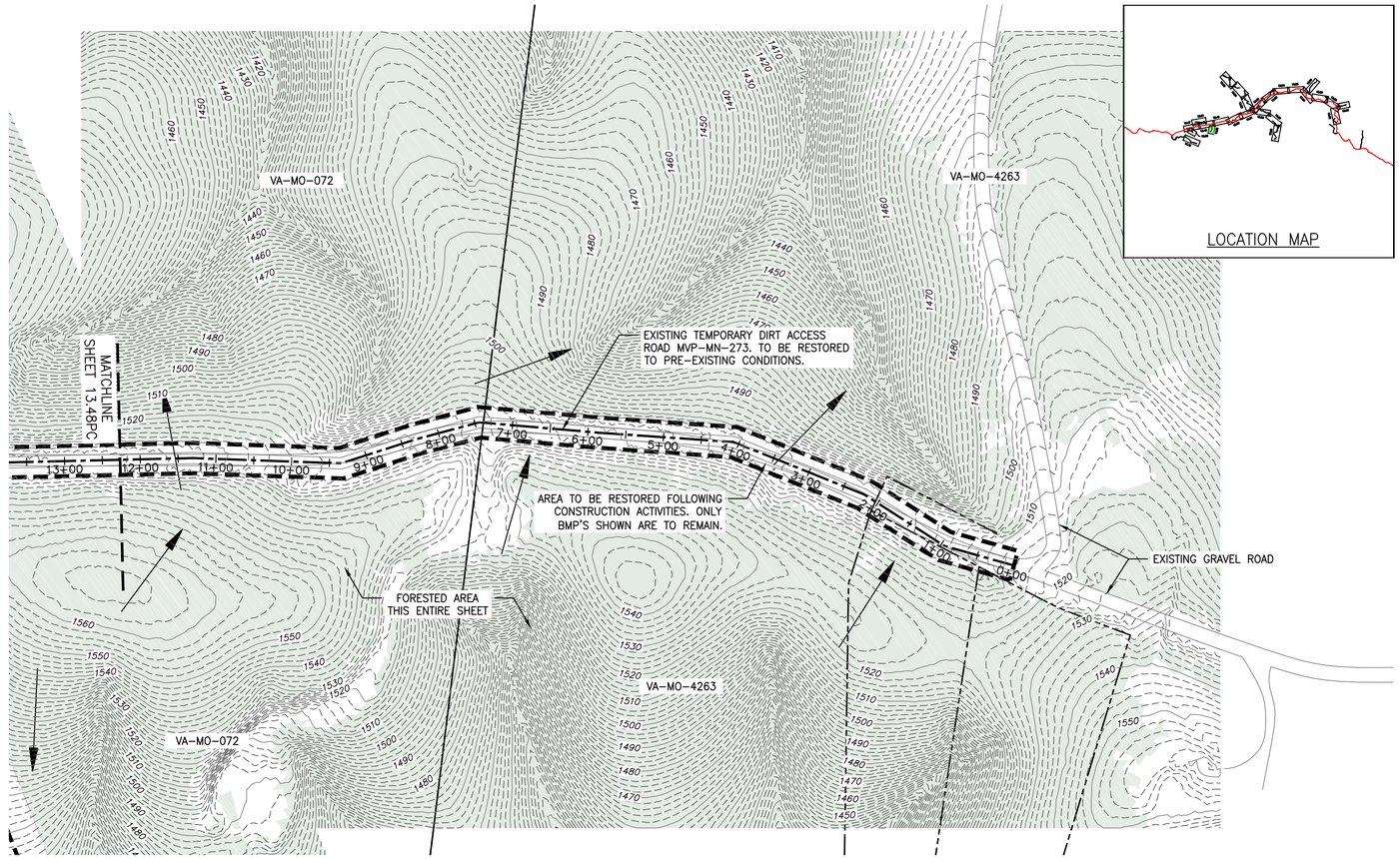
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.81PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LOCATION MAP

N

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- ACID FORMING MATERIAL
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.82(S9).dwg PLOTTED ON: 3/20/2018 1:28 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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FOSTER PLAZA 7
PITTSBURGH, PA 15220

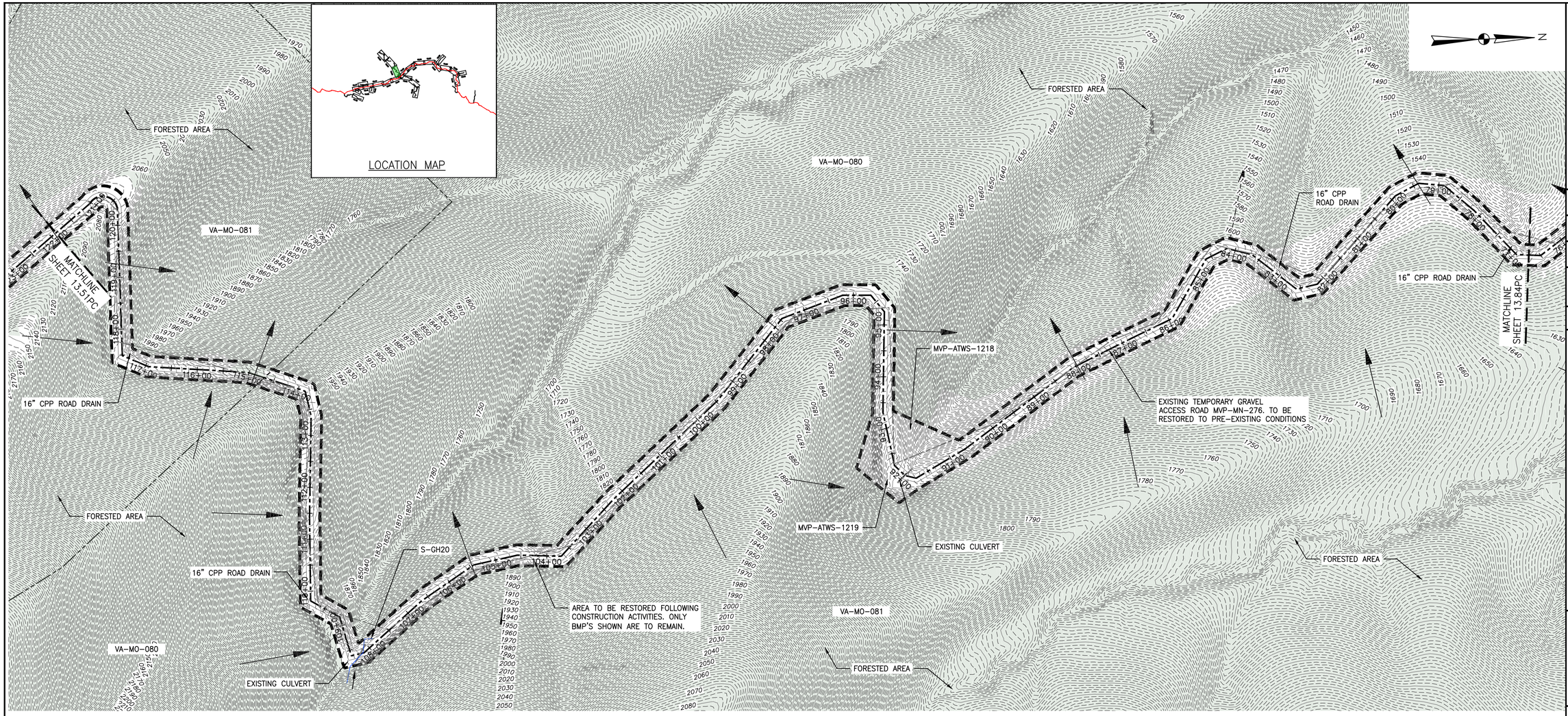
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.82PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL (ANST)
- ACID FORMING MATERIAL (AFM)
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
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- STEEP SLOPE AREA
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- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

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NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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PITTSBURGH, PA 15220

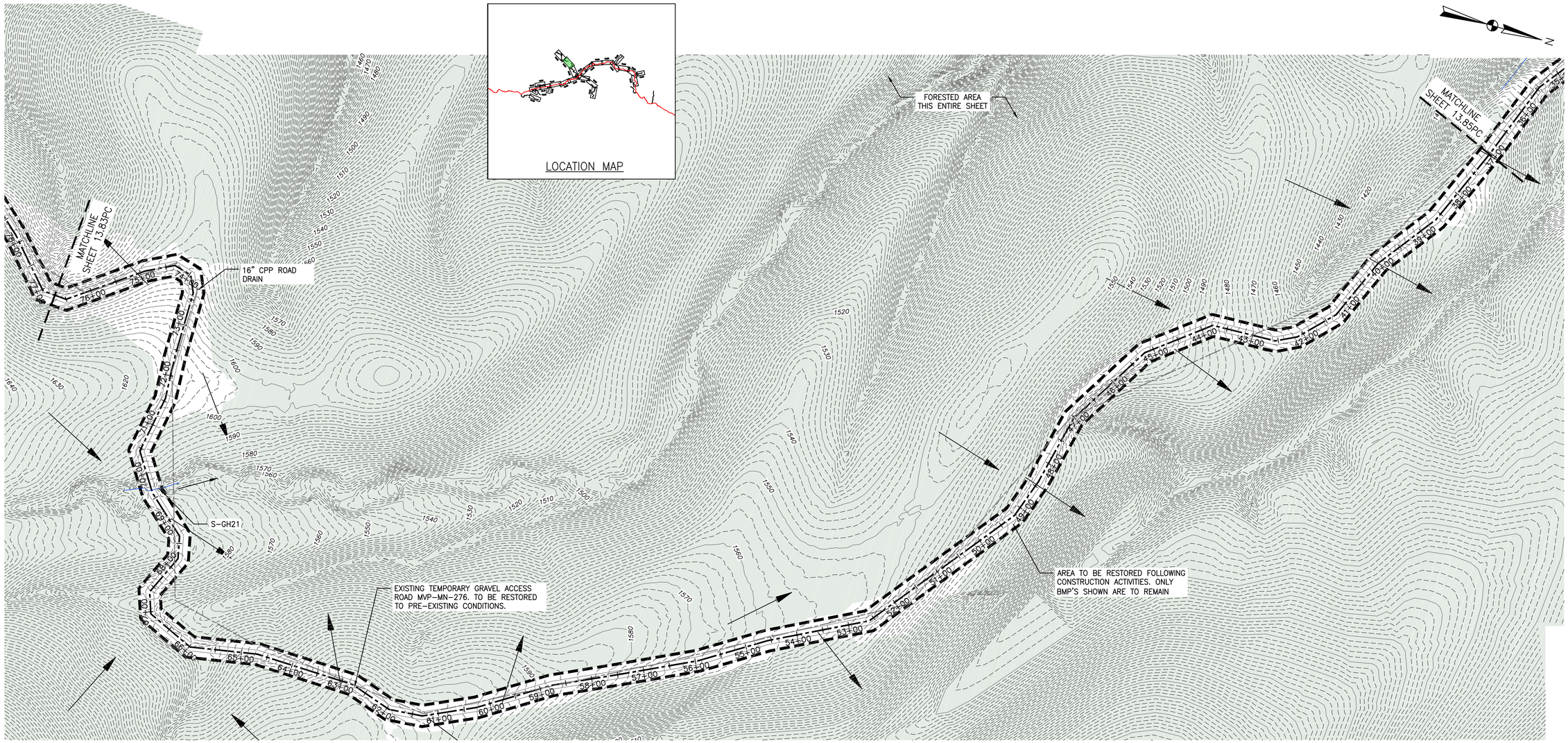
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	4

SHT. NO. 13.83PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.83(S9).dwg PLOTTED ON: 3/20/2018 1:24 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.84(S9).dwg PLOTTED ON: 3/20/2018 1:18 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

2200 ENERGY DRIVE

CANONSBURG, PA 15311

TETRA TECH

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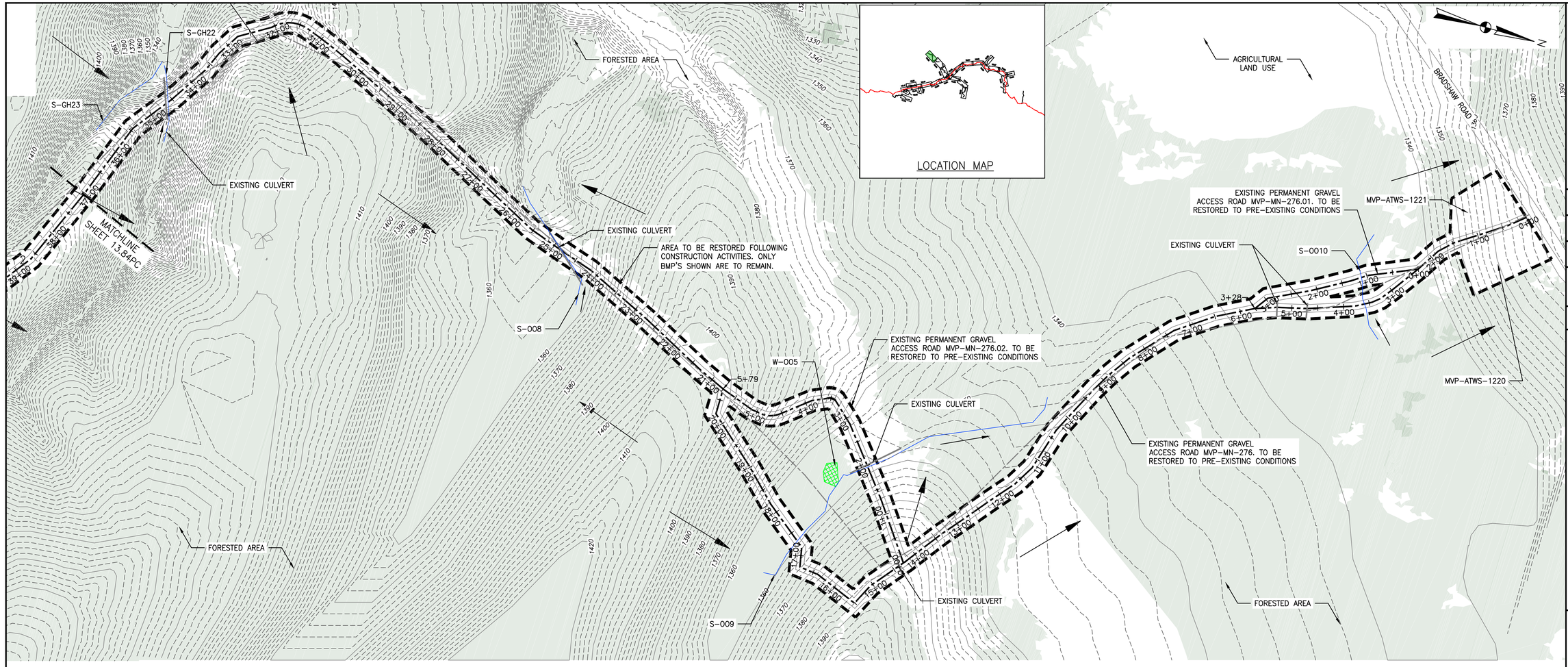
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

SHT. NO. 13.84PC OF 13.90PC



LOCATION MAP

PLAN
SCALE: 1" = 100'
100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

NOTES:

1. NOTE THAT ALL WATERBARS REGARDLESS OF SPECIFIED CALCULATION LENGTH TO BE INSTALLED AT 20-FT END TREATMENT LENGTH, EXCEPT AT NOTED IN NOTE 2 BELOW.
2. IN AREAS OF RIDGETOP AS NOTED IN THE TABLE ON THE LAST SHEET OF THIS PLAN SET, WATERBARS WITH END TREATMENT LENGTHS OF 10-FT WILL BE PLACED ON EITHER END.

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.85(S9).dwg PLOTTED ON: 3/20/2018 1:16 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
3	2/16/18	KAL	JRE	DJW	RESUBMISSION USING APPROVED STORMWATER METHODOLOGY
2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

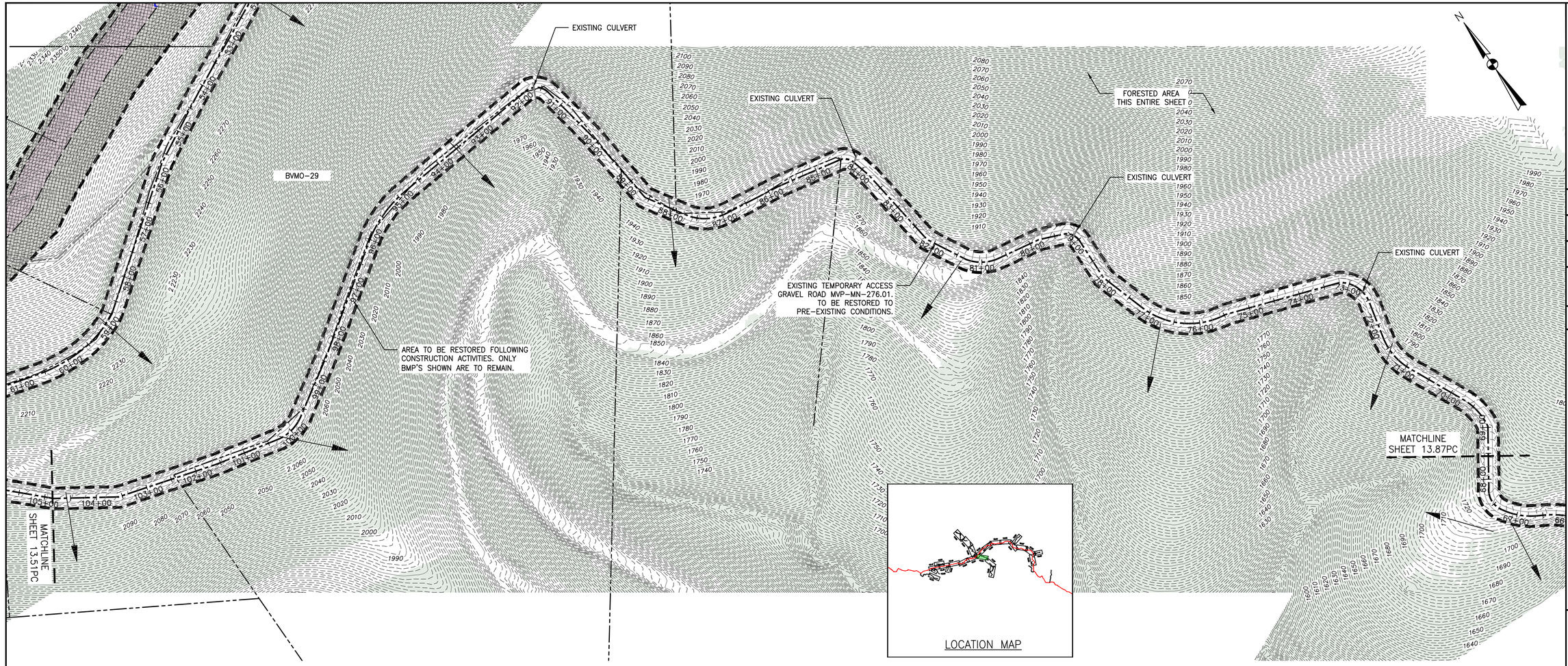
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF PENNSYLVANIA
DAVID J. WALLNER
Lic. No. 042057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN
REVISION	4

SHT. NO. 13.85PC OF 13.90PC



PLAN
SCALE: 1" = 100'
100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL (ANST)
- ACID FORMING MATERIAL (AFM)
- PROPOSED LEVEL SPREADER DIVERSION
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LEVEL SPREADER
- PROPOSED PERMANENT RIGHT OF WAY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SURFACE WATER FLOW DIRECTION
- POND
- WETLAND
- PROPOSED CULVERT WITH OUTLET PROTECTION (SEE DETAILS MVP-ES7, 7.1)
- APPROXIMATE LOCATION OF WATER BAR END TREATMENTS (PENDING FIELD CONDITIONS)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- PERMANENT WATER BAR 10' END TREATMENT
- PERMANENT WATER BAR 15' END TREATMENT
- PERMANENT WATER BAR 20' END TREATMENT
- STEEP SLOPE AREA
- EXISTING FOREST
- PERMANENT EASEMENT RESTORED TO MEADOW CONDITION
- TEMPORARY EASEMENT RESTORED TO BRUSH CONDITION

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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.86(S9).dwg PLOTTED ON: 3/20/2018 1:14 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

TETRA TECH
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

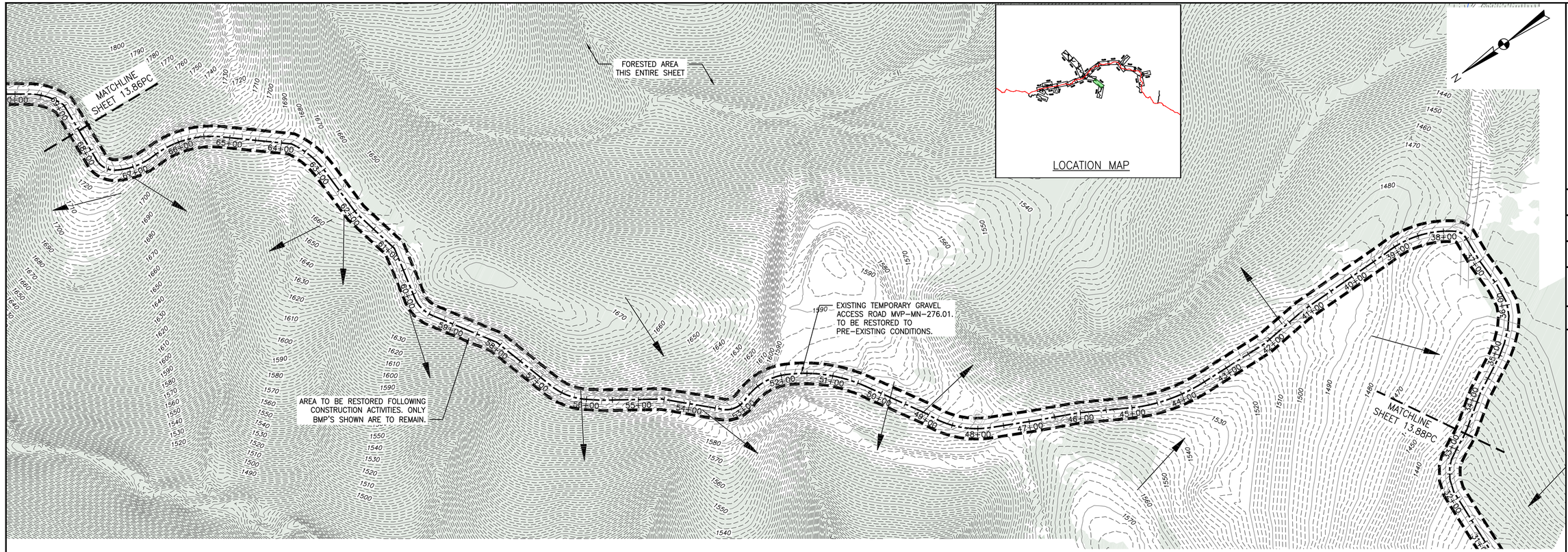
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.86PC OF 13.90PC



LOCATION MAP

PLAN
SCALE: 1" = 100'
100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
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REVISIONS:

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
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Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE
SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
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CANONSBURG, PA 15311

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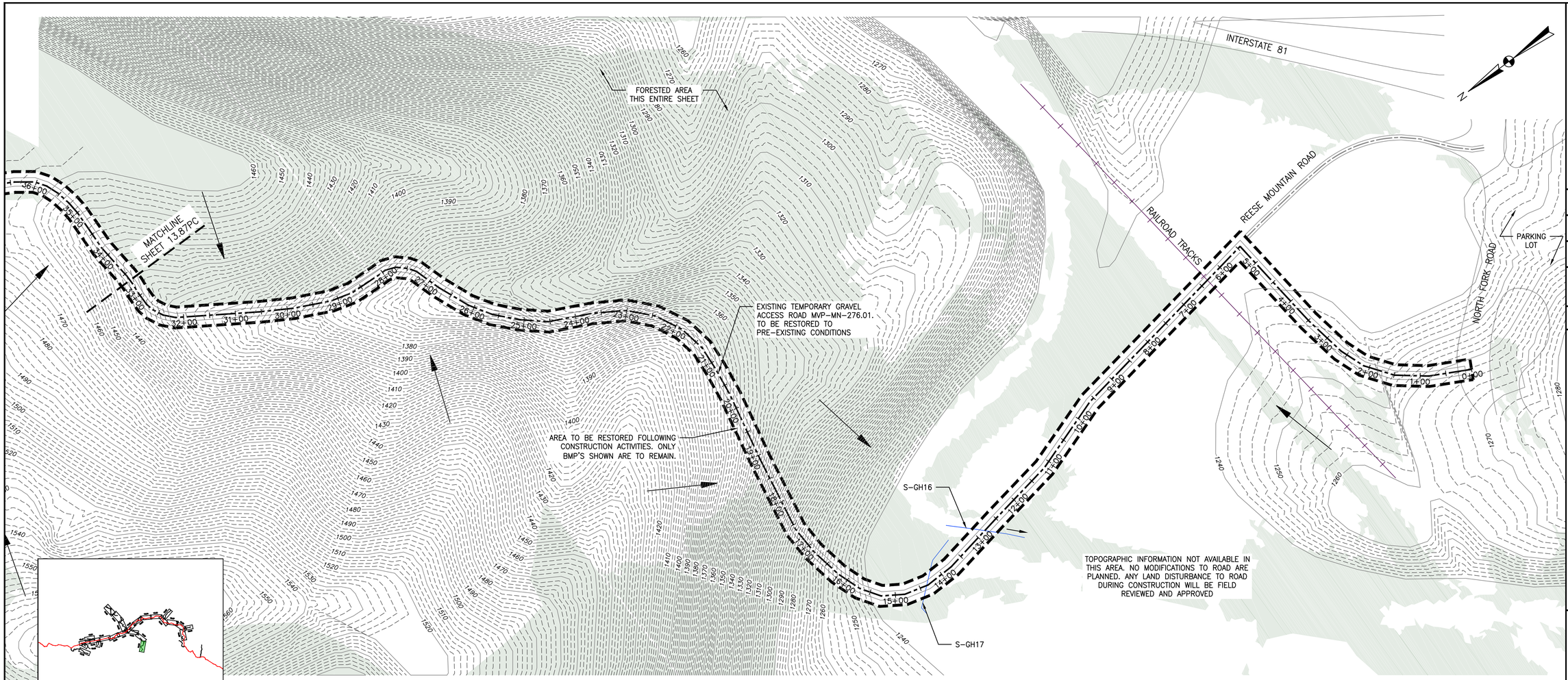
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.87PC OF 13.90PC



LOCATION MAP

PLAN
SCALE: 1" = 100'
100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
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1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

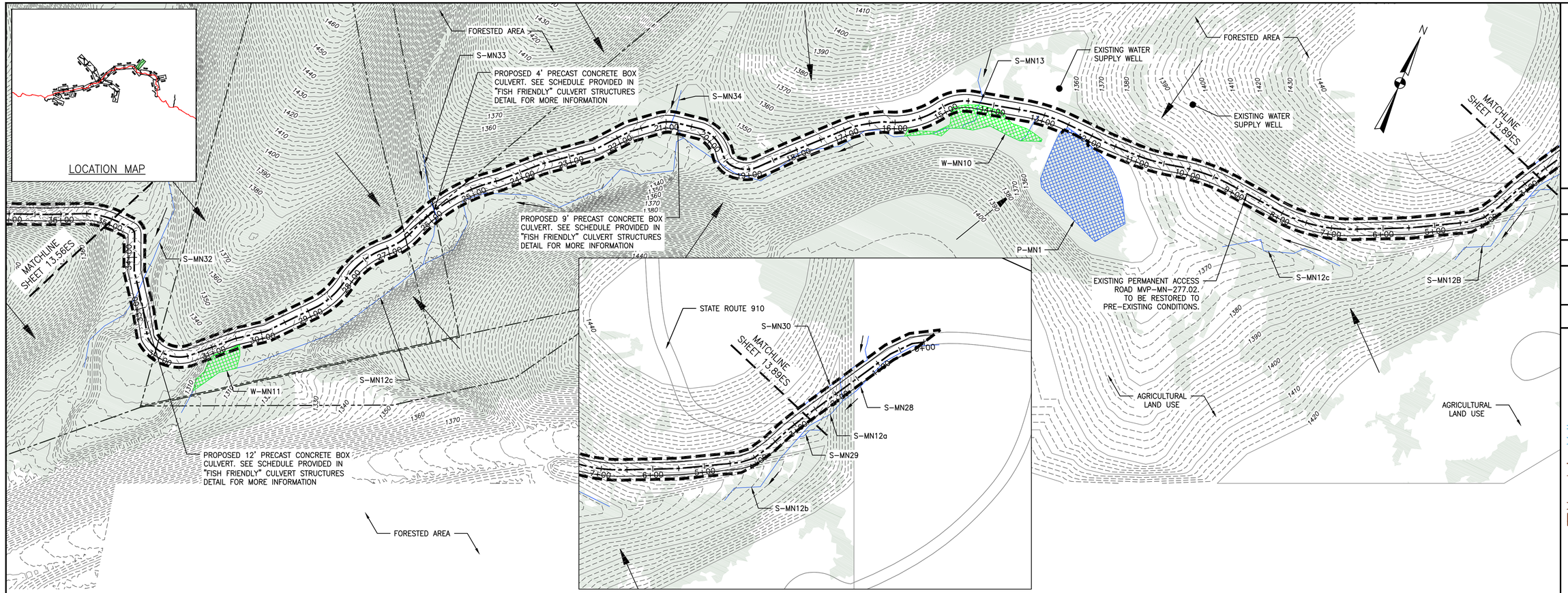
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.88PC OF 13.90PC

TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 – MVP Construction Spread 9\13 – Montgomery\PC\7157PC13.88(S9).dwg PLOTTED ON: 3/20/2018 1:11 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb



LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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TETRA TECH CAD FILE PATH: R:_Marcellus Shale Projects\EQT\7157 - MVP Construction Spread 9\13 - Montgomery\PC\7157PC13.89(S9).dwg PLOTTED ON: 3/20/2018 1:11 PM PLOTTED BY: Szpak, Jamie PLOT FILE: ENVIRONMENTAL_COLOR.ctb

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
4	3/5/18	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
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2	11/21/17	KAL	JRE	DJW	ADDRESS VADEQ COMMENTS
1	9/21/17	KAL	JRE	DJW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 9 – MONTGOMERY COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
2200 ENERGY DRIVE
CANONSBURG, PA 15311

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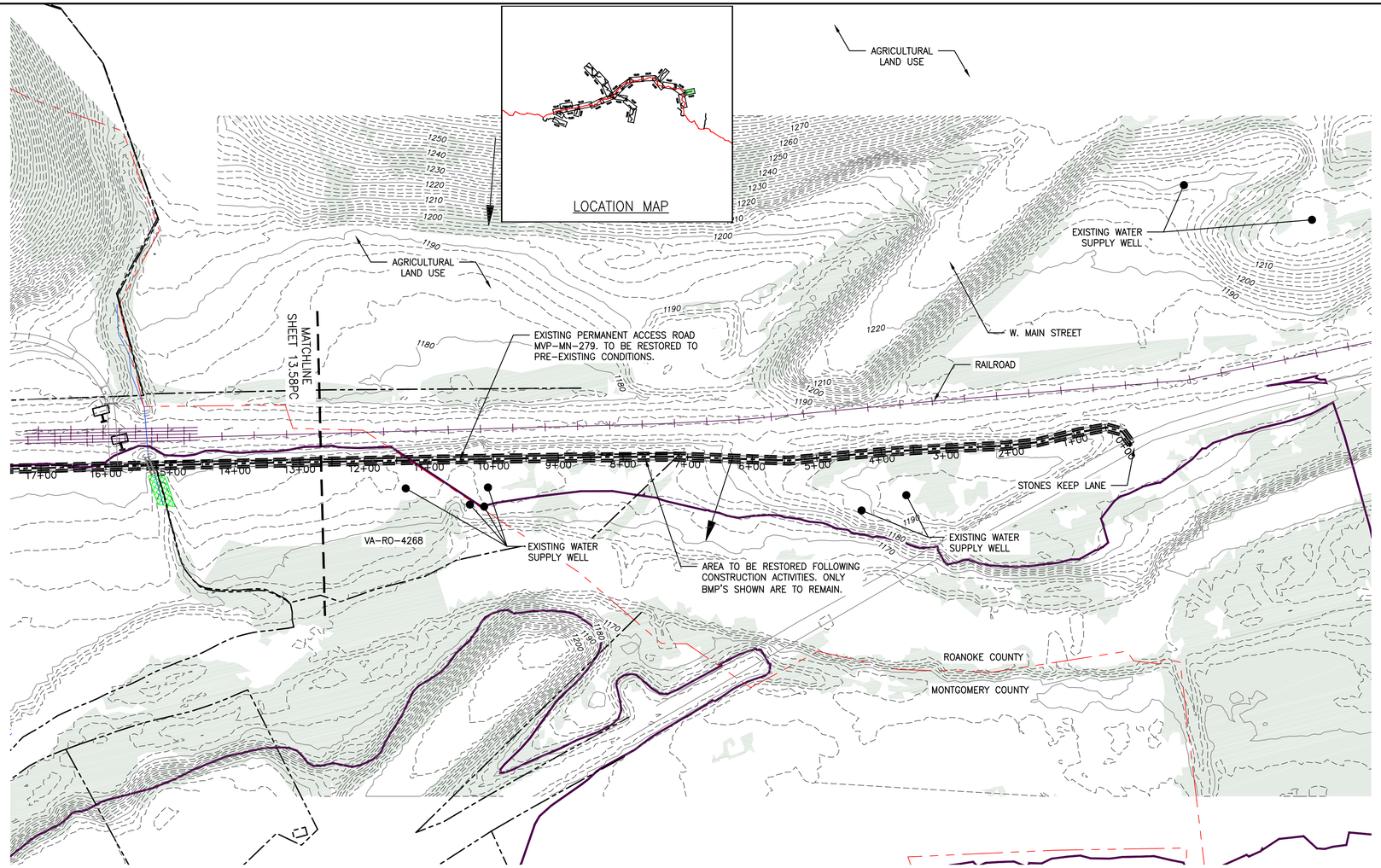
POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.89PC OF 13.90PC



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- EXISTING CULVERT
- STREAM
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- EXISTING ROAD/TRAIL
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
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REVISIONS:

Mountain Valley PIPELINE

POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 9 - MONTGOMERY COUNTY, VIRGINIA

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POST CONSTRUCTION (STORMWATER & RESTORATION) PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	JRE
APPROVED BY:	DJW
DATE:	11/21/2017
SCALE:	AS SHOWN

REVISION

SHT. NO. 13.90PC OF 13.90PC