RIGHT-OF-WAY & OWNERSHIP DATA

Station range	Parcel(s)	Length
12085+83 – 12086+07	VA-MO-059	24 LF / 24 SLOPE
12086+07 – 12086+90	VA-MO-060 / VA-MO-059	83 LF / 86 SLOPE
12086+90 – 12092+83	VA-MO-060	593 LF / 597 SLOPE
12092+83 – 12094+05	VA-MO-060 / VA-MO-3711	122 LF / 122 SLOPE
12094+05 – 12094+30	VA-MO-060 / VA-MO-061 / VA-MO-3711	25 LF / 26 SLOPE
12094+30 – 12094+98	VA-MO-061 / VA-MO-3711	68 LF / 69 SLOPE
12094+98 – 12099+10	VA-MO-061	412 LF / 424 SLOPE
12099+10 – 12099+51	VA-MO-062 / VA-MO-061	41 LF / 41 SLOPE
12099+51 – 12102+47	VA-MO-062	296 LF / 303 SLOPE
12102+47 – 12103+17	VA-MO-063 / HALF ACRE OF ROCKS ROAD / VA-MO-062	70 LF / 71 SLOPE
12103+17 – 12104+91	VA-MO-063	174 LF / 174 SLOPE
12104+91 – 12107+90	VA-MO-065 / VA-MO-063	299 LF / 304 SLOPE
12107+90 – 12112+65	VA-MO-065	475 LF / 481 SLOPE
12112+65 – 12116+37	VA-MO-066 / VA-MO-065	372 LF / 377 SLOPE
12116+37 – 12117+07	VA-MO-067 / VA-MO-066	70 LF / 73 SLOPE
12117+07 – 12118+18	VA-MO-067	111 LF / 112 SLOPE
12118+18 – 12118+30	VA-MO-067 / STATE ROUTE 622	12 LF / 12 SLOPE
12118+30 – 12118+52	BVMO-26 / VA-MO-067 / STATE ROUTE 622	22 LF / 22 SLOPE
12118+52 – 12119+68	BVMO-26 / STATE ROUTE 622 / VA-MO-068	116 LF / 117 SLOPE
12119+68 – 12119+84	BVMO-26 / VA-MO-068	16 LF / 16 SLOPE
12119+84 – 12127+01	VA-MO-068	717 LF / 719 SLOPE
12127+01 – 12130+77	VA-MO-069 / VA-MO-068	376 LF / 377 SLOPE
12130+77 – 12132+89	VA-MO-069	212 LF / 213 SLOPE
12132+89 – 12133+22	VA-MO-069 / VA-MO-070	33 LF / 33 SLOPE
12133+22 – 12135+53	VA-MO-070	231 LF / 235 SLOPE

DESIGN

Station range	PIPE / COATING	SLOPE DISTANCE
12085+83 – 12087+36	2	53'
12087+36 – 12087+76	4	40'
12087+76 – 12098+24	2	1167'
12098+24 – 12098+64	4	40'
12098+64 – 12101+37	2	281'
12101+37 – 12101+77	4	40'
12101+77 – 12108+20	2	653'
12108+20 – 12108+60	4	40'
12108+60 – 12118+77	2	1030'
12118+77 – 12119+57	5	80'
12119+57 – 12125+45	2	588'
12125+45 – 12125+85	4	40'
12125+85 – 12132+53	2	674'
12132+53 – 12132+93	4	40'
12132+93 – 12135+53	2	262'

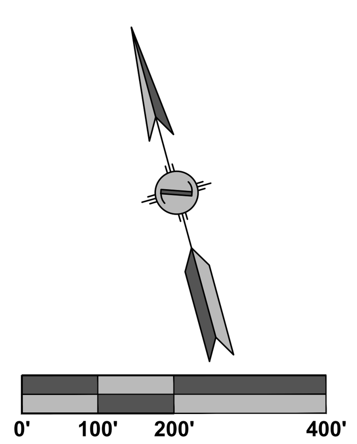
REV.8

CLASS LOCATION / HCA: 1 (12085+83 – 12086+10); 2 (12086+10 – 12135+53)

ENVIRONMENTAL

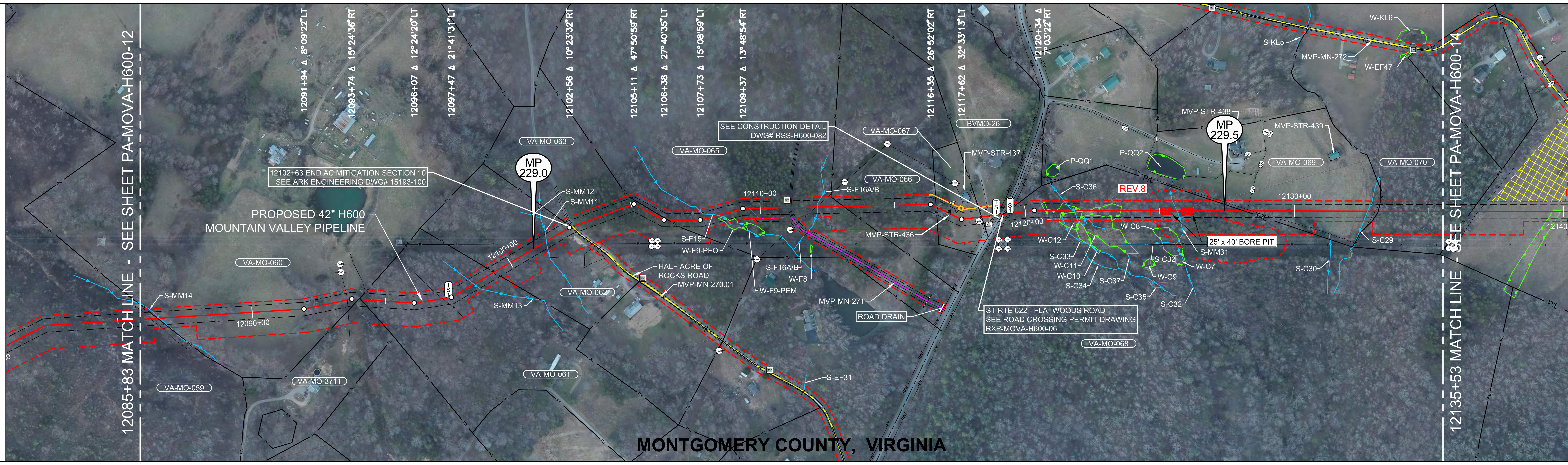
CONSTRUCTION EXCLUSION (12085+83 – 12135+53): TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31. SEE TREE CLEARING PLAN FOR FURTHER DETAILS

WETLAND / STREAM	Length
S-MM14	7 LF
S-MM13	5 LF
S-MM11	8 LF
W-F9-PFO	65 LF
S-F15	6 LF
S-F16A/B	3 LF
W-C12	85 LF
S-C33	6 LF
S-C36	3 LF
W-C11	121 LF
S-MM31	4 LF
S-C29	5.5 LF



0' 100' 200' 400'

PLAN VIEW



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-13	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-90	ACCESS ROAD DETAIL MAP
MVP-QDAR-H600-91	ACCESS ROAD DETAIL MAP
RXP-MOVA-H600-06	STATE ROUTE 622 PERMIT DWG
RSS-H600-082	RESIDENTIAL SITE SPECIFIC
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
15193-100	ARK ENGINEERING AC MITIGATION DESIGN

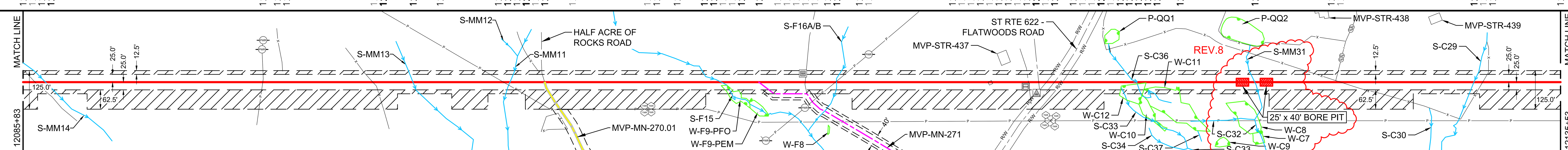
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

12085+83 MATCH LINE
12086+22 FENCE – ELECTRIC
12086+49 PROPERTY LINE
12086+56 ℄ STREAM(S–MM14)
12093+58 OHP LINE
12094+01 PROPERTY LINE
12094+10 PROPERTY LINE
12097+14 FENCE – BARBED WIRE
12097+36 PROPOSED TYPE 1 TEST STATION
12098+44 ℄ STREAM(S–MM13)
12099+31 PROPERTY LINE
12101+37 OHP LINE
12101+57 ℄ STREAM(S–MM11)
12102+63 PROPERTY LINE
12102+63 END AC MITIGATION SECTION 10
12102+64 EDGE OF GRAVEL
12102+69 ACCESS RD – TEMPORARY (MVP–MN–270.01), ℄ HALF ACRES OF ROCKS ROAD
12102+75 EDGE OF GRAVEL
12106+38 TOWER LEG 81' & 101'RT
12106+49 PROPERTY LINE
12106+97 PROPERTY CORNER 27'RT
12108+40 BEGIN WETLAND(W–F9–PFO)11'RT
12108+41 ℄ STREAM(S–F15)
12108+65 EDGE OF DIRT
12108+73 EDGE OF DIRT
12109+05 END WETLAND(W–F9–PFO) 37'RT
12109+62 ACCESS RD – PERMANENT (MVP–MN–271)
12111+02 PEDESTAL – TELEPHONE 28'LT
12111+08 EDGE OF ASPHALT
12111+11 POWER POLE 83'RT
12111+12 ℄ ASPHALT DRIVE
12111+15 EDGE OF ASPHALT
12112+10 OHP LINE
12112+13 ℄ STREAM(S–F16A/B)
12113+11 PROPERTY LINE
12113+17 POWER POLE 90'LT
12116+58 PROPERTY LINE
12117+03 BUILDING – SHED
12117+78 BUILDING – HOUSE 54'LT
12118+25 METER – WATER 15'RT
12118+33 ℄ DRIVEWAY(GRAVEL)
12118+37 PROPERTY LINE
12118+56 PROPERTY CORNER 49'RT
12118+59 MAILBOX 35'RT
12118+66 ℄ DRIVEWAY(GRAVEL)
12118+91 PROPOSED TYPE 1 TEST STATION,R/W
12119+05 EDGE OF ASPHALT
12119+17 ℄ ST RTE 622 – FLATWOODS ROAD
12119+20 PROPERTY LINE
12119+23 TOWER LEG 95'RT
12119+27 EDGE OF ASPHALT
12119+43 PROPOSED TYPE 1 TEST STATION,R/W
12120+98 CULVERT OPEN END 97'LT
12121+29 BEGIN WETLAND(W–C12) 37'RT
12121+33 ℄ STREAM(S–C33) 16'RT
12121+83 ℄ STREAM(S–C36)
12122+02 BEGIN WETLAND(W–C11) 37'RT
12122+14 END WETLAND(W–C12) 2'RT
12123+23 END WETLAND(W–C11) 37'RT
12125+65 ℄ STREAM(S–MM31)
12128+14 PROPERTY LINE
12128+41 FENCE – HOG WIRE
12132+73 ℄ STREAM(S–C29)
12133+02 FENCE – HOG WIRE
12133+12 PROPERTY LINE
12135+53 MATCH LINE

WORK SPACE

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



CONSTRUCTION METHOD

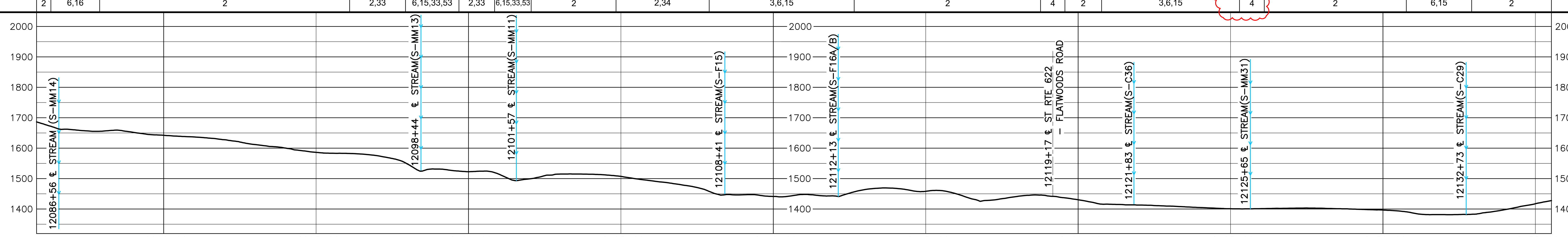
Segment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Method	2	6,16	2	2,33	6,15,33,53	2,33	6,15,33,53	2	2,34	3,6,15	2	4	2	3,6,15	4	2	6,15

Continued: 2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-16-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
2	4708	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	240	42"O.D. X 0.740"W.T., X-70, FBE & ARO
5	80	42"O.D. X 0.888"W.T., X-70, FBE & ARO
	3	TYPE 1 TEST STATION - PIPELINE

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE
C-3 PRECINCT.,MONTGOMERY CO.,VA.
STA. 12085+83 TO STA. 12135+53

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-MOVA-H600 -13	
SHEET 252 OF 329	REV. 8
DATE OF PLOT: 02/16/21 12:29 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Tract	Length
12186+52 – 12186+87	VA-MO-074	35 LF / 35 SLOPE
12186+87 – 12190+70	VA-MO-075 / VA-MO-074	383 LF / 389 SLOPE
12190+70 – 12191+01	BRADSHAW ROAD	31 LF - 31 SLOPE
12191+01 – 12192+10	BV-MN-0053	109 LF / 110 SLOPE
12192+10 – 12196+43	VA-MO-077	433 LF / 438 SLOPE
12196+43 – 12198+19	VA-MO-078	176 LF / 181 SLOPE
12198+19 – 12199+91	VA-MO-078 / VA-MO-077	172 LF / 177 SLOPE
12199+91 – 12201+98	VA-MO-077	207 LF / 201 SLOPE
12201+98 – 12202+67	VA-MO-077 / VA-MO-079	69 LF / 73 SLOPE
12202+67 – 12220+10	VA-MO-079	1743 LF / 1951 SLOPE
12220+10 – 12220+57	VA-MO-080 / VA-MO-079	47 LF / 51 SLOPE
12220+57 – 12236+66	VA-MO-080	1609 LF / 1657 SLOPE
12236+66 – 12237+21	VA-MO-081 / VA-MO-080	55 LF / 57 SLOPE
12237+21 – 12240+58	VA-MO-081	337 LF / 353 SLOPE
12240+58 – 12241+02	VA-MO-080 / VA-MO-081	44 LF / 46 SLOPE
12241+02 – 12243+63	VA-MO-080	261 LF / 264 SLOPE

DESIGN

Station	PIPE / COATING	SLOPE DISTANCE
12186+52 – 12190+49	3	401'
12190+49 – 12191+29	5	80'
12191+29 – 12191+91	3	62'
12191+91 – 12193+11	5	120'
12193+11 – 12196+22	3	317'
12196+22 – 12196+27	8	5'
12196+27 – 12197+87	5	160'
12197+87 – 12229+43	3	3320'
12229+43 – 12243+63	2	1475'

REV.8

CLASS LOCATION / HCA: 1

ENVIRONMENTAL

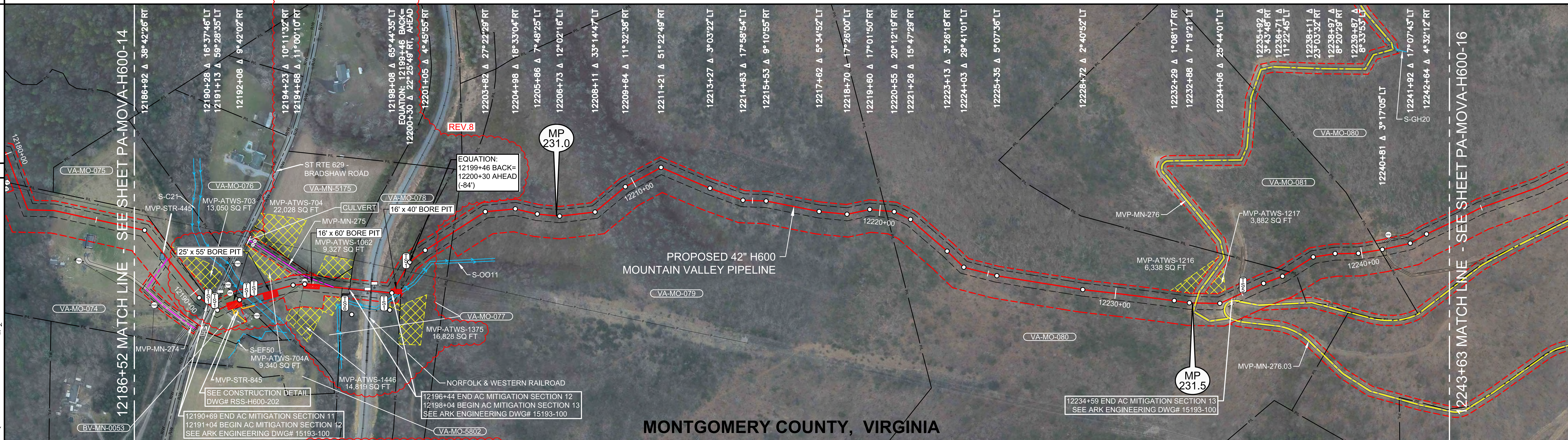
CONSTRUCTION EXCLUSION:
12186+52 T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-C21 OCT. 1ST - JUNE 30TH & FISH RELOCATION REQUIRED CONSULT RESPONIBLE E.I.

TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31
SEE TREE CLEARING PLAN FOR FURTHER DETAILS
12243+63

WETLAND / STREAM: S-C21 — 30 LF

PLAN VIEW

0' 100' 200' 400'



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-13	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-92	ACCESS ROAD DETAIL MAP
MVP-QDAR-H600-93	ACCESS ROAD DETAIL MAP
RSS-H600-202	RESIDENTIAL SITE SPECIFIC
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-W-H600-1204-02	CATHODIC PROTECTION STANDARD DRAWING
15193-100	ARK ENGINEERING AC MITIGATION DESIGN

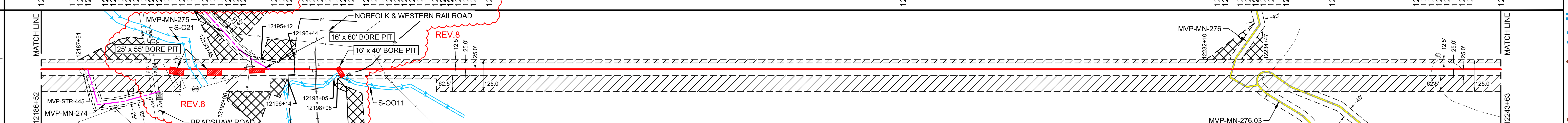
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 12186+52 MATCH LINE
- 12188+07 BEGIN BUILDING – SHED
- 12188+17 END BUILDING – SHED
- **12188+34 ACCESS RD–PERMANENT(MVP–MN–274)**
- **12190+69 END AC MITIGATION SECTION 11**
- **12190+70 PROPOSED TYPE 1 TEST STATION,R/W**
- 12190+75 EDGE OF ASPHALT
- **12190+85 ℄ BRADSHAW ROAD**
- 12190+95 EDGE OF ASPHALT
- 12190+97 MAILBOX 10'LT
- **12191+01 PROPOSED TYPE 1 TEST STATION,R/W**
- **12191+04 BEGIN AC MITIGATION SECTION 12**
- 12191+13 MAILBOX 89' & 97'RT
- 12191+36 EDGE OF GRAVEL
- 12191+40 CL DRIVEWAY(GRAVEL)
- 12191+45 EDGE OF GRAVEL
- 12191+47 SIGN 45'LT
- 12191+86 WELL – WATER 39'LT
- 12191+90 PEDESTAL – TELEPHONE 71'LT
- 12191+92 POWER POLE 71'LT
- **12191+93 BUILDING – HOUSE 14'RT**
- **12192+10 PROPERTY LINE**
- **12192+36 STREAM BANK(S–C21), PROPOSED TYPE 1 TEST STATION, BEGIN PROPOSED 3 RIVER WEIGHTS AT 10' SPACING – STREAM**
- 12192+44 GUY ANCHOR 81'RT
- 12192+56 POWER POLE 77'RT
- **12192+66 STREAM BANK(S–C21), PROPOSED TYPE 1 TEST STATION**
- 12194+52 OHP LINE
- 12194+66 OHP LINE
- 12194+68 POWER POLE 10'LT
- 12194+68 POWER POLE 10'LT
- 12194+76 GUY ANCHOR 15'LT
- **12195+80 ACCESS RD–PERMANENT(MVP–MN–275)**
- 12196+43 PROPERTY LINE,
- **12196+43 PROPOSED TYPE 1 TEST STATION**
- **END AC MITIGATION SECTION 12**
- 12197+14 SIGN 12'LT
- 12197+18 TOE OF BALLAST
- 12197+22 TOP OF BALLAST
- 12197+24 ℄ RAIL
- **12197+26 NORFOLK & WESTERN RR**
- 12197+29 ℄ RAIL
- 12197+31 TOP OF BALLAST
- 12197+35 TOE OF BALLAST
- 12197+38 SIGN 12'LT
- **12198+08 BEGIN AC MITIGATION SECTION 13**
- **12198+08 PROPOSED TYPE 1 TEST STATION**
- 12198+08 CULVERT OPEN END 32'RT
- 12198+12 CULVERT OPEN END 45'RT
- 12199+17 PROPERTY LINE,
- **PROPOSED TYPE 1 TEST STATION**
- 12202+34 PROPERTY LINE
- 12220+23 PROPERTY LINE
- 12233+06 EDGE OF GRAVEL
- **12233+12 ACCESS RD – TEMPORARY (MVP–MN–276)**
- 12233+19 EDGE OF GRAVEL
- 12234+56 CULVERT OPEN END 92'RT
- **12234+59 END AC MITIGATION SECTION 13**
- 12234+64 EDGE OF GRAVEL
- 12234+71 ℄ TRAIL(GRAVEL)
- 12234+77 EDGE OF GRAVEL
- **12235+06 PROPOSED TYPE 5 TEST STATION**
- 12237+03 PROPERTY LINE
- 12240+73 PROPERTY LINE
- 12240+88 EDGE OF GRAVEL
- 12240+93 ℄ TRAIL(GRAVEL)
- 12240+98 EDGE OF GRAVEL
- **12241+16 WELL – WATER 51'LT**
- 12242+04 EDGE OF GRAVEL
- 12242+11 ℄ TRAIL(GRAVEL)
- 12242+17 EDGE OF GRAVEL
- 12243+63 MATCH LINE

WORK SPACE

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



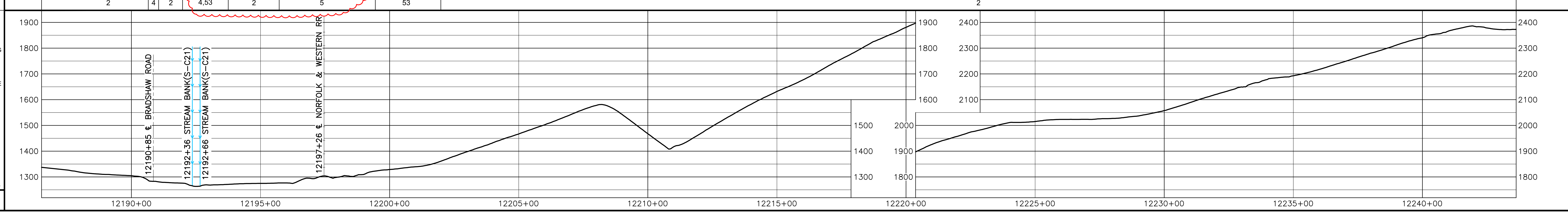
CONSTRUCTION METHOD

2	4	2	4,53	2	5	53	2

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	01-18-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE AND ROUTE ADJUSTMENT TO AVOID S-OO11

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
2	1475	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
3	4100	42"O.D. X 0.888"W.T., X-70, FUSION BONDED EPOXY
5	360	42"O.D. X 0.888"W.T., X-70, FBE & ARO
8	5	ANSI 900 MONOLITHIC INSULATING JOINT
	6	TYPE 1 TEST STATION - PIPELINE
	1	TYPE 5 TEST STATION - METAL IR DROP TEST STATION
	1	TYPE 6 TEST STATION - ISO. JOINT - BELOW GRADE
	3	RIVER WEIGHTS

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE C-3 PRECINCT.,MONTGOMERY CO.,VA. STA. 12186+52 TO STA. 12243+63

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-MOVA-H600 -15	
SHEET 254 OF 329	REV. 8
DATE OF PLOT: 01/18/21 3:54 PM	

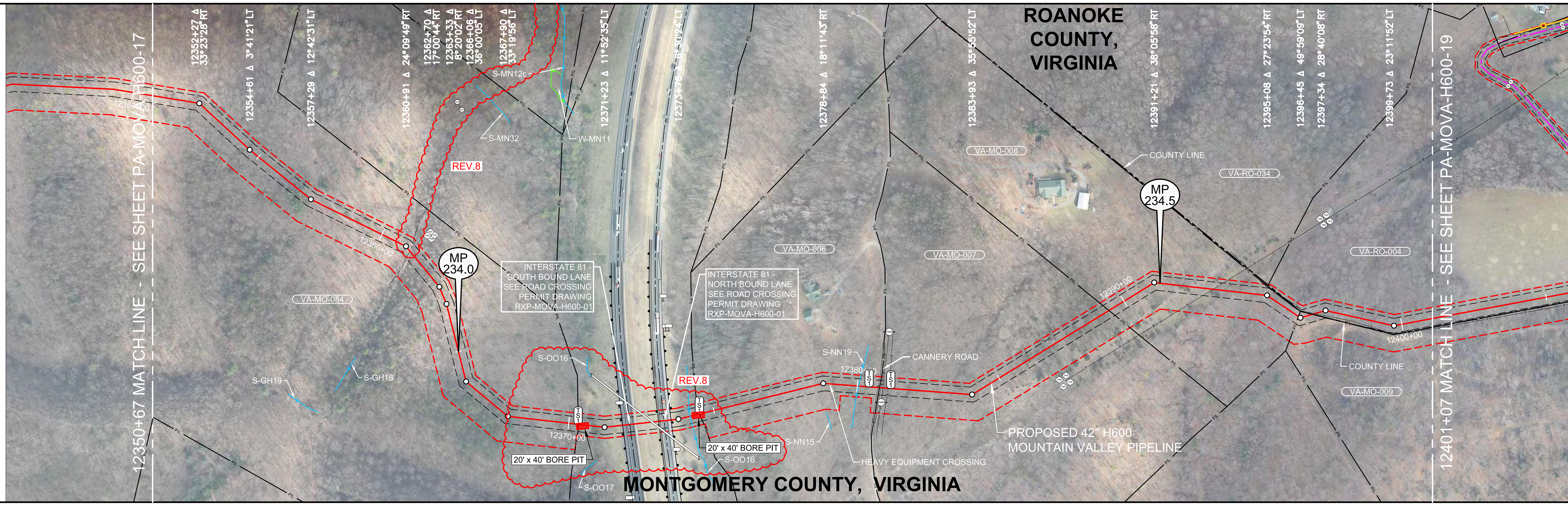
RIGHT-OF-WAY & OWNERSHIP DATA	12350+67	VA-MO-084 1967 LF 2010 SLOPE	12370+33	INTERSTATE HIGHWAY 81 417 LF 440 SLOPE	12374+50	VA-MO-006 626 LF 647 SLOPE	12380+76	VA-MO-007 851 LF 864 SLOPE	12389+27	VA-MO-008 / VA-MO-007 43 LF 43 SLOPE	12389+70	VA-MO-008 520 LF 522 SLOPE	12394+90	VA-RO-034 / VA-MO-008 12 LF 12 SLOPE	12395+02	VA-RO-004 / VA-MO-008 134 LF 134 SLOPE	12396+36	VA-RO-004 / VA-MO-009 471 LF 472 SLOPE	12401+07

DESIGN						
PIPE / COATING	12350+67	3	12370+33	5	12374+50	3	12401+07
SLOPE DISTANCE		2010'		440'		2694'	
CLASS LOCATION / HCA		1					

ENVIRONMENTAL					
CONSTRUCTION EXCLUSION	12350+67	TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS	T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-OO16 MARCH 15TH TO JULY 15TH & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.	T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-NN19 MARCH 15TH TO JULY 15TH	TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS	12401+07
WETLAND / STREAM			S-OO16 4 LF	S-NN19 3.5 LF		
.						
.						

PLAN VIEW

0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

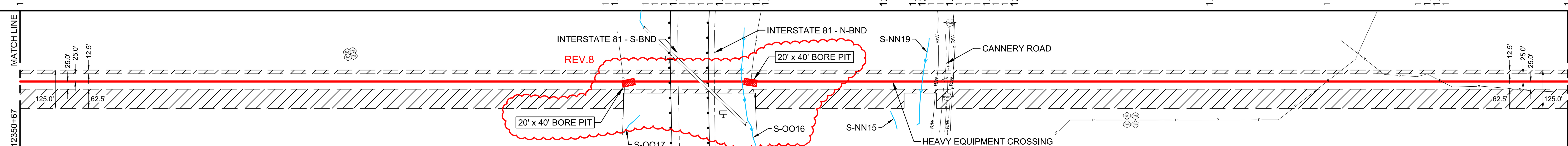
DRAWING NO.	DESCRIPTION
MVP-AR-H600-13	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-94	ACCESS ROAD DETAIL MAP
RXP-MOVA-H600-01	INTERSTATE 81 PERMIT DWG
SSRA-H600-07	RECREATIONAL SITE SPECIFIC
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

HORIZONTAL STATIONING

12350+67 MATCH LINE
12370+31 PROPERTY CORNER 11'LT
12370+32 PROPERTY LINE, FENCE – HOG WIRE,
PROPOSED TYPE 1 TEST STATION
12371+85 CONCRETE
12371+85 GUARDRAIL
12371+97 EDGE OF ASPHALT
12372+10 ℄ INTERSTATE 81 – SOUTH BND LANE
12372+21 EDGE OF ASPHALT
12373+08 GUARDRAIL
12373+12 CONCRETE
12373+15 EDGE OF ASPHALT
12373+28 ℄ INTERSTATE 81 – NORTH BND LANE
12373+39 EDGE OF ASPHALT
12373+51 CONCRETE
12373+51 GUARDRAIL
12374+16 ℄ STREAM(S–OO16)
12374+49 PROPERTY LINE, FENCE – HOG WIRE, **PROPOSED TYPE 1 TEST STATION**
12379+08 HEAVY EQUIPMENT CROSSING
12380+04 ℄ STREAM(S–NN19)
12380+41 PROPOSED TYPE 1 TEST STATION
12380+68 CULVERT OPEN END 4'LT
12380+71 EDGE OF ASPHALT
12380+76 ℄ CANNERY ROAD,PROPERTY LINE
12380+81 EDGE OF ASPHALT
12380+86 POWER POLE 50'RT
12380+86 CULVERT OPEN END 13'LT
12380+88 OHP LINE
12380+94 GUY ANCHOR 49'RT
12381+06 FENCE – BARBED WIRE
12381+15 PROPOSED TYPE 1 TEST STATION
12389+40 PROPERTY LINE
12393+23 OHP LINE
12396+32 PROPERTY CORNER 18'LT
12396+37 PROPERTY LINE
12396+88 PROPERTY LINE
12396+96 FENCE – HOG WIRE
12401+07 MATCH LINE

WORK SPACE

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

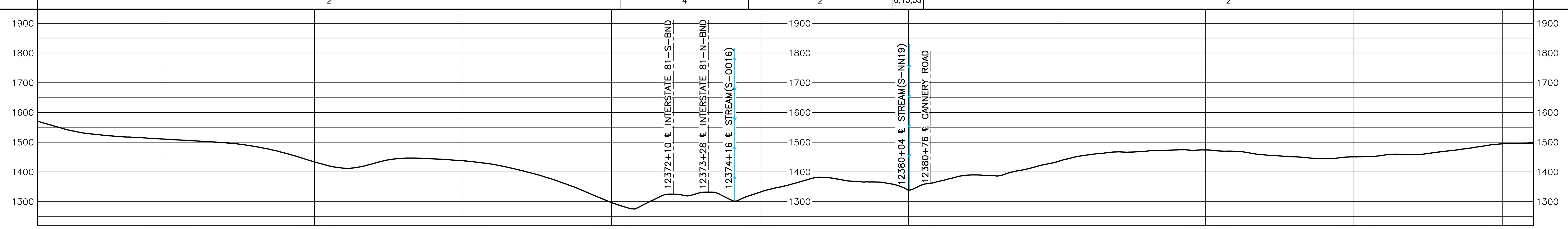


CONSTRUCTION METHOD

2	4	2	6,15,53	2

CONSTRUCTION METHOD KEY
1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



ISSUED FOR CONSTRUCTION

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

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

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	07-30-19	ISSUED FOR VARIANCE - REMOVED MVP-MN-277.02 AND ADDED BORE PITS

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
3	4704	42"O.D. X 0.888"W.T., X-70, FUSION BONDED EPOXY
5	440	42"O.D. X 0.888"W.T., X-70, FBE & ARO
	4	TYPE 1 TEST STATION - PIPELINE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE C-3 PRECINCT.,MONTGOMERY CO.,VA. STA. 12350+67 TO STA. 12401+07

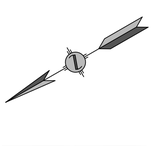
HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-MOVA-H600 -18	
SHEET 257 OF 329	REV. 8
DATE OF PLOT: 11/12/20 5:04 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

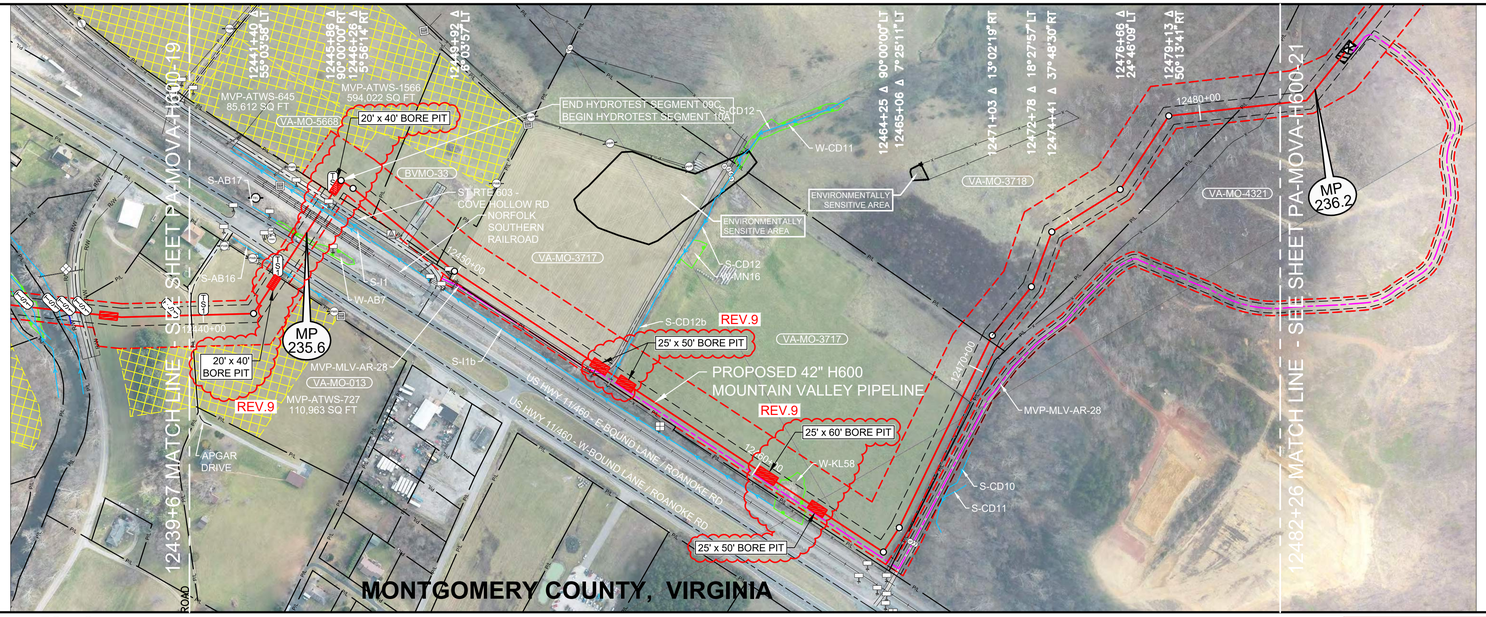
DESIGN	PIPE / COATING	3 | 5 | 3 | REV.9 | 5 | 3 | 5 | 3
	SLOPE DISTANCE	298' | 280' | 957' | 40' | 527' | 120' | 2096'
	CLASS LOCATION / HCA	2 | HCA - 10 | 1
ENVIRONMENTAL	CONSTRUCTION EXCLUSION	T.O.Y.R.: NO CONSTRUCTION WITHIN STREAMS S-AB16 & S-I1 MAY 15TH - JULY 15TH, MUSSEL RELOCATION TO BE COMPLETED BETWEEN MAY 1ST AND SEPT 30TH & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I. | TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
	WETLAND / STREAM	S-AB16 5 LF | W-AB7 12 LF | S-I1 14 LF | S-CD12b 1.5 LF | W-CD11 105 LF
	.	
	.	

VA-MO-013 | US HIGHWAY 11460 / RAILROAD / ST RTE 603 | VA-MO-5668 | BVMO-33 | VA-MO-3717 | VA-MO-3718 | VA-MO-3718 / VA-MO-4321 | VA-MO-4321

12439+67 | 297 LF 298 SLOPE | 12442+64 | 280 LF 280 SLOPE | 12445+44 | 166 LF 168 SLOPE | 12447+10 | 228 LF 228 SLOPE | 12449+38 | 2149 LF 2153 SLOPE | 12470+87 | 985 LF 1029 SLOPE | 12480+72 | 121 LF 128 SLOPE | 12481+93 | 33 LF 34 SLOPE | 12482+26



PLAN VIEW



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

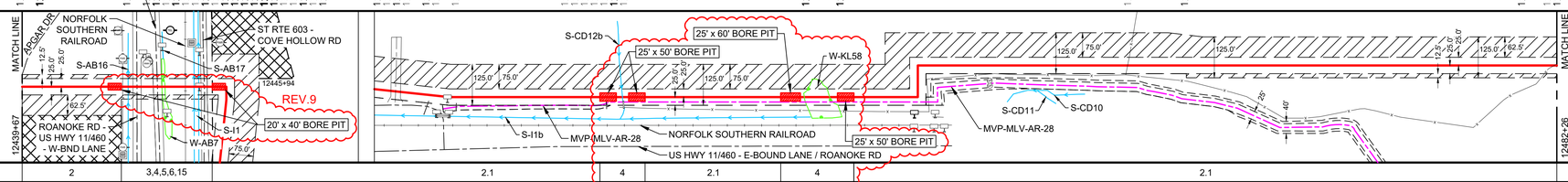
DRAWING NO.	DESCRIPTION
MVP-AR-H600-13	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-96	ACCESS ROAD DETAIL MAP
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
MVP-CPGB-24	ROBERTS CORROSION SERVICE DRAWING

HORIZONTAL STATIONING

12439+67 MATCH LINE, PROPERTY LINE, ROANOKE RD
12440+00 PROPOSED TYPE 1 TEST STATION
12440+64 PROPERTY LINE, APGAR DRIVE
12442+64 PROPOSED TYPE 1 TEST STATION
12442+68 PROPERTY LINE
12442+85 ℄ STREAM(S–AB16)(5'WIDE)
12443+00 EDGE OF ASPHALT
12443+12 US HIGHWAY 11/460 – WEST BND LN – ROANOAK ROAD
12443+62 EDGE OF ASPHALT
12443+75 US HIGHWAY 11/460 – EAST BND LN – ROANOAK ROAD
12443+88 BEGIN WETLAND(W–AB7)(3'RT)
12444+01 END WETLAND(W–AB7)26'LT
12444+60 ℄ NORFOLK SOUTHERN RAILROAD
12444+87 STREAM BANK(S–I1) HEIGHT – STREAM
12445+01 STREAM BANK(S–I1)
12445+03 SIGN 13'RT
12445+08 EDGE OF ASPHALT
12445+19 ST RTE 603 – COVE HOLLOW ROAD
12445+22 EDGE OF ASPHALT
12445+43 PROPERTY LINE, PROPOSED TYPE 1 TEST STATION
12447+10 PROPERTY LINE
12448+12 EDGE OF ASPHALT
12448+26 ℄ DRIVEWAY
12448+41 EDGE OF ASPHALT
12449+38 PROPERTY LINE
12449+88 SIGN 18'RT
12450+13 CULVERT OPEN END 19'RT
12454+71 CULVERT OPEN END 9'RT
12454+72 CULVERT OPEN END 12'RT
12454+87 CULVERT OPEN END 25'RT
12455+01 EDGE OF GRAVEL
12455+21 ℄ STREAM(S–CD12b)
12455+24 CULVERT OPEN END 13'RT
12460+76 BEGIN WETLAND(W–KL58)12'LT
12461+81 END WETLAND(W–KL58)25'RT
12469+13 FENCE – BARBWIRE
12470+87 PROPERTY LINE
12481+18 PROPERTY LINE
12482+18 FENCE – BARBWIRE
12482+26 MATCH LINE

WORK SPACE

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



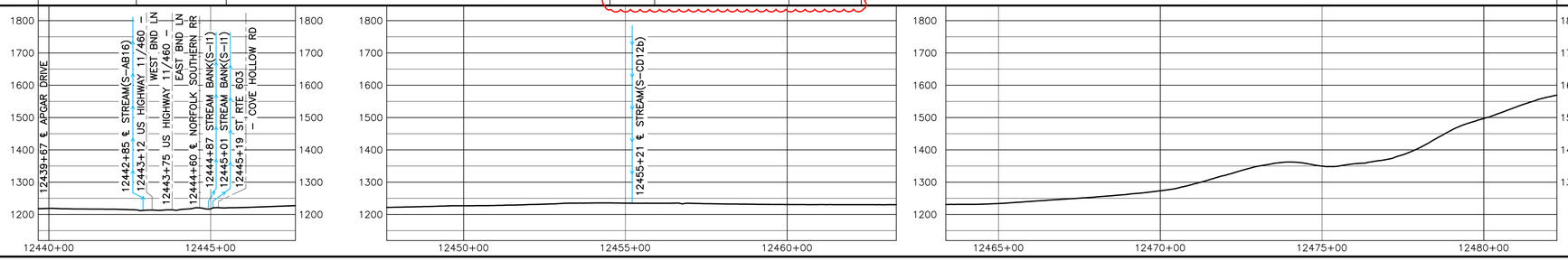
CONSTRUCTION METHOD

2 | 3,4,5,6,15 | 2.1 | 4 | 2.1 | 4 | 2.1

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



ISSUED FOR CONSTRUCTION

HOLLAND ENGINEERING
200 Hoover Boulevard, Suite 2 | 36595 Evergreen Rd. Suite 430
Holland, Michigan 49423-3786 | Southfield, Michigan 48076
T 616.546.0380 F 616.546.0381 | T 248.827.1022 F 248.827.1049
www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	08-05-16	REV. 4.1.0 ISSUED TO FERC
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	12-19-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	04-25-19	ISSUED FOR VARIANCE - NORFOLK SOUTHERN PERMITTED ROUTE
9	HEI	02-16-21	ISSUED FOR VARIANCE - CHANGED CONST. METHOD TO BORE

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	25% 50%	42"O.D. X 0.886"W.T. X 70 FBE BONDED EPOXY
2		42"O.D. X 0.886"W.T. X 70 PRE & ARO
5	440	TYPE 1 TEST STATION - PIPELINE
1	1	DIVER WEIGHTS

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR1	08-05-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR1	10-15-15
4	RRR1	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE
C-3 PRECINCT.,MONTGOMERY CO.,VA.
STA. 12426+99 TO STA. 12480+03

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.:	14-10-052
DRAWING NO.:	**PA-MOVA-H600 -20**
SHEET 259 OF 329	REV. 9
DATE OF PLOT:	02/16/21 4:30 PM

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Tract	Length
12782+64	VA-RO-045	2072 LF 2088 SLOPE
12803+36	VA-RO-046	2767 LF 2839 SLOPE
12831+03	VA-RO-1150.02	260 LF 265 SLOPE
12833+63	VA-RO-1150.02 / BVRO-04	108 LF 108 SLOPE
12834+71	BVRO-04	156 LF 156 SLOPE
12836+27		

DESIGN

PIPE / COATING: 12782+64 — 2 (REV.8) — 12793+21 — 4 — 12794+01 — 2 — 12797+13 — 4 — 12802+33 (REV.8) — 2 — 12811+31 — 4 — 12812+51 — 2 — 12836+27

SLOPE DISTANCE: 1065' | 80' | 314' | 520' | 939' | 120' | 2418'

CLASS LOCATION / HCA: 1

ENVIRONMENTAL

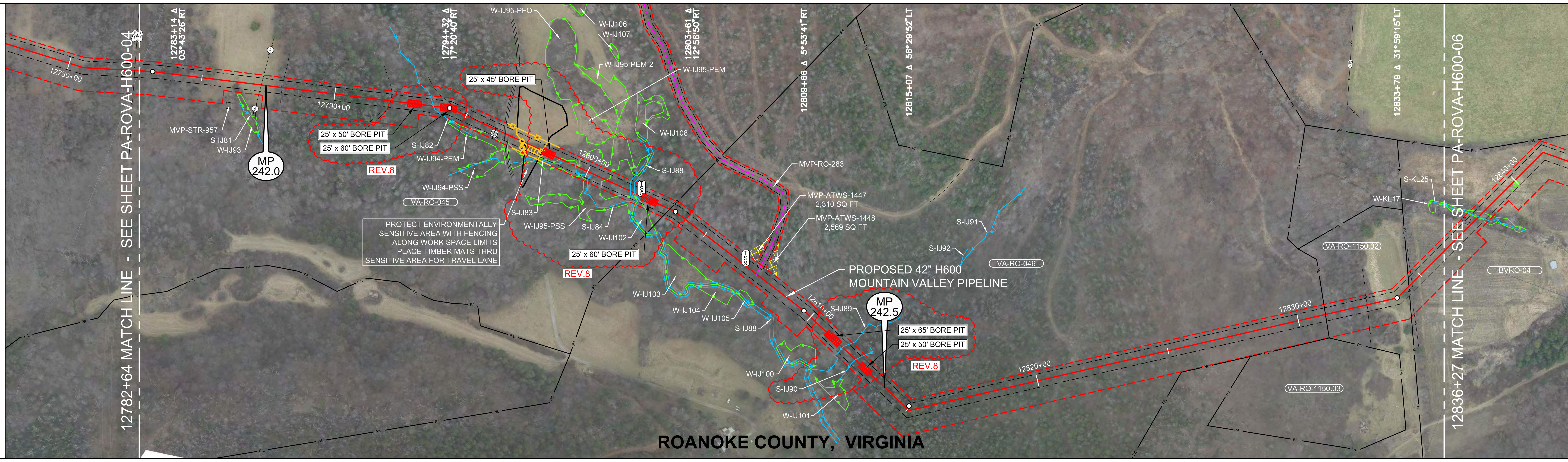
CONSTRUCTION EXCLUSION:
- 12782+64: TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- TIME OF YEAR RESTRICTION: NO CONSTRUCTION WITHIN STREAMS S-IJ82, S-IJ83 S-IJ88, S-IJ89 & S-IJ90 OCT 1ST - JUNE 30 and FISH RELOCATION REQUIRED WITHIN STREAMS S-IJ88 & IJ89 CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- 12836+27

WETLAND / STREAM:

S-IJ82	W-IJ94-PEM	S-IJ83	S-IJ83	W-IJ95-PSS	S-IJ88	W-IJ95-PSS	W-IJ102	S-IJ89	S-IJ90
5 LF	130 LF	1.5 LF	1.5 LF	408 LF	16 LF	77 LF	60 LF	3.5 LF	5 LF

PLAN VIEW

0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-14	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-97	ACCESS ROAD DETAIL MAP
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

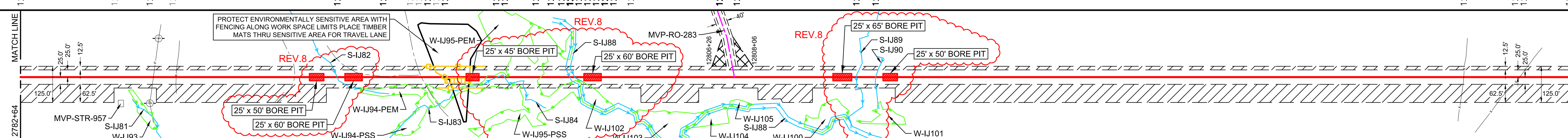
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 12782+64 MATCH LINE
- 12786+02 BARN 80'RT
- 12787+23 OHP LINE
- 12788+02 FENCE
- 12793+71 ℄ STREAM(S-IJ82)
- 12795+29 BEGIN WETLAND(W-IJ94-PEM)38'RT
- 12796+23 PEDESTAL - TELEPHONE 17'RT
- 12796+23 TELEPHONE POLE 17'RT
- 12796+59 END WETLAND(W-IJ94-PEM)38'RT
- 12796+62 ℄ DRIVEWAY
- 12796+78 BEGIN WETLAND(W-IJ95-PSS)23'RT
- 12799+25 ℄ STREAM(S-IJ83)
- 12799+49 ℄ STREAM(S-IJ83)
- 12800+86 END WETLANDW-IJ95-PSS)12'LT
- 12801+38 BEGIN WETLANDW-IJ95-PSS)37'RT
- 12801+75 STREAM BANK(S-IJ88)
- **12801+83 PROPOSED RIVER WEIGHT - STREAM**
- 12801+91 STREAM BANK(S-IJ88)
- 12801+94 BEGIN WETLAND(W-IJ102)11'RT
- 12802+15 END WETLANDW-IJ95-PSS)21'RT
- **12802+21 PROPOSED TYPE 5 TEST STATION**
- 12802+54 END WETLAND(W-IJ102)37'RT
- 12803+37 PROPERTY LINE
- **12806+91 PROPOSED TYPE 9 TEST STATION**
- 12807+43 ACCESS RD - PERMANENT (MVP-RO-283)
- 12811+64 ℄ STREAM(S-IJ89)
- 12812+31 ℄ STREAM(S-IJ90)
- 12832+63 FENCE
- 12834+40 PROPERTY LINE
- 12834+57 FENCE
- 12836+27 MATCH LINE

WORK SPACE

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



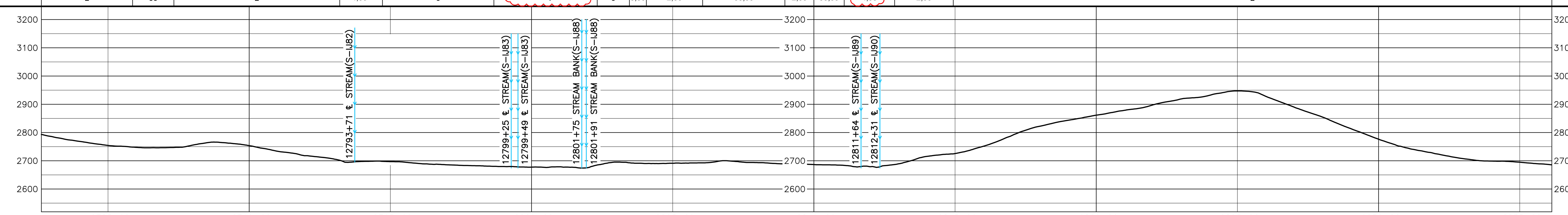
CONSTRUCTION METHOD

2	53	2	4,53	3	4	3	3,33	2,33	33,53	2,33	33,53	4,53	2,33	2

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
2	4736	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	720	42"O.D. X 0.740"W.T., X-70, FBE & ARO
	1	TYPE 5 TEST STATION - METAL IR DROP TEST STATION
	1	TYPE 9 TEST STATION - TEST STATION IR COUPON
	1	RIVER WEIGHTS

REV.8

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-12-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE BENT MOUNTAIN PCT.,ROANOKE CO.,VA. STA. 12782+64 TO STA. 12836+27

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-ROVA-H600 -05	
SHEET 266 OF 329	REV. 8
DATE OF PLOT: 02/12/21 11:16 AM	

PIPELINE ALIGNMENT

RIGHT-OF-WAY & OWNERSHIP DATA

Station range	Tract	Length
12836+27 – 12848+98	BVRO-04	1272 LF / 1276 SLOPE
12848+98 – 12851+03	BVRO-05	205 LF / 205 SLOPE
12851+03 – 12851+76	VA-RO-050	73 LF / 73 SLOPE
12851+76 – 12852+25	VA-RO-050 / VA-RO-052	49 LF / 49 SLOPE
12852+25 – 12860+42	VA-RO-052	817 LF / 817 SLOPE
12860+42 – 12862+72	VA-RO-051 / VA-RO-052	230 LF / 231 SLOPE
12862+72 – 12866+17	VA-RO-051	345 LF / 345 SLOPE
12866+17 – 12866+47	COUNTY ROUTE 607	30 LF - 30 SLOPE
12866+47 – 12872+81	VA-RO-054	634 LF / 638 SLOPE

DESIGN

	12836+27 – 12865+97	12865+97 – 12866+77	12866+77 – 12867+72	12867+72 – 12869+72	12869+72 – 12872+81
PIPE / COATING	2	4	2	4	2
SLOPE DISTANCE	2,975'	80'	95'	200'	314'
CLASS LOCATION / HCA	1				

REV.8

ENVIRONMENTAL

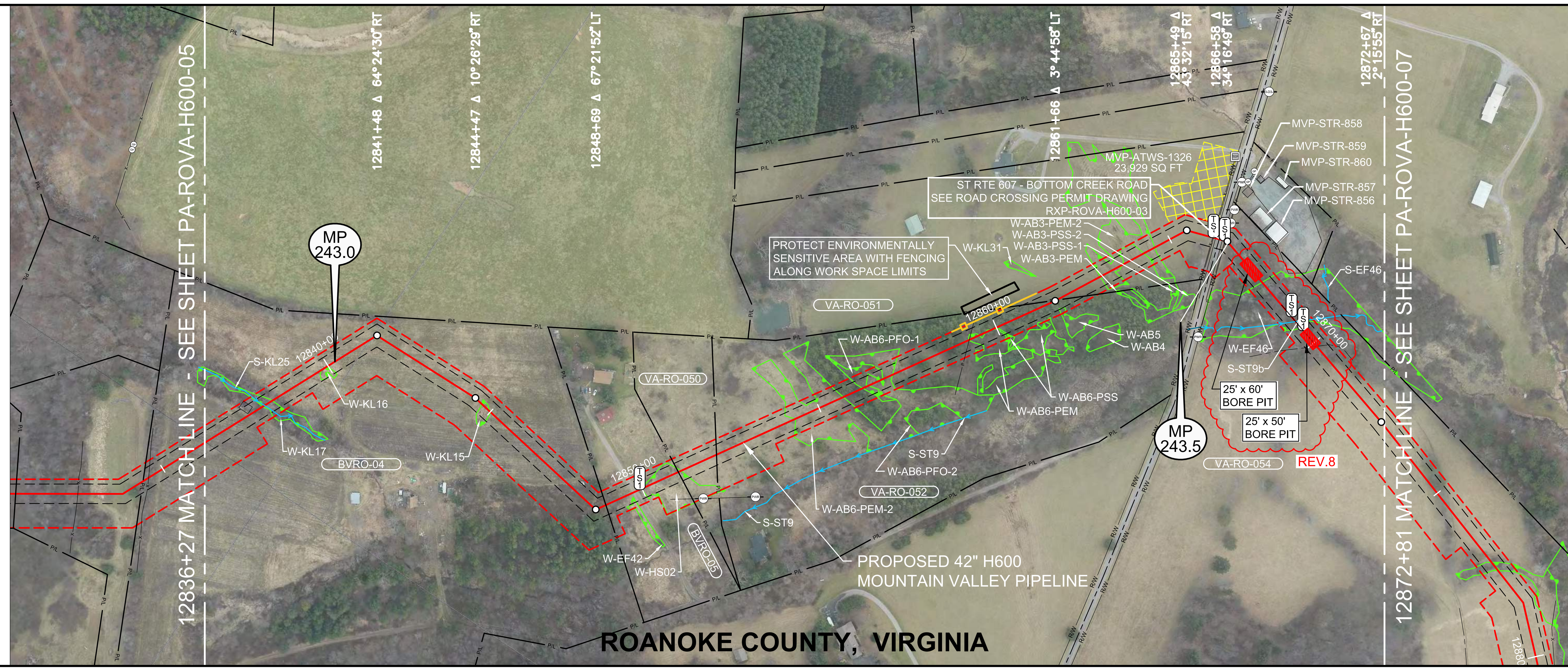
CONSTRUCTION EXCLUSION (12836+27 – 12872+81): TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31
SEE TREE CLEARING PLAN FOR FURTHER DETAILS

WETLAND / STREAM:

W-KL17	S-KL25	W-KL16	W-KL15	W-EF42	W-AB6-PEM-2	W-AB6-PFO-1	W-AB6-PEM-2	W-AB6-PEM	W-AB6-PSS	W-AB6-PSS	W-AB6-PSS	W-AB5	W-AB3-PEM-2	W-EF46	S-ST9b
58 LF	3 LF	42 LF	43 LF	11 LF	174 LF	83 LF	104 LF	91 LF	24 LF	16 LF	16 LF	14 LF	173 LF	79 LF	6.5 LF

PLAN VIEW

0' 100' 200' 400'



LEGEND

STUDY CORRIDOR
PROPOSED 42"PIPELINE
NON-SURVEYED C/L
500' TICK MARK
EXISTING PIPELINE
PERMANENT EASEMENT
WORK SPACE LIMITS
PERMANENT ACCESS RD
TEMPORARY ACCESS RD
ANCILLARY SITE
COUNTY LINE
PROPERTY LINE
ROAD RIGHT-OF-WAY
FENCE LINE
OVERHEAD POWER
OVERHEAD TELEPHONE
C/L ROAD
C/L RAILROAD
DELINEATED STREAM
DELINEATED WETLAND
BARRICADE FENCE
PI SYMBOL — PROPOSED TEST STATION
MAILBOX — LINE MARKER - VENT PIPE
POWER/TELE POLE
SIGN — TOWER LEG
TREE — GUY ANCHOR
TANK — GAS VALVE
WELL - GAS/OIL/WATER/ MONITORING
POST - GATE/FENCE
ELEC/GAS/WTR METER
PEDESTAL - UTILITY
MH - SANITARY/WATER
CATCH BASIN - CULVERT
ADDITIONAL TEMPORARY WORK SPACE(ATWS)
ABOVE GROUND FACILITY
LIMITS OF DISTURBANCE

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-14	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
RXP-ROVA-H600-03	STATE ROUTE 607 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

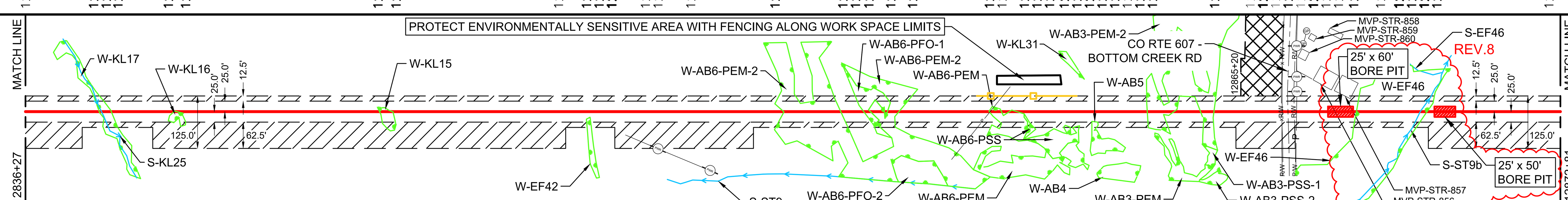
HORIZONTAL STATIONING

12836+27 MATCH LINE
12837+88 BEGIN WETLAND(W-KL17) 38'LT
12838+07 ℄ STREAM(S-KL25)
12838+46 END WETLAND(W-KL17) 37'RT
12839+66 BEGIN WETLAND(W-KL16) 22'RT
12840+08 END WETLAND(W-KL16) 24'RT
12844+66 BEGIN WETLAND(W-KL15) 8'LT
12845+08 END WETLAND(W-KL15) 31'RT
12848+98 PROPERTY LINE
12849+62 BEGIN WETLAND(W-EF42) 25'RT
12849+73 END WETLAND(W-EF42) 37'RT
12849+93 PROPOSED TYPE 1 TEST STATION
12851+02 PROPERTY LINE
12851+32 POWER POLE 89'RT
12852+10 PROPERTY LINE
12854+11 BEGIN WETLAND(W-AB6-PEM-2) 19'LT
12855+85 END WETLAND(W-AB6-PEM-2) 37'RT
12856+03 BEGIN WETLAND(W-AB6-PFO-1) 37'LT
12856+34 BEGIN WETLAND(W-AB6-PEM-2) 4'LT
12856+86 END WETLAND(W-AB6-PFO-1) 21'LT
12857+38 END WETLAND(W-AB6-PEM-2) 37'LT
12859+21 BEGIN WETLAND(AB6-PEM) 1'LT
12859+23 OHP LINE
12860+04 BEGIN WETLAND(AB6-PSS) 13'RT
12860+12 END WETLAND(AB6-PEM) 38'RT
12860+28 END WETLAND(AB6-PSS)38'RT
12860+98 BEGIN WETLAND(AB6-PSS) 37'RT
12861+14 END WETLAND(AB6-PSS) 37'RT
12861+20 BEGIN WETLAND(AB6-PSS) 38'RT
12861+36 END WETLAND(AB6-PSS) 34'RT
12861+65 BEGIN WETLAND(W-AB5) 38'RT
12861+69 PROPERTY LINE
12861+79 END WETLAND(W-AB5) 33'RT
12862+95 BEGIN WETLAND(W-AB3-PEM-2) 38'LT
12864+57 END WETLAND(W-AB3-PEM-2) 38'LT
12866+18 FENCE - BARBED WIRE
12866+21 PROPOSED TYPE 1 TEST STATION,R/W
12866+26 EDGE OF ASPHALT
12866+36 ℄ CO RTE 607 - BOTTOM CREEK RD
12866+44 EDGE OF ASPHALT
12866+51 PROPOSED TYPE 1 TEST STATION,R/W
12866+52 OHP LINE
12866+53 POWER POLE 48'LT
12867+88 BEGIN WETLAND(W-EF46) 38'RT
12868+57 PROPERTY LINE
12869+12 PROPOSED TYPE 1 TEST STATION
12869+47 ℄ STREAM(S-ST9b)
12869+58 PROPOSED TYPE 1 TEST STATION
12869+61 END WETLAND(W-EF46) 38'LT
12872+81 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

PROPOSED PIPELINE
EXISTING PIPELINE
ACCESS ROAD TEMPORARY WORK SPACE
PERMANENT EASEMENT
TEMPORARY WORK SPACE(TWS)
ADD. TEMPORARY WORK SPACE(ATWS)



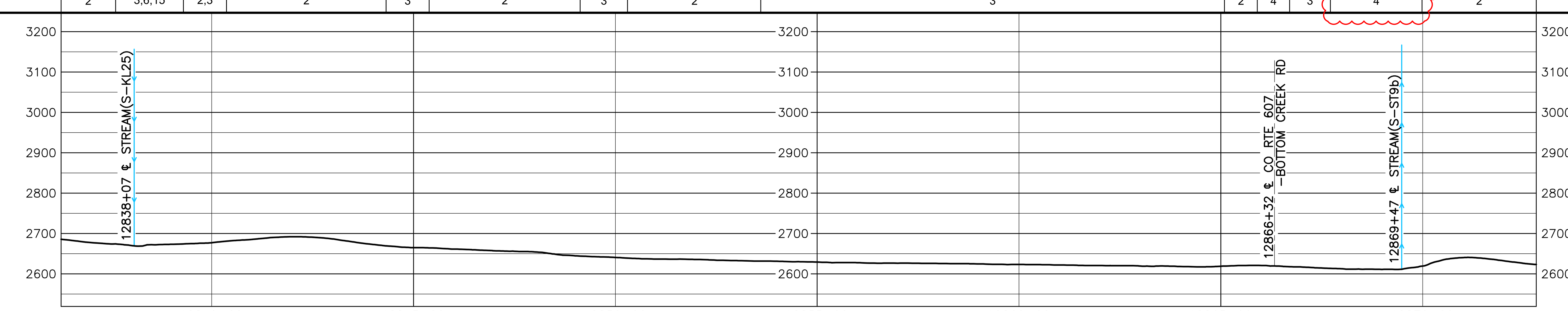
CONSTRUCTION METHOD

2	3,6,15	2,3	2	3	2	3	2	3	2	4	3	4	2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
2	3384	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	280	42"O.D. X 0.740"W.T., X-70, FBE & ARO
	5	TYPE 1 TEST STATION - PIPELINE

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-12-21	ISSUED FOR VARIANCE - CHANGED CONST. METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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www.hollandengineering.com

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE
BENT MOUNTAIN PCT.,ROANOKE CO.,VA.
STA. 12836+27 TO STA. 12872+81

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-ROVA-H600 -06	
SHEET 267 OF 329	REV. 8
DATE OF PLOT: 02/12/21 11:26 AM	

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
BENT MOUNTAIN PCT.,ROANOKE CO.,VA.
STA. 12872+81 TO STA. 12925+41

ISSUED FOR CONSTRUCTION

RIGHT-OF-WAY & OWNERSHIP DATA

Station range	Tract	Length
12872+81 – 12896+61	VA-RO-054	2380 LF / 2389 SLOPE
12896+61 – 12904+75	VA-RO-055	814 LF / 845 SLOPE
12904+75 – 12911+13	VA-RO-056 / VA-RO-055	638 LF / 641 SLOPE
12911+13 – 12920+95	VA-RO-056	982 LF / 996 SLOPE
12920+95 – 12925+41	VA-RO-057	446 LF / 460 SLOPE

DESIGN

	12872+81 – 12886+84	12886+84 – 12888+84	12888+84 – 12895+35	12895+35 – 12896+55	12896+55 – 12923+71	12923+71 – 12924+51	12924+51 – 12925+41
PIPE / COATING	2	4	2	4	2	4	2
SLOPE DISTANCE	1404'	200'	671'	120'	2756'	80'	97'
CLASS LOCATION / HCA	1						

REV.9

ENVIRONMENTAL

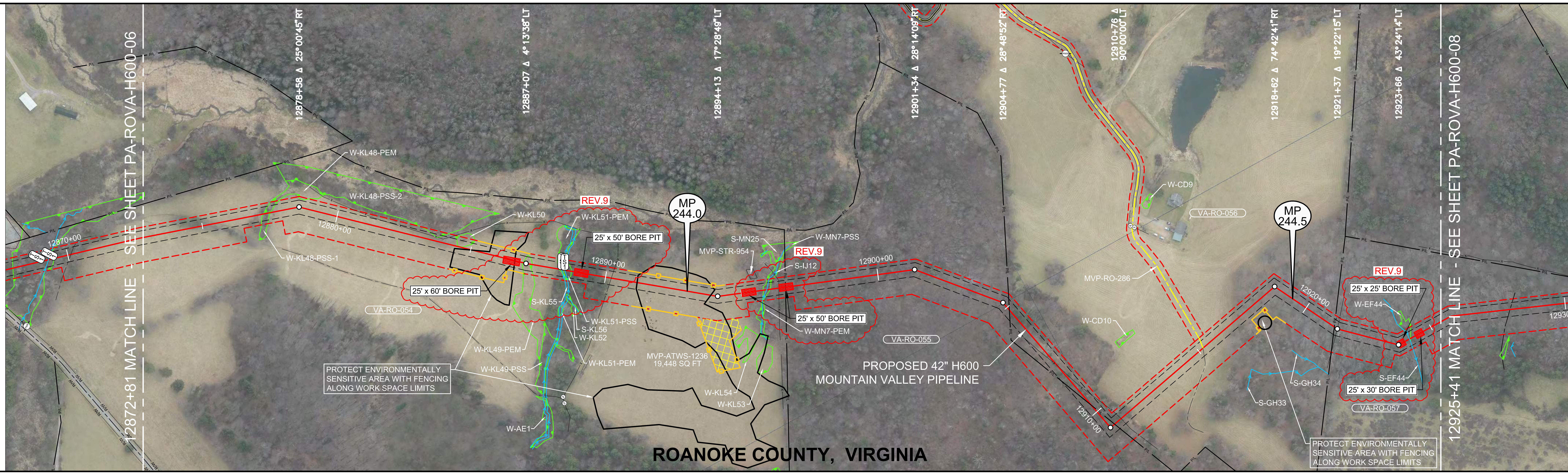
CONSTRUCTION EXCLUSION:
- 12872+81 – : TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31. SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAMS S-KL55 & S-IJ12 CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31. SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-EF44 OCT 1ST TO JUNE 30TH

WETLAND / STREAM:

W-KL48-PSS-1	W-KL48-PEM	W-KL48-PSS-2	W-KL50	W-KL49-PEM	W-KL51-PEM	W-KL51-PSS	S-KL55	W-MN7-PEM	S-IJ12	W-EF44	S-EF44
69 LF	27 LF	103 LF	69 LF	46 LF	43 LF	37 LF	11 LF	51 LF	3.5 LF	28 LF	5 LF

PLAN VIEW

0' 100' 200' 400'



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

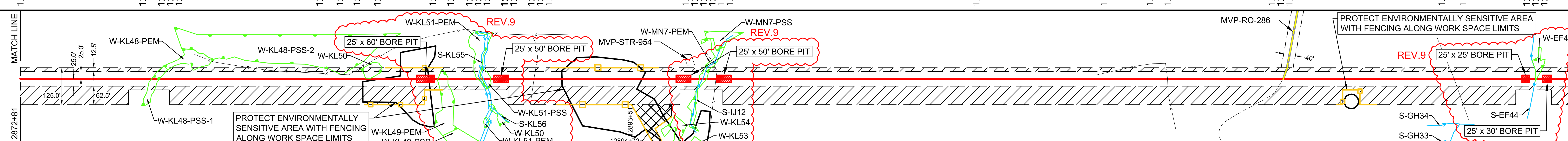
DRAWING NO.	DESCRIPTION
MVP-AR-H600-14	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-97	ACCESS ROAD DETAIL MAP
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

HORIZONTAL STATIONING

- 12872+81 MATCH LINE
- 12877+11 BEGIN WETLAND(W-KL48-PSS-1)37'RT
- 12877+74 BEGIN WETLAND(W-KL48-PEM)37'LT
- 12877+80 END WETLAND(W-KL48-PSS-1)31'LT
- 12877+91 END WETLAND(W-KL48-PEM)37'LT
- 12883+04 BEGIN WETLAND(W-KL48-PSS-2)37'LT
- 12884+07 END WETLAND(W-KL48-PSS-2)37'LT
- 12884+37 BEGIN WETLAND(W-KL50)34'LT
- 12885+06 END WETLAND(W-KL50)30'LT
- 12886+94 BEGIN WETLAND(W-KL49-PEM)5'RT
- 12887+40 END WETLAND(W-KL49-PEM)37'RT
- 12888+17 BEGIN WETLAND(W-KL51-PEM)29'LT
- 12888+38 BEGIN WETLAND(W-KL51-PSS)10'LT
- 12888+38 STREAM BANK(S-KL55), PROPOSED TYPE 1 TEST STATION
- **12888+43 PROPOSED RIVER WEIGHT - STREAM**
- 12888+49 STREAM BANK(S-KL55), PROPOSED TYPE 1 TEST STATION
- 12888+60 END WETLAND(W-KL51-PEM)34'RT
- 12888+75 END WETLAND(W-KL51-PSS)15'RT
- 12890+21 FENCE
- 12895+39 BUILDING - BARN 46'LT
- 12895+71 BEGIN WETLAND(W-MN7-PEM)37'RT
- 12895+92 ℄ STREAM(S-IJ12)
- 12896+22 END WETLAND(W-MN7-PEM)37'RT
- 12896+37 FENCE
- 12896+61 PROPERTY LINE
- 12905+12 PROPERTY LINE
- 12909+67 PROPERTY LINE
- 12910+96 PROPERTY LINE
- 12911+28 FENCE - BARBED WIRE
- 12915+19 ℄ FIELD ROAD(DIRT)
- 12915+20 ACCESS RD - TEMPORARY (MVP-RO-286)
- 12915+25 EDGE OF DIRT
- 12920+95 PROPERTY LINE
- 12921+37 FENCE - BARBED WIRE
- 12924+10 BEGIN WETLAND(W-EF44)38'LT
- 12924+12 ℄ STREAM(S-EF44)
- 12924+38 END WETLAND(W-EF44)38'LT
- 12925+41 MATCH LINE

WORK SPACE

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

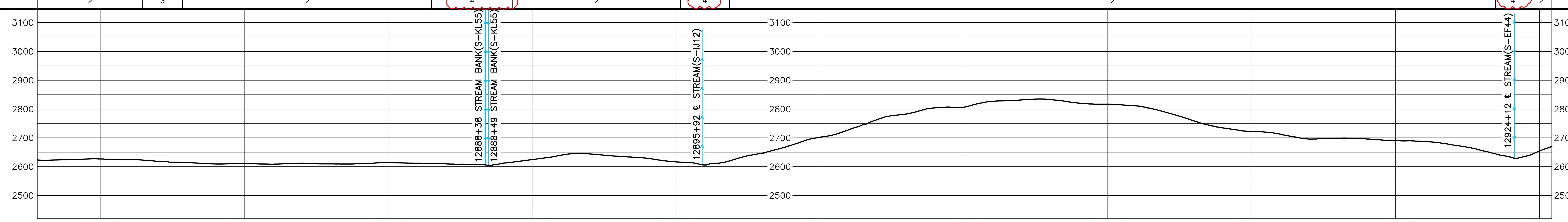


CONSTRUCTION METHOD

2	3	2	4	2	4	2	4	2

CONSTRUCTION METHOD KEY
- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



HOLLAND ENGINEERING

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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	09-11-20	ISSUED FOR CONSTRUCTION 2020
9	HEI	02-12-21	ISSUED FOR VARIANCE - CHANGED CONST. METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
2	4928	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	400	42"O.D. X 0.740"W.T., X-70, FBE & ARO
	2	TYPE 1 TEST STATION - PIPELINE
	1	RIVER WEIGHTS

REV.9

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-ROVA-H600 -07	
SHEET 268 OF 329	REV. 9
DATE OF PLOT: 02/12/21 11:30 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Tract	LF / Slope
12925+41 – 12930+13	VA-RO-057	472 LF / 481 SLOPE
12930+13 – 12932+88	VA-RO-058 / VA-RO-057	275 LF / 276 SLOPE
12932+88 – 12933+34	VA-RO-059 / VA-RO-058	46 LF / 46 SLOPE
12933+34 – 12941+44	VA-RO-059	810 LF / 826 SLOPE
12941+44 – 12951+67	VA-RO-060 (EQUATION: 12945+03 BACK= 12945+00 AHEAD)	1026 LF / 1056 SLOPE
12951+67 – 12964+92	VA-RO-061 (EQUATION: 12958+90 BACK= 12958+94 AHEAD)	1321 LF / 1351 SLOPE
12964+92 – 12966+93	VA-RO-062 / VA-RO-061	201 LF / 205 SLOPE
12966+93 – 12970+51	VA-RO-062	358 LF / 367 SLOPE
12970+51 – 12972+49	VA-RO-062 / VA-RO-64	198 LF / 204 SLOPE
12972+49 – 12976+34	VA-RO-64	385 LF / 388 SLOPE

DESIGN

	12925+41 – 12938+60	12938+60 – 12941+40	12941+40 – 12957+50	12957+50 – 12959+10	12959+10 – 12976+34
PIPE / COATING	2	4	2	4	2
SLOPE DISTANCE	1345'	280'	1650'	160'	1765'

CLASS LOCATION / HCA: 1 (to 12947+00); 2 (from 12947+00)

REV.9

ENVIRONMENTAL

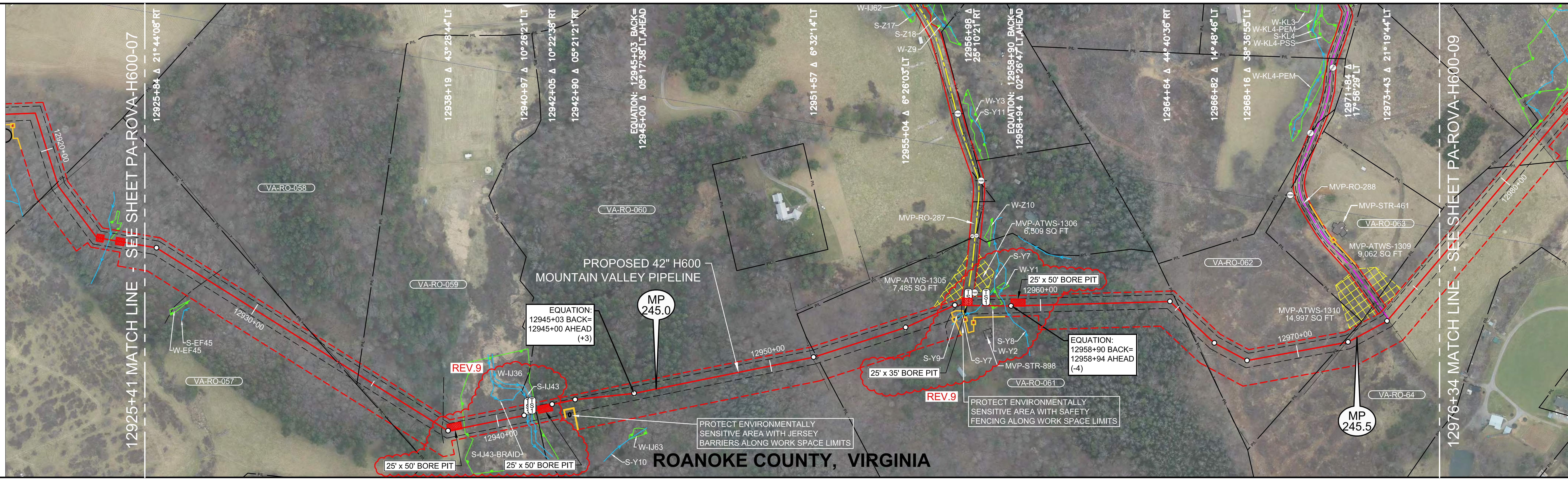
CONSTRUCTION EXCLUSION:
- 12925+41: TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-IJ43 OCT 1ST - JUNE 30 & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-Y8 CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS (to 12976+34)

WETLAND / STREAM:

W-IJ36	S-IJ43	S-Y9	S-Y7	W-Y2	S-Y8
271 LF	16 LF	44 LF	4 LF	53 LF	4 LF

PLAN VIEW

Scale: 0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
RSS-H600-085	RESIDENTIAL SITE SPECIFIC
MVP-AR-H600-14	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-98	ACCESS ROAD DETAIL MAP
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

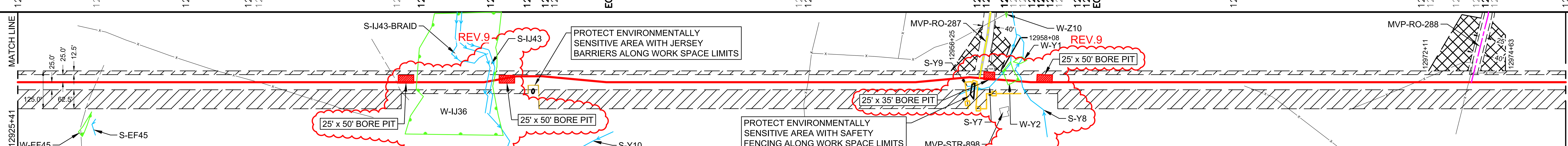
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 12925+41 MATCH LINE
- 12928+00 ℄ ROAD(DIRT)(ABANDONED)
- 12931+07 PROPERTY LINE
- 12933+02 PROPERTY LINE
- 12933+61 FENCE - HOG WIRE
- 12937+97 ℄ ROAD(DIRT)(ABANDONED)
- 12938+77 BEGIN WETLAND(W-IJ36)33'RT
- 12941+12 STREAM BANK(S-IJ43), PROPOSED TYPE 1 TEST STATION, BEGIN PROPOSED 2 RIVER WEIGHTS AT 8' SPACING - STREAM
- 12941+28 STREAM BANK(S-IJ43), PROPOSED TYPE 1 TEST STATION
- 12941+44 END WETLAND(W-IJ36)35'LT
- 12941+44 PROPERTY LINE
- EQUATION: 12945+03 BACK = 12945+00 AHEAD
- 12951+51 FENCE - BARBED WIRE
- 12951+67 PROPERTY LINE
- 12957+23 STREAM(S-Y9)27'RT
- 12957+38 ACCESS RD - TEMPORARY (MVP-RO-287)
- 12957+47 PROPOSED TYPE 1 TEST STATION
- 12957+69 POWER POLE 45'LT
- 12957+70 GUY ANCHOR 33'LT
- 12957+92 ℄ STREAM(S-Y7)
- 12958+09 PROPOSED TYPE 1 TEST STATION
- 12958+16 BEGIN WETLAND(W-Y2)37'LT
- 12959+30 BUILDING - HOUSE - ABANDONED 81'RT
- 12958+69 END WETLAND(W-Y2)9'LT
- 12958+78 ℄ STREAM(S-Y8)
- EQUATION: 12958+90 BACK = 12958+94 AHEAD
- 12965+28 PROPERTY LINE
- 12971+63 PROPERTY LINE
- 12971+78 FENCE - BARBED WIRE
- 12973+48 FENCE - HOG WIRE
- 12974+24 EDGE OF DIRT
- 12974+29 ACCESS RD - PERMANENT (MVP-RO-288)
- 12973+81 EDGE OF DIRT
- 12976+34 MATCH LINE

WORK SPACE

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



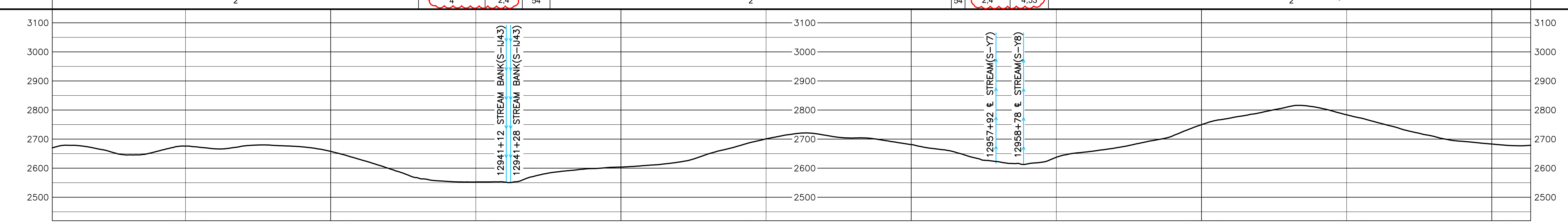
CONSTRUCTION METHOD

2 | 4 | 2,4 | 54 | 2 | 54 | 2,4 | 4,53 | 2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
2	4760	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	440	42"O.D. X 0.740"W.T., X-70, FBE & ARO
	4	TYPE 1 TEST STATION - PIPELINE
	2	RIVER WEIGHTS

REV.9

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	05-24-18	CENTERLINE & TWS ADJUSTMENTS FOR ENV. SENSITIVE AREAS
9	HEI	02-12-21	ISSUED FOR VARIANCE - CHANGED CONST. METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE BENT MOUNTAIN PCT.,ROANOKE CO.,VA. STA. 12920+79 TO STA. 12971+72

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-ROVA-H600 -08	
SHEET 269 OF 329	REV. 9
DATE OF PLOT: 02/12/21 2:40 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Parcel	Length
12976+34 – 12980+36	VA-RO-064	402 LF, 403 SLOPE
12980+36 – 12981+65	VA-RO-067 / VA-RO-064	129 LF, 130 SLOPE
12981+65 – 12990+48	VA-RO-067	883 LF, 883 SLOPE
12990+48 – 12991+87	VA-RO-067 / VA-RO-064	139 LF, 140 SLOPE
12991+87 – 12993+76	VA-RO-067	189 LF, 189 SLOPE
12993+76 – 12994+26	US HIGHWAY 221	50 LF - 52 SLOPE
12994+26 – 12998+86	VA-RO-070	460 LF, 462 SLOPE
12998+86 – 12999+49	VA-RO-068 / VA-RO-070	63 LF, 64 SLOPE
12999+49 – 13010+97	VA-RO-070	1148 LF, 1150 SLOPE
13010+97 – 13015+37	VA-RO-069	440 LF, 442 SLOPE
13015+37 – 13016+28	VA-RO-5637	91 LF, 92 SLOPE

DESIGN

	12976+34 – 12983+76	12983+76 – 12984+56	12984+56 – 12987+33	12987+33 – 12990+13	12990+13 – 12993+62	12993+62 – 12994+42	12994+42 – 13012+24	13012+24 – 13013+04	13013+04 – 13016+28
PIPE / COATING	2	4	2	4	2	5	2	5	2
SLOPE DISTANCE	745'	80'	277'	280'	349'	80'	1791'	80'	327'
CLASS LOCATION / HCA	2								

REV.8

ENVIRONMENTAL

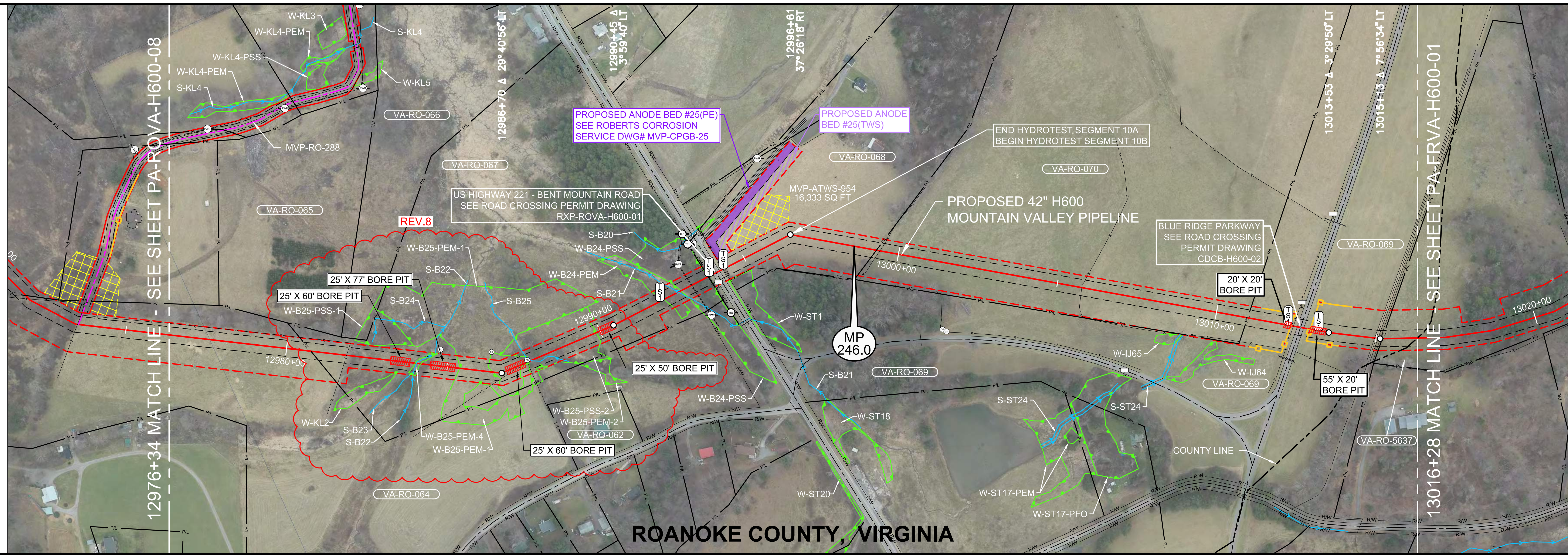
CONSTRUCTION EXCLUSION (12976+34 – 13016+28):
- TIME OF YEAR RESTRICTION: SEE TREE CLEARING PLAN
- FISH RELOCATION REQUIRED WITHIN STREAM S-B22 CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: SEE TREE CLEARING PLAN
- FISH RELOCATION REQUIRED WITHIN STREAM S-B21 CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS

WETLAND / STREAM

W-KL2	S-B23	S-B22	W-B25-PEM-4	W-B25-PEM-1	S-B25	W-B25-PSS-2	W-B24-PEM	S-B21	W-B24-PSS
14 LF	2 LF	4 LF	82 LF	143 LF	5 LF	276 LF	95 LF	4 LF	114 LF

PLAN VIEW

0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-14	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-98	ACCESS ROAD DETAIL MAP
RXP-ROVA-H600-01	US HIGHWAY 221 PERMIT DWG
SSRA-H600-09	RECREATIONAL SITE SPECIFIC
CDCB-H600-02	CONSTRUCTION DETAIL BLUE RIDGE PARKWAY CONVENTIONAL BORE
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
MVP-CPGB-25	ROBERTS CORROSION SERVICE DRAWING

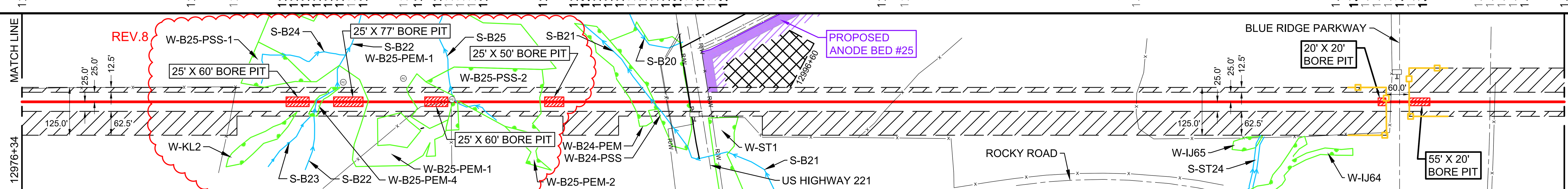
HORIZONTAL STATIONING

12976+34 MATCH LINE
12980+75 PROPERTY LINE
12981+86 FENCE - HOG WIRE
12983+38 BEGIN WETLAND(W-KL2) 38'RT
12983+52 END WETLAND(W-KL2) 27'RT
12983+63 BEGIN WETLAND(W-B25-PEM-4) 32'RT
12983+98 ℄ STREAM(S-B23) 27'RT
12984+03 ℄ STREAM(S-B22)
12984+45 END WETLAND(W-B25-PEM-4) 37'LT
12984+73 FENCE POST 51'LT
12985+24 BEGIN WETLAND(W-B25-PEM-1) 37'LT
12986+30 FENCE POST 61'LT
12986+67 END WETLAND(W-B25-PEM-1) 17'RT
12987+18 BEGIN WETLAND(W-B25-PSS-2) 38'LT
12987+48 FENCE - BARBED WIRE
12987+55 FENCE - BARBED WIRE
12987+57 FENCE POST 6'LT
12987+69 ℄ STREAM(S-B25)
12989+94 END WETLAND(W-B25-PSS-2) 37'LT
12991+98 BEGIN WETLAND(W-B24-PEM) 37'LT
12992+07 PROPOSED TYPE 1 TEST STATION
12992+62 BEGIN WETLAND(W-B24-PSS) 37'LT
12992+70 ℄ STREAM(S-B21)
12992+93 END WETLAND(W-B24-PEM) 37'RT
12993+15 FENCE - BARBED WIRE
12993+17 OHP LINE
12993+74 OHT LINE
12993+76 END WETLAND(W-B24-PSS) 21'RT
12993+76 PROPOSED TYPE 1 TEST STATION,R/W
12993+90 EDGE OF ASPHALT
12994+02 ℄ US HIGHWAY 221
12994+13 EDGE OF ASPHALT
12994+26 PROPOSED TYPE 1 TEST STATION,R/W,
FENCE - WOOD
12999+30 PROPERTY LINE
12999+41 FENCE - BARBED WIRE
13005+76 FENCE - BARBED WIRE
13010+97 PROPERTY LINE
13012+25 PROPOSED TYPE 1 TEST STATION
13012+41 FENCE - BARBED WIRE
13012+53 EDGE OF ASPHALT
13012+57 SIGN 60'LT
13012+63 ℄ BLUE RIDGE PARKWAY(ASPHALT)
13012+74 EDGE OF ASPHALT
13013+20 PROPOSED TYPE 1 TEST STATION
13014+95 EDGE OF GRAVEL
13015+00 ℄ FIELD ROAD(GRAVEL)
13015+05 EDGE OF GRAVEL
13015+13 FENCE - BARBED WIRE
13015+37 PROPERTY LINE
13016+28 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

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



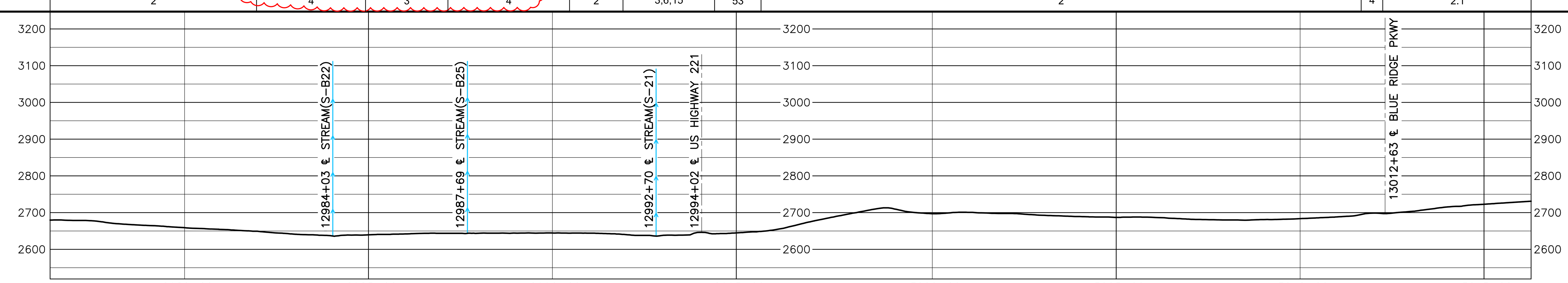
CONSTRUCTION METHOD

12976+34 – 12983+76	– 12984+56	– 12987+33	– 12990+13	– 12993+62			– 13012+24	– 13013+04	– 13016+28
2	4	3	4	2	3,6,15	53	2	4	2.1

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
2	3489	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	360	42"O.D. X 0.740"W.T., X-70, FBE & ARO
5	160	42"O.D. X 0.888"W.T., X-70, FBE & ARO
	5	TYPE 1 TEST STATION - PIPELINE

REV.8

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-17-21	ISSUED FOR VARIANCE - CHANGED CONST. METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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www.hollandengineering.com

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE BENT MOUNTAIN PCT.,ROANOKE CO.,VA. STA. 12976+34 TO STA. 13016+28

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-ROVA-H600 -09	
SHEET 270 OF 329	REV. 8
DATE OF PLOT: 02/17/21 4:52 PM	

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
BOWMANS PCT.,FRANKLIN CO.,VA.
STA. 13110+86 TO STA. 13159+81

ISSUED FOR CONSTRUCTION

RIGHT-OF-WAY & OWNERSHIP DATA

Tract	Stations	Length
VA-FR-009	13110+86 – 13123+00	1214 LF / 1332 SLOPE
VA-FR-010	13123+00 – 13147+61	2461 LF / 2589 SLOPE
VA-FR-011 / VA-FR-010	13147+61 – 13148+17	56 LF / 56 SLOPE
VA-FR-011	13148+17 – 13157+80	963 LF / 970 SLOPE
VA-FR-012	13157+80 – 13159+81	201 LF / 204 SLOPE

DESIGN

Stations	Pipe / Coating	Slope Distance
13110+86 – 13118+42	1	889'
13118+42 – 13137+58	2	2016'
13137+58 – 13137+98	4	40'
13137+98 – 13145+51	2	766'
13145+51 – 13146+36	3	85'
13146+36 – 13146+76	5	40'
13146+76 – 13149+02	3	226'
13149+02 – 13156+80	2	788'
13156+80 – 13157+60	4	80'
13157+60 – 13159+81	2	221'

CLASS LOCATION / HCA: 1

REV.8

ENVIRONMENTAL

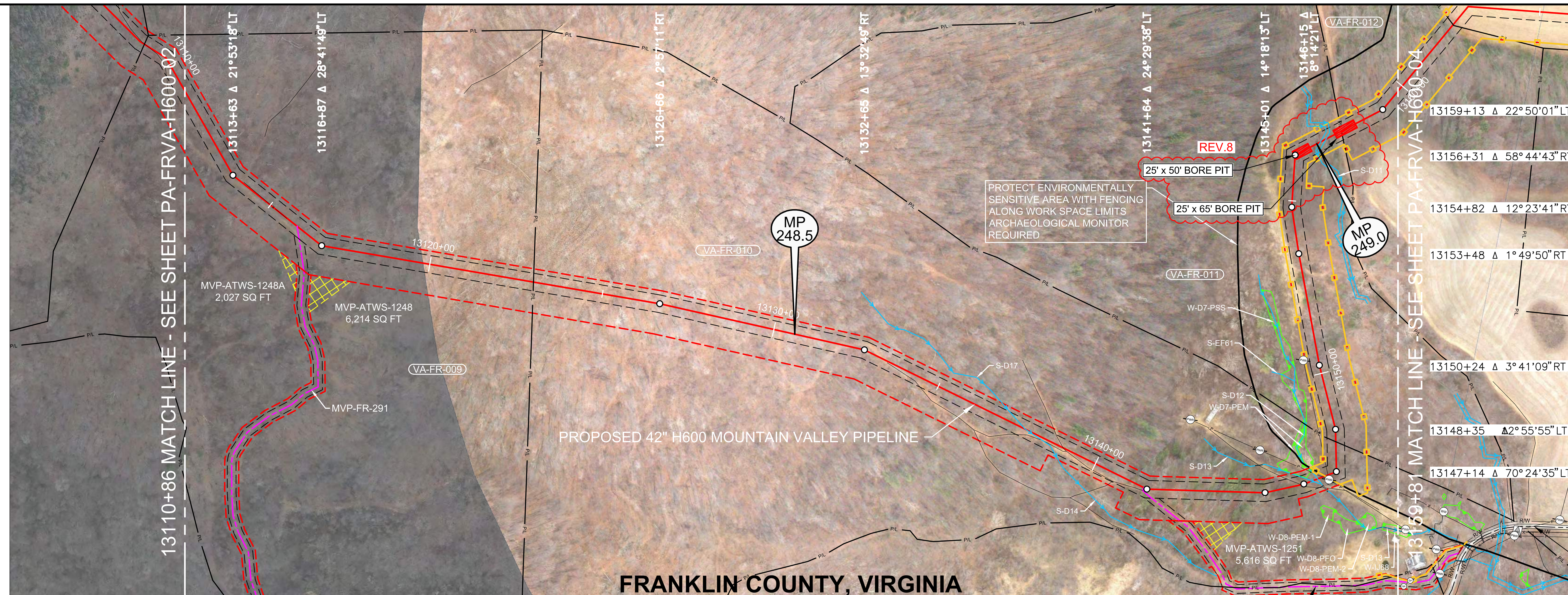
CONSTRUCTION EXCLUSION (13110+86 – 13159+81): TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31. SEE TREE CLEARING PLAN FOR FURTHER DETAILS

WETLAND / STREAM:

S-D17	S-D13	W-D7-PEM	S-D12	S-D11
7 LF	4 LF	66 LF	6 LF	18 LF

PLAN VIEW

Scale: 0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

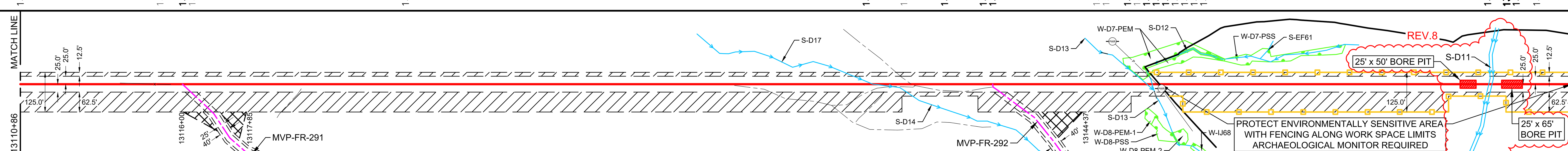
DRAWING NO.	DESCRIPTION
MVP-AR-H600-14	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-100	ACCESS ROAD DETAIL MAP
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

HORIZONTAL STATIONING

- 13110+86 MATCH LINE
- 13115+27 FENCE - HOG WIRE
- 13115+97 ACCESS RD-PERMANENT(MVP-FR-291)
- 13116+05 EDGE OF DIRT
- 13123+00 PROPERTY LINE
- 13137+78 ℄ STREAM(S-D17)
- 13138+96 ℄ TRAIL(DIRT)
- 13140+25 ℄ STREAM(S-D17)
- 13141+47 ℄ STREAM(S-D17)
- 13141+53 ACCESS RD-PERMANENT(MVP-FR-292)
- 13144+70 CULVERT OPEN END 76'LT
- 13144+90 CULVERT OPEN END 79'LT
- 13145+89 BEGIN WETLAND(W-D7-PEM) 38'LT
- 13146+06 ℄ TRAIL(DIRT)
- 13146+39 ℄ STREAM(S-D13)
- 13146+55 END WETLAND(W-D7-PEM) 37'LT
- 13146+56 ℄ STREAM(S-D12)
- 13146+71 OHP LINE
- 13146+85 POWER POLE 14'RT
- 13146+87 OHP LINE
- 13148+00 PROPERTY LINE
- 13157+13 ℄ STREAM BANK(S-D11), PROPOSED TYPE 1 TEST STATION
- 13157+22 PROPOSED RIVER WEIGHT-STREAM
- 13157+31 ℄ STREAM BANK(S-D11), PROPOSED TYPE 1 TEST STATION
- 13157+80 PROPERTY LINE
- 13159+81 MATCH LINE

WORK SPACE

Legend: PROPOSED PIPELINE; EXISTING PIPELINE; ACCESS ROAD TEMPORARY WORK SPACE; PERMANENT EASEMENT; TEMPORARY WORK SPACE(TWS); ADD. TEMPORARY WORK SPACE(ATWS)



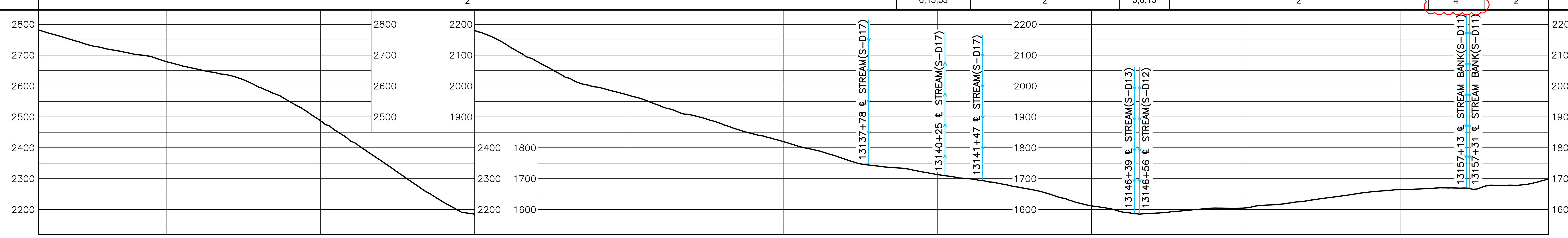
CONSTRUCTION METHOD

2	6,15,53	2	3,6,15	2	4	2

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	889	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	3791	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
3	311	42"O.D. X 0.888"W.T., X-70, FUSION BONDED EPOXY
4	120	42"O.D. X 0.740"W.T., X-70, FBE & ARO
5	40	42"O.D. X 0.888"W.T., X-70, FBE & ARO
	2	TYPE 1 TEST STATION - PIPELINE
	1	RIVER WEIGHTS

REV.8

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-18-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -03	
SHEET 273 OF 329	REV. 8
DATE OF PLOT: 02/18/21 10:44 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Tract	Length
13315+70 – 13315+93	VA-FR-017.02	23 LF, 24 SLOPE
13315+93 – 13316+34	STATE ROUTE 726	41 LF - 41 SLOPE
13316+34 – 13330+76	VA-FR-017.06	1442 LF, 1511 SLOPE
13330+76 – 13335+75	VA-FR-017.04	499 LF, 528 SLOPE
13335+75 – 13342+40	VA-FR-017.07	665 LF, 682 SLOPE
13342+40 – 13342+94	STATE ROUTE 744	54 LF - 56 SLOPE
13342+94 – 13364+50	VA-FR-017.08	2156 LF, 2213 SLOPE
13364+50 – 13365+75	VA-FR-017.08 / VA-FR-017.10	125 LF, 127 SLOPE
13365+75 – 13366+00	VA-FR-017.09 / VA-FR-017.08 / VA-FR-017.10	25 LF, 27 SLOPE
13366+00 – 13371+91	VA-FR-017.09 / VA-FR-017.10	591 LF, 601 SLOPE
13371+91 – 13372+86	VA-FR-017.11 / VA-FR-017.10	95 LF, 95 SLOPE

DESIGN

Station	PIPE / COATING	SLOPE DISTANCE
13315+70 – 13315+74	1	5'
13315+74 – 13316+54	4	80'
13316+54 – 13342+27	1	2690'
13342+27 – 13343+07	4	80'
13343+07 – 13343+87	3	80'
13343+87 – 13344+27	2	40'
13344+27 – 13348+06	1	384'
13348+06 – 13348+86	4	80'
13348+86 – 13352+03	1	322'
13352+03 – 13352+43	6	40'
13352+43 – 13358+45	1	626'
13358+45 – 13358+85	6	40'
13358+85 – 13372+86	1	1439'

CLASS LOCATION / HCA: 1

REV.9

ENVIRONMENTAL

CONSTRUCTION EXCLUSION:
- 13315+70: TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-G14 CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-GH9 CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS (to 13372+86)

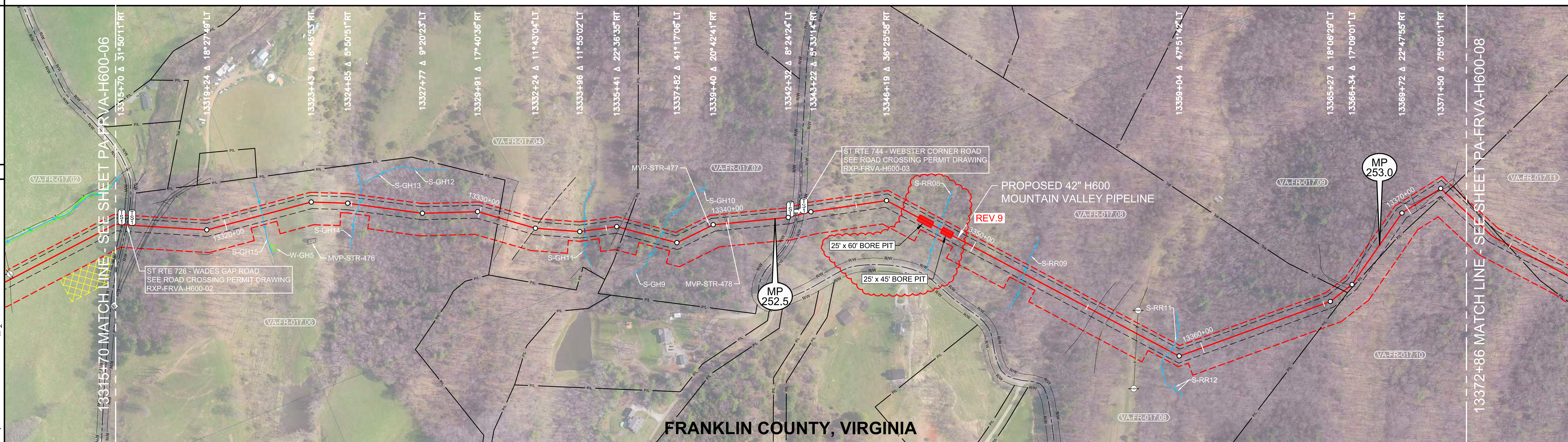
WETLAND / STREAM	S-GH15	S-GH14	S-GH11	S-GH9	S-RR8	S-RR9	S-RR11
	4 LF	4 LF	3 LF	4 LF	7 LF	9 LF	7 LF

PLAN VIEW

0' 100' 200' 400'

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE



ISSUED FOR CONSTRUCTION

REFERENCE DRAWINGS

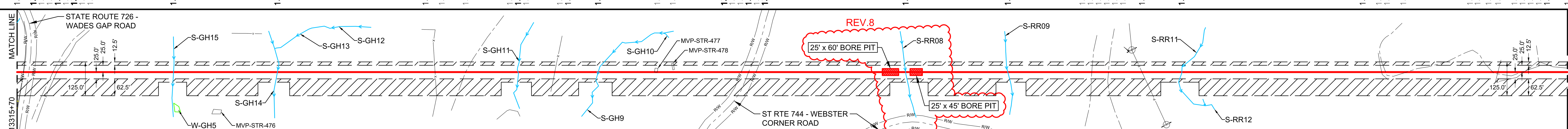
DRAWING NO.	DESCRIPTION
MVP-AR-H600-14	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
RXP-FRVA-H600-02	STATE ROUTE 726 PERMIT DWG
RXP-FRVA-H600-03	STATE ROUTE 744 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-W-H600-1100-31	MAIN LINE VALVE #29 PLOT PLAN

HORIZONTAL STATIONING

- 13315+70 MATCH LINE
- **13315+93 PROPOSED TYPE 1 TEST STATION,R/W**
- 13315+94 FENCE – ELECTRIC
- 13316+06 EDGE OF ASPHALT
- **13316+13 ℄ ST RTE 726 – WADES GAP ROAD**
- 13316+21 EDGE OF ASPHALT
- **13316+34 PROPOSED TYPE 1 TEST STATION,R/W**
- 13317+02 ℄ DRIVEWAY(GRAVEL)
- 13317+16 FENCE – ELECTRIC
- **13321+47 ℄ STREAM(S–GH15)**
- **13325+30 ℄ STREAM(S–GH14)**
- 13330+76 PROPERTY LINE
- 13331+11 FENCE – HOG WIRE
- 13332+24 ℄ ROAD(DIRT)(ABANDONED)
- 13334+15 CULVERT OPEN END 7'RT
- **13334+17 ℄ STREAM(S–GH11)**
- 13334+18 CULVERT OPEN END 8'LT
- 13335+53 FENCE – HOG WIRE
- 13335+75 PROPERTY LINE
- **13337+13 ℄ STREAM(S–GH9)**
- 13339+30 BUILDING – CONCRETE PAD 1'RT
- 13339+88 BUILDING – CONCRETE PAD 8'LT
- **13342+40 PROPOSED TYPE 1 TEST STATION,R/W**
- 13342+61 EDGE OF GRAVEL
- 13342+61 SIGN 1'RT
- **13342+67 ℄ ST RTE 744–WEBSTER CORNER RD**
- 13342+73 EDGE OF GRAVEL
- **13342+94 PROPOSED TYPE 1 TEST STATION,R/W**
- **13348+46 ℄ STREAM(S–RR08)**
- **13352+23 ℄ STREAM(S–RR09)**
- 13355+28 EDGE OF DIRT
- 13355+33 ℄ TRAIL(DIRT)
- 13355+38 EDGE OF DIRT
- 13355+89 EDGE OF DIRT
- 13355+94 ℄ TRAIL(DIRT)
- 13355+99 EDGE OF DIRT
- 13357+18 OHP LINE
- **13358+64 ℄ STREAM(S–RR11)**
- 13365+93 PROPERTY LINE
- 13366+13 FENCE – HOG WIRE
- 13366+25 EDGE OF DIRT
- 13366+65 EDGE OF DIRT
- 13370+31 FENCE – HOG WIRE
- 13370+59 EDGE OF DIRT
- 13371+00 ℄ TRAIL
- 13371+35 EDGE OF DIRT
- 13371+51 FENCE – HOG WIRE
- 13371+51 EDGE OF DIRT
- 13371+56 ℄ TRAIL
- 13371+60 EDGE OF DIRT
- 13371+76 PROPERTY LINE
- 13372+86 MATCH LINE

WORK SPACE

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



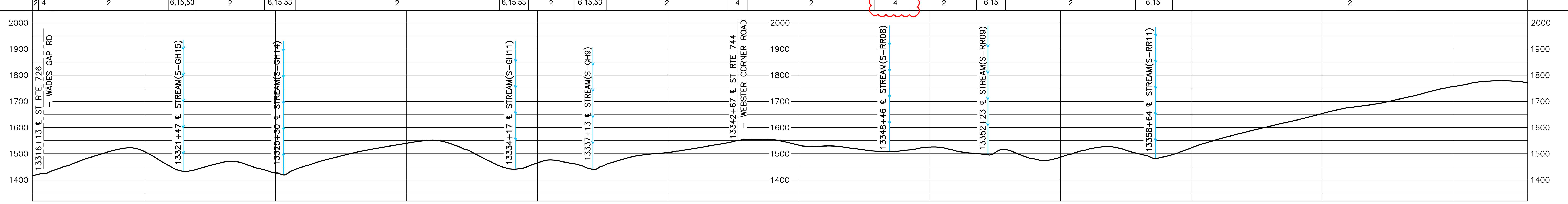
CONSTRUCTION METHOD

2	4	2	6,15,53	2	6,15,53	2	6,15,53	2	6,15,53	2	4	2	4	2	6,15	2	6,15	2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5466	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	40	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
3	80	42"O.D. X 0.888"W.T., X-70, FUSION BONDED EPOXY
4	240	42"O.D. X 0.740"W.T., X-70, FBE & ARO
6	80	42"O.D. X 0.617"W.T., X-70, FBE & ARO
	4	TYPE 1 TEST STATION - PIPELINE

REV.8

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-18-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE
BOWMANS & BOONES MILL PCT.,FRANKLIN CO.,VA.
STA. 13315+70 TO STA. 13372+86

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -07	
SHEET 277 OF 329	REV. 8
DATE OF PLOT: 02/18/21 11:01 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station range	Tract	Length
13624+71 – 13625+76	VA-FR-017.47	105 LF, 106 SLOPE
13625+76 – 13627+92	VA-FR-017.46 / VA-FR-017.47	216 LF, 217 SLOPE
13627+92 – 13631+17	VA-FR-017.46	325 LF, 344 SLOPE
13631+17 – 13631+57	VA-FR-017.46 / VA-FR-017.48	40 LF, 41 SLOPE
13631+57 – 13632+41	VA-FR-017.48	84 LF, 87 SLOPE
13632+41 – 13640+05	VA-FR-017.46 / VA-FR-017.48	764 LF, 764 SLOPE
13640+05 – 13644+67	VA-FR-017.46	489 LF, 491 SLOPE
EQUATION: 13644+68 BACK= 13644+41 AHEAD; 13644+67 – 13644+97	STATE ROUTE 728	30 LF - 30 SLOPE
13644+97 – 13655+00	VA-FR-017.46	1003 LF, 1005 SLOPE
13655+00 – 13655+63	VA-FR-045 / VA-FR-017.46	63 LF, 63 SLOPE
13655+63 – 13671+52	VA-FR-045	1589 LF, 1599 SLOPE

DESIGN

Station range	PIPE / COATING	SLOPE DISTANCE
13624+71 – 13632+20	1	770'
13632+20 – 13643+40	2	1134'
13643+40 – 13643+80	4	40'
13643+80 – 13644+42	3	80'
13644+42 – 13645+22	5	80'
13645+22 – 13653+60	2	839'
13653+60 – 13658+85	1	528'
13658+85 – 13659+25	6	40'
13659+25 – 13669+00	1	982'
13669+00 – 13671+52	2	253'

CLASS LOCATION / HCA: 1 (to 13633+00); 2 (13633+00 – 13652+80); 1 (13652+80 – 13669+80); 2 (13669+80 – 13671+52)

ENVIRONMENTAL

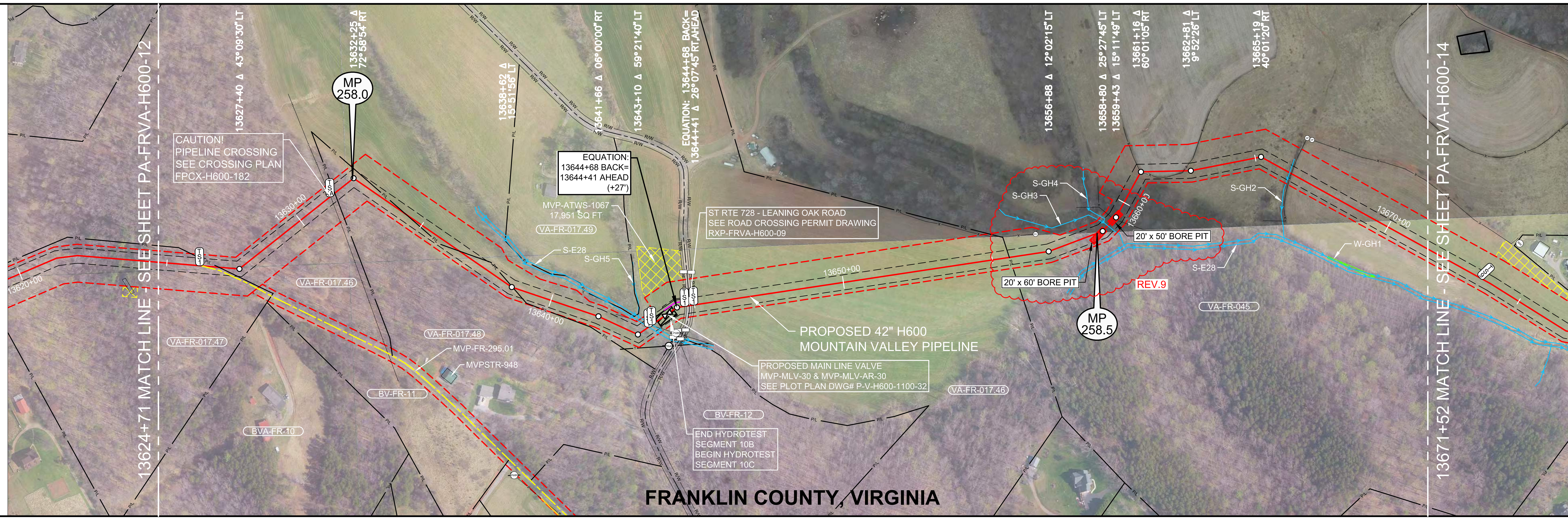
CONSTRUCTION EXCLUSION:
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-E28 MAR 15TH - JUNE 30TH & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAMS S-GH3 & S-GH2 MAR 15TH - JUNE 30TH & FISH RELOCATION REQUIRED WITHIN STREAM S-GH3 CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: SEE TREE CLEARING PLAN

WETLAND / STREAM:

S-E28	S-GH4	S-GH3	S-GH2
13 LF	5 LF	6 LF	2 LF

PLAN VIEW

0' 100' 200' 400'



LEGEND
- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-15	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-101	ACCESS ROAD DETAIL MAP
FPCX-H600-182	FOREIGN PIPELINE X-ING PLAN
RXP-FRVA-H600-09	STATE ROUTE 728 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-V-H600-1100-32	MAIN LINE VALVE #30 PLOT PLAN

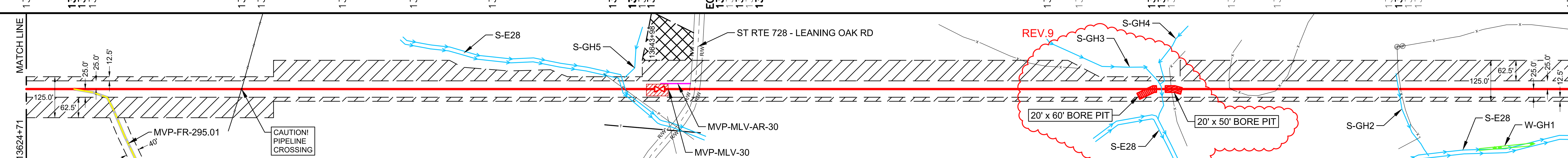
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 13624+71 MATCH LINE
- **13626+10 PROPOSED TYPE 1 TEST STATION**
- 13626+17 ACCESS ROAD – PERMANENT (MVP–FR–295.01)
- 13626+73 PROPERTY LINE
- 13631+27 PIPELINE – FOREIGN – PLANTATION,
- **13631+45 PROPOSED TYPE 4A TEST STATION**
- 13631+45 PROPERTY LINE
- 13634+35 PROPERTY LINE
- 13636+52 PROPERTY LINE
- 13638+66 PROPERTY LINE
- 13643+54 STREAM BANK(S–E28)
- **13643+61 PROPOSED TYPE 1 TEST STATION, PROPOSED RIVER WEIGHT – STREAM**
- 13643+64 OHP LINE
- 13643+67 STREAM BANK(S–E28), PROPOSED TYPE 1 TEST STATION
- **EQUATION: 13644+68 BACK = 13644+41**
- **13644+67 PROPOSED TYPE 1 TEST STATION,R/W**
- 13644+73 EDGE OF ASPHALT
- **13644+82 ℄ ST RTE 728 – LEANING OAK ROAD**
- 13644+90 EDGE OF ASPHALT
- **13644+97 PROPOSED TYPE 1 TEST STATION,R/W**
- 13655+56 PROPERTY LINE
- 13656+53 FENCE POST 63'LT
- **13659+03 ℄ STREAM(S–GH4) 17'LT**
- **13659+04 ℄ STREAM(S–GH3)**
- 13659+34 FENCE – ELECTRIC
- 13661+18 FENCE – ELECTRIC
- 13662+57 FENCE – ELECTRIC
- 13666+23 GATE POST 129'LT
- **13666+27 ℄ STREAM(S–GH2)**
- 13666+34 FENCE – ELECTRIC
- 13666+39 GATE POST 131'LT
- 13671+52 MATCH LINE

WORK SPACE

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

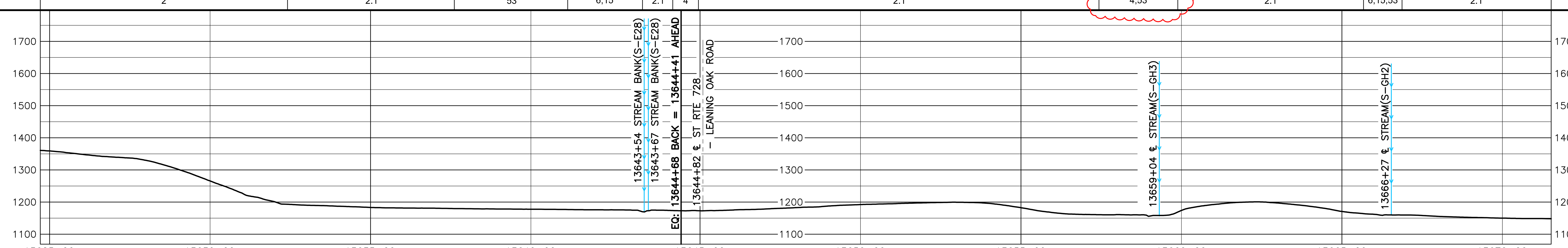


CONSTRUCTION METHOD

2	2.1	53	6,15	2.1	4	2.1	4,53	2.1	6,15,53	2.1

CONSTRUCTION METHOD KEY
1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	2280	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	2226	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
3	80	42"O.D. X 0.888"W.T., X-70, FUSION BONDED EPOXY
4	40	42"O.D. X 0.740"W.T., X-70, FBE & ARO
5	80	42"O.D. X 0.888"W.T., X-70, FBE & ARO
6	40	42"O.D. X 0.617"W.T., X-70, FBE & ARO
	5	TYPE 1 TEST STATION - PIPELINE
	1	TYPE 4A TEST STATION - SINGLE LINE FOREIGN XING
	1	RIVER WEIGHTS

REVISIONS

REV.	BY	DATE	DESCRIPTION
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	05-09-18	ISSUED FOR VARIANCE - NEW ACCESS ROAD MVP-FR-295.01, ROUTE ADJUSTMENT FOR ANGLE OF STREAM CROSSING
			REV.MVP-ATWS-1067 & ADDED MVP-MLV-30 AND MVP-MLV-AR-30
9	HEI	02-01-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE BOONES MILL PCT.,FRANKLIN CO.,VA. STA. 13624+71 TO STA. 13671+52

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -13	
SHEET 283 OF 329	REV. 9
DATE OF PLOT: 02/1/21 10:19 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Parcel	Length
13777+57 – 13791+06	VA-FR-062	1348 LF / 1372 SLOPE
13791+06 – 13792+18	VA-FR-063 / VA-FR-062	112 LF / 115 SLOPE
13792+18 – 13792+28	VA-FR-063 / VA-FR-062 / BV-FR-0083	10 LF / 10 SLOPE
13792+28 – 13792+96	VA-FR-063 / BV-FR-0083	68 LF / 69 SLOPE
13792+96 – 13794+37	VA-FR-063	141 LF / 144 SLOPE
13794+37 – 13811+56	VA-FR-064	1719 LF / 1742 SLOPE
13811+56 – 13812+06	STATE ROUTE 697	50 LF - 51 SLOPE
13812+06 – 13812+69	VA-FR-068 / BVFR-24	63 LF / 63 SLOPE
13812+69 – 13817+15	VA-FR-068	446 LF / 454 SLOPE

DESIGN

PIPE / COATING	SLOPE DISTANCE	Stations
2	375'	13777+57 – 13781+30
4	80'	13781+30 – 13782+10
2 (REV.9)	482'	13782+10 – 13786+80
1	366'	13786+80 – 13790+39
6	40'	13790+39 – 13790+79
1	366'	13790+79 – 13794+37
6	40'	13794+37 – 13794+77
1	889'	13794+77 – 13803+50
2	200'	13803+50 – 13805+50
4	40'	13805+50 – 13805+90
2	560'	13805+90 – 13811+40
5	80'	13811+40 – 13812+20
2	502'	13812+20 – 13817+15

CLASS LOCATION / HCA: 2 (13777+57 – 13786+00); HCA-14 (to 13785+45); 1 (13786+00 – 13804+30); 2 (13804+30 – 13817+15)

ENVIRONMENTAL

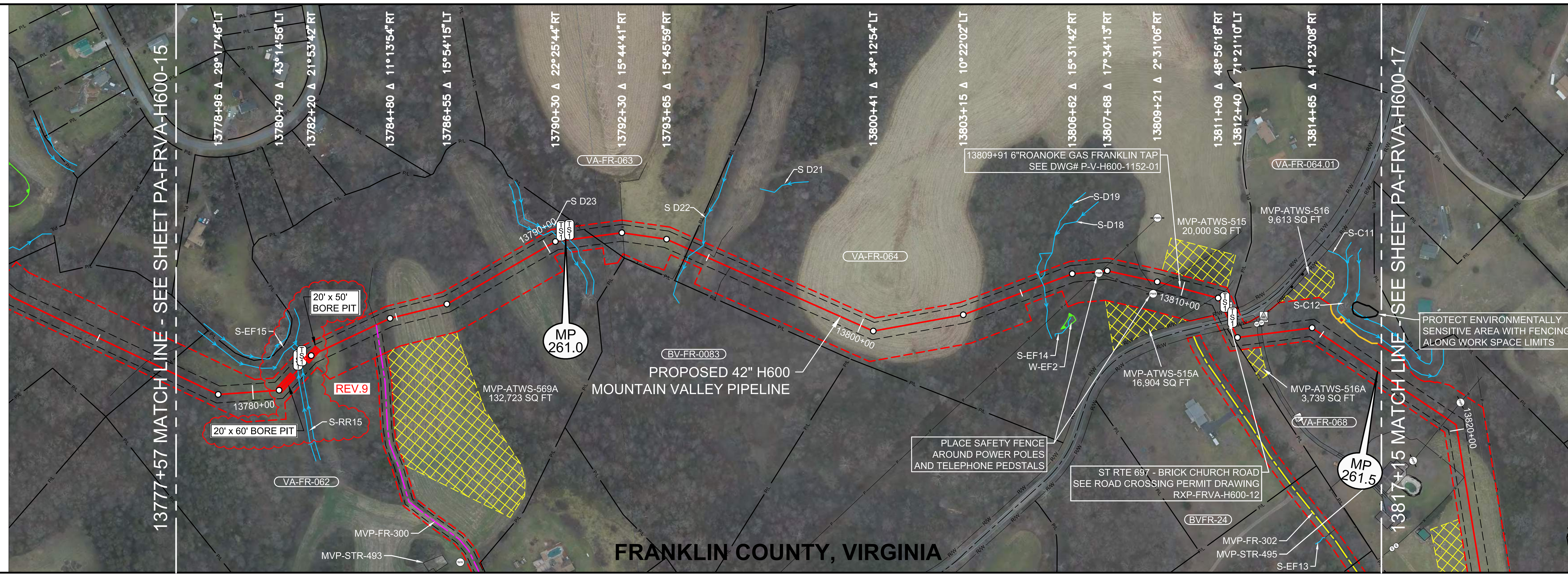
CONSTRUCTION EXCLUSION:
- 13777+57: T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-RR15 MAR 15TH - JUNE 30TH & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- T.O.Y.R.: SEE TREE CLEARING PLAN
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAMS S-D22 & S-D23 MAR 15TH - JUNE 30TH & FISH RELOCATION REQUIRED WITHIN STREAM S-D23 CONSULT RESPONSIBLE E.I.
- T.O.Y.R.: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-D20 MAR 15TH - JUNE 30TH
- T.O.Y.R.: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS (13817+15)

WETLAND / STREAM:

S-RR15	S-D23	S-D22	S-D18	S-D20
17 LF	25 LF	8 LF	21 LF	8 LF

PLAN VIEW

0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

ISSUED FOR CONSTRUCTION

REFERENCE DRAWINGS

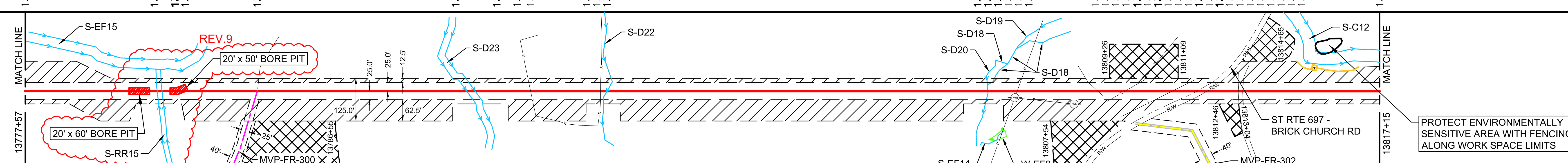
DRAWING NO.	DESCRIPTION
MVP-AR-H600-15	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-102	ACCESS ROAD DETAIL MAP
RXP-FRVA-H600-12	STATE ROUTE 697 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-V-H600-1152-01	6"ROANOKE GAS TAP

HORIZONTAL STATIONING

- 13777+57 MATCH LINE
- 13781+62 STREAM BANK(S–RR15),
- **13781+69 PROPOSED TYPE 1 TEST STATION**
- **PROPOSED RIVER WEIGHT – STREAM**
- 13781+79 STREAM BANK(S–RR15),
- PROPOSED TYPE 1 TEST STATION
- 13784+35 ACCESS ROAD – PERMANENT (MVP–FR–300)
- 13790+47 STREAM BANK(S–D23), PROPOSED TYPE 1 TEST STATION, **BEGIN PROPOSED 2 RIVER WEIGHTS AT 11' SPACING – STREAM**
- 13790+72 STREAM BANK(S–D23), PROPOSED TYPE 1 TEST STATION
- 13791+47 PROPERTY LINE
- 13792+34 FENCE – BARBED WIRE
- 13794+37 PROPERTY LINE
- 13794+38 FENCE – ELECTRIC
- 13794+57 ℄ STREAM(S–D22)
- 13805+69 BEGIN ℄ STREAM(S–D18) 19'LT
- 13805+70 ℄ STREAM(S–D20)
- 13805+90 END ℄ STREAM(S–D18) 38'LT
- 13807+35 GUY ANCHOR 2'RT
- 13807+42 POWER POLE 5'RT
- 13807+48 OHP LINE
- 13808+91 FENCE – BARBED WIRE
- 13809+16 POWER POLE 38'RT
- 13809+23 GUY ANCHOR 29'RT
- 13809+46 FENCE – BARBED WIRE
- **13809+91 6"ROANOKE GAS TAP**
- 13810+98 FENCE – BARBED WIRE
- **13811+56 PROPOSED TYPE 1 TEST STATION,R/W**
- 13811+56 LINE MARKER 16'LT
- 13811+63 MAILBOX 17'LT
- 13811+70 EDGE OF ASPHALT
- **13811+81 ℄ ST RTE 697 – BRICK CHURCH RD**
- 13811+91 EDGE OF ASPHALT
- **13812+06 PROPOSED TYPE 1 TEST STATION,R/W**
- 13812+07 FENCE – WOOD
- 13813+02 EDGE OF ASPHALT
- 13813+03 GATE POST 32'LT
- 13813+15 EDGE OF ASPHALT
- 13813+18 GATE POST 35'LT
- 13813+26 MAILBOX 55'LT
- 13813+26 MAILBOX 55'LT
- 13813+27 PEDESTAL – TELEPHONE 47'LT
- 13817+15 MATCH LINE

WORK SPACE

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



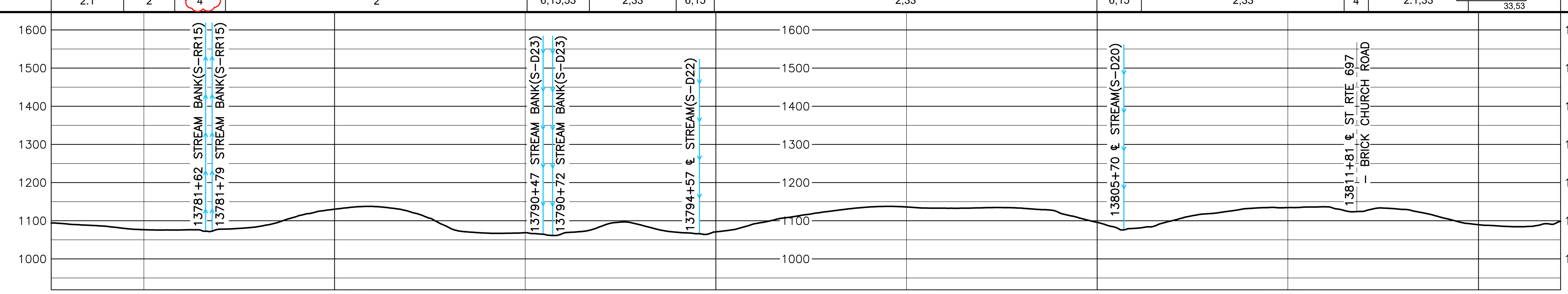
CONSTRUCTION METHOD

2.1	2	4	2	6,15,53	2,33	6,15	2,33	6,15	2,33	4	2.1,33	L. S. MIT. PLAN 33,53

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	05-09-18	ISSUED FOR VARIANCE - REVISED LOCATION OF MVP-ATWS-515
9	HEI	02-18-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	1621	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	2119	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	120	42"O.D. X 0.740"W.T., X-70, FBE & ARO
5	80	42"O.D. X 0.888"W.T., X-70, FBE & ARO
6	80	42"O.D. X 0.617"W.T., X-70, FBE & ARO
	6	TYPE 1 TEST STATION - PIPELINE
	1	6"GAS TAP
	4	RIVER WEIGHTS

REV.9

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE
BOONES MILL & GOGGINSVILLE PCT.,FRANKLIN CO.,VA.
STA. 13777+57 TO STA. 13817+15

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -16	
SHEET 286 OF 329	REV. 9
DATE OF PLOT: 02/18/21 11:16 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Parcel	Length
13859+96 – 13860+92	VA-FR-075	96 LF 98 SLOPE
13860+92 – 13861+99	VA-FR-076.01 / VA-FR-075	107 LF 108 SLOPE
13861+99 – 13875+34	VA-FR-076.01	1335 LF 1339 SLOPE
13875+34 – 13880+84	BVFR-26 / VA-FR-077	550 LF 551 SLOPE
13880+84 – 13883+75	BVFR-26	291 LF 291 SLOPE
13883+75 – 13884+20	BVFR-26 / VA-FR-077	45 LF 45 SLOPE
13884+20 – 13888+73	BVFR-26	453 LF 453 SLOPE
13888+73 – 13892+29	VA-FR-077	356 LF 380 SLOPE
13892+29 – 13892+59	STATE ROUTE 775	30 LF - 30 SLOPE
13892+59 – 13893+55	VA-FR-078	96 LF 97 SLOPE
13893+55 – 13894+69	VA-FR-078 / VA-FR-077.01	114 LF 114 SLOPE
13894+69 – 13896+90	VA-FR-078	221 LF 221 SLOPE
13896+90 – 13910+43	VA-FR-079	1353 LF 1364 SLOPE

DESIGN

Station	Pipe / Coating	Slope Distance
13859+96 – 13862+41	1	249'
13862+41 – 13863+21	4	80'
13863+21 – 13871+02	2	783'
13871+02 – 13872+22	4	120'
13872+22 – 13875+05	2	283'
13875+05 – 13875+85	4	80'
13875+85 – 13892+05	2	1647'
13892+05 – 13892+85	5	80'
13892+85 – 13907+80	2	1502'
13907+80 – 13910+43	1	267'

CLASS LOCATION / HCA: 1 (13859+96 – 13864+10); 2 (13864+10 – 13907+00); 1 (13907+00 – 13910+43)

REV.8

ENVIRONMENTAL

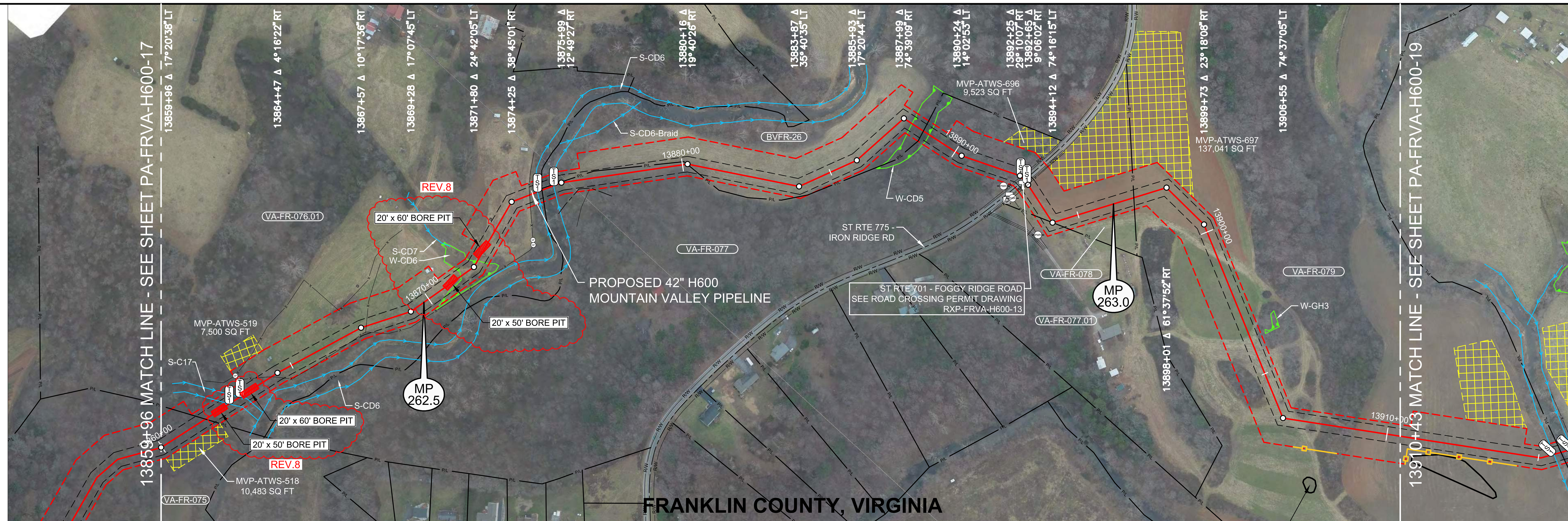
CONSTRUCTION EXCLUSION:
- 13859+96: T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-C17 MAR 15TH - JUNE 30TH & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-CD6 MAR 15TH - JUNE 30TH, MUSSEL RELOCATION TO BE COMPLETE BETWEEN MAY 1ST & SEPT. 30TH & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS (to 13910+43)

WETLAND / STREAM:

Feature	Length
S-C17	41 LF
W-CD6	202 LF
S-CD6	57 LF
W-CD5	72 LF

PLAN VIEW

0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-15	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
RXP-FRVA-H600-13	ROAD CROSSING PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

HORIZONTAL STATIONING

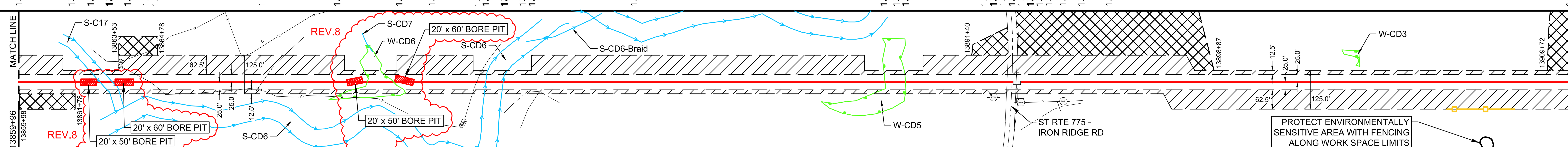
- 13859+96 MATCH LINE
- 13861+67 PROPERTY LINE
- 13862+60 STREAM BANK(S-C17), PROPOSED TYPE 1 TEST STATION
- **13862+61 BEGIN PROPOSED 3 RIVER WEIGHTS AT 12' SPACING IN STREAM**
- 13863+01 STREAM BANK(S-C17), PROPOSED TYPE 1 TEST STATION
- 13863+28 2 GATE POSTS 51' & 67'LT
- 13864+24 FENCE - ELECTRIC
- 13867+75 FENCE - WIRE
- **13870+12 BEGIN WETLAND(W-CD6) 37'RT**
- **13872+14 END WETLAND(W-CD6) 37'RT**
- 13873+41 WATER TROUGH 27'LT
- 13874+89 FENCE - ELECTRIC
- 13875+16 STREAM BANK(S-CD6), PROPOSED TYPE 1 TEST STATION
- **13875+21 BEGIN PROPOSED 5 RIVER WEIGHTS AT 11' SPACING IN STREAM**
- 13875+32 PROPERTY LINE
- 13875+73 STREAM BANK(S-CD6), PROPOSED TYPE 1 TEST STATION
- 13880+14 PROPERTY LINE
- **13888+27 BEGIN WETLAND(W-CD5) 37'LT**
- 13888+75 PROPERTY LINE
- **13888+99 END WETLAND(W-CD5) 23'RT**
- 13891+85 POWER POLE 49'RT
- **13892+29 PROPOSED TYPE 1 TEST STATION,R/W**
- 13892+35 EDGE OF ASPHALT
- **13892+45 ℄ ST RTE 775 - IRON RIDGE ROAD**
- 13892+55 EDGE OF ASPHALT
- **13892+59 PROPOSED TYPE 1 TEST STATION,R/W**
- 13892+61 SIGN 20'RT
- 13892+64 OHP LINE
- 13894+11 PROPERTY LINE
- 13894+12 PROPERTY LINE
- 13896+90 PROPERTY LINE
- 13910+43 MATCH LINE

PROTECT ENVIRONMENTALLY SENSITIVE AREA WITH FENCING ALONG WORK SPACE LIMITS

ISSUED FOR CONSTRUCTION

WORK SPACE

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



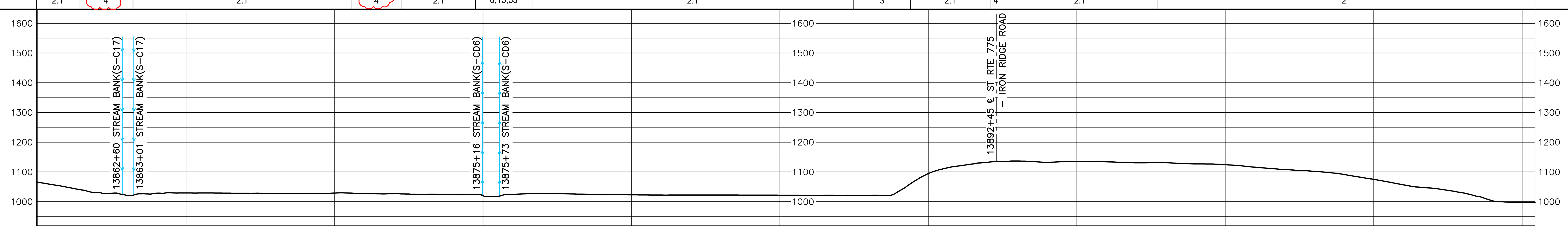
CONSTRUCTION METHOD

2.1	4	2.1	4	2.1	6,15,53	2.1	3	2.1	4	2.1	2

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	516	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	4215	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	280	42"O.D. X 0.740"W.T., X-70, FBE & ARO
5	80	42"O.D. X 0.888"W.T., X-70, FBE & ARO
	6	TYPE 1 TEST STATION - PIPELINE
	8	RIVER WEIGHTS

REV.8

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-18-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE GOGGINSVILLE PCT.,FRANKLIN CO.,VA. STA.13859+96 TO STA. 13910+43

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -18	
SHEET 288 OF 329	REV. 8
DATE OF PLOT: 02/18/21 11:29 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Tract	Length
13960+15 – 13961+98	VA-FR-089	183 LF / 183 SLOPE
13961+98 – 13964+56	VA-FR-081.001 / VA-FR-089	258 LF / 258 SLOPE
13964+56 – 13975+49	VA-FR-5473	1093 LF / 1096 SLOPE
13975+49 – 13977+54	VA-FR-5474 / VA-FR-5473	205 LF / 205 SLOPE
13977+54 – 13980+37	VA-FR-5474	283 LF / 284 SLOPE
13980+37 – 13996+77	VA-FR-5475	1640 LF / 1656 SLOPE
13996+77 – 13998+08	VA-FR-5476 / VA-FR-5475	131 LF / 131 SLOPE
13998+08 – 14009+75	VA-FR-5476	1167 LF / 1195 SLOPE
14009+75 – 14010+91	US HIGHWAY 220	116 LF / 117 SLOPE
14010+91 – 14016+27	VA-FR-5479	536 LF / 544 SLOPE

DESIGN

Station	PIPE / COATING	SLOPE DISTANCE
13960+15 – 13991+29	2	3135'
13991+29 – 13992+09	4	80'
13992+09 – 13997+95	2	586'
13997+95 – 13998+35	4	40'
13998+35 – 13998+75	2	40'
13998+75 – 14009+00	1	1048'
14009+00 – 14009+40	2	46'
14009+40 – 14011+40	5	200'
14011+40 – 14016+27	2	494'

REV.8

CLASS LOCATION / HCA: 2 (13960+15 – 13997+50); 1 (13997+50 – 14011+50); 2 (14011+50 – 14016+27); HCA-16 (14000+05 – 14016+27)

ENVIRONMENTAL

CONSTRUCTION EXCLUSION:
- 13960+15: TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-KL35 CONSULT RESPONSIBLE E.I.
- FISH RELOCATION REQUIRED WITHIN STREAM S-KL36 CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: SEE TREE CLEARING PLAN
- FISH RELOCATION REQUIRED WITHIN STREAM S-KL38 CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: SEE TREE CLEARING PLAN
- 14016+27

WETLAND / STREAM:

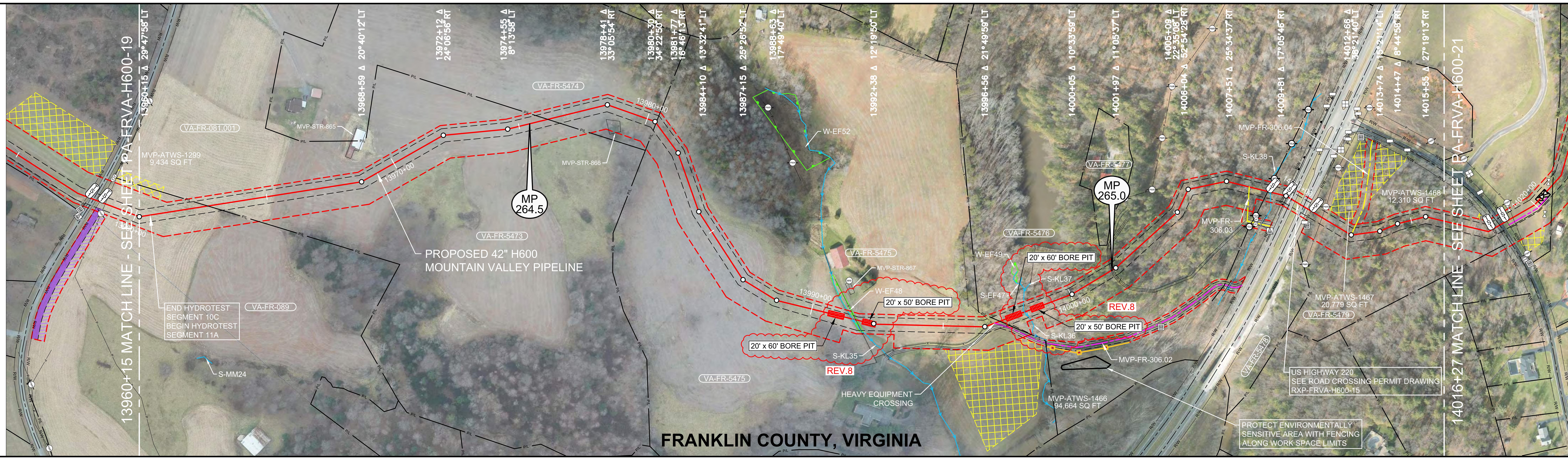
W-EF48	S-KL35	S-KL36	S-KL38
73 LF	2.5 LF	7.5 LF	7 LF

PLAN VIEW

0' 100' 200' 400'

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-15	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
RXP-FRVA-H600-15	US HIGHWAY 220 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

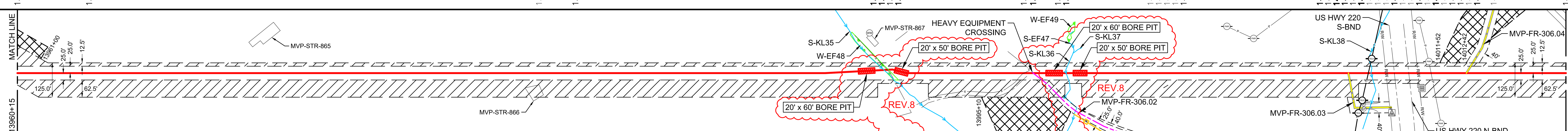
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 13960+15 MATCH LINE
- 13962+75 PROPERTY LINE
- 13979+05 BUILDING - DEMOLISHED 43'RT
- 13980+37 PROPERTY LINE
- 13991+29 BEGIN WETLAND(W-EF48) 38'LT
- 13991+69 ℄ STREAM(S-KL35)
- 13991+80 FENCE - BARBED WIRE
- 13992+02 END WETLAND(W-EF48) 32'RT
- 13996+62 FENCE - WOOD
- 13996+96 ACCESS ROAD - PERMANENT (MVP-FR-306.02), HEAVY EQUIPMENT CROSSING
- 13997+16 PROPERTY LINE
- 13998+15 ℄ STREAM(S-KL36)
- 14001+77 EDGE OF GRAVEL
- 14001+80 CULVERT OPEN END 53'RT
- 14001+82 ℄ DRIVEWAY(GRAVEL)
- 14001+87 EDGE OF GRAVEL
- 14001+95 CULVERT OPEN END 44'RT
- 14008+39 ACCESS ROAD - TEMPORARY (MVP-FR-306.03)
- 14009+11 OHT LINE
- 14009+11 PROPOSED TYPE 1 TEST STATION
- 14009+20 ℄ STREAM(S-KL38)
- 14009+33 PROPERTY CORNER 35'LT
- 14009+75 PROPOSED TYPE 1 TEST STATION,R/W
- 14009+86 GUARDRAIL
- 14009+90 EDGE OF ASPHALT
- 14009+91 EDGE OF ASPHALT
- 14010+05 ℄ US HIGHWAY 220
- 14010+21 EDGE OF ASPHALT
- 14010+44 EDGE OF ASPHALT
- 14010+58 ℄ US HIGHWAY 220
- 14010+76 EDGE OF ASPHALT
- 14010+91 PROPOSED TYPE 1 TEST STATION,R/W
- 14011+01 SIGN 64'RT
- 14011+05 PEDESTAL-TELEPHONE 55'RT
- 14011+39 OHP LINE
- 14012+60 EDGE OF DIRT
- 14012+66 ACCESS ROAD - TEMPORARY (MVP-FR-306.04)
- 14012+73 EDGE OF DIRT
- 14016+27 MATCH LINE

WORK SPACE

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



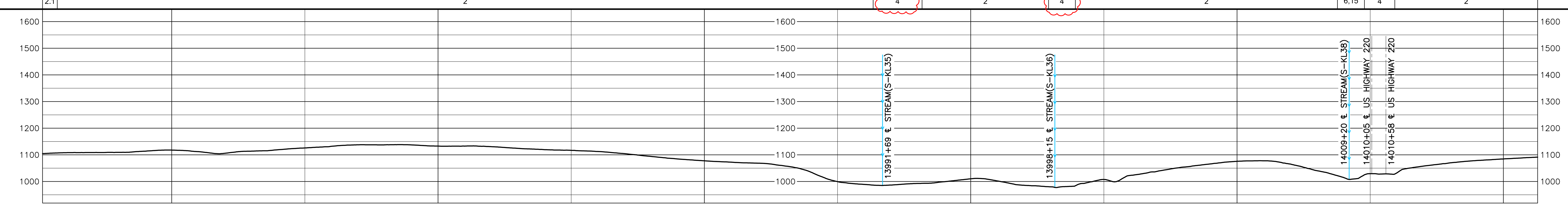
CONSTRUCTION METHOD

Station	Method
13960+15	2.1
	2
13991+29 – 13992+09	4
	2
13997+95 – 13998+35	4
	2
	6,15
	4
	2

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-18-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	~~1048~~	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	4301	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	120	42"O.D. X 0.740"W.T., X-70, FBE & ARO
5	~~200~~	42"O.D. X 0.888"W.T., X-70, FBE & ARO
	3	TYPE 1 TEST STATION - PIPELINE

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE ROCKY MOUNT EAST PCT.,FRANKLIN CO.,VA. STA. 13960+15 TO STA. 14016+27

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -20	
SHEET 290 OF 329	REV. 8
DATE OF PLOT: 02/18/21 11:50 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Tract	Length
14202+24 – 14204+69	VA-FR-119	245 LF / 245 SLOPE
14204+69 – 14205+51	VA-FR-119 / VA-FR-117	82 LF / 82 SLOPE
14205+51 – 14209+44	VA-FR-117	393 LF / 404 SLOPE
14209+44 – 14210+04	STATE HIGHWAY 122	60 LF / 63 SLOPE
14210+04 – 14216+67	VA-FR-119	662 LF / 673 SLOPE
14216+67 – 14219+34	VA-FR-120 / VA-FR-119.02	267 LF / 269 SLOPE
14219+34 – 14222+15	VA-FR-120	281 LF / 286 SLOPE
14222+15 – 14222+38	VA-FR-120 / VA-FR-121	23 LF / 24 SLOPE
14222+38 – 14226+15	VA-FR-121	377 LF / 379 SLOPE
14226+15 – 14227+04	VA-FR-121 / VA-FR-122	89 LF / 89 SLOPE
14227+04 – 14228+07	VA-FR-122	103 LF / 103 SLOPE
14228+07 – 14229+60	VA-FR-124 / VA-FR-122	153 LF / 153 SLOPE
14229+60 – 14233+86	VA-FR-124	426 LF / 454 SLOPE
14233+86 – 14235+30	VA-FR-125	144 LF / 145 SLOPE
14235+30 – 14236+86	VA-FR-126 / VA-FR-125	156 LF / 156 SLOPE
14236+86 – 14249+29	VA-FR-126	1243 LF / 1247 SLOPE
14249+29 – 14257+66	VA-FR-127	837 LF / 859 SLOPE
14257+66 – 14260+17	VA-FR-128	251 LF / 252 SLOPE

DESIGN

Station	PIPE / COATING	SLOPE DISTANCE
14202+24 – 14208+66	1	651'
14208+66 – 14209+06	4	40'
14209+06 – 14209+35	2	32'
14209+35 – 14210+15	5	80'
14210+15 – 14210+55	2	40'
14210+55 – 14213+55	1	307'
14213+55 – 14214+15	4	40'
14214+15 – 14218+69	1	489'
14218+69 – 14219+49	4	80'
14219+49 – 14232+95	1	1371'
14232+95 – 14233+75	6	80'
14233+75 – 14235+08	1	136'
14235+08 – 14235+13	7	5'
14235+13 – 14235+70	2	57'
14235+70 – 14236+50	3	80'
14236+50 – 14236+70	2	20'
14236+70 – 14248+85	1	1220'
14248+85 – 14250+45	6	160'
14250+45 – 14260+17	1	994'

REV.8

CLASS LOCATION / HCA: 1

ENVIRONMENTAL

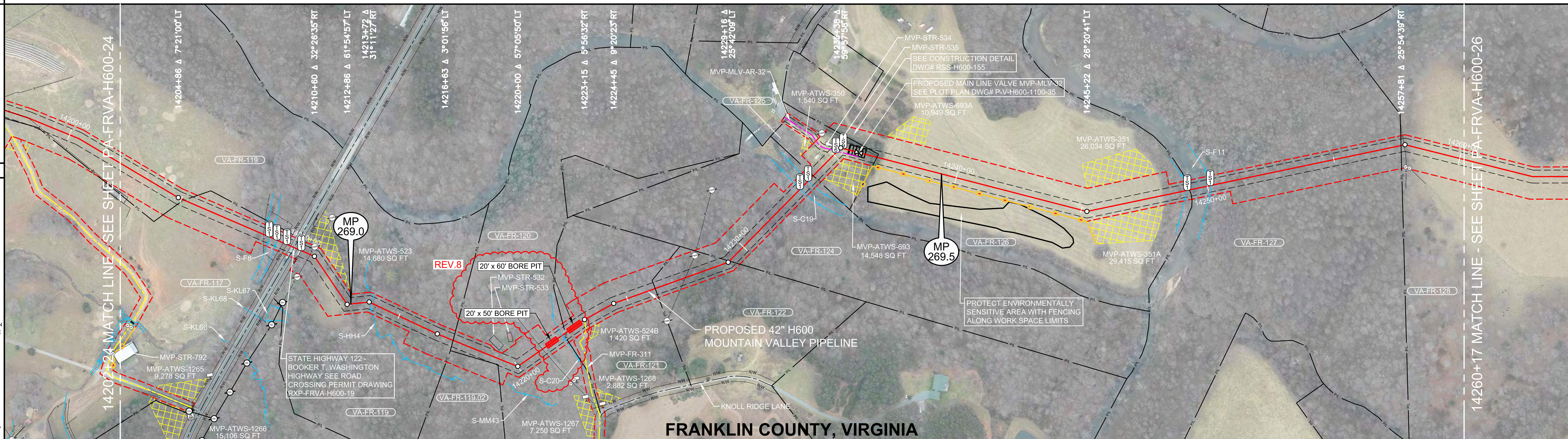
CONSTRUCTION EXCLUSION (14202+24 – 14260+17):
- TIME OF YEAR RESTRICTION: SEE TREE CLEARING PLAN
- FISH RELOCATION REQUIRED WITHIN STREAM S-F8 CONSULT RESPOSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-C20 CONSULT RESPOSIBLE E.I.
- TIME OF YEAR RESTRICTION: SEE TREE CLEARING PLAN
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-C19 MARCH 15TH - JUNE 30TH & FISH RELOCATION REQUIRED CONSULT RESPOSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-F11 MARCH 15TH - JUNE 30TH & MUSSEL RELOCATION TO BE COMPLETED BETWEEN MAY 1ST AND SEPT 30TH WITHIN and FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: SEE TREE CLEARING PLAN

WETLAND / STREAM:

S-F8	S-HH4	S-C20	S-C19	S-F11
32 LF	9 LF	4 LF	45 LF	91 LF

PLAN VIEW

0' 100' 200' 400'



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-15	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-103	ACCESS ROAD DETAIL MAP
MVP-QDAR-H600-104	ACCESS ROAD DETAIL MAP
RXP-FRVA-H600-19	STATE HIGHWAY 122 PERMIT DWG
RSS-H600-155	RESIDENTIAL SITE SPECIFIC
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-W-H600-1204-02	CATHODIC PROTECTION STANDARD DRAWING
P-V-H600-1100-35	MAIN LINE VALVE #32 PLOT PLAN

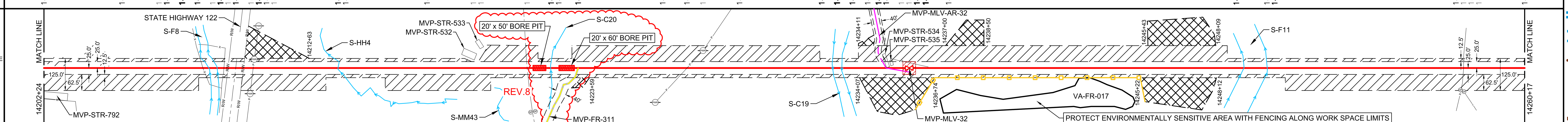
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 14202+24 MATCH LINE
- 14205+10 PROPERTY LINE
- 14208+46 FENCE – BARBED WIRE
- 14208+69 STREAM BANK(S–F8), PROPOSED TYPE 1 TEST STATION
- **14208+76 BEGIN PROPOSED 2 RIVER WEIGHTS AT 20' SPACING IN STREAM**
- 14209+02 STREAM BANK(S–F8), PROPOSED TYPE 1 TEST STATION
- 14209+29 FENCE – BARBED WIRE
- **14209+45 PROPOSED TYPE 1 TEST STATION,R/W**
- 14209+60 EDGE OF ASPHALT
- 14209+75 ℄ STATE HIGHWAY 122 – BOOKER T. WASHINGTON HWY
- 14209+88 EDGE OF ASPHALT
- **14210+05 PROPOSED TYPE 1 TEST STATION,R/W**
- 14210+43 OHP LINE
- 14210+47 POWER POLE 34'LT
- 14213+75 ℄ STREAM(S–HH4)
- 14214+02 WATER CISTERN 9'RT
- 14216+67 PROPERTY LINE
- 14219+08 BUILDING – BARN 32'LT
- 14219+31 BUILDING – BARN 75'LT
- 14221+17 ℄ DRIVEWAY
- 14222+09 ℄ STREAM(S–C20)
- 14222+24 PROPERTY LINE
- 14223+41 ACCESS RD–TEMPORARY(MVP–FR–311)
- 14226+15 PROPERTY LINE
- 14227+40 OHP LINE
- 14228+03 POWER POLE 68'LT
- 14229+23 PROPERTY LINE
- 14233+12 STREAM BANK(S–C19), PROPOSED TYPE 1 TEST STATION
- **14143+16 BEGIN PROPOSED 2 RIVER WEIGHTS AT 20' SPACING IN STREAM**
- 14233+57 STREAM BANK(S–C19), PROPOSED TYPE 1 TEST STATION
- 14233+86 PROPERTY LINE
- **14235+11 PROPOSED TYPE 6 TEST STATION**
- 14235+19 ACCESS ROAD – PERMANENT (MVP–MLV–AR–32)
- 14235+21 BUILDING – MOBILE HOME 1'LT
- 14235+38 BUILDING – PORTABLE 9'LT
- **14235+48 PROPOSED TYPE 9 TEST STATION**
- **14236+10 MAIN LINE VALVE – PROPOSED (MVP–MLV–32)**
- 14236+83 PROPERTY LINE
- 14249+19 STREAM BANK(S–F11),PROPOSED TYPE 1 TEST STATION, **BEGIN PROPOSED 8 RIVER WEIGHTS AT 11' SPACING – STREAM**
- 14249+29 PROPERTY LINE
- 14250+10 STREAM BANK(S–F11),PROPOSED TYPE 1 TEST STATION
- 14257+66 PROPERTY LINE
- 14257+78 FENCE – BARBED WIRE
- 14258+05 GATE POST 83'RT
- 14258+20 GATE POST 84'RT
- 14260+17 MATCH LINE

WORK SPACE

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



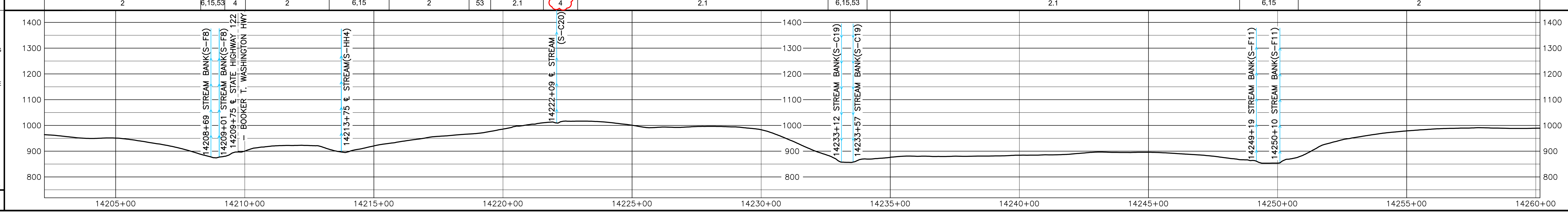
CONSTRUCTION METHOD

2	6,15,53	4	2	6,15	2	53	2.1	4	2.1	6,15,53	2.1	6,15	2

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-18-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5168	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	149	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
3	80	42"O.D. X 0.888"W.T., X-70, FBE & ARO
4	160	42"O.D. X 0.740"W.T., X-70, FBE & ARO
5	80	42"O.D. X 0.888"W.T., X-70, FBE & ARO
6	240	42"O.D. X 0.617"W.T., X-70, FBE & ARO
7	5	ANSI 600 MONOLITHIC INSULATING JOINT
	8	TYPE 1 TEST STATION - PIPELINE
	1	TYPE 6 TEST STATION - ISO. JOINT - BELOW GRADE
	1	TYPE 9 TEST STATION - TEST STATION IR COUPON
	12	RIVER WEIGHTS

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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26555 Evergreen Rd. Suite. 430 Southfield, Michigan 48076 T 248-827-7322 F 248-827-7549
www.hollandengineering.com

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE GLADE HILL PCT.,FRANKLIN CO.,VA. STA. 14202+24 TO STA. 14260+17

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -25	
SHEET 295 OF 329	REV. 8
DATE OF PLOT: 02/18/21 2:18 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Owner	Length
14260+17 – 14286+22	VA-FR-128	2605 LF / 2620 SLOPE
14286+22 – 14286+74	VA-FR-129 / VA-FR-128	52 LF / 52 SLOPE
14286+74 – 14290+08	VA-FR-129	334 LF / 336 SLOPE
14290+08 – 14294+34	VA-FR-130	426 LF / 427 SLOPE
14294+34 – 14294+67	VA-FR-130 / VA-FR-131	33 LF / 34 SLOPE
14294+67 – 14307+50	VA-FR-131	1283 LF / 1287 SLOPE

DESIGN

PIPE / COATING	14260+17	1	14267+34	2	14278+81	4	14279+21	2	14289+65	4	14290+45	2	14294+06	4	14294+86	2	14307+50
SLOPE DISTANCE		722'		1153'		40'		1050'		80'		363'		80'		1268'	

CLASS LOCATION / HCA: 1 (to 14275+25); 2 (14275+25 – 14289+00); 1 (14289+00 – 14300+30); 2 (14300+30 – 14307+50); 14292+90 – 14300+30 HCA-17

REV.8

ENVIRONMENTAL

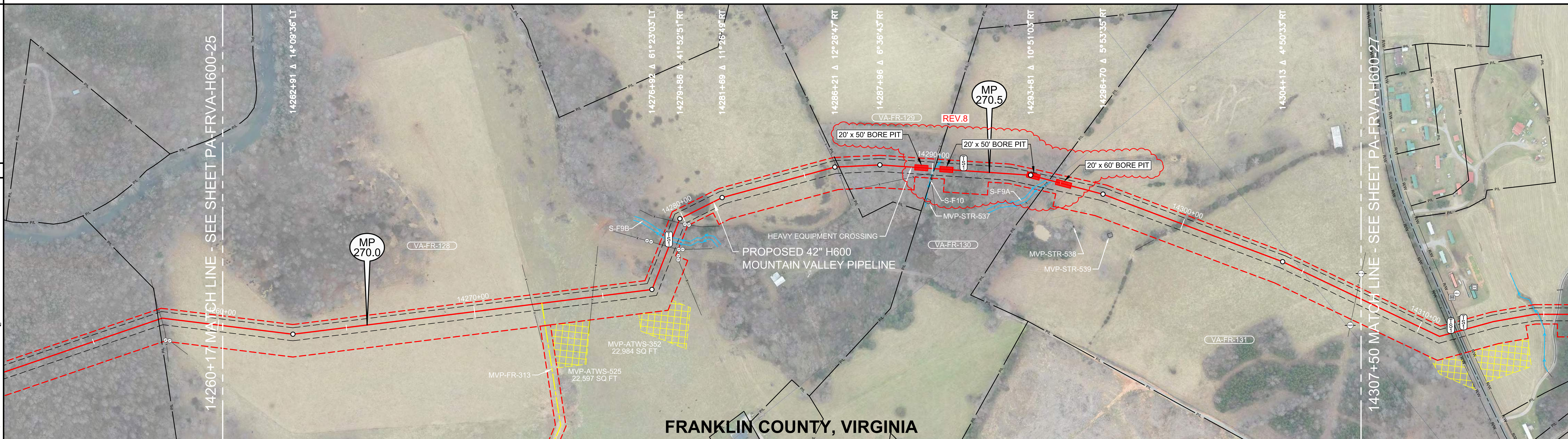
CONSTRUCTION EXCLUSION:
- 14260+17: TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-F9B CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-F10 CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS (to 14307+50)

WETLAND / STREAM:

S-F9B	S-F10	S-F9A
15 LF	9 LF	21 LF

0' 100' 200' 400'

PLAN VIEW



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-15	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-104	ACCESS ROAD DETAIL MAP
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

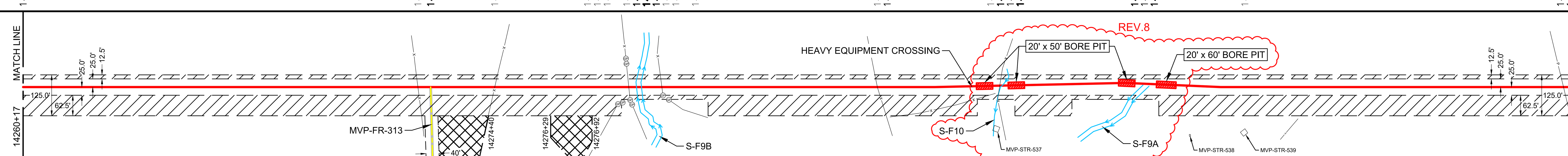
HORIZONTAL STATIONING

- 14260+17 MATCH LINE
- 14272+24 FENCE – ELECTRIC
- **14272+62 ACCESS RD – TEMPORARY(MVP-FR-313)**
- 14274+60 FENCE – ELECTRIC
- 14278+36 GATE POST 52'RT
- 14278+50 GATE POST 47'RT
- 14278+69 FENCE – ELECTRIC, **PROPOSED TYPE 1 TEST STATION**
- 14278+74 GATE POST 40'RT
- **14278+93 STREAM BANK(S-F9B)**
- **14279+01 PROPOSED RIVER WEIGHT – STREAM**
- **14279+08 STREAM BANK(S-F9B)**
- 14279+71 FENCE – ELECTRIC
- 14279+74 GATE POST 26'RT
- 14280+07 GATE POST 37'RT
- 14286+30 FENCE – BARBED WIRE
- 14286+38 PROPERTY LINE
- 14290+03 FENCE – BARBED WIRE
- **14290+05 ℄ STREAM(S-F10)(9')**
- 14290+08 PROPERTY LINE
- **14291+20 PROPOSED TYPE 1 TEST STATION**
- **14294+36 STREAM BANK(S-F9A) 4'LT**
- 14294+50 PROPERTY LINE
- **14294+57 STREAM BANK(S-F9A) 5'LT**
- 14297+54 BUILDING – BARN–DEMOLISHED 127'RT
- 14307+29 OHP LINE
- 14307+50 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

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



CONSTRUCTION METHOD

14260+17 – 14278+81	14278+81 – 14280+	14280+ – 14289+65	14289+65 – 14290+45	14290+45 – 14294+06	14294+06 – 14294+86	14294+86 – 14307+50
2	6,15	2	4	2	4,53	2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
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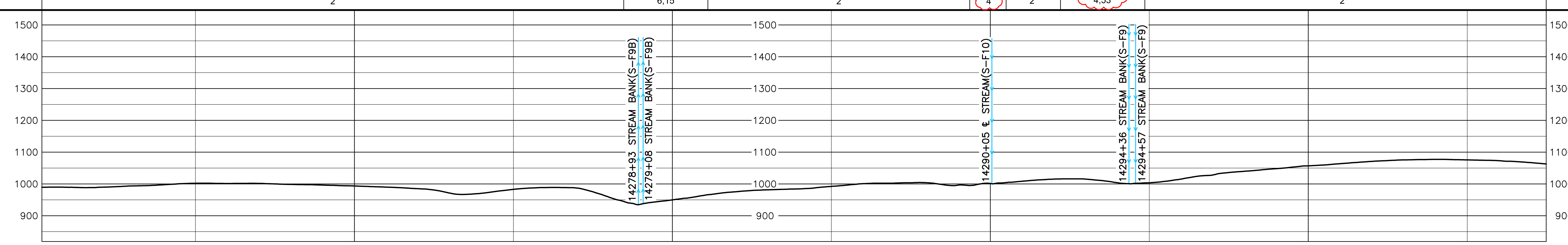
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-01-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	722	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	3834	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	200	42"O.D. X 0.740"W.T., X-70, FBE & ARO
	2	TYPE 1 TEST STATION - PIPELINE
	1	RIVER WEIGHTS

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE GLADE HILL PCT.,FRANKLIN CO.,VA. STA. 14260+17 TO STA. 14307+50

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -26	
SHEET 296 OF 329	REV. 8
DATE OF PLOT: 02/1/21 3:52 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station From	Station To	Tract(s)	Length
14307+50	14311+34	VA-FR-131	384 LF 384 SLOPE
14311+34	14311+84	STATE ROUTE 702	50 LF - 50 SLOPE
14311+84	14319+92	VA-FR-132	808 LF 811 SLOPE
14319+92	14321+79	VA-FR-132 / VA-FR-133	187 LF 188 SLOPE
14321+79	14325+07	VA-FR-135	328 LF 331 SLOPE
14325+07	14326+19	VA-FR-136 / VA-FR-135	112 LF 113 SLOPE
14326+19	14330+21	VA-FR-136	402 LF 407 SLOPE
14330+21	14330+67	BVFR-43 / VA-FR-136	46 LF 47 SLOPE
14330+67	14332+74	VA-FR-136	207 LF 209 SLOPE
14332+74	14333+02	VA-FR-136 / VA-FR-137	28 LF 28 SLOPE
14333+02	14333+52	STATE ROUTE 671	50 LF - 51 SLOPE
14333+52	14338+11	VA-FR-138 / VA-FR-5918	459 LF 462 SLOPE
14338+11	14338+52	VA-FR-138	41 LF 41 SLOPE
14338+52	14341+18	VA-FR-139	266 LF 267 SLOPE
14341+18	14341+68	VA-FR-138	50 LF 50 SLOPE
14341+68	14344+81	VA-FR-138 / VA-FR-5918	313 LF 313 SLOPE
14344+81	14345+30	VA-FR-140 / VA-FR-138 / VA-FR-5918	49 LF 49 SLOPE
14345+30	14345+78	VA-FR-140 / VA-FR-5918	48 LF 48 SLOPE
14345+78	14352+46	VA-FR-140	668 LF 672 SLOPE
14352+46	14353+31	VA-FR-140.01 / VA-FR-140	85 LF 86 SLOPE
14353+31	14353+45	VA-FR-140.01 / VA-FR-140 / VA-FR-141	14 LF 15 SLOPE
14353+45	14353+78	VA-FR-140.01 / VA-FR-141	33 LF 34 SLOPE
14353+78	14356+22	VA-FR-141	244 LF 246 SLOPE

DESIGN

Station From	Station To	Pipe / Coating	Slope Distance
14307+50	14311+16	2	366'
14311+16	14311+96	5	80'
14311+96	14314+39	2	244'
14314+39	14315+19	4	80'
14315+19	14332+86	2	1783'
14332+86	14333+66	5	80'
14333+66	14353+13	2	1959'
14353+13	14353+93	4	80'
14353+93	14356+22	2	230'

REV.8 REV.8

CLASS LOCATION / HCA: 2 (to 14355+00), 1 (14355+00 to 14356+22); HCA-17 (to 14333+25)

ENVIRONMENTAL

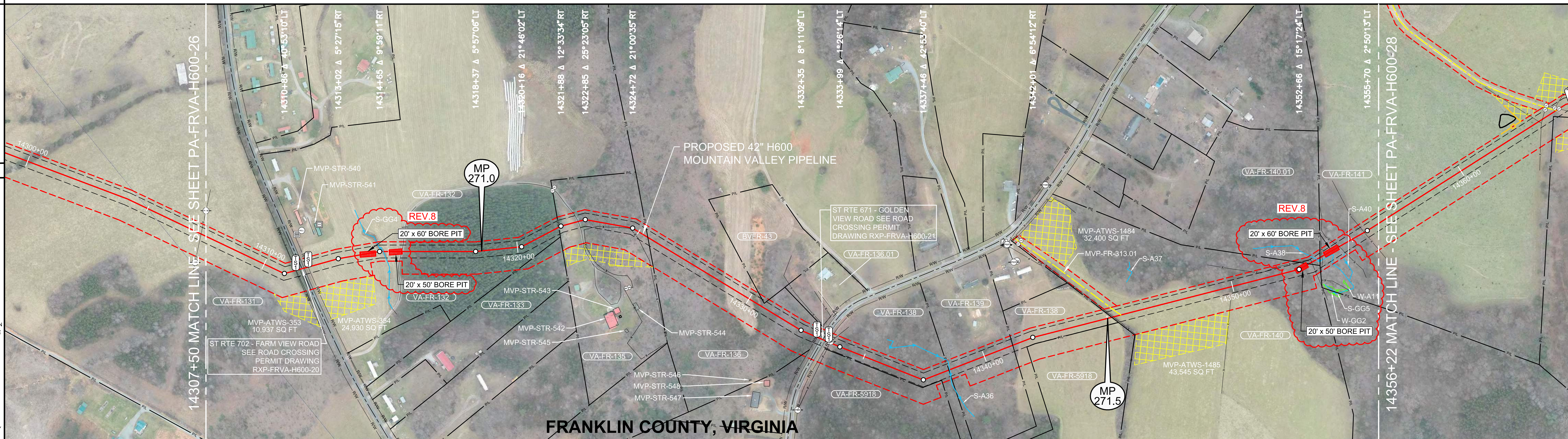
CONSTRUCTION EXCLUSION (14307+50 – 14356+22):
- TIME OF YEAR RESTRICTION: SEE TREE CLEARING PLAN
- FISH RELOCATION REQUIRED WITHIN STREAM S-GG4 CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS

WETLAND / STREAM:

S-GG4	S-A36	S-A38	S-A40
5 LF	4 LF	9 LF	5.8 LF

PLAN VIEW

0' 100' 200' 400'



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

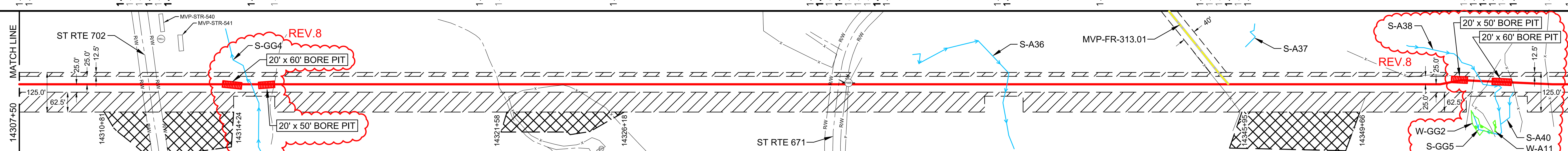
DRAWING NO.	DESCRIPTION
MVP-AR-H600-15	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-105	ACCESS ROAD DETAIL MAP
RXP-FRVA-H600-20	STATE ROUTE 702 PERMIT DWG
RXP-FRVA-H600-21	STATE ROUTE 671 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

HORIZONTAL STATIONING

- 14307+50 MATCH LINE
- 14307+55 POWER POLE 110'RT
- **14311+31 PROPOSED TYPE 1 TEST STATION,R/W**
- 14311+34 FENCE – BARBED WIRE
- 14311+47 EDGE OF ASPHALT
- **14311+57 ℄ ST RTE 702 – FARM VIEW ROAD**
- 14311+65 EDGE OF ASPHALT
- **14311+82 PROPOSED TYPE 1 TEST STATION,R/W**
- **14314+79 ℄ STREAM(S–GG4)**
- 14315+52 ℄ DRIVEWAY(GRAVEL)
- 14321+91 PROPERTY LINE
- 14322+57 ℄ DRIVEWAY(GRAVEL)
- 14326+18 PROPERTY LINE
- 14333+01 PROPERTY CORNER 5'RT
- **14333+02 PROPOSED TYPE 1 TEST STATION,R/W**
- 14333+17 EDGE OF ASPHALT
- **14333+27 ℄ ST RTE 671 – GOLDEN VIEW ROAD**
- 14333+37 EDGE OF ASPHALT
- 14333+47 GUY ANCHOR 3'LT
- 14333+50 GUY ANCHOR 3'LT
- **14333+52 PROPOSED TYPE 1 TEST STATION,R/W**
- 14333+57 OHP LINE, POWER POLE 4'LT
- 14338+52 PROPERTY LINE
- **14338+56 ℄ STREAM(S–A36)**
- 14341+18 PROPERTY LINE
- 14345+17 PROPERTY LINE
- 14345+23 FENCE – BARBED WIRE
- 14345+48 EDGE OF DIRT
- **14345+53 ACCESS ROAD – TEMPORARY (MVP–FR–313.01)**
- 14345+58 EDGE OF DIRT
- 14345+86 PROPERTY CORNER 89'RT
- 14353+22 FENCE – BARBED WIRE
- 14353+27 PROPERTY LINE
- **14353+53 ℄ STREAM(S–A38)**
- 14353+55 PROPERTY LINE
- 14353+66 FENCE – BARBED WIRE
- **14354+48 ℄ STREAM(S–A40) 27'RT,** FENCE – BARBED WIRE
- 14355+58 FENCE – BARBED WIRE
- 14356+22 MATCH LINE

WORK SPACE

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



CONSTRUCTION METHOD

Station From	Station To	Method
14307+50	14311+16	2
14311+16	14311+96	4
14311+96	14314+39	2
14314+39	14315+19	4
14315+19	14332+86	2
14332+86	14333+66	4
14333+66	14338+11	2
14338+11	14338+52	6,15
14338+52	14353+13	2
14353+13	14353+93	4
14353+93	14356+22	2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
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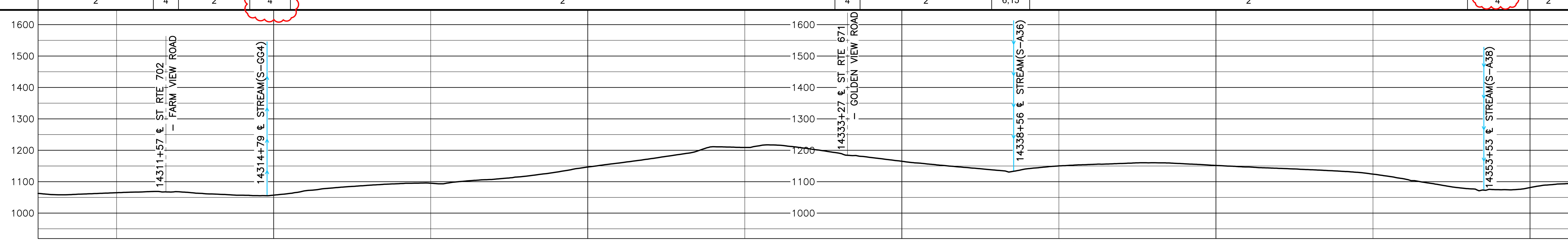
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



ISSUED FOR CONSTRUCTION

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
2	4582	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	160	42"O.D. X 0.740"W.T., X-70, FBE & ARO
5	160	42"O.D. X 0.888"W.T., X-70, FBE & ARO
	4	TYPE 1 TEST STATION - PIPELINE

REV.8

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
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6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-18-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE GLADE HILL PCT.,FRANKLIN CO.,VA. STA. 14307+50 TO STA. 14356+22

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -27	
SHEET 297 OF 329	REV. 8
DATE OF PLOT: 02/18/21 12:53 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Tract	Length
14413+35 – 14436+48	VA-FR-146	2313 LF / 2334 SLOPE
14436+48 – 14437+65	VA-FR-147 / VA-FR-146	117 LF / 118 SLOPE
14437+65 – 14454+01	VA-FR-147	1636 LF / 1643 SLOPE
14454+01 – 14454+42	STATE ROUTE 655	41 LF - 41 SLOPE
14454+42 – 14470+95	VA-FR-148	1653 LF / 1659 SLOPE

DESIGN

PIPE / COATING	2	4	2	4	2	4	2
Station	14413+35 – 14419+97	14419+97 – 14421+17	14421+17 – 14437+60	14437+60 – 14440+00	14440+00 – 14453+81	14453+81 – 14454+61	14454+61 – 14470+95
SLOPE DISTANCE	680'	120'	1647'	240'	1388'	80'	1640'
CLASS LOCATION / HCA	1						

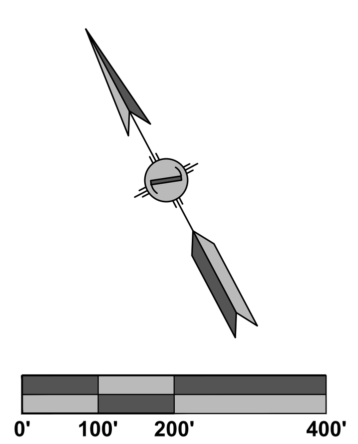
REV.8

ENVIRONMENTAL

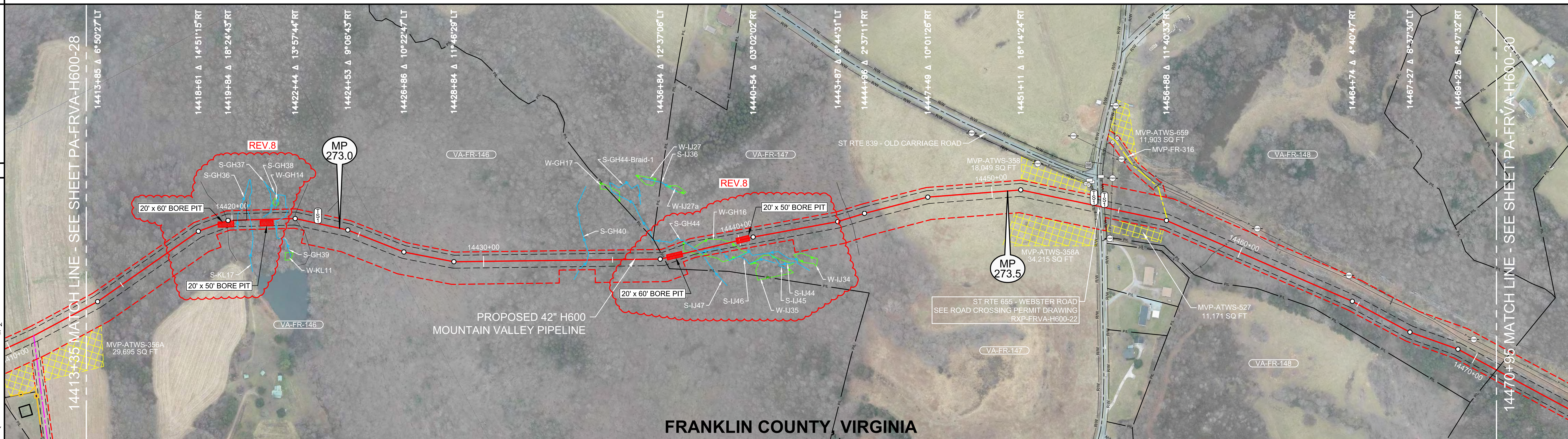
CONSTRUCTION EXCLUSION (14413+35 – 14470+95):
TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31
SEE TREE CLEARING PLAN FOR FURTHER DETAILS
FISH RELOCATION REQUIRED WITHIN STREAM S-GH44 CONSULT RESPONSIBLE E.I
TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31
SEE TREE CLEARING PLAN FOR FURTHER DETAILS

WETLAND / STREAM

S-GH36	S-KL17	S-GH37	S-GH38	S-GH39	S-GH40	W-GH16	S-GH44	S-IJ47
3 LF	5 LF	33 LF	3 LF	4 LF	3 LF	212 LF	6 LF	2 LF



PLAN VIEW



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-15	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-105	ACCESS ROAD DETAIL MAP
RXP-FRVA-H600-22	STATE ROUTE 655 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

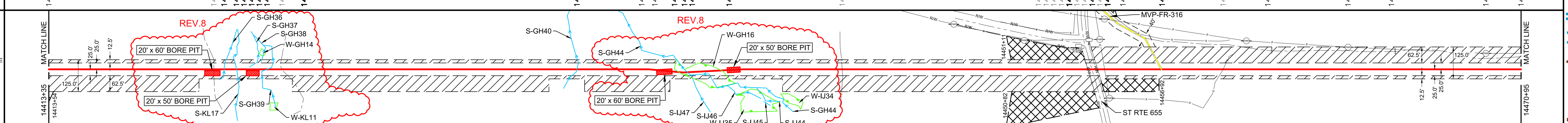
HORIZONTAL STATIONING

14413+35 MATCH LINE
14419+79 ℄ TRAIL(DIRT)
14420+21 ℄ STREAM(S-GH36)
14420+70 ℄ STREAM(S-KL17)
14421+20 BEGIN ℄ STREAM(S-GH37) 9'LT
14421+53 END ℄ STREAM(S-GH37) 37'LT
14421+67 ℄ STREAM(S-GH38) 31'LT
14421+89 ℄ STREAM(S-GH39)
14422+48 ℄ TRAIL(DIRT)
14423+34 PROPOSED TYPE 1 TEST STATION
14434+01 ℄ STREAM(S-GH40)
14436+74 PROPERTY LINE
14437+06 PROPERTY CORNER 44'RT
14437+82 BEGIN WETLAND(W-GH16) 9'LT
14438+33 ℄ STREAM(S-GH44)
14438+49 ℄ STREAM(S-IJ47) 22'RT
14439+94 END WETLAND(W-GH16) 37'RT
14444+37 FENCE - BARBED WIRE
14453+53 GATE POST 75'LT
14453+65 GATE POST 72'LT
14453+68 SIGN 74'LT
14453+77 SIGN 69'LT
14454+01 PROPOSED TYPE 1 TEST STATION,R/W
14454+04 FENCE - BARBED WIRE
14454+11 EDGE OF ASPHALT
14454+22 ℄ ST RTE 655 - WEBSTER ROAD
14454+32 EDGE OF ASPHALT
14454+42 PROPOSED TYPE 1 TEST STATION,R/W,
FENCE - BARBED WIRE
14454+69 OHP LINE
14456+94 ACCESS ROAD - TEMPORARY (MVP-FR-316)
14459+33 FENCE - BARBED WIRE
14461+23 CULVERT OPEN END 67'LT, CULVERT OPEN END 87'LT
14464+21 POWER POLE 91'LT
14466+12 CULVERT OPEN END 56'LT, CULVERT OPEN END 75'LT
14469+60 POWER POLE 62'LT
14470+95 MATCH LINE, PROPERTY LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

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

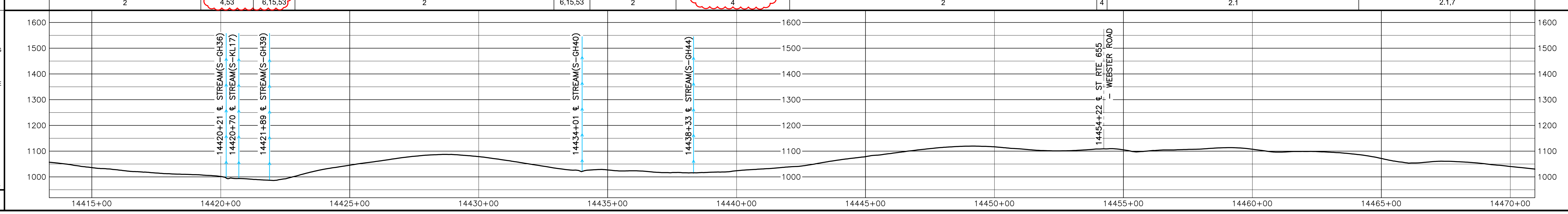


CONSTRUCTION METHOD

2	4,53	6,15,53	2	6,15,53	2	4	2	4	2.1	2.1,7

CONSTRUCTION METHOD KEY
1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-01-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
2	5355	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	440	42"O.D. X 0.740"W.T., X-70, FBE & ARO
	3	TYPE 1 TEST STATION - PIPELINE

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE GLADE HILL PCT.,FRANKLIN CO.,VA. STA. 14413+35 TO STA. 14470+95

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -29	
SHEET 299 OF 329	REV. 8
DATE OF PLOT: 02/1/21 1:02 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station From	Station To	Tract	Length
14470+95	14476+61	VA-FR-149	566 LF 567 SLOPE
14476+61	14476+92	VA-FR-150 / VA-FR-149	31 LF 31 SLOPE
14476+92	14486+47	VA-FR-150	955 LF 962 SLOPE
14486+47	14486+66	VA-FR-150 / VA-FR-151	19 LF 19 SLOPE
14486+66	14500+30	VA-FR-151	1364 LF 1398 SLOPE
14500+30	14500+78	VA-FR-152 / VA-FR-151	48 LF 48 SLOPE
14500+78	14502+38	VA-FR-152	160 LF 160 SLOPE
14502+38	14513+54	VA-FR-153 / VA-FR-152	1116 LF 1118 SLOPE
14513+54	14517+34	VA-FR-153	380 LF 384 SLOPE
14517+34	14521+30	VA-FR-154	396 LF 398 SLOPE
14521+30	14521+73	VA-FR-154 / VA-FR-155	43 LF 44 SLOPE
14521+73	14522+63	VA-FR-155	90 LF 91 SLOPE
14522+63	14524+49	VA-FR-155.01 / VA-FR-155	186 LF 190 SLOPE
14524+49	14525+02	STATE ROUTE 674	53 LF - 53 SLOPE
14525+02	14528+96	VA-FR-155.02 / VA-FR-156	394 LF 394 SLOPE

DESIGN

Station From	Station To	PIPE / COATING	SLOPE DISTANCE
14470+95	14486+42	2	1556'
14486+42	14486+82	4	40'
14486+82	14496+23	2	968'
14496+23	14497+03	4	80'
14497+03	14517+03	2	2011'
14517+03	14518+37	1	134'
14518+37	14518+77	2	40'
14518+77	14524+36	1	565'
14524+36	14525+16	4	80'
14525+16	14528+96	1	383'

CLASS LOCATION / HCA: 1

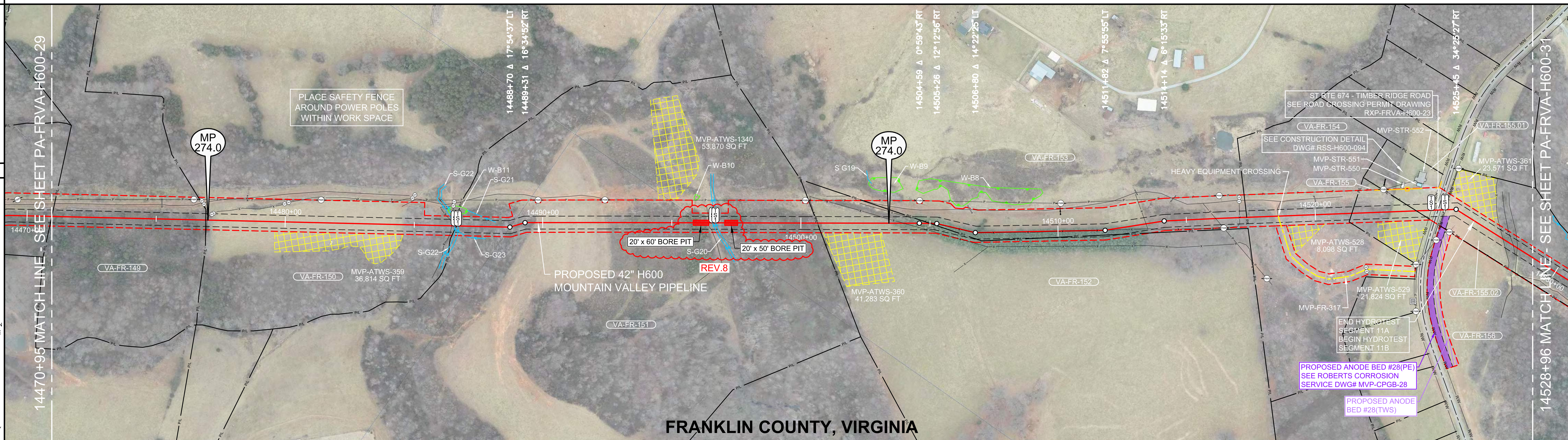
REV.8

ENVIRONMENTAL

CONSTRUCTION EXCLUSION:
14470+95 – TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
FISH RELOCATION REQUIRED WITHIN STREAM S-G22 CONSULT RESPONSIBLE E.I.
TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS – 14528+96

WETLAND / STREAM	S-G22	S-G23	S-G21	S-G20
	12 LF	35 LF	51 LF	11 LF

PLAN VIEW



0' 100' 200' 400'

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-16	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
RXP-FRVA-H600-23	STATE ROUTE 674 PERMIT DWG
RSS-H600-094	RESIDENTIAL SITE SPECIFIC
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
MVP-CPGB-28	ROBERTS CORROSION SERVICE DRAWING

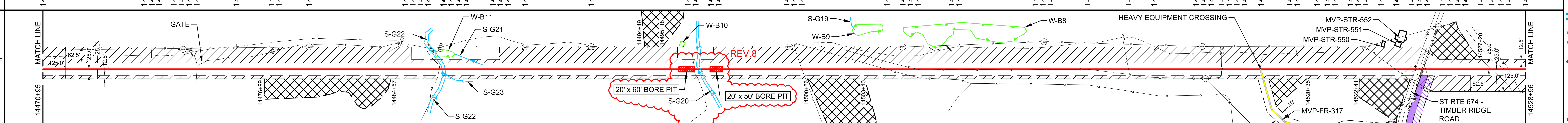
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

14470+95 MATCH LINE, PROPERTY LINE
14475+21 CULVERT OPEN END 76'LT
14475+21 CULVERT OPEN END 47'LT
14476+44 POWER POLE 78'LT
14476+75 GATE POST 74'LT
14476+84 GATE POST 61'LT
14476+92 PROPERTY LINE
14476+97 FENCE - BARBED WIRE
14478+52 CULVERT OPEN END 79'LT
14479+96 GATE POST 69'LT
14480+12 GATE POST 76'LT
14481+37 POWER POLE 88'LT
14486+23 CULVERT OPEN END 66'LT
14486+45 FENCE - BARBED WIRE
14486+49 GATE POST 78'LT
14486+56 STREAM BANK(S-G22), PROPOSED TYPE 1 TEST STATION
14486+59 PROPOSED RIVER WEIGHT - STREAM
14486+64 PROPERTY LINE
14486+65 BEGIN ℄ STREAM(S-G23) 16'RT
14486+68 STREAM BANK(S-G22), PROPOSED TYPE 1 TEST STATION
14487+00 END ℄ STREAM(S-G23) 37'RT
14487+64 BEGIN ℄ STREAM(S-G21) 38'LT
14488+15 END ℄ STREAMS-G21) 18'LT
14489+82 POWER POLE 87'LT
14492+41 POWER POLE 87'LT
14496+43 ℄ TRAIL(DIRT)
14496+58 STREAM BANK(S-G20), PROPOSED TYPE 1 TEST STATION
14496+64 PROPOSED RIVER WEIGHT - STREAM
14496+69 STREAM BANK(S-G20), PROPOSED TYPE 1 TEST STATION
14500+17 POWER POLE 88'LT
14500+63 PROPERTY LINE
14500+65 FENCE - BARBED WIRE
14503+97 FENCE - BARBED WIRE
14504+59 POWER POLE 87'LT
14505+00 PROPERTY LINE
14505+19 FENCE - ELECTRIC
14506+50 CULVERT OPEN END 71'LT
14506+80 FENCE - ELECTRIC
14510+10 GUY ANCHOR 75'LT
14510+11 GUY ANCHOR 63'LT
14510+38 FENCE - ELECTRIC
14511+82 FENCE - ELECTRIC
14513+43 FENCE - ELECTRIC
14514+43 CULVERT OPEN END 75'LT
14516+14 OHP LINE
14516+31 POWER POLE 87'LT
14516+43 POWER POLE 38'RT
14517+06 FENCE - BARBED WIRE
14517+07 GATE POST 62'LT
14517+08 GATE POST 78'LT
14517+34 PROPERTY LINE
14518+57 ACCESS RD - TEMPORARY (MVP-FR-317), HEAVY EQUIPMENT CROSSING
14519+97 CULVERT OPEN END 71'LT
14520+03 CULVERT OPEN END 52'LT
14521+42 PROPERTY LINE
14522+67 POWER POLE 87'LT
14523+45 BUILDING - NON SURVEYED 89'LT
14523+92 PROPERTY LINE
14523+92 OHP LINE
14524+14 BUILDING - NON SURVEYED 91'LT
14524+32 BUILDING - NON SURVEYED 111'LT
14524+49 PROPOSED TYPE 1 TEST STATION,R/W
14524+66 EDGE OF ASPHALT
14524+75 CULVERT OPEN END 52'RT
14524+76 ℄ ST RTE 674 - TIMBER RIDGE ROAD
14524+87 EDGE OF ASPHALT
14525+00 FENCE - ELECTRIC
14525+05 OHP LINE
14525+02 PROPOSED TYPE 1 TEST STATION,R/W
14525+16 POWER POLE 87'RT
14527+60 FENCE - ELECTRIC
14528+08 FENCE - BARBED WIRE
14528+26 ℄ FIELD ROAD(DIRT)
14528+96 MATCH LINE

WORK SPACE

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

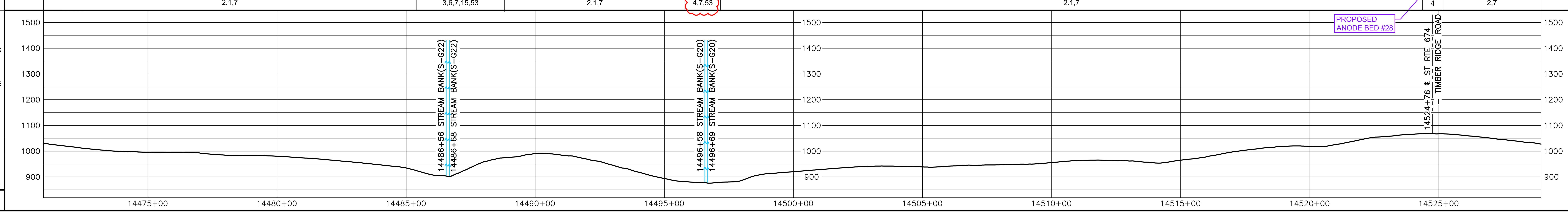


CONSTRUCTION METHOD							
	2.1,7	3,6,7,15,53	2.1,7	4,7,53	2.1,7	4	2,7

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	1082	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	4575	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	200	42"O.D. X 0.740"W.T., X-70, FBE & ARO
	6	TYPE 1 TEST STATION - PIPELINE
	2	RIVER WEIGHTS

REV.8

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
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APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
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APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
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Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE GLADE HILL PCT.,FRANKLIN CO.,VA. STA. 14470+95 TO STA. 14528+96

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -30	
SHEET 300 OF 329	REV. 8
DATE OF PLOT: 02/1/21 3:54 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Tract	Length
14633+10 – 14634+13	VA-FR-162 / VA-FR-162.01	103 LF, 103 SLOPE
14634+13 – 14644+43	VA-FR-162.01	1030 LF, 1032 SLOPE
14644+43 – 14644+94	STATE ROUTE 834	51 LF - 51 SLOPE
14644+94 – 14649+37	VA-FR-162.01	443 LF, 447 SLOPE
14649+37 – 14649+97	STATE HIGHWAY 40	60 LF - 61 SLOPE
14649+97 – 14668+00	VA-FR-169	1803 LF, 1817 SLOPE
14668+00 – 14670+20	VA-FR-170 / VA-FR-169	220 LF, 221 SLOPE
14670+20 – 14680+33	VA-FR-170	1013 LF, 1031 SLOPE
14680+33 – 14684+29	VA-FR-171	396 LF, 401 SLOPE
14684+29 – 14690+48	VA-FR-172	619 LF, 629 SLOPE

DESIGN

Station	PIPE / COATING	SLOPE DISTANCE
14633+10 – 14644+29	1	1121'
14644+29 – 14645+09	4	80'
14645+09 – 14649+27	2	422'
14649+27 – 14650+07	4	80'
14650+07 – 14656+48	1	646'
14656+48 – 14658+48	4	200'
14658+48 – 14672+90	1	1458'
14672+90 – 14673+30	4	40'
14673+30 – 14679+75	1	645'
14679+75 – 14680+95	4	120'
14680+95 – 14689+16	1	849'
14689+16 – 14689+56	4	40'
14689+56 – 14690+48	1	92'

CLASS LOCATION / HCA: 1

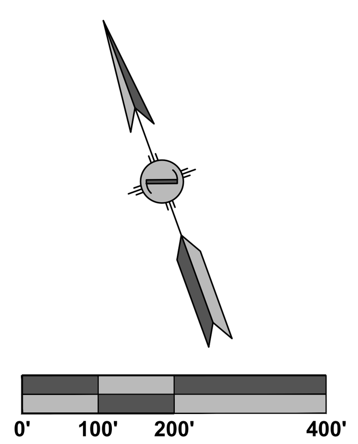
REV.8

ENVIRONMENTAL

CONSTRUCTION EXCLUSION:
- 14633+10: TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-H38 MARCH 15TH TO MAY 31ST & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-H37 MARCH 15TH TO MAY 31ST & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- T.O.Y.R.: SEE TREE CLEARING PLAN
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAMS S-H36 & S-H34 MARCH 15TH TO MAY 31ST & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- T.O.Y.R.: SEE TREE CLEARING PLAN
- 14690+48

WETLAND / STREAM:

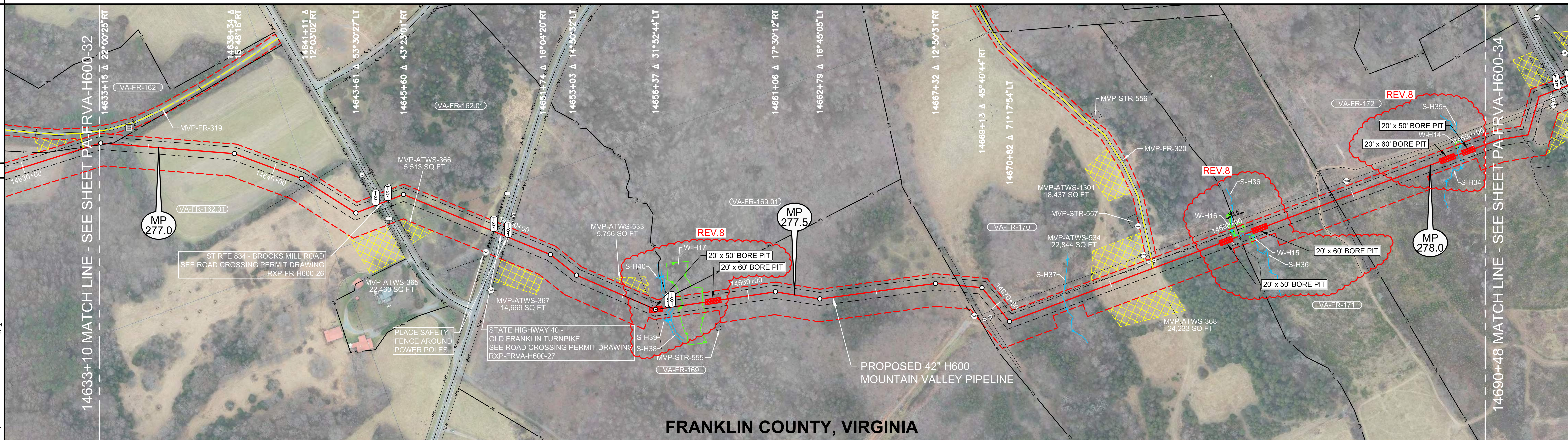
S-H38	W-H17	S-H37	W-H16	S-H36	S-H36	S-H36	W-H15	S-H34	W-H14
13 LF	105 LF	6 LF	58 LF	3 LF	3 LF	3 LF	24 LF	3 LF	23 LF



PLAN VIEW

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

ISSUED FOR CONSTRUCTION

REFERENCE DRAWINGS

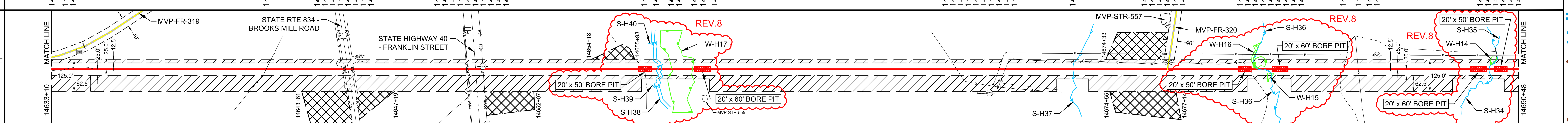
DRAWING NO.	DESCRIPTION
MVP-AR-H600-16	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-105	ACCESS ROAD DETAIL MAP
RXP-FRVA-H600-26	STATE ROUTE 834 PERMIT DWG
RXP-FRVA-H600-27	STATE HIGHWAY 40 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

HORIZONTAL STATIONING

- 14633+10 MATCH LINE
- 14633+32 ℄ FIELD ROAD(DIRT)
- 14633+45 PROPERTY LINE
- 14641+48 FENCE - BARBED WIRE
- **14644+44 PROPOSED TYPE 1 TEST STATION,R/W**
- 14644+45 FENCE - HOG WIRE
- 14644+58 EDGE OF ASPHALT
- 14644+68 SIGN 84'RT
- **14644+69 ℄ ST RTE 834 - BROOKS MILL ROAD**
- 14644+79 EDGE OF ASPHALT
- 14644+91 FENCE - HOG WIRE
- **14644+94 PROPOSED TYPE 1 TEST STATION,R/W**
- 14649+32 OHP LINE
- **14649+37 PROPOSED TYPE 1 TEST STATION,R/W**
- 14649+38 FENCE - BARBED WIRE
- 14649+39 POWER POLE 85'RT
- 14649+55 EDGE OF ASPHALT
- **14649+67 ℄ STATE HIGHWAY 40 - FRANKLIN ST**
- 14649+81 EDGE OF ASPHALT
- 14649+96 POWER POLE 11'LT
- 14649+97 OHP LINE
- **14649+97 PROPOSED TYPE 1 TEST STATION,R/W**
- 14656+27 ℄ FIELD ROAD(DIRT)
- 14656+87 STREAM BANK(S-H38), PROPOSED TYPE 1 TEST STATION
- **14656+91 PROPOSED RIVER WEIGHT - STREAM**
- 14657+00 STREAM BANK(S-H38), PROPOSED TYPE 1 TEST STATION
- 14657+24 BEGIN WETLAND(W-H17) 30'RT
- 14658+29 END WETLAND(W-H17) 38'RT
- 14658+73 BUILDING - BARN 90'RT
- 14668+27 PROPERTY LINE
- 14668+50 FENCE - BARBED WIRE
- 14668+59 GUY ANCHOR 79'RT
- 14668+63 GUY ANCHOR 84'RT
- 14668+67 GUY ANCHOR 88'RT
- 14668+79 POWER POLE 93'RT
- 14670+15 GATE POST 69'RT
- 14670+15 OHP LINE
- 14670+21 GATE POST 47'RT
- 14670+40 FENCE - BARBED WIRE
- 14673+10 ℄ STREAM(S-H37)
- 14676+16 WATER TROUGH 17'LT
- 14676+23 WATER TROUGH 18'LT
- 14676+68 GATE POST 27'LT
- 14676+75 ACCESS ROAD - TEMPORARY (MVP-FR-320)
- 14676+80 EDGE OF GRAVEL
- 14676+90 GATE POST 26'LT
- 14679+92 FENCE - BARBED WIRE
- 14680+04 BEGIN WETLAND(W-H16) 32'LT
- 14680+29 ℄ STREAM(S-H36)
- 14680+33 PROPERTY LINE
- 14680+37 ℄ STREAM(S-H36)
- 14680+55 ℄ STREAM(S-H36)
- 14680+62 END WETLAND(W-H16) 28'LT
- 14680+67 BEGIN WETLAND(W-H15) 15'RT
- 14680+91 END WETLAND(W-H15) 17'RT
- 14683+62 ℄ FIELD ROAD(DIRT)
- 14684+22 FENCE - BARBED WIRE
- 14684+29 PROPERTY LINE
- 14684+94 POWER POLE 56'LT
- 14689+36 ℄ STREAM(S-H34)
- 14689+39 BEGIN WETLAND(W-H14) 19'LT
- 14689+59 CULVERT OPEN END 81'LT
- 14689+62 END WETLAND(W-H14) 37'LT
- 14689+64 CULVERT OPEN END 50'LT
- 14690+48 MATCH LINE

WORK SPACE

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



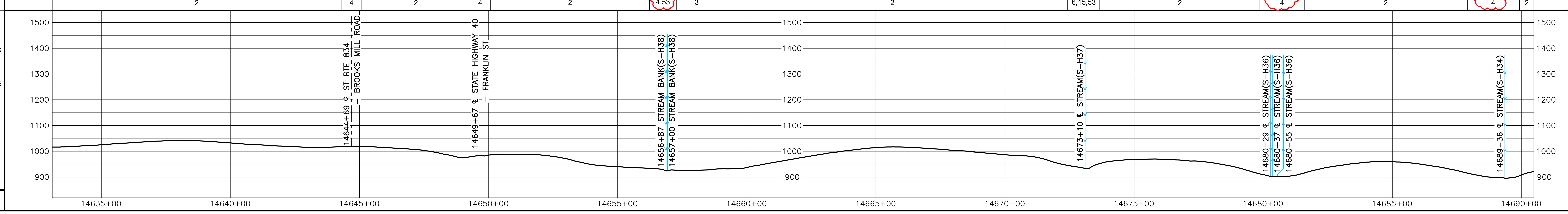
CONSTRUCTION METHOD

2	4	2	4	2	4,53	3	2	6,15,53	2	4	2	4	2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-01-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	4811	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	422	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	560	~~42"O.D. X 0.740"W.T., X-70, FBE & ARO~~
~~6~~	~~80~~	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	6	~~TYPE 1 TEST STATION - PIPELINE~~
	1	RIVER WEIGHTS

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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www.hollandengineering.com

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
PENHOOK PCT.,FRANKLIN CO.,VA.
STA. 14633+10 TO STA. 14690+48

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -33	
SHEET 303 OF 329	REV. 8
DATE OF PLOT: 02/1/21 1:20 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Owner	Length
14690+48 – 14694+52	VA-FR-172	404 LF / 407 SLOPE
14694+52 – 14695+04	STATE ROUTE 662	52 LF - 53 SLOPE
14695+04 – 14704+48	VA-FR-172	944 LF / 958 SLOPE
14704+48 – 14708+93	VA-FR-173	445 LF / 447 SLOPE
14708+93 – 14712+11	VA-FR-174	318 LF / 320 SLOPE
14712+11 – 14712+48	VA-FR-175 / VA-FR-174	37 LF / 37 SLOPE
14712+48 – 14715+46	VA-FR-175	298 LF / 298 SLOPE
14715+46 – 14715+96	VA-FR-176 / VA-FR-175	50 LF / 53 SLOPE
14715+96 – 14717+91	VA-FR-176	195 LF / 197 SLOPE
14717+91 – 14719+61	VA-FR-176 / VA-FR-177	170 LF / 171 SLOPE
14719+61 – 14724+35	VA-FR-178	474 LF / 480 SLOPE
14724+35 – 14725+20	VA-FR-178 / VA-FR-179	85 LF / 86 SLOPE
14725+20 – 14728+52	VA-FR-179	332 LF / 342 SLOPE
14728+52 – 14728+98	VA-FR-178 / VA-FR-179	46 LF / 46 SLOPE
14728+98 – 14735+57	VA-FR-179	659 LF / 670 SLOPE
14735+57 – 14737+92	VA-FR-180	235 LF / 237 SLOPE
14737+92 – 14744+73	BVFR-56 / VA-FR-180	681 LF / 688 SLOPE
14744+73 – 14748+92	VA-FR-180	419 LF / 421 SLOPE

DESIGN

Station	PIPE / COATING	SLOPE DISTANCE
14690+48 – 14694+38	1	393'
14694+38 – 14695+18	4	80'
14695+18 – 14700+45	1	536'
14700+45 – 14701+25	4	80'
14701+25 – 14727+42	1	2649'
14727+42 – 14727+82	6	40'
14727+82 – 14728+64	1	86'
14728+64 – 14729+44	4	80'
14729+44 – 14748+92	1	1967'

REV.8

CLASS LOCATION / HCA: 1

ENVIRONMENTAL

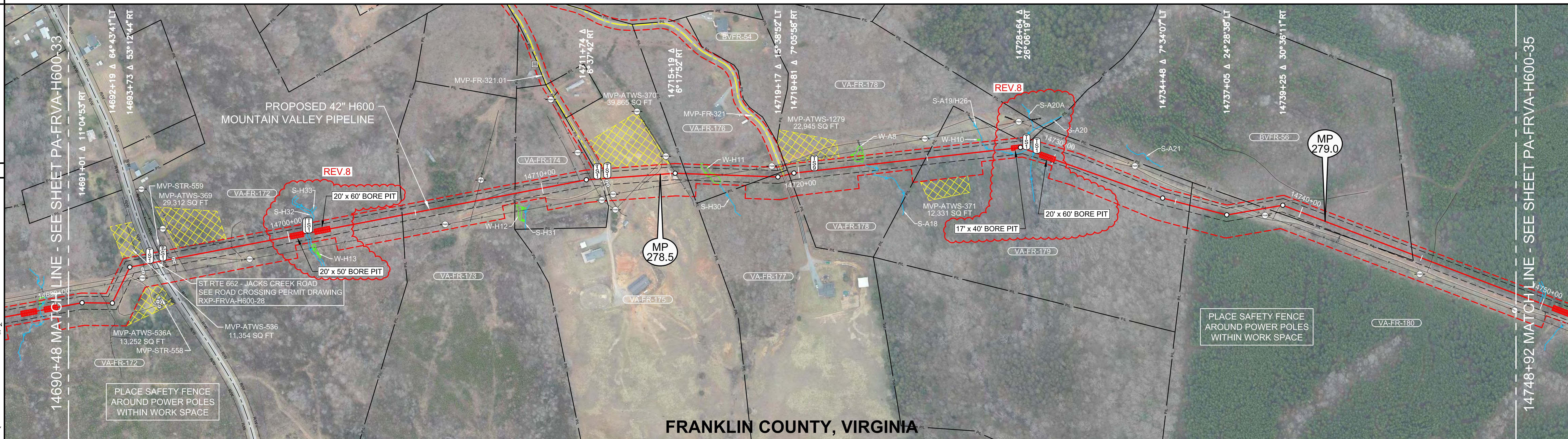
CONSTRUCTION EXCLUSION:
- 14690+48: TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-H32 MARCH 15TH TO MAY 31ST & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAMS, S-A18, S-A19/H26 & S-A20 MARCH 15TH TO MAY 31ST and FISH RELOCATION REQUIRED WITHIN STREAM S-A20 SEE RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS (to 14748+92)

WETLAND / STREAM:

S-H32	W-H11	S-H30	W-A8	S-A18	S-A19/H26	S-A19/H26	S-A20
10 LF	81 LF	1 LF	45 LF	2.6 LF	7 LF	7 LF	7 LF

0' 100' 200' 400'

PLAN VIEW



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-16	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-105	ACCESS ROAD DETAIL MAP
MVP-QDAR-H600-106	ACCESS ROAD DETAIL MAP
RXP-FRVA-H600-28	STATE ROUTE 662 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-W-H600-1204-02	CATHODIC PROTECTION STANDARD DRAWING

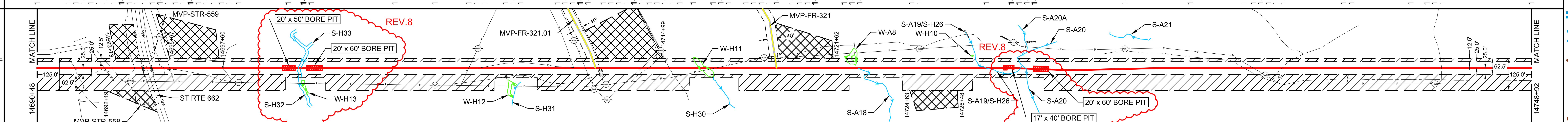
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

14690+48 MATCH LINE
14691+95 FENCE – HOG WIRE
14693+11 OHP LINE
14693+40 ℄ FIELD ROAD(DIRT)
14694+13 POWER POLE 51'RT
14694+20 GATE POST 17'RT
14694+21 GATE POST 30'RT
14694+29 FENCE – HOG WIRE
14694+52 PROPOSED TYPE 1 TEST STATION,R/W
14694+57 CULVERT OPEN END 6'LT
14694+65 BUILDING – BARN 122'RT
14694+66 EDGE OF ASPHALT
14694+68 CULVERT OPEN END 33'RT
14694+77 ℄ ST RTE 662 – JACKS CREEK ROAD
14694+89 EDGE OF ASPHALT
14694+94 CULVERT OPEN END 10'LT
14694+97 BUILDING –HOUSE– DEMOLISHED 38'LT
14695+04 PROPOSED TYPE 1 TEST STATION,R/W
14695+05 CULVERT OPEN END 28'RT
14695+46 GATE POST, GATE
14695+47 GATE POST 13'RT
14695+66 OHP LINE
14697+76 FENCE – HOG WIRE
14698+35 POWER POLE 57'RT
14700+70 STREAM BANK(S–H32)
14700+74 PROPOSED TYPE 1 TEST STATION
PROPOSED RIVER WEIGHT – STREAM
14700+80 STREAM BANK(S–H32)
PROPOSED TYPE 1 TEST STATION
14704+48 PROPERTY LINE
14706+04 POWER POLE 67'RT
14707+36 OHP LINE
14707+72 POWER POLE 76'LT
14707+76 FENCE – ELECTRIC
14708+81 CULVERT OPEN END 23'RT
14708+84 CULVERT OPEN END 43'RT
14708+93 PROPERTY LINE
14711+93 OHP LINE
14712+27 POWER POLE 83'RT
14712+29 PROPERTY LINE
14712+16 PROPOSED TYPE 1 TEST STATION
14712+33 ACCESS ROAD – TEMPORARY (MVP–FR–321.01)
14712+46 CULVERT OPEN END 12'RT
14712+48 FENCE – ELECTRIC
14712+50 CULVERT OPEN END 32'RT
14712+52 GATE POST 13'RT
14712+55 PROPOSED TYPE 1 TEST STATION
14712+56 GATE POST 27'RT
14712+73 POWER POLE 64'RT
14714+13 OHP LINE
14714+39 ℄ DRIVEWAY(GRAVEL)
14715+21 FENCE – ELECTRIC
14715+61 PROPERTY LINE
14716+15 BEGIN WETLAND(W–H11) 37'LT
14716+92 ℄ STREAM(S–H30) 33'RT
14716+96 END WETLAND(W–H11) 23'RT
14717+01 OHP LINE
14718+82 PROPERTY LINE
14718+92 POWER POLE 41'LT
14719+23 CULVERT OPEN END 25'LT
14719+35 EDGE OF GRAVEL
14719+41 ACCESS ROAD – TEMPORARY (MVP–FR–321)
14719+46 ℄ DRIVEWAY(GRAVEL)
14719+48 EDGE OF GRAVEL
14719+61 CULVERT OPEN END 26'LT
PROPERTY LINE
14720+60 PROPOSED TYPE 9 TEST STATION
14722+11 BEGIN WETLAND(W–A8) 38'LT
14722+56 END WETLAND(W–A8) 35'LT
14722+60 ℄ STREAM(S–A18)
14724+95 PROPERTY LINE
14724+99 POWER POLE 75'LT
14727+62 ℄ STREAM(S–A19/H26)
14728+91 PROPOSED TYPE 1 TEST STATION
14728+90 ℄ STREAM(S–A19/H26)
14729+19 ℄ STREAM(S–A20)
14729+30 PROPOSED TYPE 1 TEST STATION
14733+03 POWER POLE 75'LT
14735+57 PROPERTY LINE
14737+68 ℄ FIELD ROAD(ROCK)
14738+04 OHP LINE
14738+51 POWER POLE 27'RT
14738+57 PROPERTY LINE
14739+10 POST – YELLOW "T" 35'RT
14739+17 ℄ TRAIL(GRAVEL)
14741+70 CULVERT OPEN END 58'RT
14741+75 CULVERT OPEN END 28'RT
14744+63 PROPERTY LINE
14744+97 PROPERTY CORNER 16'RT
14745+16 POWER POLE 61'RT
14745+40 ℄ TRAIL(GRAVEL)
14748+92 MATCH LINE

WORK SPACE

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



CONSTRUCTION METHOD

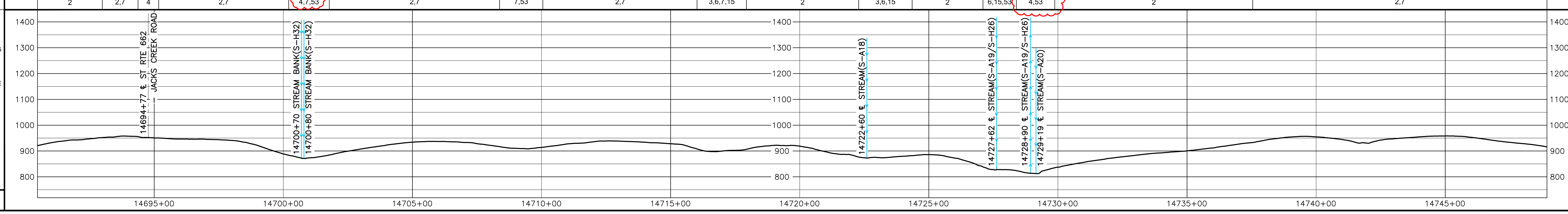
14690+48 –													
2	2,7	4	2,7	4,7,53	2,7	7,53	2,7	3,6,7,15	2	3,6,15	2	6,15,53	4,53

2	2,7

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5631	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
4	240	42"O.D. X 0.740"W.T., X-70, FBE & ARO
6	40	42"O.D. X 0.617"W.T., X-70, FBE & ARO
	8	TYPE 1 TEST STATION - PIPELINE
	1	TYPE 9 TEST STATION - TEST STATION IR COUPON
	1	RIVER WEIGHTS

REV.8

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-16-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE PENHOOK PCT.,FRANKLIN CO.,VA. STA. 14690+48 TO STA. 14748+92

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -34	
SHEET 304 OF 329	REV. 8
DATE OF PLOT: 02/16/21 6:55 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Parcel	Length
14748+92 – 14757+89	VA-FR-180	897 LF / 905 SLOPE
14757+89 – 14758+43	STATE ROUTE 952	54 LF - 54 SLOPE
14758+43 – 14771+08	VA-FR-180	1265 LF / 1276 SLOPE
14771+08 – 14771+51	VA-FR-181 / VA-FR-180	43 LF / 44 SLOPE
14771+51 – 14775+89	VA-FR-181	438 LF / 438 SLOPE
14775+89 – 14779+40	VA-FR-182 / VA-FR-181	351 LF / 353 SLOPE
14779+40 – 14788+72	VA-FR-182	932 LF / 944 SLOPE
14788+72 – 14789+00	VA-FR-182 / VA-FR-183	28 LF / 29 SLOPE
14789+00 – 14791+91	VA-FR-183	291 LF / 296 SLOPE
14791+91 – 14796+04	VA-FR-184 / VA-FR-183	413 LF / 422 SLOPE
14796+04 – 14802+05	VA-FR-184	601 LF / 604 SLOPE
14802+05 – 14802+51	VA-FR-184 / VA-FR-183	46 LF / 46 SLOPE
14802+51 – 14803+87	VA-FR-183	136 LF / 138 SLOPE
14803+87 – 14806+16	VA-FR-185 / VA-FR-183	229 LF / 234 SLOPE

DESIGN

Station	PIPE / COATING	SLOPE DISTANCE
14748+92 – 14749+74	1	85'
14749+74 – 14751+74	4	200'
14751+74 – 14757+76	1	607'
14757+76 – 14758+56	4	80'
14758+56 – 14765+71	1	715'
14765+71 – 14766+51	4	80'
14766+51 – 14781+85	1	1553'
14781+85 – 14782+65	4	80'
14782+65 – 14788+57	1	600'
14788+57 – 14788+97	4	40'
14788+97 – 14793+61	1	475'
14793+61 – 14794+41	4	80'
14794+41 – 14801+99	1	764'
14801+99 – 14802+39	2	40'
14802+39 – 14804+99	1	244'
14804+99 – 14805+19	4	40'
14805+19 – 14806+16	1	100'

REV.8

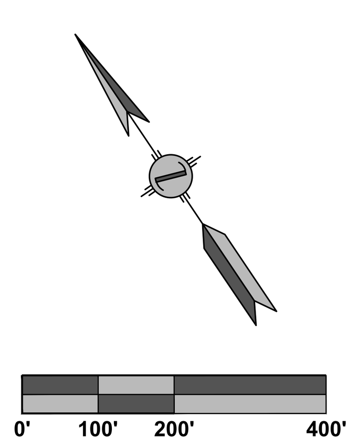
CLASS LOCATION / HCA: 1

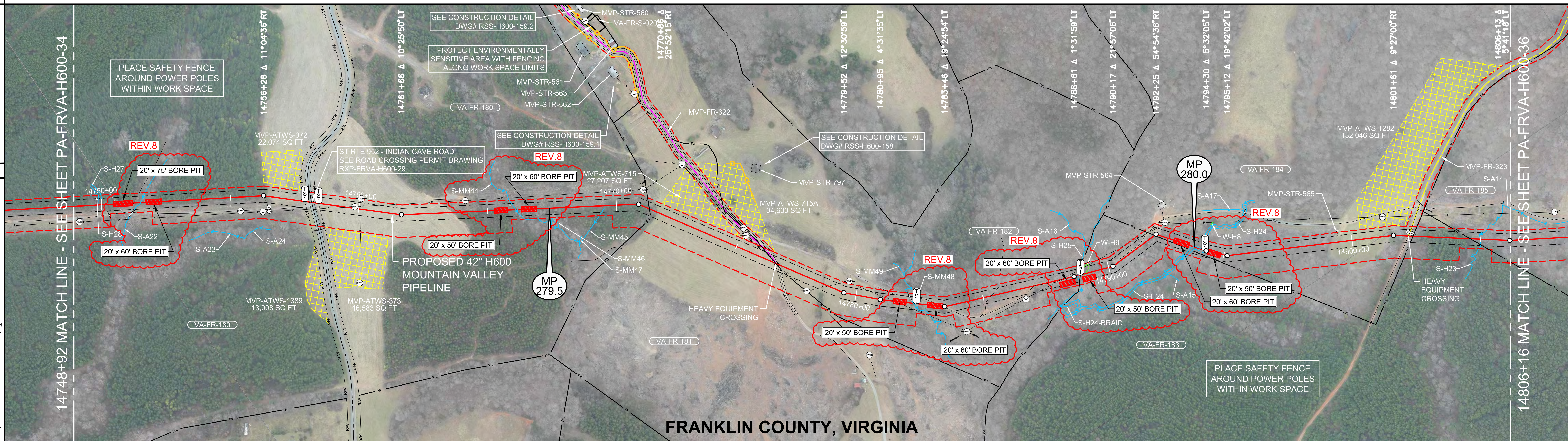
ENVIRONMENTAL

CONSTRUCTION EXCLUSION:
- 14748+92: T.O.Y.R.: SEE TREE CLEARING PLAN
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-A22 MARCH 15TH TO MAY 31ST
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-MM44 CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-MM48 CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-H24 CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- 14806+16

WETLAND / STREAM	S-H28	S-H27	S-A22	S-MM44	S-MM46	S-MM45	S-MM48	S-H25	W-H9	S-H24	S-H23
Length	8 LF	10 LF	8 LF	4 LF	3 LF	4 LF	7 LF	7 LF	25 LF	46 LF	5 LF

PLAN VIEW





LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-16	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-106	ACCESS ROAD DETAIL MAP
MVP-QDAR-H600-107	ACCESS ROAD DETAIL MAP
RXP-FRVA-H600-29	STATE ROUTE 952 PERMIT DWG
RSS-H600-158	RESIDENTIAL SITE SPECIFIC
RSS-H600-159.1	RESIDENTIAL SITE SPECIFIC
RSS-H600-159.2	RESIDENTIAL SITE SPECIFIC
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

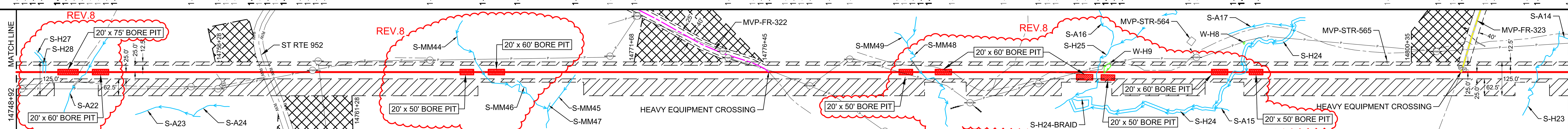
HORIZONTAL STATIONING

- 14748+92 MATCH LINE
- 14749+09 POWER POLE 62'RT
- **14749+81 BEGIN ℄ STREAM(S-H28) 38'LT**
- **14749+89 STREAM BANK(S-H27)**
- **14749+94 END ℄ STREAM(S-H28) 32'LT**
- **14749+94 PROPOSED RIVER WEIGHT – STREAM**
- 14749+99 STREAM BANK(S-H27)
- 14750+23 CULVERT OPEN END 27'RT
- 14750+31 CULVERT OPEN END 52'RT
- 14751+04 CULVERT OPEN END 49'RT
- 14751+25 ℄ TRAIL(DIRT)
- 14751+25 CULVERT OPEN END 27'RT
- 14751+50 ℄ STREAM(S-A22)
- 14755+36 POWER POLE 54'RT
- 14756+34 POWER POLE 62'RT
- 14756+54 GATE POST 42'RT
- 14756+58 GATE POST 58'RT
- **14757+89 PROPOSED TYPE 1 TEST STATION,R/W**
- 14758+07 EDGE OF ASPHALT
- **14758+16 ℄ ST RTE 952 – INDIAN CAVE ROAD**
- 14758+25 EDGE OF ASPHALT
- **14758+43 PROPOSED TYPE 1 TEST STATION,R/W**
- 14759+51 OHP LINE
- 14759+83 POWER POLE 6'LT
- 14760+04 POWER POLE 41'LT
- 14760+09 OHP LINE
- 14764+16 POWER POLE 44'LT
- **14766+11 ℄ STREAM(S-MM44)**
- **14767+38 ℄ STREAM(S-MM46) 32'RT**
- **14769+52 ℄ STREAM(S-MM45) 11'RT**
- 14770+86 POWER POLE 59'LT
- 14771+31 PROPERTY LINE
- 14775+15 POWER POLE 52'LT
- 14776+55 EDGE OF GRAVEL
- 14776+64 PROPERTY LINE
- **14776+65 ACCESS RD–PERMANENT(MVP–FR–322), HEAVY EQUIPMENT CROSSING**
- 14776+74 EDGE OF GRAVEL
- 14776+86 OHP LINE
- 14777+58 CULVERT OPEN END 91'RT
- 14778+17 POWER POLE 51'RT
- 14778+87 OHP LINE
- 14779+64 POWER POLE 48'LT
- 14781+48 OHP LINE
- 14781+94 CULVERT OPEN END 41'LT
- 14782+18 CULVERT OPEN END 8'LT
- **14782+25 ℄ STREAM(S–MM48)**
- **14782+37 PROPOSED TYPE 1 TEST STATION**
- 14783+41 ℄ FIELD ROAD(GRAVEL)
- 14785+31 ℄ FIELD ROAD(DIRT)
- 14786+60 POWER POLE 43'RT
- 14787+04 ℄ FIELD ROAD(GRAVEL)
- 14787+14 ℄ FIELD ROAD(GRAVEL)
- 14788+10 OHP LINE
- 14788+30 ℄ FIELD ROAD(GRAVEL)
- **14788+77 ℄ STREAM(S–H25)**
- **14788+86 PROPOSED TYPE 1 TEST STATION,℄**
- **14789+02 BEGIN WETLAND(W–H9)**
- **14789+27 END WETLAND(W–H9) 22'LT**
- 14792+17 PROPERTY LINE
- 14792+42 POWER POLE 54'LT
- **14793+78 STREAM BANK(S–H24)**
- **14793+82 BEGIN PROPOSED 2 RIVER WEIGHTS AT 20' SPACING IN STREAM**
- 14794+24 STREAM BANK(S–H24), PROPOSED TYPE 1 TEST STATION
- 14799+47 BUILDING – DEER BLIND 32'LT
- 14801+34 PROPERTY CORNER 68'RT
- 14802+17 GATE POST 16'LT
- **14802+19 ACCESS ROAD – TEMPORARY (MVP–FR–323), HEAVY EQUIPMENT CROSSING**
- 14802+31 GATE POST 10'LT
- 14802+37 PROPERTY LINE
- 14804+59 PROPERTY LINE
- **14804+99 ℄ STREAM(S–H23)**
- 14806+16 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

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



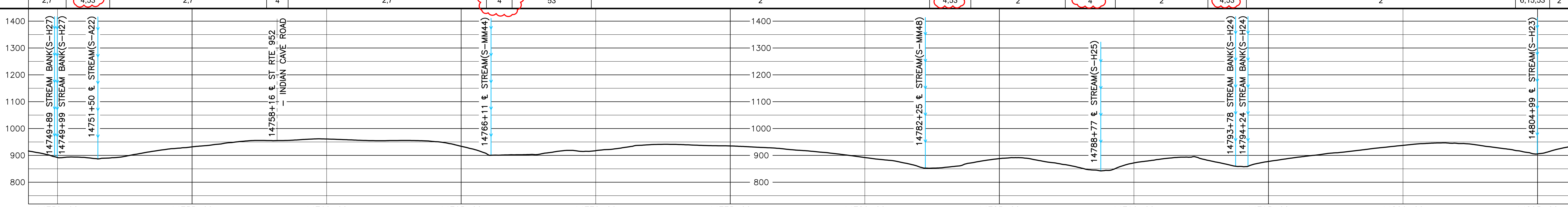
CONSTRUCTION METHOD

2,7	4,53	2,7	4	2,7	4	53	2	4,53	2	4	2	4,53	2	6,15,53	2

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5143	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	40	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	600	~~42"O.D. X 0.740"W.T., X-70, FBE & ARO~~
6	200	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	5	TYPE 1 TEST STATION - PIPELINE
	3	RIVER WEIGHTS

REV.8

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-12-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE PENHOOK PCT.,FRANKLIN CO.,VA. STA. 14748+92 TO STA. 14806+16

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -35	
SHEET 305 OF 329	REV. 8
DATE OF PLOT: 02/12/21 7:31 AM	

MOUNTAIN VALLEY PROJECT - H600 LINE
PIPELINE ALIGNMENT
PENHOOK PCT.,FRANKLIN CO.,VA.
STA. 14806+16 STA. 14865+06

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Tract	Length
14806+16	VA-FR-185	2464 LF / 2479 SLOPE
14830+80	VA-FR-185 / VA-FR-186	37 LF / 37 SLOPE
14831+17	VA-FR-186	1423 LF / 1428 SLOPE
14845+40	STATE ROUTE 658	58 LF - 58 SLOPE
14845+98	VA-FR-187	811 LF / 815 SLOPE
14854+09	VA-FR-188	707 LF / 713 SLOPE
14861+16	STATE ROUTE 659	31 LF - 31 SLOPE
14861+47	VA-FR-188	52 LF / 52 SLOPE
14861+99	VA-FR-189 / VA-FR-188	29 LF / 29 SLOPE
14862+28	VA-FR-189	277 LF / 278 SLOPE
14865+06		

DESIGN

Station	PIPE / COATING	SLOPE DISTANCE
14806+16	1	1708'
14823+15	4	80'
14823+95	1	2061'
14844+45	7	5'
14844+50	1	80'
14845+30	4	80'
14846+10	1	719'
14853+23	4	40'
14853+63	2	52'
14854+15	4	120'
14855+35	1	579'
14861+11	4	40'
14861+51	1	356'
14865+06		

REV.8

CLASS LOCATION / HCA: 1

ENVIRONMENTAL

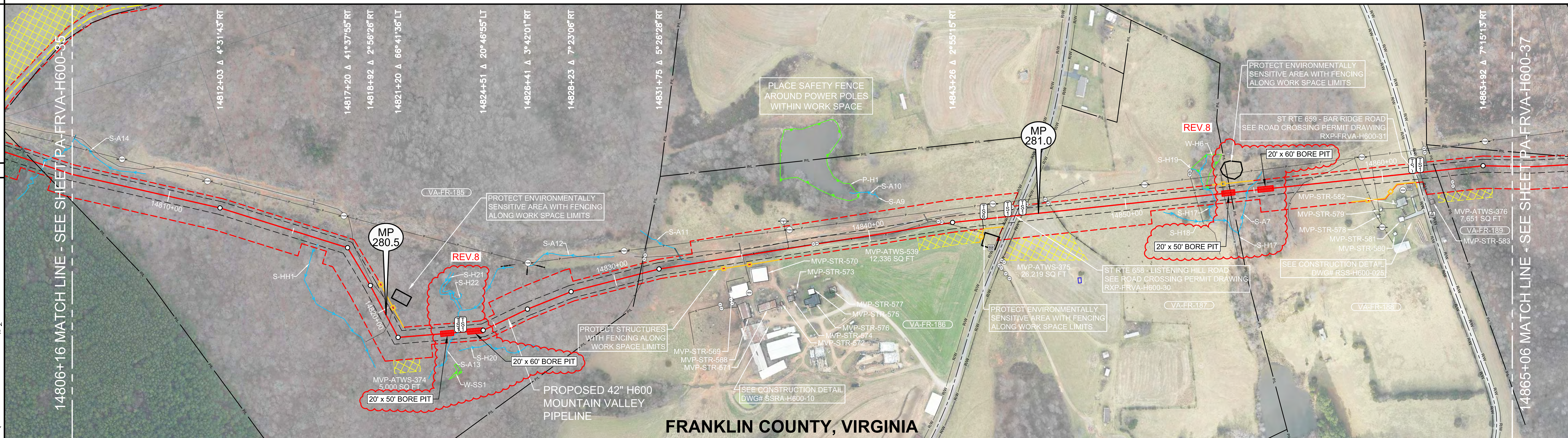
CONSTRUCTION EXCLUSION:
- 14806+16 — TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION MARCH 15TH TO JUNE 30TH WITHIN STREAM S-A13 & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-A7 CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS — 14865+06

WETLAND / STREAM:

S-HH1	S-A13	S-A11	W-H6	S-H17	S-A7
5 LF	8 LF	41 LF	23 LF	8 LF	6 LF

PLAN VIEW

0' 100' 200' 400'



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-16	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-107	ACCESS ROAD DETAIL MAP
RXP-FRVA-H600-30	STATE ROUTE 658 PERMIT DWG
RXP-FRVA-H600-31	STATE ROUTE 659 PERMIT DWG
RSS-H600-025	RESIDENTIAL SITE SPECIFIC
SSRA-H600-10	SITE SPECIFIC - DOWN CREEK FARM
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-W-H600-1204-02	CATHODIC PROTECTION STANDARD DRAWING

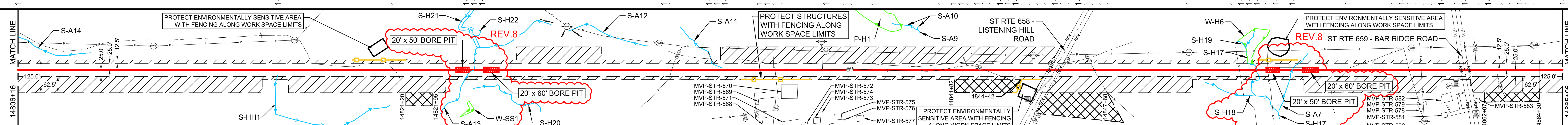
HORIZONTAL STATIONING

ISSUED FOR CONSTRUCTION

- 14806+16 MATCH LINE
- 14816+07 ℄ STREAM(S-HH1) 20'RT
- 14820+50 ℄ FIELD ROAD(DIRT)
- **14823+53 PROPOSED TYPE 1 TEST STATION**
- 14823+54 ℄ STREAM(S-A13)
- **14823+72 PROPOSED TYPE 1 TEST STATION**
- 14830+98 PROPERTY LINE
- 14831+09 FENCE - BARBED WIRE
- **14832+61 BEGIN ℄ STREAM(S-A11) 38'LT**
- 14832+66 CULVERT OPEN END 23'LT
- **14833+02 END ℄ STREAM(S-A11) 7'LT**
- 14834+97 CULVERT OPEN END 49'LT
- 14834+99 CULVERT OPEN END 10'LT
- 14835+03 FENCE - HOG WIRE
- 14835+89 BUILDING - BARN 57'RT
- 14836+97 POWER POLE 71'LT
- 14837+80 GATE POST 2'LT
- 14837+93 GATE POST 2'LT
- 14838+81 FENCE - BARBED WIRE
- 14841+35 FENCE - BARBED WIRE
- 14842+21 CULVERT OPEN END 47'LT
- 14842+32 CULVERT OPEN END 20'LT
- 14842+72 GATE POST 12'LT
- 14842+84 GATE POST 8'LT
- 14843+02 FENCE - HOG WIRE
- 14844+47 SENSITIVE AREA 52'RT
- **14844+47 PROPOSED TYPE 6 TEST STATION**
- 14844+88 POWER POLE 55'LT
- **14845+40 PROPOSED TYPE 1 TEST STATION,R/W**
- 14845+41 FENCE - HOG WIRE
- 14845+53 GATE POST 21'LT
- 14845+56 EDGE OF ASPHALT
- 14845+61 GATE POST 35'LT
- **14845+68 ℄ ST RTE 658 - LISTENING HILL ROAD**
- 14845+80 EDGE OF ASPHALT
- 14845+95 FENCE - HOG WIRE
- **14845+98 PROPOSED TYPE 1 TEST STATION,R/W**
- 14846+10 GATE POST 26'LT
- 14846+18 GATE POST 40'LT
- 14847+01 GATE POST 33'LT
- 14847+19 FENCE - BARBED WIRE
- 14850+80 POWER POLE 66'LT
- 14852+73 FENCE - WIRE
- **14853+03 BEGIN WETLAND(W-H6) 37'LT**
- **14853+26 END WETLAND(W-H6) 23'LT**
- **14853+39 ℄ STREAM(S-H17)**
- 14853+82 FENCE - BARBED WIRE
- 14854+09 PROPERTY LINE
- **14854+75 ℄ STREAM(S-A7)**
- 14856+86 FENCE - BARBED WIRE
- 14859+20 FENCE - ELECTRIC
- 14859+66 OHP LINE
- 14859+85 BUILDING - BARN 120'RT
- 14860+73 WELL - WATER 61'RT
- 14860+78 BUILDING - HOUSE 87'RT
- 14861+00 PEDESTAL - TELEPHONE 52'RT
- **14861+16 PROPOSED TYPE 1 TEST STATION,R/W**
- 14861+21 EDGE OF DIRT
- **14861+31 ℄ ST RTE 659 - BAR RIDGE ROAD**
- 14861+42 EDGE OF DIRT
- **14861+47 PROPOSED TYPE 1 TEST STATION,R/W**
- 14861+53 CULVERT OPEN END 40'RT
- 14861+88 BUILDING - BARN 107'RT
- 14862+08 PROPERTY LINE
- 14862+67 GATE POST 50'RT
- 14862+68 GATE POST 66'RT
- 14865+06 MATCH LINE

WORK SPACE

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



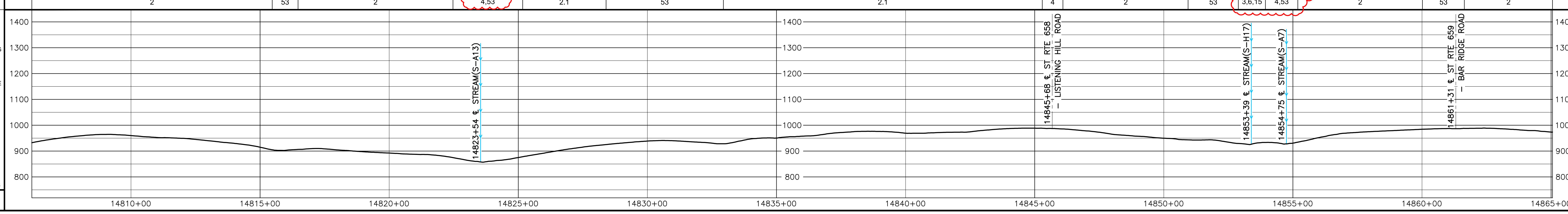
CONSTRUCTION METHOD

2	53	2	4,53	2.1	53	2.1	4	2	53	3,6,15	4,53	2	53	2

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-01-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5503	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	52	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
~~4~~	~~360~~	~~42"O.D. X 0.740"W.T., X-70, FBE & ARO~~
~~6~~	~~120~~	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
~~7~~	~~5~~	~~ANSI 600 MONOLITHIC INSULATING JOINT~~
	6	TYPE 1 TEST STATION - SIDE POST - BELOW GRADE
	1	TYPE 6 TEST STATION - BELOW GRADE

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -36	
SHEET 306 OF 329	REV. 8
DATE OF PLOT: 02/1/21 4:00 PM	

ISSUED FOR CONSTRUCTION

RIGHT-OF-WAY & OWNERSHIP DATA

Station range	Tract(s)	Length
14865+06 – 14866+80	VA-FR-189	175 LF / 176 SLOPE
14866+80 – 14870+54	VA-FR-190 / VA-FR-189	374 LF / 385 SLOPE
14870+54 – 14870+74	VA-FR-191 / VA-FR-190 / VA-FR-189	20 LF / 21 SLOPE
14870+74 – 14871+06	VA-FR-191 / VA-FR-189	32 LF / 32 SLOPE
14871+06 – 14877+45	VA-FR-191	639 LF / 646 SLOPE
14877+45 – 14878+22	VA-FR-192 / VA-FR-191	77 LF / 77 SLOPE
14878+22 – 14895+78	VA-FR-192	1756 LF / 1777 SLOPE
14895+78 – 14896+74	VA-FR-193 / VA-FR-192	96 LF / 97 SLOPE
14896+74 – 14902+40	VA-FR-193	566 LF / 576 SLOPE
14902+40 – 14904+06	VA-FR-193 / VA-FR-194	166 LF / 169 SLOPE
14904+06 – 14906+95	VA-FR-194	289 LF / 294 SLOPE
14906+95 – 14908+75	VA-FR-193 / VA-FR-194	180 LF / 180 SLOPE
14908+75 – 14913+74	VA-FR-193	499 LF / 502 SLOPE
14913+74 – 14914+69	VA-FR-193 / VA-FR-194	95 LF / 97 SLOPE
14914+69 – 14920+25	VA-FR-194	556 LF / 565 SLOPE
14920+25 – 14923+50	VA-FR-195	325 LF / 328 SLOPE

DESIGN

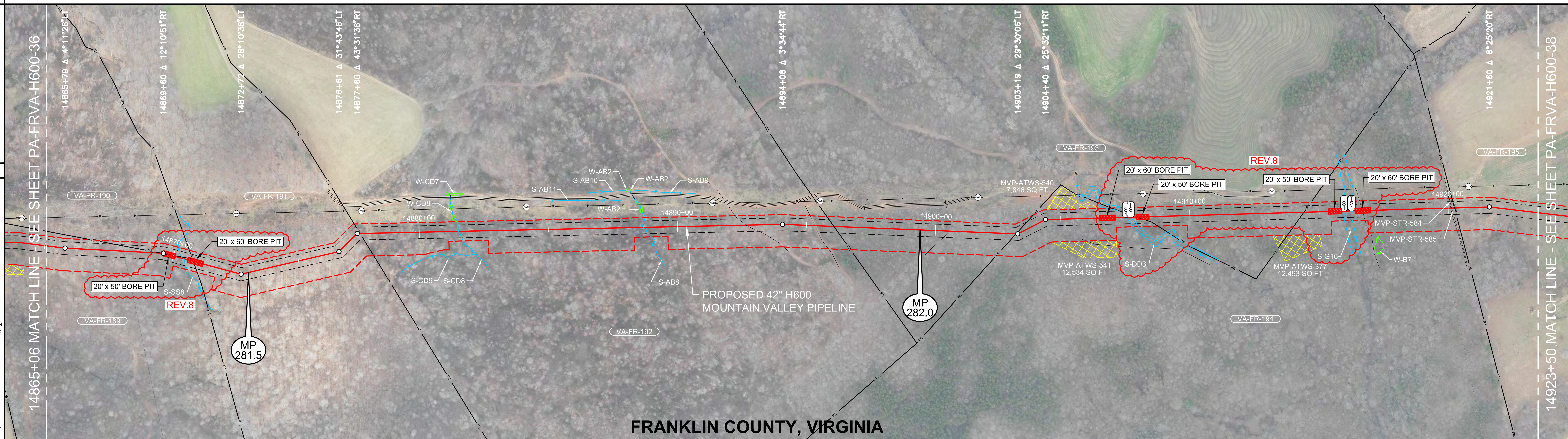
	14865+06 – 14870+04	14870+04 – 14870+84	14870+84 – 14907+06	14907+06 – 14907+86	14907+86 – 14915+72	14915+72 – 14916+52	14916+52 – 14923+50
PIPE / COATING	1	4	1	4	1	4	1
SLOPE DISTANCE	506'	80'	3670'	80'	795'	80'	706'
CLASS LOCATION / HCA	1						

REV.8

ENVIRONMENTAL

CONSTRUCTION EXCLUSION (14865+06 – 14923+50):
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-DD3 MARCH 15TH TO MAY 31ST
- T.O.Y.R.: SEE TREE CLEARING PLAN
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-G16 MARCH 15TH TO MAY 31ST & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- T.O.Y.R.: SEE TREE CLEARING PLAN

WETLAND / STREAM	S-SS8	S-CD8	S-AB8	S-DD3	S-G16
	8 LF	4.5 LF	4 LF	18 LF	30 LF



PLAN VIEW

LEGEND

STUDY CORRIDOR
PROPOSED 42"PIPELINE
NON-SURVEYED C/L
500' TICK MARK
EXISTING PIPELINE
PERMANENT EASEMENT
WORK SPACE LIMITS
PERMANENT ACCESS RD
TEMPORARY ACCESS RD
ANCILLARY SITE
COUNTY LINE
PROPERTY LINE
ROAD RIGHT-OF-WAY
FENCE LINE
OVERHEAD POWER
OVERHEAD TELEPHONE
C/L ROAD
C/L RAILROAD
DELINEATED STREAM
DELINEATED WETLAND
BARRICADE FENCE
PI SYMBOL / PROPOSED TEST STATION
MAILBOX / LINE MARKER - VENT PIPE
POWER/TELE POLE
SIGN / TOWER LEG
TREE / GUY ANCHOR
TANK / GAS VALVE
WELL - GAS/OIL/WATER/ MONITORING
POST - GATE/FENCE
ELEC/GAS/WTR METER
PEDESTAL - UTILITY
MH - SANITARY/WATER
CATCH BASIN - CULVERT
ADDITIONAL TEMPORARY WORK SPACE(ATWS)
ABOVE GROUND FACILITY
LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

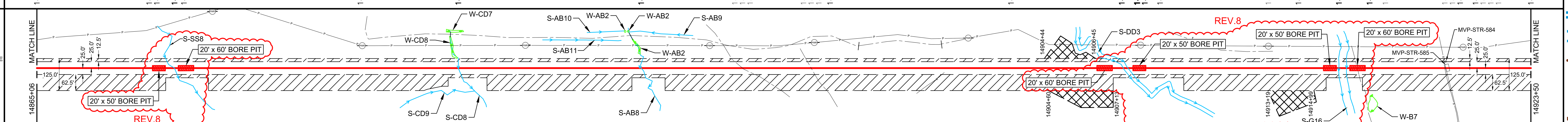
DRAWING NO.	DESCRIPTION
MVP-AR-H600-16	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

HORIZONTAL STATIONING

14865+06 MATCH LINE
14869+51 PROPERTY LINE
14869+74 PROPERTY LINE
14870+43 ℄ STREAM(S-SS8)
14870+80 PROPERTY LINE
14877+71 PROPERTY LINE
14881+54 ℄ STREAM(S-CD8)
14888+69 ℄ STREAM(S-AB8)
14892+58 EDGE OF DIRT
14892+66 ℄ TRAIL(DIRT)
14892+74 EDGE OF DIRT
14895+27 EDGE OF DIRT
14895+33 ℄ TRAIL(DIRT)
14895+38 EDGE OF DIRT
14896+07 PROPERTY LINE
14903+13 PROPERTY LINE
14907+52 STREAM BANK(S-DD3), PROPOSED TYPE 1 TEST STATION
14907+57 PROPOSED RIVER WEIGHT - STREAM
14907+70 STREAM BANK(S-DD3), PROPOSED TYPE 1 TEST STATION
14907+94 PROPERTY LINE
14913+20 POWER POLE 85'LT
14914+41 PROPERTY LINE
14915+96 STREAM BANK(S-G16), PROPOSED TYPE 1 TEST STATION, BEGIN PROP. 2 RIVER WEIGHTS AT 10' SPACING - STREAM
14916+26 STREAM BANK(S-G16), PROPOSED TYPE 1 TEST STATION
14916+68 ℄ FIELD ROAD(DIRT)
14920+10 FENCE - BARBED WIRE
14920+11 BUILDING-DEER BLIND 23'LT
14920+14 BUILDING - BARN, FENCE - HOG WIRE
14920+25 PROPERTY LINE
14920+27 BUILDING - BARN
14920+29 BUILDING - BARN 11'RT
14920+81 POWER POLE 81'LT
14923+50 MATCH LINE

WORK SPACE

PROPOSED PIPELINE
EXISTING PIPELINE
ACCESS ROAD TEMPORARY WORK SPACE
PERMANENT EASEMENT
TEMPORARY WORK SPACE(TWS)
ADD. TEMPORARY WORK SPACE(ATWS)



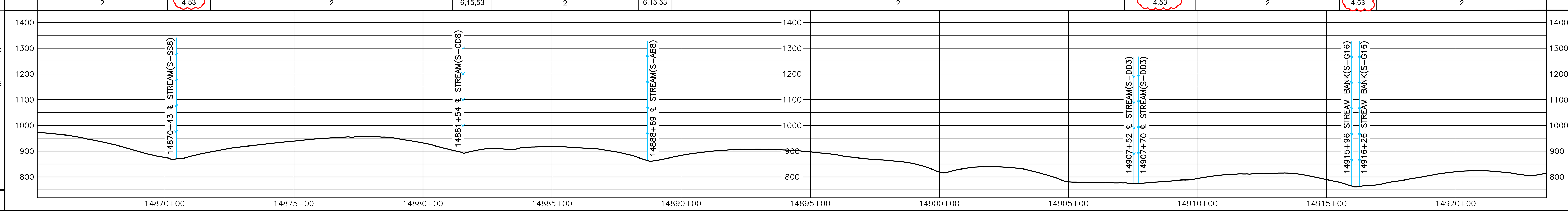
CONSTRUCTION METHOD

14865+06 – 14870+04	14870+04 – 14870+84	14870+84 – 14881+	S-CD8		S-AB8		S-DD3		S-G16	
2	4,53	2	6,15,53	2	6,15,53	2	4,53	2	4,53	2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-12-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
~~1~~	~~5677~~	~~42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY~~
4	240	42"O.D. X 0.740"W.T., X-70, FBE & ARO
~~6~~	~~120~~	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	4	TYPE 1 TEST STATION - PIPELINE
	3	RIVER WEIGHTS

REV.8

APPROVED FOR FERC		
REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING		
REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR CONSTRUCTION		
REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

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www.hollandengineering.com

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
PENHOOK PRECINCT, FRANKLIN CO.,VA.
STA. 14865+06 TO STA. 14923+50

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -37	
SHEET 307 OF 329	REV. 8
DATE OF PLOT: 02/12/21 7:35 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

14923+50	VA-FR-195 482 LF 488 SLOPE	14928+32 STATE ROUTE 626 40 LF - 41 SLOPE 14928+72	VA-FR-195 1240 LF 1251 SLOPE	14941+12 VA-FR-196 888 LF 893 SLOPE	14950+00 VA-FR-196 / VA-FR-196.01 24 LF 24 SLOPE 14950+24	VA-FR-196.01 2691 LF 2724 SLOPE 14977+15

DESIGN

PIPE / COATING	14923+50 1 14928+12	4	14928+92 1 14932+69	4	14933+09 1 14950+07	6	14950+87 1 14958+36	2	14958+76 1 14968+49	2	14968+89 1 14977+15
SLOPE DISTANCE	469'	80'	384'	40'	1710'	80'	750'	40'	998'	40'	830'
CLASS LOCATION / HCA	1										

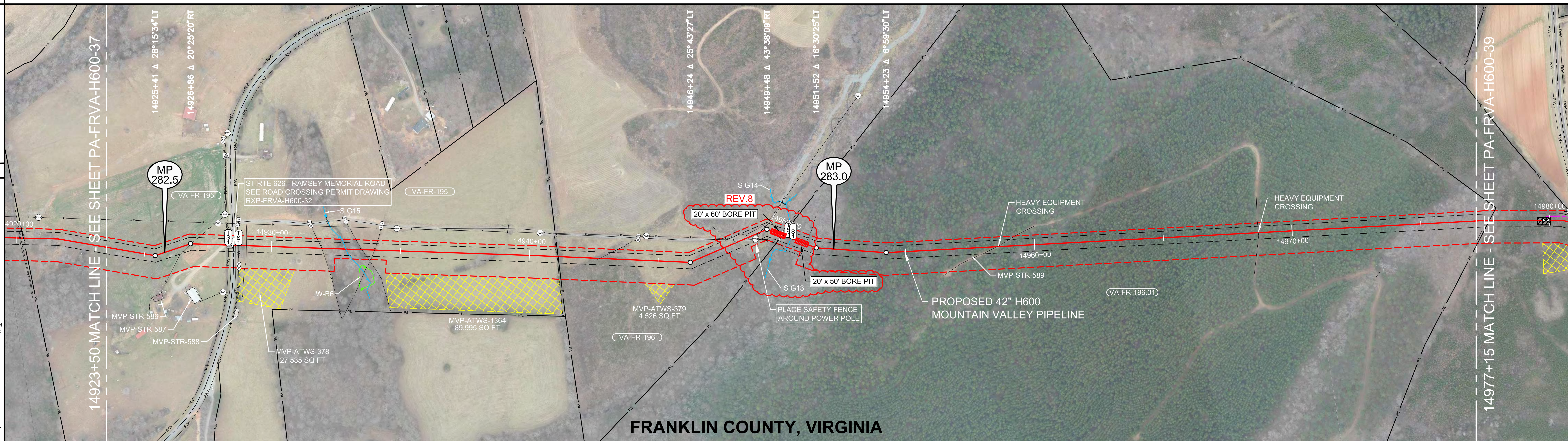
REV.8

ENVIRONMENTAL

CONSTRUCTION EXCLUSION	14923+50 TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS	T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-G13 MARCH 15TH TO MAY 31 ST & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.	TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS 14977+15
WETLAND / STREAM	S-G15 9 LF	S-G13 8 LF	
.			
.			

0' 100' 200' 400'

PLAN VIEW



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-16	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
RXP-FRVA-H600-32	STATE ROUTE 626 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

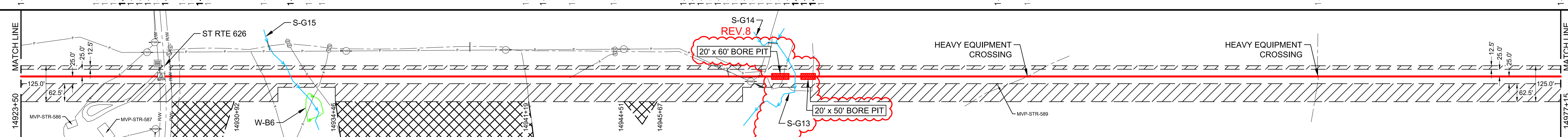
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

14923+50 MATCH LINE
14926+88 FENCE - HOG WIRE
14928+10 EDGE OF DIRT
14928+26 EDGE OF DIRT
14928+32 PROPOSED TYPE 1 TEST STATION,R/W
14928+33 CULVERT OPEN END 33'LT
14928+35 CULVERT OPEN END 2'LT
14928+38 MAILBOX
14928+42 EDGE OF ASPHALT
14928+52 ℄ ST RTE 626 - RAMSEY MEMORIAL ROAD
14928+61 EDGE OF ASPHALT
14928+70 FENCE - HOG WIRE
14928+72 PROPOSED TYPE 1 TEST STATION,R/W
14929+03 ℄ FIELD ROAD(DIRT)
14931+95 FENCE - HOG WIRE
14932+89 ℄ STREAM(S-G15)
14933+51 FENCE - HOG WIRE
14934+00 FENCE - HOG WIRE
14941+08 FENCE - BARBED WIRE
14941+12 PROPERTY LINE
14942+74 FENCE - BARBED WIRE
14944+19 GATE POST 78'LT
14948+09 CULVERT OPEN END 29'LT
14948+16 CULVERT OPEN END
14948+53 OHP LINE
14948+54 ℄ FIELD ROAD(ROCK)
14948+92 POWER POLE 17'RT
14949+09 ℄ FIELD ROAD(ROCK)
14949+20 GUY ANCHOR 31'RT
14949+21 OHP LINE
14949+25 GUY ANCHOR 34'RT
14949+31 GUY ANCHOR 37'RT
14949+66 GUY ANCHOR 36'RT
14950+07 FENCE - BARBED WIRE
14950+12 PROPERTY LINE
14950+38 PROPOSED TYPE 1 TEST STATION
14950+47 ℄ STREAM(S-G13)
14950+56 PROPOSED TYPE 1 TEST STATION
14951+08 FENCE - BARBED WIRE
14957+53 BUILDING - DEER BLIND 23'RT
14958+56 ℄ FIELD ROAD(DIRT), **HEAVY EQUIPMENT CROSSING**
14968+69 ℄ TRAIL(DIRT), **HEAVY EQUIPMENT CROSSING**
14977+15 MATCH LINE

WORK SPACE

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



CONSTRUCTION METHOD

2	4	2	3,6,15,53	2	4,53	2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
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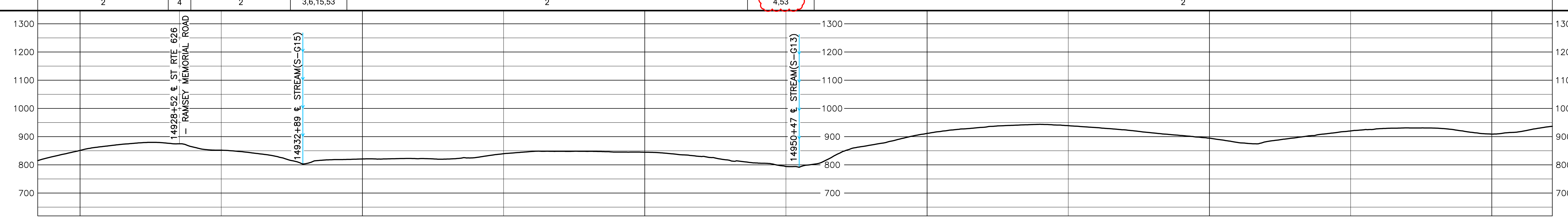
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-01-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5141	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	80	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	120	42"O.D. X 0.740"W.T., X-70, FBE & ARO
6	80	42"O.D. X 0.617"W.T., X-70, FBE & ARO
	4	TYPE 1 TEST STATION - PIPELINE

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE PENHOOK PRECINCT, FRANKLIN CO.,VA. STA. 14923+50 TO STA. 14977+15

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-FRVA-H600 -38	
SHEET 308 OF 329	REV. 8
DATE OF PLOT: 02/1/21 2:01 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station range	Parcel	Length
14998+38 – 15035+07	VA-PI-001	3681 LF, 3709 SLOPE
15035+07 – 15036+24	VA-PI-001 / VA-PI-003	117 LF, 117 SLOPE
15036+24 – 15045+73	VA-PI-003	949 LF, 956 SLOPE
15045+73 – 15046+25	VA-PI-005 / VA-PI-003	52 LF, 52 SLOPE
15046+25 – 15052+04	VA-PI-005	579 LF, 589 SLOPE
15052+04 – 15052+79	VA-PI-005 / VA-PI-006	75 LF, 76 SLOPE
15052+79 – 15056+53	VA-PI-006	374 LF, 378 SLOPE

DESIGN

Station	14998+38	15025+64	15026+44	15027+92	15028+32	15044+55	15045+35	15052+42	15055+62	15056+02	15056+53
PIPE / COATING	1	4	1	4	1 (REV.9)	4	1	2	4	2	
SLOPE DISTANCE	2738'	80'	148'	40'	1658'	80'	717'	325'	40'	51'	
CLASS LOCATION / HCA	1										

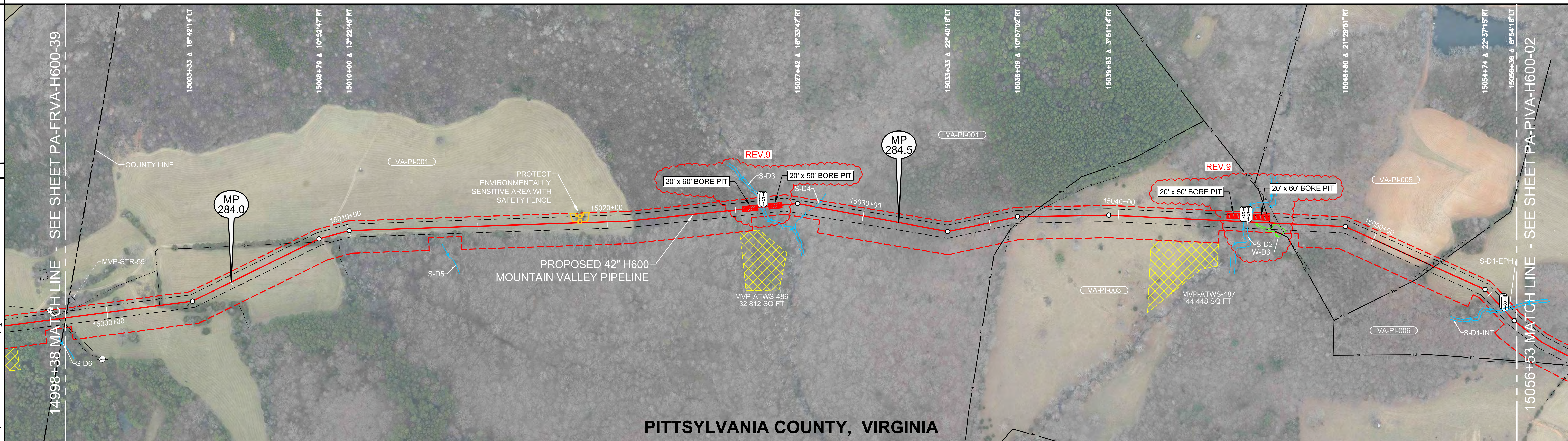
ENVIRONMENTAL

CONSTRUCTION EXCLUSION (14998+38 – 15056+53):
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAMS S-D3 & S-D4 MARCH 15TH TO MAY 31ST & FISH RELOCATION REQUIRED WITHIN STREAM S-D3 CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-D2 MARCH 15TH TO MAY 31ST & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-D1-EPH MARCH 15TH TO MAY 31ST & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.

WETLAND / STREAM

S-D3	S-D4	S-D2	W-D3	S-D1-EPH
11 LF	6 LF	18 LF	121 LF	11 LF

PLAN VIEW



0' 100' 200' 400'

LEGEND

STUDY CORRIDOR; PROPOSED 42"PIPELINE; NON-SURVEYED C/L; 500' TICK MARK; EXISTING PIPELINE; PERMANENT EASEMENT; WORK SPACE LIMITS; PERMANENT ACCESS RD; TEMPORARY ACCESS RD; ANCILLARY SITE; COUNTY LINE; PROPERTY LINE; ROAD RIGHT-OF-WAY; FENCE LINE; OVERHEAD POWER; OVERHEAD TELEPHONE; C/L ROAD; C/L RAILROAD; DELINEATED STREAM; DELINEATED WETLAND; BARRICADE FENCE; PI SYMBOL; PROPOSED TEST STATION; MAILBOX; LINE MARKER - VENT PIPE; POWER/TELE POLE; SIGN; TOWER LEG; TREE; GUY ANCHOR; TANK; GAS VALVE; WELL - GAS/OIL/WATER/ MONITORING; POST - GATE/FENCE; ELEC/GAS/WTR METER; PEDESTAL - UTILITY; MH - SANITARY/WATER; CATCH BASIN - CULVERT; ADDITIONAL TEMPORARY WORK SPACE(ATWS); ABOVE GROUND FACILITY; LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-16	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

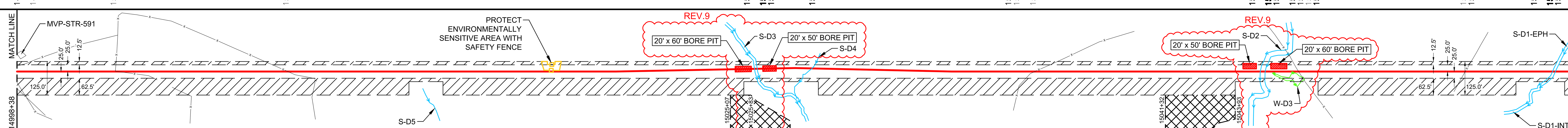
HORIZONTAL STATIONING

- 14998+38 MATCH LINE,END FRANKLIN COUNTY, BEGIN PITTSYLVANIA COUNTY
- 14998+64 BUILDING - BARN 50'LT
- 15002+15 FENCE - BARBED WIRE
- 15008+48 FENCE - BARBED WIRE
- 15025+98 STREAM BANK(S-D3), PROPOSED TYPE 1 TEST STATION
- **15026+02 PROPOSED RIVER WEIGHT - STREAM**
- 15026+09 STREAM BANK(S-D3), PROPOSED TYPE 1 TEST STATION
- 15028+12 ℄ STREAM(S-D4)
- 15035+46 PROPERTY LINE
- 15035+77 PROPERTY CORNER 38'RT
- 15036+38 FENCE - BARBED WIRE
- 15044+86 STREAM BANK(S-D2), PROPOSED TYPE 1 TEST STATION
- **15044+94 PROPOSED RIVER WEIGHT-STREAM**
- 15045+04 STREAM BANK(S-D2), PROPOSED TYPE 1 TEST STATION
- 15045+31 BEGIN WETLAND(W-D3) 6'RT
- 15045+88 PROPERTY LINE
- 15046+22 FENCE - BARBED WIRE
- 15046+52 END WETLAND(W-D3) 31'RT
- 15052+44 FENCE - BARBED WIRE
- 15052+58 PROPERTY LINE
- 15055+77 STREAM BANK(S-D2-EPH), PROPOSED TYPE 1 TEST STATION
- **15055+83 PROPOSED RIVER WEIGHT-STREAM**
- 15055+88 STREAM BANK(S-D2-EPH), PROPOSED TYPE 1 TEST STATION
- 15056+53 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

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



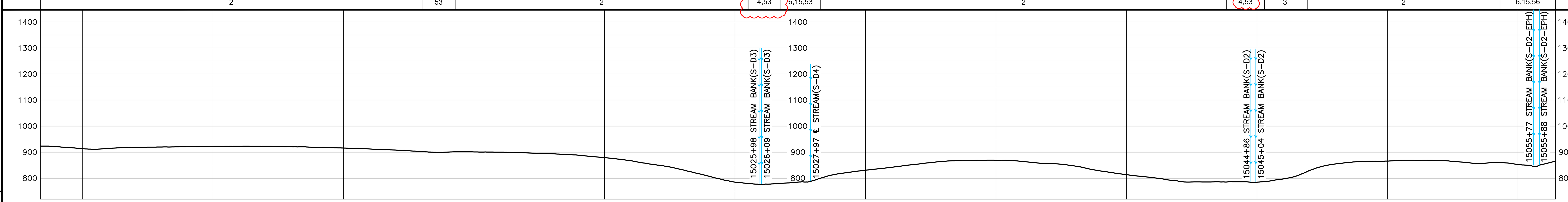
CONSTRUCTION METHOD

14998+38 –									
2	53	2	4,53	6,15,53	2	4,53	3	2	6,15,56

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	08-30-18	REDUCED TWS TO AVOID AN ENV. SENSITIVE AREA
9	HEI	02-12-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5261	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	376	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	240	~~42"O.D. X 0.740"W.T., X-70, FBE & ARO~~
6	120	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	6	TYPE 1 TEST STATION - PIPELINE
	3	RIVER WEIGHTS

REV.9

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE SANDY LEVEL PCT.,PITTSYLVANIA CO.,VA. STA. 14998+38 TO STA. 15056+53

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -01	
SHEET 310 OF 329	REV. 9
DATE OF PLOT: 02/12/21 8:04 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Owner	Length
15114+68 – 15126+92	VA-PI-013	1224 LF / 1228 SLOPE
15126+92 – 15127+39	VA-PI-013 / VA-PI-014	47 LF / 48 SLOPE
15127+39 – 15136+49	VA-PI-014	910 LF / 920 SLOPE
15136+49 – 15138+25	VA-PI-014 / VA-PI-016	176 LF / 177 SLOPE
15138+25 – 15142+40	VA-PI-016	415 LF / 422 SLOPE
15142+40 – 15142+93	STATE ROUTE 781	53 LF - 55 SLOPE
15142+93 – 15144+54	VA-PI-016	161 LF / 163 SLOPE
15144+54 – 15146+31	VA-PI-016 / VA-PI-017	177 LF / 178 SLOPE
15146+31 – 15172+12	VA-PI-017	2580 LF / 2603 SLOPE

DESIGN

Station	Pipe / Coating	Slope Distance
15114+68 – 15126+00	1	1135'
15126+00 – 15126+80	4	80'
15126+80 – 15142+26	1	1567'
15142+26 – 15143+06	4	80'
15143+06 – 15168+19	1	2529'
15168+19 – 15168+99	4	80'
15168+99 – 15172+12	1	323'

REV.8

CLASS LOCATION / HCA: 1

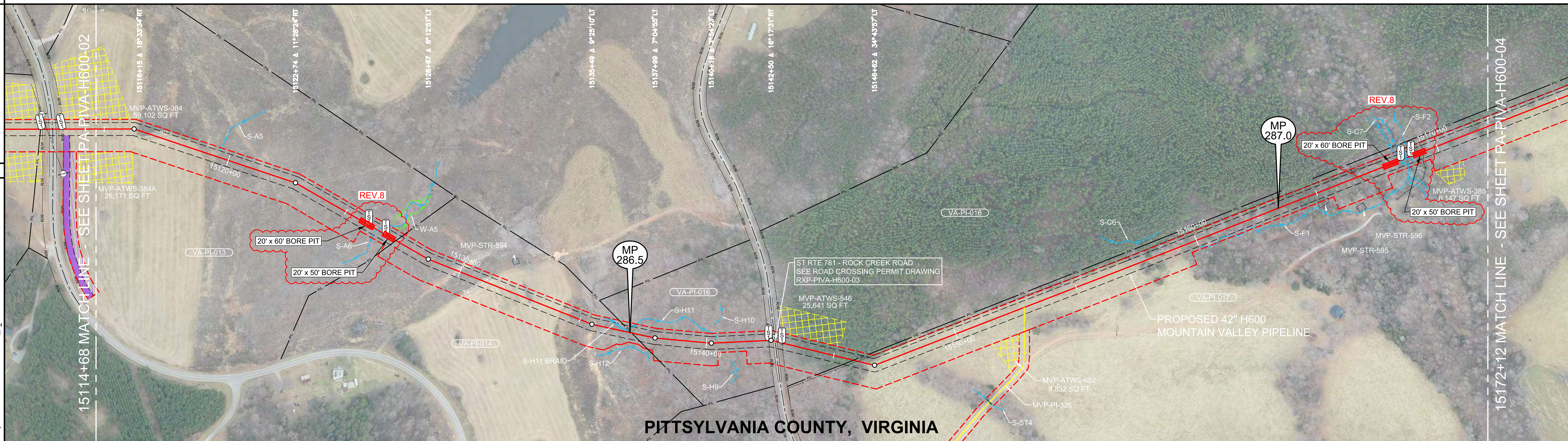
ENVIRONMENTAL

CONSTRUCTION EXCLUSION:
- 15114+68 TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-A6 MARCH 15TH TO MAY 31ST & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAMS S-C7 & S-F2 MARCH 15TH TO MAY 31ST & FISH RELOCATION REQUIRED CONSULT RSPONSIBLE E.I.
- 15172+12

WETLAND / STREAM:

S-A5	S-A6	S-H11 BRAID	S-H11	S-H9	S-F1	S-C7	S-F2
8 LF	5 LF	3 LF	3 LF	2 LF	147 LF	20 LF	20 LF

PLAN VIEW



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-16	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-108	ACCESS ROAD DETAIL MAP
RXP-PIVA-H600-03	STATE ROUTE 781 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

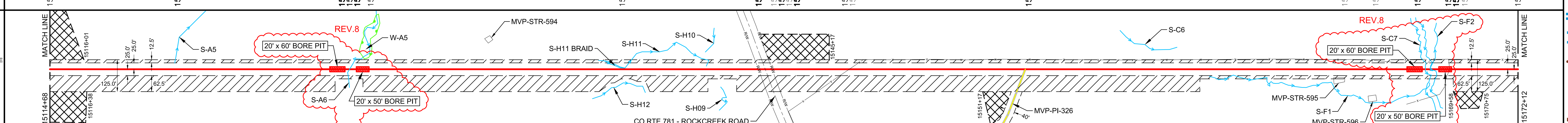
HORIZONTAL STATIONING

- 15114+68 MATCH LINE
- 15119+56 ℄ STREAM(S-A5)24'LT
- 15126+02 PROPOSED TYPE 1 TEST STATION
- 15126+40 ℄ STREAM(S-A6)
- 15126+78 PROPOSED TYPE 1 TEST STATION
- 15127+23 PROPERTY LINE
- 15137+07 PROPERTY LINE
- 15142+40 PROPOSED TYPE 1 TEST STATION,R/W
- 15142+58 EDGE OF GRAVEL
- 15142+66 ℄ CO RTE 781 - ROCKCREEK ROAD
- 15142+74 EDGE OF GRAVEL
- 15142+93 PROPOSED TYPE 1 TEST STATION,R/W
- 15145+78 PROPERTY LINE
- 15145+95 FENCE - WIRE
- 15152+84 ACCESS RD -TEMPORARY(MVP-PI-326)
- 15165+34 BUILDING - BARN 33'RT
- 15166+55 BUILDING - BARN 101'RT
- 15168+49 STREAM BANK(S-C7), PROPOSED TYPE 1 TEST STATION, BEGIN PROP. 2 RIVER WEIGHTS AT 10' SPACING - STREAM
- 15168+69 STREAM BANK(S-C7),
- 15168+89 PROPOSED TYPE 1 TEST STATION
- 15169+44 FENCE - WIRE
- 15172+12 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

Legend: PROPOSED PIPELINE; EXISTING PIPELINE; ACCESS ROAD TEMPORARY WORK SPACE; PERMANENT EASEMENT; TEMPORARY WORK SPACE(TWS); ADD. TEMPORARY WORK SPACE(ATWS)



CONSTRUCTION METHOD

Station range	Method
15114+68 – 15126+00	2
15126+00 – 15126+80	4,53
15126+80 – 15136+20	2
15136+20 – 15138+20	6,15,53
15138+20 – 15140+40	2
15140+40 – 15141+50	53
15141+50 – 15160+00	2
15160+00 – 15168+20	53
15168+20 – 15169+60	4,53
15169+60 – 15172+12	2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
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14 - PARALLEL TO POWER LINE
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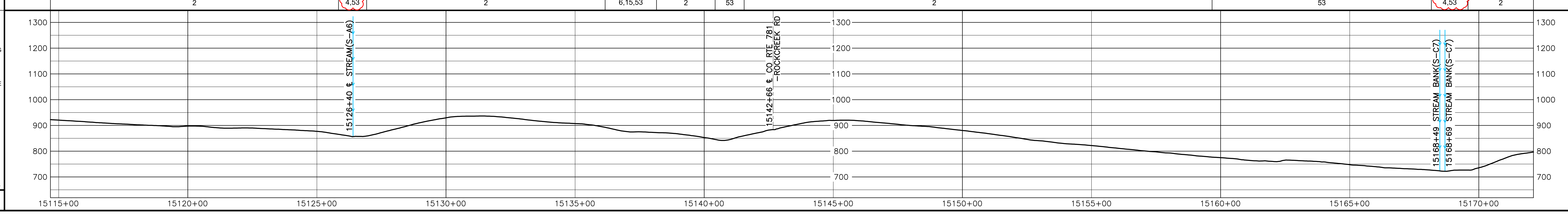
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	09-29-20	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5554	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
4	240	~~42"O.D. X 0.740"W.T., X-70, FBE & ARO~~
6	80	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	6	~~TYPE 1 TEST STATION - PIPELINE~~
	2	RIVER WEIGHTS

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
SANDY LEVEL PCT.,PITTSYLVANIA CO.,VA.
STA. 15114+68 TO STA. 15172+12

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -03	
SHEET 312 OF 329	REV. 8
DATE OF PLOT: 09/30/20 11:59 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

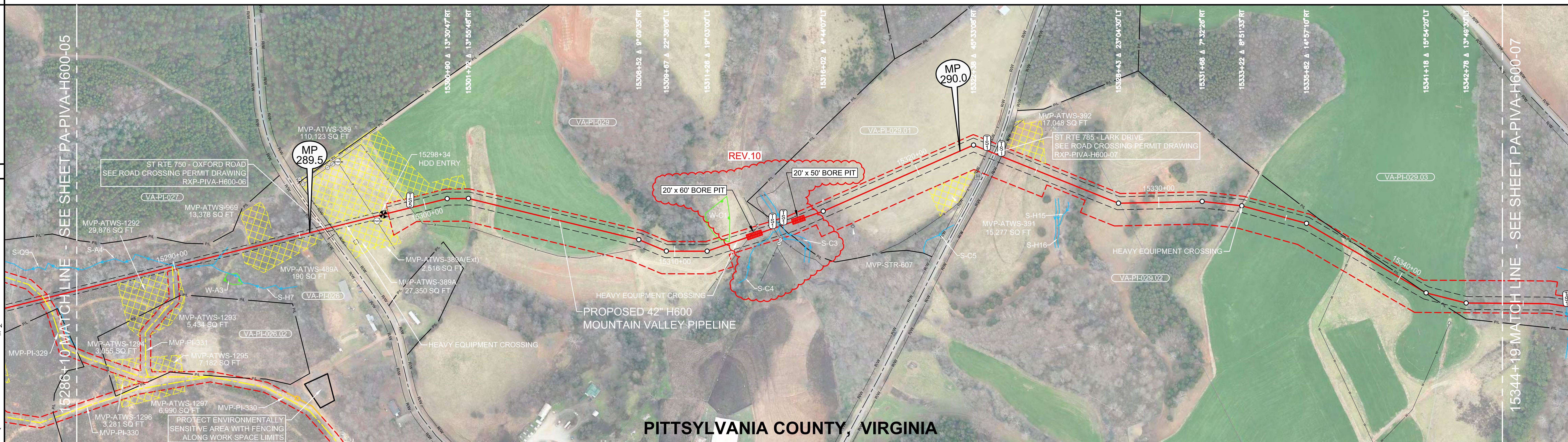
RIGHT-OF-WAY & OWNERSHIP DATA	15286+10	VA-PI-026 964 LF 977 SLOPE	15295+74 STATE ROUTE 750 54 LF - 54 SLOPE 15296+28	VA-PI-029 1777 LF 1794 SLOPE	15314+05 VA-PI-029.01 / VA-PI-029 50 LF 50 SLOPE 15314+54	VA-PI-029.01 839 LF 848 SLOPE	15322+94 STATE ROUTE 785 60 LF - 62 SLOPE 15323+54	VA-PI-029.02 1285 LF 1298 SLOPE	15336+39 VA-PI-029.03 / VA-PI-029.02 600 LF 601 SLOPE 15342+39	VA-PI-029.03 180 LF 183 SLOPE 15344+19

DESIGN

PIPE / COATING	15286+10	9	15298+34	2	15313+01 1 15313+32	4	15314+92 REV.10	1	15322+84 4 15323+64	1	15333+05 2 15344+19
SLOPE DISTANCE		1237'		1484'	31'	160'		802'	80'	952'	1121'
CLASS LOCATION / HCA				1							

ENVIRONMENTAL

CONSTRUCTION EXCLUSION	15286+10	T.O.Y.R.: SEE TREE CLEARING PLAN	FISH RELOCATION REQUIRED WITHIN STREAM S-A4 CONSULT RESPONSIBLE E.I	TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS	T.O.Y.R.: NO CONSTRUCTION WITHIN STREAMS S-C4 & S-C3 APRIL 1ST TO JUNE 30TH & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.	TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS	15344+19
WETLAND / STREAM		S-A4 8 LF	S-A4 8 LF		W-C1 49 LF / S-C4 4 LF / S-C3 17 LF		
.							
.							



PLAN VIEW

LEGEND
- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-108	ACCESS ROAD DETAIL MAP
RXP-PIVA-H600-06	STATE ROUTE 750 PERMIT DWG
RXP-PIVA-H600-07	STATE ROUTE 785 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-W-H600-1204-02	CATHODIC PROTECTION STANDARD DRAWING

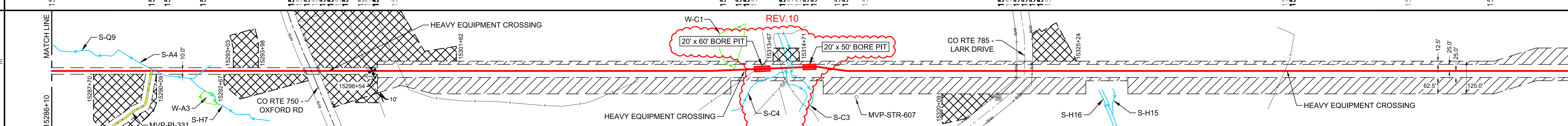
HORIZONTAL STATIONING

- 15286+10 MATCH LINE
- 15289+91 ACCESS RD – TEMPORARY (MVP–PI–331)
- 15290+04 ℄ STREAM(S–A4)
- 15291+87 ℄ STREAM(S–A4)
- **15295+74 RIGHT–OF–WAY**
- 15295+92 EDGE OF ASPHALT
- **15296+00 ℄ CO RTE 750 – OXFORD ROAD**
- 15296+09 EDGE OF ASPHALT
- **15297+87 CULVERT OPEN END**
- **15296+28 RIGHT–OF–WAY**
- 15296+29 FENCE – ELECTRIC
- **15296+82 HEAVY EQUIPMENT CROSSING**
- 15297+96 OHP LINE
- 15298+03 POWER POLE 19'RT
- **15298+34 HDD ENTRY**
- 15299+41 FENCE – ELECTRIC, **PROPOSED TYPE 5 TEST STATION**
- 15311+78 BEGIN WETLAND (W–C1)
- 15312+27 ENDWETLAND(W–C1)
- **15312+48 HEAVY EQUIPMENT CROSSING**
- 15312+92 FENCE – ELECTRIC
- **15313+76 PROPOSED TYPE 1 TEST STATION**
- 15313+99 FENCE – ELECTRIC
- 15314+09 GATE POST 42'RT
- **15314+18 ℄ STREAM(S–C4) 6'RT**
- **15314+19 STREAM BANK(S–C3), PROPOSED 2 RIVER WEIGHTS AT 10' SPACING – STREAM**
- 15314+31 PROPERTY LINE
- **15314+38 STREAM BANK(S–C3), PROPOSED TYPE 1 TEST STATION**
- 15316+85 BUILDING – SHED 93'RT
- **15322+94 PROPOSED TYPE 1 TEST STATION,R/W**
- 15322+97 FENCE – WIRE
- **15323+15 EDGE OF ASPHALT**
- **15323+24 ℄ CO RTE 785 – LARK DRIVE**
- **15323+33 EDGE OF ASPHALT**
- **15323+54 PROPOSED TYPE 1 TEST STATION,R/W**
- 15323+55 FENCE – BARBED WIRE
- 15333+18 FENCE – BARBED WIRE
- **15333+25 HEAVY EQUIPMENT CROSSING**
- 15337+90 WATER SPRINKLER 3'RT
- 15341+03 PROPERTY LINE
- 15344+19 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

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

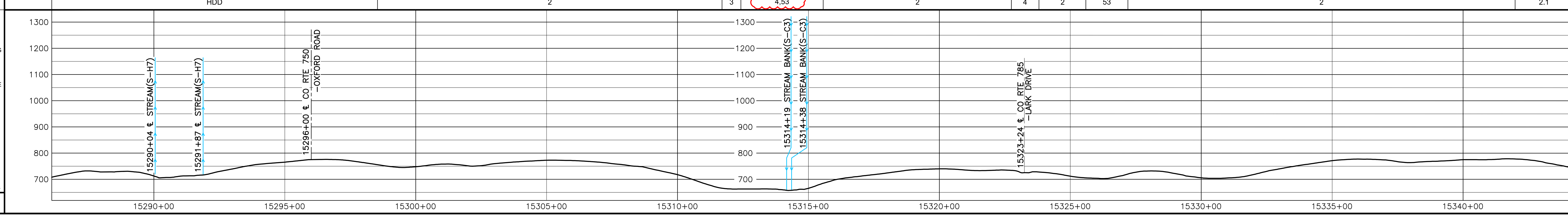


CONSTRUCTION METHOD

HDD	2	3	4,53	2	4	2	53	2	2.1

CONSTRUCTION METHOD KEY
- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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26555 Evergreen Rd. Suite. 430 Southfield, Michigan 48076 T 248-827-7322 F 248-827-7549
www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	06-19-18	ISSUED FOR VARIANCE - ADDED MVP-ATWS-389A(Ext)
9	HEI	06-27-18	REVISED MVP-ATWS-389A(Ext)
10	HEI	09-28-20	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	1785	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	2605	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	240	42"O.D. X 0.740"W.T., X-70, FBE & ARO
6	40	42"O.D. X 0.617"W.T., X-70, FBE & ARO
9	1237	42"O.D. X 0.868"W.T., X-70, POWERCRETE
	4	TYPE 1 TEST STATION - PIPELINE
	1	TYPE 5 TEST STATION - METAL IR DROP TEST STATION
	2	RIVER WEIGHTS

REV.10

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE SANDY LEVEL PCT.,PITTSYLVANIA CO.,VA. STA. 15286+10 TO STA. 15344+19

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -06	
SHEET 315 OF 329	REV. 10
DATE OF PLOT: 09/28/20 12:34 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Parcel	Length
15401+52 – 15408+89	VA-PI-029.06	737 LF / 737 SLOPE
15408+89 – 15409+81	VA-PI-029.06 / VA-PI-029.07	92 LF / 93 SLOPE
15409+81 – 15422+50	VA-PI-029.07	1269 LF / 1276 SLOPE
15422+50 – 15423+19	VA-PI-029.07 / VA-PI-029.08	69 LF / 70 SLOPE
15423+19 – 15427+19	VA-PI-029.08	400 LF / 405 SLOPE
15427+19 – 15427+66	VA-PI-041 / VA-PI-029.08	47 LF / 47 SLOPE
15427+66 – 15430+16	VA-PI-041	250 LF / 252 SLOPE
15430+16 – 15431+03	VA-PI-041 / VA-PI-041.01	87 LF / 88 SLOPE
15431+03 – 15442+47	VA-PI-041.01	1144 LF / 1149 SLOPE
15442+47 – 15457+44	VA-PI-041.02	1497 LF / 1501 SLOPE

DESIGN

Station	PIPE / COATING	SLOPE DISTANCE
15401+52 – 15413+93	1	1245'
15413+93 – 15414+33	4	40
15414+33 – 15426+13	1	1191'
15426+13 – 15426+93	4	80
15426+93 – 15434+89	1	800'
15434+89 – 15435+29	4	40'
15435+29 – 15447+27	1	1203'
15447+27 – 15448+07	4	80
15448+07 – 15457+44	1	939'

CLASS LOCATION / HCA: 1

REV.8

ENVIRONMENTAL

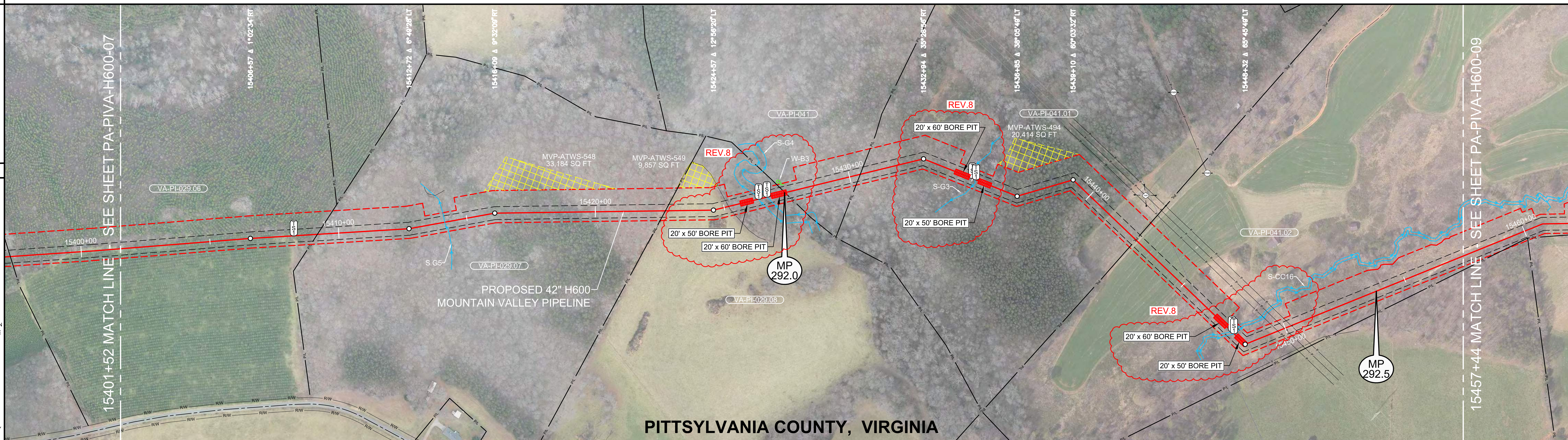
CONSTRUCTION EXCLUSION (15401+52 – 15457+44):

- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-G5 APRIL 1ST TO JUNE 30TH
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-G4 MARCH 15TH TO JUNE 30TH & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- T.O.Y.R.: SEE TREE CLEARING PLAN
- T.O.Y.R.: NO CONSTRUCTION WITHIN STREAMS S-G3 & S-CC16 APRIL 1ST TO JUNE 30TH & FISH RELOCATION REQUIRED CONSULT RESPONSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS

WETLAND / STREAM:

S-G5	S-G4	W-B3	S-G3	S-CC16
6 LF	33 LF	13 LF	9 LF	12 LF

PLAN VIEW



0' 100' 200' 400'

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

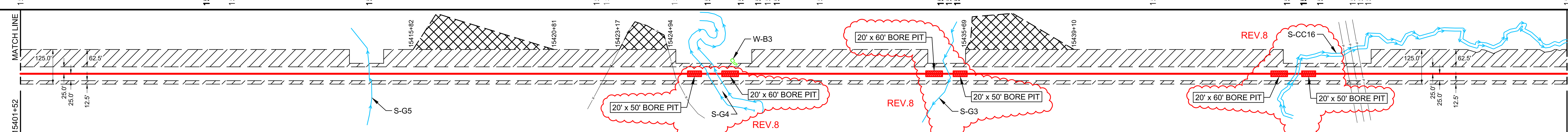
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 15401+52 MATCH LINE
- **15408+25 PROPOSED TYPE 1 TEST STATION**
- 15409+17 PROPERTY LINE
- **15414+13 ℄ STREAM(S-G5)**
- 15422+71 PROPERTY LINE
- 15422+72 FENCE - BARBED WIRE
- 15425+17 FENCE - BARBED WIRE
- **15426+37 STREAM BANK(S-G4), PROPOSED TYPE 1 TEST STATION, BEGIN PROPOSED 3 RIVER WEIGHTS AT 10' SPACING - STREAM**
- **15426+70 STREAM BANK(S-G4), PROPOSED TYPE 1 TEST STATION**
- **15427+30 BEGIN WETLAND(W-B3) 38'LT**
- 15427+42 PROPERTY LINE
- **15427+43 END WETLAND(W-B3) 35'LT**
- 15430+42 PROPERTY LINE
- **15434+98 PROPOSED TYPE 1 TEST STATION**
- **15435+09 ℄ STREAM(S-G3)**
- **15435+13 PROPOSED TYPE 1 TEST STATION**
- 15442+47 PROPERTY LINE
- **15447+61 STREAM BANK(S-CC16), PROPOSED TYPE 1 TEST STATION**
- **15447+67 PROPOSED RIVER WEIGHT - STREAM**
- **15447+73 STREAM BANK(S-CC16), PROPOSED TYPE 1 TEST STATION**
- 15449+69 OHP LINE
- 15449+97 OHP LINE
- 15450+25 OHP LINE
- 15457+44 MATCH LINE

WORK SPACE

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



CONSTRUCTION METHOD

15401+52 – 15413+93													
2.1	6,15,53	2.1	4,53	3	2.1	4,53	2.1	4,53	33,53	2.1,33	33,53	2.1,33	33,53

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
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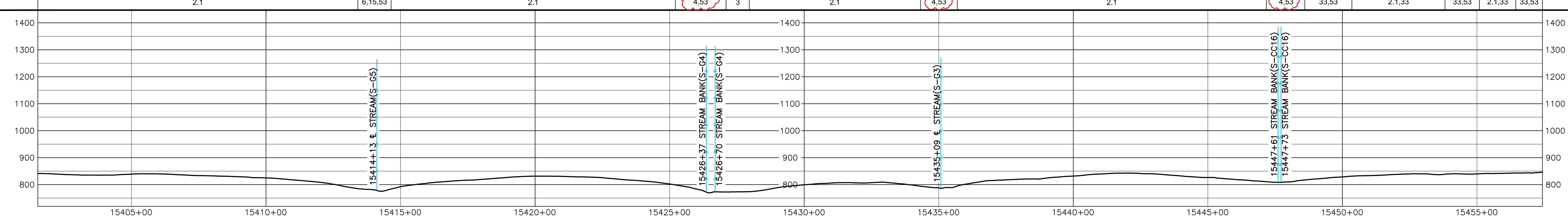
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-01-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5378	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
4	240	42"O.D. X 0.740"W.T., X-70, FBE & ARO
~~6~~	~~160~~	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	7	TYPE 1 TEST STATION - PIPELINE
	4	RIVER WEIGHTS

REV.8

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE SANDY LEVEL PCT.,PITTSYLVANIA CO.,VA. STA. 15401+52 TO STA. 15457+44

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -08	
SHEET 317 OF 329	REV. 8
DATE OF PLOT: 02/1/21 2:29 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Parcel(s)	Length
15457+44 – 15458+92	VA-PI-041.02	148 LF / 148 SLOPE
15458+92 – 15460+01	VA-PI-041.02 / VA-PI-3389	109 LF / 109 SLOPE
15460+01 – 15460+27	VA-PI-041.02 / VA-PI-3390	26 LF / 27 SLOPE
15460+27 – 15462+87	VA-PI-041.02	260 LF / 260 SLOPE
15462+87 – 15480+41	VA-PI-041.02 / VA-PI-3390	1754 LF / 1756 SLOPE
15480+41 – 15480+93	STATE ROUTE 605	52 LF - 52 SLOPE
15480+93 – 15488+86	VA-PI-046.01	793 LF / 795 SLOPE
15488+86 – 15489+42	VA-PI-046.01 / VA-PI-3392	56 LF / 56 SLOPE
15489+42 – 15496+45	VA-PI-3392	703 LF / 704 SLOPE
15496+45 – 15496+95	STATE ROUTE 799	50 LF - 51 SLOPE
15496+95 – 15508+78	VA-PI-3392	1183 LF / 1190 SLOPE
15508+78 – 15515+44	VA-PI-3393	666 LF / 669 SLOPE

DESIGN

Station range	PIPE / COATING	SLOPE DISTANCE
15457+44 – 15465+92	1	849'
15465+92 – 15479+82	2	1392'
15479+82 – 15479+87	7	5'
15479+87 – 15480+27	2	40'
15480+27 – 15481+07	4	80'
15481+07 – 15496+30	2	1527'
15496+30 – 15497+10	4	80'
15497+10 – 15507+00	2	996'
15507+00 – 15508+20	4	120'
15508+20 – 15515+44	1	728'

REV.8

CLASS LOCATION / HCA: 1

ENVIRONMENTAL

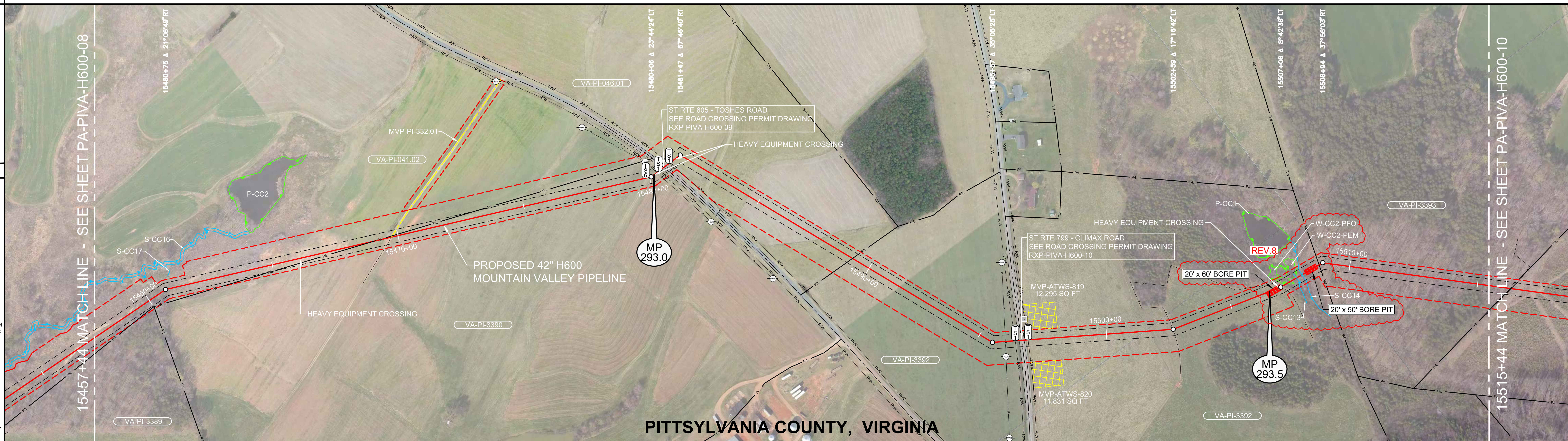
CONSTRUCTION EXCLUSION (15457+44 – 15515+44): TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31
SEE TREE CLEARING PLAN FOR FURTHER DETAILS

WETLAND / STREAM:

W-CC2-PEM	S-CC13	S-CC14
38 LF	7 LF	8 LF

PLAN VIEW

0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
RXP-PIVA-H600-09	STATE ROUTE 605 PERMIT DWG
RXP-PIVA-H600-10	STATE ROUTE 799 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-W-H600-1204-02	CATHODIC PROTECTION STANDARD DRAWING

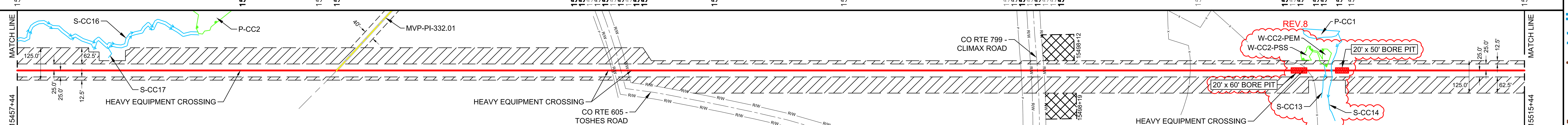
HORIZONTAL STATIONING

- 15457+44 MATCH LINE
- **15466+12 HEAVY EQUIPMENT CROSSING**
- 15469+05 PROPERTY LINE
- **15469+74 ACCESS RD - TEMPORARY (MVP-PI-232.01)**
- **15479+84 PROPOSED TYPE 6 TEST STATION**
- **15480+19 HEAVY EQUIPMENT CROSSING**
- 15480+22 POWER POLE 60'LT
- 15480+34 OHP LINE
- **15480+41 PROPOSED TYPE 1 TEST STATION,R/W**
- 15480+58 EDGE OF ASPHALT
- **15480+67 ℄ CO RTE 605 - TOSHES ROAD**
- 15480+76 EDGE OF ASPHALT
- **15480+93 PROPOSED TYPE 1 TEST STATION,R/W**
- **15481+21 HEAVY EQUIPMENT CROSSING**
- 15483+89 CULVERT OPEN END
- 15489+25 PROPERTY LINE
- 15496+06 POWER POLE 59'RT
- 15496+07 OHP LINE
- **15496+45 PROPOSED TYPE 1 TEST STATION,R/W**
- 15496+61 EDGE OF ASPHALT
- **15496+70 ℄ CO RTE 799 - CLIMAX RD**
- 15496+80 EDGE OF ASPHALT
- 15496+94 FENCE - ELECTRIC
- **15496+95 PROPOSED TYPE 1 TEST STATION,R/W**
- 15502+59 FENCE - ELECTRIC
- **15506+98 HEAVY EQUIPMENT CROSSING**
- 15507+08 FENCE - ELECTRIC
- 15507+54 BEGIN WETLAND (W-CC2-PEM)37'LT
- 15507+77 ℄ STREAM(S-CC13)
- 15507+92 END WETLAND (W-CC2-PEM)37'LT
- 15508+02 ℄ STREAM(S-CC14)
- 15508+78 PROPERTY LINE
- 15515+44 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

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



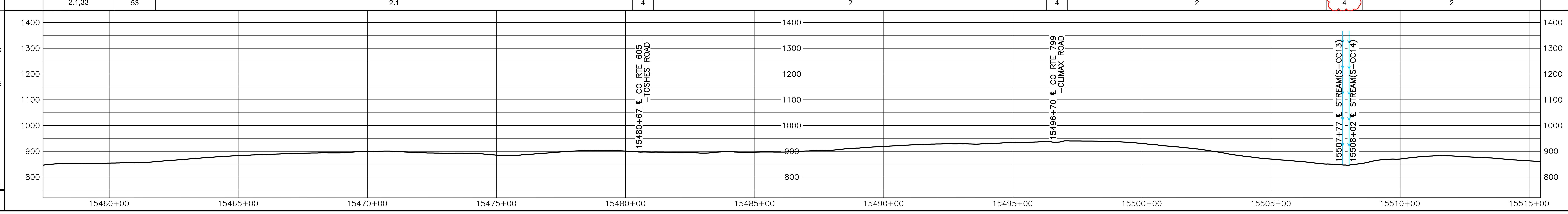
CONSTRUCTION METHOD

15457+44 –								
2.1,33	53	2.1	4	2	4	2	4	2

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

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

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	10-07-20	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	1577	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	3955	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	280	~~42"O.D. X 0.740"W.T., X-70, FBE & ARO~~
~~6~~	~~120~~	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
7	5	ANSI 600 MONOLITHIC INSULATING JOINT
	4	TYPE 1 TEST STATION - PIPELINE
	1	TYPE 6 TEST STATION - ISO. JOINT - BELOW GRADE

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE
SANDY LEVEL & CLIMAX PCT.,PITTSYLVANIA CO.,VA.
STA. 15457+44 TO STA. 15515+44

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -09	
SHEET 318 OF 329	REV. 8
DATE OF PLOT: 10/12/20 8:08 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Owner	Length
15515+44 – 15515+63	VA-PI-3393	19 LF / 19 SLOPE
15515+63 – 15516+55	VA-PI-3393 / VA-PI-3394	92 LF / 92 SLOPE
15516+55 – 15546+46	VA-PI-3394	2991 LF / 3009 SLOPE
15546+46 – 15546+71	VA-PI-3394 / VA-PI-3394.001	25 LF / 26 SLOPE
15546+71 – 15546+90	VA-PI-3394 / VA-PI-3396 / VA-PI-3394.001	19 LF / 19 SLOPE
15546+90 – 15547+18	VA-PI-3396 / VA-PI-3394.001	28 LF / 29 SLOPE
15547+18 – 15563+12	VA-PI-3396	1594 LF / 1613 SLOPE
15563+12 – 15563+90	VA-PI-3396 / VA-PI-3398	78 LF / 80 SLOPE
15563+90 – 15567+05	VA-PI-3398	315 LF / 317 SLOPE

DESIGN

PIPE / COATING	SLOPE DISTANCE
15515+44 – 15516+18: 1	74'
15516+18 – 15520+80: 2	464'
15520+80 – 15521+20: 4	40'
15521+20 – 15527+03: 2	587'
15527+03 – 15527+43: 4	40'
15527+43 – 15542+01: 2 (REV.8)	1465'
15542+01 – 15542+81: 4	80'
15542+81 – 15546+65: 2	386'
15546+65 – 15556+63: 1	1009'
15556+63 – 15557+03: 4	40'
15557+03 – 15562+48: 1 (REV.8)	554'
15562+48 – 15562+88: 4	40'
15562+88 – 15567+05: 1	423'

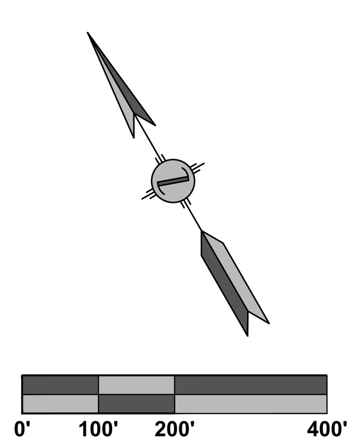
CLASS LOCATION / HCA: 1

ENVIRONMENTAL

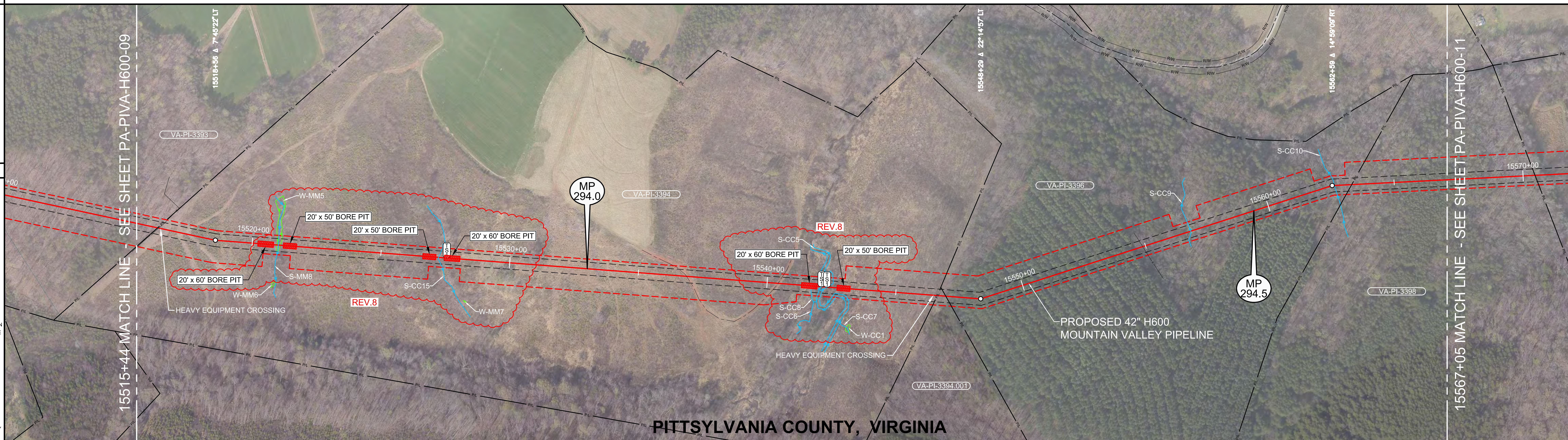
CONSTRUCTION EXCLUSION:
- 15515+44 T.O.Y.R.: SEE TREE CLEARING PLAN
- FISH RELOCATION REQUIRED WITHIN STREAM S-MM8 CONSULT RESPONSIBLE E.I
- FISH RELOCATION REQUIRED WITHIN STREAM S-CC15 CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-CC5 CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- 15567+05

WETLAND / STREAM:

W-MM5	S-MM8	S-CC15	S-CC8	S-CC5	S-CC9	S-CC10
21 LF	6 LF	6 LF	8 LF	21 LF	5.5 LF	9 LF



PLAN VIEW



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

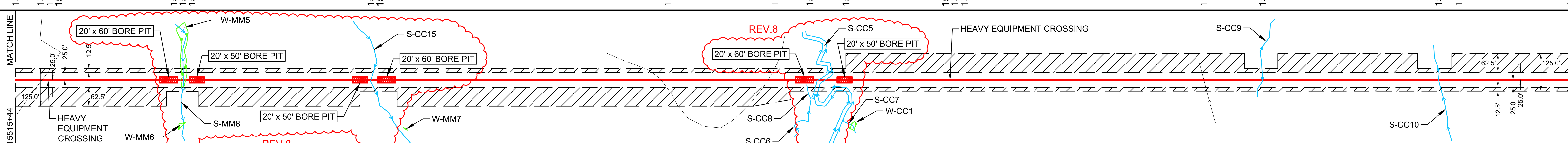
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 15515+44 MATCH LINE
- 15516+27 PROPERTY LINE
- 15516+32 FENCE - BARBED WIRE
- **15516+38 HEAVY EQUIPMENT CROSSING**
- 15520+92 BEGIN WETLAND(W-MM5) 2'LT
- 15521+00 ℄ STREAM(S-MM8)
- 15521+13 END WETLAND(W-MM5) 20'LT
- 15527+23 ℄ STREAM(S-CC15)
- **15527+55 PROPOSED TYPE 1 TEST STATION**
- 15536+86 ℄ FIELD ROAD(DIRT)
- 15540+42 ℄ FIELD ROAD(DIRT)
- 15542+11 STREAM BANK(S-CC5), PROPOSED TYPE 1 TEST STATION, **BEGIN PROPOSED 2 RIVER WEIGHTS AT 10' SPACING - STREAM**
- 15542+32 STREAM BANK(S-CC5), PROPOSED TYPE 1 TEST STATION
- **15546+45 HEAVY EQUIPMENT CROSSING**
- 15546+61 PROPERTY LINE
- 15546+93 PROPERTY LINE
- 15554+88 FENCE - BARBED WIRE
- 15556+83 ℄ STREAM(S-CC9)
- 15562+68 ℄ STREAM(S-CC10)
- 15563+35 PROPERTY LINE
- 15567+05 MATCH LINE

WORK SPACE

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



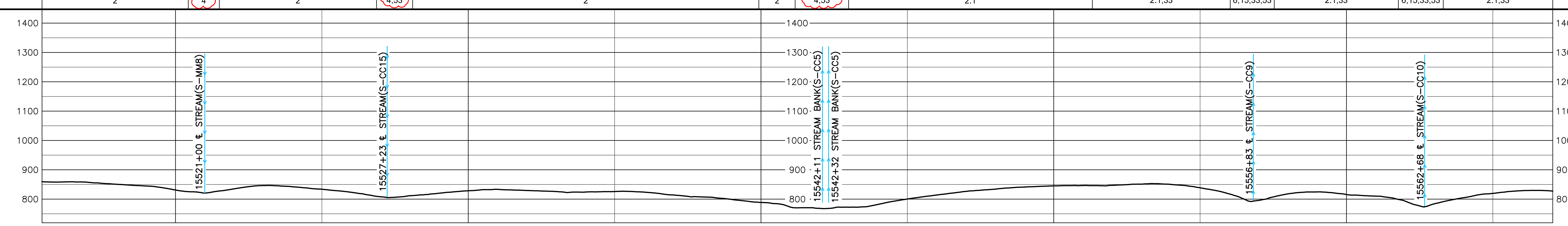
CONSTRUCTION METHOD

2	4	2	4,53	2	2	4,53	2.1	2.1,33	6,15,33,53	2.1,33	6,15,33,53	2.1,33

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-01-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	2060	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	2902	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	240	~~42"O.D. X 0.740"W.T., X-70, FBE & ARO~~
~~6~~	~~80~~	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	3	~~TYPE 1 TEST STATION - PIPELINE~~
	2	RIVER WEIGHTS

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
CLIMAX PCT.,PITTSYLVANIA CO.,VA.
STA. 15515+44 TO STA. 15567+05

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -10	
SHEET 319 OF 329	REV. 8
DATE OF PLOT: 02/1/21 2:31 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station range	Parcel	Length
15567+05 – 15570+17	VA-PI-3398	312 LF, 315 SLOPE
15570+17 – 15570+58	VA-PI-3399 / VA-PI-3398	41 LF, 41 SLOPE
15570+58 – 15577+21	VA-PI-3399	663 LF, 673 SLOPE
15577+21 – 15577+91	VA-PI-3401 / VA-PI-3399	70 LF, 71 SLOPE
15577+91 – 15583+98	VA-PI-3401	607 LF, 609 SLOPE
15583+98 – 15584+48	STATE ROUTE 649	50 LF - 50 SLOPE
15584+48 – 15598+76	VA-PI-3402	1428 LF, 1447 SLOPE
15598+76 – 15599+35	VA-PI-057.01 / VA-PI-3402	59 LF, 60 SLOPE
15599+35 – 15599+54	BVPI-13 / VA-PI-057.01 / VA-PI-3402	19 LF, 19 SLOPE
15599+54 – 15619+21	VA-PI-057.01	1967 LF, 1976 SLOPE
15619+21 – 15619+74	STATE ROUTE 649	53 LF - 53 SLOPE
15619+74 – 15624+59	BVPI-14	484 LF, 487 SLOPE

DESIGN

Station range	PIPE / COATING	SLOPE DISTANCE
15567+05 – 15573+34	1	638'
15573+34 – 15573+74	6	40'
15573+74 – 15583+83	1	1016'
15583+83 – 15584+63	4	80'
15584+63 – 15595+81	1	1134'
15595+81 – 15596+21	4	40
15596+21 – 15596+58	1	37
15596+58 – 15596+98	6	40
15596+98 – 15599+92	1	299'
15599+92 – 15600+32	6	40'
15600+32 – 15614+55	1	1430'
15614+55 – 15615+35	4	80'
15615+35 – 15619+08	1	374'
15619+08 – 15619+88	4	80'
15619+88 – 15624+59	1	473'

REV.8

CLASS LOCATION / HCA: 1

ENVIRONMENTAL

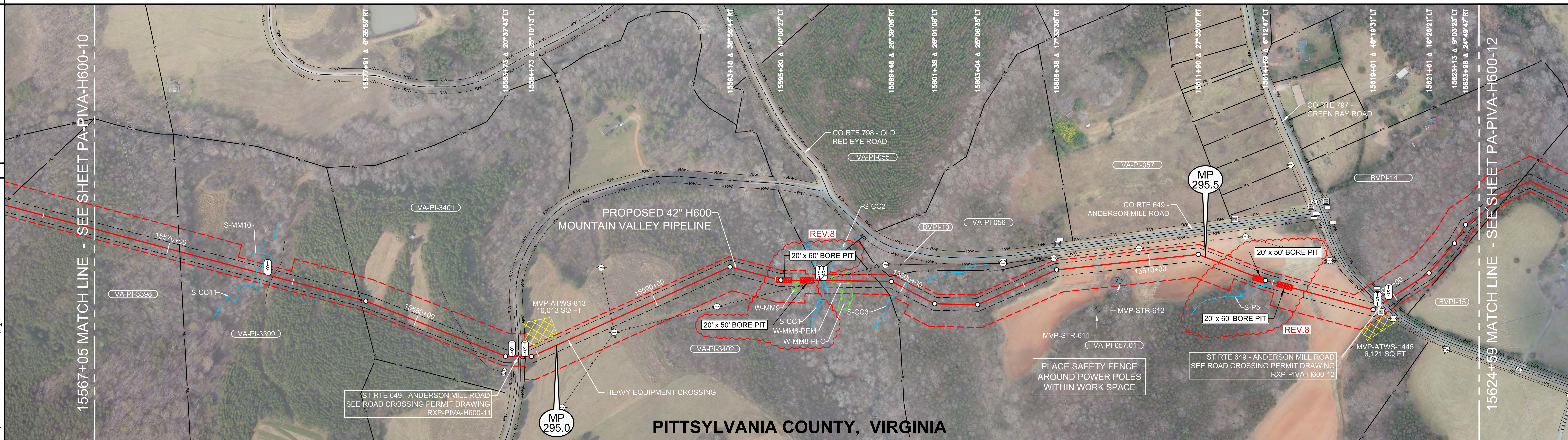
CONSTRUCTION EXCLUSION: 15567+05 T.O.Y.R.: SEE TREE CLEARING PLAN — FISH RELOCATION REQUIRED WITHIN STREAMS S-CC11 CONSULT RESPOSIBLE E.I. — TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS — 15624+59

WETLAND / STREAM:

S-MM10	S-CC11	W-MM9	S-CC1	W-MM8-PEM	W-MM8-PFO	S-CC3	S-P5
7 LF	8 LF	31 LF	17 LF	85 LF	60 LF	8 LF	5 LF

PLAN VIEW

0' 100' 200' 400'



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
RXP-PIVA-H600-11	STATE ROUTE 649 PERMIT DWG
RXP-PIVA-H600-12	STATE ROUTE 649 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

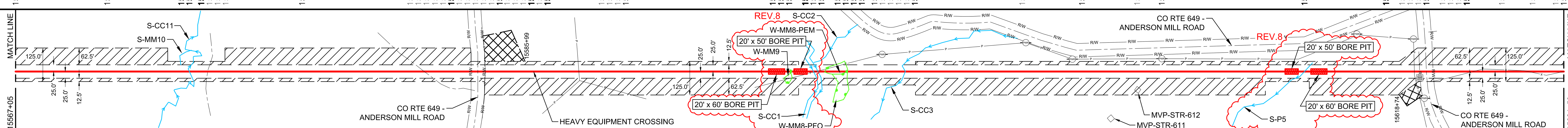
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 15567+05 MATCH LINE
- 15570+46 PROPERTY LINE
- **15573+22 ℄ STREAM (S-MM10) 28' LT**
- **15573+54 ℄ STREAM (S-CC11)**
- **15573+98 PROPOSED TYPE 1 TEST STATION**
- 15574+14 EDGE OF DIRT
- 15574+19 ℄ TRAIL(DIRT)
- 15574+25 EDGE OF DIRT
- 15577+70 PROPERTY LINE
- 15582+16 EDGE OF DIRT
- 15582+24 ℄ TRAIL(DIRT)
- 15582+32 EDGE OF DIRT
- 15583+73 GATE POST 54'RT
- 15583+73 GATE POST 69'RT
- **15583+98 PROPOSED TYPE 1 TEST STATION,R/W**
- 15584+05 CULVERT 60'RT
- 15584+06 CULVERT 10'LT
- 15584+06 CULVERT 81'RT
- 15584+14 EDGE OF ASPHALT
- 15584+22 CULVERT
- **15584+23 ℄ CO RTE 649 - ANDERSON MILL RD**
- 15584+25 CULVERT
- 15584+32 EDGE OF ASPHALT
- 15584+41 CULVERT 11'RT
- **15584+48 PROPOSED TYPE 1 TEST STATION,R/W**
- 15584+51 FENCE - BARBED WIRE
- **15586+30 ℄ HEAVY EQUIPMENT CROSSING**
- 15587+99 GUY ANCHOR 67'RT
- 15588+01 GUY ANCHOR 28'RT
- 15588+04 POWER POLE 47'RT
- 15588+15 OHP LINE
- **15595+60 BEGIN WETLAND(W-MM9) 25'RT**
- **15595+91 END WETLAND(W-MM9) 23'RT**
- **15596+70 STREAM BANK(S-CC1)**
- **15596+79 PROPOSED TYPE 1 TEST STATION**
- **PROPOSED RIVER WEIGHT - STREAM**
- 15596+80 OHP LINE
- **15596+87 STREAM BANK(S-CC1)**
- **15597+12 PROPOSED TYPE 1 TEST STATION**
- **15597+39 BEGIN WETLAND(W-MM8-PEM) 2'RT**
- **15597+97 BEGIN WETLAND(W-MM8-PFO) 10'RT**
- **15597+99 END WETLAND(W-MM8-PEM) 8'LT**
- **END WETLAND(W-MM8-PFO) 50'RT**
- 15598+98 PROPERTY LINE
- 15599+12 GUY ANCHOR 64'LT
- 15599+25 POWER POLE 64'LT
- 15599+26 GUY ANCHOR 78'LT
- 15599+44 GUY ANCHOR 70'LT
- **15600+12 ℄ STREAM(S-CC3)**
- 15604+47 GUY ANCHOR 79'LT
- 15606+38 POWER POLE 47'LT
- 15608+74 BUILDING - BARN 55'RT
- 15609+65 POWER POLE 48'LT
- **15614+94 ℄ STREAM (S-P5)**
- **15619+21 PROPOSED TYPE 1 TEST STATION,R/W**
- 15619+23 PEDESTAL-TELEPHONE 24'RT
- 15619+30 OHP LINE
- 15619+38 EDGE OF ASPHALT
- **15619+48 ℄ STATE ROUTE 649 - ANDERSON MILL ROAD**
- 15619+49 POWER POLE 72'RT
- 15619+50 SIGN 47'LT
- 15619+57 EDGE OF ASPHALT
- **15619+74 PROPOSED TYPE 1 TEST STATION,R/W**
- 15621+24 FENCE - BARBED WIRE
- 15623+27 FENCE - BARBED WIRE
- 15624+56 FENCE - BARBED WIRE
- 15624+59 MATCH LINE

WORK SPACE

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



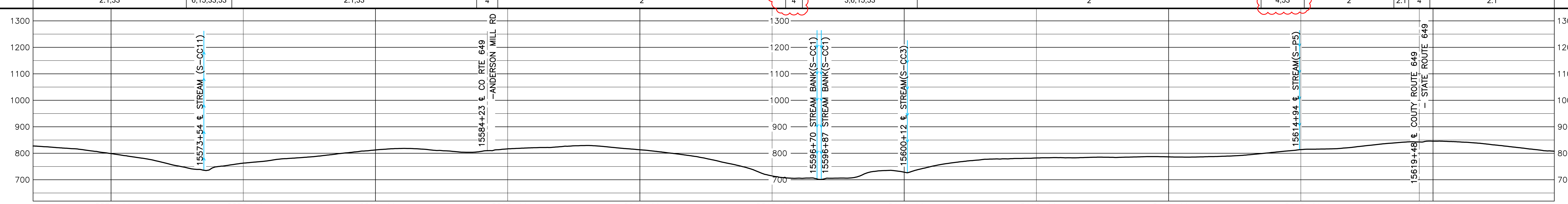
CONSTRUCTION METHOD

15567+05 – 15573+34	15573+34 – 15573+74	15573+74 – 15583+83	15583+83 – 15584+63	15584+63 – 15595+81	15595+81 – 15596+21	15596+58 – 15600+32	15600+32 – 15614+55	15614+55 – 15615+35	15615+35 – 15619+08			
2.1,33	6,15,33,53	2.1,33	4	2	4	3,6,15,53	2	4,53	2	2.1	4	2.1

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5401	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
4	280	42"O.D. X 0.740"W.T., X-70, FBE & ARO
6	120	42"O.D. X 0.617"W.T., X-70, FBE & ARO
	7	TYPE 1 TEST STATION - PIPELINE
	1	RIVER WEIGHTS

REV.8

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-18-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

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www.hollandengineering.com

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
CLIMAX PCT.,PITTSYLVANIA CO.,VA.
STA. 15567+05 TO STA. 15624+59

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -11	
SHEET 320 OF 329	REV. 8
DATE OF PLOT: 02/18/21 1:59 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Owner	Length
15624+59 – 15627+42	BVPI-14 / BVPI-15	284 LF, 284 SLOPE
15627+42 – 15636+19	BVPI-15	877 LF, 882 SLOPE
15636+19 – 15638+37	BVPI-17 / BVPI-15	218 LF, 219 SLOPE
15638+37 – 15646+76	BVPI-17	839 LF, 841 SLOPE
15646+76 – 15647+29	STATE ROUTE 649	53 LF - 53 SLOPE
15647+29 – 15647+86	VA-PI-064	57 LF, 57 SLOPE
15647+86 – 15650+02	VA-PI-065	216 LF, 216 SLOPE
15650+02 – 15651+45	VA-PI-066 / VA-PI-065	143 LF, 143 SLOPE
15651+45 – 15668+61	VA-PI-066	1716 LF, 1725 SLOPE
15668+61 – 15669+07	VA-PI-067	46 LF, 46 SLOPE
15669+07 – 15670+10	VA-PI-067 / VA-PI-068	103 LF, 103 SLOPE
15670+10 – 15671+82	VA-PI-068	172 LF, 173 SLOPE
15671+82 – 15672+18	VA-PI-067 / VA-PI-068	36 LF, 36 SLOPE
15672+18 – 15677+60	VA-PI-068	542 LF, 542 SLOPE
15677+60 – 15677+88	VA-PI-068 / VA-PI-069	28 LF, 29 SLOPE
15677+88 – 15681+26	VA-PI-069	338 LF, 338 SLOPE
15681+26 – 15681+57	VA-PI-070 / VA-PI-069	31 LF, 31 SLOPE
15681+57 – 15682+81	VA-PI-070	124 LF, 124 SLOPE

DESIGN

Station	Pipe / Coating	Slope Distance
15624+59 – 15646+63	1	2212'
15646+63 – 15647+43	4	80'
15647+43 – 15648+30	2	88'
15648+30 – 15649+10	3	80'
15649+10 – 15649+50	2	40'
15649+50 – 15658+03	1	856'
15658+03 – 15658+83	4	80'
15658+83 – 15668+38	1	961'
15668+38 – 15668+78	4	40'
15668+78 – 15669+04	1	26'
15669+04 – 15669+84	4	80'
15669+84 – 15682+81	1	1299'

REV.8

CLASS LOCATION / HCA: 1

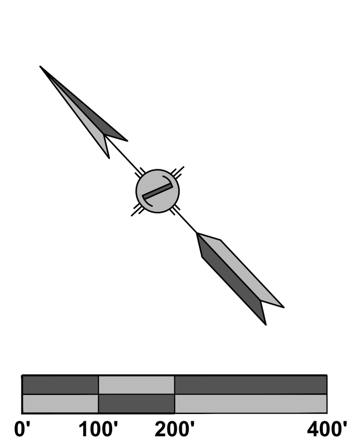
ENVIRONMENTAL

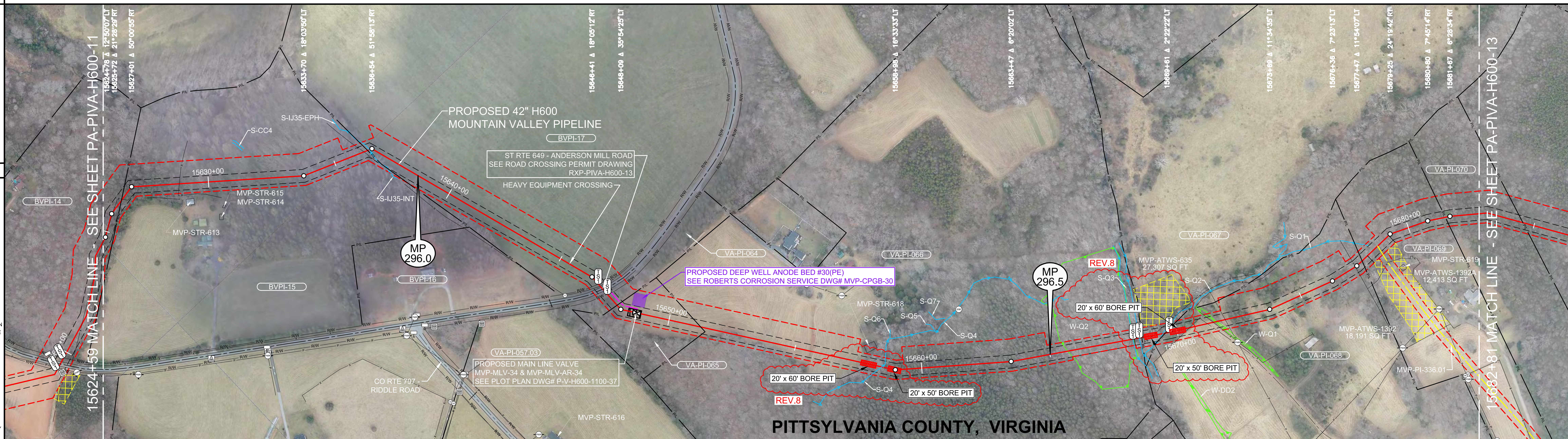
CONSTRUCTION EXCLUSION:
- 15624+59: TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAMS S-IJ35-INT CONSULT RESPOSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAMS S-Q4 CONSULT RESPOSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAMS S-Q2 CONSULT RESPOSIBLE E.I.
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS (15682+81)

WETLAND / STREAM:

S-IJ35-INT	S-Q4	W-Q2	S-Q3	S-Q2	W-Q1	S-Q1
4 LF	5 LF	282 LF	25 LF	7 LF	80 LF	4 LF

PLAN VIEW





LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-108	ACCESS ROAD DETAIL MAP
RXP-PIVA-H600-13	STATE ROUTE 649 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-V-H600-1100-37	MAIN LINE VALVE #34 PLOT PLAN
MVP-CPGB-30	ROBERTS CORROSION SERVICE DRAWING

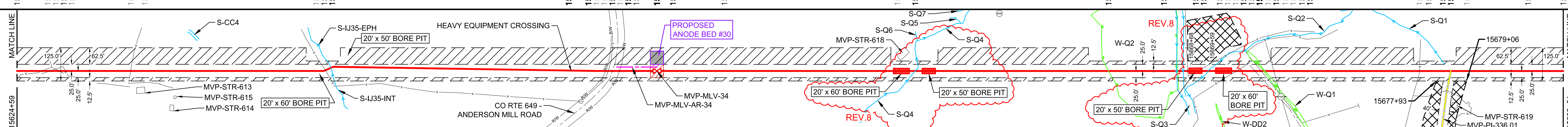
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 15624+59 MATCH LINE
- 15625+23 FENCE - BARBED WIRE
- 15625+82 FENCE - BARBED WIRE
- 15626+35 PROPERTY LINE
- 15626+41 FENCE - BARBED WIRE
- 15628+86 FENCE - BARBED WIRE
- 15629+39 BUILDING - UNKNOWN 60'RT
- 15636+21 FENCE - ELECTRIC
- 15636+36 PROPERTY LINE
- 15636+45 ℄ STREAM(S-IJ35-INT)
- 15645+39 HEAVY EQUIPMENT CROSSING
- 15646+76 PROPOSED TYPE 1 TEST STATION,R/W
- 15646+87 FENCE - ELECTRIC
- 15646+93 EDGE OF ASPHALT
- 15647+03 ℄ CO RTE 649 - ANDERSON MILL RD
- 15647+13 EDGE OF ASPHALT
- 15647+29 PROPOSED TYPE 1 TEST STATION,R/W
- 15647+86 PROPERTY LINE
- 15648+70 PROPOSED MAIN LINE VALVE (MVP-MLV-34)
- 15648+70 ACCESS ROAD - PERMANENT (MVP-MLV-AR-34)16'LT
- 15651+25 PROPERTY LINE
- 15657+75 BUILDING - BARN 40'LT
- 15658+43 ℄ STREAM(S-Q4)
- 15665+50 BEGIN WETLAND(W-Q2)
- 15668+26 STREAM BANK(S-Q3), PROPOSED TYPE 1 TEST STATION, BEGIN PROPOSED 2 RIVER WEIGHTS AT 10' SPACING - STREAM
- 15668+32 END WETLAND(W-Q2)
- 15668+51 STREAM BANK(S-Q3), PROPOSED TYPE 1 TEST STATION
- 15668+61 PROPERTY LINE
- 15668+67 FENCE - BARBED WIRE
- 15669+05 FENCE - BARBED WIRE
- 15669+44 ℄ STREAM(S-Q2)
- 15669+53 PROPERTY LINE
- 15669+68 PROPOSED TYPE 1 TEST STATION
- 15670+50 FENCE - BARBED WIRE
- 15671+13 BEGIN WETLAND(W-Q1)
- 15671+20 ℄ FIELD ROAD(DIRT)
- 15671+43 FENCE - HOG WIRE
- 15671+91 OHP LINE
- 15671+93 END WETLAND(W-Q1)
- 15677+39 FENCE - HOG WIRE
- 15677+74 PROPERTY LINE
- 15678+32 ℄ STREAM(S-Q1) 27'LT
- 15678+57 ACCESS RD - TEMPORARY(MVP-PI-336.01)
- 15678+62 BUILDING - BARN 118'RT
- 15681+48 PROPERTY LINE
- 15682+81 MATCH LINE

WORK SPACE

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



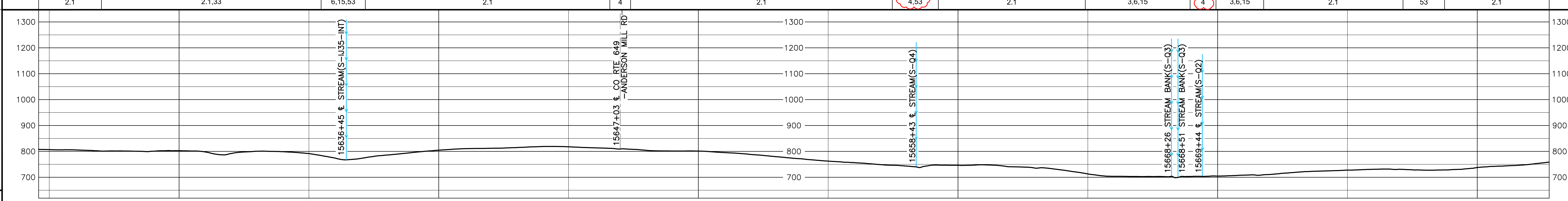
CONSTRUCTION METHOD

15624+59													15682+81
2.1	2.1,33	6,15,53	2.1	4	2.1	4,53	2.1	3,6,15	4	3,6,15	2.1	53	2.1

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-12-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5354	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	126	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
3	80	42"O.D. X 0.888"W.T., X-70, FUSION BONDED EPOXY
4	280	42"O.D. X 0.740"W.T., X-70, FBE & ARO
6	520	42"O.D. X 0.617"W.T., X-70, FBE & ARO
	5	TYPE 1 TEST STATION- PIPELINE
	2	RIVER WEIGHTS

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

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Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE CLIMAX PCT.,PITTSYLVANIA CO.,VA. STA. 15624+59 TO STA. 15682+81

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -12	
SHEET 321 OF 329	REV. 8
DATE OF PLOT: 02/12/21 8:24 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Owner / Segment
15755+93 – 15759+02	VA-PI-081.01 — 309 LF, 310 SLOPE
15759+02 – 15760+87	RAILROAD — 185 LF, 196 SLOPE
15760+87 – 15763+33	VA-PI-4167 — 246 LF, 246 SLOPE
15763+33 – 15771+87	VA-PI-086 — 854 LF, 857 SLOPE
15771+87 – 15772+68	DUAL TRACK ROAD — 81 LF - 81 SLOPE
15772+68 – 15776+78	VA-PI-087 — 410 LF, 410 SLOPE
15776+78 – 15777+37	VA-PI-088 / VA-PI-087 — 59 LF, 60 SLOPE
15777+37 – 15787+09	VA-PI-088 — 972 LF, 973 SLOPE
15787+09 – 15789+07	VA-PI-089 / VA-PI-088 — 198 LF, 198 SLOPE
15789+07 – 15791+05	VA-PI-089 — 197 LF, 197 SLOPE
15791+05 – 15793+86	VA-PI-089 / VA-PI-088 — 281 LF, 283 SLOPE
15793+86 – 15801+40	VA-PI-088 — 754 LF, 761 SLOPE

DESIGN

PIPE / COATING	15755+93	2	15758+62 4	15759+02 5	15761+02 2	15763+60 4	15764+00 2	15787+73 1 (REV.8)	15794+57 4 15794+97	1 — 15801+40
SLOPE DISTANCE		275'	40'	200'	264'	40'	2379'	688'	40'	646'
CLASS LOCATION / HCA		1			15763+86		2 (15767+80; HCA - 18)	15786+97 1		

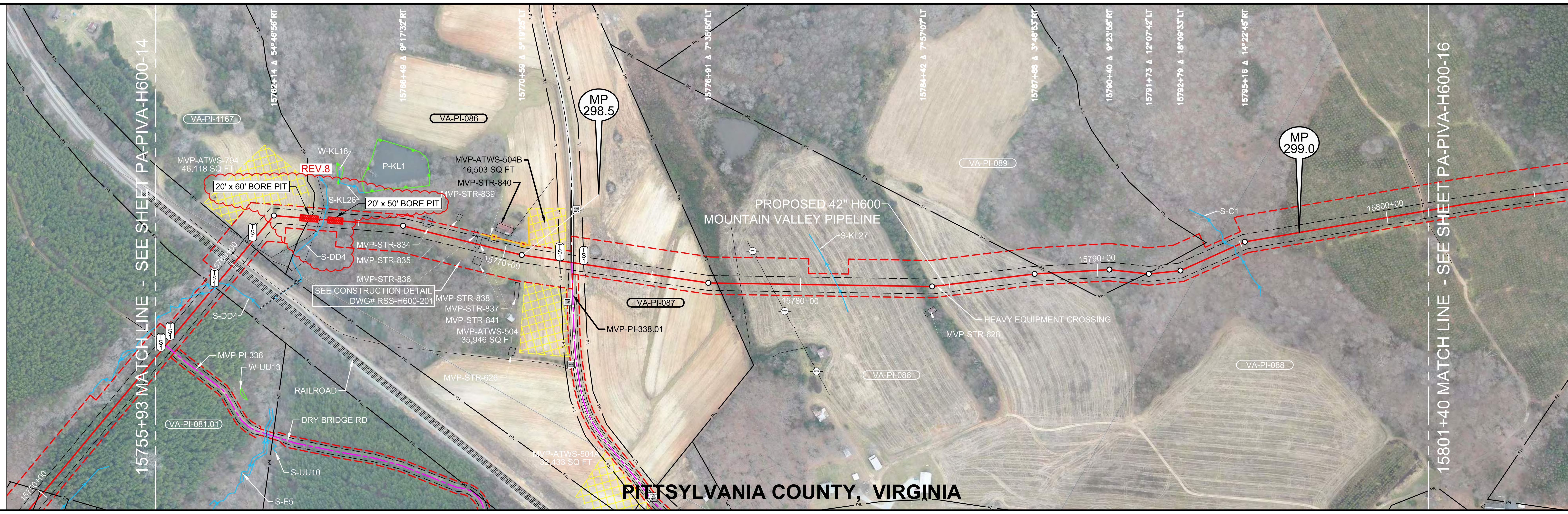
ENVIRONMENTAL

CONSTRUCTION EXCLUSION: 15755+93 — TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS | T.O.Y.R. : NO CONSTRUCTION WITHIN STREEAM S-C1 OCT 1ST TO JUNE 30TH | T.O.Y.R.:NO CLEARING JUNE 1- JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS — 15801+40

WETLAND / STREAM	S-DD4 6 LF	S-DD4 6 LF	S-KL27 1 LF	S-C1 6 LF

PLAN VIEW

0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

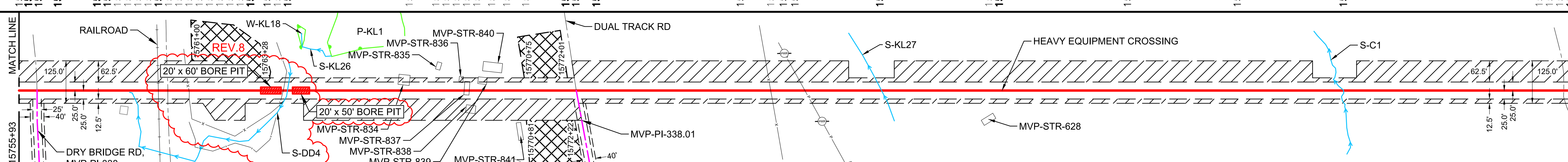
DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-109	ACCESS ROAD DETAIL MAP
RSS-H600-201	RESIDENTIAL SITE SPECIFIC
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

HORIZONTAL STATIONING

- 15755+93 MATCH LINE
- **15756+21 PROPOSED TYPE 1 TEST STATION**
- 15756+46 ACCESS ROAD – PERMANENT (MVP–PI–338)
- **15756+69 PROPOSED TYPE 1 TEST STATION**
- **15759+02 PROPOSED TYPE 1 TEST STATION,℗**
- 15759+17 STREAM(S–DD4) 5'RT
- 15759+83 TOE OF BALLAST
- 15759+89 TOP OF BALLAST
- 15759+92 ℄ RAILROAD(RAIL)
- 15759+97 ℄ RAILROAD(RAIL)
- **15760+01 ℄ RAILROAD**
- 15760+06 ℄ RAILROAD(RAIL)
- 15760+11 ℄ RAILROAD(RAIL)
- 15760+12 TOP OF BALLAST
- 15760+18 TOE OF BALLAST
- 15760+24 EDGE OF DIRT
- 15760+29 ℄ TRAIL(DIRT)
- 15760+33 EDGE OF DIRT
- 15760+91 FENCE – BARBED WIRE
- **15761+02 PROPOSED TYPE 1 TEST STATION,℗**
- 15763+55 PROPERTY LINE
- 15763+68 FENCE – BARBED WIRE
- **15763+80 ℄ STREAM(S–DD4)**
- 15767+37 BUILDING–BARN 15'LT
- 15768+27 BUILDING–BARN 60'LT
- 15768+94 BUILDING–SHED 23'LT
- 15768+98 BUILDING–DEMOLISHED BEGIN
- 15769+05 BUILDING–DEMOLISHED 42'RT
- 15769+13 BUILDING–DEMOLISHED END
- 15769+64 BUILDING–BARN 18'LT
- 15770+08 BUILDING–HOUSE 52'LT
- 15770+64 BUILDING–DEMOLISHED 93'RT
- **15771+87 PROPOSED TYPE 1 TEST STATION,℗**
- 15772+27 ACCESS RD – PERMANENT (MVP–PI–338.01)
- **15772+68 PROPOSED TYPE 1 TEST STATION,℗**
- 15777+20 PROPERTY LINE
- 15777+97 FENCE – HOG WIRE
- 15778+37 POWER POLE 109'LT
- 15778+97 OHP LINE
- **15781+22 ℄ STREAM(S–KL27)**
- 15784+41 BUILDING – BARN 64'RT
- **15784+48 HAEVY EQUIPMENT CROSSING**
- 15788+44 PROPERTY LINE
- 15791+65 PROPERTY LINE
- **15794+77 ℄ STREAM(S–C1)**
- 15801+18 EDGE OF DIRT
- 15801+23 ℄ FIELD ROAD(DIRT)
- 15801+26 EDGE OF DIRT
- 15801+40 MATCH LINE

WORK SPACE

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



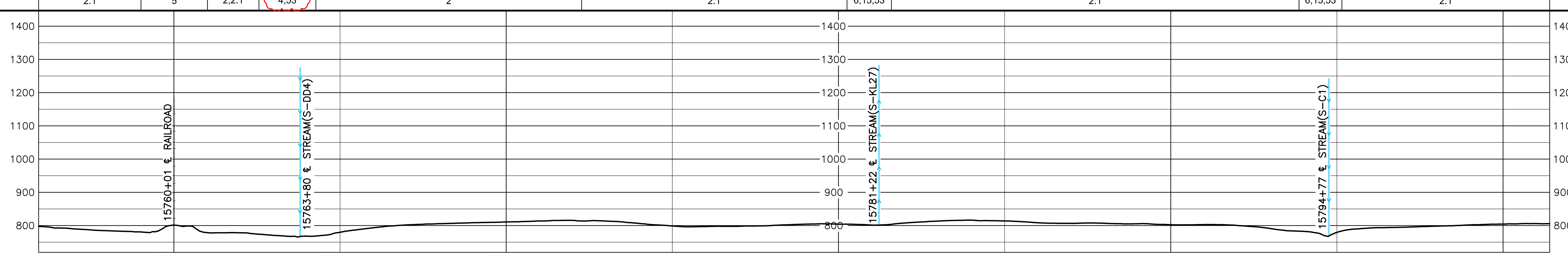
CONSTRUCTION METHOD

2.1	5	2,2.1	4,53	2	2.1	6,15,53	2.1	6,15,53	2.1

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



ISSUED FOR CONSTRUCTION

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	02-01-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	1334	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	2918	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	120	42"O.D. X 0.740"W.T., X-70, FBE & ARO
~~5~~	~~200~~	~~42"O.D. X 0.888"W.T., X-70, FBE & ARO~~
~~6~~	~~40~~	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	6	~~TYPE 1 TEST STATION - PIPELINE~~

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
CLIMAX & CENTRAL PCT.,PITTSYLVANIA CO.,VA.
STA. 15755+93 TO STA. 15801+40

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -15	
SHEET 324 OF 329	REV. 8
DATE OF PLOT: 02/1/21 3:13 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Parcel	Length
15801+40 – 15810+45	VA-PI-088	905 LF / 905 SLOPE
15810+45 – 15811+21	VA-PI-088 / VA-PI-090	76 LF / 77 SLOPE
15811+21 – 15826+54	VA-PI-090	1534 LF / 1535 SLOPE
15826+54 – 15826+99	STATE ROUTE 691	44 LF - 44 SLOPE
15826+99 – 15830+52	VA-PI-091	353 LF / 353 SLOPE
15830+52 – 15831+79	VA-PI-092 / VA-PI-091	127 LF / 127 SLOPE
15831+79 – 15832+23	VA-PI-092	44 LF / 44 SLOPE
15832+23 – 15832+80	VA-PI-092 / VA-PI-093	57 LF / 58 SLOPE
15832+80 – 15838+28	VA-PI-093	548 LF / 548 SLOPE
15838+28 – 15841+07	VA-PI-094 / VA-PI-093	279 LF / 279 SLOPE
15841+07 – 15849+54	VA-PI-094	847 LF / 849 SLOPE
15849+54 – 15851+26	VA-PI-095 / VA-PI-5156	172 LF / 174 SLOPE
15851+26 – 15852+07	VA-PI-096 / VA-PI-5156	81 LF / 81 SLOPE
15852+07 – 15856+17	VA-PI-096	410 LF / 412 SLOPE

DESIGN

PIPE / COATING	Station	Value
	15801+40 – 15820+50	1
	15820+50 – 15825+38	2
	15825+38 – 15826+18	3
	15826+18 – 15826+37	2
	15826+37 – 15827+17	5
	15827+17 – 15851+70	2
	15851+70 – 15852+90	4
	15852+90 – 15856+17	2 (REV.8)

SLOPE DISTANCE: 1910' | 488' | 80' | 19' | 80' | 2458' | 120' | 331'

CLASS LOCATION / HCA: 1 (to 15821+30) | 2 (15821+30 – 15839+62) | 1 (15839+62 – 15846+40) | 2 (15846+40 – 15855+56) | 1

HCA - 18 (to 15834+39); HCA - 19 (15838+25 –)

ENVIRONMENTAL

CONSTRUCTION EXCLUSION (15801+40 – 15856+17):
TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31
SEE TREE CLEARING PLAN FOR FURTHER DETAILS

FISH RELOCATION REQUIRED WITHIN STREAM S-G2 CONSULT RESPONSIBLE E.I.

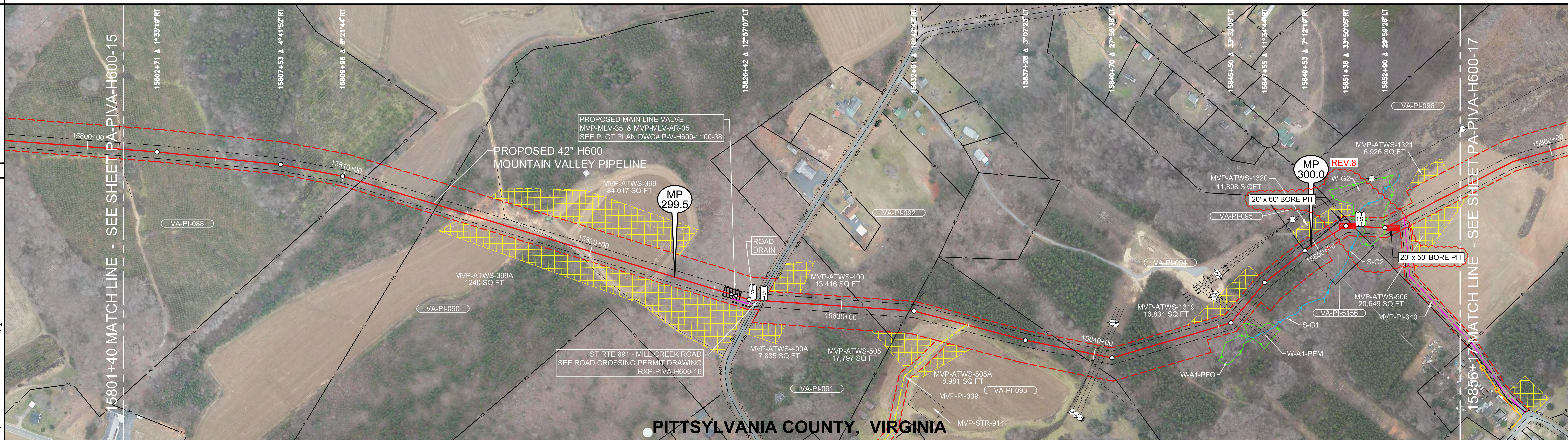
T.O.Y.R.: SEE TREE CLEARING PLAN

WETLAND / STREAM:

S-G2	W-G2
7 LF	133 LF

PLAN VIEW

0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-109	ACCESS ROAD DETAIL MAP
RXP-PIVA-H600-16	STATE ROUTE 691 PERMIT DWG
RSS-H600-161	RESIDENTIAL SITE SPECIFIC
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-V-H600-1100-38	MAIN LINE VALVE #35 PLOT PLAN

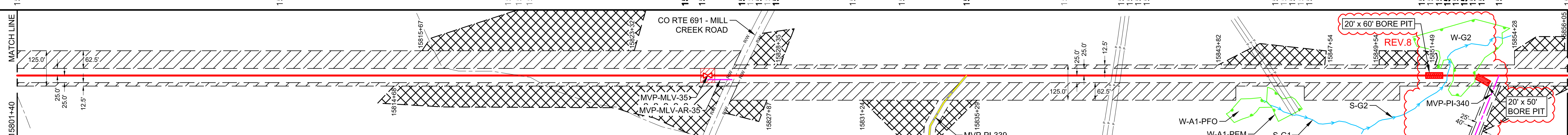
HORIZONTAL STATIONING

- 15801+40 MATCH LINE
- 15810+67 PROPERTY LINE
- 15818+46 EDGE OF DIRT
- 15818+76 ℄ FIELD ROAD(DIRT)
- 15819+05 EDGE OF DIRT
- **15825+78 PROPOSED MAIN LINE VALVE (MVP-MLV-35)**
- 15825+78 ACCESS ROAD – PERMANENT (MVP-MLV-AR-35)16'RT
- **15826+55 PROPOSED TYPE 1 TEST STATION,R/W**
- 15826+66 EDGE OF ASPHALT
- **15826+77 ℄ CO RTE 691 – MILL CREEK ROAD**
- 15826+88 EDGE OF ASPHALT
- **15826+99 PROPOSED TYPE 1 TEST STATION,R/W**
- 15830+90 PROPERTY LINE
- 15832+63 PROPERTY LINE
- **15834+92 ACCESS RD – TEMPORARY (MVP-PI-339)**
- 15838+37 PROPERTY CORNER 7'RT
- 15839+16 PROPERTY LINE
- 15840+08 OHP LINE
- 15840+23 OHP LINE
- 15840+40 OHP LINE
- 15845+83 OHP LINE
- 15845+83 GUY ANCHOR 82'LT
- 15845+98 OHP LINE
- 15845+98 GUY ANCHOR 82'LT
- 15846+11 OHP LINE
- 15851+55 BEGIN WETLAND(W-G2)
- 15851+68 PROPERTY LINE
- 15851+72 END WETLAND(W-G2)
- **15851+88 PROPOSED TYPE 1 TEST STATION**
- **15851+90 ℄ STREAM(S-G2)**
- **15851+98 PROPOSED TYPE 1 TEST STATION**
- 15852+12 BEGIN WETLAND(W-G2)
- 15852+88 END WETLAND(W-G2)
- 15853+73 ACCESS RD – PERMANENT (MVP-PI-340)
- 15856+17 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

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



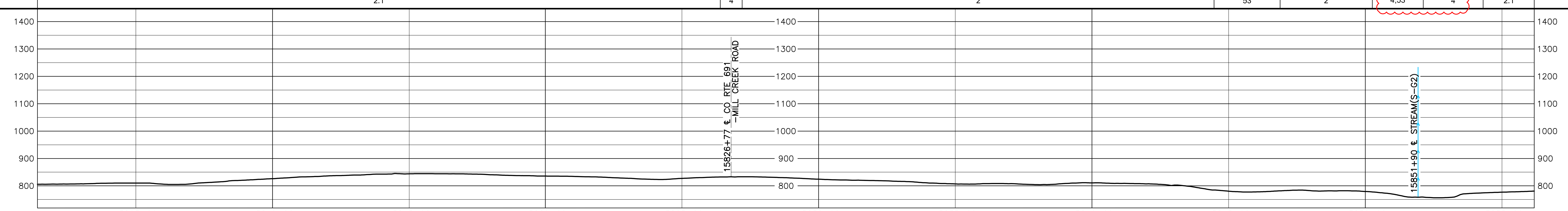
CONSTRUCTION METHOD

15801+40 –							
2.1	4	2	53	2	4,53	4	2.1

CONSTRUCTION METHOD KEY

- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
- 10 - HDD ENTRY PLAN
- 11 - HDD EXIT PLAN
- 12 - HDD CONSTRUCTION
- 13 - PARALLEL TO POWER LINE
- 14 - PARALLEL TO POWER LINE
- 15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
- 33 - SIDE HILL CONSTRUCTION
- 34 - 2-TONE SIDE HILL CONSTRUCTION
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	10-07-20	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	1910	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	3296	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
3	80	42"O.D. X 0.888"W.T., X-70, FUSION BONDED EPOXY
4	120	42"O.D. X 0.740"W.T., X-70, FBE & ARO
5	80	42"O.D. X 0.888"W.T., X-70, FBE & ARO
	4	TYPE 1 TEST STATION - PIPELINE

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE CENTRAL PCT.,PITTSYLVANIA CO.,VA. STA. 15801+40 TO STA. 15856+17

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -16	
SHEET 325 OF 329	REV. 8
DATE OF PLOT: 10/12/20 8:04 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Parcel	Length
15856+17	VA-PI-096	2291 LF / 2303 SLOPE
15879+08	VA-PI-96.001	576 LF / 577 SLOPE
15884+84	VA-PI-098 / VA-PI-96.001	44 LF / 45 SLOPE
15885+28	VA-PI-098	588 LF / 589 SLOPE
15891+16	EQUATION: 15892+69 BACK= 15892+40 AHEAD	
	VA-PI-099	1386 LF / 1387 SLOPE
15904+73	VA-PI-099 / VA-PI-100	65 LF / 65 SLOPE
15905+38	VA-PI-100	395 LF / 395 SLOPE
15909+33		

DESIGN

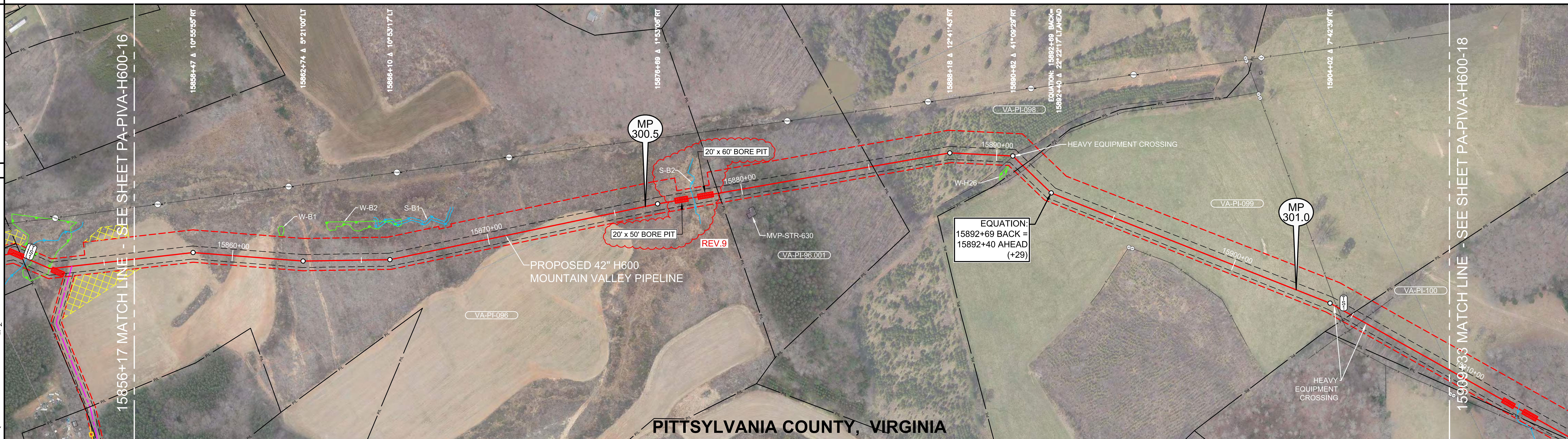
PIPE / COATING	15856+17	1	15877+88 – 15878+28: 4 (REV.9)	1	15889+88 – 15909+32: 2
SLOPE DISTANCE		2182'	40'	1154'	1986'
CLASS LOCATION / HCA		HCA - 19 (to 15863+97)		1	

ENVIRONMENTAL

CONSTRUCTION EXCLUSION	15856+17 – 15909+32: TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
WETLAND / STREAM	S-B2 5 LF
.	
.	

0' 100' 200' 400'

PLAN VIEW



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

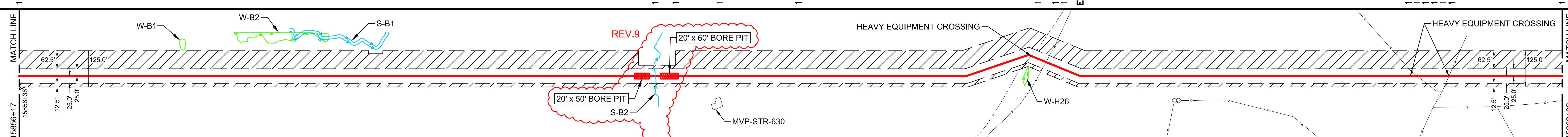
HORIZONTAL STATIONING

- 15856+17 MATCH LINE
- 15878+08 ℄ STREAM(S-B2)
- 15879+08 PROPERTY LINE
- 15880+32 BUILDING - HOUSE - DEMO'D 74'RT
- 15885+14 PROPERTY LINE
- 15890+65 ℄ FIELD ROAD(DIRT), HEAVY EQUIPMENT CROSSING
- 15891+16 PROPERTY LINE
- 15891+33 FENCE - BARBED WIRE
- EQUATION: 15892+69 BACK = 15892+40 AHEAD
- 15904+18 HEAVY EQUIPMENT CROSSING
- 15904+33 FENCE - BARBED WIRE
- 15904+61 PROPOSED TYPE 1 TEST STATION
- 15904+92 PROPERTY LINE
- 15905+43 FENCE - BARBED WIRE
- 15905+58 HEAVY EQUIPMENT CROSSING
- 15909+33 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

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



CONSTRUCTION METHOD

15856+17 – 15877+88	15877+88 – 15878+28	15878+28 – 15909+33
2.1	4,53	2.1

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
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7 - PARALLEL TO POWER LINE
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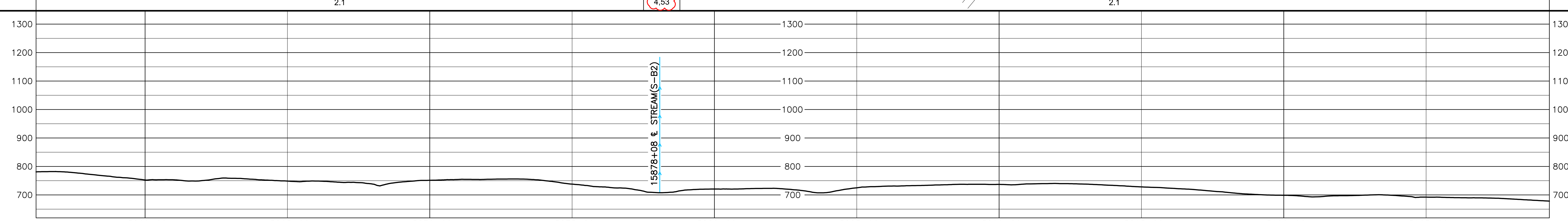
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	04-14-18	ISSUED FOR VARIANCE - RE-ROUTE TO AVOID WETLAND W-H26
9	HEI	09-31-20	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	3335	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
~~2~~	~~1986~~	~~42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY~~
4	40	42"O.D. X 0.740"W.T., X-70, FBE & ARO
~~6~~	~~40~~	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	1	TYPE 1 TEST STATION - PIPELINE

REV.9

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE CENTRAL PCT.,PITTSYLVANIA CO.,VA. STA. 15856+17 TO STA. 15909+33

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -17	
SHEET 326 OF 329	REV. 9
DATE OF PLOT: 10/6/20 11:39 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Parcel	Length
15909+33 – 15911+56	VA-PI-100	224 LF / 224 SLOPE
15911+56 – 15923+77	VA-PI-100 / VA-PI-101	1221 LF / 1225 SLOPE
15923+77 – 15924+05	VA-PI-103 / VA-PI-102 / VA-PI-101	28 LF / 28 SLOPE
15924+05 – 15933+88	VA-PI-103 / VA-PI-102	983 LF / 987 SLOPE
15933+88 – 15938+45	VA-PI-103	457 LF / 459 SLOPE
15938+45 – 15940+76	VA-PI-103.01	231 LF / 232 SLOPE
15940+76 – 15947+34	VA-PI-103.01 / VA-PI-104	658 LF / 667 SLOPE
15947+34 – 15947+94	STATE ROUTE 685	60 LF - 62 SLOPE
15947+94 – 15965+50	VA-PI-105	1756 LF / 1764 SLOPE

DESIGN

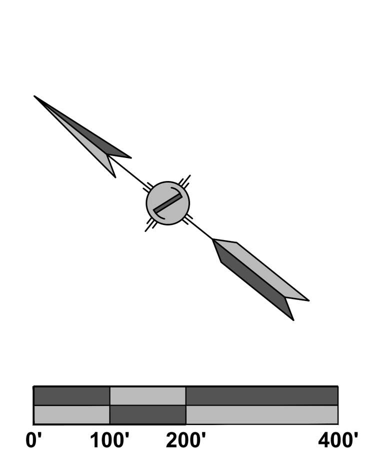
Station	15909+33	15912+19	15912+79	15923+12	15923+92	15933+82	15947+24	15948+04	15957+99	15958+39	15962+13	15962+53	15965+50
PIPE / COATING	2	4	2	4	2	1	4	1	4	1	4	1	
SLOPE DISTANCE	286'	40'	1056'	80'	994'	1356'	80'	1000'	40'	374'	40'	302'	
CLASS LOCATION / HCA	1												

REV.8

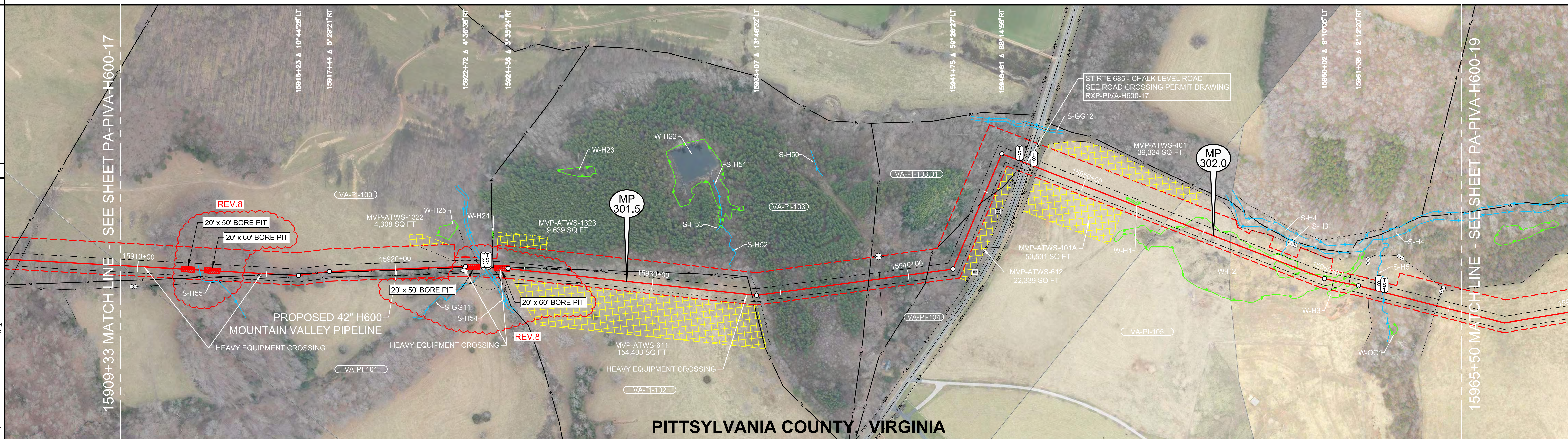
ENVIRONMENTAL

CONSTRUCTION EXCLUSION (15909+33 – 15965+50):
TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31
SEE TREE CLEARING PLAN FOR FURTHER DETAILS
FISH RELOCATION REQUIRED WITHIN STREAM S-H54 CONSULT RESPONSIBLE E.I
TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31
SEE TREE CLEARING PLAN FOR FURTHER DETAILS
FISH RELOCATION REQUIRED WITHIN STREAM S-H5 CONSULT RESPONSIBLE E.I

WETLAND / STREAM	S-H55	S-GG11	S-H54	W-H1	W-H2	S-H3	W-H3	S-H5
	3 LF	41 LF	14 LF	58 LF	732 LF	6 LF	99 LF	8 LF



PLAN VIEW



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
RXP-PIVA-H600-17	STATE ROUTE 685 PERMIT DWG
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING

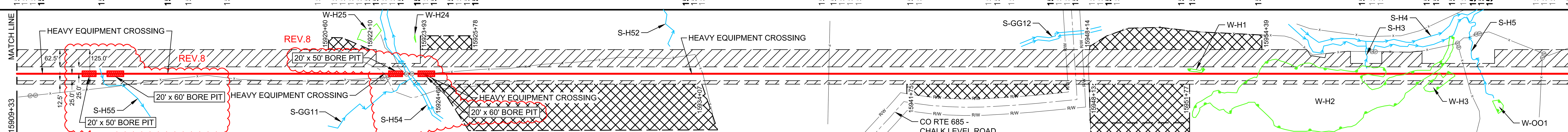
HORIZONTAL STATIONING

15909+33 MATCH LINE
15909+81 GATE POST 79'RT
15909+95 GATE POST 78'RT
15910+21 HEAVY EQUIPMENT CROSSING
15912+39 ℄ STREAM(S-H55)
15914+79 HEAVY EQUIPMENT CROSSING
15915+53 PROPERTY LINE
15916+93 PROPERTY LINE
15922+62 ℄ TRAIL(DIRT),
HEAVY EQUIPMENT CROSSING
15922+63 GATE POST 15'RT
15922+77 GATE POST 12'RT
15922+86 CULVERT 69'RT
15923+03 CULVERT 57'RT
15923+14 PROPERTY LINE
15923+21 BEGIN ℄ STREAM(S-GG11)37'RT
15923+40 FENCE - BARBED WIRE
15923+43 GATE POST 1'RT
15923+45 STREAM BANK(S-H54),
PROPOSED TYPE 1 TEST STATION
15923+49 PROPOSED RIVER WEIGHT - STREAM
15923+55 GATE
15923+59 STREAM BANK(S-H54),
PROPOSED TYPE 1 TEST STATION
15923+62 END ℄ STREAM(S-GG11)16'RT
15923+63 GATE POST 1'LT
15923+83 PROPERTY LINE
15924+05 HEAVY EQUIPMENT CROSSING
15933+62 HEAVY EQUIPMENT CROSSING
15933+88 PROPERTY LINE
15934+15 FENCE - BARBED WIRE
15938+45 PROPERTY LINE
15938+88 OHP LINE
15938+95 POWER POLE 87'LT
15938+97 GUY ANCHOR 97'LT
15938+99 GUY ANCHOR 82'LT
15940+76 PROPERTY LINE
15941+97 PEDESTAL - TELEPHONE 83'RT
15944+48 PEDESTAL - TELEPHONE 74'RT
15944+54 PROPERTY LINE
15945+31 CULVERT 81'RT
15947+34 PROPOSED TYPE 1 TEST STATION,R/W
15947+47 GUARDRAIL
15947+53 EDGE OF ASPHALT
15947+64 ℄ CO RTE 685 - CHALK LEVEL ROAD
15947+75 EDGE OF ASPHALT
15947+82 GUARDRAIL
15947+94 PROPOSED TYPE 1 TEST STATION,R/W
15948+12 FENCE - ELECTRIC
15951+72 BEGIN WETLAND(W-H1) 16'LT
15952+30 END WETLAND(W-H1) 14'LT
15953+68 BEGIN WETLAND(W-H2) 37'RT
15958+19 ℄ STREAM(S-H3)20' LT
15958+37 GATE POST 80'LT
15958+48 GATE POST 80'LT
15960+38 BEGIN WETLAND(W-H3)37'RT
15961+00 END WETLAND(W-H2)38'LT
15961+37 END WETLAND(W-H3)9'RT
15961+76 FENCE - ELECTRIC
15962+19 PROPOSED TYPE 1 TEST STATION
15962+32 ℄ STREAM(S-H5)
15962+41 PROPOSED TYPE 1 TEST STATION
15964+51 FENCE - ELECTRIC
15964+53 GATE POST 58'LT
15964+59 GATE POST 72'LT
15965+50 MATCH LINE

ISSUED FOR CONSTRUCTION

WORK SPACE

- PROPOSED PIPELINE
- EXISTING PIPELINE
- ACCESS ROAD / TEMPORARY WORK SPACE
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)



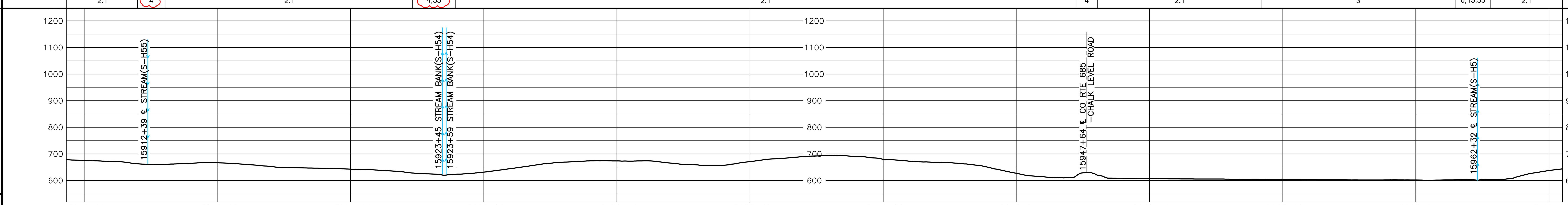
CONSTRUCTION METHOD

2.1	4	2.1	4,53	2.1	4	2.1	3	6,15,53	2.1

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION
53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	01-13-21	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	3032	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	2336	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
4	280	~~42"O.D. X 0.740"W.T., X-70, FBE & ARO~~
~~6~~	~~840~~	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	6	TYPE 1 TEST STATION - PIPELINE
	1	RIVER WEIGHTS

REV.8

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE CENTRAL PCT.,PITTSYLVANIA CO.,VA. STA. 15909+33 TO STA. 15965+50

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -18	
SHEET 327 OF 329	REV. 8
DATE OF PLOT: 02/1/21 3:20 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

Station	Tract	Length
15996+52 – 16003+92	VA-PI-104.001	740 LF / 743 SLOPE
16003+92 – 16016+72	VA-PI-111	1280 LF / 1287 SLOPE
16016+72 – 16016+90	VA-PI-111 / VA-PI-112.01	18 LF / 18 SLOPE
16016+90 – 16017+04	VA-PI-111 / VA-PI-112.01 / VA-PI-112	14 LF / 14 SLOPE
16017+04 – 16017+40	VA-PI-111 / VA-PI-112	36 LF / 36 SLOPE
16017+40 – 16027+46	VA-PI-112	1006 LF / 1008 SLOPE

DESIGN

Station	PIPE / COATING	SLOPE DISTANCE
15996+52 – 15999+25	1	276'
15999+25 – 16003+65	4	440'
16003+65 – 16015+83	1	1224'
16015+83 – 16016+63	4	80'
16016+63 – 16026+81	1	1021'
16026+81 – 16027+21	2	40'
16027+21 – 16027+46	3	25'

CLASS LOCATION / HCA: 1

REV.8

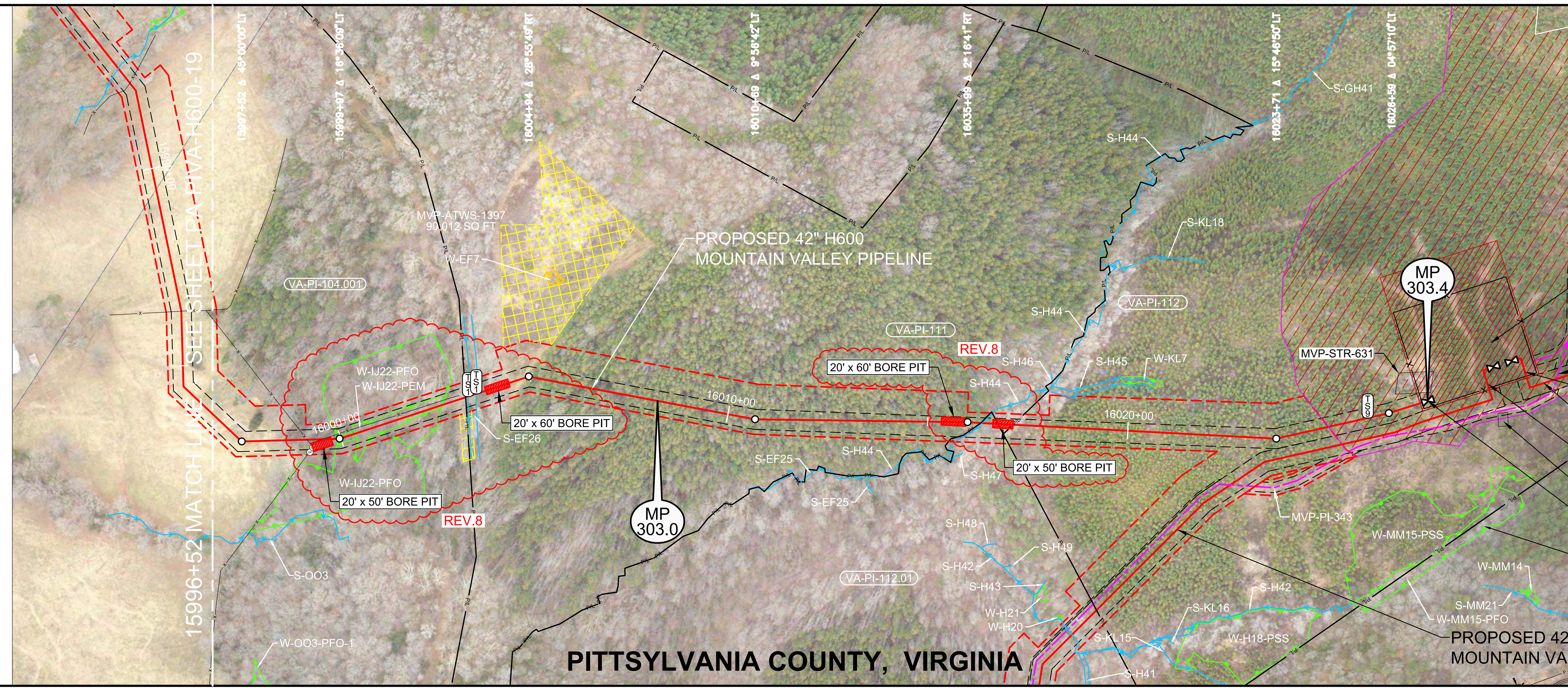
ENVIRONMENTAL

CONSTRUCTION EXCLUSION (15996+52 – 16027+46):
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS
- FISH RELOCATION REQUIRED WITHIN STREAM S-H44 CONSULT RESPONSIBLE E.I
- TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31 SEE TREE CLEARING PLAN FOR FURTHER DETAILS

WETLAND / STREAM:
- W-IJ22-PFO 317 LF
- W-IJ22-PEM 255 LF
- S-EF26 21 LF
- S-H44 8 LF

PLAN VIEW

0' 100' 200' 400'



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL / PROPOSED TEST STATION
- MAILBOX / LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN / TOWER LEG
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAS-H600-05	ANCILLARY SITE DETAIL MAP
PA-PIVA-H602-01	H602 ALIGNMENT SHEET
PA-PIVA-H603-01	H603 ALIGNMENT SHEET
P-W-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-W-H600-1204-02	CATHODIC PROTECTION STANDARD DRAWING
P-V-H600-1148-01	MLV #36 & TRANSCO IC PLOT PLAN

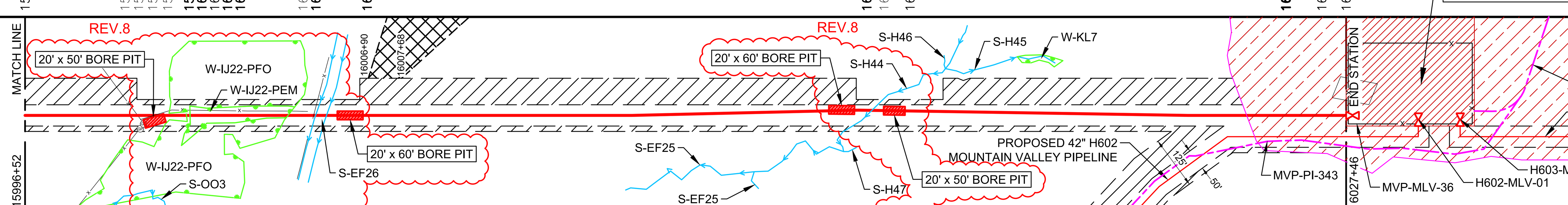
ISSUED FOR CONSTRUCTION

HORIZONTAL STATIONING

- 15996+52 MATCH LINE
- 15999+16 FENCE – BARBED WIRE
- 15999+22 GATE POST–32'RT
- 15999+29 GATE POST–20'RT
- 15999+53 FENCE – BARBED WIRE
- **15999+80 BEGIN WETLAND(W–IJ22–PFO)37'LT**
- **16000+29 BEGIN WETLAND(W–IJ22–PEM)37'RT**
- 16002+50 PROPERTY LINE
- **16002+84 END WETLAND(W–IJ22–PEM)20'LT**
- **16002+97 END WETLAND(W–IJ22–PFO)37'LT**
- 16003+28 FENCE – BARBED WIRE
- **16003+35 STREAM BANK(S–EF26), PROPOSED TYPE 1 TEST STATION, BEGIN PROPOSED 2 RIVER WEIGHTS AT 10' SPACING – STREAM**
- **16003+56 STREAM BANK(S–EF26), PROPOSED TYPE 1 TEST STATION**
- **16016+36 ℄ STREAM(S–H44)**
- 16016+91 PROPERTY CORNER 13'RT
- 16017+20 PROPERTY LINE
- **16026+05 PROPOSED TYPE 9 TEST STATION**
- 16026+89 BUILDING–HOUSE FALLING DOWN 41'LT
- 16027+46 END STATION

WORK SPACE

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



CONSTRUCTION METHOD

2.1	4	4,53	2.1	4,53	2.1

CONSTRUCTION METHOD KEY
- 1 - TYPICAL R/W WORKING SIDE RIGHT
- 1.1 - TYPICAL R/W WORKING SIDE LEFT
- 2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
- 2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
- 3 - TYPICAL WETLAND X-ING
- 4 - ROAD X-ING - BORE
- 5 - RAILROAD X-ING - BORE
- 6 - WATERBODY X-ING OPEN CUT - FLUME
- 7 - PARALLEL TO POWER LINE
- 8 - RIDGE CONSTRUCTION
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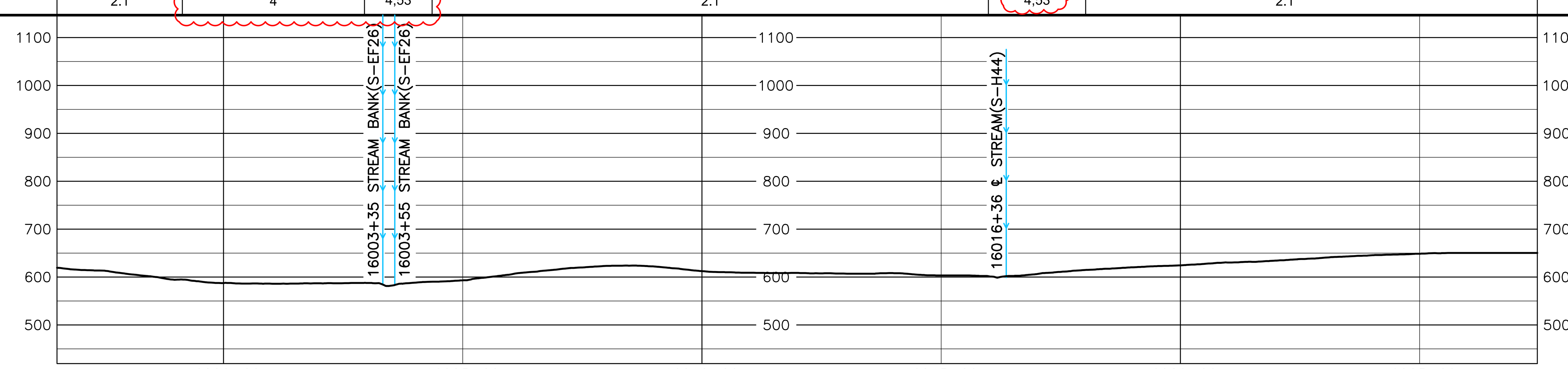
- 53 - REDUCED CONSTRUCTION R/W WITH TOPSOIL SEGREGATION
- 54 - REDUCED CONSTRUCTION R/W FOR NON-WETLAND OR STREAM REASONS

PROFILE



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1.13 ISSUED FOR BID
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC
5	HEI	11-11-16	REMOVED EQUATIONS
6	HEI	11-27-17	ISSUED FOR CONSTRUCTION
7	HEI	04-13-18	ISSUED FOR CONSTRUCTION - FERC REVISION REQUEST
8	HEI	09-31-20	ISSUED FOR VARIANCE - CHANGED CONST.METHOD TO BORE

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	2521	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
2	40	42"O.D. X 0.740"W.T., X-70, FUSION BONDED EPOXY
3	25	42"O.D. X 0.888"W.T., X-70, FUSION BONDED EPOXY
4	520	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
~~6~~	~~80~~	~~42"O.D. X 0.617"W.T., X-70, FBE & ARO~~
	2	~~TYPE 1 TEST STATION - PIPELINE~~
	1	TYPE 9 TEST STATION - TEST STATION IR COUPON
	2	RIVER WEIGHTS

REV.8

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
6	JJS	11-27-17
7	JJS	04-13-18

APPROVED FOR BIDDING

REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16
6	JJS	11-27-17
7	JJS	04-13-18

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE CENTRAL PCT.,PITTSYLVANIA CO.,VA. STA. 15996+52 TO STA. 16027+46

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/11/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:.	.
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-PIVA-H600 -20	
SHEET 329 OF 329	REV. 8
DATE OF PLOT: 09/30/20 5:34 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

DESIGN
- PIPE / COATING
- SLOPE DISTANCE
- CLASS LOCATION / HCA

ENVIRONMENTAL
- CONSTRUCTION EXCLUSION
- WETLAND / STREAM
- .
- .

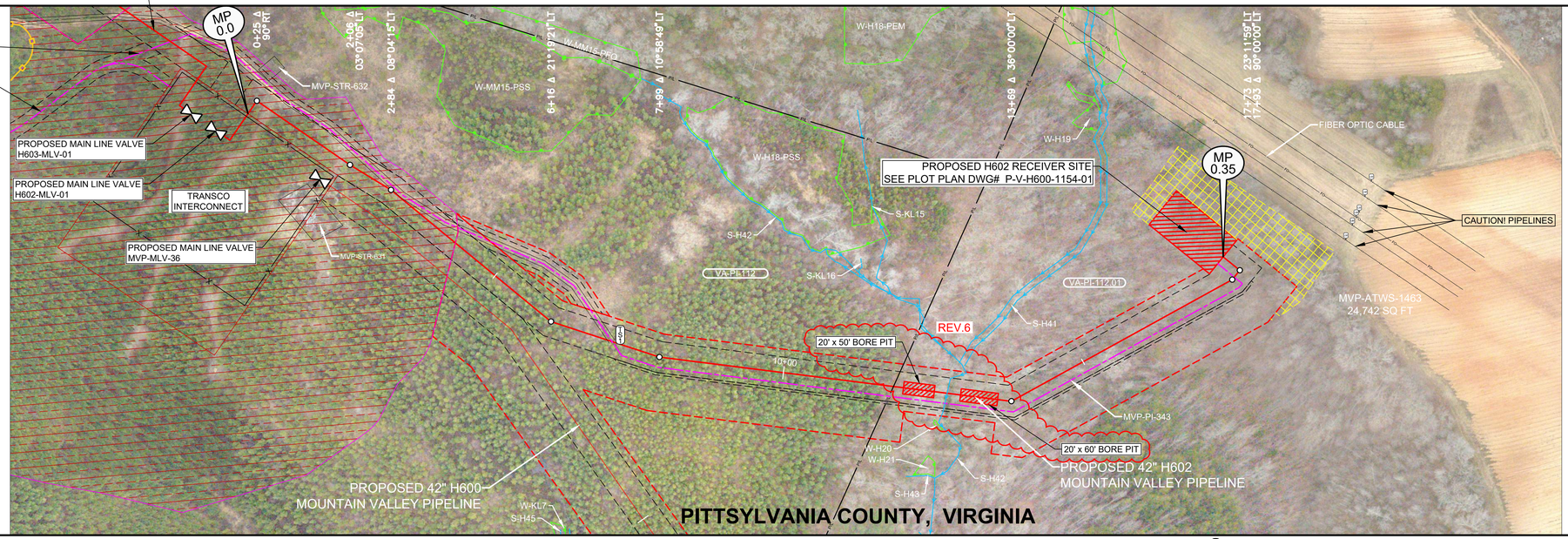
0+00 | VA-PI-112 | 1229 LF 1231 SLOPE | 12+29 | VA-PI-112.01 | 598 LF 600 SLOPE | 18+27

PIPE / COATING: 2 | REV.6 | 4 | 2
SLOPE DISTANCE: 1227' | 80' | 524'
CLASS LOCATION / HCA: 1

TIME OF YEAR RESTRICTION: NO CLEARING JUNE 1 - JULY 31
SEE TREE CLEARING PLAN FOR FURTHER DETAILS

WETLAND / STREAM: S-H42 — 5 LF

PROPOSED 42" H603
MOUNTAIN VALLEY PIPELINE



0' 50' 100' 200'

PLAN VIEW

LEGEND
- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRICADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

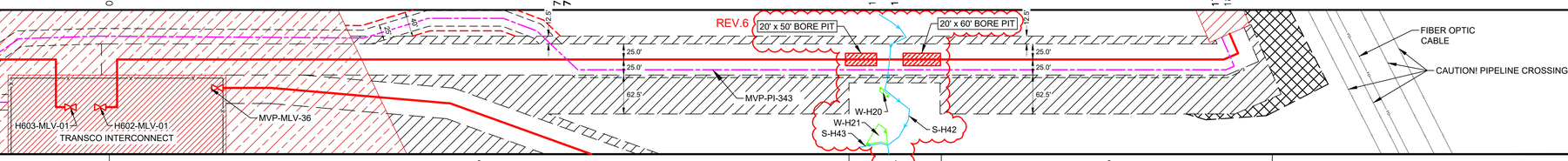
REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-17	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
PA-PIVA-H600-20	ALIGNMENT SHEET
P-V-H600-1204-01	CATHODIC PROTECTION STANDARD DRAWING
P-V-H600-1154-01	H602 TRANSCO STATION PLOT PLAN

HORIZONTAL STATIONING

0+00 PROPOSED FENCE
7+19 ACCESS RD – PERMANENT(MVP–PI–343)
7+35 PROPOSED TYPE 1 TEST STATION
12+29 PROPERTY LINE
12+65 ℄ STREAM(S–H42)
17+79 ACCESS ROAD – PERMANENT(MVP–PI–343)
18+27 BEGIN PROPOSED RECEIVER SITE

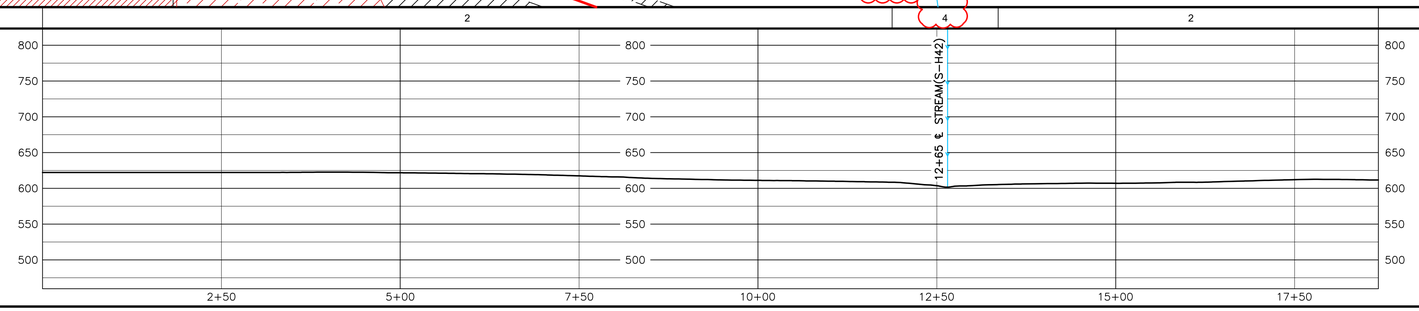
WORK SPACE
- PROPOSED PIPELINE
- EXISTING PIPELINE
- ACCESS ROAD TEMPORARY WORK SPACE
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)



CONSTRUCTION METHOD

CONSTRUCTION METHOD KEY
1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE LEFT
2 - TOPSOIL SEGREGATED R/W WORKING SIDE RIGHT
2.1 - TOPSOIL SEGREGATED R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
6 - WATERBODY X-ING OPEN CUT - FLUME
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP

PROFILE



ISSUED FOR CONSTRUCTION

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Holland, Michigan 49423-3786 | Southfield, Michigan 48076
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www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
	HEI	06-04-18	REV. 4, 1.13 ISSUED FOR CONSTRUCTION
1	HEI	10-14-18	OCTOBER 2018 PROPOSED ROUTE - ISSUED TO FERC
2	HEI	11-27-17	ISSUED FOR CONSTRUCTION
3	HEI	04-26-18	ISSUED FOR VARIANCE - ROUTE ADJUSTMENT AT PROPOSED RECEIVER SITE
4	HEI	12-04-18	REVISED ATWS AT RECEIVER SITE
5	HEI	11-11-19	REVISED PIPELINE, PE, TWS, ATWS, ACCESS ROAD AND RECEIVER SITE
6	HEI	09-31-2020	ISSUED FOR VARIANCE - CHANGED CONST METHOD TO BORE

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	3751	42"OD X 0.740"W.T. X 70 PSL2 GR X52 FBE EXPANDED EPOXY
4	80	42"OD X 0.740"W.T. X 70 PSL2 GR X52 FBE & ARO CVE X-TESTED PIPELINE

REV.6

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
2	JJS	11-27-17

APPROVED FOR BIDDING

REV.	BY	DATE
0	RRR	09-03-16

APPROVED FOR FERC

REV.	BY	DATE
1	RRR	10-14-18
2	JJS	11-27-17

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H602 LINE
CENTRAL PCT.,PITTSYLVANIA CO.,VA.
STA. 0+00 TO STA. 19+25

HORZ. SCALE: 1" = 100'	
DRAWN BY: HEI(DRF)	05/09/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.:	14-10-052
DRAWING NO.:	PA-PIVA-H602-01
SHEET 1 OF 1	REV. 6
DATE OF PLOT:	10/1/20 8:00 AM