RIGHT-OF-WAY & OWNERSHIP DATA

From	Parcel		Length	To
1251+47	WV-HA-088		184 LF 184 SLOPE	1253+31
1253+31	WV-HA-088	WV-HA-089	244 LF 245 SLOPE	1255+75
1255+75	WV-HA-088	WV-HA-089	1726 LF 1748 SLOPE	1273+01
1273+01	WV-HA-088		912 LF 922 SLOPE	1282+13
1282+13	WV-HA-091	WV-HA-088	31 LF 31 SLOPE	1282+44
1282+44	WV-HA-091	WV-HA-090	250 LF 251 SLOPE	1284+94
1284+94	WV-HA-091		171 LF 171 SLOPE	1286+65
1286+65	WV-HA-091	WV-HA-092	233 LF 235 SLOPE	1288+98
1288+98	WV-HA-091		785 LF 788 SLOPE	1296+83
1296+83	WV-HA-091	WV-HA-092	88 LF 90 SLOPE	1297+70
1297+70	WV-HA-092		1230 LF 1241 SLOPE	1310+00

DESIGN

	From		To
PIPE / COATING	1251+47	1	1310+00
SLOPE DISTANCE		5905'	
CLASS LOCATION / HCA		1	

ENVIRONMENTAL

	From		To
CONSTRUCTION EXCLUSION	1251+47	TIME OF YEAR RESTRICTION: NO TREE CLEARING APRIL 1ST TO JULY 31ST	1310+00
WETLAND / STREAM			
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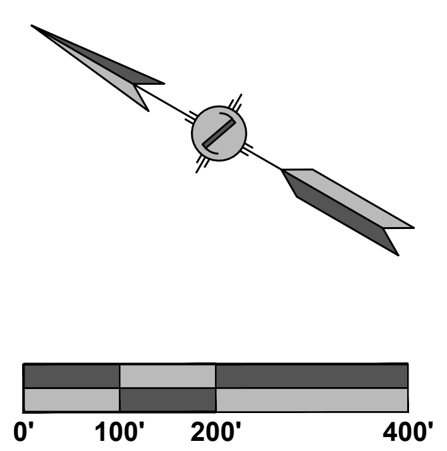
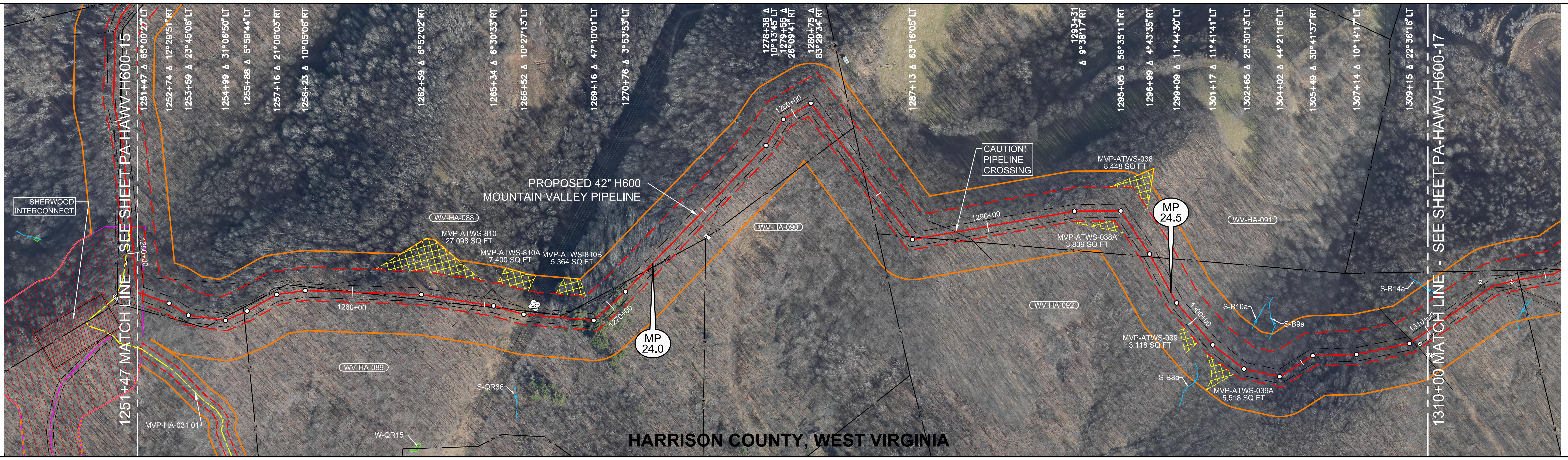


0'
100'
200'
400'

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
- BARRACADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE



1251+47 MATCH LINE - SEE SHEET PA-HAWV-H600-15
1251+47 Δ 65°00'27" LT
1252+74 Δ 12°29'51" RT
1253+59 Δ 23°45'06" LT
1254+99 Δ 31°06'50" LT
1255+88 Δ 5°59'44" LT
1257+16 Δ 21°06'03" RT
1258+23 Δ 10°05'06" RT
1262+59 Δ 6°52'02" RT
1265+34 Δ 6°30'33" RT
1266+52 Δ 10°27'13" LT
1269+16 Δ 47°10'01" LT
1270+76 Δ 3°53'53" LT
1278+38 Δ 10°13'45" LT
1279+55 Δ 26°09'41" RT
1280+75 Δ 83°29'34" RT
1287+13 Δ 63°16'05" LT
1293+31 Δ 9°38'17" RT
1295+05 Δ 56°35'11" RT
1296+99 Δ 4°43'35" RT
1299+09 Δ 11°44'30" LT
1301+17 Δ 11°41'41" LT
1302+65 Δ 25°30'13" LT
1304+02 Δ 44°21'16" LT
1305+49 Δ 30°41'37" RT
1307+14 Δ 10°14'17" LT
1309+15 Δ 22°36'16" LT
1310+00 MATCH LINE - SEE SHEET PA-HAWV-H600-17
SHERWOOD INTERCONNECT
1250+00
1260+00
1270+00
1280+00
1290+00
1300+00
1310+00
WV-HA-088
WV-HA-089
WV-HA-090
WV-HA-091
WV-HA-092
MVP-ATWS-810 27,098 SQ FT
MVP-ATWS-810A 7,400 SQ FT
MVP-ATWS-810B 5,364 SQ FT
PROPOSED 42" H600 MOUNTAIN VALLEY PIPELINE
MP 24.0
MP 24.5
CAUTION! PIPELINE CROSSING
MVP-ATWS-038 8,448 SQ FT
MVP-ATWS-038A 3,839 SQ FT
MVP-ATWS-039 3,118 SQ FT
MVP-ATWS-039A 5,518 SQ FT
MVP-HA-031.01
W-QR15
S-QR36
S-B14a
S-B10a
S-B9a
S-B8a
P/L
HARRISON COUNTY, WEST VIRGINIA

AERIAL PHOTOGRAPHY DATE: APRIL 2015

OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC

REFERENCE DRAWINGS

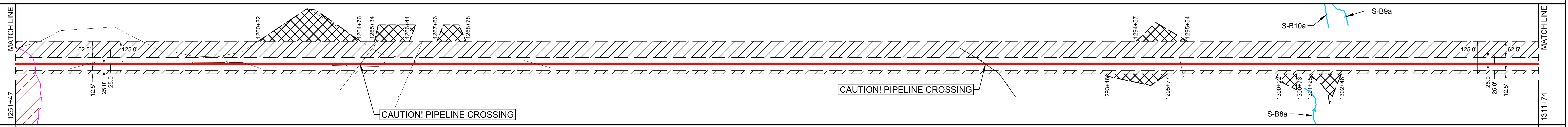
DRAWING NO.	DESCRIPTION
MVP-AR-H600-02	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-09	ACCESS ROAD DETAIL MAP

HORIZONTAL STATIONING

1251+47 MATCH LINE
1254+35 FENCE – BARBED WIRE
1254+80 PROPERTY LINE
1260+12 PROPERTY LINE
1260+37 FENCE – BARBED WIRE
1264+71 16"(DOMINION) PIPELINE
1265+73 PROPERTY LINE
1265+56 FENCE – BARBED WIRE
1266+74 OHP LINE
1266+78 TOWER LEG 32'LT
1266+84 TOWER LEG 47'LT
1266+92 TOWER LEG 26'LT
1266+99 TOWER LEG 41'LT
1271+53 FENCE – BARBED WIRE
1271+84 PROPERTY LINE
1275+99 EDGE OF DIRT
1276+07 ℄ TRAIL
1276+16 EDGE OF DIRT
1282+44 PROPERTY LINE
1284+10 PROPERTY LINE
1286+98 PROPERTY LINE
1287+56 PROPERTY LINE
1288+78 PIPELINE – FOREIGN–UNKNOWN
1296+29 FENCE – BARBED WIRE
1297+12 PROPERTY LINE
1310+00 MATCH LINE

WORK SPACE

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



MATCH LINE
1251+47
62.5'
125.0'
12.5'
25.0'
25.0'
1260+82
1264+76
1265+34
1266+44
1267+66
1268+78
CAUTION! PIPELINE CROSSING
CAUTION! PIPELINE CROSSING
1293+46
1294+57
1295+54
1295+77
S-B10a
S-B9a
1300+02
1300+73
1301+25
1302+46
S-B8a
125.0'
62.5'
25.0'
25.0'
12.5'
MATCH LINE
1311+74

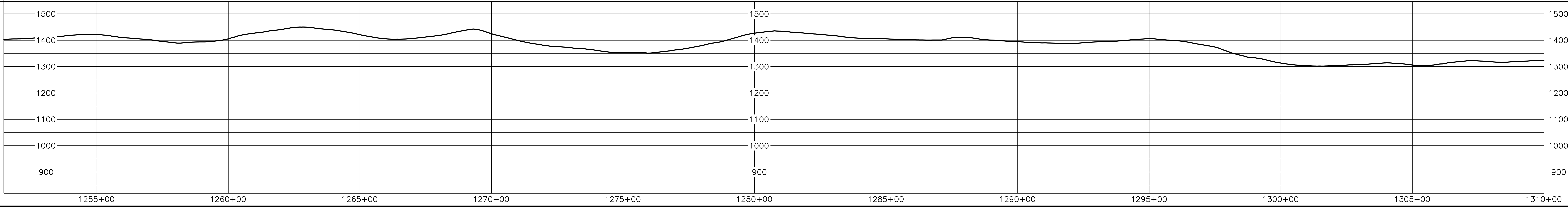
CONSTRUCTION METHOD

1 — 2

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE RIGHT
2 - TYPICAL R/W WORKING SIDE LEFT
2.1 - TYPICAL 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
9 - WATERBODY X-ING OPEN CUT - WET DITCH
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

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

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5905	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
		TYPE 1 TEST STATION - PIPELINE
		TYPE 4 TEST STATION - FOREIGN CROSSING

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
.	.	.

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

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
TENMILE DIST.,HARRISON CO.,W.V.
STA. 1251+47 TO STA. 1310+00

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	10/7/2016
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-HAWV-H600 -16	
SHEET 26 OF 329	REV. 4
DATE OF PLOT: 10/10/2016 5:29 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

1310+00	WV-HA-092	267 LF 269 SLOPE	1312+67
1312+67	WV-HA-094 WV-HA-092	130 LF 131 SLOPE	1314+00
1314+00	WV-HA-094 WV-HA-093	268 LF 275 SLOPE	1316+68
1316+68	WV-HA-093	28 LF 30 SLOPE	1316+96
1316+96	WV-HA-095 WV-HA-093	1084 LF 1094 SLOPE	1327+80
1327+80	WV-HA-095	1093 LF 1095 SLOPE	1338+73
1338+73	WV-HA-095 WV-HA-096	237 LF 238 SLOPE	1341+10
1341+10	WV-HA-095 WV-HA-096 WV-HA-097	18 LF 18 SLOPE	1341+28
1341+28	WV-HA-095 WV-HA-097	26 LF 26 SLOPE	1341+54
1341+54	WV-HA-097	1008 LF 1010 SLOPE	1351+62
1351+62	WV-HA-095 WV-HA-097 WV-HA-097.01	22 LF 23 SLOPE	1351+84
1351+84	WV-HA-095 WV-HA-098	530 LF 534 SLOPE	1357+14
1357+14	WV-HA-095 WV-HA-099	214 LF 216 SLOPE	1359+28
1359+28	WV-HA-095 WV-HA-099 WV-HA-099.01	9 LF 10 SLOPE	1359+37

DESIGN

PIPE / COATING	1310+00 · EQUATION: 1312+95 BK= 1312+99 AHD=	1 · 1359+37
SLOPE DISTANCE		4968'
CLASS LOCATION / HCA		1 · 1347+08 HCA-1

ENVIRONMENTAL

CONSTRUCTION EXCLUSION	1310+00 · TIME OF YEAR RESTRICTION: NO TREE CLEARING APRIL 1ST TO JULY 31ST · 1359+37
WETLAND / STREAM	
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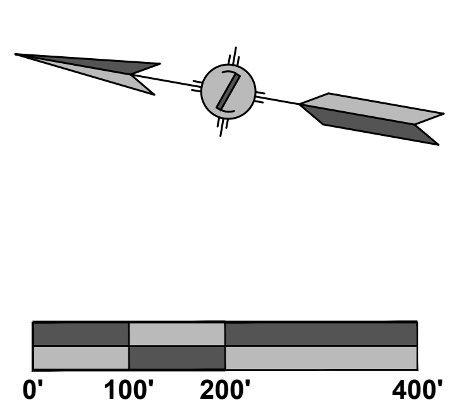
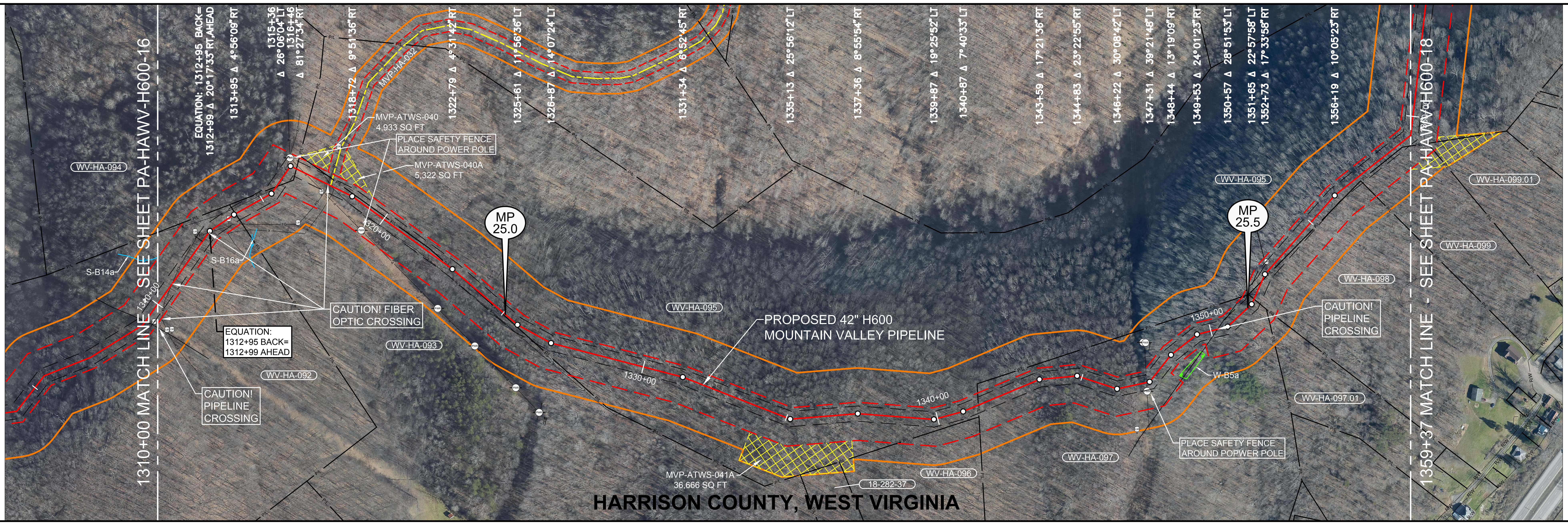


0'
100'
200'
400'

PLAN VIEW



1310+00 MATCH LINE - SEE SHEET PA-HAWV-H600-16
EQUATION: 1312+95 BACK= 1312+99 Δ 20°17'33" RT,AHEAD
1313+95 Δ 4°56'09" RT
1315+36 Δ 26°06'04" LT
1316+46 Δ 81°27'34" RT
1318+72 Δ 9°51'36" RT
1322+79 Δ 4°31'42" RT
1325+61 Δ 11°56'36" LT
1326+87 Δ 14°07'24" LT
1331+34 Δ 6°52'45" RT
1335+13 Δ 25°56'12" LT
1337+36 Δ 8°55'54" RT
1339+87 Δ 19°25'52" LT
1340+87 Δ 7°40'33" LT
1343+59 Δ 17°21'36" RT
1344+83 Δ 23°22'55" RT
1346+22 Δ 30°08'42" LT
1347+31 Δ 39°21'48" LT
1348+44 Δ 13°19'09" RT
1349+53 Δ 24°01'23" RT
1350+57 Δ 28°51'53" LT
1351+65 Δ 22°57'58" LT
1352+73 Δ 17°33'58" RT
1356+19 Δ 10°05'23" RT
1359+37 MATCH LINE - SEE SHEET PA-HAWV-H600-18
WV-HA-094
S-B14a
S-B16a
1310+00
MVP-HA-032
MVP-ATWS-040 4,933 SQ FT
PLACE SAFETY FENCE AROUND POWER POLE
MVP-ATWS-040A 5,322 SQ FT
1320+00
CAUTION! FIBER OPTIC CROSSING
EQUATION: 1312+95 BACK= 1312+99 AHEAD
WV-HA-093
WV-HA-092
CAUTION! PIPELINE CROSSING
MP 25.0
WV-HA-095
PROPOSED 42" H600 MOUNTAIN VALLEY PIPELINE
1330+00
1340+00
MVP-ATWS-041A 36,666 SQ FT
18-282-37
WV-HA-096
WV-HA-097
MP 25.5
1350+00
CAUTION! PIPELINE CROSSING
W-B5a
PLACE SAFETY FENCE AROUND POPWER POLE
WV-HA-097.01
WV-HA-098
WV-HA-099
WV-HA-099.01
P/L
R/W
HARRISON COUNTY, WEST VIRGINIA

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
- P/L PROPERTY LINE
- R/W ROAD RIGHT-OF-WAY
- X FENCE LINE
- P OVERHEAD POWER
- T OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRACADE FENCE
- ○ PI SYMBOL
- PROPOSED TEST STATION
- MB MAILBOX
- LM LINE MARKER - VENT PIPE
- PWR TEL POWER/TELE POLE
- SIGN
- TWR TOWER LEG
- TREE
- GUY ANCHOR
- TANK TANK
- ⋈ GAS VALVE
- WELL GW OW WW MNW WELL - GAS/OIL/WATER/ MONITORING
- POST FP GP POST - GATE/FENCE
- EM GM WM ELEC/GAS/WTR METER
- PED TEP EP PVR TVR PEDESTAL - UTILITY
- SAMH WMH MH - SANITARY/WATER
- ⊞ CATCH BASIN - CULVERT
- ▨ ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ▨ ABOVE GROUND FACILITY
- ▨ LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-02	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-10	ACCESS ROAD DETAIL MAP

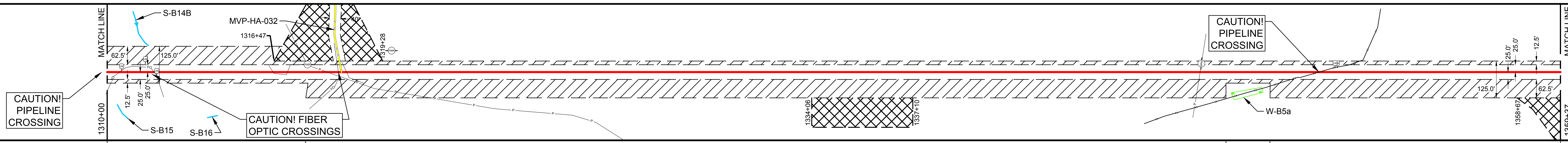
OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC

HORIZONTAL STATIONING

1310+00 MATCH LINE
1310+82 UNGRD UTILITY – FIBER OPTIC
1312+53 LINE MARKER 30'LT
1312+88 UNGRD UTILITY – FIBER OPTIC
EQUATION: 1312+95 BACK = 1312+99 AHEAD
1313+64 LINE MARKER 14'RT
1314+00 PROPERTY LINE
1315+56 FENCE – BARBED WIRE
1315+63 PROPERTY LINE
1315+72 PROPERTY CORNER 21'RT
1316+06 FENCE – BARBED WIRE
1316+31 GUY ANCHOR 41'LT
1316+46 POWER POLE 27'LT
1316+67 PROPERTY LINE
1316+97 OHP LINE
1317+80 LINE MARKER 44'RT
1317+83 UNGRD UTILITY – FIBER OPTIC
1317+92 ACCESS ROAD–TEMPORARY(MVP–HA–032)
1317+96 FENCE – BARBED WIRE
1319+61 POWER POLE 73'RT
1322+90 PROPERTY LINE
1341+40 PROPERTY LINE
1347+16 POWER POLE 29'RT
1347+20 OHP LINE
1348+34 GUY ANCHOR 79'LT
1350+22 PIPELINE – FOREIGN–DOMINION
1351+83 PROPERTY LINE
1352+47 PROPERTY LINE
1352+95 LINE MARKER 14'LT
1352+96 LINE MARKER 14'LT
1356+65 PROPERTY CORNER 15'RT
1358+68 PROPERTY CORNER 21'RT
1359+37 MATCH LINE

WORK SPACE

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



MATCH LINE
1310+00
S-B14B
62.5'
125.0'
12.5'
25.0'
25.0'
CAUTION! PIPELINE CROSSING
S-B15
S-B16
CAUTION! FIBER OPTIC CROSSINGS
MVP-HA-032
1316+47
1319+28
40'
1334+06
1337+10
CAUTION! PIPELINE CROSSING
W-B5a
125.0'
62.5'
25.0'
25.0'
12.5'
1358+67
1359+37
MATCH LINE

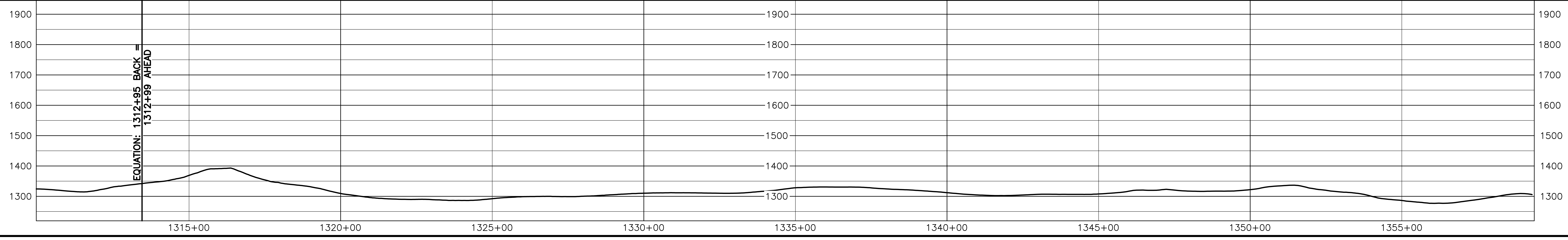
CONSTRUCTION METHOD

1310+00 –			
2	1	3	1

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE RIGHT
2 - TYPICAL R/W WORKING SIDE LEFT
2.1 - TYPICAL 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
9 - WATERBODY X-ING OPEN CUT - WET DITCH
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

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

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	4968	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
		TYPE 1 TEST STATION - PIPELINE
		TYPE 4 TEST STATION - FOREIGN CROSSING

AERIAL PHOTOGRAPHY DATE: APRIL 2015

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
.	.	.

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

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE TENMILE DIST.,HARRISON CO.,W.V. STA. 1310+00 TO STA. 1359+37

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	10/7/2016
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-HAWV-H600 -17	
SHEET 27 OF 329	REV. 4
DATE OF PLOT: 10/10/2016 5:29 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

STATION	TRACT	TRACT	LENGTH
1359+37	WV-HA-095	WV-HA-099.01	25 LF 26 SLOPE
1359+62	WV-HA-095		573 LF 628 SLOPE
1365+35	WV-HA-100	WV-HA-095	19 LF 22 SLOPE
1365+55	WV-HA-100 WV-HA-101	WV-HA-095	70 LF 70 SLOPE
1366+24	WV-HA-101	WV-HA-95	158 LF 158 SLOPE
1367+83	WV-HA-101	WV-HA-102	82 LF 82 SLOPE
1368+64	US ROUTE 50		186 LF 187 SLOPE
1370+50	WV-HA-103	WV-HA-102.01	78 LF 78 SLOPE
1371+28	WV-HA-103		85 LF 86 SLOPE
1372+13	WV-HA-104	WV-HA-108	164 LF 179 SLOPE
1373+67	WV-HA-108		192 LF 206 SLOPE
1375+60	WV-HA-106	WV-HA-108	117 LF 123 SLOPE
1376+76	WV-HA-106		533 LF 561 SLOPE
1382+09	WV-HA-107	WV-HA-106	169 LF 169 SLOPE
1383+77	WV-HA-107		174 LF 174 SLOPE
1385+51	WV-HA-107	WV-HA-108	108 LF 108 SLOPE
1386+59	WV-HA-110	WV-HA-108	35 LF 35 SLOPE
1386+94			

DESIGN

PIPE / COATING	1359+37	1	1365+00	5
	1372+60	EQUATION: 1373+23 BK= 1373+13 AHD	1	1386+94

SLOPE DISTANCE			
	621'	760'	1501'

CLASS LOCATION / HCA: HCA-1 — 1374+82 — 1

ENVIRONMENTAL

CONSTRUCTION EXCLUSION:

1359+37	TIME OF YEAR RESTRICTION: NO TREE CLEARING APRIL 1ST TO JULY 31ST	T.O.Y.R.: NO CONSTRUCTION WITHIN STREAM S-UU3 APRIL 1ST TO JUNE 30TH	TIME OF YEAR RESTRICTION: NO TREE CLEARING APRIL 1ST TO JULY 31ST	1386+94

WETLAND / STREAM:

W-UU1	W-UU3	S-UU3
14 LF	10 LF	61 LF

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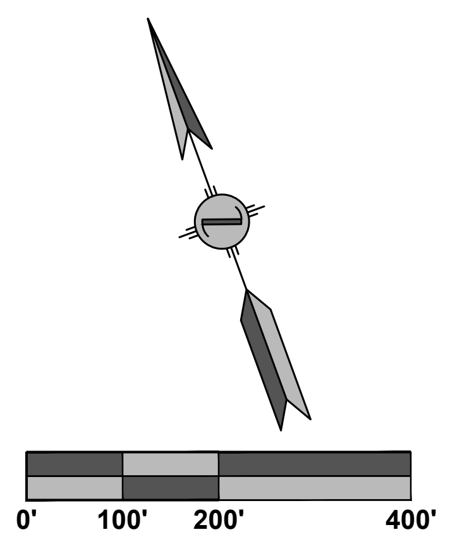
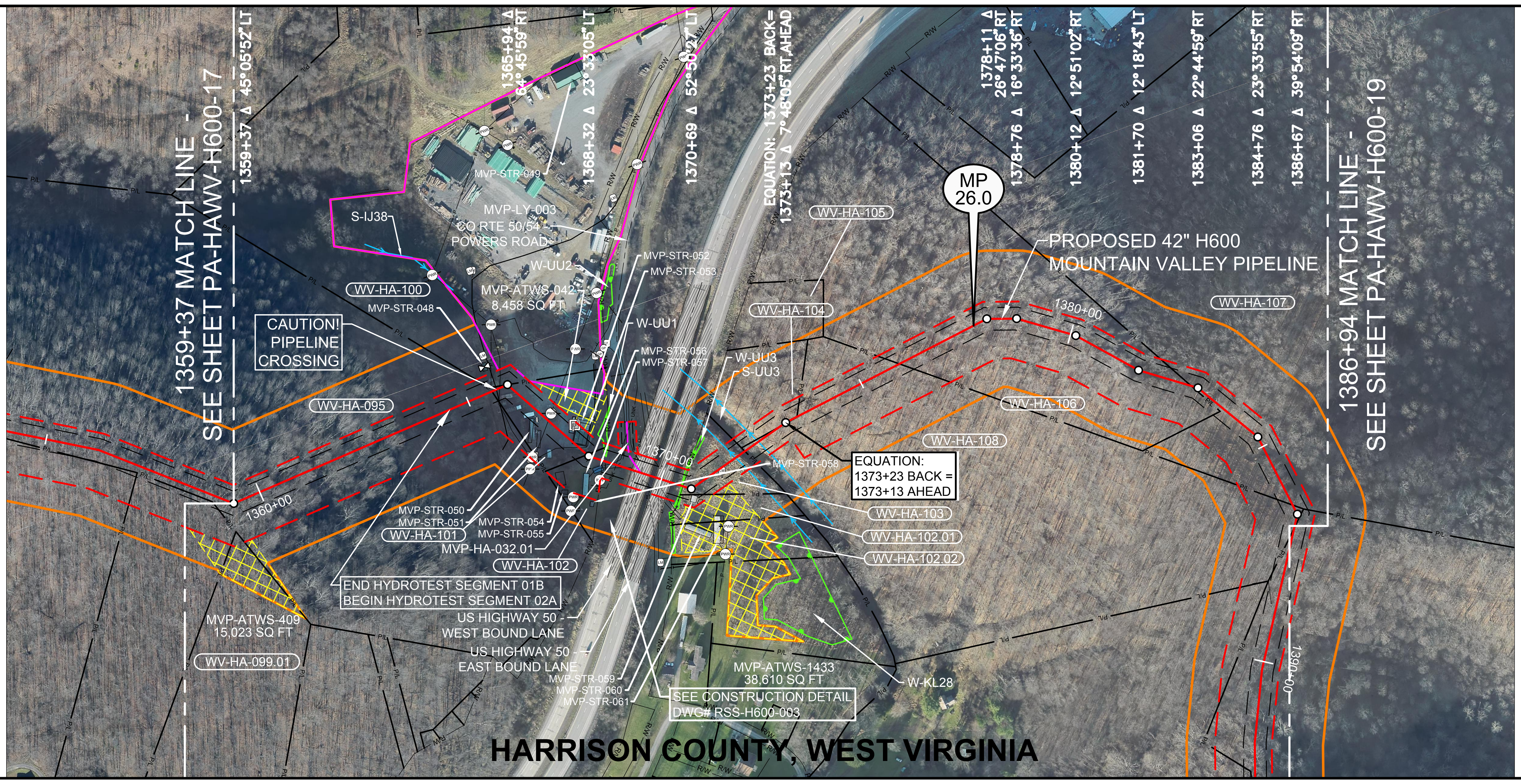

0'
100'
200'
400'

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
- BARRACADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE


1359+37 MATCH LINE -
SEE SHEET PA-HAWV-H600-17
1359+37 Δ 45°05'52"LT
1365+94 Δ 64°45'59"RT
1368+32 Δ 23°33'05"LT
1370+69 Δ 52°50'27"LT
EQUATION: 1373+23 BACK= 1373+13 Δ 7°48'05"RT,AHEAD
1378+11 Δ 26°47'06"RT
1378+76 Δ 16°33'36"RT
1380+12 Δ 12°51'02"RT
1381+70 Δ 12°18'43"LT
1383+06 Δ 22°44'59"RT
1384+76 Δ 23°33'55"RT
1386+67 Δ 39°54'09"RT
1386+94 MATCH LINE -
SEE SHEET PA-HAWV-H600-19
MP 26.0
PROPOSED 42" H600
MOUNTAIN VALLEY PIPELINE
MVP-STR-049
S-IJ38
MVP-LY-003
CO RTE 50/54 -
POWERS ROAD
W-UU2
MVP-ATWS-042
8,458 SQ FT
WV-HA-100
MVP-STR-048
CAUTION!
PIPELINE
CROSSING
W-UU1
MVP-STR-052
MVP-STR-053
MVP-STR-056
MVP-STR-057
W-UU3
S-UU3
WV-HA-105
WV-HA-104
WV-HA-107
WV-HA-106
WV-HA-108
WV-HA-095
1360+00
1370+00
1380+00
1390+00
MVP-STR-058
EQUATION:
1373+23 BACK =
1373+13 AHEAD
WV-HA-103
WV-HA-102.01
WV-HA-102.02
MVP-STR-050
MVP-STR-051
MVP-STR-054
MVP-STR-055
WV-HA-101
MVP-HA-032.01
WV-HA-102
END HYDROTEST SEGMENT 01B
BEGIN HYDROTEST SEGMENT 02A
US HIGHWAY 50 -
WEST BOUND LANE
US HIGHWAY 50 -
EAST BOUND LANE
MVP-ATWS-409
15,023 SQ FT
WV-HA-099.01
MVP-STR-059
MVP-STR-060
MVP-STR-061
SEE CONSTRUCTION DETAIL
DWG# RSS-H600-003
MVP-ATWS-1433
38,610 SQ FT
W-KL28
P/L
R/W
HARRISON COUNTY, WEST VIRGINIA

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
RSS-H600-003	RESIDENTIAL SITE SPECIFIC
MVP-AR-H600-02	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-10	ACCESS ROAD DETAIL MAP
MVP-QDAS-H600-01	ANCILLARY SITE DETAIL MAP
SSRA-H600-001	RECREATIONAL SITE SPECIFIC

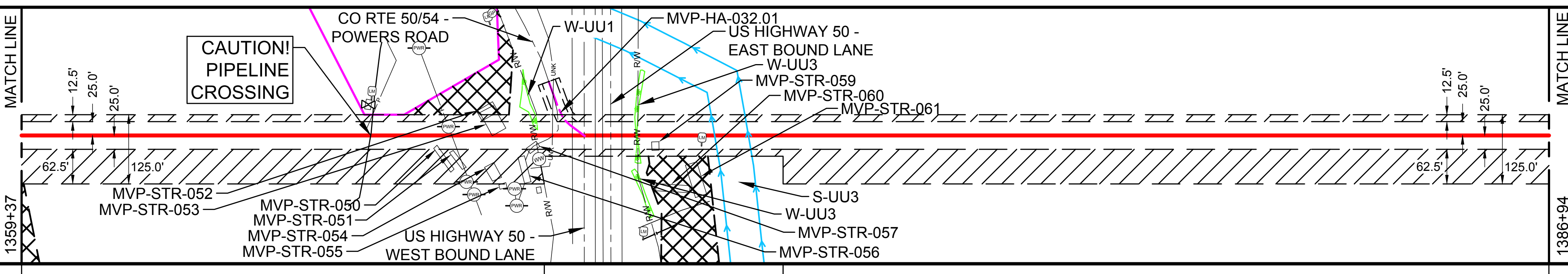
OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC

HORIZONTAL STATIONING

1359+37	MATCH LINE
1365+28	ANCILLARY SITE
1365+57	BUILDING - VALVE HOUSE 48'LT
	PROPERTY LINE
1365+63	VALVE - GAS 56'LT
1365+68	PIPELINE - FOREIGN - DOMINION
1365+69	LINE MARKER 64'LT
1365+75	EDGE OF GRAVEL
1365+94	PROPERTY LINE
1366+87	BUILDING - TRAVEL TRAILER 18'RT
1366+94	TANK - OIL 15'RT
1367+08	POWER POLE 16'LT
1367+17	BUILDING - TRAVEL TRAILER 27'RT
1367+40	POWER POLE 84'RT
1367+41	METER - ELECTRIC 84'RT
1367+64	PEDESTAL - ELECTRIC 31'LT
	TANK - WATER 41'LT
1367+67	TANK - OIL 23'LT
1367+69	BUILDING - ENCLOSURE 26'LT
1367+87	BUILDING - WATER TRAILER
1368+04	EDGE OF GRAVEL
1368+13	BUILDING - DOG PEN 62'RT
1368+27	PROPERTY LINE
1368+32	BUILDING - COLLAPSED BRICK
1368+37	CULVERT OPEN END STRUCTURE 87'RT
1368+45	BUILDING - MOBILE HOME 37'RT
1368+55	**WETLAND(W-UU1)38'LT**
1368+64	RIGHT-OF-WAY
1368+66	BUILDING - CARPORT 10'RT
1368+69	**WETLAND(W-UU1)10'LT**
1368+71	WELL - WATER 43'RT
1368+73	CULVERT OPEN END 5'RT
	WELL - BUILDING 40'RT
1368+74	BUILDING - SHED 93'RT
1368+87	EDGE OF GRAVEL
1368+95	UNGRD UTILITY - UNKNOWN
1368+98	DRIVEWAY(GRAVEL)
1369+16	EDGE OF GRAVEL
1369+30	CONCRETE PILING(3')61'LT
1369+31	BRIDGE - HIGHWAY
1369+34	EDGE OF GRAVEL
1369+41	CONCRETE PILING(3')23'RT
1369+53	**℄ US HWY 50 - WEST BOUND LANE**
1369+53	**ACCESS RD - PERMANENT (MVP-HA-032.01)**
	CONCRETE PILING(3')23'RT
1369+64	BRIDGE - HIGHWAY
1369+73	CONCRETE PILING(3')61'LT
1369+75	CONCRETE PILING(3')57'RT
1369+85	BRIDGE - HIGHWAY
1369+86	CONCRETE PILING(3')98'LT
1369+93	CONCRETE PILING(3')28'LT
1370+01	**℄ US HWY 50 - EAST BOUND LANE**
1370+02	EDGE OF GRAVEL
1370+13	CONCRETE PILING(3')98'LT
	CONCRETE PILING(3')28'LT
1370+18	CONCRETE PILING(3')57'RT
1370+21	BRIDGE - HIGHWAY
1370+44	**BEGIN WETLAND(W-UU3)33'LT**
1370+50	RIGHT-OF-WAY
	CULVERT OPEN END 50'RT
1370+54	**END WETLAND(W-UU3)38'RT**
1370+69	BUILDING - MOBILE HOME 75'LT
1370+71	BUILDING - SHED 22'RT
1370+76	BUILDING - MOBILE HOME 77'RT
1371+38	LINE MARKER 19'RT
1371+88	**STREAM BANK(S-UU3)**
1372+13	PROPERTY LINE
1372+49	**STREAM BANK(S-UU3)**
1373+08	PROPERTY LINE
EQUATION:	**1373+23 BK = 1373+13 AHD**
1373+41	PROPERTY LINE
1375+95	PROPERTY LINE
1382+90	PROPERTY LINE
1386+45	PROPERTY LINE
1386+94	MATCH LINE,PROPERTY LINE

WORK SPACE

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


MATCH LINE
1359+37
12.5'
25.0'
25.0'
62.5'
125.0'
CAUTION!
PIPELINE
CROSSING
CO RTE 50/54 -
POWERS ROAD
W-UU1
MVP-HA-032.01
US HIGHWAY 50 -
EAST BOUND LANE
W-UU3
MVP-STR-059
MVP-STR-060
MVP-STR-061
MVP-STR-052
MVP-STR-053
MVP-STR-050
MVP-STR-051
MVP-STR-054
MVP-STR-055
US HIGHWAY 50 -
WEST BOUND LANE
S-UU3
W-UU3
MVP-STR-057
MVP-STR-056
12.5'
25.0'
25.0'
62.5'
125.0'
MATCH LINE
1386+94

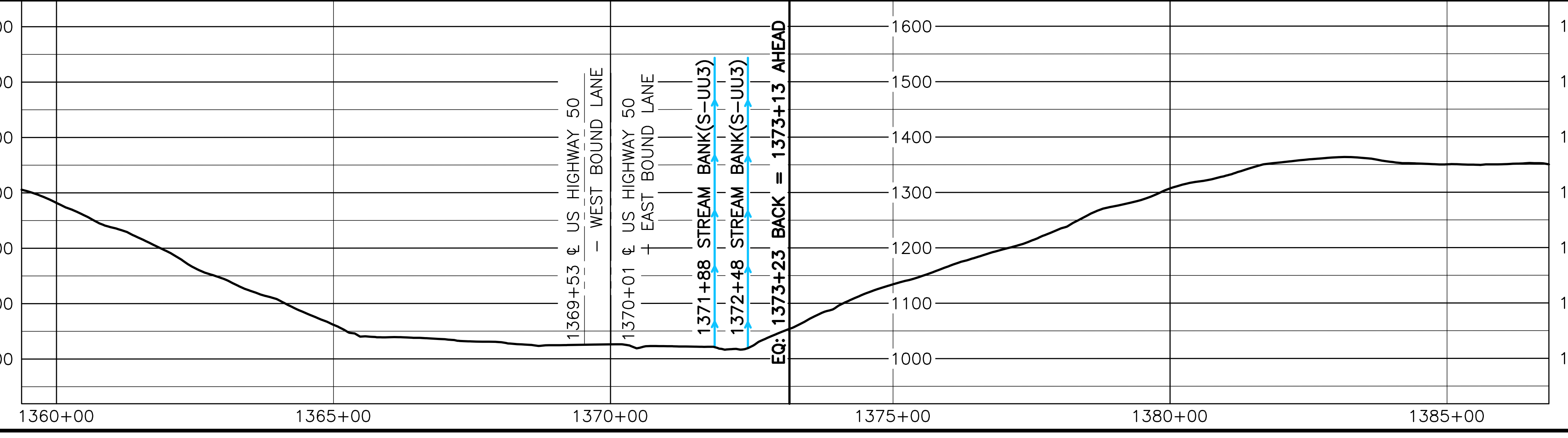
CONSTRUCTION METHOD

1	3,6,9,15	1

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE RIGHT
2 - TYPICAL R/W WORKING SIDE LEFT
2.1 - TYPICAL 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
9 - WATERBODY X-ING OPEN CUT - WET DITCH
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

PROFILE



AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	2122	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
5	760	42"O.D. X 0.888"W.T., X-70, FBE & ARO
		TYPE 1 TEST STATION - PIPELINE
		TYPE 4 TEST STATION - FOREIGN CROSSING

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

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
.	.	.

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

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Southfield, Michigan 48076
T 248-827-7322 F 248-827-7549
www.hollandengineering.com

Mountain Valley PIPELINE

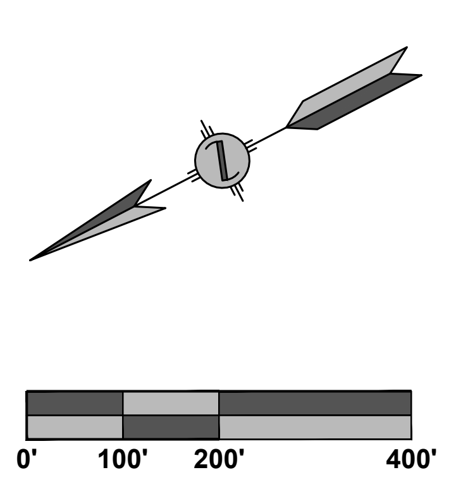
PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
TENMILE DIST.,HARRISON CO.,W.V.
STA. 1359+37 TO STA. 1386+94

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	10/7/2016
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: **PA-HAWV-H600 -18**	
SHEET 28 OF 329	REV. 4
DATE OF PLOT: 10/10/2016 5:30 PM	

RIGHT-OF-WAY & OWNERSHIP DATA

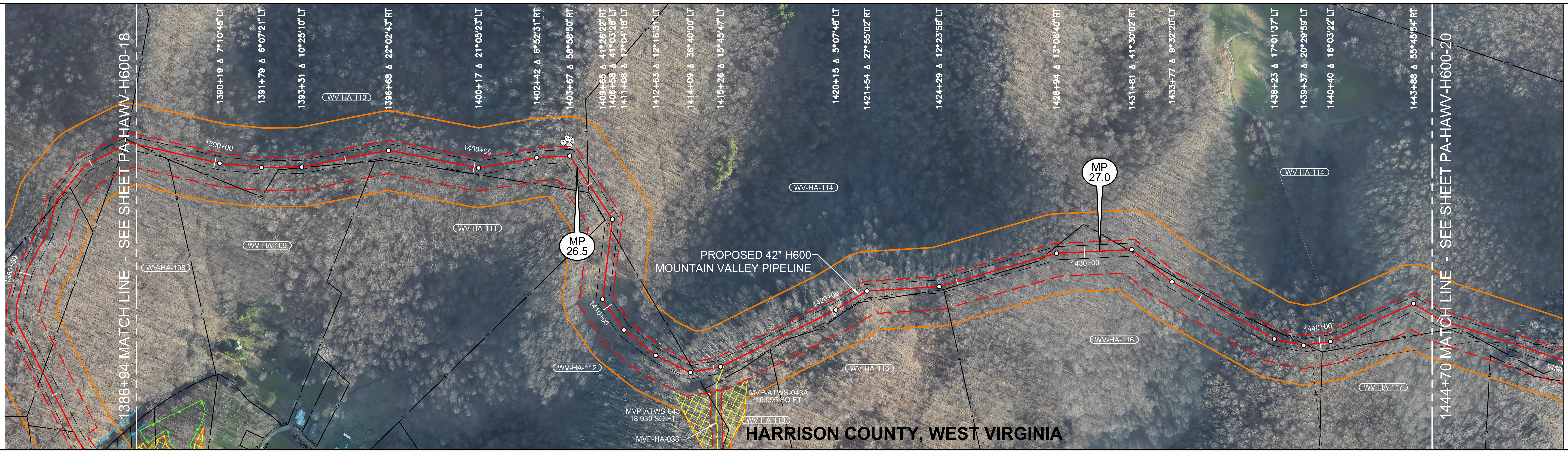
1386+94	1388+24	WV-HA-110 WV-HA-108	130 LF 131 SLOPE
1388+24	1388+50	WV-HA-110 WV-HA-109 WV-HA-108	26 LF 27 SLOPE
1388+50	1391+06	WV-HA-110 WV-HA-109	256 LF 257 SLOPE
1391+06	1391+94	WV-HA-110	88 LF 88 SLOPE
1391+94	1395+73	WV-HA-110 WV-HA-109	315 LF 383 SLOPE
1395+73	1396+09	WV-HA-110 WV-HA-109 WV-HA-111	36 LF 36 SLOPE
1396+09	1401+91	WV-HA-110 WV-HA-111	582 LF 585 SLOPE
1401+91	1404+43	WV-HA-110	251 LF 254 SLOPE
1404+43	1405+24	WV-HA-114 WV-HA-110 WV-HA-111	81 LF 81 SLOPE
1405+24	1406+65	WV-HA-114 WV-HA-111	141 LF 143 SLOPE
1406+65	1407+47	WV-HA-114 WV-HA-112 WV-HA-111	82 LF 82 SLOPE
1407+47	1414+26	WV-HA-112	679 LF 682 SLOPE
1414+26	1417+09	WV-HA-114 WV-HA-113	283 LF 283 SLOPE
1417+09	1417+24	WV-HA-114 WV-HA-113 WV-HA-115	15 LF 15 SLOPE
1417+24	1424+44	WV-HA-114 WV-HA-115	720 LF 723 SLOPE
1424+44	1429+10	WV-HA-114 WV-HA-116	466 LF 469 SLOPE
1429+10	1431+09	WV-HA-116	199 LF 199 SLOPE
1431+09	1440+09	WV-HA-114 WV-HA-116	900 LF 913 SLOPE
1440+09	1442+45	WV-HA-114 WV-HA-117	236 LF 237 SLOPE
1442+45	1444+70	WV-HA-114	225 LF 228 SLOPE

DESIGN	PIPE / COATING	1386+94	1	1444+70
	SLOPE DISTANCE		5816'	
	CLASS LOCATION / HCA		1	
ENVIRONMENTAL	CONSTRUCTION EXCLUSION	1386+94	TIME OF YEAR RESTRICTION: NO TREE CLEARING APRIL 1ST TO JULY 31ST	1444+70
	WETLAND / STREAM			
	.			
	.			



0'
100'
200'
400'

PLAN VIEW



1386+94 MATCH LINE - SEE SHEET PA-HAWV-H600-18
1390+19 Δ 7°10'45" LT
1391+79 Δ 6°07'21" LT
1393+31 Δ 10°25'10" LT
1396+68 Δ 22°02'43" RT
1400+17 Δ 21°05'23" LT
1402+42 Δ 6°52'31" RT
1403+67 Δ 58°58'50" RT
1409+65 Δ 41°26'22" RT
1406+58 Δ 41°03'28" LT
1411+08 Δ 17°04'18" LT
1412+63 Δ 12°16'31" LT
1414+09 Δ 36°40'00" LT
1415+26 Δ 15°45'47" LT
1420+15 Δ 5°07'48" LT
1421+54 Δ 27°55'02" RT
1424+29 Δ 12°23'58" LT
1428+94 Δ 13°06'40" RT
1431+81 Δ 41°30'02" RT
1433+77 Δ 9°32'20" LT
1438+23 Δ 17°01'37" LT
1439+37 Δ 20°29'59" LT
1440+40 Δ 16°03'22" LT
1443+88 Δ 55°45'54" RT
1444+70 MATCH LINE - SEE SHEET PA-HAWV-H600-20
1380+00
1390+00
1400+00
1410+00
1420+00
1430+00
1440+00
1450
WV-HA-108
WV-HA-109
WV-HA-110
WV-HA-111
WV-HA-112
WV-HA-113
WV-HA-114
WV-HA-115
WV-HA-116
WV-HA-117
MP 26.5
MP 27.0
PROPOSED 42" H600
MOUNTAIN VALLEY PIPELINE
MVP-ATWS-043
18,939 SQ FT
MVP-ATWS-043A
16,995 SQ FT
MVP-HA-033
HARRISON COUNTY, WEST VIRGINIA
P/L
R/W

AERIAL PHOTOGRAPHY DATE: APRIL 2015

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
BARRACADE FENCE
PI SYMBOL
PROPOSED TEST STATION
MAILBOX
LINE MARKER - VENT PIPE
POWER/TELE POLE
SIGN
TOWER LEG
TREE
GUY ANCHOR
TANK
GAS VALVE
WELL - GAS/OIL/WATER/ MONITORING
POST - GATE/FENCE
ELEC/GAS/WTR METER
PEDESTAL - UTILITY
MH - SANITARY/WATER
CATCH BASIN - CULVERT
ADDITIONAL TEMPORARY WORK SPACE(ATWS)
ABOVE GROUND FACILITY
LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-02	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-11	ACCESS ROAD DETAIL MAP

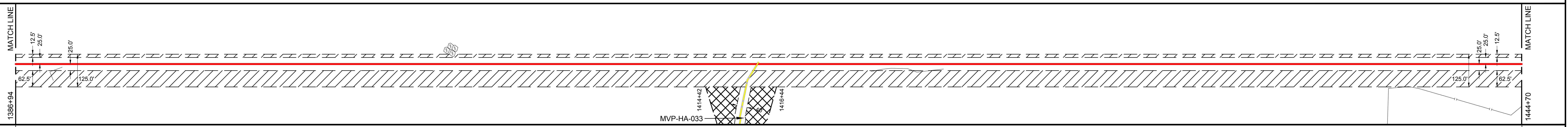
OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC

HORIZONTAL STATIONING

1386+94 MATCH LINE
1386+99 PROPERTY LINE
1388+25 PROPERTY CORNER 30'RT
1403+46 FIRE TOWER LEG 53'LT
1403+67 FIRE TOWER LEG 41'LT
1404+96 PROPERTY LINE
1407+00 PROPERTY LINE
1414+26 PROPERTY LINE
1415+42 ACCESS ROAD-TEMPORARY(MVP-HA-033)
1428+41 PROPERTY LINE
1431+66 PROPERTY LINE
1432+35 PROPERTY LINE
1439+48 PROPERTY LINE
1444+70 MATCH LINE

WORK SPACE

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



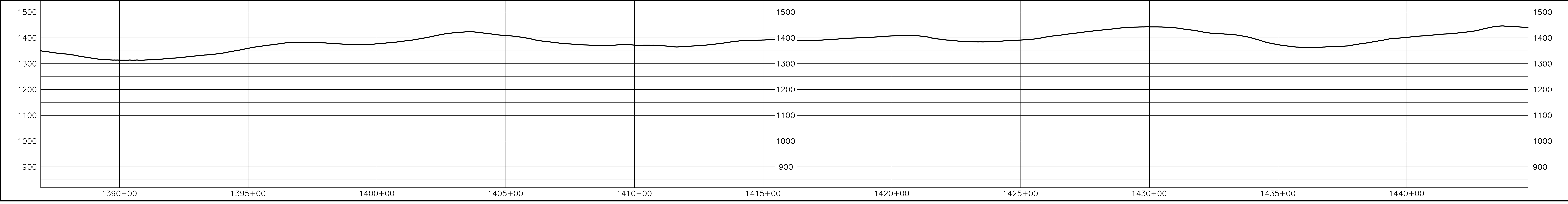
MATCH LINE
1386+94
12.5'
25.0'
25.0'
62.5'
125.0'
1414+42
1416+44
MVP-HA-033
40'
125.0'
62.5'
MATCH LINE
1444+70

CONSTRUCTION METHOD

1

CONSTRUCTION METHOD KEY
1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE RIGHT
2 - TYPICAL R/W WORKING SIDE LEFT
2.1 - TYPICAL 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
9 - WATERBODY X-ING OPEN CUT - WET DITCH
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

PROFILE



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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

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5816	42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY
		TYPE 1 TEST STATION - PIPELINE
		TYPE 4 TEST STATION - FOREIGN CROSSING

APPROVED FOR CONSTRUCTION

REV.	BY	DATE
.	.	.

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

Mountain Valley PIPELINE

PIPELINE ALIGNMENT
MOUNTAIN VALLEY PROJECT - H600 LINE
TENMILE DIST.,HARRISON CO.,W.V.
STA. 1386+94 TO STA. 1444+70

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	10/7/2016
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 14-10-052	
DRAWING NO.: PA-HAWV-H600 -19	
SHEET 29 OF 329	REV. 4
DATE OF PLOT: 10/10/2016 5:30 PM	