## RIGHT-OF-WAY & OWNERSHIP DATA

| Station | Parcel | Length |
|---|---|---|
| 1061+55 – 1066+27 | WV-HA-065 | 472 LF / 475 SLOPE |
| 1066+27 – 1068+72 | WV-HA-066 | 245 LF / 247 SLOPE |
| 1068+72 – 1070+41 | WV-HA-066 / WV-HA-065 | 169 LF / 171 SLOPE |
| 1070+41 – 1077+25 | WV-HA-065 | 684 LF / 692 SLOPE |
| 1077+25 – 1078+31 | WV-HA-065.01 / WV-HA-065 | 106 LF / 110 SLOPE |
| 1078+31 – 1086+60 | WV-HA-065.01 | 829 LF / 833 SLOPE |
| 1086+60 – 1090+30 | WV-HA-065.01 / WV-HA-065.02 | 370 LF / 371 SLOPE |
| 1090+30 – 1098+69 | WV-HA-065.01 / WV-HA-065.03 | 839 LF / 870 SLOPE |
| 1098+69 – 1099+03 | COUNTY ROUTE 5/4 | 34 LF - 35 SLOPE |
| 1099+03 – 1099+75 | WV-HA-065.01 / WV-HA-065.04 | 72 LF / 81 SLOPE |
| 1099+75 – 1105+68 | WV-HA-065.01 | 593 LF / 628 SLOPE |
| 1105+68 – 1107+07 | WV-HA-065.06 / WV-HA-065.01 | 139 LF / 143 SLOPE |
| 1107+07 – 1107+61 | WV-HA-065.06 | 54 LF / 56 SLOPE |
| 1107+61 – 1113+75 | WV-HA-065.06 / WV-HA-065.05 | 614 LF / 627 SLOPE |
| 1113+75 – 1114+56 | WV-HA-065.06 / WV-HA-065.05 / WV-HA-065.04 | 81 LF / 83 SLOPE |
| 1114+56 – 1117+79 | WV-HA-065.06 / WV-HA-065.05 | 323 LF / 323 SLOPE |
| 1117+79 – 1118+15 | WV-HA-065.06 | 36 LF / 37 SLOPE |
| 1118+15 – 1118+68 | WV-HA-065.06 / WV-HA-076 | 53 LF / 55 SLOPE |

## DESIGN

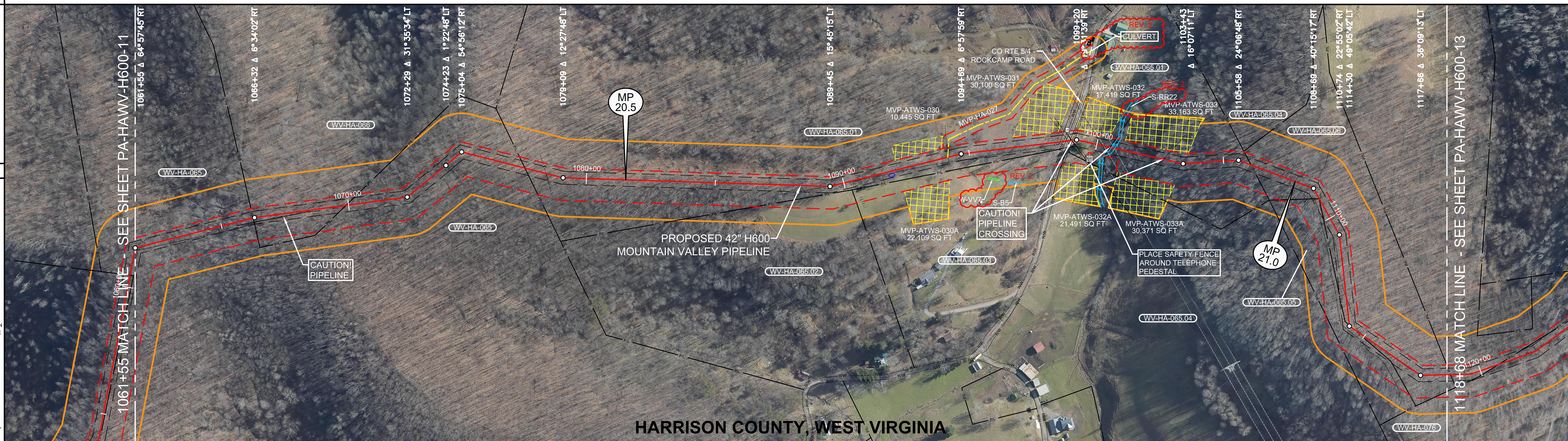
| | 1061+55 – 1098+66 | 1098+66 – 1099+06 | 1099+06 – 1118+68 |
|---|---|---|---|
| PIPE / COATING | 1 | 4 | 1 |
| SLOPE DISTANCE | 3744' | 40' | 2022' |
| CLASS LOCATION / HCA | 1 | 1 | 1 |

## ENVIRONMENTAL

CONSTRUCTION EXCLUSION

WETLAND / STREAM: REV. 2 — S-RR22, 13 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
- 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 |
|---|---|
| | |

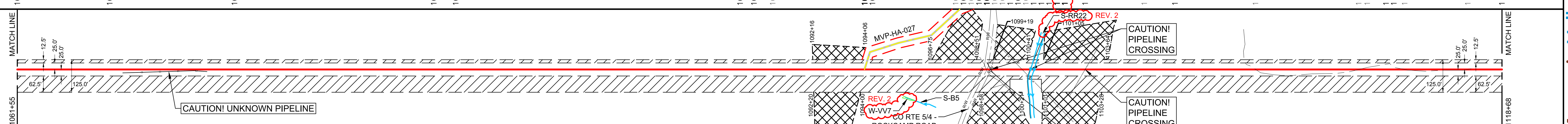
REV 4.0.0 - ISSUED TO FERC

## HORIZONTAL STATIONING

- 1061+55 MATCH LINE
- 1066+27 PROPERTY LINE
- 1069+90 PROPERTY LINE
- 1077+57 PROPERTY LINE
- 1078+42 FENCE – BARBED WIRE
- 1089+36 FENCE – BARBED WIRE
- 1089+89 FENCE – BARBED WIRE
- 1090+62 DEER BLIND 30'RT
- 1094+15 ACCESS ROAD–TEMPORARY(MVP–HA–027)
- 1094+17 FENCE – BARBED WIRE
- 1098+55 FENCE – BARBED WIRE
- 1098+69 RIGHT–OF–WAY
- 1098+78 EDGE OF ASPHALT
- 1098+83 7"F1157(EQT)
- 1098+86 ℄ CO RTE 5/4 – ROCKCAMP ROAD
- 1098+86 LINE MARKER 28'LT
- 1098+94 EDGE OF ASPHALT
- 1199+01 PIPELINE – EQT – 8"F1157
- 1099+03 RIGHT–OF–WAY
- 1099+85 PEDESTAL – TELEPHONE 60'RT
- 1100+02 UNGRD UTILITY – TELEPHONE
- 1100+22 OHP LINE
- 1100+52 PIPELINE – FOREIGN – DOMINION
- 1100+58 STREAM BANK(S–RR22) (REV. 2)
- 1100+71 STREAM BANK(S–RR22) (REV. 2)
- 1102+64 (DOMINION) PIPELINE
- 1104+92 PROPERTY CORNER 11'RT
- 1106+10 PROPERTY LINE
- 1109+20 ℄ TRAIL(DIRT)
- 1113+17 ℄ TRAIL(DIRT)
- 1113+50 PROPERTY CORNER 38'RT
- 1114+27 PROPERTY LINE
- 1114+52 PROPERTY LINE
- 1114+94 ℄ TRAIL(DIRT)
- 1117+37 ℄ TRAIL(DIRT)
- 1118+68 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

| 1061+55 – 1100+00 | 1100+00 – 1101+00 | 1101+00 – 1118+68 |
|---|---|---|
| 1 | 3 | 1 |

### CONSTRUCTION METHOD KEY

1 - TYPICAL R/W CONFIGURATION
2 - TYPICAL R/W CONFIGUARTION
3 - TYPICAL "SKINNEY" FOR WATER BODY
4 -
5 -
6 -
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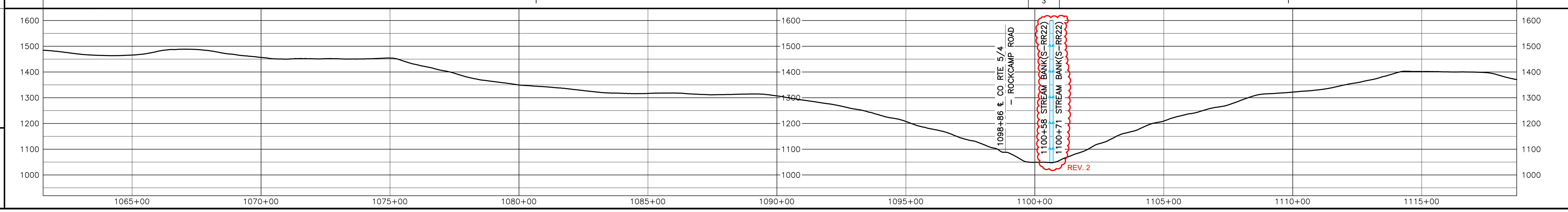
16 -

## 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 | 01-20-16 | FERC DATA REQUEST 21 - ADDED NHD WATERBOBY |
| 2 | HEI | 04-12-16 | FERC DATA REQUEST NO.2 |

### MATERIAL SUMMARY

| MK. NO. | QTY. | DESCRIPTION |
|---|---|---|
| 1 | 5808 | 42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY |
| 4 | 120 | 42"O.D. X 0.740"W.T., X-70, FBE & ARO |
| | | TYPE 1 TEST STATION - PIPELINE |
| | | TYPE 4 TEST STATION - FOREIGN CROSSING |

### APPROVED FOR CONSTRUCTION

| REV. | BY | DATE |
|---|---|---|
| . | . | . |

### APPROVED FOR BIDDING

| REV. | BY | DATE |
|---|---|---|
| . | . | . |

### APPROVED FOR FERC

| REV. | BY | DATE |
|---|---|---|
| 0 | RRR | 10-15-15 |

**Mountain Valley PIPELINE**

# PIPELINE ALIGNMENT
## MOUNTAIN VALLEY PROJECT - H600 LINE
## TENMILE DIST.,HARRISON CO.,W.V.
## STA. 1061+55 TO STA. 1118+68

| | |
|---|---|
| HORZ. SCALE: 1" = 200' | |
| DRAWN BY: HEI(DRF) | 4/4/2016 |
| DRAFTING CK: | |
| ENGINEERING CK: | |
| CONSTRUCTION CK: | |
| ENVIRONMENTAL CK: | |
| AFE/P.O.NO.: | |
| HEI PROJECT NO.: 14-10-052 | |
| DRAWING NO.: PA-HAWV-H600 -12 | |
| SHEET 21 OF 326 | REV. 2 |
| DATE OF PLOT: 4/19/2016 9:54 AM | |

## RIGHT-OF-WAY & OWNERSHIP DATA

| Start station | Parcels | Length | End station |
|---|---|---|---|
| 1118+68 | WV-HA-072 / WV-HA-065.06 / WV-HA-076 | 33 LF 33 SLOPE | 1119+01 |
| 1119+01 | WV-HA-072 / WV-HA-076 | 580 LF 582 SLOPE | 1124+81 |
| 1124+81 | WV-HA-072 / WV-HA-075 / WV-HA-076 | 96 LF 97 SLOPE | 1125+77 |
| 1125+77 | WV-HA-072 / WV-HA-075 | 43 LF 43 SLOPE | 1126+20 |
| 1126+20 | WV-HA-075 | 55 LF 56 SLOPE | 1126+75 |
| 1126+75 | WV-HA-074 / WV-HA-075 | 149 LF 150 SLOPE | 1128+24 |
| 1128+24 | WV-HA-075 | 281 LF 288 SLOPE | 1131+05 |
| 1131+05 | WV-HA-075 / WV-HA-076 | 428 LF 436 SLOPE | 1135+33 |
| 1135+33 | WV-HA-076 | 512 LF 534 SLOPE | 1140+45 |
| 1140+45 | COUNTY ROUTE 5/6 | 31 LF - 32 SLOPE | 1140+76 |
| 1140+76 | WV-HA-077 (EQ: 1144+22 BK= 1145+09 AHD) | 1183 LF 1336 SLOPE | 1153+47 |
| 1153+47 | WV-HA-078 / WV-HA-077 | 204 LF 206 SLOPE | 1155+50 |
| 1155+50 | WV-HA-077 | 254 LF 256 SLOPE | 1158+05 |
| 1158+05 | WV-HA-078 / WV-HA-077 | 211 LF 214 SLOPE | 1160+15 |
| 1160+15 | WV-HA-078 / WV-HA-079 | 1085 LF 1094 SLOPE | 1171+00 |
| 1171+00 | WV-HA-078 | 201 LF 202 SLOPE | 1173+01 |
| 1173+01 | WV-HA-078 / WV-HA-080 | 432 LF 432 SLOPE | 1177+33 |
| 1177+33 | WV-HA-078 / WV-HA-081 / WV-HA-080 | 23 LF 23 SLOPE | 1177+56 |

## DESIGN

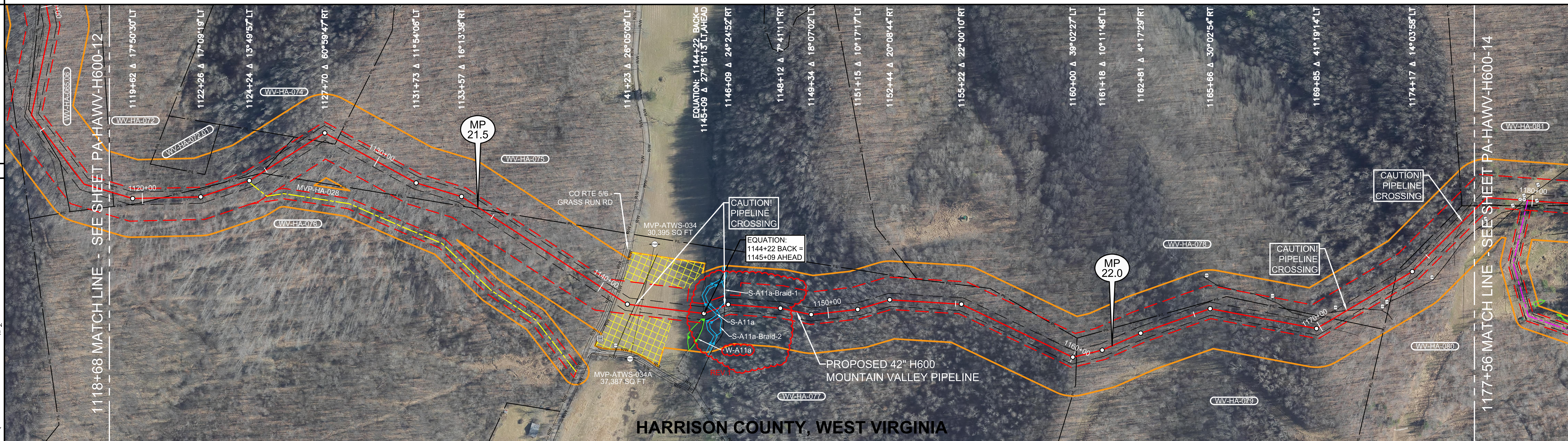
| Item | 1118+68 – 1141+28 | 1141+28 – 1141+68 | 1141+68 – 1177+56 |
|---|---|---|---|
| PIPE / COATING | 1 | 4 | 1 |
| SLOPE DISTANCE | 2215' | 40' | 3667' |
| CLASS LOCATION / HCA | 1 | 1 | 1 |

## ENVIRONMENTAL

CONSTRUCTION EXCLUSION

| WETLAND / STREAM | W-A11a (REV.1) | S-A11 |
|---|---|---|
| Length | 24 LF | 44 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
- 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 |
|---|---|
| | |

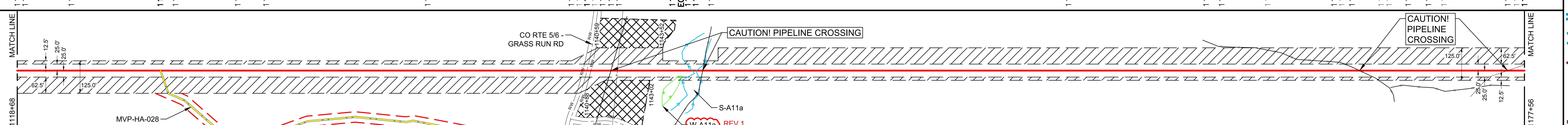
**REV 4.0.0 - ISSUED TO FERC**

## HORIZONTAL STATIONING

- 1118+68 MATCH LINE
- 1118+82 PROPERTY LINE
- 1120+76 PROPERTY LINE
- **1124+19 ACCESS RD – TEMPORARY(MVP–HA–028)**
- 1124+77 PROPERTY LINE
- 1127+17 PROPERTY LINE
- 1128+25 PROPERTY LINE
- 1134+47 PROPERTY LINE
- 1140+45 RIGHT–OF–WAY
- 1140+54 EDGE OF GRAVEL
- **1140+60 ℄ CO RTE 5/6 – GRASS RUN RD**
- 1140+67 EDGE OF GRAVEL
- 1140+76 RIGHT–OF–WAY
- 1141+53 PIPELINE–FOREIGN–16"TL–283A/1(DTI)
- 1141+78 OHP LINE
- 1144+04 STREAM BANK(S–A11a) 38'RT
- **EQUATION: 1144+22 BACK= 1145+09 AHEAD**
- 1145+14 END WETLANDS(W–A11a) 84'RT REV.1
- 1145+44 STREAM BANK(S–A11a)
- 1145+94 PIPELINE – FOREIGN – UNKNOWN
- 1160+15 PROPERTY LINE
- 1165+59 FENCE – METAL
- 1165+98 FENCE – METAL
- 1167+96 LINE MARKER 78'LT
- 1170+59 PROPERTY LINE
- 1170+82 LINE MARKER 19'LT
- 1171+21 PIPELINE – FOREIGN–CNX(2")
- 1172+40 LINE MARKER 70'RT
- 1172+64 LINE MARKER 64'RT
- 1173+37 PROPERTY LINE
- 1174+15 FENCE – BARBED WIRE
- 1174+44 LINE MARKER 80'RT
- 1176+91 (MARKWEST) PIPELINE
- 1177+55 LINE MARKER 69'RT
- **1177+56 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

| 1118+68 – 1140+60 (approx.) | | | |
|---|---|---|---|
| 1 | 2 | 3 | 2 |

### CONSTRUCTION METHOD KEY

1 - TYPICAL R/W CONFIGURATION
2 - TYPICAL R/W CONFIGUARTION
3 - TYPICAL "SKINNEY" FOR WATER BODY
4 -
5 -
6 -
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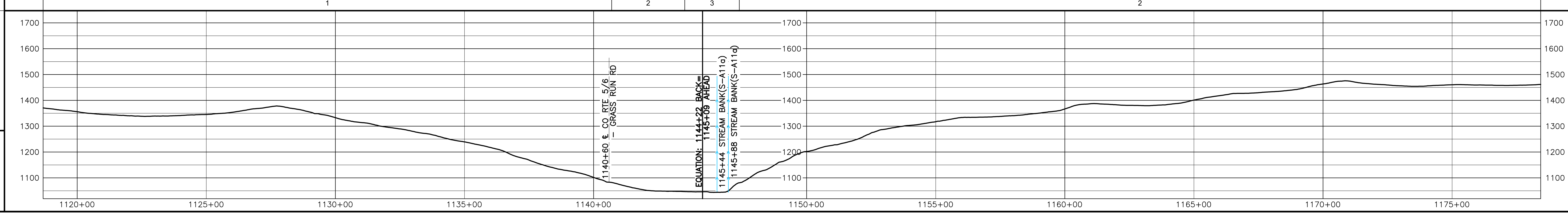
13 -
14 -
15 -
16 -

## 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 | 04-14-16 | FERC DATA REQUEST NO.2 |

### MATERIAL SUMMARY

| MK. NO. | QTY. | DESCRIPTION |
|---|---|---|
| 1 | 5882 | 42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY |
| 4 | 40 | 42"O.D. X 0.740"W.T., X-70, FBE & ARO |
| | | TYPE 1 TEST STATION - PIPELINE |
| | | TYPE 4 TEST STATION - FOREIGN CROSSING |

### APPROVED FOR CONSTRUCTION

| REV. | BY | DATE |
|---|---|---|
| . | . | . |

### APPROVED FOR BIDDING

| REV. | BY | DATE |
|---|---|---|
| . | . | . |

### APPROVED FOR FERC

| REV. | BY | DATE |
|---|---|---|
| 0 | RRR | 10-15-15 |

**Mountain Valley PIPELINE**

# PIPELINE ALIGNMENT
## MOUNTAIN VALLEY PROJECT - H600 LINE
## TENMILE DIST.,HARRISON CO.,W.V.
## STA. 1118+68 TO STA. 1177+56

| | |
|---|---|
| HORZ. SCALE: 1" = 200' | |
| DRAWN BY: HEI(DRF) | 4/4/2016 |
| DRAFTING CK: | |
| ENGINEERING CK: | |
| CONSTRUCTION CK: | |
| ENVIRONMENTAL CK: | |
| AFE/P.O.NO.: | |
| HEI PROJECT NO.: 14-10-052 | |
| DRAWING NO.: PA-HAWV-H600 -13 | |
| SHEET 22 OF 326 | REV. 1 |
| DATE OF PLOT: 4/20/2016 1:35 PM | |

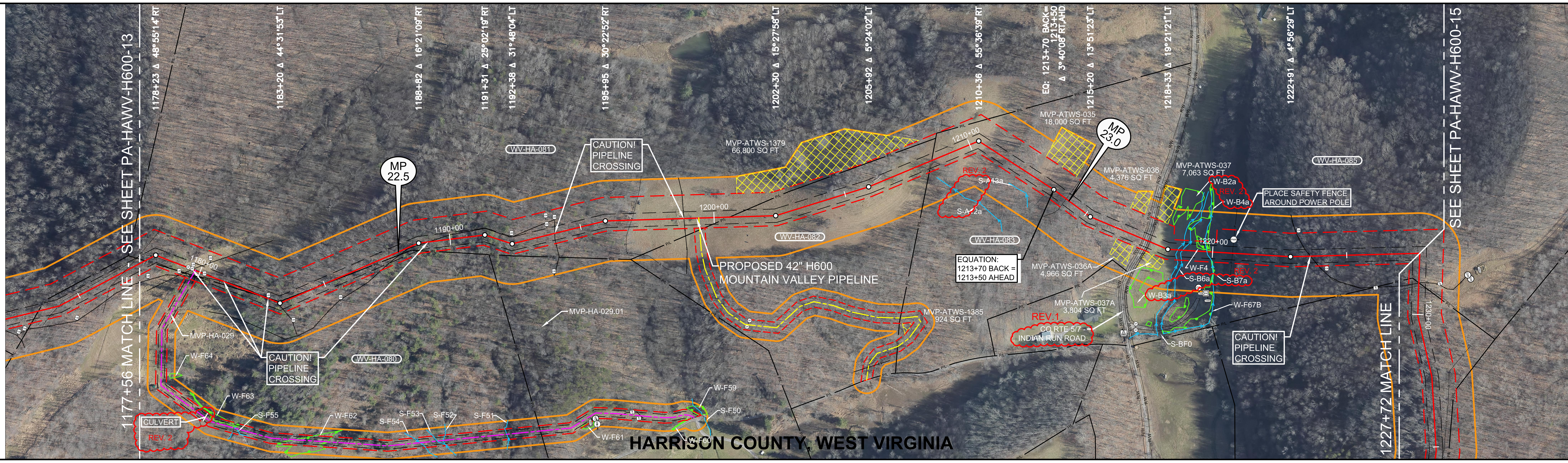
| RIGHT-OF-WAY & OWNERSHIP DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1177+56 | WV-HA-078 / WV-HA-080 / WV-HA-081 — 13 LF 13 SLOPE | 1177+69 | WV-HA-081 / WV-HA-080 — 1165 LF 1174 SLOPE | 1189+34 | WV-HA-081 — 1029 LF 1044 SLOPE | 1199+63 | WV-HA-081 / WV-HA-082 — 858 LF 869 SLOPE | 1208+21 |
| | WV-HA-081 / WV-HA-082 / WV-HA-083 — 82 LF 82 SLOPE | 1209+03 | WV-HA-081 / WV-HA-083 — 142 LF 144 SLOPE | 1210+45 | WV-HA-083 — 706 LF 739 SLOPE | 1217+31 | COUNTY ROUTE 5/7 30 LF - 31 SLOPE | 1217+61 |
| | WV-HA-085 — 1011 LF 1081 SLOPE | 1227+72 | | | | | | |

| DESIGN | | | | | | |
|---|---|---|---|---|---|---|
| PIPE / COATING | 1177+56 | 1 | EQ:1213+70 BK= 1213+50 AHD= | 1217+26 | 4 | 1217+66 | 1 | 1227+72 |
| SLOPE DISTANCE | | 4060' | | | 40' | | 1076' | |
| CLASS LOCATION / HCA | | 1 | | | | | | |

| ENVIRONMENTAL | | | | | |
|---|---|---|---|---|---|
| CONSTRUCTION EXCLUSION | | | | | |
| WETLAND / STREAM | S-B6 | W-F4 | W-B4 | S-B7 | W-F67B |
| | 18 LF | 47 LF | 49 LF | 4 LF | 6 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
- 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

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

### REFERENCE DRAWINGS

| DRAWING NO. | DESCRIPTION |
|---|---|
| | |

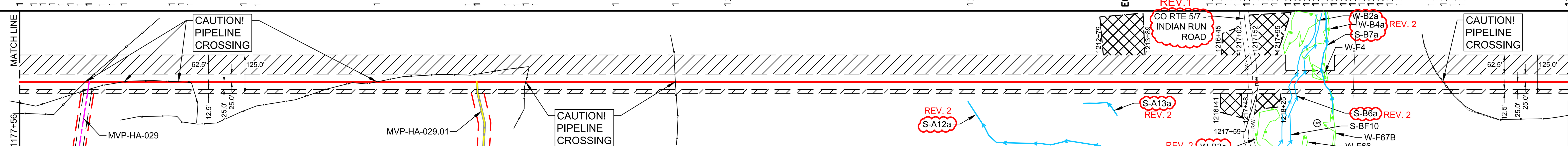
## HORIZONTAL STATIONING

- **1177+56 MATCH LINE**
- 1177+78 PROPERTY LINE
- 1178+13 FENCE – BARBED WIRE
- 1179+10 FENCE – BARBED WIRE
- 1179+31 LINE MARKER 38'RT
- 1179+69 PIPELINE–FOREIGN–MARKWEST LIBERTY
- 1179+71 LINE MARKER 4'LT
- **1179+82 ACCESS RD – PERMANENT(MVP–HA–029)**
- 1180+22 LINE MARKER 12'RT
- 1180+23 LINE MARKER 49'LT
- 1180+94 PIPELINE – FOREIGN – CNX(2")
- 1182+50 PROPERTY LINE
- 1182+72 PIPELINE – FOREIGN – CNX(2")
- 1182+74 LINE MARKER 2'RT
- 1184+83 PROPERTY LINE
- 1185+29 LINE MARKER 83'RT
- 1189+17 PIPELINE – FOREIGN – CNX(2")
- 1192+27 LINE MARKER 23'LT
- **1192+42 ACCESS RD – TEMPORARY (MVP–HA–029.01)**
- 1193+76 LINE MARKER 26'LT
- 1193+80 LINE MARKER 58'LT
- 1194+01 PIPELINE – FOREIGN – CNX(2")
- 1194+10 LINE MARKER 45'LT
- 1196+93 FENCE – BARBED WIRE
- 1198+88 PIPELINE – FOREIGN – UNKNOWN
- 1200+57 PROPERTY LINE
- 1208+46 PROPERTY LINE
- **EQUATION: 1213+70 BACK = 1213+50 AHEAD**
- 1214+07 FENCE – BARBED WIRE
- 1217+30 RIGHT–OF–WAY
- 1217+34 ℄ BAR DITCH
- 1217+37 EDGE OF ASPHALT
- **1217+45 ℄ CO RTE 5/7 – INDIAN RUN ROAD** (REV.1)
- 1217+52 EDGE OF ASPHALT
- 1217+59 FENCE – BARBED WIRE
- 1217+60 RIGHT–OF–WAY
- 1218+70 STREAM BANK(S–B6a) (REV. 2)
- 1218+88 STREAM BANK(S–B6a)
- 1219+39 BEGIN WETLAND(W–F4) 33'LT
- 1219+42 BEGIN WETLAND(W–B4a) 38'LT
- 1219+55 WELL – GAS 1...'RT
- 1219+78 ℄ STREAM(S–B7a) (REV. 2)
- 1219+85 END WETLAND(W–F4) 12'LT
- 1219+91 END WETLAND(W–B4a) 3'LT (REV. 2)
- 1219+93 ℄ DRAIN
- 1219+96 BEGIN WETLAND(W–F67B) 29'RT
- 1220+02 END WETLAND(W–F67B) 38'RT
- 1220+73 OHP LINE
- 1220+75 POWER POLE 51'LT
- 1223+23 LINE MARKER 82'LT
- 1223+65 PIPELINE – FOREIGN – WACO
- 1223+68 ℄ FIELD ROAD(DIRT)
- 1224+24 LINE MARKER 63'RT
- **1227+72 MATCH LINE**

**REV 4.0.0 - ISSUED TO FERC**

## 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

### CONSTRUCTION METHOD KEY

1 - TYPICAL R/W CONFIGURATION
2 - TYPICAL R/W CONFIGUARTION
3 - TYPICAL "SKINNEY" FOR WATER BODY
4 -
5 -
6 -
7 -
8 -
9 -
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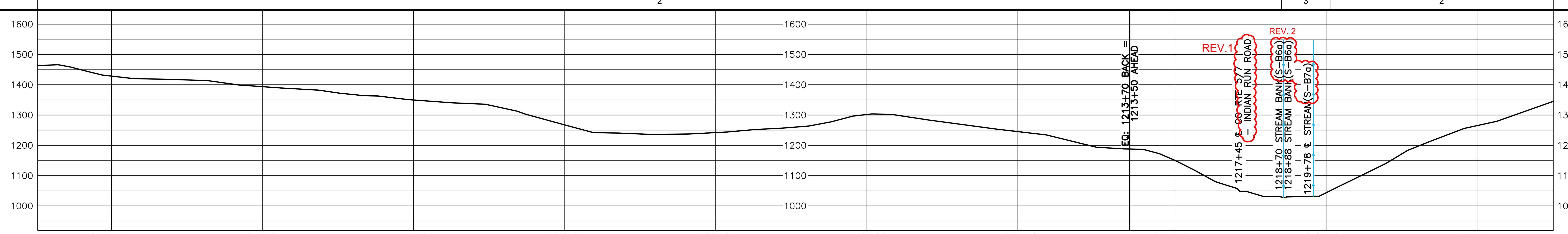
## PROFILE




### REVISIONS

| REV. | BY | DATE | DESCRIPTION |
|---|---|---|---|
| 0 | HEI | 10-15-15 | REV. 4.0.0 ISSUED TO FERC |
| 1 | HEI | 01-06-16 | FERC DATA REQUEST 21 - CHANGED ROAD NAME |
| 2 | HEI | 04-11-16 | FERC DATA REQUEST NO.2 |

### MATERIAL SUMMARY

| MK. NO. | QTY. | DESCRIPTION |
|---|---|---|
| 1 | 5056 | 42"O.D. X 0.617"W.T., X-70, FUSION BONDED EPOXY |
| 4 | 120 | 42"O.D. X 0.740"W.T., X-70, FBE & ARO |
| | | TYPE 1 TEST STATION - PIPELINE |
| | | TYPE 4 TEST STATION - FOREIGN CROSSING |

| APPROVED FOR CONSTRUCTION | | |
|---|---|---|
| REV. | BY | DATE |
| . | . | . |

| APPROVED FOR BIDDING | | |
|---|---|---|
| REV. | BY | DATE |
| . | . | . |

| APPROVED FOR FERC | | |
|---|---|---|
| REV. | BY | DATE |
| 0 | RRR | 10-15-15 |


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


Mountain Valley PIPELINE

# PIPELINE ALIGNMENT
## MOUNTAIN VALLEY PROJECT - H600 LINE
## TENMILE DIST.,HARRISON CO.,W.V.
## STA. 1177+56 TO STA. 1227+72

| | |
|---|---|
| HORZ. SCALE: 1" = 200' | |
| DRAWN BY: HEI(DRF) | 4/4/2016 |
| DRAFTING CK: | |
| ENGINEERING CK: | |
| CONSTRUCTION CK: | |
| ENVIRONMENTAL CK: | |
| AFE/P.O.NO.: | |
| HEI PROJECT NO.: 14-10-052 | |
| DRAWING NO.: PA-HAWV-H600 -14 | |
| SHEET 23 OF 326 | REV. 1 |
| DATE OF PLOT: 4/19/2016 9:55 AM | |

| RIGHT-OF-WAY & OWNERSHIP DATA | 1227+72 | WV-HA-085 93 LF 94 SLOPE | 1228+65 | WV-HA-085 / WV-HA-086 78 LF 79 SLOPE | 1229+43 | WV-HA-086 347 LF 351 SLOPE | 1232+90 | WV-HA-088 / WV-HA-086 669 LF 672 SLOPE | 1239+59 | WV-HA-088 / WV-HA-087 / WV-HA-086 95 LF 96 SLOPE | 1240+54 | WV-HA-088 / WV-HA-087 781 LF 785 SLOPE | 1248+35 | WV-HA-088 312 LF 319 SLOPE | 1251+47 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

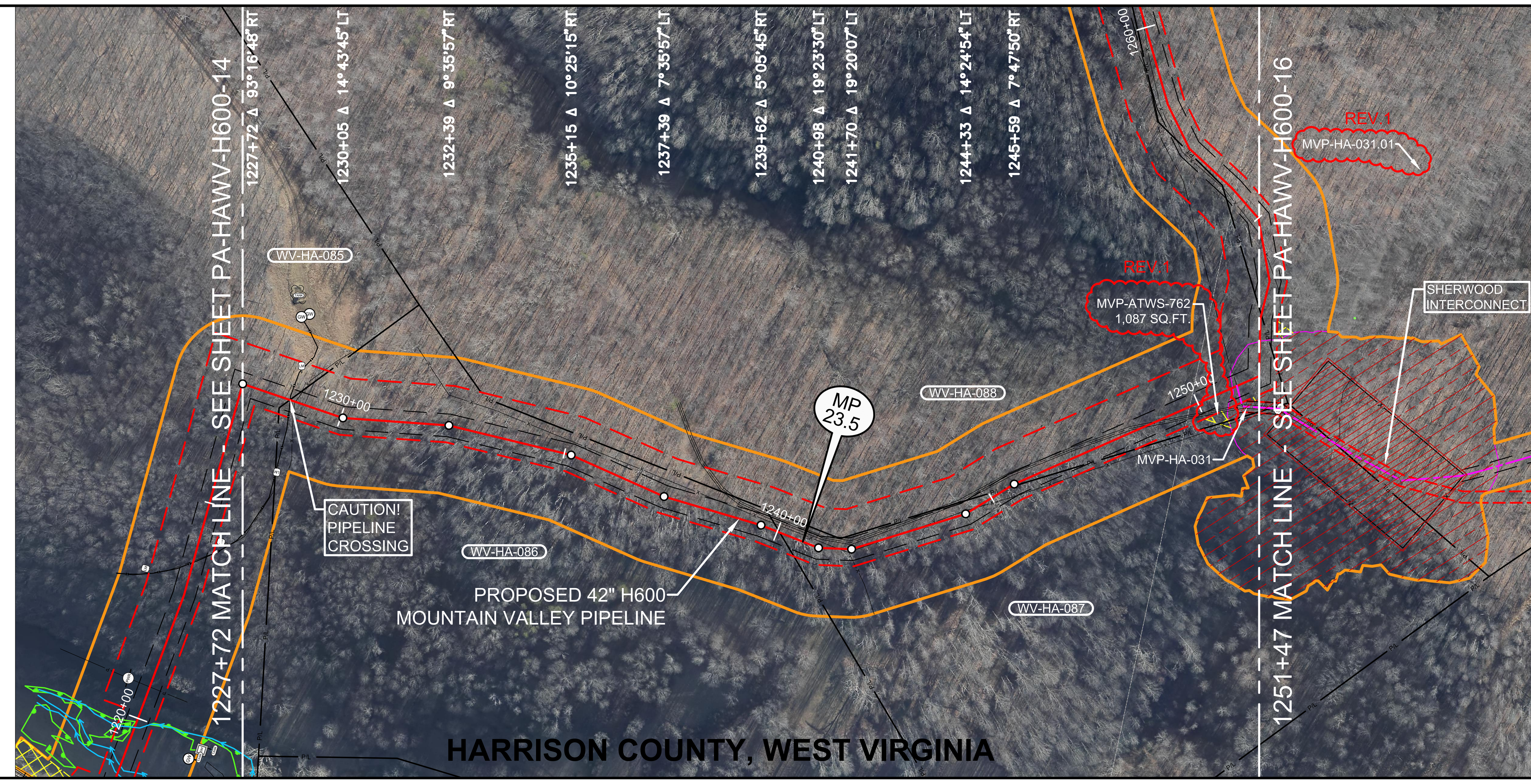
| | | |
|---|---|---|
| DESIGN | PIPE / COATING | 1227+72 — 1 — 1251+47 |
| | SLOPE DISTANCE | 2396' |
| | CLASS LOCATION / HCA | 1 |
| ENVIRONMENTAL | CONSTRUCTION EXCLUSION | |
| | WETLAND / STREAM | |
| | . | |
| | . | |

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




AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

REV 4.0.0 - ISSUED TO FERC

### REFERENCE DRAWINGS

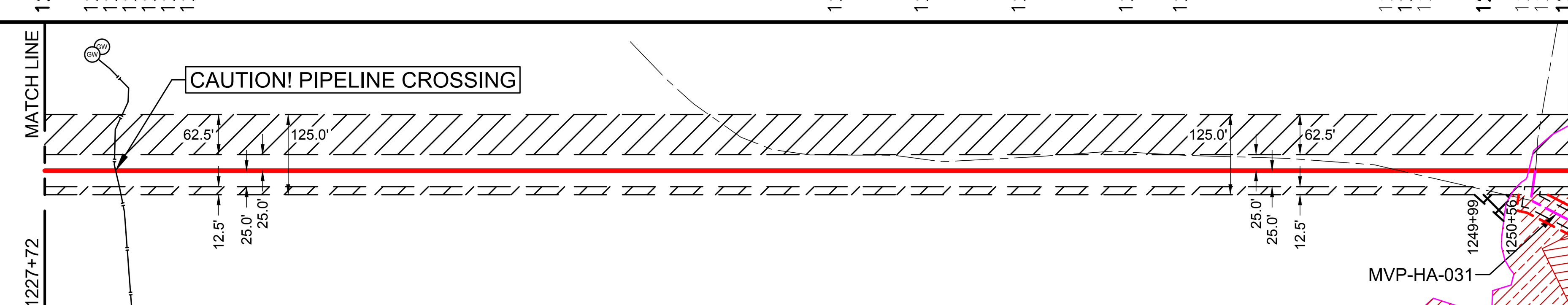
| DRAWING NO. | DESCRIPTION |
|---|---|
| | |

## HORIZONTAL STATIONING

- 1227+72 MATCH LINE
- 1228+46 WELL - GAS 181'LT
- 1228+61 WELL - GAS 193'LT
- 1228+81 PROPERTY LINE
- 1228+82 PIPELINE - FOREIGN - WACO
- 1228+87 LINE MARKER 64'LT
- 1228+94 FENCE - BARBED WIRE
- 1240+05 PROPERTY LINE
- 1241+40 FENCE - BARBED WIRE
- 1242+92 FENCE - BARBED WIRE
- 1244+59 FENCE - BARBED WIRE
- 1245+43 PROPERTY LINE
- 1248+64 EDGE OF DIRT
- 1248+82 ℄ TRAIL(DIRT)
- 1249+00 EDGE OF DIRT
- 1250+88 ACCESS ROAD-TEMPORARY(MVP-HA-031)
- 1251+47 GATE POST 82'RT
- 1251+47 GATE POST 87'RT
- 1251+47 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

### CONSTRUCTION METHOD KEY

1 - TYPICAL R/W CONFIGURATION
2 - TYPICAL R/W CONFIGUARTION
3 - TYPICAL "SKINNEY" FOR WATER BODY
4 -
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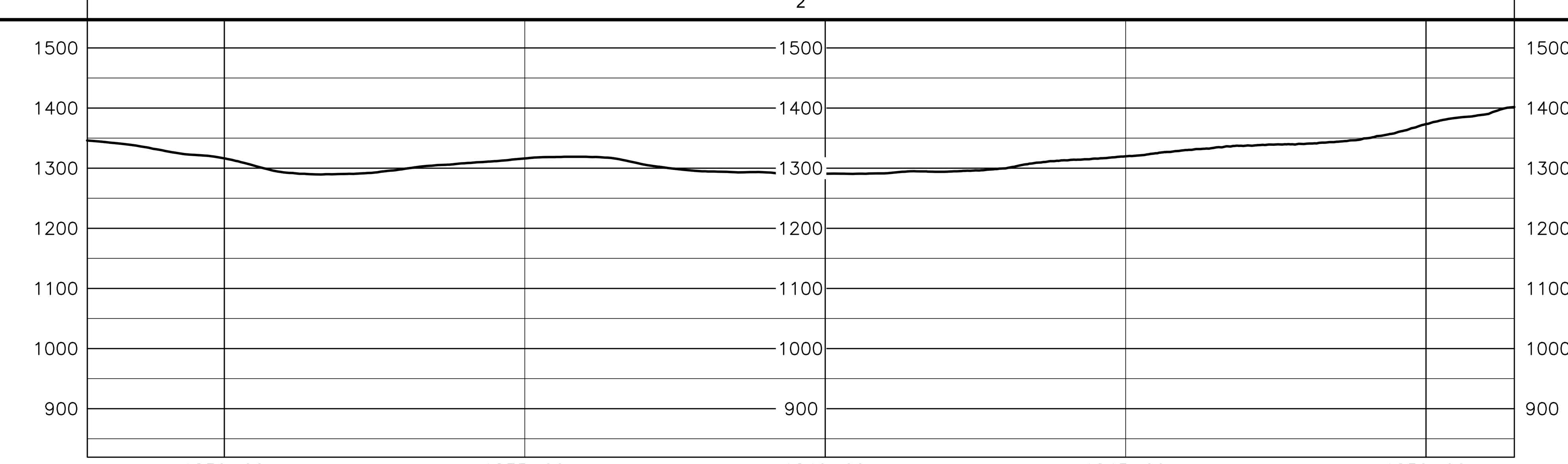
## PROFILE

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### REVISIONS

| REV. | BY | DATE | DESCRIPTION |
|---|---|---|---|
| 0 | HEI | 10-15-15 | REV. 4.0.0 ISSUED TO FERC |
| 1 | HEI | 01-05-16 | FERC DATA REQUEST 21 - MVP-HA-03.01 & MVP-ATWS-762 |

### MATERIAL SUMMARY

| MK. NO. | QTY. | DESCRIPTION |
|---|---|---|
| 1 | 2396 | 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 |
| . | . | . |

| APPROVED FOR FERC | | |
|---|---|---|
| REV. | BY | DATE |
| 0 | RRR | 10-15-15 |

Mountain Valley PIPELINE

# PIPELINE ALIGNMENT
## MOUNTAIN VALLEY PROJECT - H600 LINE TENMILE DIST.,HARRISON CO.,W.V. STA. 1227+72 TO STA. 1251+47

| | |
|---|---|
| HORZ. SCALE: 1" = 200' | |
| DRAWN BY: HEI(DRF) | 4/4/2016 |
| DRAFTING CK: | |
| ENGINEERING CK: | |
| CONSTRUCTION CK: | |
| ENVIRONMENTAL CK: | |
| AFE/P.O.NO.: | |
| HEI PROJECT NO.: 14-10-052 | |
| DRAWING NO.: PA-HAWV-H600 -15 | |
| SHEET 24 OF 326 | REV. 1 |
| DATE OF PLOT: 4/19/2016 9:55 AM | |