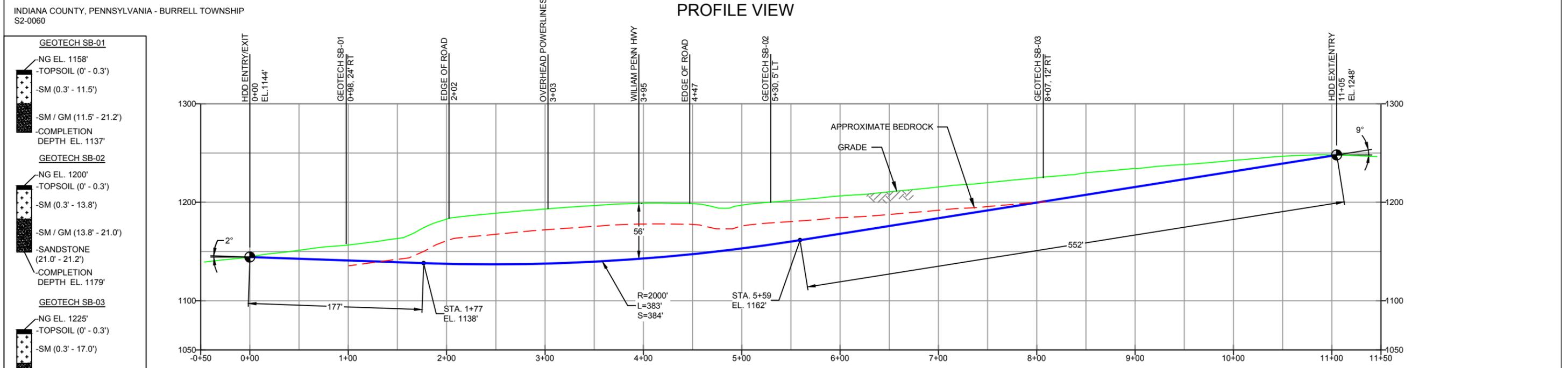


PLAN VIEW



PROFILE VIEW

INDIANA COUNTY, PENNSYLVANIA - BURRELL TOWNSHIP  
S2-0060

| GEOTECH SB-01 |                             |
|---------------|-----------------------------|
| NG EL. 1158'  | -TOPSOIL (0' - 0.3')        |
|               | -SM (0.3' - 11.5')          |
|               | -SM / GM (11.5' - 21.2')    |
|               | -COMPLETION DEPTH EL. 1137' |
| GEOTECH SB-02 |                             |
| NG EL. 1200'  | -TOPSOIL (0' - 0.3')        |
|               | -SM (0.3' - 13.8')          |
|               | -SM / GM (13.8' - 21.0')    |
|               | -SANDSTONE (21.0' - 21.2')  |
|               | -COMPLETION DEPTH EL. 1179' |
| GEOTECH SB-03 |                             |
| NG EL. 1225'  | -TOPSOIL (0' - 0.3')        |
|               | -SM (0.3' - 17.0')          |
|               | -SM / GM (17.0' - 25.0')    |
|               | -SANDSTONE (25.0' - 25.2')  |
|               | -COMPLETION DEPTH EL. 1200' |

NOTE: REFER TO TEST BORING LOG S2-0060 FOR COMPLETE SOIL MATERIAL DESCRIPTION

- DESIGN AND CONSTRUCTION:
- CONTRACTOR SHALL FIELD VERIFY DEPTH OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THIS DRAWING.
  - THE MINIMUM SEPARATION DISTANCE FROM EXISTING SUBSURFACE UTILITIES SHALL NOT BE LESS THAN 10 FEET AS MEASURED FROM THE OUTSIDE EDGE OF THE UTILITY TO OUTSIDE OF PROPOSED PIPELINE.
  - DESIGNED IN ACCORDANCE WITH CFR 49 195 & ASME B31.4
  - CROSSING PIPE SPECIFICATION:  
HDD HORZ. LENGTH (L=): 1050'  
HDD PIPE LENGTH (S=): 1113'  
20" x 0.456" W.T., X-65, API5L, PSL2, ERW, BFW  
COATING: 14-16 MILS FBE WITH 30-35 MIL ARO (POWERCRETE R95)
  - INTERNAL DESIGN PRESSURE 1480 PSIG (SEAM FACTOR 1.0, DESIGN FACTOR 0.50).
  - INSTALLATION METHOD: HORIZONTAL DIRECTIONAL DRILL (HDD).
  - PIPELINE WARNING MARKERS SHALL BE INSTALLED ON BOTH SIDES OF ALL ROAD, RAILWAY, AND STREAM CROSSINGS.
  - CARRIER PIPE NOT ENCASED.
  - PIPE / AMBIENT TEMPERATURE MUST BE NO LESS THAN 30°F DURING PULLBACK WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER.
  - CONDUCT 4-HOUR PRE-INSTALLATION HYDROTEST OF HDD PIPE STRING TO MINIMUM 1850 PSIG.
  - SEE SUNOCO PENNSYLVANIA PIPELINE PROJECT ESRI WEBMAP FOR ACCESS ROAD ALIGNMENT.
  - SUNOCO PIPELINE, L.P.'S HORIZONTAL DIRECTIONAL DRILL INADVERTENT RETURN CONTINGENCY PLAN WILL BE IMPLEMENTED AT ALL TIMES.
  - SUNOCO PIPELINE, L.P.'S EROSION AND SEDIMENTATION CONTROL PLAN WILL BE IMPLEMENTED AT ALL TIMES.

NOTES

- ALL COORDINATES SHOWN ARE IN LATITUDE AND LONGITUDE. ALL MSL ELEVATIONS ARE NAD83
- STATIONING IS BASED ON HORIZONTAL DISTANCES.
- ROONEY ENGINEERING, INC. AND SUNOCO PIPELINE, LP ARE NOT RESPONSIBLE FOR LOCATION OF FOREIGN UTILITIES SHOWN IN PLOT PLAN OR PROFILE. THE INFORMATION SHOWN HEREON IS FURNISHED WITHOUT LIABILITY ON THE PART OF ROONEY ENGINEERING, INC. AND SUNOCO PIPELINE, LP. FOR ANY DAMAGES RESULTING FROM ERRORS OR OMISSIONS THEREIN.
- CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES. CONTACT ONE CALL AT 811 PRIOR TO DIGGING.
- SUNOCO EMERGENCY HOTLINE NUMBER IS #1-800-786-7440.

| REF. DRAWING |             | REVISIONS   |  |
|--------------|-------------|-------------|--|
| ES-2.17      | TO ES-2.18  | EP2         | REVISED PER PADEP COMMENTS RECEIVED 09-06-16 |
| SHEET 11     | TO SHEET 12 | EP1         | REVISED PER PADEP COMMENTS                   |
|              |             | EP          |  |
|              |             | C           | ADDED GEOTECH INFO                           |
|              |             | B           | ISSUED FOR BID                               |
|              |             | A           | ISSUED FOR REVIEW                            |
| DWG NO       | DWG NO      | DESCRIPTION | NO.  |

| BY  | DATE     | CHK | DATE     | APP | DATE     |
|-----|----------|-----|----------|-----|----------|
| MRS | 09/30/16 | RMB | 09/30/16 | AAW | 09/30/16 |
| JTW | 05/06/16 | RMB | 05/06/16 | AAW | 05/06/16 |
| DLM | 03/15/16 | RMB | 03/15/16 | AAW | 03/15/16 |
| MRS | 09/09/15 | RMB | 09/09/15 | AAW | 09/09/15 |
| MRS | 07/31/15 | RMB | 07/31/15 | AAW | 07/31/15 |
| JVA | 03/24/15 | RMB | 03/24/15 | AAW | 03/24/15 |

**Sunoco Logistics Partners L.P.**

**TETRA TECH ROONEY**  
(303) 792-5911

**SUNOCO PIPELINE, L.P.**

20-INCH HORIZONTAL DIRECTIONAL DRILL  
WILLIAM PENN HWY  
PENNSYLVANIA PIPELINE PROJECT

SCALE: 1"=100'  
DWG. NO: PA-IN-0025.0000-RD