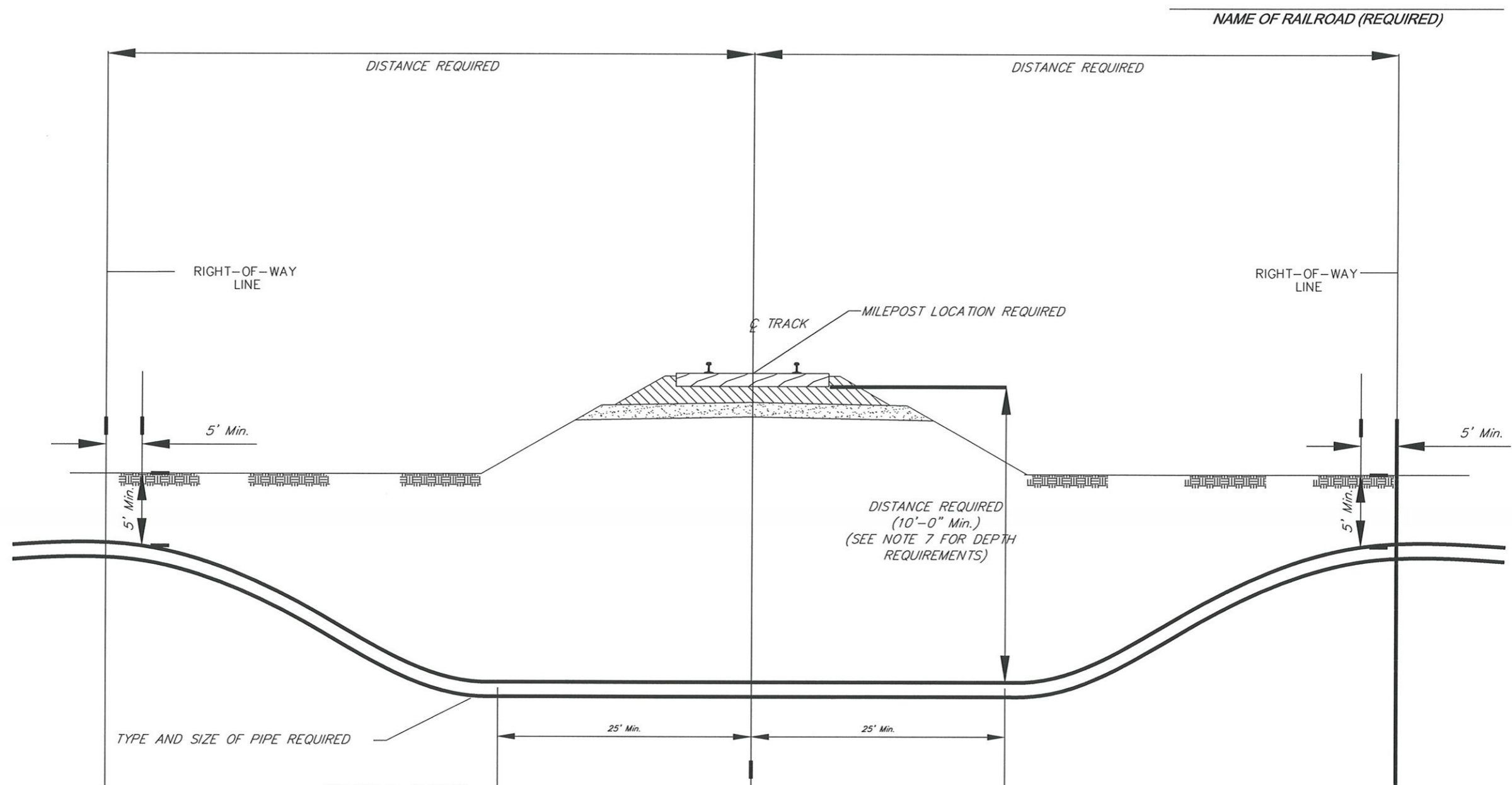


FILE
ES8090.4
REVISIONS
06-28-2011 TJF/XRL



GENERAL NOTES

1. DIRECTIONAL BORES, 10' BELOW BOTTOM OF TIE MAY BE HDPE SCH. 40 CASING.
2. NO PVC PERMITTED. CARRIER PIPE MUST BE STEEL FOR GAS OR LIQUIDS.
3. JACKING PIT LOCATIONS MUST BE OUTSIDE OF RAILROAD RIGHT-OF-WAY LINES. NO OPEN CUT LATERAL CROSSING WILL BE ALLOWED. THE PIT WILL BE PROTECTED WITH ADEQUATE SHEETING, BULKHEADS AND BARRICADES TO PROTECT THE RAILROAD'S ROADBED. PROPER BARRICADES AND LIGHTS, IF NECESSARY, WILL BE SET AROUND THE PIT FOR POSITIVE PROTECTION.
4. NO WORK WILL BE PERMITTED ON RAILROAD RIGHT-OF-WAY WITHOUT A FLAGMAN.
5. CARRIER PIPE, UNDER PRESSURE, WILL REQUIRE CASING.
6. GAS PIPELINES WITH STEEL CARRIER DO NOT REQUIRE CASING.
7. THE FOLLOWING DEPTHS ARE REQUIRED FOR MIN. COVER (AS MEASURED FROM BOTTOM OF TIE TO TOP OF CASING OR UTILITY, IF NO CASING REQUIRED):
 - WIRE OR COMMUNICATION UTILITIES (NON-LIQUID OR GAS):
 - 10' MIN. DEPTH - 6" DIA. OR LESS.
 - 15' MIN. DEPTH - OVER 6" DIA.
 - GAS OR LIQUID WITH STEEL CARRIER PIPE:
 - 10' MIN. DEPTH - 6" DIA. OR LESS.
 - 25' MIN. DEPTH - OVER 6" DIA.



Issue Date: 10-14-2008 Revised Date: 06-28-2011
 Authorized: *Jamone & Romaine*
 AVP- Engineering Services

The material and equipment shown herein must meet or exceed all quality requirements. Any deviation from these standards must be submitted in writing and approved by the Railroad Director of Engineering Services prior to use.

MISCELLANEOUS

SERIES 8000

INFORMATION REQUIRED FOR TYPICAL DIRECTIONAL BORE (HDP)

ES8090.4

SH. 1 OF 1