

INTERIM GUIDELINES FOR HORIZONTAL DIRECTIONAL DRILLING (HDD) UNDER THE PROPERTY AND TRACK(S) OF CSX TRANSPORTATION, INC.

Preface: In order to facilitate use of the latest technology available for construction of pipelines that traverse the property and tracks(s) of CSX Transportation, Inc., the following interim guidelines to govern the approval and execution of pipeline and wire line occupancies utilizing Horizontal Directional Drilling (HDD) have been adopted.

Scope: The guidelines detailed in this document do not nullify or supersede existing policies, standards, or practice currently approved by CSXT.

1. For pipelines conveying gas or liquid substances, steel pipe only may be installed under track(s) and/or CSXT right-of-way utilizing HDD.
2. For wire line installations, including fiber optic cable, High Density Polyethylene (HDPE) pipe with a dimension ratio (DR) of 11 or better may be installed as the outermost pipe. Mechanical protection is required for electrical installations that exceed 750 volts.
3. **Bundling is prohibited.** All inner ducts must have an outer casing pipe.
4. Any pipe/conduit, regardless of commodity, with an outside diameter exceeding eight (8) inches shall be installed at a minimum depth of twenty-five (25) feet from base of rail. Any pipe that contains a liquid commodity (flammable or non-flammable) shall be installed at a minimum depth of 25' from base of rail. For natural gas, fiber optics, and electrical installations within a pipe/conduit with an outside diameter of eight (8) inches or less shall be installed at minimum depth of 15 feet from base of rail.
5. Applicant engineering drawing submittal shall include actual planned depth of pipe under each railroad track. The plan and profile views must show the entire bore, including the sending and receiving pits, regardless of the railroad right-of-way limits.
6. Applicant must provide pipe specifications for casing and carrier pipes. Pipe must satisfy all applicable governmental and industry regulations.
7. Applicant must provide qualifications of drilling contractor, including specific instances of previous successful experience in drilling under railroad and other sensitive surface facilities.
8. Prior to commencement of drilling:
 - a) The contractor must submit a Boring Plan, using the CSXT Horizontal Directional Drilling (HDD) Bore Plan Template found on the CSXT's permitting website at www.csx.com. Bore Plan template found on the CSX Website.
 - b) The contractor must provide a detailed Fraction Mitigation (frac-out) Plan, including method of monitoring quantity and capturing the return of drilling fluids with particular attention to variation from proposed plan (i.e. volumes, pressure, or consistency). The CSX frac-out plan, can be found on the CSXT's permitting website at www.csx.com, and may be adopted.
 - c) Establish a Survey Grid Line and provide a program of monitoring and documenting the actual location of the bore hole during drilling operations.

- d) Both the bore plan template and frac-out plan may be submitted at the time of application submittal via the online application process or to the CSXT Construction Monitor prior to construction.
9. A construction monitor is required to monitor the ground and track for movement during the drilling reaming, and pullback processes. The construction monitor will be provided by CSX at the applicant's sole cost and expense. The installation process and all train movement must be immediately stopped if movement is detected. The damaged area must be immediately repaired. The installation process must be reviewed and modified as required before the installation may proceed. Applicant must pay Railroad's expenses for review and inspection.
 10. Upon completion of the HDD installation work, the contractor shall provide an accurate as-built drawing of the installed HDD segment. As-built drawings will include both plan and profile views. The latitude and longitude coordinates of the entry, exit, and turn points shall be provided on the as-built drawing(s).
 11. A subsurface exploration is required for bores twenty (20) inches or larger.
 12. All back reaming must utilize trailing rods.

Office of Corridor Services

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Revision: Items Nos. 2 and 4 were revised by CSXT, Project Engineering, Corridor Occupancy Services, on May 4, 2009.

Revision: Items Nos. 2, 3, 7(a), and 10 were revised/added by CSXT, Project Engineering, Corridor Occupancy Services, on July 1, 2015.

Revision: Item No. 11 added by CSXT, Project Engineering, Corridor Occupancy Services, on February 23, 2016.

Revision: Items Nos. 2, 5, 8(a), 8(b), 8(d), 9, and 10 were revised by CSXT, Project Engineering, Corridor Services on April 3, 2018.