

Mariner East 2

Proposed Project Modification – HDD 620

Middletown Township, Delaware County

Sunoco Pipeline, a subsidiary of Energy Transfer, is proposing a change to the installation method for a portion of the 20-inch pipeline and portions of the 16-inch pipeline in the Glen Riddle section of Middletown Township, Delaware County.

The company proposes to switch from a horizontal directional drill (HDD) to a combination of **direct pipe, conventional bore** and **open cut** installation methods on a section of the route spanning 3,500 feet in the area of Glen Riddle Road in Middletown Township. See below for a map of the route.

See the next page for diagrams and descriptions of the construction methods.

The request includes the following components:

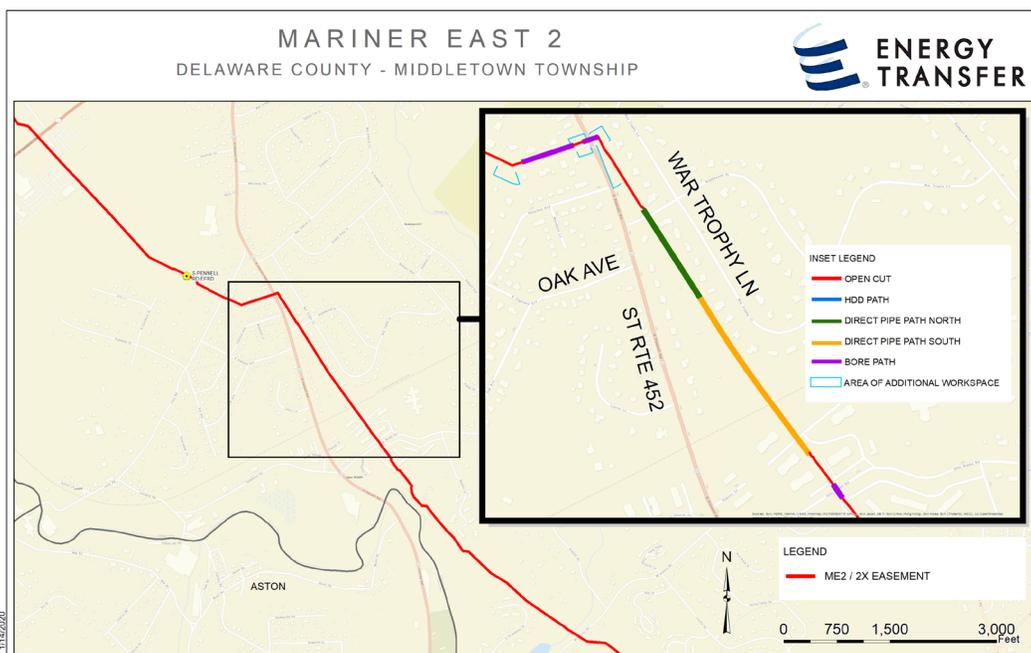
- Conventional bore under Glen Riddle Road, near the intersection of Glen Riddle Road and Pennell Road
- Direct pipe bore under Riddlewood Drive, between Pennell Road and War Trophy Lane
- Direct pipe bore under the SEPTA railroad track that runs between and parallel to Riddlewood Drive and Glen Riddle Road
- Open cut installation limited to portions of the parking lots at Tunbridge Apartments and Glen Riddle Station Apartments adjacent to Glen Riddle Road as well as section tie-ins

The change in construction method will minimize the potential for inadvertent returns of water and clay drilling fluid or other effects and will shorten the time that construction is inconveniencing the local community to an estimated four months – excluding site preparation and restoration – versus the general estimated frame of more than one year for HDD installation.

NOTE: Proposed construction methods, completion times and exact locations are subject to change due to the inherent fluidity of the construction process and outside factors.

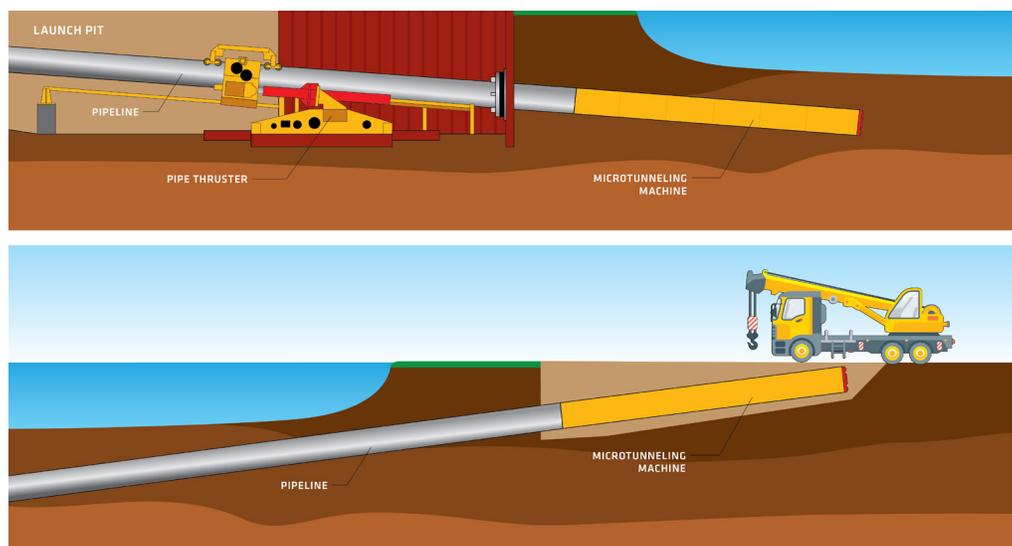
WHAT IS A MAJOR MODIFICATION?

This request is classified as a “major modification,” which is a change to an existing environmental permit issued for pipeline construction that exceeds a minor revision. It could be a change of the construction method, the specific pipeline route or workspace within the right-of-way. In the case of Mariner East 2, such environmental permits are issued by the Pennsylvania Department of Environmental Protection (DEP).



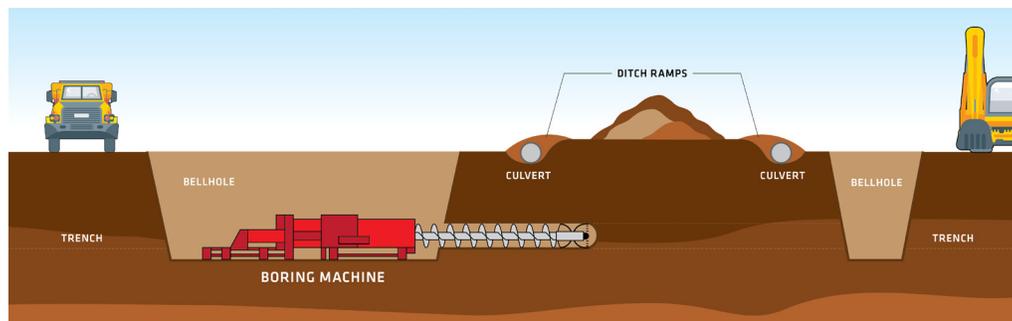
Graphics should be used as general references. Specific tools and execution in the field may vary.

Direct Pipe Installation



Direct pipe boring is a trenchless technology that combines elements of HDD and tunneling. Direct pipe combines a thruster with a steerable microtunneling machine to install steel pipes in one continuous pass. The direct pipe bore method is effective in all soil conditions, and it uses significantly less bentonite than other trenchless methods, dramatically reducing the possibility of inadvertent fluid returns. The conventional boring method can be utilized for lengths of up to 4,500 feet.

Conventional Bore Installation

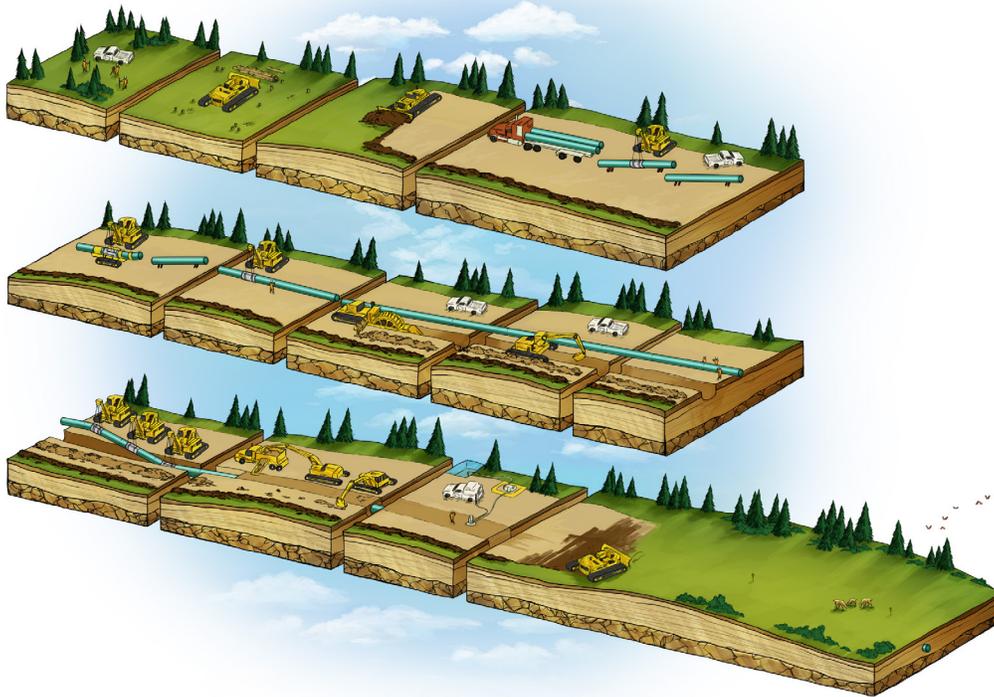


Conventional boring — which typically is used for stream, river and road crossings — consists of creating a shaft/tunnel for a pipe or conduit to be installed to minimize surface disturbance. This is accomplished by first excavating a bore pit and a receiving pit. A boring machine is then lowered to the bottom of the bore pit to tunnel using a cutting head mounted on an auger, which rotates forward through a bore tube. The pipeline is installed through the bored hole and welded to the adjacent pipeline. The conventional boring method can be utilized for lengths of up to 3,000 feet.

Information and Inquiries

Energy Transfer
Mariner East
Pipeline Project
3807 West Chester Pike
Newtown Square, PA 19073
855.430.4491
marinerpipelinefacts.com

Open Cut/Open Trench Installation



Where workspace and enough land access are available, open trench installation is the typical method used for construction, repair and replacement of various utilities, such as pipelines and sewer and water lines. Open trench installation excavation consists of: digging a trench with backhoes or wheel ditchers; lowering the pipe into the trench; and backfilling the subsoil and separated topsoil, where applicable.

Information and Inquiries

Energy Transfer
Mariner East
Pipeline Project
3807 West Chester Pike
Newtown Square, PA 19073
855.430.4491
marinerpipelinefacts.com