

# Mariner East 2 Project Modification – HDD 400 West Whiteland Township, Chester County.

Sunoco Pipeline, a subsidiary of Energy Transfer, received approval from the Pennsylvania Department of Environmental Protection to change the installation method for a portion of the 20-inch pipeline located in West Whiteland Township, Chester County. The 16-inch pipeline has already been installed.

The company will change from a horizontal directional drill (HDD) to a combination of **open cut installation** and **direct pipe** installation on two sections of the route near the Exton Bypass and Lisa Drive in West Whiteland Township. See below for a map of the route. See the next page for diagrams and descriptions of the construction methods.

The modification includes the following components:

- Direct pipe bore measuring approximately 820 feet that will go under the Exton Bypass (State Route 30), Amtrak and Norfolk Southern Railroad, approximately 0.5 miles east of North Pottstown Pike (State Route 100)
- Open cut installation spanning approximately 1,250 feet near Lisa Drive

The change in construction methodology will minimize the potential for inadvertent returns or a reoccurrence of subsidence 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.

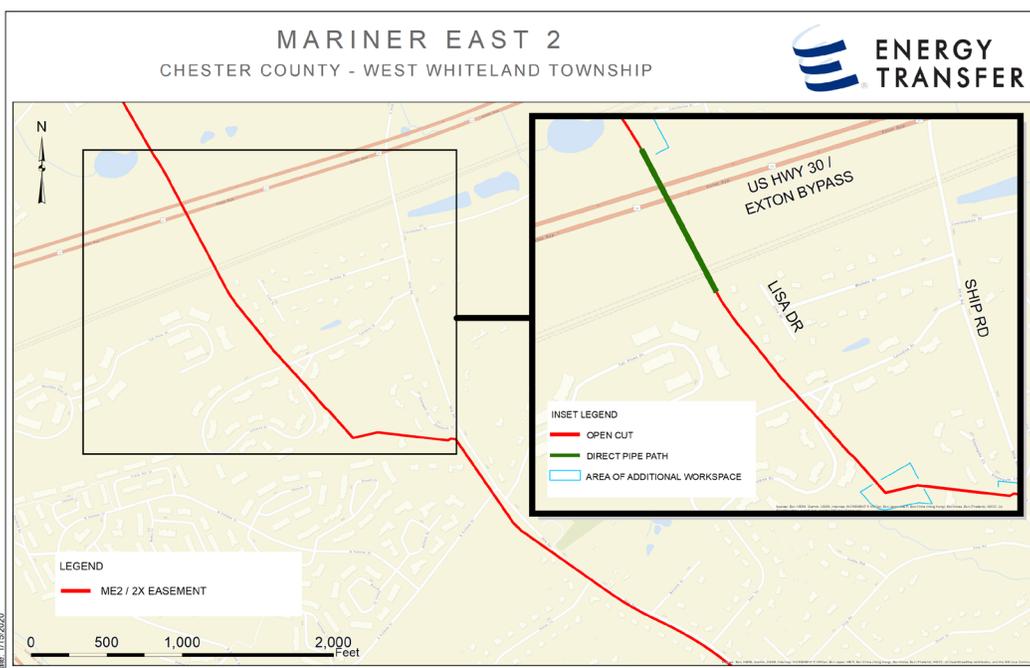
**NOTE:** Construction methods, completion times and exact locations are subject to change due to the inherent fluidity of the construction process and outside factors.

**Additional information and updates can be found at:**

[www.marinerpipelinefacts.com/majormod400](http://www.marinerpipelinefacts.com/majormod400)

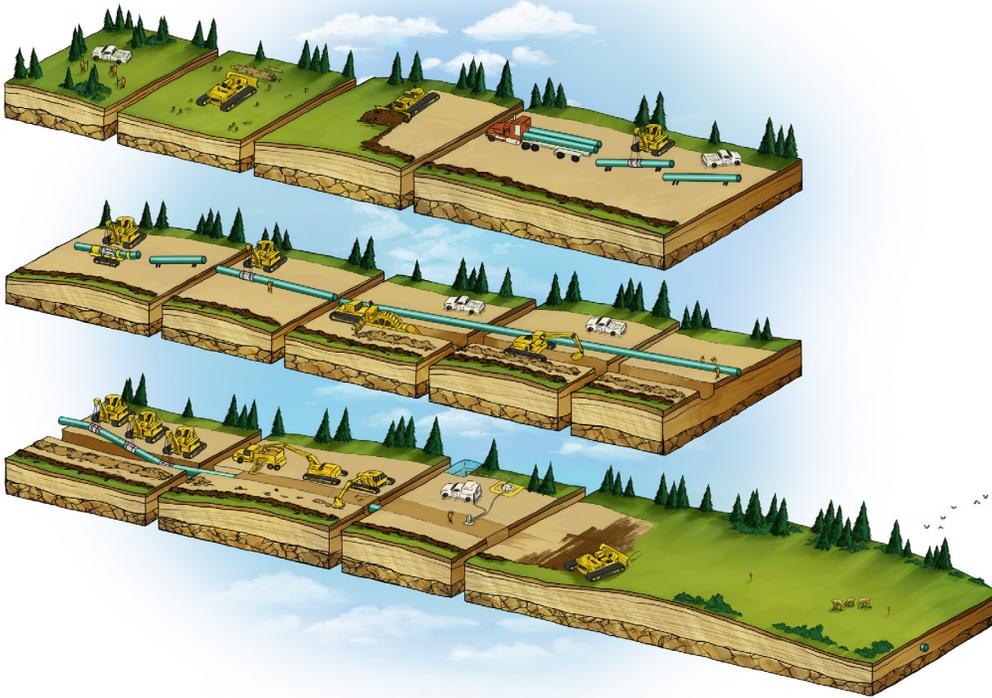
## WHAT IS A MAJOR MODIFICATION?

This change 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).



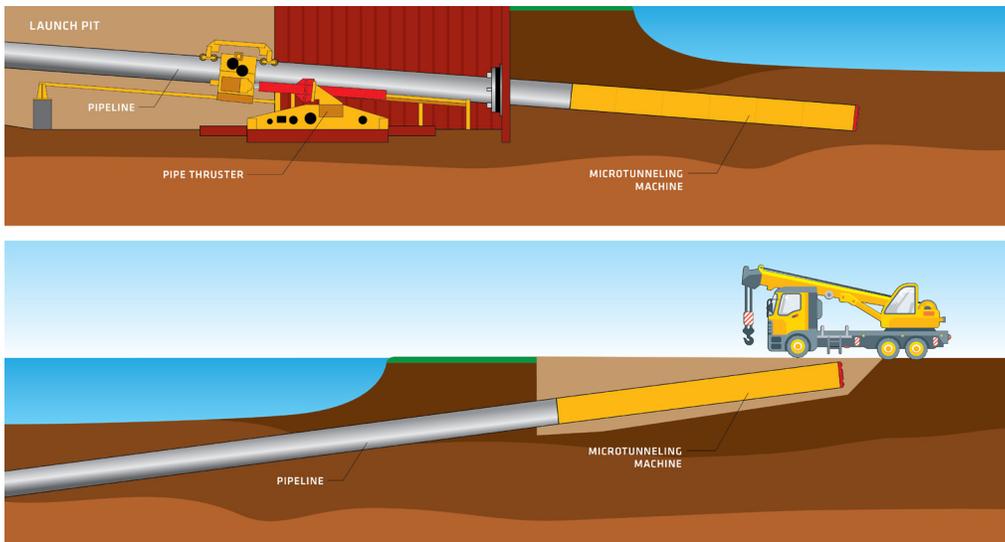
Graphics should be used as general references. Specific tools and execution in the field may vary.

## 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.

## 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.

## Information and Inquiries

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