



Planning and Managing HDD Installations

Today's HDD contractors have some very good planning tools at their disposal. Not surprisingly, you will hear different opinions on why a contractor does not always utilize these tools. The bottom line is that properly utilizing these planning tools can help a contractor's success rate on his HDD projects.

1. Why Plan? To avoid surprises on the jobsite. The most important benefits of thorough planning are the cost- and time-savings that can be realized when potential risks and problems are identified early in the process, and changes can be made without sacrificing efforts and without delaying project delivery. Thorough planning identifies and addresses all project activities required to allow project delivery.

Planning tools will:

- Help operators know how to prepare for tooling requirements, water source, mud supply, mud disposal, obstacles in the bore path, etc.
- Be prepared and look professional when they arrive at the jobsite to do the bore
- Extend the life of your equipment
- Increase chances of success
- Possibly add value to the job if you have a thorough plan
- Add value to the asset owner if you have a map of the completed bore
- Give a good record for future bores in the area

A formal plan is not needed on every job, but...

2. How to Start Planning A plan can be as simple or complicated as the user wants and can include pre-bore, completed bore or both. A planning program will need to be selected, of which there are different options. A few of these options are: Trac Management System Plus, Atlas Bore Planner, Bore Pilot and Underground Analysis.

Obtaining a geotechnical survey or as much geological information about the respective jobsite is very important. A great amount of this information can be found on the internet or in hard copy form at the following locations:

- United States Geological Survey (USGS)
<http://usgs-georef.cos.com>
- National Geological Map Database
<http://ngmdb.usgs.gov>
- U.S. Army Corps of Engineers Commands
<http://www.usace.army.mil/inet/locations>
- Publications of the Headquarters,
U.S. Army Corps of Engineers
<http://www.usace.army.mil/inet/usace-docs>
- Earth Explorer
<http://earthexplorer.usgs.gov>

- The National Soil Survey Center (NSSC)
a division of the U.S. Department of Agriculture
- State Departments of Transportation and
Highway Administrations

Knowing the geology that you will be drilling in will help greatly with your tooling selection, drilling fluid selection, etc.

Formulating a traffic control plan beforehand will help reduce downtime on the jobsite. Understanding the high traffic times throughout the day and if you can work around these timeslots are important. Find out what the local regulations are to fully understand what the requirements are.

Secure and understand the job specifications and requirements. One example is knowing what the product bend radius is and comparing that to the bore path parameters. As the diameter of the product gets larger, this is more critical, to ensure that you can pull the product through the proposed bore path. Another example is securing a topographical survey, which will help ensure that you maintain the minimum ground cover requirements.

3. How to Add Value Adding value to the asset owner can include the following information:

- Location of completed bore
- Product size
- Installed depth of product
- Installed length of product

Adding value to the contractor can include the following information:

- Factors encountered during the bore
- Machine maximum pullback and rotation pressures during bore
- Water usage
- Mud usage
- Transmitter/sonde temperature throughout bore
- Steering corrections throughout bore
- Installed depth of product
- Installed length of product

Once again, a formal plan is not needed on every job, but...

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