



Major data center chooses HDPE conduit for large horizontal directional drill project

Conduit installation for Vision Directional, Power Tel Utility Products (PTUP), and Comstar Supply.

The project

A large data center based in the USA executed a project that required a unique solution to accommodate multiple conduit pipes for the purpose of housing numerous fiberoptic lines.

There were several engineering challenges for this project. One of the largest challenges presented was that open trench installation was not feasible. This was due to factors including the short time window for installation and multiple environmental barriers. The site of the installation occurred where creeks, wetlands, and steep terrain merged. Adding to the challenges were considerations for the safety of the installation as well as making sure the project did not impede traffic in the area and avoiding existing structures on the location.

Ultimately, open trenching was considered costly, unsightly to the community, and did not meet the environmental requirements of the installation. The only installation method available was horizontal directional drilling (HDD), in approximately 400-foot segments. 24 strands of conduit strings were required to be pulled at the same time which also presented an engineering challenge. The engineers were looking for conduit that was going to be able to handle the stringent requirements of their design, and WL Plastics was able to provide the product.



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The specifications

Vision Directional Drilling was the installer chosen for this project, through James Cook at Power Tel Utility Products (PTUP) and distribution partner Comstar Supply. Comstar Supply was influential in the material selection process. James has worked with HDPE conduit for years and knows the quality of WL Plastics' conduit, so he felt that it was the right choice for this major project. Vision is an experienced directional drilling installer. The pulls were accomplished in approximately 400-foot segments in between manholes. Fusions were only completed if absolutely necessary and as a result of excellent planning and installation, rarely occurred.

Project planning began early in 2020 and was not delayed by the unusual circumstances of the pandemic. 165,000 feet of 4" DR 11 orange solid wall conduit in accordance with ASTM F2160 was required for the project and supplied on reels. Each reel contained 1,250 feet to accommodate the HDD installation. This unique reel setup allowed Vision to complete multiple pulls off one reel, which significantly reduced directional drilling time and wasted conduit.

The installation itself began in September of 2020 and was completed early 2021, a very short job duration of only 3 months.

The solution

WL plastics supplied high quality solid orange conduit on 120" diameter reels from our Statesboro GA location. The conduit was on site and ready to install before the directional drilling began. Vision performed a directional drill of 24 individual strings of conduit approximately 400 feet at a time using a bore device and pull method. Each string of conduit was hooked up to the bore unit and the entire set was pulled through at the same time. A perfect scenario of less harm to the environment, the ability to go under several creeks, less work on installation to dig and then fill, less disruption to traffic, and exactly what the end user ordered. According to Mark Hall of Vision Directional, "This is the best pipe I have ever pulled."

The pulls were accomplished using between 20,000 and 24,000 lbs of drag and there were no problems with any of the installations, having zero stretch or failures during the entire three months.

The team at Vision was extremely pleased with how the installation went. They have stated they will be happy to work with WL again soon.



Contact

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