

CASE STUDY

SUBAQUEOUS UTILITY CROSSING BENEATH BOCA CIEGA BAY, FLORIDA

SUMMARY

The subaqueous utility crossing beneath Boca Ciega Bay, Florida was in need of replacement—which would be no small task even for an experienced company.

The project was going to be loud, long and disruptive for nearby residents. But with proper planning and, most importantly, effective communication, Infratech was able to successfully complete the project with the support of the surrounding community. In addition, the completed work will sustain the community's electrical needs for years to come.

THE SITUATION

A direct embedded subaqueous feeder cable was reaching retirement age. It approached—and even sometimes exceeded—the maximum load and needed replacement. That's not exactly news. It's happening all over the country. But when the new 20" pipe with six 4" conduits runs 120' below a bay that spans almost 4000', we are talking about an engineering feat.

Infratech was tasked with drilling the bore, feeding the pipe, inserting six conduits and pulling 19,000 pounds of copper cable through three of the conduits. The project began in October and ended in January. Thankfully, the location is in friendly Tampa/St. Petersburg, Florida, so at least the crews didn't have to fight winter storms.



THE SOLUTION

After the initial planning phase with local and state agencies was concluded, the utility sent out letters to the residents on both sides of the bay to inform them about the project. It would be loud and the hours would be long, but the result would ensure a solid supply of power to their homes for the next few decades.

Our Infratech supervisors went from door to door and talked to the residents. They answered many questions and eased fears. The vast majority of home-owners were positive and also thankful for the upgrade.

[continued on next page](#)





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THE SOLUTION continued

Four crews started working from 7 AM to 7 PM seven days a week. Guide wires were laid to either side of the drilling path and “pinged” the drill operator, so he would know exactly where his drill head was at all times.

The bore was pre-reamed at 18”, 26” and 32” before the large 20” pipe could be fed into the bore tunnel.

Once the 20” pipe was in place, the the six 4” inner-ducts were pulled into the 20” casing and finally the copper cable into the



inner-duct. The bore and the pipe arrived right on target on the other side of the bay.

Pulling the cable was planned for three days but took less than two. Those days, however, were 24 hours long since it has to be done in one continuous process.

Meanwhile, all the sand, soil and slush that came out of the bore had to be disposed of or reclaimed, so dump trucks were a familiar sight.

The ends of the bore and the termination points for the cable installed across the bay also required four 58” x 88” x 60” traffic-rated concrete pull boxes to be set.

THE RESULT

While the work was in progress, residents kept checking in on the crews for updates, so although there was a fair amount of disruption, thanks to steady communication, they knew that this work was for their benefit.

The pipe contains six conduits, three of which are empty for future growth. Restoration crews are now making sure that the landscape looks as good as or even better than before work began.

This was an enormous team effort. Our crews have been working together for a long time, so communication and work flows are very efficient. In addition, our stringent safety training, tool box talks and routine drills ensure that even complex projects like this are completed without compromising the safety of workers or residents.

TO FIND OUT MORE ABOUT THE SOLUTIONS WE HAVE FOUND FOR COMPLEX CHALLENGES AND CRITICAL SAFETY ISSUES, CALL US AT 770-792-8700.