

CASE STUDY

MediTrac[®] for Underground Oxygen Main Line

- Saves Time
- Saves Money
- Increases Installation Options

Product: MediTrac[®] Corrugated 1-1/2" Flexible Medical Tubing

Location: Northwestern Medical Center at 260 Crest Rd,
St Albans City, VT 05478

MediTrac[®] by OmegaFlex[®] continues its introduction into the market by providing innovation from end to end with another installation.

Project Overview

Northwestern Medical Center needed to add a new Cryogenic Fluid Central Supply System to their facility. The new Cryogenic Fluid Central Supply System for Oxygen pad and tank were constructed further away from the building than the existing site. This required the underground oxygen line to be run across an existing access road and parking lot.

The contractor New England Air Systems was hired to install the underground oxygen main line. Installing traditional cleaned and capped copper was going to greatly disrupt facility traffic because of the need to test and inspect each brazed joint prior to sleeving the section. Cleaned and capped copper would require the trench to be open for weeks and the use of metal road covers to facilitate installation and keeping some access for facility traffic.

Having the trench open for weeks would have disrupted the staff and visitors of the facility as well as delaying the work of other contractors responsible for back fill and repair of the road and parking lot. New England Air

Systems saw the opportunity to utilize MediTrac[®] corrugated medical tubing for the oxygen main line to expedite the construction process. MediTrac[®] enabled New England Air Systems to pull a continuous line with zero fittings underground through a non-metallic conduit after the trench was backfilled. The use of MediTrac[®] minimized traffic and parking disruptions for Northwest Medical Center during the construction process.

Installation Overview

After the trench was dug, New England Air Systems installed a non-metallic conduit to prepare for the pull-through method of installing MediTrac[®] corrugated medical tubing. MediTrac[®] also allowed for a continuous conduit to be installed instead of having to leave access points for inspection of each copper fitting. The continuous conduit offers additional and better protection of the piping when compared to having "clam shell" sections for fitting inspection. Once the conduit installation was completed the trench was immediately backfilled allowing the Cryogenic Fluid Central Supply System pad to be poured ahead of the original schedule with each end of the non-metallic conduit remaining above grade. A 500-foot continuous reel of 1-1/2" MediTrac[®] was ordered for the project to be pulled through the pre-installed non-metallic conduit with a total run length of approximately 470'. Utilizing a winch located next to the building New England Air Systems pulled the 1 1/2" MediTrac[®] from the reel stationed at the Cryogenic Fluid Central Supply System pad through the conduit and up to the side of the building in 30 minutes. Prior to the MediTrac[®] fitting installation the New England Air installer pre-installed the Source Valve and Main Valve onto the MediTrac[®] fittings. The prefabrication allowed final pressure testing immediately following the installation of the assemblies onto the MediTrac[®] pipe. New England Air systems completed the installation of the two 1 1/2 inch MediTrac fittings in 20 minutes for a total installation time (Installing pipe and fittings) in just under one hour. *(continued)*

MediTrac[®] teamed up with New England Air Systems and Acute Medical Gas to provide Northwest Medical Center a new Bulk Oxygen Line using 1-1/2" MediTrac.



470' of 1-1/2" MediTrac[®] being run through the non-metallic conduit.

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(continued from front)



The long trench crossing a large section of the Northwest Medical Center access road and parking lot.

Conclusion

Utilizing MediTrac[®] in place of traditional cleaned and capped copper provided a simplified and more efficient installation for Northwest Medical Center. The continuous run of 1 1/2" MediTrac[®] eliminated 100% of underground brazed fittings, which minimized the potential for contamination of the line. Elimination of fittings underground also eliminated all inaccessible potential points of failure. Not having fittings installed underground where inaccessible also eliminated the need to have a third party inspector onsite to inspect and witness the pressure test of the underground fittings. Not having to have the inspector onsite for the duration of the installation lowered the cost and eliminated the additional scheduling and coordination of another contractor on site. Additionally, if the facility were ever to need a larger main line, the 1.5" MediTrac[®] could be pulled out of the conduit and replaced with a larger 2" MediTrac[®] line, all without any additional construction. MediTrac[®] and the pull-through method reduced disruption to the active parking lot and access road and returned both to full uninterrupted service in days rather than weeks.

Summary of MediTrac[®] materials used:

470' of 1 1/2" MediTrac[®] Corrugated Medical Gas Tube (Part Number MT-1500-CMT)

Qty. (2) 1 1/2" MediTrac[®] Straight Fittings (Part Number MT-1500-SF)

Summary of Cleaned and Capped Copper materials saved:

470' of 1 1/2" Type K Copper

Qty. (24) 1 1/2" Copper Couplings 90's/45s

Various consumable materials including but not limited to: Nitrogen purge gas, brazing rods, fire protection materials, fuel, and prep materials.

Summary of MediTrac[®] hours:

New England Air Systems estimated an 80% labor savings when installing MediTrac[®] as opposed to standard clean and capped copper.

Installing MediTrac[®] for the Northwestern Medical Center enabled the trench to be backfilled and concrete pad poured as soon as the non-metallic conduit was installed. This allowed for the work by other contractors to progress while installing MediTrac[®]. New England Air System was able to pull MediTrac[®] through the conduit and attach the fittings in a day. Utilizing MediTrac[®] eliminated underground brazed joints, simplified installation of the line and substantially decreased total installation time.



1-1/2" MediTrac[®] fitting with a pre-brazed test setup ready for testing.