



# Flow-Liner®

## Non-Invasive Underground Utility Infrastructure Conduit Lining Project



**History:** In 1898, the Experimental Model Basin (EMB) was established at the Washington Navy Yard. In 1937, ground was broken for the construction of the new model basin at Carderock. In 1939, construction of the basin was completed and formal dedication ceremonies took place. The new establishment was to be officially known as the "The David W. Taylor Model Basin." Over the years, the name evolved until in 1992 the David Taylor Research Center became the Carderock Division of the Naval Surface Warfare Center.

The Carderock Division consists of approximately 3,200 scientists, engineers and support personnel working in more than 40 disciplines ranging from fundamental science to applied/in-service engineering. This Division has the Navy's experts for maritime technology. Carderock houses world-class facilities and laboratories, its Headquarters is located in West Bethesda, Maryland. The Division also conducts research and development at several remote sites across the country.

**Project Scope:**

Re-condition approximately 4000 feet of existing 4 inch ID underground electrical conduit ducts. The entire conduit lengths are to be sealed from water infiltration from vault to vault.

**Issues:**

The average distance between the utility vaults is 200 to 300 feet in length. Most of the tar composite coatings inside the 50+ year old concrete ducts are deteriorating and causing obstructions. The electrical services to the multiple buildings in the Navy's complex could not be disrupted in any way so excavating the underground conduits is not an option!

**Solution:**

A Flow-Liner® Certified Installer will re-condition and re-line the existing electrical conduit ducts. This will be accomplished utilizing the Flow-Liner® CIP-Conduit® Lining System.

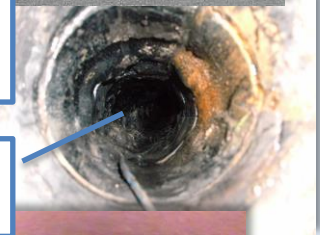
**Result:**

The underground conduits were lined without excavation or disruption to the Navy facilities. The Navy's General Contractor made the following comment:

*"We are very pleased with how the Flow-Liner CIP-Conduit installation was performed by your Installer. The conduit lining crew was very professional, courteous, and kept us informed – a top notch crew. They did a great job for us in a timely manner. The conduit lining saved us from having to dig up and replace the conduit, which would have been very costly, inconvenient, and most likely not feasible. We highly recommend your product and consider it a viable option compared to conduit replacement."*



Utility vault set-up & safety preparations



Before & after pictures of the CIP Conduit® lining



We are pleased to announce another successful project and proudly add

**The U.S. NAVY**   
to our list of happy and satisfied customers.