

# Case Study: Restoring a Manhole Within a Manhole using Mainstay ML-72 Mortar



**Contractor:** The Expeditors  
**Location:** Milwaukee, WI  
**Structures:** Double barrel manholes  
**Year:** 2017

The Expeditors performed an application of the Mainstay Composite Liner on what was essentially a manhole within a manhole. The project required the rehabilitation of very deep manholes, with some up to 48' deep. This particular "double barrel" manhole had a 72" combination sewer pipe running through it on one side and an 18" sanitary sewer pipe running through it on the other side at the same depth.



Because the manhole was so badly deteriorated that it was no longer structurally sound, the first challenge to overcome was figuring out how to restore the manhole with minimal human entry. The Expeditors used a Vactor truck with an ENZe pressure washing head, typically used for cleaning lift stations, to perform surface preparation. After pressure washing, a crew member stopped any active leaks inside the manhole using Mainstay ML-10 Hydraulic Cement Mortar.



Another challenge was the presence of a drop connection pipe that needed to be avoided while applying the Mainstay ML-72 Sprayable Microsilica Restoration Mortar. The Expeditors used the Mainstay Mortar Spinner to spin mortar onto one side of the manhole and left it to cure overnight. The crew then came back the next day and plugged the drop connection while bypassing the flow to the finished side. This allowed the crew to spin mortar onto the unfinished side without the flow from the drop connection interfering with the application process.