



EPOXYTEC™

Contractor and Product Adaptability Bring Unprecedented Results

Heavily corroded from years of service, Blackman Charter Township Utility Department's concrete lift stations in Michigan were identified as a source of Inflow & Infiltration (I&I) in the collection system. Epoxytec's CPP products offered an ultra-high build (125+ mils) single coat solution to combat both challenges. Municipal contractor MCMC Linings & Rehabilitation specializes in maintenance and rehabilitation of collection systems and was tasked by Blackman Charter Township Utility Department to seal I&I on roughly 500+ manholes and 18 lift stations throughout the township.

Product selection was imperative to the success of this project. The infrastructure within the township varied in need from severely deteriorated structures that would require restoration and repair, leak mitigation, etc., to others that simply needed a protective lining that would protect against future corrosion (H₂S) and serve as a preventative protective liner. The goal was to find a system that could do both — shield from H₂S while also holding back I&I. Additionally, a project of this magnitude required careful consideration to the method and mode of product application. Choosing a liner specifically formulated to rehabilitate and renew infrastructure in this distinctly harsh environment was simply not enough. The means of application would be a beneficial attribute for the city where extended return to service time has the potential to negatively impact its citizens and taxpayer dollars.

Epoxytec's high strength 100% solids epoxy compound, CPP Trowel-liner, was chosen for the project due in part to the fact that it is an all-in-one system that could be used as a stand-alone protective structural liner. This proven product has a history of underground installations going back for decades and contractors' positive application feedback has been an instrumental part of its appeal. "We have historically used traditional reinforced epoxy lining systems requiring a complete resurfacing, mortar, and glaze coat," noted MCMC Linings & Rehabilitation project manager Jim Radeback. "As a one coat system, CPP Trowel-Liner streamlined

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Featured Products

CPP Sprayliner

CPP Trowel-Liner



Project Information

Location

Blackman Charter Township, MI & Summit Twp., Jackson County, MI

Completion Date

2022

Structure

Lift Stations & Wet Wells

Owner

Blackman Charter Township Utility Department & Summit Twp., Jackson County, MI

Applicator

MCMC Linings & Rehabilitation

Above: Lift station rehabilitated using Epoxytec's CPP Trowel-Liner (Blackman Charter Township, MI)

Heated plural component spray equipment rented for CPP Sprayliner application (Summit Twp., Jackson County, MI)



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Contractor and Product Adaptability Bring Unprecedented Results (cont.)

the process by drastically reducing our labor and return to service time." CPP Trowel-Liner was used throughout the Blackman Charter project to line various structures allowing MCMC Linings & Rehabilitation to understand the quality of the product and ease of application.

After the success experienced throughout the Blackman Charter Township project, MCMC Linings & Rehabilitation opted to upgrade from CPP Trowel-Liner to CPP Sprayliner for their next rehabilitation project in Summit Twp., Jackson County, MI. This project included two lift stations. The cure characteristics of both CPP Trowel-Liner and CPP Sprayliner are equal, both offer the qualities necessary to combat aggressive wastewater environments while sealing against I&I, however the application methods are the distinguishing factor. CPP Sprayliner allows for a spray application using a heated plural component spray system rather than a trowel-application method. Having previously attended Epoxytec Certified Applicator Network (ECAN) training, MCMC Lining & Rehabilitation was certified to use the spray system and they elected to switch application methods.

MCMC Lining & Rehabilitation's decision to make the change and rent a plural component spray system proved to be a fruitful one, catapulting the project and slashing the originally projected timeframe. "When we bid this job 6 months ago, we bid 2700 sq ft. with an estimated four-week time frame for each lift station because we had not calculated using Epoxytec's CPP Sprayliner," commented Radeback. "We bid double the timeframe that we actually needed; using CPP Sprayliner reduced the time for each station to half that time."

The CPP Sprayliner equipment was rented for eight weeks (the quoted bid time for the Summit Twp. project). By spraying rather than troweling as they had initially planned, MCMC Lining & Rehabilitation was able to accomplish completion of both lift stations in four weeks (two weeks for each structure), leaving four extra weeks with the rented equipment and offering the opportunity to complete rehabilitation of additional work with the spray rig including a 6' x 25' wet well and a 6' x 6' valve pit. The cost savings from the reduction of time and labor, ability to line additional structures, and the product cost savings proved to be significant.

Inflow & Infiltration mitigation projects like that of Blackman Charter Township Utility Department and Summit Twp., Jackson County are proactive methods initiated by city officials that will ultimately result in tax dollar savings. By addressing the source of the problem at the collection level, the goal of preventing unnecessary water treatment can be achieved. Furthermore, the thoroughness and efficiency shown by MCMC Lining & Rehabilitation during these applications demonstrated that adaptability and change can produce positive results. Often times, the intricacies of a project cannot be predicted and the ability to assess the situation as it occurs and change from CPP Trowel-Liner to CPP Sprayliner is a fine example of how being adaptable can pay off. "These projects are like a big apple pie that we address one piece at a time," added Radeback.



Above: Lift station lined and protected using Epoxytec's CPP Sprayliner (Summit Twp., Jackson County, MI)

