



CITY OF
EAST GRAND RAPIDS

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DOUG LA FAVE
DEPUTY CITY MANAGER

MEMORANDUM

TO: Honorable Mayor and City Commissioners
FROM: Doug La Fave, Deputy City Manager
DATE: 3/8/2021

RE: Catch basin, manhole and storm sewer rehabilitation program-alternative process

Action Requested: That the City Commission consider approval of a contract for catch basin, manhole and storm sewer rehabilitation with Havener Tech, INC of Troy, MI at \$350 per structure at five-foot depth, \$50 per additional foot and \$10 per pound for void fill/repairs within authorized fiscal year budgets for 2021, 2022, 2023 and 2024.

Background: As part of the sanitary sewer manhole rehabilitation program and as a component of the City infrastructure asset management strategy, the City utilizes an inspection program to prioritize rehabilitation of sanitary sewer as well as storm sewer catch basins. It is most cost effective and less disruptive when rehabilitation takes place in advance of a structure failure and before street construction. Cured-in-place and other polyurea system products allow for creating a new solid-one piece structure within an old structure that is constructed of hundreds of independent bricks with mortar. This type of application rehabilitates and repairs structures and prevents leaks and ground water intrusion (otherwise known as infiltration and inflow). At the surface this prevents sink holes around structures and helps reduce the need to rebuild “chimney” portions of structures during road construction which can be costly and add more time to road construction projects. This process takes several minutes depending on the application and condition/size of the structure and requires no excavation or disruption to the surrounding area.

This structural rehabilitation process is a different from the three-layer flexible polymer process that was also recently approved. This structural rehab process is a closed cell rigid polyurethane foam designed for concrete void and cavity filling at a thickness of one-foot to a depth of five-feet per structure. This process allows for rehabilitating a greater number of structures that are typically shallower in depth and have a more moderate condition rating assessment with minimal infiltration and inflow compared to the three-layer flexible polymer process.

The current fiscal year major and local street fund budgets each have \$100,000 programmed for manhole casting and rehabilitation. The recent approval for the three-layer flexible polymer process is estimated at \$70,800, with the closed cell rigid polyurethane process estimated at ~\$65,800 for ~188 structures. Between each process and manhole casting purchases via the City of Grand Rapids contract with East Jordan for manhole castings, all three components are within programmed budgets for FY 20/21.

Project specifications and bid tabs are included with materials.

Below are a few before and after photos of the closed cell rigid polyurethane product rehabilitating a storm sewer outfall and manhole structure.

Before



After



Before



After



REVIEWED & APPROVED FOR SUBMISSION:

Shea Charles
City Manager