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SEWER REHABILITATION IN FORT LAUDERDALE, FL – PART II IMPLEMENTATION AND RESULTS

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ABSTRACT: The City of Fort Lauderdale wastewater collection system experiences high levels of inflow and infiltration (I&I), pipeline failures and conveyance disruptions. The City is sensitive to the disruption that municipal construction projects can cause in the vicinity of proposed utility work. In addition, a value engineering study concluded that the most cost effective means of providing additional wastewater treatment plant capacity was to remove I&I from both the base and peak flows.

For these reasons, the City has embarked on a comprehensive sewer rehabilitation program using only trenchless, cured in place technologies to repair the collection system. The program goal is to cost effectively reduce I&I based flows to the treatment plant, currently averaging 20 MGD, to accommodate growth and redevelopment activities.

This paper discusses development of specific projects, experiences with projects constructed to date and implications of flow data obtained following completion of the first two projects. Seven projects have been developed to date with three completed, three under construction and one out to bid.

Construction costs have been extremely competitive, with 3-4 bidders submitting for each project. The first two projects were conducted in areas contributing the highest rates of I&I to the system; one with historically high levels of rainfall derived I&I (RDII) and one with historically high levels of groundwater I&I (GWI). Initial review of flow monitoring data indicates sharply reduced levels of RDII in the first basin once the main sewer and lateral lining had been completed. Data is currently being analyzed for the GWI basin and the following projects, after which program progress and the path forward will be re-assessed.