

## Program 8090 Interceptor Rehabilitation Program



Vactor truck used to clean debris from interceptors

### Description:

This Program includes miscellaneous projects to rehabilitate failing facilities, address Inflow and Infiltration (I/I) sources and addressing general needs of the interceptor system not programmed into a region or facility specific program. This Program also includes additional condition assessment work to complement the internal inspections work completed by operations, office space planning and design to accommodate all the staff assigned to the Regional Maintenance Facility, and property transfer between Council and municipalities for public benefit.

### Purpose and Justification:

Periodic condition assessments for interceptor facilities have revealed facilities requiring immediate projects. In addition, system-wide administrative and management work is required to efficiently operate the interceptor System.

### Program Location:

The active projects within this program are in all the Council Districts.

### Active Projects in Program:

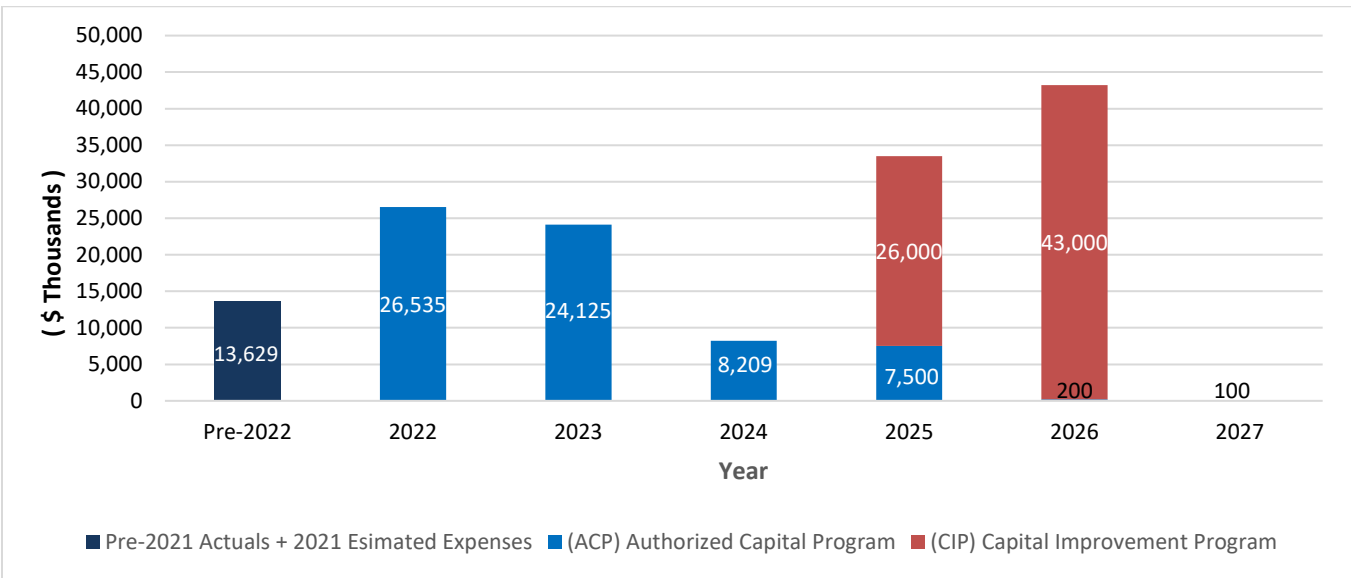
Project Number	Project Title
809099	Funds for Future Interceptor Rehabilitation Projects (Parent Project)
809083	I/I Mitigation
809089	Interceptor Inspection
809093	South Saint Paul WWTP Reconveyance

809094	Oak Park Heights Interceptor 9101 Replacement
809095	Regional Maintenance Facility (RMF) Improvements
819010	System Wide River Crossing Inspection
819011	Interceptor Chemical Odor Control
819012	Blue Lake Area Interceptor Odor Control Improvements
819013	Technical Support of Interceptors
819017	7031/9003 Siphon Outlet Structure Improvements
819018	Plymouth Forcemain Relocation at Douglas Drive
819019	Vactor Waste Facility Improvements
819020	East Isles Forcemain Improvements – Contract H
819025	TH 13 – MNDOT Coordination

**MCES 2022 – 2027 Capital Program:**

<b>Authorized Capital Program (ACP)</b> <b>\$80,298,000</b>	<b>Capital Improvement Plan (CIP)</b> <b>\$69,000,000</b>
----------------------------------------------------------------	--------------------------------------------------------------

**Estimated Program Cash Flow 2022 - 2027:**



Note: The ACP is the total amount of all past and present authorizations including Pre-2022 Expenses.

Program Family: 8090  
Project # 809083

## I / I Mitigation

### Project Location:

Project location can vary across 7 county region



Image of a sewer overflow

<b>PROJECT TYPE:</b>	Interceptor rehabilitation
<b>OBJECTIVES:</b>	Preservation and Quality Improvement
<b>CUSTOMER LEVEL OF SERVICE:</b>	Lead by Example, Minimize Impacts, Meet Capacity Needs and Comply with Permits
<b>SCOPE:</b>	Working with Operations when items are identified, such as leaking maintenance hole joints, adjustment rings and broken castings, to repair these sources of inflow and infiltration.
<b>PROJECT NEED:</b>	Elimination of inflow and infiltration sources is important to MCES in order to maintain system capacity, prevent backups of wastewater into private homes and businesses, prevent the entrance of wastewater into the environment during weather events.

### PROJECT SCHEDULE



### FINANCIAL ANALYSIS

<b>2022 Cash Flow</b> \$100,000	<b>Current ACP</b> \$805,000	<b>2022 – 2027 Cash Flow</b> \$600,000	<b>Total Project Cost</b> \$1,805,000
------------------------------------	---------------------------------	-------------------------------------------	------------------------------------------

Program Family: 8090  
Project # 809089

# Special Interceptor Inspections

Project Location:  
Location: Region Wide



UTV equipped with tracks and CCTB equipment

<b>PROJECT TYPE:</b>	Interceptor Planning
<b>OBJECTIVES:</b>	Preservation
<b>CUSTOMER LEVEL OF SERVICE:</b>	Preserve Assets, Minimize Impacts, Lead by Example, Be A Good Neighbor, and Coordinate with Others
<b>SCOPE:</b>	This project provides support for special inspections of the interceptor system that cannot otherwise feasibly be completed by Council workers. In 2021 approximately 3 miles of interceptor 1-SP-224 in St. Paul and 1-VH-423 in Vadnais Heights will be cleaned and inspected.
<b>PROJECT NEED:</b>	MCES maintains critical infrastructure throughout the greater metropolitan area, and not all of it is accessible by using the standard equipment that Interceptor Operations owns. In 2021 approximately 14,000 linear feet of interceptor gravity sewers in the cities of St. Paul and Vadnais Heights will need internal closed-circuit-television (CCTV) inspections. Specialized equipment, permits and coordination with the communities is needed to complete the work.

## PROJECT SCHEDULE



## FINANCIAL ANALYSIS

<b>2022 Cash Flow</b>	<b>Current ACP</b>	<b>2022 – 2027 Cash Flow</b>	<b>Total Project Cost</b>
\$100,000	\$2,000,000	\$15,500,000	\$32,000,000

Program Family: 8090  
Project # 809093

## South Saint Paul WWTP Reconveyance

Project Location:  
Council District # 13  
City of South St. Paul  
Metro WWTP



Backup generator at Metro WWTP

<b>PROJECT TYPE:</b>	Interceptor System
<b>OBJECTIVES:</b>	Preservation and Quality Improvements
<b>CUSTOMER LEVEL OF SERVICE:</b>	Be A Good Neighbor, Engage Customers, and Coordinate with Others
<b>SCOPE:</b>	This project completes some needed work required in anticipation of reconveying excess property back to the City of South St. Paul. Work includes removing unneeded structures and materials from site and constructing reliability improvements to electrical systems, biofilter and mechanical systems. This project also includes installation of a grinder at L74.
<b>PROJECT NEED:</b>	The Council approved reconveyance of a portion of the site to the City. MCES is obligated to clear the reconveyed land of pipes and structures in accordance with the draft acquisition agreement. In addition, to increase system reliability, a new portable generator connection and new portable pump connection will be constructed. This project will also install a grinder at L74.

### PROJECT SCHEDULE



Planning  
2018



Design  
2019-2020



Construction  
2021-2022

### FINANCIAL ANALYSIS

<b>2022 Cash Flow</b> \$330,000	<b>Current ACP</b> \$3,652,000	<b>2022 – 2027 Cash Flow</b> \$330,000	<b>Total Project Cost</b> \$3,652,000
------------------------------------	-----------------------------------	-------------------------------------------	------------------------------------------

Program Family: 8090  
Project # 809094

# Oak Park Heights Interceptor 9101 Replacement

Project Location:

Council District # 12

City of Oak Park Heights  
City of Bayport



<b>PROJECT TYPE:</b>	Interceptor Rehabilitation
<b>OBJECTIVES:</b>	Preservation
<b>CUSTOMER LEVEL OF SERVICE:</b>	Minimize impacts, Be a Good Neighbor, Preserve Assets, and Be Fair and Transparent With Fees
<b>SCOPE:</b>	The project replaces approximately 305 feet of 21-inch Polyvinyl Chloride (PVC) gravity sewer piping and associated manholes. Meter M609 is rehabilitated which involves replacing the flume, hatch, hardware, rehabilitate the Programmable Logic Controller (PLC) and upgrading the electrical service. Temporary conveyance will be provided for the interceptor and for a crossing municipal sewer.
<b>PROJECT NEED:</b>	Routine manhole inspection found sags in the 21" PVC interceptor located between Manhole (MH) G4 and MH G5. The sags have caused pooling of flow and sediment deposition. In addition, MH G13, the discharge manhole from lift station L68 was found to be extremely corroded with reinforcement wire visible throughout. Rehabilitating meter M609 during the temporary conveyance of the interceptor will save future costs.

## PROJECT SCHEDULE



Planning  
2018



Design  
2019-2020



Construction  
2021-2022

## FINANCIAL ANALYSIS

2022 Cash Flow \$200,000	Current ACP \$1,839,000	2022 – 2027 Cash Flow \$200,000	Total Project Cost \$2,057,225
-----------------------------	----------------------------	------------------------------------	-----------------------------------

Program Family: 8090  
Project # 809095

## Regional Maintenance Facility (RMF) Expansion

Project Location:  
Council District # 15  
City of Eagan  
3565 Kennebec Dr.



Regional Maintenance Facility (RMF)

<b>PROJECT TYPE:</b>	Building Improvements
<b>OBJECTIVES:</b>	Expansion
<b>CUSTOMER LEVEL OF SERVICE:</b>	Good value to the region and preservation of assets
<b>SCOPE:</b>	This project includes remodeling RMF to address the inadequate women's locker room and bathrooms and expansion to include the Air Quality lab and accommodate current staffing along with planned growth. The building improvements will address ADA deficiencies. Finally, a large meeting room is being planned that could share space with other amenities for consistent use and serve as an emergency operations center.
<b>PROJECT NEED:</b>	RMF was constructed in 1986 with improvements made in 2012 for expansion to accommodate additional staff. Currently, several work areas require improvements, including Dispatch, Computer Room, and women's facilities and improvements to comply with the ADA. Furthermore, MCES is no longer going to be leasing space at Metro 94 for the Air Quality department and RMF has been identified as a preferred location.

### PROJECT SCHEDULE



### FINANCIAL ANALYSIS

<b>2022 Cash Flow</b>	<b>Current ACP</b>	<b>2022 – 2027 Cash Flow</b>	<b>Total Project Cost</b>
\$7,750,000	\$16,992,100	\$15,500,000	\$17,124,787

Program Family: 8090  
Project # 819011

# Interceptor Chemical Odor Control

Project Location:  
  
Council District # NA  
  
City - NA  
  
Location – Multiple Lift Stations and Meter Stations



L-24 Chemical Odor Control Tank and Pumping System

<b>PROJECT TYPE:</b>	Interceptor/Odor Control
<b>OBJECTIVES:</b>	Preservation and Quality Improvement
<b>CUSTOMER LEVEL OF SERVICE:</b>	Preserve Assets, Be a Good Neighbor
<b>SCOPE:</b>	Work will be performed under a design, build, operate contract where MCES will own all equipment (except for hydrogen sulfide monitoring equipment) and a vendor will operate, maintain, monitor, report, and supply chemical. This includes installing chemical deliver equipment and HDPE tanks. The work includes operation of the systems for a 10-year term with two possible 5-year extensions, bringing the total length of the services contract up to 20 years.
<b>PROJECT NEED:</b>	MCES currently has 15 operational chemical dosing odor control sites, including meters and lift stations. These sites are critical to reducing odor releases impacting communities and reducing corrosion within the interceptor system.

## PROJECT SCHEDULE



## FINANCIAL ANALYSIS

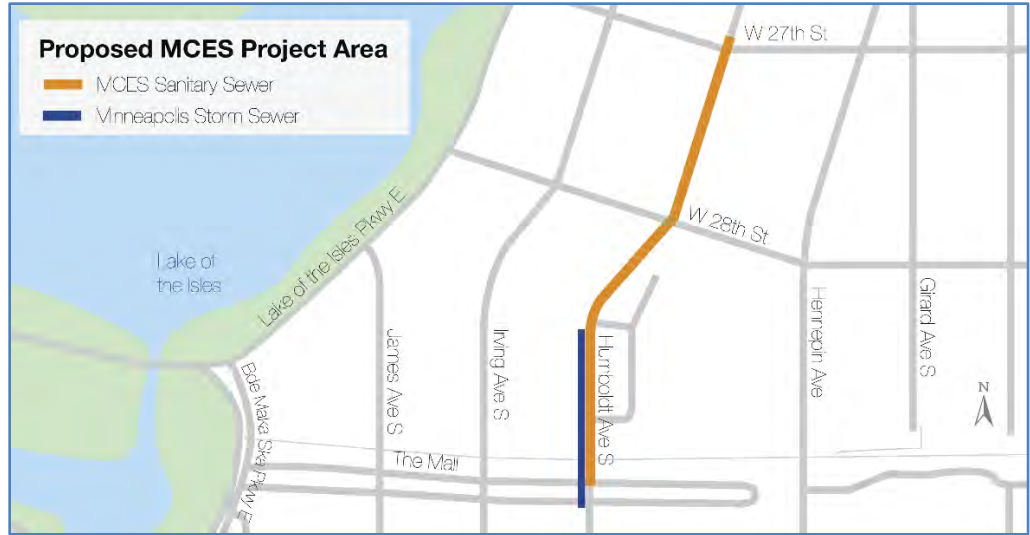
2022 Cash Flow	Current ACP	2022 – 2027 Cash Flow	Total Project Cost
\$4,300,000	\$7,063,000	\$7,300,000	7,407,496



Program Family: 8090  
Project # 819015

# Hopkins System Improvements, East Isles Forcemain – Contract G

Project Location:  
Council District # 6  
City of Minneapolis  
Humboldt Ave



<b>PROJECT TYPE:</b>	Interceptor Rehabilitation
<b>OBJECTIVES:</b>	Preservation
<b>CUSTOMER LEVEL OF SERVICE:</b>	Conveys wastewater safely with minimal backups and spills
<b>SCOPE:</b>	The project includes replacement of 1500 lineal feet of 30” concrete forcemain with two 24” diameter forcemains on Humboldt Ave between the Midtown Greenway and 27 <sup>th</sup> Street. Cooperative construction with the City of Minneapolis to complete City improvements in the area.
<b>PROJECT NEED:</b>	Without a redundant forcemain, inspecting the existing 24” concrete forcemain is difficult and there is significant potential for corrosion given the pipe material and age. An upstream section of the forcemain collapsed in 2000. The vortex drop structure between the forcemain and interceptor 1-MN-330 at 27th Street and Humboldt Ave. S. is severely corroded is at risk of failure

## PROJECT SCHEDULE



## FINANCIAL ANALYSIS

2022 Cash Flow \$4,000,000	Current ACP \$5,400,000	2022 – 2027 Cash Flow \$5,300,000	Total Project Cost \$5,400,000
-------------------------------	----------------------------	--------------------------------------	-----------------------------------

Program Family: 8090  
Project # 819016

# Large Diameter Interceptor Cleaning – Phase 2

Project Location:  
Council District #7, 8, 14  
Cities of Minneapolis  
and St. Paul NIEB, St.  
Anthony W, Prospect  
Park, Downtown, Marcy  
Holmes, North Loop,  
Summit Hill  
Neighborhoods



<b>PROJECT TYPE:</b>	Large Diameter Interceptor Cleaning
<b>OBJECTIVES:</b>	Preservation
<b>CUSTOMER LEVEL OF SERVICE:</b>	Maintain Existing Services
<b>SCOPE:</b>	Clean seven separate segments of Interceptors 1-MN-300, 1-MN-310, 1-MN-320, 1-SP-250, and 1-MS-100.
<b>PROJECT NEED:</b>	Interceptors need to be cleaned to restore original design capacity and minimize the potential for service interruptions.

## PROJECT SCHEDULE



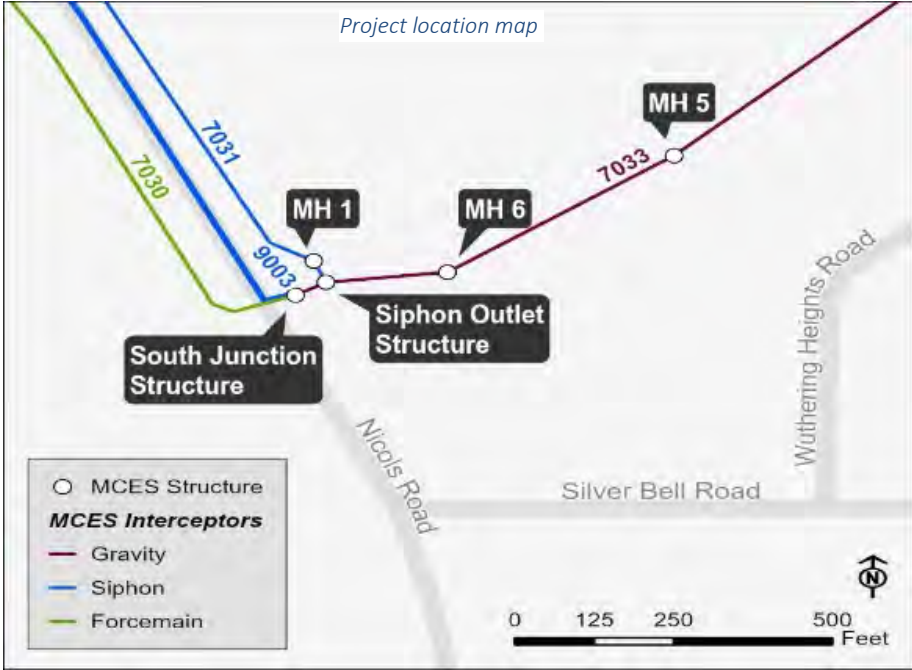
## FINANCIAL ANALYSIS

2022 Cash Flow \$3,700,000	Current ACP \$13,010,000	2022 – 2027 Cash Flow \$11,100,000	Total Project Cost \$13,010,000
-------------------------------	-----------------------------	---------------------------------------	------------------------------------

Program Family:8090  
Project # 819017

# 7031/9003 Siphon Outlet Structure Improvements (MH-1 & South Junction Structure)

**Project Location:**  
Council District: #15  
City: Eagan, MN  
Location: North of intersection of Nicols Road and Silver Bell Road



<b>PROJECT TYPE:</b>	Interceptor Rehabilitation
<b>OBJECTIVES:</b>	Preservation
<b>CUSTOMER LEVEL OF SERVICE:</b>	High H2S levels will continue to cause corrosion in the L13/Siphon Outlet Structures that could lead to a catastrophic failure and a disruption of service to our customers and does not meet the Council’s Level of Service goals
<b>SCOPE:</b>	Rehabilitation or replacement of maintenance structures and the South Junction Structure to reduce the potential for structure failure
<b>PROJECT NEED:</b>	The project is needed for operator safety, to preserve assets, and to maintain system flexibility

## PROJECT SCHEDULE



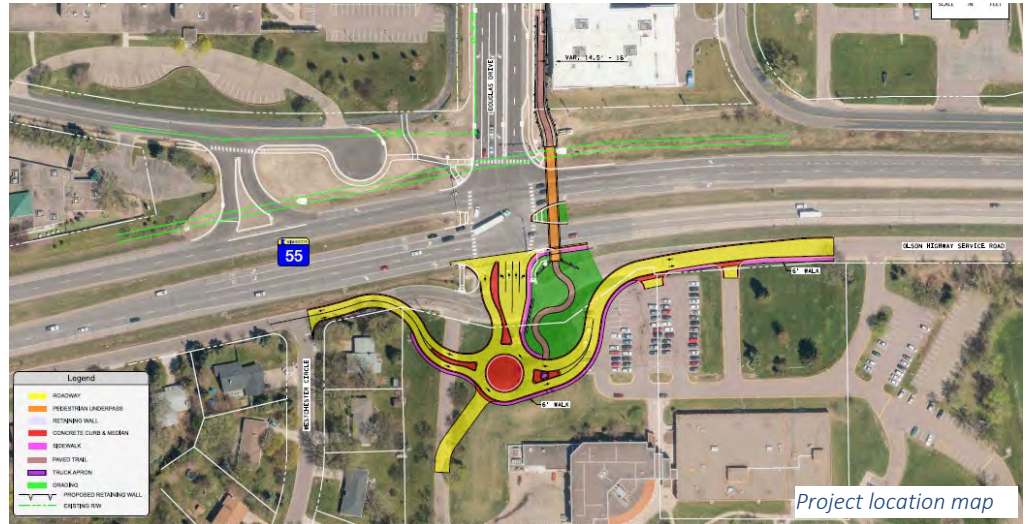
## FINANCIAL ANALYSIS

<b>2022 Cash Flow</b>	<b>Current ACP</b>	<b>2022 – 2027 Cash Flow</b>	<b>Total Project Cost</b>
\$500,000	\$2,100,000	\$2,000,000	\$2,100,000

Program Family: 8090  
Project # 819018

# Plymouth Forcemain Relocation at Douglas Drive

Project Location:  
Council District # 6  
City of Golden Valley  
Location  
Hwy 55 and Douglas Dr.



<b>PROJECT TYPE:</b>	Interceptor Relocation
<b>OBJECTIVES:</b>	Quality Improvements
<b>CUSTOMER LEVEL OF SERVICE:</b>	Be a Good Neighbor, and Coordinate with Others
<b>SCOPE:</b>	This project realigns the existing parallel 30-inch and 42-inch forcemains to address a conflict due to proposed pedestrian improvements in the project area.
<b>PROJECT NEED:</b>	The City of Golden Valley is working to improve pedestrian access in the project area, and the ability for pedestrians to cross Highway 55. The proposed pedestrian tunnel requires that the existing forcemain be lowered.

## PROJECT SCHEDULE



## FINANCIAL ANALYSIS

2022 Cash Flow \$50,000	Current ACP \$1,250,000	2022 – 2027 Cash Flow \$1,250,000	Total Project Cost \$1,250,000
----------------------------	----------------------------	--------------------------------------	-----------------------------------

Program Family: 8090  
Project # 819020

# Hopkins System Improvements, East Isles Forcemain – Contract H

Project Location:  
Council District # 6  
City of Minneapolis  
The Mall Park



<b>PROJECT TYPE:</b>	Interceptor Rehabilitation
<b>OBJECTIVES:</b>	Preservation
<b>CUSTOMER LEVEL OF SERVICE:</b>	Conveys wastewater safely with minimal backups and spills
<b>SCOPE:</b>	The project includes replacement of 1000 lineal feet of 30” concrete forcemain with two 24” diameter forcemains within The Mall Park between Bde Maka Ska Parkway and Humboldt Ave. Cooperative construction with the Minneapolis Park and Recreation Board to construct park master plan improvements in the area.
<b>PROJECT NEED:</b>	Without a redundant forcemain, inspecting the existing 24” concrete forcemain is difficult and there is significant potential for corrosion given the pipe material and age. An upstream section of the forcemain collapsed in 2000.

## PROJECT SCHEDULE



## FINANCIAL ANALYSIS

<b>2022 Cash Flow</b> \$400,000	<b>Current ACP</b> \$2,350,000	<b>2022 – 2027 Cash Flow</b> \$2,300,000	<b>Total Project Cost</b> \$2,350,000
------------------------------------	-----------------------------------	---------------------------------------------	------------------------------------------

Program Family: 8090  
Project # 819025

# TH 13 – MnDOT Coordination

Project Location:  
Council District # 4  
City of Savage  
Location  
Highway 13



<b>PROJECT TYPE:</b>	Interceptor Rehabilitation
<b>OBJECTIVES:</b>	Preservation and Quality Improvements
<b>CUSTOMER LEVEL OF SERVICE:</b>	Be A Good Neighbor, and Coordinate with Others
<b>SCOPE:</b>	This project realigns the existing forcemain route to move it from under MnDOT’s proposed entrance ramps and frontage roads.
<b>PROJECT NEED:</b>	MnDOT’s TH 13 project includes constructing an overpass with entrance and exit ramps to improve traffic safety at the intersections of Highway 13 and Dakota Ave and Highway 13 and Yosemite Ave. The existing forcemains need to be relocated to ensure continued maintenance without disrupting the proposed Highway improvements. The work will be completed as a part of the MnDOT Construction Contract.

## PROJECT SCHEDULE



## FINANCIAL ANALYSIS

2022 Cash Flow \$100,000	Current ACP \$3,600,000	2022 – 2027 Cash Flow \$3,600,000	Total Project Cost \$3,600,000
-----------------------------	----------------------------	--------------------------------------	-----------------------------------