

GREAT LAKES WATER AUTHORITY

*DETROIT, DEARBORN, AND HIGHLAND
PARK TRANSMISSION MAIN WATER
METERING*

Project Plan
April 13, 2023

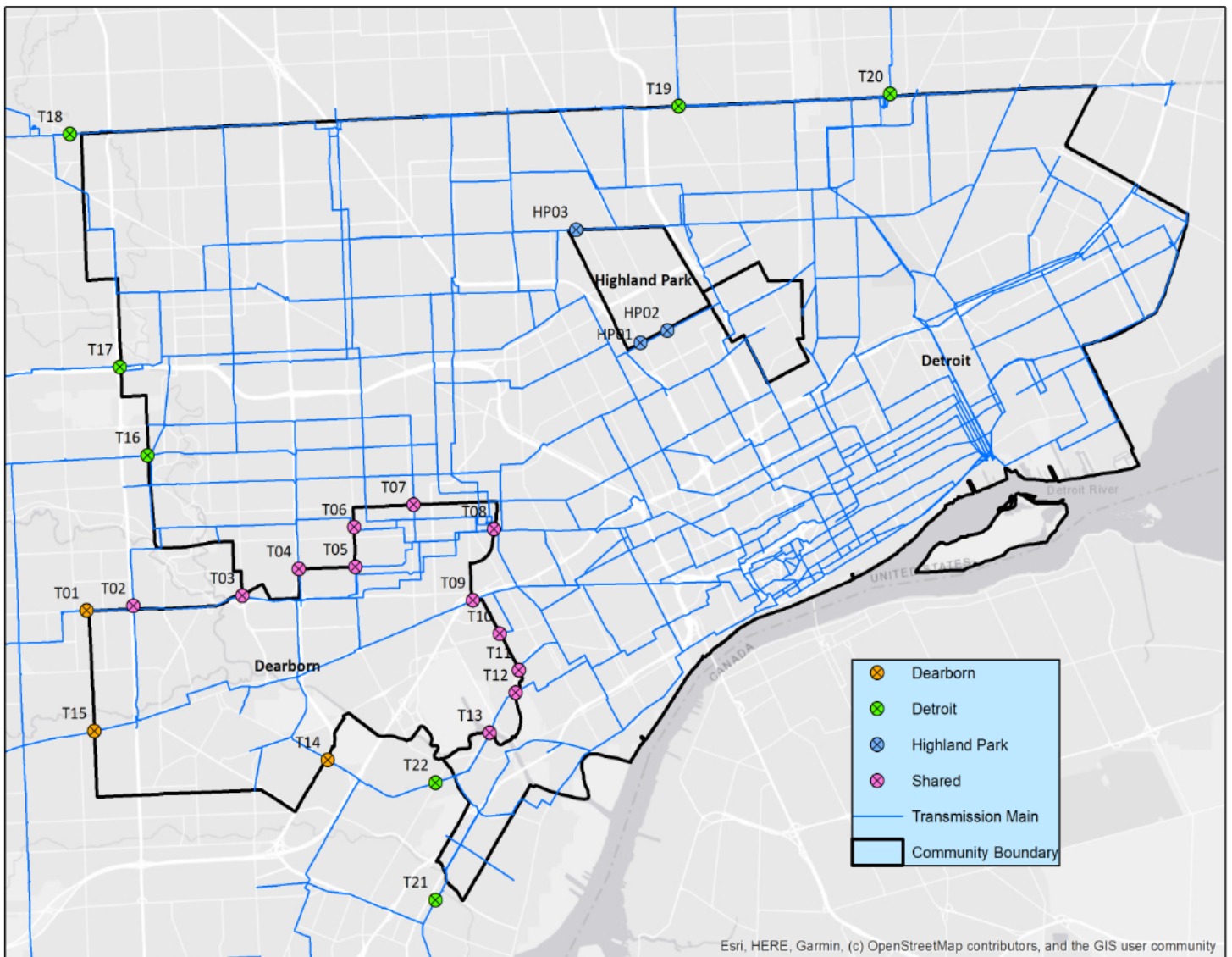


PROPOSED IMPROVEMENTS

The Great Lakes Water Authority (GLWA) provides potable water to approximately 3.9 million Member Partners across 127 municipalities in Southeast Michigan. Each potable water Member Partner has a metered connection which is used to establish the units of service and cost allocation, except for the cities of Detroit, Dearborn, and Highland Park, which are non-master metered communities. This project provides a means of accurately metering these cities.

SUMMARY OF PROJECT NEED

This project is needed to accurately meter the communities of Detroit, Dearborn, and Highland Park. Water master meters are used to identify non-revenue water (NRW), wholesale water demand, help optimize water systems operations, and improve water and energy use efficiency.



ALTERNATIVES

Five alternatives were considered for master metering Detroit, Dearborn, and Highland Park.

The proposed alternatives considered for implementation by GLWA include:

- Alternative 1: No action – keep current flow estimation procedure.
- Alternative 2: Full master metering – install meters on all applicable connection points.
- Alternative 3: Permanent district meter areas.
- Alternative 4-A: Transmission main metering – All Mag meters.
- Alternative 4-B: Transmission main metering – Hybrid Option.

Alternative 4 is the chosen alternative. Alternative 4-A and 4-B are still under technical review to determine which meter types will be used.

MONETARY EVALUATION

COST EFFECTIVENESS ANALYSIS FOR ALTERNATIVES 1 THROUGH 4-B (All monetary values shown below are presented in 2023 dollars):

Item	Alt. 1	Alt. 2	Alt. 3	Alt. 4-A	Alt. 4-B
Construction Period (Years)	0	10	8	5	5
Capital Cost*	\$0	\$363M	\$95M	\$46.55M	\$34.35M
O&M Cost (Annual)	\$0	\$3,744,000	\$1,430,000	\$325,000	\$325,000

* Includes construction, engineering (design and construction), plus administrative costs (numbers rounded)

ESTIMATED PROJECT COST

ESTIMATED COST FOR SELECTED ALTERNATIVE 4-A: TRANSMISSION MAIN METERING

Item	Alternative 4-A
Estimated Cost of Construction	\$40,478,000
15% for Engineering & Administrative Costs	\$6,072,000
Total	\$46,550,000

ESTIMATED COST FOR SELECTED ALTERNATIVE 4-B: TRANSMISSION MAIN METERING

Item	Alternative 4-B
Estimated Cost of Construction	\$29,870,000
15% for Engineering & Administrative Costs	\$4,480,000
Total	\$34,350,000

COST PER ENTITY FOR CHOSEN ALTERNATIVE

COST PER ENTITY FOR ALTERNATIVE 4-A

Entity	Cost
Dearborn	\$3,320,000
Detroit	\$25,780,000
Highland Park	\$2,250,000
GLWA	\$15,200,000
Total	\$46,550,000

COST PER ENTITY FOR ALTERNATIVE 4-B

Entity	Cost
Dearborn	\$2,350,000
Detroit	\$16,950,000
Highland Park	\$2,250,000
GLWA	\$12,800,000
Total	\$34,350,000

ENVIRONMENTAL EVALUATION

- Impacts on environmental features will be minimal as the majority of work will take place on existing roadways, within right-of-ways and underground.
- Construction is not expected to have adverse effects on neighborhoods within the project area.
- This project will not adversely affect the water and air quality within the project area.
- Construction of these metering sites will create construction-related jobs. Local contractors will have an opportunity to bid contract work.

USER COST IMPACT

USER COST FOR ALTERNATIVE 4-A

Item	Improvements
Total Cost of Project	\$46,550,000
Annualized Cost of Project (assuming SRF interest rate of 1.875% over 20 years)	\$1,874,000
Project Area Population (2020 Census) (City of Detroit, Dearborn, and Highland Park)	809,166
Estimated User Cost	~ \$2.32/user/year

USER COST FOR ALTERNATIVE 4-B

Item	Improvements
Total Cost of Project	\$34,350,000
Annualized Cost of Project (assuming SRF interest rate of 1.875% over 20 years)	\$1,453,000
Project Area Population (2020 Census) (City of Detroit, Dearborn, and Highland Park)	809,166
Estimated User Cost	~ \$1.80/user/year

IMPLEMENTATION SCHEDULE

Project Activity	Project Milestone
Post Draft SRF Project Plan and Public Hearing Notice	April 14, 2023
Public Hearing	May 24, 2023
Submit Project Plan to EGLE	June 1, 2023
Start of Construction	July 2024
Complete Construction/ Transition Period Starts	July 2029
Transition Period Ends	July 2031
Fully Implement Transmission Main Metering	July 2031



21455 Melrose Ave, Building R, Suite 12
Southfield, MI 48075
www.asi-detroit.com
Office : 313.567.3990