

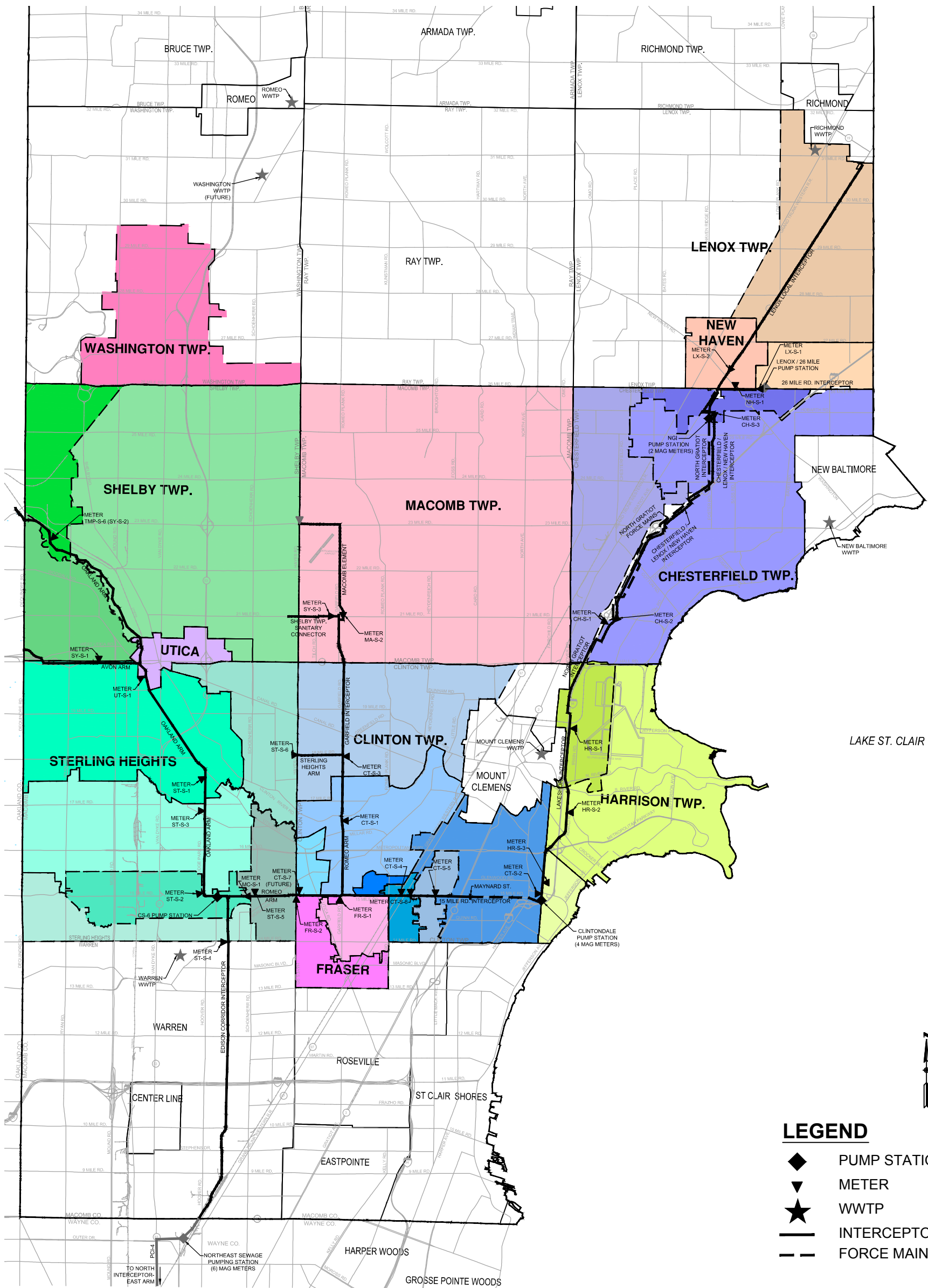
MACOMB INTERCEPTOR DRAIN  
INTRA-COUNTY DRAINAGE BOARD  
MARCH 13, 2023  
11:00 A.M.  
AGENDA

**NOTE: THIS MEETING WILL BE HELD IN PERSON WITH TELECONFERENCE  
OPTION FOR PUBLIC**

**Call in Number: 1-224-990-0182  
Access Code: 927 405 823**

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for March 13, 2023	
3. Approval of Minutes for February 13, 2023	3
4. Public Participation	
5. Project Updates – Stephen Downing/Vince Astorino	7
6. 2023 Report to the MIDD Communities – Candice Miller	36
7. Proposed 2023/2024 MIDD Budget – Brian Baker	48
Motion: To approve the 2023/2024 Macomb Interceptor Drainage District (MIDD) budget and charges.	
8. MA-S-2 & SY-S-3 Sewer Lining Project – Vince Astorino	76
Motion: To approve the proposal from SAK Construction in the not to exceed amount of \$510,160 for the MA-S-2 & SY-S-3 Sewer Lining Project.	
9. Interceptor Inspection Program – Vince Astorino	82
Motion: To award the Task 2 base bid amount of \$591,319.40 from the Taplin Group LLC to perform the work associated with the 2023 Interceptor Inspection Program.	
10. Consideration for approval of invoices (see attached)	88
11. Financial Report – Bruce Manning	90
12. Adjourn	

# MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT



## LEGEND

- ◆ PUMP STATION
- ▼ METER
- ★ WWTP
- INTERCEPTOR
- - - FORCE MAIN



**Candice S. Miller**  
 MACOMB COUNTY PUBLIC WORKS COMMISSIONER



UPDATED: FEBRUARY 2017

An adjourned meeting of the Intra-County Drainage Board for the **MACOMB INTERCEPTOR DRAIN** was held in the Office of the Macomb County Public Works Commissioner, 21777 Dunham Clinton Township, Michigan on February 13, 2023, at 10:30 A.M.

PRESENT:                Brian Baker, Acting Chair  
  
                              Bryan Santo, Member  
  
                              Don VanSyckel, Member

ALSO PRESENT:      Vince Astorino, Operations & Flow Manager; Stephen Downing, Construction and Maintenance Manager; Bruce Manning, Finance Manager; Pam Sonnenberg, Administrative Assistant

PRESENT VIA TELECONFERENCE: Mary Shepherd, Environmental and Safety Services Supervisor  
City of Sterling Heights

The meeting was called to order by the Acting Chair, Brian Baker. A motion was made by Mr. Santo, supported by Mr. VanSyckel to approve the agenda as presented.

Adopted:            YEAS: 3  
                              NAYS: 0

Minutes of the meeting of January 9, 2023 were presented. A motion was made by Mr. VanSyckel, supported by Mr. Santo to approve the minutes as presented.

Adopted:            YEAS: 3  
                              NAYS: 0

The meeting was opened to public participation, then closed, there being no comments from the public.

Mr. Downing presented photos of Segment 5 and said that we are currently focusing on the pump, piping and electrical work to get the pump station functioning. We are targeting April to have it operational.

We continue to perform Spray Lining Operations along 15 Mile Road. Mr. Downing confirmed that we sent out letters to the Villa Fontana residents to let them know that we are planning to wrap up the project by this summer.

Mr. Downing updated on Segment 6 progress. The CS-13 structure itself is complete. There has been no increase to the amount of damage to the HOBAS within the structure. Mr. Downing then presented pictures of Mersino drilling the de-watering well for the lining completion shaft. There were 2 dewatering wells needed so excavation could be completed without flooding. They are constructing the jacking frame and that should be completed today or tomorrow and will start jacking in the rest of the HOBAS by Wednesday morning. In addition, the contractor did their flow control dry run for dewatering the stretch of pipe between CS2 and CS3. That section is clean and lined. Mr. Baker asked if that work would impact 21 Mile Road and Garfield and Mr. Astorino said no. Our target completion is around June 1<sup>st</sup>. We are still working with the Builder's Risk insurance carrier on the claim. We received payment for the repair of the damaged HOBAS and 20% of the additional shaft. The Engineering time will be billed at time and material when we are done for the oversight of the

HOBAS repair. We are working with our legal team and insurance carrier to maximize insurance coverage.

Mr. Astorino updated on the Garfield Interceptor Lining Project. We had one complaint from a store owner regarding traffic access to her parking lot, but the Department of Roads assisted and resolved the issue. Mr. Astorino presented some photos of the machine that we are using for the lining. Mr. Baker mentioned that we are going to have a demo on February 23<sup>rd</sup> for Board Members or anyone else interested in seeing how the process works as we are the first in the state to use this technology. Mr. Astorino said he will provide more detailed pictures next month.

Next Mr. Astorino updated on Interceptor Inspection Program. We are wrapping up loose ends. There were three change orders which required heavy cleaning in order to fully inspect the pipe. None that impact the MIDDD, but are still part of the overall project. CT-S-1 Drop Connection is the only one that is tied to the MIDDD at Garfield and Millar is now complete. They are currently working up in the Lenox Local which is Gratiot and 26 Mile Road area. They are doing a lot of heavy cleaning up there. The Northeast Relief in St. Clair Shores has been cleaned and inspected.

Mr. Downing said that there is nothing to report on Phase II Grouting this month as it is on hold due to other flow control needs and all critical areas have been completed.

Mr. Downing updated on the Odor and Corrosion Control Facilities. Back in November, the construction contract was awarded to L. D'Agostini and Son's. They have been working on getting all of their submittals in, coordinating with the engineer and the owner for review of those. We had one utility relocation that was completed after the first of this year. They will be starting hopefully within the next two weeks at the NGI site first. They were waiting for their rebar submittal to be approved. He said he will have to do separate letters for each site. Mr. Downing then presented a table that summarizes schedule information of the various work that is in process. He noted that the 21 Mile Road and Garfield construction will start in April 2023 and will finish April 2024. They will have a traffic control plan required there to put in the foul air duct. They will do a jacking and boring operation underneath Garfield. He informed them last week that we currently have traffic control in place for the spiral lining so now would be an ideal time to do that since we already have the traffic control in place.

Mr. VanSyckel asked if Dodge Park and Utica Road would be worked on soon. Mr. Baker said that yes, it is an OMIDD project later this year. Mr. Downing said they are a bit behind on the design of that right now but and we have had some coordination with Sterling Heights. MCPWO will be meeting with their staff this Thursday to go over plans for the three locations. We have not had odor complaints in that area in a while. We had put carbon media in that existing vessel to see if it would have a positive effect, which it seems to have had. Mr. VanSyckel mentioned that Sterlingfest, Music in the Park, and during Summer events would be an ideal time to see how well it works. Mr. Downing said that facility will be replaced with a slightly bigger size carbon vessel than what exists now, and we will perform some other improvements to the manholes in the area to keep the area odor free. Mr. VanSyckel asked if that is the structure on Dodge Park right before the circle and Mr. Baker said it's the one on Utica Road just before the circle.

The one on Dodge Park and Sorrento is ready to go to the Planning Commission. We are seeking a rear yard variance of 14 feet. That site will be cleaned up quite a bit because a lot of it will be moved inside the faux house. The outside will look like a house and will be maintained as such. The ventilation will be through a chimney stack. Mr. VanSyckel suggested reaching out to the local Garden Club to see if they'd like to put some flowers in at the location. The other site is in the 15 Mile Road and ITC Corridor area. Mr. Downing said that we've been in talks with Sterling Heights to see if they're receptive to us putting it there on a city owned parcel, and eventually get a permanent easement.

Design will most likely be done later this year, and will go out to bid at the end of the year or early next year. We will not do the project during Sterlingfest. Mr. VanSyckel asked if work will be done in the median or will they have to close the road. Mr. Downing said that they should be able to work within the median but, may have to close the road from time to time.

Mr. Baker stated that next month we will need a change order for Segment 5 Engineering.

Mr. Downing updated on the Safety Consultant position. The candidate that we had chosen decided to accept another position while we were working to get the position approved. Meadowbrook Insurance found a new candidate and Mr. Downing and Mr. Lumma will be meeting virtually with this candidate later today. If all goes well, he will be on boarded at the all in hourly rate, approved by the board.

A motion was made by Mr. VanSyckel supported by Mr. Santo receive and file the project updates.

Adopted: YEAS: 3  
NAYS: 0

Mr. Astorino presented on the Clintondale Pump Station Plug Valve Replacement. MCPWO recently replaced one of four plug valves. When the plug valve failed, it was unable to be rebuilt and we had to wait nearly a year for new parts. New plug valves have a 22-24 week lead time. At that time, MCPWO recommended the purchase 3 new valves, and it was approved by the board. MCPWO has now competitively bidding the removal and installation of three new valves. We received three bids. Progressive Mechanical came in with the lowest bid of \$78,486. The next lowest bid was J.F. Cavanaugh at \$80,100. Mr. VanSyckel asked if either of these companies were local to Macomb County because the amounts were so close in price, he would prefer to keep the business in the county. The third bidder was De-Cal, Inc at the amount of \$118,300. Mr. Santo asked Mr. Astorino what the lifespan of these plug valves usually are, Mr. Astorino said about 20 years. The one that failed was installed in 2015. Mr. Santo questioned if there was some type of warranty that we could pursue. Mr. Astorino said that he had looked into that, but nothing that we could collect on. MCPWO does consider local preference in its bid process.

A motion was made by Mr. Santo, supported by Mr. VanSyckel to approve the bid from Progressive Mechanical for the installation of three plug valves at Clintondale Pump Station totaling \$78,486.

Adopted: YEAS: 3  
NAYS: 0

Mr. Astorino presented a three year Meter Maintenance proposal that we put out for bid. We received one proposal and that was HESCO. ADS Environmental holds the current contract, and did not rebid.

A motion was made by Mr. VanSyckel, supported by Mr. Santo to approve the three year Meter Maintenance proposal from HESCO for a not to exceed amount of \$466,200 (MIDD Share \$421,200).

Adopted: YEAS: 3  
NAYS: 0

The Chair presented the invoices totaling \$12,679,942.17 to the board for review and approval.

A motion was made by Mr. Santo, supported by Mr. VanSyckel to approve the invoices as presented.

Adopted: YEAS: 3  
NAYS: 0

Mr. Manning updated on the financial report and Mr. VanSyckel asked about the \$75,000 legal budget. Mr. Manning and Mr. Downing explained some instances of where we would need legal counsel, such as needing Mr. Viviano to do some contract research, write a letter, handle a complaint or pursue insurance matters.

A motion to receive and file the financial report given by Mr. Manning was made by Mr. VanSyckel and supported by Mr. Santo.

Adopted: YEAS: 3  
NAYS: 0

There being no further business, it was moved by Mr. Santo, supported by Mr. VanSyckel, that the meeting of the Macomb Interceptor Drain Board be adjourned.

Adopted: YEAS: 3  
NAYS: 0

The meeting was adjourned at 11:08 A.M.

  
\_\_\_\_\_  
Brian Baker, Acting Chair  
Macomb County Public Works Chief Deputy

STATE OF MICHIGAN  
COUNTY OF MACOMB

I certify that the foregoing is a true and correct copy of proceedings taken by the Intra-County Drainage Board for the Drainage District shown on the attached set of minutes, on February 13, 2023 the original of which is on file in the Public Works Commissioner's Office. Public notice of the meeting was given pursuant to Act No. 267, Public Acts of Michigan, 1975, including, in the case of a special or rescheduled meeting or a meeting secured for more than 36 hours, notice by posting at least 18 hours prior to the time set for the meeting.

  
\_\_\_\_\_  
Brian Baker, Acting Chair  
Macomb County Public Works Chief Deputy

DATED 2/13/23



**Candice S. Miller**

Public Works Commissioner  
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

CC: File

From: Stephen Downing, Construction & Maintenance Manager  
Vincent Astorino, Operations & Flow Manager

Date: March 13, 2023

Subject: Construction Projects Status Updates for March 2023 Board Meeting

The following provides a status update for construction work performed within the Macomb Interceptor Drain Drainage District for the previous month.

### Segment 5 Rehabilitation

**Contractor:** Oscar Renda

**Engineering Consultant:** FK Engineering

#### **Project Description:**

The Segment 5 reach of the Romeo Arm Interceptor is approximately 8,300 linear feet; it runs along 15 Mile Road starting at the ITC Corridor and extends east to approximately Hayes Road. The first 7,000 linear feet is 11-foot diameter non-reinforced concrete pipe, and the next 1,300 linear feet is 8-foot diameter steel reinforced concrete pipe. The rehabilitation consists of debris removal, cleaning, and inspection of the pipe's invert. Next, HOBAS pipe will be used to slip line 7,000 linear feet of the 11-foot diameter sewer and the 1,300 linear feet section of 8-foot diameter pipe will be coated with a corrosion resistant geo-polymer spray applied coating. To facilitate this work, a new control structure and access shaft is under construction in the ITC Corridor. The new control structure will provide the contractor access to the sewer to facilitate the work and will also serve as a dewatering pump station to draw down the upstream water level in the sewer.

#### **Significant project tasks that have occurred over the past month:**

1. Continued development, review, and approval of the required construction submittals.
2. Ground dewatering well maintenance and monitoring.
3. Continued spray-lining the 8-foot diameter interceptor (PCI-37) – 1300 Linear feet total
  - Approximately 900 linear feet is completed (5 to 7 o'clock)
  - Approximately 850 linear feet is completed (entire circumference of pipe)

- Approximately 65% completed
  - Wet-weather & maintenance days impacted in-tunnel work this month
4. Continued construction of the CS-12 permanent structure, which includes:
    - a. Rebar assembly for the concrete top panels
    - b. Continued application of the protective epoxy coating
    - c. Continued the installation of the system piping
  2. Continued electrical conduit installation for the permanent CS-12 Pumps

**Construction Costs:**

	Date	
Original Contract Amount	10/21/2020	\$28,807,500.00
Current Contract Amount	02/28/2023	\$31,702,534.88
Total Spent to Date	02/28/2023	\$15,684,428.56
Remaining Budget	02/28/2023	\$16,018,106.32



*Figure 1 – Temporary Concrete Pad Prep at CS-12*





*Figure 2 – Temporary Concrete Pad at CS-12*



*Figure 3 – Fitting Pipe at Grade*



*Figure 4 – Lowering in Pump for a Dry Fit at CS-12*



*Figure 5 - CS-12 Electrical Conduit Installation*



*Figure 6 – Portion of the 8-foot Diameter Interceptor Spray-Lined*



*Figure 7 – Spray-Lining in the 8-foot Diameter section of Interceptor*

## Segment 6 Rehabilitation

**Contractor:** Ric-Man Construction

**Engineering Consultant:** FK Engineering

### **Project Description:**

The Segment 6 Rehab project includes the rehabilitation of these main elements:

1. Cleaning and slip-lining (Hobas) of the 5-foot diameter 15 Mile Interceptor from MH-01 at Garfield Road and 15 Mile to MH-04 approximately 2200 feet east along 15 Mile.
2. Cleaning and slip-lining (Hobas) the 1400 linear feet 11-foot diameter Romeo Arm Interceptor sewer between CS-3 on 15 Mile Road and CS-2 on Garfield north of 15 Mile Road.
3. Rehabilitation of the Meter Facility FR-S-1 on Garfield south of 15 Mile Road.
4. Rehabilitation and spray-lining of the CS-2 and CS-3 control structure facilities. These concrete structures have been damaged by H2S damage over time and need repair.
5. Installation of an air-jumper to be incorporated into the existing Biofilter facility. This is being done to address the high level of odor issues that have resulted over the years from the intersection of 15 Mile and Garfield.
6. Installation of a new gate control structure on the 15 Mile Interceptor. This will allow for the rehabilitation of the MH-01 structure and provide future storage options within that interceptor.

The project started in September 2021 and is scheduled to be completed in June 2023.

### **Significant project tasks that have occurred over the past month:**

1. The Contractor continues to develop and submit the required submittals to the Engineer & Owner for review.
2. The Project team is working with the insurance carrier on a Builder's Risk Claim to determine if a claim condition exists for the damaged HOBAS pipe and installation of the remaining 240 feet of pipe.
  - a. Ongoing work with legal counsel and Meadowbrook Insurance to maximize the amount paid out by the carrier for this claim.
3. The Contractor completed installation of the 5-foot diameter HOBAS pipe.
4. Continued preparation for flow control testing for the cleaning and HOBAS lining work between CS-2 and CS-3.
5. Continued working on the CS-13 gate mechanical and electrical components.
6. The work within the Interceptor was impeded by wet-weather and system maintenance days this month.

Construction Costs:

	Date (if applicable)	
Original Contract Amount	5/1/2021	\$13,541,545.00
Change Order No. 1	8/1/2021	\$132,664.70
Total Contract Amount	02/28/2023	\$13,674,209.70
Total Spent to Date	02/28/2023	\$7,386,226.48
Remaining Budget	02/28/2023	\$6,287,983.22



Figure 8 – Excavation to Expose CS-2





*Figure 9 – Lining Completion Shaft – Tail-Tunnel w/ Hydraulic Jack*



*Figure 10 – Hoisting 5-foot diameter HOBAS into Access Shaft*



*Figure 11 –RAI Flow Control Test*

## Garfield Interceptor Lining Project

**Contractor:** SAK Construction, LLC

**Engineering Consultant:** AEW

**Project Description:** MCPWO identified 755 feet of 7-foot diameter pipe within the Garfield Interceptor that has been aggressively attacked with Hydrogen Sulfide damage. This stretch of pipe was immediately labeled as an immediate repair and MCPWO underwent an analysis of options for repairs. The selected option was a Spiral Wound PVC liner which has been installed around the world but is the first time being installed within Michigan. This product has a guaranteed useful life of 50-years and is being treated as a pilot project within the MID system.

**Significant project tasks that have occurred over the past month:**

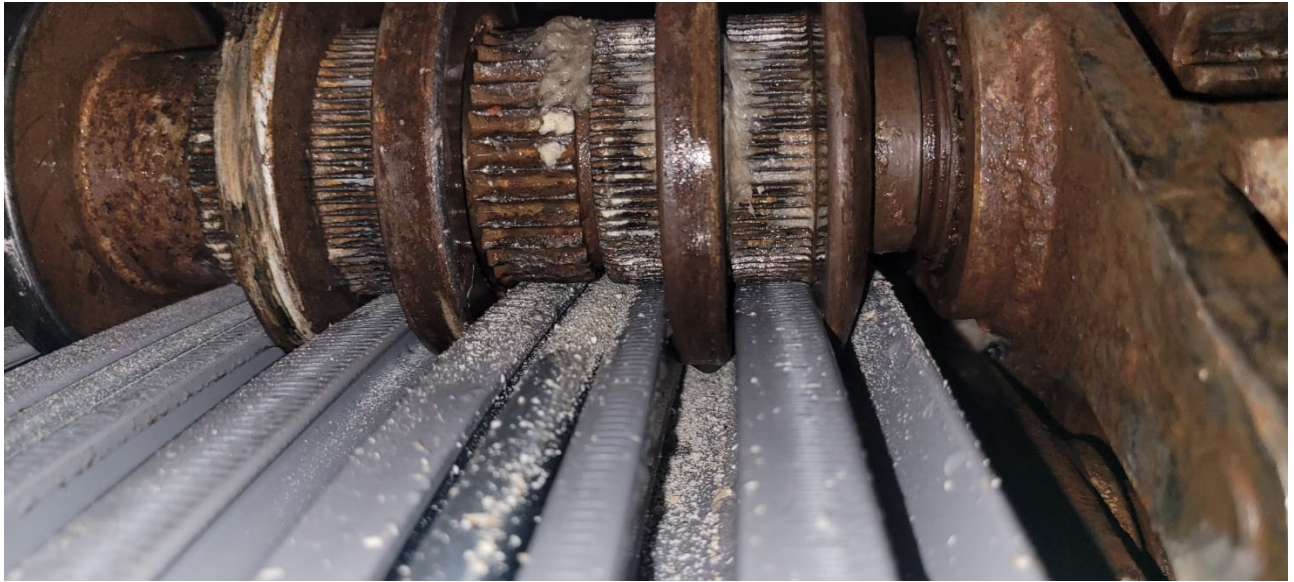
- MA-S-2 flow bypass continued to be setup over the past couple of weeks.
- As of 3/1/23, 286 ft of the 755 ft has been lined.
- Working with the contractor on a possible time extension to the contract due to the shipping delays at the start of the project.

**Construction Costs:**

	Date (if applicable)	
Original Contract Amount	8/25/2022	\$2,394,385.00
Total Spent to Date	10/31/22	\$84,145.50
Remaining Budget	10/31/22	\$2,310,239.50



*Figure 12 – Spiral Wound Lining Being Wound in the Pipe*



*Figure 13 – Spiral Wound Machine View*



*Figure 14 – Lining Past Final Community Tap*

## Interceptor Inspection Program

**Contractor:** Doetsch Environmental Services, Inc.

**Engineering Consultant:** Fishbeck

### **Project Description:**

The 2020 sewer inspection program was awarded to Doetsch Environmental Services in November 2020. The inspection program includes inspection of approximately 26 miles of sanitary sewer, 360 manholes and other aspects of the sanitary sewage infrastructure across multiple drainage districts, including the MIDDD.

The MIDDD portion of the inspection program includes 101,335 linear feet (19.25 miles) of pipe ranging in diameter from 24" to 132" and 145 manhole structures. Additionally, inspection of 8 junction chambers and 8 Drop Shaft/Connecting sewers will be performed.

The inspection interval for the entire system is based on a 3-year cycle, where non-reinforced concrete pipe is inspected every 3 years and reinforced concrete pipe is inspected every 6 years. The 2020 inspection program is the largest ever performed by the Macomb County Public Works Office. The project started in May 2021 and is expected to be completed in November of 2022.

### **Significant project tasks that have occurred over the past month:**

1. The Consultant is reviewing the data and preparing inspection reports.
2. Working through the last couple punch list items and then we will be able to close out Doetsch and finalize reports.

### **Construction Costs:**

	Date (if applicable)	
Original Contract Amount	1/19/2021	\$280,034.00
Total Spent to Date	9/30/2022	\$184,971.35
Remaining Budget	9/30/2022	\$95,062.65

**\*This Table reflects the MIDDD costs only.**



## Phase II Grouting

**Contractor:** Doetsch Environmental Services, Inc.

**Engineering Consultant:** AEW

### **Project Description:**

The Phase II Grouting project was awarded to Doetsch Environmental during summer 2020. The work includes chemical grouting of the sewer and manholes where infiltration is present. The work is planned in all reaches of the system not included in the Segment 5 or portion of the Romeo Arm rehabilitated during the 2016 Interceptor Collapse. The main areas of work include the Romeo Arm along Garfield Road between 15 Mile and Clinton River Roads, the Garfield Interceptor between Clinton River and 21 Mile Roads, and the Lakeshore Interceptor between the Clintondale Pump Station at 15 Mile and Union Lake and Joy Boulevard in Harrison Township. The chemical grouting is aimed to stop all active infiltration within the system in advance of future rehabilitation and maintenance projects.

### **Significant project tasks that have occurred over the past month:**

1. The crew has not worked since late July 2022.
2. The critical area grouting is complete, grouting operations will resume in non-critical areas when daily flow control operations allow.

### **Construction Costs:**

	Date	
Original Contract Amount	6/24/2020	\$3,000,000.00
Change Order No. 1	3/14/2022	\$3,000,000.00
Current Contract Amount	02/28/2023	\$6,000,000.00
Total Spent to Date	02/28/2023	\$4,432,736.20
Remaining Budget	02/28/2023	\$1,567,263.80

## Odor & Corrosion Control Facilities

**Contractor:** L. D’Agostini & Sons

**Engineering Consultant:** Tetra Tech

### **Project Description:**

The Macomb Interceptor Drain completed a system-wide odor and corrosion study to evaluate the need for additional odor and corrosion control facilities to mitigate corrosion induced degradation of the interceptor and nuisance odors emitting from the interceptor near homes, businesses and public spaces. This effort is concentrated on extending the useful life of the interceptor and reducing nuisance odors emitting from the interceptor.

The study identified the need to construct three new odor and corrosion control facilities. Additionally, it was determined that the existing open-bed woodchip media type Fraser Bio-Filter would be more efficient and effective if converted to an enclosed bio-filter with an engineered media. The locations of the new facilities were determined through analysis and computer modeling using data that was collected in the field during the study phase. The facilities are intended to complement one another to reduce hydrogen sulfide induced corrosion.

The facilities are summarized in the Table below:

Facility	Location	Filter Type	Media Type
Fraser	15 Mile & Garfield	Bio-Filter	Engineered
Macomb Township	21 Mile & Garfield	Bio-Filter	Engineered
Clintondale Pump Station	Union Lake & Sorrentino	Carbon Filter	Carbon
NGI Pump Station	Gratiot & Concordia	Chemical Injection	Calcium Nitrate

The construction contract was awarded to L. D’Agostini & Sons in October of 2022 and the contractual Notice to Proceed was issued with an effective date of December 2, 2022. The number of days to achieve substantial completion is 630 days, resulting in a contractually required substantial completion date of August 23, 2024.

The construction work commenced in January of 2023 and is estimated to be completed by the summer of 2024. The estimated schedule for each site is summarized in the table below:

Facility	Location	Start Date	Finish Date
Fraser	15 Mile & Garfield	March – 2023	January – 2024
Macomb Township	21 Mile & Garfield	April – 2023	April – 2024
Clintondale Pump Station	Union Lake & Sorrentino	September – 2023	May – 2024
NGI Pump Station	Gratiot & Concordia	January – 2023	October – 2023

**\*The dates are based on the Construction schedule dated February 7, 2023**

**Significant project tasks that have occurred over the past month:**

1. The Contractor is developing and submitting the required submittals to the Engineer & Owner for review.
2. The Contractor is working on obtaining the required permits from various agencies.
3. The Contractor started work at the NGI Pump Station site:
  - a. Excavation for building foundation and tank pads
  - b. Rebar placement for building foundation and tank pads
  - c. Formwork placement for building foundation and tank pads
  - d. Concrete placement for building foundation and tank pads

**Construction Costs:**

	Date	
Original Contract Amount	12/2/2022	\$11,799,678.78
Current Contract Amount	12/2/2022	\$11,799,678.78
Total Spent to Date	02/28/2023	\$0
Remaining Budget	02/28/2023	\$11,799,678.78



*Figure 14 – Excavation for Tank Pad Foundation at NGI*



*Figure 15 – Rebar for Tank Pad Foundation at NGI*



*Figure 16 – Rebar for Tank Pads at NGI*



*Figure 17 – Concrete Placement for Tank Pads at NGI*



*Figure 18 – NGI Building Foundation*

**OFFICE LOCATION:** 21777 Dunham Road, Clinton Township, Michigan 48036 • Phone: 586-469-5325 • Fax: 586-469-5933  
**ENGINEERING** • Phone: 586-469-5910 • Fax: 586-469-7693 ♦ **SOIL EROSION** • Phone: 586-469-5327 • Fax 586-307-8264



*Figure 19 – NGI Building Foundation*





**Candice S. Miller**

Public Works Commissioner  
Macomb County

February 1, 2023

**UPDATE: MACOMB INTERCEPTOR DRAIN REHABILITATION PROJECT**

Dear Residents,

This letter is to provide you with an update regarding the ongoing sewer construction along 15 Mile Road in your area.

Several of you have contacted our office by phone or email with questions about the project and its timeline. We realize, and fully appreciate, that you have been waiting a long time for lane closures to be lifted and normal traffic flow to resume -- especially close to your subdivision.

We, too, thought this project would be substantially completed by now. To be honest and forthright, the project has been impacted by labor shortages and supply chain issues, just like various aspects of the construction industry, government services and other sectors of the economy. As much as we'd like to be, we're not immune to those factors.

**Currently, we anticipate this segment of the Macomb Interceptor Drain project to be completed by the end of 2023. In terms of the work that requires lane closures, we anticipate those lane closures will be removed by Summer 2023.**

We sincerely appreciate the patience and understanding you have shown thus far. As you probably know, this is a very significant, complex and intensive construction project. While it may not be obvious to passersby, rest assured that the work far below the surface is steadily ongoing and progressing.

We all remember the sinkhole that occurred on 15 Mile Road in December 2016 and the resulting property damage, road closures, detours and emergency repair. Some of you may even remember the sinkhole that occurred in your area years prior to that.

We simply cannot afford another sinkhole, and we're confident that you'll agree with us that to ensure we do not have another infrastructure disaster again along 15 Mile, this rehabilitation of the Macomb Interceptor Drain is necessary. There really isn't any other way.

Again, we appreciate your patience and understanding.

If you have questions or concerns, please contact Keith Lumma with the Macomb County Public Works Office at [keith.lumma@macombgov.org](mailto:keith.lumma@macombgov.org) or 586-557-4071.

Sincerely,

Candice S. Miller  
Macomb County Public Works Commissioner



**Candice S. Miller**

Public Works Commissioner  
Macomb County

March 2, 2023

Dear Concordia Boulevard resident,

Under the direction of the Macomb County Public Works Office and the Macomb Interceptor Drain Drainage (MIDD) Board, installation of a new facility to control odor and reduce corrosion in the North Gratiot Interceptor sewer is underway at the NGI pump station located at the end of Concordia Boulevard (east of Gratiot Avenue, south of 26 Mile Road).

The project consists of the construction of a small building that is approximately 28-by-13 feet in size. The new building will contain the electrical and mechanical equipment to operate the facility. Immediately adjacent to the building there will be two storage tanks that hold the calcium nitrate material that is used for reducing the presence of hydrogen sulfide in the sewer system. Hydrogen sulfide is the sewer gas that creates odor and causes corrosion of the interior of concrete sewer pipes like the North Gratiot Interceptor.

The project follows a system-wide study in the MIDD district to evaluate the need for additional Odor and Corrosion Control facilities like this one, to mitigate the degradation of the interior of the concrete pipe caused by corrosive hydrogen sulfide gas.

At the Macomb County Public Works Office, we have been proactive by inspecting, maintaining and – where necessary – rehabilitating our underground infrastructure. Left unchecked, severe corrosion will only worsen, which can lead to infiltration of groundwater and sand into the sewer pipe, potentially triggering a costly sewer collapse and sinkhole. The new facility being constructed at the North Gratiot Interceptor Pump Station will extend the useful life of the interceptor.

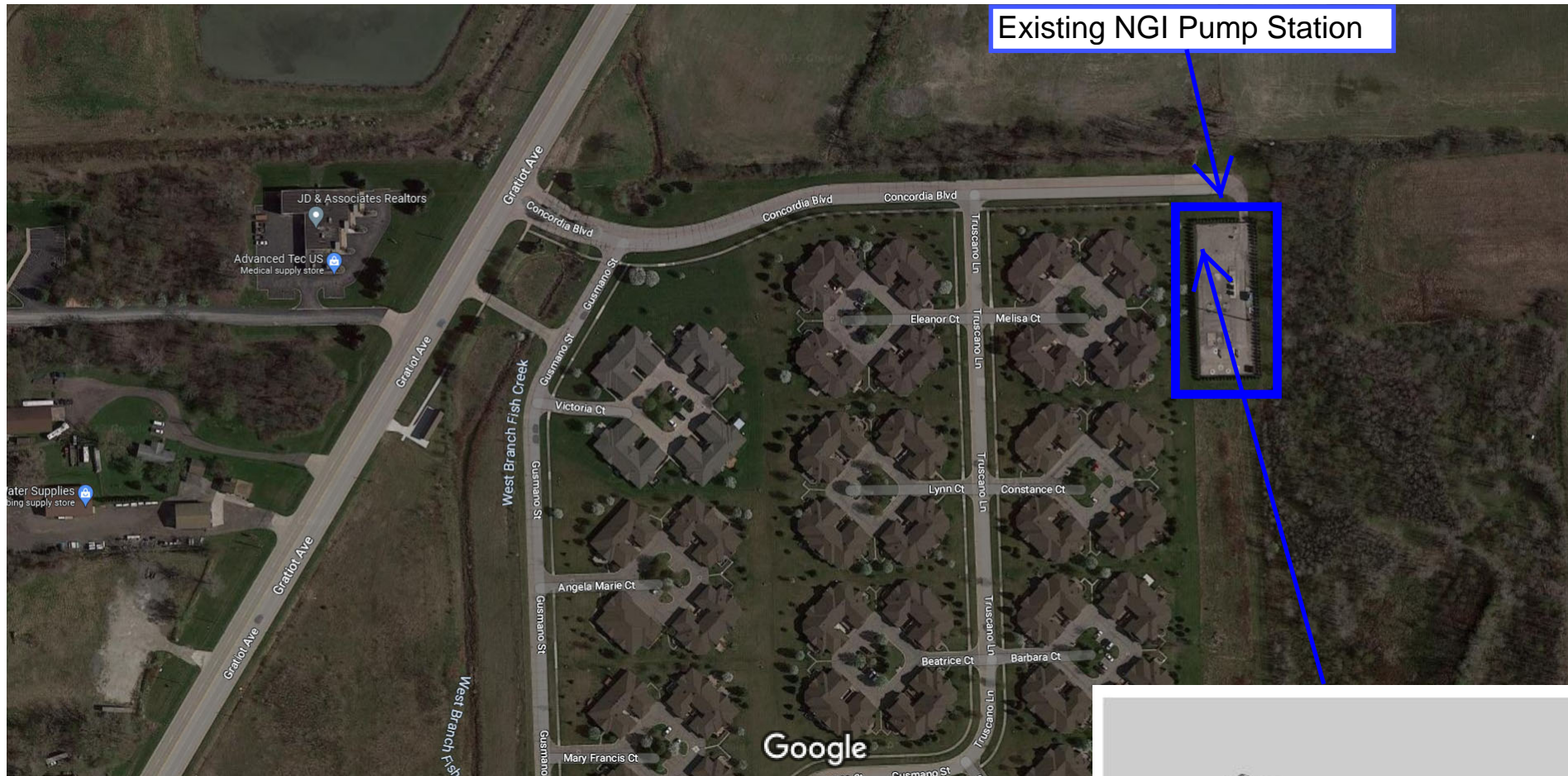
The project will not impact traffic and any impact to residents in the area is expected to be minimal. Installation is expected to be completed in October 2023.

We appreciate your cooperation and patience during the project.

Sincerely,

Candice S. Miller

Macomb County Public Works Commissioner



Existing NGI Pump Station

New Odor & Corrosion Control Facility -  
3D- Rendering





# 2023 MIDD Report

MACOMB INTERCEPTOR DRAINAGE DISTRICT (MIDD)

**CANDICE S. MILLER**

MACOMB COUNTY PUBLIC WORKS COMMISSIONER



The Macomb Interceptor Drain Drainage District is governed by Chapter 20 of the Michigan Drain Code of 1956. This annual report of the Macomb Interceptor Drainage District is presented by Macomb County Public Works Commissioner Candice S. Miller, Chair of the MIDD.



Millions of federal, state and county funding successfully secured by Commissioner Miller

# No More Sinkholes!

## Work continues on major projects along 15 Mile Road

Construction is expected to be completed at three locations along 15 Mile Road to prevent another major sewer collapse and sinkhole like the one that occurred in Fraser in late 2016 from happening again.

At the section of the Macomb Interceptor known as “Segment 5”, the construction contractor is building a new, permanent pump station inside the 60-foot deep shaft that was excavated west of Schoenherr Road in Sterling Heights. It sits atop the 11-foot diameter concrete pipe that is the last major stretch of unreinforced concrete of the MIDD installed in 1972 and carries the sanitary sewage from almost 600,000 people from 11 of Macomb County’s communities.

A bit upstream in the Interceptor, workers will continue clearing sediment and debris that may have accumulated for about a

dozen years. The contractor will install impervious glass fiber-reinforced polymer pipe – known as HOBAS – to line 7,000 feet of the pipe’s interior to protect it from further corrosion caused by hydrogen sulfide gas. Where the pipe transitions to a narrower, 8-foot-diameter stretch, 1,300 lineal feet will be spray-lined with a geo-polymer coating.

Segment 5 is a \$30 million project but will not require an increase in sewer rates for the MIDD communities. The project is funded in part with the \$12.5 million lawsuit settlement paid to the MIDD after the MIDD board chaired by Macomb County Public Works Commissioner Candice S. Miller sued three contractors whose mistakes while working in the Oakland-Macomb Interceptor sewer to the west caused conditions that eventually led to the 2016 sinkhole.

The rest of the project is paid with state funding successfully obtained by Commissioner Miller.

“To be honest and forthright, the project has been impacted by labor shortages and supply chain issues, just like various aspects of the construction industry, government services and other sectors of the economy,” Miller said. “As much as we’d like to be, we’re not immune to those factors.”

Further east, Ric-Man Construction of Sterling Heights continues to work in a section of the MID known as Segment 6. The contractor began with construction of a 40-foot-deep shaft on 15 Mile, east of Garfield Road along the Clinton Township-Fraser border, to provide access to the Interceptor. This sewer rehabilitation contract features the “slip lining” – or insertion -- of approximately 2,100 feet of HOBAS into the 5-foot-diameter concrete pipe.

To the immediate west, construction continues in a second phase of Segment 6

sewer rehabilitation, with the slip lining of a 1,200-foot curved portion of the 11-foot-diameter Romeo Arm Interceptor, at the 15 Mile-Garfield intersection.

There will also be installation of an “air-jumper” just west of the intersection which will be connected to the existing bio filter. This will help alleviate odors that have been an ongoing issue for many years.

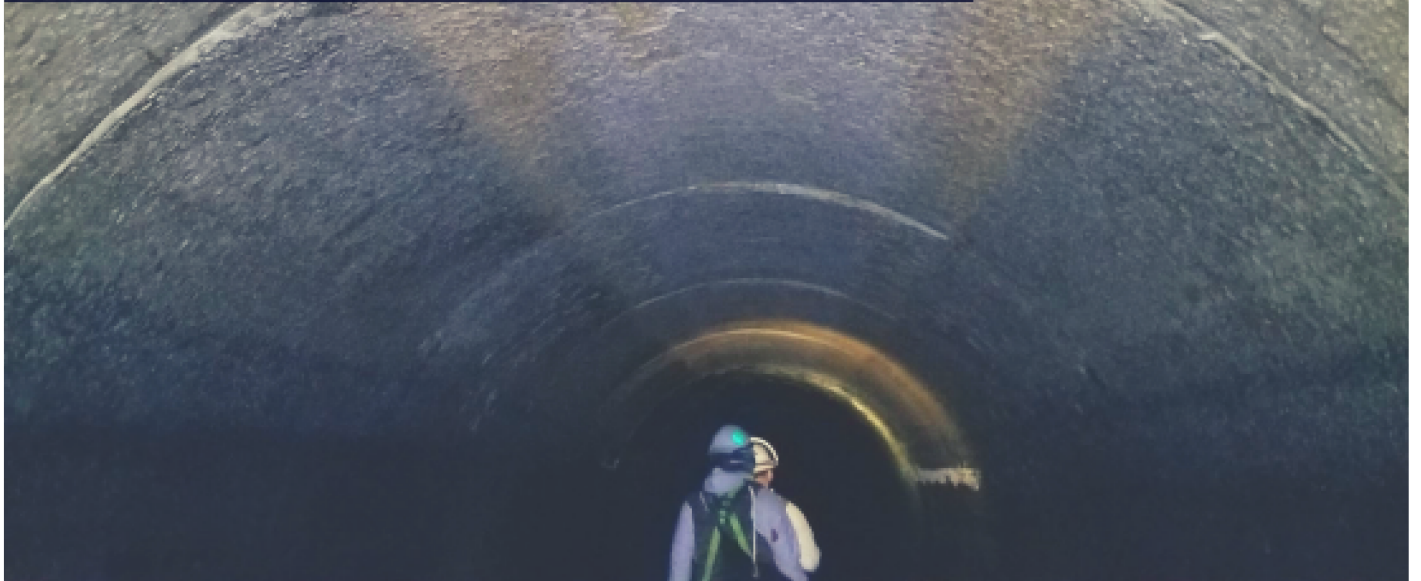
Segment 6 has a total project cost of \$17 million and is paid with state and federal funds. Weather permitting, it is scheduled to be completed by the end of spring 2023.

The need for these critical projects was identified during inspections of the MID ordered by Miller after she took office in January 2017.

“We sincerely appreciate the patience shown by nearby residents and businesses as we complete the very necessary repairs to the sewer interceptor.”



# Sewer Inspections Continue

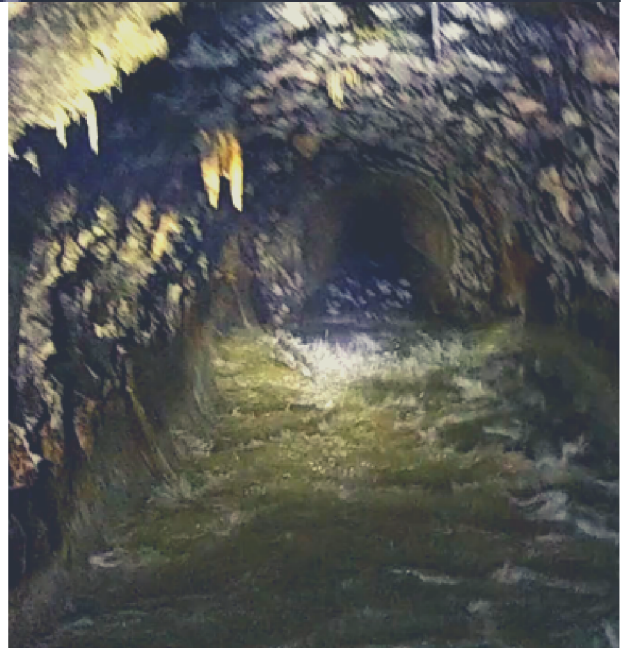


Inspection of underground infrastructure is an ongoing, important process.

In late 2020, a \$421,254 contract was awarded to Warren-based Doetsch Environmental Services to inspect sewers that are under the jurisdiction of the Macomb County Public Works Office. It's the most widespread inspection of underground infrastructure in county history. It includes inspection of 19 linear miles of sanitary sewers. The pipes range from 24 inches in diameter to the 11-foot-wide interceptors that carry the sewage from lateral pipes. The contractor is also inspecting 145 manholes and eight drop shaft/connecting sewers.

In 2023, we will begin a full laser and sonar profile inspection which will gauge the amount of sediment to be removed from the interceptors.

Reinforced concrete pipes will be inspected every six years, and non-reinforced concrete pipe will be examined every three years. An annual inspection of critical areas will also occur.



“Inspections are necessary to identify degradation caused by corrosive sewer gas and to detect infiltration of sand and groundwater that, left unchecked, could lead to sewer collapses and giant sinkholes,” Public Works Commissioner Candice S. Miller said.

# 'Spiral wound' sewer lining project underway



On-site work began in February 2023 on the “spiral wound” sewer lining/rehabilitation project at 21 Mile and Garfield roads to protect a 755-foot stretch of the Garfield Interceptor from further degradation of the concrete pipe caused by corrosive hydrogen sulfide gas.

After careful study by engineers of rehabilitation methods and material options that would meet long-term structural requirements, the spiral-wound approach was selected by the MIDD board as optimal in part because of:

- The ability to install the PVC material while maintaining sanitary flow in the 7-foot-diameter pipe is continuous.
- Requires minimal bypass operation.
- The ability to carry out the rehabilitation without the need to construct an access shaft to reach the interceptor, thereby minimizing cost and the impact of construction to nearby property and traffic.

“Not only is spiral wound a great product and fit for this important sewer rehabilitation project in Macomb County, it will be given strong consideration for future repairs and is a pilot project for the region,” Macomb County Public Works Commissioner Candice S. Miller said.

The project is expected to be completed in April 2023.





Biofilter on 15 Mile Road west of Garfield Road

## Odor & Corrosion Control

In addition to lining underground cement sewer pipes, even those reinforced with steel bars, there is a need to prevent corrosive, hydrogen sulfide gas from causing further degradation and reduce odor. MCPWO has began construction of 4 odor & corrosion control facilities:

- Improvement to the existing bio-filter on 15 Mile Road, west of Garfield, by converting it from an open bed of wood chips that act as a filter by removing hydrogen sulfide gas from the Macomb Interceptor pipe, to an enclosed bed with an engineered carbon material to capture odor. That project is expected to be completed by late spring 2024.
- Construction of odor and corrosion controls will be built at the North Gratiot Interceptor Pump Station in Chesterfield Township starting in January 2023, and also at the Clintondale Pump Station on Union Lake Road near 15 Mile in Clinton Township beginning in September 2023.
- Construction of a biofilter at 21 Mile & Garfield Roads, utilizing engineered media will start in April 2023 and is expected to be completed by April 2024.

## Water Residential Assistance Program (WRAP) available to help with water bills.



### WRAP

Water Residential Assistance Program

🌊 \$300/year per household

Minimum assistance \$25/mo (\$300/yr); maximum assistance \$1,500 annually (arrearage payments up to \$1,200)

🌊 Water conservation & repairs

Use a lot of water? Households with high water consumption may qualify for additional assistance of up to \$1,500 in minor plumbing repairs and water saving kits

🌊 Eligibility

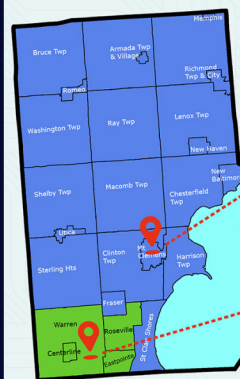
Must reside in a participating municipality in Macomb County; must provide proof of residency and income; income eligible at 200% of Federal poverty level or below

Don't wait until you have a shut off!

**586-469-6464**

[mca.macombgov.org/MCA-ES-ActionCenters](http://mca.macombgov.org/MCA-ES-ActionCenters)

## FIND YOUR LOCAL ACTION CENTER



For cities in blue...

Macomb Community Action  
Central Action Center  
196 North Rose Street  
Mount Clemens, MI 48043  
P: (586) 469-6964  
F: (586) 469-7436

For cities in green...

Macomb Community Action  
South Action Center  
11370 Hupp Avenue  
Warren, MI 48089  
P: (586) 759-9150  
F: (586) 759-9156

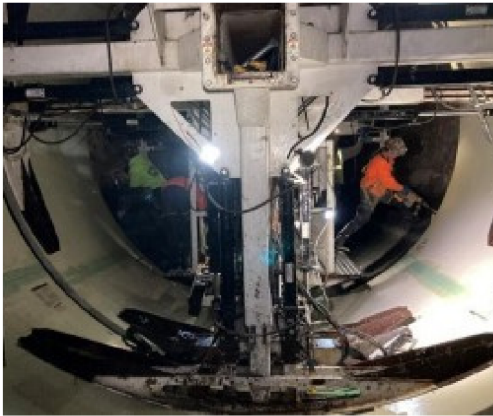
[MCA.MACOMBGOV.ORG](http://MCA.MACOMBGOV.ORG)



Macomb  
Community  
Action

If you are behind or struggling to pay your water bill, the WRAP program at the Community Action Alliance may be able to help. To find more information, and to see if you qualify, please visit <https://mca.macombgov.org/MCA-WRAP>

# OMIDD Update



Several major upgrades have been finished, and others are progressing towards completion, at the Northeast Sewage Pump Station (NESPS) in Detroit, part of a massive, multi-year capital improvement program directed by the Oakland-Macomb Interceptor Drain Drainage District board.

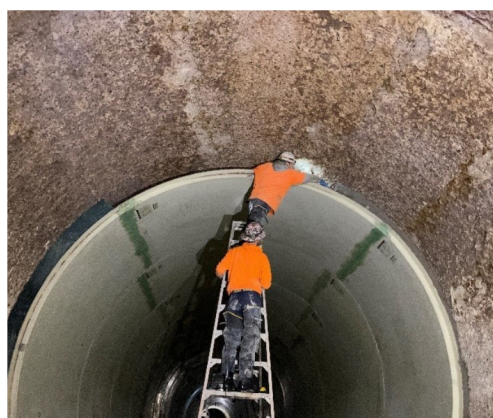
Completed parts of the overhaul at NESPS include a new electrical building at the pump station, new electrical equipment, knife gate valve removal/rehabilitation and new pipes. Two of the five new pumps have been installed and are expected to be operational this summer. This project is expected to be completed by summer 2024.



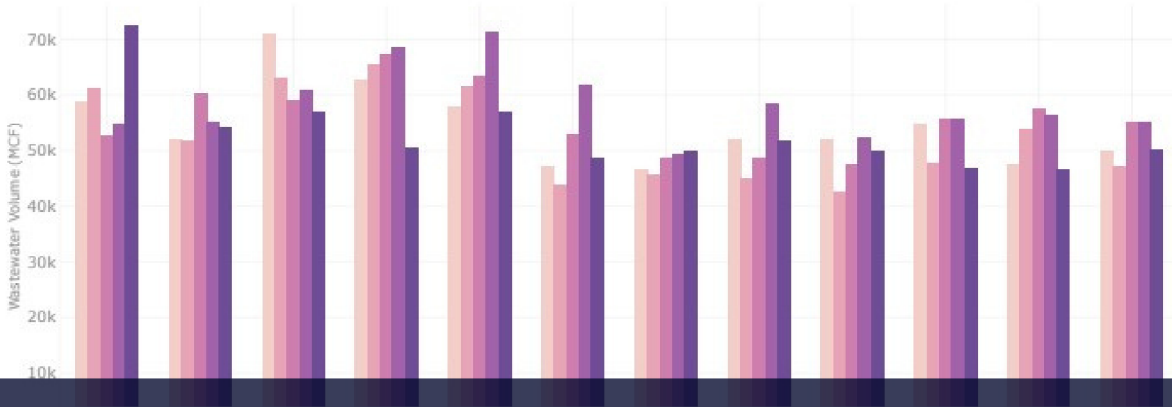
The design phase and bid specifications of an Odor & Corrosion project is expected to be completed in 2023. This includes three sites in Sterling Heights: Utica Road at Dodge Park Road; Dodge Park at Sorrento Boulevard; and an area south of 15 Mile Road, west of Schoenherr Road. The project will protect the OMID system from corrosive, hydrogen sulfide sewer gas that damages pipe, and will reduce odor in those locations.



Meantime, the pilot project to line the interior of a 7-mile stretch of the Northeast Interceptor-East Arm (NIEA) sewer that carries sewage from the 11 communities in the MIDD and 12 in Oakland County, to extend the life of the pipe and reduce odors, continues.



OMIDDD reached an agreement in 2018 with the Great Lakes Water Authority, to take over much-needed upgrades and repairs of the pump station built by the Detroit Water and Sewerage Department in the late 1960s. The entire capital improvement program will total approximately \$100 million - but with no net increase in sewer rates, thanks to savings OMIDD negotiated with GLWA.



## Go With The Flow: Meter Dashboard Available to Community Leaders

Thirty sanitary sewer outlet meter facilities maintained by the Macomb County Public Works Office allow officials from the communities in the Macomb Interceptor Drain Drainage District to view the data that's used to calculate billing of sewer service.

These facilities monitor and collect data on the sewage volumes on a continuous basis. A cloud-based meter data management tool -- called ACE -- allows municipal finance administrators, elected officials, wastewater and DPW officials to view the data on a user-friendly dashboard. Previously, they would have to wait for Public Works staff to download the data and provide it in a spreadsheet.

Data from rain gauges is also included in the dashboard. An analysis of sewage flow and rainfall totals can determine whether there is any infiltration of ground water into the sanitary system. Infiltration of storm water increases the amount of flow measured by the meters and increases cost to the local community.

COMMUNITY DASHBOARD IS INTENDED TO PROVIDE A QUICK LIVE SNAPSHOT OF COMMUNITY SANITARY SEWAGE FLOW METERS:

### KEY FEATURES INCLUDE:

- 24-HOUR INTERACTIVE TREND OF ALL SANITARY SEWAGE FLOW METERS.
- DAILY AND HISTORIC RAINFALL TOTALS
- DATA QUALITY (SANITARY SEWAGE FLOW METER UPTIME PERCENTAGE)
- 24-HOUR ANALYTICS ON LOW, NORMAL AND HIGH FLOWS
- 90-DAY CERTIFICATION HISTORY; AS REVIEWED AND CERTIFIED BY MCPWO

# MIDD Wastewater Master Plan Update

The first county-wide Wastewater Master Plan in decades was started several years ago and is now complete.

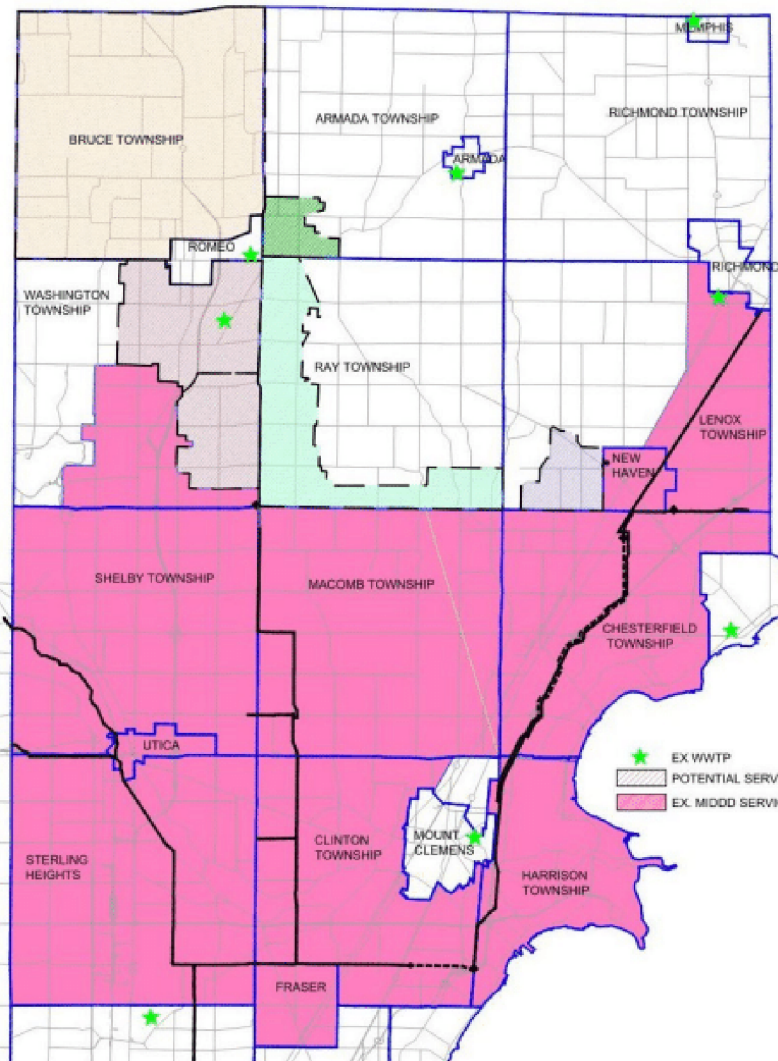
The plan was needed to ensure that our underground infrastructure continues to be a critical component of current and potential future economic activity, while also protecting the environment. The current and future sewer needs of each community were determined with input from local officials.

The plan was originally expected to take 18 months to complete, but we subsequently added several additional options for potentially service to our northern communities. The plan balances the needs of communities in the southern part of Macomb County, and those to the north.

The plan finds that with continued future infrastructure rehabilitation over the next 25 years -- continued inspections, grouting, pipe lining, and corrosion control facilities -- there is enough total flow capacity to serve current and future customers through 2045. Importantly, no community's flow capacities have been decreased. In fact, most community capacity limits have increased.

“The master plan will allow us to best serve our communities by ensuring we have the infrastructure necessary to continue to enhance the quality of life we all enjoy here in Macomb County and to serve as a critical component of economic prosperity for this and future generations,” Macomb County Public Works Commissioner Candice S. Miller said.

Figure 4.2 – Potential Service Area



Community	Proposed Maximum Allowable Flow (cfs)
Chesterfield Township	39.66
Clinton Township	104.40
Fraser	21.70
Harrison Township	28.49
Lenox Township	11.64
Macomb Township	43.00/48.00
New Haven	6.40
Shelby Township	61.00
Sterling Heights	139.60
Utica	7.90
Washington Township	10.00/15.00/24.00

# MIDD Projects Timeline

## **Northeast Sewage Pump Station**

Start: October 2020  
Finish: August 2024

**2020**

## **Segment 5 Sewer Rehab**

Start: October 2020  
Finish: December 2023

## **North Interceptor East Arm Lining/Gates**

Start: February 2021  
Finish: June 2024

**2021**

## **Segment 6 Sewer Rehab**

Start: October 2021  
Finish: June 2023

**2022**

## **4 Odor Corrosion Facilities**

Start: January 2023  
Finish: September 2024

**2023**

## **21 Mile & Garfield Lining**

Start: January 2023  
Finish: April 2023

## **8 Meter Facility Drop Shaft Rehabilitations**

Start: January 2024

**2024**

## **3 OMID Odor & Corrosion Facilities**

Start: January 2024

**Grouting**  
Start: Ongoing

**Inspections**  
Start: Ongoing

## **System Wide Cleaning & Sediment Removal**

Start: January 2024



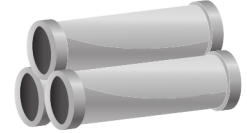
# MIDD By The Numbers



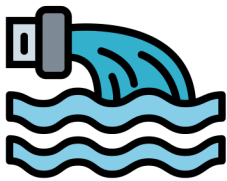
11 Communities Served



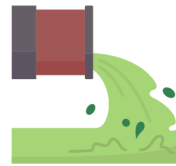
600,000 Residents & Businesses Served



29 Miles of Interceptor



2.1 Million Cubic Feet Annual Flow Volume



**ZERO** Sanitary Sewer Overflows since 2016



**ZERO** Sinkholes since 2016



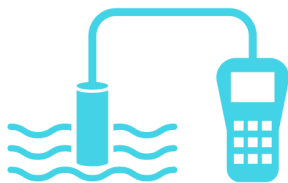
30 Billing Flow Meters



\$12.4 Million in Savings from Refinancing Bonds



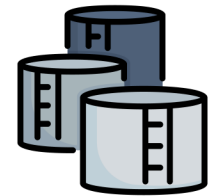
2.8% Avg. Annual Rate Adjustment since 2017 vs. 15% Annual Increase from 2010-2016



43,000 SCADA Remote Sensors



Contractors spent 282 days working in underground pipe in 2022



12 billion gallons of flow stored & safely released while workers present underground



17 Employees



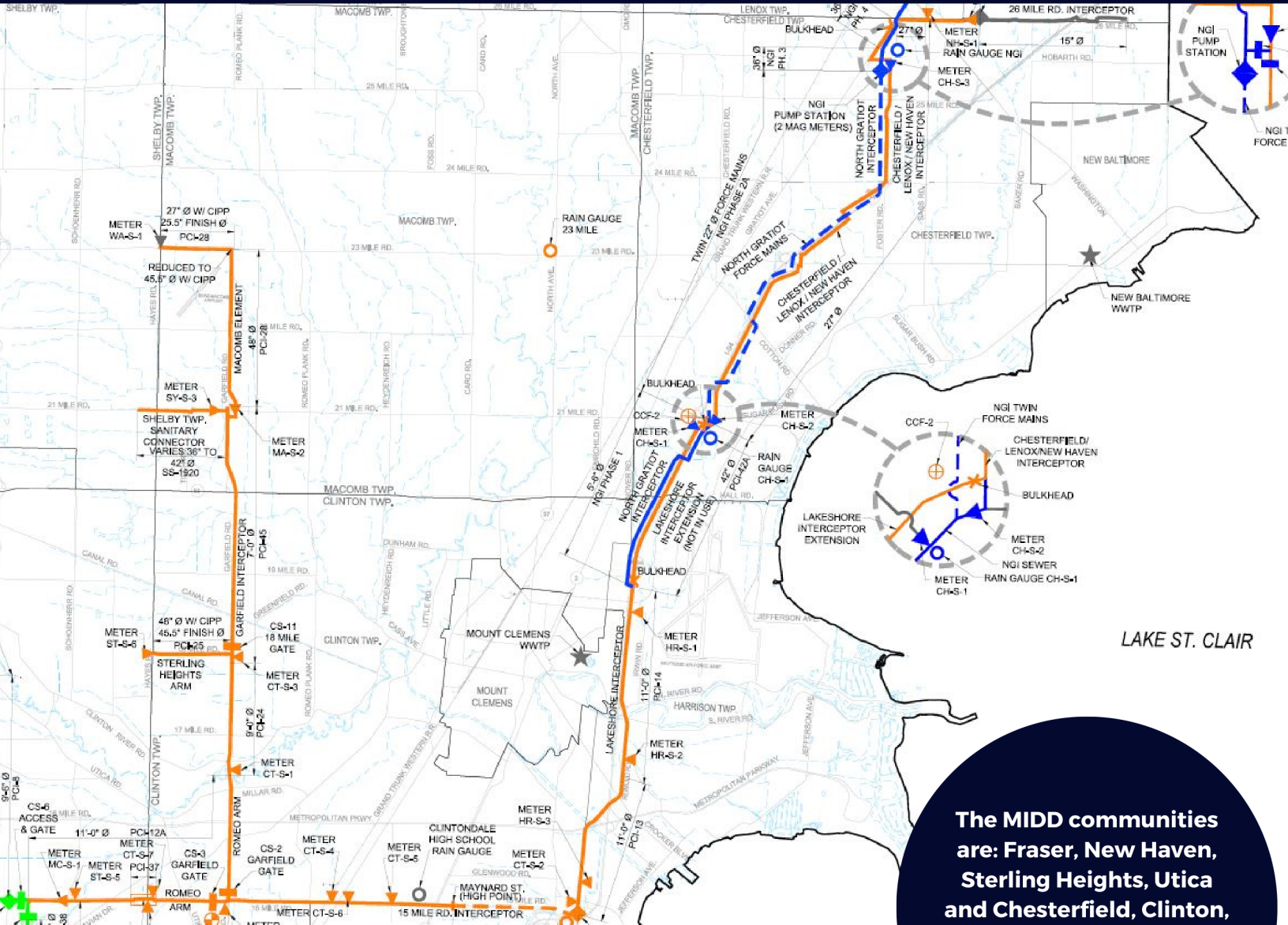
15 Rain Gauges



784 Manholes

# REPORT A POLLUTER: 24-Hour Toll Free Emergency Hotline 1-877-679-4337

If a discharge is detected in a Macomb County drain, please contact the Macomb County Public Works Office.



**The MIDD communities are: Fraser, New Haven, Sterling Heights, Utica and Chesterfield, Clinton, Harrison, Lenox, Macomb, Shelby and Washington townships.**

Macomb County Public Works Office  
Commissioner Candice S. Miller

21777 Dunham  
Clinton Township, MI 48036

586-469-5325

public.works@macombgov.org

