

EIGHT AND ONE-HALF MILE RELIEF DRAIN
INTRA-COUNTY DRAINAGE BOARD
FEBRUARY 12, 2024
10:15 A.M.
AGENDA

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

**Call in Number: 1-470-499-2258
Access Code: 415 487 641**

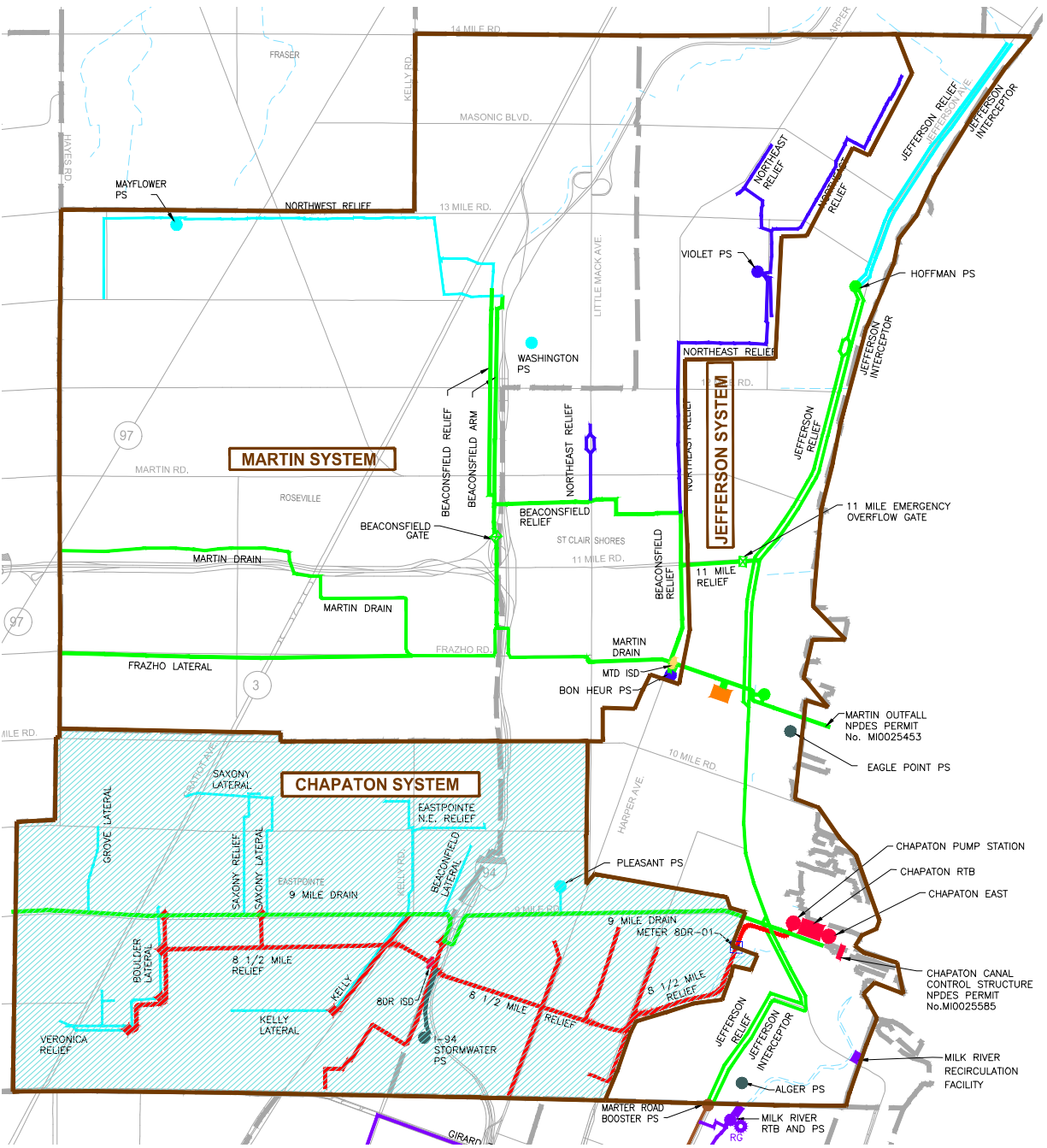
	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for February 12, 2024	
3. Approval of Minutes for January 8, 2024	3
4. Public Participation	
5. Project & Operational Updates – Vince Astorino	6
6. In-System Storage – Construction Contract Administration Amendment – Vince Astorino	32
Motion: To approve the construction contract administration amendment for \$129,009 with Tetra Tech, Inc for the In-System Storage Project.	
7. Chapaton Canal Rehabilitation – Change Order #1 – Vince Astorino	37
Motion: To approve Change Order #1 for \$300,969.50 with Z Contractors, Inc for listed work change directives on the Chapaton Canal Rehabilitation Project.	
8. Consideration for approval of invoices (see attached)	46
9. Financial Report – Bruce Manning	47
10. Adjourn	

Hard copy is intended to be 8.5"x11" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

CHAPATON SYSTEM MAP

Macomb County, MI

Southeast Macomb Sanitary District Wastewater Master Plan



SYSTEM LEGEND

(AS OF DATE OF PUBLICATION)

- SYSTEM BOUNDARY

DISTRICT LEGEND

(AS OF DATE OF PUBLICATION)

- 8 1/2 MILE RELIEF DRAIN DRAINAGE DISTRICT
- SOUTHEAST MACOMB COUNTY WASTEWATER DISPOSAL SYSTEM
- MARTIN SANITARY DIVERSION DISTRICT
- SOUTHEAST MACOMB SANITARY DISTRICT
- NORTHEAST SEWAGE DISPOSAL SYSTEM
- MILK RIVER INTERCOUNTY DRAIN DRAINAGE DISTRICT
- LOCAL MUNICIPALITY
- OTHER

ASSET LEGEND

- PUMP STATION
- FLOW CONTROL STRUCTURE
- RTB
- GRAVITY INTERCEPTOR
- IN-SYSTEM STORAGE DEVICE
- OVERFLOW POINT
- LEVEL SENSOR
- RAIN GAUGE
- FLOW METER

PLOT INFO: Z:\2018\181053\CAD\PRECED\SEMSD_OVERALL.DWG LAYOUT: FIG 3-6_CHAPATON SYS DATE: 7/20/2021 TIME: 1:33:59 PM USER: WESEDK1

PROJECT NO.

181053

3.6

An adjourned meeting of the Intra-County Drainage Board for the **EIGHT AND ONE-HALF MILE RELIEF DRAIN** was held in the Office of the Macomb County Public Works Commissioner, 21777 Dunham Clinton Township, Michigan on January 8, 2024, at 10:17 A.M.

PRESENT: Candice S. Miller, Chair
Bryan Santo, Member
Sarah Lucido, Member

ALSO PRESENT: Daniel Acciavatti, Deputy Government Relations; Vince Astorino, Operations & Flow Manager; Brian Baker, Chief Deputy; Stephen Downing, Construction and Maintenance Manager; Norb Franz, Communications Manager; Bruce Manning, Finance Manager; Pamela Sonnenberg, Administrative Assistant; Don VanSyckel, Board of Commissioners

The meeting was called to order by the Chair, Candice S. Miller. A motion was made by Ms. Lucido, supported by Mr. Santo to approve the agenda as presented.

Adopted: YEAS: 3
NAYS: 0

Minutes of the meeting of December 11, 2023, were presented. A motion was made by Mr. Santo, supported by Ms. Lucido 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. Astorino said that there were no wet weather events for the past month. He will present a year in review for 2023 for Chapaton at the next meeting. He presented pictures of the Beaconsfield In-System storage project and stated that it is progressing well. Ms. Miller said that the building looks great and asked if we are going to landscape around it. Mr. Astorino said yes, we will put bollards up because the building is near the road, and we will landscape around the building. It is now fully drywalled. Mr. Baker asked if the building is heated, and Mr. Astorino said yes because we have a lot of equipment in the building. He stated that the inflatable bladder should be here this month.

Mr. Astorino updated on the Chapaton Canal Rehabilitation project saying that it is ahead of schedule and going well. The contractors framed the walls and they were poured right before Christmas. The contractor did not work between the holidays, so we took advantage of that and filled the canal with lake water to flush the basin. The wall on the North side has been completed. We are hopeful that all sheeting will be done by the first week of February. They are making good progress. He showed photos of the emergency bypass is being installed as a redundancy measure.

Mr. Astorino said that the 2023 Interceptor Inspection program is mostly complete. We are waiting on one final close out and we are still going through the punch list. He has started uploading files to the new Sewer AI program that was approved last month. Our check has been sent out to the drone company and our target date to start training is the week of January 15th.

Mr. Astorino stated that we are still waiting on submittals for the Chapaton Electrical upgrades. They are telling us it will take 6 months for the drawings.

A motion was made by Ms. Lucido, supported by Mr. Santo to receive and file the project updates.

Adopted: YEAS: 3
NAYS: 0

Mr. Astorino said that our staff has done a large portion of the painting for the Chapaton building, but there are some areas that they were unable to reach. We received 2 quotes for the painting. GVC Painting was the low cost, at a not to exceed price of \$60,110. We had \$150,000 budgeted towards painting,

A motion was made by Mr. Santo, supported by Ms. Lucido to approve the quote from GVC Painting Co. Inc for painting of the Chapaton Pump Station main floor for an amount not to exceed \$60,110.

The Chair presented the invoices totaling \$1,740,683.91 to the board for review and approval.

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

Adopted: YEAS: 3
NAYS: 0

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

Adopted: YEAS: 3
NAYS: 0

There being no further business, it was moved by Mr. Santo, supported by Ms. Lucido, that the meeting of the Eight and One-Half Mile Relief Drain Board be adjourned.

Adopted: YEAS: 3
NAYS: 0

The meeting was adjourned at 10:41 A.M.



Candice S. Miller, Chair
Macomb County Public Works Commissioner

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 January 8, 2024, 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.



Candice S. Miller, Chair
Macomb County Public Works Commissioner

DATED: 01/08/24



Candice S. Miller

Public Works Commissioner
Macomb County

To: 8 ½ Mile Relief Drain Drainage District Board Members

CC: File

From: Vincent Astorino, Operations Director

Date: February 12, 2024

Subject: Construction Projects Status Updates for the February 2024 Board Meeting

The following provides a status update for construction work completed within the 8 ½ Mile Relief Drain Drainage District (8MRDDD) for the previous month.

Wet Weather Operations

Wet Weather Event: January 26, 2024

Rainfall: 1.37 inches

Treated Discharge Volume: 63.9 MG

Water Quality Numbers: 3 cts / 100 ml geometric mean (Permit maximum is 1000 cts/ml)

Description: This was the largest event of the three that occurred this month. Chapaton was able to handle the previous events without having a treated discharge. The rain was more intense, there was considerable snow melt, and the basin was unable to dewater from the rain/snow melt we received on 1/24/24. Overall, there were no major issues to report from this event and everything operated as designed.

Chapaton In-System Storage Project

Contractor: Weiss Construction

Engineering Consultant: Tetra Tech

Project Description:

The primary focus of the project is the construction of an access shaft and installation of the In-System Storage Device at Beaconsfield and Oak in Eastpointe. This project will achieve an additional 3.5 million gallons of storage within the 8.5 Mile Relief tunnel.

Significant project tasks that have occurred over the past month:

1. Submittals are being received and processed by the engineering team.
2. Construction Activities per Update Period:
 - Continued removing construction scrap, spoils, and unused materials stored along Beaconsfield greenbelt.
 - Maintained secured work site with swing gates and privacy fence screening at construction sites.
 - Continued Beaconsfield site monitoring and documentation during construction as required.
 - Continued dewatering and maintaining adequate working conditions within the limits of the Construction Site as necessary.
 - Placed approved backfill sand while performing compaction and density testing within specified incremental backfill heights as required inside the Beaconsfield shaft.
 - Finished removing steel I-beam bracing and piles from the Beaconsfield shaft as designed per engineers' approval.
 - Finished saw cutting for specified section to be removed of the 8.5 concrete tunnel inside the East access vault at Beaconsfield as designed.
 - Excavated material and layout reinforcing steel, dowels, and concrete form work for the carbon and ventilation concrete pad located in the east greenbelt of Beaconsfield Road as designed.
 - Layout of reinforcing steel, rubber dam processing conduit/pipes, and embedded drains for concrete bench supporting proposed rubber dam inside the 11.5ft tunnel at Beaconsfield as required.
 - Poured in place high strength 18in high concrete bench to host proposed rubber dam within the 11.5ft tunnel at the Beaconsfield site as designed.
 - DTE removed temporary lines through easement and placed new permanent poles and rerouted powerlines to permanent poles per design.
 - Pained the interior of the Control Building at Beaconsfield as required.
 - Excavate and layout electrical conduit for generator and transformer as designed.
 - Install process equipment, electric panels, and displays in the Control Building as proposed.
 - Install 8.5 tunnel metering sensors, cable, and display at the Malvern worksite as designed.
3. Construction Look Ahead:
 - Continue cleanup of construction scrap, spoils, and materials along Beaconsfield greenbelt.
 - Continue Beaconsfield site security, monitoring, and documentation.
 - Layout and install inflatable dam and hardware materials then begin bladder installation.
 - Place concrete ventilation and carbon pad at Beaconsfield greenbelt.
 - Continue to install process and electrical equipment, controls, and displays at the Beaconsfield Control building as required.
 - Place stone and grade accordingly for access drive at the Gaukler worksite as proposed.

- Remove temporary poles in easement and re-route cable lines to permanent poles per plans.

Construction Costs:

	Date (if applicable)	Amount
Original Contract Amount		\$9,673,200.00
Change Order #1	9/15/22	\$269,666.49
Revised Contract Amount		\$9,942,866.49
Total Spent to Date	Pay Apps. #1 – 20	\$6,340,260.58
Remaining Budget		\$3,602,605.91

Figure 1 – Concrete Cutting @ Beaconsfield East Access Vault



Figure 2 – Downstream Tunnel Opening @ Beaconsfield East Access Vault



Figure 3 – Upstream Tunnel Opening @ Beaconsfield West Access Vault



Figure 4 – Installed Steel & Conc. Forms for Rubber Dam Bench



Figure 5 – Placing Concrete for Rubber Dam Bench in 8.5 Tunnel



Figure 6 – Installed Conc. Bench for Rubber Dam in 8.5 Tunnel

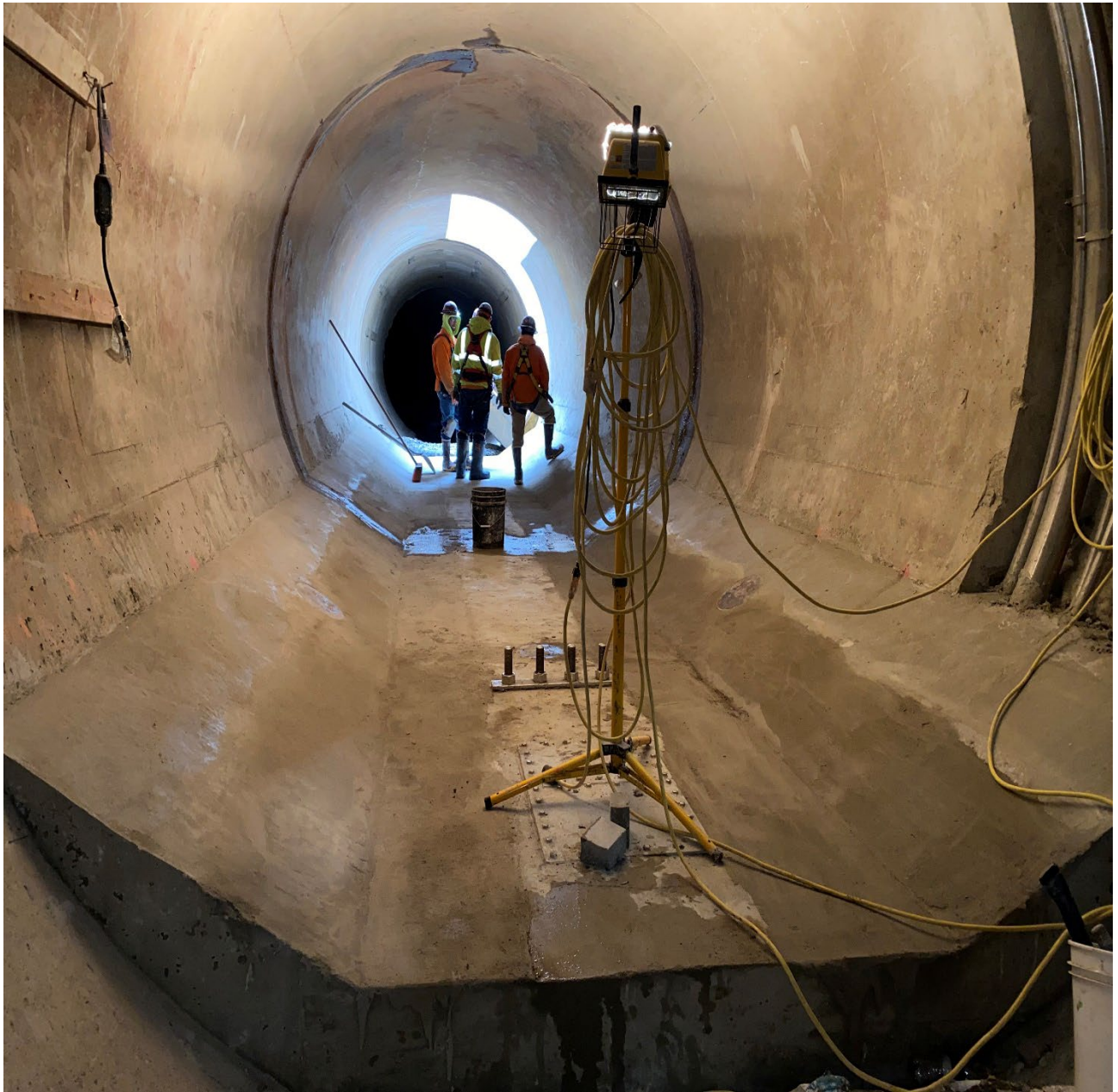


Figure 7 – Installing Process Conduit @ East Tunnel Access



Figure 8 – New Paint in Control Bldg. @ Beaconsfield Rd.



Figure 9 –Installing Elect. Panels @ Beaconsfield Control Bldg.



Figure 10 – DTE Placing New Poles @ Beaconsfield Rd



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 11 – Drone Aerial at 200 FT



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

Chapaton RTB Canal Rehabilitation Project

Contractor: Z Contractors

Engineering Consultant: Wade Trim

Project Description:

The primary focus of the project is to rehabilitate the Chapaton Treatment Canal which was last rehabilitated in the early 2000s, replace the Chapaton Canal Control Structure gates and associated building and electrical components, and raise the top of the Chapaton Treatment Canal above the 500-year flood elevation. This will provide flood resiliency for the surrounding area and will improve the water quality of Lake St. Clair by capturing more CSO and discharging fewer times per year. Additional project components include a direct process pipe to the lake to reduce treatment costs by using less water, proper abandonment of a portion of the 100-year-old 9-Mile Drain, and an 11-acre sewer separation along 9-Mile Road.

Significant project tasks that have occurred over the past month:

1. Construction Activities per Update Period:
 - Wettest January on record for SE Michigan slowed down production. Crew still worked top-side on many days when the canal was full.
 - Completed remaining sheeting which defines limits of new canal footprint.
 - Completed 8'x8' emergency bypass conduit / outfall building foundations and headwalls.
 - Installed new sheet pile cap, metal shear studs, and began placing decorative face forms along south side of canal.
 - Installed decking and forms for gate slab
 - Finalized critical submittals for outfall structure equipment. Some equipment for the new crest gates has been delivered to site.
 - Raised flushing intake structure top-slab elevation above 500-year flood elevation.

2. Construction Look Ahead:
 - Install utilities which will be embedded within the future concrete gate slab (air bladder lines, sample line, power conduits, and controls conduits)
 - Pour 5' tall decorative-face concrete caps with along south side (approx. 96' per pour)
 - Pour intermediate gate slab of outfall structure.

Construction Costs:

	Date (if applicable)	Amount
Original Contract Amount		\$27,374,710.00
Change Order 001	2/12/24 for Approval	\$300,969.50
Revised Contract Amount		\$27,675,679.50
Total Spent to Date	Through Pay App. #6	\$14,169,083.26
Remaining Budget		\$13,506,596.24

Figure 12 – Emergency Bypass Conduit ultimate outlet and headwall forms



Figure 13 – Outfall Structure Base Slab and Divider Walls



Figure 14 – Gate Slab decking and forms



Figure 15 – New sheet pile cap and shear studs (south side)



Figure 16 – Concrete pile cap forms with decorative-face forms being installed



Figure 17 – Z Contractors performing upland work despite canal being flooded



Figure 18 – Drone Aerial at 100 FT Facing East (Baseline)



Figure 19 – Drone Aerial at 100 FT Facing East (02/01/24)-Note future canal footprint on left



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 20 – Drone Aerial at 100 FT Facing West (02/01/24)



2023 Interceptor Inspection Program

Contractor: Taplin

Engineering Consultant: NTH

Project Description:

The 2023 sewer inspection program was awarded to Taplin in March 2023. The inspection program includes inspection of approximately 24 miles of sanitary sewer ranging from 2-feet to 12-feet in diameter and 152 manholes across the MIDDD and 8.5 Mile Districts.

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 8.5 Mile, due to being a combined sewer and mostly stormwater, is on a 10-year schedule. This may be adjusted pending the results of the current inspection.

Significant project tasks that have occurred over the past month:

1. Inspections are complete and data is uploaded into SewerAI.
2. After data is reviewed, punch list will be created to begin project closeout.
3. Immediate repair areas have already been addressed. MCPWO staff will develop a larger scale repair program for less critical areas.
4. Overall, the 8-1/2 pipe network is in good shape with only localized spot repairs expected.

Construction Costs:

	Date (if applicable)	
Original Contract Amount	4/10/23	\$403,919.38
Total Spent to Date	Through Pay App #4	\$352,877.70
Remaining Budget		\$51,041.68

***This Table reflects the 8.5 Mile costs only.**

Chapaton Electrical Upgrades

Contractor: Rotor Electric

Engineering Consultant: Tetra Tech

Project Description:

The project consists of installing three 2 MW generators and all associated synchronous gear, new motor starters for each of the three stormwater pumps, new 15 kV switchgear, and a complete motor rebuild for storm pump 2. This project will increase the electrical resiliency of the Chapaton Pump Station.

Significant project tasks that have occurred over the past month:

1. Submittals are being received and processed by the engineering team.
2. Construction Activities per Update Period:
 - No construction activities at this time. On-site work is currently not planned until 2025.

Construction Costs:

	Date (if applicable)	Amount
Original Contract Amount		\$14,650,000.00
Total Spent to Date	Pay Apps. #	\$0.00
Remaining Budget		\$14,650,000.00



Chapaton District Overview

- Located at 23001 9 Mile Road at Jefferson, St. Clair Shores, MI 48080
- Constructed in 1968 as a 28 Million Gallon Combined Sewer Overflow (CSO) Facility
- 700,000 gallons per minute pumping capacity
- Flushing and Disinfection Systems added in 1978
- Outfall Structure and Aeration added in Early 2000's; expanded storage to 31 MG
- Disinfection System adds Sodium Hypochlorite to Discharged CSO's
- Screened Discharge for Sanitary Trash Removal
- Services approximately 44,782 Residents in:
 - Eastpointe
 - St. Clair Shores
- Annual Operation & Maintenance Budget of \$5,654,560

2023 LOOK BACK

During the 2023 calendar year, Chapaton Retention Treatment Basin (RTB) had two (2) Combined Sewer Overflow (CSO) events, much lower than the historical average of seven (7). These events were in compliance with the existing EGLE permits and all sampling for e-coli, total suspended solids (TSS), Carbonaceous Biochemical Oxygen Demand (CBOD), ammonia, nitrogen, phosphorous, pH, dissolved oxygen (DO), and total residual chlorine (TRC) met or exceeded the EGLE standards.

The Chapaton In-System Storage project is under way and scheduled to be completed in early 2024. This project consists of installing an inflatable bladder within the 11.5-foot tunnel to assist with capturing 3.5 million gallons (MG) per event representing an 11% reduction in annual overflow volumes. The total project cost is \$10 million and is being covered by ARPA funds received by MCPWO.

Previously implemented operational changes at the Chapaton Pump Station have yielded 8.59 MG in additional storage. This also equates to a 26% average annual volume reduction. This storage has been in use since 2021 and has now prevented multiple events which, in the past, would have resulted in a CSO.

Canal Rehabilitation Project: Construction began in August 2023 to rehabilitate the Chapaton Treatment Canal which was last rehabilitated in the early 2000s. The project includes replacing the Chapaton Canal Control Structure gates and associated building and electrical components, raising the top of the sheeting above the 500-year flood elevation, and increasing the overall CSO storage volume by 13 MG; a reduction of 38%. The purpose of the project is to provide resiliency for the area surrounding the canal and improve water quality.

MOVING FORWARD

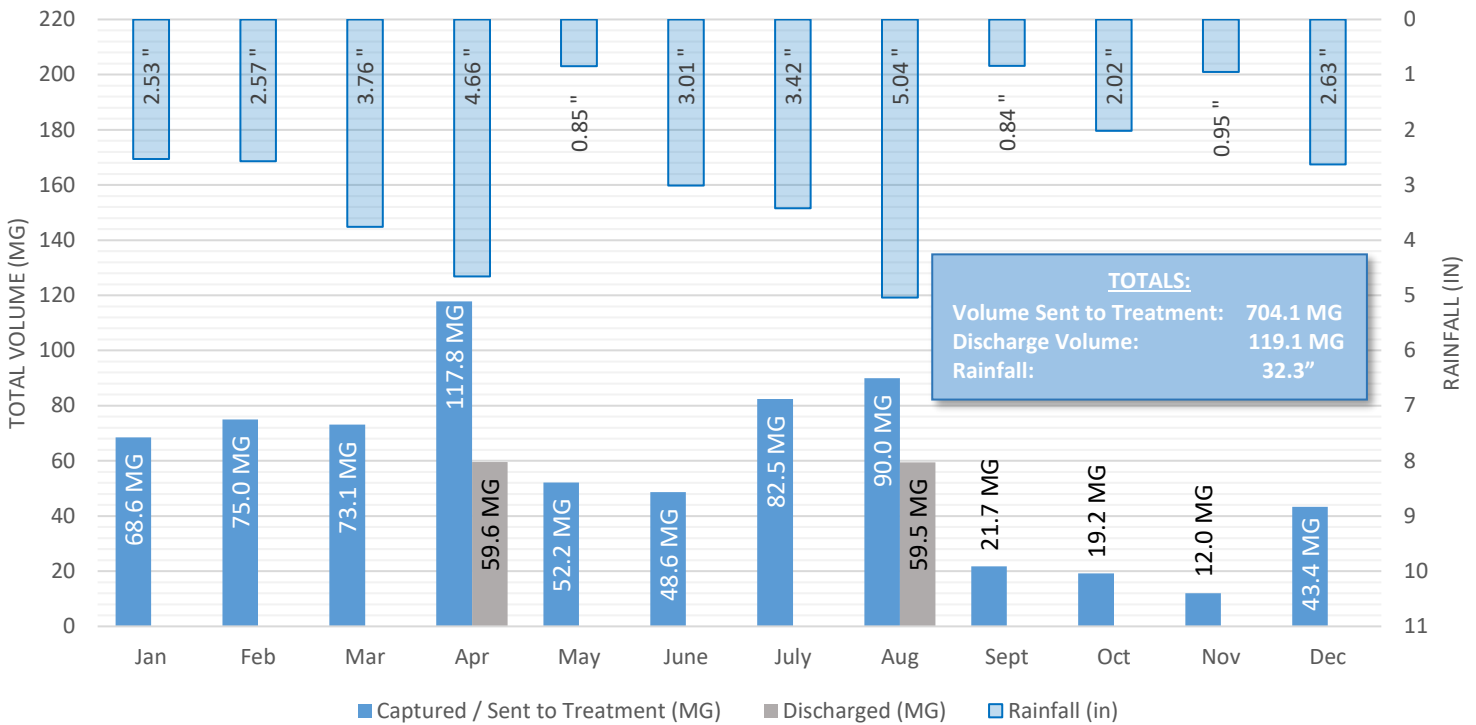
The Chapaton district is scheduled to have several improvement studies and projects during 2024. The following projects are intended to increase the level of service at the RTB and to improve upon the existing operations and maintenance efforts.

- **Electrical System Replacement:** The existing 4800 volt electrical system is being replaced due to being at the end of its useful life. Backup generators are also being added to the facility to provide additional power redundancy. The design for this project has been completed and a contractor is currently under contract.
- **Sluice Gate Replacements:** The existing gates within Chapaton facility have reached the end of their useful life and are in need of rehab/replacement. Design for this project is nearly completed and solicitations for contractors bids will be published in early 2024.
- **Flushing System Replacement:** Replacement of the existing flushing system which has reached the end of its useful life. This system is used after every wet weather storage event and is used to clear solids that have settled within the Chapaton RTB. This project is currently under design.

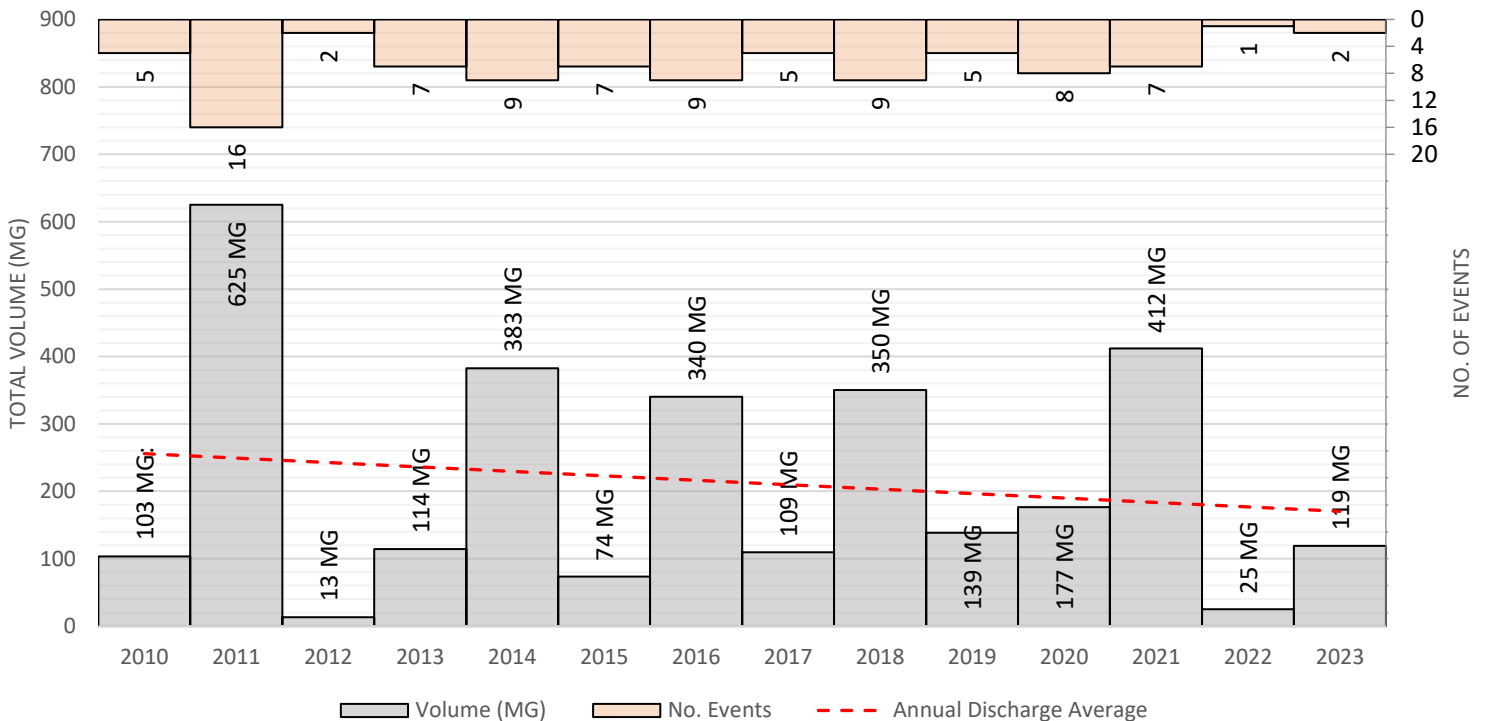




CHAPATON RTB 2023 VOLUME STATISTICS



CHAPATON RTB LONG TERM DISCHARGE STATISTICS





Candice S. Miller

Public Works Commissioner
Macomb County

To: 8-1/2 Mile Relief Drain Drainage District Board Members

CC: FILE

From: Vince Astorino, Operations Director

Date: February 12, 2024

Subject: 8-1/2 In-System Storage Construction Contract Administration Amendment

The Macomb County Public Works Office (MCPWO) solicited bids on the Michigan Inter-governmental Trade Network (MITN) for the construction of an In-System Storage Device in the 8-1/2 Mile Relief Drain Drainage District (8MRDDD), as designed by Tetra Tech. The primary focus of the project is the construction of an access shaft and installation of the In-System Storage Device at Beaconsfield and Oak in Eastpointe. This project will achieve an additional 3.5 million gallons of storage within the 8.5 Mile Relief tunnel. This volume will equate out to approximately a 15% reduction in average annual overflow volume.

On December 13, 2021, the 8-1/2 Mile Relief Drain Drainage District Board approved the construction contract for Weiss Construction for this project in the bid amount of \$9,673,200.00.

Upon review of the construction bid from Weiss Construction, Tetra Tech and MCPWO developed a scope of services for Tetra Tech to perform the construction contract administration (CCA) for this project. CCA for the 8-1/2 In-System storage project was budgeted as a separate item from the construction for an amount of \$2,250,000. On January 10, 2022, the 8-1/2 Mile Relief Drain Drainage District Board accept the construction contract administration proposal and enter an agreement with Tetra Tech for amount of \$1,024,974.00.

The original CCA proposal was based on Weiss Constructions schedule at the beginning of the project. As of today, Weiss is approximately 4 months behind their original schedule, which goes beyond the CCA scope. Tetra Tech reviewed the current construction schedule and provided an amendment budget to the CCA contract to complete CCA services through the end of the project. To keep costs down to the district, MCPWO and Tetra Tech have agreed to reduce their CCA efforts down to part-time starting in January. MCPWO is providing full-time observation with a construction engineer and therefore there is not a concern of any lack of oversight.

On October 3, 2023, Tetra Tech issued a letter to Weiss Construction making them aware that the Owner intends to pursue liquidated damages and special damages. A copy of that letter has been attached. As project completion nears, MCPWO intends to discuss this matter in more detail with Weiss.

The action is that the 8-1/2 Mile Relief Drain Drainage District Board accept the construction contract administration amendment, presented by Tetra Tech for amount of \$129,009.00.

Attachments: Change Order #3
Tetra Tech CCA Amendment
Letter – Schedule Review, October 3, 2023

OFFICE LOCATION: 21777 Dunham Road, Clinton Township, Michigan 48036 • Phone: 586-469-5325 • Fax: 586-469-5933

MAILING ADDRESS: P. O. Box 806, Mt. Clemens, Michigan 48046-0806

ENGINEERING • Phone: 586-469-5910 • Fax: 586-469-7693 ♦ **SOIL EROSION** • Phone: 586-469-5327 • Fax 586-307-8264



January 25, 2024

Mr. Steve Rozycki, PE
Engineer II
Macomb County Public Works Office
21777 Dunham Road
Clinton Township, MI 48036

**RE: In-System Storage Project
Engineering Services Amendment for Late Completion**

Dear Mr. Rozycki:

Tetra Tech appreciates the opportunity to serve your office on this important project. We are pleased thus far with the work being completed.

The construction schedule called for the project to be substantially completed by September 23, 2023. Tetra Tech's approved construction services proposal was based on completion at this date. Unfortunately, the construction contractor is now projecting substantial completion in April 2024 and final completion in July 2024. This late completion adds costs for Tetra Tech and its subconsultants.

Our estimate to complete the project as of January 1, is \$328,559, which includes turning our effort into part-time observation in January. Through December, our authorized budget has approximately \$199,550 remaining. Thus, our request is for an amendment of \$129,009. Our new estimate to complete includes 700 resident hours (which is part-time through completion).

Tetra Tech has been very efficient with our effort to date. As can be seen, the requested amendment amount is approximately \$15,000 per additional month of the project after the original substantial completion date. Tetra Tech believes this is very reasonable to administer a contract of this complexity and is in large part to efficiencies Tetra Tech delivered in 2022 and 2023.

We would also appreciate the opportunity to increase our billable rates 4.5% to account for the additional labor costs for the extended time.



TETRA TECH

Should staff and the drainage board approve of this request, we understand that an amendment to our contract will be issued. Tetra Tech appreciates consideration of this request and looks forward to a successful project completion.

Sincerely;

Brian M. Rubel, PE
Sr. Vice President



October 3, 2023

Mr. Zachary Zechmeister
Weiss Construction Co. LLC
41001 Grand River Ave.
Novi, MI 48375

**Re: Macomb In-System Storage Project
Response to Schedule Updates for received September 27, 2023**

Dear Mr. Zechmeister:

We have reviewed your schedule and narrative. We note that it was received on September 27, 2023, yet the period on the transmittal states July and August 2023.

All schedule updates since January of this year have indicated a delay of approximately 90 days. The Engineer and Owner have continuously taken exception and urged Weiss to take what steps are necessary to shorten this period as much as possible. Not only has Weiss not been successful in shortening this period, but this schedule proposes additional delays to a total of 127 days beyond Substantial Completion and 124 days beyond Final Completion, by your narrative.

In review of the schedule, we note that the work at Malvern is to begin on November 22, 2023 and be completed by March 24, 2024. This is the same period to which the Engineer and Owner previously objected, noting that Malvern needs to be completed before winter. This is also contradictory to the information you provided at the most recent progress meeting when you stated that work at Malvern was to commence in October or November and last three weeks, excluding HESCO's work, which would have no effect on the roadway. With that information and the stated period on the transmittal, we must ask if this schedule is obsolete.

Additionally, we note that the Owner had specifically stated Beaconsfield Avenue was to be completed by the date of Substantial Completion of December 2, 2023, established by Change Order, and to which Weiss agreed. Your proposed schedule shows only partial reopening of Beaconsfield until January 5, 2024, at which time you indicate complete reopening of Beaconsfield.

The Owner cannot agree to the dates shown on the Schedule beyond the contractual completion dates. It has been our sincere hope that over the last eight months Weiss would have made the effort to reduce or eliminate those days beyond the contractual

Tetra Tech, Inc.

710 Avis Drive, Suite 100, Ann Arbor, MI 48108
Tel 734.665.6000 Fax 734.213.3002 www.tetrattech.com



completion dates. Instead, Weiss proposes to add more days. Please be advised that the Owner intends on assessing Liquidated Damages as described in the Agreement, Section 00 52 00, Article 4, 4.03-A, 1 through 3, as well as costs associated with Special Damages described in Section 00 52 00, Article 4, 4.04-A, B, and C.

We again urge Weiss to work toward reducing the number of days beyond the contractual dates and stand ready to help if we can.

Please let us know if there are any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Timothy W. Ard', written in a cursive style.

Timothy W. Ard,
Construction Manager, Tetra Tech

copy: Vincent Astorino, MCPWO
Steven Wagner, MCPWO
Steve Rozycki, MCPWO
Jeremy Jarinski, MCPWO
Joe Mulville, Weiss Construction
Brian Rubel, Tetra Tech
David Weiss, Tetra Tech



Candice S. Miller

Public Works Commissioner
Macomb County

To: 8-1/2 Mile Relief Drain Drainage District Board Members

CC: File

From: Vince Astorino, Operations Director

Date: February 12, 2024

Subject: Chapaton RTB Canal Rehabilitation – Change Order #1

The Macomb County Public Works Office (MCPWO) has continuously worked towards finding solutions to reduce treated combined sewer overflows (CSO) and improve water quality within Lake St. Clair. At the center of this effort has been improvements to the Chapaton RTB Canal. A project originally proposed as an expansion of the existing Canal was ultimately rejected by EGLE. This prompted a re-envisioning of the project to focus on the much-needed rehabilitation components that weren't completed as part of the rejected expansion project. Following a five-year-long lead-up the Canal RTB project was designed, permitted, and publicly bid.

At the June 2023 Board meeting, the award of the contract to the low-bidder, Z Contractors, Inc (ZCI), was approved marking the beginning of this landmark project. Since mobilization in early August 2023, the project has proven to be a truly collaborative effort. ZCI has consistently committed the equipment, manpower, and planning to keep the project ahead of schedule with high-quality finished components. ZCI recently crossed over the 50% completion point for the project a mere six months after mobilization - an incredible pace.

Throughout the planning phase MCPWO coordinated with the engineer-of-record, Wade Trim Associates, Inc. (WTA), to provide a buildable and cost-effective design. As is often true of projects of this size and complexity, certain unforeseen issues will arise. Many of these issues have been handled in the field without any impact to the schedule or project cost. Others, however, warrant additional detail and ultimately additional cost. Presented in this Change Order #1 recommendation letter is a summary of the cost-related changes to this project to-date.

Table 1 – Work Change Directive Summary

WCD	Description	Initial ZCI Proposal	Final Negotiated Amount	Ready to be Finalized
001	Influent Structure Slab Details	\$17,500.00	\$16,840.44	Y
002	Concrete Repairs to East Building	\$22,895.00	N/A	N
003	Existing Seawall Cap Details	\$50,633.85	\$37,146.69	Y
004	Stop Log Quantity Revisions	(\$76,790.00)	(\$134,939.00)	Y
005	Spillway	\$14,186.21	(\$680.00)	Y
006	Structural Drawing Revisions	\$253,342.99	\$194,767.90	Y
007	Pre-construction Video Harbor Place	\$10,710.00	\$10,710.00	Y
008	North Side Storm Sewer & Regrading	\$34,503.25	N/A	N
009	Abandoned Box Cleanout / Cutting	\$213,316.22	\$19,246.88	Y
010	South Side Grading Changes	\$194,461.62	\$157,876.59	Y
Total Finalized WCD's:		\$677,360.89	\$300,969.50	

There are two important items to note to fully understand this Table and Change Order recommendation.

1. Firstly, nearly all of these WCD's were Owner-initiated and were not "extras" sought out by ZCI. These were value-adds which were identified after construction commenced and consist of a more constructable, resilient, and aesthetically-pleasing finished product.
2. Secondly, the large reductions in costs from the initial ZCI proposal to the final amount were a result of follow-up meetings between MCPWO, WTA, and ZCI. These meetings generally consisted of brainstorming, modifying the design, and/or providing clarifications. It was not perceived that ZCI was artificially inflating these prices for their benefit. They would promptly provide pricing after the WCD was initiated in order to keep the project on track and in anticipation of a detailed review to follow. The goal was to have all necessary items addressed without any gaps over overlaps in the required extra work.

A more detailed explanation of the 10 Work Change Directives issued to-date is provided below.

WCD 001 - Influent Structure Slab Details

Upon initial excavation, a spread footing supporting the East Building not shown on the plans was encountered. This resulted in less concrete being placed but did require additional steel rebar to tie in the new base slab. Also included in WCD 001 was the provision of 0.5% slope on the top-slab of the screening structure. This will allow for better drainage and less build-up of ice which will provide an overall safer working surface for MCPWO staff. ZCI did not charge any additional labor for this work, only the extra concrete to provide the slope. A portion of the cost to slope the top slab was to relocate several utilities.

Increase \$16,840.44

WCD 002 - Concrete Repairs to East Building

This item is not a part of this Change Order as it is not critical to the schedule. The easterly face of the East Building has spalling concrete consistent with what has been seen during recent structural repair programs. Much of this spalling concrete was uncovered once the "air gates", which were no longer in operation, were removed by ZCI. This concrete and rusting reinforcement will be repaired with the same detail previously utilized and the final quantity will be included as part of a different change order.

WCD 003 - Existing Seawall Cap Details

In an effort save cost and shorten the overall duration of the project, much of the existing steel sheeting was proposed to remain. Certain sheets were lower than the top-of-sheet elevation of the new sheeting. Pulling the sheets up to the new elevation was not approved by the structural team and driving new sheets was deemed too costly. Instead, the concrete cap, which was already proposed, was increased from 4' to 5' in height. The cost of this WCD is for the additional labor and concrete required to add one foot of concrete to the cap. There is potential that this amount will be lower as this component has not been constructed yet.

Increase \$37,146.69

WCD 004 - Stop Log Quantity Revisions

In various locations throughout the project there are sets of stop log grooves and the companion stop logs themselves. These stop logs are used to isolate a certain component such as the crest gate bays, emergency bypass conduit, and storm sewer outfall from the adjacent Lake St. Clair. Since the lake level is varying and these locations directly abut the lake the stop logs are necessary. However, it was determined that the quantity of stop logs in the base bid was overly conservative and could be reduced while not impacting the flexibility of the design.

Decrease \$134,939.00

WCD 005 - Spillway

Running the length of the canal down the center is a concrete spillway. The intent of this strip is to prevent erosion at the low-point of the canal as CSO, rain, or lake water channelizes and drains out. This detail was revised slightly during construction which resulted in more rebar but less stone base.

Decrease \$680.00

WCD 006 - Structural Drawing Revisions

This was the largest package of all the WCDs that contained numerous components and a more detailed breakout has been provided for these sub-components. The changes were primarily structural changes to the proposed outfall structure.

- A. At the onset of the project, ZCI outlined their proposed sequence to build the outfall structure in one continuous pass rather than in multiple segments as was originally proposed. This approach was reviewed and ultimately approved by the design team and MCPWO. However, during construction it was realized that certain sheet pilings originally proposed to be a temporary cofferdam (to facilitate the segment-by-segment approach) were not required. As such, these sheets were driven below grade which will provide a more aesthetically pleasing western (front) face of the new outfall structure. This resulted in less painting but additional formwork.

Increase \$29,926.40

- B. A set of removable fine screens with ½" clear opening was requested. These will be used to protect the flushing pump intake points. These intake points were already designed to draw lake water from Lake St. Clair directly instead of filling the entire canal and ultimately draining off millions of gallons of clean lake water. Only the exact amount of water needed for flushing operations will be used. The Chapaton RTB Flushing Improvements project is currently under design by Wade Trim and there are certain mesh points between the two projects. This was an opportunity to have a single fabricator provide all the new screens throughout the Canal. These screens were designed to exactly fit within the stop log grooves.

Increase \$47,419.10

- C. The Canal RTB Rehabilitation project contains certain components from the now-suspended 9-Mile Pump Station Project. One item that was to be purchased and provided as part of the 9MPS project was a davit crane. This crane is portable (while also having a 3,000 lb lifting capacity) and will be positioned in strategically placed recessed socket bases across the outfall structure. Staff will use this crane to lift stop logs, fine screens, valves, equipment, and even personnel if needed. Several davit socket base locations were changed as well as part of this WCD.

Increase \$57,686.37

- D. During construction it was discovered that an existing chamber, adjacent to the East Building, was in poor condition and would not be watertight. Under the new operational scheme more CSO will be captured and the canal will be stored to a higher elevation. Rather than try to modify or replace the original cracked cast iron hatch it was proposed to raise the top of the chamber altogether to be level with the adjacent screening structure top slab. This elevation is 3' higher than the future peak storage elevation. This change is also expected to facilitate a simpler grading plan in the surrounding area which will improve drainage.

Increase \$59,736.04

Total WCD 006 Increase \$194,767.90

WCD 007 - Pre-construction Video Harbor Place

A significant coordination effort has taken place between MCPWO staff and the adjacent Harbor Place condominium community north of the project. One such coordination was the inclusion of additional pre-construction video and vibration monitoring equipment. Pre-construction video is a means to protect all parties should damage occur (or be alleged to occur) on the project site or off-site. This supplemental video and monitoring equipment was welcomed by the project team and was provided promptly after being requested by Harbor Place. Additional off-site video and vibration monitoring was also provided on the south side of the project for the Shore Club community, however, this was less extensive and was provided at no-cost by ZCI.

Increase \$10,710.00

WCD 008 - North Side Storm Sewer & Regrading

This item is not a part of this Change Order as it is not critical to the schedule. It involves the aforementioned regrading alongside the East Building and Aeration Building. It also includes a storm sewer separation of an additional quarter acre of the site. The project was designed to have multiple duck bill valves along the sheeting on both sides of the canal to handle stormwater drainage around the canal. After further review by MCPWO staff, this design was re-envisioned to extend the proposed storm sewer along the North side to extend further to the south to pick up stormwater from the area between the East Building and Aeration building. This is being designed and is expected to be part of a change order in the future.

WCD 009 – Abandoned Box Cleanout / Cutting

A significant unknown on this project during design was the condition of the 100-year-old 9-Mile Drain. The drain had never been properly abandoned but all means of entering the double-box were blocked off. Early in the project, ZCI excavated several locations and sawcut access points into the double box. Sediment was found in both sides of the box and would need to be removed prior to the installation of the new 36" storm sewer pipe. In perhaps the most collaborative effort of the project, ZCI proposed the idea of sawcutting the top off of the existing north box. This would allow for an easier way to remove the sediment as well as install the new pipe in what would effectively be a concrete lined trench. The pipe was installed and, in lieu of

flowable fill, open graded stone was able to be utilized as backfill. The southerly box was able to be flowfilled as planned.

Increase \$19,246.88

WCD 010 – South Side Grading Changes

This is the second the largest package and a more detailed breakout has been provided for the sub-components.

- A. Tree and brush clearing adjacent to the Chapaton Canal along the southerly property line as included in the base bid. This work was done early in the project and, upon completion, it was evident additional clearing and clean-up could take place to provide a more complete finished product. MCPWO staff met with the adjacent property owner and agreed to incorporate these improvements into the project. The existing chain link fence and overgrowth along north side of the Shore Club parking garage and above the abandoned 9-Mile Drain will be cleared. This shared corridor which was previously inaccessible can be used by both parties. Locked gates will be installed at either end to prevent public access to this area.

Increase \$20,470.31

- B. By removing the chain link fence noted above, additional fall-off protection was on top of the concrete cap was desired. The same ornamental 4' high metal fence proposed on the north side of the canal will be installed along the south side. This will provide a uniform look around the entirety of the Canal and will prevent/protect the Shore Club residents from accessing the canal. Other areas west of the parking structure will receive a 6' high wooden fence using the same detail currently in design along the north property line.

Increase \$101,317.65

- C. Two storm water sump pumps on the Shore Club property previously discharged directly into the Chapaton Canal. This configuration likely predates when the existing outfall gates were installed. At the beginning of construction, MCPWO staff temporarily re-routed these two pipes to discharge away from the construction area and into Lake St. Clair. It has been requested that ZCI bury these two pipes as a permanent solution. This simple re-routing provides an additional 1.5 acres of storm sewer separation that will no longer contribute to the CSO volume within the Canal.

Increase \$14,869.40

- D. The final component of this WCD is the fine grading, top-soiling, and restoration of this future greenbelt. An indirect positive facilitated by WCD 009 was ability to use the stone-filled north box of the 9-Mile Drain as a large French drain. This narrow strip of land was originally proposed to be drained via duck-bill valves in the sheeting along the south side of the canal. Removing these duckbills will be a plus aesthetically, require less maintenance, and reduce risk (in the event a valve failed opened and allowed CSO out of the canal. By now draining into the storm sewer system another half-acre of land is hydraulically separated from the CSO volume.

Increase \$21,219.23

Total WCD 010 Increase \$157,876.59

This total package is roughly a 1% increase to the contract price; a relatively small amount given the total value added to the project. There will certainly be other change orders on this project which staff will continue to minimize. However, there are anticipated future cost reductions which will offset much if not all of the additional construction costs. Wade Trim has stayed on and under budget and is tracking towards being under well their approved budget amount. The second large cost reduction will be 16" water main replacement on E. Nine Mile Road; an effort incorporated into the County project but funded by the City of St. Clair Shores. In total, staff is anticipating over one-million dollars in future cost reductions.

MCPWO staff is recommending the Board approve Change Order #1 in the amount of \$300,969.50 to increase the total contract amount from \$27,374,710.00 to \$27,675,679.50 to perform the work associated with the Work Change Directives outlined above.

Attachments: Wade Trim Recommendation Letter Dated 02-05-24
WCD Packages to date

CHANGE ORDER NO.: 001

Owner: 8-1/2 Mile Relief Drain Drainage District Owner’s Project No.: WWS-2022-003
 Engineer: Wade Trim Associates, Inc. Engineer’s Project No.: MCW2005-01T
 Contractor: Z Contractors, Inc. Contractor’s Project No.: 202318

Project: Chapaton RTB Canal Rehabilitation
 Contract Name: Chapaton RTB Canal Rehabilitation

Date Issued: February 12, 2024 Effective Date of Change Order: February 12, 2024

The Contract is modified as follows upon execution of this Change Order:

Description:

Additional items added or deducted from the Contract per Work Change Directives 001, 003, 004, 006, 007, 008, 009, & 010

Attachments:

-Work Change Directives as listed above

-Change Order Summary

Change in Contract Price	Change in Contract Times
Original Contract Price: \$ 27,374,710.00	Original Contract Times: Substantial Completion: <u>670 Days</u> Ready for final payment: 730 Days
[Increase] [Decrease] from previously approved Change Orders No. X to No. X: \$ No Previous Change Orders	[Increase] [Decrease] from previously approved Change Orders No. X to No. X: Substantial Completion: <u>N/A</u> Ready for final payment: N/A
Contract Price prior to this Change Order: \$ 27,374,710.00	Contract Times prior to this Change Order: Substantial Completion: <u>670 Days</u> Ready for final payment: 730 Days
Increase this Change Order: \$ 300,969.50	[Increase] [Decrease] this Change Order: Substantial Completion: <u>0 Days</u> Ready for final payment: 0 Days
Contract Price incorporating this Change Order: \$ 27,675,679.50	Contract Times with all approved Change Orders: Substantial Completion: <u>670 Days</u> Ready for final payment: 730 Days

Recommended by Engineer

Authorized by Contractor

By (signature): _____

Name & Title: Brad Abar, Project Manager

Date: February 12, 2024

Authorized by Owner

~~Approved by Funding Agency~~

By (signature): _____

Name & Title: _____

Date: _____



Wade Trim Associates, Inc.
25251 Northline Road • Taylor, MI 48180
734.947.9700 • www.wadetrim.com

February 5, 2024

Macomb County Public Works Office
23001 East 9 Mile Road
St. Clair Shores, MI 48080

Attention: Vincent Astorino
Operations Director

Re: Chapaton RTB Canal Rehabilitation
Project No. WWS-2022-003
Change Order 001

Dear Vincent:

Several Work Change Directives (WCD) have been issued since the beginning of the Chapaton RTB Canal Rehabilitation project. The WCDs were issued from the Macomb County Public Works Office (MCPWO) to the contractor (Z Contractors) requesting a cost adjustment for work items changed from the original contract. As part of the WCD, Z Contractors sent a cost proposal for the requested changes to the engineer (Wade Trim) to review. Wade Trim and MCPWO reviewed the cost proposals and then agreed upon a cost with Z Contractors to perform the work. A summary of the work change directives are as follows.

Work Change Directive 001

This WCD included detail changes for the base and top slab of the influent structure, additional concrete to create a slope on the top of the structure, and relocation of a roof drain into the building. The additional cost to the contract for this WCD is \$16,840.44.

Work Change Directive 003

This work included changes to the seawall at the existing sheets. The additional cost to the contract for this WCD is \$37,146.69.

Work Change Directive 004

This WCD includes the reduction of stop logs that were needed from the original contract amount. The net cost savings to the project for this WCD is \$134,939.00.

Work Change Directive 005

This WCD includes changes to the concrete spillway access road in the basin. The net savings to the project for this WCD is \$680.00.

Work Change Directive 006

This WCD includes various structural changes to the crest gate structure and influent structure, addition of fine screens to the flushing pipe chamber, modifications to the davit bases, extension and modifications to the existing flushing chamber, and revisions to the 9 Mile Road outfall chamber. The additional cost to the contract for this WCD is \$194,767.90.

Work Change Directive 007

This WCD includes the addition of preconstruction videotaping at Harbor Place prior to nearby sheet piling operations. The additional cost to the contract for this WCD is \$10,710.00.

Work Change Directive 009

This WCD includes changes to the abandonment of the existing 9 Mile Road drain box culvert and changes to the drainage on the south side of the canal. The additional cost to the contract for this WCD is \$19,246.88.

Work Change Directive 010

This WCD includes changes to the grading and fence along the south side of the canal. Items include clearing, fence removal, six-foot vinyl fence and gates, six-foot wooden fence, four-foot ornamental fence on top of the seawall cap, additional drainage piping, grading, and restoration. The additional cost to the contract for this WCD is \$157,876.59.

Recommendations

Based on the review and agreements for each WCD listed above, Wade Trim recommends these WCD costs be added to the contract via Change Order 001. The total cost for this change order is \$300,969.50.

Sincerely,

Wade Trim Associates, Inc.



Brad Abar, PE
Project Manager

BA;jlb
MCW 2005.01T
MCW2005/01T/DOCS/CORRES/20240205_ASTORINO-C0001.RECOMMENDATION.DOCX

cc: John Arvai, PE, Wade Trim

EIGHT AND ONE-HALF MILE RELIEF
01/16/2024 - 02/06/2024

<u>Funding Source</u>	<u>Apportionment</u>	<u>Manager</u>	<u>Vendor</u>	<u>Amount</u>	<u>Invoice Detail</u>	<u>Project Summary</u>	<u>Project Balance</u>
8 1/2 Mile Relief	Chapter 20 State of MI – 16.04% County of Macomb – 2.25% Dept. of Roads – 2.25% Eastpointe – 54.33% St. Clair Shores – 25.13%						
		Astorino	Andoor Distributors	\$ 14,450.00	Invoice #408228 - 11.21.23	Door Replacement - Service Garage	
		Astorino	DTE Energy	\$ 711.14	Invoice #24-035 - 12.31.23	Monthly Electric - 12.01.23 - 12.31.23	
		Astorino	GVC Painting	\$ 37,210.00	Invoice #23124 - 12.21.23	Interior Facility Painting	
		Baker	Kienbaum Hardy Viviano Pelton	\$ 600.00	Invoice #50480 - 01.01.24	Wall and Fence Agreement	
		Astorino	Lardner Elevator	\$ 1,050.00	Invoice #199913 - 12.21.23	Category 1 Safety Test	
		Astorino	OHM	\$ 13,329.75	Invoice #70241 - 12.12.23	Ventilation Design through 12.02.23	\$ 59,626.75
		Astorino	Wade Trim	\$ 91,487.61	Invoice #2029866 - 01.04.24	Chapaton Canal Rehab CCA through 12.29.23	\$ 1,499,151.43
		Astorino	Wade Trim	\$ 21,713.75	Invoice #2029865 - 01.04.24	Chapaton Flushing Improvements Design	\$ 150,728.56
		Astorino	Weatherproofing Technologies	\$ 2,317.50	Invoice #97386337 - 11.21.23	Tremcare - Roof Warranty Renewal Years 11-15	
		Astorino	Anderson, Eckstein & Westrick	\$ 2,628.01	Invoice #147838 - 01.03.24	Chapaton Basin Gate Rehab Design through 12.17.23	\$ 8,760.05
		Astorino	Anderson, Eckstein & Westrick	\$ 1,752.01	Invoice #148564 - 01.26.24	Chapaton Basin Gate Rehab Design through 01.14.24	\$ 7,008.04
		Astorino	Cintas	\$ 3,676.66	Invoice #0D26638263 - 01.22.24	Fire Inspection / Replacements	
		Astorino	City of St. Clair Shores	\$ 1,445.58	Invoice #24-099 - 12.07.23	Monthly Utilities - 09.15.23 - 12.07.23	
		Astorino	Colville Electric	\$ 1,152.89	Invoice #23678 - 12.30.23	East Building Electrical Switchgear Repair	
		Astorino	Colville Electric	\$ 2,029.59	Invoice #23683 - 12.30.23	Updated Scada Lines	
		Astorino	Consumers Energy	\$ 1,219.99	Invoice #207147406064 - 01.08.24	Monthly Utilities - 12.07.23 - 01.08.24	
		Astorino	Consumers Energy	\$ 546.07	Invoice #201542232720 - 01.08.24	Monthly Utilities - 12.07.23 - 01.08.24	
		Astorino	Consumers Energy	\$ 797.39	Invoice #201542232721 - 01.08.24	Monthly Utilities - 12.07.23 - 01.08.24	
		Astorino	De-Cal, Inc.	\$ 754.20	Invoice #WO9231770 - 09.06.23	Backflow Testing	
		Astorino	De-Cal, Inc.	\$ 1,221.20	Invoice #WO90023105-4 - 01.17.24	HVAC Maintenance	
		Tanghe	Discount Tire	\$ 550.00	Invoice #2221294 - 09.27.23	Tires - 2014 Ford Explorer - M.T.	
		Astorino	DTE Energy	\$ 10,969.65	Invoice #24-072 - 01.09.24	Monthly Electric - 12.08.23 - 01.09.24	
		Astorino	DTE Energy	\$ 610.56	Invoice #24-071 - 01.17.24	Monthly Electric - 12.15.23 - 01.16.24	
		Astorino	DTE Energy	\$ 1,319.02	Invoice #24-073 - 01.16.24	Monthly Electric - 12.14.23 - 01.12.24	
		Astorino	JCI Jones Chemicals	\$ 10,841.95	Invoice #932796 - 01.30.24	Hypochlorite Solution	
		Astorino	JCI Jones Chemicals	\$ 10,726.23	Invoice #932906 - 01.31.24	Hypochlorite Solution	
		Astorino	JCI Jones Chemicals	\$ 11,167.83	Invoice #931792 - 01.16.24	Hypochlorite Solution	
		Astorino	NTH Consultants	\$ 9,671.12	Invoice #634832 - 01.04.24	2023 Interceptor Inspection through 12.15.23	\$ 13,257.06
		Astorino	Taplin Group	\$ 18,572.51	Invoice #App 4 - 02.01.24	2023 Interceptor Inspection through 01.17.24	\$ 119,261.93
Astorino	Tetra-Tech	\$ 35,468.89	Invoice #52180402 - 01.03.24	In-System Storage CCA through 12.29.23	\$ 199,549.66		
Astorino	Tetra-Tech	\$ 5,120.00	Invoice #52180403 - 01.03.24	Chapaton Electrical CCA through 12.29.23	\$ 680,268.00		
Astorino	Wade Trim	\$ 58,270.03	Invoice #2030199 - 02.01.24	Chapaton RTB Canal CCA through 01.26.24	\$ 1,440,881.40		
Astorino	Z Contractors	\$ 491,900.13	Invoice #App 3 - 01.26.24	Chapaton RTB Canal Upgrades through 01.31.24	\$ 13,205,626.74		
Total				\$ 865,281.26			

Budget to Actual
8.5 Mile Relief
As of Jan 31, 2024 =33%

DESCRIPTION	2024 FINAL BUDGET	ENCUMBERED	ACTUAL	REMAINING BUDGET	PCT UTILIZED
REVENUE ACCOUNTS					
Interest Earned	275,000		60,271	214,729	21.9%
Other Revenue	5,000			5,000	0.0%
Grants	47,009,450		19,397,450	27,612,000	41.3%
8.5 O&M/Charge Required Revenue	5,260,440		2,630,220	2,630,220	50.0%
PY Revenue-Fund Balance	11,372,850			11,372,850	0.0%
Reimbursement from St. Clair Shores	710,000			710,000	0.0%
Use of Reserve	270,560			270,560	0.0%
Total Revenue Accounts	64,903,300	-	22,087,941	42,815,359	34.0%
EXPENSE ACCOUNTS					
Application/Permit Fee	6,000		6,000	-	100.0%
Dues, Training, Conf, Subs.	17,400		3,357	14,043	19.3%
Engineering					
PS Main Floor Ventilation	750,000		20,474	729,526	2.7%
Digital Twin Model Pilot Project	275,000			275,000	0.0%
Inspection Program	-		61,805	(61,805)	100.0%
Sluice & Dewatering Gates Rehab/Replacement Project	4,912,400		9,260	4,903,140	0.2%
Flushing	4,863,290		92,653	4,770,637	1.9%
General Construction/Engineering Contingency-All Projects	567,500			567,500	0.0%
As Needed Engineering	161,460		43,590	117,870	27.0%
9 Mile Emergency Bypass Structural Rehab	881,420		3,182	878,238	0.4%
9 Mile Bypass Pipe Structural Repairs-Construction/CA	50,000		16,088	33,912	32.2%
In-System Storage-Construction Admin and Construction	2,617,840			2,617,840	0.0%
In-System Storage-Construction Admin and Construction (County ARPA)	2,150,250		1,290,450	859,800	60.0%
Electrical Rehab (State and County ARPA Funds)	15,369,930		26,735	15,343,195	100.0%
Canal Rehab (State ARPA Funds)	29,489,270		18,080,265	11,409,005	100.0%
New Equipment	113,750			113,750	0.0%
Office Supplies	500			500	0.0%
Operating Supplies	96,450		16,108	80,342	16.7%
Other Professional Svcs	56,500		5,231	51,269	9.3%
Personnel Services	1,251,350			1,251,350	0.0%
Repair & Maintenance	614,500		68,072	546,428	11.1%
Contribution to Reserve	288,240			288,240	0.0%
Scada System	82,050		997	81,053	1.2%
Utilities	288,200		69,172	219,028	24.0%
Total Expense Accounts	64,903,300	-	19,813,439	45,089,861	30.5%

	O&M Balance 9/30/2023	O&M	Total 1/31/2024
Cash - Operating	15,698,301	2,274,502	17,972,803
Accounts Receivable			0
Assets			0
Liabilities			0
Revenues		22,087,941	22,087,941
Expenditures		19,813,439	19,813,439
			0
Equity*	15,698,301		17,972,803

Detail of 2023 Equity*

Chlorine storage tank relining	7,500	Capital Reserve	1,768,010
Painting	50,000	SCADA Reserve	158,470
As needed Engineering	35,723	SRF Replacement Reserve	2,851,350
Sluice and Dewatering Gates Rehab/Replace Project	3,958,336	9 Mile Bypass Pipe Struct Rprs	29,726
Flushing	3,850,637	In System Storage	1,961,964
9 Mile Emergency Bypass Structural Rehab	996,585	East Building Server	30,000

ARPA Funds	Remaining
County	
ISS	2,595,237
Electrical	9,500,000
State	
Electrical	5,903,393
Canal Rehab	20,741,110
Federal Earmark	2,500,000