

NOTICE OF MEETINGS
DRAINAGE BOARD FOR THE FOLLOWING DRAINS:

1. Drainage District Policy
2. Acacia Park CSO Drain
3. Birmingham CSO Drain
4. Bloomfield Village CSO Drain
5. George W. Kuhn Drain
6. Evergreen-Farmington Sanitary Sewer Drain
7. Clinton River Water Resource Recovery Facility
8. Augusta Drain
9. Joachim Drain
10. Pontiac Clinton River No. 1 Drain
11. Mainland Drain

NOTICE IS HEREBY GIVEN THAT MEETINGS OF THE DRAINAGE BOARD FOR THE ABOVE-MENTIONED DRAINS WILL COMMENCE IN THE OAKLAND COUNTY PUBLIC WORKS BUILDING, ONE PUBLIC WORKS DRIVE, WATERFORD, MICHIGAN, AND VIA **MICROSOFT TEAMS** AT 2 P.M., ON **TUESDAY, JANUARY 23, 2024**, TO CONDUCT NECESSARY AND APPROPRIATE BUSINESS OF THE DRAINAGE BOARDS. THOSE WHO WISH TO PARTICIPATE REMOTELY MAY FOLLOW THE INSTRUCTIONS ATTACHED TO THIS NOTICE. ALL BOARD MEMBERS WILL BE PARTICIPATING IN-PERSON.

DURING THE MEETING, THERE WILL BE AN AGENDA ITEM FOR PUBLIC COMMENT, DURING WHICH THE PUBLIC MAY PROVIDE INPUT OR ASK QUESTIONS OF THE BOARD. IN THE EVENT A MEMBER OF THE PUBLIC WOULD LIKE TO SUBMIT THEIR INPUT OR QUESTIONS TO BE READ AT THE MEETING BY THE BOARD CHAIRPERSON, PLEASE PROVIDE THE INPUT OR QUESTIONS IN WRITING TO STEPHANIE LAJDZIAK AT LAJDZIAKS@OAKGOV.COM. PERSONS WITH DISABILITIES WHO NEED ASSISTANCE PARTICIPATING IN THE MEETING SHOULD CONTACT STEPHANIE LAJDZIAK AT LAJDZIAKS@OAKGOV.COM.

JIM NASH
Oakland County Water Resources Commissioner
Telephone: 248-858-0958

Posted by: January 17, 2024

Microsoft Teams meeting

Join on your computer, mobile app or room device

[Click here to join the meeting](#)

Meeting ID: 291 867 815 067

Passcode: WPTbkA

[Download Teams](#) | [Join on the web](#)

Or call in (audio only)

[+1 248-333-6396,831638427#](#) United States, Pontiac

Phone Conference ID: 831 638 427#

[Find a local number](#) | [Reset PIN](#)



[Learn More](#) | [Help](#) | [Meeting options](#)

1. Drainage District Policy

AGENDA

DRAINAGE BOARD FOR POLICY MATTERS

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of October 24, 2023
3. Public Comments
4. Meadowbrook Insurance renewal proposal and approval of invoices
5. Other business
6. Approve pro rata payment to Drainage Board members
7. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR POLICY MATTERS**

October 24, 2023

A meeting of the Drainage Board for Policy Matters was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 24th day of October 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

: David Woodward, Chairperson of the Oakland County Board of Commissioners

ABSENT: None.

Minutes of the meeting held September 26, 2023, were presented for consideration. It was moved by Markham, supported by Woodward, that the minutes be approved.

ADOPTED: Yeas - 3
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

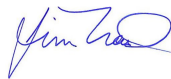
The proposed Chapter 20 meeting dates for 2024 (as attached) were presented. It was moved by Markham, supported by Woodward, to approve the proposed 2024 Chapter 20 meeting dates as presented.

ADOPTED: Yeas - 3
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham and Mr. Woodward.

ADOPTED: Yeas - 3
Nays - 0

There being no further business, the meeting was adjourned.

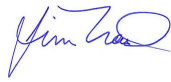


Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for Policy Matters, Oakland County, Michigan, held on the 24th day of October 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for Policy Matters.



Jim Nash, Chairperson

Dated: October 24, 2023



The Water Resources Commissioner of Oakland County

Building 95 West, One Public Works Drive, Waterford, MI 48328

Proposal for Property Insurance

01/25/2024

to

01/25/2025

(as of 12/12/2023)

Sal Saputo, Executive Vice President
 **MEADOWBROOK**
INSURANCE AGENCY.
www.meadowbrookagency.com

The Water Resources Commissioner of Oakland County

Renewal Comparison 01/25/2024 to 01/25/2025

	Expiring Chubb Jan 25, 2023-24	Renewal Chubb Jan 25, 2024-25	change
Annual Premium	\$452,997	\$480,822	+6.1%
Terrorism incl.	Yes	Yes	
Total Insured Values (TIV)	290.5M	295M	+1.4%
Rate / \$100 of TIV	.155	.162	+4.5%
Limits			
Policy – Per Occurrence limit	\$173.3M	\$175.7M	+1.4%
GWK Retention Basin	\$100M	\$100M	
Sub-limits			
Earthquake	\$25M	\$25M	
Flood Zone B&C	\$5M (Includes 1200 S. Cranbrook Rd. & 274 MLK Jr. Blvd.)	\$5M	
Flood Zone A	\$2.5M	\$2.5M (Includes 1200 S. Cranbrook Rd. & 274 MLK Jr. Blvd.)	
Extra Expense	\$5M	\$5M	
Loss of Utility services	\$1M	\$1M	
Personal property – any other location	\$500k	\$500k	
Personal Property – In Transit	\$500k	\$500k	
Debris removal	25% of direct damage loss plus \$1M	25% of direct damage loss plus \$1M	

Renewal Comparison *(continued)*

	Expiring Chubb Jan 25, 2022-23	Renewal Chubb Jan 25, 2024-25	change
Errors or Omissions	\$1M	\$1M	
Deductibles			
Basic Policy	\$250k	\$250k	
GWK	\$5M	\$5M	
Earth Movement	\$250k	\$250k	
Flood – note #3			
Zone C	\$250k/ 24 hours	\$250k/ 24 hours	
Zone B	\$250k/ 48 hours	\$250k/ 48 hours	
Zone A	\$500k/ 72 hours	\$500k/ 72 hours	

The Water Resources Commissioner of Oakland County

01/25/2024 to 01/25/2025

Premium Summary

POLICIES	EXPIRING 2023-2024	PROPOSED 2024-2025
Property Federal Insurance Company	\$452,997	\$480,822
TOTAL [1]	\$452,997	\$480,822

[1] This renewal, total property premium is increasing 6.1% over the expiring term.

Premium Payment Plans

**Pay in Full
Agency Bill**

This document does not amend, extend, or alter coverage afforded by the policy. For a complete understanding of any insurance you purchase, you must first read your policy, declaration page, and any endorsements and discuss them with your Meadowbrook agent. A specimen policy may also be available for your review from the insurance company. Actual policy conditions may be amended by endorsement or state law.”

Meadowbrook, Inc. strives to place your insurance with financially-sound insurance carriers. There are many financial rating companies who assign credit ratings to participating insurance carriers (i.e., A.M. Best Company). These ratings are the financial rating company’s independent opinion about the financial stability of the insurance carrier and, as a result, vary among insurance carriers. Not all insurance carriers choose to be rated by these services. Please be aware of this rating, or lack thereof, for the insurance carrier listed on your proposal.

Meadowbrook, Inc. is not responsible for, nor guarantees, the financial solvency of any insurance carrier through which it places your insurance. We are pleased to present this insurance proposal and thank you for the opportunity. We look forward to serving you in the future.

2. Acacia Park CSO

AGENDA

DRAINAGE BOARD FOR THE ACACIA PARK CSO DRAIN

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of December 19, 2023
3. Public Comments
4. Present Memorandum from Lesli Maes, P.E., Operations Engineer, dated January 23, 2024, requesting the Board approve the listed Acacia Park CSO Retention Treatment Basin projects at a cost of \$379,000 utilizing funds from Major Maintenance and Capital Improvement reserves
5. Present request for reimbursement of the Evergreen Farmington Fund in the amount of \$103,519.26
6. Present request for Board approval of payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$5,243
7. Other business
8. Approve pro rata payment to Drainage Board members
9. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR THE ACACIA PARK CSO DRAIN**

December 19, 2023

A meeting of the Drainage Board for the Acacia Park CSO Drain was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 19th day of December 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

ABSENT: David Woodward, Chairperson of the Oakland County Board of Commissioners

Minutes of the meeting held November 28, 2023, were presented for consideration. It was moved by Markham, supported by Nash, that the minutes be approved.

ADOPTED: Yeas - 2
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

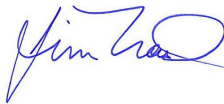
A request for approval of payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$48,333.34 (as attached) was presented. It was moved by Markham, supported by Nash, to approve the payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$48,333.34.

ADOPTED: Yeas - 2
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham.

ADOPTED: Yeas - 2
Nays - 0

There being no further business, the meeting was adjourned.

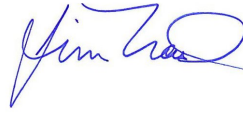


Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for the Acacia Park CSO Drain, Oakland County, Michigan, held on the 19th day of December 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for the Acacia Park CSO Drain Drainage District.



Jim Nash, Chairperson

Dated: December 19, 2023

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER**

MEMORANDUM

TO: Jim Nash, Chairperson of the Acacia Park CSO Drain Drainage Board

FROM: Lesli Maes, P.E., Operations Engineer

SUBJECT: Major Maintenance and Capital Improvement Projects for Approval

DATE: January 23, 2024

Recommendations for rehabilitation or replacement of assets within the Acacia Park CSO Drain Drainage District are continually being identified, evaluated, and planned for by WRC staff including the asset management group, staff engineers and operations supervisors.

Staff is requesting approval to initiate the following major maintenance and capital improvement projects for the Acacia Park Retention Treatment Basin (RTB).

Acacia Park CSO RTB FY2024 Reserves Projects

Major Maintenance and Capital Improvement Projects	Project Budget
Acacia RTB Replace Backflow Preventers	\$ 15,000
Acacia RTB Replace Effluent Sample Pump 14	\$ 10,000
Acacia RTB Replace Generator and Transfer Switch (2024 - 2026)	\$ 230,000
Acacia RTB Replace Hypochlorite Tank Level Sensors	\$ 12,000
Acacia RTB Replace Heating, Ventilation, and Air Conditioning System (2024 - 2025)	\$ 100,000
Acacia RTB Replace Hypochlorite Feed Pump	\$ 12,000
Subtotal:	\$ 379,000

This work was anticipated and budgeted for in the Acacia Park CSO Reserves.

Requested Action: Approve the above-listed Acacia Park CSO Retention Treatment Basin projects at a cost of \$379,000 utilizing funds from Major Maintenance and Capital Improvement reserves.

MEMO TO: Mr. Jim Nash, Chairman
of the Drainage Board for the ACACIA PARK CSO DRAIN

FROM: Shawn Phelps, Chief of Fiscal Services *FOR SHAWN PHELPS*
OCWRC Accounting

DATE: January 23, 2024

SUBJECT: Request for Reimbursement of Evergreen Farmington Fund

The following is a detail of charges paid from the Evergreen Farmington Fund
for the period ending January 15, 2024.

<u>Date</u>	<u>Ref No.</u>	<u>For</u>	<u>Amount</u>
11/30/23	JE# 021524	Oct 2023 Storm Water Flow Charges	\$34,506.42
11/30/23	JE# 021533	Nov 2023 Storm Water Flow Charges	34,506.42
12/31/23	JE# 022378	Dec 2023 Storm Water Flow Charges	34,506.42
		Total	<u><u>\$103,519.26</u></u>

MEMO TO: Mr. Jim Nash, Chairman
of the Drainage Board for the ACACIA PARK CSO DRAIN

FROM: Shawn Phelps, Chief of Fiscal Services *d for SHAWN PHELPS*
OCWRC Accounting

DATE: January 23, 2024

SUBJECT: Request for Approval of Invoices

The following is a detail of Maintenance charges paid from the Drain Revolving Fund and Invoices
for the period ending January 15, 2024

G/L Date	Ref No.	Paid To	For	Amount
12/18/2023	V # SINV00229303	Detroit Pump & Mfg Co	Invoice # 1079966 - Contracted Services	\$ 5,243.00
			Total	\$ 5,243.00

3. Birmingham CSO

AGENDA

DRAINAGE BOARD FOR THE BIRMINGHAM CSO DRAIN

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of December 19, 2023
3. Public Comments
4. Present Memorandum from Lesli Maes, P.E., Operations Engineer, dated January 23, 2024, requesting the Board approve the listed Birmingham CSO Retention Treatment Basin projects at a cost of \$264,000 utilizing funds from Major Maintenance and Capital Improvement reserves
5. Present request for reimbursement of the Evergreen Farmington Fund in the amount of \$109,761.51
6. Present request for Board approval of payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$10,400
7. Other business
8. Approve pro rata payment to Drainage Board members
9. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR THE BIRMINGHAM CSO DRAIN**

December 19, 2023

A meeting of the Drainage Board for the Birmingham CSO Drain was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 19th day of December 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

ABSENT: David Woodward, Chairperson of the Oakland County Board of Commissioners

Minutes of the meeting held October 23, 2023, were presented for consideration. It was moved by Markham, supported by Nash, that the minutes be approved.

ADOPTED: Yeas - 2
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

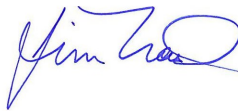
A request for approval of payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$48,333.34 (as attached) was presented. It was moved by Markham, supported by Nash, to approve the payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$48,333.34.

ADOPTED: Yeas - 2
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham.

ADOPTED: Yeas - 2
Nays - 0

There being no further business, the meeting was adjourned.

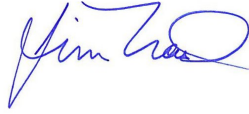


Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for the Birmingham CSO Drain, Oakland County, Michigan, held on the 19th day of December 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for Birmingham CSO Drain Drainage District.



Jim Nash, Chairperson

Dated: December 19, 2023

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER**

MEMORANDUM

TO: Jim Nash, Chairperson of the Birmingham CSO Drain Drainage Board

FROM: Lesli Maes, P.E. Operations Engineer

SUBJECT: Major Maintenance and Capital Improvement Projects for Approval

DATE: January 23, 2024

Recommendations for rehabilitation or replacement of assets within the Birmingham CSO Drain Drainage District are continually being identified, evaluated, and planned for by WRC staff including the asset management group, staff engineers and operations supervisors.

Staff is requesting approval to initiate the following major maintenance and capital improvement projects for the Birmingham Retention Treatment Basin (RTB).

Birmingham CSO RTB FY2024 Reserves Projects

Major Maintenance and Capital Improvement Projects	Project Budget
Birmingham RTB Replace Heating, Ventilation and Air Conditioning System (2024-2025)	\$ 125,000
Birmingham RTB Replace Wet Well Inlet Control Valves 10 and 11	\$ 25,000
Birmingham RTB Replace Hypochlorite Feed Pump	\$ 12,000
Birmingham RTB Replace Hypochlorite Day Tank	\$ 12,000
Birmingham RTB Replace Dewatering Pumps 1 and 3	\$ 90,000
Subtotal:	\$ 264,000

This work was anticipated and budgeted for in the Birmingham CSO Reserves.

Requested Action: Approve the above-listed Birmingham CSO Retention Treatment Basin projects at a cost of \$264,000 utilizing funds from Major Maintenance and Capital Improvement reserves.

MEMO TO: Mr. Jim Nash, Chairman
of the Drainage Board for the BIRMINGHAM CSO DRAIN

FROM: Shawn Phelps, Chief of Fiscal Services *FOR SHAWN PHELPS*
OCWRC Accounting

DATE: January 23, 2024

SUBJECT: Request for Reimbursement of Evergreen Farmington Fund

The following is a detail of charges paid from the Evergreen Farmington Fund
for the period ending January 15, 2024.

<u>Date</u>	<u>Ref No.</u>	<u>For</u>	<u>Amount</u>
11/30/23	JE# 021524	Oct 2023 Storm Water Flow Charges	\$36,587.17
11/30/23	JE# 021533	Nov 2023 Storm Water Flow Charges	36,587.17
12/31/23	JE# 022378	Dec 2023 Storm Water Flow Charges	36,587.17
		Total	<u><u>\$109,761.51</u></u>

MEMO TO: Mr. Jim Nash, Chairman
of the Drainage Board for the BIRMINGHAM CSO DRAIN

FROM: Shawn Phelps, Chief of Fiscal Services
OCWRC Accounting *FOR SHAWN PHELPS*

DATE: January 23, 2024

SUBJECT: Request for Approval of Invoices

The following is a detail of Maintenance charges paid from the Drain Revolving Fund and Invoices
for the period ending January 15, 2024

G/L Date	Ref No.	Paid To	For	Amount
12/18/2023	V # SINV00229307	Detroit Pump & Mfg Co	Invoice # 1079967 - Contracted Services	\$ 3,846.00
	TBP	FK Engineering Associates	Invoice # 23-168-001 - Contracted Services	6,554.00
			Total	\$ 10,400.00

4. Bloomfield Village CSO

AGENDA

DRAINAGE BOARD FOR THE BLOOMFIELD VILLAGE CSO DRAIN

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of December 19, 2023
3. Public Comments
4. Present Memorandum from Lesli Maes, P.E., Operations Engineer, dated January 23, 2024, requesting the Board approve the listed Bloomfield Village CSO Retention Treatment Basin projects at a cost of \$241,000 utilizing funds from Major Maintenance and Capital Improvement reserves
5. Present request for reimbursement of the Evergreen Farmington Fund in the amount of \$140,973
6. Other business
7. Approve pro rata payment to Drainage Board members
8. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR THE BLOOMFIELD VILLAGE CSO DRAIN**

December 19, 2023

A meeting of the Drainage Board for the Bloomfield Village CSO Drain was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 19th day of December 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

ABSENT: David Woodward, Chairperson of the Oakland County Board of Commissioners

Minutes of the meeting held November 23, 2023, were presented for consideration. It was moved by Markham, supported by Nash, that the minutes be approved.

ADOPTED: Yeas - 2
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

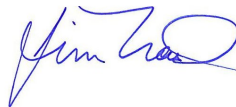
A request for approval of payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$48,333.34 (as attached) was presented. It was moved by Markham, supported by Nash, to approve the payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$48,333.34.

ADOPTED: Yeas - 2
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham.

ADOPTED: Yeas - 2
Nays - 0

There being no further business, the meeting was adjourned.

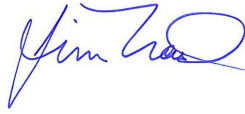


Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for the Bloomfield Village CSO Drain, Oakland County, Michigan, held on the 19th day of December 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for Bloomfield Village CSO Drain Drainage District.



Jim Nash, Chairperson

Dated: December 19, 2023

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER**

MEMORANDUM

TO: Jim Nash, Chairperson of the Bloomfield Village CSO Drain Drainage Board

FROM: Lesli Maes, P.E., Operations Engineer

SUBJECT: Major Maintenance and Capital Improvement Projects for Approval

DATE: Jan 23, 2024

Recommendations for rehabilitation or replacement of assets within the Bloomfield Village CSO Drain Drainage District are continually being identified, evaluated, and planned for by WRC staff including the asset management group, staff engineers and operations supervisors.

Staff is requesting approval to initiate the following major maintenance and capital improvement projects for the Bloomfield Village Retention Treatment Basin (RTB).

Bloomfield Village CSO RTB FY2024 Reserves Projects

Major Maintenance and Capital Improvement Projects	Project Budget
Bloomfield Village RTB Replace Heating, Ventilation and Air Conditioning System (2024-2025)	\$ 125,000
Bloomfield Village RTB Rehab Hypochlorite Containment Area	\$ 50,000
Bloomfield Village RTB Replace Chlorine Feed Pump	\$ 16,000
Bloomfield Village RTB Add Manual Transfer Switch	\$ 50,000
Subtotal:	\$ 241,000

This work was anticipated and budgeted for in the Bloomfield Village CSO Reserves.

Requested Action: Approve the above-listed Bloomfield Village CSO Retention Treatment Basin projects at a cost of \$241,000 utilizing funds from Major Maintenance and Capital Improvement reserves.

MEMO TO: Mr. Jim Nash, Chairman
of the Drainage Board for the BLOOMFIELD VILLAGE CSO DRAIN

FROM: Shawn Phelps, Chief of Fiscal Services *FOR SHAWN PHELPS*
OCWRC Accounting

DATE: January 23, 2024

SUBJECT: Request for Reimbursement of Evergreen Farmington Fund

The following is a detail of charges paid from the Evergreen Farmington Fund
for the period ending January 15, 2024.

<u>Date</u>	<u>Ref No.</u>	<u>For</u>	<u>Amount</u>
11/30/23	JE# 021524	Oct 2023 Storm Water Flow Charges	\$46,991.00
11/30/23	JE# 021533	Nov 2023 Storm Water Flow Charges	46,991.00
12/31/23	JE# 022378	Dec 2023 Storm Water Flow Charges	46,991.00
		Total	<u><u>\$140,973.00</u></u>

5. George W. Kuhn Drain

AGENDA

DRAINAGE BOARD FOR THE GEORGE W. KUHN DRAIN

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of December 19, 2023
3. Public Comments
4. Present Memorandum from Lesli Maes, P.E., Operations Engineer, dated January 23, 2024, requesting the Board approve the listed GWK Retention Treatment Basin projects at a cost of \$2,243,000 utilizing funds from Major Maintenance and Capital Improvement reserves
5. Present Memorandum from Stephanie Petriello, Environmental Planner, dated January 23, 2024, requesting the Board receive and file the RainSmart Rebates Pilot Program Update
6. Present request for Board approval of payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$57,868.72
7. Other business
8. Approve pro rata payment to Drainage Board members
9. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR THE GEORGE W. KUHN DRAIN**

December 19, 2023

A meeting of the Drainage Board for the George W. Kuhn Drain was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 19th day of December 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

ABSENT: David Woodward, Chairperson of the Oakland County Board of Commissioners

Minutes of the meeting held December 19, 2023, were presented for consideration. It was moved by Markham, supported by Nash, that the minutes be approved.

ADOPTED: Yeas - 2
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

A memorandum Gary Nigro, P.E., Manager, dated December 19, 2023, requesting the Board authorize the Chairperson to execute documents necessary to extend the expiration date of the existing agreement with the Michigan Department of Transportation's contractor, MI 75 Constructors, LLC, from December 21, 2023 to June 30, 2024 was presented. It moved by Markham, supported by Nash, to authorize the Chairperson to execute documents necessary to extend the expiration date of the existing agreement from December 21, 2023 to June 30, 2024 as presented.

ADOPTED: Yeas - 2
Nays - 0

A memorandum from Lesli Maes, P.E., Operations Engineer, dated December 19, 2023, requesting the Board authorize the Chairperson to execute the amended Operations Interface Agreement between the Drainage District and the Michigan Department of Transportation was presented. It was moved by Markham, supported by Nash, to execute the amended Operations Interface Agreement between the Drainage District and the Michigan Department of Transportation as presented.

ADOPTED: Yeas - 2
Nays - 0

A request for approval of payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$36,676.83 (as attached) was presented. It was moved by

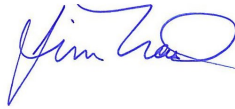
Markham, supported by Nash, to approve the payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$36,676.83.

ADOPTED: Yeas - 2
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham.

ADOPTED: Yeas - 2
Nays - 0

There being no further business, the meeting was adjourned.

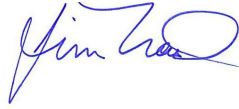


Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for the George W. Kuhn Drain, Oakland County, Michigan, held on the 19th day of December 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for George W. Kuhn Drain Drainage District.



Jim Nash, Chairperson

Dated: December 19, 2023

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER**

MEMORANDUM

TO: Jim Nash, Chairperson of the George W. Kuhn Drain Drainage Board

FROM: Lesli Maes, P.E., Operations Engineer

SUBJECT: GWK Major Maintenance and Capital Improvement Projects for Approval

DATE: January 23, 2024

Recommendations for rehabilitation or replacement of assets within the George W. Kuhn (GWK) Drain Drainage District are continually being identified, evaluated, and planned for by WRC staff including the asset management group, staff engineers and operations supervisors.

Staff is requesting approval to initiate the following major maintenance and capital improvement projects for the District.

**GWK FY2024 Reserves Projects
Pollution Control Facility (PCF) and Sanitary Disposal System (SDS)**

Major Maintenance and Capital Improvement Projects - PCF	Project Budget
Stephenson Garage Replace Roof	\$ 80,000
Stephenson Control Building Electrical Upgrades (2024-2025)	\$ 125,000
GWK Treatment Building Screens Differential Enhancement (2024-2025)	\$ 150,000
GWK Treatment Building Feasibility Study Chlorine Generation (2024-2025)	\$ 50,000
GWK Treatment Building Rehab Flushing Water Service Valve	\$ 50,000
GWK Treatment Building Reline Chlorine Tanks No. 4 and 8	\$ 70,000
GWK Treatment Building Replace Basin and Weir Level Transmitters	\$ 48,000
GWK Treatment Building Replace Disinfection Valves and Piping (2024-2025)	\$ 300,000
GWK Treatment Building Replace Unit Heaters (2024-2029)	\$ 195,000
GWK Dewatering Pumps Replace Variable Frequency Drives 1-6 (2024-2026)	\$ 360,000
GWK Dewatering PS Replace Dewatering Mag Meters (East and West)	\$ 128,000
GWK Dewatering PS Rebuild Dewatering Pumps 3 and 4	\$ 50,000
GWK Treatment Building Replace Motorized Entry Gates 1 and 2	\$ 70,000
GWK RTB Facility Evaluate/Design Flushing Main Improvements (2024-2025)	\$ 75,000
GWK North Gate Electrical Feed	\$ 50,000
GWK Truck Garage Replace Make-Up Air Unit (MAU) No. 5	\$ 75,000
Dequindre PS Replace Flushing Main Supply, Drain and Relief Valves	\$ 80,000
Subtotal:	\$ 1,956,000

Major Maintenance and Capital Improvement Projects - SDS	Project Budget
Eight Mile Meter Chamber Replace N and S Isolation Gate Actuators	\$ 160,000
GWK Flow Regulator No. 1 Replace Gate Actuator	\$ 42,000
GWK Flow Regulator No. 5 Replace Gate Actuator	\$ 40,000
GWK Flow Regulator No. 6 Replace Gate Actuator	\$ 45,000
Subtotal:	\$ 287,000

This work was anticipated and budgeted for in the GWK Reserves.

Requested Action: Approve the above-listed GWK Retention Treatment Basin projects at a cost of \$2,243,000 utilizing funds from Major Maintenance and Capital Improvement reserves.

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER**

MEMORANDUM

TO: Jim Nash, Chairman
George W. Kuhn Drainage Board

FROM: Stephanie Petriello, Environmental Planner

SUBJECT: RainSmart Rebates Pilot Program Update

DATE: January 23, 2024

RainSmart Rebates, a residential Green Stormwater Infrastructure (GSI) rebate pilot program for the GWK Drain Drainage District (District), began accepting applications on January 2, 2024. During the first week, 128 applications were received representing 11 of the 14 municipalities within the District. Of the first 128 applications, 73 (57%) indicated a desire for Equity Grant assistance.

Due to the high interest in the program, the WRC and the Clinton River Watershed Council plan to begin early implementation of the homeowner site assessments, weather permitting.

Requested Action: Receive and file.

MEMO TO: Mr. Jim Nash, Chairman
of the Drainage Board for the GEORGE W. KUHN DRAIN

FROM: Shawn Phelps, Chief of Fiscal Services
OCWRC Accounting *FOR SHAWN PHELPS*

DATE: January 23, 2024

SUBJECT: Request for Board approval of payment of the following invoices:

Payable To	Ref No.	For	Amount
Dickinson Wright PLLC	V # SINV00231614	Invoice # 1873194 - Legal Services - 11/30/23	\$ 2,964.70
Dickinson Wright PLLC	V # SINV00233008	Invoice # 1873195 - Legal Services - 11/30/23	7,918.27
Dickinson Wright PLLC	V # SINV002328619	Invoice # 1873196 - Legal Services - 11/30/23	829.50
Dickinson Wright PLLC	V # SINV00231628	Invoice # 1873203 - Legal Services - 11/30/23	2,820.90
Dickinson Wright PLLC	V # SINV00231633	Invoice # 1873208 - Legal Services - 11/30/23	1,429.40
Dickinson Wright PLLC	V # SINV00231637	Invoice # 1873209 - Legal Services - 11/30/23	3,272.70
Dickinson Wright PLLC	V # SINV00231639	Invoice # 1873211 - Legal Services - 11/30/23	1,514.20
Dickinson Wright PLLC	V # SINV00231641	Invoice # 1873214 - Legal Services - 11/30/23	1,343.00
Total			\$ 22,092.67
Center for Watershed Protection, Inc	TBP	Invoice # W-2237 #10- Contracted Services -11/1/23 - 12/31/23	\$ 7,180.00
Project 1-7235			\$ 7,180.00
ICS Integration Services LLC	V # SINV00232850	Invoice # 2888 Contracted Services - Proj 1-2847	\$ 4,046.00
ICS Integration Services LLC	V # SINV00232852	Invoice # 2889 Contracted Services - Proj 1-2847	3,689.00
Project 1-2847			\$ 7,735.00
City of Madison Heights	V # SINV00230973	Invoice # 00119434 Contracted Services - Proj 1-3484	\$ 4,455.37
Project 1-3484			\$ 4,455.37
Clinton River Watershed Council	TBP	Invoice # 4859 Contracted Services - Proj 1-7467	\$ 8,500.00
Project 1-7467			\$ 8,500.00
Hubbell, Roth, & Clark Inc	V # SINV00232338	Invoice # 0213383 - Contracted Service -12/09/23 - Proj 1-3484	\$ 7,905.68
Project 1-3484			\$ 7,905.68
Total			\$ 57,868.72

6. Evergreen-Farmington Sanitary Drain

AGENDA

DRAINAGE BOARD FOR THE EVERGREEN-FARMINGTON SANITARY DRAIN

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of December 19, 2023
3. Public Comments
4. Present Memorandum from Evans Bantios, P.E., Chief Engineer, dated January 23, 2024, requesting the Board approve the budget request for the design phase of the Biddestone Pump Station Rehabilitation project for \$290,000
5. Present Memorandum from Scott Schultz, Project Engineer, dated January 23, 2024, requesting the Board award DLZ Michigan, Inc. a contract for design engineering services for the Biddestone Pump Station Rehabilitation project in the amount of \$168,000
6. Present Memorandum from Evans Bantios, P.E., Chief Engineer, dated January 23, 2024, requesting the Board approve the budget request for the design phase of the Inkster Pump Station Rehabilitation project for \$240,000
7. Present Memorandum from Scott Schultz, Project Engineer, dated January 23, 2024, requesting the Board award DLZ Michigan, Inc. a contract for design engineering services for the Inkster Pump Station Rehabilitation project in the amount of \$125,000
8. Present Change Order No. 2 for Midwest Power Systems, Inc for Construction of the Lathrup Village Sanitary Retention Tank Improvements for a net increase in the amount of \$10,650.00
9. Present Change Order No. 2 for Dan's Excavating Inc. for the 8 Mile Corrective Action Plan Phase 2 – 8 Mile Pump Station for a net increase in the amount of \$14,400.00
10. Present Construction Estimate No. 3 for Midwest Power Systems for Construction of the Lathrup Sanitary Retention Tank Improvements in the amount of \$809,386.24 with a transfer to the Oakland County Treasurer in the amount of \$87,815.21
11. Present Construction Estimate No. 22 for Walsh Construction Company II, LLC for the 8 Mile Road Pump Station & SSO Chamber Improvements – Phase 1 in the amount of \$910,776.38 with a transfer to the Oakland County Treasurer in the amount of \$101,197.38
12. Present Construction Estimate No. 4 for Dan's Excavating for Construction of the 8 Mile Road Corrective Action Plan – Phase 2 in the amount of \$834,681.07 with a transfer to the Oakland County Treasurer in the amount of \$92,742.34
13. Present request for Board approval of payment of invoices from the Evergreen Farmington Sanitary Drain in the amount of \$544,118.96

14. Other business
15. Approve pro rata payment to Drainage Board members
16. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR THE EVERGREEN -FARMINGTON SANITARY DRAIN**

December 19, 2023

A meeting of the Drainage Board for the Evergreen-Farmington Sanitary Drain was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 19th day of December 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

David Woodward, Chairperson of the Oakland County Board of Commissioners

ABSENT: None.

Minutes of the meeting held November 28, 2023, were presented for consideration. It was moved by Markham, supported by Nash, that the minutes be approved.

ADOPTED: Yeas - 2
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

A memorandum from Lesli Maes, P.E. Operations Engineer, dated December 19, 2023, requesting the Board approve the Drainage District projects listed on the attached memorandum using funds from Major Maintenance and Capital Improvement reserves was presented. It was moved by Markham, supported by Nash, to approve the Drainage District projects listed on the attached memorandum using funds from Major Maintenance and Capital Improvement reserves as presented.

ADOPTED: Yeas - 2
Nays - 0

A memorandum from Scott Schultz, Project Engineer, dated December 19, 2023, requesting the Board award the I-696 Pump Station Rehabilitation project to Lawrence M. Clarke and authorize the Chairperson to sign the agreement for the I-696 Pump Station Rehabilitation project between the Drainage District and L.M. Clarke in the amount of \$1,597,500 was presented. It was moved by Markham, supported by Woodward, to authorize the Chairperson to sign the agreement for the I-696 Pump Station Rehabilitation project between the Drainage District and L.M. Clarke in the amount of \$1,597,500 as presented.

ADOPTED: Yeas - 3
Nays - 0

A memorandum from Evans Bantios, P.E., Project Engineer, dated December 19, 2023, requesting the Board authorize the Chairperson to sign the attached agreement and remit payment to DTE in the amount of \$25,563.68 was presented. It was moved by Markham, supported by Woodward, to authorize the Chairperson to sign the attached agreement and remit payment to DTE in the amount of \$25,563.68 as presented.

ADOPTED: Yeas - 3
Nays - 0

A memorandum from Evans Bantios, P.E., Project Engineer, dated December 19, 2023, requesting the Board approve the attached Engineering Services Agreement for Hubbell, Roth, and Clark for the preliminary design of the Walnut No. 1 Corrective Action Plan Project for a not-to-exceed amount of \$137,660 was presented. It was moved by Markham, supported by Woodward, to approve the attached Engineering Services Agreement for Hubbell, Roth, and Clark for the preliminary design of the Walnut No. 1 Corrective Action Plan Project for a not-to-exceed amount of \$137,660 as presented.

ADOPTED: Yeas - 3
Nays - 0

Engineering Work Order No. D-466(2) for DLZ Michigan Inc., regarding the I-696 Pump Station Rehabilitation Project to increase the Engineering Services Agreement by a not-to-exceed amount of \$107,234.12 was presented. It was moved by Markham, supported by Woodward, to approve Engineering Work Order No. D-466(2) for DLZ Michigan Inc., regarding the I-696 Pump Station Rehabilitation Project to increase the Engineering Services Agreement by a not-to-exceed amount of \$107,234.12 as presented.

ADOPTED: Yeas - 3
Nays - 0

Change Order No. 1 for Dan's Excavating Inc. for the 8 Mile Corrective Action Plan Phase 2 – 8 Mile Pump Station for a net increase in the amount of \$199,893.91 was presented. It was moved by Markham, supported by Woodward, to approve Change Order No. 1 for Dan's Excavating Inc. for the 8 Mile Corrective Action Plan Phase 2 – 8 Mile Pump Station for a net increase in the amount of \$199,893.91 as presented.

ADOPTED: Yeas - 3
Nays - 0

Present Construction Estimate No. 21 for Walsh Construction Company II, LLC for the 8 Mile Road Pump Station & SSO Chamber Improvements – Phase 1 in the amount of \$1,289,601.35 with a transfer to the Oakland County Treasurer in the amount of \$143,289.04 as presented. It was moved by Markham, supported by Woodward, to approve Construction Estimate No. 21 for Walsh Construction Company II, LLC for the 8 Mile Road Pump Station & SSO Chamber Improvements – Phase 1 in

the amount of \$1,289,601.35 with a transfer to the Oakland County Treasurer in the amount of \$143,289.04 as presented.

ADOPTED: Yeas - 3
Nays - 0

Construction Estimate No. 3 for Dan's Excavating for Construction of the 8 Mile Road Corrective Action Plan – Phase 2 in the amount of \$211,334.32 with a transfer to the Oakland County Treasurer in the amount of \$23,481.59 was presented. It was moved by Markham, supported by Woodward, to approve Construction Estimate No. 3 for Dan's Excavating for Construction of the 8 Mile Road Corrective Action Plan – Phase 2 in the amount of \$211,334.32 with a transfer to the Oakland County Treasurer in the amount of \$23,481.59 as presented.

ADOPTED: Yeas - 3
Nays - 0

A request for approval of payment of invoices and/or reimbursement in the amount of \$276,180.84 (as attached) was presented. It was moved by Markham, supported by Woodward, to approve the payment of invoices and/or reimbursement in the amount of \$276,180.84.

ADOPTED: Yeas - 3
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham and Mr. Woodward

ADOPTED: Yeas - 3
Nays - 0

There being no further business, the meeting was adjourned.

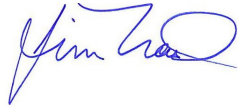


Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for the Evergreen-Farmington Sanitary Drain, Oakland County, Michigan, held on the 19th day of December 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for the Evergreen-Farmington Sanitary Drain Drainage District.



Jim Nash, Chairperson

Dated: December 19, 2023

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER**

MEMORANDUM

TO: Jim Nash, Chairperson of the Evergreen Farmington Sanitary Drain Drainage Board

FROM: Evans Bantios, P.E., Chief Engineer

SUBJECT: Biddestone Pump Station Rehabilitation – Design Phase Summary Cost

DATE: January 23, 2024

The attached design phase cost summary is for the Biddestone Pump Station Rehabilitation project. The final overall project cost will be presented once the project is designed and we obtain bids from contractors. This cost only includes the design phase of the project. The estimated design phase cost is \$290,000. The project cost will be paid using designated funds from the Evergreen-Farmington Sanitary Drain budget.

Requested Action: Approve the budget request for the design phase of the project for \$290,000.

**Biddestone Pump Station Rehab Project
Farmington Hills, MI
Estimate of Probable Project Cost
January 11, 2024**

1)	CONTRACTED SERVICES - CONSTRUCTION		\$ -
			\$ -
2)	CONTRACTED SERVICES - PROJECT DEVELOPMENT		
	Engineering - Fishsbeck		
	Consulting Engineer (ENGCON)		
	Preliminary/Study Phase	\$	-
	Design & Bidding Phase	\$	168,000
	Design & Bidding Phase (additional services)	\$	-
	Construction Administration	\$	-
	Geotechnical Exploration - N/A	\$	-
	Construction Material Testing- N/A	\$	-
	Subtotal - Contracted Services - Project Development	\$	168,000
4)	EASEMENTS		
	Temp Easement- N/A	\$	5,000
	Land Purchase/Appraisals- N/A	\$	-
	Subtotal - Easements	\$	5,000
4)	COUNTY SERVICES		
	Administration (ADM)	\$	9,000
	Engineering (ENG)	\$	63,000
	Right-of-Way (ROW)	\$	5,000
	Inspection (INS)	\$	2,000
	Surveying (SUR)	\$	3,000
	Standard Operatons (STD)	\$	3,000
	Subtotal - County Services	\$	85,000
6)	SUBTOTAL	\$	258,000
	Contingency (10% of construction cost)	\$	25,800
7)	ESTIMATE OF PROJECT COST	\$	283,800
VALUE FOR BUDGETING			\$ 290,000

Prepared by: _____
 Scott Schultz, E.I.T.

Date: _____

Approved by: _____
 Joel Brown, P.E. - Chief Engineer

Date: _____

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER**

MEMORANDUM

TO: Jim Nash, Chairperson of the Evergreen Farmington Sanitary Drain Drainage Board

FROM: Scott Schultz, Project Engineer

SUBJECT: Recommendation to award design engineering services to DLZ Michigan, Inc. for the Biddestone Pump Station Rehabilitation project

DATE: January 23, 2024

DLZ Michigan, Inc. (DLZ) will assist the Oakland County Water Resources Commissioner in the design of the Biddestone Pump Station Rehabilitation project. These services will include geotechnical services, provided by FK Engineering, drafting of a basis of design report, control system plan and review of the existing pump station. The project also will include a topographical survey, boundary review and survey, utility data collection, preliminary plans and specifications and final bid plans and specifications along with a cost estimate, permits and bidding services. ICS will provide Supervisory Control and Data Acquisition (SCADA) design and integration. The total design services estimate from DLZ is \$168,000. A breakdown of the DLZ's scope of work and cost is shown in the attached Engineering Work Order.

Requested Action: Award DLZ Michigan, Inc. a contract for design engineering services for the Biddestone Pump Station Rehabilitation project in the amount of \$168,000.

**Jim Nash Oakland County Water Resources Commissioner
Evergreen Farmington Sanitary Drain Drainage District
For the Biddestone Sanitary Pump Station Rehabilitation Project
Farmington Hills, Michigan**

Engineering Work Order No. D-469

Date: 12/05/2023

To: DLZ Michigan, INC.

For: EFSD Biddestone Sanitary Pump Station Rehabilitation

DESCRIPTION

This Engineering Work Order (EWO) is required to define specific tasks and compensation related to the EFSDS Biddestone Sanitary Pump Station Rehabilitation Project that falls under Exhibit IX Section II.b in Contract No. CON009173. This EWO serves as your approval for compensation of the following services as delineated in your attached proposal.

Preliminary Engineering

- DLZ will meet with appropriate representatives of the OCWRC and will visit the pump stations with individuals designated by the OCWRC to finalize project requirements and perform a review of the station prior to embarking on further design.
- DLZ will collect existing pump station designs and service districts information to establish system requirements and determine equivalent population contributory to the stations.
- Available equipment will be researched to meet the design criteria and will be reviewed with OCWRC staff.
- A basic control system plan will be developed in conjunction with ICS Integration, which will be compatible with the existing OCWRC control system.
- A basic geotechnical program is also proposed to be completed by our subconsultant, FK Engineering, consisting of:
 - Drilling one (1) 50-foot boring
 - Completing geotechnical labs
 - Development of a geotechnical report with soil/groundwater conditions and bearing capacities
- A Draft Basis of Design Report will be developed in this phase to finalize the design scope of work to be completed in detailed design.

Pump Station Design Services

- DLZ will provide Project Site Investigations, Site Topographical Surveys, Boundary Review and Survey, and Utility Data Collection.
- Preliminary Plans and Specifications for building, process, mechanical, electrical, and site improvements will be developed, and include a cost estimate for construction of proposed improvements.

- SCADA/Instrumentation/Controls Plans and Specifications will be developed by the County's controls integrator, ICS Integration, LLC. Costs for this have been included separately within this proposal.
- DLZ will meet with OCWRC staff periodically to confirm that the design is compliant to their requirements.
- DLZ will develop final Bid Plans and Specifications, including a cost estimate. As requested, a schedule of submittals will be prepared with the final documents.
- DLZ will prepare the data necessary for the EGLE Part 41 permit application and forward this information along with the plans and specification to the County for application and plans to the EGLE for approval.
- Due to the proximity and potential work in the floodplain, an EGLE Joint Permit Application will likely need to be made. This effort is included in this estimate. It is assumed that the permit fee will be a reimbursable expense not included in this estimate.
- Like the I-696 Pump Station Project, provide construction plans to the City of Farmington Hills Building Department for review prior to bidding to avoid any post bid building department requests. It is assumed that this review fee will also be a reimbursable expense.
- DLZ will assist OCWRC staff with determining and preparing easement descriptions that may be necessary to facilitate the rehabilitation of the existing pump station. It is understood any easements needed will be negotiated and procured by the County.

Bid Services for Pump Station Improvements

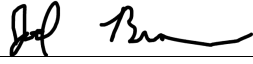
- DLZ will provide engineering services during bidding of the Pump Station Improvements Project including general consultation and planning, Advertisement, responses to Requests for Information, preparation of Addenda, conducting a Pre-Bid Meeting (if required), review of bids, and Recommendation of Award.

Construction Engineering Services for Pump Station Improvements

- DLZ understands that OCWRC desires to solicit Engineering Services during Construction of the Project once a Contractor has been selected and a construction schedule has been developed.

Preliminary & Design Engineering Services:	\$130,725.00
Geotechnical Program (FK Engineering):	\$7,875.00
SCADA Design and Integration (ICS Integration):	\$29,400.00
Total:	\$168,000.00

Fees for this Engineering Work Order shall be billed on a time and material basis according to the contract standard fee and rate schedule as specified by your proposal. The total amount of the Engineering Work Order is to be increased by a not to exceed amount of \$168,000.00. This amount is not to be exceeded without written authorization from this office.

RECOMMENDED	DATE:	ACCEPTED	DATE:
By:		By:	
Scott Schultz Project Engineer OCWRC		Manoj Sethi, P.E. President DLZ Michigan, Inc.	
APPROVED	DATE: 1/19/2024	APPROVED	DATE:
By:		By:	
Joel Brown, P.E. Chief Engineer OCWRC		Steve Korth, P.E. Chief Manager OCWRC	
Approved by the Drainage District Board on:			

Department No.:	CCN6010101	Account No.:	SC730639
Fund No.:	FND82410	Program No.:	PRG149667
Project No.:		Project Activity:	ENGCON
Contract No.:	CON009173	Contract Exp:	8/31/2024

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER**

MEMORANDUM

TO: Jim Nash, Chairperson of the Evergreen Farmington Sanitary Drain Drainage Board

FROM: Evans Bantios, P.E., Chief Engineer

SUBJECT: Inkster Pump Station Rehabilitation – Design Phase Summary Cost

DATE: January 23, 2024

The attached design phase cost summary is for the Inkster Pump Station Rehabilitation project. The final overall project cost will be presented once the project is designed and we obtain bids from contractors. This cost only includes the design phase of the project. The estimated design phase cost is \$240,000. The project cost will be paid using designated funds from the Evergreen-Farmington Sanitary Drain budget.

Requested Action: Approve the budget request for the design phase of the project for \$240,000.

**Inkster Pump Station Rehab Project
Southfield, MI
Estimate of Probable Project Cost
January 11, 2024**

1)	CONTRACTED SERVICES - CONSTRUCTION		\$ -
			\$ -
2)	CONTRACTED SERVICES - PROJECT DEVELOPMENT		
	Engineering - Fishsbeck		
	Consulting Engineer (ENGCON)		
	Preliminary/Study Phase	\$	-
	Design & Bidding Phase	\$	125,000
	Design & Bidding Phase (additional services)	\$	-
	Construction Administration	\$	-
	Geotechnical Exploration - N/A	\$	-
	Construction Material Testing- N/A	\$	-
	Subtotal - Contracted Services - Project Development	\$	125,000
4)	EASEMENTS		
	Temp Easement- N/A	\$	5,000
	Land Purchase/Appraisals- N/A	\$	-
	Subtotal - Easements	\$	5,000
4)	COUNTY SERVICES		
	Administration (ADM)	\$	9,000
	Engineering (ENG)	\$	63,000
	Right-of-Way (ROW)	\$	5,000
	Inspection (INS)	\$	2,000
	Surveying (SUR)	\$	3,000
	Standard Operatons (STD)	\$	3,000
	Subtotal - County Services	\$	85,000
6)	SUBTOTAL	\$	215,000
	Contingency (10% of construction cost)	\$	21,500
7)	ESTIMATE OF PROJECT COST	\$	236,500
	VALUE FOR BUDGETING	\$	240,000

Prepared by: _____
 Scott Schultz, E.I.T.

Date: _____

Approved by: _____
 Joel Brown, P.E. - Chief Engineer

Date: _____

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER****MEMORANDUM**

TO: Jim Nash, Chairperson of the Evergreen Farmington Sanitary Drain Drainage Board

FROM: Scott Schultz, Project Engineer

SUBJECT: Recommendation to award design engineering services to DLZ Michigan, Inc. for the Inkster Pump Station Rehabilitation project

DATE: January 23, 2023

DLZ Michigan, Inc. (DLZ) will assist Oakland County Water Resources Commissioner in the design of the Inkster Pump Station Rehabilitation project. These services will include a dry pit station structural condition assessment, provided by Dixon Engineering, geotechnical services, provided by FK Engineering, drafting of a basis of design report, control system plan, and a review of the existing pump station. The project also will include a topographical survey, boundary review and survey, utility data collection, preliminary plans and specifications and final bid plans and specifications along with a cost estimate, permits and bidding services. ICS Integrated Services, LLC (ICS) will provide Supervisory Control and Data Acquisition (SCADA) design and integration services. The total design services estimate from DLZ is \$125,000. A breakdown of the DLZ's scope of work and cost is shown in the attached Engineering Work Order.

Requested Action: Award DLZ Michigan, Inc. a contract for design engineering services for the Inkster Pump Station Rehabilitation project in the amount of \$125,000.

**Jim Nash Oakland County Water Resources Commissioner
Evergreen Farmington Sanitary Drain Drainage District
For the Inkster Sanitary Pump Station Rehabilitation Project
Southfield, Michigan**

Engineering Work Order No. D-468

Date: 12/05/2023

To: DLZ Michigan, INC.

For: EFSD Inkster Sanitary Pump Station Rehabilitation

DESCRIPTION

This Engineering Work Order (EWO) is required to define specific additional tasks and compensation related to the EFSD Inkster Sanitary Pump Station Rehabilitation Project that falls under Exhibit IX Section II.b in Contract No. CON009173. This EWO serves as your approval for compensation of the following services as delineated in your attached November 9, 2023, proposal.

Preliminary Engineering

- DLZ will meet with appropriate representatives of the OCWRC and will visit the pump stations with individuals designated by the OCWRC to finalize project requirements and perform a review of the station prior to embarking on further design.
- DLZ will collect existing pump station designs and service districts information to establish system requirements and determine equivalent population contributory to the stations.
- Available equipment will be researched to meet the design criteria and will be reviewed with OCWRC staff.
- A basic control system plan will be developed in conjunction with ICS Integration, which will be compatible with the existing OCWRC control system.
- A maintenance inspection of the dry pit is proposed to be completed, as subcontracted to Dixon Engineering. This work will include:
 - Inspection of the station's dry interior coating for remaining intactness and anticipated life. Review all interior girders and appurtenances for possible structural damage from corrosion.
 - A review of all interior surfaces for corrosion and/or damage and quantify damage for repairs. All repairs are to be quantified by extrapolation of a measured area. All quantities are estimates (usually high) because corrosion will continue between inspection and repair.
 - Inspection of the exterior coating and perform ASTM adhesion tests where coating adhesion is questionable. If it is evident that repainting is not necessary for several years, no destructive adhesion tests will be performed.
 - Review all exterior appurtenances for damage due to corrosion.
 - Review the exterior of the exposed foundations.
 - Review all safety requirements for ladders, cages, etc.
 - Review all health requirements of the station, including screening of the vent, pipe, and appurtenances. Notification of failed areas will be provided to the Owner on site.

**JIM NASH
OAKLAND COUNTY WATER RESOURCES COMMISSIONER**

- Prepare a report documenting all items found and recommendations for repair, including budgetary items. The engineering report is to include conclusions and recommendations, base report, and digital photographs with descriptions.
- Dixon is not able to offer a cost to assist with design prior to inspection, so DLZ is to collaborate with them to develop a proposal for a fee modification during detailed design to assist with the development of plans and specifications for painting and cathodic protection.
- A basic geotechnical program is also proposed to be completed by our subconsultant, FK Engineering, consisting of:
 - Drilling one (1) 50-foot boring
 - Performing corrosivity labs - (2) each of pH, Resistivity, Oxidation Reduction, Total Sulfide
 - Completing geotechnical labs
 - Development of a geotechnical report with soil / groundwater conditions
- A Draft Basis of Design Report will be developed in this phase to finalize the design scope of work to be completed in detailed design.

Pump Station Design Services

- DLZ will provide Project Site Investigations, Site Topographical Surveys, Boundary Review and Survey, and Utility Data Collection.
- Preliminary Plans and Specifications for building, process, mechanical, electrical, and site improvements will be developed, and include a cost estimate for construction of proposed improvements.
- SCADA/Instrumentation/Controls Plans and Specifications will be developed by the County's controls integrator, ICS Integration, LLC. Costs for this have been included separately within this proposal.
- DLZ will solicit pricing from Dixon Engineering to assist with the development of plans and specification for the rehabilitation of the steel dry pit can, with the addition of cathodic protection to extend its life.
- DLZ will meet with OCWRC staff periodically to confirm that the design is compliant with their requirements.
- DLZ will develop final Bid Plans and Specifications, including a cost estimate. As requested, a schedule of submittals will be prepared with the final documents.
- DLZ will prepare the data necessary for the EGLE Part 41 permit application and forward this information along with the plans and specification to the County for application and plans to the EGLE for approval.
- Only minimal coordination with the City of Southfield is expected since no major changes to the site are proposed that would necessitate planning or zoning approval.
- DLZ will assist OCWRC staff with determining and preparing easement descriptions that may be necessary to facilitate the rehabilitation of the existing pump station. It is understood any easements needed will be negotiated and procured by the County.

Bid Services for Pump Station Improvements

- DLZ will provide engineering services during bidding of the Pump Station Improvements Project including general consultation and planning, Advertisement, responses to Requests

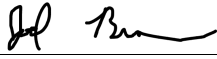
for Information, preparation of Addenda, conducting a Pre-Bid Meeting (if required), review of bids, and Recommendation of Award.

Construction Engineering Services for Pump Station Improvements

- DLZ understands that OCWRC desires to solicit Engineering Services during Construction of the Project once a Contractor has been selected and a construction schedule has been developed.

Preliminary & Design Engineering Services:	\$85,625.00
Dry Pit Station Structural Condition Assessment (Dixon Engineering):	\$4,462.50
Geotechnical Program (FK Engineering):	\$8,662.50
SCADA Design and Integration (ICS Integration):	\$26,250.00
Total:	\$125,000.00

Fees for this Engineering Work Order shall be billed on a time and material basis according to the contract standard fee and rate schedule as specified by your proposal. The total amount of the Engineering Work Order is to be a not to exceed amount of \$125,000.00. This amount is not to be exceeded without written authorization from this office.

RECOMMENDED	DATE:	ACCEPTED	DATE:
By:		By:	
Scott Schultz Project Engineer OCWRC		Manoj Sethi, P.E. President DLZ Michigan, Inc.	
APPROVED	DATE: 1/19/2024	APPROVED	DATE:
By: 		By:	
Joel Brown, P.E. Chief Engineer OCWRC		Steve Korth, P.E. Chief Manager OCWRC	
Approved by the Drainage District Board on:			

Department No.:	CCN6010101	Account No.:	SC730639
Fund No.:	FND82410	Program No.:	PRG149667
Project No.:		Project Activity:	ENGCON
Contract No.:	CON009173	Contract Exp.:	8/31/2024

JIM NASH
OAKLAND COUNTY WATER RESOURCES COMMISSIONER

CHANGE ORDER NO. 2

**Jim Nash, Oakland County Water Resources Commissioner
 Evergreen Farmington Sanitary Drainage District
 For Construction of the Lathrup Village Sanitary Retention Tank Improvements
 Lathrup Village, Michigan**

Authorization for Extras To & Changes In Contract

Department No. : CCN6010101
 Fund No. : FND84410
 Project No. : PRJ-17450

Account No. : SC730639
 Program No. : PRG1490125
 Project Activity : FAC

Contractor : Midwest Power Systems, Inc.
 2401 Hickory Oak Lane
 Milford, MI 48380

Contract No. : CON10270
 Date of Contract: 4/19/23
 Completion Date: 5/3/24

Auth	Location-Description-Reason	Unit	Est.	Unit Price	Amount	Amount
	<p>LOCATION: Flushing System</p> <p>DESCRIPTION (Extra/Add): Replace 18 existing 10-inch diameter Tyler couplings used for the flushing system piping with Victaulic couplings.</p> <p>REASON: The existing Tyler couplings didn't provide a water tight seal after they were removed and reinstalled as part of the replacement of the actuators and valves on the flushing system. They were replaced with the Victaulic couplings to provide a satisfactory seal.</p>	LS	1.0	\$10,650.00	\$10,650.00	---
Totals					\$10,650.00	\$0.00
Net Increase					\$10,650.00	---

**JIM NASH
 OAKLAND COUNTY WATER RESOURCES COMMISSIONER**

CHANGE ORDER NO. 2

Jim Nash, Oakland County Water Resources Commissioner
Evergreen Farmington Sanitary Drainage District
For Construction of the Lathrup Village Sanitary Retention Tank Improvements
Lathrup Village, Michigan

Prepared by: Evangelos Bantios Date: 1-9-2024
Evangelos Bantios, P.E. - Project Engineer

Recommended by: John Bergsma Date: 1-15-2024
John Bergsma, P.E. - Consultant

Approved by: Joel Brown Date: 1/18/2024
Joel Brown, P.E. - Chief Engineer

The Contractor agrees to do the work described above and agrees to accept payment in full on the basis indicated.

Accepted by: Brent Canup Date: 1/12/24
Brent Canup - President
Midwest Power Systems, Inc.

Approved by: Steven Korth Date: 1/19/2024
Steve Korth, P.E.
Chief Manager

The Contractor is hereby authorized and instructed to do the work described above in accordance with the terms of the Contract.

This Change Order was approved by the Drainage Board on:

CHANGE ORDER NO. 2

**Jim Nash, Oakland County Water Resources Commissioner
Evergreen Farmington Sanitary Drainage District
For Construction of the Lathrup Village Sanitary Retention Tank Improvements
Lathrup Village, Michigan**

Notice to Proceed Date:	April 19, 2023
Contract Substantial Completion Date:	March 4, 2024
Contract Final Completion Date:	May 3, 2024
Original Contract Value:	\$2,313,504.20
Previous C.O. #1 Value:	\$4,600.00
Change Order No. 1 Value:	\$10,650.00
Adjusted Contract Value	\$2,328,754.20

CHANGE ORDER

CHANGE ORDER NO. 2

**Evergreen Farmington Sanitary Drain Drainage District
8 Mile Road CAP Phase 2 - 8 Mile Pump Station 54-Inch Relief Forcemain
Southfield
Oakland County, Michigan**

Authorization for Extras To & Changes In Contract

Department No. : 6010101
Fund No. : FND84410
Project No. : PRJ-17452

Account No. : 730352
Program No. : PRG149015
Project Activity : FAC

Contractor :
Dan's Excavating, Inc.
12955 23 Mile Road
Shelby Township, MI 48315

Contract No. : 10305
Date of Contract: 7/17/2023
Completion Date: 1/12/2025

Auth No.	Location-Description-Reason	Unit Used	Est. Qty.	Unit Price	Amount Increase	Amount Decrease
2-1	<p>LOCATION: 8 Mile Road, Southfield, MI</p> <p>DESCRIPTION (Extra/Add): Additional tree removal</p> <p>REASON: Contract Drawing Sheet Nos. 17 to 19 presented the number of trees to be removed during the work consistent with the MDOT Permit. The MDOT arborist visited the site and requested the addition of four tree removals. The number of additional tree removal has been confirmed by field inspection staff.</p> <p>The contractor has agreed to remove the additional trees at the unit rate submitted with the bid. The bid unit price is reasonable when compared with published 2023 MDOT unit prices.</p> <p>Attachments: Field Order No. 5</p>	EA	4.0	\$1,200.00	\$4,800.00 0 Days	---

**JIM NASH
OAKLAND COUNTY WATER RESOURCES COMMISSIONER**

CHANGE ORDER

Auth No.	Location-Description-Reason	Unit Used	Est. Qty.	Unit Price	Amount Increase	Amount Decrease
2-2	<p>LOCATION: 8 Mile Road, Southfield, MI</p> <p>DESCRIPTION: (Extra/Add)</p> <p>Add tree trimming</p> <p>REASON: Contract Drawing Sheet Nos. 17 to 19 presented the number of trees to be removed during the work consistent with the MDOT Permit. The MDOT arborist visited the site and requested that 24 trees along the alignment be trimmed. The number of trees trimmed has been confirmed by field inspection staff.</p> <p>The unit price submitted by the contractor is reasonable when compared with published 2023 MDOT unit prices.</p> <p>Attachments: Field Order No. 5</p>	EA	24.0	\$400.00	\$9,600.00 0 Days	---
Totals					\$14,400.00	\$0.00
Net Increase					\$14,400.00	---

JIM NASH
OAKLAND COUNTY WATER RESOURCES COMMISSIONER

CHANGE ORDER

CHANGE ORDER NO. 2

**Evergreen Farmington Sanitary Drain Drainage District
8 Mile Road CAP Phase 2 - 8 Mile Pump Station 54-Inch Relief Forcemain
Southfield
Oakland County, Michigan**

Notice to Proceed Date:	July 17, 2023
Contract Substantial Completion Date:	December 13, 2024
Contract Final Completion Date:	January 12, 2025
Original Contract Value:	\$10,381,154.00
Previous C.O. Values:	\$199,893.91
Change Order No. 2 Value	\$14,400.00
Adjusted Contract Value	\$10,595,447.91

CHANGE ORDER NO. 2

Evergreen Farmington Sanitary Drain Drainage District
8 Mile Road CAP Phase 2 - 8 Mile Pump Station 54-Inch Relief Forcemain
Southfield
Oakland County, Michigan

Prepared by: Charles J. Roarty, Jr. Date: 2024 01 12
Charles J. Roarty, Jr., P.E. - NTH Consultants, Ltd.

Recommended by: Joe Sivek Date: 1/15/2024
Joe Sivek, P.E. - Consulting Engineer (Fishbeck)

Approved by: Evangelos Bantios Date: 1/19/2024
Evangelos Bantios, P.E. - Project Engineer

The Contractor agrees to do the work described above and agrees to accept payment in full on the basis indicated.

Accepted by: _____ Date: _____
James L. Doescher
Dan's Excavating, Inc.

Approved by: Steven Korth Date: Jan. 23, 2024
Steve Korth, P.E.
Chief Manager

The Contractor is hereby authorized and instructed to do the work described above in accordance with the terms of the Contract.

This Change Order was approved by the Drainage Board on:

**Jim Nash, Oakland County Water Resources Commissioner
Evergreen Farmington Sanitary Drain Drainage District
For Construction of the Lathrup SRT
Lathrup Village
Oakland County, Michigan**

Construction Estimate No. 3

7/25/2023 to 1/12/2024

Department No. : CCN6010101
Fund No. : FND84410
Project No. : PRJ-17450 ✓

Account No. : 730639
Program No. : PRG149015
Activity : FA C
Vendor No. : 40564
Contract No. : CON00010270
Date of Contract : April 19, 2023
Completion Date : May 3, 2024

Contractor :
Midwest Power Systems
2401 Hickory Oak Lane
Milford, MI 48380

Original Contract Amount:		\$2,318,504.20	
Previous Change Order Numbers (none):		\$0.00	
Change Orders This Estimate Numbers (CO#1):		\$4,600.00	
Total Net Change Orders:		\$4,600.00	
<u>Adjusted Contract Amount:</u>		<u>\$2,323,104.20</u>	✓
Subtotal To Date: (Sheet 2 of 2 Column 7)		\$1,180,601.45	
Less Deductions to Date: (Sheet 2 of 2 Column 7)		\$0.00	
Gross Estimate: (Work in Place)	50.82%	\$1,180,601.45	
Less Amount Reserved: (5% of Adjusted Contract Amount)		\$116,155.21	✓
Total Amount Allowed To Date:		\$1,064,446.24	
Less Previous Estimates:		\$255,060.00	
Net Payment Request To Be Paid To Contractor:		\$809,386.24	
Reserve Payment to Contractor		\$0.00	
Balance of Contract To Date	✓	\$1,142,502.75	Accounting Auditor: <i>BCR</i> 1/16/2024
Less Previous Transfers To Reserve:		\$28,340.00	✓
<u>Amount of Current Transfer:</u>		<u>\$87,815.21</u>	

Prepared by: Evangelos Bantios
Evangelos Bantios, P.E. - Project Engineer

Date: 1-16-2024

Recommended by: John Bergsma
John Bergsma, P.E. - Consulting Engineer

Date: 1-17-2024

Approved by: Joel Brown
Joel Brown, P.E. - Chief Engineer

Date: 1/18/2024

Approved by Board on: _____

**Jim Nash, Oakland County Water Resources Commissioner
Evergreen Farmington Sanitary Drain Drainage District
8 Mile Road CAP 8 Mile Road Pump Station & SSO Chamber Improvements - Phase 1
Southfield
Oakland County, Michigan**

Construction Estimate No. 22

December 1, 2023 to Dec. 31, 2023

Department No. : 6010101
Fund No. : FND84410 ✓
Project No. : PRJ-17452

Account No. : 730352
Program No. : PRG149015
Activity : FAC
Vendor No. : 23191
Contract No. : 6628
Date of Contract : 2/2/2022
Completion Date : 8/13/2027

Contractor :
Walsh Construction Company II, LLC
3031 W Grand Blvd, Suite 640
Detroit, MI 48202

Original Contract Amount:	\$0.00
Previous Change Order Numbers: CO Nos. 1, 2, 3, 4, 5, 6, 7, and 8.	\$50,292,966.06
Change Orders This Estimate Number:	\$0.00
Total Net Change Orders:	\$50,292,966.06 ✓
<u>Adjusted Contract Amount:</u>	<u>\$50,292,966.06</u>
Subtotal To Date: (Sheet 2 of 3 Column 7)	\$13,622,615.46
Less Deductions to Date: (Sheet 2 of 3 Column 7)	\$0.00
Gross Estimate: (Work in Place) 27.09%	\$13,622,615.46
Less Amount Reserved: (10% of Gross Estimate)	\$1,362,261.55 ✓
Total Amount Allowed To Date:	\$12,260,353.91
Less Previous Estimates:	\$11,349,577.54
Net Payment Request To Be Paid To Contractor:	\$910,776.38
Reserve Payment to Contractor	\$0.00
Balance of Contract To Date ✓	\$36,670,350.60
	Accounting Auditor: <i>BCR</i> 1/16/2024
Less Previous Transfers To Reserve:	\$1,261,064.17 ✓
<u>Amount of Current Transfer:</u>	<u>\$101,197.38</u>

Prepared by: *Charles J. Roarty, Jr.*
Charles J. Roarty, Jr., P.E. - NTH Consultants

Date: 2024 01 04

Recommended by: *Joseph C. Siwek*
Joe Siwek, P.E. - Consulting Engineer (Fishbeck)

Date: 1/5/2024

Recommended by: *Evangelos Bantios*
Evangelos Bantios, P.E. - Project Engineer

Date: 1-16-2024

Approved by: *Joel Brown*
Joel Brown, P.E. - Chief Engineer

Date: 1/18/2024

Approved by Board on: _____

**JIM NASH
OAKLAND COUNTY WATER RESOURCES COMMISSIONER**

**Jim Nash, Oakland County Water Resources Commissioner
 Evergreen Farmington Sanitary Drain Drainage District
 For Construction of 8 Mile Road CAP Phase 2 - 8 Mile Pump Station 54-Inch Relief Forcemain
 Southfield, Michigan**

Construction Estimate No. 4

December 1, 2023 to Dec. 31, 2023

Department No. : 6010101
 Fund No. : FND84410 ✓
 Project No. : PRJ-17452

Account No. : 730352
 Program No. : PRG149015
 Activity : FAC
 Vendor No. : 40260
 Contract No. : 10305
 Date of Contract : 7/17/2023
 Completion Date : 1/12/2025

Contractor :
 Dan's Excavating, Inc.
 12955 23 Mile Road
 Shelby Township, MI 48315

Original Contract Amount: \$10,381,154.00

Previous Change Order Numbers (none): \$0.00

Change Orders This Estimate Number: CO No. 1 \$199,893.91

Total Net Change Orders: \$199,893.91

Adjusted Contract Amount: \$10,581,047.91 ✓

Subtotal To Date: (Sheet 2 of 2 Column 7) \$2,832,073.00

Less Deductions to Date: (Sheet 2 of 2 Column 7) \$0.00

Gross Estimate: (Work in Place) 26.77% \$2,832,073.00

Less Amount Reserved: (10% of Gross Estimate) \$283,207.30 ✓

Total Amount Allowed To Date: \$2,548,865.70

Less Previous Estimates: \$1,714,184.63

Net Payment Request To Be Paid To Contractor: \$834,681.07

Reserve Payment to Contractor \$0.00

Balance of Contract To Date ✓ \$7,748,974.91 Accounting Auditor: BCE 1/16/2024

Less Previous Transfers To Reserve: \$190,464.96 ✓

Amount of Current Transfer: \$92,742.34

Prepared by: Charles J. Roarty, Jr.
 Charles J. Roarty, Jr., P.E. - NTH Consultants

Date: 2024 01 02

Recommended by: Joe Sivek
 Joe Sivek, P.E. - Consulting Engineer (Fishbeck)

Date: 1/10/2024

Recommended by: Evangelos Bantios
 Evangelos Bantios, P.E. - Project Engineer

Date: 1-16-2024

Approved by: Joel Brown
 Joel Brown, P.E. - Chief Engineer

Date: 1/18/2024

Approved by Board on: _____

**JIM NASH
 OAKLAND COUNTY WATER RESOURCES COMMISSIONER**

MEMO TO: Mr. Jim Nash, Chairman
of the Drainage Board for the Evergreen Farmington Sanitary Drain Ch20

FROM: Shawn Phelps, Chief of Fiscal Services
OCWRC Accounting *FOR SHAWN PHELPS*

DATE: January 23, 2024

SUBJECT: Request for Approval of Invoices

The following is a detail of charges paid from the Evergreen Farmington Sanitary Drain Ch20 and Invoices

Payable To	Ref No.	For	Amount
Hubbell, Roth & Clark, Inc.	SINV00226901	Inv# 0212409 - Contracted Services - Proj #17432	2,412.24
		Subtotal - Project #17432	\$ 2,412.24
Oakland Heights Development Inc	SINV00232193	Inv# 4243-000017740 - Contracted Services - Proj #17440	1,342.50
		Subtotal - Project #17440	\$ 1,342.50
Applied Science Inc	SINV00232196	Inv# 8547 - Contracted Services - Proj #17449	3,895.00
		Subtotal - Project #17449	\$ 3,895.00
Hubbell Roth and Clark Inc	SINV00232199	Inv# 0213243 - Engineering Services - Proj #17450	2,575.23
		Subtotal - Project #17450	\$ 2,575.23
ADS LLC	SINV00232191	Inv# 35515-1023-K - Contracted Services - Proj #17452	4,480.00
Fishbeck	SINV00234895	Inv# 432512 - Engineering Services - Proj #17452	61,116.62
Meadowbrook Insurancy Agency	TBP	Inv# 12368 - Insurance - Proj #17452	50,440.00
Meadowbrook Insurancy Agency	TBP	Inv# 11433 - Insurance - Proj #17452	150,000.00
NTH Consultants, Ltd.	SINV00229785	Inv# 634581 - Engineering Services - Proj #17452	2,058.50
NTH Consultants, Ltd.	SINV00233124	Inv# 634247 - Engineering Services - Proj #17452	9,207.56
NTH Consultants, Ltd.	SINV00233131	Inv# 634855 - Engineering Services - Proj #17452	9,300.75
NTH Consultants, Ltd.	SINV00233136	Inv# 634838 - Engineering Services - Proj #17452	3,427.50
PMA Consultants	SINV00233139	Inv# 04582.00 - 1.0-13 - Professional Services - Proj #17452	2,630.00
		Subtotal - Project #17452	\$ 292,660.93
Fishbeck	SINV00229396	Inv# 430701 - Engineering Services - Proj #17455	1,032.40
Fishbeck	SINV00233013	Inv# 431749 - Engineering Services - Proj #17455	2,857.50
Fishbeck	SINV00235072	Inv# 423339 - Engineering Services - Proj #17455	16,321.50
JMK Consultants Inc	SINV00234891	Inv# 1635 - Professional Services - Proj #17455	5,049.00
		Subtotal - Project #17455	\$ 25,260.40
JMK Consultants Inc	SINV00234891	Inv# 1635 - Professional Services - Proj #17459	4,114.00
		Subtotal - Project #17459	\$ 4,114.00
ADS LLC	SINV00231381	Inv# 35515-1023-I - Contracted Services	\$ 2,670.00
ADS LLC	SINV00231382	Inv# 35515-1023-A - Contracted Services	49,295.00
ADS LLC	SINV00233754	Inv# 35515-1123-I - Contracted Services	2,670.00
ADS LLC	SINV00233757	Inv# 35515-1123-A - Contracted Services	49,295.00
ADS LLC	SINV00233758	Inv# 35515-1123-K - Contracted Services	4,480.00
Applied Science Inc	SINV00231376	Inv# 8548 - Contracted Services	18,385.43
Applied Science Inc	SINV00231383	Inv# 8546 - Contracted Services	54,557.50
Applied Science Inc	SINV00231384	Inv# 8550 - Contracted Services	3,610.00
Dickinson Wright PLLC	SINV00233009	Inv# 1850937 - Contracted Services	1,066.50
Dickinson Wright PLLC	SINV00233010	Inv# 1862832 - Contracted Services	2,212.00
Dickinson Wright PLLC	SINV00233011	Inv# 1862833 - Contracted Services	1,540.50
Kennedy Industries Inc	SINV00231386	Inv# 639856 - Materials and Supplies	10,196.00
Orchard Hiltz and McCliment Inc	SINV00231387	Inv# 67721 - Contracted Services	2,354.00
Orchard Hiltz and McCliment Inc	SINV00231389	Inv# 69794 - Contracted Services	5,371.75
Pipeline Management Company	SINV00233852	Inv# 23-01009 - Contracted Services	1,980.00
Tractor Supply	PC00025994	Pcard purchase - Small Tools	2,174.98
		Subtotal	\$ 211,858.66
		Total	\$ 544,118.96

**7. Clinton River Water
Resource Recovery Facility**

AGENDA

DRAINAGE BOARD FOR THE CLINTON RIVER WATER RESOURCE RECOVERY FACILITY

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of December 19, 2023
3. Public Comments
4. Present Memorandum from Gary Nigro, P.E., Manager, dated January 23, 2024, requesting the Board award the CRWRRF Optimization Project – Phase II design contract to Jacobs Consultant, Inc. pending an agreeable cost negotiation with an amount not to exceed \$1,196,645 and authorize the Drainage Board Chairperson to execute the engineering services agreement once it is finalized
5. Present Memorandum from Gary Nigro, P.E., Manager, dated January 23, 2024, requesting the Board award the engineering consulting services contract to Jacobs Consultant, Inc. for an amount not to exceed \$276,544
6. Present request for Board approval of payment of invoices and/or reimbursement of the Drain Revolving Fund from the Maintenance Fund in the amount of \$230,143.09
7. Present request for Board approval of payment of invoices and/or reimbursement of the Drain Revolving Fund from the Construction Fund in the amount of \$15,491.10
8. Other business
9. Approve pro rata payment to Drainage Board members
10. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR THE CLINTON RIVER WATER RESOURCE RECOVERY FACILITY**

December 19, 2023

A meeting of the Drainage Board for the Clinton River Water Resource Recovery Facility was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 19th day of December 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

David Woodward, Chairperson of the Oakland County Board of Commissioners

ABSENT: None.

Minutes of the meeting held November 28, 2023, were presented for consideration. It was moved by Markham, supported by Woodward, that the minutes be approved.

ADOPTED: Yeas - 3
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

Engineering Work Order for Jacobs Consulting Inc., for the Optimization Project to increase the Engineering Services Agreement by a not-to-exceed amount of \$215,340 was presented. It was moved by Markham, supported by Woodward to approve Engineering Work Order for Jacobs Consulting Inc., for the Optimization Project to increase the Engineering Services Agreement by a not-to-exceed amount of \$215,340 as presented.

ADOPTED: Yeas - 3
Nays - 0

A request for approval of payment of invoices and/or reimbursement of the Drain Revolving Fund from the Maintenance Fund in the amount of \$295,286.19 (as attached) was presented. It was moved by Markham, supported by Woodward, to approve the payment of invoices and/or reimbursement of the Drain Revolving Fund from the Maintenance Fund in the amount of \$295,286.19.

ADOPTED: Yeas - 3
Nays - 0

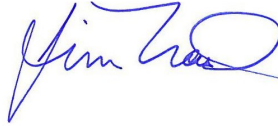
A request for approval of payment of invoices and/or reimbursement of the Drain Revolving Fund from the Construction Fund in the amount of \$10,505.95 (as attached) was presented. It was moved by Markham, supported by Woodward, to approve the payment of invoices and/or reimbursement of the Drain Revolving Fund from the Construction Fund in the amount of \$10,505.95.

ADOPTED: Yeas - 3
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham and Mr. Woodward.

ADOPTED: Yeas - 3
Nays - 0

There being no further business, the meeting was adjourned.



Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for the Clinton River Water Resource Recovery Facility, Oakland County, Michigan, held on the 19th day of December 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for the Clinton River Water Resource Recovery Facility.



Jim Nash, Chairperson

Dated: December 19, 2023

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER****MEMORANDUM**

TO: Jim Nash, Chairperson
Clinton River Water Resource Recovery Facility Drainage District

FROM: Gary Nigro, P.E., Manager

SUBJECT: Optimization Project Phase II - Engineering Design Contract

DATE: January 23, 2024

The Clinton River Water Resource Recovery Facility (CRWRRF) Optimization Project - Phase II has been approved for a FY 2024 loan by the State Revolving Fund (SRF). A proposal and scope for design services were received by Jacobs Consultant, Inc. which previously completed the engineering design and is currently performing construction administration services for Phase I. The scope for Phase II includes design of a Mobile Organic Biofilm (MOB) process to improve the secondary treatment capacity and achieve the goals desired by operations staff. The MOB process is an alternative recommended by Jacobs that is more economical and less risky during construction when compared to the original scope of constructing two new clarifiers near the existing equipment. Staff is reviewing Jacobs's scope and is working on contract language to meet the requirements of the SRF program.

Jacobs's fee, which includes all design services up through the bidding phase, is \$1,196,645. This does not include the construction administration phase or Resident Project Representative tasks. The cost for construction phase services must be negotiated and presented to the board for approval later.

Due to the aggressive SRF funding schedule, Jacobs is already proceeding with design, at-risk, while staff finalizes the engineering services agreement.

Requested Action: Award the CRWRRF Optimization Project - Phase II design contract to Jacobs Consultant, Inc., pending an agreeable cost negotiation with an amount not to exceed \$1,196,645 and authorize the Drainage Board Chairperson to execute the engineering services agreement once it is finalized.

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER****MEMORANDUM**

TO: Jim Nash, Chairperson
Clinton River Water Resource Recovery Facility Drainage District

FROM: Gary Nigro, P.E., Manager

SUBJECT: Net Zero Energy Study

DATE: January 23, 2024

Over the past several years, the Clinton River Water Resource Recovery Facility has been taking steps toward greenhouse gas emission reduction and energy independence from conventional energy sources. In 2019, the Thermal Hydrolysis Process system was built to increase biogas production from the anaerobic digesters. Currently under construction is Phase 1 of the Optimization Project, which includes the installation of cogeneration units. This new equipment will utilize the increased biogas to create both heat and power, reducing our dependence on utility companies for natural gas and electricity.

Acknowledging our objective of energy neutrality, Jacobs Consultant, Inc. has provided a proposal to perform an energy study focused on the two main methods to achieve this goal. The first method will maximize the amount of energy created from biosolids and other green energy sources. The second method will reduce energy consumption throughout the plant.

The attached proposal from Jacobs provides a framework to move toward the sustainability goals for the facility. These services would be completed under the terms and conditions of its existing contract for a not-to-exceed amount of \$276,544. This study is expected to be completed within approximately six months following authorization to proceed.

Requested Action: Award the engineering consulting services contract to Jacobs Consultant, Inc. for an amount not to exceed \$276,544.



**Proposal for Clinton River WRRF Net Zero/Net Positive Energy Study
and Implementation Plan**

November 15, 2023



Background

The Oakland County Water Resources Commissioner’s Office (WRC) seeks to operate the Clinton River Water Resource Recovery Facility (WRRF) sustainably and reliably as an energy neutral, or possibly as an energy positive facility and reduce greenhouse gas (GHG) emissions. Energy neutral, or net zero, refers to facilities that create the same (or greater) amount of energy on-site as they use for wastewater processing and building needs. There are two methods to achieve energy neutrality that will be evaluated simultaneously in this study:

- 1) Maximizing the amount of energy created from the biosolids; and
- 2) Reducing energy usage throughout the plant.

Over the past few years, WRC has taken a significant step towards energy neutrality by installing the Thermal Hydrolysis Process (THP) system in 2019 to increase biogas production from the digested biosolids. Further, Phase 1 of the Plant Optimization Project, currently under construction, will be installing two (2) 600 kW cogeneration units, which will use the digester biogas to create heat and power, thus reducing natural gas and electrical power needs from the utility companies. The cogeneration units will be in service in late 2026.

Through its extensive amount of recent past studies, design-related work and pilot testing at the Clinton River WRRF, Jacobs has focused this study on improvements that will most significantly “move the needle” towards energy neutrality and greenhouse gas emission reduction.

Why Should Study be Completed Now?

WRC has a number of planned capital improvements in the aeration system. The aeration system is a key area of potential energy savings to be investigated in this study and Jacobs will provide guidance and direction for the planned improvements to provide both energy efficiency and long-term reliability.

Jacobs is aware of a significant upcoming grant opportunity through the Inflation Reduction Act, which could potentially provide grant funding to the MHP system and high-strength organic waste (HSOW) acceptance system. Grant applications need to be submitted by April 2024.

Further, this project will help Oakland County be on track to meet its greenhouse gas emission reduction goals.

Study Objectives and Benefits

The overall objective of the study is to evaluate and identify alternatives that will move the CRWRRF towards “net zero” energy and resiliency. The study will include the following tasks (*with benefits in italics*):

1. Evaluate current (baseline) and planned future energy consumption and corresponding greenhouse gas emissions (GHG) at the Auburn and East Boulevard Plants – *To most efficiently reach net zero, WRC needs to know its current levels of energy use and GHG emissions at the CRWRRF.*
2. Evaluate capital and operations alternatives to move towards net-zero energy, including budgetary-level capital costs and level of energy production or reduction – *Life-cycle costs will provide the number of years for a simple payback, which will help prioritize the scheduling of each alternative in the implementation plan.*
3. Assist with federal or State grant funding applications – *The Inflation Reduction Act provides funding for energy production projects, such as the Microbial Hydrolysis Process and acceptance of HSOWs. Grant funding would ease the impact on rate increases.*
4. Prepare Energy Study Report with recommendations, proposed implementation schedule and planning-level project costs for budgetary purposes – *Jacobs will collaborate with WRC staff so that the report will provide the road map for achieving net zero energy, while controlling rate increases.*

Scope of Work

Task 1 - Develop Baseline Conditions

Task 1A – Develop Current (Baseline) Energy Consumption

To evaluate baseline energy consumption, Jacobs will obtain (if necessary) and review monthly utility bills (i.e., electric and natural gas) for the Auburn and East Boulevard Plants from 2019 to 2022, which matches the period of evaluation for the Phase 1 Design of the CRWRRF Optimization Project. Jacobs will also obtain and review plant operating data for both plants for the same period. (Note that Jacobs has this information for the Auburn Plant, but not the East Boulevard Plant). With this information, Jacobs will develop a process model of the two plants to generate estimates of energy usage at each major unit process.

Task 1B – Develop Future Baseline Conditions

Future baseline conditions will include the addition of the anticipated energy production of the cogeneration units currently under construction. This will be the baseline condition by which the proposed alternatives in Task 2 will be evaluated.

Task 1C - Estimate Excess Digestion Capacity

Using the baseline information from Task 1B, Jacobs will estimate the excess digestion capacity available at the Auburn Plant, up to the biogas capacity of the two proposed cogeneration units. This estimate will provide the approximate amount of high-strength solid waste (HSOW) streams that could be accepted at the plant (see Task 2A for additional HSOW details). There should be more than enough HSOWs in the Metro Detroit area, and this estimate will allow WRC and Jacobs to be more selective in potential HSOW sources.

The information from these subtasks will be provided in a tech memo (TM), which will be presented and reviewed in a project progress meeting with WRC.

Task 2 - Evaluation of Energy Opportunities at the Clinton River WRRF

Jacobs will perform an evaluation of individual capital improvements and operational modifications to move toward net zero energy usage. The evaluation will include the following alternatives:

- A. Acceptance of HSOWs to increase biogas production
- B. Addition of Microbial Hydrolysis Process (MHP) to increase biogas production
- C. Evaluation of aeration system improvements at the Auburn and East Boulevard Plants
- D. Addition of solar panels

Task 2A - Acceptance of High-Strength Organic Wastes

Acceptance of HSOWs for co-digestion in the existing digesters would increase biogas production, thereby increasing energy production from the cogeneration units. Because of the unique site-specific conditions around any plant, Jacobs recommends a HSOW survey to identify potential sources of HSOWs in the vicinity of the CRWRRF, and then develop conceptual modifications to the Septage Receiving Facility to accept the HSOWs. Each of the subtasks is described below.

Identification and Survey of Potential Sources of High-Strength Organic Wastes: The objective of this task will be to provide a realistic outlook of potential sources of HSOWs and revenue that could be generated from accepting HSOWs at the CRWRRF. Based on Jacobs' experience conducting these surveys in other communities in the United States, the general categories of potential known sources of HSOWs that would be appropriate for co-digestion at the CRWRRF include:

- Brown grease from restaurants
- Commercial food waste from grocery stores, restaurants, hotels, and food manufacturing

Proposal for Net Zero Energy Study and Implementation Plan

- Brewery waste
- Others based on WRC staff input and local knowledge

Jacobs recognizes that these types of evaluations are unique to each community due to the commercial and industrial mix in the vicinity of the plant. Jacobs will work closely with WRC staff, or other Oakland County staff, who may be familiar with specific industries or commercial establishments that could provide a single or large portion of HSOWs, which would simplify coordination for future hauling. At the beginning of this task, Jacobs will conduct a meeting with WRC staff to discuss the scope, goals, specific commercial or industrial facility input, and expected task outcomes.

Jacobs will perform an initial high-level evaluation of the amount HSOWs from restaurants and commercial food waste sources based on national averages and experience with other communities. The goal of this task is to compare the estimated amount of HSOWs in the vicinity of the CRWRRF to the additional available capacity of the digestion process. As noted in Task 1C above, there should be more than enough HSOWs in the Metro Detroit area (we will start with an area of about a 30-mile radius around the plant), and this estimate will allow WRC and Jacobs to be more selective in potential HSOW sources.

The next step will be to better understand how the HSOWs identified above are currently being handled. For example, a cursory investigation shows that there are multiple haulers of brown grease in the area. Jacobs will investigate whether there are current programs for handling food waste and brewery wastes in the area.

Based on the high-level information gathered above, Jacobs will develop customized surveys to gain information about the site-specific conditions. Survey questions include, but are not limited to:

- Type(s) of HSOWs generated by entity
- Approximate amount of HSOW generated
- Current method and cost of "disposal"
- Willingness to re-direct HSOWs to a new location if price is right

Based on Jacobs' experience with similar surveys, we have found that the best way to obtain this information is through personal contact with someone at the commercial establishment or industrial facility. (E-mail, social media or other types of surveys do not have an acceptable response rate). As such, Jacobs staff will attempt to make contact with up to 10 of the leading firms identified to help complete the survey information.

It should be noted that firm commitments will not be obtained from HSOW generators, although Jacobs will attempt to gauge their willingness to re-direct their HSOW during the personal surveys. Similarly, sampling of the potential waste will not be performed, rather typical characteristics will be used. Actual waste characterization would be performed in a subsequent step (not included in this scope and budget) if the Business Case Evaluation shows that it is beneficial to accept the waste. Note that WRC would not start to accept this HSOWs until after the cogeneration units become operational, which will be at least late 2026. So, this should provide WRC with adequate time to make necessary arrangements.

Jacobs will generate a HSOW Identification and Survey Results TM documenting the procedures and findings of this task and review the draft with WRC staff during a progress meeting.

Modifications to Septage Receiving Facility to Accept HSOWs: Jacobs will use the information gathered from the identification and surveys of potential HSOWs to develop a conceptual design of anticipated additional process equipment or facilities needed, if any, to accept and pre-process the HSOWs at or near the existing Septage Receiving Facility. Jacobs will look to minimize the capital costs of any additional equipment and minimize the impact of HSOW processing on the operation and maintenance (O&M) staff. The addition of HSOWs could occur with or without the addition of the MHP system described in the next subtask.

Jacobs will develop budgetary capital costs for the additional equipment and will estimate the increased biogas production from the HSOWs and associated energy benefits. Jacobs will also estimate the O&M costs associated with increased solids processing and disposal from the addition of the HSOWs.

Task 2B - Microbial Hydrolysis Process (MHP) to Increase Biogas Production

In a 2021 study for WRC, Jacobs evaluated and pilot tested the benefits of an add-on digestion process called Microbial Hydrolysis Process (MHP), formerly referred to as C. Bescii Hydrolysis Process. This process further increases the biogas production from the existing digestion/THP process and it decreases solids production and dewatering polymer demand.

Jacobs will review and update, as necessary, the conceptual design for the MHP from the 2021 study with WRC WRRF staff. Updated budgetary capital costs will be developed. Jacobs will also estimate the benefits of the increased biogas production on the amount of energy produced.

Task 2C – Aeration System Improvements at Auburn and East Boulevard Plant

Using the process model developed in Task 1A, Jacobs will review the most energy-intensive processes. Because the aeration systems of any activated sludge plant consume about half of the total energy used, Jacobs will specifically evaluate aeration system improvements at the Auburn and East Boulevard Plants. Specific scope items are indicated below:

1. Replace existing blowers and diffusers with more efficient units or systems
2. Increased monitoring and control of aeration system to reduce aeration

Task 2D – Evaluation of Solar Power

Jacobs will evaluate the economic benefit of installing solar photovoltaic (PV) panels in the vacant area east of the plant. The switchgear being installed under Phase 1 Plant Optimization project has space allocated for a future solar connection. This evaluation will present the costs, electrical output and simple payback of solar panels in the available space.

Task 3 – Evaluation of Effluent Disinfection Alternatives – Optional Task

The CRWRRF currently uses sodium hypochlorite for effluent disinfection and sodium bisulfite for dechlorination before discharge to the Clinton River. Chemical costs have increased significantly over the past few years and the poor reliability of chemical deliveries has recently caused the plant to nearly run out of chemicals and switch to a supplier that is located further away.

Because of these issues, WRC desires to conduct a disinfection alternatives evaluation to determine the best alternative moving forward, based on expected costs, reliability, health and safety, and other relevant factors. Disinfectants to be considered include:

1. **Ultraviolet (UV) Light:** Although electrical energy usage is higher for this alternative, the life-cycle costs (capital and operating costs over 20 year period) can be lower, particularly with rising sodium hypochlorite costs. Also, UV disinfection is more reliable because it does not rely outside suppliers and UV disinfection electrical power would be backed-up by the new emergency generators being installed under the on-going Phase 1 Plant Optimization project.
2. **Sodium Hypochlorite/Sodium Bisulfite:** This is the status quo alternative. The plant switched from chlorine gas to sodium hypochlorite and sodium bisulfite in the late 1990's. Continued application of these chemicals will require rehabilitation and replacement of existing equipment and facilities at some point in the future (capital costs and timing will be determined in this study to allow comparison with other alternatives.)

3. **On-Site Hypochlorite Generation:** WRC has considered on-site hypochlorite generation at the George W. Kuhn (GWK) Retention Treatment Basin (RTB). If generation is cost-effective at this location, it could be used to provide a reliable source of hypochlorite for the CRWRRF. For this study, Jacobs will work with WRC to obtain a cost estimate from a leading hypochlorite generator to compare with the cost of obtaining hypochlorite from the current chemical supplier.

This evaluation will utilize recent concrete condition assessment of the chlorine contact tanks conducted by NTH Consultants in 2022. Jacobs will develop budgetary capital costs and expected operating costs (and life-cycle costs) for each alternative to provide for cost comparison, and a recommendation will be made based on cost and non-cost factors.

This evaluation will allow for estimate of future electrical power usage and its impact on WRC's net zero energy goal.

Task 4 – Net Zero Energy Study Report

The information generated from the analyses in Tasks 1 and 2 will be summarized in a Report. Project costs (i.e., construction, engineering and WRC costs) will be presented for each energy opportunity, along with a simple payback analysis. The implementation plan will develop a recommended sequence and implementation schedule, taking into account other known capital improvements (costs and schedule from WRC). The study will also list other areas of focus for energy reduction measures that could be part of future improvement projects. These include building heating and cooling improvements, and other process improvements.

A draft report will be provided to WRC for review. A meeting will be held with WRC and Jacobs staff to review the findings of the report and answer WRC's questions. A final report will address WRC's comments.

Task 5 – Project Management and Coordination

Jacobs will coordinate all the tasks with WRC staff and internally with Jacobs staff. Jacobs Project Manager (Allen Gelderloos) will provide regular updates to WRC's Project Manager (Gary Nigro) throughout the entire project and Jacobs will provide overall progress meetings as necessary throughout the project.

Task 6 – Grant Funding Identification and Assistance – Optional Task

Jacobs has assisted WRC with numerous Federal and State grant and funding applications in the past. Jacobs is aware of an upcoming grant opportunity through the Inflation Reduction Act, which could potentially provide grant funding to the MHP system and HSOW acceptance system. Coordination with the Southeast Michigan Council of Governments (SEMCOG) will be required for this effort. Because of the details of the grant programs are not fully described at this time, an allowance amount is provided in the fee.

Project Schedule

The proposed project schedule is shown in Table 1.

Table 1. Project Schedule

Task	Duration	Scheduled Period
Task 1: Develop Baseline Conditions	8 weeks	1/2/24 to 2/27/24
Task 2: Evaluation of Energy Opportunities	10 weeks	2/27/24 to 5/7/24
A. Acceptance of High-Strength Organic Wastes		
B. Addition of Microbial Hydrolysis Process		
C. Evaluation of Aeration System Improvements		
D. Addition of Solar Panels		
Task 3: Evaluation of Disinfection Alternatives – Optional Task	10 weeks	1/26/24 to 4/5/24
Task 4: Study Report	8 weeks	5/7/24 to 5/28/24
Draft Report	3 weeks	5/7/24 to 5/28/24
Review by WRC and Review Meeting	3 weeks	5/28/24 to 6/18/24
Finalize Report	2 weeks	6/18/24 to 7/2/24
Task 5: Project Management and Coordination	Entire project	
Task 6: Grant Funding Assistance – Optional Task	As needed	

Proposed Project Fee

The proposed fee for this project is presented in Table 2 on the next page. A detailed breakdown is presented in Table 3.

Table 2. Proposed Project Fee

Task			
No.	Task / Subtask Description	Subtask	Total Task
1	Develop Baseline Conditions		\$26,470
	A. Develop Baseline Conditions	\$19,869	
	B. Develop Future Baseline Conditions	\$3,265	
	C. Estimate Excess Digestion Capacity	\$3,336	
2	Evaluation of Energy Opportunities		\$116,463
	A. Acceptance of HSOWs	\$68,028	
	B. Addition of MHP	\$16,125	
	C. Aeration System Improvements	\$22,279	
	D. Addition of Solar Panels	\$10,031	
3	Evaluation of Effluent Disinfection Alternatives - Optional Task		\$34,639
4	Study Report and Implementation Plan		\$48,975
5	Project Management and Coordination		\$19,997
6	Grant Funding - Optional Task		\$30,000
TOTAL BASE FEE (without Optional Tasks)			\$211,905
Optional Tasks			\$64,640
TOTAL FEE (with Optional Tasks)			\$276,544



Table 3. Detailed Breakdown of Project Fee

Oakland County Water Resources Commissioner
Clinton River WRRF Net Zero Energy Study

NOTES/ASSUMPTIONS:
 1) Multiplier: 2.84, consistent with all other Jacobs' contracts for WRC
 2) Since project will likely start in 2024, 2023 rates are increased by 2.5% to represent 2024.

Task Description	Project Manager		Lead HSOW		HSOW Support		Engineer		Lead Digestion		Modeling Support		Lead Electrical Designer		Lead Energy Evaluator		Lead Process and Modeling		Cost Estimator		Lead Solar		Process Mechanical Support		CAD Techs		Lead Grant Support		Admin		Total Hours by Task	Total Labor By Task	Total Expenses	Total by Task		
	Allen Gelderloos	Lindsey Lopez	Joey Velasquez	Brendan Wrobel	Dave Parry	Medhavi Gupta	Ian Hammons	Emma Shen	Tom Johnson	Mike Gndadt	Andy Solberg	Dustin Maas	Various	Russell Koff	Sandy Pepper																					
2023 Raw Rates (see notes)	\$89.38	\$78.47	\$43.88	\$43.27	\$136.64	\$35.57	\$77.18	\$58.86	\$106.01	\$66.39	\$137.02	\$62.68	\$35.00	\$91.34	\$37.74																					
2023 Billing Rate	\$253.73	\$222.76	\$124.57	\$122.84	\$387.90	\$100.98	\$219.10	\$167.09	\$300.94	\$188.47	\$388.98	\$177.94	\$99.36	\$259.30	\$107.14																					
2024 Billing Rate	\$260.08	\$228.33	\$127.68	\$125.91	\$397.59	\$103.50	\$224.58	\$171.27	\$308.47	\$193.18	\$398.70	\$182.39	\$101.84	\$265.78	\$109.82																					
	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees				
Task 1	Develop Baseline Conditions																																			
A. Develop Baseline Conditions	10	\$2,601		\$0		\$0	10	\$1,259		\$0	50	\$5,175	4	\$898	40	\$6,851	10	\$3,085		\$0		\$0		\$0		\$0		\$0		\$0		\$0	124	\$19,869		\$19,869
B. Develop Future Baseline Conditions	2	\$520		\$0		\$0		\$0	5	\$1,988	4	\$414		\$0	2	\$343		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	13	\$3,265		\$3,265
C. Estimate Excess Digestion Capacity	2	\$520		\$0		\$0		\$0	5	\$1,988	8	\$828		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	15	\$3,336		\$3,336
Task 2	Evaluation of Energy Opportunities																																			
A. Acceptance of HSOWs	30	\$7,802	60	\$13,700	160	\$20,429	80	\$10,073	10	\$3,976		\$0		\$0		\$0	20	\$3,864		\$0	20	\$3,648	20	\$2,037		\$0		\$0		\$0		\$0	400	\$65,528	\$2,500	\$68,028
B. Addition of MHP	10	\$2,601		\$0		\$0		\$0	10	\$3,976		\$0		\$0		\$0	20	\$3,864		\$0	20	\$3,648	20	\$2,037		\$0		\$0		\$0		\$0	80	\$16,125		\$16,125
C. Aeration System Improvements	10	\$2,601		\$0		\$0	20	\$2,518		\$0	40	\$4,140		\$0	40	\$6,851	20	\$6,169		\$0		\$0		\$0		\$0		\$0		\$0		\$0	130	\$22,279		\$22,279
D. Addition of Solar Panels	4	\$1,040		\$0		\$0	20	\$2,518		\$0		\$0	4	\$898		\$0		\$0	4	\$773	10	\$3,987		\$0	8	\$815		\$0		\$0		\$0	50	\$10,031		\$10,031
Task 3	Evaluation of Effluent Disinfection Alternatives - Optional Task																																			
	20	\$5,202		\$0		\$0	80	\$10,073		\$0		\$0		\$0	20	\$6,169	20	\$3,864		\$0	40	\$7,295	10	\$1,018		\$0		\$0		\$0		\$0	190	\$33,621		\$33,621
Task 4	Study Report and Implementation Plan																																			
	40	\$10,403		\$0		\$0	100	\$12,591	10	\$3,976	40	\$4,140		\$0	40	\$6,851	10	\$3,085		\$0		\$0	20	\$2,037		\$0	40	\$4,393		\$0	300	\$47,475	\$1,500	\$48,975		
Task 5	Project Management and Coordination																																			
	60	\$15,605		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	40	\$4,393		\$0	100	\$19,997		\$19,997
Task 6	Grant Funding - Optional Task																																			
	20	\$5,202		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	93	\$24,718		\$0		\$0	113	\$29,919	\$81	\$30,000
Total Project Not-to-Exceed	208	\$54,096	60	\$13,700	160	\$20,429	310	\$39,031	40	\$15,904	142	\$14,697	8	\$1,797	122	\$20,895	60	\$18,508	64	\$12,364	10	\$3,987	80	\$14,591	78	\$7,944	93	\$24,718	80	\$8,785	1,515	\$271,445	\$4,081	\$275,526		

MEMO TO: Mr. Jim Nash, Chairman
of the Drainage Board for the CLINTON RIVER WATER RESOURCE RECOVERY FACILITY DRAIN - (Maintenance)

FROM: Shawn Phelps, Chief of Fiscal Services *For Shawn Phelps*
OCWRC Accounting

DATE: January 23, 2024

SUBJECT: Request for Approval of Invoices

The following is a detail of charges paid from the Drain Revolving Fund and Invoices

Payable To	Ref No.	For	Amount
USA Blue Book	PC00024860	Pcard - Materials and Supplies	\$ 5,698.25
USA Blue Book	PC00026663	Pcard - Lab Supplies	3,812.99
USA Blue Book	PC00027233	Pcard - Lab Supplies	3,114.75
USA Blue Book	PC00024857	Pcard - Lab Supplies	1,369.26
USA Blue Book	PC00026664	Pcard - Lab Supplies	2,631.07
Grainger	PC00027471	Pcard - Materials and Supplies	1,945.40
Sensaphone	PC00026444	Pcard - Contracted Services	1,197.60
Young Supply Compnay	PC00027474	Pcard - Materials and Supplies	4,555.40
ADS Environmental Services	V # SINV00233752	Invoice # 35515-1123-J - Contracted Services	930.00
Applied Science Inc	V # SINV00231376	Invoice # 8548 - Contracted Services	408.54
Cambi Inc	TBP	Invoice # 609810-SP-034 - Material and Supplies	6,965.42
D3W Industries	V # SINV00226282	Invoice # 4177 - Material and Supplies	5,720.00
D3W Industries	V # SINV00229684	Invoice # 4209 - Material and Supplies	5,720.00
D3W Industries	V # SINV00231488	Invoice # 4227 - Material and Supplies	5,720.00
D J Conley	V # SINV00229257	Invoice # SI-50852-1 - Material and Supplies	1,881.12
Eurofins Environment Testing	V # SINV00226288	Invoice # 1900053798 - Laboraratory Fees	1,057.20
Eurofins Environment Testing	V # SINV00229738	Invoice # 1900053928 - Laboraratory Fees	1,057.20
Eurofins Environment Testing	TBP	Invoice # 1900054005 - Laboraratory Fees	1,664.40
Eurofins Environment Testing	V # SINV00226289	Invoice # 1900053816 - Laboraratory Fees	1,664.40
Haviland Products Company	V # SINV00231490	Invoice # 488667 - Chemical Treatment	14,985.00
Haviland Products Company	TBP	Invoice # 491337 - Chemical Treatment	14,985.00
Haviland Products Company	V # SINV00232183	Invoice # 491809 - Chemical Treatment	14,985.00
Haviland Products Company	V # SINV00229752	Invoice # 490730 - Chemical Treatment	5,956.00
Haviland Products Company	V # SINV00229748	Invoice # 490633 - Chemical Treatment	9,029.00
Galloup Forberg Smith Merlo Energy	V # SINV00229764	Invoice # S113415949.001 - Contracted Services	4,176.15
LaSalle Agri Inc	V # SINV00233749	Invoice # 1959 - Land Application	16,577.75
McNaughton-McKay Electric Company	V # SINV00231495	Invoice # 23824115-00 - Material and Supplies	1,193.81
PVS Technologies Inc	V # SINV00231500	Invoice # 346046 - Chemical Treatment	2,639.96
PVS Technologies Inc	V # SINV00229678	Invoice # 346102 - Chemical Treatment	3,235.16
PVS Technologies Inc	TBP	Invoice # 348855 - Chemical Treatment	5,123.68
State of Michigan /EGLE	TBP	Invoice # 11171448 - Biosolids Land Application Fee 2024	6,075.00
		Subtotal	\$ 156,074.51
Doetsch Environmental Services	V # SINV00234437	Invoice # 72592 - Contracted Services - Proj # 1-3469	47,825.00
		Subtotal - Project 1-3469	\$ 47,825.00
D J Conley Associates Inc	V # SINV00231485	Invoice # SI-51068-1 - Material and Supplies - Proj # 1-3470	\$ 1,355.91
		Subtotal - Project 1-3470	\$ 1,355.91
Fishbeck	V # SINV00231440	Invoice # 431583 - Engineering Services - 12/22/23 - Proj # 1-3042	434.25
		Subtotal - Project 1-3042	\$ 434.25
Tetra Tech, Inc	V # SINV00231505	Invoice # 52174979 - Engineering Admin - 11/24/23 - Proj # 1-3304	\$ 3,025.00
		Subtotal - Project 1-3304	\$ 3,025.00
PM Environmental	V # SINV00232339	Invoice # 105794 - Contracted Services - Proj # 1-7085	\$ 5,077.72
PM Environmental	V # SINV00234898	Invoice # 105955 - Contracted Services - Proj # 1-7085	\$ 690.00
		Subtotal - Project 1-7085	\$ 5,767.72

Actuator Specialities	V # SINV00229233	Invoice # 5562 - Engineering Admin - Proj # 1-3492	\$	6,065.70
Tetra Tech, Inc	TBP	Invoice # 52183636 - Engineering Program - 12/29/23 - Proj # 1-3492	\$	1,520.00
		Subtotal - Project 1-3492	\$	7,585.70
Gamalski Building Specialties Inc	V # SINV00232184	Invoice # 162589 - Material and Supplies - Proj # 1-7048	\$	2,120.00
		Subtotal - Project 1-7048	\$	2,120.00
NTH Consultants Ltd	V # SINV00232182	Invoice # 634835 - Engineering & Survey - 12/29/23 - Proj 1-7162	\$	2,221.00
		Subtotal - Project 1-7162	\$	2,221.00
Technical Service Professionals LLC	V # SINV00231501	Invoice # L23048.1-1 - Contracted Services - Proj 1-7470	\$	3,734.00
		Subtotal - Project 1-7470	\$	3,734.00
		Total	\$	230,143.09

MEMO TO: Mr. Jim Nash, Chairman
of the Drainage Board for the CLINTON RIVER WATER RESOURCE RECOVERY FACILITY DRAIN - (Construction)

FROM: Shawn Phelps, Chief of Fiscal Services
OCWRC Accounting

FOR SHAWN PHELPS

DATE: January 23, 2024

SUBJECT: Request for Board approval of payment of the following invoices:

	Ref No.	For	Amount
Davis & Davis Law Offices PLC	V # SIN00231484	Invoice # OCWRC-12-13-23 - Legal Services - 10/11/23 - 12/13/23	\$ 6,850.00
		Total for Project # 1-2181	\$ 6,850.00
Jacobs Consultant, Inc	V # SIN00231493	Invoice # C6A21700-11 - Engineering and Survey - 11/24/23 - Proj # 1-7461	8,641.10
		Total for Project # 1-7461	\$ 8,641.10
		Total	\$ 15,491.10

8. Augusta Drain

AGENDA

DRAINAGE BOARD FOR THE AUGUSTA DRAIN

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of October 24, 2023
3. Public Comments
4. Present Memorandum from Geoff S. Wilson, P.E., Chief Engineer, dated January 23, 2024, requesting the Board authorize HRC to proceed with the engineering services outlined in its December 18, 2023 proposal for an amount not-to-exceed \$151,000
5. Other business
6. Approve pro rata payment to Drainage Board members
7. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR THE AUGUSTA DRAIN**

October 24, 2023

A meeting of the Drainage Board for the Augusta Drain was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 24th day of October 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

David Woodward, Chairperson of the Oakland County Board of Commissioners

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

ABSENT: None.

Minutes of the meeting held April 25, 2023, were presented for consideration. It was moved by Markham, supported by Woodward, that the minutes be approved.

ADOPTED: Yeas - 3
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

A memorandum from Geoff S. Wilson, P.E., Chief Engineer, dated October 24, 2023, requesting the Board authorize staff to proceed with engineering procurement for design services was presented. It was moved by Markham, supported by Woodward, to authorize staff to proceed with engineering procurement for design services as presented.

ADOPTED: Yeas - 3
Nays - 0

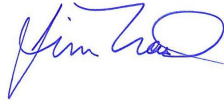
A request for approval of payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$151,837.95 (as attached) was presented. It was moved by Markham, supported by Woodward, to approve the payment of invoices and/or reimbursement of the Drain Revolving Fund in the amount of \$151,837.95.

ADOPTED: Yeas - 3
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham and Mr. Woodward.

ADOPTED: Yeas - 3
Nays - 0

There being no further business, the meeting was adjourned.

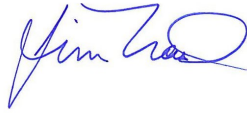
A handwritten signature in blue ink, appearing to read "Jim Nash".

Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for the Augusta Drain, Oakland County, Michigan, held on the 24th day of October 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for the Augusta Drain Drainage District.



Jim Nash, Chairperson

Dated: October 24, 2023

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER****MEMORANDUM**

TO: Jim Nash, Chairperson of the Augusta Drain Drainage Board

FROM: Geoff S. Wilson, P.E. – Chief Engineer

SUBJECT: Augusta Drain Rehabilitation Project – Engineering Services

DATE: January 23, 2024

Three Oakland County drains have been awarded stormwater grants from the Clean Water State Revolving Fund for fiscal year 2024. They include a \$615,000 grant for the Joachim Drain, an \$800,000 grant for the Pontiac Clinton River No. 1 Drain, and a \$920,000 grant for the Augusta Drain.

These grants are intended to cover 100% of the cost of the rehabilitation projects identified in the project plans for the respective drainage districts. This rehabilitation work consists of repairing pipes, drainage structures, a weir, and a drop-fall structure that are all located within the City of Pontiac. The work was previously identified by WRC staff and budgeted by the City of Pontiac as part of a six-year plan beginning in 2023.

Consultant engineering services are needed for the Augusta Drain for rehabilitation of the Drop Fall Structure and adjacent Junction Chamber located 250 feet northwest of 404 Lake Laura Drive, as well as pipe rehabilitation, including spot lining and grouting of storm pipes and rehabilitation of storm manholes. The project also includes the construction of a riparian buffer strip along the perimeter of Osmun Lake within North Kiwanis Park, also known locally as Stanley Park. This will improve water quality by addressing non-point source pollution.

Hubbell, Roth, & Clark, Inc. (HRC) has provided a proposal for preliminary and design engineering, bidding assistance, and construction engineering. HRC has worked on many similar projects and is familiar with the individual work sites and scopes. A budget has been established based on its existing as-needed services contract with Oakland County.

Requested Action: Authorize HRC to proceed with the engineering services outlined in its December 18, 2023 proposal for an amount not to exceed \$151,000.



December 18, 2023

Oakland County Water Resources Commissioner
One Public Works Drive
Waterford, Michigan 48328

Attn: Mr. Geoff Wilson, P.E., Chief Engineer

Re: Augusta Drain Improvements
Proposal for Professional and Construction Engineering Services
Clean Water State Revolving Fund Project No. 5896-01

HRC Job No. 20220896

Dear Mr. Wilson:

Pursuant to your request, Hubbell, Roth & Clark, Inc. (HRC) is pleased to submit this proposal to provide professional and construction engineering services related to the design and construction of the Augusta Drain (Drain) Improvement project in the City of Pontiac. Our services, as described herein, were discussed at the virtual meeting held on November 27, 2023, as well as our previous involvement in developing the FY24 CWSRF Project Plan for the Drain Improvements.

We understand that the Oakland County Water Resources Commissioner's office (OCWRC) was awarded American Rescue Plan (ARP) grant funding for FY2024 in the amount of \$920,000 to improve the Drain. This grant allows OCWRC, on behalf of the drainage district, to meet the goals and objectives identified in the Asset Management Plan developed for the Drainage District in 2019 and ultimately improve the aged system at a minimal cost to the community. The Drain is an established County Drain under Chapter 20 Drain Code, Act 40 of 1956. The Drain Code Act 40 of 1956 gives the OCWRC, on behalf of the drainage district, powers and responsibilities to maintain and govern legally established drainage systems within the County.

The proposed Drain improvement was outlined in the FY24 CWSRF Project Plan. The Project Plan identified the following improvements:

- ≡ Rehabilitation of the Drop Fall Structure and adjacent Junction Chamber located 250 ft Northwest of 404 Lake Laura Dr.
- ≡ Pipe rehabilitation, including spot lining and grouting of storm pipes and rehabilitation of storm manholes.
- ≡ Construct a riparian buffer strip along the perimeter of Osmun Lake within North Kiwanis Park, also known locally as Stanley Park, to improve water quality by addressing non-point source pollution.

Overall, we will assist your office in developing the required project documents to ensure the proposed rehabilitation projects can be competitively bid for and awarded to a contractor in accordance with the required milestone dates for the grant awarded as part of the CWSRF program. We know this grant is an exceptional opportunity for OCWRC and the drainage district, and time is of the essence due to the timing required to meet the grant requirements.

SCOPE OF SERVICES

HRC will assist with the following major work items:

Preliminary Engineering Phase Services

Task 1 - Project Scoping Confirmation

OCWRC will review this scoping document to confirm the project scope, budget, and anticipated schedule. Upon receipt of comments and any further discussion that is necessary, this document will be updated to memorialize the scope, budget, and schedule. The document will be based on the FY24 CWSRF Project Plan previously provided to OCWRC.

Task 2 – Kickoff/Scoping Meeting

HRC, OCWRC, and other entities, including the City and Parks and Rec staff, will meet to confirm the project scope, budget, timeline, and deliverables.

Task 3 – Necessary Field Investigation and Surveying

The proposed rehabilitation for the drop fall structure and adjacent junction chamber in the FY24 CWSRF Project Plan is according to the inspection conducted in 2018. The HRC Structural Team will re-visit the site and perform an additional inspection to ensure the proposed rehabilitation for the drop fall structure and junction chamber is still valid and modify it if needed.

HRC professional wetland scientists will visit the Osmun Lake project site in North Kiwanis Park and conduct a site assessment to determine the types and quality of riparian vegetation. Habitat assessment will include identifying invasive species and determining the most suitable native plant species for the buffer strip, considering soil type and local ecosystem requirements.

To better understand the soil condition for rehabilitating the drop fall structure and junction chamber, we anticipate a soil boring approximately 40ft deep are required. HRC Team will coordinate with the Geotechnical Consulting firm to perform the required soil boring. We anticipate performing one soil boring and developing a geotechnical report cost \$5,000.

Task 4 – Review of Rehabilitation Recommendations

HRC will review and adjust the proposed rehabilitation work in the FY24 CWSRF Project Plan and modify it according to the new findings and OCWRC's recommendations if needed. Additionally, we will confirm any upcoming road rehabilitation locations with the City; however, the proposed repairs are spot repairs and grouting of existing storm systems with very limited ground disturbance. HRC will coordinate with WRC's ROW department staff to obtain signed access agreements, if applicable, prior to the start of construction. HRC will coordinate with the City's Parks and Recs staff regarding the proposed buffer strip location. HRC will prepare preliminary maps and tables of the recommendations for WRC to review.

Deliverables: One Meeting, Updated Structural Report for the Drop Fall Structure and Adjacent Junction Chamber, Soil boring Results and Geotechnical Report, Preliminary Design Drawings (or Maps Showing the Proposed Repair), and Map indicating the Invasive Species along the perimeter of Osmun Lake.

Design Phase Services

Task 5 – ARP Fund and Program Assistance CWSRF

HRC will assist OCWRC in submitting any required reviews and correspondence related to the ARP grant.

Task 6– Development of Project Plans and Specifications

Once the final scope is completed, HRC will prepare design plans and specifications for the rehabilitation work. Since the proposed rehabilitation for pipes, structures, drop fall, and the junction chamber doesn't require dig-ups, the full topographic survey and geotechnical analysis are not required. For these areas where trenchless repair is proposed, we will use GIS mapping as the primary means to prepare bidding documents, with supplementation with additional data where necessary. We understand OCWRC's mapping department will be able to assist with the sharing of required GIS geodatabases for this purpose. HRC will prepare technical specifications for all proposed work to be done in the system and will use OCWRC's standard front-end procurement documents.

We note that it may be desirable to break up the project into separate Contracts to allow for similar types of work (grouting, spot repairs, structural repair, buffer strip, etc.) to be bid by different specialty contractors. This will be discussed during the Design Phase Kickoff Meeting. We also suggest (and have included in our budget) scheduling regular design progress meetings once a month with HRC and OCWRC staff to ensure expectations are communicated, and necessary project data is made available.

Task 7 – Final Review Meeting

A meeting will be held with OCWRC, Park and Rec, and HRC staff to finalize the project recommendations, locations, and maps.

Task 8 – Permitting

HRC will coordinate with applicable agencies for permitting. This will include the City of Pontiac for the SESC permit and the Road Commission for Oakland County (if needed) for work within the road rights-of-way. Since the Drain is an established County Drain with the work being performed by the Drainage District under the Drain Code, the work is exempt under Part 31 (or Floodplains and Floodways) under R323.1312. The proposed drop fall structure and adjacent junction chamber may require Part 301 (Stream Impacts), and the proposed buffer strip and invasive species control may require a wetland minor permit category under Part 303 (Wetland Impacts).

As part of this task, HRC will prepare the EGLE permit application for the proposed improvements, including buffer strip and drop fall structure sites and prepare the required exhibits. However, we anticipate the drop fall structure and junction chamber repair can be done as part of the "Maintenance of a drain". Permits under Part 301 are not required for maintenance of a drain that either was legally established and constructed pursuant to the drain code of 1956 before January 1, 1973 or was constructed or modified under a permit issued under Part 301. In our estimate for this task, we assumed both sites, including buffer strips and drop fall structure, require EGLE permitting. Our initial estimate for the EGLE permitting application and any corresponding with EGLE is \$5,000. If some of these proposed works can be done under the "Maintenance of a drain" exemption, not all funds will be spent. OCWRC will be responsible for all permit fees.

Deliverables: Four Meetings, Permit Application(s), Project Plan, Technical Specifications

Bidding Services

Task 9– Project Bidding

A final determination has not been made on whether this project will be publicly bid or invited only to the County's pre-approved contractors. Regardless of the method, HRC will respond to Contractor inquiries, issue any necessary addenda,

prepare a bid tab once bids are received, and provide a recommendation for award. We note that this phase of work may include one or more separate Contracts (as noted above) if it is deemed appropriate to break up the work into similar project types. Bid documents and the bid process will conform to the requirements of the CWSRF program requirements. We understand that this project is considered “non-equivalent.” This means that certain additional Federal requirements, such as “Build American, Buy American,” Disadvantaged Business Enterprise, etc., are not applicable to the project. However, certain other requirements, including “Davis Bacon wages,” Debarment, and non-Iran contracting, may apply.

Construction Phase Services

We anticipate the construction duration for this project will span 12 weeks based on the scope of work, site conditions, and potential challenges that may arise during the construction process.

- ≡ Responding to contractor inquiries during the project.
- ≡ Reviewing all design submittals.
- ≡ Assist in reviewing quantities for pay estimates.
- ≡ Attending biweekly progress meetings, including preparing agendas and meeting minutes. It is anticipated that these meetings will be held virtually.
- ≡ Preparing change orders as needed.
- ≡ HRC will provide daily observations. 25 observation days were included in the CE services.
- ≡ Reviewing quantities and preparing pay estimates based on quantities. Assuming one pay estimate for each month.
- ≡ Preparing a final punch list and project close-out documents.

EASEMENTS

Because all work is occurring on the existing county drain easement, it is assumed that all subject stormwater lines are within the existing Right-Of-Way and/or the county drain easement. Therefore, these costs do not include any easement acquisitions. If additional easements or access is found to be needed, an additional proposal will be provided. If procurement of easements is necessary, this may also affect the project timeline.

ANTICIPATED PROJECT SCHEDULE

To meet the APR Grant’s timeline requirements, all Notices to Proceed must be issued no later than December 31, 2024. Assuming authorization to proceed is given at the Drainage Board Meeting on January 30, 2024, we anticipate the following schedule to finalize this work: (If the authorization to proceed gets delayed, the project schedule may also be delayed.)

- Kickoff/Scoping meeting, Week of February 05, 2024
- Necessary field investigation– Following the kickoff meeting, February 2024
- Prepare recommendations and preliminary plans and specs – February through April 2024
- Plans and specs available for OCWRC to review – May 01, 2024
- Get comments back from OCWRC– Week of May 27, 2024
- Review meeting with OCWRC– Week of June 03, 2024
- Advertisement – June 24, 2024
- Plans and specs available for bid– July 01, 2024
- Bids Due – August 01, 2024
- Contract packet ready for the Drainage Board Meeting – August 15, 2024

- Contract award (at the Drainage Board Meeting) – August 27, 2024
- Award and Notice to Proceed – December 2024 (no later than December 31)

*Note that the ARP Grant does not require a specific timeline, only that a **Notice to Proceed to be issued before December 31, 2024.***

FEES FOR SERVICES

Preliminary Engineering and Design Phase Services

Our costs to complete the work described in the Preliminary and Design phase services are estimated to be approximately \$75,000 (including \$5,000 for soil boring), which will be billed on an actual time and materials expended basis and will not be exceeded without prior authorization.

Bidding and Construction Phase Services

Our costs to complete the work described in the Construction phase services are estimated to be approximately \$76,000, which again will be billed on an actual time and materials expended basis and will not be exceeded without prior authorization.

Our total combined fee of \$151,000 equates to approximately 16% of a \$920,000 total grant and will be billed on a monthly basis under the terms and conditions of our engineering services agreement with WRC. If this proposal is deemed acceptable to your office, please acknowledge it by signing in the space provided below. We appreciate the opportunity to work with OCWRC on this important project. If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.



Daniel Mitchell, P.E.
President.



Karyn Stichel, P.E.
Senior Associate

pc: Oakland County Water Resources Commission; C. Cox
HRC; F. Babakhani, S. Duffy, File

FB

Accepted By:



Signature: _____

Written Name: _____

Title: _____

Dated: _____

9. Joachim Relief Drain

AGENDA

DRAINAGE BOARD FOR THE JOACHIM DRAIN

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of October 24, 2023
3. Public Comments
4. Present Memorandum from Geoff S. Wilson, P.E., Chief Engineer, dated January 23, 2024, requesting the Board authorize HRC to proceed with the engineering services outlined in its December 18, 2023 proposal for an amount not-to-exceed \$110,000
5. Other business
6. Approve pro rata payment to Drainage Board members
7. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR THE JOACHIM DRAIN**

October 24, 2023

A meeting of the Drainage Board for the Joachim Drain was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 24th day of October 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

David Woodward, Chairperson of the Oakland County Board of Commissioners

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

ABSENT: None.

Minutes of the meeting held April 25, 2023, were presented for consideration. It was moved by Markham, supported by Woodward, that the minutes be approved.

ADOPTED: Yeas - 3
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

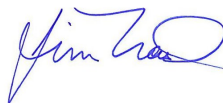
A memorandum from Geoff S. Wilson, P.E., Chief Engineer, dated October 24, 2023, requesting the Board authorize staff to proceed with engineering procurement for design services was presented. It was moved by Markham, supported by Woodward, to authorize staff to proceed with engineering procurement for design services as presented.

ADOPTED: Yeas - 3
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham and Mr. Woodward.

ADOPTED: Yeas - 3
Nays - 0

There being no further business, the meeting was adjourned.

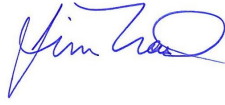


Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for the Joachim Drain, Oakland County, Michigan, held on the 24th day of October 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for the Joachim Drain Drainage District.



Jim Nash, Chairperson

Dated: October 24, 2023

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER****MEMORANDUM**

TO: Jim Nash, Chairperson of the Joachim Drain Drainage Board

FROM: Geoff S. Wilson, P.E. – Chief Engineer

SUBJECT: Joachim Drain Rehabilitation Project – Engineering Services

DATE: January 23, 2024

Three Oakland County drains have been awarded stormwater grants from the Clean Water State Revolving Fund for fiscal year 2024. They include a \$615,000 grant for the Joachim Drain, an \$800,000 grant for the Pontiac Clinton River No. 1 Drain, and a \$920,000 grant for the Augusta Drain.

These grants are intended to cover 100% of the cost of the rehabilitation projects identified in the project plans for the respective drainage districts. This rehabilitation work consists of repairing pipes, drainage structures, a weir, and a drop-fall structure that are all located within the City of Pontiac. The work was previously identified by WRC staff and budgeted by the City of Pontiac as part of a six-year plan beginning in 2023.

Consultant engineering services are needed for the Joachim Drain for rehabilitation of the weir structure located at Galloway Lake, north of University Drive at Doris Street in the City of Pontiac. Spalled concrete on the exiting outfall would be repaired with rehabilitation and new specialty coatings. Backfill would be added around the outfall, and the slopes would be stabilized. A new safety railing would also be installed along with pipe rehabilitation, including five storm pipes.

Hubbell, Roth & Clark, Inc. (HRC) has provided a proposal for preliminary and design engineering, bidding assistance, and construction engineering. HRC has worked on many similar projects and is familiar with the individual work sites and scopes. A budget has been established based on its existing as-needed services contract with Oakland County.

Recommendation –

Requested Action: Authorize HRC to proceed with the engineering services outlined in its December 18, 2023 proposal for an amount not to exceed \$110,000.



December 18, 2023

Oakland County Water Resources Commissioner
One Public Works Drive
Waterford, Michigan 48328

Attn: Mr. Geoff Wilson, P.E., Chief Engineer

Re: Joachim Drain Improvements
Proposal for Professional and Construction Engineering Services
Clean Water State Revolving Fund Project No. 5897-01

HRC Job No. 20220981

Dear Mr. Wilson:

Pursuant to your request, Hubbell, Roth & Clark, Inc. (HRC) is pleased to submit this proposal to provide professional and construction engineering services related to the design and construction of the Joachim Drain (Drain) Improvement project in the City of Pontiac. Our services, as described herein, were discussed at the virtual meeting held on November 27, 2023, as well as our previous involvement in developing the FY24 CWSRF Project Plan for the Drain Improvements.

We understand that the Oakland County Water Resources Commissioner's office (OCWRC) was awarded American Rescue Plan (ARP) grant funding for FY2024 in the amount of \$615,000 to improve the Drain. This grant allows OCWRC, on behalf of the drainage district, to improve the aged system at a minimal cost to the community. The Drain is an established County Drain under Chapter 20 Drain Code, Act 40 of 1956. The Drain Code Act 40 of 1956 gives the OCWRC, on behalf of the drainage district, powers and responsibilities to maintain and govern legally established drainage systems within the County.

The proposed Drain improvement was outlined in the FY24 SRF Project Plan. The Project Plan identified the following improvements:

- ≡ Rehabilitation of the Weir structure* located at Galloway Lake, north of University Drive at Doris Street in the City of Pontiac.
- ≡ Spalled concrete on the exiting outfall would be repaired with rehabilitation and new specialty coatings. Backfill would be added around the outfall, and the slopes would be stabilized. A new safety railing would also be installed.
- ≡ Pipe rehabilitation, including five storm pipes.

* Assumed after the work is completed, the weir structure will be returned to its original conditions, and the proposed rehabilitation does not impact the performance and capacity of the weir. Therefore, no hydraulics and hydrology studies were included in this project.

Overall, we will assist your office in developing the required project documents to ensure the proposed rehabilitation projects can be competitively bid for and awarded to a contractor in accordance with the required milestone dates for the grant awarded as part of the CWSRF program. We know this grant is an exceptional opportunity for OCWRC and the drainage district, and time is of the essence due to the timing required to meet the grant requirements.

SCOPE OF SERVICES

HRC will assist with the following major work items:

Preliminary Engineering Phase Services

Task 1 - Project Scoping Confirmation

OCWRC will review this scoping document to confirm the project scope, budget, and anticipated schedule. Upon receipt of comments and any further discussion that is necessary, this document will be updated to memorialize the scope, budget, and schedule. The document will be based on the FY24 CWSRF Project Plan previously provided to OCWRC.

Task 2 – Kickoff/Scoping Meeting

HRC and OCWRC will meet to confirm the project scope, budget, timeline, and deliverables.

Task 3 – Necessary Field Investigation and Surveying

The proposed rehabilitation for the CMP pipe and outfall structure in the FY24 CWSRF Project Plan is according to the structural condition assessment conducted in 2021. The HRC Structural Team will re-visit the site and perform an additional inspection to ensure the proposed rehabilitation for the pipe and outfall structure is still valid and modify it if needed. The Structural Team will perform a structural condition assessment on the weir structure; the weir has significant structural issues that are causing flows to bypass the weir, and it is no longer able to function as designed.

To better understand the soil condition for rehabilitating the weir structure, we anticipate two soil borings approximately 40ft deep are required. HRC Team will coordinate with the Geotechnical Consulting firm to perform the required soil borings. We anticipate performing two soil borings and developing a geotechnical report costing \$7,000. If the proposed soil borings for the Joachim Drain are done at the same time as the Augusta Drain project, the soil borings fee for both projects can be reduced to \$8,000.

Task 4 – Review of Rehabilitation Recommendations

HRC will review and adjust the proposed rehabilitation work in the FY24SRF Project Plan and modify it according to the new findings and OCWRC's recommendations if needed. Additionally, we will confirm any upcoming road rehabilitation locations with the City; however, the proposed repairs are spot repairs of existing storm systems with very limited ground disturbance. HRC will prepare preliminary maps and tables of the recommendations for WRC to review.

Deliverables: One Meeting, Updated Structural Report for the Outfall and Weir Structure, Geotechnical Report, Preliminary Design Drawings (or Maps Showing the Proposed Repair)

Design Phase Services

Task 5 – ARP Fund and Program Assistance CWSRF

HRC will assist OCWRC in submitting any required reviews and correspondence related to the ARP grant.

Task 6– Development of Project Plans and Specifications

Once the final scope is completed, HRC will prepare design plans and specifications for the rehabilitation work. Since the proposed rehabilitation for pipes, structures, the Outfall, and the weir doesn't require dig-ups, the full topographic survey and geotechnical analysis are not required. For these areas where trenchless repair is proposed, we will use GIS mapping as the primary means to prepare bidding documents, with supplementation with additional data where necessary. We understand OCWRC's mapping department will be able to assist with the sharing of required GIS geodatabases for this purpose. HRC will prepare technical specifications for all proposed work to be made in the system and will use OCWRC's standard front-end procurement documents.

We note that it may be desirable to break up the project into separate Contracts to allow for similar types of work (corrugated pipe rehab, Outfall structure repair, weir structure rehabilitation, etc.) to be bid by different specialty contractors. This will be discussed during the Design Phase Kickoff Meeting. We also suggest (and have included in our budget) scheduling regular design progress meetings once a month with HRC and OCWRC staff to ensure expectations are communicated and necessary project data is made available.

Task 7 – Final Review Meeting

A meeting will be held with OCWRC and HRC staff to finalize the project recommendations, locations, and maps.

Task 8 – Permitting

HRC will coordinate with applicable agencies for permitting. This will include the City of Pontiac for the SESC permit and the Road Commission for Oakland County (if needed) for work within the road rights-of-way. Since the Drain is an established County Drain with the work being performed by the Drainage District under the Drain Code, the work is exempt under Part 31 (or Floodplains and Floodways) under R323.1312. The weir structure rehabilitation project may require Part 301 (Stream Impacts). As part of this task, HRC will prepare the EGLE permit application for the proposed work to rehabilitate the weir structure and prepare the required exhibits. However, we anticipate the proposed work can be done as part of the “Maintenance of a drain” and permits under Part 301 are not required for maintenance of a drain that either was legally established and constructed pursuant to the drain code of 1956 before January 1, 1973, or was constructed or modified under a permit issued under Part 301. In our estimate for this task, we assumed the weir structure requires EGLE permitting. Our initial estimate for the EGLE permitting application and any corresponding with EGLE is \$5,000. If some of these proposed works can be done under the “Maintenance of a drain” exemption, not all funds will be spent. OCWRC will be responsible for all permit fees.

Deliverables: Four Meetings, Permit Application(s), Project Plan, Technical Specifications

Bidding Services

Task 9– Project Bidding

A final determination has not been made on whether this project will be publicly bid or will be invited only to the County’s pre-approved Contractors. Regardless of the method, HRC will respond to Contractor inquiries, issue any necessary addenda, prepare a bid tab once bids are received, and provide a recommendation for award. We note that this phase of work may include one or more separate Contracts (as noted above) if it is deemed appropriate to break up the work into similar project types. Bid documents and the bid process will conform to the requirements of the CWSRF program requirements. We understand that this project is considered “non-equivalent.” This means that certain additional Federal requirements, such as “Build American, Buy American,” Disadvantaged Business Enterprise, etc., are not applicable to the project. However, certain other requirements, including “Davis Bacon wages,” Debarment, and non-Iran contracting, may apply.

Construction Phase Services

We anticipate the construction duration for this project will span 8 weeks based on the scope of work, site conditions, and potential challenges that may arise during the construction process.

- ≡ Responding to contractor inquiries during the project.
- ≡ Reviewing all design submittals.

- ≡ Assist in reviewing quantities for pay estimates.
- ≡ Attending biweekly progress meetings, including preparing agendas and meeting minutes. It is anticipated that these meetings will be held virtually.
- ≡ Preparing change orders as needed.
- ≡ HRC will provide daily observations. 15 observation days were included in the CE services.
- ≡ Reviewing quantities and preparing pay estimates based on quantities. Assuming one pay estimate for each month.
- ≡ Preparing a final punch list and project close-out documents.

EASEMENTS

Because all work is occurring on the existing county drain easement, it is assumed that all subject stormwater lines are within the existing Right-Of-Way and/or the county drain easement. Therefore, these costs do not include any easement acquisitions. If additional easements or access is found to be needed, an additional proposal will be provided. If procurement of easements is necessary, this may also affect the project timeline.

ANTICIPATED PROJECT SCHEDULE

To meet the APR Grant's timeline requirements, all Notices to Proceed must be issued no later than December 31, 2024. Assuming authorization to proceed is given at the Drainage Board Meeting on January 30, 2024, we anticipate the following schedule to finalize this work: (If the authorization to proceed gets delayed, the project schedule may also be delayed.)

- Kickoff/Scoping meeting, Week of February 05, 2024
- Necessary field investigation– Following the kickoff meeting, February 2024
- Prepare recommendations and preliminary plans and specs – February through April 2024
- Plans and specs available for OCWRC to review – May 01, 2024
- Get comments back from OCWRC– Week of May 27, 2024
- Review meeting with OCWRC– Week of June 03, 2024
- Advertisement – June 24, 2024
- Plans and specs available for bid– July 01, 2024
- Bids Due – August 01, 2024
- Contract packet ready for the Drainage Board Meeting – August 15, 2024
- Contract award (at the Drainage Board Meeting) – August 27, 2024
- Award and Notice to Proceed – December 2024 (no later than December 31)

*Note that the ARP Grant does not require a specific timeline, only that a **Notice to Proceed to be issued before December 31, 2024.***

FEEES FOR SERVICES

Preliminary Engineering and Design Phase Services

Our costs to complete the work described in the Preliminary and Design phase services are estimated to be approximately \$60,000 (including \$7,000 for soil borings), which will be billed on an actual time and materials expended basis and will not be exceeded without prior authorization.

Bidding and Construction Phase Services

Our costs to complete the work described in the Construction phase services are estimated to be approximately \$50,000,

which again will be billed on an actual time and materials expended basis and will not be exceeded without prior authorization.

Our total combined fee of \$110,000 is approximately 18% of a \$615,000 total grant and will be billed on a monthly basis under the terms and conditions of our engineering services agreement with WRC. If this proposal is deemed acceptable to your office, please acknowledge it by signing in the space provided below. We appreciate the opportunity to work with OCWRC on this important project. If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.



Daniel Mitchell, P.E.
President.



Karyn Stichel, P.E.
Senior Associate

pc: Oakland County Water Resources Commission; C. Cox
HRC; F. Babakhani, S. Duffy, File

FB

Accepted By:

Signature: _____

Written Name: _____

Title: _____

Dated: _____

10. Pontiac Clinton River #1 Drain

AGENDA

DRAINAGE BOARD FOR THE PONTIAC CLINTON RIVER NO. 1 DRAIN

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of October 24, 2023
3. Public Comments
4. Present Memorandum from Geoff S. Wilson, P.E., Chief Engineer, dated January 23, 2024, requesting the Board authorize HRC to proceed with the engineering services outline in its December 18, 2023 proposal for an amount not-to-exceed \$105,000
5. Other business
6. Approve pro rata payment to Drainage Board members
7. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR THE PONTIAC CLINTON RIVER NO. 1 DRAIN**

October 24, 2023

A meeting of the Drainage Board for the Pontiac Clinton River No. 1 Drain was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 24th day of October 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

David Woodward, Chairperson of the Oakland County Board of Commissioners

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

ABSENT: None.

Minutes of the meeting held April 25, 2023, were presented for consideration. It was moved by Markham, supported by Woodward, that the minutes be approved.

ADOPTED: Yeas - 3
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

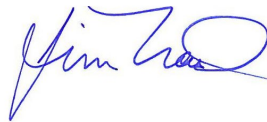
A memorandum from Geoff S. Wilson, P.E., Chief Engineer, dated October 24, 2023, requesting the Board authorize staff to proceed with engineering procurement for design services was presented. It was moved by Markham, supported by Woodward, to authorize staff to proceed with engineering procurement for design services as presented.

ADOPTED: Yeas - 3
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham and Mr. Woodward.

ADOPTED: Yeas - 3
Nays - 0

There being no further business, the meeting was adjourned.

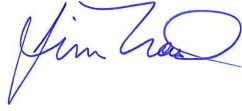


Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for the Pontiac Clinton River No. 1 Drain, Oakland County, Michigan, held on the 24th day of October 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for the Pontiac Clinton River No. 1 Drain Drainage District.



Jim Nash, Chairperson

Dated: October 24, 2023

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER****MEMORANDUM**

TO: Jim Nash, Chairperson of the Pontiac Clinton River No. 1 Drain Drainage Board

FROM: Geoff S. Wilson, P.E., Chief Engineer

SUBJECT: Pontiac Clinton River No. 1 Drain Rehabilitation Project – Engineering Services

DATE: January 23, 2024

Three Oakland County drains have been awarded stormwater grants from the Clean Water State Revolving Fund for fiscal year 2024. They include a \$615,000 grant for the Joachim Drain, an \$800,000 grant for the Pontiac Clinton River No. 1 Drain, and a \$920,000 grant for the Augusta Drain.

These grants are intended to cover 100% of the cost of the rehabilitation projects identified in the project plans for the respective drainage districts. This rehabilitation work consists of repairing pipes, drainage structures, a weir, and a drop-fall structure that are all located within the City of Pontiac. The work was previously identified by WRC staff and budgeted by the City of Pontiac as part of a six-year plan beginning in 2023.

Consultant engineering services are needed for the Pontiac Clinton River No. 1 Drain for pipe rehabilitation, including spot lining and grouting of storm pipes and rehabilitation of existing storm manholes.

Hubbell, Roth & Clark, Inc. (HRC) has provided a proposal for preliminary and design engineering, bidding assistance, and construction engineering. HRC has worked on many similar projects and is familiar with the individual work sites and scopes. A budget has been established based on its existing as-needed services contract with Oakland County.

Requested Action: Authorize HRC to proceed with the engineering services outlined in its December 18, 2023 proposal for an amount not to exceed \$105,000.



December 18, 2023

Oakland County Water Resources Commissioner
One Public Works Drive
Waterford, Michigan 48328

Attn: Mr. Geoff Wilson, P.E., Chief Engineer

Re: Pontiac-Clinton River No.1 Improvements
Proposal for Professional and Construction Engineering Services
Clean Water State Revolving Fund Project No. 5898-01

HRC Job No. 20220897

Dear Mr. Wilson:

Pursuant to your request, Hubbell, Roth & Clark, Inc. (HRC) is pleased to submit this proposal to provide professional and construction engineering services related to the design and construction of the Pontiac-Clinton River No.1 (PCR Drain) Improvement project in the City of Pontiac. Our services, as described herein, were discussed at the virtual meeting held on November 27, 2023, as well as our previous involvement in developing the FY24 CWSRF Project Plan for Drain Improvements.

We understand that the Oakland County Water Resources Commissioner's office (OCWRC) was awarded American Rescue Plan (ARP) grant funding for FY2024 in the amount of \$800,000 to improve the Drain. This grant allows OCWRC, on behalf of the drainage district, to work toward ensuring the Drain continues to meet its required level of service as established by OCWRC's Asset Management Program and ultimately improve the aged system at a minimal cost to the community. The Drain is an established County Drain under Chapter 20 Drain Code, Act 40 of 1956. The Drain Code Act 40 of 1956 gives the OCWRC, on behalf of the drainage district, powers and responsibilities to maintain and govern legally established drainage systems within the County.

The proposed Drain improvement was outlined in the FY24 SRF Project Plan. The Project Plan identified the following improvements:

- ≡ Pipe rehabilitation, including spot lining and grouting of storm pipes and rehabilitation of existing storm manholes.

Overall, we will assist your office in developing the required project documents to ensure the proposed rehabilitation projects can be competitively bid for and awarded to a contractor in accordance with the required milestone dates for the grant awarded as part of the CWSRF program. We know this grant is an exceptional opportunity for OCWRC and the drainage district, and time is of the essence due to the timing required to meet the grant requirements.

SCOPE OF SERVICES

HRC will assist with the following major work items:

Preliminary Engineering Phase Services

Task 1 - Project Scoping Confirmation

OCWRC will review this proposal to confirm the project scope, budget, and anticipated schedule. Upon receipt of comments and any further discussion that is necessary, this document will be updated to memorialize the scope, budget, and schedule. The document will be based on the FY24 CWSRF Project Plan previously provided to OCWRC.

Task 2 – Kickoff/Scoping Meeting

HRC and OCWRC will meet to confirm the project scope, budget, timeline, and deliverables.

Task 3 – Review of Rehabilitation Recommendations

HRC will review and adjust the proposed rehabilitation work in the FY24SRF Project Plan and modify it according to the new findings and OCWRC's recommendations if needed. Additionally, we will confirm any upcoming road rehabilitation locations with the City; however, the proposed repairs are spot lining and grouting of existing storm systems with very limited ground disturbance. HRC will coordinate with WRC's ROW department staff to obtain signed access agreements for this project prior to the start of construction. HRC will prepare preliminary maps and tables of the recommendations for WRC to review.

Deliverables: One Meeting, Preliminary Design Drawings (or Maps Showing the Proposed Repair)

Design Phase Services

Task 4 – ARP Fund and Program Assistance CWSRF

HRC will assist OCWRC in submitting any required reviews and correspondence related to the ARP grant.

Task 5– Development of Project Plans and Specifications

Once the final scope is completed, HRC will prepare design plans and specifications for the rehabilitation work. Since the proposed rehabilitation for pipes and structures doesn't require dig-ups, the full topographic survey and geotechnical analysis are not required. For these areas where trenchless repair is proposed, we will use GIS mapping as the primary means to prepare bidding documents, supplementing additional data where necessary. We understand OCWRC's mapping department will be able to assist with the sharing of required GIS geodatabases for this purpose. HRC will prepare technical specifications for all proposed work to be done in the system and will use OCWRC's standard front-end procurement documents.

We suggest (and have included in our budget) scheduling regular design progress meetings once a month with HRC and OCWRC staff to ensure expectations are communicated and necessary project data is made available.

Task 6 – Final Review Meeting

A meeting will be held with OCWRC and HRC staff to finalize the project recommendations, locations, and maps.

Task 7 – Permitting

HRC will coordinate with applicable agencies for permitting. This will include the City of Pontiac and the Road Commission for Oakland County (if needed) for work within the road rights-of-way and the City for the SESC permit. We anticipate no EGLE permit is required since the project does not impact regulated wetlands, floodplains, or inland lakes and streams. No costs have been included for EGLE permitting in this project scope.

Deliverables: Four Meetings, Project Plan, Technical Specifications

Bidding Services

Task 8– Project Bidding

A final determination has not been made on whether this project will be publicly bid or invited only to the County's pre-approved contractors. Regardless of the method, HRC will respond to Contractor inquiries, issue any necessary addenda, prepare a bid tab once bids are received, and provide a recommendation for award. We note that this phase of work may

include one or more separate Contracts (as noted above) if it is deemed appropriate to break up the work into similar project types. Bid documents and the bid process will conform to the requirements of the CWSRF program requirements. We understand that this project is considered “non-equivalent.” This means that certain additional Federal requirements, such as “Build American, Buy American,” Disadvantaged Business Enterprise, etc. are not applicable to the project. However, certain other requirements, including “Davis Bacon wages,” Debarment, and non-Iran contracting, may apply.

Construction Phase Services

We anticipate the construction duration for this project will span 8 weeks based on the scope of work, site conditions, and potential challenges that may arise during the construction process.

The following tasks were assumed under construction phase services:

- ≡ Responding to contractor inquiries during the project.
- ≡ Reviewing all design submittals.
- ≡ Review post-lining submittals to ensure completeness.
- ≡ Attending biweekly progress meetings, including preparing agendas and meeting minutes. It is anticipated that these meetings will be held virtually.
- ≡ Preparing change orders as needed.
- ≡ HRC will provide daily observations. 20 observation days were included in the CE services.
- ≡ Preparing a final punch list and project close-out documents.
- ≡ Reviewing quantities and preparing pay estimates based on quantities. Assuming one pay estimate for each month.

EASEMENTS

Because all work is occurring on the existing county drain easement, it is assumed that all subject stormwater lines are within the existing Right-Of-Way and/or the county drain easement. Therefore, these costs do not include any easement acquisitions. If additional easements or access is found to be needed, an additional proposal will be provided. If procurement of easements is necessary, this may also affect the project timeline.

ANTICIPATED PROJECT SCHEDULE

To meet the APR Grant’s timeline requirements, all Notices to Proceed must be issued no later than December 31, 2024. Assuming authorization to proceed is given at the Drainage Board Meeting on January 30, 2024, we anticipate the following schedule to finalize this work: (If the authorization to proceed gets delayed, the project schedule may also be delayed.)

- Kickoff/Scoping meeting, Week of February 05, 2024
- Necessary field investigation– Following the kickoff meeting, February 2024
- Prepare recommendations and preliminary plans and specs – February through April 2024
- Plans and specs available for OCWRC to review – May 01, 2024
- Get comments back from OCWRC– Week of May 27, 2024
- Review meeting with OCWRC– Week of June 03, 2024
- Advertisement – June 24, 2024
- Plans and specs available for bid– July 01, 2024
- Bids Due – August 01, 2024
- Contract packet ready for the Drainage Board Meeting – August 15, 2024
- Contract award (at the Drainage Board Meeting) – August 27, 2024

➤ Award and Notice to Proceed – December 2024 (no later than December 31)

Note that the ARP Grant does not require a specific timeline, only that a **Notice to Proceed to be issued before December 31, 2024.**

FEES FOR SERVICES

Preliminary Engineering and Design Phase Services

Our costs to complete the work described in the Preliminary Engineering and Design phase services are estimated to be approximately \$40,000, which will be billed on an actual time and materials expended basis and will not be exceeded without prior authorization.

Bidding and Construction Phase Services

Our costs to assist OCWRC in the bidding phase and complete the work described in the Construction phase services are estimated to be approximately \$65,000, which again will be billed on an actual time and materials expended basis and will not be exceeded without prior authorization.

Our total combined fee of \$105,000 equates to approximately 13% of a \$800,000 total grant and will be billed on a monthly basis under the terms and conditions of our engineering services agreement with WRC. If this proposal is deemed acceptable to your office, please acknowledge it by signing in the space provided below. We appreciate the opportunity to work with OCWRC on this important project. If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,
HUBBELL, ROTH & CLARK, INC.



Daniel Mitchell, P.E.
President



Karyn Stichel, P.E.
Senior Associate

pc: Oakland County Water Resources Commission; C. Cox
HRC; F. Babakhani, S. Duffy, File

FB

Accepted By:

Signature: _____

Written Name: _____

Title: _____

Dated: _____

11. Mainland Drain

AGENDA

DRAINAGE BOARD FOR THE MAINLAND DRAIN

January 23, 2024

1. Call meeting to order
2. Approve minutes of meeting of December 19, 2023
3. Public Comments
4. Present Memorandum from Ryan Woloszyk, P.E., Lake Level and Drain Engineer, dated January 23, 2024, requesting the Board approve Trojan Development Invoice No. 2314 in the amount of \$27,984.05
5. Present Maintenance Assessment Recommendation and Special Assessment Roll in the amount of \$118,670
6. Other business
7. Approve pro rata payment to Drainage Board members
8. Adjourn

**MINUTES OF THE MEETING OF THE DRAINAGE BOARD
FOR THE MAINLAND DRAIN**

December 19, 2023

A meeting of the Drainage Board for the Mainland Drain was held in the office of the Oakland County Water Resources Commissioner, Public Works Building, One Public Works Drive, Waterford, Michigan at 2:00 p.m. on the 19th day of December 2023.

The meeting was called to order by the Chairperson.

PRESENT: Jim Nash, Oakland County Water Resources Commissioner

Gwen Markham, Chairperson of the Finance Committee, Oakland County Board of Commissioners

David Woodward, Chairperson of the Oakland County Board of Commissioners

ABSENT: None.

Minutes of the meeting held July 18, 2023, were presented for consideration. It was moved by Markham, supported by Woodward, that the minutes be approved.

ADOPTED: Yeas - 3
Nays - 0

Chairperson Nash asked if there were any public comments. There were none.

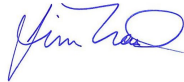
A memorandum from Sarah Stoolmiller, P.E., Civil Engineer III, dated December 19, 2023, requesting the Board authorize the Chairperson to award the engineering services contract to GEI Consultants of Michigan for a not-to-exceed amount of \$137,851 was presented. It was moved by Markham, supported by Woodward, to authorize the Chairperson to award the engineering services contract to GEI Consultants of Michigan for a not-to-exceed amount of \$137,851 as presented.

ADOPTED: Yeas - 3
Nays - 0

It was moved by Nash, supported by Markham, to certify attendance and authorize pro rata payment of \$25 per day to Ms. Markham and Mr. Woodward.

ADOPTED: Yeas - 3
Nays - 0

There being no further business, the meeting was adjourned.

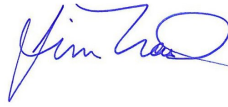


Jim Nash, Chairperson

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I, the undersigned, do hereby certify that the foregoing is a true and complete copy of the minutes of the Drainage Board for the Mainland Drain, Oakland County, Michigan, held on the 19th day of December 2023, and that the minutes are on file in the office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that the notice of the meeting was posted at least 18 hours in advance of the meeting at the office of the Oakland County Water Resources Commissioner which is the principal office of the Drainage Board for the Mainland Drain Drainage District.



Jim Nash, Chairperson

Dated: December 19, 2023

**OAKLAND COUNTY
WATER RESOURCES COMMISSIONER****MEMORANDUM**

TO: Jim Nash, Chairperson of the Mainland Drain Drainage Board

FROM: Ryan Woloszyk, P.E., Lake Level and Drain Engineer

SUBJECT: Emergency Repair - Culvert Removal

DATE: January 23, 2024

Flooding at the Oakland County Jail, along with highwater concerns in the wetlands on the east side of County Campus Drive, prompted engineering staff to investigate the Mainland Drain. A sinkhole and failed culvert were located on the drain at the old culvert crossing the rail siding located on county property south of the jail.

The sinkhole was determined to be caused by a failing 48-inch diameter corrugated metal pipe that is part of the Mainland Drain, a legally established county drain under the jurisdiction of the Water Resources Commissioner's office. Additional investigation determined there was a sister pipe parallel to the main channel that also failed. After reviewing options, it was decided to "daylight" this portion of the drain and remove the culverts in the area. Staff reached this conclusion because the pipes could not be salvaged, and the rail siding was no longer in use.

Trojan Development company mobilized and removed the existing culvert and replaced it with an open channel through the area. Costs will be recouped with the next assessment of the Mainland Drain.

Recommended Action: Approve Trojan Development invoice No. 2314 in the amount of \$27,984.05.

Photo 1 - Sinkhole



Photo 2 – Failed CMP



Photo 3 – New channel through rail siding crossing



Trojan Development Company, Inc.

2260 Metamora Rd
 Oxford MI 48371
 (248) 628-6200

Invoice

Attn: Ryan Woloszyk
Owner: Oakland County Water Resources
 One Public Works
 Waterford, MI 48328

Invoice #2314
 Contract # 005609
 Vendor #
 Item #

Engineer: WRC

Date: 10/6/2023

Project: Oakland /Mainline Drain Pontiac

Job No: 2314

Invoice Period: 8/3/23 - 8/30/23

**Job Cost Summary
 Oakland /Mainline Drain Pontiac**

Job Summary:

We were asked to work on the drain behind the Oakland county jail that was causing flooding by the jail. The drain runs down stream from the jail through a large section of land owned by the county. Jake and Ryan walked the drain earlier and discussed what need to be done. The main restriction was 2 culverts through the abandoned railroad embankment that were rusted out, collapsing and plugged with brush and sediment. With the railroad no longer in use and the tracks were removed. Ryan directed us to remove the culvert and open ditch through the embankment. The embankment was approximately 16 or 17 feet high, 16 foot wide on the top and has 1 on 1 slopes on the sides. Access to get our equipment back to the failed culverts and RR embankment was about a 1/4 mile through relatively rough terrain, that hadden been cleared in sometime. We didn't want to disrupt the existing ground cover anymore than we had too. So we picked a path with the least amount of large brush and trees, bending the small brush and grass over, using wood chip to bridge the low areas. Once we got our equipment back to the RR embankment we opened up the culverts to allow more water through, then began clearing the RR embankment and area around the drain to the culverts, which had heavy brush and trees. Ryan directed us to stockpile trees and brush close to the area we were working and consolidate it as much as possible. With the brush, sediment and a collapsed piece of the 48" culvert removed water started flowing through the RR embankment. We then started cutting the embankment down so we could access the south side with our 314 excavator. Ryan directed us to move the excess material about 500 feet away to an elevated area and extend the area, but strip the topsoil first to cover the spoils when done. With our excavator on the south side of the RR embankment we continue south (downstream) removing obstructions so the water level would lower to work the drain banks. With the water flowing better we went back to removing the embankment and transporting the spoils to the area we stripped. Trojan used the cat 314 to excavate the embankment and stockpile for the loader to move. We continued to remove trees and brush as we could reach it. There was a substantial amount of embankment material to move, taking a few days. We discussed with Ryan to lowing the embankment to a 2 to 1 slope on both sides of the drain with a small shoulder on the north side parallel to the drain. The south side we did the same slope but added a 10 foot flat area parallel to the drain for access. The drain we made approximately 20 foot wide at the bottom with 4 foot high steeper banks. The county had natural riprap at there storage area about a 1/4 mile away. The riop rap was shuttled with the loader and put in place with the 314 exc. 8 oz non woven fabric was placed under the rip rap. The slopes were covered with seed and mulch blankets. The flat areas that were disturbed were graded out with topsoil. Then seed and straw were applied.

Total Labor Cost	\$	13,262.08
Total Equipment Cost	\$	9,893.06
Total Material (Invoices attached)	\$	1,178.82
Equipment Rental Cost (Not Owned by Trojan Dev)	\$	-
Total Subcontractor Cost (Subcontractor's)	\$	-
Job Subtotal	\$	24,333.96
15% Markup	\$	3,650.09
Job Grand Total	\$	27,984.05

Note:

See attached Invoices Breakdown for Materials, Rental Equipment not owned by Contractor and Subcontractors.
 See attached Daily Reports for Daily Man Hours, Equipment, Materials, Subcontractors and Daily Work Summary

Fund 82544 Dept 6010101
 Program 155020 Acct 730373
 Contract # 8500 Project -
 Chapter 20 Op Unit -
 Woloszyk *Ryan Woloszyk* 10/31/2023
 Approver _____

OAKLAND COUNTY WATER RESOURCES COMMISSIONER
MAINTENANCE ASSESSMENT RECOMMENDATION FOR THE
Mainland Drain

Assessment for current fund deficit, estimated maintenance expenses for fiscal years 2024 through 2026,
2023 emergency repair and FEMA Grant project expenses

Date last assessment approved: 02/28/22
Last Assessment: \$97,177
Current Available Cash: (\$14,022)

Expenditure History:	Fiscal Year	Amount
	2017	\$2,474
	2018	\$4,995
	2019	\$4,372
	2020	\$3,772
	2021	\$7,647
	2022	\$42,349
	2023	\$31,420

Estimated Expenditures:	Year	Amount
	2024	\$4,300
	2025	\$4,300
	2026	\$4,300
	Total	\$12,900

Recommended Assessment:

Current Cash Deficit	\$14,022
Total Anticipated Maintenance Expenses 2024 - 2026	\$12,900
August 2023 Emergency Repair Contracted Services Expenses	\$27,984
FEMA Grant Application Expenses (Preliminary Design)	\$34,230
FEMA Grant Match (10 Percent Match for Engineering Phase)	\$29,534
TOTAL RECOMMENDED ASSESSMENT	\$118,670

Prepared by: _____ Date: _____
Geoff Wilson, P.E. - Chief Engineer

Approved by: _____ Date: _____
Gary Nigro, P.E. - Manager

Note: Current Available Cash as of the November 30, 2023, Fiscal Services Division Report.

**SPECIAL ASSESSMENT ROLL FOR THE MAINTENANCE
OF THE MAINLAND DRAIN**

Public Corporation	*Percentage of Apportionment	Total Amount of Assessment	Payment #1	Payment #2	Payment #3
County of Oakland (County Complex)	85.96%	\$ 102,008.73	\$ 102,008.73	-	-
County of Oakland (County Highways)	9.48%	\$ 11,249.92	\$ 11,249.92	-	-
State of Michigan	4.56%	\$ 5,411.35	\$ 5,411.35	-	-
Total	100.00%	\$ 118,670.00	\$ 118,670.00	\$ -	\$ -

*Apportionment based on Final Order of Apportionment dated 3/22/2022.

Assessment Payment Due Date(s): Payment #1 02/29/2024

I hereby certify that I have prepared the Special Assessment Roll for the Maintenance of the Mainland Drain for the fiscal years 2024- 2026 in accordance with the direction of the Drainage Board and the statutory provisions applicable thereto.

Jim Nash
Chairman of the Drainage Board for the Mainland Drain

The foregoing Special Assessment Roll for the maintenance of the Mainland Drain was approved by the Drainage Board on _____ .

Jim Nash
Chairman of the Drainage Board for the Mainland Drain