

MACOMB INTERCEPTOR DRAIN
INTRA-COUNTY DRAINAGE BOARD
OCTOBER 19, 2020
10:45 A.M.
AGENDA

NOTE: THIS MEETING WILL BE HELD BY TELECONFERENCE

Call in Number: 1-408-418-9388
Access Code: 173 553 9528

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for October 19, 2020	
3. Approval of Minutes for September 14, 2020	4
4. Public Participation	
5. Project Updates – Stephen Downing/Vince Astorino	
6. M-59/Garfield Land Sale – Notice of Purchase Agreement Termination – Brian Baker	7
7. State Grant Agreement - COVID Testing of Wastewater in Sterling Heights and Lenox Township – Vincent Astorino	9
Motion: To approve the agreement between the MIDDD and EGLE for COVID wastewater testing grant funds of \$404,150.98	
8. COVID Wastewater Monitoring Proposals (Grant Funded) – Vincent Astorino	36
Motion: To approve the Aquasight proposal for \$266,500 to handle the laboratory testing, web platform, and analytics.	
Motion: To approve the Hesco quotes totaling \$47,400 to provide the sampling equipment and equipment installation.	
Motion: To approve the Colville Electric quote of \$36,980 to install conduits and electrical and integrate units into the SCADA system.	
9. Metering Facility Rehabilitation – Construction Contract - Vincent Astorino	65
Motion: To award the bid to Weiss Construction Co., LLC for \$857,159 to rehabilitate three sewerage metering sites.	

10. Metering Facility Rehabilitation – Construction Engineering & Contract Administration – Vince Astorino 78

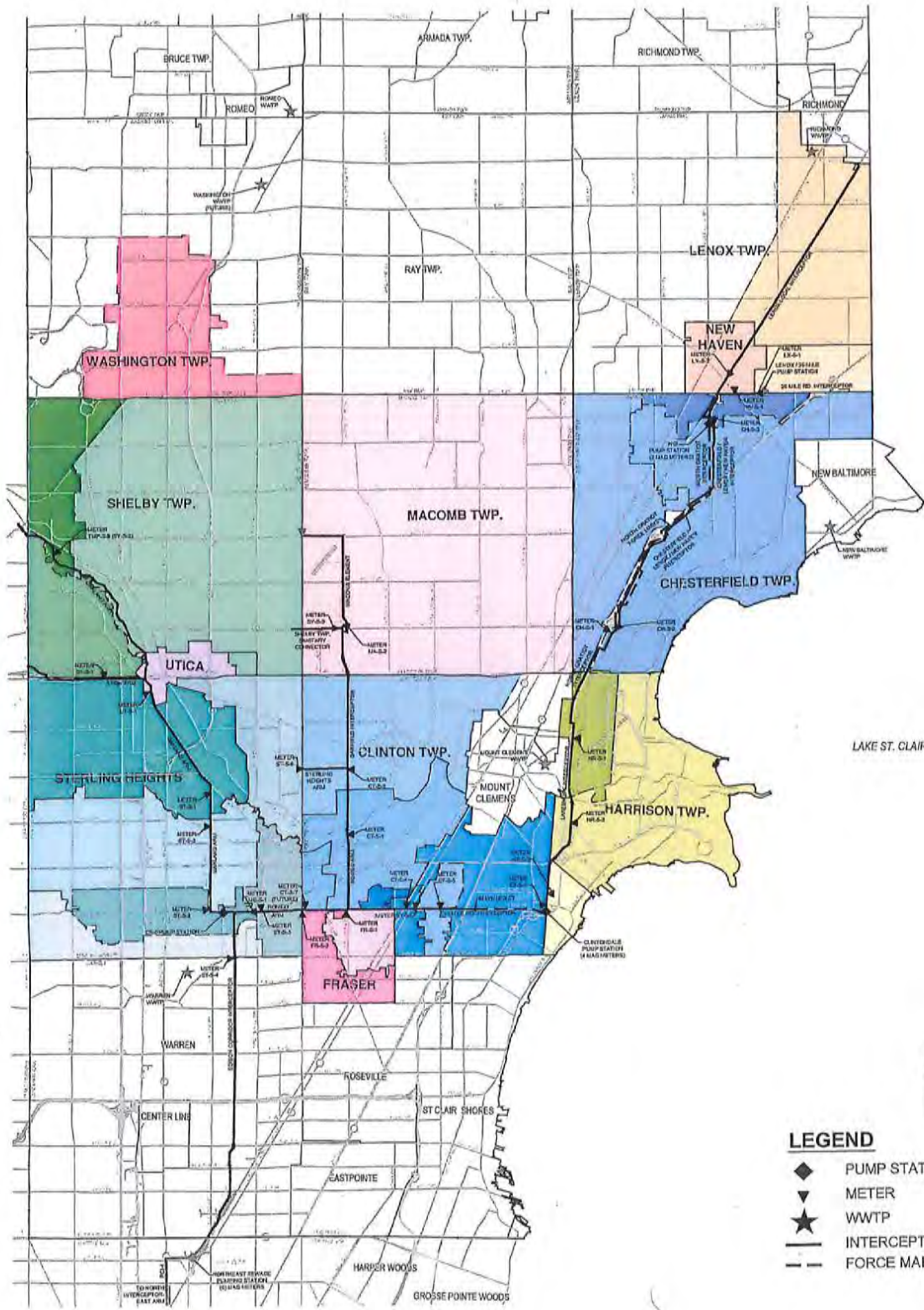
Motion: To approve the proposal from Hubbell, Roth & Clark (HRC) for construction engineering and contract administration for the Metering Facility Rehabilitation project for \$149,200.

11. Consideration for approval of invoices (see attached) 84

12. Financial Report – Bruce Manning 86

13. Adjourn

MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT



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



Candice S. Miller

MACOMB COUNTY PUBLIC WORKS COMMISSIONER

An adjourned meeting of the Intra-County Drainage Board for the **MACOMB INTERCEPTOR DRAIN** was held via telephone conference per the State of Michigan Executive Order due to the COVID-19 pandemic, on September 14, 2020, at 11:21 A.M.

PRESENT: Brian Baker, Acting Chair
Bryan Santo, Member
Robert Mijac, Member

ALSO PRESENT: Stephen Downing, Construction & Maintenance Manager, Bruce Manning, Financial Manager, Tom Stockel, Construction Engineer, Jeff Bednar P.E., Environmental Resources Manager, Vince Astorino, Operations & Flow Manager, Kellie Kource, Drain Account Specialist, Karen Czernel, Deputy, Norb Franz, Communications Manager, Macomb County Public Works; Joe Viviano, MIDD Attorney, Ben Aloia, MIDD Attorney

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

Adopted: YEAS: 3
NAYS: 0

Minutes of the meeting of August 10, 2020 were presented. A motion was made by Mr. Mijac, supported by Mr. Santo to approve the minutes as presented.

Adopted: YEAS: 3
NAYS: 0

Mr. Downing updated the board that the drop shaft project is moving along with no issues. Phase 2 grouting work has finished on Clinton River sections and is moving north. MIDD segment 5 rehab contract agreement will be signed soon, and we will issue a notice to proceed next week.

Mr. Astorino updated the board that the COVID sewage testing is going well and we are working with EGLE to receive more funding to expand the program.

A motion was made by Mr. Mijac, supported by Mr. Santo to receive and file the project updates by Mr. Astorino and Mr. Downing.

Adopted: YEAS: 3
NAYS: 0

Mr. Downing updated the board that the OCIP premium estimates brought to the board last month came in at a 14% lower cost than estimated.

A motion was made by Mr. Mijac, supported by Mr. Santo to receive and file the insurance update.

Adopted: YEAS: 3
NAYS: 0

Mr. Viviano updated the board that they have created an agreement to properly align the parties for the OMID Wastewater Services Agreement.

A motion was made by Mr. Mijac, supported by Mr. Santo to authorize Candice Miller to sign documents which assign the 2009 OMID Wastewater Services Agreement from Macomb County to the Macomb Interceptor Drainage District (MIDD).

Adopted: YEAS: 3
NAYS: 0

The Chair presented the invoices totaling \$5,182,677.85 to the board for review and approval.

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

Adopted: YEAS: 3
NAYS: 0

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

Adopted: YEAS: 3
NAYS: 0

A motion was made by Mr. Mijac, supported by Mr. Santo to enter closed session at 11:37 a.m.

Adopted: YEAS: 3
NAYS: 0

Mr. Baker ended closed session and return the board to open session at 12:05 p.m.

A motion was made by Mr. Mijac, supported by Mr. Santo to approve the settlement agreement discussed in closed session.

Adopted: YEAS: 3
NAYS: 0

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

Adopted: YEAS: 3
NAYS: 0

The meeting was adjourned at 12:06 p.m.



Brian Baker, Acting Chair
Macomb County Public Works Chief Deputy

STATE OF MICHIGAN
COUNTY OF MACOMB

I certify that the foregoing is a true and correct copy of proceedings taking by the Intra-County Drainage Board for the Drainage District shown on the attached set of minutes, on September 14, 2020 the original of which is on file in the Public Works Commissioner's Office. Public notice of the meeting was given pursuant to Act No. 267, Public Acts of Michigan, 1975, including, in the case of a special or rescheduled meeting or a meeting secured for more than 36 hours, notice by posting at least 18 hours prior to the time set for the meeting.



Brian Baker, Acting Chair
Macomb County Public Works Chief Deputy

DATED: 9/14/20

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& BADALAMENTI ^{PLC}
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October 6, 2020

Via Email

Macomb Interceptor Drain Drainage District
c/o Macomb County Department of Public Works
Attn: Tamara Keskeny, Manager Real Property
21777 Dunham Road
Clinton Township, MI 48036
Email: tamara.keskeny@macombgov.org

Benjamin J. Aloia, Esq.
Aloia & Associates, P.C.
48 S. Main Street, Ste. 3
Mount Clemens, MI 48043
aloia@aloia.law

Vision Invesco LLC, on Behalf
of an Entity to be Formed
Attn: Kevin Denha
700 N. Old Woodward Avenue, Ste. 300
Birmingham, MI 48009
kdenha@visioninvpartners.com

Louis Ciotti
Landmark Commercial Real Estate Services
30500 Northwestern Highway, Suite 200
Farmington Hills, MI 48334
LCiotti@landarkcres.com

RE: 45345 Garfield Road, Macomb Twp., MI

Dear Ms. Keskeny:

Please accept this letter as a Notice of Termination regarding the Real Estate Purchase Agreement that was entered into between Vision Invesco LLC on Behalf of an Entity to be Formed and the Macomb Interceptor Drain Drainage District.

Per the Agreement, please return Escrow funds to our client at the following address:

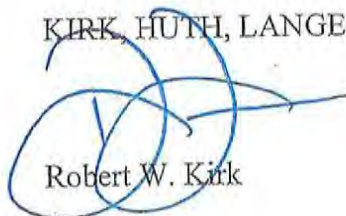
Kevin Denha
700 N. Old Woodward Ave., Suite 300
Birmingham, MI 48009.

MIDD
October 6, 2020
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Thank you for your courtesy in this matter. If you have any questions please feel to contact me.

Very Truly Yours,

KIRK, HUTH, LANGE & BADALAMENTI, PLC

A handwritten signature in blue ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

Robert W. Kirk



Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

CC: File

From: Vincent Astorino, Operations & Flow Manager

Date: October 13, 2020

Subject: EGLE Contractual Agreement for COVID Testing of Wastewater in Sterling Heights and Lenox Township

The Macomb County Public Works Office (MCPWO) has been working with the department of Environment, Great Lakes, and Energy (EGLE) to secure grant funding using CARES Act funding for additional wastewater sampling for COVID within Sterling Heights and Lenox Township. MCPWO was successful in obtaining this grant funding in the amount of \$404,150.98. This funding will be used to install six portable composite samplers in Sterling Heights and one unit in Lenox Township. This project will run to December 30, 2020 with samples being taken once a week during that time.

Attached to this recommendation you will find the draft contractual agreement between MIDDD and EGLE. This draft agreement has been reviewed by MCPWO staff and our legal team. At this time the only change that will be made is that the agreement will be made between the MIDDD and EGLE instead of MCPWO and EGLE.

This project is 100% funded by EGLE which includes MCPWO staff time. It is expected that there will be no charge to the MIDDD.

MCPWO staff is recommending to sign the agreement between the MIDDD and EGLE to receive the grant funding in the NTE amount of \$404,150.98.

Attachment: EGLE DRAFT Contractual Agreement

I. PROJECT SCOPE

This Agreement and its appendices constitute the entire Agreement between the State and the Grantee and may be modified only by written agreement between the State and the Grantee.

(A) The scope of this project is limited to the activities specified in Appendix A and such activities as are authorized by the State under this Agreement. Any change in project scope requires prior written approval in accordance with Section III, Changes, in this Agreement.

(B) By acceptance of this Agreement, the Grantee commits to complete the project identified in Appendix A within the time period allowed for in this Agreement and in accordance with the terms and conditions of this Agreement.

II. AGREEMENT PERIOD

Upon signature by the State, the Agreement shall be effective from the Start Date until the End Date on page 1. The State shall have no responsibility to provide funding to the Grantee for project work performed except between the Start Date and the End Date specified on page 1. Expenditures made by the Grantee prior to the Start Date or after the End Date of this Agreement are not eligible for payment under this Agreement.

III. CHANGES

Any changes to this Agreement other than budget line item revisions shall be requested by the Grantee or the State in writing and implemented only upon approval in writing by the State. The State reserves the right to deny requests for changes to the Agreement or to the appendices. No changes can be implemented without approval by the State.

IV. GRANTEE DELIVERABLES AND REPORTING REQUIREMENTS

Reporting on Expenditures

Recipients will be required to periodically report on spend and the forecasted spend throughout the grant program. Below are the reporting dates and requirements for each recipient. Templates will be provided for you to use for this reporting.

Reporting Period	Report Due Date	Reporting Requirements
November 1, 2020 – December 30, 2020	November 15, 2020	Expenditure Forecast Report
October 1, 2020 – December 30, 2020	January 6, 2021	Financial Status Report
December 1, 2020 – December 30, 2020	January 30, 2021	Final Financial Status Report
		Expenditure Location Report
		Outcome Metric Report
		Grant Closing Certification

V. GRANTEE RESPONSIBILITIES

(A) The Grantee agrees to abide by all applicable local, state, and federal laws, rules, ordinances, and regulations in the performance of this grant.

(B) All local, state, and federal permits, if required, are the responsibility of the Grantee. Award of this grant is not a guarantee of permit approval by the State.

(C) The Grantee shall be solely responsible to pay all applicable taxes and fees, if any, that arise from the Grantee's receipt or execution of this grant.

(D) The Grantee is responsible for the professional quality, technical accuracy, timely completion, and coordination of all designs, drawings, specifications, reports, and other services submitted to the State under this Agreement. The Grantee shall, without additional compensation, correct or revise any errors, omissions, or other deficiencies in drawings, designs, specifications, reports, or other services.

(E) The State's approval of drawings, designs, specifications, reports, and incidental work or materials furnished hereunder shall not in any way relieve the Grantee of responsibility for the technical adequacy of the work. The State's review, approval, acceptance, or payment for any of the services shall not be construed as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.

(F) The Grantee acknowledges that it is a crime to knowingly and willingly file false information with the State for the purpose of obtaining this Agreement or any payment under the Agreement, and that any such filing may subject the Grantee, its agents, and/or employees to criminal and civil prosecution and/or termination of the grant.

VI. USE OF MATERIAL

Unless otherwise specified in this Agreement, the Grantee may release information or material developed under this Agreement, provided it is acknowledged that the State funded all or a portion of its development.

The State, and federal awarding agency, if applicable, retains a royalty-free, nonexclusive and irrevocable right to reproduce, publish, and use in whole or in part, and authorize others to do so, any copyrightable material or research data submitted under this grant whether or not the material is copyrighted by the Grantee or another person. The Grantee will only submit materials that the State can use in accordance with this paragraph.

VII. ASSIGNABILITY

The Grantee shall not assign this Agreement or assign or delegate any of its duties or obligations under this Agreement to any other party without the prior written consent of the State. The State does not assume responsibility regarding the contractual relationships between the Grantee and any subcontractor.

VIII. SUBCONTRACTS

The State reserves the right to deny the use of any consultant, contractor, associate, or other personnel to perform any portion of the project. The Grantee is solely responsible for all contractual activities performed under this Agreement. Further, the State will consider the Grantee to be the sole point of contact with regard to contractual matters, including payment of any and all charges resulting from the anticipated Grant. All subcontractors used by the Grantee in performing the project shall be subject to the provisions of this Agreement and shall be qualified to perform the duties required.

IX. NON-DISCRIMINATION

The Grantee shall comply with the Elliott Larsen Civil Rights Act, 1976 PA 453, as amended, MCL 37.2101 *et seq.*, the Persons with Disabilities Civil Rights Act, 1976 PA 220, as amended, MCL 37.1101 *et seq.*, and all other federal, state, and local fair employment practices and equal opportunity laws and covenants that it shall not discriminate against any employee or applicant for employment, to be employed in the performance of this Agreement, with respect to his or her hire, tenure, terms, conditions, or privileges of employment, or any matter directly or indirectly related to

employment, because of his or her race, religion, color, national origin, age, sex, height, weight, marital status, or physical or mental disability that is unrelated to the individual's ability to perform the duties of a particular job or position. The Grantee agrees to include in every subcontract entered into for the performance of this Agreement this covenant not to discriminate in employment. A breach of this covenant is a material breach of this Agreement.

X. UNFAIR LABOR PRACTICES

The Grantee shall comply with the Employers Engaging in Unfair Labor Practices Act, 1980 PA 278, as amended, MCL 423.321 *et seq.*

XI. LIABILITY

(A) The Grantee, not the State, is responsible for all liabilities as a result of claims, judgments, or costs arising out of activities to be carried out by the Grantee under this Agreement, if the liability is caused by the Grantee, or any employee or agent of the Grantee acting within the scope of their employment or agency.

(B) Nothing in this Agreement should be construed as a waiver of any governmental immunity by the Grantee, the State, its agencies, or their employees as provided by statute or court decisions.

XII. CONFLICT OF INTEREST

No government employee, or member of the legislative, judicial, or executive branches, or member of the Grantee's Board of Directors, its employees, partner agencies, or their families shall benefit financially from any part of this Agreement.

XIII. ANTI-LOBBYING

If all or a portion of this Agreement is funded with federal funds, then in accordance with 2 CFR 200, as appropriate, the Grantee shall comply with the Anti-Lobbying Act, which prohibits the use of all project funds regardless of source, to engage in lobbying the state or federal government or in litigation against the State. Further, the Grantee shall require that the language of this assurance be included in the award documents of all subawards at all tiers.

If all or a portion of this Agreement is funded with state funds, then the Grantee shall not use any of the grant funds awarded in this Agreement for the purpose of lobbying as defined in the State of Michigan's lobbying statute, MCL 4.415(2). "Lobbying" means communicating directly with an official of the executive branch of state government or an official in the legislative branch of state government for the purpose of influencing legislative or administrative action." The Grantee shall not use any of the grant funds awarded in this Agreement for the purpose of litigation against the State. Further, the Grantee shall require that language of this assurance be included in the award documents of all subawards at all tiers.

XIV. DEBARMENT AND SUSPENSION

By signing this Agreement, the Grantee certifies that it has checked the federal debarment/suspension list at www.SAM.gov to verify that its agents, and its subcontractors:

- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or the state.
- (2) Have not within a three-year period preceding this Agreement been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction, as defined in 45 CFR 1185;

violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

- (3) Are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses enumerated in subsection (2).
- (4) Have not within a three-year period preceding this Agreement had one or more public transactions (federal, state, or local) terminated for cause or default.
- (5) Will comply with all applicable requirements of all other state or federal laws, executive orders, regulations, and policies governing this program.

XV. AUDIT AND ACCESS TO RECORDS

The State reserves the right to conduct a programmatic and financial audit of the project, and the State may withhold payment until the audit is satisfactorily completed. The Grantee will be required to maintain all pertinent records and evidence pertaining to this Agreement, including grant and any required matching funds, in accordance with generally accepted accounting principles and other procedures specified by the State. The State or any of its duly authorized representatives must have access, upon reasonable notice, to such books, records, documents, and other evidence for the purpose of inspection, audit, and copying. The Grantee will provide proper facilities for such access and inspection. All records must be maintained for a minimum of five years after the final payment has been issued to the Grantee by the State.

XVI. INSURANCE

(A) The Grantee must maintain insurance or self-insurance that will protect it from claims that may arise from the Grantee's actions under this Agreement.

(B) The Grantee must comply with applicable workers' compensation laws while engaging in activities authorized under this Agreement.

XVII. OTHER SOURCES OF FUNDING

The Grantee guarantees that any claims for reimbursement made to the State under this Agreement must not be financed by any source other than the State under the terms of this Agreement. If funding is received through any other source, the Grantee agrees to delete from Grantee's billings, or to immediately refund to the State, the total amount representing such duplication of funding.

XVIII. COMPENSATION

(A) A breakdown of costs allowed under this Agreement is identified in Appendix A. The State will pay the Grantee a total amount not to exceed the amount on page 1 of this Agreement, in accordance with Appendix A, and only for expenses incurred and paid. All other costs necessary to complete the project are the sole responsibility of the Grantee.

(B) Expenses incurred by the Grantee prior to the Start Date or after the End Date of this Agreement are not allowed under the Agreement.

(C) The State will approve payment requests after approval of reports and related documentation as required under this Agreement.

(D) The State reserves the right to request additional information necessary to substantiate payment requests.

(E) Payments under this Agreement may be processed by Electronic Funds Transfer (EFT). The Grantee may register to receive payments by EFT at the SIGMA Vendor Self Service web site (<https://sigma.michigan.gov/webapp/PRDVSS2X1/AltSelfService>).

(F) Administrative costs: The maximum amount of Administrative costs is limited to \$1,000 and cannot exceed this amount.

XIX. CLOSEOUT

(A) A determination of project completion, which may include a site inspection and an audit, shall be made by the State after the Grantee has met any match obligations, satisfactorily completed the activities, and provided products and deliverables described in Appendix A.

(B) Upon issuance of final payment from the State, the Grantee releases the State of all claims against the State arising under this Agreement. Unless otherwise provided in this Agreement or by State law, final payment under this Agreement shall not constitute a waiver of the State's claims against the Grantee.

(C) The Grantee shall immediately refund to the State any payments in excess of the costs allowed by this Agreement.

XX. CANCELLATION

This Agreement may be canceled by the State, upon 30 days written notice, due to Executive Order, budgetary reduction, other lack of funding, upon request by the Grantee, or upon mutual agreement by the State and Grantee. The State may honor requests for just and equitable compensation to the Grantee for all satisfactory and eligible work completed under this Agreement up until 30 days after written notice, upon which time all outstanding reports and documents are due to the State and the State will no longer be liable to pay the grantee for any further charges to the grant.

XXI. TERMINATION

(A) This Agreement may be terminated by the State as follows.

(1) Upon 30 days written notice to the Grantee:

- a. If the Grantee fails to comply with the terms and conditions of the Agreement, or with the requirements of the authorizing legislation cited on page 1, or the rules promulgated thereunder, or other applicable law or rules.
- b. If the Grantee knowingly and willingly presents false information to the State for the purpose of obtaining this Agreement or any payment under this Agreement.
- c. If the State finds that the Grantee, or any of the Grantee's agents or representatives, offered or gave gratuities, favors, or gifts of monetary value to any official, employee, or agent of the State in an attempt to secure a subcontract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Agreement.
- d. If the Grantee or any subcontractor, manufacturer, or supplier of the Grantee appears in the register of persons engaging in unfair labor practices that is compiled by the Michigan Department of Licensing and Regulatory Affairs or its successor.
- e. During the 30-day written notice period, the State shall withhold payment for any findings under subparagraphs a through d, above and the Grantee will immediately cease charging to the grant and stop earning match for the project (if applicable).

- (2) Immediately and without further liability to the State if the Grantee, or any agent of the Grantee, or any agent of any subcontract is:
- a. Convicted of a criminal offense incident to the application for or performance of a State, public, or private contract or subcontract;
 - b. Convicted of a criminal offense, including but not limited to any of the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or attempting to influence a public employee to breach the ethical conduct standards for State of Michigan employees;
 - c. Convicted under State or federal antitrust statutes; or
 - d. Convicted of any other criminal offense that, in the sole discretion of the State, reflects on the Grantee's business integrity.
 - e. Added to the federal or state Suspension and Debarment list.

(B) If a grant is terminated, the State reserves the right to require the Grantee to repay all or a portion of funds received under this Agreement.

XXII. IRAN SANCTIONS ACT

By signing this Agreement the Grantee is certifying that it is not an Iran linked business, and that its contractors are not Iran linked businesses, as defined in MCL 129.312.

XXIII. DISCLOSURE OF INFORMATION

All reports and other printed or electronic material prepared by or for the Grantee under the Agreement will not be distributed without the prior written consent of the State except for items disclosed in response to a Freedom of Information Act request, Court Order or subpoena.

XXIV. QUALITY ASSURANCE/QUALITY CONTROL

A project-specific Quality Assurance Project Plan (QAPP) must be submitted to the State in accordance with guidance provided by the EGLE project administrator. Monitoring conducted prior to final EGLE approval of the QAPP will not be reimbursed.

XXV. RESEARCH AND DEVELOPMENT

Research and development costs are eligible as part of this grant.

FEDERALLY FUNDED PROGRAM-SPECIFIC BOILERPLATE

SECTION 1. PROGRAM INFORMATION

Uniform CRF Eligibility

Payments from the Coronavirus Relief Fund may only be used to cover expenditures that:

1. are necessary expenditures incurred due to the public health emergency with respect to Coronavirus Disease (COVID-19);
2. were not accounted for in the budget most recently approved as of March 27, 2020 (the date of enactment of the CARES Act) for the State or government;
3. were incurred during the period that begins on March 1, 2020 and ends on December 30, 2020.

Usage of these funds must comply with the federal requirements of the Coronavirus Relief Fund.

The overarching goal of this project is to more rapidly detect the circulation of the SARS-CoV-2 virus within specific communities via wastewater testing, with the following outcomes:

1. Confirm the presence of virus, indicate the trend of virus shedding, and potentially quantify disease burden, within a community through local pilot projects.
2. Provide data to support local testing strategies.
3. Better inform local and statewide healthcare and public health response stakeholders.
4. In the future, potentially decrease the burden of testing on congregate facilities such as prisons and long-term care facilities.

With this proposal, SARS-CoV-2 wastewater sampling and analysis will be consistent, public health interpretation of results and risk communication will be implemented, and data will be systematically shared with local and state level public health officials and other stakeholders.

For a cost to be considered to have been incurred, performance or delivery must occur during the covered period but payment of funds need not be made during that time (though it is generally expected that this will take place within 90 days of a cost being incurred).

Administrative Costs

Administrative costs are eligible for reimbursement in the project in accordance with the budget. Indirect costs are not eligible.

Eligible CRF expenditures under this program

- Expenditures incurred due to the public health emergency with respect to Coronavirus Disease (COVID-19);
- Expenditures that were not accounted for in the budget most recently approved as of March 27, 2020 (the date of enactment of the CARES Act) for the State or government;
- Expenditures that were incurred during the period that begins on March 1, 2020 and ends on December 30, 2020

SECTION II. STANDARD PROVISIONS: PROGRAM REQUIREMENTS

Funds were awarded to the State of Michigan as Federal Financial Assistance from the U.S. Department of Treasury. The funds were awarded under the Social Security Act, as amended by section 5001 of the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") <https://home.treasury.gov/policy-issues/cares/state-and-local-governments> as the Coronavirus Relief Fund.

CFDA #: 21.019

FAIN #: SLT0040

Coronavirus Relief Funds are considered federal financial assistance and have been assigned a Catalog of Federal Domestic Assistance (CFDA) or Assistance Listing Number of 21.019. Fund payments are considered to be federal financial assistance subject to the Single Audit Act (31 U.S.C. Sections 7501 – 7507) and the related provisions of the Uniform Guidance, 2 Code of Federal Regulations (CFR) Section 200.303 regarding internal controls, Section 200.330 – 200.332 regarding subrecipient monitoring and management, and subpart F regarding audit requirements. Under the Single Audit Act, subrecipients will need to report expenditures under this program using the CFDA number 21.019.

Each eligible applicant must register with the Federal System for Award Management (SAM) by October 30, 2020. The SAM website is: <https://www.sam.gov/SAM>.

Use of Funds:

The CARES Act requires that the payments from the Coronavirus Relief Fund only be used to cover expenditures that:

1. are necessary expenditures incurred due to the public health emergency with respect to Coronavirus Disease (COVID-19);
2. were not accounted for in the budget most recently approved as of March 27, 2020 (the date of enactment of the CARES Act) for the State or government;
3. were incurred during the period that begins on March 1, 2020 and ends on December 30, 2020.

CRF is federal funding and, as such, funds from this program cannot be used to pay expenses that will be or have been reimbursed by another federal program

OMB Uniform Guidance for Non-federal Agencies Receiving These Funds

The U.S. Department of Treasury has indicated in the Coronavirus Relief Fund Frequency Asked Questions that are accessible at [Coronavirus Relief Fund FAQ pdf](#) that the provisions of the Uniform Guidance, 2 Code of Federal Regulations (CFR) Section 200.303 regarding internal controls, Sections 200.330 through 200.332 regarding subrecipient monitoring and management, and subpart F regarding audit requirements are applicable to all CRF subawards at this time. However, guidance is evolving, and jurisdictions will be required to comply with additional guidance as it is published. Effective internal controls must be established and maintained (2 CFR Section 200.303). All reimbursements requested under this program should be accounted for with supporting documentation. Eligible applicants should maintain documentation evidencing that the funds were expended in accordance with federal, state, and local regulations. In accordance with federal Uniform Guidance, funds received under this program shall be included on the eligible applicant's Schedule of Expenditures of Federal Awards (SEFA) and included within the scope of the eligible applicant's Single Audit.

The following is a summary of Uniform Guidance provisions that have been identified as significant. Applicants must review the Uniform Guidance at [eCFR Uniform Guidance](#) for complete requirements.

2 CFR 200.303 Internal Controls

The non-Federal entity must:

1. Establish and maintain effective internal control over the Federal award that provides reasonable assurance that the non-Federal entity is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the Federal award.
2. Comply with Federal statutes, regulations, and the terms and conditions of the Federal awards.
3. Evaluate and monitor the non-Federal entity's compliance with statutes, regulations, and the terms and conditions of Federal awards.
4. Take prompt action when instances of noncompliance are identified including noncompliance identified in audit findings.
5. Take reasonable measures to safeguard protected personally identifiable information.

2 CFR 200.330 – 200.332 Subrecipient Monitoring and Management

The subrecipient or local unit receiving the subaward shall not issue any subawards to any other entity.

2 CFR 200.501 – Audit Requirements

- (a) Audit required. A non-federal entity that expends \$750,000 or more during the non-Federal entity's fiscal year in Federal awards must have a single or program-specific audit conducted for that year in accordance with the provisions of this part.

2 CFR 200.508 – Auditee Responsibilities

The auditee must:

1. Procure or otherwise arrange for the audit, if required.
2. Prepare appropriate financial statements, including the schedule of expenditures of Federal awards.
3. Promptly follow up and take corrective action on the audit findings.
4. Provide the auditor with access to personnel, accounts, books, records, supporting documentation, and other information as needed for the auditor to perform the audit.

Repayment for ineligible CRF expenditures or under spending

Any funds received under the authorizing legislation for this program expended by the eligible applicant in a manner that does not adhere to the Coronavirus Aid, Relief, and Economic Security Act, Public Law 116-136 or Uniform Guidance 2 CFR 200, as applicable, shall be returned to the state. If it is determined that an eligible applicant receiving funds under this act expends any funds under this act for a purpose that is not consistent with the requirements of the Coronavirus Aid, Relief, and Economic Security Act, Public Law 116-136, or Uniform Guidance 2 CFR 200, the state budget director is authorized to withhold payment of state funds, in part or in whole, payable from any state appropriation.

All subawards are subject to future audits and eligible applicants must allow the State of Michigan, any of its duly authorized representatives and/or State of Michigan's Office of the Auditor General access to the eligible applicant's records and financial statements to ensure compliance with Federal statutes, regulations and the terms and conditions of the grant award.

CRF Record Retention Requirements

Recipients of Coronavirus Relief Fund payments shall maintain and make available to the U.S. Department of Treasury, Office of Inspector General, upon request, all documents and financial records sufficient to establish compliance with subsection 601(d) of the Social Security Act as amended, (42 U.S.C. 801(d)).

Records shall be maintained for a period of five (5) years after final payment is made using Coronavirus Relief Fund monies. These record retention requirements are applicable to prime recipients and their grantees and subgrant recipients, contractors, and other levels of government that received transfers of Coronavirus Relief Fund payments from prime recipients.

Records to support compliance with subsection 601(d) may include, but are not limited to, copies of the following:

1. general ledger and subsidiary ledgers used to account for (a) the receipt of Coronavirus Relief Fund payments and (b) the disbursements from such payments to meet eligible expenditures related to the public health emergency due to COVID-19;
2. budget records for 2019 and 2020;
3. payroll, time records, human resource records to support costs incurred for payroll expenditures related to addressing the public health emergency due to COVID-19;
4. receipts of purchases made related to addressing the public health emergency due to COVID-19;
5. contracts and subcontracts entered into using Coronavirus Relief Fund payments and all documents related to such contracts;

6. grant agreements and grant subaward agreements entered into using Coronavirus Relief Fund payments and all documents related to such awards;
7. all documentation of reports, audits, and other monitoring of contractors, including subcontractors, and grant recipients and subrecipients;
8. all documentation supporting the performance outcomes of contracts, subcontracts, grant awards, and grant recipient subawards;
9. all internal and external email/electronic communications related to use of Coronavirus Relief Fund payments; and
10. all investigative files and inquiry reports involving Coronavirus Relief Fund payments.

Section III. Reporting Requirements

Additional information will be communicated to you at a future date as the subrecipient or contractor. State agencies may identify and develop additional reporting requirements that is specific for their program.

Statewide Reporting Requirements

The State Budget Director will report on the status of these funds to the Senate and House appropriations committees and the Senate and House fiscal agencies periodically until all funds are exhausted. U.S. Treasury reporting requirements are evolving and additional reporting guidance will be issued with more detail but the elements described below are the minimum reporting expectations.

Reporting Requirements

The United States Treasury Office of Inspector General has engaged GrantSolutions, a grant and program management Federal shared service provider under the U.S. Department of Health and Human Services, to develop a customized and user-friendly reporting solution to capture the use of Coronavirus Relief Fund payments. In this regard, the GrantSolutions portal will be prepopulated with prime recipient data to include the Coronavirus Relief Fund payment amount, date, recipient Dun & Bradstreet unique identification number (DUNS number), and contact information. It is the responsibility of the prime recipients to report on uses of Coronavirus Relief Fund payments. Accordingly, each prime recipient shall report Coronavirus Disease 2019 (COVID-19) related costs incurred quarterly. The State of Michigan is currently working on a template (financial status report) that will need to be completed by grantees to assist the State with the required reporting. The following delineates the reporting requirements for the State of Michigan as the prime recipient to provide context regarding the type of information that may be collected through the reporting template.

Projects

List all projects the prime recipient plans to complete with Coronavirus Relief payments. For each project, the prime recipient will be to enter the project name, identification number (created by the prime recipient), description, and status of completion. Once a project is entered into the GrantSolutions portal, the prime recipient will be able to report on the project's obligations and expenditures.

Expenditure Categories

Once expenditures are entered against obligations, the prime recipient will need to select the specific expenditure category from the available options from a dropdown menu:

- a. Administrative Expenses
- b. Budgeted Personnel and Services Diverted to a Substantially Different Use
- c. COVID-19 Testing and Contact Tracing
- d. Economic Support (Other than Small Business, Housing, and Food Assistance)
- e. Expenses Associated with the Issuance of Tax Anticipation Notes
- f. Facilitating Distance Learning
- g. Food Programs
- h. Housing Support
- i. Improve Telework Capabilities of Public Employees
- j. Medical Expenses
- k. Nursing Home Assistance
- l. Payroll for Public Health and Safety Employees
- m. Personal Protective Equipment
- n. Public Health Expenses
- o. Small Business Assistance
- p. Unemployment Benefits
- q. Workers' Compensation
- r. Items Not Listed Above - to include other eligible expenses that are not captured in the available expenditure categories

Each prime recipient shall also provide detailed obligation and expenditure information for any contracts and grants awarded, loans issued, transfers made to other government entities, and direct payments made by the prime recipient that are greater than or equal to \$50,000 as follows.

Grants Greater Than or Equal to \$50,000

- a. Grantee identifying and demographic information (e.g. DUNS number and location)
- b. Award number
- c. Award date, amount, and description
- d. Award payment method (reimbursable or lump sum payment(s))
- e. Related project name(s)
- f. Period of performance start date
- g. Period of performance end date
- h. Primary place of performance
- i. Quarterly obligation amount
- j. Quarterly expenditure amount
- k. Expenditure categories (listed above)

Aggregate reporting below \$50,000

Aggregate reporting is allowed on contracts, grants, transfers made to other government entities, loans, direct payments, and payments to individuals that are below \$50,000.

Reporting on Expenditures

Recipients will be required to periodically report on spend and the forecasted spend throughout the grant program. Below are the reporting dates and requirements for each recipient. Templates will be provided in the future for you to use for this reporting.

Reporting Period	Report Due Date	Reporting Requirements
November 1, 2020 – December 30, 2020	November 15, 2020	Expenditure Forecast Report
October 1, 2020 – December 30, 2020	January 6, 2021	Financial Status Report
December 1, 2020 – December 30, 2020	January 30, 2021	Final Financial Status Report
		Expenditure Location Report
		Outcome Metric Report
		Grant Closing Certification

PROJECT-SPECIFIC REQUIREMENTS – APPENDIX A

The following pages include the Grant Closing Certification, required format for data reporting, work plan, and budget.

EGLE
Waste Water Surveillance Program - Reporting Form
Grant Closing Certification

1. I certify the End of Program Report submitted for the **Waste Water Surveillance** Program is accurate and adheres to all of the constraints outlined in this guidance.
2. I understand and agree that any expenditures incurred in any manner that does not adhere to official federal guidance shall be returned to the State of Michigan.
3. I understand that any subrecipient receiving funds under the **Waste Water Surveillance** Program shall retain documentation supporting the reporting and eligibility of expenditures and obligations contained in the expenditure reports. Such documentation shall be provided by the state upon request and maintained for (5) years.
4. All funds that have not been incurred by December 30, 2020 will be or have been returned to the State of Michigan by January 30, 2021.

By: _____

Signature: _____

Title: _____

Date: _____

Format of data for reporting to EGLE

Facility and Site Registration Information				
Number	Field Name	Description	Examples	Required
1	Facility_ID	system generated key		Yes
2	Name	Name of facility for which samples are being collected; name of lab conducting sample	Saginaw Waste Water Treatment Plant; MSU Lab	Yes
3	Type	type of facility	WWTP, Nursing Home, Casino, University, Lab	Yes
4	Address1	address info of facility		Yes
5	Address2	address info of facility		No
6	City	city info		Yes
7	State			Yes
8	Zip			Yes
9	Contact Name	first and last name of primary contact for data from facility		No
10	Contact Email	email for facility contact		No
11	Contact Phone	phone for facility contact		No
Sample Location Information				
12	Facility_ID	from facility table, facility that owns sample location (usually not Lab type)		Yes
13	Sample Location ID	system generated key		Yes
14	Sample Location Name	name describing the sampling location	West Saginaw WWTP, NE Saginaw WWTP	Yes
15	Sample Lat	latitude of sample		Yes
16	Sample Long	longitude of sample		Yes
Sample and Result Information - to be sent weekly or some other cycle				
1	Lab Facility_ID	id from facility table for lab that processed the sample		Yes
2	Facility_ID	facility id for where sample was collected	01, 02, 03, ...	Yes
3	Sample Location ID	sample location id for where sampling specifically occurred	100, 101, 102; 200, 201, 202; ...	Yes
4	Sample ID	internal system generated ID	SN12345	Yes
5	Sample Number	number identified by labs for each sample		
6	Sample Date	Date sample was collected	10/10/2020	Yes
7	SARS-CovV-2 Detected		Yes, No	Yes
8	SARS-Quantifiable		Yes, No	
9	QA/QC Pass or Fail	indicates whether sample test/result passed QA/QC	Pass, Fail	Yes
10	N1 GC / 100 ml			No
11	N2 GC / 100 ml			No
12	E GC / 100 ml			No
13	Lower Limit of Detection (LDL) GC / 100 ml			No
14	Instrument Type	type of equipment used to test the sample	qPCR, ddPCR	Yes
15	Flow	24 hour flow for the day sample collected		No
16	Sample Method	whether sample is instantaneous pull or 24 hr composite	Grab, 24 hr Composite	Yes
17	Sample Notes	any notes or qualifiers associated with the sample, test, and results	500 characters	No

Budget



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

Water Resources Division
 Wastewater Surveillance
 FINANCIAL STATUS REPORT

Grantee / Vendor Name: Macomb County Public Works Office

Vendor Number: _____

Project Name: SARS CoV-2 Wastewater Testing

Grant Given Number: 2020-7204

Contract Date From: 9/1/2020 To: 12/30/2020

Contact Name: Vincent Astorino Contact Number: 586-469-6320

Contact Email: Vincent.Astorino@macombgov.org

TASK	Task Number	Amount
Macomb County Public Works Staff	1	49,070.98
Supplies	2	4,200.00
Aquasight	3	266,500.00
HESCO Sterling Heights	4	47,400.00
Coleville Electric	5	36,980.00
		-
		-
		-
		-
		-
Task Subtotal		404,150.98
INDIRECT BUDGET		Percentage
Total	0%	\$ -
PROJECT BUDGET		
Total		404,150.98
MATCH BUDGET		Percentage
Total	0%	\$ -
GRANT BUDGET		
Total		404,150.98

MACOMB COUNTY PUBLIC WORKS OFFICE



CANDICE S. MILLER

MACOMB COUNTY PUBLIC WORKS COMMISSIONER

SARS-CoV-2 Wastewater Testing Submittal

*EGLE, MDHSS, MCPWO, Macomb County Health
Department, Sterling Heights, Oakland University,
HESCO, Aquasight*

September 22, 2020

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- B. Sterling Heights Sampling Location Details
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- D. HESCO Sampler Installation Costs
- E. Colville Electric Quote for Electrical Work
- F. MCPWO Staffing Costs
- G. Oakland University Laboratory Costs & Aquasight Data Analytics Costs

Section 1 – Introduction

This document outlines the approach from the Macomb County Public Works Office (MCPWO) for the SARS-CoV-2 Wastewater Monitoring Pilot Project. This pilot project is being facilitated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and the Michigan Department of Health & Human Services (MDHSS). A letter from these entities is presented in Appendix A.

For this project, along with EGLE and MDHSS, MCPWO will partner several different entities to facilitate the SARS-CoV-2 monitoring. Listed below are the partners and their respective roles in the project.

- MCPWO: Facilitate the SARS-CoV-2 monitoring program. MCPWO staff to perform program oversight tasks, sampling plan implementation, sample collection, sampler operation & maintenance, and sample transportation to laboratory.
- Macomb County Health Department (MCHD): Data collected during this project will be provided to MCHD so they have the ability to make informed decisions on where to prioritize testing. MCHD will provide the team data on number of confirmed case numbers within Sterling Heights.
- City of Sterling Heights: A Macomb County community and Macomb Interceptor Drain Drainage District (MIDDD) member. Wastewater sampling will be performed at each of the Sterling Heights wastewater outlet locations.
- Aquasight: Data analytics and management and laboratory facilitator. Aquasight to develop and maintain a cloud based database, which hosts all information received and processed throughout the sampling period. This platform provides the ability to view and alert on data trends. This also includes population data, google searches for SARS-CoV-2 symptoms, sewer GIS information, etc.
- HESCO: Sampling equipment representative. HESCO will procure and install all sampling related equipment.
- Colville Electric: Electrical installation to link the sampling equipment into the MCPWO SCADA servers.
- Oakland University: Provide laboratory analysis of all samples collected as part of the SARS-CoV-2 Wastewater Monitoring Pilot Project.

MCPWO believes that this project can be completed at a not-to-exceed cost of \$404,150.98. A breakdown of these costs and overall project plan are listed below.

In the summer of 2020, MCPWO partnered with Clinton Township as well as members of this team to implement a similar wastewater monitoring program. MCPWO and partners will leverage best practices

EGLE, MDHSS, MCPWO, MCHD, Sterling Heights, Oakland University, HESCO, Aquasight

and information from the Clinton Township monitoring project to ensure the success of this SARS-CoV-2 Wastewater Monitoring Pilot Project in Sterling Heights.

Section 2 – Monitoring Locations

The City of Sterling Heights wastewater system is broken up into six (6) unique drainage districts that outlet wastewater into the MIDDD, which ultimately outlets to the Great Lake Water Authority (GLWA) system for proper treatment at the GLWA Water Resources Recovery Facility (WRRF). EGLE has also requested that MCPWO perform sampling downstream of the Macomb Correctional Facility. One additional site will be added to accommodate this request.

MCPWO intends to install sampling equipment at each of the six (7) outlet locations, which are currently equipped with permanent wastewater flow (volume) billing meters. These locations are listed below in Table 1.

Table 1. Sterling Heights Sample Locations

Billing Meter I.D.	Address	Approximate Drainage District Area (acres)
ST-S-1	40440 Utica Rd, Sterling Heights, MI 48313	7,631
ST-S-2	11590 E 15 Mile Rd, Sterling Heights, MI 48312	1,407
ST-S-3	11637 Sorrento Dr, Sterling Heights, MI 48312	6,220
ST-S-4	12655 14 Mile Rd, Sterling Heights, MI 48312	3,163
ST-S-5	13793 E 15 Mile Rd, Sterling Heights, MI 48312	1,862
ST-S-6	41024 Hayes Rd, Sterling Heights, MI 48038	3,283
LX-S-1	32989 26 Mile Rd, Lenox Township, MI 48048	690

Provided in Appendix B are excerpts of MIDDD maps showing these locations and billing district areas. Detail locations and images of each location are also provided, including:

- Detailed location map

- Aerial image
- Photo of Facility
- Billing meter wastewater infrastructure profile

Section 3 – Sampling Equipment

Each of the six (7) sampling locations will be furnished with an ISCO 6712C automatic compact portable sampler and pertinent fixtures. Product information for these samplers is provided in Appendix C. These samplers will be powered via battery and tied directly into the MCPWO Supervisory Control and Data Acquisition (SCADA) program. This will allow the sampler to communicate directly with the respective Sterling Heights and Lenox Twp. billing flow meters, for flow (volume) based sampling logic. Each sampler can be initiated and viewed remotely, through the SCADA program. It is intended to have the samplers automatically collect an 8-hour composite sample once a week.

Hesco will provide the sampling equipment, including startup and installation. A breakdown of these efforts is provided in Appendix D. The electrical conduit that will be required to be installed plus wiring into the SCADA system will be performed by Colville Electric and a breakdown of their costs are included in Appendix E.

Section 4 – Sampling Standard Operating Procedures

Outlined below is the Standard Operating Procedure (SOP) for the SARS-CoV-2 Wastewater Monitoring Pilot Program. This is intended to assist the field technician / logistician in regulating and quality control of sample collection process. MCPWO staff will perform these tasks. Provided in Appendix F is a cost breakdown for the MCPWO staff for this task.

1. Equipment

- 1.1. Portable Sampler (Installed on site)
- 1.2. Ice
- 1.3. PPE consistent with CDC guidelines for wastewater operators
- 1.4. Sterile 1-L or 500 mL sample bottle individually wrapped (provided by lab)
- 1.5. Sample transfer funnel
- 1.6. Sharpie markers for time labeling
- 1.7. Pre-printed sample ID's to apply to bottles (provided by lab)
- 1.8. Parafilm or tape for sealing bottles (provided by lab)
- 1.9. Cold (non-ice) packs (provided by lab)
- 1.10. Plastic Igloo Cooler (provided by lab)

- 1.11. Packaging Tape 2 inch
- 1.12. 70% Ethanol for cleaning and disinfecting
- 1.13. Bleach wipes
- 1.14. Biohazard bag for disposing of used PPE
- 1.15. 1 Gallon Ziplock Bag

2. Sample Run Preparations

- 2.1. Place ice pack in the freezer upon receipt from lab
- 2.2. Charge battery pack(s) for sampler
- 2.3. If using portable on-site samplers, a run to fill them with ice the night before 12am-12am sampling should be performed, and battery packs should be checked/swapped
- 2.4. On the day of sampling, put ice packs in the cooler
- 2.5. Verify sample programs are loaded into sampler
- 2.6. Load portable samplers with ice
- 2.7. Pack spare ice in additional (non-sample) cooler if required to refill sampler(s)
- 2.8. Remove bottle wrapping and apply pre-printed labels from lab to bottles
- 2.9. Load bottles into cooler, in ziplock bags to prevent labels from getting wet

3. On-Site Sample Collection (Fixed Refrigerated Sampler)

- 3.1. For composite samples taken 12am-12am the previous day, sample runs should begin as early as possible the following day to minimize hold time.
- 3.2. Wear PPE (gloves, mask, face shield, eye protector)
- 3.3. Copy Sample ID/description, date and time onto the Chain of Custody Form provided.
- 3.4. Remove the collected sample vessel from the sampler (up to 5 gallons) and gently invert the collected sample from the sampler at least 6 times to assure homogeneity.
- 3.5. Remove the bottle top when ready to sample and protect from contamination.
- 3.6. Pour from the composite refrigerated sample vessel slowly into the sample container using a funnel if necessary. *If sample vessel is full after wet weather, take sample and note time of program end on CoC*
 - No need to have a full bottle, approx. 500ml is sufficient.
 - Clean and disinfect the funnel with 70% ethanol (do not use bleach)
 - Pour any remaining collected sample down manhole after sample is transferred
- 3.7. Tightly close the sample bottle and wipe up any spills with a bleach wipe and 70% ethanol. Use sharpie to add to the bottle label the collection time and add to the Chain of Custody form as well.
- 3.8. Put a wrap of parafilm around the bottle cap to prevent loosening during transport and place in the cooler with the ice packs. If required, fill with newspaper or other filler so that the bottles don't move around during shipping.
- 3.9. Record temperature and pH data from probe data collected with sample and add to Chain of Custody sheet
 - If no probe data available, run new manual sample from sampler and take temperature/pH measurements with handheld probe from current sludge conditions and add to Chain of Custody.

- 3.10. Sign and add the Chain of Custody form to the cooler (Putting the form in a Ziplock bag will preserve it during shipping).
- 3.11. If shipping, tape the ice chest with at least two complete wraps of 2-inch-wide packaging tape.
- 3.12. Contain and dispose of all waste in a Red Biohazard Bag.

4. On-Site Collection (Portable/Non-Refrigerated Sampler)

- 4.1. For manual grab samples (non-composite), samples should be taken between 8-11 am when possible for peak loading.
- 4.2. For composite samples taken 12am-12am the previous day, samples should be collected as early as possible the following day to shorten hold time and ice melt.
- 4.3. Wear PPE (gloves, mask, Face shield eye protector)
- 4.4. Copy Sample ID/description, date and time onto the Chain of Custody Form provided.
- 4.5. Deploy/access the portable sampler through the manhole or other access point and follow the pre-determined sample program for each sample location.
 - If using grab sampling with a unit being taken site to site, consider using a 500mL or 1000mL carousel of multiple bottles to streamline the collection process.
 - Otherwise use pre-determined sample program and pump directly into pre-sealed 500mL or 1-L bottles provided by the lab
- 4.6. Remove the bottle top when ready to sample and protect from contamination.
- 4.7. If transferring from a collected vessel, pour from the sampler slowly into the sample container using a funnel if necessary. *If collection vessel is full after wet weather, collect sample and note when the program ended on CoC*
 - No need to have a full bottle, approx. 500ml is sufficient.
 - Clean and disinfect the funnel if used
 - Pour any remaining collected sample down manhole after sample is transferred
 - Check sampler for ice level if required
- 4.8. Tightly close the sample bottle and wipe up any spills with a bleach wipe and 70% ethanol. Use sharpie to add to the bottle label the collection time and add to the Chain of Custody form as well.
- 4.9. Put a wrap of parafilm around the bottle cap to prevent loosening during transport and place in the cooler with the ice packs. If required, fill with newspaper or other filler so that the bottles don't move around during shipping.
- 4.10. Record temperature and pH data from probe data collected with sample and add to Chain of Custody sheet
 - If no probe data available, run new manual sample from sampler and take temperature/pH measurements with handheld probe from current sludge conditions and add to Chain of Custody.
- 4.11. Sign and add the Chain of Custody form to the cooler (Putting the form in a Ziplock bag will preserve it during shipping).
- 4.12. Tape the ice chest with at least two complete wraps of 2-inch-wide packaging tape.
- 4.13. Contain and dispose of all waste in a Red Biohazard Bag.

5. Sample Drop-off and Cooler Exchange

- 5.1. Call Dave Szlag at (586) 921.3027 30 minutes prior to arrival to
Math & Science Center Loading Dock
Oakland University
146 Library Dr, Rochester Hills MI, 48309
- 5.2. If shipping, ship the samples to the following address on the day of sampling
(Use FedEx Priority Overnight):
5250 West Rd.
Washington, MI 48094
Attn: David Szlag
Phone: (586) 921-3027
- 5.3. Note: Samples received in the laboratory can be stored at -80° C if not processed within 72 hours. Dr. David Szlag will be available for guiding the logistics team for first sample collection. (586) 921.3027

6. Sample Invalidation Criteria

If the following occurs, the sample should be invalidated and not sent to the lab

- 6.1. Less than 75% of total samples were collected (based on 96 or programmed number of samples)
- 6.2. Sample volume was lower than expected (less than 35% of total bottle volume) due to plugging or other tube malfunction
- 6.3. Refrigeration or ice (temperature) rises above acceptable levels (4 C)

Invalid samples should be noted in the comment section of the Chain of Custody and then the lab analyst should decide the validity of the sample.

Section 5 – Laboratory Analysis

Samples are received from a logistician and verified to be on ice. Sample handoff is tracked in the Chain of Custody form, then samples are either refrigerated for preparation or frozen at -80° C for long term storage if not processed within 72 hours. Lab analysis is performed in a joint lab set up by Oakland University and Aquasight and has BSL2+ approval. Virus sample is concentrated via centrifuge to an aliquot volume of 5-6 mL and prepared for Viral RNA extraction. Viral RNA is extracted using the QUIAGEN QUIAmp to create sample aliquots for the ddPCR analysis. N1, N2, and E genes are tested for in the ddPCR analysis, as well as phi6 for recovery yield. Results are expected within 48 hours or 2 lab days. Gene copies per L (gc/L) detected and Minimum Detection Level (MDL) are reported to the CEWS system for each sample. Once entered into the CEWS system, the results are available in the CEWS dashboard in near-live

EGLE, MDHSS, MCPWO, MCHD, Sterling Heights, Oakland University, HESCO, Aquasight

time. We are planning to quantify and measure TSS concentration for each of the samples to measure solids levels that will provide a measure of dilution in the samples from week to week.

Section 6 – Analytics and Data Processing

CEWS integrates multifarious data to estimate the extent of COVID-19 spread in a community and a decision-making tool for public health officials. Some of these features of CEWS are:

METADATA

- GIS view with sewer-shed / micro-level demarcation
- Information about pipelines, manholes and lift stations
- Sewered Equivalent Population, number of people connected to sewer
- No. of accounts total billed customers within the sewer-shed
- Granular population distribution and 60+ age population distribution map
- Hot Spots. These include places of public gathering and high proximity between people. They can be located sewer-shed wise and includes restaurants, religious places, factories, etc.
- High Risk. It includes places containing vulnerable population like old-age homes and nursing centers in a sewer-shed.

SEWAGE FLOW INSIGHTS

- Average Dry Weather Flow: Diurnal pattern of sewage flow extracted from hydraulic analysis from historical flowmeter and weather data at each sampling site.
- Actual Flow: Measured in real-time and used along with ADWF to estimate sample dilution in case of I&I (Infiltration & Inflow).
- Sewage Travel Times: This factor is essential in understanding the sample dynamics and RNA degradation while travelling from source to sampling point. It depends on the physical characteristics and location of collection system pipes.
- Viral Degradation: Due to temporal and spatial factors like temperature & distance, RNA fragments in the feces can degrade exponentially.

PREVALANCE INSIGHTS

- MPSC – Minimum Peak Shedding Cases, are estimated after accounting for sewage degradation, flow-based dilution and minimum detection limit of the lab analysis method. This number would include clinical known cases, unreported cases as well as asymptomatic cases.
- MPSC by detectable Gene – Lab analysis result in genome copies per 100 ml of sample, minimum detection limit and recovery rates for genes N1, N2 and E. MPSC can be estimated for each gene while the overall MPSC is an average per sewer-shed.
- MPSC per 100k – This metric normalizes the MPSC according to the sewer-shed population to 100,000 people. It reflects the infectivity and severity of spread within a region. For example, MPSC of 50 for two different sewer-sheds normalized to their population might become 60 MPSC per 100k and 3000 MPSC per 100k.

Work Plans SARS-CoV-2 Wastewater Testing Submittal

EGL, MDHSS, MCPWO, MCHD, Sterling Heights, Oakland University, HESCO, Aquasight

CLINICAL INSIGHTS

- Day-wise data about actual reported cases and mortality rates. Presently, we use city-level data as a benchmark against the estimated cases from sewage-based insights.

INFECTION KEY-WORD SEARCH

- Top 10 covid-19 symptoms search analysis is captured daily and recorded in CEWS sites. The correlation of this with Lab and MPSC analysis can provide excellent insights for public health officials to take action in a specific sewer shed.

Provided in Appendix G is the cost proposal for the laboratory testing and the analytics and data processing.



Candice S. Miller
Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

CC: File

From: Vincent Astorino, Operations & Flow Manager

Date: October 13, 2020

Subject: Aquasight, Colville Electric, and Hesco COVID Wastewater Monitoring Recommendation

The Macomb County Public Works Office (MCPWO) has been working with the department of Environment, Great Lakes, and Energy (EGLE) to secure grant funding using CARES Act funding for additional wastewater sampling for COVID within Sterling Heights and Lenox Township. MCPWO was successful in obtaining this grant funding in the amount of \$404,150.98. This funding will be used to install six portable composite samplers in Sterling Heights and one unit in Lenox Township. This project will run to December 30, 2020 with samples being taken once a week during that time.

MCPWO has submitted to EGLE to use the same team that was put together to perform the Clinton Township sampling. This team consists of MCPWO, Macomb County Health Department, Aquasight, Oakland University, Hesco, and Coleville Electric. Aquasight will be handling the laboratory testing with Oakland University along with developing a web platform which includes analytics of the data from the lab. Hesco will be supplying the sampling equipment and installation of it. Coleville Electric will be installing conduits and electrical to the sampling equipment so that it can be integrated into the MCPWO SCADA system.

This project is 100% funded by EGLE which includes MCPWO staff time. It is expected that there will be no charge to the MIDDD.

MCPWO staff is recommending to award the following:

- Aquasight in the total amount of \$266,500 to handle the laboratory testing, web platform, and overall analytics.
- Hesco in the total amount of \$47,400 to provide the sampling equipment and the installation of it.
- Colville Electric in the total amount of \$36,980 to install conduits and electrical that will run to the sampling equipment and integrate them into the MCPWO SCADA system.

Their proposals have been attached for reference.

Attachment: Aquasight Proposal
Colville Quote
Hesco Quotes

ORDER FORM AND SCOPE OF SERVICES

1. OWNER: **MACOMB INTERCEPTOR DRAIN
DRAINAGE DISTRICT
21777 Dunham Road
Clinton Township, MI 48036**

2. Program: **WW COVID-19 Wastewater
Sewage Surveillance Program
CEWS See Program Details
City: Sterling Heights & One
Correctional Facility**

3. Term: **3.5 Months**

4. Fees: **\$266,500**
Program Management,
Sampling Optimization,
Flow analysis, Sample Preparation
Lab Testing, Lab Data
Management, Analytics
Dashboard

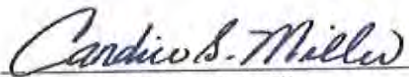
5. "CEWS" Program Details
 - Project Workflow (Appendix A)
 - Project Scope & Roles & Responsibilities (Appendix B)
 - Project Detail Tasks (Appendix C)
 - Digital System Example (Appendix D)

6. Terms & Conditions:

- Project expected to start in Mid-September to set up GIS, perform travel and degradation analysis, flow analysis and rest of system set up
- Fees will be invoiced incrementally as detailed in the schedule in Appendix E and is payable within 30 days.
- General terms and conditions are attached in Appendix F and is approved by MIDD and applied on existing on-going contracts
- Terms and Conditions as per existing MIDD Contract number WWS-2019-007 will apply for this pilot program
- Sample preparation and lab testing will be performed by OU labs as per protocols defined by the lab
- MIDD will deliver wastewater samples to OU as per the defined standard protocol by Aquasight
- WW based COVID-19 testing is a rapidly evolving science, and standards, testing and interpretation are being developed. MSU/OU experts assigned will make best efforts to ensure latest available best practice protocols will be utilized for the pilot program
- MIDD will provide requested GIS and/or Models for sterling heights in a timely manner
- ACE platform will be used for flow data

**OWNER: MACOMB INTERCEPTOR
DRAIN DRAINAGE DISTRICT**

PROVIDER:



By: Candice S. Miller
Its: Public Works Commissioner

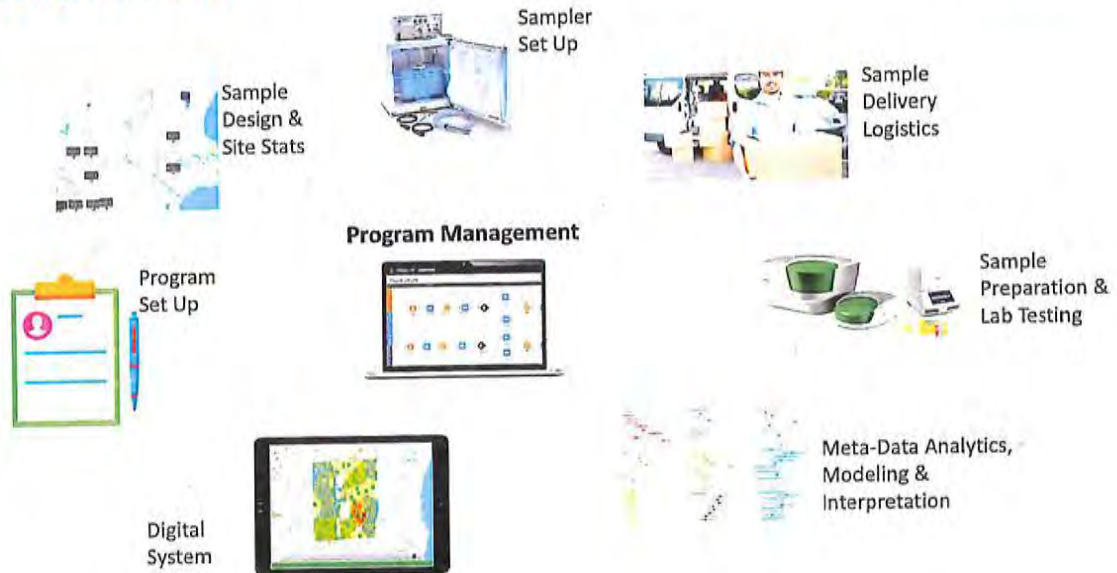


By: Mahesh Lunani
Its: CEO

A. Project Workflow

CEWS Project Workflow

AQUASIGHT
EPA | MICHIGAN | CANAL



B. Scope and Roles and Responsibilities

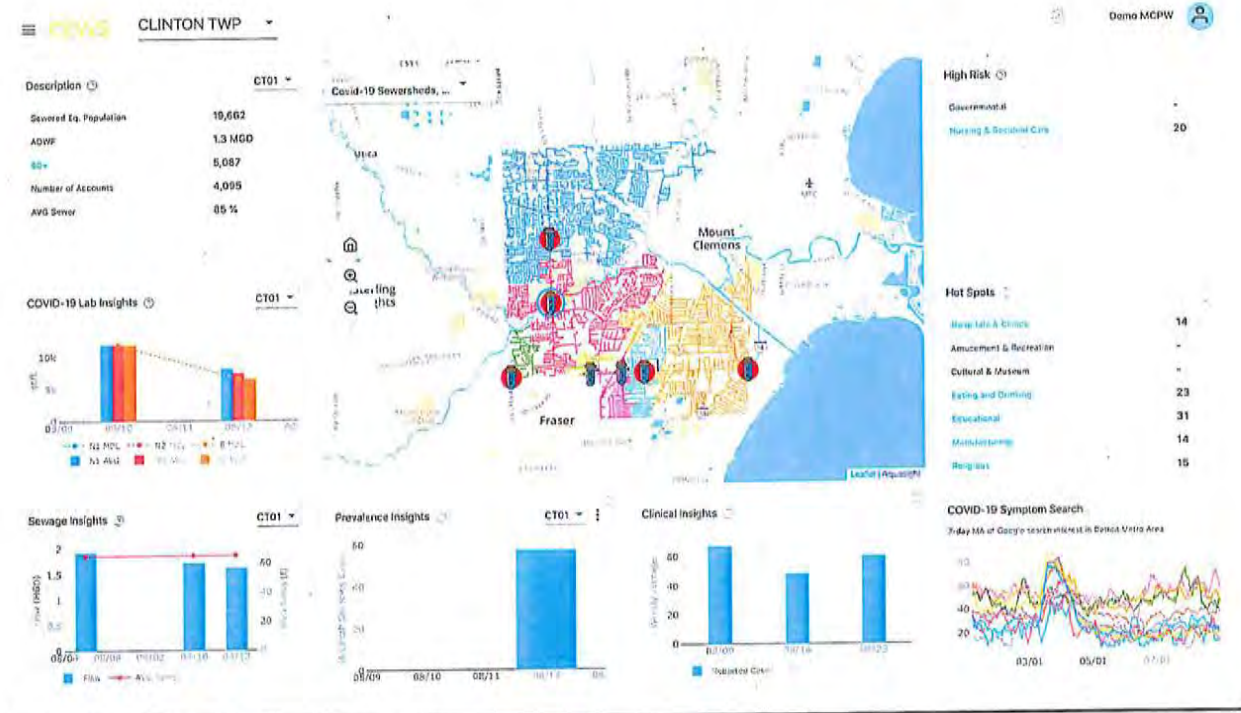
Scope	Roles & Responsibility				
	MIDDD	Aquasight	MSU/OU	Public Health	Hesco
1. Program Set Up & Management	Colloborate	Lead			
2. Sampling Design and Sample Site Statistics	Colloborate	Colloborate	Colloborate		
3a Sampler Set Up	Colloborate	Colloborate			Lead
3b Sample Pick Up and Logistics	Colloborate	Colloborate	Colloborate		Lead
4. Sample Preparation and Testing			Lead		
5. Meta Data Analytics, Modeling and Interpretation	Colloborate	Colloborate	Colloborate	Colloborate	
6. CEWS Digital Platform		Lead			

C. Project Detail Tasks

CEWS Pilot Project Plan

<p>1. Program Set Up & Management</p> <ul style="list-style-type: none"> a. Program manager assigned b. Cadence set up c. Team members identified and roles and responsibilities defined d. Project deliverables defined and finalized f. program management discipline and tracking
<p>2. Sampling Design and Sample Site Statistics</p> <ul style="list-style-type: none"> a. Number of sample sites (7) b. flow meters location upstream or downstream c. Maximum area coverage optimization d. Hydraulic flow travel time vs virus half-life considerations e. Set up composite sampler flow paced f. Sample point meta data: <ul style="list-style-type: none"> i. residents serviced (GIS) ii. land mass covered (GIS) iii. I&I (if any) iv. rain (gauges) v. WW temperature (HM or a prior study that links external temperature to WW temperature) vi. base sewage metrics, Population density variation, annual temperature changes vii. geographic boundaries of sewer system (GIS) viii. Sample lat/long (composite sampler location sense) ix. flows (flow meters) x. assumed loading at the site xi. community demographics or other information (external) g. establish frequency of sampling per week (depending on how fast lab can turn around) h. code each sample site_date_time with an aqid generator i. create sample pick and delivery form for the technician
<p>3. Sampler Set Up and Sample pick up and drop off logistics</p> <ul style="list-style-type: none"> a. order 24 hour composite samplers (including one or two spares in case of failures and with additional sample bottles) b. site preparation if any to set up and program samplers c. identify or hire sample logistics technician d. create an SOP and train sample logistics technician (slt) e. determine a safety procedure and ppe equipment required and ensure proper supply to slt f. Provide a standard schedule to the technician (standard and optimized route), including forms and id generator to track samples g. set up a ingestion system for SLT to upload daily forms h. Pretreatment (filtration), Storage (Ice) and transport configuration
<p>4. Sample Preparation and Testing</p> <ul style="list-style-type: none"> a. sample preparation (remove all wastewater and capture viral RNA) b. perform test PCR or other approach to determine viral loading c. obtain viral genomes/l lab results including RT graphs from the PCR machine d. confirm with microbiologist, wbe or test technician on final results e. create a lab upload for reports and test results
<p>5. Meta Data Analytics, Modeling and Interpretation</p> <ul style="list-style-type: none"> a. timestamped sample test results database and merge with real-time sample site data (flows, I&I, rain, temp etc) b. Develop analytics methods (example below outlined, finalized during project with WBE experts) <ul style="list-style-type: none"> i. viral loading vs population served ii. Temperature degradation impact analytics iii. Temperature vs viral loading iv. Land use impact analysis v. average ww retention time analytics vi. Infection rate and # of cases analytics vii. Gis viral heatmap visualization viii. trend predictions based on moving averages for each sample sites or show curve or flattening of curve for ease of interpretation ix. Set up a red, yellow and green zones based on observed thresholds on viral or infection rates x. Overlay with community demographics for severity assessment c. set up analytics to auto generate every day based on uploaded lab results as well as uploaded slt forms
<p>6. CEWS Digital Platform</p> <ul style="list-style-type: none"> a. Integrated into existing ACE macomb as separate menu item or a standalone platform b. front end GIS dashboard with sample locator c. trending and analytics d. heatmaps by each sewershed e. sampling site metadata views (fixed, real-time, sampling) f. external data overlays such community demographics, alignment with reported cases & hospitalizations g. SAMI indicator and alerting system

D. Example of Digital Platform



E. Invoice Schedule

Invoice Month	Invoice Amount
Sep-20	\$40,000
Oct-20	\$75,500
Nov-20	\$75,500
Dec-20	\$75,500

F. Terms and Conditions

SOFTWARE SERVICE PROVIDER SERVICES AGREEMENT

This Software Service Provider Services Agreement (“Contract”) is made this ___ day of May, 2019 between the MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT (“OWNER”), and AQUASIGHT (“Provider”). In this Contract, Provider or the OWNER may also be referred to individually as a “Party” or jointly as the “Parties”.

In consideration of the mutual promises, obligations, representations, and assurances in this Contract, the Parties agree to the following:

§1. CONTRACT DOCUMENTS AND DEFINITIONS

The following words and expressions shall be defined as follows:

- 1.1. “Claims and Liabilities” means any alleged losses, claims, complaints, demands for relief or damages, lawsuits, causes of action, proceedings, administrative or governmental actions or proceedings, judgments, deficiencies, liabilities, fines, penalties, costs, and expenses of any kind or nature (including, but not limited to, reasonable attorney fees, litigation expenses, and court costs) which are imposed on, incurred by, or asserted against the OWNER, or for which the OWNER may become legally and/or contractually obligated to pay or defend against, whether direct, indirect, or consequential, whether based upon any alleged violation of the federal or state constitutions or any federal, state, or local statute, ordinance, rule, regulation, or state common law, whether any such claims are brought in law or equity, tort, contract, or otherwise, and/or whether commenced or threatened.
- 1.2. “Confidential Information” means all information that the OWNER is required or permitted by law to keep confidential and any information that may be subject to attorney-client, work product, or other privilege.
- 1.3. “Contract Administrator” means the individual designated by the OWNER to act as a liaison between the OWNER and the Provider. Any questions or problems the Provider may have concerning the work under this Contract should be directed to this individual.
- 1.4. “Contract Documents” means the following documents which are included and fully incorporated into this Contract:
 - 1.4.1. Exhibit I: Provider Insurance Requirements
 - 1.4.2. Exhibit II: Order Form and Scope of Services
 - 1.4.3. Exhibit III: Rate Schedule

- 1.5. “Data” means information, content, and other data that may be exchanged electronically between OWNER and Aquasight.
- 1.6. “Documentation” means the user manuals and/or technical publications as applicable, supplied in connection with Software relating to the installation, use, and administration of Software.
- 1.7. “OWNER Agent” means all OWNER board members, officials, employees (including employees shared with Macomb County), representatives, and/or any such persons’ successor(s). “OWNER Agent” shall include any person who is or was an “OWNER Agent” anytime during the term of this Contract.
- 1.8. “Provider Employee” means without limitation, any officers, directors, managers, employees, and representatives of Provider, and also includes any Provider subcontractors, consultants, independent contractors, or suppliers. “Provider Employee” shall include any person who is or was a Provider Employee at any time during the term of this Contract.
- 1.9. “E-Verify” is an internet-based system operated by the Department of Homeland Security (DHS) in partnership with the Social Security Administration (SSA) that allows participating employers to electronically verify the employment eligibility of their new hired employees. For more information and to register visit <https://e-verify.uscis.gov/enroll/>.
- 1.10. “Intellectual Property” means any developments, improvements, designs, innovation, and materials that may be the subject of a trademark/servicemark, copyright or patent, trade secrets, or Proprietary Information.
- 1.11. “Proprietary Information” means ideas, concepts, inventions, and processes related to the development and operation of computer software and systems such as source code, object code, security procedures, and passwords.
- 1.12. “Services” means on-boarding, implementation, initial deployment, maintenance, administration, subscription, technical, training, consulting, support and other professional services provided by Aquasight in connection with or otherwise associated with Software as described in the Order Form.
- 1.13. “Software” means the proprietary software and platform employed by Aquasight to deliver Services and its associated technology (if applicable), and any modified versions and copies of, and upgrades, updates and additions to Software, provided to OWNER by Aquasight, including Software and access thereto provided on a Software as a Service (SaaS) basis.

- 1.14. "Working Day" means any calendar day except Saturday, Sunday, and OWNER legal holidays.
- 1.15. "Written Notice" means a communication in writing delivered in person, by first class mail, or by overnight delivery by a reputable national delivery service to the Party's address identified in Section 10.27 hereof.

§2. **CONTRACT EFFECTIVE DATE, TERM, AND TERMINATION**

- 2.1. The effective date of this Contract shall be stated on the first page of this Contract. Notwithstanding the above, under no circumstances shall this Contract be effective and binding and no payments to the Provider shall be due or owing for any Provider services until and unless:
- 2.1.1. This Contract is signed by an employee of Provider, legally authorized to bind the Provider.
- 2.1.2. Any and all Provider Certificates of Insurance and any other conditions precedent to the Contract have been submitted and accepted by the OWNER.
- 2.1.3. The OWNER Board has approved the retention of Provider.
- 2.2. The term of this Contract shall begin on the Effective Date for a period of three (3) years (the "Initial Term"). The Contract may be renewed for successive three (3) year terms (each a "Renewal Term") upon the written agreement of both Parties, executed not less than sixty (60) days prior to the expiration of the Initial Term or Renewal Term, as applicable.
- 2.3. Right to Terminate.
- 2.3.1. Owner's Right to Terminate for Any Reason.
- a. During the On-Boarding Phase. The OWNER may terminate and/or cancel this Contract at any time during the onboarding phase of this project, upon seven (7) days Written Notice to the Provider, for any reason, with or without cause, including a termination for the convenience of the OWNER, without incurring obligation or penalty of any kind. The OWNER's sole obligation in the event of termination is for payment for actual services rendered by the Provider before the effective date of termination
- b. During the Subscription Phase. The OWNER may terminate and/or cancel this Contract at any time during the subscription phase of this project, upon thirty (30) days Written Notice to the Provider, for any reason, including a termination for the convenience of the OWNER. In the event of early termination pursuant to this paragraph 2.3.1.b., OWNER's sole obligation to Provider will be to pay the remainder of the subscription fee, as specified in Exhibit II, for the current annual subscription term.
- 2.3.2. Parties' Right to Terminate for Breach. If either Party (the Non-Breaching Party) believes that the other Party (the "Breaching Party") materially breached one or more of its obligations under this Contract, then the Non-Breaching Party may deliver Written Notice of such material breach to the Breaching Party specifying the nature of the alleged breach in reasonable

detail (a “Default Notice”). Thereafter, the Non-Breaching Party shall have the right to terminate this Agreement if the breach asserted in such Default Notice has not been cured within thirty (30) days after such Default Notice. If OWNER terminates this Contract pursuant to this paragraph 2.3.2, OWNER shall be entitled to a pro-rated refund of the unused portion of the subscription fee for the remainder of the current annual subscription term.

- 2.4. The OWNER shall not under any circumstances, in the event of termination or otherwise, be liable to the Provider for consequential damages of any kind, including but not limited to loss of income, lost profits, or any loss of business opportunities, revenues, or any other economic benefit.
- 2.5. Effect of Termination or Expiration. Promptly upon termination or expiration of this Agreement for any reason, OWNER shall cease using and accessing the Software. Termination of this Agreement shall be in addition to and not in limitation of any other rights and remedies to which either Party is or may become entitled. In the event of termination or expiration of this Agreement for any reason, Aquasight will provide all OWNER generated clean Data (i.e. raw Data that has been corrected and auto-filled by the Software), to OWNER pursuant to a separate Statement of Work to be mutually agreed to by the Parties, but such production shall be no later than 45 days after termination or expiration. Aquasight will retain a copy of OWNER raw Data for a period of one year after termination or expiration of this Agreement. After the expiration of the one-year period, Aquasight shall have the right to delete and destroy all OWNER raw Data with notice to OWNER.

§3. **SCOPE OF PROVIDER’S SERVICES AND CHANGE ORDER PROCESS**

- 3.1. The Provider shall perform all work identified and itemized in Exhibit II: “Order Form and Scope of Provider’s Services” and this Contract.
- 3.2. Hosting and Software Services. Aquasight agrees to provide the hosting services described herein and as may be set forth in more detail in the applicable Order Form, including the right of OWNER to access, view, download, transmit, and use all data transmitted by OWNER or OWNER’s systems and facilities to Aquasight (“OWNER Data”). Aquasight hereby grants OWNER a non-exclusive, non-transferable, worldwide right to use and access the Software solely for OWNER’s own internal business purposes, subject to the terms and conditions of this Agreement. Only employees of OWNER properly authorized by OWNER for the performance of their job responsibility for OWNER (“Authorized Users”) shall be entitled to access and use the Software. Only the number of Authorized Users indicated on the Order Form are permitted to access and use the Software. The Software may be hosted on hardware owned, operated, and managed by Aquasight’s third party service providers. Upon OWNER’s request, Aquasight shall provide reasonable information to OWNER with respect to Aquasight’s third party hosting services provider. Aquasight shall have the right to modify the Software in its sole discretion, provided that Aquasight shall not materially diminish the performance or functionality of the Software without OWNER’s prior written consent.
- 3.3. Change Order Process.

- 3.3.1. Contract Change Orders, which must be in writing and executed by OWNER to be effective and binding, shall be used to reflect additions to, reductions in, or changes to the Order Form and Scope of Services (Exhibit II), Rate Schedule (Exhibit III), Contract price, or any other changes to the Contract.
- 3.3.2. Any change order request submitted by Provider shall indicate the reason for the addition, reduction, or change, the cost impact, the new proposed total Contract price, and any effect on the Software or Services provided under this Contract.

§4. **OWNER PAYMENT OBLIGATIONS FOR PROVIDER'S SERVICES**

- 4.1. Except as otherwise expressly provided for in this Contract, the OWNER's sole financial obligation to the Provider for any services under this Contract shall be as follows:
 - 4.1.1. The Provider shall submit an invoice to the OWNER which shall itemize all amounts due and/or owing by the OWNER under this Contract, as the date of the invoice. The invoices shall be submitted in the form and according to the schedule approved by the OWNER. The OWNER shall have no obligation to make payment until a proper invoice is submitted and approved by the Contract Administrator or designated OWNER Agent. Once an invoice is approved, the OWNER will pay the invoice within forty-five (45) days. The OWNER reserves the right to make partial payments on any invoice in an amount the OWNER, in its discretion, deems to be commensurate with the actual progress of the services performed. Provider shall be compensated in accordance with the Rate Schedule attached as Exhibit III.
 - 4.1.2. Under no circumstances shall the OWNER be obligated to pay the Provider for any services rendered which have not been invoiced, as required herein, within sixty (60) days of the date such services were actually rendered pursuant to this Contract.
- 4.2. Final payment for the work performed under this Contract shall not be made until all work is satisfactorily performed and accepted by the Contract Administrator or designated OWNER Agent.
- 4.3. Under no circumstances shall the OWNER be responsible for any cost, fee, fine, penalty, or damages incurred or suffered by Provider in connection with or resulting from the Provider's provisions of Services under this Contract.
- 4.4. The OWNER has the right to offset any amounts due and owing to the Provider should the OWNER incur any cost associated with this Contract that is the obligation of Provider under this Contract.

§5. **PROVIDER'S ASSURANCES AND WARRANTIES**

- 5.1. Provider Statements. The Provider certifies that all statements, assurances, records, and materials submitted to OWNER in connection with securing this Contract are truthful, complete, and accurate in all respects.
- 5.2. Service Warranty. The Provider warrants that all Services performed hereunder will be performed timely and in a manner that complies with all applicable laws, statutes, regulations, ordinances, and professional standards.

- 5.3. Warranty of Function. The Provider warrants that the Software documentation and representations regarding the Software's functionality provided by Aquasight to OWNER accurately describe the function and operational characteristics of the Software, and that the Software will operate according to the functional specifications, documentation, and representations provided to OWNER and in accordance with the Scope of Services. Further, the Software will be free from defects, viruses, and other malware. Provider will not be responsible for functionality failures resulting solely due to general Internet outages.
- 5.4. Ownership of Software. The Provider represents and warrants that it is the legal owner of all intellectual property rights of the Software, or has received all intellectual property licenses or rights necessary to provide the Software and Services without further consent from any third party. The Provider warrants that the Software does not infringe any patent or copyright of a third party.
- 5.5. Data Security. The Provider will maintain and enforce information and data privacy and security procedures with respect to its access, use, and storage of all OWNER Data that (a) are at least equal to industry standards, taking into consideration the sensitivity of the relevant OWNER Data, (b) comply with all applicable international, foreign, federal, state and local laws, statutes, rules, orders and regulations, and (c) provide all reasonably appropriate administrative, technical, and physical safeguards to protect against accidental or unlawful destruction, loss, alteration, or unauthorized disclosure, access or use of OWNER Data.
- 5.6. Business and Professional Licenses. The Provider will maintain at all times during the term of this Contract all applicable business and professional licenses necessary to provide the contracted services.
- 5.7. Equipment and Supplies. The Provider is responsible for providing equipment and supplies required to complete the specified Services under the Contract unless otherwise expressly set forth in the Contract.
- 5.8. Taxes. The Provider shall pay its own local, state, and federal taxes, including without limitation, social security taxes, and unemployment compensation taxes. The OWNER shall not be liable to or be required to reimburse the Provider for any federal, state, and local taxes or fees of any kind. OWNER will provide tax exempt documentation.
- 5.9. Provider's Incidental Expenses. Except as otherwise expressly provided in this Contract, the Provider shall be solely responsible and liable for all costs and expenses incident to the performance of all Services for the OWNER.
- 5.10. Provider Employees.
- 5.10.1. The Provider shall employ and assign qualified Provider Employees as necessary and appropriate to provide the Services under this Contract. Provider shall ensure all Provider Employees have the necessary knowledge, skill, and qualifications to perform the required Services and possess any necessary licenses, permits, certifications, and governmental authorizations as may be required by law.
- 5.10.2. The Provider shall solely control, direct, and supervise all Provider Employees with respect to all Provider obligations under this Contract.

The Provider will be solely responsible for and fully liable for the work, conduct, and supervision of any Provider Employee.

- 5.10.3.** If requested by the OWNER, all Provider Employees shall wear and display appropriate OWNER-provided identification at all times while working on OWNER premises. The Provider shall promptly return all OWNER-provided identification.
- 5.10.4.** All Provider Employees assigned to work under this Contract may, at the OWNER's discretion, be subject to a security check and clearance by the OWNER.
- 5.11.** E-Verify. Provider shall register with, participate in, and utilize the E-Verify Program (or any successor program implemented by the federal Department of Homeland Security and Social Security Administration) when hiring their employees. Unless otherwise exempted, Provider agrees to certify they have registered with, will participate in, and continue to utilize, once registered, the E-Verify Program (or any successor program implemented by the federal government or its departments or agencies) to verify the work authorization status of all newly hired employees employed by the Provider. Breach of this term or conditions is considered a material breach of this Contract.
- 5.12.** Provider Employee-Related Expenses. All Provider Employees shall be employed at the Provider's sole expense (including employment-related taxes and insurance) and the Provider warrants that all Provider Employees shall fully comply with and adhere to all of the terms of this Contract. The Provider shall be solely and completely liable for any and all applicable Provider Employee's federal, state, or local payment withholdings or contributions and/or any and all Provider Employee related pension or welfare benefits plan contribution under federal or state law. The Provider shall indemnify, defend, and hold the OWNER and OWNER Agents harmless for and against any and all Claims brought against the OWNER or OWNER Agents by any Provider Employee.
- 5.13.** Full Knowledge of Service Expectations and Attendant Circumstances. The Provider warrants that before submitting its bid, it had a full opportunity to review all OWNER requirements and expectations under this Contract. The Provider understands and confirms that it will be able to timely perform all obligations under the Contract as specified herein.
- 5.14.** Independent Contractor. The Provider's relationship to the OWNER is that of an independent contractor. All Provider Employees assigned to provide Services under this Contract by the Provider shall, in all cases, be deemed employees, agents, or subcontractors of the Provider and not employees, agents, or subcontractors of the OWNER.
- 5.15.** Disclaimer. Except as expressly provided in this Contract, the software and the services are provided to OWNER in their then-existing condition, as is, where is and with all faults. Except for the foregoing warranties, Provider expressly disclaims all other warranties, express or implied, including merchantability, satisfactory quality, or fitness for a particular purpose.

§6. **OWNER RESPONSIBILITIES**

- 6.1.** Compliance with Laws. OWNER is responsible for all activity occurring under any applicable user accounts while users are in performance of their job

responsibilities, and OWNER shall abide by all applicable local, state, federal and foreign laws, treaties and regulations in connection with OWNER's use of the Services and Software, including those related to data privacy, international communications, and the transmission of technical or personal data.

6.2. OWNER Data.

6.2.1. OWNER represents that it has the right and authority to provide all OWNER Data to be hosted by Aquasight hereunder, and to the best of OWNER's knowledge all such OWNER Data will be free from viruses, spyware, and other similar harmful and destructive code.

6.2.2. OWNER is solely responsible for the quality of the Data transmitted to Aquasight or otherwise processed by the Software. OWNER acknowledges that the quality of the results and analytics provided by the Software is a function of the quality of OWNER's Data, and that inaccurate or erroneous Data can lead to inaccurate or erroneous results. Aquasight cannot and does not guarantee the quality of any Data provided by OWNER. Aquasight retains all historical and real-time collected and analyzed data for the life of the Subscription Term.

6.3. OWNER Equipment and Connectivity. OWNER is solely responsible for the equipment used by OWNER in connection with the Software, including without limitation the calibration of all sensors and equipment data being collected. Aquasight will not be liable or responsible for any delays, inaccuracies, or unavailable Data resulting from a disruption or interruption of connectivity and Data communication to the Aquasight system and Software due to a connectivity problem that is the fault of OWNER's equipment.

6.4. Use of the Software and Results. OWNER acknowledges and agrees (a) it will verify and validate with its engineering staff any changes that OWNER proposes to make to its systems or facilities based on intelligence from the Aquasight system and Software, and (b) the Aquasight system and Software does not control OWNER's systems or facilities, but rather assists OWNER with the efficiencies associated with the operation of OWNER's system and facilities.

6.5. Design Information and Configuration. OWNER acknowledges and agrees that the Aquasight system and Software are configured based on the preliminary design information provided by OWNER. In the event of any changes or modifications to the design information relating to OWNER's systems or facilities, OWNER will promptly notify Aquasight of such changes or modifications. Aquasight will adapt the configuration of the Aquasight system and Software to the new design conditions pursuant to a separate Statement of Work to be mutually agreed to in writing by the Parties.

6.6. License to Use OWNER Data. OWNER grants Aquasight (i) a non-exclusive, non-transferable (except as permitted herein), royalty-free, license to use, reproduce, modify and transmit Data provided by OWNER during the term of this Contract for the purpose of performing the Services only, and (ii) a non-exclusive, non-transferable (except as permitted herein), royalty-free, license to use, reproduce, display, modify, create derivative works of, and disclose and distribute any usage Data derived by Aquasight from the provision of Services to OWNER

("Usage Data") during the term of this Contract for the purpose of performing the Services only, provided that the Usage Data is disclosed in an aggregate form.

§7. **SOFTWARE AND DATA OWNERSHIP**

- 7.1. Aquasight IP. All right, title, and interest in and to the Software and all portions thereof, including the look and feel of the Software, visualizations displayed by the Software, and all other intellectual property rights therein, including all applicable rights to: (i) copyrights, including all rights incident to copyright ownership, such as all rights of publication, registration and rights to create derivative works; (ii) patents; (iii) trademarks; and (iv) trade secrets (including all know-how, ideas, logic, formulas and confidential information embodied in or reflected in Software) are and shall remain with Aquasight and its suppliers.
- 7.2. OWNER IP. All right, title, and interest in and to Data provided by OWNER, related analyzed/generated clean Data, and all related information provided to and accessed by Aquasight, including all intellectual property rights therein and all rights incident thereto, are and shall remain with OWNER.

§8. **PROVIDER PROVIDED INDEMNIFICATION AND INSURANCE**

- 8.1. Indemnification. To the maximum extent permitted by law, Provider agrees to protect, defend, indemnify and hold the OWNER and the OWNER Agents free and harmless from and against any and all Claims and Liabilities of any kind arising from any action or omission by Provider or any Provider Employee related to or arising out of the performance of Provider's Services under this Agreement. This indemnification provision shall be construed in all respects to comply with MCL 691.991 and shall not be construed to: (a) indemnify the OWNER or the OWNER Agents for damages arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the OWNER or OWNER Agents or (b) require Provider to assume any liability or indemnity obligation for any amount greater than the degree of fault of the Provider and Provider Employees.
- 8.2. Provider Provided Insurance. At all times during this Contract, including renewals or extensions, Provider shall obtain and maintain insurance according to the specifications indicated in Exhibit I: Provider Insurance Requirements.

§9. **Limitation of Liability.**

- 9.1. Neither party shall be liable to the other party for any lost profits resulting from any claim or cause of action based on breach of warranty, breach of contract, negligence (including strict liability), or any other legal theory.

§10. **ADDITIONAL TERMS AND CONDITIONS**

10.1. Immunity. In undertaking the obligations of this Contract, OWNER is engaging in a governmental function. The activities undertaken herein are not proprietary and specifically are not for pecuniary profit. Nothing in this Contract is intended to, or shall be construed as, in any way diminishing the immunity OWNER enjoys under applicable law.

10.2. Notification and Access to OWNER Facilities.

10.1.1. To the extent the Provider requires access to OWNER facilities for performances of its Services, the Provider must provide notice to the

OWNER and obtain prior permission from the OWNER to obtain such access.

- 10.1.2.** If applicable to the Services rendered hereunder, the OWNER shall have full access to the work site and full access to any off-site preparation and fabrication facilities.
- 10.3.** Use of OWNER's Premises. To the extent applicable to the Services rendered hereunder, Provider shall confine its equipment, apparatus, materials and products, and operations of Provider Employees to the limits indicated by law, ordinances, permits, or directions of the OWNER and shall not unnecessarily encumber the work site or OWNER premises with its materials, products, or equipment.
- 10.4.** Damage to OWNER Property and Premises. The Provider shall be responsible for any damage to the OWNER premises or property and the work site, if applicable, that is caused by the Provider or Provider Employees. Should damage occur as a result of the Provider's actions or the actions of the Provider Employees, the Provider is responsible for the repair and/or replacement of the damage. If the Provider fails to repair or replace the damage, the OWNER shall repair and/or replace the damaged area and charge the Provider or deduct the amount from the Provider's payment, at the OWNER's option.
- 10.5.** Cleaning. To the extent applicable to the Services rendered hereunder, the Provider shall at all times keep the OWNER's property and premises free of rubbish related to Provider's Services hereunder.
- 10.6.** OWNER Right to Complete Work. In addition to all remedies the OWNER has at law or in equity, in the event the Provider shall fail, neglect, or refuse to perform any or all of his duties under this Contract, the OWNER, after giving the Provider seven (7) calendar days' notice in writing, may perform or employ another entity to perform such duties under the Contract and charge the Provider or deduct the amount from the Provider's payment due under this Contract, at the OWNER's option.
- 10.7.** Cumulative Remedies. The OWNER's exercise of any remedy shall not preclude the exercise of any other remedies, all of which shall be cumulative. The OWNER shall have the right, in its sole discretion, to determine which remedies are to be exercised and in which order.
- 10.8.** Survival of Terms and Conditions. All terms and conditions which by their nature extend beyond termination of this Contract shall survive and continue in full force beyond the termination and/or cancellation of this Contract, including without limitations Provider's assurances and warranties in Section 5 and insurance and indemnification obligations in Section 8.
- 10.9.** OWNER Right to Suspend Services. Upon written notice, the OWNER may suspend performance of this Contract if Provider has failed to comply with federal, state, or local laws, or any requirements contained in this Contract. The right to suspend services is in addition to the OWNER's right to terminate and/or cancel this Contract. The OWNER shall incur no penalty, expense, or liability to Provider if the OWNER suspends services under this Section.

- 10.10. No Third-Party Beneficiaries.** Except as expressly set forth herein, this Contract does not and is not intended to create any obligation, duty, promise, contractual right, or benefit in favor of any other person or entity.
- 10.11. Compliance with Laws.** Provider shall comply with all federal, state, and local laws, statutes, ordinances, regulations, insurance policy requirements, and requirements applicable to its activities under this Contract.
- 10.12. Permits and Licenses.** Provider shall be responsible for obtaining and maintaining throughout the term of this Contract all licenses, permits, certificates, and governmental authorizations necessary to perform all of its obligations under this Contract and to conduct business under this Contract. Upon request by the OWNER, Provider shall furnish copies of any permit, license, certificate, or governmental authorizations necessary to provide services under this Contract. The Provider shall deliver all certificates of inspection to the OWNER, if applicable.
- 10.13. Discrimination.** Provider shall not discriminate against any employee or applicant for employment because of sex, race, religion, color, national origin, or disability in violation of State or Federal law.
- 10.13.1.** Provider shall promptly notify the OWNER of any complaint or charge filed and/or determination by any Court or administrative agency of illegal discrimination by Provider.
- 10.13.2.** The OWNER, in its discretion, may consider any illegal discrimination described above as a breach of this Contract and may terminate or cancel this Contract immediately.
- 10.14. Reservation of Rights.** This Contract does not, and is not intended to, impair, divest, delegate, or contravene any constitutional, statutory, and/or other legal right, privilege, power, obligation, duty, or immunity of the OWNER.
- 10.15. Assignment.** OWNER shall not assign this Contract or any rights or obligations hereunder, without the express written consent of Aquasight, which consent shall not be unreasonably withheld. Any assignment or transfer in violation of the foregoing will be null and void. Aquasight shall not assign this Contract to any affiliate or any entity in connection with the sale, combination, or transfer of all or substantially all of the assets or capital stock or from any other corporate form of reorganization by or of Aquasight without the express written consent of the OWNER, which consent shall not be unreasonably withheld. Subject to all the terms and conditions hereof, the Contract inures to the benefit of and is binding upon the Parties hereto and their successors and assigns.
- 10.16. Force Majeure.** Notwithstanding any other term or provision of this Contract, neither Party shall be liable to the other for any failure of performance hereunder if such failure is due to acts of God, natural disasters, fire, explosion, vandalism, national emergencies, insurrections, riots, wars, strikes, lockouts, or work stoppages. Reasonable Written Notice shall be given to the affected Party of any such event and the other Party's reliance on this provision. If such event persists for sixty (60) days or more, either Party may terminate this Contract without penalty upon Written Notice to the other Party.

- 10.17. Conflict of Interest.** To avoid any real or perceived conflict of interest, Provider shall identify any Provider Employee or relative of Provider's Employees who are presently employed by the OWNER or Macomb County.
- 10.18. Grant Compliance.** If any part of this Contract is supported or paid for with any state or federal funds granted to the OWNER, the Provider shall comply with all applicable grant requirements.
- 10.19. Project Managers.** Each Party shall designate an employee or agent to act as a Project Manager. The Project Manager shall serve as a contact point for all matters related to the services to be performed under this Contract. The Provider's Project Manager shall coordinate with the OWNER's Project Manager. The Provider shall provide the name and qualifications of its Project Manager and an alternate.
- 10.20. Contract Administrator.** The OWNER may appoint a Contract Administrator to be responsible for such activities as monitoring deliverables and funding, addressing the quality of services provided by the Provider, reviewing invoices, and submitting requests to the OWNER board or authorized representative for any contract modification in accordance with this Contract.
- 10.21. Access and Records.** Provider will maintain accurate books and records in connection with the services provided under this Contract for thirty-six (36) months after the end of this Contract and provide the OWNER with reasonable access to such books and records.
- 10.22. Audit.** At the OWNER's request, Provider shall allow an auditor identified by the OWNER to perform finance compliance audits with the authority to access all pertinent records and interview any Provider Employee throughout the term of this Contract and for a period of three (3) years after final payment.
- 10.23. Delegation/Subcontract/Assignment.**
- 10.23.1.** The Provider shall not assign, delegate, or subcontract any part of this Contract without the prior written consent of the OWNER. With respect to permitted assignments, delegations, and subcontracts:
- a.** The rights and obligations under this Contract shall not be diminished in any manner by assignment, delegation, or subcontract.
 - b.** Any assignment, delegation, or subcontract by Provider must include a requirement that the assignee, delegee, or subcontractor will comply with this Contract.
 - c.** The Provider shall remain primarily liable for all work performed by any subcontractor. The Provider shall remain liable to the OWNER for any obligations under the Contract not completely performed or incorrectly performed by any Provider, delegee, or subcontractor.
 - d.** If any part of the Provider's services depends upon the work of any other Provider or subcontractor, the Provider shall inspect and promptly report to the OWNER any defects in such work that shall render it unsuitable.
- 10.24. Non-Exclusive Contract.** This Contract is a non-exclusive agreement and the OWNER may freely engage other persons to perform the same or similar work that the Provider performs. Except as provided in this Contract, this Contract

shall not be construed to guarantee the Provider or any Provider Employee any certain quantity of hours or services to be rendered to the OWNER.

- 10.25. No Waiver.** No term or condition of this Contract may be waived in the absence of a written waiver. Absent a written waiver, no act, failure, or delay by a Party to pursue or enforce any right or remedy under this Contract shall constitute a waiver of those rights. Any waiver shall be limited to the specific instance for which it is given, and no waiver by either Party shall subsequently affect its right to require strict performance of this Contract.
- 10.26. Severability.** If a court of competent jurisdiction finds a term, condition, or provision of this Contract to be illegal or invalid, then the term, condition, or provision shall be deemed severed from this Contract. All other terms, conditions, and provisions of this Contract shall remain in full force and effect.
- 10.27. Written Notices.** Written Notices given under this Contract shall be sent as follows:
- 10.27.1.** If notice is sent to the Provider, it shall be addressed to: AQUASIGHT LLC, 1650 Big Beaver Road, Suite 101, Troy, MI 48084, ATT: CEO.
- 10.27.2.** If notice is sent to the OWNER, it shall be addressed to: 21777 Dunham Road, Clinton Township, Michigan 48036, ATT: Chief Deputy Public Works Commissioner, with a required copy to: Joseph E. Viviano, Esq., Kienbaum Hardy Viviano Pelton & Forrest, P.L.C., 48 S. Main St., Ste. 2, Mt. Clemens, Michigan 48043.
- 10.27.3.** Either Party may change the address or individual to which notice is sent by notifying the other party in writing of the change.
- 10.28. Contract Modifications or Amendments.** Any modifications, amendments, rescissions, waivers, or releases to this Contract must be in writing and agreed to by an authorized representative of both Parties.
- 10.29. Precedence of Documents.** In the event of a conflict between the terms and conditions in any of the documents comprising this Contract, the terms and conditions in this Contract document shall prevail and take precedence over any allegedly conflicting provisions in all other Exhibits and documents.
- 10.30. Governing Law.** This Contract is made and entered into in the County of Macomb, State of Michigan, and shall be governed, interpreted, and enforced by the laws of the State of Michigan. Provider acknowledges and stipulates that it conducts business in Macomb County for purposes of MCL 600.1621 or any successor statute.
- 10.31. Provider Use of Confidential Information.** The Provider and/or Provider Employees shall not reproduce, provide, or disclose Confidential Information to any third party, or to any Provider Employee not having a legitimate need to know any such information and data, and shall not use the Confidential Information for any purpose other than performing its services under this Contract. Notwithstanding the foregoing, Provider may disclose the Confidential Information if required by law, statute, or other legal process, provided that Provider (i) gives OWNER prompt written notice of an impending disclosure prior to make the disclosure, (ii) provides reasonable assistance to OWNER in opposing or limiting the disclosure, and (iii) makes only such disclosure as is compelled or required.

10.32. Entire Contract. This Contract represents the entire Contract and understanding between the Parties. This Contract supersedes all other prior or contemporaneous oral or written understandings, communications, agreements, or contracts between the Parties related to the subject matter hereof. The language of this Contract shall be construed as a whole according to its fair meaning, and not construed strictly for or against any Party.

EXHIBIT I

1. At all times during this Contract, including renewals or extensions, Provider shall obtain and maintain insurance according to the following specifications:
 - a. Commercial General Liability – with the following minimum requirements:
 - \$1,000,000 for each occurrence of bodily injury and personal injury with an annual aggregate of not less than \$2,000,000.
 - Occurrence Form Policy
 - Broad Form Property Damage
 - Premises/Operations
 - Independent Providers
 - Products and Completed Operations
 - (Blanket) Broad Form Contractual
 - Additional Insured – The Macomb Interceptor Drain Drainage District (“OWNER”) and Macomb Interceptor Drain Drainage District board members, officials, employees (including employees shared with Macomb County), and representatives (“OWNER Agents”)**
 - b. Workers’ Compensation – as required by law and Employer’s Liability Insurance with minimum limits of \$500,000 each accident, \$500,000 bodily injury by disease policy limit, \$500,000 bodily injury by disease each employee;
 - c. Automobile Liability and Property Damage - \$1,000,000 each occurrence, including coverage for all owned, hired, and non-owned vehicles including No Fault coverage as required by law;
 - d. Professional Liability/Errors & Omissions Insurance (as applicable) – with minimum limits of \$1,000,000 per claim and \$2,000,000 aggregate.
2. General Certificates of Insurance:
 - a. All Certificates of Insurance shall be sent as provided in Section 10.27.
 - b. The insurance carrier(s) must have an A.M. Best rating of no less than an A-, VII.
 - c. The OWNER and OWNER Agents shall be named additional insured on all policies (excluding Worker’s Compensation and Professional Liability/Errors & Omissions Insurance) and the underwriters will have no right of recovery or subrogation against the OWNER or OWNER Agents.
 - d. The insurance company(s) issuing the policy or policies will have no recourse against the OWNER for payment of any premiums or for assessments under any form of policy.

- e. The Provider will assume any and all deductible in the above-described insurance policies.
- f. All Certificates are to provide thirty (30) days written notice of material change, cancellation, or non-renewal. Certificates of Insurance or insurance binders must be provided no less than ten (10) working days before commencement of work. Insurance carriers are subject to the approval of the OWNER.

QUOTE



23905 Freeway Park • Farmington Hills, MI 48335
Phone: 586.978.7200 • Fax: 586.978.2200
www.hesco-mi.com

TO: Vince Astorino
Macomb County Public Works Commission
21777 Dunham Rd
Clinton Twp MI 48036

Thursday, August 27, 2020

QUOTE #: QT-211/2
SALESPERSON: Kevin Livingston

vincent.astorino@macombgov.org

Sterling Heights COVID Samplers Installation Labor

LINE ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	LINE TOTAL
1	Sampler Installation Field Service and Installation Labor. Confined Space Entry Services to Install 6712C samplers at various Manholes located in Sterling Heights Collection System	4		3,600.00	\$14,400.00
2	Sampler Training One day of factory trained technician to train Macomb Staff on sample collection procedure and how to operate sampler	1		1,500.00	\$1,500.00
	Not Included: Electrical contractor services such as underground conduit and power. Power should not be required because these samplers are battery powered but, you may need a conduit for the wire that connects the sampler to the flowmeter - should you wish to take flow weighted composite samples				
SUBTOTAL:					15,900.00
MI SALES TAX:					
TOTAL:					

Ship Via:	Best Way FOB Factory	Shipping Terms:	
Payment Terms:		Quote Valid Through:	09/10/2020
Lead Time:	Shop Drawing Submittals: Weeks ARO Shipment: Weeks ARA		

END QUOTE

QUOTE



23905 Freeway Park • Farmington Hills, MI 48335
 Phone: 586.978.7200 • Fax: 586.978.2200
 www.hesco-mi.com

TO: Vince Astorino
 Macomb County Public Works Commission
 21777 Dunham Rd
 Clinton Twp MI 48036

Thursday, August 27, 2020

QUOTE #: QT-211/1
SALESPERSON: Kevin Livingston

vincent.astorino@macombgov.org

Sterling Heights COVID Samplers

LINE ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	LINE TOTAL
1	686710071 6712C Compact Portable Sampler	7	EA		
2	686700025 1-Bottle Configuration. Standard Compact Base Portable Sampler only. Includes 2.5-gallon (10-liter) round polyethylene bottle, cap, tube guide, and two discharge tubes.	7	EA		
3	606700044 Pump Tubing (QTY 10) for 5800/4700/670	7	EA		
4	609004379 3/8 inch ID x 25 ft. long vinyl suction line with standard weighted polypropylene strainer. Includes tubing coupler.	7	EA		
5	686700052 701 Module with Stainless Steel double junction combination pH probe	6	EA		
6	609004456 6712 Universal Cable, length 50 ft	6			
7	601394014 Three-point Sampler Suspension Harness (not for GLS)	7	EA		
8	603004106 Model 914 Battery Backed Power Supply	7	EA		
9	299001304 2.5 Gallon Poly Bottle	6			
10	Monthly Lease Rate for all equipment	3	Months	\$10,500.00	\$31,500.00
SUBTOTAL:					\$31,500.00
MI SALES TAX:					
TOTAL:					\$31,500.00

Ship Via:	Best Way FOB Factory	Shipping Terms:	Included
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Payment Terms:	Net 30	Quote Valid Through:	09/31/2020
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Lead Time:	Shop Drawing Submittals: 0Weeks ARO Shipment: 4 Weeks ARA
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QUOTE



23905 Freeway Park • Farmington Hills, MI 48335
Phone: 586.978.7200 • Fax: 586.978.2200
www.hesco-mi.com

If favored with a Purchase Order, please issue it to:
HESCO
23905 Freeway Park Drive,
Farmington Hills, MI

END QUOTE

Colville Electric Co., LLC

23416 Gratiot Ave
 Eastpointe MI 48021
 (586) 774-9110
 Office@ColvilleElectric.com

Estimate

ESTIMATE #	40670706
DATE	09/22/2020
PO #	
Tech	

CUSTOMER
Macomb County DPW 23001 Nine Mile Rd. St. Clair Shores, MI, 48080

SERVICE LOCATION
23001 Nine Mile Rd. St. Clair Shores, MI, 48080

DESCRIPTION

Description	Qty	Rate	Total
Estimate ST-S-1 Install one 3/4" PVC coated rigid conduit into meter pit. Install PVC coated FS/FD box with blank cover near chamber bench. Conduit to be surface mounted on cement above grade. Install penetration into chamber above grade. Install 2 18/2C Twisted Shielded for analog signals. Install 2-#14 power conductors to terminate to customer's equipment. Install relays to drive two channel of IO outputs from SCADA.	1.00	\$5,260.00	\$5,260.00
Estimate ST-S-2 Install one 3/4" PVC coated rigid conduit into meter pit. Install PVC coated FS/FD box with blank cover near chamber bench. Conduit to be installed below grade. Install penetration into chamber below grade. Install 2 18/2C Twisted Shielded for analog signals. Install 1 18/4C cable for i/o signals. Install 2-#14 power conductors to terminate to customer's equipment. Install relays to drive two channel of IO outputs from SCADA.	1.00	\$4,960.00	\$4,960.00
Estimate ST-S-3 Install one 3/4" PVC coated rigid conduit into meter pit. Install PVC coated FS/FD box with blank cover near chamber bench. Conduit to be installed below grade. Install penetration into chamber below grade. Install 2 18/2C Twisted Shielded for analog signals. Install 1 18/4C cable for i/o signals. Install 2-#14 power conductors to terminate to customer's	1.00	\$5,680.00	\$5,680.00

equipment.
Install relays to drive two channel of IO outputs from SCADA.

Estimate	1.00	\$5,160.00	\$5,160.00
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ST-S-4
Install one 3/4" PVC coated rigid conduit into meter pit.
Install PVC coated FS/FD box with blank cover near chamber bench.
Conduit to be installed below grade.
Install penetration into chamber below grade.
Install 2 18/2C Twisted Shielded for analog signals.
Install 1 18/4C cable for i/o signals.
Eliminate hand inputs for fan and pump to PLC.
Install 2-#14 power conductors to terminate to customer's equipment.
Install relays to drive two channel of IO outputs from SCADA.

Estimate	1.00	\$4,960.00	\$4,960.00
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ST-S-5
Install one 3/4" PVC coated rigid conduit into meter pit.
Install PVC coated FS/FD box with blank cover near chamber bench.
Conduit to be installed below grade.
Install penetration into chamber below grade.
Install 2 18/2C Twisted Shielded for analog signals.
Install 1 18/4C cable for i/o signals.
Install 2-#14 power conductors to terminate to customer's equipment.
Install relays to drive two channel of IO outputs from SCADA.

Estimate	1.00	\$4,960.00	\$4,960.00
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ST-S-6
Install one 3/4" PVC coated rigid conduit into meter pit.
Install PVC coated FS/FD box with blank cover near chamber bench.
Conduit to be installed below grade.
Install penetration into chamber below grade.
Install 2 18/2C Twisted Shielded for analog signals.
Install 1 18/4C cable for i/o signals.
Install 2-#14 power conductors to terminate to customer's equipment.
Install relays to drive two channel of IO outputs from SCADA.

Estimate	1.00	\$6,000.00	\$6,000.00
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LX-S-6
Install one 3/4 Rigid conduit to near exhaust vent on exterior of meter pit.
Conduit to be installed below grade.
Install 1 18/4C cable for i/o signals.
Install 2-#14 power conductors to terminate to customer's equipment.
Install relays to drive two channel of IO outputs from SCADA.

CUSTOMER MESSAGE

Estimate Total: \$36,980.00



Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

CC: File

From: Vincent Astorino, Operations & Flow Manager

Date: October 14, 2020

Subject: Metering Facility Rehabilitation Project - Construction Contract Recommendation

The Macomb County Public Works Office (MCPWO) has identified three community sewerage metering facilities in need of significant rehabilitation. Below is a summary of the three facilities:

Name	Location	Year Constructed	Type of Meter	Est. Rehab Cost
SY-S-1	M-59, W. of Mound	1994	Parshall Flume	\$326,000
SY-S-2	23 Mile Rd, W. of Ryan	1981 (orig. facility)	Temporary A/V	\$509,000
WA-S-1	23 Mile & Hayes	2001	Palmer-Bowlus Flume	\$242,700

As part of the 2019/2020 budgets, \$1,200,000 was allocated for the rehabilitation of the three above-noted facilities with an additional \$250,000 budgeted for inspection and contract administration in the 2020/2021 budget. These budgets were established by using previously prepared condition assessments and conceptual cost estimates prepared by HRC (SY-S-1 & SY-S-2) and MCPWO staff (WA-S-1). These estimates were increased in order to cover construction administration and contingency.

In September 2018, Hubbell, Roth & Clark, Inc. (HRC) was awarded the engineering design contract for the rehabilitation of SY-S-1. In February 2019, MCPWO added the rehabilitation of SY-S-2 and WA-S-1 to the design scope. HRC then prepared plans and specifications for the three metering sites. The project was then publicly advertised on MITN. On October 9, 2020, MCPWO received the three (3) unit price bids as follows:

- L. D'Agostini & Sons, Inc. – \$1,210,940.75
- Weiss Construction Co., LLC – \$857,159.00
- Z Contractors, Inc. – \$1,069,093.21

HRC performed a review of the documents submitted by Weiss and has indicated they believe Weiss is capable of performing the work. MCPWO staff is recommending to award the contract to Weiss Construction Co., LLC in the total amount of \$857,159.00 to rehabilitate the three noted sewerage metering sites. MCPWO staff is confident that Weiss Construction will be able to perform the work for

the above-noted price. Upon board approval, MCPWO staff will coordinate with Weiss to finalize the contract.

Attachments: Weiss Construction Bid Form Dated 10-09-20
HRC Recommendation Letter Dated 10-13-20



MAILING: PO Box 824
Bloomfield Hills, MI 48303-0824
SHIPPING: 555 Hulet Drive
Bloomfield Hills, MI 48302-0360
PHONE: 248-454-6300
WEBSITE: hrcengr.com

October 13, 2020

Macomb County Public Works Office
Macomb Interceptor Drain Drainage District
21777 Dunham Rd
Clinton Township, MI 48036

Attn: Mr. Steven Wagner, Engineer II

Re: Metering Facility Rehabilitation Project (WWS-2020-003)
Bid Results & Recommendation of Award

HRC Job No. 20180441

Dear Mr. Wagner:

Hubbell, Roth & Clark, Inc (HRC) has reviewed the bids received on Friday, October 9, 2020 for the subject project. There were a total of three (3) bids received, publicly opened and read with the lowest responsive bid submitted by Weiss Construction Co., LLC (Weiss Construction) of Novi, Michigan with an as-read bid of \$857,159.00. The pricing for the three (3) bid options ranged from \$857,159.00 to \$1,210,940.75. Copies of the Bid Tab are enclosed for your reference and distribution.

Weiss Construction has satisfied the requirements of the specifications and has submitted all the necessary information for the bid proposal to be considered complete and responsive. Weiss Construction has extensive experience working in Southeast Michigan on a wide-range of underground utility, process mechanical and structure rehabilitation projects both larger and smaller than the subject project. In addition, each of the references contacted provided strong support of their abilities, including timeliness, responsiveness, workmanship, and communications. In addition, our office has personally completed numerous projects with Weiss Construction with good success.

Our office has contacted Weiss Construction and they have indicated they are able to complete the project in accordance with the bid documents, schedule and for the amount bid. On the basis of the above, we recommend award of the Metering Facility Rehabilitation Project construction Contract to Weiss Construction Co. LLC at a total amount of \$857,159.00, subject to the Contractor supplying the requisite bonds and insurance certificates. Construction is anticipated to begin in February or March of 2021 and be completed by May 30, 2021.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Bradley Shepler, P.E., CCCA, LEED AP
Associate

Attachment

pc: MCPWO; Vincent Astorino, Stephen Downing
HRC; J. Burton, E. Ause, File

Delhi Township
2101 Aurelius Rd.
Suite 2A
Holt, MI 48842
517-694-7760

Detroit
535 Griswold St.
Buhl Building, Ste 1650
Detroit, MI 48226
313-965-3330

Grand Rapids
1925 Breton Road SE
Suite 100
Grand Rapids, MI 49506
616-454-4286

Howell
105 W. Grand River
Howell, MI 48843
517-552-9199

Jackson
401 S. Mechanic St.
Suite B
Jackson, MI 49201
517-292-1295

Kalamazoo
834 King Highway
Suite 107
Kalamazoo, MI 49001
269-665-2005

Lansing
215 S. Washington SQ
Suite D
Lansing, MI 48933
517-292-1488

BID TABULATION
METERING FACILITY REHABILITATION PROJECT WWS-2020-003
MACOMB COUNTY PUBLIC WORKS OFFICE
MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT
MACOMB COUNTY, MICHIGAN

L. D'Agostini & Sons, Inc.
15801 23 Mile Road
Macomb, MI 48042
P (586) 781-5800

Z Contractors, Inc.
50500 Design Lane
Shelby Township, MI 48315
P (586) 255-2421
F (586) 726-8481

Weiss Construction Co., LLC
41001 Grand River Avenue
Novi, MI 48375
P (313) 567-4500

Item	Quantity	Unit Price	Total Cost	Unit Price	Total Cost	Unit Price	Total Cost
DIVISION A - METERING FACILITY SY-S-1 (M-59 & MOUND)							
1	1	LSUM	\$10,000.00	\$10,000.00	\$17,000.00	\$13,976.20	\$13,976.20
						\$595.28	\$595.28
2	1	LSUM	\$1,000.00	\$1,000.00	\$1,300.00	\$12,383.11	\$12,383.11
3	1	LSUM	\$1,100.00	\$1,100.00	\$25,000.00	\$5,952.74	\$5,952.74
4	1	LSUM	\$10,000.00	\$10,000.00	\$40,000.00	\$31,431.17	\$31,431.17
5	1	LSUM	\$2,500.00	\$2,500.00	\$6,000.00	\$130.96	\$1,833.44
6	14	LFT	\$100.00	\$1,400.00	\$72.00		
7	1	EA	\$1,150.00	\$1,150.00	\$1,000.00	\$1,369.13	\$1,369.13
8	8	LFT	\$140.00	\$1,120.00	\$125.00	\$148.82	\$1,190.56
9	2	EA	\$550.00	\$1,100.00	\$500.00	\$595.28	\$1,190.56
10	2	EA	\$2,000.00	\$4,000.00	\$1,500.00	\$881.95	\$1,763.90
11	5	VFT	\$350.00	\$1,750.00	\$200.00	\$1,153.25	\$5,766.25
12	2	EA	\$1,100.00	\$2,200.00	\$1,500.00	\$2,302.72	\$4,605.44
13	21	LFT	350.00	\$7,350.00	\$10.00	448.68	\$9,422.28
14	1	EA	\$15,000.00	\$15,000.00	\$10,000.00	\$4,238.81	\$4,238.81
15	26	LFT	\$150.00	\$3,900.00	\$120.39	143.33	\$3,726.58
16	10	LFT	\$200.00	\$2,000.00	\$180.32	\$214.68	\$2,146.80
17	5	SFT	\$550.00	\$2,750.00	\$245.53	\$292.31	\$1,461.55
18	100	SFT	\$30.00	\$3,000.00	\$40.25	\$47.92	\$4,792.00
19	1	LSUM	\$650.00	\$650.00	\$813.92	\$791.32	\$791.32
20	100	SFT	\$45.00	\$4,500.00	\$87.06	\$103.65	\$10,365.00
21	1	LSUM	\$6,000.00	\$6,000.00	\$5,000.00	\$6,828.30	\$6,828.30
22	1	LSUM	\$1,800.00	\$1,800.00	\$100.00	\$5,332.80	\$5,332.80
23	1	LSUM	\$35,000.00	\$35,000.00	\$89,000.00	\$18,545.30	\$18,545.30
24	10	LFT	\$200.00	\$2,000.00	\$180.32	\$214.68	\$2,146.80
25	10	SFT	\$500.00	\$5,000.00	\$145.00	\$176.56	\$1,765.60
26	590	SFT	\$11.00	\$6,490.00	\$15.29	\$18.20	\$10,738.00
27	590	SFT	\$33.00	\$19,470.00	\$28.80	\$34.29	\$20,231.10
28	25	SFT	\$25.00	\$625.00	\$100.00	\$263.93	\$6,598.25
29	1	LSUM	\$3,000.00	\$3,000.00	\$7,500.00	\$17,559.24	\$17,559.24



BID TABULATION
METERING FACILITY REHABILITATION PROJECT WWS-2020-003
MACOMB COUNTY PUBLIC WORKS OFFICE
MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT
MACOMB COUNTY, MICHIGAN

Weiss Construction Co., LLC
41001 Grand River Avenue
Novi, MI 48375
P (313) 567-4500

Z Contractors, Inc.
50500 Design Lane
Shelby Township, MI 48315
P (586) 255-2421
F (586) 726-8481

L. D'Agostini & Sons, Inc.
15801 23 Mile Road
Macomb, MI 48042
P (586) 781-5800

Item	Quantity	Unit Price	Total Cost	Unit Price	Total Cost	Unit Price	Total Cost
30 "S2" - ABOVE GROUND SITE PAINTING	1	LSUM	\$600.00	\$600.00	\$2,000.00	\$2,000.00	\$9,103.75
31 "S3" - REMOVE BLOWER FAN & CONCRETE PAD	1	LSUM	\$700.00	\$700.00	\$1,000.00	\$1,000.00	\$9,366.35
32 "S5" - CONTRACTOR QTY VERIFICATION	1	LSUM	\$600.00	\$600.00	\$5,000.00	\$5,000.00	\$2,199.53
33 "S6" - VENT INTAKE CLEANING & COATING	1	LSUM	\$1,150.00	\$1,150.00	\$1,000.00	\$1,000.00	\$65,480.09
34 "S7" - INSTALL SUPPLY FAN	1	LSUM	\$16,500.00	\$16,500.00	\$15,000.00	\$15,000.00	\$9,779.23
35 REMOVE AND REPLACE METER AND SERVICE ENTRANCE SWITCH AND EQUIPMENT RACK	1	LSUM	\$10,000.00	\$10,000.00	\$6,620.00	\$6,620.00	\$6,786.12
36 REMOVE AND REPLACE BLOWER UNIT DISCONNECT SWITCH AND EQUIPMENT RACK	1	LSUM	\$4,000.00	\$4,000.00	\$1,740.00	\$1,740.00	\$2,500.14
37 REMOVE AND REPLACE CONTROL CABINET AND CONCRETE FOUNDATION	1	LSUM	\$5,500.00	\$5,500.00	\$12,000.00	\$12,000.00	\$11,905.47
38 SITE CONDUIT AND WIRE	1	LSUM	\$10,000.00	\$10,000.00	\$12,000.00	\$12,000.00	\$3,214.48
39 DTE ALLOWANCE	1	LSUM	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
40 REMOVE AND REPLACE FLUME LEVEL SENSOR AND EQUIPMENT SUPPORT RACK	1	LSUM	\$7,200.00	\$7,200.00	\$1,340.00	\$1,340.00	\$2,976.37
41 REMOVE AND REPLACE LIGHT FIXTURES	1	LSUM	\$3,600.00	\$3,600.00	\$2,700.00	\$2,700.00	\$6,667.07
42 REMOVE EXISTING CONDUIT AND WIRE	1	LSUM	\$2,000.00	\$2,000.00	\$1,070.00	\$1,070.00	\$1,785.82
43 FACILITY CONDUIT AND WIRE	1	LSUM	\$10,200.00	\$10,200.00	\$8,888.00	\$8,888.00	\$3,571.65
44 OBSERVATION CREW DAYS - BASE CONTRACT ALLOWANCE	15	DAYS	\$700.00	\$10,500.00	\$700.00	\$10,500.00	\$700.00
45 OBSERVATION CREW DAYS - EXCESS OF BASE CONTRACT	700	/DAY	\$7,700.00	\$7,700.00	5	\$3,500.00	0
SUB-TOTAL AMOUNT OF DIVISION A			\$246,605.00			\$354,748.21	\$355,083.58
DIVISION B - METERING FACILITY SY-S-2 (23 MILE & SANDSHORE)							
46 MOBILIZATION, MAX 5%	1	LSUM	\$7,500.00	\$7,500.00	\$9,500.00	\$9,500.00	\$12,846.14
47 COLOR AUDIO-VIDEO ROUTE SURVEY	1	LSUM	\$600.00	\$600.00	\$1,300.00	\$1,300.00	\$595.28
48 SOIL EROSION AND SEDIMENTATION CONTROL	1	LSUM	\$1,600.00	\$1,600.00	\$12,000.00	\$12,000.00	\$12,589.56
49 NON HAZ CONT MAT HANDLING, DISPOSAL (AS NEEDED)	20	TON	\$100.00	\$2,000.00	\$65.00	\$1,300.00	\$29.75
50 SITE RESTORATION	1	LSUM	\$4,000.00	\$4,000.00	\$15,000.00	\$15,000.00	\$42,771.14
51 SANITARY MANHOLE REHABILITATION (SY-S-2-MH-01)	1	LSUM	\$5,500.00	\$5,500.00	\$6,000.00	\$6,000.00	\$5,409.66
52 SANITARY MANHOLE REHABILITATION (SY-S-2-MH-02)	1	LSUM	\$5,500.00	\$5,500.00	\$6,000.00	\$6,000.00	\$5,409.66
53 SANITARY MANHOLE REHABILITATION (SAN MH 01)	1	LSUM	\$5,500.00	\$5,500.00	\$6,000.00	\$6,000.00	\$5,409.66
54 SANITARY MANHOLE REHABILITATION (SAN MH 02)	1	LSUM	\$3,000.00	\$3,000.00	\$6,000.00	\$6,000.00	\$8,971.81



BID TABULATION
 METERING FACILITY REHABILITATION PROJECT WWS-2020-003
 MACOMB COUNTY PUBLIC WORKS OFFICE
 MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT
 MACOMB COUNTY, MICHIGAN

Bids Due: 10/09/2020 @ 11:00 AM
 HRC Job No. 20180441

Weiss Construction Co. LLC
 41001 Grand River Avenue
 Novi, MI 48375
 P (313) 567-4500

Z Contractors, Inc.
 50500 Design Lane
 Shelby Township, MI 48315
 P (586) 255-2421
 F (586) 726-8481

L. D'Agostini & Sons, Inc.
 15801 23 Mile Road
 Macomb, MI 48042
 P (586) 781-5800

Item	Quantity	Unit Price	Total Cost	Unit Price	Total Cost	Unit Price	Total Cost	
55	1	LSUM	\$5,500.00	\$5,500.00	\$6,000.00	\$6,000.00	\$8,971.81	\$8,971.81
56	1	LSUM	\$30,000.00	\$30,000.00	\$35,000.00	\$35,000.00	\$60,172.18	\$60,172.18
57	1	LSUM	\$49,000.00	\$49,000.00	\$30,000.00	\$30,000.00	\$59,950.35	\$59,950.35
58	1	LSUM	\$13,600.00	\$13,600.00	\$10,090.00	\$10,090.00	\$17,858.21	\$17,858.21
59	1	LSUM	\$5,500.00	\$5,500.00	\$12,000.00	\$12,000.00	\$8,333.84	\$8,333.84
60	1	LSUM	\$5,700.00	\$5,700.00	\$7,500.00	\$7,500.00	\$5,000.30	\$5,000.30
61	1	LSUM	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00
62	1	LSUM	\$20,727.00	\$20,727.00	\$20,727.00	\$20,727.00	\$20,727.00	\$20,727.00
63	10	DAYS	\$700.00	\$7,000.00	\$700.00	\$7,000.00	\$700.00	\$7,000.00
64	\$700	/DAY	\$5,600.00	\$5,600.00	2	\$1,400.00	0	\$0.00
SUB-TOTAL AMOUNT OF DIVISION B			\$183,827.00	\$183,827.00	\$198,817.00	\$198,817.00	\$288,611.60	\$288,611.60

DIVISION C - METERING FACILITY WA-S-1 (23 MILE & HAYES)

65	1	LSUM	\$16,500.00	\$16,500.00	\$25,000.00	\$25,000.00	\$27,044.48	\$27,044.48
66	1	LSUM	\$600.00	\$600.00	\$1,300.00	\$1,300.00	\$595.28	\$595.28
67	1	LSUM	\$2,100.00	\$2,100.00	\$15,000.00	\$15,000.00	\$13,415.30	\$13,415.30
68	1	LSUM	\$20,000.00	\$20,000.00	\$65,000.00	\$65,000.00	\$27,382.58	\$27,382.58
69	300	LFT	\$9.00	\$2,700.00	\$5.00	\$1,500.00	\$148.13	\$44,439.00
70	1	LSUM	\$4,900.00	\$4,900.00	\$12,000.00	\$12,000.00	\$31,431.17	\$31,431.17
71	210	LFT	\$12.00	\$2,520.00	\$25.00	\$5,250.00	\$29.76	\$6,249.60
72	420	LFT	\$10.00	\$4,200.00	\$5.00	\$2,100.00	\$5.95	\$2,499.00
73	210	LFT	\$370.00	\$77,700.00	\$300.00	\$63,000.00	\$357.16	\$75,003.60
74	510	SFT	\$26.00	\$13,260.00	\$34.90	\$17,799.00	\$35.72	\$18,217.20
75	1	LSUM	\$70,000.00	\$70,000.00	\$90,000.00	\$90,000.00	\$130,107.83	\$130,107.83
76	6	EA	\$100.00	\$600.00	\$400.00	\$2,400.00	\$39.69	\$238.14
77	6	EA	\$100.00	\$600.00	\$400.00	\$2,400.00	\$39.69	\$238.14
78	1	LSUM	\$1,800.00	\$1,800.00	\$100.00	\$100.00	\$5,332.80	\$5,332.80
79	1	LSUM	\$30,000.00	\$30,000.00	\$40,000.00	\$40,000.00	\$18,545.30	\$18,545.30
80	55	LFT	\$125.00	\$6,875.00	\$106.98	\$5,883.90	\$127.36	\$7,004.80
81	10	SFT	\$520.00	\$5,200.00	\$212.46	\$2,124.60	\$252.94	\$2,529.40
82	590	SFT	\$33.00	\$19,470.00	\$45.95	\$27,110.50	\$54.71	\$32,278.90



BID TABULATION
METERING FACILITY REHABILITATION PROJECT WWS-2020-003
MACOMB COUNTY PUBLIC WORKS OFFICE
MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT
MACOMB COUNTY, MICHIGAN

L. D'Agostini & Sons, Inc.
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P (586) 255-2421
F (586) 726-8481

Weiss Construction Co., LLC
41001 Grand River Avenue
Novi, MI 48375
P (313) 567-4500

Item	Quantity	Unit	Unit Price	Total Cost	Unit Price	Total Cost	Unit Price	Total Cost
83 "F8" - INSTALL FRP LADDER UP	1	LSUM	\$7,500.00	\$7,500.00	\$5,000.00	\$5,000.00	\$9,422.28	\$9,422.28
84 "F9" - INSTALL ACCESS SAFETY FEATURES	1	LSUM	\$6,500.00	\$6,500.00	\$10,000.00	\$10,000.00	\$9,422.28	\$9,422.28
85 "S2" - ABOVE GROUND SITE PAINTING	1	LSUM	\$600.00	\$600.00	\$2,000.00	\$2,000.00	\$9,103.75	\$9,103.75
86 "S5" - CONTRACTOR QTY VERIFICATION	1	LSUM	\$600.00	\$600.00	\$5,000.00	\$5,000.00	\$2,199.53	\$2,199.53
87 "S6" - VENT INTAKE CLEANING & COATING	1	LSUM	\$1,200.00	\$1,200.00	\$1,000.00	\$1,000.00	\$1,190.55	\$1,190.55
88 "S7" - INSTALL SUPPLY FAN	1	LSUM	\$16,500.00	\$16,500.00	\$15,000.00	\$15,000.00	\$9,779.23	\$9,779.23
89 REMOVE AND REPLACE METER AND SERVICE ENTRANCE SWITCH AND EQUIPMENT RACK	1	LSUM	\$10,000.00	\$10,000.00	\$6,620.00	\$6,620.00	\$5,952.74	\$5,952.74
90 INSTALL NEW SUPPLY FAN DISCONNECT SWITCH AND EQUIPMENT RACK	1	LSUM	\$4,000.00	\$4,000.00	\$1,740.00	\$1,740.00	\$2,381.09	\$2,381.09
91 REMOVE AND REPLACE CONTROL CABINET AND CONCRETE FOUNDATION	1	LSUM	\$12,000.00	\$12,000.00	\$12,000.00	\$12,000.00	\$11,905.47	\$11,905.47
92 SITE CONDUIT AND WIRE	1	LSUM	\$8,400.00	\$8,400.00	\$9,300.00	\$9,300.00	\$1,785.82	\$1,785.82
93 DTE ALLOWANCE	1	LSUM	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00
94 REMOVE AND REPLACE FLUME LEVEL SENSOR AND EQUIPMENT SUPPORT RACK	1	LSUM	\$7,500.00	\$7,500.00	\$1,640.00	\$1,640.00	\$2,976.37	\$2,976.37
95 INSTALL LIGHT FIXTURES	1	LSUM	\$3,600.00	\$3,600.00	\$2,700.00	\$2,700.00	\$2,619.20	\$2,619.20
96 REMOVE EXISTING CONDUIT AND WIRE	1	LSUM	\$1,300.00	\$1,300.00	\$1,070.00	\$1,070.00	\$2,381.09	\$2,381.09
97 FACILITY CONDUIT AND WIRE	1	LSUM	\$11,000.00	\$11,000.00	\$8,888.00	\$8,888.00	\$3,571.65	\$3,571.65
98 INSTALL LASER FLOW/LEVEL EQUIPMENT (ALLOWANCE)	1	LSUM	\$20,727.00	\$20,727.00	\$20,727.00	\$20,727.00	\$20,727.00	\$20,727.00
99 PERMITS (ALLOWANCE)	1	LSUM	\$10,775.00	\$10,775.00	\$10,775.00	\$10,775.00	\$10,775.00	\$10,775.00
100 OBSERVATION CREW DAYS - BASE CONTRACT ALLOWANCE	25	DAYS	\$700.00	\$17,500.00	\$700.00	\$17,500.00	\$700.00	\$17,500.00
101 OBSERVATION CREW DAYS - EXCESS OF BASE CONTRACT	\$700	/DAY	10	\$7,000.00	8	\$5,600.00	0	\$0.00
SUB-TOTAL AMOUNT OF DIVISION C				\$426,727.00	\$515,528.00		\$567,245.57	
TOTAL AMOUNT OF BID (ALL DIVISIONS)				\$857,159.00	\$1,069,093.21		\$1,210,940.75	

ENGINEER: Bradley Shepler, P.E.
Hubbell, Roth & Clark, Inc.
555 Hulet Drive
P.O. Box 824
Bloomfield Hills, MI 48083-0824



BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

- 1.01 This Bid is submitted to: **Macomb Interceptor Drain Drainage District**
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

- 2.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;
 - B. List of Proposed Subcontractors;
 - C. List of Proposed Suppliers;
 - D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
 - E. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
 - F. Required Bidder Qualification Statement with supporting data;

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

3.01 *Lump Sum Bids*

~~A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s), together with any Unit Prices indicated in Paragraph 3.02:~~

~~1. Lump Sum Price (Single Lump Sum)~~

Lump Sum Bid Price	\$
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~~2. Lump Sum Price (Base Bid and Alternates)~~

Lump Sum Bid Price for Base Bid	\$
Alternate A [Add] [Deduct]	\$
Alternate B [Add] [Deduct]	\$

~~3. Lump Sum Price (Sectional Lump Sum Bids)~~

Lump Sum Bid Price for Section I only	\$
Lump Sum Bid Price for Section II only	\$

Lump Sum Bid Price for Section I and II	\$
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B. All specified cash allowance(s) are included in the price(s) set forth below, and have been computed in accordance with Paragraph 13.02 of the General Conditions.

Lump Sum for Cash Allowance 1	\$
Lump Sum for Cash Allowance 2	\$
Lump Sum for Cash Allowance 3	\$
Total for all Lump Sum for Cash Allowances	\$

C. All specified contingency allowances are included in the price(s) set forth below, and have been computed in accordance with Paragraph 13.02 of the General Conditions.

Lump Sum Contingency Allowance 1	\$
Lump Sum Contingency Allowance 2	\$
Lump Sum Contingency Allowance 3	\$
Total for all Lump Sum Contingency Allowances	\$

3.02 Unit Price Bids

A. Bidder will perform the following Work at the indicated unit prices:

[Fill out the attached UNIT PRICE BID TABLE which can be found at the end of this section]

B. Bidder will perform the following Alternatives Work at the indicated unit prices:

1. ~~ALTERNATE A BID~~

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
Total of All ALTERNATE A Unit Price Bid Items					\$

C. Bidder will perform the following Alternatives Work at the indicated unit prices:

1. ~~ALTERNATE B BID - ADD CHANTICLEER PEAR TREE TO BASE BID:~~

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
Total of All ALTERNATE B Unit Price Bid Items					\$

D. Bidder acknowledges that:

- each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
- estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

3.03 *Total Base Bid Price* (~~Lump Sum and Unit Prices~~)

Total Base Bid Price (Total of all Lump Sum and Unit Price Bids)	\$ 857,159. ⁰⁰
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ARTICLE 4—TIME OF COMPLETION

- 4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

- A. Bidder hereby acknowledges receipt of the following Addenda: [Add rows as needed. Bidder is to complete table.]

Addendum Number	Addendum Date
1	10/6/2020

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder's Representations*

- A. In submitting this Bid, Bidder represents the following:
1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

- A. The Bidder certifies the following:
 1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
 2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
 3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
 4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 6.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at

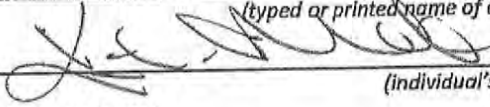
artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

- c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
- d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

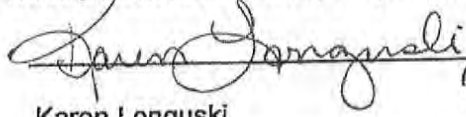
BIDDER hereby submits this Bid as set forth above:

Bidder:

Weiss Construction Co. LLC

By: _____
(typed or printed name of organization)
By:  _____
(individual's signature)
Name: Kevin Markhardt _____
(typed or printed)
Title: Vice President _____
(typed or printed)
Date: October 9, 2020 _____
(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest:  _____
(individual's signature)
Name: Karen Longuski _____
(typed or printed)
Title: Office Administrator _____
(typed or printed)
Date: October 9, 2020 _____
(typed or printed)

Address for giving notices:

41001 Grand River
Novi, MI 48375

Bidder's Contact:

Name: Kevin Markhardt _____
(typed or printed)
Title: Vice President _____
(typed or printed)
Phone: 313.567.4500 _____
Email: kmarkhardt@weiss-construction.com _____
Address: 41001 Grand River _____
Novi, MI 48375 _____

Bidder's Contractor License No.: (if applicable) 8000666 _____



Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

CC: File

From: Vincent Astorino, Operations & Flow Manager

Date: October 14, 2020

Subject: Metering Facility Rehabilitation Project - Const. Admin. Contract Recommendation

The Macomb County Public Works Office (MCPWO) has identified three community sewerage metering facilities in need of significant rehabilitation; SY-S-1, SY-S-2, and WA-S-1. MCPWO subsequently contracted with Hubbell, Roth & Clark, Inc. (HRC) to prepare plans and specifications for the rehabilitation of these three metering sites. On October 9, 2020, MCPWO received bids from three (3) contractors for the execution of the proposed work. Under separate cover, MCPWO staff has recommended to award the construction contract to Weiss Construction Co., LLC.

HRC has submitted a proposal of \$120,300.00 to perform oversight and administer this work from start to finish. Their not-to-exceed amount falls in line with our offices estimates for their defined scope of work. Their proposed NTE amount for CA services is also well below MCPWO's budgeted amount of \$250,000.00. In general, HRC's tasks consist of full-time construction observation, submittal review, contractor payment reviews, and project closeout. HRC has also included in their proposal a cost of \$28,900.00 for additional services that have already been performed. These services included permitting, subsequent revisions to the plans and specifications, and additional procurement activities. These tasks were not in the original design scope of work. HRC's new total design cost including the additionally requested fees is still well within the typical fee range for similar design projects.

MCPWO staff is recommending to award the Metering Facility Rehabilitation Project preliminary construction engineering and construction administration contract to HRC for a not-to-exceed amount of \$149,200.00. Upon board approval, MCPWO staff will coordinate with HRC to execute a change order that adds these services to the original design contract.

Attachments: HRC Construction Administration Proposal Dated 10-14-20



MAILING: PO Box 824
 Bloomfield Hills, MI 48303-0824
 SHIPPING: 555 Hulet Drive
 Bloomfield Hills, MI 48302-0360
 PHONE: 248-454-6300
 WEBSITE: hrcengr.com

October 14, 2020

Macomb County Public Works Office
 Macomb Interceptor Drain Drainage District
 21777 Dunham Rd
 Clinton Township, MI 48036

Attn: Mr. Steven Wagner, Engineer II

Re: Metering Facility Rehabilitation Project (WWS-2020-003)
 Macomb Interceptor Drain Drainage District
 Proposal for Construction Engineering and Administrative Services

HRC Job No. 20180441.09

Dear Mr. Wagner:

As requested, Hubbell, Roth & Clark, Inc. (HRC) is pleased to offer our preliminary construction engineering (PCE) and construction administrative (CA) services for the subject project. Our scope of work is based on our design of the subject project, providing CE services for previous Macomb County Public Works Office (MCPWO) sewerage metering facility rehabilitation projects and our experience with similar wastewater system improvement projects. In summary, our services would include all necessary activities to administer the construction Contract, coordinate with affected stakeholders and observation of the rehabilitation of three (3) MCPWO sewerage metering facility sites including structural rehabilitation of existing underground chambers, sewer and manhole lining and site, mechanical and electrical upgrades.

SCOPE OF SERVICES (PCE)

The design work involved with the subject project has revealed several additional items of work, modifications to the project scope, and communication and coordination efforts that we believe added complexity to the project that required additional detail to prepare the project for permitting and construction. In addition, the requested scope of work for providing procurement assistance (which was not included in the original scope of the project) has been provided. These additional items of work were provided with the goal to provide the OMCPWC and MIDDD with a successful project that meets its long-term goals.

The additional services and preliminary construction engineering work to successfully complete this project are summarized as follows:

Construction Drawing Modifications

Additional detail is required adequately address the complexities of the facility and manhole structural rehabilitation, sewer and structure lining, bypass pumping and maintaining traffic needed to successfully complete the project. Multiple plan sheets were added to illustrate the detail necessary to clearly show the intent of the project.

Revisions to Technical Specifications

MCPWO currently requires their specifications to be in Master Format 2016 format. Technical specifications needed to be revised and updated to comply with this formatting requirement. The revisions were not originally included in the project scoping and requires significant additional work.

Permitting

HRC will obtain permits from all Authorities Having Jurisdiction over parts of the project. This task requires additional coordination because the project sites are in three (3) different locations, within two (2) Townships (and upstream sewer

Delhi Township 2101 Aurelius Rd. Suite 2A Holt, MI 48842 517-694-7760	Detroit 535 Griswold St. Buhl Building, Ste 1650 Detroit, MI 48226 313-965-3330	Grand Rapids 801 Broadway NW Suite 215 Grand Rapids, MI 49504 616-454-4286	Howell 105 W. Grand River Howell, MI 48843 517-552-9199	Jackson 401 S. Mechanic St. Suite B Jackson, MI 49201 517-292-1295	Kalamazoo 834 King Highway Suite 107 Kalamazoo, MI 49001 269-665-2005	Lansing 215 S. Washington SQ Suite D Lansing, MI 48933 517-292-1488
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system ownership by a third Township) and one (1) site within a EPA Superfund site operated by a separate entity. In addition, the SESC permit through the MCWO required additional project details and the Part 41 permit has required significant time and effort to coordinate information that EGLE has requested to review.

Procurement Activities

HRC will prepare and issued for bids set of Procurement Documents for upload to MITN. HRC will address questions during the bidding process and prepare addenda. HRC will attend the bid opening, review the proposals and bid tabulation, create a formal bid tabulation document and provide the MCPWO with a recommendation on the award of the Contract. If necessary and upon direction by the MCPWO, HRC will organize, attend and memorialize one (1) Pre-Award Conference with the selected contractor.

SCOPE OF SERVICES (CA)

The main objectives for the administration of the construction Contract for the subject project are to provide the MCPWO with a successfully completed project that meets the contracting requirements, is adequately communicated to the affected stakeholders in the area, minimizes the impact to the public, and is within the approved budget. HRC is proposing to utilize the same project team that designed the subject project to administer the construction Contract. We feel that this philosophy will provide consistency between design and construction activities and assure that the project gets built with the MCPWO's design goals and objectives in mind. A single Project Field Representative will be assigned to the project to observe construction progress and provide daily reports.

In summary, the following major contract administrative services have been identified for this project:

Preconstruction Meeting

HRC will coordinate, attend and summarize a pre-construction meeting with the MCPWO, contractor, utility companies and any affected stakeholders.

Issued for Construction Documents

HRC will develop and produce issued for construction documents based on any clarifications needed prior to the project start and distribute to all interested parties.

Shop Drawing Review

Submittal of bypass pumping plans, concrete restoration materials, mechanical and electrical equipment and materials, structure covers, etc are required as part of the Contract. HRC will review these submittals to assure they comply with Contract requirements and maintain a log of the submittals and status for the duration of the project. All review correspondences will be shared via a document control website (Dropbox).

Change Management

HRC will prepare work directives, field orders and bulletins as necessary to ensure proper performance of the work and will develop Change Orders from the aforementioned change management documents. HRC will promptly coordinate and respond to contractor RFIs.

Track & Support Construction Progress

HRC will interpret the Contract documents and assist with day-to-day administration activities as requested. HRC staff understands the urgency of matters that come up during construction and will be available to respond quickly to any questions. The HRC Project Manager will have a 24/7 access line and will provide a backup contact should the Project Manager be unavailable. HRC will be in daily communication with the Field Representative and review daily reports to maintain project record drawings throughout construction to assist with pay application reviews and record documentation.

Pay Application Processing

HRC will review, coordinate and process all pay requests and develop pay application documentation based on agreement with the contract bid items, work completed and construction progress. HRC will work with the contractor to coordinate pay requests to minimize the back and forth discussion on construction progress.

Progress Meetings

HRC will coordinate, attend, and summarize progress meetings. It is anticipated that the project will take 3 to 4 months to complete and progress meetings will be scheduled based on the amount of Work forecasted. For the purposes of this proposal, six (6) progress meetings have been included for budgeting purposes. In addition, it is proposed that special meetings be held just prior to bypass pumping to coordinate the sequencing of work and shutdown procedures with the contractor and MCPWO, Shelby Twp. and Washington Twp. staff. Lastly, a final walkthrough meeting will be held to finalize the punch list and prepare for project completion.

Record Drawings

Record drawings will be produced from the Project Field Representative's and the Contractor's marked up drawings, daily reports, contractor's records and HRC site visits, reviews and annotated plan set maintained through construction. Record drawings will be completed within 60 days of receipt of all the aforementioned information and will be submitted electronically in PDF and in AutoCad 2018.

Contract Closeout

HRC will complete reviews, prepare and issue documentation to memorialize Substantial Completion (of discrete parts of the work as it may apply), Final Completion and Final Payment. HRC will prepare and update all punch lists and prepare record drawings for the project as mentioned above.

Construction Observation

HRC will provide qualified and competent construction observation throughout the duration of construction in accordance with Section 01 32 29.13 of the Contract. The Project Field Representative will provide daily inspection reports of project construction, update the Project Manager of project progress, handle day to day resident/stakeholder complaints and maintain field record drawings. We have also allocated some time for the Project Field Representative to assist with the coordination of subcontractors; this task is the responsibility of the general contractor, however, past experiences have revealed that the field representative assigned to this project should have the capability to handle contractor coordination and work sequencing. Observation time will be tracked to update the MCPWO and the contractor of project performance and forecast any potential observation crew day overruns.

Senior construction engineering staff will be available to supervise and assist the Project Field Representative with questions during construction and assure that project communications are in place and maintained.

The HRC project manager will visit the site at intervals appropriate to the pace of construction and significance of work being completed. HRC will document the work reviewed and work being completed at the time of the site visit and any other issues or concerns that arose as part of the site visit.

It is assumed that construction will take three to four months off and on to complete the work. From past experience, the work involved in rehabilitating underground structures and facilities is mostly specialty contractor work and requires extensive coordination due to contractor mobilization, concrete and coating cure times, climate and humidity concerns, system events (i.e., surcharging), and work sequencing. While the work on the facilities will not be continuous, the MCPWO should anticipate each site being under construction for at least two to three months.

In addition, HRC has a full-service materials testing laboratory that can provide material quality control on the project so that the MCPWO does not need to sub-contract those services. HRC's Materials Testing Laboratory would provide compaction testing services for the backfill of all excavations, concrete compressive strength testing of pavements and

flowable fill (where required), and density testing of road base materials. HRC will review all testing information for conformance with the design and contracting requirements. HRC can provide an additional proposal for this work at the MCPWO's request.

FEES FOR SERVICES

A breakdown of the items of work within each task of the Project along with our estimated hours and associated fees is provided on the attached Table 1. Invoicing for this work will be on a basis of direct payroll plus a multiplier of 2.0. Invoices will be submitted on a monthly basis as the work progresses.

The total estimated cost for the Preliminary Construction Engineering and Procurement Services work is \$28,9900 and will not be exceeded without prior authorization.

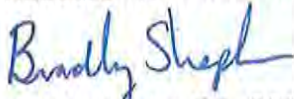
The results of the bids received for the subject project on October 9, 2020, revealed that the lowest responsive and responsible bidder submitted a total bid amount (minus crew days) of \$801,859. Construction engineering (CE) and administration services for a rehabilitation project of this type, size and scope, including full-time construction observation, typically range around 15-20 percent of the construction cost and therefore we would propose a not-to-exceed without prior authorization fee of \$120,300. The lowest responsive and responsible bidder proposed the need for 79 crew days to complete the project, which calculates to a budget of \$55,300 for full-time construction observation, leaving approximately \$65,000 for the remainder of the necessary CE services. Construction engineering and administration is highly dependent on contractor performance, so HRC will work closely with the Contractor from the very beginning of the project to streamline our engineering, administration and observation services to assure our services remain within the proposed budget.

Jamie Burton, P.E., President will be the Principal In-Charge. He will be supported by Bradley Shepler, P.E., CCCA, LEED AP, Associate and Emily Ause, P.E, Staff Engineer, and our experienced structural, electrical and construction engineering and observation staff.

We thank you in advance for considering us for this engineering work. We look forward to hearing from you soon. Should you have any questions, comments or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.



Bradley Shepler, P.E., CCCA, LEED AP
Associate

pc: MCPWO; Vincent Astorino, Stephen Downing
HRC; J. Burton, E. Ause, R. Nacey, File

HUBBELL, ROTH & CLARK, INC. COST PROPOSAL
October 14, 2020

TASK DESCRIPTION	Rate (\$/hr.)											Total
	Principal	Associate/ PM	QA/QC	Process/ Dept. Head	Structural Engineer	Structural Engineer	Electrical Engineer	Graduate Engineer	CSE Supervisor	Designer (CAD Tech)	Const Eng/ RPR	
Preliminary Construction Engineering & Procurement												
Construction Drawing Modifications	2	8	4	2	8	8	8	16		32		78
Revisions to Technical Specifications	2	16	8	8	8	8	8	8				58
Permitting	2	12					24	24		16		54
Procurement Activities		16			8	8	24	24				56
Subtotals	4	52	12	10	24	24	24	72	0	48	0	246
	\$ 748	\$ 8,034	\$ 2,160	\$ 1,620	\$ 3,082	\$ 2,772	\$ 7,128	\$ -	\$ 3,360	\$ -	\$ -	\$ 28,900
TOTAL (PCE & P)												\$ 28,900
Construction Administration and Full-Time Observation												
Construction Administration												
Issued for Construction Documents	2	2			2	2	4	4		4		14
Preconstruction Meeting	4	6			4	4	8	8				20
Shop Drawing Reviews	4	12	4	4	24	8	36	36		16		104
Change Management		16			8	8	24	24		36		92
Track & Support Construction Progress	2	20	4	4	12	6	40	40				88
Pay Application Processing		8					40	40				48
Progress Meetings (Bi-Weekly) & Meeting Summaries	4	24			8	8	36	36				80
Record Drawings		6			4	4	24	24		32		70
Contract Closeout		8			8	8	20	20		8		52
Subtotals	8	102	8	8	70	44	232	88	8	88	0	568
	\$ 1,496	\$ 15,759	\$ 1,440	\$ 1,296	\$ 8,988	\$ 5,082	\$ 22,968	\$ 888	\$ 6,160	\$ -	\$ -	\$ 64,100
Construction Observation												
Coordination of Sub-Contractors											22	22
Full-Time Observation											510	510
Periodic Inspections		12					12					24
Subtotals	0	12	0	0	0	0	12	0	0	532	0	556
	\$ -	\$ 1,854	\$ -	\$ -	\$ -	\$ -	\$ 1,188	\$ -	\$ -	\$ 53,200	\$ -	\$ 56,200
TOTAL (CA & FTO)												\$ 120,300

Construction Observation costs provided are a budgetary estimate assuming a twelve (12) week construction period, actual costs are heavily dependent on Contractor capabilities and performance.

Funding Source	Apportionment	Manager	Vendor	Amount	Invoice Detail	Project Summary	Project Balance
Macomb Interceptor Drain	Chapter 20						
	Chessterfield - 7.2499%	Astorino	Aloia & Associates, P.C.	\$ 1,092.50	Invoice #20429 - 8.1.20	Sale of 45345 Garfield Road	\$ 152,001.75
	Clinton - 21.2506%	Downing	Anderson, Eckstein & Westrick	\$ 12,623.40	Invoice#127696 - 9.2.20	Dropshaft & Connecting Sewer Rehab	\$ 38,587.50
	Fraser - 4.0512%	Astorino	Applied Science	\$ 25,300.00	Invoice #7697 - 9.24.20	Dye Dilution Testing - 6.4.19 - 1.26.20	\$ 255,600.00
	Harrison - 6.4207%	Astorino	Aquasight	\$ 40,000.00	Invoice #000596 - 9.24.20	COVID 19 - CEWS Program	
	Lenox - 1.0638%	Manning	Benzdinski & Co.	\$ 48,000.00	Invoice #19-044 MIDD SRF - 7.23.20	Segment 5 SRF Financing Costs	
	Macomb - 13.9606%	Astorino	City of Mt. Clemens	\$ 15,806.30	Invoice #28001609 - 8.27.20	Sewage Flow Billing - July 2020	
	New Haven - 8226%	Astorino	City of Mt. Clemens	\$ 13,844.07	Invoice #28001669 - 9.16.20	Sewage Flow Billing - August 2020	
	Shelby - 9.9057%	Astorino	Colville Electric Co., LLC	\$ 36,980.00	Invoice #200521 - 10.7.20	COVID Sites	\$ 1,547,438.60
	Sterling Heights - 30.9081%	Downing	Doetsch	\$ 284,796.15	Invoice #71370 - 9.29.20	Phase 2 Grouting - 9.1.20 - 9.26.20	
	Utica - 1.5918%	Astorino	DTE Energy	\$ 1,141.81	Invoice #20-443 - 9.1.20	Monthly Electric - 8.1.20 - 8.31.20	
	Washington - 2.7751%	Astorino	Fishbeck	\$ 785.56	Invoice #394860 - 9.14.20	Wastewater Master Plan	\$ 476,454.89
		Astorino	Fishbeck	\$ 1,425.00	Invoice #394842 - 9.14.20	GLWA Assistance	\$ 27,139.37
		Astorino	Fishbeck	\$ 7,715.00	Invoice #394823 - 9.14.20	2020 Inspection Program through 9.4.20	\$ 166,192.00
		Astorino	FK Engineering Associates	\$ 14,000.00	Invoice #20-042-003 - 9.14.20	Sewer Rehab Analysis	\$ 28,000.00
		Downing	FK Engineering Associates	\$ 146,060.67	Invoice #20-058-004 - 8.26.20	Segment 6 Rehabilitation	\$ 207,584.72
		Astorino	Great Lakes Water Authority	\$ 522.57	Invoice #20-466 - 9.29.20	Industrial Metal Coating (Pass through)	
		Downing	Inland Waters	\$ 220,500.00	Invoice #WO18331 Est 1 - 9.4.20	Drop Shaft & Connecting Sewer Rehab	\$ 670,975.00
		Downing	Inland Waters	\$ 80,120.83	Invoice #WO18330 Est 2 - 9.28.20	Dropshaft & Connecting Sewer Rehab	\$ 970,717.35
		Astorino	KHVPP, PLC	\$ 1,485.00	Invoice #45227 - 9.1.20	Professional Services August 2020 - Ray Twp	
	Downing	Meadowbrook Insurance	\$ 106,894.69	Invoice #5399 - 9.10.20	Owners Protective Professional Indemnity		
	Downing	Meadowbrook Insurance	\$ 161,961.12	Invoice #5401 - 9.10.20	Builders Risk		
	Downing	Meadowbrook Insurance	\$ 46,376.10	Invoice #5402 - 9.10.20	Pollution Liability		
	Downing	Meadowbrook Insurance	\$ 88,000.00	Invoice #5403 - 9.10.20	Administrative Fee		
	Downing	Meadowbrook Insurance	\$ 124,222.45	Invoice #5419 - 9.10.20	General Liability		
	Downing	Meadowbrook Insurance	\$ 84,145.05	Invoice #5420 - 9.10.20	Excess \$5M x Primary		
	Downing	Meadowbrook Insurance	\$ 49,092.38	Invoice #5421 - 9.10.20	Excess \$5M x \$5M		
	Downing	Meadowbrook Insurance	\$ 70,216.88	Invoice #5422 - 9.10.20	Excess \$10M x \$10M		
	Downing	Meadowbrook Insurance	\$ 67,957.50	Invoice #5423 - 9.10.20	Excess \$15M x \$20M		
	Downing	Meadowbrook Insurance	\$ 51,500.00	Invoice #5424 - 9.10.20	Excess \$15M x \$35M		
	Downing	Miller, Canfield, Paddock & Stone	\$ 54,000.00	Invoice #1488105 - 8.3.20	Segment 5 SRF Financing Costs		
	Manning	NTH Consultants, Ltd.	\$ 31,764.53	Invoice #623692 - 9.8.20	Drop Shaft Meter Rehab - Engineering	\$ 111,279.24	
	Downing	NTH Consultants, Ltd.	\$ 7,872.88	Invoice #86236 - 9.17.20	Wonderware Renewal		
Administration		Astorino					

Funding Source	Apportionment	Manager	Vendor	Amount	Invoice Detail	Project Summary	Project Balance
Biofilter Clintondale P.S.		Astorino	City of Fraser	\$ 1,702.02	Invoice #20-456 - 8.21.20	Monthly Utility - 7.22.20 - 8.21.20	
		Astorino	Clinton Township Treasurer	\$ 2,407.29	Invoice #20-448 - 8.31.20	Water & Sewer - 7.28.20 - 8.25.20	
		Astorino	Colville Electric Co., LLC	\$ 1,344.60	Invoice #200464 - 9.10.20	Fuse Replacements	
		Astorino	DTE Energy	\$ 14,774.94	Invoice #20-439 - 9.1.20	Monthly Electric - 8.4.20 - 9.1.20	
1.5 Mile Sinkhole		Baker	Aloia & Associate, P.C.	\$ 2,013.75	Invoice #20434 - 8.1.20	MIDD vs. 3 contractors	
		Baker	Applied Science, Inc.	\$ 52,083.00	Invoice #7687 - 9.8.20	MIDD vs. OMID Contractors - Transient Analysis	
		Baker	KHVPP, PLC	\$ 58,017.83	Invoice #45228 - 9.1.20	Water Hammer Lawsuits - Mediation	
		Baker	NI Discovery, LLC	\$ 800.00	Invoice #NIDS168 - 9.22.20	Water Hammer Lawsuit	
		Downing	TBM Property Management LLC	\$ 750.00	Invoice #501 - 10.1.20	Pipe and Material Storage 4th Quarter	
		Astorino	Motor City Electric Technologies	\$ 1,909.02	Invoice #93250 - 9.30.20	As-Needed Electrical and Engineering Services	
NGI							
OMID		Downing	Oakland County	\$ 4,257,665.09	Invoice #SDS0007248-August	August Sewer Disposal	
		Downing	Oakland County	\$ 4,257,665.09	Invoice #SDS0007370-September	September Sewer Disposal	
		Astorino	Wonderware North	\$ 1,281.63	Invoice #86236 - 9.17.20	Wonderware Renewal	
SEMSD		Astorino	\$ 7,826.50	Invoice #394863 - 9.14.20	Wastewater Master Plan through 9.4.20	\$ 82,138.60	
Total				\$ 10,556,443.20			

Budget to Actual
MIDDD
As of Sept 30, 2020 = 25%

DESCRIPTION	2021 FINAL BUDGET	ENCUMBERED	ACTUAL	REMAINING BUDGET	PCT UTILIZED
REVENUE ACCOUNTS					
GLWA-OMID	47,262,993		11,817,563	35,445,430	25.0%
OMID O&M	3,828,987		957,247	2,871,740	25.0%
Settlement	100,000			100,000	0.0%
Reimbursements	225,000		81,749	143,251	36.3%
PY Revenue-Fund Balance	8,388,627			8,388,627	0.0%
Washington Twp Meter Project	47,475			47,475	0.0%
Reimb-Local Communities	13,548,089		3,387,022	10,161,067	25.0%
Interest	250,000		19,062	230,938	7.6%
Total Revenue Accounts	73,651,171		18,262,643	57,388,528	22.1%
EXPENSE ACCOUNTS					
GLWA-OMID	47,262,993		11,817,563	35,445,430	25.0%
OMID O&M	3,828,987		957,247	2,871,740	25.0%
Public Works Wastewater Disposal Division	1,942,127			1,942,127	0.0%
Office Operations/Insurance	309,925		25,512	284,413	8.2%
SCADA	268,889		17,134	251,755	6.4%
Engineering					
Meter Dye Testing 2 year contract new this year	100,000		25,300	74,700	25.3%
Data Review-Aquasight	250,000		30,995	219,005	12.4%
Replenish reserve from CPS refunding	618,680			618,680	0.0%
Design Odor and Corrosion	750,000		3,420	746,580	0.5%
Construction Project for Odor and Control	1,000,000			1,000,000	0.0%
SY-S-1, SY-S-2, WA-S-1 Construction Admin	250,000			250,000	0.0%
FKE Rehab analysis phase 2	84,000		14,000	70,000	16.7%
Seg 5 Construction	1,150,000		131,548	1,018,452	11.4%
Phase II Grouting	3,825,000		1,012,368	2,812,632	26.5%
GLWA Assistance	40,000		1,425	38,575	3.6%
As Needed FTCH	75,000			75,000	0.0%
As Needed FK Engineering	75,000			75,000	0.0%
As Needed Wade Trim	75,000		104	74,896	0.1%
As Needed Metco	125,000		1,495	123,505	1.2%
As Needed Applied Science	25,000			25,000	0.0%
As Needed Odor and Corrosion	75,000			75,000	0.0%
Seg 5 Engineering Design	374,557		70,946	303,611	18.9%
Contribution to Segment 5/Grouting	1,450,000		559,508	890,492	38.6%
15 Mile Inter Design East of Garfield (Segment 6)/Const Admin	1,500,000		146,061	1,353,939	9.7%
SY-S-1 & SY-S-2 Meter Design/Rehab	1,134,070			1,134,070	0.0%
Level Sensors/Pressure/H2S-Meters	250,000			250,000	0.0%
Wastewater Master Plan/Contract Capacity	400,000		20,960	379,040	5.2%
EGLE Testing Grant			77,177	(77,177)	0.0%
Washington Township meter	500,000			500,000	0.0%
Legal Services	250,000			250,000	0.0%
Clintondale PS O&M	839,500		63,587	575,913	9.9%
NGI O&M	230,000		8,474	221,526	3.7%
Meters O&M	253,470		68,626	184,844	27.1%
CS-3 O&M	226,000			226,000	0.0%
Biofilter O&M	22,500		4,577	17,923	20.3%
Contribution Life Cycle Reserve	171,700			171,700	0.0%
Interceptor O&M	1,900,000		7,715	1,892,285	0.4%
Stormwater Pump Stations	234,250		58,563	175,688	25.0%
Sewage Disposal Charges - Mt. Clemens	200,000		29,650	170,350	14.8%
Debt Service - Revenue Bonds	1,784,523		446,131	1,338,392	25.0%
Total Expense Accounts	73,651,171		15,600,085	58,051,086	21.2%

	O&M Balance 6/30/2020	O&M	Total 9/30/2020
Cash - Operating	24,226,346	662,558	24,888,904
Accounts Receivable			0
Assets			0
Liabilities			0
Revenues		16,262,643	16,262,643
Expenditures		15,600,085	15,600,085
Equity*	24,226,346		24,888,904

Detail of 2020 Equity*

Projected reserve at 6/30/2020	6,818,887
Projected Engineering Reserve	12,920,000
Projected Sinkhole Surplus	3,656,059
Life Cycle Reserve	831,400