AGENDA

Randolph Street Intercounty Drain Drainage Board
Wayne and Oakland Counties

December 18, 2023 – 10:00 a.m.
Northville City Hall
215 W. Main St.
Northville, MI, and Microsoft Teams

1. Call meeting to order

   Board Members:
   Michael Gregg, Chair, Michigan Department of Agriculture and Rural Development
   Elmeka Steele, Wayne County Drain Commissioner
   Jim Nash, Oakland County Water Resources Commissioner

2. Approval of the meeting agenda for December 18, 2023

3. Approval of Drainage District Board Meeting Minutes from March 3, 2023

4. Public Comment

5. Present Memorandum for the Grant Transfer for the Serenity Point and Riverbank Stabilization Project

6. Present Memorandum for Engineering Services for the Serenity Point and Riverbank Stabilization Project

7. Present trial balance

8. Other business

9. Adjourn

Agenda Item No. 3

Board Meeting Minutes from
March 3, 2023

Minutes of the Meeting
of the Intercounty Drainage Board for the
Randolph Street Drain

March 3, 2023

Minutes of the regular meeting of the Drainage Board of the Randolph Street Drain Drainage District held at the Northville Public Library, 212 W. Cady Street, Northville, Michigan on the 3rd day of March 2023 at 10:00 a.m. Eastern Standard Time and via Microsoft Teams.

Present:

Michael Gregg, Chairperson and Deputy for Gary McDowell, Director of the Michigan Department of Agriculture and Rural Development; Elmeka Steele, Member and Wayne County Drain Commissioner; and Jim Nash, Secretary and Oakland County Water Resources Commissioner.

Also Present: Representing the office of the Oakland County Water Resources Commissioner: Anne Vaara, Geoffrey Wilson, and Stephanie Lajdziak. Representing the City of Novi: Becca Rumple. Representing the City of Northville Public Works: Mike Domine, Chris Helsinki, and Nancy Darga. Others in attendance: Brady Harrington; MDARD

1. Call meeting to order.
Chairperson Gregg called the meeting to order at 10:12 a.m.

2. Agenda.
Motion by Nash, supported by Steele, to approve the March 3, 2023, agenda as presented.

Adopted: YEAS – 3
NAYS – 0

3. Minutes.
Motion by Steele, supported by Nash, to approve the minutes of the April 8, 2019, meeting.

Adopted: YEAS – 3
NAYS – 0

4. Public Comment.
None.

5. Serenity Point Improvement Project
Geoff Wilson provided an update on the riverbank stabilization project at Serenity Point. At this time, soil loss is a major concern due to the headwall that collapsed creating an island from the overflow of sediment. Nancy Darga, head of the Northville Rouge Restoration Task Force, advised that the grant funding that was sought in 2022 will help with the stabilization project. It was agreed that the Drainage District can become an asset to the community and the adjacent park. Mr. Wilson noted that once the scope of the potential project is finalized,

an agreement between the City of Northville and Oakland County Water Resources will be discussed along with further direction from the U.S. Environmental Protection Agency.

Motion by Nash, supported by Steele, to receive and file the memorandum regarding the Serenity Point Improvement Project as presented.

Adopted: YEAS – 3
NAYS – 0

6. Easement Acquisitions – Center Street to Lower Terminus

Geoff Wilson presented a memorandum to the Board outlining easement acquisitions along Center Street to the Lower Terminus of the Drain. He advised that there is no maintenance needed at this time. However, acquiring an easement from at least one of the three landowners is essential for future maintenance. Discussion ensued regarding the legality of acquiring an easement without homeowner collaboration.

Motion by Nash, supported by Steele, to receive and file the memorandum regarding Easement Acquisitions at Center Street to the Lower Terminus of the Drain as presented.

Adopted: YEAS – 3
NAYS – 0

7. Design Engineering Progress Update – Mill Pond Court and Weir

Geoff Wilson presented a memorandum detailing flooding issues at the Lexington Green and Pheasant Hills subdivisions. Mr. Wilson provided background on the flooding issues in these subdivisions and advised that plans from ASI to alleviate the flooding by building an additional culvert were developed but have since been halted. Through additional research, it was found that the detention basin at Lexington Green is the root cause of the flooding issues and fixing this basin would alleviate the current issues that the residents are having. Residents offered history and insight regarding this issue and advised that although efforts have been made to fix the flooding, they are still troubled by what a future storm event may do to their property. Discussion ensued as to the various avenues that can be taken to get the flooding under control. A site visit was discussed to evaluate the interconnections and easements.

Motion by Nash, supported by Steele, to pause efforts to build weir and replace Mill Pond Court culvert until further progress is made between the City of Novi and Lexington Green Homeowners Association.

Adopted: YEAS – 3
NAYS – 0

8. Maintenance Update

Geoff Wilson provided a brief update on the maintenance done within the Drainage District and highlighted points in the OHM report (attached). He noted that in 2021, 51 yards of material were removed from a bar screen and provided the Board with photos of the bar screen cleaning (attached).

Motion by Nash, supported by Steele, to receive and file the memorandum regarding the Maintenance Update as presented.

Adopted: YEAS – 3
NAYS – 0

9. Maintenance Assessment Recommendation and Special Assessment Roll
Mr. Wilson presented a Maintenance Assessment Recommendation and Special Assessment Roll in the amount of $86,992 (as attached).

Motion by Vaara, supported by Steele, to adopt the Maintenance Assessment Recommendation and Special Assessment Roll in the amount of $86,992 as presented.

Adopted: YEAS – 3
NAYS – 0

10. Trial Balance.
Mr. Wilson presented the Trial Balance report dated February 15, 2023, indicating a cash deficit balance of -$48,463.66.

Motion by Vaara, supported by Steele, to receive and file the updated Trial Balance as provided.

Adopted: YEAS – 3
NAYS – 0

11. Other Business.
Anne Vaara asked Ms. Darga about the earmarks that are due on March 16th. Discussion ensued as to the funding that may be available and the application process. WRC advised that they would assist Northville with completing any forms or providing letters of support to aid in securing any grant funding on behalf of the Drainage District.

Motion by Vaara, supported by Steele, to authorize the Secretary to submit an application on behalf of the Drainage District for Congressional Direct Spending.

Adopted: YEAS – 3
NAYS – 0

12. Adjourn.
Motion by Steele, supported by Vaara, to adjourn the March 3, 2023, meeting at 11:52 a.m.
Adopted: YEAS – 3
NAYS – 0

Jim Nash, Secretary

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

I hereby certify that the foregoing is a true and complete copy of the minutes of the Randolph Street Intercounty Drain Drainage Board, at a meeting held on the 3rd day of March 2023 and that the meeting was conducted and public notice was given in compliance with the Open Meetings Act being Act 267, Public Acts of Michigan, 1976, as may be amended from time to time and that the minutes were kept and will be or have been made available to the public as required by the Act.

IN WITNESS WHEREOF, I have hereunto affixed my official signature on this 3rd day of March 2023.

Jim Nash, Secretary
Randolph Street Intercounty Drain Drainage Board

Agenda Item No. 4

Public Comment

Agenda Item No. 5

Serenity Point and Riverbank Stabilization Project Grant Transfer

OAKLAND COUNTY
WATER RESOURCES COMMISSIONER

MEMORANDUM

TO: **Michael Gregg, Chairperson, Randolph Street Intercounty Drain Drainage Board**

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

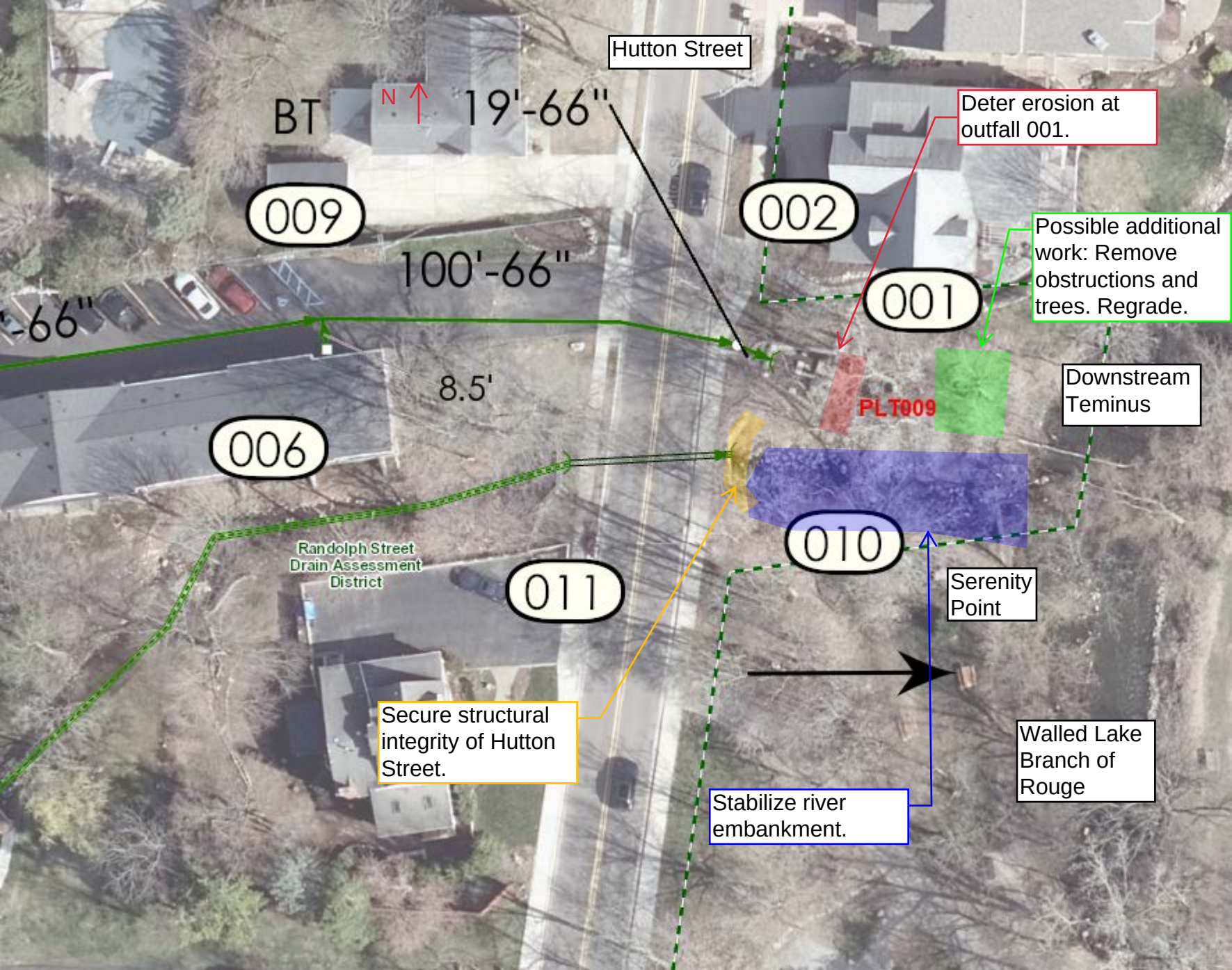
SUBJECT: **Randolph Street Drain Serenity Point and Riverbank Stabilization Project – Grant Transfer to the Randolph Street Drain Drainage District**

DATE: **December 18, 2023**

A 2022 application for a community grant, funded by the U.S. Environmental Protection Agency (EPA) for water infrastructure projects, was obligated to the City of Northville for FY 2023 (later modified to FY 2024). The grant was intended to fund a proposed construction project to address maintenance concerns impacting the lower terminus of the Randolph Street Drain and Ford Field Park adjacent to the drain. The $700,000 grant included an 80/20 match requirement. A resolution, adopted unanimously on December 4, 2023, by the Northville City Council authorized the transfer of the grant to the Randolph Street Intercounty Drain Drainage District.

Oakland County WRC staff is requesting the board accept the transfer of the grant, which would then be administered by WRC staff. If the board accepts the transfer, the EPA, recognizing that both parties are in agreement, will transfer the project to the drainage district. Local matching funds will be generated from existing intercounty drainage district assessments. Both Northville and the City of Novi are aware of their potential financial obligations at this preliminary stage.

Recommendation – Accept the EPA community grant transfer from the City of Northville to the Randolph Street Drain Drainage District to allow for uninterrupted continuation of the Serenity Point and Riverbank Stabilization Project.


Hutton Street
N
BT
19'-66"
009
002
100'-66"
001
-66"
8.5'
006
PLT009
Randolph Street
Drain Assessment
District
011
010
Deter erosion at outfall 001.
Possible additional work: Remove obstructions and trees. Regrade.
Downstream Teminus
Serenity Point
Secure structural integrity of Hutton Street.
Walled Lake Branch of Rouge
Stabilize river embankment.

Randolph Street Drain

Downstream terminus, looking upstream toward Hutton Street.

Randolph Street Drain

Enclosed portion outlet (001) downstream of Hutton Street.

Randolph Street Drain

Hutton Street culvert over low flow channel.

Randolph Street Drain

Hutton Street culvert over low flow channel.

Randolph Street Drain

Outlet of enclosed portion (001). Looking downstream with Ford Field in the background.

Rep Stevens Community Project Funding form for Interior STAG Clean Water

Please note that any project receiving federal funding will be subject to all relevant federal requirements, including competition, contracting, Davis Bacon, Buy America, the environmental review process, etc.

Title

Randolph Drain Serenity Point and Riverbank Stabilization

Project Description

The Randolph Drain, Serenity Point and Riverbank Stabilization Project seeks to repair a pair of deteriorated drainage structures that serve the cities of Northville and Novi. The Randolph Drain emerges from beneath Hutton Street, forming a confluence with the Walled Lake Branch of the Rouge River flowing through historic Ford Field in Northville. The drains are severely undermined and have contributed to eroding the banks of the river and endangering the stability of Hutton Street. In addition to stabilizing the drainage structures and river embankments, the Ford Field Master Plan calls for the development of a scenic viewing area in this location, overlooking the spillway of the Upper Mill Pond built by Henry Ford for the Ford Valve Plant, one of his first Village Industry Plants in the 1920's. The stabilization of the drains and river embankments will address a safety hazard and an eyesore and will create a serene viewing point, benefiting the many visitors who are attracted to this popular, regional destination. The project will be done in partnership with the Oakland County Water Resource Commission who repairs and maintains the drain.

Estimated Start Date

1/1/2023

Estimated End Date

1/1/2024

Do you have a Letter of Community Support that you have shared with Rep. Stevens Staff? If no, please share with Michael.tash@mail.house.gov or reach out to him with questions.

Yes

Amount of $$ Requested for FY23 Appropriations (amount of money requested for this project this year.)

$560,000

Total Project Cost

$700,000

FY23 President's Budget Request Amount (If money was requested for this project in the President's budget request to Congress. The answer to this question is likely "none.")

None

FY22 Enacted Amount* (If you received money through congressional appropriations community project funding for this project last year. Write none if you received none).

None

Can the project obligate all appropriated funds within 12 months after enactment?

Yes

Is the funding requested by a governmental or non-profit organization? (Is your organization a government or non-profit org?)

Yes

Recipient Point of Contact (This cannot be a lobbyist; this must be an individual employed by the grantee who will serve as a point of contact for the funding agency)

Patrick Sullivan, City Manager

Recipient Phone Number

(248) 449-9905

Recipient Email Address

psullivan@ci.northville.mi.us

In which congressional district(s) is the recipient organization located? (This can be found at https://www.house.gov/, use find your representative tool in upper right corner of page):

Located in 11th District

Recipient Organization Legal Name

The City of Northville Michigan

Recipient Organization Address with city state and zip

215 Main St. Northville MI 48167

Project Address is the Same as Recipient Address

Yes

if no, what is the legal name of the project?

N/A

if no, what is full project address with city state and zip

N/A

If Project is not located in Michigan's 11th Congressional District please identify congressional district (This can be found at https://www.house.gov/, use find your representative tool in upper right corner of page):

Located in 11th District

Project Information URL (Please provide a URL link to the webpage containing project information. This must be an external URL such as http://example.com.)

http//www.ci.northville.mi.us Upgrades to Randolph Drain in Ford Field were identified in both the Ford Field and Downtown Development Authority's (DD) Master Plans, the Northville River Restoration Framework Plan, and the Northville Parks and Recreation Master Plan.

Request Explanation* (Explanation of the request must include purpose and why it is a valuable use of taxpayer funds.)

The repair of the Randolph Drain at Serenity Point will deter ongoing erosion of the outfall, stabilize the river embankment, and secure the structural security of Hutton Street that abuts the

head wall. A positive outcome from this project is a reduction of sediments coming from the outfall discharging into the Rouge River improving the water quality of an “Area of Concern’” flagged by the USEPA impacting the Great Lakes. The riverbank stabilization portion of the project will introduce new vegetation and natural rip rap along the riparian edges improving aquatic habitat, nesting areas and provide a more natural setting in the park area that the drain has greatly degraded. The project will also provide a scenic viewing point overlooking the historic Ford Mill Pond spillway.

Upgrades to Ford Field were identified in both the Ford Field and Downtown Development Authority’s (DD) Master Plans, the Northville River Restoration Framework Plan, and the Northville Parks and Recreation Master Plan. Repair of the drain is listed as a priority on the City’s Strategic Plan due to the severity of its scouring. Ford Field, where the outfall is located, is a tour site in the Motor City National Heritage Area. Repairing the drain not only improves the environmental health of the Rouge River, it allows for continued event programing drawing numerous visitors and generating economic benefits for local businesses.

Is the project on your state’s most recently finalized Clean Water/Drinking Water State Revolving Fund Intended Use Plan?*

No

Has the project received federal funds previously?*

No

If yes, please describe.

N/A

Does the project have (or expects to have within 12 months) its 20 percent matching fund requirement?*

Yes

Submitted 4/26/2022 N. Darga

Agenda Item No. 6

Engineering Services for the Serenity Point and Riverbank Stabilization Project

OAKLAND COUNTY
WATER RESOURCES COMMISSIONER

MEMORANDUM

TO: **Michael Gregg, Chairperson, Randolph Street Intercounty Drain Drainage Board**

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

SUBJECT: **Randolph Street Drain Serenity Point and Riverbank Stabilization Project – Engineering Services**

DATE: **December 18, 2023**

The proposed Randolph Street Drain Serenity Point and Riverbank Stabilization Project will require consultant engineering services for: design; surveying; construction inspection; and construction contract administration. Engineering services are an eligible expense for the grant. Oakland County WRC staff received proposals from five consultant engineering firms. Proposals were scored based on: project understanding and schedule; assigned personnel; related project experience; and estimate of fees. Scoring results are ranked as follows:

1.) Hubbell, Roth, and Clark, Inc. (HRC)
2.) The Spicer Group
3.) OHM Advisors
4.) Applied Science, Inc.
5.) Fishbeck

Recommendation – Authorize HRC to proceed with engineering services as outlined in its December 13, 2023 proposal, through its existing as-needed services contract with Oakland County, for an amount not to exceed $105,000.

Proposal for

Engineering Services for Randolph Drain Serenity Point and Riverbank Stabilization Project

Due: December 13, 2023
By 2:00 p.m.

SUBMITTED TO:
Oakland County Water
Resources Commissioner
Attention: Jack Puscas
One Public Works Drive,
Building 95 West
Waterford, Michigan 48328-1907

PREPARED BY:

Hubbell, Roth & Clark, Inc.
James Burton, PE
(248) 535-3414
jburton@hrcengr.com

555 Hulet Drive
Bloomfield Hills, MI 48302

HRC

ENGINEERING. ENVIRONMENT. EXCELLENCE.

HUBBELL, ROTH & CLARK, INC
CONSULTING ENGINEERS SINCE 1915

555 Hulet Drive
Bloomfield Hills, MI 48302

248-454-6300

www.hrcengr.com

December 13, 2023

Oakland County Water Resources Commissioner
Attention: Jack Puscas
One Public Works Drive, Building 95 West
Waterford, Michigan 48328-1907

Re: Engineering Services for Randolph Drain Serenity Point and Riverbank Stabilization Project HRC Job No. 20230950

Dear Mr. Puscas and Review Committee Members:

Hubbell, Roth & Clark, Inc. (HRC) is pleased to submit this proposal to the Oakland County Water Resources Commissioner (WRC) for engineering consulting services for the Randolph Drain Serenity Point and Riverbank Stabilization Project. HRC is very familiar with this Drain having completed several studies and projects over the last few decades. While our past experience helps with some of the historical background, it is really our current project team that makes us the best choice to complete this project. Our small but extremely qualified team already visited this site and has some ideas on how to cost effectively address the basin, protect the road, and make this area seamlessly fit into the surrounding park area.

Partnering with the right engineering firm significantly affects the outcome of any project. That's why so many municipal, industrial, and private clients choose HRC. Our superior qualifications, diverse portfolio, and century of expertise guarantee success.

HRC's culture gives us a competitive edge over other engineering firms. We do our research, hone skills from previous projects, and consider open communication a vital part of the process. From kickoff to completion, HRC's fully accountable project managers deliver on promises and exceed expectations.

Our highest priority is to thoroughly and efficiently work through WRC's standard engineering tasks, so grant funding can be optimized for actual restoration not paperwork. We are excited to take on this challenge and deliver an exceptional project for WRC and the two communities. Your success is our success – we're in this together. We look forward to discussing this project further with you.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

James F. Burton, PE
Vice President
(248) 535-6363
jburton@hrcengr.com

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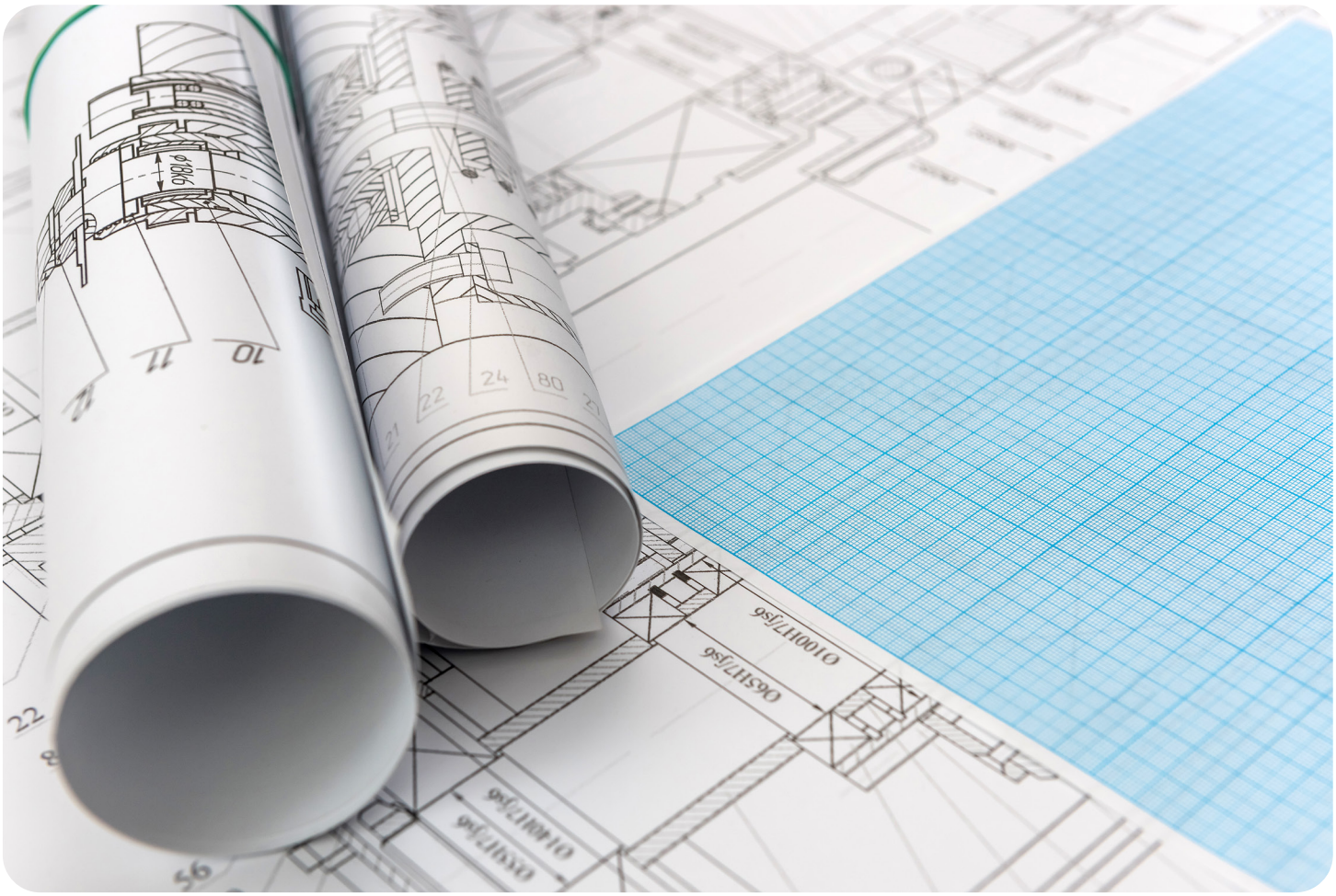
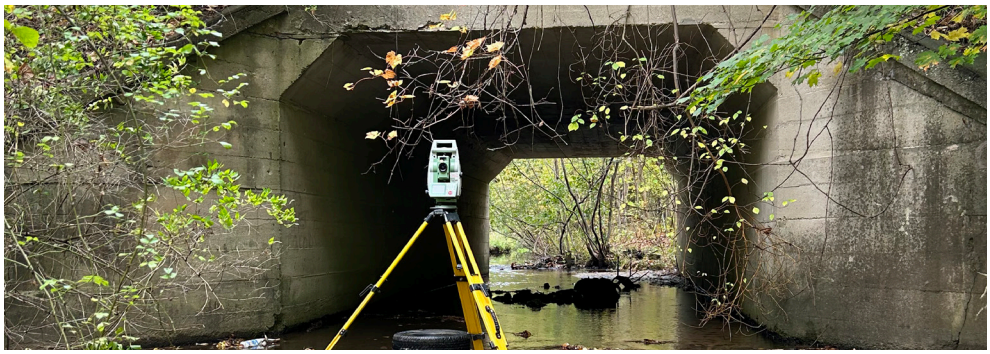


I. Understanding of the Project, Scope of Consultant's Services and Duration Schedule



For over a century, Hubbell, Roth & Clark, Inc. (HRC) has been trusted by clients who hire us and then become repeat customers, establishing a valuable relationship with our firm. Our company environment is often cited as the reason we have a competitive edge over other engineering firms. The key to our success is professionalism, quality services, and a commitment to exceeding our clients' expectations.

Teamwork is deeply ingrained in our culture. A commitment to excellence, integrity, and dedication cannot always be measured, but you will see these values in action when you work with HRC. Doing whatever it takes is not just a phrase, it is a big part of our corporate philosophy.

Choosing the right engineering firm significantly affects the outcome of your project. Your success is our success – we are in this together.

HRC is organized as an S-Corporation headquartered and licensed in the State of Michigan. Our license to operate in the State of Michigan is located under Appendix A. There are nine principals of the firm, all licensed professional engineers in the State of Michigan. Additionally, HRC has 20 associates. The table below lists each officer's corporate title, primary activity, and experience.

CORPORATE OFFICERS

Daniel W. Mitchell, PE President	Municipal
Nancy M.D. Faught, PE Executive Vice President	Municipal/Transportation
Michael C. MacDonald, PE Vice President/Secretary	Municipal
Jesse B. VanDeCreek, PE Vice President	Municipal
Roland N. Alix, PE Vice President	Municipal/Industrial
James F. Burton, PE **Vice President | Principal in Charge**	Municipal/Environmental
Charles E. Hart, PE Vice President	Municipal/Transportation
Todd J. Sneathen, PE Vice President	Municipal
Thomas G. Maxwell, PE Vice President	Municipal/Process

Site and Civil Engineering
Environmental Engineering
Landscape Architecture
Wetlands and Watershed Management
Traffic Engineering
Architectural Services
Water Transmission and Treatment
Structural Engineering
Wastewater Treatment Plants
Electrical Engineering
Combined Sewer Overflow Retention and Treatment
Process Engineering
Industrial Facilities Design
Roads and Bridge Design
Construction Services and Material Testing
Easement and Right of Way Services
Surveying
Instrumentation and Control
GIS
Asset Management

ABOUT

Many facets go into the successful completion of a project, from technical qualifications of team members to the projected schedule and cost estimates. But HRC offers something more, and that's what makes us stand out from the crowd. As you read our proposal, check our references, and review our resumes, please consider something equally important – our reputation.

Where HRC Excels.

Extensive work portfolio with an array of diverse engineering projects.

Proven track record of success with the specific type of project being undertaken.

Multi-disciplinary team with a deep understanding of the needed technical requirements, broad capabilities, and a vast array of easily accessible resources.

History of meeting and overcoming challenges using innovative problem-solving tactics.

Project managers who champion a job from start to finish, ensuring the project stays on track and proceeds smoothly to completion.

Clear and consistent communication that keeps clients well informed.

Transparency with any challenges that arise or costs that change during the project.

Accountability from every person who works on the project.

Competence that creates high comfort levels and decreases stress for clients.

ACHIEVEMENTS

HRC is proud of its many engineering achievements and has received numerous awards from the American Council of Engineering Companies (ACEC), American Society of Civil Engineers (ASCE), American Public Works Association (APWA), and other professional organizations for innovative and cost-effective projects. A notable example is the selection by ASCE/Michigan of the HRC designed upgrade of the Detroit Wastewater Treatment Plant as one of Michigan's Top Ten Civil Engineering Projects of the 20th Century.

HRC was named a 2023 Top Workplace USA for the third year of the program. We also were recognized by the Detroit Free Press as a Top Workplace for a fifth consecutive year. Other accolades include being a Top 50 Trenchless Technology Design Firm and an ENR Top 500 Design Firm. HRC also received the honor of being named one of the Cool Places to Work in Michigan by Crain's Detroit Business magazine. Additional awards can be found on our website.

1. Macomb County Public Works Sterling Relief Drain Daylighting and Green Infrastructure Retrofit project earned the APWA/Michigan 2021 Project of the Year in the category of Quality of Life ($1M–$5M), the Michigan Association of County Drain Commissioners' 2022 Innovation and Engineering Award, the ACEC/Michigan Chapter 2022 Engineering Honorable Conceptor Award, and ACEC 2022 National Recognition. 2. City of Troy Section 25 Relief Drain project earned the ACEC Engineering 2023 Merit Award and the APWA/Detroit Metro Branch 2022 Project of the Year in the category of Environment ($5M–$25M).

3. Paint Creek Dam Removal and Stream Restoration project was awarded ACEC/Michigan 2013 Merit Award, the 2013 ASCE Michigan/Southeastern Branch Quality of Life Award, and the 2013 ASCE/Michigan Quality of Life Award. 4. City of Ann Arbor Geddes Avenue and Sanitary Improvement project was awarded the ACEC/Michigan 2019 Engineering and Surveying Excellence Merit Award.

5. Road Commission of Kalamazoo East Michigan Avenue Emergency Repair earned both the APWA/Michigan Chapter 2021 Project of the Year in the category of Emergency Response (Less than $1M) and the ASCE/Michigan Quality of Life 2021 Award. 6. City of Rochester Hills Innovation Hills project earned the APWA/Michigan Chapter 2021 Project of the Year in the category of Quality of Life ($5M–$25M), the 2021 ACEC/Michigan Chapter Engineering and Surveying Excellence Merit Award. The ASCE/Michigan 2021 Quality of Life Merit Award and the MCA Award in the Innovation category for 2020.

UNDERSTANDING OF THE PROJECT

WRC, on behalf of the Randolf Street Intercounty Drain Drainage District, seeks proposals from professional engineering firms for the design of the Randolph Drain Serenity Point and Riverbank Stabilization Project (Project). For more than 30 years, Hubbell, Roth, and Clark, Inc. (HRC) has provided services to this Drainage District on similar projects and for more than 100 years to Oakland County and local communities.

The Project will repair two deteriorated drainage structures that serve the cities of Northville and Novi. The Randolph Drain emerges from beneath Hutton Street, forming a confluence with the Walled Lake Branch of the Rouge River flowing through historic Ford Field in Northville. The drain outlets are severely undermined and have contributed to eroding the banks of the river and endangering the stability of Hutton Street.

The HRC Team reviewed available documents about the two drainage structures (Outfall #010 and #001) east of Hutton Street and conducted a preliminary site visit to identify the extent of deterioration and the specific areas requiring repair at the two drainage structures and downstream reach.

HRC also reviewed the Ford Field Park Master Plan as part of this response. Within this plan, which was issued in November 2023, it speaks to the City's goals on the Serenity Point area and Randolph Drain. Goals for this area include improved drainage in lawn areas and parking lots, as well as repair and strengthening of the river embankment and improvements and beautification to the Randolph Drain and spillway. Specifically, stabilization of the riverbank utilizing native plant material and green infrastructure as well as replacement and repair of the pipe and end section and headwalls. This will be incorporated into our structural design.

Exhibit 1: Outfall #010

The Hutton Street culvert, as shown in **Exhibit 1**, is the main flow path that consists of a six-foot span–seven foot rise concrete arch pipe. The 2022 Northville Bridge and Culvert Inspection Report identified the culvert is in overall fair condition with some scaling throughout. The east and west headwalls and wingwalls are in poor condition and are recommended to be repaired. Although replacing/rehabilitating the culvert itself wasn't recommended in the 2022 inspection, the HRC Team will perform additional condition assessments to ensure the culvert itself has sufficient structural integrity and recommend rehabilitation/replacement if necessary or economically viable.

Exhibit 2: Outfall #001

Outfall #001, as shown in **Exhibit 2**, is the secondary flow path that conveys the flow from east of N. Center Street to west of Hutton Street at the Rouge River by a 6.9-foot span – 4.4-foot rise concrete elliptical pipe which turns into 66-inch round concrete pipe at the downstream end. According to the 2022 Northville Bridge and Culvert Inspection Report, the pipe is in good condition, with minor spalling in isolated locations; no work was recommended. Similar to Outfall #010, the HRC Team will perform additional condition assessments to ensure the concrete outlet structure has enough integrity and recommend rehabilitation/replacement if necessary.

The deteriorating condition of these outlet structures poses a significant risk to the integrity of the road and, consequently, to the overall functionality of the drainage system. Timely repair is essential to prevent further damage to Hutton Street and ensure the long-term sustainability of the local infrastructure.

The undermined drain structures and downstream eroded streambanks are most likely caused by high shear stress conditions due to steep longitudinal slopes and significant elevation drops from the culverts to where they outlet to the Walled Lake Branch of the Rouge River. The primary objective is to implement measures to control and reduce shear stress levels downstream of culverts and protect the structural integrity of the drainage structures and the natural environment.

The HRC Team will perform sufficient hydraulic analysis to understand the current shear stress conditions and evaluate the downstream channel morphology to identify vulnerable areas prone to erosion due to shear stress. The Team will evaluate the feasible techniques to mitigate these issues while being respectful of the park area and the City's Master Plan.

Based on our field investigation, some of these possible mitigation techniques are:

- Armor the downstream stream with the stone toe structures. This option repairs only the eroded streambank and may not remedy the head cutting concerns.
- Implement vegetative stabilization measures such as planting native vegetation along the banks. Vegetation helps to absorb excess water, reduces shear stress, and provides water quality but may not be sufficient protection.
- Scour pool and cross vane at the outlet(s): These can modify the velocity distribution and minimize concentrated flows directly downstream of the culvert. Cross-vane structures can act as grade control and prevent head-cutting and undermining of the drainage structures.
- Step-pool structures, a type of natural channel design technique used in stream restoration, consist of a series of cascading pools or steps formed by strategically placing rocks in a stream. The stepped nature of the pool structure helps dissipate the energy of flowing water. As water cascades over each step, its velocity is reduced, and energy is dispersed. This process minimizes the impact force at the culvert outlet, thereby reducing shear stress. Similar to cross-vane structures, step-pool structures can prevent head-cutting and undermining of the drainage structures.
- Other measures as determined once we gather data, discuss the project with WRC and the communities, and confirm the solution will work.

HRC firm has a proven track record of successfully implementing techniques similar to the proposed step-pool and stone-toe structure for stream restoration. Our experience and achievements in the field of stream restoration and infrastructure repair underscore our ability to deliver feasible solutions. **Exhibits 3 through 5** are some key highlights of our past successes.

Exhibit 3: Benz Creek Restoration, Huron Hills Golf Course. Step-pool structure downstream of Huron River Drive Culvert.

Exhibit 4: Longwood Basin Retrofit Project, City of Farmington Hills. Step-pool structure in the steep slope upstream of the basin.

Exhibit 5: Oakland University, City of Rochester Hills.

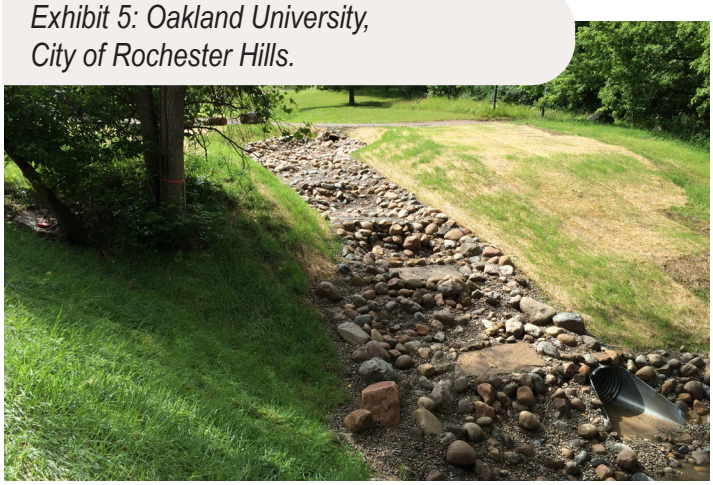


Exhibit 6: Outfall #010 and Outfall #001

At Hutton Street, the secondary flow path (Outfall #001) is at a higher elevation than the primary culvert (Outfall #010) as shown in **Exhibit 6**. One solution to repair the eroded streambank and undermined outlet structure would be to keep these two flow paths separate by installing a berm or grade break between their paths. Each path would then have separate step-pool structures at two different levels or tie the secondary flow path to the primary flow path further downstream and create one main flow path at the downstream channel. We understand interlocking the existing concrete structures with a riprap apron in the proposed step-pool structure might be challenging. To provide integrity between existing concrete outlet structures at Outfall #001 with the proposed step-pool structure and provide a smooth transition, additional concrete may be needed downstream of the concrete outlet structure.

The existing culvert at Hutton Street (Outfall #010) is short, and there is not sufficient distance between the downstream end of the culvert (headwall) and the road pavement, which might endanger the integrity of Hutton Street. One alternative solution to protect the road would be to build a structure at the end of the existing culvert then extend the existing culvert. This approach would help to keep the existing culvert and provide flexibility to replace it in the future (if economically viable).

Overall, a combination of the above-mentioned techniques may be employed to achieve a feasible solution to protect the drainage structure and the stability of Hutton Street. These are all primary thought processes. Selecting specific conditions or techniques would require more study and investigation.

In our commitment to sustainable and cost-effective solutions, we would propose the strategic reuse of existing on-site materials, specifically on-site weathered stone, in the construction of any step-pool structure and repair of deteriorated outlet structures. Weathered stone can be a good choice for the aesthetic purposes of this project. We would also propose using any trees that need to be removed for upper bank stabilization. We understand that besides improving the environmental health of the Rouge River, aesthetics is another driving factor due to the proximity of the project site to Ford Field, which is a tour site in the Motor City National Heritage Area.

This approach aligns with our goal to minimize environmental impact and optimize available resources.

Our design of the Randolph Drain at Serenity Point will:

1. Deter ongoing erosion of the outfall.
2. Stabilize the river embankment.
3. Secure the structural security of Hutton Street that abuts the head wall.
4. Reduce sediments coming from the outfall discharging into the Rouge River improving the water quality of an "Area of Concern" flagged by the USEPA impacting the Great Lakes.
5. Introduce new vegetation and natural riprap along the riparian edges, improving aquatic habitat and nesting areas and providing a more natural setting in the park area where the drain has greatly degraded.
6. Improve the scenic viewing point overlooking the historic Ford Mill Pond spillway built by Henry Ford for the Ford Valve Plant, one of his first Village Industry Plants in the 1920s.
7. Address a safety hazard and an eyesore and create a serene viewing point, benefiting the many visitors who are attracted to this popular regional destination.

A U.S. Environmental Protection Agency (EPA) Community Grant has been obtained to fund the scope of services to be provided. Our work will be completed in full compliance with the requirements of the Community Project Funding (CPF).

Services include preliminary engineering (study), design, permit, bidding, and construction phases. HRC agrees to the preliminary schedule below as to when the summary of objectives is expected to be completed.

PRELIMINARY SCHEDULE

Assuming authorization to start by January 1, 2024.

Mid-January – Concept Plan and Estimate

Late-February – 30% Plus Estimate

April 1 – 50% (Permit Set) Plus Estimate

May 1 – 90% Plus Estimate

June 3 – Advertisement

After July 4 – Construction Starts

November 2024 – Construction Complete

December 2024 – Final Completion and Contract Closeout

TASKS

Although not stated in the RFP, HRC understands that WRC, the Drainage District, and the communities would like to optimize the grant funding to perform as much on the ground improvements, including aesthetic enhancements ,as necessary. Therefore, engineering services need to be efficient and cost effective to leave as much funding as possible for any value-added items.

HRC has repeated WRC standard services descriptions herein **with comments in bold** on areas where we can be cost-effective and to clarify scope items.

DC-391 PRE PRELIMINARY ENGINEERING PHASE SERVICES

1.0 In performing Preliminary Engineering (Study) Phase Services the Engineer shall:

1.1. Complete the Design Phase work ~~**within 180 days of the date of this ESA.**~~ **by January 2024.**

1.2. Establish a location or route for the Project, as applicable. **Not Applicable.**

1.3. Complete a Basis of Design Report, with technical memoranda as required, developing and identifying all necessary disciplines and design criteria necessary for the Project, such as hydraulic, hydrogeological, geotechnical, structural, civil, environmental, disciplines or designs. The engineer shall lead and conduct **one meeting** with the Owner and other entities as necessary to present the Basis of Design Report.

1.4. Provide calculations and complete hydraulic profiles and any other hydraulic work required to complete the Project. **Included with above, but since projects completed under the Drain Code are Part 31 Floodplain exempt, we have not included any FEMA Floodplain Modeling at this time.**

1.5. Set up, coordinate, and maintain for the duration of the Project a document exchange website using a system acceptable to the Owner for electronic file transfer between the Engineer, the Owner, Contractor, the municipalities in which Project is located, and other parties involved in the Project that require access to Project documents. **HRC will use whatever file share system WRC desires.**

1.6. Gather and review all scope of work and background documents including those (if any) provided by the Owner during the Request for Proposal Phase of the project.

1.7. Perform all necessary field investigations and surveying to complete the Basis of Design Report and comply with grant requirements.

1.8. Complete a study and investigation and provide preliminary recommendations regarding easement and spoil requirements for the Project. **We have assumed that easements exist over the area of work and will be provided by WRC. Should additional easements be needed, these will be done by WRC staff or by HRC at an additional cost.**

1.9. Investigate, identify, and describe existing and proposed utilities in the Project vicinity for possible conflict with, and use for, the Project. Provide documentation and proof to the Owner that all utility owners potentially impacted by the Project have been contacted. Engineer shall follow-up as needed with non-responsive utility owners and shall obtain the required information. Identify all regulations regarding existing utilities, such as clearance, tolerance, and public notice requirements that may impact the constructability or schedule for the Project.

1.10. Complete all other design standard and code review work for the Project and determine permits necessary to construct it. The Basis of Design Report shall identify and discuss the standards, codes, and regulatory requirements applicable to the Project and shall identify and discuss permit requirements that may impact constructability or scheduling of the Project. **Included with above.**

1.11. Provide lists of proposed equipment, preliminary design drawings, including schematics as required for civil, architectural, structural, process, mechanical, plumbing, instrumentation, and control, electrical and any other discipline necessary to complete the Basis of Design.

1.12. Develop and present for the Owner's Chief Engineer's approval a Baseline Conditions Assessment. The Baseline Conditions Assessment shall identify and describe the topographical, geological, hydrological, environmental conditions affecting each element of the project and the design options available as result. The Baseline Conditions Assessment shall also identify the assumptions on which it is predicated. In the event the Engineer intends to recommend a portion of the design be delegated to the Contractor, the Engineer will describe proposed performance parameters necessitated by the baseline conditions and an assessment of the design options the Contractor is likely to pursue. **We have budgeted $5,000 for geotechnical work as needed after concepts are prepared**.

1.13. Prepare preliminary and final Basis of Design reports with technical memoranda as required. The Baseline Conditions Assessment shall be included in the final Basis of Design. **Included with above.**

1.14. Provide recommendations and analysis for equipment and systems required for the Project. **Not Applicable.**

1.15. Complete all investigations, studies, and other work regarding floodplains and wetlands necessary for the Project and to meet grant requirements. **Not Applicable except to document for the files.**

1.16. Identify and describe potential impacts the Project may have on the environment, community, public and private infrastructure and utilities, and the Owner's other facilities and property. The Engineer shall summarize these impacts and their magnitude for each of the design or configuration options being considered for the Project in the Basis of Design Report. This shall include impacts of designs that may be implemented by the Contractor when elements of design have been delegated to it. **Included with above.**

1.17. The Engineer shall prepare a Risk Register. The Engineer shall lead and conduct two meetings with parties listed in it for discussion and feedback on the options being considered for the Project. The Risk Register must clearly describe the risks are to be managed during the Project. The Risk Register does not necessarily need to list individual homeowners or residents but must be specific enough to enable the Owner to identify sets of stakeholders (e.g., "Residents of Foxfire Subdivision"). **Not Applicable.**

1.18. Assist the Owner in presenting the Project as necessary **~~(up to five meetings)~~ one meeting** for approval by governmental agencies with jurisdiction over it, the municipalities the Project is located in, affected municipalities, and any others listed on the Risk Register. Engineer shall lead these meetings in presenting the Project and provide technical support for discussion and feedback on the options being considered for the project. The Engineer shall also prepare agenda and meeting minutes for these meetings.

1.19. Prepare an estimated Construction Cost, Total Project Cost, and CPM Schedule in collaboration with the Owner for the Owner's use in budget preparation and refinement of the Project. The Engineer shall prepare options for the Project to ensure the Total Project Cost stays within the Owner's budget while still achieving the Owner's goals. The estimated Construction Cost, Total Project Cost, and CPM Schedule for each option being considered for the Project shall be separately identified in this analysis.

1.20. Coordinate with local property owners, communities, and agencies with jurisdiction over the Project to obtain the necessary permits to construct the Project as defined in the Basis of Design Report. **Please refer to design phase comments.**

1.21. Provide ~~**three paper copies in binder format**~~ an electronic PDF of the draft and final Basis of Design Reports compiling the above technical memoranda, including schematic layouts, sketches, design criteria, preliminary facility/equipment sizing and the estimate of probable Construction Cost, Total Project Cost, and CMP Schedule prior to proceeding with the Design Phase of the project. **Included with above.**

1.22. Provide a virtual platform for all meetings, such as Zoom, Teams, GoToMeeting, or other similar virtual meeting platform approved by the Owner. The Owner shall be apprised of all such meetings and provided with all required information to facilitate the Owner's attendance. **Included with above.**

DPS-391 DESIGN PHASE SERVICES

2.0 In performing Design Phase Services the Engineer shall:

2.1. Complete the Design Phase work ~~**within 180 days of the completion**~~ of the Study Phase **by May 2024**.

2.2. Support the Owner as needed in procuring financing for the Project and in developing documents necessary for financing agreements between the Owner and municipal entities affected by the Project. **Not Applicable.**

2.3. Revise and update the Basis of Design report to reflect any changes that occur during the Design Phase.

2.4. Review information provided by the Owner, such as record drawings from previous projects, previous hydraulic, hydrogeological, geotechnical, and structural models, or reports, used in the design of the Project as necessary for the Engineer to comply with terms of this Engineering Services Agreement and the Standard of Care. **Included in Preliminary Design Phase.**

2.5. Advise the Owner in accordance with Owner's Responsibilities of this Engineering Services Agreement if the Engineer believes additional tests or inspections are necessary to complete the design in accordance with the Standard of Care and the needs of the Project. **Included with Basis of Design.**

2.6. Perform any and all additional investigations, calculations, and modeling not completed during the Preliminary Engineering (Study) Phase necessary to complete the Bidding Documents and comply with grant requirements. **Only as included herein.**

2.7. When applicable to the Project, develop a new hydraulic model to predict and analyze the hydraulic behavior of the new facility (water system, sewer system, storm sewer system, drain) and to determine how it will operate and function in relation to the existing system. **HRC assumes a spreadsheet model or small hydraulic model is the only thing required.**

2.8. Update the Risk Register to reflect any changes that occur during the Design Phase.

2.9. Identify potential haul routes to be used for construction and show them on the Drawings. **Included with above.**

2.10. Finalize recommendations to the Owner concerning easement and right-of-way needs. Show limits of all easements and easement conditions (provided by Owner) on the Drawings and/or Specifications, including current tax identification (Sidwell) numbers for acreage parcels and lots, lot numbers and street addresses. Surface topography must include all features of natural or man-made origin, subsurface structures, and utilities, except house or building connections. The extent of tree and shrub locations within proposed easements shall be governed by the following conditions: **Included in Preliminary Design.**

2.10.1. In landscaped areas, all trees and shrubs shall be identified, located, and physically numbered with a numbered metal tag. **Will be identified on the plans but not physically tagged to trees.**

2.10.2. In undeveloped field areas, where tree cover is sparse, trees shall be identified, located, and physically numbered with a numbered metal tag. **Not applicable.**

2.10.3. In forested undeveloped areas, the tree area limits shall be outlined, typical tree species and average size shall be identified, and tree coverage density shall be estimated. Further, any tree that is 4 inches in diameter or larger shall be identified, located, and physically numbered with a numbered metal tag. **Not applicable**.

2.11. Provide a completed design for the proposed work for each system recommended in the Basis of Design Report. Complete design work in the engineering disciplines required to construct the Project including but not limited to geotechnical, hydrogeological, civil/site, traffic control and construction route, and soil erosion and sedimentation control (SESC) plan. **It is anticipated that a full road closure is not needed, so full detour plans are not included.**

2.12. Provide field surveying services and topographic work to design the project including sufficient surveying control and benchmarks and coordinates to enable the project to be constructed and staked by the contractor during the Construction Phase. All elevations in the documents shall be based on NAVD 88. **Included in Preliminary Design.**

2.13. Provide topographic detail with spot elevations and elevation contours as appropriate for the Project (two-foot vertical intervals). **Included in Preliminary Design.**

2.14. Investigate the means of sanitary sewer and storm drain bypass (including existing open drainage courses, if necessary) to facilitate construction of the Project. If sanitary sewer or storm drain bypass design is not being delegated to the Contractor, prepare the design for the means of bypass. **Delegated to Contractor as means and methods, except to note all relevant information.**

2.15. Investigate means of bypassing any and all other existing systems which may require bypassing for construction of the Project including, but not limited to, mechanical, electrical, instrumentation and control, potable, and non-potable water systems. If bypass design is not being delegated to the Contractor, prepare the design for the means of bypass. **Not applicable.**

2.16. Develop a detailed work description and construction sequence for the project to be included with the Drawings and Specifications, as required by the needs of the Project. Engineer shall conduct ~~**two**~~ **one** separate meetings with WRC Staff to review the proposed work description and construction sequence. **Included in 2.17.**

2.17. Provide three sets of paper sets of the Drawings and Specifications and electronic PDF at the 30 percent, 50 percent and 90 percent design stages for review by Owner in 24" x 36" format and in half size (12" x 24") format.

2.18. Prepare an estimated Construction Cost, Total Project Cost, and schematic CMP Schedule at the 50 percent, 90 percent, and final design stages in collaboration with the Owner for the Owner's use in budget preparation and refinement of the Project. The Engineer will develop the Construction Cost using unit prices for each contract line item or activity based upon the item or activities estimated cost of labor, materials, equipment plus a reasonable proportionate share of the Contractor's anticipated profit, overhead, and other indirect costs.

2.19. Facilitate design meetings with the Owner to review the design at key stages of development and prepare agendas and meeting notes/minutes. The Engineer shall plan to hold a minimum of five design meetings: at the start (kickoff), 30 percent, 50 percent, 90 percent and final design stages.

2.20. Provide a virtual platform for meetings, such as Zoom, MS Teams, GoToMeeting, or similar virtual meeting platform approved by the Owner. The Owner shall be apprised of all such meetings and provided with all required information to facilitate the Owner's attendance. **HRC will use whatever file share system WRC desires.**

2.21. Identify permits that must be procured by the Contractor. Provide technical assistance, criteria, written descriptions, application completion services, and design data for Owner's use in securing necessary permits from or approvals of governmental agencies with jurisdiction over any aspect of the Project, and secure approval of the Drawings and Specifications from the appropriate agencies such that the required permits (SESC, ROW, etc.) can be procured by the Contractor upon payment of permit fees during construction. Engineer shall attend meetings with the affected municipalities and other agencies when required for this process. Permits and approvals include but may not be limited to the following:

2.21.2. EGLE Part 365 Threatened and Endangered Species Permit (Schedule should allow contractor to address tree removal over winter to avoid survey that would be needed to determine if endangered bats are present in the project area. Cost of survey is not included in design fee.) **Not applicable**.

2.21.3. EGLE Part 327 Water Withdrawal Permit (Contractor will need to obtain based on dewatering system they determine necessary to address their means and methods.) **Not applicable.**

2.21.4. US Army Corps of Engineers/EGLE Joint Permit including Part 301 (Inland Lakes and Streams), Part 325 (Great Lakes Submerged Lands), Part 303 (Wetlands Protection), ~~**Floodplain Regulatory Authority found in Part 31**~~, Water Resources Protection, Part 315 (Dam Safety), Part 323 (Shorelands Protection and Management (High Risk Erosion Areas). **HRC will review permit requirements for the project considering exceptions for drain projects.**

2.21.5. Oakland County Health Department Dewatering Well Permit. (Contractor will need to obtain based on dewatering system they determine necessary to address their means and methods.) **Not Applicable.**

2.21.6. Soil Erosion and Sedimentation Control Permit – **WRC to self issue.**

2.21.7. Building Permit – **Not Applicable.**

2.21.8. Right of Way Permit – **From Northville.**

2.21.9. Woodlands Permit – **Not applicable**.

2.21.10. Oakland County Road Commission Permit – **Not Applicable**.

2.21.11. Michigan Department of Transportation Permit – **Not Applicable.**

2.21.12. Engineer shall obtain and include all permits in the Specifications prior to bidding the project.

2.22. Revise the Drawings and Specifications to conform to comments by the Owner and requirements of governmental agencies with jurisdiction over the Project. In the event the revisions result from an error or omission of the Engineer, the Engineer shall make the revision at no cost to the Owner. **Included with above.**

2.23. Determine the criteria for Substantial Completion of the Work, accounting for Owner supplied fixtures and equipment, software, and training. The Engineer will also determine the criteria for partial Substantial Completion as it may apply to various components or aspects of the Work if partial Substantial Completion is part of the Owner's plan for the Project. **Included with above.**

2.24. Prepare Drawings and Specifications that describe a constructible Project. Submit such Drawings and Specifications for the Owner's approval when the Engineer's design for the Project reaches the 30 percent, 50 percent and 90 percent stages. **Included with above.**

2.25. Develop a model schedule of values or set of contract line items for payment that accurately identifies discrete Work activities for measurement and payment to the Contractor. **Included with above.**

2.26. Develop a comprehensive and itemized list of submittals based on the Contract Documents of all submittals required of the Contractor and include the list in the Specifications. **Included with above.**

2.27. The Design Phase will commence after completion of the Study Phase and upon acceptance of the Final Basis of Design Report by the Owner. **Included with above.**

2.28. Develop a post-construction monitoring plan and report process. **Only as noted in the grant.**

2.29. Ensure design is in conformance with the 2019 WRC Engineering Design Standards for Storm Water Utilities, applicable WRC technical specifications and in compliance with all federal, state and local regulations. **Included with above.**

DC-391 BID BIDDING SERVICES – ESA

3.0 In performing Bidding Services the Engineer shall:

3.1. Assist the Owner in publicizing the Project to potential bidders and in distributing the Bid Documents to potential bidders. Develop and maintain an invited Bidder's list as appropriate for the Project. **WRC to post the project. HRC to inform qualified contractors and maintain a list of plan holders.**

3.2. Organize and conduct a pre-bid conference or pre-bid meeting; arrange for stenographic transcription of it (if appropriate for the Project); prepare minutes for it; and issue these transcripts and minutes as an Addendum to the Bid Documents.

3.3. Respond to the Bidder's questions in a timely manner and issue clarifications of Bid Documents as Addenda.

3.4. Prepare additional Addenda to the Bid Documents as needed during the bidding process.

3.5. Attend the bid opening at the Owner's office, analyze bids received, and prepare a tabulation of the bids.

3.6. Evaluate and identify Bids that contain lump sum or unit prices that do not reflect reasonable actual costs of labor, equipment, materials, plus a reasonable proportionate share of the bidder's anticipated profit, overhead costs, and other indirect costs.

3.7. Review and endeavor to ascertain the accuracy of the information submitted by Bidders, such as their Experience and Qualifications Statement (DC-118), financial statements, and preliminary Schedule. Keep detailed notes on these reviews and provide copies of these notes to the Owner upon request. **Included with above.**

3.8. Contact and interview references provided by Bidders with their DC-118 as part of the bid evaluation. Keep detailed notes on these interviews and provide copies of these notes to the Owner upon request. **Only if necessary.**

3.9. Coordinate and lead a pre-award meeting and prepare agendas and minutes. **Only if necessary.**

3.10. Provide a written recommendation as to award of the construction contract.

3.11. Provide five bound copies (using three-ring binders) for signature of the contract books and for distribution by the Owner.

3.12. Provide five copies of the final Drawings in D+ (24" x 36") size, or other size mutually agreed upon by the Owner, and 5 copies in half size (12" x 18") and an electronic PDF of the Drawings/plans and Bidding Specifications to be used for construction to the Owner. **Included with above.**

DC-391 CON CONSTRUCTION PHASE SERVICES

4.0 In Performing Construction Phase Services the Engineer shall:

4.1. Prepare five full-size paper copies of the drawings issued for construction and five half-size paper copies of the Drawings issued for construction. **Included with above.**

4.2. Provide a virtual platform for meetings, such as Zoom, MS Teams, GoToMeeting, or similar virtual meeting platform approved by the Owner. The Owner shall be apprised of all such meetings and provided with all required information to facilitate the Owner's attendance. **Included with above.**

4.3. Coordinate and lead a pre-construction meeting; prepare agendas for and minutes of the meeting.

4.4. Coordinate and lead bi-weekly progress and other meetings as required by the Contract Documents as required during construction; prepare agendas for and minutes of each meeting.

4.5. Coordinate and lead a pre-installation meeting between the Owner, Engineer, and Contractor for all major construction activities associated with the project. **Not applicable.**

4.7. Furnish consultation and advice to Owner during construction. **Included with above.**

4.8. Visit the Work site as needed, but no less than weekly during construction, to assist the RE, RPR and/or the Owner's inspector in becoming generally familiar with the progress and quality of the portion of the Work completed, and to determine, in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Engineer shall report any deficiencies observed to the Owner. The Engineer shall also maintain a "24/7" access line to immediately address questions that arise in the field. Per WRC email, we assume all work will be observed by HRC staff for a four week construction duration.

4.9. Keep, and make available to the Owner, a full set of Project records, including, but not limited to, all versions of Drawings and Specifications, as-built drawings, Bulletins, Requests for Information, Work Directives Field Orders and responses to such requests, Submittals and responses to such Submittals, Contractor's and Engineer's daily reports, meeting minutes, schedules, correspondence, notices of non-conformity, and Applications for Payment. The records shall be well organized, summarized in a log and maintained in both paper and electronically. In addition, work with the Contractor to organize and maintain a document control website acceptable to the Owner for the duration of the Project, as initially established during the Study Phase. The Engineer shall provide the Owner, the municipalities in which Project is located, and other parties involved in the Project that require access to Project documents with complete and continuous access to this system for the duration of the Project. **Included with above.**

4.10. Procure construction testing services, including laboratory testing services, and field-testing services to perform inspections, tests, and approvals of samples, materials and equipment required by the Contract Documents. The Engineer shall provide the Owner with an appropriate professional interpretation of the results of such inspections, tests, and approvals. Such construction and field testing may include the testing of soils, asphalt, pipe, and concrete. The cost for these services shall be paid for as an Additional Special Service. **HRC will provide these services with in-house personnel.**

4.11. Receive and review all certificates of inspections, tests, and approvals required by the Contract Documents. **Included with above.**

4.12. Review and take appropriate action with respect to Contractor's suggested alternates, value engineering solutions, and proposals to determine (1) the benefit to the Owner in furtherance of the Project; (2) compliance with applicable laws, statutes, ordinances, codes, orders, rules and regulations in effect as of the date of this Engineering Services Agreement, and (3) conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated in the Contract Documents. **Included with above.**

4.13. Review and take appropriate action with respect to items such as detailed construction, erection and Shop Drawings, product data, samples, Submittals, and other data which Contractor is required to submit, but only for determining (1) compliance with applicable laws, statutes, ordinances, codes, orders, rules and regulations in effect as of the date of this Engineering Services Agreement, and (2) conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated in the Contract Documents. Such reviews and approvals or other action will not extend to means, methods, techniques, sequence, or procedures of construction or to safety precautions and programs incident thereto. The Engineer will review the Contractor's Submittals (within two weeks) to avoid delay in the progress of the Work. **Included with above.**

4.13.1. In the event the Submittal pertains to a performance specification or to a delegated part of the design, the Engineer will conduct a peer review of the Contractor's design and will ensure the Contractor's design adequately accounts for baseline conditions identified in the Baseline Conditions Assessment Report and the risks previously identified in the Risk Register. Such reviews and approvals or other action will not extend to means, methods, techniques, sequence, or procedures of construction or to safety precautions and programs incident thereto. **Included with above.**

4.14. Ensure the Contractor designed Work is coordinated with the design expressed in the Drawings and Specifications and the Contract Documents. Notwithstanding performance Specifications or delegation of design to the Contractor, the Engineer remains responsible for coordination and integration of all design disciplines. **Included with above.**

4.15. Issue necessary clarifications and interpretations of the Contract Documents as appropriate to the orderly completion of the Work. Such clarifications and interpretations will be consistent with the intent of and reasonably inferable from the Contract Documents. **Included with above.**

4.16. Review and approve or take other appropriate action with respect to the Contractor's proposed schedule of values, unit prices, or balancing of the Construction Cost across contract line items to ensure unit prices accurately reflect the actual cost of the unit. **Included with above.**

4.17. Based on the Engineer's observations as an experienced and qualified design professional and on review of Applications for Payment and accompanying supporting documentation, recommend disposition of the following: Work Directives for changes and extras to the Construction Agreement and periodic progress and final payments to the Contractor. **Included with above.**

4.17.1. Such recommendations of payment will be in writing and will constitute Engineer's representation to the Owner, based on such observations and review, that, to the best of the Engineer's knowledge, information and belief, the Work has progressed to the point indicated, the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and to any other qualifications stated in the recommendation), and the conditions precedent to the Contractor's being entitled to such payment appear to have been fulfilled in so far as it is the Engineer's responsibility to observe the Work. The Engineer's recommendations of payment will include final determinations of quantities and classifications of Work (subject to any subsequent adjustments allowed by the Contract Documents) and note the relationship of the payment requested to the schedule of values, work completed, and materials and equipment delivered at the Site but not incorporated in the Work. **Included with above.**

4.17.2. By recommending payment, the Engineer shall not thereby be deemed to have represented that observations made by the Engineer to check the quality or quantity of the Work as it is performed and furnished have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to the Engineer in the Engineering Services Agreement and the Contract Documents. Neither the Engineer's review of the Work for the purpose of recommending payments nor the Engineer's recommendation of any payment including final payment will impose on the Engineer responsibility to supervise, direct, or control the Work in progress or the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident thereto, or the Contractor's compliance with laws and regulations applicable to the Contractor's furnishing and performing the Work. Similarly, the Engineer's recommendation for payment and the Owner's payment to the Contractor do not constitute acceptance of the Contractor's performance or prevent the Owner from asserting its rights against the Contractor for any deficiency in the Contractor's performance. **Included with above.**

4.18. Review and take appropriate action with respect to the Contractor's construction schedules and pace of work. Should the Owner enlist a project scheduling consultant, the Engineer shall coordinate its construction schedule reviewing efforts with this consultant. **Included with above.**

4.19. In the event the Contractor's performance falls behind a submitted schedule, the Engineer will immediately advise the Owner and Contractor and immediately issue appropriate Notice of Nonconformity to the Contractor, which may include a demand for the Contractor's corrective action. **Included with above.**

4.20. Promptly respond to Requests for Information and requests for substitution submitted by the Contractor to avoid delaying the Work. **Included with above.**

4.21. Determine whether the Work conforms to the Contractor's Submittals reviewed by the Engineer and to the requirements of the Contract Documents; immediately advise the Owner and Contractor of all suspected non-conformities; and immediately issue appropriate Notice of Non-Conformity and demand for correction to the Contractor. **Included with above.**

4.22. Prepare required documents and sketches to resolve any differing field conditions encountered. **Included with above.**

4.23. Prepare Work Directives, Field Orders, Change Orders, and Bulletins as necessary to ensure the proper performance of the Work and the completion of the Work within the Contract Time. **Included with above.**

4.24. Coordinate, witness, and document equipment start-up, facility commissioning, and testing for individual equipment components and systems and for the entire Work as required per the Contract Documents and as outlined in the Owner's Equipment Turnover Flowchart, which Engineer shall incorporate into the Contract Documents. **Included with above.**

4.25. Prepare a detailed overall operations and maintenance (O&M) manual for the new facility. Provide two paper copies of the new O&M manual in three-ring binders and in electronic PDF formats. **Not applicable.**

4.26. Provide 16 hours of on-site and classroom training for WRC Staff on the overall operation and maintenance of the new facility and system including but not limited to a complete and detailed review of the overall operations and maintenance Manual developed by the Engineer for the new facility and the functional intent developed for the instrumentation and control system/SCADA system. This training shall be recorded by the Engineer using a professional videographer. Two copies of the final training video shall be submitted to the Owner along with an electronic copy on a flash drive or other electronic storage device. **Not applicable.**

4.28. Prepare and issue documentation to memorialize or certify Substantial Completion or partial Substantial Completion of discrete parts of the Work, as it may apply. Upon completion, the engineer shall confirm the volume of storage was achieved. **Included with above.**

4.29. Prepare final Record Drawings based on mark-ups provided by the Contractor, RE, RPR, and/or the Owner's inspector. Furnish the Owner with two complete D+ (24" x 36") sets of reproducible Record Drawings and an electronic PDF, and in the latest version of AutoCAD. These items shall be furnished to the Owner within 60 calendar days after Final Payment to the Contractor. **Included with above.**

4.30. Promptly after notice from the Owner or as described in the Contract Documents that the Contractor considers the entire Work ready for its intended use, in company with the Owner and Contractor, conduct an inspection to determine if the Work is Substantially Complete. **Included with above.**

4.31. Prepare and update a "punch list" of incomplete or non-conforming Work that must be completed or remedied for Final Completion of the Work. **Included with above.**

4.32. Promptly after notice from the Owner or as described in the Contract Documents that the Contractor considers the entire Work has been completed in accordance with the Contract Documents, conduct an inspection to determine if the Contractor has achieved Final Completion. **Included with above.**

4.33. Prepare and issue documentation to memorialize or certify Final Completion. **Included with above.**

4.34. Perform all duties assigned to the Engineer by the Construction Contract that are not specifically identified in this Engineering Services Agreement. **Not applicable.**

4.35. The Construction Phase will commence with the execution of the first Construction Contract for the Project or any part thereof and will terminate upon Final Acceptance of the entire project by the Owner. If the Project involves more than one prime contract, Construction Phase services may be rendered at different times in respect to the separate contracts.

CC-391 SUR CONSTRUCTION SURVEYING AND LAYOUT

5.0 In performing Construction Surveying and Layout Services the Engineer shall:

5.1 Provide construction surveying layout, including staking and re-staking to establish such lines, points, grades, and benchmarks as necessary to locate and control construction in accordance with the Drawings.

5.2 Provide easement document preparation. **Not applicable.**

II. Personnel Assigned to Project (Project Team)

PROJECT TEAM

HRC has over 108 years of serving clients on an as-needed basis. Our current staff of 290 employees spends most of their efforts on municipal clients by solving problems, reacting to emergencies, and serving the public in the fields of civil, environmental, low impact design, effective stormwater management, and Green Infrastructure engineering.

HRC has provided information herein on key personnel supplemental to our Engineering Services contract. These key personnel have been chosen specifically for this proposal due to their distinct ability to react quickly, solve problems, and assemble the proper team and expertise this project requires. These critical team members can all mobilize and assign other personnel as necessary to meet the obligations of any assignment. Due to the page limitation, full resumes are available upon request.

Jamie Burton, PE

VICE PRESIDENT | PARTNER | PRINCIPAL IN CHARGE

Jamie Burton will serve as **Principal in Charge**. He will be responsible for selecting the personnel, developing the scope, budget and schedule, overseeing each work assignment, monitoring work assignment progress and addressing issues. His experience includes numerous stormwater management plans, innovative detention and stormwater management facilities, dam removal, wetland mitigation design, lake and canal dredging projects, and Drain Commissioner projects. Jamie has considerable experience with environmental and attractive features such as rain gardens, bioswales, bioretention, streambank stabilization, and other best management practice implementation. He has successfully managed the procurement and administration of millions of dollars in grant funding for communities and governmental agencies.

555 Hulet Drive, Bloomfield Hills, MI, 48302 • (248) 454-6363 • jburton@hrcengr.com

John Balint, PE

ASSOCIATE | PROJECT MANAGER

John Balint will serve as the **Project Manager** and primary **Point of Contact** from our Bloomfield Hills office. He has over 27 years of experience, including 13 years of service with the City of Pontiac where his responsibilities included preparing and overseeing transportation and storm sewer funds, capital improvement funds, EGLE MS4 permitting tasks, and acquiring funding through various grant agencies. He also has experience administering and coordinating the design and oversight of city infrastructure projects that included water main, sanitary storm sewer, storm sewer, and local and major road improvements and rehabilitation programs. John is HRC's lead on all MS4 permitting services and water management planning.

Fatemeh Babakhani, PhD, PE

MANAGER | STORMWATER SERVICES

Dr. Fatemeh Babakhani will provide **Environmental Engineering and Stormwater Services** from our Bloomfield Hills office. Her specific experience includes hydrologic and hydraulic analyses, design of GI and stormwater management facilities, wetland mitigation design, stream and habitat restoration, development of construction plans and specifications, and project management. She has over 10 years of experience including knowledge of WRC design guidelines, stormwater management, and environmental projects.

Derek Stratelak, LLA, CPWS, CA

MANAGER

Derek Stratelak will assist in efforts for **Landscape Architecture** and will serve as the Team's Certified Arborist from our Detroit office. His expertise includes a broad range of public and private sector experience in landscape architecture design, site planning, construction administration, tree surveys, wetland delineations, wetland restoration, and mitigation design, natural stream channel design (Rosgen Level IV), stream relocation, and bank restoration, and environmental permitting. He has 36 years of experience working on a wide variety of large and complex projects, including streetscapes, beaches, parks, cemeteries, golf courses, recreational facilities, educational facilities, residential developments, commercial developments, public and private roads, including work with numerous municipalities. Derek has extensive experience in site design issue resolution, natural landscape architectural design, resource planning, and land planning for private and public interests.

Andy Groat

ENVIRONMENTAL ENGINEERING PROJECT MANAGER

Andy Groat is a **Project Manager** in the Environmental Engineering Department at HRC with over 35 years of boundary, topographic, and construction survey experience. He will lead the Survey and Field Services on this project. He has extensive GPS and robotic surveying experience utilizing Leica, Trimble, Topcon, and Carlson Surv CE data collection software. In addition to his expertise with AutoCAD Civil 3D CAD software, Andy has experience with ESRI's mobile application collector for ArcGIS on various drain and river projects, for which he has served as field leader. He also has experience in performing surveys to establish boundaries, knowledge of pipe routes and construction for drainage projects, knowledge of topographic design, and an ability to ascertain and resolve issues within projects.

III. Related Project Experience

FIRM SPECIALTIES

Hubbell, Roth & Clark, Inc. (HRC) has been providing engineering services to the Office of the Oakland County Water Resources Commissioner (WRC) for over 80 years. We have completed numerous Green Infrastructure, storm water management, watershed planning, and related projects for the WRC.

UNDERSTANDING OF SERVICE

Enclosed in this section is our experience in engineering services provided to municipalities and utilities similarly to WRC, to supplement those experience profiles from our existing Engineering Services Contract with WRC.

HRC can provide services in all of the following engineering areas in house or with the limited assistance of highly capable subconsultants approved by WRC on a per project basis:

- Green Capital Improvement Planning
- Infiltration Testing and Soils Analysis
- Green Infrastructure Design
- Green Infrastructure Maintenance Planning
- Planting Design and Layout
- Green Infrastructure Inspection and Testing
- Green Infrastructure and Wetlands Grant Procurement Services
- Wetland Design
- Watershed Water Budgets
- Hydraulic Analysis and Design
- Landscape Architecture
- Green Infrastructure Details Design
- Water Quality Monitoring
- New Construction Planning, Design, Permitting, and Plan Review
- Surveying
- Construction Inspection
- Post Construction Inspection

STATE AND FEDERAL GRANT PROGRAM MANAGEMENT

The most critical component of any project is finding the funding available for implementation. In these challenging economic conditions, municipalities rely heavily on outside sources for financial support. HRC has successfully assisted numerous Michigan communities with grants and funding through the Michigan Department of Environment, Great Lakes, and Energy (EGLE) State Revolving Fund (SRF), Drinking Water Revolving Fund (DWRF), Clean Michigan Initiative (CMI) Non-Point Source Pollution Control grants, the Michigan Natural Resources Trust Fund, Land and Water Conservation Fund, and Recreation Improvement Fund (RIF). Additionally, HRC has successfully completed Michigan Department of Transportation (MDOT) administered programs and grants including Transportation Enhancement Grants, the Surface Transportation Program – Urban (STPU) and RRR, Category C funding, Economic Development Funds (Category A), Congestion Mitigation and Air Quality (CMAQ), and Safety funds.

We are acutely aware of the programmatic conditions required for this project. Members of this team are currently working on assisting fiduciary entities with completing all the programmatic functions for various grants and cooperative agreements within southeast Michigan.

HRC is excited for the opportunity to assist the County with administering this funding. HRC takes pride in helping communities financially undertake projects that better their community, their infrastructure, and the environment.

Oakland County Water Resources Commissioner

Green Infrastructure Projects

OWNER
Oakland County Water Resources Commissioner
One Public Works Drive
Building 95 West
Waterford, MI 48328

Lynne Seymour
(248) 858-0958

COMPLETION DATE
Ongoing

START DATE
2022

KEY PERSONNEL
James Burton, PE
John Balint, PE
Nancy Kolinski, PE

AUGUSTA DRAIN

HRC is currently engaged with WRC in developing green stormwater infrastructure BMPS to provide water quality improvements to the Augusta Drain. HRC and our project partners are completing initial site evaluations and the public engagement necessary to ensure local buy-in to the proposed improvements. Bioretention, infiltration, rain gardens, and native planting areas are being considered as stand-alone features or incorporated discretely among future site improvements that will make the area more of a neighborhood park.

GWK PARKING LOT AND GREEN INFRASTRUCTURE PROJECT

HRC is currently engaged with WRC to design an expanded parking lot at the GWK Facility and develop a green stormwater infrastructure BMP to provide water quality from the parking area runoff. We are also working on plans to convert the turf grass on site to lower maintenance native grow zones to promote better water quality. As a demonstration tool, we are using normal compost and biosolids for the planting medium in this project. HRC and our project partners are completing initial site evaluations and construction is planned for next fiscal year.

GWK HEADWATERS – U.S. ARMY CORPS OF ENGINEERS (USACE) PROJECT

HRC developed the scope and initial budget to improve the outlet conditions from the GWK facility for the Red Run Intercounty Drain Drainage Board. This project is now led by the USACE and will focus on stabilizing the banks, reducing erosion, and repairing deteriorated elements at the outlet using green practices. HRC is a subconsultant focusing on local agency coordination, permitting, geotechnical evaluation, and wetland delineation. The project is in final design.

FREEDOM HILL NORTH BANK – RED RUN INTERCOUNTY DRAIN

HRC led the effort to improve the bank stability along the Red Run Intercounty Drain behind the Freedom Hill Amphitheater. Erosion and bank deterioration was migrating toward the historic landfill site threatening the Drain. Stone toe was added to stabilize the banks. Three J-hooks were constructed to direct velocity of the water from the bank to the center of the Drain. Restoration used native plantings to promote sustainability. Additional native planting areas, trees, and grow zones were constructed around the property to further improve water quality. The access route for drain maintenance doubles as an important local trail connection. Treatment of invasive species throughout the Drain is ongoing.

FREEDOM HILL SOUTH BANK – RED RUN INTERCOUNTY DRAIN

HRC developed the scope and initial budget to improve the Red Run Intercounty Drain. This project is now led by the USACE and will focus on stabilizing the banks, reducing erosion, and repairing deteriorated sections using green practices. HRC is a subconsultant focusing on local agency coordination, permitting, geotechnical evaluation, and wetland delineation. The project is in final design.

Stone toe is being added along the bank to stabilize the bank. J-hooks are being constructed to direct velocity of the water from the bank to the center of the Drain.

CWSRF PROJECT PLAN – NON-POINT SOURCE POLLUTION

HRC prepared and submitted a Project Plan to EGLE Clean Water State Revolving Loan Program for Non-Point Source Pollution projects. The 17 projects ($28 million) within the plan focus on GI improvements from bank stabilization, bioretention, infiltration, native grow zones and other BMPs to improve water quality. The first project, Augusta Drain, was 100% funded for design and construction at approximately $1.4 million. HRC is currently working on a plan update to reprioritize projects and add two new locations calling for wetland treatment areas for non-point source pollution reduction.

Huron Hills Golf Course Design & Construction Engineering

OWNER
Washtenaw County Water Resources Commissioner
705 North Zeeb Road
Ann Arbor, MI 48107

Harry Sheehan, Chief Deputy
(734) 222-6851

COMPLETION DATE
Ongoing

START DATE
October 2019

FINAL CONSTRUCTION COST
$98,770

KEY PERSONNEL
James Burton, PE
John Balint, PE

PROJECT DESCRIPTION:

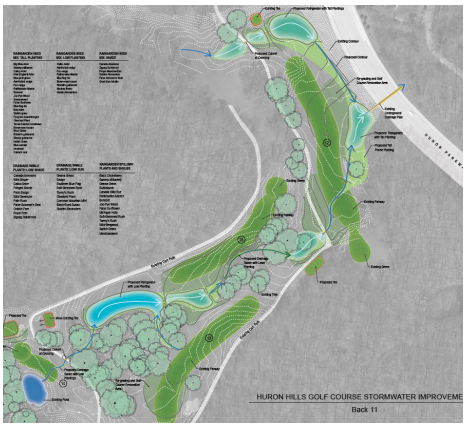
Huron Hills Golf Course is owned by the City of Ann Arbor and operated by Ann Arbor Parks and Recreation. The initial goals for the project were to address the incised stream flowing through the golf course, increase floodplain access and storage, improve the riparian vegetation, and provide stormwater treatment prior to outletting into the Huron River.

As part of the project, the City of Ann Arbor also petitioned the Washtenaw County Water Resources Commissioner to change the previously unnamed tributary into a legally established County Drain (Benz Creek) through the golf course.

A hydraulic model was used to design a new pattern and profile for the realigned Drain and properly size the raingardens and treatment wetlands on the upstream portion of the golf course. Roughly 570 feet of the original creek was abandoned and approximately 1,000 feet of new channel was created across the downstream end of the golf course. This realignment considered the creek's historical location, playability of the golf course, and provided an opportunity to increase stream sinuosity and appropriate pool-to-pool spacing. The raingardens were designed to treat roughly 16,000 cubic feet of stormwater. Water that is not infiltrated eventually discharges to the unnamed tributary and enters Benz Creek as it passes through the golf course.

The raingardens and wetlands were created to improve water quality before entering the river, particularly through the reduction of total suspended solids (TSS), total phosphorus (TP), and E. coli. With the designed raingardens and constructed floodplain wetlands, it is estimated that there will be an annual reduction of over 33,000 pounds of TSS, over 70 pounds of TP, and over 52,000 trillion colonies of E. coli every year. Native trees, shrubs, plugs, and seed were planted along the newly constructed creek and within each raingarden and wetland. HRC also replaced failing and undersized culverts to address erosion and pinch point concerns at several golf cart crossings.

HRC coordinated with EGLE for permitting and State Revolving Fund approval. Construction for the project began in September 2020 and was completed in the spring of 2021. Monitoring of the stream and rain gardens will continue for five years.



STORMWATER MANAGEMENT PLAN EXPERIENCE

OWNER
St. Clair County Health Department
3415 28th Street
Port Huron, MI 48060

Sheri Faust,
Environmental Educator
(810) 987-5306

MULTIPLE CLIENTS

City of Bloomfield Hills
45 E. Long Lake Road
Bloomfield Hills, MI 48301

Jay Cravens, City Manager
(248) 644-1520

Calhoun County Water Resources Commissioner
315 W. Green Street
Marshall, MI 49068

Water Resources Commissioner
(269) 781-0790

Delhi Charter Township
1492 Aurelius Road
Holt, MI 48842

Sandra Diorka,
Director of Public Services
(517) 699-3874

Oakland University
Facilities Management
Rochester, MI

Ryan Gioro, Senior Engineer
(248) 370-4383

PROJECT DESCRIPTION:

BELLE RIVER WATERSHED MANAGEMENT PLAN

HRC prepared a 319/CMI-approved Watershed Management Plan (WMP) for the St. Clair County Health Department and the Belle River Watershed Advisory Group. The Belle River Watershed, located in St. Clair, Lapeer, and Macomb Counties, is 227 square miles and has high sediment loading, leading to a Total Maximum Daily Load (TMDL) for dissolved oxygen on 21 miles of river. The preparation of the WMP included the review and interpretation of existing water quality data and local master plans, ordinances, policies, and land use practices. Data was collected from federal, state, county, and local sources. HRC, as part of WMP development, identified upland and in-stream sediments, nutrients, and E. coli sources and recorded riparian land conditions using aerial images, land use analysis, modeling, monitoring, and field assessments.

Based on watershed specific information, goals and objectives were developed for the watershed and the communities developed action plans and commitments to use best management practices to meet the goals and objectives of the WMP.

STORMWATER PERMIT ASSISTANCE

Since 1997, HRC has assisted over 80 permittees (communities, counties, universities, agencies, and schools) with various aspects of permit compliance. The firm provides full-time assistance to 25 permittees, including the cities of Birmingham, Bloomfield Hills, South Lyon, Grosse Pointe Shores and Sterling Heights; the Villages of Beverly Hills, Franklin, and Lake Orion; Oakland University; and Huron Valley School District. HRC has assisted communities under the voluntary permit process as well as the mandatory Phase I and Phase II processes. HRC has prepared stormwater permit applications for many communities and completed Illicit Discharge Elimination Plans (IDEP), Public Education Plans (PEP), and Stormwater Pollution Prevention Initiatives (SWPPI).

SAW STORMWATER MANAGEMENT PLANS

HRC is extensively involved with the Stormwater, Asset Management, and Wastewater (SAW) grant program, administered by the Michigan Department of Environmental Quality (MDEQ). As part of this program, HRC is completing Stormwater Management Plans for the following:

Calhoun County

The Calhoun County Water Resources Commissioner is developing a SAW stormwater management plan to improve county water quality, help their office implement environmentally friendly drain maintenance practices, and educate local municipalities on how development impacts water quality. Select county drains were inspected to determine common problems and make recommendations for new maintenance practices. This planning initiative also includes a review of existing watershed management plans, stakeholder meetings, public outreach and education, and prioritization of projects and best management practices. The deliverables of this project will include a comprehensive stormwater management plan, which addresses stormwater impacts from county drains and developments, along with a sustainable drain maintenance manual. The plan will include best management practices for managing county drains in an environmentally-friendly and cost-effective manner, while providing a high level of service related to conveyance.

STORMWATER MANAGEMENT PLAN EXPERIENCE

Delhi Charter Township

HRC is assisting Delhi Township with a SAW stormwater management plan to address stormwater impacts from township-owned parcels and incorporate portions of watershed management plans on a local level. This planning effort includes review of existing watershed management plans, review of relevant Total Maximum Daily Loads, analysis of local water quality data, inspections of properties and infrastructure, and identification and prioritization of projects to improve water quality and decrease stormwater impacts originating from township and school-owned parcels.

Oakland University Stormwater Management Plan

HRC was retained by Oakland University (OU) to complete an evaluation of the University's stormwater management and conveyance systems. The University had numerous concerns regarding stormwater drainage throughout the campus, relating to management of on-site stormwater runoff, as well as off-site pass-through flows from the tributary area of Galloway Creek.

HRC produced a comprehensive report that identified problem areas, proposed and prioritized solutions, provided guidance for future campus development, and provided preliminary design for areas in need of immediate correction. HRC also reviewed the OU grounds and maintenance operations and recommended managerial and procedural changes to mitigate stormwater runoff, improve water quality, and reduce operational costs. HRC's GIS department assisted by providing more current aerial photography than was available through local government agencies. The firm outlined the overall watershed boundary, identifying new developments that may have been contributing to flooding.

STORMWATER ASSET MANAGEMENT PLAN AND STORMWATER MANAGEMENT PLAN

OWNER
Washtenaw County Water Resources Commissioner

Harry Sheehan
Deputy Water Resource Commissioner
(734) 222-6851

Start Date
January 2016

Completion Date
October 2017

Original Project Budget
$265,000

Final Project Cost
$161,000

Project Team
Prime – Spicer Group
Consultants – HRC

Hubbell, Roth & Clark, Inc. and Spicer Group teamed to develop a Stormwater Asset Management Plan and Stormwater Management Plan for the Washtenaw County Water Resources Commissioner through the MDEQ's Stormwater, Asset Management, and Wastewater (SAW) Program. The County used the grant money for the development of these plans, including condition assessment, such as CCTV work. The Project team assisted with the following tasks:

- Recommendations for improvements to the GIS database
- GIS Mapping and Attribution Updates
- Development of Inspection Forms for County-owned assets, including pipes, open channels, detention basins, and overflow structures
- Large Diameter Pipe Inspections, including confined space entry and PACP coding
- Open Channel Drain Inspections
- Review of existing inspection data
- Development of a GIS model for criticality and risk assessments
- Development of a stormwater model to determine level of service
- Recommendations for Operations and Maintenance, including inspection frequencies
- Recommendations for organizational updates for continuation of the asset management planning
- Recommendations for Capital Improvements
- Development of a Stormwater Asset Management Plan and Stormwater Management Plan per MDEQ requirements

Geddes Avenue and Sanitary Improvement Project

OWNER
City of Ann Arbor
301 E. Huron St.
Ann Arbor, Michigan 48104

Brian Slizewski
Senior Project Engineer
(734) 794-6410, X-43636
bslizewski@a2gov.org

START DATE
January 2014

COMPLETION DATE
June 2014

ESTIMATED CONSTRUCTION COST
$6,922,400

KEY PERSONNEL
James Burton, PE
Derek Stratelak, LLA, CPWS, CA
Nancy Faught, PE
Gary Chalice, PS
Robert DeFrain, PE
Andrew Malczewski, EIT
James Miller, GISP
Karyn Stickel, PE
Richard Nacey, PE
James Surhigh, PE

Award
2019 Engineering Merit Award, ACEC

PROJECT DESCRIPTION:

This project included the reconstruction of approximately 0.7 miles of an existing two-lane HMA roadway along a naturally scenic arterial roadway in the City of Ann Arbor. The new roadway included sidewalk replacement, bicycle accommodations, and a structural retaining wall to support a failing roadway edge. Numerous parcels along this route were on septic systems for sanitary sewer, and this project included a study to provide municipal sanitary service to the adjacent residents. It also involved a new sanitary sewer and water main along Riverview Drive, adjacent to Geddes Avenue. A new stormwater system was included to meet the City's Green Streets Ordinance and is consistent with an approved EGLE project plan administered by the Washtenaw County Water Resources Commission.

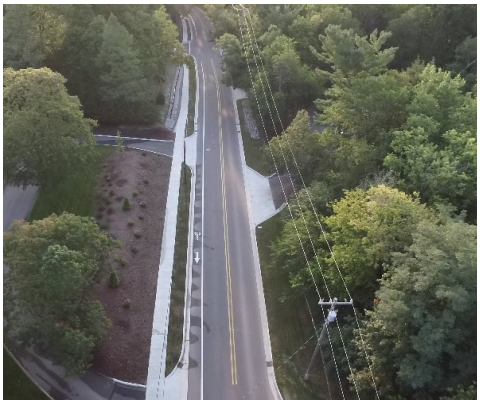
This project area had a history of sanitary sewer service issues, and several attempts were made to bring service to the affected homeowners. Due to the scenic and residential character of this route and the prior experiences, an extensive public engagement plan was required. This plan included individual/small group meetings with residents, larger meetings with affected stakeholders, and detailed meetings with City staff to ensure the project was providing the necessary public benefit while balancing the priorities of the stakeholders. Additional on-site meetings with residents were also included in this public engagement plan.

The stormwater design included detailed design of a variety of measures that included infiltration beds beneath the roadway, detention elements, plantings within the ROW, and other natural measures that provided the improved stormwater quality required by the City's ordinance.

Additional responsibilities included:

- Topographic survey
- Structural retaining wall along railroad ROW
- New water main
- Utility coordination
- ROW/easement documents

NOTABLE FEATURES
- Extensive Public Engagement
- City Green Streets Ordinance
- MDEQ SRF Loan Program
- Sanitary Sewer Service and Study
- Retaining Wall to Support Roadway



Plum Hollow Country Club

Watershed Engineering Services

OWNER
Plum Hollow Country Club
21631 Lahser Road
Southfield, Michigan 48033

Rick Burkardt
(248) 357-5353

START DATE
2020

COMPLETION DATE
2022

FINAL PROJECT COST
$500,000

KEY PERSONNEL
James Burton, PE
John Balint, PE

PROJECT DESCRIPTION:

In 2020, HRC was retained by Plum Hollow Country Club in the City of Southfield to assist with a comprehensive plan to reduce course flooding, enhance water quality, improve the river through the course, and repair, replace, or remove a dam structure used to feed their primary irrigation pond. HRC recommended and implemented a design/build project to remove the dam, installing a fish passage structure, disconnecting the pond from the river but installing a feeder line from further upstream, creating four acres of wetland flood storage areas and restoring over 3000 linear feet of stream. HRC prepared plans and specifications, assisted in regulatory permits, and provided construction administration for the structural removal and other watershed stabilization on this project.

IV. Estimate of Fees

SEPARATE FEE SECTION

Per the instructions on the Mailing Label in Appendix B, Hubbell, Roth & Clark, Inc. (HRC) has submitted its estimated fees in a separate sealed envelope to the Oakland County Water Resources Commissioner (WRC) for the Engineering Services for Randolph Drain Serenity Point and Riverbank Stabilization Project.

E-VERIFY

The Oakland County Board of Commissioners adopted Miscellaneous Resolution (MR) #09116, on July 30, 2009, established a policy requiring future service contractors to register with, participate in, and utilize the E-Verify Program implemented by the Federal Department of Homeland Security and Social Security Administration when hiring employees.

"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 verity the employment eligibility of their new hired employees.

For more information and to register visit https://e-verify.uscis.gov/enroll/.

All newly hired Contractor Employees, unless otherwise excluded under Misc. Resolution No. 09116 must undergo employment eligibility verification through the E-Verify system. Failure of to verify newly hired employees is a material breach of this agreement.

E-VERIFY - STATEMENT OF POLICY

Pursuant to MR #09116 the Board of Commissioners has established a policy that every future services contract (including both new and renewing contracts) between Oakland County and service contractors/vendors shall require the contractors/vendors contracting with Oakland County to 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.

Oakland County shall not enter into any future services contracts (including both new and renewing contracts) for services with any contractors or vendors unless the contractors/vendors first certify they have registered 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) to verify the work authorization status of all newly hired employees employed by the contractors and vendors.

IMPLEMENTATION PROCEDURES

No Oakland County elected official, officer or employee having authority to enter into services contacts shall authorize a new or renewed contract for services with any contractor or vendor that has not registered with, does not participate in, and/or does not 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.

Each services contract, unless otherwise exempted under the terms of MR #09116, shall contain the following provision:

E-Verify. In accordance with Miscellaneous Resolution No.09116 (BOC Minutes, July 30, 2009, pp 37-38), unless otherwise exempted, all service contractors and/or vendors who wish to contract with the County to provide services must first certify they have registered with, will participate in, and continue

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 contractors and/or vendors. Breach of this term or conditions is considered a material breach of this agreement.

Contractor's/Vendor's execution of this agreement constitutes a certification that they are authorized to certify on behalf of contractor/vendor and do hereby certify on behalf of contractor/vendor that the contractor/vendor has registered with, has and will participate in, and does and will continue utilize once registered and throughout the term of this contract and any permissible extension hereof, 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 contractors and/or vendors.

For more information and to register visit https://e-verify.uscis.gov/enroll/.

VENDOR CERTIFICATION THAT IT IS NOT AN "IRAN LINKED BUSINESS"

Pursuant to Michigan law, before accepting any bid or proposal, or entering into any contract for goods or services with any prospective Vendor, the Vendor must first certify that it is not an "IRAN LINKED BUSINESS, as defined by the Iran Economic Sanctions Act, 2012 PA 517, MCL 129.311 et seq.

Vendor	
Legal Name	Hubbell, Roth & Clark, Inc.
Street Address	555 Hulet Drive
City	Bloomfield Hills
State, Zip	Michigan 48302
Corporate I.D. Number/ State	800079203/Michigan
Taxpayer I.D. #	38-0668370

The undersigned, with: 1) full knowledge of all of Vendor's business activities, 2) full knowledge of the requirements and possible penalties under the Iran Economic Sanctions Act, and 3) the full and complete authority to make this certification on behalf of the Vendor, by his/her signature below, certifies that: the Vendor is **NOT** an "IRAN LINKED BUSINESS" as required by MCL 129.311 *et seq.*, and as such Vendor is legally eligible to submit a bid and be considered for a possible contract to supply goods and/or services to the County of Oakland and/ or the Drainage District.

Signature of Vendor's Authorized Agent: James F Burton

Print Name of Vendor's Authorized Agent: James F. Burton

Witness Signature: Janice Shine

Printed Name of Witness: Janice Shine

CERTIFICATION SAFETY COMPLIANCE

This Contract Addendum and Certification for Safety Compliance is effective as of January 24, 2023 between the Bidder identified below and the County of Oakland whose address is 1200 North Telegraph Road, Pontiac, MI 48341 by and through its Water Resources Commissioner, County Agency for the County of Oakland pursuant to Public Act 342 of the Public Acts of 1939, as amended.

1. By executing this Contract Addendum, the Bidder certifies that it, its employees, agents, subconsultants, and assigns strictly follows all Michigan Occupational Safety & Health Administration (MIOSHA) safety and health standards relevant to the work being performed for the Oakland County Water Resources Commissioner's office, its drainage districts, municipal customers, private systems, or other customers, at all times during which work is being performed.

2. The Bidder further certifies that it will provide a qualified or competent person, whichever is required pursuant to MIOSHA safety and health standards for the work being performed, to oversee safety on the job site.

3. If a qualified or competent person is not present on the job site, then work must not proceed until a qualified or competent person is present.

4. The Bidder must provide a list of all qualified or competent persons to the Oakland County Water Resources project engineer or field staff prior to commencement of any work.

5. If at any time, any of the information provided in this Certification changes, the Bidder agrees to notify the Oakland County Water Resources Commissioner's office in writing prior to any further work performed on a job site.

Bidder name, address, and telephone number:	Bidder's safety coordinator:
Hubbell, Roth & Clark, Inc., 555 Hulet Drive, Bloomfield Hills, MI 48302	Roland N. Alix, PE

The signatory below hereby certifies that the statements and representations of fact made by such signatory contained in this document are true, accurate, and complete. This Contract Addendum and Certification for Safety Compliance has been made, presented, and delivered for the purpose of ensuring compliance with MIOSHA safety standards and may be relied upon by the Oakland County Water Resources Commissioner's office as a true statement of the facts set forth in this document.

By signing below on behalf of the Bidder, the signatory represents that he or she is duly authorized and has legal capacity to execute and deliver this Certification.

CERTIFICATION SAFETY COMPLIANCE

Bidder Company Name: Hubbell, Roth & Clark, Inc.

Signature: 

Print Name: Roland N. Alix, PE

Title: Vice President | Partner

DISCLOSURE FORM

Bidder Company Name: Hubbell, Roth & Clark, Inc.

1. Does the Bidder currently employ a relative of any employee, elected official or appointee of an elected official of Oakland County and/or Oakland Count Water Resources Commissioner? Relative is defined as husband or wife, father or mother, son or daughter, brother or sister, uncle or aunt, first cousin, nephew or niece, great uncle or great aunt, grandfather or grandmother, grandson or granddaughter, father-in-law or mother-in-law, son-in-law or daughter-in-law, brother- in-law or sister-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister, half-brother or half-sister, the parents or grandparents of the individual's fiancée.

☐ **YES** ☒ **NO**

If yes, please provide the name of the employee and elected official (or appointee) along with position/title:

2. Does any employee or elected official of the Bidder have an interest in the organization in any of the following capacities, either compensated or non-compensated: director, owner, officer, partner, beneficiary, trustee, member, employee or contractor.

☐ **YES** ☒ **NO**

If yes, please provide the name of the employee and elected official (or appointee) along with position/title:

3. In the last five calendar years, has the Bidder failed to perform or otherwise deliver on the terms of a contract or agreement with Oakland County or Oakland County Water Resources Commissioner or any other public entity, including suspensions or debarments?

☐ **YES** ☒ **NO**

If yes, please provide further explanation:

DISCLOSURE FORM

I hereby certify that the information included on this form is complete, true and accurate to the best of my knowledge and belief. I understand that either I or the organization to which this form applies may be subject to sanctions and/or penalties as set forth in the ethics ordinance if any information has been falsified or omitted.

Bidder Company Name: Hubbell, Roth & Clark, Inc.

Signature: James F Burton

Print Name: James F. Burton

Title: Vice President | Partner

NON-COLLUSION AFFIDAVIT

James F. Burton, being first duly sworn, deposes and says that he/she is authorized on behalf of Hubbell, Roth & Clark, Inc. (Bidder Company Name) who is making the foregoing Proposal that:

1. Such Proposals are genuine and not collusive or a sham.

2. This Bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder or person to submit a Proposal which is a sham.

3. This Bidder has not in any manner agreed with any other persons or businesses to fix the proposed price, overhead, profit, or any cost element of the submitted Proposal.

4. This Bidder has not attempted to secure any advantage against any other Bidders through collusion with any other Bidder or employees or representative of the OWNER, Oakland County, or Oakland County Water Resources Commissioner.

5. That the Proposals submitted are true and accurate to the best of my knowledge and belief and are made in good faith.

6. This Bidder has not directly or indirectly submitted or disclosed its Proposal or its contents or divulged information or data relative thereto to any association or to any member or agent of any other Bidder to this proposal.

Further, Affiant sayeth not.

Bidder Company Name: Hubbell, Roth & Clark, Inc.

Signature: James F Burton

Print Name: James F. Burton

Title: Vice President | Partner

State of: Michigan	**Notary Seal and Signature:**
County of: Oakland	
Subscribed and Sworn Before Me This Date: December 13, 2023	
Printed Name of Notary: Janice Strine	Janice Strine

GENERAL INFORMATION

In further description of this Proposal, we desire to submit sheets marked as follows:

Proposing under the name of: Hubbell, Roth & Clark, Inc.

DUNS Number: 046070223

Federal Employer Identification Number: 38-0668370

Which is (check one of the following):

X Corporation, incorporated under the laws of the State of: Michigan | Corporate ID No. 800079203

( ) Partnership or Joint Venture, consisting of (list partners):

( ) Limited Liability Company

( ) Individual

Authorized Signature:

Print Name: James F. Burton

Title: Vice President | Partner

Address: 555 Hulet Drive

City, State, Zip Code: Bloomfield Hills, Michigan 48302

Date: December 13, 2023

Telephone Number: (248) 454-6363

Fax Number: (248) 454-6312

Email: jburton@hrcengr.com

When payment on such order or contract is to be directed to the same company at an address different from above, please list the address to be used below:

DEBARMENT CERTIFICATION

All information requested in this section must be completed and the document notarized. Any information omitted, or erroneously reported, may result in disqualification for current or future bidding and supply on behalf of Oakland County.

The undersigned warrants and presents that they have full complete authority to make representations for and on behalf of the undersigned company and that their representations are fully binding upon the undersigned company.

1. The undersigned are not presently debarred, suspended, proposed for debarment, declared ineligible, or excluded from transactions by any federal department or agency, or any state, county or local municipality, department or agency.

2. The undersigned has not within a three (3) year period preceding this bid been convicted of, or had a civil judgment rendered against them for the commission of fraud, a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction, or a contract a public transaction, 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. The undersigned are not presently indicted for or otherwise criminally or civilly charged by any governmental entity (federal, state or local) with commission of any of the offenses set forth in paragraph 2.

4. The undersigned have not within a three (3) year period preceding this bid, had one or more public transactions (federal, state or local) terminated or attempted to be terminated for cause or default.

IF THE APPLICANT IS UNABLE TO CERTIFY TO ANY OF THE STATEMENTS IN THIS CERTIFICATION, CERTIFICATION AND EXPLANATION SHALL BE ATTACHED AND PRESENTED WITH THIS CERTIFICATION.

THE UNDERSIGNED CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED MADE ON BEHALF OF THE UNDERSIGNED BIDDER.

Bidder Company Name: Hubbell, Roth & Clark, Inc.

Signature: James F Burton

Print Name: James F. Burton

Title: Vice President | Partner

DEBARMENT CERTIFICATION

State of: Michigan	**Notary Seal and Signature:**
County of: Oakland	
Subscribed and Sworn Before Me This Date: December 13, 2023	
Printed Name of Notary: Janice Strine	Janice Strine

APPENDIX A. Michigan License

Department of Licensing and Regulatory Affairs

Lansing, Michigan

This is to Certify That

HUBBELL, ROTH & CLARK, INC.

was validly incorporated on January 30, 1932, as a Michigan profit corporation, and said corporation is validly in existence under the laws of this state.

This certificate is issued pursuant to the provisions of 1972 PA 284, as amended, to attest to the fact that the corporation is in good standing in Michigan as of this date and is duly authorized to transact business and for no other purpose.

This certificate is in due form, made by me as the proper officer, and is entitled to have full faith and credit given it in every court and office within the United States.

Sent by Facsimile Transmission
1371290

In testimony whereof, I have hereunto set my hand, in the City of Lansing, this 1st day of March, 2016.

Julia Dale

Julia Dale, Acting Director
Corporations, Securities & Commercial Licensing Bureau

OUR OFFICES

Bloomfield Hills
555 Hulet Drive
Bloomfield Hills, MI 48302
248-454-6300 | Fax: 248.454-6312

Delhi Township
2101 Aurelius Road, Suite 2
Holt, MI 48842
517-694-7760

Detroit
Buhl Building, Suite 1650
535 Griswold Street Detroit, MI 48226
313-965-3330

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

Howell
105 West Grand River Avenue
Howell, MI 48843
517-552-9199

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

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

Traverse City
1501 Cass Street
Traverse City, MI 49684
231-714-5007

Troy
629 E Elmwood Street
Troy, MI 48083
248-454-6300

REACH OUT TO US

248-454-6300
www.hrcengr.com

Agenda Item No. 7

Trial Balance

Consolidation Data

Ledger Account	Beginning Balance	Debit Amount	Credit Amount	Ending Balance
100100:Cash - Operating	(44,569.89)	172,602.25	95,989.59	32,042.77
101500:Undeposited Cash	0.00	84,899.54	84,899.54	0.00
104100:Accrued Interest on Investment	229.25	210.60	225.41	214.44
126105:Due from Municipalities-AR Con	0.00	85,184.65	84,899.54	285.11
207100:Due to Municipalities	(5,905.32)	0.00	0.00	(5,905.32)
211100:Due to Primary Government	(10,611.75)	0.00	0.00	(10,611.75)
228100:Deposits Liability	(111.11)	0.00	0.00	(111.11)
381350:FB Restricted Programs	60,968.82	0.00	0.00	60,968.82
450100:Cash Sweep	0.00	84,899.54	84,899.54	0.00
605000:Special Assessments	0.00	0.00	86,992.00	(86,992.00)
655000:Investment Income	0.00	690.52	440.27	250.25
730000:Contractual Services	0.00	18.49	0.00	18.49
770000:Internal Support Expenditures	0.00	10,606.45	766.15	9,840.30
Total	0.00	439,112.04	439,112.04	0.00

Agenda Item No. 8

Other Business

Agenda Item No. 9

Adjourn