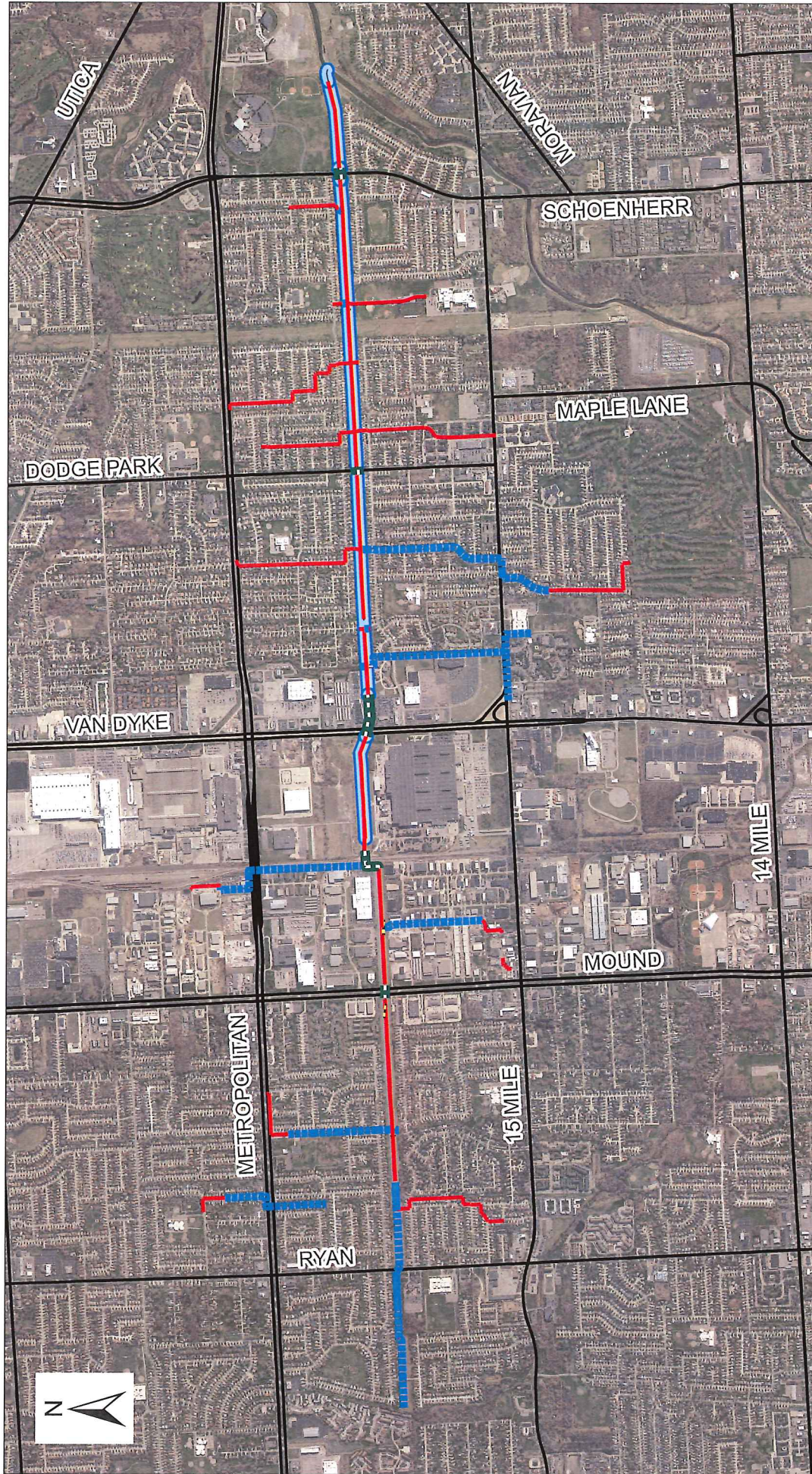


STERLING RELIEF DRAIN
INTRA-COUNTY DRAINAGE BOARD
AUGUST 13, 2018
10:15 A.M.
AGENDA

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for August 13, 2018	
3. Approval of Minutes for June 11, 2018	3
4. Public participation	
5. Project Update – Jeff Bednar	6
6. Sterling Relief Drain Daylighting Project – EPA Grant – Jeff Bednar	7
Motion: To approve the proposal for engineering construction services for the grant funded Sterling Relief Lateral Drain Daylighting Project in the amount of \$1,250,00 from TR Pieprzak	
7. Consideration for approval of invoices (see attached)	20
8. Financial Report – Bruce Manning	21
9. Adjourn	

STERLING RELIEF & BRANCHES

STERLING HEIGHTS



Legend

- Enclosed Gravity**
- < 60" Dia
- ≥ 60" Dia
- Multiple Pipes
- Lateral Connection
- Culvert
- Open Channel**
- Ditch
- Pond



Drain Length (Feet/Miles):
104,166.49 / 19.73



An adjourned meeting of the Intra-County Drainage Board for the **STERLING RELIEF DRAIN** was held in the Office of the Macomb County Public Works Commissioner, 21777 Dunham, Clinton Township, Michigan, on June 11, 2018, at 10:44 A.M.

PRESENT: Candice Miller, Chair
Joseph Romano, Member
Bryan Santo, Member

ALSO PRESENT: James Carabelli, Veronica Klinefelt, Marvin Sauger, Macomb County Board of Commissioners; Brian Baker, Chief Deputy, Karen Czernel, Deputy, Evans Bantios, P.E., Construction and Maintenance Manager, Jeff Bednar, P.E., Environmental Engineer, Bruce Manning, Financial Manager, Dan Heaton, Public Relations Manager, Thomas Stockel, Construction Engineer, Barbara Delecke, Administrative Services, Macomb County Public Works (MCPW); Erik Skurda, Jordan Scott, Sterling Heights Public Works Department

The meeting was called to order by the Chair, Candice Miller. The agenda was approved as presented.

Minutes of the meeting of May 14, 2018 were presented. A motion was made by Mr. Romano, supported by Mr. Santo to approve the minutes as presented.

Adopted: YEAS: 3
NAYS: 0

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

A meeting was held with Tetra Tech last month. Only minor issues exist within the drainage system. There are unused grant monies, and Mr. Bednar has asked Tetra Tech to inspect the first manhole of every tap, time permitting before the grant closes this year. Tetra Tech will provide a prioritization schedule for maintenance items and an answer to the expansion of the scope of work for next month's meeting. Mr. Romano asked if the culverts under Dodge Park Road could be cleaned out. The MCPW drain maintenance crew will be asked to investigate the blockage. Fahey, Schultz, Burzych, Rhodes, PLC is performing a district delineation on the Sterling Relief Drain. Mr. Romano expressed concern that leaving the drain in its natural state will impede the flow in a wet weather event. Mr. Bednar explained that the drain was originally designed to drain the City of Troy too. The drain has sufficient capacity to handle Macomb County's flows.

A motion was made by Mr. Romano, supported by Mr. Santo to receive and file the project update given by Mr. Bednar.

Adopted: YEAS: 3
NAYS: 0

A \$1.25 million grant was applied for through the EPA for a daylighting project. Requests for Qualifications (RFQ) were sent to interested bidders to do a design/build project. Three qualified

firms responded to the RFQ. Each firm will be contacted to see if timelines can be met. They will then be scored based on work plans, unit pricing and how they viewed the RFQ. The project has to be started this year and completed by July 2019. A work plan has to be provided, along with unit pricing for the types of materials to be used and design/engineering costs. The laterals coming into the underdrain of the Sterling Relief Drain are called first flushes in a wet weather event. The laterals will be daylighted so that the water can be discharged into the bottom of the open channels before reaching the underdrain. This will allow for absorption by plant material, ground infiltration and/or evaporation. It is estimated that approximately 1/2-inch to 1-inch of rain will be diverted from the underdrain. Mr. Bednar will bring back the analysis of the three proposals from the firms and ask for Board approval for the Macomb County Public Works Commissioner to sign on behalf of the Board at the next meeting. The project will have to move along quickly in order to meet EPA deadlines. Another grant was applied for to do daylighting on another mile segment of the drain.

A motion to receive and file the EPA Grant Update given by Mr. Bednar was made by Mr. Romano, supported by Mr. Santo and unanimously carried.

The Chair presented the invoices totaling \$24,473.51 to the board for review and approval.

Motion was made by Mr. Santo, supported by Mr. Romano to approve the invoices as presented.

Adopted: YEAS: 3
NAYS: 0

A motion to receive and file the financial report given by Mr. Manning was made by Mr. Romano, supported by Mr. Santo and unanimously carried.

Adopted: YEAS: 3
NAYS: 0

There being no further business, it was moved by Mr. Santo, supported by Mr. Romano, that the meeting of the Sterling Relief Drain Board be adjourned.

Adopted: YEAS: 3
NAYS: 0

The meeting was adjourned at 11:08 a.m.



Candice S. Miller, Chair
Macomb County Public Works Commissioner

STATE OF MICHIGAN
COUNTY OF MACOMB

I certify that the foregoing is a true and correct copy of proceedings taken by the Intra-County Drainage Board for the Drainage District shown on the attached set of minutes, on June 11, 2018, the original of which is on file in the Public Works Commissioner's Office. Public notice of the meeting was given pursuant to Act No. 267, Public Acts of Michigan, 1975, including, in the case of a special or rescheduled meeting or a meeting secured for more than 36 hours, notice by posting at least 18 hours prior to the time set for the meeting.



Candice S. Miller, Chair
Macomb County Public Works Commissioner

DATED: 6/13/18

9295.bd

MEETING MINUTES / ACTION ITEMS

PROJECT: Macomb County Stormwater, Asset Management and Wastewater (SAW) Grant Management
Schoenherr Relief Drain SAW Grant
Sterling Relief Drain SAW Grant **DATE:** July 26, 2018

SUBJECT: Progress Meeting – Action Items **START:** 10:00 a.m.
ADJOURN: 11:00 a.m.

MEETING SITE: Macomb County Public Works Office (MCPWO) **DISTRIBUTED:** July 27, 2018

PREPARED BY: Maria Sedki, PE **PROJECT NO.:** 160107

ATTENDING: Refer to Sign-in Sheet Attachments Yes No
Individuals in the distribution list will receive all attachments unless noted otherwise.

DISTRIBUTION: Attendees

If information contained herein is thought to be inaccurate or incorrect, please contact writer at once for resolution.

Schoenherr SAW Action Items

1. Jeff Bednar to provide Tt with the results of Stacy's drain delineation
2. Tt to develop a new scope of work based on the previous work performed on the drain as well as Stacy's results. The scope to include schedule and budget.
3. Jeff Bednar to provide Tt with the MDOT siphon maintenance agreement

Sterling SAW Action Items

1. Jeff Bednar to verify what has already been fixed by MCPWO Staff.
2. Jeff Bednar to provide Tt with the recently received lawn mowing bids
3. Tt to consider the fence as an asset and
 - a. inspect the fence,
 - b. note the location of the barbed wire,
 - c. evaluate if the fence is needed everywhere
 - d. add the fence as an asset to the BRE and CIP spreadsheets
4. Tt to look at adding the land as an asset and provide recommendations on what property width should the MCPWO maintain.
5. Tt to finalize the BRE and CIP spreadsheets and submit to MCPWO for review by 8/27/18.
6. Tt to provide Jeff with Drain GIS information from Van Dyke to Dodge Park to forward to the Design/Build Team being awarded the Daylighting Project.
7. Tt to note in the CIP what is being done by MCPWO, what is being done by the Design/Build Team, and what is remaining to be done.
8. Tt to prepare info and drone flight segments for Jeff's Presentation to the City Council in September

Next Meeting: September 6, 2018 at 10:00 am



Candice S. Miller

Public Works Commissioner
Macomb County

From: Macomb County Public Works Office

Date: 8-9-2018

To: Sterling Relief Drain Board

Copy: File
Evaluation Committee

RE: Proposal Evaluation Project Award Recommendation
MCPWO RFP No.: **MCPWO-SWS-2018-RFQ-501**
MCPWO Proposal Name: **Sterling Relief Lateral Drain Day-Lighting Project**

This is an open competitive contract for engineering and construction services for design and construction which includes day-lighting 14 lateral drain connections and enhancing the vegetation through the one-mile stretch of the Sterling Relief Drain between Van Dyke and Dodge Park Roads. The ultimate goal of this project is to improve the water quality of storm water conveyed through the drain into the Red Run Drain and ultimately into the Clinton River. Day-Lighting the lateral drain connections will allow the storm water to filter through the natural soil, removing contaminants prior to entering the enclosed concrete pipe, especially the first flush which contains higher levels of contaminants. This project also includes restoration of the green infrastructure, restoring the drain to include more aesthetically pleasing landscape.

The project is being funded with a \$1,250,000 grant from the EPA. The grant will cover the design and construction costs for this project.

The Request for Qualifications (RFQ) was advertised from 5-7-18 to 5-24-18 on the Michigan Inter-Governmental Trade Network (MITN) website. Two-Thousand Four-Hundred and Forty-Eight (2448) solicitations were sent out via MITN and Fifty-Three (53) firms downloaded the RFQ.

One (1) Addendum was issued during the course of the RFQ. The Addendums provided responses to vendor questions submitted during the question period.

On 5-24-18, Statement of Qualifications were received from 3 firms. The evaluation committee independently reviewed the Statement of Qualifications and collaboratively decided that each team was sufficiently qualified to perform the work. Each team was then invited to submit a technical and cost proposal. The three teams accepted the invitation and submitted the second deliverable on 7-20-18.

Each member of the Evaluation Committee independently reviewed and scored the comprehensive proposal packages in accordance with MCPWO's policy. The possible range of scores was from 0 to 100%. The proposers were ranked as follows:

Firm	Score	Proposed Cost
TR Pieprzak	97%	\$1,250,000
Z-Contractors	88.5%	\$1,571,887
Wade Trim	74.2%	\$1,223,792

The Evaluation Committee recommends that **TR Pieprzak**, the number one ranked proposer, be named as the contractor for the above referenced Project.

On behalf of the Board please indicate your approval of this recommendation by signing below. Thank you for consideration of this recommendation.

Jeff Bednar, PE, CFM
 Environmental Engineer
 MCPWO Engineering

Evans Bantios, PE
 Construction & Maintenance Manager
 MCPWO Engineering-Wastewater Services

Brent Geurink, AICP
 Associate Planner – Land & Water Resources
 Macomb County Dept. of Planning &
 Economic Development

Stephen Downing
 Engineer II
 MCPWO Engineering-Wastewater Services

Jeffrey H. Bednar, PE, CFM
 Environmental Engineer
 MCPWO Engineering

Approved: _____

Not Approved: _____

Hold: _____

Authorized Board Member Signature
 Sterling Relief Drain Board

Authorized Board Member Name (print)



July 17, 2018

Macomb County Public Works Office
21777 Dunham Road
Clinton Township, MI 48036

ATTN: Mr. Stephen Downing, Engineer II – Waste Water Services

Re: Sterling Relief Lateral Drain Day-Lighting
MCPWO-SWS-2018-RFQ-501
Technical Proposal

Dear Mr. Downing:

T.R. Pieprzak Co., Inc. is pleased to team with Hubbell, Roth & Clark, Inc. (HRC), Sherman Nursery Farms, InSite Design Studio, Inc., the Clinton River Watershed Council to submit this proposal to the Macomb County Public Works Office (MCPWO) for design and construction services to intercept and daylight a portion of the Sterling Relief Drain Laterals located in Sterling Heights, Michigan. Our team offers a proven ability to deliver a design-build stormwater grant project on a MCPWO drain on schedule and within budget, while exceeding grant outcome deliverables.

Pieprzak carefully selected our team due to each firm's ability to successfully manage numerous projects, from planning and design through to construction and startup. This real world, hands-on experience will be invaluable to you. The process starts with our team bringing its experience and background of working with the MCPWO on past drain projects, including the Sterling Relief Drain. Our team will design an approach that will meet the project outcomes while maintaining the stormwater capacity needs of the drainage district, improving water quality, and minimizing the long-term maintenance of the drain corridor.

We appreciate this opportunity to assist you with this important project. If you have any questions or require any additional information, please contact the undersigned.

A handwritten signature in black ink, appearing to read 'Greg Pieprzak', is written over a horizontal line.

Greg Pieprzak

Vice President of Field Operations

6267 St. Clair Hwy
China Township, MI 48054

Phone: 810-329-4027
Fax: 810-329-6359
Email: trpieprzak@comcast.net



B. Company's Experience and Qualifications

STATEMENT OF INTEREST AND CAPABILITY TO PERFORM THE WORK

T.R. Pieprzak is confident in our capability to perform the work outlined in the Request for Qualification (RFQ) and compiled a team that has proven success working on Macomb County Public Works GLRI grants. Our most recent collaboration, Partridge Creek (Gloede Drain), demonstrates our ability to meet deadlines, budgets, and exceed grant requirements for habitat outcomes.

T.R. Pieprzak Co. is a small family-owned business that has grown to an underground infrastructure construction and land balancing company serving Southeastern Michigan since 1954. We have approximately 40 experienced employees and nearly 80 pieces of heavy equipment in various sizes to complete any size project. With a sister company that owns and manages two sand and gravel operations, we have prioritized access to any material needed for construction. We currently have an MDOT pre-qualification rating/capacity of over 35 million dollars in all categories related to this work. Our over 60 years of experience includes extensive work in Macomb County and numerous County drain projects for the MCPWO.

**Our team has over
200 years of
experience combined!**

HRC has a longstanding working relationship with the MCPWO spanning over 40 years, including a condition assessment on the Sterling Relief Drain in 2006. They have been hired to design and manage more GLRI grant projects in the Clinton River Area of Concern than any other engineering firm in Southeast Michigan. Their knowledge of EPA grant administration, successful stormwater and habitat design, and familiarity of the Sterling Relief Drain will allow for a quick analysis and design of the lateral daylighting to allow us to quickly proceed with construction.

Sherman Nursery Farms is a family-owned and operated company that has been in business since 1969 serving residential, commercial, and municipal clients across southeast Michigan with hardscape, softscape, and design services. In 1986 the growing fields were established with 29 acres and since expanded to 66 acres, for growing and marketing trees. Their business became a growing nursery with beautiful trees, designing and installing landscapes visions, and adding a retail lot for customers to come and see the trees that will be added to their landscaping. Their high-quality work and landscaping materials were utilized most recently for MCPWO's Partridge Creek (Gloede Drain) project. This project included the planting of over 600 trees.

Established in 1994, InSite Design Studio is a landscape architecture firm that serves public, recreational, commercial, institutional, and residential clients. They strive to restore ecological function to every project site, regardless of size or scope, while maintaining high aesthetic standards. InSite was added to the team for their expertise in designing bioretention systems. With the project site adjacent to residential backyards, it is important that the design of the bioretention areas not only be functional and low maintenance, but aesthetically pleasing. InSite is committed to participatory design throughout the decision-making process and works inclusively with client, public, and governmental input.

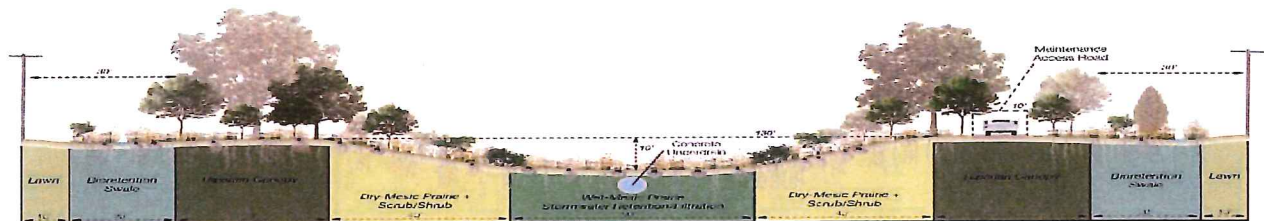


Our team is complete with the assistance of the Clinton River Watershed Council (CRWC) to assist with any monitoring efforts required by the grant and not covered by MCPWO staff. The mission of the CRWC is to protect, enhance, and celebrate the Clinton River, its watershed, and Lake St. Clair. They have been assisting municipalities with meeting their GLRI grant monitoring requirements, including the projects overseen by MCPWO. Their knowledge of grant requirements, QAPPs, and monitoring requirements will allow for consistent data collection in a very cost-effective manner.

GRANT PROJECT OVERVIEW

The Pieprzak Team has met to discuss the successful delivery of the stated grant goals including:

- Retrofitting approximately one mile of open channel drain to intercept and daylight lateral storm drains to reduce, slow and filter urban stormwater runoff prior to entering the Sterling Relief Drain underdrain and Red Run Drain;
- Improving the water quality entering the Red Run Drain;
- Creating an ecologically diverse and resilient natural habitat corridor;
- Maintaining or improve current flood conveyance capacity; and
- Creating approximately 25 total acres of habitat through ecological restoration, including:
 - Six +/- acres open channel bottom: wet-mesic prairie/stormwater infiltration zone
 - Nine +/- acres channel slopes: Dry-mesic prairie plus scrub/shrub
 - Five +/- acres riparian tree canopy and low-profile prairie
 - Five +/- acres lateral bioretention swales to retain and infiltrate local drainage



Our focus is to maximize the total amount of work completed on the ground to meet or exceed grant outcomes. With a Design–Build approach, the opportunity exists to exceed EPA grant outcome expectations, while MCPWO demonstrates the highest level of regional benefit with total fiscal responsibility. To accomplish the grant outcomes along with local objectives, we will rely on our experienced team in the following ways:

Design–Build. We believe MCPWO’s decision to proceed with a Design–Build approach is the best way to be successful in this effort with an accelerated project schedule. It allows us to work with our team of design professionals and the MCPWO, from the onset, to engineer the best real-world storm sewer solutions for daylighting the laterals to the Sterling Relief Drain and providing bioretention areas to improve water quality. This early collaboration allows for reduced engineering costs and more money left available for construction and landscaping. Pieprzak will work closely with our design team to convey the minimum level of detail needed for MCPWO approval, permitting, and construction. We will develop baseline details and make in-field adjustments, as site conditions dictate. For instance, similar diameter lateral storm sewers can likely be grouped together to develop baseline engineering details. Nuances of each lateral will be broadly addressed in the design phase but resolved in the field, with MCPWO approval received prior to excavation. Similarly, the bioretention plans will be generated based on a uniform design. This detail will not only make construction easier, but it will facilitate easier maintenance. The designs can be expanded in preset increments to match the needs of each lateral sewer diameter and flow. Subtle deviations for aesthetics can then be done. In proceeding this way, less engineering/landscape architecture time will be needed and again, more budget for construction and planting.

Monitoring. The CRWC will perform the required monitoring for the project. They have grant monitoring experience on other EPA projects, including the Clinton River Spillway, Partridge Creek (Gloede Drain), and McBride Drain. The CRWC has the expertise on staff to provide the monitoring in a cost-effective manner.

GLRI Grant Administration. Our team has extensive knowledge of assisting clients with GLRI grant administration, including the current MCPWO grant projects for the Clinton River Spillway, Partridge Creek (Gloede Drain) and McBride Drain. This experience and relationship with MCPWO and the EPA will allow for us to complete the Quality Assurance Project Plan (QAPP) and reporting assistance needed at the lowest possible cost.

STATEMENT OF SCHEDULE TO PERFORM THE WORK

Pieprzak and our team understands the goals and desired outcomes of this project and have reviewed the proposed schedule. Each firm has confirmed they have the capacity to dedicate the specialized manpower and resources necessary to meet and exceed the EPA's and County's benchmarks. The preliminary schedule provided in the Addendum is realistic and achievable with our team.

EXPERIENCE IN DESIGN BUILD PROJECTS



HRC has been involved with several design build projects of this nature. Specifically, the Clinton River Area of Concern projects for MCPWO Sterling Heights, Utica, Troy, and the CRWC, all had elements of Design-Build. These projects included preliminary field work and typical designs for each stormwater or habitat feature. The designs were presented to the client for review and approval then used for multiple locations while working with the contractor to do on-site modifications, as needed. This approach was used with the Clinton River Corridor (Sterling Heights and Utica) and Partridge Creek (Gloede Drain) and the collaboration allowed us to meet an aggressive timeline while addressing varying field conditions. This process, Design-Build or a slightly modified Design-Build, was

proposed by HRC and approved by NOAA and EPA for use on these grant projects and by MDEQ for permitting. Their experience with this process, will streamline our efforts and reduce non-construction costs, leaving more grant funds for construction and tree planting.

Pieprzak and HRC utilized a design build approach on the Partridge Creek (Gloede Drain) project. HRC prepared baseline engineering plans and typical details to provide enough direction for MCPWO approval, estimating costs and materials and obtaining permits. Working together, Pieprzak and HRC made infield modifications due to changing site conditions and project priorities to achieve the desired EPA grant outcomes.

HRC utilized a similar design build approach on the Clinton River Corridor project addressing 9-miles of habitat impairments along the Clinton River in Sterling Heights and Utica. Natural channel restoration protocols including restoring natural meanders, riffle-pool bed topography, and channel dimensions were used to ensure long-term stability. Natural riffle grade controls and floodplain bench excavation in channelized areas provided connectivity to the floodplain. Stabilizing 7,600 feet of eroding riverbanks reduced sediment loading by 230,000 tons annually. HRC worked with the project contractor to modify project details to address priority areas and meet grant outcomes.

EXPERIENCE IN DESIGN AND CONSTRUCTION OF STORM SEWER SYSTEMS

Pieprzak has extensive experience in the construction of storm sewer systems, including open drain construction and detention basins. Our crews install storm pipe daily, having installed over 100 miles of storm pipe in the last eight years ranging in sizes from 3 inches to 108 inches; box culverts up to 26 feet by 9 feet; and drain structures from 2 feet in diameter to 20 feet by 20 feet square. We own our equipment which allows for quick mobilization preventing delays that may occur from limited rental availability.



For over 100 years, HRC has been designing, modeling, inspecting and providing construction oversight for storm sewer systems for its many municipal clients, including County Drain Commissioners across Michigan. These services include modeling for small neighborhood systems to entire subwatersheds, like the Belle River.

EXPERIENCE IN DESIGN AND CONSTRUCTION OF BIORETENTION

HRC assists many clients with designing green infrastructure plans to manage stormwater on municipal and commercial properties. Many designs include retrofitting existing properties and storm drain systems to address impacts of urban runoff, such as increased volumes due to imperviousness and nonpoint sources pollution. HRC and InSite Design Studio have been partnered on multiple projects to merge stormwater engineering with the functionality and aesthetics clients desire, especially in public areas.



InSite Design Studio works with many clients, including County Drain Commissioners, to design bioretention areas for mitigating major stormwater issues and improving water quality, creating habitat for regional wildlife, beautifying public spaces while efficiently managing stormwater and attracting wildlife, increasing visibility and awareness of rain gardens by framing highly utilized public spaces, and enhancing public spaces with rain gardens that are both functional and aesthetically pleasing. Additional work with municipalities includes designing stormwater systems to handle 100-year storm events through a variety of innovative strategies: green roofs, cisterns, infiltration areas, stormwater planters, pervious pavements, and native

plantings that absorb stormwater and are visually appropriate in an urban setting. Designs respect varying neighborhood faces and streetscapes with differing design strategies and pay keen attention to the pedestrian experience in relation to the building and interface of the right-of-way. InSite Design Studio has extensive experience with building bioretention systems with prominent and high visibility and utilizing them as an opportunity to improve aesthetics in highly urbanized landscapes.

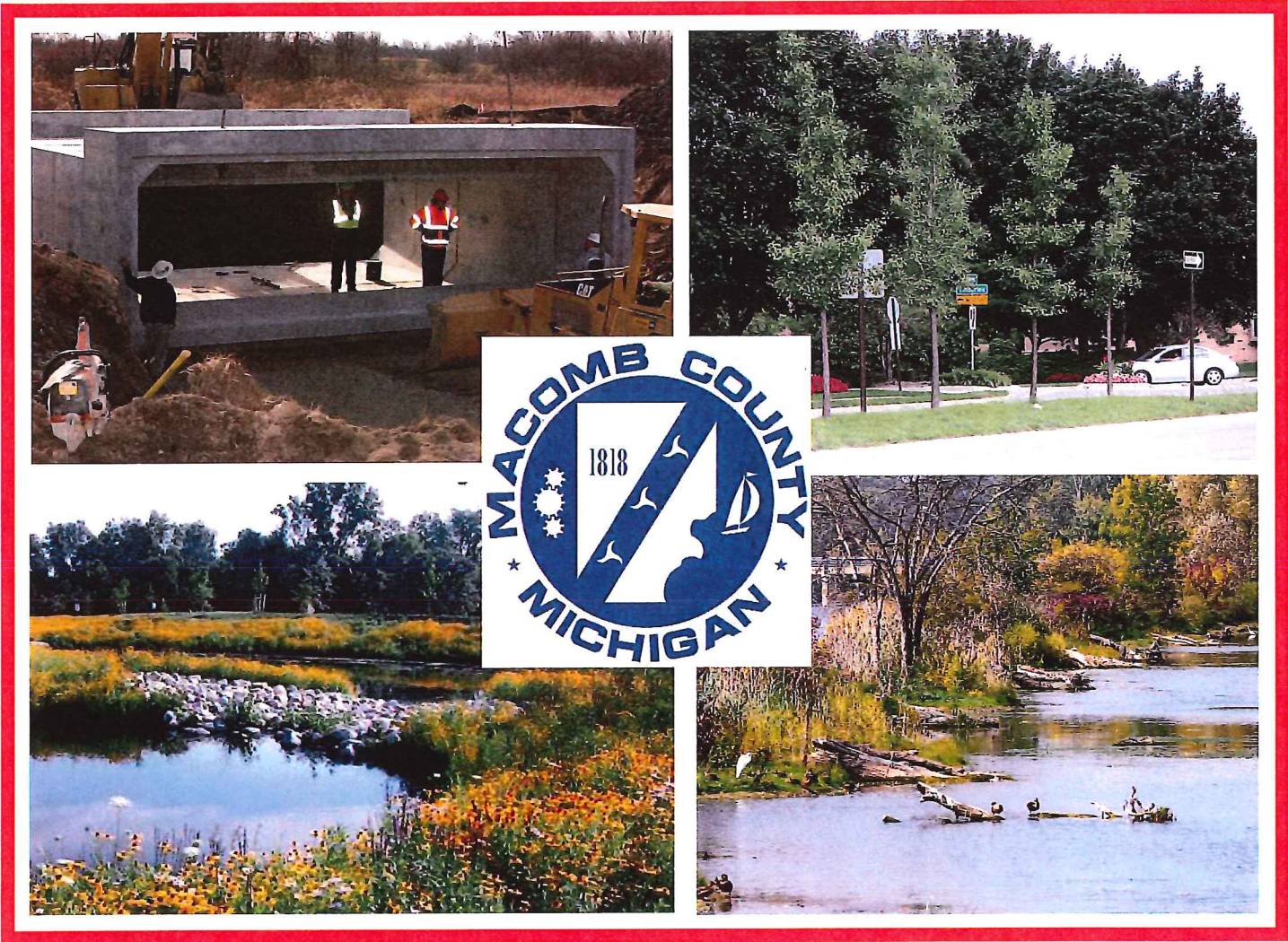
EXPERIENCE IN DESIGN AND CONSTRUCTION OF LANDSCAPING

Sherman Nursery Farms has successfully completed residential, commercial, municipal, and federal projects from small and simple to large and complex. Their knowledge and expertise to help guide the design for the best landscape outcome possible. Today, they concentrate most

of their focus on municipal and commercial projects, including projects on river systems, drainage districts, freeways, and urban environments. In these projects, they have planted up to several thousand pieces of plant material, installed spray-less irrigation systems and completed large multi-scope streetscapes. These projects have included LEED certified landscape requirement projects and all other scopes involved in landscape construction. In addition to landscaping, restoration is another of Sherman Nursery Farms' primary scope of work. Each year, they plant several hundred trees for numerous local municipalities.



InSite Design Studio's services range from large-scale site planning and design to detailed construction documents. Their design and consultation services include innovative stormwater design/environmental planning; schematic design through construction documentation; site engineering and grading; planting and hardscape design; floristic quality inventory and assessment; wetland delineation and creation; and interpretative signage and publication design.



Macomb County Public Works Office
STERLING RELIEF LATERAL DRAIN DAY-LIGHTING
 Qualification No.: MCPWO-SWS-2018-RFQ-501

Cost Proposal

Prepared by:
TR Pieprzak
 6267 St. Clair Highway
 China Township, MI 48054





A. Staffing Cost Matrix

TR Pieprzak	
Earth Excavation	
Strip Topsoil	
Construct Bioswales	
Re-spread Top Soil	
	\$377,600
Day Light Lateral	
Tap Lateral Manholes	
Install new lateral pipe in Bio Swales	
Tap and install riser pipe in bottom of Bioswales	
Construct weir in Lateral Manholes	
	\$258,600

Sherman Nursery Farms	
Landscape	
Trees-150ea per acre of bio swale	
Shrubs- 1ea every 1.5 linear feet of bio swale	
Wet land plugs- 1200 per acre of bio swale	
Seed and mulch all disturbed areas	
	\$313,800

Clinton River Watershed Council	
Monitoring	
DEQ Proc. 51	
Temperature Loggers	
Frog/Toad	
Water Chemistry & Flow	
Reporting	
	\$5,000

InSite Design			
	S. Gibb-Randall Principal	L. Nelson Project Manager	S. Noblet Landscape Designer
Hourly rates	\$125	\$100	\$85
Project Initiation/Site Analysis/Field Work			
Obtain and coordinate base information	1	2	
Field visits/photo documentation	8	8	8
	\$1,000	\$1,000	\$680
Hydrological Analysis			
Coordinate with team for subwatershed flows as they relate to landscape design	2	8	
	\$250	\$800	
Grading			
Collaborate with site grading as integrates w hydrology, landscape habitat capacity and species choices	4	16	24
	\$500	\$1,600	\$2,040
Plan Preparation			
Design Development 70%	8	40	20
Graphics and species choices for Neighborhood Meeting	2	2	40
Plan Documents 90%	6	60	10
Final Documents 100%	4	32	10
	\$2,500	\$13,400	\$6,800
Construction			
Field visits as relate to strategic construction intervals	16	16	8
Punch List	2	20	8
Field visits for plant establishment & management assessment	4	4	16
	\$2,750	\$4,000	\$2,720
Meetings: Kickoff, Neighborhood, 70%, 90%			
4 meetings	16	16	16
	\$2,000	\$1,600	\$1,360
Subtotals per staff person	\$9,000	\$22,400	\$13,600
TOTAL			\$45,000

Macomb County Public Works Office
STERLING RELIEF LATERAL DRAIN DAY LIGHTING — HRC Hours

Task	Principal		Sr. Associate/Manager		Department Manager/Engineer		Project Engineer		Survey		Graduate Engineer		CADD/GIS/Dwg		Administrative Support		Totals	Percentage		
	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost				
Design/Engineering																				
1.) Data Collection		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -				
a.) Field Survey			16	\$ 2,720.00		\$ -		\$ -	40	\$ 5,000.00	20	\$ 1,700.00	26	\$ 2,470.00		\$ -				
b.) Record Document Review			8	\$ 1,496.00	4	\$ 560.00	8	\$ 800.00												
2.) Base Survey Plan			8	\$ 1,360.00		\$ -		\$ -	10	\$ 1,250.00	8	\$ 680.00	30	\$ 2,850.00		\$ -				
3.) Contributing Watershed Analysis			10	\$ 1,700.00		\$ -	40	\$ 4,000.00		\$ -		\$ -	25	\$ 2,375.00		\$ -				
4.) Flow Calculations and Storm Day Lighting Design	5	\$ 935.00	20	\$ 3,400.00		\$ -	10	\$ 1,000.00		\$ -	45	\$ 3,825.00	60	\$ 5,700.00		\$ -				
5.) Site Grading Design			20	\$ 3,400.00	10	\$ 1,400.00		\$ -		\$ -	40	\$ 3,400.00	35	\$ 3,325.00		\$ -				
6.) Earthwork Calculations			15	\$ 2,550.00		\$ -		\$ -		\$ -	35	\$ 2,975.00		\$ -		\$ -				
7.) Plan Preparation	5	\$ 935.00	10	\$ 1,700.00	40	\$ 5,600.00		\$ -		\$ -		\$ -	90	\$ 8,550.00		\$ -				
8.) Field Construction Layout				\$ -		\$ -		\$ -	100	\$ 12,500.00	18	\$ 1,530.00	10	\$ 950.00		\$ -				
9.) Construction Coordination QA/QC	5	\$ 935.00	140	\$ 23,800.00	100	\$ 14,000.00		\$ -		\$ -		\$ -		\$ -		\$ -				
Sub-Totals	15	\$ 2,805.00	247	\$ 42,126.00	154	\$ 21,560.00	58	\$ 5,800.00	150	\$ 18,750.00	166	\$ 14,110.00	276	\$ 26,220.00	21	\$ 1,260.00	21	\$ 1,260.00	\$ 133,703.00	71.31%
Permitting																				
1.) SECC		\$ -		\$ -	2	\$ 280.00		\$ -		\$ -	15	\$ 1,275.00	15	\$ 1,425.00	8	\$ 480.00				
Sub-Totals					2	\$ 280.00					15	\$ 1,275.00	15	\$ 1,425.00	8	\$ 480.00			\$ 3,500.00	1.87%
Plan Development																				
1.) QAPP	2	\$ 374.00	4	\$ 680.00	10	\$ 1,400.00		\$ -		\$ -	20	\$ 1,700.00		\$ -		\$ -				
2.) Monitoring				\$ -	10	\$ 1,400.00		\$ -		\$ -	15	\$ 1,275.00	5	\$ 475.00	10	\$ 600.00				
3.) Maintenance Plan	2	\$ 374.00	4	\$ 680.00	10	\$ 1,400.00		\$ -		\$ -	10	\$ 850.00	10	\$ 950.00	15	\$ 900.00				
Sub-Totals	4	\$ 748.00	8	\$ 1,360.00	30	\$ 4,200.00		\$ -		\$ -	45	\$ 3,825.00	15	\$ 1,425.00	35	\$ 2,100.00			\$ 15,791.00	7.56%
Reporting																				
1.) Monthly Progress Reports/ EPA Assistance	6	\$ 1,122.00	15	\$ 2,550.00	25	\$ 3,500.00		\$ -		\$ -	35	\$ 2,975.00	10	\$ 950.00	30	\$ 1,800.00				
2.) Final Report	4	\$ 748.00	5	\$ 850.00	20	\$ 2,800.00		\$ -		\$ -	30	\$ 2,550.00	10	\$ 950.00	20	\$ 1,200.00				
Sub-Totals	10	\$ 1,870.00	20	\$ 3,400.00	45	\$ 6,300.00		\$ -		\$ -	65	\$ 5,525.00	20	\$ 1,900.00	50	\$ 3,000.00			\$ 22,195.00	11.84%
Meeting/Outreach																				
1.) Design Meetings	12	\$ 2,244.00	25	\$ 4,250.00	25	\$ 3,500.00		\$ -		\$ -	10	\$ 850.00		\$ -	8	\$ 480.00				
2.) Resident Meetings	4	\$ 748.00	4	\$ 680.00	4	\$ 560.00		\$ -		\$ -	5	\$ 425.00		\$ -	8	\$ 480.00				
Sub-Totals	16	\$ 2,992.00	29	\$ 4,930.00	29	\$ 4,060.00		\$ -		\$ -	15	\$ 1,275.00		\$ -	16	\$ 960.00			\$ 14,306.00	7.63%
Total Hours	45		304		260		58		150		306		326		130					
% of Total Effort	3.49%		27.64%		19.41%		3.09%		10.00%		13.87%		16.52%		4.16%					
Total																				





B. Rate Chart

Hubbell, Roth & Clark, Inc.

2018 Estimated Hourly Rate Schedule

Prepared for:

Macomb County Public Works

<u>Category</u>	<u>Billable Rates</u>
Principal	187.00 - 187.00
Sr. Associate/Managing Engineer	167.00 - 187.00
Associate/Managing Engineer	136.00 - 165.00
Department Manager	125.00 - 161.00
Manager	123.00 - 128.00
Sr. Project Engineer/Architect	115.00 - 156.00
Project Engineer/Architect	97.00 - 138.00
Staff Engineer/Architect	94.00 - 112.00
Graduate Engineer/Architect I/II	83.00 - 97.00
Transportation Specialist	130.00 - 130.00
GIS Specialist	70.00 - 97.00
Right of Way Specialist	141.00 - 141.00
Environmental Analyst	78.00 - 102.00
Sr. Designer	128.00 - 156.00
Designer	91.00 - 133.00
Sr. Cadd Technician	95.00 - 109.00
Survey Office Supervisor	128.00 - 128.00
Registered Surveyor	105.00 - 105.00
Survey Technician	98.00 - 99.00
Survey Party Chief	79.00 - 114.00
Survey - Instrument Person	76.00 - 76.00
Survey - Survey Assistant	59.00 - 59.00
Supervisors- Construction Observation	110.00 - 115.00
Field Project Representatives	95.00 - 132.00
Construction - Office Technician	53.00 - 66.00
Sr. Construction Observer	76.00 - 94.00
Construction Observer I/II	45.00 - 78.00
Construction Engineer	95.00 - 138.00
Testing Technician	53.00 - 97.00
Administrative Support**	53.00 - 114.00

*Wage rates shown above are estimated for 2018.

Billable rates for Hubbell, Roth & Clark, Inc. include Unemployment and Payroll taxes, contributions for Social Security, Retirement benefits, Medical and Life insurance benefits, normal printing cost, telephones, fax, computer time, mileage, other overhead costs and profit.

Allowable Reimbursable expenses will be invoiced at our cost which is defined as the direct costs plus 5% .

** This Category includes Computer, Reproduction and Administrative Staff.



STERLING RELIEF DRAIN - 8/13/18

<u>Funding Source</u>	<u>Apportionment</u>	<u>Manager</u>	<u>Vendor</u>	<u>Amount</u>	<u>Invoice Detail</u>	<u>Project Summary</u>	<u>Project Balance</u>
Sterling Relief Drain	Chapter 20 State of MI - 3.29% Macomb County - 7.79% Sterling Heights - 88.93% SAW 1208-01 (Closing date 10/2018)	Bednar	Fahey, Schultz, Burzych, Rhodes, PLC	\$ 6,410.28	Invoice #43027 - 7/10/18 Legal Services - ending 6/30/18	District Delineation	\$ 202,719.26
			Fishbeck, Thompson, Carr & Huber, Inc.	\$ 561.50	Invoice #376289 - 7/23/18 Engineering Services - ending 7/13/18	SAW Grant Assistance	\$ 12,006.00
			Oceanview Excavation	\$ 512.50	Invoice #528 - 7/22/18	Brush and Debris Removal from Bar Grate	
			Tetra Tech, Inc.	\$ 15,535.28	Invoice #51926233 - 6/27/18 Engineering Services - ending 6/22/18	GPS Survey, CCTV, Processing GPS Data	\$ 209,129.54
Total				\$ 23,019.56			

YTD Trial Balance

Fund: Sterling Relief

As of Fiscal Period: Oct 1, 2017-July 31, 2018

	O&M Balance 9/30/2017	O&M	Total 7/31/2018
Cash - Operating	119,702	8,448	128,150
Accounts Receivable			0
Assets			0
Liabilities		1,074	1,074
Revenues		18,824	18,824
Expenditures		11,450	11,450
Equity	119,702		127,076

NOTES

	Grant	Match	Total
SAW 1208-01	377,586	41,954	419,540
YTD	(195,139)	(21,682)	(216,821)
Remaining	182,447	20,272	202,719