

STERLING RELIEF DRAIN
INTRA-COUNTY DRAINAGE BOARD
OCTOBER 18, 2020
10:30 A.M.
AGENDA

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

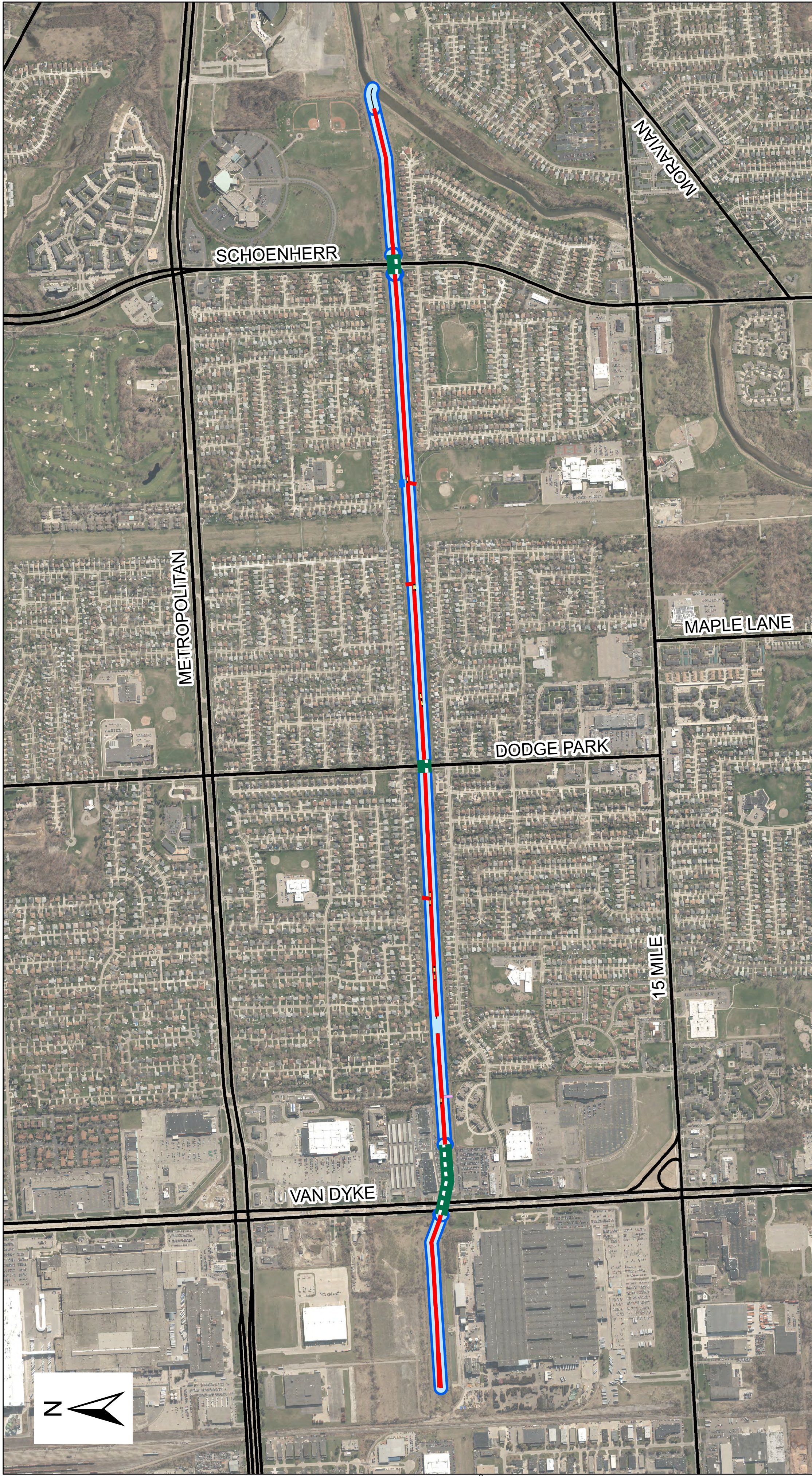
**Call in Number: 1-262-404-7425
Access Code: 306 814 485**

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for October 18, 2020	
3. Approval of Minutes for November 9, 2020	4
4. Public Participation	
5. Project Update – Jeff Bednar	6
6. Approval of EPA Green Infrastructure Grant Agreement (\$213,850/no match) and Cardno Inc. Change Order for Plant Establishment Activities (\$147,600) - Jeff Bednar	9
<p>Motion: To approve the grant agreement with the EPA for \$213,850 to fund the ongoing establishment and maintenance of habitat restoration activities and installation of an automated gate for increased treatment of runoff in the Sterling Relief Drain (100% grant-funded).</p> <p>Motion: To approve a change order to the Cardno, Inc contract for \$147,600 and an additional 2 years for the ongoing establishment and maintenance of habitat restoration activities (100% grant-funded).</p>	
7. Sterling Relief/Red Run Drain Grant Funded Habitat & Trail Project Agreement (East of Schoenherr) – Jeff Bednar	15
<p>Motion: To approve the habitat and trail grant work project agreement with the Red Run Drainage District and authorize Commissioner Miller to execute the agreement.</p>	








8. Sterling Relief Ivy Drive Fence Replacement – Stephen Downing	65
Motion: To approve the replacement of the existing fence at the Ivy Road Crossing for the not-to-exceed amount of \$23,800.	
9. Consideration for approval of invoices (see attached)	70
10. Financial Report – Bruce Manning	71
11. Adjourn	

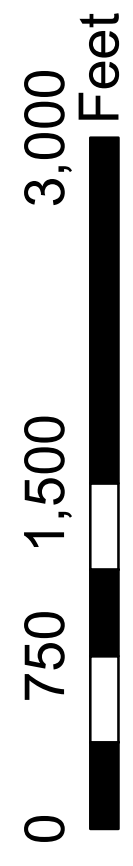
STERLING RELIEF

STERLING HEIGHTS



Legend

- | Enclosed Gravity | | Open Channel | |
|---|--------------------|---|----------------|
|  | < 60" Dia |  | Ditch |
|  | >= 60" Dia |  | Multiple Pipes |
|  | Lateral Connection |  | Pond |
|  | Culvert | | |



Drain Length (Feet/Miles):
15,747.52 / 2.98



An adjourned meeting of the Intra-County Drainage Board for the **STERLING RELIEF DRAIN** was held via telephone conference per the State Public Act 228 of 2020 due to the COVID-19 pandemic, on November 9, 2020, at 10:52 A.M.

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

ALSO PRESENT: Robert Mijac, Macomb County Board of Commissioners; Brian Baker, Chief Deputy, Karen Czernel, Deputy, Stephen Downing, Construction & Maintenance Manager, Bruce Manning, Financial Manager, Tom Stockel, Construction Engineer, Jeff Bednar P.E., Environmental Resources Manager, Vince Astorino, Operations & Flow Manager, Kellie Kource, Drain Account Specialist, Macomb County Public Works

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

Adopted: YEAS: 3
NAYS: 0

Minutes of the meeting of September 14, 2020 were presented. A motion was made by Mr. Santo, supported by Mr. Romano to approve the minutes as presented.

Adopted: YEAS: 3
NAYS: 0

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

Mr. Bednar updated the board that we have wrapped up the daylighting project and have been in communication with the EPA to receive direct funding for maintenance support. They are interested so we provided cost estimates and time tables to make sure the project stays on track and the plants thrive. We also discussed adding a gate at the downstream end of the project to raise and lower to capture smaller rainwater events.

The grant that we have is through the Planning Department to do some bank stabilization, planting, and a trail on the north side of the Sterling Relief that ties into the Red Run Drain. We also applied for a 319 grant to continue work on the Sterling Relief.

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

Adopted: YEAS: 3
NAYS: 0

The Chair presented the invoices totaling \$6,260.00 to the board for review and approval.

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

Adopted: YEAS: 3
NAYS: 0

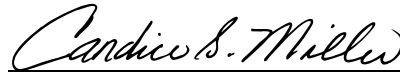
A motion to receive and file the financial report given by Mr. Manning was made by Mr. Romano, supported by Mr. Santo.

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 11:03 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 taking by the Intra-County Drainage Board for the Drainage District shown on the attached set of minutes, on November 9, 2020 the original of which is on file in the Public Works Commissioner's Office. Public notice of the meeting was given pursuant to Act No. 267, Public Acts of Michigan, 1975, including, in the case of a special or rescheduled meeting or a meeting secured for more than 36 hours, notice by posting at least 18 hours prior to the time set for the meeting.



Candice S. Miller, Chair
Macomb County Public Works Commissioner

DATED: 11/9/20

FOR IMMEDIATE RELEASE

October 15, 2021

Contact:

Norb Franz, communications manager

Macomb County Public Works Office

586-201-5732 norb.franz@macombgov.org

Macomb County wins top award for green infrastructure project

A project by the Macomb County Public Works Office that uses green infrastructure to improve water quality has earned the top award from the Michigan chapter of the American Public Works Association.

The “daylighting and green infrastructure retrofit” of the Sterling Relief Drain in Sterling Heights was awarded Project of the Year in the category of Quality of Life/\$1 Million to \$5 Million, by the Michigan chapter of the APWA.

“We’re proud and honored to receive this award from the APWA,” Macomb County Public Works Commissioner Candice S. Miller said. “Like we always say, ‘Water quality equals quality of life,’ and this project has been a notable and innovative effort to improve both.”

The Sterling Relief Drain – located south of Metropolitan Parkway, from west of Ryan Road to east of Schoenherr Road -- was built in the 1960s and drains the stormwater from 20% of Sterling Heights. It outlets to the Red Run Drain to the east, and the flow eventually reaches Lake St. Clair.

The project’s primary goal was to improve water quality by redesigning and retrofitting two miles of open channel drain by forcing the flow into a naturalized green corridor after “daylighting” – or exposing – two lateral storm drains and removing a 300-foot stretch of pipe to make it appear more like an intermittent stream. The ground then acts as a sponge, soaking up harmful nutrients and sediment before they have a chance to reach the Red Run Drain during normal rain events.

Approximately 135,000 native perennial plant plugs were planted on the slope and bottom of the open channel including native pollinator plants to create a 2.5-mile-long butterfly flyway. Additionally, more than 1,000 shrubs were planted in the bio-retention areas. Hundreds of 1- to 2-inch caliper native species trees were planted to establish a tree canopy.

The project started in 2018, with most of the work performed in 2019. It was funded by grants from the U.S. Environmental Protection Agency and the National Fish & Wildlife Foundation.

“This project is all about water quality and improving our environment, which improves our quality of life,” said Miller.

Macomb County Public Works is joined in the award by engineering consultant Hubbell, Roth & Clark, and contractor T.R. Pieprzak Company.

PHOTO:

Macomb County Public Works Commissioner Candice S. Miller, center, holds the American Public Works Association award and is joined by, from left: Macomb County Public Works Environmental Resources Manager Jeff Bednar; Duane Poole, president of the Michigan chapter of APWA; Greg Pieprzak of T.R. Pieprzak Company; and Jamie Burton of Hubbell, Roth & Clark engineers.

APWA Michigan 2021 Project of the Year Award Winner

QUALITY OF LIFE \$1 MILLION TO \$5 MILLION

In the Category of Quality of Life One Million to Five Million Dollars, the Project award goes to the Macomb County Public Works Office for the Sterling Relief Drain Daylighting and Green Infrastructure Retrofit Project. The Consultant is Hubbell Roth and Clark, and the Contractor is TR Pieperzak Company.

This project's primary goal was to improve water quality by redesigning and retrofitting two miles of open channel drain. This was achieved by forcing flows into a naturalized green corridor and daylighting lateral storm drains to reduce, slow, and filter stormwater runoff before it enters the Red Run Drain and Clinton River.

Additional project goals included:

- Providing an increase water storage capacity in the Sterling Relief Drain,
- Creating an ecologically diverse and resilient habitat,
- Supporting native pollinators, and
- Connecting natural areas and corridors

To improve water quality, 2 of the 28 lateral drains were diverted from the underdrain and daylighted. Ten removable restrictor plates were installed in the underdrain which daylighted the rest of the flow. These changes allowed stormwater to first flow into the open channel, infiltrate the ground, and only reach the underdrain if the water level in the channel rose too high. Near the end of the system, check dams were placed and 300 feet of the 48-inch drain was removed to fully daylight the runoff before it entered the Red Run Drain.

These changes not only improved water quality in the area, but also quality of life. The area was transformed into a flourishing habitat and kickstarted a potential five-mile-long flow reduction and water quality retrofit project.

Congratulations!



Candice S. Miller

Public Works Commissioner
Macomb County

Memo

To: Sterling Relief Drainage Board

From: Jeffrey H. Bednar, PE, CFM, Environmental Resources Manager

Date: October 13, 2021


Re: Request for Approval of Grant Agreement and Contract Modification

Please see the attached information regarding approval of a grant agreement with the United States Environmental Protection Agency (US EPA) for \$213,850 for ongoing establishment and maintenance of the habitat restoration and drain retrofit project at the Sterling Relief Drain. Along with maintenance activities, the grant includes fabrication and installation of an automated gate near Schoenherr Road.

Staff recommends modifying and extending the existing contract with Cardno, Inc. covering similar activities at the Area of Concern habitat restoration sites for an amount not to exceed \$147,600. This amount includes assessment, reporting, mapping, chemical treatment and native seeding and plantings for three years within the bioretention cells along the two-mile restoration area, and the establishment of a 6-foot-wide buffer strip on both sides of the drain to prevent encroachment of weeds and turf grass into the bioretention areas. Over 5,000 additional native plant plugs will be installed, as well as approximately 224 pounds of maintenance seeding over a three year period ending October 31, 2023.

To increase the overall effectiveness of the bioretention systems installed during the Sterling Relief Daylighting project, an automated gate will be fabricated and installed in the vicinity of Schoenherr Road. This will allow for increased treatment of runoff from the smaller and less intense rain events throughout the approximate two mile project area, while still allowing seasonal base flow, winter bypass, and sufficient dewatering time. This portion of the project will be obtained through competitive sealed bids in response to a Request for Proposal (RFP) proposed to be issued in early 2022. \$66,250 of the grant is reserved for this element.

In summary, we request acceptance of a grant agreement for \$213,850 with the US EPA for ongoing green infrastructure establishment at the Sterling Relief Drain, including the installation of an automated gate near Schoenherr Road. We also request authorization to extend the existing Cardno, Inc. contract to include ongoing establishment activities at the Sterling Relief Drain at a cost not to exceed \$147,600.

	U.S. ENVIRONMENTAL PROTECTION AGENCY Grant Agreement	GRANT NUMBER (FAIN): 00E02984 MODIFICATION NUMBER: 0 PROGRAM CODE: GL	DATE OF AWARD 06/03/2021
		TYPE OF ACTION New	MAILING DATE 06/10/2021
		PAYMENT METHOD: ASAP	ACH# 50811
		RECIPIENT TYPE: County	
RECIPIENT: MAC PUB WOR - Cty of Macomb - Public Works 21777 Dunham Road Clinton Township, MI 48036-1005 EIN: 38-6004868		PAYEE: City of Macomb - Public Works 21777 Dunham Road Clinton Township, MI 48036-1005	
PROJECT MANAGER Jeff Bednar 21777 Dunham Rd Clinton Township, MI 48036 E-Mail: jeff.bednar@macombgov.org Phone: 586-746-9118		EPA PROJECT OFFICER Cara Walsh 77 West Jackson Blvd., G-9J Chicago, IL 60604-350 E-Mail: Walsh.Cara@epa.gov Phone: 312-886-6191	
EPA GRANT SPECIALIST Kimberly Houston-Williams Assistance Section, MA-10J E-Mail: Houston-Williams.Kimberly@epa.gov Phone: 312-353-7928			
PROJECT TITLE AND DESCRIPTION Green Infrastructure Establishment at Sterling Relief Drain Macomb County Public Works will treat invasive species, establish new native plants, install a buffer strip to prevent encroachment of turf weeds into bioretention areas, and construct a berm and automated storm-water retention gate along Sterling Relief Drain in the Clinton River Watershed Area of Concern (AOC). This project will enhance and complement previous restoration efforts of the Sterling Relief Daylighting project and will contribute to the removal of Beneficial Use Impairments Loss of Fish and Wildlife Habitat and Degradation of Fish and Wildlife Populations in the AOC.			
BUDGET PERIOD 05/01/2021 - 10/31/2023	PROJECT PERIOD 05/01/2021 - 10/31/2023	TOTAL BUDGET PERIOD COST \$213,850.00	TOTAL PROJECT PERIOD COST \$213,850.00
NOTICE OF AWARD			
Based on your Application dated 04/16/2021 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards \$213,850.00. EPA agrees to cost-share <u>100.00%</u> of all approved budget period costs incurred, up to and not exceeding total federal funding of \$213,850.00. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA regulatory and statutory provisions, all terms and conditions of this agreement and any attachments.			
ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)		AWARD APPROVAL OFFICE	
ORGANIZATION / ADDRESS U.S. EPA Region 5 Mail Code MCG10J 77 West Jackson Blvd. Chicago, IL 60604-3507		ORGANIZATION / ADDRESS EPA R5, Great Lakes National Program Office R5 - Region 5 77 West Jackson Blvd. Chicago, IL 60604-3507	
THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY			
Digital signature applied by EPA Award Official William Massie - Chief, Acquisition and Assistance Branch			DATE 06/03/2021

EPA Funding Information

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	\$0	\$213,850	\$213,850
EPA In-Kind Amount	\$0	\$0	\$0
Unexpended Prior Year Balance	\$0	\$0	\$0
Other Federal Funds	\$0	\$0	\$0
Recipient Contribution	\$0	\$0	\$0
State Contribution	\$0	\$0	\$0
Local Contribution	\$0	\$0	\$0
Other Contribution	\$0	\$0	\$0
Allowable Project Cost	\$0	\$213,850	\$213,850

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.469 - Great Lakes Program	Clean Water Act: Sec. 118(c) as amended by PL 114-322	2 CFR 200, 2 CFR 1500 and 40 CFR 33

Fiscal									
Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation
-	2105HDX055	2021	B	05HCA	000BJ7XF1	4116	-	-	\$213,850
									\$213,850

Budget Summary Page

Table A - Object Class Category (Non-Construction)	Total Approved Allowable Budget Period Cost
1. Personnel	\$0
2. Fringe Benefits	\$0
3. Travel	\$0
4. Equipment	\$0
5. Supplies	\$0
6. Contractual	\$213,850
7. Construction	\$0
8. Other	\$0
9. Total Direct Charges	\$213,850
10. Indirect Costs: 0.00 % Base null	\$0
11. Total (Share: Recipient <u>0.00</u> % Federal <u>100.00</u> %)	\$213,850
12. Total Approved Assistance Amount	\$213,850
13. Program Income	\$0
14. Total EPA Amount Awarded This Action	\$213,850
15. Total EPA Amount Awarded To Date	\$213,850

Date of Issuance: 10/13/2021
Owner: Sterling Relief Drain
Drainage District
Contractor: Cardno, Inc.

Effective Date: 10/13/2021
Owner's Contract No.: SWS-2020-001
Contractor Contract No.:
Contract Name: Invasive Species Management

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

Contract is amended to include work plan activities at the Sterling Relief Drain listed under the Cardno Proposal for Establishment Activities at Sterling Relief Drain Revised October 2021 and attached hereto which include assessment, mapping, chemical treatment of noxious/invasive plants, establishment of buffer strips, and planting native seeds and plugs through three years, ending October 31, 2023.

The original Contract Sum was: \$ 178,495.00

The net change from previously approved Change Orders No. : \$ 0

The Contract Sum prior to this Change Order: \$ 178,495.00

The Contract Sum prior to this Change Order will be increased by: \$ 147,600.00

The new Contract Sum, including this Change Order, will be: \$ 326,095.00

The Contract Time will be changed by: 2 years

The date of Substantial Completion as of the date of this Change Order, therefore, is: October 31, 2023.

ACCEPTED:

ACCEPTED:

By: _____
Owner (Authorized Signature)

By: _____
Contractor (Authorized Signature)

Title _____
Board Chair

Title _____

Date _____

Date _____

Cardno Proposal for Establishment Activities at Sterling Relief Drain

Revised October 2021

Task	Year	Month	Cost	Notes
Consulting and Reporting	2021	October-December	\$5,000.00	Includes 1 visit, establishment of ArcGis Online (AGO), meetings and 1 report
Site Prep and Treatment	2021	October-November	\$24,250.00	Herbicide spot treatment throughout drain
Native Planting and Seeding	2022	March-May	\$18,400.00	Includes installation of a 6' buffer strip along each side of drain at the planting edge and supplemental planting throughout drain
Consulting and Reporting	2022	March – November	\$8,600.00	Includes 3 visits, maintenance of AGO, meetings and 3 reports
Native Planting	2022	May – July	\$23,250.00	Includes providing and installing 5,000 native plant plugs
Herbicide Treatment	2022	May – October	\$31,500.00	Includes herbicide treatment of buffer strip and herbicide spot treatment throughout drain twice during 2022
Consulting and Reporting	2023	March – October	\$6,600.00	Includes 2 visits, maintenance of AGO, meetings and 2 reports
Native Planting and Seeding	2023	March – July	\$13,500.00	Includes maintenance seeding and supplemental planting throughout drain
Herbicide Treatment	2023	May – October	\$16,500.00	Includes herbicide spot treatment throughout drain

Total	\$147,600.00
Year 1	\$29,250.00
Year 2	\$81,750.00
Year 3	\$36,600.00
	\$147,600.00

**RED RUN INTERCOUNTY DRAIN DRAINAGE DISTRICT
AND
STERLING RELIEF DRAIN DRAINAGE DISTRICT**

AGREEMENT

THIS AGREEMENT is made this ____ day of _____, 2021 by and between the Red Run Intercounty Drain Drainage District (“Red Run Intercounty Drain Drainage District”), by and through the Red Run Intercounty Drain Drainage Board, whose address is One Public Works Drive, Building #95W, Waterford, Michigan 48328 (“Red Run Intercounty Drain Drainage Board”) and the Sterling Relief Drain Drainage District (“Sterling Relief Drain Drainage District”), by and through the Sterling Relief Drain Drainage Board, whose address is 21777 Dunham Road, Clinton Township, MI 48036 (“Sterling Relief Drain Drainage Board”).

WHEREAS, the Red Run Intercounty Drain (“Red Run Intercounty Drain”) is an intercounty drain servicing Macomb and Oakland Counties, established under Chapter 21 of the Michigan Drain Code, Public Act 40 of 1956, as amended (“Drain Code”), and under the jurisdiction of the Red Run Intercounty Drain Drainage Board; and

WHEREAS, the Sterling Relief Drain (“Sterling Relief Drain”) is a county drain located in Macomb County, established under Chapter 20 of the Drain Code, and under the jurisdiction of the Sterling Relief Drain Drainage Board; and

WHEREAS, the Red Run Intercounty Drain Drainage Board is in the process of implementing a multimillion-dollar project for the repair, maintenance, and management of the Drain near the Michigan Lottery Amphitheatre at Freedom Hill in the City of Sterling Heights, Macomb County (“Project”); and

WHEREAS, Macomb County has applied for and obtained a National Fish and Wildlife Foundation grant (“NFWF Grant”) in the amount of Three Hundred Thousand and 00/100 (\$300,000) Dollars to increase habitat complexity and biodiversity, connect habitat corridors, benefit native pollinators, control invasive species, reduce erosion, increase riparian canopy, and develop a waterfront trail for public access for over 1.35 miles of riparian areas along the Sterling Relief Drain and the Red Run Intercounty Drain (the “Grant Work”). The NFWF Grant application and agreement are attached hereto as **Exhibit A**; and

WHEREAS, Macomb County has requested that the Red Run Intercounty Drain Drainage District perform the Grant Work as part of the Project, which includes work along the Sterling Relief Drain, and has agreed to transfer the NFWF Grant funds to the Red Run Intercounty Drain Drainage District to offset the costs of the Grant Work; and

WHEREAS, the Macomb County Department of Roads has requested that the Red Run Intercounty Drain Drainage District construct the waterfront trail portion of the Grant Work (“Waterfront Trail”) as part of the Project. The Waterfront Trail consists of a ten-foot-wide, aggregate trail, commencing at Schoenherr Road, and following at the north bank of the Sterling

Relief Drain, then following the north bank of the Red Run Intercounty Drain, terminating at Metropolitan Parkway and is as described and depicted in the attached **Exhibit B**; and

WHEREAS, as the total estimated cost for the Grant Work is One Million One Hundred Thirty-Five Thousand One Hundred Seventy-Two and 50/100 (\$1,135,172.50) Dollars, the NFWF Grant requires certain additional matching funds be provided from Macomb County, the Macomb County Department of Roads, and the Red Run Intercounty Drain Drainage District to complete the Grant Work as more fully described herein; and

WHEREAS, the Red Run Intercounty Drain Drainage District has agreed to perform the Grant Work as part of the Project, which includes portions contemplated along the Sterling Relief Drain; and

WHEREAS, the Sterling Relief Drain Drainage District has agreed to authorize the Red Run Intercounty Drain Drainage District to complete the Grant Work within its rights-of-way; and

WHEREAS, Section 523 of the Drain Code authorizes the Red Run Intercounty Drain Drainage Board, on behalf of the Red Run Intercounty Drain Drainage District, to contract with public corporations with respect to any matter connected with the construction, operation, maintenance, use, or services of the Red Run Intercounty Drain; and

WHEREAS, and Section 471 of the Drain Code authorizes the Sterling Relief Drain Drainage Board, on behalf of the Sterling Relief Drain Drainage District, to contract with public corporations with respect to any matter connected with the construction, operation, maintenance, use, or services of the Sterling Relief Drain; and

WHEREAS, the Parties wish to memorialize their understanding of their roles and responsibilities regarding the Grant Work upon the terms and conditions set forth in this Agreement.

NOW, THEREFORE, for good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties hereto agree to the following:

1. Incorporation of Recitals. Each of the Recitals set forth above are incorporated as contractual provisions of this Agreement and this Agreement shall be interpreted and applied consistent with the intent and purposes of the parties as set forth in those Recitals.
2. Performance of Grant Work. The Red Run Intercounty Drain Drainage District hereby agrees to perform the Grant Work as set forth in **Exhibit A**. For efficiencies, the Grant Work will be performed concurrently with the Project. The Red Run Intercounty Drain Drainage District shall be solely responsible for the design, permitting, bidding, construction, observation, and contract administration of the Grant Work.
3. Access to Sterling Relief Drain Rights-of-Way. The Sterling Relief Drain Drainage District hereby authorizes the Red Run Intercounty Drain Drainage District, its contractors,

consultants, and employees, access to the Sterling Relief Drain Drainage District's right-of-way to perform the Grant Work.

4. Matching Funds. Pursuant to the NFWF Grant, the total cost of the Grant Work is estimated to be One Million One Hundred Thirty-Five Thousand One Hundred Seventy-Two and 50/100 (\$1,135,172.50) Dollars. Except for maintenance following the Project, there is no cost impact to the Sterling Relief Drain Drainage District for project construction or the Grant Work. In addition to the NFWF Grant funds, the following entities shall provide matching funds as follows:

Macomb County Department of Roads	\$313,120.35
Red Run Intercounty Drain Drainage District (Project expenditures)	\$502,052.15
Macomb County (in-kind contribution)	\$20,000.00
<u>TOTAL MATCHING FUNDS</u>	<u>\$835,172.50</u>

5. NFWF Grant Administration. Macomb County is solely responsible for the administration of the NFWF Grant, including all documentation, reporting, notifications, submittals, and certifications required under the NFWF Grant. The Red Run Intercounty Drain Drainage District shall provide Macomb County all records of contributions and/or matching funds received from other entities and expenses incurred attributable to the NFWF Grant, including those portions expended for the benefit of the Sterling Relief Drain.
6. Future Maintenance and Repair of Grant Work. Upon completion of the Grant Work, the Sterling Relief Drain Drainage District shall be solely responsible for the maintenance and repair of the Grant Work, including maintenance of plantings, within its rights-of-way.
7. Future Maintenance of Waterfront Trail. Upon completion of the construction of the Waterfront Trail, the Sterling Relief Drain Drainage District shall enter into a license or some other agreement with the City of Sterling Heights for future maintenance and repair of the Waterfront Trail in a manner acceptable to the parties.
8. Notices. Any and all correspondence, invoices, and/or any other written notices required, permitted, or provided for under this Agreement are to be delivered to the following:

STERLING RELIEF DRAIN DRAINAGE DISTRICT
c/o STERLING RELIEF DRAIN DRAINAGE BOARD
Attn: Candice S. Miller, Chairperson
21777 Dunham Road
Clinton Township, Michigan 48036

RED RUN INTERCOUNTY DRAIN DRAINAGE DISTRICT
c/o RED RUN INTERCOUNTY DRAIN DRAINAGE BOARD
Attn: Jim Nash, Secretary
One Public Works Drive
Building #95W
Waterford, Michigan 48328

9. Controlling Law and Venue. This Agreement shall be deemed to have been mutually drafted by the parties and it shall be applied, interpreted and enforced in accordance with the laws of the State of Michigan. Venue for any legal action arising from, or in any way connected with, this Agreement shall be in the 16th Circuit Court for Macomb County, Michigan. In the event any provision in this Agreement is rendered invalid or unenforceable because of any federal or state statute or regulation or by decision of any tribunal of competent jurisdiction, that provision shall be considered deleted and the remainder of this Agreement shall remain in full force and effect, PROVIDED HOWEVER, that if deletion of the invalid or unenforceable provision results in the invalidity or illegality of the remainder of this Agreement then this Agreement shall be considered to have terminated as of the date on which the provision was rendered invalid or unenforceable.

10. Binding Effect, Limitation Upon Assignment. This Agreement is binding upon the Red Run Intercounty Drain Drainage District, Sterling Relief Drain Drainage District, their officials, departments, agents, employees, representatives and successors in interests. Neither this Agreement nor any rights or obligations under this Agreement shall be assigned without the prior written consent of the parties.

11. Miscellaneous. This is the entire agreement between the parties regarding its subject matter. There are no prior or contemporaneous agreements. It may not be modified or amended except in writing, approved by the respective governing bodies and signed by the parties. It shall not be affected by any course of dealing. The captions are for convenience only and shall not affect its interpretation, but the recitals are an integral part of this Agreement.

12. Signatories. Each signatory to this Agreement represents that they have the authority to enter into this Agreement and they are authorized to sign on behalf of the entity which they represent.

**STERLING RELIEF DRAIN
DRAINAGE DISTRICT**

**RED RUN INTERCOUNTY DRAIN
DRAINAGE DISTRICT**

By: STERLING RELIEF DRAIN
DRAINAGE BOARD

By: RED RUN INTERCOUNTY DRAIN
DRAINAGE BOARD

By: Candice S. Miller
Its: Chairperson

By: Michael R. Gregg
Its: Chairperson

Date: _____

Date: _____

EXHIBIT A



EasyGrantsID: 67170

National Fish and Wildlife Foundation – Southeast Michigan Resilience Fund 2019, Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

Organization: Macomb County, Michigan

Grant Information

Title of Project

Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

Total Amount Requested	\$ 300,000.00
Matching Contributions Proposed	\$835,172.50
Proposed Grant Period	08/01/ 2020 - 12/31/ 2022

Project Description

This project will restore over 1.35 miles of riparian areas along the Sterling Relief and Red Run drains in Macomb County as a natural habitat corridor link in order to increase habitat complexity and biodiversity, connect new and existing habitat corridors (Sterling Relief, Red Run, Bousson Drain and Clinton River), benefit native pollinators, control invasive species, plant 475 trees, 2,500 shrubs and 4,000 native pollinator plugs, develop a mile long waterfront trail, and capture and infiltrate an estimated 200,000 gallons of urban stormwater runoff per year from riparian tree plantings.

Project Abstract

The Sterling Relief/Red Run Drain Confluence Habitat Restoration and Trail Connector project is located in Macomb County, MI in the City of Sterling Heights.

This project will restore riparian habitat along 1.35 miles of the Sterling Relief and Red Run drains to increase habitat complexity and biodiversity, connect habitat corridors (Sterling Relief, Red Run, and Clinton River) benefit native pollinators, control invasive species, reduce erosion, increase riparian canopy, and develop a waterfront trail for public access.

Grant activities will restore over 30 acres of diverse native habitat including 10.75 acres riparian canopy, 12.25 acres of native pollinator prairie plantings, and 2.75 acres of stream bank re-vegetation and stabilization, treat over 20 acres for invasive species, plant 475 trees and 2,500 shrubs, develop a mile long waterfront trail connecting to the regional Freedom Trail, and reduce runoff by 200,000 gallons per year from riparian tree plantings.

This project will improve habitat for bird and pollinator species of conservation concern including the American bittern, blackcrowned night heron, common nighthawk, golden-winged warbler, least bittern, northern harrier, short-eared owl, monarch butterfly, Karner blue butterfly, and rusty-patched bumble bee.

This project is a partnership between Macomb County’s Public Works, Roads, and Planning departments, City of Sterling Heights, Clinton River Watershed Council, and the Lake St. Clair Cisma.

Organization and Primary Contact Information

Organization	Macomb County, Michigan
Organization Type	State or Local Government
City, State, Country	„

Region (if international)

Primary Contact	Amanda Oparka
Position/Title	Senior Planner
Phone and E-mail	x ; amanda.oparka@macombgov.org



NFWF

EasyGrantsID: 67170

National Fish and Wildlife Foundation – Southeast Michigan Resilience Fund 2019, Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

Organization: Macomb County, Michigan

Additional Contacts

Role	Name



NFWF

EasyGrantsID: 67170

National Fish and Wildlife Foundation – Southeast Michigan Resilience Fund 2019, Full Proposal
Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector
Organization: Macomb County, Michigan

Project Location Information

Project Location Description The project area is located in Macomb County, centered at the confluence of of the Sterling Relief Drain and Red Run Drain in the City of Sterling Heights, Michigan. Behind Freedom Hill County Park.

Project Country(ies) North America - United States

Project State(s) Michigan

Project Congressional District(s) District 9 (MI)

Permits and Approvals

Permits/Approvals Description: In accordance with the Michigan Soil Erosion and Sediment Control Act Part 91 we will apply for a permit with the Macomb County Soil Erosion Department for construction of the project. As partners on the project we do not anticipate any issues procuring the permit. We intend to apply once a contractor has been selected.

Permits/Approvals Status: Intend to Apply

Permits/Approvals Agency-Contact Person: Macomb County Public Works- Lara Sucharski

Permits/Approvals Submittal-Approval Date: 10/01/2020

Permits/Approvals Description: We intend to apply for a construction permit for the project once a contractor has been selected. Oakland County is in charge of the management of the Red Run Drain and the drain board has passed a resolution of support for the project so we do not anticipate any issues.

Permits/Approvals Status: Intend to Apply

Permits/Approvals Agency-Contact Person: Oakland County Water Resources-Glenn Appel

Permits/Approvals Submittal-Approval Date: 10/01/2020



NFWF

EasyGrantsID: 67170

National Fish and Wildlife Foundation – Southeast Michigan Resilience Fund 2019, Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

Organization: Macomb County, Michigan



EasyGrantsID: 67170

National Fish and Wildlife Foundation – Southeast Michigan Resilience Fund 2019, Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

Organization: Macomb County, Michigan

Activities and Outcomes

Funding Strategy: Habitat Management

Metric: SE MI - Green Infrastructure - # trees planted

Required: Recommended

Description: Enter the number of trees planted.

Starting Value	0.00 # trees planted
Target value	475.00 # trees planted

Note:

Funding Strategy: Habitat Management

Metric: SE MI - Green Infrastructure - miles trails developed/improved

Required: Recommended

Description: SE MI - Green Infrastructure - miles trails developed/improved Habitat Management Green Infrastructure miles trails developed/improved Enter the number of miles of trails developed or improved Enter the number of miles of trails or river walks developed or improved

Starting Value	0.00 miles trails developed/improved
Target value	1.00 miles trails developed/improved

Note: 1 mile paved waterfront trail connecting Schoenherr Road to Freedom Trail.

Funding Strategy: Habitat Management

Metric: SE MI - Improved management practices - Acres under improved management

Required: Recommended

Description: Enter the total number of acres enhanced. Habitat enhancement involves the manipulation of an area to change (heighten, intensify, or improve) specific function(s) or successional stage of the project site conditions to provide additional benefits for monarchs. Habitat enhancement includes implementation or modification of land management practices such as mowing, haying, grazing, fire, mechanical/chemical treatments, use of pesticides, control of invasive species, forest management activities, and interseeding existing habitat with milkweeds and forbs. For purposes of reporting, each project area should only be reported once as either “restored” or “enhanced” based on the condition of the area relative to monarchs at the beginning of project implementation.

Starting Value	0.00 Acres under improved management
-----------------------	--------------------------------------



EasyGrantsID: 67170

National Fish and Wildlife Foundation – Southeast Michigan Resilience Fund 2019, Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

Organization: Macomb County, Michigan

Target value 20.00 Acres under improved management

Note:

Funding Strategy: Habitat Restoration

Metric: SE MI - Removal of invasives - Acres restored

Required: Recommended

Description: Enter the number of acres of invasive species control (this will be a subset of restoration acres; non-cumulative with other acre restoration metrics)

Starting Value 0.00 Acres restored
Target value 20.00 Acres restored

Note:

Funding Strategy: Habitat Restoration

Metric: SE MI - Riparian restoration - Miles restored

Required: Recommended

Description: Enter the number of miles restored

Starting Value 0.00 Miles restored
Target value 1.35 Miles restored

Note:



EasyGrantsID: 67170
 National Fish and Wildlife Foundation –
 Southeast Michigan Resilience Fund 2019,
 Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector
 Organization: Macomb County, Michigan

I. PERSONNEL \$0.00

Staff Name	Position	Annual Salary	Project Hours	Hourly Rate	LOE (%)	Project Salary	% Fringe	\$ Fringe	Total Personnel
Totals						\$0.00		\$0.00	\$0.00

II. TRAVEL \$0.00

Domestic Airfare – Per Flight

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

International Airfare – Per Flight

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Train – Per Ticket

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

26



Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector
 Organization: Macomb County, Michigan

Rental Car – Per Day

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00

Taxis – Per Trip

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Mileage – Per Mile

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Gasoline – Per Gallon

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Per Diem (M&IE) – Per Day

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00

27



Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector
 Organization: Macomb County, Michigan

Lodging – Per Night

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00

Meals (no M&IE) – Per Meal

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00

III. EQUIPMENT \$0.00

Item Name	Description	Unit Cost	Quantity	Total Cost

IV. MATERIALS & SUPPLIES \$102,375.00

Type	Purpose	Unit of Measure	Unit Cost	Quantity	Total Cost
Signage and Wayfinding	public education		\$2,000.00	1	\$2,000.00
Bare Root Trees	Habitat Restoration		\$15.00	325	\$4,875.00
Large Trees	Habitat Restoration		\$275.00	150	\$41,250.00
Native Pollinator Seed	Habitat Restoration	Acre	\$1,000.00	15	\$15,000.00
Native Shrubs	Habitat Restoration		\$12.50	2500	\$31,250.00
Native Plant Plugs	Habitat Restoration		\$2.00	4000	\$8,000.00

28



EasyGrantsID: 67170
 National Fish and Wildlife Foundation –
 Southeast Michigan Resilience Fund 2019,
 Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector
 Organization: Macomb County, Michigan

V. CONTRACTUAL SERVICES	\$197,625.00
--------------------------------	---------------------

Subcontract/Contract – Per Agreement

Contractor Name	Description	Total Cost
TBD	Engineering Services	\$78,517.35
Clinton River Watershed Council	Water Quality Monitoring	\$5,000.00
Lake St. Clair CISMA	Invasive Species Monitoring	\$4,154.00
TBD	Site prep for pollinator plantings	\$40,000.00
TBD	Invasive Species Treatment	\$26,250.00
TBD	Construction of Sterling Relief Trail	\$43,703.65

SubTotal **\$197,625.00**

Subgrant – Per Agreement

Subrecipient	Description	Total Cost

SubTotal **\$0.00**

VI. OTHER DIRECT COSTS	\$0.00
-------------------------------	---------------

Type	Purpose	Unit of Measure	Unit Cost	Quantity	Total Cost

VII. TOTAL DIRECT COSTS	\$300,000.00
--------------------------------	---------------------

VIII. INDIRECT COSTS	\$0.00
-----------------------------	---------------

Explanation of Modified Total Direct Cost Base(MTDC)	Rate Type	NICRA Expiration	\$MTDC	Rate(%)	Total Cost



NFWF

EasyGrantsID: 67170
National Fish and Wildlife Foundation –
Southeast Michigan Resilience Fund 2019,
Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector
Organization: Macomb County, Michigan

--	--	--	--	--	--

IX. TOTAL PROJECT COSTS					\$300,000.00
--------------------------------	--	--	--	--	---------------------



Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector
Organization: Macomb County, Michigan

Budget Narrative

Budget Narrative:

1. Personnel

Personnel -

2. Travel

Domestic Airfare - Per Flight -

International Airfare - Per Flight -

Train - Per Ticket -

Rental Car - Per Day -

Taxis - Per Trip -

Mileage - Per Mile -

Gasoline - Per Gallon -

Per Diem (M&IE) - Per Day -

Lodging - Per Night -

Meals (No M&IE) - Per Meal -

3. Equipment



Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector
Organization: Macomb County, Michigan

Equipment -

4. Materials and Supplies

Materials and Supplies -

5. Contractual Services

Subcontract/Contract - Per
Agreement -

Subgrant - Per Agreement -

6. Other Direct Costs

Other Direct Costs -

7. Indirect Costs

Indirect Costs -



NFWF

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector
Organization: Macomb County, Michigan

EasyGrantsID: 67170
National Fish and Wildlife Foundation –
Southeast Michigan Resilience Fund 2019,
Full Proposal



EasyGrantsID: 67170

National Fish and Wildlife Foundation – Southeast Michigan Resilience Fund 2019, Full Proposal
 Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector
 Organization: Macomb County, Michigan

Matching Contributions

Matching Contribution Amount:	\$20,000.00
Type:	In-kind
Status:	Received
Source:	Macomb County
Source Type:	Non-Federal
Description:	In-kind match of staff time for grant administration, project meetings, site visits.

Matching Contribution Amount:	\$313,120.35
Type:	Cash
Status:	Pledged
Source:	Macomb County
Source Type:	Non-Federal
Description:	Macomb County has pledged \$313,120.35 of cash from the county's Act 51 allocation that will be used as match for the creation of the 1 mile waterfront trail.

Matching Contribution Amount:	\$502,052.15
Type:	Cash
Status:	Pledged
Source:	Red Run Inter-County Drain Board
Source Type:	Federal
Description:	The Red Run Drain Board is currently evaluating drain improvements to support habitat and stream stabilization in the project area. This is likely to occur during the project period. As they finalize project scope and funds we will provide updates.

Total Amount of Matching Contributions:	\$835,172.50
--	--------------



NFWF

EasyGrantsID: 67170

National Fish and Wildlife Foundation – Southeast Michigan Resilience Fund 2019, Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

Organization: Macomb County, Michigan





EasyGrantsID: 67170

National Fish and Wildlife Foundation – Southeast Michigan Resilience Fund 2019, Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

Organization: Macomb County, Michigan

The following pages contain the uploaded documents, in the order shown below, as provided by the applicant:

Upload Type	File Name	Uploaded By	Uploaded Date
SMRF Full Proposal Narrative	Full Proposal 2.26.20.doc	Oparka, Amanda	02/26/2020
SMRF Additional Project Information	SEMI_Additional+Project+Info_Metrics+and+Outcomes.doc	Oparka, Amanda	02/26/2020
Project Map	Project Location Map.pdf	Oparka, Amanda	02/25/2020
Letters of Support	Letters of Support Final.pdf	Oparka, Amanda	02/26/2020
Conceptual Plans	RedRunConfluence_ConceptPlan_V1.3.jpg	Oparka, Amanda	02/25/2020
Photos - Jpeg	Red_Run South bank.jpg	Oparka, Amanda	02/26/2020
Photos - Jpeg	Red_Run_Freedom Hill.jpg	Oparka, Amanda	02/26/2020
Photos - Jpeg	RedRun_FreedomTrail.jpg	Oparka, Amanda	02/26/2020
Photos - Jpeg	Sterling Relief Confluence.jpg	Oparka, Amanda	02/26/2020
Statement of Litigation	Statement+of+Litigation.doc	Oparka, Amanda	02/25/2020
Board of Trustees, Directors, or equivalent	Board of Commissioners.docx	Oparka, Amanda	02/26/2020
Other Documents	Project Timeline.pdf	Oparka, Amanda	02/26/2020
Other Documents	Regional_Trails_Connections [Converted].pdf	Oparka, Amanda	02/26/2020
Other Documents	Trail connections.pdf	Oparka, Amanda	02/26/2020

The following uploads do not have the same headers and footers as the previous sections of this document in order to preserve the integrity of the actual files uploaded.



NFWF

EasyGrantsID: 67170

National Fish and Wildlife Foundation – Southeast Michigan Resilience Fund 2019, Full Proposal

Title: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

Organization: Macomb County, Michigan



Full-Proposal Project Narrative

Instructions: Save this document on your computer and complete the narrative in the format provided. The final narrative should not exceed six (6) pages; font should be 12-point Times New Roman. Do not delete the text provided below. Once complete, upload this document into the on-line application as instructed.

- 1. Funding Category:** Highlight the Funding Category that best describes the proposed project: 1) *Expanding Green Stormwater Infrastructure and Enhancing Public Space*; 2) *Improving Habitat Quality and Connectivity and Enhancing Public Space*. If the project is expected to yield benefits in both categories, indicate the relevant secondary category.

“Sterling Relief/Red Run Drain Confluence Habitat Restoration and Trail Connector” best fits in category 2 “Improving Habitat Quality, Connectivity, and Accessibility”, as this project enhances, restores, and connects over 30 acres of diverse riparian habitat and improves public access via a mile long waterfront trail at the confluence of two urbanized waterways in the heart of Macomb County, MI.

This project will increase habitat complexity and biodiversity, connect new and existing habitat corridors (Sterling Relief, Red Run, Bousson Drain and Clinton River), benefit native pollinators, control invasive species, reduce erosion, increase riparian canopy, and develop a mile long waterfront trail for public access. While this project is primarily a habitat quality project, the restoration of such a large area, including the planting of hundreds of trees and shrubs, will result in significant water quality and other benefits in the first category of “Expanding Green Stormwater Infrastructure and Enhancing Public Space”, including intercepting and reducing well over 200,000 gallons of stormwater per year (at 10 years - iTree).

- 2. Context:** Briefly describe the project context in terms of current conditions, existing challenges, and opportunities for improvement. Explain how the proposed work would complement and connect to previous and ongoing efforts and strategies.

This project ties together two distinct site contexts with their own challenges and opportunities: the terminus of the Sterling Relief Drain (0.35 miles) and the Red Run Drain riparian zones along Freedom Hill County Park (0.65 miles). The Sterling Relief Drain was designed in the 1960s as a 4 ft. diameter concrete pipe serving as an underdrain to an open, mowed grass, trapezoidal channel (measuring 60 ft. bottom x 10 ft. deep x 140 ft. top) within a 250 ft. wide corridor. Two current grants, an EPA grant associated with the Clinton River Area of Concern (\$1.25 million) and a Sustain Our Great Lakes grant (\$602,183), have enabled Macomb County and partners to redesign and retrofit the 2 miles of the Sterling Relief Drain corridor immediately upstream of this project in order to daylight, store, and infiltrate stormwater from the 1,870-acre urban drainage district while also creating over 50 acres of diverse native habitat. This project aims to complement these efforts along the final 0.35 mile terminus of the Sterling Relief Drain in order to expand and connect the adjacent 50 acre habitat corridor into the Red Run confluence and drain corridor. Ecological restoration will include native pollinator plantings and establishment of riparian canopy.

The Red Run Drain continues east and north from the confluence with the Sterling Relief Drain along Freedom Hill County Park. Macomb County is committed to improving Freedom Hill County Park recreational opportunities, including increased access to trails and restored natural areas, particularly the waterfront along the Red Run Drain. Macomb County’s Act 51 fund will provide match dollars for the construction of the 1-mile non-motorized trail. The riparian zone of the Red Run along Freedom Hill includes the edge of an historic landfill with invasive species, minimal biodiversity, and negligible habitat structure and complexity. The edge of the capped landfill abuts the Red Run Drain easement where our project will be occurring. We intend to avoid any activity that would disturb prior remediation activities.

The Red Run Inter-County Drainage Board has identified erosion issues near the confluence of the Sterling Relief and Red Run Drain through a recent survey. It is a priority for the board to address the erosion issues in order to prevent contamination from the landfill into the drain. The drain board is evaluating the information collected during the survey which will lead to a streambank stabilization project, this is likely to occur in the project timeframe. We will coordinate with the drain board to ensure the

success of both efforts. The streambank stabilization will protect the newly constructed 1 mile path against future erosion. The grant project will complement this work by planting native species along the stabilized bank to further protect the drain and trail. These efforts will enhance and supplement the landfill dendroremediation that is planted in this area.

An existing overgrown gravel access road provides an ideal location for a paved non-motorized trail along the banks of the Red Run, providing new access along the waterway, and connecting the Sterling Relief to the regional Freedom Trail, which extends approximately nine miles to Lake St. Clair. This provides for greater connection to heavily populated areas along the Schoenherr Road corridor and will enable a future connection to the planned nearby state-wide Iron-Belle Trail. This development will help serve a much needed connection to the residential areas and provide for greater health and wellness to this region, which ranks very high in chronic diseases and obesity rate far above national standards.

3. **Outcomes:** Discuss how project activities will generate direct, measurable benefits to the communities, habitats, waterways, etc. of Southeast Michigan and advance the goals of the funding category(ies) as indicated in the RFP. Elaborate on project outcomes and impact with reference to the outcome metrics selected previously in the application; discuss what makes the outcomes achievable and important. Explain how the project will improve community and/or habitat resilience in the face of intensifying environmental stressors, particularly related to climate. For all proposals, please describe the current and anticipated public-use of the site(s) your project will address. Where possible, quantify pre-project implementation public use and/or community perception of the site(s), project how this use will change due to your project activities or benefits to communities served will be generated, and describe plans to groundtruth projections post-project implementation. Describe how the project will address the triple bottom line by improving ecological services and green infrastructure while enhancing economic benefits, including the value and use of public greenspace and/or neighborhood property values.
- a. *Green Stormwater Infrastructure Additional Guidance:* Include anticipated outcomes in terms of gallons of stormwater storage capacity added (design retention capacity) and provide a projection for the volume of stormwater runoff captured and/or infiltrated per year (gallons/year). Describe the size and land use of the drainage area that will be served by the GSI, including soil type.
 - b. *Habitat Additional Guidance:* If your project activities include invasive species control, include the following outcomes as relevant to your project: 1) acres of invasive species controlled (total project acreage); 2) acres of new treatment; 3) acres of re-treatment.

This project supports the goals of funding Category 2: “Improving Habitat Quality, Connectivity and Enhancing Public Space,” by including nearly 31 acres of ecological restoration work, restoring 1.35 miles of riparian habitat and creating a 1-mile long waterfront trail. The project is located at the confluence of the Sterling Relief and Red Run drains, both provide important wildlife corridor connections through one of the most contiguously urbanized areas in the state. As aforementioned, this project would be a continuation of the already restored and day-lighted 2 miles of the Sterling Relief drain.

This project will improve water quality by installing thousands of native plants and shrubs which will absorb and infiltrate runoff before it enters the streams in the areas not funded under other sources. Currently, the gravel parking lot at Freedom Hill County Park does not have any stormwater management and water sheet flows off into the adjacent drains with surface debris, pollutants and eroded soils.

The streambank stabilization project through the drain board will reduce erosion of the Red Run Drain and prevent any issues with the capped landfill. It is a priority for the Inter-County Drainage Board, as well as Macomb County, to prevent pollutants from entering the Red Run, Clinton River and ultimately Lake St. Clair. The majority of the project area currently serves no real habitat value for native bird and pollinator species of conservation concern such as the American bittern, black-crowned night heron, common nighthawk, golden-winged warbler, least bittern, northern harrier, short eared owl, monarch butterfly, Karner blue butterfly, and rusty-patched bumble bee. Through the treatment of invasive species and native plantings we will increase the habitat complexity, connectivity and quality for these important species. There is extremely limited public access at Freedom Hill. Parking, and most

public assets, are located at the north end of the property, thus, visualization of the water is very restricted. This project will not only involve installing a 10ft wide paved pathway for pedestrians to enjoy, but also incorporate ecological educational and directional signage for trail access and allow for water views.

In order ensure the success of the native plantings, 20 acres of invasive species will be treated and managed. The Red Run drain board has already surveyed this area for invasive species (see uploads for map) as part of drain maintenance plan developed in 2019. In coordination with our local cooperative invasive species management area (CISMA) we have identified that we will be treating for two of the CISMA's priority species through this project: Phragmites and Japanese Knotweed. Riparian tree canopy and native pollinator plantings will be installed along 1.35 miles (0.65 miles of Red Run and 0.7 mile of Sterling Relief). This outcome is achievable because we successfully installed the same type of treatments along 2 miles of the Sterling Relief Drain in 2019 with previous funding sources. This will create 30.75 acres of greenspace and open it to the public for the first time.

The creation of a 1-mile paved waterfront trail, which will eventually connect the regional Freedom Trail to the statewide Iron Belle Trail to the west, and Lakes St. Clair to the east, will allow for meaningful public access at the site (see uploads for trail connections). The paved trail will allow people of all ages and abilities to access the waterfront including those in low income and underserved portions of the County. Educational and wayfinding signage will be installed to inform the public where they can access the trail and the importance of the native vegetation to water quality, resiliency and pollinators. 450 trees will be planted in the project area in addition to the already 100 planted as part of the other phases of the project. These trees will capture and infiltrate over 200,000 gallons per year (at 10 years-iTree) According to the Audubon Society, landscaping with native plants can assist in combating climate change. In addition to the reduced noise and carbon pollution from lawn mower exhaust, many native plants, especially long-living trees like oaks and maples, are effective at storing the greenhouse gas carbon dioxide. The treatment and removal of invasive species and planting a diverse range of native species will help to maintain important pollinator connections and ensure food sources for wildlife improving resilience of these important habitat corridors. As there is an increase in precipitation amounts, the native plants and trees will help absorb and filter the additional stormwater runoff generated before it enters the streams, resulting in improvement of water quality.

Located in one of the most urbanized areas of southeast Michigan, Freedom Hill is one of few public spaces owned by Macomb County. Sitting on a former land fill that has since been remediated, the majority of the property is used by the amphitheater for concerts and cultural events within Macomb County. The area where the project will be implemented is adjacent to the event parking area. Currently, all areas designated for public use have limited visibility of the Red Run or Sterling Relief Drain.

Therefore, once we complete the project, most visitors to the park would still not know there is access to a new portion of the property. To correct this issue, upon completion of the plantings and trail installation, we will install wayfinding and ecological educational signage to inform the public of the newly created access and the value in improving habitat along the drains.

The total project area is 30.75 acres and will be controlled for invasive species. 20 acres of the project area will be new treatment of invasive species and the entire 30.75 acres will continue to be retreated throughout the project period for the greatest impact. The creation of the greenspace and trail should increase the use and value of this public property and help to increase physical and emotional wellness, while increasing the ecological ownership of our collective watershed management.

4. **Activities:** Elaborate on project activities with reference to the activity metrics selected previously in the application. Explain how these activities are expected to lead to the outcomes indicated above. Describe how these activities relate to established regional plans and priority needs in the specific project location (see "Strategic Value" section in RFP). Include a detailed project implementation timeline to describe how the project will be implemented throughout the grant period as defined in your proposal. Include key deliverables and anticipated milestones. Describe how the project incorporates planning for increasingly severe and more frequent storm events and other climate-driven threats into design, location, and/or function.

- a. Green Stormwater Infrastructure Additional Guidance: Explain how the project activities will reduce flooding and other intensifying climate-driven threats. If applicable, explain how project activities will result in a reduction in heat-island affect.

Key deliverables from the project include:

- 5 acres forested wetland enhancement through invasive species control
- 25.75 acres new planting zones
 - **Plant 10.75 acres riparian canopy**
 - 5.25 acres Sterling Relief Drain + 5.5 acres Freedom Hill
 - **Plant 12.25 acres native pollinator plantings (and invasive species control)**
 - 3.25 acres Sterling Relief Drain + 9 acres Freedom Hill
 - **2.75 acres streambank plantings along Freedom Hill (and invasive species control)**
- Plant 475 trees (mixture large and bare root), 2,500 shrubs and 4,000 native plugs. Native trees such as birch, cherry and oaks have been shown to host 300 to over 500 pollinator species (moths, butterflies, etc.). This project will prioritize those species that support the greatest biodiversity
- Develop 1-mile of paved non-motorized trail and install educational signage to improve public awareness of the project and access to the site
- Host a nature walk to educate the public on the creation of the trail and importance of the habitat restoration

In 2016, Macomb County Planning and Economic Development partnered with our coastal communities to develop the [Resilient Macomb Plan](#). While it was focused on the coastal communities, much of the information can be translated to the other areas of the county. According to the Great Lakes Integrated Sciences and Assessments Program (GLISA), projections for the years 2041 through 2070, annual precipitation amounts are projected to increase an additional 3 to 4 inches and the number of days experiencing heavy rainfall is projected to increase by one. At the same time, Macomb County temperatures are expected to increase by 4.5 to 5.0 degrees Fahrenheit. The likelihood of drought is also projected to increase in Macomb County. The planting of native tree and shrub species will reduce CO2 emissions and filter and slow stormwater runoff, decrease flooding and improve the resiliency of Sterling Heights and Macomb County.

The project will occur from August 2020 through December 2022. August – October will include soliciting bids from contractors, awarding the contract, developing the QAPP and hosting initial project meetings with all partners. The end of 2020 and beginning of 2021 will be spent in the design/engineering phase and obtaining permits for construction. Construction will begin in the spring of 2021, beginning with the Sterling Relief trail and plantings. Invasive species treatment will occur prior to the construction beginning and continue throughout the project period. Phase II of construction, which includes the Red Run trail construction and plantings will occur in 2022, along with monitoring, public outreach and education. A more detailed project timeline is attached in the upload section.

This project is within the Clinton River Area of Concern (AOC) and addresses specific links to the following plans and priorities: [Macomb County Parks and Natural Resources Master Plan](#), [Lake Erie Lakewide Management Plan](#), [The Clinton River Remedial Action Plan](#), [The Red Run](#) and [Clinton River East Subwatershed Plans](#), [Green Infrastructure Vision for Southeast Michigan](#), [Macomb County's Blue Economic Initiative](#), [Michigan's Forest Action Plan](#), [Green Macomb Urban Forestry Partnership Roadmap](#), [Urban Bird Treaty](#), and [Michigan's Wildlife Action Plan](#).

5. **Partnerships, Inclusion, and Community Engagement:** List the individuals who would lead project implementation and describe their qualifications and experience. Describe additional project partners and their role in the proposed project, including opportunities to build new partnerships that will be explored throughout the project timeline. Expand upon the ways the proposed project will meaningfully engage and benefit people, particularly historically underrepresented and underserved communities, including a description of community input in project design and the education and engagement activities that will optimize public-use of the project. Indicate the demographics of communities/groups that will be served or impacted by the project. Letters of support from all project partners are required

and should be included in the “uploads” section of your application. Applicants are highly encouraged to include letters of support from community organizations to demonstrate support for benefits to the communities served by your project.

This project continues and expands the existing partnerships developed for the EPA and SOGL grant projects along the Sterling Relief Drain and will utilize previous efforts in order to increase capacity and improve outcomes. The partnership includes Macomb County’s Public Works, Roads and Planning departments, City of Sterling Heights, Lake St. Clair CISMA and Clinton River Watershed Council (CRWC). The City of Sterling Heights is part of the MCPED’s Green Macomb Urban Forestry partnership which was established in 2015 with the goal of increasing tree canopy in the most urbanized areas in the county. The current tree canopy cover in the city is 19% the US forest service recommends 40% in urban areas, the City has participated in the program since its inception planting over 400 trees in the community to increase tree canopy. This project continues to build upon the efforts of the Green Macomb program and the city’s desire to improve quality of life for residents. We will partner with Macomb County’s [OneMacomb Initiative](#), which strives to promote multiculturalism and inclusion through community affairs. OneMacomb will be an integral part of our public outreach program, allowing us to reach a diverse audience.

Grant Administration and Management will be handled by Macomb County Planning and Economic Development and the Macomb County Public Works Commissioner’s Office as in-kind match for the project. Lead Staff includes:

Gerard Santoro, AICP – As the Program Director of Parks and Natural Resources and has expertise in stormwater management, parks and conservation master planning, green infrastructure development, urban forestry and community sustainability. Mr. Santoro has Undergraduate Studies in Architecture from Lawrence Technological University, and a Master’s Degree in Urban and Regional Planning from Wayne State University.

Amanda Minaudo, AICP – As the Program Director, Amanda has over 8 years of experience in community planning. She is an AICP certified planner and has a Bachelor of Arts in Political Science and Environmental Science from the University of Michigan. Throughout her career, she has administered a variety of state and federally funded grants. Her division currently focuses on non-motorized transportation planning, working to improve the quality of life for both residents and visitors in Macomb County.

Amanda Oparka, AICP-As a Senior Planner, Amanda works in the Parks and Natural Resources Division. The division works with communities and organizations to improve parks and recreation opportunities, enhance tree canopy through the Green Macomb urban forestry partnership, improve wildlife habitat and water quality, encourage healthy lifestyles for Macomb County Residents. She has Bachelor of Science in Hydro-geology from Central Michigan University and Masters of Urban Planning in Managing Metropolitan Growth from Wayne State University She is an AICP Certified Planner and has 8 years of experience in environmental planning.

Danielle Devlin, AICP - As Environmental Specialist, Danielle works with the Environmental Resources Group on asset management planning, habitat restoration projects, GIS mapping, flood mitigation and civic outreach and engagement. Danielle has B.S. in Resource Planning and Management and a B.A. in Social Science from the University of Michigan and over 20 years of experience in different areas of land use and natural resources planning. After serving as the Land Protection Director at the Six Rivers Land Conservancy for nearly six years, she accepted a position at the Macomb County Public Works Commissioner’s Office in August of 2019.

Jeff Bednar, PE CFM - As Environmental Resources Manager, Jeff assists local municipalities, individuals, and businesses to preserve and protect our shared water resources. A strong advocate for watershed management planning and implementation, Jeff joined the team at Macomb County Public Works in September 2017. Prior to that he served over 20 years as the water resources senior project manager at a municipal consulting firm in southeast Michigan. He is well versed in floodplain management, water resources planning and design, and implementation of stream and overbank improvements that increase community resilience, improve water quality, and reduce flood risk.

6. **Tracking Metrics:** Indicate how the project will monitor/assess progress on the metrics selected previously in the application. At a minimum, the description should: 1) indicate the metrics that will be used to track progress and quantify outcomes; 2) outline the approach for establishing baseline conditions against which post-implementation conditions will be compared; and, if applicable, 3) demonstrate plans and resources for post-implementation monitoring (including partnerships). Note any challenges or limitations anticipated with tracking the metrics. Additional guidance to assist applicants in selecting and reporting metrics and project outcomes is available at www.nfwf.org/semichigan.

CRWC and Lake St. Clair Cisma will be conducting pre and post implementation monitoring for the project. CRWC will monitor water quality parameters such as temperature, dissolved oxygen, benthic macroinvertebrate populations and physical habitat parameters. This monitoring will occur during the grant period and we will work with CRWC and the Clinton River Public Advisory Council to identify ways to continue monitoring upon completion of the project to continue to track the success. The Lake St. Clair Cisma will coordinate the invasive species monitoring during the project and assist with the tracking of the acres of restored metric selected. This project supports two years of chemical treatment of priority species (*Phragmites australis*, *Fallopia japonica*, and *Fallopia sachalinensis*) anticipating a 50% reduction with each treatment. A monitoring plan including qualitative estimates of % cover of desirable/undesirable species, photo monitoring, and temporal/spatial replication will be implemented in late spring and summer of 2021-2022 by the LSC Cisma.

The planting will include 325 Bare root (3/4" caliper) and 150 (2" caliper) trees including native species such as the Hawthorn, Red maple, Hackberry, Honeylocust, Red Bud, Serviceberry, Basswood and others. The number of trees planted will be tracked throughout the grant period. These numbers can be used to quantify the amount of storm water runoff captured by the project and tree canopy established.

The restoration of 1.35 linear miles of riparian vegetation will not only include the planting of trees, but other native species in order to prevent erosion, absorb storm water, recharge our aquifers and create habitat for pollinators and other wildlife to enhance the established wildlife corridor. This will be achieved by including the planting of 2,500 native shrubs such as staghorn sumac, dogwoods, elderberry and nine bark and native plant plugs such as Mountain Mint, Cup Plant, Joe-Pye Weed, New England Aster, Purple Coneflower, Common Milkweed, Early Sunflower, Rose Mallow, Golden Alexander and Groundsell.

The project will improve nearly 31 acres of greenspace that can be accessed by area residents via local sidewalks, Freedom Hill County Park and the regional Freedom Trail.

The creation of 1 mile of riverfront trail along the Sterling Relief and Red Run Drain will allow the public to access and experience the newly planted riparian areas while increasing their knowledge of the local ecology and improve their own wellness.

7. **Long-term Operation, Maintenance and Monitoring:** Indicate how project benefits will be sustained through time. Refer to any relevant existing long-term operation and maintenance plan(s) or describe anticipated efforts to develop a long-term plan. Plans should include expected long-term efficacy of project activities, including projected or anticipated performance over 5 years, anticipated useful life of project elements (GSI construction, habitat restoration/management practices) and required maintenance over time to sustain optimal function. Additionally, proposals are encouraged to include a monitoring plan to measure outcomes and assess the success of the project (see "Long-term Operation, Maintenance, and Monitoring" section of the RFP for details and expectations for monitoring plans).

A long-term operations and maintenance plan will be developed through this project, including specific guidance on maintenance work and schedules for implementation for each unique ecological restoration treatment. Pre- and post-implementation monitoring of the work will be conducted by the CRWC, with continued maintenance reflecting the project's overall partnership for implementation including Macomb County Public Works Office on behalf of the Red Run Inter-County Drainage Board and Macomb County Facilities and Operations. Additional monitoring/treatment for invasive species will be conducted in collaboration with the Lake St. Clair Cooperative Invasive Species Management Area (LSC Cisma).

8. **Other (Optional):** Provide any additional information important for the review of this proposal.



NFWF

Southeast Michigan Resilience Fund 2019 Metrics and Outcomes Upload

Instructions: Please only fill out sections that correspond to the primary or secondary funding category selected in the full proposal narrative. Delete sections that are not applicable to your proposal. The intention of this document is to acquire additional information regarding your project metrics and projected outcomes in a concise format, which will complement the information presented in the full proposal narrative and metrics section of your application. If you have questions about this exercise, please contact Aislinn Gauchay aislinn.gauchay@nfwf.org or Traci Giefer traci.giefer@nfwf.org.

Funding Category 1: Expanding Green Stormwater Infrastructure and Enhancing Public Space

Please describe the methodology and/or tools utilized to calculate project outcomes corresponding to the metrics selected previously in the “metrics” section of the Easygrants application. If you did not plan to report on a metric listed below, you may delete that row or leave it blank. If you selected a metric but are unable to calculate the exact outcome at this time, please comment on how the metric outcome was estimated and how you plan to measure progress throughout the life of your grant.

Applicants can use several models or tools to estimate “Volume stormwater storage added (gallons).” Some models and tools that are available to make the appropriate estimates are presented below. Although several viable tools are provided for grantees to use to estimate this metric, this list is not exhaustive. To ensure accurate results, grantees should use tools or models they are comfortable implementing and have the required skill set to execute correctly. In some instances, the tool or model that grantees are most comfortable using may not be included in the list below or the grantee may rely on estimates from engineering plans.

- i-Tree can be used to estimate the gallons of stormwater intercepted by tree planting projects. i-Tree Hydro is a simulation tool that analyzes how changes in the extent of tree canopy cover or changes in the surface cover affect urban stormwater retention, and is likely of most relevance to the Great Lakes Program. The i-Tree suite is available at no cost, there is a large user base, and there are many online tutorials available. Although i-Tree Streets is relatively easy-to-use, it will require some training.
- EPA Stormwater Calculator can be used to model the impacts of seven green infrastructure practices: rooftop disconnection, rainwater harvesting, rain gardens, green roofs, street planters, infiltration basins, and porous pavements on stormwater retention. SWC is a user-friendly desktop application. Users can determine how specific green infrastructure changes can affect runoff. There are many online resources available to help users effectively utilize the tool, including a user manual, a descriptive video, and a fact sheet.

To estimate the amount of runoff retained in an average year in gallons, grantees will need to convert inches of rainfall to a volume of water using the following calculation:

$$\text{Inches of runoff retained} \times \text{square feet of modeled area} / 12.$$

The inches of runoff retained is divided by 12 to express the data in feet rather than inches. After the multiplication, the amount of water captured by the green infrastructure is expressed in cubic feet. To convert this to gallons, grantees can then multiply this number by 7.48 (1 ft³ of water is 7.48 gallons).

Metric	Methodology/Tools Utilized to Calculate Outcome	Additional Information <i>(Address prompts below and/or provide optional comments)</i>
Volume stormwater storage added	We utilized the iTree tools to calculate the amount of annual stormwater captured after 10 years and was over 200,000 gallons annually.	Please include a projection of the gallons of stormwater captured or infiltrated annually.
Trees planted	325 bare root (up to ¾” caliper) 100 large (1.5-2.5” caliper). Species include Red Maple, Hackberry, Hawthorn, Honeylocust, Spruce, Basswood, Hybrid Elm, Red Bud, Serviceberry, Sycamore and other native species as available	Please include information regarding tree size (diameter) and species planted The number of trees takes into account the 100 trees already planted on the Sterling Relief by volunteers as part of the Green Macomb program. Species listed match has already been planted and 20 ft spacing between large trees has been assumed.
Erosion control - Lbs sediment avoided annually		
Lbs N (nitrogen) avoided annually		
Lbs P (phosphorous) avoided annually		

Funding Category 2: Improving Habitat Quality, Connectivity and Enhancing Public Space

Please describe the methodology and/or tools utilized to calculate project outcomes corresponding to the metrics selected previously in the “metrics” section of the Easygrants application. If you did not plan to report on a metric listed below, you may delete that row or leave it blank. If you selected a metric but are unable to calculate the exact outcome at this time, please comment on how the metric outcome was estimated and how you plan to measure progress throughout the life of your grant.

Habitat Restoration

Metric	Methodology/Tools Utilized to Calculate Outcome	Additional Information <i>(Address prompts below and/or provide optional comments)</i>
Fish passage improvements - Miles of stream opened		If brook trout will be impacted, discuss the location and health of the existing population in reference to project activities. Indicate the miles of newly accessible, viable brook trout habitat.
Instream restoration – miles restored		If brook trout will be impacted, discuss the location and health of the current population in reference to project activities and indicate the miles of newly viable habitat for brook trout.
Restoring hydrology – acres with restored hydrology		If northern pike will be impacted, discuss the location and health of current population in reference to project activities (if possible). Indicate the acres of newly accessible wetland/pond habitat for northern pike.
Erosion control - Lbs sediment avoided annually		
Lbs N (nitrogen) avoided annually		
Lbs P (phosphorous) avoided annually		

Invasive Species Control

Metric	Methodology/Tools Utilized to Calculate Outcome	Additional Information <i>(Address prompts below and/or provide optional comments)</i>
Removal of invasives – acres restored	20 acres of invasive species control will occur 5 acres in the forested wetland area, 9 acres on the Freedom Hill property and 2.75 acres along the Red Run Drain.	Summary of all phases of invasive control activities. Indicate total acres where invasive control activities will take place.
Removal of invasives – acres retreated	These areas will be retreated in the second year of the project.	Indicate total acres where retreatment will take place. This includes any secondary, follow up, or additional treatments on acres where invasive control has previously occurred.
Removal of invasives – acres of initial treatment <i>(please complete – metric not included in EZG options)</i>	20 acres of Phragmites and Japanese Knotweed. This area has not been treated for invasive species prior to this project. The area was surveyed by CRWC for the Red Run Drain Board so we have identified established populations and scope.	Indicate total, previously untreated, acres where initial invasive species control efforts will occur (includes EDRR).

**Red Run Inter-County Drainage Board
Resolution of Support**

Resolution Approving Submission of Southeast Michigan Resilience Fund Application for Sterling Relief/ Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

The following resolution was offered by board member, Nash and second by board member Miller,

Whereas, The Red Run Inter-County Drainage Board has determined it is in support of the Sterling Relief/ Red Run Drain Confluence Habitat Restoration and Regional Trail Connector proposal being submitted by Macomb County Planning and Economic Development.

Whereas, Funding is available from the National Fish and Wildlife Foundation through the Southeast Michigan Resilience Fund for improving habitat quality, connectivity and accessibility and expanding green stormwater infrastructure while enhancing public spaces.

Whereas, the total project cost is estimated at no more than \$1,135,000 of which \$300,000 will be funded through Southeast Michigan Resilience Fund and the remaining through local match.

Therefore be it resolved that, The Red Run Inter-County Drainage Board does hereby approve the submission of a grant application to the Southeast Michigan Resilience Fund for the total cost of no more than \$1,135,000 for the Sterling Relief/ Red Run Drain Confluence Habitat Restoration and Regional Trail Connector proposal being submitted by Macomb County Planning and Economic Development and acknowledges that the Red Run Inter-County Drainage Board is currently evaluating Drain Improvements that support habitat improvements and stream stabilization within the proposed project area. Hereby adopted on February 19th, 2020.

Adopted: Ayes: 3
 Nays: 0

I certify the foregoing to be a true and correct copy of a resolution that was adopted by the Red Run Inter-County Drainage Board at a meeting held on February 19th, 2020.



Michael Gregg, Chair
Red Run Inter-County Drainage Board



Candice S. Miller

Public Works Commissioner
Macomb County

February 24, 2020

Mr. Gerard Santoro
Macomb County Planning & Economic Development
One South Main Street, Seventh Floor
Mount Clemens, Michigan 48043

Mr. Santoro,

Please accept this correspondence as a formal letter of support for Macomb County's efforts in funding the Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector. The Macomb County Public Works Commissioner's Office believes this project will enhance our green space, improve water quality, restore native habitats and provide greater access to our regional trail network.

We understand that the Macomb County Department of Planning & Economic Development, in partnership with our office, is applying for funding through the Southeast Michigan Resiliency Fund with the goal of extending the existing Sterling Relief Drain retrofit/daylighting project to the east and connecting with Freedom Hill County Park and the Macomb Freedom Regional Trail. This grant would enable the restoration of over 1.35 miles of riparian areas and completion of a 1 mile waterfront trail along the Sterling Relief Drain from Schoenherr Road to the Red Run Drain, and allow additional enhanced greenway development for 0.6 miles behind the Freedom Hill County Park, including the trail connector.

The Macomb County Public Works Commissioner's Office is a partner in this effort and as noted in the proposal is committed to \$8,000 for in-kind staff time to help with grant administration and management of the project. This project will treat nearly 20 acres of invasive species and enhance wildlife corridors in this urban area along the Sterling Relief, Red Run, Bousson Drain and Clinton River. Native plantings will improve habitat for birds and pollinator species while also capturing and infiltrating an estimated 500,000 gallons of urban stormwater off per year. It will also increase the county's tree canopy, which is a goal of the Green Macomb – Urban Forest Partnership.

In closing, we appreciate the chance to be a part of this important project and look forward to the improved quality of life to be enjoyed by the residents of Macomb County.

Sincerely,

Candice S. Miller, Commissioner
Macomb County Public Works Office



CITY OF Sterling Heights
InnovatingLiving

Richard J. Notte Sterling Heights City Center
 City Hall
 40555 Utica Rd. | P.O. Box 8009
 Sterling Heights, MI | 48311-8009

TEL 586.446.CITY(2489) FAX 586.276.4077
 cityhall@sterling-heights.net | www.sterling-heights.net
 facebook.com/cityofsterlingheights | twitter.com/sterlingheights

City Council

<i>Mayor</i>	Michael C. Taylor
<i>Mayor Pro Tem</i>	Liz Sierawski
<i>Councilwoman</i>	Deanna Koski
<i>Councilman</i>	Michael V. Radtke Jr.
<i>Councilwoman</i>	Maria G. Schmidt
<i>Councilman</i>	Henry Yanez
<i>Councilwoman</i>	Barbara A. Ziarko

City Manager Mark D. Vanderpool

February 12, 2020

Mr. Gerard Santoro
 Macomb County Planning & Economic Development
 One South Main Street, Seventh Floor
 Mount Clemens, Michigan 48043

Mr. Santoro,

Sterling Heights City Administration supports Macomb County's effort to fund the extension of the Sterling Relief Greenway and to enhance this greenway, between Metro Parkway and Schoenherr Road, with pedestrian circulation and greater access to the regional trail network the Southeast Michigan Resiliency Fund. We understand that Macomb County Department of Planning & Economic Development and Macomb County Public Works Office is applying for funding to extend this project to the east and connect with Freedom Hill County Park and Macomb Freedom Regional Trail. This grant will fund the next steps in completing the greenway along the Sterling Relief Drain from Schoenherr Road further east through to the confluence with the Red Run River Drain, including greenway development for 0.6 Miles (six-tenths) behind the County park that also includes the trail connector. The proposed trail will not abut residential homes and does not extend west of Schoenherr Road.

We support this effort knowing it provides a means to access the Freedom Hill County Park from our heavily populated area to the west and continues the trail all the way to Freedom Trail and then will serve as a future connector to the State of Michigan's initiative with the Iron-Belle Trail. The initiative will include a complementary greenway application beyond the already funded projects through Sustain Our Great Lakes, and the USEPA Office in the area from Schoenherr to Red Run. This will complete both the greenway and the regional trail connector in this gapped and underserved area within the County and assists in the increase in additional tree canopy cover as is the main goal of the Green Macomb – Urban Forest Partnership.

The project is consistent with the City's Sustainability Plan, Non-motorized Transportation Plan, Reforestation efforts and Recreating Recreation. With this in mind, please accept this letter as a means of support for this project. Thank you for putting very meaningful projects like this together for the good of all of our citizens and visitors.

Best regards,

A handwritten signature in black ink, appearing to read "Mark Vanderpool", with a large, sweeping flourish extending to the right.

Mark Vanderpool, City Manager
City of Sterling Heights Michigan



CLINTON RIVER WATERSHED COUNCIL
47 Years of Dedication

February 7, 2020

1115 W. Avon Road
Rochester Hills, MI 48309
248-601-0606
www.crw.org
contact@crwc.org

Board of Directors

Susan Kelsey
President
Stacey McFarlane
1st Vice President
Greg Kacvinsky
2nd Vice President
Jeff Bednar
Secretary
Aaron Loiselle
Treasurer
John Kosnak
Director
Jamie Burton
Director
Jim Carabelli
Director
Diana Evennou
Director
Joerg Hensel
Director
Aaron Loiselle
Director
Becky Quinn
Director
Kimberly Meltzer
Director
David Szlag
Director
Jennifer Tegan
Director
Robert Zvonek
Director

COUNCIL STAFF

Anne Brasie
Executive Director
Chris Bobryk
Watershed Planner
Eric Diesing
Watershed Ecologist
Michael Eovaldi
Program Assistant
Melissa Golembieski
Development and
Communications Specialist
Linda Schuler
Membership & Operations
Coordinator
Kathleen Sexton
Program Manager
Janice Sugden
Accountant
Katie Yates
Program Coordinator

Mr. Gerard Santoro
Macomb County Planning & Economic Development
One South Main Street, Seventh Floor
Mount Clemens, Michigan 48043

Mr. Santoro,

Please accept this correspondence as a formal letter of support for Macomb County's efforts in funding of the Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector. The Clinton River Watershed Council believes this project will enhance our green space, improve water quality, restore native habitats and provide greater access to our regional trail network.

We understand that the Macomb County Department of Planning & Economic Development and the Macomb County Public Works Office is applying for funding through the Southeast Michigan Resiliency Fund with the goal of extending the existing Sterling Relief Drain retrofit/daylighting project to the east and connecting with Freedom Hill County Park and the Macomb Freedom Regional Trail. This grant would enable the restoration of over 1.35 miles of riparian areas and completion of a 1 mile waterfront trail along the Sterling Relief Drain from Schoenherr Road to the Red Run Drain, and allow additional enhanced greenway development for 0.6 miles behind the Freedom Hill County Park, including the trail connector.

The Clinton River Watershed Council is a partner in this effort and as noted in the will provide pre and post monitoring for the project. This project will treat nearly 20 acres of invasive species and enhance wildlife corridors in this urban area along the Sterling Relief, Red Run, Bousson Drain and Clinton River. Native plantings will improve habitat for birds and pollinators species while also capturing and infiltration an estimated 500,000 gallons of urban stormwater off per year. It will also increase the county's tree canopy, which is a goal of the Green Macomb – Urban Forest Partnership.

In closing, I would like to reiterate that the Clinton River Watershed Council fully supports this project. We appreciate all of the meaningful work being done and look forward to next steps.

Best regards,

Anne Brasie, Executive Director
Clinton River Watershed Council



February 24, 2020

To whom it may concern,

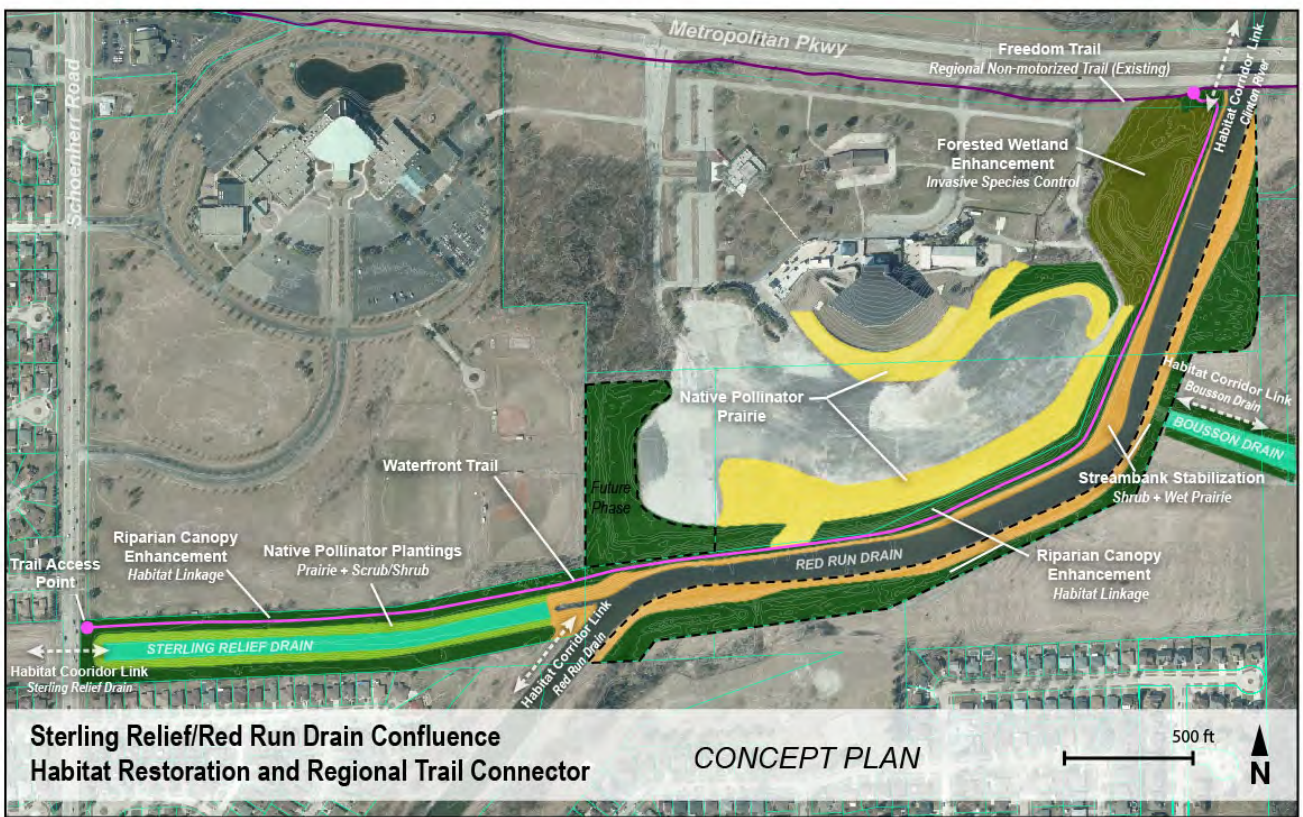
It is with great enthusiasm that the Lake St. Clair (LSC) Cooperative Invasive Species Management Area (CISMA) offers this letter of support to Macomb County Planning and Economic Development (MCPED) for the Sterling Relief / Red Run Confluence Habitat Restoration Project. This project will reduce invasive species propagule pressure, restore valuable habitat, and contribute to the LSC CISMAs goals and objectives.

The LSC CISMA recognizes that invasive plants are a threat to ecosystems, our economy, and our health. Recognizing that invasive species can be spread directly through natural vectors of dispersal, such as streams and rivers, it is of utmost importance to determine population distributions to aid in future management. To show our commitment for this effort, the LSC CISMA will provide staff time and GIS mapping applications to facilitate monitoring activities.

We believe our support and commitment will significantly improve the effectiveness of evaluating invasive species management and restoration of terrestrial plant communities. We look forward to working with MCPED and would like to thank you for your consideration of this project.

Sincerely,

McKenzi Waliczek
Coordinator
Lake St. Clair Cooperative Invasive Species Management Area



Red Run Drain
View of Freedom Hill from South Bank



**Red Run Drain
Existing Gravel Path from Freedom Hill Parking Lot to the Water's Edge**



Red Run Drain
Looking Downstream at Freedom Trail and Metro-Parkway



**Sterling Relief Drain
Daylighted Section Just Upstream of Confluence With Red Run**



Project Name: Sterling Relief/Red Run Drain Confluence Habitat Restoration and Regional Trail Connector

= Task Time Frame
 = Task Completion
 = Recurring Task

Task	2020					2021												
	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
Prepare Design/Build Request for Proposals																		
Advertisement for Bids																		
Contract Negotiations (Scope and Contract Revisions)																		
Contract Award (Notice to Proceed)																		
Quality Assurance Project Plan (QAPP)																		
Initial Project Meeting																		
Preliminary Design (50% Design Documents)																		
Permit Application Submittals																		
Final Design Plans and Specifications (100% Design)																		
Construction																		
Phase 1 - Construction of trail/ plantings along Sterling Relief																		
Phase 2 - Construction of trail/plantings along Red Run																		
Invasive Treatment																		
Construction Completion (Punch List, Planting, Close-out)																		
Monitoring																		
Public Outreach/ Education																		
Project Reports (Quarterly and 90 days after project completion)																		
Maintenance & Guarantee (2 years after construction)																		

Task	2022											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Prepare Design/Build Request for Proposals												
Advertisement for Bids												
Contract Negotiations (Scope, EPA Approval, Contract Revisions)												
Contract Award (Notice to Proceed)												
Quality Assurance Project Plan (QAPP)												
Initial Project Meeting												
Preliminary Design (50% Design Documents)												
Permit Application Submittals												
Final Design Plans and Specifications (100% Design)												
Construction												
Phase 1 - Construction of trail/ plantings along Sterling Relief												
Phase 2 - Construction of trail/plantings along Red Run												
Invasive Species Treatment												
Construction Completion (Punch List, Planting, Close-out)												
Monitoring												
Public Outreach/ Education												
Project Reports (Quarterly and 90 days after project completion)												
Maintenance & Guarantee (2 years after construction)												

Macomb County Regional Trail Network





Iron Belle Trail
Regional Non-motorized Trail

Local Trail Connection
Existing Sidewalk Network

Freedom Trail
Regional Non-motorized Trail

Future Waterfront Trail

Potential Future Connection

Sterling Relief Drain

Schoenherr Road

Metropolitan Pkwy

Red Run Drain

**Sterling Relief/Red Run Drain Confluence
Habitat Restoration and Regional Trail Connector**

Trail Connections

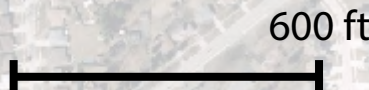
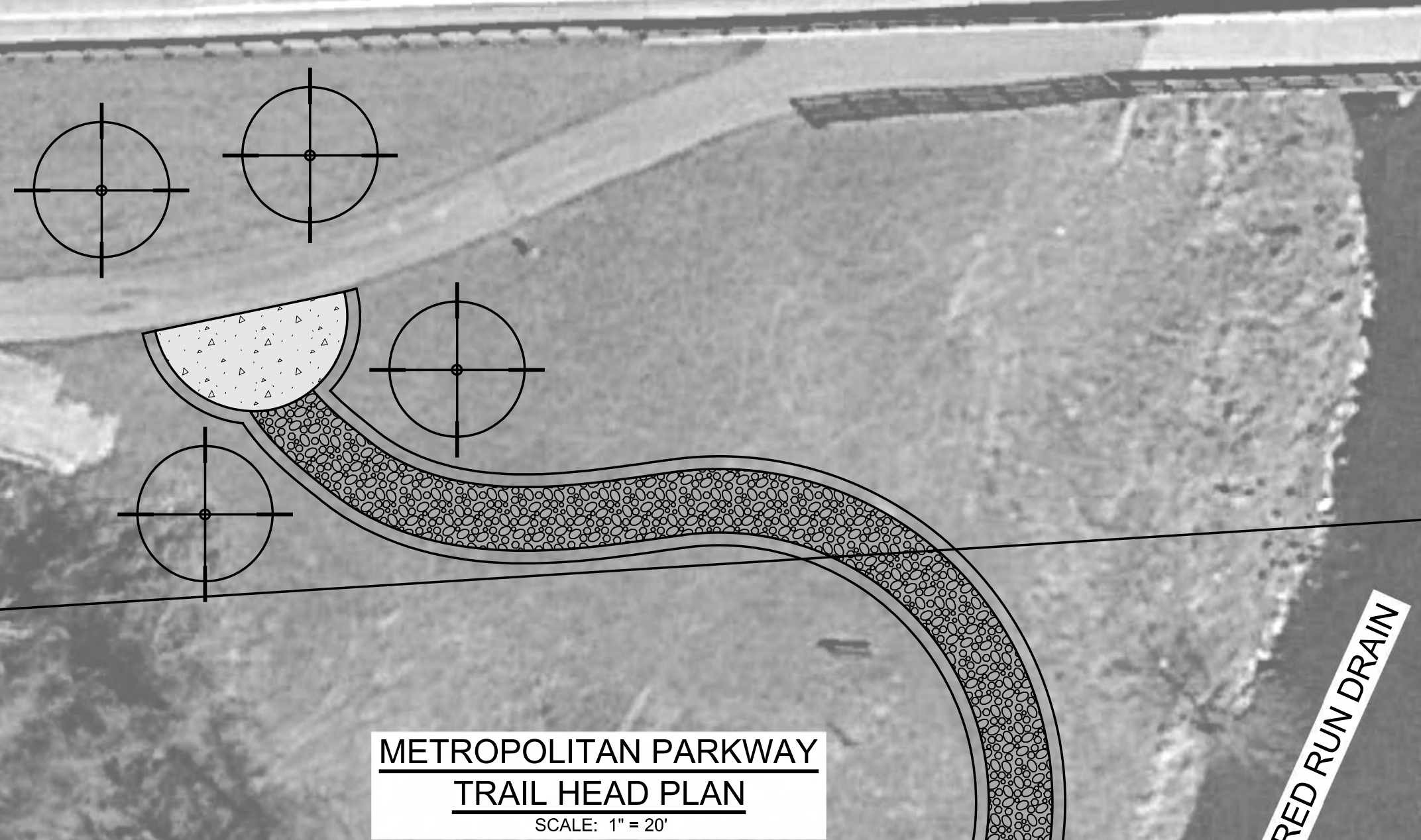
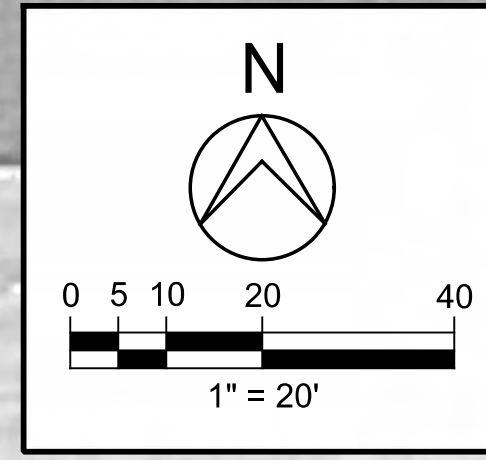
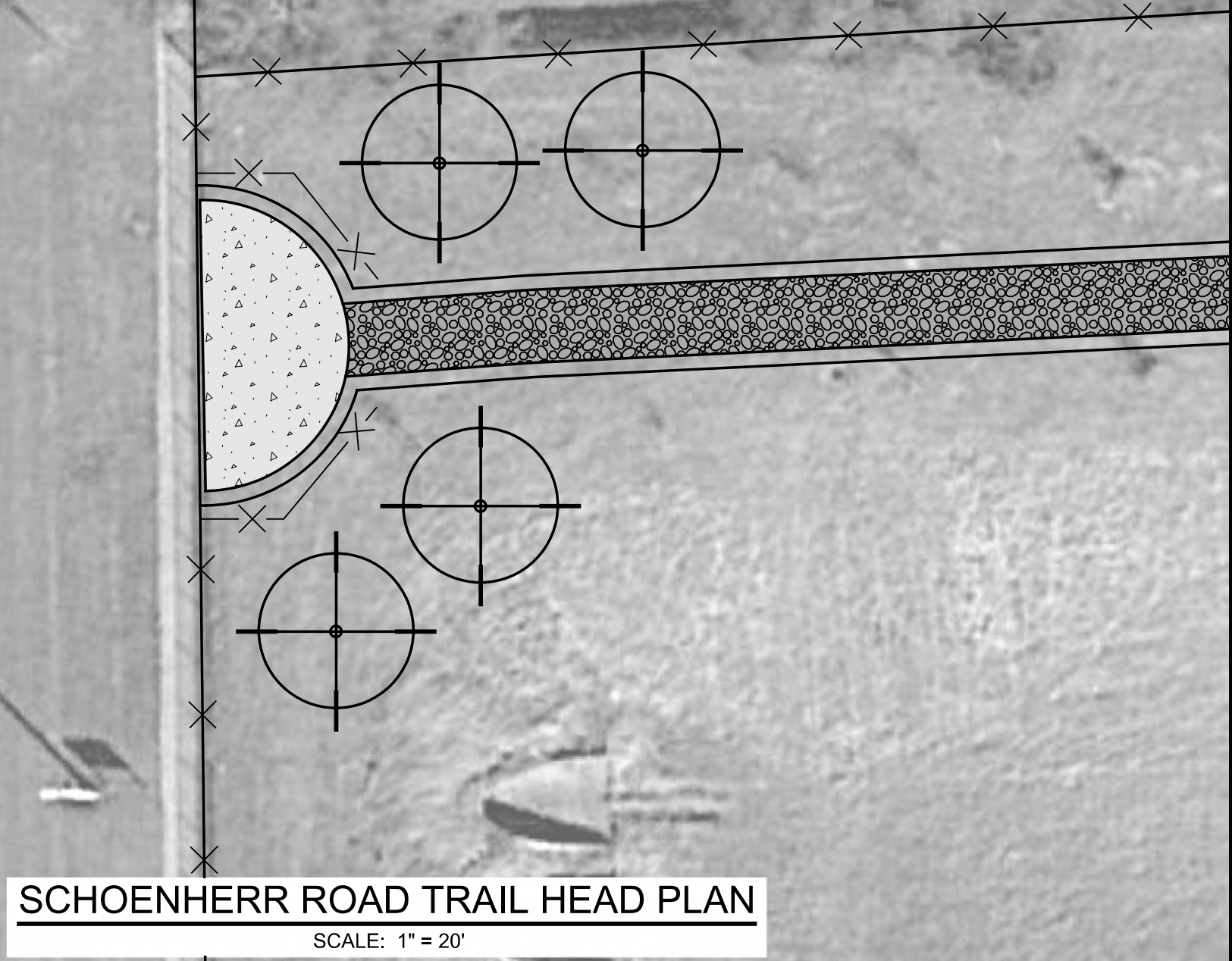
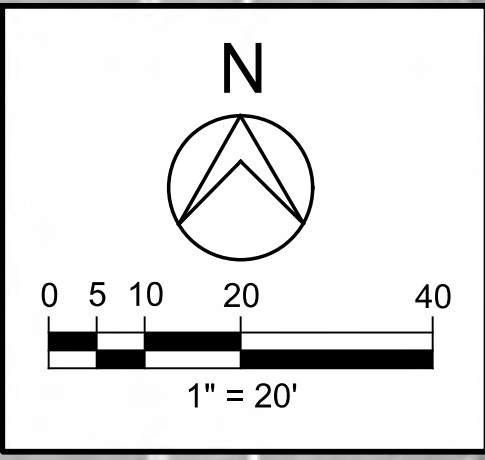


EXHIBIT B

14-Sep-2021, 9:14:20 AM
 07012015HRC.tbl
 P9
 V:\202008\20200852\C\Sheets\ogn\Exhibit_09_14_2021.dgn
 HRC



METROPOLITAN PARKWAY

SEE INSET PLAN FOR METROPOLITAN PARKWAY TRAIL HEAD DETAILED PLAN

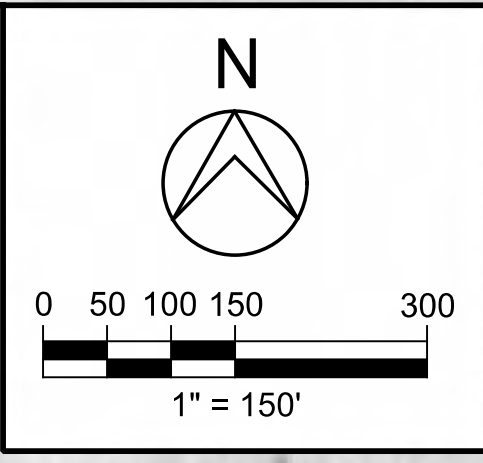
WATERFRONT TRAIL

RED RUN DRAIN

10-25-200-010

RED RUN DRAIN

METROPOLITAN PARKWAY TRAIL HEAD PLAN
 SCALE: 1" = 20'



SEE INSET PLAN FOR SCHOENHERR ROAD TRAIL HEAD DETAILED PLAN

WATERFRONT TRAIL

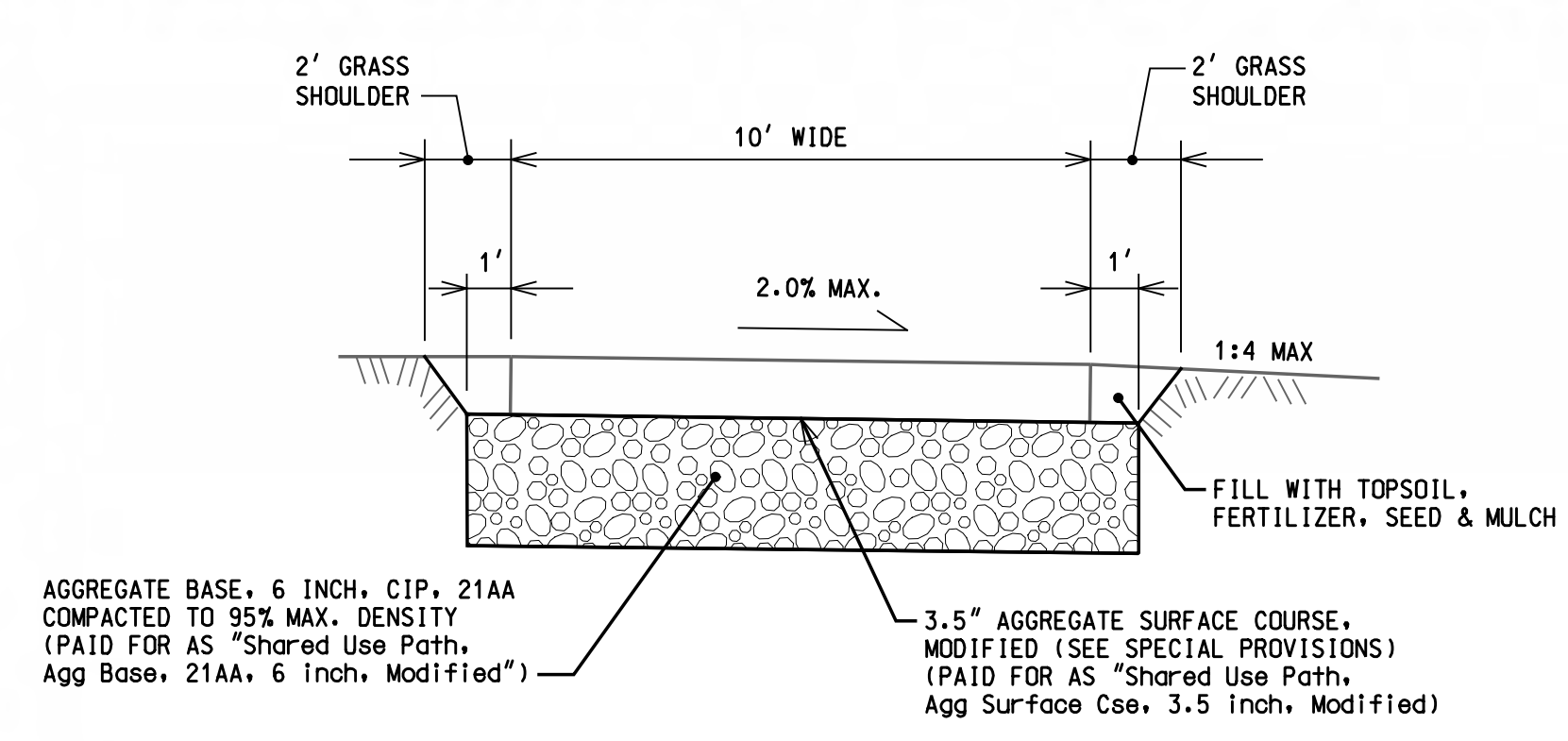
STERLING RELIEF DRAIN

10-25-100-026

WATERFRONT TRAIL

RED RUN DRAIN

10-25-200-004



RED RUN INTERCOUNTY DRAIN DRAINAGE BOARD

Michigan Department of **AGRICULTURE & Rural Development**

WRC
 WATER RESOURCES COMMISSIONER
 Jim Nash

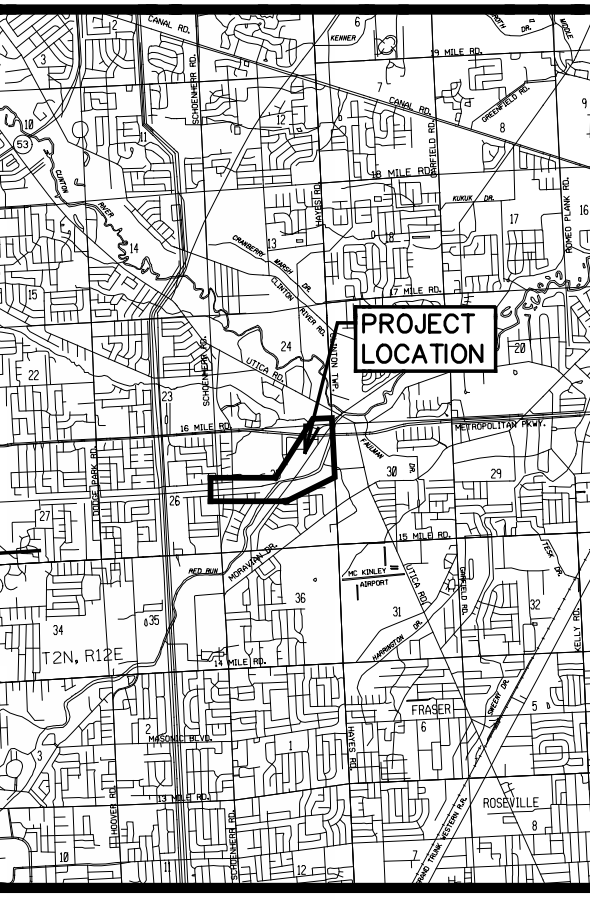
MACOMB COUNTY MICHIGAN
 Macomb County Public Works Commissioner

HRC
HUBBELL, ROTH & CLARK, INC
 CONSULTING ENGINEERS SINCE 1915

555 HULET DRIVE, BLOOMFIELD HILLS, MICH. P.O. BOX 824, 48303-0824

PHONE: (248) 454-6300
 FAX (1st. Floor): (248) 454-6312
 FAX (2nd. Floor): (248) 454-6359
 WEB SITE: [http:// www.hrcenr.com](http://www.hrcenr.com)

DATE	ISSUED FOR / ADDITIONS / REVISIONS
DESIGNED	HRC
DRAWN	HRC
CHECKED	N.J.K.
APPROVED	J.F.B.



RED RUN INTRCOUNTY DRAIN DRAINAGE BOARD

RED RUN DRAIN RESTORATION PHASE I

MACOMB COUNTY MICHIGAN

EXHIBIT B WATERFRONT TRAIL

HRC JOB NO. 20200852 SCALE A NOTED
 DATE SEPTEMBER 2021 EXHIBIT A

© 2021 Hubbell, Roth & Clark, Inc. All Rights Reserved



Candice S. Miller

Public Works Commissioner
Macomb County

To: Sterling Relief Drain Drainage District Board Members

From: Stephen Downing, Construction & Maintenance Manager

Date: October 18, 2021

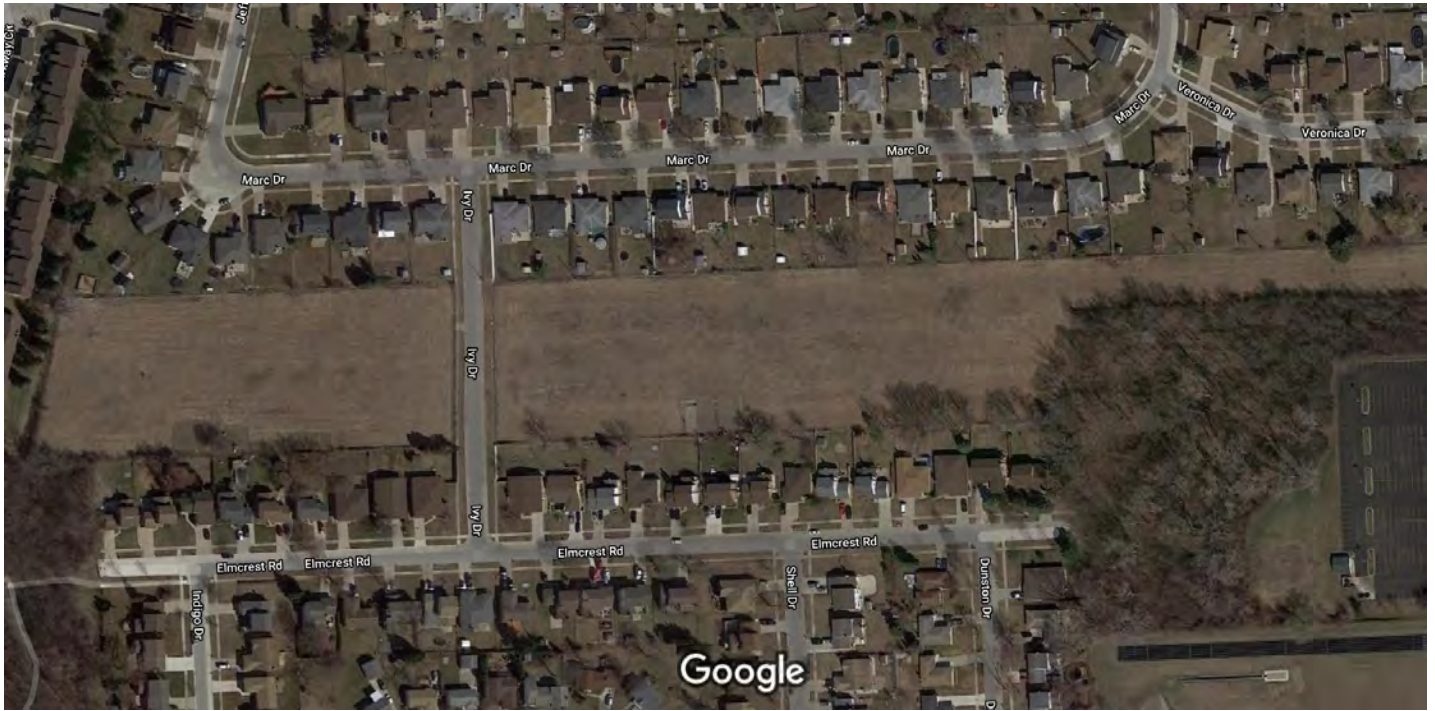
Subject: Ivy Drive Fence Replacement

The existing fence at the Ivy Drive crossing of the Sterling Relief Drain is in disrepair, requiring replacement. The fence is damaged in multiple locations and the access gates are heavily damaged. The Macomb County Public Works Office is soliciting proposals to remove and replace the existing 4-foot high chain link fence with a 6-foot high black vinyl coated chain link fence. The 6-foot height was selected to meet the City of Sterling Heights fencing ordinance. The black vinyl coated fencing will restore the aesthetics of the drain in this location and provide a long-lasting product.

There is approximately 470 linear feet of fence removal/replacement plus two 14-foot gates, one on each side of the street. The gates provide access for the Drain Maintenance personnel to access the drain for mowing and other maintenance related tasks. We have already received one quote from Taylor Made Fence Co. for the lump sum of \$23,800. We are soliciting quotes from at least one other fencing contractor prior to awarding the work. If a proposal is received for less than \$23,800, we will proceed with the lesser amount.

The recommendation for the Sterling Relief Drain Drainage District Board is to approve the replacement of the existing fence at the Ivy Drive Road Crossing for the Not-to-Exceed amount of \$23,800.

Attachments: Fence Upgrade Proposal
Aerial Map of Location



Imagery ©2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2021 100 ft





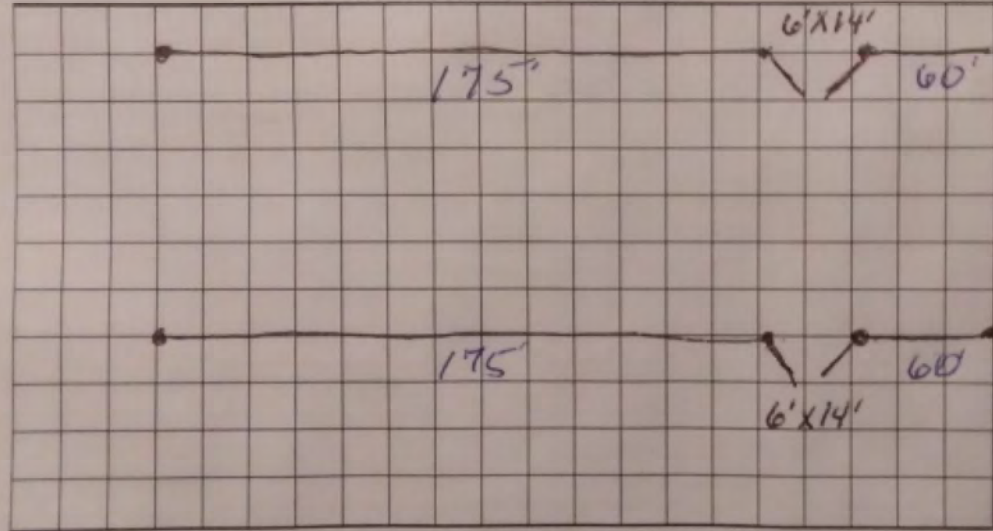
Customer: 2000
 Address: Violet St
 City: Sterling Heights
 Phone: _____

Down Payment: _____
 Balance: *23,800 586-615-4195
 Terms: ATTN: TOM STOCKEL

Construction: PVC Wood Steel Chain Link Aluminum Other
 Style or Fabric: _____ Height: 6' ft
 Type of Posts: Black Vinyl Coated Corner Post: 4" X 9' PP40
 Line Posts: Black Vinyl PP40 3" Top Rail: Black 1 1/2 PP20
 Spacing Between Posts (Approx.): 10' or less Service Gate: 2-6' X 14'
 Drive Gate: 2-6' H X 14' DOUBLE Dirt Removal: _____
 Type of (Wood): _____ Tops: _____
 Posts Set In: CONCRETE Depth: CODE

Remarks: REMOVE & HAUL AWAY EXISTING 6' - U + TOP RAIL - GATES 3" LIND POSTS PP-40 4" ENDS & GATE POSTS

PROPERTY AND FENCE PLAN



Taylor Made Fence will:

- Call Miss Dig
- Pull Permit
- Spread dirt along fence line
- Remove dirt from job site (extra charge)

AGREEMENT

The Taylor Made Fence Co. agrees to do all the above work in a good workmanlike manner.
 It is further agreed that time shall be the essence of this agreement, and that in the event any default be made in the payments hereinbefore required to be made, the total amount due hereunder shall become due and payable forthwith without notice.
 This agreement shall not be binding upon the contractor until signed by him in writing. All unused materials shall, under any conditions, remain the title and property of the contractor.
 It is further agreed that the contractor shall not be liable for delays caused by weather conditions, obtaining materials or any other causes beyond his control.

INSTALLATION PRACTICE

Fence will be built to average general grade in disregard to unevenness of ground. Fence will be erected on lot line when stakes can be found. If no stakes can be located it will be the responsibility of the property owner to determine his property lines. If survey is necessary, the property owner is required to pay for that service.

ACCEPTION OF PROPOSAL

I, customer, hereby agree to stake the fence line. I, customer, hereby agree to clear fence lines of all debris, bush, obstacles, etc.
 The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payments will be made as outlined above.

Salesperson: *ME*
 Accepted: _____
 Taylor Made Fence Co.

Signature: _____
 Date: _____

<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%						
		Bednar	City of Sterling Heights	\$ 2,096.74	Invoice #2020-0923ST - 9.28.20	Reimbursement for Fuel Spill Remediation	
		Bednar	Clinton Township Treasurer	\$ 5,001.19	Invoice #2020-0923CT - 9.28.20	Reimbursement for Fuel Spill Remediation	
		Slanec	Cross Brothers Excavating	\$ 510.00	Invoice #5770 - 1.31.21	Drain Cleanout	
		Stockel	Doetsch	\$ 1,170.00	Invoice #71571 - 4.14.21	Emergency Spill Remediation - No Source Found	
		Bednar	English Countryside Landscaping	\$ 3,000.00	Invoice #21-001 - 11.15.20	Watering Newly Planted Trees	
			Total	\$ 11,777.93			

YTD Trial Balance

Fund: Sterling Relief

As of Fiscal Period: Oct 1, 2020-Sept 30, 2021

	O&M Balance 9/30/2020	O&M	Total 9/30/2021
Cash - Operating	124,094	37,625	161,719
Accounts Receivable	71,146		71,146
Assets			0
Liabilities			0
Revenues		55,788	55,788
Expenditures		18,163	18,163
Equity	195,240		232,865