#### AGENDA

### Red Run Intercounty Drain Drainage Board

Macomb and Oakland Counties

# August 26, 2020 – 10 a.m. Via GoToMeeting

1. Call meeting to order

#### **Board Members:**

Michael Gregg, Chair, Michigan Department of Agriculture and Rural Development Candice Miller, Macomb County Public Works Commissioner Jim Nash, Oakland County Water Resources Commissioner

- 2. Approval of the meeting agenda for August 26, 2020
- 3. Approval of Drainage District Board Meeting Minutes from February 19, 2020
- 4. Public Comment
- 5. Presentation of Final Operations and Maintenance Plan and Board Adoption
- 6. Present Trial Balance
- 7. USACE project funding updates
- 8. Request for compensation for HRC/Spicer additional services
- 9. Presentation of proposals for new tasks
  - a. 6 Rivers/CISMA for Invasive Vegetation Treatment Including Access Agreement
  - b. HRC/Spicer for Freedom Hill Support
  - c. HRC/Spicer for Spill Response Planning
- 10. Discussion on Assessments
- 11. Annual Drain Inspection Walkthrough
- 12. Present request for reimbursement of the Drain Revolving fund in the amount of \$12,093
- 13. Other business
- 14. Adjourn

# **Red Run Intercounty Drain**

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 3

Board Meeting Minutes from February 19, 2020

### Minutes of the Meeting of the Intercounty Drainage Board for the Red Run Drain

February 19, 2020

A meeting of the Drainage Board for the Red Run Intercounty Drain was held at the office of the Oakland County Water Resources Commissioner, Public Works Building, Building 95 West, Waterford, Michigan on February 19, 2020. The meeting was called to order by the Chairperson at 11:02 a.m.

Present:

Michael Gregg, Chairperson and Deputy for Gary McDowell, Director of the Michigan Department of Agriculture and Rural Development; Candice Miller, Member and Macomb County Public Works Commissioner; and Jim Nash, Member and Oakland County Water Resources Commissioner.

Also Present: Representing the office of Macomb County Public Works Commissioner: Brian Baker and Jeff Bednar. Representing the office of the Oakland County Water Resources Commissioner: Steven Korth, George Nichols and Megan Koss. Others in attendance: Jamie Burton (Hubbell, Roth & Clark) and Brady Harrington (MDARD).

The agenda for the February 19, 2020 meeting was presented. It was moved by Ms. Miller, supported by Mr. Nash, to approve the agenda as presented.

Adopted:

YEAS - 3

NAYS - 0

Minutes of the meeting held on October 16, 2019 were presented for consideration. It was moved by Ms. Miller, supported by Mr. Nash, to approve the minutes as presented.

Adopted:

YEAS - 3

NAYS - 0

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

Jeff Bednar updated the Board on the status of the Michigan Invasive Species Grant Program. He discussed grant and funding options. Mr. Bednar noted plans to identify which invasive species to focus on and indicated that Japanese knotweed is currently the greatest concern. Jamie Burton stated that they have been in contact with the CISMA coordinator and that HRC is working on a budget regarding the species and area for treatment they plan to pursue. Lastly, Steve Korth indicated a need to establish the proper program and schedule to best manage the invasive species at issue. He furthered that work should begin to abate the aforementioned with or without grant funding.

Jeff Bednar presented a Resolution of Support for the Sterling Relief/Red Run Drain Confluence Habitat Restoration and Trail Connector Project. It was moved by Mr. Nash, supported by Ms. Miller, that the Chairperson execute the Resolution.

Adopted: YEAS - 3NAYS - 0

George Nichols presented a Letter of Support for the Open Drain Headwaters Repair at the George W. Kuhn outfall. He indicated the Army Corps of Engineers provided a grant-match opportunity for repairs and work at the GWK outfall. The scope of the project and funding is still being explored.

Mr. Nash and Ms. Miller engaged in spirited discourse regarding CSOs and the source and cause of the "sludge issue" in Macomb County.

George Nichols presented potential dates for the Annual Drain Inspection Walkthrough; May 8, 2020 was agreed upon.

Mr. Korth presented the Trial Balance report dated February 14, 2020 (as attached) indicating a net cash balance of \$118,412.30. It was moved by Mr. Nash, supported by Ms. Miller, to receive and file the updated provided.

Adopted: YEAS - 3NAYS - 0

Mr. Korth presented a request for Board approval of reimbursement of the Drain Revolving Fund in the amount of \$5,554.65. It was moved by Mr. Nash, supported by Ms. Miller, to approve the reimbursement of the Drain Revolving Fund in the amount of \$5,554.65

Adopted: YEAS - 3NAYS - 0

Motion by Ms. Miller, supported by Mr. Nash, to adjourn the February 19, 2020, Red Run Intercounty Drain Drainage Board meeting at 11:34 a.m.

Adopted: YEAS - 3NAYS - 0

Next Regular Meeting: March 18, 2020 at the Office of the Oakland County Water Resources Commissioner, One Public Works, Building 95 West, Waterford, Michigan at 9:30 a.m., Eastern Standard Time.

Jim Nash, Secretary

Red Run Intercounty Drain Drainage Board

STATE OF MICHIGAN	)
	)SS.
COUNTY OF OAKLAND	)

I hereby certify that the foregoing is a true and complete copy of the minutes of the Red Run Intercounty Drain Drainage Board, at a meeting held on the 19<sup>th</sup> of February, 2020 and that the meeting was conducted and public notice was given in compliance with the Open Meetings Act being Act 267, Public Acts of Michigan, 1976 and that the minutes were kept and will be or have been made available to the public as required by the Act.

IN WITNESS WHEREOF, I have hereunto affixed my official signature on this \_\_\_\_\_\_\_ of March, 2020.

Jim Nash, Secretary

Red Kun Intercounty Drain Drainage Board

# **Red Run Intercounty Drain**

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 4

**Public Comment** 

# **Red Run Intercounty Drain**

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 5

Presentation of Final Operations and Maintenance Plan Board Adoption



**Drainage Board for the Red Run Intercounty Drain** 

STUDY FOR THE REPAIR, MAINTENANCE,
AND MANAGEMENT OF THE RED RUN INTERCOUNTY DRAIN

Macomb and Oakland Counties, Michigan

Prepared by:

HUBBELL, ROTH & CLARK, INC CONSULTING ENGINEERS SINCE 1915

555 Hulet Drive Bloomfield Hills, MI 48302





1.	District Assessment Table
l. II.	District Assessment Table  Project Fact Sheets
III.	Memos
IV.	Attachments
10.	Attaciments









# **Maintenance and Capital Improvement Plan**

### Introduction

The Red Run Intercounty Drain (Drain) is a Chapter 21 intercounty drain located within Oakland and Macomb Counties. The Drain was improved by the United States Army Corps of Engineers (USACE) in the late 1940s. Upon completion of construction, ownership was transferred to the Red Run Intercounty Drainage Board (ICDB) for long-term operation and maintenance. The Red Run ICDB is comprised of three members: the Michigan Department of Agriculture and Rural Development (MDARD), Chair; the Oakland County Water Resources Commissioner (WRC), Secretary; and the office of the Macomb County Public Works Commissioner (MCPWO), Member. WRC is responsible for the daily operation and maintenance of the Drain.

The Drain is the receiving waterbody for the periodic treated combined sewer overflows from the George W. Kuhn Drain, as well as stormwater from the Drain. The existing open channel drain is approximately 8.2 miles long and extends from its point of beginning at the Clinton River in Clinton Township north of 16 Mile Road (Metropolitan Parkway) and east of Hayes Road to its upper terminus at Dequindre Road near 13 ½ Mile Road (Chicago Road) in the City of Warren.

To ensure the long-term viability of the Drain, the Red Run ICDB obtained the professional engineering services of Hubbell, Roth, and Clark, Inc. and Spicer Group (Project Team) to develop a comprehensive study for the repair, maintenance, and management of the Red Run Drain.

# Scope of Work

To determine the maintenance needs and capital improvement projects, the Project Team conducted a baseline assessment by inspecting 8.2 miles of the Drain, starting from the George W. Kuhn Retention Treatment Basin at Dequindre, between 13 Mile and 14 Mile Roads, to where the Red Run meets the Clinton River. In addition, the Project Team reviewed existing data, reports, models, and drone footage. All the information obtained was used to evaluate the following:

- Bank/slope conditions
- Encroachments
- Invasive vegetation
- Obstructions
- · Peak flows and floodplain

- Regional detention opportunities
- Sedimentation
- Utilities
- Water quality

# **Findings**

#### **Drain Condition**

The field inspection of the Red Run Intercounty Drain identified several issues throughout the 8.2 miles of assessment. Typical issues included outfalls in need of repairs, severe bank erosion, sedimentation, and invasive species. Condition scores were given to assets as good, fair, or poor. Impacts or impairments to the Drain were rated as either minor, moderate, or severe.



A summary of the Drain condition assessment is included in the Appendices under *Field Inspections and Baseline Condition Assessment Memorandum*.

In the summer of 2019, the Project Team surveyed the Red Run drain for invasive species from Dequindre Road to 16 Mile Road with the assistance from the Clinton River Watershed Council. During the survey, the field crew found two of the CISMA priority invasive vegetation types, Phragmites and Japanese Knotweed, and seven other invasive species: Yellow Clover, Garlic Mustard, Buckthorn, Reed Canary Grass, Bull Thistle, Canada Thistle, Privet Shrub. Throughout the drain assessment, the type, location, density, area of each species was recorded. Treatment of the invasive vegetation should consider both chemical treatment and removal of the vegetation. In addition, procedures should be

adopted to prevent the spread of invasives (e.g., washing equipment, prohibiting the spreading of spoils containing invasive vegetation). A summary of the invasive vegetation assessment is included in the Appendices under *Invasive Vegetation Survey Memorandum*.

#### Water Quality

A substantial amount of *E. coli* data exists for the Red Run Drain and its tributaries. Both Oakland and Macomb Counties have worked diligently over the past 20 years to track illicit discharges impacting *E. coli* levels in the Drain. Comparing historical data with current data shows that significant progress has been made to reduce the chronic levels within the Red Run Drain and its tributaries. Although progress has been made, the levels continue to exceed the Water Quality Standard of 300 MPN per 100/mL indicating that human and/or animal sources of *E. coli* remain.

Tracking *E. coli* sources in an urbanized storm drain system with approximately 144 outfalls, miles of enclosed pipes, and nonpoint source impacts are especially complex. Therefore, we recommend supporting the monitoring currently conducted by the Macomb County Health Department with supplemental sampling to assist with source tracking. In addition, utilizing Microbial Source Tracking (MST) techniques to assist with distinguishing human sources of *E. coli* from animal/wildlife sources to prioritize illicit discharge activities. This effort could be done in partnership with the Cities of Warren and Sterling Heights and the Charter Township of Clinton, the adjacent municipalities with outfalls to the Drain. A summary of the water quality assessment is included in the Appendices under Water Quality Evaluation and Findings Memorandum.

#### Peak Flows and Floodplain Analysis

The Project Team reviewed the Drainage District, USACE design information, existing studies, and

models to determine the hydraulic and hydrology of the Drain. The 2, 5, 10, 50, 100, and 500-year peak flow rates for the Red Run Drain and its tributaries were determined as part of this study. The hydraulic capacity, the amount of flow conveyed through the Drain before overtopping the banks, was analyzed for the Red Run Drain. The Project Team supplemented from the FEMA model with additional model information from Anderson, Eckstein, and Westrick to analyze the capacity of the Drain. The Red Run Drain was originally designed to convey 10-year peak flows. The result of the current hydraulic/hydrology analysis confirms that the Red Run drain meets this design intent. The depression zones on the floodplains were also evaluated as part of this project. There are some low zones on the floodplain that are lower than the top of the bank elevation, and once the water level reaches the bank, the water will

#### **KEY INFORMATION**

Red Run drain is providing conveyance of the design event (or 10- year peak stream discharge).

The majority of sediment grain size within the Red Run Drain is coarse sand and approximately 4 to 5 feet water depth required to move the coarse sand.

be stored in the depression zones. The low pocket areas are within the 500-yr FEMA floodplain, and the results of our analysis are consistent with FEMA floodplain boundaries. A summary of the peak flow and floodplain analysis is included in the Appendices under *Peak Flow and Floodplain Analyses Memorandum*.

#### Regional Detention Analysis

As part of this project, the Project Team utilized the peak flow rates and floodplain analyses to evaluate the best opportunities available for regional detention within the Red Run Intercounty Drain Drainage District. The desktop analysis evaluated the need/benefit for regional detention, available lands, and/or easement required, and identified viable opportunities for regional green infrastructure. Throughout the regional detention vision, vacant lands were identified as a potential opportunity to invest in green infrastructure. A storage routing method was used to evaluate watershed development plans and evaluate the importance of regional detention. The same storage routing was applied on the Red Run tributaries, including the Plumbrook Drain, Big Beaver, and Bear Creek Drain for a 2-year peak flow rate. The results show that the Plumbrook Drain Drainage District has more available lands, resulting in more opportunities for implementing regional detention and reducing the peak flow rates. A summary of the peak flow and floodplain analysis is included in the Appendices under Regional Detention and Green Infrastructure Analyses Memorandum

#### **KEY INFORMATION**

If all vacant public-owned parcel adjacent to the Red Run converted to regional detention basins, the 2, 10, and 100-year peak stream discharge will be reduced by 1.9%, 0.6%, and 0.4% at the Red Run, respectively.

If all vacant public-owned parcels in the entire Red Run watershed converted to detention basins, the 2, 10, and 100-year peak stream discharge will be reduced by 14.6%, 4.7%, and 2.6% at the Red Run, respectively.

By reducing the flow into the Red Run by 5%, the water surface is reduced by 4 inches for the 2-year peak flow rate and 6 inches for the 100-year peak flow rate.

A healthy aquatic ecosystem typically has an effective impervious surface less than 10%. The Red Run has an effective impervious surface of 32%. Decreasing the effective impervious surface from 32 to 10% would require about 20,000 acres (or 31 mi2) of impervious cover be converted to pervious.

#### Management and Capital Improvement Projects

The Project Team utilized the findings and results of this study and developed annual maintenance and capital improvement project plan. The management plan is concise, with a focus on recommended actions, location maps, and estimated costs. The list of potential projects for capital improvement projects and maintenance projects are explained below.

#### Long-term Capital Improvement Projects:

The long-term capital improvement project plan was developed for projects requiring a petition according to the ICBD's priorities and the findings from the baseline assessments.

- 1- Phase 1 GWK Outfall Repair
- 2- Phase 2 Bank Stabilization-Downstream of GWK Outfall
- 3- Bank Stabilization Freedom Hill
- 4- Bank Stabilization East of Ryan Rd
- 5- Bank Stabilization West of Van Dyke

#### Total Project Cost is \$13 million.

- 6- Outfalls ReplacementTotal Project Cost is \$2.33 million.
- 7- Outfalls SamplingTotal Project Cost is \$30,000 (phase 1).

#### Short-Term Maintenance Projects:

- 1- Outfalls Repair
- 2- Invasive Species Removal and Control
- 3- Vegetation Management including Mowing, Brushing, and Tree Removal

Theoretically, many issues are interconnected, and addressing one without the other would prove futile in the long term. Therefore planning, coordination, and prioritization of projects are essential to successfully managing the Red Run Drain. For example, addressing sedimentation without addressing bank erosion may only result in a short-term solution with more frequent maintenance costs.

Project sheets were developed for the proposed long-term capital improvement and short-term maintenance projects. The project sheets explain the issues, recommended solutions, planning-level cost estimates, and alternative funding sources. Overall, these fact sheets can be used to assist the ICDB in applying for grants and explaining assessment costs to municipalities.

The Project Team also provided three alternatives on different ways to evaluate assessment impacts for completing the capital improvement and maintenance projects. In Alternative one, the projects are prioritized and assessed yearly. In Alternative Two, all projects are assessed over three consecutive years. In Alternative Three, the total project cost (or \$13M) is compensated by a \$13M bond with 50% interest rates over ten years.

### Conclusion

Overall the Red Run Drain is in fair condition and conveys a 10-year peak stream discharge, which is the design intent. This study can be utilized to assist the ICDB in preparing a list of priority projects for the Drain to address annual, short term, and long-term maintenance and capital improvement projects.

All background information and results of this project are summarized in appendices for staff reference and grant application support when needed.

## **Credits**

Prepared by Hubbell, Roth & Clark, Inc. (HRC) with support from Spicer Group, Inc. along with

- Oakland County Water Resources Commissioner (OCWRC)
- Macomb County Department of Public Works (MCDPW)
- Michigan Department of Agriculture and Rural Development (MDARD)
- Macomb County Health Department
- Macomb County Planning & Economic Development
- Lake St. Clair Cooperative Invasive Species Management Area (CISMA)
- Oakland County Cooperative Invasive Species Management Area
- Clinton River Watershed Council (CRWC)
- US Army Corps of Engineers, Detroit District (USACE)

# **Red Run Intercounty Drain**

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 6

Trial Balance

Run By: 27706

Run: 08/20/2020 at 08:10 AM

Scope: 82902 Red Run Federal Drain Ch21

### YTD Trial Balance Fund: 82902 Red Run Federal Drain Ch21 As of Fiscal Period: Month 11, 2020

		Fiscal Year	Current FY	
ACCOUNT		BEG BAL	Net Activity	ENDING BAL
100100	Cash - Operating	133,829.92	3,587.94	137,417.86
104100	Accrued Interest on Investment	5,132.90	(246.34)	4,886.56
126105	Due from Municipalities-AR Con	47,413.40	(47,413.40)	0.00
211100	Due to Primary Government	(400.00)	400.00	0.00
228100	Deposits	(26,700.00)	455.60	(26,244.40)
230852	Accounts Payable	(29,454.45)	29,454.45	0.00
	Revenues	0.00	(2,983.55)	(2,983.55)
	Expenditures	0.00	16,745.30	16,745.30
	Special Items- Uses	0.00	0.00	0.00
381350	FB Restricted Programs	(129,821.77)	0.00	(129,821.77)
		0.00	0.00	0.00

Cash as 08/20/2020 \$ 137,417.86

Permit Deposits Held (26,244.40)
Vouchers Payable AP 0.00
Due to Drain Revolving Fund 0.00

Total Net Cash Balance \$ 111,173.46

# **Red Run Intercounty Drain**

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 7

USACE project funding updates

## **Description of Issue**

#### Red Run Bank Stabilization- West of Ryan Rd.

- Moderate to severe bank erosion due to shear stress
- Localized slope instability due to long-term saturation and rapid draw down
- Slope instability has been attributed to relatively steep slopes combined with erosion at the toe and lack of sediment in flows

#### **Estimate of Costs**

\$2.4 M

#### **Recommended Solution**

- Install stone toe and in-stream structures to protect the toe slope
- Repair of the outfalls within project area
- Remove shoaling (or excess sediment deposition) areas in project area
- Reshape upper bank slopes similar to the "Red Run Open Drain Slope Stabilization" project completed by USACE
- · Install groundwater interceptor drains to discharge groundwater into the groundwater outfalls
- Restore with native seed on the upper bank

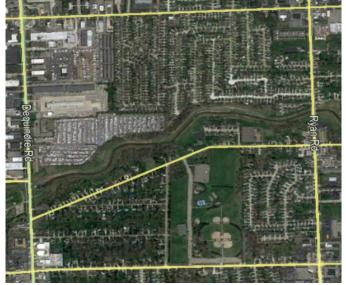
## **Collaborators/Partnerships**

- Oakland County Water Resources Commissioner
- Macomb County Department of Public Works
- GWK Drain Drainage District
- City of Warren
- US Army Corps of Engineers, Detroit District

# **Funding Opportunities**

- USACE
- EPA GLRI
- EGLE 319
- Local Match Drainage District
- · GWK Drain Drainage District

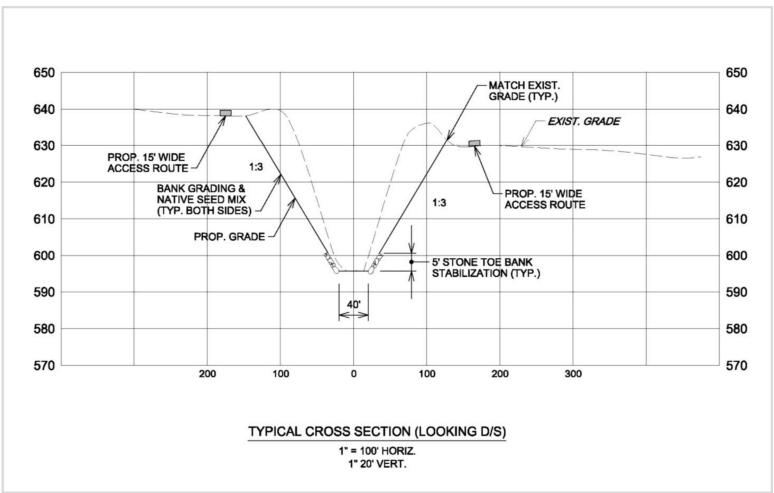
## **Location Map**

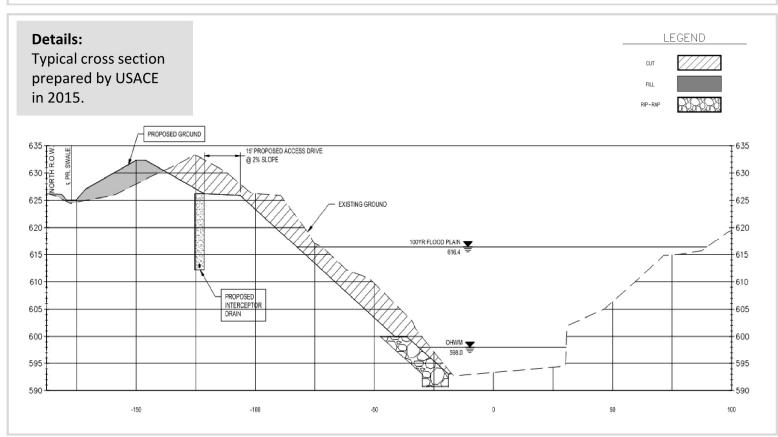


## **Photo of the Problem**



# **Graphic**





### **General Conditions**

All projects shall consider the following conditions:

- Restoration of native planting (See information below).
- Invasive species control.
- Additional vegetation management, such as the removal of woody material.
- Repair of any outfalls in the project area.
- Removal and proper disposal of sediment in the channel.
- Review and implementation of the pilot channel dimensions for sediment transport improvement based on study.
- Evaluation of area for additional slope drainage improvements.
- Consideration of any additional top side green infrastructure improvements.
- Incorporation of baseline maintenance requirements into contracts for outside services.
- Review of EGLE or local permit requirements

### **Invasive Control Plans**

- Prior to the implementation of any control methods, safety factors and permit requirements must be taken into consideration. Many control actions require permits from local, state, and/or federal agencies.
- The use of herbicide treatments is recommended as the primary control method.
- Spray should be applied to wet the leaves and, when present, the flower plumes of the target plants. Excessive application, such that the chemicals are dripping off the plants, should be avoided because it is more costly, can cause increased injury to desirable nontarget species, and often decreases the success of control.
- After the initial herbicide treatment, one or more follow-up methods at each site are recommended such as prescribed fire, mechanical treatment, or water level management.
  - Prescribed fire can be used after an herbicide treatment to remove excess biomass.
  - Mechanical treatments are used most effectively following an herbicide treatment to remove dead stems and promote native plant growth. Clean construction machines before moving to a new job site. The mud and soil stuck to the machines can harbor seeds from invasive plants.
- Once areas of invasive species have been controlled (e.g., greater than 85% reduction), it is recommended that an annual maintenance control program be implemented.

# **Native Species Bank Mix**

Specify a seed mix containing a variety of grasses, sedges, forbs, and pollinators. Examples species for consideration are:





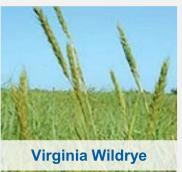
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**Purple Coneflower** 



**Black Eyed Susans** 









# Red Run Bank Stablization at West of Ryan Rd. Draft Engineer's Preliminary Estimate of Probable Costs

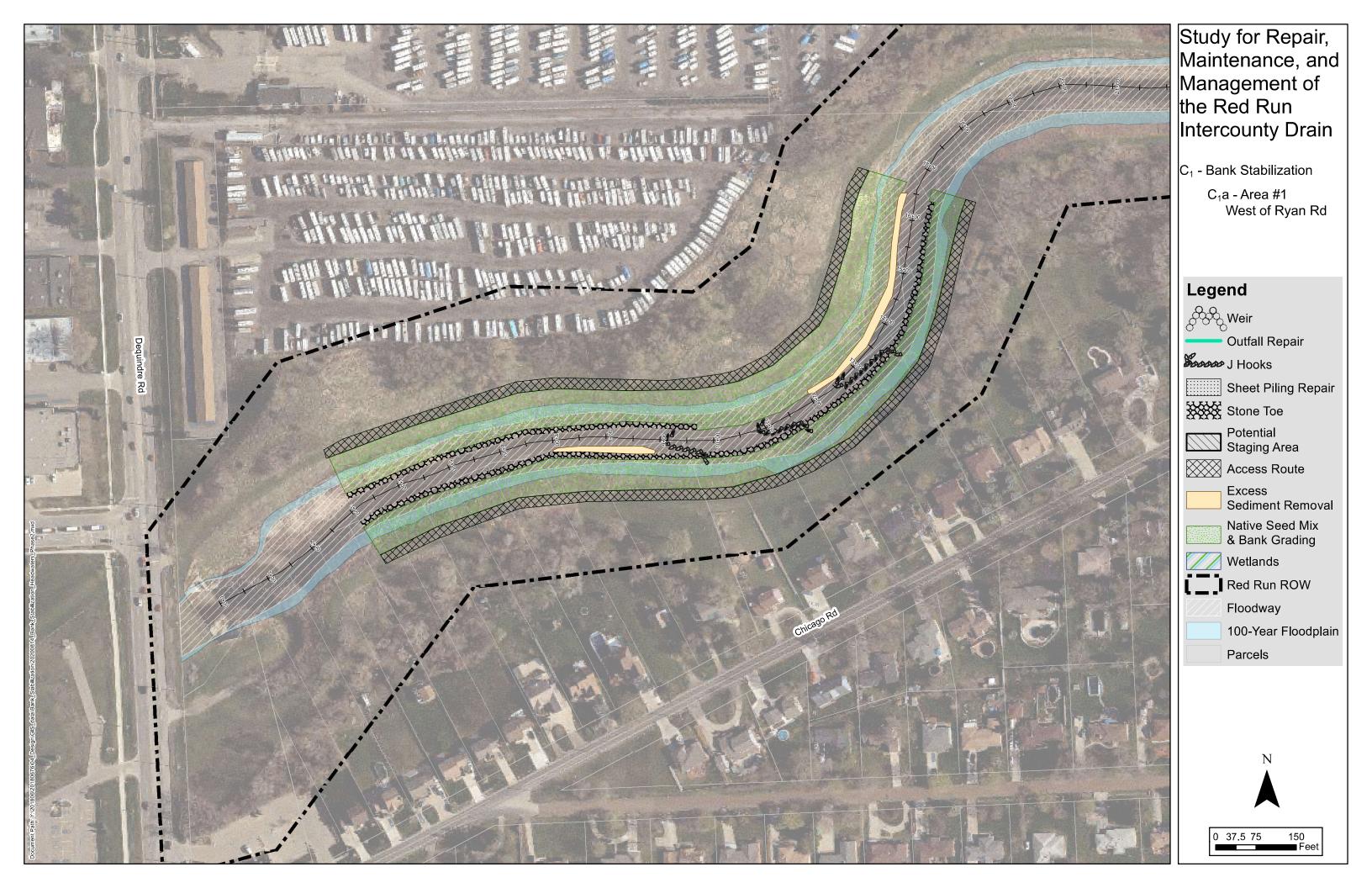
## Red Run Drain Intercounty Drainage Board

2/20/2020 HRC Job No. 20180676

Revision 1

## **Red Run Bank Stablization**

No.	Bid Item	Quantity	<u>Unit</u>		Unit Price	Total Cost
1.	Mobilization (Max 10%)	1	Lsum	@	\$147,200 =	\$147,200
2.	Clearing and Grubbing and Invasive Control	1	Lsum	@	\$40,000 =	\$40,000
3.	Earth Work (cut and fill, top soil as needed)	36,400	Cyd	@	\$20 =	\$728,000
4.	Mulch Blankets on the banks	18,200	Syd	@	\$6 =	\$109,200
5.	Native seeding on Banks	3	Ac	@	\$12,000 =	\$36,000
6.	Upland Seeding	2	Ac	@	\$6,000 =	\$12,000
7.	Stone Toe	2,000	Lft	@	\$200 =	\$400,000
8.	J hooks	3	Ea	@	\$15,000 =	\$45,000
9.	Excess Sediment Removal	1	Lsum	@	\$10,000 =	\$10,000
10.	Soil Erosion and Sediment Control and Silt Fence	1	Lsum	@	\$12,000 =	\$12,000
11.	Access Route and Staging Area	1	Lsum	@	\$30,000 =	\$30,000
12.	EGLE Permit Conditions	1	Lsum	@	\$10,000 =	\$10,000
13.	3 year maintenance	1	Lsum	@	\$40,000 =	\$40,000
	Subtotal Construction Costs					\$1,619,400
	Contingencies (20%)					\$323,900
	Engineering Services (25%)					\$404,900
	Grants Application and Projects Admin (5%)					\$81,000
	Total Project Costs					\$2,429,200



## **Description of Issue**

- Excess sediment deposition or shoaling in some areas
- Moderate to severe bank erosion due to shear stress
- Localized slope instability due to long-term saturation and rapid draw down
- Slope instability has been attributed to relatively steep slopes combined with erosion at the toe.

**Estimate of Costs** 

\$2.6 M

### **Recommended Solution**

- Remove shoaling (or excess sediment deposition) areas in project area
- Reshape upper bank slopes and stabilize with native seed on the upper bank
- Install stone toe to protect the toe slope
- Install J-hooks to direct the shear stress to the center of the drain
- Repair the outfalls within project area
- Install groundwater interceptor drains to discharge groundwater into the groundwater outfalls

## **Collaborators/Partnerships**

- Oakland County Water Resources Commissioner
- Macomb County Department of Public Works
- City of Warren
- US Army Corps of Engineers, Detroit District

# **Funding Opportunities**

- USACE
- EPA GLRI
- EGLE 319
- Local Match Drainage District

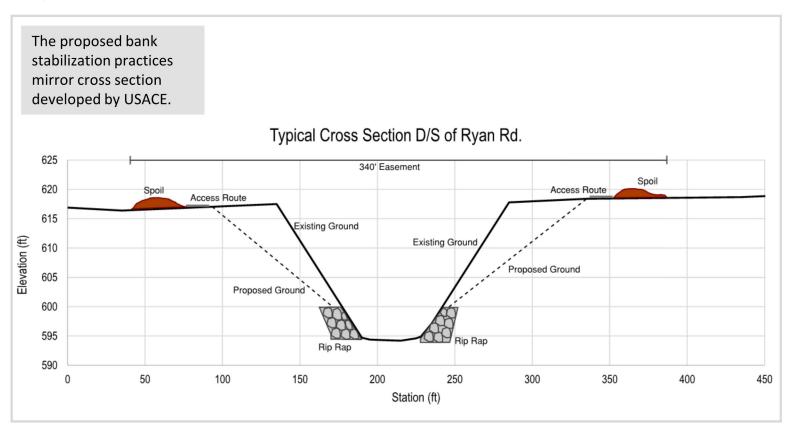
# **Location Map**

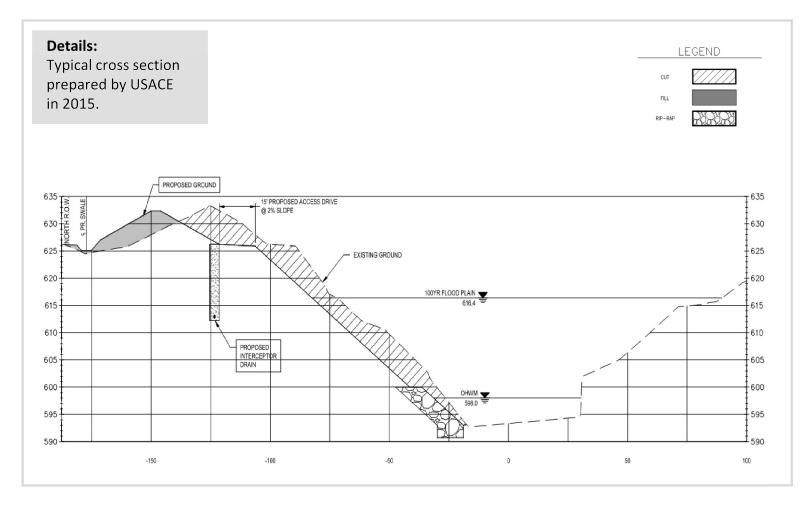


## **Photo of the Problem**



# **Graphic**





#### **General Conditions**

All projects shall consider the following conditions:

- Restoration of native planting (See information below).
- Invasive species control.
- Additional vegetation management, such as the removal of woody material.
- Repair of any outfalls in the project area.
- Removal and proper disposal of sediment in the channel.
- Review and implementation of the pilot channel dimensions for sediment transport improvement based on study.
- Evaluation of area for additional slope drainage improvements.
- Consideration of any additional top side green infrastructure improvements.
- Incorporation of baseline maintenance requirements into contracts for outside services.
- Review of EGLE or local permit requirements

### **Invasive Control Plans**

- Prior to the implementation of any control methods, safety factors and permit requirements must be taken into consideration. Many control actions require permits from local, state, and/or federal agencies.
- The use of herbicide treatments is recommended as the primary control method.
- Spray should be applied to wet the leaves and, when present, the flower plumes of the target plants. Excessive application, such that the chemicals are dripping off the plants, should be avoided because it is more costly, can cause increased injury to desirable nontarget species, and often decreases the success of control.
- After the initial herbicide treatment, one or more follow-up methods at each site are recommended such as prescribed fire, mechanical treatment, or water level management.
  - Prescribed fire can be used after an herbicide treatment to remove excess biomass.
  - Mechanical treatments are used most effectively following an herbicide treatment to remove dead stems and promote native plant growth. Clean construction machines before moving to a new job site. The mud and soil stuck to the machines can harbor seeds from invasive plants.
- Once areas of invasive species have been controlled (e.g., greater than 85% reduction), it is recommended that an annual maintenance control program be implemented.

# **Native Species Bank Mix**

Specify a seed mix containing a variety of grasses, sedges, forbs, and pollinators. Examples species for consideration are:





**Prairie Switchgrass** SOMEONIO DE CONTRACTO DE LA CONTRACTO DE CONTRACTOR DE CONTRACTO DE CO



**Purple Coneflower** 



**Black Eyed Susans** 









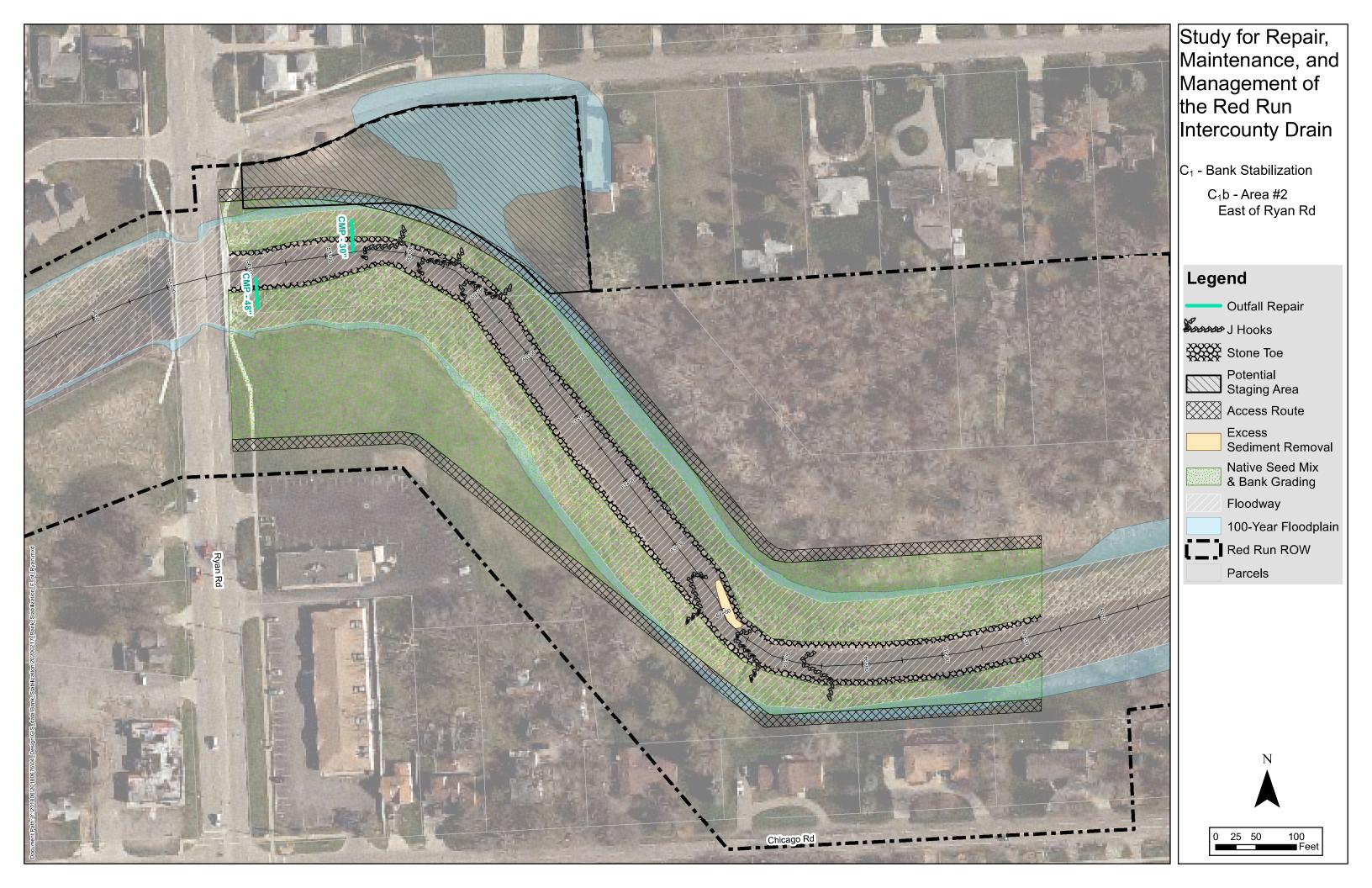
# Red Run Bank Stablization East of Ryan Rd. Draft Engineer's Preliminary Estimate of Probable Costs

## Red Run Drain Intercounty Drainage Board

2/20/2020 HRC Job No. 20180676

Revision 1

No.	Bid Item	Quantity	<u>Unit</u>		Unit Price	Total Cost
1.	Mobilization (Max 10%)	1	Lsum	@	\$154,600 =	\$154,600
2.	Clearing and Grubbing and Invasive Control	1	Lsum	@	\$50,000 =	\$50,000
3.	Earth Work (cut and fill, top soil as needed)	28,800	Cyd	@	\$20 =	\$576,000
4.	Mulch Blankets on the banks	16,800	Syd	@	\$6 =	\$100,800
5.	Native seeding on banks	3	Ac	@	\$12,000 =	\$36,000
6.	Upland Seeding	2	Ac	@	\$6,000 =	\$12,000
7.	Stone Toe	2,800	Lft	@	\$200 =	\$560,000
8.	J hooks	6	Ea	@	\$15,000 =	\$90,000
9.	Outfall Repairs	2	Ea	@	\$10,000 =	\$20,000
11.	Soil Erosion and Sediment Control and Silt Fence	1	Lsum	@	\$12,000 =	\$12,000
12.	Access Route and Staging Area	1	Lsum	@	\$30,000 =	\$30,000
13.	EGLE Permit Conditions	1	Lsum	@	\$10,000 =	\$10,000
14.	3 year maintenance	1	Lsum	@	\$50,000 =	\$50,000
	Subtotal Construction Costs					\$1,701,400
	Contingencies (20%)					\$340,300
	Engineering Services (25%)					\$425,400
	Grants Application and Projects Admin (5%)					\$85,100
	Total Project Costs					\$2,552,200



## **Description of Issue**

- Fair to poor condition outfalls
- Moderate to severe bank erosion
- Localized slope instability due to long-term saturation and rapid draw down
- Slope instability has been attributed to relatively steep slopes combined with erosion at the toe

**Estimate of Costs** 

\$2.5M

## **Recommended Solution**

- · Repair of the outfalls and outlets within project area
- Reshape upper bank slopes to provide milder slope
- Install stone toe to protect the toe slope
- Install groundwater interceptor drains to discharge groundwater into the groundwater outfalls
- Plant native seed on the upper bank
- Remove branches within the right of way

# **Collaborators/Partnerships**

- Oakland County Water Resources Commissioner
- Macomb County Department of Public Works
- City of Warren
- US Army Corps of Engineers, Detroit District

# **Funding Opportunities**

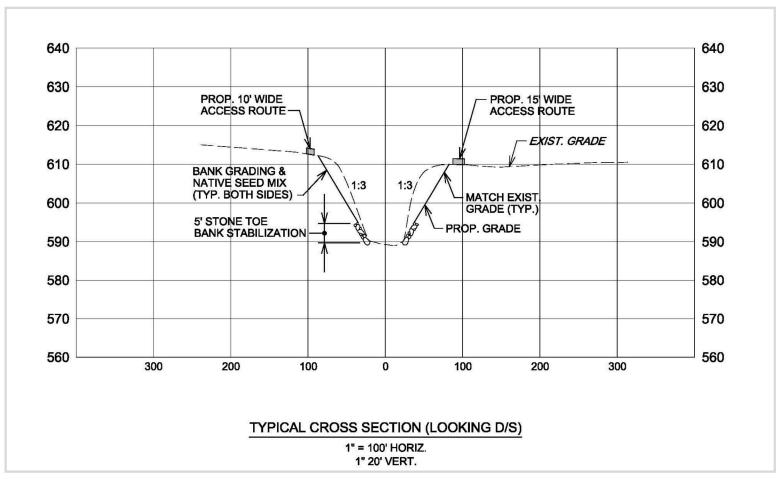
- USACE
- EPA GLRI
- EGLE 319
- Local Match Drainage District

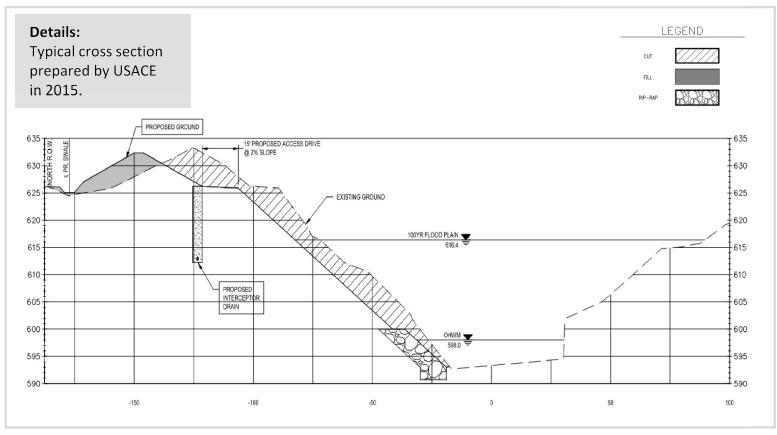
# **Location Map**



# **Photo of the Problem**







### **General Conditions**

All projects shall consider the following conditions:

- Restoration of native planting (See information below).
- Invasive species control.
- Additional vegetation management, such as the removal of woody material.
- Repair of any outfalls in the project area.
- Removal and proper disposal of sediment in the channel.
- Review and implementation of the pilot channel dimensions for sediment transport improvement based on study.
- Evaluation of area for additional slope drainage improvements.
- Consideration of any additional top side green infrastructure improvements.
- Incorporation of baseline maintenance requirements into contracts for outside services.
- Review of EGLE or local permit requirements.

### **Invasive Control Plans**

- Prior to the implementation of any control methods, safety factors and permit requirements must be taken into consideration. Many control actions require permits from local, state, and/or federal agencies.
- The use of herbicide treatments is recommended as the primary control method.
- Spray should be applied to wet the leaves and, when present, the flower plumes of the target plants. Excessive application, such that the chemicals are dripping off the plants, should be avoided because it is more costly, can cause increased injury to desirable nontarget species, and often decreases the success of control.
- After the initial herbicide treatment, one or more follow-up methods at each site are recommended such as prescribed fire, mechanical treatment, or water level management.
  - Prescribed fire can be used after an herbicide treatment to remove excess biomass.
  - Mechanical treatments are used most effectively following an herbicide treatment to remove dead stems and promote native plant growth. Clean construction machines before moving to a new job site. The mud and soil stuck to the machines can harbor seeds from invasive plants.
- Once areas of invasive species have been controlled (e.g., greater than 85% reduction), it is recommended that an annual maintenance control program be implemented.

# **Native Species Bank Mix**

Specify a seed mix containing a variety of grasses, sedges, forbs, and pollinators. Examples species for consideration are:





**Prairie Switchgrass** SOMEONIO DE CONTRACTO DE LA CONTRACTO DE CONTRACTOR DE CONTRACTO DE CO



**Purple Coneflower** 



**Black Eyed Susans** 





**Common Milkweed** 





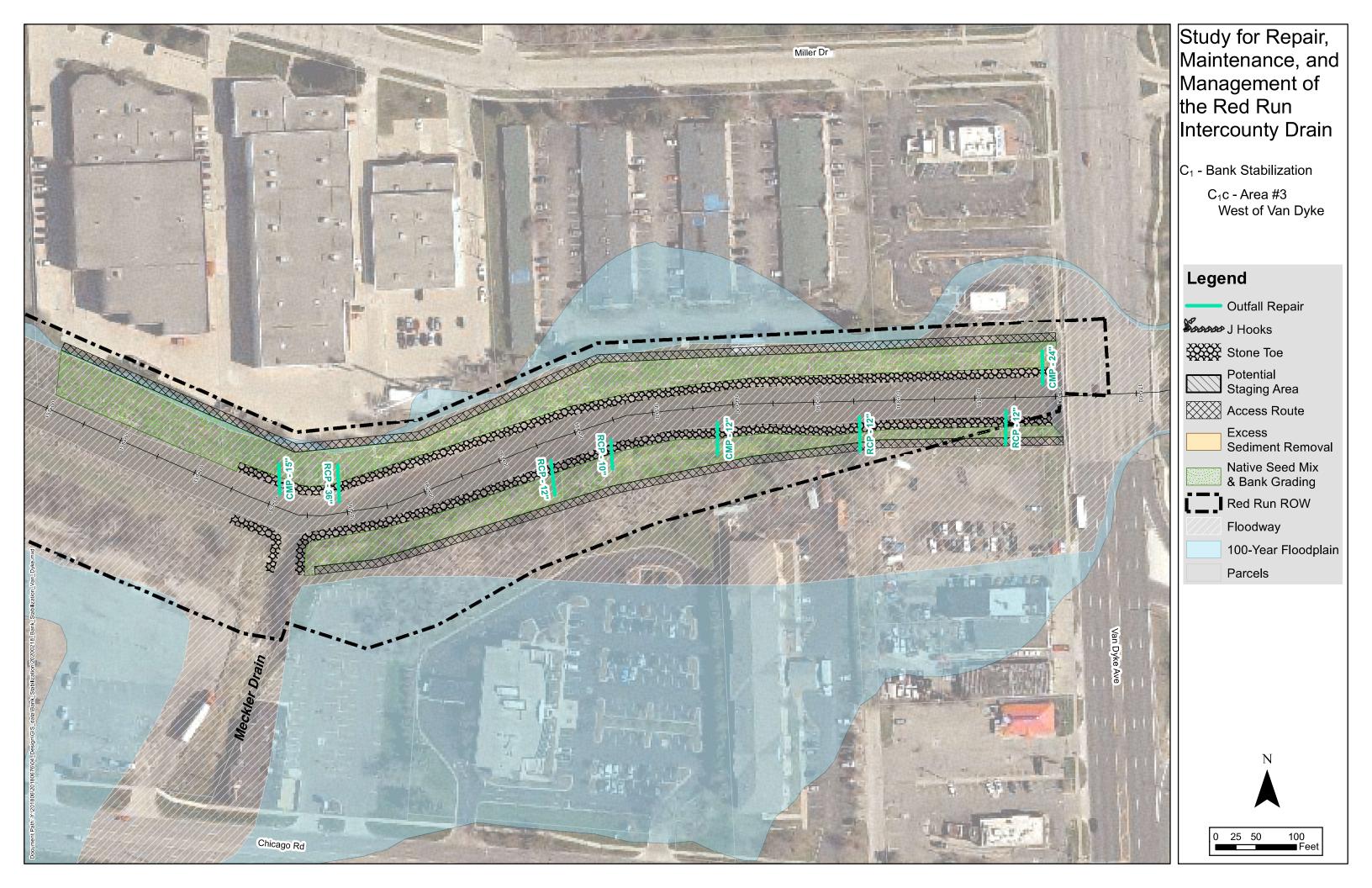
# Red Run Bank Stablization at West of VanDyke Rd. Draft Engineer's Preliminary Estimate of Probable Costs

## **Red Run Drain Intercounty Drainage Board**

2/20/2020 HRC Job No. 20180676

Revision 1

No.	Bid Item	<b>Quantity</b>	<u>Unit</u>		<u>Unit Price</u>		Total Cost
1.	Mobilization (Max 10%)	1	Lsum	@	\$148,500	=	\$148,500
2.	Clearing and Grubbing and Invasive Control	1	Lsum	@	\$50,000	=	\$50,000
3.	Earth Work (cut and fill, top soil as needed)	28,600	Cyd	@	\$20	=	\$572,000
4.	Mulch Blankets on the banks	15,600	Syd	@	\$6	=	\$93,600
5.	Native seeding on banks	3	Ac	@	\$12,000	=	\$36,000
6.	Upland Seeding	2	Ac	@	\$6,000	=	\$12,000
7.	Stone Toe	2,500	Lft	@	\$200	=	\$500,000
8.	Outfall Repairs	8	Ea	@	\$15,000	=	\$120,000
9.	Soil Erosion and Sediment Control and Silt Fence	1	Lsum	@	\$12,000	=	\$12,000
10.	Access Route and Staging Area	1	Lsum	@	\$30,000	=	\$30,000
11.	EGLE Permit Conditions	1	Lsum	@	\$10,000	=	\$10,000
12.	3 year maintenance	1	Lsum	@	\$50,000	=	\$50,000
	Subtotal Construction Costs						\$1,634,100
	Contingencies (20%)						\$326,900
	Engineering Services (25%)						\$408,600
	Grants Application and Projects Admin (5%)						\$81,800
	Total Project Costs						\$2,451,400



## **Description of Issue**

- Moderate to severe bank erosion due to shear stress (specifically at the bend)
- Localized slope instability due to long-term saturation and rapid draw down conditions
- Slope instability has been attributed to relatively steep slopes combined with erosion at the toe

**Estimate of Costs** 

\$4.2 M

### **Recommended Solution**

- Reshape upper bank slopes similar to the "Red Run Open Drain Slope Stabilization" project completed by USACE, west of Ryan Road
- Install stone toe and in-stream structures to protect the toe slope
- Install groundwater interceptor drains to discharge groundwater into the groundwater outfalls.
- Stabilize with native seed on the upper bank
- Repair of the outfalls within project area
- · Remove shoaling (or excess sediment deposition) areas in project area

# **Collaborators/Partnerships**

- Oakland County Water Resources Commissioner
- Macomb County Department of Public Works
- City of Sterling Heights
- US Army Corps of Engineers, Detroit District
- Clinton River Watershed Council
- Macomb County Planning & Economic Development

# **Funding Opportunities**

- USACE
- EPA GLRI
- EGLE 319
- Local Match Drainage District

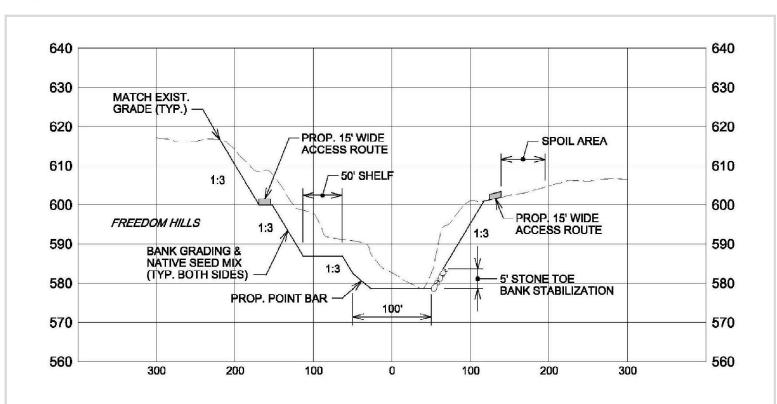
# **Location Map**



## **Photo of the Problem**

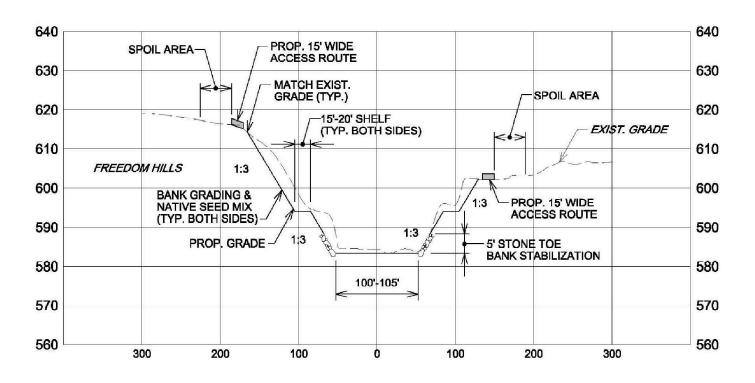


## **Graphic**



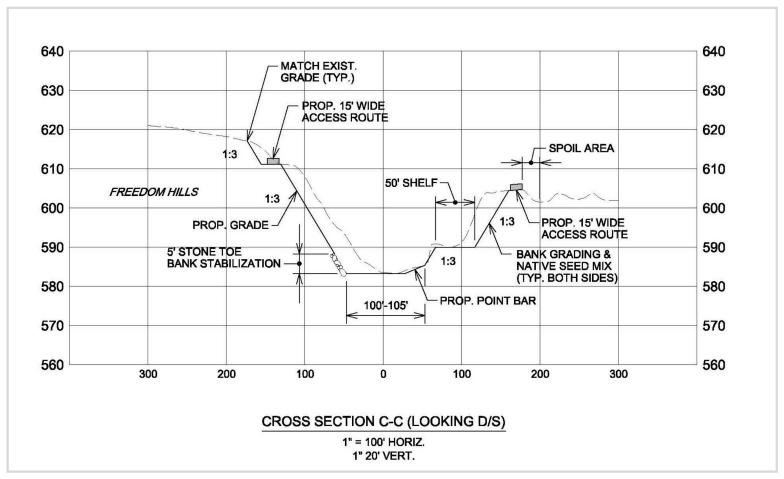
#### CROSS SECTION A-A (LOOKING D/S)

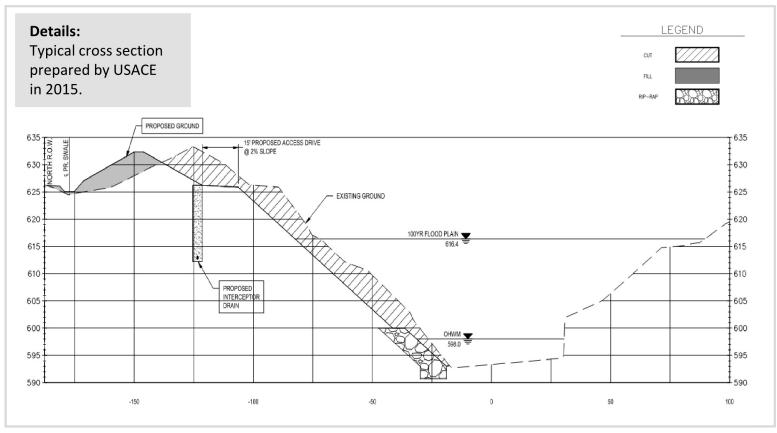
1" = 100' HORIZ. 1" 20' VERT.



#### CROSS SECTION B-B (LOOKING D/S)

1" = 100' HORIZ. 1" 20' VERT.





### **General Conditions**

All projects shall consider the following conditions:

- Restoration of native planting (See information below).
- Invasive species control.
- Additional vegetation management, such as the removal of woody material.
- Repair of any outfalls in the project area.
- Removal and proper disposal of sediment in the channel.
- Review and implementation of the pilot channel dimensions for sediment transport improvement based on study.
- Evaluation of area for additional slope drainage improvements.
- Consideration of any additional top side green infrastructure improvements.
- Incorporation of baseline maintenance requirements into contracts for outside services.
- Review of EGLE or local permit requirements

### **Invasive Control Plans**

- Prior to the implementation of any control methods, safety factors and permit requirements must be taken into consideration. Many control actions require permits from local, state, and/or federal agencies.
- The use of herbicide treatments is recommended as the primary control method.
- Spray should be applied to wet the leaves and, when present, the flower plumes of the target plants. Excessive application, such that the chemicals are dripping off the plants, should be avoided because it is more costly, can cause increased injury to desirable nontarget species, and often decreases the success of control.
- After the initial herbicide treatment, one or more follow-up methods at each site are recommended such as prescribed fire, mechanical treatment, or water level management.
  - Prescribed fire can be used after an herbicide treatment to remove excess biomass.
  - Mechanical treatments are used most effectively following an herbicide treatment to remove dead stems and promote native plant growth. Clean construction machines before moving to a new job site. The mud and soil stuck to the machines can harbor seeds from invasive plants.
- Once areas of invasive species have been controlled (e.g., greater than 85% reduction), it is recommended that an annual maintenance control program be implemented.

## **Native Species Bank Mix**

Specify a seed mix containing a variety of grasses, sedges, forbs, and pollinators. Examples species for consideration are:





Prairie Switchgrass



Purple Coneflower



**Black Eyed Susans** 









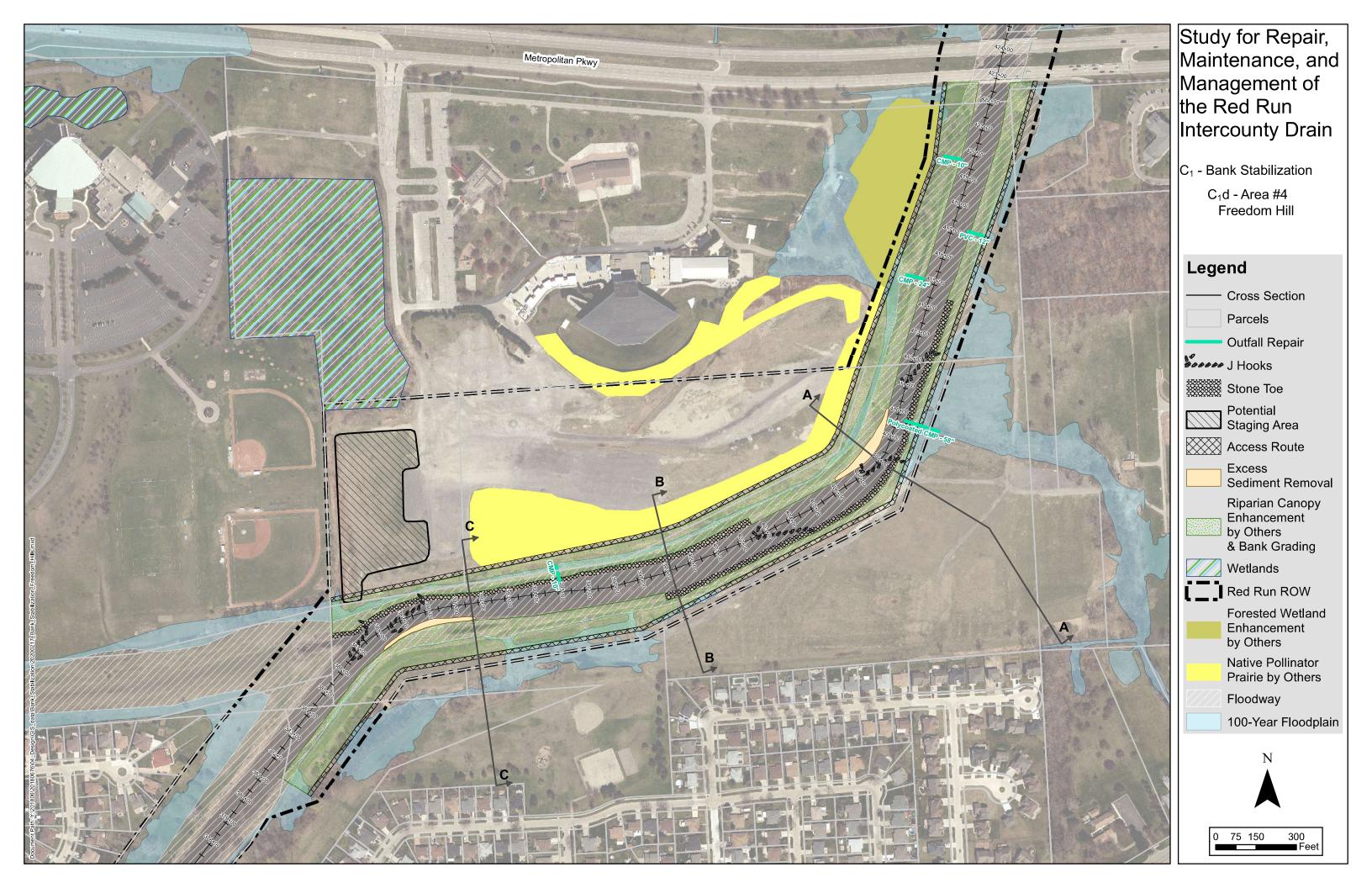
# Red Run Bank Stabilization at Freedom Hill Draft Engineer's Preliminary Estimate of Probable Costs

## **Red Run Drain Intercounty Drainage Board**

2/20/2020 HRC Job No. 20180676

Revision 1

No.	Bid Item	Quantity	Unit		Unit Price		Total Cost
1.	Mobilization (Max 10%)	<u>Quartity</u>	Lsum	@	\$251,400	_	\$251,400
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2.	Clearing and Grubbing and Invasive Control	1	Lsum	@	\$50,000		\$50,000
3.	Earth Work (cut and fill, top soil as needed)	63,000	Cyd	@	\$20	=	\$1,260,000
4.	Mulch Blankets on the banks	38,000	Syd	@	\$6	=	\$228,000
5.	Native seeding on banks	6	Ac	@	\$12,000	=	\$72,000
6.	Upland Seeding	2	Ac	@	\$6,000	=	\$12,000
7.	Stone Toe	3,200	Lft	@	\$200	=	\$640,000
8.	J hooks	5	Ea	@	\$15,000	=	\$75,000
9.	Excess Sediment Removal	1	Lsum	@	\$15,000	=	\$15,000
10.	Outfall Repairs	5	Ea	@	\$10,000	=	\$50,000
11.	Soil Erosion and Sediment Control and Silt Fence	1	Lsum	@	\$12,000	=	\$12,000
12.	Access Route and Staging	1	Lsum	@	\$40,000	=	\$40,000
13.	EGLE Permit Conditions	1	Lsum	@	\$10,000	=	\$10,000
14.	3 year maintenance	1	Lsum	@	\$50,000	=	\$50,000
	Subtotal Construction Costs						\$2,765,400
	Contingencies (20%)						\$553,100
	Engineering Services (25%)						\$691,400
	Grants Application and Projects Admin (5%)						\$138,300
	Total Project Costs						\$4,148,200



Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 8

Request for additional compensation for HRC/Spicer services out of scope

# OAKLAND COUNTY WATER RESOURCES COMMISSIONER

# **MEMORANDUM**

TO: Michael Gregg, Chairman of the Drainage Board for the Red Run Drain

FROM: George P. Nichols, P.E., Civil Engineer III

**SUBJECT:** Additional Services – Request for Compensation

Engineering Services for the Repair, Maintenance and Management of the Red

**Run Drain Study** 

**DATE:** August 26, 2020

Hubbell, Roth & Clark (HRC) was retained by the Board to prepare a study for the repair, maintenance and management of the Red Run Drain. During the course of providing their engineering services, many other requests and activities generated by the steering committee and Drainage Board were developed that was outside of HRC's original scope of services. These included:

- Evaluating storage impacts of the low areas adjacent to Red Run Drain
- Evaluating detention and green infrastructure impacts on tributaries
- Additional meetings
- Water quality assistance pilot program
- CISMA proposal assistance
- Grant application assistance for Freedom Hill project

All these services have been vital to obtain a better understanding and direction for the necessary improvements along the Red Run Drain. A detail description of each service and associated cost is outlined in the attached letter from HRC dated August 17, 2020.

### **Requested Action**

Authorization from the Red Run Drainage Board to approve the requested compensation for an additional \$44,000 to Hubbell, Roth & Clark for engineering services rendered for the Study of the Repair, Maintenance and Management of the Red Run Drain.

OAKLAND COUNTY WATER RESOURCES COMMISSIONER

Rev.: 02/12/2018

Page 1 of 1



August 17, 2020

Drainage Board for the Red Run Intercounty Drain c/o Oakland County Water Resources Commissioner One Public Works Drive Building 95 West Waterford, Michigan 48328

Attn: Mr. George P. Nichols, P.E. Civil Engineer III

Re: Study for the Repair, Maintenance, and Management of the

Red Run Intercounty Drain

Additional Services – Request for Compensation

Dear Mr. Nichols:

On behalf of the project team of Hubbell, Roth & Clark, Inc. (HRC) and the Spicer Group, Inc. (Spicer), we would first like to thank you for the opportunity to assist on this important project. We have identified priority projects, costs, and a practical approach to facilitate on going management and capital improvement project implementation. We look forward to working with both counties and MDARD on finishing this project and facilitating the next steps on this important assignment.

As can be expected on a project to evaluate the existing conditions of a drain and determine future needs, the scope can meander away from the original scope as results from modelling start be discussed and evaluated. The staff of both counties and MDARD have extensive knowledge of the Red Run Drain and this led to wanting to understand various impacts of additional scenarios not in the original scope. Many of these items have been discussed and provided to the technical team with the understanding that final Board approval would be needed prior to payment authorization. Due to the "Stay Home, Stay Safe" Executive Order (EO 2020-21) issued on March 24, 2020, and the postponement of Red Run Drain ICDB meetings, this formal request was delayed. The out of scope items are summarized below:

#### **■ Evaluating storage impacts of low areas adjacent to Red Run (\$7,500)**

Once the model was obtained and compared to the FEMA mapping, it was evident that low lying areas in the surrounding communities were susceptible to flooding. We were asked to review how these areas were connected to the Red Run water surface elevations and what benefits could be derived to these areas from lowering the Red Run flood stage elevations. We met with staff to discuss and highlight areas of improvements that would have a secondary benefit to possibly reduce flooding in these areas. This effort informed our recommendations related to storage within the watershed and cost benefit considerations related to large capacity improvements.

#### **Evaluating Detention and Green Infrastructure impacts on tributaries (\$9,500)**

Originally, the scope was to evaluate Detention and Green Infrastructure benefits to the Red Run. Based on the findings, HRC was requested to evaluate the benefits of these stormwater BMPs in each of the major tributaries and the Red Run proper. This enables the Board and communities to evaluate cost effective placement of storage where it will have the most impact.

#### **■** Additional Meetings (\$8,000)

As the project progressed, four additional staff meetings were requested as well as attendance at three additional ICDB meetings. The costs for additional meetings include meeting preparation, development of handouts, meeting attendance, and follow up on action items discussed.

MAILING: PO Box 824 Bloomfield Hills, MI 48303-0824 SHIPPING: 555 Hulet Drive Bloomfield Hills, MI 48302-0360

PHONE: 248-454-6300

WEBSITE: hrcengr.com

HRC Job No. 20180676



### **■ Water Quality Assistance Pilot Program (\$8,500)**

The staff from both Counties and MDARD have identified the need to continue pollution source tracking in the Red Run Drain and Drainage District. HRC coordinated with the MCPWO, Macomb County Health Department, and the City of Warren to finalize a pilot water quality sampling program for Bear Creek Drain and Schoenherr Relief Drain within the Red Run Drain Drainage District. This pilot program includes Microbial Source Tracking, dry weather sampling, hydrocarbon sampling, and TMDL wet weather monitoring. These two drainage districts would serve as ideal pilot projects since they have chronic e. coli and hydrocarbon impacts contributing to the Red Run Drain.

Based on the recommendations from the Study and outside of the original project scope, HRC/Spicer were asked to support County staff with grant funding requests as follows:

### **■ CISMA Proposal Assistance (\$5,000 – MISP and Six Rivers Land Conservancy)**

HRC coordinated with the Lake St. Clair CISMA and the Clinton River Watershed Council to evaluate Michigan Invasive Species Program (MISP) grant opportunities to assist with invasive vegetation treatment. The scope included conference calls with the partners, past grant RFP review and evaluation of proposal needs to prepare MISP GLRI proposals. Due to COVID-19 impacts, CISMA funding opportunities for 2020 were put on hold by the State of Michigan. In response to funding changes, HRC coordinated with ICDB staff and Six Rivers Land Conservancy to develop a proposal to meet the needs of the Red Run Drain for 2020. The scope included a conference call with the partners, grant proposal guidance, and review for consistency with the Red Run Management Plan recommendation and submittal to the ICDB project team.

### **■** Grant application assistance for Freedom Hill project (\$5,500)

HRC was asked to assist the Macomb County Planning and Economic Development Department with grant applications that would potentially provide funding to assist with the bank stabilization along the Freedom Hill Property. This area was determined to be a high priority area for bank stabilization and supported the project outcomes. Our Team visited the site, revised our plans, exhibits, and costs estimates, and worked with all parties to coordinate this opportunity.

We appreciate your consideration for compensation of the additional costs totaling \$44,000. If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Yarmer F Butto
James F. Burton, P.E.
Vice President

pc: HRC; File

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 9

Proposals for New Tasks

## OAKLAND COUNTY WATER RESOURCES COMMISSIONER

# **MEMORANDUM**

TO: Michael Gregg, Chairman of the Drainage Board for the Red Run Drain

FROM: George P. Nichols, P.E., Civil Engineer III

SUBJECT: **Identified New Projects** 

Engineering Services for the Repair, Maintenance and Management of the Red

Run Drain Study

DATE: August 26, 2020

Hubbell, Roth & Clark (HRC) was retained by the Board to provide services to prepare a study for the repair, maintenance and management of the Red Run Drain. During this process of coordination with the Technical Steering Committee, the Board, and other agencies, two additional projects have been identified as a priority for 2020 implementation due to grant opportunities and ongoing water quality impacts to the Red Run Drain. The projects are:

- Freedom Hill Project Scope Phasing
- **Tributary Spill Response Evaluation**

These services are essential to obtain a better understanding and direction for the necessary improvements along the Red Run Drain. A detailed description of each service and associated cost is outlined in the attached letter from HRC dated August 17, 2020.

#### **Requested Action**

Authorization from the Red Run Drainage Board to approve the requested compensation for \$28,000 to Hubbell, Roth & Clark for engineering services related to the Freedom Hill Project Scope Phasing and Tributary Spill Response Evaluation.

> Page 1 of 1 Rev.: 02/12/2018



CONSERVING, SUSTAINING, AND CONNECTING NATURAL AREAS, LANDS, AND WATERS THAT MAKE THE PLACES WE LIVE SPECIAL.



# Contract Stewardship Services Proposal-Red Run Drain Restoration August 12, 2020

#### For:

Red Run Intercounty Drain Drainage Board c/o Jim Nash, Oakland County Water Resources Commissioner One Public Works Building #95W Waterford Twp, MI 48328

#### **Produced by:**

Six Rivers Land Conservancy 248-601-2816 4480 Orion Road, 2<sup>nd</sup> Floor PO Box 80902 Rochester, MI 48308

#### **Contact:**

Chris Bunch, Executive Director cbunch@sixriversrlc.org
McKenzi Waliczek, Coordinator
Lake St. Clair CISMA
mwaliczek@sixriversrlc.org

#### Introduction:

The Red Run (RR) Drain project area runs from Dequindre Road in Warren to Utica Road in Clinton Township (Sections 1 through 6). Throughout the RR easement, there are many large, dense, stretches of priority invasive species, as identified by <a href="Hubbell">Hubbell</a>, Roth & Clark, Inc (HRC) and the <a href="Clinton River">Clinton River</a> Watershed Council (CRWC) in 2019. At the request of HRC, stewardship staff from Six Rivers Land Conservancy (SRLC) did a preliminary assessment of the subject area to determine approaches for invasive species treatment to improve/maintain habitat quality in the restoration areas. Due to the vast surface area, height and density of priority invasive species cover observed, it is recommended that a treatment plan be created to prioritize species and areas to treat for maximum benefit. SRLC, through the affiliated Lake St. Clair Cooperative Invasive Species Management Area (LSC CISMA) will initiate treatment on critical priorities for the remainder of the 2020 season and create a treatment plan for the 2021 season.



4480 Orion Rd., 2nd Floor · PO Box 80902 · Rochester · Michigan · 48308-0902

Phone: 248-601-2816 · Fax: 248-601-0106 · www.sixriversrlc.org

#### **Project Scope:**

- 1. Begin spot treatments on select priority species in Section 1 immediately. The treatment of Giant knotweed is a priority because if allowed to hybridize with Japanese knotweed present on the site, viable Bohemian knotweed seeds can further facilitate the spread of invasive knotweeds throughout the area. Giant knotweed infestations in Section 1 and other isolated priority species (Japanese knotweed, etc) with similar management specifications that can be treated by technicians using hand treatment techniques—backpack sprayers, hand-wiping, cut and dab and/or injection will be treated as possible during remaining treatment season in 2020. The amount of priority species chemically treated in 2020 will vary depending on the time of project and EGLE permit approval.
- 2. Produce a report summarizing treatments performed in 2020 and share with stakeholders by November 30, 2020.
- 3. Develop prioritized treatment RFP for Spring 2021.
  - a. Identify contractors, solicit bids, select and secure contractor(s) to perform treatments;
  - b. Manage and oversee treatment including invoicing, payment and EGLE reporting requirements.
  - c. Coordinate treatments with ongoing ROW treatments contracted through LSC CISMA by Macomb Department of Roads to ensure efficiency and cost savings.
  - d. Potential to coordinate treatments with adjacent landowners through the LSC CISMA.

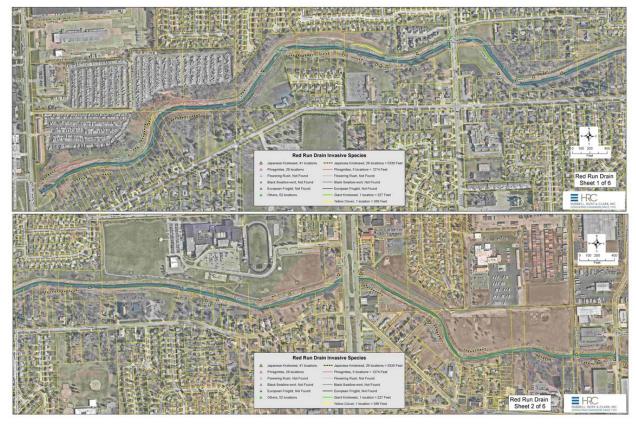
#### **Project Duration:**

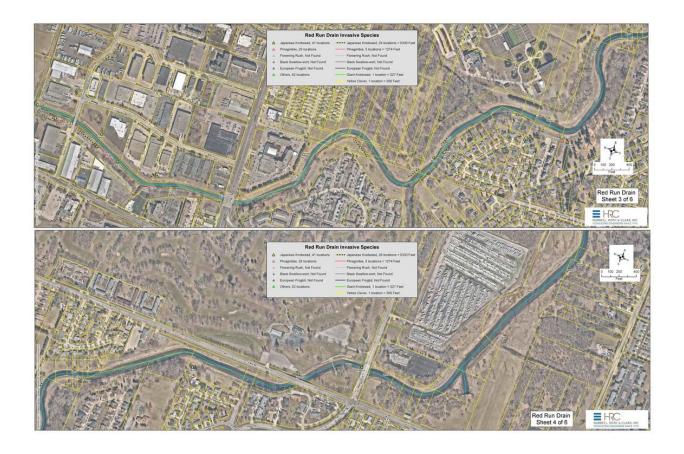
- Perform spot treatments of priority species during the remainder of 2020 growing season.
- Report 2020 treatment data to stakeholders by end of November, 2020.
- Develop and manage treatment RFP for Spring 2021.

#### Costs:

- 2020 season
  - Not to exceed \$20,000 for monitoring, spot treatment and plan development
    - Billing rate \$40/hr for staff plus mileage and chemicals
- 2021 season:
  - Annual monitoring, spot treatment/coordination, and plan implementation: TBD based upon funds available for treatment and prioritization of treatment areas.

## Site Maps:

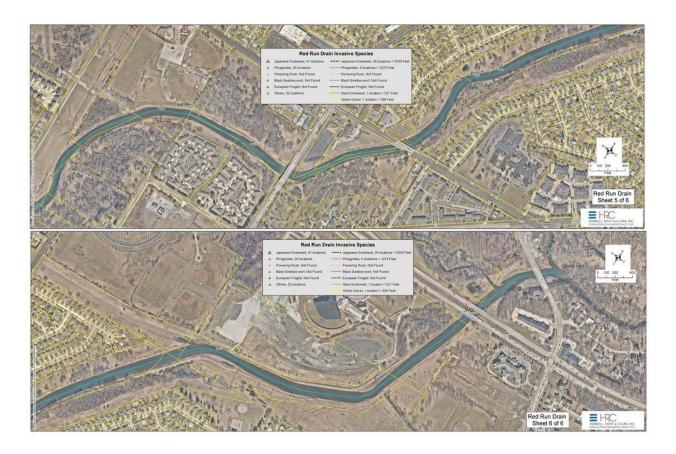




#### **Organizational Background and Qualifications:**

Six Rivers Land Conservancy is a 501(c)3 non-profit land conservancy operating in the northern portion of the Detroit Metro region and the lower thumb in the counties of Oakland, Macomb, St. Clair, Genesee and Lapeer in the watersheds of the Belle, Clinton, Flint, Huron, Rouge and Shiawassee rivers, including the St. Clair River and Lake St. Clair. Six Rivers works to preserve land through acquisition of conservation easements and nature preserves, and through assisting public agency partners in acquiring land for natural areas and parks. Six Rivers has a stewardship program to manage its protected properties and provide services to partner agencies.

Six Rivers is the fiduciary and managing partner of the Lake St. Clair and the Oakland County Cooperative Invasive Species Management Areas (CISMA's.). The CISMA's are partnerships of CVT's, non-profit members and the State of Michigan (through DNR, EGLE and MDARD) that collaborate and cooperate on managing invasive species and educating landowners and the public about invasive species in their respective communities to create efficiencies and cost savings through coordinated efforts. The CISMA's are established through an MOU and are guided by steering committees made up of partner members. Six Rivers' role as fiduciary and managing partner includes hiring and overseeing staff and holding countywide treatment permits for Oakland, Macomb and St. Clair counties. Six Rivers is licensed and insured, including holding a pesticide applicators business license, and employs qualified field staff holding pesticide applicators licenses. Six Rivers, through both the Oakland and LSC CISMA's, coordinates and manages road ROW treatments in Oakland and Macomb counties for the respective partners and road departments, including assessment, monitoring, developing treatment plans,



preparing RFP's, soliciting bids, awarding contracts, handling permit reporting requirements, invoicing and payment for partners and contractors.							

### Property Access Agreement for Treatment of Invasive Species

This Agreement, made this (date) by and between the Red Run Intercounty Drain, a drainage district organized pursuant to Chapter 21 of Public Act 40 of 1956, as amended, ("Owner" with jurisdiction over property) and Six Rivers Land Conservancy (SRLC), a Michigan non-profit organization, for the purposes of treatment invasive plant species and helping restore wildlife habitat, at the Owner's request, establishes consent to access the Owner's property in Oakland and Macomb counties (the "Property"). Owner agrees to allow the Lake St. Clair Cooperative Invasive Species Management Area (LSC CISMA) and/or SRLC, their employees, agents, contractors and volunteers' access to the Property to perform the work described above from the date of final signature through December 31, 2021. Notice of treatments will be provided to the landowner at least 24 hours in advance of the scheduled treatment date. SRLC and LSC CISMA shall be collectively referred to as the "Contractor."

This project may be funded in whole or in part by the Michigan Invasive Species Grant Program through the Departments of Natural Resources, Environment, Great Lakes, and Energy, and Agriculture and Rural Development. An invasive species is one that is not native and whose introduction causes harm, or is likely to cause harm to Michigan's economy, environment, or human health. Owner agrees to not knowingly introduce invasive plant species on the Property.

Owner has requested, and herby consents and agrees to the physical, chemical or biological removal of invasive species from the Property by SRLC and/or LSC CISMA (including their respective elected officials, employees, volunteers, agents, contractors, partners, and consultants). Treatment may include applying herbicides at the recommended label rates and in accordance with all label direction under the direction of licensed, certified commercial applicators; hand pulling or cutting, or other accepted best practice control methods. Treatment may also occur under permit by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) where applicable and will adhere to requirements under said permit, including filing any treatment amendments, all necessary posting of property prior to treatment, and all follow-up paperwork required.

Contractor and their respective elected and appointed officials, employees, agents and volunteers and others working on behalf of SRLC or LSC CISMA agree to indemnify, defend, and hold harmless from all claims, demands, suits, or loss, including all costs connected therewith, incurred by or asserted against the Owner by any person or entity, which are alleged to have been caused from the acts or omissions of the Contractor and their respective elected and appointed officials, employees, agents and volunteers and others working on behalf of SRLC or LSC CISMA. The Owner's right to indemnification is in excess and above any insurance rights or policies as required by this Agreement.

Owner agrees to defend, indemnify, and hold harmless SRLC, LSC CISMA, LSC CISMA partners and their respective elected and appointed officials, employees, agents and volunteers and others working on behalf of SRLC or LSC CISMA against any and all claims, demands, suits, or loss, including all costs connected therewith, and for any damages asserted, claimed or recovered against or from SRLC, which arise out of Owner's negligence and is connected to or associated with the treatment of the Property as described in this Agreement.

During the term of this Agreement, SRLC shall provide and maintain, at its own expense, the insurance specified in Exhibit A to this Agreement, protecting Owner against all claims, demands, suits, or loss, including all costs connected therewith.

This instrument and Exhibit A contain the entire agreement between SRLC and Owner. No verbal agreement, conversation, or representation by or between any officer, agent, or employee of the parties hereto, either before or after the execution of this Agreement, shall affect or modify any of the terms or obligations herein contained.

Any changes in the provisions of this Agreement must be in writing and signed by SRLC and Owner. No waiver of any term or condition of this Agreement shall be binding and effective unless in writing and signed by all parties, with any such waiver being limited to that circumstance only and not applicable to subsequent actions or events. If Owner sells or transfers Property before the end of this Agreement, Owner will notify SRLC in writing at P. O. Box 80902 Rochester, MI 48308-0902.



CONSERVING, SUSTAINING, AND
CONNECTING NATURAL AREAS, LANDS,
AND WATERS THAT MAKE THE PLACES
WE LIVE SPECIAL.



Signed	Date				
Owner or legally authorized representative					
Signed	Date				
SRLC by its authorized representative					
Contact Information for Treatment and Access Notification					
Owner Name(s):	Office Phone:				
Address:	Cell Phone:				
City, State, Zip:	Email:				



4480 Orion Rd., 2nd Floor • PO Box 80902 • Rochester • Michigan • 48308-0902

Phone: 248-601-2816 • Fax: 248-601-0106 • www.sixriversrlc.org

#### Exhibit A

Contractor agrees to provide the following insurance coverage. The insurance shall be written for not less than any minimum coverage herein specified. Limits of insurance required in no way limit the liability of the Contractor.

### **Primary Coverages**

Commercial General Liability Occurrence Form including: (a) Premises and Operations; (b) Products and Completed Operations (including On and Off Premises Coverage); (c) Personal and Advertising Injury; (d) Broad Form Property Damage; (e) Broad Form Contractual including coverage for obligations assumed in this Agreement;

\$1,000,000 – Each Occurrence Limit \$1,000,000 – Personal & Advertising Injury \$2,000,000 – Products & Completed Operations Aggregate Limit \$2,000,000 – General Aggregate Limit \$100,000 – Damage to Premises Rented to You (formally known as Fire Legal Liability)

Workers' Compensation Insurance with limits statutorily required by any applicable Federal or State Law and Employers Liability insurance with limits of no less than \$500,000 each accident, \$500,000 disease each employee, and \$500,000 disease policy limit.

- 1. ⊠ Fully Insured or State approved self-insurer.
- 2. 

  Sole Proprietors must submit a signed Sole Proprietor form.
- 3. ☐ Exempt entities, Partnerships, LLC, etc., must submit a State of Michigan form WC-337 Certificate of Exemption.

Commercial Automobile Liability Insurance covering bodily injury or property damage arising out of the use of any owned, hired, or non-owned automobile with a combined single limit of \$1,000,000 each accident. This requirement is waived if there are no company owned, hired or non-owned automobiles utilized in the performance of this Agreement.

Commercial Umbrella/Excess Liability Insurance with minimum limits of \$2,000,000 each occurrence. Umbrella or Excess Liability coverage shall be no less than following form of primary coverages or broader. This Umbrella/Excess requirement may be met by increasing the primary Commercial General Liability limits to meet the combined limit requirement.

### **General Insurance Conditions**

The aforementioned insurance shall be endorsed, as applicable, and shall contain the following terms, conditions, and/or endorsements. All certificates of insurance shall provide evidence of compliance with all required terms, conditions and/or endorsements.

1. All policies of insurance shall be on a primary, non-contributory basis with any other insurance or self-insurance carried by the Owner;

- 2. The insurance company(s) issuing the policy(s) shall have no recourse against the Owner for subrogation (policy endorsed written waiver), premiums, deductibles, or assessments under any form. All policies shall be endorsed to provide a written waiver of subrogation in favor of the Owner;
- 3. Any and all deductibles or self-insured retentions shall be assumed by and be at the sole risk of the Contractor;
- 4. Contractor shall be responsible for their own property insurance for all equipment and personal property used and/or stored on Owner property;
- 5. The Commercial General Liability and Commercial Automobile Liability policies along with any required supplemental coverages shall be endorsed to name the Owner and its officers, directors, employees, appointees and commissioners as additional insured where permitted by law and policy form;
- 6. If the Contractor's insurance policies have higher limits than the minimum coverage requirements stated in this document the higher limits shall apply and in no way shall limit the overall liability assumed by the Contractor under contract.
- 7. The Contractor shall require its contractors or sub-contractors, not protected under the Contractor's insurance policies, to procure and maintain insurance with coverages, limits, provisions, and/or clauses equal to those required in this Agreement;
- 8. Certificates of insurance must be provided no less than five (5) Business Days prior to the Owner's execution of the agreement and must bear evidence of all required terms, conditions and endorsements; and provide 30 days' notice of cancellation/material change endorsement.
- 9. All insurance carriers must be licensed and approved to do business in the State of Michigan and shall have and maintain a minimum A.M. Best's rating of A- unless otherwise approved by the Owner.



August 17, 2020

Drainage Board for the Red Run Intercounty Drain c/o Oakland County Water Resources Commissioner One Public Works Drive Building 95 West Waterford, Michigan 48328

Attn: Mr. George P. Nichols, P.E. Civil Engineer III

Re: Study for the Repair, Maintenance, and Management of the

Red Run Intercounty Drain Identified New Projects

Dear Mr. Nichols:

On behalf of the project team of Hubbell, Roth & Clark, Inc. (HRC) and the Spicer Group, Inc. (Spicer), we would first like to thank you for the opportunity to assist on this important project. As you are aware, working with staff from Oakland County Water Resources Commissioner's Office, the Macomb County Public Works Office, and Michigan Department of Agriculture and Rural Development (MDARD), we have identified priority projects, costs, and a practical approach to facilitate on going management and capital improvement project implementation. Based on this work and coordination with other agencies, two projects have been identified as a priority for 2020 implementation due to grant opportunities and ongoing water quality impacts to the Red Run Drain.

### **■ Freedom Hill Project Scope Phasing (\$6,000)**

Per the request of staff, in 2019 our team assisted the Macomb County Planning and Economic Development (MCPED) in preparing costs estimates, planting seed mixes and general scoping limits of work proposed along the Red Run Drain for a National Fish and Wildlife Foundation (NFWF) Southeast Michigan Resilience Fund grant. MCPED was notified recently that it was successful in obtaining the NFWF grant to assist, in part, with the Red Run Drain bank stabilization along Freedom Hill. Due to the limited funding, the entire stretch of bank stabilization identified will not be able to be completed. Therefore, it is necessary to determine the project limits to ensure sustainability when the future phases can be completed. The work proposed under this task will be to develop phased project scopes to determine the feasible limits of Phase 1 using NFWF funding while not hindering the constructability of Phase 2 due to Phase 1 implementation. We will coordinate with your technical staff on the appropriate limits of work to be included in the larger project.

#### **■ Tributary Spill Response Evaluation (\$22,000)**

County and MDARD staff discussion identified the need to evaluate and determine improvements for effective spill management on the major tributaries discharging to the Red Run Drain. The study would include site visits to each tributary to assess spill response needs, meetings with response teams to identify improvements for boom installation, distribution, and spill notification and clean up procedures. A memo with identified spill response control measures needed, procedures for coordinating with local municipal response teams, and costs will be presented to the ICDB.

MAILING: PO Box 824 Bloomfield Hills, MI 48303-0824 SHIPPING: 555 Hulet Drive Bloomfield Hills, MI 48302-0360

PHONE: 248-454-6300

WEBSITE: hrcengr.com

HRC Job No. 20180676



We appreciate your consideration for the proposed projects totaling \$28,000. If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

James 7 But

James F. Burton, P.E.

Vice President

pc: HRC; File

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 10

**Assessments Discussion** 

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 11

Annual Drain Inspection Walkthrough

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 12

Invoices

**MEMO TO:** Mr. Jim Nash, Chairman

of the Intercounty Drainage Board for the RED RUN FEDERAL DRAIN

SjPhelps 8/20/20

**FROM:** Shawn Phelps, Chief of Fiscal Services

**OCWRC** Accounting

**DATE:** August 26, 2020

**SUBJECT:** Request for Approval of Invoices

Request for Board approval of payment of the following invoices:

Ref

 Date
 No.
 Paid To
 For
 Amount

 8/20/2020
 V # 1462328
 Macomb County Public Works
 Invoice # ARP200142 - Annual Insurance
 \$ 12,093.00

Total \$ 12,093.00

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 13

Other Business

Regular Meeting – Wednesday August 26, 2020

# Agenda Item No. 14

Adjourn