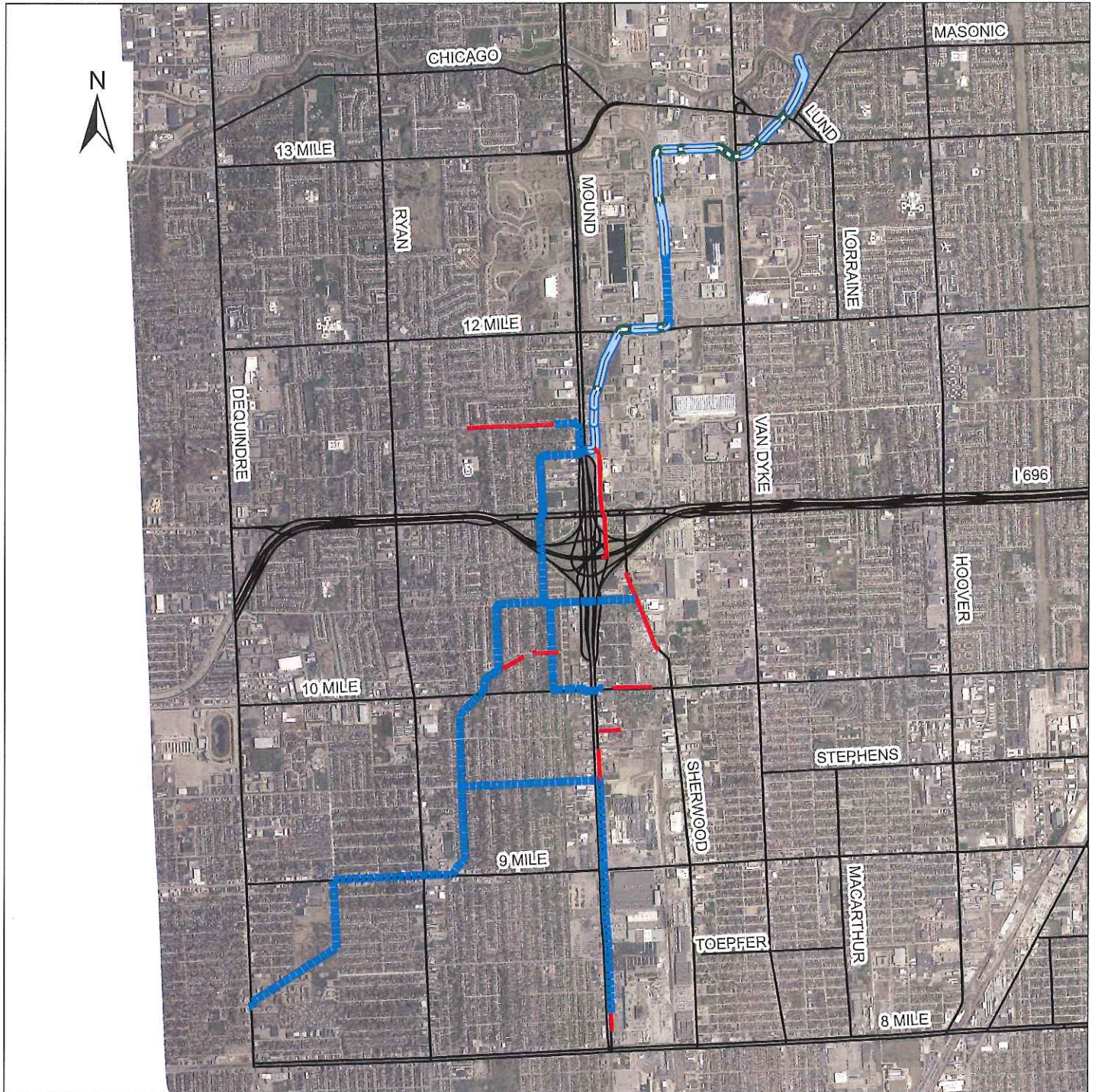


BEAR CREEK
INTER-COUNTY DRAINAGE BOARD
OCTOBER 25, 2017
10:00 a.m.
AGENDA

	<u>Page</u>
1. Call meeting to order and roll call	
2. Approval of Agenda	
3. Public participation	
4. Approval of minutes of meeting of September 27, 2017	3
5. Progress Report Update – Anderson, Eckstein & Westrick, Inc.	6
6. Consideration of approval of invoices:	19
See attached spreadsheet	
7. Sinkhole Repair Update – Tom Stockel	20
8. Surplus Bear Creek Property Update and Next Steps – Tamara Keskeny	
9. Financial Update – Bruce Manning	23
10. Old Business	
11. New Business	
12. Adjourn	

BEAR CREEK DRAIN (INTER COUNTY) & BRANCHES

CENTERLINE/WARREN/OAKLAND COUNTY



Drain Length (Feet/Miles):
87,023.47 / 16.48

Legend

- | | |
|--|---------------------|
| Enclosed Gravity | Open Channel |
| — < 60" Dia | Ditch |
| ≥ 60" Dia | Pond |
| Culvert | |

A meeting of the Inter-County Drainage Board for the **BEAR CREEK DRAIN** was held in the Office of the Macomb County Public Works Commissioner, 21777 Dunham Road, Clinton Township, Michigan on September 27, 2017.

PRESENT: Michael Gregg, Chairman
Michigan Department of Agriculture & Rural Development

Candice Miller, Secretary
Macomb County Public Works Commissioner

Anne Vaara, Acting Member
Oakland County Water Resources Commissioner

ALSO PRESENT: Brian Baker, Chief Deputy, Karen Czernel, Deputy, Keith Graboske, P.E., Chief Engineer, Bruce Manning, Financial Manager, Tom Stockel, Construction Manager, Tamara Keskeny, Property Manager, Jeff Bednar, Environmental Engineer, Barbara Delecke, Administrative Services, Office of Macomb County Public Works Commissioner; Steve Korth, P.E., Manager, Office of Oakland County Water Resources Commissioner; Jamie Burton, P.E., Albert Mickalich, P.E., Hubbell, Roth & Clark, Inc. (HRC); Gordon Wilson, P.E., Sydney Kanan, Graduate Engineer, Anderson, Eckstein & Westrick (AEW)

The Chairman called the meeting to order at 10:23 a.m.

A motion was made by Ms. Miller, supported by Ms. Vaara and unanimously carried to approve the agenda as presented.

The minutes of the meeting of August 23, 2017 were presented. A motion was made by Ms. Miller, supported by Ms. Vaara and unanimously carried to approve the minutes as presented.

The Chairman presented the invoices totaling \$9,221.98 as provided to the board for review and approval.

Motion was made by Ms. Miller, supported by Ms. Vaara to approve the invoices as presented.

AYES: Miller, Vaara and Gregg
NAYS: None
Motion approved.

Ms. Kanan, AEW updated the board on the district delineation project. The metes and bounds, property descriptions and documents are being compiled to map out the actual drainage district. The goal is for AEW and Fahey, Schultz, Burzych, Rhodes, PLC to present their findings at the next board meeting.

Green infrastructure is on-hold until the district delineation portion of the project is complete. Until it is determined what communities are in the drainage district, discussions on green infrastructure cannot be held. Communities would be asked to incorporate green infrastructure into new developments or redevelopments.

The original scope of work for the SAW Grant was strictly for the enclosed portion of the drain. Construction costs for needed improvements sited in the SAW Grant summary are upwards of \$755,800. These improvements were then prioritized based on criticality for a cost of \$588,000. An in-depth IDEP was done approximately 10 years ago. It was suggested entering this data into GIS and building on past information. ECT performed the prior water sample testing so it was suggested having them work with AEW. Capacity will not increase with the repairs to the drainage system, but will bring the drain back to its original design capacity. Mr. Bednar will work with AEW on an IDEP cost and ideas for partnering with Warren and GM to increase drain flow capacity and present same to board.

A corrugated metal pipe (CMP) in the open drain has failed just before it discharges into the Red Run Drain and a sinkhole has formed. AEW prepared an estimate of cost to repair this portion of pipe with concrete and repair the manhole for \$22,000.00. This repair could be incorporated into the overall project cost.

A motion to incorporate the CMP repair into the overall repair project and authorize AEW to seek bids on the CMP repair and bring back to the board for approval was made by Ms. Miller, supported by Ms. Vaara and unanimously approved.

AYES: Miller, Vaara, Gregg

NAYS: None

Motion approved.

A resident lodged a complaint about a sinkhole in his backyard. The pipe connecting the catch basin to the Bear Creek Drain is in good condition, but the area under the catch basin has been undermined causing the sediment to leach into the drain. AEW will inspect manholes upstream of this site where the laterals tap the Bear Creek Drain to see if there are other failures.

A motion to receive and file the Anderson, Eckstein & Westrick, Inc. progress report was made by Ms. Vaara, supported by Ms. Miller.

AYES: Vaara, Miller, Gregg

NAYS: None

Motion approved.

The sinkhole repair on the GM property should be completed by the end of the week. The concrete wash will be repaired next.

A motion to receive and file the sinkhole and concrete wash report given by Mr. Stockel was made by Ms. Vaara, supported by Ms. Miller and unanimously approved.

There may be homeowners on Cunningham Street that are interested in taking a portion of the Bear Creek vacant land located on Marcy Street. The City of Warren is not interested in taking possession of this property. Letters will be sent to all homeowners asking about interest in the property. The property will remain as a drain easement. Homeowners will not be allowed to build permanent structures on the land.

A motion to send letters to homeowners offering the option to take ownership of the land and bring back the responses to the board was made by Ms. Miller, supported by Ms. Vaara and unanimously approved.

A motion to receive and file the financial report given by Mr. Baker was made by Ms. Miller, supported by Ms. Vaara and unanimously approved.

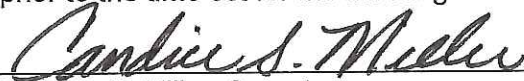
There being no further business coming before the Board, the meeting was adjourned at 11:40 a.m. by Mr. Gregg on a motion by Ms. Vaara, supported by Ms. Miller and unanimously approved.



Candice S. Miller, Secretary
Bear Creek Inter-County Drainage Board

STATE OF MICHIGAN
COUNTY OF MACOMB

I certify that the foregoing is a true and correct copy of proceedings taken by the Inter-County Drainage Board for the Drainage District shown on the attached set of Minutes, on September 27, 2017, 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, Secretary
Bear Creek Inter-County Drainage Board

DATED: 9/29/17

8931.bd

PROGRESS UPDATE

PROJECT: Bear Creek Infrastructure Rehabilitation
Bear Creek District Delineation
Bear Creek Green Infrastructure

DATE: October 17, 2017

UPDATE BY: Sydney Kanan

BEAR CREEK INFRASTRUCTURE REHABILITATION

Tasks accomplished:

- a. Construction plans have been compiled and are in the review process.
- b. Prioritized cost estimate for repairs has been compiled. (\$756,200.00)
 - o Estimate includes open channel repair and sinking catch basin replacement presented at last meeting.
- c. Determined number of structures which were constructed of CMP (9).

Anticipated tasks:

- a. Compile specifications and contract documents.
- b. Determine the scope of work moving forward.

Requested Information/Actions from OMCPWC:

- a. Determine the scope of work moving forward.

BEAR CREEK DISTRICT DELINEATION

Tasks accomplished:

- a. All pertinent documents have been reviewed and cataloged from Macomb County and Oakland County Offices.
- b. AEW has started assembling a base map, and calculating the drain right of way.

Anticipated tasks:

- a. Complete base map and determine what branches of the drain are under the jurisdiction of the Inter-County Drainage Board for the Bear Creek.

Requested Information/Actions from OMCPWC:

- a. N/A

BEAR CREEK GREEN INFRASTRUCTURE

Tasks accomplished:

- a. N/A

Anticipated tasks:

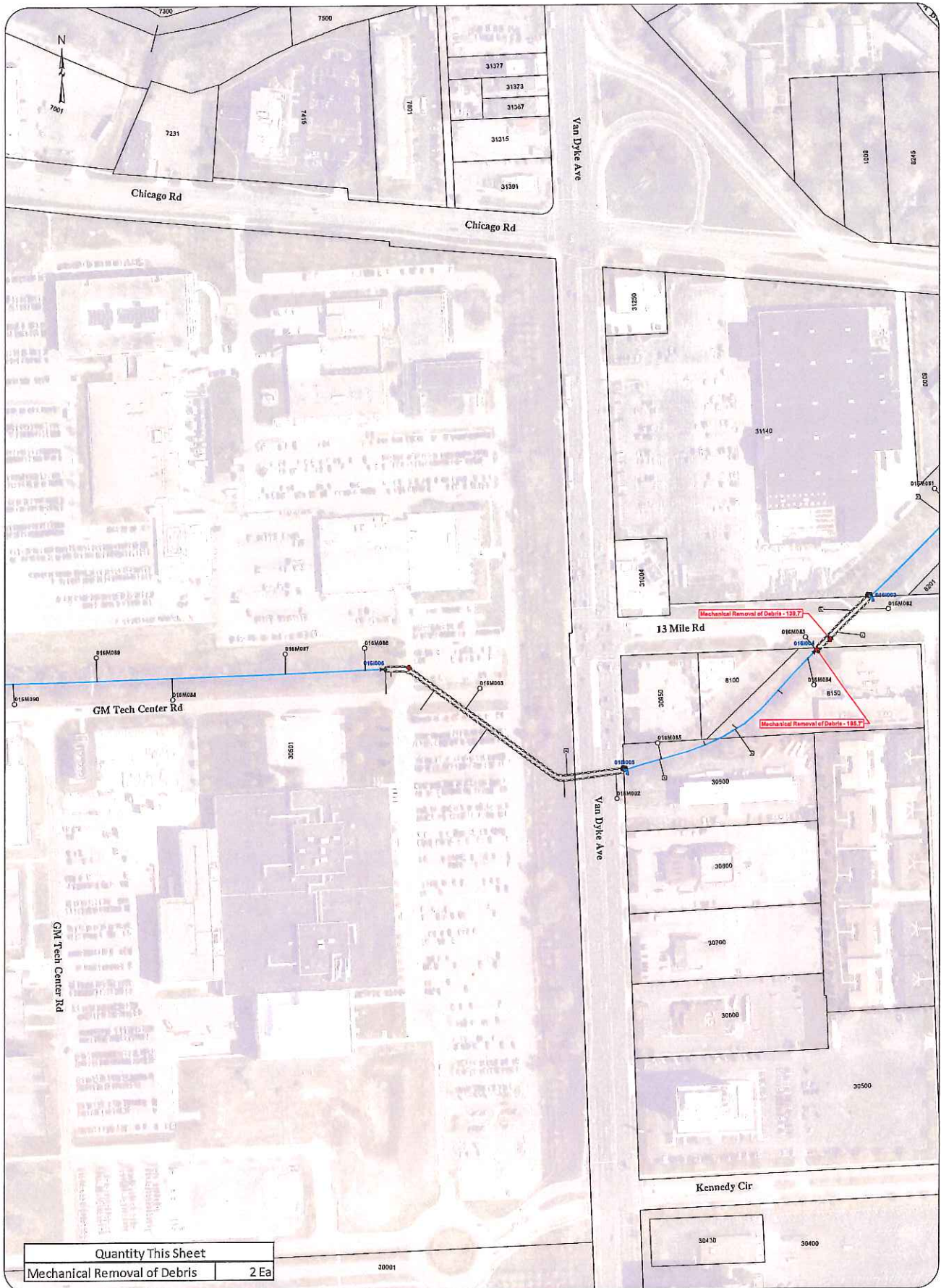
- a. Determine framework for introducing green infrastructure to communities within the Bear Creek Drainage District.

Requested Information/Actions from OMCPWC:

- a. N/A

ANDERSON, ECKSTEIN & WESTRICK, INC. SHELBY TOWNSHIP, MICHIGAN ENGINEERS COST ESTIMATE Bear Creek Infrastructure Rehabilitation - Prioritized Locations AEW PROJECT NO. 0211-0187	PROJECT :	BEAR CREEK INFRASTRUCTURE REHABILITATION
	OWNER:	INTER-COUNTY DRAINAGE BOARD FOR BEAR CREEK
	PREPARED BY:	Sydney A. Kanan 10/17/17
	CHECKED BY:	Gordon B. Wilson, PE 10/17/17

WORK ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Localized Steel Reinforcement Replacement	0.00	Ea	\$ 1,200.00	\$ -
Concrete Repair	10.00	Ea	\$ 1,000.00	\$ 10,000.00
Tap Repair, 8 inch	1.00	Ea	\$ 1,400.00	\$ 1,400.00
Tap Repair, 12 inch	9.00	Ea	\$ 1,500.00	\$ 13,500.00
Tap Repair, 36 inch	1.00	Ea	\$ 1,700.00	\$ 1,700.00
Tap Repair, 60 inch	1.00	Ea	\$ 2,500.00	\$ 2,500.00
Mechanical Removal of Debris	13.00	Ea	\$ 2,500.00	\$ 32,500.00
Mineral Deposit Removal	20.00	Ea	\$ 500.00	\$ 10,000.00
Roots, Rem	3.00	Ea	\$ 300.00	\$ 900.00
Infiltration Seal	126.00	Ea	\$ 800.00	\$ 100,800.00
Clean and Seal Joints, Manhole	2.00	Ea	\$ 3,000.00	\$ 6,000.00
Clean, Pipe	4,980.00	Ft	\$ 50.00	\$ 249,000.00
Cementitious Lining	275.00	Ft	\$ 200.00	\$ 55,000.00
Tree, Rem, 37 inch or Larger	1.00	Ea	\$ 2,500.00	\$ 2,500.00
Dr Structure, Rem	8.00	Ea	\$ 1,150.00	\$ 9,200.00
Curb and Gutter, Rem	29.00	Ft	\$ 30.00	\$ 870.00
Pavt, Rem	93.00	Syd	\$ 20.00	\$ 1,860.00
Dr Structure Cover	7.00	Ea	\$ 600.00	\$ 4,200.00
Dr Structure, 36 inch	1.00	Ea	\$ 4,000.00	\$ 4,000.00
Dr Structure, 36 inch, with 2' Sump	7.00	Ea	\$ 4,500.00	\$ 31,500.00
Sewer, CI A, 12 inch, Tr Det A	15.00	Ft	\$ 50.00	\$ 750.00
Aggregate Base, 8 inch	93.00	Syd	\$ 25.00	\$ 2,325.00
Curb and Gutter, Conc, Misc	29.00	Ft	\$ 50.00	\$ 1,450.00
Conc Pavt, Nonreinf, 8 inch	29.00	Syd	\$ 75.00	\$ 2,175.00
HMA, 2C	16.50	Ton	\$ 300.00	\$ 4,950.00
Lane Tie, Epoxy Anchored	14.00	Ea	\$ 5.00	\$ 70.00
Traffic Control and Maintenance	1.00	LS	\$ 10,000.00	\$ 10,000.00
Open Channel Repair	1.00	LS	\$ 22,540.00	\$ 22,540.00
TOTAL ESTIMATED CONSTRUCTION COST				\$ 581,700.00
CONTINGENCIES (10%)			\$	58,170.00
ENGINEERING (7%)			\$	40,720.00
CONSTRUCTION SURVEYING AND LAYOUT (2%)			\$	11,630.00
CONSTRUCTION ADMINISTRATION (3%)			\$	17,450.00
CONSTRUCTION OBSERVATION (6%)			\$	34,900.00
AS-BUILT & GIS RECORDS (2%)			\$	11,630.00
TOTAL ESTIMATED COST				\$756,200.00



Quantity This Sheet	
Mechanical Removal of Debris	2 Ea

ANDERSON, ECKSTEIN AND WESTRICK, INC.
 Civil Engineers • Surveyors • Architects
 51221 Schoolcraft Road, Oakley Township, Michigan 48151
 Phone: 616.778.1234 Fax: 616.778.9180

DATE PRINTED: 10/17/2017 DATE CREATED: 7/14/2017
 SCALE: 1 Inch = 100 Feet MAP DOCUMENT: Bear Creek Repair Plans
 PROJECT NO: 0214-11187 PREPARED BY: JCS CHECKED BY: SAK



Bear Creek Drain

2017 Infrastructure Rehabilitation



REFERENCE SHEET NUMBER
2

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Quantity This Sheet	
Mechanical Removal of Debris	1 Ea

Anderson, Eckstein and Westrick, Inc.
 Civil Engineers • Surveyors • Architects
 11021 Greenfield Road, Whitefish Township, Michigan 48113
 Phone: 588-784-1314 Fax: 588-724-9760

DATE PRINTED: 10/17/2017 DATE REVISION: 7/14/2017
 SCALE: 1 inch = 100 feet
 PROJECT NO: 0211-0187 DRAWN BY: JCB CHECKED BY: SAK



Bear Creek Drain

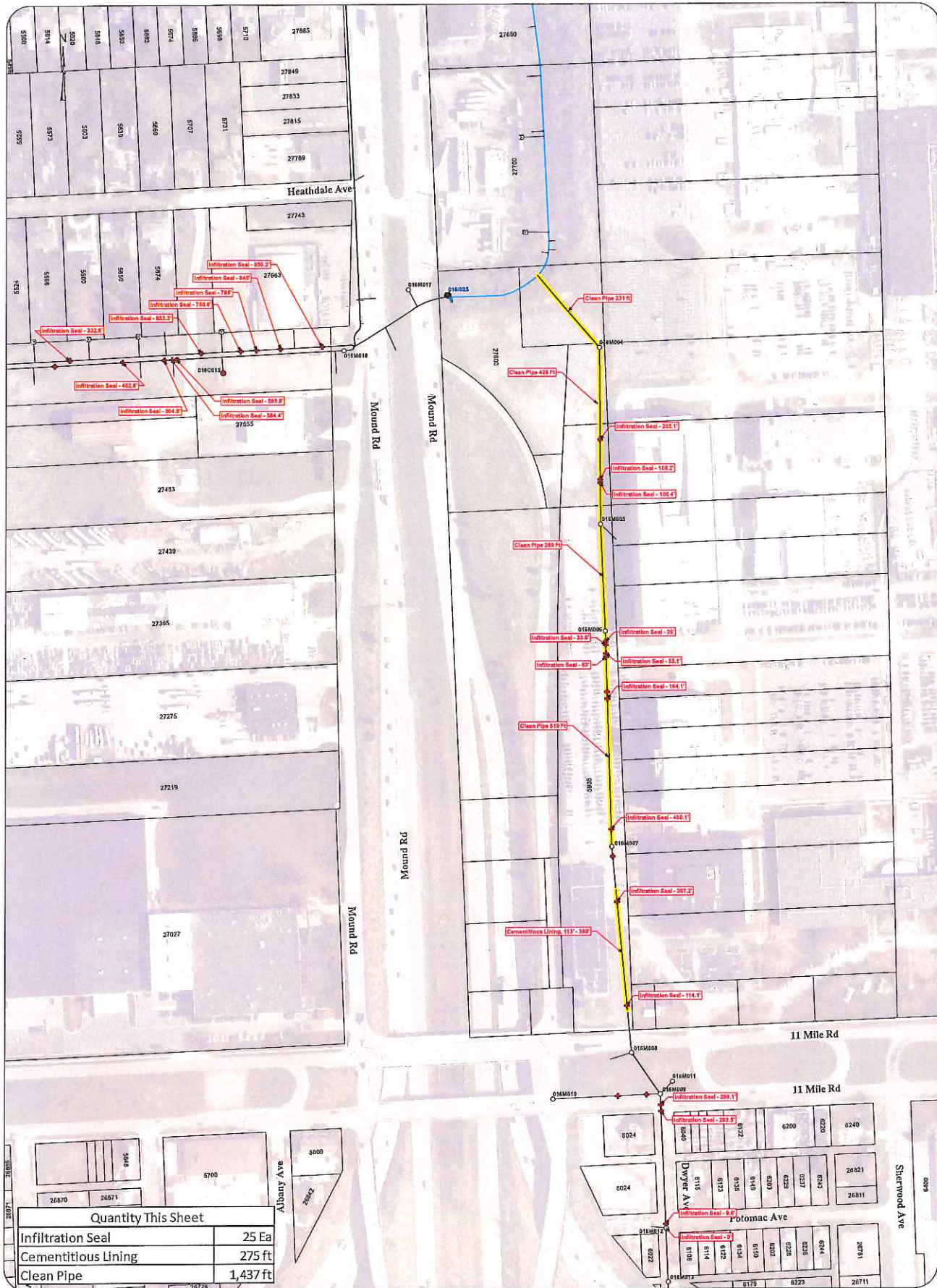
2017 Infrastructure Rehabilitation



REFERENCE SHEET NUMBER
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Quantity This Sheet	
Infiltration Seal	25 Ea
Cementitious Lining	275 ft
Clean Pipe	1,437 ft

ANDERSON, ECKSTEIN AND WESTRICK, INC.
 Civil Engineers • Surveyors • Architects
 5151 Riverchase Road, Shirley Township, Michigan 48151
 Phone: 920.291.3261 Fax: 920.291.2165

DATE PRINTED: 10/17/2017 DATE CHECKED: 7/11/2017
 SCALE: 1 Inch = 100 Feet DRAWN BY: Bear Creek Repairs, P/line
 PROJECT NO: 021-1-0187 CHECKED BY: JCS



Bear Creek Drain

2017 Infrastructure Rehabilitation

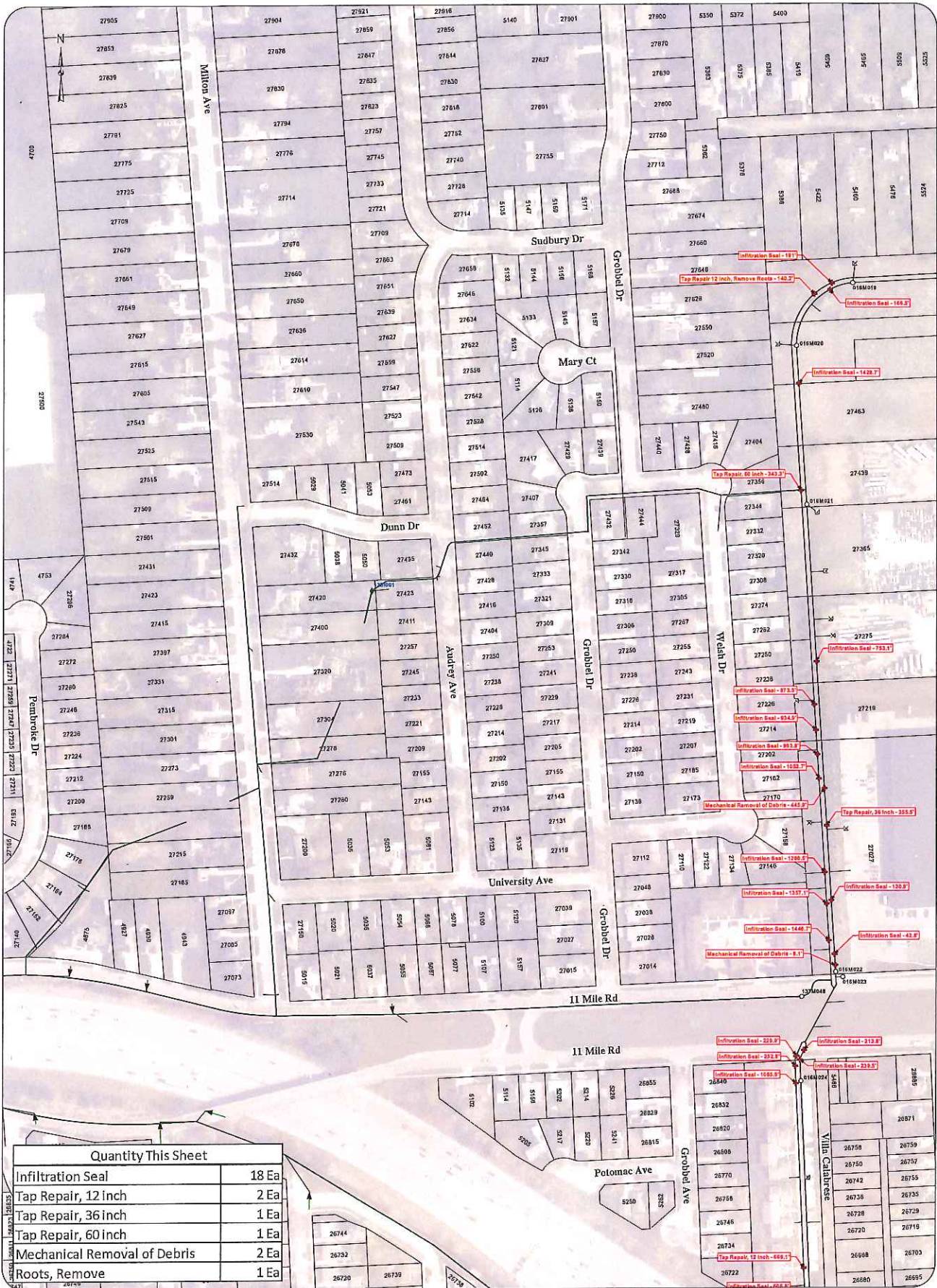


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Quantity This Sheet	
Infiltration Seal	18 Ea
Tap Repair, 12 inch	2 Ea
Tap Repair, 36 inch	1 Ea
Tap Repair, 60 inch	1 Ea
Mechanical Removal of Debris	2 Ea
Roots, Remove	1 Ea

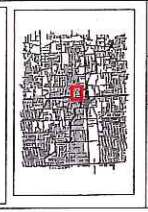
ANDERSON, ECKSTEIN AND WESTRICK, INC.
 Civil Engineers • Surveyors • Architects
 11911 Eisenhower Blvd., Suite 100, Grand Rapids, MI 49508
 Phone: 616-794-1100 Fax: 616-794-1100

DATE PLOTTED: 01/22/2019 DATE ORIGINATED: 1/14/2019
 SCALE: 1 inch = 100 feet DRAWING: Bear Creek Repair Plans
 PROJECT NO: 0211-0187 DESIGNED BY: JCS CHECKED BY: JCS



Bear Creek Drain

2017 Infrastructure Rehabilitation



REFERENCE SHEET NUMBER
7

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ANDERSON, ECKSTEIN AND WESTRICK, INC.
 Civil Engineers • Surveyors • Architects
 5120 Eastman Road, Suite 200, Grand Rapids, MI 49508
 Phone: 616-726-7500 Fax: 616-726-6180

DATE PRINTED: 8/25/2017 DATE CREATED: 7/14/2017
 SCALE: 1 inch = 100 feet PROJECT NO: 0211-0182
 SHEET NO: 115



Bear Creek Drain

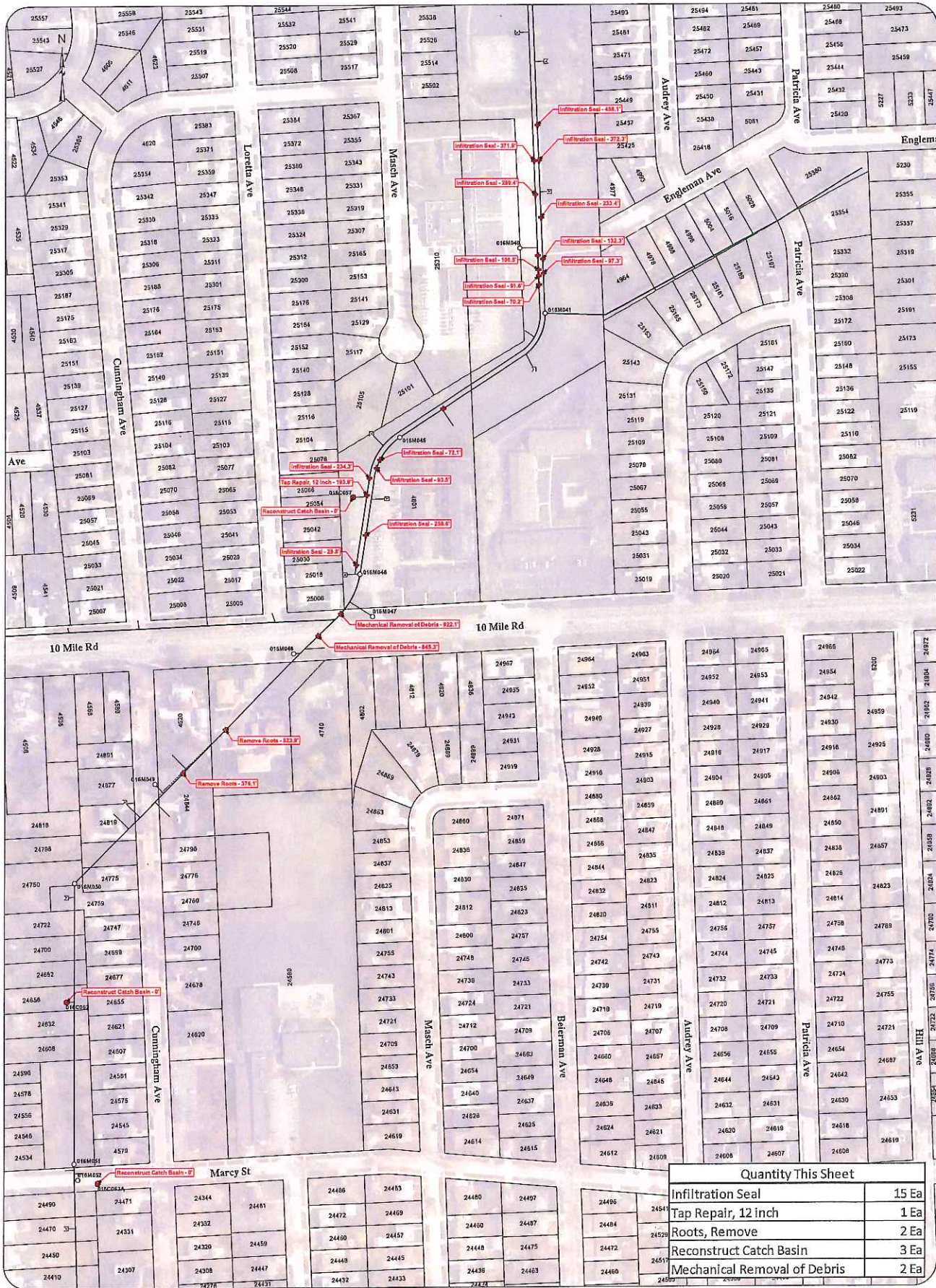
2017 Infrastructure Rehabilitation



REFERENCE SHEET NUMBER
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Quantity This Sheet	
Infiltration Seal	15 Ea
Tap Repair, 12 inch	1 Ea
Roots, Remove	2 Ea
Reconstruct Catch Basin	3 Ea
Mechanical Removal of Debris	2 Ea

ANDERSON, ECKSTEIN AND WESTRICK, INC.
 Civil Engineers • Surveyors • Architects
 5100 Woodward Road, Suite 1000, Farmington Hills, MI 48334
 Phone: 248-759-2500 Fax: 248-759-2502

DATE PRINTED: 10/17/2017 DATE DRAWN: 7/11/2017
 SCALE: 1 inch = 100 feet PROJECT: Bear Creek Drain Rehabilitation
 DRAWN BY: JCS CHECKED BY: JCS



Bear Creek Drain

2017 Infrastructure Rehabilitation

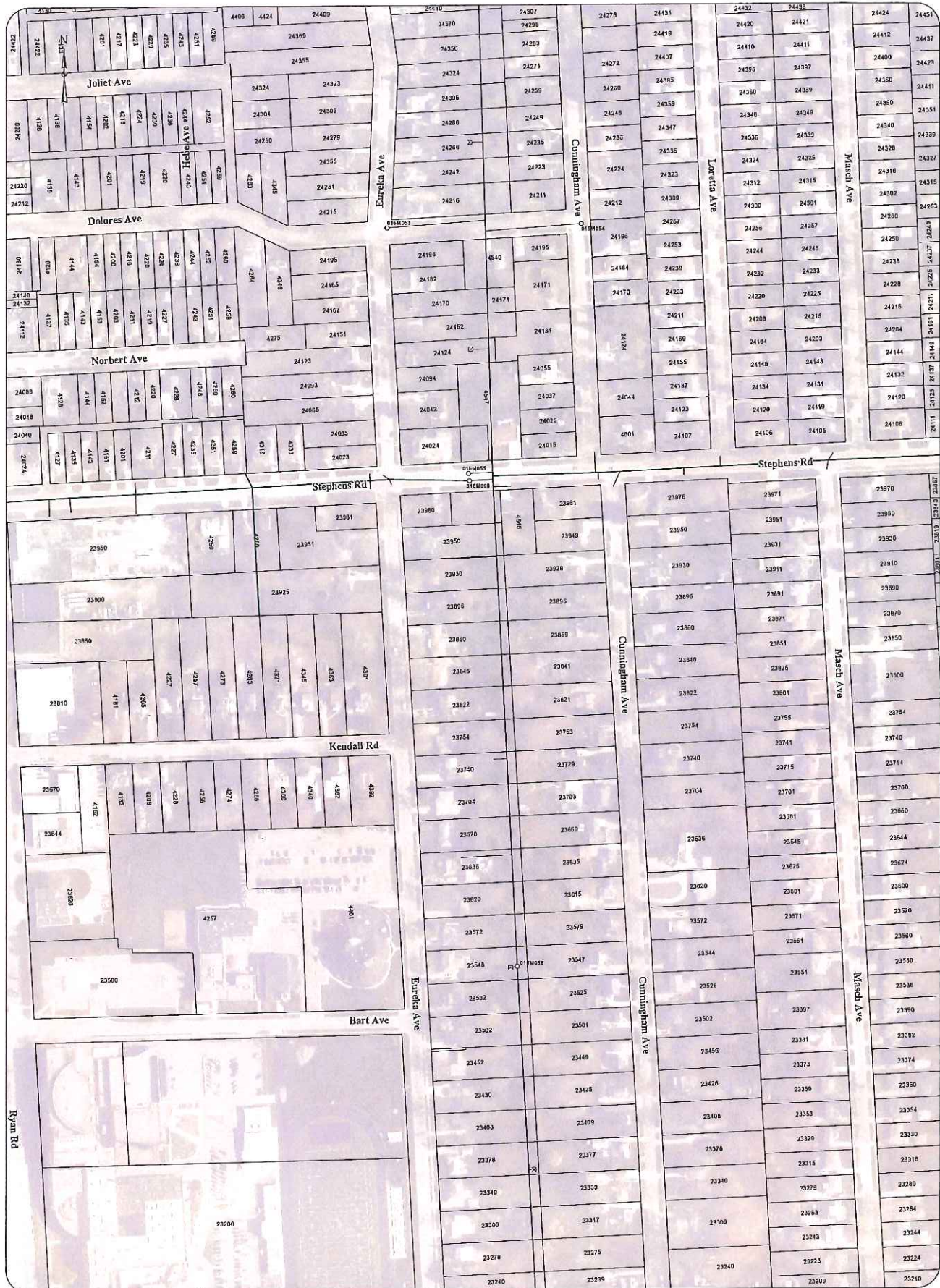


REFERENCE SHEET NUMBER
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ANDERSON, ECKSTEIN AND WESTRICK, INC.
 Civil Engineers • Surveyors • Architects
 4100 E. Rochester Road, Steady Tower, Midland, MI 48601
 Phone: 517.221.2100 Fax: 517.221.2100

DATE PRINTED: 8/22/2017 DATE CREATED: 7/11/2017
 SCALE: 1 inch = 100 feet SHEET NUMBER: Bear Creek Drain, Phase 1
 PROJECT NO: 0311-0187 CONTRACT NO: 2017-001



Bear Creek Drain

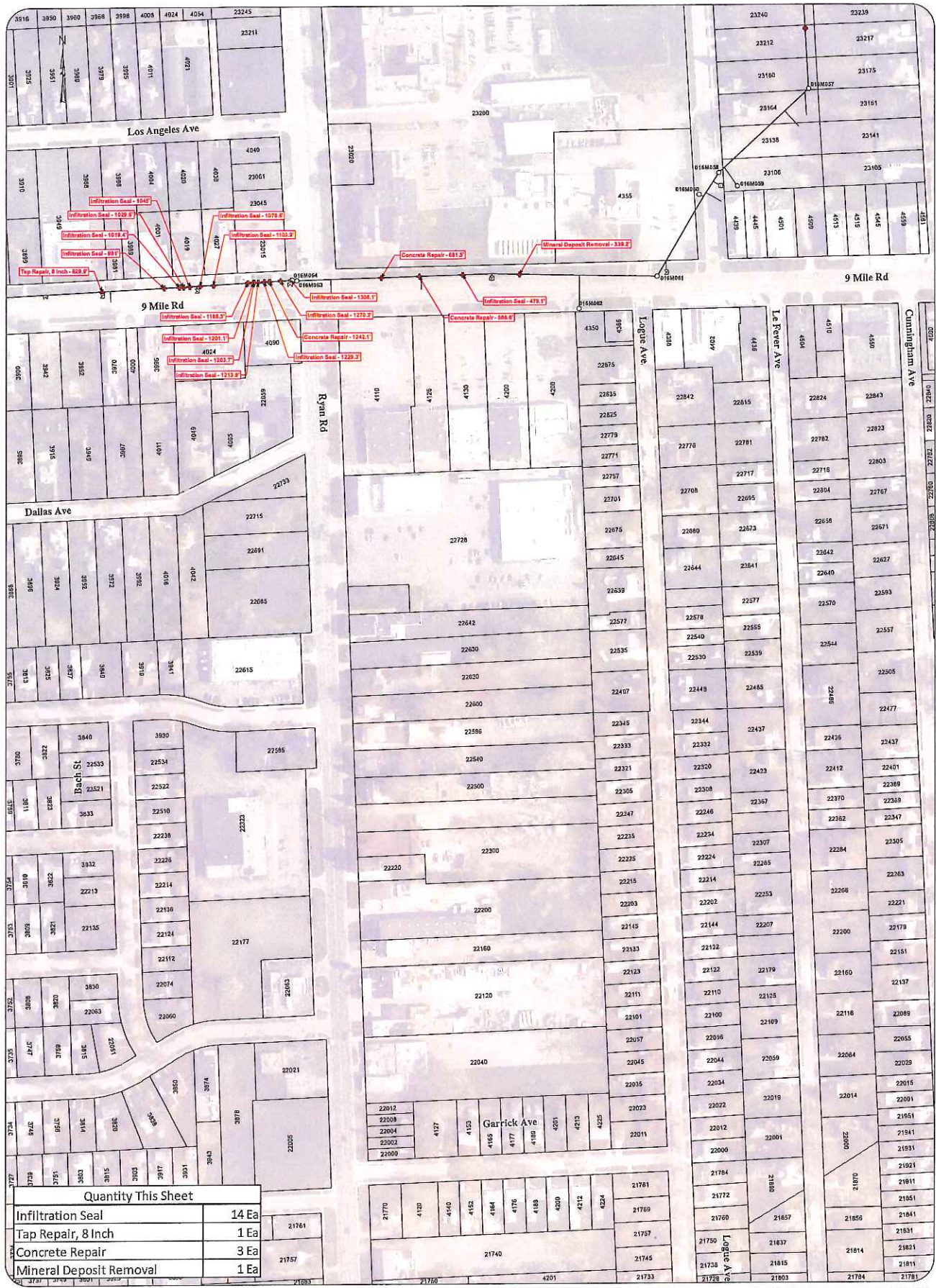
2017 Infrastructure Rehabilitation



REFERENCE SHEET NUMBER
10

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Quantity This Sheet

Infiltration Seal	14 Ea
Tap Repair, 8 Inch	1 Ea
Concrete Repair	3 Ea
Mineral Deposit Removal	1 Ea

ANDERSON, ECKSTEIN AND WESTRICK, INC.
 Civil Engineers • Surveyors • Architects
 8100 Woodward Road, Suite 100, Ferndale, Michigan 48115
 Phone: 586.725.1234 Fax: 586.725.8760

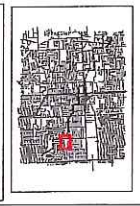
DATE PLOTTED: 10/17/2017
 SCALE: 1 inch = 100 feet
 PROJECT: 0211-0187

DATE REVISION: 7/14/2017
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DESIGNED BY: [Name]



Bear Creek Drain

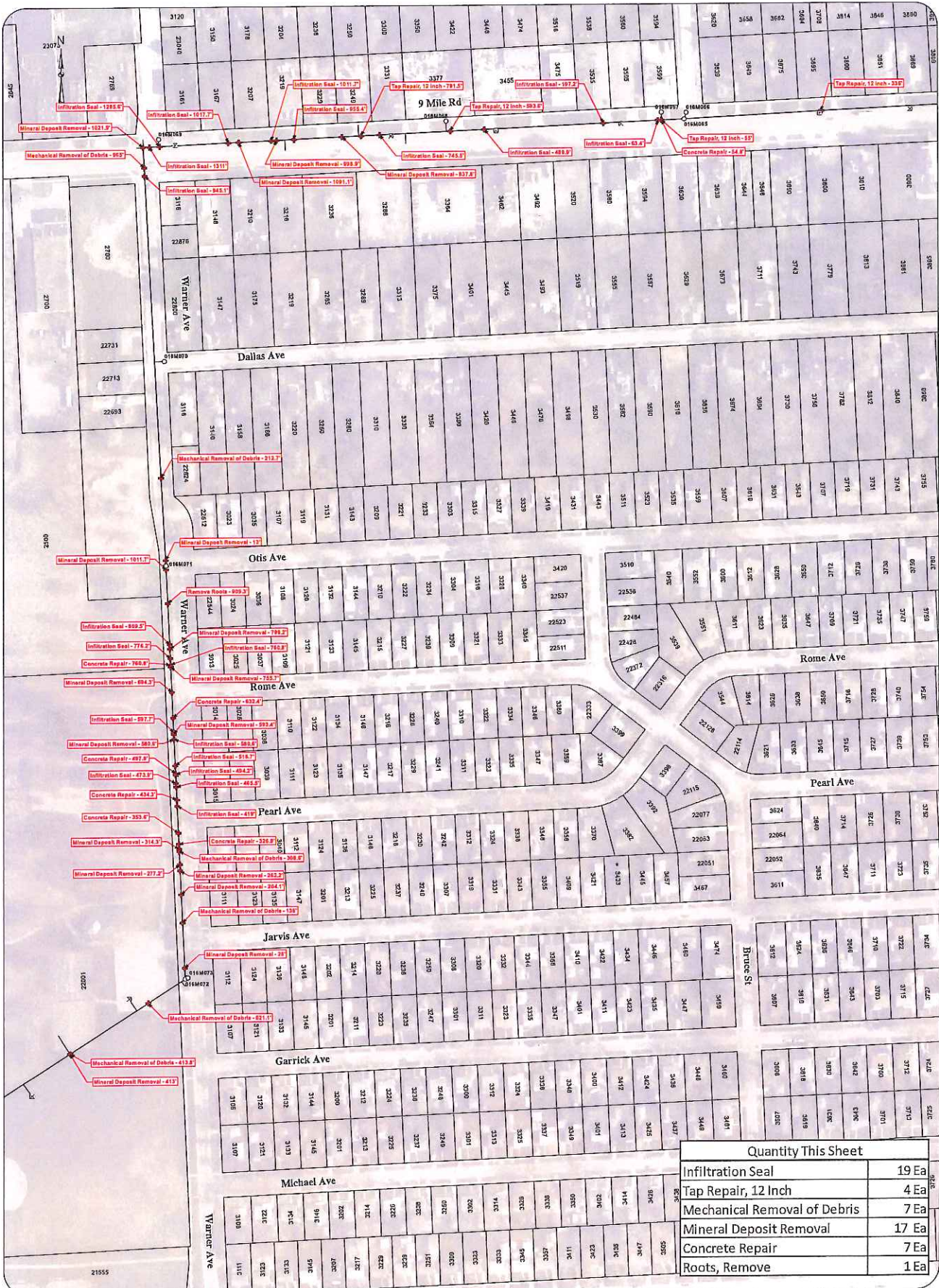
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ANDERSON, ECKSTEIN AND WESTRICK, INC.
 Civil Engineers • Surveyors • Architects
 1916 Eisenhower Blvd., Troy, Michigan 48068-4818
 Phone: 482.225.1254 Fax: 482.225.1256

DATE PRINTED: 8/22/2017 DATE REVISION: 7/14/2017
 SCALE: 1 inch = 100 feet
 PROJECT NO.: 033-1-0187 DRAWN BY: JCS CHECKED BY: SAT



Bear Creek Drain

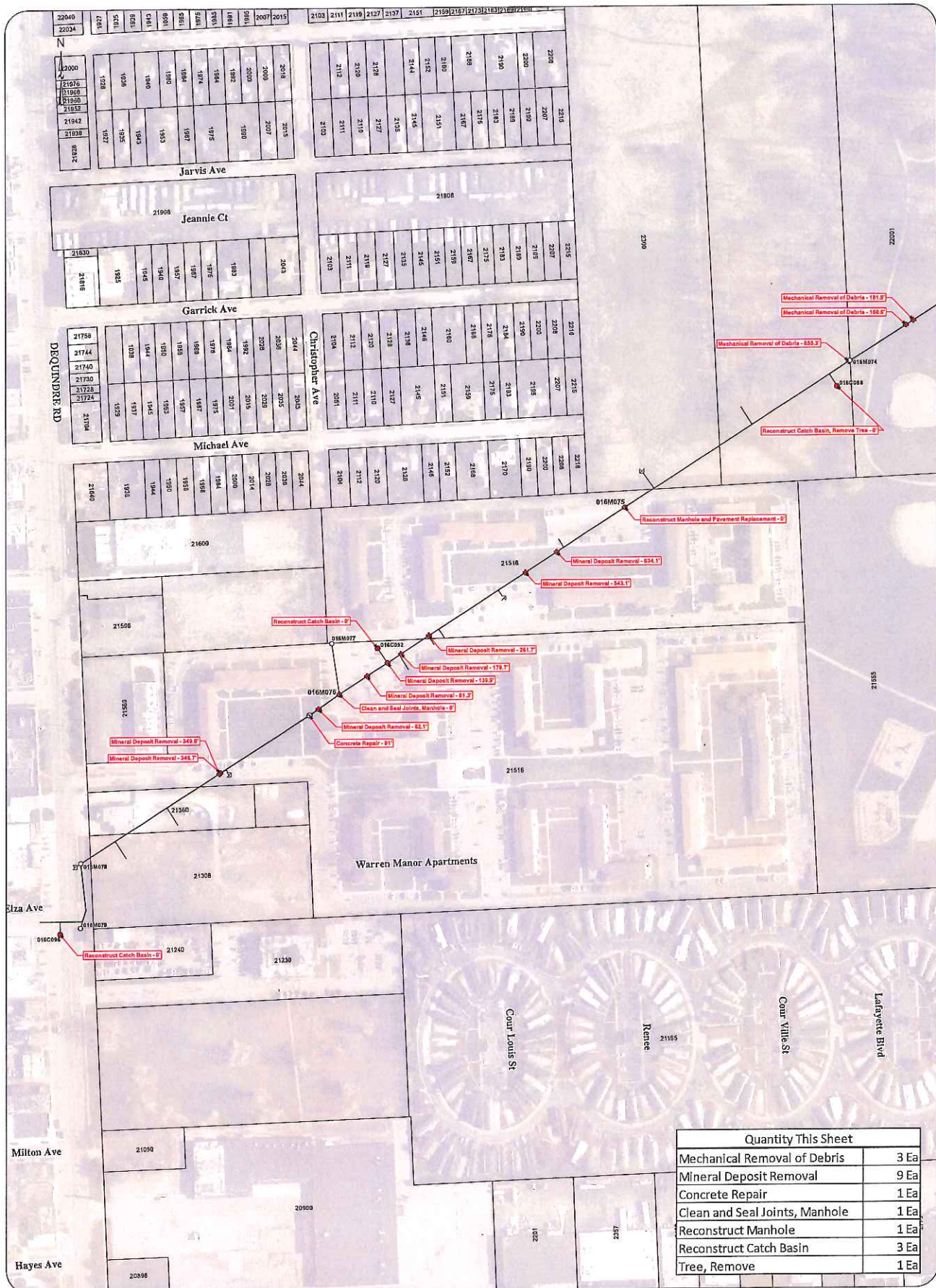
2017 Infrastructure Rehabilitation



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Quantity This Sheet	
Mechanical Removal of Debris	3 Ea
Mineral Deposit Removal	9 Ea
Concrete Repair	1 Ea
Clean and Seal Joints, Manhole	1 Ea
Reconstruct Manhole	1 Ea
Reconstruct Catch Basin	3 Ea
Tree, Remove	1 Ea

ANDERSON, ECKSTEIN AND WESTRICK, INC.
 Civil Engineers • Surveyors • Architects
 5124 Excelsior Road, Southfield, Michigan 48034
 Phone: 313.759.5200 Fax: 313.759.5201

DATE PRINTED: 10/17/2017
 SCALE: 1 inch = 100 feet
 PROJECT NO: 0211-0187

DATE CREATED: 7/11/2017
 DRAWN BY: SAK
 CHECKED BY: SAK



Bear Creek Drain

2017 Infrastructure Rehabilitation



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13

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BEAR CREEK - 10/25/17

<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>
Bear Creek	Chapter 21	Graboske	Anderson, Eckstein & Westrick, Inc.	\$ 14,000.00	Invoice #0115245 - 9/13/17 Engineering Services - 7/24/17 - 8/20/17	Infrastructure Rehabilitation Design	
		Graboske	Anderson, Eckstein & Westrick, Inc.	\$ 3,614.75	Invoice #0115246 - 9/13/17 Engineering Services - 7/24/17 - 8/20/17	District Delineation	

Total \$ 17,614.75



Candice S. Miller
Public Works Commissioner
Macomb County

October 19, 2017

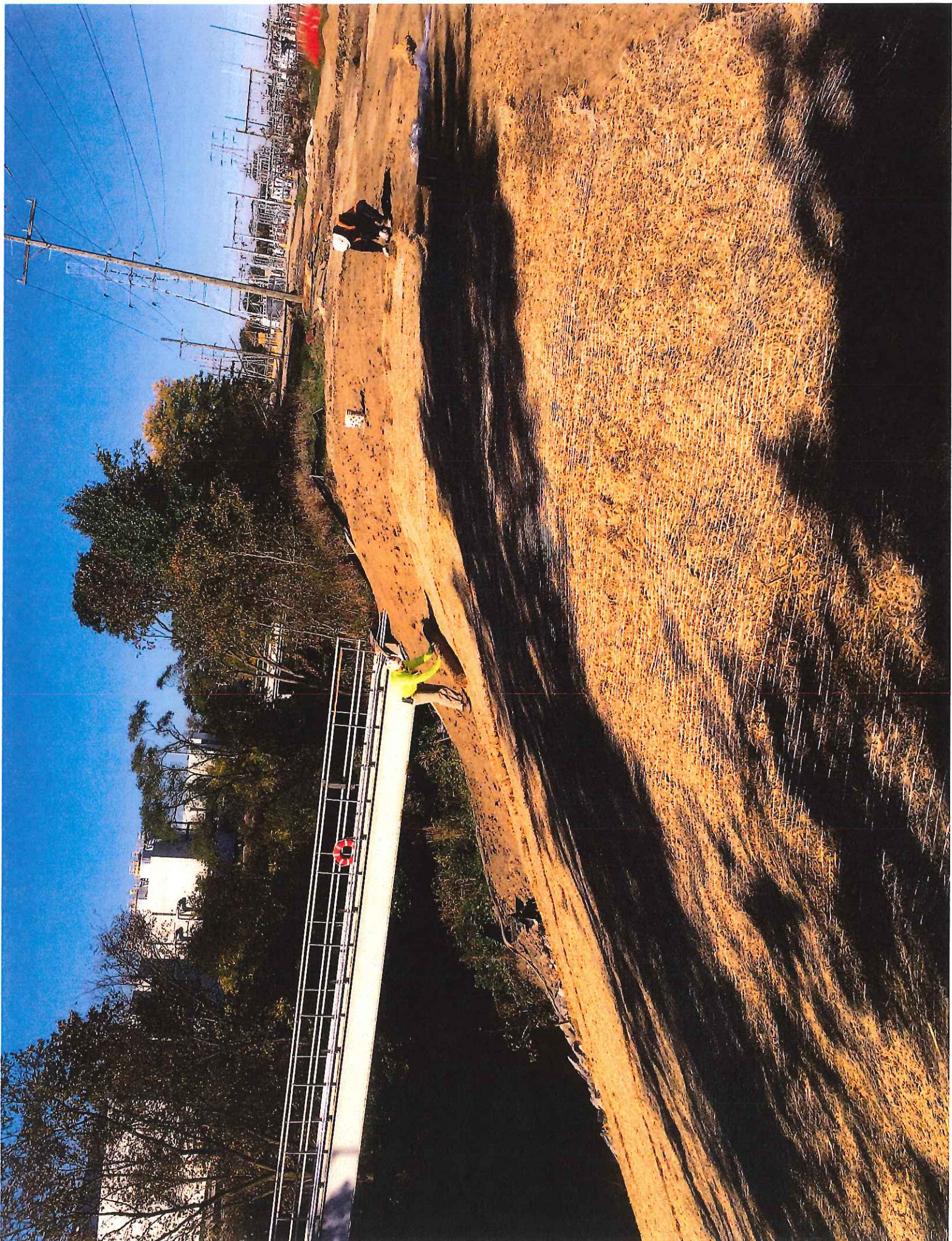
MEMORANDUM

TO: Brian Baker, Chief Deputy
FROM: Thomas R. Stockel, Construction Engineer *TRS*
RE: GM Tech Center Property

Attached are copies of the completed sinkhole repair on the Bear Creek Drain within the General Motors Technical Center property. The concrete wash repair will be done after the soil borings are completed.

Attachments

8970.ts





YTD Trial Balance
Fund: Bear Creek
As of Fiscal Period: Oct 1, 2016-Sept 30, 2017

	O&M Balance 9/30/2016	O&M	Total 9/30/2017
Cash - Operating	250,354	(26,683)	223,672
Accounts Receivable			0
Assets			0
Liabilities		9,893	9,893
Revenues		11,137	11,137
Expenditures		47,712	47,712
Equity	250,354		213,779
	0		

NOTES

OTHER BEAR CREEK AVAILABLE CASH BALANCES	9/30/2017
Bear Creek Enclosure	811,644
Bear Creek GM Enclosure	3,142
Bear Creek Warren Branches	400,325
Bear Creek Warren Branches #2	134,363
TOTAL ALL BEAR CREEK	1,573,146