

Portage Creek Area Time Critical Removal Action

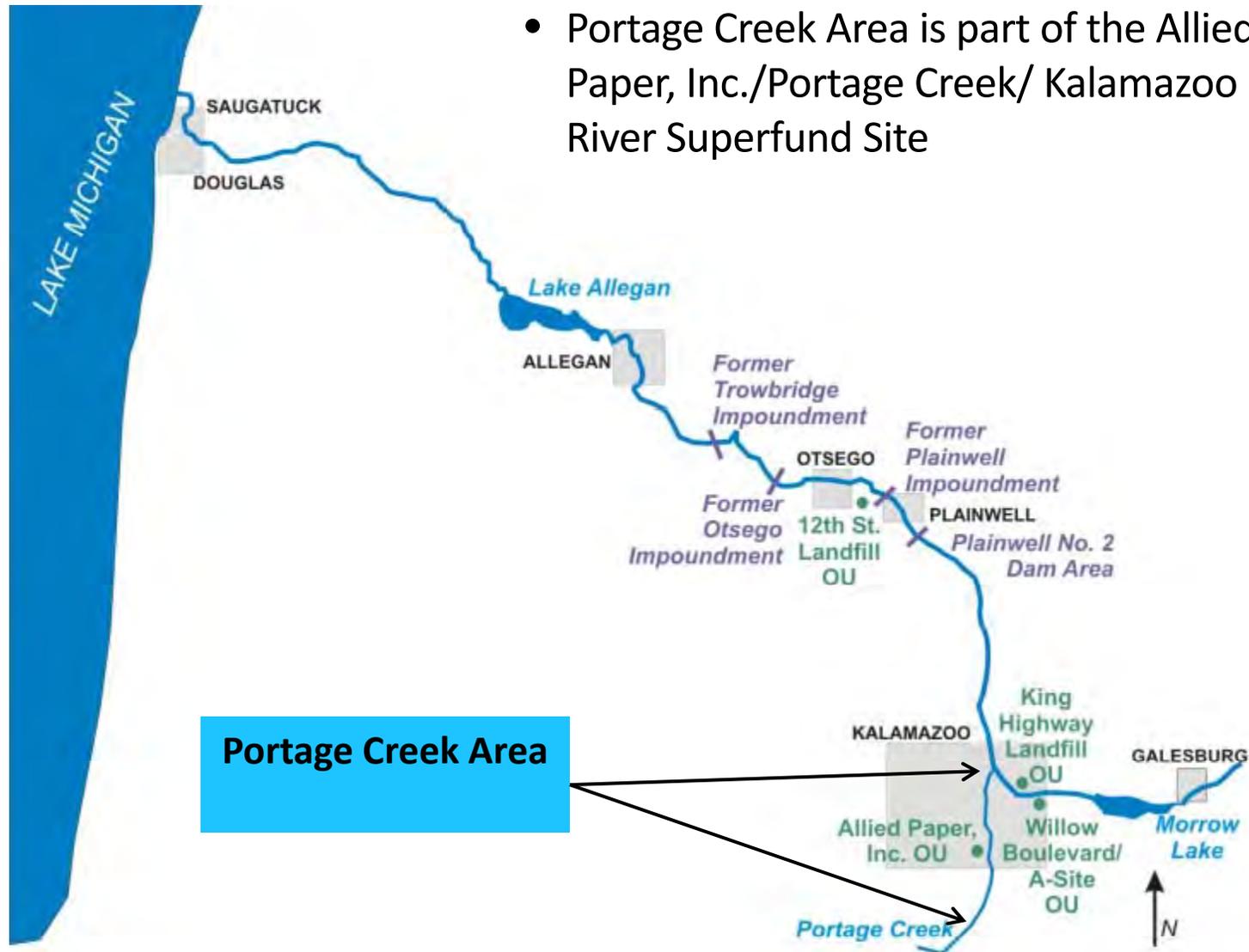
Final Progress Update

Public Meeting

12/4/2013

Overview

- Portage Creek Area is part of the Allied Paper, Inc./Portage Creek/ Kalamazoo River Superfund Site



Portage Creek Investigation Results

- 1993-2000 Remedial Investigation/Feasibility Study (RI/FS)
 - Series of transects sampled
 - Highest PCB concentration **79 mg/kg**
- 2008 Supplemental RI/FS
 - Target sediment probes and depositional features
 - Highest PCB concentration **300 mg/kg**
- 2010 MDNRE sampling
 - Define hotspots
 - Highest creek sediment PCB concentration **590 mg/kg**
 - Highest floodplain PCB concentration **72 mg/kg**

Portage Creek Excavation Areas Map

04/01/2011

Schedule

2013
SA1-A
-completed-

2013
SA5-A
SA3-A
SA1-B&C
-completed-

2012
SA7
SA6
Axtell Creek
SA5D&C

Completed in phases over 2 yrs
Budgeted cost: \$15.8m
Actual cost: ~ \$13m

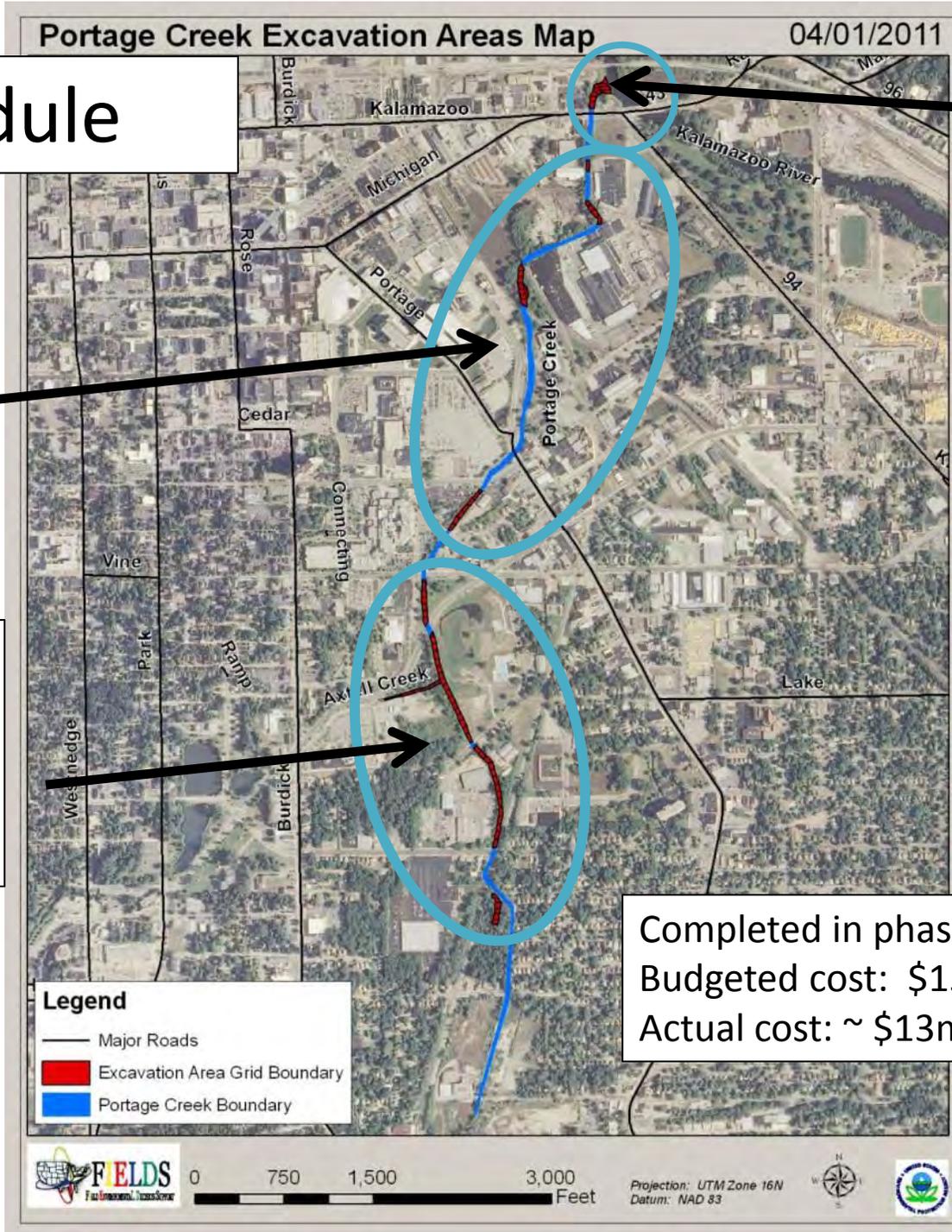
Legend

- Major Roads
- Excavation Area Grid Boundary
- Portage Creek Boundary



0 750 1,500 3,000 Feet

Projection: UTM Zone 16N
Datum: NAD 83



Operations Overview

Site Preparation

- Clear & grub for access
- Pre-surveys & sampling
- Access, support areas
- Controls (security, environmental, H&S)
- Isolation
 - Task 1- Cofferdam construction
 - Task 2- By-pass pumping
 - Task 3- Excavation area dewatering

Air & Water Monitoring



Operations Overview (cont.)

Contaminated Sediment Removal

- Excavation & solidification (if needed)
- Load & transfer to John St. staging pad
- Load out for disposal
 - Subtitle D (C&C Landfill, Marshall, MI)
 - TSCA facility (EQ, Belleville, MI)
- Verification & confirmation sampling

John Street Staging Area / Pad



> 50ppm – EQ (Detroit)
< 50ppm - C&C Landfill (Marshall)

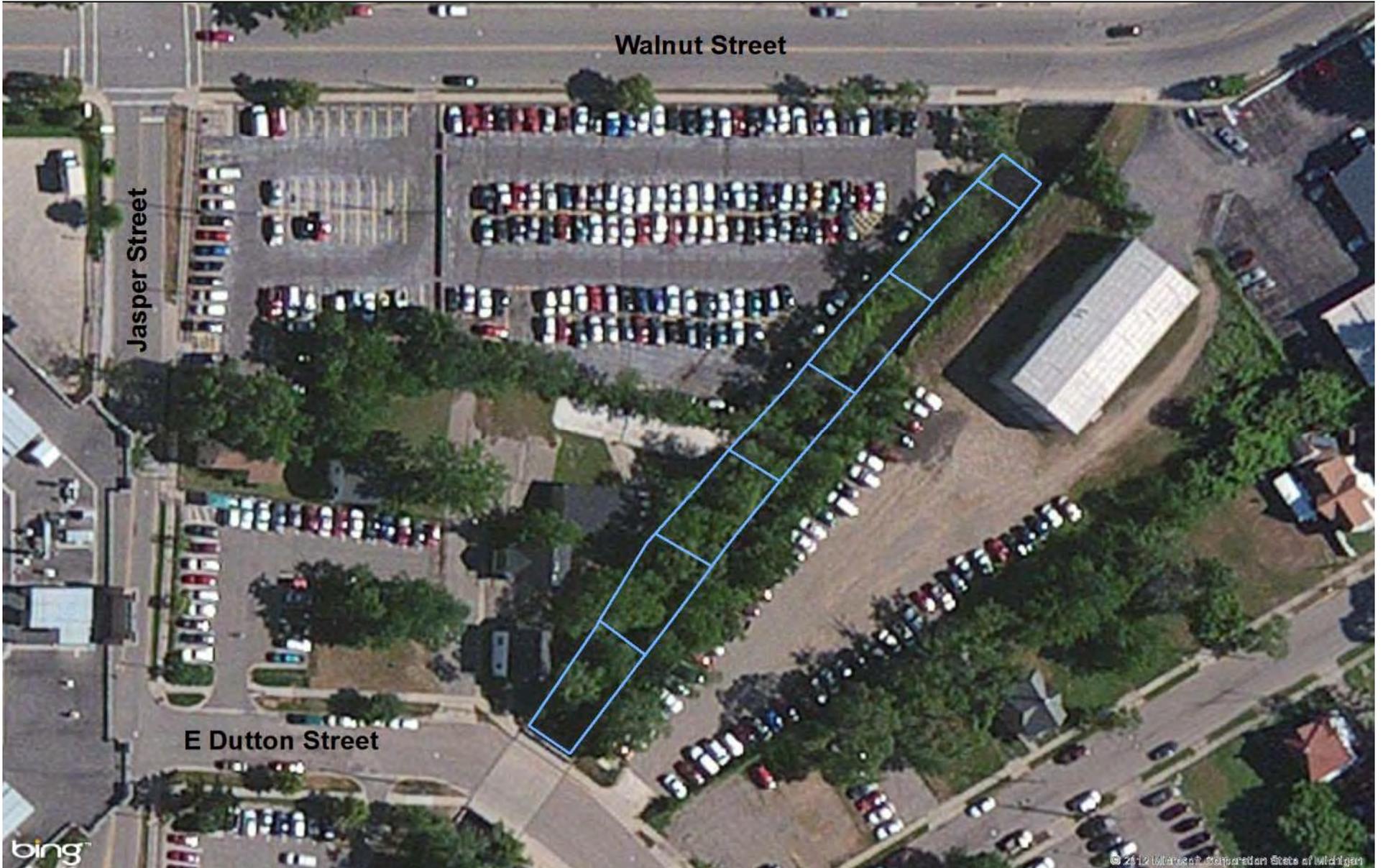
Operations Overview (cont.)

Site Restoration

- Backfill stream channel/banks
- Remove controls
- Restoration planting
- Infrastructure restoration (fence replacement, asphalt repairs, etc.)
- Post-condition surveys

SA5A

Dutton St. to Walnut St.

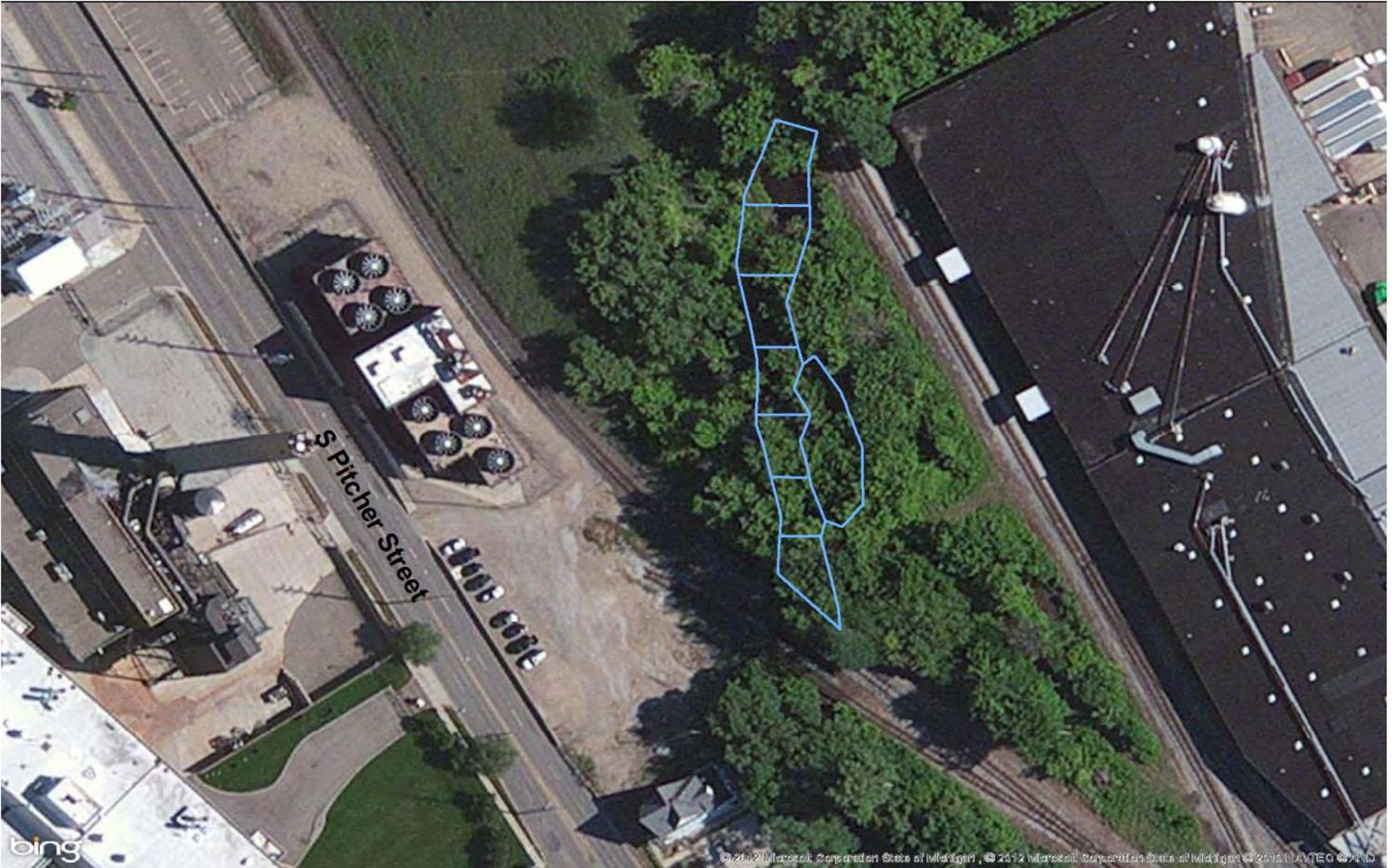


Dutton Street Bridge Closure



SA3A

Pitcher St. to Rochester Ave.



Floodplain Grid



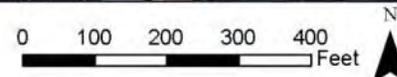
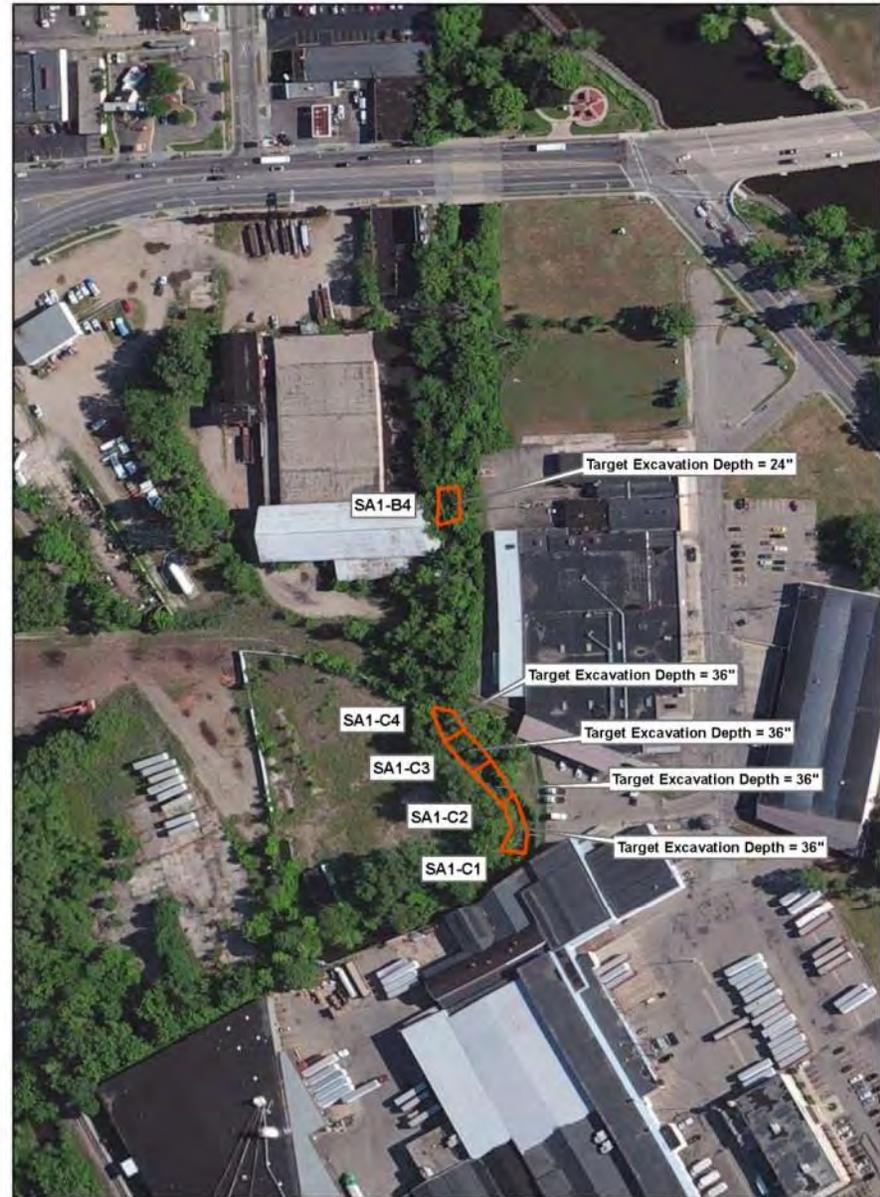
Kalamazoo Nature Center



Wetland Mitigation & Future Urban Nature Park

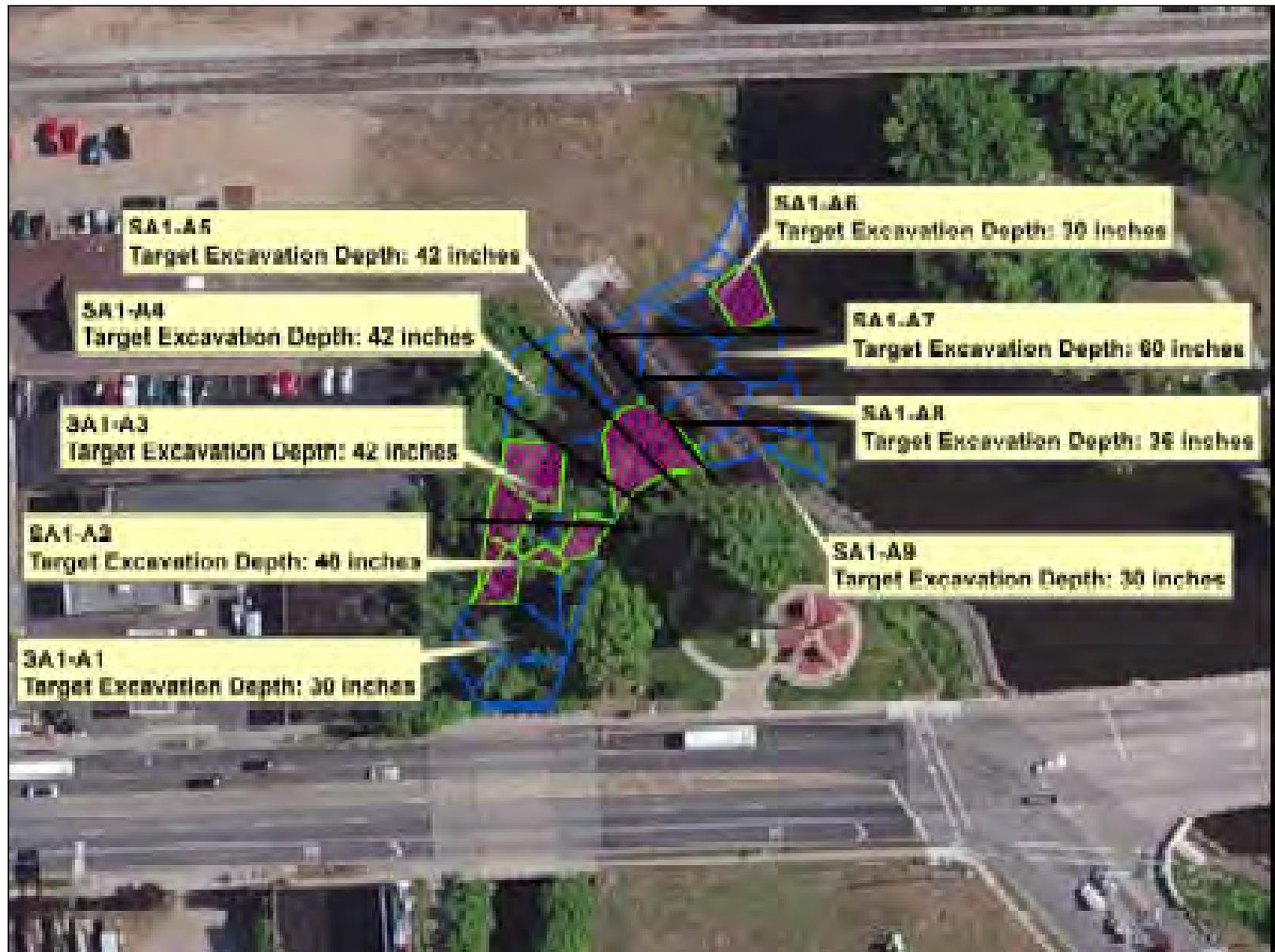
SA1-C & SA1-B
Rochester Ave.
to
E. Michigan Ave.

Portage Creek SA1B and SA1C



SA1-A

Michigan Ave. to Kalamazoo River



Indiana Bat Survey



Indiana Bat Survey





NOTE:

By-Pass Pump configuration could move a maximum of 55,300 gallons/minute of water at SA1-A, or 79,632,000 gallons/day









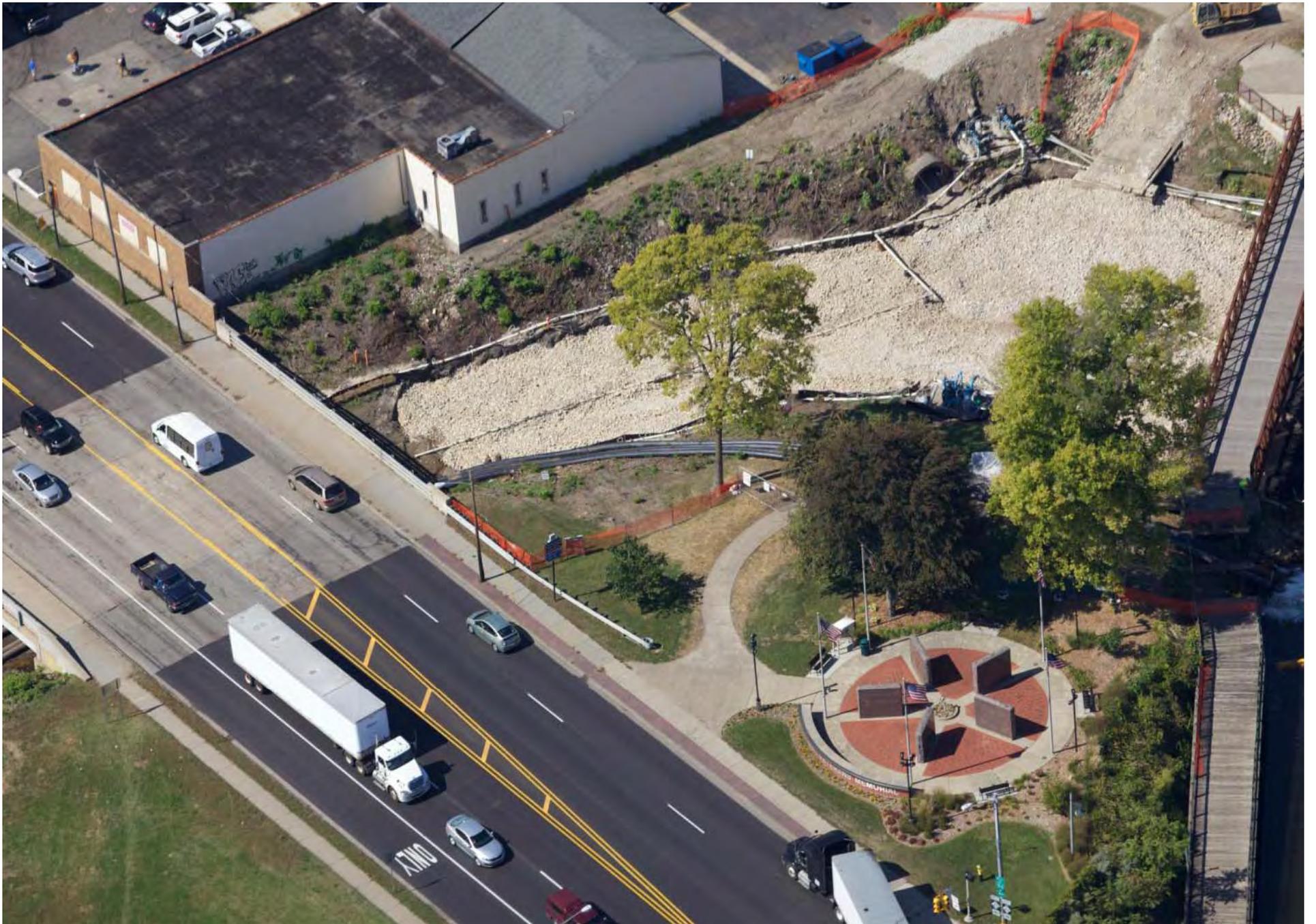






Backfilling / Restoration





Bank Restoration



12/03/2013 22:34

KVRT Trail Re-construction



Before...



After...



Finished Product



Performance

- Initial project estimate approximately 17,000 yd³
 - Actual ~23,700 yd³
- In-stream sediments
 - Performance Standard = 10 mg/kg
 - Performance Standard Goal = 1 mg/kg
 - All 29 samples from SA5A, SA3A, SA1B&C, SA1A met performance standard
 - All but 7 samples met performance standard goal (within 1-2 mg/kg)
 - Range non-detect to 3.07 mg/kg
 - Unable to excavate SA5-A7, portions of SA3-A1, SA3-A8, SA1-A1
- Floodplain soils
 - Performance Standard Goal = 5mg/kg
 - SA3-A3 & SA1-C5 confirmatory samples < 5 mg/kg
 - Range non-detect to 1.95 mg/kg
- Excavation/Dredge depths ranged 27” – 79” over entire area

Original Estimates vs. Final Estimated Volumes Excavated

2013

Area	Original Volume (yd ³)	Final Volume (yd ³)	Increase in Volume (yd ³)
SA5-A	2,086	2,241	155
SA3-A	1,666	1,970	304
SA1-C	506	1,387	881
SA1-B	47	120	73
SA1-A	1,930	4,139	2,209
Total (2013)	6,235	9,857	3,622

2012

Area	Original Volume (yd ³)	Final Volume (yd ³)	Increase in Volume (yd ³)
SA5-C	2,040	2,877	837
SA5-D	4,373	5,388	1,015
SA6	2,408	2,962	554
SA7	826	826	0
Axtell Crk	827	1,817	990
Total (2012)	10,474	13,870	3,396

TOTAL

TOTAL	16,709	23,727	7,018
--------------	---------------	---------------	--------------

Next Steps

- Final report
- Provide results for evaluation by Remedial Program
- Monitor restoration plantings
- Spring plantings, touch up work

Partners

- State of Michigan
- Kalamazoo City
 - Public Services, Planning, Economic Development, Parks & Recreation, Schools
 - Police & Fire
 - Tree Committee
- Non-profits
 - Kalamazoo Nature Center
 - Kalamazoo River Cleanup Coalition
 - Kalamazoo River Watershed Council
- U.S. Fish & Wildlife Service, NOAA
- Others
 - Bronson Methodist Hospital
 - Private property owners
 - Utilities (railroad, power, phone, gas)
 - EQM, Inc. & Weston Solutions

Questions ?

www.epaosc.org/portagecreekarea



Craig Thomas
(312) 886-5907
thomas.craig@epa.gov

Paul Ruesch
(312) 886-7898
ruesch.paul@epa.gov

Andy Maguire
(312) 353-8782
maguire.andrew@epa.gov