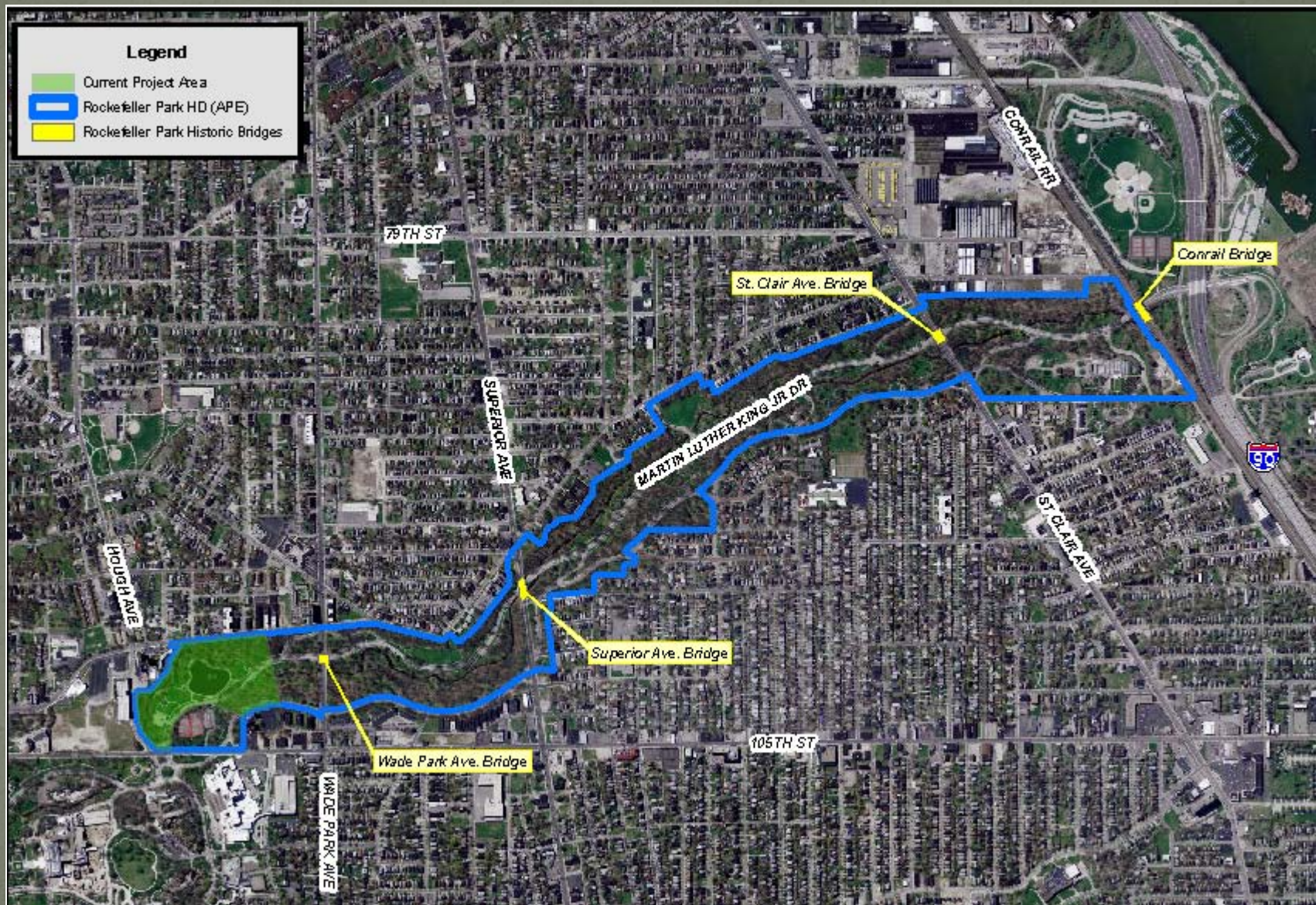


Doan Brook Stream Enhancement Project

60% Design Review
Section 106 Stakeholder Meeting

September 20, 2012





Memorandum of Agreement (2005)

- National Register of Historic Places nomination
- Treatment of contributing trees
- Treatment of contributing stone walls
- Final design plan, construction plans, and specifications
- Master Plan for Doan Brook/Rockefeller Park
- Project signage program
- Monitor project improvements and report bi-annually (for 6 years)
- Unanticipated adverse effects or human remains

Pre-Design Meeting (January 2011)

- Provide background on the stream restoration project
- Look at existing conditions
- Introduce the new stream enhancement project
- Solicit input on new project from stakeholders

Stakeholder Involvement Plan (March 2011)

Doan Brook Stream Enhancement Project

Stakeholder Involvement Plan

March 2011
Version 1.0

DOAN BROOK STREAM ENHANCEMENT PROJECT PROJECT TEAM ROLES AND RESPONSIBILITIES

PROJECT SPONSOR:
Kellie Rotunno, PE
NECRSD
216-881-6600

PROJECT MANAGER:
Dave Anthony, ASLA
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anthonyd@necrsd.org

DISTRICT MAIN CONTACT:
Betty Yingling, PE
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yinglingb@necrsd.org

REGULATORY COORDINATOR:
Robin Halperin
NECRSD
216-881-6600
halperinr@necrsd.org

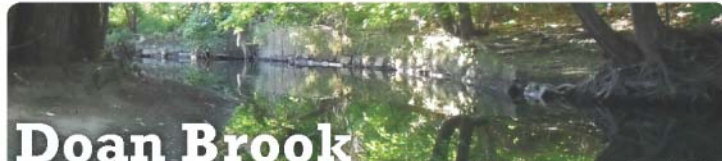
COMMUNITY LIAISON:
Victoria Mills
Doan Brook Watershed Partnership
216-321-5935 x 234
vmills@shakerlakes.org

SECTION 106 COORDINATOR:
Maura Johnson
The Mavroik & Smith Group, Inc.
415-891-2222 x 175
mjohanson@mavroiksmithgroup.com

DOAN BROOK STREAM ENHANCEMENT PROJECT STAKEHOLDERS LIST

Stakeholder Name	Affiliation
Ms. Laura Dean	Advisory Council on Historic Preservation
Mr. Peter Whiting, Ph.D.	Case Western Reserve University
Mr. Gene Matthews	Case Western Reserve University
Mr. Michael Cox	City of Cleveland, Department of Parks, Recreation, and Properties
Mr. Daniel Brown	City of Cleveland, Office of the Mayor
Mr. Olffe Shaw	City of Cleveland, Water Pollution Control
Mr. Jim Cull	Cleveland Cultural Gardens Federation
Mr. Bill Jones	Cleveland Cultural Gardens Federation, Vice President
Mr. Meenakshi Singh	Cleveland Hopkins International Airport, Department of Port Control
Mr. Renato Camacho	Cleveland Hopkins International Airport, Department of Port Control
Ms. Traci Clark	Cleveland Hopkins International Airport, Department of Port Control
Mr. Freddy Collier	Cleveland Landmarks Commission
Ms. Kim Scott	Cleveland Landmarks Commission
Mr. Michael Reenor	Cleveland Restoration Society
Mr. Martin Gelfand	Congressman Kucinich, 10th District of Ohio
Ms. Marcia Fudge	Congresswoman, 11th District of Ohio
Ms. Elaine Price	Cuyahoga Planning Commission
Mr. Todd Houser	Cuyahoga Soil and Water Conservation District
Mr. David Wright	Doan Brook Watershed Partners
Ms. Nancy Moore	Doan Brook Watershed Partners
Ms. Stacy Polk	Doan Brook Watershed Partners Lower Doan Citizens Representative
Mr. John Anselio	Famcos Foundation
Mr. Ernest Gubry	Federal Aviation Administration, Detroit Airports District Office
Mr. David Beach	Green City Blue Lake Institute
Ms. Dorothy Adams	Herrick Road Street Club
Mr. Roger Gettig	Holden Arboretum
Ms. Kristina Kuprevicius	Judson Manor
Mr. Jim McKnight	McKnight & Associates
Ms. Bobbi Reichert	Neighborhood Progress, Inc.
Mr. Andy Vidra	Northeast Ohio Area-wide Coordinating Agency
Mr. Randy Borrique	Ohio Environmental Protection Agency
Mr. Tom Hancarik	Ohio Environmental Protection Agency
Ms. Lisa Atkins	Ohio Historic Preservation Office
Ms. Anne Zollar	Parkworks
Mr. Andrew Futry	Ukrainian Community, Cleveland Cultural Gardens Federation
Mr. Chris Borgiano	University Circle Inc.
Ms. Melissa Bruggeman	US Army Corps of Engineers, Buffalo District, Regulatory Branch
Mr. Mark Gronoski	US Army Corps of Engineers, Owett Field Office, Regulatory Branch
Mr. Jeffrey Johnson	Ward 8 Cleveland City Council
Mr. Kevin Cornwell	Ward 9 Cleveland City Council
Mr. Richard Arlesic	Western Reserve Historical Society
Ms. Tori Mills	Nature Center at Shaker Lakes
Mr. Tom Zarfos	Behrke Associates Inc.
Ms. Amy Brennan	Chagrin River Watershed Partners, Inc.

Public Outreach



Doan Brook

stream enhancement project



AUGUST 2011

Improving and protecting the brook

The Northeast Ohio Regional Sewer District is working to enhance and restore portions of the lower Doan Brook. The Doan Brook Stream Enhancement Project focuses on the section of the brook between East 10th Street at Martin Luther King, Jr. Boulevard and Wade Park Avenue. Required by the Ohio Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE), this enhancement project will mitigate impacts to Abram Creek from the Cleveland Hopkins International Airport expansion project. The District has a long-term interest in the ecological restoration of Doan Brook and is this project's manager for design and implementation.

In late 2010, the District hired the services of CT Consultants to complete the design of the Doan Brook Stream Enhancement Project. Throughout the design process, stakeholder input will be requested through Stakeholder Meetings such as the one conducted on January 18, 2011 to share information about the updated project and to explore stakeholder ideas in advance of any technical design work commencing.

The design team used input from this meeting with technical information about the brook to begin the stream enhancement design. Since this project involves the use of federal funds, through the Federal Aviation Administration (FAA), and potentially impacts historic properties (e.g., Rockefeller Park), Section 106 of the National Historic Preservation Act (NHPA) applies. The District also retained the services of Mannik & Smith for the Section 106 Consultation Process and Stakeholder Involvement for the project. A second Stakeholder Meeting was held on May 24, 2011 to review the conceptual stream restoration design. At this meeting the design team and the District detailed plans to focus the current enhancement project on the section of stream from E. 10 5th to the crossing under MLK near the lagoon.

CONTINUED ON BACK

About Doan Brook

The Doan Brook begins in the Heights area of Greater Cleveland and carries flows from portions of Shaker Heights, Cleveland Heights, and Cleveland. The Doan Brook watershed drains directly to Lake Erie at Dike 14. The Doan Brook watershed was developed over the past 200 years and is home to most of the area's cultural museums and the historic Rockefeller Park with its cultural gardens exhibition.

As the area developed, forests and wetlands were replaced by roads, buildings and parking lots, creating impervious services that prevent rainwater from percolating into the ground. The initial effect of urbanization on stream channels is increased runoff volume and velocity, resulting in channel erosion and higher sediment loads. The channel erosion and increased sediment combine to degrade the aquatic habitat of the stream.

Today, the lower Doan Brook is impacted by flooding, stormwater, and combined sewer overflows.

Save the Date!

DOAN BROOK 12TH ANNUAL Family Fishing Day

ROCKEFELLER PARK LAGOON
IN UNIVERSITY CIRCLE - CLEVELAND

SATURDAY, AUGUST 25, 2012

9AM-3PM



Conceptual Design Plans-30% (May 2011)



NORTHEAST OHIO REGIONAL SEWER DISTRICT CLEVELAND, OHIO

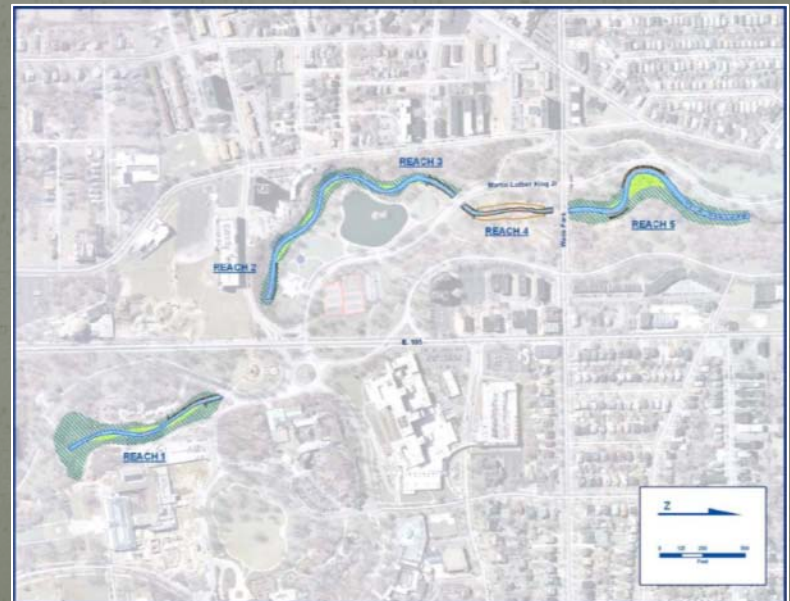
30 % CONCEPTUAL DESIGN REPORT

FOR

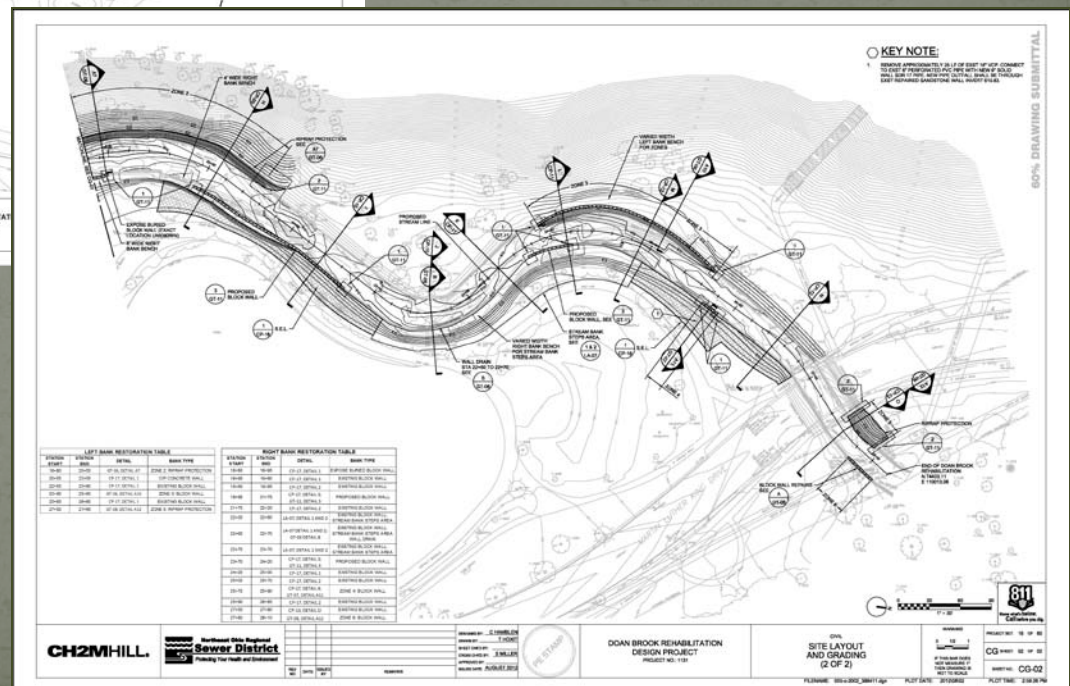
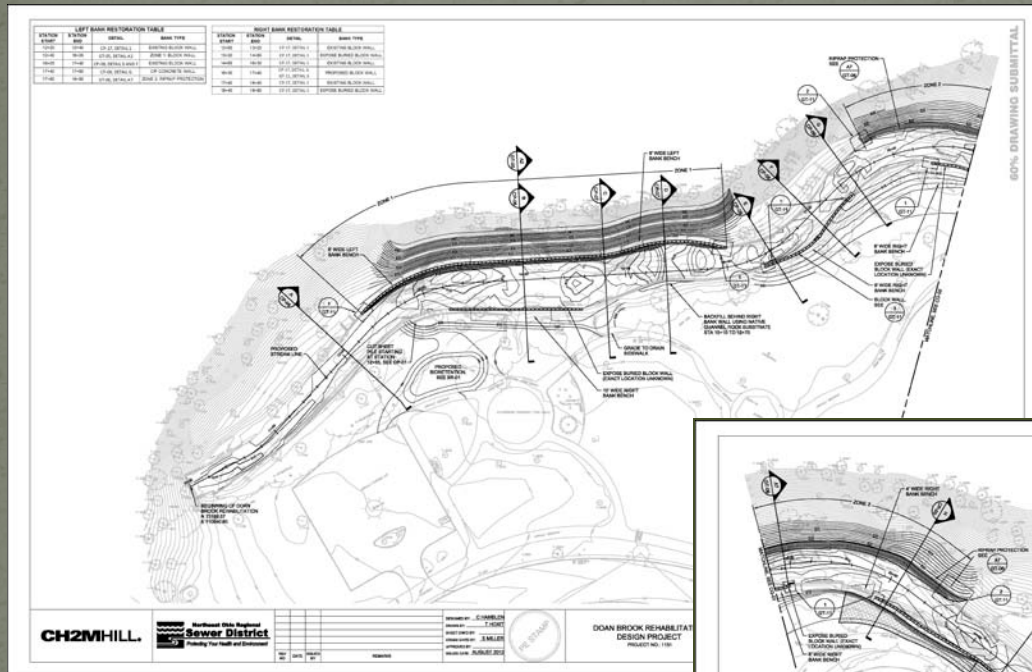
DOAN BROOK STREAM ENHANCEMENT PROJECT



May 5, 2011



Design Plans-60% (August 2012)



Overview of Project Design

- Minimize removal & impact to contributing trees and walls
- Maintain and enhance viewsheds and landscaping
- Maintain access to the stream near playground
- Landscape with native plants and “contributing” tree species
- Project bound by stream banks on both sides
 - No opportunities to widen channel and protect walls
- Horizontal and vertical instability
- Grade control at geomorphically appropriate locations
- Use similar materials as what exists currently

Project Area



60% Design - Grading Plan



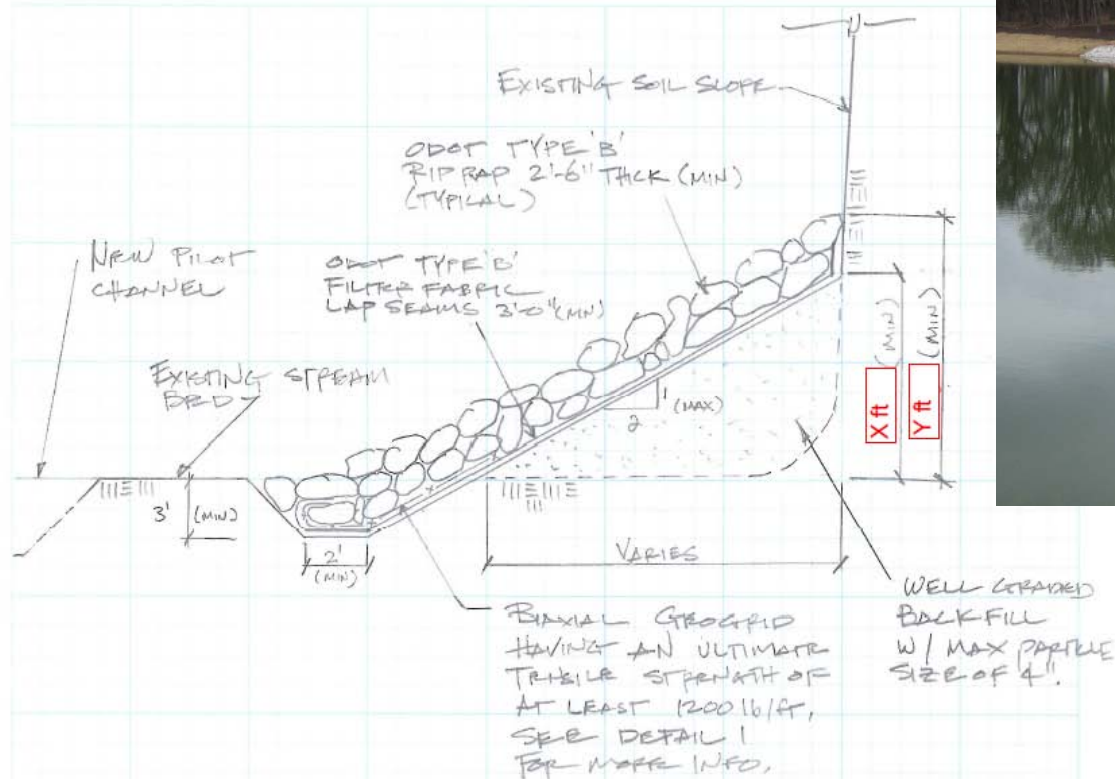
Large Slope Failure



Existing Conditions - Large Slope Failure



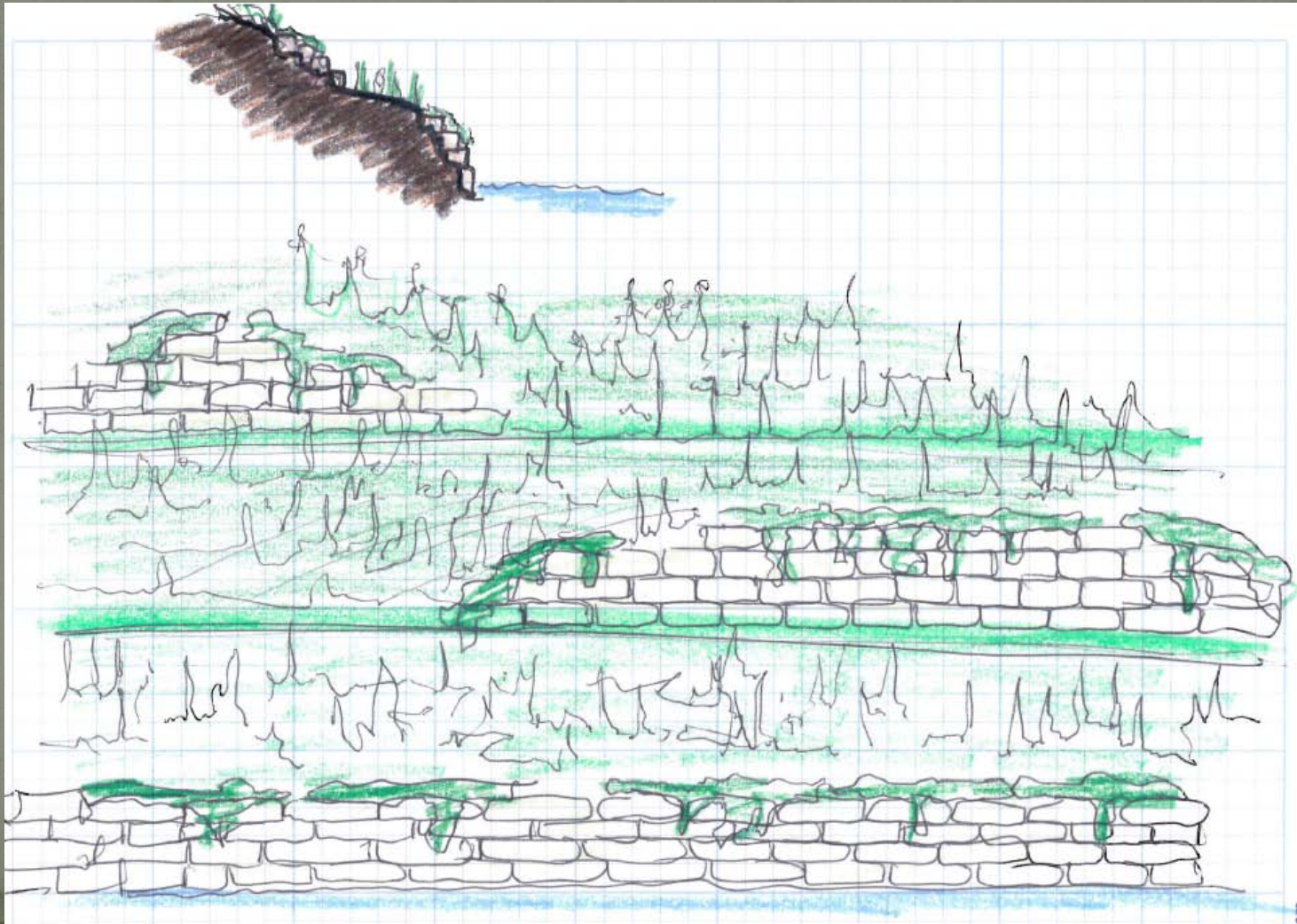
Large Slope Failure – Temporary Repair



Large Slope Failure – Permanent Repair



Large Slope Failure – Permanent Repair



Additional Stream Bank Repairs



Existing Conditions

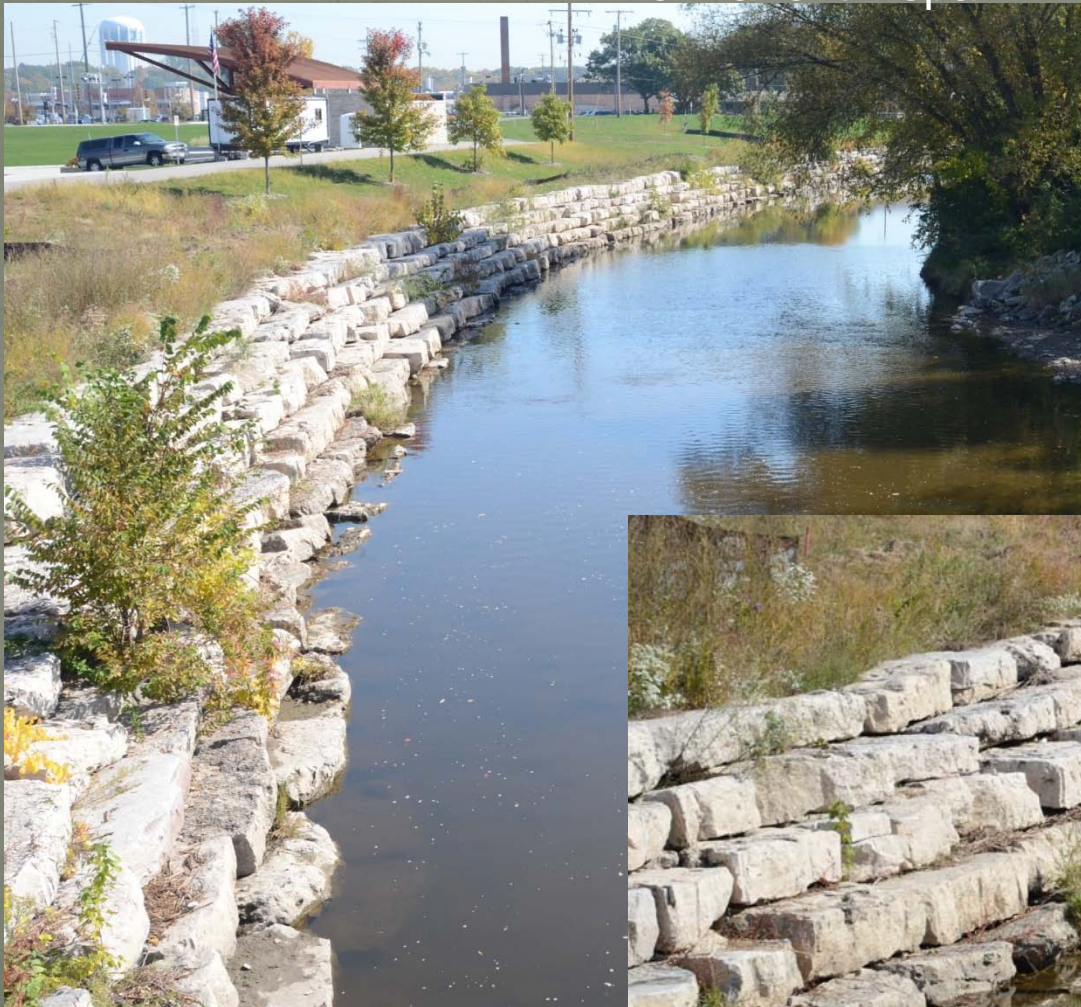


Existing Conditions



Bank Repair in Three Zones

Permanent Repair



Additional Stream Bank Repairs - Landscape Feature



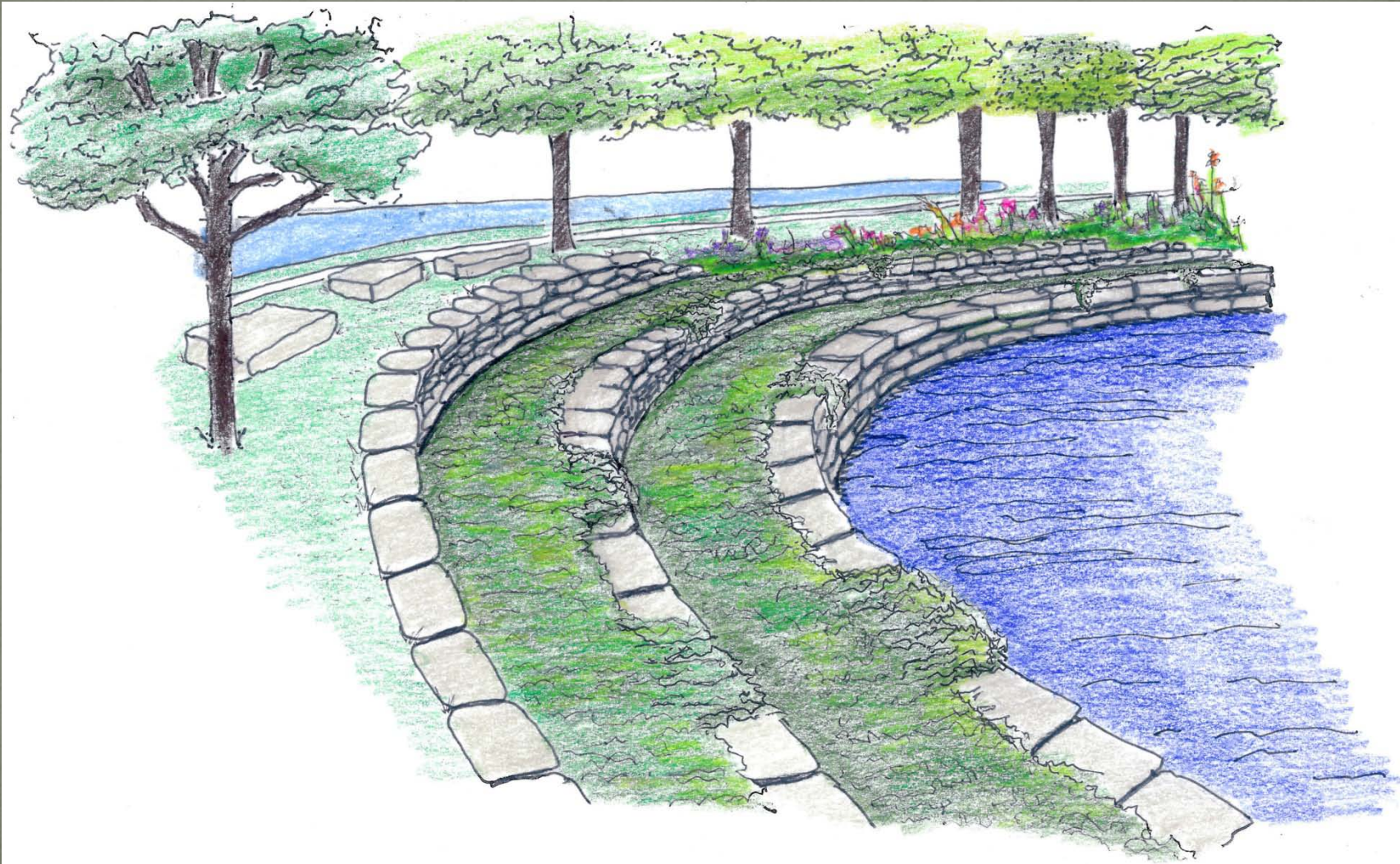
Existing Conditions



Existing Conditions



Stream Bank Steps



In Stream Features - Cascades



Cascade



In Stream Features - J-Hook



J-Hook



In Stream Features - Riffles



Riffle



Significant Landscaping Area

Sculpture Play and Bioretention Areas



Sculpture Play & Bioretention Areas



BIORETENTION WITH SCULPTURE PLAY AREA

Sculpture Play and Bioretention Areas



Example Vegetation Palette

Trees



Scarlet Oak



Princess Diana
Serviceberry



Blue Japanese
White Pine



Pin Oak



Red Rage Tupelo



American Sycamore



Basswood Linden
Legend



Part Shade to Sun Mix



Butterfly Milkweed



Creek Sedge



Pennsylvanica Sedge



Purple Love Grass



Purple Palace Coral Bell



Dense Blazing Star



Heavy Metal Switchgrass

Woodland Shade Mix



Lady's Mantle



Japanese Painted Fern



Korean Feather Reed Grass



Golden Japanese Forest Grass



Peach Coral Bell



Great Expectations Hosta



Blue Phlox

Bioretention Area

Basin Bottom Plants



Butterfly Milkweed



Blue Lobelia



Black-Eyed Susan



Little Bluestem



Soft or Common Rush

Upper Basin Plants



Red-Osier Dogwood



Red Chokeberry



Virginia Sweetspire



Blue Fescue
'Elijah Blue'



Purple Palace Coral Bell



Northern Bayberry



Seaside Goldenrod

Bioretention Area

Low Upland Mix



Canadian Wild
Ginger



Deutschland Astilbe



Japanese Painted Fern



Horsetail



Rhododendron



Hydrandrea



Golden Japanese Forest
Grass



Blue Flag Iris



Flying Hedgehogs



Dwarf Ligularia



Gro Low Fragrant Sumac



Blue Lobelia

Sculpture Play Area



Seaside Goldenrod



Gro Low Fragrant Sumac



Pennsylvanica Sedge



Purple Palace Coral Bell



Red-Osier Dogwood

Stream Bank Steps



Violet Intrigue Lavender



Motley Mazus



Royal Cinquefoil



Snow in Summer



Korean Feather
Reed Grass



Snowy Marguerite



Bonfire Cushion
Spurge



Summer Drummer
Allium

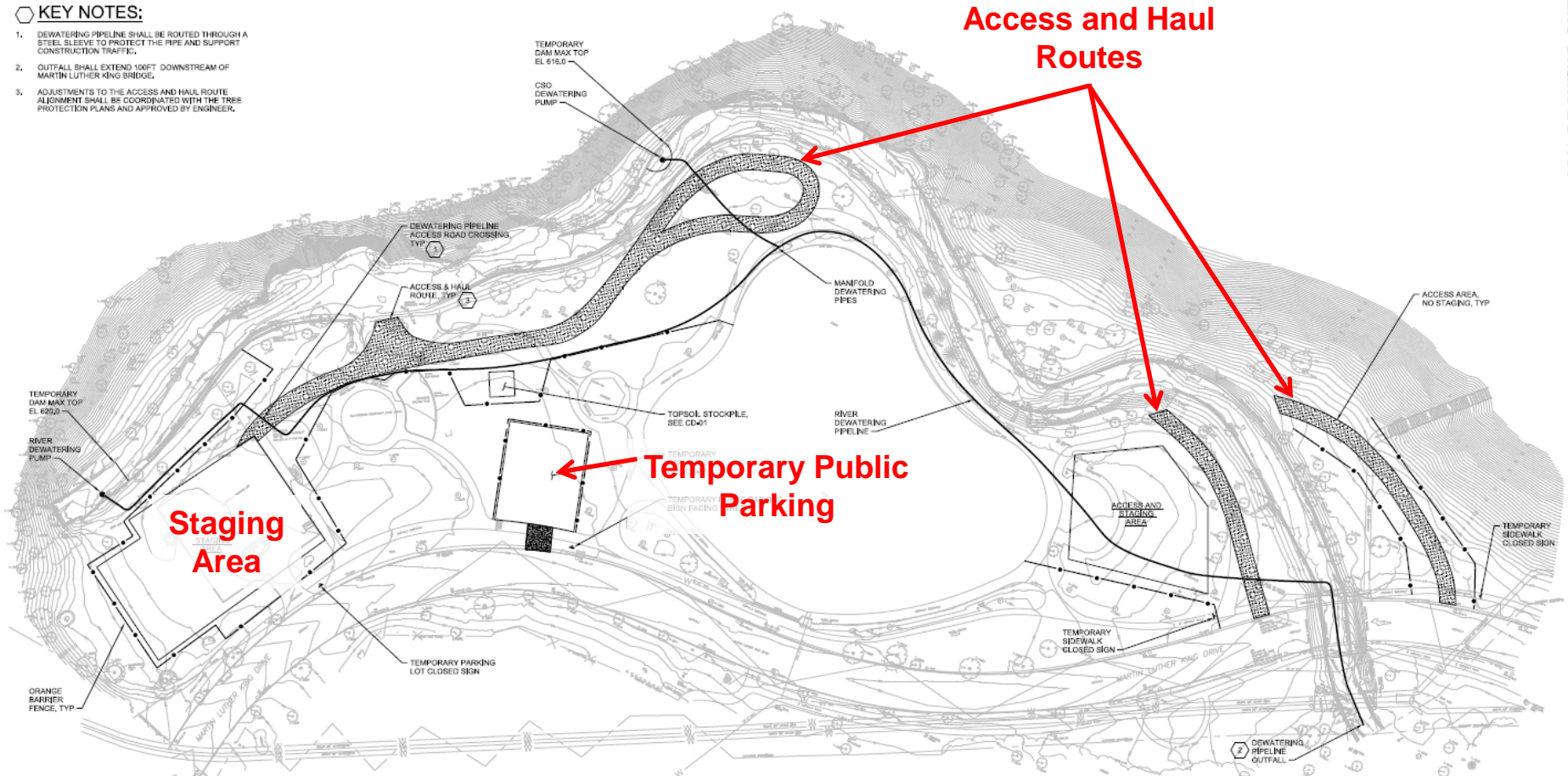
Staging and Access Plan

GENERAL NOTE:

1. REMOVE ALL TRASH CANS, LIGHTS, PARK BENCHES AND INFORMATIONAL SIGNS WITHIN CONSTRUCTION LIMITS FENCE THAT WILL BE IMPACTED BY CONSTRUCTION ACTIVITIES, STORE ON-SITE AND REINSTALL AT PROJECT COMPLETION.

KEY NOTES:

1. DEWATERING PIPELINE SHALL BE ROUTED THROUGH A STEEL SLEEVE TO PROTECT THE PIPE AND SUPPORT CONSTRUCTION TRAFFIC.
2. OUTFALL SHALL EXTEND 100FT DOWNSTREAM OF MARTIN LUTHER KING BRIDGE.
3. ADJUSTMENTS TO THE ACCESS AND HAUL ROUTE ALIGNMENT SHALL BE COORDINATED WITH THE TREE PROTECTION PLANS AND APPROVED BY ENGINEER.



Section 106

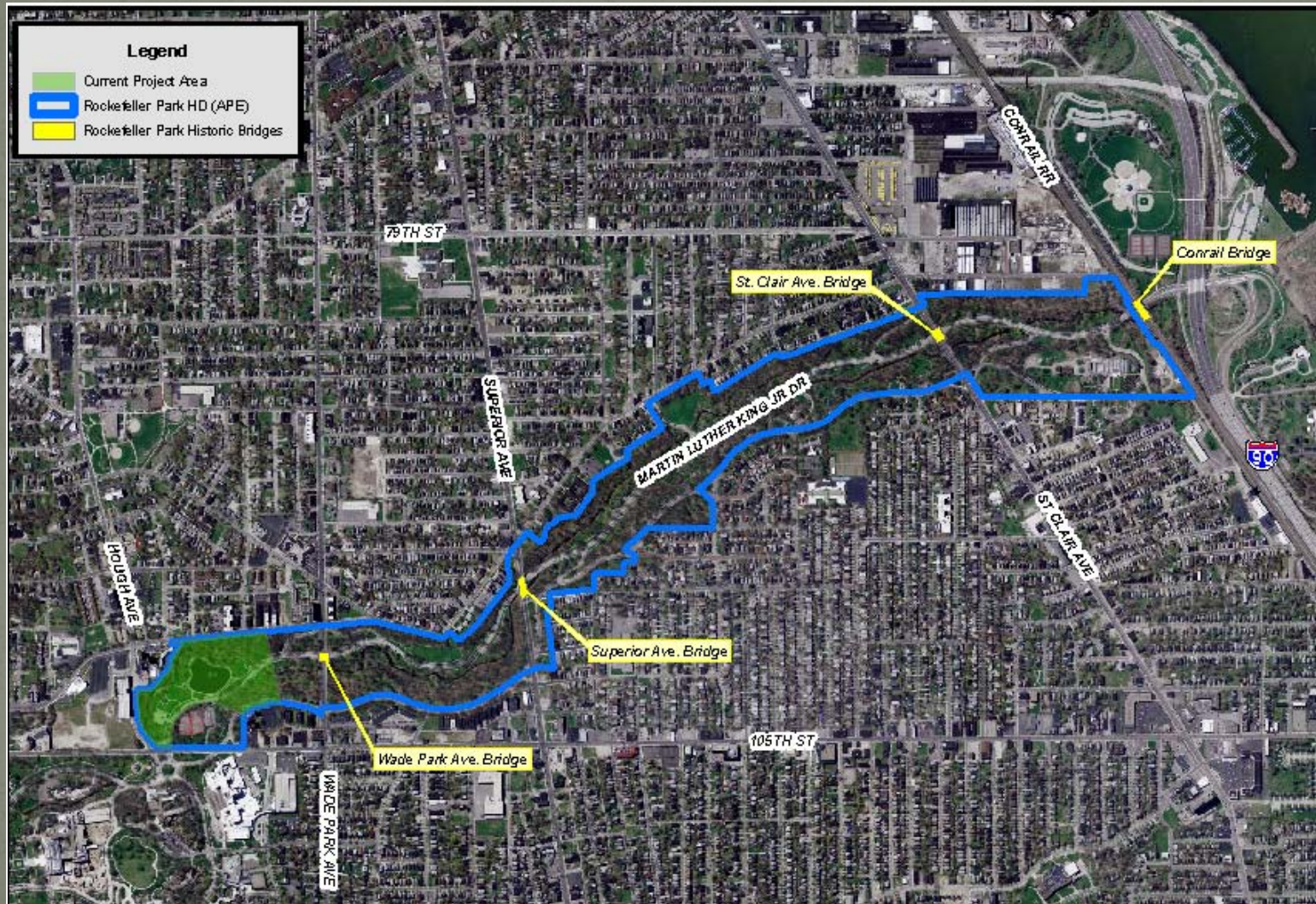
Assessment of Effects

Assessment of Effects Report

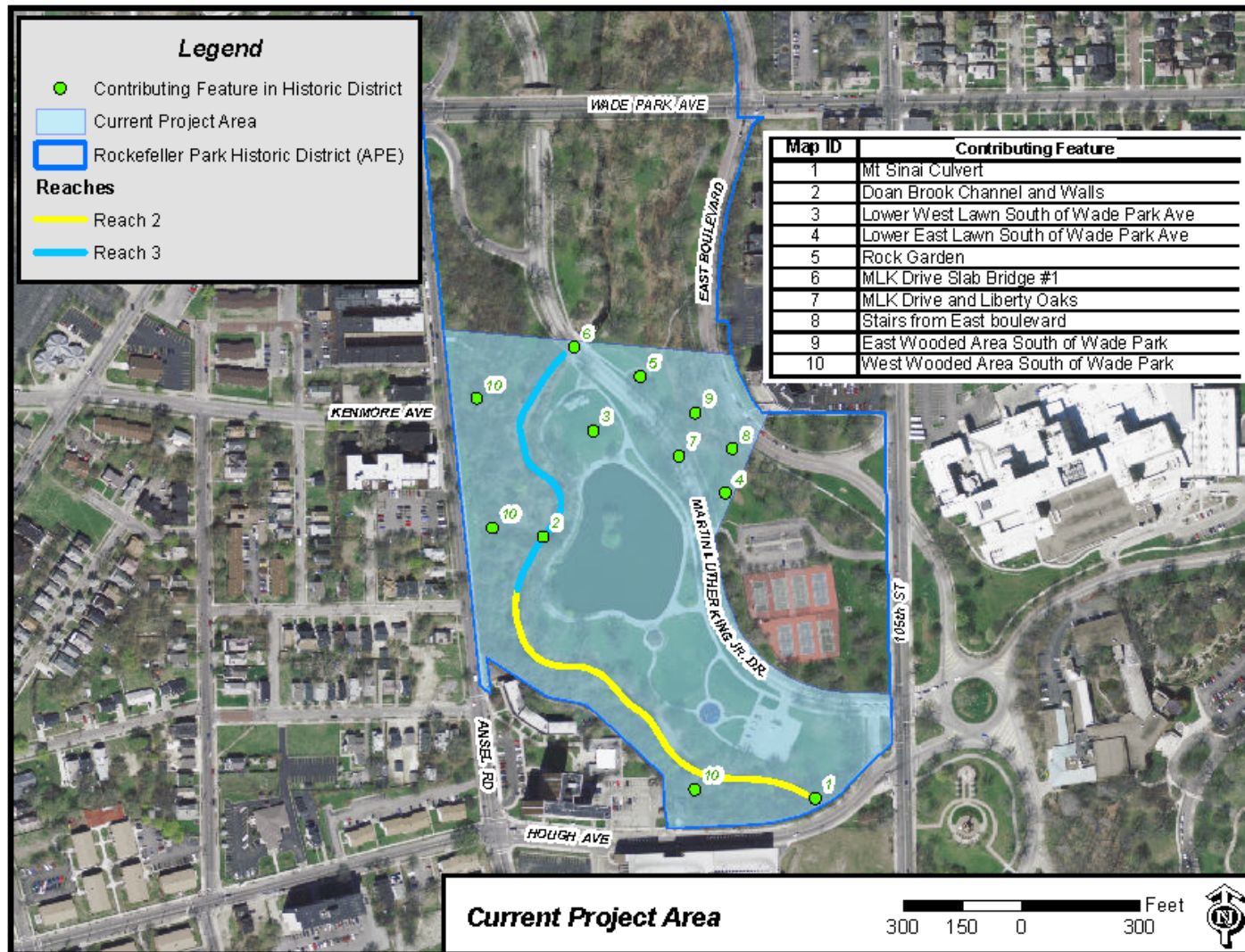
- Prepared by a 36 CFR 61 qualified architectural historian
- Defined the Area of Potential Effects (APE)
- Identified potential affected historic properties within the APE
- Assessed the impact of the project on those historic properties



Area of Potential Effects



Project Area

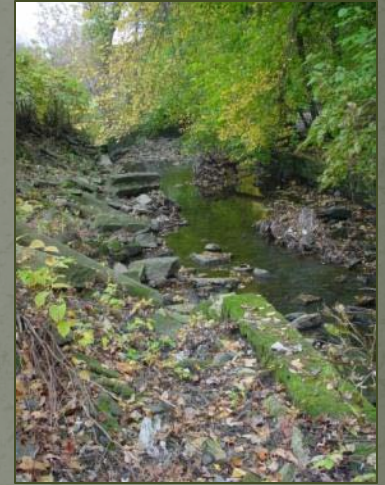


Contributing Resources in the Project Area



1. Mt. Sinai Culvert

Contributing Resources in the Project Area



2. Doan Brook Channel and Walls

Impacts to Contributing Walls

Contributing Walls	Feet	Failed/Poor Condition	% in Project Area	% in APE
Preserve	1280		69%	5%
Remove+	343	149 (43%)	19%	<2%
Rebuild	20		1%	<0.1%
Modify	200		11%	<1%
Expected to be exposed	200			
Total	1500*	149	1843	23,312

+stone will be reused elsewhere in the project area if possible.

** does not includes walls expected to be exposed.*

Contributing Resources in the Project Area



3. Lower West Lawn South of Wade Park Avenue

Contributing Resources in the Project Area



4. Lower East Lawn South of Wade Park Avenue

Contributing Resources in the Project Area



5. Rock Garden

Contributing Resources in the Project Area



No Impacts



6. MLK Drive Slab Bridge #1

Contributing Resources in the Project Area

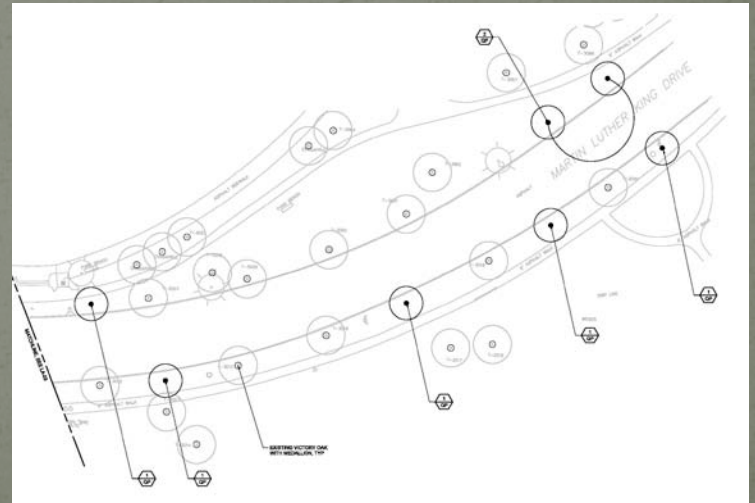


7. MLK Drive and Liberty Oaks

Liberty Oaks



- Project will add:
 - 18 new Liberty Oaks along MLK Drive



Contributing Resources in the Project Area



No Impacts



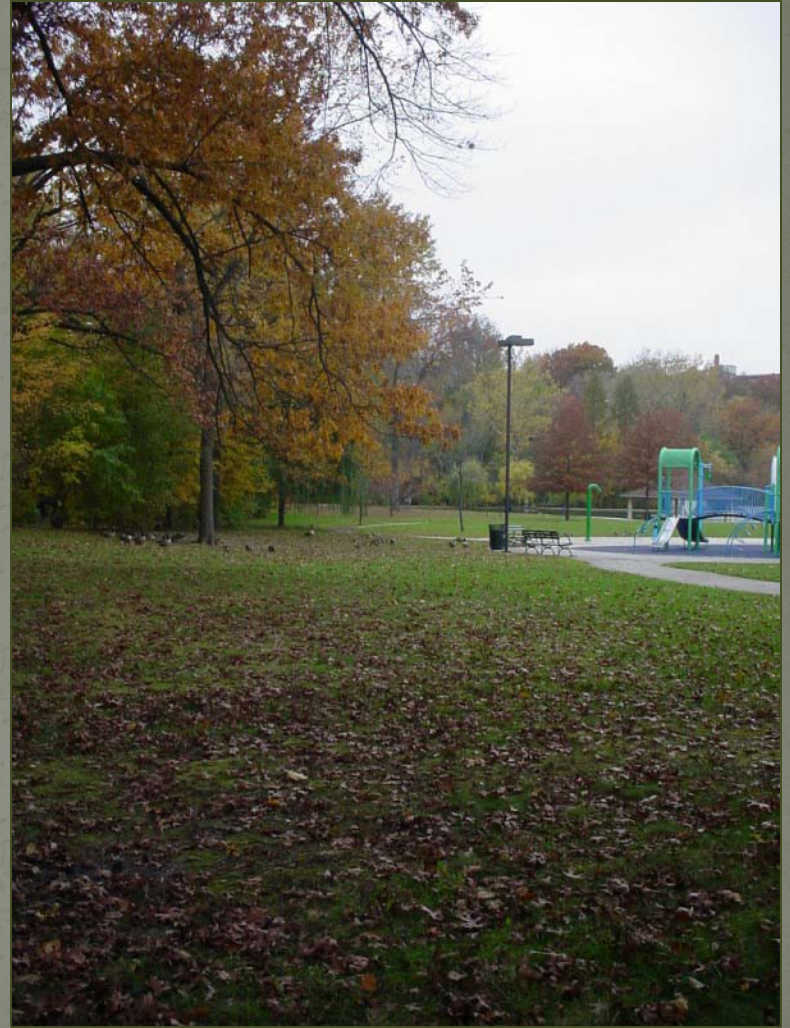
8. Stairs from East Boulevard

Contributing Resources in the Project Area



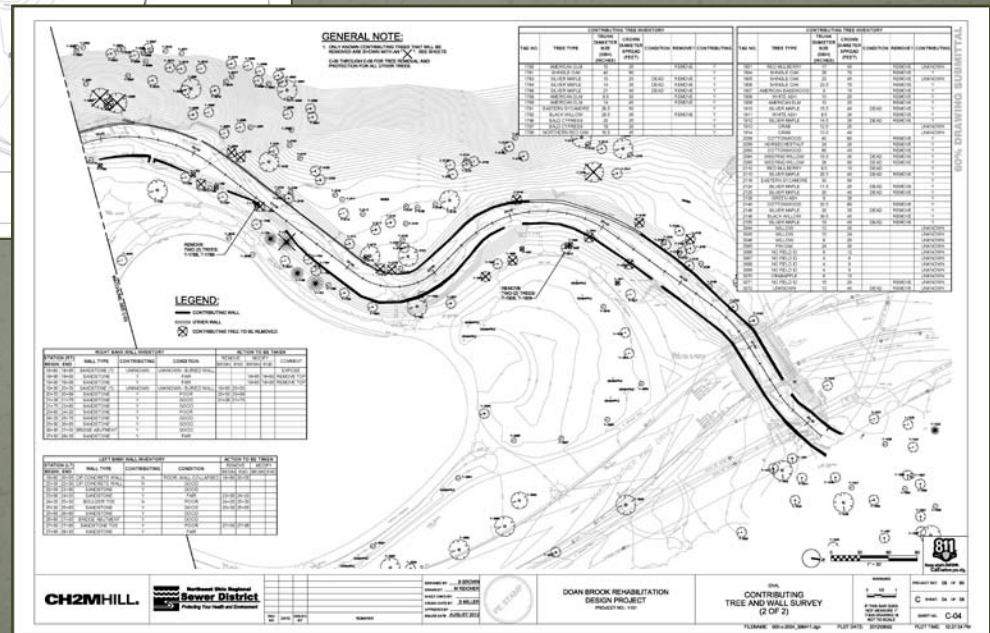
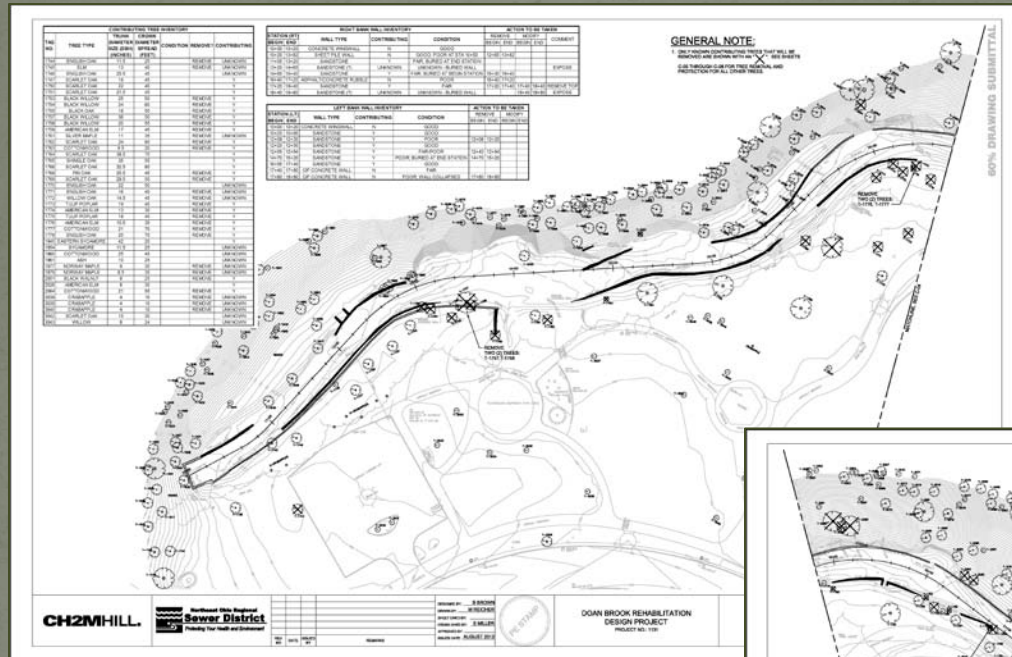
9. East Wooded Area South of Wade Park Avenue

Contributing Resources in the Project Area



10. West Wooded Area South of Wade Park Avenue

Contributing Trees



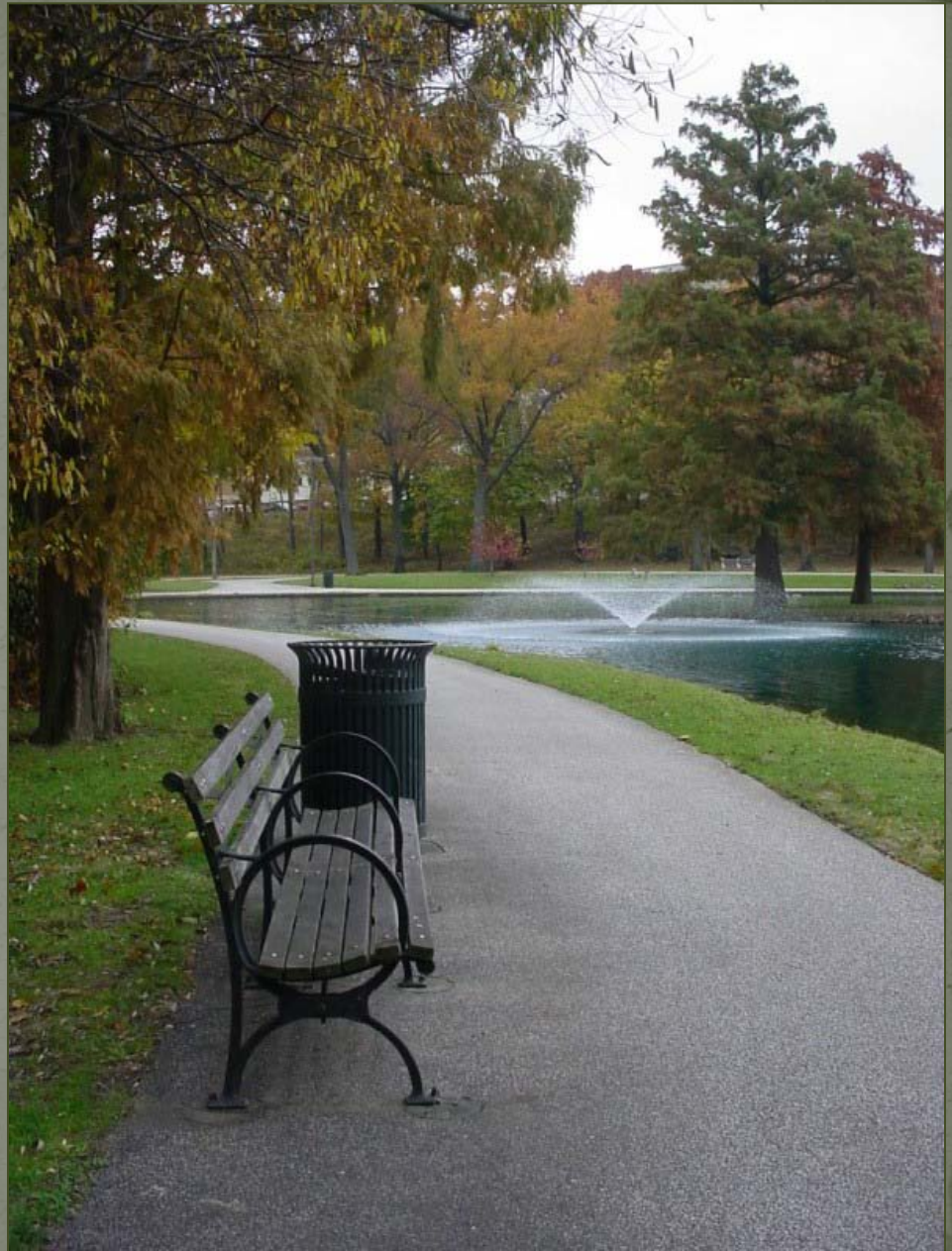
Impacts to Contributing Trees

Contributing Trees	Number	Dead	% in Project Area	% in APE
Preserve	44	0	48%	9%
Remove	48	13 (14%)	52%	10%
New Trees	45			
Total	92		393	502

Value Added

- Plant 18 new Liberty Oaks along MLK Drive
- Plant 45 replacement trees along the stream
- Reuse stone in new walls, terraces and hardscaping
- Where needed, rebuild non-contributing walls with locally quarried sandstone
- Create rain garden and sculpture play area

Section 106
process will
result in a
amendment to
the 2005 MOA



Project Schedule

Date	Activity
September 2012	Agency & Stakeholder Meetings Begin 60 Day Comment Period
October 2012	Complete temporary slope repair
December 2012	Review comments and revise assessment report, as needed
January 2013	Submit Final Assessment Report for 30-day SHPO Review
February 2013	Amend Section 106 MOA with Stakeholder Input
March 2013	Award Construction Project
April 2013	Contractor Mobilization
October 2013	Construction Complete
Spring 2014	Plantings, if necessary
2014	Year 1 of 2 year warranty/monitoring of vegetation
2015	Year 2 of 2 year warranty/monitoring of vegetation

Questions?
