

An aerial photograph of a suburban area. A river flows through the center-left of the image. Several baseball fields are visible, some with brown dirt bases and green grass. Residential streets with houses and trees are scattered throughout the background. The text is overlaid in white, bold, sans-serif font.

Hancock County Flood Risk Reduction Program

Hydraulic Improvements (Phase 1) Project Public Presentation

January 24, 2018

An aerial photograph of a baseball field and its surrounding area. The field is green with brown dirt bases and pitcher's mound. Several other baseball fields are visible in the background. A road runs along the left side of the field. The word "INTRODUCTIONS" is overlaid in large white capital letters in the center of the image.

INTRODUCTIONS

Agenda



Project Overview

- Floodplain Benching & Soil Disposal
- In-River Structure Removal
- Soil Stockpiling & Staging
- Utility Coordination
- Site Restoration

Opinion of Probable Cost

Anticipated Benefits

Project Schedule

Project Stations

Project Overview

Floodplain
Bench Widening

Remove Inline
Riffles/Dams

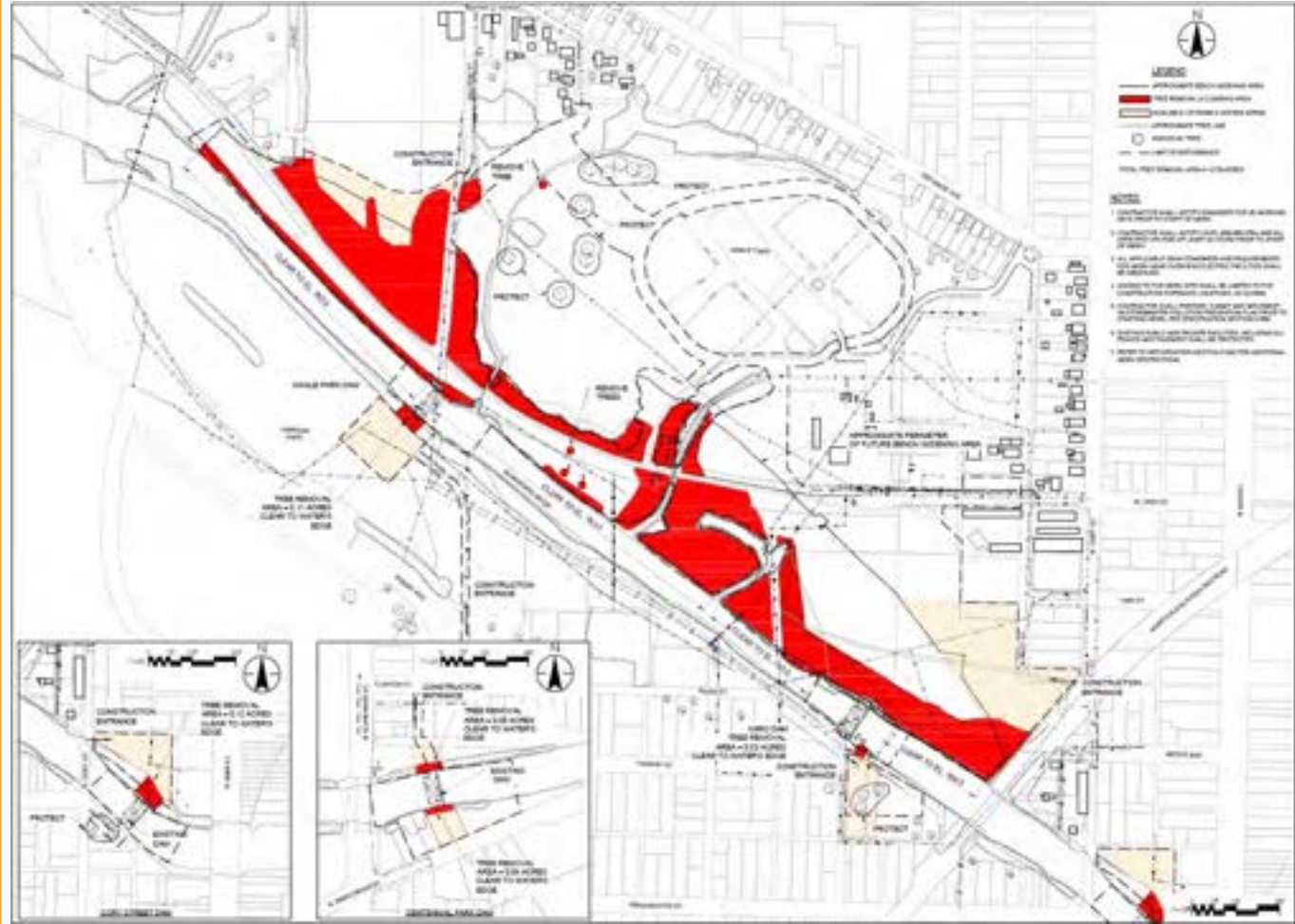
Norfolk-Southern
RR Bridge
Modifications in
Phase 2

Hydraulic Improvements (Phase 1)



Project Overview

Tree Clearing



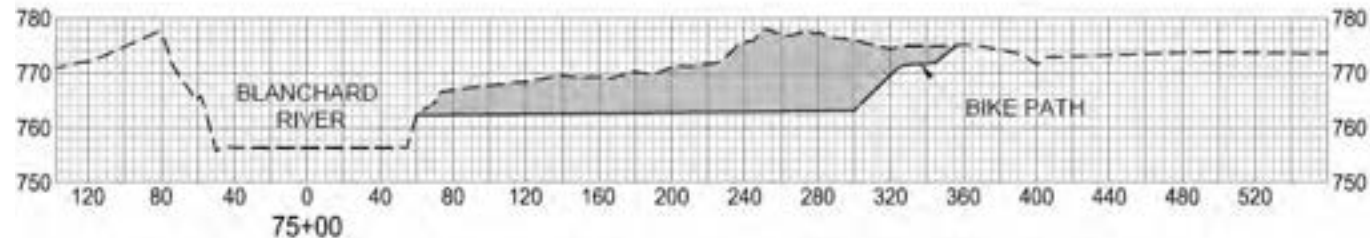
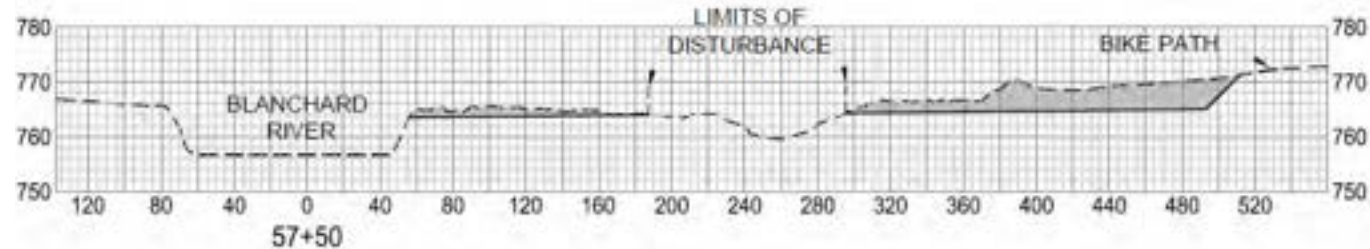
Project Overview

Floodplain Benching



Project Overview

Floodplain Benching Cross Sections





Project Overview

Existing Inline Structure Removals



Figure 1 – Blanchard River – Existing Inline Structure - (Cory Street Dam)



Figure 2 – Blanchard River – Existing Inline Structure - (Centennial Park Dam)

Project Overview

Existing Inline Structure Removals

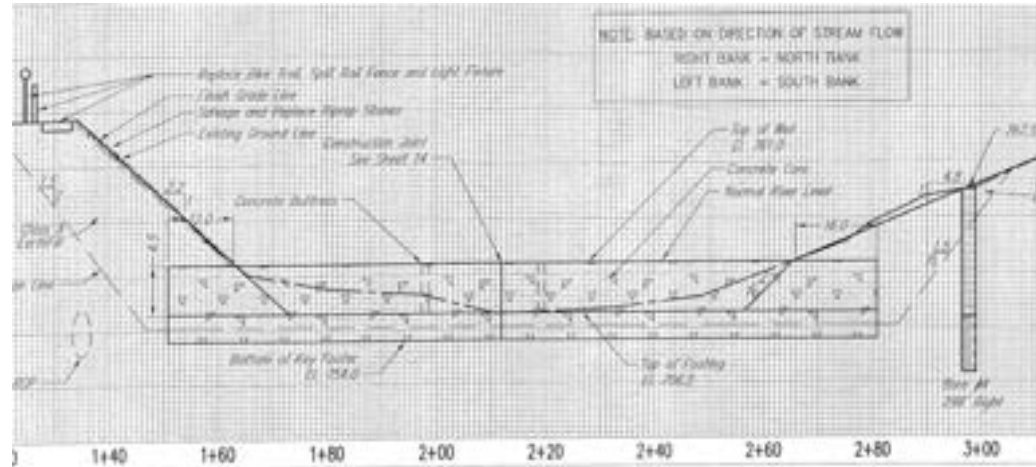


Figure 3 – Blanchard River – Existing Inline Structure - (Section Detail)

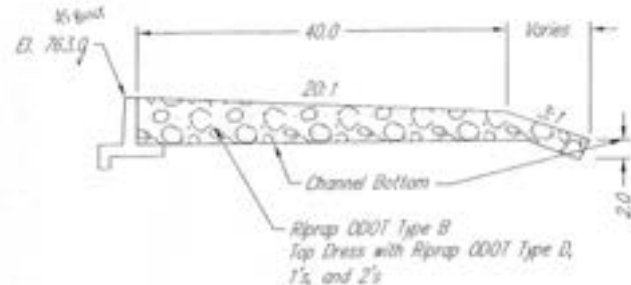


Figure 4 – Blanchard River – Existing Inline Structure - (profile View)

Project Overview

Constructed Riffles

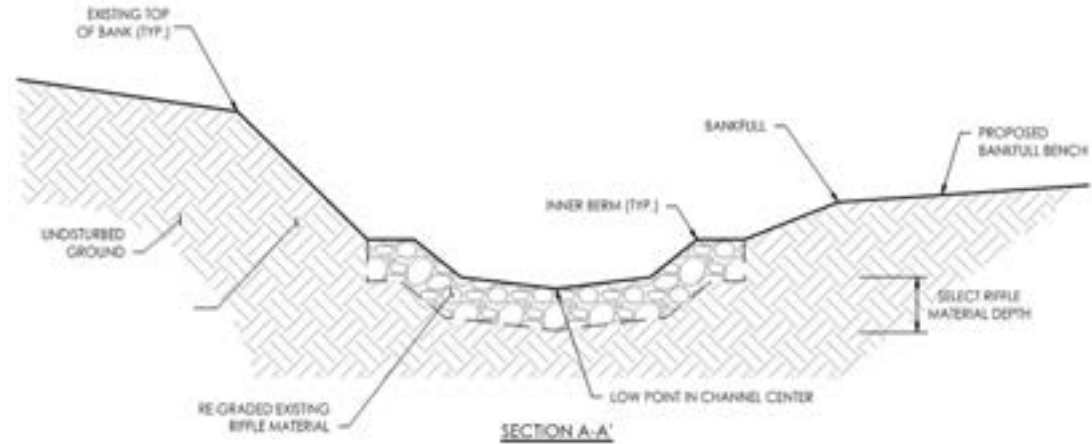


Figure 5 – Example Constructed Riffle – (Section Detail)

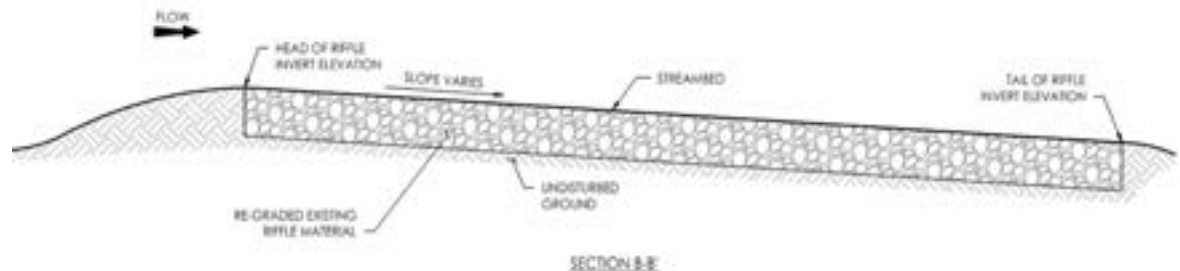


Figure 6 – Example Constructed Riffle – (Profile View)

Project Overview

Example Project

Proposed Riffle Structures



Figure 7 – Kalamazoo River – Example Before Dam Removal (Pre-Construction)

Project Overview

Example Project

Proposed Riffle Structures



Figure 8 – Kalamazoo River – Constructed Riffle (Post-Construction)

Project Overview

Wetland Area
Avoidance

Brandman Area

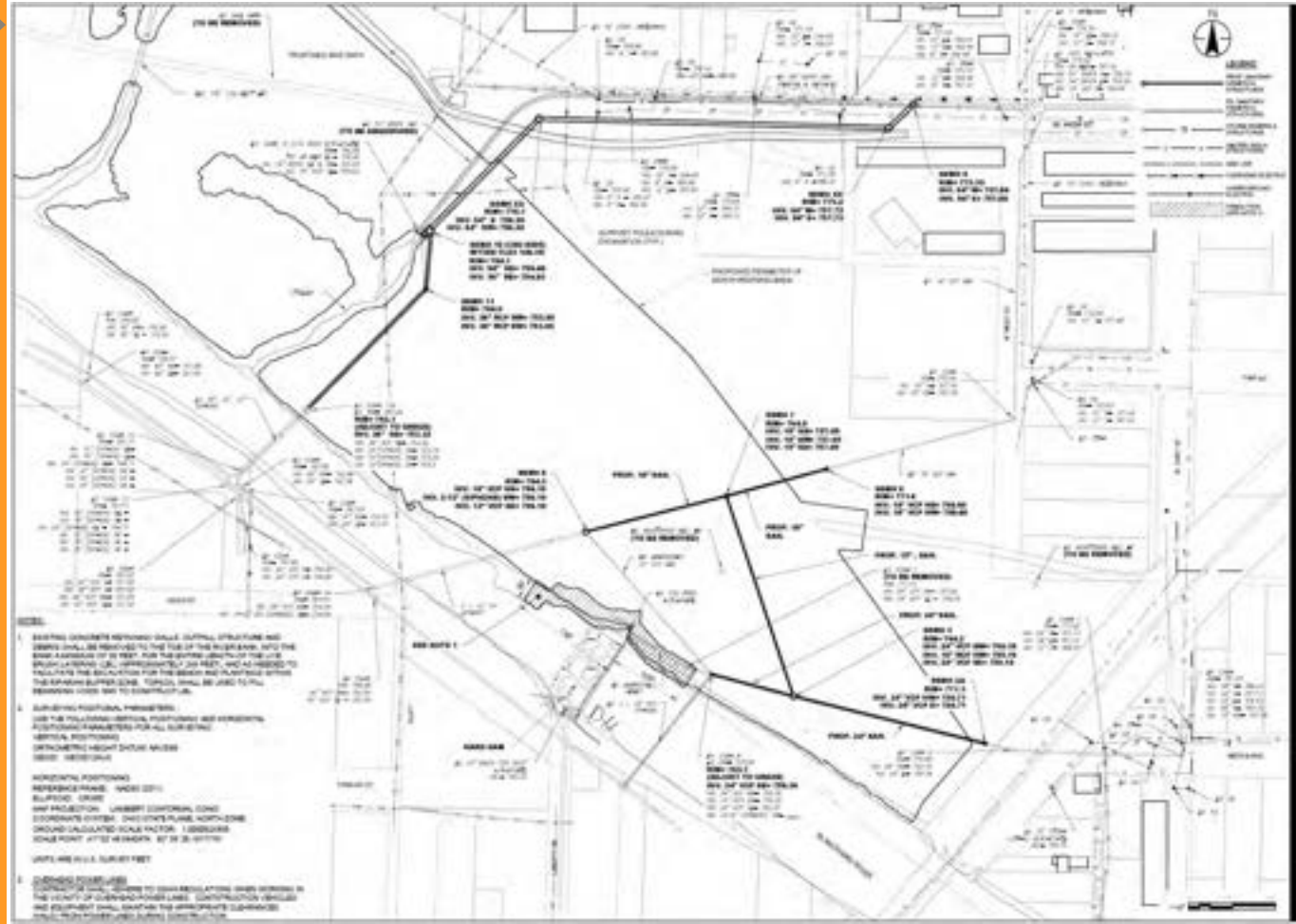
Soil Stockpiling & Staging



Project Overview

Utility Coordination

AEP Overhead
Electric
City Combined
Sewers















Opinion of Probable Costs

Hydraulic
Improvements
(Phase 1) Only

Project Costs

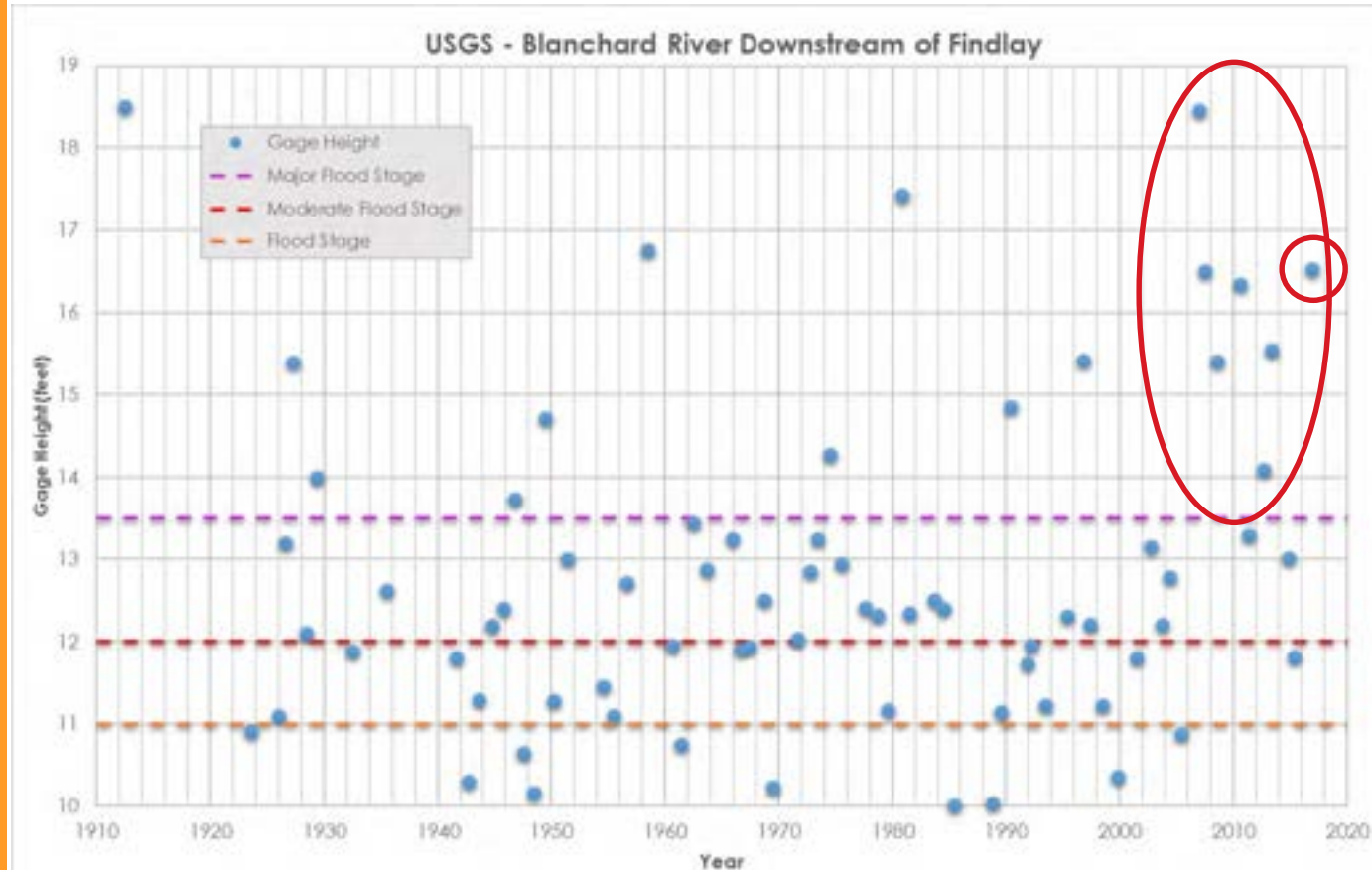
Hydraulic Improvements - Phase I - Opinion of Probable Costs	
Description	Amount
Construction Costs	
In-Stream Improvements:	\$1,401,000
Floodplain Bench Widening Improvements:	\$7,179,000
Utility and Bike Path Improvements:	\$1,222,000
Utility Coordination:	\$750,000
CONSTRUCTION SUBTOTAL	\$10,552,000
Contingency (15%)	\$1,583,000
CONSTRUCTION TOTAL	\$12,135,000
Other Costs	
Tree Removal (Including Debris Removal)	\$105,000
Stream Wetland and T&E Mitigation	\$75,000
Construction Administration (5%)	\$607,000
OTHER SUBTOTAL	\$787,000
TOTAL PROJECT COSTS	\$12,922,000

Local Flooding

Seven Events
Since 2000

July 2017 Event
~4% (25-year)
ACE

Historic Flood Events

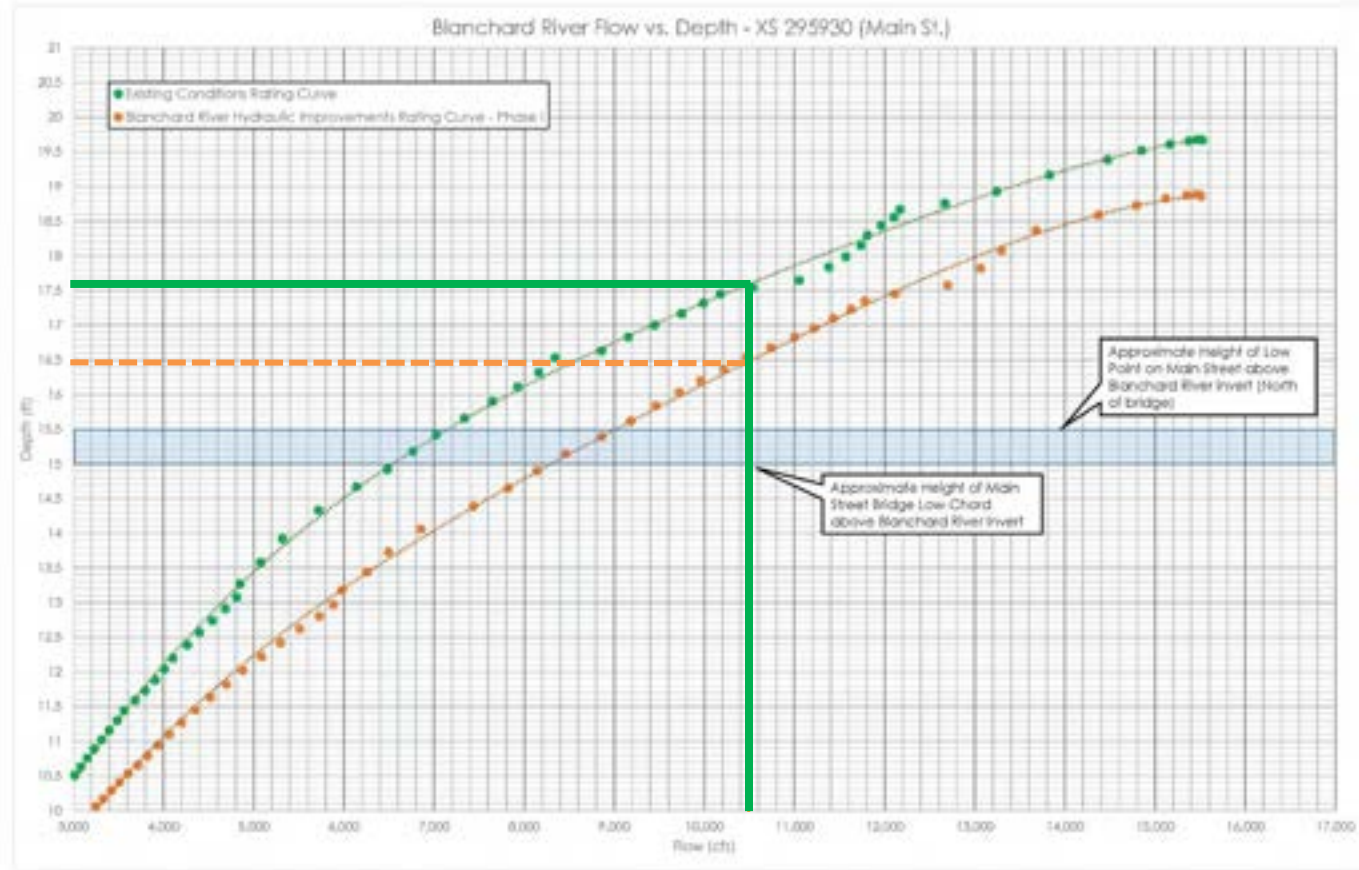


Anticipated Benefits

New Blanchard
River Rating
Curve at Main
Street

July 2017 Event
~ 10,500 CFS

River Flow vs Depth at Main Street





ID	Location	ADT
1	Main St - Center St to Sandusky St	18,000
2	Main Cross St - Western Ave To Bright Rd 5 (West St)	12,000
3	Main Cross St - Western Ave To Bright Rd 4 (East St)	12,000
4	Main Cross St - Western Ave To Bright Rd 3 (Blanchard St)	12,000
5	Sandusky St (SR568) - Main St to TR 237 (Lye Creek Bridge)	12,000
6	Sandusky St (SR568) - Main St to TR 237 (Blanchard St)	12,000
7	Sandusky St (SR568) - Main St to TR 237 (RR)	12,000

Legend

Transportation Locations

Existing Conditions Modeled Flooding Frequency

- 1% Annual-Chance
- 2% Annual-Chance
- 4% Annual-Chance
- 10% Annual-Chance
- 20% Annual-Chance
- 50% Annual-Chance

Hydraulic Improvements - Phase I Modeled Flooding Frequency

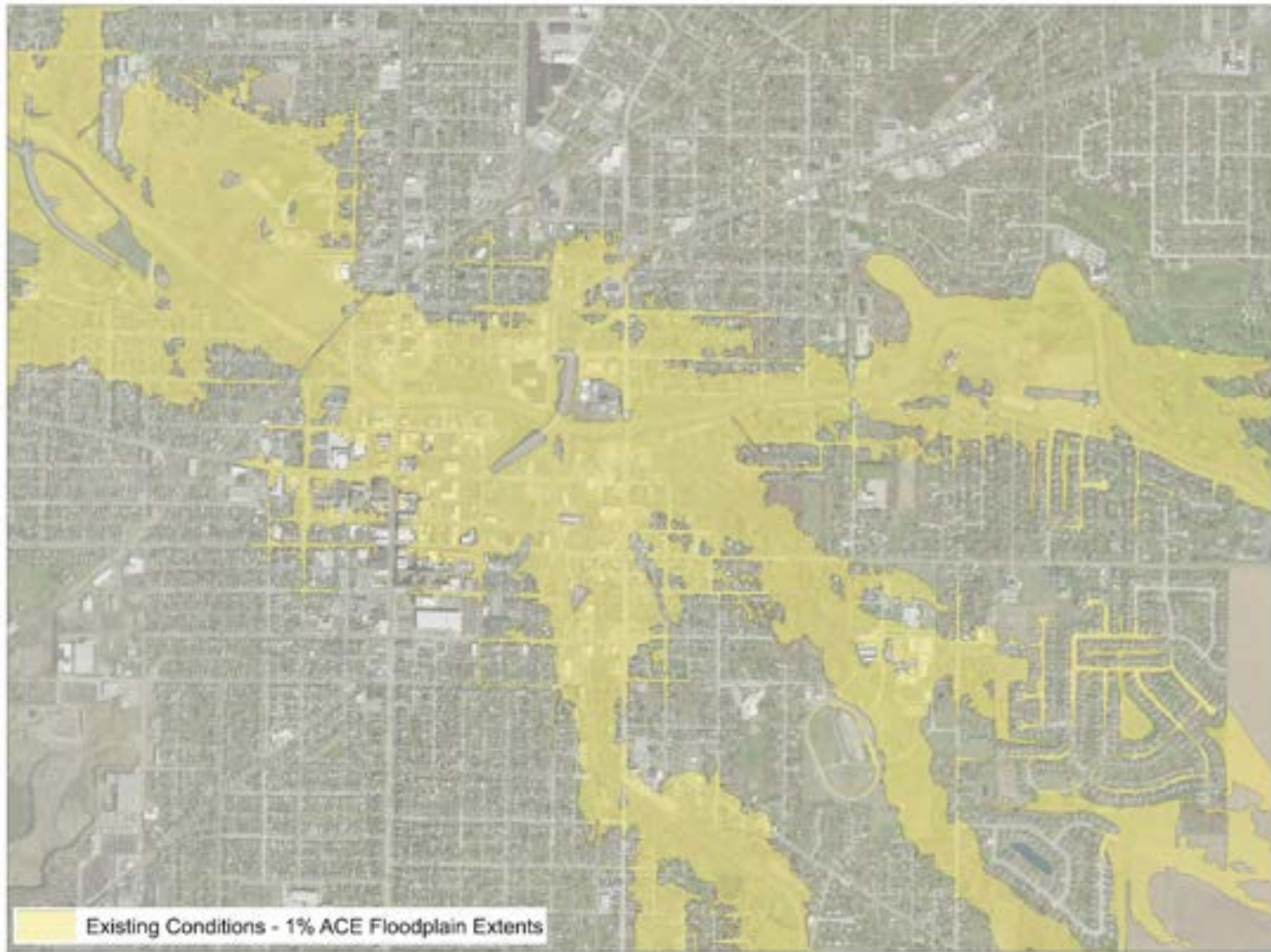
- 1% Annual-Chance
- 2% Annual-Chance
- 4% Annual-Chance
- 10% Annual-Chance
- 20% Annual-Chance
- 50% Annual-Chance

— Stream

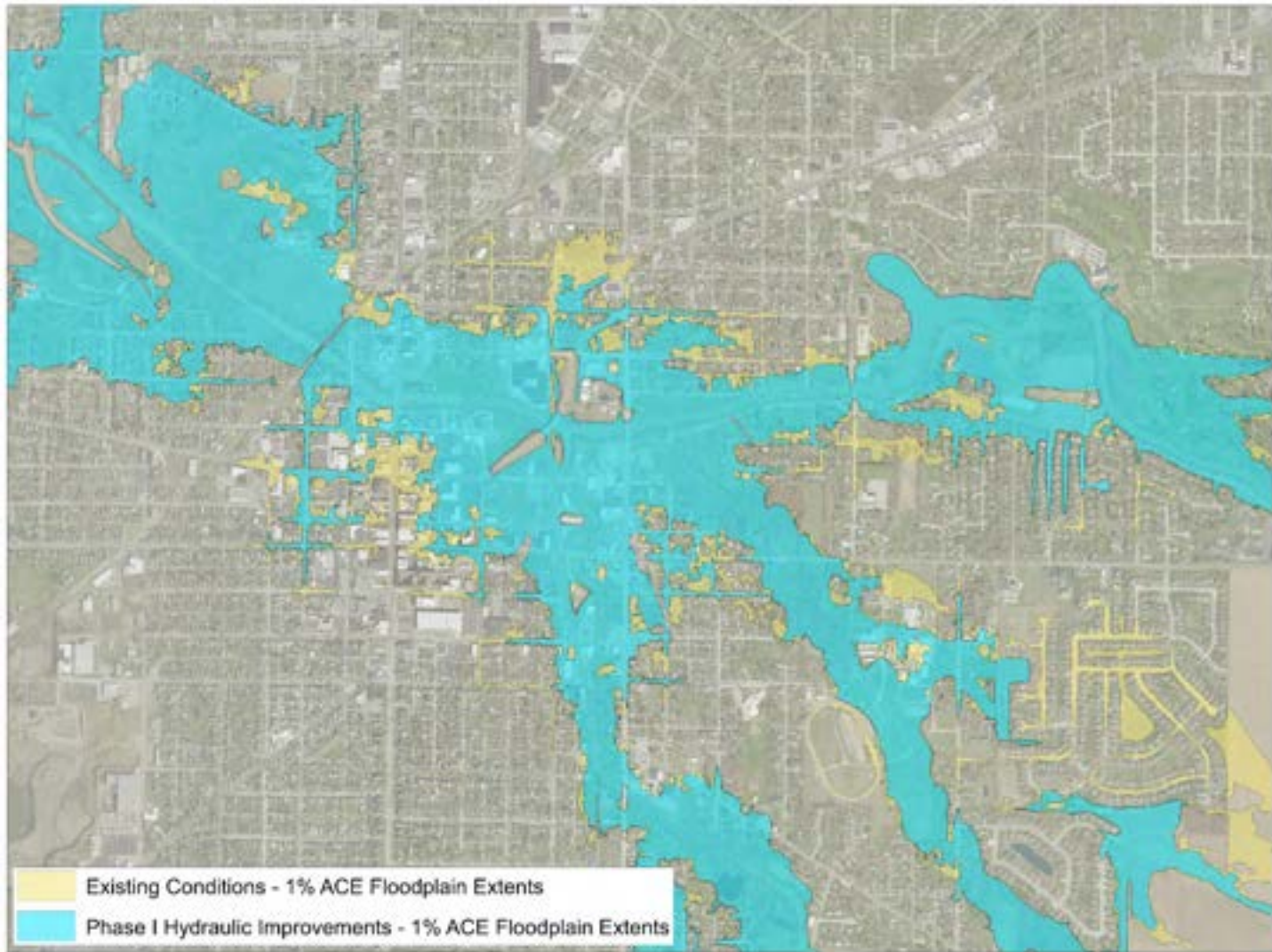
Anticipated Benefits

- Increased Wetland Function
- Improved Water Quality
- Fish Passage & Aquatic Habitat
- Enhanced Recreational Opportunities
- Reduced Transportation Impacts
- **1% *ACE Floodplain Reduction*** ~ LOMR To Be Filed Following Construction

1% ACE Floodplain



1% ACE Floodplain



Anticipated Schedule

*Critical Path
of Project is
through
Permitting*

Permitting

- OEPA 401 WQC / USACE 404 Permits
 - Submitted week of Dec. 18, 2017 ~ Completeness Review Underway
 - Public Comment & Agency Coordination Periods
 - 401 Public Hearing
- Floodplain Permit (City)
- OEPA Permit to Install (Sewer Replacements)
- OEPA Rule 27-13 Application (Brandman Site)

*** Targeting permits to be issued Summer 2018 ***

Anticipated Schedule

*Critical Path
of Project is
through
Permitting*

Design & Construction

- Tree Clearing Project
 - Bid Award: Jan. 16th / NTP: Feb. 1st
 - S.C.: Mar. 31st / F.C.: May 15th
- Final Design
 - 60% Design submitted Dec. 8, 2017
 - 95% Design due May 1st
 - Final IFB Package (estimate July 2018)
- Construction
 - Bidding & Award: Aug. 2018 / NTP: Sep. 2018 (**)
 - S.C.: Aug. 2019 / F.C.: Oct. 2019 (**)

** Targeting permits to be issued Summer 2018 **

Questions & Comments

Project Stations in Hallway

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