Harbor Technical Advisory Committee

Updates to TAC and MIC Board

Mike Wenholz

January 14 & 15, 2020

Dredge Material Management Options

Duluth/Superior Harbor

Dan, Ted, and Jeff

HTAC | update

Wednesday, 5 December 2019

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Project updates

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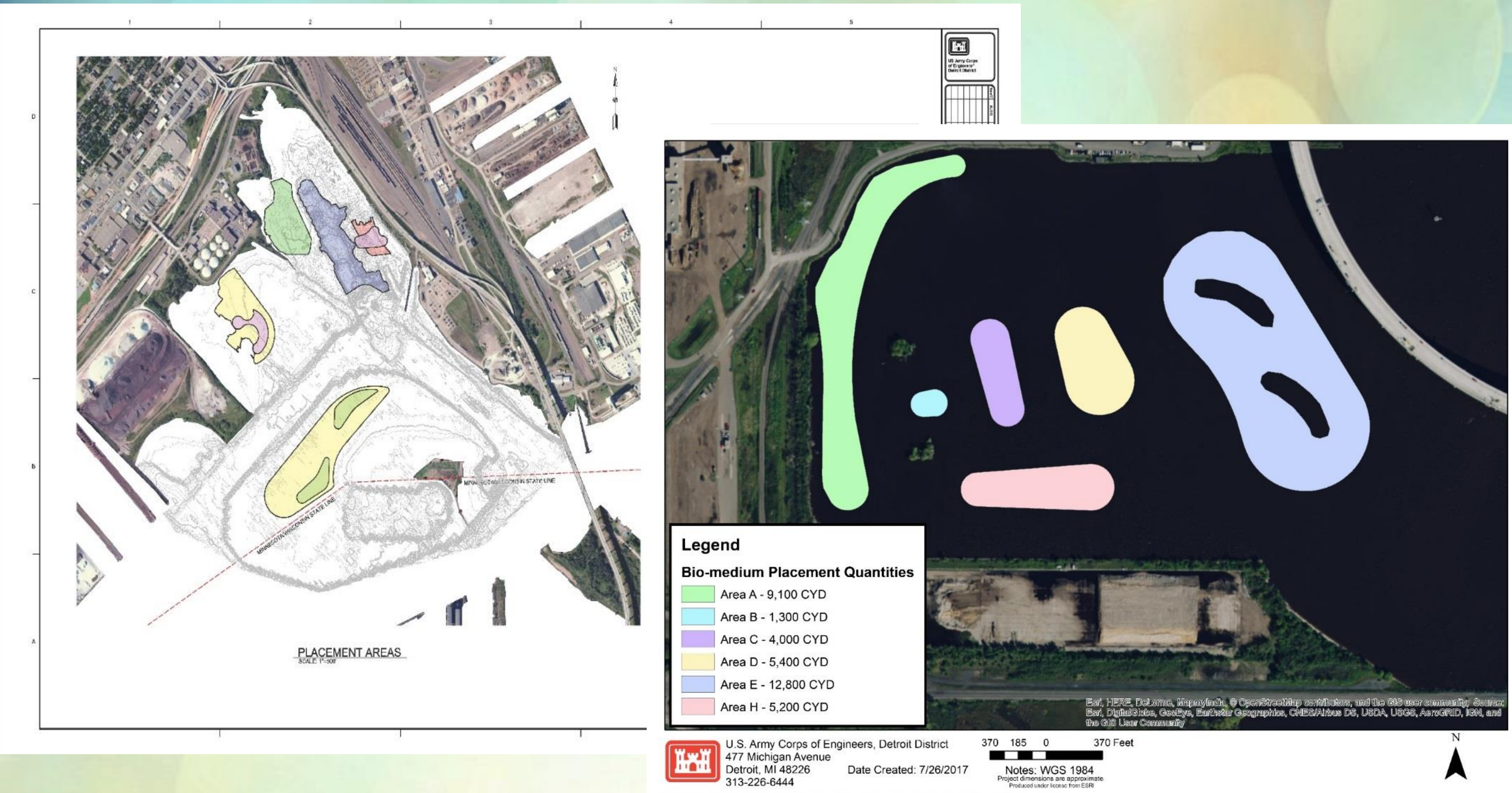
HISTORICAL PERSPECTIVE

- 2010 – open lake testing demonstrated 95% material suitable for open water placement
- 2012 – HTAC discussions on beneficial use to avoid open lake; coincided with St. Louis River AOC work, EPA GLRI funding
- 2013 – Series of beneficial uses were begun; over 1,000,000 cubic yards of material have been beneficially used in the harbor.
- 2020 – Dredging crisis. Possible partial solution (Interstate Island and 21st Ave and 40th Ave biomedium)
- 2021 – No viable long term solution

US Army Corps of Engineers ®

Dredging- Duluth/Superior Harbor



21st and 40th Avenues West- final phase

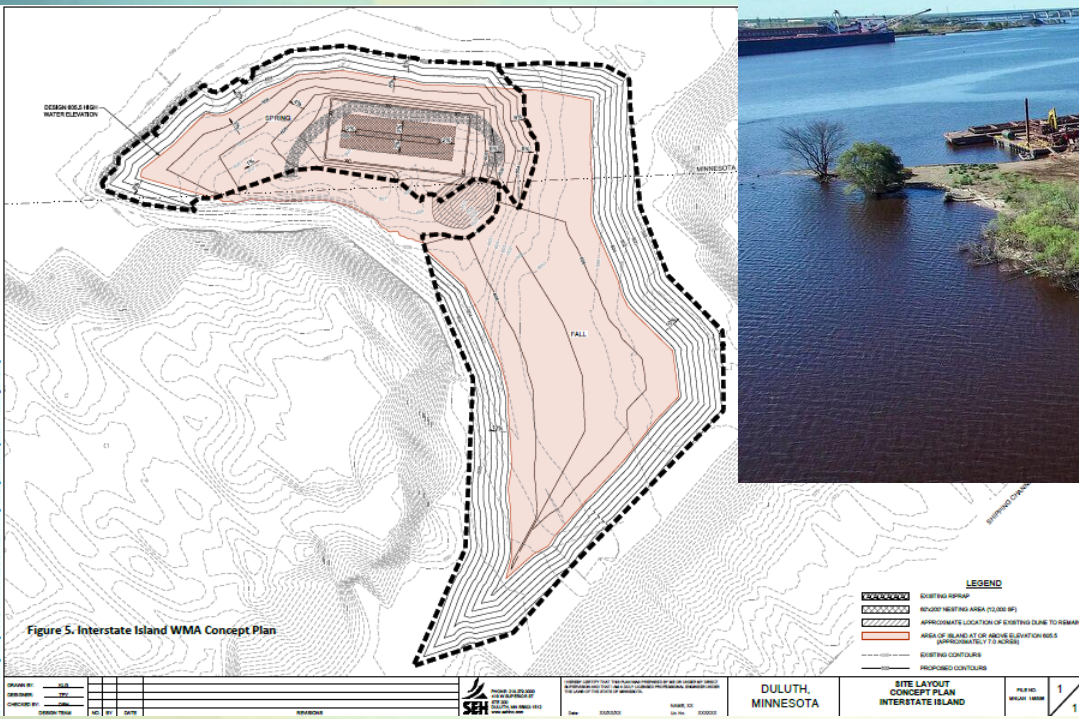
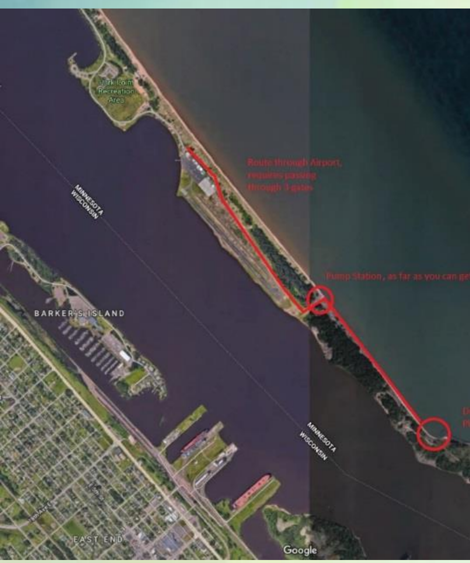


Figure 5. Interstate Island WMA Concept Plan

Interstate Island WMA restoration


Park Point Recreation Area
Route through Airport, requires passing through 3 gates
Pump Station, as far as you can get
MINNESOTA
WISCONSIN
BARKER'S ISLAND
EAST END
Google

MN Point


Pre 10/22/2019 Storm
Placement Area
SE End MN Point


Redistribution
Post 10/22/2019 Storm
Placement Area
SE End MN Point

Beneficial Use in a Sustainable Dredge Management Plan

Shoreline Resiliency

In-water restoration habitat maintenance

stockpiling or processing

flexible alternatives

Federal/State Incentive

off-set transportation costs

HTAC Meeting

December 4th, 2019

COASTAL EROSION HAZARD MAPPING

Project Partners:
ARDC, NSMB, Lake & Cook County and SWCD's, MLSCP, MNDNR, MN BWSR, NOAA, UMD GAC

Project Goal

Develop a web-based mapping tool that can be used to confidently identify areas along Lake Superior's North Shore that are susceptible to high rates of erosion

Erosion Facts

- Shoreline erosion affects…
  - Landowner property values
  - Public infrastructure
  - Water quality
  - Habitat for critical species
- Rising water temperatures are leading to more storm events, causing erosion. (NOAA)
- Lake Superior’s water levels are increasing which leads to increased wave action, causing erosion (FEMA Flood Study, 2018)

Project Implementation

Phase I

- Gather available data
- Process, clip, and manage all data for coastal area
- Share data between partners – via Arc GIS Online
- Meetings

Deliverables:

ArGIS online group,

Web app

Funding: BWSR CWF (secured)

Completed!: 2019

Phase 2

- Strategies and methodologies defined
- Identify pilot areas
- Meetings
- Run GIS analysis for identified pilot areas
- Review findings and identify process and project along the north shore

Deliverables:

Pilot study results

Action plan for completion of the entire north shore

Funding: MN DNR Coastal Grant (secured)

Potential completion: 2020

Phase 3

- Address data gaps found from phase 2
- Generate additional data
- Execute action plan for north shore

Deliverables:

Completed mapped area along the north shore

Usable tool for erosion along the north shore

Funding: TBD

Potential completion: 2023

Phase 4

- Inform stakeholders and landowners about the project
- Develop a tool for landowners living on the coast
- Continued outreach

Deliverables:

Tool for landowners to be more informed

More informed landowners

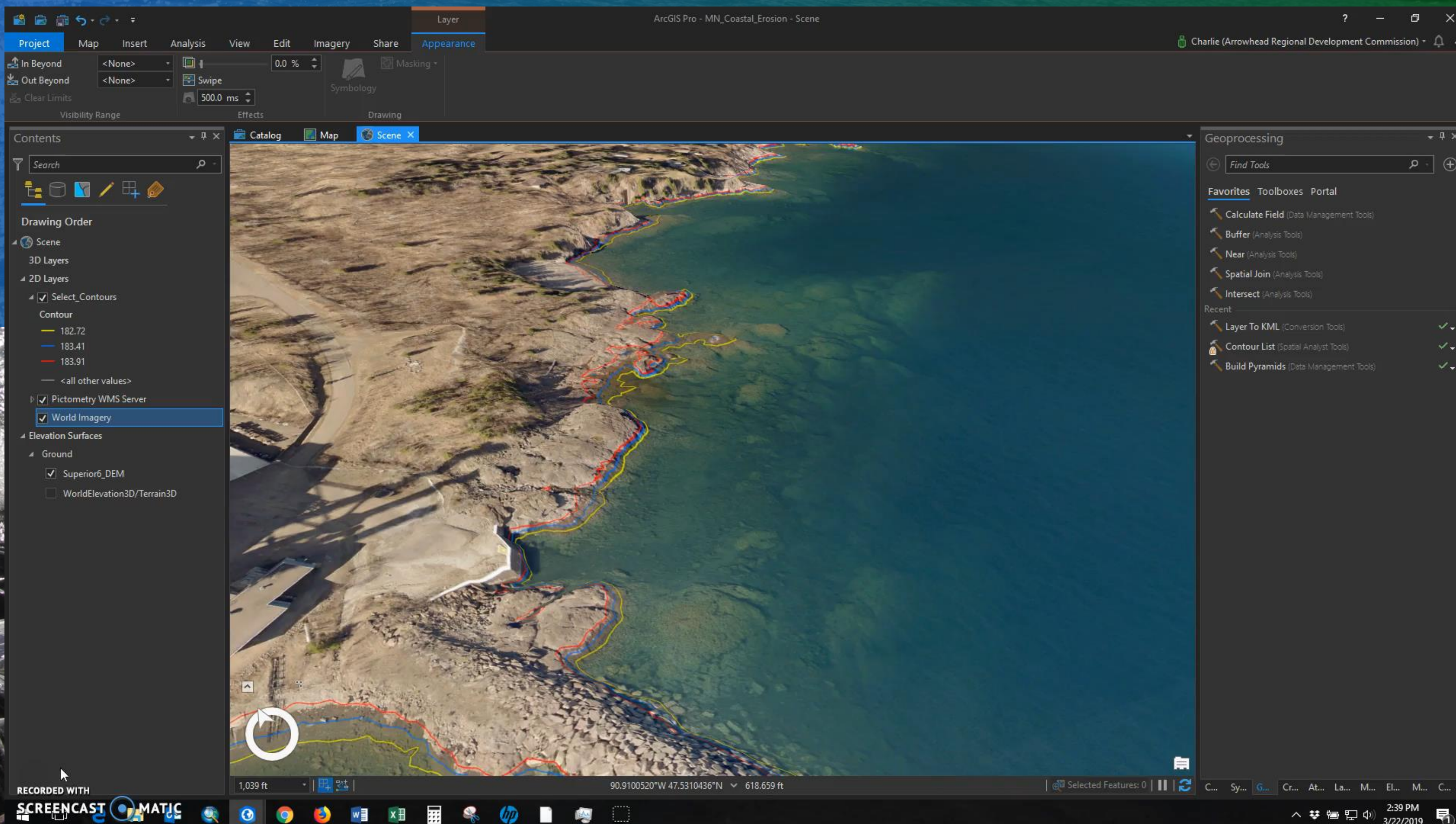
Funding: MN DNR Coastal Grant (unsecured)

Potential completion: ongoing

New tools available

3D modeling tools are available for visualizing data

- NOAA topobathy LIDAR (elevation above and below the water surface)
- Average Lake levels (highest and lowest average)
- This visualization tool will help with Phase 2 of the project – developing methodology and assessing pilot areas.

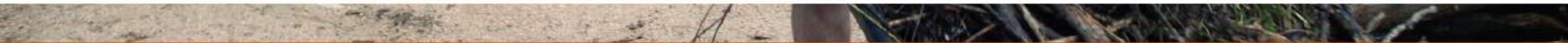


READY NORTH

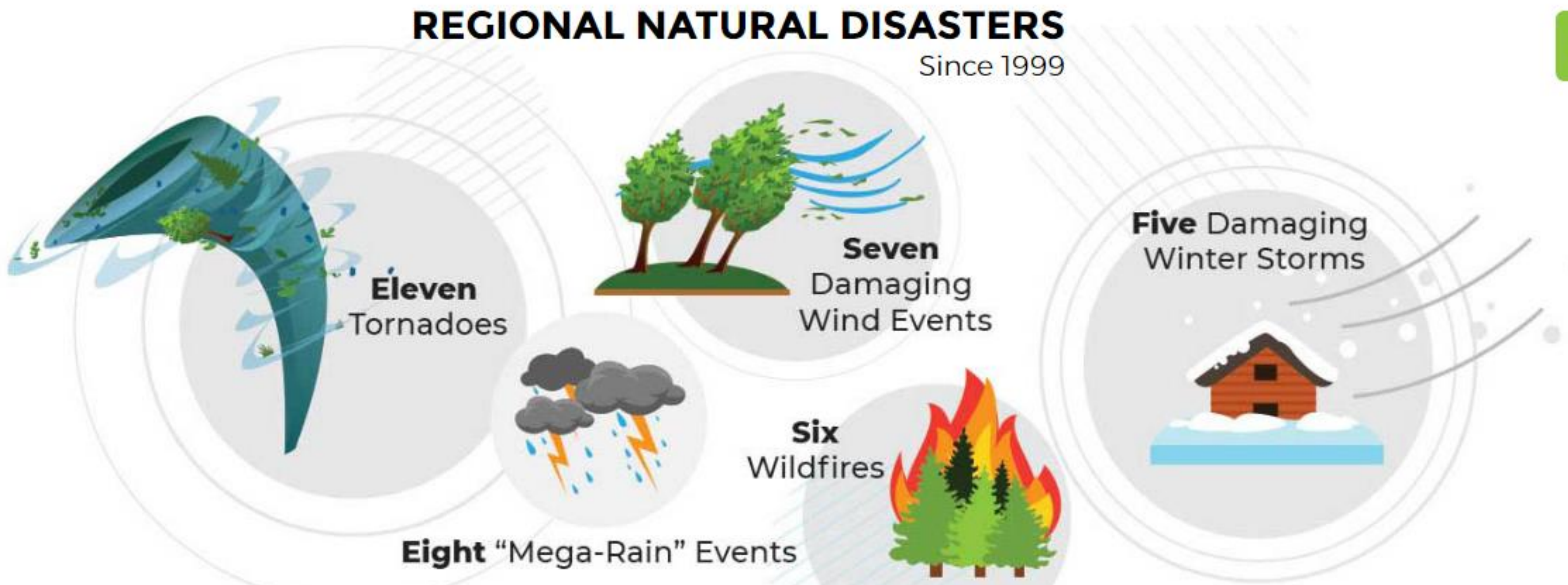
Local/Regional Disaster Preparedness & Resiliency Resources

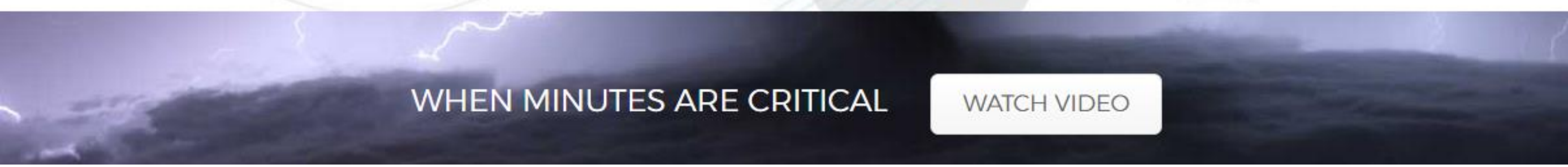
READY NORTH

DISASTER RESOURCES ▾ EMERGENCY KIT ORGANIZATIONS ▾ NEWS ABOUT ▾ BE A RESOURCE CONTACT ▾



DISASTERS ➤ PREPARE ➤ RESPOND ➤ RECOVER ➤ REPEAT



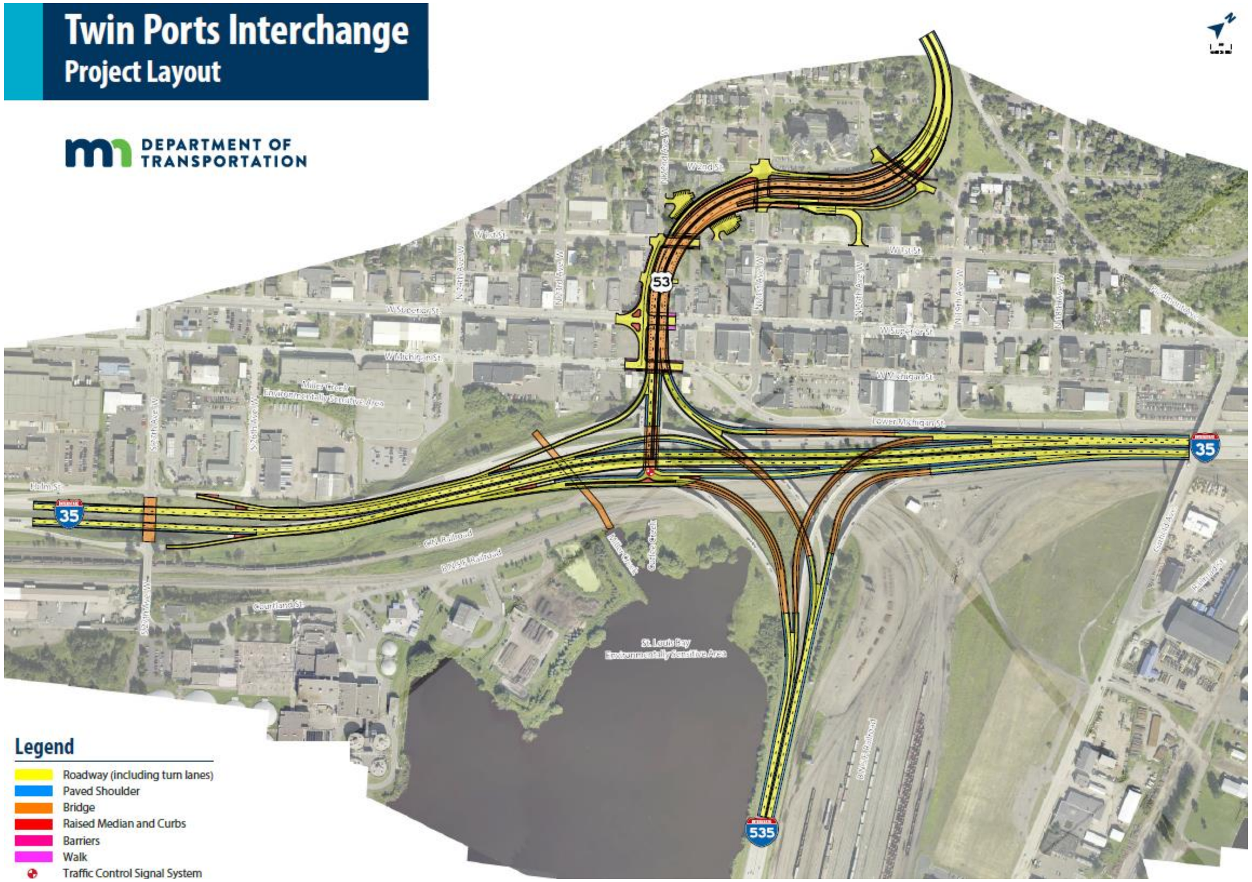


Twin Ports Interchange Reconstruction Project
HTAC Meeting

December 4, 2019

DEPARTMENT OF TRANSPORTATION

Twin Ports Interchange (TPI) 2020-2023



Where are we today?

- Engineering and detailed design have shed more light on the cost of the project
- Costs have risen and total cost appears to be more than $100 million above estimate ($343 million).
- **As design progresses, the cost will continue to change. The values above are snapshot in time.**

What is the plan to deal with the budget gap?

- MnDOT will need to defer some planned work in order to stay within our available budget.
  - MnDOT and FHWA want to ensure use of the BUILD Grant, so we will continue to move forward with a portion of this project in 2020.
- Plans are being modified and two portions of work will be deferred:
  - Garfield Avenue/I-535Interchange
  - The Highway 53 bridge from West Superior Street to 19th Avenue West

Funding Challenges

- The timeframe for funding the components is unknown at this time.
  - All funding coming into the trunk highway account is committed for the next four years to other projects throughout the region and state
  - The only options for funding this work in the next four years are:
    - To defer other already-programmed projects, which is not an ideal solution, OR
    - To secure new, dedicated transportation funding
- This is not the only project across the state experiencing a funding gap – which is a symptom of underfunding our state's transportation system.
- MnDOT will continue to advocate for new and dedicated funding to ensure we can complete critical projects like the Twin Ports Interchange and other major improvements statewide

Blatnik Bridge History

- Construction began in 1958
- Opened to traffic in 1961 ($15M)
- Approach span widening, new deck, lighting – 1993-1994
- Complete repaint – 1995-1998
- Steel repair and spot paint – 2008
- Suspender cable evaluation and replacement – 2010
- Structural repairs, exp joints and partial painting – 2012 ($13M)
- Structural repairs – 2016 ($2M)

Reasons for the Project

- Significant deterioration developed in truss elements
- Maintenance and repair activities required at an increasing frequency
- Increased levels of road user delays
- MnDOT wanted more comprehensive strategy –options?

Whats Next?

- Public engagement will begin early next year 2020
- Once a consultant has been selected we will begin evaluating alternatives that include but are not limited to the following:
    - Rehabilitation of entire bridge
    - Replacing the main span and rehabilitating the approach spans
    - Replacing entire bridge on existing alignment
    - Replacing entire bridge on a new alignment

Questions???

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