I-494: Airport to 169

MnDOT Metro District

Andrew Lutaya, P.E. | West Area Engineer
1. Project Location & Overview
   A. Scope/Goals
   B. Project Budget

2. Project Structure
   A. Teams/Committees
   B. Engagement Strategy

3. Schedule Overview

4. Environmental Document
   Clearance

5. Traffic Management Planning

6. Other Considerations
   A. Segmentation for Construction

7. Current Project Risks
Primary goal is to provide long-term and sustainable solutions for all highway users

Current Needs
- Address deficient bridges and pavement conditions
- Increase mobility
- Improve travel time reliability
- Maintain/improve transit advantages

Project Budget

Funded
- $205M Corridors of Commerce Funding
- $20M (FY 2023) Pavement (MN River to 24th)

Unfunded needs (thus far)
- $50M Pavement Rehab (btn 24th and TH 100)
- $20M for bridges (12th, Portland, Nicollet)
- Drainage System upgrade
Existing Congestion Analysis – East Bound

A.M. Peak Period

W Bush Lake Road

E Bush Lake Road

6

5

4

3

2

France Avenue S

1

P.M. Peak Period

W Bush Lake Road

E Bush Lake Road

6

4

3

2

France Avenue S

1

Legend:
- No Recurring Congestion
- <1 Hour of Congestion
- 1-2 Hours of Congestion
- 2-3 Hours of Congestion
- >3 Hours of Congestion

Congestion defined as speeds less than 45 mph

9/14/2018
Existing Congestion Analysis – East Bound

P.M. Peak Period

S Xerxes Avenue

Penn Avenue S

1

Legend
- No Recurring Congestion
- <1 Hour of Congestion
- 1-2 Hours of Congestion
- 2-3 Hours of Congestion
- >3 Hours of Congestion

Congestion defined as speeds less than 45 mph

P.M. Peak Period

Nicollet Avenue S

Portland Avenue S

S 12th Avenue

2

2

1
Existing Congestion Analysis – West Bound

A.M. Peak Period

P.M. Peak Period

Legend
- No Recurring Congestion
- <1 Hour of Congestion
- 1-2 Hours of Congestion
- 2-3 Hours of Congestion
- >3 Hours of Congestion

Congestion defined as speeds less than 45 mph
Existing Congestion Analysis—West Bound

A.M. Peak Period

P.M. Peak Period
Crash history highlights

- I-35W interchange has highest # of crashes on corridor
- High concentration of severe crashes between Penn Ave & TH 77
- Rear End crashes most common
- Sideswipe Passing 2nd common
Travel Time reliability Analysis

Non-recurring Events Affecting Multiple Segments

Travel Time Index

- >4.0 TTI
- 3.5 TTI - 4.0 TTI
- 3.0 TTI - 3.5 TTI
- 2.5 TTI - 3.0 TTI
- 2.0 TTI - 2.5 TTI
- 1.5 TTI - 2.0 TTI
- 45 mph TT - 1.5 TTI
- Speed Limit TT - 45 mph TT
- < Speed Limit TT
## Project Development Schedule

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Estimated Completion</th>
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<tbody>
<tr>
<td>Selection of Preferred Build Alternative *</td>
<td>Spring 2019</td>
</tr>
<tr>
<td>Municipal Consent</td>
<td>Fall 2019</td>
</tr>
<tr>
<td>FONSI – Approve Environmental Assessment*</td>
<td>Spring 2020</td>
</tr>
<tr>
<td>Possible Award of Early Work Packages (DB)</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>Final Plan Design Development completion</td>
<td>September 2021</td>
</tr>
<tr>
<td>R/W Acquisition Complete &amp; Agreements</td>
<td>October 2021</td>
</tr>
<tr>
<td>Construction of Highway Expansion Project</td>
<td>January 2022 – December 2023</td>
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* FHWA Concurrence Points  
DB – Design Build Project delivery method
Environmental Assessment Process

Concurrence Points & Public Engagement Plan

1. Develop Purpose & Need
2. Evaluation Criteria
3. Determine Study Area & Logical Termini
4. Finalize Purpose & Need based on Public Input
5. Develop alternatives that meet Purpose & Need
6. Select Preferred Alternatives & develop EA
7. FONSI
Segmentation for Construction

1. No reduction of capacity on mainline I-494 before 2022

2. Potential multiple lettings/early work packages
   - Replacing 12th Ave, Portland Ave, Nicollet Ave, RR Bridges
   - Part of Phase 1 - 35W/494 Reconstruction to align with Metro Transit’s Orange Line Knox Avenue Underpass project
   - Utilities Relocation

3. Multiple Project Delivery Methods
   - Design-Build (DB)
   - Design-Bid-Build (DBB)
   - Construction Manager/General Manager (CM/GC)
Currently Identified Project Risks

1. Right of Way
   - Storm runoff treatment – 2014 Study estimated $105 Million for ponding
   - Corridor Expansion – Adding lanes in each direction
   - I-35W/494 Interchange – Accommodate additional ramps

2. Drainage Accommodations
   - Existing system is over capacity – 2014 Study estimated $200 Million for system that avoids R/W purchase
   - New impervious from highway expansion.

3. Environmental Assessment Approval
   - MnPASS vs General Purpose Lane vs HOV Lane

4. Project Budget
   - Other unfunded Infrastructure Needs i.e. Bridges, Pavement, etc
   - Operational Limits of MnPASS
Thank you!

Andrew Lutaya, P.E

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