

# Highway **169** Mobility Study

## US 169 Corridor Coalition

March 8, 2018

*Evaluating the potential for Bus Rapid Transit and MnPASS Express Lanes in the southwest Metro, Investigating options for improved bus service between the Twin Cities and Mankato*



# Outline

- Intercity Bus Service Update
- MnPASS & BRT Implementation Plan
- Next Steps

# INTERCITY BUS SERVICE

# Intercity Bus Service

Evaluating need for *intercity bus* along Highway 169 between Mankato and Twin Cities

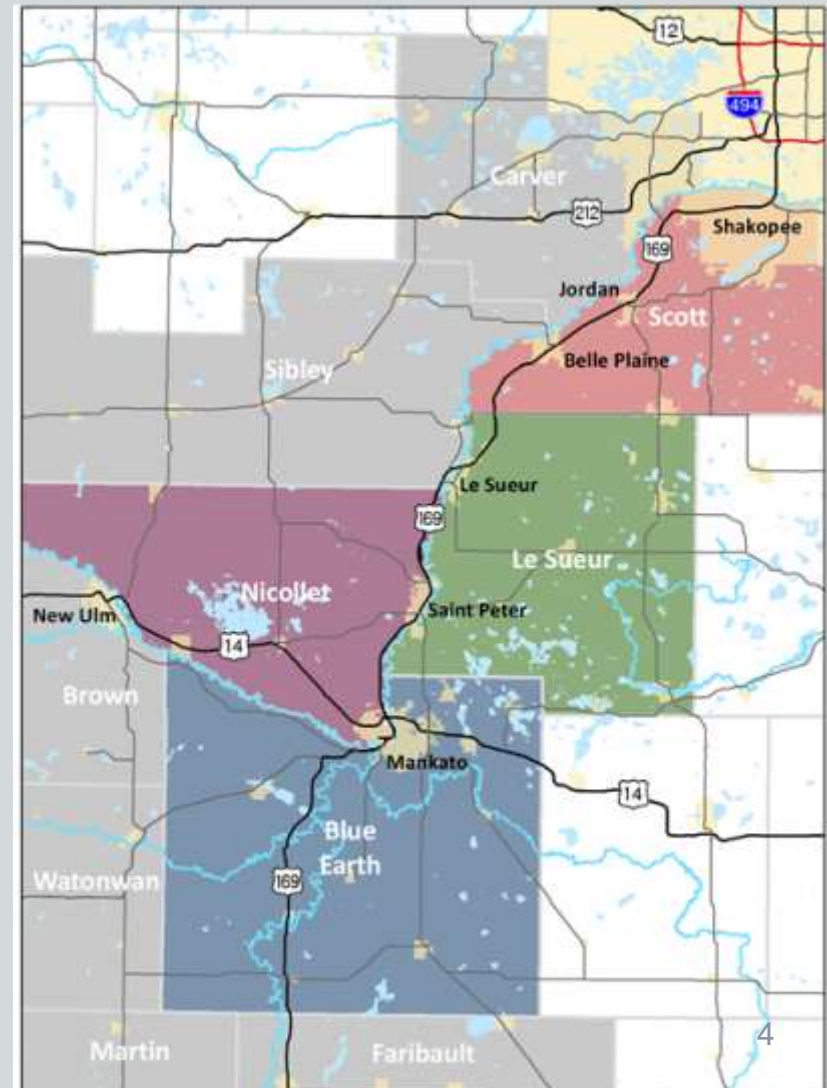
## General Population Outreach

- 20 question online/paper survey
- Press release, email blast, social media
- Over 2,000 responses; majority online, paper included bus riders, adult education, 50+ event

## Findings

- Popular destinations include Minneapolis, Mankato, Southwest suburbs
- More likely to use service if *buses ran often, fares were lower* and there are *convenient connections*
- 41% said they would use service more than once a month, once a week or more
- 46% would pay a fare of \$5 to \$10, 32% would pay a fare of \$11 to \$15

## Study Area



# Highway 169 Intercity Bus Feasibility (Task 2)

- Identified Needs:

- **Improved regional connections** between people, jobs, services, and other destinations throughout the corridor
- Need **expanded travel options** for those with limited or no access to a vehicle
- Need intercity service that is **frequent, affordable, and connected** to other transit services

- Study Outcome:

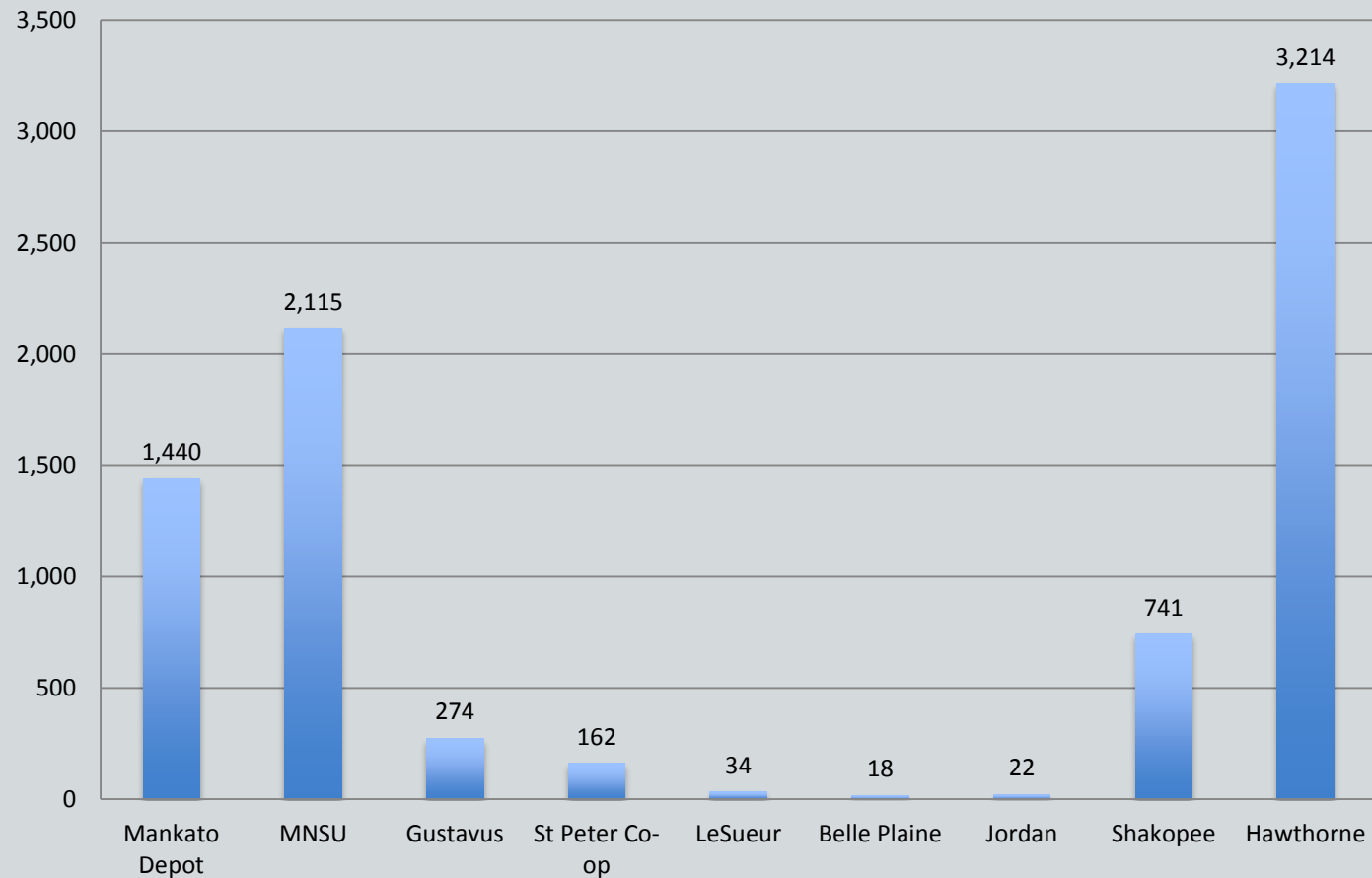
- **Identified potential** for Highway 169 intercity bus service.
- Developed **intercity bus service options**, including short and long term recommendations.
- **Cost, frequency and connection** to public transit are key factors
- Initial service will likely require a **subsidy to reduce fares**; service must be eligible for federal funding via the MnDOT Intercity Bus Program.

# Highway 169 Connection

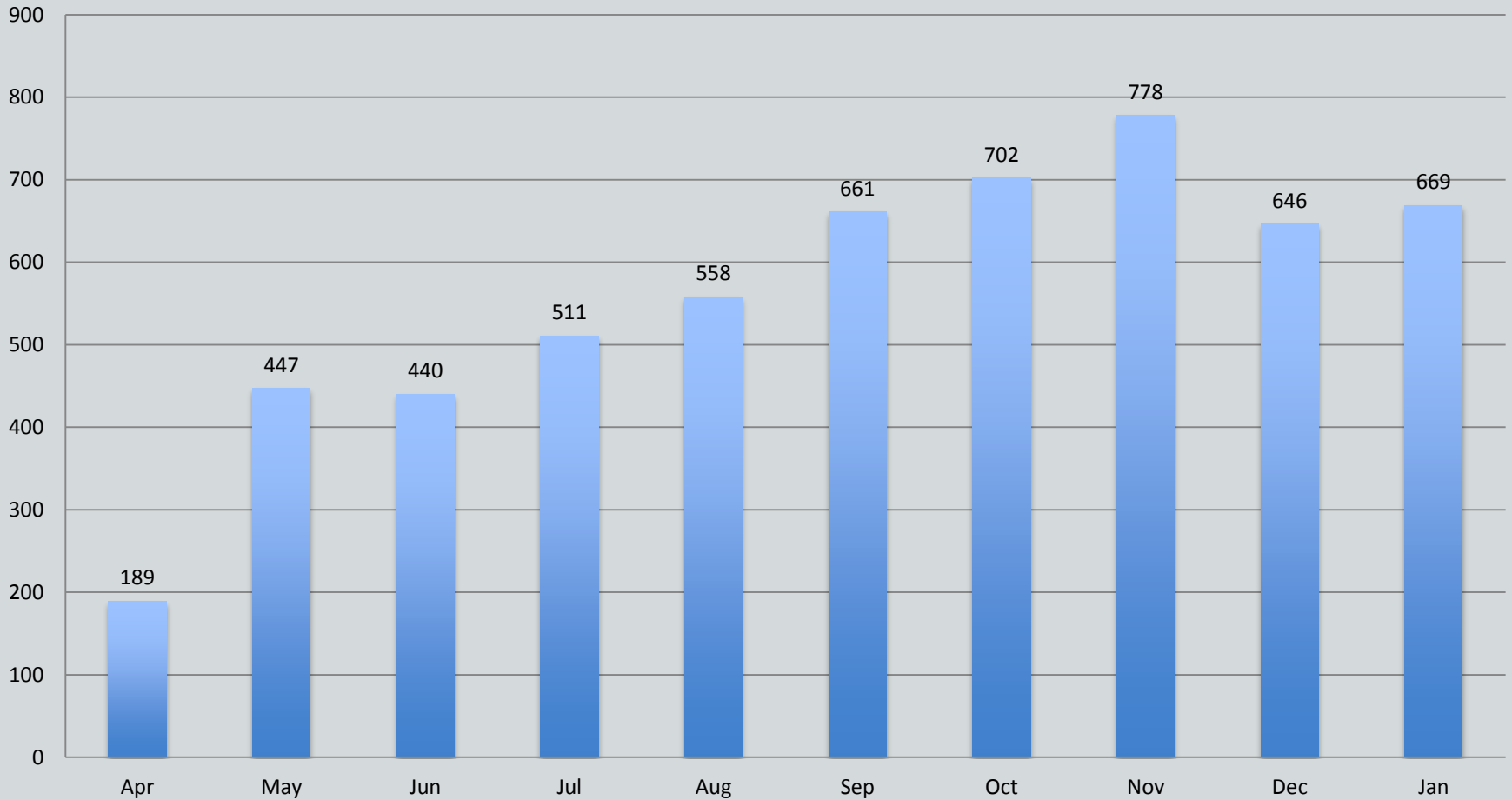


# Total On/Off Passengers By Stop

(6 months Aug-Jan)



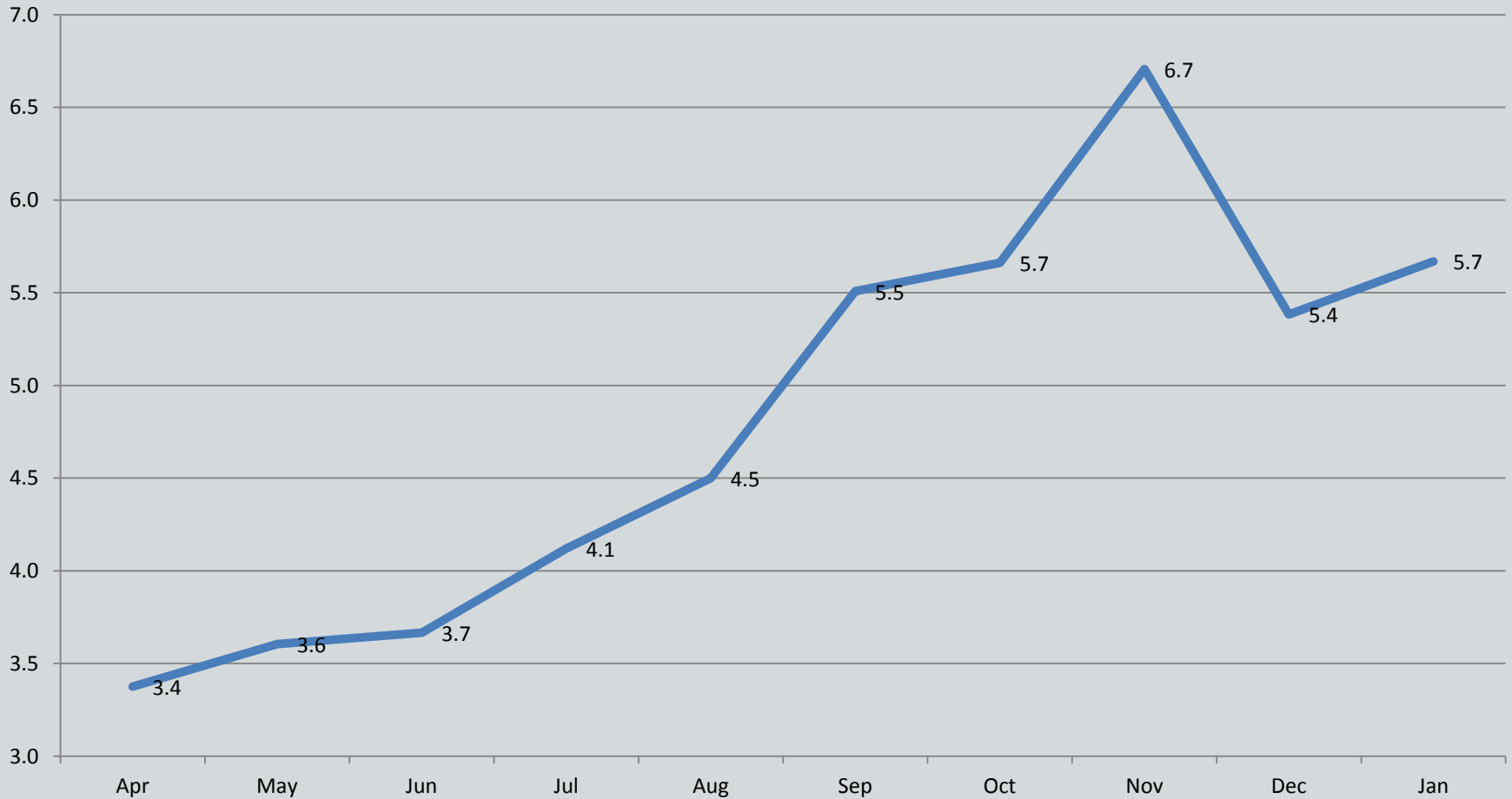
# 169 Connection Passengers By Month



Goal = 600 passengers/month



# 169 Connect: Average Passengers per Trip



Goal = 3.5 passengers/trip

# MNPASS & BRT IMPLEMENTATION PLAN

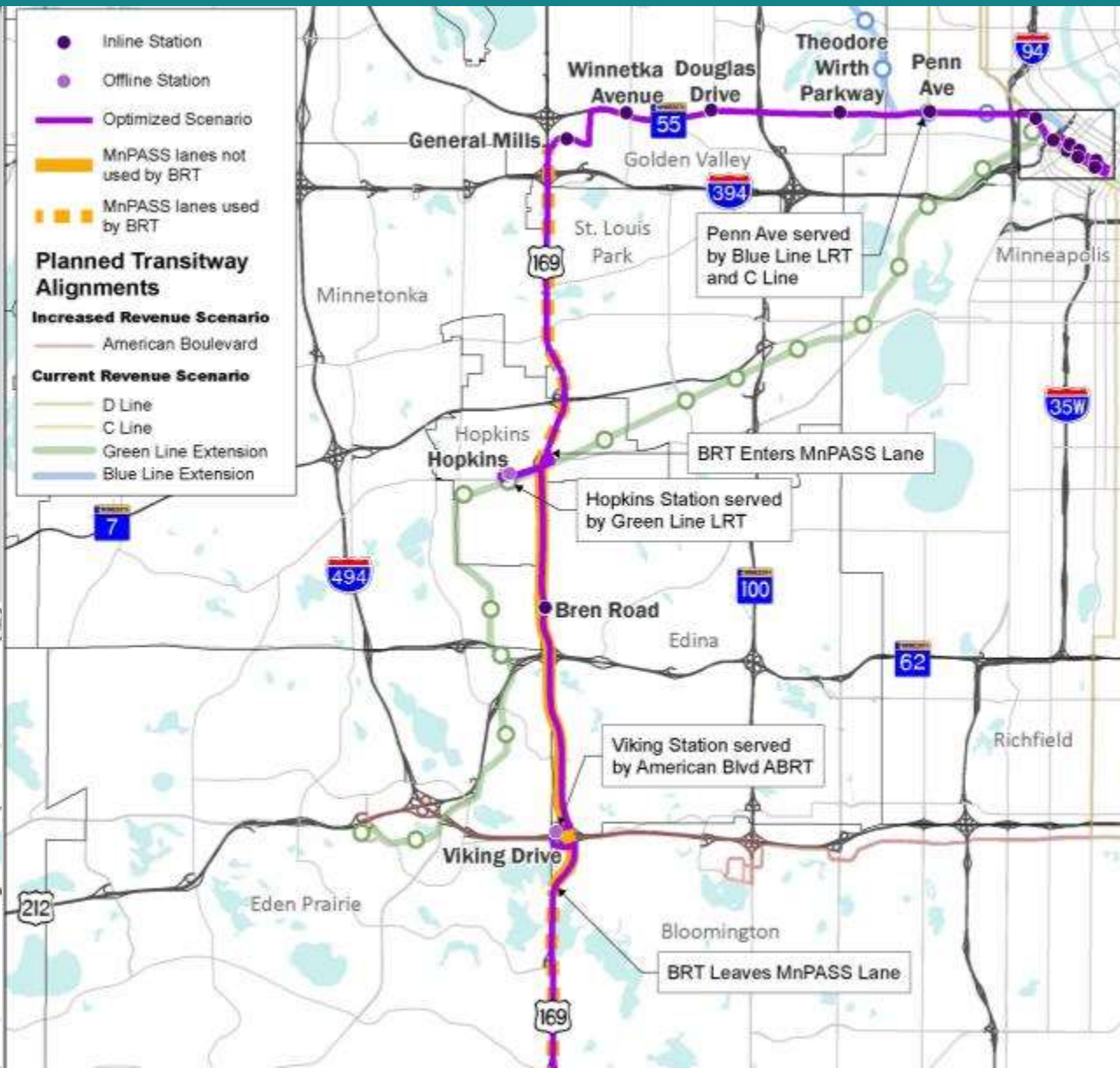
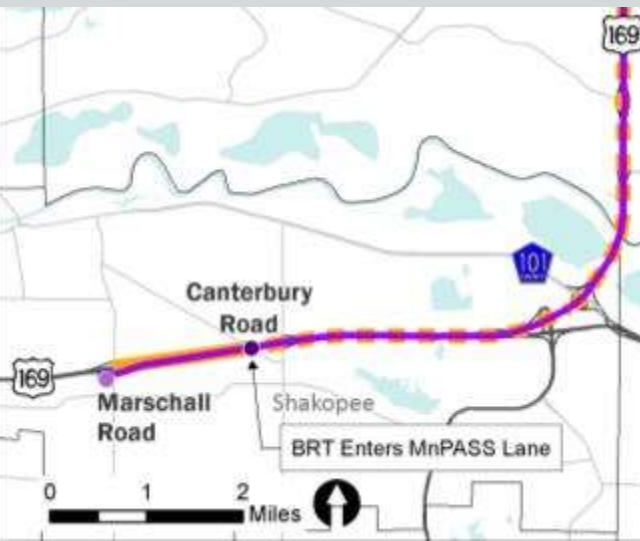
# Purpose of the Implementation Plan

- Vision for corridor
- Detail the Optimized Scenario
  - BRT Service
  - Spot Mobility Improvements
  - Infrastructure (Highway & Transit)
- Chronology of investment and interim service
- Compendium of funding sources



# BRT OPTIMIZED SCENARIO

# BRT Optimized Scenario



# BRT by the Numbers

- Length: 28 miles
- Stations: 15
- Forecast 2040 Ridership: 5,600
- Estimated Cost to Construct: \$45.5 million\*
- Estimated Annual Cost to Operate: \$13.6 million\*
- Service Frequency: every 15 minutes
- End-to-End Travel Time: 75 minutes

*\*2018 Dollars*

# Interim Service Option 1

## Option 1

- Marschall Road to General Mills
- 4 Stations:
  - Marschall Road
  - Viking Drive
  - Downtown Hopkins
  - General Mills

Interim service is assumed to open after Southwest LRT is operational.



# Interim Service Option 2

## Option 2

- Marschall Road to Downtown Minneapolis
- All stations in Optimized Scenario except Bren Road and Canterbury

Interim service is assumed to open after Southwest LRT is operational.





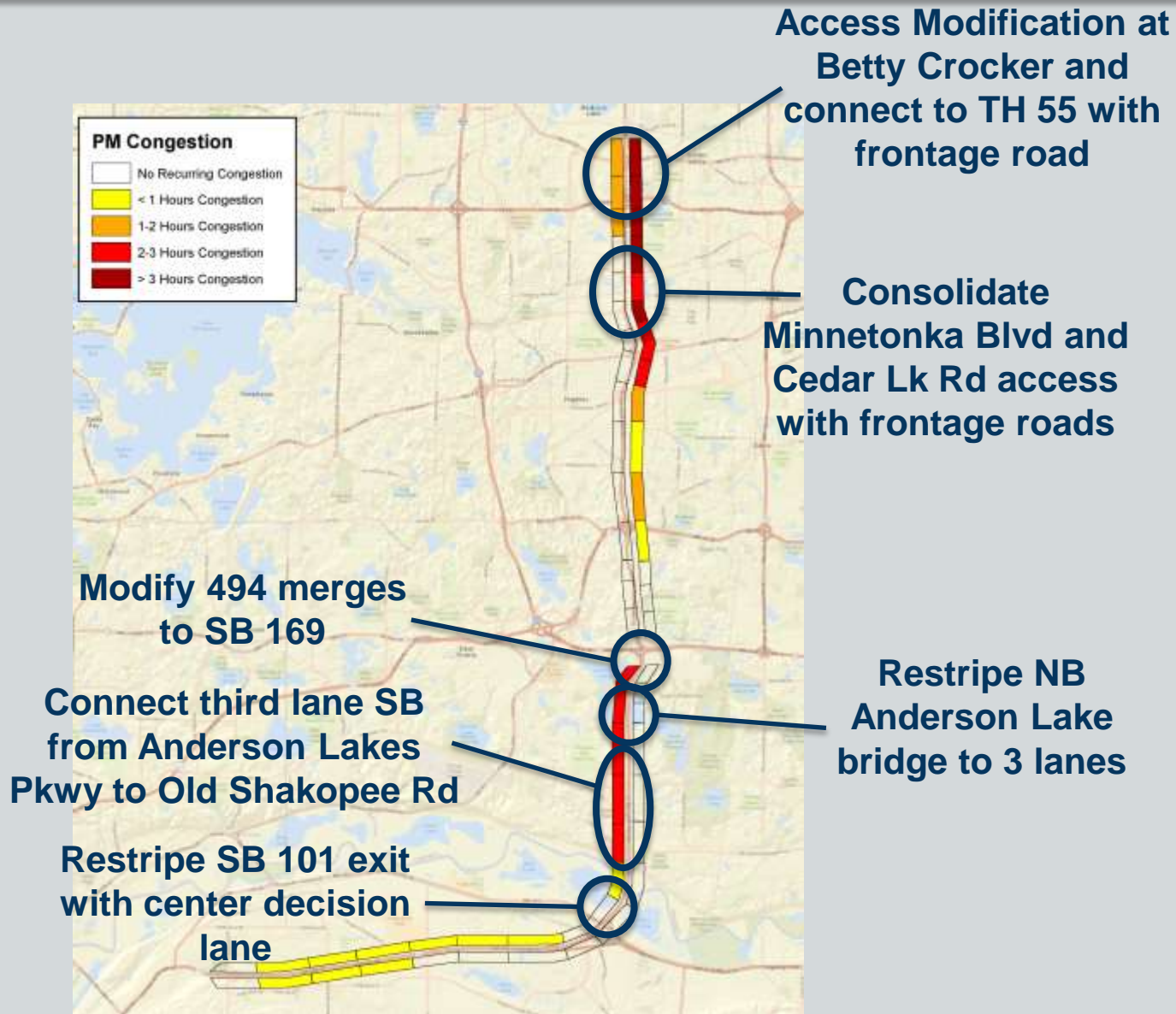
# Interim Service by the Numbers

- Estimated Cost to Construct\*
  - Option 1: \$4.4 million
  - Option 2: \$8.8 million
- Estimated Annual Cost to Operate\*
  - Option 1: \$1.7 million 5-day service or \$2.2 million 7-day
  - Option 2: \$2.6 million 5-day service or \$3.3 million 7-day
- Service Frequency
  - 30 minutes peak, 60 minutes off-peak
- End-to-End Travel Time
  - Option 1: ~37 minutes
  - Option 2: ~73 minutes
- Assumes same supporting bus service as BRT

*\*2018 dollars*

# SPOT MOBILITY IMPROVEMENTS

# Spot Mobility Improvements



# INFRASTRUCTURE (HIGHWAY AND TRANSIT)

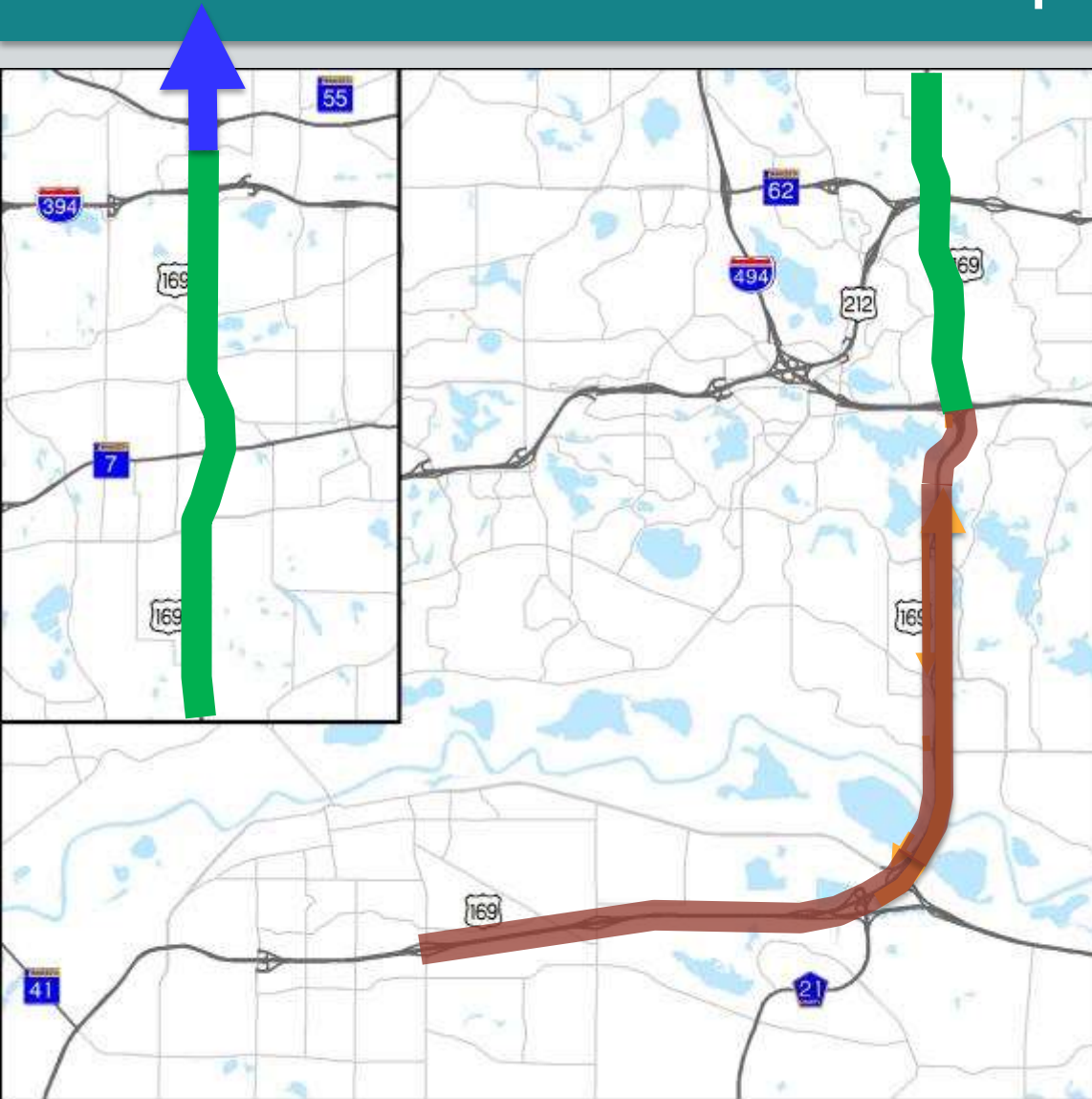
# Infrastructure Data Sources

- Preservation needs identified in:
  - MnDOT STIP
  - MnDOT CHIP (June 2017)
  - MnDOT Bridge Replacement and Improvement Management
- Ultimate vision implemented over time in a series of smaller projects for low disruption, high cost efficiency
- Timing of improvements coordinated with scheduled infrastructure investments
  - Pavement preservation needs
  - Three bridge preservation timeframes
  - 2022 to 2027, 2028 to 2037, and 2038 to 2043

# Unknown Influences

- I-35W Minnesota River Bridge reconstruction (and management of traffic)
- Other MnPASS corridors (e.g. I-494) and system implementation
- Other local projects (e.g., Canterbury redevelopment, TH 13 improvements)
- Orange Line completion
- Flooding and bridge closures
- STIP/CHIP updates and bridge maintenance needs
- Funding sources/opportunities

# Implementation Phases



**Phase 1**  
Northbound MnPASS and southbound spot improvements between CH 21 and I-494

**Phase 2**  
Full MnPASS between Marschall Road and I-494

**Phase 3**  
MnPASS north of Hwy 55

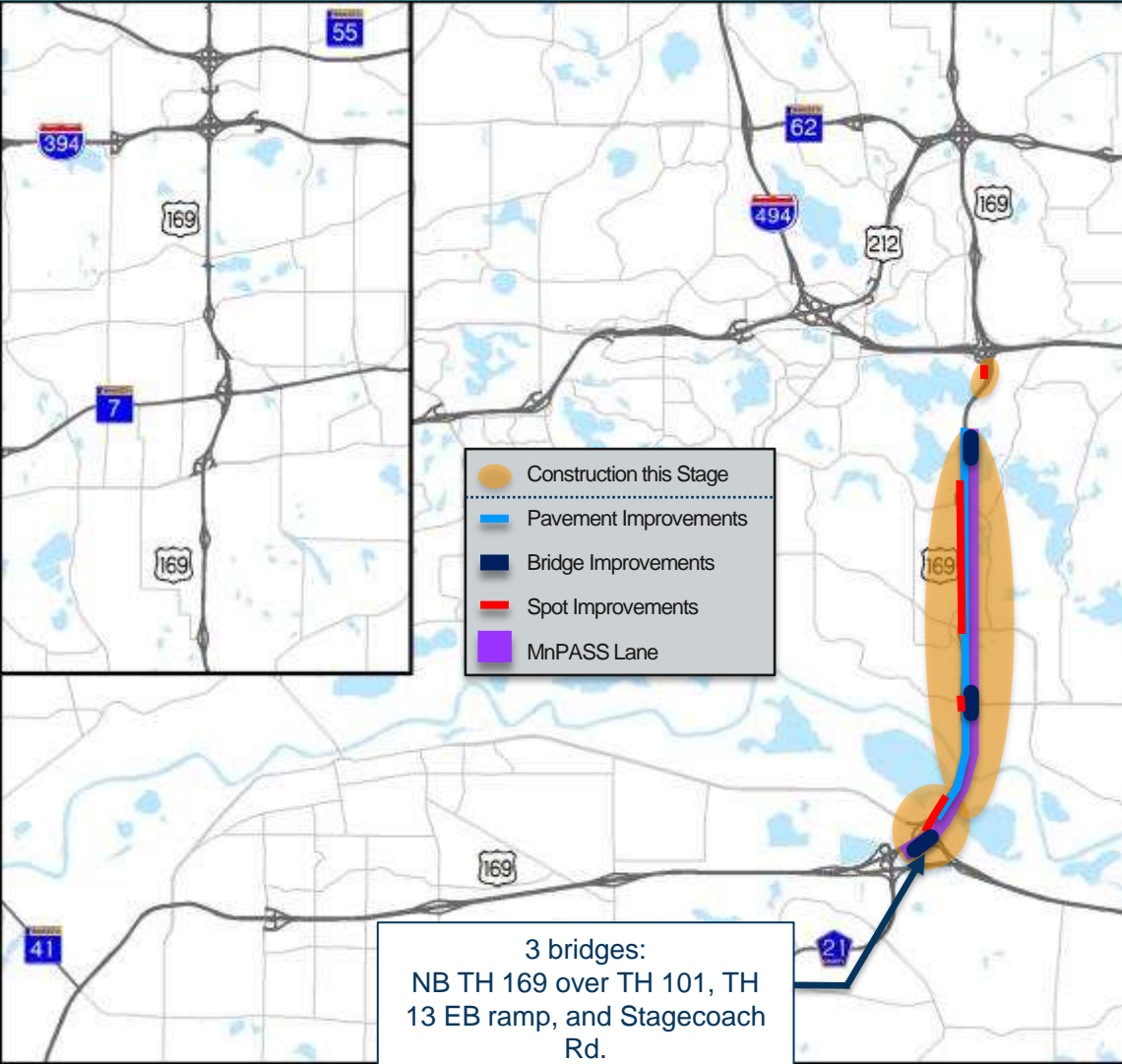
**Phase 4**  
MnPASS between I-494 and Hwy 55

# Stage A

CH 21 to I-494:

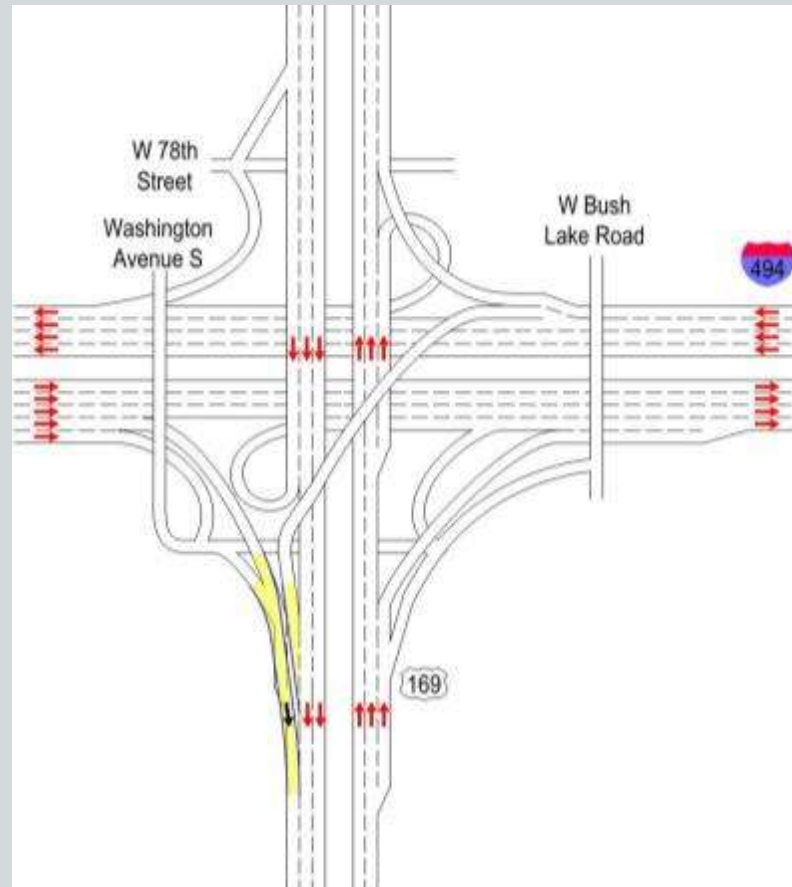
Northbound MnPASS

Southbound spot mobility improvements

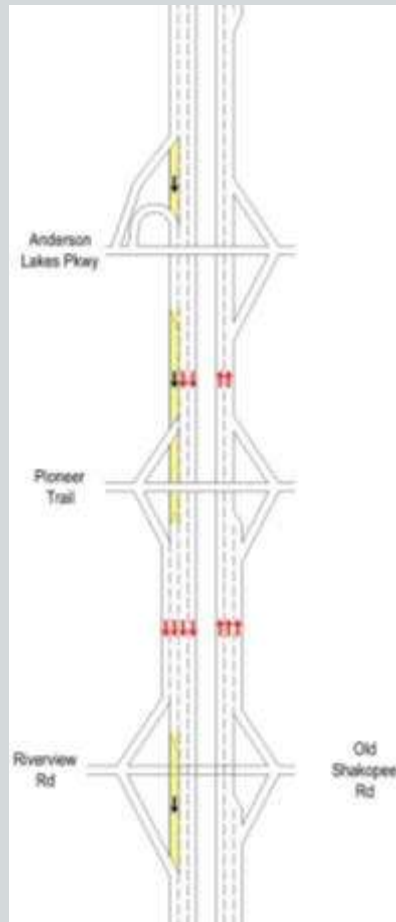




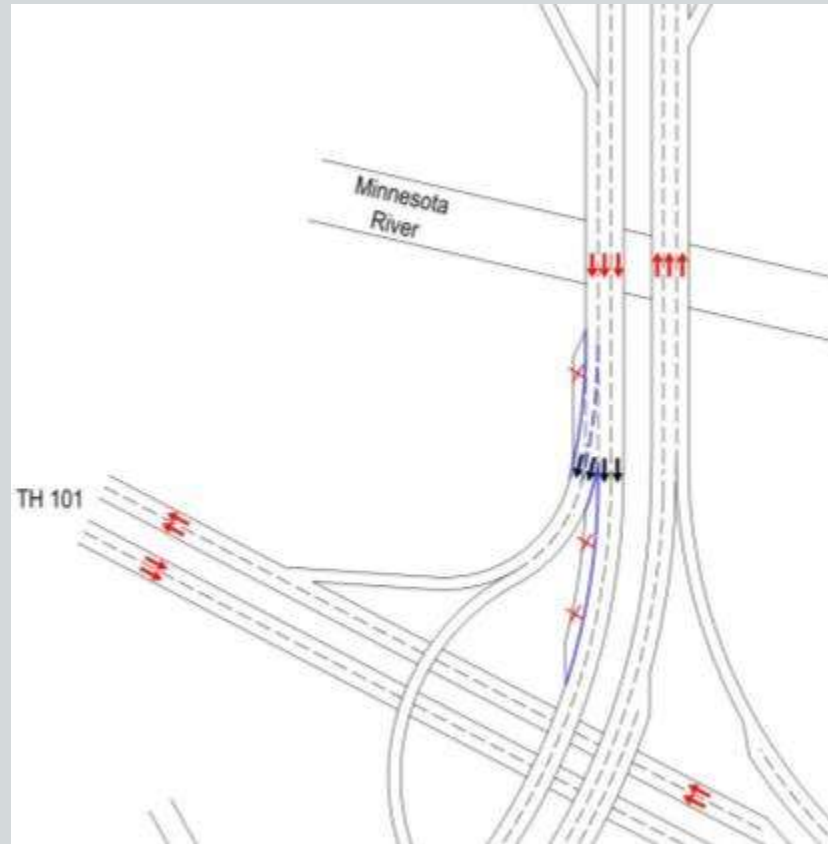
# Stage A Vision Improvements



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# Implementation Phases

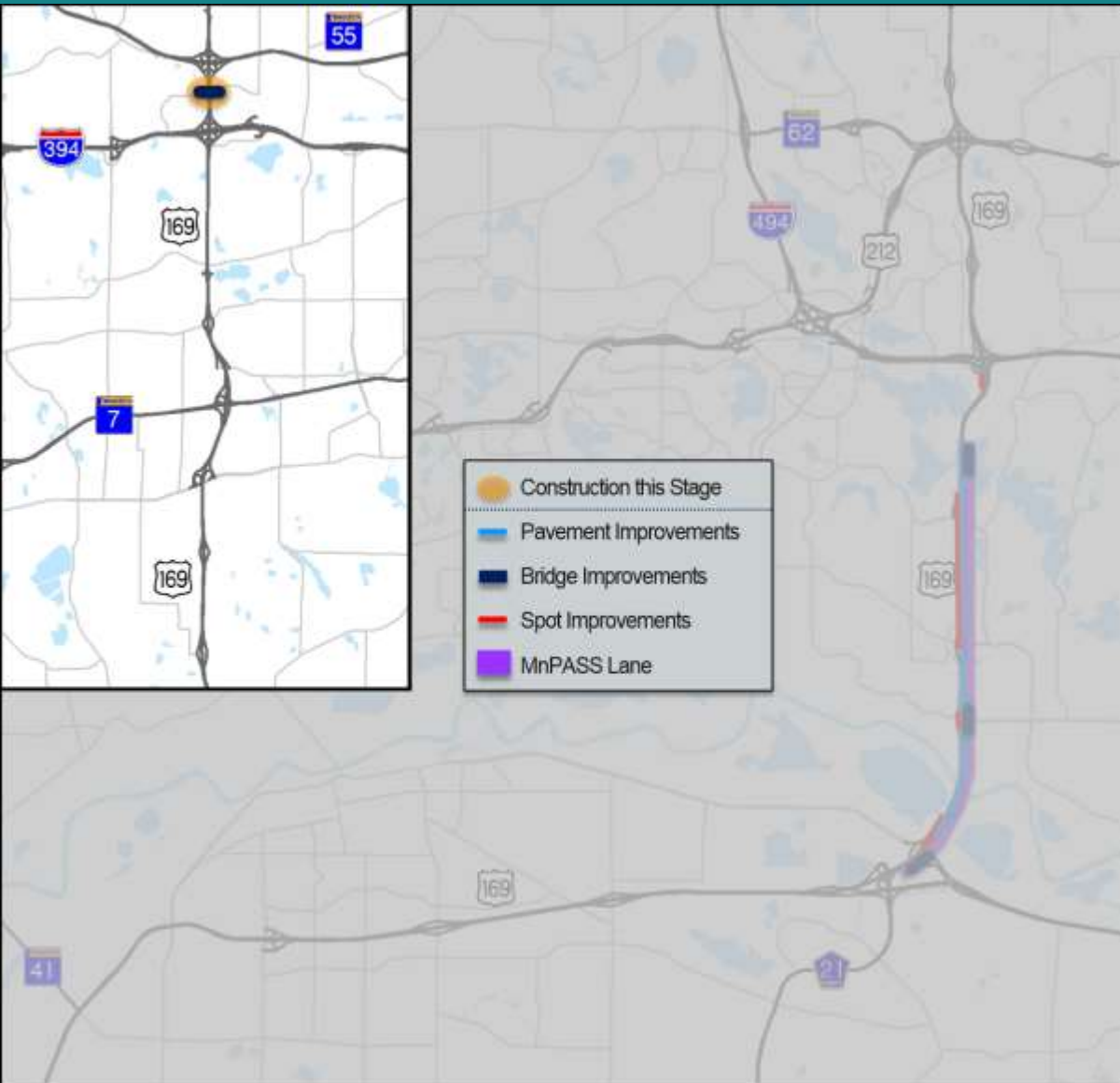


## Phase 1

Northbound MnPASS and southbound spot improvements between CH 21 and I-494

# Stage B

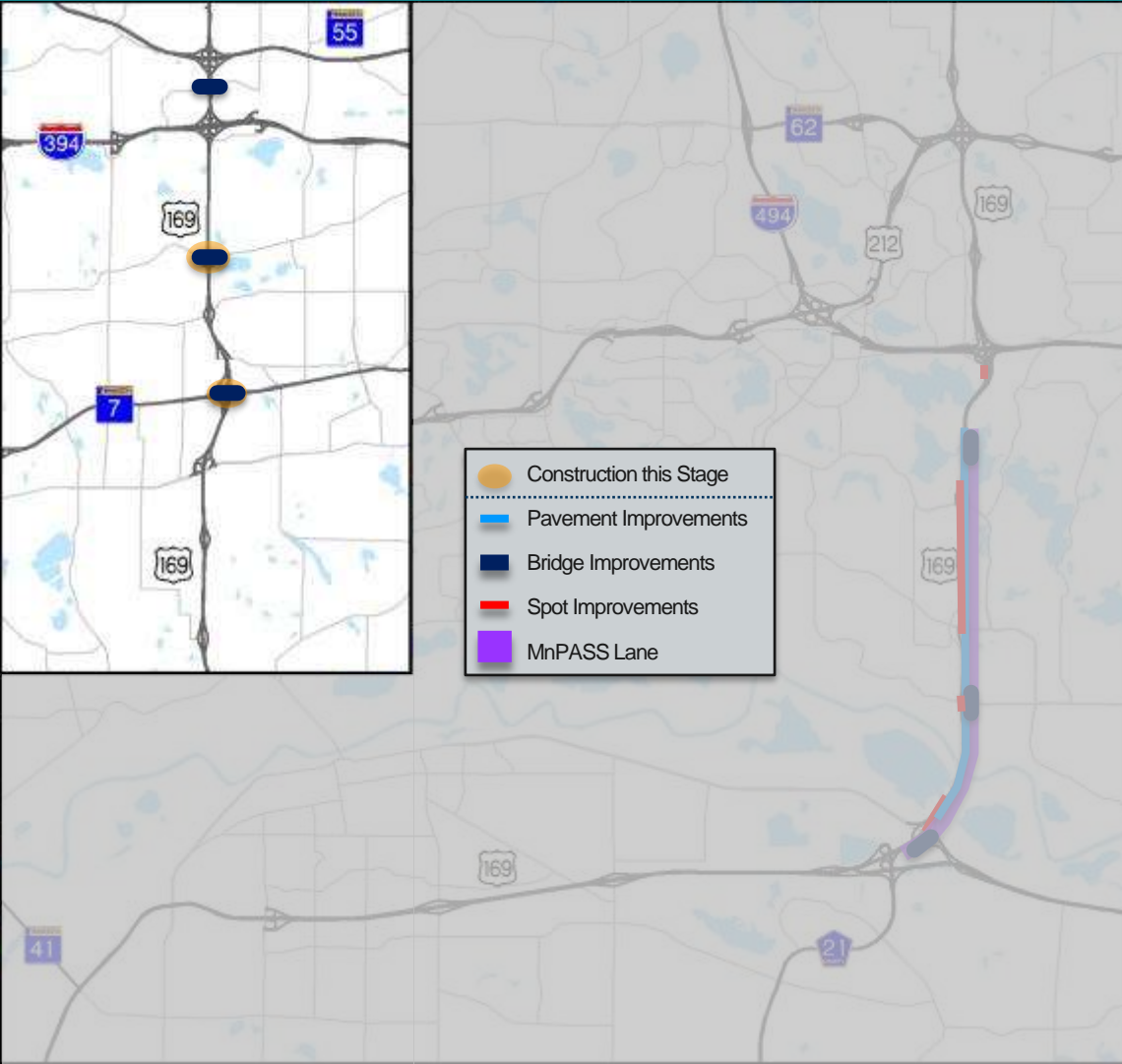
Betty Crocker bridge reconstruct over TH 169, needs to be lengthened to facilitate MnPASS)



# Stage B Vision Improvements



# Stage C



Improvements to two bridges over Highway 169 (TH7 and Cedar Lake Road)

Cedar Lake Road bridge needs to be lengthened to accommodate MnPASS

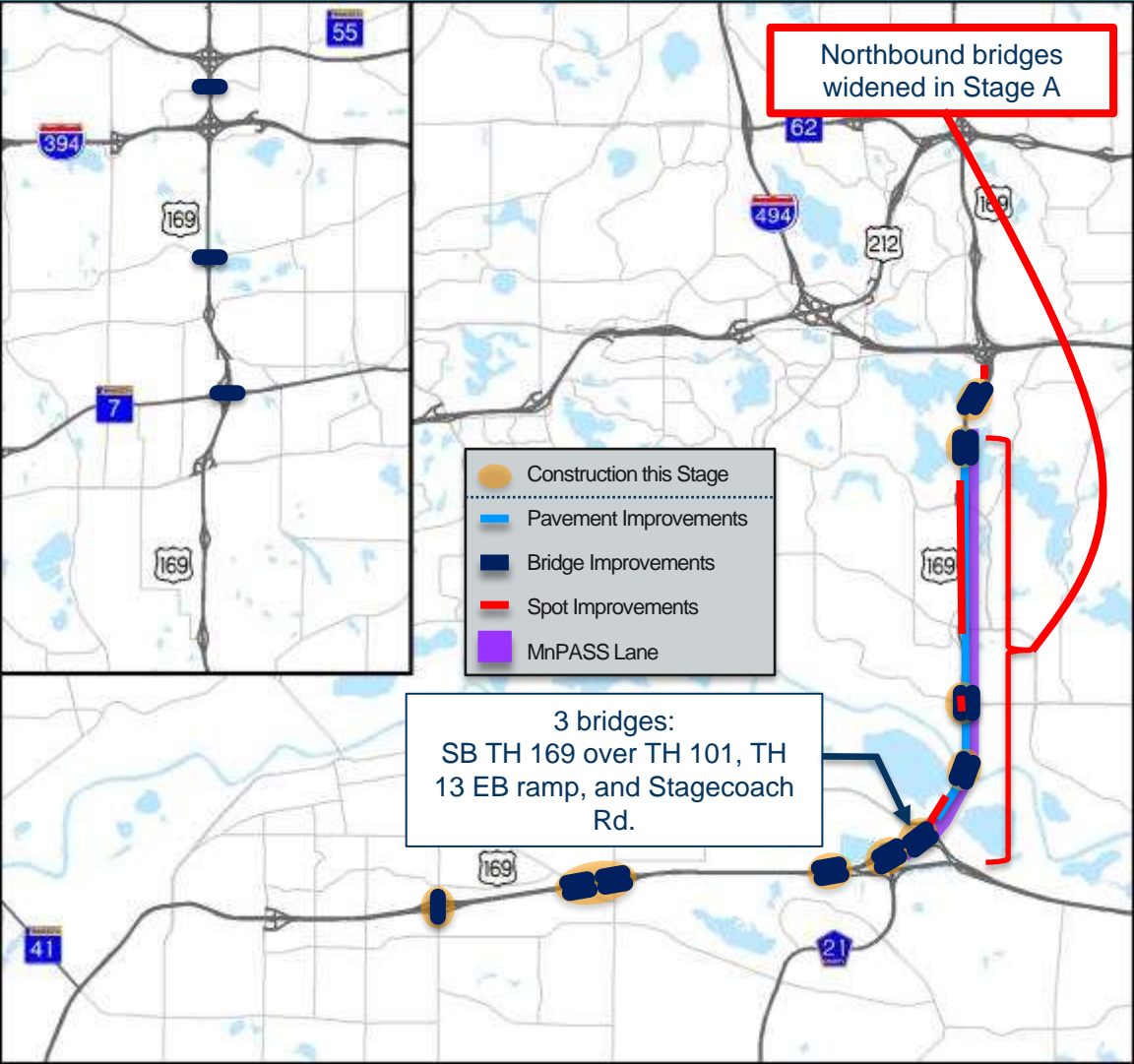
# Stage C Vision Improvements





# Stage D

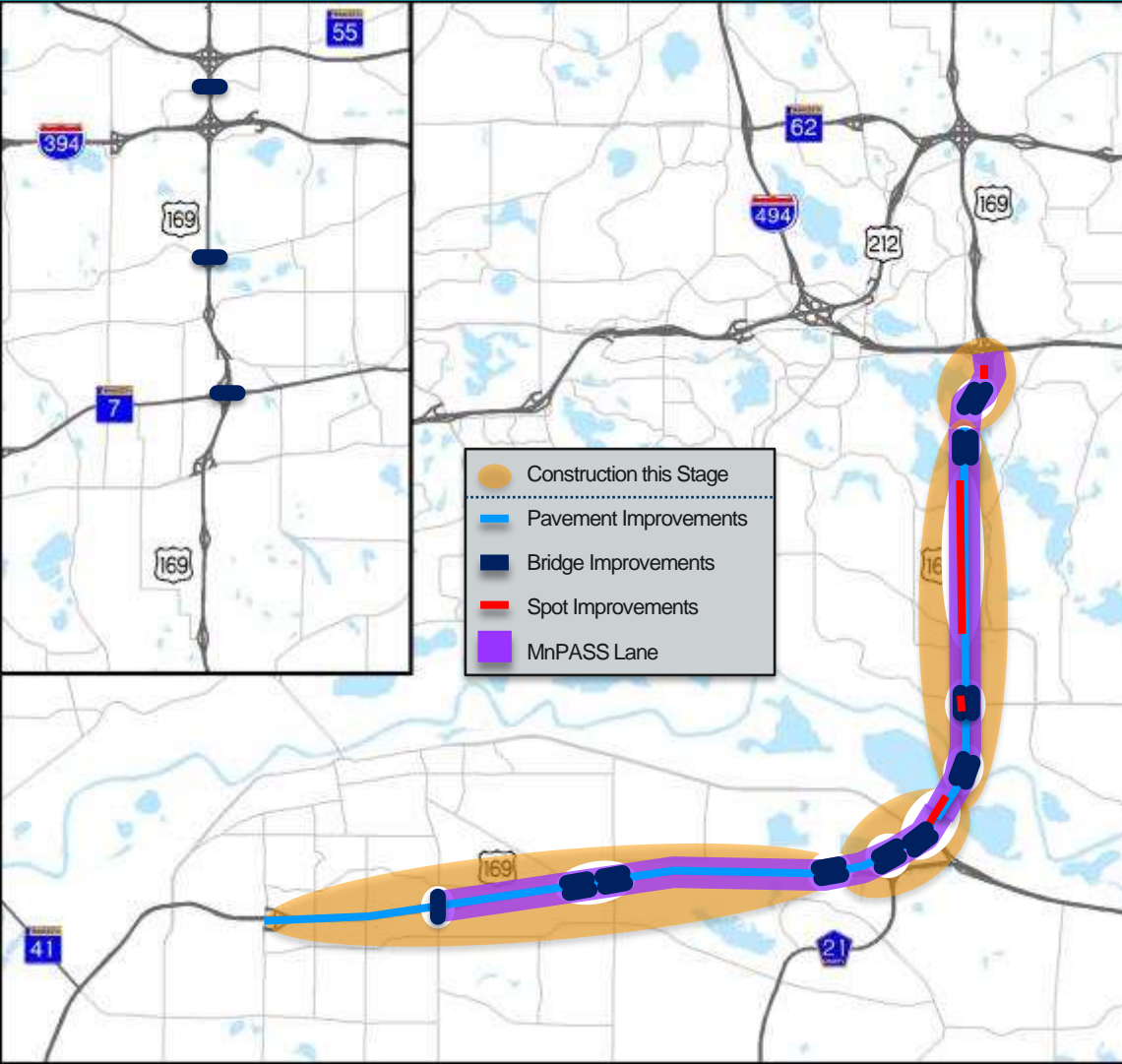
15 bridge widenings and 3 bridge re-overlays.



# Stage E

TH 169 concrete restoration from CSAH 15 to Minnesota River bridge

Complete MnPASS from Marschall Road to I-494



# Implementation Phases

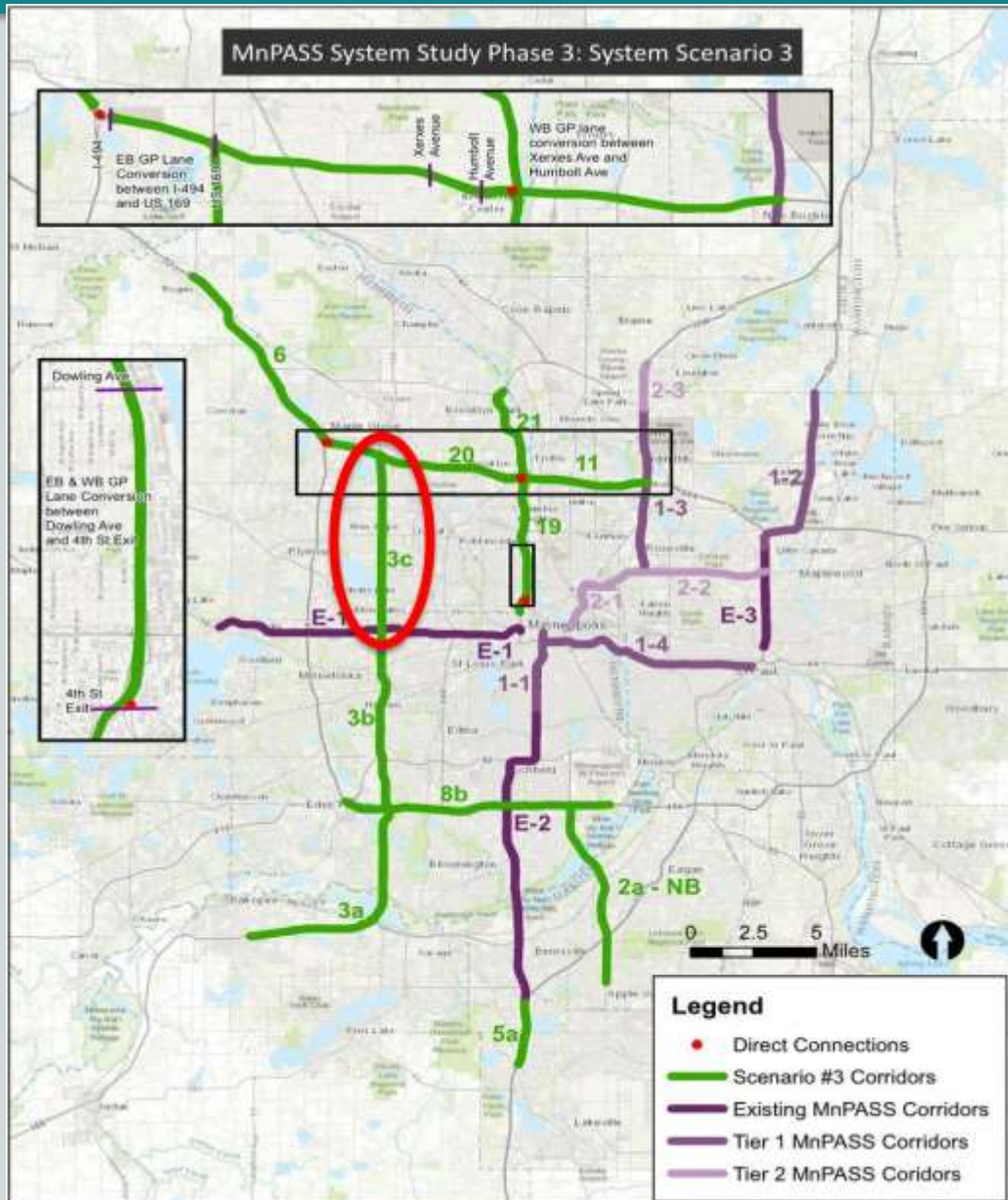


**Phase 1**  
Northbound MnPASS  
and southbound spot  
improvements between  
CH 21 and I-494

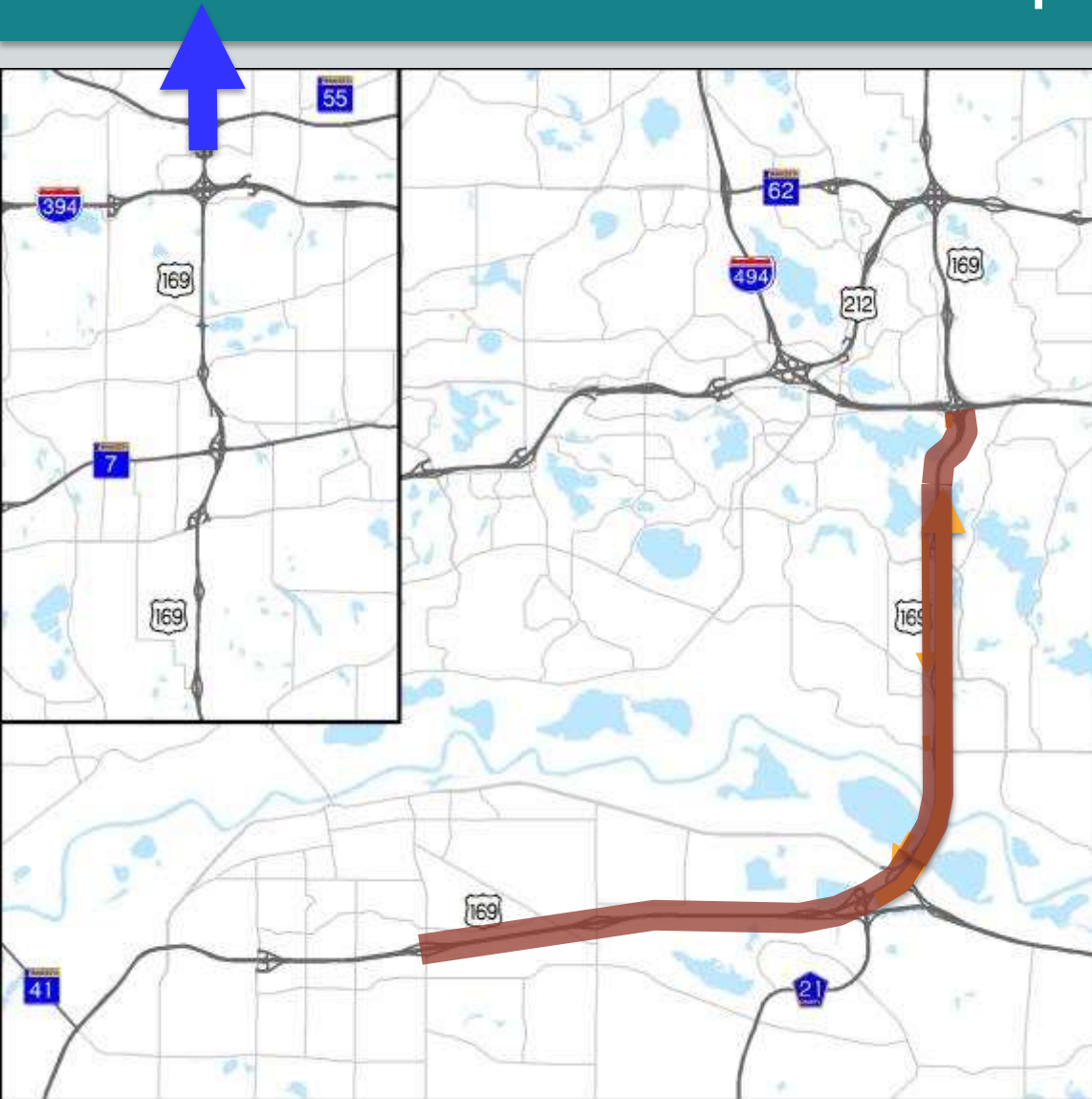
**Phase 2**  
Full MnPASS between  
Marschall Road and  
I-494

# Stage F

MnPASS north of the study area on 169



# Implementation Phases



**Phase 1**  
Northbound MnPASS and southbound spot improvements between CH 21 and I-494

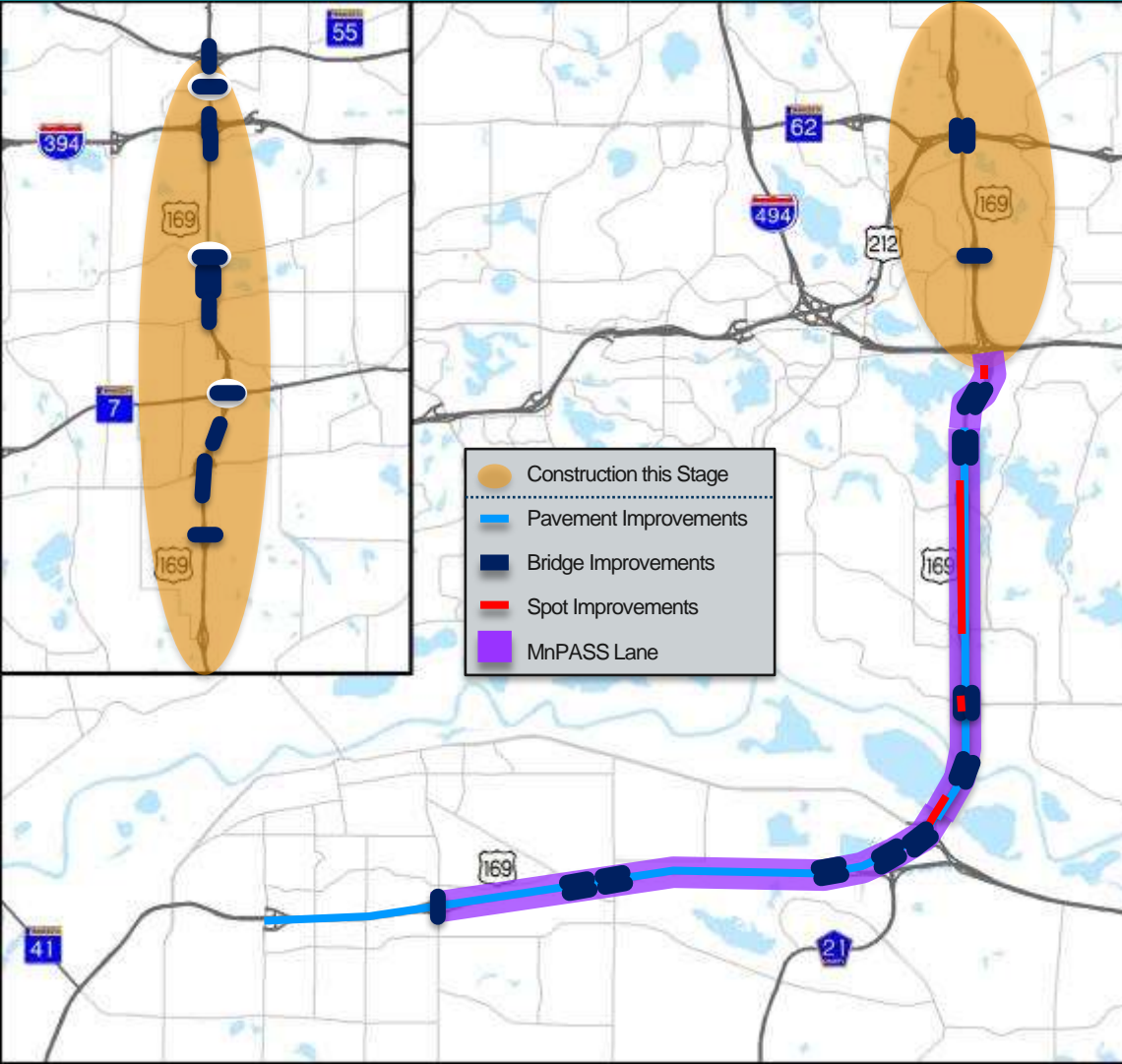
**Phase 2**  
Full MnPASS between Marschall Road and I-494

**Phase 3**  
MnPASS north of Hwy 55

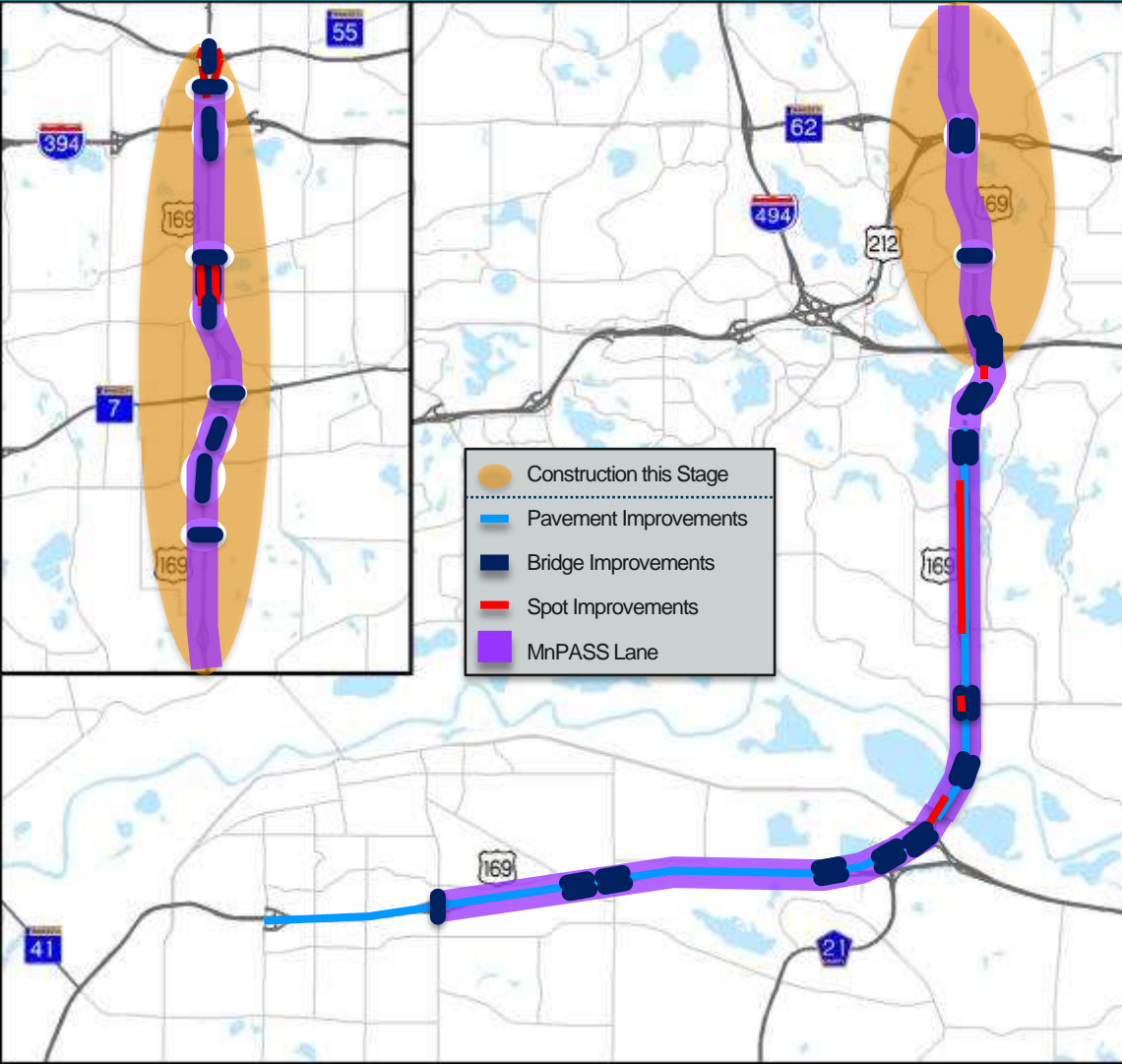
# Stage G

Ten bridge widenings, two bridge redecks

Potential transit station at Minnetonka Blvd interchange



# Stage H



MnPASS on Highway 169 north of I-494

4 bridge widening

Interchange reconfigurations at Betty Crocker Drive and Cedar Lake Road

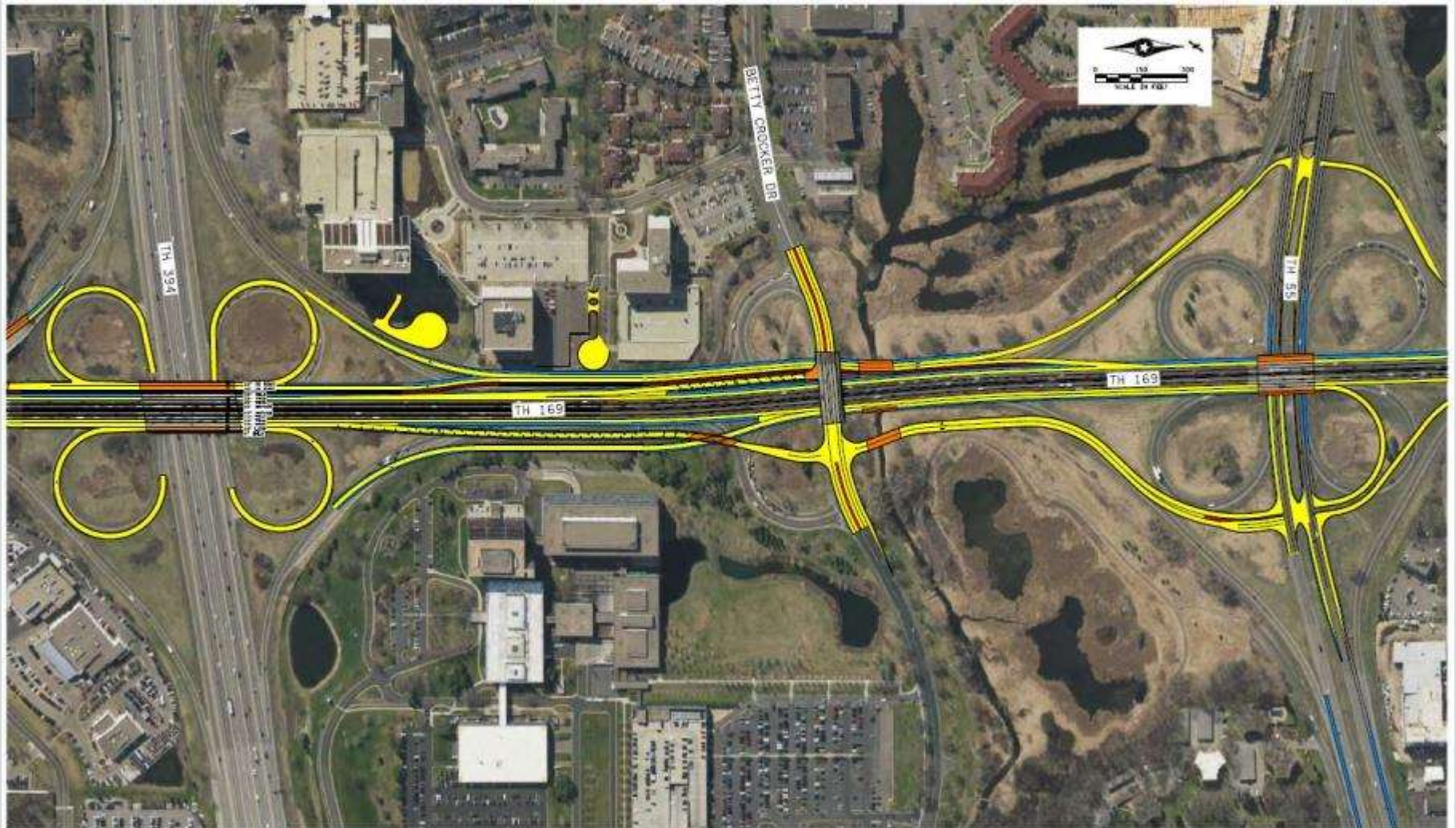
Exits to Betty Crocker Drive provide significant time savings for transit

# Stage H Vision Improvements: Cedar Lake Road

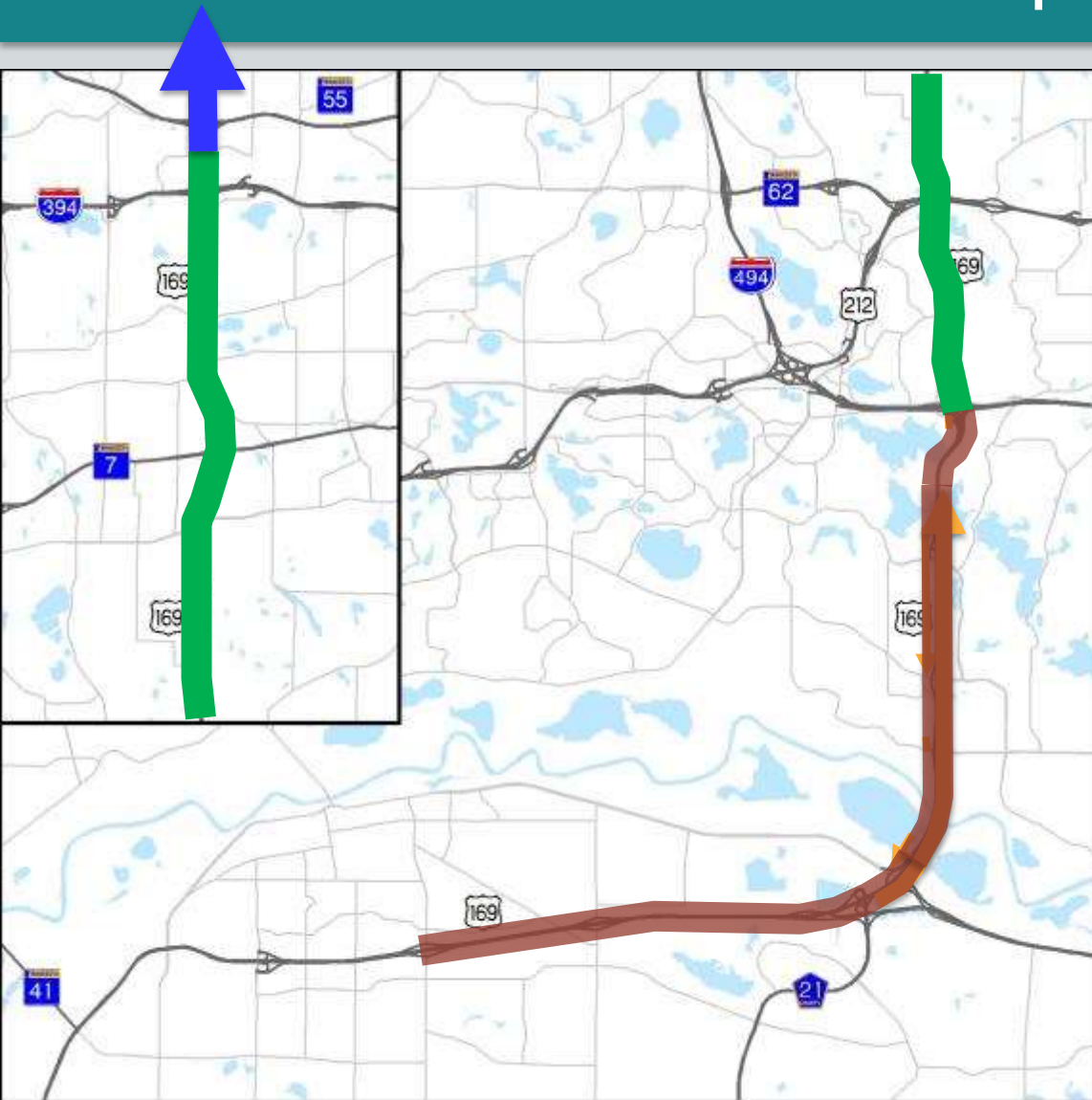




# Stage H Vision Improvements: Betty Crocker Drive



# Implementation Phases



**Phase 1**  
Northbound MnPASS  
and southbound spot  
improvements between  
CH 21 and I-494

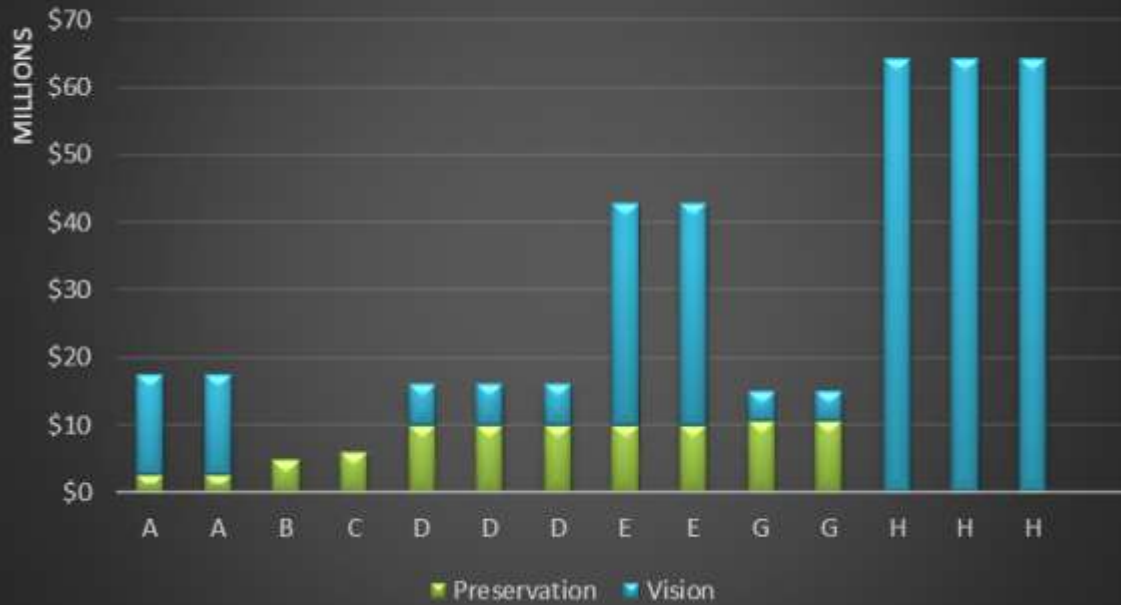
**Phase 2**  
Full MnPASS between  
Marschall Road and  
I-494

**Phase 3**  
MnPASS north of  
Hwy 55

**Phase 4**  
MnPASS between  
I-494 and Hwy 55

# Infrastructure Cost Summary

Annual Expenditure by Phase



Category	Cost
Mobility Investments	\$335M
Preservation Investments	\$85M
2018-2021 Program	\$0
Corridor Investments – Subtotal	\$420M
Cost Synergy	-\$20M
Corridor Investments – Total	<b>\$400M</b>

Stage	A	B	C	D	E	F	G	H	Total
Cost	\$35M	\$5M	\$5M	\$50M	\$85M	TBD	\$30M	\$190M	<b>\$400M</b>

# SCHEDULE AND NEXT STEPS

# Next Steps

- Executive Summary
- Study Complete Spring/Summer 2018