



# I-494: Airport to 169

## MnDOT Metro District

City of Richfield Council Work Session  
December 11, 2018

Andrew Lutaya, P.E. | West Area Engineer

# Agenda

1. Project Location & Overview
  - A. Project Development Goals
2. Prelim Design Phase -1
  - A. Project Purpose & Need
  - B. Results of the Public Engagement on Purpose and Need
3. Prelim Design – Phase 2
  - A. Build Alternatives Analysis Selection
    - I. Statutory Requirements
- II. Propose Access Consolidation at 12<sup>th</sup>, Portland and Nicollet Avenues
- III. Public Engagement Strategies for Access consolidation

# 1. Project Location & Overview

## A. Current Project Development Goals



**Primary goal is to provide long-term and sustainable solutions for all highway users**

### Current Goals

- ☐ Address deficient assets in the corridor i.e. bridges, pavement conditions, retaining walls,
- ☐ Bring to ADA standards pedestrian facilities owned by MnDOT
- ☐ Connect neighborhoods by connecting missing Ped facilities & accommodating facilities on new bridges
- ☐ Maintain/improve transit advantages
- ☐ Receive a planned Highway 77 MnPASS facility onto I-494
- ☐ Access consolidation on 12<sup>th</sup>, Portland & Nicollet Avenue interchanges
- ☐ Develop a phased implementation plan for the corridor expansion vision

# Agenda

1. Prelim Design Phase -1
  - A. Project Purpose & Need
  - B. Results of the Public Engagement on Purpose and Need

# 3. Preliminary Design – Phase 1

## A. Project Purpose & Need



### Projects Purpose & Need Statement

The purpose and need for a project defines the transportation problems or deficiencies that the project will fix.

#### ☐ Purpose of the Proposed Action

- ❖ The purpose is to improve safety, mobility, and travel time reliability, address bridge and pavement conditions, and maintain or improve transit mobility on I-494 between TH 5 and US 169.

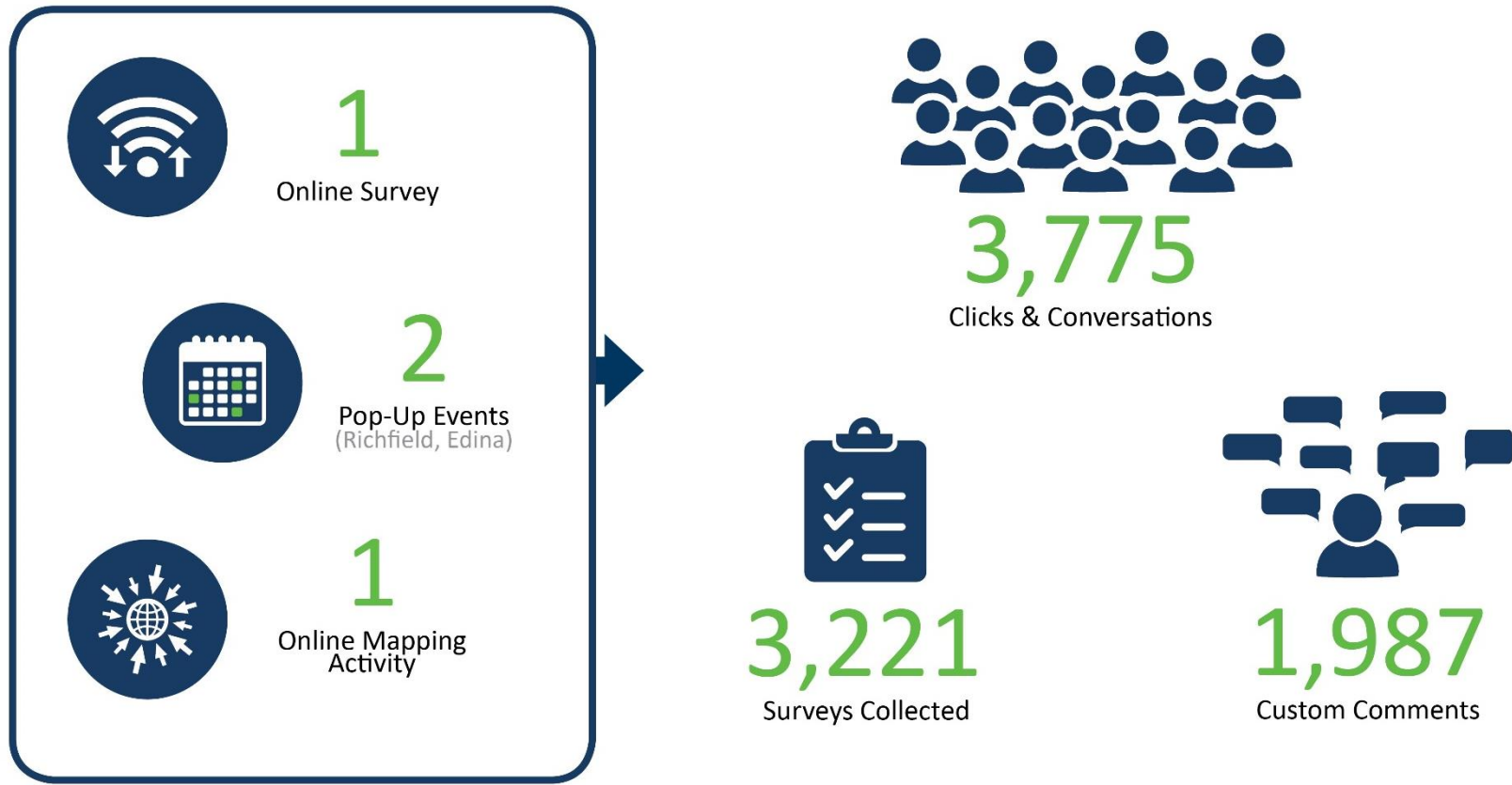
#### ☐ Need for the Proposed Action

- ❖ Vehicle Safety & Vehicle Mobility
- ❖ Pavement & Bridge Conditions
- ❖ Pedestrian & Bicycle Connectivity
- ❖ Stormwater Drainage

# 3. Preliminary Design – Phase 1

## B. Public Engagement efforts

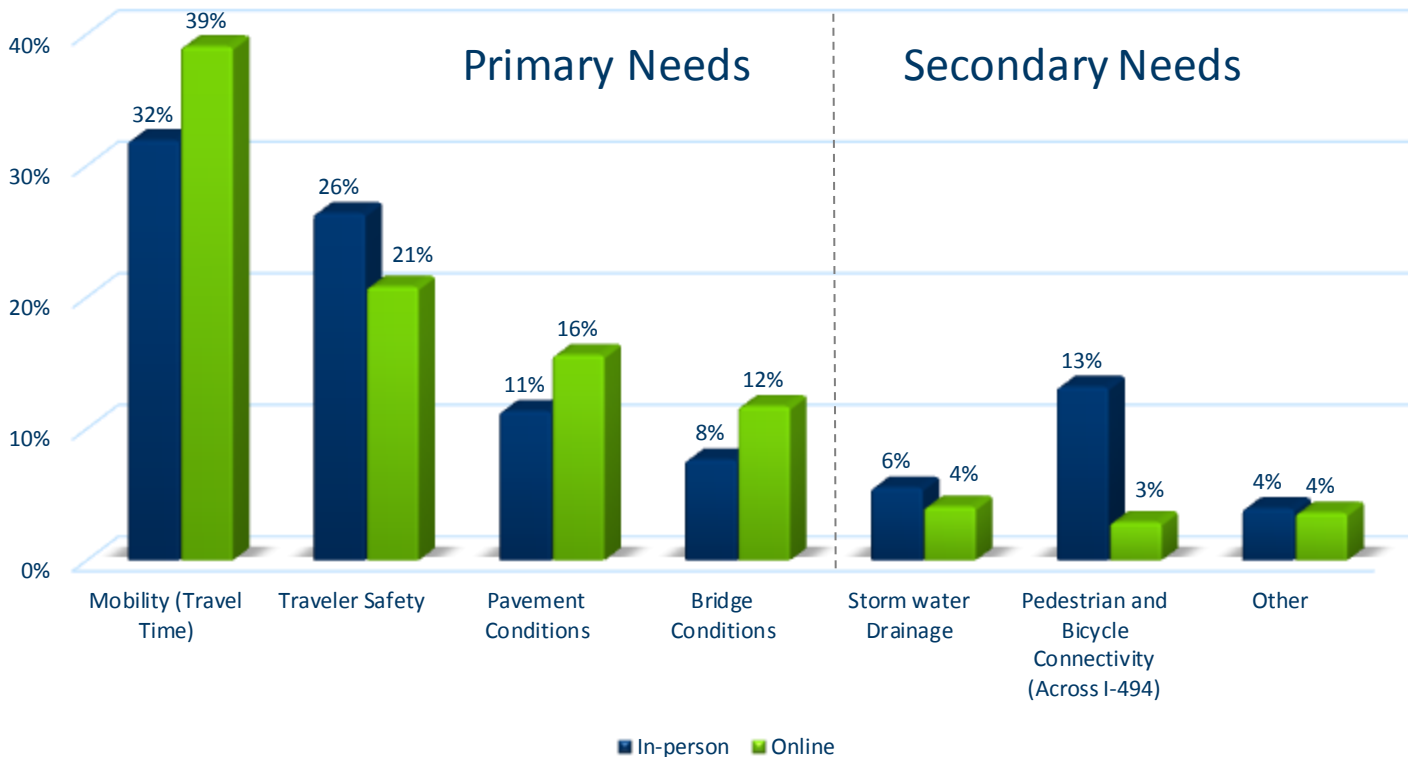
### Result of Public Engagement Effort on Purpose & Need



# 3. Preliminary Design - Phase 1

## B. Public Engagement efforts

**“In your opinion, what is most important for MnDOT to address when redesigning Interstate 494 from the Airport to Hwy 169?  
(Choose up to 3)”**



# 3. Preliminary Design - Phase 1

## B. Public Engagement efforts

### What else we heard...

- “Increase and improve public transportation along the freeway”
- “Increase capacity by adding more general purpose lanes”
- “Improve interchanges and entrance/exit ramps, including consolidation”



# Agenda

## 2. Prelim Design – Phase 2

### A. Build Alternatives Analysis Selection – Access Consolidation

#### I. Statutory Requirements

#### II. Interchange Spacing

##### i. Existing Traffic Concerns

##### ii. Propose Access Consolidation at 12th, Portland and Nicollet Avenues

#### III. Public Engagement Strategies for Access consolidation

## 2. Preliminary Design - Phase 2

### I. Municipal Consent

Minnesota Statutes - 161.162-161.167 : MC triggered for any TH project causing :  
**Alters access, increases or reduces traffic capacity, acquisition of permanent right of way.**

#### Council Support Resolutions Requests

- ☐ During the alternative selection process

#### **Cities of Bloomington & Richfield**

1. 12<sup>th</sup>/Portland/Nicollet – Access Consolidation
2. Phase 1 – 35W/I-494 Interchange
3. R/W Acquisition for both 1 & 2

- ☐ Preferred build alternative selection

#### Municipal Consent Request

- ☐ Preferred build alternative selection

#### **Cities Edina, Eden Prairie - packet**

- Approve capacity increase on corridor

#### **Cities of Bloomington & Richfield - Packet**

1. 12<sup>th</sup>/Portland/Nicollet – Access Consolidation
2. Phase 1 – 35W/I-494 Interchange Rebuild
3. R/W Acquisition for both 1 & 2
4. Capacity increase on corridor

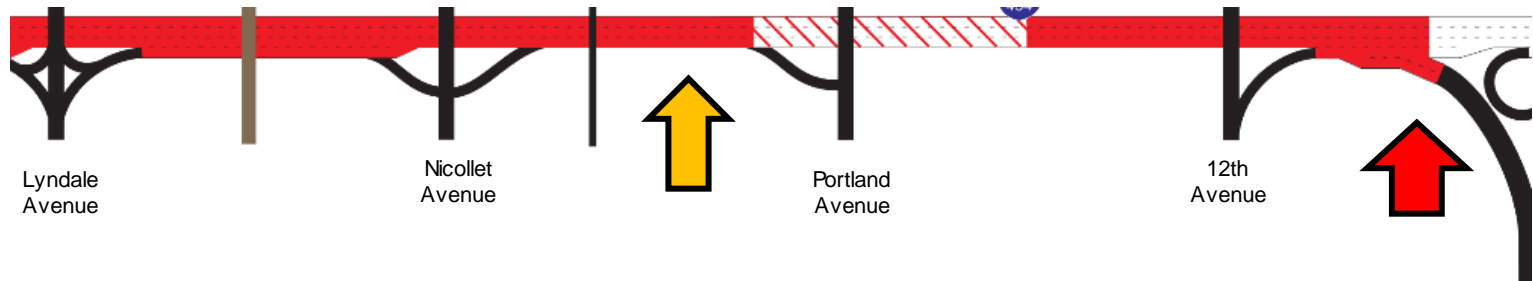
# Existing Interchange Spacing

## ii. Existing Traffic Concerns (Mobility)

### Eastbound I-494

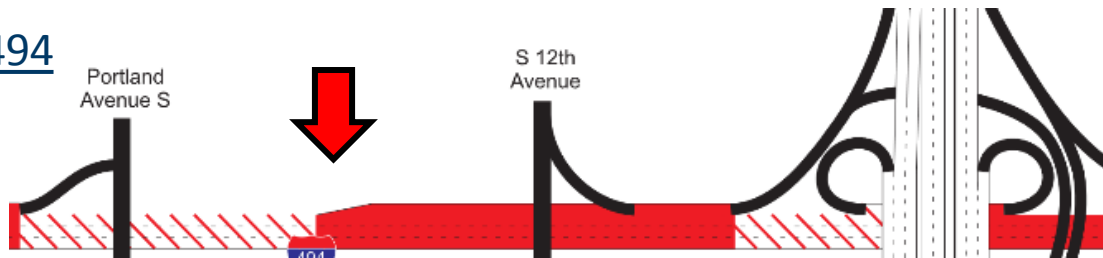
**AM Peak** - No bottleneck issues identified in this location

**PM Peak**

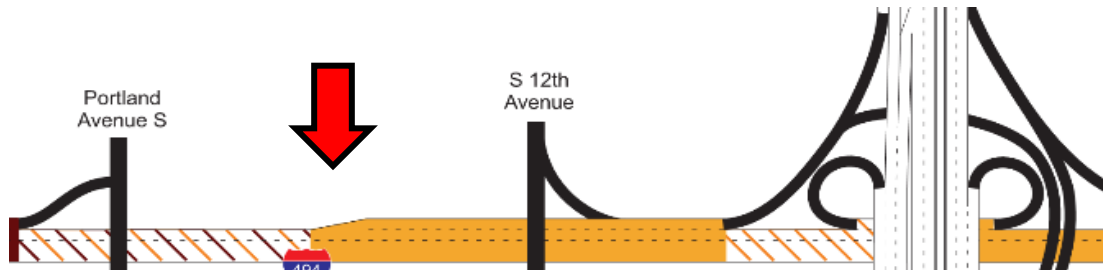


### Westbound I-494

**AM Peak**



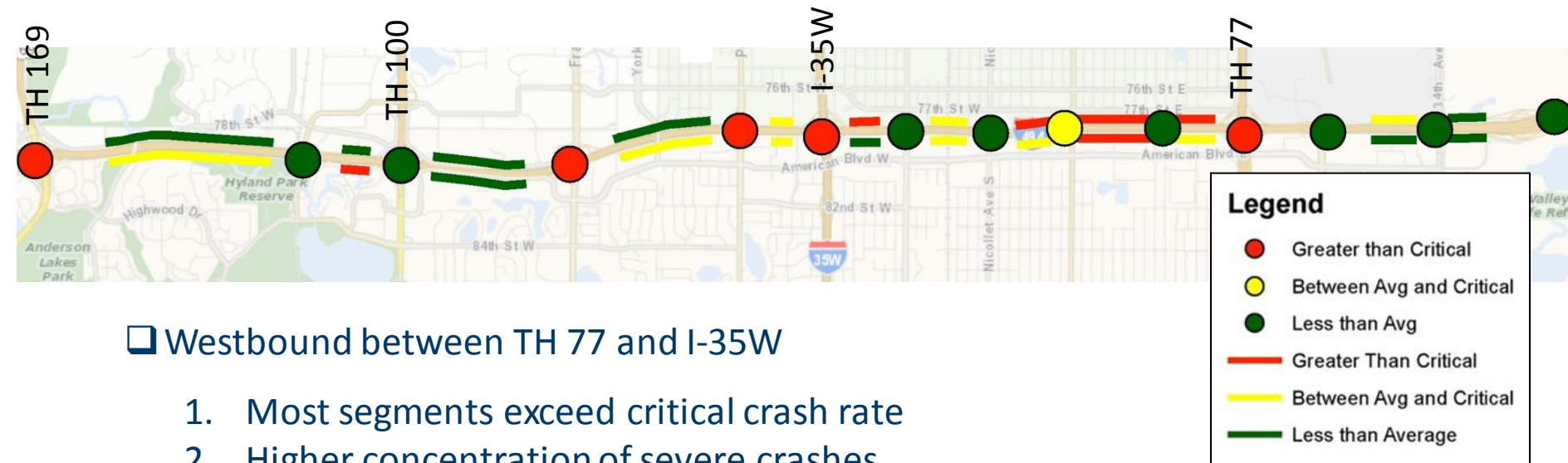
**PM Peak**



# Existing Interchange Spacing

## ii. Existing Traffic Concerns (Safety)

### Interchange and Segment Crash Rates



#### ☐ Westbound between TH 77 and I-35W

1. Most segments exceed critical crash rate
2. Higher concentration of severe crashes

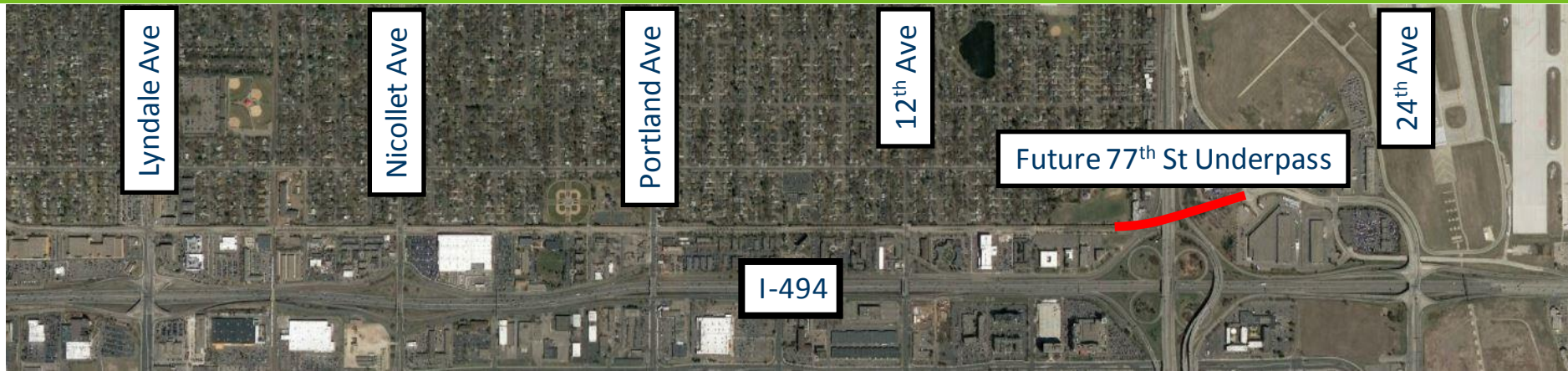
#### ☐ Eastbound segment crash rates tend to increase approaching system interchanges and drop immediately downstream of the interchanges

#### ☐ Rear-end and sideswipe crashes account for 75% of all crashes

#### ☐ I-35W, Penn Avenue, and France Avenue in top 20 crash cost interchanges in state (7th, 13th, and 14th respectively)

# Build Alternatives Analysis

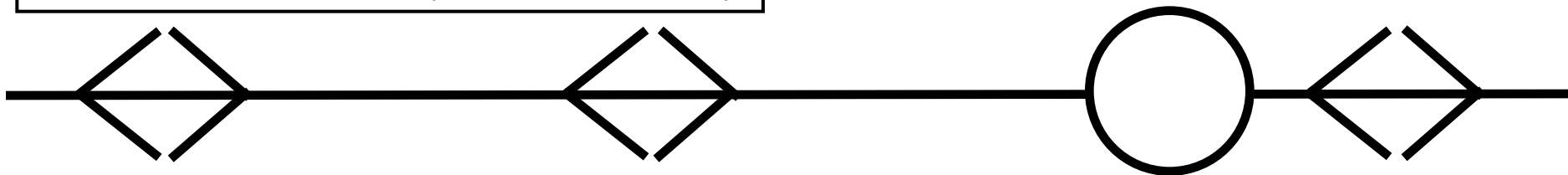
## ii. Proposed Access Consolidation



Existing Configuration



Potential Access Consolidation (Full Access at Portland)



# Build Alternatives Analysis

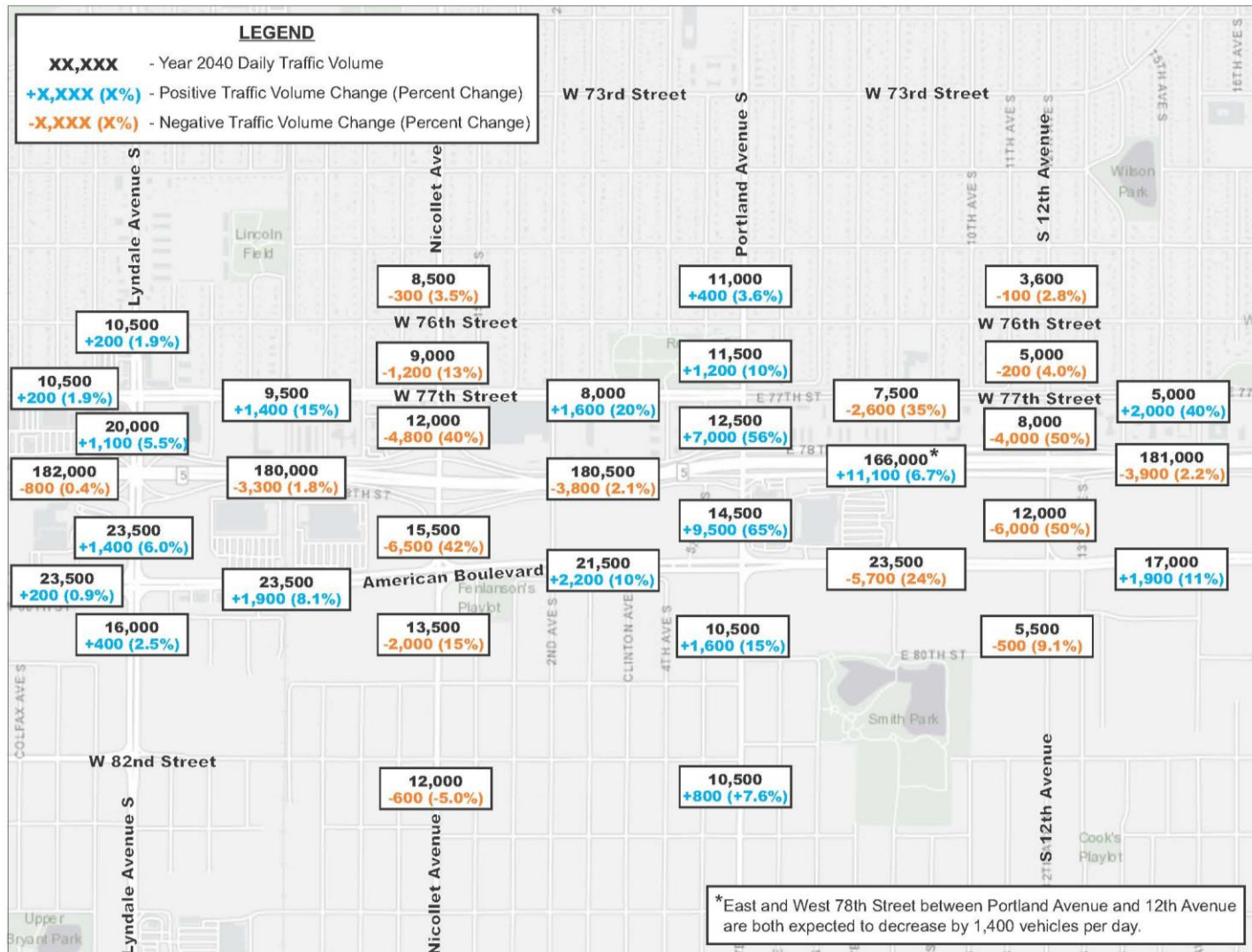
## ii.DRAFT Year 2040 Peak Hour LOS

Intersection	No Build AM	No Build PM	Build AM	Build PM
Lyndale/77 <sup>th</sup>	D	D	D	D
Lyndale/I-494	B	B	B	B
Lyndale/American	D	D	D	D
Portland/77 <sup>th</sup>	D	D	D	E
Portland/I-494	TBD			
Portland/American	D	D	D	E
24 <sup>th</sup> /I-494	B	C	B	D

Note: LOS is calculated using HCS

# Build Alternatives Analysis

## ii.2040 Local Diversion Map



# Build Alternatives Analysis

## III. Proposed Public Engagement

In general, interchanges spaced less than 1 mile apart have greater mobility and safety issues than those with over 1 mile of spacing. The entrances and exits at Nicollet, Portland and 12th Ave S are spaced .5 miles apart and have significant safety and congestion issues, as shown by the high crash rates and levels of congestion

EXISTING CONDITIONS



### Considerations

- Close spacing of entrances and exits is below safety standards and causes safety issues on I-494
- Close spacing of entrances and exits causes congestion on I-494 with increased weaving
- Partial access at Portland Ave and 12th St
- Full access at Nicollet Ave

In this area, a possible solution to safety and congestion issues on I-494 would be to reduce the number of access point on and off the interstate and make improvements to the frontage roads and interchanges.

POSSIBLE SOLUTION



### Considerations

- Access would now meet federal safety standards
- Improved reliability on I-494
- Full interstate access at Portland Ave
- Access removed at Nicollet Ave and 12th Ave S, with improved frontage roads to access Portland Ave entrances and exits
- Increased traffic flow on Portland Ave, with infrastructure improvements to support increase

## 1. Demographics

## 2. Main Question

- Existing Conditions

- Possible Solution

- The Question: Could you support removing access from Nicollet and 12th, and expanding access at Portland?

## 3. Follow-up Questions

# Build Alternatives Analysis

## III. Proposed Public Engagement

1. Could you support removing access from Nicollet and 12th, and expanding access at Portland?

(Note: All other access along I-494 would remain the same) \*

- ☐ Yes
- ☐ No
- ☐ I'm not sure

# Build Alternatives Analysis

## III. Proposed Public Engagement

### Engagement Strategies

#### Underrepresented Populations

- ☐ Multilingual online survey (Spanish) and in-person Open House at Partnership Academy (Spanish interpreter provided)
- ☐ Advertising through direct mailing to low-income properties, flyers at bus stops and local businesses, and distribution through social service organizations

#### Small Businesses and Impacted Residents

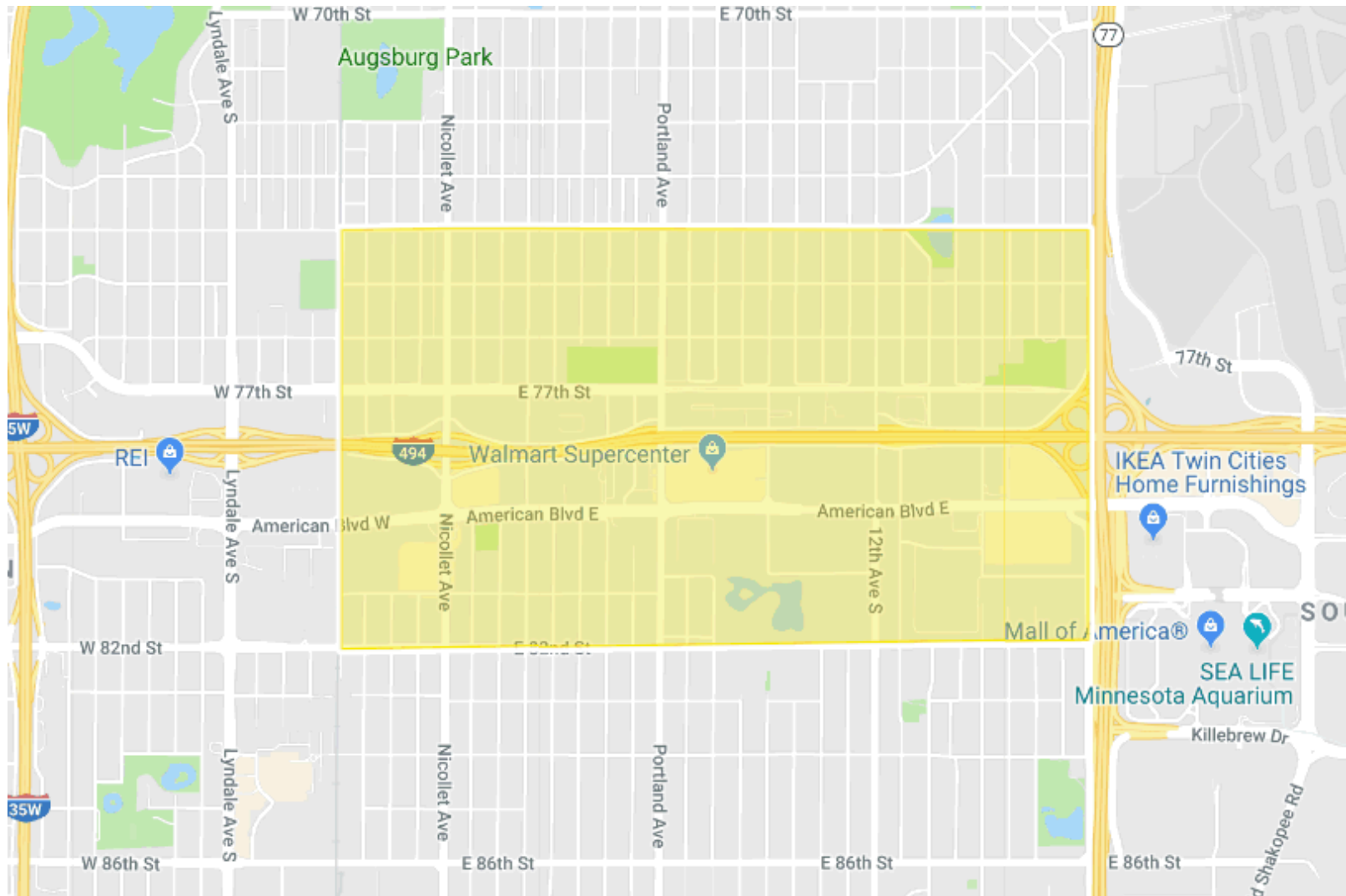
- ☐ Online survey and in-person Open House at Partnership Academy
- ☐ Advertising through direct mailing to properties and property owners within the impacted area, flyers at bus stops and local businesses, and distribution through apartment complex networks

#### Large Businesses

- ☐ Business listening session in partnership with Bloomington and Richfield Chambers of Commerce, online survey, employee lunch-and-learns, individual meeting with large employers

# Build Alternatives Analysis

## III. Proposed Public Engagement



# Thank you!

Andrew Lutaya, P.E

651-234-7563