

CITY OF MINNEAPOLIS

Hennepin/First Transportation Study

Study Advisory Committee
May 2, 2016

Meeting Agenda

- Introductions (5 Mins)
 - Agenda Review
 - Meeting #2 Minutes
 - Study Questions
- Study Overview (5 Mins)
- Traffic Analysis (15 Mins)
- Evaluation Summary and Conceptual Layouts (60 Mins)
 - Overview
 - One-Way Concepts Discussion
 - Two-Way Concepts Discussion
- Next Steps (5 Mins)



Study Overview

- Evaluate existing transportation system and range of alternatives along the Hennepin and First Avenue corridors
- City leading in coordination with County, Metro Transit, and MnDOT
- Examine one-way, two-way, and hybrid roadway configurations
- Identify potential roadway concepts and document impacts (pros and cons) associated with potential implementation
- Consideration for quality of life, access, safety, connectivity, and mobility for all modes
- Currently no improvements are programmed, nor has any funding been identified for such improvements*

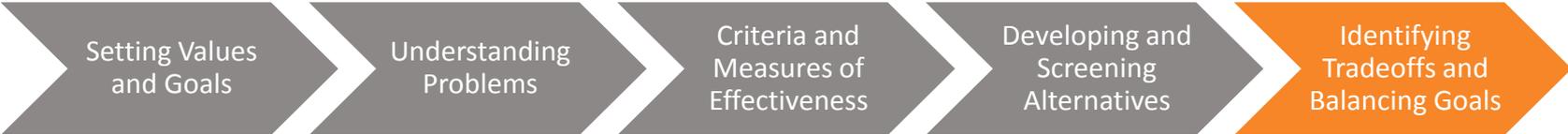
*MnDOT Projects:
University/4th Ped Improvements (2016-18)
Central Avenue Bridge (2019-20)



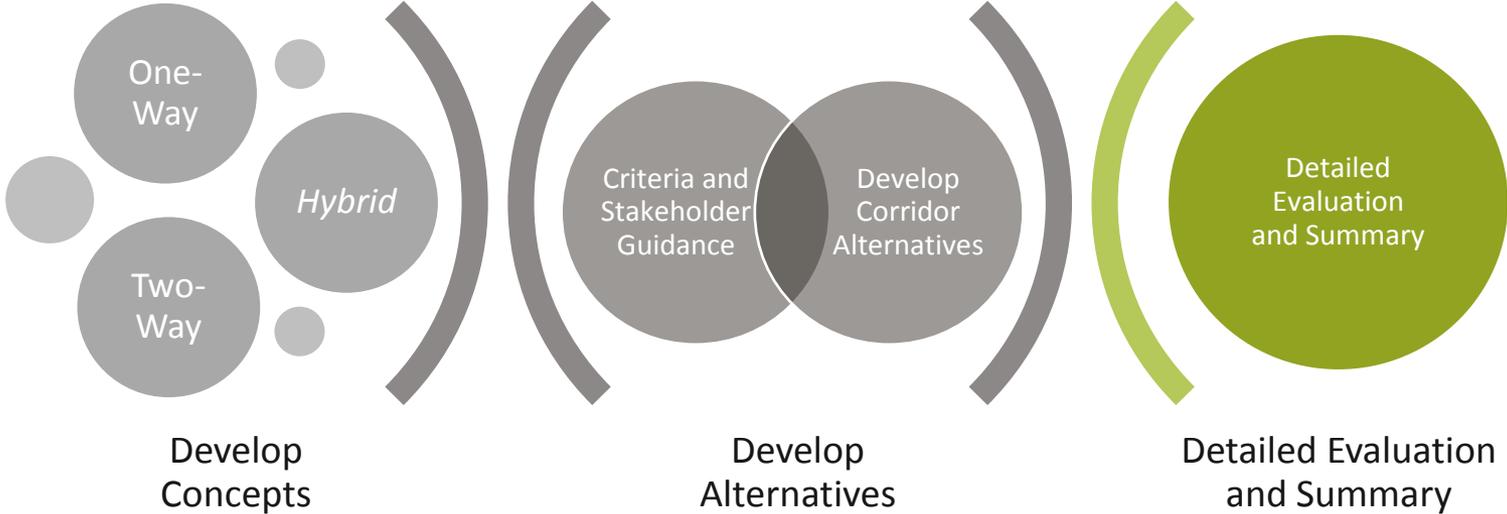
Source: Nicollet Island-East Bank
Neighborhood Association

Study Overview

Approach



Process



Concepts Moving Forward

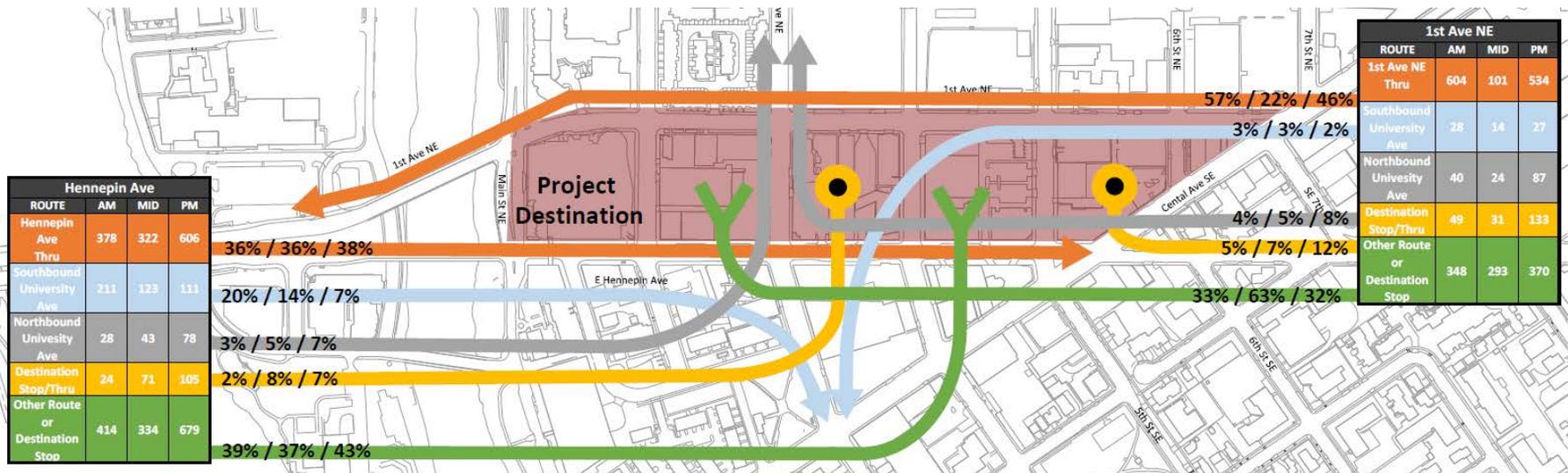
- **Leading One-Way Concepts**
 - 1-1B: Two Lanes (Transit Right Side)
 - 1-2B: Three Lanes with Off-Peak Parking (Streetcar Left Side)
 - 1-2C: Three Lanes (Transit Right Side)
- **Leading Two-Way Concepts**
 - 2-1A: Three Lanes (Interim Re-striping)
 - 2-1B: Three Lanes and One-Sided Parking (Transit Right Side)
 - 2-1C: Three Lanes and Two-Sided Parking (Transit Right Side)



Traffic Patterns

- **Origin-Destination Data Collection:**

- Collected during summer of 2015
- Necessary element of two-way conversion studies
- Prominent directional/peaking characteristics
- Different patterns than Hennepin and First Avenues in downtown CBD



Traffic Analysis

- **Detailed Simulation Model**
 - Transit schedules and stop locations
 - Bicycle and Pedestrian interactions
- **Concepts Modeled:**
 - Year 2015:
 - Existing
 - 2-Way Concept (2-1A, 2-1B, 2-1C)
 - Year 2035:
 - Existing
 - 1-Way Two Lanes w/ Right Side Streetcar (1-1B)
 - 1-Way Three Lanes w/ Left Side Streetcar (1-2B)
 - 1-Way Three Lanes w/ Right Side Streetcar (1-2C)
 - 2-Way Concept (2-1A, 2-1B, 2-1C)

Traffic Analysis: Operations

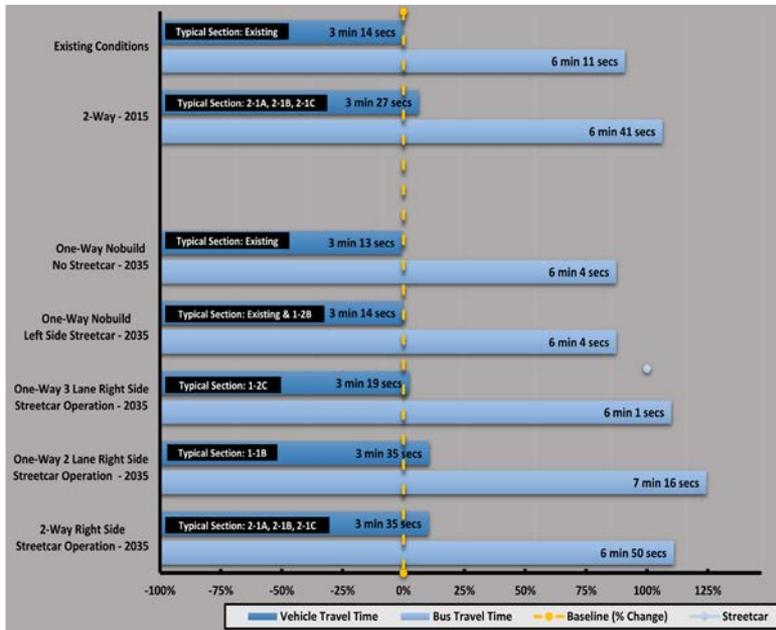
- **Morning Peak and Mid-Day/Off-Peak:**
 - Acceptable operations at all intersections
 - Minimal difference in travel time across all concepts
 - Southbound morning peak better for “metering” traffic, intersection spacing, no bottleneck, and no 3-legged intersections
 - Two lanes on 1st Ave provide acceptable operations during peak directional period



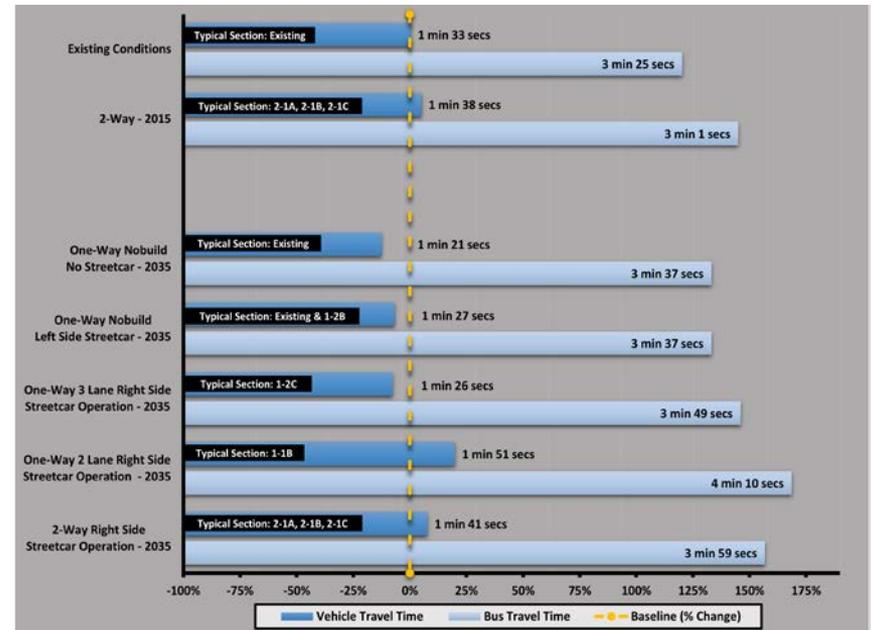
Traffic Analysis: Travel Time

- **Morning Peak:**
 - Minimal difference in travel time across all concepts
 - Transit travel times (bus/streetcar) comparable

Hennepin Ave (First St S to 8th St SE)



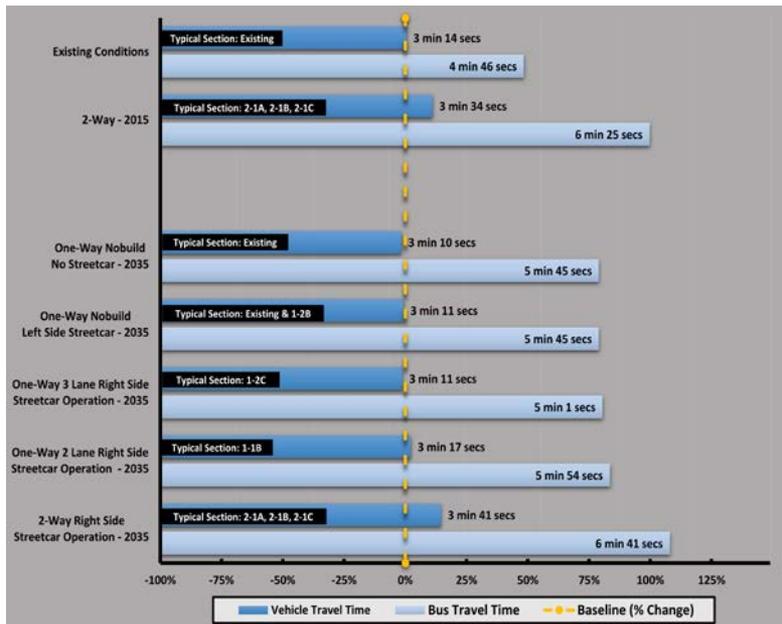
First Ave (Central Ave to Main St NE)



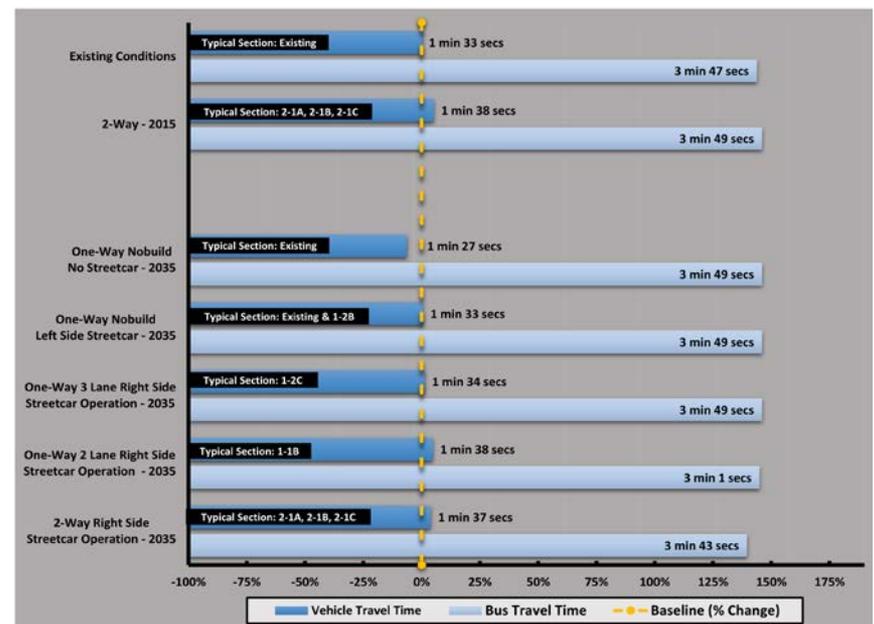
Traffic Analysis: Travel Time

- **Mid-Day/Off-Peak:**
 - Minimal difference in travel time across all concepts
 - Transit travel times (bus/streetcar) comparable

Hennepin Ave (First St S to 8th St SE)



First Ave (Central Ave to Main St NE)



Traffic Analysis: Operations

- **Afternoon Peak:**

- Hennepin Ave (eastbound) is dominant direction
- Limited bridge crossings from downtown (i.e., “Disconnected Grid”)
- One-Way 3-Lane (2015 and 2035) Concepts: Acceptable operations at all intersections
- Two-Way (2015) Concept: Acceptable operations at all intersection

Expected Congestion:

- One-Way 2-Lane and Two-Way (2035) Concepts: Long delays at Hennepin/ Main intersection
- Hennepin/Main intersection represents bottleneck into Northeast
- Higher demand out of downtown, travel concentrated at same period

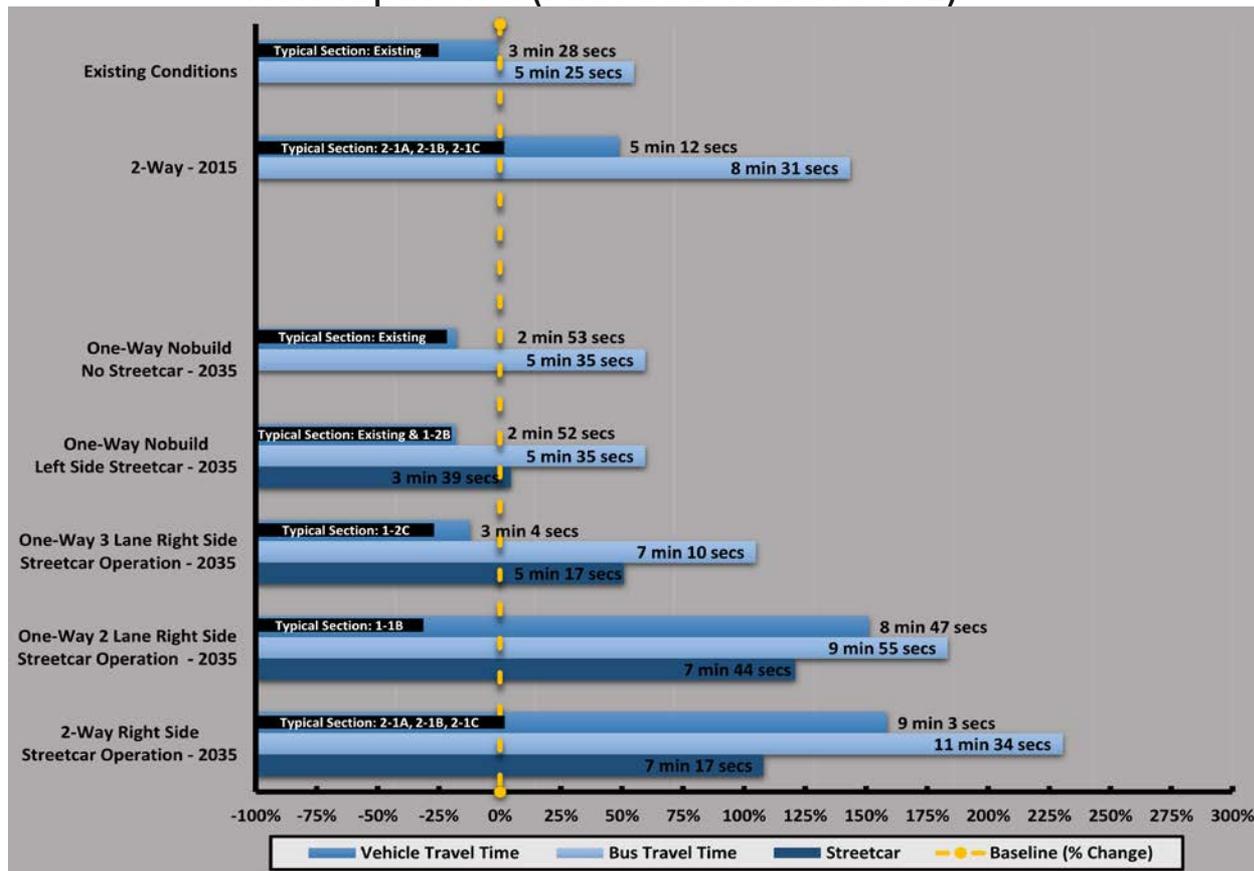


Traffic Analysis: Travel Time

- **Afternoon Peak:**

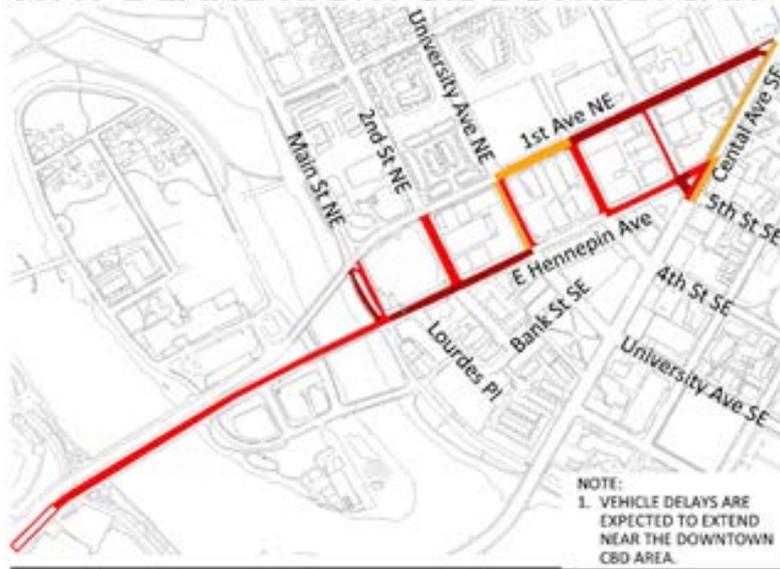
- Travel times provide better indication of congestion along corridors
- Hennepin Ave with 2-Lanes: Transit (bus and streetcar) travel times double and motor vehicle travel time triple (queues across bridge)

Hennepin Ave (First St S to 8th St SE)



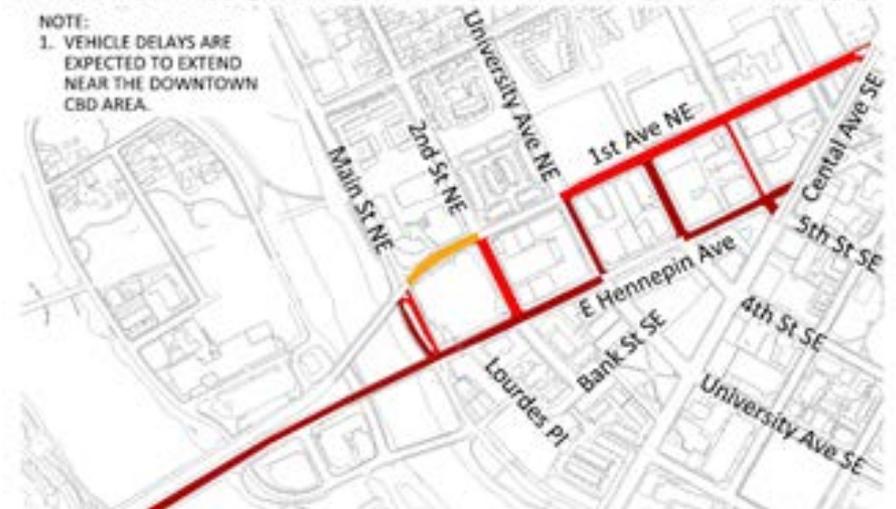
Traffic Analysis: Travel Time

ONE-WAY 2 LANE RIGHT SIDE STREETCAR - 2035



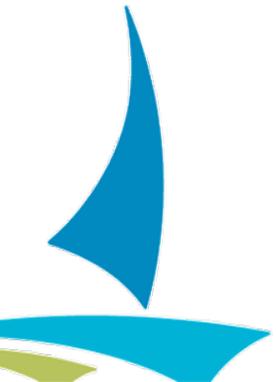
Speed	
All Intervals	
Color	mph
	9 to 12
	6 to 9
	< 6

2-WAY RIGHT SIDE STREETCAR - 2035



Concept Development

- **Designs are conceptual and for planning purposes only:**
 - Do not include (but does not preclude) conversion of 4th Avenue to two-way operations *or* modifications to Hennepin/Central/5th intersection
 - Lourdes Place two-way restoration independent of Hennepin Ave design
 - Require more detailed engineering and interagency coordination
 - Input needed from residents, businesses, neighborhood, advisory committees, etc.
 - Continued coordination with Streetcar EA Study



Concept Modification

Hennepin Avenue: One-Way from 5th St SE to 7th St SE

Pros:

- + Potential for additional green space (Major Strategic Goal – NIEBNA SAP)
- + Expansion of space for pedestrian and bicycle infrastructure (Major Strategic Goal – NIEBNA SAP)
- + Supports improved and more reliable transit services (Top Priority – NIEBNA SAP)
- + Prioritizes non-motorized safety and mobility
- + Narrows street and reduces intersection footprint
- + Reduces conflicting movements
- + Access may be addressed during redevelopment

Cons:

- Establishes short one-way segment that may be confusing for visitors
- Does not align with neighborhood expectations (Vision and Strategic Action – NIEBNA)
- Increases route circuitry for local access

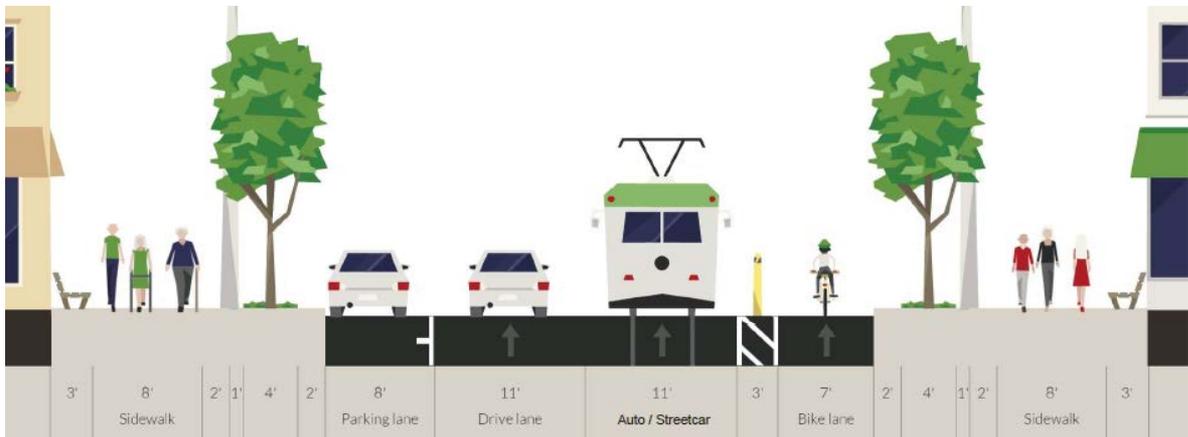


One-Way Concepts

Concept 1-1B Two-Lanes

Summary

- Pedestrian Realm: 20'
- Bicycles: Protected Bike Lane
- Transit: Streetcar Compatible
- ▲ Travel Lanes: 2
- ▲ Parking: One Side
- Implementation: Reconstruction



■ More Space

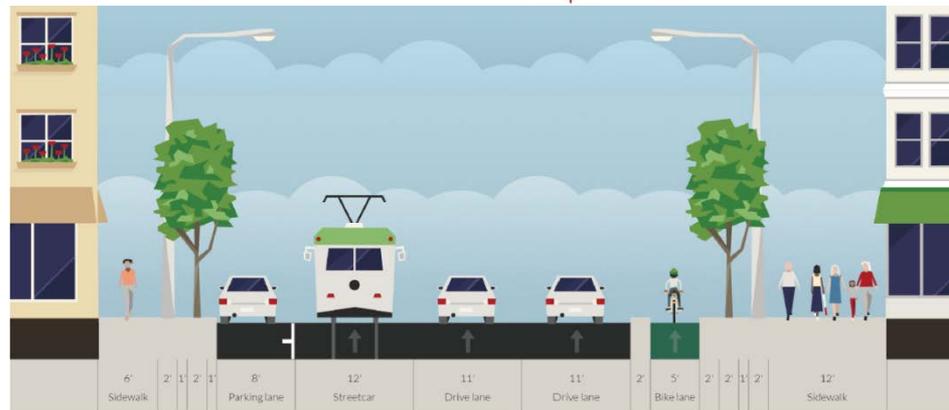
▲ Less Space

○ No Change

★ Varies

One-Way Concepts

Concept 1-2B Flexible Peak/Off-Peak Lane



Summary

- ★ Pedestrian Realm: 12' – 19'
- Bicycles: Protected Bike Lane
- Transit: Streetcar Compatible
- ★ Travel Lanes: 2 Off-Peak, 3 Peak
- ★ Parking: One Side Peak, Two Sides Off-Peak

Implementation: Retrofit and Reconstruction

■ More Space

▲ Less Space

○ No Change

★ Varies

One-Way Concepts

Concept 1-2C Three Lanes



Summary

- ★ Pedestrian Realm: 12' – 19'
 - Bicycles: Protected Bike Lane
 - Transit: Streetcar Compatible
 - Travel Lanes: 3
 - ▲ Parking: One Side
- Implementation: Retrofit and Reconstruction

■ More Space

▲ Less Space

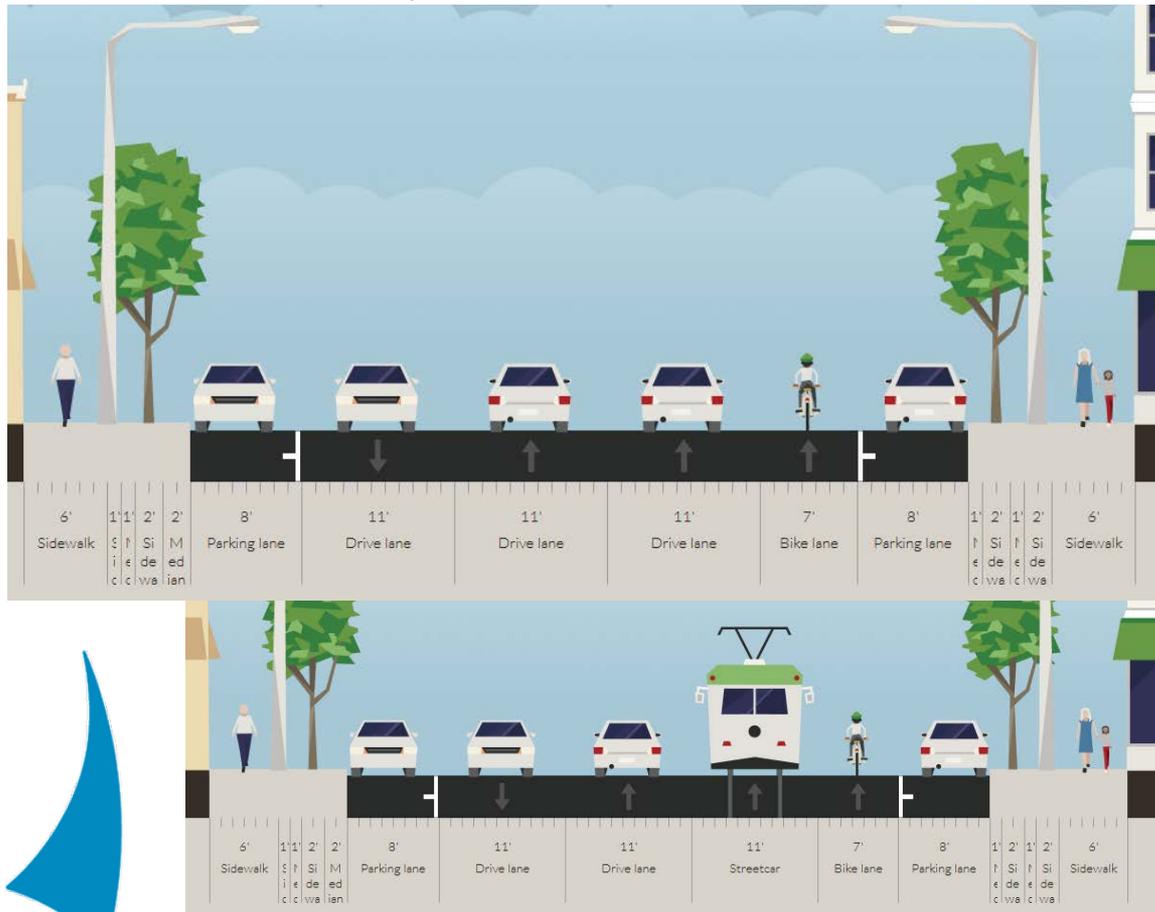
○ No Change

★ Varies

Two-Way Concepts

Concept 2-1A

Two-Way: Three-Lanes (Smaller-Scale)



Summary

- Pedestrian Realm: 12'
 - Bicycles: Standard Bike Lane
 - Transit: Streetcar Compatible
 - Travel Lanes: 3
 - Parking: Both Sides
- Implementation: Retrofit and Reconstruction

■ More Space

▲ Less Space

○ No Change

★ Varies

Two-Way Concepts

Concept 2-1B Three-Lanes



Summary

- ★ Pedestrian Realm: 12' – 19'
- Bicycles: Protected Bike Lane
- Transit: Streetcar Compatible
- Travel Lanes: 3
- ▲ Parking: One Side
- Implementation: Reconstruction

■ More Space

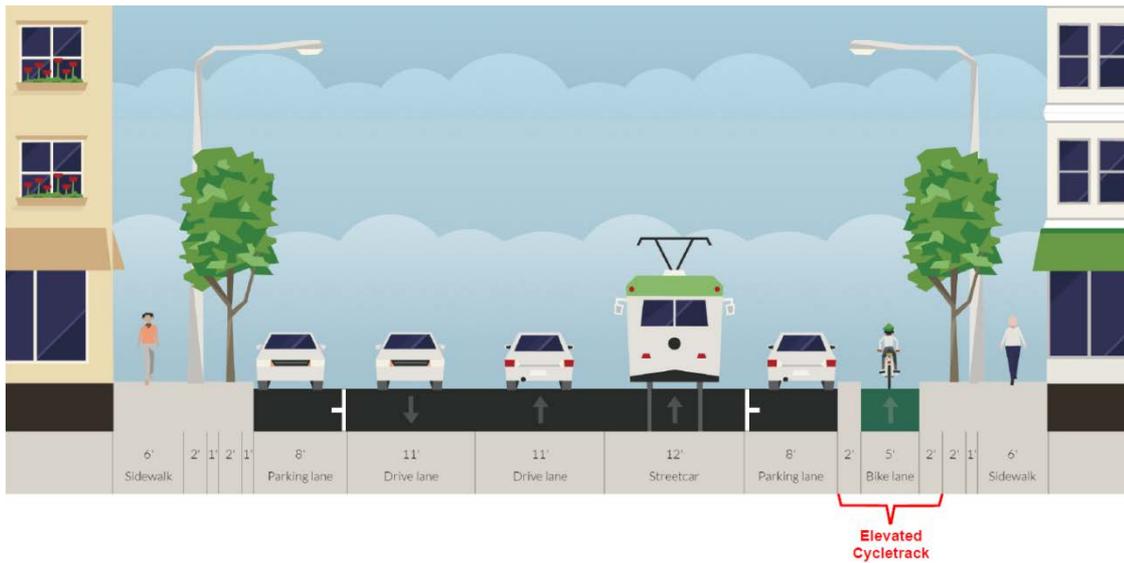
▲ Less Space

○ No Change

★ Varies

Two-Way Concepts

Concept 2-1C Three-Lanes Two Sided Parking



- ★ Pedestrian Realm: 11'
- Bicycles: Protected Bike Lane
- Transit: Streetcar Compatible
- Travel Lanes: 3
- Parking: Both Side
- Implementation: Reconstruction



■ More Space

▲ Less Space

○ No Change

★ Varies

Next Steps

- Prepare Final Documentation
 - Finalize report that **will not** include recommendations
 - Provide guidance for upcoming MnDOT projects and ongoing Streetcar EA
- Internal Agency Meetings
- External Agency Meetings
 - Neighborhood, NEBA, and Advisory Committee Outreach

