TCAC Meeting #04

December 11, 2012

Meeting Purpose and Expectations

- Purpose
  - Respond to Committee comments on draft results of Initial Screening
    - Downtown alignment
  - Describe elements that define alternatives in detail
  - Define street design considerations and priorities

Alternatives Recommended for Detailed Development

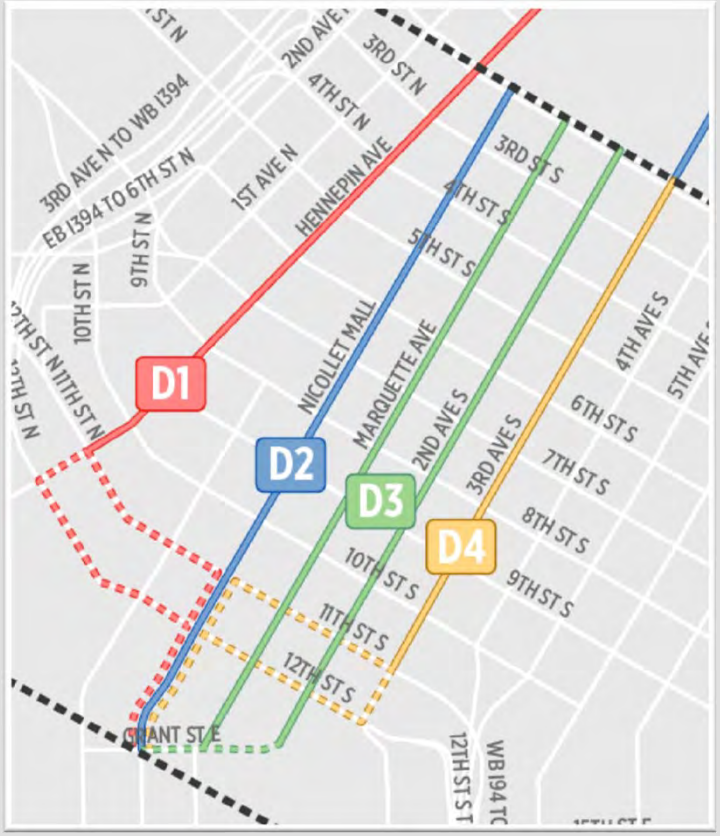
- Modes

Local Bus Good	Enhanced Bus Best	Modern Streetcar Best

- Alignment
  - Two alignment options across River and near Lake Street
  - Discussion of Nicollet Mall as preferred
- Alternatives for Detailed Evaluation
  - Using alignment shown, for the following modes:
    - No-Build (primarily local bus)
    - Enhanced Bus
    - Modern Streetcar

Segment D: Downtown

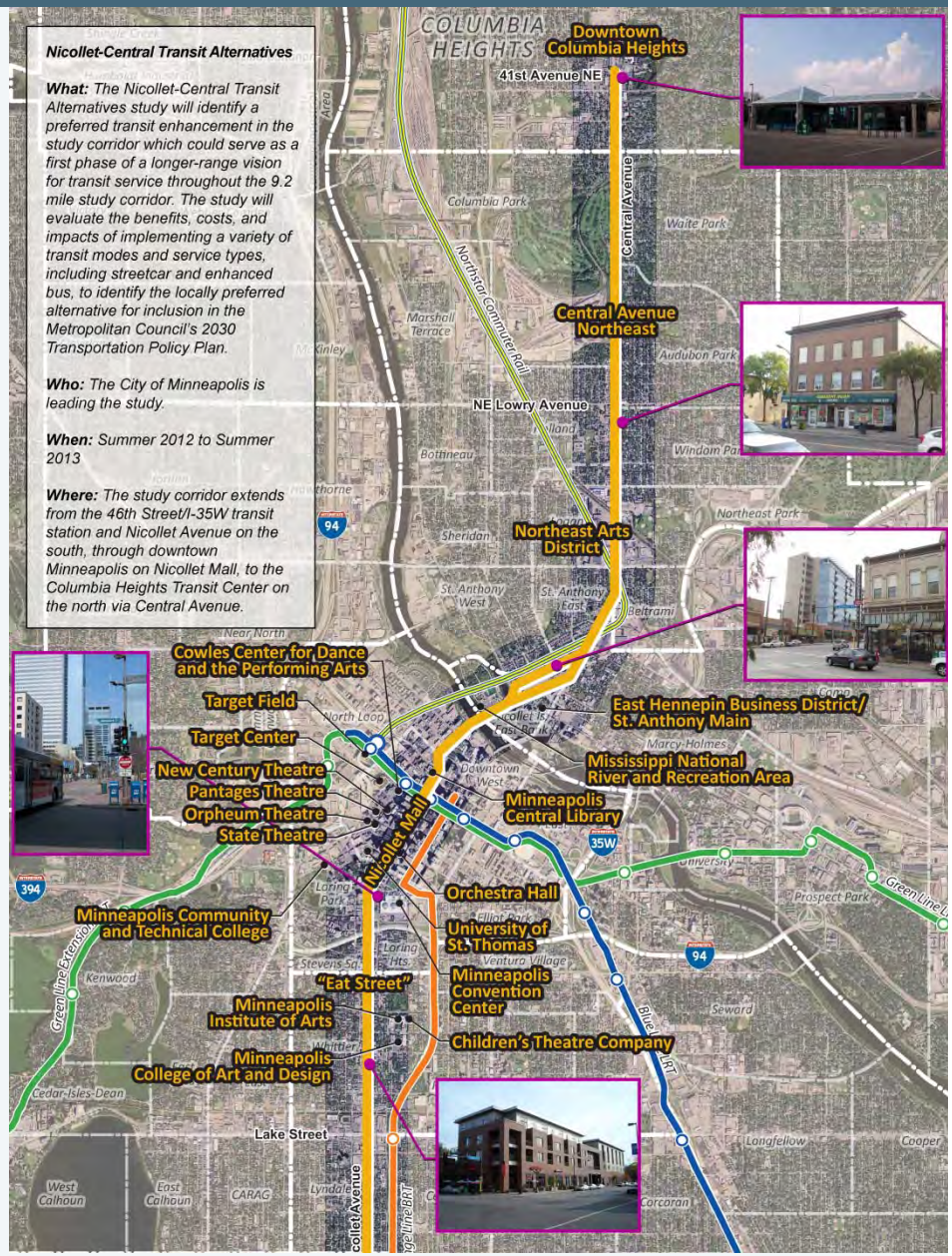
Based on feedback from November T/CAC meeting, following is a summary of the rationale for moving forward with the Nicollet Mall alignment.



	D1	D2	D3	D4
Connects activity centers	Good	Good	Good	Good
Compatible with local and regional plans	Fair	Best	Fair	Fair
Community and stakeholder sentiment	Fair	Good	Fair	Fair
Effective alignment that provides for direct access	Fair	Best	Fair	Fair
Consistent with existing community character	Good	Best	Fair	Fair
Overall Rating	Fair	Best	Fair	Fair

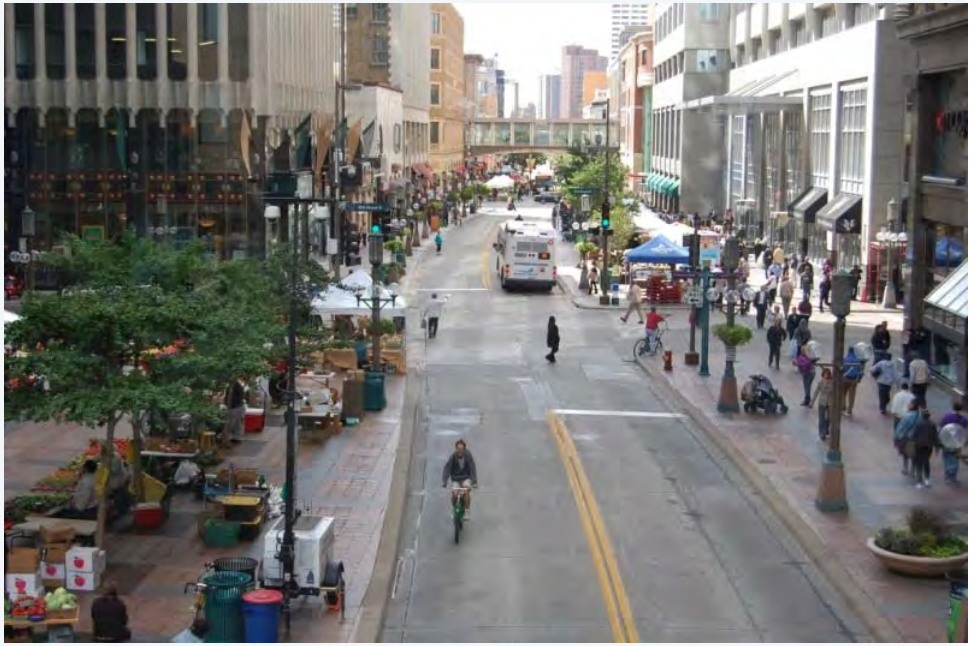
Nicollet Mall Connects Activity Centers

- Downtown
  - Shopping, dining, office towers, Convention Center
    - Gaviidae, Macys, IDS
    - Target, US Bancorp, Xcel Energy
- South of Downtown
  - Whittier, Kingfield, Lyndale



Concerns – Deliveries and Access

- No changes to existing operations/functions are anticipated
  - Continue to occur using side streets, alleys

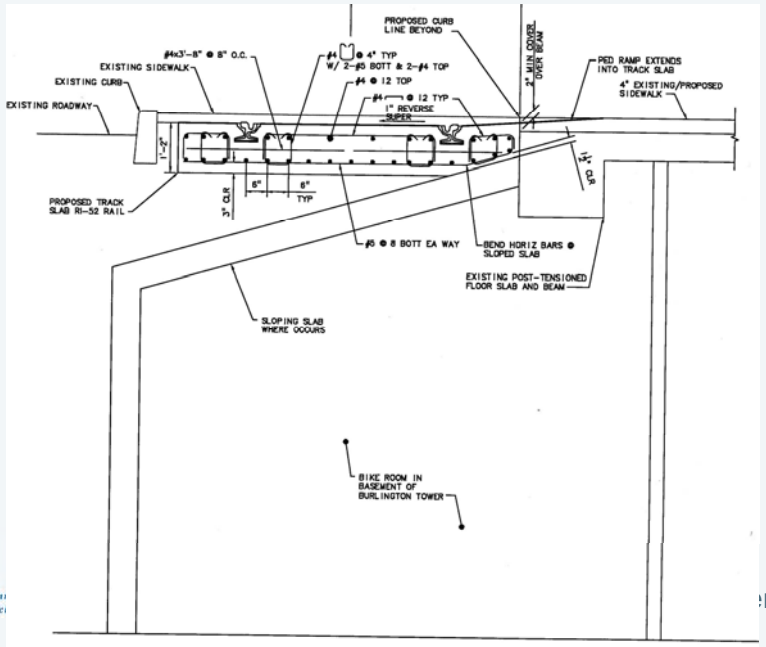


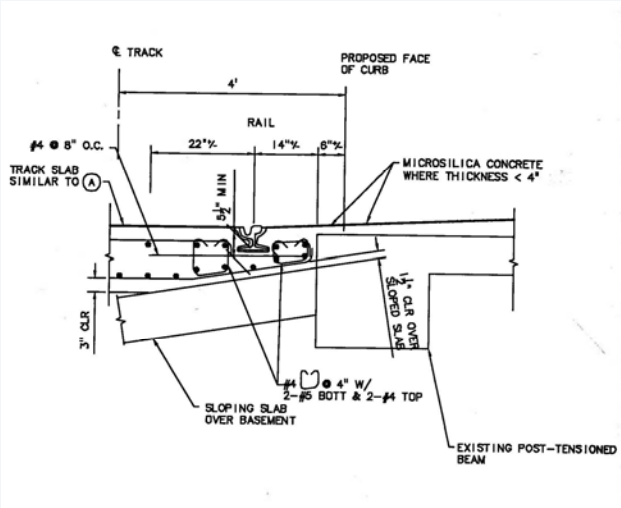
Concerns – Areaways

- Streetcar projects routinely deal with areaways
- City routinely deals with areaway vacations as part of street projects
- City ordinance: If areaway is in the public right-of-way, City has authority to abandon or partially abandon if it conflicts with public good project

Concerns – Areaways

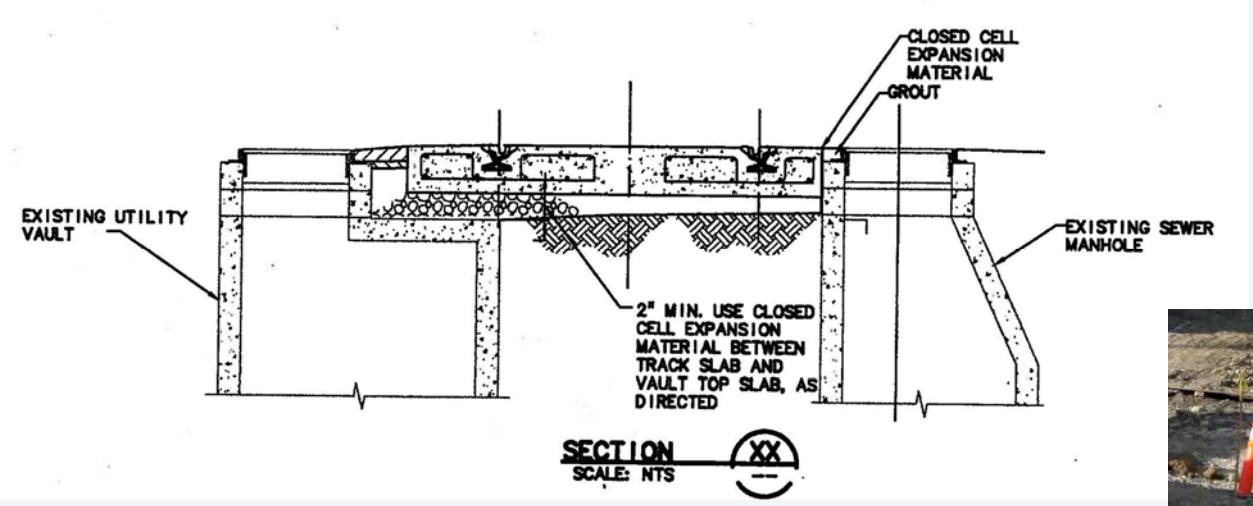
- Streetcar loading similar to semi-trailer (HS-20)
- Track slab typically 12” deep (can be as shallow as 8”)





Concerns – Utilities

- Maintain access to vaults and manholes



Concerns – Utilities

- Spanning capability of track slab

Elements of Defining Alternatives

Elements of Defining Alternatives

For both Enhanced Bus and Streetcar Alternatives:

- Runningway
- Vehicles
- Stops and Amenities
- Real-Time Signs
- Fare Collection
- Stop Locations and Service and Operations
  - Still under discussion

Information for Enhanced Bus is based on Metro Transit's 2012 ATCS.

Enhanced Bus Characteristics

- Runningway
  - Likely mixed operations for most of corridor
  - Bus lanes on Nicollet Mall
  - Opportunity for bus lanes on Central north of Lowry?

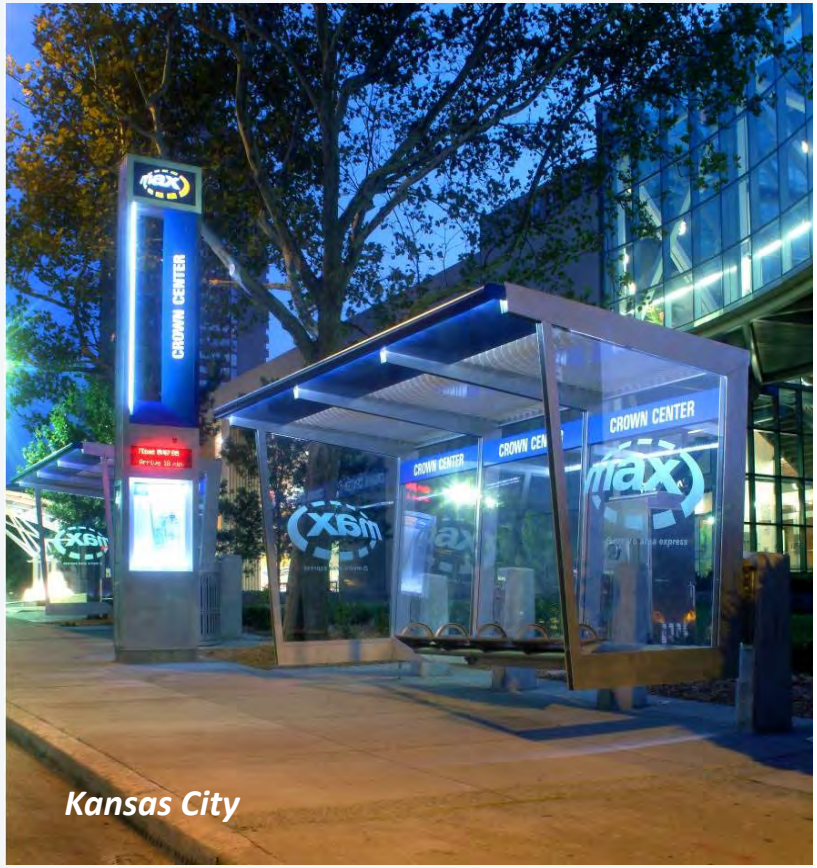
Enhanced Bus Characteristics

- Vehicles
  - Depending on demand and frequency
  - 60-foot articulated hybrid-electric bus

Source: Metro Transit, Arterial Transitway Corridors Study.

Enhanced Bus Characteristics

- Stops and Amenities
  - Near-level boarding
  - Curbside with some bump-outs
  - Shelters are custom-designed to distinguish service from others
  - Will stops be shared with other bus routes?



Kansas City

Source: Metro Transit, Arterial Transitway Corridors Study.

Enhanced Bus Characteristics

- Real-Time Signs

Cleveland HealthLine

Kansas City MAX

At Mall of America Station

Source: Metro Transit, Arterial Transitway Corridors Study.

Enhanced Bus Characteristics

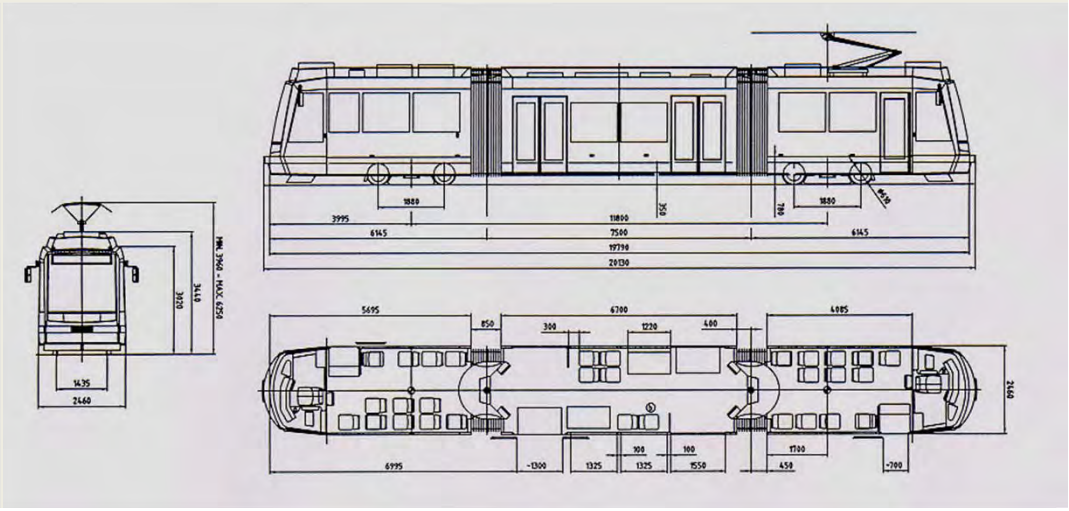
- Fare Collection
  - Proof of Payment with Smart Card Option

Source: Metro Transit, Arterial Transitway Corridors Study.

Streetcar Characteristics

Streetcar Characteristics

- Operations/Maintenance Facility
  - Roughly two- to three-Acre Site
  - For fleet of 10 to 15 vehicles
- 66 feet long, 8 feet wide, 11 feet and 3inches tall
- Doubled-ended, double-sided, 3 sections
- 30 seats; total capacity 115 passengers
- Space for wheelchairs, bikes



Streetcar – Vehicle

- Modular Design
  - Length-width
  - 1 or 2 cabs
  - Doors
  - Interior
  - Track gauge
  - Voltage
  - Others
    - End Styling
- Common vehicle shown
  - Portland, Seattle

Streetcar – Stop Design

- Side Platform – Portland

Streetcar – Stop Design

- Side Platform - Seattle

Streetcar – Stop Design

- Side Platform Integrated with Sidewalk - Seattle

Streetcar – Stop Design

- Center Platform

Portland

Tacoma

Streetcar – Bike Interface

- Right Lane Alignment

Streetcar – Bike Interface

- Side Platform

Streetcar – Maintenance Facility

- Roughly two- to three-acre site
  - Accommodate fleet of 10 to 15 vehicles

Streetcar - Substations

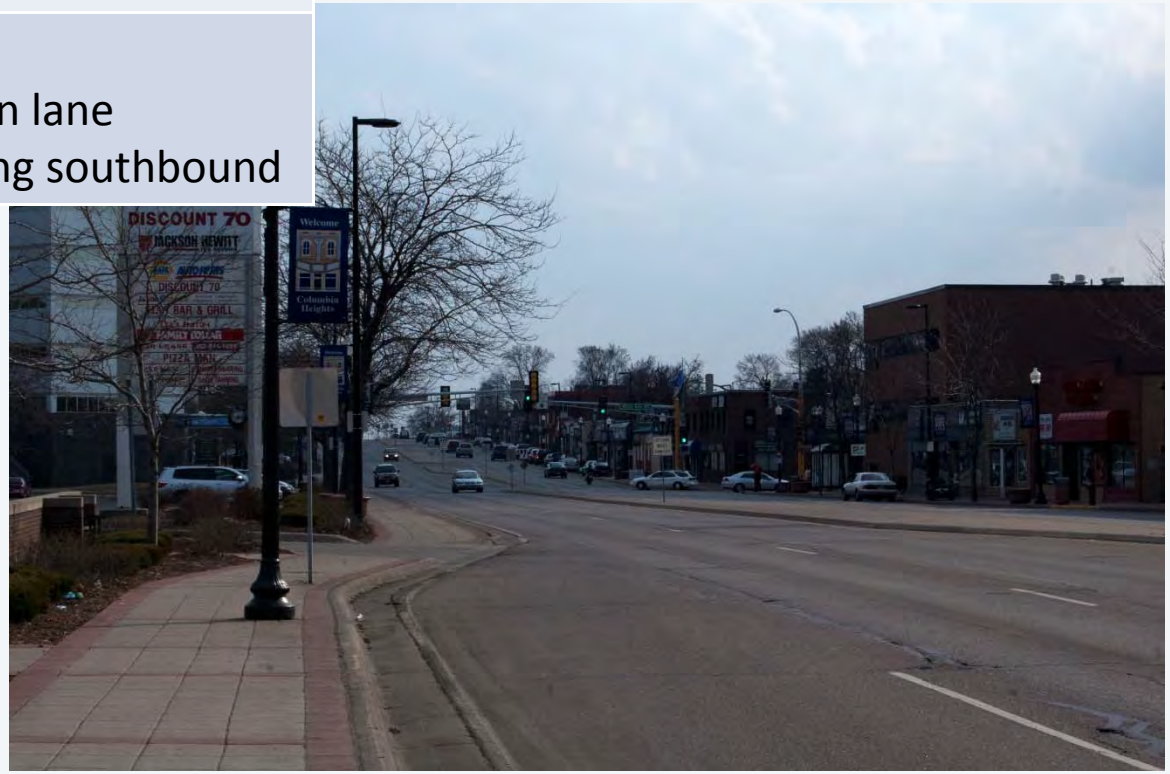
- Footprint typically 15’x20’
- Spaced every one-half mile

Existing Conditions

Central Avenue

41st Ave NE to 37th Ave NE

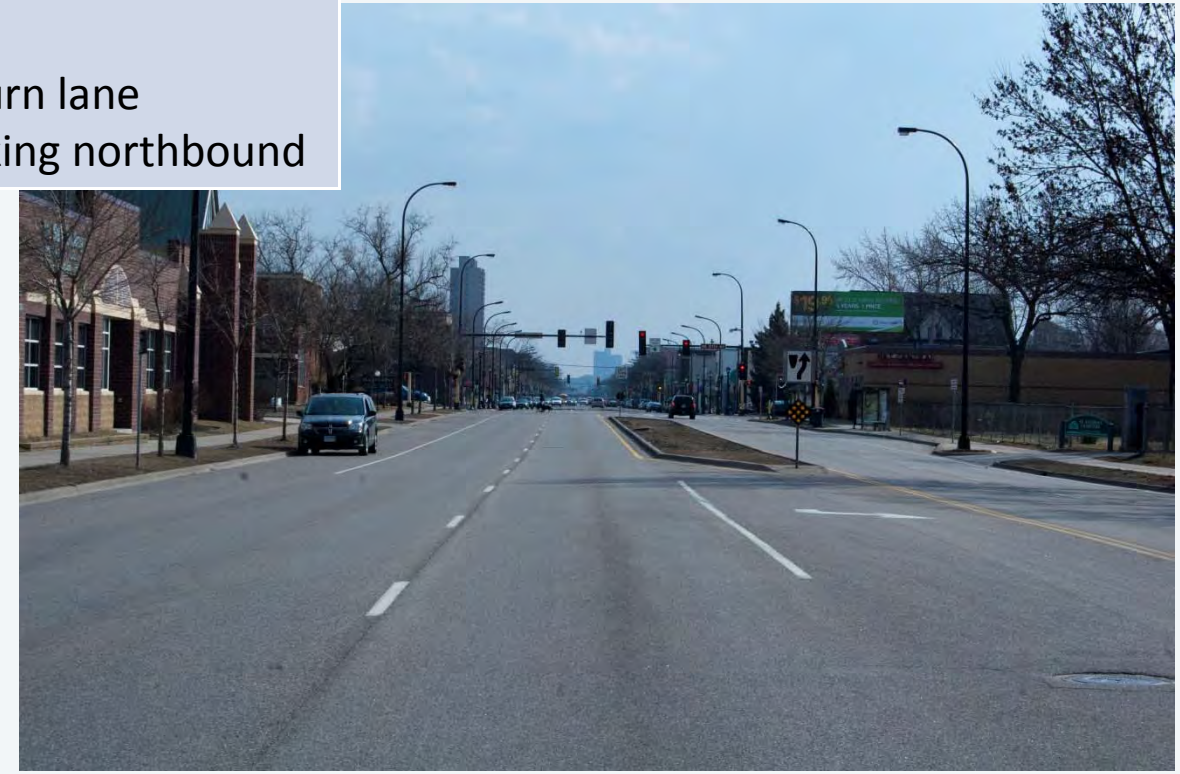
41st Ave NE to 37th Ave NE	
Right-of-way	90’
Street width	68’
Configuration	4 travel lanes Median/left turn lane On-street parking southbound



Central Avenue

37th Ave NE to 27th Ave NE

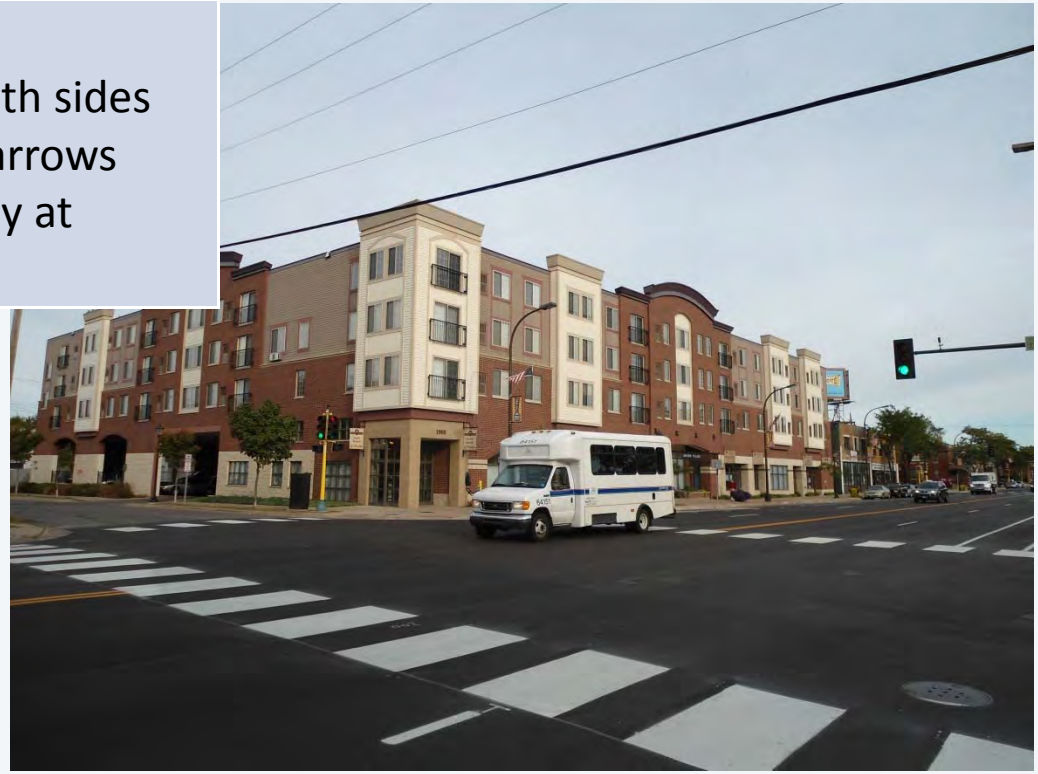
37th Ave NE to 27th Ave NE	
Right-of-way	100’
Street width	70’
Configuration	4 travel lanes Median/left turn lane On-street parking northbound



Central Avenue

27th Ave NE to 18th Ave NE

27th Ave NE to 18th Ave NE	
Right-of-way	100’
Street width	70’
Configuration	4 travel lanes On-street parking both sides Bicycle lanes and sharrows Left turn lanes at only at Lowry and 27th Aves



Central Avenue

18th Ave NE to 13th Ave NE

27th Ave NE to 18th Ave NE	
Right-of-way	80’
Street width	64’
Configuration	4 travel lanes On-street parking both sides Bicycle sharrows No left turn lanes

Central Avenue

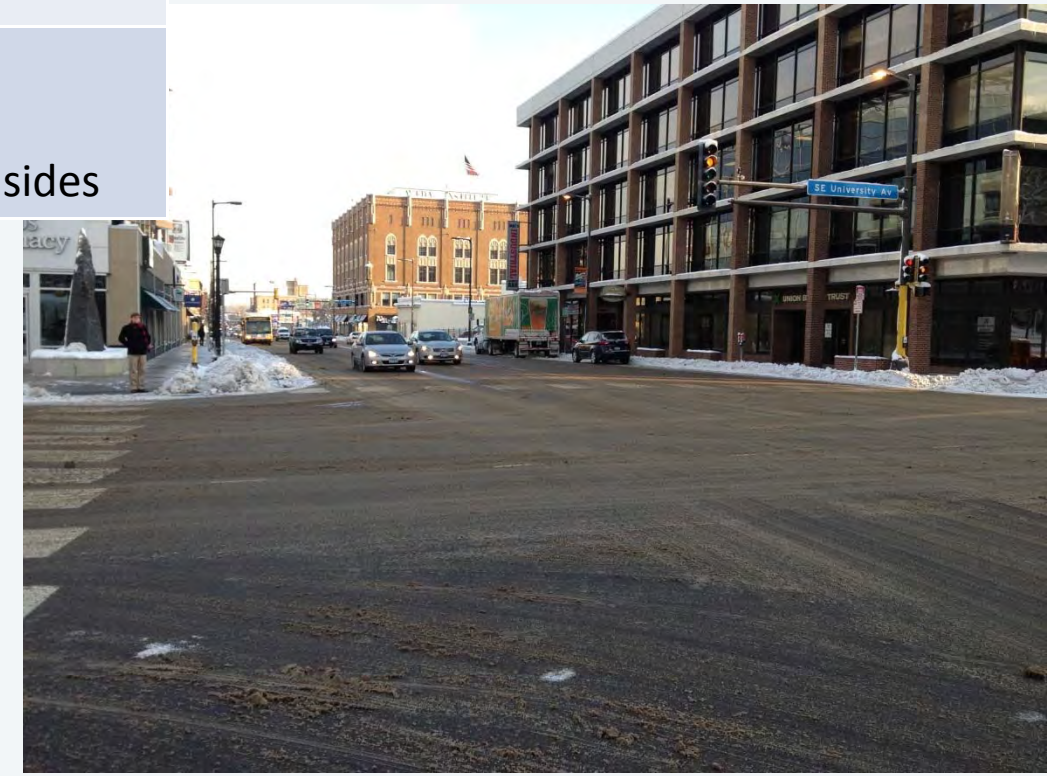
13th Ave NE to 7th Ave NE

13th Ave NE to 7th Ave NE	
Right-of-way	80’
Street width	68’
Configuration	4 travel lanes Bicycle sharrows Left turn lanes No on-street parking

Central Avenue

7th Ave NE to Main St SE

7th Ave NE to Main St SE on Central Ave	
Right-of-way	80’
Street width	64’
Configuration	4 travel lanes Bicycle sharrows On-street parking both sides



First/Hennepin Avenue

7th Ave NE to Main St SE

7th Ave NE to Main St SE on 1st/Hennepin Aves	
Right-of-way	80’
Street width	56’
Configuration	3 travel lanes On-street parking both sides

Central Avenue

Across Mississippi River

Crossing River on Central Ave	
Right-of-way	80’
Street width	60’
Configuration	4 travel lanes Bicycle lanes No on-street parking

Preliminary Comparison of Streetcar Alignment Options

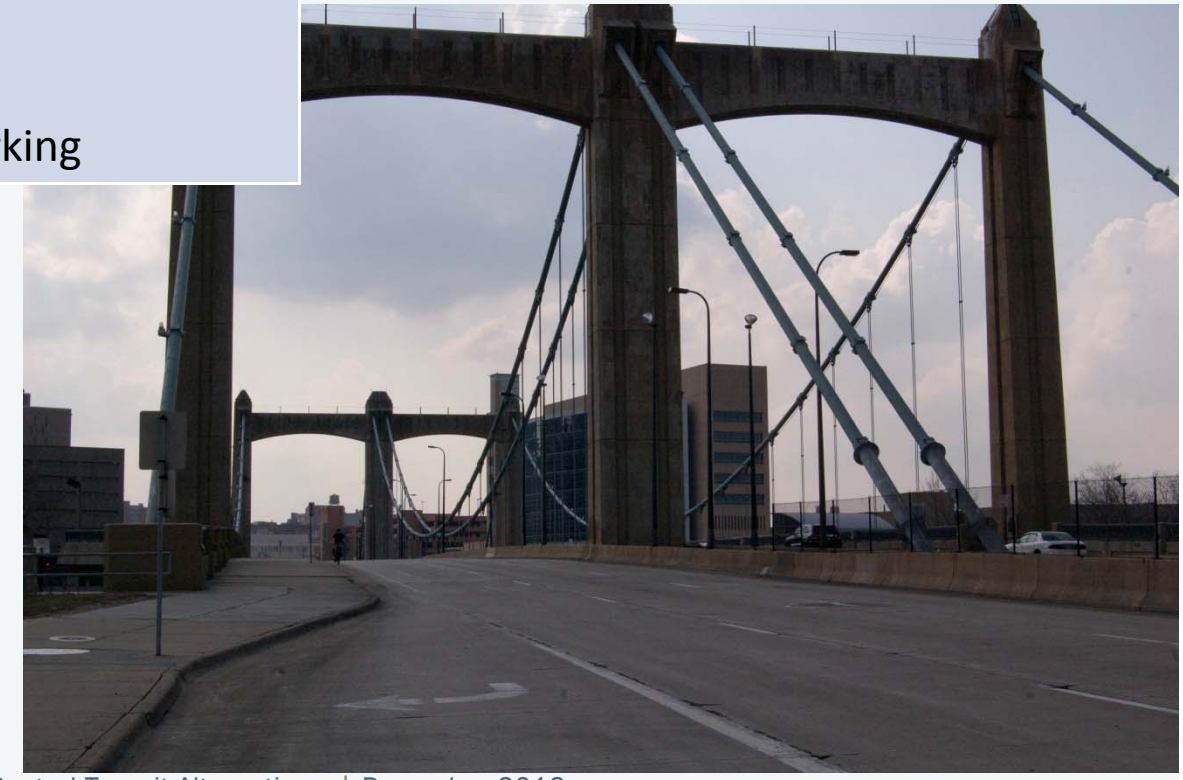
Applies to Central Avenue/Four-Lane Section

Consideration	Left Lane	Right Lane
On-Street Parking	Impacts if space is needed for median stop	Impacts at stop locations
Traffic Circulation	Center platforms will likely take place of left turn lane	Generally no concerns
Property Access	Left in/left out of driveways restricted at stop locations	Stops will block driveways if present
Platform & Pedestrian Environment	Need to cross half of street for each boarding or alighting	Extension of sidewalk for direction of desired travel - need to cross street for other platform
Streetcar Operations	Less susceptible to traffic delays	Minor operating delays due to right-turn traffic (waiting for pedestrians), on-street parking, and in-lane bus stops
		Potential significant delays for automobile breakdowns (generally pull off to right lane)
Integrated Bus/Streetcar Stops	No	Yes
Compatibility with Bike Traffic	Allows for sharrows in right lane or bike lanes where space available	Generally requires bike lanes or route on nearby parallel street. Bikes need to route behind stop platforms
Utility Impacts	TBD	TBD
Capital Cost Considerations	Generally less roadway re-grading requirements.	Requires more road re-grading
	Significant savings if OCS poles can be placed in median.	OCS poles located along sidewalks.
	Traffic signal modifications can be reduced	Usually requires more extensive traffic signal modifications

First/Hennepin Avenues

Across Mississippi River

Crossing Main Channel on 1st/Hennepin Aves	
Right-of-way	60’
Street width	50’
Configuration	3 travel lanes Bicycle lane No on-street parking



First/Hennepin Avenue

Across Mississippi River

Crossing East Channel on 1st/Hennepin Aves	
Right-of-way	54’
Street width	44’
Configuration	3 travel lanes Bicycle lane No on-street parking

Washington Avenue

Between Hennepin and Third

Washington Ave between Hennepin and 3rd Aves	
Right-of-way	110’
Street width	88’
Configuration	6 travel lanes Median/Left turn lanes No on-street parking

Nicollet Mall

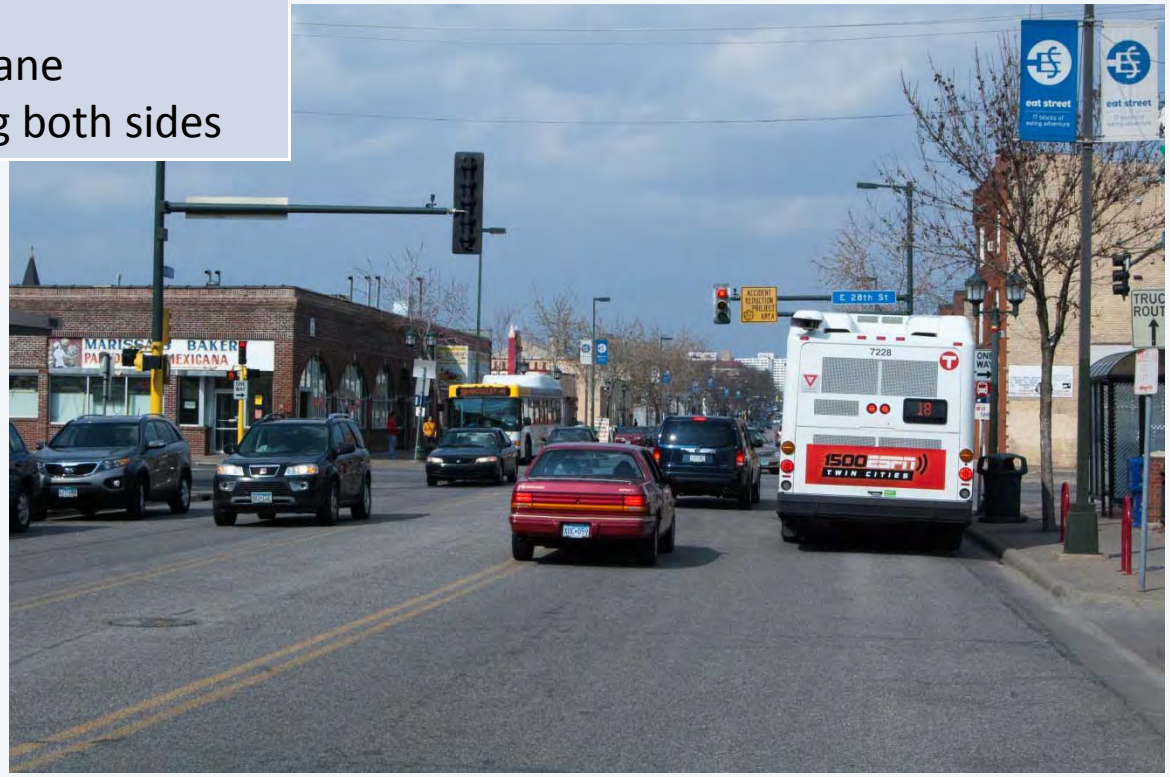
Washington to Grant

Nicollet Mall Washington Ave to Grant St S	
Right-of-way	80’
Street width	26’
Configuration	2 transit lanes No on-street parking

Nicollet Avenue

Grant to 29th

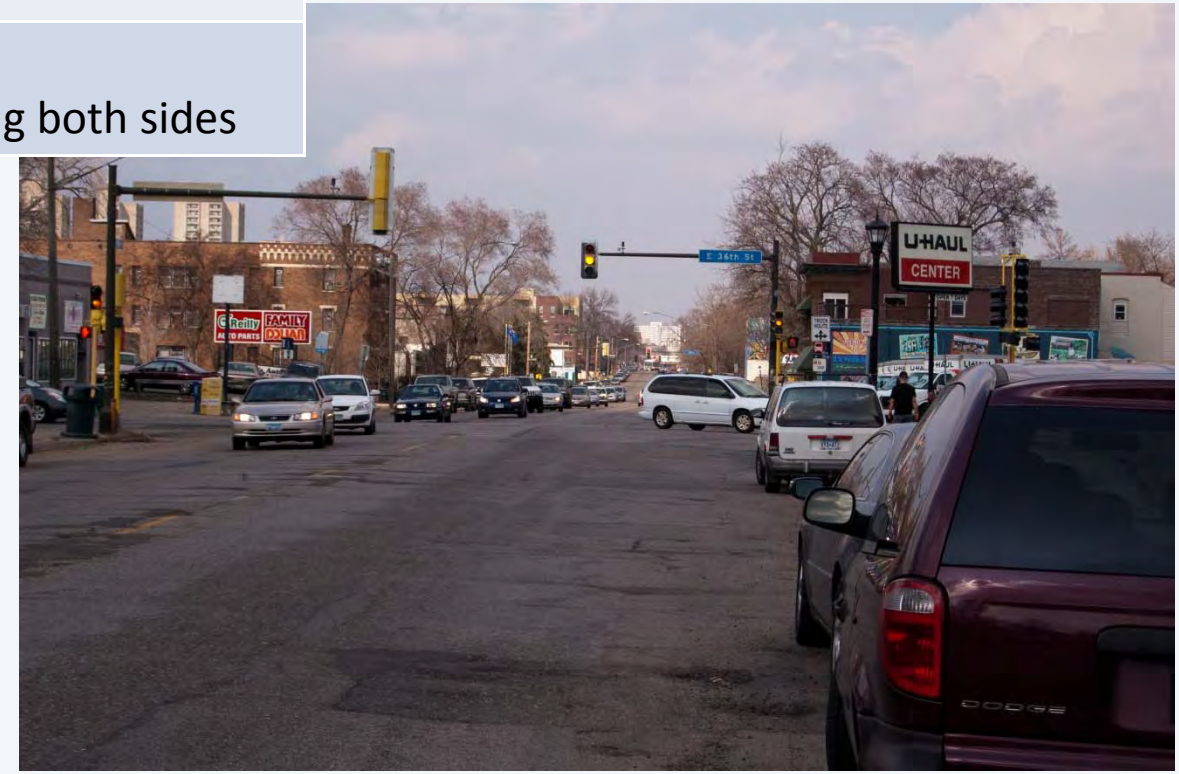
Grant St S to 29th St S	
Right-of-way	80’
Street width	50’
Configuration	2 travel lanes Center left turn lane On-street parking both sides



Nicollet Avenue

Lake to 40th

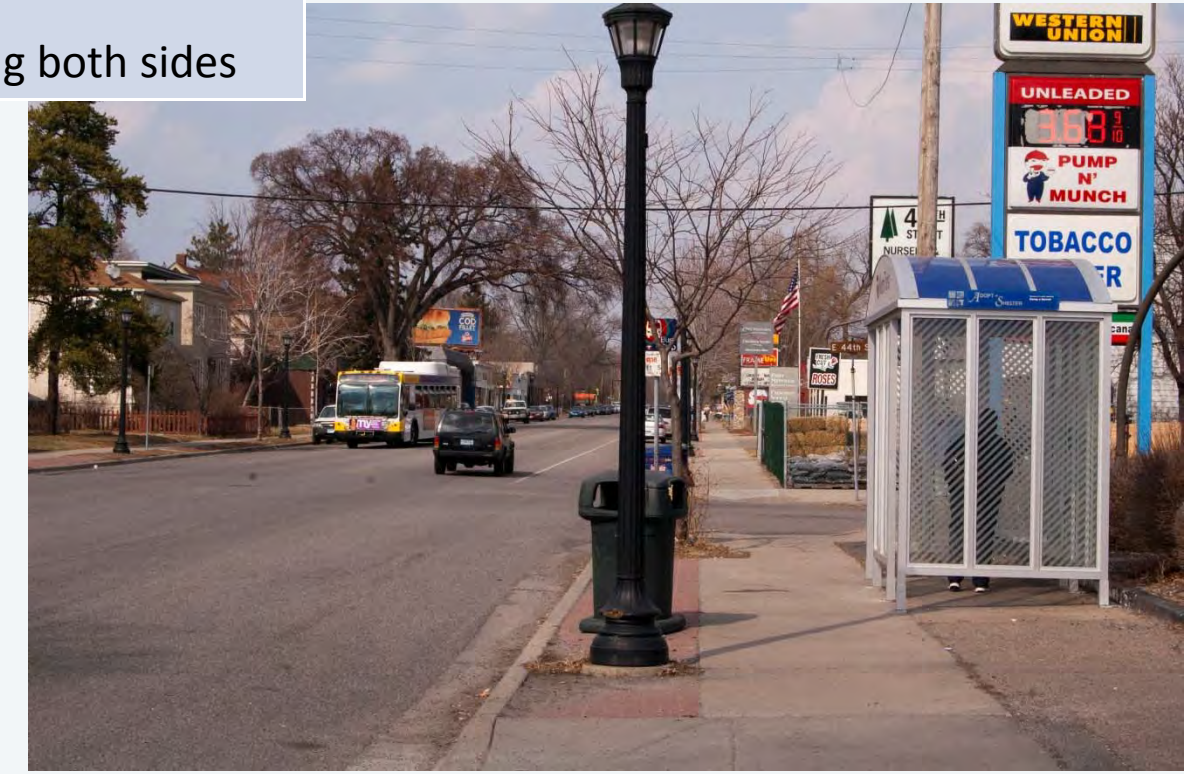
Lake St S to 40th St S (Following reconstruction)	
Right-of-way	80’
Street width	44’
Configuration	2 travel lanes On-street parking both sides



Nicollet Avenue

40th to 46th

40th St S to 46th St S	
Right-of-way	80’
Street width	50’
Configuration	2 travel lanes On-street parking both sides



Stop Locations

Stop Locations

- Why do we need to identify stop locations?
  - For ridership modeling purposes
  - For capital and O&M cost estimating
- What we are <u>not</u> doing at this juncture
  - Determining what side of an intersection to locate stops
- Basis
  - Metro Transit APC data
  - Arterial Transitway Corridors Study
  - Discussions with Metro Transit and Met Council; CPED staff regarding development and redevelopment potential

Stop Locations

- Preliminary streetcar stop locations identified
- Status of enhanced bus stop locations
  - Initiated discussion with Metro Transit
  - Determine within context of Arterial BRT

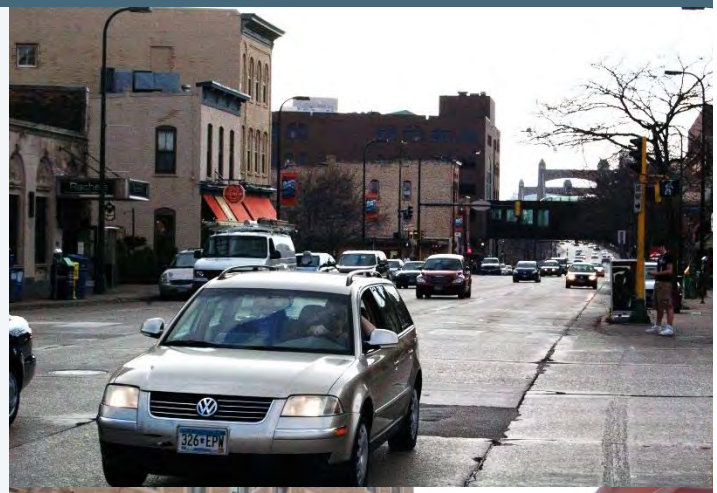
Workshop:
Street Design Considerations

Introduction

- Purpose
  - Seek input to define alternatives in detail and facilitate their evaluation
- Ground Rules and Desired Outcomes
  - Consider short-term and long-term vision for the corridor
  - Identify priorities for each major segment
  - Listen

Potential Priorities

- Safety
- Maintain Existing Curb
  - Cost implications
  - Pedestrian Environment
  - Construction impacts
    - Businesses, pedestrians
- Traffic Operations/ Circulation
  - Turn lanes
- On-Street Parking
- Vehicle type/platform height

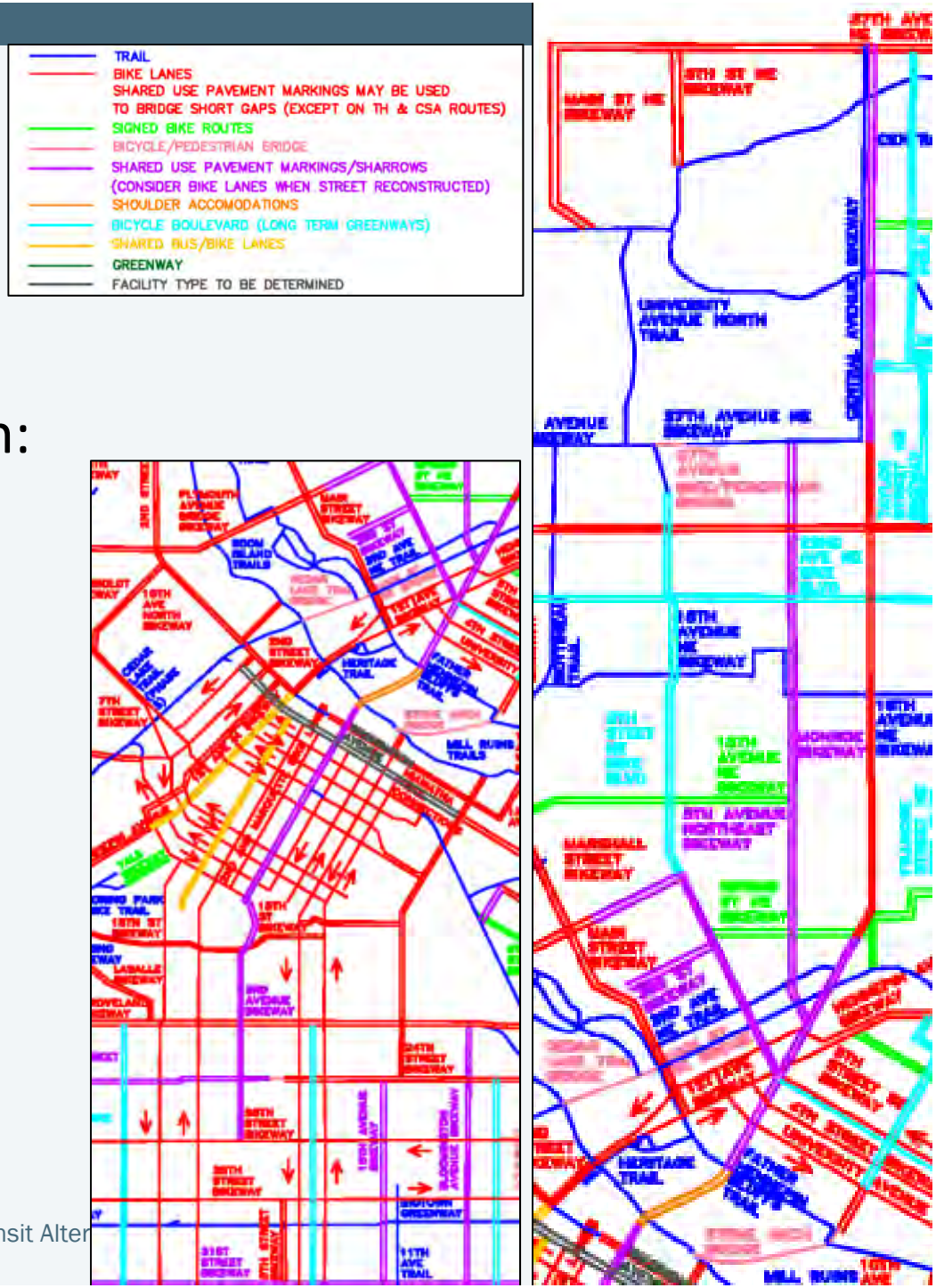


Potential Priorities

- Avoid Potential Conflicts with Public Utilities
- Local Bus Operations
- Optimize for Operations
  - Try to work around areas of significant potential delay to improve service reliability

Potential Priorities

- Bike Accommodation
  - Minneapolis Bike Plan:
    - Central Avenue
      - Bike lanes, trail, sharrows, shared bus/bike
    - First/Hennepin
      - Bike lanes
    - Nicollet Mall
      - Shared bus/bike
    - First/Blaisdell and Nicollet Ave
      - Bike lanes



Potential Priorities

- Integrate Enhanced Transit Stops with Local Bus Stops
- Enhance Pedestrian Space
  - As budget allows
- Minimize Disruption during Construction
- Spur Economic Development
- Other?

Next Steps

- Develop Typical Sections Based on Priorities
- Review Detailed Definition of Alternatives with Committee and Public
  - PAC approval of detailed alternatives
- Evaluate Potential Cost, Impacts and Benefits

Purpose and Need

Corridor Problems and Challenges
Vision for the Corridor
Goals and Objectives and Evaluation Criteria

Initial Development and Screening of Corridor Transportation Options

Transit Mode Options
Corridor Segment Options

Detailed Definition and Evaluation of Alternatives

Selection of Locally Preferred Alternative