

City of Northfield CIP Pedestrian and Bikeway Analysis

August 16, 2022



alta

Introduction and Project Context

The background image is a photograph of a residential street in winter. The ground is covered in snow, and there are snowbanks along the sidewalks. In the foreground, a person wearing a yellow safety vest with "SAFETY PATROL" written on the back is walking across a crosswalk. Other pedestrians, including a man and a child, are also visible. In the background, there are houses, trees, and a parked car. The entire image has a teal color overlay.

Introduction to the project

- Overview
- Purpose
- Key questions the report



A teal-tinted photograph of a residential street scene. In the foreground, a person wearing a yellow safety vest with "SAFETY PATROL" written on the back is walking across a crosswalk. Other pedestrians, including a man and a child, are also crossing the street. In the background, there are houses, trees, and a parked car. The overall scene is a typical suburban neighborhood.

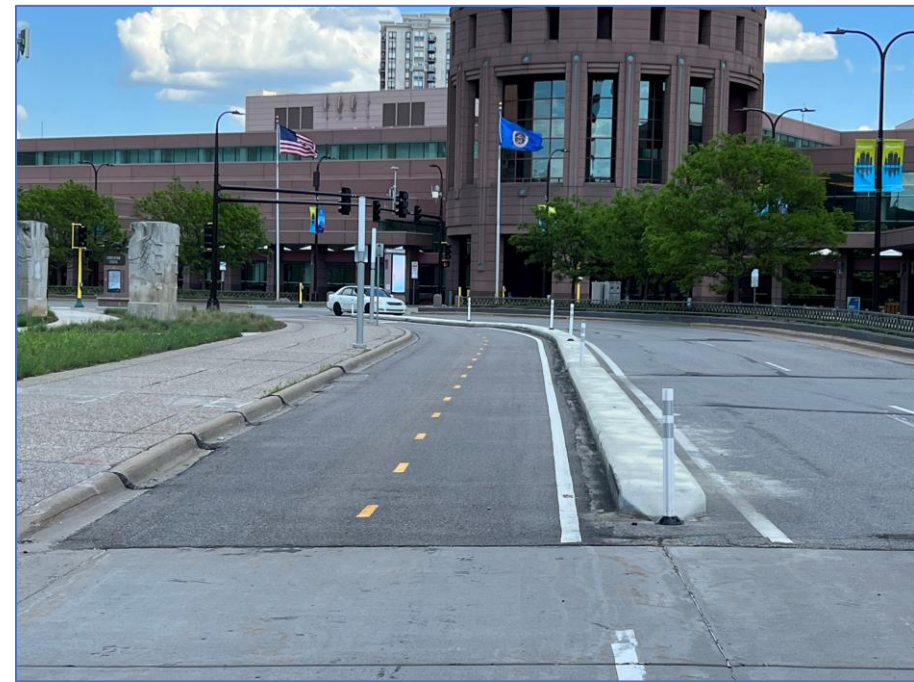
Key Policy Recommendations *Council Input Needed*

CIP Recommendations

- **Recommendation 1:** Split the Sidewalk/Trail/Bike Construction category and fund at a level that allows multiple projects per year. This should include sidewalk construction, All Ages and Abilities (AAA) bikeways, and Pedestrian Crossing Improvements.

Bikeway Recommendations

- **Recommendation 2:** Identify a preferred bikeway type in Northfield.
- For most retrofit projects, recommend a two-way protected bikeway, with a 2' concrete bike buffer as a form of physical separation.
- For reconstruction and reclamation projects, recommend a raised two-way protected bikeway. Include separate space for people walking and bicycling where space allows.



Bikeway Recommendations

Connections and Bikeway Continuity

- **Recommendation 3:** For the unprogrammed sections of the “proposed bikeway corridors,” add to the scope and implement them with a quick build approach – which would include striping, signage, and concrete bike buffers.

Bikeway Recommendations

Recommendation 4: Explore a demonstration of a concrete bike buffer as a form of bikeway separation as a retrofit project. Evaluate how the treatment works and make any necessary tweaks on future installations.



Pedestrian Crossing Improvements

Upgrade crossings

- **Recommendation 5:** Use the pedestrian origin and destination map to prioritize pedestrian crossing improvements in conjunction with reconstruction/reclamation projects, mill & overlays, and stand alone projects.



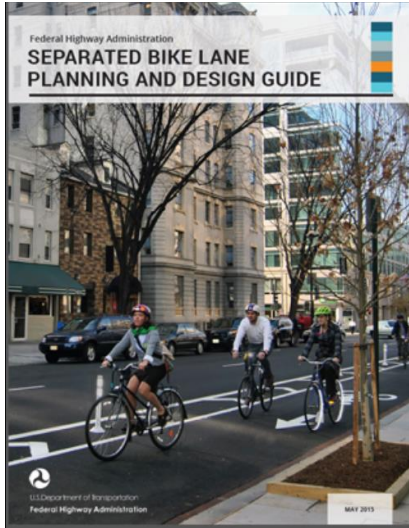
Existing Plans and Conditions

Overview of existing plans and conditions

- All Ages & Abilities
- Facility design should rely on “latest and best” guidance
- Separated bikeways are recommended
- Traffic calming and crossing treatments (bumpouts, and pedestrian refuge islands)



Bikeway Guidance



- NACTO Urban Street Design Guide
- FHWA Separated Bike Lane Planning and Design Guide
- MnDOT Bicycle Facility Design Guide



A teal-tinted photograph of a residential street scene. In the foreground, a person wearing a backpack and a patterned jacket is walking across a crosswalk. In the background, other pedestrians are visible, including a person in a yellow safety vest. The street is lined with houses and trees, and there is snow on the ground and sidewalks. A street sign is visible on the left side of the road.

Draft Bikeway Design Concepts and Report

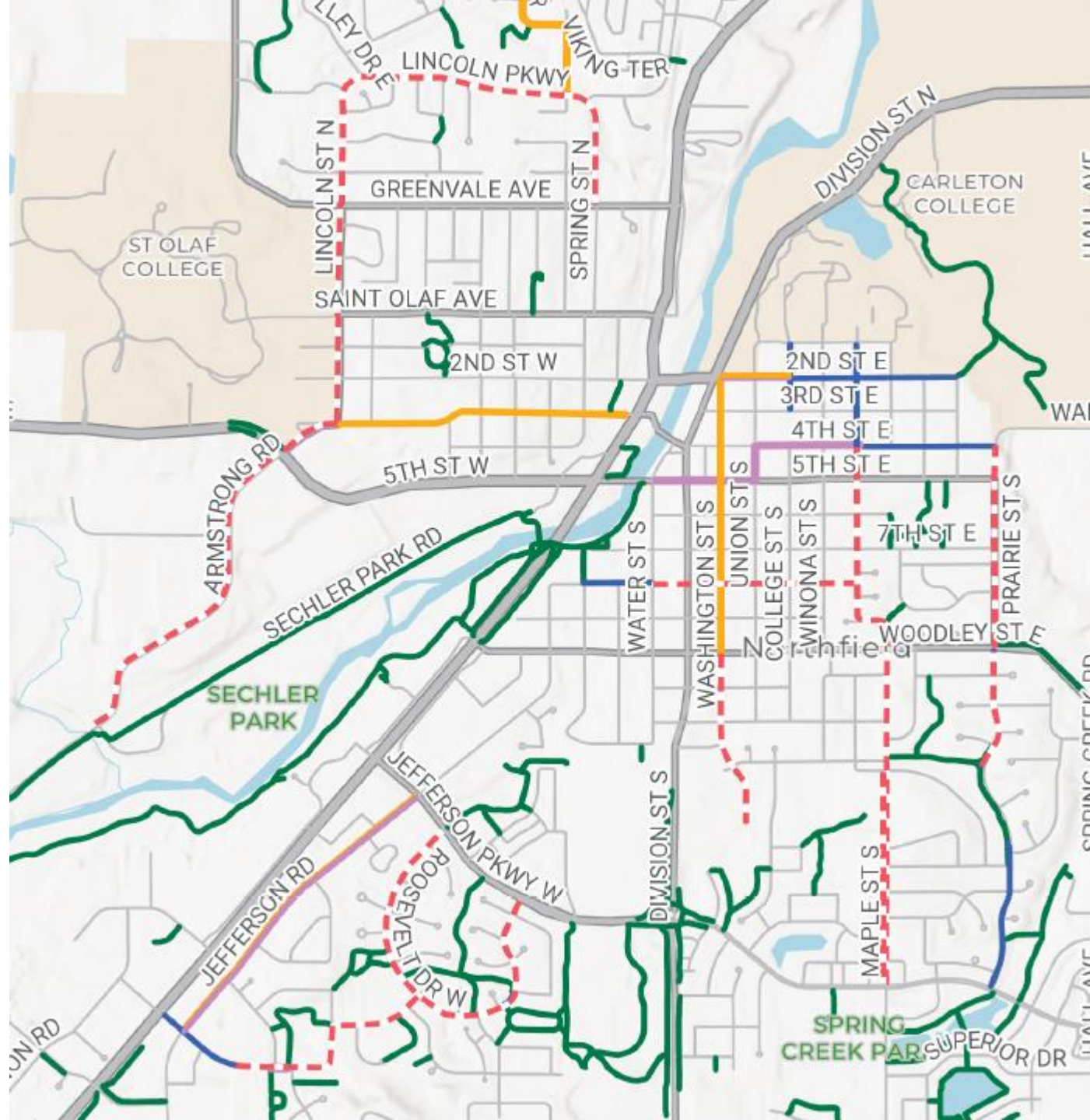
Overview of bikeway analysis

- 7 corridors
- Building off recent bikeway installations
- Identifying preferred bikeway type
- Designing for all ages and abilities
- Continuity – (programming)

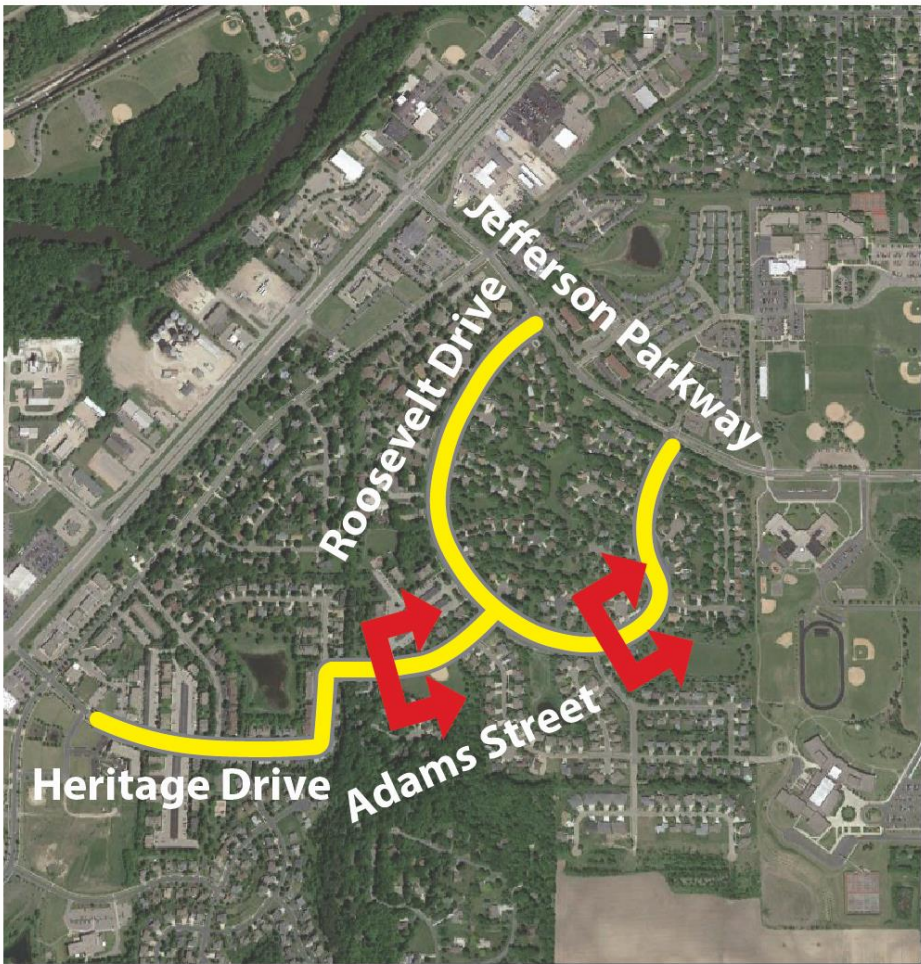
Proposed bikeway routes

- Heritage Drive/Adams Street/Roosevelt Drive
- Spring Street/Lincoln Parkway/Lincoln Street
- Armstrong Road
- Washington Street
- Eighth Street
- Prairie Street
- Maple Street/Nevada Street

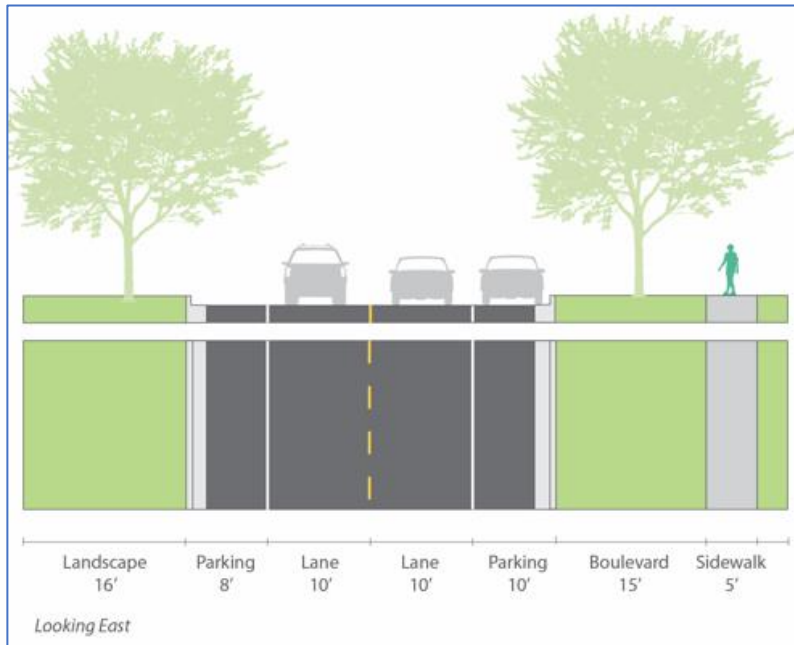
Proposed Bikeway Corridor Map (with existing bikeway network)



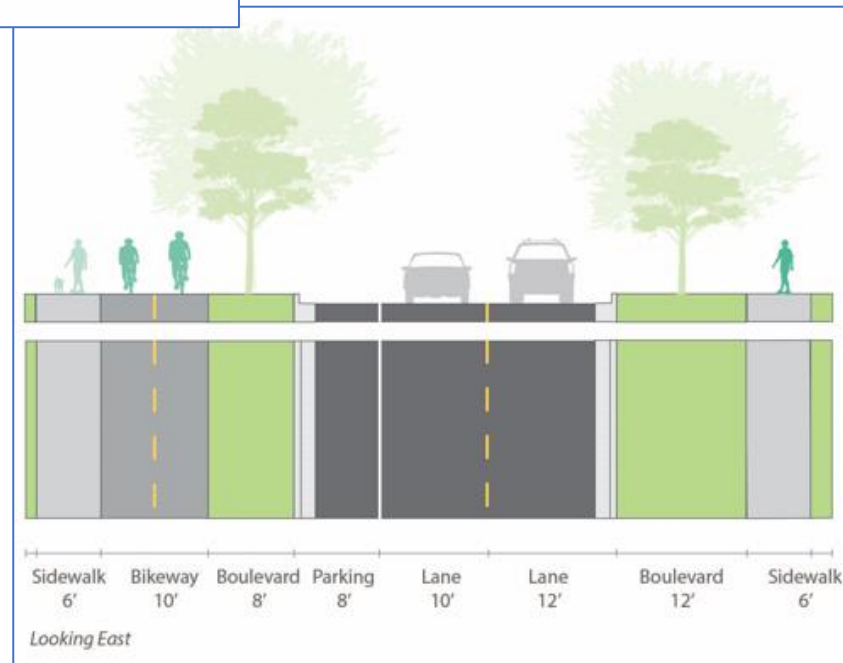
Heritage Dr, Adams St, and Roosevelt Dr



 Proposed bikeway extents  Location of cross section

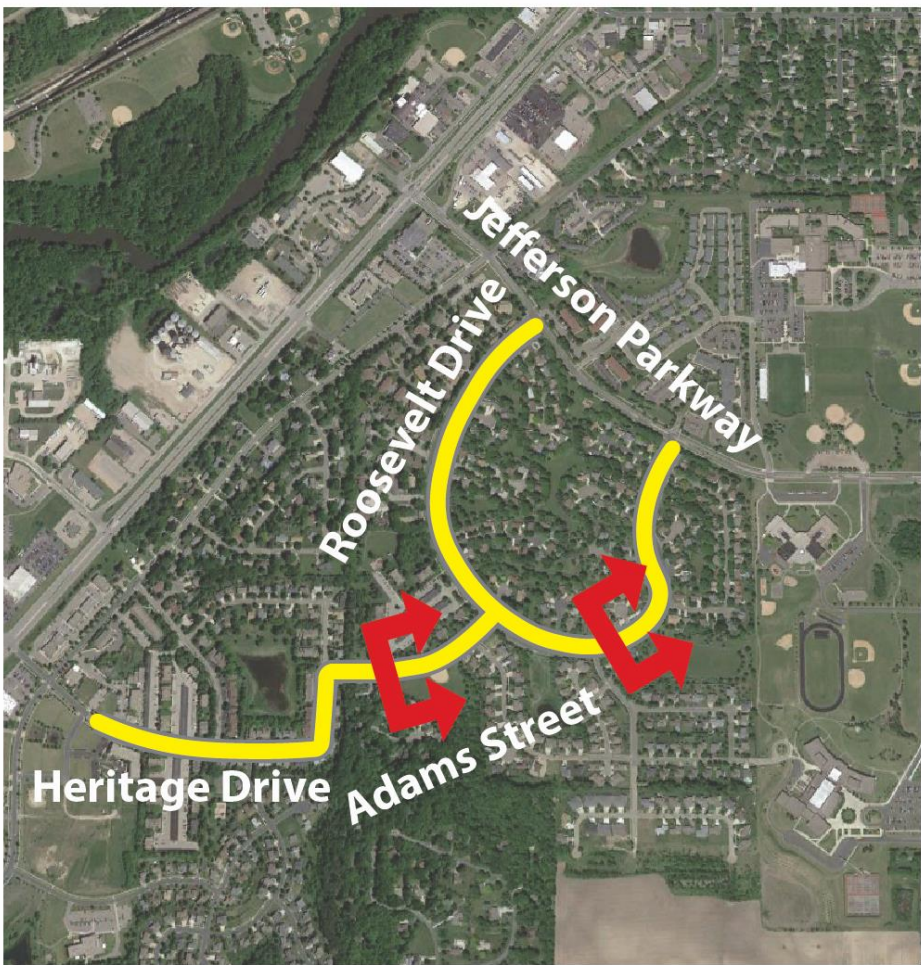


Existing cross section (Adams St)



Recommendation west of Grant Dr

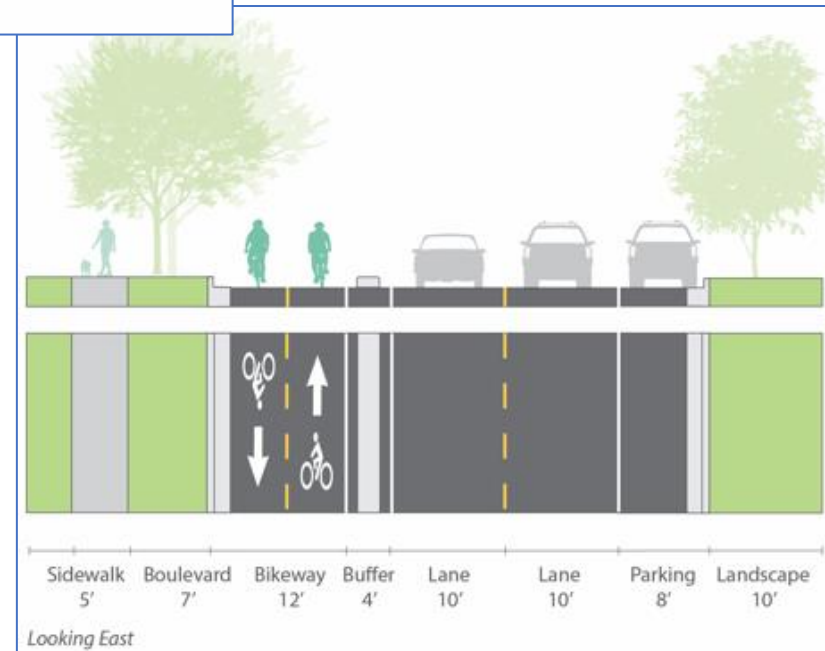
Heritage Dr, Adams St, and Roosevelt Dr



 Proposed bikeway extents  Location of cross section



Existing cross section (Roosevelt Dr)



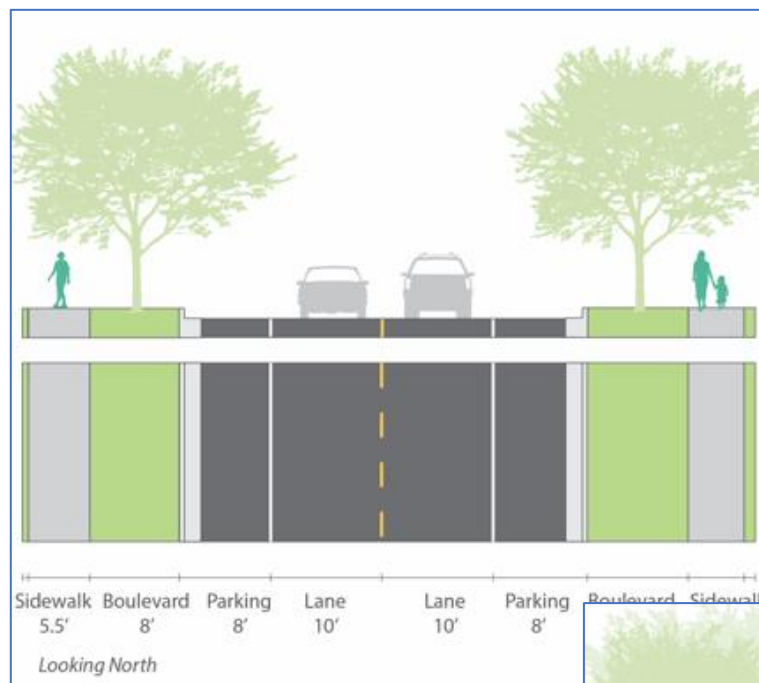
Recommendation west of Hayes Dr

Lincoln St, Lincoln Pkwy, and Spring St

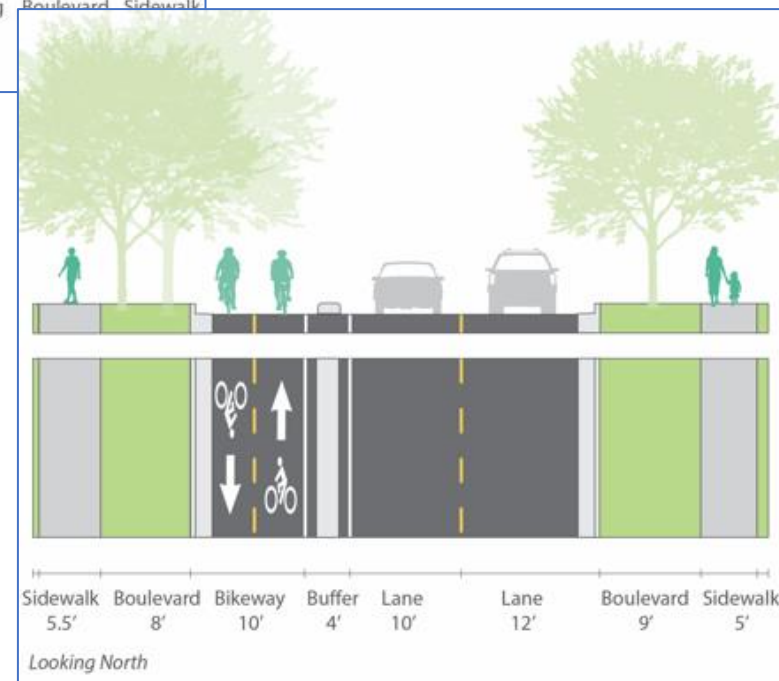


 Proposed bikeway extents

 Location of cross section



Existing cross section

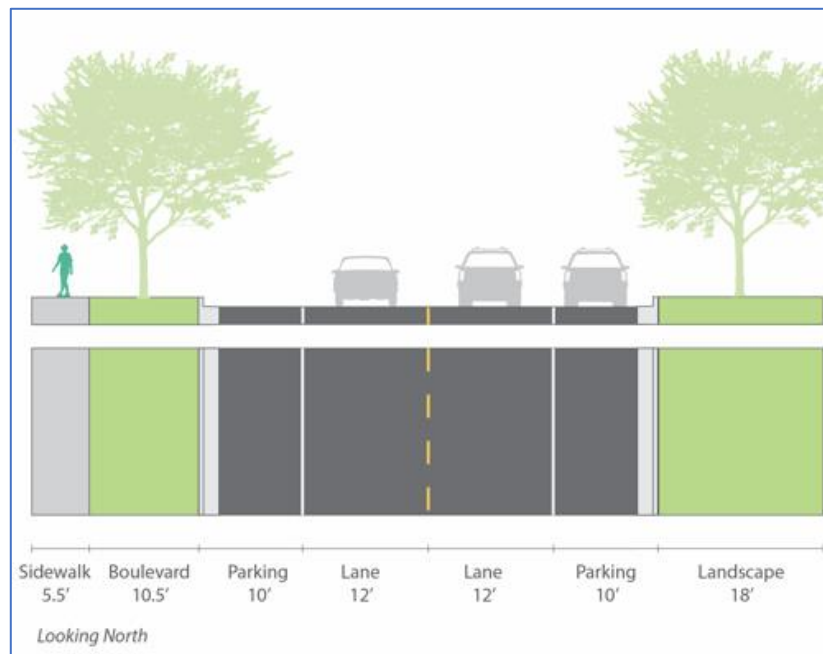


Recommendation south of Lincoln Lane

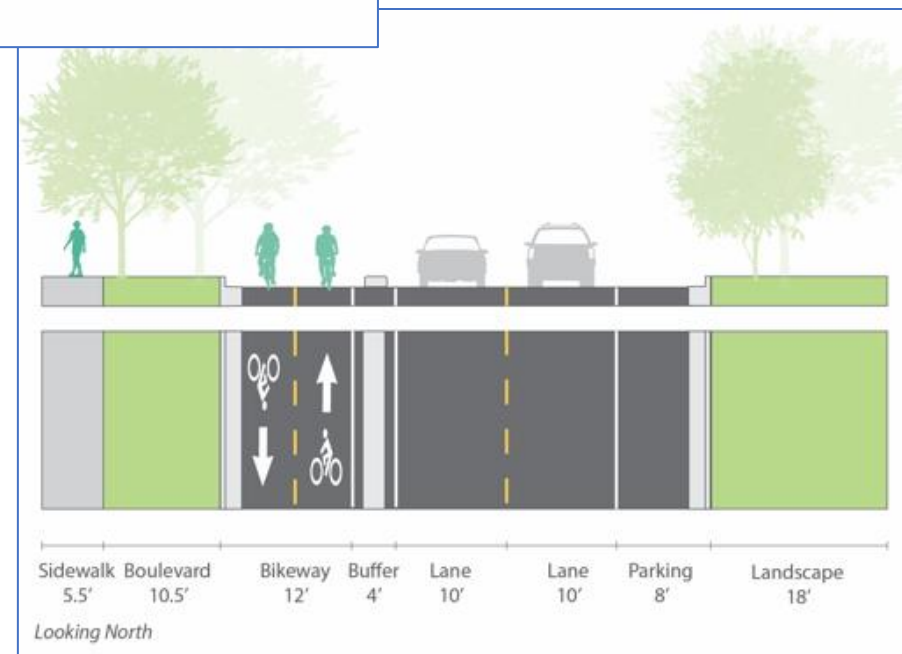
Lincoln St, Lincoln Pkwy, and Spring St



 Proposed bikeway extents  Location of cross section



Existing cross section



Recommendation north of Greenvale Ave

Armstrong Rd



Proposed bikeway
extents

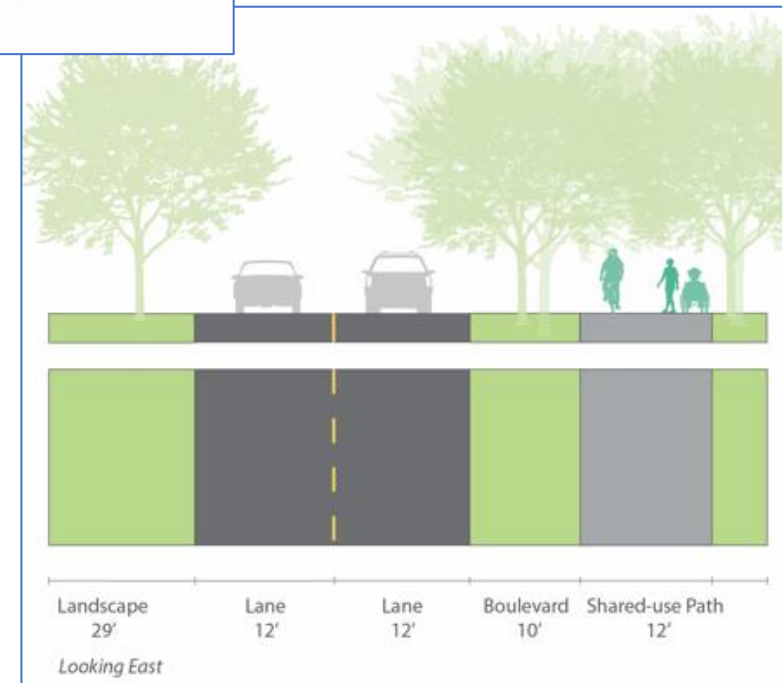


Location of
cross section

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Existing cross section



Recommendation in the 24' section

Armstrong Rd

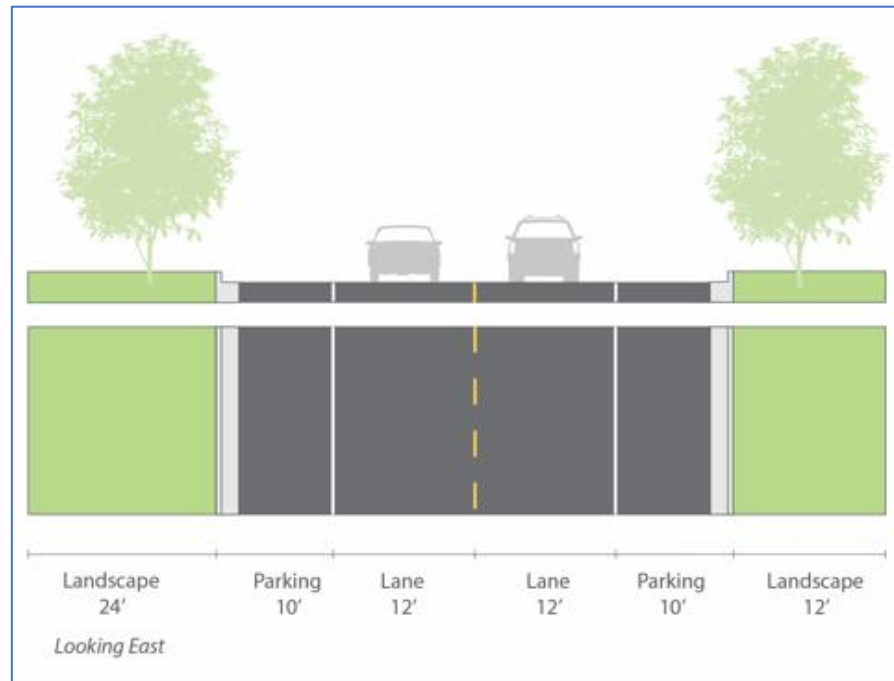


Proposed bikeway
extends

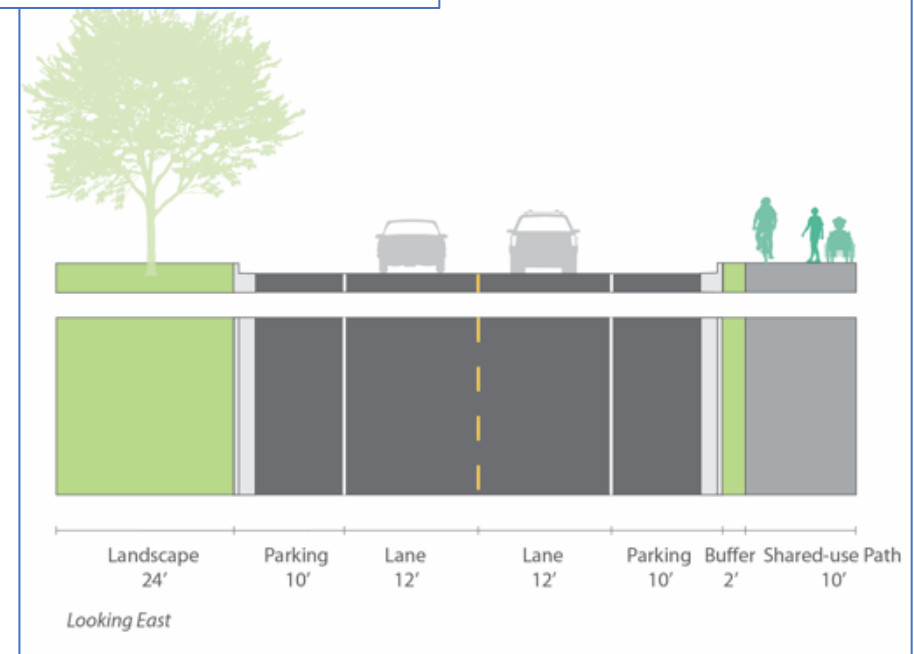


Location of
cross section

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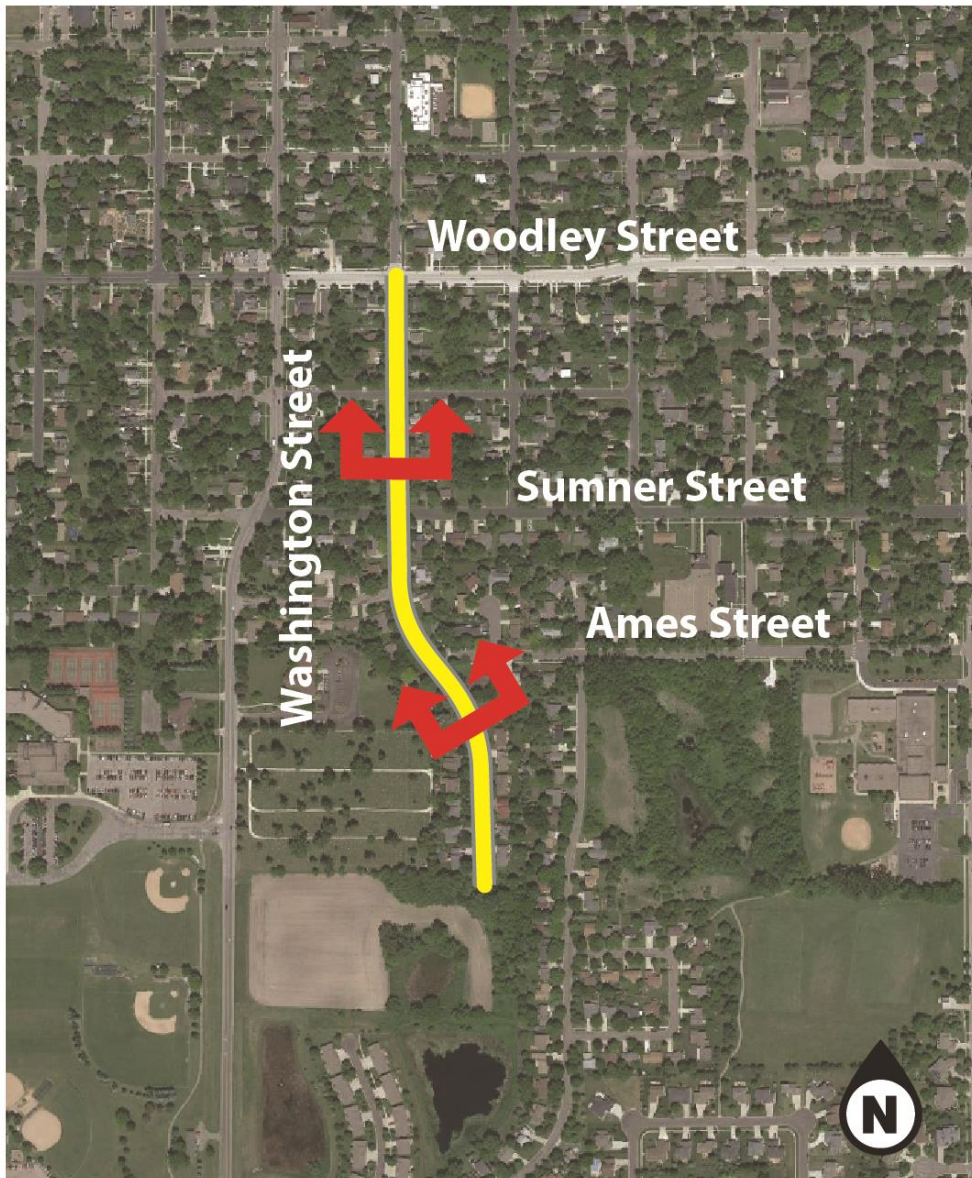


Existing cross section



Recommendation in the 44' section

Washington St

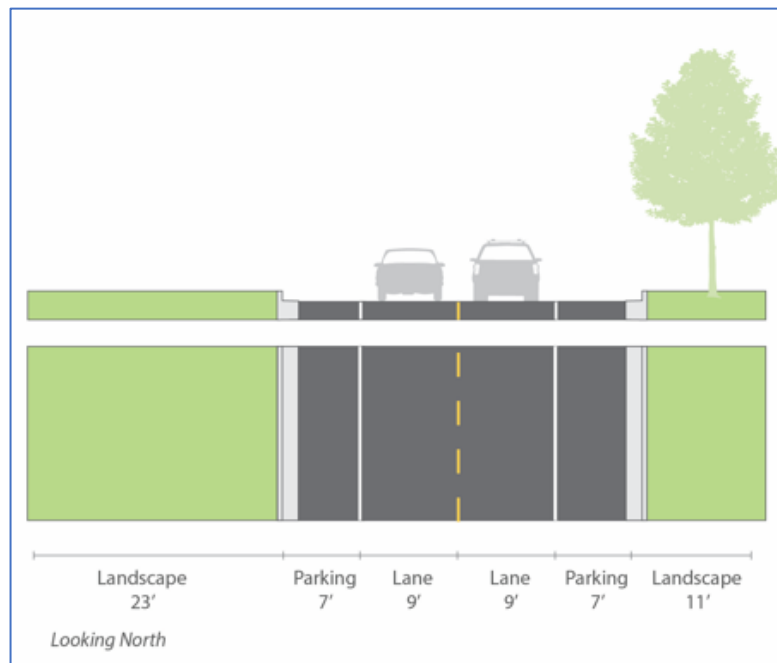


Proposed bikeway
extents



Location of
cross section

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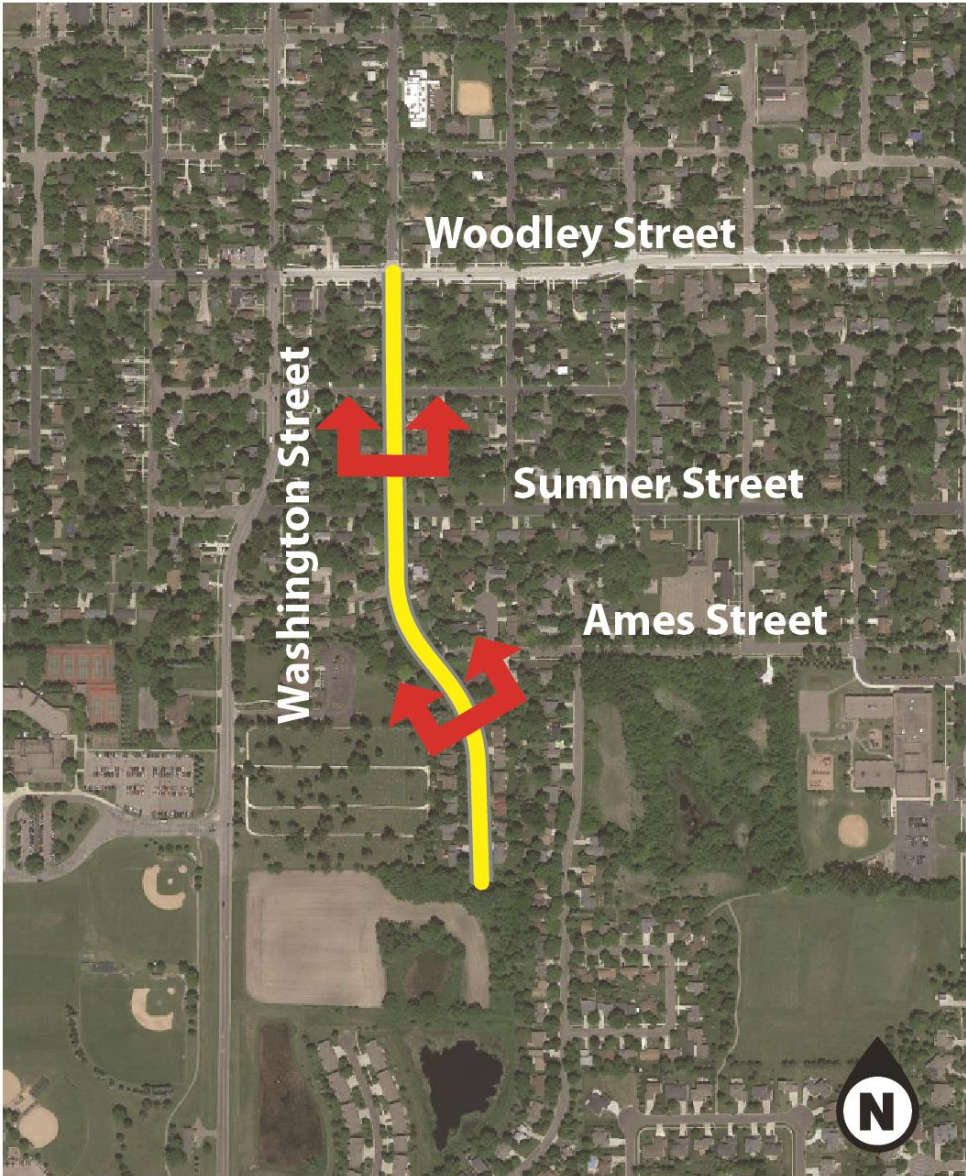


Existing cross section



Recommendation from Ames St to cul-de-sac

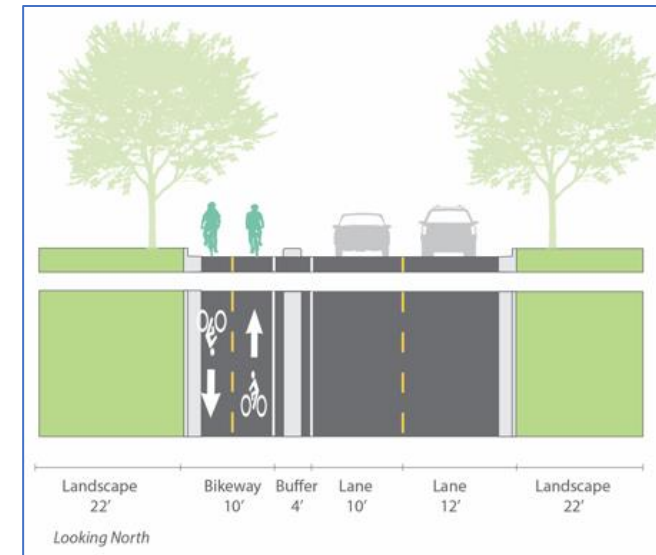
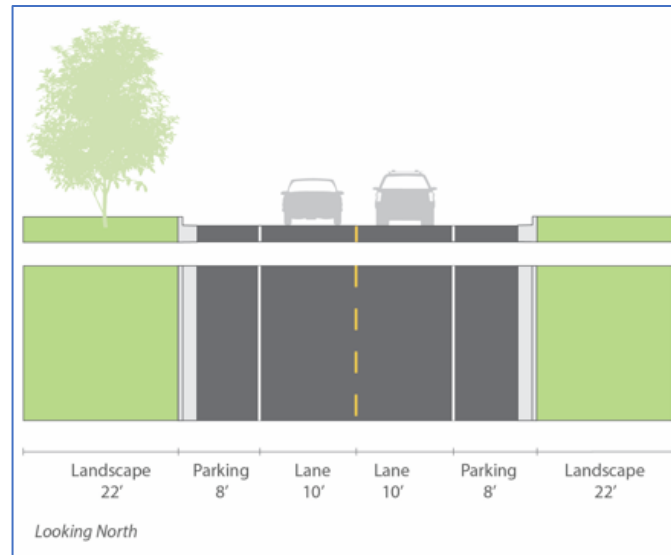
Washington St



 Proposed bikeway
 extents
  Location of
 cross section

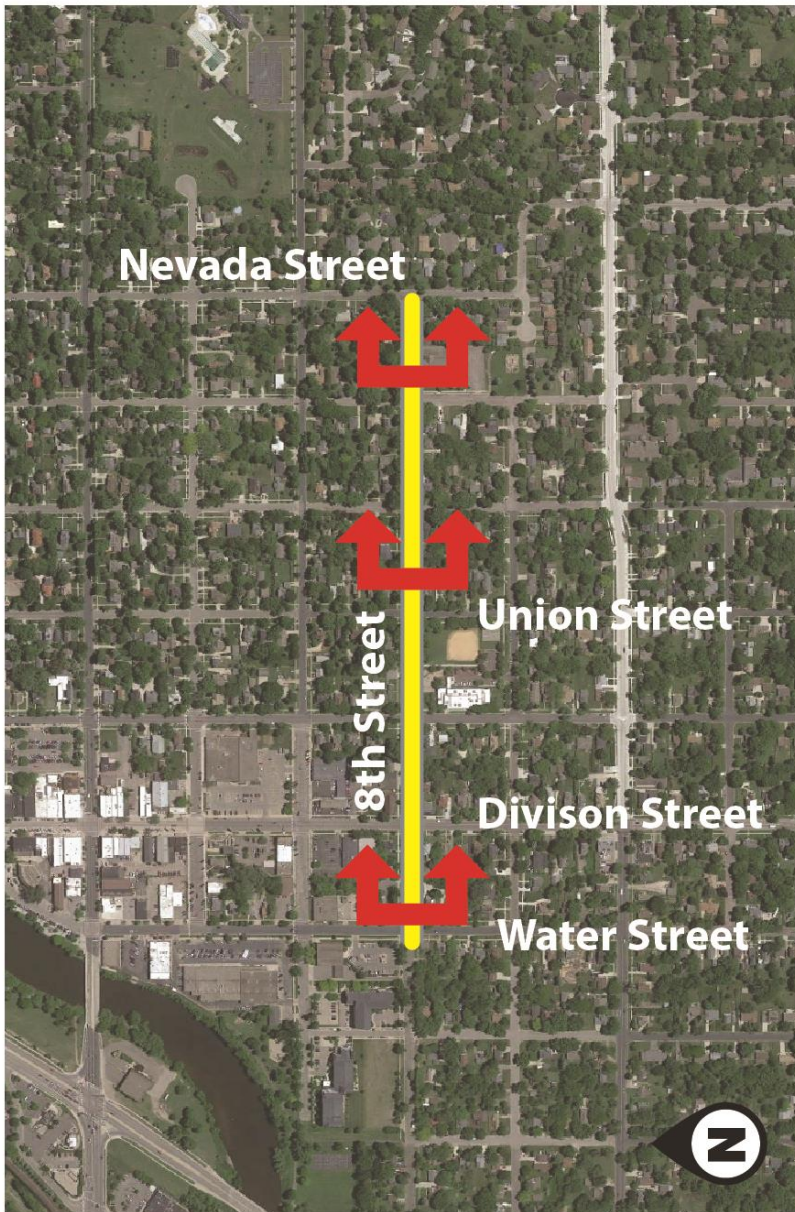


Existing cross section



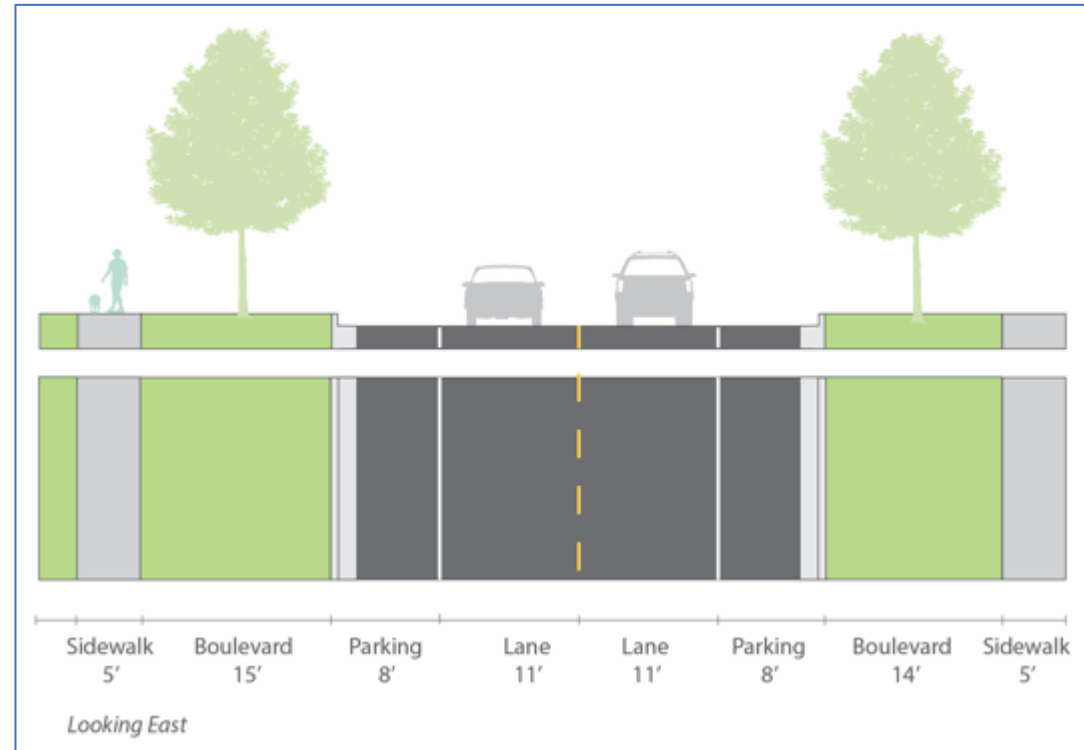
Recommendations from Woodley St to Ames St

8th St



— Proposed bikeway
extends

Location of
cross section

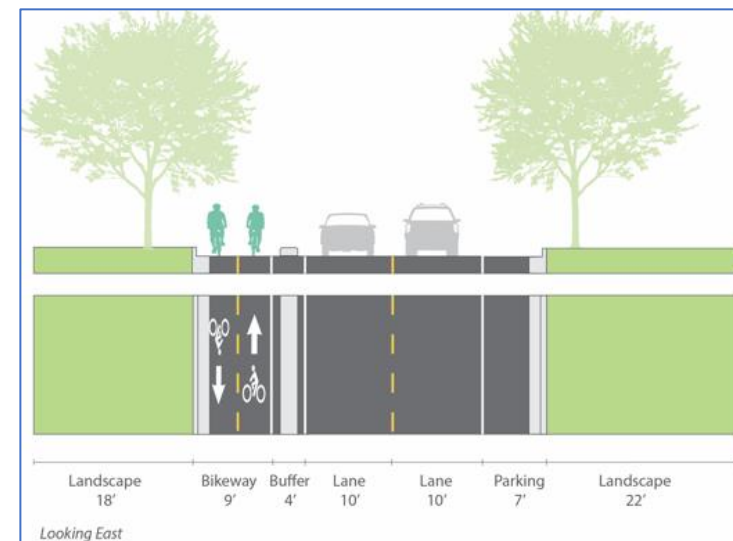
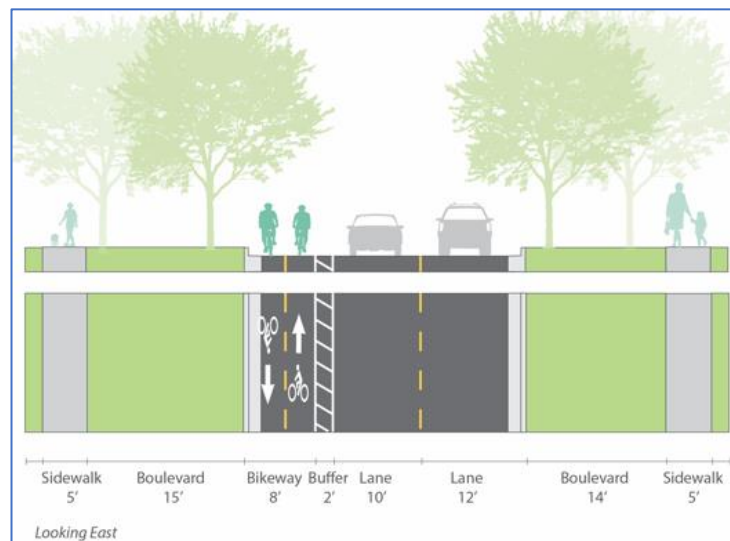
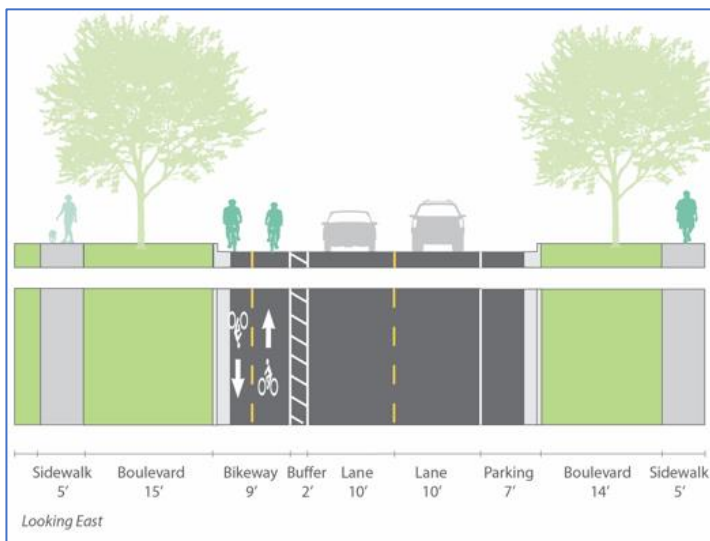


Existing cross section: 38' section show – ranges from 38' to 32' to 40'

8th St

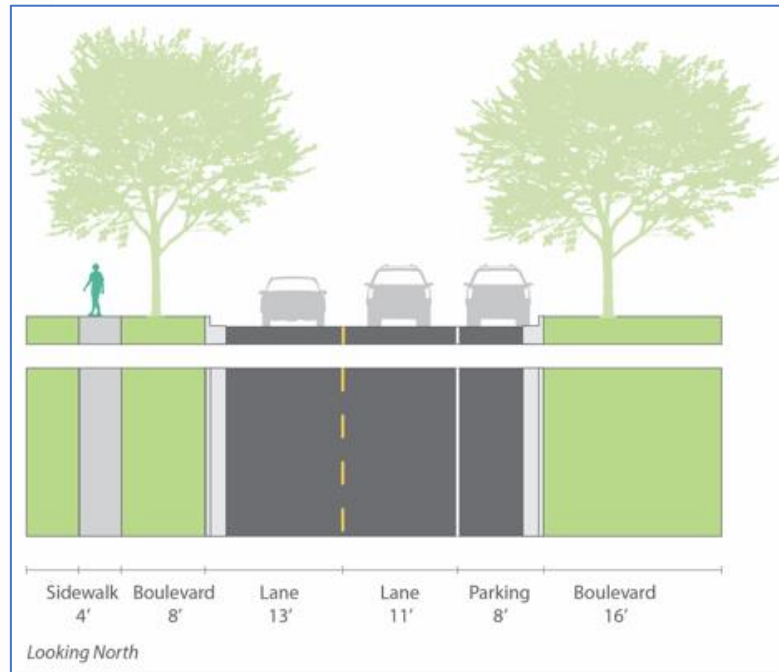
Proposed bikeway
extends

Location of
cross section

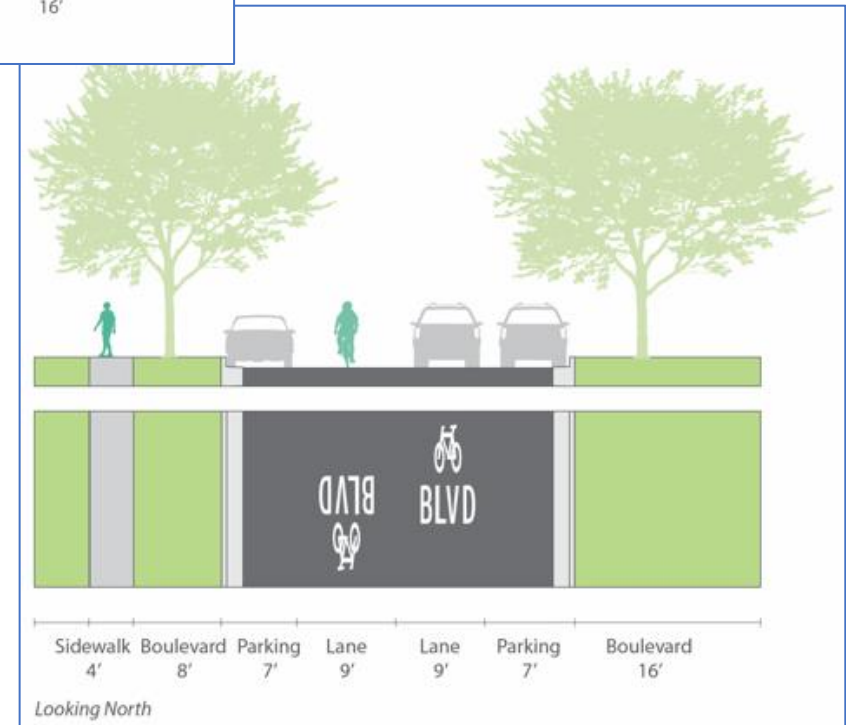




 Proposed bikeway extents
  Location of cross section

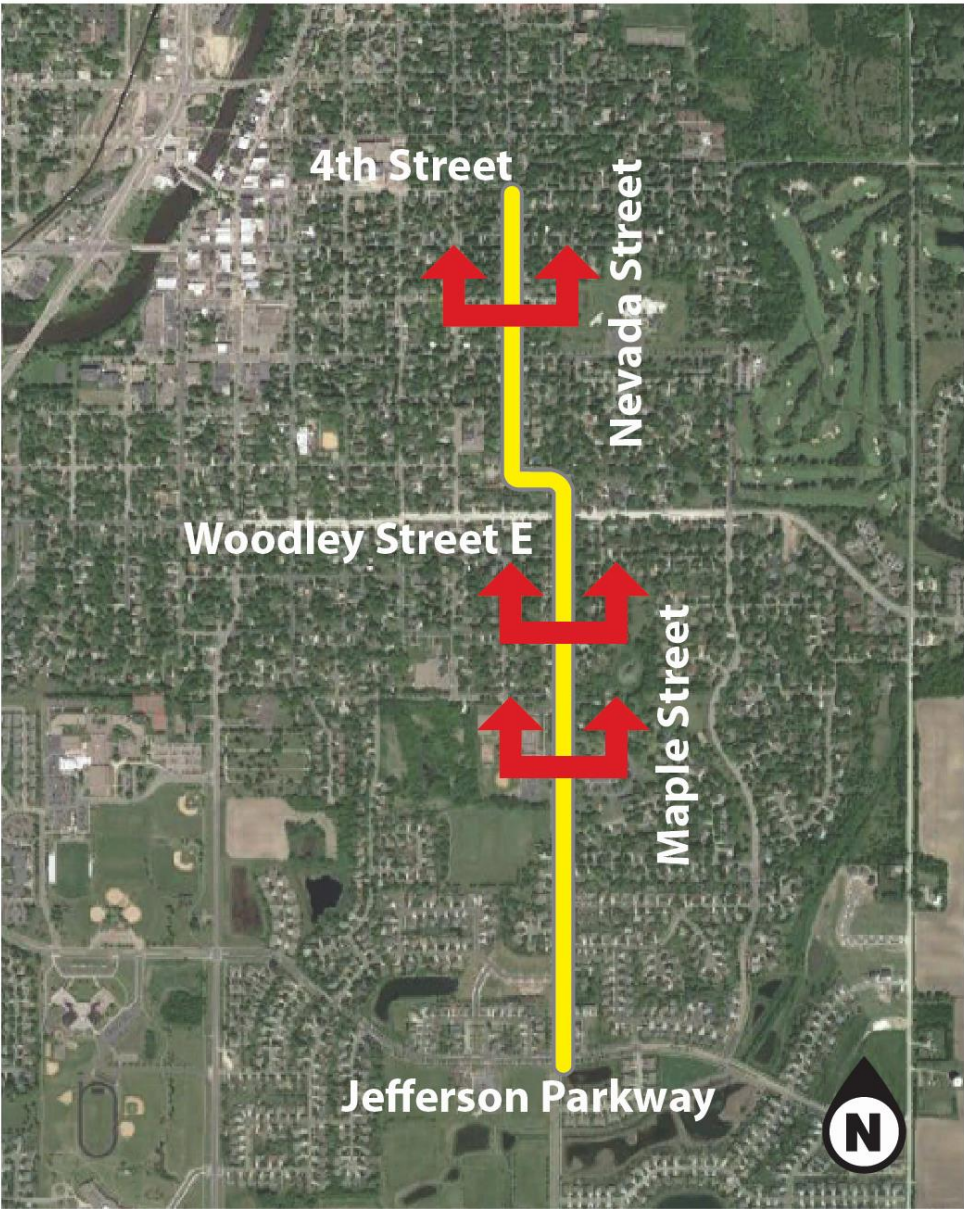


Existing cross section

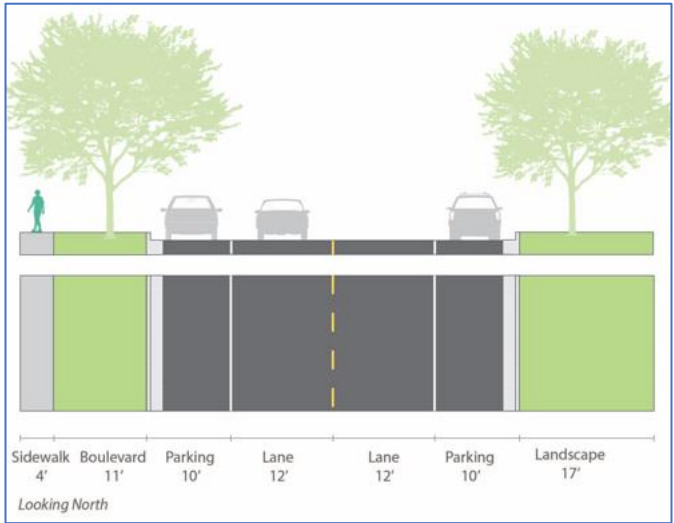


Recommendation

Maple St & Nevada St



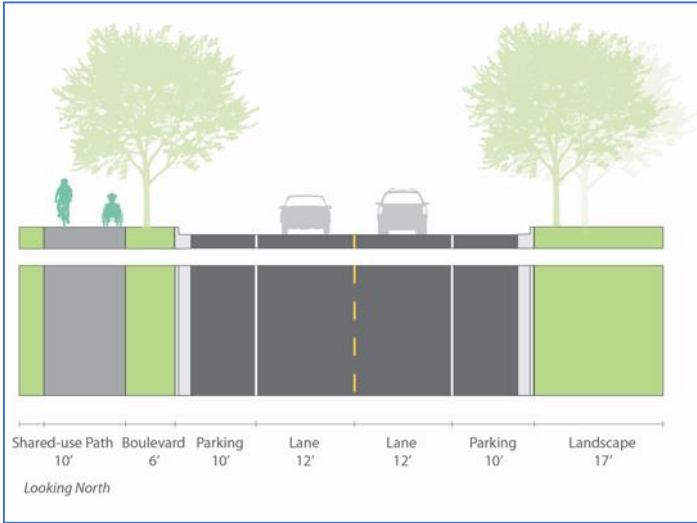
 Proposed bikeway extents
  Location of cross section



Existing cross section (Maple St)

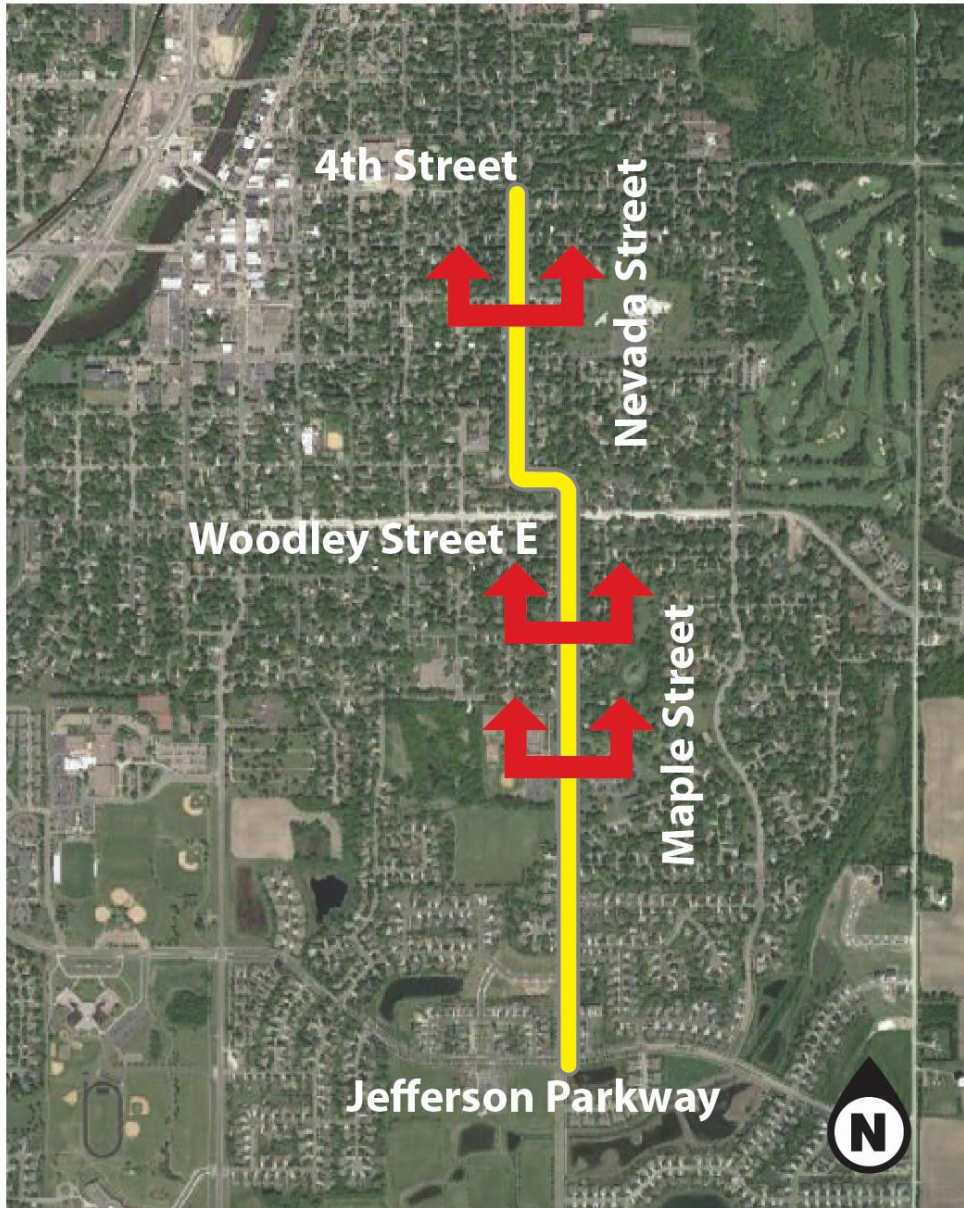


Recommendation between Sumner St and Fremont St



Recommendation south of Sibley Dr

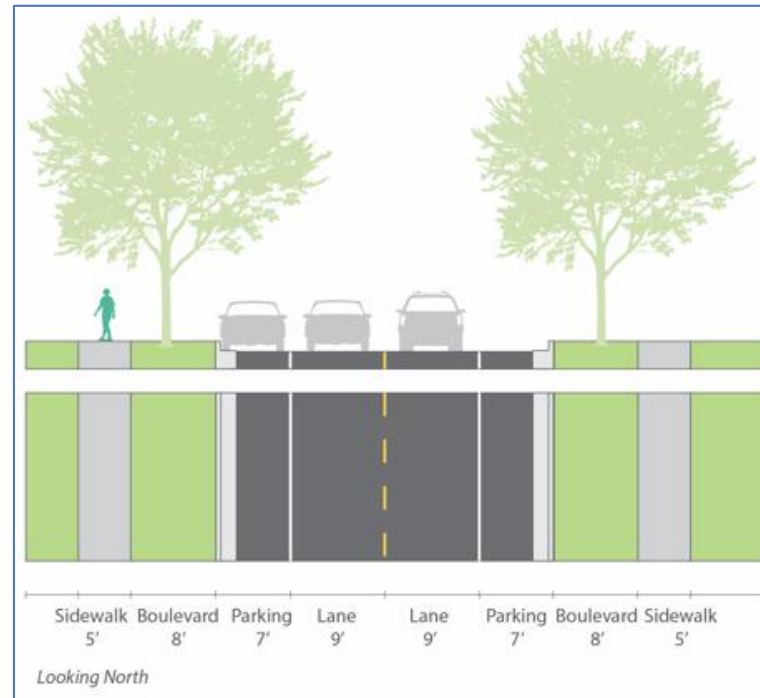
Maple St & Nevada St



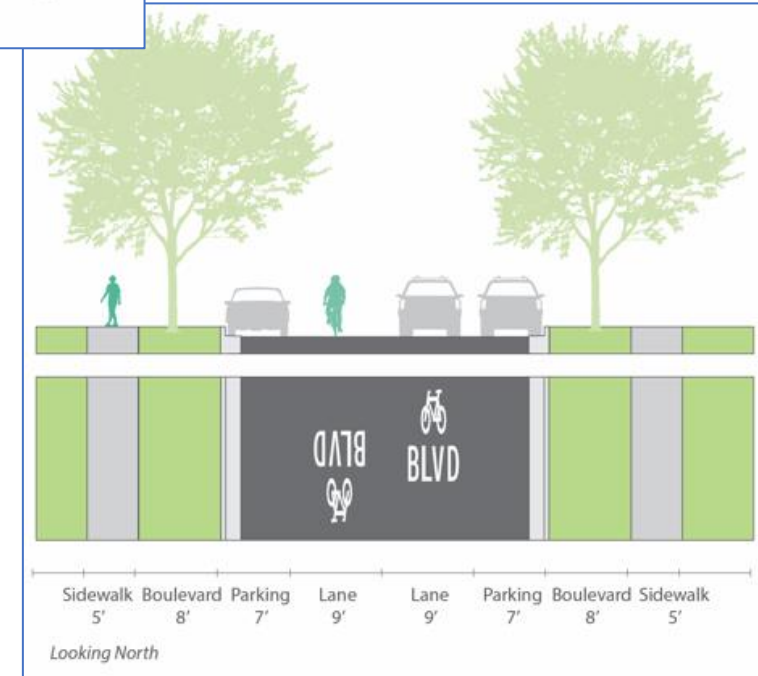
— Proposed bikeway extents

Location of cross section

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Existing cross section (Nevada St)



Recommendation between 6th St and 7th St

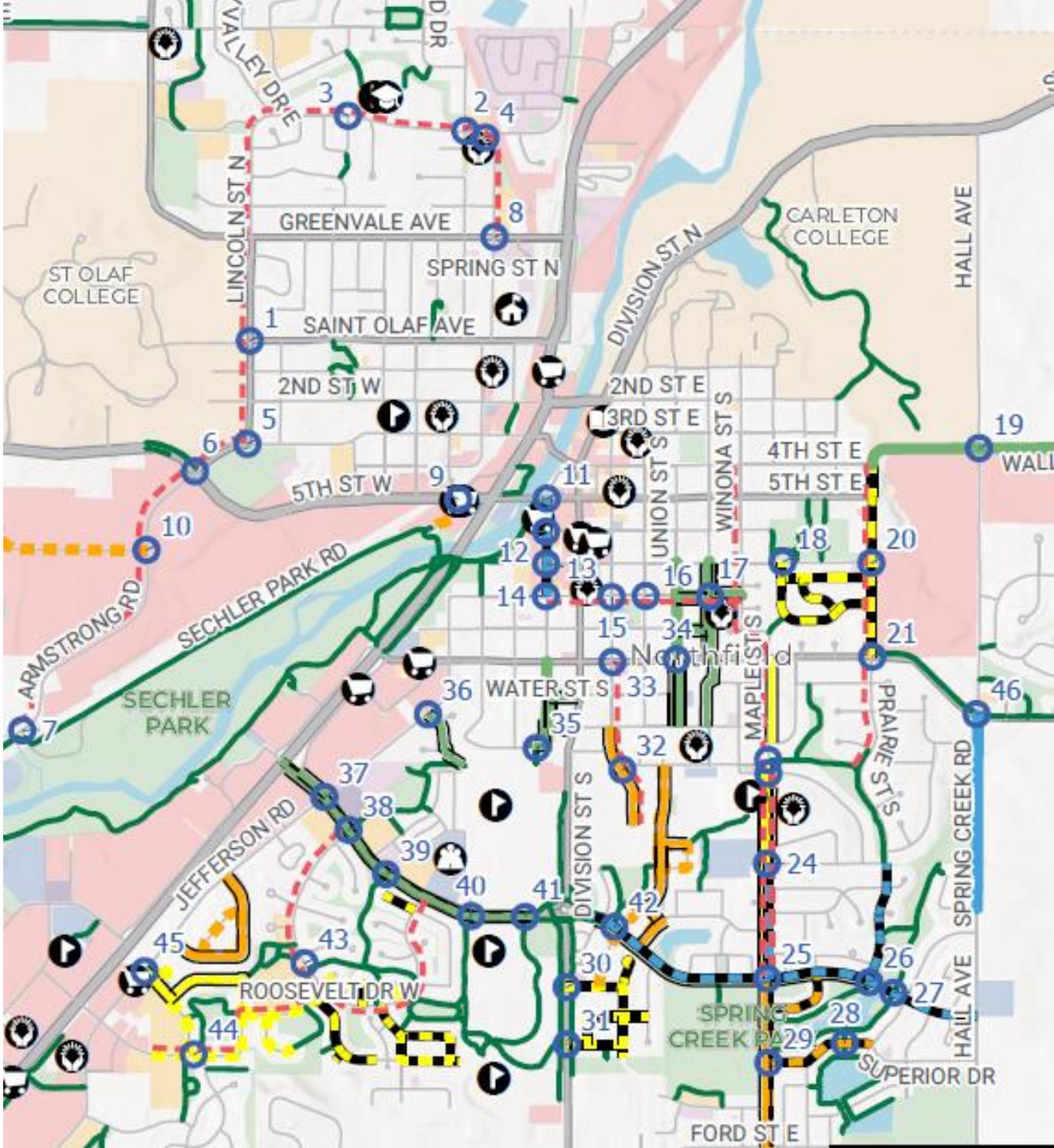


Draft Pedestrian Design Concepts and Report

Overview of pedestrian analysis

- Origin and destination analysis
- Street and intersection types
- Exploring tools for different CIP projects
- Pedestrian Toolbox
- How to use

Pedestrian Origin and Destination Analysis



Pedestrian Toolbox tools relevant to Capital Improvement Projects

Table 3: Pedestrian Toolbox tools relevant to Capital Improvement Projects

Tool	Mill and Overlay	Reconstruction and Reclamation	Sidewalk/Trail Improvements
Curb ramps	Standard	Standard	Standard (except bike lane striping/signing with no other associated project)
Corner treatments*	Opportunistic (especially curb extensions)	Standard	Opportunistic (especially curb extensions)
Crosswalks	Standard	Standard	Standard
Median refuge islands	Opportunistic	Opportunistic	Opportunistic
RRFBs	Opportunistic	Opportunistic	Opportunistic
Raised crossings	Opportunistic	Standard	Opportunistic (not applicable for sidewalk gap or bike lane striping projects)
Raised intersections	Limited	Opportunistic	Limited
Trees	Standard	Standard	Limited
Green stormwater infrastructure	Limited	Standard	Opportunistic
Roundabouts	Limited	Opportunistic	Limited
Other speed and volume control measures	Limited	Opportunistic	Opportunistic

*Curb extensions, corner radii, mountable truck aprons, and protected Intersections

Questions & Discussion

Thank you!