

Welcome!

Blake Road Corridor Study **Open House #3**

April 20, 2015

Study Partners:



In coordination with the Southwest Light Rail Project Office

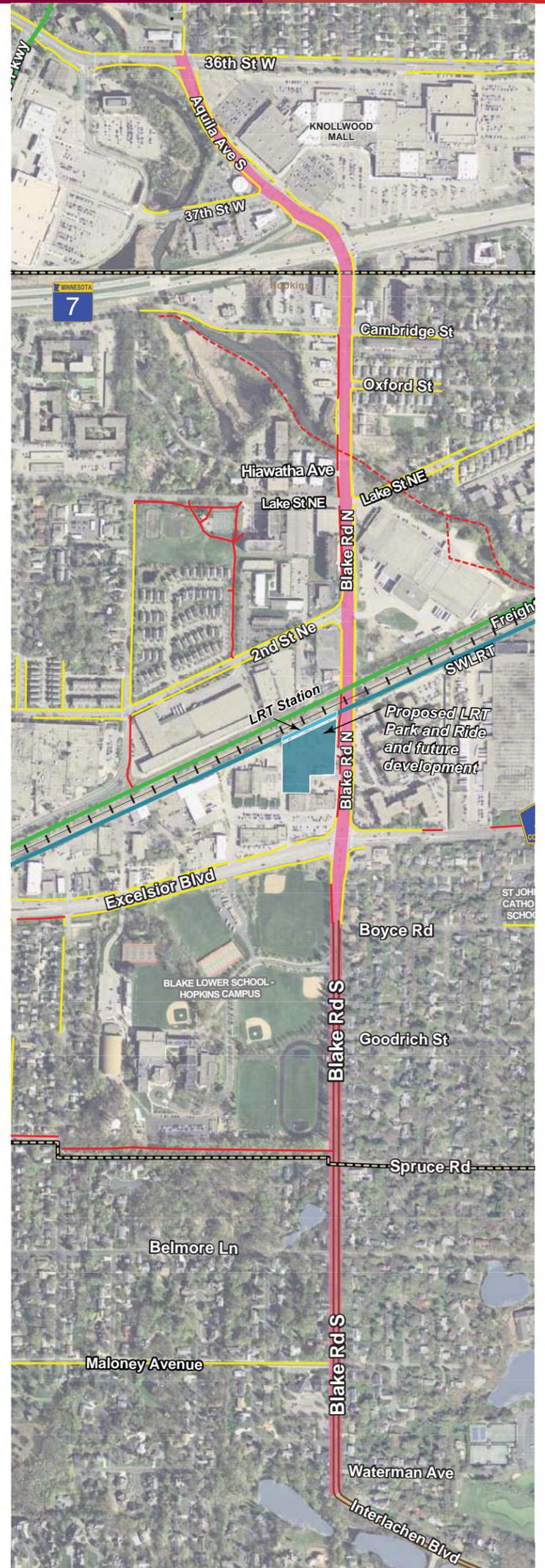
Project Background

The Blake Road area is expected to significantly change over the next 20 years. The Southwest Light Rail Transit (LRT) is planned to open in 2019 and will include a station on Blake Road. Redevelopment is also expected along Blake Road.

This study addresses existing and future issues as the corridor changes.

The purpose of this open house is to present the preferred alternative to address transportation needs on Blake Road/Aquila Ave between 36th Street and Interlachen Boulevard.

Study recommendations will be used to seek funding from local, state, and federal sources.



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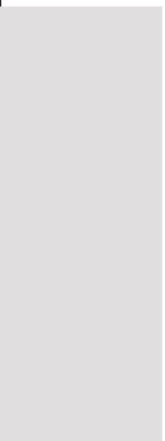
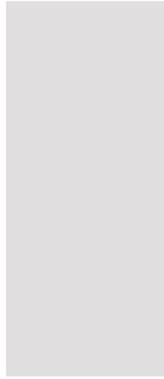
Blake Road Corridor Study

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Study Goals

These goals were used for developing and evaluating alternatives:



- Facilitate access to the future Southwest LRT Blake Road station.
- Create a roadway that is comfortable, safe, and functional for all transportation modes: pedestrian, bicycle, motor vehicle, freight, and transit
- Support redevelopment and make the roadway a place that is comfortable and active
- Improve access to and connectivity across TH 7
- Protect and enhance natural resources near the roadway including Minnehaha Creek
- Improve connections between the roadway and nearby neighborhoods, parks, and trails
- Improve connections to Minnehaha Creek and nearby trails

Evaluation Criteria

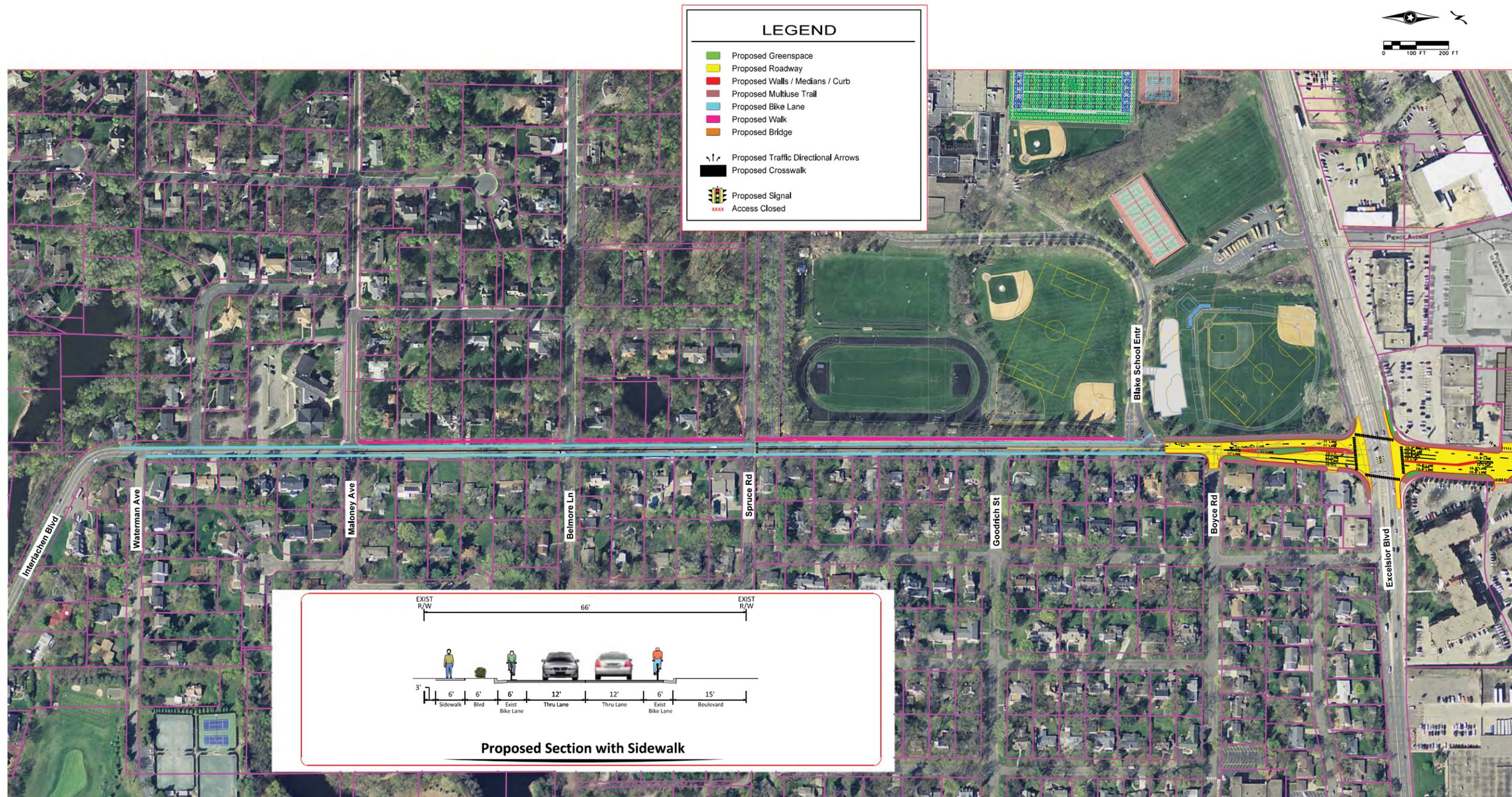


Options for Blake Road were evaluated based on the following criteria:



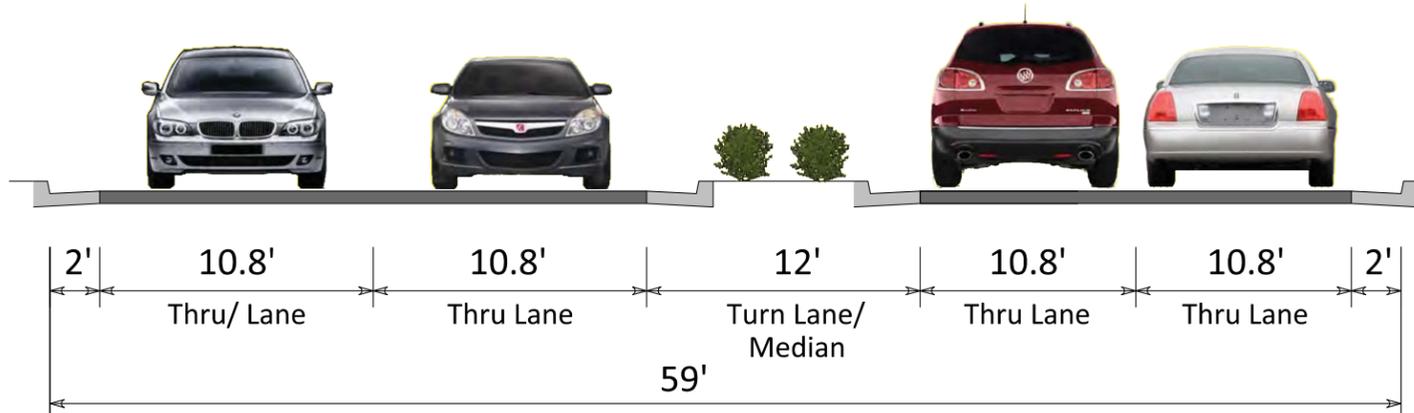
- Traffic operations
- Safety and conflict points
- Pedestrian and bicycle crossings: delay, safety, and directness
- Bicycle facility safety and comfort for likely users
- Pedestrian safety and comfort
- Business/residential access
- Right of way impacts – roadway cross-section width
- Economic development
- Construction cost
- Maintenance costs and ease of maintenance
- Environmental

Proposed Layout South of Excelsior Boulevard



Preferred Roadway Alternative

A four-lane divided roadway is the preferred roadway alternative.



Benefits of this alternative include:

- Provides for better intersection operations
- Provides adequate capacity for the future for motorized vehicles
- Capacity of the roadway can accommodate future residential, commercial, and office development along Blake Road
- Provides pedestrian refuge locations
- Safer than other roadway alternatives
- Provides space in some locations for a landscaped median

Drawbacks:

- Property impacts
- Longer crossing for pedestrians and bicyclists than other alternatives; however, crossing distance would be shorter than current conditions
- Would change access to right in/right out for some properties

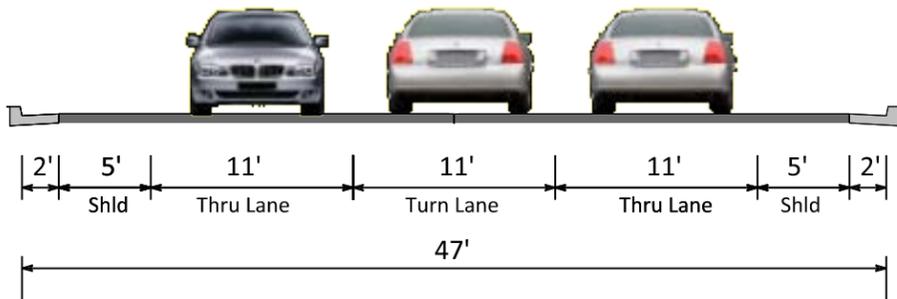
Evaluation of Roadway Alternatives

Criteria	3-lane	4-lane	5-lane	4-lane divided
Operations	Low	Low-moderate	Moderate-high	Moderate-high
Safety	Low-moderate	Low-moderate	Moderate-high	High
Pedestrian Crossings	Moderate	Low-moderate	Low-moderate	Moderate-high
Business and Residential Access	Moderate	Moderate	Moderate-high	Low-moderate
Right of Way Impacts*	Moderate-high	Moderate-high	Moderate	Low-moderate
Construction Costs*	Moderate-high	Moderate	Low-moderate	Low
Environmental Impacts*	Moderate-high	Moderate-high	Moderate	Low-moderate
Economic Development	Low-moderate	Low-moderate	Moderate-high	High
Overall Evaluation	Moderate	Moderate	Moderate-high	Moderate-high

*Higher ratings were given to alternatives that resulted in lower impacts and costs. For example, under Right of Way Impacts the three-lane alternative received a Moderate-High rating because it requires the least amount of right of way.

Other Roadway Alternatives Considered

Three-lane Roadway



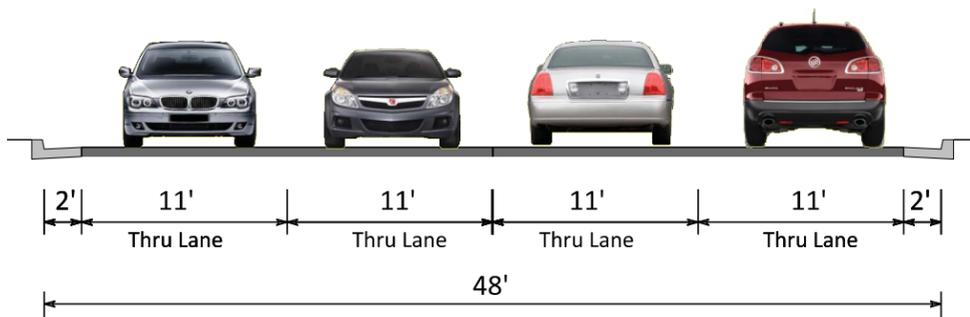
Benefits

- Narrower roadway would result in fewer property impacts and shorter pedestrian crossings

Drawbacks

- Congestion is likely to occur
- Would not provide adequate capacity for future residential, commercial, or office development along Blake Road

Four-lane Roadway



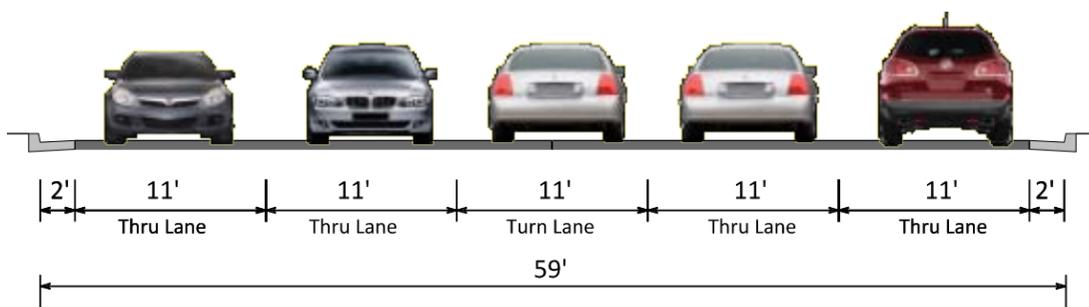
Benefits

- Narrower roadway would result in fewer property impacts and shorter pedestrian crossings

Drawbacks

- Lack of turn lanes decreases intersection operations
- Roadway design tends to have higher crash rates than other roadway designs because motorized vehicles cannot pull out of the lane to turn

Five-lane Roadway



Benefits

- Turn lane provides better operations at intersections

Drawbacks

- Crash rates are higher than on a four-lane divided roadway
- Roadway is wider than the three-lane and four-lane undivided alternatives

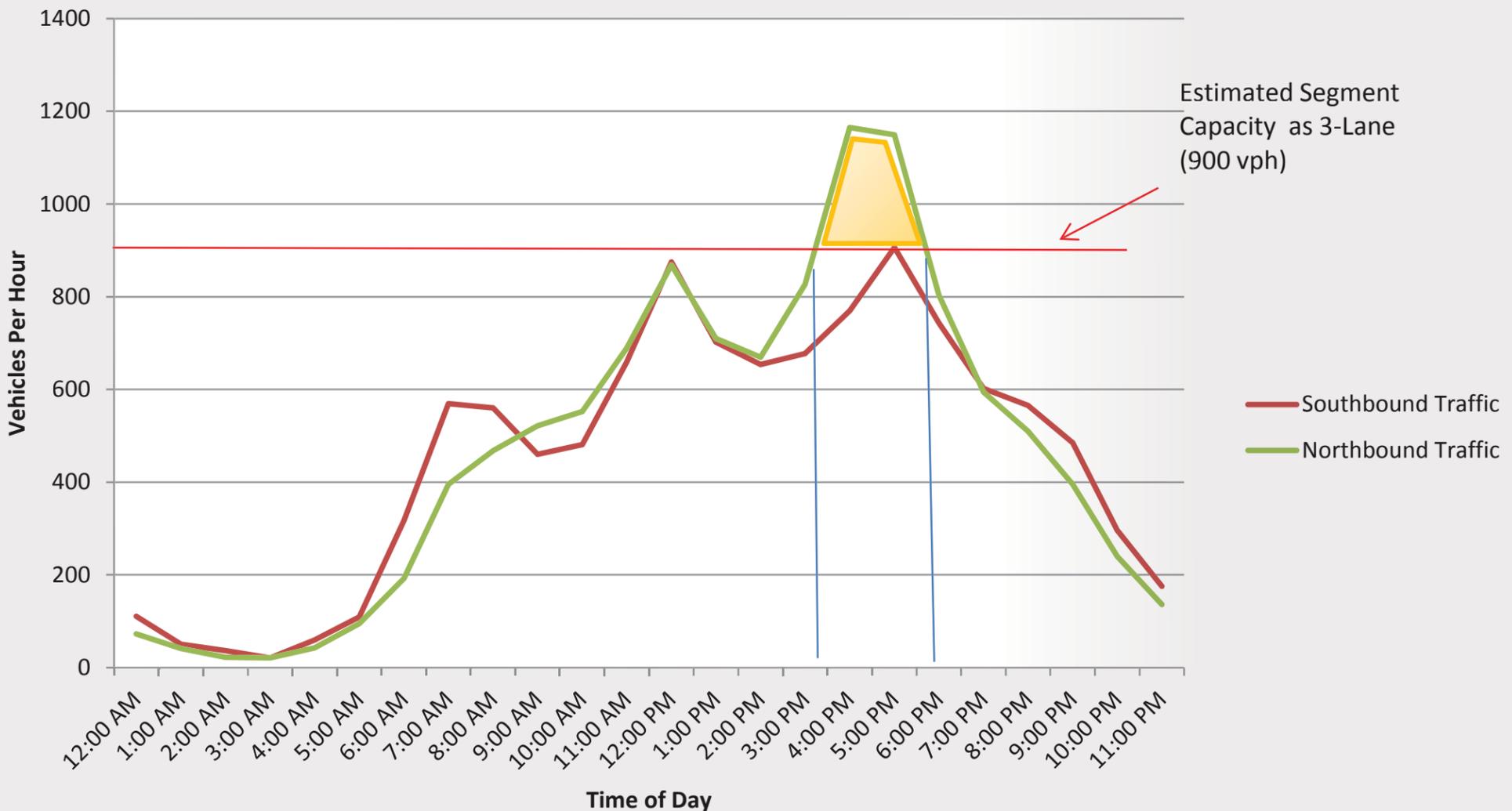
Travel Time on Blake Road

Travel time and delay were evaluated for different alternatives between Excelsior Boulevard and Highway 7:



- Four-lane divided roadway
- 3-lane roadway
- Unbalanced lanes: two lanes northbound, one lane southbound
- 3-lane roadway from 2nd to Cambridge Streets, four-lane divided roadway in other locations

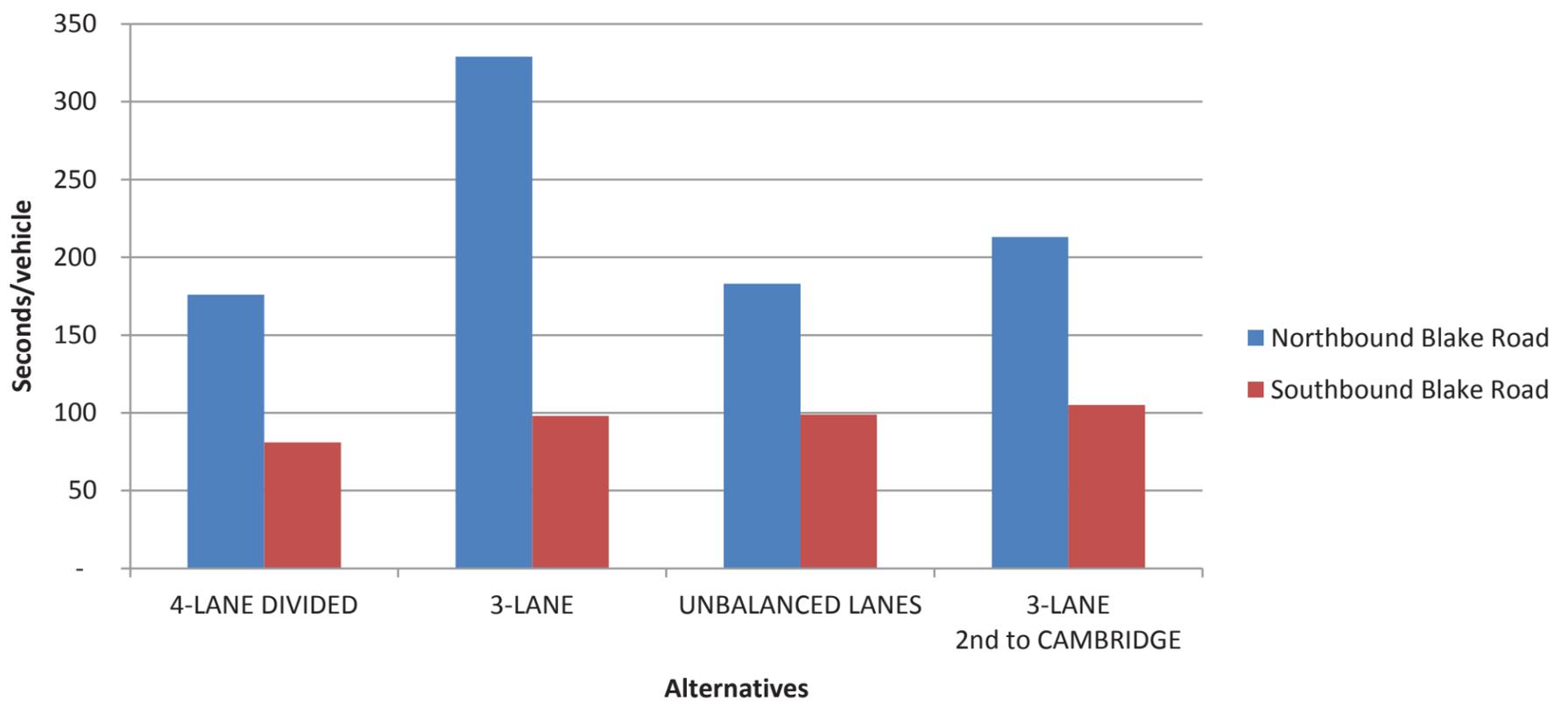
Blake Road: North of 2nd Street
Forecast 2035 Traffic



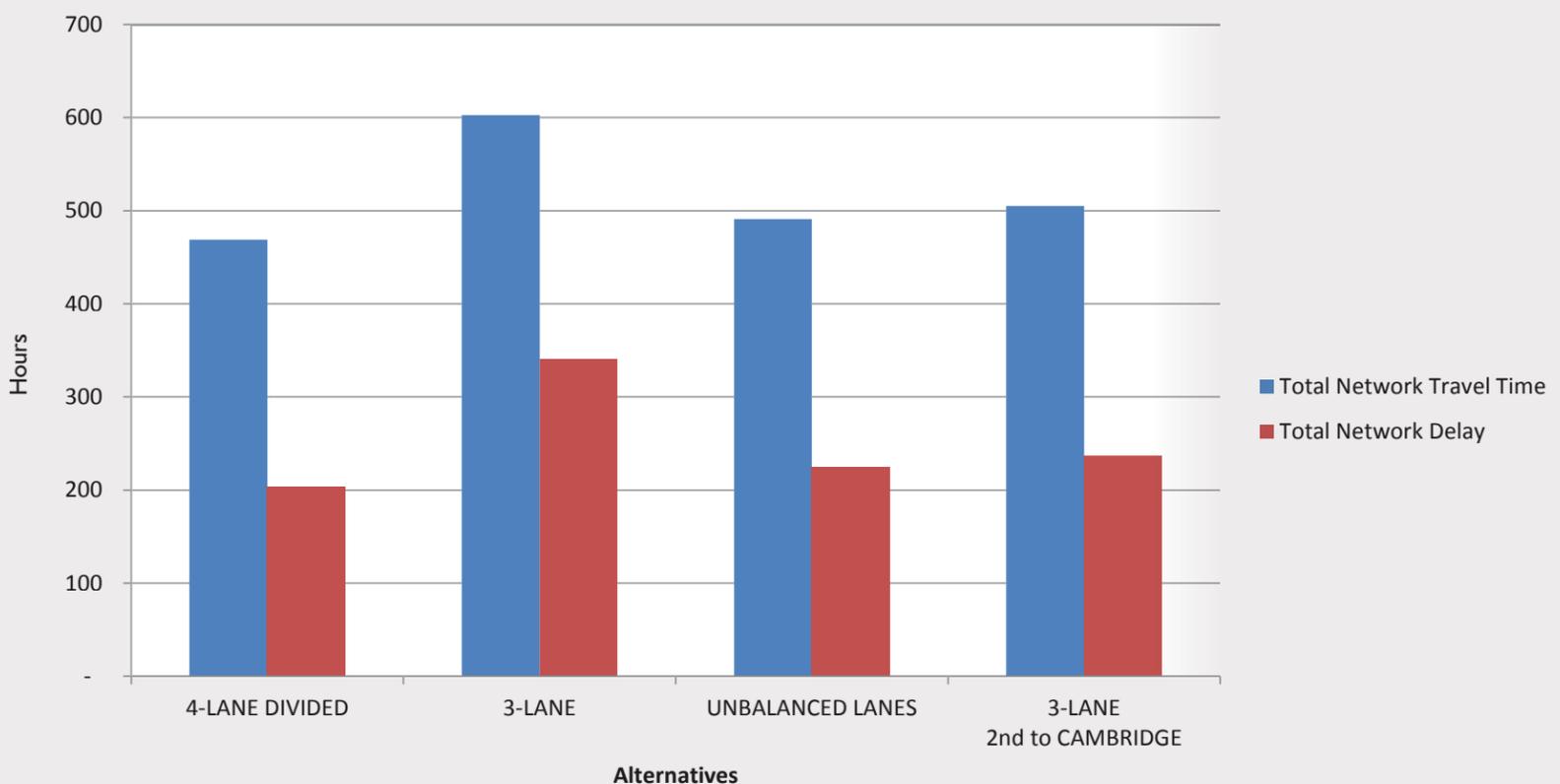
Travel Time on Blake Road

Travel time and delay were based on forecast 2035 traffic volumes. The four-lane divided roadway would provide the lowest travel time between Excelsior Boulevard and Highway 7 and least amount of delay for vehicles. The three-lane roadway would result in the greatest travel time and most delay.

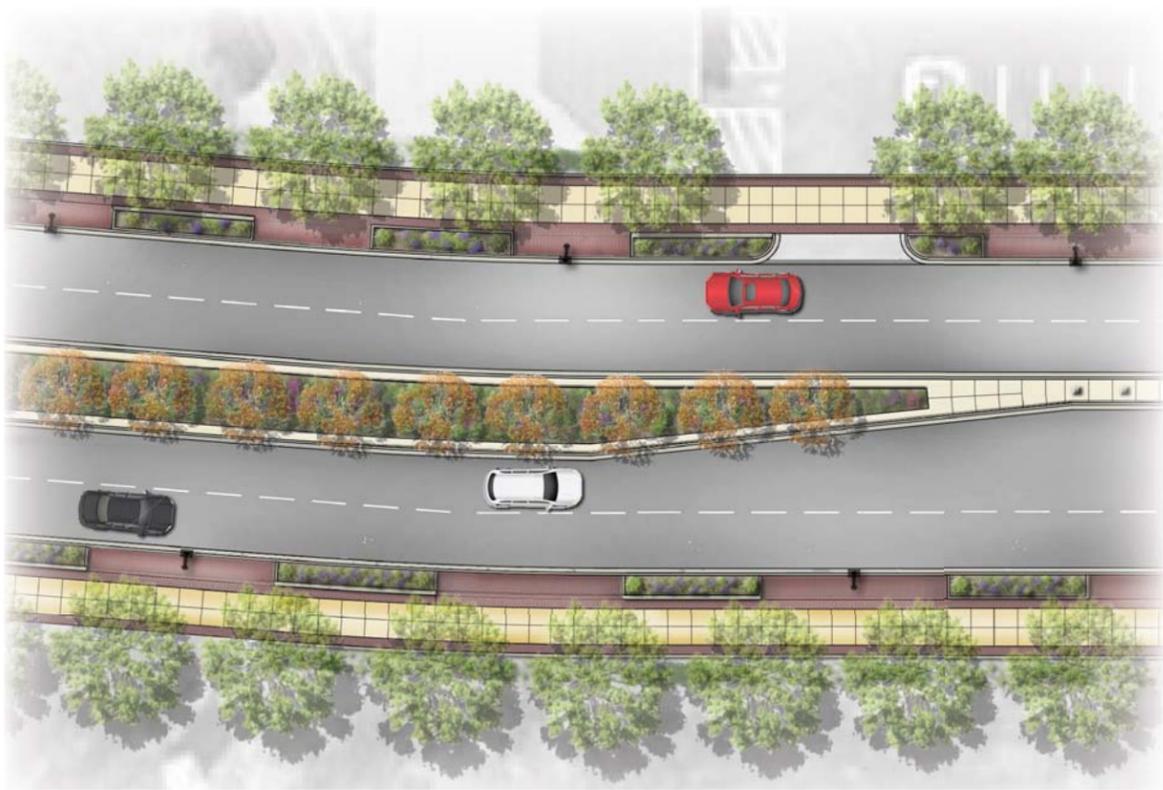
*Average Delay Blake Road: Excelsior to TH 7
(2035 PM Peak Hour)*



*Total Network Travel Time and Delay: Blake Road Corridor
(2035 PM Peak Hour)*

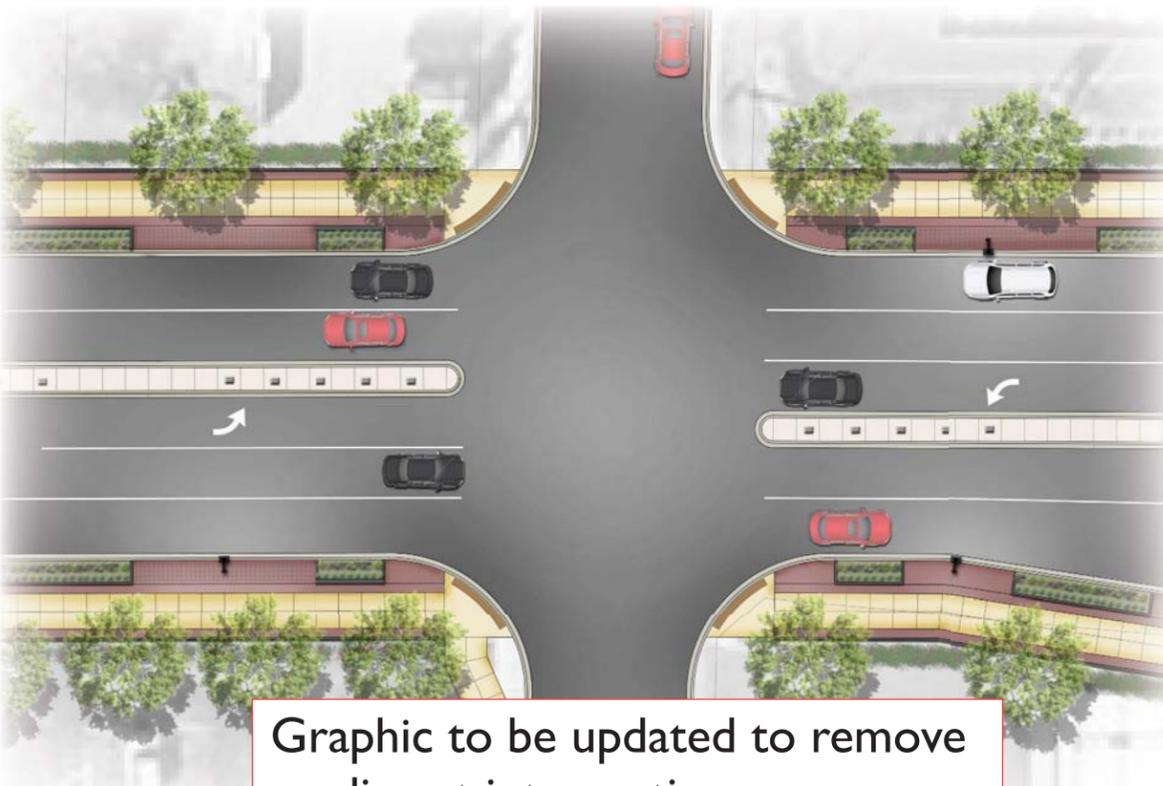


Streetscaping Options



Streetscaping and urban design will be important components of the final design.

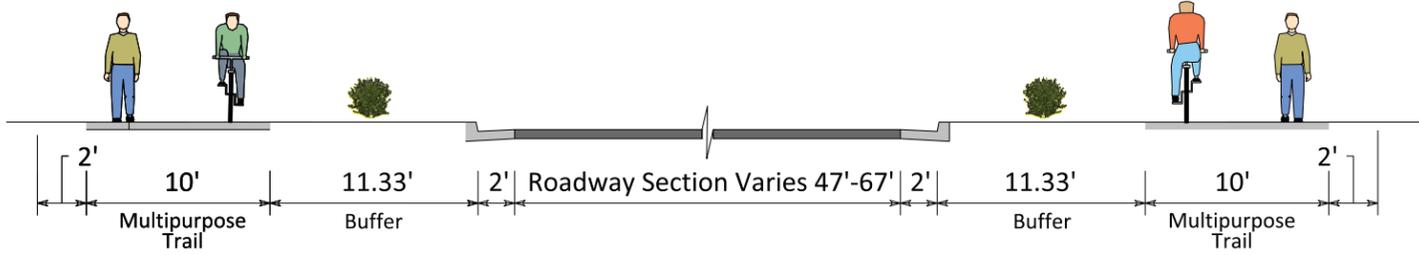
Plantings and surface materials will help give Blake Road a more urban and pedestrian-friendly feel. These concepts will be refined through final design.



Graphic to be updated to remove median at intersection

Preferred Pedestrian and Bicycle Alternatives

Between Excelsior Boulevard and Highway 7:



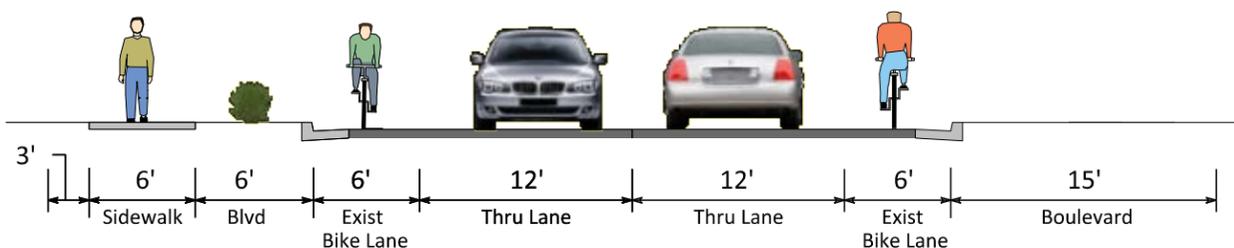
Drawbacks

- Experienced bicyclists generally do not prefer multi-use trails – they may ride in traffic or have to ride slower
- Potential for conflicts between bicyclists and pedestrians with a combined facility
- Requires additional attention to design at intersections

The **multi-use trail** is the preferred option for pedestrian and bicycle facilities. Benefits of this alternative include:

- Provides a facility that is most comfortable for less experienced bicyclists
- Requires less space than a cycle track
- Winter maintenance can be better than on-street bike lanes
- Reduces the need for bicyclists to cross Blake Road multiple times (two-way facility)
- Provides full separation between bicyclists and motorized vehicles except at intersections and driveways
- Allows utilities to be buried

South of Excelsior Boulevard:

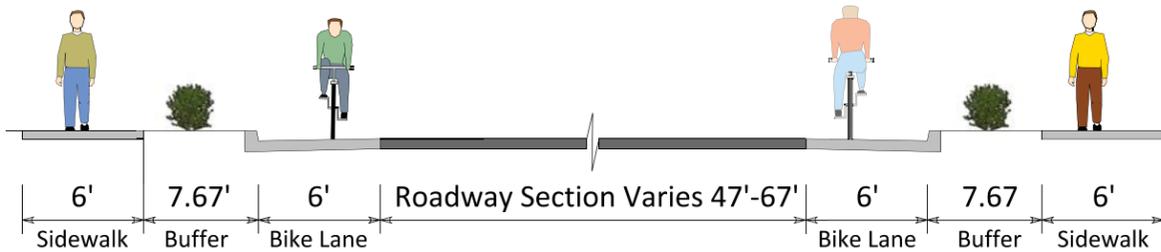


The preferred option for bicycle and pedestrian facilities south of Excelsior Boulevard are **bike lanes with a sidewalk** on the west side of Blake Road. This option was selected for the following reasons:

- Provides sidewalk to connect residents to Blake School and future SWLRT station
- Reduces conflicts between bicyclists, pedestrians, and motor vehicles by providing separate facilities
- Sidewalk and bike lanes can fit within existing right of way
- Traffic volumes south of Excelsior Boulevard are lower than north of Excelsior Boulevard, which makes bike lanes a more appropriate facility for a wider range of bicyclists

Other Pedestrian and Bicycle Alternatives Considered Between Excelsior Boulevard and Highway 7

Bike Lane and Sidewalk



Benefits

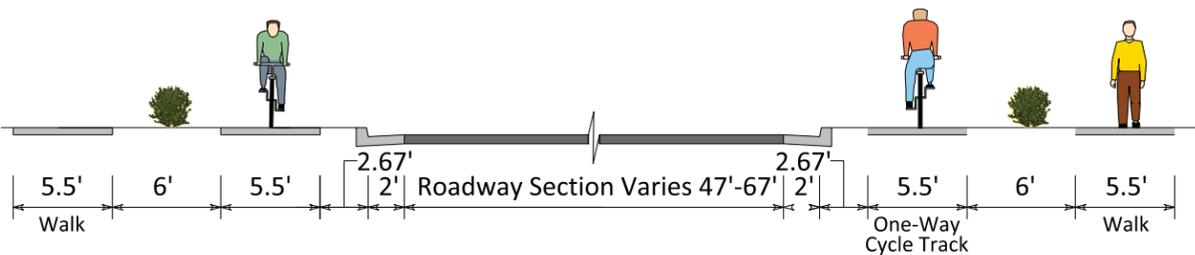
- Provides a facility that is comfortable and fast for experienced cyclists
- Reduces conflicts between bicyclists, pedestrians, and motor vehicles by providing separate facilities
- Bike lane is consistent with conditions south of Excelsior Boulevard
- Allows utilities to be buried



Drawbacks

- Not as comfortable for less experienced bicyclists – potential conflicts with motorized vehicles
- Can be challenging to keep clear of snow and ice
- Requires additional attention to design at intersections

Cycle Track and Sidewalk



Benefits

- Provides a facility that is comfortable for most bicyclists
- Reduces conflicts between bicyclists, pedestrians, and motor vehicles by providing separate facilities
- Winter maintenance can be better than bike lanes
- Inconsistent with facilities south of Excelsior Boulevard
- Allows utilities to be buried



Drawbacks

- Short segment for cycle track design – usually a longer facility
- Requires more space than multiuse trail
- Potential confusion on how to use – cycle tracks are one-way (with traffic flow) facilities, but inexperienced users may go the wrong way
- One-way facilities mean that some bicyclists may have to cross Blake Road twice to reach destinations
- Requires additional attention to design at intersections

Evaluation of Bicycle and Pedestrian Facilities

Criteria	On-Road Bike Lane	Cycle Track	Multi-use Trail
Operations	Moderate-high	Moderate	Moderate
Bike Safety and Comfort	Moderate	High	High
Pedestrian Safety and Comfort	High	High	Moderate-high
Bike Facility Directness to Destinations	Moderate	Moderate	High
Economic Development	Moderate	Moderate	Moderate
Right of Way Impacts*	Moderate	Moderate	Moderate
Construction Costs*	Moderate	Moderate	Moderate
Maintenance Costs*	Moderate	Low-moderate	Moderate
Environmental Impacts*	Moderate	Moderate	Moderate
Overall Evaluation	Moderate	Moderate	Moderate-high

*Higher ratings were given to alternatives that resulted in lower impacts and costs. For example, under Maintenance Costs the cycle track received a rating of Low-Moderate because it will require the sidewalk and bike facility to be plowed separately, resulting in higher maintenance costs.

Preferred Locations for Pedestrian and Bicycle Crossings



Rectangular Rapid Flashing Beacon



Pedestrian refuge median

Marked pedestrian and bicycle crossings are recommended at all signalized intersections and the following unsignalized locations on Blake Road:

- **Spruce Road:** Marked crosswalk
- **North of entrance to Westside Village Apartments:** marked crosswalk, pedestrian refuge median, and Rectangular Rapid Flashing Beacon
- **Cedar Lake Regional Trail:** Marked crosswalk, unless grade-separated crossing constructed
- **Lake Street:** Marked crosswalk, Rectangular Rapid Flashing Beacon

Evaluation of Bicycle and Pedestrian Crossings: Near West Side Village

Criteria	Maintain median break and install pedestrian crossing	Close median, do not install pedestrian crossing
Safety	Low-moderate	Moderate-high
Construction Costs*	Moderate	Moderate
Right of Way Impacts*	Low-moderate	Moderate-high
Vehicle Access	Moderate-high	Low-moderate
Directness of Connections	Moderate-high	Low-moderate
Economic Development	Moderate-high	Low-moderate
Overall Evaluation	Moderate-high	Moderate

Evaluation of Bicycle and Pedestrian Crossings: Cedar Lake Regional Trail

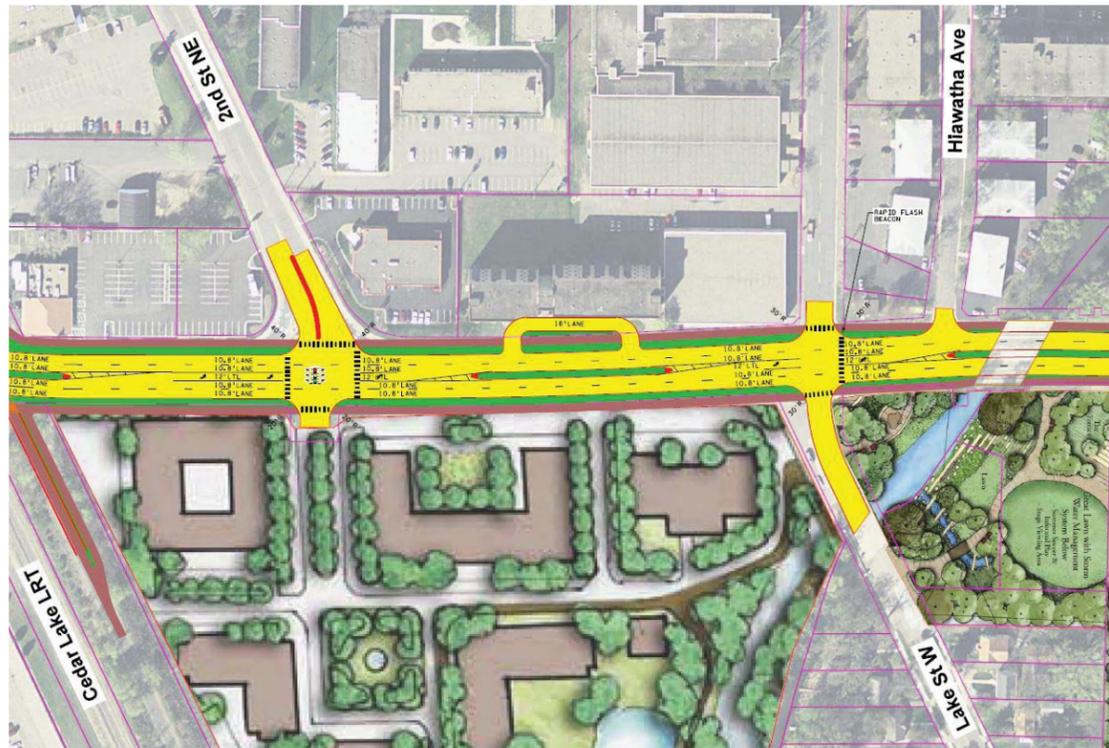
Criteria	Grade Separated	At Grade
Safety	Moderate-high	Low-moderate
Construction Costs*	Low	Moderate-high
Right of Way Impacts*	Low	Moderate
Directness of Connections	Moderate	Moderate
Overall Evaluation	Low-moderate	Moderate

Evaluation of Bicycle and Pedestrian Crossings: Lake Street

Criteria	Grade Separated (under bridge)	At Grade
Safety	Moderate-high	Low-moderate
Construction Costs*	Low	Moderate-high
Right of Way Impacts*	Low	Moderate
Directness of Connections	Moderate	Moderate
Overall Evaluation	Low-moderate	Moderate

*Higher ratings were given to alternatives that resulted in lower impacts and costs. For example, under Construction Costs the grade separated alternatives received a rating of Low because of the high construction costs of grade separated crossings.

Preferred Alternative for Intersections at 2nd and Lake Streets



The preferred alternative is to keep a **traffic signal at 2nd Street** and **through-stop intersection** at Lake Street.

This option provides the following benefits:

- Consistent with other traffic control on Blake Road
- Can be easily coordinated with LRT operations to prevent vehicles from backing up on the tracks
- More predictable to users
- Requires fewer property impacts than other options

Drawbacks

- Turn lanes increase the length of pedestrian crossings
- Does not provide the traffic calming and aesthetic benefits of roundabouts

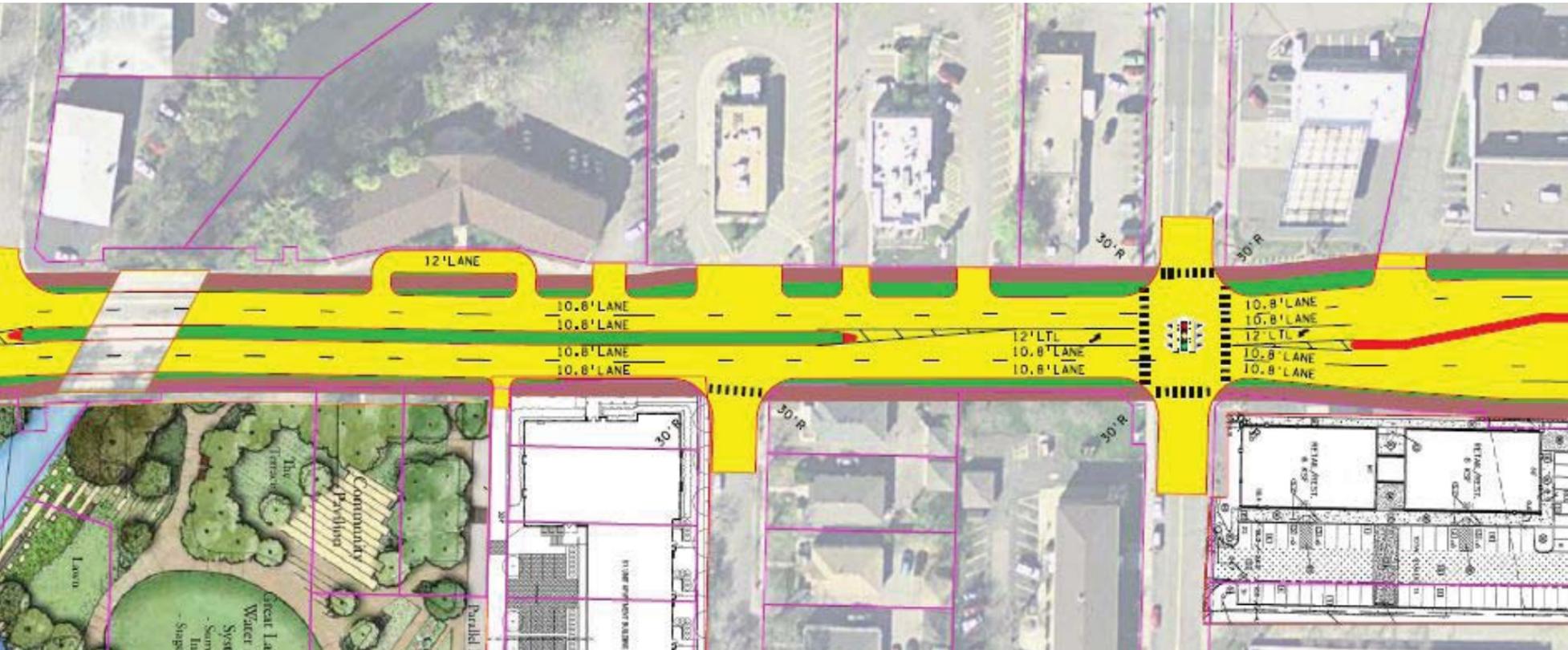
Evaluation of 2nd and Lake Street Intersections

Criteria	Roundabout	Signal/ Through Stop
Operations	Moderate	Moderate-high
Safety	Moderate-high	Moderate-high
Pedestrian Crossings	High	Moderate
Business and Residential Access	Moderate-high	Moderate
Right of Way Impacts*	Low-moderate	Moderate
Construction Costs*	Low-moderate	Moderate
Environmental Impacts*	Low-moderate	Moderate
Aesthetics	Moderate-high	Moderate
Overall Evaluation	Moderate	Moderate

*Higher ratings were given to alternatives that resulted in lower impacts and costs. For example, under Right of Way Impacts the roundabout alternative received a rating of Low - Moderate because it would result in greater right of way impacts.

Roundabouts were considered at 2nd and Lake Street. The roundabout option was not selected because of greater property impacts and concerns about traffic backing up onto rail tracks.

Preferred Alternative at Oxford Street



A **closed median** is preferred at Oxford Street.

This option provides the following benefits:

- Allows space for landscaping in the median
- Improves traffic operations and safety
- Requires less right of way from property owners

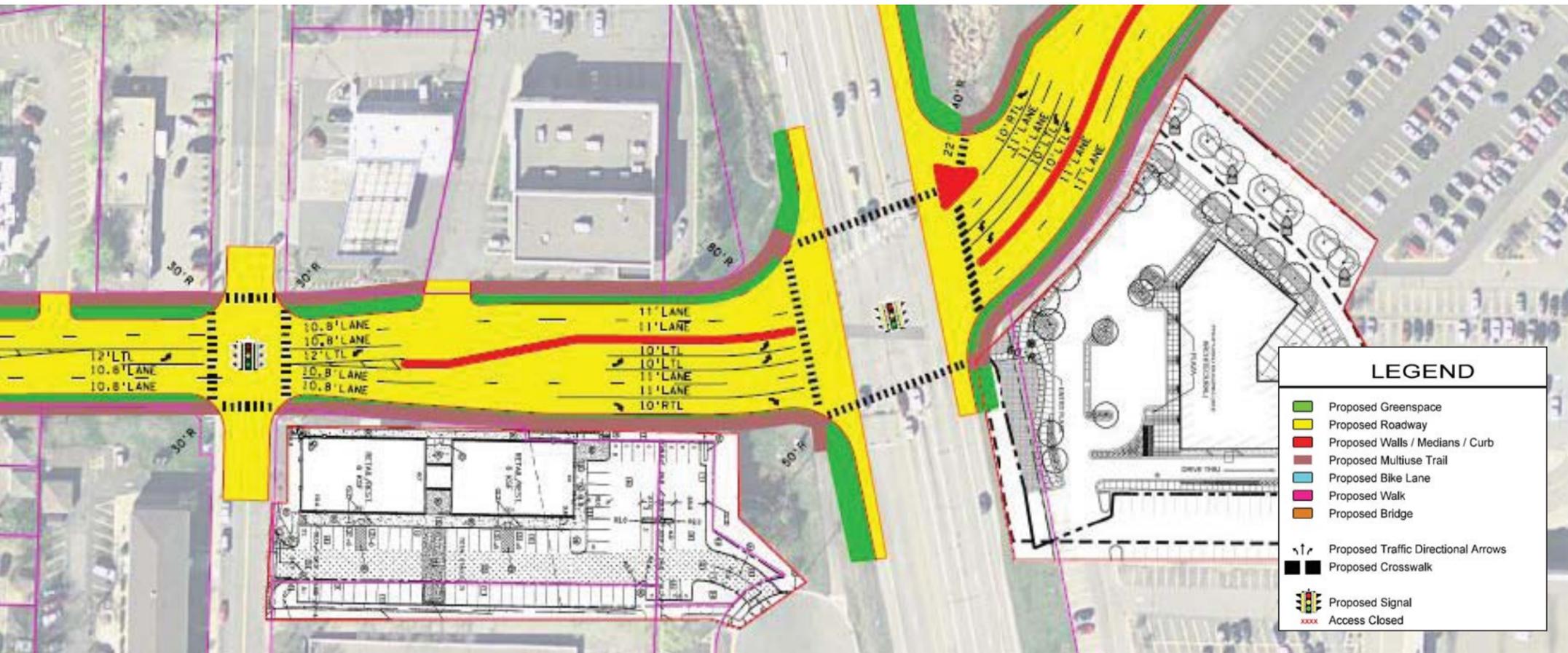
Drawbacks

- Restricts motor vehicle, pedestrian, and bicycle access to residences on the east side of the road and businesses on the west side

LEGEND	
	Proposed Greenspace
	Proposed Roadway
	Proposed Walls / Medians / Curb
	Proposed Multiuse Trail
	Proposed Bike Lane
	Proposed Walk
	Proposed Bridge
	Proposed Traffic Directional Arrows
	Proposed Crosswalk
	Proposed Signal
	Access Closed

Full access was also considered at this intersection. This option was not selected because it would result in greater property impacts and safety concerns.

Preferred Alternative at Highway 7

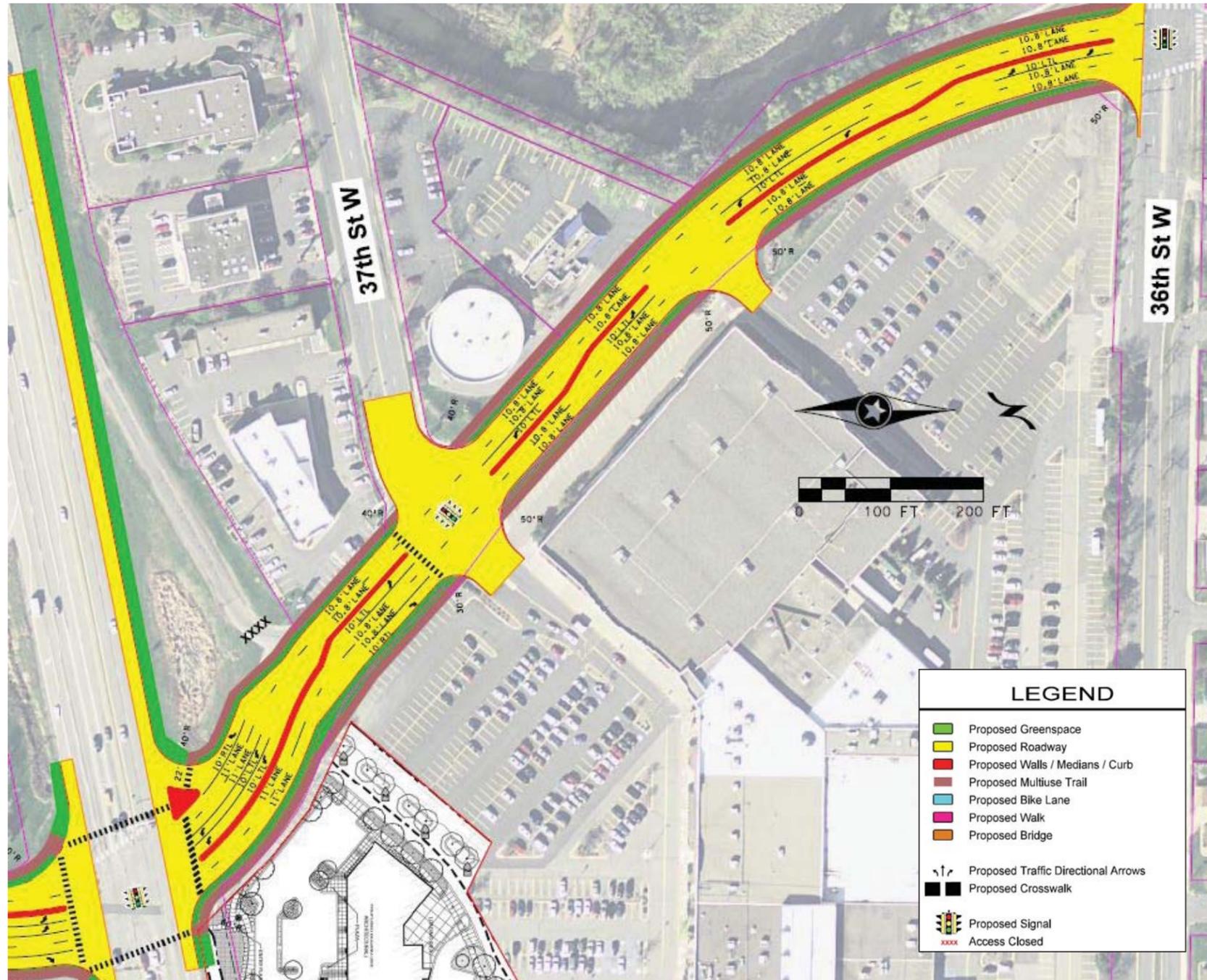


An at-grade intersection with dual left turn lanes is preferred at Highway 7. This option would improve traffic operations, but congestion would still exist during peak periods.

A no-build option was considered that would not have included additional left turn lanes. This option was not selected because it does not address the congestion problems at Highway 7.

A pedestrian and bicycle bridge was also considered at Highway 7. This option was not selected because of property impacts and construction cost.

Preferred Alternative North of Highway 7



The preferred alternative on Aquila Avenue between Highway 7 and 36th Street includes a **four-lane divided roadway** and **multi-use trail** on both sides of the roadway.

Blake Road Corridor Study

Open House #3 - April 20, 2015



Next Steps

The Blake Road Corridor Study will continue through May 2015.

The study process is nearly complete. Next steps include:



- Preparing report documenting technical analyses and recommended improvements



- Identifying funding for proposed improvements



- Presenting final recommendations to impacted agencies
 - Hopkins City Council Meeting: May 19