

**Memorandum**

**4th Street Market District  
Feasibility Study**

For:

**4th Street Market - Project Management Team**

Prepared by:

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# Project Summary

## Project Purpose and Intent

The 4th Street Market District is a concept conceived of and initiated by a group of business and property owners along 4th Street in downtown Saint Paul. An initial report titled, *4th Street Market District: Connections, Retail and Art from Washington Street to North Broadway Street*, prepared by the Saint Paul Riverfront Corporation, articulates the business community’s visions and aspirations for 4th Street. These property owners see the opportunity to create a vibrant street environment activated with programmed activities, such as outdoor dining, an expanded farmers market, and increased numbers of pedestrians and bicyclists traversing the roadway. Increased pedestrian and bicycle activity would be accompanied by an associated reduction or elimination of cars from 4th Street. The activated corridor is envisioned to extend from Washington Street to Broadway Street. A map showing the project study area is below in Figure 1.

This study is a technical analysis to test the feasibility of implementing the 4th Street Market District vision. The Saint Paul Riverfront Corporation, on behalf of the Project Management Team (PMT), retained SRF Consulting to develop concepts for transforming the street to better facilitate and accommodate increased pedestrian and bicycle activity, including reducing or eliminating vehicle traffic from the roadway. Work was performed under the guidance of the PMT and with input from the Project Review Committee (PRC).

For the purposes of the feasibility study, and consistent with the approach developed by the initial 4th Street Market District report, the 4th Street Market District was divided into three distinct character districts or segments. The segments of 4th Street are listed below and discussed in Figures 2-7.

- Segment 1 from Washington Street to Minnesota Street
- Segment 2 from Minnesota Street to Wacouta Street
- Segment 3 from Wacouta Street to Broadway Street

## Project Study Area



Figure 1.



Segment 1: Washington Street to Minnesota Street

Existing Conditions

This segment currently has two vehicular travel lanes providing two-way movement, sidewalks of varying width on both sides of the street, and on-street parking. Generally, this segment has higher traffic volumes than the eastern portion of the corridor. Metro Transit bus route 67 runs between Cedar and Wabasha streets within this segment and has one bus stop on the north side of 4th Street.

Segment 1: Plan

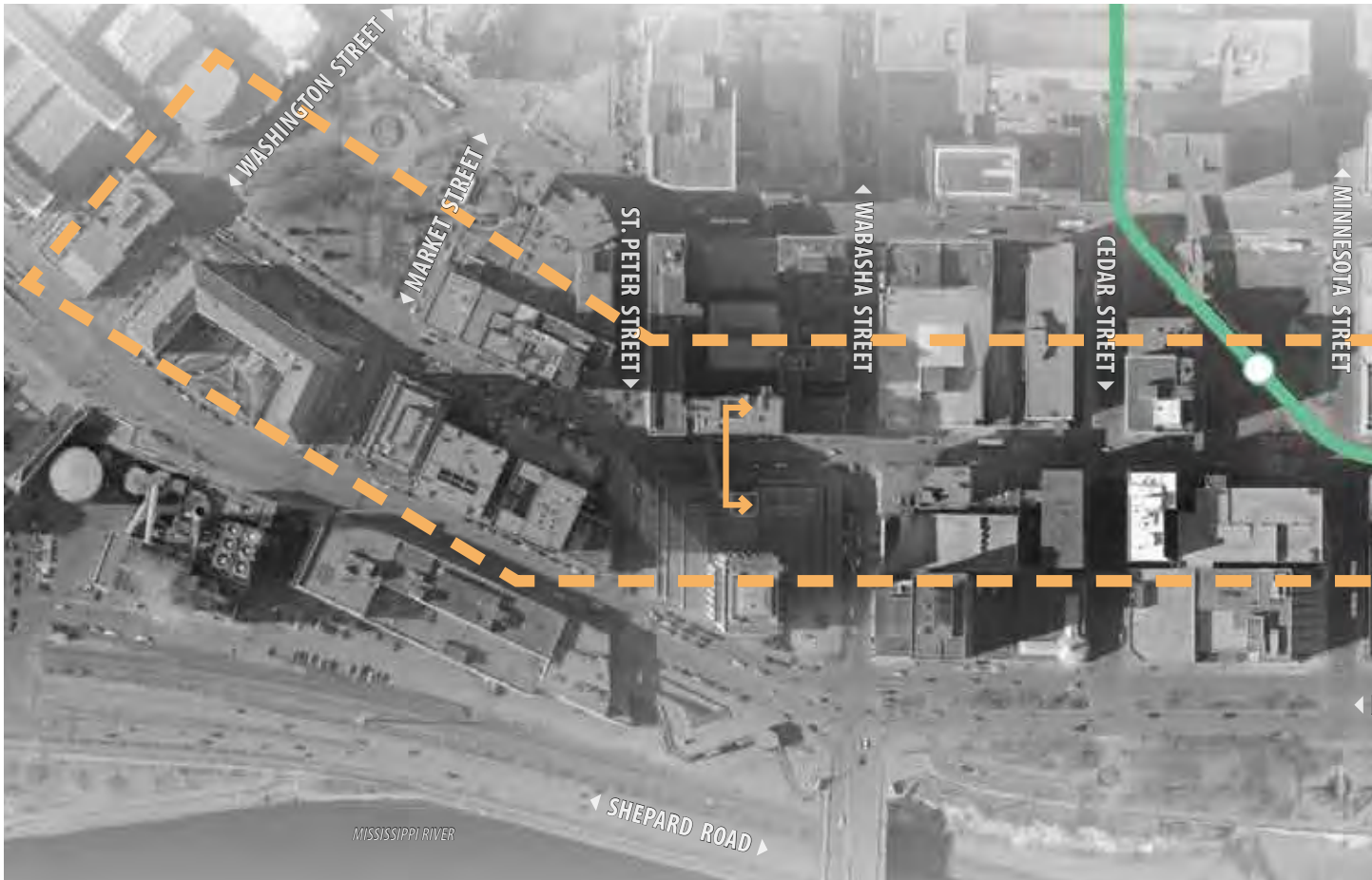


Figure 2.

Segment 1: Section

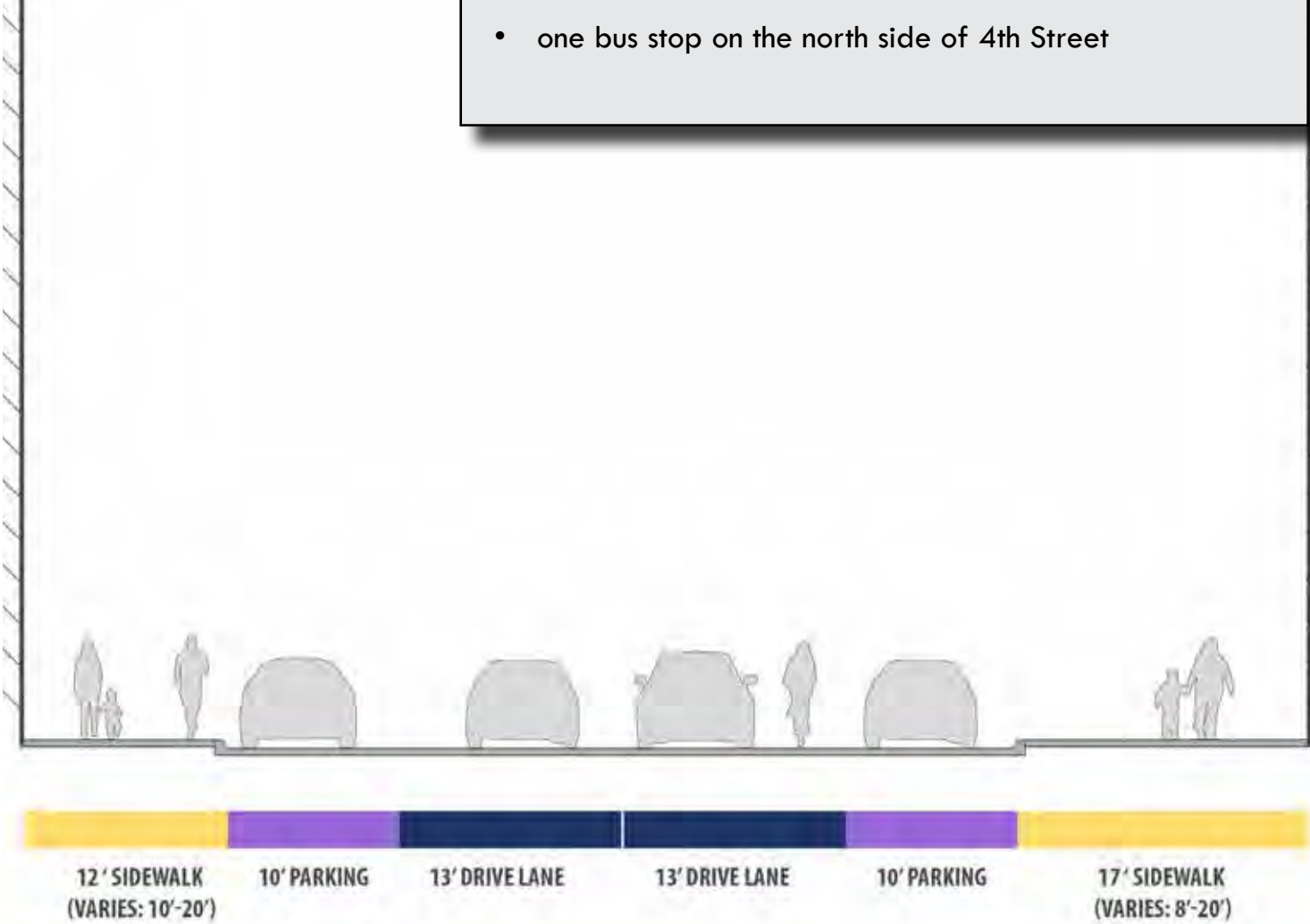


Figure 3.

**Segment 1 Washington Street to Minnesota Street**

- two vehicular travel lanes providing two-way movement
- sidewalks of varying width on both sides of the street
- on-street parking
- generally higher traffic volumes than the eastern portion of the corridor
- Metro Transit bus route 67 runs between Cedar and Wabasha Streets
- one bus stop on the north side of 4th Street

Segment 2: Minnesota Street to Wacouta Street

Existing Conditions

This segment hosts light rail transit, one westbound vehicle travel lane and sidewalks of varying width on both sides of the street. For this segment, the LRT catenary poles are located between the LRT tracks.

Segment 2: Plan



Figure 4.

**Segment 2 Minnesota Street to Wacouta Street**

- light rail transit
- one westbound vehicle travel lane
- sidewalks of varying width on both sides of the street
- LRT catenary poles located between the LRT tracks

Segment 2: Section

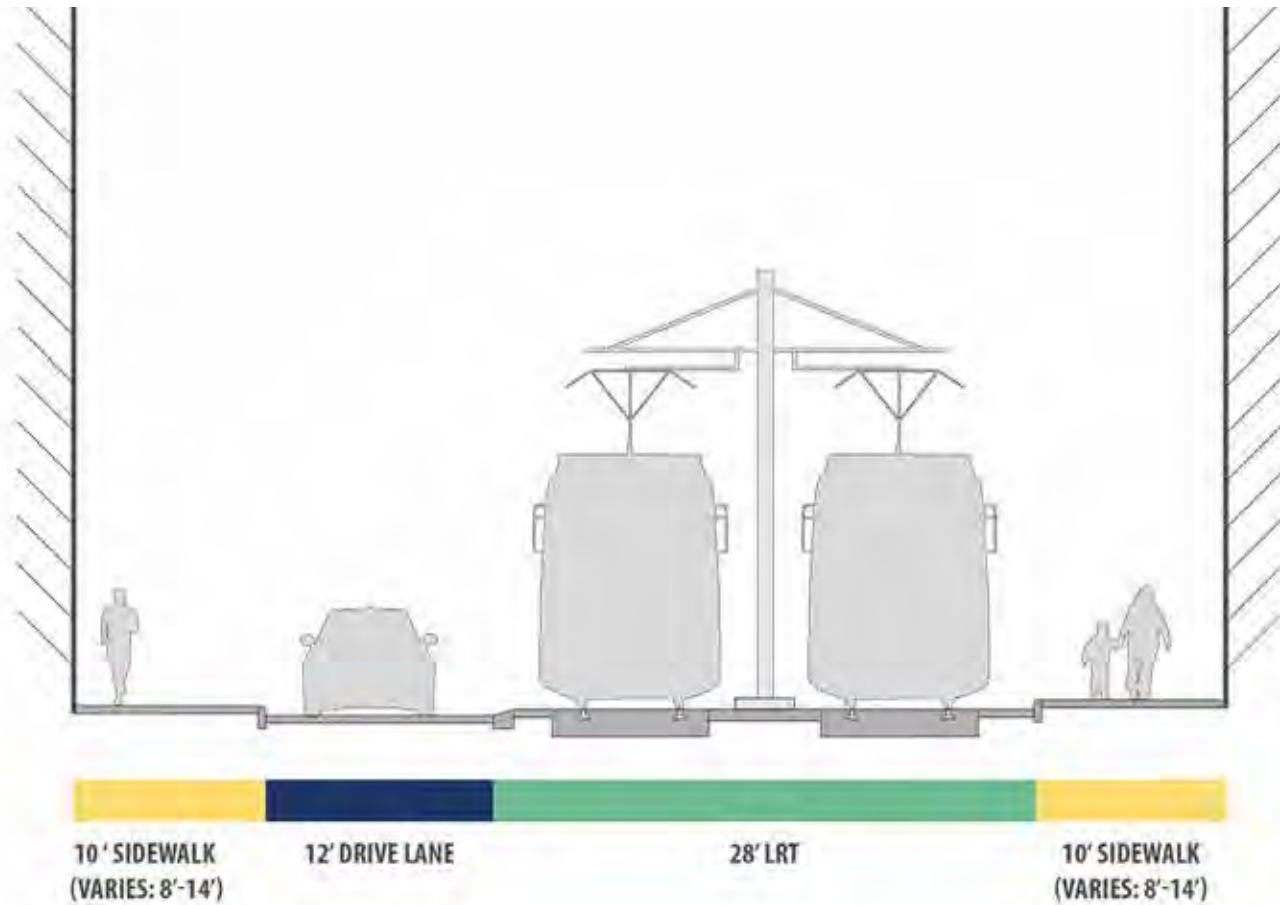


Figure 5.



Segment 3: Wacouta Street to Broadway Street

Existing Conditions

Similar to Segment 2, this segment hosts light rail transit. One travel lane is provided in each direction, and 8.5-foot sidewalks exist on each side of the street. A portion of each sidewalk hosts poles for the overhead catenary wires associated with the light rail transit.

Segment 3: Plan

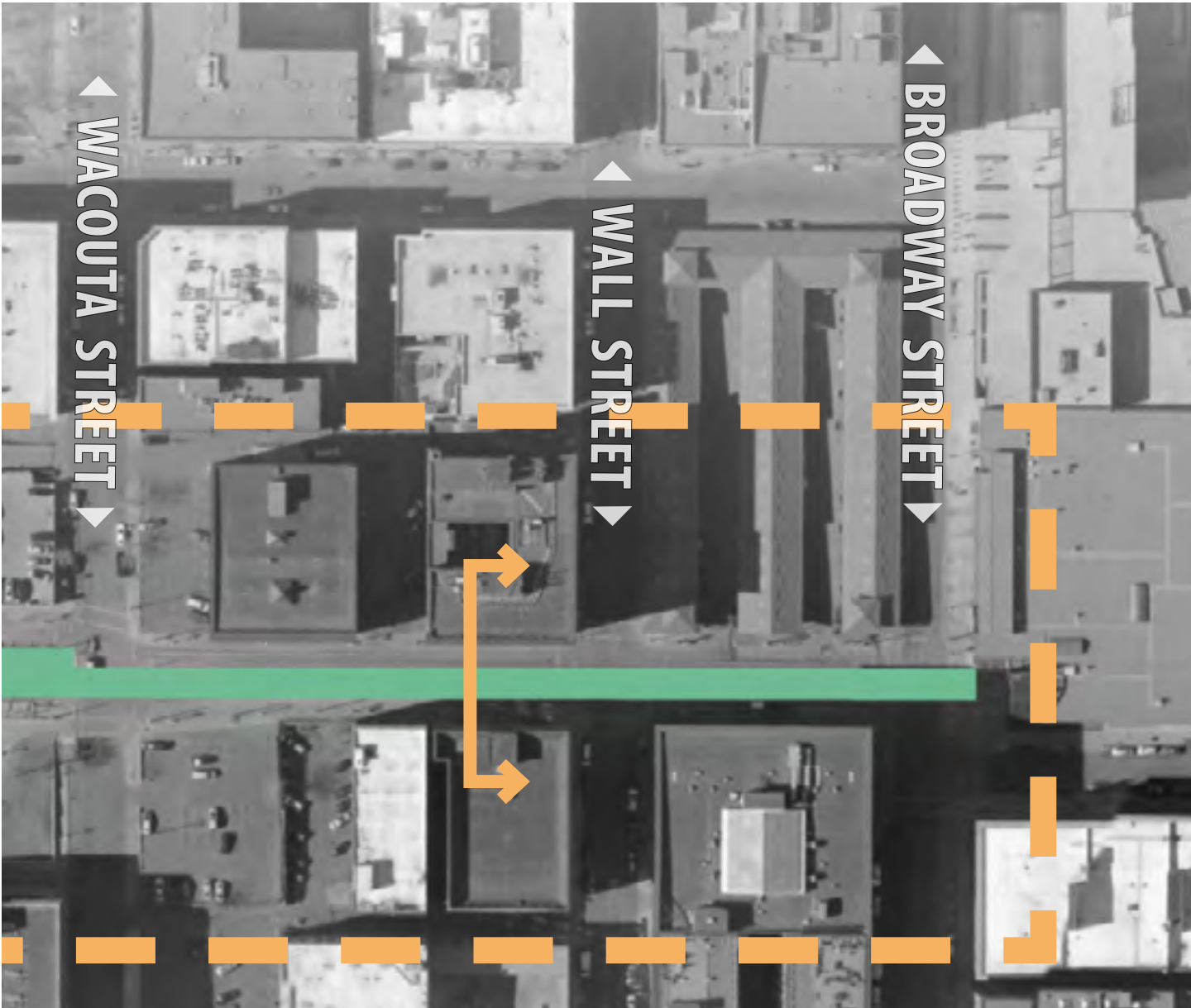


Figure 6.

**Segment 3: Wacouta Street to Broadway Street**

- Light rail transit
- One travel lane in each direction
- 8.5-foot sidewalks on each side of the street
- A portion of each sidewalk hosts poles for the overhead catenary wires associated with light rail

Segment 3: Section

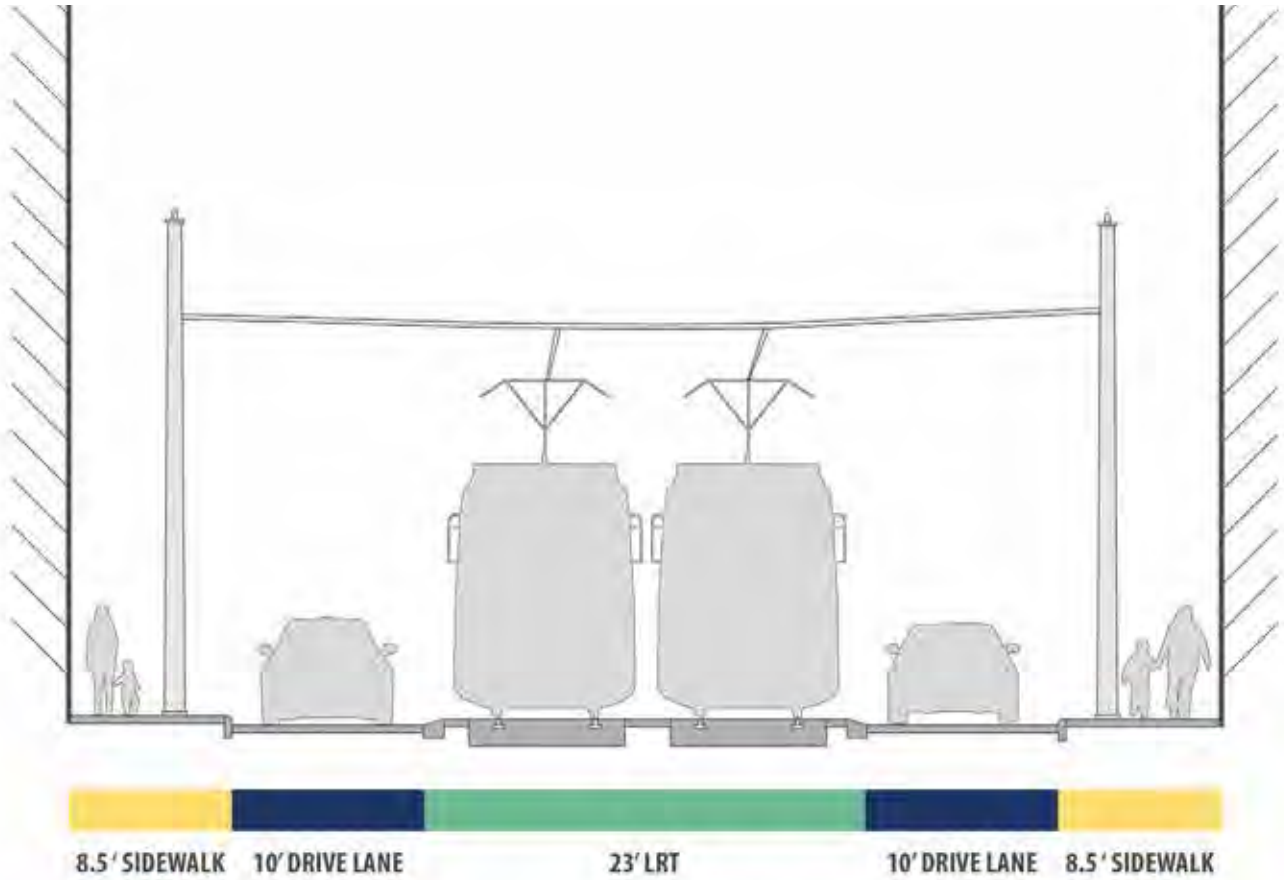


Figure 7.

# Project Background and Existing Conditions

## Previous Studies and Initiatives

This feasibility study builds off of the work performed as part of the *4th Street Market District: Connections, Retail and Art from Washington Street to North Broadway Street* report prepared by the Saint Paul Riverfront Corporation. The City of Saint Paul Capital City Bikeway: Network Study and Design Guide, Draft 2016, along with the Saint Paul Bicycle Plan, were referenced to better understand planned bicycle facilities for downtown Saint Paul.

## Project Process

A Project Management Team (PMT) and a Project Review Committee (PRC) were established to guide the feasibility study. The PMT met as needed over the course of the study to review project progress and provide advice regarding desired outcomes. The PRC met four times to provide feedback on concepts and insight into stakeholders' desires and concerns. The first PRC meeting focused on the feasibility of diverting traffic from 4th Street, and provided insight on existing parking and usage near 4th Street. Design concepts were provided during the second PRC meeting. At the third PMT meeting, information gained from select property owners with direct access to 4th Street, agency stakeholder interviews, and high-level, "magnitude of estimated construction costs" were shared. Options for each segment were discussed, and recommendations were made. A review of the draft technical memorandum was the focus of the fourth PRC meeting.

## Traffic and Parking Analysis

### Traffic Circulation

Available annualized average daily traffic (AADT) counts and the existing street circulation network were analyzed in downtown to determine if traffic could be removed from 4th Street and diverted to other downtown streets. Traffic data volumes reviewed were collected in years 2008, 2010 and 2012. Given that road reconstruction projects were occurring during this study and traffic was not traveling as it normally would, it was determined that collection of new data during this time frame would not provide reliable information. Based on the low traffic volumes previously collected for 4th Street, and the fact that 4th Street terminates at Broadway and Washington streets and thereby does not provide continuous vehicular movement through downtown, it was determined that the existing traffic volumes on 4th Street could be diverted to adjacent streets in the downtown network without adversely affecting downtown traffic operations.

As part of this study, informational interviews were conducted with Metro Transit and City of Saint Paul Emergency Services to better understand the potential impacts associated with removing vehicular circulation from 4th Street. Findings from these conversations indicated that Metro Transit currently uses 4th Street east of Minnesota Street to access transit platforms for cleaning and track maintenance. Metro Transit also uses 4th Street between Wabasha and Cedar streets to lay over buses and desires to maintain this operation in this location. Saint Paul Emergency Services indicated concern with the loss of circulation options should 4th Street be closed to vehicular movement, potential pedestrian encroachment on the LRT tracks, potential non-compliance of street crossing regulations by pedestrians, and potential noise complaints with increased pedestrian activity near existing downtown residential units.



Both agencies expressed an interest in continued involvement as the 4th Street Market District concept moves into more detailed design. Additional detailed summaries of these interviews can be found in Appendix A1- Stakeholder Interview Findings (separate attachment).

Parking Considerations

Currently, on-street parking is not available on 4th Street east of Minnesota Street, as this segment of 4th Street also hosts light rail transit. Available parking utilization data collected in October 2014 were reviewed. While on-street parking stalls were heavily utilized, there is adequate capacity available in existing parking ramps to accommodate any loss of on-street parking if those options became the preferred option. It should be noted that in October 2014, the City started charging for evening on-street parking (the period of highest on-street parking demand), which may have decreased on-street parking utilization.

Additional discussions are needed with adjacent business owners to better understand the implications of relocating parking from streets to ramps. There also may be a need to communicate to downtown visitors and customers where they can conveniently find parking.

Analysis of Existing Property Access from 4th Street

A key component of this feasibility analysis was an analysis of whether existing vehicular access to 4th Street for parcels east of Minnesota Street can be closed or relocated to cross streets. Discussions or informational interviews were performed with business owners of these parcels to determine each business owner’s perspective, and concerns about potential closure or relocation of access from 4th Street. A summary of these conversations can be found in the Appendix A1- Stakeholder Interview Findings. Input from these discussions (shown in Figure 9 below) directly informed the development of the concept alternatives presented in the next section.

A high-level assessment was performed for the feasibility of relocating the Lowertown Lofts parking deck entrance from 4th Street to Wacouta Street. It may be feasible to relocate the entrance to

Property Owner Access Findings

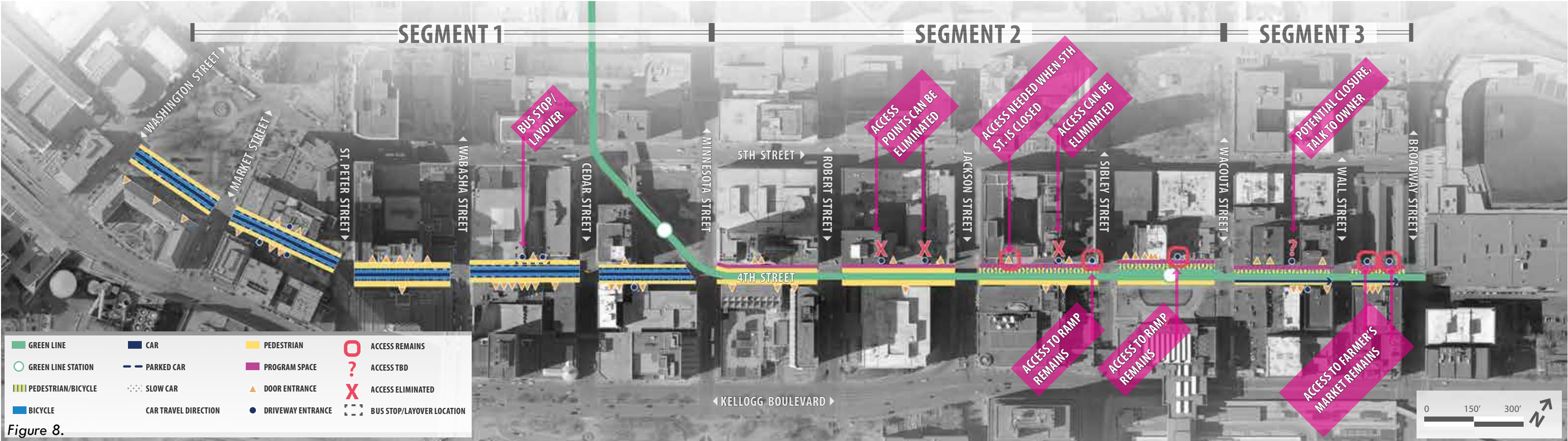


Figure 8.

Wacouta if the entrance is located along the southern-most side of the parking deck along Wacouta and a small ramp constructed in the ramp due to the grade change that occurs along Wacouta. It should be noted that this is not an ideal location for a parking deck entrance due to its proximity to the intersection of Wacouta). and 4th streets. Relocating the parking ramp entrance would require modifications to existing curbs, and sidewalks at the existing and new parking deck entrances. An existing street light would need to be relocated, one or two on-street parking stalls may be lost, and a storm drain inlet structure may need to be relocated or adjusted. Given the current parking configuration in the lower level of the parking deck and the need for a small ramp to get down to existing grade if the entrance is relocated to Wacouta, a detailed analysis would need to be performed to determine if the lower-level parking can be reconfigured to maintain the current number of parking spaces, a concern expressed by the parking deck owner.

**Historic Districts**

The study area passes through the two historic districts and one heritage preservation district. Segment 1 includes the Rice Park Historic District, which has been determined eligible for the National Register of Historic Places and local designation. Segments 1 and 2 span the Saint Paul Urban Renewal Historic District, which is recommended for National Register listing with contributing properties on 4th Street from Wabasha Street to Jackson Street. Segment 3 spans the Lowertown Heritage Preservation District (local) and Lowertown Historic District (National Register).

While staff from Saint Paul Heritage Preservation Commission were engaged in the preparation of this report, the scope of the study did not address the impact of the proposed changes on historic sites and districts. As the design for 4th Street advances, the Saint Paul Heritage Preservation Commission should be consulted to ensure that the proposed design and materials for 4th Street are respectful and responsive to the City’s historic resources.

**Concept Alternatives**

**Overall Approach**

The feasibility study resulted in the development of four concept alternatives for Segment 1, and two concept alternatives for Segments 2 and 3. In general, concepts for Segments 1, 2 and 3 can be “mixed and matched,” provided continuity of travel lanes and bicycle facilities is maintained across Minnesota Street. In order to better facilitate comparisons between the concept alternatives, they are organized and presented by segment.

All of the concepts were based on an approach that kept bicycle movement towards the north side of the street or public right-of-way. This was done to provide a consistent expectation for vehicle drivers and pedestrians of where to expect bicycle traffic. This approach also minimized the number of times bicycles would be required to cross over the light rail transit tracks and vehicular travel lanes, thereby improving bicyclist safety.

At the conclusion of the feasibility study, the PMT and PRC recommended to include all of the concept alternatives in future conversations with property owners, residents and business owners.

- Implementation should start to the east of Minnesota Street where there is currently momentum for the project.
- Testing should begin in Segment 2. In particular, the segment from Jackson to almost Cedar could be the first part of the road to be tested.
- Testing should occur on a block-by-block basis prior to making decisions.



# Segment 1: Washington Street to Minnesota Street Concept A

Concept A comprises one vehicular travel lane in each direction and on-street parking to the extent possible. Street width is narrowed by approximately 10 feet, with this additional space allocated to sidewalk space. Bicycle movement is accommodated through the use of shared lanes, where bicycle markings called “sharrows” in the travel lane indicate that both vehicles and bicycles can use the travel lane. The sharrows are located in the travel lane to indicate the preferred location for bicyclists to maximize bicyclist visibility and safety from doors opening on parked cars. This concept allows Metro Transit to maintain the existing bus stop and bus parking layover on 4th Street between Cedar and Wabasha streets.

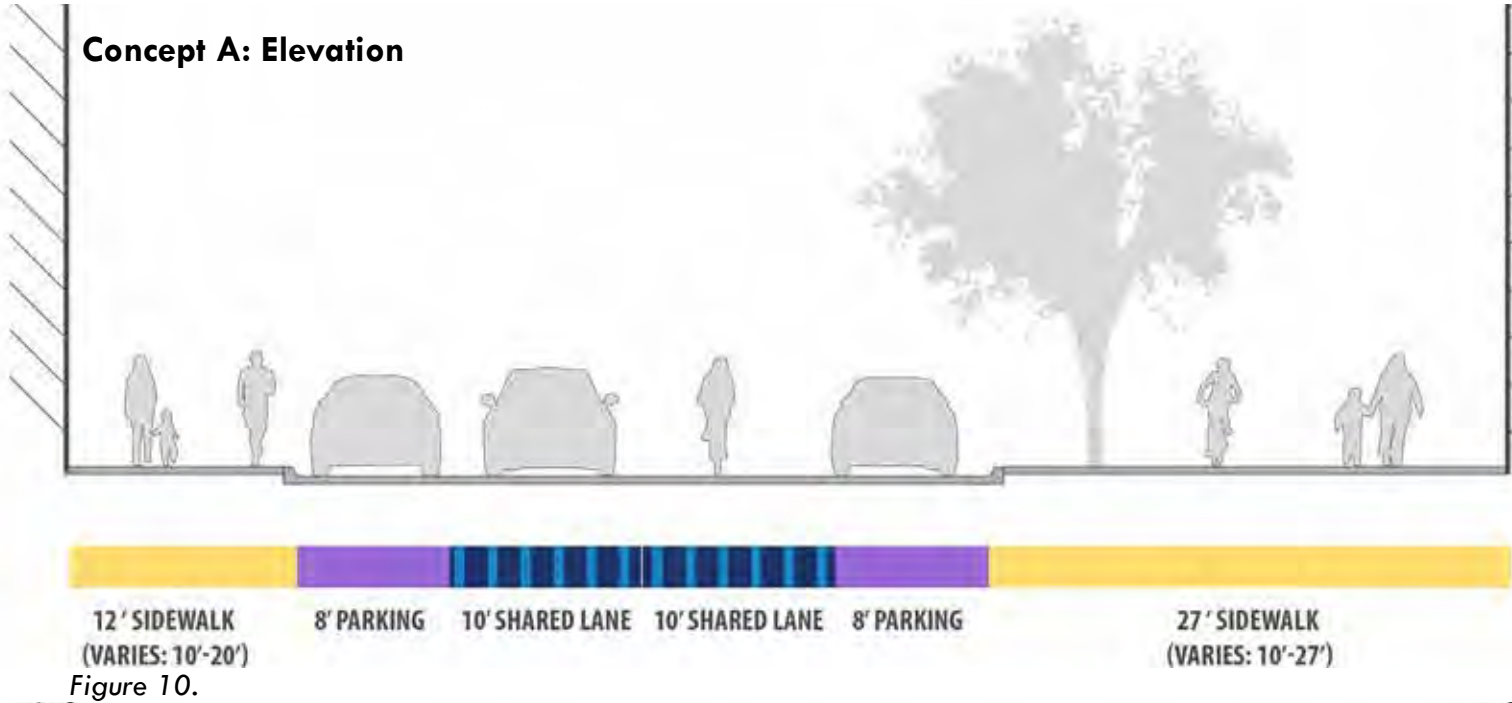
## Segment 1: Washington Street to Minnesota Street CONCEPT A

- one vehicular travel lane in each direction
- on-street parking provided to the extent possible
- street width narrowed and space reallocated to sidewalk
- bicycle movement accommodated through the use of shared lanes marked with sharrows
- metro Transit maintains existing bus stop and bus parking layover on 4th Street

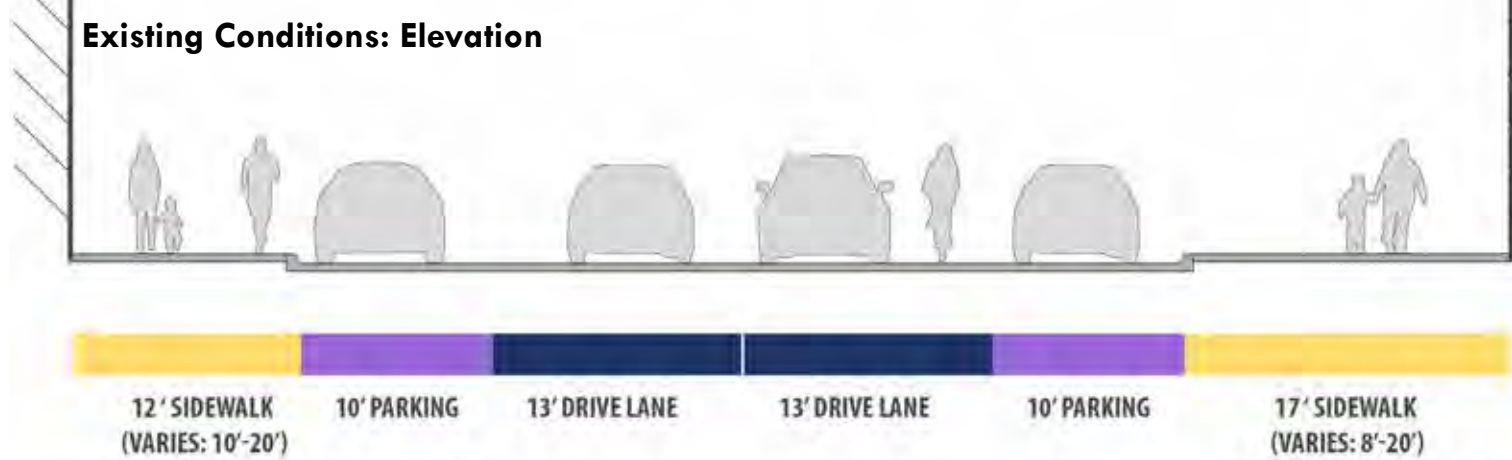
### Concept A: Plan



### Concept A: Elevation



### Existing Conditions: Elevation





# Segment 1: Washington Street to Minnesota Street Concept B

Concept B is comprised of one vehicular travel lane in each direction. On-street parking is removed, and the space is allocated to a protected bikeway at street level. Similar to Concept A, the street width is narrowed by approximately 10 feet, with this additional space allocated to sidewalk space. It should be noted that currently, the City is planning to construct a protected bikeway along Kellogg Boulevard, one block south of 4th Street. In addition, the presence of a protected bikeway on 4th Street would pose challenges for existing bus service and a bus stop between Cedar and Wabasha streets. Sidewalk width is likely too narrow to create a floating bus stop, where the protected bikeway weaves behind the bus stop to avoid conflicts between bicyclists and pedestrians boarding and exiting buses.

## Segment 1 Washington Street to Minnesota Street CONCEPT B

- one vehicular travel lane in each direction
- parking is removed and replaced with a protected bikeway
- street width is narrowed and space reallocated to sidewalk
- protected bikeway poses a challenge for existing bus service and bus stop on 4th Street

## Concept B: Plan

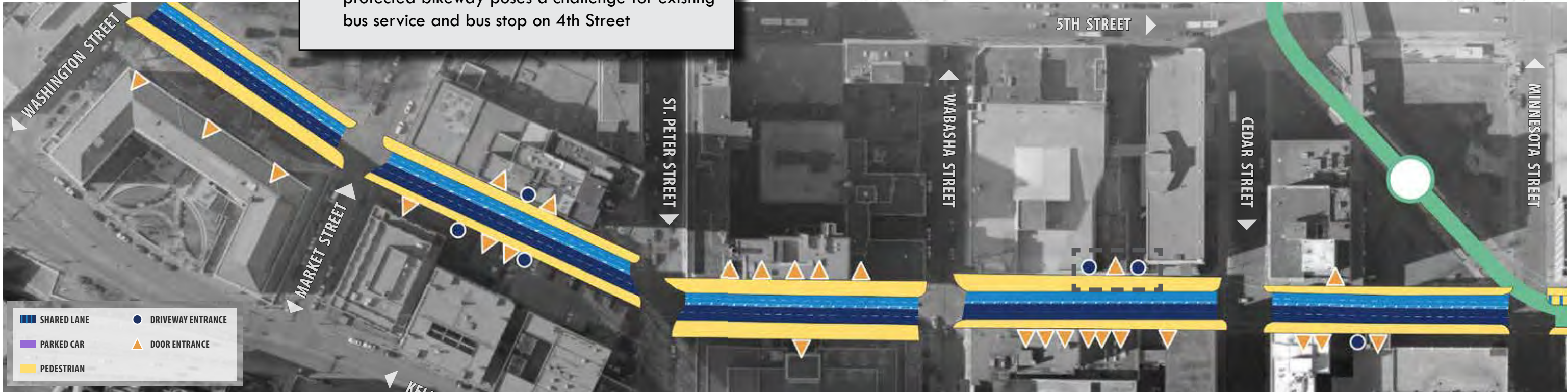


Figure 11.

## Concept B: Elevation

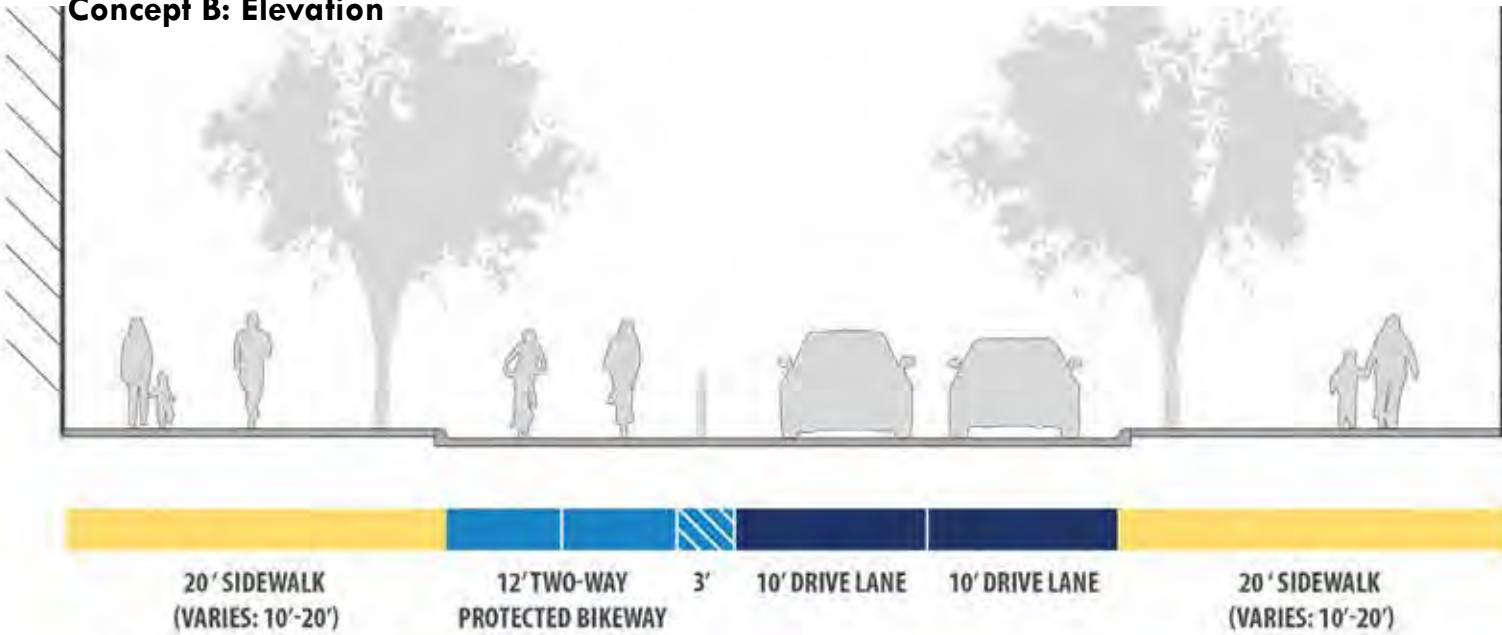
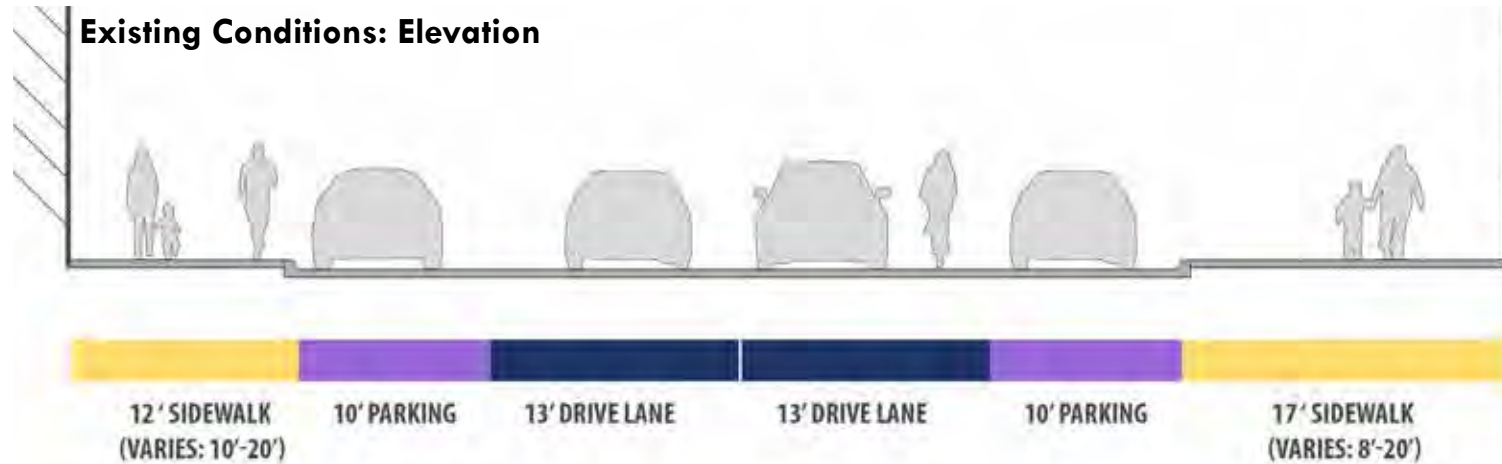


Figure 12.

## Existing Conditions: Elevation





# Segment 1: Washington Street to Minnesota Street Concept B-2

Concept B-2 is comprised of one vehicular travel lane in each direction. On-street parking is removed from the north side of the street to accommodate a protected bikeway at street level. Concept B-2 was developed later in the concept alternatives phase to investigate the feasibility of preserving some on-street parking along the south side of the street while still providing a protected bikeway. As with Concept B, the City is planning to construct a protected bikeway along Kellogg Boulevard, one block south of 4th Street. In addition, the presence of a protected bikeway would pose challenges for existing bus service and a bus stop between Cedar and Wabasha streets. Sidewalk width is likely too narrow to create a floating bus stop, where the protected bikeway weaves behind the bus stop to avoid conflicts between bicyclists and pedestrians boarding and exiting buses. It may be possible to implement this concept on an interim basis without modifying existing curb lines.

## Segment 1 Washington Street to Minnesota Street CONCEPT B-2

- one vehicular travel lane in each direction
- parking on north side of street is removed and replaced with protected bikeway
- parking on south side of street remains
- protected bikeway poses challenge for existing bus service and bus stop on 4th Street

## Concept B-2: Plan



Figure 13.

## Concept B-2: Elevation

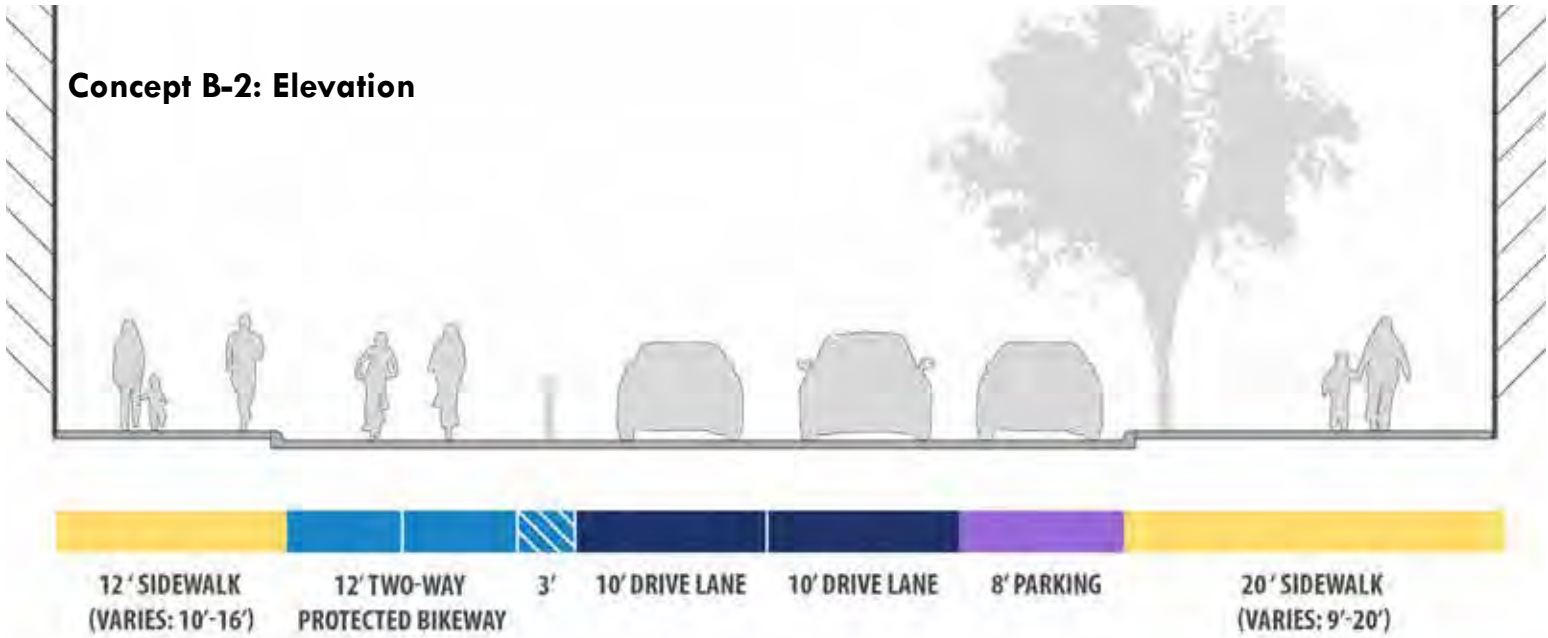
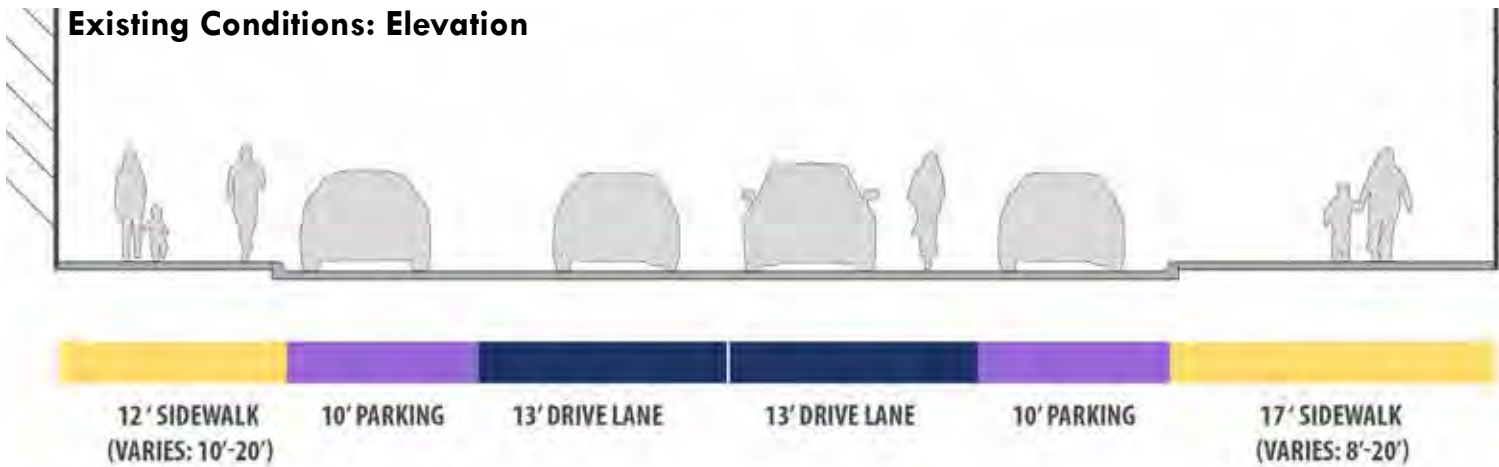


Figure 14.

## Existing Conditions: Elevation





Segment 1: Washington Street to Minnesota Street

Concept C

Concept C comprises a singular one-way, vehicle travel lane with on-street parking along the south side of the street. This concept significantly narrows the roadway, and reallocates the space to pedestrians and bicyclists. The south sidewalk is shown as an exclusive pedestrian zone. The north sidewalk could function as a mixed space for both pedestrians and bicyclists, or could accommodate a protected bikeway at sidewalk level. Mixing pedestrians and bicyclists in the same zone may cause bicyclists to slow down in order to safely maneuver the mixed environment, similar to the concept of cars slowing down in a shared street setting. The option of a protected bikeway at sidewalk level would provide dedicated space for each mode, which may encourage higher bicycle speeds, but would improve safety for pedestrians by moving bicyclists away from building doorways. Given the significant increased space allocated to pedestrians and bicyclists in this concept, a floating bus stop may be feasible to accommodate the existing bus stop between Cedar and Wabasha streets. Narrowing down to one travel lane would not accommodate bus layovers.

Segment 1 Washington Street to Minnesota Street  
CONCEPT C

- singular one-way vehicle travel lane
- on-street parking along the south side of the street.
- significantly narrows roadway and reallocates space to pedestrians and bicyclists.
- north sidewalk functions as a mixed space for pedestrians and bicyclists, or provides sidewalk and protected bikeway at sidewalk level.
- narrowing down to one travel lane would not accommodate bus layovers.

Concept C: Plan

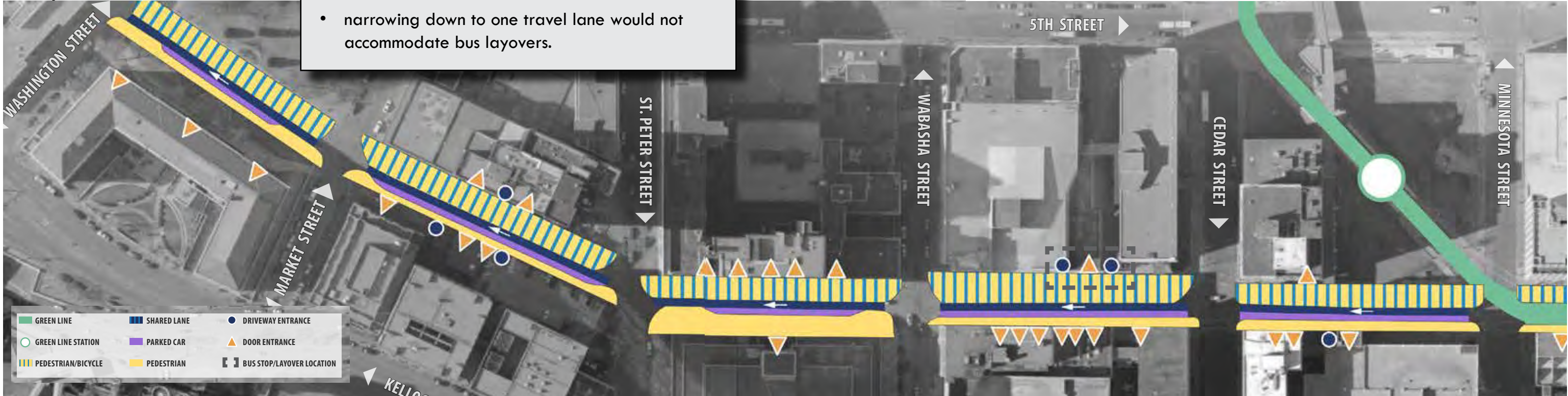


Figure 15.

Concept C: Elevation

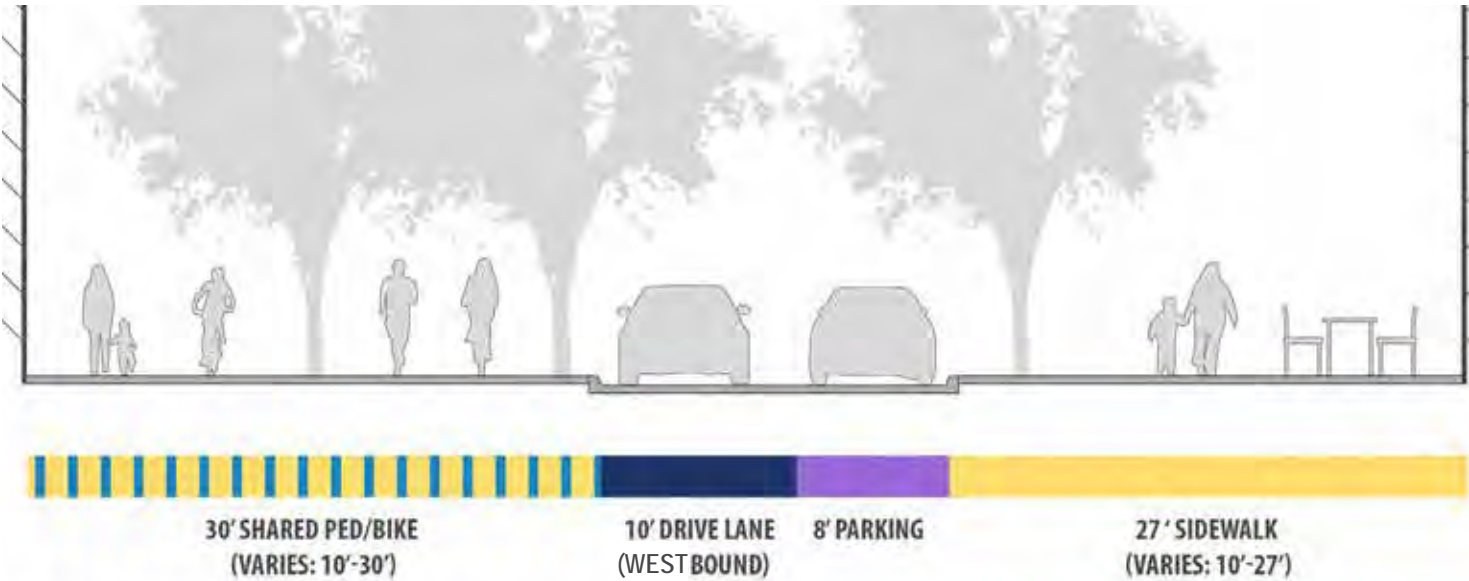
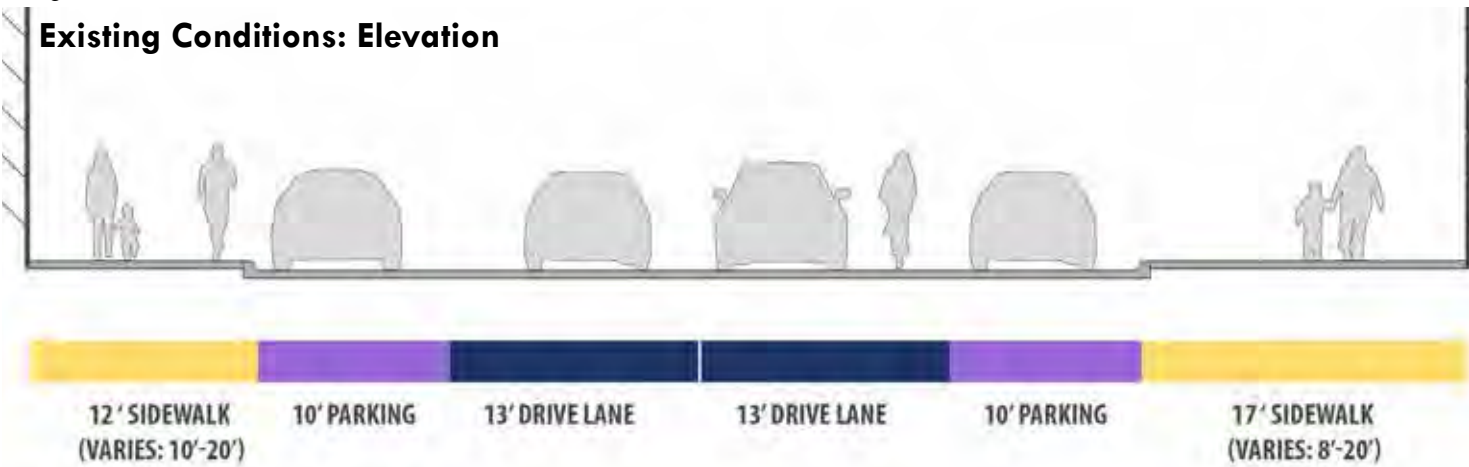


Figure 16.

Existing Conditions: Elevation

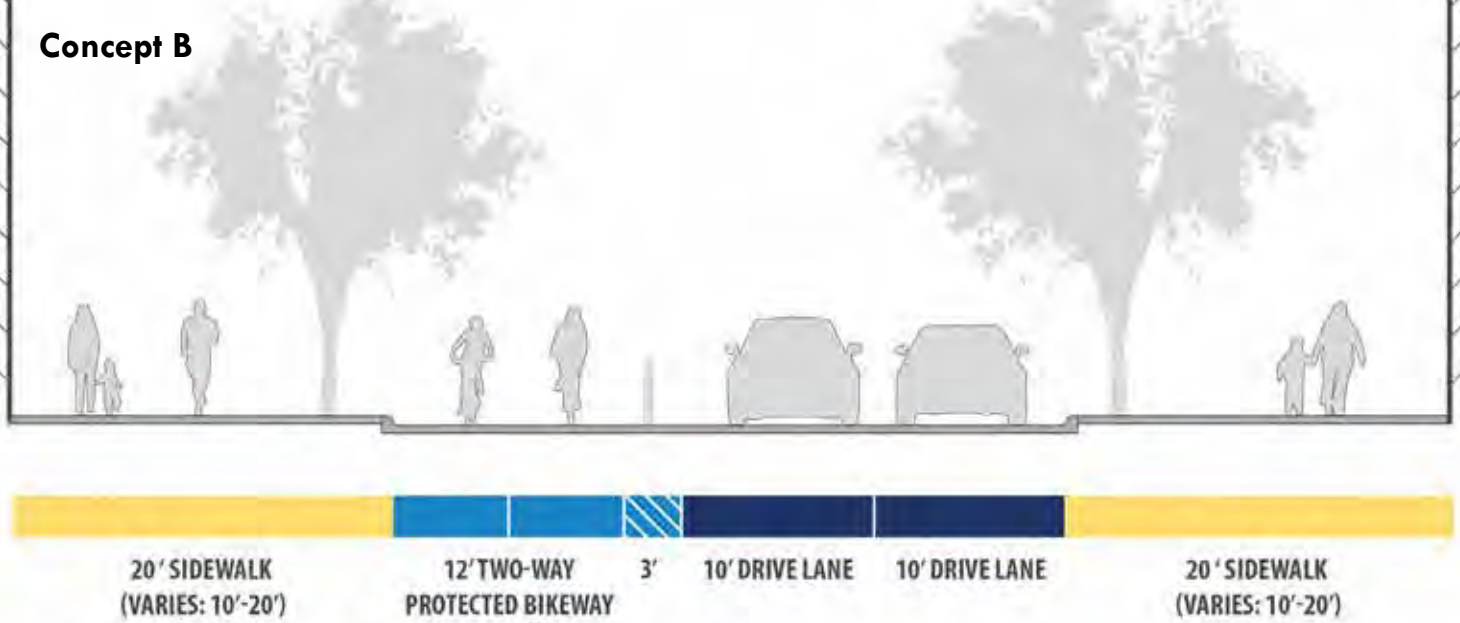
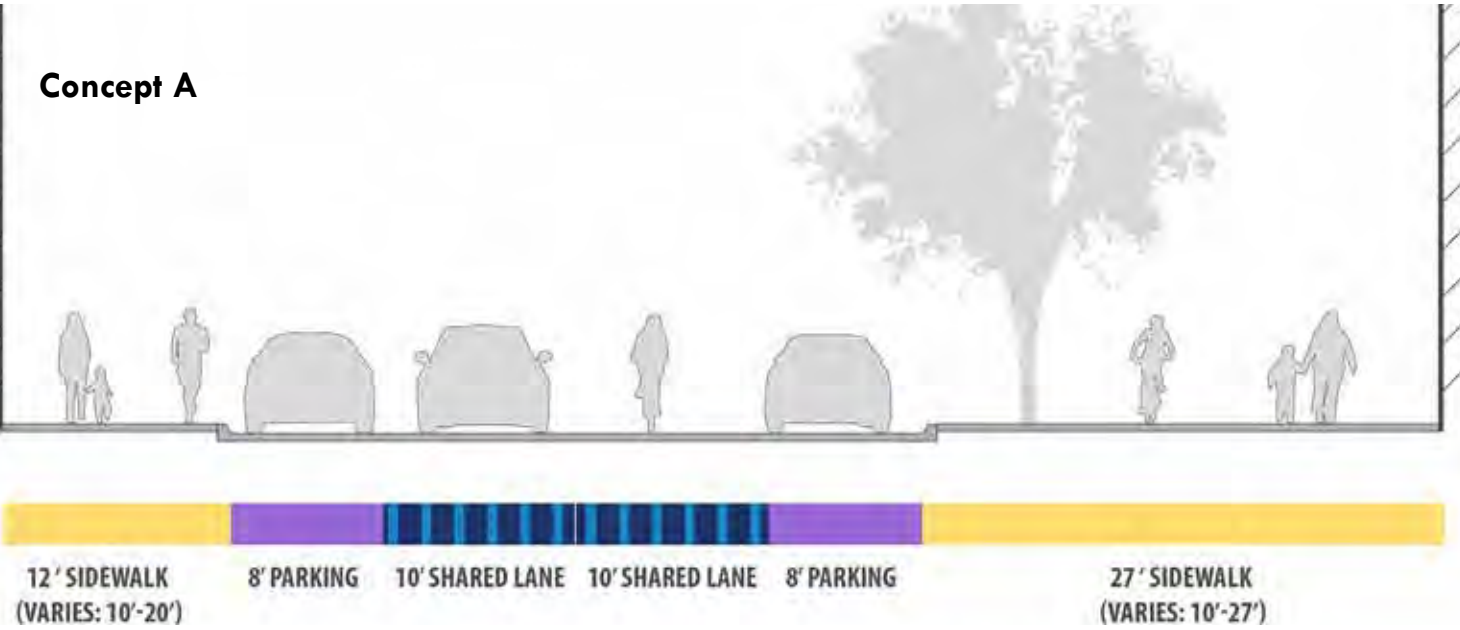
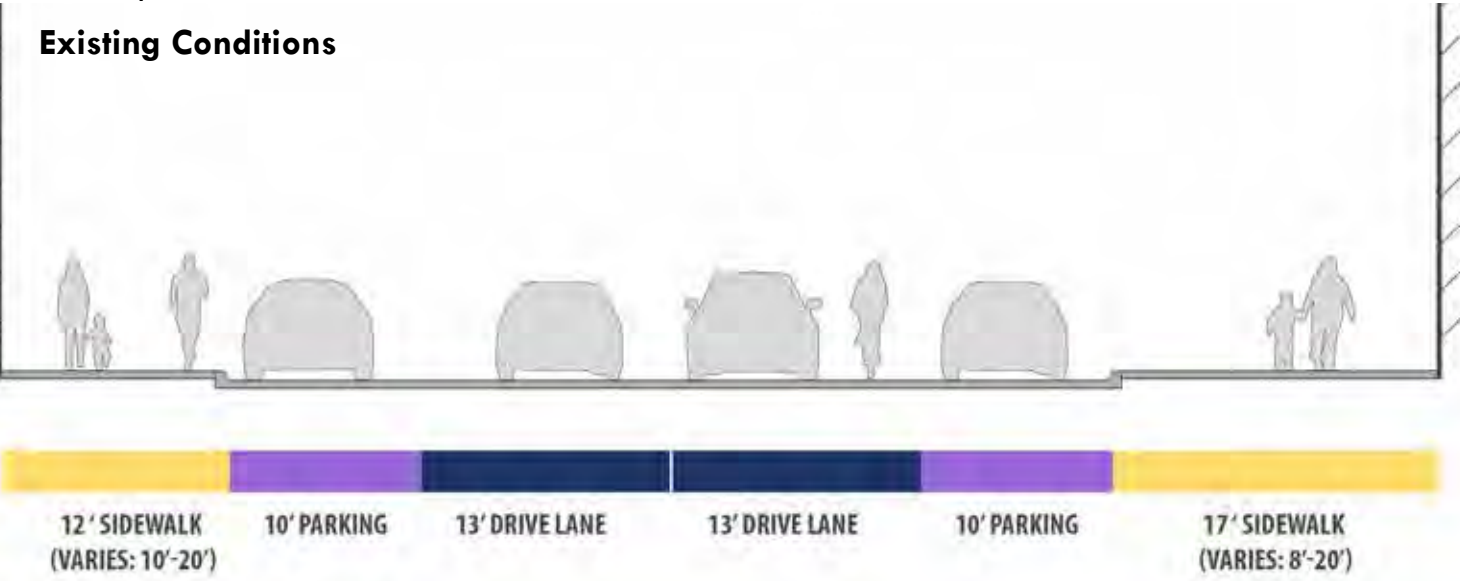




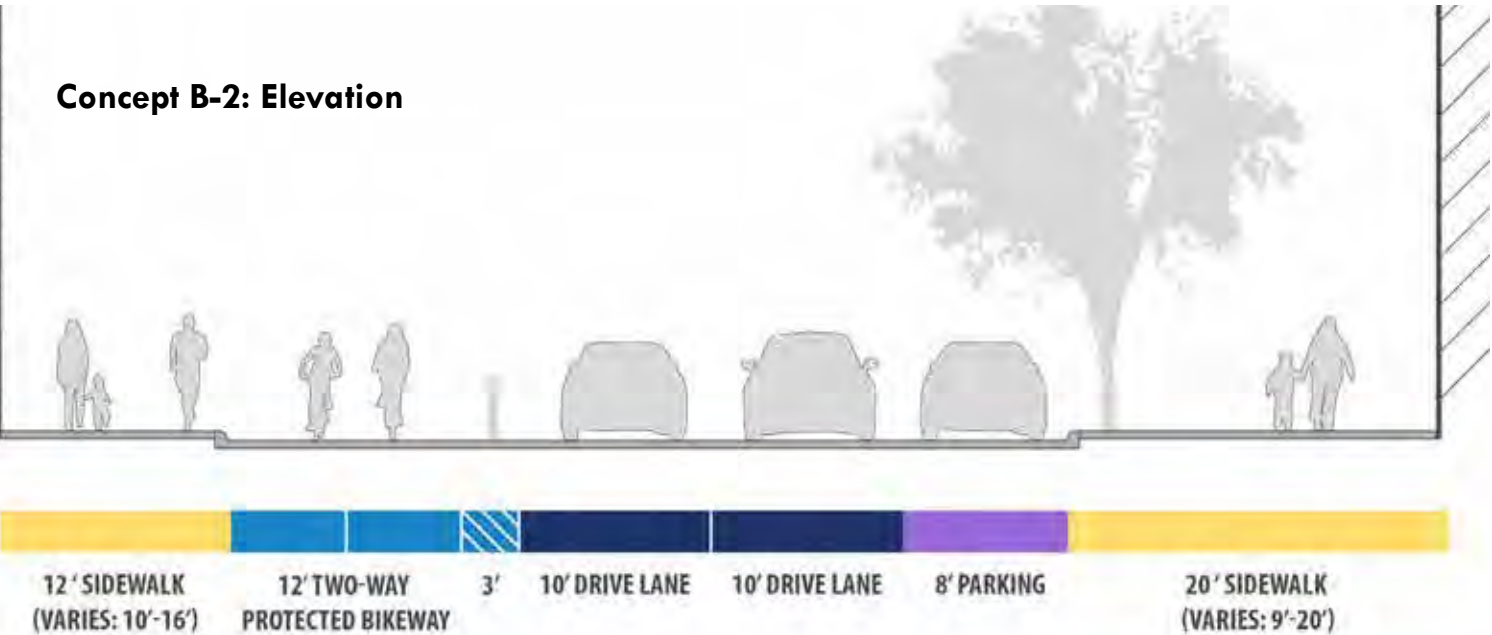
Segment 1: Washington Street to Minnesota Street

All Concepts & Comments

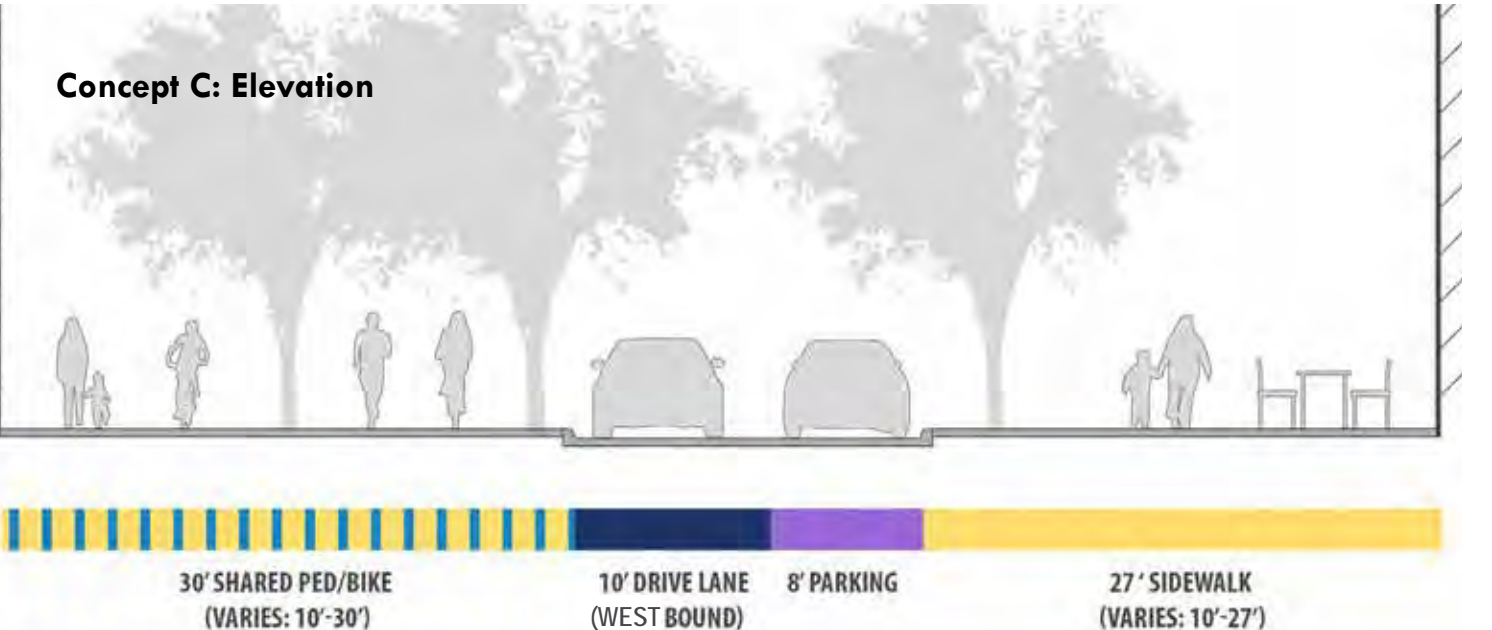
Existing Conditions



Concept B-2: Elevation



Concept C: Elevation



PMT and PRC Comments

- A traffic study will be needed to determine the viability of one-way traffic along this segment.
- Segment 1 traverses the Rice Park Historic District, determined eligible for the National Register and local designation, and the Saint Paul Urban Renewal Historic District, recommended for National Register listing. Any proposed modifications within these districts need to be reviewed by the Saint Paul Heritage Preservation Commission.
- Making biking safe and comfortable for all is desired. Additional analysis is needed to determine if there is an alternative bike facility that would work better than a protected bikeway.
  - The protected bike lane may not be desirable due to redundancy with the planned protected bikeway on Kellogg Boulevard.
  - Shared lanes are less attractive because they would not support bike riders of all types.
  - Bike infrastructure on 4th Street should fit into the larger planned bikeway system and not create a redundant bike system.



# Segment 2: Minnesota Street to Wacouta Street

## Concept A

Concept A restricts vehicular movement between Minnesota and Jackson streets to limited hours during the day, thereby opening the street and sidewalk to exclusive use by pedestrian and bicyclists for circulation and programmed activities. Given the need to provide vehicle access to select parcels between Jackson and Wacouta streets, pedestrians, bicycles, and slow-moving vehicles would all share the street space. This would allow programmed activities to occur on the sidewalk. In this concept, the street remains at its current elevation.

One challenge associated with this approach is how to distinguish zones where the street is shared by all users (pedestrians, bicycles and automobiles) from zones that are exclusively for pedestrians and bicycles during select periods of the day. If it is determined that emergency access is needed on 4th Street between Minnesota and Jackson streets, programming needing furniture could not be located in the street.

### Concept A: Plan

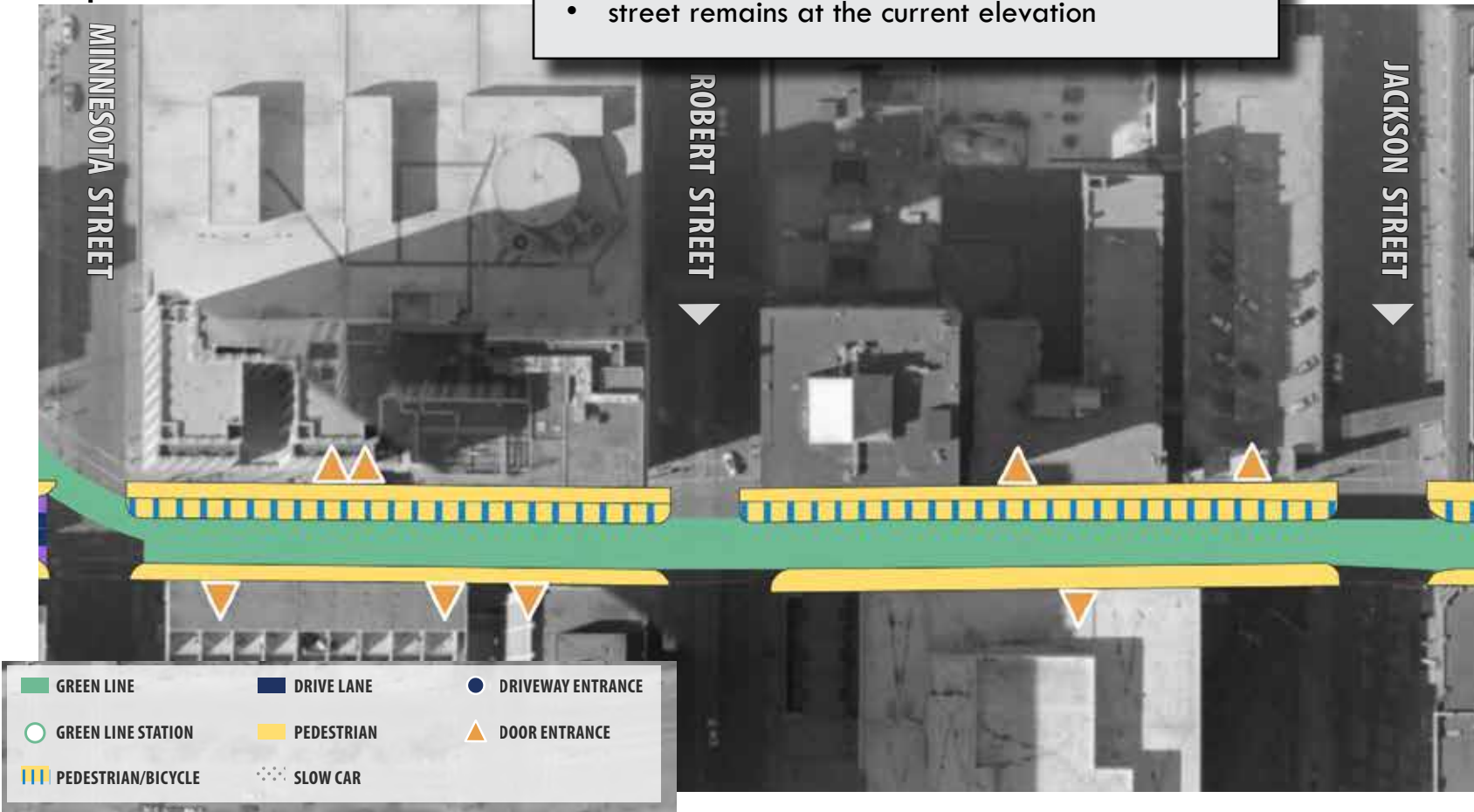
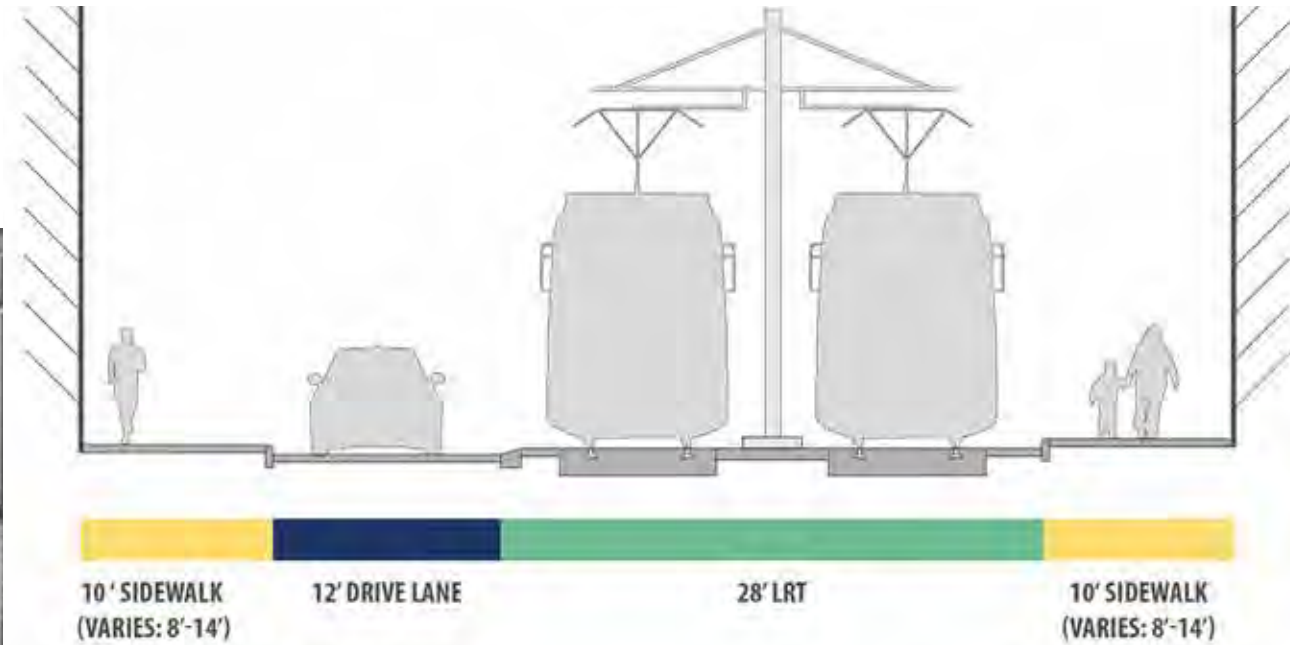
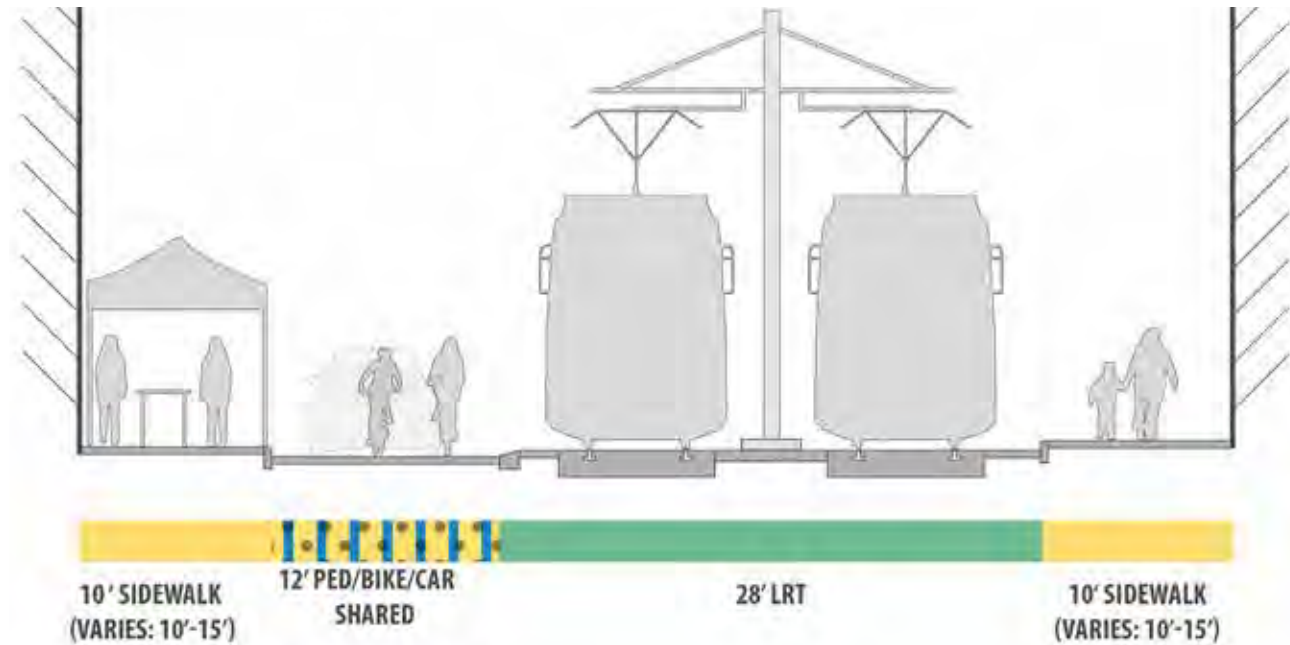


Figure 17.

## Concept A: Elevation





# Segment 2: Minnesota Street to Wacouta Street Concept B

Concept B is very similar to Concept A, with the exception that street surface is raised to sidewalk level. Raising the shared street space to sidewalk level provides more flexibility in how the street can be programmed. Raising the shared street space may also pose some challenges. The lack of a curb between the shared street space and light rail transit tracks does not provide a physical demarcation between these spaces, and increases the chance that pedestrians may inadvertently step onto the tracks. In addition, for those blocks that must also accommodate slow-moving cars, the lack of a clear demarcation of zones where vehicles are allowed may result in programmed spaces unintentionally encroaching into the vehicular zone, potentially creating safety and circulation problems.

## Concept B: Plan

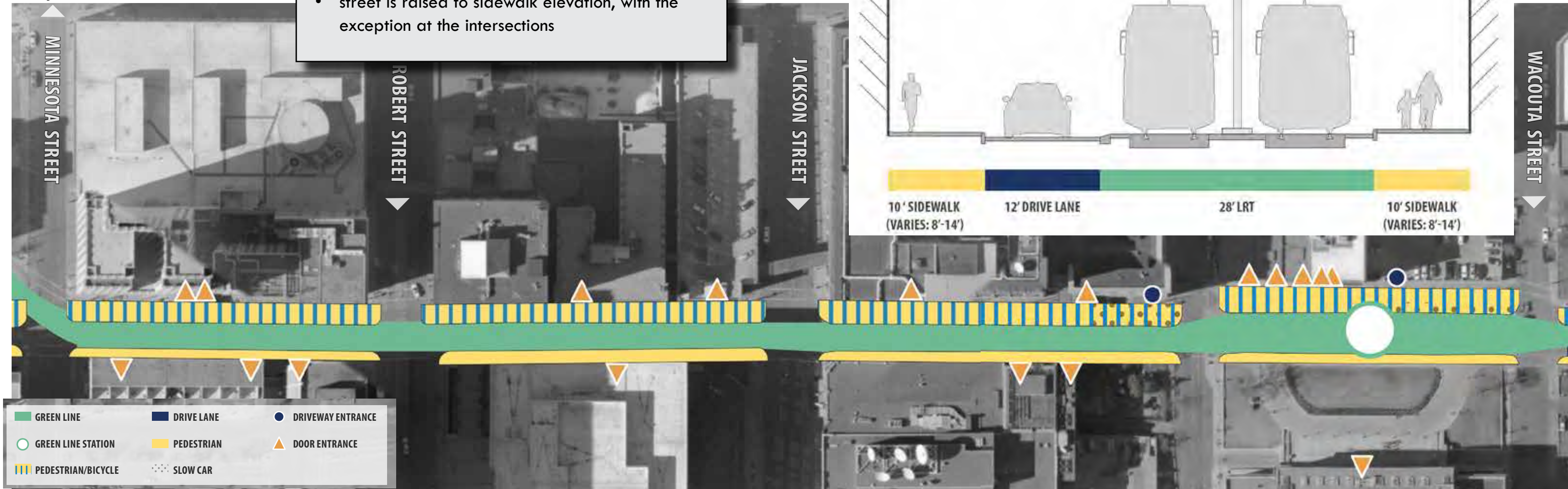
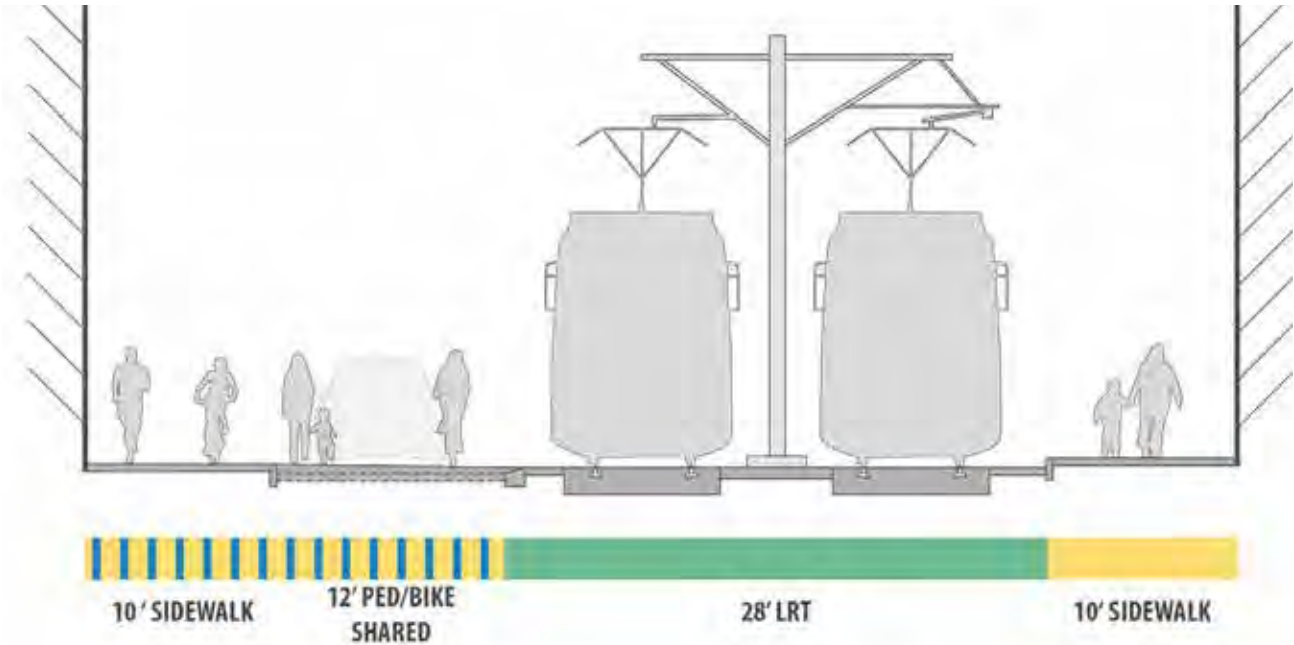
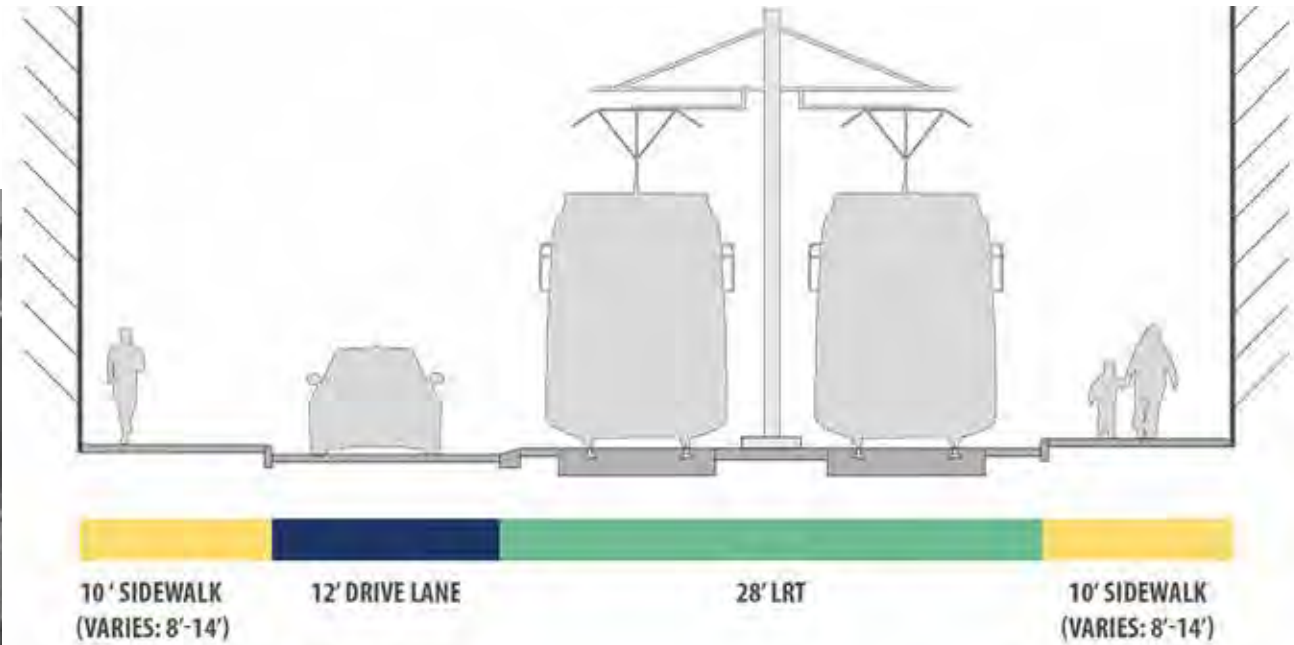


Figure 19.

## Concept B: Elevation



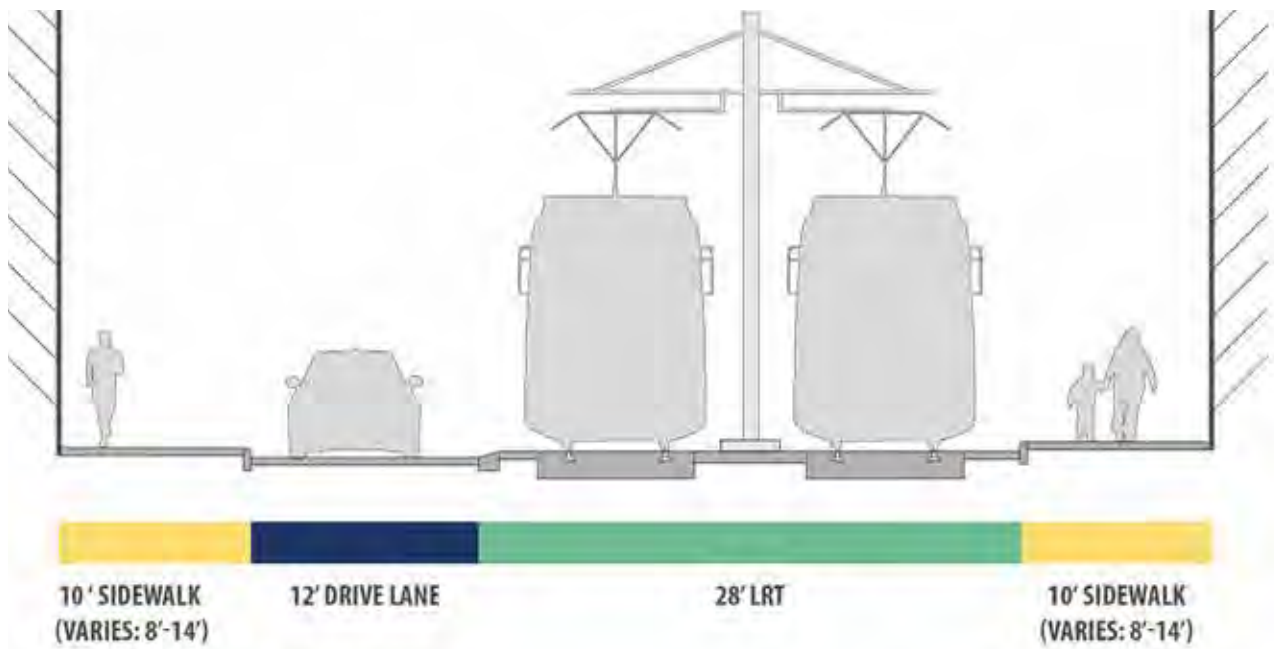
Existing Conditions: Elevation



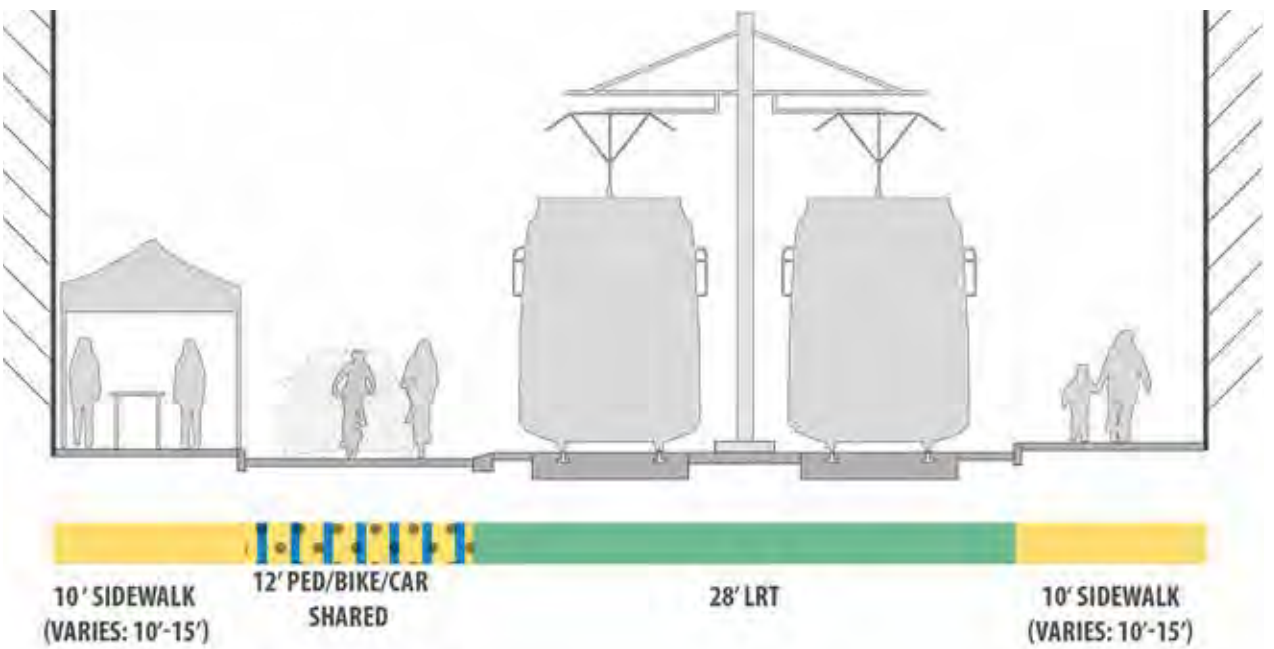
## Segment 2: Minnesota Street to Wacouta Street

All Concepts & Comments

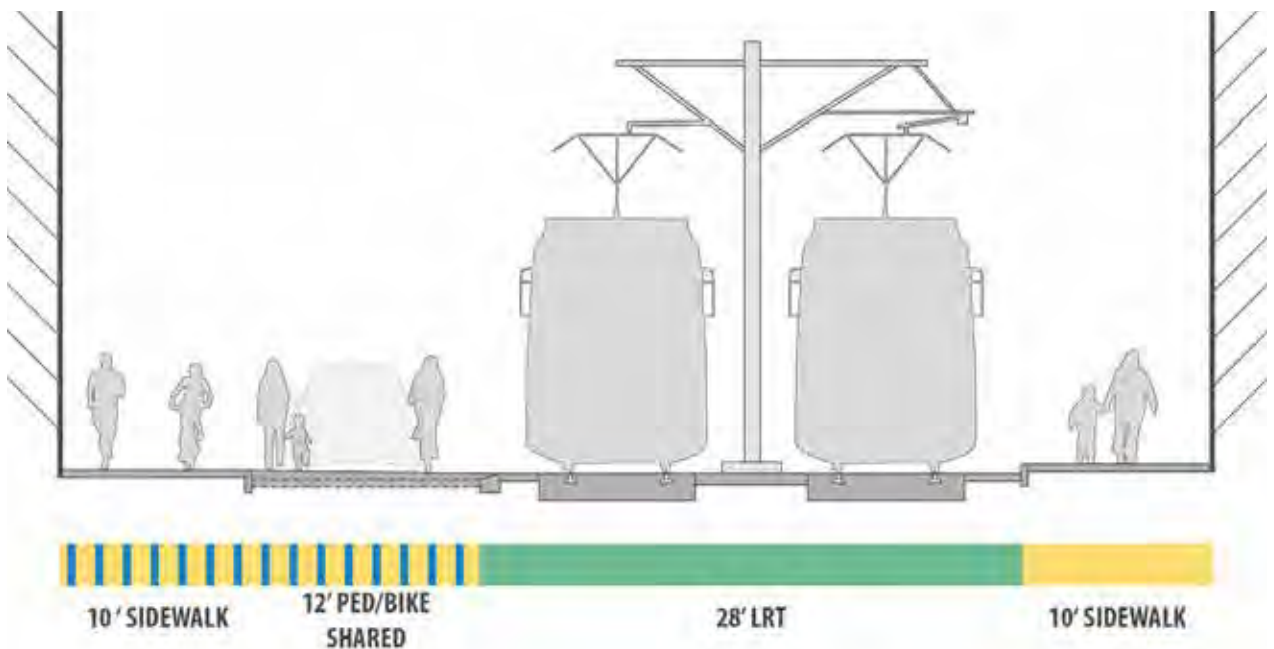
### Existing Conditions: Elevation



### Concept A: Elevation



### Concept B: Elevation



### PMT and PRC Comments

- A portion of Segment 2 falls within the Saint Paul Urban Renewal Historic District, determined eligible for National Register listing. Any proposed modifications within this district need to be reviewed by the Saint Paul Heritage Preservation Commission.
- From Jackson east to Broadway, 4th Street is within the Lowertown Heritage Preservation District (local) and Lowertown Historic District (National Register). The Saint Paul Heritage Preservation Commission will need to review any physical changes made along this segment.
- Strategies need to convey that, wherever possible, it is desirable that cars not be there. The street level is for people, bikes and very slow vehicles.
- ADA provisions are needed for sidewalks with proposed programming.
- Testing is needed to determine the appropriate sidewalk width for programming.
- Further study and input from agencies are needed to determine the importance of the LRT grade change.
- Drivers take cues from other drivers. If they don't see other vehicles, they may make a mistake.
- Traffic speed needs to be slower. Should the speed be slower by ordinance? How do you enforce the slower speed?



# Segment 3: Wacouta Street to Broadway Street Concept A

Given the need to provide vehicle access to the Saint Paul Farmers Market between Wall and Broadway streets, pedestrians, bicycles, and slow-moving vehicles would all share the westbound travel lane in Segment 3. Due to the fact that vehicular access would likely need to be retained adjacent to the Farmers Market and for the blocks between Jackson and Wacouta streets, it is recommended that the block between Wacouta and Wall streets also allow slow-moving vehicles in order to maintain some vehicular circulation consistency, and to avoid driver confusion by changing vehicular circulation patterns on a block-by-block basis. The eastbound travel lane would remain an exclusive vehicle space. In this concept, the street remains at its current elevation.

One challenge associated with this approach is how to distinguish zones where the street is shared by all users (pedestrians, bicycles and automobiles) from zones that are exclusively for pedestrians and bicycles during select periods of the day.

## Concept A: Plan

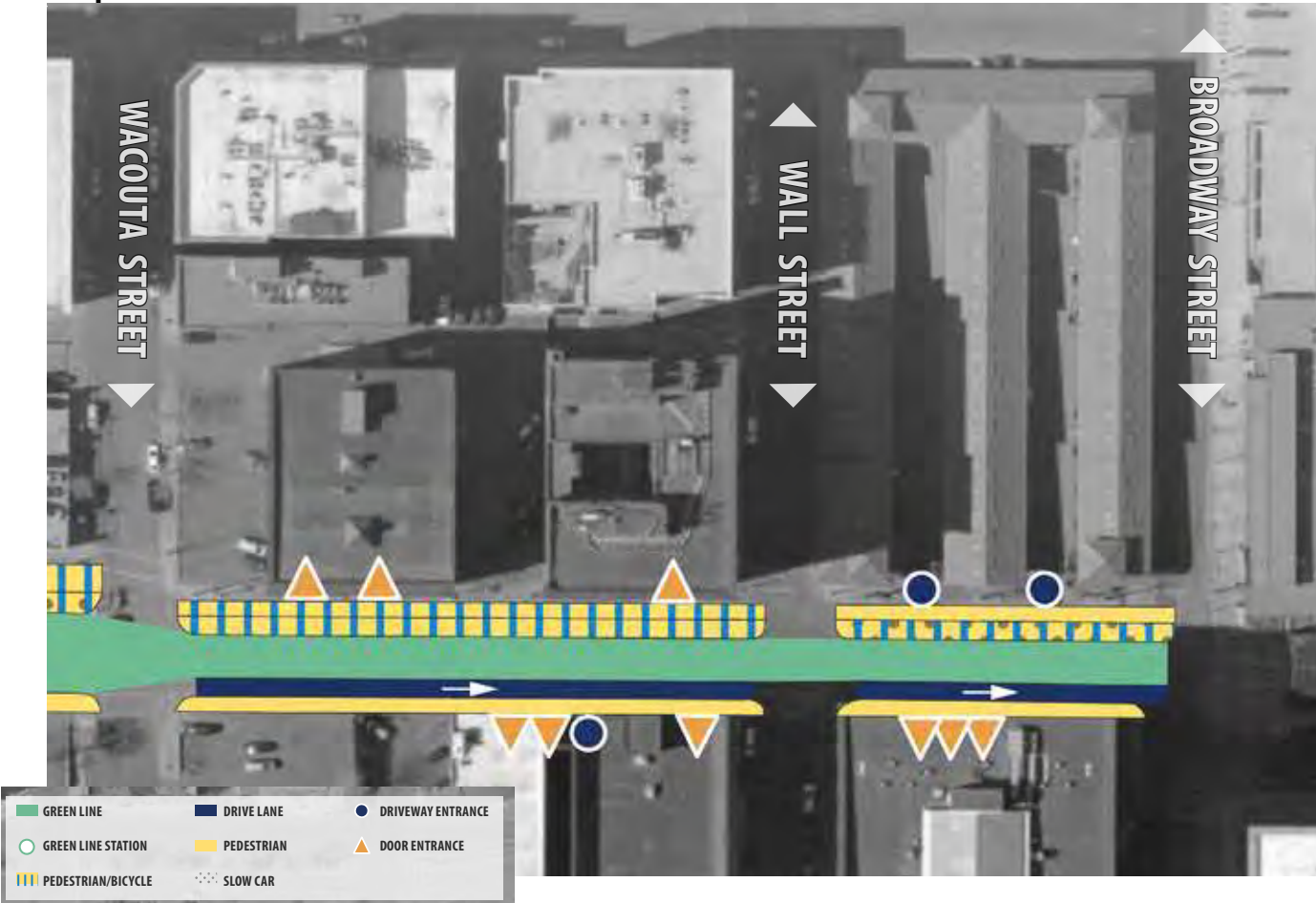


Figure 21.

- Segment 3: Wacouta Street to Broadway Street  
CONCEPT A
  - sidewalk on north side of street is available for programming
  - pedestrians, bicycles and slow-moving cars share the westbound travel lane
  - eastbound lane is exclusive to cars
  - streets remain at current elevation

## Concept A: Elevation

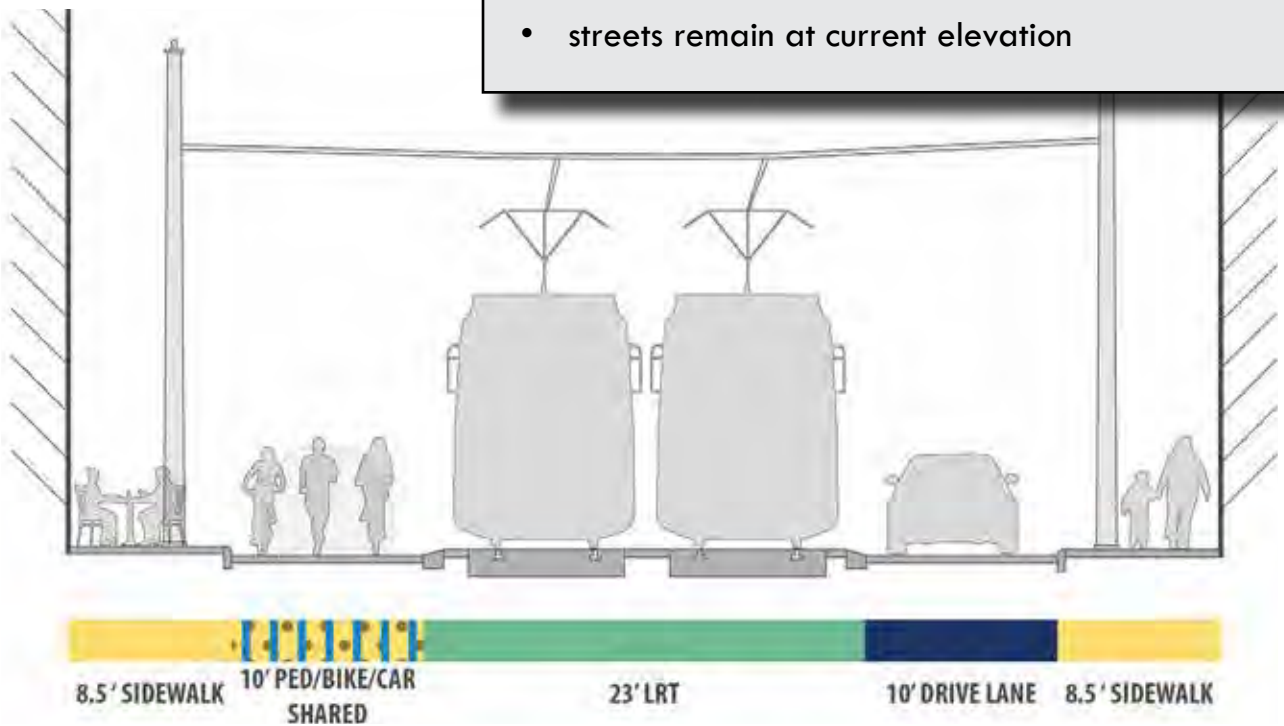
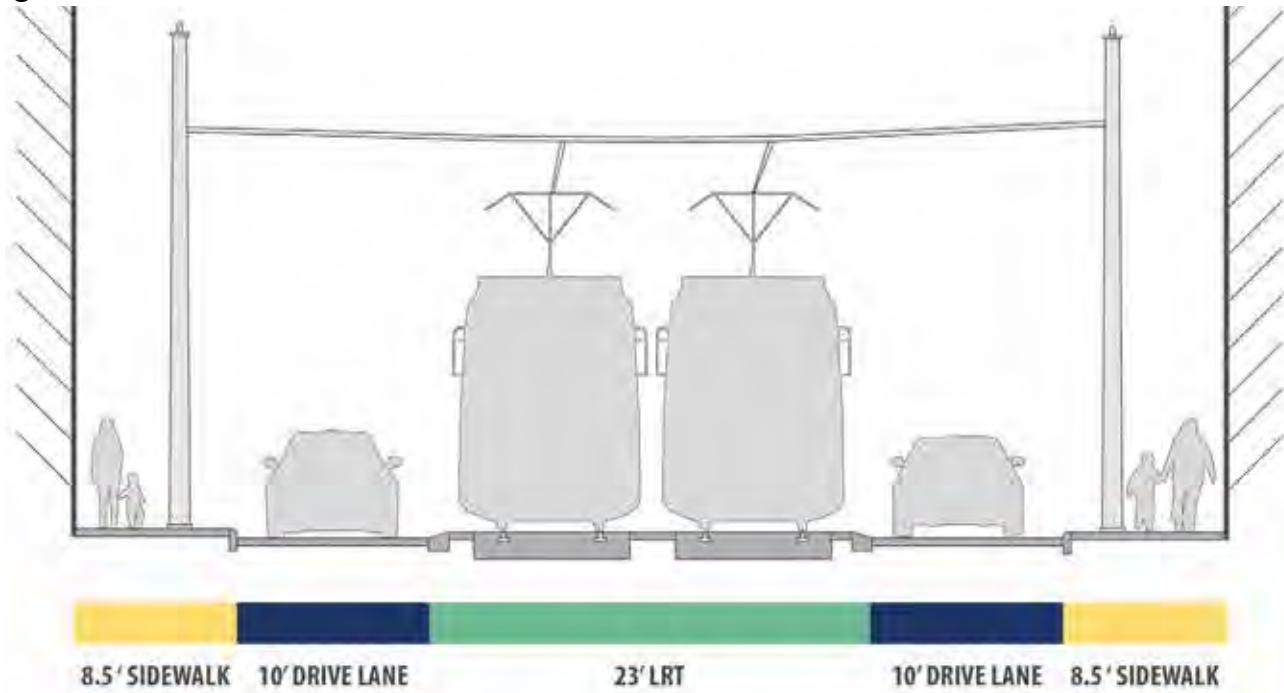


Figure 22.

## Existing Conditions: Elevation



# Segment 3: Wacouta Street to Broadway Street Concept B

Concept B is very similar to Concept A, with the exception that the street surface is raised to sidewalk level. Raising the shared street space to sidewalk level provides more flexibility in how the street can be programmed. Raising the shared street space may also pose some challenges. The lack of a curb between the shared street space and light rail transit tracks does not provide a physical demarcation between these spaces, and increases the chance that pedestrians may inadvertently step onto the tracks. In addition, for those blocks that must also accommodate slow-moving cars, the lack of a clear demarcation of zones where vehicles are allowed may result in programmed spaces unintentionally encroaching into the vehicular zone, potentially creating safety and circulation problems. In this concept, the eastbound travel lane remains at its current elevation.

Concept B: Plan

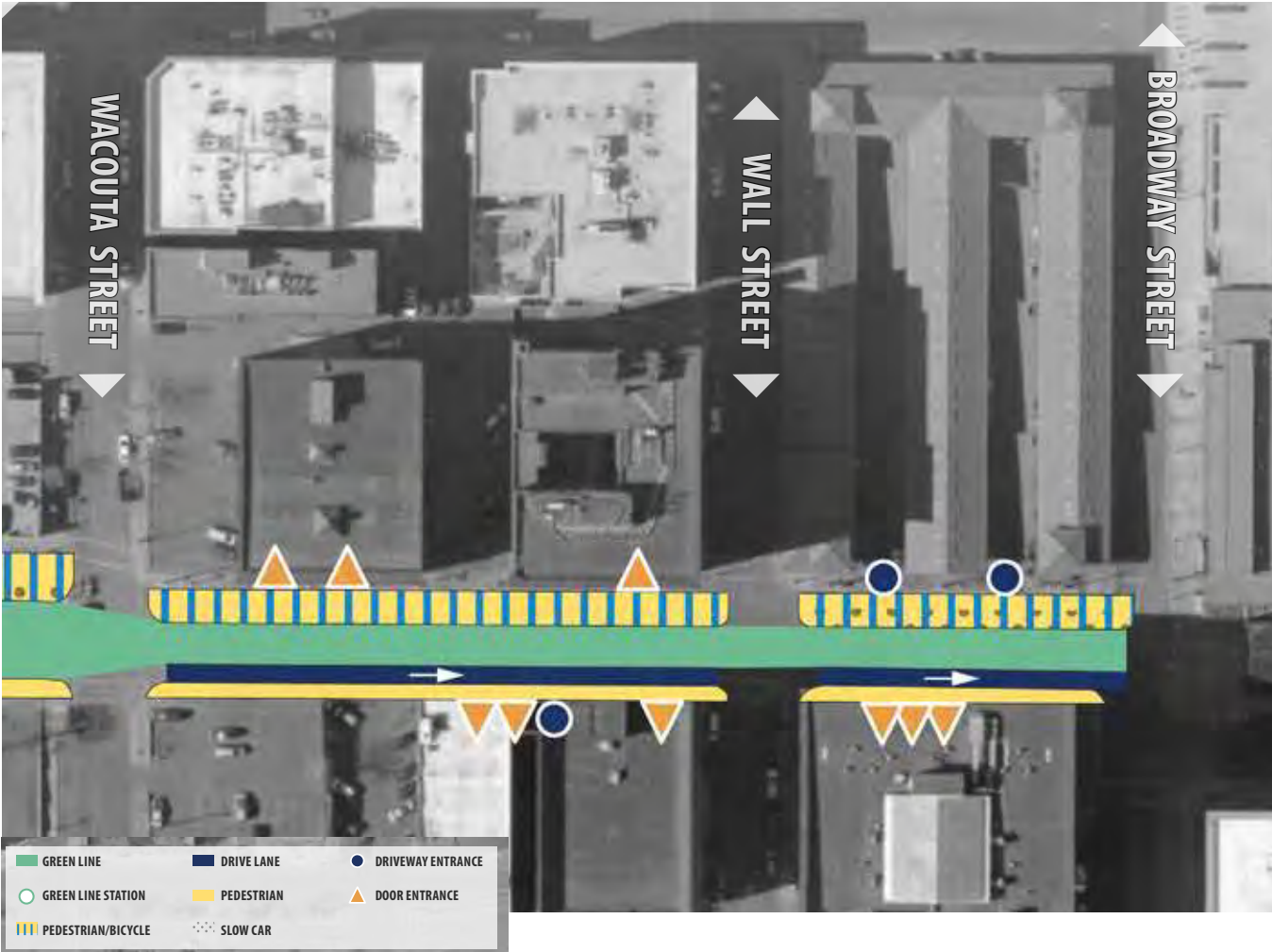


Figure 21.

## Segment 3: Wacouta Street to Broadway Street CONCEPT B

- sidewalk on the north side of street is available for programming
- pedestrians, bicycles and slow moving cars share the westbound travel lane
- eastbound lane is exclusive to cars
- westbound lane is raised to the sidewalk elevation, except at the intersections

Concept B: Elevation

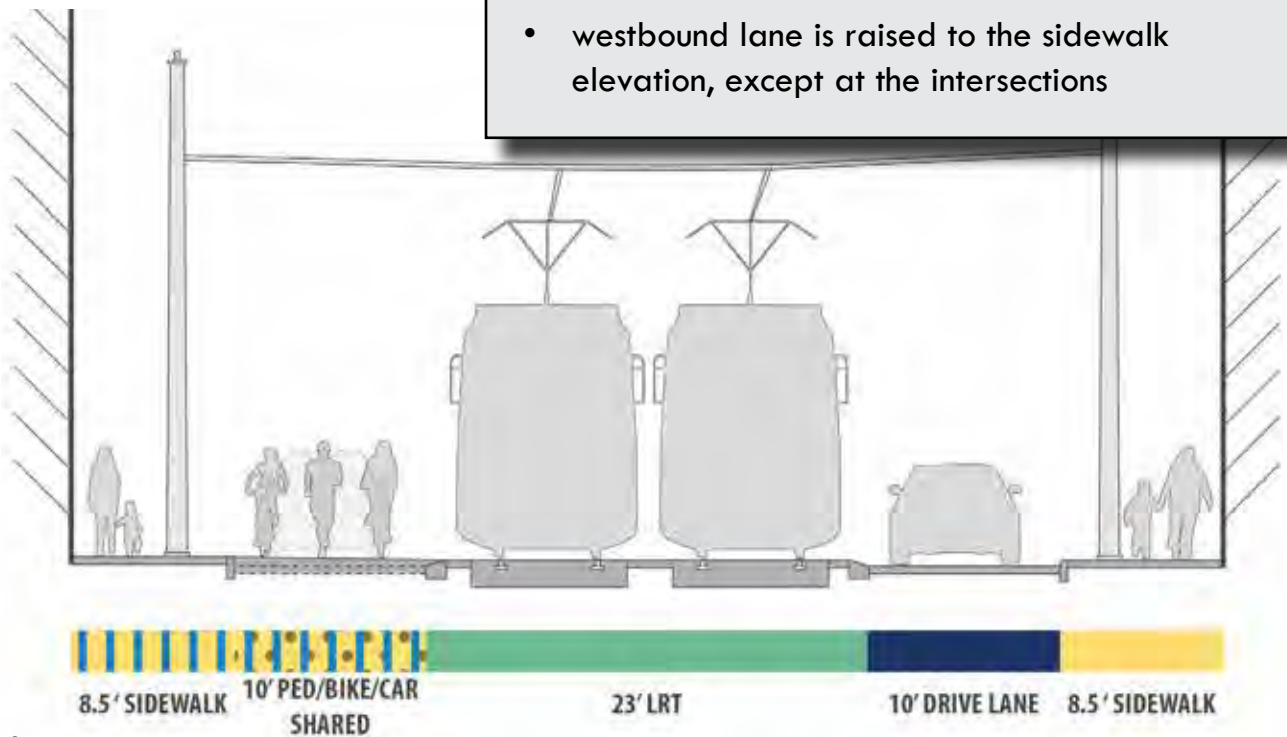
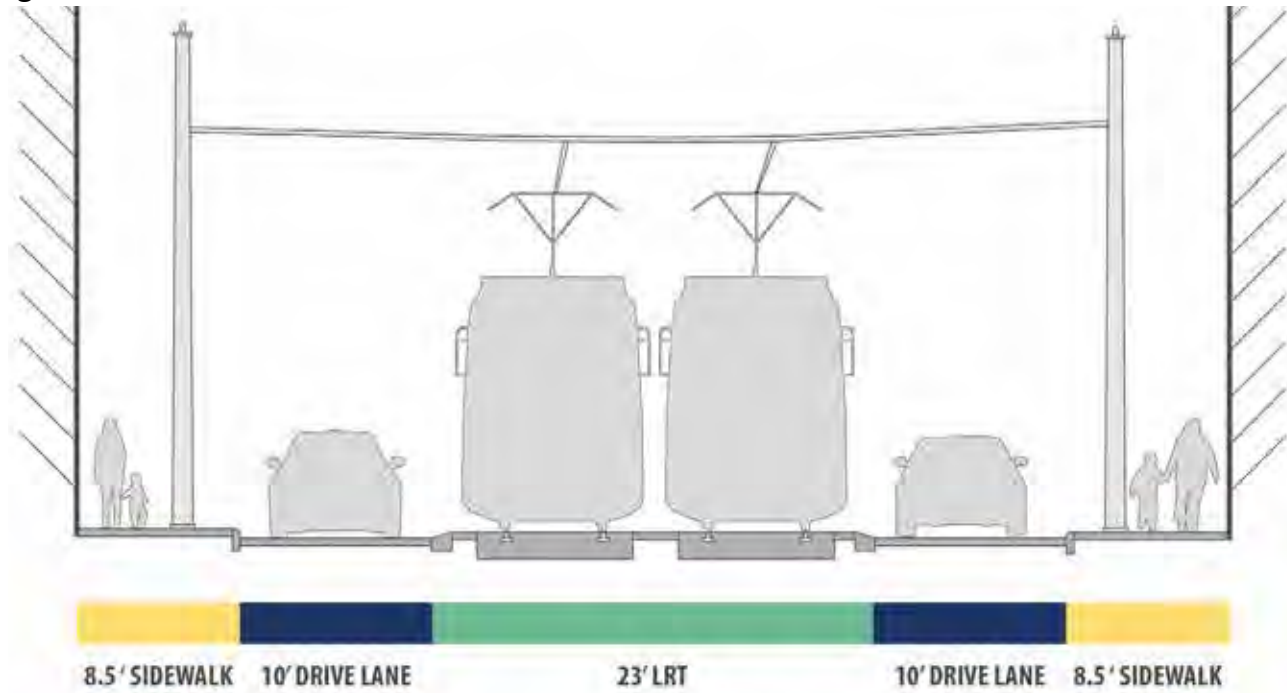


Figure 22.

Existing Conditions: Elevation

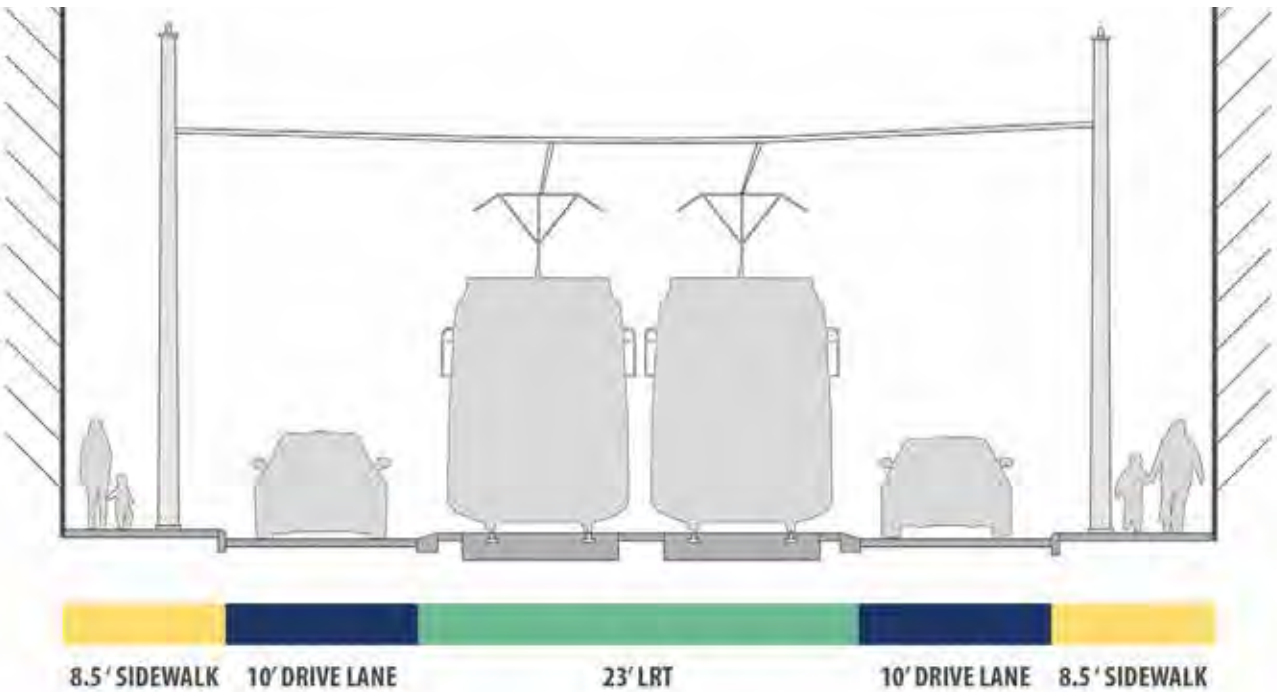




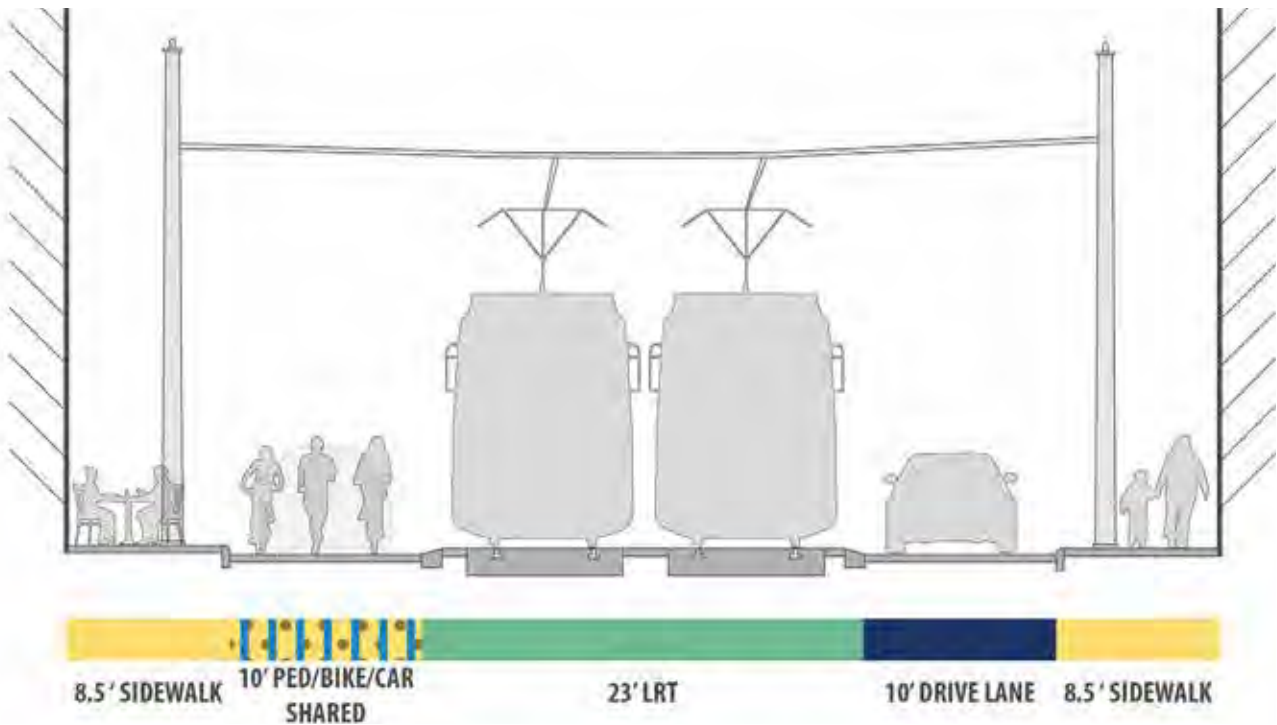
### Segment 3: Wacouta Street to Broadway Street

All Concepts & Comments

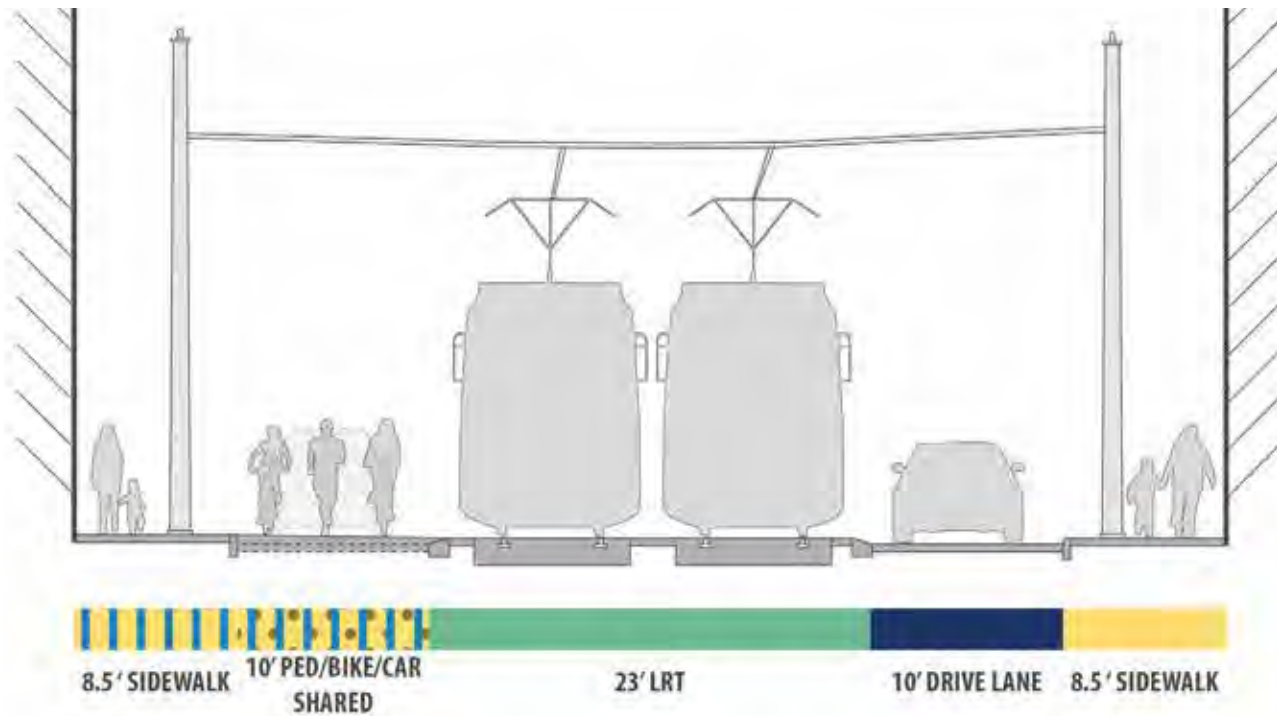
#### Existing Conditions: Elevation



#### Concept A: Elevation



#### Concept B: Elevation



#### PMT and PRC Comments

- From Jackson east to Broadway, 4th Street is within the Lowertown Heritage Preservation District (local) and Lowertown Historic District (National Register). The Saint Paul Heritage Preservation Commission will need to review any physical changes made along this segment.
- Strategies need to convey that, wherever possible, it is desirable that cars not be there. The street level is for people, bikes and very slow vehicles.
- ADA provisions are needed for sidewalks with proposed programming.
- Testing is needed to determine the appropriate sidewalk width for programming.
- Further study and input from agencies are needed to determine the importance of the LRT grade change.
- Drivers take cues from other drivers. If they don't see other vehicles, they may make a mistake.
- Traffic speed needs to be slower. Should the speed be slower by ordinance? How do you enforce the slower speed?

# Order-of-Magnitude Estimated Construction Costs

The following order-of-magnitude estimated construction costs were prepared to provide a very high level comparison between the various concept alternatives. The estimated construction costs were developed for one representative block in each of the three character segments. This cost was then extrapolated to the remaining blocks for that segment.

The concept alternatives were based purely on aerial mapping of existing surface conditions. While it is assumed that implementation of the concept alternatives would likely require modifications to existing underground utilities, the estimated costs presented here do not reflect the cost of doing so, as mapping and data on underground utilities were not reviewed as part of the project. Also, given the current highly conceptual nature of the alternatives, numerous costing assumptions had to be made to prepare the cost estimates. Estimated construction costs presented in this memorandum also do not include design development, final design or construction administration costs, which would increase of cost of implementing these projects. Additional detail showing how the costs were developed and the costing assumptions used are included in the Appendix.

Order-of-Magnitude Estimated Construction Costs	
Segment 1	
Concept Alternative	Order-of-Magnitude Estimated Construction Cost
A	\$585,000
B	\$1,167,000
B-2	\$1,405,000
C	\$1,929,000
Segment 2	
Concept Alternative	Order-of-Magnitude Estimated Construction Cost
A	\$26,000
B	\$676,000
Segment 3	
Concept Alternative	Order-of-Magnitude Estimated Construction Cost
A	\$17,000
B	\$208,000

# Urban Design

The 4th Street Market District introduces a relatively new concept of a “shared street” to the Minneapolis/Saint Paul metropolitan area, where space within the street right-of-way is shared equally between pedestrians, bicyclists and vehicles. This approach requires that vehicle drivers reduce their travel speeds to that of pedestrians. This concept is not applicable to all streets, but it can be considered for select streets where a majority of the intended users are pedestrians and bicyclists, and where street vehicle traffic volumes are low. In the case of 4th Street, and in particular along the segment east of Minnesota Street, most of the existing traffic is likely accessing parcels along 4th Street. Should a shared street be instituted, the only drivers who would choose to drive on 4th Street would be those that require access to a parcel along 4th Street. In addition, it is assumed that these drivers would enter and exit at the nearest cross street, given the slow speeds at which they would be required to travel along 4th Street.

A key aspect of shared streets is communicating to drivers where they are allowed to drive and the speed at which they are expected to travel. In addition, the design of the shared street needs to communicate to pedestrians and bicycles that this is a different type of environment, and invite them to enter 4th Street and move along it. The design also needs to communicate to bicyclists and pedestrians where they can walk and bike within the street right-of-way. A number of streetscape elements could be used to communicate the shared street environment along 4th Street, such as signage, overhead decorations, movable traffic barricades and changes in surface pavement. Examples of shared streets are shown on the following pages.

## Examples of Overhead Streetscape Treatments



Source: clevelandskyscrapers.com



Source: clevelandskyscrapers.com



Examples of Shared Use Streets



Source: American Planning Association California Chapter San Diego



Source: transportblog.co.nz



**Examples of Shared Use Streets**  
(Continued)



Source: *The Planner.co.uk*



Source: *The Strongtowns.org*



Examples of signage on other shared streets and overhead decorations are shown to the left. If overhead decorations are desired, care must be taken to not place the decorations over the light rail transit tracks; coordination with Metro Transit is required.

Reconstructing the pavement surface that, using unique paving materials could convey the pedestrian nature of the street. It should be noted if brick pavers are used, consideration should be given to the comfort of people with disabilities and bicyclists who may find numerous pavement joints uncomfortable to pass over. Given the recent reconstruction of 4th Street for the light rail, it may be a number of years before the roadway requires reconstruction. Alternatively, it may be feasible to affix a colored pattern on top of the existing pavement to create a unique and distinct environment.

An estimated cost for a custom designed pavement pattern/markings such as the ones shown above is \$25/sf, provided a minimum material purchase of 2,000 sq. ft. This custom pavement marking cost is based on a product line called “TrafficPatterns” produced by Ennis-Flint Company. TrafficPatterns® is a durable, interconnected, surface-applied, preformed thermoplastic pavement overlay marking material, suitable for application on asphalt and concrete pavement substrates. TrafficPatterns® markings are created using solid color pieces of preformed thermoplastic in a pattern. Custom TrafficPatterns® pattern pricing is based on design complexity/intricacy, the number of sheets necessary to create the specified pattern, number/type of colors, pattern repetition and quantity. This representative product does not require any stamping or impressions to be made into the substrate to create the pattern.

As stated earlier in the memorandum, design elements for 4th Street should be respectful and responsive to the historic districts that it passes through; coordination with the Heritage Preservation Commission is needed.

### Examples of Shared Use Signage



Source: DailyMail.com



Source: DailyMail.com

### Examples of Pavement



Source: Ennis-Flint Company



Source: Ennis-Flint Company

Shared streets (sometimes referred to as “woonerfs”) have been successfully used in select European cities for over 40 years. Recently, this concept is starting to receive more attention in the United States, with comparable projects starting to be installed across the country. Locally, two shared streets opened in Minneapolis in Fall 2016. One is located along a segment of 29th Street South between Lyndale and Bryant Avenues. Another is located between 1st and 2nd streets South, east of 3rd Avenue South in downtown Minneapolis.

7th Place between St Peter and Wabasha streets in downtown Saint Paul, while not officially a shared street, demonstrates many of the characteristics of a shared street. The arched gateway feature on St Peter Street, brick pavers and outdoor furniture communicate that this is a unique pedestrian environment. Delivery and service vehicles do need to pass through 7th Place on occasion; they are accommodated without having to design for them.



## Images of 7th Place in downtown Saint Paul



Source: Saint Paul Riverfront Corporation



Source: SRF Consulting



Source: Saint Paul Riverfront Corporation

## Next Steps

### Concept Testing

As the 4th Street Market District concept moves forward, the PMT and PRC expressed interest in constructing a temporary demonstration project as a way to further test its feasibility. Given that direct vehicular access is not required for the parcels located between Minnesota and Jackson streets, this two-block segment should be considered for testing. Over the course of this feasibility study, both PMT and PRC members stated the importance of programming 4th Street in order to achieve the desired activation of the street environment. Concept testing needs to incorporate both modifications to the physical environment, and space activation programming.

### PMT and PRC Comments

- Activating 4th Street is needed. Both activation and street modification are needed in order for the 4th Street Market District to be successful.
- Property owners may be hesitant to invest in improvements if the testing and other next steps are seen as temporary. A long-term strategy for activation, testing and phasing needs to be established to convey a commitment to the private investors.
- The Saint Paul Building Owners and Managers Association will initiate and document conversations with the property owners.

### Design Development

If the concept testing yields positive findings, the concept can then move forward to design development and final design. During this phase of the project, design details, such as ADA compliance and utility modification, along with associated cost estimates can be further developed and refined based on additional research and a clearer understanding of existing site conditions. Maintenance considerations should be considered concurrent with design development, as design elements may have consequences for maintenance operations.



**Detailed Traffic Analysis**

A detailed traffic analysis and some modeling of traffic patterns may be necessary for Segment 1 to better understand how restricting vehicles on 4th Street will potentially affect other streets and areas in downtown, especially during events, such as CHS Field games, Ordway performances, RiverCentre events, Xcel Energy Center games and Winter Carnival activities.

**Public Engagement**

Input from property owners, residents employees and business owners will continue, and is an important next step as this effort moves forward.

**Continued Agency and Project Stakeholder Coordination**

Further development of the 4th Street Market Street concept will require continued involvement by numerous project stakeholders to ensure all perspectives and technical requirements have been adequately addressed. Project stakeholders recommended for continued engagement include, but are not limited to, the following:

- Property and Business Owners
- Allied Organizations
  - Building Owners and Managers Association
  - Transit for Livable Communities
  - Saint Paul Riverfront Corporation
  - Saint Paul Chamber of Commerce
  - CapitalRiver District Council
  - Capitol Region Watershed District
- City Departments
  - Public Works
  - Planning and Economic Development
  - Saint Paul Emergency Services
  - Parks and Recreation
- Heritage Preservation Commission
- Ramsey County
- Metro Transit
- City Artist with Public Art St. Paul

**Appendix**

**Appendix (in separate attachment)**

Stakeholder Interview Findings.....A1

Order-of-Magnitude Estimated Construction Costs Details.....A2