

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussing and Selecting the Preferred Option for the 185 th Street Multimodal Corridor Strategy		
DEPARTMENT:	Public Works		
PRESENTED BY:	Nora Daley-Peng, Senior Transportation Planner		
ACTION:	<input type="checkbox"/> Ordinance	<input type="checkbox"/> Resolution	<input type="checkbox"/> Motion
	<input checked="" type="checkbox"/> Discussion	<input type="checkbox"/> Public Hearing	

PROBLEM/ISSUE STATEMENT:

The purpose of this agenda item is to provide the City Council with an update on the 185th Street Multimodal Corridor Strategy (185th MCS). To date, the study team has assessed the corridor’s existing conditions, conducted the fall outreach series to receive initial community and stakeholder input, developed several draft roadway options and shared them during the spring outreach series. Staff used public and stakeholder input from the spring outreach series to help develop the City Staff Recommended Option (Recommended Option).

Tonight, City staff is providing Council with a summary of the spring outreach series, the Recommended Option for consideration as the Preferred Option to move forward into the next steps of development of the 185th MCS.

Once Council has selected a Preferred Option, the study team will develop the 185th MCS Report, which will include a refined corridor plan, intersection design analysis, right-of-way (ROW) needs, utility coordination, SEPA checklist, conceptual design guidelines, cost estimate, project delivery approach, and funding strategy. Staff will return to Council in fall 2019 with the finalized 185th MCS Report for Council discussion and adoption.

Currently, there is no designated Capital Improvement Plan (CIP) funding for improvements to the corridor. Changes to the 185th Street Corridor will happen incrementally over time as redevelopment occurs. The 185th MCS will serve as a guide to ensure that future public and private development projects contribute to a cohesive vision and will help the City competitively seek funding opportunities. The 185th MCS will serve as the basis of design for a future design development phase when the City advances this study into a CIP project.

RESOURCE/FINANCIAL IMPACT:

This study has a total budget of \$533,275 from the City of Shoreline (City) Roads Capital Fund. There is no additional financial impact associated with continued work to complete this study.

There is no immediate financial impact associated with Council's selection of the Preferred Option.

RECOMMENDATION

Staff recommends that Council select the Recommended Option as the Preferred Option for the 185th MCS in order for the study team to refine the corridor concept, develop a project delivery approach and funding strategy; and return to Council in fall 2019 with the 185th MCS Report for Council discussion and adoption.

Approved By: City Manager ***DT*** City Attorney ***MK***

INTRODUCTION

City staff is working to create a vision for the 185th Street Corridor that is future-focused and considers the needs of multiple transportation modes including motorists, pedestrians, bicyclists, and transit operators and riders. The 185th Street Corridor is anchored by the future light rail station on the east side of Interstate 5 and created by three roads: N/NE 185th Street, 10th Avenue NE, and NE 180th Street. For this study, the term “185th Street Corridor” is used to succinctly describe the collection of these three streets.

Council previously discussed the 185th MCS’s fall outreach series, draft mid-block cross section options, and draft concepts for community gathering places at their March 25, 2019 Council meeting. The staff report for that discussion can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2019/staffreport032519-8a.pdf>

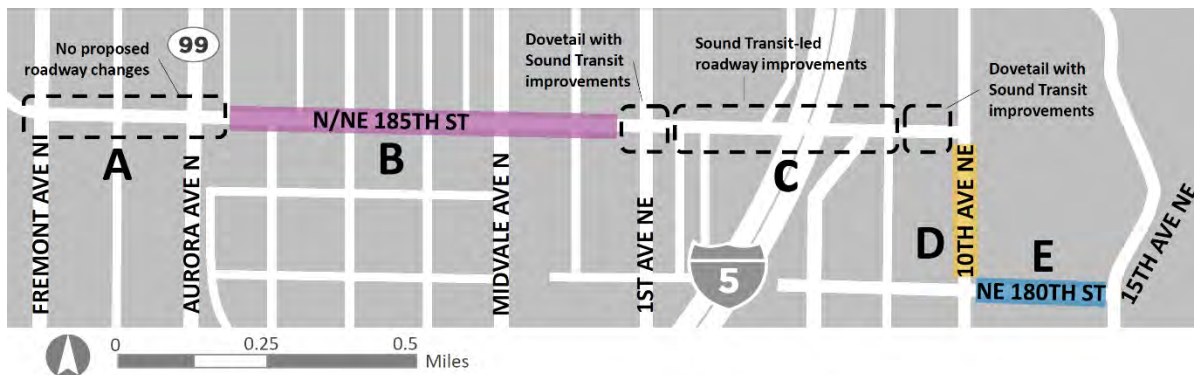
This staff report provides a summary of the work leading to and the feedback from the spring outreach series, the Recommended Option of proposed mid-block cross sections for the 185th Street Corridor, and an outline of next steps. The study will culminate in a 185th MCS Report to guide how future developments, both public and private, will relate to the 185th Street Corridor and ensure that it is developed in a cohesive way. The 185th MCS will serve as the basis of design for a future design development phase when the City advances this study into a CIP project.

BACKGROUND

The 185th MCS takes into consideration the future Shoreline North/185th Station, which is expected to open in 2024 and related amenities, the additional transportation demands created as a result of the station, as well as new demands based on anticipated population growth from the 185th Street Station Subarea rezoning.

Corridor Segments

The 185th Street Corridor has distinct characteristics throughout. No “One Size Fits All” design can work along the entire corridor for all modes of transportation or land uses. The study team divided the corridor into the following segments for this study:



Process and Schedule

To date, the study team has assessed the corridor's existing conditions, conducted the fall outreach series to receive initial community and stakeholder input, developed several draft mid-block cross section options and shared them during the spring outreach series. Using public and stakeholder feedback on the draft corridor options, the study team developed a hybrid set of mid-block cross sections along the corridor reflecting the best mix of elements from the options, referred to as the Recommended Option in this staff report.

Tonight, staff is seeking Council's selection of a Preferred Option for the 185th MCS in order for the study team to refine the corridor concept, develop a project delivery approach and funding strategy, and return to Council in fall 2019 with the 185th MCS Report for Council consideration.



DEVELOPMENT OF RECOMMENDED OPTION

Stakeholder Outreach

Staff is using a variety of outreach events and activities to engage and inform the community throughout the 185th MCS process. In spring 2019, staff facilitated Outreach Series 2 to gather community and stakeholder input on several draft roadway options and draft concepts for community gathering places.

Outreach Series 2 events included Open House 2 on Tuesday, April 2, 2019, stakeholder meetings, a presentation at a neighborhood association meeting for neighborhoods adjacent to the corridor, and an online survey from April 5 to May 28, 2019 that offered similar exercises to those offered at in-person spring outreach events. Overall, a total of 375 people participated in the spring outreach meetings and online survey.

Staff used public and stakeholder input from the spring outreach series to help develop the Recommended Option. A high-level summary of the survey take-aways for the draft roadway options (see Attachment A for illustrations and evaluation analysis of the draft roadway options) and the draft community gathering places concepts are described below. More details about Outreach Series 2 and public feedback received can be viewed in the Outreach Series 2 Summary (see Attachment B).

Overall Survey Take-aways

Most survey responders support improving the corridor with a relatively small percentage (between five to eight percent) of survey responders selecting to keep the corridor the way it is today. Survey responses indicate a strong interest in accommodating multiple modes of travel along the corridor with an emphasis on creating a pedestrian-friendly environment.

Note that the 185th MCS does not propose changes to N/NE 185th Street Segment A and C because the lane configuration sufficiently accommodates present and future traffic or utilizes Sound Transit's (ST) planned project improvements, respectively.

N/NE 185th Street Survey Take-aways - Segment B

Previously proposed options included:

- Option 1 - enhanced three-lane section (two travel lanes and a center turn lane) with bike lanes
- Option 2 - four-lane section (two travel lanes and two Business Access and Transit "BAT" lanes) and protected bike lanes
- Option 3 - five-lane section (four travel lanes and a center turn lane) with a shared-use path

Overall, Option 2 ranked highest. Top reasons for this choice included considerations for pedestrians, bicyclists, and transit. Outreach participants suggested improving Option 2 by moving the bike lanes off the street and trying to preserve mature trees on the northside of street by retaining the location of the existing curb.

10th Avenue NE Survey Take-aways - Segment D

Previously proposed options included:

- Option 1 - two-lane section (two travel lanes) with buffered bike lanes
- Option 2 - two-lane section (two travel lanes) with bike lanes and on-street parking
- Option 3 - three-lane section (two travel lanes and a center turn lane) and bike lanes

Overall, Option 1 ranked highest. Option 2 was a close second (within five percent). Top reasons for this choice included considerations for pedestrians, bicyclists, and traffic. Participants emphasized the need for parking in this growing neighborhood and asked the team to be mindful of how future bus stops would affect traffic and cyclists.

NE 180th Street Survey Take-aways - Segment E

Previously proposed options included:

- Option 1 - two-lane section (two travel lanes) with bike lanes
- Option 2 - two-lane section (two travel lanes) with buffered bike lanes and on-street parking

Overall, Option 1 ranked highest. Top reasons for this choice included considerations for pedestrians, bicyclists, and traffic. Participants voiced concerns about how multimodal improvements would fit into this relatively narrow street segment (within a 60 foot right of way) that is quickly redeveloping. In addition, participants asked the team to consider NE 180th Street's topography when planning for bicycle facilities and to provide as much separation between bicyclists and roadway traffic as possible.

See Discussion section of this staff report to see how public/stakeholder feedback on draft roadway options was incorporated in the Recommended Option.

Community Gathering Places Survey Take-aways

The team previously developed and shared draft concepts for community gathering places (shown in map below) along the 185th Street Corridor for better multimodal connections, placemaking, and enhanced open spaces within the Corridor's local vicinity.



- Site #1: Aurora Avenue N and N 185th Street
 - City-owned parcel identified in the Shoreline Public Art Plan as part of a series of art-themed spaces along Aurora Avenue N.
- Site #2: Ashworth Avenue N and NE 185th Street (mid-block on south side)
 - Parcel identified as a potential nature-based open space during the 185th Street Station Subarea planning process.
- Site #3: Trailhead at the Station
 - City right of way that serves as a trailhead for the [Trail Along the Rail](#) at the intersection of NE 185th Street and 5th Avenue NE.
- Site #4: Rotary Park
 - Collection of parcels and utility right of ways identified in the Shoreline Parks, Recreation, and Open Space (PROS) Plan as an opportunity site for adding more public space within the light rail station areas.

The intent of the survey was to gather public and stakeholder feedback on what programming elements are best suited for the four identified community gathering places. Overall, outreach participants responded favorably to activating these sites while being mindful of maintenance and security needs. Attachment B includes ranking of favorite programming activities per site.

Feedback on draft concepts for Sites #1, #2, and #4 received during this process was shared with the City's Parks, Recreation, and Cultural Services (PRCS) Director and the PRCS/Tree Board. Feedback on Site #3 received during this process was shared with the Public Works Director and the Trail Along the Rail Project Manager.

Currently, there is no funding for programming these sites. Draft concepts of community gathering places are fodder for the start of a longer process of programming potential public spaces with design features that will nurture a sense of place and enhance the quality of life for the community.

DISCUSSION

The 185th Street Multimodal Corridor Strategy will provide a vision for the corridor that is safe for pedestrians and bicyclists, supports frequent bus and light rail service, addresses traffic flow, creates gathering spaces, and encourages neighborhood businesses.

The study team used the results of preliminary evaluation analysis as well as public and stakeholder feedback on the draft roadway options to develop the hybrid roadway option referred to as the Recommended Option.

Recommended Option

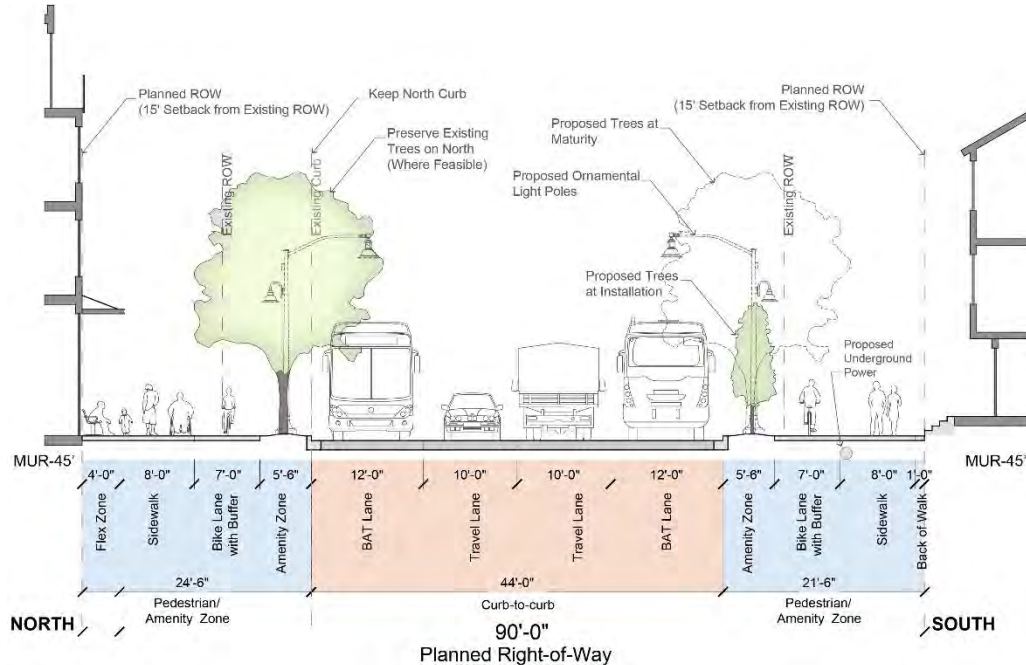
The Recommended Option shows typical mid-block cross sections (see Attachment C) for each corridor segment's overall right-of-way width including dimensions for its roadway component (curb to curb) and its non-motorized component that includes sidewalks, bicycle facilities, and amenity zones. Cross sections will typically be wider approaching and through intersections to accommodate left, right, and U-turns. Once the Council has selected a Preferred Option the team will develop and analyze intersection design options that will work with the Council-selected Preferred Option's mid-block cross sections (see Next Steps section of this staff report for more details about upcoming intersection design analysis).

The Recommended Option mid-block cross sections for the 185th Street Corridor segments are described below.

N/NE 185th Street

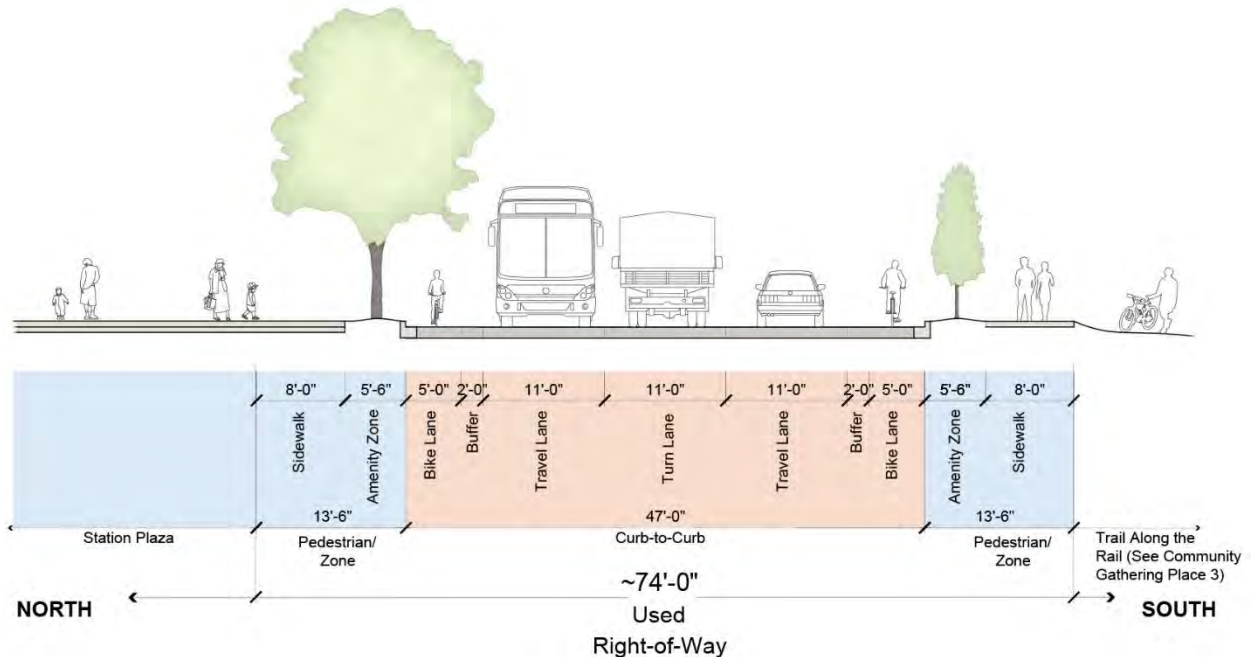
- Segment A - Fremont Avenue N to Midvale Avenue N
 - No roadway options are proposed for this segment because the lane configuration sufficiently accommodates present and future (year 2035) traffic volumes and turning movements through this segment.

- Segment B - Midvale Avenue N to 2nd Avenue NE



- Recommended Option for this segment is a four-lane section (two travel lanes and two BAT lanes), amenity zones, off-street bike lanes, sidewalks, and additional flex zone on the north side of the street.
 - Fits within the 90-foot planned right-of-way (ROW) established during the 185th Street Station Subarea planning process.
 - Supports frequent transit service with 12-foot wide BAT lanes.
 - Holds northside curb to preserve existing street trees where feasible.
 - Moves bike lanes off the street for more protection.
 - Provides separate facilities for pedestrians and cyclists.
 - Brings amenity zones and sidewalks up to City standards.
 - Adds a four-foot flex zone to the northside pedestrian zone for street furnishings.
 - Power could be undergrounded to increase street aesthetics, maximize adjacent property development, accommodate growth of large canopy street trees on the southside of street, and remove the barrier that overhead wires present during firefighting and rescue operations. Alternatively, power poles could be relocated to the amenity zone and outfitted with ornamental street lights. Staff recognizes that a Council decision as to whether to underground power along 185th Street requires more information, analysis, and policy discussions. This is discussed in the Next Steps section in this staff report.
 - Transitions from four-lanes to three-lanes between 1st Avenue NE and 2nd Avenue NE to match into Segment C's ST improvements with possible transition options such as queue jumps for buses to keep transit service reliable.

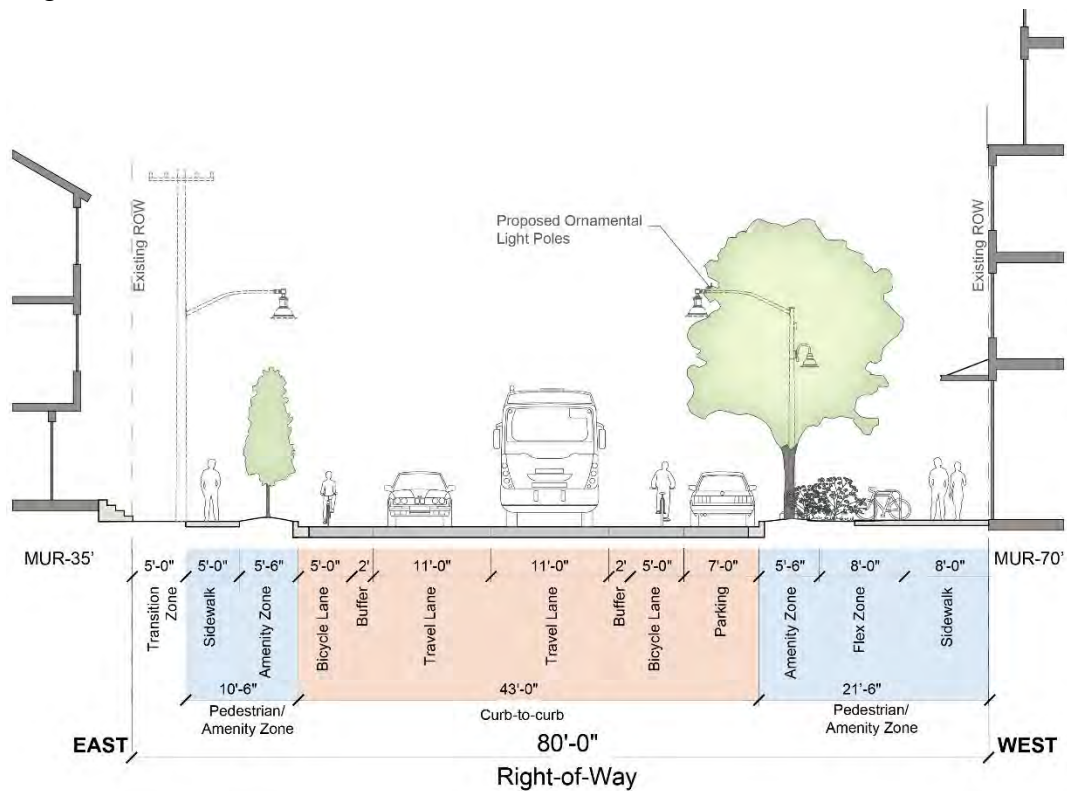
- Segment C - 2nd Avenue NE to 10th Avenue NE



- The 185th MCS does not propose changes to ST's planned project improvements for this segment. Per the Lynnwood Link Light Rail project, ST will restripe NE 185th Street into a three-lane section with buffered bike lanes between 2nd Avenue NE and 5th Avenue NE (east of I-5). Between 5th Avenue NE and 8th Avenue NE the lane configuration will consist of a two-lane section with buffered bike lanes and standard five-foot amenity zones and eight-foot sidewalks on both sides.
- ST will be undergrounding electric power on NE 185th Street from east of the bridge between of 5th Avenue NE to 8th Avenue NE and on the westside of 8th Avenue NE adjacent to the future Shoreline North/185th Station.
- East of 8th Avenue NE to 10th Avenue NE, ST is not required to make any permanent roadway improvements to NE 185th Street. ST may install temporary traffic control measures, if needed, at the intersection of NE 185th Street and 10th Avenue NE to accommodate detoured traffic during the reconstruction of 5th Avenue NE.
- East of 8th Avenue NE to 10th Avenue NE, the Recommended Option dovetails with ST roadway improvements and brings the sidewalks and amenity zones up to City standards.

10th Avenue NE

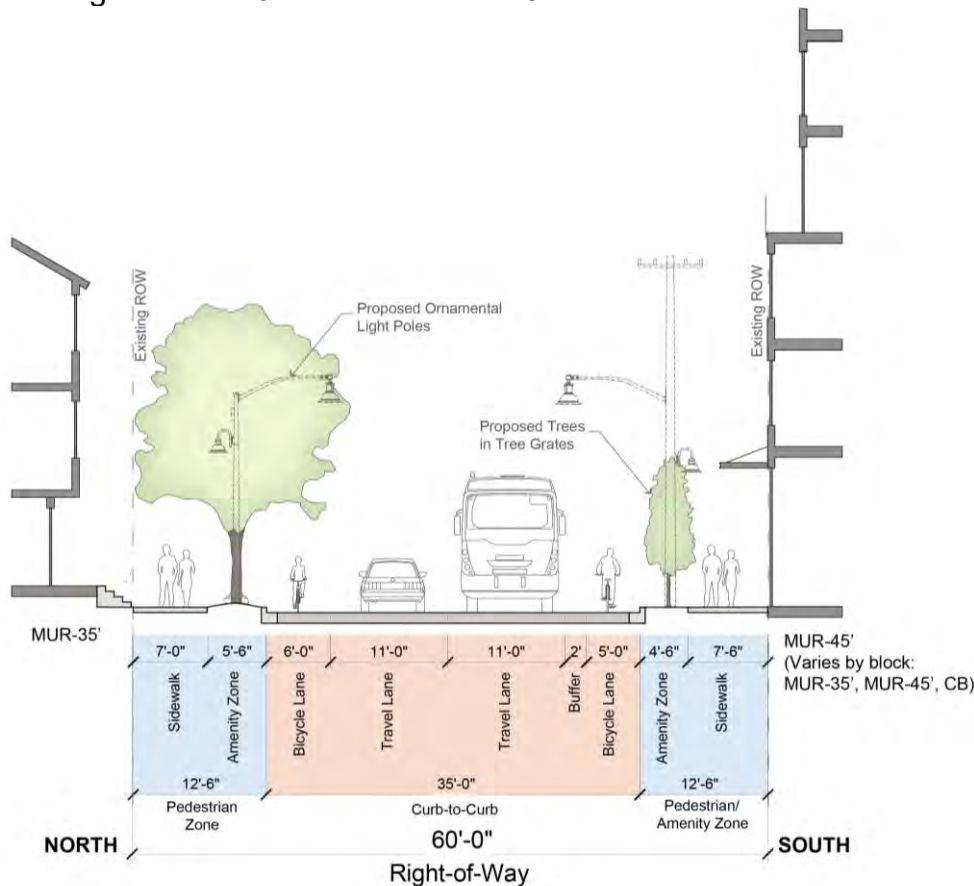
- Segment D - NE 185th Street to NE 180th Street



- Recommended Option for this segment is a two-lane section (two travel lanes) with buffered bike lanes, on-street parking (westside only), amenity zones, sidewalks, and additional flex zone on the westside of the street.
 - Fits within the 80-foot ROW.
 - Supports frequent transit service with 11-foot wide lanes.
 - Provides buffer between bikes and vehicles.
 - Adds on-street parking on westside of street. One of the previous options looked at adding a center turn lane to increase traffic flow. On-street parking was offered in another previous option to respond to the future demand for parking in the area due to nearby high-density housing and the light rail station. The Recommended Option seeks to balance these needs by providing on-street parking on the westside of the street and addressing traffic turning movements at intersections rather than having a continuous center turn lane.
 - Brings amenity zones and sidewalks up to City standards.
 - Adds an eight-foot flex zone to the westside pedestrian zone to accommodate more plants and street furnishings adjacent to future density (zoned MUR-70').

NE 180th Street

- Segment E - 10th Avenue NE to 15th Avenue NE



- Recommended Option for this segment is a two-lane section (two travel lanes) with enhanced bike lanes, amenity zones, and sidewalks.
 - Fits within the 60-foot ROW. The study team developed the Recommended Option that could dovetail with recent redevelopment on this street segment, which led to balancing what could be offered within a 60-foot ROW. The Recommended Option prioritizes creating room for multimodal travel over providing on-street parking, which would have provided limited spaces due to the parking setbacks from driveways and intersections along this five-block segment.
 - Supports frequent transit service with 11-foot wide lanes.
 - Provides a buffer for cyclists on the uphill side and a six-foot bike lane (wider than standard) on the downhill side.
 - Provides amenity zones and sidewalks on both sides of the street.

RECOMMENDED OPTION ANALYSIS

The study team developed the Recommended Option based on Council's input heard during the March 25, 2019 Council Meeting and community and stakeholder feedback received during the spring outreach series (see Stakeholder Outreach section in this staff report for more details). The team looked at how forward-compatible the Recommended Option is with 185th Street Station Subarea zoning, City plans, King

County Metro and Community Transit future service plans, and utility providers and emergency responder service needs. The team also evaluated environmental and community benefits and potential impacts. The study team will continue to analyze potential benefits and impacts as well as overall project costs during the refinement of the Council-selected Preferred Option (see Next Steps in this report for more details).

Evaluation Criteria

During winter 2019, the team developed a set of draft criteria (see Attachment D) to evaluate how well each draft mid-block cross section option benefited pedestrians, bicyclists, transit operators and riders, and motorists; as well as overall environmental and community benefits; high-level ROW impacts and construction costs.

During the spring outreach series, the team shared the preliminary evaluation analysis of draft mid-block cross section options with the community and stakeholders, so they could compare the benefits and tradeoffs of each draft options.

Comparative Analysis of Options

The study team used the results of preliminary evaluation analysis as well as public and stakeholder feedback to develop the best of the best hybrid option referred to as the Recommended Option. See Attachment E for a comparative analysis of the previous options and the Recommended Option using the evaluation criteria.

Transit Speed and Reliability

The expected opening of the future Shoreline North/185th Station in 2024 has been the impetus for planning efforts to optimize bus connections to and from the light rail station. King County Metro's (Metro) long-range plan envisions both local and frequent service connections to/from the Shoreline North/185th Station. In addition, Metro is considering a frequent service route (a bus every 15 minutes or less) from the Shoreline North/185th Station east to 10th Avenue NE to NE 180th Street to North City Business District and beyond to Lake Forest Park. Community Transit (CT) is planning an extension of its Swift blue line (Bus Rapid Transit [BRT] line) that would make frequent connections (a bus every 8 minutes or less) to/from the Shoreline North/185th Station.

The Recommended Option supports future frequent transit service by proposing corridor improvements that would optimize the speed and reliability of transit service, as well as strengthen pedestrian and bicycle access to/from transit stops.

During the spring outreach series, the team met with Metro and CT representatives to get their feedback on the draft options and again to discuss the Recommended Option. Overall, the Transit agency representatives responded positively to the Recommended Option. They expressed a strong preference for dedicated BAT lanes on N/NE 185th Street to support frequent bus service and appreciated the off-street bike lanes on N/NE 185th Street and the buffered bike lanes on 10th Avenue NE and NE 180th Street. They reiterated the need to provide a minimum of 11-foot wide lanes for buses (12-foot wide is optimal), accommodate bus turning movements at intersections, allow adequate room for future bus stops, and to particularly study the roadway grade of NE 180th Street to assure the design provides adequate clearance between the pavement and the underside of the buses.

Traffic Impact

Concurrency is one of the goals of the Growth Management Act and refers to the timely provision of public facilities and services relative to the demand for them. To maintain concurrency requires adequate public facilities are in place to serve new development as it occurs or within a specified time period.

The March 25, 2019 staff report discussed the City of Shoreline's adopted traffic LOS (level of service) for measuring traffic concurrency and provided general-purpose traffic V/C (volume to capacity) ratios (which compares roadway demand or general-purpose vehicle volumes to roadway supply or carrying capacity) for each of the 185th MCS segment options. For reference, a V/C of 1.0 indicates the roadway facility is operating at its capacity. A V/C of 0.9 is generally considered an appropriate threshold and greater than 1.0 would indicate "over-capacity", which would materialize as slower travel times for drivers.

Below are the general-purpose traffic V/C ratio outcomes for each of the Recommended Option segments. It should be noted that the V/C ratios indicate peak hour travel. Please note that these are preliminary projections of how well general-purpose traffic will flow through the individual street segments without yet looking at the performance of the corridor's intersections, which may affect results. During the corridor concept refinement period, the study team will analyze the LOS of preliminary intersection designs and update the results.

N/NE 185th Street

- Segment A
 - There are no roadway changes proposed for this segment because the current lane configuration meets the City's LOS for the Future No Build condition for year 2035.
- Segment B
 - The Recommended Option will result in a 1.92 V/C ratio for general-purpose traffic that far exceeds the City's current LOS standard for this segment. However, it is important to note that N/NE 185th Street Recommended Option provides dedicated BAT lanes that are an essential component of fast and reliable transit service. The roadway segment V/C ratio assumes standard trip generation methods associated with the type of redevelopment anticipated within the 185th Street Station Subarea. As such, there is an assumption of high vehicle use and dependency; however, this can and likely will shift over time, especially if walking, biking, or riding the bus becomes more economical and efficient than driving alone. This would occur if vehicular LOS is deprioritized, by lowering the 185th Street Corridor's LOS standard and allowing increased general-purpose traffic delays and congestion. In combination with the presence of safe, connected, and easy to use bike and pedestrian facilities, and the availability of reliable and frequent transit service, mode shift would be incentivized, thereby reducing traffic demand on the corridor over time.
 - If this corridor is to function as a multimodal corridor, the concession of lowering the City's LOS for N/NE 185th Street may be necessary. It should

be noted that none of the options studied would meet the City's LOS. Creating an option that would meet the City's current V/C ratio would require a greater than 5-lane roadway configuration for general-purpose vehicles that would compromise the safety, access, and mobility of pedestrians, bicyclists, and reliable transit; and have a much larger roadway footprint than is economically feasible.

- If Council ultimately adopts 185th MCS with this Recommended Option (i.e. 4-lane roadway configuration), a follow up action would need to be taken to set a specific LOS for N/NE 185th Street in the City's Comprehensive Plan.
- Segment C
 - The 185th MCS does not propose changes to ST's planned project improvements. The general-purpose traffic LOS is likely to drop below standards in future years. It is worth noting that ST's Environmental Impact Statement (EIS) concluded prior to the adoption of the 185th Street Station Subarea rezone. As such, ST's analysis did not include Subarea growth in the project analysis and their project was not required to mitigate for the additional growth. With their improvements, vehicle level of service is likely to drop below standards in future years.

10th Avenue NE

- Segment D
 - The Recommended Option will result in a 1.12 V/C ratio for general-purpose traffic that exceeds the City's current LOS standard for this segment.
 - Although traffic volumes on 10th Avenue NE are significantly less than N/NE 185th Street, a center turn lane would be needed to bring the V/C ratio within the City's current standard. One of the previous options looked at adding a center turn lane to increase traffic flow to a 0.93 V/C ratio. The Recommended Option seeks to balance the competing spatial demands for on-street parking and traffic flow by addressing traffic turning movements at intersections rather than having a continuous center turn lane. Once the Council has selected a Preferred Option the team will develop and analyze intersection design options that will work with the Council-selected Preferred Option's mid-block cross sections and will return to Council with an updated LOS for 10th Avenue NE.
 - If Council ultimately adopts 185th MCS with this Recommended Option (i.e. 2-lane roadway configuration), a follow up action may be needed to set a new, specific LOS for 10th Ave NE in the City's Comprehensive Plan.

NE 180th Street

- Segment E
 - The Recommended Option's two-lane roadway configuration meets City's current LOS standard with a V/C ratio of 0.61.

NEXT STEPS

Once Council has selected a Preferred Option, the study team will develop the 185th MCS Report that will include a refined corridor plan, intersection design analysis, ROW needs, utility coordination, SEPA checklist, conceptual design guidelines, cost estimate, project delivery approach, and funding strategy (see below for task descriptions). Ultimately, staff will return to Council in fall 2019 with the finalized 185th MCS Report for Council adoption.

Refined Corridor Plan

Refined roadway channelization plan of the Preferred Option will establish a vision for how all multimodal facilities (i.e. pedestrian, bike, vehicle, and transit), landscaping, and placemaking fit cohesively together.

Intersection Design Analysis

While the Recommended Option's four-lane section offers N/NE 185th Street clear multimodal benefits, one of the tradeoffs is the elimination of the center turn lane, which currently facilitates vehicular turns to and from the corridors to/from driveways and side streets. As such, in the future as the corridor develops, access restrictions and consolidations will likely be necessary. Given this, attention to intersections and specifically how intersections can accommodate U-turn movements will be an important consideration.

To frame the upcoming analysis of intersection design options, the study team prepared an example footprint comparison (see Attachment F) of a standard signalized intersection versus a 2-lane roundabout. The comparison begins to show differences in benefits and impacts of the two types of intersection designs. Once Council has selected the Preferred Option, the team will conduct a comparative analysis of intersection design options for the major intersections along the corridor and return to Council in fall 2019 with the findings in the 185th MCS Report.

ROW Needs

Preliminary analysis of ROW requirements based on the anticipated impacts of the Preferred Option on existing property lines and vehicular access.

Utility and Public Service Coordination

The study team will continue to coordinate with utility and public service providers (i.e. Seattle City Light (SCL), Seattle Public Utilities, North City Water District, Ronald Wastewater District, Telecommunication providers, Recology, Shoreline Police Department, and Shoreline Fire Department) on the Preferred Option's impacts and opportunities for utility and public service providers.

Undergrounding Overhead Power and Communication Facilities Along N/NE 185th Street

As discussed in Segment B, the Recommended Option includes undergrounding of overhead utilities. This is aligned with SMC Chapter 13.20

(<https://www.codepublishing.com/WA/Shoreline/#!/html/Shoreline13/Shoreline1320.html>), which provides policy intention to require undergrounding with capital projects.

However, there are challenges with this related to costs for undergrounding, lack of funding for a capital project and difficulties in coordinating with development.

The alternative to undergrounding would be to continue with overhead power located within the amenity and/or flex zone of the Recommended Option. Staff seek input from Council on proceeding with the assumption to underground power and communication facilities in developing the final report including developing cost estimates and incorporating into the project delivery approach and funding strategy.

The City is working in collaboration with SCL on the following action items:

- Identify impacts to development and the City ROW
- Identify possible short-term and long-term solutions
- Assess possible solutions effect on the Recommended Option
- Assess associated costs and benefits of possible solutions

SEPA Checklist

High-level environmental analysis document (assume SEPA non-project checklist) will outline the evaluation of the Preferred Option.

Conceptual Design Guidelines

Conceptual design guidelines for the corridor that will describe streetscape elements such as street furniture and landscaping for each street segment of the Preferred Option. A brief description of streetscape elements will accompany example images.

Cost Estimate

Planning-level cost estimates and high-level risk assessment for the Preferred Option by segment will include design, environmental review, right-of-way acquisition, and construction costs.

Project Delivery Approach

A project delivery approach will look at implementing the corridor vision in logical and strategic project phases to identify potential low hanging fruit or pilot projects and to leverage other City capital projects and potential agency partnership projects.

Funding Strategy

A funding strategy will identify potential local, state, and federal funding opportunities for implementing the Preferred Option.

RESOURCE/FINANCIAL IMPACT

This study has a total budget of \$533,275 from the City of Shoreline (City) Roads Capital Fund. There is no additional financial impact associated with continued work to complete this study.

There is no immediate financial impact associated with Council's selection of the Preferred Option.

COUNCIL GOAL(S) ADDRESSED

The 185th MCS directly supports two of the 2018-2020 City Council Goals:

- *Goal 2: Improve Shoreline's infrastructure to continue the delivery of highly-valued public service.*
 - Currently, the 185th Street Corridor inadequately supports non-motorized travel and requires improvements to effectively serve all travel modes in the future.
- *Goal 3: Continue preparation for regional mass transit in Shoreline.*
 - The 185th MCS will identify multimodal transportation improvements necessary to support growth associated with the 185th Street Station Subarea Plan and the Shoreline North/185th Station.

POLICY ISSUES

In considering guidance to the staff on moving into next steps on the 185th MCS, staff are interested in feedback on the following policy issues:

- Modifications to the Recommended Option to be explored in further work.
- Selection of the Recommended Option as the Preferred Option for the 185th MCS.
- Input on setting a specific LOS for N/NE 185th Street and 10th Ave NE in the City's Comprehensive Plan Amendment Docket process for the Preferred Option.
- Input on proceeding with the assumption to include underground power and communication facilities in the development of the Preferred Option.

RECOMMENDATION

Staff recommends that Council select the Recommended Option as the Preferred Option for the 185th MCS in order for the study team to refine the corridor concept, develop a project delivery approach and funding strategy; and return to Council in fall 2019 with the 185th MCS Report for Council discussion and adoption.

ATTACHMENTS

Attachment A: Draft Roadway Options and Evaluation Analysis

Attachment B: Outreach Series 2 Summary

Attachment C: Recommended Option's Cross Sections

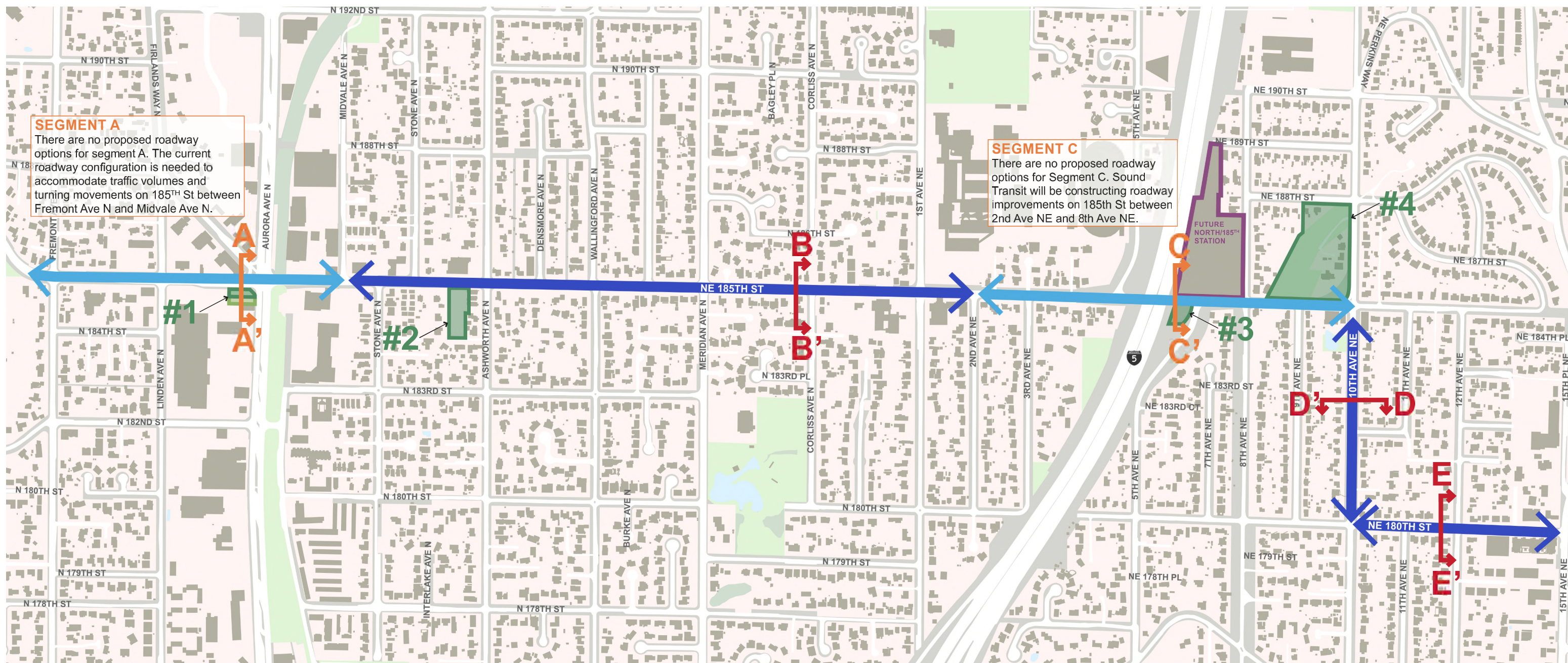
Attachment D: Draft Evaluation Criteria

Attachment E: Comparative Analysis of Options

Attachment F: Example Footprint Comparison of Standard Intersection vs. Roundabout

STREET SECTIONS AND COMMUNITY GATHERING PLACES LOCATOR KEY PLAN

Draft Roadway Options and Evaluation Analysis



**WE'RE LOOKING FOR YOUR FEEDBACK!
SEE WORKSHEET TO GIVE YOUR INPUT ON:**

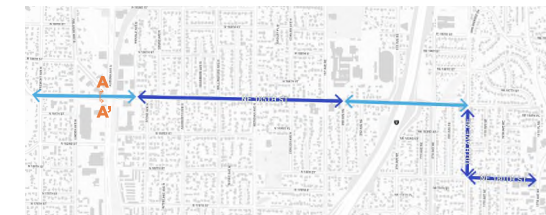
 STREET SEGMENTS B, D, AND E - DRAFT ROADWAY OPTIONS

 POTENTIAL COMMUNITY GATHERING PLACES #1, 2, 3, AND 4

INFORMATION ONLY:

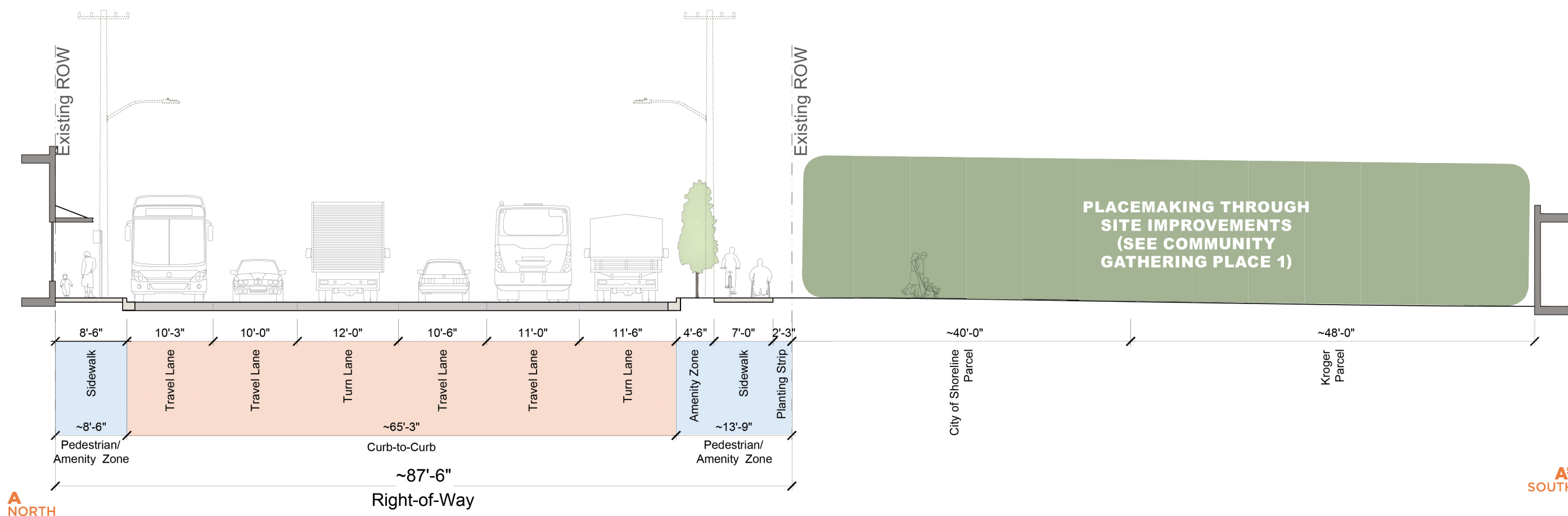
 STREET SEGMENTS A AND C - NO PROPOSED OPTIONS

TERMS:
ROW - RIGHT-OF-WAY
BAT LANE - BUSINESS ACCESS AND TRANSIT LANES
BIOSWALE - LANDSCAPE ELEMENT THAT REMOVES DEBRIS AND POLLUTION FROM STORMWATER RUNOFF



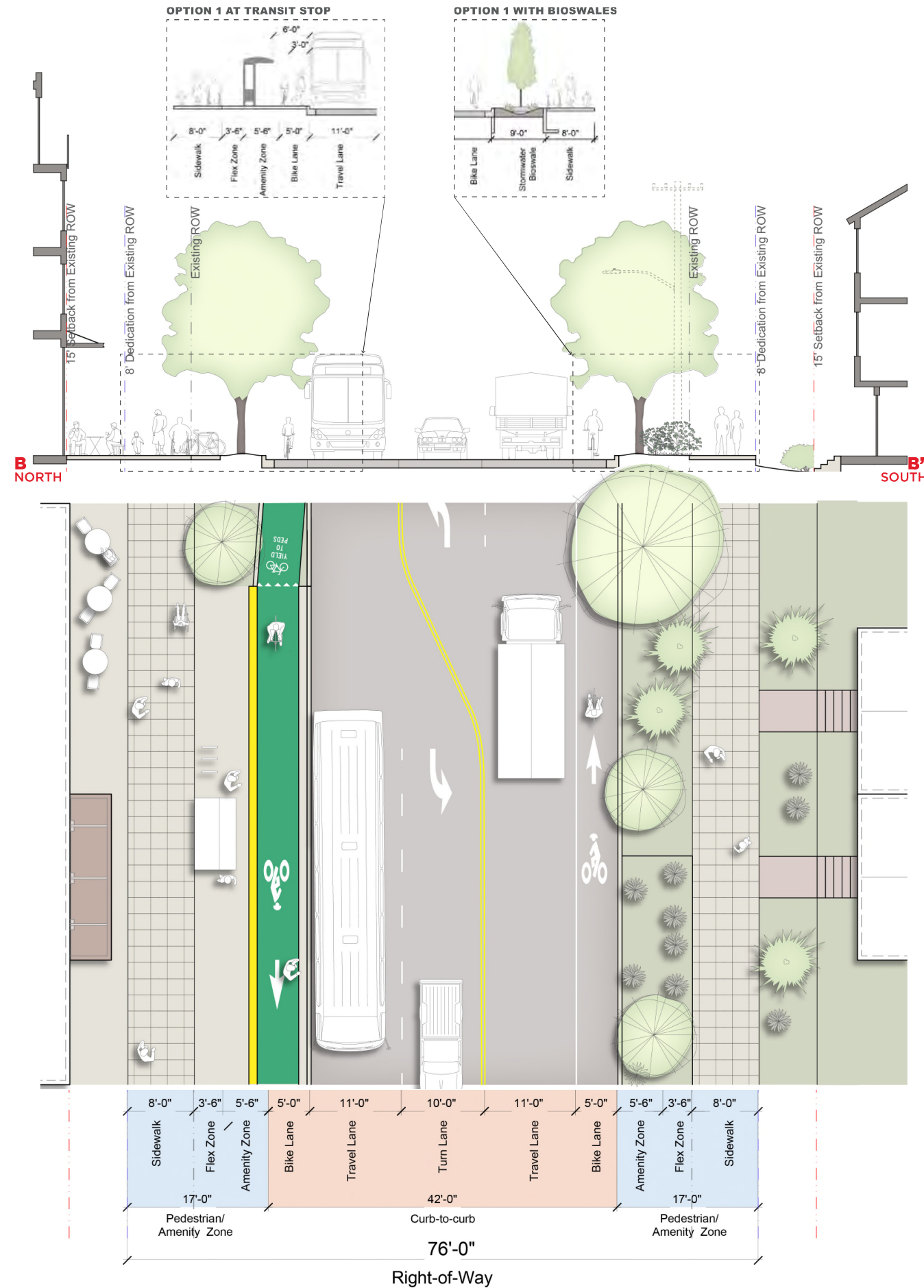
185TH STREET - A-A'

INFORMATION ONLY, NO PROPOSED OPTIONS FOR THIS SEGMENT



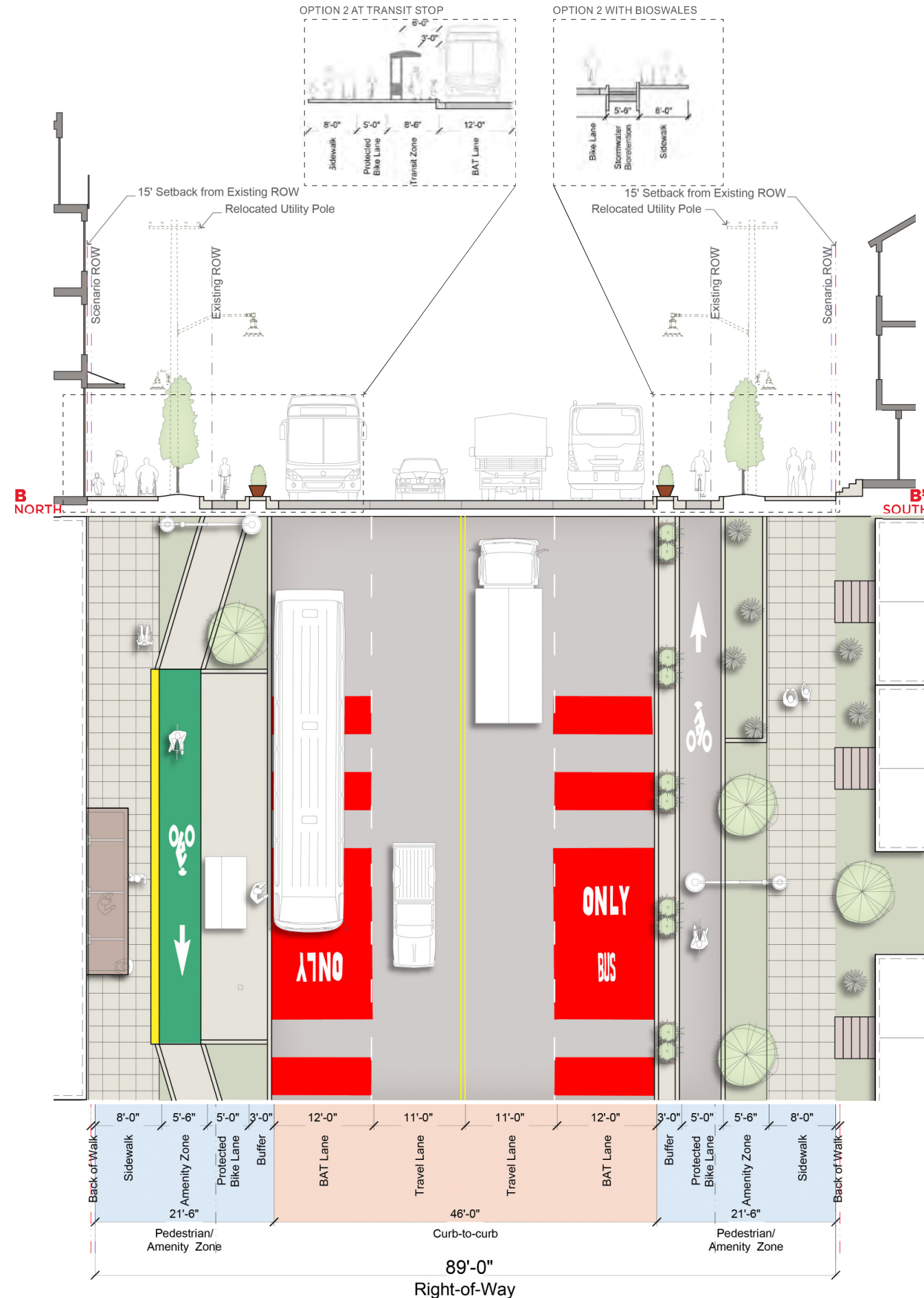
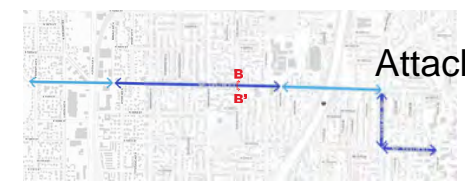
There are no proposed roadway options for segment A. The current roadway configuration is needed to accommodate traffic volumes and turning movements on 185TH St between Fremont Ave N and Midvale Ave N.

185TH STREET - B-B' OPTION 1 - THREE VEHICULAR LANES INCLUDING TURN LANE, AND BIKE LANES



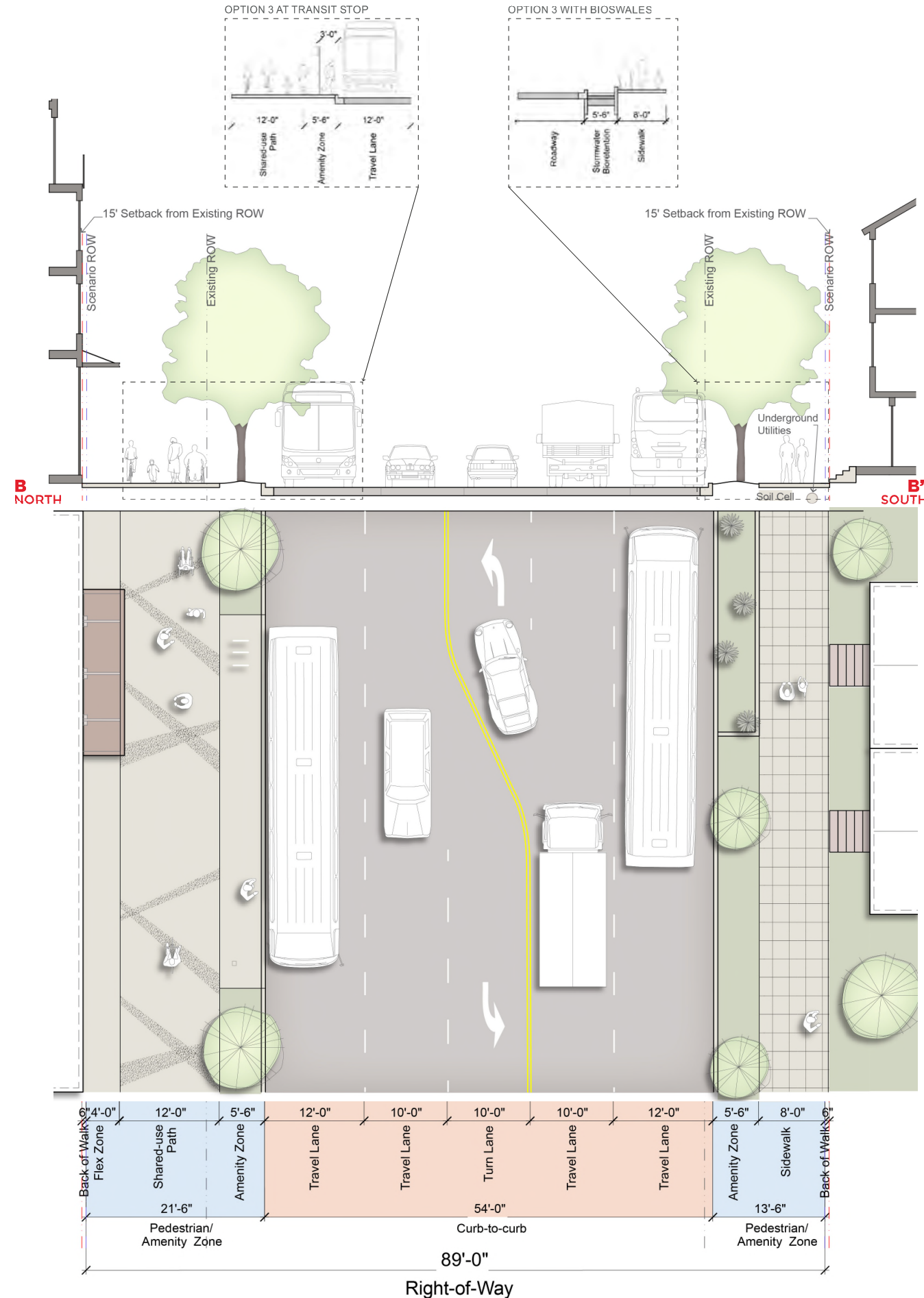
	BENEFIT MEASURE	BENEFIT MEASURE					DESCRIPTION	DISTINCTION
		LOW	MED-LOW	MED	MED-HIGH	HIGH		
PEDESTRIAN	PEDESTRIAN SAFETY	[Green]					<ul style="list-style-type: none"> 42' street crossing 3.5' flex zone + 5.5' amenity zones 	<ul style="list-style-type: none"> Existing & Option 1 have narrow street crossing Flex zone + amenity zone provides best separation from vehicles
	PEDESTRIAN MOBILITY	[Green]					<ul style="list-style-type: none"> 8' sidewalks 	<ul style="list-style-type: none"> 8' sidewalk meets City's standard
BICYCLE	BICYCLIST SAFETY	[Yellow]					<ul style="list-style-type: none"> 5' bike lanes 	<ul style="list-style-type: none"> Minimal separation from vehicles Intersection improvements would enhance safety
	BICYCLIST MOBILITY	[Yellow]					<ul style="list-style-type: none"> Pair of bike lanes for east/west travel 	<ul style="list-style-type: none"> Potential to enhance connections to Interurban Trail and surrounding streets
TRAFFIC	DRIVER SAFETY	[Green]					<ul style="list-style-type: none"> Narrow street slows down drivers Center turn lane provided 	<ul style="list-style-type: none"> Turn pockets keep left turning vehicles out of travel lanes
	TRAFFIC FLOW	[Orange]					<ul style="list-style-type: none"> One general purpose lane in each direction 	<ul style="list-style-type: none"> Traffic Level of Service will fall by 2035
TRANSIT	PARKING	[Red]					<ul style="list-style-type: none"> No parking in this segment 	<ul style="list-style-type: none"> No room for parking
	TRANSIT SPEED AND RELIABILITY	[Orange]					<ul style="list-style-type: none"> Buses and cars share the same 11' lane 	<ul style="list-style-type: none"> No dedicated bus lanes
LIVABILITY	ENVIRONMENT	[Green]					<ul style="list-style-type: none"> 3.5' flex zone provides room for more plantings 	<ul style="list-style-type: none"> Opportunity to assess preserving healthy existing trees
	PLACEMAKING OPPORTUNITY	[Green]					<ul style="list-style-type: none"> 3.5' flex zone provides room for placemaking 	<ul style="list-style-type: none"> Greatest room for placemaking
	MODE SHIFT	[Yellow]					<ul style="list-style-type: none"> Good spread of multimodal options, but doesn't support frequent transit service 	<ul style="list-style-type: none"> Encourages medium mode shift
COST	ROW IMPACT	[Green]					<ul style="list-style-type: none"> Minimal impacts 	<ul style="list-style-type: none"> Keeps existing curb lines
	EASE OF IMPLEMENTATION	[Green]					<ul style="list-style-type: none"> Easy to implement 	<ul style="list-style-type: none"> Roadway option dovetails with bridge's roadway configuration
	CAPITAL COST	[Green]					-	<ul style="list-style-type: none"> Least expensive

185TH STREET - B-B' OPTION 2 - FOUR VEHICULAR LANES INCLUDING BAT LANES, AND PROTECTED BIKE LANES



	BENEFIT MEASURE	BENEFIT MEASURE					DESCRIPTION	DISTINCTION
		LOW	MED-LOW	MED	MED-HIGH	HIGH		
PEDESTRIAN	PEDESTRIAN SAFETY	Med-Low	Med	Med-High	High	• 45' street crossing • 5.5' amenity zones	• Medium wide street crossing • Amenity zone provides good separation from vehicles	
	PEDESTRIAN MOBILITY	Med	Med-High	High		• 8' sidewalks	• 8' sidewalk meets City's standard	
BICYCLE	BICYCLIST SAFETY	High	High	High		• 5' protected bike lanes with 3' buffer	• Greatest separation from vehicles and pedestrians • Intersections improvements would enhance safety	
	BICYCLIST MOBILITY	High	High	High		• Pair of protected bike lanes	• Easy to connect to Interurban Trail and surrounding streets	
TRAFFIC	DRIVER SAFETY	Med-Low	Med	Med-High		• No turn lanes	• Good mode separation • Conflict between left turning vehicles and through vehicles	
	TRAFFIC FLOW	Low	Med-Low	Med		• One general purpose lane in each direction	• Traffic Level of Service will fall by 2035, but BAT lanes will provide additional capacity	
	PARKING	Med-Low	Med	Med-High		• Option for parking at non-peak times	• BAT lanes could support parking during non-peak times	
TRANSIT	TRANSIT SPEED AND RELIABILITY	High	High	High		• 12' Dedicated BAT lanes	• Supports frequent bus service	
LIVABILITY	ENVIRONMENT	Med-Low	Med	Med-High		• Amenity zones provide room for new trees and plantings	• New trees would need to be smaller in stature to avoid conflicts with above ground utility poles • Option 2 & 3 offer the potential to preserve existing trees on the north side	
	PLACEMAKING OPPORTUNITY	Med-Low	Med	Med-High		• Potential placemaking opportunities in planters, paving patterns, banners, and amenity zones	• Some room for placemaking	
	MODE SHIFT	High	High	High		• Best spread of multimodal options, including frequent transit service	• Encourages highest mode shift	
COST	ROW IMPACT	Low	Med-Low	Med		• High impacts	• Option 2 or 3 have similar right-of-way impacts	
	EASE OF IMPLEMENTATION	Med-Low	Med	Med-High		• Moderately easy to implement	• Can be transitioned to bridge's roadway configuration	
	CAPITAL COST	Low	Med-Low	Med		-	• Most expensive	

185TH STREET - B-B' OPTION 3 - FIVE VEHICULAR LANES INCLUDING TURN LANE, AND SHARED USE PATH



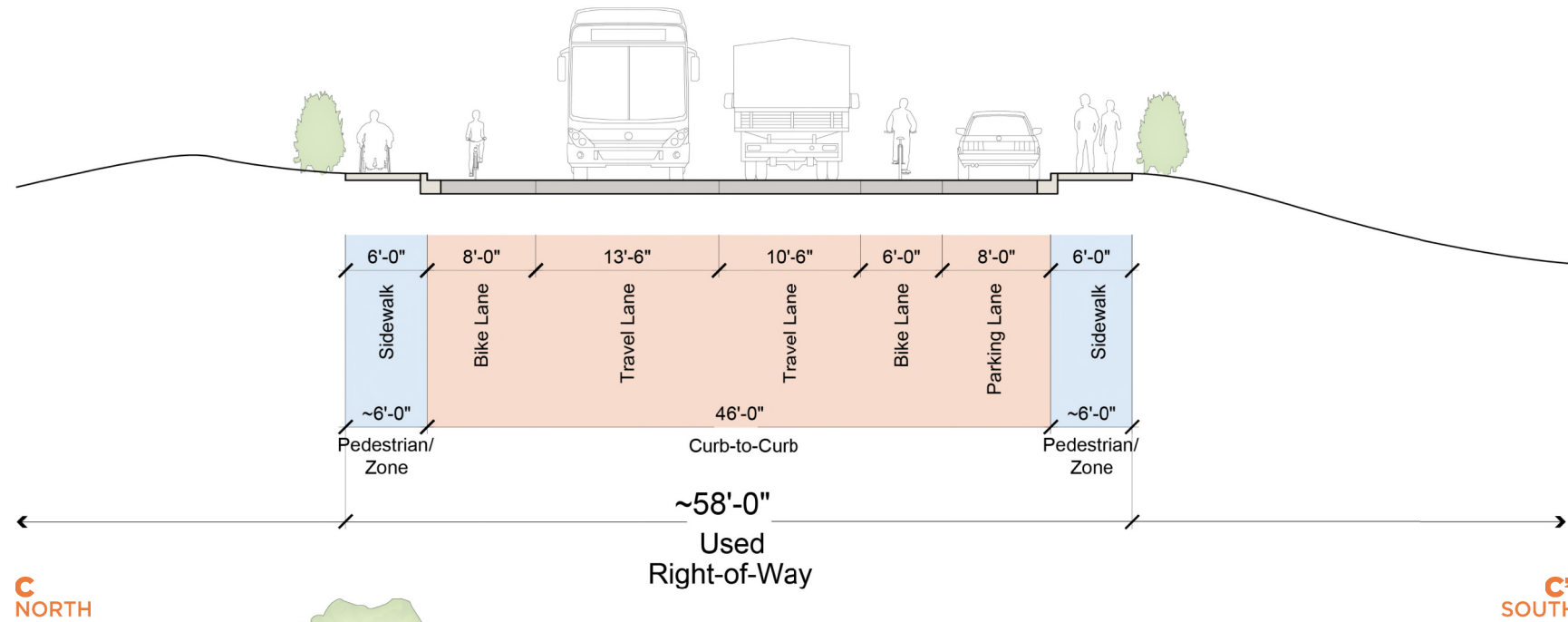
		BENEFIT MEASURE					DESCRIPTION	DISTINCTION
		LOW	MED-LOW	MED	MED-HIGH	HIGH		
PEDESTRIAN	PEDESTRIAN SAFETY	MED			HIGH		<ul style="list-style-type: none"> 54' street crossing 5.5' amenity zones 	<ul style="list-style-type: none"> Widest street crossing High separation from vehicles, but must share path with bicyclists
	PEDESTRIAN MOBILITY	MED			HIGH		<ul style="list-style-type: none"> 12' shared-use path on north side 8' sidewalk on south side 	<ul style="list-style-type: none"> 12' shared use path meets AASHTO standards 8' sidewalk meets City's standard
BICYCLE	BICYCLIST SAFETY	MED			HIGH		<ul style="list-style-type: none"> 12' shared-use path on north side 	<ul style="list-style-type: none"> High separation from vehicles, but must share path with pedestrians Intersections improvements would enhance safety
	BICYCLIST MOBILITY	MED			HIGH		<ul style="list-style-type: none"> East/west bike trips are both accommodated on shared-use path on north side 	<ul style="list-style-type: none"> Harder to transition from shared-use path to surrounding street network
TRAFFIC	DRIVER SAFETY	HIGH					<ul style="list-style-type: none"> Center turn lane provided 	<ul style="list-style-type: none"> Autos and buses share the same lane Turn pockets keep left turning vehicles out of travel lanes
	TRAFFIC FLOW	HIGH					<ul style="list-style-type: none"> Two general purpose lanes in each direction Center turn lane reduces traffic back-ups 	<ul style="list-style-type: none"> Traffic Level of Service will borderline fail by 2035 Provides greatest capacity and lowest delay
	PARKING	MED			HIGH		<ul style="list-style-type: none"> Option for parking during non-peak times 	<ul style="list-style-type: none"> Curb lanes could support parking during non-peak times
TRANSIT	TRANSIT SPEED AND RELIABILITY	MED			HIGH		<ul style="list-style-type: none"> Buses and cars share the 12' curb lanes 	<ul style="list-style-type: none"> No dedicated bus lane
LIVABILITY	ENVIRONMENT	MED			HIGH		<ul style="list-style-type: none"> Amenity zone provides room for new trees and plantings 	<ul style="list-style-type: none"> Potential new larger canopy trees, if utilities are underground Option 2 & 3 offer the potential to preserve existing trees on the north side
	PLACEMAKING OPPORTUNITY	LOW	MED				<ul style="list-style-type: none"> Potential placemaking opportunities in paving patterns, banners, and amenity zones 	<ul style="list-style-type: none"> Least room for placemaking
	MODE SHIFT	LOW	MED				<ul style="list-style-type: none"> Encourages some mode shift 	<ul style="list-style-type: none"> Accommodates motor vehicle trips
COST	ROW IMPACT	LOW	MED				<ul style="list-style-type: none"> High impacts 	<ul style="list-style-type: none"> Option 2 or 3 have similar right-of-way impacts
	EASE OF IMPLEMENTATION	LOW	MED				<ul style="list-style-type: none"> Difficult to transition 	<ul style="list-style-type: none"> Hardest to transition to bridge's roadway configuration
	CAPITAL COST	LOW	MED				<ul style="list-style-type: none"> If undergrounding utilities were selected, this would be the most expensive option 	<ul style="list-style-type: none"> Moderately expensive



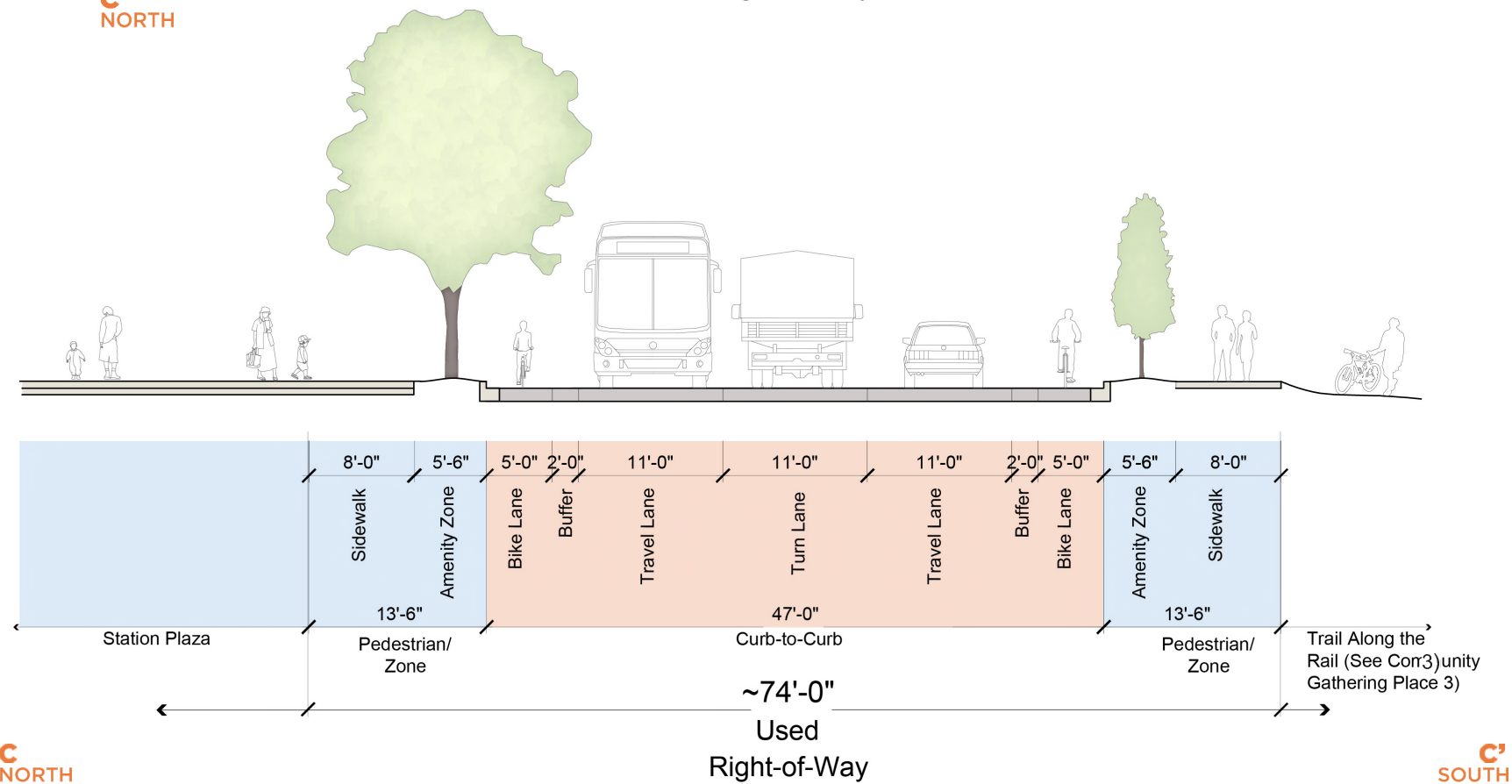
185TH STREET - C-C'

INFORMATION ONLY, NO PROPOSED OPTIONS FOR THIS SEGMENT

EXISTING



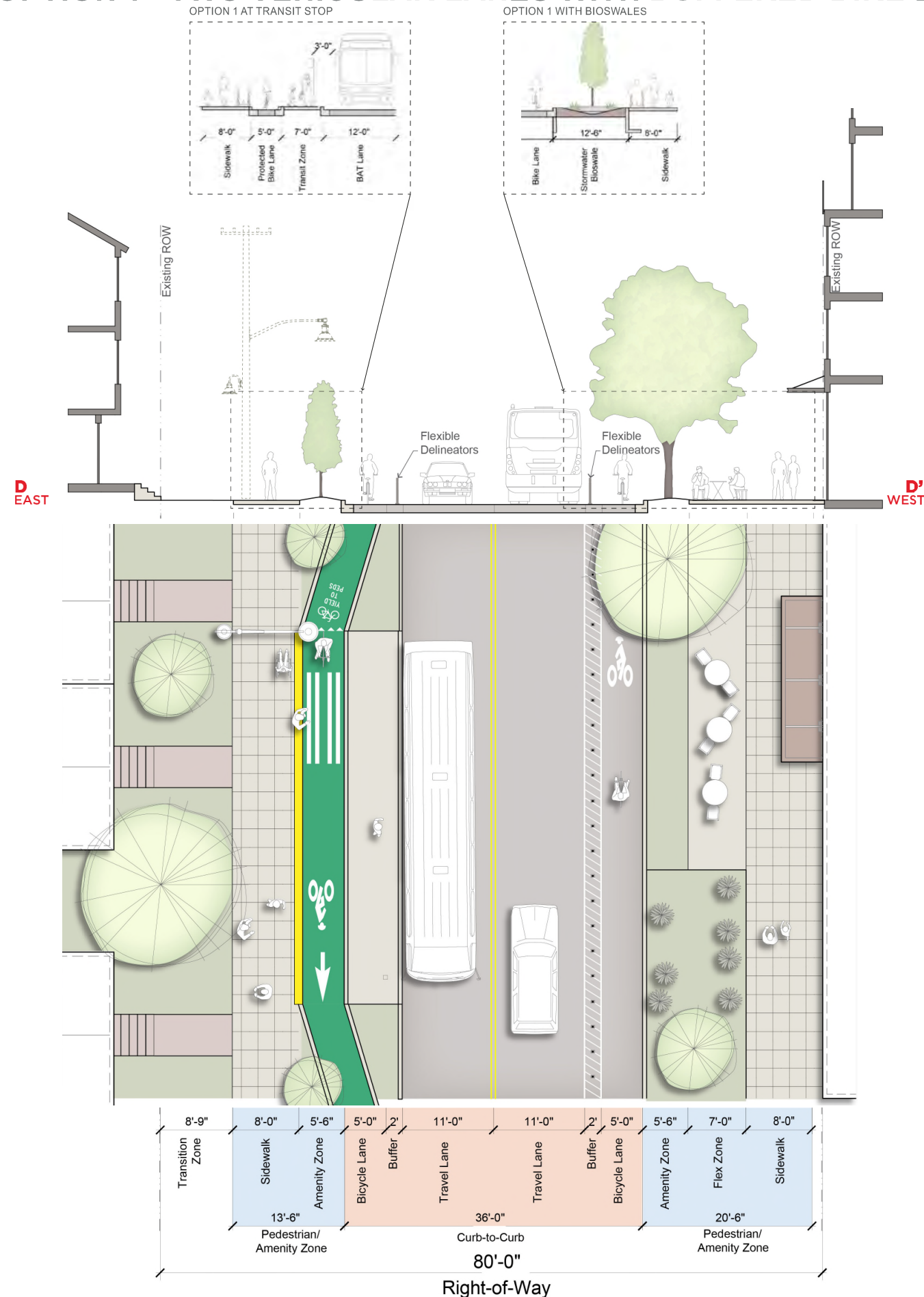
FUTURE CONDITIONS



There are no proposed roadway options for Segment C. Sound Transit will be constructing roadway improvements on 185th St between 2ND Ave NE and 8TH Ave NE.

10TH AVENUE - D-D'

OPTION 1 - TWO VEHICULAR LANES WITH BUFFERED BIKE LANES

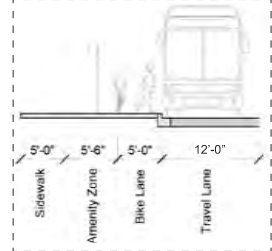


		BENEFIT MEASURE					DESCRIPTION	DISTINCTION
		LOW	MED-LOW	MED	MED-HIGH	HIGH		
PEDESTRIAN	PEDESTRIAN SAFETY	[Green]					<ul style="list-style-type: none"> 36' street crossing 5.5' amenity zone on both sides plus 7' flex zone on west side 	<ul style="list-style-type: none"> Medium wide street crossing Amenity zone provides good separation from vehicles
	PEDESTRIAN MOBILITY	[Green]					<ul style="list-style-type: none"> 8' sidewalks 	<ul style="list-style-type: none"> 8' sidewalk meets City's standard
BICYCLE	BICYCLIST SAFETY	[Green]					<ul style="list-style-type: none"> 5' bike lanes with 2' buffer 	<ul style="list-style-type: none"> Greatest separation from vehicles and pedestrians
	BICYCLIST MOBILITY	[Green]					<ul style="list-style-type: none"> Pair of buffered bike lanes 	<ul style="list-style-type: none"> Easy to connect to surrounding streets
TRAFFIC	DRIVER SAFETY	[Yellow]					<ul style="list-style-type: none"> No turn lanes 	<ul style="list-style-type: none"> Autos and buses share the same lane
	TRAFFIC FLOW	[Green]					<ul style="list-style-type: none"> One general purpose lane in each direction 	<ul style="list-style-type: none"> Traffic Level of Service will fall by 2035
	PARKING	[Red]	[Green]				<ul style="list-style-type: none"> No parking 	-
TRANSIT	TRANSIT SPEED AND RELIABILITY	[Green]					<ul style="list-style-type: none"> 11 lanes shared by transit and autos 	<ul style="list-style-type: none"> No dedicated bus lanes
LIVABILITY	ENVIRONMENT	[Green]					<ul style="list-style-type: none"> Amenity zones provide room for new trees and plantings 	<ul style="list-style-type: none"> Least amount of new paving
	PLACEMAKING OPPORTUNITY	[Green]					<ul style="list-style-type: none"> 7' flex zone and ~8' transition zone provides room for placemaking 	<ul style="list-style-type: none"> Option 1 and 2 provide generous room for placemaking
	MODE SHIFT	[Green]					<ul style="list-style-type: none"> Good spread of multimodal options, including frequent transit service 	<ul style="list-style-type: none"> Encourages moderate mode shift
COST	ROW IMPACT	[Green]					<ul style="list-style-type: none"> Low impacts 	<ul style="list-style-type: none"> All options have similar right-of-way impacts
	EASE OF IMPLEMENTATION	[Green]					<ul style="list-style-type: none"> Easy to transition 	-
	CAPITAL COST	[Green]					-	<ul style="list-style-type: none"> Least expensive

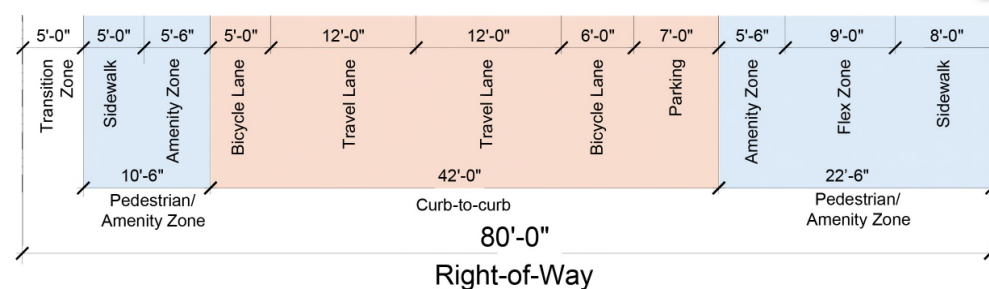
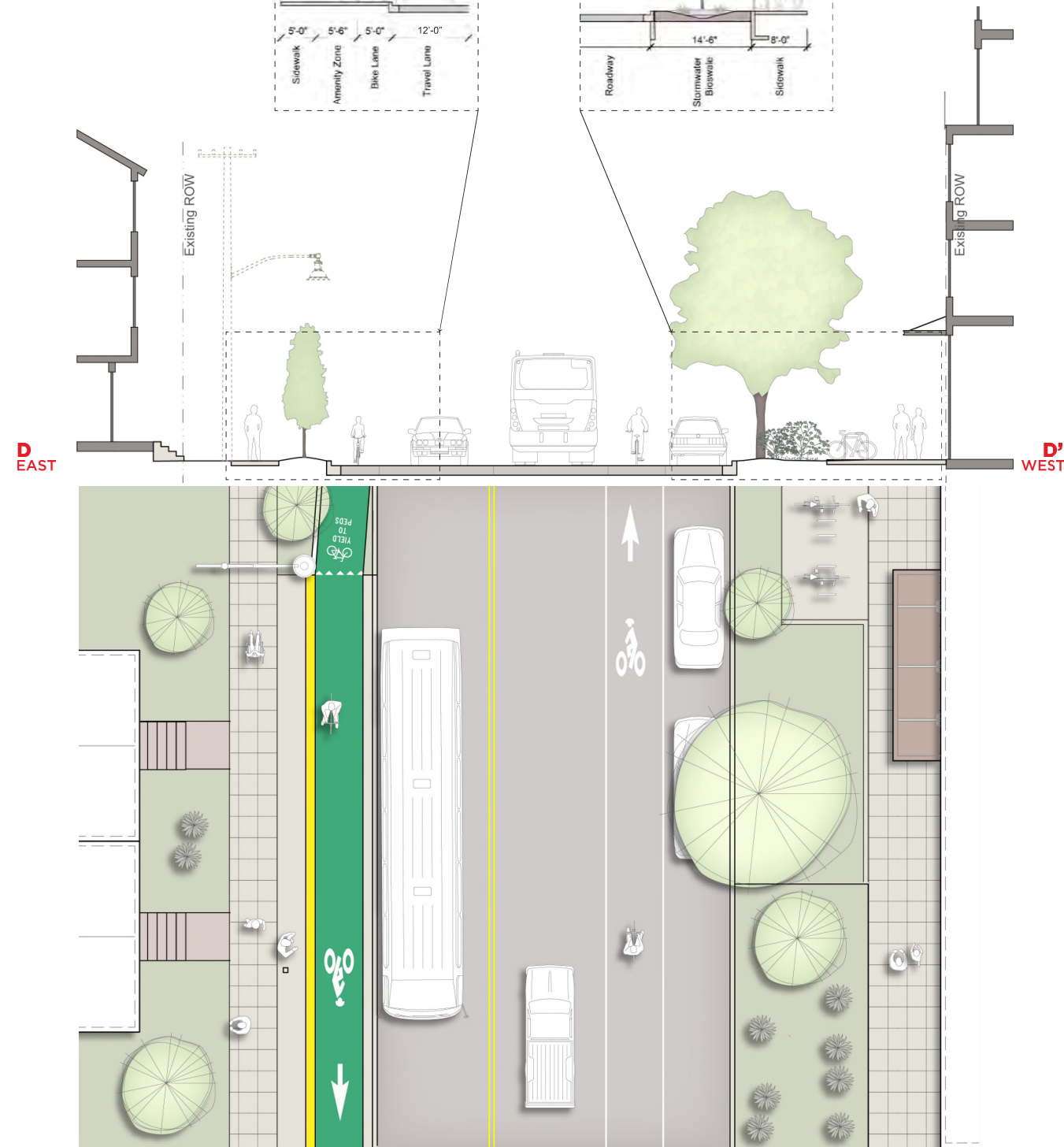
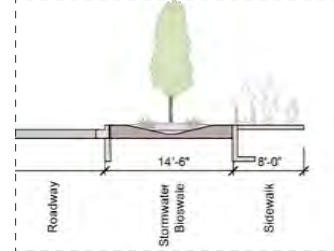
10TH AVENUE - D-D' OPTION 2 - TWO VEHICULAR LANES WITH BIKE LANES, AND PARKING



OPTION 2 AT TRANSIT STOP



OPTION 2 WITH BIOSWALES

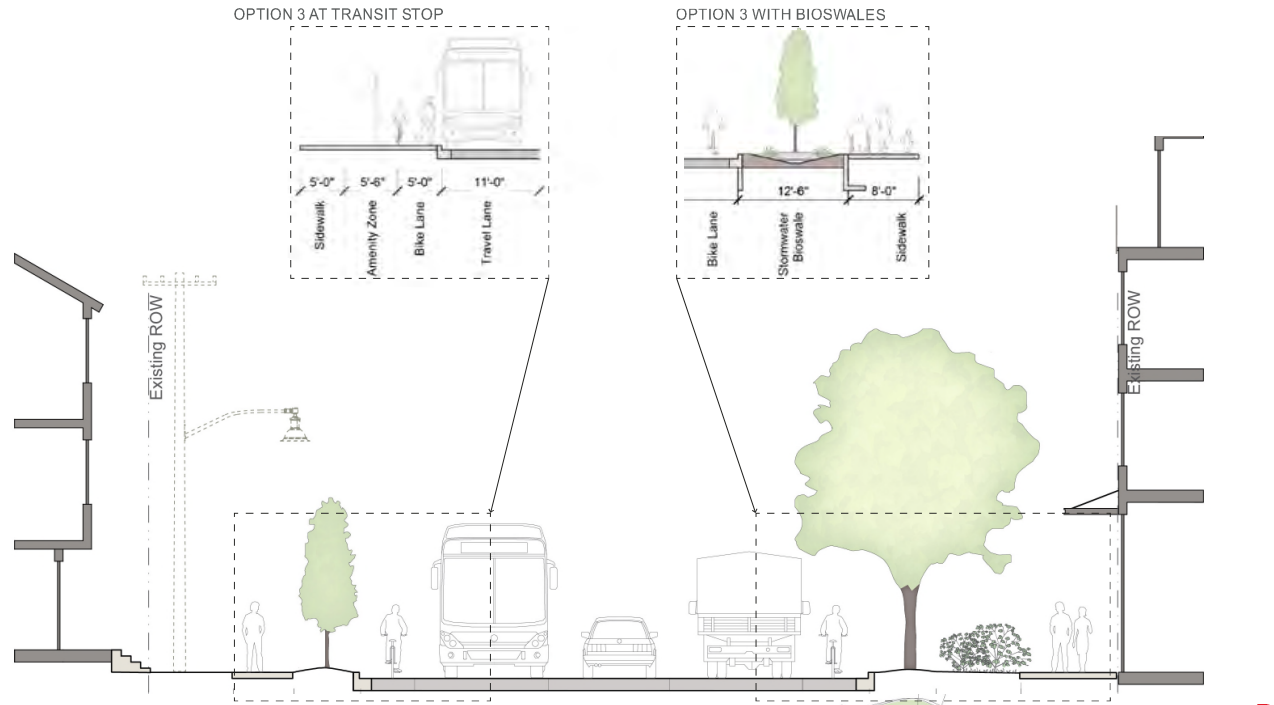


	BENEFIT MEASURE	BENEFIT MEASURE					DESCRIPTION	DISTINCTION
		LOW	MED-LOW	MED	MED-HIGH	HIGH		
PEDESTRIAN	PEDESTRIAN SAFETY	[High Benefit]					<ul style="list-style-type: none"> 35' street crossing at curb bulbs Curb bulbs at crossing make it the narrowest crossing 	<ul style="list-style-type: none"> Narrowest crossing Amenity zones and flex zone on west side provides best separation from vehicles
	PEDESTRIAN MOBILITY	[High Benefit]					<ul style="list-style-type: none"> 5' sidewalk on east side 8' sidewalk on west side 	<ul style="list-style-type: none"> Sidewalk width meet City's standard for zoning
BICYCLE	BICYCLIST SAFETY	[High Benefit]					<ul style="list-style-type: none"> 5' bike lane on east side 6' bike lane on west side adjacent to parking 	<ul style="list-style-type: none"> Moderate separation from vehicles and pedestrians Parking next to bike lane creates potential conflicts
	BICYCLIST MOBILITY	[High Benefit]					<ul style="list-style-type: none"> Pair of bike lanes for north/south travel 	<ul style="list-style-type: none"> Potential to enhance connections to surrounding streets
TRAFFIC	DRIVER SAFETY	[High Benefit]					<ul style="list-style-type: none"> No turn lanes 	<ul style="list-style-type: none"> Parking creates conflicts with through traffic
	TRAFFIC FLOW	[High Benefit]					<ul style="list-style-type: none"> One general purpose lane in each direction 	<ul style="list-style-type: none"> Traffic Level of Service will fall by 2035 Parking slows down traffic
	PARKING	[High Benefit]					<ul style="list-style-type: none"> Provides parking 	<ul style="list-style-type: none"> Only option that provides parking
TRANSIT	TRANSIT SPEED AND RELIABILITY	[High Benefit]					<ul style="list-style-type: none"> 12' lanes shared by transit and autos 	<ul style="list-style-type: none"> Parking creates conflicts for buses
LIVABILITY	ENVIRONMENT	[High Benefit]					<ul style="list-style-type: none"> Amenity zones, flex zone, and curb bulbs provide room for new trees and plantings 	<ul style="list-style-type: none"> Moderate amount of new paving
	PLACEMAKING OPPORTUNITY	[High Benefit]					<ul style="list-style-type: none"> 9' flex zone and parking built-outs provide room for placemaking 	<ul style="list-style-type: none"> Option 1 and 2 provide generous room for placemaking
	MODE SHIFT	[High Benefit]					<ul style="list-style-type: none"> Good spread of multimodal options, including frequent transit service 	<ul style="list-style-type: none"> Encourages mode shift
COST	ROW IMPACT	[High Benefit]					<ul style="list-style-type: none"> Low impacts 	<ul style="list-style-type: none"> All options have similar right-of-way impacts
	EASE OF IMPLEMENTATION	[High Benefit]					<ul style="list-style-type: none"> Moderate ease of transition 	<ul style="list-style-type: none"> -
	CAPITAL COST	[High Benefit]					<ul style="list-style-type: none"> - 	<ul style="list-style-type: none"> Most expensive

10TH AVENUE - D-D' OPTION 3 - THREE VEHICULAR LANES INCLUDING CENTER TURN LANE, AND BIKE LANES

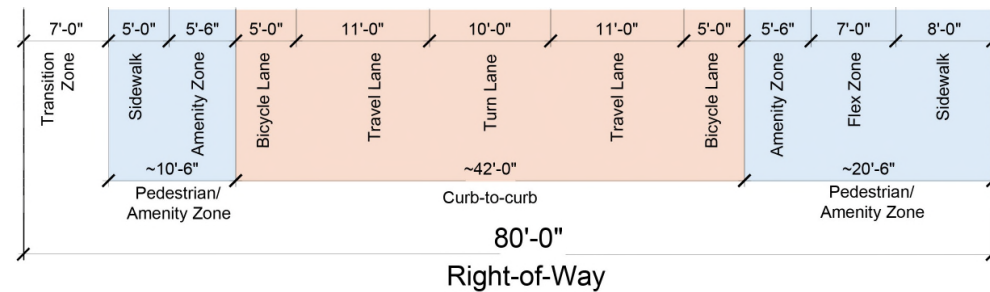
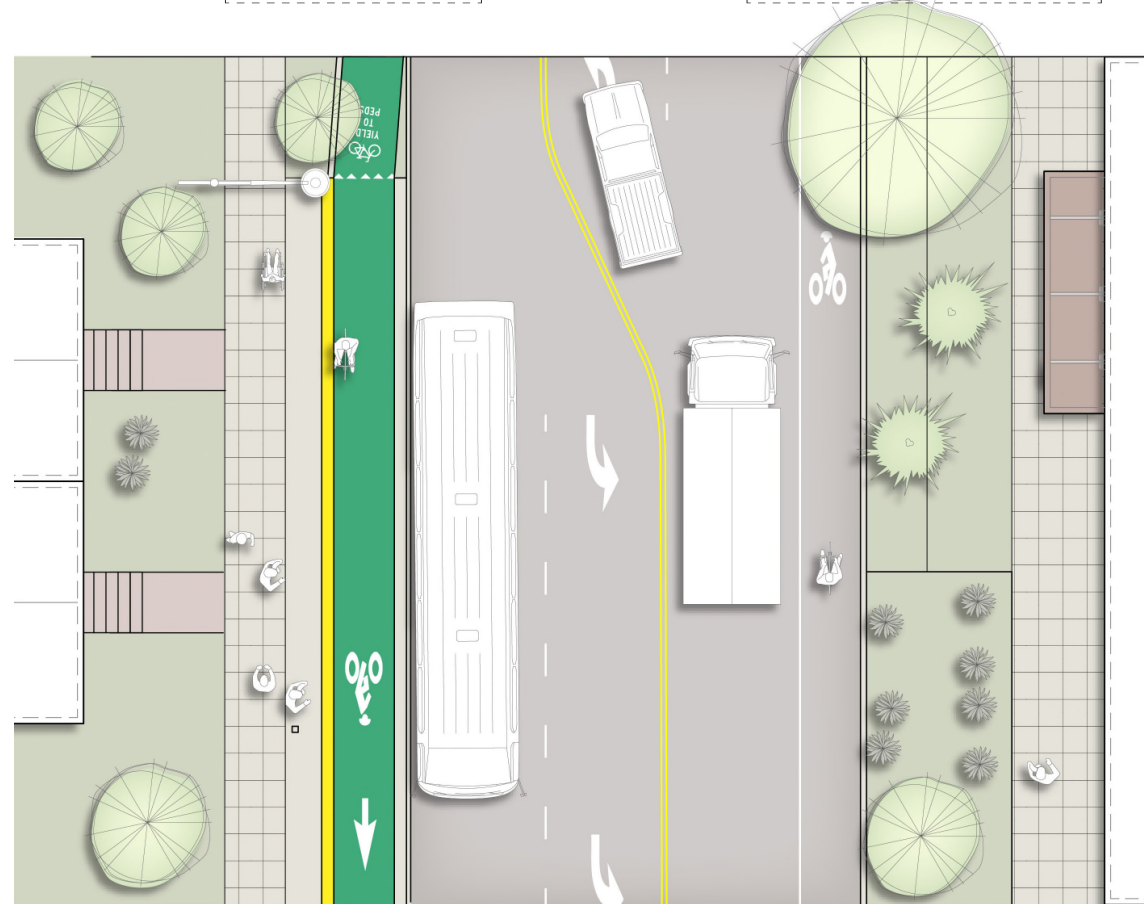


Attachment A



D
EAST

D
WEST

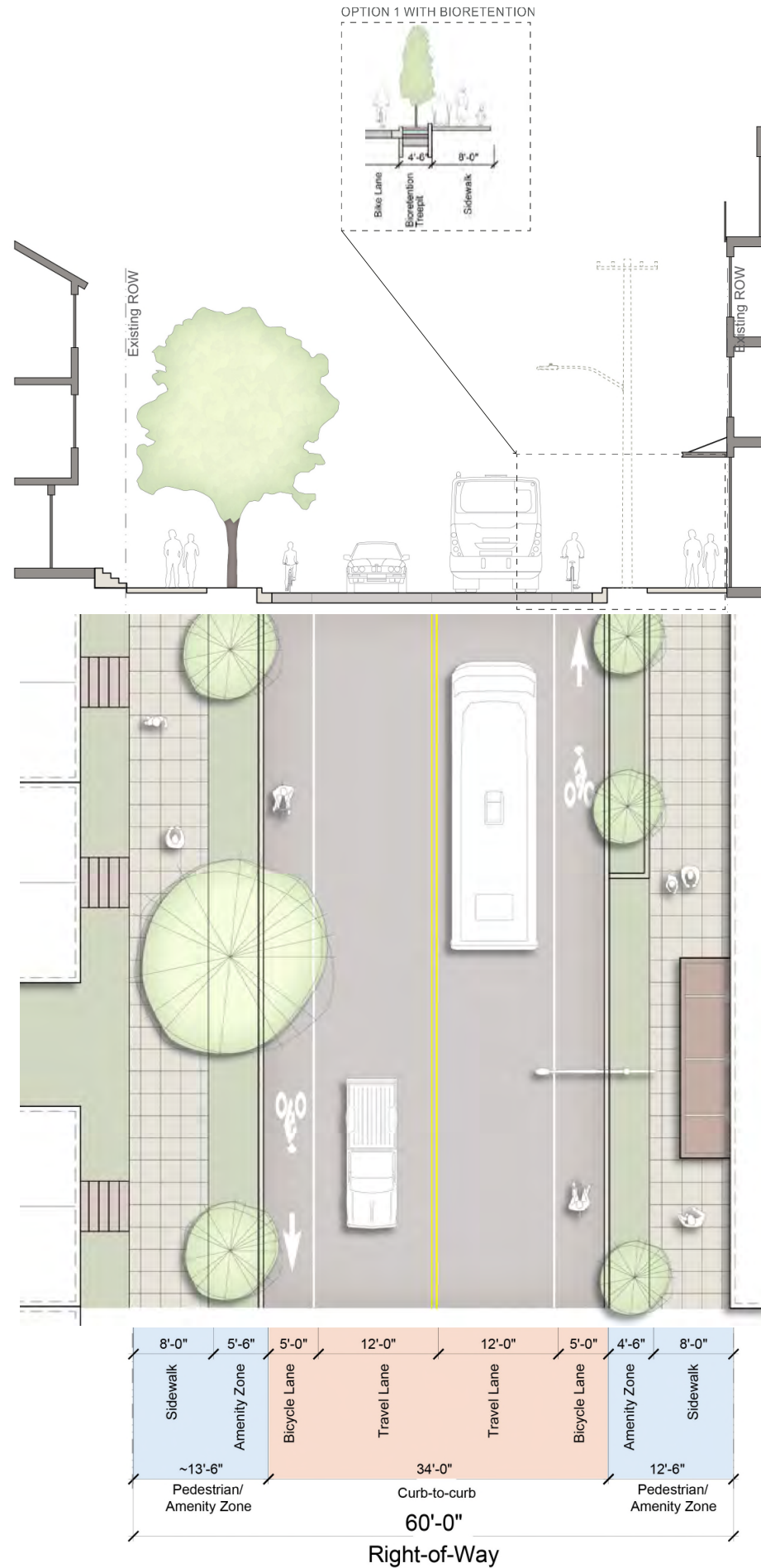


	BENEFIT MEASURE	BENEFIT MEASURE					DESCRIPTION	DISTINCTION
		LOW	MED-LOW	MED	MED-HIGH	HIGH		
PEDESTRIAN	PEDESTRIAN SAFETY	[Yellow]			[Green]		• 42' street crossing at curb bulbs	• Widest crossing • Amenity zones and flex zone on west side provides best separation from vehicles
	PEDESTRIAN MOBILITY	[Yellow]			[Green]		• 5' sidewalk on east side • 8' sidewalk on west side	• Sidewalk width meet City's standard for zoning
BICYCLE	BICYCLIST SAFETY	[Green]			[Light Green]		• 5' bike lanes	• Moderate separation from vehicles and pedestrians
	BICYCLIST MOBILITY	[Yellow]			[Green]		• Pair of bike lanes for north/south travel	• Potential to enhance connections to surrounding streets
TRAFFIC	DRIVER SAFETY	[Green]			[Light Green]		• Provides turn lanes	• Only option that provides center turn lane
	TRAFFIC FLOW	[Green]					• One general purpose lane in each direction • Center turn lane reduces traffic back-ups	• Acceptable Traffic Level of Service in 2035
	PARKING	[Red]	[Yellow]				• No parking	-
TRANSIT	TRANSIT SPEED AND RELIABILITY	[Green]					• 11' lanes shared by transit and autos	• Center turn lane supports frequent bus service
LIVABILITY	ENVIRONMENT	[Orange]		[Yellow]			• Amenity zones and flex zone provide room for new trees and plantings	• Most amount of new paving
	PLACEMAKING OPPORTUNITY	[Green]			[Light Green]		• 7' flex zone provides room for placemaking	• Moderate room for placemaking
	MODE SHIFT	[Green]			[Light Green]		• Best spread of multimodal options, including frequent transit service	• Encourages highest mode shift
COST	ROW IMPACT	[Green]			[Light Green]		• Low impacts	• All options have similar right-of-way impacts
	EASE OF IMPLEMENTATION	[Green]			[Light Green]		• Easy to transition	-
	CAPITAL COST	[Yellow]			[Green]		-	• Moderately expensive

180TH STREET - E-E' OPTION 1 - TWO VEHICULAR LANES WITH BIKE LANES



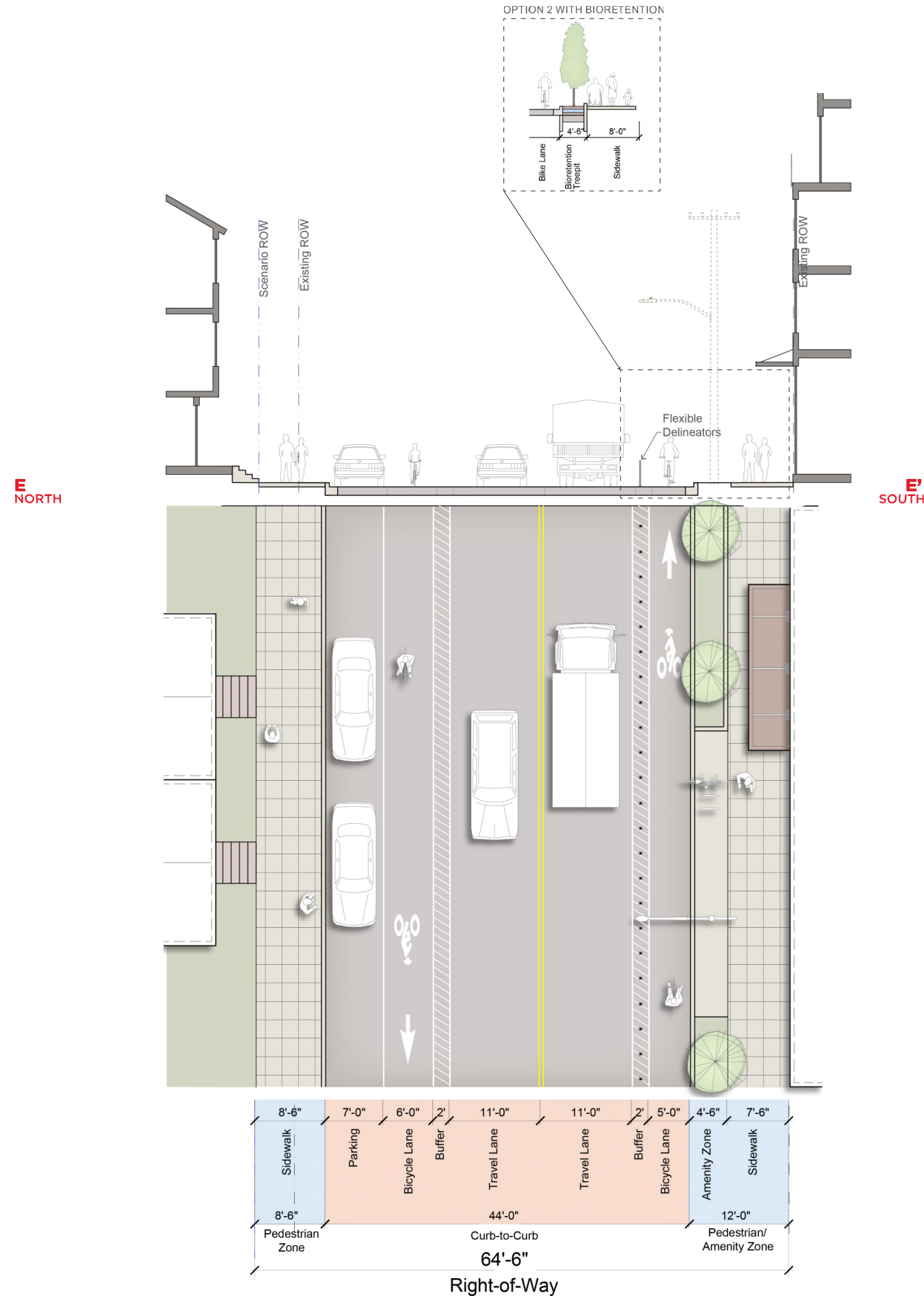
E
NORTH



E
SOUTH

		BENEFIT MEASURE					DESCRIPTION	DISTINCTION
		LOW	MED-LOW	MED	MED-HIGH	HIGH		
PEDESTRIAN	PEDESTRIAN SAFETY	[High Benefit]					• 34' street crossing at curb bulbs	• 2nd narrowest crossing
	PEDESTRIAN MOBILITY	[High Benefit]					• 8' sidewalks	• Sidewalk width meets City's standard
BICYCLE	BICYCLIST SAFETY	[High Benefit]					• 5' bike lanes	• Moderate separation from vehicles and pedestrians
	BICYCLIST MOBILITY	[High Benefit]					• Pair of bike lanes for east/west travel	• Potential to enhance connections to surrounding streets
TRAFFIC	DRIVER SAFETY	[High Benefit]					• No turn lanes	• Added curbs provide traffic calming
	TRAFFIC FLOW	[High Benefit]					• One general purpose lane in each direction	• Acceptable Traffic Level of Service in 2035
	PARKING	[Low Benefit]	[High Benefit]				• No new parking	-
TRANSIT	TRANSIT SPEED AND RELIABILITY	[High Benefit]					• 12' lanes shared by transit and autos	• Supports transit service
LIVABILITY	ENVIRONMENT	[High Benefit]					• Room for trees in amenity zone on north side	• Moderate amount of new paving
	PLACEMAKING OPPORTUNITY	[High Benefit]					• Potential placemaking opportunities in paving patterns, banners, and amenity zones	• Some room for placemaking
	MODE SHIFT	[High Benefit]					• Good spread of multimodal options, including transit service	• Encourages mode shift
COST	ROW IMPACT	[High Benefit]					• Minimal impacts	• Stays within the right-of-way
	EASE OF IMPLEMENTATION	[High Benefit]					• Easy to implement	• Some transition required to dovetail with existing
	CAPITAL COST	[High Benefit]					-	• Least expensive

180TH STREET - E-E' OPTION 2 - TWO VEHICULAR LANES WITH PROTECTED BIKE LANES, AND PARKING



	BENEFIT MEASURE	BENEFIT MEASURE					DESCRIPTION	DISTINCTION
		LOW	MED-LOW	MED	MED-HIGH	HIGH		
PEDESTRIAN	PEDESTRIAN SAFETY	MED			HIGH		• 37' street crossing at curb bulbs	• Widest crossing • No amenity zone on north side and substandard amenity zone on south side provides minimal separation from vehicles
	PEDESTRIAN MOBILITY	MED			HIGH		• -8.5' sidewalk on north side • -7.5' sidewalk on south side	• Sidewalk width is less than 8'
BICYCLE	BICYCLIST SAFETY	HIGH					• 5' bike lane with 2' buffer on east side • 6' bike lane with 2' buffer on west side adjacent to parking	• Moderate separation from vehicles and pedestrians • Parking next to bike lane creates potential conflicts
	BICYCLIST MOBILITY	HIGH					• Pair of bike lanes for north/south travel	• Potential to enhance connections to surrounding streets
TRAFFIC	DRIVER SAFETY	HIGH					• No turn lanes	• Parking creates conflicts with through traffic
	TRAFFIC FLOW	HIGH					• One general purpose lane in each direction	• Acceptable Traffic Level of Service in 2035
	PARKING	HIGH					• Provides parking	• Only option that provides parking
TRANSIT	TRANSIT SPEED AND RELIABILITY	MED			HIGH		• 11' lanes shared by transit and autos	• Parking creates conflicts for buses
LIVABILITY	ENVIRONMENT	LOW	MED-LOW		HIGH		• No room for trees in amenity zone	• Moderate amount of new paving
	PLACEMAKING OPPORTUNITY	LOW	MED-LOW		HIGH		• Potential placemaking opportunities in paving patterns, banners, and amenity zones	• Least amount of room for placemaking
	MODE SHIFT	LOW	MED-LOW		HIGH		• Good spread of multimodal options, including transit service	• Space for parking narrows travel lanes width of pedestrian zone
COST	ROW IMPACT	LOW	MED-LOW		HIGH		• Most impacts	• Exceeds the existing right-of-way
	EASE OF IMPLEMENTATION	LOW	MED-LOW		HIGH		• Moderate effort to implement	• Expansion of curb lines add complexity
	CAPITAL COST	LOW	MED-LOW		HIGH		-	• Most expensive

INTRODUCTION AND APPROACH

The City conducted a second series of events and activities (Outreach Series 2) during spring 2019 for the 185th Street Multimodal Corridor Strategy (185th MCS). The purpose of Outreach Series 2 was to share progress on several different options for each of the 185th Street Corridor segments.

Stakeholders were given the opportunity to share their feedback at all of the Outreach Series 2 events. The study team used a variety of methods to notify and gather input from a wide range of stakeholder groups, including those who live, work, or travel in the area, and representatives from key organizations and partner agencies.

OBJECTIVES

Outreach Series 2 objectives were to:

- Continue to provide community members and stakeholder agency partners with various opportunities to learn about the 185th MCS.
- Introduce how feedback from the community has been incorporated into the development of potential corridor design concepts.
- Invite the public and stakeholders to review and give input on preliminary roadway cross section options, comparative analysis of roadway options, and draft concepts of community gathering places.



IN PERSON & ONLINE ENGAGEMENT

Outreach Series 2 included a public open house, an online survey, stakeholder briefings, and other events. Outreach Series 2 events provided the community and stakeholders with an opportunity to share their feedback on draft materials and build a vision for the 185th Street Corridor, as well as speak directly with 185th MCS team members.

Overall, a total of 375 people participated in spring 2019 outreach meetings and the online survey. See the neighborhood map on the following page for a visual breakdown of where participants live in the community.

Outreach Series 2 events included:

SHORELINE CITY COUNCIL MEETING
Monday, March 25, 2019

PARKS, RECREATION, & COMMUNITY SERVICES BOARD
Thursday, March 28, 2019
• 11 attendees

OPEN HOUSE 2

Tuesday, April 2, 2019, 6 - 8 PM
Shoreline City Hall

- 80 attendees
- Included a City presentation and question and answer portion (shown in photo above)

COUNCIL OF NEIGHBORHOODS MEETING
Wednesday, April 3, 2019

- 15 attendees

TRANSIT PROVIDERS MEETING

Tuesday, April 9, 2019

- 10 attendees

CITY STAFF MEETING

Wednesday, April 10, 2019

- 20 attendees

DEVELOPERS MEETING

Thursday, April 11, 2019

- 17 attendees

IN PERSON & ONLINE ENGAGEMENT (CONTINUED)

UTILITY & PUBLIC SERVICES MEETING

Monday, April 15, 2019

- 15 attendees

LARGE PROPERTY OWNER MEETING

Monday, April 15, 2019

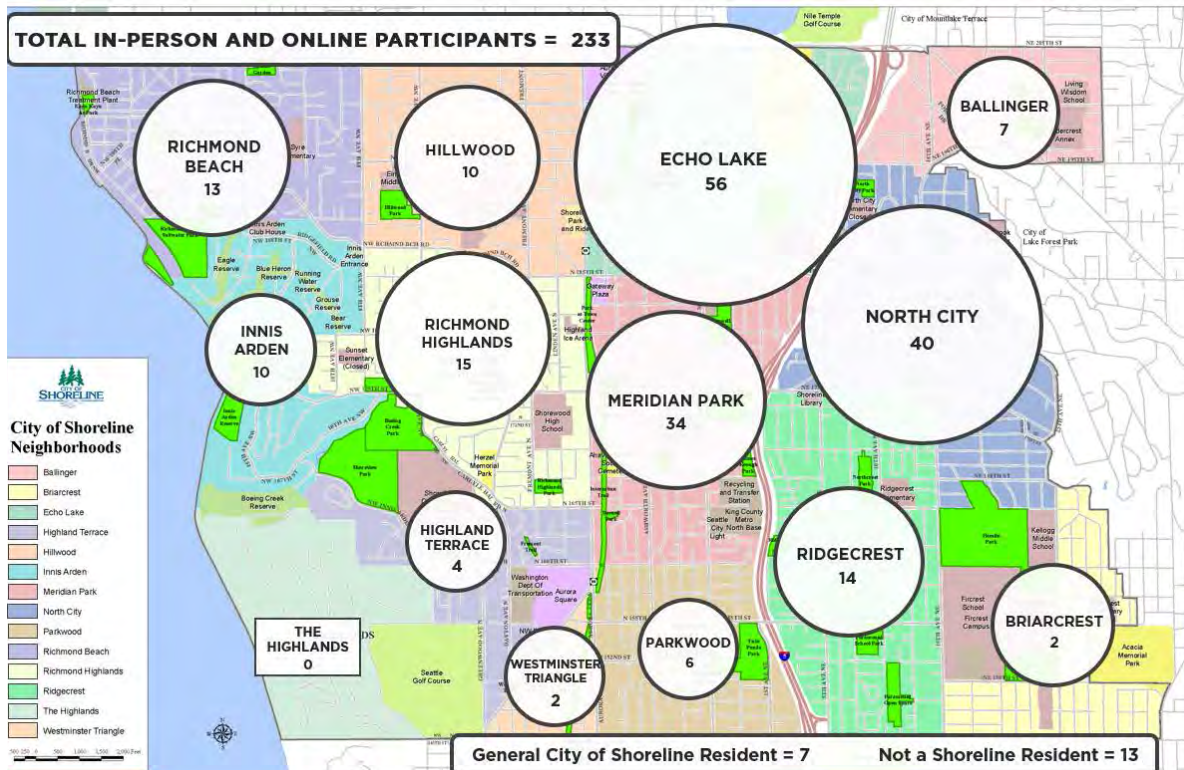
- 6 attendees

ECHO LAKE NEIGHBORHOOD ASSOCIATION, MERIDIAN PARK, AND NORTH CITY MEETING

Tuesday, April 16, 2019

- 42 attendees

ATTENDEES BY NEIGHBORHOOD*



* Not all people who participated in Outreach Series 2 identified where they live.

NOTIFICATION STRATEGIES

Attachment B

Notifications for Outreach Series 2 included:

Web page (ShorelineWA.gov/185corridor)

- Updated with materials from Outreach Series 1
- Announced upcoming Outreach Series 2 events and served as a repository for materials presented at Open House 2
- Provided link to online survey

Shoreline Currents

- Published March 1, 2019
- Distributed via mail to each household in Shoreline
- Advertised April 2 Open House at Shoreline City Hall

Flyer/Poster (in English and Spanish)

- Distributed to local businesses and public locations beginning on March 19
- Included translation in several languages for how to communicate with the City

Yard Signs for Open House 2

- Placed along the corridor on March 14 and removed on April 3

ALERT Shoreline email (all those who signed up)

- Emailed alert on March 26 for upcoming Open House 2
- Emailed alert on April 5 for virtual Open House 2 and online survey.

Social media posts

- Created and shared a Facebook event for Open House 2
- Shared link to online survey on social media accounts on April 4, 2019



SURVEY OVERVIEW

Outreach Series 2 participants reviewed street options for three distinct segments of the corridor (shown in the map above):

- **N/NE 185TH STREET**
- **10TH AVENUE NE**
- **NE 180TH STREET**

For each of the three corridor segments, community members were invited to review potential cross section options. These options served as bookend opportunities and demonstrated different ways that multimodal components could be incorporated into different parts of the corridor.

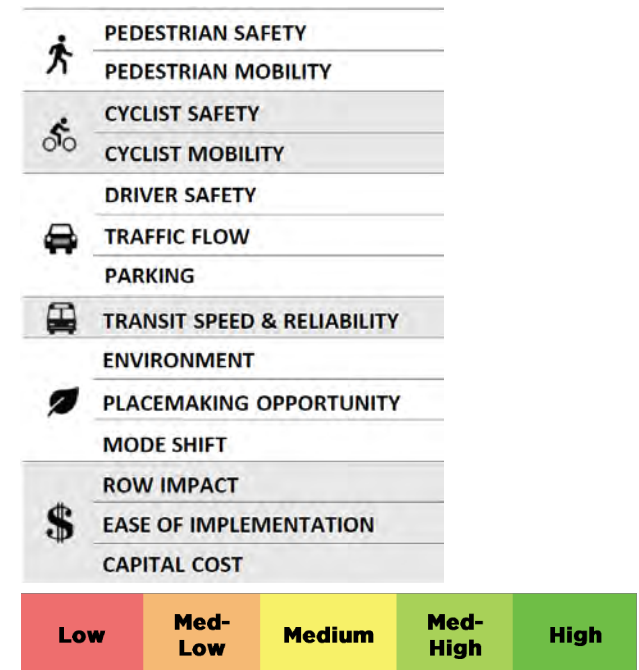
Options included benefit ratings for each evaluation component (shown in graphic to the right). These scores demonstrated how benefits and challenges were balanced.

Participants were then asked to respond to the following prompts for each segment:

- What is your favorite option for balancing the future needs for this corridor segment?
- Choose up to 3 components that make this option your favorite.
- Are there other reasons why you prefer this option?

OVERALL SURVEY TAKE-AWAYS

The relatively small percentage (between five to eight percent) of survey responders who selected keeping the corridor the way it is today reflects that most support improving the corridor. Survey responses indicate a strong interest in accommodating multiple modes of travel along the corridor with an emphasis on creating a pedestrian-friendly environment.



A scoring chart was prepared for each segment option presented, showcasing a benefit measures associated with each of the evaluation criteria.

N/NE 185TH STREET OPTIONS



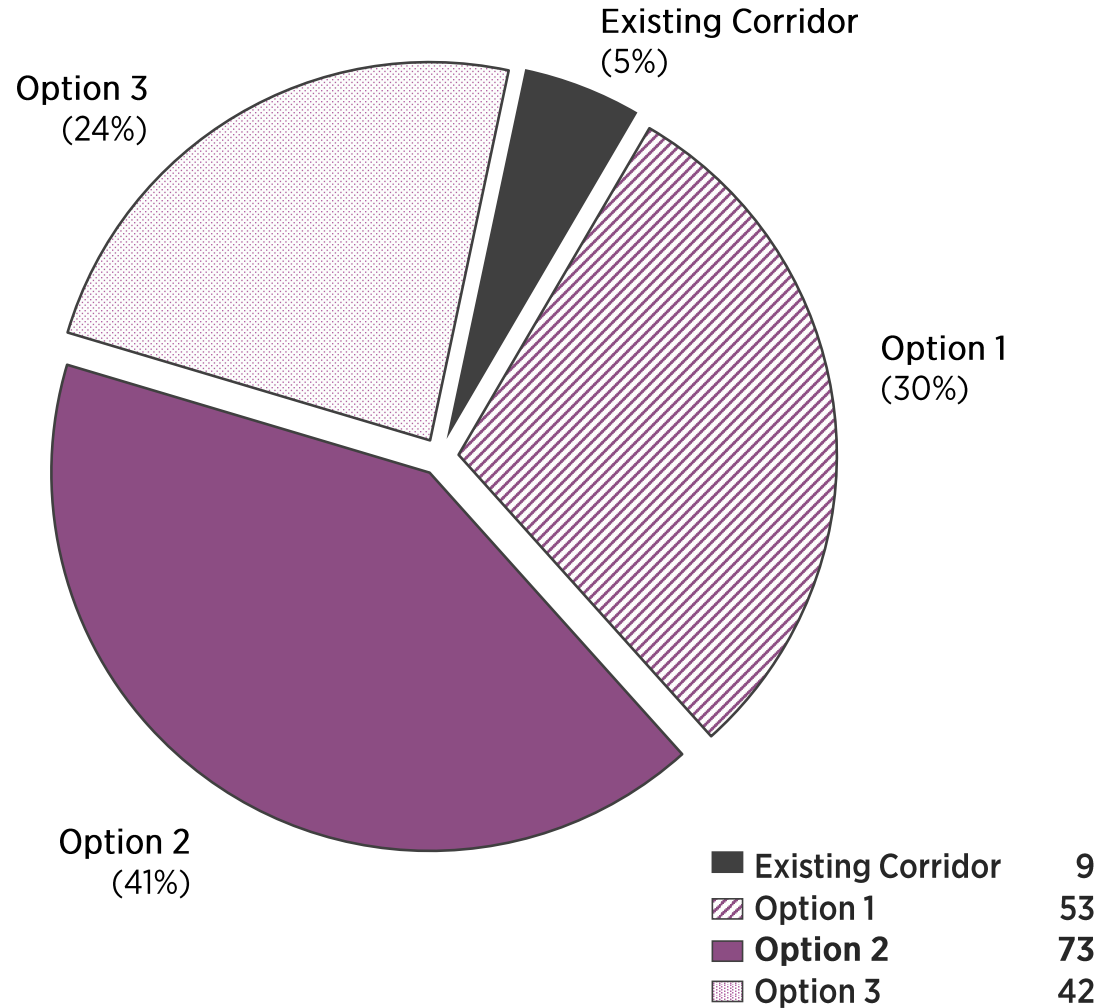
DESCRIPTION OF PRESENTED OPTIONS

Option 1: THREE-LANE SECTION (two travel lanes and a center turn lane) with **BIKE LANES**

Option 2: FOUR-LANE SECTION (two travel lanes and two BAT lanes) with **PROTECTED BIKE LANES**

Option 3: FIVE-LANE SECTION (four travel lanes and a center turn lane) with a **SHARED-USE PATH**

FAVORITE OPTION RESULTS



Total participants 177

N/NE 185TH STREET OPTIONS



REASONS FOR FAVORITE OPTION SELECTION

(Top 3 favorite components in each option are highlighted in green)*

Online survey (123 responses)

	Pedestrian	Bicycle	Traffic	Transit	Cost	Parking	Environmental	Placemaking
Option 1	24	16	15	4	16	1	13	9
Option 2	36	44	21	33	1	3	6	7
Option 3	16	9	25	13	1	6	8	4

In-person survey (54 responses)

	Pedestrian	Bicycle	Traffic	Transit	Cost	Livability
Option 1	14	7	4	3	10	10
Option 2	11	14	5	14	3	6
Option 3	5	2	10	6	3	1

* NOTE: Components for this question differed between the in-person and the online surveys.

N/NE 185TH STREET SURVEY TAKE-AWAYS

Overall, Option 2 ranked highest. Top reasons for this choice included considerations for pedestrians, bicyclists, and transit.

Outreach participants suggested improving Option 2 by moving the bike lanes off the street and trying to preserve mature trees on the north side of the street by retaining the location of the existing curb.

FEEDBACK THEMES FOR N/NE 185TH STREET OPTIONS

- **Tree Preservation** – Mature street trees and canopy coverage on 185th Street should be preserved to the greatest extent possible.
- **Pedestrian** – Provide sidewalks and crosswalks that promote a safe walking environment for pedestrians of all abilities, and safe and easy access to transit.
- **Bicycle** – Place bike lanes off of the street to promote cycling, increase safety, and potentially help retain mature trees.
- **Transit** – Find smart ways to incorporate transit-only lanes while maintaining traffic flow and allowing vehicles to effectively turn.
- **Balance** – Select an option that does the best job of balancing cost and amenities.



Study team member walks open house attendees through one of the street options.

10TH AVENUE NE OPTIONS



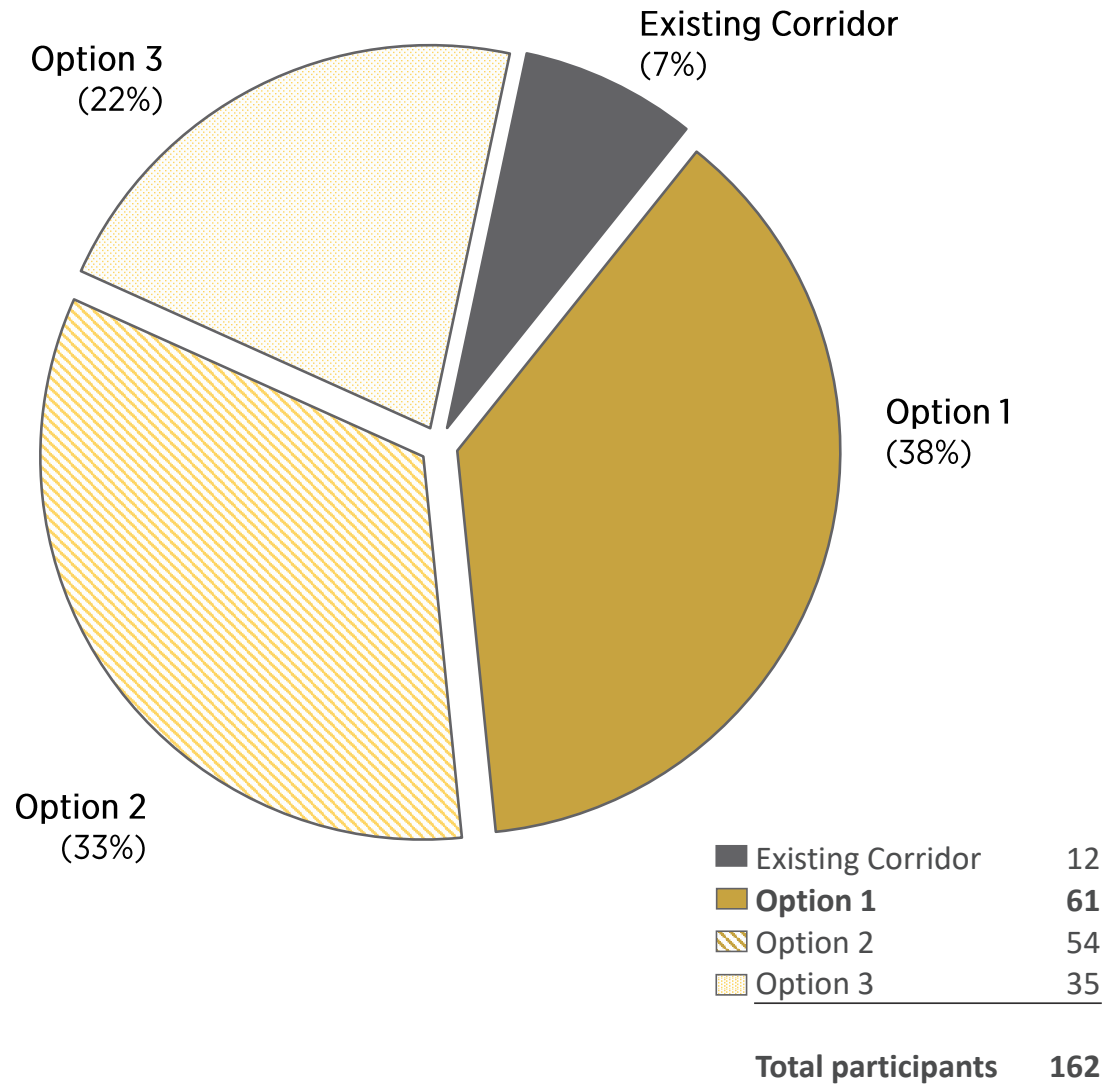
DESCRIPTION OF PRESENTED OPTIONS

Option 1: TWO-LANE SECTION (two travel lanes) with **BUFFERED BIKE LANES**

Option 2: TWO-LANE SECTION (two travel lanes) with **BIKE LANES** and **ON-STREET PARKING**

Option 3: THREE-LANE SECTION (two travel lanes and a center turn lane) with **BIKE LANES**

FAVORITE OPTION RESULTS



10TH AVENUE NE OPTIONS

REASONS FOR FAVORITE OPTION SELECTION

(Top 3 favorite components in each option are highlighted in green)*

Online survey (117)

	Pedestrian	Bicycle	Traffic	Transit	Cost	Parking	Environmental	Placemaking
Option 1	31	32	12	7	10	2	10	6
Option 2	25	21	20	2	3	28	5	4
Option 3	12	15	21	11	1	5	2	0

In-person survey (45 responses)

	Pedestrian	Bicycle	Traffic	Transit	Cost	Livability
Option 1	17	13	6	6	11	8
Option 2	7	3	9	3	2	6
Option 3	4	3	7	4	0	2

* NOTE: Components for this question differed between the in-person and the online surveys.

FEEDBACK THEMES FOR 10TH AVENUE NE OPTIONS

- **Pedestrian** – Provide a safe, separate space for pedestrians and easy access to transit.
- **Bicycle** – Promote safety by separating cyclists from traffic and transit as much as possible.
- **Transit** – Accommodate transit and vehicles; be mindful of bus stops and how they will affect traffic and cyclists.
- **Traffic** – Provide dedicated turn lanes to help keep traffic moving smoothly.
- **Parking** – Demand will increase in this area due to the light rail station and nearby high-density housing.



10TH AVENUE NE SURVEY TAKE-AWAYS

Overall, Option 1 ranked highest. Option 2 was a close second (within five percent). Top reasons for this choice included considerations for pedestrians, bicyclists, and traffic.

Participants emphasized the need for parking in this growing neighborhood and asked the team to be mindful of how any future bus stops would affect traffic and cyclists.



Open House 2 participants reviewing information about roadway options and community gathering places.

NE 180TH STREET OPTIONS

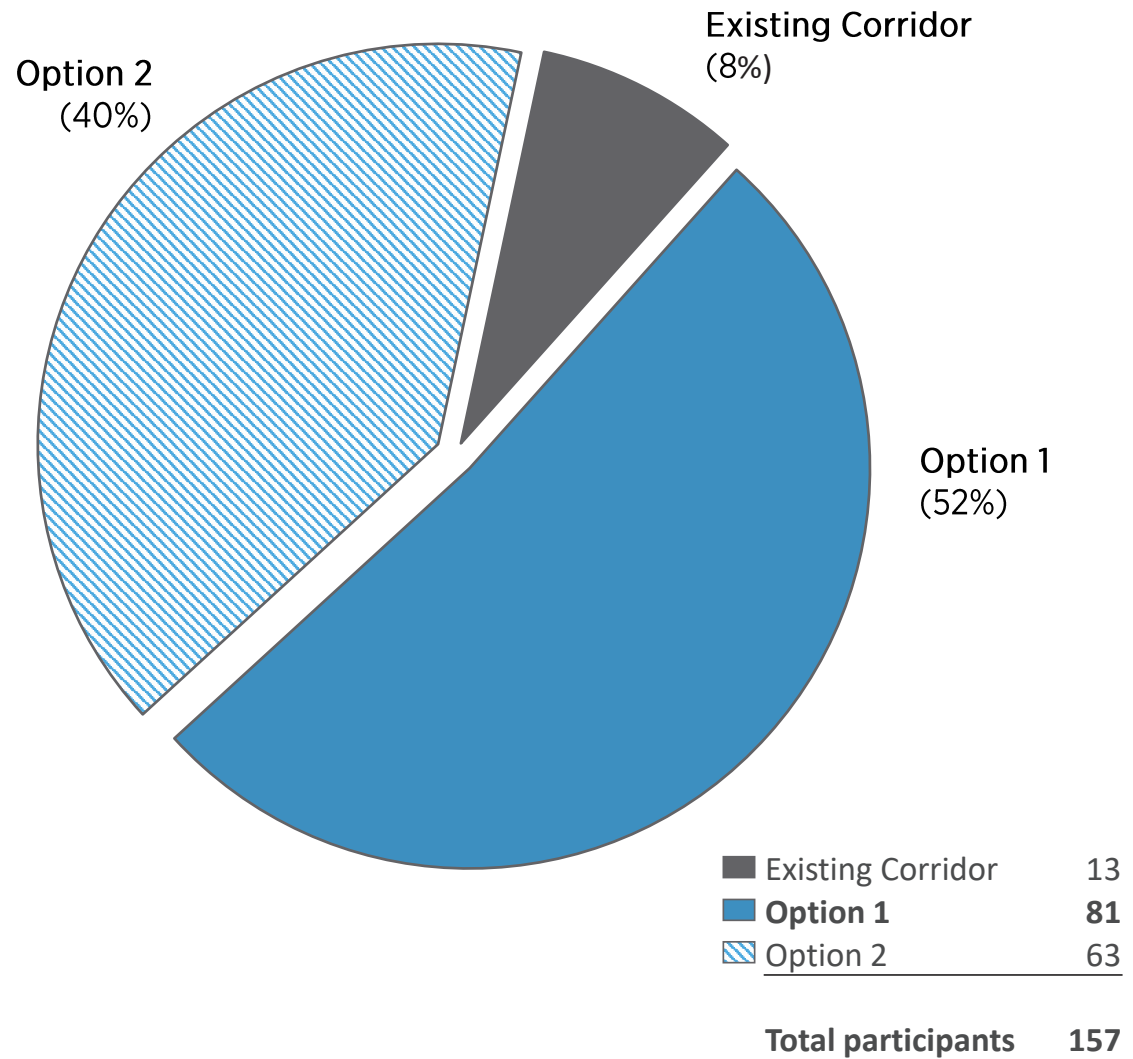


DESCRIPTION OF PRESENTED OPTIONS

Option 1: TWO-LANE SECTION (two travel lanes) with **BIKE LANES**

Option 2: TWO-LANE SECTION (two travel lanes) with **BUFFERED BIKE LANES** and **ON-STREET PARKING**

FAVORITE OPTION RESULTS



NE 180TH STREET OPTIONS



REASONS FOR FAVORITE OPTION SELECTION

(Top 3 favorite components in each option are highlighted in green)*

Online survey (113 responses)

	Pedestrian	Bicycle	Traffic	Transit	Cost	Parking	Environmental	Placemaking
Option 1	47	33	27	7	18	5	17	3
Option 2	27	27	27	7	2	29	3	3

In-person survey (44 responses)

	Pedestrian	Bicycle	Traffic	Transit	Cost	Livability
Option 1	17	8	7	3	11	12
Option 2	7	8	8	3	2	6

* NOTE: Components for this question differed between the in-person and the online surveys.

FEEDBACK THEMES FOR NE 180TH STREET OPTIONS

- **Multimodal** – Street is likely to become busier as more traffic tries to access the station area; design the roadway to move the most people the most effectively.
- **Bicycle** – Be mindful of the road grade when planning for bicycle infrastructure and keep bicycles as separate as possible from roadway traffic.
- **Parking** – Demand in this area due to nearby high-density housing and retail.
- **Balance** – Select an option that does the best job of balancing cost and amenities.

NE 180TH STREET SURVEY TAKE-AWAYS

Overall, Option 1 ranked highest. Top reasons for this choice included considerations for pedestrians, bicyclists, and traffic.

Participants voiced concerns about how multimodal improvements would fit into this relatively narrow street segment (within a 60 foot right of way) that is quickly redeveloping.

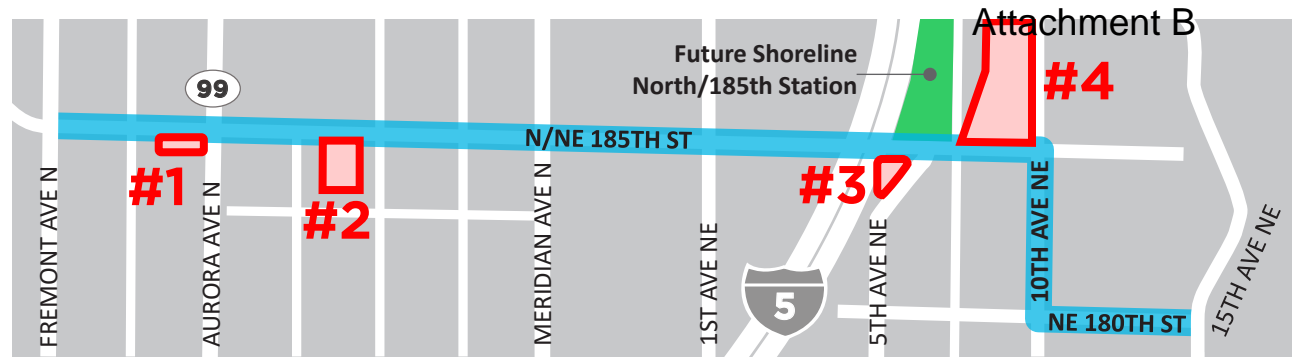
Transit Agency representatives expressed the need to design the street to be future compatible with frequent bus service including accommodating bus turning movements at major intersections, allowing adequate room for future bus stops, providing a minimum of 11-foot wide travel lanes, and studying the roadway grade for potential modifications needed for buses to operate on the hill without bottoming out.

COMMUNITY GATHERING PLACES

The study team invited community members to share early thoughts on potential public space opportunities at four specific sites along the 185th Street Corridor (shown in the map to the right).

Community members reviewed concept diagrams and programming ideas to activate each site and then responded to the following questions:

- For this site, please check your top three programming options that would be most beneficial for the community.
- Is there anything you would like to share about this location?



#1 AURORA AVENUE N & N 185TH STREET

The City owns the northern portion of this currently vacant space. The recently installed Richmond Highlands gateway mural provides beauty to this space.

Favorite Programming Options for Site #1 (top three favorite options are highlighted in green):

Colorful plantings	75
Pathways	69
Bike parking	54
Creative play	28
Fitness zone	20
Interpretive signage	19
Interactive musical elements	17

Feedback themes:

- **Maintenance** - The site would need to be cleaned and properly maintained to be a better gathering place.
- **Safe** - This site is very busy and its proximity to Aurora Avenue may present challenges for safe play.

#2 ASHWORTH AVENUE N & N 185TH STREET

This parcel was identified as a potential nature-based open space during the 185th Street Station Subarea planning process.

Favorite Programming Options for Site #2 (top three favorite options are highlighted in green):

Naturalized area	76
Boardwalk/Perimeter path	73
Nature play elements	59
Seating	33
Fitness zone	22
Educational elements	19
Placemaking elements	16
Interpretive signage	7

Feedback themes:

- **Greenspace** - This site could provide much needed neighborhood greenspace.
- **Maintenance** - The existing space is poorly maintained (trash, blackberry bushes, etc.) and it would require some work to transform it into a gathering place.
- **Engaging** - The site should to be visually and physically interesting (e.g. multiple ingress/egress points, varying vegetation height, seating, etc.).



Recently installed gateway mural frames community gathering place #1

#3 TRAILHEAD AT THE STATION

There is a small space for a trailhead at this location. Sound Transit will be constructing improvements and re-aligning 5th Ave NE near the future Shoreline North/185th Station. The City’s Trail Along the Rail project will access the station at this point.

Favorite Programming Options for Site #3 (top three favorite options are highlighted in green):

Native plants	61
Trailhead signage	59
Seating	51
Public art/placemaking	42
Charge/Recharge space	36
Swale along the trail	34
Solar trees	27
Solar paving	22

Feedback themes:

- **Right-size** – Programming should be mindful of the small footprint of this site.

#4 ROTARY PARK

The Shoreline Parks, Recreation, and Open Space (PROS) Plan identified this collection of parcels and utility rights of way as an opportunity site for adding more public space within the light rail station area.

Favorite Programming Options for Site #4 (top four favorite options are highlighted in green. Community garden and splash park tied for third place):

Flexible lawn space	53
Play area	48
Community garden	44
Splash park	44
Picnic tables/Seating	42
Paths	40
Food trucks	34
Off-leash dog area	28
Stage	14

Feedback themes:

- **Open Space** – This site will be surrounded by many new housing developments, so there will be a need for open space that can accommodate many different types of users and uses.
- **Family amenities** – The site should prioritize amenities for families and neighborhood residents.

SURVEY TAKE-AWAYS AND NEXT STEPS

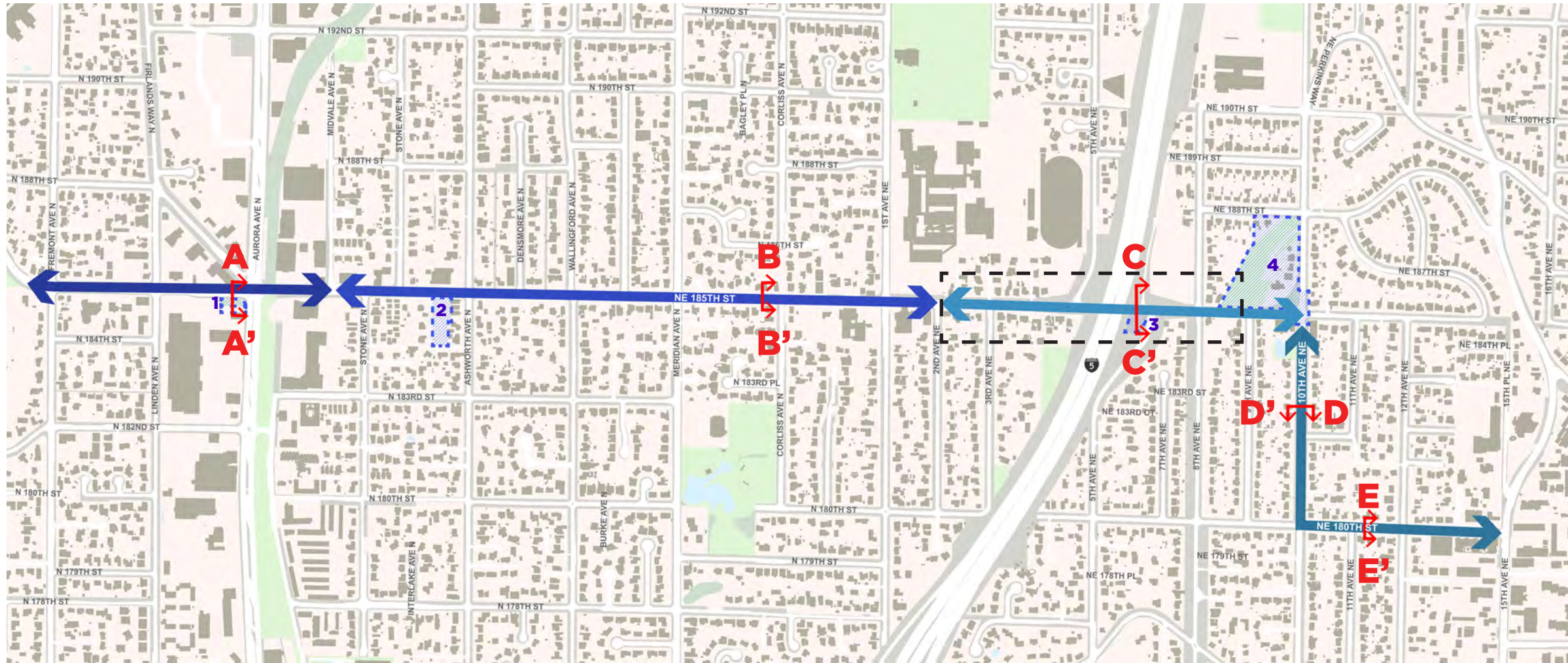
The intent of the survey was to gather ideas and feedback from community members and stakeholders about how these sites could benefit the community and the environment. Overall, outreach participants responded favorably to activating these sites while being mindful of maintenance and security needs.

Feedback on draft concepts for Site #1, #2, and #4 received during this process will be shared with the City’s Parks, Recreation, and Cultural Services (PRCS) Director and the PRCS/Tree Board. Feedback on Site #3 received during this process will be shared with the Public Works Director and the Trail Along the Rail project manager.

Currently, there is no funding for programming these sites. Draft concepts of community gathering places are fodder for the start of a longer process of programming potential public spaces with design features that will nurture a sense of place and enhance the quality of life for the community.

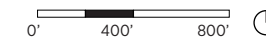
185TH STREET MULTIMODAL CORRIDOR SECTION KEY PLAN

Recommended Option's Cross Sections



SECTION LOCATOR DIAGRAM

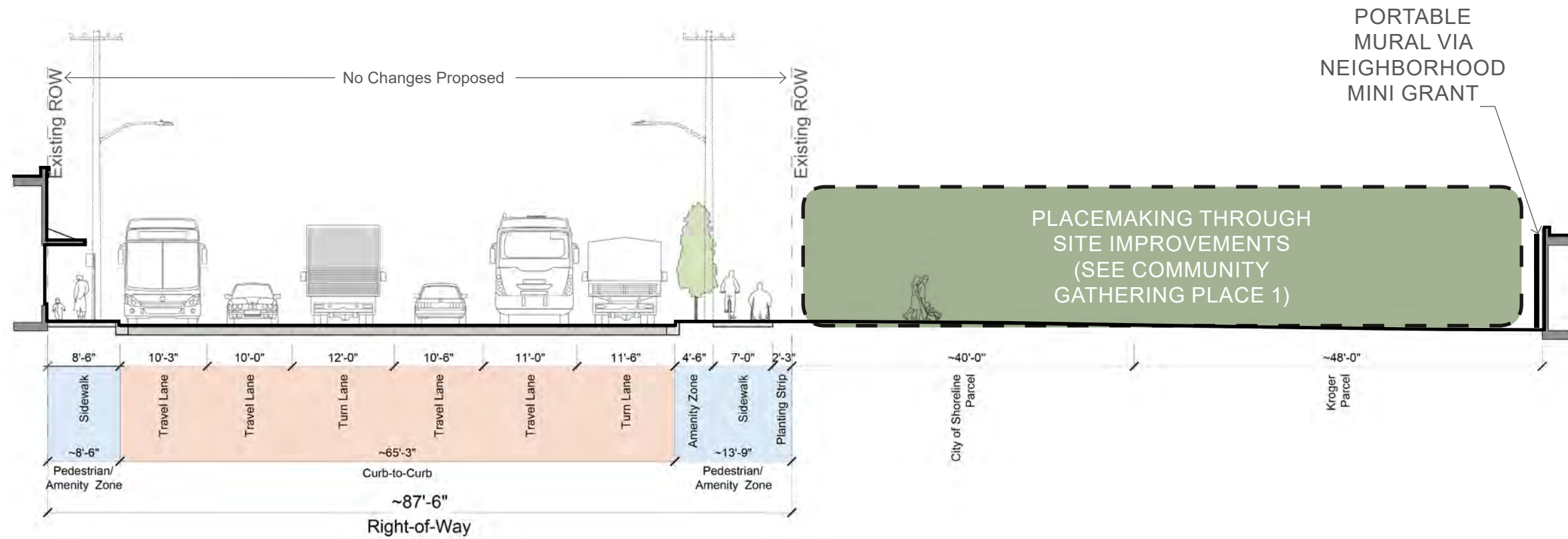
- SECTION CUT
- STREET SEGMENT 1
- STREET SEGMENT 2
- STREET SEGMENT 3
- STREET SEGMENT 4
- OPPORTUNITY SITE FOR COMMUNITY GATHERING PLACE
- SOUND TRANSIT LYNNWOOD LINK LIGHT RAIL PROJECT WILL BE CONSTRUCTING ROADWAY IMPROVEMENTS FOR THIS SEGMENT OF THE CORRIDOR



185TH STREET - A-A'

NO PROPOSED CHANGES TO ROADWAY

PROPOSED COMMUNITY GATHERING PLACE 1



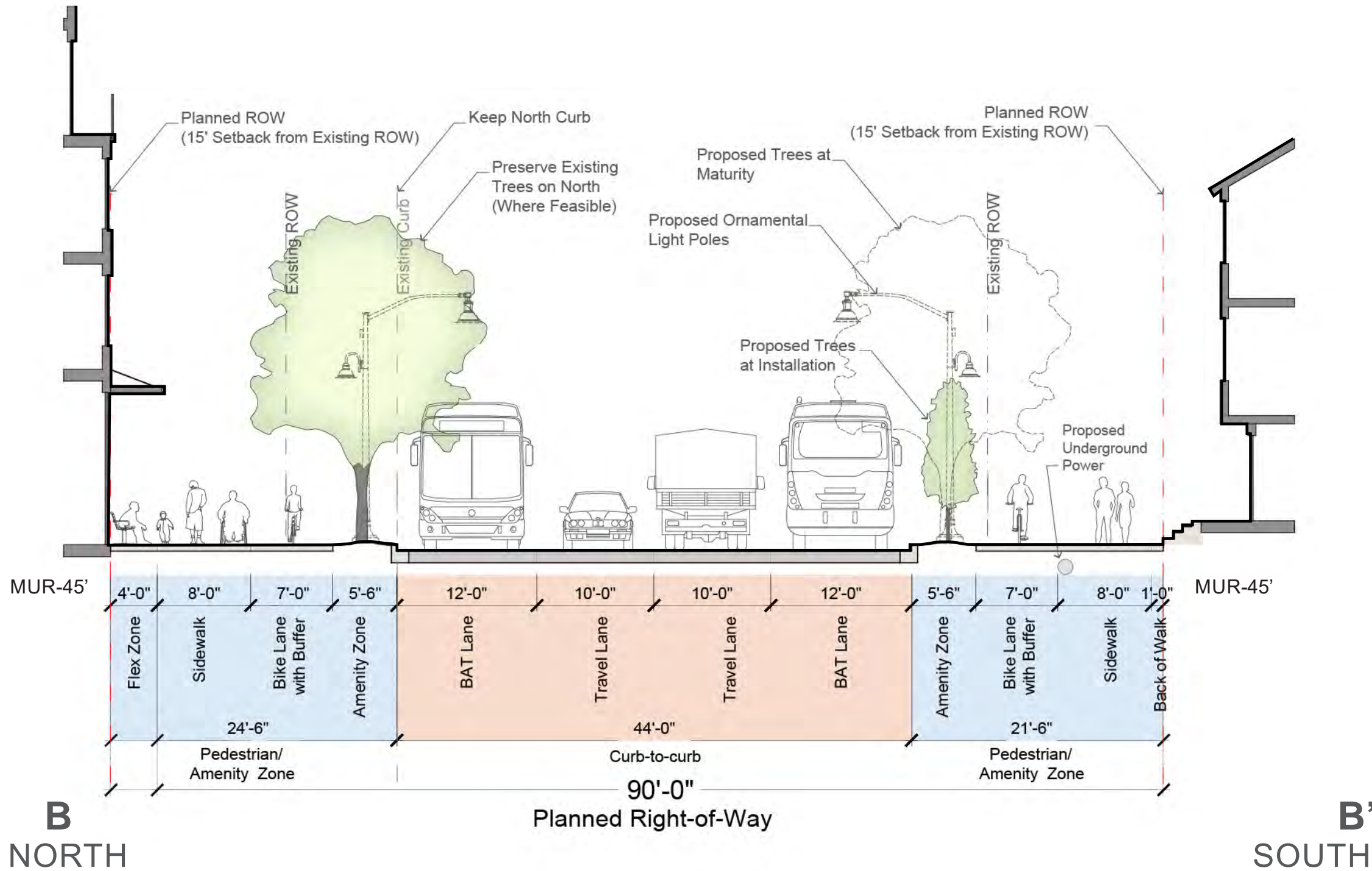
A
NORTH

A'
SOUTH

SECTION A FUTURE CONDITIONS



185TH STREET PREFERRED OPTION - B-B' FOUR VEHICULAR LANES INCLUDING BAT LANES, OFF-STREET BIKE LANES, AND ENHANCED PEDESTRIAN ZONES

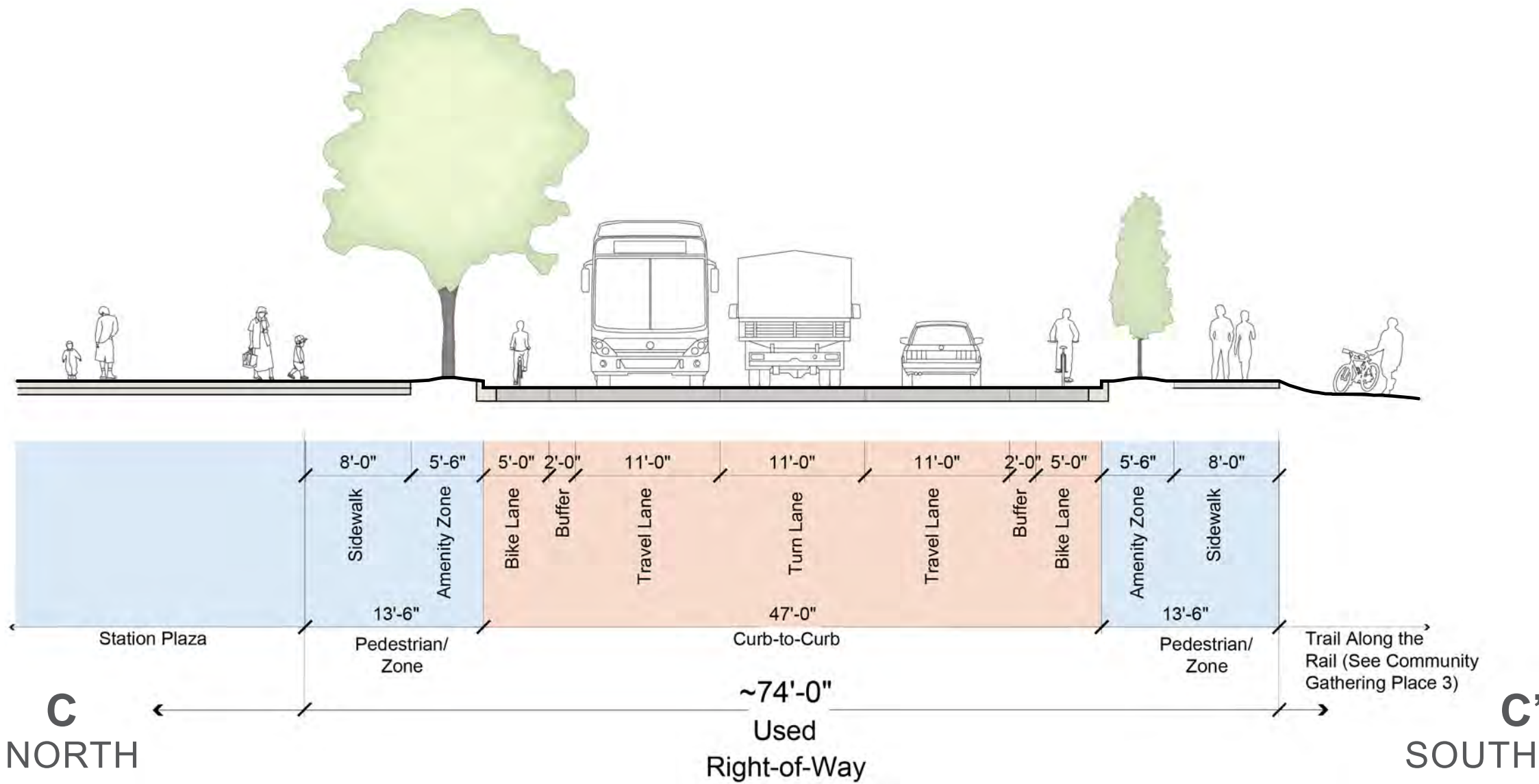


SECTION B PREFERRED OPTION

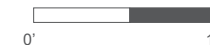


185TH STREET - C-C' *

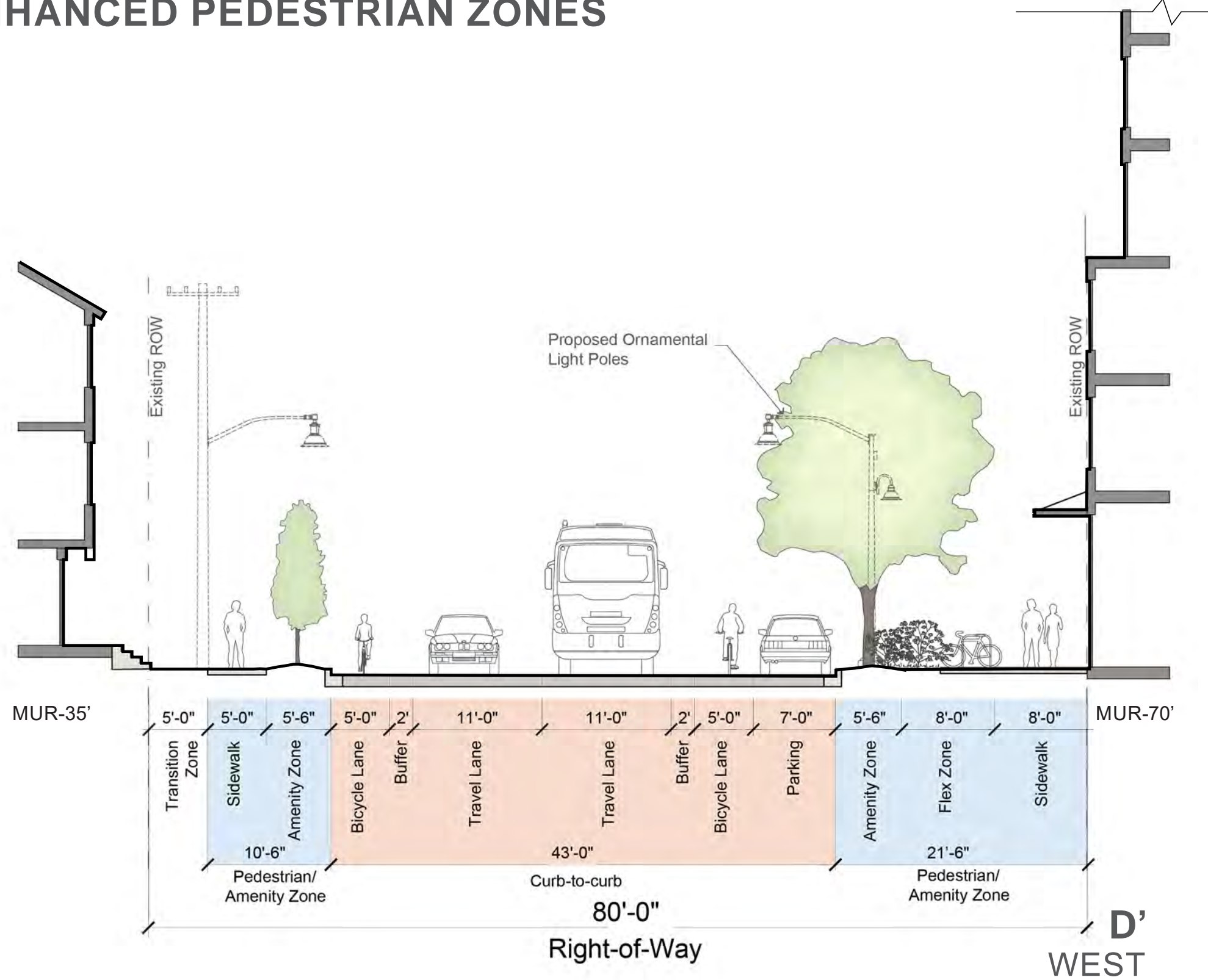
THREE VEHICULAR LANES INCLUDING CENTER TURN LANE, BUFFERED BIKE LANES, AND ENHANCED PEDESTRIAN ZONES



*NOTES:
 2ND AVE NE TO 8TH AVE NE: SOUND TRANSIT-LED IMPROVEMENTS
 8TH AVE NE TO 10TH AVE NE: DOVETAIL WITH SOUND TRANSIT-LED IMPROVEMENTS



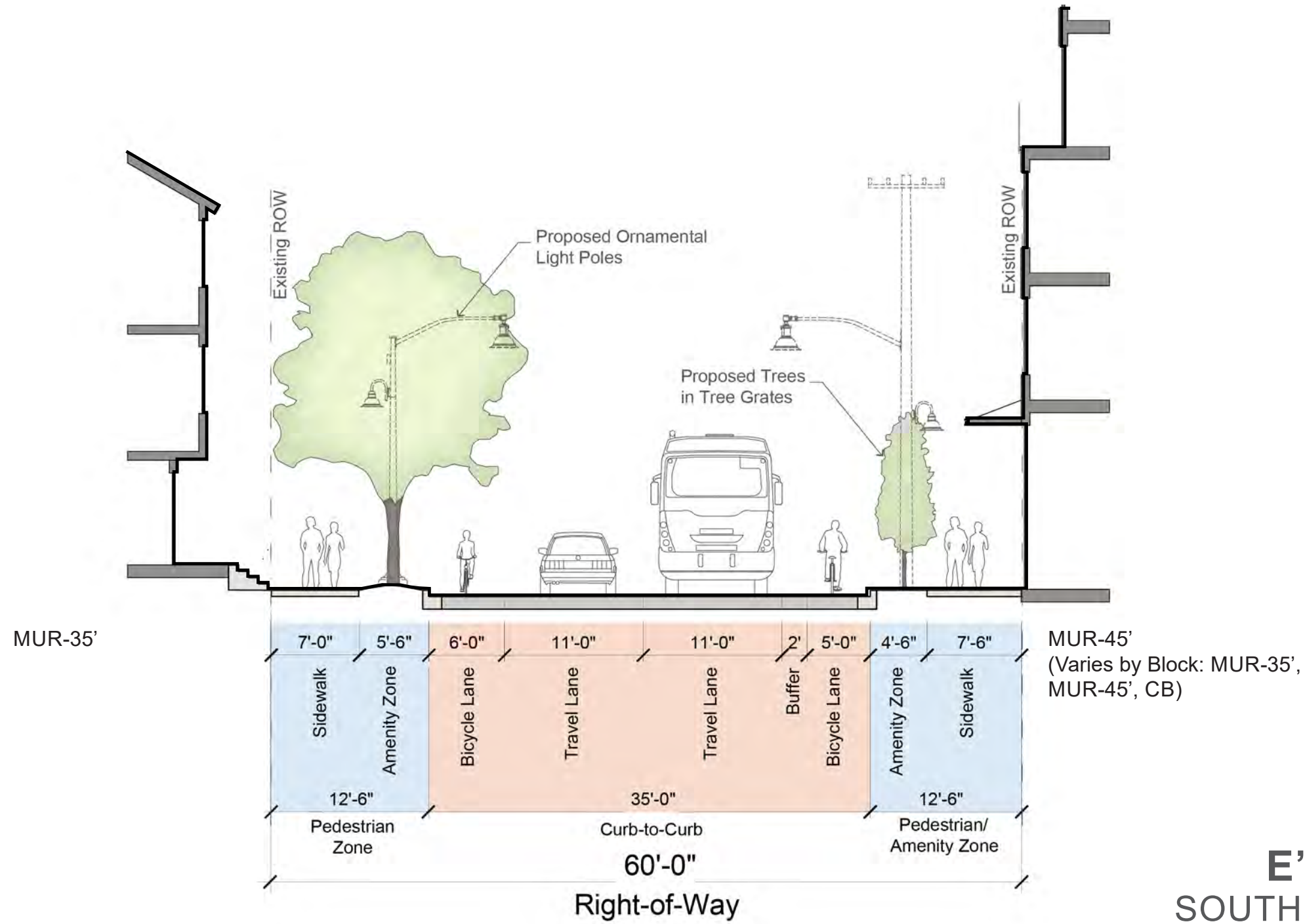
10TH AVENUE PREFERRED OPTION - D-D' TWO VEHICULAR LANES WITH BUFFERED BIKE LANES, PARKING, AND ENHANCED PEDESTRIAN ZONES



SECTION D PREFERRED OPTION



180TH STREET PREFERRED OPTION - E-E' TWO VEHICULAR LANES WITH ENHANCED BIKE LANES AND PEDESTRIAN ZONES



E
NORTH

E'
SOUTH

SECTION E PREFERRED OPTION


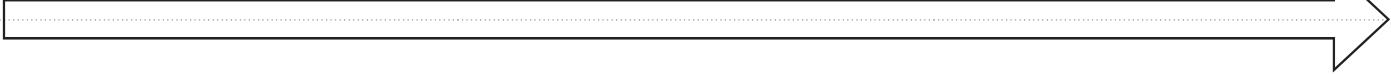



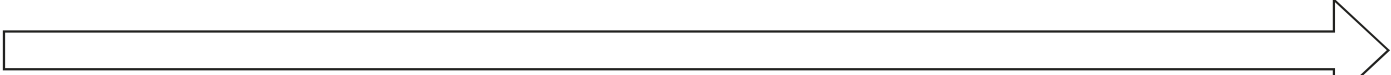

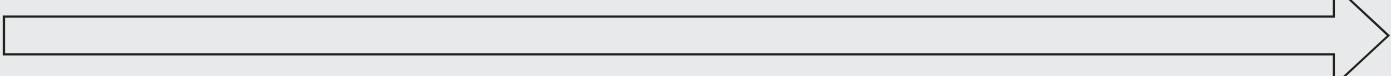

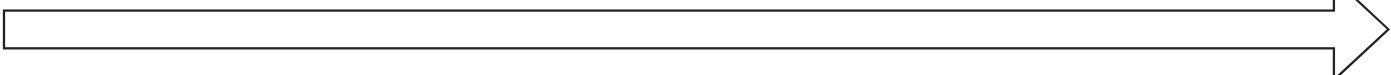




DRAFT EVALUATION CRITERIA

BENEFIT MEASURE

CRITERIA DESCRIPTIONS



		LOW	MED-LOW	MED	MED-HIGH	HIGH
PEDESTRIAN 	PEDESTRIAN SAFETY	<ul style="list-style-type: none"> Wide street width makes pedestrian crossings challenging Little to no separation from bike and/or vehicle facilities 				<ul style="list-style-type: none"> Narrow street width supports frequent and safe pedestrian crossings Provides separation from bike and/or vehicular facilities.
	PEDESTRIAN MOBILITY	<ul style="list-style-type: none"> Sidewalk width is less than City standards Obstructions are present 				<ul style="list-style-type: none"> Sidewalk width is equal or greater than City standards Free of obstructions
BICYCLE 	BICYCLIST SAFETY	<ul style="list-style-type: none"> Obscured visibility of bikes at crossings Little to no separation from pedestrian and/or vehicular facilities 				<ul style="list-style-type: none"> High visibility of bikes at crossings Separation from pedestrian and/or vehicular facilities
	BICYCLIST MOBILITY	<ul style="list-style-type: none"> Bike facility makes abrupt connections to surrounding streets and trails 				<ul style="list-style-type: none"> Bike facility makes easy connections to surrounding streets and trails
TRAFFIC 	DRIVER SAFETY	<ul style="list-style-type: none"> Turn lanes absent Frequent stops and starts (i.e. shared lane with buses) Inconsistent speeds 				<ul style="list-style-type: none"> Turn lanes provided Encourages consistent speeds Mode separation
	TRAFFIC FLOW	<ul style="list-style-type: none"> Lower or similar vehicle capacity compared to existing roadway Level of Service <math>\leq</math> E or F 				<ul style="list-style-type: none"> Adds significantly more capacity for general purpose drivers Level of Service >math>\geq</math> C or D
	PARKING	<ul style="list-style-type: none"> Doesn't provide parking 				<ul style="list-style-type: none"> Provides parking or the potential to offer parking during non-peak travel hours
TRANSIT 	TRANSIT SPEED AND RELIABILITY	<ul style="list-style-type: none"> No dedicated BAT lanes reduce transit speed and reliability Narrow travel lanes are 10' 				<ul style="list-style-type: none"> Dedicated BAT lanes support consistent transit speed and reliability Wide travel lanes are 12'
LIVABILITY 	ENVIRONMENT	<ul style="list-style-type: none"> Significant increase to impervious area Minimal room for trees and landscaping 				<ul style="list-style-type: none"> Little to no change in impervious surface Ample space for trees and landscaping
	PLACEMAKING OPPORTUNITY	<ul style="list-style-type: none"> Minimal space beyond the curb Provides ped and/or bike facility only 				<ul style="list-style-type: none"> Significant space behind the curb i.e. allows for public art, street furniture, etc.
	MODE SHIFT	<ul style="list-style-type: none"> Discourages mode shift (i.e. less apt to walk, bike, or take transit) 				<ul style="list-style-type: none"> Encourages mode shift (i.e. more apt to walk, bike, or take transit)
COST 	ROW IMPACT	<ul style="list-style-type: none"> Significant increase in street right-of-way Possible impacts to existing structures 				<ul style="list-style-type: none"> Little to no change to existing street right-of-way
	EASE OF IMPLEMENTATION	<ul style="list-style-type: none"> Curblines significantly different than existing street Unlikely to be achieved through frontage improvements alone 				<ul style="list-style-type: none"> Curblines similar to existing Easier to transition from existing street to future design through frontage improvements
	CAPITAL COST	<ul style="list-style-type: none"> Most expensive 				<ul style="list-style-type: none"> Least expensive

**185th Street Multimodal Corridor
Comparative Analysis of Options
N/NE 185th Street - Segment B**

		Existing	Option 1	Option 2	Option 3	Rec. Option	Description	Distinctions
Pedestrian	Pedestrian Safety						44' street crossing.	2nd narrowest street crossing. Amenity zone and bike lanes provides good separation from cars.
	Pedestrian Mobility						8' sidewalks.	8' sidewalk meets City's standard.
Bicycle	Bicyclist Safety						Off-street bike lanes.	Greatest separation from vehicles and pedestrians. Intersections improvements would enhance bike safety.
	Bicyclist Mobility						Pair of uni-directional bike lanes.	Easy to connect to Interurban Trail and surrounding streets.
Traffic	Driver Safety						No turn lanes.	Good mode separation.
	Traffic Flow						One general purpose lane in each direction.	Traffic Level of Service will fail by 2035, but BAT lanes will be well above passing.

	Parking						No permanent parking.	Option for parking in BAT lanes at non-peak times.
Transit	Speed & Reliability						12' Dedicated BAT lanes	Supports frequent bus service.
Livability	Environment						Holds northside of street's curb to preserve existing trees where feasible.	New large canopy trees on southside of street could be specified if power lines were underground. Alternatively, smaller trees could be specified if power poles stay in amenity zone.
	Placemaking Opportunity						Additional four foot flex zone for street furnishings, planters, etc.	Most room for placemaking.
	Mode Shift						Best spread of multimodal options, including frequent transit service.	Encourages highest mode shift.
Cost	ROW Impact						Uses the full 90' planned ROW.	Highest impacts.
	Ease of Implementation						Moderately easy to implement	Can be transitioned to bridge's roadway configuration.
	Capital Cost						–	2nd most expensive.

10th Avenue NE - Segment D

		Existing	Option 1	Option 2	Option 3	Rec. Option	Description	Distinctions
Pedestrian	Pedestrian Safety						36' street crossing at curb bulbs. Curb bulbs at crossing make it the narrowest crossing.	2nd narrowest crossing. Amenity zones and flex zone on westside provides best separation from bikes and cars.
	Pedestrian Mobility						5' sidewalk on eastside. 8' sidewalk on westside.	Sidewalks meet City's standard for zoning.
Bicycle	Bicyclist Safety						Buffered bike lanes.	Best separation from vehicles and pedestrians.
	Bicyclist Mobility						Pair of buffered bike lanes for north/south travel.	Easy to connect to surrounding streets.
Traffic	Driver Safety						No turn lanes.	Parking slows down traffic
	Traffic Flow						One general purpose lane in each direction.	Traffic Level of Service will fail by 2035.
	Parking						Provides parking on westside of street.	Supports parking adjacent to high-density dev.

Transit	Speed & Reliability	Yellow	Light Green	Yellow	Dark Green	Light Green	11' lanes shared by transit and autos.	Bike buffer provides separation. Parking creates friction for buses.
Livability	Environment	Red	Light Green	Yellow	Orange	Yellow	Amenity zones, flex zone, and curb bulbs provide room for new trees and plantings.	Moderate amount of new paving.
	Placemaking Opportunity	Red	Dark Green	Dark Green	Light Green	Dark Green	8' flex zone and parking bulb outs provide room for placemaking.	Most room for placemaking.
	Mode Shift	Red	Light Green	Yellow	Dark Green	Light Green	Good spread of multimodal options, including frequent transit service.	Encourages mode shift.
Cost	ROW Impact	Dark Green	Light Green	Light Green	Light Green	Light Green	All options have equal right of way impacts.	Moderate impacts.
	Ease of Implementation	Dark Green	Dark Green	Yellow	Light Green	Light Green	Moderate ease of transition	Easy to transition north and south on 10th Ave NE.
	Capital Cost	Dark Green	Light Green	Orange	Yellow	Orange	–	Most expensive.

NE 180th Street - Segment E

		Existing	Option 1	Option 2	Rec. Option	Description	Distinctions
Pedestrian	Pedestrian Safety					35' street crossing.	Narrowest crossing.
	Pedestrian Mobility					7' sidewalk on northside. 7.5' sidewalk on southside.	Sidewalk widths are slightly less than City's standard.
Bicycle	Bicyclist Safety					Buffered bike lane on uphill. 6' wide bike lane on downhill.	Best separation from vehicles and pedestrians.
	Bicyclist Mobility					Pair of bike lanes for east/west travel.	Easy to connect to surrounding streets.
Traffic	Driver Safety					No turn lanes.	Added curbs provide traffic calming.
	Traffic Flow					One general purpose lane in each direction.	Acceptable Traffic Level of Service in 2035.
	Parking					No new parking.	Narrow ROW is prioritized for multimodal travel rather than vehicle storage.

Transit	Speed & Reliability					11' lanes shared by transit and autos.	Supports future transit service.
Livability	Environment					Room for trees in amenity zones.	Moderate amount of new paving.
	Placemaking Opportunity					Potential placemaking opportunities in paving patterns, banners, and amenity zones.	Some room for placemaking.
	Mode Shift					Good spread of multimodal options, including transit service.	Encourages mode shift.
Cost	ROW Impact					Minimal impacts.	Stays within the ROW
	Ease of Implementation					Easy to implement.	Some transition required to dovetail with existing dev.
	Capital Cost					–	Least expensive

Example footprint comparison of standard intersection with left turn pockets + U turn bay vs. 2-lane (120' diameter) roundabout

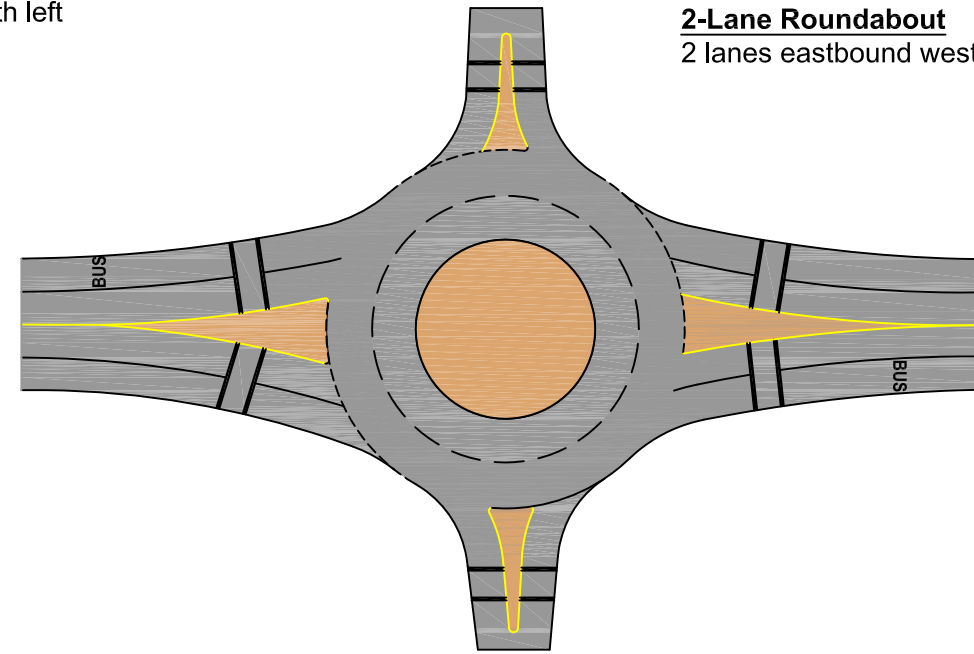
A 2 lane roundabout would impact significantly fewer properties and an overall lower area in comparison to a standard intersection with left turn pocket and U-turn bay.

Notes

- 1) Both contain 2 eastbound and 2 westbound through lanes, intersected by a minor roadway with one lane in each direction.
- 2) Excludes pedestrian, bicycle and landscaped facilities as they would be approximately the same for either option.
- 3) Conceptual only, does not represent a design-level comparison.
- 4) Roundabout footprint shown accommodates east/west articulated bus.

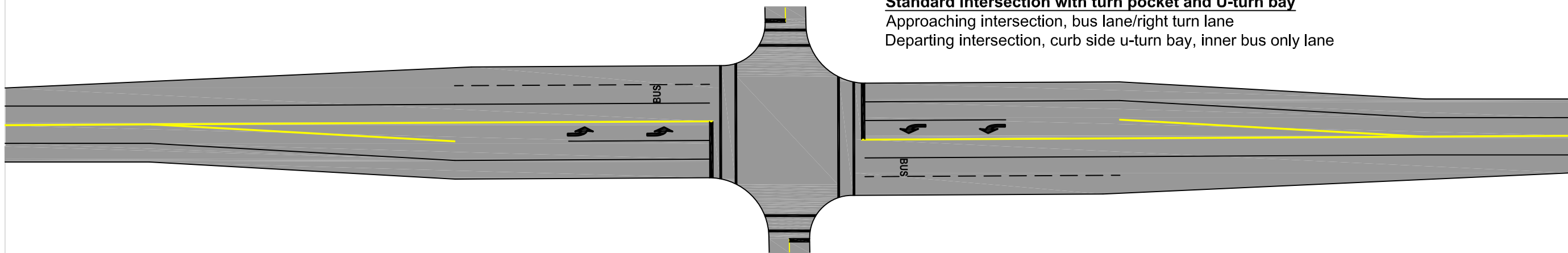
2-Lane Roundabout

2 lanes eastbound westbound, with curbside bus and turn lane

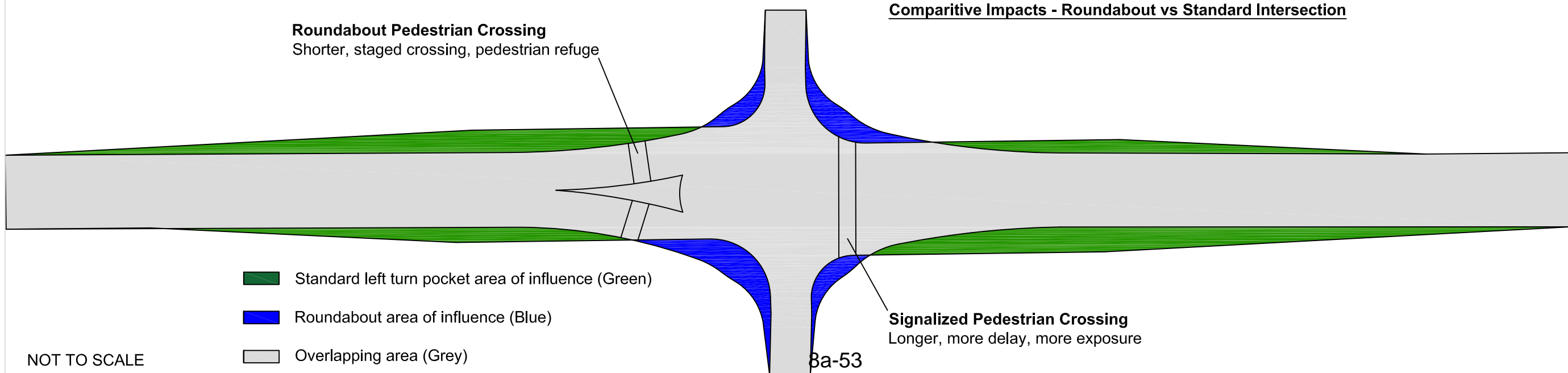


Standard intersection with turn pocket and U-turn bay

Approaching intersection, bus lane/right turn lane
 Departing intersection, curb side u-turn bay, inner bus only lane



Comparitive Impacts - Roundabout vs Standard Intersection



Roundabout Pedestrian Crossing
 Shorter, staged crossing, pedestrian refuge

Signalized Pedestrian Crossing
 Longer, more delay, more exposure

- Standard left turn pocket area of influence (Green)
- Roundabout area of influence (Blue)
- Overlapping area (Grey)

NOT TO SCALE

8a-53

