

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussion of the 145 th Street Multimodal Corridor Study Preferred Design Concept
DEPARTMENT:	Public Works Department
PRESENTED BY:	Kurt Seemann, Senior Transportation Planner Nytasha Sowers, Transportation Services Manager
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 Council with an update on the progress of the 145th Street Multimodal Corridor Study and confirm Council's concurrence with the Preferred Design Concept for the corridor. This report provides an overview of the Preferred Design Concept, feedback from the public on the Preferred Design Concept received at the third corridor study open house held in February, and a comparison of impacts and costs for the Preferred Design Concept and the study concepts reviewed earlier. Also noted are potential next steps if Council concurs with the Preferred Design Concept.

RESOURCE/FINANCIAL IMPACT:

The 145th Street Multimodal Corridor Study has a total budget of \$596,000, with revenues of \$246,000 from the US Department of Transportation's Surface Transportation Program (STP) and the balance from the City of Shoreline Roads Capital Fund. There is no immediate financial impact associated with the continued design work on 145th Street.

RECOMMENDATION

No formal action is required at this time. Council is currently scheduled to adopt a motion confirming the Preferred Design Concept on April 4, 2016. Tonight, staff would like Council's confirmation that the Preferred Design Concept is consistent with Council goals and objectives for this study and confirmation on the recommendation to move forward on further environmental and design work for the portion of the corridor between Aurora Avenue N and Interstate-5.

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

INTRODUCTION

145th Street forms the southern border of the City of Shoreline. The portion adjacent to the City is approximately 3.2 miles long, running from 3rd Avenue NW to Bothell Way (SR 522) NE. It is a state highway (SR 523) from Aurora Avenue N (SR 99) to Bothell Way NE. 145th Street crosses over Interstate 5 (I-5) just west of 5th Avenue NE and includes a four quadrant interchange with the freeway.

As Council has discussed several times over the past few years, the corridor is in need of significant upgrades in order to improve pedestrian and bicycle mobility, safety and operations, transit speed and reliability, and freight mobility. 145th Street also lacks a sidewalk system that complies with the Americans with Disabilities Act (ADA). Traffic volumes are anticipated to increase with regional growth and the future light rail station at 145th Street and Interstate-5. Upgrades are needed to accommodate future development of the corridor as well as to improve safety for bicycles and pedestrians and to provide adequate speed and reliability for transit.

The 145th Street Corridor Study began in early 2015 by defining project goals and evaluation criteria. The project team then began analyzing existing conditions and developing study concepts to “bookend” the range of concepts that would improve how the corridor addresses pedestrian, bicycle, transit, and vehicular mobility, while considering and balancing impacts to right-of-way and potential project costs.

Staff has engaged in ongoing robust community outreach, including holding three open houses, meeting with various neighborhood groups and property owners, and conducting regular meetings with a Citizen’s Advisory Task Force (CATF) as well as ongoing local agency coordination with the Inter-jurisdictional Technical Team (ITT).

Information and materials from all three open houses can be found on the City’s 145th Street Multi-modal Corridor Study Project Webpage:

<http://www.shorelinewa.gov/government/departments/145th-street-corridor>.

As well, Council last discussed the 145th Street Corridor Study at their August 17, 2015 Council meeting. The staff report for this discussion can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2015/staffreport081715-9b.pdf>

Through the Corridor Study, staff has developed a recommendation for a Preferred Concept for the corridor. This report provides a summary of the Corridor Study process and the Preferred Concept. A project schedule for the Corridor Study is attached to this staff report as Attachment A.

BACKGROUND

The redevelopment of 145th Street promises to be a significant capital improvement in the City of Shoreline. Similar to the Aurora Corridor Improvement Project, it is likely to take several years to be designed and evaluated for compliance with environmental regulations, and constructed in multiple phases. The multijurisdictional nature of its

location and function, as well as the various issues that need to be addressed in conjunction with redevelopment, combine to create a very complex project.

The purpose of a corridor study is to serve as a master plan for the proposed improvements to the corridor. Development of a corridor study can also be known as “pre-design”.

The project team began with confirming project goals for the corridor. Project Goals and Evaluation criteria were initially established with the City Council in 2014. Staff worked with the CATF and the ITT to confirm these goals and evaluation criteria as well as establish specific performance measures. For simplicity in communicating these goals, staff summarized the project goals as follows:

- Ensure that everyone can walk, bike, bus, access light rail and drive safely and reliably along and across the corridor; and
- Develop transportation improvements that:
 - support the local economy,
 - protect the environment, and
 - support a vibrant community.

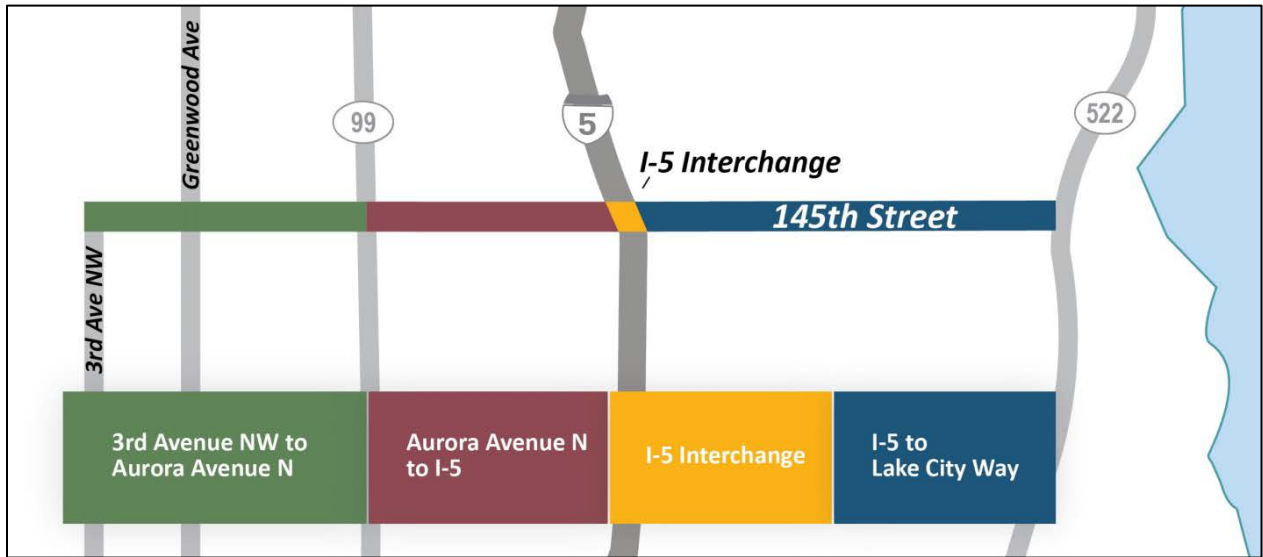
Staff then investigated existing conditions and future projections for the corridor to clearly understand the transportation problems. Study of the existing conditions and future function of the corridor included:

- An inventory of current and projected traffic volumes;
- Evaluation of accidents and their causes;
- Identification of the locations and types of utilities;
- Evaluation of existing transit service and future needs, including the light rail station;
- Evaluation of existing bicycle and pedestrian facilities;
- Identification of existing and projected transportation levels of service; and
- Evaluation of the function of the interchange at Interstate-5.

In addition to the project goals and the understanding of the existing conditions and future projections for the corridor, staff also understood that there are various contexts, land uses and traffic volumes along 145th Street from Lake City Way to 3rd Avenue NW. To separate out these contexts, staff defined four unique areas, or sections, along the corridor. They are listed below, east to west:

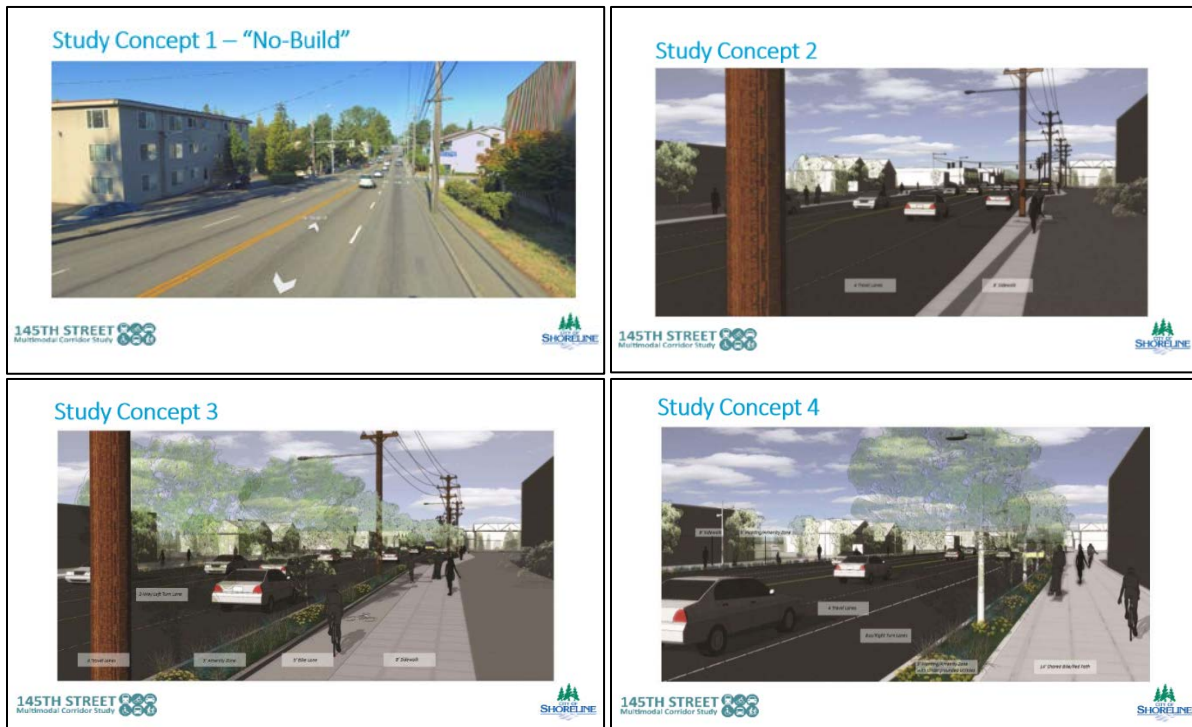
1. Interstate-5 to Lake City Way (SR 522);
2. The Interstate-5 Interchange;
3. Aurora Avenue N to Interstate-5; and
4. 3rd Avenue NW to Aurora Avenue N.

The map below highlights these four sections of the corridor:



Considering these four unique sections along the 145th Street corridor, system alternatives, or study concepts, were developed to maintain continuity for the travel modes within each study concept. Staff also asked the City’s advisory teams (ITT and CATF) to weigh in on what system alternatives would be appropriate to study within each of these four sections. Using this feedback, the City’s consultant team and City staff developed three draft study concepts (in addition to a No-Action Option) to carry forward for evaluation, for a total of four study concepts.

The four study concepts were evaluated against the project goals and evaluation criteria. These four study concepts were presented at the second Corridor Study Open House, held on September 30, 2015.



Feedback collected from the second Open House was carefully evaluated, and the general themes that emerged are as follows:

- Strong recognition that the corridor is not working for all users and most notably pedestrians and transit;
- Strong interest in bringing improvements to the corridor while recognizing improvements will likely affect properties along the corridor; and
- A desire to minimize impacts if possible.

In close coordination with the ITT and CATF and based on the evaluation of study concepts against the goals of the project and feedback from project stakeholders, including the City Council and partner agencies, staff developed the Preferred Design Concept for the corridor. The Preferred Design Concept was shared with the public at the third and final Corridor Study Open House, which was held on February 24, 2016.

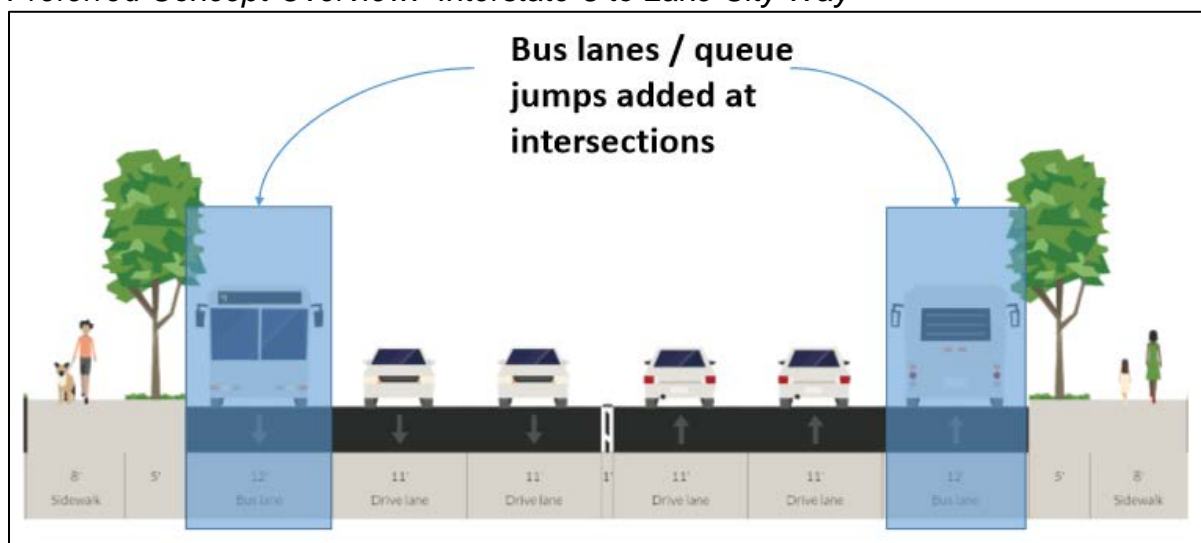
DISCUSSION

The Preferred Design Concept is described in detail below by corridor section. In summary, the Preferred Design Concept reflects a strategy to maximize benefits in terms of meeting project goals, while minimizing costs impacts and effects on properties. The Preferred Design Concept is a vision for multimodal transportation improvements that reflects input from the community, the ITT and the CATF.

1. Interstate-5 to Lake City Way (SR-522)

In the Preferred Design Concept, the majority of this section will include two through lanes in both directions with intermittent Bus and Right Turn (BAT) lanes, and widening for left turns at intersections (see cross section below). There will be capacity improvements at intersections with left-turn and right turn lanes, and improved signal timing. In addition, the traffic signals will recognize on-coming buses and adjust signal timing to prioritize the bus movement.

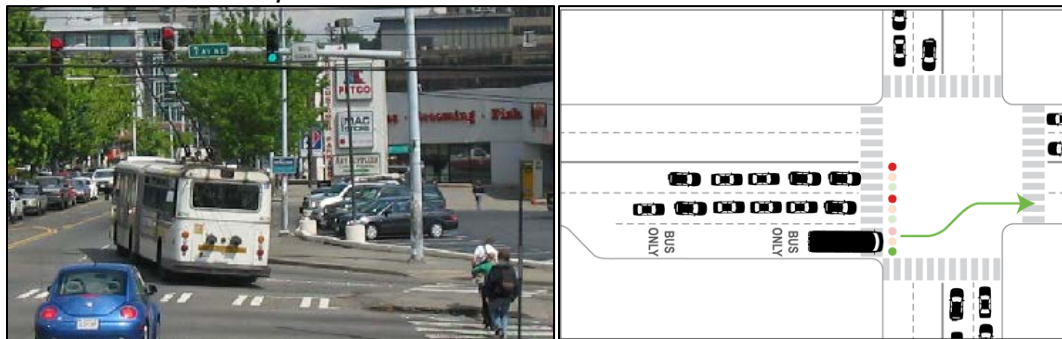
Preferred Concept Overview: Interstate-5 to Lake City Way



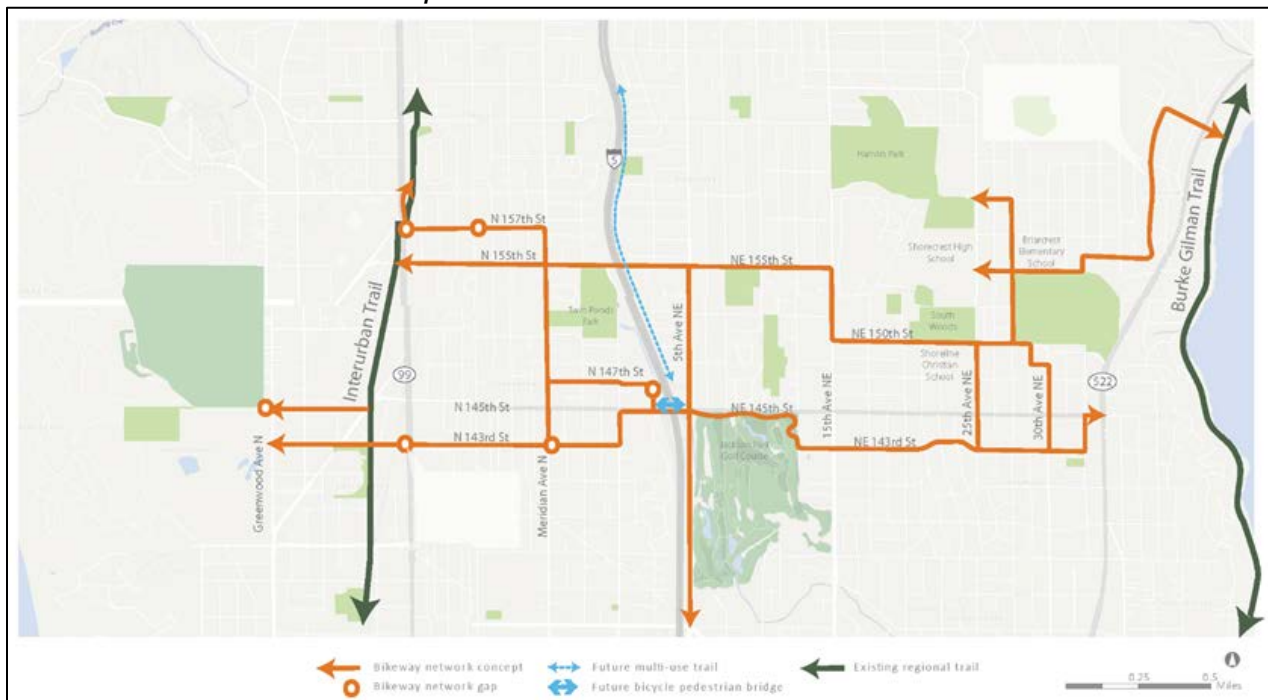
For safety, left-turn access will be limited mid-block. New sidewalks with a landscape buffer will greatly improve pedestrian safety and mobility on 145th Street. This section will include City standard sidewalks, new ADA accessible curb ramps, improved crosswalks and pedestrian countdown signals, and a new midblock crosswalk and pedestrian refuge at 17th Avenue NW. It will be supportive of High Capacity Transit (HCT) through a combination of traffic signal queue-jumps, intermittent BAT lanes, transit signal priority (TSP), new wheelchair accessible bus stops, and continuous sidewalks to support pedestrian connections.

Transit queue jumps (illustration below) allow a bus to get around and jump ahead of backed up through traffic at a signalized intersection. Bicycle connections will be strengthened on an off-corridor bike network (network map below) from the Burke-Gilman Trail to the Interurban Trail, which will provide a parallel route to connect the future light rail station. Enhancing the bike network off the 145th Street corridor allows for safe bike use and minimizes impacts to properties.

Transit Queue Jump Illustration

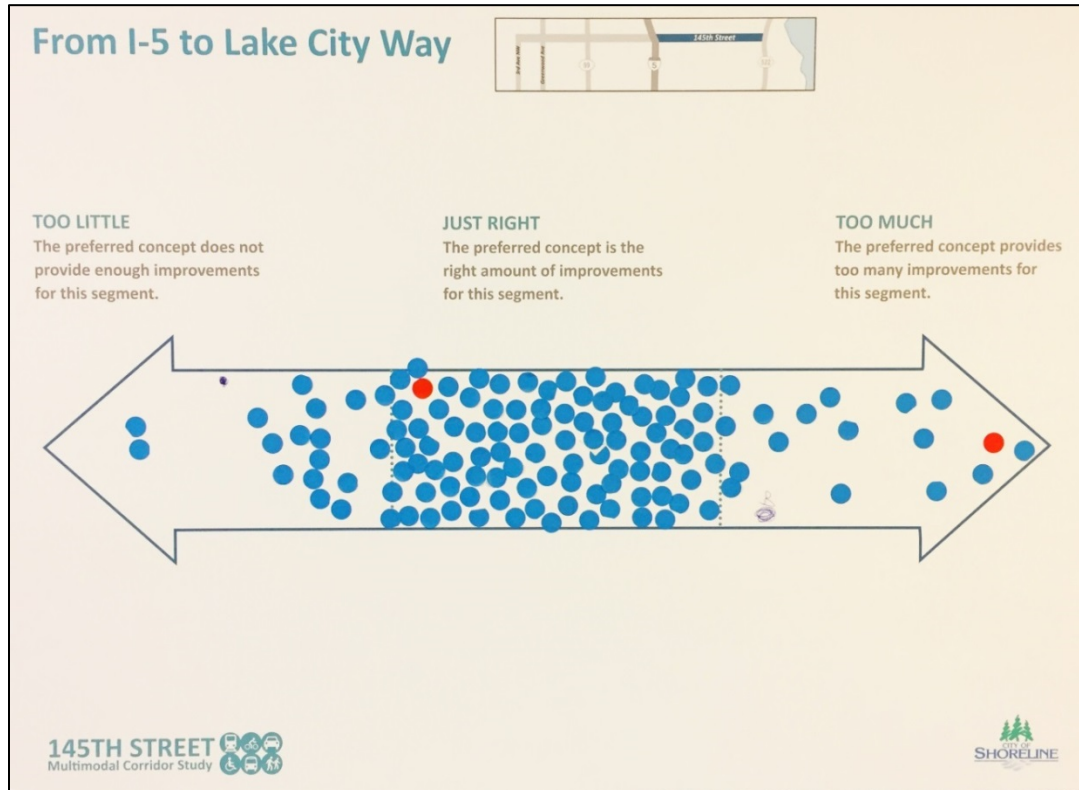


Off-Corridor Bike Network Map



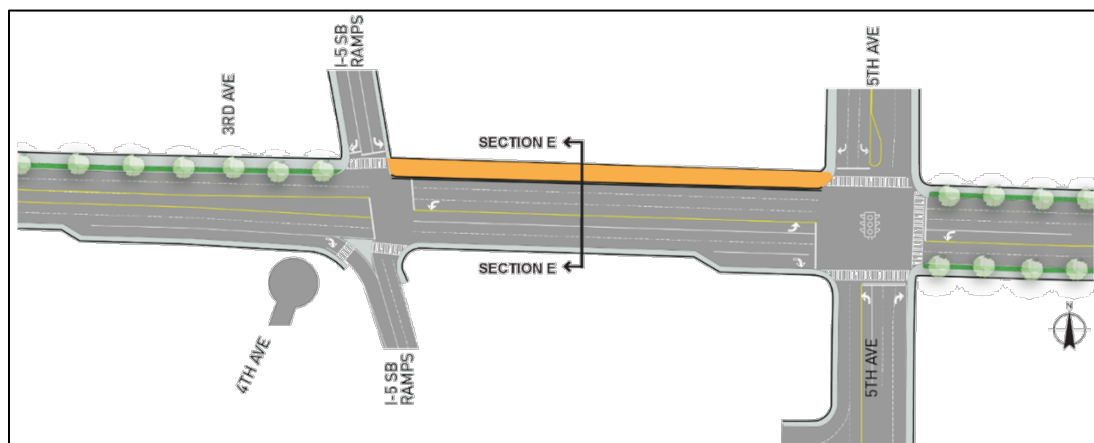
February 24 Open House Results

At the third Open House, staff asked the participants to weigh in on the Preferred Design Concept for this section and how well it achieves project benefits while balancing impacts and costs. The results are shown below. In summary, 86% of participants believe the Design Concept for this section is “just right” or does not go far enough in providing improvements.

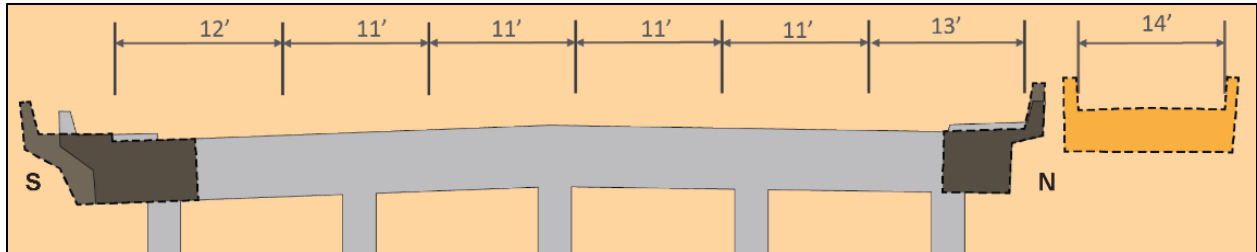


2. Interstate-5 Interchange

Within the Interstate-5 interchange area, staff worked with the Washington State Department of Transportation (WSDOT) to develop a Preferred Design Concept that will improve mobility and safety for all transportation modes. The 145th Street bridge over Interstate-5 is currently five (5) lanes. The concept proposes to modify the bridge to provide for six (6) lanes.



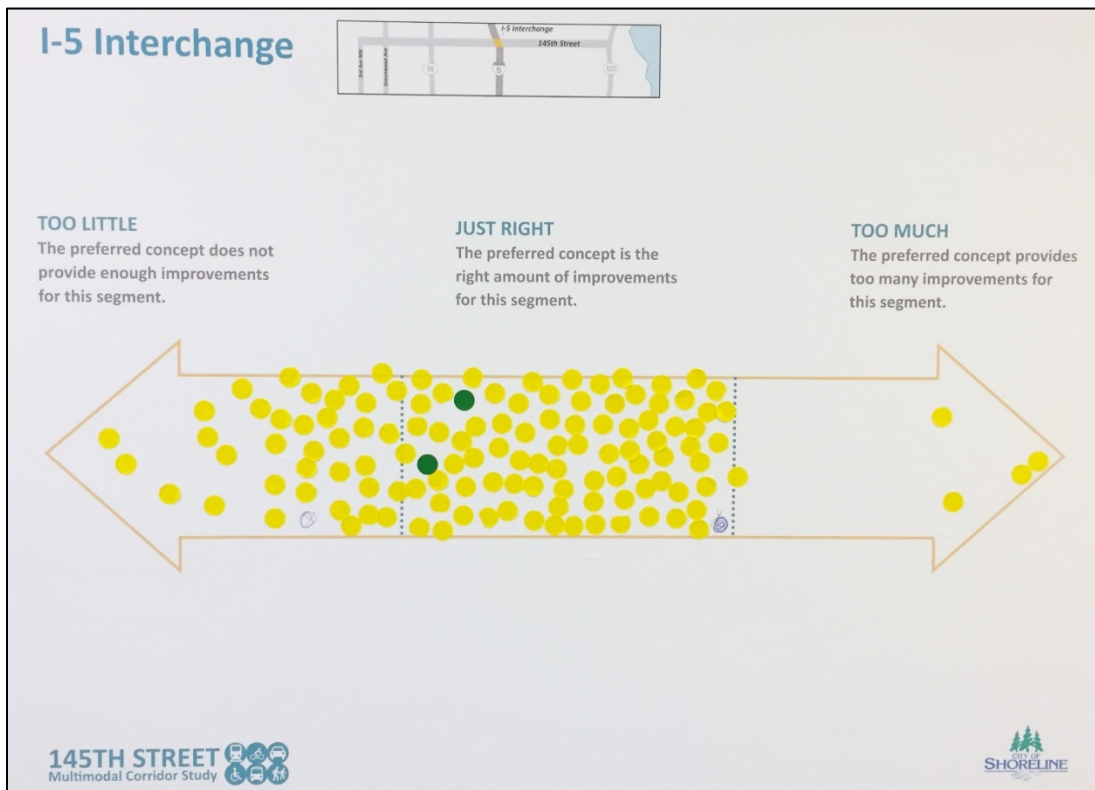
This allows more left-turn storage, which will improve the east-west traffic flow. In addition, the Preferred Design Concept proposes an eastbound 145th Street to northbound Interstate-5 button hook ramp so that vehicles will be able to turn right and loop under the bridge to access Interstate-5 northbound, which will help traffic flow considerably. A new non-motorized bridge will be located on the north side of 145th Street that will tie into the off-corridor bike network and will connect directly to the future light rail station.



Walkways and crosswalks will be fully upgraded to provide ADA accessibility. Traffic signal timing and transit signal priority enhancements will also improve the bus travel through the interchange area.

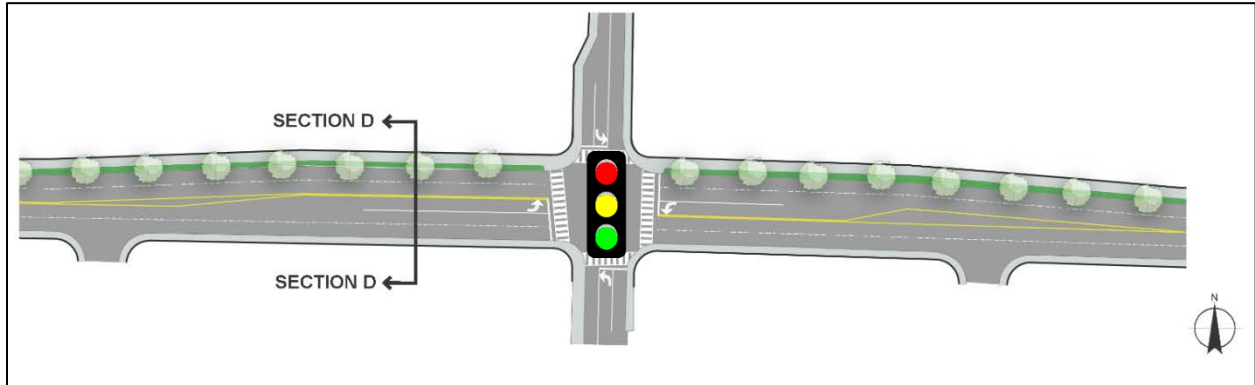
February 24 Open House Results

At the third Open House, staff asked the participants to weigh in on the Preferred Design Concept for this section and how well it achieves project benefits while balancing impacts and costs. The results are shown below. In summary, 96% of participants believe the concept for this location is “just right” or does not go far enough in providing improvements.

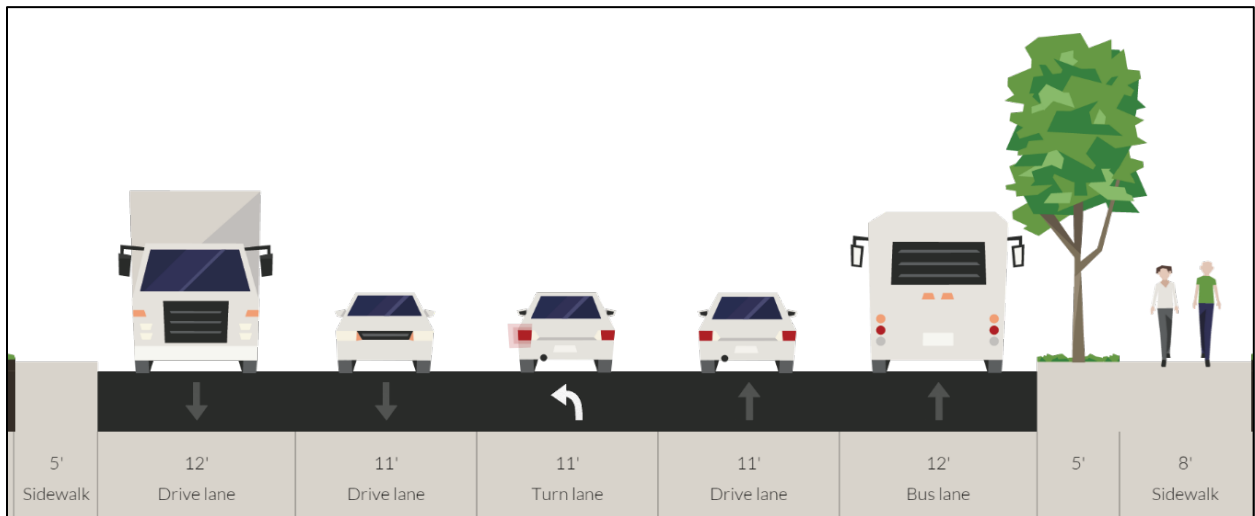


3. Aurora Avenue N to Interstate-5

In this section, the focus is on improving intersections. By improving signalized intersections, including adding left turns and improving signal timing, traffic flow will improve, which will improve speed for buses. A new traffic signal is proposed at Ashworth Avenue, which has the benefit of providing another crossing location for pedestrians.

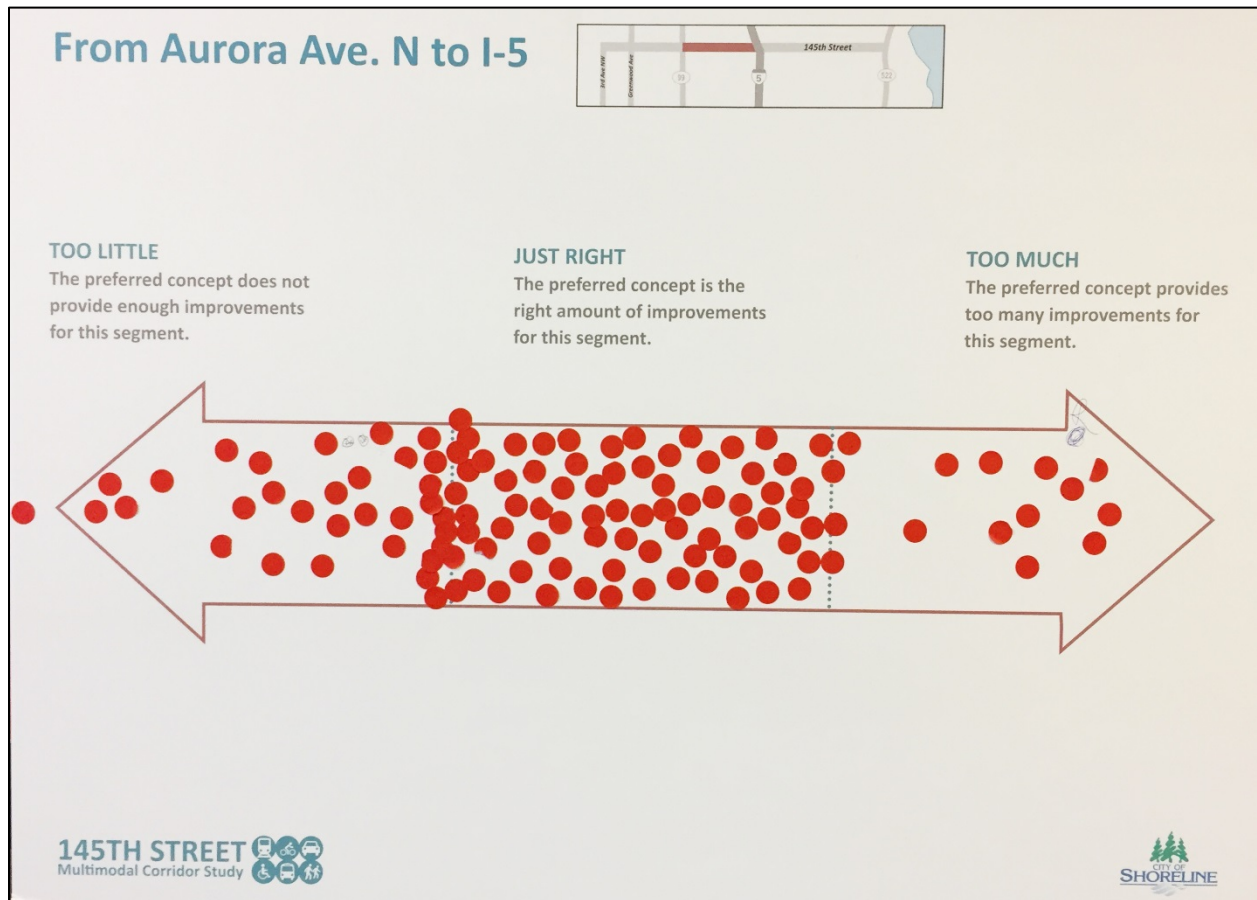


At the intersections where improvements are proposed – 1st Avenue, Meridian Avenue, Ashworth Avenue, and Aurora Avenue - new sidewalks will be implemented that meet City standards. This section will include new ADA accessible curb ramps, improved crosswalks and pedestrian countdown signals. It will be supportive of transit through a combination of capacity improvements, transit signal priority (TSP), new wheelchair accessible bus stops, and ADA accessible sidewalks to support pedestrian connections. Bicycle connections will be strengthened on the off-corridor network from the Interurban Trail to the future light rail station.



February 24 Open House Results

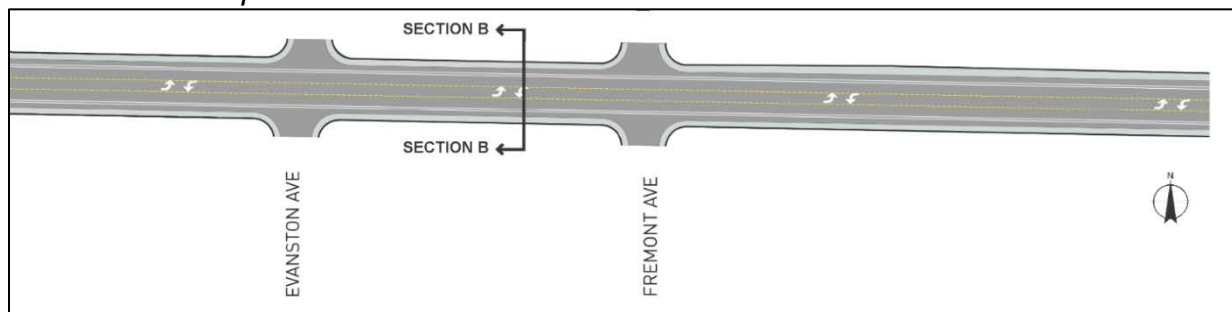
At the third Open House, staff asked the participants to weigh in on the Preferred Design Concept for this section and how well it achieves project benefits while balancing impacts and costs. The results are shown below. In summary, 89% of participants believe the concept for this location is “just right” or does not go far enough in providing improvements.

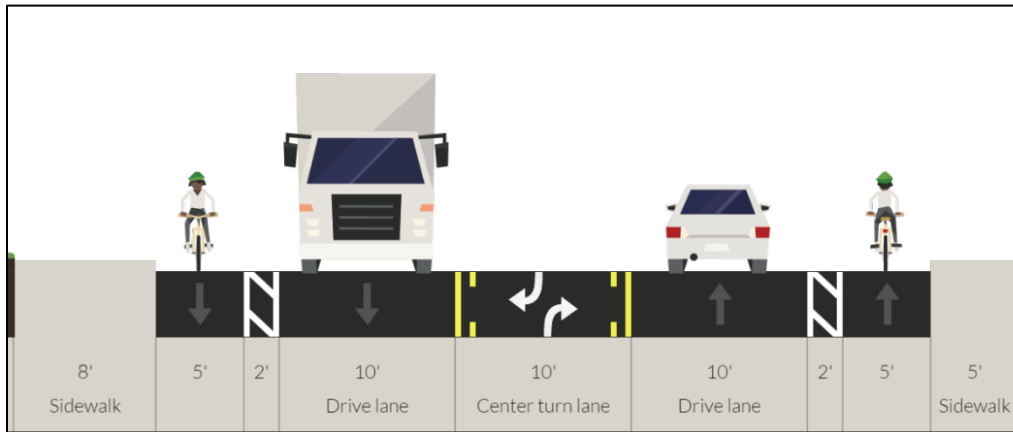


4. 3rd Avenue NW to Aurora Avenue N

The Preferred Design Concept in this section will improve signalized intersections by adding left-turn and right turn capacity, improving signal timing, and rebuilding sidewalks to City standards. This includes the intersections of Aurora Avenue, Linden Avenue, and Greenwood Avenue. For the area between Linden Avenue and Greenwood Avenue (see below), traffic volumes in this area are low enough that a three lane section will function better than the existing four lanes. This concept provides a center turn lane to allow turning vehicles to get out of the through lanes, which reduces friction and improves traffic flow in the through lanes. A three lane section improves safety for pedestrians because it moves cars further away from the sidewalks and three lanes are safer to cross than four traffic lanes. In addition, three lanes provide room to include buffered bike lanes on the street from Greenwood Avenue to Linden Avenue which connect to the Interurban Trail.

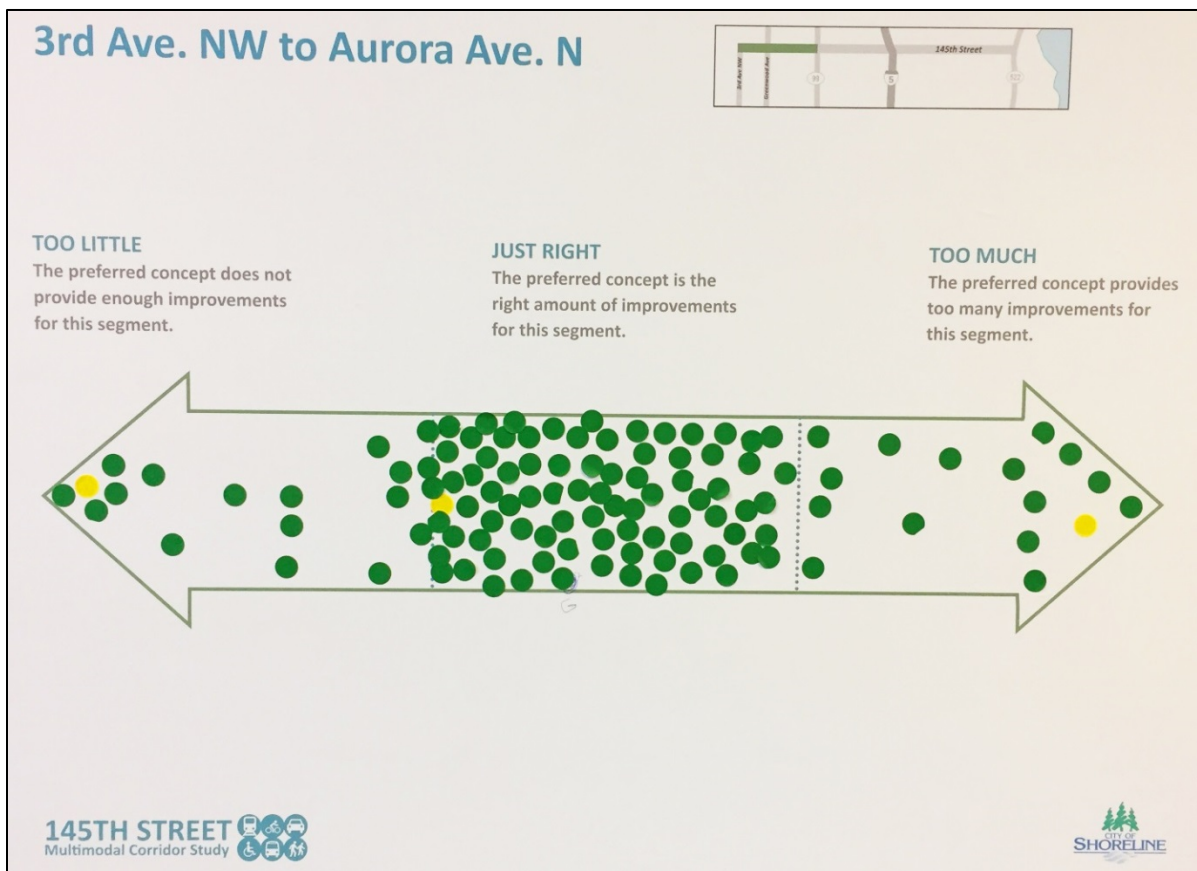
Preferred Concept Overview: Linden Avenue to Greenwood Avenue





February 24 Open House Results

At the third Open House, staff asked the participants to weigh in on the Preferred Design Concept for this section and how well it achieves project benefits while balancing impacts and costs. The results are shown below. In summary, 86% of participants believe the concept for this location is “just right” or does not go far enough in providing improvements.



Comparison of Possible Property Impacts and Costs

The following tables provide a comparison of the possible property impacts of the study concepts and the Preferred Design Concept for three of the corridor sections (the Interstate-5 Interchange is not included). The possible impacts include:

- **Right-of-way (ROW) Impacts** indicate the total area of new ROW acquisition required in addition to full parcel acquisition.
- **Total Acquisitions** indicate the number of parcels that will need to be completely acquired to construct the design concept
- **Parcel Impacts** indicate the number of parcels that will be affected by ROW acquisition, both partial and full.
- **Total Number of Parcels** indicates the total number of parcels adjacent to that section of the corridor.

Interstate-5 to Lake City Way (SR522)				
	Study Concept 2	Study Concept 3	Study Concept 4	Preferred Concept
ROW Impacts (ft ²)	77,500	144,000	150,000	130,000
Total Acquisitions	17 (14%)	55 (47%)	70 (58%)	21 (17%)
Parcel Impacts	82 (68%)	120 (100%)	120 (100%)	100 (83%)
Total Number of Parcels	120	120	120	120

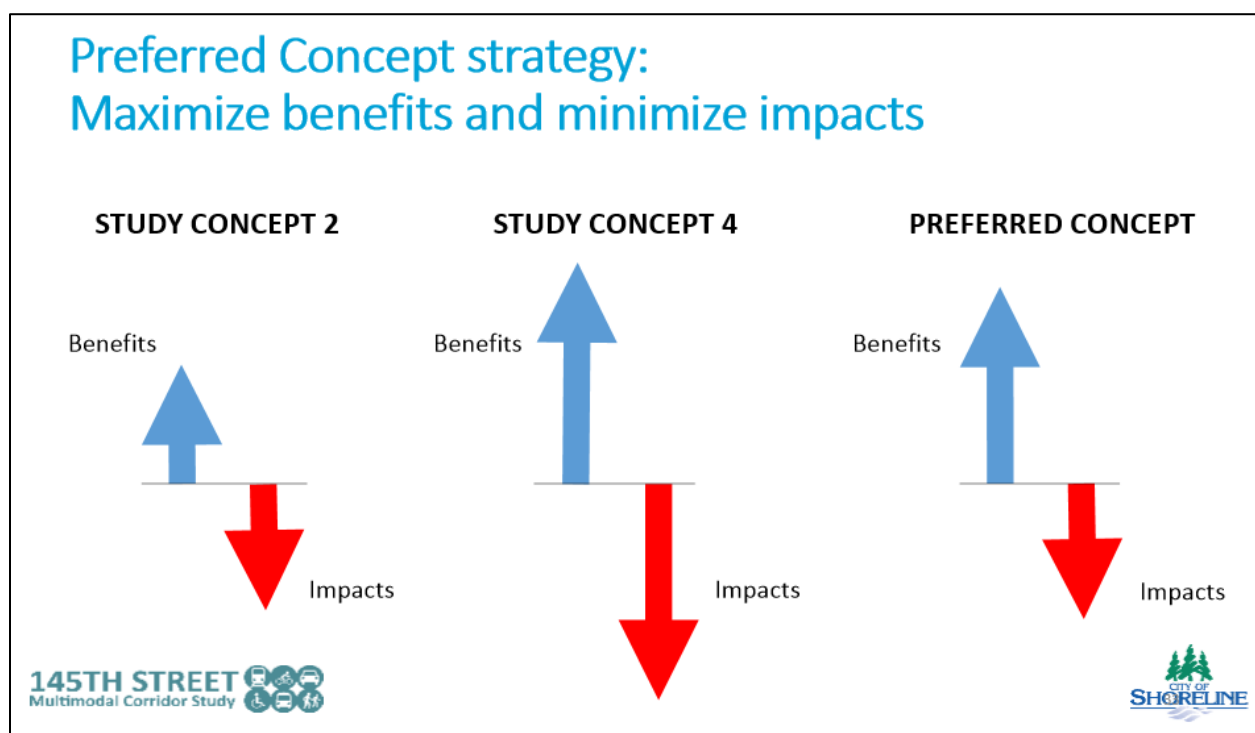
Aurora Avenue N to Interstate-5				
	Study Concept 2	Study Concept 3	Study Concept 4	Preferred Concept
ROW Impacts (ft ²)	48,000	71,000	52,000	15,000
Total Acquisitions	23 (24%)	40 (42%)	65 (68%)	22 (23%)
Parcel Impacts	63 (66%)	96 (100%)	96 (100%)	44 (46%)
Total Number of Parcels	96	96	96	96

3 rd Avenue NW to Aurora Avenue N				
	Study Concept 2	Study Concept 3	Study Concept 4	Preferred Concept
ROW Impacts (ft ²)	30,000	34,000	44,400	10,000
Total Acquisitions	3 (9%)	3 (9%)	15 (29%)	0 (0%)
Parcel Impacts	26 (71%)	26 (71%)	50 (98%)	11 (22%)
Total Number of Parcels	51	51	51	51

In addition to property impacts, the three study concepts and Preferred Design Concept all have different cost estimates. The table below provides rough cost estimates for the concepts:

Cost Opinion Comparison				
	Study Concept 2	Study Concept 3	Study Concept 4	Preferred Concept
Interstate-5 to Lake City Way	\$53,000,000	\$88,000,000	\$111,000,000	\$82,000,000
Interstate-5 Interchange	\$21,000,000	\$27,000,000	\$50,000,000	\$21,000,000
Aurora Avenue N to Interstate-5	\$46,000,000	\$66,000,000	\$89,000,000	\$38,000,000
3 rd Avenue NW to Aurora Avenue N	\$24,200,000	\$29,000,000	\$39,800,000	\$9,200,000
Total	\$144,200,000	\$210,000,000	\$289,800,000	\$150,200,000

As can be seen in the property impact tables and cost opinion table above, it should be evident that the Preferred Design Concept reflects a strategy to maximize benefits in terms of achieving project goals while minimizing impacts to properties and costs. The graph comparison below illustrates this strategy and outcome for the Preferred Design Concept.



Next Steps

With Council approval of the Preferred Design Concept, staff will advance project development for improvements on the 145th Street corridor. These actions will include the following:

- **Interstate-5 to Lake City Way:** staff will continue to work with Sound Transit and partner agencies to advocate for this project to be funded through ST3. This section is comparable to one of the ST3 concepts.
- **Interstate-5 Interchange:** staff will continue partnerships with WSDOT, Sound Transit, and the Seattle Department of Transportation (SDOT) to capitalize on the momentum for this project. Staff will pursue funding for this project with the goal of having the improvements completed before the opening of the light rail station. The City is requesting funds for the interchange work.
- **Aurora Avenue N to Interstate-5:** staff will advance this section through final design funded by a Puget Sound Regional Council Countywide grant. Staff will continue to pursue funding for ROW acquisition and construction of this section with granting agencies.
- **3rd Avenue NW to Aurora Avenue N:** staff will work with SDOT and the City of Seattle to develop this project.
- **Off-corridor Bike Network:** staff will work closely with SDOT to develop this project.

STAKEHOLDER OUTREACH

As noted earlier, the City held three very well-attended and successful open houses on the 145th Street Corridor Study. At the second Open House on September 30, 2015, the draft study concepts that had been developed with input from the community and project stakeholders were presented as “bookends” to illustrate the range of possible improvements along the corridor. Many of the attendees, while supportive of the overall improvements, expressed concern over impacts to individual properties along the corridor, where many houses, buildings, and other structures are very close to the existing right-of-way.

At the third and final open house on February 24, staff presented the preferred concept that, seeks to maximize corridor benefits while minimizing property impacts. As highlighted in this staff report, participants attending this open house were overwhelmingly in support of the Preferred Design Concept.

In addition to the open houses, staff has worked closely and held 12 meetings with the ITT and worked closely and held nine (9) meetings with the CATF throughout this process. Staff also met with 10 neighborhood groups last fall and in early 2016 and hosted three (3) property owner meetings before the third open house.

RESOURCE/FINANCIAL IMPACT

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ATTACHMENTS

Attachment A – Project Schedule

