Item No. 4(c)
April 14, 2014

CITY COUNCIL STUDY SESSION ITEM

SUBJECT:
Bellevue Transit Master Plan – Draft Transit Capital Vision Report

STAFF CONTACT:
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Transportation Department

FISCAL IMPACT:
The Transportation Commission's Draft Transit Capital Vision Report presents the types of infrastructure improvements needed to realize a Frequent Transit Network that is: "Efficient, useful, attractive service for most people, to most destinations, most of the time, serving maximum ridership." The Draft Report investments reflect planning level cost estimates and will require additional project-level analysis to verify the fiscal impact of undertaking the full-range of projects reflected in this document. The capital improvements identified in the plan will be implemented incrementally over time along with street projects through Bellevue's Capital Improvement Program, coordinated with transit service and facility improvement efforts by King County Metro and Sound Transit, and/or submitted for future grant funding opportunities.

POLICY ISSUES:

Comprehensive Plan:
Bellevue's Comprehensive Plan acknowledges that responding to anticipated growth in travel necessitates a multi-modal transportation solution that offers the public real choices about how they travel within, to, and through Bellevue. Comprehensive Plan Policy TR-50 recognizes the need to "Work with transit providers to implement the Bellevue Transit Plan as an attractive travel option for local residents, employees, students, visitors, businesses and other users of regional facilities."

Bellevue Transit Plan:
On June 2, 2003 Council adopted the Bellevue Transit Plan (Resolution No. 6859). The 2003 Plan was a major step forward in articulating what improvements are needed in transit service and capital investments throughout Bellevue and served as an important reference document for collaborations with the City's transit service providers. The service and capital partnerships resulting from this vision have enhanced transit's role in Bellevue.

Bellevue Transit Master Plan:
On July 9, 2012 Council initiated the Bellevue Transit Master Plan (TMP), an update of the City's 2003 Transit Plan. The TMP is being overseen by the City's Transportation Commission whose work is guided by Council-approved project principles (see Attachment 1) and input from members of the Planning, Arts, and Human Services Commissions and the Parks and Community Services Board. The TMP scope of work comprises three major elements (Service, Capital, and Policy) supported by extensive outreach and data-driven technical analysis.

DIRECTION NEEDED FROM COUNCIL:

___ Action
_X_ Discussion
_X_ Information

On April 14, 2014 representatives of the Bellevue Transportation Commission (Scott Lampe, Vic Bishop, Francois Larrivee, and Janice Zahn) and staff will present Council with the Commission's Draft Transit Capital Vision Report. No Council action is sought at this time.

BACKGROUND:

On April 14, 2014 staff and members of the Bellevue Transportation Commission will present Council with the Transportation Commission's Draft Transit Capital Vision Report. This document compliments the Bellevue Transit Service Vision Report (available in Council Office). Informed by public input, technical studies, and market analyses, the Transportation Commission's Draft Capital Vision Report considers the various types of infrastructure that support productive, accessible, efficient transit services in Bellevue and recommends investments that would help the City realize its proposed 2030 Frequent Transit Network, thereby enabling more people to reach more destinations in less time.

What is Bellevue's Transit Service Vision Report?

Council's project principles for the TMP direct staff and the Commission to formulate a transit service vision that considers three distinct funding scenarios (reduced, stable, and growing resources) for three time horizons (2015, 2022, and 2030). On May 20, 2013, Council approved a set of service-oriented strategies that lead to a vision of "Abundant Access" which means guiding additional transit service to/from Bellevue's major activity centers where transit demand is high and expected to increase in the future. Consistent with this guidance, the Bellevue Transit Service Vision Report details route-level recommendations for nine funding/time-horizon scenarios that align with the TMP's vision statement and service-oriented strategies.

What is the Frequent Transit Network (FTN)?

The desired end state of Bellevue's 2030 service vision is a Frequent Transit Network (FTN) that is: "Efficient, useful, attractive service for most people, to most destinations, most of the time, serving maximum ridership." The FTN supports Downtown growth, Bel-Red corridor redevelopment, and Bellevue's other activity centers with well-connected bus routes that seamlessly interface with East Link light rail. The FTN is also where capital investments need to be focused to serve the most riders and provide the highest quality of service to people who travel to/from or within Bellevue.

How did the Transportation Commission develop the Draft Capital Vision Report?

On November 12, 2013 Transportation Commissioners and staff received Council feedback and general consensus on four draft capital-oriented strategies that recognize that "encouraging long-term ridership growth" (Council Project Principles) in Bellevue necessitates both transit service enhancements paired with the City's commitment to a supportive land use environment, pedestrian and bicycle amenities, and transit speed and reliability infrastructure. The result of this partnership will be a more productive transit network for the benefit of transit agencies and City customers. Council input on the capital-oriented strategies informed the Transportation Commission's approach to identifying locations and corridors that warrant speed and reliability, route facility, pedestrian and bicycle enhancements to support efficient and effective transit operations.

On November 14, 2013 Bellevue staff released the Draft Capital Element Background Report which included a preliminary list of potential projects to improve bus speed and reliability on FTN corridors referenced in Bellevue's Transit Service Vision Report. Preliminary project descriptions and visualizations provided Transportation Commissioners and other interested stakeholders with an opportunity to review and comment on the potential improvements being considered. Over the course of four Commission meetings, staff responded to requests for additional information on many of the projects contained in the Draft Capital Element Background Report. During this evaluative stage, a number of suggested projects were eliminated from further consideration due to one or more 'fatal flaws' identified. The Transportation Commission prioritized the remaining projects with a high, medium, or low ranking based on an appraisal of which of these improvements are most supportive of the FTN's goal of enabling more people to reach more destinations in less time.

What is the Draft Capital Vision Report?

The Transportation Commission's Draft Transit Capital Vision Report (available in Council Office) recognizes that although the City does not operate its own transit service, it has an influence over how well transit services perform along FTN corridors. This includes influencing demand for transit by co-locating appropriate land uses to transit services, connecting pedestrians and bicycles to the transit network, providing convenient, safe, and comfortable transit stops and commuter parking facilities, and maintaining roadways, traffic signals, and other infrastructure that supports efficient and reliable operations. Informed by public input, technical studies, and market analyses, the Commission's Draft Transit Capital Vision Report represents a bold vision supported by practical, achievable strategies in the near term that establish a foundation for longer-term improvements through the 2030 plan horizon year.

What are Transportation Commissioners and staff sharing with Council?

On April 14, 2014 representatives of the Bellevue Transportation Commission and staff will present Council with a brief overview of the Commission's Draft Transit Capital Vision Report. Most of the presentation will center on the Transit Running Way section of the document that identifies 107 candidate roadway, signal system, and other right-of-way improvements. All of the projects have been ranked as high, medium or low priority depending on the value they bring to improving transit speed and reliability along FTN corridors.

Commission and staff will also review the ranking methodology and representative projects with Council, in addition to highlighting some of the other Draft Capital Vision Report recommendations related to bus shelters, layover facilities, pedestrian and bicycle infrastructure, and commuter parking facilities. Still, all of these projects will remain conceptual, and the final details of design will be developed as the projects proceed further along in the implementation process.

Of particular note, Commissioners regard leased lot arrangements between King County Metro and faith communities (i.e., churches) as an immediate and relatively inexpensive method to improve access to the FTN and mitigate deficits in the availability of commuter parking stalls in Bellevue. Preliminary estimates suggest that an estimated 3,500 potential commuter parking stalls are within a one-quarter mile distance of Bellevue's FTN.

NEXT STEPS:

At tonight's meeting the Transportation Commission and staff seeks Council feedback on the Draft Transit Capital Vision Report. No formal Council action is sought at this time. On May 19, 2014 staff will present Council with a Draft Transit Master Plan that merges the three major

service, capital, and policy elements of this project. This will be another opportunity for Council feedback prior to Plan adoption. After a public hearing (SEPA requirement) held before the Transportation Commission on June 26, 2014, staff will return to Council on July 7, 2014 seeking formal Council adoption of the Bellevue Transit Master Plan. Upon acceptance, the TMP will inform the region's transit service providers of Bellevue's priorities.

ATTACHMENTS:

1) Council Project Principles
2) Transit Capital Vision Report (Executive Summary)

AVAILABLE IN COUNCIL OFFICE FOR REVIEW:

- Draft Transit Capital Vision Report (March 2014)
- Transit Service Vision Report (October 2013)

Bellevue Transit Master Plan

Project Principles

Approved July 9, 2012

The City Council envisions a fully integrated and user-friendly network of transit services for Bellevue that supports the city's growth, economic vitality, and enhanced livability, and has developed the following set of project principles to direct development of the Transit Master Plan.

1. Support planned growth and development in Bellevue with a bold transit vision that encourages long-term ridership growth.	The dynamic nature of Bellevue's economic expansion requires a bold transit vision supported by practical, achievable strategies in the near term that set a solid foundation for longer term improvements through 2030. The Transit Master Plan should identify, evaluate, and prioritize transit investments that are responsive to a range of financial scenarios (cuts/status-quo/aspirational) and attune to different time horizons (near/mid/long term).
2. Engage community stakeholders in setting the priorities for transit delivery.	A comprehensive public engagement strategy should result in meaningful input on transit services and facilities from a range of stakeholders including residents, businesses, major institutions, neighboring cities, transportation agencies, and others (e.g., community associations, Network on Aging, Bellevue School District, Bellevue College, Chamber of Commerce, Bellevue Downtown Association). Special attention will be required to enlist the participation of "under-represented" communities such as immigrants, low-income and non-native English speakers.
3. Determine where and how transit investments can deliver the greatest degree of mobility and access possible for all populations.	The Transit Master Plan should look to the future and be compatible with Bellevue's land use and transportation plans and the challenges and opportunities of changing demographics, land use characteristics, and travel patterns. Following consultations with the community, demand forecasting, and a review of industry best practices and emerging technologies, this initiative will identify the steps required to create a public transportation system that is easy to use by all people in Bellevue for trips within Bellevue and to regional destinations.
4. Incorporate other transit-related efforts (both bus and light rail) underway in Bellevue and within the region.	The Transit Master Plan should incorporate local and regional transportation projects and plans that have been approved and/or implemented since the Bellevue Transit Plan was adopted in 2003. Transportation system changes include East Link, SR 520 expansion and tolling, and improvements to I-90 and I-405. Planning changes include the updated Bel-Red Subarea Plan, the Wilburton Subarea Plan and the Eastgate/I-90 Land Use and Transportation Project. Through coordination with local and regional transportation plans, the Transit Master Plan should outline a strategy to leverage the investment in public transportation projects to the benefit of Bellevue residents and businesses.
5. Identify partnership opportunities to further extend transit service and infrastructure.	While transit infrastructure is typically funded through large capital funding programs, other less traditional funding mechanisms can be utilized to pay for improvements vital to support transit communities and/or achieve higher transit ridership. The Transit Master Plan should undertake an analysis of partnership opportunities that the City might want to consider with other government organizations (e.g., Bellevue School District, Bellevue College, Metro, Sound Transit), human service agencies, and private corporations, to improve transit service delivery in Bellevue. This analysis will explore alternatives to traditional transit service delivery.
6. Develop measures of effectiveness to evaluate transit investments and to track plan progress.	The Bellevue Comprehensive Plan presently includes the following metrics/benchmarks related to transit: (i) mode split targets within each of the City's Mobility Management Areas [Table TR.1 – Area Mobility Targets]; (2) transit service frequency improvement targets between Downtown, Overlake, Crossroads, Eastgate, and Factoria [TR.8 – 10 Year Transit Vision]; and, (3) guidance found in 44 transit-supportive policies. The Transit Master Plan will revisit these metrics, and where necessary, propose modifications to better reflect present and future conditions.

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TRANSIT CAPITAL VISION REPORT
EXECUTIVE SUMMARY

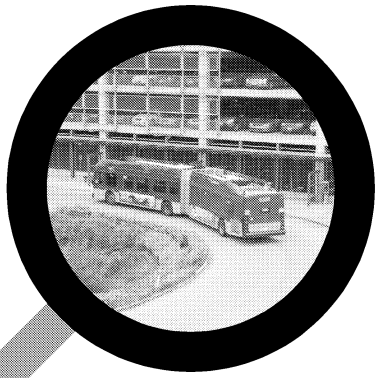
Bellevue Transit Master Plan

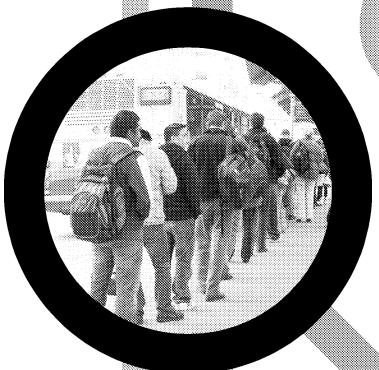
Draft
April 7, 2013

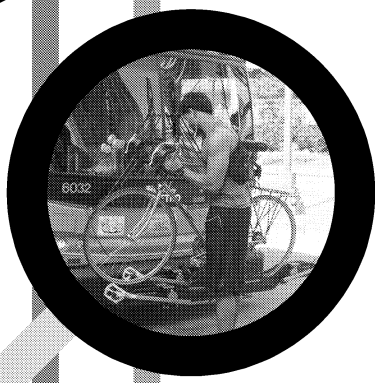
prepared for the
April 14, 2014 meeting of the
Bellevue City Council

CITY OF BELLEVUE
April 2014

Transportation Department







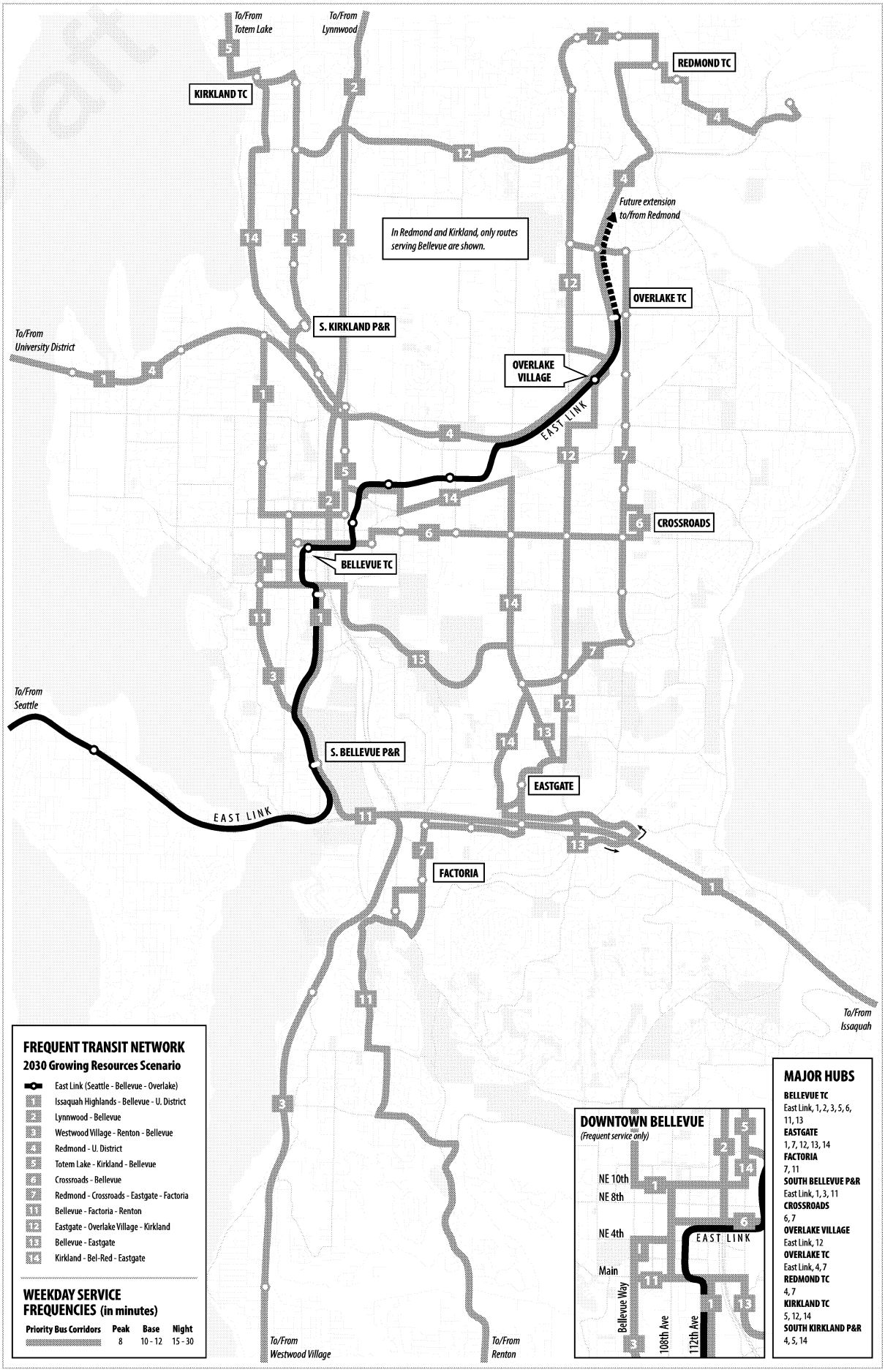


Figure 1 2030 Frequent Transit Network (FTN).

EXECUTIVE SUMMARY

INTRODUCTION

The Bellevue Transit Master Plan (TMP) will establish short- and long-term policies and projects that help foster a high-quality transit system that is more effective at connecting residents, employees, and visitors in Bellevue with the places they want to go. The *Transit Service Vision Report*, published in October 2013, identified where and how frequently service will operate according to three funding scenarios (Growing, Stable, and Reduced) at three time horizons (2015, 2022, and 2030). This *Transit Capital Vision Report* considers the various types of infrastructure that support productive, accessible, efficient transit services in Bellevue and recommends investments that would help the City realize its proposed 2030 Frequent Transit Network (FTN).

This document is a compilation of several draft reports previously published over the course of the Capital Element planning process, as well as additional, previously unpublished content. The Transit Capital Vision Report thus represents the culmination of that planning effort.

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Purpose

The Transit Capital Vision is the result of an approximately six month-long process undertaken by the Transportation Department following completion of the Transit Service Vision. The Capital Vision seeks to address the variety of means through which the City can positively affect the operation and user experience of transit within Bellevue. While the City of Bellevue does not operate its own bus system, it must play a critical role in ensuring that high quality transit is available to keep Bellevue moving. Specifically, the City's authority is to:

- Manage street rights-of-way on which transit operates. By investing in state-of-the-art adaptive traffic signal systems with transit signal priority, Bellevue reduces transit vehicle delay, travel time, and the number of stops on city streets.
- Develop and manage sidewalks and bicycle facilities. By creating accessible communities that seamlessly integrate the pedestrian, bicycle, and transit networks Bellevue increases the market demand for public transportation.
- Set land use policies. By creating vibrant concentrations of retail, office, service, residential, and recreational activity, Bellevue ensures that the greatest possible number of residents and employees have access to high quality transit.
- Use transit as a tool to support the Bellevue Comprehensive Plan. By adopting transit supportive policies, Bellevue has clarified its commitment to public transportation as part of a balanced strategy to improve mobility and meet sustainability and economic development goals.
- Advocate for Bellevue residents and businesses in regional forums. By working with residents and businesses to identify the City's transit needs, Bellevue has been successful in identifying and attracting new transit investments.

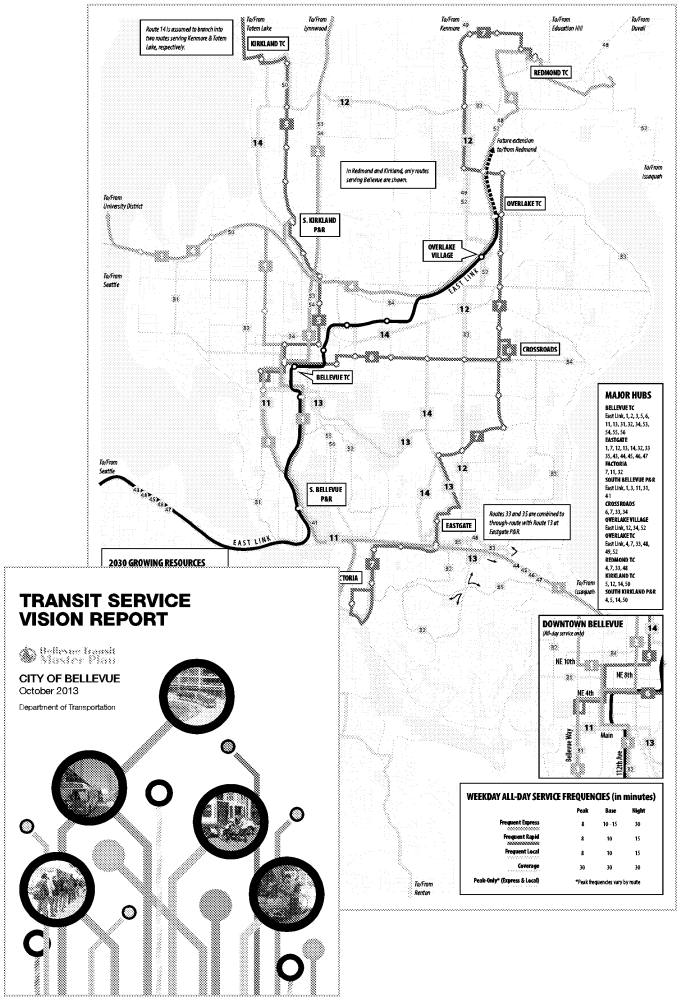

Figure 2 The *Transit Service Vision Report* presents route-level recommendations for transit in Bellevue that are responsive to three financial scenarios and attune to three time horizons. The 2030 Growing Resources Network (pictured above) is the most optimistic of the networks presented.

Policy Background

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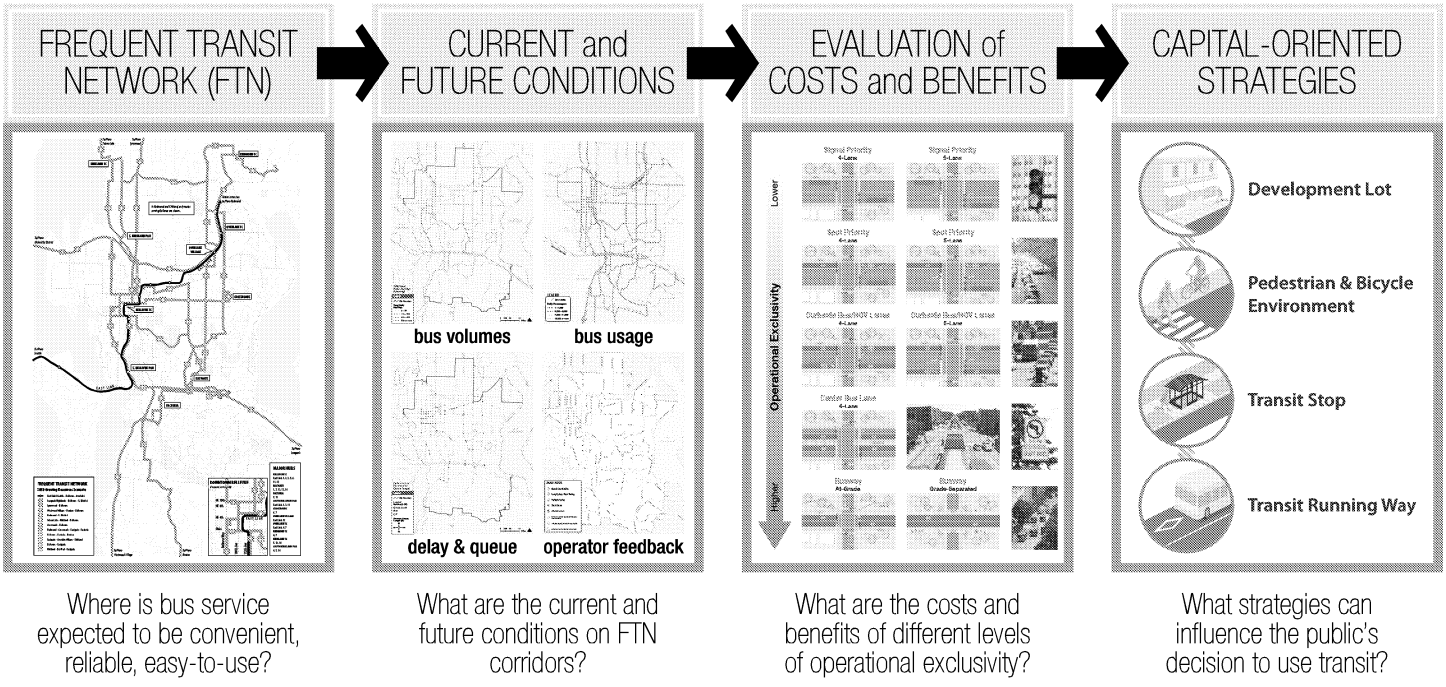
The Bellevue City Council approved the Transit Master Plan Project Principles on July 9, 2012, which represent the Council's priorities for directing development of the Transit Master Plan (see Figure 5 on page 5). The City Council envisions a fully integrated and user-friendly network of transit services for Bellevue that supports the city's growth, economic vitality, and livability.

Bellevue's Comprehensive Plan also acknowledges that responding to anticipated growth in travel necessitates a multi-modal transportation solution that offers the public real choices about how they travel within, to, and through Bellevue. Comprehensive Plan Policy TR-50 directs the Transportation Department to "work with transit providers to implement the Bellevue Transit Plan as an attractive travel option for local residents, employees, students, visitors, businesses and other users of regional facilities." This policy, along with others in the City's Comprehensive Plan, highlights Bellevue's recognition that enabling people to substitute single occupancy vehicle trips for transit

Figure 3 The Transit Master Plan process arrives at capital-oriented strategies based on a detailed review of where bus service is needed to support Bellevue's growing population and an appraisal of what investments can influence the public's decision to use transit.



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trips has the potential to convey multiple public benefits such as: increased transportation options; reduced growth of traffic congestion; decreased air, water, and noise pollution; support for climate change emission reduction goals; and stimulation of the local economy.

Encouraging long-term ridership growth involves building capacity to meet future demand for transit service by: (i) providing service where there is anticipated to be high ridership, typically where there is some mix of: higher residential or commercial density; major activity centers; and, measures that discourage driving, such as limited parking; (ii) building and supporting park-and-ride facilities that help people access the transit system; (iii) improving the way people make transit connections so they can reach more destinations in less time; and, (iv) investing in speed and reliability enhancements such as transit priority measures and bus rapid transit (BRT).

Consistent with guidance from City Council, the Transportation Commission, existing policies, and the framework established by the TMP Service Element, the Capital Element has adopted four Capital-Oriented Strategies that will help to achieve the “Abundant Access” vision (Figure 4).

Figure 4 Four capital-oriented strategies have been defined to help realize the "Abundant Access" vision established by the TMP Service Element.

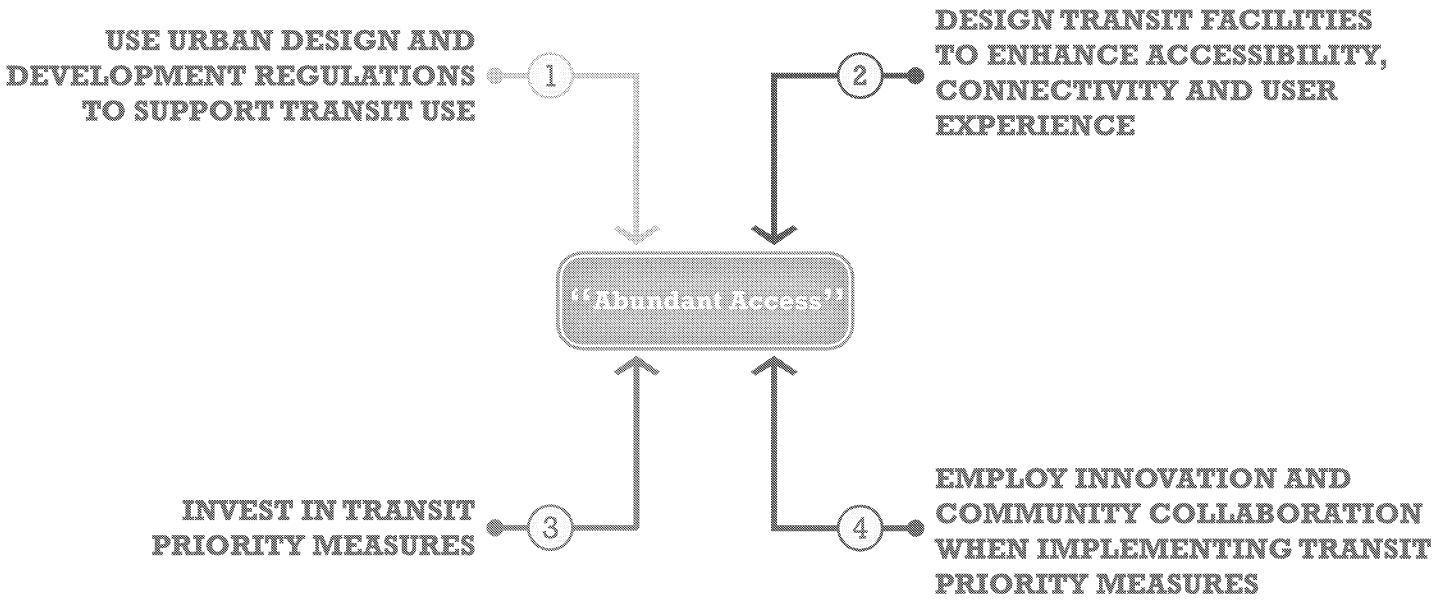

Figure 5 Transit Master Plan Project Principles, approved by the Bellevue City Council, July 9, 2012.

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4. **Incorporate other transit-related efforts (both bus and light rail) underway in Bellevue and within the region.**	The Transit Master Plan should incorporate local and regional transportation projects and plans that have been approved and/or implemented since the Bellevue Transit Plan was adopted in 2003. Transportation system changes include East Link, SR 520 expansion and tolling, and improvements to I-90 and I-405. Planning changes include the updated Bel-Red Subarea Plan, the Wilburton Subarea Plan and the Eastgate/I-90 Land Use and Transportation Project. Through coordination with local and regional transportation plans, the Transit Master Plan should outline a strategy to leverage the investment in public transportation projects to the benefit of Bellevue residents and businesses.
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Figure 6 Themes summarizing the input provided by particpants via keypad polling and discussion at the *Capital & Policy Workshop*.

1 Bellevue faces difficult choices about the use of its limited street right-of-way.

2 "It is neither possible nor desirable to build enough roadway improvements to keep pace with ever accelerating demand for travel in single-occupant vehicles. Rather, the Plan focuses on reducing auto dependency by providing viable travel choices."

3 In principle, high-ridership frequent transit deserves a higher priority than low-occupant private vehicles in access to limited road capacity.

4 Bellevue should manage its arterial travel lanes to maximize the throughput capacity for people rather than vehicles.

5 Transforming high-volume arterials into transit-supportive corridors requires careful and coordinated planning.

6 Bellevue needs to package its transit speed and reliability improvements with supportive land use policies, pedestrian and bicycle amenities, stop/station design, and transportation demand management strategies.

7 Bellevue should make transit the logical choice for a wide range of people and situations, by ensuring reliable operations.

8 Bellevue should consider pursuing bold investments in transit priority on some high-demand corridors by 2030.

9 Bellevue should consider broadening the transit priority toolbox.

Community Input

The Transit Master Plan obtained input from the community through a variety of means, each of which provided direction for the Capital Element planning process. The earliest and most expansive outreach was conducted via the web-based *Bellevue Transit Improvement Survey*, which generated input from over 4,200 respondents, including current riders, former riders, and those who have never used transit in Bellevue. The results of some questions with implications for the Capital Vision are depicted graphically in Figure 7 and Figure 8. In September 2012, participants at the *Transit Master Plan Forum* spoke of the need to make the following types of strategic investments to grow ridership:

- "If you look at the demand for Downtown Bellevue, there's a much greater flow North- South, not East-West. We need Bus Rapid Transit on I-405." – Scott Lampe, Transportation Commission
- "I favor setting up high-ridership corridors for transit that serve high density areas." – Dallas Evans, Parks & Community Services Board
- "Until 2030, we'll just keep getting denser around East Link nodes…. If parking is free, people will use it…. If you don't build the parking, and if you have good transit, people will use it." – Hal Ferris, Planning Commission

The Transportation Department held the joint Board/Commission Capital and Policy Workshop in September 2013 to specifically address capital issues. Workshop participants engaged in a discussion about the appropriate degree to which transit should be given priority over other modes—if at all—and in which situations. This was considered both in terms of the language used in City policies and in relation to transit priority treatments along Frequent Transit Network corridors. Refer to the *Capital & Policy Workshop Report* for additional information.

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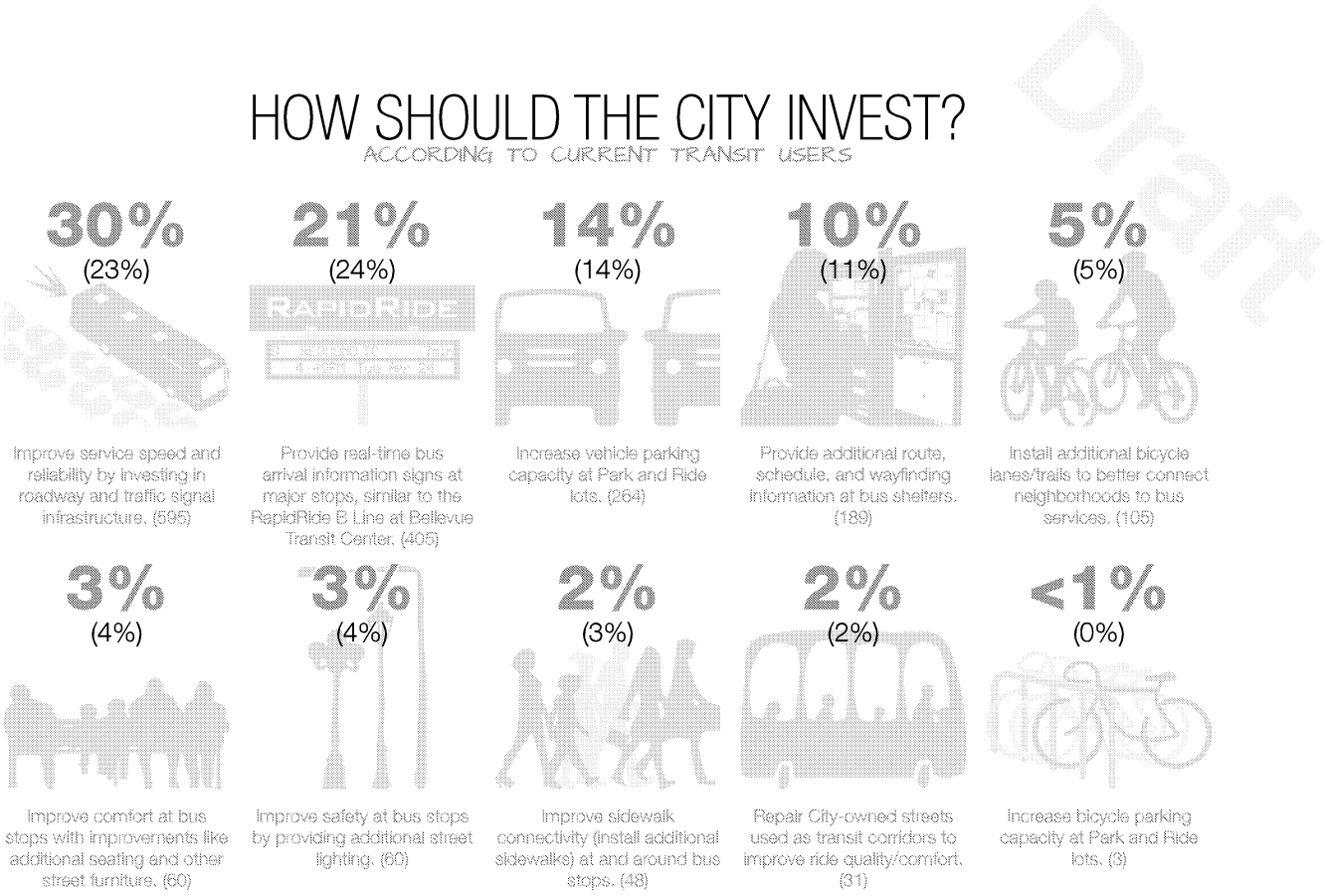

Figure 7 Priorities for municipal investment in transit among those who currently use transit services in Bellevue, according to the Bellevue Transit Improvement Survey. Large blue percentages reflect all current transit users, small black percentages in parentheses reflect all current transit users who reside in Bellevue, and small blue numbers in parentheses following each description reflect the total number of respondents.

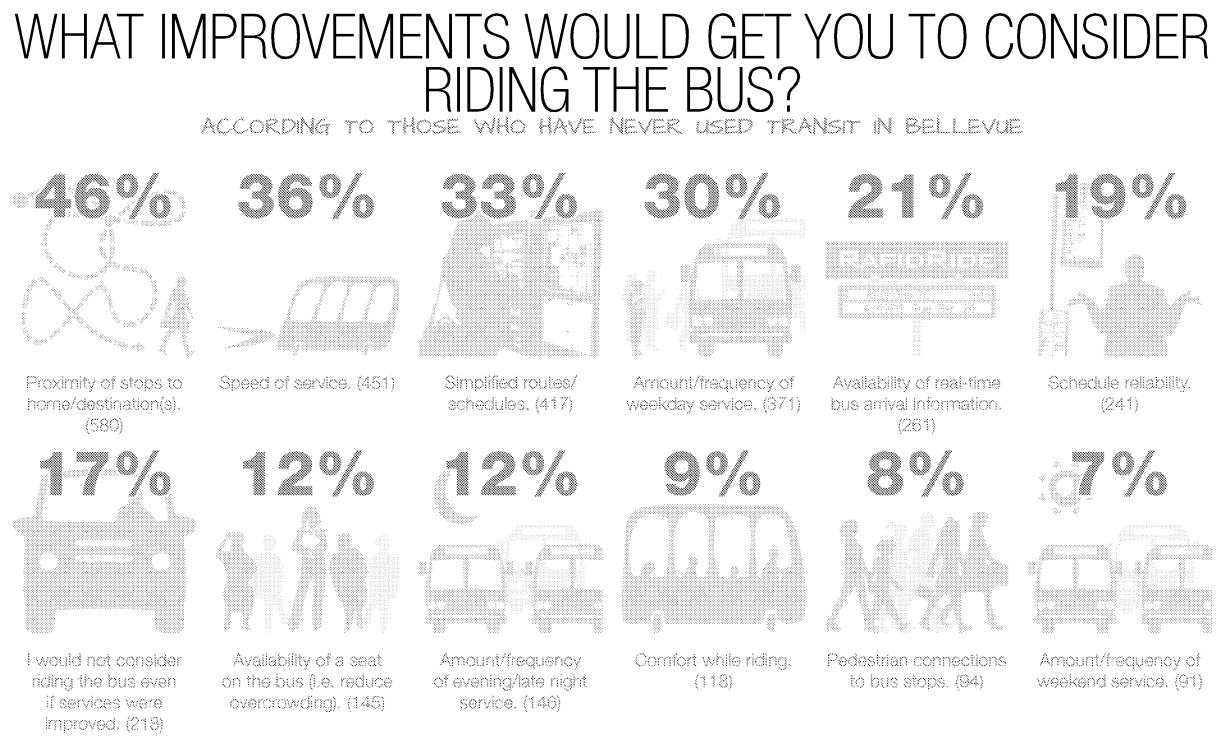

Figure 8 Factors that would encourage those who have never used transit services in Bellevue to consider doing so, according to the Bellevue Transit Improvement Survey. Large blue percentages reflect all current transit users, small black percentages in parentheses reflect all current transit users who reside in Bellevue, and small blue numbers in parentheses following each description reflect the total number of respondents.

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Report Organization

This report is divided into four sections based on the areas over which the City of Bellevue has influence on the attractiveness and performance of transit services locally. Although the City does not operate its own transit service, it has an influence over several important aspects of how well transit services are delivered. This includes influencing demand for transit by co-locating appropriate land uses to transit services, connecting pedestrians and bicyclists to the transit network, providing convenient, safe, and comfortable transit stops, and maintaining roadways, traffic signals, and other infrastructure that supports efficient and reliable operations. All aspects of the transit trip should be designed around the rider. These sections are organized in terms of both increasing specificity to transit operations and in the same order that they are experienced by transit users from the beginning of a transit trip. The following pages provide a brief review of each of the major issues addressed in each of these:

1. **The Development Lot** is where all transit trips begin. This section addresses the relationship between land use and transit services.
2. **The Pedestrian and Bicycle Environment** serves as the primary link between transit users' points of origin and transit services. More direct connections and hospitable facilities encourage greater use of transit.
3. **The Transit Stop** is the first point of contact between the passenger and the transit service. This is where pedestrians, bicyclists, and park-and-ride users transition from their mode of access to transit users.
4. **The Transit Running Way** encompasses the street rights-of-way on which transit services operate. While transit service providers define routes and schedules and operate the vehicles, the city builds and maintains roadway and traffic signal infrastructure, which significantly impact the speed and reliability of transit services.

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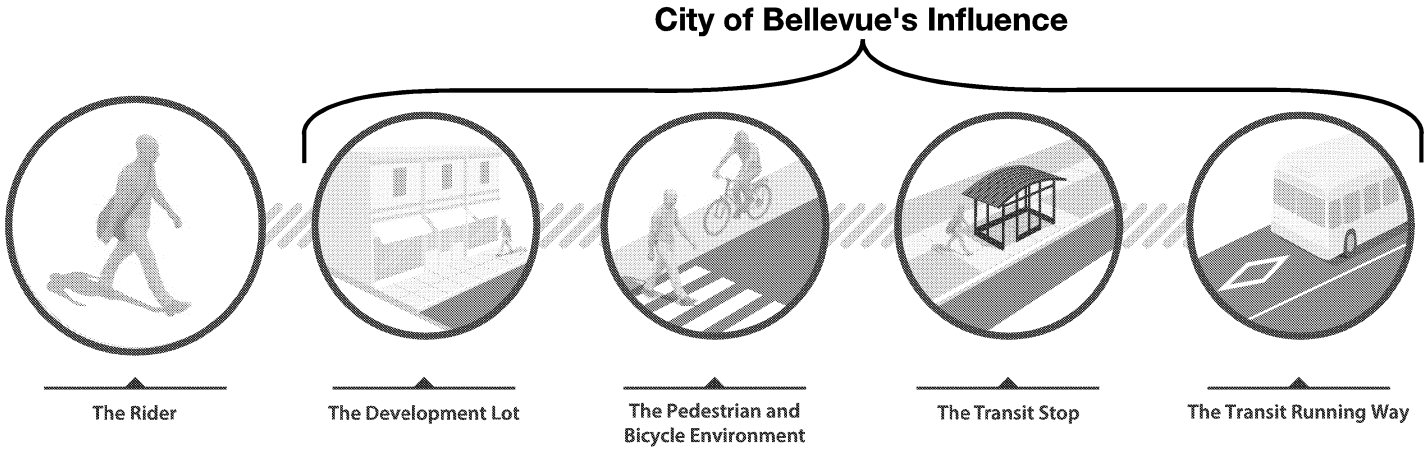
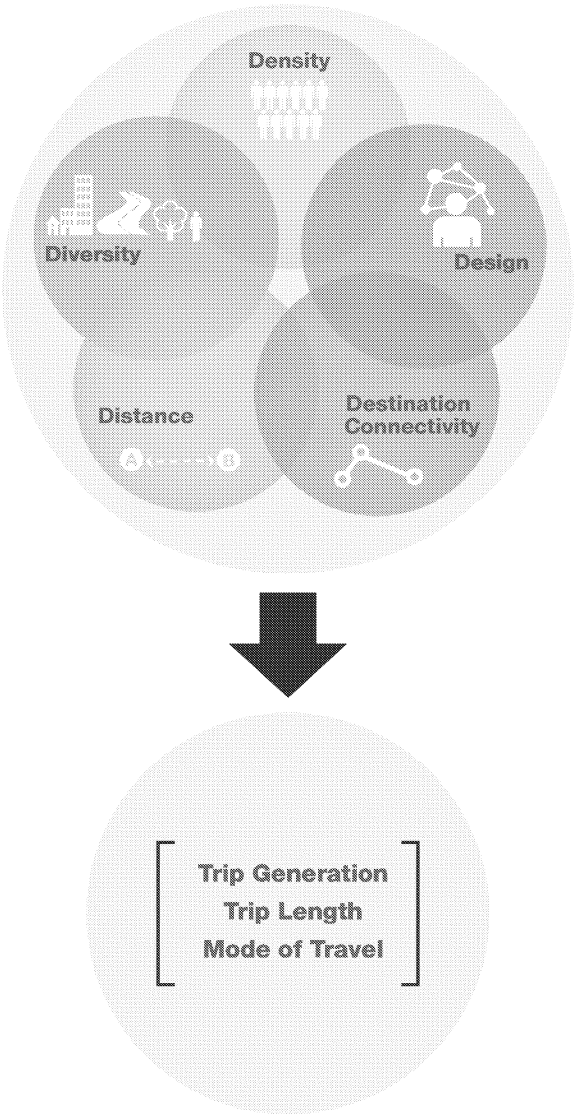
Figure 9 Areas related to transit capital facilities over which the City of Bellevue has influence.



"Better integrating land use and transportation, so that people have more choices in how they move around. This will require better pedestrian linkages for new and existing developments, and a density and mix of land uses that encourage walking and transit in appropriate locations."

- Land Use Element, *City of Bellevue Comprehensive Plan (2004: 35)*

Figure 10 The "5 Ds" of the built environment that can encourage mode shift from single-occupant vehicles (SOVs) to alternatives like public transit.



THE DEVELOPMENT LOT

The Five Ds of the built environment—*density*, land use *diversity*, pedestrian-oriented *design*, *destination* accessibility and connectivity, and *distance* to transit—are commonly cited as the built environment factors that can encourage mode shift from single-occupant vehicles (SOVs) to public transportation, walking, and bicycling. The development lot represents both the origin and destination of every transit trip and relates to the first three Ds. The development lot includes parcels of private property (e.g. housing, offices, commercial services) and public places (e.g. schools, community centers, parks). The density, diversity, and design of these places are influenced by the zoning and subdivision regulations designated in the Comprehensive Plan.

Bellevue is a city with substantial variety in land uses, development types, and urban form. The city's diverse neighborhoods have developed over a period of many decades, each reflecting the prevailing trends and consumer preferences of their time. Residential areas range from low-density single-family subdivisions and equestrian lots to mid- and high-rise apartments and condominiums. Emplyoment centers have developed in several parts of the city, ranging from auto-oriented retail and office park developments with large surface parking lots and building setbacks to the dense, mixed-use, increasingly walkable Downtown core.

Although the character of many areas will generally remain as they are today, particularly Bellevue's established single-family residential neighborhoods, other areas will realize significant changes in the coming years. Bellevue's Comprehensive Plan—currently undergoing its decennial update—notes that a mix of employment and residential uses will continue to concentrate in Downtown, one of the major urban centers in King County. As the city center continues to grow, providing people with

more transportation choices will be a key to realizing the viable, livable, memorable Downtown with a strong and diverse economy that the plan envisions. Additionally, the Bel-Red area, historically the city's warehouse and manufacturing district, is transitioning into an area of mid-rise mixed-use office, retail, and residential land uses, coinciding with the extension of Sound Transit's regional light rail network through the area.

While it is neither necessary nor recommended that all places look and function the same, it is important to recognize that some fundamental characteristics of urban form and site design increase the likelihood that an area will support access to and the operation of transit. The Transit Master Plan "Abundant Access" service vision aims to provide "efficient, useful, attractive service for the most people, to most destinations, most of the time, serving maximum ridership." Thus, while coverage services will be provided to the extent possible with available resources, when trade-offs are required, places that foster productive service are prioritized. For additional information about the service-oriented strategies and future transit networks proposed by the Transit Master Plan, refer to the *Market-Driven Strategies Report* and *Transit Service Vision Report*.

Unlike the other three sections of the Transit Capital Vision Report, that addressing the development lot does not propose new capital projects (like the Transit Running Way), advocate for the prioritization of existing projects (like the Pedestrian and Bicycle Environment), or identify issues warranting additional analysis or work programs (like the Transit Stop). Instead, the Development Lot section acknowledges the important relationship between land use, urban design, and effective transit planning. For more information, refer to the full section on The Development Lot beginning on page 25.

Figure 11 Artist rendering of the future Bel-Red area—a transit-oriented, mixed-use neighborhood following the introduction of East Link light rail in 2023.

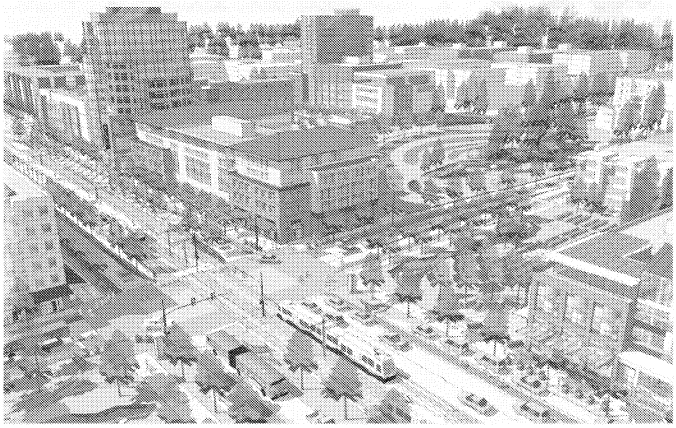
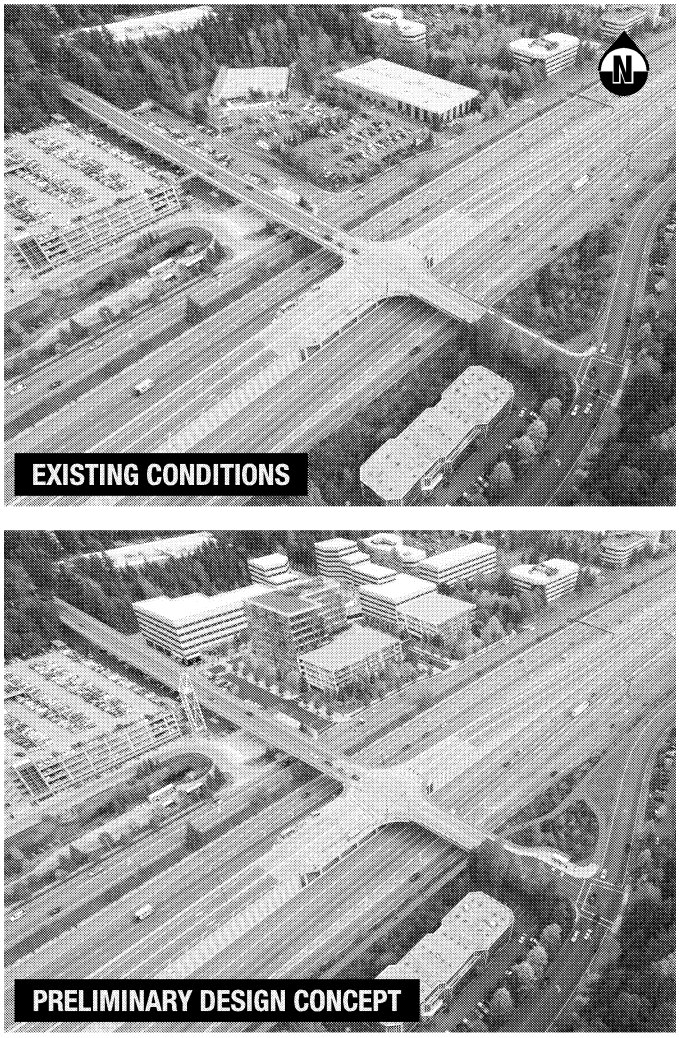


Figure 12 The Bellevue College Connection (Project L27) will contribute to the integration of a balanced transportation system emphasizing transit and non-motorized connectivity with Bellevue College and a cluster of mixed-use residential, retail, and office buildings around a new pedestrian-friendly “main street” envisioned east of the park-and-ride, creating a vibrant urban neighborhood.



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THE PEDESTRIAN AND BICYCLE ENVIRONMENT

A transit system involves the superimposition of two networks: the access network, used by people to reach the system, and the service network provided by bus operators, with the bus stop serving as the point of connection between the two. All transit users are thus pedestrians for some part of their trip. The provision of an accessible pedestrian network is therefore an essential component of a useful transit system. If potential transit users are unable to reach a bus stop easily, quickly, and reasonably directly, they are more likely to consider alternative travel modes if any are available to them.

This section identifies which existing pedestrian and bicycle projects proposed by other planning efforts would specifically improve non-motorized access to transit. Unlike the 'Transit Running Way' section of this report, this section does not propose any new projects, nor does the basic assessment presented here assign any priority ranking (e.g. high/medium/low) to a project for which this has not already been done. This represents only a first-level of screening for identifying pedestrian and bicycle projects that should be considered a priority from the perspective of transit.

In assessing which pedestrian and bicycle projects should be prioritized from the perspective of transit, the projects of interest are those that are proximate to bus stops. For the purposes of this preliminary screening, any project that has some portion within one quarter-mile of an FTN bus stop was selected and identified as being a priority to transit. Those 342 projects are shown in Figure 13 relative to the 2030 FTN service area, and the complete list is provided in Appendix B1. A more detailed analysis leveraging more complex accessibility metrics will propose a means of prioritizing non-motorized projects based on the degree to which they improve one's ability to access transit. For more information, refer to the full section on The Pedestrian and Bicycle Environment, beginning on page 35.

Table 1 Preliminary screening of transit priority pedestrian and bicycle projects.

Project Type	High Priority*		Total Transit Priority Projects	
Sidewalk Projects	89	57.8%	**154**	**45.0%**
Bicycle Projects	48	40.7%	**118**	**34.5%**
Offstreet Path Projects	11	29.7%	**37**	**10.8%**
Trail Projects	18	62.1%	**29**	**8.5%**
Multimodal Intersections	0	0.0%	**4**	**1.2%**
All Projects	166	48.5%	**342**	

Note: Percentages in the center column reflect the number of each project type rated as High Priority. Percentages in the right column reflect the number of total projects of each type.

*Projects rated High Priority by the 2009 Pedestrian-Bicycle Plan project prioritization process.

Table 2 Forecast (2030) populations in Bellevue with access to frequent transit services (15-minute headways or better) based on quarter-mile radial catchment areas.

Funding Scenario	2030 Projections					
	Employment		Household Pop.		Population	
	%	Total	%	Total	%	Total
Growing	82.2%		58.1%		51.2%	
Stable	82.2%	184,300	57.7%	70,300	50.9%	157,400
Reduced	82.2%		57.8%		50.9%	

Note: 2030 projections are based on for

Figure 13 Preliminary transit priority pedestrian and bicycle projects.

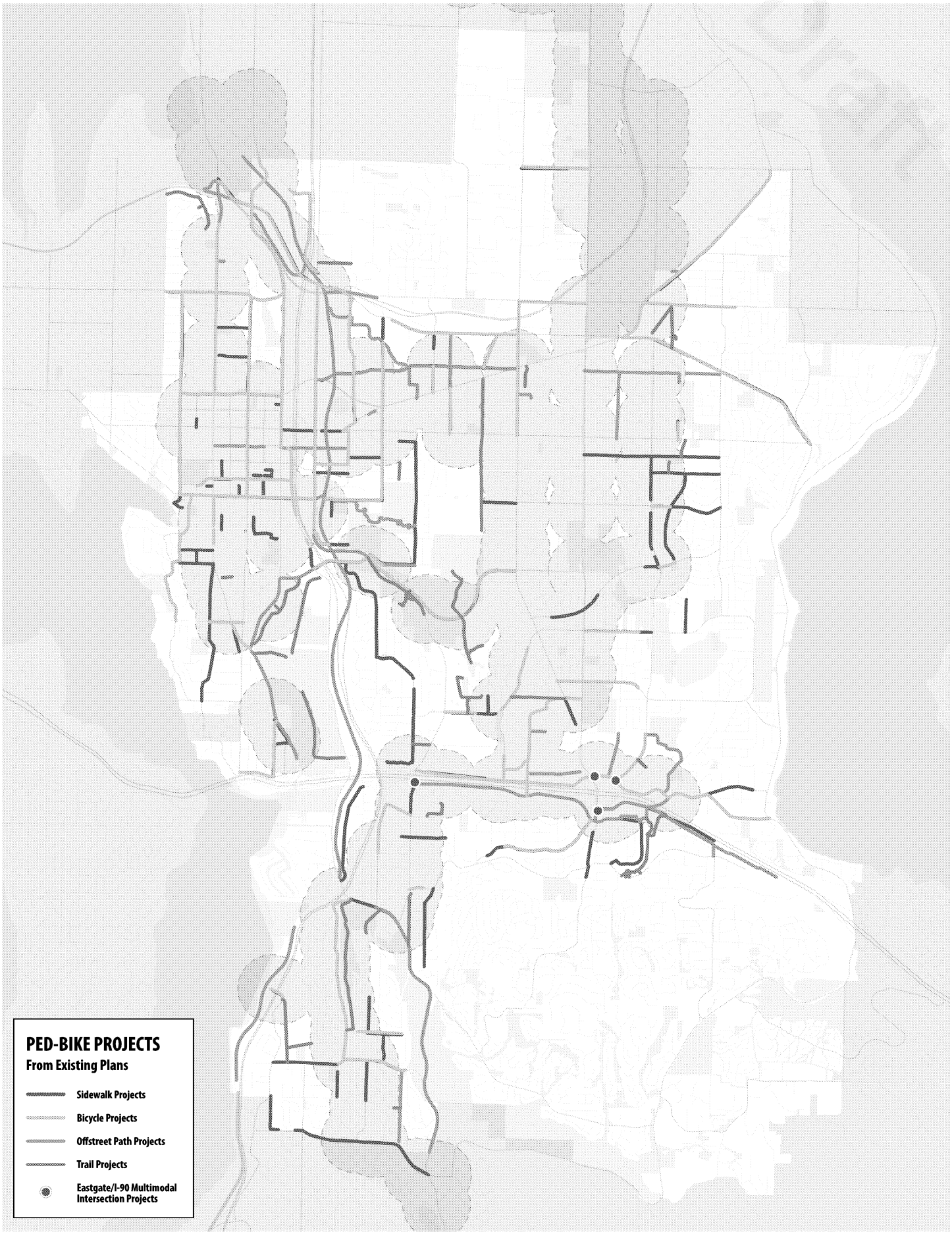


Figure 14 Transit use patterns in Bellevue based on Fall 2011 boarding and alighting (on/off) data.

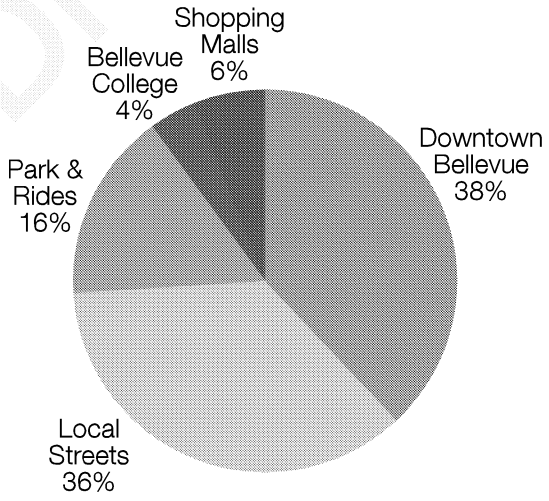
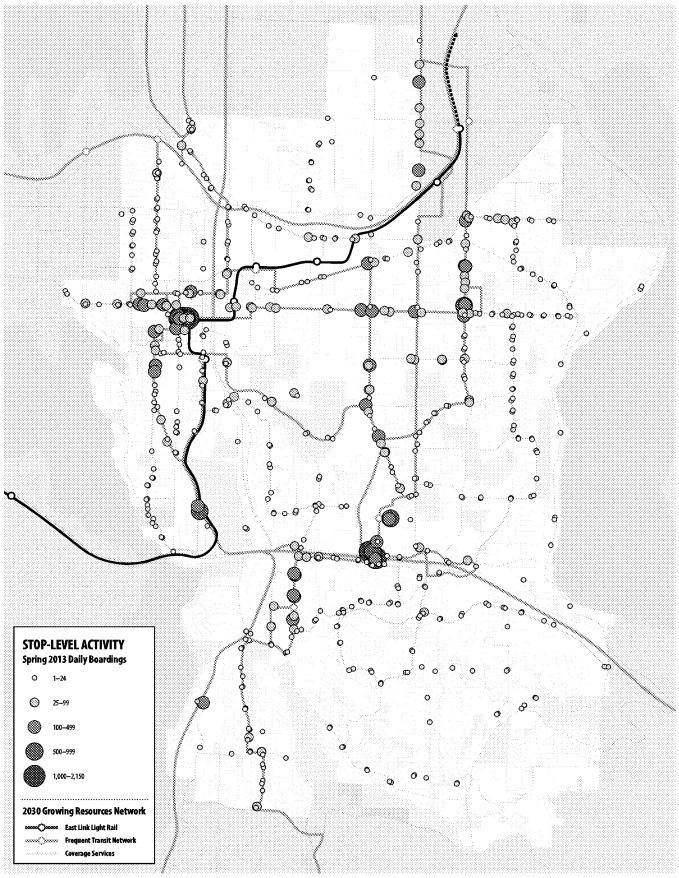


Figure 15 Stop-level daily boardings (ons) in Spring 2013. The route network of Frequent and Coverage services from the 2030 Growing Resources network are shown for reference.



The transit stop is the first point of interaction between the transit user and the transit system. The efficient placement of bus stops near major destinations with well-connected pedestrian and bicycle facilities helps to provide communities with viable transportation choices by making the entire transit trip shorter and more pleasant. Also important to the ability of transit to attract ridership is the quality and comfort of the transit stop and its environment.

The Transit Master Plan (TMP) will not make specific recommendations about bus stop locations for the route networks defined in the *Transit Service Vision Report* beyond that document's general stop spacing guidelines based on the various service types defined. Instead, this section focuses on three other subjects related to the transit stop: bus stop amenities, commuter parking, and bus layover needs. The first two of these subjects relate primarily to how transit users experience their first point of contact with the transit system, while the third deals with operational considerations.

Bus Stop Amenities

As of Fall 2011, 84 percent of boardings and alightings in Bellevue took place outside of park-and-ride lots, with 36 percent at bus stops on local streets (Figure 14). Waiting area amenities increase the convenience, comfort, safety, and usefulness of bus stops and influence the overall attractiveness of public transportation. Stop locations that are designed with paved waiting pads, shelters, benches, lighting, windbreaks, route information, trash bins, bicycle racks, and, in some cases, off-board pay stations and real-time arrival information make bus stops more hospitable places to be. The most fundamental of the various bus stop amenities is the bus shelter, which provides protection from the elements and

seating. Several factors influence the determination of need for various stop amenities. For stop shelters, the primary consideration is stop-level passenger activity. King County Metro's bus shelter warrant standard requires shelters to be installed at stops with 25 or more average daily boardings. Figure 15 depicts the number of stop-level daily boardings (ons) at all bus stops served in Bellevue in Spring 2013. Forty-three stops serve sufficient daily boardings to warrant a stop shelter but currently have no form of cover provided (refer to Appendix C1 on page A203).

Commuter Parking

Commuter parking facilities play an important role in concentrating transit rider demand, often in lower-density areas that would otherwise be unable to support frequent services. These facilities provide convenient access to transit via automobile or bicycle for people who do not live within convenient walking distance of a standard bus stop. By supporting the use of alternatives to the single-occupant vehicle, park-and-rides help to reduce the need for increasing roadway capacity as the region grows. Further, by concentrating transit boardings at a single point, a more frequent level of service can be supported.

A review of park-and-ride usage in the Puget Sound region over the past ten years reveals two trends. First, there is an uneven regional distribution of park-and-ride use. Several lots east of Bellevue and/or an inconvenient distance from the Frequent Transit Network (FTN) are under-capacity, while several lots in western Bellevue such as the South Bellevue Park-and-Ride are over-capacity, as shown in Table 3. This imbalance of lot usage indicates that lot location in relationship to the FTN is an important factor to consider when siting new facilities. Second, there is a trend of increasing utilization of park-and-

Table 3 2013 park-and-ride and leased lot capacity and usage.

Park-and-Ride Facility	Lot Capacity	% Occupancy
Park-and-Ride Lots:		
Eastgate	1,614	99%
Newport Hills	275	84%
South Kirkland (Bellevue and Kirkland)	783	75%
South Bellevue	519	107%
Wilburton	186	87%
Total	**3,377**	
Leased Lots:		
Bellevue Christian Reformed Church	20	38%
Bellevue Foursquare Church	35	20%
Eastgate Congregational Church	20	100%
Grace Lutheran Church	50	100%
Newport Covenant Church	75	24%
Newport Hills Community Church	37	64%
St. Luke's Lutheran Church	30	18%
St. Andrew's Lutheran Church	20	63%
Total	**351**	

Figure 16 Potential lease lots within one-quarter and one-half mile radial catchment areas of 2030 Frequent Transit Network stops.

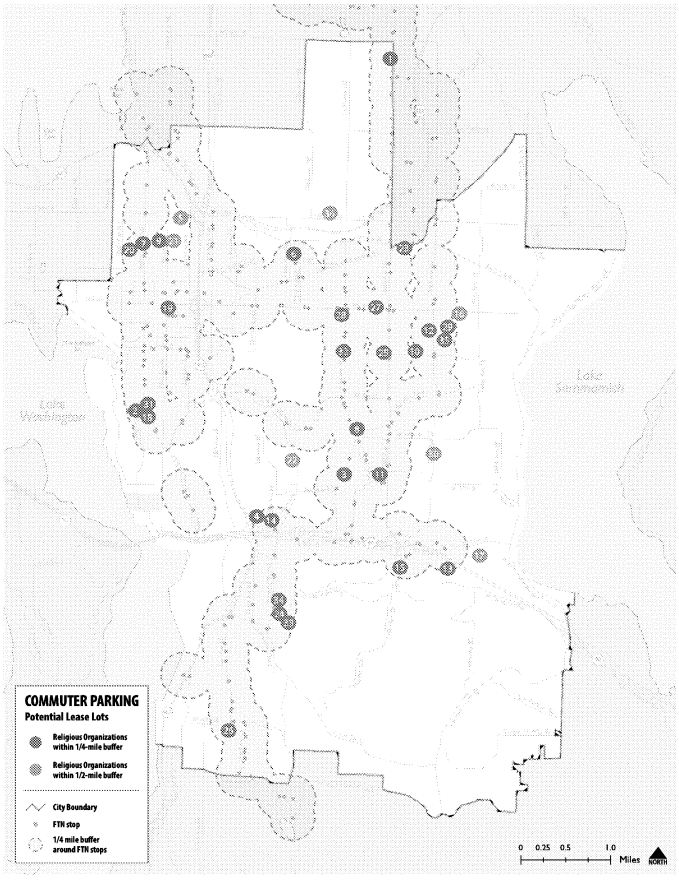
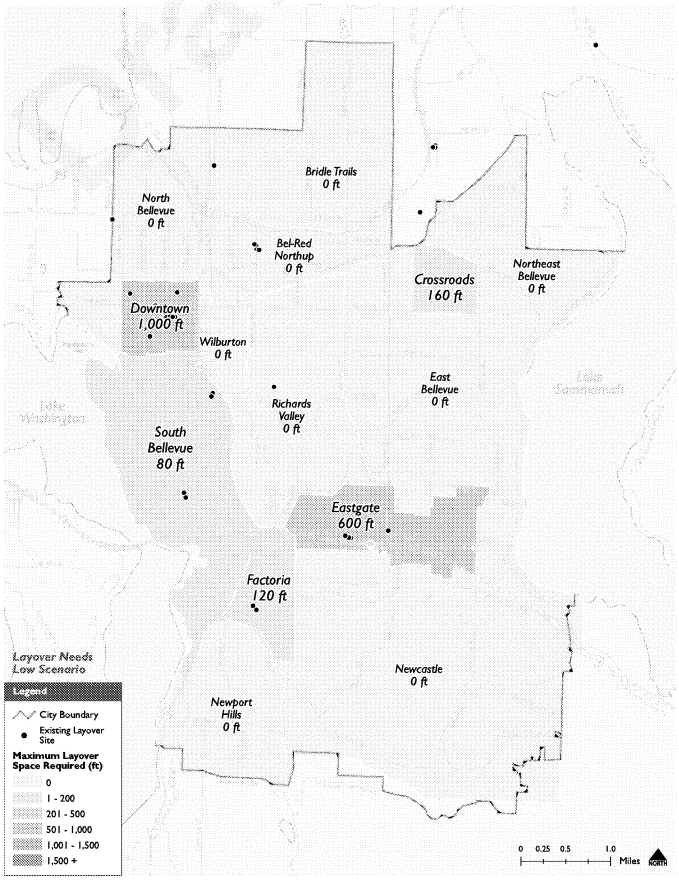
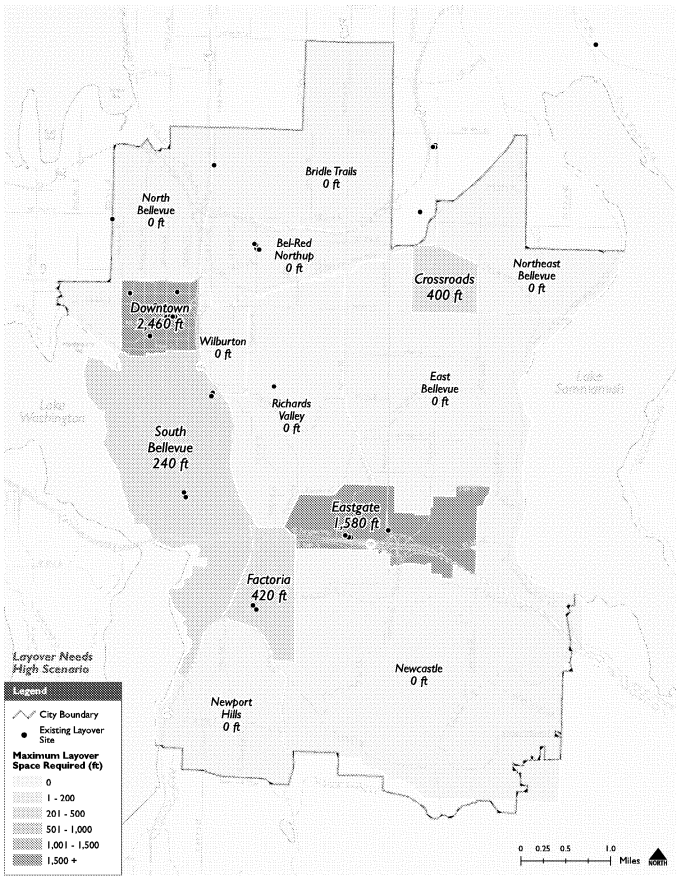


Figure 17 Bus layover needs in linear feet by Mobility Management Area (MMA): low estimate (top) and high estimate (bottom).





ride lots overall, with the two study corridors reflecting a 63 percent increase between 2000 and 2013.

This section also reviews 2030 projected commuter parking demand for the I-405 and I-90 corridors, considers this demand in light of existing parking facilities, and determines that there would be an undersupply of parking stalls available along these corridors if the 2030 Growing Resource network is implemented as proposed. If an unlimited supply of parking were available along each of the corridors (unconstrained demand), the I-90 corridor would be short by approximately 6,300 park-and-ride stalls, and the I-405 corridor would be short by approximately 4,600 stalls. Model results show that unconstrained demand is approximately 200 percent greater than constrained demand, suggesting that new riders will likely begin using the system given increased parking availability.

Leased lots, shared use park-and-ride lots, often blend in well with the character of residential neighborhoods and are a good tool to use to better serve low-density residential areas. If all churches within a half-mile walking distance of the FTN were to share their parking, over 4,700 stalls would become available, and churches that are within one quarter-mile radius of FTN transit stops have more than 3,500 parking stalls available. Figure 16 provides a reference map showing the twenty-five church locations that fall within a quarter-mile radius of FTN stops, as well as the seven additional churches that are within a half mile walking distance.

Bus Layover Needs

The layover, or amount of time between the end of one trip and the start of the next trip, requires that space be provided at transit facilities or designated along nearby streets or parking lots for transit vehicles to park while not in service. Inefficiencies result when vehicles must travel from their route terminal to

reach the layover location. Understanding how much layover space will be required and where that space can most efficiently be accommodated can help to ensure that the scarce regional transit resources allocated to Bellevue are used to provide service to passengers, not lost to operational inefficiencies.

This report does not attempt to identify specific locations at transit facilities or along street right-of-ways to be used by transit vehicles for layover. Instead, it provides an estimate of the range of total linear feet of layover space that will be required to operate the 2030 Growing Resources Network. The estimation conducted determined that the maximum layover requirements—that is, the amount needed during the time of day when the most buses are in operation—will range from 3,560 to 8,480 feet. (The two maps in Figure 17 depict the high and low layover need estimates by Mobility Management Area.)

For each of the variables in this analysis, the assumed conditions are appropriate and applicable in some cases but either too conservative or excessive in others, depending on site- and service-specific needs. These estimates should therefore be interpreted as the extreme lower and upper bounds of what may be necessary, with the actual amount of layover space required falling somewhere in between. It is estimated that approximately 7,000 feet of layover space currently exist in the study area that includes Bellevue and portions of Redmond, Kirkland, and Issaquah. While this total might be sufficient to accommodate the projected needs in aggregate, future proposed routes have different terminals than existing routes, so additional analysis will be required in the coming years to determine where these needs can be optimally accommodated.

For more information about each of the three subjects summarized here, refer to the full section on The Transit Stop, beginning on page 57.

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PAST STUDIES

Figure 18 Bellevue Transit Center.

Figure 19 Eastgate Park-and-Ride.

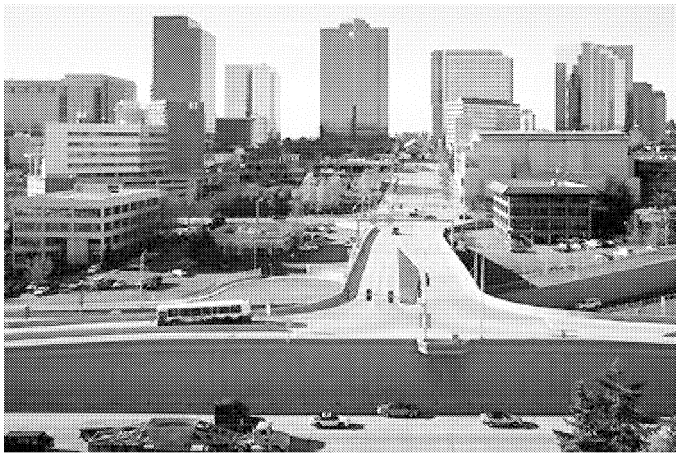

Figure 20 Downtown Bellevue HOV Access.

The first task of the Capital Element was the documentation of previously identified transit and roadway improvements along the corridors served by the Frequent Transit Network (FTN). The following provides a brief summary of the reports referenced.

Downtown Transportation Plan Update (current) – This on-going project will be a focused update to the transportation portion of the Downtown Subarea Plan, which was adopted in 2004. The update will incorporate forecasted growth in population and employment through 2030 to ensure that the Downtown transportation system can function well and support this anticipated growth. A multimodal strategy is being pursued to accommodate both motorized and non-motorized transportation demand. The final report will include a revised list of system improvements to roadways, transit, pedestrian and bicycle facilities, and traffic signal operations. While still on-going, some early results of this effort relating to the Transit Master Plan include the establishment of future transit circulation patterns in Downtown, which are reflected in the networks proposed in the *Transit Service Vision Report*, and the consideration of projects such as the 108th Ave NE Bus Priority Corridor.

East Link Extension Cost Savings Work Plan Findings (2012) – Following the November 2011 execution of a Memorandum of Understanding (MOU) regarding funding and construction of East Link light rail, the City of Bellevue and Sound Transit analyzed cost savings concepts that have the potential to save at least $60 million in project costs while supporting the system's performance. This report summarizes the cost savings options advanced for further development, including alternative alignments for Bellevue Way and 112th Ave SE segments and several

options for the Downtown Station design. The review of each of these includes anticipated cost savings, impacts to traffic, vehicle and pedestrian access, noise, visual appearance, and any impacts to adjacent properties, wetlands, and parks. Other projects are associated with these concepts, including a southbound HOV lane along Bellevue Way SE between 112th Ave SE and South Bellevue Park-and-Ride.

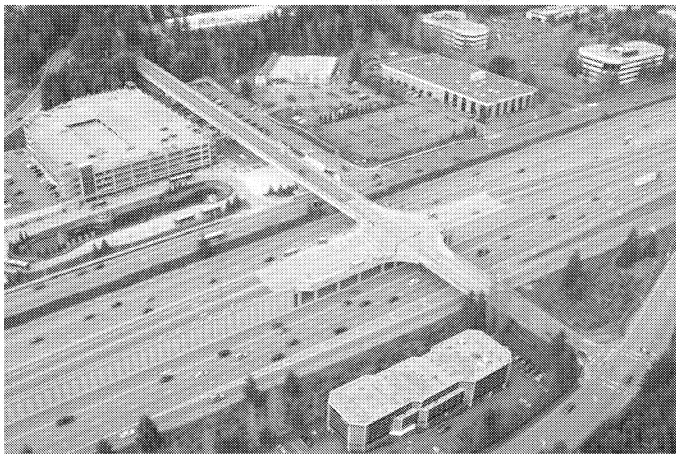

Figure 21 Eastgate Direct Access Ramp.

Eastgate/I-90 Land Use and Transportation Project (2012) – The *Transportation Strategy Report* outines a vision that will guide public and private actions, investments, and capital project priorities to improve mobility for all travel modes in the Eastgate/I-90 corridor. Potential improvements advanced by the plan are oriented toward finding the best transportation solutions for the area that are affordable, supported by the community, and can be implemented in a reasonable time frame. The list includes projects that would improve traffic flow at critical intersections, enhance the pedestrian/bicycle environment, and increase the attractiveness of transit as a travel option. One of the transit improvements proposed is the development of 142nd Pl SE as a transit emphasis corridor, including upgrading Snoqualmie River Rd to support buses and accessible bus stops.

Figure 22 I-90 Two-Way Transit & HOV Operations.

SR-520 High-Capacity Plan (2008) – The *SR-520 High Capacity Transit Plan* outlines a strategy for meeting the demand for cross-lake travel with an incremental implementation of bus rapid transit service that connects employment, residential areas, and activity centers on both sides of Lake Washington. The plan recommends how transit can build on capital investments identified for the SR-520 Corridor Program by substantially increasing service and improving off-corridor transit facilities to help meet future growth in

Figure 23 RapidRide B Line inauguration ceremony.

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Proposed Transit Speed and Reliability Projects

Similar to the projects implemented in the ten years since adoption of the 2003 Transit Plan, the Capital Vision identifies a total of 107 capital projects that would benefit transit speed and reliability. As shown in Table 4, these include 19 running way improvement projects, 39 spot improvement projects, 5 tracking and additional study projects, and 44 near-term transit signal priority (TSP) projects.

These include some existing projects already adopted in the Transportation Facility Plan (TFP) and/or Transportation Improvement Program (TIP), previously proposed projects from past planning efforts (e.g. Eastgate/I-90 Land Use and Transportation Project, Downtown Transportation Plan Update), and numerous new projects conceived during the TMP Capital Element planning process. New projects were advanced through a multi-stage process that began with the development of a transit priority toolbox, was followed by a geographic information system- (GIS-) based issue identification analysis, and ultimately proceeded through several iterations of project feasibility screening. Travel demand modeling was used to provide some inputs into the issue identification analysis, and both travel demand and micro-simulation models were used to help assess the potential degree of benefit provided by certain subsets of the total project list.

General cost estimates were identified for each project, as summarized in Table 5. Figure 24 maps the location and estimated costs of all running way and spot improvement projects, as well as two location-specific tracking projects. Citywide tracking projects and TSP projects are not included in the map, the latter because they are too numerous to include in a single map together with the others. Refer to Figure 145 on page 168 for a map of the near-term TSP projects being proposed.

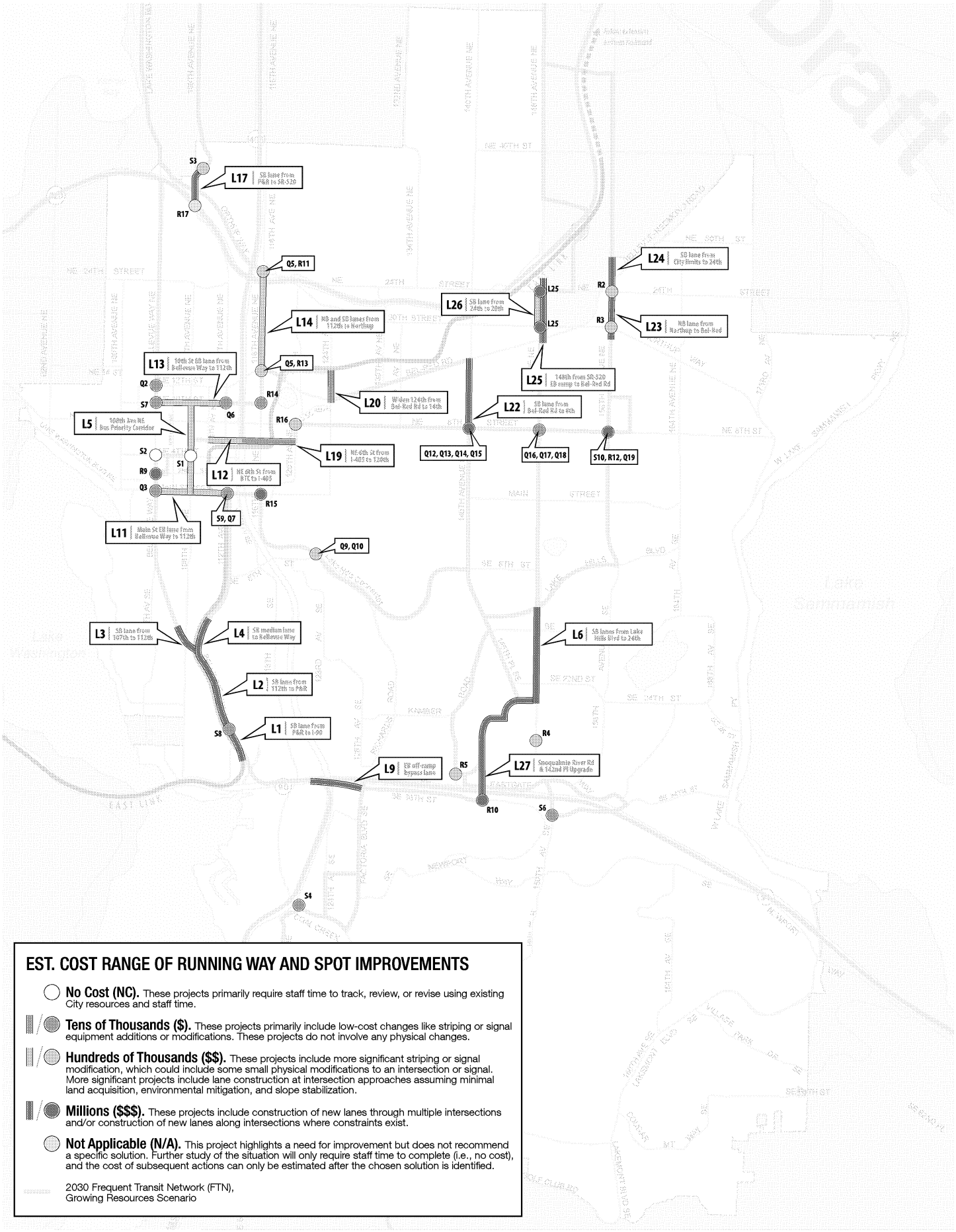
Table 4 Summary of speed and reliability projects by type.

Project Type	No. of Projects
Running Way Improvements	**19**
HOV Lanes	8
BAT Lanes	6
Roadway Construction	5
Spot Improvements	**39**
Queue Jump Lanes	16
Intersection and Roadway Improvements	13
Signalization Improvements	10
TSP Projects (Near-term)	**44**
Tracking & Additional Study	**5**
Total	**107**

Table 5 Summary of speed and reliability projects by cost.

Estimated Project Cost	No. of Projects
No Cost (NC) These projects primarily require staff time to track, review, or revise using existing City resources and staff time.	6
Tens of Thousands ($) These projects primarily include low-cost changes like striping or signal equipment additions or modifications. These projects do not involve any physical changes.	66
Hundreds of Thousdands ($$) These projects include more significant striping or signal modification, which could include some small physical modifications to an intersection or signal. More significant projects include lane construction at intersection approaches assuming minimal land acquisition, environmental mitigation, and slope stabilization.	16
Millions ($$$) These projects include construction of new lanes through multiple intersections and/or construction of new lanes along intersections where constraints exist.	18
Not Applicable (N/A) This project highlights a need for improvement but does not recommend a specific solution. Further study of the situation will only require staff time to complete (i.e., no cost), and the cost of subsequent actions can only be estimated after the chosen solution is identified.	1
Total	**107**

Figure 24 Transit running way and spot improvement projects by estimated cost range.



EST. COST RANGE OF RUNNING WAY AND SPOT IMPROVEMENTS

- **No Cost (NC).** These projects primarily require staff time to track, review, or revise using existing City resources and staff time.
- **Tens of Thousands ($).** These projects primarily include low-cost changes like striping or signal equipment additions or modifications. These projects do not involve any physical changes.
- **Hundreds of Thousands ($$).** These projects include more significant striping or signal modification, which could include some small physical modifications to an intersection or signal. More significant projects include lane construction at intersection approaches assuming minimal land acquisition, environmental mitigation, and slope stabilization.
- **Millions ($$$).** These projects include construction of new lanes through multiple intersections and/or construction of new lanes along intersections where constraints exist.
- **Not Applicable (N/A).** This project highlights a need for improvement but does not recommend a specific solution. Further study of the situation will only require staff time to complete (i.e., no cost), and the cost of subsequent actions can only be estimated after the chosen solution is identified.

2030 Frequent Transit Network (FTN), Growing Resources Scenario

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Project Prioritization Criteria

Base Priority Identification:

1.) Long-Term Corridor Composite Score(s)

- **High:** 19–24
- **Medium:** 16–18
- **Low:** N/A–15

Priority Refinement:

2.) Current TFP/CIP Projects

3.) Projects specifically required to implement future FTN route structure

- Project L19: NE 6th St Extension
- Project L27: Bellevue College Connection

4.) Projects for which the Transportation Commission has provided specific guidance

- Project L27: Bellevue College Connection
- Project L11: Main St HOV Lane
- Project L13: NE 10th St HOV Lane

Table 6 Summary of speed and reliability project prioritization.

Preliminary Staff Prioritization	Total Projects	Project Type	
		Running Way	Spot Improvement
High	20	10	10
Medium	21	8	13
Low	19	2	17
Total	60	20	40

Note: Both the running way and spot improvement categories each include one more project than these categories do in Table 4 on page 20 because each includes one tracking project identified in Figure 25.

Project Prioritization

At the request of the Transportation Commission, priorities were assigned to each of the running way, spot improvement, and location-specific tracking projects presented in this report. The results of this priorization are summarized in Table 6 and mapped in Figure 25. The prioritization criteria are summarized here and described in greater detail on pages 150 through 153.

The purpose of prioritizing the proposed capital projects is to maximize the value to the Frequent Transit Network (FTN). Thus, the FTN's long-term composite scores serve as the primary means of identifying a project's priority. The ranges for High, Medium, and Low Priority (shown at left) are consistent with the categories shown on the map shown in Figure 129 on page 143. For projects characterized by a range of composite scores, the average of the maximum and minimum scores was used to determine a project's base priority. These initial priority assignments were then refined according to three separate considerations. First, if a proposed project has already been adopted by the Transportation Facilities Plan (TFP) or Capital Investment Program (CIP), that project's priority was increased by one category. The same action was taken if a project is specifically required to implement the 2030 FTN route structure. Finally, if the Transportation Commission provided specific guidance about a project during the Capital Element planning process, that project's priority was increased or decreased by one category accordingly.

The Bellevue College Connection (Project L27) provides an instructive example of a project affected by several of the refinement considerations. Though its base priority is Low because much of that corridor is not affected by general purpose traffic, its final prioritization is High because it is has an associated TFP project (TFP-252), is necessary to restructuring service between Eastgate and Bellevue College, and was identified by the Transportation Commission as being of specific interest to pursue as soon as possible.
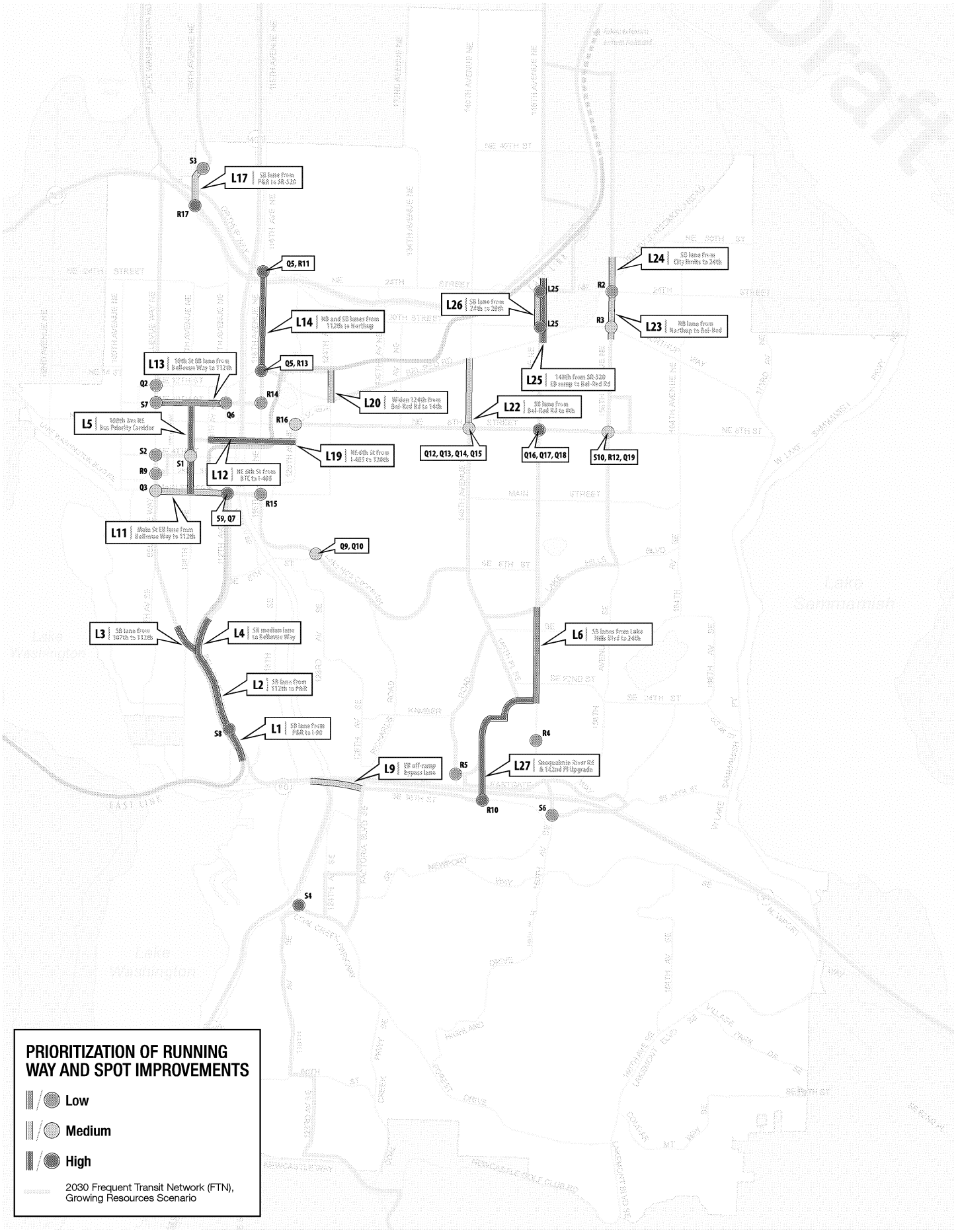
Figure 25 Prioritization of the proposed transit running way and spot improvement projects.