SOUTH BELLEVUE STATION AREA PLAN

STATION AREA PLANNING

CITY OF BELLEVUE WASHINGTON

APPENDIX

JANUARY 2016

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EXISTING CONDITIONS

WHAT YOU WILL FIND IN APPENDIX A 1

- A 1.1 Demographics
- A 1.2 Land Use and Character (includes area crime studies)
- A 1.3 Transportation
- A 1.4 Natural Environment
- A 1.5 Parks and Public Facilities

The Existing Conditions section describes the current conditions and characteristics of the study area residents and their natural and built environments. It is divided into five areas: Demographics; Land use and Character; Transportation; Natural Environment; and Parks and Community Facilities. Tables and graphs in each section are followed by text describing the data and why it is included in the report.

Figure A.1 South Bellevue Station Area

The study area is slightly larger than the basic ½-mile radius surrounding the South Bellevue station. The boundary extends to the north and south (SE 16th Street and I-90/Enatai Beach respectively) and reaches east to I-405 and west to approximately 104th Avenue SE. In some instances, where noted, the available data includes a larger geographic area than the study area.

In the South Bellevue study area the majority of the population lives in the Enatai neighborhood west of Bellevue Way. The

study area also includes the Killarney Circle neighborhood, the southern-most portion of the Bellecrest neighborhood and the town of Beaux Arts. The study area includes two smaller residential areas on the east side of Mercer Slough: apartment homes on 108th Avenue SE (Bellefield Manor Apartments built in 1957) and multifamily on 118th Avenue SE near I-405 (Brookshire and Mercer Park condominiums built in the early 1990s and Emerald Ridge apartments built in 1987).

A 1.1 DEMOGRAPHICS

AGE DISTRIBUTION

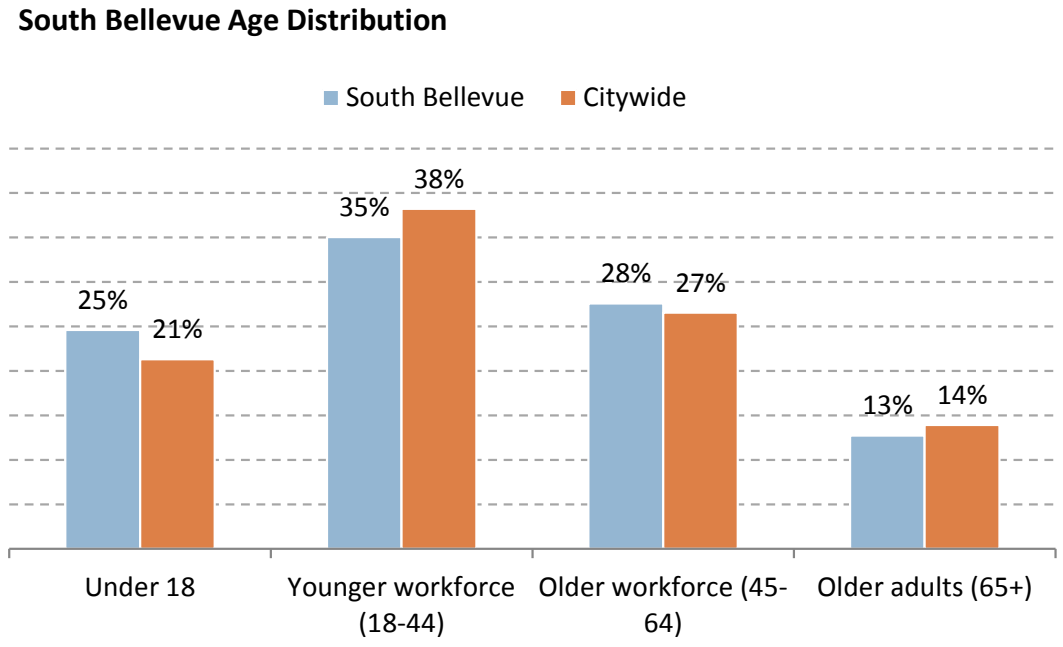
Table A.1.1-A South Bellevue Age Distribution Table

	Total Population	Under 18	Younger Workforce (18-44)	Older Workforce (45-64)	Older Adults (65+)
South Bellevue	3,019	743	1,058	833	385
Citywide	127,893	27,262	48,871	33,948	17,812

Source: US Census Bureau, 2010 Census

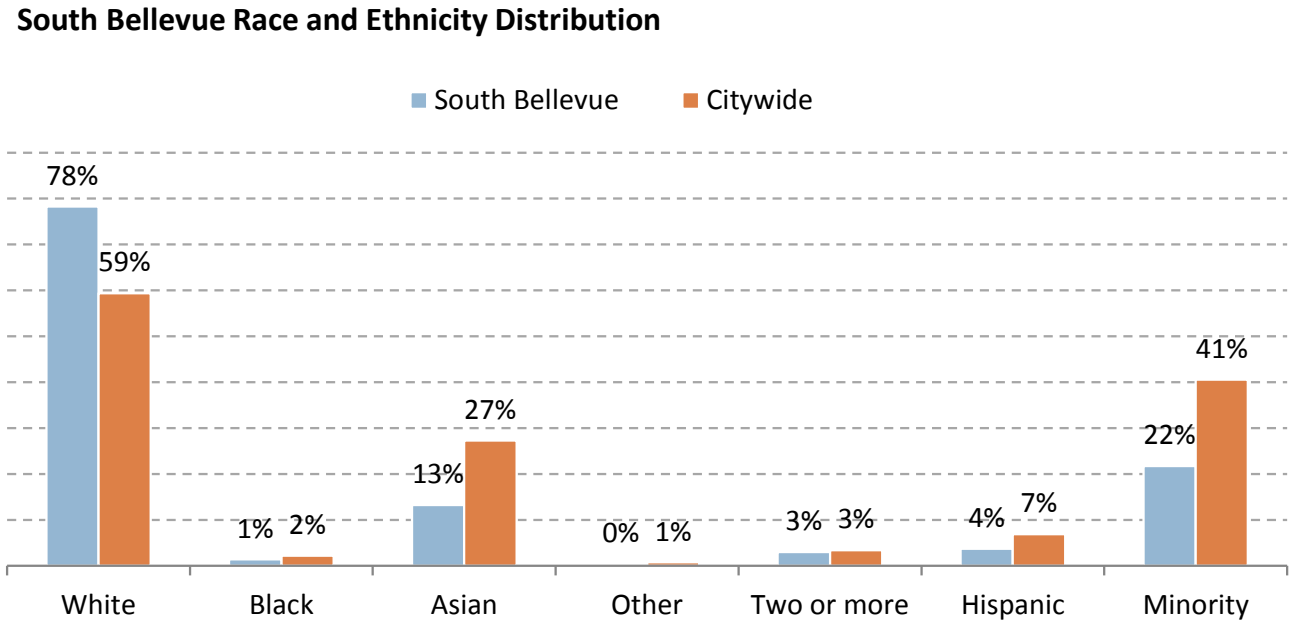
About 3,000 people reside in the study area, as shown in Table A.1.1-A. Table A.1.1-A and Figure A.1.1-A also show the population of the study area by age group compared to the entire city. This comparison shows that the age distribution for the study area is similar and within a few percentage points of the citywide population. The largest age group of the study area is the 18-44 years "younger workforce" (35%). One noteworthy characteristic of the study area age distribution is that it is relatively young overall, with 25% being school-age or below and another 63% being under the age of 65. These demographic characteristics indicate the potential for a significant portion of the population walking or biking to the station.

Figure A.1.1-A South Bellevue Age Distribution



Source: US Census Bureau, 2010 Census

Figure A.1.1-B South Bellevue Race and Ethnicity Distribution



Source: US Census Bureau, 2010 Census

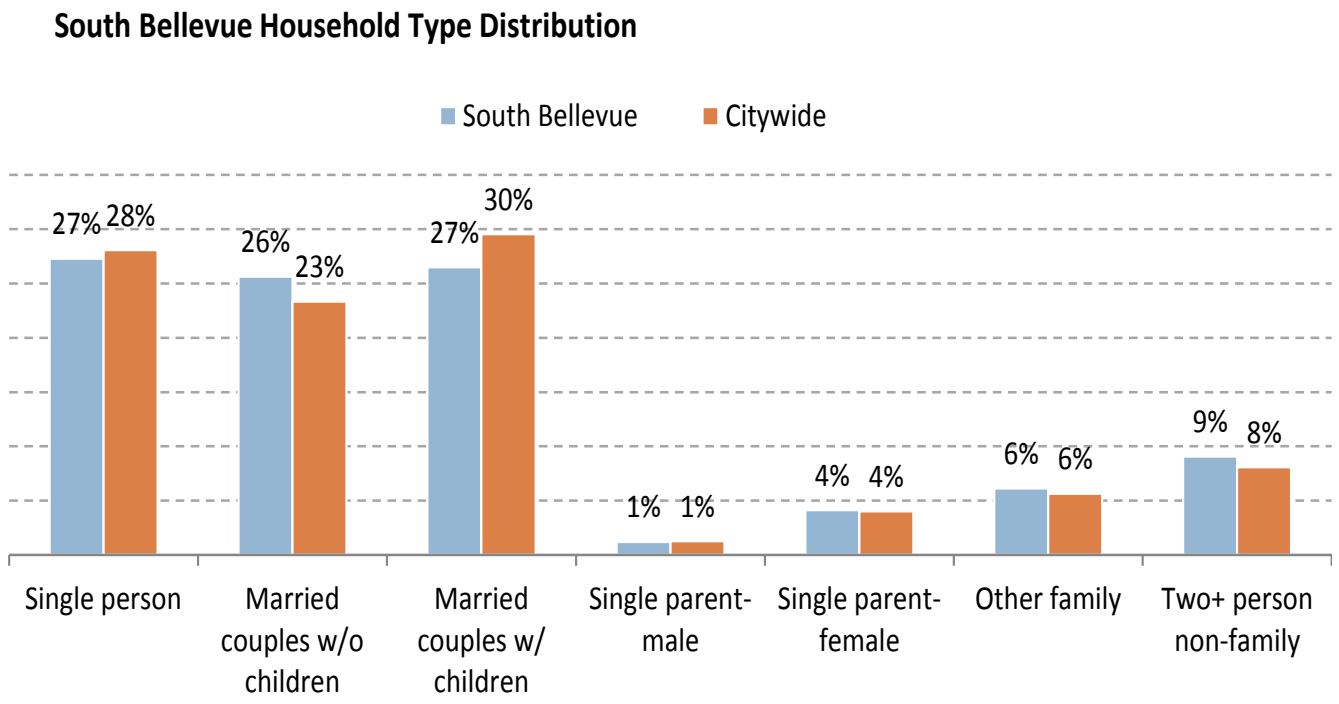
RACE AND ETHNICITY

The study area is much less diverse than the citywide population in terms of race and ethnicity (Figure A.1.1-B). A much higher proportion (78%) of residents in the study area identify as white compared to 59% citywide. Minorities comprise 41% of the citywide population but only 22% of the study area.

The Light Rail Best Practices Report recommends that wayfinding and signage be tailored to meet the needs of specific stations, including information in different languages. Bellevue's population is expected to continue to diversify and it will be important to evaluate this information again after the 2020 census to see whether there is a need for signage in different languages to serve this neighborhood.

OTHER CHARACTERISTICS STUDIED

Figure A.1.1-C Household Type Distribution



Source: US Census Bureau, 2010 Census

Many factors contribute to neighborhood stability and certain demographic characteristics can provide a sense of the general condition of an area. In general, the household characteristics studied show South Bellevue is very similar to the city overall.

Household type (Figure A.1.1-C) Compared to citywide, household type in the study area includes slightly more households of married couples without children and slightly fewer households of married couples with children.

Average number of people per household in South Bellevue is 2.44 which is only slightly higher than the citywide average of 2.41.

Occupancy and Owner occupancy Both the South Bellevue study area and the city as a whole have a high occupancy rate (94% and 91% respectively). Almost 70% of homes in the study area are owner-occupied compared to slightly less than 60% citywide. The higher level of owner-occupied homes reflects the historic stability of this area as well as the fact that there is less rental and other housing types available in the study area compared to the city overall.

A 1.2 LAND USE AND CHARACTER

Land Use and Character are examined as the distinct areas of land use that define the South Bellevue planning area: West of Bellevue Way; East of Bellevue Way; and Bellevue Way itself.

Enatai Residential

West of Bellevue Way

The portion of the study area west of Bellevue Way is a single-family residential neighborhood that also includes parks, churches and an elementary school. Most of this planning area is made up of the Enatai neighborhood but also includes Killarney Circle, the southern-most portion of the Bellecrest neighborhood and the town of Beaux Arts. As described in the Light Rail Permitting CAC's Statement of Context and Design Consideration: "The character of this area is defined by…Unique, low-density residential character

Figure A.1.2 A Existing Land Use

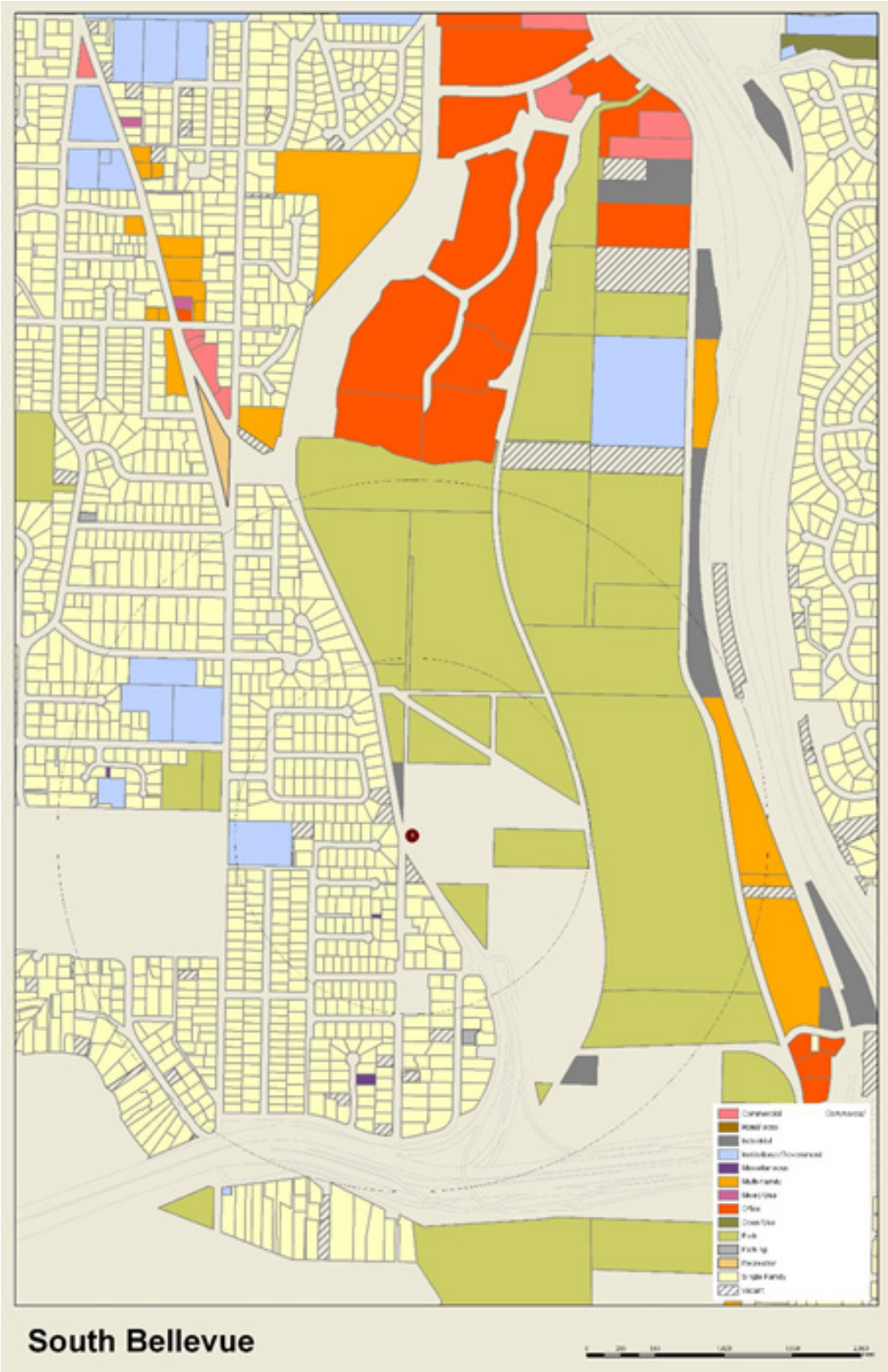
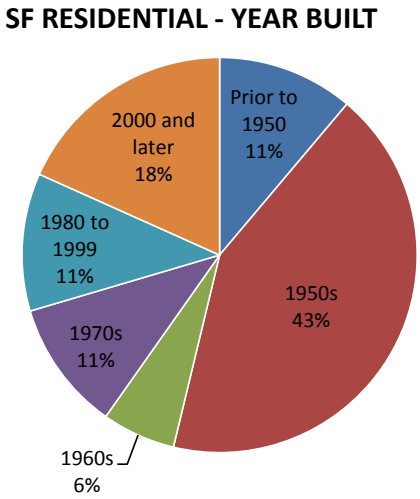
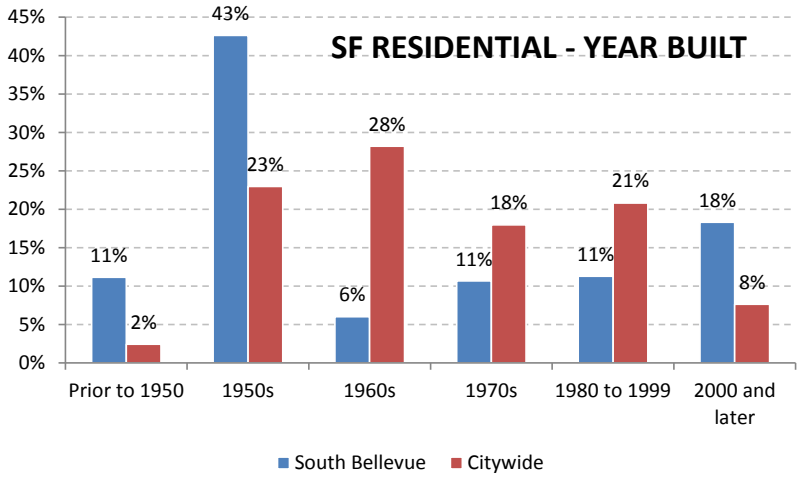


Figure A.1.2-B Single Family Residential – Year Built





Source: King County Assessor, 2014

that conveys the feeling of a small town within a larger city."

The Enatai and adjacent neighborhoods are mature and well established. Over 10% of the homes were built prior to 1950 and about half the homes built during the 1950's and 1960's. Nearly 20% of the housing is relatively new, having been built since 2000.

South Bellevue neighborhoods offer a variety of single family housing styles and sizes because of many years of incremental development and the range of development regulations under King County and Bellevue.

East of Bellevue Way

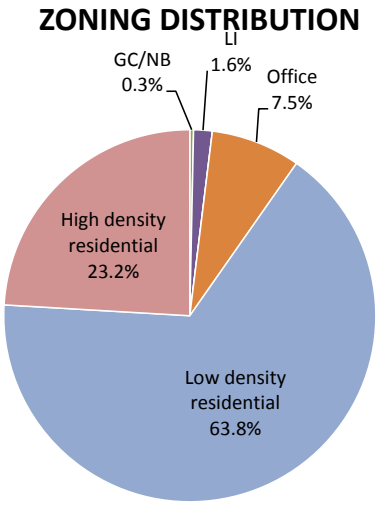
The portion of the study area that is east of Bellevue Way is largely comprised of the 320-acre Mercer Slough Nature Park and Environmental Education Center but also includes the 65-acre Bellefield Office Park, and two smaller areas of multifamily housing- apartment homes on 108th Avenue SE and condominium homes on 118th Avenue SE near I-405. As described in the Light Rail Permitting CAC's Statement of Context and Design Consideration: "The character of this area is defined by… The expansive Mercer Slough Nature Park; and historic references to truck farming of strawberries and blueberries…."

Mercer Slough Blueberry Fields

Bellevue Way Corridor

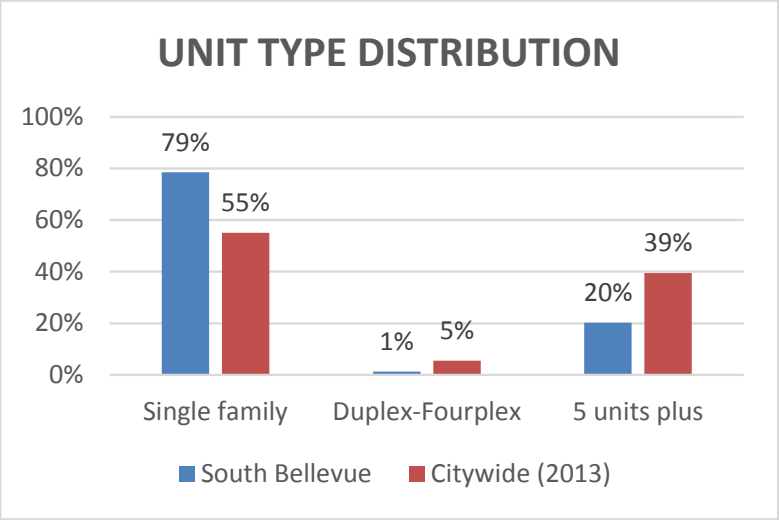
Bellevue Way SE is a major transportation corridor and the primary gateway to downtown Bellevue from the south. The corridor is characterized by Mercer Slough to the east and residential to the west, as well as commercial on Bellevue Way north of the "Y". Residents value these long-established neighborhood businesses that provide a sense of place and continuity, including Chevron gas and mini mart, Chace's Pancake Corral, and Enatai Dry Cleaners. Over the past decade the segment of Bellevue Way between I-90 and the South Bellevue park-and-ride lot has carried an average of about 40,000 vehicles per day. The park-and-ride, located on the east side of Bellevue Way just north of I-90, is currently a surface lot with 519 stalls. The facility is served by Metro (two bus routes and paratransit) and Sound Transit (four bus routes) and is typically filled to over capacity by 9 a.m. weekdays. As described in the Light Rail Permitting CAC's Statement of Context and Design Consideration: "The character of this area is defined by… Retained and enhanced tree and landscaped areas that complement and screen transportation uses from residential and commercial development…."

Figure A.1.2-C South Bellevue Zoning Distribution



Source: King County Assessor, 2014

Figure A.1.2-D South Bellevue & Citywide Unit Type



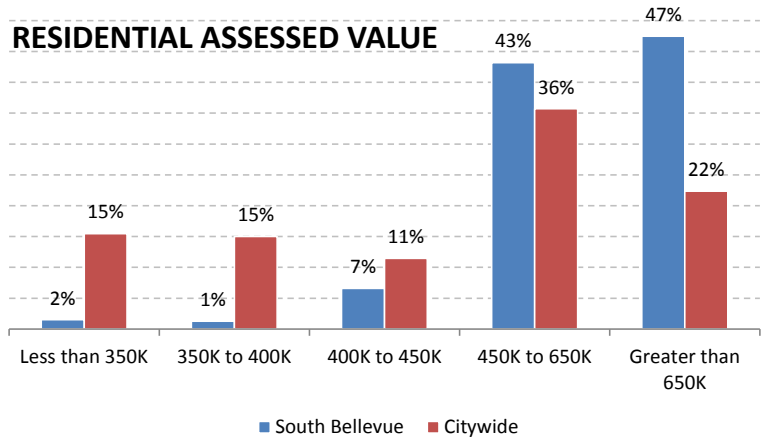
Sources: King County Assessor, 2014 and WA State Office of Financial Management, 2013

Bellevue Way at the "Y"

Some residential properties have deep, wooded lots as a matter of choice or from restrictions that limit development, such as steep slopes. Most residential properties reflect the current Single Family Medium (R-2.5, R-3.5) and Single Family-High (R-4, R-5) zone districts of the area. These districts have minimum lot sizes from 7,500 square feet to 13,500 square feet; and height limits of 30 feet (35 feet with a pitched roof). Existing zoning regulations will allow new single family but preclude any other type of development to maintain a stable, familiar land use pattern.

The neighborhood is well maintained and desirable and attracts considerable investment from infill development, redevelopment, and remodeling. The housing market in this neighborhood is very brisk. For-sale homes are quickly sold and vacant or "tear down" properties can sell for near the citywide median home price.[1]

Figure A.1.2-E South Bellevue & Citywide Residential Assessed Value



Source: King County Assessor, 2014

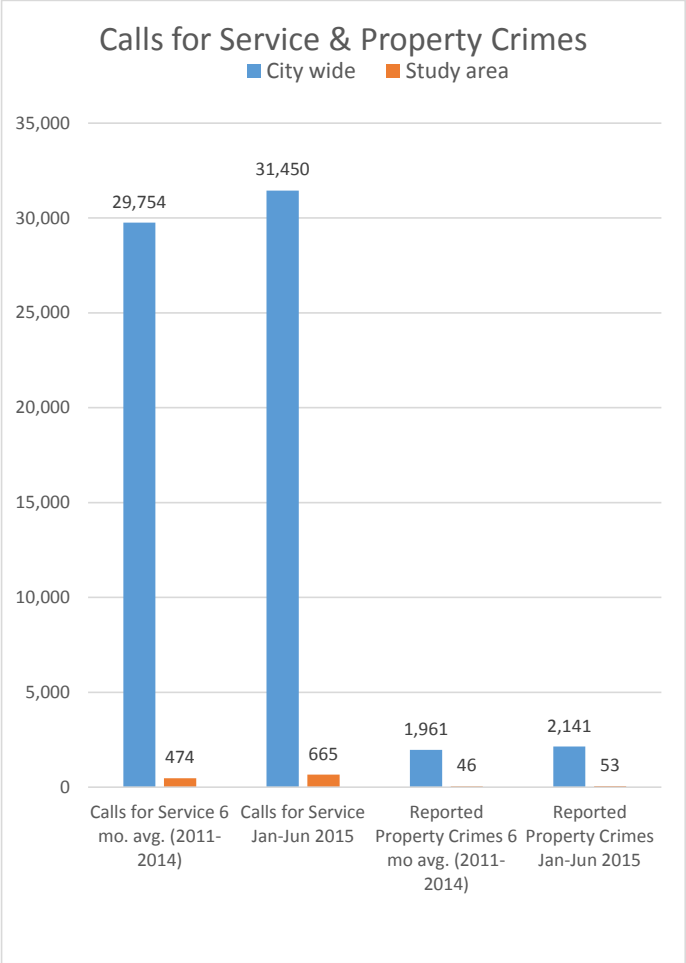
1 *October 2015 closed sales median price for Bellevue single family and condominium is $654,200; for Bellevue single family $798,600. Median single family price for West Bellevue and Point Cities that includes station area is $1,675,000. (Northwest Multiple Listing Service).*

AREA CRIME STUDIES

Crime is a growing concern for the neighborhood due to recent increases in certain types of criminal activity. This section also addresses the issue of neighborhood safety and crime resulting from the light rail station.

Bellevue Police continually track crime statistics so current rates and trends provide a baseline that can be compared to the same study area over time. Crime statistics being collected now can be compared to rates and trends in this area after the light rail station opens in 2023.

Figure A.1.2-F Reported Crime



The average number of calls for service city wide over six months (i.e. January to June and July to December) in 2011, 2012, 2013 and 2014 is 29,754. From January to June 2015 there were 31,450 which is within the expected range of calls for service city wide (25,916-33,592). During the same four-year period in the South Bellevue study area there was an average of 474 calls for service for the six-month periods. Between January and June 2015 there were 665 calls for service within the study area, which is outside of normal range for service calls for this area (371-577).

Each year Bellevue Police reports crime statistics to the Federal Bureau of Investigation (FBI) through their Uniform Crime Reporting (UCR) program. The "property crimes" (i.e. crimes only involving property) that are tracked and reported include: burglary, larceny-theft, motor vehicle theft and arson. For the entire city, between 2011 and 2014 the average number of property crimes for a 6-month period is 1,961. Between January and June 2015 there were 2,141 reported property crimes citywide, which is slightly less than the previous two six month time frames (2,288 and 2,333 respectively) and falls within the expected range of 1,728-2,194. By comparison, for the study area between 2011 and 2014 the average number of property crimes for a 6-month period is 46. Between January and June 2015 there were 53 reported property crimes for the study area. This is lower than the previous 6 month period of 64 for the study area.

Additional analysis indicates this increase in property crimes in the study area may be attributed to a spike in burglaries in February 2015. For the first six months of 2015 the study area had slightly more property crimes per 1,000 persons (18) than the rest of the city (16). Between 2011 and 2014 the average number of property crimes for a 6-month period per 1,000 persons in the study area is on par with the rest of the city, at 15.

The other category that is tracked and reported is "persons crimes" (i.e. crimes against persons) that include: murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault. For the entire city, between 2011 and 2014 the average number of persons crimes for a 6-month period is 71. Between January and June 2015 there were 59 reported persons crimes citywide. This is not within the normal range of 64-79. By

comparison the study area has virtually no reportable persons crimes.

112th Ave SE at Bellevue Way

A 1.3 TRANSPORTATION

A 1.3.1 ROADWAYS

Roadways in Bellevue are designated in the city's Comprehensive Plan based upon their intended function. Major arterials provide efficient direct routes for longer trips. Major arterials have the capacity to carry high volumes of traffic and are given preference at intersections. Minor arterials provide connections between major arterials and neighborhoods and carry less through traffic. Collector arterials collect and distribute traffic within a neighborhood and connect to both minor and major arterials. Bellevue Way SE is designated as a major arterial. There are no minor arterials in the study area. Collector arterials include 104th Ave SE, 108th Ave SE, SE 25th Street and SE 34th Street. Within the neighborhoods a network of sometimes narrow and winding local access roads, walkways and trails provide choices for travel by car, bus, and bicycle, or on foot. All of these options are well used by residents.

A 1.3.2 TRAFFIC VOLUME

Traffic volumes along Bellevue Way show a slight downward trend over the ten year period between 2003 and 2013. The table below shows the average weekday daily traffic (ADT) taken by the City of Bellevue for Bellevue Way south of the park & ride/112th Ave SE intersection.

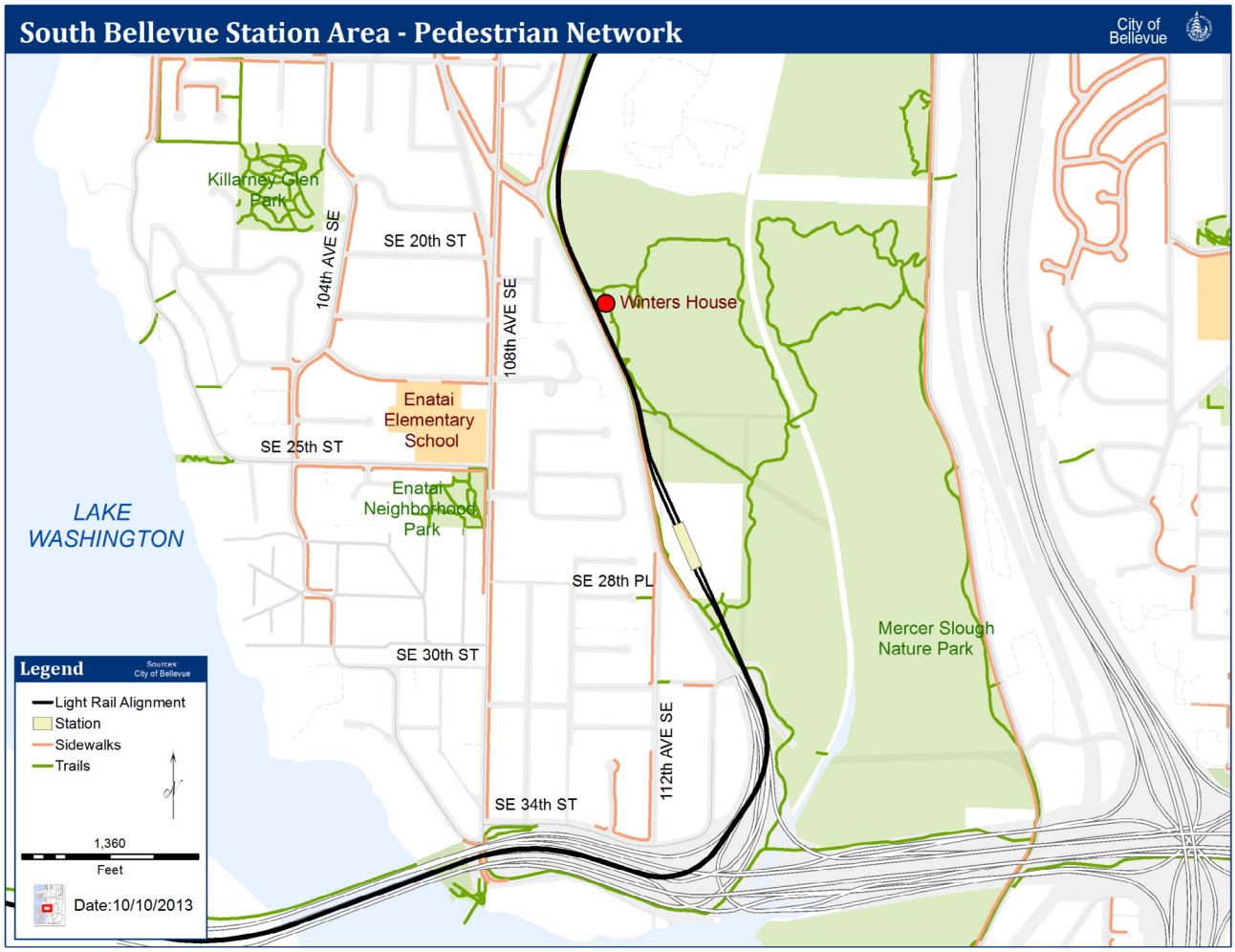
Year	Traffic Volume
2003	40,663
2008	38,884
2013	38,463

Improved Walkway on 108th

A 1.3.3 PEDESTRIAN NETWORK

Sidewalks exist along the east side of Bellevue Way and along portions of the collector arterials and some local streets. There are a number of gaps in the sidewalk network and most local streets do not have any sidewalks. Several residential streets end in cul-de-sacs resulting in out of direction travel for people trying to walk to the existing park & ride facility. The neighborhood does have two pedestrian shortcuts to Bellevue Way, a stairway connection between the SE 28th Place cul-de-sac and 112th Ave SE as well as a short switchback trail between 112th Ave SE and an eastern

Figure A.1.3-A Pedestrian Network



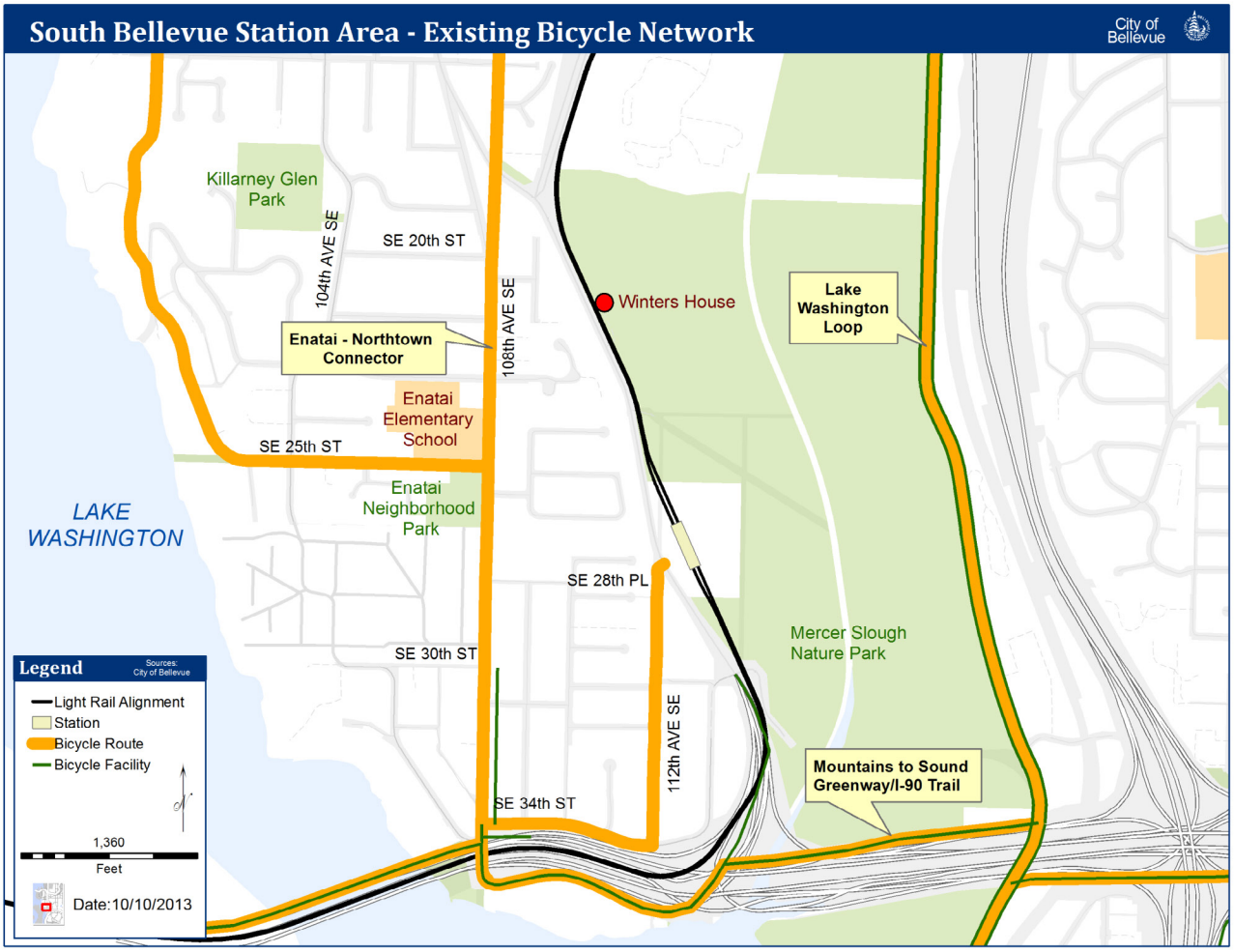
portion of SE 30th Street. The pedestrian walk shed outlines the area that can be reached within a 10 minute walk from the South Bellevue park & ride along existing streets including those without sidewalks and the stairway connection. East of Bellevue Way there is a network of trails through the Mercer Slough Nature Park.

Although there are designated bicycle routes in the station area, the number of dedicated bicycle facilities is limited (see fig. A1.3.4-A). There is an off-street facility on 108th Ave SE

Hillside Stairs to SE 28th Place

A 1.3.4 BICYCLE FACILITIES/NETWORK

Figure A.1.3.4-A Bicycle Network



South Bellevue Park and Ride

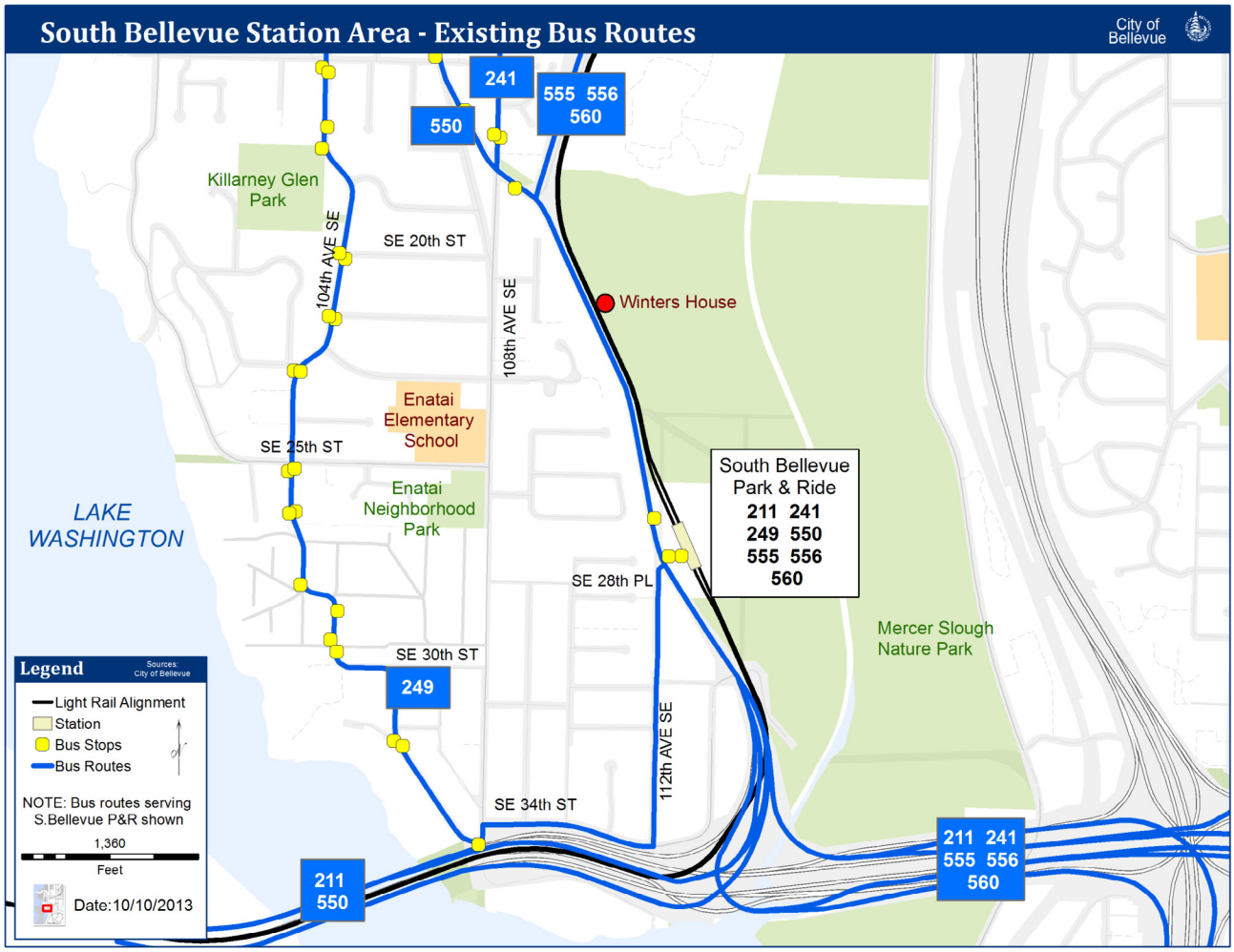
northbound between SE 34th St and SE 30th St. The off-street pedestrian/bicycle facility that parallels I-90 forms part of the regional Mountains to Sound Greenway/I-90 trail connecting communities along the I-90 corridor. The bicycle facilities along 118th Ave SE form a portion of the Lake Washington Loop.

A 1.3.5 TRANSIT

Existing bus service in the station area is provided by King County Metro and Sound Transit. Of the seven routes serving the station area, only one provides service to the interior of the Enatai neighborhood although all of them serve the existing South Bellevue park & ride. Bus service type, destinations and routing are summarized in the following table and map.

Table A 1.3.5-A Bus Routes Currently Serving the South Bellevue Park & Ride

Route	King County Metro Service Family	Bellevue Category	Places Served
211 Eastgate - First Hill (Seattle)	Peak	Regional Service	Eastgate, S. Bellevue, Mercer Island, Seattle
241 Bellevue - Eastgate	All Day Local Service	Community Service	Bellevue TC, 108th (Bellecrest), S. Bellevue, Factoria
249 Overlake - S. Bellevue	All Day Local Service	Community Service	Sammamish Viewpoint, Northup Way, Bellevue TC, 104th (Enatai)
550 Bellevue - Seattle	All Day Very Frequent Service	Regional Service	Bellevue Way, S. Bellevue, Mercer Island
555 Issaquah - Northgate	Peak	Regional Service	Eastgate, S. Bellevue, 112th, Bellevue TC
556 Issaquah - Northgate	Peak	Regional Service	Eastgate, S. Bellevue, 112th, Bellevue TC, U District
560 Bellevue - Airport - Westwood Village	All Day Local Service	Regional Service	112th, S. Bellevue, Renton, Burien



A 1.4 NATURAL ENVIRONMENT

The neighborhood is most characterized by its natural features—its many wooded and lake front parks, and its views of Lake Washington and the Mercer Slough Nature Park. But this area's most dominant feature is the trees. Along roadways, on private lots and throughout the parks are the Douglas Fir, Western Hemlock, and Western Red Cedar that reforested the hills following the logging activity of the late 1800s. Where new housing was built on cleared sites in the 1950s and 1960s, planted trees contribute

Kayakers at Enatai Beach Park

Enatai Courts

substantially to the urban canopy. The community values the continued maintenance and planting of trees to sustain the long-term health of the urban forest which is a defining characteristic of this portion of much of the study area.

A 1.5 PARKS AND COMMUNITY FACILITIES

Community ties are built through neighborhood activities, associations, recreational facilities and programs, local churches and schools -- particularly Enatai Elementary School. School and community events provide many opportunities for the community to come together. Community ties are also built through social media. Enatai's Next Door community on-line site is very active. With over 1,500 members it is the largest Next Door site in the city. The neighborhood also comes together for recreation, such as the Triangle Pool and the tennis courts on NE 108th. Other outdoor recreational opportunities in and near the station area include bike and pedestrian trails, canoeing, swimming beaches, children's playgrounds and various ball courts.

Winters House

The Mercer Slough Nature Park is Lake Washington's largest remaining wetland, containing hundreds of plant species and an abundance of water resources. The park provides a diverse habitat for over 170 species of wildlife. Visitors can explore this urban wetland on over seven miles of interpretive, self-guided trails, including a unique canoe trail. The Mercer Slough Environmental Education Center features classrooms, a visitor center, a community building and a "tree house," all sustainably built. The City of Bellevue and Pacific Science Center provide year-round educational programs at the center.

Many reminders of Bellevue's historic past can be found in and around the Mercer Slough. The Heritage Trail, located behind the Winters House, meanders past remnants of old greenhouses, through an abandoned rhododendron nursery, and parallels the historic blueberry fields.

On the east side of Bellevue Way, north of the park-and-ride,

Figure A.1.5-A Parks and Community Facilities Map

Killarney Glen Park

is the Mercer Slough Blueberry Farm with seasonal u-pick blueberries, fruit and produce stand, and trailhead parking. The historic Winters House, just north of the fruit and produce stand, provides interpretive exhibits, visitor information, rental facilities, trailhead parking and is home to the Eastside Heritage Center. The beautifully restored Winters House is Bellevue's only building on the National Historic Register.

Lake to Lake Trail

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RELATED PLANS AND STUDIES

WHAT YOU WILL FIND IN APPENDIX A 2

- A 2.1 Southwest Bellevue Subarea Plan
- A 2.2 Pedestrian and Bicycle Transportation Plan; Pedestrian and Bicycle Implementation Initiative
- A 2.3 Bellevue Transit Master Plan
- A 2.4 Light Rail Permitting Citzen Advisory Committee
- A 2.5 Traffic Noise Studies
- A 2.6 South Bellevue Station Area Pedestrian and Bicycle Access Analysis
- A 2.7 Sound Transit East Link South Bellevue Final Design

A 2.1 SOUTHWEST BELLEVUE SUBAREA PLAN

The City's Comprehensive Plan includes the Southwest Bellevue Subarea Plan. This plan includes all the neighborhoods west of I-405 between Downtown and I-90, a larger study area than the South Bellevue Station Area Plan. The current Southwest Bellevue Subarea Plan was adopted in 2007, with a map update in 2015. Subarea plans can be accessed from this website: bellevuewa.gov/comprehensive_plan.htm

Each of Bellevue's 14 subareas has its own character and development. Planning at the subarea level is an effective way to address neighborhood needs and to focus planning efforts. Subarea plans, written with direct citizen involvement, are a key element in maintaining stable land use patterns in the City. This stability is one measure of the high quality of life that citizens in Bellevue have come to expect.

A 2.2 PEDESTRIAN AND BICYCLE TRANSPORATION PLAN; PEDESTRIAN AND BICYCLE IMPLEMENTATION INITIATIVE

PEDESTRIAN AND BICYCLE TRANSPORTATION PLAN

The Pedestrian and Bicycle Transportation Plan – adopted by City Council in 2009, establishes the City's overall vision "To Plan, design, build, and maintain an integrated, comprehensive network of pedestrian and bicycle facilities in collaboration with community stakeholders". The Plan builds on the acknowledgement in the City's Comprehensive Plan that the anticipated growth in travel requires a multi-modal approach to transportation planning that offers choices to how people travel in the city.

A series of strategies are outlined in the Plan, including the following items:

- Improvement Priorities. Give special consideration to projects that improve network connectivity, enhance accessibility to major community facilities, and address safety issues.
- Context Sensitive Design. Work with the public in designing transportation facilities that are safe, attractive, and compatible with surrounding land uses.
- Coordination. Implement public education and encouragement programs, enabling policies, and land use patterns that support bicycle and pedestrian movement.
- Accommodation. Consider the needs of pedestrians and bicyclists in planning and designing road projects.

The Pedestrian and Bicycle Transportation Plan provides a detailed assessment of Bellevue's transportation network that has resulted in specific recommendations for new pedestrian and bicycle facilities. Within the South Bellevue station study area the Plan

identified several projects including:

- S-339-E & S-339-W: Add a 6 ft. wide sidewalk and 4 ft. wide planter strip to 108th Ave SE from SE 21st St to SE 34th Street.
- S-340-W: Add a 6 ft. wide sidewalk and 4 ft. wide planter strip to the west side of Bellevue Way from SE 27th Place (alignment) to SE 30th Street.
- O-131-E: Add a 10-14 ft. wide off-street path on the east side of 112th Ave SE and Bellevue Way SE from SE 8th St. to I-90 trail (Mountains to Sound Greenway Trail).
- B-138-E & B-138-W: Add 5 ft. wide bicycle lanes on both sides of 108th Ave SE from Bellevue Way SE to SE 34th St. this is a component of the priority bicycle corridor NS-1: Enatai - Northtowne Connection.

Pedestrian and bicycle facility enhancements addressing projects S-339-E & S-339-W were completed along 108th Ave SE in 2011, these included new sidewalks and multi-purpose path for pedestrians and cyclists separated from the roadway by landscaping on the east side of the street between SE 30th and SE 34th Streets.

Sound Transit will complete project O-131-E as part of the construction of the East Link light rail line along 112th Ave SE and Bellevue Way SE. Sound Transit will also construct traffic signals and a crosswalk at the south entrance to the South Bellevue station and park & ride and sidewalk on the west side of Bellevue Way SE from the south entrance crosswalk to SE 30th St., this is similar to project S-340-W described above.

PEDESTRIAN AND BICYCLE IMPLEMENTATION INITIATIVE

The recently inaugurated (fall 2014) Bellevue Pedestrian & Bicycle Implementation Initiative builds on the work of the 2009 Pedestrian & Bicycle Plan. A set of Program Principles has been developed by City Council to direct the Implementation Initiative including the following principles that are particularly relevant to the ongoing station area planning work:

- The vision established by the 2009 Pedestrian and Bicycle

Plan remains relevant today, its goals should not be diluted, and its measures of effectiveness should continue to be monitored. Rather than revisiting the original 2009 plan, the Implementation Initiative is instead focused on advancing the projects and programs identified in the 2009 plan.

- Undertake an action-oriented initiative that advances projects and programs to help realize the City's vision. Undertake assessments and design analysis to advance projects from the 2009 plan.
- Advance the implementation of Bellevue's planned Bicycle Priority Corridors to facilitate continuous bicycle travel along a connected grid of safe facilities throughout the city and the region. The 2009 Plan identifies eleven cross-city bicycle priority corridors – complete pre-design work for two north-south and two east-west corridors by 2019. In the South Bellevue station area, these include the Enatai – Northtowne Connection on 108th Ave SE, the Lake Washington Loop on 118th Ave SE, and the Mountains to Sound Greenway Trail in the I-90 corridor; the portions within the station area are complete.
- Determine where pedestrian and bicycle investments can improve the connectivity of the multi-modal transportation system. As the transit network grows with implementation of light rail, it is important to enhance the pedestrian and bicycle environment to enable to get to transit. The Pedestrian & Bicycle Implementation Initiative will assess where investments in walkways and bicycle facilities can significantly improve access to transit. This is consistent with work started in the Transit Master Plan as well the South Bellevue Station Area Pedestrian & Bicycle Access analysis described in Appendix Section A2.6.
- Coordinate with other efforts underway in Bellevue related to pedestrian and bicycle issues. The Pedestrian & Bicycle Implementation Initiative should incorporate and inform the work done in various City initiatives such as East Link station area planning.

A 2.3 BELLEVUE TRANSIT MASTER PLAN

The City's Transit Master Plan was updated and adopted by City Council in July 2014 and provides a comprehensive analysis of the system that will be required to meet Bellevue's transit needs through 2030.

While the focus of the Transit Master Plan is primarily on transit service and the City's aspirational goals for that service the Master Plan also acknowledges the importance of access to the transit network. "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 pedestrians for some part of their trip, so the provision of an accessible pedestrian network is 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."

The discussion of access to transit provides a starting point for assessment of where investments in pedestrian and bicycle facilities can significantly improve access to transit consistent with the South Bellevue Pedestrian & Bicycle Access analysis and with the program principles of the Bellevue Pedestrian & Bicycle Implementation Initiative.

A 2.4 LIGHT RAIL PERMITTING CITIZEN ADVISORY COMMITTEE

The Light Rail Permitting CAC has established the following statement of context and design considerations for their evaluation of the East Link project at the South Bellevue Park-and-Ride station. This statement could inform how strategies from this

report are implemented.

a. The alignment transition from the I-90 right-of-way to the South Bellevue Station should be reflected as a “Grand Entry” into Bellevue. This gateway area defines Bellevue as the “City in a Park.” The gateway serves a number of functions, and should appropriately greet the different users that pass through it, including transit riders, vehicles, residents, bicyclists from the I-90 trail, fish (specifically salmon), and wildlife.

b. The South Bellevue Park & Ride garage should incorporate green/living walls and trellis structures on the roof level in addition to interesting concrete surface treatments to break down mass and scale, and to help blend the garage into the Mercer Slough Nature Park when viewed from the neighborhoods to the west and the park to the east.

c. References to Southwest Bellevue’s truck farming history should be incorporated into the South Bellevue Station and Parking Garage.

In addition to complying with all applicable provisions of the Southwest Bellevue Subarea Plan, the design intent for the [regional light rail transit] RLRT system and facility segment that passes through this subarea is to contribute to the major City gateway feature that already helps define Bellevue Way and the 112th Corridor. The RLRT system or facility design should reflect the tree-lined boulevard that is envisioned for the subarea, and where there are space constraints within the transportation cross-section, design features such as living walls and concrete surface treatments should be employed to achieve corridor continuity.

The presence of the South Bellevue park and ride and station when viewed from the neighborhood above and Bellevue Way to the west, as well as from park trails to the east, should be softened through tree retention where possible and enhanced landscaping and “greening features” such as living walls and trellises. Design features for the alignment passing through this subarea and for the East Main Station should include landscaping that provides dense screening when viewed from residential areas and visual relief along transportation rights-of-way while maintaining sightlines that ensure user safety. Design features should be incorporated to discourage vehicular drop-off activities adjacent to the single-

family areas. The character of this area is defined by:

a. The expansive Mercer Slough Nature Park;

b. Historic references to truck farming of strawberries and blueberries;

c. Retained and enhanced tree and landscaped areas that complement and screen transportation uses from residential and commercial development; and

d. Unique, low-density residential character that conveys the feeling of a small town within a larger City.

A 2.5 TRAFFIC NOISE STUDIES[2]

INTRODUCTION

Several studies were prepared in 2012 and 2013 that quantify traffic noise levels for residents along Bellevue Way from the South Bellevue Park and Ride to the Y intersection at 112th Avenue SE. This memorandum is a compilation of the previous studies and an assessment of potential mitigation treatments along this corridor. This document looks only at traffic noise. Noise from the proposed light rail is not included.

Three options have been studied:

1**. A no-build option**, accounting for normal increases in traffic volumes over time.

2. **Shifting of Bellevue Way** traffic lanes to the west, toward the residences, to accommodate the Sound Transit Light Rail project. (This alignment was not chosen and is no longer being considered by City of Bellevue or Sound Transit).

3. **Add HOV lane to the Center of Bellevue Way** requires shifting along the west side of Bellevue Way for additional right-of-way. (City of Bellevue is considering this project from the South Bellevue park-and-ride to the "Y").

2 This section was prepared by The Greenbusch Group, Inc. for the City of Bellevue specifically for this report.

The documents reviewed for this study, include:

- Supplemental Noise Analysis for Potential Refinements (March 4, 2013) prepared by Michael Minor & Associates updating "Appendix H2: Noise and Vibration Technical Report" of the East Link Light Rail Transit Project Final Environmental Impact Statement, June 2011.
- FINAL: East Link LRT Noise Mitigation Design Measures for Cost Savings Options 1.A and 2.B (March 31, 2013) prepared by ATS Consulting updating plans and profiles of "Cost Savings Idea 1.A and Idea 2.B" prepared by H-J-H Final Design Partners, dated December 7, 2012.
- "Final Impact Statement 2013-2014 Transportation Facilities Plan", prepared by Parametrix, dated July 2013.

EXECUTIVE SUMMARY

Many of the residences along the Bellevue Way corridor are currently experiencing levels of sound exceeding the Federal Highway Administration (FHWA) Noise Abatement Criteria (NAC) level of Leq 66 dBA. Several studies have been completed to analyze the effect on noise levels due to shifting Bellevue Way to the west. The conclusion of the studies is that the predicted increase in noise level (from traffic only-no influence from the light rail project) with a shift in alignment is not much more than 1 to 2 dBA. In addition, for many of the homes along Bellevue Way, the noise levels are predicted to decrease over the existing conditions due the mitigation treatments proposed. Homes with line-of-sight to I-90 or I-405, after mitigation, are not likely to notice any reduction.

A number of mitigation strategies are available. Historically, the most effective, and most commonly used form of mitigation is the noise wall. Reductions in noise levels of 5 to 10 dBA are achievable with this type of barrier. Other forms of mitigation include quiet pavement types, vegetation, building insulation, masking and active noise cancellation. Advantages and disadvantages of each type of mitigation are outlined in Table 3.

NOMENCLATURE

Decibel, dB

The most common measure of sound level is expressed in decibels. The auditory response to sound is a complex process, which occurs over a wide range of frequencies and intensities. Decibel levels, or "dB", are a form of shorthand that compresses this broad range of intensities into a convenient numerical scale.

The decibel scale is logarithmic, and as such, a doubling or halving of energy causes the sound level to change by 3 dB ; it does not double or halve the sound level as might be expected. The minimum sound level variation perceptible to a human observer is generally around 3 dB. A 5-dB change is clearly perceptible, and an 8 to 10 dB change is associated with a perceived doubling or halving of loudness.

A-weighted Decibel, dBA

The human ear has a unique response to sound pressure. It is less sensitive to those sounds falling outside the speech frequency range. Sound level meters and monitors utilize a filtering system to approximate human perception of sound. Measurements made utilizing this filtering system are referred to as "A weighted" and are called "dBA". Unless otherwise stated, the levels reported in this document are in dBA.

Ambient Sound Level

A sound pressure level that describes the sound environment at a specified location during a specified time period including contributions from all sound sources, both local and distant.

Equivalent Sound Level, Leq

Leq is the A-weighted level of a constant sound having the same energy content as the actual time-varying level during a specified interval. The Leq is used to characterize complex, fluctuating sound levels with a single number. Typical intervals for Leq are hourly, daily and annual. The hourly Leq is the basis of an FHWA evaluation to determine impact.

REGULATORY CRITERIA

FHWA

The criteria for determining a traffic noise impact are established by the FHWA in their Procedures for Abatement of Highway Traffic Noise and Construction Noise, Title 23, Code of Federal Regulation (CFR) Subchapter H, Section 772 (1982). Table 1 shows the traffic Noise Abatement Criteria (NAC) by Land Use. The descriptor used for evaluation is the hourly Leq. A residential property is considered category Type B.

Washington State Department of Transportation (WSDOT) is the agency responsible for implementing FHWA regulations in Washington. For a project, such as this, with an increase in the number of through traffic lanes, WSDOT considers a traffic-noise impact to have occurred if predicted noise levels are within 1 dBA below the allowed hourly Leq criteria shown in Table 1 above. This results in an NAC for Residential of Leq 66 dBA and Leq 71 dBA for Commercial.

City of Bellevue

Within the City of Bellevue, the Bellevue City Code (BCC) Chapter 9.18 governs environmental noise levels. The Code designates maximum permissible noise levels by district of noise source and

Table 1. Traffic Noise Abatement Criteria-NAC

Land Use Category	Hourly Leq
Type A Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose	57 dBA (exterior)
Type B Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals	67 dBA (exterior)
Type C Developed lands, properties or activities not included in the above categories	72 dBA (exterior)
Type D Undeveloped land —	-
Type E Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums 52 dBA (interior)	52 dBA (interior)

Source: FHWA Procedures for Abatement of Highway Traffic Noise and Construction Noise (23 CFR 772)

district of receiving property. These permissible sound levels are based on the Environmental Designation for Noise Abatement ("EDNA") of the area, which, for Bellevue, is based on zoning as follows:

- Class A EDNA – Residential;
- Class B EDNA – Commercial;
- Class C EDNA – Industrial.

Permissible sound levels transmitted between two unrelated properties are listed in Table 2 below.

BCC 9.18.030 C.1 imposes a nighttime penalty of 10 dBA on the permissible sound levels between the nighttime hours of 10:00 PM to 7:00 AM where the receiving property is Class A EDNA. This lowers the allowable sound level to 45, 47 and 50 for the first column in Table 2 during nighttime hours. BCC 9.18.030

Table 2 Maximum Permissible Sound Levels by Receiving Property, dBA re: 20 µPa

	Receiving Property District (EDNA)		
Noise Source District	Residential (A)	Commercial (B)	Industrial (C)
Residential	55	57	60
Commercial	57	60	65
Industrial	60	65	70

Source: BCC 9.18.030

C.2 imposes a further penalty of 5 dBA for impulsive or pure tone sounds, at any time, due to the higher levels of annoyance associated with these types of sound. An impulsive sound is one that occurs for a short period of time (one second or less). Examples of impulsive sound are pile driving and other impact type of sound generated by construction equipment. A pure tone is a sound dominated by one frequency. An example of a source of sound with a pronounced pure tone is a transformer.

Section 9.18.020.A.7 of the BCC provides certain exemptions from compliance with the city's noise code, including "Sounds

created by motor vehicles when regulated by Chapter 173-62 WAC." According to Chapter 173-62 WAC, the definition of "motor vehicle" does not include "vehicles used exclusively on stationary rails or tracks…."

Section 9.18.020.C of the BCC states that sounds created by construction are exempt from code limitations between the hours of 7:00 AM and 6:00 PM on weekdays and 9:00 AM and 6:00 PM on Saturdays which are not legal holidays. Sounds from construction are prohibited outside of these hours and on Sundays and legal holidays, unless a variance is granted by the City of Bellevue.

EXISTING AMBIENT

Many noise sensitive, residential properties are located along the west side of the corridor. The topography in this area is elevated above the Bellevue Way corridor. Dominant existing noise sources include traffic noise from I-90, I-405 and Bellevue Way SE. Many locations currently exceed the FHWA NAC of Leq 66 dBA.

SUMMARY OF IMPACTS

At residential properties along the west side directly adjacent to the Bellevue Way corridor, measured sound levels range between Leq 66 dBA and 72 dBA. Prior to any widening of Bellevue Way, all of these properties meet or exceed the FHWA definition of impacted property and the NAC Leq 66 dBA. Sound levels at properties set back from Bellevue Way by one row ranged from Leq 57 dBA to 67 dBA. Of these homes, approximately 10% are currently over the FHWA NAC threshold.

Computer models were constructed to predict the increase in sound level with the shifting of the traffic lanes to the west. The predicted increases in level were typically not more than 0 to +2 dBA, with one property experiencing +3 dBA. Although the perception of increased loudness is inaudible (0 to +2 dBA) to barely audible (+3 dBA), mitigation was proposed due to the high sound levels currently characterizing this area.

Mitigated sound levels for the most impacted residents along the

corridor range between Leq 60 dBA to 65 dBA. This is a reduction of between -4 dBA and -13 dBA. Most of these properties with sound levels within the range of Leq 70 dBA to 73 dBA will experience a reduction in sound associated with a perceived halving of loudness over current sound levels. Mitigated sound levels are also more consistent throughout the neighborhood.

MITIGATION

Strategies for noise control generally fall into three categories:

1. **Vehicle controls** (tires, mufflers, etc.) Some noise controls for new vehicles are imposed by the State of Washington. Imposing additional regulations at the city level is difficult.

2. **Highway planning and design** (expanded below)

3. **Land use controls** (zoning, buffers, etc.) Land use controls, while effective, are not applicable along an established corridor.

Highway planning and design includes the following types of mitigation:

- Noise walls
- Quiet pavement:
  - Rubber or Polymer Asphalt
  - Pavement Surface Texture
- Vegetation
- Building insulation

Techniques seldom used, but often requested by the community:

- Masking Sound
- Active noise cancellation

Table 3. Comparison of Highway Noise Mitigation Treatments

Mitigation Treatment	Advantages	Disadvantages	Estimated Reduction	Notes
Noise Barriers				
Noise Walls	Historically, noise walls are the most effective mitigation treatment.	Historically, noise walls are the most effective mitigation treatment.	5-10 dBA	In view corridors, barriers can be constructed of transparent materials. Plexiglas is subject to scratching, yellowing and view distortion. Glass is recommended if transparency is desired. Barriers may be constructed of wood as long as it is solid. It is not essential that barriers are concrete.
Quiet Pavement				
Hot Mix Asphalt	New Asphalt is quiet	Doesn't stay quiet	5 dBA	Benefit lost after 6 months
Rubber or Polymer Asphalt	Quieter than new asphalt when first applied.	Doesn't stay quiet	3-4 dBA	No audible difference with asphalt after 6 months. Quiet pavement is also not as durable as asphalt.
Pavement Surface Texture	Quieter than concrete when texture is new.	Doesn't stay quiet.	7 dBA	Loss of effectiveness is slower than rubber or polymer asphalt. No audible difference with concrete after 1 year.
Vegetation				
Vegetation	Psychological effect of reducing noise as line-of-sight to noise source is blocked.	A 200 foot dense forest would be required to equal a modest noise wall.	6 dBA	Large area required.
Building Insulation				
Building Insulation	Effective to reduce sound inside a home.	Outdoor living areas remain impacted.	5-7 dBA	Fan assist ventilation is also required to allow windows to remain closed all year.

Mitigation Treatment	Advantages	Disadvantages	Estimated Reduction	Notes
Masking Sound				
Masking Sound	A concept where one sound masks over another.	May be effective in quiet environments In an environment where noise levels are already high-masking would just increase the noise level.	NA	Along the Bellevue Way corridor, one form of masking that may have an effect would be a water feature. The broadband nature of this type of sound could mask traffic and provide a consistent background sound level, not governed by the traffic flow. However, the length of the corridor may make this approach cost prohibitive.
Active Noise Cancellation				
Active Noise Cancellation	A sound is sampled reproduced and played back out of phase to cancel the original sound.	Technology is in its infancy. It is effective only on repeatable sounds. Some success has been achieved in car mufflers.	NA	Technology not advanced enough to cancel random sounds of traffic. Approach is not viable along Bellevue Way.

Source: The Greenbusch Group, Inc., Julie Wiebusch, June 2014.

A 2.6 SOUTH BELLEVUE STATION AREA PEDESTRIAN AND BICYCLE ACCESS ANALYSIS

The purpose of this technical memorandum is to document the methodology, assumptions and results of the pedestrian and bicycle connectivity analysis conducted for projects around the South Bellevue Station. This analysis used the ViaCity tool, a geographic information system (GIS) based connectivity analysis tool developed by Transpo Group, which assesses the access

and connectivity benefits of various projects for pedestrian and bicycle travel to and from the future South Bellevue Link Station. These projects were identified through work with the surrounding community as well as review of the City's Pedestrian and Bicycle Master Plan.

The ViaCity tool was used because it provides detailed station access analysis of pedestrian and bicycle improvement projects including sidewalks, bike lanes, trails and bridges. The benefits of individual projects or a package of projects can be tested and compared to other projects in a consistent way. The ViaCity tool provides numeric quantification of the project benefits including how much it expands the station walkshed, improves the quality of connections or increases the directness of connections to the station. It also allows for mapping of the project benefits at a building level, showing which areas see the largest benefits from each project.

A high-level summary of the projects and their connectivity benefits intended for a public audience has been developed (see Attachment A). This summary includes maps of the projects as well as connectivity results. Additional details on network coding and the specific connectivity results are also included in this memo.

Network coding, including documentation of which geometric transportation networks were used as well as the impedance values for various non-motorized facilities, are discussed first. Next, preliminary planning-level cost estimates for each project are presented. Finally, analysis of the results including baseline connectivity and connectivity improvement results for both pedestrian and bicycle projects are presented.

NETWORK CODING

To conduct a pedestrian or bicycle connectivity analysis using the ViaCity tool, a baseline network must first be developed using GIS. Network development is a two-stage process. First, the geometric network must be laid out, which includes the physical lines (streets, sidewalks, crosswalks) and nodes (intersections, trail heads) that make up the network.

The second step involves coding of impedance values on each link of the geographic network. Impedance variables capture the quality of various road segments for pedestrians and cyclists based on factors such as roadway facility class, number of travel lanes, speed limit and pedestrian or bicycle facilities. This allows the quality of connections, not just their presence or absence, to be factored into the analysis.

Geometric Network Layout

Since pedestrians and bicyclists primarily use different parts of the roadway (sidewalks and crosswalks for pedestrians, roads for bicyclists) two geometric networks were developed for the analysis. This allows for representative routing of pedestrian and bicycle travel on the appropriate network. Both networks were based on the City's street centerline and trails shapefile, were reviewed by City staff, and verified in the field if necessary. Before pedestrian- or bicycle-specific coding occurred, the number of travel lanes and grade of each link was added to the network.

The following section provides details on the development of the pedestrian and bicycle networks.

Pedestrian Network:

Base Network: The City's street centerline file was used as the base network. All trails included in the City's trails file were then added, including both soft and hard surface trails.

Sidewalk Coding: The lines representing street centerlines for primary arterials, secondary arterials and collector streets were divided by side of the roadway to accurately model each side of the roadway separately. This was done using the "copy parallel" function within ArcGIS. The roadway centerlines were copied and buffered 20 feet on each side of the roadway, and then the original centerline was deleted.

Crosswalk Coding: Crosswalks were manually coded into the pedestrian network based on aerial photos, Google Street View and field visits. Because sidewalks were coded by the side of the roadways for primary arterials, secondary arterials

and collectors, crosswalks were added to those roads to represent the locations pedestrian can cross the roadway. On local roadways where a single line represents both sides of the roadway, crosswalk coding is not necessary. Five types of crosswalks were coded into the network (unmarked, marked, signalized, enhanced, and bridge).

Building Snap Lines: Using a shapefile developed by the City the base network was augmented to ensure that during analysis, building lines properly "snapped" to the correct network segment.

Bicycle Network:

Base Network: The City's street centerline file was used as the base network. The City's trail file was also added to this, but only for hard surface trails, according to the "SurfaceType" attribute coded into the Trail Network by the City.

Facility Coding: Using the data already in the City's street centerline file, the type of existing bicycle facilities was identified, including bike lanes, shoulders, shared marked lanes, and signed routes. Trails added previously were coded as trails, and road segments with various facility types were coded with the predominant facility type.

Building Snap Lines: Using a shapefile developed by the City (Bldg_Centroids_StreetSnapLines_EastLinkAcces), the base network was augmented to ensure that during analysis, building lines properly "snapped" to the network in the correct way.

Network Impedance Coding

Using the pedestrian and bicycle geometric network, impedance values were developed through a two step process. The first step assigned each street segment with a "vehicle presence" ranking, from very low to very high.

The second step used this ranking, as well as existing pedestrian or bicycle facilities, roadway slope, and other factors to capture the experience of walking or bicycling along a road segment. The less comfortable the experience, the higher the impedance value

becomes. A value of 1.0 is the baseline impedance value, with values above 1.0 indicating a road segment that is less comfortable to walk or bicycle along due to factors such as high traffic or inadequate facilities.

Impedance values are factored into the connectivity analysis by multiplying the impedance value by the length of the road segment, effectively lengthening or shortening a link. Crosswalks are the only exception and use a fixed impedance value based on the type of crosswalk and vehicular presence. Building snap lines have an impedance value of 1.0. The impeded length of each road segment is a direct measure used by the connectivity analysis to determine how well a location is connected to the South Bellevue Station. The shorter the "impeded distance", the closer and more direct the connection is.

VEHICULAR PRESENCE CODING

Each roadway was assigned a "vehicle presence" rank (see Table 1) based on the following three roadway attributes:

Lanes: The total number of travel lanes (excluding turn lanes) along a road segment. For roadways with variable cross sections, the midpoint of the street segment was used.

Functional Class: The functional classification for each roadway centerline shapefile was provided to Transpo as an attribute within the shapefile from the City.

Speed Limit: The speed limit for each roadway centerline shapefile was provided to Transpo as an attribute within the shapefile from the City.

Based on the number of lanes, functional class of the roadway, and speed limit, a vehicle presence ranking was assigned to each street segment. Segments with low vehicle presence ranking are more comfortable for pedestrians and bicyclists, while segments with high vehicle presence rankings are less comfortable and are more auto-oriented. Table 1 shows the matrix used to assign the vehicle presence rank.

Table 1 - Vehicle Presence

	Total Through Vehicle Travel Lanes					
Vehicle Speed (mph)		2 Lanes (Local)	2 Lanes (Collector)	2 Lanes (Arterial)	4 Lanes	6+ Lanes
	<= 25 mph	Very Low	Low	Medium	High	Very High
	30 -35 mph	Low	Medium	High	Very High	Very High
	40+ mph	Medium	High	Very High	Very High	Very High

PEDESTRIAN IMPEDANCE VALUES

The pedestrian network was built from the street centerline layer with the facility classification (detailed above) previously coded. Local streets were modeled as one segment, while arterials and collectors were broken into two (to model both sides of the street). The impedance of each road segment was based on the following elements:

Vehicle Presence: Same as described above.

Sidewalk Facility Type: Using sidewalk data provided by the City, the presence of sidewalks were coded onto this network. For primary arterials, secondary arterials, and collectors, each side of a roadway was coded independently based on the presence or lack of a sidewalk. On local streets, which have not been separated, a sidewalk on one side of the street was coded in the same way as a street with sidewalks on both sides of the street. Sidewalks wider than 6 feet were specifically identified, as they are more comfortable for pedestrians. See Table 2 for details.

Table 2 - Pedestrian Facility Impedance

	Vehicle Presence Category					
Pedestrian Facility Impedance		Very Low	Low	Medium	High	Very High
	No Sidewalk	1.125	1.125	1.25	1.5	2
	Sidewalk (< 6 ft.)	1	1	1	1.125	1.125
	Sidewalk (> 6 ft.)	1	1	1	1	1
	Trail	0.9				

Crosswalk Type: To account for the walking time of street crossings, impedance values were added to each crosswalk. Because crosswalks vary in length, a fixed distance in feet is used rather than an impedance value. See Table 3 for the crosswalk impedance distance by type.

Table 3 - Crosswalk Facility Impedance

	Vehicle Presence				
Crosswalk Type	Very Low	Low	Medium	High	Very High
Unmarked	160	240	320	NA	
Marked	80	160	240	NA	
Signalized	80		160	240	320
Enhanced	0				
Bridge	0				

**Note: The signalized crosswalk impedance values are based on walking speeds of 4 feet/second multiplied by signal timings of 40, 60, and 80 seconds. The unmarked and marked crosswalks were scaled to balance with these values.*

Slope: The average slope of each roadway segment was calculated using 30 foot contour lines from King County LIDAR data. This was achieved by creating a surface layer using the LIDAR data and then using the "Add Surface Information" function within ArcGIS and selecting "average slope" as the output type.

ADA Accessibility: Based on data developed by the City's ADA Title II self-assessment, sidewalks with a high priority for repair or replacement were given an added impedance of 0.1 on top of other impedance values.

BICYCLE IMPEDANCE VALUES

Bicycle impedance values, like pedestrian impedance values, use vehicle presence as the first measure. Once the vehicle presence of a roadway has been determined, the facility type (none, shared marked lane, shoulder, bike lane, or multiuse trail) is used to determine the impedance values along the roadway segment. An additional impedance value for slope of the road segment was also included.

Table 4 - Bicycle Facility Impedance

Vehicle Presence Category					
	Very Low	Low	Medium	High	Very High
None	1	1.125	1.25	1.75	2
Shared Marked Lane	1	1	1.125	1.5	1.75
Shoulder	1	1	1	1.25	1.5
Bike Lane	1	1	1	1.125	1.25
Multi-Use Trail	0.8				

**Note: Only hard-surface trails were included within the bike network.*

Vehicle Presence: Same as described above.

Bicycle Facility Type: Based on the bicycle facility and trail shapefiles, an attribute was added to the bicycle network detailing which type of facility was present (none, shared marked lanes, shoulder, bike lane, multi-use trail). Details of bicycle impedance are provided in Table 4.

Slope: The average slope of each roadway segment was calculated using 30 foot contour lines from King County LIDAR data. This was achieved by creating a surface layer using the LIDAR data and then using the “Add Surface Information” function within ArcGIS and selecting “average slope” as the output type.

IMPEDANCE CALCULATIONS AND ROAD SEGMENT LENGTH

Using the various pedestrian and bicycle impedance values, a final road segment impedance value was calculated. This value was multiplied by the length of the road segment or added in the case of crosswalks. Road segments with high vehicular presence and a lack of pedestrian or bicycle facilities have a high impedance value and therefore the impeded segment length is longer than the actual length of the link. The ViaCity tool uses the impeded distances to determine how well a location is connected to the station, both with respect to distance and directness. The equations below show how impedance values are calculated.

Pedestrian Impeded Distance: Shape Length * (Facility Impedance + 0.025 * Average Slope + ADA Impedance) + Crosswalk Impedance

Bicycle Impeded Distance: Shape Length * (Facility Impedance + 0.025 * Average Slope)

VIACITY ANALYSIS DETAILS

The pedestrian and bicycle network, with their associated impedance values, are used by the ViaCity tool to measure connectivity to the South Bellevue Station. Since various analysis options are possible using the ViaCity tool, the list below includes some of the specific settings used to run the analysis:

Analysis Layer: The Bellevue Buildings shapefile was used for the analysis. After the analysis was run, unoccupied buildings, buildings closer to the East Main Station, and buildings beyond the study area (1-mile for pedestrian and 3-miles for bicyclist based on the impeded network distance) were filtered out.

Analysis Networks: The impeded pedestrian and bicycle networks previously discussed were used as the analysis layer.

Analysis Destination: A point file with the location of the South Bellevue Station was used at the analysis destination.

Analysis Type: A many to one analysis was run using the impeded network distance. The RDI as well as distance measures were calculated and output.

Analysis Measures: The ViaCity Score was used to measure both the directness of access and the distance from the station. The score equation was tailored to the mode to capture the importance of distance, particularly for pedestrian travel:

- Pedestrian ViaCity Score: 0.67 * [-0.0189393 * (Impeded Network Distance) + 120] + 0.33 * (RDI)
- Bicycle ViaCity Score: 0.67 * [-0.0047348 * (Impeded Network Distance) + 100] + 0.33 * (RDI)

PROJECT COST ESTIMATES

This section presents planning-level cost estimates developed for each project. Cost estimates were developed for planning purposes only and have therefore been presented by their rough order of magnitude cost.

To develop the planning-level costs estimates a unit cost approach, informed by City feedback, was used due to the detailed nature of pedestrian and bicycle projects. However, these cost estimates are not based on full engineering or design and should still be considered preliminary and for planning purposes only. Potential items such as retaining walls and earthwork, which require detailed engineering and design, are assumed to be covered in the 20% planning level contingency. The cost of property acquisition was not included in the cost estimates.

Cost estimates for bridge structures were developed using findings from the Cost of Pedestrian and Bicycle Infrastructure Improvements report developed by the UNC Highways Safety Research Center and should also be considered preliminary and for planning purposes only. Details of the project cost estimate can be found in Attachment B.

Table 5 - Estimated Pedestrian Project Costs

Project	*Description*	*Cost Range ($1,000s)*[1]
1	New sidewalk along 112th Ave SE, SE 34th St and 106th Ave SE	500 - 1,000
2	New sidewalks along SE 28th St, SE 30th St, and SE 31st St	500 - 1,000
3	New pedestrian bridge over Bellevue Way SE at 112th Ave SE	1,000 >
4	New trail connections and sidewalk on Bellevue Way SE and SE 23rd St	100 - 500
5	New trail connections sidewalk on SE 23rd St	100 - 500
6	New trail connections at sidewalk SE 23rd St	100 - 500
7	ADA and other improvements to stairway between SE 28th Pl and 112th Ave SE	> 1,000
8	New pedestrian bridge over Bellevue Way SE at 112th Ave SE (at the Y)	> 1,000

Notes: 1 Does not include property acquisition costs

Table 6 - Estimated Bicycle Project Cost

Project	*Description*	*Cost Range ($1,000s)*[1]
1	Eastside Rail Corridor Trail and Mountains to Sound Greenway Trail	> 1,000
2	New bike lanes on 124th Ave SE and SE 38th St	> 1,000
3	New shoulder on 112th Ave SE	100 - 500
4	New shoulder on 98th, 99th, 100th, 101st Ave SE	> 1,000
5	Multiuse trail along Bellevue Way SE	N/A[2]

Notes: 1 Does not include property acquisition costs 2 Costs included within East Link construction project

A brief description of each project is provided in Table 5 and Table 6 as well as an estimated cost range for each project. For complete descriptions, including a map of improvements, see Attachment A.

RESULTS

Baseline Results

Baseline pedestrian and bicycle connectivity to the South Bellevue Station is shown in Figures 1 and 2. Both maps show the connectivity using ViaCity Score on a low-to-high range. An impeded network was used to measure both the distance and directness of access to the station. Since the pedestrian and bicycle analysis use networks with different impedance values the ViaCity Score ranges of low, medium, and high were set independently. These ranges do not conform to the standard non-impeded route directness index (RDI) ranges used in basic ViaCity connectivity analysis. Additionally, the connectivity benefits of projects are determined through comparison of baseline results and project results, and therefore the ViaCity Score ranges do not need to match. The pedestrian analysis extends up to 1-mile from the station and the bicycle analysis extending up to 3-miles. The score ranges are shown in Table 7.

Table 7 - Baseline ViaCity Score Ranges

Summarized Range	*Pedestrian*	*Bicycle*
Low	< 65	<44
Medium-Low	65 - 70	44 - 53
Medium	70 - 75	53 - 63
Medium-High	75 - 80	63 - 75
High	80 >	75 >

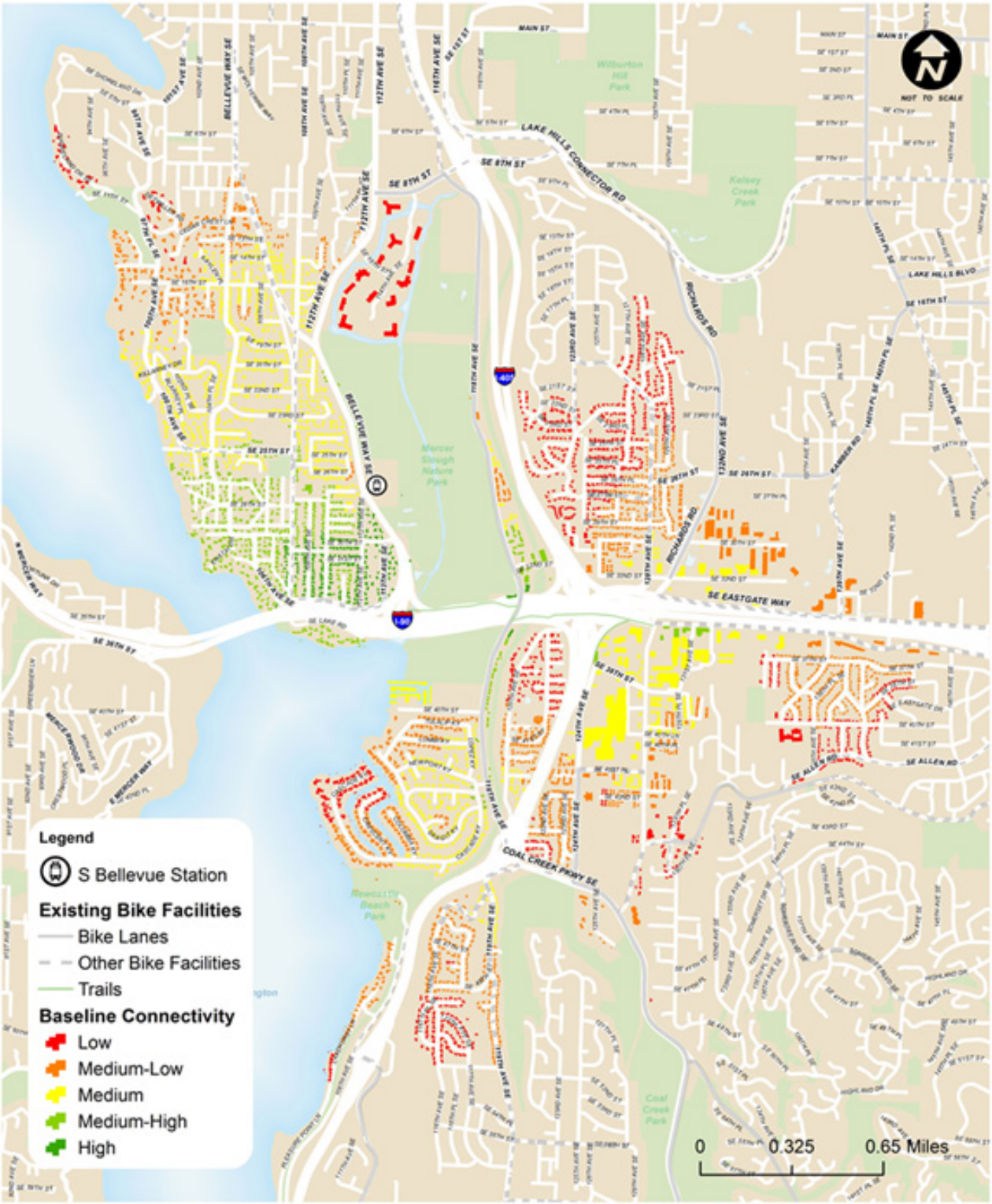
The pedestrian results shown in Figure 1 illustrate that the areas to the northwest of the station have poor connectivity to the station despite close proximity. This is particularly the case for the streets of SE 24th Pl, SE 25th St, and SE 26th St. The maps also show the value of the existing staircase between 112th Ave SE and SE 28th Pl, which provides good connectivity to areas directly west of the station.

Figure 2 shows the baseline bicycle connectivity results. The baseline analysis shows that areas to the southwest and west of the station are well connected. The analysis also highlights the importance of the Mountains to Sound Greenway in providing access across the Mercer Slough towards Lake Washington Blvd, Factoria and the Eastgate areas. Both areas have small pockets with high connectivity to the station where the trail connected to the street network. The northern half of Enatai has medium levels of connectivity to the station, as does the majority of the area surrounding the Factoria Mall.

This analysis also shows that in areas where multiple Link Light Rail stations are relatively closely spaced, bicycle access will overlap. Using the impeded bicycle network, buildings located closer to the East Main Station were excluded from the analysis.

Figure 1 – Baseline Pedestrian Connectivity

Figure 2 – Baseline Bicycle Connectivity



Project Results

Using the previously documented methodology and baseline network, pedestrian and bicycle improvements were added to the network. This process was done discretely, so the benefit of each project could be independently assessed. The resulting ViaCity Score for each building to the station was compared to the baseline ViaCity Score, and the improvement was measured. The larger the change in the ViaCity Score, referred to as the ViaCity Delta Score, the better the project performed.

A full summary of the results are included in Table 8 and 9 below. Maps of the ViaCity Delta Score for each project are provided in Attachment A. The ViaCity Delta Score maps group improvement in connectivity into three ranges of less than 5, 5 to 10, and greater than 10 for each building. Other numeric measures of performance are also collected with details of each measure provided below.

Additional Buildings in Study Area: This measures the number of additional buildings accessible within the 1-mile pedestrian study area or the 3-mile bicycle study area due to each project. These distances represent the impeded network walking or biking distance, not the straight line distance often described as the distance "as the crow flies." Areas closer to the East Main Station will be studied in the future and were thus excluded from the analysis.

Number of Buildings with Improved Connectivity to Station: This measure counts the total number of buildings with some level of connectivity improvements to the station, either due to a more direct connection or a higher quality connection. This measure is best used as an indicator of how large of a geographic area each project impacts. Generally the closer a project is to the station, the larger this measure becomes.

Aggregated Weighted ViaCity Delta Score: The ViaCity Delta Score was weighted and aggregated to provide a single measure of effectiveness. This measure, termed "Aggregated Weighted ViaCity Delta Score" captures expanded access, improved access, and a rough approximation of the amount of travel demand to/from each building. Due to the abstract nature of the Aggregated

Weighted ViaCity Delta Score it was summarized by Low (less than 1 million), Medium (1 to 5 million), and High (greater than 5 million) for communication with the public in Attachment A.

The bullets below explain the relationship of the various ViaCity measures.

- ViaCity Delta Score = ViaCity Score (with improvements) - ViaCity (Baseline)
- Weighted ViaCity Delta Score = ViaCity Delta Score x Size of Building (in square feet)
- Aggregated Weighted ViaCity Delta Score = sum of Weighted ViaCity Delta Score for all buildings

Large buildings such as office, retail, and multifamily builds have a larger impact on the Weighted ViaCity Delta Score than smaller single family homes with the same ViaCity Delta Score. Unoccupied buildings are not included.

Table 8 - Pedestrian Connectivity Results

Project	*Description*	*Additional Buildings in Study Area (1- Mile)*	*Number of Buildings with Improved Connectivity to Station*	*Aggregated Weighted ViaCity Delta Score (Range)*
1	New sidewalk along 112th Ave SE, SE 34th St and 106th Ave SE	1	46	30,000 (Low)
2	New sidewalks along SE 28th St, SE 30th St, and SE 31st St	28	515	1,210,000 (Medium)
3	New pedestrian bridge over Bellevue Way SE at 112th Ave SE	77	611	4,180,000 (Medium)
4	New trail connections and sidewalk on Bellevue Way SE and SE 23rd St	65	114	2,440,000 (Medium)
5	New trail connections sidewalk on SE 23rd St	100	267	6,640,000 (High)
6	New trail connections at sidewalk SE 23rd St	24	446	2,110,000 (Medium)
7	ADA and other improvements to stairway between SE 28th Pl and 112th Ave SE	190	408	6,620,000 (High)
8	New pedestrian bridge over Bellevue Way SE at 112th Ave SE (at the Y)	55	90	920,000 (Low)

Table 9 - Bicycle Connectivity Results

Project	*Description*	*Additional Buildings in Study Area (3- Mile)*	*Number of Buildings with Improved Connectivity to Station*	*Aggregated Weighted ViaCity Delta Score (Range)*
1	Eastside Rail Corridor Trail and Mountains to Sound Greenway Trail	11*	1,237	30,000 (Low)
2	New bike lanes on 124th Ave SE and SE 38th St	13	256	1,210,000 (Medium)
3	New shoulder on 112th Ave SE	0	0	4,180,000 (Medium)
4	New shoulder on 98th, 99th, 100th, 101st Ave SE	0*	49	2,440,000 (Medium)
5	Multiuse trail along Bellevue Way SE	0*	530	6,640,000 (High)

** Area of improved connectivity overlaps with the 3-mile study area of the East Main Station and/or extends beyond the baseline analysis study area.*

PEDESTRIAN FINDINGS

The findings show that projects either far away from the station (#8) or along routes which are indirect (#1) do not yield large connectivity benefits. The analysis also validates existing pedestrian trail connections (#7). While this project tested the benefit of existing investments, it shows the high value of this connection and indicates that improvements to it such as lighting or ADA improvements should be a top priority.

The analysis also shows that a new trail connection to the areas northwest of the station provides a significant improvement in station access, particularly project #5 which provides a new, direct connection to the station. Other improvements like sidewalk improvements show connectivity improvement and are relatively low cost. The pedestrian overpass project (#3) resulted in medium level improvements; however, this project is also one of the highest cost pedestrian projects.

BICYCLE FINDINGS

The findings of the bicycle analysis shows that the largest impact projects (#5 and #1) are already under design and planning. The multiuse trail planned as part of East Link provides very significant connectivity benefits to a large area north of the station, including multifamily housing and commercial space along Bellevue Way and 112th Ave SE. Ensuring high-quality connections across Bellevue Way SE is important to leverage this investment. The analysis also shows the value of completing the Mountains to Sound Greenway (MTSG) through the Eastgate I-90 area.

The highest scoring bicycle project not already under design or planning is project #2. This project leverages the MTSG and improves connectivity from the Factoria Mall and surrounding areas. The remaining projects show limited benefit in improve access to the station.

ATTACHMENT A

South Bellevue Station Area Pedestrian and Bicycle Access

City of Bellevue | September 2014 | Prepared by the Transpo Group

The purpose of the South Bellevue Station pedestrian and bicycle access analysis is to help the City of Bellevue better understand and quantify the benefits of pedestrian and bicycle projects in the vicinity of the future Sound Transit Link light rail station.

Background

Pedestrian and bicycle projects, identified through both neighborhood engagement and review of the City of Bellevue's Pedestrian and Bicycle Master Plan, were analyzed. These projects include new pedestrian and bicycle facilities such as sidewalks, bike lanes, trails, and bridges.

Each project or grouping of projects was analyzed based on its ability to increase the quality of access, reduce walking or biking distance, and improve the directness of pedestrian or bicycle access to the station. These measures are encapsulated by the idea of improved station area connectivity (i.e., how easily and comfortably can people walk and bike to the station).

Analysis

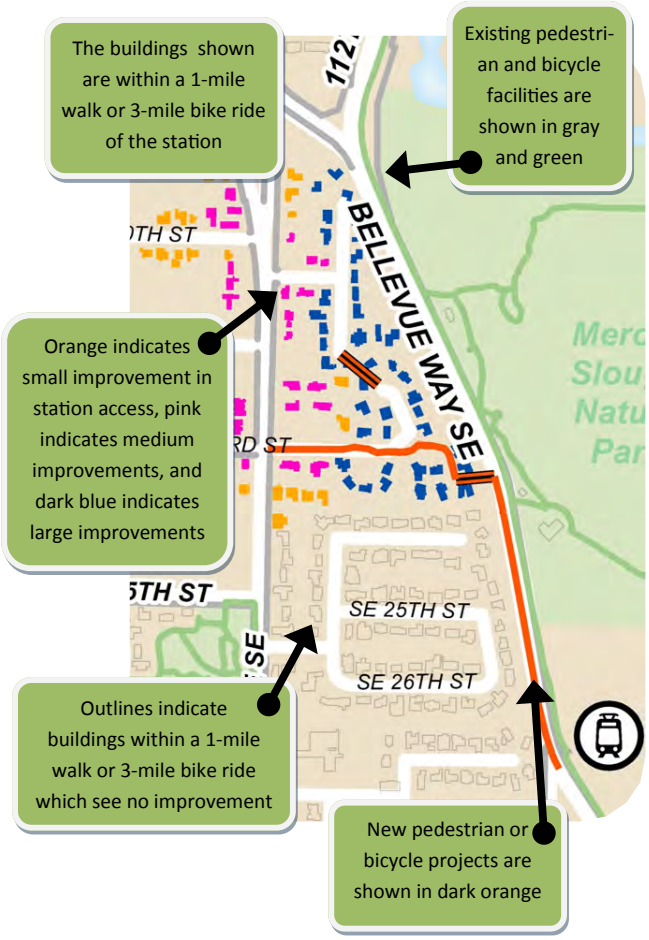
Based on the measures described above, and a map-based analysis program, each project was tested to determine the improvement in station connectivity compared to existing conditions. Maps showing existing pedestrian and bicycle connectivity to the station are included on pages 3-4 of this document.

The proposed improvements were mapped and the connectivity results of each analysis are shown at the building level. Connectivity scores range from none to high for the projects.

The image and callouts below provides additional details on how to interpret the project maps attached in pages 5-17.

Buildings with high connectivity benefits have reduce walking or bicycling distance to the station as well as higher quality connections to the station.

Connectivity improvements of low



and medium generally indicate that the quality of access has been improved although walking and bicycling distance may not be significantly reduced.

Measures

In addition to mapping the results of each project, a summary is also provided in the tables to the right and on each project summary sheet. The three measures summarized in the table and on the summary sheets include:

- The number of additional buildings connected to the station within the 1-mile pedestrian study area or the 3-mile bicycle study area due to each project. These distances represent the actual walking or biking distance, not the straight line distance "as the crow flies." Areas closer to the East Main Station will be studied separately and were thus excluded from the analysis.
- The total number of buildings with some level of connectivity improvements to the station either due to a more direct connection or a higher quality connection.
- The overall connectivity benefit is based on the improvement in distance, directness and quality of connection to the station (expressed on a low to high scale). This measure allows for direct comparison of projects.

Pedestrian projects are presented first, followed by bicycle projects. Each sheet includes a short description of the project, along with a brief narrative summarizing the benefits of the project.

Findings

The analysis shows the value of existing pedestrian connections to the station (#7) and the value of the planned multi-use trail connections (#1 and #5).

The analysis indicates that a new pedestrian connection to the area bounded by 108th Ave SE, Bellevue Way SE, and SE 26th St yields the largest pedestrian improvements to station access (#4,5, and 6). New bike lanes on SE 38th St and 124th Ave SE (#2) provide the largest improvement to station access excluding projects #1 and #5.

Pedestrian Project Results

Project Number	Additional Buildings in Study Area (1-Mile)	Buildings with Improved Connectivity	Overall Connectivity Benefit
1	1	46	Low
2	28	515	Medium
3	77	611	Medium
4	65	114	Medium
5	100	267	High
6	24	446	Medium
7	190	408	High
8	55	90	Low

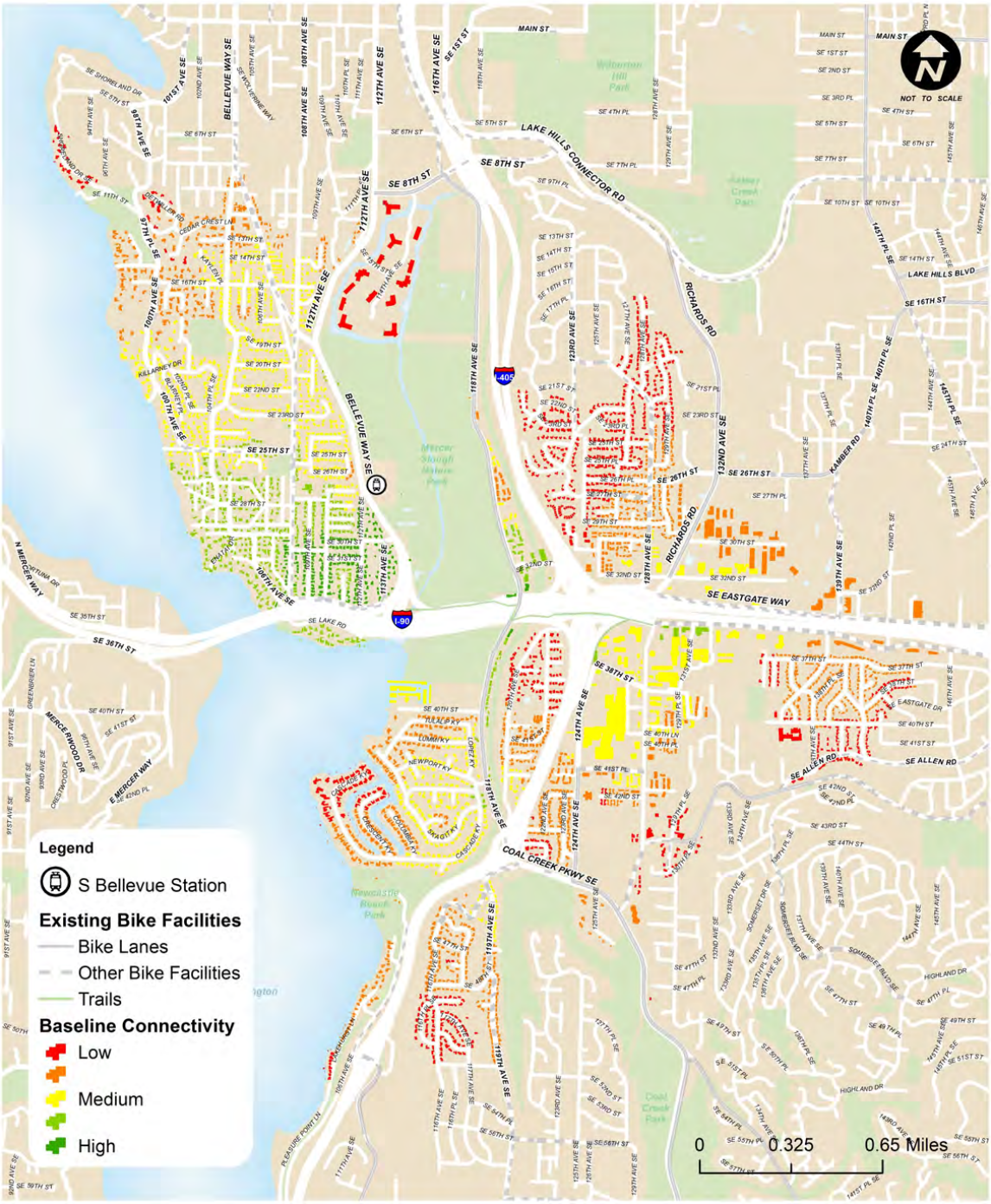
Bicycle Project Results

Project Number	Additional Buildings in Study Area (3-Mile)	Buildings with Improved Connectivity	Overall Connectivity Benefit
1	11*	1,237	High
2	13	256	Medium
3	0	0	None
4	0*	49	Low
5	0*	530	High

* Area of improved connectivity overlaps with the 3-mile study area of the East Main Station and/or extends beyond the baseline analysis study area.

Existing Pedestrian Connectivity

Existing Bicycle Connectivity



Pedestrian Project #1

Project Description: Sidewalks added on one side of:

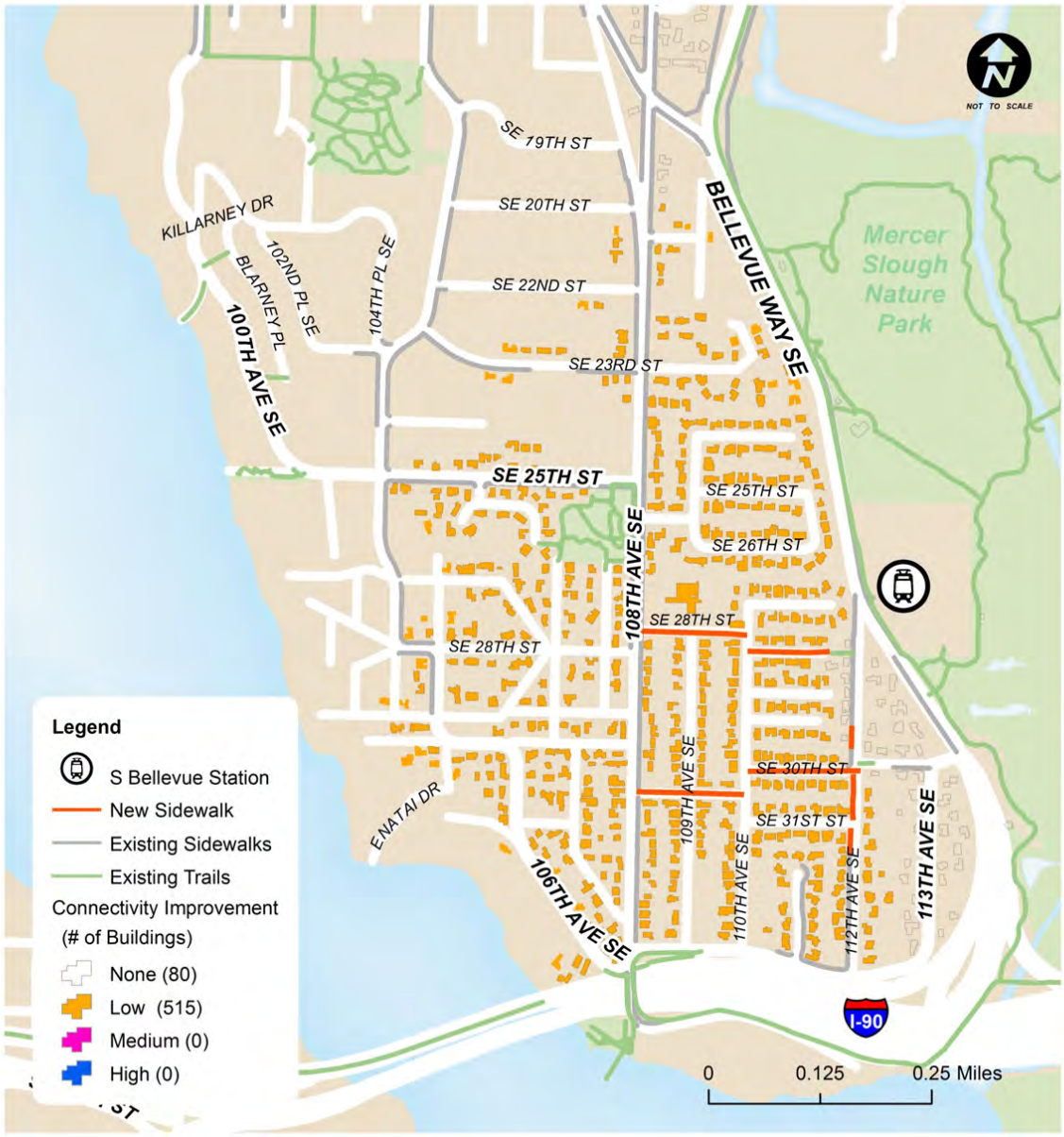
- 113th Ave SE (Bellevue Way SE to SE 34th Street)
- SE 34th Street (113th Ave SE to 108th Ave SE)
- 106th Ave SE (108th Ave SE to SE 30th St)
- SE 30th St (106th Ave SE to 105th Ave SE

Project Benefit: Connectivity benefits are limited to the buildings immediately adjacent to the new sidewalk improvements along the southern tip of Enatai.

Project Origin: Neighborhood workshop and Pedestrian and Bicycle Master Plan

Analysis Summary:

- Additional buildings within 1-mile analysis study area: **1**
- Buildings with improved connectivity to station: **46**
- Overall connectivity benefit: **Low**



Pedestrian Project #2

Description: Sidewalks or other pedestrian facilities added to one side of:

- SE 28th St/Pl (108th Ave SE to 112th Ave SE)
- SE 30th/31st St (108th Ave SE to 112th Ave SE)
- Filling gaps along 112th Ave (SE 34th St to Bellevue Way SE)

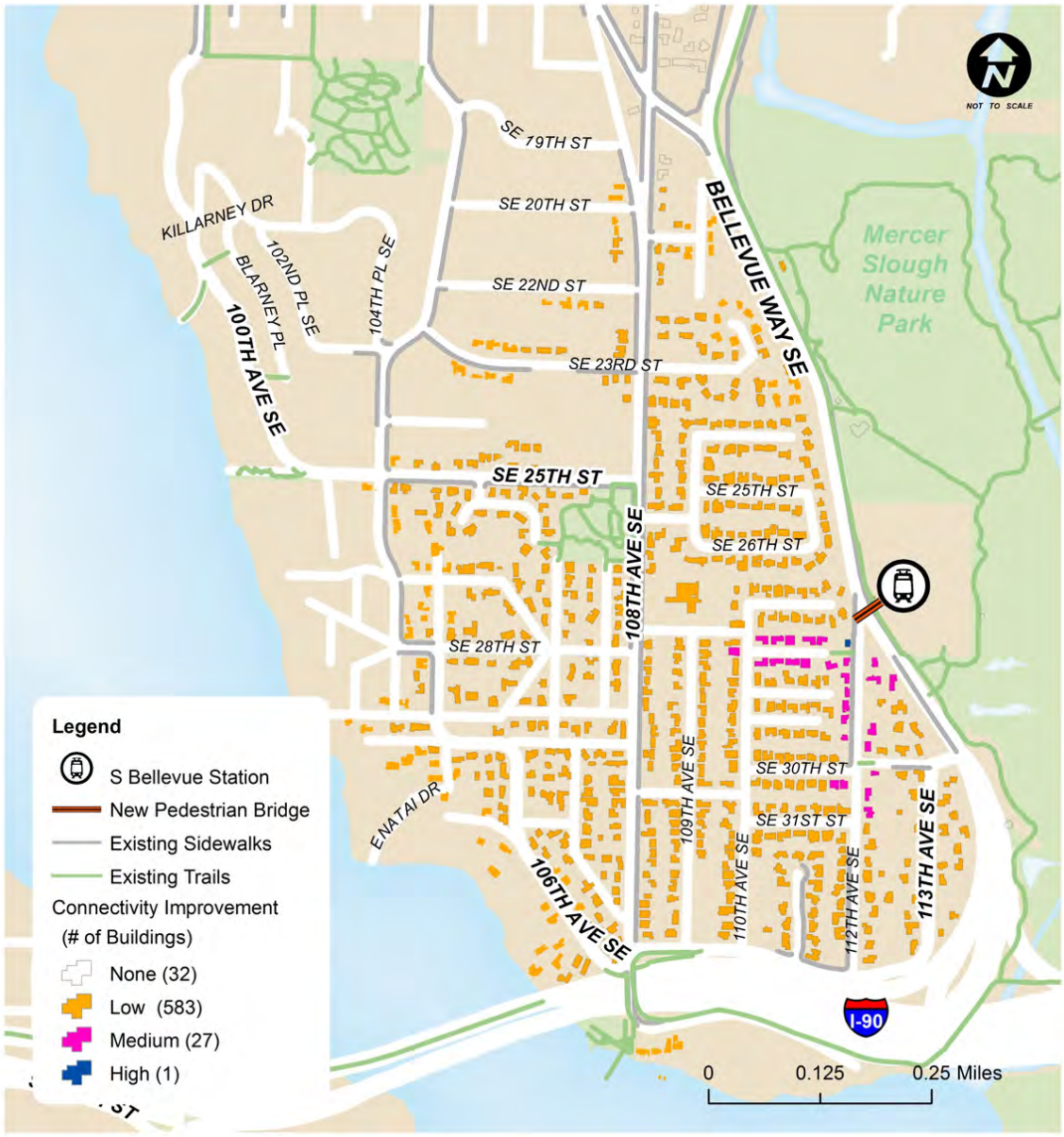
Connectivity Benefits: Connectivity improvements are widespread across the study area to the west of Bellevue Way SE although generally small.

Project Origin: Neighborhood Workshop

Analysis Summary:

- Additional buildings within 1-mile analysis study area: **28**
- Buildings with improved connectivity to station: **515**
- Overall connectivity benefit: **Medium**

6



Pedestrian Project #3

Description: Pedestrian bridge across Bellevue Way at 112th Ave NE. A pedestrian bridge at Bellevue Way SE and 113th Ave SE was also analyzed but produced less station access benefits.

Connectivity Benefits: Connectivity benefits are widespread across the study area, with medium level connectivity improvements for buildings located in close proximity to the pedestrian bridge.

Project Origin: Neighborhood Workshop

Analysis Summary:

- Additional buildings within 1-mile analysis study area: **77**
- Buildings with improved connectivity to station: **611**
- Overall connectivity benefit: **Medium**

Pedestrian Project #4

Description:

- Completion of sidewalks or other pedestrian facilities along SE 23rd St
- New trail connection between SE 23rd St to Bellevue Way SE and SE 22nd St to 109th Ave SE
- New sidewalk along west side of Bellevue Way SE from trail connection to 112th Ave SE

Connectivity Benefits: Connectivity benefits are focused in the neighborhood north of SE 23rd St, particularly between Bellevue Way SE and 108th Ave SE.

Project Origin: Neighborhood Workshop

Analysis Summary:

- Additional buildings within 1-mile analysis study area: **65**
- Buildings with improved connectivity to station: **114**
- Overall connectivity benefit: **Medium**

8

Pedestrian Project #5

Description:

- Completion of sidewalks or other pedestrian facilities along SE 23rd St
- New trail connection between SE 23rd St cul-de-sac to SE 24 Pl, SE 24th to SE 25th St & 111 Ave, and SE 26th St and 111th Ave SE to Bellevue Way
- Sidewalk along west side of Bellevue Way SE to 112th Ave SE

Connectivity Benefits: Connectivity benefits are focused in the neighborhoods north of SE 26th St and south of SE 18th St.

Project Origin: Neighborhood Workshop

Analysis Summary:

- Additional buildings within 1-mile analysis study area: **100**
- Buildings with improved connectivity to station: **267**
- Overall connectivity benefit: **High**

Pedestrian Project #6

Description:

- Complete sidewalk or other pedestrian facilities along SE 23rd St
- New trail connection between SE 23rd St cul-de-sac to SE 24 Pl, SE 24th PL to SE 25th St & 111 Ave, and SE 27th Pl & 110th Ave SE to SE 26th St
- Add sidewalks along SE 28th St (110th Ave SE to 112th Ave SE)

Connectivity Benefits: Improvements are distributed with the largest benefits north of SE 27th Pl.

Project Origin: Neighborhood Workshop

Analysis Summary:

- Additional buildings within 1-mile analysis study area: **24**
- Buildings with improved connectivity to station: **446**
- Overall connectivity benefit: **Medium**

10

Pedestrian Project #7

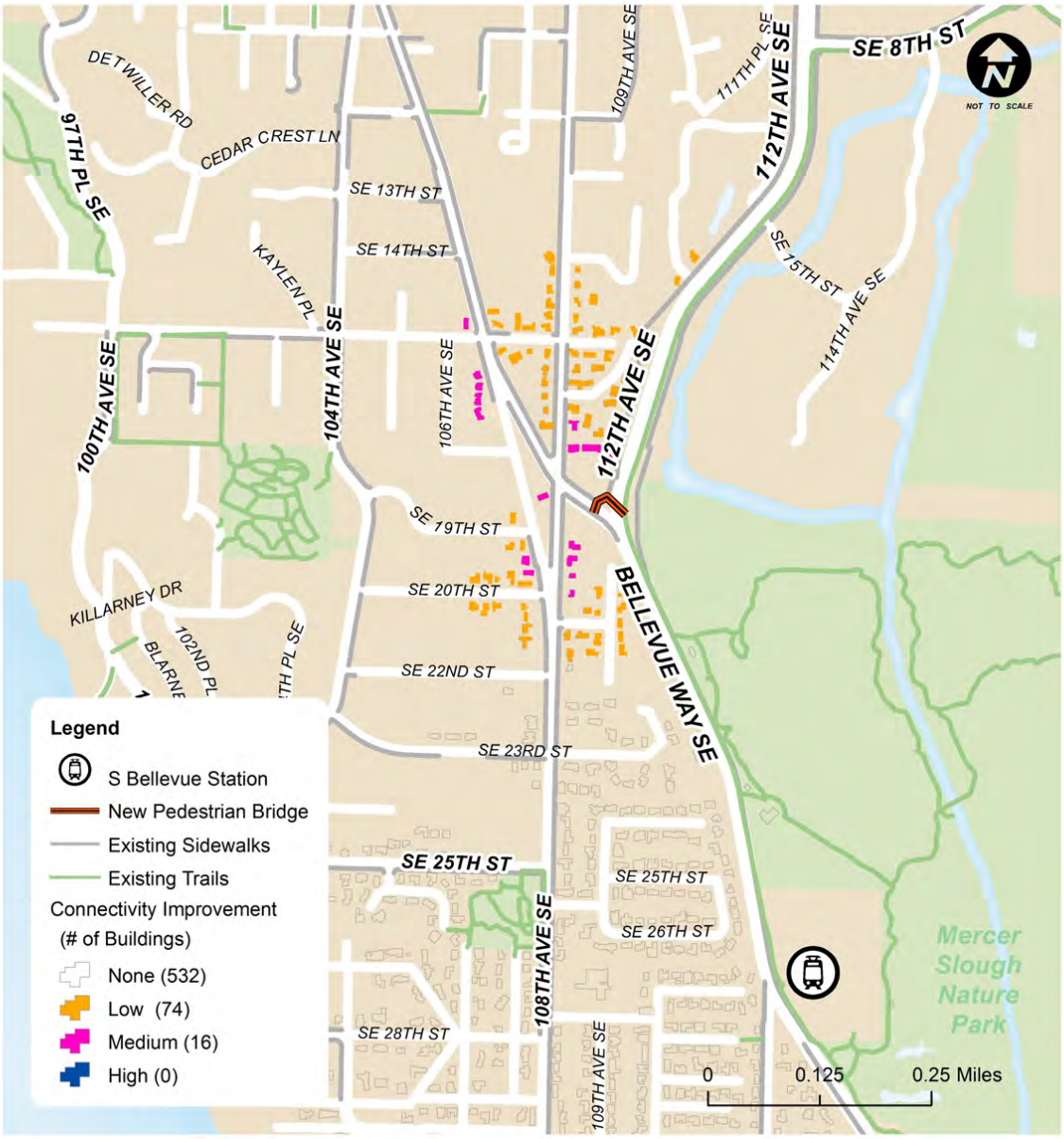
Description: A trail connection between the end of SE 28th PL to 112th Ave where one currently exists. This analysis assess the benefit of the project as if the current connection did not exist to provide an "apples to apples" comparison with other projects. This analysis also shows the value of an ADA accessible ramp, which currently does not exist, for those who need it.

Connectivity Benefits: The benefit of this project is widespread, showing the value of the existing connection. Providing ADA accessibility will impact the same buildings.

Project Origin: Neighborhood Workshop

Analysis Summary:

- Additional buildings within 1-mile analysis study area: **190**
- Buildings with improved connectivity to station: **408**
- Overall connectivity benefit: **High**



Pedestrian Project #8

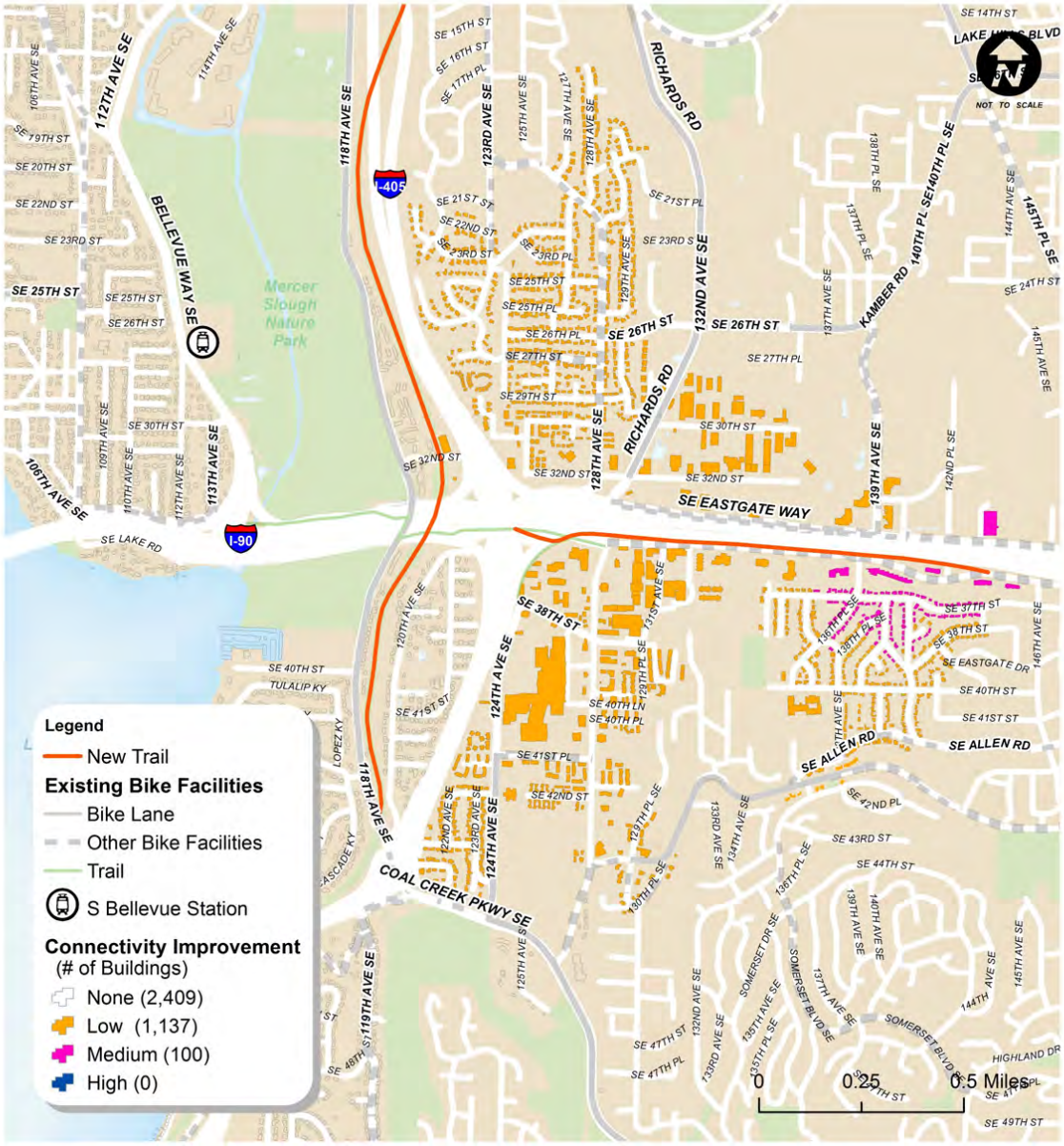
Description: A new pedestrian bridge crossing both Bellevue Way SE and 112th Ave SE at the intersection of Bellevue Way SE & 112th Ave SE.

Connectivity Benefits: Buildings with improved connectivity are generally far from the station at edge of the 1-mile study area, primarily along the 108th Ave SE corridor.

Project Origin: Neighborhood Workshop

Analysis Summary:

- Additional buildings within 1-mile analysis study area: **55**
- Buildings with improved connectivity to station: **90**
- Overall connectivity benefit: **Low**



Bicycle Project #1

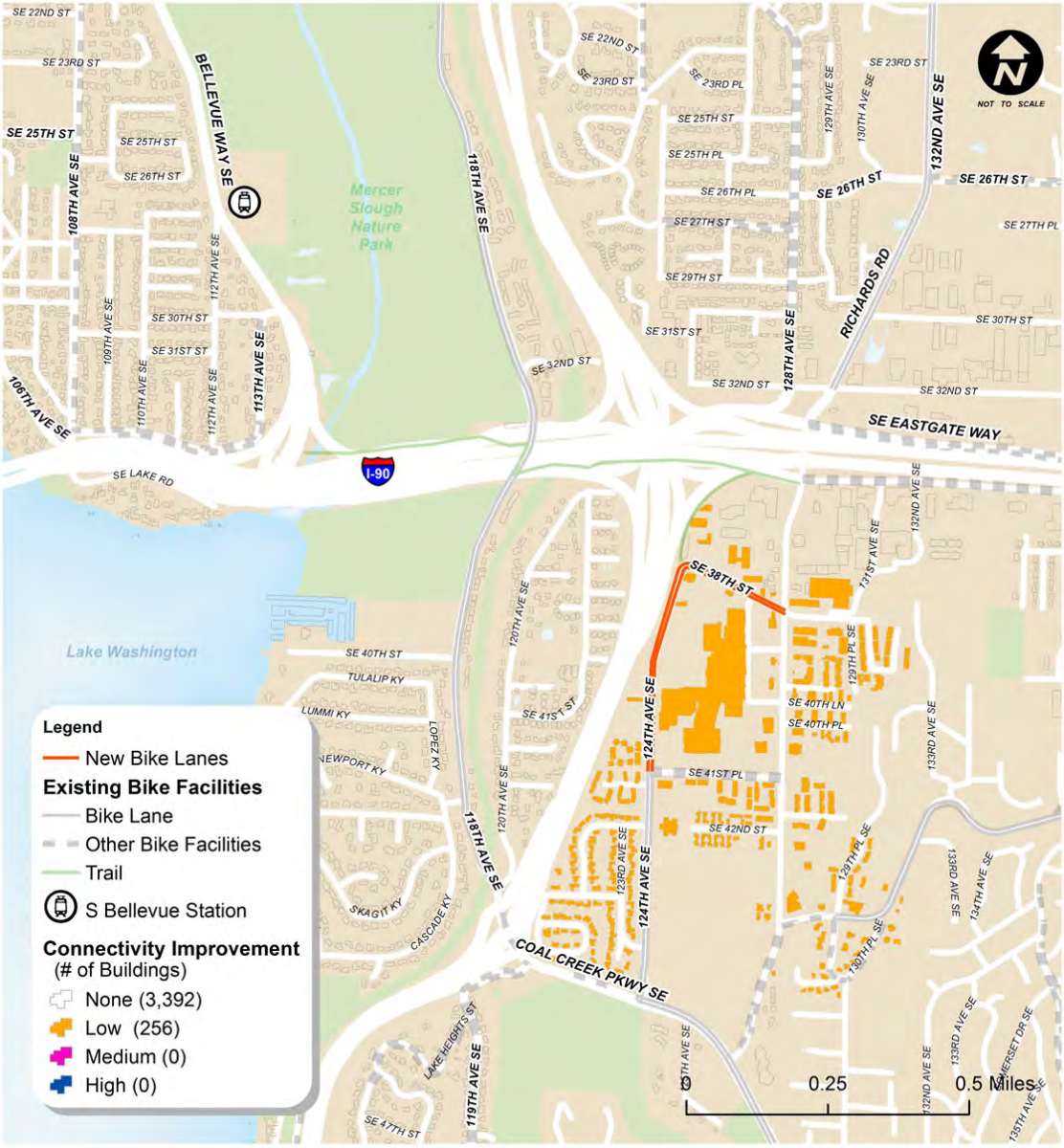
Description: This project includes the BNSF trail and Mountains to Sound Greenway trail. Both projects are progressing independently of this station access planning work.

Connectivity Benefits: Connectivity benefits are large and extend to multiple neighborhoods. The added trails leverage existing high quality connections. Benefits extend beyond the study area particularly to the east, therefore this analysis only captures a portion of the project benefit, with some overlap with the East Main Station.

Project Origin: Pedestrian and Bicycle Master Plan

Analysis Summary:

- Additional buildings within 3-mile analysis study area: **11**
- Buildings with improved connectivity to station: **1,237 (including commercial, retail and multi-family housing)**
- Overall connectivity benefit: **High**



Bicycle Project #2

Description: Add bike lanes along 124th Ave SE (SE 41st Pl to SE 38th St) and SE 38th St (124th Ave SE to Factoria Blvd SE)

Connectivity Benefits: Connectivity benefits are focused to the southeast of the I-405/I-90 interchange for routes that use either 124th Ave or SE 38th St to access the Mountains to Sound Greenway. Access to Factoria Mall improves.

Project Origin: Pedestrian and Bicycle Master Plan

Analysis Summary:

- Additional buildings within 3-mile analysis study area: **13**
- Buildings with improved connectivity to station: **256 (including commercial, retail and multi-family housing)**
- Overall connectivity benefit: **Medium**

Bicycle Project #3

Description: Add wide shoulder to 112th Ave SE from Bellevue Way SE to SE 34th St.

Connectivity Benefits: Based on the assessment methodology which measures roadway functional class, speed limit, number of lanes and existing and new bicycle facilities, no appreciable improvement in station connectivity is expected from this project.

Project Origin: Pedestrian and Bicycle Master Plan

Analysis Summary:

- Additional buildings within 3-mile analysis study area: **0**
- Buildings with improved connectivity to station: **0**
- Overall connectivity benefit: **None**

Bicycle Project #4

Description: Add marked shoulders from Main St to SE 16th St along the following North-South Route: 101st Ave SE, 100th Ave SE, 99th Ave SE, 98th Ave SE and SE7th St.

Connectivity Benefits: Station access is primarily improved for buildings located near Lake Washington north of SE 16th St. Buildings at the north end of the project are located closer to the East Main Station.

Project Origin: Pedestrian and Bicycle Master Plan

Analysis Summary:

- Additional buildings within 3-mile analysis study area: **0**
- Buildings with improved connectivity to station: **49**
- Overall connectivity benefit: **Low**

Bicycle Project #5

Description: This regional trail facility, already funded and to be constructed as part of East Link, extends along Bellevue Way SE from the South Bellevue P&R station to SE 8th St.

Connectivity Benefits: Improvements to station access are widespread and very large north of the Bellevue Way SE and 11th Ave SE intersection overlapping with the East Main Station. This include multifamily housing as well as commercial buildings.

Project Origin: Pedestrian and Bicycle Master Plan

Analysis Summary:

- Additional buildings within 3-mile analysis study area: **0**
- Buildings with improved connectivity to station: **530 (Including commercial and multifamily housing)**
- Overall connectivity benefit: **High**

ATTACHMENT B

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Ped Project 1

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
Intersection of SE 30 St and Enatai Dr	N/A	Pedestrian crosswalk channelization and signing
SE 30 St from Enatai Dr to 106 Ave SE	135	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on south side of road, reestablish 1 asphalt driveway connections, relocate one mailbox cluster.
SE 30 St from Enatai Dr to 106 Ave SE	95	Precast traffic curb (12" wide) and channelization striping to be constructed on south side of road, reestablish 4 asphalt driveway connections.
SE 30 St from Enatai Dr to 106 Ave SE	125	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on south side of road, reestablish 1 asphalt driveway connection.
106 Ave SE from SE 30 St to just west of SE Lake Rd	1450	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on west side of road, reestablish 16 driveway connections, relocate 8 mailbox structures.
Intersection of 106 Ave SE and 108 Ave SE	N/A	Pedestrian crosswalk channelization and signing
108 Ave SE from just north of 106 Ave SE to SE 34 St	135	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on west side of road, reestablish 2 driveway connections.
Intersection of 108 Ave SE and SE 34 St	N/A	Pedestrian crosswalk channelization and signing
SE 34 St from 112 Ave SE to 113th Ave SE	310	Precast traffic curb (12" wide) and channelization striping to be constructed on north side of road.
SE 34 St from 112 Ave SE to 113th Ave SE	520	Concrete sidewalk (6' wide) in grass shoulder and 3 ramps to roadway grade.
SE 34 St from 112 Ave SE to 113th Ave SE	320	Concrete sidewalk (6' wide) in grass shoulder and 1 ramp to roadway grade.
Intersection of SE 34 St and 113 Ave SE	N/A	Pedestrian crosswalk channelization and signing
113th Ave SE to just east of SE 30 St	1300	Precast traffic curb (12" wide) and channelization striping to be constructed on east side of road, reestablish 11 driveway connections.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 30,100.00
2	Design Engineering	LS	1	20%	$ 46,300.00
3	Traffic Control Labor	LS	1	15%	$ 34,700.00
4	Property Restoration	LS	1	3%	$ 7,000.00
5	Construction Engineering	LS	1	10%	$ 23,200.00
6	Construction Contingency	LS	1	10%	$ 23,200.00
7	Clearing and Grubbing	LS	1	10%	$ 23,200.00
8	Stormwater Drainage	LS	1	15%	$ 34,700.00
9	Concrete Sidewalk	SY	1,790	$ 48.00	$ 85,920.00
10	Precast Traffic Curb (12")	LF	1,705	$ 30.00	$ 51,150.00
11	Cement Concrete Curb (18")	LF	1,845	$ 35.00	$ 64,575.00
12	Channelization Striping	LF	1,705	$ 1.00	$ 1,705.00
13	Pedestrian Crossings	LS	4	$ 800.00	$ 3,200.00
14	Driveway Reestablishment	LS	35	$ 700.00	$ 24,500.00

Subtotal	$ 453,500
Contingency (15%)	$ 68,025
Planning Level Contingency (20%)	$ 90,700
Ped Project 1 Estimated Cost	**$ 612,225**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Ped Project 2

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
SE 28 St from 108 Ave SE to 110 Ave SE	650	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on north side of road, reestablish 3 driveway connections.
Intersection of SE 28 St and 110 Ave SE	N/A	Pedestrian crosswalk channelization and signing
110 Ave SE from SE 28 St to SE 28 Pl	70	Concrete sidewalk (6' wide) on east side of roadway in grass shoulder and 1 ramp to roadway grade.
SE 28 Pl from 110 Ave SE to 112 Ave SE	450	Concrete sidewalk (6' wide) on north side of roadway in grass shoulder and 12 ramps to driveway grade.
SE 31 St from 108 Ave SE to 110 Ave SE	615	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on south side of road, reestablish 4 driveway connections.
110 Ave SE from SE 30 St to SE 31 St	300	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on east side of road on northern section and west side of the road on southern section, reestablish 1 driveway connection.
SE 30 St from 110 Ave SE to 112 Ave SE	640	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on south side of road, reestablish 9 driveway connections.
112 Ave SE from just south of SE 31 St to SE 30 St	470	Concrete sidewalk (6' wide) on west side of roadway in grass shoulder and 3 ramps to roadway grade.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 25,000.00
2	Design Engineering	LS	1	20%	$ 38,500.00
3	Traffic Control Labor	LS	1	15%	$ 28,900.00
4	Property Restoration	LS	1	3%	$ 5,800.00
5	Construction Engineering	LS	1	10%	$ 19,300.00
6	Construction Contingency	LS	1	10%	$ 19,300.00
7	Clearing and Grubbing	LS	1	10%	$ 19,300.00
8	Stormwater Drainage	LS	1	15%	$ 28,900.00
9	Concrete Sidewalk	SY	2,130	$ 48.00	$ 102,240.00
10	Cement Concrete Curb (18")	LF	2,205	$ 35.00	$ 77,175.00
11	Pedestrian Crossings	LS	1	$ 800.00	$ 800.00
12	Driveway Reestablishment	LS	17	$ 700.00	$ 11,900.00

Subtotal	$	377,200
Contingency (15%)	$	56,580
Planning Level Contingency (20%)	$	75,440
Ped Project 2 Estimated Cost	**$**	**509,220**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Ped Project 3

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
Intersection of 112 Ave SE and Bellevue Way SE	550	Pedestrian bridge overpass. Assume 10' wide at 140 LF yields approximately 5500 SF.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 178,800.00
2	Design Engineering	LS	1	20%	$ 275,000.00
3	Traffic Control Labor	LS	1	15%	$ 206,300.00
4	Property Restoration	LS	1	3%	$ 41,300.00
5	Construction Engineering	LS	1	10%	$ 137,500.00
6	Construction Contingency	LS	1	10%	$ 137,500.00
7	Clearing and Grubbing	LS	1	10%	$ 137,500.00
8	Stormwater Drainage	LS	1	15%	$ 206,300.00
9	Pedestrian Bridge	SF	5,500	$ 250.00	$ 1,375,000.00

Subtotal	$	2,695,200
Contingency (15%)	$	404,280
Planning Level Contingency (20%)	$	539,040
Ped Project 3 Estimated Cost	**$**	**3,638,520**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Ped Project 4

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
SE 23 St between 104 Ave SE and 108 Ave SE	140	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on south side of road.
SE 23 St between 108 Ave SE and 109th Ave SE	700	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on north side of road, reestablish 4 driveway connections.
109 Ave SE between SE 23 St and Trail Connection	260	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on north side of road, reestablish 3 driveway connections.
Trail connection between 109 Ave SE and Bellevue Wy SE	165	Paved trail (8' wide) assumed as 2.5" HMA Class 1/2" pavement over 4" Depth 5/8" Minus C.R. base course.
Trail connection between SE 22 St and 109 Ave SE	215	Paved trail (8' wide) assumed as 2.5" HMA Class 1/2" pavement over 4" Depth 5/8" Minus C.R. base course.
Bellevue Wy SE between SE 23 St trail connection and 112 Ave SE	1400	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on west side of road.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 23,800.00
2	Design Engineering	LS	1	20%	$ 36,700.00
3	Traffic Control Labor	LS	1	15%	$ 27,500.00
4	Property Restoration	LS	1	3%	$ 5,500.00
5	Construction Engineering	LS	1	10%	$ 18,400.00
6	Construction Contingency	LS	1	10%	$ 18,400.00
7	Clearing and Grubbing	LS	1	12%	$ 22,000.00
8	Stormwater Drainage	LS	1	15%	$ 27,500.00
9	Trail Pavement	TN	50	$ 144.00	$ 7,200.00
10	Trail Base Course	SY	340	$ 10.00	$ 3,400.00
11	Concrete Sidewalk	SY	1,667	$ 48.00	$ 80,016.00
12	Cement Concrete Curb (18")	LF	2,500	$ 35.00	$ 87,500.00
13	Driveway Reestablishment	LS	7	$ 700.00	$ 4,900.00

Subtotal	$	362,900
Contingency (15%)	$	54,435
Planning Level Contingency (20%)	$	72,580
Ped Project 4 Estimated Cost	**$**	**489,915**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Ped Project 5

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
SE 23 St between 104 Ave SE and 108 Ave SE	140	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on south side of road.
SE 23 St between 108 Ave SE and 109th Ave SE	700	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on north side of road, reestablish 4 driveway connections.
109 Ave SE between SE 23 St and Trail Connection	260	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on north side of road, reestablish 3 driveway connections.
Trail connection between 109 Ave SE and 111 Ave SE	670	Paved trail (8' wide) assumed as 2.5" HMA Class 1/2" pavement over 4" Depth 5/8" Minus C.R. base course.
Trail connection between 111 Ave SE and Bellevue Way SE	190	Paved trail (8' wide) assumed as 2.5" HMA Class 1/2" pavement over 4" Depth 5/8" Minus C.R. base course.
Bellevue Wy SE between 111 Ave SE trail connection and 112 Ave SE	490	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on west side of road.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 17,600.00
2	Design Engineering	LS	1	20%	$ 27,000.00
3	Traffic Control Labor	LS	1	15%	$ 20,300.00
4	Property Restoration	LS	1	3%	$ 4,100.00
5	Construction Engineering	LS	1	10%	$ 13,500.00
6	Construction Contingency	LS	1	10%	$ 13,500.00
7	Clearing and Grubbing	LS	1	12%	$ 16,200.00
8	Stormwater Drainage	LS	1	15%	$ 20,300.00
10	Trail Pavement	TN	110	$ 144.00	$ 15,840.00
11	Trail Base Course	SY	770	$ 10.00	$ 7,700.00
12	Concrete Sidewalk	SY	1,060	$ 48.00	$ 50,880.00
13	Cement Concrete Curb (18")	LF	1,590	$ 35.00	$ 55,650.00
14	Driveway Reestablishment	LS	7	$ 700.00	$ 4,900.00

Subtotal	$	267,500
Contingency (15%)	$	40,125
Planning Level Contingency (20%)	$	53,500
Ped Project 5 Estimated Cost	**$**	**361,125**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Ped Project 6

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
SE 23 St between 104 Ave SE and 108 Ave SE	140	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on south side of road.
SE 23 St between 108 Ave SE and 109th Ave SE	700	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on north side of road, reestablish 4 driveway connections.
109 Ave SE between SE 23 St and Trail Connection	260	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on north side of road, reestablish 3 driveway connections.
Trail connection between 109 Ave SE and 111 Ave SE	670	Paved trail (8' wide) assumed as 2.5" HMA Class 1/2" pavement over 4" Depth 5/8" Minus C.R. base course.
Trail connection between SE 26 St and 110 Ave SE	320	Paved trail (8' wide) assumed as 2.5" HMA Class 1/2" pavement over 4" Depth 5/8" Minus C.R. base course.
110 Ave SE between SE 27 Pl and SE 28 Pl	260	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on north side of road.
SE 28 Pl between 110 Ave SE and 112 Ave SE	490	Cement concrete curb (18" wide) and concrete sidewalk (6' wide) to be constructed on north side of road, reestablish 5 driveway connections.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 20,900.00
2	Design Engineering	LS	1	20%	$ 32,100.00
3	Traffic Control Labor	LS	1	15%	$ 24,100.00
4	Property Restoration	LS	1	3%	$ 4,900.00
5	Construction Engineering	LS	1	10%	$ 16,100.00
6	Construction Contingency	LS	1	10%	$ 16,100.00
7	Clearing and Grubbing	LS	1	12%	$ 19,300.00
8	Stormwater Drainage	LS	1	15%	$ 24,100.00
9	Trail Pavement	TN	130	$ 144.00	$ 18,720.00
10	Trail Base Course	SY	880	$ 10.00	$ 8,800.00
11	Concrete Sidewalk	SY	1,240	$ 48.00	$ 59,520.00
12	Cement Concrete Curb (18")	LF	1,850	$ 35.00	$ 64,750.00
13	Driveway Reestablishment	LS	12	$ 700.00	$ 8,400.00

Subtotal	$	317,800
Contingency (15%)	$	47,670
Planning Level Contingency (20%)	$	63,560
Ped Project 6 Estimated Cost	**$**	**429,030**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Ped Project 7

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
Removal of Stair Connection between SE 28 Pl and 112 Ave SE	160	Remove stair connection between SE 28 Pl and 112 Ave Se.
ADA compliant pedestrian ramps structure between SE 28 Pl and 112 Ave SE	600	Pedestrian structures may involve multiple ramps with handrail to achieve required grade.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 198,300.00
2	Design Engineering	LS	1	20%	$ 305,000.00
3	Traffic Control Labor	LS	1	15%	$ 228,800.00
4	Property Restoration	LS	1	3%	$ 45,800.00
5	Construction Engineering	LS	1	10%	$ 152,500.00
6	Construction Contingency	LS	1	10%	$ 152,500.00
7	Clearing and Grubbing	LS	1	10%	$ 152,500.00
9	Removal of Stair Connection	LS	1	$ 25,000.00	$ 25,000.00
10	Pedestrian Structures	SF	6,000	$ 250.00	$ 1,500,000.00

Subtotal	$	2,760,400
Contingency (20%)	$	552,080
Planning Level Contingency (20%)	$	552,080
Ped Project 7 Estimated Cost	**$**	**3,864,560**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Ped Project 8

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
ADA compliant pedestrian bridge between 112 Ave SE and Bellevue Way SE	1100	Pedestrian bridge overpass. Assume 10' wide at 140 LF yields approximately 11,000 SF.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 357,500.00
2	Design Engineering	LS	1	20%	$ 550,000.00
3	Traffic Control Labor	LS	1	15%	$ 412,500.00
4	Property Restoration	LS	1	3%	$ 82,500.00
5	Construction Engineering	LS	1	10%	$ 275,000.00
6	Construction Contingency	LS	1	10%	$ 275,000.00
7	Clearing and Grubbing	LS	1	10%	$ 275,000.00
8	Pedestrian Bridge	SF	11,000	$ 250.00	$ 2,750,000.00

Subtotal	$	4,977,500
Contingency (20%)	$	995,500
Planning Level Contingency (20%)	$	995,500
Ped Project 8 Estimated Cost	**$**	**6,968,500**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Bike Project 1

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (Miles)	Description of Work
Trail along old rail corridor from SE 1st St to Lake Washington Blvd SE	2.910	Demolition, de-contamination, and removal of existing railroad tracks. Construction of 12' wide paved trail. Assumed trail pavement design of 3" HMA CL 1/2" PG 64-22 and 4" of 5/8" Minus CR base course.
Trail along SE 36 St from Richards Rd to 146 Ave SE	1.070	Construction of 12' wide paved trail. Assumed trail pavement design of 3" HMA CL 1/2" PG 64-22 and 4" of 5/8" Minus CR base course.
Trail along 106th Ave SE from Lake Washington Blvd SE to just south of I-405 interchange	0.650	Construction of 12' wide paved trail. Assumed trail pavement design of 3" HMA CL 1/2" PG 64-22 and 4" of 5/8" Minus CR base course.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 486,200.00
2	Design Engineering	LS	1	20%	$ 748,000.00
3	Traffic Control Labor	LS	1	15%	$ 561,000.00
4	Property Restoration	LS	1	3%	$ 112,200.00
5	Construction Engineering	LS	1	10%	$ 374,000.00
6	Construction Contingency	LS	1	10%	$ 374,000.00
7	Clearing and Grubbing	LS	1	10%	$ 374,000.00
8	Railroad Demo	LS	1	$ 50,000.00	$ 50,000.00
9	Trail Pavement	TN	5,600	$ 144.00	$ 806,400.00
10	Trail Base Course	SY	293,360	$ 10.00	$ 2,933,600.00

Subtotal	$ 6,819,400
Contingency (20%)	$ 1,363,880
Planning Level Contingency (20%)	$ 1,363,880
Bike Project 1 Estimated Cost	**$ 9,547,160**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Bike Project 2

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
Along 124th Ave SE from SE 41st Pl to SE 38th St	2000	Addition of 5-foot bike lanes requires 5 feet of pavement widening on both sides of the road. Includes pavement, cement concrete curb (18" wide), concrete sidewalk (6' wide), new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet. Reestablish 6 driveway connections.
Along SE 38th St from 124th Ave SE to Factoria Blvd SE	1000	Addition of 5-foot bike lanes requires 5 feet of pavement widening on both sides of the road. Includes pavement, cement concrete curb (18" wide), concrete sidewalk (6' wide), new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 69,400.00
2	Design Engineering	LS	1	20%	$ 106,700.00
3	Traffic Control Labor	LS	1	15%	$ 80,000.00
4	Property Restoration	LS	1	3%	$ 16,000.00
5	Construction Engineering	LS	1	10%	$ 53,400.00
6	Construction Contingency	LS	1	10%	$ 53,400.00
7	Clearing and Grubbing	LS	1	10%	$ 53,400.00
8	Stormwater Drainage	LS	1	15%	$ 80,000.00
9	Bike Lane Signs	EA	6	$ 400.00	$ 2,400.00
10	Bike Lane Symbols	EA	12	$ 150.00	$ 1,800.00
11	Channelization	LF	6,000	$ 1.00	$ 6,000.00
12	Cement Concrete Curb (18")	LF	6,000	$ 35.00	$ 210,000.00
13	Concrete Sidewalk	SY	4,000	$ 48.00	$ 192,000.00
14	Roadway Widening, Asphalt	TN	580	$ 144.00	$ 83,520.00
15	Roadway Widening, Base	SY	3,340	$ 10.00	$ 33,400.00
16	Driveway Reestablishment	LS	6	$ 700.00	$ 4,200.00

Subtotal	$ 1,045,700
Contingency (15%)	$ 156,855
Planning Level Contingency (20%)	$ 209,140
Bike Project 4 Estimated Cost	**$ 1,411,695**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Bike Project 3

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
Along 112th Ave SE from SE 34th St to Bellevue Way SE	2200	Adding 4-ft paved shoulder to east side of the roadway.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 11,400.00
2	Design Engineering	LS	1	20%	$ 17,500.00
3	Traffic Control Labor	LS	1	15%	$ 13,100.00
4	Property Restoration	LS	1	3%	$ 2,700.00
5	Construction Engineering	LS	1	10%	$ 8,800.00
6	Construction Contingency	LS	1	$ 75,000.00	$ 75,000.00
7	Channelization	LF	2200	$ 1.00	$ 2,200.00
8	Roadway Widening, Asphalt	TN	420	$ 144.00	$ 60,480.00
9	Roadway Widening, Base	SY	2,450	$ 10.00	$ 24,500.00

Subtotal	$	215,700
Contingency (20%)	$	43,140
Planning Level Contingency (20%)	$	43,140
Bike Project 5 Estimated Cost	**$**	**302,000**

14108.00 Bellevue Bike and Ped Planning Level Cost Estimates

Bike Project 4

Note: **This cost estimate is not based on full engineering and design.** It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the 20% planning level estimate contingency.

Location	Approximate Length (ft)	Description of Work
Along SE 16th St from 100th Ave SE/Killarney Way to 108th Ave SE	490	Adding bike lanes (bike shoulders) will require widening of the existing paved shoulder approximately 5 feet on both sides of the roadway. Includes pavement, striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet. Reestablish 5 driveway connections.
Along SE 16th St from 100th Ave SE/Killarney Way to 108th Ave SE	710	Adding bike lanes (bike shoulders) will require widening of the existing paved shoulder approximately 10 feet on north side of the roadway. Includes pavement, striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet. Reestablish 6 driveway connections.
Along SE 16th St from 100th Ave SE/Killarney Way to 108th Ave SE	100	Adding bike lanes will require widening of approximately 5 feet on both sides of the roadway. Includes pavement, cement concrete curb (18" wide), concrete sidewalk (6' wide), striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet.
Along SE 16th St from 100th Ave SE/Killarney Way to 108th Ave SE	340	Adding bike lanes (bike shoulders) will require widening of the existing paved shoulder approximately 5 feet on both sides of the roadway. Includes pavement, striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet. Reestablish 5 driveway connections.
Along SE 16th St from 100th Ave SE/Killarney Way to 108th Ave SE	320	Adding bike lanes (bike shoulders) will require widening of the existing paved shoulder approximately 4 feet on the south side of the roadway. Includes pavement, striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet. Reestablish 1 driveway connection.
Along SE 16th St from 100th Ave SE/Killarney Way to 108th Ave SE	170	Adding bike lanes will require widening of approximately 5 feet on both sides of the roadway. Includes pavement, cement concrete curb (18" wide), concrete sidewalk (6' wide), striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet.
Along SE 16th St from 100th Ave SE/Killarney Way to 108th Ave SE	430	Adding bike lanes (bike shoulders) will require widening of the existing paved shoulder approximately 5 feet on both sides of the roadway. Includes pavement, striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet. Reestablish 10 driveway connections.
Along 100th Ave ES from SE 16th St to SE 15th St	310	Adding bike lanes (bike shoulders) will require widening of the existing paved shoulder approximately 5 feet on both sides of the roadway. Includes pavement, striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet. Reestablish 4 driveway connections.
Along 98th Ave SE from SE 15th St to 97th Ave SE	1590	Adding bike lanes (bike shoulders) will require widening of the existing paved shoulder approximately 5 feet on both sides of the roadway. Includes pavement, striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet.
Along 99th Ave SE from 97th Ave SE to SE 7th St	620	Adding bike lanes (bike shoulders) will require widening of the existing paved shoulder approximately 5 feet on both sides of the roadway. Includes pavement, striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet. Reestablish 8 driveway connections.

Along 98th Ave SE from SE 7th St to SE Shoreland Dr	1130	Adding bike lanes (bike shoulders) will require widening of the existing paved shoulder approximately 5 feet on both sides of the roadway. Includes pavement, striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet. Reestablish 2 driveway connections.
Along 98th Ave SE from SE 7th St to SE Shoreland Dr	320	Adding bike lanes will require widening of approximately 5 feet on both sides of the roadway. Includes pavement, cement concrete curb (18" wide) on the north side of the road, concrete sidewalk (6' wide) on the north side of the road, striping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet.
Along SE 5th St from SE Shoreland Dr to 100th Ave SE	300	Adding bike lanes will require new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet.
Along 101st Ave SE from 100th Ave SE to Main St	1720	Adding bike lanes will require restriping, new 6" white paint edge lines, a bike lane sign (R3-17) every 1,300 feet, and a bike lane pavement marking symbol every 500 feet.

Conceptual Cost Estimate

No.	Item	Unit	Quantity	Unit Cost	Cost
1	Mobilization, Survey, Potholing	LS	1	13%	$ 62,500.00
2	Design Engineering	LS	1	20%	$ 96,200.00
3	Traffic Control Labor	LS	1	15%	$ 72,100.00
4	Property Restoration	LS	1	3%	$ 14,500.00
5	Construction Engineering	LS	1	10%	$ 48,100.00
6	Construction Contingency	LS	1	10%	$ 48,100.00
7	Clearing and Grubbing	LS	1	10%	$ 48,100.00
8	Stormwater Drainage	LS	1	15%	$ 72,100.00
10	Bike Lane Signs	EA	14	$ 400.00	$ 5,600.00
11	Bike Lane Symbols	EA	34	$ 150.00	$ 5,100.00
12	Channelization	LF	20,600	$ 1.00	$ 20,600.00
13	Cement Concrete Curb (18")	LF	860	$ 35.00	$ 30,100.00
14	Concrete Sidewalk	SY	580	$ 48.00	$ 27,840.00
15	Roadway Widening, Asphalt	TN	2,420	$ 144.00	$ 348,480.00
16	Roadway Widening, Base	SY	1,420	$ 10.00	$ 14,200.00
17	Driveway Reestablishment	LS	41	$ 700.00	$ 28,700.00

Subtotal	$ 942,400
Contingency (20%)	$ 188,480
Planning Level Contingency (20%)	$ 188,480
Bike Project 6 Estimated Cost	**$ 1,319,360**

A 2.7 SOUND TRANSIT EAST LINK SOUTH BELLEVUE FINAL DESIGN

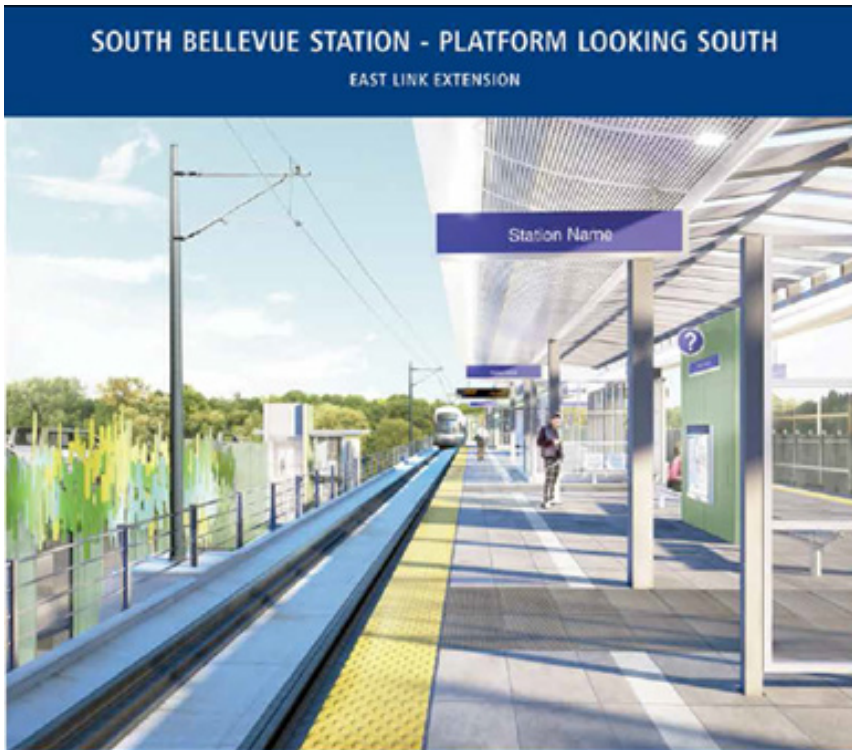
Sound Transit provides online information on the East Link light rail project: soundtransit.org/Projects-and-Plans/East-Link-Extension and on the South Bellevue Station: soundtransit.org/Projects-and-Plans/East-Link-Extension/Stations/South-Bellevue-Station.

From the link above, Sound Transit final design drawings for the station, including parking structure and elevated guideway:

SOUTH BELLEVUE STATION - NORTH ENTRY
EAST LINK EXTENSION

SOUTH BELLEVUE STATION - BUS PLATFORM
EAST LINK EXTENSION

SOUTH BELLEVUE STATION - GARAGE SOUTH ENTRY
EAST LINK EXTENSION


SOUTH BELLEVUE STATION - PLATFORM LOOKING SOUTH
EAST LINK EXTENSION
Station Name

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COMMUNITY FEEDBACK

WHAT YOU WILL FIND IN APPENDIX A 3

- A 3.1 Visioning and Brainstorming Workshop
- A 3.2 Focus Group and Online Survey
- A 3.3 Community Open House

A 3.1 VISIONING AND BRAINSTORMING WORKSHOP

Background

In October 2013 the city held a visioning and brainstorming workshop to kick-off the planning process for the South Bellevue station area. The workshop served as an open public forum for interested stakeholders to share ideas and concerns related to the addition of a light rail station to the area. The Enatai Neighborhood Association co-hosted the workshop, and played an active role in shaping its direction. Working with community leaders, the city invited stakeholders to provide feedback during and after the workshop.

Feedback

The purpose of the workshop was to initiate planning for the station area by asking participants to identify a list of concerns

and ideas that would help define the topics to be addressed by the plan. Participants could register their comments individually in writing, as well as contribute to small group discussions that brainstormed lists of concerns and ideas. Some participants recorded their comments on large maps at each of the small group discussion tables. These mapped comments, depicted in a graphic (Figure A3.1) complement and augment the other comments recorded at the workshop.

Six themes or topic areas emerged from the discussion. Some comments overlap more than one topic area; however, for the purposes of this summary they have been listed in the topic area that best matches the statement. Comments are in no particular order, and duplicate comments have been removed.

1. Access to station via bike, bus, foot or car

This topic generated several comments with the general consensus that improved access to the station was desirable. Participants were interested in better pedestrian and bicycle connections in the eastern portion of the neighborhood coupled with safer crossings of Bellevue Way to the station as well as to activities in Mercer Slough Nature Park. There were also concerns expressed about the elimination of Sound Transit's 550 route along Bellevue Way north of the "Y," because it provides transit service from the neighborhood area in the north that is outside the walk area for light rail.

- Loss of 550 bus
- Access to the station
- Walking distances from residences to station with cul-de-sacs
- Walkability/bikability/traffic safety
- Bicycle and pedestrian "friendliness"
- *Bike access to station
- Access to Winter's House and Blueberry farm from southbound Bellevue Way

2. Aesthetics and identity

There was not as much interest or discussion on this topic relative to several others. Participants expressed concerns about the loss

** Comment forwarded to the Light Rail Permitting Advisory Committee*

of gateway appeal of Bellevue Way and the loss of the wooded area along the west side of Bellevue Way for an HOV lane. Several people expressed relief that there would not be rezoning or transit-oriented development planned for the area.

- *Bellevue gateway aesthetics
- No TOD or rezones (thank you!)
- Loss of greenbelt with potential HOV north from park-and-ride

3. Mercer Slough Nature Park

Both of the comments under this topic are at least partly related to potential park impacts from the light rail construction and operation so they have been forwarded to the Light Rail Permit Advisory Committee for their consideration. There are aspects of each comment (e.g. identity) that also relate to other topics to be addressed through the station area plan.

- *Maintain identity and visibility of Mercer Slough Park
- *Environmental protection of slough (no run off)

4. Neighborhood Traffic and Parking

One of the most common concerns was about additional traffic in and around the neighborhood, whether from the light rail station or Bellevue Way or the historic trend of increasing traffic. Participants were most concerned about more congestion on Bellevue Way during and after light rail construction for two key reasons: 1) increased cut-through traffic in the neighborhood; and 2) greater difficulty getting in and out of the neighborhood. "Hide and ride" parking in the neighborhood was another concern and was described as an existing problem as well.

- Getting through Bellevue Way/108th/112th will be tough due to congestion
- Ingress/egress to neighborhood at 112th and 113th
- Neighborhood access due to congestion
- Neighborhood cut through traffic
- *Neighborhood traffic mitigation during construction and after
- Additional traffic on Bellevue Way
- Impacts of I-90 tolling on Bellevue Way
- Increased traffic coming from I-90 east

** Comment forwarded to the Light Rail Permitting Advisory Committee*

- Commuter parking in neighborhood
- Parking

5. Noise and Vibration

This topic has been raised frequently during planning and design for the light rail project. Impacts from light rail will be addressed through the city's permit process. The remaining concerns relate to increasing noise levels from automobile traffic, primarily on Bellevue Way.

- *Noise and vibration mitigation from trains and cars on Bellevue Way
- Traffic Noise from Bellevue Way, I-90, I-405

6. Safety and Security

This topic is closely tied to, and generated a similar amount of discussion as, neighborhood traffic. Many of the concerns were about the safety of children walking and riding their bicycles with increased automobile traffic in the neighborhood. Some of the concerns are related to the lack of sidewalks or designated bike paths. There were also general concerns about increased crime in the neighborhood.

- *Overall safety and security in station and neighborhood
- Safety, crime and burglary
- Safety of neighborhood, kids, extra cars, speed humps, signing, etc.
- Elementary school routes
- Pedestrian and bike safety, especially kids
- Safe paths/routes to station
- Safe access to station from neighborhood, park and elsewhere
- 108th remain safe for bicycles
- Bike safety at 108th and Bellevue Way

Ideas to be considered in station area planning

Following the small group discussions to develop a list of concerns, participants were asked to brainstorm ideas to address those concerns. The purpose of this activity was to better understand

** Comment forwarded to the Light Rail Permitting Advisory Committee*

the concerns and the desired outcomes of the group. At the beginning of the workshop, staff explained that strategies which ultimately result from the plan would have to compete for funding with other projects in the city, but that it was important to get the projects on the list for consideration. The following is a compilation of all the ideas from the small group brainstorms. Comments are in no particular order and organized into six topic areas listed alphabetically. The "Noise and Vibration" topic did not generate any ideas that addressed those concerns. Each bulleted list of ideas is preceded by a brief summary. Duplicate comments have been removed.

Access to station via bike, bus, foot or car

Ideas for better access from the neighborhood to the station included improving existing pedestrian and bicycle facilities (e.g. lighting, bike routes); adding new sidewalks and bike paths and a new pedestrian/bicycle bridge over Bellevue Way connecting the neighborhood more directly and safely to the light rail station. There were also suggestions to improve bus service as well as access to the Winters House and the blueberry farm.

- Make stairs ADA accessible and provide lighting
- Weather protection for access routes (i.e. safe in rain or snow)
- Pedestrian and bike overpass to station and at Bellevue Way and 108th
- Pedestrian overpasses on 112th/Bellevue Way and 113th and Bellevue Way
- Pedestrian overpass over Bellevue Way at SE 30th and at 112th
- Sidewalk on west side of Bellevue Way (112th to 113th) and internal access to Transit Center
- More sidewalks
- Better sidewalks
- *Improve pedestrian access to station
- Non-motorized improvements within neighborhood to station
- Improved ability to move from west side of neighborhood to Bellevue Way (ex: improved way finding signs, sidewalks on 112th, etc.)
- Complete bike path on 108th and to station

** Comment forwarded to the Light Rail Permitting Advisory Committee*

- Bike lanes to station from neighborhood
- Bike "rail" on existing stairway from 28th
- Alternate bus routes to replace 550
- *Wayfinding signs on Bellevue Way to Winter's House and Blueberry farm
- Improve access to Winter's house or relocate it

Aesthetics and identity

In response to the concerns raised about this topic (see above), ideas focused on more and better signage at neighborhood entrances and along Bellevue Way.

- Neighborhood entrance signs at all access areas like on Bellevue Way and 108th
- Better identification of neighborhood
- No street banners or advertisements on Bellevue Way

Mercer Slough Nature Park

Suggestions encompassed maintaining the existing qualities of the park at a minimum and expanding on the current activities.

- More educational uses/programs at Mercer Slough Park—emphasize uses on west side of the park
- *Maintain and protect Mercer Slough

Neighborhood Traffic and Parking

The amount of discussion on the concerns of this topic (see above) also generated a range of ideas to address them. Various forms of traffic calming were suggested to discourage cut-through traffic along with increased use of technology, signalization and other means to improve the flow of traffic on Bellevue Way. Some traditional ideas were proposed to address "hide and ride" parking. There was also a non-traditional idea to set aside a certain number of parking spaces in the station parking garage for neighborhood residents who live outside of the walk area for the station.

- Traffic calming (signs, etc.)
- Traffic calming signage—what works?
- Neighborhood access signage

** Comment forwarded to the Light Rail Permitting Advisory Committee*

- More education about flashing yellow left turn lights
- Photo enforcement on 108th and traffic calming signage
- Speed humps and traffic calming
- Speed bumps or other effective ways to slow people down
- Bellevue Way HOV lane from the "Y" to the station
- Lengthen left turn lane at 112th, and elongate signal cycle (turning onto Bellevue Way)
- Light/left turn lane for southbound traffic at Winter's House
- Turn light at SE 25th and 108th
- Improved signal timing
- *Streamline vehicle access from park-and-ride south
- Other access to I-90, not just Bellevue Way
- *Reserved parking at park-and-ride for residents
- Cap on parking spaces
- Parking zones on 112th and 30th
- Permit parking/monitoring (suggested implementation BEFORE light rail to discourage habit)

Noise and Vibration

The one idea specifically addressing noise along Bellevue Way is applying newer, quieter roadway materials to dampen traffic noise.

- Install "quiet pavement" along Bellevue Way to reduce noise from automobile traffic

Safety and Security

Suggestions for addressing concerns in this topic include more and better lighting and signage especially for pedestrian areas, increased security and monitoring and better separation of pedestrian and bicycle users from automobile traffic.

- *Safety/Security improvements (lighting/panic button)
- *Police monitoring of the station area
- *Lighting that isn't obtrusive to homes
- Lighted (flashing crosswalks) and flags to carry when crossing the crosswalk
- Lighting on current stairs

** Comment forwarded to the Light Rail Permitting Advisory Committee*

- Signage re: children at play
- Signage: residential area, local traffic only
- Separate bicycle and pedestrian areas from traffic

Comments forwarded to Light Rail Permitting Advisory Committee

Access to station via bike, bus, foot or car

- Improve pedestrian access to station
- Bike access to station

Aesthetics and identity

- Bellevue gateway aesthetics
- Wayfinding signs on Bellevue Way to Winter's House and Blueberry farm

General

- ST provide mitigation, not the city

Mercer Slough Nature Park

- Maintain identity and visibility of Mercer Slough Park
- Environmental protection of slough (no run off)
- Maintain and protect Mercer Slough

Neighborhood Traffic & Parking

- Neighborhood cut through traffic during construction and operation
- Additional traffic on Bellevue Way
- Detour traffic to 405 during construction
- HOV or just general purpose before construction to help with mitigation
- Streamline vehicle access from park-and-ride south
- Reserved parking at park-and-ride for residents

Noise and Vibration

- Light and noise impacts on wildlife
- Noise and vibration mitigation from trains and cars on Bellevue Way

Safety and Security

- Emergency/panic button at station
- Safety/Security improvements (lighting/panic button)
- Overall safety and security in station and neighborhood
- Lighting that isn't obtrusive to homes
- Safe storage options at station
- Police monitoring of the station area

Brainstorm Map Comments

The image of the following page contains a graphic depiction of comments captured on maps at the small group discussion tables during the workshop. The notes on the map complement and augment the list of comments on the preceding pages.

Figure A.3.1 Brainstorm Map Comments

A 3.2 FOCUS GROUP AND ONLINE SURVEY

Background

In November 2014 focus groups were held at city hall. Two focus groups participated, each including approximately 10 participants. Participants received an update on strategies that had been developed to address key concerns raised by stakeholders in the South Bellevue East Link station area. The intent of the focus groups was to provide initial feedback on these strategies. All stakeholders who had participated in South Bellevue station area planning at any point were invited to participate in the focus groups.

Following the focus groups, participants were invited to complete an online survey to rank their preferences for the station area planning strategies shared during the sessions.

Feedback

Questions and responses to the focus group/on-line survey questions:

Question One: Please identify the 10 most important strategies for the South Bellevue Station.

Answer Choices (in order of top responses)	Responses	
(A2) Address traffic calming and cut-through traffic	91.7%	11
(D4) Promote health of Mercer Slough Nature Park	75.0%	9
(C2) Develop program to enhance tree canopy	66.7%	8
(C6) Monitor neighborhood crime	66.7%	8
(B2) Institute residential parking zone prior to light rail	58.3%	7
(C7) Increase police patrols in station area	58.3%	7
(A3) Improve access in and out of neighborhood during peak traffic	50.0%	6
(C10) Increase lighting in pedestrian areas	50.0%	6
(A1) Study HOV lane on Bellevue Way from “Y” to park-and-ride	41.7%	5
(B8) Design and construct walkways and bikeways along designated station routes	41.7%	5
(B10) Provide lighting on stairs	41.7%	5
(B5) Include pedestrian/bicycle improvements in city plans	33.3%	4
(C1) Reinforce area’s character with new policies in SW Subarea Plan	33.3%	4
(C3) Monitor tree canopy coverage	33.3%	4
(A4) COMPLETED Evaluate noise attenuation techniques along Bellevue Way	25.0%	3
(B4) Retain bus service on Bellevue Way north of the “Y”	25.0%	3
(A5) Install message boards to direct park-and-ride users to locations with capacity	16.7%	2
(A6) COMPLETED Install “neighborhood” signage at main entrances	16.7%	2
(B1) Provide information to commuters about no-parking and alternative parking areas	16.7%	2
(B7) Conceptually design and cost pedestrian/bicycle overpasses on Bellevue way	16.7%	2
(D1) Promote park facilities and programs	16.7%	2
(B3) COMPLETED Include bus service on Bellevue Way in city’s Transit Master Plan	8.3%	1
(B6) Designate best routes to station	8.3%	1
(C5) Increase Block Watch and National Night Out participation	8.3%	1
(C9) Install gateway treatment along Bellevue Way	8.3%	1
(C11) Evaluate potential for “panic buttons”	8.3%	1
(D2) Promote availability of park-and-ride spaces for park patrons	8.3%	1
(D5) Promote information about Slough and Education Center at station	8.3%	1
(B9) Design and construct ADA accessible route		0
(C4) Work with neighbors to increase community ties and awareness		0
(C7) Educate property owners to increase pedestrian visibility		0
(D3) Promote light rail as a way to visit Mercer Slough Nature Park		0

Complete descriptions of the pedestrian and bicycle projects referenced in questions two and three, including a map of improvements, are shown in Attachment 2.6-A.

Question Two: How much do you prefer the following pedestrian projects?

1. Sidewalks added on one side of:
   - 113th Ave SE (Bellevue Way SE to SE 34th Street)
   - SE 34th Street (113th Ave SE to 108th Ave SE)
   - 106th Ave SE (108th Ave SE to SE 30th St)
   - SE 30th St (106th Ave SE to 105th Ave SE
2. Sidewalks or other pedestrian facilities added to one side of:
   - SE 28th St/Pl (108th Ave SE to 112th Ave SE)
   - SE 30th/31st St (108th Ave SE to 112th Ave SE)
   - Filling gaps along 112th Ave (SE 34th St to Bellevue Way SE)
3. Pedestrian bridge across Bellevue Way at 112th Ave NE. A pedestrian bridge at Bellevue Way SE and 113th Ave SE was also analyzed but produced less station access benefits.
4. Completion of sidewalks or other pedestrian facilities along SE 23rd St, new trail connection between SE 23rd St to Bellevue Way SE and SE 22nd St to 109th Ave SE, new sidewalk along west side of Bellevue Way SE from trail connection to 112th Ave SE
5. Completion of sidewalks or other pedestrian facilities along SE 23rd St, new trail connection between SE 23rd St cul-de-sac to SE 24 Pl, SE 24th to SE 25th St & 111 Ave, and SE 26th St and 111th Ave SE to Bellevue Way, sidewalk along west side of Bellevue Way SE to 112th Ave SE
6. Complete sidewalk or other pedestrian facilities along SE 23rd St, new trail connection between SE 23rd St cul-de-sac to SE 24 Pl, SE 24th PL to SE 25th St & 111 Ave, and SE 27th Pl & 110th Ave SE to SE 26th St, add sidewalks along SE 28th St (110th Ave SE to 112th Ave SE)
7. *This looked at the overall benefit of the stairs on SE 28th Place. Project benefit was modeled by Transpo but not surveyed by focus group attendees as the stairs are already in place.*
8. A new pedestrian bridge crossing both Bellevue Way SE and 112th Ave SE at the intersection of Bellevue Way SE & 112th Ave SE

Question Two	Not al all	A little	Neutral	Quite a bit	A lot	No opintion	Total	Average Rating
Pedestrian Project #1	- 0	- 0	18.2% 2	9.1% 1	54.6% 6	18.2% 2	11	4.4
Pedestrian Project #2	9.1% 1	9.1% 1	18.2% 2	18.2% 2	27.3% 3	18.2% 2	11	3.56
Pedestrian Project #3	27.3% 3	- 0	18.2% 2	18.2% 2	18.2% 2	18.2% 2	11	3.0
Pedestrian Project #4	63.6% 7	- 0	9.1% 1	- 0	9.1% 1	18.2% 2	11	1.67
Pedestrian Project #5	45.5% 5	18.2% 2	9.1% 1	- 0	9.1% 1	18.2% 2	11	1.89
Pedestrian Project #6	36.4% 4	27.3% 3	9.1% 1	9.1% 1	- 0	18.2% 2	11	1.89
Pedestrian Project #8	27.3% 3	- 0	18.2% 2	- 0	36.4% 4	18.2% 2	11	3.22

Question Three: How much do you prefer the following Bicycle projects?

1. This project includes the BNSF trail and Mountains to Sound Greenway trail. Both projects are progressing independently of this station access planning work.
2. Add bike lanes along 124th Ave SE (SE 41st Pl to SE 38th St) and SE 38th St (124th Ave SE to Factoria Blvd SE)
3. Add wide shoulder to 112th Ave SE from Bellevue Way SE to SE 34th St.
4. Add marked shoulders from Main St to SE 16th St along the following North-South Route: 101st Ave SE, 100th Ave SE, 99th Ave SE, 98th Ave SE and SE7th St.
5. This regional trail facility, already funded and to be constructed as part of East Link, extends along Bellevue Way SE from the South Bellevue P&R station to SE 8th St.

Question Three	Not al all	A little	Neutral	Quite a bit	A lot	No opintion	Total	Average Rating
Bike Project #1	- 0	- 0	36.4% 4	18.2% 2	18.2% 2	27.3% 3	11	3.75
Bike Project #2	9.1% 1	9.1% 1	45.5% 5	- 0	9.1% 1	27.3% 3	11	2.88
Bike Project #3	18.2% 2	- 0	18.2% 2	45.5% 5	- 0	18.2% 2	11	3.11
Bike Project #4	27.3% 3	- 0	36.4% 4	9.1% 1	9.1% 1	18.2% 2	11	2.67
Bike Project #5	9.1% 1	- 0	9.1% 1	27.3% 3	36.4% 4	18.2% 2	11	4.0

A 3.3 COMMUNITY OPEN HOUSE

FINAL OPEN HOUSE JUNE 2015

Background

Following a year and a half of planning and public engagement, City of Bellevue staff held a community open house for the draft South Bellevue Station Area Plan on March 3, 2015. Open house attendees learned about draft strategies aimed to address public concerns voiced in an initial brainstorming workshop held in October 2013. Topics of consideration included neighborhood character, parks and public facilities, and transportation issues such as traffic, safety, parking and station access, once the East Link Light Rail system is operational.

Feedback

Approximately 20 members of the public attended the open house and submitted comments. Although the following comments have been sorted by topic, they have been transcribed without editing.

Neighborhood Character, Parks & Public Facilities

Lighting

- Please install better lighting on 107th.
- Improve lighting and safety on ped/bike trails connecting the neighborhood to the P/R, and through the Mercer Slough Park.
- Better lighting on 107th.
- No more signs! Especially, lighted ones. Light pollution by signs and the parking garage will be awful.

Tree Canopy

- 'Monitor' the tree canopy?! That just means watch them cut all the trees. We are supposed to be a City in a Park!
- Trees can't screen it because there needs to be 30 ft. of clearance. Nor will they be able to screen the noise walls.
- Put more restrictions on tree cutting to preserve the sound barrier provided by trees.
- Tree retention is not being monitored by current builders of new homes (example Jay Marc the builder).
- Protecting the mature trees that provide sound buffer and add to the neighborhood character (try going out again to the neighborhood). Monitoring is not enough—need proactive protection.
- Do more than "monitor" tree canopy.
- Develop and/or strengthen a tree ordinance that will offset effects of every new house removing existing big trees. We're losing tree density fast in Enatai.

Mercer Slough Nature Park

- Maintain visibility of slough – how? The noise walls will block any sight of it! Worst idea EVER!
- Access to Mercer Slough needs to be easy and preserved from neighborhood.
- Have a small Mercer Slough kiosk staffed by park personnel to answer questions.

Noise

- Noise attention – walls/considerations – especially if added lane.
- We have concerns about increased noise from trains once they exit the East Channel Bridge to the point they make the "turn" toward Bellevue Way. From our home, we can see the train tracks where they parallel SE 34th St. Not sure if much has been discussed as to noise flowing up from trains/ freeway to our neighborhood on 111th Ave. SE. Thank you.
- Do not evaluate feasibility of sound attenuation along Bellevue Way—that evaluation will just be used to build the case for building the HOV lane. The HOV lane north of the park and ride should be eliminated.

Neighborhood Crime

- Need to increase police patrols – had a prowler on Sun. 2 wks. ago across the street!
- Had a block watch presentation already. Mercer Slough is a gem: worry about homeless camping (leaving a mess), drug dealing, and security for walkers in the park.
- Like idea of cameras at entrances for crime prevention.
- Do not put cameras at neighborhood entrances. This is not a gated community. Some people getting paranoid?
- Cameras to track entry and exit of cars (not just license plates, which may be stolen).

Transportation: Traffic & Safety

Pedestrian and Bicycle safety

- Please add a sidewalk on the west side of 107th between Bellevue Way and SE 20th. This would complete the pedestrian sidewalk connection between I90 and Bellevue Way on 108th/107th Avenues SE.
- Better sidewalk on 107th.
- Bicycle strategies 3, 4, and 5 are all good!
- The ped path on the east side of the LRT line from SE 8th to Mercer Slough part is now much scarier than before. Minor, but important to some.
- Connect the cul-de-sacs with walkways/bikeways to shorten the distance to the light rail station.

- More sidewalks on 112th. Full length of 112th. Safety is an issue with increased traffic.

Traffic

- City has already installed neighborhood signs and they don't work.
- Although we realize this has been mentioned, we wanted to reiterate concerns about cross through traffic during the lengthy construction. We live on 111th Ave. SE that enters/exits onto SE 34th. There is already a lot of traffic that uses 108th to 34th to 113th as a way to bypass Bellevue Way. Once construction begins this surely gets worse.
- No diverting traffic through (residential) local roads in Enatai when Bellevue Way is closed!
- No more speed bumps on 108th, please. Need to work on traffic light at 108th and Bellevue Way.
- Left turn lanes on 108th (both N & S) at Bellevue Way; also, make signal change faster.
- Please install a better parking surface on the east side of 107th.

Transportation: Parking & Station Access

Parking

- Neighborhood resident sticker for our cars so we may park in areas (i.e. "hide and ride) near our homes if signs put up restricting such. This will also help police monitor vehicles parked from outside our neighborhood who may be "casing" the area, etc.
- Reduce local demand for P/R slots at station by restoring shuttle service through Enatai neighborhood.
- Please plan ahead for lease lots space during construction.
- Ensuring parking is available for residents and their guests if sidewalks are put in.
- Watch for Enatai Beach parking being crowded out by commuters.

Miscellaneous

- The ultimate solution for the above is BTR or a bored tunnel

alignment from the BTR station (A-Z) into the downtown via 108th Ave. NE. We believe the latter can be less expensive than the current plan and would not result in schedule delay (even though reworking design) mode is faster and the ancillary complications are substantially less.

- No work on Light Rail between 10 p.m. – 7:00 a.m.
- Scoping for HOV plan – include a general purpose lane as option.
- The proposed HOV lane does not eliminate the queuing and cut through traffic for southeast Enatai based on the data presented in the 4/8/13 presentation to the Council. With the HOV lane the queues extend to the church on 108th Ave. NE – that is not adequate mitigation. The mailer to the community showed widening on Bell Way and 112th from the way north, but that is apparently not necessary with the projected rollout of HOV use.
- Kate March and John Murphy are really great. The City is lucky to have them.

Additional Comments Received

The open house public comment period remained open through March 31 and interested parties could submit comments via email or mail. The scope of station area planning does not include design or construction of the East Link light rail system itself; all comments regarding these topics have been shared with Sound Transit. All comments pertaining to neighborhood crime concerns have been shared with the Bellevue Police Department.

City staff received the following public comments between March 3 and March 31:

Comment 1: I am a concerned Enatai resident writing to you to discuss the many recent break-ins in our neighborhood. They seem to happening much more frequently, and the most recent ones have been quite brazen (while people are home). Our family has lived in Enatai for over 10 years and have always felt safe. It is upsetting to feel that our security is being compromised and frankly I hate the paranoia.

I wonder from your perspective what we can do. Obviously, we can

do things like get dogs, install and use alarms, report suspicious activity, and generally be more aware. However, in addition I'd like to see us take steps to make our entire neighborhood less desirable to thieves. There has been some talk of cameras at the entrances to Enatai and more patrols. Are these a possibility? Also, are Neighborhood Watch programs effective? I am sure there are other things available to us that I don't even know of. I am hoping you can help.

Comment 2: Our community is in need of immediate attention to deter break-ins. Please advocate for surveillance cameras. We appreciate your prompt attention to our security issues.

Comment 3: Thank you for the enlightening presentation Tuesday night. I also have appreciated the handout informing us about Goals of Station Area Planning.

I thought you were responsive and made note about installing cameras, but wanted to put this in writing to you. I'm hoping you will hear from other neighbors as well. Today on the neighborhood website someone posted a nighttime home invasion while the resident slept. To say the least, this was terribly unsettling to myself and other neighbors. We've lived in Enatai for more than 30 years and though there has been periodic criminal activity, of late not only has the latest spike not decreased, but the behaviors are more aggressive.

All of this is happening before light rail though at a time when Bellevue is growing rapidly. Camera installation, given our proximity to I-90 would be a powerful deterrent. Camera installation given the growing criminal activity would certainly be timely, and also reassuring to this community which will be seeing significant change over the next ten years with light rail.

I imagine (heard this from someone closer to City operations) that you've some discretionary funds to work with and am hoping that our circumstances will warrant a designated area for preventive funding.

Comment 4: Crime here seems to be increasing at an alarming rate. Having lived in this neighborhood for 40 years, crime seems to have started about 10 years ago and has increased unabated to

the present time. Either that, or we are all more aware of it with internet neighborhood reporting.

Cameras at neighborhood entry points has been mentioned, but I can think of many ways into the area. If that is a viable option for the neighborhood, by all means consider it. Maybe a precinct office near the Pancake House. Something. My property taxes just went up 47% this year. Adding a home security system is an expense I find hard to meet.

Comment 5: We wanted to express our concerns about the increased crime surrounding and penetrating, the Enatai community. We have lived here for over 42 years and it's become apparent that our little bit of Heaven, has been invaded by people who are targeting homes to burglarize. We did not even OWN a key to our home for 25 years, but after hearing so much about burglaries...we had whole house keyed and don't even leave for 10 minutes to pick our granddaughter up at preschool, without locking our doors. Please consider adding lighting and/ or cameras to the entrances to Enatai neighborhoods. We have noticed more security signs up...and more postings on our Neighborhood Enatai site...about break-ins. Our son's home was also burglarized several months ago...their glass patio door was smashed and many items were stolen. When is enough, enough?

Comment 6: We are seeing a significant upsurge of burglary and break-ins in Enatai. We moved from Redmond in 2012 and in our 8 years in the city of Redmond never experienced the rate of crime that we are seeing currently in Bellevue. The proximity of our neighborhood to the highway and the ease of access seems to be the reason for the increase compared to other similar Bellevue neighborhoods. I often come home and see policemen parked at the Church on 108th, at cross streets of SE 31 and 110th and hear about crime sprees form neighbors on NextDoor our neighborhood website.

We have had police come and chat to neighborhood association. We watch each other's homes. We use ADT or other services to monitor our homes. We would like to see the city put in cameras in strategic areas in the neighborhood and think about better lighting.

With light rail, we all believe this will get worse. If there is anything you can do to help us feel more secure, please invest in better lights, more policing and close circuit cameras.

Comment 7: I am writing you about the idea of installing security cameras at entrances to Enatai neighborhood. We have been alarmed by increase in burglary in our area and apparent impotence of the city to stop it. We have 3 children and don't feel safe anymore. We would appreciate if you could speak on our behalf when security measures are considered.

Comment 8: As the City of Bellevue East Link Community Outreach Lead, I am sure you are aware of the dramatic increase in crime that the Enatai community is experiencing. As a 20 year resident of Enatai I have seen theft/home invasion continue to rise. Proximity and access to 1-90 make Enatai an easy target, and the presence of Light Rail in a few years will only increase the exposure to criminal activity.

I strongly urge the City of Bellevue to consider installing video surveillance at the major ingress and egress points to Enatai. There is strong community awareness and a police presence, but few deterrents to would be thieves. It seems that the proactive approach of installing video surveillance now, would be beneficial in many ways:

It would allow the Bellevue Police Department to monitor and hopefully confirm presence of criminals after a burglary. It would deter criminals from entering the area. It could help the City of Bellevue monitor traffic patterns and pedestrian safety during the construction of Light Rail when commuters will be cutting through Enatai to avoid congestion on Bellevue Way. Anything the City of Bellevue and Sound Transit can do to assist the Enatai community in their efforts to decrease criminal activity would be greatly appreciated.

Comment 9: I am writing to you today because I am very concerned about the safety of the Enatai neighborhood, and the impact Sound Transit is likely to have. As you may have heard, we are have a crime wave in Enatai. A crime wave that is growing, not diminishing and is greatly impacting residents as more and

more homes are invaded. Once the construction for Sound Transit starts, this is likely to get even worse since there will be additional people milling around in our neighborhoods; some as part of the construction crews, some as "hide and ride" commuters, some as thieves blending in with the others.

I want to urge you, and the city council, to give serious consideration to neighborhood cameras, similar to those used in Medina. The camera footage can be used to help track "hide and ride" commuters during the construction phases, as well as help identify vehicles that are cruising, casing and leaving crime scenes.

When most of us bought in this neighborhood, it was quiet and safe. The transit plans are significantly negatively impacting us already (noise, visual blight) and giving miscreants easy access to the neighborhood will only exacerbate the problems. Since the Bellevue police have been unable to stop the break-in escalations, I think it is time to look at monitoring for at least some increase in the safety of our neighborhood.

Comment 10: Additional lighting would be a huge help. Some of our streets are so dark I also think signage posted throughout the neighborhood stating this is a neighborhood watch area including video might help. I have lived here since 1960 and no longer feel safe even walking from my car to my house. My street is really dark. I leave my outside lights on but it's not enough. Please consider lighting. Thank you.

Comment 11: Please consider installing cameras at the entrances to our previously safe, pleasant-ville neighborhood. The spike in crime is alarming as is the brazen nature of the thieves.

Comment 12: As you know the crime rate in our neighborhood has skyrocketed over the past few years. With the upcoming light rail construction and traffic detours through Enatai we will be even more vulnerable to an increase in crime.

As a neighborhood, Enatai, has endured more changes than any other neighborhood in Bellevue. We would like the City of Bellevue to consider mitigation of crime strategies for our neighborhood. The simplest and easiest solution would be for the City to install security cameras at all entrances to Enatai as a deterrent to further

criminal action. Cameras have worked very successfully in Medina and now the time has come to install them in Enatai.

Comment 13: I'm a resident of Bellevue in the Enetai neighborhood. I'd like to submit input regarding the stations and increased access that light rail will bring to our neighborhood.

Please consider installing cameras at the entrances to the Enetai neighborhood. We seem to be experiencing an uptick in property crime in the area. It may be that the presence of cameras at our neighborhood entrances could serve as a deterrent to potential thieves.

Comment 14: I am a 14 year resident of Enatai and am very concerned about the increasing frequency of crime/home invasions in my neighborhood. As you move forward with City of Bellevue planning for the changes coming with light rail, I urge you to consider crime abatement measures for our vulnerable neighborhood.

Enatai would like the City to install video cameras the entrances to our neighborhood. There aren't more than a handful of entries into our little pocket of Bellevue. We need a police car that is assigned full time to Enatai. During a recent day time invasion, it took Bellevue police over 10 minutes to reach the house. That's a generous amount of time for a crook.

We've have dozens of day time invasions, in several cases with people at home, in one recent case a 16 year old girl was home alone for a sick day. During a recent night time invasion, a woman was home with her two small children. There were three invasions on a single block in one afternoon last month.

We need deterrents. We need a police officer assigned to Enatai all the time. We need video cameras at the entrances to our neighborhood.

Comment 15: Thank you for the presentation at the City Hall on March 3. I appreciate the opportunity to comment, after the meeting when I can get my mind in some state of organized thought for comment. I'm a 22 year Enatai resident and 30 year S. Bellevue resident. I was very disappointed to see the low

turnout at the meeting, considering there are almost 1000 Enatai residents… it's hard for me to believe they are all unconcerned, but their absence was evident!

Firstly, I'm in support of the general concept of light rail, and I think it would be great as a commuter from Bellevue into Seattle to get a more reliable way to ease congestion/traffic for Bellevue/ all, however, I'm not convinced that this light rail plan is the best solution to achieve this state, and I'm super disappointed at the destruction such modernization is going to cause and the length of time impact for us in the near area.

My feedback is primarily about the S. Bellevue station area:

AA. Scope of project and is it actually different than what voters approved in 2008 (other than refined details) and City Council in 2011… if so, how/why can this be pushed through and why does the City support this? I know there are huge politics going on but the impact is not a minor forgettable thing.

A. HUGE concern about the park and ride replacement plan for the duration of the project - this is a very busy/overflowing p & right now, and I don't see how/where we can accommodate all of us somewhere convenient…for anyone!

B. NOISE -- including Tree removal - Hillside destruction (thus noise into Enatai). I am very concerned about the inability to preserve natural noise and pollution reduction in the trees we already have in the area, and the HOV lane removal of the West hill into Enatai area. 90 & 405 already generate significant noise that travels over to us already, whether during night construction or commute hours.

C. Cut through traffic in Enatai is a huge issue already (with a lot of speeding, esp through all straightaways (104 and 108) including all around the elementary school area). We cannot withstand more of this especially for the long project duration, so something significant needs to be done (one -way idea? To reduce the appeal of cuttrhoughs).

D. Ridership/goal of project -- I hear different things about what will really be accomplished by adding this route and whether we

are going to just replace buses for commuters or whether more rider increase will be seen afterwards etc. It seems like there is not a very reliable/realistic projection for this aspect and the evaluation whether the findings can be a strong driver for such a huge $$ project or not… I don't know how this 'data' can be obtained reliably (future projections) but perhaps a factual/better analysis of the areas where it has now been implemented (Tacoma, Seattle etc) would be relevant to know how/whether ridership is worth the effort for Bellevue. Is it financially neutral/positive etc.

E. I'm also curious if there is really mis-speak going on about the project (from the City or ST?) because we have some neighborhood groups (Better Bellevue) that have recently distributed color flyers in the area and the 'facts' they list are different than what I've heard at the several City meetings I've attended. Primarily in these areas:

- Duration - I've heard 5 years (the flyer says 7 years) for the project and closure of P & R etc.
- Tree cutting along Bell Way (winters house) flyer says 1300 trees will need to be removed!
- Lane closures (flyer says a variety of things about Bell way 3 lanes for 6-7 years, 112th 2 lanes for 5-7 years etc).

If this new information 'per the flyer', that says City Council just learned of the ST plans and that there are previously unpublished details and info etc….has any elements of truth then we are headed for a disaster where no one can trust the City efforts etc…

I know the City can't respond to all these small/emotional groups but ensuring the facts are still the same as the original scope/vote/approval seems important to acknowledge somehow so that at least we can continue to have faith that there is no drift occurring too, in addition to the efforts to remediate etc. I know this group (BB) has 'ideas' about solutions, I don't know what they are or if they are viable/reasonable etc.

I wish I had some great idea to throw out to solve all the problems/issues I foresee, but in general it's a very saddening concept to think that we will end up destroying a lot of things (view/vegetation, historic sites), making things worse for many years (duration of project + afterwards) and I'm not super sure what the

gain actually is…

I don't know if the previous lightrail areas with install projects have had the potential for so much widespread impact or not (I know the Beacon Hill project had some houses demolished etc), it seems like this one has such a broad path of destruction and aftermath/ during that it's crazy - but maybe everyone in the path of the projects has felt like we do?

Thanks again for the opportunity -- I wish you the best in collating and organizing all the comments!

Comment 16: The community open house on Tuesday, March 3, 2015 was an informative poster session, gathering and presentation. I learned about this event by reading the post card/ mailer to my home address with the logo Station Area Planning.

Major concerns are several:

1. Bellevue Way is not primarily a transportation corridor to the freeways, rather it is a city street! Need to lower vehicle seed to 25 miles per hour. Permitting a 40 mph section makes a large part of Bellevue Way SE a highway on-ramp increasing speeding, collisions and difficulty for residents, pedestrians and cyclists, not to mention those people north bound who wish to left turn onto 113th to drive westward into the neighborhood and their homes.

2. White painted cross sections for people to cross safely changing from one street side to the other side or to another street. Need painted "sidewalk" crossing sections going into and out:

a. Enatai Beach Park onto 108th and along 106th SE;

b. At SE 30th and 105th SE; also at SE 30th and 106th SE where the stop and yield signs are located;

c. Also at SE 30th and 108th SE to cross from east to west on 108th;

d. Likewise for the Enatai Neighborhood Park crossing 108th SE at SE 25th

e. At SE 25th into and out of Chesterfield Park crossing SE 25th

3. Increase tree canopy and vegetation for greenery, oxygen sources, slow down rainwater runoff and improve neighborhood.

4. Offer homeowners incentives to use more permeable surface in garden, driveway and patio landscaping by offering permit discounts or with King County property tax refunds or discounts.

5. Increase trees and greenery along streets and sidewalks and replace third tree at island on SE 34th east of Enatai Beach Park and the bike route.

Finally, I believe all residential streets should be 25 mph and heavy traffic such as 148th should be 30 mph. Please change speed limit on Bellevue Way SE.

Comment 17: I'm a new resident in the Enatai area of Bellevue. I'm writing because I am particularly alarmed by the number of burglaries happening in our beautiful neighborhood. I know that Medina has security cameras and a license plate scanning service, which has significantly reduced crime. Is this something we can explore? I want things to improve before someone gets hurt.

Comment 18: Given the dramatic increase in property crime and home invasions that we have seen in our neighborhood in the past 18 months, I am writing on behalf of my wife, two children, and myself to express our strong support for the installation of neighborhood surveillance cameras in order to increase the chances that those committing crimes in the neighborhood will be apprehended and punished.

Over one week during mid-winter break this year, four houses were broken into on our street alone. This is simply unacceptable and we need to take every reasonable measure to combat this decline in civil order in the area.

As I'm sure you are aware, such surveillance cameras have been quite effective in the Medina Township and have led directly to the apprehension of multiple suspects of similar crimes in that neighborhood.

I hope you will take this letter with all due seriousness as it reflects the sentiment of many in our community who are increasingly

concerned about the rampant property crime, break-ins and decline in safety in this area.