The Growing Transit Communities Partnership is funded by the Sustainable Communities Regional Planning Grant Program of the U.S. Department of Housing and Urban Development. The work that provided the basis for this publication was supported by funding under an award with the U.S. Department of Housing and Urban Development. The substance and findings of the work are dedicated to the public. The author and publisher are solely responsible for the accuracy of the statements and interpretations contained in this publication. Such interpretations do not necessarily reflect the views of the Government.
Acknowledgements

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### The Focus of this Phase 2 Report:

**Bicycle and Pedestrian Connectivity**

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Preface

THE REGIONAL VISION

VISION 2040 is the central Puget Sound region’s long-range vision for maintaining a healthy region and is a guiding premise for all regional planning and implementation. VISION 2040’s cornerstone is its emphasis on development of vibrant, mixed-use centers where people can live, work, and play. Integrating affordable housing in mixed-use centers throughout the region contributes to achieving a jobs-housing balance that increases access to opportunity, lowers households’ combined cost of housing and transportation, and helps ensure that infrastructure investments enhance equity across the region.

SUMMARY OF THE GROWING TRANSIT COMMUNITIES PARTNERSHIP

In keeping with the regional vision described above, the central Puget Sound region is investing more than $25 billion dollars in high-capacity transit over the next twenty years, providing a once-in-a lifetime opportunity to capitalize on these investments by growing and strengthening communities around stations. The Growing Transit Communities Partnership (Partnership), funded by a grant from the US Department of Housing and Urban Development’s Sustainable Communities Regional Planning Grant Program and administered by Puget Sound Regional Council (PSRC), has been designed to help make the most of this investment by locating housing, jobs, and services close enough to transit so that it is a viable option for many people. If done right, more people will have a faster and more convenient way to travel.

The Partnership was formed through a coalition of city and county governments, housing authorities and affordable housing interests, transit agencies, public health agencies and departments, real estate and development interests, social justice and community development groups, economic development and business interests, community based organizations, educational interests, environmental advocacy groups, and the public. This coalition of the Partnership has been supporting neighborhood planning for more connected, livable, and sustainable communities around more than 74 high-capacity transit centers in the region—covering three counties in sixteen cities—including existing, new, and future station areas.

Through these efforts, the Partnership has been working to shape the region and station areas in ways that benefit current and future residents, local businesses, and the wider region. Working within the framework of existing plans, policies, and goals of local governments and guided by VISION 2040, the Partnership has been helping local communities bring their visions to reality and to make the most of new light rail service, bus rapid transit, and other transit investments, including identifying unique roles and opportunities for community development associated with high-capacity transit investments. For more information about the Growing Transit Communities Partnership and PSRC, visit www.psrc.org.
THREE CORRIDORS/THREE TASK FORCES

Planning activities of the Partnership have focused along the three light rail corridors from Seattle north to the city of Everett, south to Tacoma, and east to the city of Redmond. Based on the premise that change can happen at the local level through tools and solutions that address similar challenges shared by communities in the region, the Partnership has provided a big-picture perspective so that people can see both local and regional benefits, and local entities can apply lessons learned in other places in the region. Corridor task forces for the North, East, and South corridors were charged with analyzing and reviewing existing conditions and identifying unique opportunities and challenges for development of existing and future transit station areas.

In development of its work plan and specific assignments for each task force, the Partnership felt that it was important to focus implementation activities in specific station areas of the region’s transit corridors to serve as models for other parts of the region. In the case of the East Corridor, the intention was to work with the East Corridor Task Force to identify what catalyst project, or projects, were most appropriate. This evolved into the defined scope of work for the East Corridor Implementation Support Project.

EAST CORRIDOR CONTEXT

In 2011, the Sound Transit Board of Directors made its final decision about the East Link light rail transit (LRT) corridor alignment and station locations. Also in 2011, King County Metro began operation of its Bus Rapid Transit service (BRT) RapidRide line B. In order to help areas around LRT and BRT stations transform into more transit-oriented communities, the four cities participating in the East Corridor Task Force (Seattle, Mercer Island, Bellevue, and Redmond) and other Task Force members were interested in developing focused implementation strategies and tools for specific East Corridor station areas. Seattle and Mercer Island had already completed extensive planning for the station areas in their jurisdictions, so the Task Force decided to focus on stations in Bellevue and Redmond.

Staff from the cities of Bellevue and Redmond indicated that the station areas in the Bel-Red Corridor and Overlake were in most need of implementation support. Given these considerations, the Task Force determined that the East Corridor Implementation Support Project should focus on the following subset of East Corridor station areas in the cities of Bellevue and Redmond, along East Link and King County Metro’s RapidRide Route B stations:

**East Link Light Rail Station Areas (Future) Selected for the East Corridor Implementation Support Project:**

- Hospital Station Area in Bellevue
- 120th Avenue NE/Spring Creek Station Area in Bellevue
- 130th Avenue NE Station Area in Bellevue
- Overlake Village Station Area in Redmond
- Overlake Transit Center Station Area in Redmond

**King County METRO RapidRide B Line Station areas (Existing) Selected for the East Corridor Implementation Support Project:**

Located in Bellevue’s Crossroads Neighborhood:

- NE 10th Street Station Area
- NE 15th Street Station Area

The Partnership funded and guided the East Corridor Implementation Support Project to examine opportunities for TOD along Sound Transit’s East Link Light Rail and King County Metro RapidRide Line B alignments through the Eastside cities of Bellevue and Redmond in these station areas initially as part of Phase 1 of the project, and then to provide more focused analysis and strategies for selected station areas as part of Phase 2. Portions of the project area are located within the areas known as the Bel-Red Corridor and Overlake.
FOUR FOCUS AREAS FOR EAST CORRIDOR IMPLEMENTATION ACTIVITIES

Through a series of meetings, the East Corridor Task Force examined key issues and identified barriers to transit-oriented development in the East Corridor, along with particular challenges to implementing equitable TOD in station areas. In its discussion of how to incent and accommodate equitable transit-oriented development in station areas, the Task Force determined four areas of focus for the East Corridor Implementation Support project. The Task Force identified the need for detailed strategies and action steps to implement existing local plans, particularly in the areas of:

- Affordable Housing
- Business Retention and Attraction
- Public and Private Partnerships
- Transportation Access and Connectivity

EAST CORRIDOR PROJECT PURPOSE AND OVERVIEW

The East Corridor Implementation Support project has identified pivotal opportunities to transform Eastside station areas into more vibrant, economically healthy neighborhoods that offer equitable housing choices, more convenient access to jobs and jobs-to-housing balance within the high-capacity transit corridors and region, and better connectivity to goods and services.

The project is supporting immediate advancement of the implementation of visions and plans that have already been developed by participating jurisdictions on the Eastside, and the project team has leveraged other products developed by PSRC and the Growing Transit Communities Partnership, including affordable housing and opportunity mapping, existing conditions reports, market analyses, station area typologies, Center for Transit-Oriented Development (CTOD) market strength index, and other information as a base of reference for the project.

IMPLEMENTATION SUPPORT PROJECT GUIDANCE AND TIMELINE

All phases of the East Corridor Implementation Support Project have been informed by representatives of the East Corridor Task Force. The Task Force identified a subset of members, called the Project Management Team (PMT), to advance the project and bring back matters to the Task Force for direction and decisions. PMT members were selected from the general membership of the Task Force (including representatives from the cities of Bellevue and Redmond) and confirmed by the Task Force co-chairs. See the Acknowledgements page for PMT members.

Growing Transit Communities staff and the PMT members of the Task Force retained a consultant team with expertise in affordable housing, urban design, transportation planning and policy, real estate and economic development, and other areas to assist in identifying actions and strategies to address these issues and help to catalyze TOD.

OVERVIEW OF PHASES 1 AND 2

The scope of work for the East Corridor Implementation Support Project was completed in two phases. Phase 1 included best practices research, a high level assessment of seven East Corridor station areas, screening and selection of station areas for further analysis in Phase 2, and development of the scope of work for Phase 2. See the Phase 1 Best Practices Research Report for a detailed description of initial tasks. Go to [http://www.psrc.org/about/pubs](http://www.psrc.org/about/pubs) to download the report.

Phase 2 involved more intensive analysis and development of specific recommendations for TOD implementation for two station areas: 130th Avenue NE in Bellevue and Overlake Village in Redmond. Phase 2 explored innovative approaches to leverage opportunities and incent TOD implementation in the short- and long-term in these station areas. Phase 2 developed recommended actions, strategies, and products to address specific issues in each station area per the scope of work that was developed by the Task Force and overseen by the PMT.
PHASE 2 PRODUCTS
Products developed in Phase 2 supporting these four focus areas are listed in the chart below.

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<th>Housing, Development, and Infrastructure Funding</th>
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<th>Business Retention and Attraction</th>
<th>Partnerships</th>
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These products have been completed as stand-alone, but complementary documents and reports. All reports are available for download at [http://www.psrc.org/about/pubs](http://www.psrc.org/about/pubs) (look for Growing Transit Communities Partnership, East Corridor information).
PARTNERSHIP FOR SUSTAINABLE COMMUNITIES LIVABILITY PRINCIPLES

The Growing Transit Communities Partnership supports the livability principles of the Partnership for Sustainable Communities. The US Department of Housing and Urban Development (HUD), US Department of Transportation (DOT), and the US Environmental Protection Agency (EPA) have joined together to help communities nationwide improve access to affordable housing, increase transportation options, and lower transportation costs while protecting the environment through the Partnership for Sustainable Communities. The Partnership for Sustainable Communities works to coordinate federal housing, transportation, water, and other infrastructure investments to make neighborhoods more prosperous, allow people to live closer to jobs, save households time and money, and reduce pollution. The Partnership agencies incorporate the following six principles of livability into federal funding programs, policies, and future legislative proposals.

Provide more transportation choices—Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

Promote equitable, affordable housing—Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.

Enhance economic competitiveness—Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services, and other basic needs by workers, as well as expanded business access to markets.

Support existing communities—Target federal funding toward existing communities—through strategies like transit-oriented, mixed use development and land recycling—to increase community revitalization and the efficiency of public works investments and to safeguard rural landscapes.

Coordinate and leverage federal policies and investment—Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

Value communities and neighborhoods—Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.
The Focus of this Phase 2 Report: Bicycle and Pedestrian Connectivity Analysis and Recommendations

The focus of this Phase 2 report of the East Corridor Implementation Support Project is Bicycle and Pedestrian Connectivity. Work conducted included analysis of existing and planned conditions and development of strategies and recommendations to improve connectivity in both the 130th Avenue NE station area in Bellevue and the Overlake Village station area in Redmond.

The information developed as part of this study supported by the Growing Transit Communities Partnership can serve as a reference and model for other transit-oriented development throughout the region.

BACKGROUND AND INTRODUCTION

This Bicycle and Pedestrian Connectivity Report is one of several tasks being completed as part of the East Corridor Implementation Support Project for the Growing Transit Communities Partnership.

One of the key objectives of the Partnership is to make the most of the regional investment in high-capacity transit by locating housing, jobs, and services close enough to stations that using transit is a viable option for many people. Improving pedestrian and bicycle connectivity in station areas is of critical importance to increasing transit ridership and enhancing livability. People need to be able to walk and bicycle to and from the station, as well as to and from.

As background for completing this report, existing policies related to pedestrian and bicycle connectivity adopted by the City of Redmond and City of Bellevue were reviewed by the consultant team and determined to be more than sufficient to support the development of complete streets and an enhanced walking and bicycling environment in the two station areas. Existing on-the-ground conditions in the station areas were reviewed, along with proposed capital improvement projects already planned to enhance connectivity. The report includes recommendations for strategies, design guidelines and standards, and prioritizing project improvements to support bicycle and pedestrian connectivity in the two station areas.

The cities, transit agencies, developers and others working redevelopment in the corridor can draw from these strategies and recommendations to support future implementation of bicycle and pedestrian improvements in the station areas in whatever ways may be useful.

APPROACH TO ANALYSIS AND REPORT CONTENTS

In analyzing pedestrian and bicycle connectivity, the following areas of work were completed.

Regulatory Analysis

A review of existing adopted plans and policies, design guidelines and standards, and zoning provisions was completed. The purpose of this analysis was to determine if there is a need for additional policies, design guidance, and standards that would help to implement pedestrian and bicycle connectivity in the station areas.

Review of the Existing and Proposed Multi-Modal System, Project Priorities, and Contextual Analysis

Existing and proposed street networks and proposed multi-modal improvements including pedestrian and bicycle exclusive facilities (such as grade separated bridges for pedestrian and bicycle use) in each station area were reviewed and mapped. These networks were then compared with mapping of existing and future land uses including mapping of known senior and subsidized housing parcels (based on regional GIS data) to determine if there may be a need for additional improvements beyond those already programmed. Existing and planned walksheds of ¼ mile and ½ mile and three-mile bicycling distances to/from the light rail stations were assumed in the analysis.

Sound Transit light rail plans, existing RapidRide B Line bus rapid transit service, and programmed capital
improvements of the cities of Redmond and Bellevue were reviewed and factored into the analysis. Key corridors for pedestrian and bicycle connectivity were evaluated and compared to capital project programs.

**Development of a Bicycle and Pedestrian Connectivity and Access Toolbox**
Specific solutions and tools for enhancing pedestrian and bicycle connectivity to and from the transit stations and encouraging walking and bicycling within and beyond the station areas were compiled into a toolbox, located in the Appendix. The toolbox can be used as a reference for future project planning and implementation in the station areas.

**Description of the Context and Proposed Improvements**
The context of the two station areas analyzed includes existing and proposed land uses with the station planning areas and the multi-modal transportation networks that support these areas. Existing and proposed land uses and characteristics of the local streets systems for each station area are described on the following pages. Regional transportation systems are described below.

**East Link Light Rail Service by Sound Transit (Proposed)**
The East Link light rail line, which is 14 miles long, will open in 2023. Sound Transit is currently working on the design of this rail extension, which will provide fast, frequent, and reliable high-capacity service from stations in Redmond and Bellevue to Downtown Seattle, SeaTac International Airport, University of Washington, and other areas.

The East Link line will include ten stations in Seattle, Mercer Island, Bellevue (several stations including 130th Avenue NE in the Bel-Red Corridor), Overlake Village in Redmond, and terminating at the Overlake Transit Center in Redmond, serving some of the Eastside’s biggest population and employment centers. Sound Transit estimates that 50,000 riders will use the East Link system every day by 2030. Refer to Figure 1.

Sound Transit is providing public workshops at each stage of design to engage communities in the process of implementing light rail. For more information, visit www.soundtransit.org/eastlink.

**Construction Timeframe and Future Phase**
Construction is targeted to begin in 2015, with completion by 2021, and then there will be two years of safety testing before the service starts. The next phase of light rail construction, not yet funded, likely would include an extension of the East Link line to Downtown Redmond.

**Station Features**
Each station will provide pedestrian waiting platforms with shelters, public art, bicycle parking, and other amenities for riders. In addition to specific improvements at the stations, pedestrian and bicycle access ways in close proximity to the station are typically improved by Sound Transit, along with other features that support transit riders such as park-and-ride and drop off areas.

**Bicycle Parking at Light Rail Stations**
Sound Transit administers specific bicycle parking policies and design standards for light rail stations. The agency incorporates non-motorized access assessments during the design process for all stations, park-and-ride lots, transit centers, and corridor development plans. Sound Transit’s assessment identifies opportunities to incorporate non-motorized facilities, such as bicycle, pedestrian, or multi-use trails, within transit rights-of-way where feasible and safe. Sound Transit bicycle facilities are designed in accordance with capital facility design standards. Relevant design standards are summarized below.

Bicycle storage for a minimum of 12* bicycles SHALL be provided at all transit center or rail station locations, or a greater number as determined by Sound Transit. Designers should reference Sound Transit Board Motions M2009-36 and subsequently M2010-87 for additional bicycle policy information.

*It should be noted that the East Link Final Environmental Impact Statement, Appendix H-1 calls for dramatically more than 12 bicycle parking stalls per station. This standard is an absolute minimum.*
The designer should consider local codes for bicycle storage; however, these facilities **SHALL** conform to the following basic requirements:

- Bicycle storage facilities **SHALL** be constructed on hard surfaces, and space for future expansion **SHALL** be included in the design.

- Storage facilities **SHALL** be located for easy access to facility entrances and the street system.

- Conflicts with pedestrians, station access/fare collection and bus boarding **SHALL** be avoided.

- Bicycle facilities **SHALL** be given preference over motorcycles as to location.

- A secure stanchion **SHALL** be provided to allow bicycles to be locked and/or bicycle lockers **SHALL** be provided for protection from vandalism.

- A sign designating the location of the bicycle storage area **SHALL** be provided.

- Bicycle storage areas **SHALL** be properly lighted. Refer to Chapter 12 of Sound Transit’s Design Standards and Guidelines for guidance on lighting.

- Bicycle storage facilities **SHALL** be located in covered areas.

- In design of bicycle storage facilities, consider security issues and applicable regulations (visual transparency/opacity of bicycle lockers, etc.)

Section 10.4.8.4 of Sound Transit’s Design Standards and Guidelines provides further direction regarding furnishings for bike storage and lockers, as follows:

**10.4.8.4 Bike Racks and Lockers**

- Designers **SHALL** select Cora Bike Rack Model Expo “W” Series or a similar approved rack. It should be the standard size to accommodate 10 bikes.*

- Designers **SHALL** select Cycle-safe Bike Lockers Model M/#DFR ProPark or a similar approved locker that stores 2 bikes per locker unit.

* Sound Transit’s East Link design and the City of Redmond’s standards for long term bicycle parking differ from these standards/guidelines published by Sound Transit. There is some flexibility to use different products in coordination with Sound Transit.

Sound Transit’s policies further state that the agency will partner with interested parties to plan for and fund design, construction, and maintenance of bicycle access facilities within one-half-mile radius of facilities served by Sound Transit, within established Sound Transit project scopes of work and budgets.

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**Figure 1—Sound Transit’s map of the East Link route and proposed light rail stations in the East Corridor**

**RapidRide Bus Rapid Transit Service by King County Metro (Existing)**

King County Metro began operating the RapidRide B Line on the Eastside in 2011. The service operates seven days a week and is frequent (with buses every ten minutes during peak hours), running between the Bellevue Transit Center and the Downtown Redmond Transit Center via Crossroads and Overlake. See Figure 2. Riders can access free Wi-Fi, and each station has real time bus arrival signs, well-lit shelters, and attractive waiting areas. Metro’s integrated intelligence transit systems help to speed up travel times, boarding times, and provide enhanced customer information.
The system has been designed to complement connections to East Link in the future, with RapidRide stations located in proximity to East Link Stations, including Hospital Station in Bellevue via a stop on NE 8th Street, stops at Overlake Park-and-Ride and NE 31st Street in the Overlake Village area and a full station at Overlake Transit Center. Metro is planning to upgrade RapidRide as well as other services in the future to enhance access to and from light rail.

130th Avenue NE Station Area in the Bel-Red Corridor

Background
The City of Bellevue worked with residents, business representatives, and other stakeholders to develop the vision for the Bel-Red Corridor as part of the city’s overall plan for growth and economic development between 2005 and 2009. The adopted vision for the Bel-Red Corridor has become a model for smart growth that presents a tremendous opportunity for local, regional, and state collaboration, as well as partnerships involving public and private sector entities to achieve economic, land use, and transportation goals. For more information, visit www.bellevuewa.gov/bel-red_background.htm.

Existing Conditions and Planned Transformation
The Bel-Red Corridor is a 900-acre area that stretches between State Route 520 and Bel-Red Road, extending from Interstate 405 to 148th Avenue Northeast and is characterized by a mix of light industrial, heavy industrial, commercial, office, and a variety of other uses. Bel-Red is a major employment area for Bellevue, but some large employers have moved out or reduced operations, in part due to changing market pressures in the area.

There are significant areas of under-utilized land in an area that will be served by light rail beginning in 2023. There are large, flat expenses of concrete and asphalt, and the streams and wetlands in the area are unhealthy. With its proximity to SR 520 and I-405, as well as its strategic location between Downtown Bellevue and Redmond/Overlake and several large employment centers on the Eastside, this area will transform to a mix of high density housing and mixed-uses, creating 10,000 new jobs and 5,000 new housing units.

Transit-oriented developments around light-rail stations will emerge supported by better local and regional transportation connections. New parks, trails, bike paths, and restored streams and ecological functions will enhance the quality of life and create a vibrant, urban setting that attracts new residents, businesses and a variety of triple-bottom-line economic, social, and environmental benefits. Figures 3 and 4 from the Bel-Red Plan illustrate the proposed vision for the corridor.
Pedestrian- and Bicycle-Friendly Policies

The city’s adopted policies and supporting zoning provisions demonstrate a strong level of support for and commitment to pedestrian and bicycle connectivity. The overall transportation goal of the plan is to create a more complete, connected, and well balanced transportation system, while protecting neighborhoods from spillover traffic impacts and ensuring that transportation investments contribute to the area’s sense of place and sustainability. A summary of adopted policies most relevant to bicycle and pedestrian connectivity follows. Note that in the policies below, “pedestrian and bicycle” is used to include the range of pedestrian and bicycle-like types of travel, such as wheelchairs, strollers, and mobility scooters.

- **S-BR-6**: Concentrate the majority of future Bel-Red growth into a series of mixed-use, pedestrian-friendly and transit-oriented development nodes, with higher density and height therein, as enabled through a land use incentive system. Within each node, provide for tiered building heights, with maximums at the center.

- **S-BR-7**: Implement a land use incentive system that makes available additional floor area ratio (FAR) and height in exchange for infrastructure and amenities that contribute to the public good (including public open space, trails, environmental enhancements, affordable housing, and other public amenities).

- **S-BR-8**: Encourage mixed-use development, promoting opportunities to live, work, shop, and recreate within close proximity (will encourage walking and bicycling between these uses).

- **PS-BR-14**: Use design guidelines to promote pedestrian-friendly and transit-oriented design, ensure quality and a sense of permanence, promote environmental sustainability, and create a distinct sense of place. (Design review should pay special attention to creating a pedestrian-friendly environment, by helping to create vibrant, interesting, safe, walkable and interconnected sites.)

- **S-BR-15**: Integrate transit in the design of public and private developments, so that the form and connectivity of the built environment support travel choices. (Features such as transit stops near major buildings, building entrances oriented toward transit stops, and direct pedestrian connections between buildings and transit help to integrate transit and land use, improving the pedestrian environment and supporting travel choices.)

- **S-BR-16**: Encourage place-making and a dynamic public realm by integrating publicly accessible plazas, open spaces and other gathering places with development, in public and private projects.

- **S-BR-21**: Protect solar access to public spaces and important views from public spaces, as defined through the land use regulatory framework.
• S-BR-22: Promote parking design and management that supports local uses in a manner compatible with the area’s urban design, transit and pedestrian orientation, including:
  a. Encourage shared parking;
  b. Encourage structured parking as opposed to surface parking, particularly in identified development nodes;
  c. Prohibit surface parking between buildings and sidewalks where appropriate, and provide visual screening and/or landscaping relief of surface parking where it occurs; and
  d. Allow reduction of parking supply in transit development nodes.

• S-BR-23: Reinforce neighborhood character and identity through the use of gateways and neighborhood signage. Prohibit signage that is out of scale with or detracts from the public realm.

• S-BR-24: Encourage private and public use of public art to enrich design aesthetics and add character, identity and a sense of place.

• S-BR-25: Design and develop an outstanding street environment that promotes streets as key urban places, sensitive to their context and providing an interesting and aesthetically rich experience. Apply a street hierarchy with design guidelines and street standards (with strong consideration of character and aesthetics in the design and implementation of all street projects; integration of open space and landscaping, including street trees; sidewalk development standards that promote pedestrian functionality and interest, and avoid obstructions; ground floor differentiation, including preferred uses, visual and physical access; mid-block pedestrian crossings; and on-street parking, where it contributes to pedestrian convenience and safety).

• S-BR-35: Create a robust, aesthetically beautiful and functional parks and open space system that serves the needs of residents, employees, visitors, surrounding neighborhoods, and the entire community (with neighborhood parks and smaller “pocket” parks with convenient access to all neighborhoods; locating neighborhood and community parks along stream corridors, linked through a series of trails and other open spaces; developing a “linear park” series of open spaces spanning the extended NE 16th Street multi-modal corridor through the middle of the subarea; and centrally locating a large civic plaza (public square) within the pedestrian-oriented 130th Avenue NE development node.

• S-BR-38: Provide an interconnected system of non-motorized trails for mobility within the study area, connected to the larger, regional trail system, including Marymoor Park and Bridle Trails State Park. The system will emphasize recreational use and provide transportation benefits as well (non-motorized trails along the stream corridors to connect parks and other land uses, and links to the trail systems along the BNSF Corridor and NE 16th Street with initial emphasis on the West Tributary and Goff Creek stream systems; a major east-west multi-purpose trail along the NE 16th Street corridor that will include a generous right-of-way width to accommodate significant green infrastructure, and to create a high-quality pedestrian and bicycle environment and auto-free access between neighborhoods, as well as connections to other local and regional trail systems and to light-rail stations; and development of a regional north-south multi-use trail along the BNSF Corridor that could coexist with potential long-term future rail use, linking to the NE 16th Street regional trail and other local trail access points.

• S-BR-39. Promote the development of “green streets” throughout the corridor, with an abundance of street trees and areas of landscaping to improve and reduce the amount of stormwater runoff, be aesthetically pleasing, and provide an attractive pedestrian experience.

• S-BR-51: Support the Bel-Red Subarea Land Use Plan with a multi-modal transportation system that provides enhanced, multi-modal travel connections within the Bel-Red Subarea, and to other parts of the City and region.
• S-BR-53: Identify and preserve necessary rights of way for the transportation projects identified in the plan by ensuring that proposed site and building development plans are compatible with the planned transportation system.

• S-BR-54: Design and develop arterial improvements, including added vehicular capacity, transit facilities, and non-motorized components, to serve travel demand generated by the Bel-Red Land Use Plan in addition to citywide and regional travel demand.

• S-BR-55: Extend and expand NE 16th Street as a multi-modal corridor that includes vehicular, high-capacity transit, and non-motorized travel modes to serve east-west trip demand across the Bel-Red area, while incorporating significant urban open spaces, and environmentally sensitive design features.

• S-BR-56: Develop local streets to establish a new grid system with smaller block sizes, particularly in development nodes; emphasizing continuity, connectivity and community character. Minimize crossings of streams and wetlands by local streets; use environmentally friendly pedestrian and bicycle crossings where needed to provide local connectivity.

• S-BR-60: Include on-street parking where it contributes to the pedestrian environment and other elements of the desired neighborhood character.

• S-BR-61: Incorporate public access where appropriate and environmental restoration components, such as removal of fish passage barriers and the creation of wildlife passages, in the design and development of roadways that intersect stream corridors.

• S-BR-62: Include pedestrian and bicycle facilities in the design of arterials and local streets.

• S-BR-63: Improve pedestrian connectivity and the quality of the pedestrian environment with a comprehensive sidewalk and trail system, including through-block pedestrian connections, and mid-block crossings. Include pedestrian amenities such as pedestrian-scaled lighting, seating, transit shelters, and weather protection.

• S-BR-64: Develop a multi-use trail system throughout the subarea that provides both local and regional connections, including major non-motorized facilities along the extended NE 16th Street, along the West Tributary of Kelsey Creek and other stream corridors, and incorporating the planned regional trail along the BNSF railroad corridor.

• S-BR-65: Develop multiple access points to the planned BNSF corridor multi-use trail.

• S-BR-66: Provide grade-separated road crossings of the proposed trail system along the West Tributary of Kelsey Creek, and of other separate trails where feasible.

• S-BR-69: Include transit-supportive improvements, such as transit shelters, wayfinding signage, and other features through a combination of public investments and a regulatory framework applicable to private development.

• S-BR-71: Implement a transportation demand management program to reduce Bel-Red single-occupancy trip demand, and increase the share of trips utilizing transit, carpools and vanpools, and pedestrian and bicycle options.

• S-BR-72: Support the development of a Transportation Management Association in the Bel-Red Subarea to assist employers in providing commute options for employees.

• S-BR-73: Manage the parking supply and consider establishing maximum parking requirements to encourage the use of transit, car/van pool, and non-motorized commute options.

• S-BR-74: Promote the development and management of parking supply to encourage
the use of transit, car/van pool, and non-motorized commute options.

- BR-22: regarding parking policies to promote pedestrian-friendly and transit-oriented design, particularly in development nodes.

- S-BR-88: Provide for a mix of housing, retail and services in this area, with an emphasis on housing (include a pedestrian-oriented retail area along 130th Avenue and an urban plaza located near 130th Avenue NE that will serve as a “town square”).

The Bel-Red Subarea Plan also includes policies related to inter-jurisdictional coordination and implementation, including partnerships and coordination with state and regional transportation and transit agencies (WSDOT, Sound Transit, and King County Metro) on planning and providing transportation projects to be implemented in the subarea.

The Need for Pedestrian and Bicycle Connectivity Improvements

Due to the land use patterns described previously, the Bel-Red area has a sparse and discontinuous transportation system. The few arterials in the western portion of the Subarea were designed to serve low intensity, light industrial uses and therefore lack connected sidewalks or mature streetscapes. Arterials in the eastern portion of the subarea carry commuter traffic and provide local access to retail and service uses. Many segments of roadway have no sidewalks. Bicycle accommodations are limited to shared roadway facilities as there are no exclusive bicycle lanes.

This system provides limited connections for east-west travel, few transit options, and minimal facilities for pedestrians and bicyclists.

The Bel-Red Subarea Plan represents an ambitious vision that calls for a substantial departure from the area’s past. Significant investments in transportation, parks, and environmental improvements will be needed. Much of these investments will occur through private sector funded improvements as redevelopment brings sites up to newer land use and urban design standards. Some will occur with land use incentives, allowing greater building intensities or height in exchange for development contributions to infrastructure and amenities. The city also has developed a specific funding strategy that will play a role, by utilizing both existing revenue sources and new financing tools.

The Bel-Red Subarea Plan calls for improvements to the transportation system on all fronts to provide better vehicular, transit and non-motorized connections within the subarea and to other parts of the city and region. Transportation improvements will occur consistent with the plan’s emphasis on sustainability and on making Bel-Red a highly livable place. Providing travel choices is a key element of sustainability. Efforts to reduce commuter trip demand, encourage ride-sharing, walking, and bicycling, and promote transit service will further pursue this end.

The Bel-Red Subarea Plan calls for creating a multi-modal transportation system to support a mixed-use environment requires excellent pedestrian and bicycle access, including access for wheelchairs, strollers and other wheeled pedestrian devices. The city intends to create transit-rich development nodes and neighborhoods in which walking and bicycling are predominant forms of transportation. As such, a wide range of improvements to the non-motorized transportation system are anticipated; from sidewalks and mid-block pedestrian connections, to trails along riparian corridors and the Burlington Northern Santa Fe (BNSF) railroad corridor, and new neighborhoods and roadways that are designed from the start with pedestrians and bicyclists in mind. Proposed bicycle facilities will serve all types of users, from novice to expert, and all types of trips, including recreation and commuting. Links to local parks and connections to the regional system also are part of the vision.

As a major future arterial and transit corridor, an extension of NE 16th Street is also planned to be the primary component of the east-west non-motorized transportation system. Providing a high quality pedestrian and bicycling environment along this arterial will create non-motorized linkages between neighborhoods, regional trail systems, and light rail stations with limited or minimal auto conflicts. The east-west pedestrian and bicycle corridor is also intended to link the various north-south trails and sidewalks.
The adopted Bel-Red vision calls for a new network of streets in a highly connected, walkable grid pattern. The city is proactively preparing to accommodate Bel-Red’s anticipated growth by budgeting to fund several of the key links in the neighborhood. Bel-Red transportation projects include high priority investments that will improve access, circulation, and mobility options for cars, transit, freight, pedestrians, and bicyclists. All streets are being planned and designed in an integrated process with complete streets principles as a guiding focus. Figures 5 through 8 illustrate the proposed street network and streetscape details. Link transit station at 130th Avenue NE. Figures 9, 10, and 11 illustrate details from Sound Transit’s plans for the station area.

Figure 5—Proposed street network in Bel-Red, which will include local streets, green streets, and the 130th Avenue NE shopping street (shown in red)
Figures 6, 7, and 8 illustrate proposed street design concepts for Bel-Red.

Sound Transit will complete improvements to the street network in the vicinity of the proposed East

Figure 9a—Sound Transit’s context analysis for the 130th Avenue NE station area

Figure 9b—Sound Transit’s plan for the 130th Avenue NE light rail station area design

Figure 10—Sound Transit’s designs for the 130th Avenue NE station include a bike plaza with short term and long term bike parking facilities
**Capital Projects**

Planned capital projects for the 130th Avenue NE station area are keyed to the bicycle and pedestrian connectivity maps in the Appendix. While these projects are listed in the City of Bellevue’s 2013-2019 Capital Improvements Program, not all of them are yet fully funded. The city will continue to pursue a variety of infrastructure funding opportunities including private sector partnerships to fund these.

**Map Key Description**

The maps in the Appendix include numbered projects that correspond to the numbers below for proposed capital projects that will enhance bicycle and pedestrian connectivity.

1. NE 4th Street—116th to 120th Avenues NE—implementation of a new five-lane arterial with two travel lanes in each direction and center turn lane where necessary between 116th Avenue NE and 120th Avenue NE; the project will include bike lanes, curb, gutter and sidewalk on both sides, illumination, landscaping and irrigation, and stormwater drainage and detention.

2. 120th Avenue NE—widening to create a five lane arterial with two travel lanes and center turn lane with turn pockets and medians from south of NE 4th Street to south of NE 8th Street; the project will include bike lanes, curb, gutter, and sidewalk on both sides (filling in missing gaps) a traffic signal at the NE 6th Street intersection, illumination, landscaping and irrigation, and stormwater green infrastructure.

3. Extension of NE 6th Street—from its current terminus in the median of I-405 to the east over the northbound lanes of I-405 and 116th Avenue NE to a new intersection with 120th Avenue NE, with two lanes in each direction, turn lanes at signalized intersections at the I-405 HOV ramps and 120th Avenue NE, illumination, landscaping and irrigation, stormwater green infrastructure and other utility improvements.

4. Extend, Realign, and Widen 120th Avenue NE from south of NE 8th Street through NE 12th Street with five lanes (two travel lanes in each direction and center turn pockets/turn lane), completion of missing gaps of bike lanes, curb, gutter, and sidewalk, landscaping and irrigation, illumination, and stormwater green infrastructure.

5. Extension of 120th Avenue NE from NE 12th Street to Northup Way—with a five lane cross section (two travel lanes in each direction and turn pockets/center turn lane), completion of missing gaps of bike lanes, curb, gutter, and sidewalk on both sides, illumination, landscaping and irrigation, and stormwater green infrastructure.

6. NE 12th Street Intersection Improvements—signalized intersection improvements with two lanes in each direction, turn pockets, curb, gutter, and sidewalk, a separated 16-foot-wide multi-purpose path along the north side and a six-foot sidewalk on the south side; landscaping and irrigation, stormwater green infrastructure, and other utility improvements.

7. 124th Avenue NE from NE 12th Street (Bel-Red Road to approximately NE 14th Street Preliminary Design)—of five lane cross section (two travel lanes in each direction, center turn lane/turn pockets), bike lanes, curb, gutter, and sidewalk on both sides, illumination, landscaping and irrigation, intersection and signal improvements, and stormwater green infrastructure.

8. Widen 124th Avenue NE from NE 14th Street to Northup Way—with roadway cross section of five lanes (two travel lanes in each direction and a center turn lane/turn pockets), filling in missing gaps of sidewalk, curb, and gutter on
both sides, and a multi-purpose trail on both sides; illumination, landscaping and irrigation, and stormwater green infrastructure.

9 Initiation Design for the New Arterial Roadway Connection between 130th Avenue NE and 132nd Avenue NE; with intersection designs at the 130th and 132nd Avenue NE junctions integrating traffic, pedestrian, and bicycle improvements with LRT crossings; the roadway cross section outside of the LRT alignment will include a single travel lane in each direction, buffered bike lanes, curb, gutter, and sidewalk, illumination, landscaping and irrigation, underground utilities, and stormwater green infrastructure.

10 Initiate Design for the Redevelopment of 130th Avenue NE between Bel-Red Road and NE 20th Street, with the segment north of the planned intersection with NE 16th Street to include a retail-focused pedestrian-oriented design with a two-lane cross section, bike lanes, and on-street parking; improvements will include turn lanes, potential mid-block crossings, illumination, landscaping and irrigation, underground utilities, and stormwater green infrastructure.

11 Initiate Design for the 134th Avenue NE extension between NE 16th Street and NE 20th Street; with a new signalized intersection at NE 16th Street that will integrate traffic, pedestrian, and bicycle movements with the LRT crossing and a new signalized intersection at NE 20th Street.

12 Advance the Design of New Roadway Improvements to Intersections at 132nd Avenue NE, 134th Avenue NE, NE 16th Street/136th Place, NE, and NE 20th Street—including forward coordination with and compatibility with Sound Transit as part of the 130th Avenue NE station improvements; intersection designs will integrate traffic, pedestrian and bicycle movements with the LRT crossings and provide other needed improvements such as illumination, landscaping and irrigation, stormwater green infrastructure, and underground utilities.

The following projects are being advanced by the City of Bellevue as part of the city’s 2009 Mobility and Infrastructure Initiative (M&II) to address recent growth, accommodate planned new development, and ensure coordinated design and implementation with East Link. These projects will connect Downtown Bellevue, Wilburton, the new Bel-Red transit oriented development nodes, and the larger city and region.

- **NE 4th Street and 120th Avenue NE**
  - NE 4th Street from 116th Avenue NE to 120th Avenue NE is undergoing Phase 1 construction with estimated completion by fall of 2014.
  - 120th Avenue NE from NE 4th Street to NE 8th street began construction in summer of 2013 and will be completed in 2014.
  - 120th Avenue NE from NE 8th Street to NE 12th Street construction is expected to begin in June 2014.
  - 120th Avenue NE from NE 12th Street to Northup Way is currently in design with construction between NE 12th and NE 16th expected to begin in late 2015.

- **NE 15th and 16th Streets**
  - Segment of NE 15th Street from 116th Avenue NE to 124th Avenue NE is funded to 60 percent design.

- **124th Avenue NE**
  - Segment from NE 8th to NE 14th Street along with Wilburton Streetscape Enhancements is in preliminary design.
  - From NE 14th Street to NE 18th Street is scheduled for right-of-way acquisition in 2014 and construction is scheduled...
BICYCLE AND PEDESTRIAN CONNECTIVITY
Analysis and Recommendations

Bicycle Parking at the 130th Avenue NE Station
Sound Transit is proposing to provide a mix of short term (bike racks) and long term (bike lockers) bicycle parking facilities at the station. Some of these will be installed when the station opens in 2023; others will be installed in the future. From review of Sound Transit’s plans, it appears that two Class II bike racks with capacity for 10 bikes each will be installed with the station opening and additional two bike racks with capacity for 5 bikes will be installed in the future. One Class I bike locker with capacity for two bikes will be installed at opening with one added in the future. See “Recommendations” for additional bike parking at and near the station area.

Bicycle Parking in the Neighborhood
The City of Bellevue has adopted specific bicycle parking recommendations for office, residential, institutional, retail, and education uses in the Bel-Red Corridor:

- A ratio of 1 space per 10,000 net square feet (nsf) for non-residential uses greater than 20,000 nsf.

Figure 11,below, shows the 130th Avenue Station Plan vision for the area surrounding the station including the public space and extension of Goff Creek northeast of the station. This area was studied in a separate effort as part of the Growing Transit Communities Partnership work for the East Corridor Implementation Support Project. Refer to the 130th Avenue NE Transit-Oriented Development Opportunity Study for more information.

Figure 11—130th Avenue NE station area vision by the City of Bellevue
Overlake Village Station Area in Redmond

Background
In 2007 the City of Redmond adopted a major update to the Overlake Neighborhood Plan, including a future vision, goals, and policies. This plan was developed in partnership and close coordination with people who live and work in the area, business and property owners, and other stakeholders. This plan established a coordinated approach for investments in land use, transportation, parks and natural resources and set the strategic framework to achieve the vision to transform Overlake from its current suburban character to a vibrant, urban neighborhood. One of the core strategies is to create a variety of opportunities for people to live in Overlake close to where they work.

The Overlake Neighborhood Plan and Overlake Master Plan and Implementation Strategy call for a number of public investments in Overlake over the course of several years in order to support current and future redevelopment efforts. The city also completed the Overlake Village Street Design Guidelines to guide implementation of multimodal streets throughout Overlake Village. Figures 12 through 14 below illustrate the vision for Overlake Village. For more information, visit: www.redmond.gov/overlake.

Implementing the adopted plans and policies for Overlake will greatly enhance bicycle and pedestrian connectivity in the area, creating a place where more people can work, access services and shopping, and enjoy recreation opportunities all within close proximity to where they live. Thousands of new residents will be able to walk and bicycle from their homes to neighborhood shops and services, as well as to jobs in the neighborhood or accessible from neighboring transit stations.

Already there are significant redevelopment activities underway in the neighborhood. For example, a master development plan has been adopted for the former Group Health Site, and Capstone is moving forward with redevelopment of the site.
Existing Conditions and Planned Transformation

Overlake Village is part of the Overlake Neighborhood in Redmond, Washington. The neighborhood is a commercial and employment hub on the eastside with excellent access via SR-520 and public transit to Downtown Redmond, Downtown Bellevue, Seattle, and the region. The home of the Microsoft headquarters and many other businesses and employers, Overlake is the third largest employment center in the region with about 46,000 jobs. Businesses have located in Overlake based on the proximity to world leaders in software and digital media. People who work and live in Overlake have their pick of a wide variety of restaurants and shops.

King County Metro serves the area with six all-day bus routes and the new bus rapid transit system, RapidRide began service in the area in 2011 via the B Line serving local and regional destinations.

Sound Transit’s East Link light rail line will have stations at Overlake Village and the Overlake Transit Center, which are planned to be open by 2023, concurrent with the Bel-Red stations. East Link will conveniently transport residents, employees, and visitors between stations on the Eastside and to and from regional destinations such as Downtown Seattle, Seattle-Tacoma International Airport, and the University of Washington.

The existing street network will be transformed from the current large blocks to a much finer grained network that significantly improves accessibility for pedestrians and bicyclists. Redmond is building on these assets by planning for significant growth in Overlake. The adopted plan calls for 5,000 new homes and 25,000 new jobs by 2030. The City has created zoning provisions that encourage mixed-use development and include an incentive program allowing buildings of up to 12 stories (10 for commercial buildings) and Floor Area Ratio (FAR) of up to 4.0 for residential space and 0.55 for commercial space.

Pedestrian- and Bicycle-Friendly Policies

The City of Redmond adopted a broad set of policies to guide future redevelopment, and many of these encourage pedestrian- and bicycle-friendly implementation. A summary of these can be found in the Comprehensive Plan policies (below) and the overall transportation vision and implementation steps can be found in the Transportation Master Plan.

- OV-27 Increase mobility within Overlake and provide for convenient transit, pedestrian, and bicycle routes to and from Overlake.
- UC-27 Strive to achieve by 2030 a non-single-occupancy vehicle (transit, bicycling, walking, car/vanpooling, telecommuting or other “virtual” commute) mode split of 40 percent for peak-period trips in the urban center. Do this by providing a pedestrian- and transit-supportive environment, developing supportive land uses, working with regional transit agencies to provide expanded transit options, including light rail and bus rapid transit, enhancing transportation demand management strategies, and implementing a parking development and management plan.
- OV-28: Maintain the Overlake Urban Center as a Growth and Transportation Efficiency Center to promote the use of alternative transportation modes in Overlake and the surrounding neighborhoods in Redmond and Bellevue.
- UC-21: Ensure that improvements, including streets, sidewalks, transit facilities, lighting, landscaping, and parking lots/structures, provide a comfortable and attractive pedestrian environment and contribute to the urban centers’ aesthetic appeal.
• UC-16: Encourage pedestrian activity, including informal gatherings, through public and private investment in improvements along the streetscape.

• OV-30: Consider grade separation where persistent conflicts between nonmotorized modes and vehicles create safety concerns.

• OV-31: Develop multiuse pathways that accommodate pedestrians and cyclists adjacent to multimodal corridors as an efficient and cost-effective means of meeting pedestrian and bicycle standards.

Overlake Village Subarea Policies
As described above, Overlake Village is envisioned to become an urban, mixed-use neighborhood that functions as the core of the Overlake Neighborhood. As a mixed-use area, it is intended to provide for significant residential growth, while remaining part of a larger, vibrant commercial area that is a destination for many. Subarea policies encourage the development of a mix of land uses within the compact village, which will increase the level of walking and bicycling in the neighborhood.

Because the vision for Overlake Village calls for it to have its own unique character within the Overlake Neighborhood, city-adopted policies also call for redevelopment that provides a comfortable and accessible environment that is unique to the area. This includes a system of public parks, plazas, and open spaces that provide relaxing, recreational, and community gathering opportunities to residents, employees, and visitors.

Other policies supporting pedestrian and bicycle connectivity include:

• OV-47: Encourage development and invest, when possible, in conjunction with other public agencies, in improvements on 152nd Avenue NE that:
  o Create a linear neighborhood core with a main street character that attracts significant numbers of people to multiple activities;
  o Include within the mix of uses at street level restaurants, retail, cultural or entertainment uses, personal service uses and similar businesses that are pedestrian oriented;
  o Include residential or office uses in upper floors;
  o Maintain a pedestrian-friendly scale along the street by requiring buildings taller than six stories to step-back upper stories;
  o Promote the use of transit through the effective placement of transit facilities and routes; and
  o Achieve the goals of the multimodal corridor designation.

• OV-49: Recognize the public benefit that can be derived from the site’s proximity to the Overlake Village Transit Center, the bus rapid transit line and the planned Sound Transit light rail station by encouraging walkable, transit-supportive development through incentives tied to building height and allowable floor area.

• OV-53: Orient buildings to the streets and include design features that encourage walking and biking to the area and between stores and shopping centers. Locate parking beside, behind or underneath buildings. Include street trees and landscaping to provide green space between buildings and the street.

• OV-56: Recognize sidewalks with landscaped planting strips and street trees as part of Overlake Village’s park-like amenities.

• UC-22: Design and construct pedestrian corridors to enhance pedestrian safety and pedestrian use of the area. Connect businesses within the retail area with each other and with transit. Include street
furniture, such as benches, on pedestrian corridors on public rights-of-way or public property to make them functional and inviting.

The Need for Bicycle and Pedestrian Connectivity Improvements

The City of Redmond is actively working with private and public sector partners to transform Overlake Village into a dynamic and high quality urban place through excellence in design, land use density and mix, community facilities, and public and private investments that emphasizes pedestrian activity and minimize parking facilities.

There are a variety of mobility choices that will significantly increase access to, from, and within Overlake Neighborhood when implemented. Many of the existing streets in the neighborhood lack bike lanes and sidewalks of sufficient width to serve the higher volumes of pedestrians expected when the light rail station is constructed and the neighborhood grows. Some sidewalks are in a state of disrepair and intersections need to be upgraded with accessible features and treatments to enhance pedestrian and bicycle crossings.

While there will be continued need for vehicle travel, future investments will need to enable and prioritize more safe and attractive opportunities for walking, using transit, or bicycling between residences, stores, work, and amenities. The city not only seeks to enhance multimodal connections within the Overlake Neighborhood, but also between the neighborhood and nearby areas including Downtown Redmond. The city also will require new developments to provide pedestrian and bicycle facilities (including cycle tracks, paved shared use paths, and bicycle lanes), and bicycle racks.

With implementation of the Overlake Village Street Design Guidelines, new complete streets will emerge throughout the neighborhood, along with improved intersections and crossings. Proposed complete streets and two new nonmotorized crossings of State Route 520 will make transit more convenient to more people and provide new connections between Overlake Village and the Employment Area to the north.

Sound Transit will construct the light rail station as well as transportation improvements in the immediate vicinity of the station. Microsoft also has agreed to contribute funding for improvements associated with the Overlake Transit Center station, which will include funding of the northernmost pedestrian-bicycle bridge (just south of NE 40th Street), which will connect the Microsoft campus located east and west of SR 520 directly to the future light rail station. The bridge is planned to open in 2020 and will increase East Link ridership at the Overlake Transit Center Station.

The City of Redmond is committed to funding the Overlake Village pedestrian-bicycle, which has already received a $5 million grant through Puget Sound Regional Council. This will provide access from the west side of SR 520 to light rail and to the vibrant mix of uses in the Overlake Village.

Figures 15 through 19 illustrate the proposed street network and various concepts for pedestrian and bicycle improvements in Overlake Village.
Figure 15a—Pedestrian, bicycle, and transit circulation plan for station subarea

Figure 15b—Overlake Village street types include the 152nd Avenue NE retail street, the 151st Avenue NE neighborhood street, and local access streets

Figure 16—Overlake Village Station area multi-modal access diagram (buildings and block developments shown are conceptual)
Capital Projects

Of the full list of capital improvement projects being planned and implemented in the Overlake Village area, the following are the most relevant projects for enhancing bicycle and pedestrian connectivity. These projects are keyed to the bicycle and pedestrian connectivity maps at the end of this report (Figures 20 and 21). It should be noted that while these projects are listed in the City of Redmond’s 2013-2018 Capital Investment Program, not all of them are yet fully funded, and the city will continue to pursue a variety of infrastructure funding opportunities including private sector partnerships to fund these.

Figure 17—Sound Transit’s concept for the Overlake Village light rail station

Figures 18 and 19—Illustrative design concepts for the pedestrian-bicycle bridge across SR 520 at Overlake Village
Map Key Description
Refer to the maps in the Appendix showing proposed street networks and proposed capital projects that will enhance pedestrian and bicycle connectivity in the station areas. The maps include numbered projects that correspond to the numbers below.

1 152nd Avenue NE—one through lane in each direction, turn lanes, cycle tracks, on-street parking, sidewalks, and additional pedestrian amenities per the Overlake Village Street Design Guidelines. Developers will complete the improvements as required through frontage improvements and development agreements. The Group Health site development agreement requires completion of improvements on 152nd Avenue NE along that site’s frontage.

2 NE 27th Street and NE 28th Street—Construct new east-west street between 152nd Avenue NE and 156th Avenue NE with a three-lane public roadway (narrowing to two lanes adjacent to the future park) with parking and bike lanes along both sides of the street. This project is currently under construction by Capstone.

3 Overlake Access Ramp—construct eastbound access ramp from SR 520 to roundabout terminus at 150th Avenue NE; ramp will diverge from the 148th Avenue NE off-ramp and be grade separated from 148th Avenue NE and connect with city streets at 150th Avenue NE. The ramp will include one general purpose lane, auxiliary lanes and HOV transit treatments as applicable.

4 Overlake Access Ramp Local Connection—construct local street connections from the roundabout terminus of the Overlake Access Ramp to 152nd Avenue via the proposed NE 26th Street alignment and the proposed NE 28th Street alignment.

Note: when the Washington State Department of Transportation implements the ramp project above (3), it will be important to evaluate the best options for pedestrian and bicycle facilities and crossing improvements across the ramp ingress and egress points and at the roundabout as these are typically challenging areas for pedestrians and bicyclists to navigate.

5 Overlake Village Bicycle-Pedestrian Bridge—design and construct a new bicycle and pedestrian bridge over SR 520 locating the southern landing at the Overlake Village light rail station and the north landing in the vicinity of the SR 520 Regional Trail and NE 31st Street.

6 NE 31st Street—improvements between 152nd Avenue NE and 156th Avenue NE including the addition of green bicycle lanes; construction of additional westbound left-turn lane at the intersection with 156th Avenue NE.

7 156th Avenue NE ADA upgrades (as part of other improvements) preliminary engineering/design is funded.

8 Overlake Transit Center Bicycle-Pedestrian Bridge—design and construct a new bicycle and pedestrian bridge over SR 520 locating the eastern landing at the Overlake Transit Center with the western landing on the Microsoft West Campus.

9 520 Trail Grade Separation at NE 40th Street—improvements to grade separate the 520 Trail at the NE 40th Street
overpass to enhance pedestrian and bicycle access along the trail, reduce conflicts between vehicles and nonmotorized trail users, and improve vehicle operations at the intersection.

10 NE 40th Street—between SR 520 and 156th Avenue NE and 163rd Avenue NE and Bel-Red Road, resize vehicular lane width to ten feet and add five-foot bike lane in the westbound direction. Improvements include sidewalks in both directions, bike lane in the westbound direction, ten-foot vehicular lanes in both directions (two lanes), and eleven-foot turn lane, as well as streetscape, stormwater treatments, street lights, and utilities.

Other recent and planned improvements in the neighborhood include the following.

Recent construction of rain gardens has been completed on portions of 151st Place NE and 152nd Avenue NE. This project converted existing underutilized and unused pavement space into areas that can accommodate stormwater and improve water quality while also enhancing streetscapes, making them attractive and enjoyable for pedestrian use. These interim rain gardens may be removed and replaced as redevelopment occurs and streets are widened in the future.

By 2023—Pedestrian, bicycle, and street improvements will be completed in the immediate vicinity of the light rail station, including both pedestrian-bicycle bridges over SR 520.

By 2030—The urban pathway system connecting the three regional stormwater vault sites is planned to be developed within dedicated easements adjacent to City rights-of-way, and would be designed to include LID components.

Through 2030 and Beyond—As private sector redevelopment continues in the neighborhood, it is anticipated that various street improvements and other extensions of the urban pathway system will be completed. For example, street improvements along 152nd Avenue NE and path extensions through the site will be completed by Capstone as part of their development.

In addition, the city is actively implementing a regional system of stormwater facilities that will serve current and future redevelopment activities in the neighborhood. This includes the south detention vault, which will be completed by 2015. Also the design of the Overlake Village light rail station infiltration vault is underway, in cooperation with Sound Transit so that it can be fully integrated into the light rail station project. This facility is proposed to be built by Sound Transit’s Design/Build contractor, with completion by 2023.

By approximately 2025, the central infiltration vault is planned to be complete with a two acre park constructed over the top of the vault. The facility will be surrounded by NE 26th Street, NE 27th Street, 151st Avenue NE, and 152nd Avenue NE.

**Bicycle Parking at the Overlake Village Station**

At this time Sound Transit is working on the design for the Overlake Village station and the specific quantity of bike parking that will be installed at the station is not yet known. It is anticipated that a mix of short term (bike racks) and long term (bike lockers) options will be provided at the station based on other light rail stations.

With the potential for a high level of bicycle access to and from this station, it is anticipated that more bike parking will be needed than is typically provided at light rail stations. There may even the need for a larger bike station or bike barn integrated into the plans for community facilities/public space near the transit station.
**City of Redmond Design Standards**
The City of Redmond has adopted citywide standards for bicycle parking (Zoning Code Section 21.40.020). These standards cover requirements for short- and long-term bicycle parking, bicycle commuter showers, and bicycle parking at transit stops.

**RECOMMENDATIONS**

**Prioritize Implementation of Complete Streets in the Station Areas**
- Both cities should continue to focus on prioritizing complete streets improvements in the vicinity of the proposed light rail stations: within approximately ½ mile for pedestrians and within approximately 3 miles for bicyclists. In addition pedestrian access to local bus service that feeds the light rail station should be improved.
- Both cities should evaluate the need for additional bicycle and pedestrian improvements along those routes beyond the ½ mile station walking distance that have the potential to connect to other residential neighborhoods, subsidized housing, and senior housing. Refer to Figures 20 and 21 for locations of subsidized and senior housing in proximity to the station areas based on regional GIS data.

**Priority Corridors for Pedestrian and Bicycle Connectivity and Access**
Both the City of Redmond and the City of Bellevue set priorities for capital projects. The cities are funding specific projects and seeking funds to improve the pedestrian and bicycle network in the station areas, as discussed above. Private sector development also will assist in completing improvements for pedestrians and bicyclists as the areas redevelop.

In Bellevue, the City is prioritizing bicycle and pedestrian connectivity at the following corridors in the station area:
- NE 16th Street/136th Place NE (primary east-west access to station)
- 130th Avenue NE (special treatment north of NE 16th)
- 132nd Avenue NE (special treatment south of NE 16th)
- New “green streets” on NE 14th and NE 19th Street with pedestrian/bicycle stream crossings
- New “local streets” within one quarter mile of the station
- SR 520 trail improvements with Bel-Red access at 130th Avenue and 136th Place
- 140th Avenue NE bicycle facility

**Bicycle Parking and Storage**
Given that a limited number of bicycle parking facilities will be provided at East Link stations by Sound Transit, both cities should consider options for providing additional facilities near the stations, especially as ridership and the neighborhoods grow in population density.

The Association of Pedestrian and Bicycle Professionals (APBP) has developed an extensive set of Bicycle Parking Guidelines.
these guidelines, APBP recommends that for high-capacity transit stations and rail/bus terminals, stations, and airports long term bicycle parking spaces (lockers or bike barn storage) for 7 percent of the projected a.m. peak period ridership and short term bicycle parking (racks) for 2 percent of the a.m. peak period ridership be provided.

**Strengthening First and Last Mile Connections**

The first and last mile of access to public transportation is a growing interest area as cities confront challenges in getting more people to use transit. First and last mile solutions such as cycling are becoming increasingly popular in many cities around the world as an inexpensive and environmentally friendly solution, and research shows that commuter bicyclists are willing to travel a distance of three miles to access high-capacity transit.

The cities and transit agencies should continue to work together to develop specific first mile/last mile strategies to increase the effective range of access to transit stations.

With regard to bicycle and pedestrian connectivity, included among the strategies are: improving the walking and biking experience as well as increasing safety and security. It also includes innovative strategies, such as bike-share (see discussion on next page), car-share, local electric vehicles. Implementation of pedestrian and bicycling infrastructure, such as complete streets, and special programs and facilities such as bike sharing programs and bike barns (rental and maintenance shops) can also address first and last mile needs.

It is also important to think beyond walking and bicycling on conventional bikes and to look into the future and anticipate future methods people may use for getting to and from transit stations in the future. All active transportation/human-powered transportation options should be considered and accommodated in design, including electric scooters and wheelchairs and other types of low speed electronic assist devices, all types of bicycle and tricycle configurations, people on skates, and other means.

The more first/last mile and active transportation solutions that can be accommodated, the more people will access transit contributing to community sustainability by reducing greenhouse gas emissions, increasing public health, and making the region a more enjoyable place to live, work and play.

Feeder buses and a variety of other transit based solutions, car sharing programs, pod cars (personal rapid transit), motorized shoes, and transportation demand management programs can also address first/last mile needs. Refer to the Parking Management and Transit Integration Report for more information.

**Bike Share**

Bicycle sharing programs in particular have been widely successful in Europe and Asia, and are beginning to be implemented on a larger scale in North America. Bike share programs can directly address first/last mile connectivity and extend the reach of transit. If people can easily bike to the light rail station from job and home the need for personal, single occupancy vehicles on the roads can be reduced.

A recent publication of the Institute for Transportation & Development Policy (ITDP), *The Bike Share Planning Guide*, highlights two metrics for determining whether a bike-share system is efficient, reliable and cost-effective—the average
number of daily uses for each public bicycle and the average daily trips per resident within the coverage area.

The Bike Share Planning Guide identifies five key elements of a successful bike share system, and consideration of these elements can help cities determine the system capacity they may need for their own system.

- **Station Density:** A quality system needs 10-16 stations for every square kilometer, providing an average spacing of approximately 300 meters between stations and a convenient walking distance from each station to any point in between. Lower station densities can reduce usage rates.

- **Bikes per Residents:** 10-30 bikes should be available for every 1,000 residents within the coverage area. Larger, denser cities and metropolitan regions with an influx of commuters into the area served by the system should have more bikes available to meet the needs of both commuters and residents. Systems with a lower ratio of bikes to residents may not meet this need during peak demand periods, reducing system usage and reliability.

- **Coverage Area:** The minimum area covered by a system should be 10 square kilometers, large enough to contain a significant number of user origins and destinations. Smaller areas may drive down system usage.

- **Quality Bikes:** Bikes should be durable, attractive and practical (with a front basket to carry bags, packages or groceries). The bicycles should also have specially designed parts and sizes, which discourages theft and resale.

- **Easy-to-Use Stations:** The process of checking out a bicycle should be simple. The payment and authorization technology utilized should have an easy-to-use interface, a fully automated locking system and real-time monitoring of occupancy rates (to track whether more or fewer bikes are needed for each station).

**East Corridor Context Suggestions**

The two cities in the East Corridor have started to assess the potential for implementing future bike share programs. Based on the planned context in the station areas, the following suggestions can guide future decision-making related to bike share:

- Consider locating stations approximately every three to four blocks.
- Plan for each individual station to take up around 600 square feet (including stations, bikes, and access) for 12 bikes.
- There are two general layouts to consider:
  1) Double-sided where bikes can be accessed on either side of the station; and
  2) Single-sided where bikes can be accessed on one side of the station.
- There are three general methods cities should consider to identify specific locations for bikes share stations:
  1) Find space in the public right-of-way; block ends and midblock crossing locations may be good candidates on streets with curb extensions, because there is the potential to create specific space for bike share stations within the bulb-out area (or to located bike share stations in the space that may be normally devoted to an onstreet parking lane).
  2) Locate bike share stations on private property where space exists and through easement or other property use mechanism with the property owner; business owners may be supportive of
30 having bike share stations understanding the potential to draw attention and increased foot traffic to their businesses.

3) Include bike share stations in new developments through methods such as development incentives; in these areas, space can be planned from the outset as part of the project.

BICYCLE AND PEDESTRIAN CONNECTIVITY TOOLBOX
The solutions summarized in the table in the Appendix can help to improve bicycle and pedestrian connectivity and encourage cycling and walking to transit within and beyond station areas. The tools highlighted in this “toolbox” are particularly important in creating more seamless first mile/last mile travel options.

Bicycle and pedestrian facilities can take various forms. The term “bikeways” can be used to describe bike lanes, sharrows, cycle tracks, or other bicycle travel ways. Shared use paths are designed to accommodate bicyclists and pedestrians, whereas sidewalks are primarily for pedestrian use. Various types of intersection treatments can improve the safety, accessibility, and efficiency of crossing for both pedestrians and bicyclists.

For more specific information about design standards and guidelines for these solutions, refer to the local standards of the Cities of Redmond and Bellevue. The American Association of State and Highway Transportation Officials (AASHTO) and the National Association of City Transportation Officials (NACTO) are also good resources. These entities have published comprehensive design standards and guidelines for streets, and pedestrian and bicycle facilities. Intersection treatments, lane markings, signing, and symbols stenciled in streets in particular are regulated by the Manual on Uniform Traffic Control Devices (MUTCD).
# Bicycle and Pedestrian Connectivity Toolbox

## Solution/Tools | Descriptions | Visual Examples
--- | --- | ---
**Connectivity – Corridors – Bicycle Facilities** |  |  

### Bike Lanes
Marked and delineated with striping and bicycle symbols that define road/street space for bicyclists and for motorists, promoting a more orderly flow of traffic and allowing bicyclists to move at their own pace; bike lanes may be painted green, which often is done to alert motorists and bicyclists of a conflict zone.

![Existing bike lane in Redmond, WA](image)

### Buffered Bike Lanes
Bike lane with adjacent striped area between bicyclists and motor vehicles; sometimes this area is crosshatched; provides extra space between bike lanes and motor vehicles on heavily congested streets and adjacent to parking lanes.

![Dual buffered bike lane on 1st Street in Davis, California, photo by Jimmy Fong](image)

### Sharrows (Shared Lane Markings)
Symbols stenciled onto travel lanes that properly position bicyclists in the roadway.

![Seattle bike route and wayfinding signs](image)

### Bicycle Guide Signs/Connecting Multiple Routes
Signs that direct bicyclists to particular destinations, often configured with arrows and names of places, along with bicycling distance (see visual example at right).

![Seattle bike route and wayfinding signs](image)
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<th>Solution/Tools</th>
<th>Descriptions</th>
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</thead>
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<tr>
<td><strong>Cycle Tracks</strong></td>
<td>Cycle tracks can be implemented in various forms; a key aspect of a cycle track that differentiates it from other bicycle facilities is physical separation from the vehicle lane (horizontal and/or vertical); follow National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide standards for design</td>
<td>![Cycle track in Holland from SustainableTransportationHolland.org](Cycle track in Holland from SustainableTransportationHolland.org)</td>
</tr>
<tr>
<td><strong>Two-way Cycle Tracks</strong></td>
<td>Striping and symbols delineate space provided for two way bicycle use that is horizontally and sometimes vertically separated from traffic lanes, parking areas, and sidewalks</td>
<td>![Example in Washington DC, photo by Larry Ehl, urbanplacesandspaces.blogspot.com](Example in Washington DC, photo by Larry Ehl, urbanplacesandspaces.blogspot.com)</td>
</tr>
<tr>
<td><strong>Contraflow Lanes</strong></td>
<td>Bicycle lanes separated with double yellow striping and marked with bicycle symbols and signs that provide space for bicyclists to travel in the opposite direction of motorists on one-way streets where there is no parking</td>
<td>![Seattle Department of Transportation](Seattle Department of Transportation)</td>
</tr>
</tbody>
</table>

**Connectivity – Corridors – Bicycle Facilities, Continued**

| **Shared Use Paths** | Shared Use Paths are designed to accommodate use by bicyclists and pedestrians and provide critical transportation links throughout our region, as well as recreation opportunities | ![Burke-Gilman Trail, Seattle, WA, photo from the Cascade Bicycle Club](Burke-Gilman Trail, Seattle, WA, photo from the Cascade Bicycle Club) |

**Connectivity – Corridors – Pedestrian and Bicycle Facilities**
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<thead>
<tr>
<th>Solution/Tools</th>
<th>Descriptions</th>
<th>Visual Examples</th>
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</thead>
<tbody>
<tr>
<td><strong>Connectivity – Corridors – Pedestrian Facilities</strong></td>
<td></td>
<td>Photos by Dan Burden, Walkable and Livable Communities Institute</td>
</tr>
<tr>
<td>Sidewalks</td>
<td>Continuous sidewalks with no gaps and of sufficient width to accommodate the volumes of pedestrian anticipated are important to increase pedestrian connectivity and mobility throughout the station areas and beyond; check local standards for dimension/width and grade requirements</td>
<td></td>
</tr>
<tr>
<td>Pedestrian Access Through Blocks</td>
<td>Encouraging the provision of through public access across private development sites will increase pedestrian mobility in the station area and encourage more pedestrian activity</td>
<td></td>
</tr>
<tr>
<td>Pedestrian Gathering Spaces</td>
<td>Plazas, pocket parks, parklets, and other places should be created to attract pedestrian activity and create a vibrant urban village</td>
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<tr>
<td>Solution/Tools</td>
<td>Descriptions</td>
<td>Visual Examples</td>
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</tr>
<tr>
<td><strong>Grade-Separated Pedestrian and Bicycle Crossings: Bridges</strong></td>
<td>Pedestrian overcrossings/bridges can be helpful in carrying large volumes of pedestrians across highways and other barriers; they need to be carefully designed with accessible approaches and/or elevators at both sides and should be attractive and convenient to use; a variety of covered pedestrian/bicycle crossings are being constructed around the Denver metropolitan area to connect transit riders between park and rides and light rail stations and across busy highways.</td>
<td><img src="image" alt="Arapahoe Pedestrian/Bicycle Bridge, photo from the Regional Transportation District FasTracks Light Rail program, Denver, CO" /></td>
</tr>
<tr>
<td><strong>Grade-Separated Pedestrian and Bicycle Crossings: Tunnels</strong></td>
<td>Pedestrian undercrossings and tunnels need to be carefully designed with plenty of width, good visibility, daylighting, and gradual descents at both sides; otherwise pedestrians may not use them and may continue to cross at grade; the City of Boulder and University of Colorado campus are known for creating a variety of successful undercrossings.</td>
<td><img src="image" alt="Undercrossing at CU campus, Boulder, Colorado" /></td>
</tr>
<tr>
<td><strong>Curb Ramps and Accessible Pedestrian Systems (Signals and Push Buttons)</strong></td>
<td>Curb ramps with tactile warning strips (truncated domes) provide accessibility for people with disabilities and are also helpful for parents pushing strollers and travelers pulling luggage; accessible pedestrian systems with signals and push buttons provide audible signals and vibrotactile indicators that help people with visual impairments.</td>
<td><img src="image" alt="Graphic from Los Angeles Metro and Los Angeles County Bicycle Coalition via California Active Transportation Safety Information Pages" /></td>
</tr>
<tr>
<td><strong>Countdown Signals</strong></td>
<td>Countdown signals provide visual (illuminated numbers) and audible (chirps/voice messages) queues for pedestrians crossing that enable them to determine how much time they have left to make it through the crosswalk.</td>
<td><img src="image" alt="" /></td>
</tr>
<tr>
<td><strong>Striped Crosswalks and Advanced Stop Bars</strong></td>
<td>Striped crosswalks delineate the pedestrian crossing area at intersections and midblock crossings, improving visibility of that area for motorists and pedestrians; zebra stripe crosswalks use wide white stripes that are considered to be more visible to motorists than crosswalks marked on either side with two white lines; advance stop bars create more space between waiting motor vehicles and pedestrians crossing the straight, improving visibility of pedestrians in the crosswalk.</td>
<td><img src="image" alt="Graphic from Los Angeles Metro and Los Angeles County Bicycle Coalition via California Active Transportation Safety Information Pages" /></td>
</tr>
</tbody>
</table>
## Solution/Tools | Descriptions | Visual Examples
--- | --- | ---
### Connectivity – Crossings and Intersections

**Mid-Block Crossings and Median Refuge Islands**
Installed to provide pedestrians with additional crossing opportunities, particularly in urban areas; mid-block crossings are typically paired with median refuge islands and help to calm traffic; they can be designed to enhance visibility between pedestrians and motorists with curb extensions and various signing and marking treatments

![Mid-Block Crossing in Downtown Bellevue, WA](image)

**Bike Boxes at Intersections**
Colored rectangular area (typically painted green) at a signalized intersection that allows a group of several bicyclists to wait in front of traffic; usually 14-feet wide, located in front of the motorized stop line but behind the pedestrian crosswalk; often used in conjunctions with bike lanes; designed to be used only at red lights, bike boxes increase visibility and provide bicyclists with a head start when the light turns green; helps to prevent the “right hook” crash where drivers turn right as bicyclists start straight

![Bike box being painted at a Portland, Oregon intersection](image)

**Loop Detectors**
Embedded below the pavement approaching an intersection, loop detectors tell the signal with a bicycle is waiting for the light to turn green. Bike symbols with special markings are used to indicate where bicyclists should position their front wheels in order to change the signal

![MUTCD markings for loop detectors](image)

**Raised Crosswalks**
Raised crosswalks allow pedestrians to travel continuously at the same grade across the street without the need for curb ramps; they are often paired with median refuge islands and help to calm traffic

![Raised crossing in Carmel, CA, photo by Richard Drdul](image)

**Tabled Intersections**
Similar to raised crossings, raised or tabled intersections allow pedestrians to travel from the sidewalk level across the entire intersection without the need for curb ramps; vehicles ascend a gradual incline as they cross the intersection

![Raised Intersection in Cambridge, MA](image)
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<tbody>
<tr>
<td><strong>Connectivity – Crossings and Intersections</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High-Intensity Activated Crosswalk (HAWK) Beacons</strong></td>
<td>High-Intensity Activated crossWalk (HAWK) beacons are traffic signals used to stop motorists for pedestrians; also known as pedestrian hybrid beacons, HAWKs allow protected pedestrian crossings, stopping road traffic only as needed with high rates of motorist compliance</td>
<td>![Image](Juneau, Alaska, photo by Michael Penn, Juneau Empire)</td>
</tr>
<tr>
<td><strong>Rectangular Rapid-Flash LED Beacons (RRFB)</strong></td>
<td>Rectangular Rapid Flash Beacons (RRFB) enhance safety by reducing crashes between vehicles and pedestrians at unsignalized intersections and mid-block pedestrian crossings; they increase driver awareness of potential pedestrian conflicts by emitting a rapid flashing light</td>
<td>![Image](Photo from the Federal Highway Administration)</td>
</tr>
<tr>
<td><strong>Supporting Facilities</strong></td>
<td></td>
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<tr>
<td><strong>Bike Racks</strong></td>
<td>Preferred styles of bike racks are lockable/securable at two points; bike parking/storage areas at stations are required to be covered by Sound Transit design standards; refer to local city code requirements for bicycle parking requirements outside of stations (in station areas and beyond)</td>
<td>![Image](Bike rack at the Sound Transit Sounder commuter rail station in Puyallup)</td>
</tr>
<tr>
<td><strong>Bicycle Storage Lockers</strong></td>
<td>Bike storage lockers provide enhanced security; Sound Transit provides lockers at most stations that are available first come/first serve through an annual reservation program; locker users pay an annual fee of $50.00 for a specifically assigned bicycle locker, as well as an additional one-time refundable $50.00 key deposit</td>
<td>![Image](Bike lockers and bike racks at Sound Transit's Beacon Hill light rail station)</td>
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<tr>
<td>Solution/Tools</td>
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<tr>
<td><strong>Supporting Facilities</strong></td>
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<tr>
<td>Unstaffed Bicycle Parking</td>
<td>Covered or indoor facility, usually secured with fencing/walls that provides</td>
<td>![McDonald's Cycle Center, Millennium Park in Chicago](Photo by Steven Vance) provides heated, secure parking for 300 bikes during the day to the public and allows 24/7 access to members; also see example in Japan via this YouTube video:</td>
</tr>
<tr>
<td>Stations (Bike Barns)</td>
<td>protected bicycle parking; may give access to specific members through key</td>
<td></td>
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<tr>
<td></td>
<td>card operation or other technology</td>
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<tr>
<td>Bicycle Valet/ Staffed</td>
<td>Either an in-station or nearby facility that provides supervised bicycle</td>
<td>![The Bicycle Cellar at the Transportation Center in Tempe, Arizona](<a href="http://www.thebicyclecellar.com/get">http://www.thebicyclecellar.com/get</a> to know bc/)</td>
</tr>
<tr>
<td>Bicycle Parking Stations</td>
<td>parking and may also provide repair/maintenance services and accessories for</td>
<td></td>
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<tr>
<td>(Bike Barns)</td>
<td>sale; can be publicly or privately operated</td>
<td></td>
</tr>
<tr>
<td>Bike Share Programs</td>
<td>Bike sharing programs are gaining popularity in urban areas and on college</td>
<td><img src="https://www.niceridemn.org/" alt="The Nice Ride program from the Twin Cities area, Minnesota, which is being coordinated with transit in the region" /></td>
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<td>and employment campuses across the US; these programs provide bicycles to</td>
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<td></td>
<td>riders via an automated rental program (card swipe or payment kiosk); daily</td>
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<td></td>
<td>and/or hourly rental can be programmed and rental stations are typically self-</td>
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<td>service; for more information about the Bike Share program being implemented</td>
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<td></td>
<td>in the Puget Sound region, go to:</td>
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<td><a href="http://pugetsoundbikeshare.org/">http://pugetsoundbikeshare.org/</a></td>
<td></td>
</tr>
<tr>
<td>Stair Channels/ Ramps for</td>
<td>Channels along stairwells that allow bicyclists to roll bikes up and down a</td>
<td>![Bike ramp next to stairs at BART 16th Street station](Bike ramp next to stairs at BART 16th Street station)</td>
</tr>
<tr>
<td>Bikes</td>
<td>staircase without the need of lifting and carrying it</td>
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<tr>
<td>Solution/Tools</td>
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<tr>
<td><strong>Supporting Facilities</strong></td>
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<tr>
<td>Attractive Settings with Streetscape Furnishings, Pedestrian Lighting, Sidewalk Cafes, Retail and Neighborhood Services</td>
<td>Creating a secure, inviting, and attractive environment will encourage walking and bicycling; streetscape furnishings (benches, trash and recyclables receptacles, etc.), pedestrian lighting, sidewalk cafes, along with a variety of other retail and neighborhood services (library, postal, etc.) also attract pedestrian use and invite social interaction</td>
<td><img src="image1" alt="BelMar in Lakewood, CO, where a suburban shopping area was transformed into a new urban village" /></td>
</tr>
<tr>
<td>Landscape Buffers</td>
<td>Landscaped areas that are part of the streetscape can make the pedestrian environment more attractive and provide a buffer between pedestrians and traffic or parked cars; they can also be used as stormwater planters to manage runoff</td>
<td><img src="image2" alt="12th Avenue, Portland, Oregon" /></td>
</tr>
<tr>
<td>Wayfinding and Signage</td>
<td>Wayfinding and signage located at key decision points can help pedestrians and bicyclists navigate the station area and can lead transit riders to the station; providing a map in key areas can help pedestrians find various destinations</td>
<td><img src="image3" alt="Wayfinding signs in Downtown Bellevue and West Redmond" /></td>
</tr>
<tr>
<td>Street Trees</td>
<td>Street trees bring multiple benefits in the urban environment, including making streetscapes more attractive to pedestrians and providing a buffer from traffic; they also calm traffic and help to mitigate the heat island effect in urban areas</td>
<td><img src="image4" alt="Streetscape in Greenwich, Connecticut" /></td>
</tr>
</tbody>
</table>
130th Avenue NE Station Area in the Bel-Red Corridor

EXISTING CONDITIONS
(Showing Future Light Rail Route)
Overlake Village Station Area in Redmond

EXISTING CONDITIONS
(Showing Future Light Rail Route)