4.4 Social Impacts, Community Facilities, and Neighborhoods

4.4.1 Introduction to Resources and Regulatory Requirements

This section evaluates how the East Link Project may affect communities and neighborhoods in the area. Consistent with published guidance from the Federal Transit Administration (FTA) and the Federal Highway Administration (FWHA), four key neighborhood and community issues are considered when addressing the affected environment and potential impacts of a transportation project. These are changes in quality of life, barriers to social interaction, impacts on community resources, and effects on safety and security. The analysis also considers the demographics of potentially affected areas.

The study area for social impacts, community facilities, and neighborhoods consists of a one-half-mile radius from the centerline of alternatives, with emphasis around the stations. Neighborhoods adjacent to the stations are more likely to be directly and indirectly influenced, positively and negatively, by construction and operation of the project. Much of the impact analysis for this section overlaps with issues evaluated in other sections, so the following sections may be consulted where appropriate:

- Section 4.2, Land Use, for descriptions of land uses and zoning in the study area
- Section 4.3, Economics, for details on population, housing, and impacts on property values
- Section 4.14, Public Services, for information on fire, emergency medical, police, schools, and postal services (locations of public services are shown in exhibits in this Section 4.4)
- Section 4.17 Parkland and Open Space, for a description of recreational resources in the study area
- Section 4.6 Air Quality, for information on local and regional air quality
- Section 4.7 Noise and Vibration, for a description of potential noise and vibration impacts
- Chapter 3, Transportation Impacts, for description of impacts on regional and local traffic, transit and non-motorized transportation
- Appendix C, Environmental Justice, for more information on effects on minority and low-income populations

4.4.2 Affected Environment

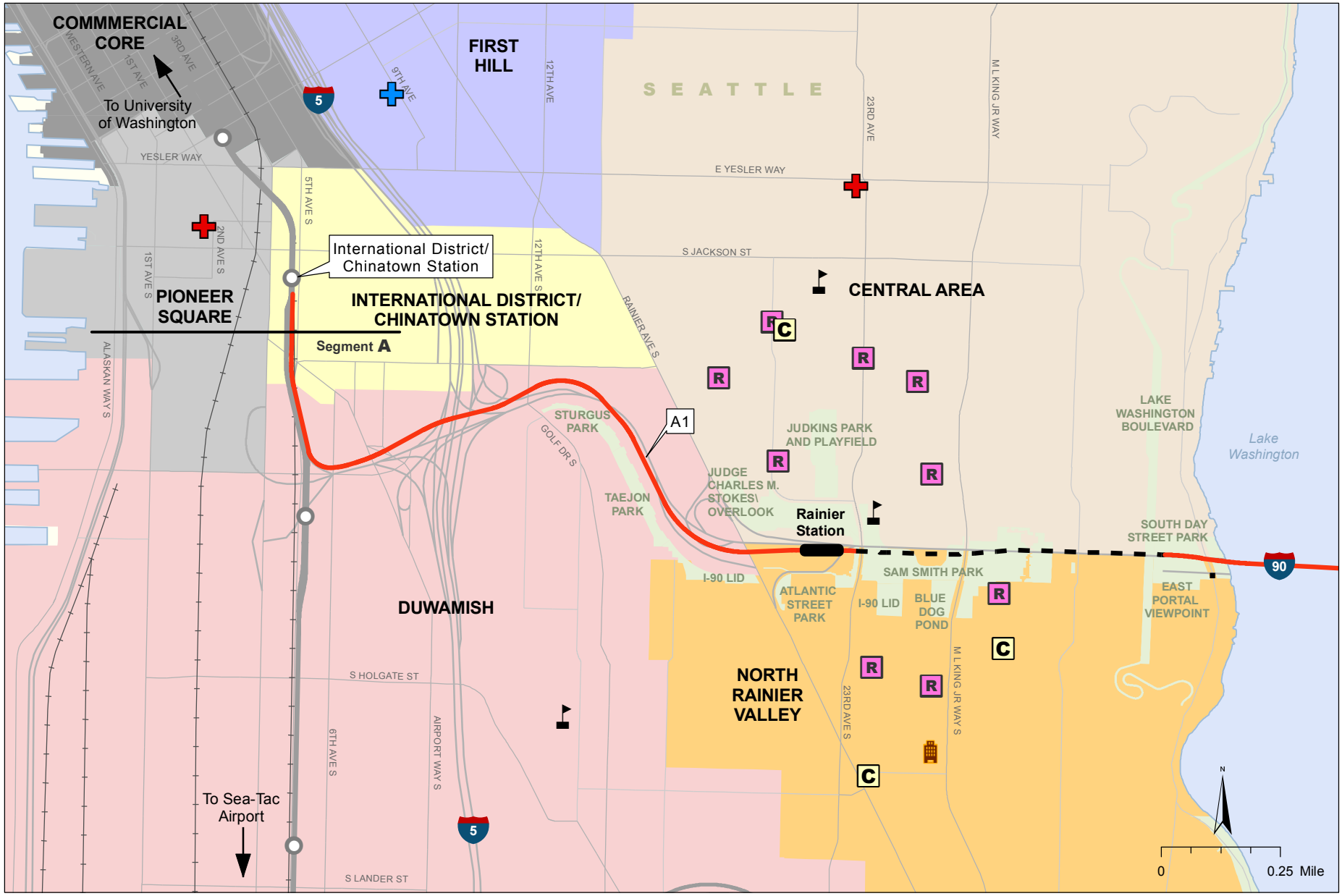
The East Link Project would connect to the Central Link at the International/Chinatown Station in Seattle and provide light rail service to the Eastside communities via Interstate 90 (I-90). The East Link alternatives pass through Seattle, Mercer Island, Bellevue, and Redmond. This section describes neighborhoods characteristics, including location, development pattern, demographics, community resources, economic characteristics, safety and security, and accessibility. Neighborhoods located within the study area are identified in Exhibits 4.4-1 to 4.4-6, and a general description of neighborhoods by segment follows.

The demographic makeup of populations in areas within one-half mile of the stations for each of the project alternatives is shown in Table 4.4-1. These estimates are based on a geographic information system (GIS) extraction of 2000 Census data for the Census Blocks and Census Block Groups within each station area. The population data for residents living within the station areas were then aggregated to create a demographic profile of the total population that would be affected by the project. The demographic information in the table includes information on the total population within one-half mile and the percentage of the total population that is minority, low-income, senior citizens, or households with no vehicle that resides within one-half mile of the stations. Based upon the information in the table, Segment A includes the highest percentage of minority, low-income, and households with no vehicle that would have access to the stations, and the stations in Segment C contain the highest percentage of senior citizens within one-half mile of the stations.

4.4.2.1 Segment A, Interstate 90

The study area for Segment A includes portions of four City of Seattle neighborhoods and Mercer Island. I-90 is a barrier between the neighborhoods in Seattle and bisects Mercer Island. However, the lids and the public recreation facilities over the freeway provide connections in both cities allowing residents to interact and travel easily across I-90 at several locations. The prominent north-south arterials include Airport Way, Rainier Avenue, 23rd Avenue, and Martin Luther King Jr. Way in Seattle, and Island Crest Way on Mercer Island.

The International District was the original home of Seattle's Chinese residents and is now the heart of the Asian community. Other focal points in the International District include the Uwajimaya



Source: Data From CH2M HILL (2007), City of Seattle (2002), King County (2006), and Sound Transit (2007).

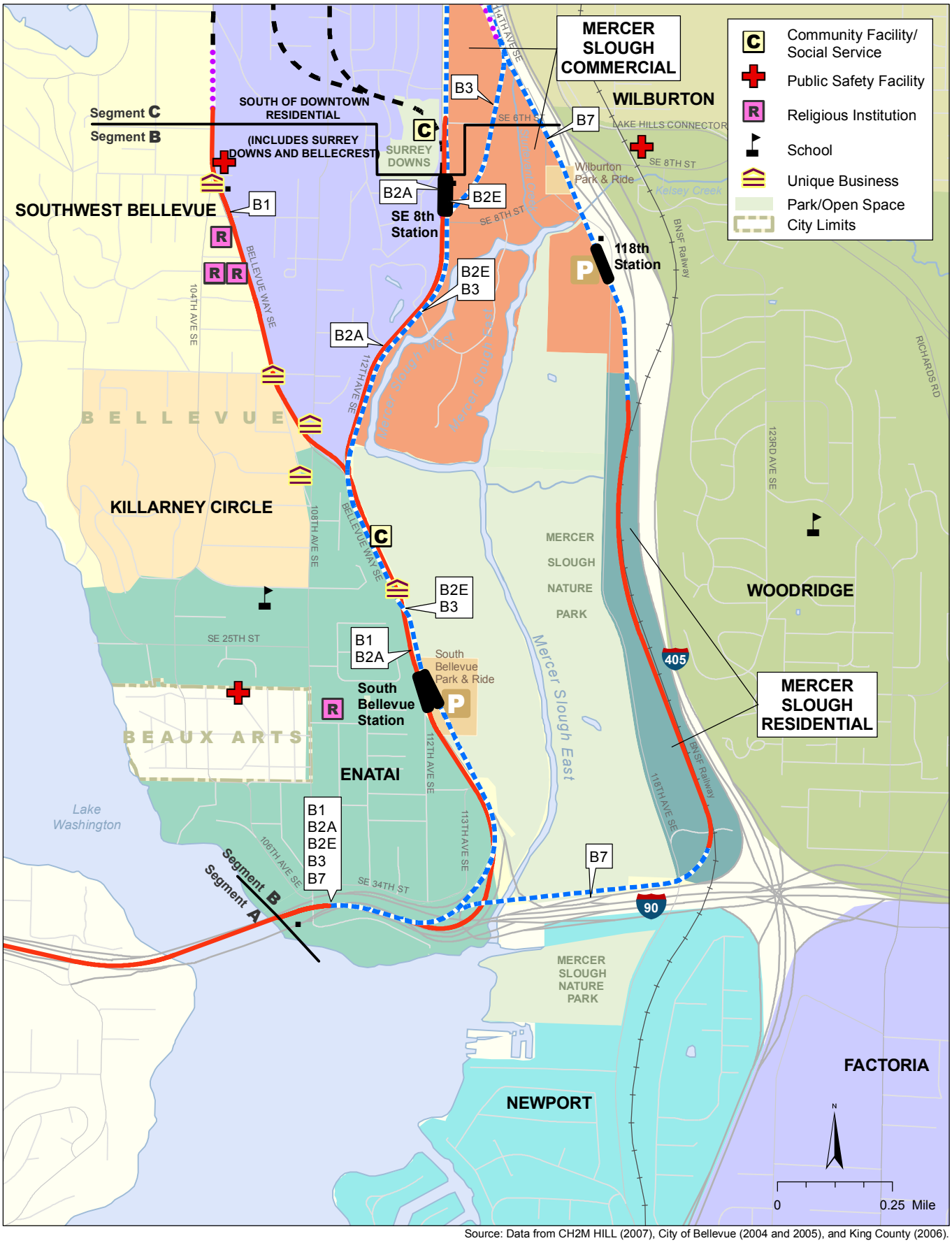
- Community Facility/ Social Service
- Hospital
- Public Safety Facility
- Religious Institution
- School
- Affordable Housing
- Park/Open Space
- At-Grade Route
- Elevated Route
- Retained-Cut Route
- Tunnel Route
- Traction Power Substation
- Proposed Station
- Central Link Alignment and Station

Exhibit 4.4-1
Neighborhoods and Public Services
Segment A - Seattle
East Link Project

Source: Data from CH2M HILL (2007), City of Mercer Island (2006), and King County (2006).

C Community Facility/ Social Service
Public Safety Facility
R Religious Institution
School
Park/Open Space
At-Grade Route
Elevated Route
Retained-Cut Route
Tunnel Route
Traction Power Substation
Proposed Station
City Limits

Exhibit 4.4-2
Neighborhoods and Public Services
Segment A - Mercer Island
East Link Project



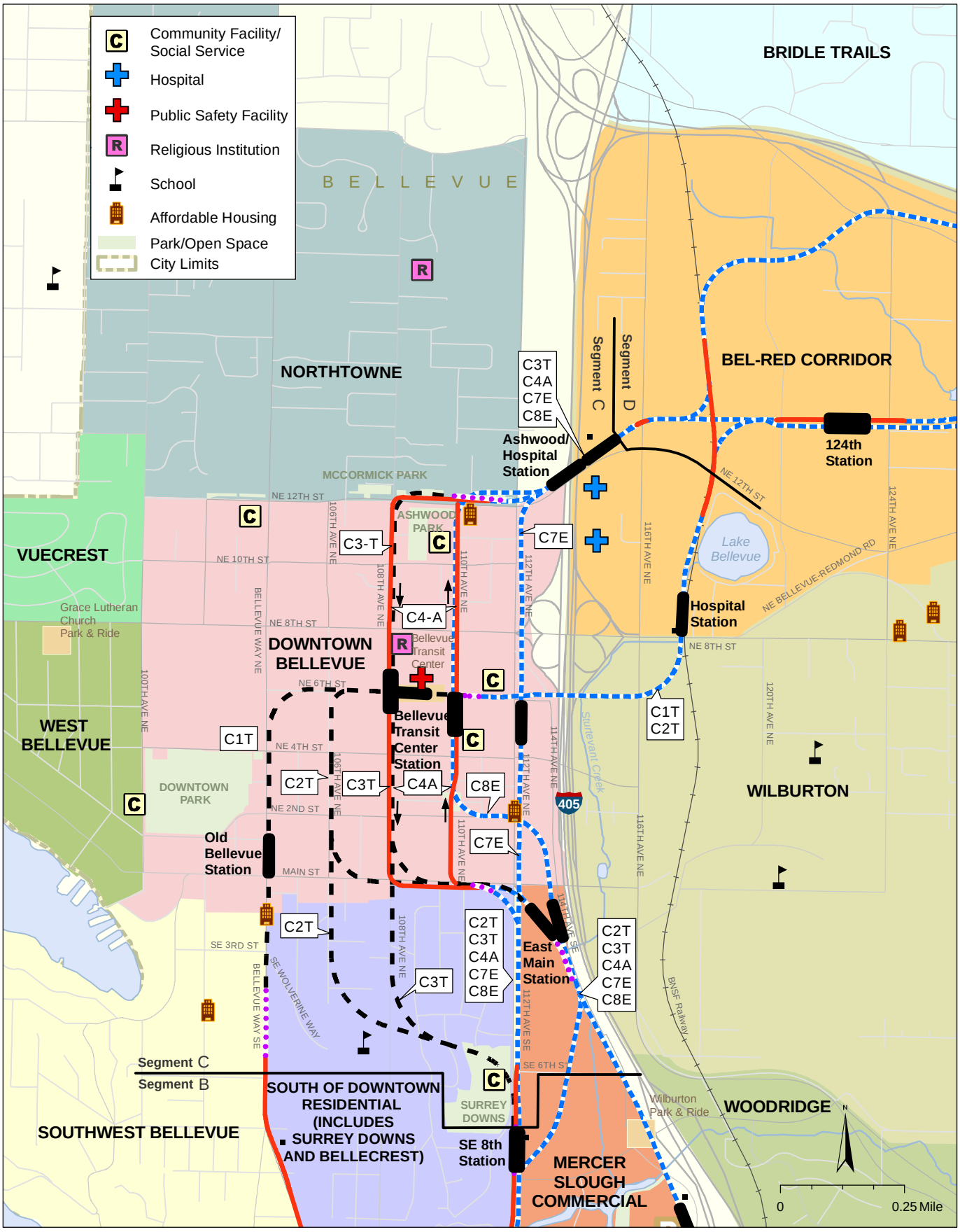
Source: Data from CH2M HILL (2007), City of Bellevue (2004 and 2005), and King County (2006).

At-Grade Route
Elevated Route
Retained-Cut Route
Tunnel Route

Traction Power Substation
Proposed Station

New and/or Expanded Park-and-Ride Lot

Exhibit 4.4-3 **Neighborhoods and Public Services Segment B**
East Link Project



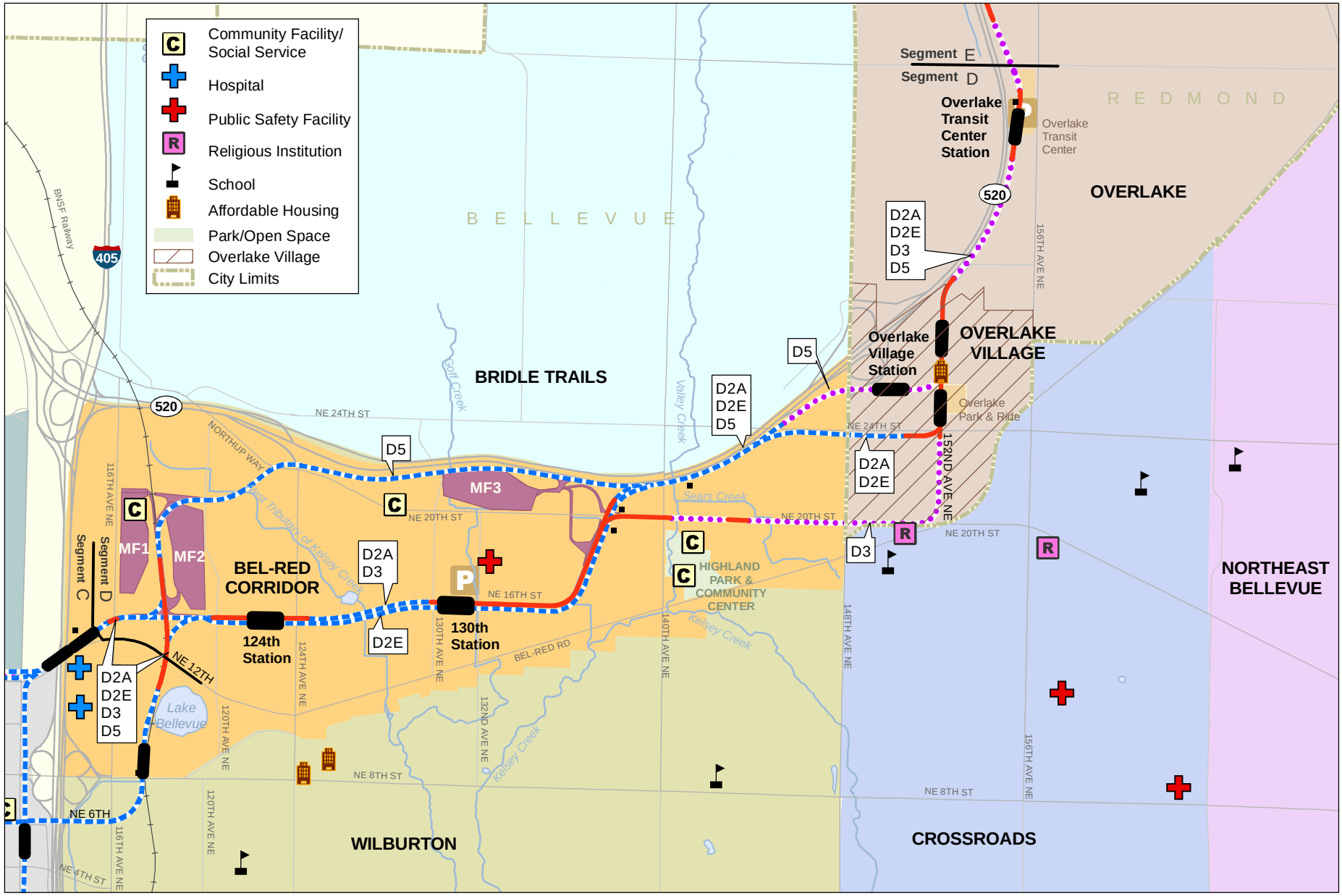
Source: Data from CH2M HILL (2007), City of Bellevue (2004 and 2005), and King County (2006).

At-Grade Route
Elevated Route
Retained-Cut Route
Tunnel Route

Traction Power Substation
Proposed Station

New and/or Expanded Park-and-Ride Lot

Exhibit 4.4-4 **Neighborhoods and Public Services Segment C**
East Link Project



Source: Data from CH2M HILL (2007), City of Bellevue (2005), City of Redmond (2005), and King County (2006).

At-Grade Route
Elevated Route
Retained-Cut Route
Tunnel Route

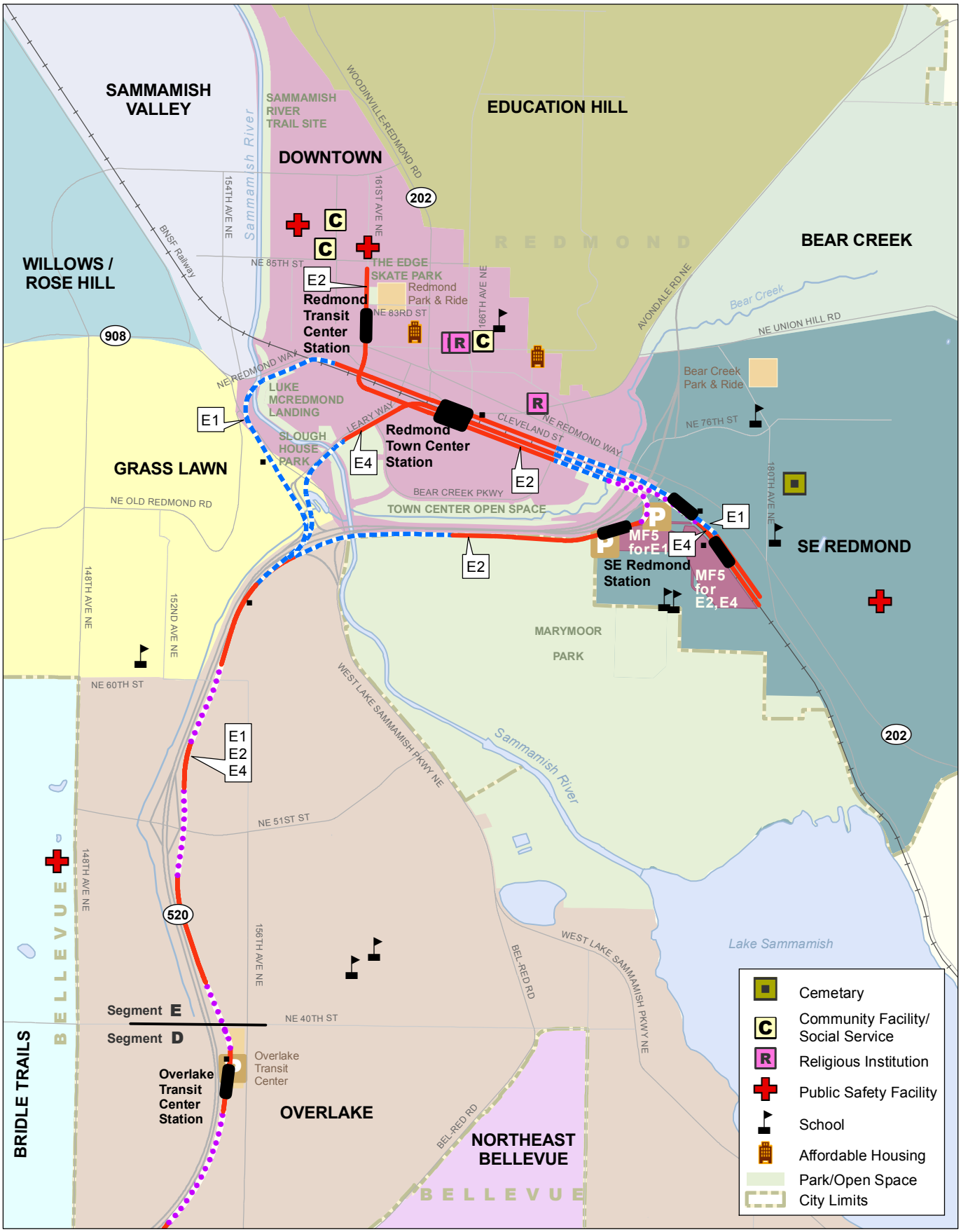
Traction Power Substation
Proposed Station
Maintenance Facility and Access Track

New and/or Expanded Park-and-Ride Lot

N

0 0.25 Mile

Exhibit 4.4-5
Neighborhoods and Public Services
Segment D
East Link Project



Source: Data from CH2M HILL (2007), City of Redmond (2005), and King County (2006).

Exhibit 4.4-6 **Neighborhoods and Public Services Segment E**
East Link Project

TABLE 4.4-1
Demographics within One-Half Mile of the Project Alternative Stations

Alternative and Connector		2000 Census Block Population	Minority Population (%)	2000 Low-Income Population (%)	Senior Citizens Population[c] (%)	Number of Households with No Vehicle[c] (%)
Segment A, Interstate 90						
A, I-90		10,294	51.2%	12.4%	18.7%	15.0%
Segment B, South Bellevue						
B1, Bellevue Way		2,289	13.7%	4.1%	11.5%	2.2%
B2A/B2E,[a] 112th SE At-Grade/ 112th SE Elevated		4,268	17.9%	6.2%	11.6%	3.1%
B3, 112th SE Bypass		2,254	13.8%	4.1%	11.5%	2.2%
B7, BNSF		5,064	4.7%	4.7%	12.4%	2.3%
Segment C, Downtown Bellevue						
C1T, Bellevue Way Tunnel		14,641	7.0%	7.0%	21.6%	8.6%
C2T, 106th NE Tunnel	B2A/B2E[a,b]	7,297	6.2%	6.2%	26.8%	10.5%
	B3/B7[a,b]	8,311	7.3%	7.3%	25.0%	9.7%
C3T, 108th NE Tunnel	B2A/B2E[a,b]	6,477	6.1%	6.1%	26.1%	10.0%
	B3/B7[a,b]	7,491	7.3%	7.3%	24.1%	9.1%
C4A, Couplet	B2A/B2E[a,b]	6,477	6.1%	6.1%	26.1%	10.0%
	B3/B7[a,b]	7,491	7.3%	7.3%	24.1%	9.1%
C7E, 112th NE Elevated	B2A/B2E[a,b]	6,477	6.1%	6.1%	26.1%	10.0%
	B3/B7[a,b]	7,491	7.3%	7.3%	24.1%	9.1%
C8E, 110th NE Elevated	B2A/B2E[a,b]	6,477	6.1%	6.1%	26.1%	10.0%
	B3/B7[a,b]	7,491	7.3%	7.3%	24.1%	9.1%
Segment D, Bel-Red/Overlake						
D2A/D2E/D3,[a] NE 16th At-Grade/ NE 16th Elevated/NE 20th		19,025	8.9%	8.9%	10.7%	10.1%
D5, SR 520		10,435	6.9%	6.9%	11.3%	7.9%
Segment E,						
E1/E4,[a] Redmond Way/Leary Way		6,852	8.5%	8.5%	8.7%	6.8%
E2, Marymoor		6,965	8.4%	8.4%	13.6%	8.6%

[a] Each alternative has the same population shown.

[b] Population totals are for those census block groups and census blocks with more than 90 percent of the census area within the station radius. Overlapping station radii have been clustered by alternative to capture the whole urban cluster and avoid double counts.

[c] Population data are based on the 2000 Census Block population.

Source: U.S. Census, 2000.

Shopping Center, Union Station, and religious facilities. Land uses adjacent to the alternative within this neighborhood include a mixture of commercial and offices, many unique to the Asian cultures present there.

The Duwamish and Pioneer Square neighborhoods contain regional activity centers of Qwest Field and Events Center, King Street Station, and Safeco Field. The residential areas along Segment A within Seattle are older medium-density neighborhoods with a mixture of mostly single-family and some multifamily housing, although the International District contains some pockets of high-density housing.

Public recreation facilities in the Central Area and North Rainer Valley neighborhoods include Judkins Park and Playfield, Sam Smith Park, and the Mountains-to-Sound Greenway Trail (I-90 Trail), which parallels I-90. The primary commercial area in these neighborhoods is adjacent to Rainier Avenue and 23rd Avenue South. The newly opened Northwest African American Museum (see Exhibit 4.4-1) is located in the historic Colman School. The museum building also contains 36 units of mixed-income rental housing.

Segment A travels through Mercer Island, and the Mercer Island Station would be located adjacent to the Town Center Neighborhood (see Exhibit 4.4-2). The Town Center is the commercial core of Mercer Island and includes a mixture of commercial, office, and multifamily residential uses.

Recent mixed-use developments within the 76-acre Town Center have led to greater densities and a more walkable community. Low-density single-family residential subdivisions surround the Town Center. Community facilities within the study area include public recreation facilities located to the south, the Mountains-to-Sound Greenway Trail (I-90 Trail) to the north, the Community Center at Mercer View, and the Mercer Island Park-and-Ride Lot (450 stalls). Access from I-90 is provided at Island Crest Way, 77th Avenue, West Mercer Way, and East Mercer Way. Island Crest Way is the main arterial traveling to the south end of the island from I-90.

4.4.2.2 Segment B, South Bellevue

The Segment B study area includes portions of eight City of Bellevue neighborhoods (see Exhibit 4.4-3). The alternatives follow existing local roadways and transportation infrastructure (Bellevue Way SE, 112th Avenue SE, the BNSF Railway, and I-405), which currently act as boundaries between the study area neighborhoods. The Segment B study area also contains the highly used South Bellevue Park-and-Ride Lot on Bellevue Way SE (520 parking stalls) and the Wilburton Park-and-Ride Lot (186 parking stalls), located at the I-405/SE 8th Street interchange.

The Enatai, Killarney Circle, and Southwest Bellevue neighborhoods are bounded to the east by Bellevue Way SE. These neighborhoods are primarily composed of well-established suburban single-family residences. Community resources include Enatai Elementary School and Bellevue High School. A second elementary school, Surrey Downs Elementary, closed in 1981, now provides community functions including at the King County District Court on the north end and playfields at Surrey Downs Park in the south end. Southwest Bellevue's churches serve the residents of the immediate area as well as the larger community. Religious and community events provide many opportunities for residents to come together. The South of Downtown Residential Neighborhood is bounded between Bellevue Way SE and 112th Avenue SE and encompasses the Surrey Downs and Bellecrest neighborhoods. North of the Bellevue Way SE and 112th Avenue SE intersection, land uses consists of a mixture of commercial and retail to the east, and some multifamily, and to the west it is single family transitioning to multifamily.

There are established neighborhood businesses along Bellevue Way SE, which provide a sense of place and continuity for residents in a fast-changing city. Chace's Pancake Corral, Triangle Swim Club, the Blueberry Farm, the Chevron Station, and the Bellevue Nursery are among the businesses that have for many years contributed to the quality of life of Bellevue residents. Identified by the community as unique businesses (Exhibit 4.4-3), these businesses are located close to these neighborhoods and have provided service for the surrounding residents for many years.

The Mercer Slough Residential and Commercial neighborhoods are linear neighborhoods located along I-405. The Mercer Slough Residential Neighborhood consists of a mixture of multifamily residences and office buildings. There are no community facilities located within this neighborhood. The Mercer Slough Commercial neighborhood is located between 112th Avenue SE and I-405 and is composed of commercial buildings, office buildings, and three hotels. The Wilburton Park-and-Ride Lot is also located within the neighborhood. The Mercer Slough Nature Park is located between Bellevue Way SE and the Mercer Slough Residential, and the Frederick Winters House and the Bellevue Blueberry Farm are located within the park (refer to Section 4.17, Parkland and Open Space, for a description).

The Woodridge and Wilburton neighborhoods are located east of I-405, somewhat separated from the study area by the freeway.

4.4.2.3 Segment C, Downtown Bellevue

The Segment C study area is located primarily within the Downtown Neighborhood, with outlying sections located in or adjacent to it, including the South of Downtown Residential, Northtowne, Wilburton, and Bel-Red Corridor neighborhoods. For the most part, the alternatives follow the existing roadway grid between SE 6th Street and NE 12th Street. The Bellevue Transit Center straddles NE 6th Street between 108th Avenue NE and 110th Avenue NE.

As the name implies, the Downtown Neighborhood forms the core of Bellevue. Downtown Bellevue, once a suburban business district, is now the second-largest city center in Washington and a regional employment center with over 35,000 workers; it includes the regional commercial centers of Bellevue Square and Lincoln Square. The Downtown Neighborhood is experiencing a boom in development with a number of high-rise mixed-use developments either under construction or recently completed. The new residences in the Downtown Neighborhood are primarily high-end condominiums. Land uses in the neighborhood include a mixture of commercial, office, and multifamily residences located in a number of high-rise towers. The area in the vicinity of the Bellevue Transit Center provides transit-oriented development with higher densities of residential, commercial, and office development close to the transit center. This area is highly urban with large city block, but due to the mixed uses, the neighborhood is walkable. Community facilities within the neighborhood include the Bellevue First Congregational Church, Meydenbauer Center (events and exhibition facility), the Bellevue Regional Library, the Bellevue Arts Museum, and Bellevue City Hall.

The Northtowne Neighborhood consists primarily of single-family residences. McCormick Park is located within this neighborhood and provides a buffer between the Northtowne and Downtown Bellevue. Although Downtown Bellevue includes several north-south arterials, only Bellevue Way SE, 108th Avenue NE, and 112th Avenue NE provide access through downtown and into the Northtowne Neighborhood. There are no other community facilities located nearby.

The Wilburton and Bel-Red Corridor neighborhoods are located east of I-405. Land uses within the Wilburton Neighborhood in this area are primarily auto-oriented commercial, with a number of auto dealerships located along 116th Avenue NE, and also include retail and commercial uses. The Bel-Red Corridor Neighborhood within the study area is composed of mainly medical-related office buildings and the Overlake Hospital Medical Center and the Group Health Medical Center. No community facilities are located within these portions of the neighborhoods.

4.4.2.4 Segment D, Bel-Red/Overlake

The Segment D study area includes the Bel-Red corridor and is generally bounded between SR 520 to the north and Bel-Red Road to the south. SR 520 acts as barrier between the Bridal Trails Neighborhood and the impacts of the light rail project. Aside from SR 520, major east-west arterials include NE 20th Street and Bel-Red Road.

The focal area of Segment D is the Bel-Red Corridor in Bellevue, which is predominantly industrial and commercial establishments, and the Overlake Village in Redmond consisting of commercial retail establishments, hospital services, and senior housing and office parks (see Exhibit 4.4-5). The Bel-Red Corridor in this area is primarily commercial and industrial land uses, including a King County Metro bus base and a Coca-Cola distribution facility. The Overlake neighborhood contains a mix of multifamily and single-family housing. The Microsoft campus in Overlake is a major employment center for the region. The Overlake Transit Center serves the Microsoft office campuses as well as the adjacent neighborhood communities.

As discussed in the Section 4.2, Land Use, the area has adopted changes in the future land use that would support light rail and includes transit-oriented development that would cause an increase in the overall density and change the character of the neighborhood through mixed-use development of commercial, office, and residential uses.

4.4.2.5 Segment E, Downtown Redmond

The Segment E study area is primarily along SR 520 and ends in the Downtown Redmond Neighborhood (see Exhibit 4.4-6). SR 520 is the only freeway to and from Redmond, and it connects to major roadways that serve communities beyond Redmond, including West Lake Sammamish Parkway NE, SR 202, Redmond Way, and Avondale Road. Otherwise, the Downtown Redmond grid street pattern is interrupted by the BNSF Railway right-of-way that runs diagonally through the town center. Redmond Transit Center is located at 161st Avenue NE and NE 83rd Street near the Redmond City Hall.

Neighborhoods within the study area include SE Redmond and Downtown Redmond as well as a large portion of Marymoor Park (Exhibit 4.4-6). The Downtown Redmond neighborhood developed around the BNSF Railway train station and track, which bisects the town into northern and southern commercial areas. Downtown Redmond includes a mixture of medium-density multifamily housing and retail uses and a civic center that includes Redmond City Hall, Redmond Library, and the Redmond Police Department. For surrounding communities, downtown is a shopping destination and includes the Redmond Town Center, a mixed-use facility that includes a regional shopping center, a hotel, and office buildings. Other draws to Downtown Redmond include Marymoor Park and open spaces, trails, and the Redmond Saturday Market, an open air market that operates from May to October. The Southeast Redmond Neighborhood contains both low-density single-family residential development and a corridor of retail and light industrial commercial uses along SR 202. One regional activity center in Segment E is Marymoor Park, a large regional public recreation and events facility owned and operated by King County.

Located north of Downtown Redmond, the Education Hill and Bear Creek neighborhoods consist primarily of single-family residences. On a bluff west of Downtown Redmond there is an area of primarily multifamily residential units that is part of the Grass Lawn Neighborhood. A small portion of the Sammamish Valley is also located within the study area and consists of mostly business parks, with no community facilities located within the study area.

4.4.2.6 Maintenance Facility Surroundings

In Segment D, the maintenance facilities (MF1, MF2, and MF3) are located in the Bel-Red Corridor neighborhood of Bellevue. In Segment E, the SE Redmond Maintenance Facility (MF5) is located within the SE Redmond Neighborhood. Sections 4.4.2.4 and 4.4.2.5 provide information on these neighborhoods.

4.4.3 Environmental Impacts

The analysis of potential impacts of the East Link Project on neighborhoods considers the following key neighborhood and community issues: changes in neighborhood quality, barriers to social interaction, impacts on community resources, and impacts on public services, safety and security. Much of the basis for the evaluation of impacts in this section comes from analyses done for other sections of this Draft EIS including Transportation, Acquisitions and Displacements, Land Use, Economics, Visual and Aesthetic Resources, Air Quality, Noise and Vibration, Public Services, and Parkland and Open Spaces. Impacts from these resources do not automatically constitute an adverse impact on neighborhood cohesion, rather these impacts are evaluated collectively with mitigation measures on their effect on neighborhood cohesion.

4.4.3.1 No Build Alternative

The No Build Alternative would avoid the property acquisitions and other related changes associated with light rail construction and operation. Those who reside in or travel to and from neighborhoods in the study area would not be provided with a reliable mode of transportation and increased transit accessibility. There would be no change to neighborhood quality.

4.4.3.2 Impacts During Operation

This section addresses the impacts, both positive and negative, that would affect neighborhoods as a whole, and is followed by a segment-by-segment analysis of the impacts that would occur within each segment and project alternative.

Neighborhood Quality

A new transportation mode operating on a fixed-rail system has the potential to affect neighborhood quality. Federal guidance states that neighborhood quality impact analysis should be a "qualitative discussion of [the] cumulative impact of" the following factors: property acquisitions and land use changes (including consistency of new development with existing neighborhoods), visual or physical intrusion of the new facility on traffic and parking, and noise and vibration.

In general, neighborhoods served by light rail stations would benefit both from increased transit access and from potential development within station areas in a manner consistent with neighborhood goals and plans. Neighborhoods (particularly those portions near station areas) may experience increased vitality in terms of improved access, residential infill, growth in employment base, and greater patronage of local businesses. Goals for regional, local, and station area planning emphasize reducing reliance on automobiles and providing increased pedestrian access and pedestrian-oriented design.

The East Link Project would result in impacts to a number of properties located along neighborhood boundaries. Those in close proximity may be affected by the changes due to the East Link Project. However, the overall neighborhood quality would not change because the project alternatives travel along existing arterials, which in many instances already act as boundaries for the neighborhoods.

Property Acquisitions and Land Use Changes. Overall, the property acquisitions required for each segment represents a small portion of the land available in adjacent neighborhoods and would not result in changes in the existing neighborhood's intactness or character. Aside from Segment A, all of the alternatives would require the acquisition and displacement of residential and commercial properties. Only a small portion of the residential dwellings in the neighborhoods would be acquired and none of the displacements would result in the neighborhoods being bisected or separated from other portions of the neighborhood.

Under many alternatives, several businesses may be displaced. In most situations the commercial properties that would be displaced by the East Link alternatives do not provide unique services to the surrounding neighborhoods (i.e., corner store, cafe, coffee shop) and tend to be either office complexes or light industrial uses that are likely to draw employees from the surrounding region. Because most of the commercial properties are not unique to the surrounding neighborhoods, the impacts on the neighborhood character and quality would be minimal.

Some of the properties that would be acquired have the potential to be redeveloped consistent with existing zoning after construction. There is the potential for the indirect effect of transit-oriented development consisting of higher density residential and mixed-use development, typically around the proposed stations (see Section 4.2, Land Use). These redevelopment opportunities would only occur where allowed by comprehensive and neighborhood plans, and where stations can support transit-oriented development. For those areas that are primarily single-family residential development, transit-oriented development is not allowed under current zoning. Transit-oriented development allows for the creation of compact, walkable communities that provide increased transit ridership, and reduced traffic congestion and driving. Section 4.2, Land Use, gives information on potential transit-oriented development, identifying those areas where redevelopment would be encouraged and those areas where it would not be encouraged. Redevelopment near stations could enhance economic activity by expanding neighborhood business districts. Section 4.3, Economics, give additional information on the economic benefits from redevelopment near stations.

Visual or Physical Intrusion. Visual changes would be noticeable to some residents located adjacent to or with views of the East Link Project, especially in areas where the alternatives would be elevated above the existing transportation infrastructure or where vegetation would be removed. When possible, vegetation removed for the project would be replaced and landscaping would be provided to screen sensitive visual environments and/or sensitive viewers where necessary, which would minimize the visual impacts. While the East Link project would introduce another form of transportation, the project would be located primarily within heavily developed urban areas and the alternatives would be located along major transportation facilities where light rail is generally compatible (e.g., local roads, freeway infrastructure, powerlines, tall buildings), so the impacts related to visual quality would generally not adversely affect neighborhood quality for the entire neighborhood.

Transportation and Parking. Overall, impacts on property access and circulation would be generally limited to the loss of some mid-block left-hand turn movements and turning restrictions of right-in and right-out for alternatives in the roadway's median. Some travelers may be affected by the loss of left turns and the need to travel a more circuitous route. For alternatives that are at-grade or elevated, U-turns would be provided at signalized intersections to minimize the impact on traffic circulation. The Couplet Alternative (C4A) would convert 108th Avenue NE and 110th Avenue NE from two-way streets to a one-way couplet, which would change circulation patterns. In addition, elevated sections would cause minimal access issues because access could be maintained under the guideway.

Traffic impacts that would result from the East Link Project can be mitigated. Park-and-ride lots associated with the stations would be expected to attract more traffic and could impact traffic operations more than if the project were not constructed. In addition, because the alternatives are mostly located within or adjacent to existing arterials, the traffic impacts on the surrounding neighborhoods are expected to be minimal.

Neighborhoods could be affected as a result of light rail riders parking in neighborhoods adjacent to stations. The potential exists for hide-and-ride (when transit users park in neighborhoods surrounding the transit stations), and the best ways to mitigate the impact are unique to each station and the areas surrounding it (see Chapter 3 for more information).

In neighborhoods where parking does not currently have restrictions, Sound Transit would work with the applicable jurisdictions to implement prevention

strategies (i.e., time limits or neighborhood permit programs) in order to maintain neighborhood quality.

The East Link Project provides a reliable mode of transportation and results in improved transit accessibility and connections for riders between the study area neighborhoods and community facilities within one-half mile of the stations, as well as providing connections to regional destinations (i.e., Sea-Tac Airport and the University of Washington). Overall, the project would improve transit travel times, reliability, and convenience. None of the alternatives would result in negative impacts on pedestrian and bicyclist movements, (see Chapter 3 for more information).

Noise and Vibration. The number and severity of noise impacts vary greatly along each segment and alternative. Where alternatives are at-grade, the roadway must be widened to accommodate the light rail system, which could result in the potential for traffic noise impacts in addition to noise from light rail operations. However, based on noise studies that have been performed, after noise mitigation has been introduced (e.g., sound walls), no adverse impacts related to noise would occur. In addition, there would be three locations where vibrations impacts could not be mitigated. Sound Transit would review these impacts during final design to further minimize or eliminate the impacts. Section 4.7, Noise and Vibration, provides information on potential vibration impacts and potential mitigation measures.

Social Interaction

None of the project alternatives would create new barriers to interaction because they travel along existing arterials that already act as a barrier along the fringe of existing neighborhoods. Stations on these arterials could enhance the cohesion as new meeting points for adjoining neighborhoods. Where portions of the project would be at-grade, crossing points would be maintained at existing signalized intersections to allow continued access within and between communities. Where tunnel alternatives are proposed, there would be no impacts on community cohesion because the trains would be located beneath the neighborhood. In addition, the East Link Project could improve cohesion with increased transit access and transit-oriented development, which may indirectly enhance the walking experience and safety of the neighborhoods.

Community Resources

The East Link Project is not expected to result in long-term operation impacts on the civic community resources (e.g., parks, churches, schools) located within the study area, except for a few park resources. Although the project would not result in the loss of public recreation facilities, there would be short-term impacts on some facilities as described in Section 4.17, Parkland and Open Space, with the exception of impacts on McCormick Park (see further description under Segment C in this section). These short-term impacts would primarily be felt by those in close proximity to the facilities and would not result in permanent adverse impacts on the surrounding neighborhoods.

Safety and Security

Maintaining safety and security at the stations, park-and-ride lots, and the neighborhoods surrounding these facilities is another important consideration for many residents within surrounding neighborhoods. As described in Section 4.14, Public Services, incidences of crime are most likely to occur at the stations; however, crime is not expected to increase as a result of operation of the stations. Typically, crime around stations mirrors crime rates in the surrounding neighborhoods. In the areas around all but one of the proposed stations (Rainier Station), crime is low compared to the surrounding jurisdictions of King County and Washington State. Sound Transit would employ security personnel, but also as a matter of practice, Sound Transit implements Crime Prevention through Environmental Design (CPTED) principles directed at reducing crime incidents at stations and park-and-ride lots. Other measures to minimize crime would include the use of equipment (i.e., closed circuit TV, sealed fareboxes, and automatically sealed exits), the use of anti-crime programs such as anti-graffiti programs, and the use of security personnel. Because these design elements would be integrated throughout the East Link Project, there would not be the potential for project-related safety and security impacts in adjacent neighborhoods, with few exceptions. Only these few cases are discussed in the remainder of the operations impact analysis.

Segment A

Overall, Segment A would have little impact on neighborhoods, because it is located in the center lanes of I-90 and would be similar in character to the areas it would pass through. There would be no displacements nor land use changes that would affect neighborhood quality. The two proposed stations (Rainier Avenue and Mercer Island) would be consistent with the visual character of the areas where they are located and would not reduce visual quality. Noise from light rail operations is not expected to cause a change in the overall noise levels in the adjacent neighborhoods, because I-90 would continue to be the dominate noise source. The station would provide enhanced accessibility to Mercer Island

neighborhoods. Because Segment A occurs primarily in existing WSDOT I-90 right-of-way, there would be no new barriers created that would affect community cohesion or access between community resources, and public services. Alternative A1 would not negatively affect neighborhoods in Seattle or Mercer Island.

Segment B

The Segment B alternatives follow existing local roadways and transportation infrastructure (Bellevue Way SE, 112th Avenue SE, and BNSF Railway), which currently act as boundaries along the fringe of adjacent study area neighborhoods (see Exhibit 4.4-2). None of the alternatives would travel through existing neighborhoods but rather would travel along the edges of neighborhoods along existing arterials. These roadways would need to be widened in order to maintain the existing travel lanes and to accommodate the new light rail. As a result, there would be property acquisitions and the displacement of some residences and businesses, some minor changes in property access, removal of vegetation, and the addition of new structures, which can negatively affect those residents and businesses in close proximity. These impacts are not expected to markedly alter the overall land use or development character of the neighborhoods located within Segment B because the neighborhoods are well defined, with Bellevue Way SE and/or 112th Avenue SE serving as an existing boundary. Therefore, the project is not expected to result in interruption to social interaction for the neighborhood. Table 4.4-2 summarizes the factors used to assess impacts on neighborhoods by alternative. The following discussion summarizes the results of the listed impacts in Table 4.4-2 on neighborhood quality, social interaction, and community resources.

Bellevue Way Alternative (B1). Although there are impacts associated with the East Link Project, the overall neighborhood quality for the neighborhoods in the affected study area is not expected to change. Just one of the affected businesses was identified as important to the neighborhood. The Chevron station located on the corner of Bellevue Way SE and 108th Avenue SE provides an important service to the area, which is not provided by other business in the immediate vicinity. Relocation of this business would result in an impact to those in the surrounding neighborhood that use this business, resulting in the additional travel for gasoline purchases and vehicle repairs, but this in combination with other neighborhood impacts would not result in degradation of neighborhood quality. No new barriers for social interaction would be created by this alternative.

TABLE 4.4-2
Factors Considered in Assessing Impacts on Neighborhoods Within Segment B

Alternative	Potential Impacts by Alternative			
	Displacements	Visual/Physical Intrusion	Noise Impacts[a]	Traffic/Access Changes
B1, Bellevue Way	2 businesses 13 residences	Removal of vegetation and addition of other project components (e.g., retaining walls and overhead guideway) would result in adverse visual impacts that cannot be mitigated along Bellevue Way to the Bellevue Way and 112th Avenue SE interchange.	None after mitigation.	Right-in/right-out on Bellevue Way SE
B2A, 112th SE At-Grade	0 businesses 3 residences	Same as B1. In addition, elevated structures on Bellevue Way SE would be more visible from nearby residences than with B1. Light rail in the median along 112th Avenue SE would alter visual character of the area for those in close proximity.	None after mitigation.	Right-in/right-out on 112th Avenue SE
B2E 112th SE Elevated	0 businesses 1 residence	Same as B1, In addition, elevated structures on Bellevue Way SE would be more visible from nearby residences than with B1. Elevated structures on 112th Avenue SE would be more visible than with B2A but generally consistent with the existing boulevard-like character.	None after mitigation.	No changes
B3, 112th SE Bypass	0 businesses 3 residences	Same as Alternative B2A.	None after mitigation	Right-in/right-out on 112th Avenue SE
B7, BNSF	4 businesses 0 residences	Elevated structures passing north of I-90 Trail (part of Mountains-to-Sound Greenway) would be viewed by trail users and residences along 118th Avenue SE.	None after mitigation.	No changes

[a] Noise impacts would be mitigated using a combination of noise barriers, track lubrication at curves, building sound insulation, or special trackwork at crossovers and turnouts. See Section 4.7, Noise and Vibration.

Impacts on community and public services would be minor. Although B1 Alternative travels directly in front of the Bellevue Fire Department Station 1, it would not result in impacts on access and egress because there would be a signal with left-turn access allowed into and out of the fire station.

112th SE At-Grade (B2A). Table 4.4-2 lists effects on the neighborhood quality, which would be generally minor with considerably fewer relocations than B1. North of the 112th Avenue SE intersection, widening would remove the existing landscaped median and would result in negative visual impacts for those who have a view toward 112th Avenue SE. All existing community resources would be maintained. There would be increased neighborhood access to transit through the SE 8th Station. B2A would not add new barriers to social interaction, because 112th Avenue SE separates the residential neighborhood from the office commercial district.

112th SE Elevated Alternative (B2E). This alternative would have similar effects on neighborhood quality and generally follows the same route as B2A, except that it continues elevated all the way to the station at SE 8th Street. B2E would not create any new barriers to social interaction or traffic circulation. The SE 8th Street station would enhance neighborhood access to transit. Because B2E is elevated, it would have the fewest number of displacements (i.e., no businesses and one residence) but would offer more of a visual and physical presence along Bellevue Way SE. North of 112th Avenue SE intersection, B2E would be elevated and would allow the retention of the landscaped median, which maintains the general boulevard-like character of 112th Avenue SE. All community resources would be preserved and neighborhood quality would be slightly affected by visual changes for residences on the edges along Bellevue Way and 112th Avenue SE.

112th SE Bypass Alternative (B3). For the most part, this alternative follows the same route as B2A and B2E. Neighborhood impacts would be generally the same, except it would not add the SE 8th Station and thus would not provide new accessibility for surrounding residents. At the northern end, it would pass through parking lots, behind office buildings, across an undeveloped open area resulting in wetland impacts, and removal of some landscaped parking strips. No community resources would be affected, nor would there result in new barriers to social interaction. In addition, there would be no substantial changes in the roadway alignment, so there would be no traffic noise impacts. Neighborhood quality would be maintained.

BNSF Alternative (B7). Overall, this alternative would have little impact on neighborhood quality, because much of it would follow I-90 corridor and BNSF Railway right-of-way. There would be no changes in access or circulation, and visual and physical intrusion would be minimal because, for the most part, the project would be consistent with the existing rail corridor and the I-90 structure over the Mercer Slough Nature Park. This and all other community resources along this route would remain intact and accessible. Neighborhood quality and social interaction would be maintained.

Segment C

Because the Downtown Bellevue area is densely developed, it was considered important to identify the staging areas needed to construct Segment C in order to identify the associated potential impacts. Staging areas for Segment C would be located at either end of the segment in Downtown Bellevue and at each station (refer to Chapter 2 for information on the location of the staging area). Staging areas would require the acquisition of properties in different areas depending on the alternative selected and the specific connection from Segment B. The effects from the use of the staging areas are discussed in Section 4.4.3.3, Impacts During Construction. Following construction, most of these areas would be available for redevelopment.

For the most part, the Segment C alternatives would follow the existing roadway grid of the highly urbanized Downtown Bellevue. There would be displacements of residences and businesses, some minor changes to property access, the removal of vegetation and the addition of new structures, which can affect neighborhood quality. The Segment C alternatives that involve tunneling would have minimal effects because they would be underground and most of the effects, such as displacement, are anticipated only in the station areas and staging areas.

Most of the Segment C alternatives would have minimal property access impacts. Impacts on pedestrian and bicycle circulation within Downtown Bellevue are expected to be minimal because existing pedestrian crossings and bicycle routes would be maintained and the alternatives would not alter the location of future bicycle routes identified in the Bellevue Comprehensive Plan. Overall, the effect of direct property acquisitions, lower visual quality, access revisions, and noise and vibration effects are not expected to markedly alter the overall land use or development character of the neighborhoods in Segment C. Table 4.4-3 summarizes the effects used to

assess impacts to neighborhoods by Segment C alternative, and a discussion follows.

Bellevue Way Tunnel Alternative (C1T). This alternative would have the highest number of displacements due to the displacement of three multifamily buildings. Because of the urban nature of Downtown Bellevue, however, relocation opportunities are expected to be readily available within a number of mixed-use developments, existing, currently planned, or under construction. Given the abundance of residential dwellings, both single-family and multifamily, in the surrounding area, even if the residents decided to move elsewhere, there would be no negative impact on the neighborhood's cohesion.

Much of the C1T route would be underground (including the Old Bellevue and Bellevue Transit Center stations) and therefore would not change social interaction. The transition of the alternative from tunnel to elevated along NE 6th Street would be visible but consistent with the existing character and visual quality of the area near it. Traffic movements could become slightly more circuitous to Meydenbauer Center and City of Bellevue offices, but access to these community resources would not be diminished. Neighborhood quality would be enhanced with improved transit accessibility and reliability from two to three light rail stations serving downtown neighborhoods.

106th NE Tunnel Alternative (C2T). Neighborhood impacts and benefits would be generally the same as with C1T, the primary difference being fewer displacements. Regardless of which connector and staging area is used, this alternative would result in the least number of displacements in comparison to the other alternatives in Segment C, and project components would be consistent with the visual character of the surrounding areas. Alternative C2T would have access and circulation impacts similar to those described for Alternative C1T. There would also be a residual vibration impact that may not be fully mitigated but would not result in any overall adverse impacts to the neighborhoods quality.

TABLE 4.4-3
Factors Considered in Assessing Impacts on Neighborhoods Within Segment C

Alternative	Potential Impacts by Alternative			
	Displacements[a]	Visual/Physical Intrusion	Noise Impacts[b]	Traffic/Access Changes
C1T, Bellevue Way Tunnel	18 businesses 93 residences (includes 2 multifamily units)	Minimal because much of the route is underground.	None after mitigation.	Minimal because light rail system operates below ground.
C2T, 106th NE Tunnel	8-16 businesses 0-12 residences	Minimal because much of the route is underground.	None after mitigation.	Minimal because light rail system operates below ground.
C3T, 108th NE Tunnel	50-57 businesses 7-19 residences	Removal of mature vegetation in McCormick Park and the presence of the light rail transition would result in visual impacts that cannot be fully mitigated.	None after mitigation.	Changes in access to and from the Northtowne Neighborhood.
C4A, Couplet	59-61 businesses 8 residences	Same as C3T.	None after mitigation.	Changes in circulation along 110th Avenue NE and 108th Avenue NE in Downtown Bellevue Neighborhood.
C7E, 112th NE Elevated	44-45 businesses 0 residences	Minimal due to the scale and design of the surrounding facilities, including I-405.	None after mitigation.	Minimal because light rail system operates above ground.
C8E, 110th NE Elevated	48 businesses 2 residences	Same as C3T. In addition, would introduce elevated structure (trackway and station) over 110th Avenue NE, which would be out of context with the pedestrian environment near the Bellevue Transit Center and the park like setting near Bellevue City Hall.	Most of the impacts would be mitigated except for certain areas where residual noise impacts would occur in outdoor-use areas in the multifamily complex adjacent to 110th Avenue NE.	Right-in/right-out on 110th Avenue NE.

[a] The range reflects differences between connectors from Segment B alternatives.

[b] Noise impacts would be mitigated using a combination of noise barriers, track lubrication at curves, building sound insulation, or special trackwork at crossovers and turnouts. See Section 4.7, Noise and Vibration.

108th NE Tunnel Alternative (C3T). Neighborhood impacts and benefits would be generally the same as with C1T and C2T. Like other tunnel alternatives, this alternative is mostly underground, and impacts would occur primarily at the staging areas (see Impacts During Construction). Along NE 12th Street, C3T would alter McCormick Park resulting in visual impacts that could not be fully mitigated. This park serves as a neighborhood buffer to downtown business traffic and activities. Following construction, the park would be enlarged by converting the staging area, and therefore the buffer would be replaced and the neighborhood quality preserved. A cul-de-sac with access from NE 12th Street would be redirected to access 108th Avenue NE. This would buffer some homes from traffic and generate a few more traffic trips from the redirected residents. No other changes to property access and circulation would be necessary because C3T mainly operates underground; therefore, no barriers to social interaction would be created. A single-family residence could also be affected by residual vibration impacts. Because the impact would be to only one dwelling, there would be no adverse impacts to the neighborhood quality.

At-Grade Couplet Alternative (C4A). This alternative, while above ground, would have similar impacts and benefits as the tunnel alternatives. Although the changes would be more noticeable, the at-grade profile and location in the existing street right-of-way through downtown is consistent with the urban environment and streetscape. Also, the light rail stations would be more accessible to users than the tunnel alternatives. The impacts from the portion of the alternative that would pass along NE 12th Street would be similar to those described for C3T. While community resources, such as McCormick Park would be impacted by the presence of light rail, they would also benefit from increased accessibility. The vibration impact described under C3T would also occur with this alternative.

C4A would affect traffic circulation along 110th Avenue NE and 108th Avenue NE in Downtown Bellevue; however, the City of Bellevue is already planning a one-way couplet to improve downtown circulation movement. For the safety of light rail and traffic movement, light rail would travel counterflow to traffic, north along 110th Avenue NE and south along 108th Avenue NE. There would be some inconveniences of restricted turning movements, but for the most part access would be preserved and no barriers created. For emergency access, the trackway would have mountable curbs. Overall, the neighborhood quality would be enhanced with new transit access by this alternative without adverse effects on quality of life.

112th NE Elevated Alternative (C7E). North of Main Street, the elevated profile and pedestrian crossing structure would pass along 112th Avenue NE and would be noticed, but it would be consistent with the character of this section of 112th Avenue NE because of the visual association with large transportation features, such as access to and from I-405. Because C7E is elevated along 112th Avenue NE, there would be minimal impacts on property access and circulation along this alternative and therefore no impact on social interaction. Overall, this alternative would not impact community resources or add barriers to social interaction, and it would enhance transit accessibility and offer a benefit to neighborhood quality.

110th NE Elevated Alternative (C8E). The elevated profile and stations at the Bellevue Transit Center would affect the visual environment for residents in nearby multifamily buildings. Circulation effects would be minor because U-turn movements would be allowed at signalized intersections. The vibration impact described under C3T would also occur with this alternative. For the multifamily residential units located along 110th Avenue NE between NE 10th Street and NE 12th Street, noise impacts would be mitigated but the visual intrusion cannot be fully mitigated. These impacts would not change the overall neighborhood social interaction, affect community resources, or adversely reduce the neighborhood quality.

Segment D

The cities of Bellevue and Redmond have updated their comprehensive and neighborhood plans to encourage transit-oriented development within the Bel-Red Corridor and Overlake Village area of the Overlake Neighborhood (see Section 4.2, Land Use, for further description of plans and policies). This analysis compares the effects of Segment D alternatives with the intent of these neighborhood plans while considering effects on immediate neighborhood uses. The new light rail stations have a potential to act as a catalyst for re-development consistent with recently adopted plans. Adjacent residential neighborhoods would benefit from increased mobility options and additional services created from station development. Like the stations located in Bellevue, a station located within the Overlake Village area would support the City of Redmond to implement the recently adopted land use plans. The Overlake Transit Center Station would support the existing land use and would increase mobility for expanding numbers of Microsoft and other nearby office employees.

The stations would be designed to respond to the areas in which they would be built, and all of the four potential stations would either improve on the visual quality of the areas where they would be built or would lessen impacts on the visual environment. Overall impacts on property access and circulation in Segment D are expected to be focused along NE 16th Street, NE 20th Street, and 152nd Avenue NE.

NE 16th At-Grade Alternative (D2A). This alternative would have little impact on existing neighborhood quality because it would follow the new east-west route NE 16th Street. Property acquisition would not be adverse to the neighborhood because of the planned land use changes for the area.

Driveway access from NE 24th Street to commercial business between 148th Avenue NE and 151st Place NE would be permanently removed to prevent left turning vehicles from crossing the at-grade track. Similarly, western access to and from the business park along 152nd Avenue NE between NE 24th Street and NE 28th Street would be closed. Vehicle circulation within surrounding office parks would likely be rerouted onto 151st Place NE. Although this would affect access to businesses, it is not considered a barrier to social interaction. The new transit stations at planned transit-oriented development nodes are considered new centers for increasing social interaction. No community resources would be affected. The influence of D2A on the neighborhood quality of the area would be minimal, if not beneficial over time.

NE 16th Elevated Alternative (D2E). This alternative is an elevated version of D2A and would have little effect on neighborhood quality. The elevated stations in the western part of the alternative would be compatible in character and would not change the visual quality. Impacts in the eastern portion would be the same as those described for D2A.

In D2E, the route is along the side of NE 16th Street and 136th Avenue NE, minimizing impacts on property access and circulation. Access from NE 24th Street to commercial business between 148th Avenue NE and 151st Place NE would be affected as described for D2A. Like D2A, there would be no impact on community resources and no barriers to social interaction, but rather enhanced centers for social interaction. Neighborhood quality is expected to improve with either D2A or D2E.

NE 20th Alternative (D3). West of approximately 140th Avenue NE, the impacts of D3 would be essentially the same as those described for D2A. D3 would impact on access and circulation along NE 16th Street and 136th Avenue NE similar to those of D2A, but D3 would have the more property access and circulation issues because it would operate in the median along NE 20th Street and 152nd Avenue, affecting low-density commercial establishments. Although this would affect access to businesses, it is not considered a barrier to social interaction. Also, major intersections would preserve the ability to access businesses on either side of NE 20th. The new transit stations at planned transit-oriented

TABLE 4.4-4
Factors Considered in Assessing Impacts on Neighborhoods Within Segment D

Alternative	Potential Impacts by Alternative			
	Displacements	**Visual/Physical Intrusion**	**Noise Impacts[a]**	**Traffic/Access Changes**
D2A, NE 16 At-Grade	41-49 businesses 0 residences	Minimal because the light rail system would be consistent with the urban environment.	None after mitigation.	Right-in/right-out on NE16th Street and 136th Avenue NE where light rail system is at-grade.
D2E, NE 16 Elevated	43-46 businesses 0 residences	Minimal because the light rail system would be consistent with the urban environment.	None after mitigation.	Minimal because light rail system is elevated.
D3, NE 20th	64-72 businesses 0 residences	Minimal because the light rail system would be consistent with the urban environment.	None after mitigation.	Right-in/right-out on NE16th Street and 136th Avenue NE where light rail system is at-grade and restricted along NE 20th Street.
D5, SR 520	43-52 businesses 0 residences	Minimal because the light rail system would be consistent with the urban environment.	None after mitigation.	Minimal because light rail system is located off local roadways.

[a] The range reflects differences between connectors from Segment C Alternatives (either from BNSF or from NE 12th Street).

[a] Noise impacts would be mitigated using a combination of noise barriers, track lubrication at curves, building sound insulation, or special trackwork at crossovers and turnouts. See Section 4.7, Noise and Vibration.

development nodes are considered new centers for increasing social interaction. No community resources would be affected. The influence of D3 on the neighborhood quality of the area would be minimal, if not beneficial over time.

SR 520 Alternative (D5). This alternative would have no adverse impacts on neighborhood quality, social interaction, or community resources because it would primarily follow the BNSF corridor and the south side of SR 520, which separates the light rail from the Bridle Trails Neighborhood. D5 also would have the least property access and circulation impacts because most of the alternative is outside the roadway right-of-way. Similar to D2A and D2E, the western driveway access along 152nd Avenue NE between NE 24th Street and NE 28th Street would be closed. However, this alternative would not offer the same neighborhood benefits of the other Segment D alternatives because it does not include the 124th and 130th stations. The presence of light rail for this alternative may not have as much influence on Transit Oriented Development in the Bel-Red Neighborhood, and therefore less benefit on the neighborhood quality.

Segment E

Table 4.4-5 provides the summary of factors considered in assessing impacts on neighborhoods from Segment E alternatives. A large portion of the light rail alternatives in this segment travels parallel to SR 520 and, therefore, would not affect property access or adjacent neighborhoods. Because all alternatives use the same route in this section, the discussion will focus on differences after the alternatives diverge at West Lake Sammamish Parkway NE. Also, all Segment E alternatives use a substantial portion of existing BNSF Railway right-of-way parallel to NE Redmond Way, so access to and circulation around the Redmond Town Center and surrounding businesses and neighborhoods would not be affected.

Potential development of a multi-use trail located along the BNSF Railway tracks parallel to E1, E2, and E4 was included in the Segment E conceptual design. Development of a multi-use trail on this corridor would extend bicycle circulation from the southern portion of the SR 520 Trail to Lake Sammamish. The alternatives would not affect pedestrian circulation on sidewalks within or surrounding the Redmond Town Center or Downtown Redmond.

Redmond Way Alternative (E1). This alternative would not adversely impact adjacent neighborhoods because it would result in only two residential relocations and only minor visual impacts as it travels between SR 520 and NE Redmond Way. The route along West Lake Sammamish Parkway NE would require removing a number of trees on the hillside in front of a large condominium complex. This would change the character of the residents living at the edge of this neighborhood but would not diminish the overall neighborhood quality.

This structure and the removal of the trees on the south edge of Luke McRedmond Landing Park would result in visual change, but the visual character of the park itself and transportation facilities adjacent to the park would not change. No other effects on community resources would result from this alternative.

E1 would not create barriers to social interaction because the alternative operates almost fully outside the roadway right-of-way. Properties access on the south side of Redmond Way, near the 159th Place NE intersection, may have their access altered to accommodate this alternative. The overall neighborhood quality would not be adversely affected.

Marymoor Alternative (E2). The route along Marymoor Park would be scarcely visible north of SR 520 because of the screening effect of trees that follow Bear Creek and the fact that the alternative would be constructed at-grade on the south side of the raised embankment that SR 520 is built on. The alternative would be more visible from parts of Marymoor Park, particularly the sports fields at the north end of the park. Alternative E2 would be similar in character to SR 520 (but less visible).

The full-length E2 option would have a greater impact on properties than the other alternatives due to the displacement of a 60-unit and 62-unit apartment buildings. It would also have more impact on property access and circulation than the other alternatives because it proceeds at-grade in the median of 161st Avenue NE between Cleveland Street and NE 85th Street. Midblock property access would be restricted to only allow right turns in and out of the driveways. To minimize vehicle recirculation, NE 83rd Street and 161st Avenue NE would be signalized, and this intersection as well as NE 80th Street and NE 85th Street, would allow U-turn movements. While these are more impacts to the neighborhood than other Segment E alternatives, this terminus station would augment the Redmond Transit Center, and therefore would be compatible with the neighborhood once in operation. Also, these impacts associated with the Redmond Transit Center Station and the tail track may be avoided if the alternative terminates at the Redmond Town Center Station with tail tracks remaining in the BNSF corridor. There would be virtually no adverse impacts on community resources,

TABLE 4.4-5
Factors Considered in Assessing Impacts on Neighborhoods within Segment E

Alternative	Potential Impacts by Alternative			
	Displacements	Visual/Physical Intrusion	Noise[a]	Traffic/Access Changes
E1, Redmond Way	7 businesses 2 residences	Minimal because the light rail system would be consistent with the urban environment.	None after mitigation.	Right-in/right-out on NE16th Street and 136th Avenue NE where light rail system is at-grade.
E2, Marymoor	24 businesses 126 residences	Minimal because the light rail system would be consistent with the urban environment.	None after mitigation.	Minimal because light rail system is elevated.
E4, Leary Way	7 businesses 2 residences	Removal of vegetation would temporarily impact the visual quality along Leary Way.	None after mitigation.	Right-in/right-out on NE16th Street and 136th Avenue NE where light rail system is at-grade and restricted along NE 20th Street.

[a] Noise impacts would be mitigated using a combination of noise barriers, track lubrication at curves, building sound insulation, or special trackwork at crossovers and turnouts. See Section 4.7, Noise and Vibration, for complete information on impacts and mitigation measures.

neighborhood quality or social interaction—only benefits of increased accessibility to reliable transit.

Leary Way Alternative (E4). The Leary Way Alternative (E4) is the only alternative in Segment E that would affect community features. E4 would have impacts similar to those of E1 along West Lake Sammamish Parkway NE, except that the light rail along Leary Way would require the removal of trees along the south side of Leary Way NE, which is the formal entry into Downtown Redmond, and the relocation of the Justice White House, an important historic resource in the settlement of Redmond. There would be a visual effect for a portion of the neighborhood due to the removal of mature trees along a portion of Leary Way NE; in the Town Center open space. However, Sound Transit is proposing mitigation that would partially screen the light rail guideway, and minimize the visual effect on appearance of the Leary Way NE entry into Downtown Redmond. While the removal of the trees would impact those who travel along Leary Way NE, it would not result in adverse impacts on the overall neighborhood quality.

This alternative would be near the Redmond Saturday Market that occurs near the intersection of Leary Way NE and the BNSF Railway, in the northwest corner of the Redmond Town Center. There would still be sufficient land where the market would be able to operate, however, and the Downtown Redmond Station would provide improved accessibility to the market.

Also, this alternative would require the relocation of the Justice William White House; however, the relocation would not negatively affect the neighborhood because it would be relocated in the same general vicinity.

E4 would also have minimal impact on property access and circulation because the alternative operates almost fully outside the roadway right-of-way. No barriers to social interaction would be created and the alternative would provide enhanced transit access. In addition, a multifamily residence would be affected by vibration impacts that may not be mitigated. Because the impact is to only one building, there would be no adverse impacts to the surrounding neighborhood. In summary, the effects of E4 do not reduce the neighborhood quality and the increased accessibility to this area would enhance the neighborhood.

Maintenance Facility

The 116th Maintenance Facility (MF1) would require relocation of the Bellevue Public Safety Training Center, but this would not result in negative impacts on fire and emergency medical services because this facility is primarily used for training and therefore more readily relocated. The BNSF Maintenance Facility (MF2), the SR 520 Maintenance Facility (MF3), or the SE Redmond Maintenance Facility (MF5) would not result in negative impacts on community facilities. The presence of a maintenance facility in Bellevue—the 116th Maintenance Facility (MF1), the BNSF Maintenance Facility (MF2), and the SR 520 Maintenance Facility (MF3)—may limit the anticipated transit-oriented development that is identified in the Bellevue comprehensive and neighborhood plans for this area. But the sites have been located in areas that can be screened and would not impact the continuity of the surrounding neighborhood cohesion. No additional impacts on neighborhoods or community facilities are anticipated with regards to the maintenance facilities during operation.

4.4.3.3 Impacts During Construction

Impacts Common to All Alternatives

Construction would temporarily affect neighborhood quality. Construction of East Link would affect any given neighborhood for approximately 2 to 5 years, where tunnel construction is generally longer than at-grade and elevated construction (See Chapter 2 for more detail information). Activities related to building the project would include the presence and movement of equipment and materials, clearing and exposure of soils, introduction of lights for nighttime work, storage of construction materials, and general visual changes in the viewed landscape during the period of building the project.

Temporary increases in noise, dust, and traffic congestion would occur along the corridor and at staging areas during construction. Adjacent neighborhoods may experience increased difficulty accessing residential, commercial, and office properties because of road closures, construction equipment and trench cutting construction activities. Roadway closures or lane closures could result in detours and cut-through traffic through neighborhoods and community facilities. Construction would affect nearby neighborhoods to varying degrees for varying amounts of time.

Construction would also require a substantial amount of earthmoving, particularly for the tunnel alternatives. The average number of truck trips per day and per hour for each alternative is discussed in Chapter 3. Haul trucks are expected to arrive and depart from I-90, I-405, and SR 520 to access local construction sites.

Although some residents and businesses in the immediate area of construction would experience impacts, the overall neighborhood cohesion would not be permanently affected. Sound Transit would implement measures to minimize construction-related parking and travel in the adjacent residential neighborhoods. During construction, Sound Transit would implement measures (i.e., advertisements and signage) to help businesses maintain open accessible conditions as well as continue to perform public outreach (i.e., public involvement meetings, website, and telephone to allow residents and businesses to voice their concerns and for Sound Transit to respond to any concerns). Refer to Section 4.3 Economics for additional information on mitigation measures for businesses. These measures would reduce the impacts of construction.

In general, Sound Transit would maintain access to adjacent properties and prevent barriers to social interaction during construction to the extent possible. Because the alternatives follow major arterials, short-term affects to pedestrian and vehicular circulation are not considered a barrier to interaction. Noise, dust, and congestion may affect the use of some community resources, and to some extent, the quality of the neighborhood's edge would be reduced for a period of time. The following outlines specific effects on the neighborhoods by Segment.

Segment A

Neighborhoods would not be affected in Segment A. There could be negative effects for those who reside in close proximity to construction activities; however, because construction activities and construction staging would be within the I-90 right-of-way, and because I-90 is lower than the surrounding area impacts are expected to minor. Access for construction vehicles and haul routes would be from I-90, and construction traffic through the adjoining neighborhoods would be limited.

Segment B

Construction for the Segment B alternatives would primarily be located within existing transportation rights-of-way. Detour routes are available, with the exception of Bellevue Way SE south of 112th Avenue SE. Neighborhood traffic intrusion is expected to be low, with the exception of Bellevue Way SE north of 112th Avenue SE. Increased traffic congestion as a result of the construction-related traffic disruptions could temporarily affect transit reliability and auto travel times on the local arterials.

Of the alternatives in Segment B, the Bellevue Way Alternative (B1) is predicted to require the most haul truck trips due to the relatively high amount of excavation and asphalt concrete pavement required. With this alternative, up to 120 haul truck trips per day would access Bellevue Way SE, NE 8th Street, and 112th Avenue SE from I-90 and I-405. B1 would result in the greatest impacts to neighborhoods during construction due to the amount of new right-of-way required along Bellevue Way SE, which would disrupt those in the adjoining neighborhoods. The BNSF Alternative (B7) would result in the fewest impacts on the surrounding neighborhoods because much of the construction would be within the BNSF right-of-way. The 112th SE At-Grade (B2A), 112th SE Elevated (B2E), and 112th SE Bypass (B3) alternatives would result in similar impacts because these alternatives follow essentially the same route.

Segment C

Construction would require mostly lane and/or road closures. Tunnels and underground stations may include cut-and-cover construction, tunnel-boring construction, and sequential excavation mining

construction. Tunnel construction would last longer than construction for an elevated or at-grade section, creating a longer period of disruption to adjacent communities and supporting businesses.

Within Segment C, local, minor, and principal arterials would be affected by construction. Road closures range from none at staging areas and partial road closures for short-term durations, to full road closures. Detour routes would be available in the central business district, but commercial vehicles would have limited access in some cases. Construction vehicle traffic ranges from low to high, and neighborhood traffic intrusion ranges from low to moderate.

Because Downtown Bellevue is so densely developed, it was considered important to identify the staging areas needed to construct Segment C in order to identify the associated potential impacts. Staging areas would be located at the northern and southern ends of Downtown Bellevue within Segment C to facilitate construction. The Segment C alternatives would also include a staging area at the stations (see Exhibits 2-41 through 2-46 in Chapter 2 for location of staging areas). Staging areas at the south end of the 106th NE Tunnel (C2T), 108th NE Tunnel (C3T), and Couplet (C4A) alternatives would depend on the specific connection from Segment B.

The staging-area locations with the greatest potential to affect neighborhoods, are staging areas on the north half of the Surrey Downs Park where the King County District Courthouse is located, the property southwest of Main Street/112th Avenue NE, and property at McCormick Park. These staging areas are located adjacent to existing residences that could be negatively affected by the noise, dust, and activity related to construction. Depending on the sensitivity of the surrounding land uses, a barrier would be used to buffer the adjacent land uses from noise and visual impacts where practical. Both the permanent effects and the temporary construction effects are discussed below for each alternative within Segment C.

Bellevue Way Tunnel Alternative (C1T). Cut-and-cover construction activities have the potential to affect how neighborhood residents access the activity centers that Downtown Bellevue offers. There may be times when roadways are closed due to excavation activities. It is anticipated that some portions of the roadway could be temporarily covered (i.e., using steel plates), allowing work to continue below while traffic has access above. The properties used for staging are surrounded by mixed use and commercial uses within the urban downtown area, so they would have no impact on single-family residential neighborhoods.

106th NE Tunnel Alternative (C2T). Like C1T, C2T would have similar construction impacts. Two of the possible staging areas at the south end, however, could potentially affect the South of Downtown Neighborhood. The first may affect the South of Downtown Neighborhood due to its location at the King County District Courthouse site and temporarily disrupt the quality of residential land uses during tunneling activities. However, this staging site would reduce the number of residential relocations of other connectors. After construction, the staging area would be available for redevelopment consistent with the master planning efforts for Surrey Downs Park.

If connector B2E is used, the relocated businesses and residences, which are isolated from the remaining residences in the neighborhood, would not be considered a negative impact on the overall neighborhood cohesion. Once construction is completed, the land could be restored or used to create a park that would provide a buffer to transition between the Surrey Downs and Downtown neighborhoods as recommended in the Downtown Implementation Plan.

The third possible staging area for the southern end is located at the East Main Station and is primarily within a commercial area and would not affect residential neighborhoods.

108th NE Tunnel Alternative (C3T). In addition to the possible staging areas and impacts on the South of Downtown Neighborhood described for C2T, this alternative would use property at its north end that would potentially affect the Northtowne Neighborhood. The staging area at McCormick Park would remove six single-family residences along the north side of McCormick Park. This represents a small area of the neighborhood. The effect would result in the temporary loss of the park to patrons as well as disruption of the buffer transition between the Northtowne and Downtown neighborhoods. C3T would include redesigning and reconstructing the park upon completion of the project. Nearby residents in the Northtowne Neighborhood would have temporary disruption from adjacent project construction.

Couplet Alternative (C4A). This alternative would use primarily the same staging areas (i.e., south of Main Street and at McCormick Park) as C3T, with similar impacts. South of Main Street, C4A would require a smaller area.

112th NE Elevated (C7E). The properties used for staging are surrounded by commercial uses within the

urban downtown area, so they would have no impact on existing residential neighborhoods

110th NE Elevated (C8E). This alternative would use the McCormick Park staging area, and impacts would be similar to those described for C3T. In addition, construction along 110th would affect several multifamily residences.

Segment D

Within Segment D, collector, local, minor, and principal arterials would be affected by construction. Road closures would range from partial closures for short-term durations to full closures for long-term durations. Neighborhood traffic intrusion and construction vehicle traffic would be low because detours are generally available. Because this alternative includes a section of retained cut, it would require the most haul truck trips of the alternatives in Segment D, with up to 140 trips per day. The suggested haul route for this alternative uses Bel-Red Road, 152nd Avenue NE, 156th Avenue NE, and service roads along the route. Impacts on neighborhoods would be minimal, because these roads are surrounded by primarily industrial and commercial uses.

Segment E

All Segment E alternatives follow along the south side of SR 520 and under NE 40th Street, NE 51st Street, and NE 60th Street in a retained-cut profile and then return at-grade down to the West Lake Sammamish Parkway NE. Within Segment E, local and collector arterials as well as state highways would be affected by construction. Barriers, such as road closures, would range from partial closures for short-term durations to full closures for long-term durations. Construction vehicle traffic is expected to be moderate, as would neighborhood traffic intrusion, because detour routes are generally available. Alternatives E2 and E4 would require about the same number of haul trips, or up to 160 trips per day. These trips would be routed on a frontage road along SR 520 and along SR 202, West Lake Sammamish Parkway NE, and other streets. In general, large portions of construction would be along or along side of large road or collectors where noise is expected. Construction within the BNSF Railway right-of-way is not expected to disrupt neighborhoods.

Construction activities at the intersection of Leary Way NE and the BNSF Railway that result from the Leary Way Alternative (E4) may require temporary relocation of the Redmond Saturday Market and affect some multifamily residences. Because the market consists primarily of portable fixtures, temporary relocation elsewhere within the Redmond Town Center or Redmond is not expected to result in adverse impacts.

Maintenance Facility

No adverse impacts on the surrounding neighborhoods are anticipated from the construction of the maintenance facility alternatives because the facilities would be located within areas having primarily industrial or, in the instance of NE 116th (MF1) medical and office land uses, and without community facilities close by. The only exception is the SE Redmond Maintenance Facility (MF5), which would be constructed within an area surrounded by existing light industrial uses but could create noise and dust impacts near the Lake Washington Technical College Redmond Corporate Campus. This is not considered an adverse effect on the neighborhood quality.

4.4.4 Potential Mitigation Measures

Sound Transit would incorporate measures to minimize the impacts on quality of life, social interaction, and safety and security. The East Link Project would primarily provide net benefit to neighborhood quality during operation, and therefore no mitigation would be necessary beyond mitigation described in other sections of the Draft EIS. Construction would result in temporary reduction of neighborhood quality due to construction barriers, reduced convenience in access and may result in impacts on use of community resources during construction.

Specific mitigation measures during operation and construction are described in detail in other sections of this Draft EIS, including Chapter 3, Transportation Impacts, and sections 4.1, Acquisitions, Displacements, and Relocation; 4.2 Land Use; 4.3 Economics; 4.5, Visual and Aesthetic Resources; 4.6, Air Quality; 4.7, Noise and Vibration; and 4.17, Parklands. No additional mitigation measures related to social impacts, community, and neighborhoods would be required.