3. Existing Conditions

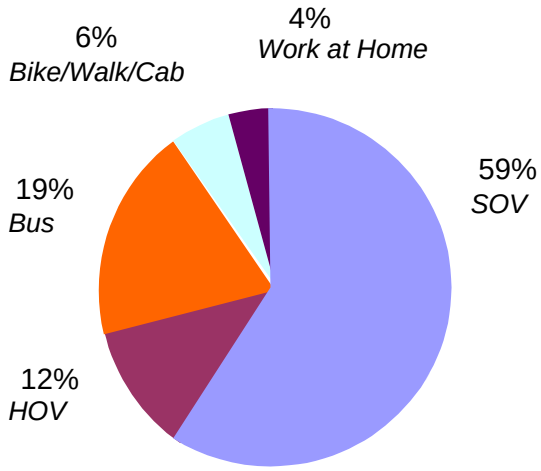
Travel Mode Choices

Traffic in the CTIP study area benefits from the relatively high proportion of both residents and workers who travel by means other than driving alone. The Seattle Comprehensive Plan establishes rigorous goals for reducing single-occupant vehicle travel in all Urban Centers, including Northgate. The Seattle Comprehensive Plan goals for Northgate are to increase transit and carpool trips to 30% by 2010 and to 40% by 2020. For Northgate residents, the combined carpool and transit trip goals are 55% by 2010 and 60% by 2020.

Northgate Residents' Mode Choice

According to the 2000 census, over 42% of Northgate residents travel to work by means other than driving alone (see **Figure 3-1**). Nearly 20% take the bus, 12% carpool, 6% walk, bike or take a cab, and 4% work at home.

Figure 3-1. Northgate Residents' Means of Transportation to Work

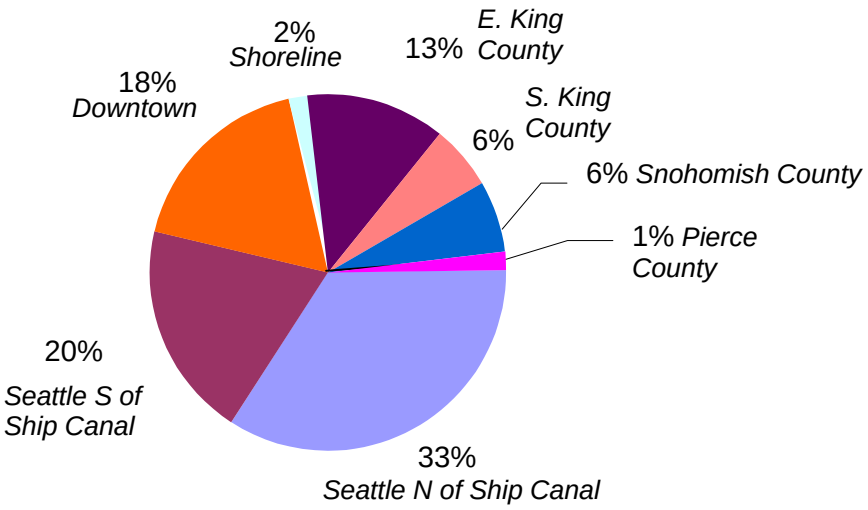


Source: 2000 Census

SOV - single occupant vehicle
HOV - high occupancy vehicles (carpools/ vanpools)

Among the various destinations, most Northgate area residents (71%) work in the City of Seattle, with just over half working in downtown Seattle or north of the ship canal (see **Figure 3-2**). Just over 13% work in East King County. Six percent of Northgate area residents work in South King County and another 6% percent work in Snohomish County.

Figure 3-2. Northgate Residents' Work Trip by Destination



Source: 2000 Census

Table 3-1 further defines Northgate residents' travel mode choice for each destination. Highlights include the following:

- Nearly half of those working in downtown Seattle take transit, while only 6% of those working in Shoreline do.
- Over 10% of Northgate commuters destined for Seattle north of the ship canal or Shoreline bike or walk to work.
- More Northgate residents carpool than take transit to Shoreline and South King County.

Table 3-1. Northgate Residents' Work Trip by Destination

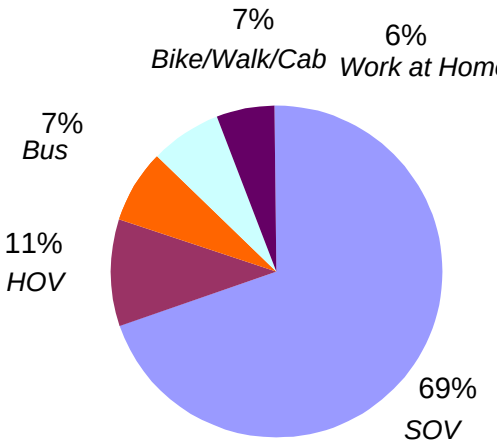
Destination	Transit	HOV	SOV	Bike / Walk
Seattle north of ship canal	14%	9%	51%	13%
Seattle south of ship canal	16%	14%	68%	2%
Downtown Seattle	47%	14%	38%	1%
Shoreline	6%	21%	61%	12%
East King County	11%	10%	77%	2%
South King County	14%	17%	67%	2%

Source: 2000 Census

Northgate Workers' Mode Choice

Figure 3-3 shows that almost 70% of those working in the Northgate area drive alone. Of the remainder, 11% carpool; 7% bus; another 7% walk, bike, or take a cab; and 6% work at home.

Figure 3-3. Means of Transportation to Work in the Northgate Area

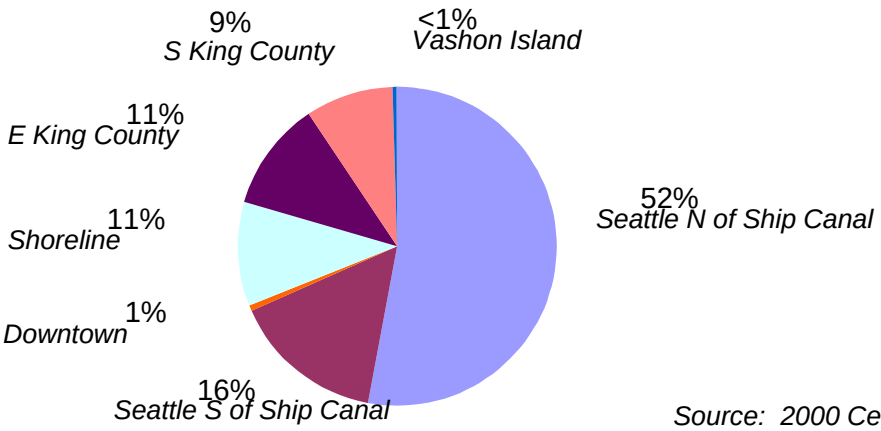


Source: 2000 Census

SOV - single occupant vehicle
HOV - high occupancy vehicles (carpools/ vanpools)

As shown in **Figure 3-4** below, most (52%) of the 7,300 Northgate area workers come from Seattle north of the ship canal. The next larger group (16%) comes from Seattle south of the ship canal, with similar shares (9 -11%) coming from South King County, East King County and the City of Shoreline.

Figure 3-4. Northgate Workers' Work Trip by Origin



Source: 2000 Census

Table 3-2 below summarizes travel mode choices by place of origin for Northgate workers. Key findings include the following:

- Over 40% of workers from Seattle north of the ship canal bike, walk, take transit, carpool, or work at home.
- Carpooling or vanpooling has much higher usage than transit for workers coming from East or South King County.
- Bicycling and walking to work has a notable share (11%) among Northgate workers coming from Seattle north of the ship canal, with other areas reporting much lower numbers. (Note: the 25% bike/walk share of Northgate workers who live in downtown represents only 10 people; fewer than 1% of Northgate workers live in downtown Seattle.)

Table 3-2. Northgate Workers' Travel Mode Choice by Point of Origin

Northgate Workers' Travel Mode Choice by Point of Origin	Transit	HOV	SOV	Bike / Walk	Work at Home
Seattle north of ship canal	9%	10%	59%	11%	10%
Seattle south of ship canal	6%	8%	83%	3%	0%
Downtown Seattle	0%	0%	75%	25%	0%
Shoreline	9%	7%	83%	1%	0%
East King County	1%	12%	85%	2%	0%
South King County	5%	19%	76%	0%	0%

Source: 2000 Census

Pedestrian System

This section reports on the existing pedestrian system within the CTIP study area. Key performance indicators were identified for four categories of pedestrian facilities: 1) arterial crossings; 2) connections between neighborhoods and the Northgate Urban Center; 3) connections within the Urban Center; and 4) connections within neighborhoods to local schools, parks, the library, community center, the transit center, and neighborhood commercial districts. **Appendix 3-1** contains detailed data from field visits to each intersection; **Appendix 3-2** contains detailed data on arterial sidewalks and school walk routes.

Arterial Crossings

The Seattle Planning Commission's 2005 Open Space and Pedestrian Connections plan, public comments at Northgate Community Forums, and Northgate Stakeholders' input all helped identify arterial intersections and mid-block crossings for project review. Existing conditions at these locations are described below.

Pedestrian and Bicycle Crashes

Figure 3-5 shows the number of reported crashes from 1999 to 2003 involving vehicles and either pedestrians or bicyclists. A number of pedestrian and bicycle crashes are concentrated on Northgate Way between Meridian Avenue N and 15th Avenue NE.

NE Northgate Way & 3rd Avenue NE (looking east)

Two intersections had the highest number of pedestrian crashes (three within five years): Northgate Way at the southbound I-5 off-ramp/Corliss Avenue N, and Northgate Way at 5th Avenue NE. The mid-block crossing at Northgate Way N between Meridian Avenue N and the southbound I-5 off ramp/Corliss Avenue N shows the highest number of reported pedestrian crashes. Many people commented during the study about pedestrians crossing illegally on Northgate Way between 3rd Avenue N and 5th Avenue N (between Northgate North and Northgate Mall), but only one pedestrian crash has been reported within the last five years.

NE Northgate Way Pedestrian Crossings

Within the study area, NE Northgate Way has ten signalized intersections, two of which are pedestrian-activated signals:

- Meridian Avenue N
- Corliss Avenue N/I-5 Southbound Ramps
- 1st Avenue NE/Northbound on-ramps
- 3rd Avenue NE
- 5thAvenue NE
- 8thAvenue NE (pedestrian activated)
- Roosevelt Way NE
- 15th Avenue NE
- 19th Avenue NE (pedestrian activated)
- 24th Avenue NE

All signalized intersections provide pedestrian crosswalks. However, for pedestrian safety and traffic operation, not all legs of each signalized intersection provide a pedestrian crossing. For example, at the Corliss Avenue southbound I-5 off-ramp, the east leg of the intersection with Northgate Way N does not provide a crosswalk. Similarly, the west leg of the 1st Avenue N/Northgate Way intersection does not provide a crosswalk.

Figure 3-5. Total Number of Pedestrian and Bicycle Crashes 1999–2003

The 3rd Avenue NE intersection serves pedestrians crossing between Northgate North and the Northgate Mall. However, the crossing does not serve either location particularly well. This intersection involves three driveways in close proximity: the entry and exit into Northgate Mall, and 3rd Avenue NE itself. Pedestrians in this vicinity seeking to cross from north to south must walk eastbound across 3rd Avenue NE to the crosswalk. Once at the south side of NE Northgate Way, the Mall entryway landscaping and bus layover zone present barricades around which pedestrians must travel to enter the Mall.

Pedestrians crossing NE Northgate Way elsewhere face a substantial number of turning vehicles, with the highest volumes at 5th Avenue NE, Roosevelt Way and the I-5 ramps. Medians at the I-5/Corliss Avenue N southbound ramps, at 3rd Street NE and at 8th Street NE Northgate Way provide some pedestrian refuge. Only the east/west crossing at the 1st Avenue NE/Interstate-5 ramp has an audible crossing signal.

5th Avenue NE

The following intersections along 5thAvenue NE are signalized:

- NE 130th Street
- NE 112th Street (including behind Northgate North)
- NE Northgate Way
- NE 106th Street
- NE 103rd Street
- NE 100th Street
- NE 95th Street (pedestrian activated)
- NE 92nd Street

None of the intersections provide audible pedestrian crossing signals or refuge space. Conflicting turning volumes are particularly high at NE Northgate Way. This intersection also serves a relatively high volume of pedestrians and is in close proximity to several senior housing complexes. Curb and ADA ramps are in poor condition at the intersections of 5th Avenue NE and NE 103rd Street and NE 100th Street. NE 105th Street presents pedestrian challenges as it approaches the unsignalized intersection with 5th Avenue NE from the east. The road has a very steep grade and lacks sidewalks or a pedestrian pathway. In 2006, the 5th Avenue NE Streetscape Project will construct a sidewalk on the north side of NE 105th adjacent to the Civic Center, and it will also provide a new intersection at 106th

5th Avenue NE & NE 112th Street (looking southwest)

Street on 5th Avenue NE, which will be aligned with the Northgate Mall entrance. Pedestrians on 5th Avenue NE from NE 105th Street will be able to safely use this crossing location.

8th Avenue NE

In addition to other traffic controls, the intersection of 8th Avenue NE and NE Northgate Way provides a pedestrian signal that stops traffic on NE Northgate Way. This also allows north-to-east turning traffic from 8th Avenue NE to proceed at the same time, which can present pedestrian/vehicle conflicts.

NE Northgate Way & 8th Avenue NE (looking northeast)

Midblock on 8th Avenue NE just north of NE Northgate Way, pedestrians often cross to access the U.S. Post Office. The street is 40 feet wide at this location with heavily used on-street parking on both sides. Parking is restricted for approximately 47 feet south of the U.S. Post Office driveway, but visibility for drivers exiting business and retail establishments on 8th Avenue NE is reduced. Northbound traffic on 8th Avenue NE has limited sight distance due to the grade at this location.

Roosevelt Way NE

The following intersections along Roosevelt Way NE within the study area are signalized:

- NE 112th Street
- NE Northgate Way
- NE 95th Street (pedestrian activated)

Roosevelt Way NE north of NE Northgate Way (looking west)

None of the intersections provide audible pedestrian crossing signals or refuge space. Many pedestrians bypass the signal at NE 112th Street and cut across the TJ Maxx Plaza to QFC and the adjacent bus stop from nearby residential areas. There is a channelized left turn lane at this location with an island. Many pedestrians also choose to cross just north of NE 112th Street near the intersection of Roosevelt Way NE and Pinehurst Way NE. Vehicle speeds and restricted driver sight distance present an increased risk for pedestrians crossing at these unmarked crossings.

Vehicles traveling Roosevelt Way NE between NE Northgate Way and NE 80th Street do not encounter any signalized intersections. There is a pedestrian signal at NE 95th Street, but no signalized crossings serving the restaurants and businesses between NE 92nd Street to NE 88th Street. An unlit overhead crosswalk sign hangs across Roosevelt Way NE at NE 90th Street, but pedestrians must be very vigilant to cross the often steady stream of traffic along this busy roadway.

15th Avenue NE

Crossings at the following locations on 15th Avenue NE were identified for review:

- NE 117th Street to NE 125th Street
- NE 94th Street to NE Northgate Way
- Access to Sacajawea School via NE 94th, 95th and 96th streets
- The NW Puppet Center

15th Avenue NE & NE Pinehurst Way (looking south)

The roadway between NE 117th and NE 125th serves several small businesses and a grocery store, as well as a number of apartment and condominium buildings. A pedestrian crosswalk is provided across 15th Avenue NE at NE 120th Street. Moving farther to the south on 15th Avenue NE, there is a marked pedestrian crossing at NE 95th Street. The Northwest Puppet Center at the corner of 15th Avenue NE and NE 92nd generates pedestrian traffic.

3rd Avenue NE: NE 100th to NE 103rd Street

King County is currently designing a new, pedestrian-oriented three-lane minor arterial to connect NE 103rd Street to NE 100th Street. It will bisect the South Lot superblock that now stretches from 1st Avenue NE to 5th Avenue NE. When the 3rd Avenue NE extension is constructed, a signal at NE 103rd Street will provide pedestrian crossings, connecting the business and medical complexes south of NE 100th Street and Northgate Mall, east of the 3rd Avenue NE exit.

Today an undeveloped parking lot, the South Lot provides great opportunity for transit-oriented development, with its proximity to Metro's Northgate Transit Center and the future Sound Transit link light rail. A proposed mixed-use development will be built east of 3rd Avenue NE to provide housing, commercial development, open

spaces, and pedestrian connections to the Transit Center and surrounding neighborhoods. It will coincide with construction of 3rd Avenue NE. West of 3rd Avenue NE, King County also plans a future transit-oriented-development that will provide additional synergy for a walkable community with great transit access and pedestrian amenities.

The Thornton Creek Water Quality Channel Project, under design by Seattle Public Utilities at the time of this report, will be located east of the new 3rd Avenue NE roadway, abutting the Northgate Commons and ERA Care Community development projects. The Channel Project will provide an extensive network of pedestrian walkways, including a connection between the new 3rd Avenue NE roadway and 5th Avenue NE.

Meridian Avenue N/College Way N

NE 115th Avenue. The four-way stop intersection at NE 115th Street provides access from NE Northgate Way to residential neighborhoods, Northwest Hospital and adjacent medical offices on NE 115th Street.

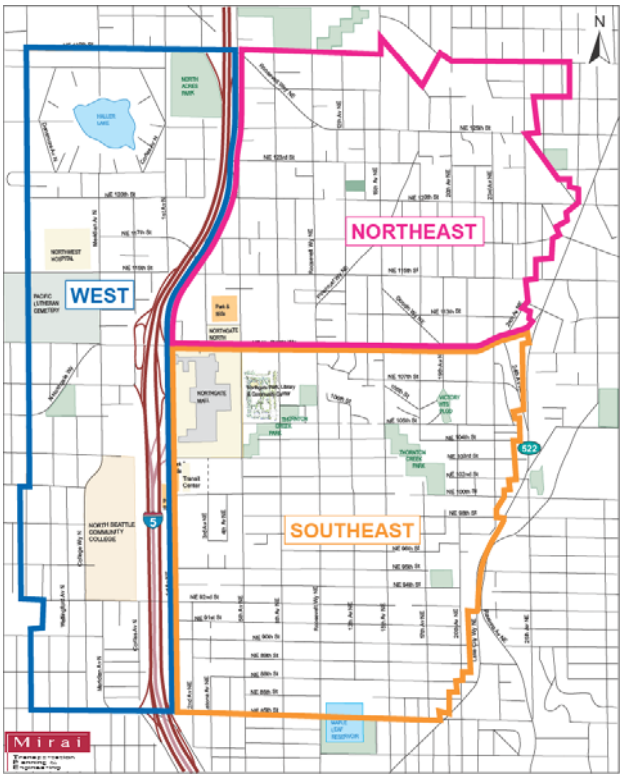
N 103rd and N 105th streets. South of Northgate Way, pedestrians from the neighborhood and office buildings have two marked crossings: a pedestrian signal and crosswalk at N 105th Street, and a marked crosswalk at N 103rd Street. Meridian Avenue N is a three-lane arterial at this location (two lanes with a center two-way turn-lane).

College Way N. South of N 103rd, Meridian Avenue N becomes College Way N and expands to a four-lane roadway with separate turn-pockets at major intersections. The only marked crosswalk is a signalized intersection at N 95th Street. Pedestrian improvements across College Way N have been requested near North Seattle Community College, at N 97th Street and N 100th Street.

Pedestrian Facilities: Neighborhoods to Urban Center, and Within Neighborhoods

To identify pedestrian connections between neighborhoods and the Urban Center, the CTIP study area was divided into three sectors: west, north, and south (see **Figure 3-6**). The west sector falls between North 130th and NE 85th streets to the north and south, and Ashworth Avenue N and 1st Avenue NE to the west and east. First Avenue NE north of Northgate Way is included in the west sector. The north sector runs from NE 130th/NE 125th Street to NE Northgate Way, and I-5 to Lake City Way. The south sector is bounded by NE Northgate Way, NE 85th Street, I-5, and Lake City Way.

Figure 3-6. Urban Center Sector Boundaries



The CTIP study looked at connectivity and quality when evaluating pedestrian linkages from neighborhoods (as defined by sector) to the Urban Center. The benchmark for "connectivity" calls for the total length of sidewalks on arterials to equal 90% of the total arterial linear distance times two. The "quality" of the facilities included assessment of streetlights, and thresholds for sidewalk width and condition, as defined in **Table 3-3**.

Note: Performance measures for non-arterial streets also captured elements of the pedestrian system (see **Table 3-11** on page 3-43), since these roadways are frequently used as pedestrian routes.

Table 3-3. Pedestrian Connections Performance Thresholds

Sidewalks	At least five feet wide; length equal to 90% of total arterial linear distance times two (to represent both sides of the street)
Condition	No tree grate displacement, broken concrete, obstruction or other maintenance issues
Lighting	Excellent = More than one lamppost on every block. Very Good = Unobstructed lighting every block. Fair = Lampposts up to three blocks apart or obstructed lighting Poor = Lampposts three or more blocks apart.

Table 3-4 summarizes the analysis results, with detailed data contained in **Appendix 3-2**. Key areawide findings include the following:

- 81% of the sidewalk miles in the study area meet the benchmark for coverage (90% of arterial length times two).
- 49% of the sidewalk miles in the study area meet the benchmark for coverage, if only 5-foot-wide sidewalks are counted.
- The south sector has the highest percentage (70%) of sidewalks meeting the width benchmark.
- The north sector has the highest percentage (90%) of sidewalks meeting the coverage benchmark.

Table 3-4. Neighborhood to Urban Center Pedestrian Connections

Sector	Total Arterial Miles	Total Sidewalk Miles	Benchmark Miles (90% of sidewalk)	Total Sidewalk/ Path	≥ 5-Foot Sidewalk	≤ 4-Foot Sidewalk	Paved Paths*
West	5.50	11.00	9.90	7.89 mi 72%	3.67 mi 33%	3.73 mi 34%	0.49 mi 4%
North	4.74	9.48	8.53	8.54 mi 90%	3.67 mi 39%	4.56 mi 48%	0.31 mi 3%
South	6.76	13.52	12.17	11.20 mi 83%	9.44 mi 70%	1.76 mi 13%	0.00 mi 0%
TOTAL	*17.01*	*34.02*	*30.62*	*27.63 mi* *81%*	*16.78 mi* *49%*	*10.05 mi* *30%*	*0.80 mi* *2%*

**Paved paths include asphalt paths and sidewalks without curbs*

West Sector

This sector has the lowest percentage of sidewalks or paved paths on both sides of arterials. Out of a possible 11 sidewalk miles in this sector (two times the arterial miles in the sector, representing the potential for sidewalks on both sides of the arterial), 3.67 miles (33%) are 5 feet wide or greater. However, if all sidewalks and paved paths are included, regardless of width, the sector has 7.89 miles (72%) of pedestrian facilities.

Meridian Avenue N has a pathway on the east side from NE 115th to Haller Lake, but lacks concrete curb, gutter, and sidewalks from NE 115th to NE 130th Street. However, it should be noted that NE 128th Street, NE 125th Street, NE 122nd Street, Corliss Avenue N, and Densmore Avenue N all have sidewalks on one side of the street, facilitating pedestrian movement. Pedestrian facilities on 1st Avenue NE change from the west to the east side of the street at NE 117th Street, forcing pedestrians to cross the street.

North Sector

The north sector meets the CTIP benchmark for sidewalk distance, if all sidewalks and paved paths are counted regardless of width. That figure drops to 39% for those meeting the 5-foot width threshold. Fifth Avenue NE from NE 130th Street to NE 125th Street, and 15th Avenue NE From Pinehurst Way NE to NE Northgate Way, are missing sidewalks on the west side of the street.

1st Avenue NE at NE 94th Street (looking north)

South Sector

Seventy percent of arterials in the south sector have 5-foot-wide sidewalks. If all sidewalks and paths are considered, regardless of width, the sector has sidewalks covering 83% of the target distance. First Avenue NE between NE 92nd and NE 100th has a partial sidewalk on the east side, some of which is in disrepair, and no sidewalk on the west side. Roosevelt Way NE from NE 95th Street to NE 85th Street has 10-foot sidewalks, unobstructed lampposts on every block, and on-street parking. There are many local businesses and restaurants located in this area.

NE 100th Street looking west to 1st Avenue NE

Pedestrian Facilities: Within the Urban Center

The Northgate Open Space and Pedestrian Connections Plan (2004) identified a series of connectivity targets within the Urban Center. The CTIP connectivity benchmark is the presence of sidewalks on arterials within the Urban Center. Connectivity is acceptable when the total length sidewalks on arterials equal 90% of the total arterial linear distance times two. The quality of the facilities includes assessment of streetlights, sidewalk width, and condition.

Thirty percent of the arterials (4.78 roadway miles, or 9.56 total sidewalk miles) in the study area are within the Urban Center. **Table 3-5** shows that the Urban Center has sidewalks totaling 8.15 miles, putting this sector at 95% of the distance benchmark. If only those sidewalks that are 5 feet or wider are counted, the Urban Center is at 65% of the benchmark.

All arterials within the Urban Center have sidewalks on both sides, except 1st Avenue NE and NE 100th Street, which have sidewalks on only one side. Most of the area has unobstructed lampposts on every block.

Table 3-5. Urban Center Pedestrian Facilities

Sector	Total Arterial Miles	Total Sidewalk Miles	Benchmark Miles (90% of sidewalk)	Total Sidewalk / Path	≥ 5-Foot Sidewalk	≤ 4-Foot Sidewalk	Paved Paths*
Total	*4.78*	*9.56*	*8.60*	*8.15 mi 85%*	*6.18 mi 65%*	*1.97 mi 21%*	*0.00 mi 0%*

**Paved paths include asphalt paths and sidewalks without curbs*

The following section reviews the existing conditions of specific pedestrian linkages within the Urban Center.

Between North Seattle Community College and Northgate Transit Center

Currently I-5 divides North Seattle Community College and the Northgate Transit Center. Although served by a bus route, the existing freeway crossing at NE 92nd provides a circuitous walking route and a longer walking distance than is typical for bus riders. This situation discourages those students and faculty from North Seattle Community College who might otherwise use the transit center.

Between the new Civic Center and Northgate Transit Center

The new Civic Center (park, library and community center) will have good connectivity to the Transit Center. The area is well lit and has sidewalks that will be improved in the first project of the 5th Avenue NE Streetscape Design Plan. Additional developments and City sidewalk projects, including Northgate Commons and the 3rd Avenue NE Extension, will complete the connections to the Transit Center.

Between Northgate Mall and Northgate Transit Center

103rd Street NE & Northgate Transit Center (looking west)

Pedestrians use a marked crosswalk to cross NE 103rd Street at 3rd Avenue NE. The 3rd Avenue NE Extension will provide a signalized crossing at 3rd Avenue NE.

Between Northgate Mall and new Civic Center

This linkage was analyzed in the previous "arterial crossings" section. The City will relocate the entry to the Mall on 5th Avenue and NE 106th to link to the new Civic Center. Signalized crossings are located at NE 106th Street and NE 103rd Street.

Between Northgate Mall and Northgate North Center

This linkage was also analyzed in the previous "arterial crossings" section. The proximity of three driveways in the vicinity of 3rd Avenue NE, a circuitous crossing route, and the south side barrier of landscaping and the bus layover zone discourage easy pedestrian access.

Between Northwest Hospital and Northgate Mall

Pedestrians who walk between Northgate Mall and Northwest Hospital have two routes to cross I-5. One route uses the N 117th overpass; the other includes NE Northgate Way. Traffic on the N 117th route is much lighter than on NE Northgate Way, but N 117th does not have a sidewalk between Meridian Avenue N and 1st Avenue N. A trail connects this overpass from the east side of I-5 to 3rd Avenue NE at NE 116th Street. Pedestrians can walk on 3rd Avenue NE to get to the Mall.

The NE Northgate Way route provides sidewalks on Meridian Avenue N and NE Northgate Way. Between Meridian Avenue N and the Mall, NE Northgate Way has many driveways, and pedestrians also must cross freeway on- and off-ramps. The I-5 undercrossing is dark with narrow sidewalks adjacent to the heaviest concentration of traffic in the study area.

Between NE 100th Street Offices and Northgate Mall

Looking south across NE 100th Street from Northgate south lot

Although well lit, NE 100th Street currently lacks sidewalks on the north side, and pedestrians must either cross a very large empty parking lot or walk a significant distance around it. The new 3rd Avenue NE roadway under design will connect NE 103rd Street to NE 100th Street. Private development, the City, and King County will construct a continuous sidewalk from 1st Avenue NE to 5th Avenue NE. (Please see the "3rd Avenue NE" analysis in the previous arterial crossings section.)

Pedestrian Access to QFC at Roosevelt Way and NE 112th Street

Some pedestrians choose to walk across the TJ Maxx Plaza to QFC instead of crossing at either NE 112th Street or NE Northgate Way. This location is too close to the NE Northgate Way intersection for a safe mid-block crossing.

8th Avenue NE between NE Northgate Way and NE 92nd Street

Neighborhood residents use 8th Avenue NE as an alternate north-south pedestrian route to 5th Avenue NE. However, 8th Avenue NE does not have a sidewalk, and some sections of the roadway are narrow. This street connects several key activity areas, such as Olympic View Elementary School, Thornton Creek Park, and retail businesses along NE Northgate Way. Vehicles parked on the shoulders of 8th Avenue NE south of NE Northgate Way force pedestrians to walk on the roadway.

School Walk Route Connectivity

Five public elementary schools have school walk routes within the Northgate CTIP area. The Seattle School District has designated many of the local streets in the area as school walk routes.

- Alternative School #1 at Pinehurst Way NE and NE 115th Street
- Northgate Elementary School at 1st Avenue NE and NE 117th Street
- Olympic Hills Elementary School at 20thAvenue NE and 130th Street

- Olympic View Elementary School at 5th Avenue NE and NE 95th Street
- Sacajawea Elementary School at 20th Avenue NE and NE 95th Street

For this performance indicator, acceptable connectivity is defined as sidewalks on at least one side of 90% of all streets designated as school walk routes.

Table 3-6 summarizes the analysis results. Just less than 50 miles of roadway within the study area have been designated as school walk routes. Of these, 49% have some type of paved path or sidewalk on one side; only 27% of them have sidewalks meeting the 5-foot width benchmark. However, the majority of the roads without sidewalks have shoulders exceeding 10 feet in width and very low traffic volumes. These factors help to minimize safety risks for children traveling to and from school. **Appendix 3-2** provides details by school area.

Table 3-6. School Walk Route Existing Conditions (in alphabetical order)

School	Total School Walk Route Miles	Total Sidewalk Miles	Benchmark Miles (90% of sidewalk)	Total Sidewalk /Path	≥ 5-Foot Sidewalk	≤ 4-Foot Sidewalk	Paved Paths*
Alternative School #1	12.29	12.29	11.06	5.90 mi 48%	3.07 mi 25%	2.46 mi 20%	0.37 mi 3%
Northgate Elementary	11.10	11.10	9.99	4.50 mi 41%	2.00 mi 18%	1.78 mi 16%	2.17 mi 20%
Olympic Hills Elementary	5.89	5.89	5.30	2.85 mi 48%	1.71 mi 29%	0.64 mi 11%	0.50 mi 8%
Olympic View Elementary	10.84	10.84	9.76	6.50 mi 57%	3.94 mi 36%	1.95 mi 18%	0.61 mi 6%
Sacajawea Elementary	8.28	8.28	7.45	4.42 mi 53%	2.42 mi 29%	1.61 mi 19%	0.39 mi 5%
TOTAL	*48.45*	*48.45*	*43.61*	*24.17 mi 49%*	*13.14 mi 27%*	*8.44 mi 18%*	*4.04 mi 8%*

**Paved paths include asphalt paths and sidewalks without curbs*

Bicycle System

This study evaluated the bicycle system using a bicycle performance index (BPI) based upon bicycle level of service expert Bruce Landis' methodology for assessing bicycle "rideability." This index relates significant bicycling factors into an equation that factors in traffic conditions, roadway design, and surface conditions.

The resulting score equates to a bicycle performance index (BPI) that ranges from an "A" through "F." The target BPI along arterials in the study area was set at a "C" and residential routes was set at "B." In addition, routes that are within ½ mile of a recreational facility or school were assigned a target BPI of "B." **Figure 3-7** identifies commonly used and suggested bicycle routes that were evaluated.

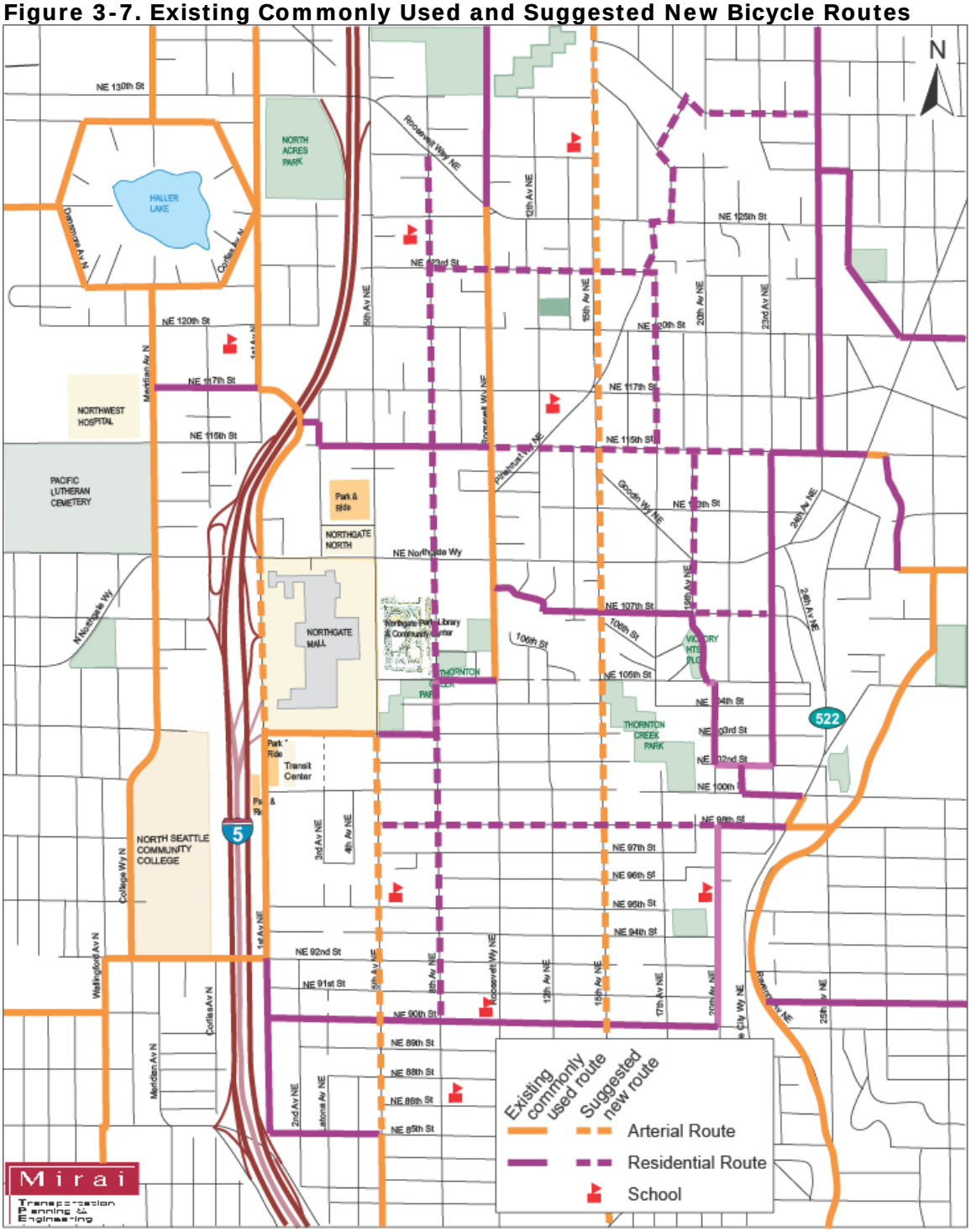
Designated Bicycle Routes

The City of Seattle's Bicycling Guide Map identifies "bicycle facilities" and "commonly used bike routes." "Bicycle facilities" include separate trails and on-street lanes. "Commonly used bike routes" are classified as arterials or residential streets. In the Northgate study area, there are no off-street bicycle facilities. The closest trail in the vicinity is the Burke-Gilman Trail, roughly one mile to the east. On-street bike lanes are located to the south and east of the area, around Green Lake and Ravenna Boulevard. Most of the "commonly used bike routes" run north-south. A few routes, primarily on residential streets, run east-west, and these include some steep hills.

N 92nd Street near Meridian Avenue N (looking west)

Roadway space for bicyclists varies from a shoulder or parking lane to a soft shoulder or sidewalk. Space for cyclists on residential streets is undefined, typically without curbs, gutters or sidewalks. Vehicles often park on the edge of the pavement or on the grass.

Figure 3-7. Existing Commonly Used and Suggested New Bicycle Routes



Bicycle Usage

Within the Northgate study area, residents can bike to many destinations, including Northgate Mall, North Seattle Community College, Northwest Hospital, the post office, park-and-ride lots, local businesses and shops, offices, and schools. In addition to playgrounds and parks in the Northgate area, cyclists can bike to Green Lake to the south or the Burke-Gilman Trail to the east, which connects to the regional trail system. Residents can ride around their own neighborhood or do long-distance riding to areas outside of the study area such as downtown Seattle or the University District.

Bicycle System Performance

Figure 3-8 shows the rating of commonly used bicycle routes in the study area. Most residential bike routes in the study area have a BPI of "B" or higher, with only a few segments receiving a "C" or "D." Considering both City-designated and proposed residential routes, nearly 50% of the segments received an "A." Only 28% of the residential routes received a "C" or "D," primarily along NE 115th Street. The only "D" segment was noted at NE 125th Street near 19th Avenue NE. The remaining 12% of the routes had a BPI of "B."

Meridian Avenue NE near NE 107th Street (looking south)

For all arterial routes, the BPI was lower overall; "C" and "D" were more common, with 29% of the routes receiving a "D" and 31% receiving a "C." Fewer than 3% of the routes received a BPI of "E." Areas not meeting the BPI target included Meridian Avenue N north of North Seattle Community College and 1st Avenue NE adjacent to the Northgate Mall and north of NE 117th Street.

Figure 3-8. Bicycle Performance Index (level of service)