# CHAPTER 6. Transportation Problems

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Chapter 6. Transportation Problems

As one of the most vibrant of Seattle’s densely populated urban centers, the University area experiences high volumes of pedestrians and bicyclists and enjoys some of the most frequent transit service in Seattle. Land-locked on three sides by water and man-made physical features (I-5 on the west, SR 520 and Ship Canal on the south, and Lake Washington on the west) the area’s arterials carry heavy automobile traffic through congested interchanges and across constricted bridges. The combination of the natural setting, the freeways, the arterial patterns, the interactions among transportation modes, and the intensity of land use strains the area’s transportation system. This section describes the key problems within the University area’s transportation system based on existing conditions.

EASTLAKE AVENUE/CAMPUS PARKWAY/ NE 40TH STREET AREA

Campus Parkway was originally designed as the major entryway to the University District and the U.W. The intersection of Campus Parkway and Eastlake Avenue E was designed with loop ramps for turning vehicles, similar to the design of a freeway interchange. However, for some reason, not all directional movements were accommodated. Furthermore, the intersection designers (several decades ago) paid little attention to accommodating transit, bicyclist and pedestrian movements. Bicyclists and pedestrians have encountered conflicts with northbound vehicles on Eastlake Avenue exiting onto the loop ramps.

Also in this vicinity, the area underneath the University Bridge houses a variety of commercial establishments with unorganized/unregulated parking lots, undefined street edges, and a lack of pedestrian facilities.

Problem areas and inadequate facilities are as follows:

- Lack of clear and complete designated pedestrian crossing on Roosevelt Way NE/11th Avenue NE at the Campus Parkway/Upper NE 40th Street intersection area.
- Lack of continuous bicycle lanes on Eastlake Avenue to Campus Parkway; lack of continuous pedestrian facility in this area.
Bicycle/vehicle conflicts at the north and south ends of University Bridge: it is difficult for southbound bicyclists on Eastlake Avenue to make left turns at the Eastlake Avenue East and Harvard Avenue East intersection.

Inadequate pedestrian facilities and unregulated parking on City properties and streets in the commercial area underneath the University Bridge.

Lack of connection from Burke Gilman trail to 40th Street/Campus Parkway in the area west of University Bridge.

**MONTLAKE BOULEVARD /NE PACIFIC STREET CORRIDORS**

In addition to serving the U.W. proper, Montlake Boulevard NE and NE Pacific Street provide access to University Village, Husky Stadium and Edmunson Pavilion, University Hospital and SR 520. The Montlake Bridge also provides one of two connections from the University area to Capitol Hill over the Ship Canal. Such a concentration of regionally significant destinations and facilities draws large volumes of automobile traffic onto heavily congested roadways. The traffic congestion also slows transit speeds and makes pedestrian crossings difficult at some locations. Specific problem areas and inadequate facilities are noted below:

- Heavy traffic congestion on Montlake Boulevard NE during AM and PM peak periods due to lack of capacity of the SR 520 mainline.
- Lack of eastbound SR 520 on-ramp vehicle storage capacity.
- Slow HOV speeds on Montlake Boulevard NE.
- Difficult pedestrian crossings on Montlake Boulevard NE and NE Pacific Street.
- Pedestrian/bicycle conflicts at the south end of the Montlake Bridge.
- Lack of adequate vehicle storage capacity for northbound traffic on Montlake Boulevard to SR 520 westbound on-ramp (U-turn lane).
- Lack of an easy connection from the Burke-Gilman trail to the Montlake Bridge.
MAJOR EAST/WEST ACCESS CORRIDORS

The limited number of arterials that cross I-5 within the University area funnel significant traffic volumes onto the few east/west corridors within the study area. I-5 acts as a major barrier between the University area and Wallingford, not only to vehicle travel, but also to bicycling and walking. High traffic volumes on the east-west arterials that cross I-5 create conflicts with non-motorized modes of travel. Heavy traffic also slows down transit. Problem areas on these east/west corridors are as follows:

- Excessive delays during non-peak periods along NE 65th Street, particularly at the intersections with 15th Avenue NE and 25th Avenue NE. In addition, delays for northbound vehicles during the non-peak period at the intersection of 25th Avenue NE and NE 65th Street are excessive.
- Low transit speeds on NE 45th Street from I-5 to 15th Avenue NE.
- Inadequate pedestrian and bicycle facilities to cross Interstate 5, and pedestrian and bicycle delays at NE 45th Street intersections due to long signal cycles (e.g. the 180-second signal cycle length at the intersections on NE 45th with the I-5 on- and off-ramps).

MAJOR NORTH/SOUTH ACCESS CORRIDORS

The UATS study area provides a number of heavily used north/south arterials, which connect with the communities north of the study area. The north-south arterials include the Roosevelt Way/11th Avenue NE couplet, Brooklyn Avenue, University Way, 15th Avenue NE, 17th Avenue NE, 20th Avenue NE, 25th Avenue NE, and 35th Avenue NE. (Montlake Boulevard NE is also a major north-south arterial corridor; the problems in this corridor are discussed above.) For the most part, these corridors work very well, although heavy traffic volumes and on-street parking make bicycle riding on these arterials somewhat uninviting. The problems related to the north-south corridors are as follows:

- Lack of designated north/south bikeways.
- Heavy traffic congestion on 25th Avenue NE south of NE 65th Street, and difficult pedestrian crossings across 25th Avenue NE between the University of Washington, Burke-Gilman Trail, and the University Village and surrounding residential areas.
I-5 CROSSING

I-5 borders the study area on the west, with major access points at 45th Street NE, 50th Street NE and 65th Street NE. Access to and from the I-5 Express Lanes is provided at NE 42nd Street. The ramps in the 45th Street and 50th Street interchanges carry extremely heavy traffic volumes, making pedestrian, bicycle and transit movements difficult. Both streets also experience significant back-ups from traffic waiting to get onto I-5. These and other problem areas are noted below:

- Inadequate pedestrian and bicycle facilities to cross I-5.
- Significant bus delays on northbound 7th Avenue NE south of NE 45th Street due to conflicts with heavy traffic on northbound I-5 off-ramps.
- Inadequate vehicle storage space on on-ramps to I-5 at the 45th and 50th Avenue NE interchanges.
- Long WSDOT signal cycles (180 seconds) which make pedestrians wait for a long period to cross the intersections with the I-5 ramps.

UNIVERSITY VILLAGE AREA ACCESS

The recently redeveloped University Village shopping center generates a significant amount of vehicular traffic in close proximity to the Burke-Gilman Trail (used by bicyclists and pedestrians) and in the busy Montlake Boulevard NE and NE 45th Street corridors. University Village is surrounded by single-family residential neighborhoods, whose residents are concerned with through traffic and pedestrian safety. Providing safer facilities for each of these transportation modes requires a combination of improvements to the following problem areas:

- Crossing conflicts between bicyclists/pedestrians and vehicles on the Burke-Gilman Trail at 25th Avenue NE and 30th Avenue NE.
- Inadequate sidewalks and pedestrian facilities north and east of University Village on 30th Avenue NE, NE Blakely Street, and Union Bay Place NE, and NE 50th Street from 30th to 35th Avenues NE.
- Lack of direct connections from the Burke-Gilman trail to University Village.
- Lack of a designated bicycle linkage between the Ravenna bicycle lanes and the Burke-Gilman Trail.
- Excessive vehicle delays (Level of Service F) during the non-peak period and weekend days at the 25th Avenue NE and NE 65th Street intersection.
- Turning movements off of NE Blakely Street, 25th Avenue NE, and NE 45th Street can be hazardous.
- Undefined intersection configuration at Ravenna Place NE/Ravenna Boulevard NE and NE 55th Street, leading to excessive vehicle speeds observed and conflict with pedestrians.
- Unregulated parking in City rights-of-way in the vicinity of University Village area, which conflicts with University and City traffic management efforts.
- Excessive vehicle delays (Level of Service F) during the peak period at the "Five Corners" intersection of NE 45th Street, NE 45th Place, Union Bay Place, and Mary Gates Memorial Drive.

TRANSIT/HOV ACCESS

The University area generates some of the heaviest transit ridership in King County Metro service area. While high transit ridership significantly reduces the number of vehicles that would otherwise be on the road, the heavily congested roadways in the study area greatly slow transit vehicle flows. Key problem areas are as follows:

- Heavy traffic congestion on NE 45th Street from I-5 to 15th Avenue NE.
- Transit travel delays in the vicinity of 7th Avenue NE, NE 45th Street and northbound I-5 off- and on-ramps.
- Slow transit speeds in the UW’s main campus area.
- Low transit/HOV speeds on Montlake Boulevard NE accessing SR 520.

LIGHT RAIL STATION AREAS

Sound Transit’s planned light rail connection from downtown Seattle to Northgate through the University District (based on the locally preferred alternative) will add two new stations on 15th Avenue NE: one at NE Pacific Street and the other at NE 43rd Street. Construction of the new stations provides the opportunity and necessity to improve pedestrian and bicycle access to the transit
network and particularly to the light rail stations. Stand-alone park and ride facilities will not be built at these stations. Areas in need of improvement in the vicinity of the new stations include the following:

- Narrow sidewalks on 15th Avenue NE between NE 50th and NE Pacific Street.
- Difficult at-grade crossings in the vicinity of the stations.
- Inadequate east-west pedestrian facilities between Roosevelt Avenue NE and the NE 43rd station.

**TRAFFIC SIGNAL ISSUES**

The University Area enjoys significant pedestrian activity, such that the roadway system needs to accommodate those on foot. The City adopted a “pedestrian pushbutton” policy in October 2000, stating when pedestrian signals would operate on fixed time and when they would be user-activated. Signals would operate on fixed time if pedestrians were present at the main street crossing for 75 percent of the cycles for 12 hours of the day. At locations where pedestrians were present at the main street crossing for 50 percent of the cycles for that time, signals would operate on fixed time during hours of heavy pedestrian use and be user-activated during other times.

- University area community members expressed confusion about the City’s pedestrian push button policy. It appears that many of the University District pedestrian push buttons either just barely failed the threshold criteria or testing was not repeated as was indicated in a previous study.

**TRANSPORTATION DEMAND MANAGEMENT**

The City, local businesses, King County Metro and the U.W. have instituted a number of parking and transportation demand management efforts throughout the University area. These include the U.W.’s U-Pass program, the U-District Access Package, Flexcar, and Residential Parking Zones (RPZs), as well as installation of off-street parking signs. Additional measures could be implemented to expand and strengthen these programs as follows:

- Modify the transportation demand management programs to further reduce trip generation by developments, businesses and institutions.
SR 520 AND I-5 RAMP CAPACITY

The vehicle queues from the freeway on-ramps extending onto the arterials are the major cause of traffic congestion in the study area.

- Traffic congestion on southbound Montlake Boulevard NE is the result of the lack of an adequate SR 520 on-ramp.
- Ramp meters further aggravate this situation.

TRANSPORTATION PROBLEMS BY MODE

As an alternative method of illustrating transportation conditions within the study area, Figures 6-1, 6-2 and 6-3 illustrate existing transportation problems by mode: pedestrian/bicycle, transit/HOV and vehicle (roadway/intersection) travel.
Figure 6-1. Areas of Pedestrian and Bicycle Travel Problems

Figure 6-2. Areas of Transit Problems

Figure 6-3. Areas of Vehicle/Roadway Problems