## Revision Record

### Construction Traffic Engineering Report

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<th>Prepared by</th>
<th>Reviewed by</th>
<th>Date</th>
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<td>Revisions based on results of Traffic Analysis and other review comments</td>
<td>G. Grijalva</td>
<td>S.Ching</td>
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<td>D. Davis</td>
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<td>G. Grijalva</td>
<td>D. Adams</td>
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<td>G. Grijalva</td>
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<td>K. McDonald</td>
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1.0  Introduction
This report identifies and documents the University Link construction impacts to existing surface conditions at various locations at the University of Washington (UW) in relation to traffic, transit and pedestrian and bicycle facilities.

Construction on University Link is scheduled to begin in late 2008, with a projected opening for service in 2016.

There are three University Link construction contracts that will have surface impacts near/at the UW Husky Stadium. These contracts are briefly described as:

- U210: Demolition of two concession buildings and relocation of existing utilities near Husky Stadium.
- U220: Excavation of the southern half of the University of Washington Station box and boring of the LRT tunnels to the Capitol Hill Station (CHS).
- U250: Construction of the University of Washington Station finishes including the north and west entrances and the pedestrian bridge crossing Montlake Blvd.

A complete description of contract activities and impacts are contained in the chapters that follow.

As of October 20, 2008, the U210 Contract documents have been completed to IFB. U220 documents are 100% complete and the U250 Contract is 60% complete.

2.0  Existing Conditions
This section identifies and documents the existing transportation system conditions in the vicinity of the planned University of Washington Station (UWS).

2.1  Roadways
NE Pacific Street, Montlake Boulevard and the western half of NE Pacific Place are classified Principle Arterials, and East Roanoke Street is classified a Minor Arterial, according to the City of Seattle Department of Transportation Comprehensive Plan Arterial Classifications Planning Map (1984).

NE Pacific Street and Montlake Boulevard south of NE Pacific Street are classified as Major Truck Streets, according to the City of Seattle Major Truck Streets Map (2003).

Following is a written and graphic description of roadway segments and intersections.

2.1.1 Montlake Boulevard: Montlake Bridge to NE Pacific Street
There are two northbound through lanes and three southbound in this area. A C-curb separates the directions of travel north of the Montlake Bridge. The outside southbound lane is a “3+” HOV lane that begins at NE Pacific Street and merges left with the two southbound lanes just north of the bridge. There are dual northbound left turn lanes at NE Pacific Street. These lanes begin just north of the bridge. See Figure 2.1.
Figure 2.1  Montlake Boulevard & NE Pacific Street Existing Conditions

2.1.2 Montlake Boulevard/NE Pacific Street Intersection  – See Figure 2.1

- East Leg: Ingress/egress for the Husky Stadium E11 and E12 parking lots. There is one lane (right in) from northbound Montlake Boulevard and one lane (left in) from southbound Montlake Boulevard, plus a westbound right turn (right out) lane to northbound Montlake Blvd. No thru or left turn movements are allowed at this location.

- South Leg: There are two northbound through lanes, two northbound left turn lanes and three southbound through lanes. The outside southbound lane is “3+” HOV.

- West Leg: There are three eastbound right turn lanes to southbound Montlake Blvd, the outside lane is “3+” HOV. There are two westbound lanes that receive the dual left turn lanes from Montlake Boulevard plus the right turn slip lane from southbound Montlake Boulevard which merges west of a pedestrian island. There are no eastbound through lanes at this intersection.
• North Leg: There are two southbound through lanes and two northbound through lanes. There is a southbound left turn lane that provides access to the E11 and E12 parking lots. There is one southbound right turn slip lane onto NE Pacific Street.

• A raised pedestrian island exists on the northwest portion of this intersection.

2.1.3 Montlake Boulevard north of NE Pacific Street to NE Pacific Place

There are two through lanes in each direction. There is a southbound left turn to the E11 and E12 parking lots, and a southbound HOV/right turn slip lane. This HOV lane receives the right turning busses from the bus only lane on NE Pacific Place. It is an HOV lane southbound for about half of the block then it transitions to a right turn only lane for all vehicles approaching NE Pacific Street. See Figure 2.2.

Figure 2.2 Montlake Boulevard & NE Pacific Place Existing Conditions
2.1.4 Montlake Boulevard/NE Pacific Place Intersection – See Figure 2.2

- East Leg: There are three lanes - one eastbound lane – receiving through traffic from NE Pacific Place and right turning traffic from northbound Montlake Boulevard; one westbound right turn only lane; and one westbound left turn only lane.

- North Leg: Two through lanes in each direction, separated by a C-curb - no turns allowed. North of the intersection there is a southbound right turn slip lane to NE Pacific Place, separated by a triangle-shaped landscaped island.

- South Leg: There are two through lanes in each direction, separated by a C-curb. A right turn bus only slip lane (from NE Pacific Street) creates a third southbound lane just south of a small raised pedestrian refuge island.

- West Leg: The west leg of this intersection is skewed approximately 60 degrees. There are dual eastbound left turn lanes to Montlake Boulevard, a through/right turn lane and a right turn bus only slip lane.

2.1.5 Montlake Boulevard north of NE Pacific Place to the Hec Edmundson Pavilion pedestrian overpass

There are two lanes in each direction, separated by a C-curb in front of the Hec Edmundson Pavilion / Husky Stadium Plaza. Just south of the pedestrian overpass to Hec Edmundson Pavilion, the lanes are separated by a landscaped median. North of the pedestrian overpass is a southbound left turn lane for vehicles entering the Husky athletics facilities. See Figure 2.2.

2.1.6 NE Pacific Street west of Montlake Boulevard

There are two eastbound lanes plus a “3+” HOV lane, and two lanes westbound. West of the pedestrian island, there is a left turn lane entrance to the University of Washington Medical Center. At the west terminus of the westbound left turn lane is a raised asphalt median that provides a physical barrier from the traffic exiting the UW Medical Center driveway headed westbound. See Figure 2.3.

On the north side of the roadway, opposite the UW Medical Center driveway is a semi-circular pick-up and drop-off pull out. This provides pedestrian access to the Triangle parking garage and to a tunnel under NE Pacific Street. There is a small raised median that separates the pull out from the westbound through traffic.

At the west terminus of the westbound merge lane from the UW Medical Center driveway there is a short, raised median that separates the merging westbound traffic from a westbound turn lane into another UW Medical Center driveway.

North of the short median is a right turn slip lane that allows for traffic to turn from NE Pacific Street onto NE Pacific Place.

West of the NE Pacific Place slip lane is the Montlake Station pedestrian plaza. This plaza accommodates a major transit stop for westbound passengers. At the west point of the plaza, there is a signalized pedestrian crossing of NE Pacific Street – crossing two westbound lanes, a left turn lane into the UW Medical Center, two eastbound general purpose lanes and one 3+ HOV lane.
West of the pedestrian crossing, the westbound left turn lane ends and there is a raised median. The median separates left turning vehicles into the UW Medical Center from vehicles approaching from the west in a left turn lane to NE Pacific Place.

Figure 2.3  NE Pacific Street & NE Pacific Place Existing Conditions

2.1.7 NE Pacific Street/NE Pacific Place Intersection – See Figure 2.3

- East Leg: There are two westbound through lanes, one westbound left turn lane into the UW Medical Center, two eastbound general purpose lanes and one 3+ HOV Lane. There is an eastbound bus pull out just east of the intersection.
- North Leg: There is one lane southbound right turn only on to NE Pacific Street. One lane northbound, receiving left turning vehicles from NE Pacific Street.
- South Leg: A two-lane, one way entrance to the UW Medical Center.
West Leg: There are two westbound through lanes. Eastbound, there is one left turn lane, two
general purpose lanes and one 3+ HOV lane.

2.1.8 NE Pacific Place between NE Pacific Street and Montlake Boulevard

There is one through lane in each direction. North of the Montlake Station pedestrian plaza, a slip lane from westbound NE Pacific Street joins NE Pacific Place at a “T” intersection that is stop sign-controlled for entering traffic. Further north there is a southbound left turn pocket into the Triangle parking garage. Continuing north, between two mid-block pedestrian crossings, there is a short bridge section over an old tunnel on a drive that formerly provided access from NE Pacific Street to the central campus. This drive is no longer functional for general access. North of the mid-block crossings, on the east side of the road is a bus pullout layover space. This area is not used for active boarding/alighting, with the possible exception of special busses serving football fans on game days. Just south of the Montlake Boulevard intersection, the roadway consists of two general purpose lanes, one bus only northbound bound lane, and one southbound lane. See Figures 2.2 and 2.3.

2.1.9 East Roanoke Street – south of SR 520 and east of Montlake Place East

Between West Montlake Place East and 22nd Ave East, East Roanoke Street has one through lane westbound and one lane transitioning to two lanes eastbound with on-street parking on both sides. Between 22nd Avenue East and the signal at Montlake Place East, East Roanoke Street fans into a broad paved area with the two eastbound lanes transitioning to dual left turn lanes plus a single right turn lane (there is no through eastbound movement at this location). From southbound Montlake there is a westbound slip lane onto Roanoke. See Figure 2.4.
2.2 Traffic Volume

2.2.1 2006 Traffic Volume on City Arterials

The following traffic counts are average vehicles per day obtained from the Seattle Department of Transportation 2006 Traffic Flow Map.

- Montlake Boulevard south of NE Pacific Street: 56,800
- Montlake Boulevard north of NE Pacific Street: 44,900
- NE Pacific Street west of Montlake Boulevard: 15,000 – 20,000
- East Roanoke Street west of East Montlake Place: <5,000

2.2.2 2007 Traffic Volume at East Campus Parking Gates

The following traffic counts are average vehicles per weekday, obtained from the 2007 UW Annual Campus Traffic Count.

- Montlake Boulevard at NE Pacific Place (Gate 8):
  - Inbound: 634. 193 vehicles between 7 AM and 9 AM
  - Outbound: 1,426. 541 vehicles between 4 PM and 6 PM
- E11 & E12 Entrance/Exit @ NE Pacific Street:
  - Inbound: 945. 363 vehicles between 6 AM and 8 AM
  - Outbound: 187. 85 vehicles between 3 PM and 6 PM

2.3 Signalized Intersections

2.3.1 NE Pacific Street/Montlake Boulevard (Span Wire)

- Westbound: No signal, right out only from E11, E12 parking lot driveway.
- Northbound: Four signal heads; two for dual left turn lanes and two for through lanes.
- Eastbound: Two signal heads for right turning traffic - no left turns and no through traffic.
- Southbound: Two signal heads for through traffic, left turn arrow on the intersection to E11 and E12 parking.

2.3.2 NE Pacific Street/NE Pacific Place (Span Wire)

- Westbound: Two signal heads for through traffic, no signal for left turns.
- Northbound: No signal, southbound entrance only.
- Eastbound: Two signal heads, one signal for left turns.
- Southbound: Two signals for right turning traffic – no turns on red. No left turns, no through traffic.

2.3.3 Montlake Boulevard/NE Pacific Place (Span Wire)

- Westbound: Two signal heads. Left or right turns only, no through traffic onto NE Pacific Place.
- Northbound: Two signal heads. No left turns.
• Eastbound: Two signal heads.
• Southbound: Two signal heads. No protected left turns into E10 and E17 parking.

2.3.4 East Roanoke Street/East Montlake Place East (Span Wire)
• Westbound: None. There is no approach to East Roanoke Street from the east.
• Northbound: Two signal heads.
• Eastbound: Two span wire signal heads and one pole mounted signal on the east side of Montlake.
• Southbound: Two signal heads.

2.4 Pedestrian Facilities
2.4.1 Sidewalks
• Montlake Boulevard
Sidewalks exist on both sides from the Montlake Bridge to the NE Pacific Place intersection. Between this intersection and the Hec Edmundson Pavilion pedestrian overpass, there is a sidewalk on the east side of the street. On the west side there is no sidewalk north of the stairway that connects the NE Pacific Place sidewalk to the Burke Gilman Trail, which parallels Montlake Boulevard and is separated from it by a vegetated slope. The accessible route to the Burke Gilman Trail is further south on NE Pacific Place.

• NE Pacific Street
Sidewalks exist on both sides from NE Pacific Place to Montlake Boulevard. At the UW Medical Center passenger pick-up/drop-off on the north side of the street, the sidewalk curves around the outside of this semi-circular driveway. At the right turn slip lane to NE Pacific Place the sidewalk parallels this roadway to intersect with the NE Pacific Place sidewalk. The Montlake Station on the north side of NE Pacific Street is a large paved pedestrian plaza and there is no delineated sidewalk.

Between NE Pacific Place and the UW Medical Center pedestrian overpass, there is a sidewalk on the south side of the street. On the north side of the street, there is no sidewalk west of NE Pacific Place. There is an accessible pedestrian connection from NE Pacific Place to the Burke Gilman Trail, which parallels NE Pacific Street and is separated from it by a vegetated slope.

• NE Pacific Place
There are sidewalks on both sides between Montlake Boulevard to the north/east side of two mid-block pedestrian crossings. South/west of this pedestrian crossing there is a sidewalk on the south side of the street. On the west side of the street, the Burke Gilman Trail serves as the pedestrian route. Two ramps from the Burke Gilman Trail provide access to the Montlake Station plaza near the NE Pacific Street/NE Pacific Place intersection.

• East Roanoke Street
There are sidewalks on both sides, with a striped crosswalk on the west side of 22nd Avenue East, and also striped crosswalks across the three legs of the intersection at East Montlake Place East.

• Burke Gilman Trail
The Burke Gilman Trail is a paved, multi-purpose path that parallels Montlake Boulevard on the west, curves around the west side of NE Pacific Place, and parallels NE Pacific Street on the north. There are multiple access points to the Trail within the study area, including: Hec Edmundson Pavilion pedestrian overpass; a stairway at NE Pacific Place/Montlake Boulevard; two parallel pedestrian paths mid-block on NE Pacific Place (northern path is paved, southern path is gravel); two paved ramps near NE Pacific Place/NE Pacific Street; and a UW Medical Center pedestrian overpass west of NE Pacific Place. See Figure 2.5.

Figure 2.5  Burke Gilman Trail and other Pedestrian/Bicycle Facilities  
Source:  Seattle Department of Transportation

### 2.4.2 Intersection Crosswalks and Ramps

- **Montlake Boulevard/NE Pacific Street** - See Figure 2.1

  There are striped crosswalks on the north, west and east legs. A pedestrian refuge island on the west side of Montlake Boulevard provides connections between the UW Medical Center (southwest), Triangle parking garage (northwest) and Husky Stadium (east). Each “island” access point has a curb ramp, as does the corresponding sidewalk across the street (except on the Husky Stadium side where there is no curb). The Montlake Boulevard crosswalk has a short raised pedestrian refuge island between northbound and southbound traffic lanes, with an at-grade passage through the middle. On the Husky Stadium side, the crosswalk lands in an area of complex vehicular movements, with cars entering a driveway from both northbound and southbound Montlake Boulevard, and exiting to northbound Montlake Boulevard. A stripe-delineated, triangular shaped pedestrian refuge island exists south of the crosswalk, with metal pole bollards parallel to Montlake Boulevard.
• **Montlake Boulevard/ NE Pacific Place - See Figure 2.2**

There are striped crosswalks on the south, east, and west legs only. There are two pedestrian refuge islands. A small, hard surfaced island separates the southbound bus lane from the through/right general purpose traffic. This island has three ramps: one for east/west access across Montlake Boulevard, one for north/south access across the bus lane, and one for north/south access across the NE Pacific Place general purpose lanes. Each landing across from the island has a curb ramp. A larger, landscaped island exists on the west side of Montlake Boulevard and north of the NE Pacific Place intersection. It separates southbound Montlake Boulevard traffic from the southbound slip lane onto NE Pacific Place. Pedestrian access across this island is at the south end where a short sidewalk segment links the curb ramp at the NE Pacific Place/Montlake Boulevard intersection with the curb ramp that leads to the striped crossing of the slip ramp. A sidewalk continues to the south on NE Pacific Place and stairs lead to the Burke Gilman Trail.

• **NE Pacific Street/NE Pacific Place - See Figure 2.3**

There are striped crosswalks on the south, east and north sides. The east crosswalk across NE Pacific Street and the north crosswalk across NE Pacific Place provide access to the Montlake Station pedestrian plaza. The south crosswalk is across driveway access to the UW Medical Center. There are curb ramps at each end of each crosswalk. At the north end of the Montlake Station plaza, there is an unstriped crossing of the NE Pacific Place slip ramp, with curb ramps on each end. This is the accessible route to the Montlake Station plaza from the NE Pacific Street sidewalk as there is no crosswalk or curb ramp direct to the plaza from the north side of NE Pacific Street.

2.4.3 Mid-Block Crossings

• **Hec Edmundson Pavilion Pedestrian Overpass – Montlake Boulevard: North of the study area, this overpass provides a pedestrian connection between the Burke Gilman Trail and upper campus to Hec Edmundson Pavilion and other UW athletic facilities and parking.**

• **UW Medical Center Pedestrian Overpass – NE Pacific Street: West of the study area, this overpass provides a pedestrian connection – with use limited to students, faculty, staff, and others with building access – to the Burke Gilman Trail and upper campus.**

• **UW Medical Center Pedestrian Underpass – NE Pacific Street: Between Montlake Boulevard and NE Pacific Place an underpass connects the UW Medical Center and the Triangle parking garage. Sidewalk access to the underpass on the north side of NE Pacific Street is at the east end of the passenger pick-up/drop-off pull out. On the south side, access is near the hospital building entrance.**

• **NE Pacific Place Mid-Block Crossings: Two mid-block crossings provide access between the Burke Gilman Trail/ upper campus to and the Triangle parking garage. There is no sidewalk between these two crossings, the Burke Gilman Trail provides the connection approximately 50-feet west of NE Pacific Place. See Figure 2.6.**

  o **North Crossing:** This is the primary route. It has curb ramps on both sides of the street and piano key crosswalk striping. This is the signed crossing for the Lake Washington Loop bicycle route.
South Crossing: This crossing also has piano key crosswalk striping but has no curb ramps on either side of the street.

Figure 2.6  Mid-block Crossing/Sidewalks along NE Pacific Place at Rainier Vista/Burke Gilman Trail
Source: Pedestrian Study performed by Parametrix

2.5  Bicycle Facilities
The Seattle Department of Transportation citywide bicycle system map, see Figure 2.5, shows bike lanes, shared use paths, and streets commonly used by bicyclists, with special detailed maps for high use areas such as the U District and Montlake.

- Montlake Boulevard: No dedicated on-street bicycle facilities
- NE Pacific Street: No dedicated on-street bicycle facilities
- NE Pacific Place: No dedicated on-street bicycle facilities
- Burke Gilman Trail: Paved, shared multi-use path
- Lake Washington Loop Bicycle Route: This signed bicycle route utilizes the Burke Gilman Trail, crosses the UW Triangle parking garage island, and uses the sidewalk on the east side of Montlake Boulevard

2.6  Transit Operations
NE Pacific Street and Montlake Boulevard south of NE Pacific Street are classified Principle Transit Streets, Montlake Boulevard north of NE Pacific Street and NE Pacific Place are classified Major Transit Streets, and East Roanoke Street is a Minor Transit Street according to the Seattle Department of Transportation Transit Classifications Map (2006).
NE Pacific Street and Montlake Boulevard are served with both trolley buses and diesel buses. Overhead trolley wires provide for bi-directional trolley travel (on Montlake Boulevard, bi-directional trolley routes are south of NE Pacific Street only). Overhead trolley wires are also suspended over NE Pacific Place and a segment of southbound Montlake Boulevard between NE Pacific Place and the NE Pacific Street to allow for the #44 trolley route to maneuver a clockwise turn around.

Bus shelters are located on NE Pacific Street at the Montlake Station, serving both eastbound (2 shelters connected) and westbound (1 shelter) passengers (see Figure 2.1). Table 2.1 below summarizes current service characteristics of westbound transit routes that serve Montlake Station – on NE Pacific Street (Source: KC Metro 2007, Sound Transit 2007).

### Table 2.1 Westbound Transit Serving Montlake Station along NE Pacific Street

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Source: KC Metro 2007, Sound Transit 2007

Table 2.2 below summarizes current service characteristics of eastbound transit routes that serve the Montlake Station – on NE Pacific Street.

### Table 2.2 Eastbound Transit Serving Montlake Station along NE Pacific Street

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<th>Route Type</th>
<th>Service Frequency (minutes)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Peak</td>
<td>Off Peak</td>
</tr>
<tr>
<td>25</td>
<td>diesel</td>
<td>30</td>
<td>30-50</td>
</tr>
<tr>
<td>43</td>
<td>trolley</td>
<td>7-15</td>
<td>15</td>
</tr>
<tr>
<td>44</td>
<td>trolley</td>
<td>10-15</td>
<td>10-20</td>
</tr>
<tr>
<td>48</td>
<td>diesel</td>
<td>10-15</td>
<td>10-15</td>
</tr>
<tr>
<td>133</td>
<td>diesel</td>
<td>30</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Table 2.3 below summarizes current service characteristics of transit routes that serve the bus zone along NE Pacific Place just east of the Montlake Station plaza.

**Table 2.3 Eastbound Transit Serving the Bus Zone along NE Pacific Place**

<table>
<thead>
<tr>
<th>Route #</th>
<th>Route Type</th>
<th>Service Frequency (minutes)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>trolley</td>
<td>10-15 10-20 15</td>
<td>South/east end of line turn around.</td>
</tr>
<tr>
<td>48</td>
<td>diesel</td>
<td>varies N/A N/A</td>
<td>Symbol B routing: Does not serve Montlake Station.</td>
</tr>
</tbody>
</table>

Source: KC Metro 2007

Table 2.4 below summarizes current service characteristics of the transit route that serves Montlake Boulevard – there are transit stops on Montlake Boulevard southbound between NE Pacific Place and NE Pacific Street and northbound at the NE Pacific Street intersection and at Hec Edmundson Pavilion. See Figures 2.1 and 2.2.

**Table 2.4 Transit Route along Montlake Boulevard**

<table>
<thead>
<tr>
<th>Route #</th>
<th>Route Type</th>
<th>Service Frequency (minutes)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>243</td>
<td>diesel</td>
<td>30 N/A N/A</td>
<td>AM and PM peak service only between Jackson Park and Bellevue.</td>
</tr>
</tbody>
</table>

Source: KC Metro 2007

Table 2.5 summarizes current service characteristics of the transit route that serves East Roanoke Street. There are two transit stops in the immediate work area: westbound stop has a shelter, eastbound has no shelter.
Table 2.5 Transit Route along East Roanoke Street

<table>
<thead>
<tr>
<th>Route #</th>
<th>Route Type</th>
<th>Service Frequency (minutes)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>diesel</td>
<td>20-30</td>
<td>30-60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

Source: KC Metro 2007

2.7 Other Access

2.7.1 NE Pacific Street

There is one south side driveway access point to the UW Medical Center at a mid-block location that is an exit only except for a separate ingress/egress signalized access drive for emergency vehicles and patient and visitor parking. Refer to Figure 2.1.

2.7.2 NE Pacific Place

There is an east side driveway access point for the UW Triangle parking garage just north of the slip ramp from NE Pacific Street. This driveway has right turn and left turn access. Refer to Figure 2.3.

2.7.3 East Roanoke Street

There are two driveways to a commercial parking lot on the north side and one residential driveway on the south side. There are additional residential driveways on both sides of West Montlake Place west of the immediate construction area on East Roanoke Street.

2.8 Parking

There is no on-street parking on Montlake Boulevard, NE Pacific Street or NE Pacific Place., within the vicinity of the University of Washington Station. Parking analysis on the UW surface parking lots and within the Triangle garage has not been performed for this report. The University of Washington parking map is provided for reference in Figure 2.7. Parking lots E11 and E12 are available for University of Washington employees, students and the general public. E17 has wheelchair/lift van parking. Lot E10 is within the Husky Stadium gates and is available to UW faculty/staff/students by permit. E10 is also available to visitors who can purchase hourly tickets. On Husky football game days, parking in Lots E11, E12, and E17 is available to special permit holders only, and there is no parking in E10.

On-street parking is available on East Roanoke Street, south of SR 520. PM peak hour parking is restricted on the south side of Roanoke. Parking on football game days is prohibited on both sides.
Figure 2.7 University of Washington Parking Areas near Husky Stadium
Source: University of Washington
3. U210 Contract. Introduction

This chapter identifies and documents the impacts of the U210 construction to existing traffic and pedestrian conditions near Husky Stadium. Figure 3.1 is a vicinity map showing the University of Washington Station area and the proposed work site for U210 contract.

Figure 3.1 University of Washington Station Vicinity Map
3.1 Proposed Construction Activities and Impacts

Contract Package U210 consists primarily of utility relocations at the University of Washington station site in advance of Contract U220. Utilities to be relocated will be relatively shallow lines that are needed to maintain services during construction of the U220 Contract. Deeper utilities and those requiring support and protection during construction will be handled by Contracts U220 and U250. The U210 work will take place on University of Washington property.

U210 contract work sequence involves the following:

1. Secure site with perimeter fencing and install environmental controls, including TESC measures.
2. Demolish and remove landscaping, buildings, sidewalks and pavement.
3. Relocate existing utilities within the UW parking lots, E10 and E12 near the location of the UW station box and Husky Stadium entrance gates.
   a. Storm drains and a water main within the UWS footprint are to be relocated around the station box
   b. An electrical and communications duct bank, which is within the UWS footprint, will be relocated to the east, between the UWS box and Husky Stadium
   c. Irrigation sleeves and lines are to be relocated and installed.
4. Replace paving, sidewalks and pavement markings and restore the site.

3.2 Impacts Due to Construction

General impacts due to construction involve displacement of existing parking and impacts to vehicular and pedestrian circulation within the E10 and E12 parking lots, some disturbance to established landscaping, relocation of dumpsters that are located within the perimeter fencing and disruption to existing utilities during the relocation.

The Contractor will be required to maintain access to parking areas via the NE Pacific Place/ Montlake Boulevard intersection, and to maintain pedestrian walk ways, or provide appropriate alternate routes.

The Contractor shall submit a Traffic Management Plan (TMP) to be approved by the Resident Engineer and UW Facilities Services. The TMP shall address all items such as construction schedules, construction phasing, times of parking lot circulation closures and reroutes, a parking displacement analysis, times of sidewalk closures and reroutes, plan to maintain delivery routes and emergency vehicle ingress and egress plan.

3.2.1 Parking Impacts

The Contractor shall minimize all parking space impacts, sidewalk impacts and parking lot circulation impacts.

All displaced parking during construction will be coordinated with Sound Transit and the UW and the cost of lost parking will be reimbursed by the Contractor at a rate of $12.00 per space per day.

- The E10, E11, E12 and E17 parking lots shall remain in service during construction.
- Within the E10 Lot, approximately 40 to 45 parking spaces will be temporarily displaced due to needed utility relocations. Construction should be phased so that parking impacts in all areas
of the construction do not occur all at the same time. Contractor will plan the Work to minimize the number of impacted parking stalls.

- Within the E12 Lot:
  - Waterline replacement and ductbank installation along the north side of E12 - approximately 21 parking spaces will be displaced due to needed utility relocations. Approximately 15 additional parking spaces may be displaced to accommodate pedestrian and vehicular reroutes around the utility work as described in Section 3.2.2 and illustrated in Figure 3.2. Contractor will plan/phase the Work to minimize the number of impacted parking stalls.
  - Irrigation sleeve/lines installation – approximately 6 spaces will be displaced. Contractor will plan the Work to minimize the number of impacted parking stalls. See figure 3.3.
  - 12” storm drain installation within – approximately 40 spaces will be displaced. Contractor will plan/phase the Work to minimize the number of impacted parking stalls. See figure 3.3.
  - 8” storm drain installation on the south side of E12 – approximately 26 spaces will be displaced. Contractor will plan/phase the Work to minimize the number of impacted parking stalls. See figure 3.3.

- There are no anticipated impacts to parking spaces in the E11 or the E17 parking lots.

3.2.2 Traffic Operation

- Arterial Operations
  - There are no general impacts to traffic operations along Montlake Blvd, NE Pacific Street and NE Pacific Place.
  - The Contractor shall access the work site using the signalized intersection of NE Pacific Place and Montlake Boulevard.

- Parking Lot Circulation
  - At Main Entrance: Montlake Boulevard/NE Pacific Place
    - The relocation of underground utilities will involve trenching across the main driveway entrance into the Husky Stadium parking lots from the Montlake Boulevard/NE Pacific Place intersection. Contractor shall maintain two-way traffic at all times at this main entrance into the parking lots. See Figure 3.4 and Figure 3.5. An approved Traffic Control Plan (TMP) shall be submitted for the Resident Engineer and UW Facilities Services to approve.
    - It is suggested that during the utility relocations near this main driveway that all vehicular access to the E10 Lot be rerouted to the South West Gate. This will minimize traffic operation impacts near and into the intersection of Montlake Boulevard and NE Pacific Place.
      - In the E10 Parking Lot
        - The E10 parking lot shall remain in service during work in this area. The contractor is to coordinate sequence of work with the Resident Engineer.
      - In the E12 Parking Lot
        - For waterline replacement and ductbank installation along the north side of E12 – A traffic reroute will be necessary to direct motorists around the perimeter of the construction area
where the utility relocations encroach into the parking lot travel lanes. Options for either a single-lane or a two-lane reroute route that may be established are described as follows:

- A two-lane reroute may be established by removing approximately 15 additional parking spaces in the adjacent parking row to the south. This would allow for the creation of a minimum 20’ wide vehicular reroute, allowing for two-way traffic, as shown in Figure 3.2. A four-foot minimum pedestrian walkway would also be needed.

- A single-lane reroute may be established by removing 13-15 parking spaces on the south side of the parking lot aisle, creating a 14-16 foot-wide travel route between the temporary walkway and the striped southern edge of the parking spaces. This single-lane segment would need to be regulated as eastbound or westbound only. A flagger may be required depending on construction sequencing or operation. Steel plates may be used over open trenches during non-working hours.

For irrigation sleeve/lines installation and storm drain installation within E12 - The contractor will be required to maintain vehicular circulation with in the E 12 parking lot travel aisles/lanes at all times. During periods of time the contractor is in the aisle, two-way/one-lane operations will be necessary. The contractor can use “steel plates” over open trench work during all non-working hours or when not at the open trench site. See figure 3.3.

The Contractor shall minimize the duration of disruption to the parking lot traffic aisle and shall expeditiously restore the asphalt pavement and parking stall striping following relocation of the utility in the parking traffic aisle.
Figure 3.2. E12 Suggested Pedestrian and Vehicular Rerouting Diagram
Figure 3.3  Suggested Maintenance of Traffic in E12 Parking Lot

- Contractor will maintain parking lot aisle two-way traffic at all times.
- During periods of construction within the aisle, contractor will allow two-way-one-lane operation using a steel plate over open trenches.
- Steel plates will be used during non-working hours and when contractor is not working in the vicinity to maintain two-way/two-lane traffic operations.
Figure 3.4 West Gate Vicinity – Suggested Vehicular Traffic Control

- The contractor will provide a safe pedestrian route around utility relocation.
- Propose closing the West Gate access to vehicular traffic while maintaining travel lanes to Montlake Boulevard. Access to E10 from the SW Gate.
- Provide temporary asphalt driving surface.
3.2.3 Pedestrian Circulation

All sidewalk closures will be coordinated with the Resident Engineer and UW Facilities Services and addressed in the TMP. They will be properly signed, safe and clear of debris for all pedestrian movements thru the construction area. All sidewalk closures and reroutes will be per City of Seattle standards and will be ADA compliant. The contractor will minimize the amount of time sidewalks are closed. Work will accommodate daily and event access for pedestrians and bicyclists at all times.

- **In the E12 Parking Lot**

  For the water line and duct bank installation - The sidewalk along the north edge will be closed temporarily due to needed utility relocations, as shown in Figure 3.2.

  - An appropriately demarcated pedestrian reroute shall be established within the E12 parking lot around the perimeter of the construction fencing. This reroute shall provide a minimum four feet unobstructed width along its entire length. Five feet minimum is desirable.
  
  - Two ADA-compliant curb ramps shall be constructed at each end of the pedestrian detour to provide an accessible connection to the existing sidewalk.
  
  - Contractor shall restore the curbs, sidewalks and the modular pavers in kind to their original location, grade and dimension following construction.

- **At West and SW Gates**
Sidewalks leading into and out of the Southwest and West gates are anticipated to be temporarily closed due to needed utility relocations. The area may be fully enclosed by fencing at times.

The Contractor shall maintain at least one pedestrian access gate into and out of the E10 Lot from the Gates at all times. Two gates open would be desirable, with one gate open at each end of the project construction area.

The Contractor may choose to close all access at the SW Gate or all access at the West Gate but not both at the same time. The Contractor shall reroute and adequately sign all pedestrian access to either the SW Gate or to the West Gate, the one that is not closed.

**Near Main Access at Montlake Boulevard**

Trenching between the West gate and Montlake Boulevard will temporarily inhibit pedestrian movement east of Montlake Boulevard, as shown in Figure 3.4. The Contractor will need to perform this work in phases to allow the heavy pedestrian movement safe and continuous passage. Temporary alternate routing will need to be established to direct pedestrians around the work activity to ensure continuous pedestrian access along the east sidewalk on Montlake Boulevard and across pedestrian plaza in front of the west gate.

### 3.3 Special Events

Construction hours of operation and restrictions to construction traffic activities at the UW on special event days for the following events:

- For most construction activity, work hours will be between 7 AM and 5 PM, in single shifts on weekdays. The contractor may request extended hours for special activities such as utility tie-ins, but all work will be done between 7 AM and 10 PM on weekdays.

- It is anticipated that construction of the relocation of the utilities within the E10 and E12 parking lots will be completed prior to commencement activities, June 13, 2009. No impacts during special events are anticipated.

- Other unanticipated special events may occur during this contract. Work hours during these occasions must be approved by the Resident Engineer and UW Facilities Services.

### 3.4 Pedestrian Access During Special Events

The Contractor will provide well delineated pathways for pedestrians between parking lots E10, E11, and E 12 and Hec Edmundson Pavilion. Well lit, marked paved and signed pedestrian pathways will be required for all events in Hec Edmundson Pavilion.

Any open trenches will be plated over with non-skid plates during special events.

### 3.5 Construction Access and Haul Routes

- All Contractor access will be from the intersection of NE Pacific Place and Montlake Boulevard.

- Staging of materials and contractor parking shall be limited to and within the fence-enclosed work site.

- Removal of debris and building materials should use the haul route designated for trucks entering and leaving the U210 site via NE Pacific Place along Montlake Blvd to/from SR 520.
4 U220 Contract

4.1 U220 and U250 Construction Activities, Staging and Schedule

The current schedule and staging plans for the UW Station site are detailed as follows (as of May 2008):

- **Phase 1.** The U220 Contractor will occupy an area not to exceed 4 acres for the first five months of construction (now scheduled from 11/23/09 to 4/22/10). The area used during this time will be at the south end of the site as needed to establish the new access roads to the site and the E12 parking area.

- **Phase 2.** Contractors (U220 and U250) will then occupy the largest staging area, a site not to exceed 6 acres over 36 months (currently 5.67 acres from 4/23/10 to 4/22/13).

- **Phase 3.** At the end of the 36-month period, the contractors will reduce the area occupied to a maximum of 4 acres and will occupy the 4 acre site for a period not to exceed 15 months (currently 4/25/13 to 7/23/14). A total of 15 months of occupancy of a 4-acre site will be used up at this time.

- **Phase 4.** At the end of the 15-month period (for Phase 3), contractors will reduce the area occupied to a maximum of 2 acres, and will occupy this area for a period not to exceed 9 months (currently 7/24/14 to 4/23/15). At the end of this period, the site will be restored to its final configuration as detailed in the U250 final design documents.

4.1.1 Design and Construction Requirements

- **Phase 1.** The first five months of construction will be divided into two sub-phases.
  
  - **Phase 1(a).** This phase would take approximately 3.5 months and would occupy the area south of Boundary A-1 on Figure 4.1. The contract will specify a milestone date approximately 3.5 months after Notice to Proceed, for completion of the new roadway to the E12 parking lot. The contractor will phase work such that the east leg of the Pacific Street intersection will remain open to vehicles to and from E11 until the new south access road is complete. During that period, a 10 foot minimum pedestrian walkway will be maintained along the A-1 Boundary to accommodate pedestrian traffic to Montlake Blvd. The contractor will construct utilities and site work associated with the southern temporary gatehouse. At the end of Phase 1(a), the contractor will consolidate work activities into a smaller area at the south end of the site. The work area to the south of the new roadway will be restored and returned for use by the University. Restoration of this area will be completed no later than 3.5 months after initial occupancy of the site by the U220 contractor.
  
  - **Phase 1(b).** This phase would encompass the last 1.5 months of Phase 1. Work would proceed in the smaller area south of Boundary A-1, as well as in Areas D and E. Work during Phase 1(b) will include excavation of the site to grade and establishment of a new access to Husky Stadium through Area D. The SCL vault and ductbank, in the area denoted as Area E, will be installed and construction areas restored during this time. The contractor will construct utilities and site work associated with the northern temporary gatehouse.

- **Phase 2.** For the next 36 months, month 6 through month 41, (currently April 23, 2010 through April 22, 2013) the maximum 6 acre site will be used for construction. This area,
which is the entire unshaded area in Figure 4.1, actually occupies 5.67 acres owned by the University of Washington. Figure 4.2 shows the area built-out showing driveways and sidewalks. During this time the site will be used by both the U220 and U250 contractors, with significant operations and transitions as follows:

- **Phase 2(a).** The U220 contractor will occupy the entire 6 acre site for approximately 11½ months (currently April 23, 2010 through April 7, 2011). During this time, the U220 contractor will complete construction of the slurry walls for the station and will prepare the station area for turnover to the U250 contractor. He will also complete excavation of the crossover box, assemble both TBM’s and begin tunneling operations for both tunnels. The 6 acre area to be used by the U220 contractor is essentially the unshaded area on Figure 4.1. Figure 4.2 shows use of the full 6 acre site with roadways and sidewalks shown.

- **Phase 2(b).** At the end of Phase 2(a), the U220 contractor will turn over the northern portion of the site (the area north of Boundary F-1) to the U250 contractor, and will continue to work in the area south of Boundary F-1. This configuration will be in effect for about 17 months, from April 8, 2011 to September 10, 2012. At that time the TBM tunneling will be complete and the U220 contractor will have demobilized the tunnel mucking operation.

- **Phase 2(c).** At the end of the 36th month, the U220 contractor will turn over a portion of the crossover box to the U250 contractor, allowing U250 to proceed with station interior civil and finish work in the northernmost 200 feet of the crossover area. The U220 contractor will continue to occupy the southernmost 100 feet of the crossover box (the area south of Boundary F-2 on Figure 4.1), using this area for staging the work on the cross-passages, tunnel invert, walkways and utilities. This configuration will be in effect for 7 months, from September 10, 2012 to April 8, 2013. During the last two months of the U220 contract, which are designated for final cleanup and demobilization, the contractor will restore portions of the area south of Boundary F-1 and turn them over to the U250 contractor, as necessary to tie in with other restoration under the U250 contract. It is anticipated that construction of the pedestrian bridge over Montlake Blvd. will be constructed during this phase of the project. This work is likely to occur between December 2012 and September 2013.

- **Phase 2(d).** During Phase 2(d), the entire staging area is controlled by the U250 contractor for a period of less than one month (April 2013) after the U220 contractor leaves the site. During this month, the U250 contractor will restore about 1.8 acres of the site, resulting in a transition to the 4-acre site, which is the maximum allowed for construction staging during Phase 3.

- **Phase 3.** This phase will last for a total of 15 months (month 43 through month 57 of the project, during which approximately 4 acres of the UW site will be available for construction activities. During this phase, the U250 contractor will complete the roof of the crossover box and restoration of this area. The contractors will also be working on interior finishes, mechanical and electrical work, and track installation for the UW Station. During this phase, restoration of the area occupied by the temporary road at the south end of the site must be completed and the area turned over for University use.

- **Phase 4.** For the final 9 months of the project (month 58 through month 66), the U250 contractor will occupy a 2-acre area on the UW site. The exact location of this area will be determined by the U250 design and will be situated to provide optimal access to the station. During this phase, the contractors will be finishing up the installation of mechanical, electrical, trackwork and systems components and will be testing and starting up these items. Station
finishes will also be completed during this time. During the last month of Phase 4 construction, the area used for stadium access throughout construction will be restored to its final configuration. This area, shown Area D on Figure 4.1 occupies about 0.4 acres.

Subsequent to the end of final 9-month period, Sound Transit will continue to be able to access the station for start-up, commissioning and operational support via the permanent tunnel access points within the station plaza.

Figure 4.1 U220 and U250 Construction Staging Layout
Figure 4.2 Temporary access roads and driveways during full 6-acre occupation
4.2 Impacts Due to Construction at the UW Station

General impacts due to construction involve traffic operation impacts, lane closures, displacing existing parking and vehicle circulation to and within the E10, E11, E12 and E17 parking lots, rerouting pedestrians and bicyclists, and altering Husky Stadium access during special event activities.

There is also construction impacts on East Roanoke Street, south of SR 520 associated with sewer utility work.

Trucking operations are as described in Section 4.2.5.

The Contractor will be required to maintain access to parking areas via the NE Pacific Place/Montlake Boulevard intersection, and to maintain pedestrian walk ways, or provide appropriate alternate routes.

The Contractor shall submit a Traffic Management Plan (TMP) to be approved by the Resident Engineer. The TMP shall include/address:

- Construction schedules;
- Construction phasing;
- Maintenance of traffic plans/traffic control plans;
- Parking displacement analysis per construction phasing;
- Times of sidewalk closures and reroute plans;
- Plans for maintaining deliveries;
- Emergency vehicle ingress and egress plan.

The Contractor shall submit a Special Event Traffic Management Plan (SETMP) to be approved by the Resident Engineer and UW Facilities Services and coordinated with SDOT, King County Metro, and Seattle Police Department. The SETMP will provide details of impacts and mitigation to general purpose traffic, pedestrian, bicycle and transit operations during special events and will include details for:

- Auto operations along Montlake Blvd, NE Pacific Place, and NE Pacific St.;
- Bus operations along Montlake Blvd; NE Pacific Place and NE Pacific St.
- E11 and E12 parking lot operations, both charter buses and auto vehicles;
- Widths of special event pedestrian pathways/sidewalks;
- Auto parking and pedestrian flows, if any, in the grassy area south of E12;
- Pedestrian flows between the stadium and the bus stops and staging areas on Montlake Boulevard;
- Traffic control devices and traffic personnel required;
- Emergency vehicle access

4.2.1 Traffic Operations and Analysis

Since the latter part of 2007, a traffic operation analysis for Montlake Boulevard has continued to be performed and refined, focusing on the intersection of Montlake Boulevard and NE Pacific Street. The analysis assessed the impacts to traffic operations on Montlake Boulevard based on construction activities within the parking lots of E11 and E12 and how vehicles would access Montlake Boulevard via NE Pacific Street and NE Pacific Place.

Construction vehicles entering and leaving the Site were also assessed.
Based on the analysis performed to date, many meetings with Seattle Department of Transportation (SDOT) staff and UW, the following describes the revised traffic operations during construction of the UWS:

- **At Montlake Boulevard/NE Pacific Street**
  
  Reconstruct the east leg of existing intersection to allow 1 inbound (eastbound) lane; 2 outbound (westbound) thru lanes; and 1 right turn lane.
  
  - Traffic signal phasing/operations will be modified to allow the new westbound thru movement. Per SDOT direction this will not be a new phase but overlap with other phases of the signal system. (It will be part of the bus queue jump phase and the east to west pedestrian movement phase).
  
  - The new westbound thru movement will allow vehicles exiting the E12 lot to continue west and south. For the south movement, vehicles will continue west on NE Pacific St, circle around the Triangle garage island using NE Pacific Place and then turn right (south) onto Montlake Blvd. See turn templates performed for large vehicles included in Appendix C, "Truck Routing Feasibility Study around Montlake Triangle".
  
  - Outbound construction vehicles heading to SR 520 will be required to follow this route as well. During spoils removal operations, nighttime hauling operations are anticipated. Trucks will be allowed to make left turns directly onto southbound Montlake Blvd from the Site to SR 520 from 10 pm to 7 am Monday thru Sunday, when Montlake Blvd traffic volumes are at a minimum.

  Revise lane configuration on the north leg by revising the southbound to eastbound left turn movement and including this movement as a protected left turn.
  
  - Per SDOT direction this will not be a new phase but overlap with other phases of the signal system (It will be part of the northbound left turn phase and the eastbound right turn phase).

- **At Montlake Boulevard/NE Pacific Place**
  
  - There is no traffic operation changes proposed at this location.
  
  - The contractor will coordinate with UW and SDOT if this intersection is to be used for trucking access.

- **New Trucking Access north of Montlake Bridge**
  
  A right-in only truck and parking lot access roadway is proposed south of NE Pacific St and north of Montlake Bridge.

Results of the progressive traffic analyses performed are included in Appendix A. In general, the results conclude that the new signalized intersection will operate at acceptable levels of service. Appendix C includes a memo documenting the history of Construction Access to UWS, "Construction and Public Access to University of Washington: Summary of Development and Traffic Analysis performed."

### 4.2.2 Maintenance of Traffic to Impacted Roadway Facilities

Traffic impacts to Montlake Boulevard include lane closures, resignalization, and ingress/egress changes to UW parking lots.
- **Lane Closures**

  Temporary lane closures are anticipated along Montlake Boulevard. These closures could be short-term during weekends and off-peak periods. Based on results of the traffic analysis and the 70% plan development, lane closures will be required to construct a new fourth leg at the intersection of Montlake Boulevard and NE Pacific Street. Lane closures will also be required for the utility relocation across Montlake Boulevard north of NE Pacific Place and across NE Pacific Place. See suggested in-street work zones and traffic control concepts shown in Figures 4.4 through 4.10.
For the reconstruction of the east leg to the intersection at NE Pacific Street, traffic control will be established in phases so that traffic can continue to access the E11/E12 parking lots. Figures 4.4 and 4.5 depict a method of this maintenance of traffic (MOT). The outside northbound curb lane should be closed for the shortest possible duration. Left turns into the parking lot must be maintained during the reconstruction of this intersection. Pedestrians and bicyclists should also be rerouted around this planned work.

**Figure 4.4** Suggested phased MOT at Montlake Boulevard and NE Pacific Street

**Figure 4.5** Suggested phased MOT at Montlake Boulevard and NE Pacific Street
For the utility relocations across Montlake Boulevard north of NE Pacific Place, the contractor will maintain a minimum of two lane/two way traffic at all times. Figures 4.6 and 4.7 depict one method of this MOT. The contractor will minimize impacts to traffic and perform work/lane closures during evenings and/or weekends. As shown in Figure 4.6, closure of the southbound slip lane from Montlake Boulevard to NE Pacific Place may be needed to allow for utility work across that roadway. Traffic destined to westbound NE Pacific Street would travel further south on Montlake Boulevard to the NE Pacific Street intersection. Closure of this lane will require the approval of the Resident Engineer. Figure 4.7 depicts northbound traffic shifted to the west to allow for utility work – the southbound slip lane is reopened to traffic.

Figure 4.6  Suggested phased MOT along Montlake Boulevard at Utility Relocation Site

Figure 4.7  Suggested phased MOT along Montlake Boulevard at Utility Relocation Site
For the utility relocations across NE Pacific Place just east of Montlake Boulevard, the contractor will maintain a minimum of two lane/two way traffic at all times. Figures 4.8 and 4.9 depict one method of this MOT. The contractor will minimize impacts to traffic and perform work/lane closures during evenings and/or weekends, if possible. A pedestrian/bicycle by-pass will be required around the phased work zone.

Figure 4.8  Suggested phased MOT at NE Pacific Place and Montlake Boulevard
For the construction of the truck access driveway south of NE Pacific Street, two northbound lanes should be able to be maintained around the contractor work space. See Figure 4.10. A pedestrian/bicycle by-pass will be required around the phased work zone.
For the utility work on East Roanoke Street, the contractor will reduce East Roanoke Street to a one-lane, two-way operation during construction hours, and will restore the roadway to its regular three-lane, two-way operation in the evenings and on weekends. All residential and business access shall be maintained at all times. All on-street parking in the vicinity of the construction activity shall be removed. Bus operations will be maintained and coordination with King County Metro will be necessary. See Figures 4.11a and 4.11b.
Figure 4.11b  Suggested phased MOT at East Roanoke Street

Maintenance of traffic for the above lane closures will be developed based on the City of Seattle Traffic Control Manual for In-Street Work. Refer to figures X-2, X-4, X-5, X-10(modified), X-11, X-12, X-13, V1-1, and V1-3 all of which have been included herein as Appendix B. The contractor will be required to provide detailed Traffic Control Plans as part of the TMP to be approved by the Engineer, the University of Washington Facilities Services, and the City of Seattle. Access to the parking facilities will be maintained at all times.

- **Resignalization**
  - A new traffic signal would be installed at Montlake Boulevard and NE Pacific Street as described previously in Section 4.2.1. See traffic signal plan in 90% plans submittal.
    - The new signal shall be coordinated with other signals along Montlake Boulevard and should operate in conjunction with the Montlake Bridge operations. The Contractor will coordinate with the City of Seattle Department of Transportation.
  - During the modification of the signal it may be necessary to provide a temporary signal or use of flaggers/uniformed officers to maintain traffic control.

- **Ingress/Egress**
  - The Contractor shall maintain access into and out of the E10, E11, E12, and E17 parking lots at all times. The Contractor will submit a Traffic Control Plan based on construction sequence of activities and will describe all reroutes and diversions of access into parking lots to be approved by the Resident Engineer and UW Facilities Services.
A new truck access driveway just north of the Montlake Bridge will be constructed to provide construction vehicle access to the construction work area. See figure 4.2. General purpose vehicles can use this new access roadway as well.

Access at NE Pacific Place will be maintained at all times.

4.2.3 Maintenance of Impacted Pedestrian and Bicycle Facilities

High levels of pedestrian and bicycle activity along Montlake Boulevard will be impacted and reroutes will be necessary during construction. Significant non-motorized transportation routes also include the Burke Gilman Trail, and the several pedestrian routes through the parking lots for access to sports venues, the UW Medical Center, and to upper campus. Maintenance of pedestrian and bicycle facilities during the various stages of construction will be developed as described below for each of the various construction stages. The contractor will be required to provide detailed pedestrian routing plans as part of the TMP and will be approved by the Resident Engineer, the University of Washington, and the City of Seattle. The contractor will be required to maintain pedestrian access to buildings and parking facilities at all times.

- Maintenance of Impacted Pedestrian Facilities
  - Phase 1:
    - All long term temporary sidewalks shall be a 10-foot minimum width. One exception to this will be along Montlake Blvd. just south of NE Pacific Place where the noise wall encroaches into the sidewalk and only allows 7-feet 6-inches at the very minimum width.
    - A temporary pedestrian route along the north side of the four-acre construction/staging area (refer to Figure 4.1) will be created. This will allow pedestrian access to the parking lots and to stadium gates.
    - For the reconstruction of the east leg of the intersection at NE Pacific Street and the driveway that will access the E11 and E12 lots, a sidewalk will be installed along the south side of the driveway (refer to Figure 4.2). During construction of the east leg at Montlake Blvd, sidewalk detours should be established in phases in concert with the vehicular MOT. Figures 4.4 and 4.5 depict the sequence of construction and a suggested method of rerouting pedestrians and cyclists.
    - For the utility relocation along the Burke Gilman Trail on the west side of Montlake Boulevard just north of NE Pacific Place intersection, a temporary pedestrian and bicycle detour will be required. Recognizing that this as a major pedestrian and bicycle facility, the duration of work and the footprint of the work zone should be kept to a minimum. Possible reroutes are currently being studied are as proposed in the 90% plan submittal, drawing number N21-CC200.
    - For the utility relocations east of Montlake Boulevard near the West Gate to Husky Stadium, it is suggested that pedestrians and bicyclists be rerouted around the east side of the work zone through the existing pedestrian plaza (refer to Figure 4.7).
    - The new truck access driveway south of NE Pacific St will have a sidewalk constructed on the north side of the access road that will continue north up along the E11/E12 parking lots (refer to Figure 4.2). During the construction of the access driveway at Montlake Blvd, a clear and safe temporary minimum 8-foot wide asphalt path/sidewalk shall be constructed to bypass the work zone, as shown in Figure 4.10.
Prior to the installation of slurry walls and noise walls, the existing sidewalk along the east side of Montlake Blvd between NE Pacific Street and NE Pacific Place will be modified by removing landscaping and tree wells to provide a clear path when the noise walls are up. Sidewalk reroutes are proposed along the east side of the work zone for this construction. The contractor shall provide a clear and safe path for the detour.

- **Phase 2 and 3:**
  - A new stadium gate, driveway and sidewalk will be constructed in Phase 2 prior to the full occupation of the 6 acre staging area. The sidewalk will connect the E 11 lot to the E10 Lot. (Refer to Figure 4.2.)

- **End of construction:**
  - The contractor will replace, reconstruct or remove all roadways, intersections and sidewalks to original configuration.

**Maintenance of Impacted Bicycle Facilities**

- Bicyclists generally use the Montlake Boulevard sidewalks due to high traffic volumes, narrow lane widths and a grated bridge deck that make on-street cycling routes challenging. Therefore, bicyclist impacts and rerouting will be similar to pedestrian impacts and reroutes as described above.

- Bicyclists would use the temporary reroute of the Burke Gilman Trail along with pedestrians. See 90% plans.

**4.2.4 Maintenance of Impacted Transit Facilities**

Transit operation impacts are not expected to affect transit routes on NE Pacific Street. However, routes along Montlake Boulevard at NE Pacific Place, and on East Roanoke Street may be impacted. The impacted routes include:

- **# 243 on Montlake Boulevard.** This is a diesel bus route that provides weekday AM and PM peak service between Jackson Park and Bellevue. There are bus zones for this route on Montlake Boulevard southbound mid-block at the Triangle parking garage, and northbound at the NE Pacific Street intersection and at Hec Edmundson Pavilion. Reconstruction of the east leg of the NE Pacific Street intersection will require temporary relocation of this existing bus zone to the north. Coordination with King County Metro will be required.

- **# 44 on Montlake Boulevard and NE Pacific Street provides frequent trolley bus service between the Montlake Station and Ballard.** There are no anticipated impacts to route #44 for this contract.

- **#48 special routing on NE Pacific Place - Does not serve Montlake Station as does the #48 regular service.** There are no anticipated impacts to route # 48 for this contract.

- **#25 on East Roanoke Street provides relatively infrequent diesel bus service between Laurelhurst and downtown Seattle via Montlake Boulevard.** Route # 25 serves the Montlake Station and there are two bus zones in the East Roanoke Street construction area. Utility work in the roadway will require coordination with KC Metro to ensure uninterrupted service.

**4.2.5 Truck Haul Routes, Site Circulation Plans and Trucking Operations**

Site truck traffic circulation plans and truck haul route plans have been developed and are as shown in the U220 plans submittal.
Trucking operations and hours of operation will be as follows based on 90% design and the approved traffic operation at Montlake Blvd by SDOT:

- Construction trucking will be limited to the hours of 9:00 AM to 2:00 PM (daytime) and then from 10:00 PM to 7:00 AM (nighttime) (per SDOT). During the daytime trucking hours, construction traffic will exit the site at the revised intersection at Montlake Boulevard and NE Pacific Street. Construction traffic will go straight (west) through that intersection, turn left (north) on NE Pacific Place to go around the triangle and return to southbound Montlake Boulevard. During evening hours, trucks will be allowed to turn left directly onto southbound Montlake Boulevard. Monitoring of traffic operations and congestion may require changes to these hours. A large vehicle turn template analysis has been completed and in Appendix C.

- During daytime hours, it is estimated that the intersection can accommodate a volume of construction traffic out of the site of 20 trucks/hour (one truck every 3 minutes). For the 5 hours of daytime trucking, this amounts to 100 trucks. This will allow the following configuration of truck movements at the peak of construction:
  - Tunnel segment delivery: 20 trucks/day
  - Concrete, rebar, etc: 20 trucks/day
  - General deliveries: 20 trucks/day
  - Remaining trucking capacity: 40 trucks/day

- During night time hours, there will be little traffic interference and trucks can turn left onto Montlake Boulevard. With this movement, it is estimated that the intersection can accommodate up to 30 trucks per hour (one truck every 2 minutes) or a total of 240 trucks during the 8-hour nighttime period. At the peak of construction spoils hauling, when tunneling under U220 and station excavation under U250 are in full production, the required number of truck movements are as follows:
  - TBM tunneling for 2 bores (avg. 50 ft/day): 128 trucks/day
  - Station excavation (avg. 1,000 cy/day): 62 trucks/day
  - Remaining trucking capacity: 40 trucks/day

Prior to the start of tunnel boring machine (TBM) tunneling operations, the maximum number of trucks needed for spoils hauling from site operations is 80 trucks per day, during excavation of the crossover box. Since there will be no segment delivery during this time, the capacity for day time spoils hauling is about 60 trucks. This would require moving about 20 truck loads per day into the night time hauling hours, a scenario that can easily be accommodated within the proposed trucking configuration.

When TBM tunneling and station excavation are in full operation, spoils trucking will average 190 trucks/day. With a maximum of 40 trucks/day allocated to day time hauling, 150 trucks would leave the site during night time hauling hours. This is less than 20 trucks per hour.

In order to achieve an average tunneling rate of 50 ft/day, the TBM must be able to achieve a maximum rate of about 75 ft/day (1.5 times average). At this rate of tunneling, an additional 64 truck trips will be generated for hauling tunnel spoils. This brings the total night time truck trips from 150 to 214, or about 27 trucks per hour, which is still less than the assumed night time capacity of 30 trucks/hour.

- Truck Queuing: In working with the University, an area has been identified parallel to the site entrance road, about 300 feet long by 16 feet wide which will be available for truck queuing. This allows space for at least three trucks in an on-site queuing area in addition to space within the construction site for one or two trucks in each contract area.
Spoils Stockpiling: A stockpile area for about 4,000 cubic yards (cy) of spoils has been identified in staging drawings for the U220 contract and an area for 2,000 cy would be available for the U250 contract. This will allow flexibility to stockpile spoils and perform additional hauling on weekends to clean out any excess spoils that have accumulated during the week. This provides room to stockpile over 2 days of excavated materials for each contract. In addition, space has been identified for stockpiling tunnel liner segments in the U220 contract area, which would accommodate two days of tunnel production at a rate of 50 ft/day.

Trucking Coordination between U220 and U250 Contracts: Each contractor will be required to manage trucking operations and coordinate with other contractors on a day-to-day basis as necessary to avoid conflicts and keep traffic moving through the site.

4.2.6 Emergency Vehicle Access
All emergency vehicle ingress/egress during construction for non-event and special event will be maintained throughout construction at the UWS. A detailed emergency access plan will be submitted with the Traffic Management Plan and Special Event Management Plan submittals. The contractor shall use the guidelines established and documented in discussions that are underway between UW, Sound Transit, and the Seattle Fire Department. The contractor will also work and coordinate with UW, King County Metro and the Seattle Fire Department during the development of the Special Event Management Plan submittal. The contractor will be responsible to ensure that the provisions of the plan are implemented and maintained.

4.2.7 Special Events
Construction activity will disrupt established operations for traffic, transit, and pedestrians and bicyclists during special events held in Husky Stadium, Hec Edmundson Pavilion, and in the Montlake Cut. Construction impacts and restrictions to construction traffic activities for Husky Football, Commencement, Husky Men’s and Women’s Basketball, and the Windermere Cup are as follows:

4.2.7.1 Husky Football

Football Game Day Traffic Operations
- Assume five football seasons are impacted by construction beginning with the 2010 season.
- Generally there are 6 to 7 home football games each season, which runs from early September through mid-November. Kick-off is typically 12:30 PM, although this time may vary for TV coverage and night games. Generally, night games have been limited to one night game per season, however there may be more night games in the future as determined by the University of Washington and the broadcast media.
- In general the existing game day traffic auto and transit operations along Montlake Blvd. will be maintained during construction.
- The hours of construction restrictions would be limited 24 hours in advance of game day. The contractor will develop specific pre- and post-game construction restrictions prior to each game and would include the limitations and restrictions established by the Seattle Department of Transportation traffic restrictions for football game days, which are two hours prior to the game, during the game and up to three hours after the game concludes. The hours of construction activities during special events will be further studied in the Special Event Traffic
Management Plan. The current Seattle Department of Transportation football game day traffic restrictions are as follows:

**Football Game Day Traffic Restrictions (City of Seattle Department of Transportation)**

The game day traffic plan will be implemented approximately two hours prior to the start of each game after which time normal traffic operations will resume until the conclusion of the game, when the post-game traffic plan begins. Below are the basic components of the plan.

- The Washington State Department of Transportation will operate the Montlake Bridge under a modified schedule which will keep the bridge in the down position (open to vehicles and pedestrians) approximately two hours and thirty minutes before the start of the game and up to three hours after the game concludes.

- Seattle Police officers will staff intersections before and after the event in the immediate area to help facilitate safe vehicle and pedestrian flow.

- Lane and traffic restrictions to help control traffic flow will also be implemented throughout the area.

- Prior to the conclusion of the game (beginning in the 3rd Quarter), Montlake Boulevard NE will be closed to through traffic between NE Pacific Street and NE 45th Street until the traffic volumes exiting the stadium parking lots subside.

- All northbound traffic crossing the Montlake Bridge, excluding emergency and permit holding vehicles, will be re-routed westbound on NE Pacific Street.

- Southbound traffic traveling toward Husky Stadium will also be detoured away from the stadium.

- All traffic exiting stadium parking lots along Montlake Boulevard NE will be routed northbound.

- Pedestrian traffic is given precedence for the first 20 minutes after the conclusion of the game by Seattle Police officers to help move the crowds safely away from the stadium.

- At the conclusion of the game, NE 25th Street between Montlake Blvd NE and NE 75th Street becomes one-way northbound for approximately two hours.

**Football Game Day Transit Operations**

- Husky Stadium seating capacity is 72,000, and a significant percent of football fans travel to and from the stadium on regularly scheduled and special transit service.

- Pedestrian routes for transit riders to Husky Stadium would be altered during U220 construction activities as described in the following section.

- Post-game bus staging areas on Montlake Boulevard may not have to be altered during construction.

- In general the existing football game day auto and transit operations will be maintained during construction.

**Football Game Day Pedestrian Circulation**

Football game day pedestrian ingress and egress to Husky Stadium would be impacted by proposed construction activities as would emergency exiting of the stadium.

Pedestrian circulation between the stadium, E11/E12 parking lots and the Montlake Boulevard/Main Campus sidewalks, crosswalks, and bus zones would be impacted.
Phases 1, 2, and 3 construction from November 23, 2009 through December 2014 would eliminate most of the customary game day pedestrian flow across a portion of Lot E11 between Montlake Boulevard sidewalks and the stadium (refer to Figure 4.12).

As described previously, adequate pedestrian access/circulation to and from Husky Stadium should be provided on the new construction access driveway, the temporary access route just north of the four-acre staging area, and across the existing pedestrian plaza from NE Pacific Place should provide.

All long term temporary pedestrian circulation routes will be designed a minimum width of 10 feet.
Phase 2 has the largest construction staging footprint and would occur from April 2010 through April 2013 and would significantly restrict pedestrian access to the stadium during three football seasons.

Access to the existing southwest gate would be reconfigured to accommodate the six-acre construction staging area in Lot E11. A new gate and ramp just to the east of the staging area on the southwest side of the stadium is proposed to be constructed which would allow pedestrian access from the south and east (refer to Figure 4.13).

Figure 4.12 – Football Game Day East to South Side Proposed Pedestrian Flow
The new access road/driveway and the new construction access driveway will provide pedestrian access to Husky Stadium around the construction and staging area. In addition, the contractor shall provide sufficient space for a pedestrian plaza at NE Pacific Place intersection near the west gates and the north end of the station box to accommodate the large volume of game day pedestrians.
Suggested access to the existing and proposed south side of the stadium for pedestrians arriving from the E1 parking lot could be routed around the east end of the stadium to avoid the construction on the west side using Walla Walla Road (refer to Figure 4.14). Adequate advance notification, a public outreach program, way finding signage, public address announcements, and staff guidance, etc. before games will help with this reroute. Other tools will be further studied in the development of a “special event management plan”.

Figure 4.14 Football Game Day East and South Proposed Pedestrian Flow
Emergency Stadium Exits

The contractor will be responsible to address all emergency stadium exits and emergency vehicle ingress/egress issues during construction as part of the TMP and the SETMP submittals. Discussions are underway between UW, Sound Transit, and the Seattle Fire Department to address emergency ingress/egress issues.

Requirements for exits from Husky Stadium are established by the State of Washington Building Code, Table 1024.6.2. Two of the three West gates will be reconfigured, plus the athletics pass gate would be obstructed temporarily by the construction during Phases 1 and 2. Access to the South Gate is provided, but there is intervening construction activity between this gate and parking lots and Montlake Boulevard. Loss of West gate exiting capacity and generally reduced pedestrian circulation on the west side of the stadium and will need to be addressed in the SETMP.

The SETMP will require alternate emergency exit routes, including but not limited to:

- Directing patrons in the West and South lower stands to exit onto the field before exiting the stadium to the north
- Using portions of the E12 parking lot as an area of refuge – requiring some reduction in parking capacity and possible additional South gate capacity
- Other

Options that redirect patrons from accustomed or intuitive exit routes would require modifying existing operational procedures and require additional staff and training. The contractor will be required to coordinate with the UW and the City of Seattle Fire Department so that emergency egress is in compliance with applicable State of Washington Building Code specifications.

4.2.7.2 UW Men's and Women's Basketball: Hec Edmundson Pavilion

- There are 15-20 home games each for the Men’s and Women’s basketball teams in a typical season which runs from November through March. Regular season games are usually held on Thursday evenings and Saturday afternoons, with an occasional Sunday afternoon game. Pre-and post season tournaments may also be held in Hec Edmundson Pavilion, the seating capacity of which is 10,000.
- Anticipate that construction would impact parking and pedestrian access commencing with U210 activities during to 2008/2009 season, through the 2014/2015 season.
- Much of parking Lot E11 would not be available for basketball fan parking during construction.
- Lot E11 and E17 are the designated disability parking areas for basketball games. An alternate parking area for disabled persons will be required during Phase 2 construction.
- In general the existing basketball game traffic and transit operations will be maintained during construction.
- Access at NE Pacific Street will be maintained during construction. Additional police staff may be required to assist with vehicles exiting the parking lots.
- Pedestrian circulation between Hec Edmundson Pavilion and the E11, E12 and E17 parking lots, and the Montlake Boulevard sidewalks, crosswalks, and bus zones would be impacted. Adequate and safe pedestrian flow around the work sites will be provided thru all phases of construction, either using the existing pedestrian and roadway facilities or new ones created.
Phase 2 will have the largest impact on pedestrian access to Hec Ed from the E12 lot. All pedestrians from the E12 lot will be directed to use the walkway along the new temporary road way around the south side of the construction area to the sidewalk along Montlake Boulevard. Additional details will be provided in the TMP and SETMP to be approved by the Resident Engineer.

4.2.7.3 Commencement at Husky Stadium

- Commencement is held on the second Saturday of June in Husky Stadium. Events occur throughout the day from around 9:00 AM to 4:30 PM.
- Assume this event occurs at six different times during the construction process.
- It is anticipated that Phase 1 construction will occur after the 2009 commencement activities. 2010 through 2014 commencement would be impacted by construction, particularly by Phase 2 activities that utilize the greatest number of acres and impact the West gates to Husky Stadium.
- Parking is available in all campus lots, and a shuttle is provided from remote locations. Much of Lot E11 would not be available for graduates or guests during U220 construction.

4.2.7.4 Windermere Cup Rowing Regatta: Montlake Cut

- Event occurs the first Saturday in May. This rowing regatta sponsored by Windermere Real Estate and the University of Washington features crew races and the traditional opening day of boating season. See Figure 4.15
- Construction impacts would occur 2010 through 2014.
- Parking is typically available in Lots E10, E11, and E12. Much of Lot E11 would not be available for regatta spectators during construction.
- The Montlake Bridge is closed to vehicular and pedestrian traffic – in the raised position from 9:40 AM to 4:00 PM.

Figure 4.15. Windermere Cup Activity Area
5.0 U250 Contract

This chapter identifies and documents the construction impacts of the U250 construction activities to traffic, pedestrian and bicycle conditions near the University of Washington Station (UWS) at Husky Stadium from the previous U220 contract build condition to the final configurations at this site. Refer to Figure 4.1 for the U220 contract configuration. Figure 5.1 is a vicinity map showing the UWS area and the final build configuration of the U250 contract activity.

Figure 5.1 University of Washington Station Vicinity Map for U250 Contract Activity

5.1 Construction Sequence/Phasing and Schedule

The scheduled start date is the second quarter of 2011, and the scheduled completion date is the fourth quarter of 2014. The following detailed work sequence for the U250 contract supersedes the construction staging and schedule described in section 4.1. Refer to the maps in section 4.1 for staging area references:

- Phase 2(a): The U220 Contractor will occupy the entire 6 acre site through April 7, 2011 for construction of utility work, temporary shoring walls, slurry walls, excavation of the crossover box, assembly of both tunnel boring machines and tunneling operations.

- Phase 2(b): The U250 Contractor will acquire the northern portion of the site labeled F-1 from the U220 Contractor on April 8, 2011. U250 Contractor to mobilize and begin excavation and construction of the north half of the station. U220 Contractor to continue tunneling operations within Area A-3.

- Phase 2(c): The U250 Contractor will expand site occupancy to the limits labeled Area F-2 on September 11, 2012 for continued construction of the northern portion of the crossover box.
U220 Contractor to continue occupancy of Area A-5 for construction of tunnel crosspassages, walkways, tunnel inverts and utilities.

- U220 to restore Area C and demobilize from site by April 8, 2013
- U250 to acquire Area A-C for restoration.
- Phase 2(d): U250 Contractor will expand site occupancy on April 9, 2013 to include Area F-3 for site restoration of south parking lot E-12.
- Phase 3(a): U250 Contractor will condense site occupancy to Area F-4 beginning April 25, 2013 through May 24, 2014 for continued station crossover box construction and site restoration. All other interior work elements including station finishes, electrical and mechanical work continue. Access to parking lot E-12 restored from Montlake and Pacific Place intersection.
- Phase 3(b and c): U250 to complete staged removal and restoration of the temporary access road from May 25, 2014 through July 23, 2014 and reduce site occupancy to Areas F-5 and F-6 respectively.
- Phase 4(a): U250 to reduce site occupancy to Area F-5 beginning July 24, 2014 through March 23, 2015 for completion of station architectural, mechanical and electrical work and for continued testing of all equipment. Pedestrian bridge construction to be complete during this phase as well as surface restoration.
- Phase 4(b): U250 to complete restoration of Area D and demobilize from March 24, 2015 through April 23, 2015.

5.1.1 Construction Activities and Impacts due to Construction

This section provides an overview description of the construction activities associated with the U250 Contract that will have impacts on traffic, pedestrian, bicycle and transit facilities. Figure 5.2 is a graphic summarizing the construction activities related to the U250 contract.
General impacts due to construction involve traffic operation revisions, road closures, lane closures, displacing existing parking and vehicle circulation to and within the E10, E11, E12 and E17 parking lots, rerouting pedestrians and bicyclists, and altering Husky Stadium access during special event activities.

For all activities that impact roads, pedestrian and transit facilities, the Contractor shall submit a Traffic Control Plan (TCP) to be approved by the Resident Engineer. The TCP shall include/address:

- Construction schedules;
- Construction phasing;
- Maintenance of traffic plans/traffic control plans;
- Details of pedestrian reroutes and detours, including the Burke-Gilman Trail area;
- Parking displacement analysis per construction phasing;
- Plans for maintaining deliveries;
- Emergency vehicle ingress and egress plan.

As developed during the U220 contract, the U250 Contractor will need to modify/update, if necessary, the Special Event Traffic Management Plan (SETMP) to be approved by the Resident Engineer and UW Facilities Services and in coordination with SDOT, King County Metro, and Seattle Police Department. The SETMP provides details of impacts and mitigation to general purpose traffic, pedestrian, bicycle and transit operations during special events and includes details for:

- Auto operations along Montlake Boulevard, NE Pacific Place, and NE Pacific Street;
- Bus operations along Montlake Blvd; NE Pacific Place and NE Pacific Street.
• E11 and E12 parking lot operations, both charter buses and auto vehicles;
• Widths of special event pedestrian pathways/sidewalks;
• Auto parking and pedestrian flows, if any, in the grassy area south of E12;
• Pedestrian flows between the stadium and the bus stops and staging areas on Montlake Boulevard;
• Traffic control devices and traffic personnel required;
• Emergency vehicle access.

5.2 Maintenance of Traffic to Impacted Roadway Facilities

5.2.1 Traffic Operations

As part of the U220 contract design, revised intersection configurations, traffic operations and signal phasing were performed at the intersection of Montlake Boulevard and NE Pacific Street. These revisions will continue into the U250 contract. See Figure 4.2. They are described briefly as:

• Reconstruction of the east leg to allow 1 inbound (eastbound) lane; 2 outbound (westbound) thru lanes; and 1 right turn lane.

• Traffic signal phasing/operations were modified to allow the new westbound thru movement.
  o The westbound thru movement allows vehicles exiting the E12 lot to continue west and south. For the south movement, vehicles continue west on NE Pacific St, circle around the Triangle garage island using NE Pacific Place and then turn right (south) onto Montlake Boulevard.
  o Outbound construction vehicles heading to SR 520 are required to follow this route as well. During spoils removal operations, nighttime hauling operations will continue and trucks are allowed to make left turns directly onto southbound Montlake Boulevard from the Site to SR 520 from 10 pm to 7 am Monday thru Sunday, when Montlake Boulevard traffic volumes are at a minimum.

• Revised the southbound left turn lane/movement to operate with the signal operations. This movement overlaps with the northbound left turn phase and the eastbound right turn phase.

• Constructed a new trucking access road north of Montlake Bridge. This is a right-in only truck and parking lot access roadway.

• There were no traffic operation changes at Montlake Boulevard and NE Pacific Place.

At the completion of the U250 contract, the intersection of Montlake Blvd and NE Pacific Street will be reconstructed as shown in Figure 5.3. The traffic operations of this new intersection will be similar to existing conditions. The new intersection and traffic operation are described as follows:

• The east leg of this intersection will consist of two inbound lanes and one outbound. This is similar to the existing operations which consist of one southbound left turning receiving lane, one northbound right turning receiving lane and one westbound right turning outbound lane. The crosswalk at the east leg will be widened to 16 feet to accommodate the increased north-south activity due to the introduction of the UWS. The crosswalk will not be actuated.

• The north leg will be similar to the operations and configuration of the U220 contract. The left turn lane will continue to be part of the signal operations and will be permissive (although it will be wired to accommodate a change to a protective movement, to be approved by SDOT). The
A significant feature of the U250 contract work is the construction of a pedestrian overpass that spans between the UWS on the east, crosses over Montlake Boulevard, the north end of the Triangle Parking Garage island, NE Pacific Place and the Burke Gilman Trail, with a west-side landing at the Rainier Vista pathway just north of the Burke Gilman Trail.

The current design approach for construction of the pedestrian overpass is a series of segments that include placement of steel box sections over Montlake Boulevard, NE Pacific Place and the Burke Gilman Trail. Bridge support columns will be installed on the east and west sides of Montlake Boulevard in advance of the box section placement. Cranes will be used to place the sections.

Construction impacts related to the placement of the bridge steel box frame and removal of the associated falsework will require nighttime roadway closure of Montlake Boulevard and NE Pacific Place. The Burke Gilman Trail will require trail reroutes as well.

The nighttime closure of Montlake Boulevard and NE Pacific Place is recommended based on the ability of the contractor to provide the most amount work area for the work crews, best production rates within a short period of time (nighttime) and providing the safest work zone for construction crews and the traveling public.
Other nighttime phased maintenance of traffic schemes were considered that would allow traffic to be maintained on Montlake Boulevard with a 2-phase or a 3-phase operation. These were determined not to be as time efficient or as safe as a full closure for an evenings operation.

When closing Montlake Boulevard, traffic would be detoured to NE Pacific Place and NE Pacific Street. See Figures 5.4 and 5.5 for recommended traffic detour routing and signage for the nighttime closure of Montlake Boulevard.

Curb modifications will be required at the raised median on NE Pacific Street/NE Pacific Place, along with use of flaggers and/or uniformed officers at this location, as shown. Also, outbound UW parking lot vehicles will be allowed to make thru movements and left turns at NE Pacific Street with the assistance of flaggers and/or uniformed officers as well. The contractor will work with the UW Traffic/Transportation Facilities Manager to provide advance notification to all permitted patrons in the E10, E11, and E12 parking lots.

For the placement of the bridge decking sections and removal of the associated falsework over NE Pacific Place, the contractor will close NE Pacific Place. Traffic will be detoured to NE Pacific Street and Montlake Boulevard. See Figure 5.6 for recommended traffic detour routing and signage for the nighttime closure. Eastbound left turns on NE Pacific Street onto northbound Montlake Blvd will be allowed with the assistance of flaggers/uniformed officers.

Closure of Montlake Boulevard and NE Pacific Place will not occur concurrently and work will not conflict with any scheduled special events.

The placement of the bridge steel box frame should be able to be accomplished in one or two weekend evenings. Removal of the falsework should be able to be accomplished in a series of evening or weekend operations as well.
Figure 5.4 Traffic Detour Route for Montlake Boulevard Nighttime Closure
Figure 5.5 Montlake Boulevard Traffic Detour Details at NE Pacific Street/NE Pacific Place
Figure 5.6 Traffic Detour Route for NE Pacific Place Nighttime Closure
5.2.3 Reconstruction of the E10, E11 and E12 parking lots and associated roadways

As part of the final station box construction and station finishes will be the reconstruction of the E10, E11, E12, and E17 parking lots and associated driveways/roadways within the UW Husky Stadium parking lot areas. The work will need to be performed in phases described in Section 5.1, so that traffic operations are maintained and parking space displacements are minimized as best possible. The reconstruction/restoration will include the reconstruction of the east leg of the Montlake Boulevard and NE Pacific Street intersection, removal of the truck access roadway north of the Montlake Bridge and the reconstruction of curb gutter and sidewalk along Montlake Blvd.

For the reconstruction of the parking lots, roadways and curb, gutter and sidewalks phased Maintenance of Traffic (MOT) schemes are proposed. They are as follows:

**MOT 1: Construct Station Plaza, partial parking lots and roadways.** See Figure 5.7

- Complete the hardscaped/landscaped area at the University of Washington Station plaza area within the perimeter fencing as much as possible, including portions of the roadway leading to Montlake Boulevard. (This may need to done in phases to be determined by the contractor.)
- Maintain access into the E12 lot as previously constructed in the U220 contract.

![Figure 5.7](image)

**Figure 5.7**
MOT 1: Reconstruct Internal Station and Roadway Elements within Designated Contractor Work Area
MOT 2: Reconstruct the north side of the east leg of Montlake Boulevard/NE Pacific Street Intersection. See Figure 5.8.

- Construct the north side of the NE Pacific Street intersection,
- Construct the new westbound (outbound) lane from the parking lot to Montlake Boulevard,
- Maintain two way traffic on the existing temporary driveway as follows:
  - Maintain one eastbound lane allowing for right turns from northbound Montlake Boulevard to enter the parking lot, and left turns for southbound traffic on Montlake Boulevard;
  - Maintain one westbound lane allowing for right turns onto Montlake Boulevard;
- Shift the pedestrian and bicycle route from the sidewalk/crosswalk area to the UWS plaza;
- Shift pedestrians and bicyclists to a temporary crosswalk across Montlake Boulevard;
- Temporarily close or relocate the route #243 northbound bus stop.

Figure 5.8 MOT 2 Reconstruct the North Side of Montlake Boulevard Intersection

MOT 3: Reconstruct the south side of the east leg of the Montlake/NE Pacific Street intersection. See Figure 5.9.

- Connect the westbound lane of the NE Pacific Street access driveway to the internal parking lot driveway – this roadway lane will temporarily become a one way eastbound (inbound) from left turn pocket on Montlake Boulevard;
- Close the two-way internal north/south driveway within the E11 parking lot - this surface will be utilized as a pedestrian and bicycle bypass route during sidewalk reconstruction along Montlake Boulevard;
- Close the temporary construction access driveway north of the Montlake Bridge, leaving a paved section between Montlake Boulevard and the E11 north/south driveway to be used for a construction bypass route for pedestrians and bicyclists;
- Shift pedestrians and bicyclists to a temporary route on the north/south driveway between the Montlake Bridge and NE Pacific Street;
- Access into and out of the parking lots for northbound Montlake Boulevard traffic will be from the NE Pacific Place driveway until the NE Pacific Street intersection is completed;
- Restore sidewalk and landscaping between Montlake Bridge and NE Pacific Street;
- Restore the E11 parking lot driveways and parking to the final configuration.
MOT 4: Reconstruct the sidewalk and replace short segments of existing curb and gutter north of the NE Pacific Street intersection to NE Pacific Place. See Figure 5.10.

In the segment north of NE Pacific Street to a point near the west stadium entrance plaza, the sidewalk will be removed and restored – but, unlike in the segment to the south of NE Pacific Street, a significant amount of the existing curb/gutter will be retained in this segment. Where and when the small sections of curb will be removed and replaced, a road lane closure will be required. Nighttime work is also recommended when performing this work.

- Shift pedestrians and bicyclists from the sidewalk area to the UWS plaza between NE Pacific Street and NE Pacific Place.
5.2.4 Reconstruction of the curb/sidewalk at the Triangle Parking Garage island

On the west side of Montlake Boulevard and the east side of NE Pacific Place, the curb/gutter and concrete sidewalk will be removed and restored around the northern radius of the Triangle Parking Garage island due to the requirements of the station area at this location. Work on the curb/gutter and sidewalk will involve the temporary encroachment into the southbound and northbound HOV/transit lanes along Montlake Blvd and along NE Pacific Place, respectively. There should be sufficient room to avoid a full lane closure. There are also overhead trolley wires running along the HOV/transit lanes but they should not be impacted by this construction activity. Nighttime work is recommended to minimize disruption to traffic and transit operations. See Figure 5.11.

Figure 5.11 Triangle Parking Garage Island Construction Activities
5.3 Maintenance of Traffic to Impacted Pedestrian and Bicycle Facilities

5.3.1 Burke Gilman Trail/Rainier Vista Pathway

The construction method for the pedestrian bridge over the Burke Gilman Trail will be similar to the method used over Montlake Boulevard and NE Pacific Place. Pedestrian bridge piers would be installed on the outside of the edges of the existing paved pathway. A crane will be used to place the short deck span on the set piers over the Burke Gilman Trail. This work will require temporary full closure of the Burke Gilman Trail for one evening during the placement of the bridge deck. Pedestrians and cyclists will be temporarily routed to the Rainier Vista south pathway via the Burke Gilman Trail and the pathway south of Drumheller Fountain. Advance signs will be set indicating the evening of closure. See Figure 5.12.

It is also recommended that the improvements shown in Figure 5.12 be performed ahead of the pedestrian bridge construction so that there is a detour route in place for the closure of the Burke Gilman Trail while the pedestrian bridge deck is being set.

The gravel pathway on the north side of Rainier Vista just west of the Burke Gilman Trail will require new pavement at the landing of the pedestrian bridge. This work will require full pathway closure of this Rainier Vista pathway. The contractor will perform work in phases to maintain pedestrian flows.

Impacts are expected within the C12 parking lot near the landing of the pedestrian bridge to accommodate a new porous concrete base for bicycle racks, and construction of a new asphalt path connection from the Rainier Vista pathway to the Burke Gilman Trail. Up to 21 parking spaces are expected to be permanently removed. This portion of the parking lot will be closed during the construction of the pedestrian bridge.

Figure 5.12 Pedestrian Bridge Landing at Rainier Vista
5.3.2 Montlake Boulevard

During curb, gutter and sidewalk reconstruction on the east side of Montlake Boulevard between the gravel pathway on the north end of the Montlake Bridge and north of the new 4th leg of the NE Pacific Street intersection (E11 driveway access), it is recommended that pedestrians and bicyclists be temporarily routed to the east of the work zone. See Figures 5.8 and 5.9 for recommended pedestrian and bicycle routing.

During curb, gutter and sidewalk construction on the east side of Montlake Boulevard north of the NE Pacific Street intersection (E11 driveway access), to the NE Pacific Place intersection, it is recommended that pedestrians and bicyclists be temporarily routed to the east of the work zone. See Figure 5.10 for recommended pedestrian and bicycle routing during sidewalk construction north of the intersection.

Sidewalks will be restored along the east side of Montlake Boulevard between the Montlake Bridge and NE Pacific Place per the U250 contract.

During curb, gutter and sidewalk construction on the west side sidewalk of Montlake Boulevard around the north end of the Triangle Parking Garage island, pedestrian access will be temporarily rerouted around the construction area, as shown in Figure 5.11. Sidewalks will be restored on the Triangle Parking Garage island per the U250 construction documents.

During the pedestrian bridge deck installation, it is recommended that sidewalks be closed on both the east side and the west side of Montlake Boulevard in the vicinity of construction activities. The contractor shall prepare a plan – for approval by the Seattle Department of Transportation - to route pedestrians around the nighttime construction work.

Crosswalks across Montlake Boulevard at NE Pacific Street and NE Pacific Place will be restriped to be wider than existing conditions to accommodate the expected increase in pedestrian volume. Suggested crosswalk striping widths at the NE Pacific Street intersection are shown in Figure 5.13.

![Figure 5.13 Recommended Crosswalk Widths at Montlake Boulevard and NE Pacific Street](image-url)
5.3.3 NE Pacific Place
The existing curb/gutter and sidewalk would be removed and restored on the east side of NE Pacific Place across the northern radius of the Triangle Parking Garage island.

During curb, gutter and sidewalk construction, pedestrian access will be temporarily rerouted around the construction area, as shown in Figure 5.11. Sidewalks will be restored on the Triangle Parking Garage island per the U250 construction documents.

Wider striping is recommended at the east leg of the Montlake Boulevard/NE Pacific Place intersection - for the north-south walkway across the parking lot access driveway. This width will be 16 feet.

During the pedestrian bridge deck installation, it is recommended that sidewalk be closed on the east side of NE Pacific Place. The contractor shall prepare a plan for approval by the Seattle Department of Transportation to route pedestrians around the recommended nighttime construction work.

5.3.4 NE Pacific Street
Wider crosswalk striping is recommended at all of the Montlake Boulevard/NE Pacific Street crosswalks. Refer to Figure 5.13 for recommended crosswalk dimensions.

5.4 Maintenance of Impacted Transit Facilities
Route #243 northbound bus stop on Montlake Blvd at NE Pacific Street will need to be temporarily relocated to the north while the curb and sidewalk are being reconstructed. The southbound bus stop along Montlake Blvd at the Triangle Parking Garage island is south of the construction work area and will not be impacted.

Currently a bus stop and the bus layover occur along NE Pacific Place near Montlake Boulevard for Route #44. The curb/gutter/sidewalk installation may require the temporary relocation of this bus stop and layover space.

Overhead wires for the route #44 trolley bus loop around the Triangle Parking Garage island on NE Pacific Place, Montlake Boulevard and NE Pacific Street. Wires will need to be "attached" to the underside of the pedestrian bridge deck. This work will require some possible temporary deployment of diesel buses on this route to replace the trolley buses until the connections can be made.

The Contractor will work with King County Metro on all bus stop and bus layover relocations during construction.

5.5 U220/U250 Contract Trucking Coordination for Phase 2 and Phase 3
Due to the unique location of the University of Washington Station (UWS) site, limitations of construction activities due to traffic congestion, and the contract overlap of the U220 and U250 contracts, several measures have been developed to assist in the management of traffic during the construction of the project.

Section 4.2.5 and 5.1 describes the elements of trucking operations, production rates, hours of operations, proposed truck queuing locations, and spoils stockpiling for the UW site. A key
element is the limitation of construction trucking of excavation spoils on weekdays (Monday-
Friday) to the hours of 9:00 am to 2:00 pm (daytime) and from 10:00 pm to 7:00 am (nighttime). Construction trucking of other heavy civil elements such as concrete, tunnel segments, rebar, etc. will take place during the standard daytime work hours. The two specialized time frames listed above will help minimize or avoid conflicts with the UW general traffic during excavation/spoils handling.

The above limitations have been established for the U220 and U250 contracts. Refer to Figure 5.14 for the truck haul route.

Figure 5.14 Truck Haul Route Map
5.5.1 Summary of Work Activities during Phase 2 and Phase 3

During the development of the U220 final design package and the 60% U250 package, construction contract coordination questions were asked whether the operation could be accommodated by the intersection capacity and whether the site could handle the overlap of the contracts in general. Specifically, Phase 2 and Phase 3 work at the UWS site which will see the maximum amount of construction trucking compared to the rest of the project due to the work activities proposed during these time periods.

A detailed outline of the U220 and U250 general work activities is listed below.

Phase 2a – U220 Contractor Only

During Phase 2a, the U220 contractor will focus work activities on the following:

- Reestablish Temporary Erosion and Sedimentation Control (TESC) measures around new site perimeter
- Completion of temporary shoring around perimeter of site
- Excavate entire site to EL 53
- Install utilities (water, storm drain, sanitary, electrical) within site limits
- Pave entire site
- Install temporary shoring around crossover box and excavate crossover box to EL 39
- Mobilize slurry wall machinery
- Complete slurry walls around entire perimeter of UW Station Box as well as the intermediate wall roughly half way through the station
- Complete excavation of crossover area of UW Station Box (area between intermediate slurry wall and southern end of box)
- Complete crossover base slab
- Mobilize Tunnel Boring Machine (TBM) equipment
- Establish F-1 boundary through middle of site to be used in Phase 2b
- Adjust access location and gates along east edge of site
- Establish power for TBM

Phase 2b- U220 and U250 Contractors

During Phase 2b, the U220 contractor will focus their work activities on the following:

- Reestablish TESC measures around new site perimeter
- Launch TBMs from UWS site
- Provide tunnel lighting, dewatering and ventilation
- Complete tunneling operations for NB and SB tunnels
- Remove TBMs from Capitol Hill Station Site. This activity does not count against area restrictions.
- Establish F-2 boundary through middle of UWS site to be used in Phase 2c

Meanwhile, during Phase 2b, the U250 contractor will focus their work activities on the following:

- Mobilize onto the north station site
- Minor excavation to underside of roof slab
- Construct roof slab at north end of UW Station
• Excavate to Upper Mezzanine and place floor slab at north end of UW Station
• Excavate in sequence to Lower Mezzanine. Construct struts and floor slab at north end of UW Station
• Construct station interior walls
• Backfill roof slab to subgrade

Phase 2c- U220 and U250 Contractors
During Phase 2c, the U220 contractor will focus their work activities on the following:
• Reestablish TESC measures around new site perimeter
• Complete tunnel cross passages
• Complete tunnel invert, walkways, utilities
• Clean tunnels
• Demobilize from site

Meanwhile, during Phase 2c, the U250 contractor will focus their work activities on the following:
• Excavate to station invert, install temporary bracing and construct base slab at north end of UW Station
• Construct topping and platform slab at north end of UW Station.
• Remove temporary bracing
• Construct topping and platform slab at south end of UW Station
• Remove temporary bracing and construct intermediate floor slabs at south end of UW Station
• Backfill north portion of site to grade
• Place roadway along north end of site

Phase 2d- U250 Contractor Only
During Phase 2d, the U250 contractor will focus their work activities on the following:
• Continue to backfill site to grade
• Complete roadway at south end of UW Station
• Restore south end of parking lot for turnaround

Phase 3 - U250 Contractor Only
During Phase 3, the U250 contractor will focus their work activities on the following:
• Construct roof slab at south end of UW Station
• Remove and restore the temporary access road at south end of site
• Place utilities within southern area of site
• Backfill south end of station to subgrade
• Finalize grading in south area of site
• Pave and restore landscape in south parking area
• Assemble and install pedestrian bridge

5.5.2 Construction Truck Traffic
A variety of construction activities will occur during the daytime and nighttime hours specific to the phases and sequence of construction. The contractor will ultimately determine the flow of their traffic from the site but to better understand how the construction traffic may appear, the following estimates have been generated.
**Daytime Trucking Numbers**

During daytime hours (9 am to 2 pm), it is anticipated that the new signalized intersection can accommodate a volume of construction traffic out of the site of 20 trucks/hour (one truck every 3 minutes). For the 5 hours of daytime trucking, this amounts to 100 trucks.

**Nighttime Trucking Numbers**

During the nighttime hours, there will be little traffic interference and trucks can turn left onto Montlake Boulevard. With this movement, it is anticipated that the intersection can accommodate up to 30 trucks per hour (one truck every 2 minutes) or a total of 270 trucks during the 9-hour period. It is assumed that most all mass concrete pours, those over 500 cubic yards, will be scheduled for a nightshift as the daytime impact of general traffic and Montlake Bridge openings on a steady flow of concrete deliveries can be high.

**24 Hour/Daily Trucking Numbers, Average**

During any 24 hour period, construction trucking operations could occur as follows based on the production rates established, on an average:

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Trucking Limitations</th>
<th>Trucking volume allowed for this period of time</th>
<th>Total Trucking Capacity for this period of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>7am – 9 am</td>
<td>No spoils removal</td>
<td>20 trucks/hour</td>
<td>40 trucks</td>
</tr>
<tr>
<td>9am – 2 pm</td>
<td></td>
<td>20 trucks/hour</td>
<td>100 trucks</td>
</tr>
<tr>
<td>2 pm – 10 pm</td>
<td>No spoils removal</td>
<td>20 trucks/hour</td>
<td>160 trucks</td>
</tr>
<tr>
<td>10 pm – 7 am</td>
<td>30 trucks/hour</td>
<td></td>
<td>270 trucks</td>
</tr>
</tbody>
</table>

**Phase 2a – Daytime and Nighttime Trucking Numbers**

It is anticipated that the activities listed for Phase 2a will generate the following construction truck movements during the daytime hours:

- Site excavation, shoring, grading 80 trucks/day
- Slurry wall spoils 20 trucks/day
- Slurry wall concrete/rebar 30 trucks/day
- Crossover Box Excavation 20-80 trucks/day
- General deliveries 20 trucks/day
- Remaining trucking capacity 0-40 trucks/day

During Phase 2a, a number of these activities will occur at the same time while others are independent of each other.

Prior to the start of TBM tunneling operations, the maximum number of trucks needed for spoils hauling from site operations is 80 trucks per day, during excavation of the crossover box. Since there will be no segment delivery during this time, the capacity for day time spoils hauling is about 60 trucks. This would require moving about 20 truck loads per day into the night time hauling hours, a scenario that can easily be accommodated within the current traffic management plan.
Nighttime truck trips are expected to consist of spoils export first from the initial site excavation at approximately 60 trips per night shift and later, the crossover box excavation at 80 trips per night shift. This does not pose a problem as no other activities are projected to occur at this time.

**Phase 2b – Daytime and Nighttime Trucking Numbers**

At the peak of construction traffic during Phase 2b, when tunneling under U220 and station excavation under U250 are in full production, the required number of truck movements are as follows:

- TBM tunneling for 2 bores (avg. 50 ft/day) 120 trucks/day
- Station excavation (avg. 1,000 cy/day) 62 trucks/day
- Tunnel segment delivery 20 trucks/day
- Concrete, rebar, etc 20 trucks/day
- General deliveries 20 trucks/day
- Remaining trucking capacity 40 trucks/day

When TBM tunneling and station excavation are in full operation, spoils trucking will average 182 trucks/day. With a maximum of 40 truck/day allocated to daytime hauling, 150 trucks would leave the site during nighttime hauling hours. This is less than 20 trucks per hour.

In order to achieve an average tunneling rate of 50 ft/day, the TBM must be able to achieve a maximum rate of about 75 ft/day (1.5 times average). At this rate of tunneling, an additional 64 truck trips will be generated for hauling tunnel spoils. This brings the total night time truck trips from 150 to 214, or about 27 trucks per hour.

U250 will periodically schedule mass concrete pours of the station roof and upper mezzanine floor slab. These activities will involve multiple pours on a 7 to 10 day cycle between June 2011 and June 2012. The largest pours, depending upon the layout of construction joints, may range from 950 to 1400 cubic yards per pour over a single night shift. The additional concrete delivery truck demand is 95 to 140 trucks per night per pour and coupled with the projected average spoils excavation, is within the 270 trip capacity of the intersection. Smaller concrete pours may occur during the dayshift without significant impact to the intersection.

**Phase 2c – Daytime and Nighttime Trucking Numbers**

It is anticipated that the activities listed for Phase 2c will generate the following truck movements during the daytime hours:

- Cross-passage excavation 20 trucks/day
- Concrete, rebar, etc 40 to 60 trucks/day/pour
- General deliveries 20 trucks/day
- Remaining trucking capacity 20 trucks/day

During the Phase 2c, U220 excavation activities include approximately 20 trips per day to account for cross-passage work. U250 excavation will have been completed in the prior phase and the majority of activity includes forming and placing concrete for the base slab and platform slab pours. Concrete pours for platform slab concrete are estimated to be between 300 and 640 cubic yards (30 and 64 truck trips respectively) and are within the day shift intersection capacities. Larger base slab concrete pours from September 2012 through December 2012 of 1200 cubic yards (120 truck trips) are projected to take place during the night shift to minimize traffic impacts to concrete deliveries.
Phase 2d – Daytime and Nighttime Trucking Numbers

It is anticipated that the activities listed for Phase 2d will generate the following truck movements during the daytime hours:

- Concrete, rebar, etc: 20 trucks/day
- General deliveries: 20 trucks/day
- Remaining trucking capacity: 60 trucks/day

This period includes the import of approximately 50,000 cubic yards of fill for the south parking lot, the equivalent of 104 truck trips per day for 30 days. This effort may be scheduled as a combined day and night shift activity.

Phase 3 – Daytime and Nighttime Trucking Numbers

It is anticipated that the activities listed for Phase 3 will generate the following peak truck movements during the daytime hours:

- Concrete, rebar, etc: 40 trucks/day
- General deliveries: 20 trucks/day
- Remaining trucking capacity: 40 trucks/day

Phase 3 U250 activities include forming and placement of concrete for floor slabs at the south end of the station over the crossover. These are smaller pours of 40 concrete trucks (400cy) which can be accommodated during a single day shift. This phase also includes a number of roof slab pours between August 2013 and October 2013 of 136 trucks (1,360cy) per nighttime shift. From December 2013 through March 2014, approximately 49,000 cubic yards of backfill will be imported. This equates to approximately 47 trucks per day over the course from late November 2013 to early March 2014.

5.6 Special Events

Construction activity related to the U250 contract will disrupt established operations for traffic, transit, and pedestrians and bicyclists during special events held in Husky Stadium, Hec Edmundson Pavilion, and in the Montlake Cut. Construction impacts, restrictions to construction traffic activities and proposed alternate routing for traffic related to Husky Football, University of Washington Commencement, Husky Men’s and Women’s Basketball and the Windermere Cup are described in Section 4.2.7.

The U250 contractor will be required to update the Special Event Traffic Management Plan and utilize as part of the work effort.