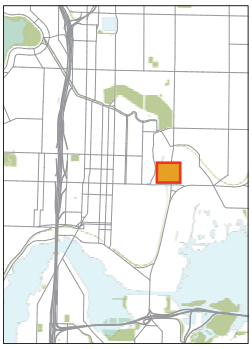


University Area Transportation Action Strategy

Burke Gilman Trail/NE 47th St/University Village

Bicycle and Pedestrian Mobility & Safety

Project # 22

Create new pedestrian connections along the NE 47th St right-of-way, and realign intersections along 25th Ave, to improve mobility for all modes.

Priority Rating:	Medium
Cost Estimate:	$895,000

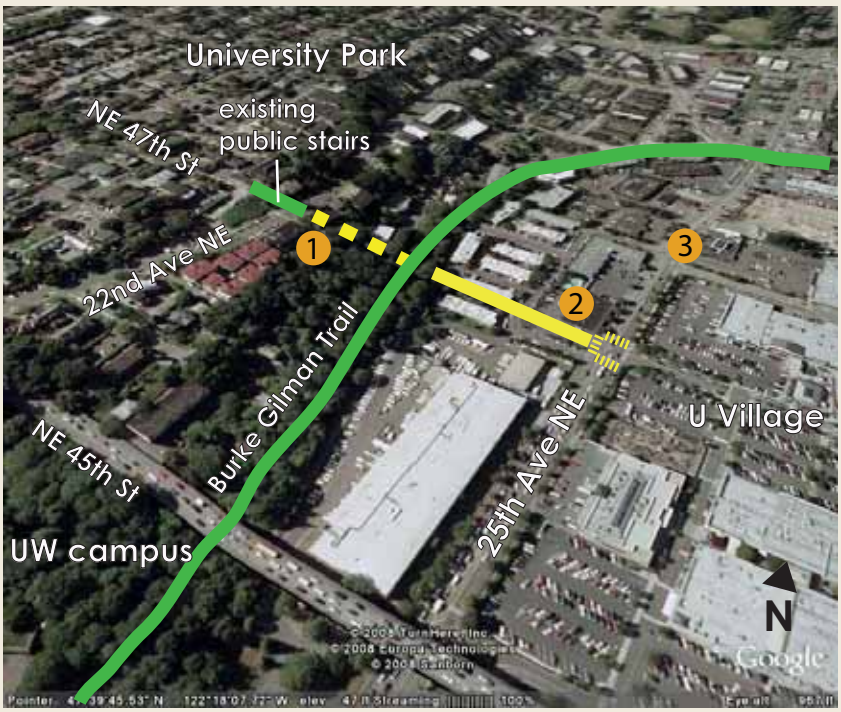
Problems and Issues

- A steep hillside separates the University Park neighborhood from the University Village shopping area. Neither the Burke Gilman Trail nor existing public stairs provide a direct pedestrian connection.
- The major access 'roads' to/from the University Village are not aligned with NE 47th and NE 49th Streets across from 25th Ave NE. This increases traffic congestion and reduces pedestrian comfort and safety.
- The area between the Burke Gilman Trail and 25th Ave NE is projected to intensely redevelop by 2030. A plan that improves trail connections and simplifies vehicle circulation patterns is needed.

Currently, trail users cannot directly access NE 47th St and the University Village due to a guardrail, University parking facilities, and the lack of a paved connection.

Recommended Actions

1. Create a new pedestrian connection from 22nd Ave NE to the Burke Gilman Trail. Upgrade the existing public stairs along NE 47th St to provide a direct pedestrian connection from University Park to the Burke Gilman Trail.
2. Work with the University and other adjacent property owners to realign NE 47th St with the University Village entrance on 25th Ave NE; create a 4-way signalized intersection with crosswalks.
3. Pursue additional opportunities to consolidate curb cuts and simplify intersections along 25th Ave NE, such as at NE 49th St where there are multiple retail entrances.



University Area Transportation Action Strategy

Project # 23

7th Ave NE and NE 40th St

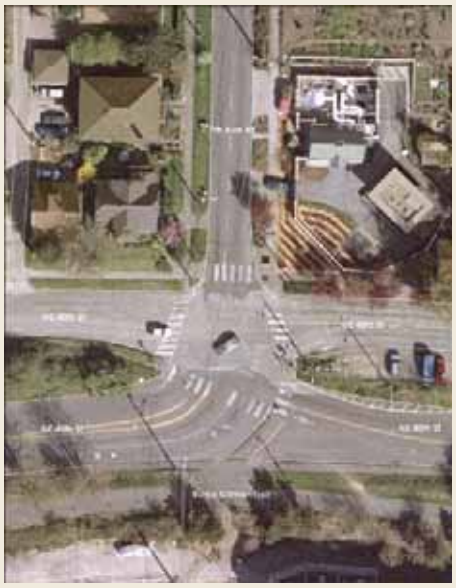
Congestion Management & Safety for All Modes

Construct a roundabout to improve traffic flow and reduce conflicts for all modes.

Priority Rating:	Medium
Cost Estimate:	$1.13 million

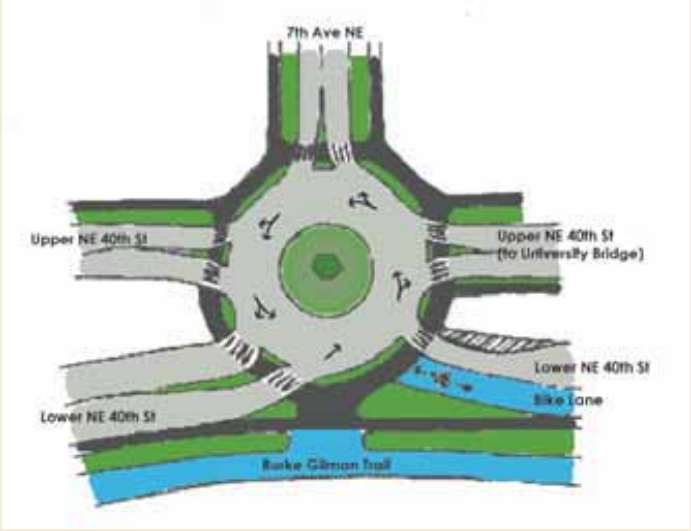
Problems and Issues

- This is a 5-legged intersection with all-way stops for traffic control. Lower NE 40th St is one-way west-bound, with the other lane a dedicated two-way bicycle facility.
- During the PM peak, this intersection is operating at level of service (LOS) F with an average 93 sec delay. Vehicles from westbound lower NE 40th St experience the longest delays.
- It is projected that this intersection without improvements would operate at LOS F with an average 152 seconds of delay in 2030.
- At a juncture between the University Bridge and Burke Gilman Trail, bicycle and pedestrian improvements at this intersection would greatly contribute to the Urban Trails and Bikeways Network.

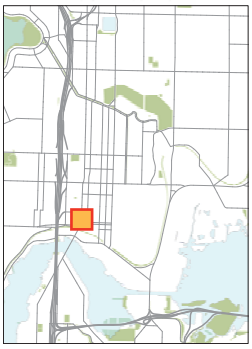


Recommended Actions

- Construct a roundabout and improve the approach roadways at the 7th Ave NE/NE 40th St intersection. Ensure that the design accommodates bus turning movements.
- Together with UATAS project #14, which focuses on improved connections between the Burke Gilman Trail and the University Bridge, this project would provide a comprehensive, multi-modal upgrade to the west University Bridge approach.



University Area Transportation Action Strategy



11th Ave NE/Eastlake Ave and NE 41st St

Pedestrian Safety

Project # 24

Install pedestrian-actuated signal, and upgrade sidewallks and crosswalks to improve safety.

Priority Rating:	Medium
Cost Estimate:	$242,000

Problems and Issues

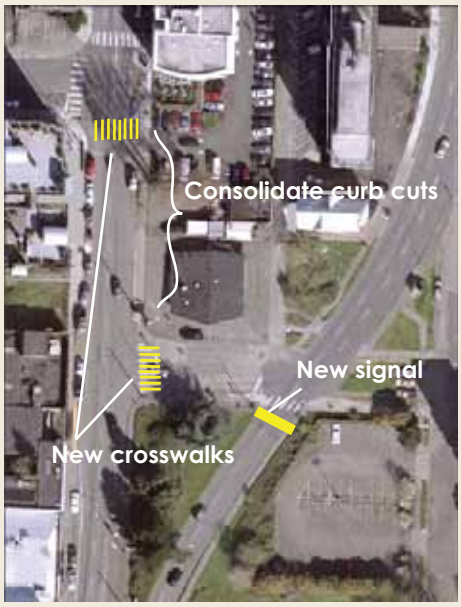
1. A marked crosswalk without traffic control is provided at the crossing of 11th Ave NE/Eastlake Ave at NE 41st St.

- Many pedestrians do not feel safe crossing this unsignalized intersection due to high speeds and volumes of northbound traffic. The curving of the road which marks the transition from Eastlake Ave E to 11th Ave NE also reduces the visibility for pedestrians.

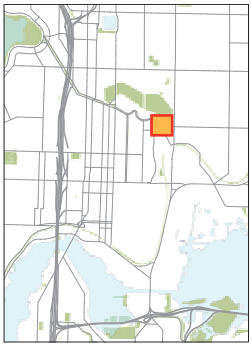
2. Full pedestrian crossing of the Roosevelt Way/11th Ave NE couplet includes needing to use the north leg of the NE 42nd Street/ Roosevelt Way intersection, which is a signalized "T" intersection.

Recommended Actions

- Install a pedestrian-actuated signal at the intersection of 11th Ave NE and NE 41st St to stop traffic for crossing pedestrians.
- Provide upgrades to adjacent sidewalks and wayfinding to help navigate the full crossing of the Roosevelt Way/11th Ave couplet.
- Consider adding a crosswalk to the south leg of the NE 42nd St/Roosevelt Way NE when adjacent property to the east redevelops.



University Area Transportation Action Strategy



Ravenna Ave NE/55th Ave/Ravenna Park

Bicycle and Pedestrian Mobility & Safety

Project # 25

Improve off-street mutli-use trail parallel to Ravenna Ave NE to improve pedestrian & bicycle mobility and safety.

Priority Rating:	Medium
Cost Estimate:	$423,000

Problems and Issues

1. Ravenna Ave to the Burke Gilman Trail is a popular bicycle connection that lacks adequate facilities. The Bicycle Master Plan recommends constructing a northbound bicycle climbing lane.

- There is not sufficient roadway width to provide 2 traffic lanes and a 5-foot climbing lane. The BMP recommendation would require roadway widening and could be prohibitively expensive.

2. An effective, less expensive solution is to provide a trail within Ravenna Park that runs parallel to Ravenna Ave NE.

Recommended Actions

1. Provide off-street bicycle and pedestrian trail at Ravenna Park from 55th Ave NE to Ravenna Blvd with improved surfacing, lighting, and signage. This will likely involve working with the Parks Department on cost-sharing and maintenance strategies.

2. Upgrade crosswalks and sidewalks that connect the off-street trail to the street network.

- Together with UATAS project #10, this project provides a comprehensive, multi-modal upgrade to the street network.

Montlake Boulevard E and E Hamlin St

Congestion Management & Vehicle Safety

Project # 26

Extend northbound left/U-turn lane at E Hamlin St to reduce congestion on Montlake Boulevard.

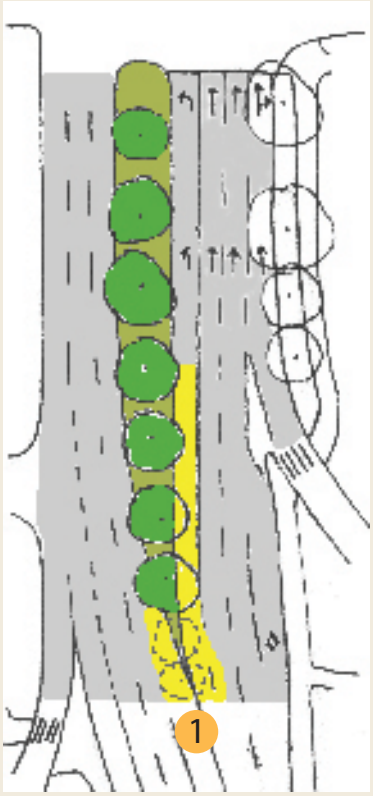
Priority Rating:	Medium
Cost Estimate:	$72,000

Problems and Issues

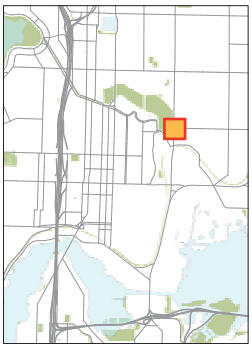
- The existing U-turn lane on Montlake Blvd is the principle turn for northbound vehicles accessing State Route 520.
- 1 The turn lane is currently not long enough to store the vehicles wanting to access SR 520. Vehicles regularly spill back into the through-lane and block northbound traffic.
- While the replacement of the 520 Bridge is expected to cause major road revisions in the near future, there are low-cost improvements that can and should be done now to improve traffic flow.

Recommended Actions

1. Add vehicle storage capacity to the existing northbound left/U-turn on Montlake Blvd at E Hamlin St by removing part of the median.
- Work with the Washington State DOT to gain approvals for this project, which is technically in state-owned right-of-way.
- Additional congestion management can be achieved along Montlake Blvd by asking WSDOT to add a sign on SR-520 directing westbound-to-southbound drivers to utilize the Lake Washington Blvd exit, which is a more direct route than using Montlake Blvd.



University Area Transportation Action Strategy



25th Ave NE/NE 55th St

Congestion Management & Safety for All Modes

Project # 27

Provide northbound and southbound left-turn pockets to reduce congestion and improve safety.

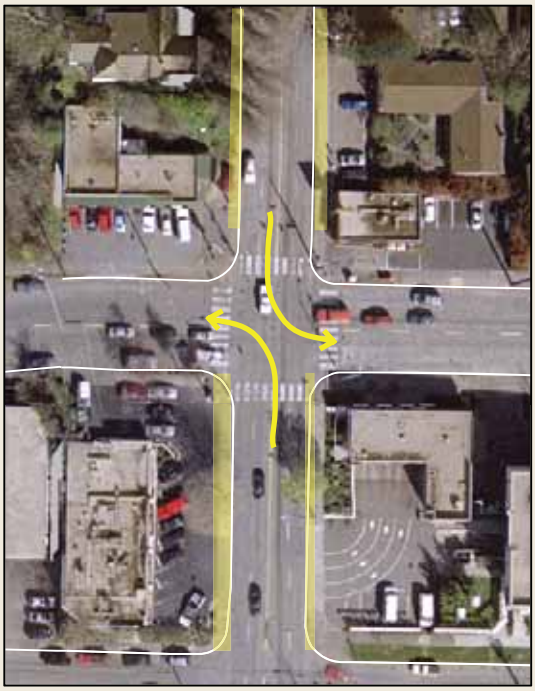
Priority Rating:	Medium
Cost Estimate:	$849,000

Problems and Issues

- This intersection has one of the highest collision rates of the study area, based on number of crashes and traffic volume.
- There is high demand for northbound and southbound left turns but they are not currently "protected."
- Making this intersection more attractive to drivers travelling to and from Ravenna Blvd could help reduce traffic (and thus vehicle/bicycle/ped conflicts) at the Burke Gilman Trail crossing at NE Blakely St/25th Ave NE.

Recommended Actions

- Provide left-turn pockets on 25th Ave NE at NE 55th St; 25th Ave will need to be widened near the intersection to provide enough room.

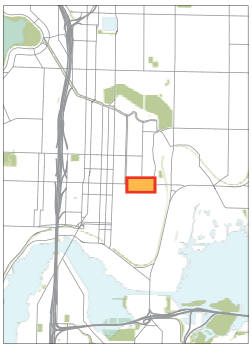


University Area Transportation Action Strategy

NE 45th St from 18th to 22nd Ave NE

Pedestrian Mobility & Safety

Project # 28



Widen sidewalks and install landscaped pedestrian refuge islands to improve pedestrian capacity and safety

Priority Rating:	Medium
Cost Estimate:	$1.4 million

Problems and Issues

- NE 45th St is a principal arterial connecting the north University campus area with the business district and the east campus. Pedestrian volumes are high, especially north-south.
- This section of NE 45th St has narrow sidewalks, particularly on the north side, and fails pedestrian performance measures for width (LOS F) as established by UATAS.
- Sidewalks on both sides of the street are narrow. However, right-of-way constraints - and the potential for an improved pedestrian connection from the south side of NE 45th St underneath the NE 45th St Viaduct (see UATAS Project #11) - make focusing on the south side of the street (and connections to it) the most feasible and appropriate option for improving pedestrian safety and connectivity.

Recommended Actions

1. Widen sidewalks on south side of NE 45th St from 18th Ave NE to 22nd Ave NE. This improvement will be particularly valuable if a new pedestrian connection is established from NE 45th St to the Burke Gilman Trail as part of the NE 45th St Viaduct replacement project slated for 2009-2010.
2. Install landscaped pedestrian refuges on NE 45th St at 18th Ave and 20th Ave by replacing the 'dead spaces' where center turn lanes are not needed.

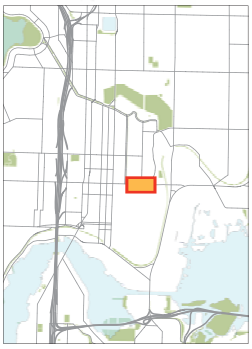
- When parcels redevelop on either side of 45th St, the City should require additonal setbacks for wider sidewalks.

University Area Transportation Action Strategy

NE 45th St from 18th to 22nd Ave NE

Pedestrian Mobility & Safety

Project # 28



Widen sidewalks and install landscaped pedestrian refuge islands to improve pedestrian capacity and safety

Priority Rating:	Medium
Cost Estimate:	$1.4 million

Problems and Issues

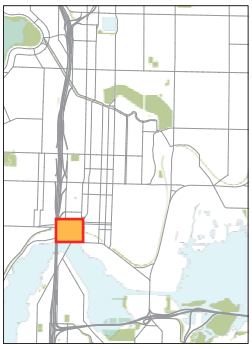
- NE 45th St is a principal arterial connecting the north University campus area with the business district and the east campus. Pedestrian volumes are high, especially north-south.
- This section of NE 45th St has narrow sidewalks, particularly on the north side, and fails pedestrian performance measures for width (LOS F) as established by UATAS.
- Sidewalks on both sides of the street are narrow. However, right-of-way constraints - and the potential for an improved pedestrian connection from the south side of NE 45th St underneath the NE 45th St Viaduct (see UATAS Project #11) - make focusing on the south side of the street (and connections to it) the most feasible and appropriate option for improving pedestrian safety and connectivity.

Recommended Actions

1. Widen sidewalks on south side of NE 45th St from 18th Ave NE to 22nd Ave NE. This improvement will be particularly valuable if a new pedestrian connection is established from NE 45th St to the Burke Gilman Trail as part of the NE 45th St Viaduct replacement project slated for 2009-2010.
2. Install landscaped pedestrian refuges on NE 45th St at 18th Ave and 20th Ave by replacing the 'dead spaces' where center turn lanes are not needed.

- When parcels redevelop on either side of 45th St, the City should require additonal setbacks for wider sidewalks.

University Area Transportation Action Strategy



Northlake Way Corridor

Pedestrian, Bicycle and Transit Mobility & Safety

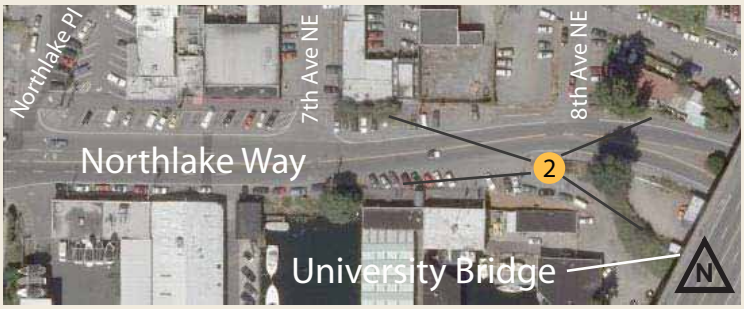
Project # 29

Reconstruct Northlake Way; add sidewalks and landscaping, upgrade bus stops, and provide off-street shared use path to improve mobility and safety

Priority Rating: Medium
Cost Estimate: $1.62 million

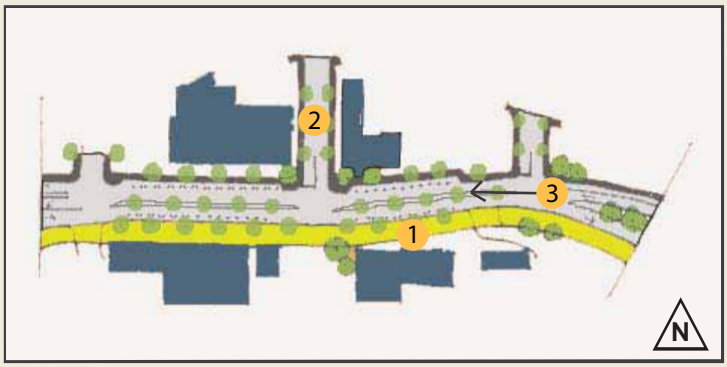
Problems and Issues

- Community plans call for new sidewalks and street trees in this area. Northlake Way is also a key section of the proposed Lake Union loop trail, which is in the Bicycle Master Plan and the Parks Foundation's 'Bands of Green' report.
- 1 This area currently lacks continuous sidewalks and well-defined pedestrian and bicycle facilities.
- 2 Underutilized and/or unregulated public rights-of-way provide ample opportunities to improve all modes, introduce more sustainable infrastructure, and activate the waterfront edge.
- Northlake Way is classified as a major truck street, and many adjacent properties are currently zoned for industrial use.



Recommended Actions

1. Reconstruct Northlake Way from University Bridge to 6th Ave NE. Shift roadway configuration to the north to provide an off-street shared-use trail from NE Boat St westward along the waterfront side.
2. Provide continuous sidewalks with street trees on the north side of Northlake Way, and along 7th and 8th Ave NE to Northlake Place.
3. Remove 90-degree parking to allow for an extension of the current landscaped center median on NE Pacific St to Northlake Way. Develop a comprehensive plan to manage parking by 2012.



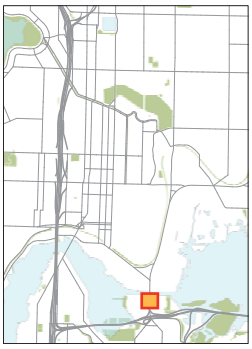
- Maintain freight and business access. Consider potential impacts and/or changes to industrial lands as area is improved.
- Upgrade bus stops (covered seating, lighting, in-lane stops, etc.), and consider east-west transit improvements such as additional service hours and new connections as area develops and light rail operation begins.

University Area Transportation Action Strategy

Montlake Boulevard NE / NE Shelby St

Pedestrian & Bicycle Mobility, Safety for All Modes

Project # 30

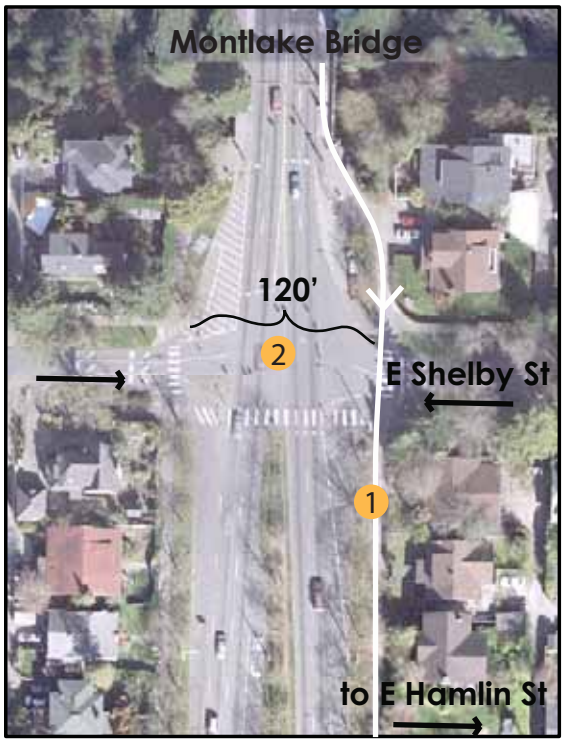


Narrow intersection, add bike lanes and widen sidewalks to improve safety. (Phase 2 of 2 - see Project #D)

Priority Rating:	Medium
Cost Estimate:	$785,000

Problems and Issues

- This intersection is a key connection in the designated Urban Trails and Bikeways Network, providing access over the Montlake Bridge from several major bicycle corridors.
- 1 E Shelby St and E Hamlin St are a one-way couplet. The majority of cyclists from Montlake Bridge are heading to Lake Washington Blvd from the east side of the bridge, and are forced onto the sidewalk for a full block before accessing Hamlin St, the signed eastbound route.
- 2 The intersection is wide with some painted stripes to reduce perceived width. Sidewalks are narrow, curb ramps are non-compliant, nighttime visibility is poor, and no bicycle facilities are provided.
- Whichever design is chosen, the 520 Bridge Replacement Project will provide an opportunity to redesign this intersection.



Recommended Actions

- Reconstruct intersection with tighter curb radii, wider sidewalks, and bicycle-friendly ramps.
- Provide a southbound bike lane from Montlake Bridge to SR 520.
- Improve the southbound bicycle connection from the east side of Montlake Bridge. Provide contra-flow bicycle lane or shared-use path to Hamlin St, or consider reversing direction of one-way couplet.
- Add pedestrian-scaled lighting to improve night-time visibility.

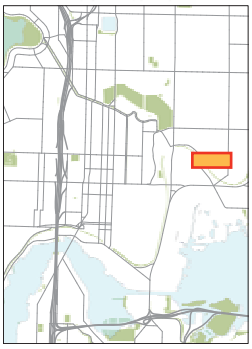
A more detailed design concept including the recommended actions should be completed when the SR 520 interchange location is decided as part of the WSDOT 520 Bridge Replacement Project.

University Area Transportation Action Strategy

NE 50th St / 30th Ave to 35th Ave NE

Pedestrian Safety

Project # 31



Complete sidewalk along south side of roadway and provide traffic calming devices to reduce vehicle speeds and improve pedestrian safety.

Priority Rating:	Medium
Cost Estimate:	$390,000

Problems and Issues

- NE 50th St between 30th and 35th Ave NE is a non-arterial residential street, bordered for most of its north side by a cemetary. Drivers often cut-through to avoid congested NE 45th St and travel at excessive speeds.
- Gaps in the sidewalk exist for several blocks along the south side of the street, while the north side is an unimproved shoulder with an earth embankment and parking toward the cemetary corners.

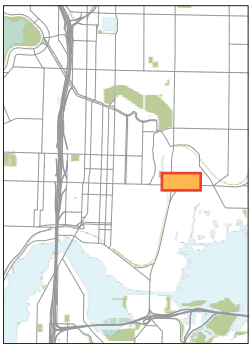
Recommended Actions

- Extend sidewalks along south side of street to provide a continuous off-street pedestrian path.
- Prioritize NE 50th St for the installation of traffic calming devices such as chicanes, speed humps, and"woonerf"-style alternating on-street parking.

Montlake Blvd/NE 45th St Corridors

Congestion Management

Project # 32



Install variable message signs and cameras in the vicinity of the Montlake Blvd/NE 45th St intersection to relay real-time traffic information.

Priority Rating:	Medium
Cost Estimate:	$1,310,000

Problems and Issues

- Traffic on Montlake Blvd southbound and on NE 45th St eastbound during peak periods is heavily-congested; drivers generally expect long delays. On the shoulders of the peak, and during off-peak hours, however, drivers may be unsure which route is faster to get to Interstate-5 and other destinations.
- Traffic cameras in this area linked to the internet are consistently the most-viewed cameras from SDOT's webpage, indicating a strong demand for real-time information.
- Better information can reduce vehicle trip times, improve safety around construction zones, and more efficiently distribute vehicles over the roadway system.

A rare moment of calm looking south along Montlake Blvd. But what will it look like up ahead?

Recommended Actions

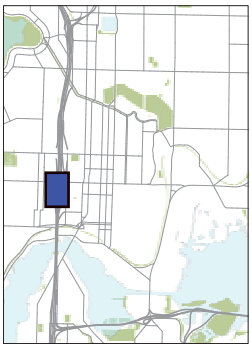
- Install variable message signs before Montlake Blvd on southbound 25th Ave NE and westbound NE 45th St to inform drivers of heavy delays and average trip times.
- Real-time signs and additional CCTV cameras viewable from the internet could play a big role in alerting drivers to delays and re-routings related to the SR 520 Bridge Replacement Project and Sound Transit station construction.

University Area Transportation Action Strategy

I-5/NE 45th St Interchange

Congestion Management

Project # 33



Provide additional lane on southbound I-5 on-ramp at NE 45th St to reduce vehicle delay.

Partnership Project
Cost Estimate: TBD

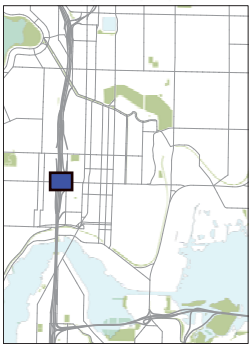
Problems and Issues

- The lack of adequate vehicle storage capacity on the I-5 on-ramp causes significant delays to traffic on NE 45th St.
- (1) Because there is only one general purpose lane on the I-5 on-ramp, single-occupant drivers do not use both westbound left turn lanes onto I-5 from NE 45th St. When they do, they turn into the HOV bypass lane and must merge left, blocking the lane for carpoolers.
- There is sufficient right-of-way so that an additional on-ramp lane can be added relatively easily.

Recommended Actions

- (2) Add a lane to the southbound I-5 on-ramp from NE 45th St. This would provide two general prupose on-ramp lanes and an HOV bypass lane.
- Modify the ramp meter to accommodate the 2 general purpose lane approach.

Project # 34



I-5/NE 45th St Overpass

Pedestrian & Bicycle Mobility; Congestion Mangement

Widen NE 45th St/I-5 overpass to reduce vehicle delays and incorporate better sidewalks and bike lanes

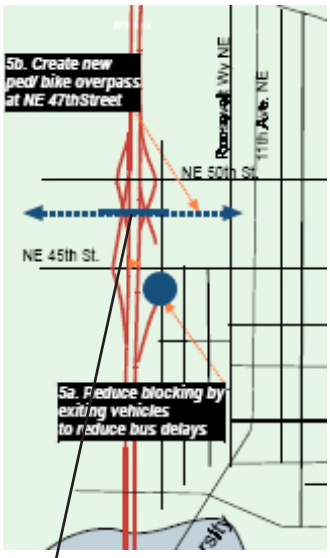
Partnership Project
Cost Estimate: TBD

Problems and Issues

- The lack of adequate westbound-to-southbound left-turning vehicle storage capacity causes significant delay to east-west traffic movements on NE 45th St.
- The existing overpass does not provide adequate pedestrian and bicycle connections across I-5.
- (1) The Bicycle Master Plan, the 2002 UATS report, and adjacent neighborhood plans call for a new shared-use overpass at NE 47th St. Such an action may be prohibitively expensive.

Recommended Actions

- Widen NE 45th St/I-5 overpass to accommodate lengthened left-turn lanes towards on-ramp, widened sidewalks with landscaping, and bike lanes. Consider as part of any major I-5 reconstruction efforts.



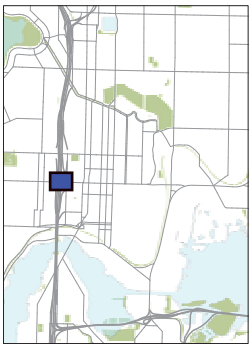
(1) The need to improve east-west pedestrian and bicycle connectivity over I-5 has been a long-standing concern of the area. The 2002 University Area Transportation Study (top) and the 2007 Bicycle Master Plan (above) both call for a new I-5 overpass at NE 47th St. If such a project is not considered feasible due to cost concerns, WSDOT must consider a widening and enhancement to the NE 45th St overpass as part of any major new project on I-5.

University Area Transportation Action Strategy

I-5/NE 45th St Interchange

Congestion Management

Project # 35



Provide additional northbound on-ramp from 7th Ave NE to reduce vehicle delay.

Partnership Project
Cost Estimate: TBD

Problems and Issues

- NE 45th St, a key east-west vehicle and transit corridor, is heavily-congested during most of the day. A significant source of delay are vehicles looking to access Interstate 5.
- Inadequate vehicle storage capacity of the I-5 northbound on-ramp forces traffic spillovers back onto NE 45th St. Vehicles waiting to access I-5 from the westbound 45th St curb lane often slow east-west through traffic.
- There is sufficient right-of-way to provide additional storage capacity for the north-bound I-5 on-ramp, which would reduce spillovers onto NE 45th St and improve levels-of-service.

Recommended Actions

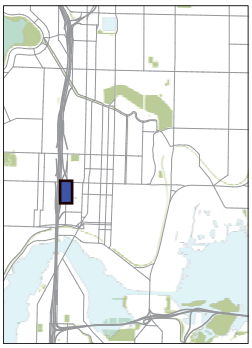
1. Add a lane to the northbound I-5 on-ramp from NE 45th St.
- Modify ramp meter to accommodate a two-lane ramp approach.

University Area Transportation Action Strategy

7th Ave NE/I-5 off-ramp at NE 45th St

Transit Speed & Reliability

Project # 36



Provide transit queue bypass lane to improve transit speeds & reliability.

Partnership Project
Cost Estimate: TBD

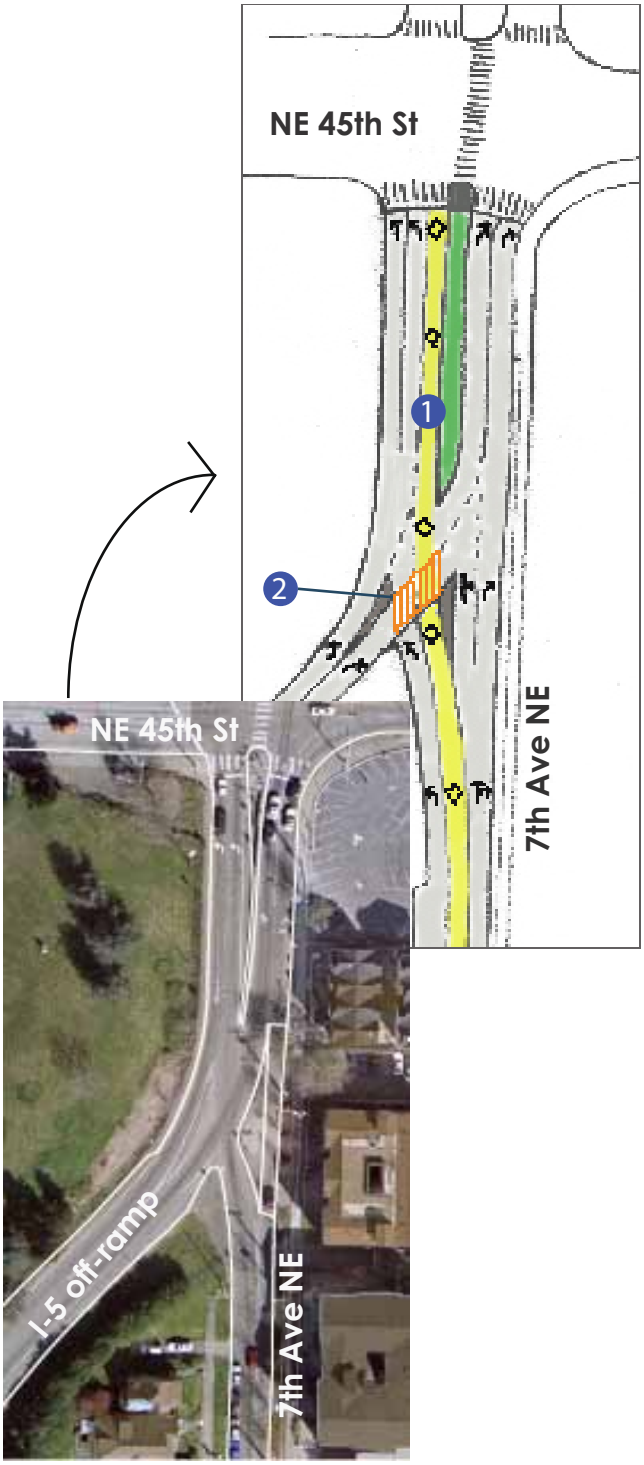
Problems and Issues

- 7th Ave NE is a northbound one-way arterial street. The I-5 northbound off-ramp approaching NE 45th St is not signalized as it crosses 7th Ave, while 7th Ave is controlled by a stop sign. This intersection performs poorly in the peak periods.
- Traffic backups on the NE 45th St I-5 off-ramp sometimes block the intersection with 7th Ave.
- Transit vehicles (28 buses in the AM peak and 22 in the PM peak) experience severe delays getting through this intersection and the intersection at NE 45th St.

Recommended Actions

1. Construct a transit queue bypass lane on northbound 7th Ave NE south of NE 45th St.
2. Create a clearly delineated intersection with the I-5 northbound off-ramp, improving pavement markings and signage that indicate to drivers not to block the intersection.

- This project will provide significant time savings to peak period transit. Potential negative impacts include increased I-5 off-ramp congestion and some parking removal along 7th Ave.
- The need for this project will greatly diminish once light rail service is established to and from Northgate. WSDOT and the City should prioritize the implementation of this project in order to maximize the accrued benefit to existing transit service.

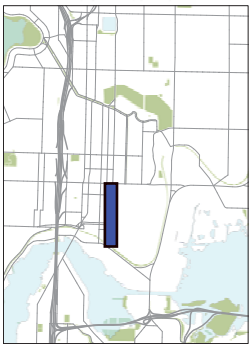


University Area Transportation Action Strategy

15th Ave NE Corridor

Multi-Modal Corridor Planning; Urban Design

Project # 37



Conduct a corridor study in cooperation with the UW and King County Metro to improve pedestrian and transit facilities, manage congestion, & improve urban design.

Partnership Project
Cost Estimate: TBD

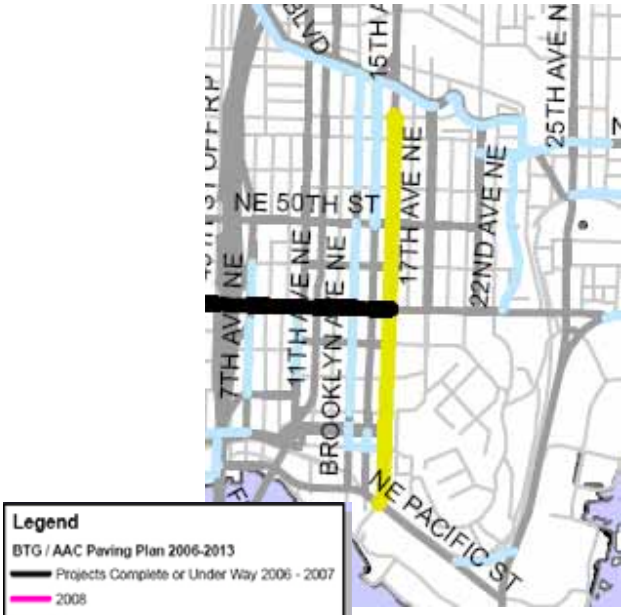
Problems and Issues

- 15th Ave NE carries a high volume of pedestrian, transit, and vehicle traffic - all of which are forecasted to increase.
- Existing pedestrian facilities are generally substandard, particularly the sidewalk and connection with campus on the east side of the street.
- The lifting of the University 'lease lid' and expected development of light rail at Brooklyn Ave, as well as increased employment and housing densities, all contribute to the importance of improving east-west connections across 15th Ave.
- Forecasted increases in north-south vehicle and transit volumes - especially if an interchange north of Montlake is chosen for the 520 Bridge Replacement Project - will only heighten the need to comprehensively manage all of the demands placed on 15th Ave NE.

Forecasted increases in transit and new development, such as the William Gates Hall Law Center (above), will only continue to place pressure for improving 15th Ave NE for all modes.

Recommended Actions

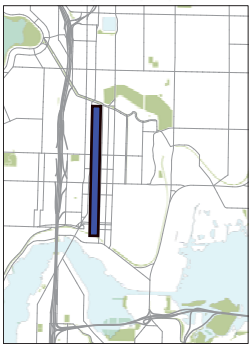
- Conduct a corridor study in conjunction with the University of Washington and King County Metro to develop improvement concepts and implementation strategies for 15th Ave NE. Focus particularly on the east side of the street where the roadway and west campus edge intersect.
- Improvement concepts developed by this study should be considered in conjunction with SDOT reconstruction of 15th Ave NE scheduled for 2013 or for mitigation related to the SR 520 Bridge Replacement Project.



Thanks to Bridging the Gap funds, 15th Ave will be reconsructed in 2013, providing an incredible opportunity to address the design, safety, and performance of this important corridor in a comprehensive way.

University Area Transportation Action Strategy

Project # 38



Brooklyn Ave NE Corridor

Multi-Modal Corridor Planning; Streetscape Design

Develop a streetscape concept plan and implementation strategy to encourage coordinated urban design/sustainable infrastructure, and to leverage development activities.

Partnership Project
Cost Estimate: TBD

Problems and Issues

- Brooklyn Ave from Ravenna Park to NE Boat St is designated as a Neighborhood Green Street and has long been considered a key bicycle route. UATAS analysis has identified adding bicycle sharrows and widening sidewalks north of 50th St as recommended projects.
- More than adequate right-of-way provides implementation opportunities for sustainable and pedestrian-friendly improvements: the curb-to-curb distance is about 40 ft.
- Aging and substandard infrastructure, such as the pavement and utility poles/street lighting, indicate that new infrastructure investments will be needed in the foreseeable future.
- New investments are expected along Brooklyn Ave by SDOT, Sound Transit, the University of Washington, (potentially) the Parks Department, and private development. In order to facilitate coordinated construction, good urban design and the leveraging of opportunities, SDOT and the Department of Planning & Development should promote stakeholder participation in - and funding of - a concept streetscape plan for this corridor.

The 2005 University District Parks Plan is "anchored" around the development and planning associated with Brooklyn Ave.

Recommended Actions

- Develop Green Street design concept for Brooklyn Ave from Ravenna Park to NE Boat St in cooperation with DPD, Sound Transit, the UW, the Parks Department, and neighborhood property-owners and stakeholders.
- Officially designate Brooklyn Ave as a bicycle route and add shared-lane markings (sharrows).
- Prioritize pedestrian improvements, such as wider sidewalks, street trees, better trail connections, and shorter signal cycles.