

Seattle Department of Transportation

ACCESSIBLE MT. BAKER MULTIMODAL TRANSPORTATION PLAN



Seattle
Department of
Transportation

INTRODUCTION

The Accessible Mt. Baker Plan (the Plan) will transform an auto-oriented area into a pedestrian and transit-oriented destination that is safe for everyone. The Plan is the culmination of many conversations with community stakeholders and is informed by years of planning and outreach that has taken place prior to this effort. It is another bold step towards achieving our city's vision of zero traffic fatalities and serious injuries by 2030. What makes the plan unique and transformative is its employment of a modal hierarchy in which pedestrians are the highest priority, followed by people biking, transit, freight, shared transportation options, and general purpose traffic. This hierarchy ensures that the needs of the most vulnerable road users are addressed first and that the significant investments in transit infrastructure that have been made in the area will be utilized to their full potential.

The Plan will reconfigure the intersection of Rainier Ave South (Rainier Ave) and Martin Luther King, Jr. Way (MLK Way) and transform the Mt. Baker station area into a safe, comfortable and dignified place for people to walk, bike, and make transit connections. It will lay the foundation for the Mt. Baker Town Center to take root and flourish. In addition to prioritizing walking and biking, the Plan also achieves better transit and freight reliability and creates safer and more predictable conditions for motorists.

“Can we build this tomorrow?”

March 26, 2015 open house attendee

The Mt. Baker station area, which centers on the intersection of MLK Way and Rainier Ave, has many assets, including a Link light rail station, bus transit center, Franklin High School, an artist community, and local businesses. The two streets function as key corridors for moving people and goods in and out of southeast Seattle. Rainier Ave is also one of the busiest bus corridors in the region.

However, the intersection has been a serious problem for the neighborhood and has hampered the vision for a livable and vibrant Town Center established in previous neighborhood planning efforts. While significant investments in transit infrastructure have been made in the area, these investments are not being utilized to their full potential largely due to the inhospitable nature of the area. People have trouble navigating the intersection of Rainier Ave and MLK Way and face long wait times at street crossings when connecting between the transit center and the light rail station. Sidewalks are narrow, and in many locations lack buffers from traffic, which creates an uncomfortable walking environment and puts youth traveling between transit facilities and Franklin High School at risk. People biking face even more challenges given a complete lack of bicycle infrastructure and high volumes of vehicular traffic. Motorists also experience significant delay and safety issues. In fact, the intersection of Rainier Ave and MLK Way is among Seattle intersections with the highest number of crashes with 76 crashes (includes crashes involving people walking and biking) between 2010 and 2013.

A FRAMEWORK FOR SAFE, RELIABLE AND AFFORDABLE TRAVEL OPTIONS

Seattle is consistently recognized as one of the safest cities in the U.S. from a traffic safety standpoint. The City has established an aggressive “Vision Zero” goal to reach zero deaths and serious injuries on our streets by 2030. It has also laid out a 5-Year Safe Routes to Schools Action Plan to improve safety on our streets near schools. Seattle has adopted citywide modal plans for walking, bicycling, transit, and freight, each focused on keeping Seattle moving and our economy thriving while making our city more livable and healthy. Finally, in 2015, voters approved the 9-year, \$930 million Levy to Move Seattle, which provides funding to improve safety for all travelers, maintain our streets and bridges, and invest in reliable, affordable travel options for a growing city. These initiatives complement and reinforce what will be achieved with the Accessible Mt. Baker Plan.

Move Seattle sets priorities for investment that:

- Prioritize pedestrians
- Carry out the Rainier Ave safety corridor and complete street projects
- Build high-priority protected bike lanes and neighborhood greenways
- Improve safety near schools

Our modal plans also highlight the Mt. Baker area specifically and recommend:

- Crossing improvements to accommodate high pedestrian demand
- Transit upgrades on Rainier Ave
- Protected bike lanes on Rainier Ave and MLK Way
- Maintain MLK Way as a major freight route, and Rainier Ave as a minor freight route.

BUILDING ON PAST EFFORTS

Over the last 15 years, the city has worked with community stakeholders and developed a number of planning concepts intended to address livability, safety, and traffic issues within the Mt. Baker station area. The Accessible Mt. Baker Plan has benefited from the stakeholder engagement and ideas of these past efforts. Below is a short summary of the more notable efforts that have informed the Accessible Mt. Baker Plan. More details of past planning efforts are included in Appendix A.

- **Setting the Vision:** The 1999 North Rainier Neighborhood Plan and 2010 update set a vision for Mt. Baker as an attractive town center, with connected networks for people walking, bicycling, and riding transit.
- **Transit First:** In 2009, Link Light Rail began service to the Mt. Baker station, near the existing bus transit center. The 2010 North Rainier Action Plan set a top priority that Rainier Ave and MLK Way be made safe and attractive to walk, bike, ride transit, and drive.
- **Redesign It:** The 2001 McClellan Town Center Development Strategy and the 2011 Mt. Baker Station Area Analysis developed concepts to redesign the intersection of Rainier Ave and MLK Way, including proposing a roundabout. These concepts envisioned space for wide sidewalks, parking, green space, bike lanes, and bus lanes.

- **Connecting with Land Use:** the 2011 Mt. Baker Urban Design Framework set out a vision for the Mt. Baker station area as a livable, walkable destination and gateway to Southeast Seattle. It supports further evaluation of a one-way couplet (aka “bowtie”) concept at Rainier/ MLK, and envisions that with a couplet in place, wide sidewalks, parking lane, landscaping, bike lanes and bus lanes could be added in the corridor. Stemming from the Framework plan, zoning changes were made to support development of the Mt. Baker Town Center area.

The current station area presents tremendous opportunity to create a great space through human-scale connections. While crossings are currently difficult for most pedestrians, there are places where these crossings can

be improved, and new ones created, to provide safer and more direct access between the transit station, the Olmsted Boulevard greenbelt, and surrounding homes, shops, and jobs. Space to create dedicated bicycle connections through the area is available with a little “outside the box” thinking. These connections will not only bring more people into the area, but they will also help to complete the city’s network of bicycle facilities.

Owners of key parcels of land are currently evaluating opportunities for transit-oriented development that capitalize on proximity to light rail as well as frequent bus service. Finally, releasing the Rainier Ave/MLK Way intersection from the inherent inefficiency of requiring so much traffic to stop in one place presents the opportunity to distribute traffic to multiple other streets, which could reduce the overall traffic delay in the area.

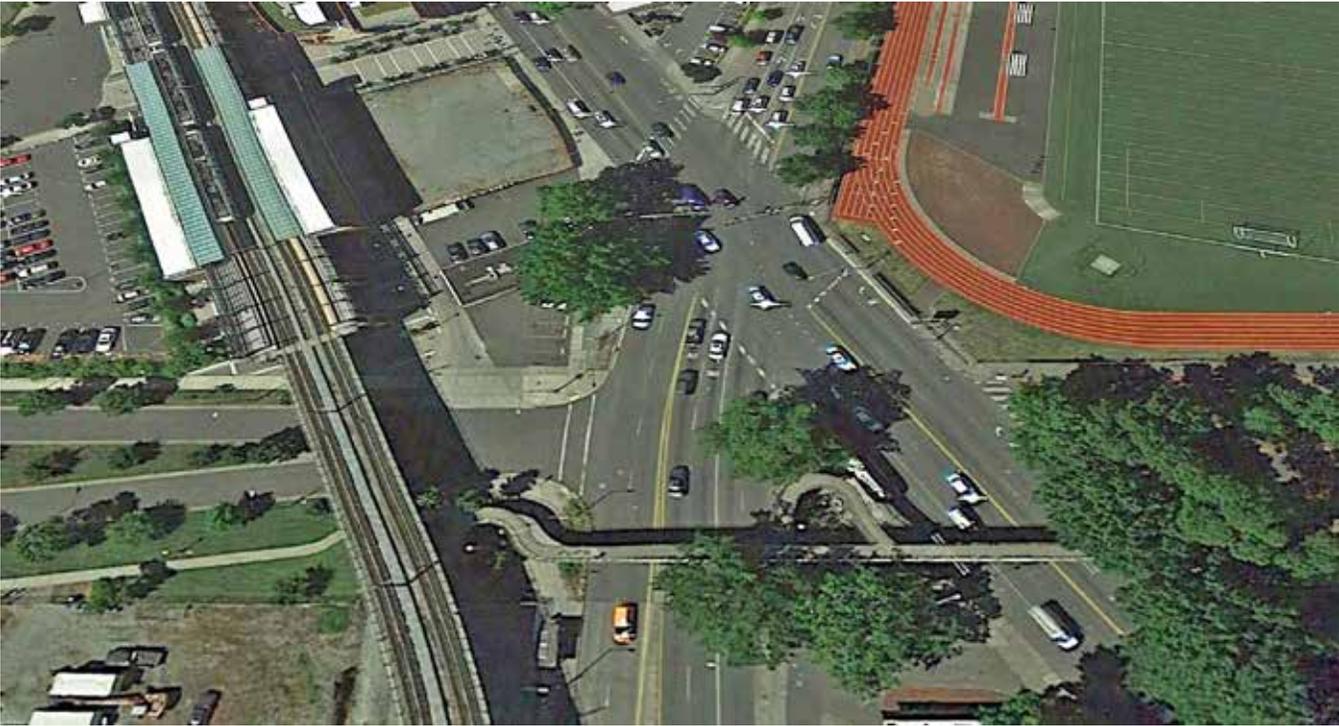


Figure 2: Existing Condition at Mt. Baker Station Area

HOW THE ACCESSIBLE MT. BAKER PLAN WAS DEVELOPED

The Accessible Mt. Baker Plan development process commenced in late 2014 when a team of engineers, planners, urban designers, and community engagement specialists gathered for an intense five-day collaborative work session, known as a “charrette.” The team reviewed data and past planning efforts to develop a thorough understanding of what the community had already identified as needs and the solutions that had been developed. They actively engaged with the community, interviewing 45 stakeholders, to learn more about key issues and important outcomes. This information gathering yielded the following Guiding Principles:

- Improve access to neighborhood destinations for all transportation users (pedestrians, transit riders, bicyclists, and vehicles)
- To help make the area more walkable, prioritize forms of transportation in the immediate station area as follows:
 - Pedestrians/Bicyclists: Enhance safety and comfort
 - Transit: Improve integration, reliability and frequency
 - Freight: Maintain access and reliability
 - Auto: Calm travel speeds and improve predictability
- Create a network of streets, paths, and open spaces
- Respect the existing character and assets of the neighborhood
- Establish the Mt. Baker station area as a neighborhood and regional destination
- Ensure diverse voices and traditionally underrepresented communities in Mt. Baker are heard and considered.

CONCEPT EVALUATION

The project team conducted a screening of nine early concepts – in addition to the roundabout and one-way couplet (“bowtie”) concepts – using evaluation criteria informed by stakeholder input and the Guiding Principles. The team also considered principles in the NACTO Urban Street Design Guide, which provides ideas for implementing new thinking in street design to advance project and city transportation goals. From this evaluation, the roundabout and one-way couplet (“bowtie”) concepts were carried forward for further evaluation and a third concept emerged.

Accessible Mt. Baker

Early Concepts

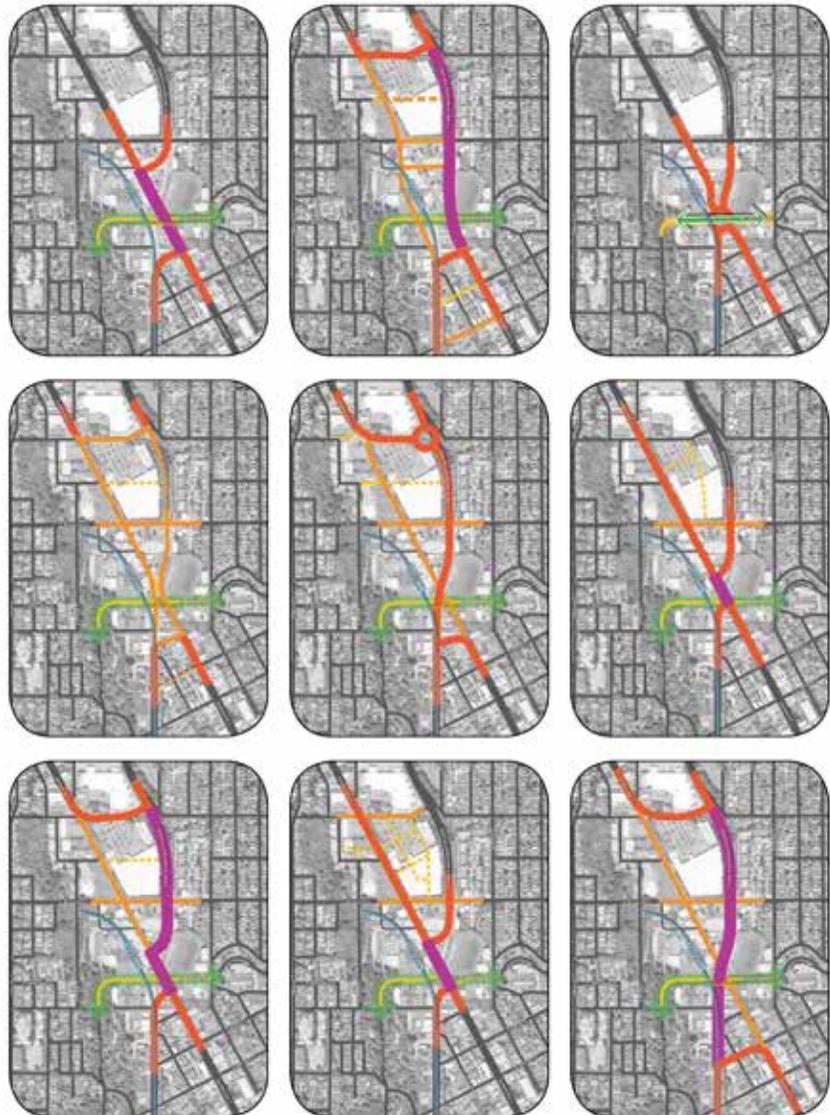
Walk
Bike
Transit
Freight
TRAFFIC
Open Space

CONCEPTS TESTED INCLUDE:

- "Bowtie" one-way street plan
- Roundabout(s)
- Redistributing traffic
- New "T" intersections
- Changing street types
- Adding and reducing lanes

SAMPLE FINDINGS

- Priority to motor vehicles - not for walk, bike and transit
- Difficult turning movements for freight
- Crossing distances
- Variations on confluences of streets that create traffic bottlenecks
- Property required
- Failed intersections
- Insufficiently addresses project's "Guiding Principles"



LEGEND

- Major Street
- Minor Street
- Interior Connector Street
- Olmsted Greenbelt
- Link Light Rail



Figure 3: Early Traffic Concepts

One-Way “Bowtie” Couplet

The Seattle Station Area Transportation Analysis (2011) developed the one-way couplet concept, which came to be known as the “bowtie,” shown in Figures 4 and 5. This concept would narrow travel lanes to give more space for transit, walking, and bicycling, while accommodating people driving. This concept provides some benefits, such as wider sidewalks and reduced conflicts. However, while it appears to address the bottleneck of MLK Way and Rainier Ave, it forces localized around-the-block movements that result in longer travel times. Furthermore, when subjected to the evaluation criteria used during the charrette process, it was clear that this concept doesn’t provide sufficient safety, multimodal and place-making benefits within the Mt. Baker area. For these reasons, the concept was eliminated from further consideration.

Roundabout

The roundabout concepts, shown in Figures 6 and 7, was developed and assessed in 1999 as part of the McClellan Town Center Development

Strategy. The concept aimed to beautify the area and improve circulation and safety. During the charrette, the project team looked at a modified roundabout concept that would fit within the existing physical constraints, including the Franklin High School track and field. Despite a design intended to minimize property impacts, this modified concept would require the city to acquire a significant amount of private property at a substantial cost.

The roundabout concepts did not meet the goals for an Accessible Mt. Baker because they focused mainly on moving motor vehicles more efficiently at the expense of safe and direct access for people walking and biking. By their nature, roundabouts generally prioritize motorized modes in the assignment of physical space. The concept would also create a large center island that would have no practical value, because a roundabout’s circulating roadway is specifically designed for crossings of it to be prohibited. Consequently, the roundabout concept was eliminated from further evaluation.

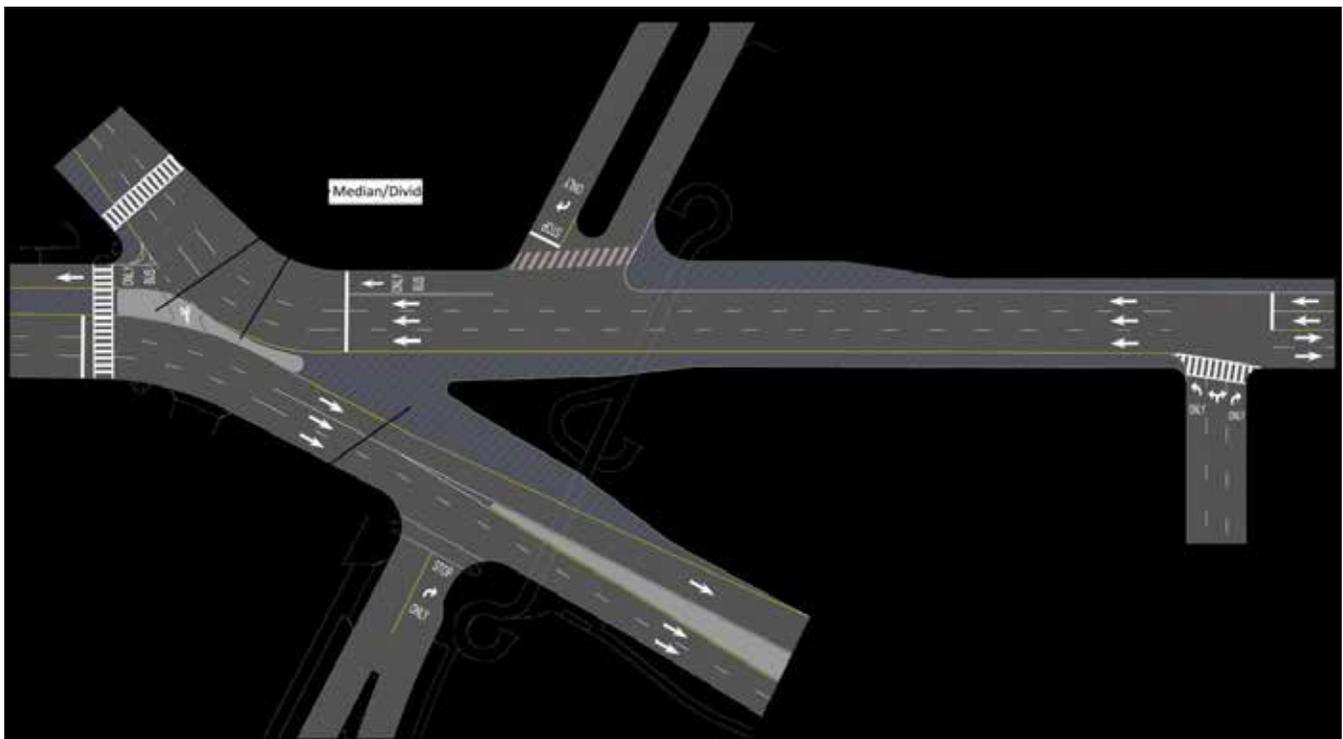


Figure 4: Bowtie Concept



Figure 5: Bowtie Concept

CONCEPT EVALUATION CRITERIA

Pedestrian Access

- Reduce crossing distances
- Reduce conflict points
- Lengthen crossing times at traffic signals
- Decrease delay
- Create more direct connections between major destinations
- Improve pedestrian visibility
- Enlarge pedestrian space

Bicycle Access

- Create more direct connections between major destinations
- Reduce conflict points
- Separation from vehicle traffic
- Bike Share
- Bicycle parking

Transit

- Improve reliability and frequency
- Proximity and convenience
- Rapid Ride-like features and amenities
- Ease of transfer
 - Local transfer (bus to rail)
 - Regional transfer (rail to bus to rail)
- On-street stops and layover

Freight

- Reliable trips for deliveries
- Access to properties
- Compatible roadway design

Auto Traffic

- No significant impacts to travel times
- Provide property and service access

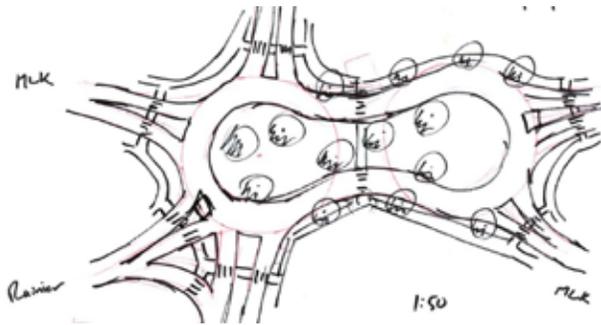


Figure 6: Roundabout Concepts

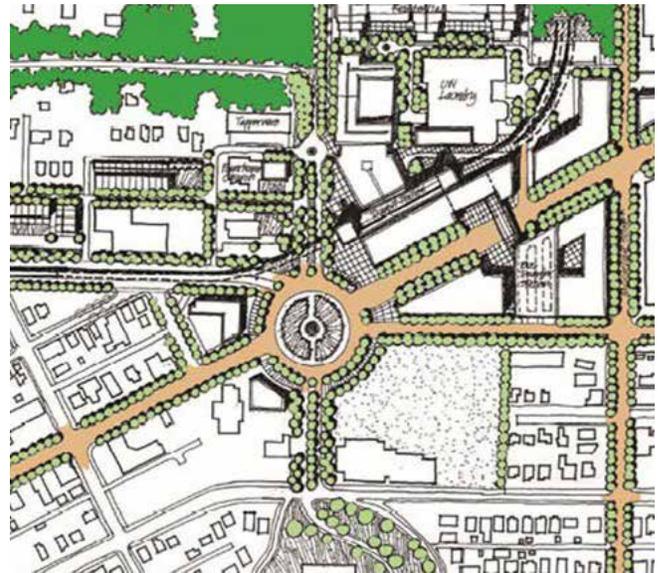


Figure 7: Roundabout Concept

THE ACCESSIBLE MT. BAKER INTEGRATED MULTIMODAL PLAN PREFERRED CONCEPT

The charrette process followed a progression of milestones leading up to the preferred concept:

- Town Center vision offered themes
- Stakeholder interviews informed ideas
- Guiding principles defined direction
- Early concepts tested
- New concepts prepared and evaluated
- Long-term plan emerged
- Near-term actions followed

The charrette process resulted in a bold, yet simple solution: eliminate the intersection of Rainier Ave and MLK Way making more time and space for pedestrians, cyclists, and transit. The project team analyzed outcomes for all modes of travel, emphasizing recommendations from the citywide modal plans and other policies guiding how the City develops and enhances its transportation system such as Seattle's Complete Streets policy. Through the analysis it became clear that eliminating the intersection could deliver the safety and mobility benefits sought by the community and supported by the City's transportation policies. Where other plans and concepts have failed this new integrated multimodal plan provides the opportunities to greatly improve the safety of people walking and biking in the area, improve transit and freight reliability and strengthen community identity without significantly impacting vehicle travel times.

Over the next ten months, the team reached out to the community to gather more information on how people use the Mt. Baker station area, what they like and don't like about the area, and their ideas for creating a more accessible, safe, and culturally and economically vibrant place. They also analyzed the new concept in greater detail, including conducting traffic analysis to better understand traffic impacts. The team used this additional input and analysis to develop the Accessible Mt. Baker concept into a more refined plan. For more details, see Appendix F.



Figure 8: Draft Concept

COMMUNITY VOICES

The Accessible Mt. Baker Plan will only truly succeed with the strong support of the community, and no one understands the challenges and opportunities of the area better than the people who travel through it every day. That's why a diverse range of groups and community members helped to shape project priorities. The project team integrated ideas and comments from the community into the recommendations and designs for the area.

The project team developed and deployed engagement strategies to reduce barriers and encourage everyone in the community to participate including youth, communities of color, and representatives from the Lighthouse for the Blind. For example, City staff recruited the Department of Neighborhood Public Outreach and Engagement Liaisons (POELs) to engage youth and seven language communities around the Mt. Baker Station area throughout the Accessible Mt. Baker public outreach process. Other strategies used throughout the project to engage the community engagement and receive input included:

- Project Website
- 2 Public Open Houses
- 19 Community Briefings
- Public Engagement Tabling Event
- Door-to-Door Business Outreach
- Multilingual and Youth Community Meetings
- Online Survey



Figure 9: Public Involvement

POEL DETAILS: SEE COMMENT BUBBLE

Outreach to seven language groups:

- 130 Asian and SE Asian Participants
 - 40 Chinese-speaking survey participants
 - 32 Vietnamese-speaking survey participants
 - 38 Tagalog- speaking survey participants
 - 21 Khmer-speaking survey participants
- 56 East African participants
 - 10 Amharic-speaking survey participants
 - 5 Oromo-speaking survey participants
 - 10 Somali-speaking survey participants

Translated Survey

- City conducted 19 communities meeting and 14 of them are non-English meetings
- Public outreach were conducted for 7 multilingual communities

Simultaneous Translation at Open House

- Key materials were translated in 9 different languages

Accessible Mt. Baker

Outreach in Numbers

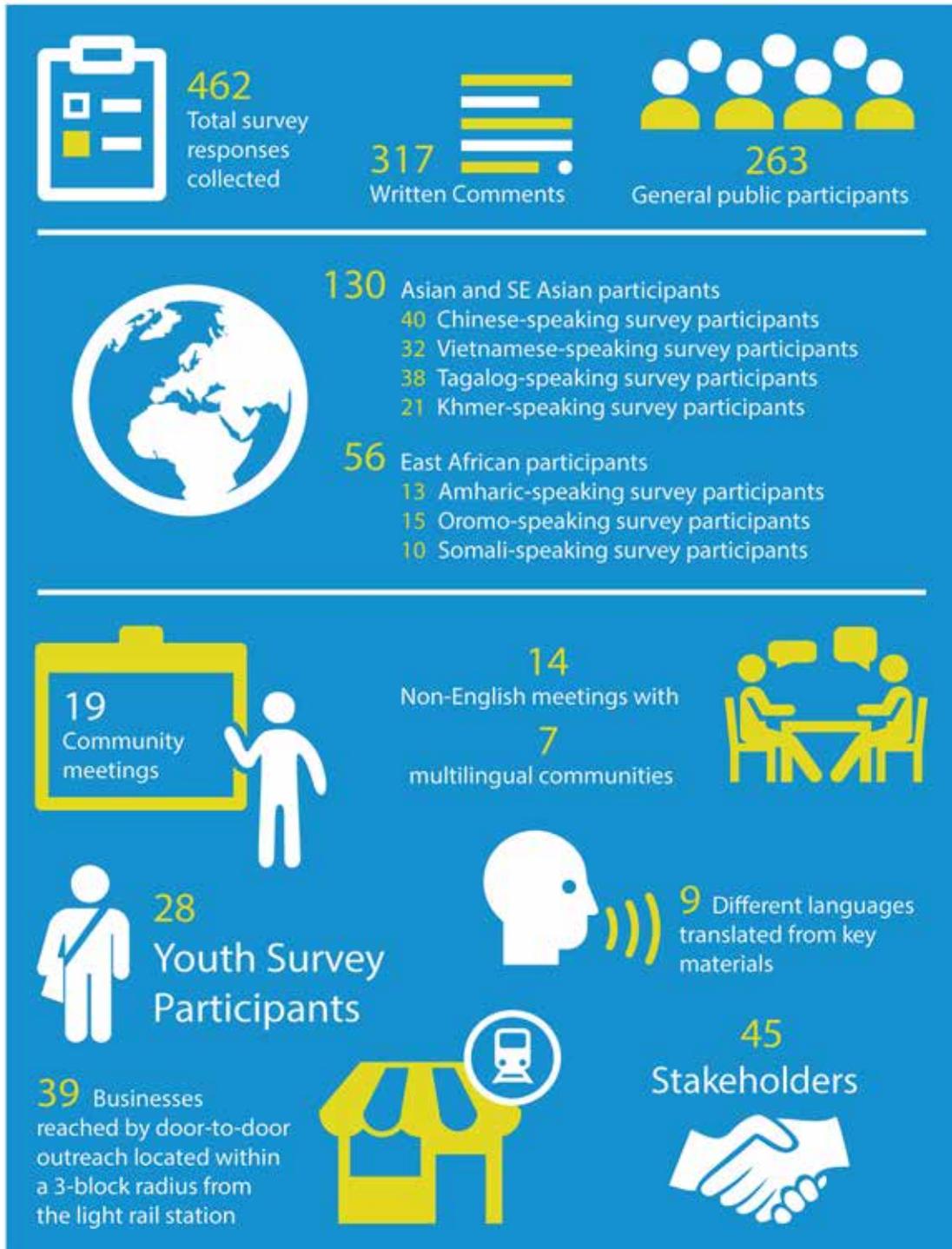


Figure 10: Public Involvement

“Love the safety improvements for people walking and biking.”

Open House Comment

WHAT WE HEARD

Below is an overview of the recurring themes from the many comments received from the community. This summary of findings includes an equally weighted measure of the general survey, seven language groups, and the youth community. No single group had more of a voice due to a greater number of responses. For more detail on stakeholder engagement strategies and results, see the Public Outreach Report.

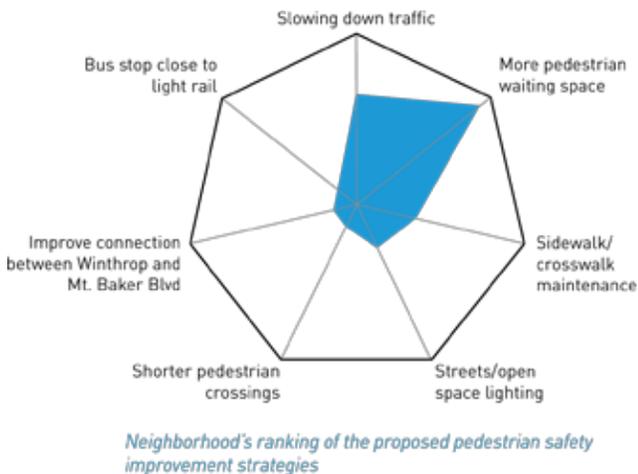


Figure 11: Stakeholder ranking of pedestrian safety improvement strategies

Pedestrians

Pedestrian safety is a major issue. People are concerned about:

- Vehicle speeds along Rainier Ave and MLK Way.
- The lack of a buffer from traffic along Rainier.
- Long, skewed intersections are hard to cross.

Bicycling

- Rainier Ave is the flattest and most direct route to and from downtown. Today, heavy traffic and narrow lanes make it risky to bike on the street.
- Build a protected bikeway along Rainier Ave. Narrowing the roadway from four lanes to three could free up space for people bicycling on Rainier Ave.

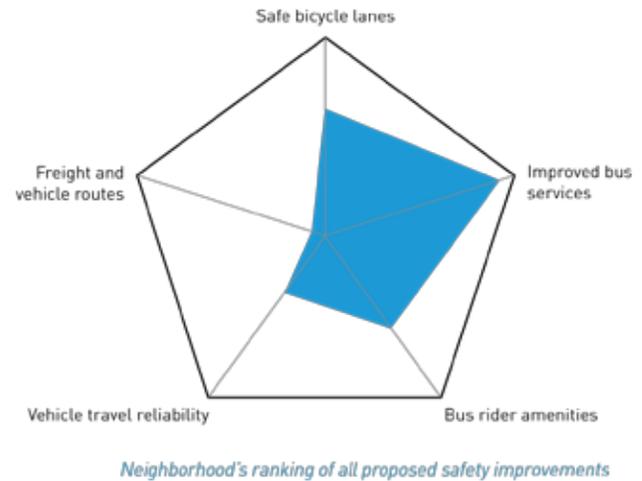


Figure 12: Stakeholder ranking of proposed improvements

Transit

- Rainier Ave is critical for Route 7, one of the busiest bus routes in the King County Metro system.
- It's challenging to connect from bus to rail. Most people support moving the Mt. Baker bus transit center closer to the light rail station.
- Many people use light rail and think it benefits the area. People want to make it easier to connect from the station to MLK Way and Rainier Ave.

Motor Vehicles

- Traffic along Rainier Ave is heavy and it's hard to get 'through' the area.
- Community members are concerned vehicles are cutting through neighborhood streets, and that more people will drive on alternate routes to avoid the area as development increases.

Freight

- It's important to maintain freight access in the area.
- Design solutions should ensure that businesses can make/receive deliveries.

Neighborhood Urban Design and Transit Oriented Development

- Some oppose the Town Center rezone, while others think the zoning changes provide opportunities to achieve their vision.
- The area needs a safer and more comfortable pedestrian environment, including lighting and green space.
- Opportunities for transit-oriented development include the "triangle site" (Starbucks, US Bank, and transit center), the Lowe's site, and the property west of the light rail station.

Economic Development

- It's important to ensure economic vitality in the area, particularly retaining and creating jobs. Business sectors, including office, manufacturing, technology, retail and service, all contribute to the area.
- Some people are concerned that jobs may be displaced by housing with redevelopment in the station area.

THE ACCESSIBLE MT. BAKER INTEGRATED MULTIMODAL PLAN

The Accessible Mt. Baker Plan is bold. It embodies the City's mission to deliver a high-quality transportation system for Seattle and create a city that is safe, connected, affordable, vibrant and innovative. The project team listened to what the community had to say about what's working and what's not working in the Mt. Baker station area and received positive feedback on the draft Accessible Mt. Baker Plan and the many benefits it offers. Furthermore, the team conducted technical analysis and confirmed that the Plan can be made to work from a traffic perspective (for more details, see below).

“Excited for the prospect of open space and reconnection of Olmsted Boulevard”

Open House Comment

BENEFITS OF THE PLAN

The Accessible Mt. Baker Plan achieves the goals of making the Mt. Baker station area safer and more accessible for everyone. It prioritizes the safety of those people walking and biking through the area while enhancing transit and freight reliability and meeting vehicle demand. Below is a summary of the benefits the Plan offers.

Pedestrian Safety and Access

Pedestrian safety and access is the first priority of the Accessible Mt. Baker Plan. Removing the intersection of MLK Way and Rainier Ave frees up space and simplifies operations, providing opportunities to greatly improve conditions for people walking through the area. The new design offers:

- Shorter street crossings to improve safety and comfort.
 - More direct connections to destinations such as Franklin High School and the light rail station.
 - More time for crossing the street.
 - Wider sidewalks and sidewalk buffers to create a more comfortable walking environment.
 - Improved pedestrian visibility and comfort.
-

The conversion of the northern side of Mt. Baker Blvd. to pedestrian and bicycle use only (between Rainier Ave and 30th Ave) allows for much higher capacity and creates a well-oriented connection to the new, wider protected crossing of both Rainier Ave and MLK Way, and in turn, to the historic Cheasty Blvd. greenway west of MLK Way. The reconnected boulevard will link the Mt. Baker and Beacon Hill neighborhoods and two neighborhood greenways and provide a better, more direct connection to Franklin High School.



Figure 13: New Concept

- Recommend extension of the protected bicycle facilities on Rainier Avenue south to Charlestown St.
- Construct full or partially protected intersections at McClellan St and MLK Way and McClellan St and Rainier Ave.
- Install secure bicycle parking at the Mt. Baker light rail station. As the system expands, install a bicycle share station in the Mt. Baker station area.
- Add and improve wayfinding signage.
- Reconnect the historic Cheasty and Mt. Baker Boulevards. The reconnected boulevard will link the Mt. Baker and Beacon Hill neighborhoods and two neighborhood greenways and provide a better, more direct connection to Franklin High School.
- Relocated focus of bus activity along the perimeter of Mt. Baker's pedestrian plaza; enabling stronger, safer, and simpler transfers between modes by placing people directly at the Station's "front door".
- Enhanced wayfinding, real-time arrival, plaza art, and improved stops builds a safe and welcoming environment at street level for community use. Activation of plaza space through partnerships with the local businesses and organization converts this area into a destination for those traveling to or through this space.
- Transit priority treatments; including queue jumps, dedicated bus lanes, minimized left turns, and a transit-only connector street at Mt. Baker Blvd between MLK Way and Rainier Ave. These investments facilitate reliable and efficient bus operations through the project corridor by providing buses dedicated street space and optimal signal phasing. In addition, these transit improvements provide a foundation for future RapidRide+ accommodations as part of voter-approved Move Seattle measure.
- Relocated and enhanced in-street stops for Metro Route 7, a critical bus route serving Mt. Baker and surrounding neighborhoods, creating a safer environment and improving connectivity with Mt. Baker Station and the neighborhood.
- New opportunities for first/last mile bicycle trips with new secure bicycle parking, bike share space, and building all-abilities & all-ages connections into surrounding neighborhoods.
- Integration of rideshare services (Uber/Lyft/etc.) into Mt. Baker Station has not been considered at this time.

Transit Access and Reliability

The Mt. Baker station area is a key transit hub for the thousands of people riding light rail and buses each day, and those transferring between modes. Link Light Rail's Mt. Baker Station represents a significant transit investment, yet the surrounding area has not been oriented towards transit access, as vehicle throughput has historically been the priority. The Accessible Mt. Baker Plan improves transit access by improving connectivity, safety, comfort, and convenience in the vicinity for people walking and biking. The Plan provides the following benefits related to transit access and reliability:

- Construction of a southern segment of 27th Avenue between Winthrop and Forest Streets creates a low-volume, transit-focused connection for Metro bus operations adjacent to Mt. Baker Station.
- Integration of buses directly with Mt. Baker Station's pedestrian plaza by relocating bus operations currently occurring at Mt. Baker Transit Center to 27th Avenue. Former Mt. Baker TC will be reallocated as an opportunity for Transit Orientated Development and a new east-west cross street.

Transit priority treatments, including queue jumps, dedicated bus lanes, and a transit-only



Figure 17: Existing Condition for Bus Access



Figure 18: Proposed Conditions for Bus Access

“There are lots of high-frequency bus routes, need to consider how they will work with proposed concept.”

Open House Comment

Freight Access and Reliability

By removing the bottleneck of Rainier Ave and MLK, the Accessible Mt. Baker Plan removes the main source of traffic congestion, making trips and deliveries more reliable. Freight movement through the Mt. Baker district will be streamlined by creating a seamless connection between two legs of the Major Truck Streets, which are MLK Way (south of the station area) and Rainier Ave (north of the station area). With full implementation, the Plan will deliver a more resilient network of streets through which freight can move and support business more reliably. The Plan supports freight mobility in the following ways:

- Streamlines the freight route by connecting two Major Truck Streets, the north leg of Rainier Ave with the south leg of MLK Way
- In order to facilitate local truck movement between Rainier Ave and MLK Way, key intersections are modified to better accommodate truck turns
- Adjusts signals to accommodate more turning trucks and protect pedestrians
- Improves predictability by providing dedicated space for bicycles and transit vehicles, and creating more convenient pedestrian crossings

Auto Traffic Access

Traffic near the Mt. Baker station is heavy and often unpredictable. Community members are also concerned about fast-moving traffic and more people driving on neighborhood streets. The Accessible Mt. Baker Plan reduces conflicts,

walking, biking and driving through the area will be treated. It will also be important to work closely with property owners to take advantage of opportunities to integrate the street design with the surrounding land uses to further support and enhance the potential for walking, cycling, and transit use. For example, the Plan identifies the preferred location for driveways on side-streets so that they do not introduce conflicts and detract from a comfortable walking and biking environment along Rainier Ave, MLK Way, and McClellan St. Coordination with the Office of Planning and Community Development, which reviews and approves new development projects is, will be needed to ensure private development is contributing to the overall implementation of the Plan.

WILL THE ACCESSIBLE MT. BAKER PLAN MAKE TRAFFIC WORSE?

Traffic in the Mt. Baker area is already congested during peak travel times. Much of this is due to the inefficient operations at the Rainier Ave and MLK Way intersection. Though the Plan prioritizes pedestrians, bicyclists and transit, it also considers vehicle travel times, particularly since transit and freight reliability are also key goals. The project team modeled the traffic impacts of the Plan in order to answer the following questions:

- Can the proposed network accommodate current traffic volumes and travel demands?
- What travel improvements are expected compared with existing conditions?

- What infrastructure improvements (e.g. signals, intersection design) are needed to make it work from a traffic perspective?
- Can this proposal accommodate the traffic generated by new development within the Mt. Baker area?

Based on the traffic analysis, the Plan will serve projected traffic volumes and travel demand within the study area between Bayview St and Walden St in 2019 (assumed to be soonest the project would be completed). The traffic model showed only two intersections (Rainier Ave and Bayview St and MLK Way and McClellan St) having increased delay, but this result is not taking into

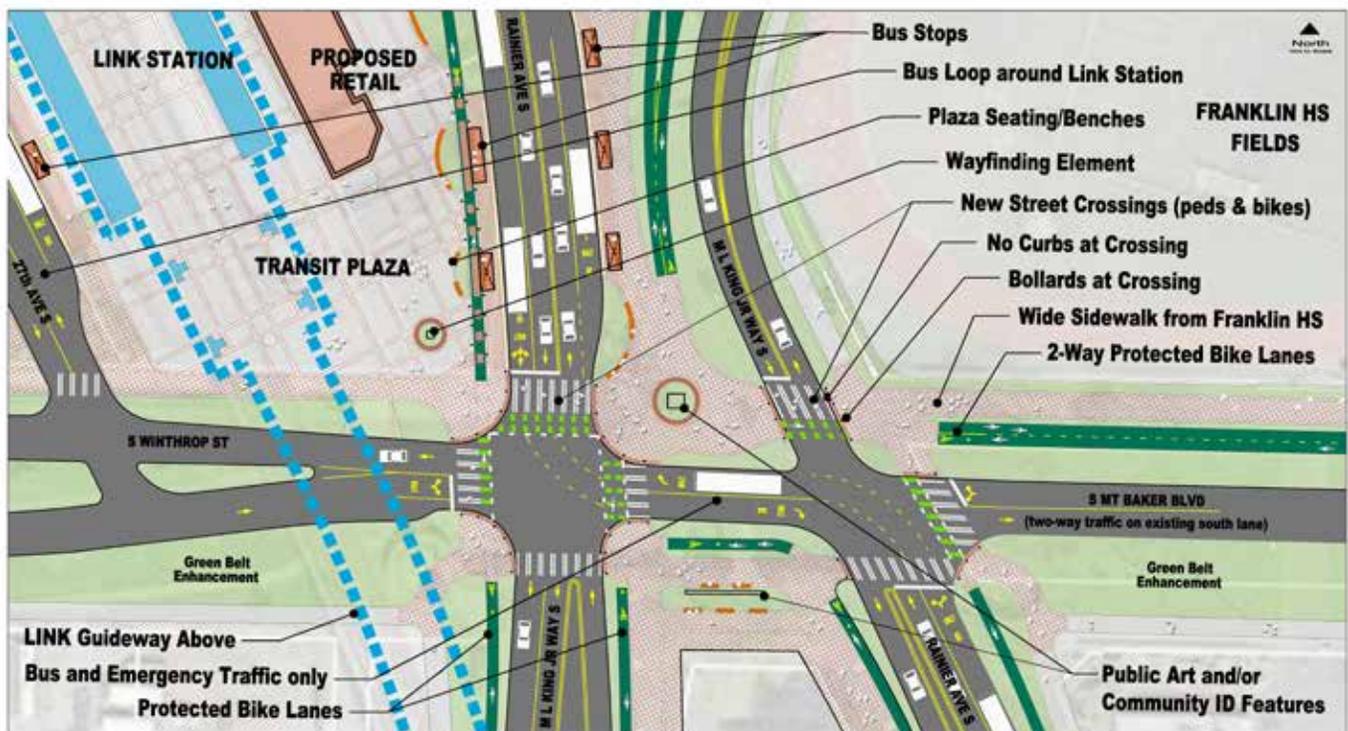


Figure 20: Crossover Street and Intersection Improvements

account strategic signal and roadway design improvements that could be made to mitigate the delay at these intersections. These positive modeling results are a result of several important elements that all work together to accommodate and serve the travel demands through and within the Mt. Baker area:

- Removal of the bottleneck at the Rainier Ave and MLK Way intersection to streamline key movements and minimize conflicts
- Future new east-west connections between Rainier Ave and MLK Way at Forest St and Lander St to accommodate crossover traffic within the Mt. Baker area
- More optimized utilization of the street network north and south of the Mt. Baker area (see discussion below).
- New signals and/or new turn lanes at:
 - Rainier Ave at Lander Street
 - MLK Way at Lander Street
 - MLK Way at Forest Street
 - Rainier Ave at Hanford Street
 - Rainier Ave at Byron Street
- Restricted street access between Rainier Ave and MLK Way along Mt. Baker Blvd that serves only buses and emergency vehicles.

The Accessible Mt. Baker Plan takes advantage of the efficiencies gained when a street network bottleneck is eliminated to improve safety, comfort and convenience for all roadway users. These efficiencies are depicted in the graphics below:

1. The intersection of two arterials creates a bottleneck.

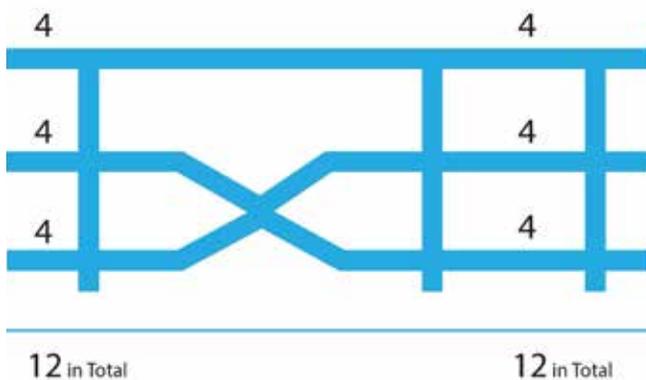


Figure 21: Existing Condition

2. The parallel streets at this bottleneck point have 12 lanes of capacity.

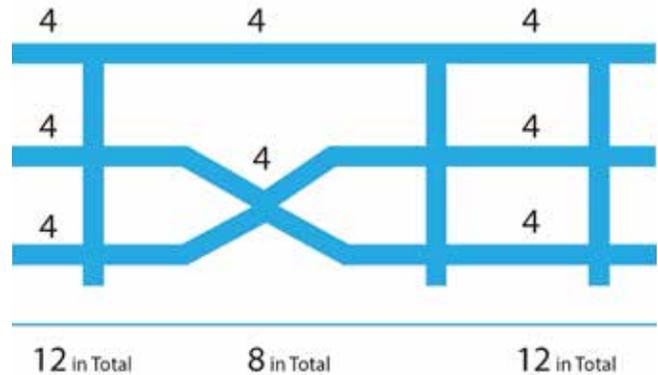


Figure 22: Existing Condition

3. The capacity of two 4-lane streets is diminished at the bottleneck due to the need for multiple signal phases. The signal allows only half of the traffic to move through at a time, interrupting the flow of traffic through the area.

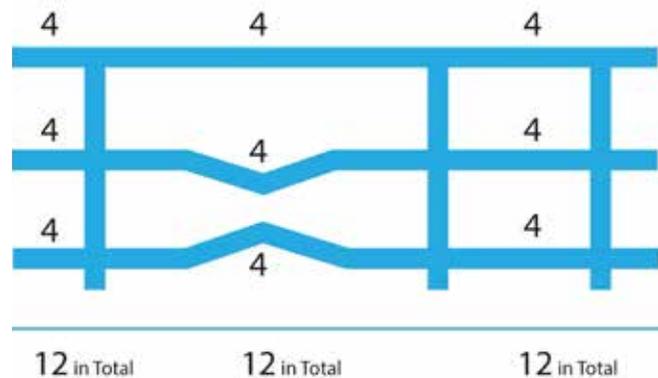


Figure 23: Existing Condition

- 4. Eliminating the intersection restores capacity of the two streets.

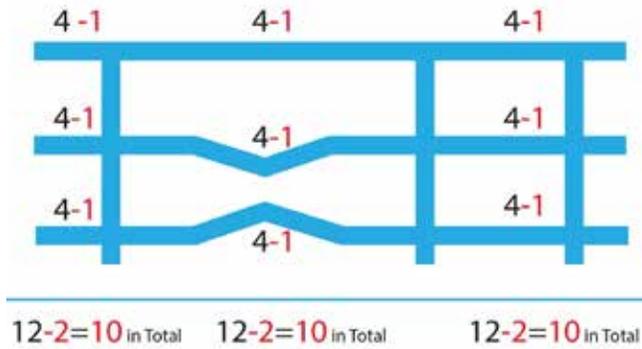


Figure 24: Existing Condition

- 5. By eliminating the intersection of two streets and relying more on the greater street network, there may be opportunities to reduce the number of vehicle travel lanes and reallocate space to other modes and purposes. Doing so would also have traffic calming effects and improve safety in the area.

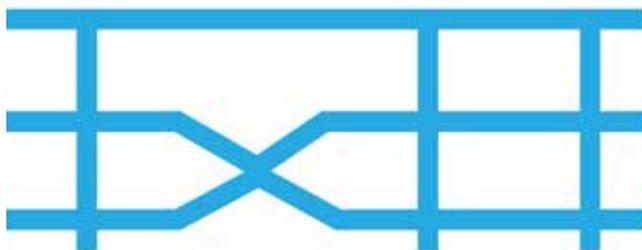


Figure 25: Existing Condition

While Rainier Ave and MLK Way are more or less parallel streets, they serve different functions throughout the corridor. For example, Rainier Ave more directly connects to Downtown. Once the Plan is implemented, motorists traveling north on Rainier Ave from southeast Seattle to Downtown will need to either travel west to MLK Way south of the Mt. Baker area (to continue north on Rainier Ave) or west from MLK Way to Rainier Ave north of the station area. Imagine Rainier Ave and MLK Way as the supporting sides of a ladder and the many east-west streets between as the rungs. These east-west streets provide motorists with

many opportunities for moving between Rainier Ave and MLK Way.

The traffic model assumed that 20 percent of traffic would transfer between Rainier Ave and MLK Way either north or south of the study area. This number could be higher once motorists adjust and figure out the route that serves them best. The traffic analysis did not assume that some people would avoid peak hour travel, which is likely to be the case. It also did not assume a shift of vehicle trips to other modes such as transit, which is very likely to be the case once future Link light rail lines open in 2021 and 2023 and Bus Rapid Transit improvements are implemented on Rainier Ave. Eventually, an equilibrium will be reached and network utilization will be optimized as people figure out what route, time of day, or travel mode best meets their needs.

Anytime a major change like the one proposed by the Accessible Mt. Baker Plan is put in place, there is a period of adjustment. Strategic improvements such as signal adjustments, wayfinding signage and roadway design modifications both inside and outside the Accessible Mt. Baker study area will ease the movement of traffic between MLK Way and Rainier Ave and make it easier for people to adjust.

Detailed traffic analysis can be found in Appendix XX.

NEXT STEPS

We know the Accessible Mt. Baker Plan will deliver significant safety, livability, and economic benefits for the neighborhood while also accommodating traffic and freight needs and demand. The Plan responds to stakeholders and the public that something needs to be done, primarily at the bottleneck of Rainier Ave and MLK Way. Stakeholders have expressed their support for the bold rethinking of how people travel through the Mt. Baker station area and agreed that the Accessible Mt. Baker Plan is the right solution. The City will continue to work with stakeholders as the Plan moves forward with project development, final design and formulating a full funding and implementation strategy.

The Planning cost estimate for this project is between an estimated \$20 and \$24 million. About a quarter of the necessary funding has already been secured through the Levy to Move Seattle and the Washington State Department of Transportation (WSDOT). This initial funding will leverage other regional, state and federal funding sources and advance the Plan to a level of design needed to provide more detailed cost estimates and identify potential coordination opportunities.

Implementation will also be coordinated with other projects in the area such as Bus Rapid Transit expansion along Rainier Ave, the Rainier Avenue Safety Corridor Project and coordinate with the four modal implementation plans. Lastly, opportunities will be leveraged to implement some location-specific elements of the Plan as private redevelopment occurs.

NEAR-TERM ACTIONS

The goal is to implement the Accessible Mt. Baker Plan as soon as is feasible, understanding that there are still many pieces that need to fall into place and a significant amount of funding that needs to be secured. In the meantime there will be a focus on low-cost safety strategies such as signal modifications, repurposing excess roadway space to create shorter street crossings and additional waiting space at corners, and improving visibility of pedestrians through tree trimming and improved lighting. There will be work with City departments and community partners to support other community priorities such as improving lighting on Hanford Steps and ensuring that bus stops have enough lighting for people to feel safe. As new development projects are proposed, coordination with neighborhood partners and the Office of Planning and Community Development will promote development that reflects the goals and organizing principles of the Accessible Mt. Baker Plan. Lastly, a portion of Mt. Baker Blvd will be converted into a protected bike lane to facilitate movement between Rainier Valley Neighborhood Greenway and the Mt. Baker station.

APPENDIX A: PREVIOUS PLANS

Move Seattle (2016)

Move Seattle is the 10-Year vision that lays out the strategy for Seattle to meet the challenges facing the city's transportation system today, organized around our core values of being a safe, interconnected, vibrant, affordable, and innovative city. Move Seattle also lays out the framework to integrate the four modal plans and prioritize projects based on the core values and other considerations. Related to the Accessible Mount Baker plan, Move Seattle recommends a Complete Street project on Rainier Ave.

Vision Zero Action Plan (2015)

Vision Zero is Seattle's plan to end traffic deaths and fatalities by 2030. Related to the Mount Baker station area, the Plan designates Rainier Avenue as a 'road safety corridor' to target engineering, enforcement, and education efforts.

Seattle Safe Routes to School 5-Year Action Plan (2015)

Safe Streets, Healthy Schools and Communities is a detailed action plan that lays out a 5-year strategy for improving safety on Seattle streets near schools. The Action Plan recommended completing 9-12 engineering improvements near schools per year.

Seattle Pedestrian Master Plan (2016, 2009)

The Pedestrian Master Plan provides a 20-year strategy for making Seattle the "most walkable and accessible city in the nation," including prioritization for along the roadway and crossing the roadway improvements. The Pedestrian Master Plan identifies the Mt. Baker Town Center area as having high potential pedestrian demand and as a high priority area for improvement. It identifies high opportunity for roadway crossing

improvements at the intersections of Rainier Avenue with Bayview Street, McClellan Street, MLK Way S., and Walden Street. The Plan also includes the MLK Way/Rainier Ave intersection within the top 20% of safety improvement opportunities, and the Mount Baker Station area also score highly based on equity and health disparities.

Seattle Bicycle Master Plan (2014)

The Bicycle Master Plan (BMP) recommends both MLK Way S. and Rainier Avenue S. as part of the recommended all ages and abilities bicycle network. The BMP recommends cycle tracks (protected bike lanes) on MLK Way S. both north and south of the MLK Way S. /Rainier Avenue S. intersection and on Rainier Ave north of the intersection. The BMP also identifies the MLK Way S. / Rainier Ave intersection as a catalyst project. Catalyst projects are defined as critical pieces of the future bicycle network. The public engagement highlighted Rainier Ave S and other routes through Southeast Seattle as major challenges for bicycling and one of the streets people would like to ride on, but cannot currently. Stakeholder input received during the Accessible Mt. Baker Plan development process showed a strong desire to have Rainier Ave be the primary bicycling route between southeast Seattle and Downtown.

Other bicycle facilities in the Accessible Mt. Baker project area recommended by the BMP include continuing bicycle lanes on McClellan west of 31st Ave S. to 21st Avenue S. and Neighborhood Greenways on 34th Avenue S., 31 st Ave S. (between Mt. Baker Blvd and McClellan), S. Walden St, 25th Avenue S. (between S. Hanford Street and S. College Street), Cheasty Boulevard S., and S. Hanford Street (between MLK Way S. and 18th Avenue S.). The Bicycle Master Plan

recommends Cheasty Boulevard as a future neighborhood greenway (east of MLK Way). The 2016-2020 BMP Implementation Plan notes that the Rainier Valley N-S neighborhood greenway will be implemented in 2017, which is near the Mount Baker Station area.

Seattle Transit Master Plan Final Summary Report (2016, 2012)

Rainier Ave is designated as a Frequent Transit Network (FTN) High Priority Bus Corridor. This corridor is served by the Route 7 bus line with 10-minute headways. In a 2016 update, the Transit Master Plan upgrades Rainier Avenue to a Rapid Ride corridor funded by the Levy to Move Seattle.

Seattle Freight Master Plan (2016)

Rainier Ave is designated as a Minor freight route south of MLK and a Major freight route north of MLK, while MLK Way is designated as a Major freight route south of Rainier Ave. The FMP states that major truck streets serve through trips, which minor truck streets serve primarily “goods and service delivery to/from urban villages and neighborhood commercial districts.”

Seattle Complete Streets Policy

Seattle’s Complete Streets Policy was adopted by ordinance in 2007. It states “To design, operate and maintain Seattle’s streets to promote safe and convenient access and travel for all users—pedestrians, bicyclists, transit riders, and people of all abilities, as well as freight and motor vehicle drivers.” Any roadway improvements constructed in the Mt. Baker Town Center area will be developed according to Complete Streets principles.

Mt. Baker Town Center Future Transportation Improvements Preliminary Business Outreach Project (2012)

The purpose of this report is to better understand the mobility and access needs of key area businesses and property owners given the goal to build a vital, walkable town center adjacent

to the Mt. Baker light rail station established in the 1999 North Rainier Neighborhood Plan and reaffirmed in the 2010 neighborhood plan update. It presents relevant case studies, and assesses the advantages and disadvantages of potential urban design and transportation solutions. The advantages and disadvantages of the roundabout concept first presented in the McClellan Town Center Development Strategy (2001), the “bowtie” concept presented in the Seattle Station Area Analysis (2011), and smaller scale improvements identified in a number of different planning documents have been considered and incorporated, where appropriate, into the concept evaluation presented further below.

Seattle Station Area Analysis – Mt. Baker (2011)

This analysis modeled trip generation based on the increases in household and employment anticipated in the 2010 North Rainier Neighborhood Plan Update. It concludes that due to the rich transit opportunities and additional locations to live, shop and work within the same area, many of these trips will not involve a car. In the PM peak hour, the analysis concluded that these increases will create an additional 226 vehicle trips, 72 additional pedestrian and bicycle trips, and 53 transit trips.

This analysis included an evaluation of the “bow tie” concept and suggested that this concept allows a lane reduction on MLK Way S., which would provide more than adequate space for adding a two-way cycle track on the west side of the street. This facility would connect to bicycle lanes on McClellan Street, facilitate connections to the light rail station and provide a catalyst for northern extension of bicycle facilities on MLK Way S. to meet existing facilities at I-90. Analysis of this concept also suggests that pedestrian crossing distances of MLK Way S. and Rainier Ave within the Mt. Baker station area could be reduced due to lane reductions that would result from the couplet.

Mt. Baker Town Center Urban Design Framework (2011)

The Urban Design Framework (UDF) envisions the creation of a transit accessible “Main Street” shopping district on Rainier Avenue S and S McClellan Street, with gateways and landmarks reinforcing the Town Center identity. The Plan also emphasizes creation of a complete network of sidewalks and bicycle infrastructure, and complete streets with easy connections to nearby neighborhoods and historic neighborhoods. It supports further evaluation of the one-way couplet (aka “bowtie”) concept at Rainier/ MLK, and envisions that with the couplet in place, wide sidewalks, parking lane, landscaping, bike lanes and bus lanes could be added in the corridor.

North Rainier Neighborhood Plan Update (2010)

The North Rainier Plan Update is a community-driven update to the 1999 Neighborhood Plan. It envisions Rainier Avenue as a highly functioning multimodal complete street, with a network of safe streets for pedestrians and bicycles, and integrated green and open space, consistent with the 1999 vision. Other objectives of the plan included increasing choices for living, working, and playing in the neighborhood, and supporting opportunities to maintain the community’s diversity, including culturally relevant programming.

North Rainier Neighborhood Action Plan (2010)

The North Rainier Action Plan is the work plan that identifies priorities, strategies and action steps to be accomplished together by the community and the City in order to achieve the vision and goals established in the North Rainier Neighborhood Plan Update. Priorities for the current action plan were established through a community involvement process. The goal that “Rainier Avenue S and MLK Jr. Way S are safe and attractive to walk, bike, and ride as well as drive” was selected as the top priority goal in the Plan.

Southeast Transportation Study (2008)

The Southeast Transportation Study (SETS) built on prior planning efforts to provide a comprehensive transportation plan for southeast Seattle (south of I-90 and east of I-5). It was developed to serve as a blueprint for financing and programming transportation improvements over the next two decades. SETS projects focus on improving safety; maintaining vehicle capacity and freight accessibility on Rainier; improving transit access, speed and reliability; and supporting the transition of the core business district around the Mt. Baker Station to a pedestrian-friendly urban village.

The report notes the challenge on Rainier Avenue to balance the needs of changing land development patterns, and many more people on the sidewalks, with the necessity to maintain capacity for high traffic volumes and its use as a major truck route. It also indicates that despite carrying the highest traffic volumes in southeast Seattle, all of the intersections analyzed in the Mt. Baker Town Center area operate at acceptable levels of service, and are projected to do so through 2030. It does note, however, that two intersections (Rainier/MLK and Rainier/Walden) are High Collision Locations, which means that they experience greater than 10 collisions per year on average.

Key recommended transportation projects in the Mt. Baker Town Center area include (1) reconfiguring the Rainier/MLK intersection so that pedestrians can cross at-grade on all approaches, (2) improving the two intersections that are currently High Collision Locations, (3) improving S McClellan St for pedestrians and cyclists traveling to and from the light rail station, and (4) constructing a non-motorized trail along MLK between Bayview and McClellan. These recommended projects are described in more detail later in this report.

McClellan Town Center Development Strategy (2001)

This study focused on the area around the Rainier/MLK intersection, from S McClellan St to S Walden St and identified a variety of commercial and housing development strategies, as well as public investments and design recommendations intended to integrate the proposed future light rail station into the commercial core of the neighborhood, building upon the town center vision established in the North Rainier Neighborhood Plan (1999). The study proposed and assessed a roundabout concept at Rainier/MLK.

North Rainier Neighborhood Plan (1999)

Key transportation-related areas of emphasis in this Plan included creation of a town center in the Rainier/MLK area, bicycle and pedestrian networks, accessible transit, and attractive green streetscapes along Rainier Ave and MLK Way S.

APPENDIX B: LIST OF STAKEHOLDER INTERVIEWS

Prior to and during the Technical Charrette, the project team conducted interviews with various stakeholders in and around the Mt. Baker station area.

- Seattle Department of Transportation
- Seattle Department of Neighborhoods
- Seattle Department of Planning and Development
- Seattle Fire Department
- Seattle Parks Department
- Seattle City Light
- Seattle Neighborhood Greenways
- King County Metro
- University of Washington
- Rainier Valley Community Development Fund
- Rainier Chamber of Commerce
- Rainier Valley Greenways
- Columbia City Neighborhood
- Feet First
- Cascade Bicycle Club
- Senior Housing Assistance Group (SHAG)
- Artspace
- Columbia City Business Association (CCBA)
- Enterprise
- ZGF Architects
- Lighthouse for the Blind
- OFC
- Berk Consulting
- Property owners in the station area

Interviews were conducted in groups by topic area of interest, including:

- Traffic and Transit
- Bikes and Greenways
- Columbia City Neighborhood
- Senior Housing
- New Facility
- Transit Route 7
- Neighborhood interests
- Community interests
- Transit Oriented Development (TOD)
- ADA Interests
- Rainier Safety Project
- Business interests
- Freight
- Transit (general)
- Neighborhood Plan
- Community Development
- Drop-In

APPENDIX C: FEEDBACK ON PAST DESIGN CONCEPTS

Two design concepts for the Rainier Ave/MLK Way intersection were studied in the past and participants in outreach for this study were asked to provide comments and opinions on the concepts.

Bowtie Concept

- There was no support for the bowtie option; participants felt this concept came from, and was supported by, City staff with little input from the community

Roundabout Concept

- There was no support for a roundabout design, but participants asked the team to evaluate this option

Short-term Ideas

- Single crossing at Rainier Ave/MLK Way. (i.e., pedestrian scramble).
- Raised crosswalks at Rainier Ave/MLK Way intersection.
- Curb bulb near high school? Can we eliminate a lane to gain space?
- Consider Pronto (bike share) at Mt. Baker Station and eventual Judkins Park (I-90) Station for transfer options.
- Convert center turn lane along Rainier Ave into a two-way queue jump.
- Install removable concrete planters and skewed intersections to channel vehicles and protect pedestrians.
- Reduce speed limit along Rainier Ave by 5 MPH and install high visibility and larger signs (current posted speed is 30 MPH).
- Install high visibility warning signs at vehicle turn/pedestrian crossing conflict zones.

- Install high visibility and durable crosswalk markings and stop bars; maybe continue to adjacent intersections.
- Install textured and colored pavement to better delineate intersection and pavement between adjacent intersections.
- Use paint, lighting, and art features to make the pedestrian bridge more visible and attractive.
- If feasible, modify pedestrian bridge ramp slope to better accommodate handicapped users.
- Install directional signs to marked crossings at the pedestrian bridge landings.
- Repair sidewalks where needed.
- Trim tree branches where they conflict with pedestrian movement, particularly along Rainier Ave.
- Relocate sidewalk obstructions such as utility boxes.
- Increase east-west signal timing across Rainier Ave to better serve pedestrians.
- Continue installation of Accessible Pedestrian Signals (APS).

Long-term /Big Ideas

- Look for excess capacity on Rainier Ave and MLK Way and remove a vehicle lane to reallocate to other uses and priorities. This could be short term project.
- Close Rainier Ave from McClellan to MLK Way and introduce as a car-free public space.
- Construct a parking garage west of Mt. Baker Station. SDOT could charge for parking and a portion of the revenue could fund other transportation projects in Southeast Seattle.

- Reconfigure or relocate the bus transit center closer to the Mt. Baker light rail station.
- If the full road diet is implemented through Columbia City, SDOT could consider allowing parking during the off-peak hours in the bus lane. These lanes are currently designated as bus-only during the peak commute hours.
- Remove pedestrian overpass and designate-grade pedestrian/bicycle crossings.

APPENDIX D: OPEN HOUSE BOARDS

1st Public Meeting



Accessible Mt. Baker

Common Vision with Existing Plans

The Mount Baker Town Center Urban Design Framework (2011)



Envisions

- A transit accessible “main street”
- Gateways and landmarks reinforcing a Town Center
- Complete network of sidewalks and bicycle infrastructure
- Easy connections to nearby neighborhoods
- Supports further evaluation of an optimal transportation network that works for all users

Town Center Concepts



Accessible Mt. Baker

What We've Heard So Far



WALK

- Pedestrian safety concerns
- Limited sidewalk widths
- Signal crossing times



BIKE

- High vehicle volumes
- Narrow lanes
- Stay consistent with Bicycle Master Plan



TRANSIT

- Poor bus-to-rail connection
- Issues with Mt. Baker Transit Center
- Personal safety at station



ECONOMIC DEVELOPMENT

- Parking needs
- Priority to retain and create jobs
- More people and jobs are expected



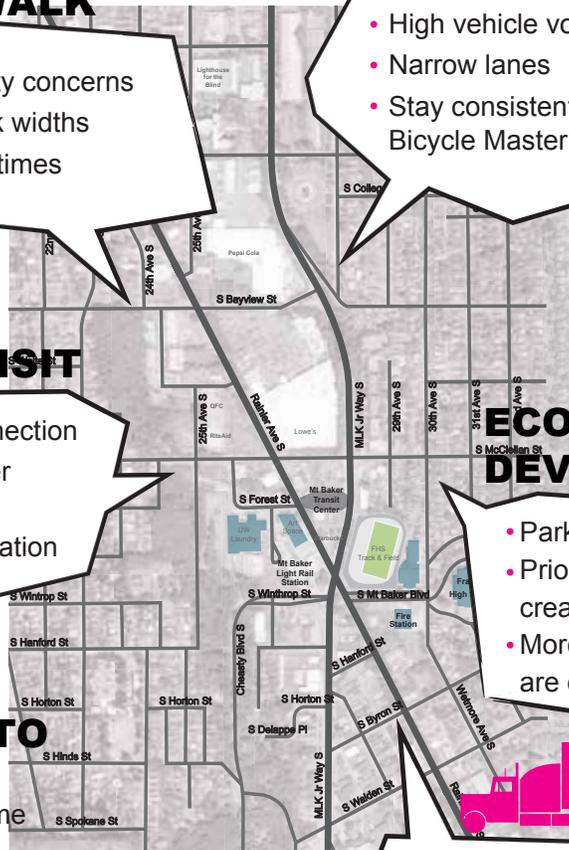
AUTO

- High traffic volume and congestion
- High number of auto crashes
- Maintain driveway access



FREIGHT

- Heavy freight traffic on Rainier Ave. S.
- Need improved reliability for deliveries
- Large turning radii required



Accessible Mt. Baker

Guiding Principles

GUIDING PRINCIPLES

1 Improve access
to neighborhood destinations
for all transportation users



2 Create a network
of streets, paths and open spaces



3 Respect the existing
character and assets
of the neighborhood



4 Establish the Mt Baker station area as
a neighborhood and
regional destination



5 To help make the area more walkable,
prioritize forms of transportation
in the immediate station area as follows:



Pedestrians/Bicyclists: Enhanced Safety and comfort
Transit: Reliable and frequent
Freight: Maintain access and reliability
Auto: Calm and predictable

6 Ensure diverse voices and
traditionally underrepresented
communities are heard and considered



Accessible Mt. Baker

Early Concepts

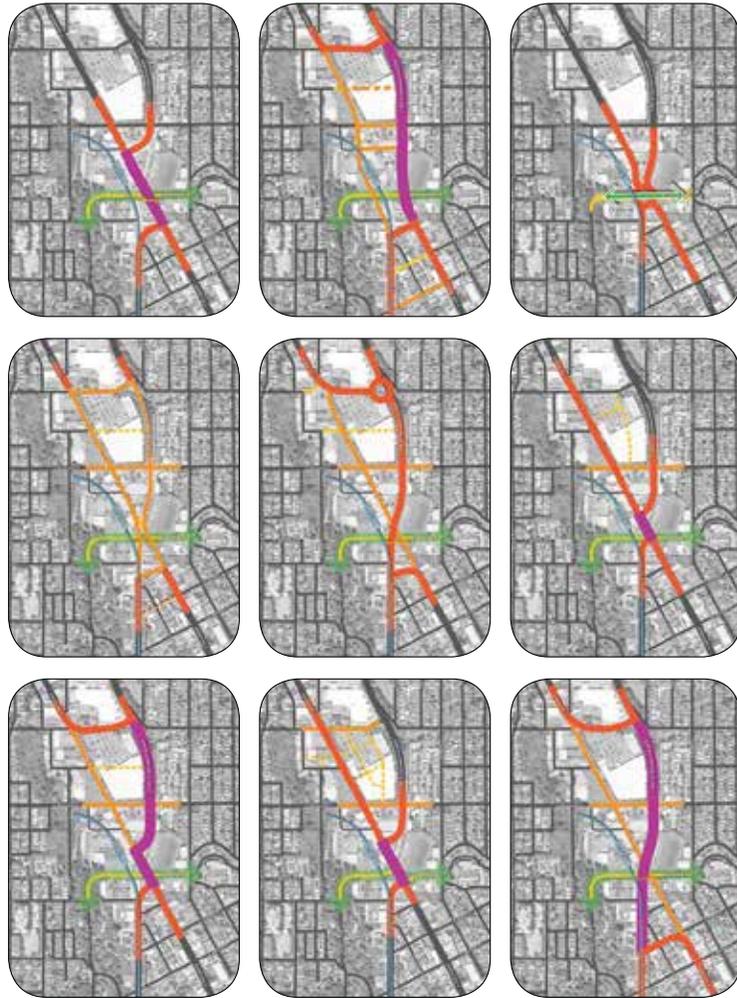
- Walk
- Bike
- Transit
- Freight
- TRAFFIC**
- Open Space

CONCEPTS TESTED INCLUDE:

- “Bowtie” one-way street plan
- Roundabout(s)
- Redistributing traffic
- New “T” intersections
- Changing street types
- Adding and reducing lanes

SAMPLE FINDINGS

- Priority to motor vehicles - not for walk, bike and transit
- Difficult turning movements for freight
- Crossing distances
- Variations on confluences of streets that create traffic bottlenecks
- Property required
- Failed intersections
- Insufficiently addresses project’s “Guiding Principles”



LEGEND

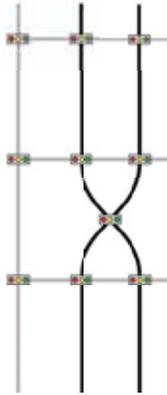
- | | |
|--|---|
|  Major Street |  Interior Connector Street |
|  ↓ |  Olmsted Greenbelt |
|  Minor Street |  Link Light Rail |
|  ↓ | |



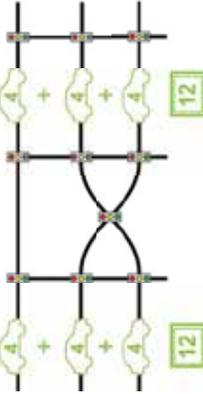
Accessible Mt. Baker

Fixing the Bottleneck for Improved Safety

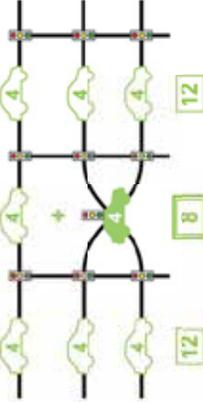
1 The intersection of two arterials creates a bottleneck.



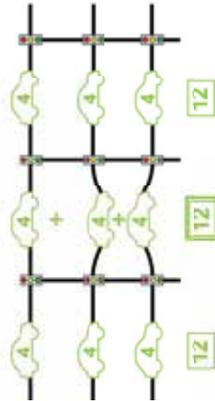
2 Parallel streets have 12 lanes of capacity.



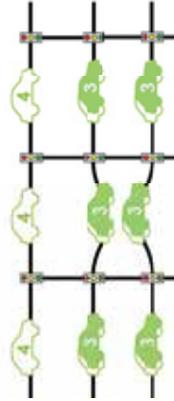
3 The bottleneck reduces capacity. Signal at bottleneck allows only 1/2 of the traffic at a time and interrupts



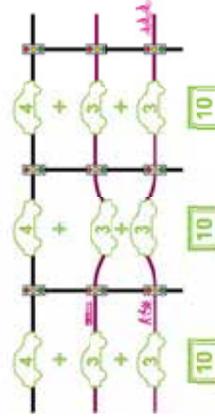
4 Eliminate the bottleneck and restore capacity.



5 Enables lane reduction because of less delay and more reliability.



6 Efficiency gained with space recovered from lane reduction could be used for walking, biking and transit.



Accessible Mt. Baker

Existing Condition

WALK

- Bike
- Transit
- Freight
- Traffic
- Open Space

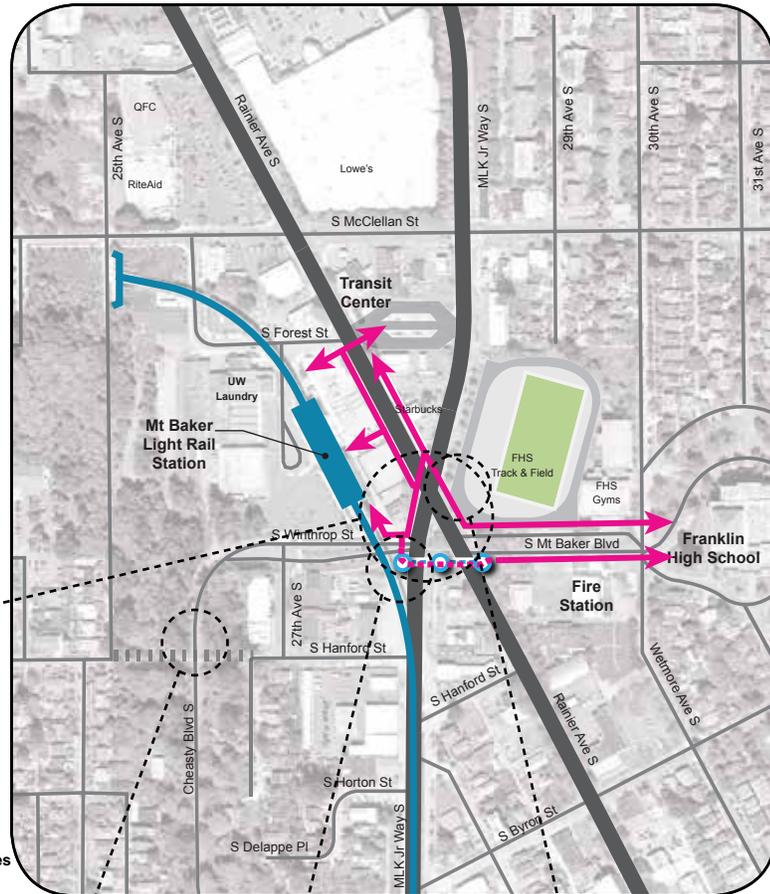
LEGEND

- ||||| Hanford Stairs
- ➔ Walking Routes for Transit Access to and from School
- Pedestrian Bridge



Rainier Ave. S and MLK, Jr. Way S. Intersection

- Long crossing distances
- Three signal phases create long wait times
- No crosswalks on south side
- Walk signal inconsistent
- Jaywalking
- Lack of walk route



Not to Scale



Cheasty Blvd.

- No sidewalk
- Hanford Stairs incomplete
- Perceived personal safety issues



Pedestrian Bridge

- Too steep and not ADA accessible
- Loitering
- Perceived personal safety issues
- Maintenance



Sidewalks

- Most are too narrow
- Not enough area to wait at crossing signals
- Poor condition, inconsistent surfaces
- Barriers and obstructions



Accessible Mt. Baker

What it could look like...

WALK

- Bike
- Transit
- Freight
- Traffic
- Open Space

LEGEND

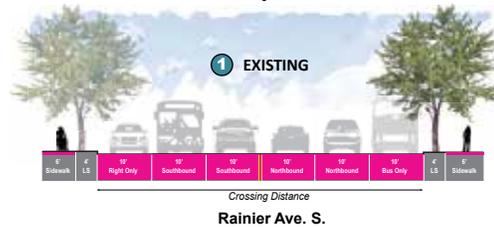
- Walking Routes for Transit Access to and from School
- Redeveloped Arterial Street
- New Local Street
- Walk/Bike/Transit/ and Emergency Vehicle Priority Signal

KEY HIGHLIGHTS

- Shorter crossing distances
- Direct and easy to navigate routes
- Less wait – fewer signal phases
- Ample space for safe movement and waiting
- Improved and protected sidewalks and cycle lanes
- All at-grade (no pedestrian bridge)
- Tree-lined streetscape



Not to Scale



Accessible Mt. Baker

Existing Condition

- Walk
- BIKE**
- Transit
- Freight
- Traffic
- Open Space

LEGEND

-  Bike Lanes
-  Pedestrian Bridge



Rainier Avenue S.

- No bike lanes or protected paths
- Speed and congestion impact comfort

- General Issues:**
- Local destinations not served
 - Regional routes not connected
 - Minimal bike parking and facilities
 - Conflicts with traffic
 - Vehicle speed



MLK, Jr. Way S.

- No bike lanes or protected paths
- Long signal process



No Facilities

- Sidewalks used by riders because of lack of facilities
- Cycle routes not identified



Pedestrian Bridge

- Too steep, and too narrow to accommodate multiple users
- Not designed for bicycles



Accessible Mt. Baker

What it could look like...

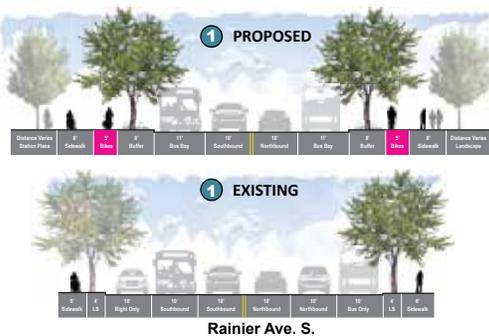
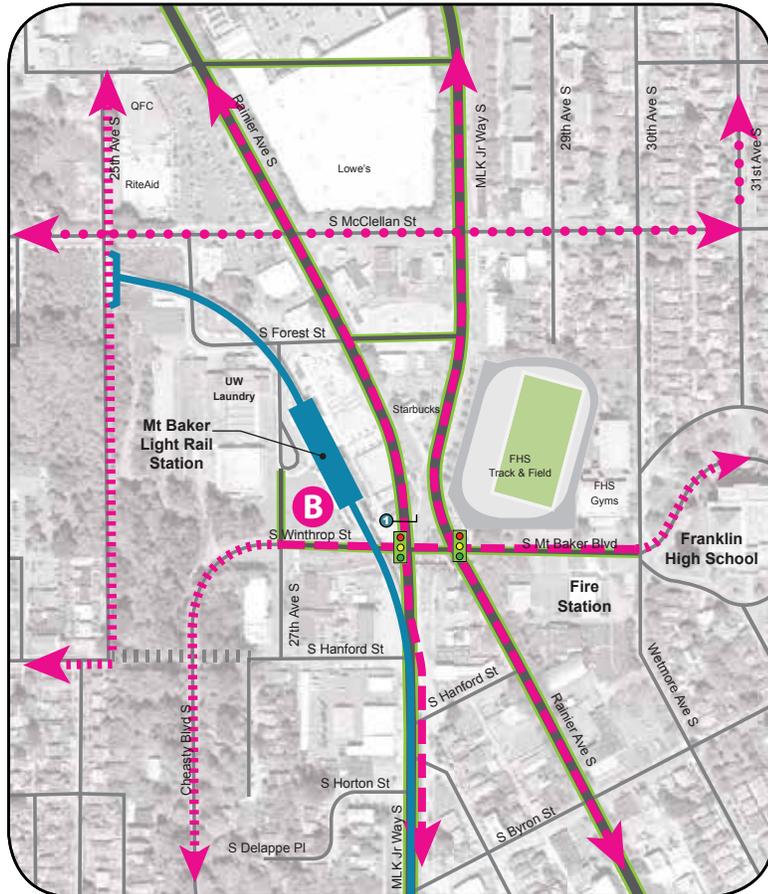
Walk
BIKE
 Transit
 Freight
 Traffic
 Open Space

LEGEND

- Cycle Tracks or Protected Bike Lanes
- Bike Lanes
- Neighborhood Greenway
- Bike Parking/Bike Share
- Redeveloped Arterial Street
- New Local Street
- Walk/Bike/Transit/and Emergency Vehicle Priority Signal

KEY HIGHLIGHTS

- Connected routes
- Well-buffered and protected paths
- More comfortable experience with separation from traffic
- Bike parking and bike share facilities



Accessible Mt. Baker

Existing Condition

Walk
Bike
TRANSIT
Freight
Traffic
Open Space

LEGEND

- Bus Routes
- Bus Stop and Route No.
- Pedestrian Bridge
- Indirect Pedestrian Access Between Transit Center and Light Rail



Bus Stop Locations

- Transfers are challenging
- Need to be closer to light rail station
- Visibility issues
- Inconsistent surfaces, materials and features



Transit Center

- Location not ideal
- Not visible from rail station
- Potential development site



Mt. Baker Light Rail Station

- Community asset
- Could use access improvements, such as stairs at end of platform
- Station environment lacks activity



Bus Traffic

- Three signal phases at MLK/ Rainier create long wait times
- Roadway network a challenge for bus circulation
- Speed and reliability issues



Not to Scale



Accessible Mt. Baker

What it could look like...

Walk
Bike
TRANSIT
Freight
Traffic
Open Space

LEGEND

- Bus Routes
- Bus Stop and Route No.
- Potential Bus Layover
- Transit Crossing Street
- Walk/Bike/Transit/ and Emergency Vehicle Priority Signal

KEY HIGHLIGHTS

- Potential for new priority treatments including queue jumps and dedicated bus lanes
- Easier transfers
- Stops aligned with major pedestrian routes
- More space for amenities
- Better visibility of facilities
- Transit Center moved/repurposed



Not to Scale



Accessible Mt. Baker

Existing Condition

Walk
Bike
Transit
Freight
Traffic

OPEN SPACE

LEGEND

-  Olmsted Greenbelt
-  Dense Tree Canopy
-  Pedestrian Bridge



Intersection Area

- No central open space exists
- Area dominated by asphalt, concrete and vehicular movements
- Need for central community open/landscape space



S. Winthrop St. / Olmsted Greenbelt

- Community asset
- Gateway to the community
- Recreational potential not reached



Rainier Ave. S. Streetscape

- Preserve trees as much as possible
- Some sidewalks upheaved by tree roots



Mt. Baker Blvd.

- Could use further enhancement and maintenance
- Auto dominated

Not to Scale 



Accessible Mt. Baker

What it could look like...

- Walk
- Bike
- Transit
- Freight
- Traffic

OPEN SPACE

LEGEND

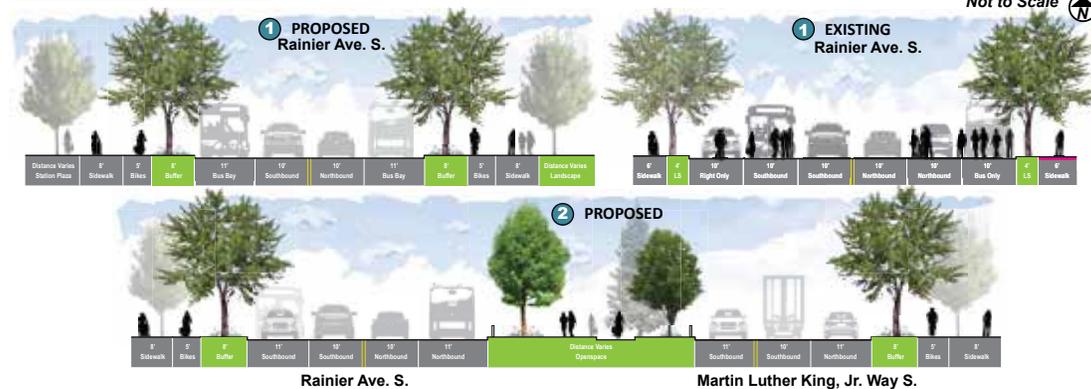
-  Olmsted Greenbelt
-  Dense Tree Canopy
-  Tree-lined Streets
-  Central Public Open Space (incl. Light Rail Station Plaza and Park-like Setting)

KEY HIGHLIGHTS

- A central public open space connecting transit with people
- A walkable, bike friendly town center
- New streets that are landscaped to enhance the multimodal environment
- Existing trees preserved where possible to maintain community identity



Not to Scale 



Accessible Mt. Baker

Existing Condition

- Walk
- Bike
- Transit
- Freight
- TRAFFIC**
- Open Space

LEGEND

- Through Traffic Lanes During Signal Phase
- Existing Traffic Signal

CHALLENGE

The bottleneck resulting from the intersection of Rainier Ave. S. and Martin Luther King, Jr. Way causes:

- Delayed and indirect walking
- Disconnected bike routes
- Poorly integrated transit operations
- Peak period congestion
- Inefficient, delayed and confusing bottleneck of traffic for motorists



Not to Scale

Notes:

- Three phase signal
- Minimum walk crossing time
- Traffic stacking

Crashes in period 2010-2013*

- | | |
|--|-------------------------------|
| 1 Rainier/MLK/Mt. Baker Blvd - 76 | 4 Rainier/Bayview - 34 |
| 2 Rainier/McClellan - 65 | 5 MLK/Bayview - 18 |
| 3 MLK/McClellan - 42 | 6 Rainier/Forest - 16 |

City guideline for high crash locations is 10 or more per year at signalized intersections, or 40 or more in 4-year period.

* Included crashes involving people walking or biking.



Accessible Mt. Baker

What it could look like...

Walk
Bike
Transit
Freight
TRAFFIC
Open Space

LEGEND

-  Redeveloped Arterial Street
-  New Local Street
-  Walk/Bike/Transit/ and Emergency Vehicle Priority Signal
-  Through Traffic Lanes During Signal Phase
-  Existing Traffic Signal
-  Possible New Traffic Signal (requires further analysis)
-  Potential New Local Street
-  Transit Crossing Street

ACTION

Eliminating the bottleneck intersection allows:

- More time and space assigned to people for walking, biking and using transit
- More room for livability features such as wider sidewalks and landscaping
- Predictable traffic movement
- Simplified traffic signal operations
- Distribution of traffic to the broader street network



Not to Scale 



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What it could look like...Sketch Concept



KEY HIGHLIGHTS

- Reflects prioritized connections
- Restores traditional urban values
- Creates a coherent street network
- Supports redevelopment to the north and conservation to the south
- Reconnects the Olmsted Greenway
- Creates the desired destination

Not to Scale

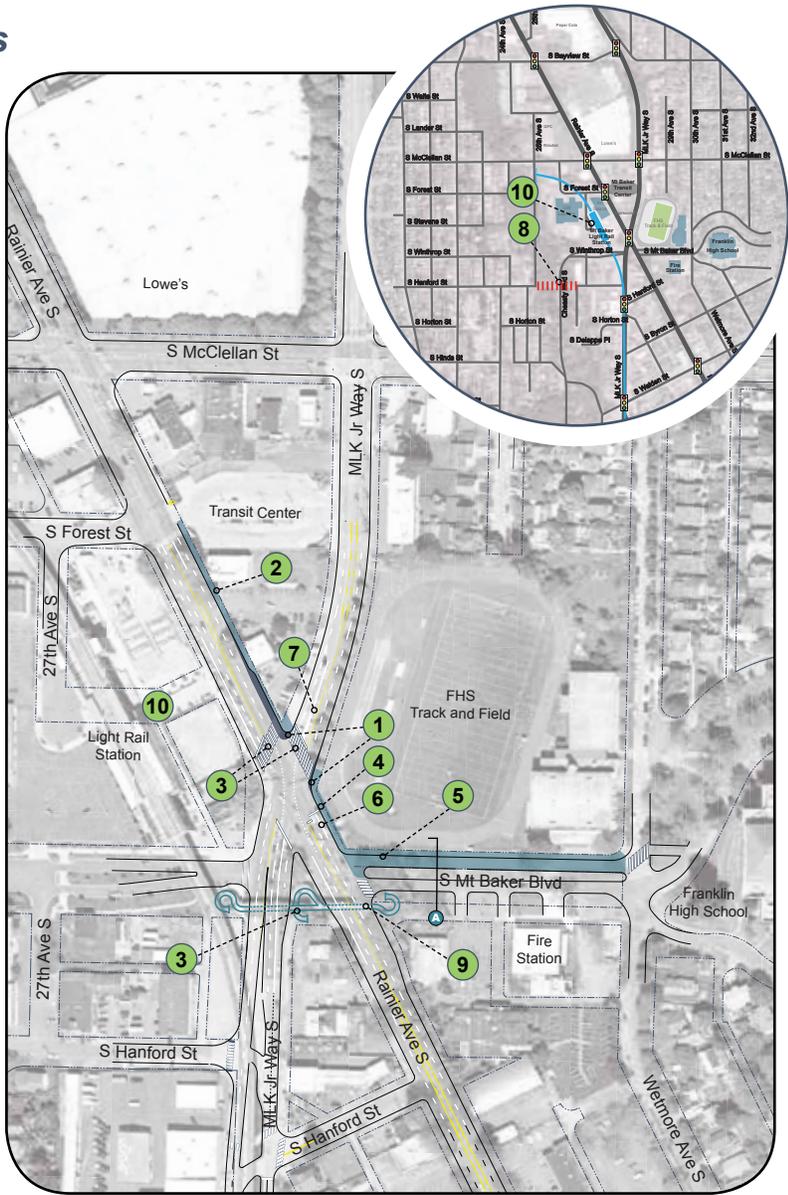


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Near Term Projects PHASE 1

- 1 Shorten existing crossing distances and increase signal waiting area by adding sidewalk area
- 2 Increase sidewalk width and perform repairs
- 3 Increase crosswalk width from 10' to 20'
- 4 Increase sidewalk width from 8' to 12'
- 5 Change north lane of Mt. Baker Blvd. to walk/bike only (see cross section below)
- 6 Prohibit right turn heading north onto MLK, Jr. Way from Rainier Ave. S. during red light
- 7 Single left turn lane only heading south from MLK, Jr. Way S. onto Rainier Ave. S. (change existing combined through and left turn lane to through traffic only)
- 8 Replace lower Hanford Stairs and provide better lighting
- 9 Clean and repair pedestrian bridge
- 10 Activate Light Rail Station environment with more programmed events, market, bike share, outdoor concerts and other activities

- Other Actions**
- Improve traffic signaling to shorten walk waiting time
 - Clean up and organize signs
 - Add sidewalks where missing
 - Repair sidewalks
 - Landscape maintenance
 - Manage parking
 - Improve lighting where needed



Not to Scale



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Near Term Projects

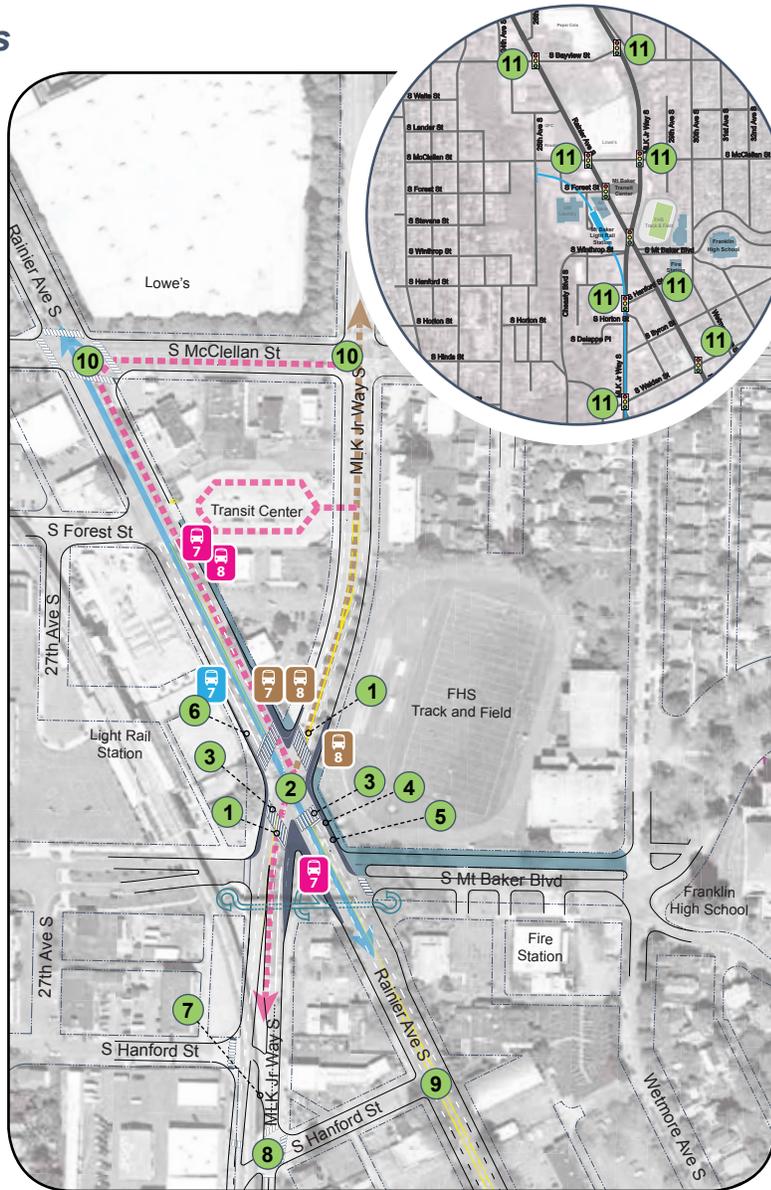
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These improvements are in addition to the Phase 1 projects

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- 11 Verify/improve truck access and turning movements at key intersections throughout

Other Actions

- Perform additional traffic analyses
- Coordinate emergency response requirements with the Fire Department



Not to Scale

Transit Modifications:

Route 7 - Consolidate stops to one area on both sides of Rainier north of MLK

Route 8 - Re-route and move stop

- | | | | |
|--|---------------------------------|--|-------------------------------|
| | Existing Route 7 to Remain | | Existing Stop to Remain |
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Outreach in Numbers



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Integrated Multimodal Plan



Not to Scale



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Traffic Simulation

WHAT IS IT?

- A technical analysis and planning tool to analyze traffic scenarios
- Traffic based on observed travel patterns
- Accounts for movement and interaction of people, bikes, buses, trucks, and cars
- Combines complex numerical analysis with visual animation of traffic movement



**Rainier Avenue and MLK Jr Way
Reconfiguration**

BENEFITS

- Allows testing of potential changes to the street network without building them
- Helps predict congestion
- Helps visualize expected operation
- Makes it easier to refine roadway and intersection network changes needed to manage traffic



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Study Area

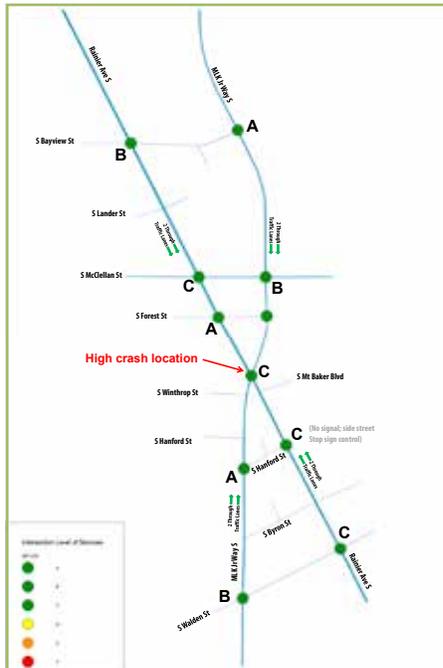
ASSUMPTIONS

- Model year of 2019
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- Future Lowe's site redevelopment would generate comparable auto traffic to what Lowe's does today
- New east-west streets to connect Rainier and MLK Jr. Way:
 - Lander (if Lowe's site is redeveloped)
 - Forest (existing bus transit center)
- Additional traffic signals
- Minor bus route adjustments
- Bike lanes on both Rainier and MLK Jr. Way

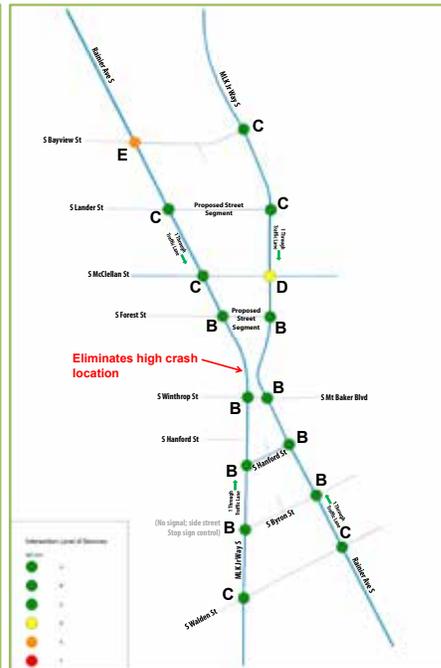


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Intersection Level of Service (LOS)



Existing LOS



2019 LOS

HIGHLIGHTS

- High crash intersection removed (Rainier Ave S/MLK Jr. Way S)
- Accommodates the same traffic demand
- Balances traffic on Rainier Ave S and MLK Jr. Way S
- Supports bike and pedestrian improvements
- Supports better bus operations and transfers between bus and rail

LOS	Signalized Intersection	Unsignalized Intersection
A	≤10 sec	≤10 sec
B	10–20 sec	10–15 sec
C	20–35 sec	15–25 sec
D	35–55 sec	25–35 sec
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Source: Highway Capacity Manual 2010
LOS Criteria



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PM Peak Hour Origin and Destination Patterns



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AM Peak Hour Origin and Destination Patterns



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Project Timeline and Next Steps



2015

Accessible Mt. Baker Integrated Multimodal Plan
- complete planning study
- conduct public involvement

Safe Routes to School Implementation
- crossing improvements at Rainier/MLK

2016

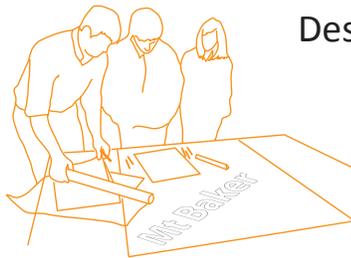
Align Move Seattle Levy Investment Project Timelines
- 23rd Avenue RapidRide
- Rainier/Jackson RapidRide
- pedestrian and bicycle improvements

Develop Funding Strategy
- local and external funding sources
- grant opportunities



Design

Project Design and Environmental Review
- initiate design and review
- brief City boards and committees
- conduct public involvement



Build Project
- work with businesses and community to reduce economic and mobility impacts during construction
- provide public updates

Construction



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What we have heard so far...



WALK

- Improve pedestrian safety between the rail station and Franklin High School
- Implement "Safe Routes to School" projects
- Provide more pedestrian spaces and slow down traffic
- Improve sidewalks and night lighting, focus on safety and security
- Widen and shorten crosswalks and improve crosswalk pavement and markings
- Improve Hanford steps by maintaining vegetation



BIKE

- Introduce bicycle facilities for all ages and abilities
- Expand bike share to the station area
- Provide bike lanes and minimize conflict points with cars
- Provide better bicycle parking at the Mt. Baker Link Station area
- Coordinate bicycle improvements with the Rainier Valley North/South Greenway



TRANSIT

- Relocate the bus transit center adjacent to the light rail station
- Improve transit rider stops and conveniences
- Allow for commercial and/or community uses at a relocated transit center
- Consider neighborhood circulators serving the Mt. Baker Link Station



FREIGHT

- Maintain freight access
- Reduce the time diesel vehicles spend stopped in traffic near Artspace to reduce soot build up on windows



AUTO

- Provide for consistent and predictable traffic movement
- Provide places for drop off access to transit for private automobiles and transportation network companies such as Uber, Lyft and taxis
- Increase parking for businesses



OPEN SPACE

- Reconnect the Olmsted Boulevard between Winthrop Street to Mt. Baker Boulevard
- Improve urban spaces by adding more open space and businesses
- Utilize planted buffers to improve pedestrian and bicycle facilities
- Make open spaces more welcoming



LIVABILITY

- Diversify business recruitment in the neighborhood
- Encourage a multicultural workforce for people of different languages, races, cultures, and ages
- Encourage living wage housing, job and employment resources, and social and health services
- Encourage mixed-use and higher density
- Encourage development on Sound Transit fenced property



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How we are responding...



WALK

- Direct pedestrian crossing of Rainier and MLK integrated with the Olmsted Boulevard
- Fewer lanes provide more pedestrian space at intersection corners for people waiting to cross street
 - "Safe Routes to School" project currently in design
- Adjusted signal timing to slow down traffic and provide ample crossing time
- Night time lighting for safety and security to be evaluated during design phase
- Improved pedestrian markings and directional signs included
- Improvements to Hanford steps including maintenance, lighting, and landscaping is recommended
- Repaired, replaced, and additional sidewalks are recommended
- Initiate ongoing coordination with Seattle Police Department for station area security



BIKE

- Network of protected bicycle lanes (PBL) serving key destinations and facilities
- Connections to the North/South Greenway at:
 - Mt. Baker Boulevard/30th Ave S
 - Mt. Baker Boulevard/McClintock Avenue S
 - Rainier Avenue S/Charlestown Street
- Bike share expansion will be considered in Mt. Baker Link Station area



TRANSIT

- Bus transit center next to the Mt. Baker Link Station site
- Transit center plaza with open space and convenience business uses
- Move Seattle Levy includes two new RapidRide lines
- Transit center design will consider improving direction signs and public restroom needs



FREIGHT

- Direct freight movement from I-5 to I-90 with redeveloped street network
- More green light signal time moves traffic better near Artspace and reduces engine idling near residences



AUTO

- Traffic evaluation verified the design works for traffic
- The concept plan includes a 27th Avenue connection from Forest to Winthrop and provides new transit drop-off access



OPEN SPACE

- Reconnected Olmsted Boulevard
- Open space plazas incorporated in new bus transit facilities
- Landscape buffers in the central triangle and along primary arterials
- SDOT will continue to work with the Parks Department to plan open spaces and user amenities
- Continue to support community events and activities



LIVABILITY

- Will work with the Office of Economic Development, the Office of Housing, and the Department of Planning and Community Development to support ongoing efforts to increase jobs, encourage living wage housing, and promote new community resources and development
- Will work with the local business community formed under the "Only in Seattle" program to encourage economic development and business vitality



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Planning-level Cost Estimate

Project Elements

- Roadway modifications – (separation of Rainier Ave S and MLK Jr Way S)
- Connected bicycle network with protected bike lanes
- Re-located transit center
- Sidewalks
- Landscaping
- Lighting
- Traffic signal modifications
- Utility work
- Design, contingencies and soft costs

Cost Range

- \$20 – 24 Million
- Cost represents improvement in shaded area
- Project elements will be further defined in design phase



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Survey Results

PEDESTRIAN SAFETY IMPROVEMENT STRATEGIES*

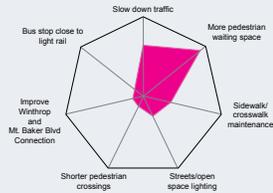
Request: Please prioritize the specific strategies that you believe will improve pedestrian safety in the neighborhood.

Top Priorities:

1. More pedestrian waiting space at intersections
2. Slower traffic
3. Sidewalk and crosswalk maintenance

* Equal weight given to each group

Compiled Results



OTHER SAFETY IMPROVEMENTS*

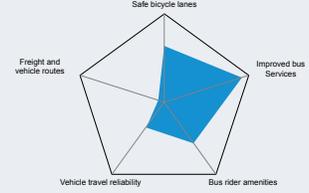
Request: In addition to pedestrian safety improvements please prioritize other safety improvements

Top Priorities:

1. Improved bus service
2. Safe bicycle lanes
3. Bus rider amenities

* Equal weight given to each group

Compiled Results



TYPES OF USES AND ACTIVITIES*

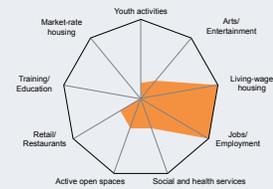
Question: What new uses or activities would you like to see in the area within walking distance of the light rail station?

Top Priorities:

1. Living-wage housing and jobs/employment
2. Social and Health Services
3. Active open spaces

* Equal weight given to each group

Compiled Results



TYPES OF OPEN SPACES*

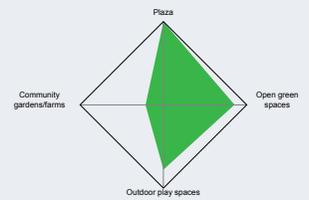
Question: If open space is important to you, what type of urban open spaces would you like to see more of?

Top Priorities:

1. Plaza
2. Open green spaces
3. Outdoor play spaces

* Equal weight given to each group

Compiled Results

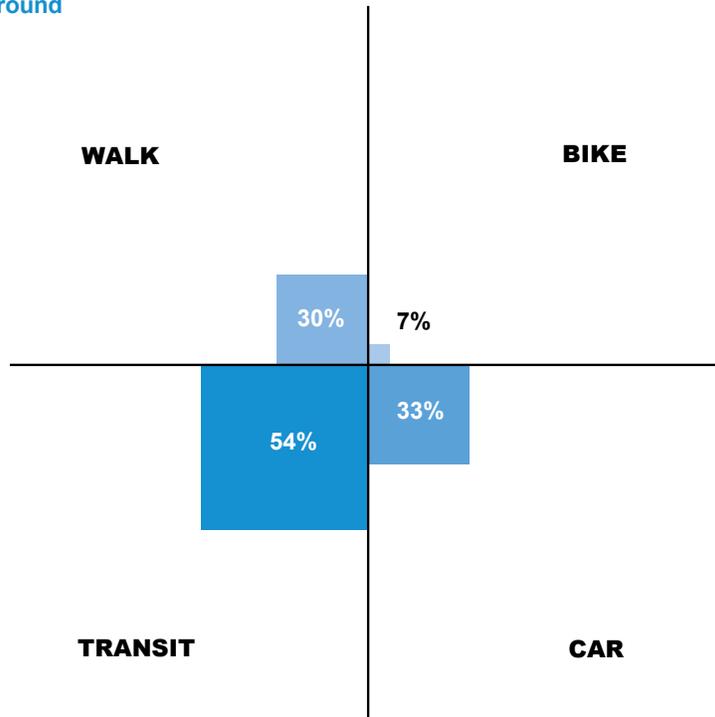


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Survey Results

TRAVEL BEHAVIOR*

Question: How do you usually get around the Mt. Baker Neighborhood?



*Represents percentage by travel mode of 462 total survey respondents. (Respondents may select more than one mode).

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What it could look like...



WALK
Bike
Transit
Freight
Traffic
Open Space

KEY HIGHLIGHTS

- Shorter crossing distances.
- Direct and easy to navigate routes.
- Less wait - fewer signal phases.
- Ample space for safe movement and waiting.
- Improved and protected sidewalks and cycle lanes.
- All at grade (no pedestrian bridge)
- Tree-lined streetscape.

LEGEND

- Walking Routes For Transit Access to and From School
- Redeveloped Arterial Street
- New Local Street
- Walk / Bike / Transit / and Emergency Vehicle Priority Signal



Walk
BIKE
Transit
Freight
Traffic
Open Space

KEY HIGHLIGHTS

- Connected routes
- Well buffered and protected paths.
- More comfortable experience with separation from traffic.
- Bike parking and bike share facilities.

LEGEND

- Cycle Tracks or Protected Bike Lanes
- Bike Parking / Bike Share
- Redeveloped Arterial Street
- Bike Lanes
- Neighborhood Greenway
- Walk / Bike / Transit / and Emergency Vehicle Priority Signal



Walk
Bike
TRANSIT
Freight
Traffic
Open Space

KEY HIGHLIGHTS

- Potential for new priority treatments including queue jumps and dedicated bus lanes.
- Easier transfers
- Stops aligned with major pedestrian routes
- More space for amenities
- Better visibility of facilities.
- Transit center moved re-purposed

LEGEND

- Bus Routes
- Bus Stop
- Potential Bus Layover
- Transit Crossing Street
- Walk / Bike / Transit / and Emergency Vehicle Priority Signal



Walk
Bike
Transit
Freight
Traffic
OPEN SPACE

KEY HIGHLIGHTS

- A central public open space connecting transit with people.
- A walkable, bike friendly town center.
- New streets that are landscaped to enhance the multimodal environment.
- Existing trees preserved where possible to maintain community identity.

LEGEND

- Orsted Greenbelt
- Dense Tree Canopy
- Tree-lined Streets
- Central Public Open Space (incl. Light Rail Station Plaza and Park-like Setting)



Walk
Bike
Transit
FREIGHT
Traffic
Open Space

KEY HIGHLIGHTS

- Both Rainier Ave. S. and MLK, Jr. Way remain major truck streets, providing key connectors to I90 and I5.
- Provides direct connection of north leg of Rainier Ave. S. With south leg of MLK, Jr. Way.
- Adds truck turns between north and south legs of Rainier Ave. S. and MLK, Jr. Way at S Bayview St., S McClellan St., S Byron St. and S Walden St.
- Corner radii to handle big trucks may need modification at intersections.
- Signals may need adjustment (timing) due to more turning truck traffic and to protect pedestrian movement.

LEGEND

- Major Truck Street
- Existing Traffic Signal
- Possible New Traffic Signal (requires further analysis)
- Through Traffic Lanes During Signal Phase
- Walk / Bike / Transit / and Emergency Vehicle Priority Signal
- Transit Crossing Street
- Potential New Local Street



Walk
Bike
Transit
Freight
TRAFFIC
Open Space

ACTION

- Eliminating the bottleneck intersection allows more time and space assigned to people for walking, biking and using transit.
- More room for livability features such as wider sidewalks and landscaping.
- Predictable traffic movement.
- Streamlined traffic signal operations.
- Distribution of traffic to the broader street network.

LEGEND

- Redeveloped Arterial Street
- New Local Street
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Not to Scale

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Integrated Multimodal Plan



ENLARGED VIEW OF INTERSECTION

Not to Scale 

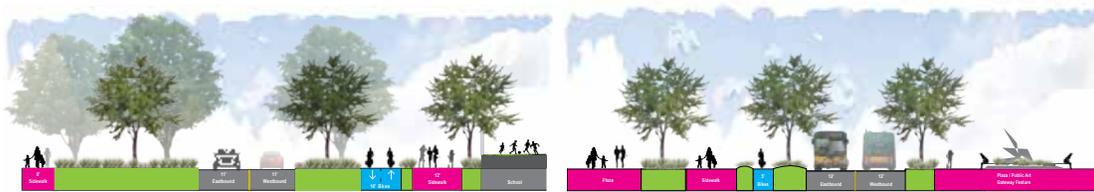


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Street Types



SECTION A - RAINIER AVE S AND MARTIN LUTHER KING JR. WAY S



SECTION B - MT BAKER BOULEVARD

SECTION C - RAINIER AVE S | MLK CONNECTION (FUTURE -BUS ONLY STREET)



SECTION D - S McCLELLAN S

SECTION E - MARTIN LUTHER KING JR. WAY

SECTION F - RAINIER AVE S



SECTION G - 27TH AVE S | WEST SIDE OF MT. BAKER LINK STATION

SECTION H - S FOREST ST (FUTURE)

SECTION I - MARTIN LUTHER KING JR. WAY



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Near Term Projects

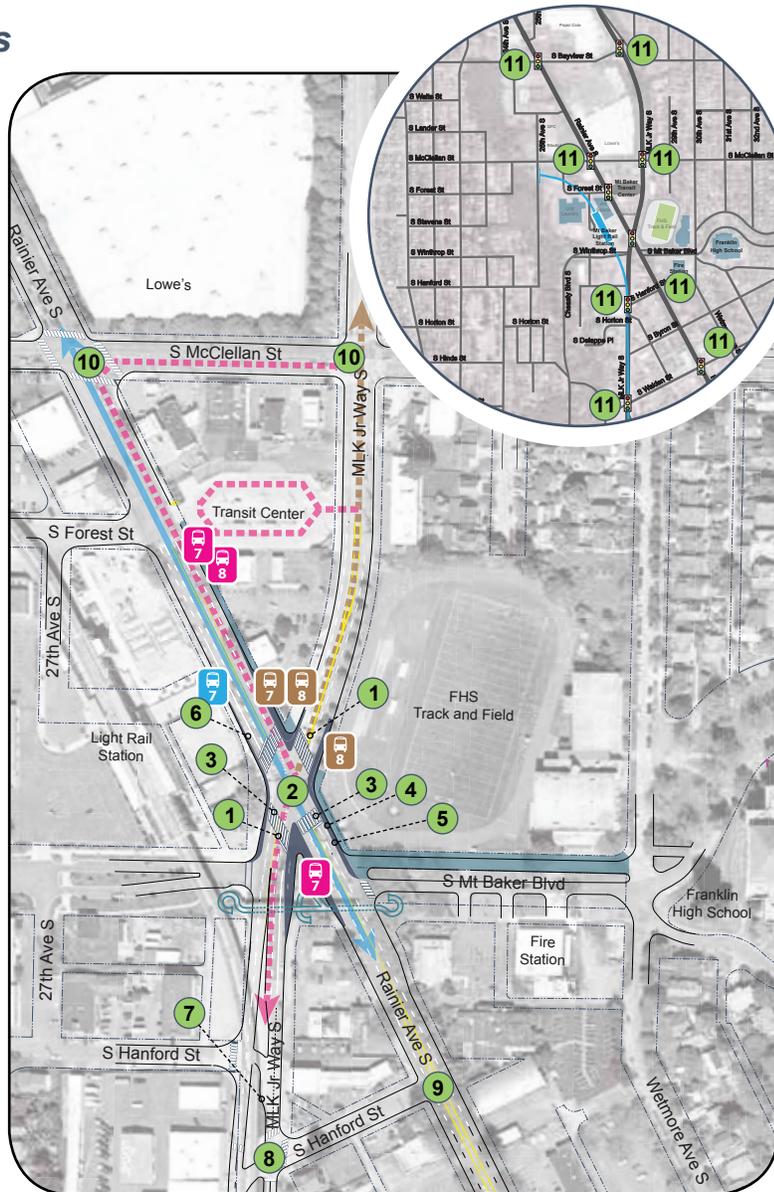
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These improvements are in addition to the Phase 1 projects

- 1 Remove left turn lanes from MLK Way
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Other Actions

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Not to Scale

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APPENDIX F: TRAFFIC EXHIBITS

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Traffic Simulation

WHAT IS IT?

- A technical analysis and planning tool to analyze traffic scenarios
- Traffic based on observed travel patterns
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- Combines complex numerical analysis with visual animation of traffic movement



**Rainier Avenue and MLK Jr Way
Reconfiguration**

BENEFITS

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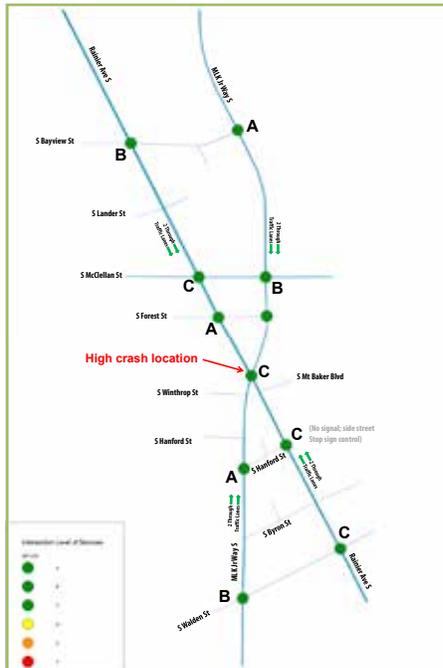
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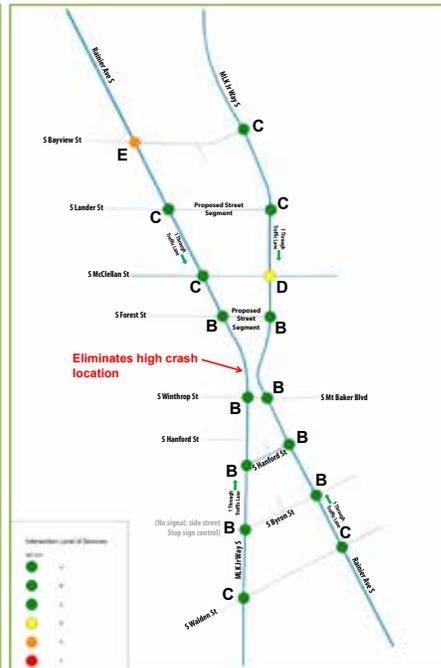


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Intersection Level of Service (LOS)



Existing LOS



2019 LOS

HIGHLIGHTS

- High crash intersection removed (Rainier Ave S/MLK Jr. Way S)
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- Supports bike and pedestrian improvements
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LOS	Signalized Intersection	Unsignalized Intersection
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Source: Highway Capacity Manual 2010
LOS Criteria



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PM Peak Hour Origin and Destination Patterns



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AM Peak Hour Origin and Destination Patterns



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Existing Condition

- Walk
- Bike
- Transit
- FREIGHT**
- Traffic
- Open Space

LEGEND

-  Major Truck Streets
-  Existing Traffic Signal

CONSIDERATIONS

- Both Rainier Ave. S. and MLK, Jr. Way. S. are Major Truck Streets, providing key connections to I-90 and I-5
- Trucks are stuck in the congestion along with other traffic
- Large trucks come and go from UW Laundry, Pepsi Bottling, Lowes, and Darigold Plant



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Existing Condition

- Walk
- Bike
- Transit
- Freight
- TRAFFIC**
- Open Space

LEGEND

- Through Traffic Lanes During Signal Phase
- Existing Traffic Signal

CHALLENGE

The bottleneck resulting from the intersection of Rainier Ave. S. and Martin Luther King, Jr. Way causes:

- Delayed and indirect walking
- Disconnected bike routes
- Poorly integrated transit operations
- Peak period congestion
- Inefficient, delayed and confusing bottleneck of traffic for motorists



Notes:

- Three phase signal
- Minimum walk crossing time
- Traffic stacking

Crashes in period 2010-2013*

- | | |
|--|-------------------------------|
| 1 Rainier/MLK/Mt. Baker Blvd - 76 | 4 Rainier/Bayview - 34 |
| 2 Rainier/McClellan - 65 | 5 MLK/Bayview - 18 |
| 3 MLK/McClellan - 42 | 6 Rainier/Forest - 16 |

City guideline for high crash locations is 10 or more per year at signalized intersections, or 40 or more in 4-year period.

* Included crashes involving people walking or biking.



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Department of
Transportation

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