The purpose of this agenda bill is to:
1. Provide updated information to address Councilmember questions that were raised during the Sound Transit ("ST") and King County Metro ("Metro") presentation on March 19, 2019 (see AB 5540); and
2. Seek direction from Council regarding proposed Guiding Values which will be drafted in a response letter to ST and Metro as the project moves from 30% to 60% design.

BACKGROUND
In 2008, Mercer Island voters approved ST2 with a 58% yes vote, which provided for a light rail station on Mercer Island. The East Link (Blue Line) provides the Mercer Island community the opportunity to travel to the University of Washington or to the Redmond Technology station in approximately 20 minutes by transit and will connect with all current and future light rail systems. Once East Link is operational, Sound Transit will no longer provide regional bus service between Mercer Island and Seattle. Light rail stations, including Mercer Island, will see bus/rail integration as a necessary part of transit operations.
In anticipation of the impacts of the closure of the I-90 reversible center roadway, the City reached a Settlement Agreement with Sound Transit in 2017 (see AB 5346). The Settlement Agreement was finalized without Metro at the table and thus requires Metro’s concurrence. The Settlement Agreement states that the transit interchange will be based on the 77th Avenue SE Configuration, and not the 80th Avenue SE Configuration (see 2017 SEPA Addendum to the East Link Final EIS Executive Summary & Sections 1-2).

The 77th Avenue Configuration was preferred by the Mercer Island City Council for several reasons, including:

1. Prevented regional buses traveling through the Town Center.
2. Required fewer bus layover spaces (3 to 4 depending on size of bus).
3. Significantly less impacts to 80th Avenue SE.
4. Significantly less impacts to public space at the corner of SE 27th St/80th Ave SE.

The 80th Avenue SE Configuration was not preferred because it:

1. Routed regional buses through the Town Center.
2. Provided for 8 bus layover spaces.
3. Did not eliminate bus layover on North Mercer Way.
4. Created a new four-way intersection at the eastbound HOV on-ramp on 80th Avenue SE.
5. Created extensive bus operations and layover presence on the 80th Avenue SE overpass.
6. Required the SE 27th St/80th Ave SE corner (adjacent to Tully’s and Sunset Way cul-de-sac) for bus operations instead of community public space.

Following the Settlement Agreement, Metro began working on operational refinements to meet the 77th Avenue SE configuration identified in the Settlement Agreement between Sound Transit and the City.

As previously stated, the City Council received a presentation regarding bus/rail integration from Sound Transit and Metro on March 19, 2019 and follow-up information from City engineering consultant firm KPG at the April 30, 2019 Study Session (see AB 5547). Council had remaining questions and concerns following the study sessions. The City has received responses to these questions from Metro and ST (see Exhibit 1) which were posted to the City’s Let’s Talk public engagement website.

**CONFIGURATION OF THE TRANSIT INTERCHANGE**

The Settlement Agreement requires Metro concurrence with the implementation of the 77th Avenue SE Configuration. On May 24, 2019, Sound Transit forwarded correspondence (see Exhibit 2) outlining Metro’s concurrence with the Improved or Optimal configurations for the 77th Avenue SE Configuration. Both configurations include refinements to meet the operational goals of the 77th Avenue SE Configuration. A summary of Mercer Island Bus/Rail Integration provided by Sound Transit provides brief, factual information about the bus/rail integration as proposed (see Exhibit 3).

The City has been working with Sound Transit and Metro on the required bus/rail integration for the best outcomes for the Mercer Island community. There remain community concerns over the proposed configurations. While the Mercer Island Station construction is nearing completion, the bus/rail integration design is only at 30% (conceptual) design (see Exhibit 4 for overview diagram). As part of the design and permit process, Sound Transit will complete intersection analyses to confirm pedestrian and traffic operations.

To leverage the best outcome for Mercer Island, it is important that the community’s values and interests be presented and clearly communicated to Sound Transit as the design moves forward. It is anticipated that Sound Transit will move towards 60% design later this year (see Exhibit 5).
GUIDING VALUES FOR MERCER ISLAND TRANSIT INTERCHANGE

Although the 77th Avenue SE configuration meets the preferred configuration identified in the Settlement Agreement, community concerns remain over the proposed design and potential impacts of this interchange. A formal letter will be prepared to Sound Transit to articulate these concerns and guide Sound Transit in the design of the Mercer Island transit interchange.

The following Guiding Values are drafted to reflect the unique residential nature of Mercer Island, and to offer direction to Sound Transit in the design of the Mercer Island transit interchange.

Guiding Values for Council Consideration in Metro/ST Letter:

1) Align with the City’s Adopted Comprehensive Plan:
   a. Optimize intersection design, signalization and synchronization to ensure optimal flows and align with the City’s Transportation Goals and Policies
   b. Mutually monitor and address any needed changes after bus/rail integration implementation and traffic, bicycle and pedestrian volumes have “normalized”

2) Address Pedestrian, Bicycle & Vehicular Safety throughout the interchange area:
   a. Meet multi-modal transportation needs and best practices
   b. Implement improvements for pedestrian, bicycle and vehicular traffic at the 80th/North Mercer Way and 77th/North Mercer Way intersections and the Park & Ride facility frontage areas
   c. Maintain integrity and connectivity of Mountains-to-Sound (aka I-90) Trail
   d. Ensure current vehicle and bicycle wayfinding signage is included in design

3) Design landscape and vegetation enhancements throughout the interchange area, ensuring:
   a. Quality of life through well-designed and aesthetically appealing facilities that include enhanced vegetation and tree cover
   b. Landscape best practices including species that are drought tolerant (native or “native-like” Pacific Northwest species) and well-suited to site conditions that provide an attractive and safe facility
   c. That privacy of neighbors and the neighborhood is addressed
   d. Safety, including proper lighting and landscape design, is prioritized

NEXT STEPS

Based on direction from City Council, staff will prepare a formal response letter to Sound Transit that will reinforce the guiding values to be included and addressed in the design of the Mercer Island transit interchange. Staff will continue to meet with the Sound Transit and Metro team as the project moves from 30% thru construction ready plans.

RECOMMENDATION

Public Works Director & Senior Project Manager

Provide feedback to staff and direct the City Manager to draft a formal response letter to Sound Transit outlining the City Council’s values for the Mercer Island transit interchange.
Mercer Island City Council Questions/Data Requests provided by Kirsten Taylor, Mercer Island Project Manager on May 14, 2019

1. Questions requesting clarification on data showing actual regional transit service and bus ridership that is expected on Mercer Island at the time light rail becomes operational.

   a. How frequent is bus service during peak and non-peak hours? Please describe expected schedule.

   Potential service is based on METRO CONNECTS’ 2025 service vision and the service constraints established by the Settlement Agreement that will limit peak bus service to less than existing levels. There is no specific schedule at this time, but we anticipate the arrival of up to 20 buses per hour - an average of about one bus every three minutes - during peak periods roughly 6-9 AM and 3-6 PM on weekdays. Buses would likely be less frequent during midday, evening and weekend times.

   In 2021, roughly 24 months before East Link opens, Metro will lead an extensive public engagement and planning process to give Eastside and Mercer Island residents and employees the opportunity to provide input and feedback on transit services and routing when East Link opens. This process will guide Metro’s decisions about the existing Route 204, Route 630, and other transit and mobility services on Mercer Island, and throughout the Eastside. It is during this time that final decisions about specific bus routes and service levels will be made and ultimately approved by King County Council.

   b. How many passengers are expected to arrive and transfer by bus each hour throughout the day?

   Metro does not estimate future ridership at the individual bus trip or route level. The best estimate stems from the pre-Settlement Agreement East Link FEIS Addendum (April 2017) that states the following:

   “With the 77th Avenue SE Configuration, approximately 1,300 pedestrians in the peak hour, (1,050 from bus transfers and 250 from the park & ride lot) would cross N. Mercer Way between the I-90 bus route stops located on the north side of N. Mercer Way and the light rail station.

   Parenthesis added [With the 80th Avenue SE Configuration, riders would transfer between buses and light rail without crossing any public roadways. The only pedestrians crossing N. Mercer Way to access the stations and buses would be those parked at the parking garage, which would be similar to the No Build condition at around 250 during the peak hour.]”

   The FEIS Addendum (April 2017) bases these numbers on a volume of 40 buses in the peak hour. Only 20 bus trips in the peak hour can fit in the Optimal Configuration. The FEIS Addendum assumes 1,050 bus transfer pedestrians and 250 park-and-ride patrons using this crosswalk in the peak hour (page 3-55 of the FEIS Addendum). To supplement this estimate, Metro used METRO CONNECTS to develop a hypothetical, conservative, AM peak commute period (approximately 6 AM to 9 AM) volume of people arriving by bus to access Link or other destinations on Mercer Island. Assuming 20 trips in the peak hour – twelve 60’ coaches and
eight 40’ coaches – arriving with all seats occupied, there would be 1,040 bus passengers at the peak AM commute period under this scenario (see Appendix below for additional information). It should be noted that the number of transferring bus passengers from both the FEIS Addendum and the hypothetically conservative METRO CONNECTS scenario are nearly identical at 1,050 and 1,040, respectively.

c. How many pedestrians and bicyclists are projected to cross NMW at 80th and 77th intersections?

The signal at 80th Avenue and N. Mercer Way currently has a regular cycle length of 90 seconds, but there are multiple phases based on time-of-day. The regular phase has a 10 second “Walk” sign and 18 additional seconds of clearance for the west crosswalk. A 90-second cycle assumption provides 40 opportunities for people to cross N. Mercer Way each hour.

As discussed in the response to 1.b above, the number of pedestrians in the west crosswalk during the busiest one-hour period in the AM per the FEIS Addendum—comprised of both bus transfers and users of the park-and-ride—is estimated at approximately 1,300 people, comprised of 1,050 transferring passengers and 250 park-and-ride users; the hypothetical scenario based on METRO CONNECTS, also discussed above, provides an example with a slightly lower number of pedestrians (1,290) in the west crosswalk. This results in an average of 32 or 33 pedestrians per cycle during the AM peak.

These are all very manageable numbers, and assumes all transferring passengers and park-and-ride users will choose to use the 80th Avenue station entrance, and no transfer passengers will opt to use the 77th Avenue SE station entrance. While this represents an increase in pedestrian volumes at this location over existing conditions, this increase would not jeopardize safety or require significant changes to traffic signal timing, noting that the East Link FEIS assumed 1,300 pedestrians would cross the street during the peak hour with no impact to people or cars. As we proceed with final design, we will conduct intersection analyses to confirm pedestrian and traffic operations.

The 2011 FEIS estimated under 15 pedestrians during the PM peak hour in the east crosswalk at N. Mercer Way and 77th Avenue SE once East Link is operational. The number of bicycles in the crosswalk was not estimated in the FEIS. There will be 40 bicycle parking spaces near the 77th Avenue SE entrance to the light rail station.

If deemed to be necessary, signal phasing and timing can be adjusted with Mercer Island and WSDOT approval to optimize pedestrian crossing efficiencies and safety. Volumes of people crossing N. Mercer Way will be highest in the AM peak, and much lower in the PM peak, midday, evening, and weekend periods. This is because bus passengers in the PM peak will board the bus on the south side of N. Mercer Way to go outbound to the Eastside or other destinations on Mercer Island.

d. Will buses lay over on Mercer Island every hour of the day? Or just certain peak hours? Please describe.
Buses will lay over at any time of day that Metro is operating service. However, it is unlikely buses will layover on Mercer Island every hour of the day, because it is unlikely service will be provided to Mercer Island 24 hours a day.

Every bus trip that stops on Mercer Island will layover at least five minutes, except the last trip of an operator’s work shift. Hypothetically, if the first trip of the day was 5 AM and the last trip was at 12 AM, there would be buses laying over during these hours. The number of buses laying over at a given time corresponds to service frequency. Hence, the most use of layover spaces would only occur during AM and PM peak service periods, with likely less frequent use during midday, evening, and weekend periods.

No final decisions about the specific service and layover schedule will be made prior to an extensive public outreach process and approval by King County Council.

e. To assess the safety mitigations, are there examples of similar conditions and what works/doesn’t work?

Analysis of the 77th Avenue SE Configuration was included in the 2017 Addendum (this configuration was not contemplated in the 2011 FEIS). Section 3.5.3 (pages 3-55 and 3-56) of the 2017 Addendum, which discusses mitigation for potential non-motorized (bikes and pedestrians) impacts, states the following:

“To address potential construction impacts for either the 77th Avenue SE or 80th Avenue SE Transit Integration configuration, mitigation would be similar to that described in the Final EIS...No operational impacts to non-motorized users were identified with the 80th Avenue SE Configuration and no mitigation is needed for this configuration. For the 77th Avenue SE Configuration, potential improvements that could be considered to increase the pedestrian capacity at the N. Mercer Way/80th Avenue SE include creating a pedestrian all-way crossing phase intersection or providing wider crosswalks and larger waiting areas at the intersection corners to accommodate pedestrians bunching and waiting for a walk signal. Non-motorized crashes are expected to be similar among all of the options during construction and operations on Mercer Island local streets. Therefore, no mitigation is proposed to address “non-motorized safety.”

In addition to those discussed in the 2017 Addendum, potential intersection safety and operational improvements were included in the 03/19/2019 responses to Council comments:

“It is anticipated that the transit interchange will result in a greater number of pedestrians using the west crosswalk at the 80th Avenue SE/N. Mercer Way intersection, due to transfers between the bus drop-off and the 80th Avenue SE light rail station entrance. While the transit interchange is still in the early design stages, pedestrian and bicycle safety at this location is a concern for all stakeholders and appropriate safety measures will be discussed and incorporated into the design moving forward, including the potential for the following:

1. Providing painted crosswalks or other pavement markings (or materials) to improve visibility of pedestrian/bicycle crossings.
2. Improving horizontal and vertical sight distances through the removal of extraneous curbside clutter such as newspaper boxes, redundant utility poles, or overgrown vegetation.

3. Explore the use of bulb-outs and other traffic calming measures that reduce pedestrian/bicycle crossing lengths/times and reduce traffic speeds.

4. The use of signage and lighting to alert drivers to crossings.

5. Working with WSDOT, Metro, and the City of Mercer Island on signal timing changes that improve pedestrian safety, such as pedestrian lead phases, pedestrian-only phases, and pedestrian-activated (push button) phases.

6. Include design measures that promote the ease of bus traffic through the intersection.

7. Limit or prohibit right turn on red movements.”

The KPG recommendations, which were also presented to Council at the 04/30/2019 study session, included the following for N. Mercer Way and 80th Avenue SE:

“N. Mercer Way and 80th Avenue SE Street Intersection – revise the signal phasing so that when there is a pedestrian call on the west leg, the northbound left turn will change from protected-permissive to protected only. This will reduce the potential for collisions between left turning vehicles and pedestrians. Also, change the northbound left turn signal indicator from a green ball to flashing yellow arrow.”

According to KPG’s analysis, by adjusting the traffic signal at NMW & 80th to give pedestrians a protected walk cycle, it reduces the potential for collisions at an intersection that already has one of the lowest collision rates on the Island, while only increasing the wait time for cars and buses traveling through the intersection by an average 3-5 seconds during AM and PM peak hours. The final crosswalk and signal design will be developed in final design. Mercer Island will be one of the agencies reviewing 60% and 90% design of the bus/rail integration project.

2. Questions regarding Metro Drop-off and Layover Operations

a. Respond to why Metro cannot drop off all of its westbound passengers on the south side of NMW after going around the roundabout and still satisfy its minimal and real operational layover needs (as opposed to one that might be more ideal from Metro’s perspective).

The Settlement Agreement prohibits regional buses from circulating through the Town Center. Dropping off passengers only on the south side of N. Mercer Way would require buses to loop through the Town Center or other local Mercer Island streets to access the designated layover spaces on N. Mercer Way. Based on extensive study and review, we do not see a way to drop-off passengers on the south side of N. Mercer Way and utilize the planned layover spaces on the north and south sides of N. Mercer Way without circulating through the Town Center. The planned layover spaces on the north and south sides of N. Mercer Way, as outlined in the Improved and Optimal Configurations, are essential to meet KCM’s operational needs.

b. Can Metro’s active and layover bay operations be adjusted to allow for the dropping off of passengers only on the south side of N Mercer Way without buses going through Town Center?
No. Once buses navigate around the roundabout to the south side of N. Mercer Way, there is no way for them to return to the north side of N. Mercer Way without looping through the Town Center or other local Mercer Island streets. As outlined below, there are also reasons why drop off of passengers, layover, and pick up of passengers cannot exclusively on the south side of N. Mercer Way.

One idea that was considered was to have the entire south side of N. Mercer Way used flexibly for pick up, layover, and drop off. However, this does not work for a few reasons including customer legibility and accessibility. A single flexible curb space would mean that riders would access pick up or drop off at different locations each time they take transit, and potentially even through different light rail station entrances, introducing a significant element of unpredictability for transit customers. Predictability of pick up and drop off locations is a critical to providing equitable access for all people, including those with visual, cognitive, or mobility impairments. It also presents issues for people who have challenges in traveling longer distances, such as people with luggage, strollers, young children, or the elderly. More simply, there is not enough physical space along the south side of N. Mercer Way to simultaneously accommodate 130’ bays for pick-up and drop-off and four layover spaces that will allow buses to pull-in and pull-out without requiring the movement of an adjacent bus.

c. Are there alternative sites of bus layover bays that do not require buses going through Town Center?

None that are consistent with the Settlement Agreement. Prior to the Settlement Agreement, many other options were evaluated in the FEIS and SEPA Addendum, including the 80th Avenue SE Configuration that Mercer Island City Council opposed. In the Settlement Agreement, Mercer Island City Council negotiated for their preference of the 77th Avenue SE Configuration. The planned 77th Avenue NE Configuration allows buses to serve Mercer Island and avoids buses circulating through the Town Center.

d. When no buses are present on the north side of NMW, where does the bus stop and unload? What happens when a follow along bus arrives before a bus has unloaded?

At the existing bus stop on the north side of N. Mercer Way. The existing bay is long enough to accommodate two buses at the same time, and the first bus will always pull forward to the front end of the bay to allow space for a second bus.

e. Can a hybrid approach be used between the Optimal and Improved Configurations? In other words, can the Optimal Configuration be implemented, but bus volumes be refined to 16 (as identified in the Improved Configuration)?

The numbers provided in the study are estimates. In the Optimal configuration, it was described as “up to 20.” There will not be a difference in the number of regional bus connections between the Improved and Optimal Configurations. In both configurations, the number of buses will be just over half of what there are today. Spatial constraints and operated-mandated layover requirements will limit bus volumes to 20 regional bus connections per hour in both the Improved and Optimal Configuration. A final determination of precise bus volumes will be made.
after King County Service Planning’s public outreach and the completion of a detailed routing schedule.

The Optimal Configuration allows some flexibility in where local Mercer Island buses can stop, providing a closer stop for Mercer Island residents, employees and visitors to make a bus transit connection to destinations on Mercer Island.

f. What is the layover space requirement for the proposed layover on the north side of N. Mercer Way?

In response to Mercer Island City Council concerns and the amount of space available, the length of the flexible curb space/layover on the north side of N. Mercer Way was designed to be only 145 feet, which is the smallest it can be and still meet Metro’s operational needs for independent bus movement. Please see the attached illustration of the length of the flexible curb space. The 30% design drawings show the how the layover space is tapered, which will be finalized as we move forward to 60% design.

3. Questions regarding Bus operations and future bus-rail integration from Eastside Cities to Bellevue and Mercer Island.

a. What routes are proposed to get passengers from Issaquah and points east to South Bellevue? And which routes from which cities are proposed to Mercer Island? How many trips per day? How many passengers per trip?

As previously mentioned, specific routing and schedules have not been determined. Based on constraints established by the Settlement Agreement, no more than 20 trips per hour are expected during peak periods. METRO CONNECTS generally defines these routes as coming from Issaquah and Sammamish – areas that will not be served by East Link.

Metro and Sound Transit will work cooperatively to design a network that connects people from the Eastside to both Bellevue and Seattle. The routes that connect to Mercer Island will be primarily designed to get people to Mercer Island and allow for an efficient connection to Seattle. Other routes would be designed to get people directly from the Eastside to destinations in Bellevue.

While specific routes have not been proposed to get passengers from the Eastside to South Bellevue, the current service illustrates how Metro and Sound Transit connect people to both Bellevue and Seattle with different services. Currently Metro Route 214 and Sound Transit Route 554 connect Issaquah to Seattle via Mercer Island. Metro Route 271 connects Issaquah to downtown Bellevue via Eastgate in addition to Sound Transit Express Routes 555 and 556. In the future, we would expect similar service options with some connecting to Mercer Island, and some connecting to Bellevue.

Currently, 10 routes serve the I-90 Bridge. When Link opens, bus service west of Mercer Island will no longer be needed. Most of these routes will serve other parts of the eastside that are not served by Link light rail. A few routes (using not more than 20 buses per peak hour) will likely connect to the Mercer Island Link station serving passengers headed to Seattle who come from
areas not served by Link. METRO CONNECTS generally defines these areas as Issaquah and Sammamish.

Specific routes, how many trips per day, and how many passengers per trip cannot be determined without public engagement as noted in 1a. However, as stated in 1b, using the constraint of 20 buses per hour, and assuming every seat was filled, this would result in 1,040 people arriving by bus in the peak hour.

b. What routes will passengers use traveling from Issaquah/Sammamish/etc. to Bellevue/Redmond? Will they ride a bus to Mercer Island, and then have to ride a bus to South Bellevue? If those passengers are being taken to South Bellevue on other routes, why cannot South Bellevue be the transfer point to light rail?

As outlined in 1a, final routing and scheduling will not be finalized until public outreach is complete. We expect to design some services connecting to from the Eastside, generally along I-90, to Mercer Island that will allow for the most efficient connection to East Link into Seattle. Other service from the Eastside will travel directly to Bellevue.

As a major park-and-ride location, the South Bellevue Link station will be a transfer point to light rail for some people, but it is not the most efficient connection to Link for transit riders from the Eastside, generally in communities along I-90, traveling to downtown Seattle. As previously discussed, Mercer Island is a more efficient and direct transfer point to Link for these communities.

Customers will be able to choose the service going most directly to their destination, whether it is Mercer Island, Seattle, Bellevue, or other locations. Many routes will be adjusted to efficiently connect to Link, and avoid duplicative service by bus and rail.

c. With regard to the claimed 150-175 people per day served by routes 554 and 216, who will not be otherwise served, please provide more information on why they are boarding or alighting on Mercer Island? Are they residents here? Do they work here? Are they simply using the MI Park and Ride as a way station because it’s convenient?

The data showing 150-175 people either board, or alight on Mercer Island is obtained by Automatic Passenger Counts (APC), which anonymously records a person entering or leaving the coach. APC data is a federal requirement. The equipment, and methodology is best practice in the transit industry, and is used by cities across the country. The collection method and data are regularly audited by the Federal Transit Administration.

There is no way to determine the person’s origin or destination, only that they entered or left the bus using Automated Passenger Count (APC) technology. This technology is installed on all Metro buses and records boarding and alighting data. Metro cannot and does not inquire about passengers’ place of residence, employment, or final trip destination. It is logical to conclude that these passengers live on the Eastside and come to Mercer Island to work or shop, or Mercer Island residents that are traveling to/from Eastside destinations.

4. What is the benefit to Mercer Island residents of the optimal configuration?
Bus service connecting Eastside communities to Mercer Island will be a critical component of the regional transit network because that service will efficiently connect customers to East Link and destinations on Mercer Island. This service will provide a competitive mobility option to reduce demand for parking at Link stations, including the Mercer Island park-and-ride lot; and reduce car dependency for people accessing jobs, shopping, and other services on Mercer Island.

A short-hand list of the benefits of the Optimal Configuration include the following:

- Transportation funds in the amount of $10M for transportation improvements on Mercer Island per the Settlement Agreement;
- Bus/Rail Integration in the form of the 77th Avenue SE Configuration—as preferred by the Mercer Island City Council;
- Mercer Island is one of limited cities in King County that will have a light rail station;
- Overall improved connections to the regional transportation network;
- No substantial bus operations and no bus layovers along 80th Avenue;
- Future bus volumes (16-20 buses per peak hour) will be less than existing bus volumes (36-39 buses per peak hour);
- No bus idling during layovers;
- Provides benefit to Mercer Island employers whose employees rely on bus service from eastside locations not served by light rail;
- Provides flexible curb space that may be used for future first/last mile mobility initiatives, including local Metro service, micro-transit, and rideshare opportunities;
- Bus/rail integration is limited to a two-block area of Mercer Island;
- Limited occurrences of long bus layovers (average 15 minutes when a bus is laying over);
- No routing of regional buses through the Town Center;
- The better the transit service and flexibility of transit service operations, the fewer single-occupant vehicle trips on Mercer Island from non-Island commuters;
- Other eastside cities will have a significantly greater number and percentage of buses for bus/rail integration; and
- The roundabout provides a safer intersection for both vehicular and pedestrian traffic.

5. How will pedestrians be protected against external security threats especially when pedestrians are within the crosswalk?

The City of Mercer Island is best equipped to answer this question. Section 4.6 of the 2017 Addendum addresses safety concerns from a transit perspective, which states:

“This section addresses the potential changes in crime rates and response times for emergency vehicles resulting from the Mercer Island Bus Transit Integration configurations. As described in the Final EIS, the potential for crime reflects the level of crime in the surrounding community. Mercer Island has a low crime rate, which would be expected to continue with the implementation of the Transit Integration configurations. The Final EIS also describes how the design of the station incorporates elements of Crime Prevention Through Environmental Design (CPTED) to discourage crime in and around the station. Sound Transit operates its own security force at its facilities. This includes Sound Transit’s contracted security personnel and/or
contracted law enforcement officers that function as transit police. Security personnel are stationed at some facilities throughout the day, and some roam and patrol transit facilities and respond to incidents in coordination with local law enforcement.”

6. If additional north end intersections need or would benefit from additional mitigation due to rail station congestion and bus interchange, who pays?

All potential impacts and proposed mitigation measures are included in the 2011 FEIS and 2017 Addendum. Sound Transit has already implemented many of the mitigation measures. A future signal improvement at 80th Avenue SE and SE 27th Street intersection is also part of the FEIS mitigation. If the City wishes to make additional improvements that are not part of the FEIS mitigation, there are funds in the Settlement Agreement that the City could choose to use for additional improvements.

7. Would it be helpful to Sound Transit to receive Council concurrence on the roundabout prior to Council approving an integration concept?

We appreciate the intent behind this question. The proposed configuration, including the roundabout at 77th Avenue SE and N. Mercer Way, implements the bus/rail integration project as outlined in the Settlement Agreement. Additional Council concurrence is not needed. Sound Transit’s Mercer Island station is nearing completion. In June 2019, Sound Transit will move forward with the final design contract for the 77th Avenue SE bus/rail configuration as well as the 80th Avenue SE Station frontage in order to complete the station frontage before the start of East Link revenue service. If Mercer Island City Council wishes to take an action that recognizes the proposed bus/rail integration project as implementation of the Settlement Agreement (including the roundabout) please do so by June 2019. Sound Transit will also coordinate with the City on the construction of the mixed-use development at the Tully’s site and its intersection with the station frontage on 80th Ave SE.
8. Requests for third party reviews of Metro and Sound Transit data and assumptions: If the council majority wishes to contract for outside consultant review, City staff will solicit costs for such scope of work. Propose that King County and Sound Transit pay for an independent consultant to perform this review, where the consultant is selected and supervised by the city.

   No. Sound Transit and King County will not pay for outside consultant review. Reimbursement for consultant costs to review analysis (that Mercer Island has already been a participant in) are not eligible for Settlement funds per Section 5 and Section 12 of the Settlement Agreement.
**Appendix:** Calculations for estimating the number of people crossing N. Mercer Way during an AM peak commute hour

<table>
<thead>
<tr>
<th>Estimates of the number of people crossing N Mercer Way at 80th St</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FEIS estimate, published per 2017 Addendum</td>
<td>METRO CONNECTS service assumption based on limitations of Settlement Agreement - assuming all seats full</td>
</tr>
<tr>
<td>Estimated bus to rail passengers in peak hour</td>
<td>1,050</td>
</tr>
<tr>
<td>Assumed passengers from P&amp;R in peak hour</td>
<td>250</td>
</tr>
<tr>
<td><em>Total peak hour crossings across N Mercer Way at 80th Ave</em></td>
<td>1,300</td>
</tr>
<tr>
<td>Existing and assumed signal cycle length = 90 Sec</td>
<td>90</td>
</tr>
<tr>
<td><em>Number of signal cycles per hour (i.e. # of &quot;WALK&quot; signals):</em> 3600/90 = 40</td>
<td>40</td>
</tr>
<tr>
<td><em>Average number of people crossing per cycle in peak hour</em></td>
<td>33</td>
</tr>
</tbody>
</table>

**Assumptions and Calculations:**

Number of peak bus trips per hour at Mercer Island Link Station; Number of buses per hour limited by constraints of Settlement Agreement configuration: 40

This scenario includes 4 routes, two with a bus arriving every 15 min with 40 seats, and two with a bus arriving every 10 min with 60 seats, which equals 20 buses an hour with a bus arriving every 2 to 5 minutes. 

\[ \text{1040} = (2 \times 4 \times 40) + (2 \times 6 \times 60) \]

**Note:** In our recent discussions with City Council members we also discussed reasonable assumptions where as low as 775 people, which is 25 people per signal cycle, could cross in the peak hour, given that there will be about half as many bus trips to Mercer Island under the Settlement Agreement compared with the FEIS Addendum estimates.
Sound Transit has also been asked to compare these results to our ridership estimates for Mercer Island Station. The 2011 FEIS included a projection of 1,500 daily boardings at the Mercer Island station in 2020 and 2,000 daily boardings in 2030 (page 3-25). A more recent projection from 2016 included an approximate 4,200 daily boardings for the current year (this is an estimate of the ridership if East Link was operational in 2016 and all ST2 projects were complete). Using the estimate of 1,300 passengers crossing NMW at 80th from the 2011 FEIS, an estimate of 4,200 daily boardings could be met before midday. For now, the 2016 projection is the most accurate and will likely change as we approach East Link’s opening date. It’s important to remember that these are projections that change and fluctuate as more data and information becomes available. Sound Transit projects ridership using various assumptions that reflect best available information, such as regional employment and population forecasts, which provide information about a specific period in time. While this information gives us a rough idea of what we can expect in terms of ridership, there are other assumptions that affect these numbers. As such, Sound Transit does not publish estimates for a project’s opening year for a variety of factors including coordination with King County Metro bus routes and transfers, changing rider behavior and a project’s specific opening date.

Questions 2.e. and 2.f. were emailed and answered the week of 6/11/19
May 10, 2019

Jemae Hoffman
East Link Light Rail Development Manager
Central Puget Sound Regional Transit Authority (Sound Transit)
401 S. Jackson Street
Seattle, WA 98104-2826

Dear Ms. Hoffman:

1. **Summary**

   This letter outlines certain refinements that Metro requires in order to concur and agree with the 77th Avenue SE configuration referenced in the Settlement Agreement between Sound Transit and the City of Mercer Island. Without these refinements, the 77th Avenue SE Configuration, as described in the Settlement Agreement, would prevent Metro from meeting mobility needs with fixed route bus service, both on- and off-island. However, Section 4.1 of the Settlement Agreement allows for refinements to address Metro’s operational needs, and to effectively serve the Mercer Island Station.

   As further explained in this letter, the 77th avenue SE Configuration must be refined to:

   (1) Allow layover at all hours of the day, with the potential for layover to be longer than 15 minutes; and

   (2) Allow layover as well as pick-up and drop-off on the north and south sides of North Mercer Way.

2. **Background**

   In partnership with Sound Transit and the City of Mercer Island, Metro is committed to providing reliable and convenient mobility options for Mercer Island and Eastside residents and commuters, including future Link riders, as well as people living in communities not served by East Link (2023) or the Downtown Redmond Link Extension (2024). Bus service connecting these Eastside communities to Mercer Island will be a critical component of the regional transit network because that service will efficiently connect them to East Link and destinations on Mercer Island. This service will provide a competitive mobility option to reduce demand for parking at Link stations, including the Mercer Island park-and-ride lot; and to reduce car dependency for people accessing jobs, shopping, and other services on Mercer Island.
The remainder of this letter 1) highlights Metro’s service plan for when East Link opens and 2) documents refinements that Metro requires in order to concur and agree with the 77th Avenue SE configuration agreed to by Sound Transit and the City. Those refinements are needed to address Metro’s operational and spatial concerns, and to allow Metro to provide a mobility option that will reduce car trips to Mercer Island, alleviate parking demand, and provide quality regional service, including for Mercer Island residents.

3. **Metro Service at the Opening of East Link**

METRO CONNECTS sets Metro’s vision for service in 2025 - 2040 and is Metro’s guiding document for long-range planning, including service restructures at the opening of East Link. Prior to the Settlement Agreement, METRO CONNECTS identified the following routes and service levels to connect Eastside locations not directly served by East Link to Mercer Island:

<table>
<thead>
<tr>
<th>METRO CONNECTS Route #</th>
<th>Layover on MI</th>
<th>AM Peak Volume</th>
<th>PM Peak Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 (Mercer Island to Issaquah)</td>
<td>Yes</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>2012 (Mercer Island to North Bend)</td>
<td>Yes</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2206 (Mercer Island to Sammamish)</td>
<td>Yes</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2206 (Mercer Island to Redmond)</td>
<td>Yes</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total Peak Trips</strong></td>
<td></td>
<td><strong>36</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

The 77th Avenue SE Configuration described in the Settlement Agreement prevents this frequency of service. However, robust passenger service between Eastside communities and Mercer Island is and will remain a critical need, especially when East Link opens. Recent data shows between 150-175 daily passenger trips are taken between Mercer Island and Eastside communities (such as the cities of Sammamish and Issaquah) that will not be served by East Link. In addition, service ending and beginning at Mercer Island provides these communities with an efficient connection to East Link. Metro’s competitive travel times will allow people to commute on Link or visit the City without having to drive and park on Mercer Island.

Layover space adjacent to the Mercer Island Link Station will be critical to meet those needs when East Link opens, because a portion of Metro’s service will be restructured to begin and end at Mercer Island (routes indicated above). Layover is needed to provide mandated operator rest periods, provide timely bus/rail transfers, and maintain schedule compliance as buses make the return trip to the Eastside.

4. **The 77th Avenue SE Configuration in the Settlement Agreement Does Not Meet Metro’s Operational and Spatial Requirements.**

As noted above, the 77th Avenue SE Configuration would prevent Metro from meeting mobility needs with fixed route bus service, both on- and off-island. There are two primary issues.

---

3 The implementation of the Improved or Optimal Configuration outlined in the Mercer Island Transit Operational and Configuration Study configuration will reduce bus service relative to existing service and the envisioned METRO CONNECTS service indicated in this table.
4.1  The 77th Avenue SE Configuration Places Unworkable Limits On the Duration and Timing of Layover.

Under Section 4.3 (b) of the Settlement Agreement, bus layovers would be limited to no more than 15 minutes, and then only during the afternoon peak period (3:30pm - 7:00pm). However, Metro will need layover throughout the day and not limited in duration to provide any service to Mercer Island Station. First, Metro cannot legally limit bus layover duration because of labor contract requirements mandating operator rest periods. (However, typical layover times range from approximately 10-15 minutes, meaning that in practice the majority of layover would meet the intent of Section 4.3(b)). In addition, longer layover increases Metro's operating costs, so the agency continuously strives to limit layover duration rather than extend it.

Second, limiting layover to the afternoon peak period would prevent Metro from providing needed morning peak service to Mercer Island, or all-day on-island service. Therefore, to meet Metro's operational needs, layover must be allowed throughout the day, and must not be limited in duration. Finally, Metro buses do not idle during layover, so bus emissions and noise should not be a concern.

4.2  The Elimination of Layover, Pick-up, and Drop-off on the North Side of North Mercer Way Is Unworkable.

In Section 4.2 (a) and Section 4.3 (a), the Settlement Agreement would limit all bus drop-off and pick-up, and all layover areas (other than for local Mercer Island buses, as indicated in 4.2 (a)) to the south side of North Mercer Way. These restrictions would limit the amount of service that Metro can provide and would complicate operations for customers traveling between Eastside communities and Mercer Island. Metro and Sound Transit buses currently pick-up and drop-off on both sides of North Mercer Way, so these restrictions would significantly reduce space for boarding and deboarding compared to current conditions.

Perhaps more significantly, layover on the north side of North Mercer Way would not function without the active bus bay on the north side of North Mercer Way; without that bay, buses would have to circle back through the Mercer Island town center along 27th Street after dropping off passengers on the south side of North Mercer Way. The result would be longer trips for passengers, increased operational costs, and additional impact to the Mercer Island town center (more buses traveling along 27th Street). To meet its operational needs, Metro will require active pick-up/drop-off and layover on both sides of North Mercer Way as outlined in the Improved or Optimal Service Configuration in the Mercer Island Transit Operational and Configuration Study.

5.  Metro Will Concur and Agree with the 77th Avenue SE Configuration if These Shortcomings Are Addressed.

Section 4.1 of the Settlement Agreement states that “the 77th Avenue SE Configuration cannot be implemented without King County Metro’s agreement. The Parties will work collaboratively with King County Metro to obtain its concurrence where necessary and document such concurrence as appropriate.” Metro will concur and agree with the 77th Avenue SE Configuration agreed to by Sound Transit and the City the Settlement Agreement if the above-described shortcomings are addressed.

2 Metro noted that 4.2 (a) calls out an exception for local Mercer Island buses, while 4.3 (a) does not.
Specifically, Metro requires the 77th Avenue SE Configuration be implemented with the following refinements:

1. Allow layover at all times of day, without a 15-minute or other time limit.

2. Allow pick-up, drop-off, and layover on both sides of North Mercer Way as outlined in the Improved or Optimal Service Configuration in the Mercer Island Transit Operational and Configuration Study.

While even this configuration will reduce bus service relative to existing conditions and envisioned future METRO CONNECTS service, these refinements will allow Metro to provide reliable, convenient, and competitive mobility options for Eastside communities, including Mercer Island, and reduce overall parking demand on Mercer Island.

Sincerely,

Bill Bryant
Managing Director, Service Development
King County Metro

cc: Charles Benson III, Project Manager – East Link, Sound Transit
    Luke Lamon, Government & Community Relations, Sound Transit
    David Cantey, Transit Route Facilities Supervisor, King County Metro
    Steve Crosley, Transit Integration Program Manager, King County Metro
    Mark Noll, Transportation Planner, King County Metro
• The Mercer Island Bus/Rail Integration is part of a larger set of transportation improvements (and mitigation measures) stemming from the East Link project. We have successfully partnered on many improvements to date, including the last mile pilot project and improvements in front of the park and ride.

• Overall, there will be about half as many buses coming on to Mercer Island when East Link opens than there are today.

• However, since buses will no longer be running over I-90 into Seattle, Mercer Island will be the last stop for WB buses and all passengers will get off of the bus on the north side of N. Mercer Way (NMW).

• This means that during the busiest commute hours in the AM, there will likely be more people crossing the street to get to the Mercer Island light rail station than there are today.

• This will not be the case in the evening, as bus passengers will catch their bus on the south side of NMW and not need to cross the street. Only those walking to the P&R or their homes would need to cross NMW.

• Sound Transit projects approximately 4,200 daily boardings (spread over our entire 20-hr daily service period) at the Mercer Island Station when East Link opens in 2023, and we know that a number of those boardings will be people transferring from a bus to go to and from destinations to the East of Mercer Island that will not be served by East Link, such as Eastgate and Issaquah.

• During the single busiest hour in the morning, projections based on the 2017 East Link SEPA Addendum estimate of 1,300 people crossing NMW at 80th from either the P&R or their bus stop to get to the light rail station, which equates to about 33 people per walk signal. This SEPA estimate is likely higher than will actually occur, because it assumed more buses than can fit in the Optimal Configuration.

• While this volume of people crossing is higher than one typically sees today, it is consistent with other crosswalks in Bellevue and elsewhere around the region.

• In order to ensure the safety of those pedestrians, Sound Transit, WSDOT and Mercer Island will work together through the project design to identify appropriate measures such as widened crosswalks, larger waiting areas at the intersection corners, lighting, signage and signal timing adjustments.

• The proposed configuration is consistent with what Mercer Island negotiated in the Settlement Agreement with Sound Transit in 2017. A short list of additional benefits that Mercer Island negotiated as part of the Settlement Agreement include:
  - Funds in the amount of $10M for transportation improvements on Mercer Island;
  - Future bus volumes (16-20 buses per peak hour) will be less than existing bus volumes (36-39 buses per peak hour); No bus idling during layovers;
  - Provides benefit to Mercer Island employers whose employees rely on bus service from eastside locations not served by light rail; and
  - Bus/rail integration is limited to a two-block area of Mercer Island and would not result in buses circulating through the Town Center.
ADDITIONAL FLEXIBLE BUS/TRANSIT CURB SPACE PER IMPROVED SERVICE CONFIGURATION

EXISTING BUS/TRANSIT CURB SPACE [BUS BAY 1]

EXISTING MERCER ISLAND PARK & RIDE

ADDITIONAL BUS/TRANSIT CURB SPACE PER SETTLEMENT AGREEMENT

EXISTING BUS/TRANSIT CURB SPACE [BUS BAY 2]

ADDITIONAL BUS STOP FOR LOCAL BUSES ONLY PER OPTIMAL SERVICE CONFIGURATION

ROUNDABOUT AT N MERCER WAY AND 77TH AVENUE SE