



# EMPLOYER SHARED TRANSIT STOP PILOT EVALUATION REPORT

OCTOBER 2018

## EXECUTIVE SUMMARY

### Background

Several major Seattle-area employers operate shuttle services to transport their workforces. The goals of these services are to facilitate inter-worksite travel, fill gaps in the public transit network that affect employee commutes, reduce employee dependence on drive-alone commuting, and reduce greenhouse gas emissions.<sup>1</sup>

Employer-provided shuttle services are not allowed to pick up and/or drop off passengers at public transit stops in the City of Seattle. Instead, these shuttles use 15- to 30-minute Generic Load/Unload Zones (GLUZs; yellow curbs) and Shuttle Bus Zones (SBZs; white curbs) to pick up and drop off passengers. On some occasions, they may use three-minute Passenger Load/Unload Zones (PLUZs; white curbs). These GLUZs and PLUZs, however, can be unreliable places to pick up and drop off passengers because they are frequently used by other vehicles, such as delivery trucks or private autos. If these stop zones are occupied, employer-provided shuttles are sometimes forced to board and/or alight passengers in mixed traffic, which creates safety concerns for riders.

In addition, establishing new SBZ locations can impact residents and businesses by removing on-street parking. Because of this, employer-provided shuttle operators sometimes find it difficult to secure reliable locations to pick up and drop off passengers.

The Employer Shared Transit Stop Pilot program (Shared Stop Pilot) is a collaboration of the City of Seattle Department of Transportation (SDOT), King County Metro Transit (KCM), Seattle Children's (SC) Hospital, and Microsoft to test sharing of select KCM bus stops with employer-provided shuttles. The Shared Stop Pilot was carefully developed by the participating public, private, and non-profit entities over the past three years. The pilot began in April 2017 as a six-month program and has been extended into 2019.<sup>2</sup>



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<sup>1</sup> SDOT, KCM, Microsoft, and SC. April 2017. Memorandum of Agreement.

<sup>2</sup> The Shared Stop Pilot has been extended through June 2019.

## Goal and Desired Outcomes

The overarching goal of the Shared Stop Pilot is to test the feasibility of allowing employer-provided shuttles to use public transit stops while minimizing impacts to public transit operations. As described in the memorandum of agreement<sup>3</sup>, the other primary goals of the pilot are:

1. **Increase safety for all road users** by providing reliably safe and efficient stop locations for employer-provided shuttles and their riders. Because some loading zones are frequently used by other vehicles, they are not reliable places for employer-provided shuttles to board and alight riders. This can force shuttles to pick up and drop off passengers in general traffic, which creates safety issues and increases traffic congestion.
2. **Maximize ridership on public transit and employer-provided shuttles.** Allowing private employer-provided shuttles to use public transit stops will allow shuttles to stop in more convenient locations than they do today, making them more convenient and attracting more riders who may otherwise drive to work. In addition, employees of the organizations participating in the pilot will find it easier to choose between public and private transit service if they can wait for both types of services in one location.
3. **Limit public curb space allocated to loading zones**, thereby preserving on-street parking for businesses, residents, and other right-of-way uses. Establishing load zones in new locations often entails removing existing public parking spaces. If the pilot is deemed successful and employer-provided shuttles are allowed to use select KCM stops on an ongoing basis, it may be possible to eliminate some of the load zones used by shuttles, helping to optimize curb space use.

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<sup>3</sup> SDOT, KCM, Microsoft, and SC. April 2017. Memorandum of Agreement. P. 1

## Key Findings

- Neither KCM nor employer shuttle operators reported operational issues or concerns at the shared stops
- All of the shared stops located on a two-lane roadway produced favorable bus stop failure rates<sup>4</sup> below the KCM acceptable level of 5% (satisfactory performance)
- Three of four shared stops located on single-lane roadways produced unfavorable bus stop failure rates above the KCM acceptable level of 2.5% (unsatisfactory performance)
- The public's perception of the pilot, as understood through comments made to SDOT through e-mail, was mixed

## Key Recommendations

- The Shared Stop Pilot should continue, and conversations should begin regarding a permanent SDOT Shared Transit Stops program
- In-lane bus stops (located in a travel lane used by all vehicles) that are served by a single travel lane are not recommended as a location for a shared stop unless the zone is long enough to accommodate both KCM and employer shuttle vehicles
- In-lane shared stops with multiple travel lanes are recommended. To reduce chances of bus stop failure, the zone should be long enough to accommodate both KCM and employer shuttle vehicles.
- Offline stops (in the parking lane) that do not accommodate a KCM bus and employer-provided shuttle should be considered strong candidates for the addition of a Shuttle Bus Zone (SBZ) either immediately before or after the stop
- Private operators should review their boarding/alighting processes and operational policies to identify potential opportunities to minimize dwell times, thereby helping to reduce stop failure rates for all operators

A comprehensive summary of recommendations for each stop type is provided in the recommendations section of this report.

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<sup>4</sup> As defined by the Transit Capacity and Quality of Service Manual, 3<sup>rd</sup> Edition, the bus stop failure rate is the percentage of events where all available loading areas at a bus stop are occupied and a bus arriving at a stop must wait for available space.

## OVERVIEW OF SHARED STOPS

Ten KCM stops in Seattle's southwest, central, and northern districts were selected for the Shared Stop Pilot. Each stop was selected based on location, proximity to existing employer-provided shuttle routes, and anticipated amount of conflict between employer-provided shuttles and other transit vehicles at the stop. Every shared stop included a detailed KCM stop flag (street sign listing routes served and other information) and most included a covered bus shelter. Three stops (Madison Street [C], Old Ballard [G], and U Village Eastbound [M]) did not have bus shelters. A detailed profile of each stop is in Appendix A1. Each stop was assigned a letter and name, detailed in Figure 1 and Figure 2.

Figure 1 Map of Shared Stops

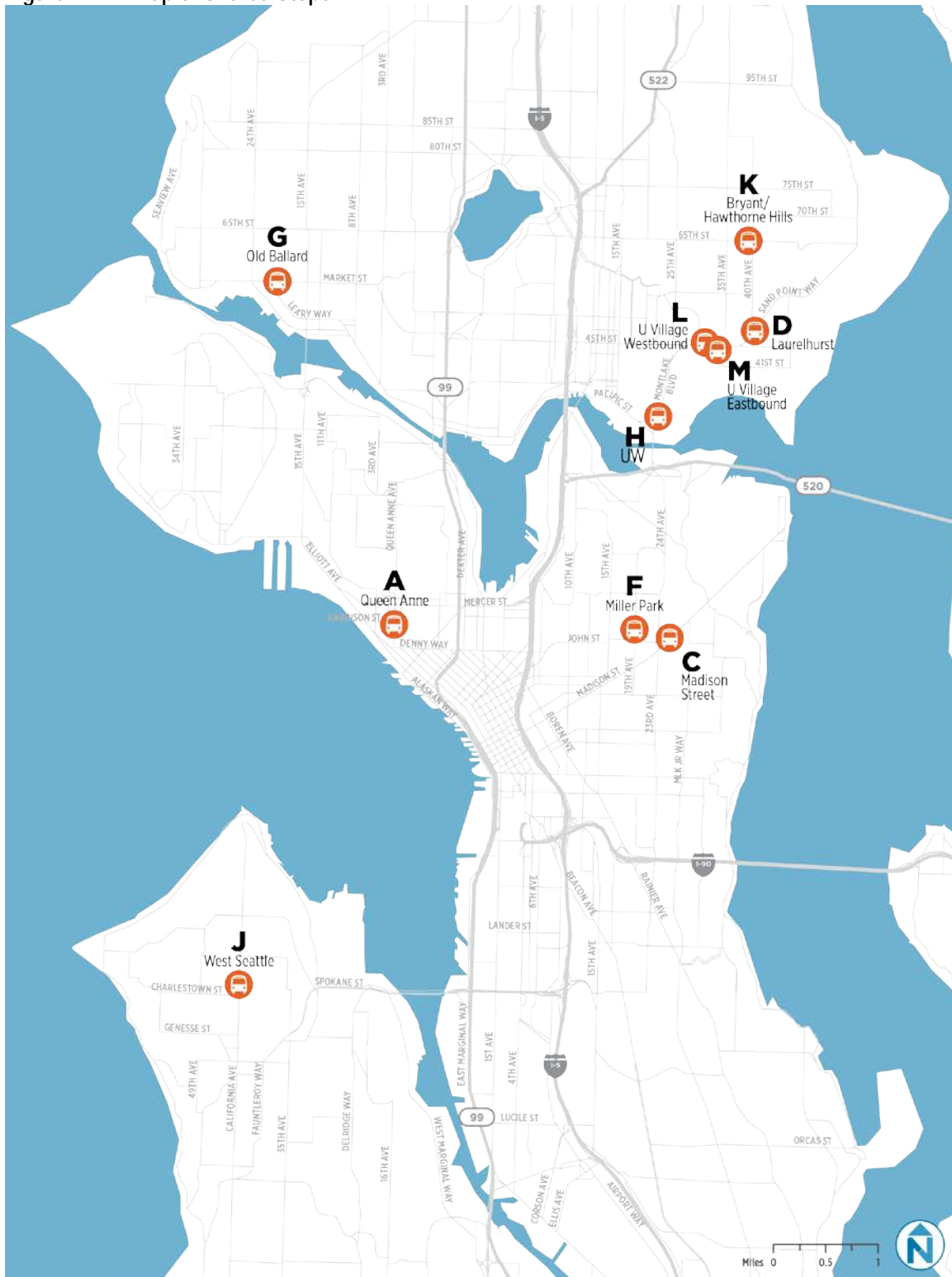


Figure 2 Table of Shared Stops

| Letter | Zone ID | Name                   | Address  | KCM Routes Served       | Employer Sharing Stop | Zone Length (ft.) <sup>5,6</sup> | Travel Lanes | Stop Placement | Zone Location |
|--------|---------|------------------------|--|-------------------------|-----------------------|----------------------------------|--------------|----------------|---------------|
| A      | 2180    | Queen Anne             | Queen Anne Ave. N & W Harrison St.                   | 1, 2, 8, 13, 32         | MSFT                  | 70'                              | 2            | Farside        | Offline       |
| C      | 12340   | Madison Street         | E Madison St. & E 25 <sup>th</sup> Ave.              | 8, 11                   | MSFT                  | 120'                             | 1            | Farside        | Offline       |
| D      | 10562   | Laurelhurst            | Sand Point Way & 40 <sup>th</sup> Ave. NE            | 75                      | SC                    | 80'                              | 2            | Midblock       | In-lane       |
| F      | 13250   | Miller Park            | 19 <sup>th</sup> Ave. E & E Harrison St.             | 12                      | MSFT                  | 67'                              | 1            | Nearside       | Offline       |
| G      | 29720   | Old Ballard            | NW Market St. & 20 <sup>th</sup> Ave. NW             | 44                      | MSFT                  | 90'                              | 2            | Farside        | In-lane       |
| H      | 25765   | UW                     | Montlake Blvd. NE & NE Pacific Pl.                   | 65, 78, 982             | SC                    | 85'                              | 2            | Midblock       | In-lane       |
| J      | 31970   | West Seattle           | California Ave. SW & SW Spokane St.                  | 50, 55, 128             | MSFT                  | 60'                              | 1            | Farside        | Offline       |
| K      | 37920   | Bryant/Hawthorne Hills | NE 65 <sup>th</sup> St. & 39 <sup>th</sup> Ave. NE   | 62, 71, 76              | MSFT                  | 100'                             | 1            | Farside        | In-lane       |
| L      | 25200   | U Village Westbound    | NE 45 <sup>th</sup> St. & Union Bay Pl. NE           | 31, 32, 67, 75, 78, 995 | SC                    | 90'                              | 3            | Farside        | In-lane       |
| M      | 29920   | U Village Eastbound    | NE 45 <sup>th</sup> St. & Mary Gates Memorial Dr. NE | 65, 75                  | SC                    | 60'                              | 2            | Farside        | In-lane       |

Farside, midblock, and nearside refer to the bus stop's location at an intersection. For example, a farside stop is located on the far side (after the intersection) of the cross street.

<sup>5</sup> SDOT, KCM, Microsoft, and SC. April 2017. Memorandum of Agreement, Exhibit 4. P. 2.

<sup>6</sup> Capacity of the zone depends on the size of vehicles serving a stop.

## EVALUATION METHODOLOGY

Evaluation of the Shared Stop Pilot was conducted using four sources of information:

- Field observation of shared stops during joint KCM/employer-provided shuttle operation
- Feedback from KCM and employer-provided shuttle operators
- Public comments received by KCM and SDOT
- Traffic crashes and citations occurring at the shared stops

### Field Observations

All ten stops were observed as a part of the field observation portion of the shared stop evaluation. The purpose of data collection was to identify any impacts on KCM operations at shared stops. In planning for the pilot, potential shared stops were ranked by number of scheduled buses per hour and assigned an ‘anticipated activity level’. Because of the assumed greater potential for conflict between KCM and employer-provided shuttle vehicles, high-activity stops were observed more frequently than moderate- and low-activity stops.

Data collection personnel were stationed at each stop with data collection sheets and observed all vehicle stop activity at their designated stop.<sup>7</sup> Data collected included the type of vehicle using the shared stop, the dwell time of the vehicle at the stop, the number of passengers boarding and alighting, and details about any conflict or bus stop failure between the stopped vehicle and other roadway users/infrastructure. A sample blank data collection sheet is included in Appendix A2.

Figure 3 Shared Stop Observation Characteristics

| Letter | Name                   | Observation Period(s) | Observation Times                                | Anticipated Activity Level | Hours of Observation |
|--------|------------------------|-----------------------|--|----------------------------|----------------------|
| A      | Queen Anne             | a.m.                  | 6:00 a.m. – 10:00 a.m.                           | High                       | 21                   |
| C      | Madison Street         | p.m.                  | 4:15 p.m. – 7:15 p.m.                            | Moderate                   | 12                   |
| D      | Laurelhurst            | a.m., p.m.            | 6:00 a.m. – 9:30 a.m.;<br>3:30 p.m. – 6:30 p.m.  | Low                        | 13                   |
| F      | Miller Park            | a.m., p.m.            | 6:30 a.m. – 10:00 a.m.;<br>4:00 p.m. – 8:00 p.m. | Low                        | 15                   |
| G      | Old Ballard            | a.m., p.m.            | 6:30 a.m. – 9:00 a.m.;<br>4:30 p.m. – 8:00 p.m.  | Low                        | 12                   |
| H      | UW                     | a.m., p.m.            | 5:30 a.m. – 9:30 a.m.;<br>3:30 p.m. – 7:30 p.m.  | Low                        | 16                   |
| J      | West Seattle           | a.m., p.m.            | 6:00 a.m. – 9:00 a.m.;<br>5:00 p.m. – 8:00 p.m.  | Low                        | 12                   |
| K      | Bryant/Hawthorne Hills | a.m., p.m.            | 6:00 a.m. – 9:30 a.m.;<br>4:30 p.m. – 8:00 p.m.  | Low                        | 14                   |
| L      | U Village Westbound    | Mid-Day               | 8:45 a.m. – 2:30 p.m.                            | Low                        | 11.5                 |
| M      | U Village Eastbound    | Mid-Day               | 8:45 a.m. – 2:30 p.m.                            | Low                        | 11.5                 |

<sup>7</sup> Observers also collected data on private autos, delivery services, ride-hailing vehicles, and other non-transit stop users.

Data collection primarily occurred on consecutive days in May and October 2017. One additional day of data collection was conducted in September 2017. The purpose of splitting the data collection into two months was to record observations under different conditions, thereby helping to mitigate any potential seasonal or event-based anomalies. The University of Washington, a major trip generator near stops H, L, and M, was in session for both the May and October observation periods, and neither observation period included a major holiday. The two observation periods also fall within high-ridership months<sup>8</sup>, allowing for measurement of the shared stops during periods of maximum potential activity.

Figure 4 Data Collection Periods and Observations Recorded

| Collection Period | Day(s) of Week Observed      | Stop(s) Observed            | Stop Activities Recorded | Day(s) of Observation |
|-------------------|------------------------------|-----------------------------|--------------------------|-----------------------|
| 5/23 – 5/25       | Tuesday, Wednesday, Thursday | A, C, D, F, G H, J, K       | 495                      | 3                     |
| 9/12              | Tuesday                      | A                           | 24                       | 1                     |
| 10/3 – 10/19      | Tuesday, Wednesday, Thursday | A, C, D, F,G, H, J, K, L, M | 1,131                    | 6                     |
|                   |                              | Total                       | 1,650                    | 10                    |

### Operator Feedback

A short survey was distributed to the operators of Microsoft Connector and Seattle Children’s shuttles to understand shuttle operators’ experience with the Shared Stop Pilot program. The survey was distributed in late October and responses from the operators received in early November. The survey questions are included in Appendix A3. Over the course of the pilot, KCM also maintained an internal driver feedback program.

### Public Comment

For the duration of the pilot, SDOT maintained a web page with information on the program, as well as a dedicated e-mail address for Shared Stop Pilot comments, questions, and concerns.<sup>9</sup>

All public comments collected are anonymized and included in Appendix A4.

### Traffic Crashes & Citations

Shared Stop Pilot participants agreed to report traffic crashes and traffic citations that occurred at shared stops throughout the pilot. No citations or crashes were reported.

<sup>8</sup> In 2016, May and October were KCM’s two highest-ridership months (411,380 and 414,097 average weekday transit boardings, respectively).

<sup>9</sup> Web address: <https://www.seattle.gov/transportation/projects-and-programs/programs/transit-program/employer-shared-transit-stop-pilot>; E-mail address: [sharedstopspilot@seattle.gov](mailto:sharedstopspilot@seattle.gov)

## ANALYSIS

### Field Observations

The most robust evaluation of the Shared Stop Pilot comes from the field data collected over the course of the pilot. Using the 1,650 observations of stop behavior collected at the shared stops, the following section examines the impacts of the Shared Stop Pilot on multi-modal operations within the public right-of-way.

### Pilot Descriptive Statistics

Descriptive statistics of vehicle behavior at the shared stops are included below. During observation periods, Microsoft Connector and SC shuttle vehicles made up about 25% of all vehicle types using the shared stops to pick up/drop off passengers. Just over 1% of all vehicles using the KCM stops are not authorized to do so. These non-transit vehicle types include ride-hailing vehicles, construction vehicles, private autos, and school buses.<sup>10</sup>

Figure 5 Total Vehicle Stop Events Observed by Vehicle Type at Shared Stops ( $n=1,650$ )

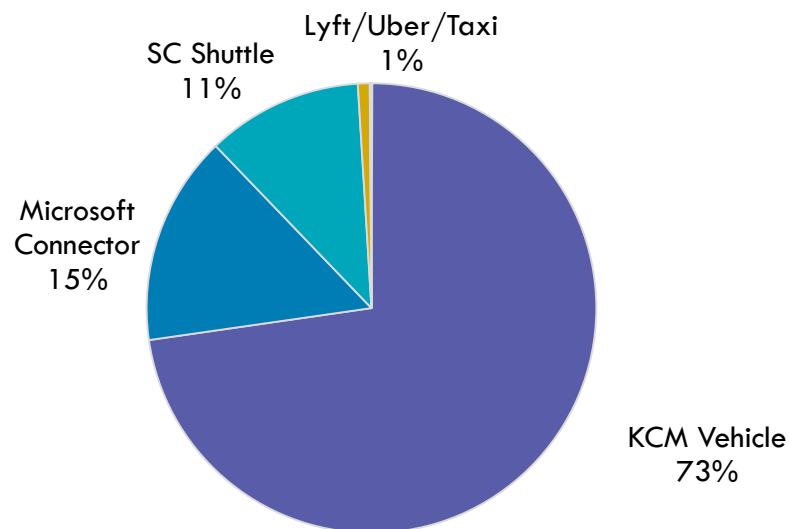
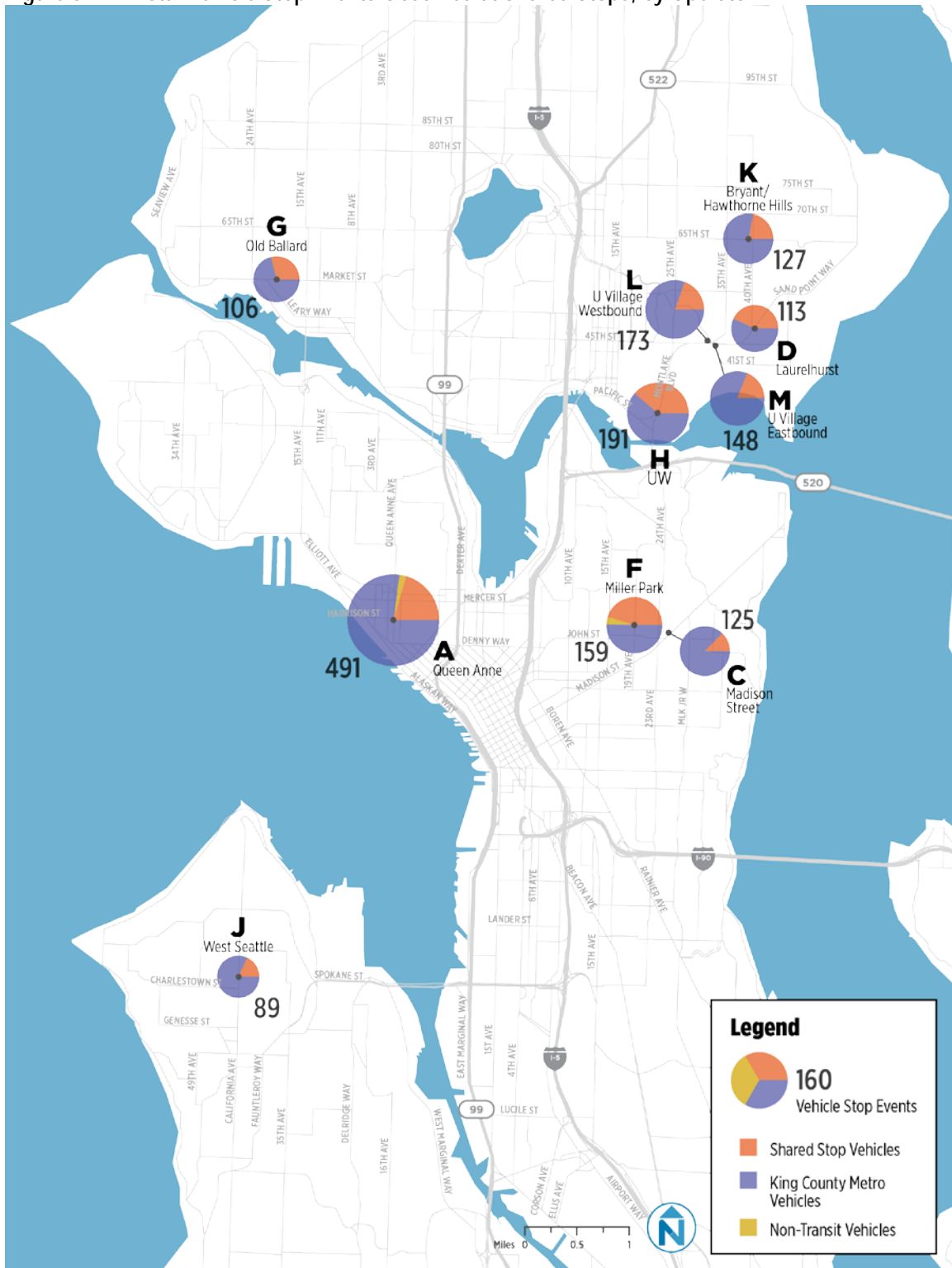


Figure 6 shows stop events observed by operator and stop. Each circle represents a shared stop and is proportionally sized to the number of total vehicle stop events observed. The vehicle stop events were classified as KCM vehicles, shared stop vehicles (Microsoft Connector and SC shuttles), and non-transit vehicles (construction and delivery trucks, private vehicles, school buses, and Lyft/Uber/taxi).

Across all observed stops, the average proportion of shared stop vehicles to the total stop events was 26%. The three highest proportions of shared stop vehicles to all stop events were at Miller Park [F] (45%), Laurelhurst [D] (43%), and UW [H] (38%). The lowest three proportions of shared stop vehicles to all stop events were at Madison Street [C] (13%), West Seattle [J] (18%), and U Village Eastbound [M] (19%).

<sup>10</sup> Construction vehicles, private vehicles, and school buses were observed one time each and represented <1% of all vehicles observed. Due to the small proportion, those categories were excluded from Figure 5.

Figure 6 Total Vehicle Stop Events Observed at Shared Stops, by Operator



## Dwell Time

The average dwell time of each operator is a function of many factors, including the number of passengers boarding and/or alighting, the fare payment or verification process, operational policies (e.g. no standees, no acceleration until all passengers sit, no early departures), vehicle type (i.e. step-up or low-floor, etc.), layover, and platform configuration.<sup>11</sup> Boarding activity results in more dwell time than alighting activity due to fare payment/passenger verification. The combination of these factors results in varying dwell times for public and private operators.

Most Connector and all SC vehicles have a single door and steps while KCM buses have multiple-door, low-floor boarding. Connector and SC also serve one-way, peak period commuters, while KCM buses load and unload passengers at most stops. Connector and SC do not allow standees and do not accelerate out of a stop until all passengers are seated, while KCM bus operators do.

Figure 7 Average Dwell Time by Operator

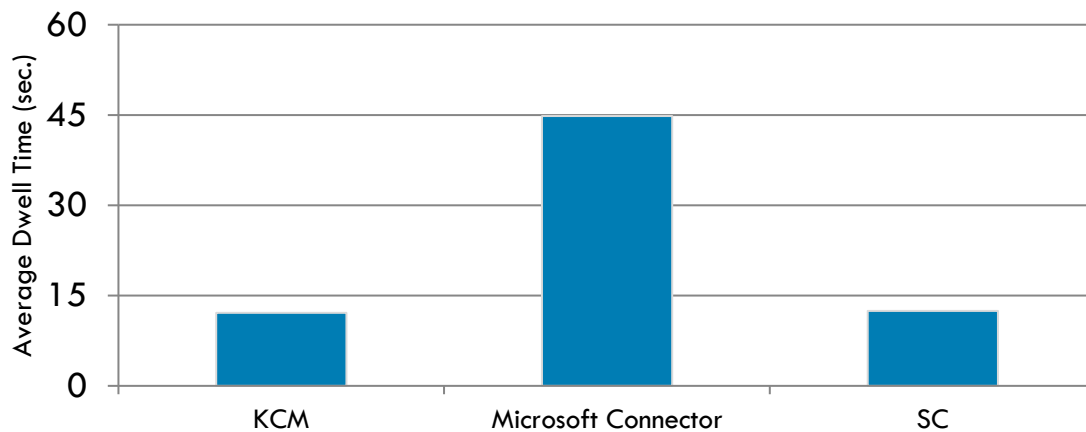
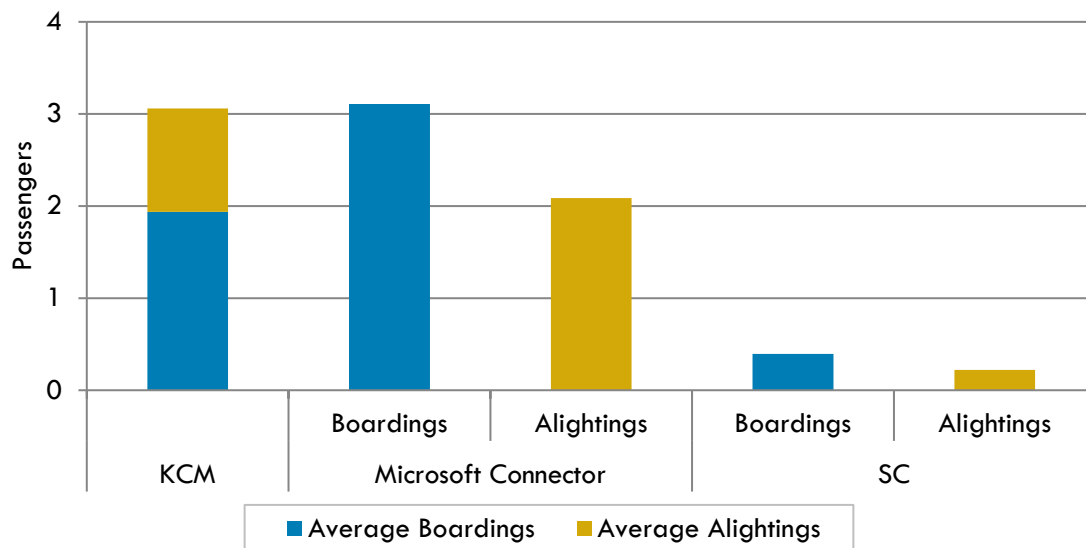


Figure 8 Average Boardings and Alightings per Stop by Operator



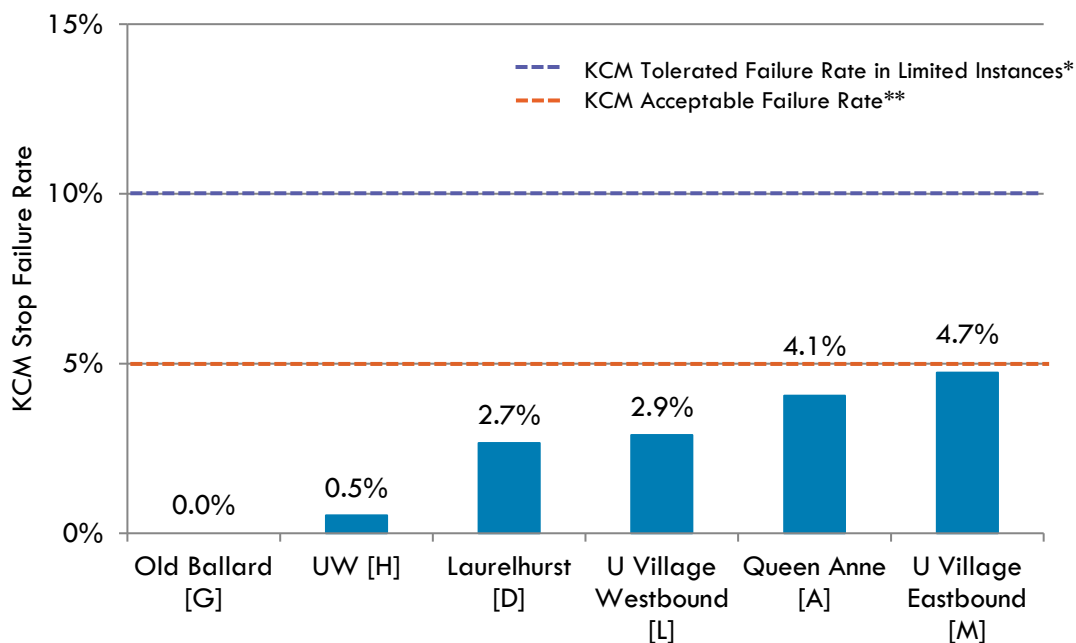
<sup>11</sup> Transportation Research Board. 2013. *Transit Capacity and Quality of Service Manual*. Washington, D.C. P. 6-6. [https://www.nap.edu/login.php?action=guest&record\\_id=24766](https://www.nap.edu/login.php?action=guest&record_id=24766)

## Delay at Shared Stops: Bus Stop Failure Rate

Bus stops served by enough trips per hour can experience a condition known as bus stop failure, or 'stop failure'. Stop failure, as defined in the *Transit Capacity and Quality of Service Manual*, occurs when all available loading zones at a bus stop are occupied and a bus arriving at a stop must wait for available space.<sup>12</sup> High failure rates negatively impact bus operations (specifically, speed and reliability) and low failure rates can represent inefficient use of limited curb space, meaning a stop failure rate of 0% is not always optimal.<sup>13</sup> Transit agencies balance these needs by setting expectations and designing for specific bus stop failure rates.<sup>14</sup> Because assessing the impact of stop sharing on existing KCM operations is of paramount importance to this evaluation, bus stop failure rate is an important metric considered in this report.

In general, KCM plans for a 2.5% failure rate at its bus stops outside of the central business district and accepts a 5% failure rate in situations where a queueing bus could wait without blocking an intersection or the only travel lane. KCM could further tolerate a higher 10% failure rate when a queueing bus would not block an intersection or the only travel lane, and if a nearly-full bus of passengers alight with a similar number boarding.<sup>15</sup> This scenario may occur at shared stop UW [H] near the University of Washington Link light rail station. Figure 9 shows that all of the stop failure rates at shared stops with multiple travel lanes fell below KCM levels.

Figure 9 Observed KCM Stop Failure Rate at Shared Stops with 5% Threshold



\*At some stops, KCM tolerates a higher rate (10%). E.g., at high-ridership stops where a nearly-full bus is unloading and loading.

\*\*A rate of 5% is acceptable if the queueing bus is not blocking an intersection or the only single travel lane.

<sup>12</sup> Transportation Research Board. 2013. *Transit Capacity and Quality of Service Manual*. Washington, D.C. P. 6-5. [https://www.nap.edu/login.php?action=guest&record\\_id=24766](https://www.nap.edu/login.php?action=guest&record_id=24766)

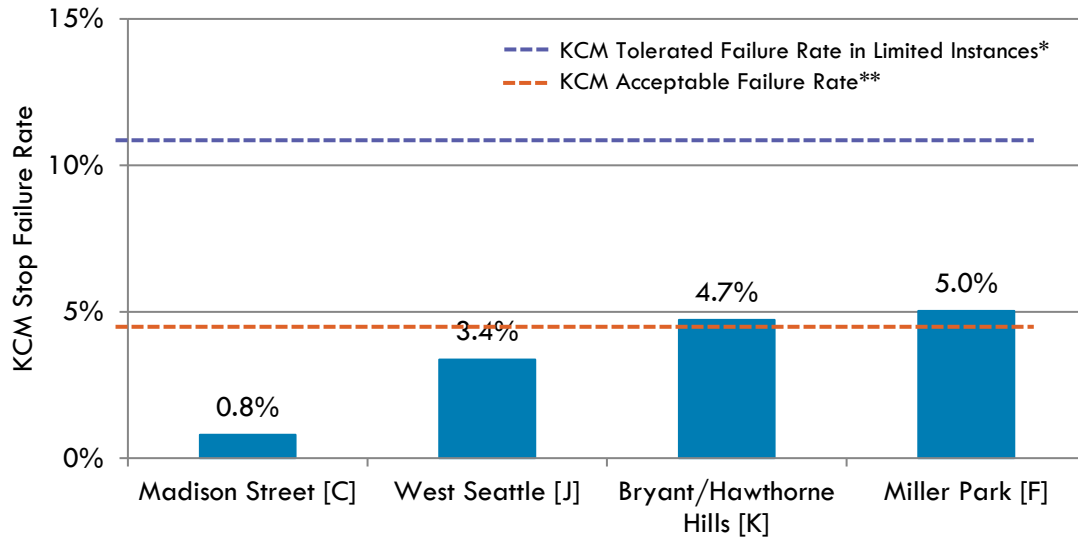
<sup>13</sup> If a bus zone is busy, having a steady queue of vehicles moving through it sometimes represents a more optimal use of public right-of-way than does an alignment of many individual bus zones.

<sup>14</sup> *Ibid*, p. 6-64.

<sup>15</sup> E-mail correspondence, November 2017, Owen Kehoe, PE, PTOE, King County DOT.

Figure 10 shows that the stop failure rate at only one shared stop with a single travel lane fell below KCM levels. The West Seattle [J], Bryant/Hawthorne Hills [K], and Miller Park [F] stops saw higher-than-accepted stop failure rates of 3.4%, 4.7%, and 5.0%, respectively. A lower stop failure rate (2.5%) threshold is used because they are served by a single travel lane.

Figure 10 Observed KCM Stop Failure Rate at Shared Stops with 2.5% Threshold



\*At some stops, KCM tolerates a higher rate (10%). E.g., at high-ridership stops where a nearly-full bus is unloading and loading.

\*\*A rate of 2.5% is acceptable if the stop is served by a single travel lane.

Data allowing for analysis of stop failure rate at SBZs and GLUZs used by employer shuttles are unavailable but should be collected in the future. This would allow for a comparison of queueing vehicles at shared stops versus SBZs and GLUZs.

Figure 11 shows stop failure across operators. The average delay accrued by stop failure for all vehicles was between eight and ten seconds, and Microsoft Connector buses experienced the highest rate of stop failure. On average, three out of every 100 observations of a vehicle stopping at a shared stop identified stop failure and resultant queueing.

Figure 11 Operators *Experiencing* Stop Failure and Delay

| Operator            | Number of Stop Failures Experienced | Avg. Delay* Experienced (sec.) | Total Vehicles Observed | Operator-Experienced Stop Failure Rate |
|---------------------|-------------------------------------|--------------------------------|-------------------------|--|
| KCM                 | 36                                  | 10                             | 1,199                   | 3%                                     |
| Microsoft Connector | 10                                  | 10                             | 249                     | 4%                                     |
| SC Gold Line        | 6                                   | 8                              | 185                     | 3%                                     |
| <b>Total</b>        | <b>52</b>                           | <b>N/A</b>                     | <b>1,633</b>            | <b>3%</b>                              |
| <b>Average</b>      | <b>17</b>                           | <b>9</b>                       | <b>544</b>              | <b>3%</b>                              |

\*Average delay for KCM and Microsoft Connector operators is a grand mean of route average delays.

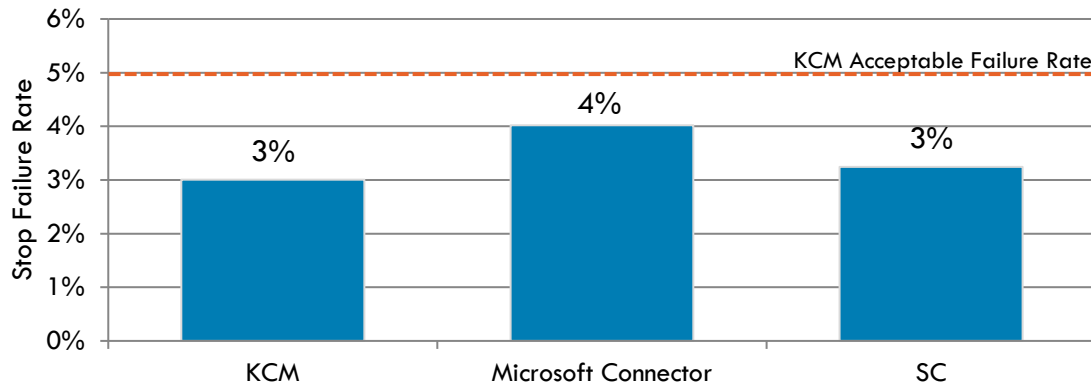
Figure 12 shows which vehicles were occupying the stop zone when another vehicle approached, thereby causing stop failure and queueing. Connector buses caused the highest percentage of stop failures relative to the number of stop events they perform, likely due to their longer dwell time and higher ridership than SC (Figure 7). Overall, three out of every 100 observations of a vehicle stopping at a shared stop identified stop failure and resultant queueing, a rate that is only one-half percent higher than KCM plans for in its own operation.

Figure 12 Operators *Causing* Stop Failure and Delay

| Operator            | Number of Stop Failures Caused | Avg. Delay Caused (sec.) | Total Vehicles Observed | Operator Stops Causing Stop Failure |
|---------------------|--------------------------------|--------------------------|-------------------------|-------------------------------------|
| KCM                 | 28                             | 12                       | 1,199                   | 2%                                  |
| Microsoft Connector | 19                             | 8                        | 249                     | 8%                                  |
| SC                  | 5                              | 3                        | 185                     | 3%                                  |
| <b>Total</b>        | <b>52</b>                      | <b>N/A</b>               | <b>1,633</b>            | <b>3%</b>                           |
| <b>Average</b>      | <b>17</b>                      | <b>8</b>                 | <b>544</b>              | <b>3%</b>                           |

Overall, the stop failure rate of vehicles using shared stops ranged from three to four percent. This is below the KCM qualified acceptable 5% rate, as shown in the orange dashed line in Figure 13. The *Transit Capacity and Quality of Service Manual* anticipates a non-central business district failure rate of between 2.5% and 7.5% - allowing for slightly higher rates than KCM.<sup>16,17</sup> In short, failure rates observed during the Shared Stop Pilot are not abnormal and, by and large, represent typical operation.

Figure 13 Experience of Stop Failure by Operator



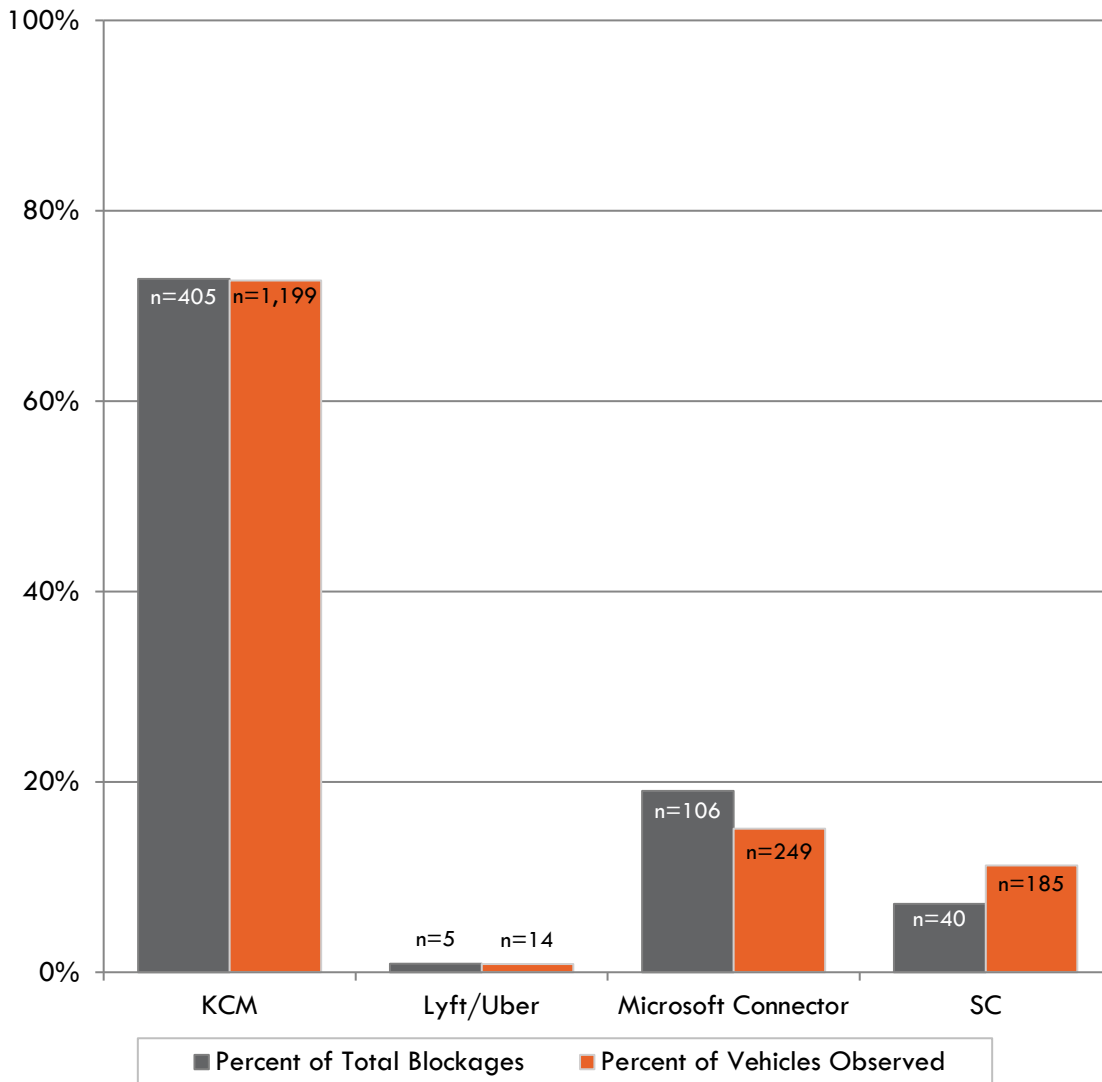
<sup>16</sup> Transportation Research Board. 2013. *Transit Capacity and Quality of Service Manual*. Washington, D.C. P. 6-64. [https://www.nap.edu/login.php?action=guest&record\\_id=24766](https://www.nap.edu/login.php?action=guest&record_id=24766)

<sup>17</sup> Transportation Research Board. 1997. *Operational Analysis of Bus Lanes on Arterials*. Washington, D.C. [http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp\\_rpt\\_26-a.pdf](http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_26-a.pdf)

## Delay to Non-Transit Road Users

This report also evaluates the effects of stop sharing on other users of the roadway by analyzing the observed number of bike lane, turning lane, crosswalk, and general travel lane blockages caused by vehicles using a shared stop. Figure 14 compares the percentage of all types of blockages caused to the percentage of stop events by each operator, showing a relatively consistent correlation between the number of stop events made and the number of blockages caused. This suggests that no one operator is more likely to block other roadway users and that these blockages are a function of an operator's vehicle volumes, not the operator itself.

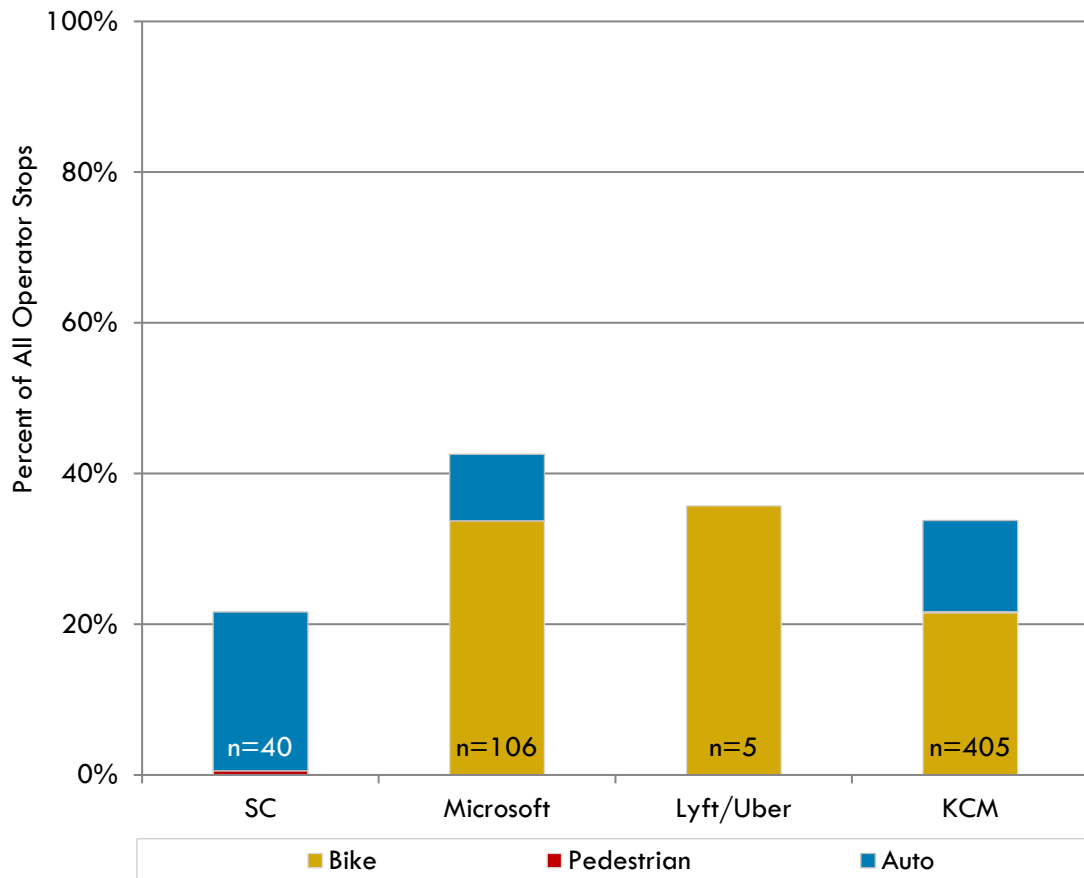
Figure 14 Percent of Total Blockages\* and Vehicles Observed by Operator



\*Includes blockages of all types (General Travel Lane, Bike Lane, Crosswalk, and Turning Vehicles).

Figure 15 shows the type of roadway blockages that each operator was responsible for. Instances of shared stop vehicles blocking bicycle or auto infrastructure on the roadway were by far the most common. These blockages primarily include a shared stop vehicle blocking a bike lane, the general travel lane, or a turning lane from an adjacent street. Blockages of pedestrian infrastructure (crosswalks) were uncommon, despite the presence of crosswalks near five of the shared stops.

Figure 15 Blockages by Operator and Road User Affected (*n*=number of blockages)



The high percentage of auto (general travel lane) blockages by SC shuttles is likely due to the fact that all of the shared stops used by SC (Laurelhurst [D], UW [H], U Village Eastbound [M], and U Village Westbound [L]) were in-lane stops, meaning that many stop events inevitably delayed another vehicle.

The high percentage of bike lane blockages by KCM and Connector vehicles is tied to their use of the Queen Anne [A] stop, where the bus bay is seven feet in width, making it extremely difficult for either KCM or Connector vehicles to *not* block the adjacent bike lane, given that KCM electric trolley buses and Connector Van Hool coaches are approximately 8-½' wide.<sup>18,19</sup>

The Queen Anne [A] stop includes a mixing zone in the bike lane, where buses and people on bikes are meant to expect conflict and navigate appropriately (Figure 16). In addition to the four KCM routes and two Connector routes that serve Queen Anne [A] shared stop, the RapidRide D Line travels southbound on this stretch of Queen Anne Ave., making this a mixing zone with relatively high bus volumes.

Figure 16 Queen Anne [A] Shared Stop with Transit/Bicycle Mixing Zone



Source: Nearmap, photo taken 4/21/17.

Because of the high bus volumes in this mixing zone, conflict mitigation may be necessary to address bicycle/bus interaction. Potential options for mitigation include:

- **Floating transit island.** Floating transit islands allow buses and bicycles to navigate the bus zone in their own dedicated lanes. In this design, the passenger waiting area for an in-lane bus zone is on a raised island set away from the curb, while the bike lane passes behind the island, avoiding cyclist conflict with waiting riders and arriving buses.
- **Roadway re-striping.** Re-striping or reconstruction of this stretch of Queen Anne Ave. could include a protected bike lane on the east side of the street, as is called for in SDOT's Bicycle Master Plan.<sup>20</sup> The nearby 2<sup>nd</sup> Ave. two-way protected bike lane illustrates a design type that could be applied to Queen Anne Ave.

<sup>18</sup> Xcelsior Trolley Specifications Sheet. 2017. New Flyer Industries. <<https://www.newflyer.com/site-content/uploads/2017/09/729-NFL-Xcelsior-Final.pdf>>

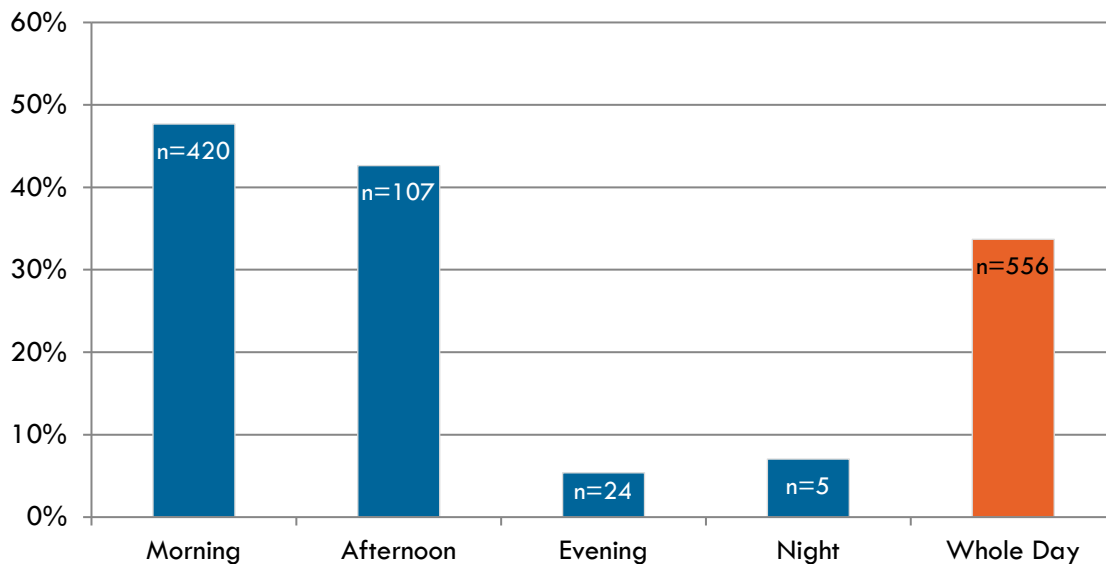
<sup>19</sup> "Coaches USA". 2017. Van Hool NV. <<https://www.vanhool.be/en/coaches/coaches-usa/coaches-usa>>

<sup>20</sup> SDOT. April 2014. Bicycle Master Plan. P. 45. <[https://www.seattle.gov/Documents/Departments/SDOT/About/DocumentLibrary/BicycleMasterPlan/SBMP\\_21March\\_FINAL\\_full%20doc.pdf](https://www.seattle.gov/Documents/Departments/SDOT/About/DocumentLibrary/BicycleMasterPlan/SBMP_21March_FINAL_full%20doc.pdf)>

- **Change the bus or bike network.** Queen Anne Ave. is currently a bikeway and a transit street. Relocating either bus or bike traffic off Queen Anne Ave. could be an option.
- **Two-way conversion.** Queen Anne Ave. is part of a north-south couplet with 1<sup>st</sup> Ave. N. This couplet is suggested for two-way conversion in Seattle's Uptown Urban Design Framework and Metro Connects network.<sup>21,22</sup>
- **Close the bus stop.** The stop is not paired and not served by the RapidRide D Line. If closed, the space could be transformed into a Shuttle Bus Zone. This would reduce the number of large vehicles using the zone.

Figure 17, which charts the percentage of stop events causing blockages by time of day, shows that the morning and afternoon periods produce higher rates of blockages than the average for the day. These data also suggest that evening and night periods produce a lower rate of blockages, but because of the low sample size, the results should be interpreted with caution. Without a longitudinal data source predating these observation periods, it is impossible to say how the Shared Stop Pilot changed rates of roadway blockages at shared stops. It can be assumed, however, that an absolute increase in vehicles using the stop produces an increase of blockages.

Figure 17 Percent of Stop Events Causing Blockages by Time of Day (*n*=number of blockages)



Morning = 12:00 a.m. – 10:00 a.m.; Afternoon = 10:01 a.m. – 3:00 p.m.; Evening = 3:01 p.m. – 7:00 p.m.; Night = 7:01 p.m. – 12:00 a.m.

<sup>21</sup> Seattle Office of Planning and Community Development. May 2016. *Uptown Urban Design Framework*. P. 22. <[https://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/p2341231.pdf](https://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/p2341231.pdf)>

<sup>22</sup> King County Metro, Metro Connects: <http://www.kcmetrovision.org/plan/service-map/>

## **Operator Feedback**

Both Connector and SC shuttle operators returned the operator feedback survey distributed to them, citing ‘no comments of significance.’ King County Metro opted not to administer the survey, as they had a driver comment program open for the duration of the pilot, through which drivers could report incidents or issues (none were reported).

The only feedback noted by SC shuttle operators was that members of the public at some shared stops would ask SC shuttle drivers when the next KCM bus was arriving. Otherwise, they reported no scheduling or operational conflicts. Microsoft Connector operators also reported no issues of significance that occurred during the pilot.

In short, the program was a smooth transition for all operators and entailed no accommodations or sacrifices, short of using a new space (in the case of employer shuttles) or communicating with the public.

## **Public Comment**

Over the course of the pilot and up to the drafting of this report, only eight public comments were received through SDOT’s dedicated comment e-mail address.

### **Supportive Comments**

Half of the comments were supportive of the program, with respondents praising the convenience of the stops. One commenter described the time-savings of being able to get their shuttle bus at a KCM stop, while another simply described it as a “great idea”.

### **Critical Comments**

The other half of the comments were critical of the pilot, with a common theme being potential social justice implications of municipal government enabling a private transit service for high-earning residents at the potential expense of public transit. Other complaints were targeted at excessive idling by employer-provided shuttles and traffic backups caused by stop sharing. It should be noted that the comment related to excessive idling described a location not included in the Shared Stop Pilot.

## **Traffic Crashes and Citations**

Shared Stop Pilot participants reported zero traffic crashes or citations during the pilot program. We cannot attribute any change in reported traffic crashes or citations to the Shared Stop Pilot, however, as there are no accessible records of employer shuttle crashes or citations for time periods preceding the pilot.

## SUMMARY OF FINDINGS

Overall, the data reviewed in this report produce important findings that can be used to help evaluate the performance of the current pilot and assist shared stop partner entities in crafting future shared stop policy. Findings of significance include:

- Neither KCM nor employer shuttle operators reported operational issues or concerns at the shared stops
- All of the shared stops located on a two-lane roadway produced KCM bus stop failure rates<sup>23</sup> below the KCM acceptable level of 5%
- Three of four shared stops located on single-lane roadways produced stop KCM bus stop failure rates above the KCM acceptable level of 2.5%
- No one operator (KCM, Microsoft Connector, or SC) suffered a disproportionately higher rate of stop failure than others
- Microsoft Connector vehicles caused a higher rate of stop failures than operators, likely due to their proportionately higher ridership and dwell times than SC vehicles
- Blockages of bike lanes and general travel lanes by KCM and employer-provided shuttles were the most common types of roadway blockages. Blockages of bike lanes were observed almost exclusively at Queen Anne [A] shared stop due to the narrow bus stop zone and configuration of the bike lane.
- The public's perception of the Shared Stop Pilot is mixed, with the most concern expressed about inequitable distribution of accessibility improvements to higher-earning Seattle residents

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<sup>23</sup> As defined by the Transit Capacity and Quality of Service Manual, 3<sup>rd</sup> Edition, the bus stop failure rate is the percentage of events where all available loading areas at a bus stop are occupied and a bus arriving at a stop must wait for available space.

## RECOMMENDATIONS

Given the uniqueness of each potential shared stop, specific recommendations are provided for the majority of stop types and are summarized and detailed in Figure 18 and Figure 19. Note that the following diagrams do not represent all potential street configurations.

Figure 18 In-Lane Shared Stop Recommendations

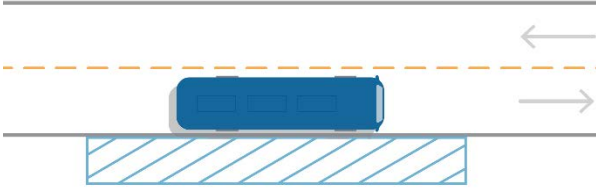
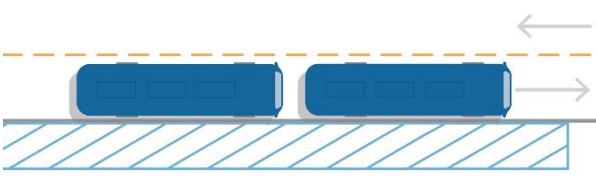

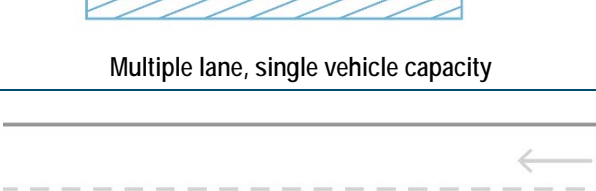
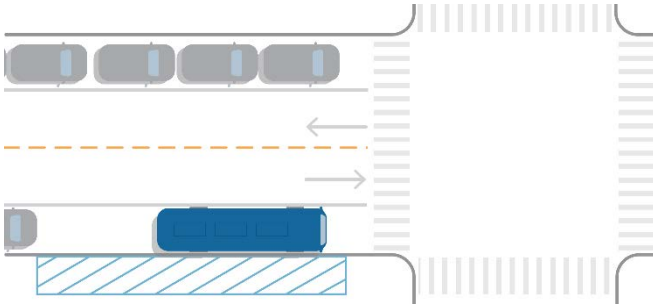
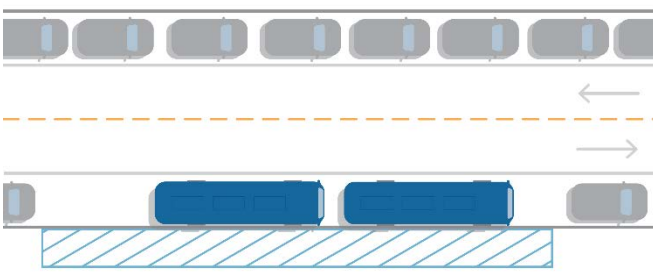
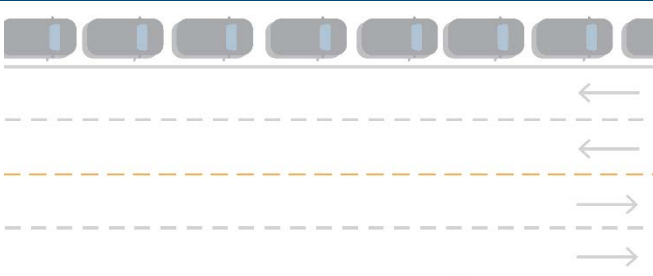
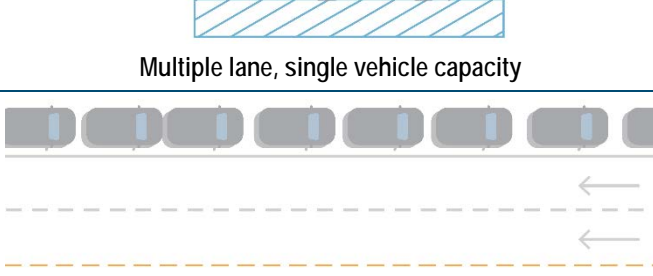
| Stop Type   | Recommendation   |
|---|--|
|  <p>Single lane, single vehicle capacity</p>       | <p>Not recommended<br/>Upgrade to multiple vehicle stop zone</p>                         |
|  <p>Single lane, multiple vehicle capacity</p>    | <p>Acceptable if the stop zone can accommodate both KCM and employer shuttle vehicle</p> |
|  <p>Multiple lane, single vehicle capacity</p>   | <p>Recommended</p>   |
|  <p>Multiple lane, multiple vehicle capacity</p> | <p>Recommended</p>   |

Figure 19 Offline Shared Stop Recommendations

| Stop Type   | Recommendation  |
|---|---|
|  <p>Single lane, single vehicle capacity</p>       | Acceptable at nearside and midblock locations only                                |
|  <p>Single lane, multiple vehicle capacity</p>     | Acceptable if the stop zone can accommodate both KCM and employer shuttle vehicle |
|  <p>Multiple lane, single vehicle capacity</p>   | Recommended   |
|  <p>Multiple lane, multiple vehicle capacity</p> | Recommended   |

## In-Lane Shared Stops

The recommendation to upgrade the capacity of in-lane, single-lane, single-vehicle stops to two vehicles is informed by higher-than-acceptable stop failure rates at Bryant/Hawthorne Hills [K]. The zone length of in-lane, single-lane, multiple-vehicle capacity stops should be based on the maximum length KCM and employer shuttle vehicles assigned to the stop. In-lane stops situated on multiple-lane roads have a lower impact on other traffic and are therefore recommended.

## Offline Shared Stops

Offline stops are recommended under all lane and vehicle capacity conditions, other than farside single-lane, single-vehicle capacity stop locations. Under this scenario, a stop failure could potentially result in a blockage of the intersection.

Offline stops that do not accommodate a KCM bus and employer-provided shuttle should be considered strong candidates for the addition of a Shuttle Bus Zone (SBZ) either immediately before or after the stop. This is already general practice at SDOT and would reduce stop failure rate while maintaining street parking in the SBZ outside of peak hours.

## Reducing Dwell Time

All operators should work to reduce dwell times to reduce stop failure rates. Strategies for dwell time reduction could include:

- Rider and driver education on the importance of swift boarding and alighting
- Tightening schedule to reduce any intermediate layover time that lengthens dwell times at shared stops

## Mitigating Bike Lane Blockages

Given the high number of blockages of the bike lane at Queen Anne [A] by KCM and employer-provided shuttles, this stop should be further studied to determine acceptable volumes of buses and bicycles for a mixing zone. Mitigation options to reduce conflict include:

- Floating transit island
- Roadway restriping
- Change bus or bike network
- Conversion of street to two-way travel
- Close bus stop

## Final Recommendation

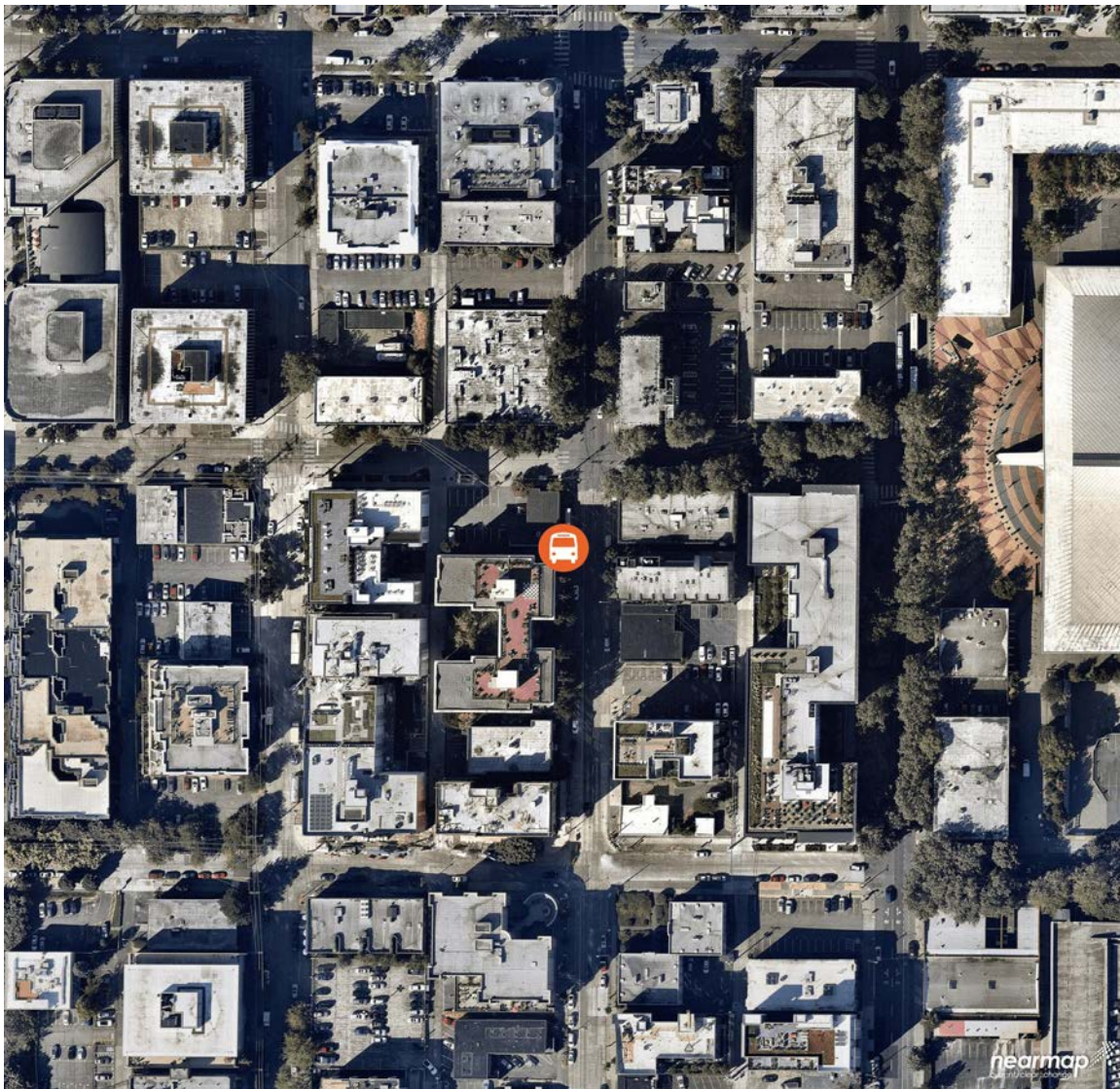
The Shared Stop Pilot has not resulted in significant negative outcomes for KCM bus operations and has many potential positive benefits not studied in this evaluation, including reducing activity at Generic Load/Unload Zones and reducing demand for Shuttle Bus Zones. The Shared Stop Pilot should continue, and conversations should begin regarding a permanent and expanded SDOT program.

# Appendix A

## Appendix A1 Shared Stop Profiles

### Stop A – Queen Anne

Stop A is a far side stop located at the southwest corner of Queen Anne Avenue N and W Harrison Street. The stop includes a covered shelter, detailed KCM stop flag, and approximately 12'-wide sidewalk. The area surrounding the stop is medium-density residential, commercial, and institutional use.



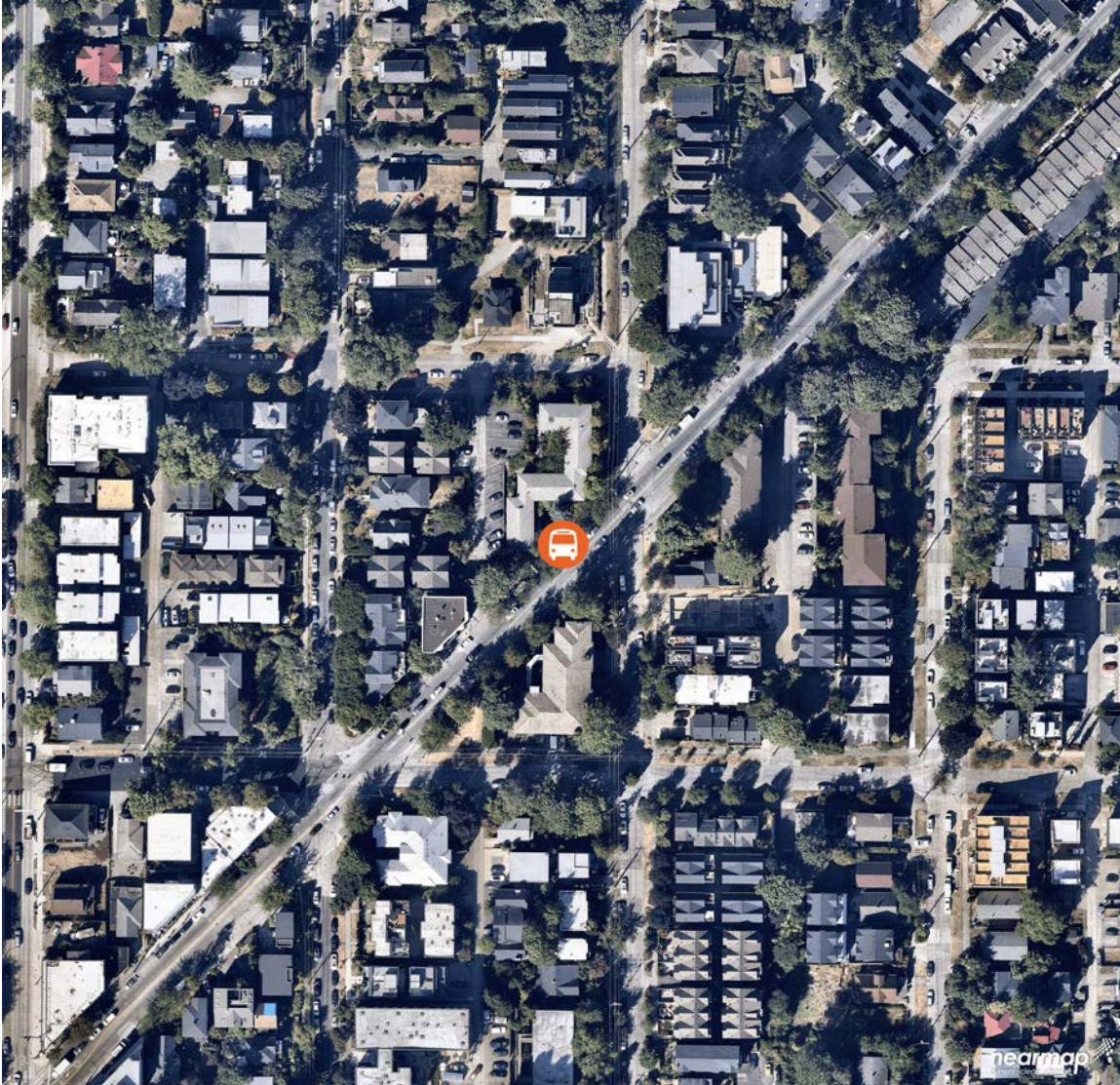
Source: Nearmap, photo taken 9/11/17.



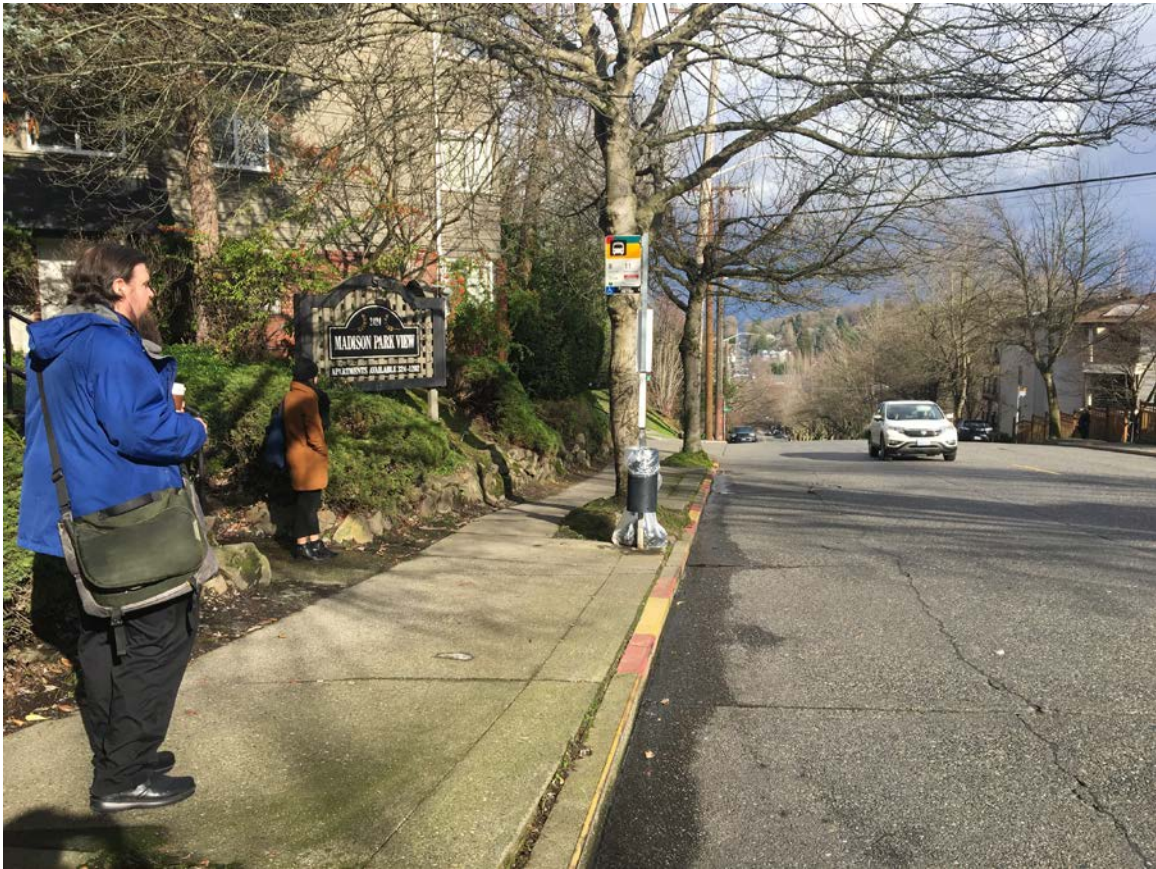
Source: NelsonNygaard, photo taken 1/30/18.

### Stop C – Madison Street

Stop C is a far side stop located on the northwest side of E Madison Street at E 25<sup>th</sup> Avenue. The stop does not include a bus shelter but does have a detailed KCM flag. The sidewalk is narrow (approximately 7' wide) and inclined. Surrounding land use is primarily single- and multi-family residential.



Source: Nearmap, photo taken 9/11/17.



Source: NelsonNygaard, photo taken 1/30/18.

### Stop D - Laurelhurst

Stop D is a mid-block stop located on Sand Point Way, just northeast of its intersection with 40<sup>th</sup> Avenue NE. The stop includes a covered bus shelter and detailed KCM flag. There is also a raised, two-way protected bikeway adjacent to the very wide (approximately 29' at the bus shelter) mixing zone with pedestrian access to the nearby SC Hospital. The area is well-lit and surrounding land use is primarily institutional (SC Hospital), surface parking, and single- and multi-family residential.



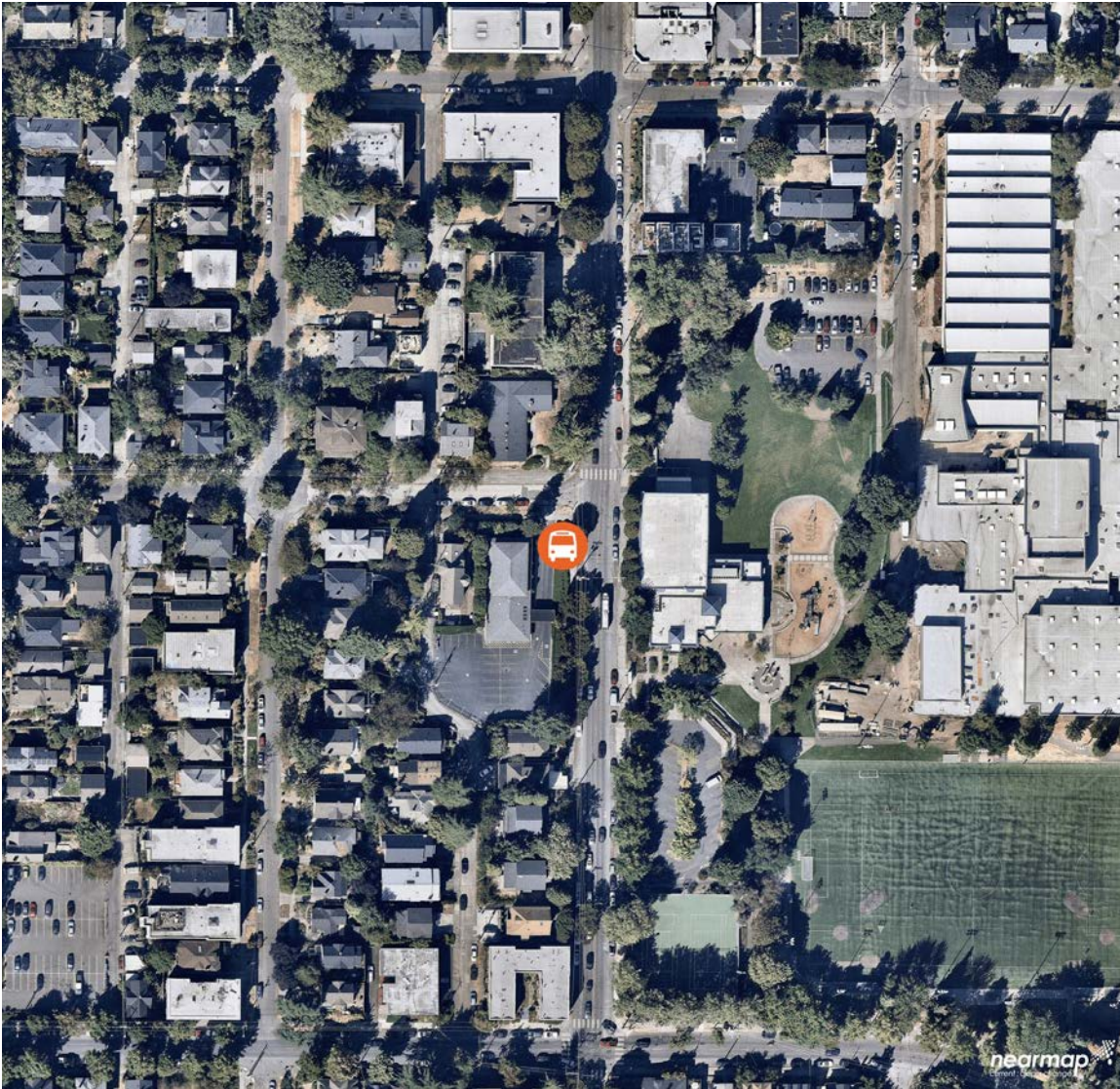
Source: Nearmap, photo taken 9/11/17.



Source: Nelson\Nygaard, photo taken 1/30/18.

### Stop F – Miller Park

Stop F is a far side stop located at the southwest corner of 19<sup>th</sup> Avenue E and E Harrison Street. The stop includes a covered bus shelter and a detailed KCM flag. The sidewalk (approximately 8' wide) is somewhat obstructed at the bus stop by a near-mature street tree, telephone pole, and the bus stop infrastructure. Nearby land use is institutional, park, and single- and multi-family residential. A middle school, community center, church, and public park are all located close to the stop.



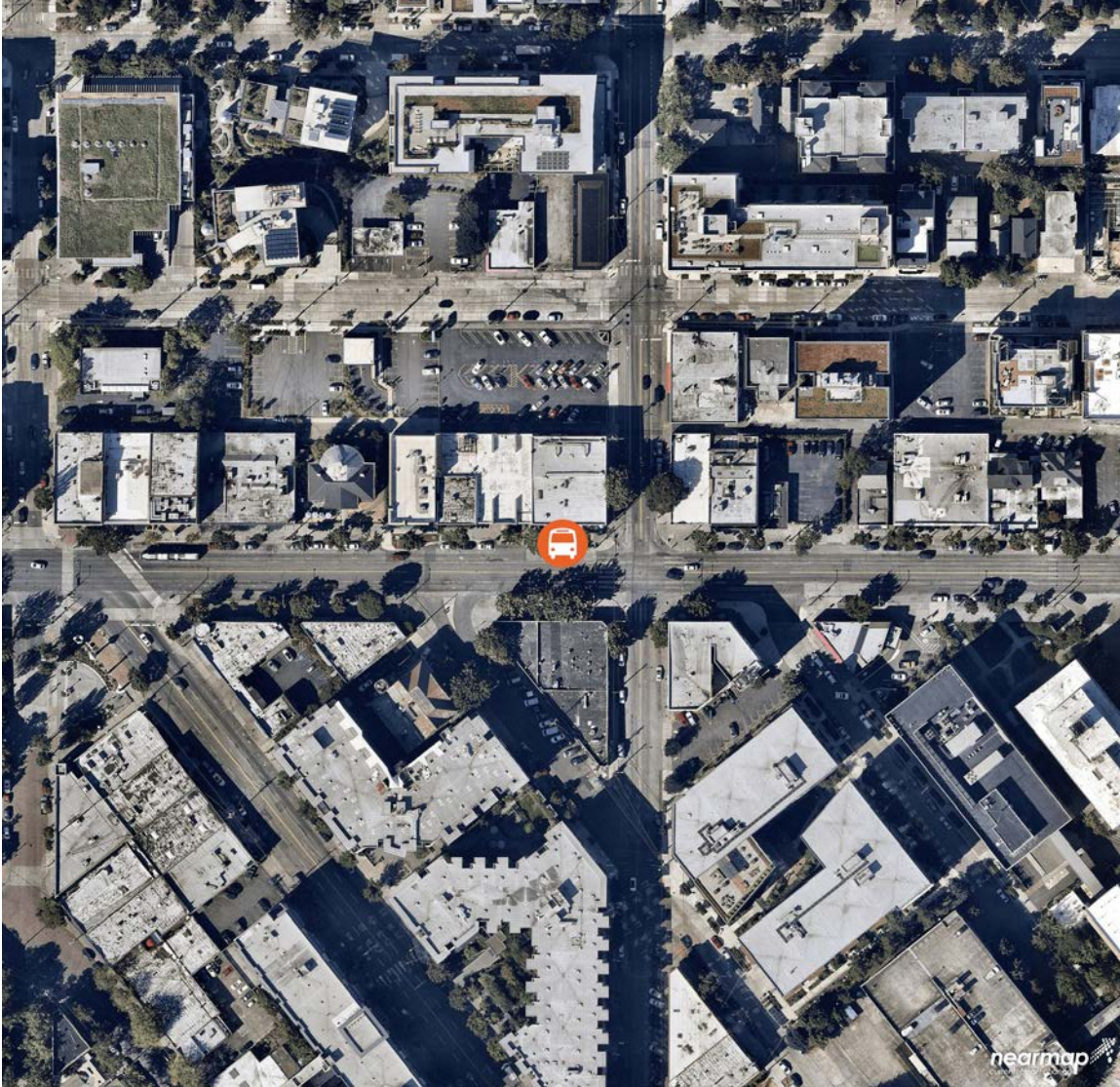
Source: Nearmap, photo taken 9/11/17.



Source: Nelson\Nygaard, photo taken 1/30/18.

### Stop G – Old Ballard

Stop G is a far side stop located at the northwest corner of NW Market Street and 20<sup>th</sup> Avenue NW. The stop does not include a covered shelter but does have a detailed KCM flag. Pedestrian infrastructure is otherwise robust, as there is street furniture, waste receptacles, street trees, and an approximately 24'-wide sidewalk at the stop. Land use surrounding the stop is primarily commercial, with medium-density residential and light industry also located nearby.



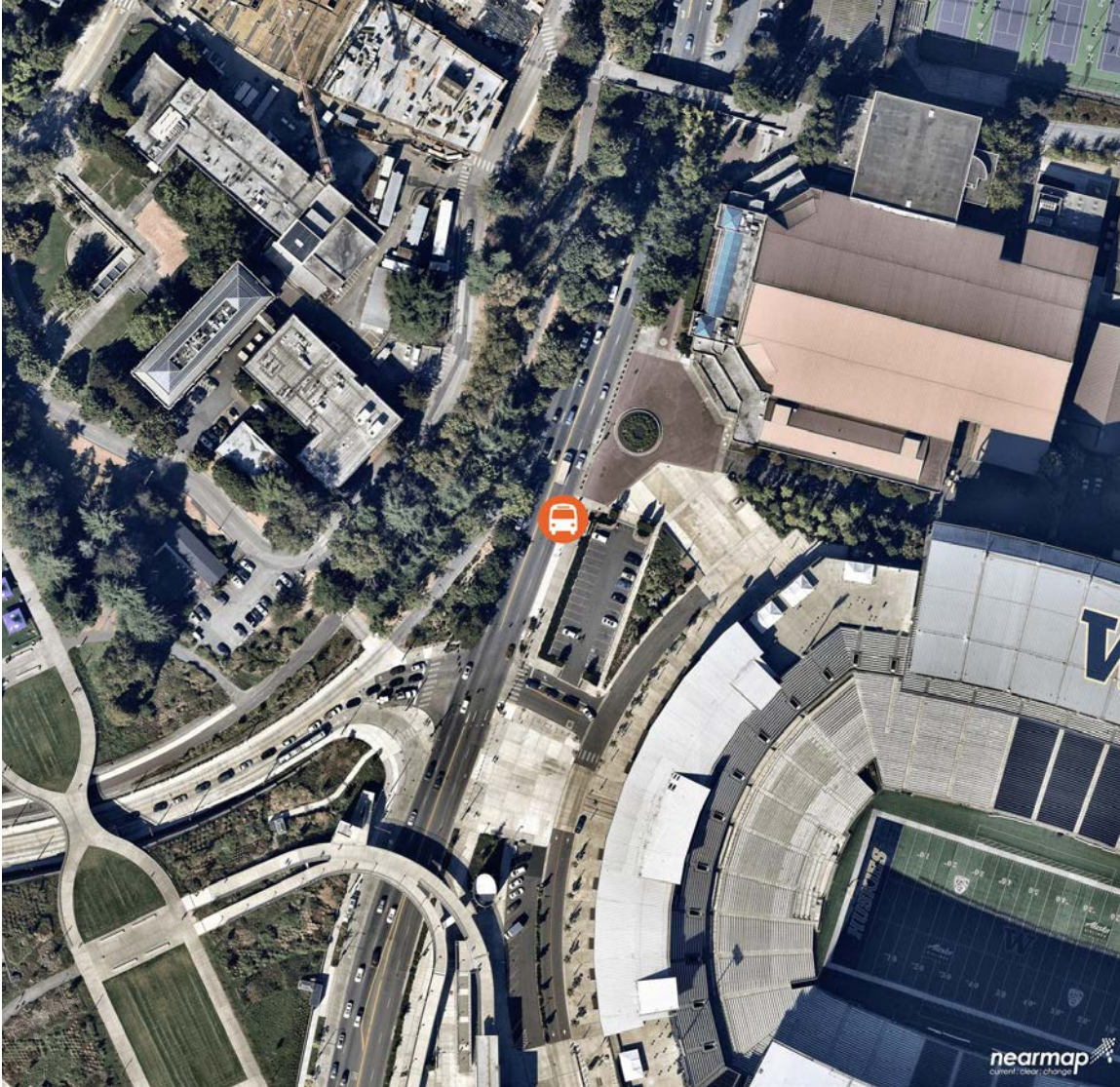
Source: Nearmap, photo taken 9/11/17.



Source: Nelson\Nygaard, photo taken 1/30/18.

### Stop H – UW

Stop H is an in-lane far side stop on the east side of Montlake Boulevard NE at NE Pacific Place. The stop includes a covered bus shelter, detailed KCM flag, and robust pedestrian infrastructure, including bike racks, approximately 12'-wide sidewalks, street plantings, and pedestrian access to a Link light rail station. Nearby land use is entirely institutional, as the stop is located by the University of Washington and the UW Medical Center.



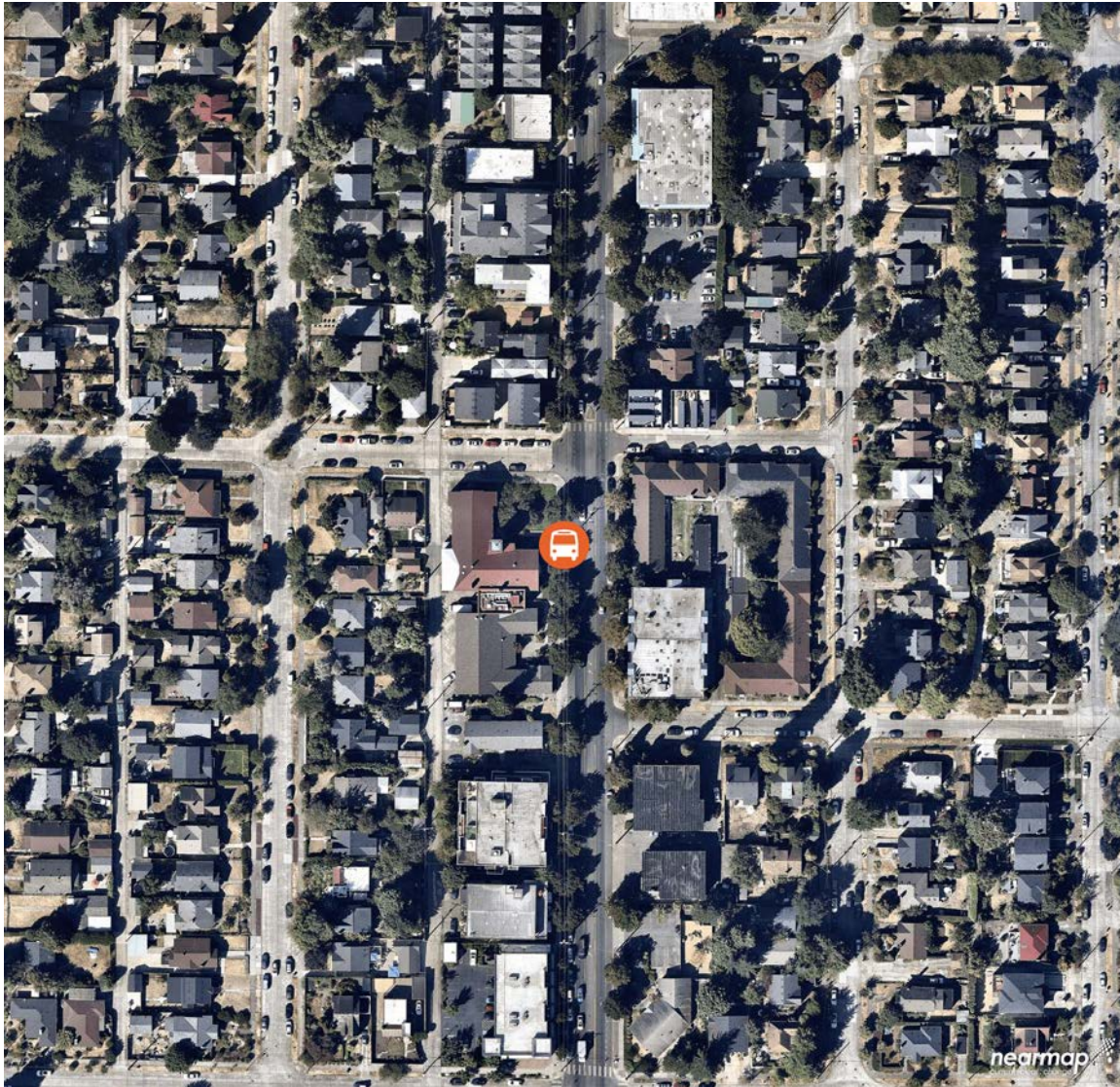
Source: Nearmap, photo taken 9/11/17.



Source: Nelson\Nygaard, photo taken 9/25/17.

### Stop J – West Seattle

Stop J is a far side stop located at the southwest corner of California Avenue SW and SW Spokane Street. The stop includes a covered bus shelter and a detailed KCM flag. Pedestrian infrastructure includes street trees and ample sidewalk space (approximate 10' width) near the stop. Surrounding land uses are primarily single-family residential with some commercial on California Avenue. The stop is located directly in front of a church.



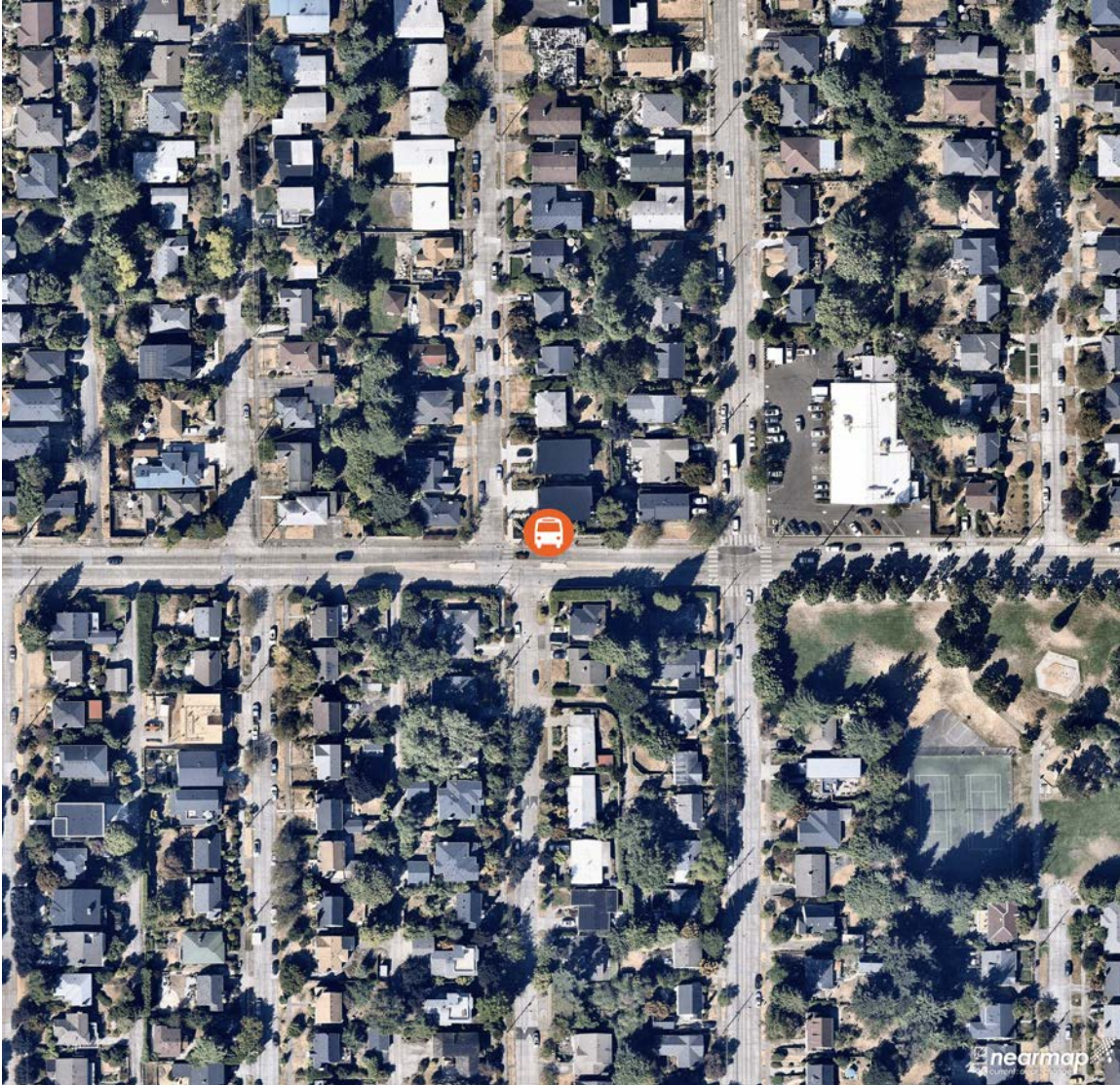
Source: Nearmap, photo taken 9/11/17.



Source: NelsonNygaard, photo taken 1/30/18.

### Stop K – Bryant/Hawthorne Hills

Stop K is a nearside stop located at the corner of NE 65<sup>th</sup> Street and 39<sup>th</sup> Avenue NE. The stop includes a covered bus shelter and a detailed KCM flag. The sidewalks are narrow (approximately 4-½' wide) in this area. Surrounding land use is primarily single-family residential, although one supermarket and a park are within one block.



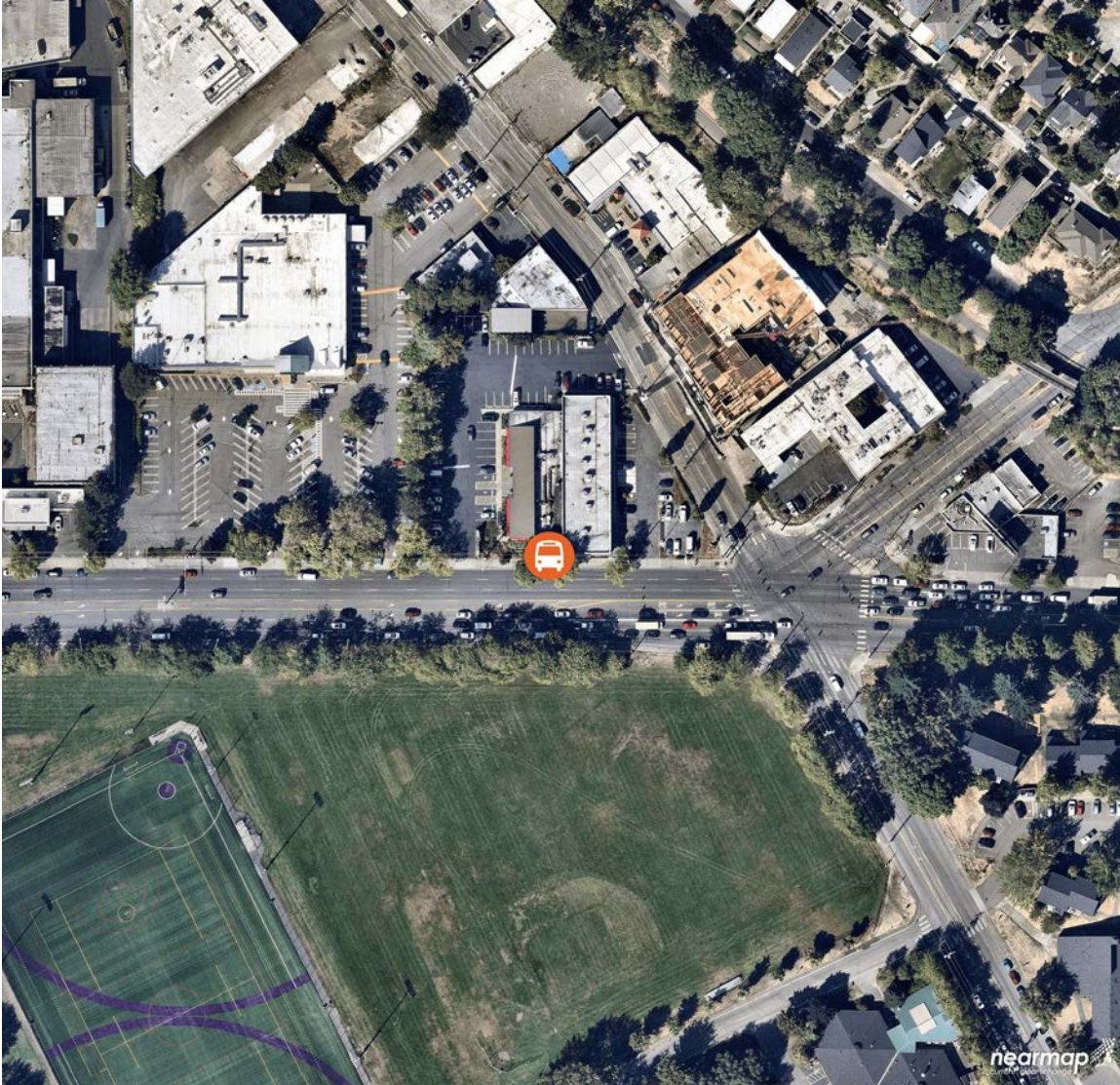
Source: Nearmap, photo taken 9/11/17.



Source: Nelson\Nygaard, photo taken 1/30/18.

### Stop L – U Village Westbound

Stop L is an in-lane far side stop located at the northwest corner of NE 45<sup>th</sup> Street and Union Bay Place NE. The stop includes a covered bus shelter and a detailed KCM stop flag, as well as street trees and an approximately 10'-wide sidewalk. Nearby land use is primarily strip-mall type commercial, institutional (UW), and single- and multi-family residential.



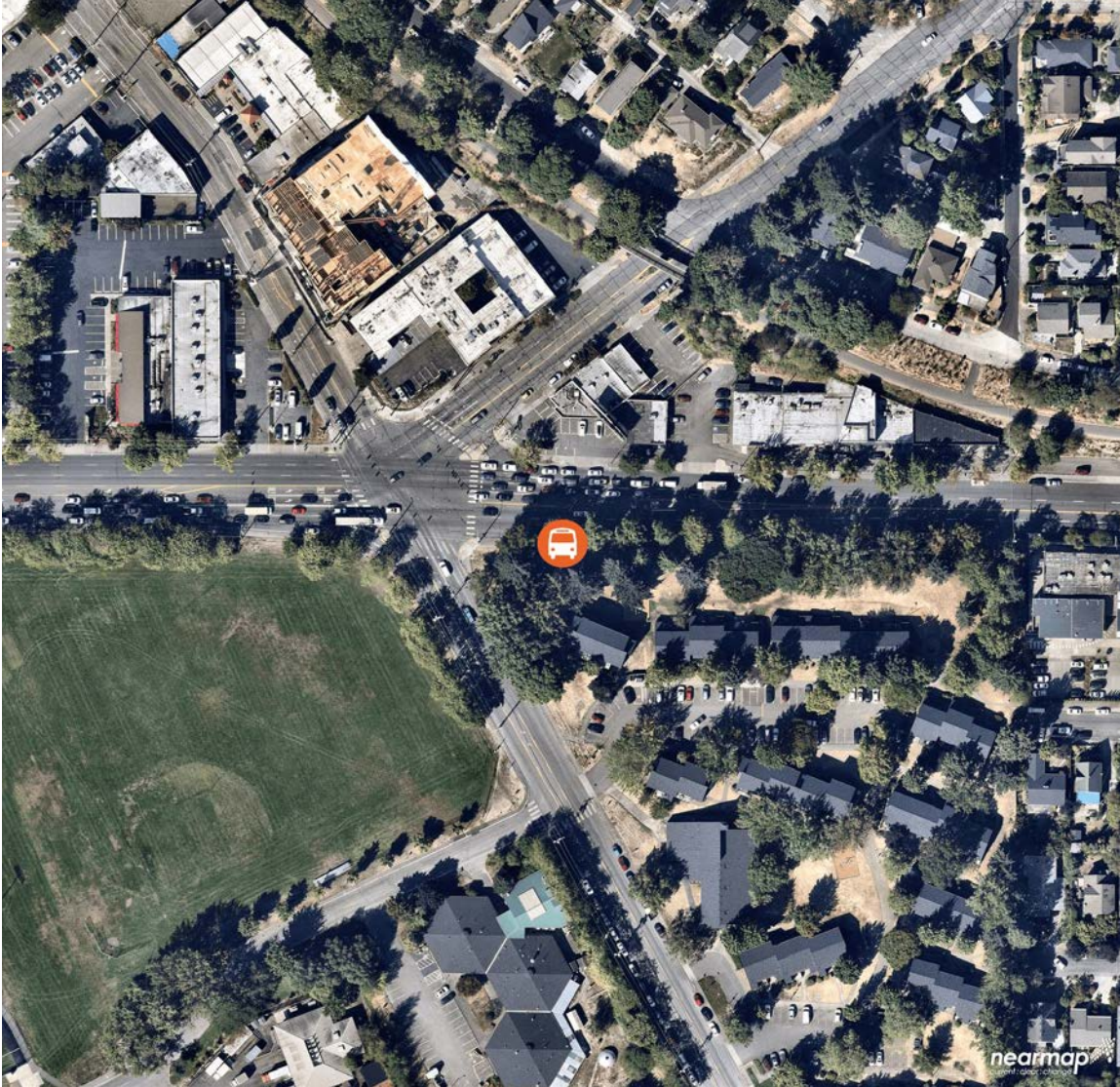
Source: Nearmap, photo taken 9/11/17.



Source: Nelson\Nygaard, photo taken 1/30/18.

### Stop M – U Village Eastbound

Stop M is a far side stop located at the southeast corner of NE 45<sup>th</sup> Street and Mary Gates Memorial Drive NE. The stop includes a detailed KCM flag but no bus shelter. The pedestrian infrastructure includes approximately 10'-wide sidewalks, street trees, and a slight incline. Surrounding land use is primarily strip-mall type commercial, institutional (UW), and single- and multi-family residential.



Source: Nearmap, photo taken 9/11/17.



Source: Nelson\Nygaard, photo taken 1/30/18.

Appendix A2 Sample Data Collection Sheet

| Data Collection Sheet AM<br>Stop Letter A   Stop #2180:<br>Queen Anne Ave. N & W Harrison St. |                               |         |      |     |           |                         |   | Date: _____<br>Start Time: _____<br>Your Name: _____ |                         |                        |           |            |                                   |
|---|-------------------------------|---------|------|-----|-----------|-------------------------|---|--|-------------------------|------------------------|-----------|------------|-----------------------------------|
| #   | Route # or<br>Company<br>Name | Arrival | OFFS | ONs | Departure | Dwell<br>time<br>(sec.) | Conflict?<br>If so how<br>many<br>seconds<br>delayed? | Which<br>Route<br>was<br>delayed?                    | Wheelchair<br>Boarding? | Blocked?               |           |            |                                   |
|   |                               |         |      |     |           |                         |   |  |                         | General<br>Travel Lane | Bike Lane | Cross-walk | Right- or<br>left-turning<br>cars |
| 1   |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 2   |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 3   |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 4   |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 5   |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 6   |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 7   |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 8   |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 9   |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 10  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 11  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 12  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 13  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 14  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 15  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 16  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 17  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 18  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 19  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 20  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 21  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 22  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |
| 23  |                               |         |      |     |           |                         |   |  |                         |                        |           |            |                                   |

When your shift is completed, wait at stop for Joe to check you out and gather materials.

## Appendix A3 Operator Survey

## EMPLOYER SHARED TRANSIT STOP PILOT: BRIEF SURVEY FOR OPERATORS

The City of Seattle and King County Metro are collaborating with Seattle Children's Hospital and Microsoft to conduct a six-month pilot that allows these participating organizations' employer-provided shuttles to temporarily share a select set of public transit stops with King County Metro buses.<sup>24</sup> This pilot was carefully developed over the last two years and tests the feasibility of allowing employer-provided shuttles to use public transit stops, while minimizing impacts to public transit operations. A list of routes serving shared stops is in Figure.

**As part of the pilot, the project team is seeking input and experiences from operators who have driven routes that include Shared Stops. Please distribute the questions below to operators and return responses by November 3, 2017.**

1. While operating routes serving Shared Stops, did you encounter any problems related to the Shared Stop Pilot? If so, what were they?
2. Were there any scheduling challenges related to operating routes with Shared Stops? If so, what were they?
3. Were there any operational challenges related to serving Shared Stops? If so, what were they?

Figure 1 List of Shared Pilot Stops

| KCM Zone ID | Stop Name              | Stop Address                             | KCM Routes              | Shared Service   |
|-------------|------------------------|--|-------------------------|--|
| 2180        | Queen Anne             | Queen Anne Ave. N & W Harrison St.       | 1, 2, 8, 13, 32         | Microsoft Connector (Belltown-Queen Anne-Redmond, Belltown-Queen Anne-Bellevue)        |
| 12340       | Madison Street         | E Madison St. & E 25th Ave.              | 8, 11                   | Microsoft Connector (Leschi-Madrona-Madison Park)                                      |
| 10562       | Laurelhurst            | Sand Point Way & 40th Ave. NE            | 75                      | Seattle Children's Hospital-Gold Line  |
| 13250       | Miller Park            | 19th Ave. E & E Harrison St.             | 12                      | Microsoft Connector (Capitol Hill Direct, Capitol Hill-Bellevue, Capitol Hill-Redmond) |
| 29720       | Old Ballard            | NW Market St. & 20th Ave. NW             | 44                      | Microsoft Connector (Ballard-Whittier Heights)   |
| 25765       | UW                     | Montlake Blvd. NE & NE Pacific Pl.       | 65, 78, 982             | Seattle Children's Hospital-Gold Line  |
| 31970       | West Seattle           | California Ave. SW & SW Spokane St.      | 50, 55, 128             | Microsoft Connector (West Seattle)   |
| 37920       | Bryant/Hawthorne Hills | NE 65th St. & 39th Ave. NE               | 62, 71, 76              | Microsoft Connector (Laurelhurst-Wedgewood)  |
| 25200       | U Village Westbound    | NE 45th St. & Union Bay Pl. NE           | 31, 32, 67, 75, 78, 995 | Seattle Children's Hospital-Green Line   |
| 29920       | U Village Eastbound    | NE 45th St. & Mary Gates Memorial Dr. NE | 65, 75                  | Seattle Children's Hospital-Green Line   |

<sup>24</sup> <http://www.seattle.gov/transportation/SharedTransitStopPilot.htm>

## Appendix A4 Public Comment

| Date      | Email   |
|-----------|---|
| August 21 | <p>Sent: Monday, August 21, 2017 9:46 PM<br/> To: DOT_SharedStopPilot &lt;SharedStopPilot@seattle.gov&gt;<br/> Subject: Microsoft Connector Buses</p> <p>I would like to share with you my experience with the pilot project that allowed Microsoft shuttles to share Capitol Hill bus stops. Overall it's been a terrible experience. My house is on 19th Ave E, right across from Steven's Elementary school and the end stop for bus #12. It's a quiet residential neighborhood and we never had issues with engine noise from our bus # 12 until Microsoft shuttles began parking right in front of our house and in front of the elementary school. The problem is that they don't shut off their engines. These huge diesel buses sit right in front of schools and houses with very loud and dirty engines running sometimes for longer than 30 minutes! Several times I timed them and they sat with engine running for 45+ minutes. I called Microsoft Connector Dispatcher many times and they reassured me that bus drivers are instructed to shut of their engines after 2 minutes. Then problem is that drivers don't do that. I tried directly asking drivers to turn of their engines - they are polluting the air and the noise is just horrendous. Drivers were very rude and basically told me to get lost, they told me that they have computers on board that need to run, that they are either too cold or too hot to sit there with there engines off. Frankly, I really don't care about their comfort at this point, I am really getting tired of being woken up every morning at 7am by a giant bus idling in front of my house for 30 minutes. I don't think Seattle residents, kids and pets should be exposed to these polluters in our neighborhoods.</p> <p>I urge you to please address this issues as soon as possible and not to renew the permit for Microsoft shuttles to use city bus stops in our neighborhoods.</p> |
| July 25   | <p>Sent: Tuesday, July 25, 2017 9:03 AM<br/> To: DOT_SharedStopPilot &lt;SharedStopPilot@seattle.gov&gt;<br/> Subject: Feedback on the shared pilot study</p> <p>I want to provide some feedback on the Employer shared use bus stops. Please find a better space for these employer vehicles to stop without backing up traffic, or make these shuttles available to the general public. I have witnessed several traffic delays as buses and vans suddenly back up traffic through the intersections, especially at zones 37920 and 25765 in NE Seattle.</p> <p>Please find a better location for these employer vehicles to stop without backing up traffic, or make these shuttles available to the general public. The bus zones are public spaces, but are meant for bus stops, not for drop off/pick up zones for either employer vans or the general public. These extra vehicles suddenly stopping are adding to the traffic volumes in these already crowded streets.</p>   |
| April 25  | <p>Sent: Tuesday, April 25, 2017 5:16 PM<br/> To: DOT_SharedStopPilot &lt;SharedStopPilot@seattle.gov&gt;<br/> Subject: Buss Stop #9978</p> <p>Hi,</p> <p>I was very excited when you let us know that we will be able to take the Children Hospital Vans, from my stop to Huskie Stadium, that saves me lots of time, since I will not be going through the UW campus. The problem with waiting for the Van is that there is no schedule, so I have no idea when the Van's come by, I waited for 45min and not a single van stop at the bus stop, it did not even pass the stop. So I ended up taking the bus and being late for work. It will be nice to have some idea when the vans would stop that way a better decision could be made, do I take Metro Bus or the Hospital Van.</p>   |
| April 24  | <p>Sent: Monday, April 24, 2017 11:23 AM<br/> To: DOT_SharedStopPilot &lt;SharedStopPilot@seattle.gov&gt;<br/> Subject: Employer Shared Transit Stop Pilot - comments</p> <p>Hi,</p> <p>A couple comments:</p>  |

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|          | <p>1. I am generally supportive of this program provided: a) it does not negatively impact public bus service or other existing public uses in any way, and b) that the permit fees are established based on public feedback and are much higher than what they have going in San Francisco, and c) that other private operators (including small ones) are able to get into the program so it isn't just for giant companies.</p> <p>2. If Seattle wants to be innovative with this program, I think a neat improvement would be to offer the private companies an incentive if they open their private transit vehicles (probably for a fee) to commuters who do not work for their company. Personally, I live very close to one of the stops proposed in the pilot, work for a small company on the Eastside near Microsoft, and have terrible transit options and haven't been able to find a Metro Vanpool with an open space, so I would be interested in this.</p> <p>I'm happy to chat further if you'd like.</p>  |
| April 22 | <p>Sent: Saturday, April 22, 2017 8:24 AM<br/> To: DOT_SharedStopPilot &lt;SharedStopPilot@seattle.gov&gt;<br/> Subject: Lovely</p> <p>I look forward to being able to use the shuttles!</p>  |
| April 21 | <p>Sent: Friday, April 21, 2017 9:55 PM<br/> To: DOT_SharedStopPilot &lt;SharedStopPilot@seattle.gov&gt;<br/> Subject: Stop this pilot program</p> <p>Do you have any idea what happened when this was tried in San Francisco? Or are you just ignoring the fact that near-riots broke out? SF's cooperation with private busing schemes not only empowered the wealthiest companies in the world to avoid contributing to a functional public transit network (the current one sucks), but also to enable their affluent employees to live in the city and price out black, Chicano, gay and working class communities from the neighborhoods they built. You propose to do the same thing in Seattle. In a city of bad transit decisions, this is one of the worst.</p>   |
| April 21 | <p>Sent: Friday, April 21, 2017 4:58 PM<br/> To: DOT_SharedStopPilot &lt;SharedStopPilot@seattle.gov&gt;<br/> Subject: Shared Stop Pilot Program</p> <p>Greetings,</p> <p>I read with some concern about the Shared Stop program Seattle is initiating at certain bus stops in the city. As a former resident of San Francisco, I saw that city allow unfettered access to municipal bus stops for Google buses, and employee shuttles from various tech companies, much to the detriment of local residents who rely on public transit at their only means of transit (sometimes relying on transit in literal life and death situations). Those residents with limited mobility also suffered greatly at the hands of San Francisco's ill-conceived plan to allow public accommodations to be used by private entities at their whim.</p> <p>I am greatly concerned about the negative impact on those of us who are not part of the great "tech boom" that Seattle is currently undergoing. I hope we do not find ourselves inconvenienced, and even possibly left without the transit we rely on because city buses simply cannot reach their designated stops on time, or even reach them at all.</p> <p>I would like these concerns addressed. I sincerely hope the residents of Seattle will not be left to their own devices instead of being provided the public services that we, in one way or another, all pay for.</p> |
| April 21 | <p>Sent: Friday, April 21, 2017 4:48 PM<br/> To: DOT_SharedStopPilot &lt;SharedStopPilot@seattle.gov&gt;<br/> Subject: Shared bus stops w/ Microsoft</p> <p>What a great idea!</p>  |

