



DRAFT

March 19, 2009

TO: Ballard-Uptown RapidRide D-Line Advisory Panel
FM: Paul Roybal, D-Line Corridor Implementation Lead
RE: **RapidRide Preliminary Metro Staff Recommendation**

Later this year, the King County Executive is expected to submit a recommendation on the routing and proposed station and stop locations of the Ballard-Uptown RapidRide D-Line to the King County Council. Metro Transit staff will prepare a recommendation to the Executive that will be considered along with your Advisory Panel recommendation in a report to the Council.

The main points of the preliminary staff recommendation are:

- Consistent with the Transit Now ordinance of September 2006, the RapidRide D-Line will connect Downtown Seattle and the Ballard Crown Hill neighborhood via the Uptown (Lower Queen Anne) neighborhood.
- Through downtown Seattle, the D-Line will operate via 3rd Avenue.
- Toward Ballard, the D-Line will operate northbound on 1st Avenue N and southbound on Queen Anne Avenue N, and through Uptown on Mercer Street and W Mercer Place in both directions.
- Between Uptown and Crown Hill, the D-Line will operate via Elliott Avenue W, 15th Avenue W, and 15th Avenue NW.
- The D-Line will extend to NW 100th Street via 15th Avenue NW, with a preferred terminus in the vicinity of NW 100th Place and 7th Avenue NW.
- Metro accepts the City's proposed speed and reliability improvements along the corridor, dependent of additional traffic analyses that will be presented to Metro staff prior to our final recommendation.
- Stations and other RapidRide stops will be implemented as described in the public outreach brochure. Additional stops north of NW 85th Street are proposed on 15th Avenue NW at NW 90th Street, NW 95th Street, and NW 100th Street; on NW 100th Street in the vicinity of 11th Avenue NW; and a terminal station stop at NW 100th Place.

A more detailed discussion of the recommendations follows.



DRAFT

Routing through Downtown via 3rd Avenue:

The RapidRide D-Line will travel between Pioneer Square and 3rd Avenue via S Main Street (eastbound) and S Washington Street (westbound) with stops near 1st Avenue S, and through the downtown core on 3rd Avenue. Stop locations through downtown will be based on customer and operational considerations, bus stop capacity through the downtown core, and speed of travel, and will be consistent for all RapidRide lines that will travel through downtown Seattle. The D-Line will serve approximately six pairs of stops on 3rd Avenue between Yesler Way and Denny Way. The evaluation of bus stop alternatives through downtown Seattle are described in the King County staff report *RapidRide 3rd Avenue Bus Stop Analysis*, dated March 2009.

Between 3rd Avenue and Uptown, the D-Line traveling toward Ballard is proposed to operate via northbound 3rd Avenue, westbound Broad Street, and northbound 1st Avenue. Toward downtown the D-Line will operate via southbound Queen Avenue North, eastbound Denny Way, and southbound 3rd Avenue.

A proposal to operate the D-Line in the westbound direction Denny Way between 3rd Avenue and Uptown was considered and deemed infeasible. This routing would have required a new traffic signal at 3rd Avenue and Denny Way to allow buses to make the left turn from northbound 3rd Avenue to westbound Denny Way. The proposed signal was reviewed by the Seattle Department of Transportation (SDOT) and determined to result in additional delay to general purpose traffic traveling along Denny Way and traffic safety issues, both due to the proximity of adjacent signals.

Routing through Uptown:

Toward Ballard, the D-Line will operate northbound on 1st Avenue N and southbound on Queen Anne Avenue N, and through Uptown on Mercer Street and W Mercer Place in both directions.

To evaluate the range of speed and reliability improvements that might be implemented through the Uptown area, three alternative alignments were identified: Mercer Street to 1st Avenue N (with two-way operations on 1st Avenue N using a proposed southbound transit-only contraflow lane), Elliott Avenue W to Harrison Street/1st Avenue N (with two-way operations), and Elliott Avenue W to Western Avenue/Denny Way. Based on initial technical analyses of the levels of congestion and travel times for transit vehicles, and through the recommendation of King County and SDOT staff, a fourth (“hybrid”) alternative was developed. The hybrid was based on the Mercer Street alignment, but would use the existing one-way couplet consisting of northbound 1st Avenue N and southbound Queen Anne Avenue N.

The hybrid alignment was shown to best accomplish the objectives of providing the shortest travel times, lowest intersection delays, greatest level of transit service directly to the Uptown neighborhood, and best connections for trips between Ballard, Uptown, Upper Queen Anne and downtown Seattle. Results of this analysis are described in the technical memorandum *Ballard/Uptown RapidRide Corridor Alternatives Analysis*, prepared for King County by Parsons Brinckerhoff, dated December 2008.



DRAFT

Routing through Interbay:

From Uptown to the Ballard Bridge, the D-Line will follow the routing of existing transit service through Interbay, via Elliott Avenue W and 15th Avenue W. This is the only service path that was considered for this portion of the route.

The D-Line will utilize existing peak-period, peak-direction business access and transit (BAT) lanes that were implemented in July 2008 by SDOT through the Denny/Wester/Elliott/15th Avenue W arterial repaving project. These BAT lanes were installed with the purpose of complementing future RapidRide service increases on the corridor.

Routing through Ballard via 15th Avenue NW:

The project examined two alternatives for routing through the Ballard portion of the D-Line north of the Ballard Bridge: (1) directly through Ballard via 15th Avenue NW; and (2) along Leary Avenue NW to NW Market Street, then along 24th Avenue NW, and across NW 85th Street to 15th Avenue NW.

The 15th Avenue NW alternative would replace existing routes 15 and 15 Express. It would be faster than the 24th Avenue alternative for riders traveling to or from Crown Hill. Routing for this alternative would use a stop pattern that, for the most part, exists today, including station stops at three transfer points (NW Leary Way, NW Market Street, and NW 85th Streets), a fourth station at NW 65th Street serving Ballard High School, and four other RapidRide stops.

The City of Seattle designated 15th Avenue NW as a transit priority corridor, and SDOT is currently designing traffic signal and roadway improvement to enhance the speed and reliability of buses using this street. The D-Line would take advantage of these changes under the 15th Avenue NW alternative.

The 24th Avenue NW alternative would replace existing routes 18 and 18 Express. It is estimated to take between two and four minutes longer than the 15th Avenue NW alternative (roughly 40 percent longer along this portion of the alignment). Its stop pattern would be similar to that proposed for the 15th Avenue NW alternative, with comparable transfer options; however, under the 24th Avenue NW alternative, the D-Line would serve only half the current number of stops on 24th Avenue NW.

Feedback received from 3,177 responses to questionnaires included in the public outreach materials that were mailed to nearly 60,000 project area addresses showed a strong preference for the 15th Avenue NW alternative, with 71 percent of respondents stating they liked the 15th Avenue NW alternative (compared to 43 percent who liked the 24th Avenue NW alternative). Support for this alternative was strong across all rider and demographic groups, including a majority of current 18 and 18 express riders who said they liked the alternative. Even among people who reside west of 20th Avenue NW, where support for the 24th Avenue NW alternative was strongest, more people said they liked the 15th Avenue NW alternative than the number who either said they had concerns about it or who disliked it. Survey findings are summarized in the *Ballard-Uptown RapidRide Service Survey Final Report*, prepared by Hebert Research, dated March 2009.



DRAFT

Support for the 15th Avenue NW alternative was also voiced by attendees at five public open house and information table events that were held in February 2009, and by participants in 11 project briefings that were held with community, business, and employer groups.

Staff recommends adoption of the 15th Avenue NW alternative.

Routing North of NW 85th Street to the Northern Terminus:

The existing route 15 (including the 15 express) currently serves the Blue Ridge neighborhood, north of NW 85th Street, with approximately 250 weekday boardings on this portion of the route, and terminates in a single-family residential neighborhood at 14th Avenue NW and NW 105th Street. Staff recommends the D-Line be extended to NW 100th Street to serve the Blue Ridge neighborhood.

Layover facilities for route 15 are currently spread across seven locations, that have had a history of concerns including inadequate capacity at any one location for the required number of coaches, and a variety of complaints from residents about the frequency, noise, speed of travel, and utilization of buses traveling through the residential neighborhood north of NW 100th Street. Two options for alternative on-street layover locations for the D-Line were considered: (1) adjacent to the former Crown Hill Elementary school at 14th Avenue NW and NW 95th Street, and (2) in the vicinity of the shopping center at NW 100th Place and 7th Avenue NW. No off-street locations were considered because of lack of funding for such a facility.

The Crown Hill Elementary School, moved into surplus by the Seattle School District in 2007, was sold to Small Faces Daycare and the Seattle Parks Department in 2008. In addition to the daycare, the building remains actively used by a variety community groups. The area surrounding the school is primarily a single-family residential neighborhood. The concept of establishing on-street layover adjacent to the school was discussed with the Crown Hill Business Association and was considered by the group to be incompatible with proposed future uses of the site, and lacking in available on-street parking. Site visits by staff confirmed that on-street parking adjacent to the property is largely occupied during daytime hours, and establishing layover near the school would have negative impacts to surrounding homes.

Streets in the vicinity of NW 100th Place and 7th Avenue NW, adjacent to a large shopping center parking lot, provide the best opportunity in the project area for staging up to three RapidRide coaches. This location would have minimum impacts on adjacent residences and businesses, and the shopping center would provide good facilities for operators. Although this option would result in additional operating costs to reach the layover, it would have the advantage of terminating the D-Line at a neighborhood shopping destination and serving a dense and rapidly growing residential area in the vicinity of Holman Road NW and 3rd Avenue NW. The level of capital improvements that might be required at this location is within the current RapidRide budget. This option also received community support during the public outreach process. Exact placement of the terminal facilities requires further operational study, minor changes to the street classification along the terminal loop, and approval of the curb use by the SDOT.



DRAFT

SDOT Speed and Reliability Improvements:

Proposed traffic signal and roadway improvements along the 15th Avenue NW alternative alignment include traffic signal priority or other enhanced signal operations at 22 locations, bus bulbs at 13 locations, and queue jumps at two locations. The roadway improvements also include BAT lanes on Elliott Avenue W and 15th Avenue W that were installed in 2008. These proposed improvements are estimated to result in a 3-4 minute travel time savings, an improvement of 10 to 16 percent (depending on time of day and direction) over the March 2007 baseline travel time between NW 85th Street and Denny Way. These improvements are described in the technical memorandum *Ballard Corridor Traffic Analysis*, prepared for the City of Seattle by CH2M Hill, dated March 2009.

Additional travel time savings would result from stop consolidation along the corridor and lower dwell times due to faster boarding. With these savings, total travel time between NW 85th Street and Denny Way is expected to improve by 5 minutes southbound in the morning peak period, and 6 minutes northbound in the afternoon peak period compared to the baseline travel time on the existing route 15.

Staff recommends SDOT implement traffic signal and roadway improvements for the corridor as proposed, dependent on the results of additional analyses of the impacts of these improvements on general purpose traffic flow that will be provided by the City. As the design of these speed and reliability improvements is finalized, any refinements to the design should be made with the goal of decreasing transit travel time.

Proposed stations and stops:

Feedback during the public outreach process strongly supported the proposed stop pattern for the D-Line; over nine-in-ten survey respondents (93 percent) said they either liked or could accept the proposed number and location of stations and stops. This level of support was uniform across all rider groups. Staff recommends the stop spacing plan circulated for public review be accepted as proposed with the following modifications:

- To serve the upper Crown Hill and the Blue Ridge neighborhoods, stops will be added on 15th Avenue NW at NW 90th Street, NW 95th Street, and NW 100th Street, and one additional pair on NW 100th Street in the vicinity of 11th Avenue NW. These stops would be “enhanced” or “standard” RapidRide stops, depending on the number of boardings at each stop.
- One station stop will be added at the D-Line terminus at NW 100th Place.

Although support for the proposed stop pattern was somewhat lower among Uptown residents, staff recommends no changes from the stop pattern in the Uptown area circulated for public review. A few comments were received about adding a pair of stops on W Mercer Street at 5th Avenue W. However, staff recommends against adding these stops because of their proximity to the proposed stops at 3rd Avenue W (about 600 feet away).