City of Seattle
Edward B. Murray, Mayor

Department of Transportation
Scott Kubly, Director

Eastlake Community Council
117 E Louisa St. #1
Seattle, WA 98102-3278

January 28, 2016

RE: Roosevelt to Downtown High Capacity Transit Study

The following is in response to an Eastlake Community Council (ECC) letter dated January 7 and received via email. The project team addressed several of the comments and questions included in the letter during an ECC meeting held on January 12, 2016.

The project team would like to thank the ECC for providing a detailed letter that presents important issues to consider during the development of this project. Please find responses below in red.

The ECC proposed cross-sections that eliminate parking in favor of protected bicycle lanes is very helpful for deciding the appropriate bicycle treatment in this area of the corridor. We believe these questions and our responses will continue the important dialogue regarding roadway design in this area of the corridor.

Value of the Center Turn Lane
Both of SDOT's options for Targeted Investment involve the removal of the center turn lane and median planters on Eastlake. SDOT instituted this center turn lane because of serious problems from its absence. The center turn lane provides a number of important functions, as follows:

1. **Improves traffic flow**

a. The Center turn lane removes left-turning vehicles from the traffic lanes. Vehicles

Turning left would otherwise block thru-traffic, especially when needing to wait for a break in oncoming traffic, oncoming cyclists, or pedestrians crossing either Eastlake Avenue or the side street.

Removing left-turning vehicles from traffic lanes does prevent some backup in through lanes. What is unknown is the level of benefit or impact from the left-turning vehicles using the existing two-way left-turn lanes (TWLTL). There are no traffic counts of mid-block left-turns. Additional data collection will be needed for further analysis.

Seattle Municipal Tower
700 5th Avenue
Suite 3800
PO Box 34996
Seattle, Washington 98124-4996

Tel (206) 684-ROAD / (206) 684-5000
Fax: (206) 684-5180
Hearing Impaired use the Washington Relay Service (7-1-1)
www.seattle.gov/transportation

b. In segments where it is not needed for turns, the center turn lane is used extensively as a loading zone for delivery vehicles and less frequently for emergency parking. It is unclear from the information presented thus far how the proposed Targeted Investment options would accommodate loading zones and emergency parking. Vehicles that are loading or are there for emergencies are more likely to block traffic lanes without the center turn lane.

SDOT does not promote the use of TWLTLs for vehicle parking or commercial vehicle loading or unloading. Emergency vehicles are not bound by the same traffic rules as the public and are allowed to occupy any traffic lanes – parking, travel, turn, or otherwise, as they deem fit and safe. Furthermore, general emergency vehicle practices encourage parking as close to the sidewalk as possible.

c. The center turn lanes allow motor vehicles and bicycles, especially those turning left onto Eastlake from side streets, to choose when to merge into the oncoming traffic, thus allowing the Eastlake Avenue traffic to move more freely and averting slowdowns. Without the center turn lane, traffic already on Eastlake Avenue must immediately slow down to accommodate them.

This is the correct use of a TWLTL from a side street onto the mainline. However, when turning from a side street onto a mainline outside of an intersection, the mainline has the right-of-way and is not required to slow down to allow left-turning vehicles to merge. Merging into the mainline is the responsibility of the left-turning vehicles, based on appropriate gaps in traffic. The presence (or not) of a vehicle in the TWLTL should not affect mainline traffic lane operations

2. Improves safety for motorists, cyclists, and pedestrians

a. Lanes of traffic moving in opposite directions that have no appreciable buffer between them pose a well-known risk of head-on collision. It was in part to reduce this danger that SDOT introduced the center turn lane on Eastlake Avenue, providing a lane-wide buffer and in some places also a median island.

The risk of head-on collisions due to traffic operating in opposite direction without a buffer between lanes is theoretical but not a significant risk identified by the industry. Most urban roadways in the United States do not have a buffer between opposing traffic and are considered safe. Also, the TWLTL cannot act as a buffer when there is a vehicle in the TWLTL. When vehicles use the TWLTL this makes loading and unloading in this space unsafe.

b. The center turn lane also reduces the risk of back-end collisions that occur when a vehicle or bicycle slows in the traffic lane to turn left. Vehicles and bicycles that leave the traffic lane for the turn lane are less likely to be hit from behind.

Rear-end collisions are primarily caused by sudden deceleration of a lead car combined with following car driver distraction, tailgating, or poor weather

conditions. Gradual deceleration, typically associated with vehicles preparing to make a left-turn is no different from gradual deceleration of general traffic slowing down at a signalized intersection with a red light.

c. The center turn lane provides a refuge for pedestrians (especially seniors, the disabled, or others who cross slowly) and bicyclists halfway across the street; this refuge is doubly safe where the lane is occupied by a median island. Note that the proposed cycle track does nothing to ensure the safety of bicyclists as they cross Eastlake Avenue. Removing the center turn lane creates as dangerous a situation for bicyclists as it does for pedestrians.

Medians at designated crosswalks provide refuge for pedestrians crossing the street; TWLTLs do not. An immovable physical barrier at a designated crosswalk is required to provide a safe location in the middle of the street for pedestrians. TWLTLs are provided for vehicle use and present safety issues for all users when pedestrians cross them outside of a designated crosswalk and stop in the lane. This issue is compounded by the nature of the lane, which allows vehicles to operate in different directions making it difficult for pedestrians to determine how traffic is changing while crossing the street. Any design treatment should discourage crossing the roadway mid-block, outside of a designated crosswalk.

The project is considering design treatments that will improve pedestrian crossings through the introduction of new pedestrian crossing phases and geometric changes at signalized intersections, inclusion of pedestrian median refuges, and extensions of the sidewalk, as possible.

d. As mentioned above, the center turn lanes enhance traffic flow by accommodating motor vehicles and bicycles that are turning left onto Eastlake Avenue from side streets. This is also a major safety advantage, reducing the chances of side collisions and back-end collisions. Without the center turn lane, there is increased risk of traffic collisions from cars entering Eastlake Ave.

See response to comment 1.c.

3. Increases neighborhood access and quality of life

a. By facilitating left turns off Eastlake, the center turn lane provides an important means of access to Eastlake residences and businesses.

While TWLTLs do provide some access to and from Eastlake, there are other opportunities to access cross-streets and both sides of the mainline street. Left-, right-, and U-turn lanes at intersections along with roadways parallel to Eastlake provide opportunities to access residences and businesses.

b. Removing the landscaped median islands would reduce greenery and tree canopy in the neighborhood. This may also be a costly element of re-engineering the street.

Any existing landscaping removed due to the project will be replaced with useful trees in the same area, likely on the adjacent sidewalk. Removing medians is not technically difficult and does not result in a meaningful cost compared to other elements of the project.

c. The center turn lane provides loading vehicles a space (explained above) that can be important for businesses and residences alike.

See response to comment 1.b. This study considers parking allocation and utilization along this segment of the corridor. We will work to identify any deficiencies in loading zones and propose potential solutions.

4. Reflects significant prior neighborhood and SDOT planning

a. Both the *Eastlake Neighborhood Plan* (1998) and the *Eastlake Transportation Plan and Related Design Issues (1994)* identify the importance of the center turn lane and call for landscaped median islands. Both of these plans were achieved with significant neighborhood outreach and collaboration with SDOT. Neither is listed among the previous planning studies reviewed in Appendix A of the Existing Conditions Report.

The above-mentioned reports were reviewed but not documented in the existing conditions document. More recent reports, including the South Lake Union Height and Density Alternatives EIS, SDOT's Modal Plans, and on-going work on the Seattle Comprehensive plan were reviewed and summarized as they provided information on current conditions.

b. SDOT has long advocated center turn lanes and introduced them on Eastlake Avenue for many of the above reasons. We did not find any reference to these SDOT and consultant studies that led to this decision referenced in Appendix A of the Existing Conditions Report.

No decisions have been made. The roadway cross sections presented were potential options. They were developed after a review of the existing conditions data and in an effort to safely accommodate all modes and anticipated traffic volumes.

5. Significant left-turning traffic is identified in the Existing Conditions report's Appendix E.

a. During one hour in the AM Peak period, 82 identified left-turns were made by vehicles traveling northbound, and 249 left-turns were made by vehicles traveling southbound. The total: 331 left-turns per peak hour (Appendix E, Table 4) whose safety and flow for themselves as well as other vehicles, bicycles, and pedestrians are greatly facilitated by the center turn lane.

The project will provide left-turn lanes at all locations where left-turn demand meets thresholds for dedicated turn lanes. The analysis will consider both existing traffic levels and changes in traffic volumes and operations because of the project.

b. During one hour in the PM Peak period, 106 identified left-turns were made by vehicles traveling northbound, and 349 left-turns were made by vehicles traveling southbound. The total: 455 total left-turns per peak hour (Appendix E, Table 5) whose safety and flow for themselves as well as other vehicles, bicycles, and pedestrians are greatly facilitated by the center turn lane.

See previous response.

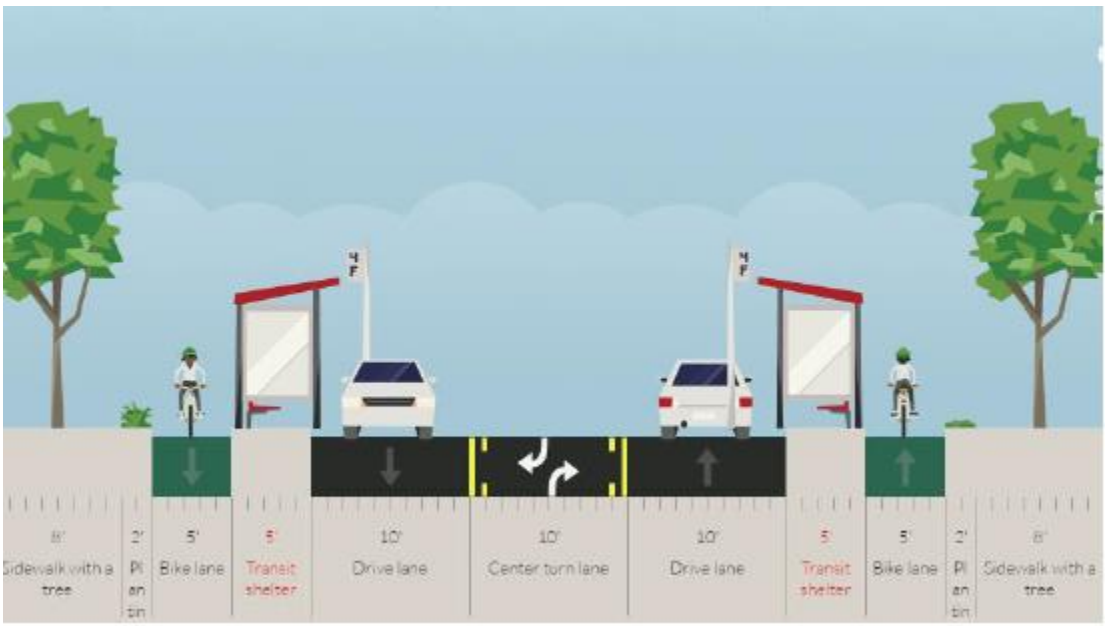
c. This analysis includes intersections at Garfield, Boston, Lynn, Louisa, Roanoke, and Hamlin streets. Thus it does not include the positive contributions of the center turn lane at Allison, Edgar, Blaine, Howe, Shelby and Newton streets. The analysis also does not include traffic making left turns into private parking lots, of which there are many on both sides of Eastlake Avenue that currently benefit for the center turn lane.

See previous response.

Request: In view of the above considerations, ECC requests that SDOT and its consultants analyze as a full public alternative an option that retains the current center turn lane and median islands. We are confident that there has been some discussion of such an option within your team, but given its many strengths, we think it important for this option be addressed publicly. Figures 1 and 2 below provide one potential cross-section.

We will review the Eastlake section of the corridor to determine if the center turn lane can be retained. We appreciate the ECC taking the time to propose a cross section for consideration. Below are comments on the ECC proposed cross-sections. We are currently analyzing an option incorporating a center turn lane.

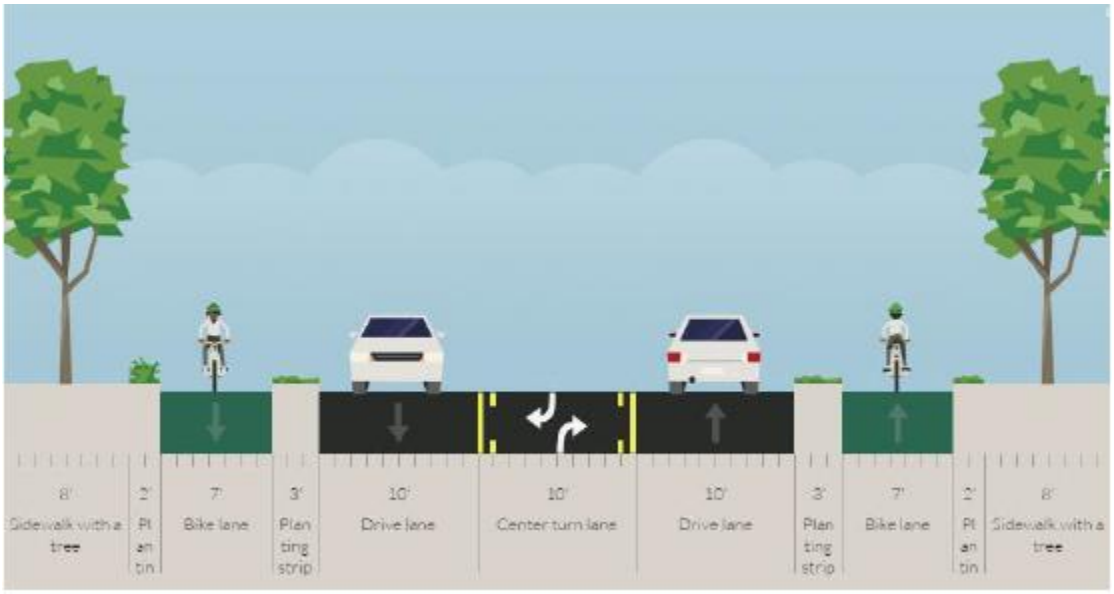
Figure 1: Potential cross-section at intersections with a bus stop



[Note: this cross-section envisions a long and narrow bus island and a bike lane that narrows at the intersection to slow bike traffic as it approaches interactions with other modes]

- Transit shelter zones needs to be wider than 5’ to meet ADA, SDOT, and Metro standards. Approximately 8’ is the minimum. Stop pairs would most likely be staggered and not directly across from each other to gain the required width.
- 10’ sidewalk is acceptable, but the specific location of sidewalk planters and sidewalk trees will be limited by curb setbacks and required 6’ clear zones

Figure 2: Potential cross-section for areas outside of intersections/bus stops



[Note: bike lanes are slightly widened to account for more traffic and differential speeds on the hill. Also, in places where a median island exists instead of the center turn lane, the median island would be kept.

- 10’ sidewalk is acceptable, but the specific location of sidewalk planters and sidewalk trees will be limited by curb setbacks and required 6’ clear zones
- The 3’ planting strips between the drive and bike lanes would most likely be replaced by bicycle bollards or other typical SDOT buffers.

SDOT staff appreciates the time and thought put into the questions and roadway cross sections developed by the ECC. The consultant team is in the process of analyzing turn movements and we are also looking at commercial vehicle loading in the corridor. Both of these issues will most likely require additional data collection efforts as we move forward. We appreciate your patience as we consider all input received from ECC as well as other residents and stakeholders along the corridor.

Sincerely,

Alison Townsend, AICP
Project Manager, Seattle Department of Transportation