April 23, 2007

Ms. Agnes Govern
Sound Transit
401 So. Jackson
Seattle, WA 98104

Ms. Grace Crunican
Director of DOT, City of Seattle
PO Box 34996
Seattle, WA 98124-4996

Mr. Goran Sparrman
Transportation Director, City of Bellevue
P.O. Box 90012
Bellevue, WA 98009

Mr. Rich Conrad
City of Mercer Island
9611 SE 36th St.
Mercer Island, WA 98040

Mr. Harold Taniguchi
Director of DOT, King County
201 S. Jackson Street
Seattle, WA 98101

Dear I-90 MOA Signatories:

The Washington State Department of Transportation recently revised the original Interstate 90 Access Plan dated September 29, 2006 to reflect statements made by the Governor’s Office and the WSDOT in correspondence dated December 22, 2006.

To that end, the revised Mercer Island Access Plan restates our intention to allow Mercer Island residents access to the high occupancy vehicle (HOV) lanes in the outer roadway of I-90 when the center roadway is converted to High Capacity Transit and until conversion to high occupancy toll (HOT) lanes or another tolling mechanism.

The revised Mercer Island Access Plan no longer calls for the creation of a separate traffic operations review committee since traffic operations and person throughput in the I-90 corridor will be assessed in the Sound Transit Environmental Impact Statement for East Link.

We appreciate your attentiveness to this matter and important transportation corridor.

Sincerely,

[Signature]

David L. Dye
Administrator
Urban Corridors Office
Revised Access Plan for Mercer Island
Under SSB 6241 Section 304(1)(b)

April 23, 2007

Background Understandings and Conditions

2007 Proposed Budget Proviso

During the 2007 Legislative Session, both the House and Senate proposed to include a proviso in the 2007-2009 Budget to revise the Mercer Island Access Plan “such that Mercer Island traffic will have access to the outer roadway high occupancy vehicle (HOV) lanes during the period of operation of such lanes following the removal of Mercer Island traffic from the center roadway and prior to the conversion of the outer roadway HOV lanes to high occupancy toll (HOT) lanes.”

2006 Adopted Budget Proviso

In March 2006, the State Legislature adopted a proviso respecting its appropriation of funds for the I-90 Two Way Transit and HOV project. The project is for WSDOT and Sound Transit to add HOV lanes to the I-90 outer roadway between Bellevue and Seattle and make HOV direct access improvements to the facility.\(^1\) The proposed first stage of project construction will improve westbound I-90 between Bellevue and Mercer Island by adding a westbound HOV lane from East Mercer Way to 80\(^{th}\) Avenue SE, building a westbound direct access exit ramp at 80\(^{th}\) Avenue SE, and modifying existing ramps at Bellevue Way for HOV operation.

The proviso contained in SSB 6241 Section 304(1)(b) states:

I-90/Seattle to Mercer Island – Two way transit/HOV. Expenditure of these funds on construction is contingent upon the development of an access plan that provides equitable and dependable access for I-90 Mercer Island exit and entry.

The proviso builds upon important features relating to the configuration and operation of the I-90 corridor that are contained in a 1976 Memorandum Agreement and an amendment entered into in 2004 to that Memorandum Agreement.\(^2\) The relevant portions of those two documents are set forth below:

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\(^1\) For more information on the project, see [http://www.wsdot.wa.gov/Projects/I90/TwoWayTransit/](http://www.wsdot.wa.gov/Projects/I90/TwoWayTransit/)

\(^2\) The 2006 proviso is also related to a somewhat similar proviso enacted in 2005 as Section 305(b)(1) of SSB 6091.
1976 Memorandum Agreement

The 1976 Memorandum Agreement was entered into among the cities of Seattle, Mercer Island and Bellevue and also with King County, Metro and the Washington State Highway Commission. The agreement was a crucial step in implementing the I-90 project. It specifically provided in Paragraph 1 (e) as follows on the subject of the configuration and operation of the forthcoming I-90 facility:

The parties agree that the transit lanes [the center roadway] shall operate initially in a two-way directional mode, at no less than 45 mph average speed, with the first priority to transit, the second to carpool, and the third to Mercer Island traffic. The subsequent mode of operation of the facility shall be based upon existing needs as determined by the Commission in consultation with the affected jurisdictions, pursuant to paragraph 14 of this agreement. That determination will consider efficient transit flow, equitable access for Mercer Island and Bellevue traffic and traffic-related impacts on Seattle. [Emphasis supplied].

2004 Amendment

The 2004 Amendment to the 1976 Memorandum of Agreement memorialized the parties’ intention that:

the ultimate configuration and operation of I-90 between Bellevue, Mercer Island and Seattle should be defined as High Capacity Transit in the center roadway and HOV lanes in the outer roadways; and further . . . that High Capacity Transit for this purpose is defined as a transit system operating in dedicated right-of-way such as light rail, monorail, or a substantially equivalent system;

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3 Following 1976, Metro’s independent existence was terminated in 1992 by its merger into King County. The state Highway Commission subsequently became the state Transportation Commission. In 2005, a reorganization of transportation functions made important changes in transportation governance. The question of whether the powers and responsibilities entered into by the Transportation Commission relating to the I-90 Memorandum Agreement now rest with the Transportation Commission or the state department of Transportation has not specifically been addressed for purposes of this access plan.

4 The agreement contained express acknowledgment that its parties had limited power to bind their successors. Accordingly, the agreement provided in Paragraph 14:

This agreement, therefore, sets forth the express intent of the existing governing bodies that the parties to this agreement understand that their respective governing bodies are limited in the degree to which they can bind their successors with respect to the exercise of governmental powers vested in those governing bodies by law. Accordingly, the Commission will take no action which would result in a major change in either the operation or the capacity of the I-90 facility without prior consultation with and involvement of the other parties to this agreement, with the intent that concurrence of the parties be a prerequisite to Commission action to the greatest extent possible under law.
The parties then agreed to the following principles regarding future development of the I-90 corridor between Seattle and Bellevue.

[HOV on the outer roadway (i.e., R8A)] with High Capacity Transit deployed in the center lanes is the ultimate configuration for I-90 in this segment;

The earliest possible conversion of center roadway to two-way High Capacity Transit operation based on outcome of studies and funding approvals;

To the extent of any loss of mobility to and from Mercer Island based on the outcome of studies, additional transit facilities and services such as additional bus service, parking available for Mercer Island residents, and other measures shall be identified and satisfactorily addressed by the Commission, in consultation with the affected jurisdictions pursuant to paragraph 14 of the Agreement, prior to the time the center roadway converts to High Capacity Transit.

September 8, 2005 Letter

After the 2004 Amendment to the 1976 Memorandum of Agreement, some of its parties (including Mercer Island) recommended to the State Transportation Secretary\(^5\) that direct access by vehicles from Mercer Island should be arranged and managed as follows:

In the near term, Mercer Island has suggested that a preferred measure to address mobility access for Mercer Island traffic under the terms of [Paragraph 7 of the 2004 Amendment] would be to provide access to the R-8A HOV lanes. Accordingly, consistent with the intent and terms of the MOA, as amended, and subject to the outcome of required studies, we support Mercer Island’s request to provide access for Mercer Island traffic as follows:

**Center Roadway.** Mercer Island traffic will remain in the center roadway as long as allowed under the MOA and Amendment.

**Outer Roadway.** Once removed from the center lanes, Mercer Island traffic will have access to the R-8A HOV lanes under the same conditions provided in the MOA for Mercer Island traffic access to the transit lanes. Such access shall be provided at no cost to Mercer Island traffic until such time as the State implements congestion based pricing on the I-90 roadway and only after complying with Section 14 of the MOA.

We understand that the WSDOT is conducting studies of the I-90 facility. We encourage you to include the parties to the MOA and Amendment in the study process. In addition to the WSDOT studies, Sound Transit will conduct project level environmental studies identify impacts and required mitigation for the projects.

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\(^5\) Under legislation approved in 2005, the Secretary of Transportation is now appointed directly by the Governor and heads a conventional executive branch cabinet agency.
If the studies support Mercer Island traffic being allowed in the R-8A HOV lanes, the Parties will propose and submit a Second Amendment to the MOA to their respective legislative or decision making bodies incorporating the provisions of this letter and relevant portions of the WSDOT studies.

These suggestions have been received by the Transportation Commission and the Department of Transportation, but neither of them is yet a party or a subscriber to the recommendations contained in the September 2005 letter.

**Background Understandings about Traffic Growth in the I-90 Corridor**

Questions about *equitable access* for I-90 users from Bellevue and Mercer Island as sought to be protected in the 1976 Memorandum of Agreement must also take account of developments and conditions in the I-90 corridor and travelled that are independent of changes in configuration and operation resulting from the forthcoming center lane use for High Capacity Transit.

The most important concern is the substantial expected growth of traffic in the corridor that will lead to more frequent and longer-lasting periods of congestion, deterioration of travel times and back-ups at times on I-90 itself and on its ramps and approaches.

These forthcoming conditions are the result of expected residential and job growth across the very large area constituting the I-90 travelshed. They affect two-way growth in peak period demand, since many commuters now travel to jobs east of Lake Washington from their homes in Seattle and other locations west of Lake Washington – originally labeled the “reverse commute.” Expected growth in truck movements of freight volumes on I-90 will also affect I-90 travel performance.

Initial understandings of these conditions have been provided in modeling and analysis performed by WSDOT and widely distributed. (A summary is attached to this paper as Attachment 1.)

In addition, the reconfiguration of the I-90 corridor for High Capacity Transit’s use of the center roadway will change the mix of capacity opportunity for private automobile use on I-90 inasmuch as peak-hour unidirectional flow of transit, carpools and Mercer Island traffic using the two-lane peak hour center roadway will need to be accommodated on the one-lane HOV system provided each direction on the outer roadway. These are changes to which the region has long been committed, as evidenced by the 1976 Memorandum of Agreement with the support of many communities, including Mercer Island.

These changes will bring traffic adjustments to be equitably shared by all. It has been established since 1976 that the *priority* among users will *first* be accorded to transit, then *second* to carpools, and only then *third* to Mercer Island single occupancy vehicles (Mercer Island carpools obviously fit in the second, not the third, priority class.)
An equitable outcome must take into account the reasonable expectations of all users of the corridor including users of transit and high occupancy vehicles who must be assured that the lane meets performance standards consistent with priority in the 1976 MOA. Access and mobility for Mercer Island residents will also include new high capacity transit uses in addition to the private passenger vehicle use exercised today.

In Summary

In summary, the 2006 proviso requiring a plan for “an access plan that provides equitable and dependable access for I-90 Mercer Island exit and entry.” must be read in the context of the following:

- Recognition that the center roadway would ultimately be used for High Capacity Transit. (1976 Memorandum of Agreement and 2004 Amendment)

- Understanding that after High Capacity Transit began to use the center roadway, operation of the facility would consider efficient transit flow, equitable access for Mercer Island and Bellevue traffic and traffic-related impacts on Seattle. (1976 Memorandum of Agreement)

- Acknowledgment that in access to the center roadway and subsequently to the outer roadway HOV lanes, the use by Mercer Island users (except carpools) would be subject to the priority of transit and carpools. (1976 Memorandum of Agreement; September 2005 Letter [“under the same conditions provided in the 1976 Memorandum of Agreement.”])

- Suggestion that Mercer Island access to the transit lane should be without cost to Mercer Island traffic until such time as the State implements congestion based pricing on the I-90 roadway. (September 2005 Letter)

Future Conditions Expected to Meet the Needs of Dependable and Equitable Access for Mercer Island.

I-90 is used today by people who live in Bellevue and on Mercer Island (as well as many others, I-90 being a critical highway of statewide significance and a portion of the Interstate Highway system of national importance for personal travel and freight movement); use of the corridor is achieved in a variety of ways including:

- Travel in personal automobiles, both as single occupancy vehicles and multiple occupancy vehicles including carpools

- Vanpools
• Transit services on routes served by Metro and Sound Transit.

Today, access to I-90 is provided to residents of Mercer Island not only through their private automobile use, but also through transit services that include:

• Transit services operated on eight cross-Lake routes with about 260 buses stopping westbound or eastbound each weekday at the Mercer Island Park and Ride facility in the Mercer Island business district. These services provide approximately 13,400 seats daily (almost evenly divided eastbound and westbound) for trips departing the Park and Ride facility. Load factors vary greatly during the course of the day. The average load factor is about 46 percent. Westbound (to Seattle) morning peak period load factors are about 59 percent. This level of service and partial utilization suggests that transit services now provide excellent opportunity for Mercer Island residents to make choices to use transit for personal travel destinations served by the transit services that utilize the corridor.

• Transit usage for residents of Mercer Island is supported by six Park and Ride lots on Mercer Island. Construction of an expansion of the largest, the Park and Ride in the Mercer Island at 7800 North Mercer Way near the business district is now underway. When completed in 2007, this large Park and Ride lot will have parking for 450 vehicles.

• Approximately eleven vanpools today operate to and from Mercer Island on I-90 routings. Seven of these are related to a single large employer on Mercer Island. The strong vanpool program in King County suggests that additional vanpool use by Mercer Island residents can contribute to equitable access for many.

**Future Conditions: Dependable and Equitable Access**

In the future all these uses are expected to continue and to grow.

**Access from Improvements to Transit Services**

Enhancement of transit services will provide the most important new service contribution to equitable and dependable access for Mercer Island users exiting and entering the I-90 corridor.

• Park and Ride availability on Mercer Island is expanding. The capacity of the new business district Park and Ride will be 75 percent larger than the old surface facility it replaces. In total, there will be approximately 600 Park and Ride spaces on Mercer Island. This will equal one space for approximately every 37 residents
(for Bellevue, the comparable figure is one space for approximately every 42 residents; for Kirkland, one space for approximately every 28 residents; and for Sammamish, one space for approximately every 108 residents).

- Conventional transit service will continue to be provided and strengthened. Today, weekday boardings of I-90 corridor services provided by Metro and Sound Transit at the Park & Ride location on North Mercer Way near the Mercer Island business district and at other locations on Mercer Island now total about 800 per day. Metro's proposed Transit Now program, if adopted by voters in the November 2006 general election, will add frequencies to existing services with an expected gain in ridership of 18 to 20 percent. Sound Transit service expansion will occur not by traditional bus services, but on High Capacity Transit services expected to commence service in about a decade, in 2016 (see below).

- Mercer Island provides attractive opportunities for expansion of efficient, dependable vanpool services for commuters whose jobs are both east and west of Lake Washington. The relatively small number of vanpools now operating suggests that as Mercer Island residents discover the convenience and reliability of vanpool services (especially as non-HOV travel times continue to be affected by worsening congestion throughout the region), vanpools can gain many new Mercer Island riders.

- Finally, use of the center roadway for High Capacity Transit itself will provide significant new travel opportunities for Mercer Island (and Bellevue) with particular benefit in the area of travel dependability. Assuming the conversion of the center roadway to exclusive use by light rail as High Capacity Transit, Sound Transit's projections for ridership at the Mercer Island light rail stop indicate that 1500 people a day will ride light rail from a trip origin on Mercer Island either eastbound or westbound making fast, convenient and dependable trips in just a few minutes to stations either in Seattle or Bellevue, and to further points on the light rail system such as, for example, Sea-Tac International Airport and the University of Washington. (This is by comparison to about 800 boardings per day at the current bus transit services now located at the Park and Ride location on North Mercer Way near the Mercer Island business district and at other Mercer Island locations. Another 140 boardings occur at other Mercer Island stops on buses that travel directly to Seattle or East King County locations.) Over 400 Mercer Island residents also board buses for trips that terminate on the island.

The project for placing the center roadway into use for High Capacity Transit is now underway and will shortly be the subject of preparation of the Environmental Impact Statement responsive to requirements of both the National Environmental Policy Act and the State Environmental Policy Act. The Sound Transit board of directors has designated exclusive light rail as its preferred alternative for the use of the center roadway for High Capacity Transit.

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King County estimates the initiative will create an increase of 18 million to 21 million annual rides over the current 100 million annual rides.
Studies to be performed for the project-level Draft Environmental Impact Statement will provide more extensive and precise information about the benefits that High Capacity Transit alternatives, including light rail, will provide in the corridor, as well as information about impacts from the project.

**Access from Highway System Improvements**

The significant access improvements from new ways that transit and vanpools will benefit residents of Mercer Island will be offset in some measure because Mercer Island residents, like others, who still desire or require the use of their personal automobiles will utilize an I-90 that for a portion of its length will have lost peak period two-lane capacity in the center roadway to be replaced only by the one-lane (each direction) capacity of the new HOV lanes on the outer roadway. These HOV lanes will have to be operated in such a way as to assure performance; this in turn is a critical condition for the speed and reliability of transit and multi-occupant vehicles using the lane.

Implementation of the I-90 Two Way Transit and HOV project itself will improve entry and exit to I-90 from Mercer Island. HOV access will be two-way at all times, a major benefit to Mercer Island users engaged in travel that emulates the "reverse commute." (It is as likely that these users might be travelers to school on the eastside or patients or visitors at eastside medical facilities as conventional workday commuters.)

The project also will replace and connect key direct access ramps on Mercer Island to the outer roadway and construction of an eastbound auxiliary lane from East Mercer Way to the I-405 interchange which will improve the eastbound flow of I-90 traffic from Mercer Island.

Looking ahead several years to a point no earlier than 2014 when the Sound Transit project for High Capacity Transit will likely result in removal from service of the center lane roadway for construction, the expected traffic conditions on the I-90 corridor will surely bring the day, as anticipated by the communities that signed the September 2005 Letter that the state—presumably following the consultation principles established in Paragraph 14 of the 1976 Memorandum of Agreement—establishes a pricing mechanism to assure the efficient performance of at least the outer roadway HOV lanes.

A pricing mechanism such as, for example, a High Occupancy Toll or HOT Lane may be desired at that point based on:⁷

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⁷ A future Puget Sound region transportation governance body yet to be established with powers yet to be determined under new state law might be created with powers to fulfill some of the powers and responsibilities that would now fall to the state in that regard.

⁸ Given the likely future conditions for general purpose and transit and HOV traffic, the signers of the September 2005 letter and others might suggest that implementation of a HOT Lane system on I-90, generally from Seattle to Issaquah, offers the most promise for optimizing traffic performance in the I-90 corridor. This, however, remains to be seen.
• Broad acceptance of the technology of "open road tolling" based on fast-gathering experience elsewhere in the country\textsuperscript{9} and the results of the forthcoming HOT lane pilot project to be implemented in 2008 on SR 167.

• Further momentum toward the implementation of "managed lane" strategies now seeming to gain favor to assure optimal efficiency of existing and new capacity on the I-405 corridor.\textsuperscript{10}

• The need for refined access management tools to accompany and support expected construction period traffic mitigation measures for any construction period work on the center roadway, such as, for example, greatly expanded vanpool services and other demand management and efficiency strategies.

• Demonstrated results from experience elsewhere in the country (for example, the Washington, D.C. area, Denver, Colorado, several California cities, several Texas cities, and the Minneapolis, Minnesota area) that HOT lane applications allow the maintenance of traffic at optimal speeds to assure maximum throughputs.

• Demonstrated projections that over-burdened HOV lanes will see irremediable breakdowns of speed and throughput, arguing against their efficiency (with or without Mercer Island single-occupancy vehicle usage) as workable continuing strategy for I-90 traffic operations.

Implementing the Plan

The Governor's Office and the Washington State Department of Transportation intend to honor the understanding of the agreement reached by the signatories regarding Mercer Island access to HOV lanes.\textsuperscript{11} They concluded that when the center roadway is converted to high capacity transit, Mercer Island residents should be permitted HOV lane access until the HOV lanes are converted to high occupancy toll (HOT) lanes or another tolling regimen is implemented on I-90. It is important to emphasize that it is not known how long the lanes would operate as HOV lanes, and it is possible that those lanes may be operated as tolled lanes from the time of or even before the conversion of the center roadway occurs.

\textsuperscript{9} Given the likely future conditions for general purpose and transit and HOV traffic, the signers of the September 2005 letter and others might suggest that implementation of a HOT Lane system on I-90, generally from Seattle to Issaquah, offers the most promise for optimizing traffic performance in the I-90 corridor. This, however, remains to be seen.

\textsuperscript{10} A few examples of open road tolling are as part of HOT lanes in Denver, Minneapolis, and San Diego, and as part of toll roads in California and Florida.

\textsuperscript{11} Office of the Governor and WSDOT Correspondence dated December 22, 2006.
Attachment 1

Summary of Information from the I-90 Center Roadway Study

WSDOT recently completed a detailed study of what I-90 traffic operations might look like in the future. This study was done in response to a Sound Transit Board motion to provide clear public disclosure and facilitate discussion of plusses and minuses of exclusive HCT use of I-90 Center Roadway prior to a public vote.

The three main findings from the study were:

- The travel time and amount of congestion on I-90 will increase significantly in the future, regardless of whether the center roadway is used exclusively for HCT. This increase is due more to sheer growth of jobs and population in the region rather than conversion of the center roadway.

- We will most likely see these conditions within the next ten to fifteen years.

- Increased congestion will lead to a corresponding reduction in vehicular throughput. As vehicular throughput decreases, so does the person throughput, and therefore investments that increase transit and carpool use are necessary to recover and increase upon the person throughput we see on the corridor today.

Study findings relevant to Mercer Island access were:

- Future intersection operations on Mercer Island will not significantly impact the ability to access the I-90 corridor.

- The addition of the eastbound auxiliary lane from E Mercer Way to I-405 significantly reduces congestion on eastbound I-90 leaving Mercer Island.

- Channelization or signalization may be necessary at the 76th Ave SE / N Mercer Way on ramp to westbound I-90 with the conversion of the center roadway.

For detailed information on travel time, volumes, and other considerations, see the final report at http://www.wsdot.wa.gov/projects/i90/study.

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12 Motion M2005-83 Directed ST staff to work in conjunction with WSDOT to complete further analyses of the I-90 bridge load testing and to examine traffic flow, mobility, accessibility, and capacity for all users across the lake.
Attachment 2

Lane Management Issues Presented by Excessive Volume in an HOV Lane

As part of the recent I-90 Travel Analysis, the volatility of the performance of HOV lanes on the outer roadway was tested at different levels of traffic volume. In this context, "volatility" refers to HOV lane performance at different volume levels. This analysis is independent of whether the higher HOV lane volumes are due to higher-than-projected HOV growth, or allowing Mercer Island traffic to utilize the HOV lane.

The chart at right shows the relationship between volume in the HOV lane westbound and the corresponding travel speed within the lane. The data in this chart is representative of likely HOV lane conditions by 2015, even with the assumption that some HOV demand has shifted to SR 520.

Moving across the chart from left to right HOV lane speeds drop substantially once the lane volume exceeds about 1,500 vehicles per hour. As this volume is exceeded, the deteriorating performance is akin to moving from an HOV lane or a managed mix of HOV and non-HOV into an unmanaged, overloaded lane that behaves like a fourth general purpose (GP) lane.

While the above analysis was done to assess HOV lane volatility, it also strongly suggests that optimizing HOV lane capacity (sometimes there is excess capacity in an HOV lane) can improve the overall efficiency of I-90.

The suggested conclusion is that a lane management strategy such as a HOT Lane can preserve the desired operational speed of a transit-carrying lane while also increasing its overall use.
December 22, 2006

The Honorable Bryan Cairns, Mayor
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040

Dear Mayor Cairns:

Thank you for your letter of November 13 concerning access for single occupancy vehicles from Mercer Island to the HOV lane on I-90 after conversion of the center roadway to high capacity transit.

The Governor’s Office and the Washington State Department of Transportation intend to honor our understanding of the agreement reached by the signatories regarding Mercer Island access to HOV lanes. We have concluded that when the center roadway is converted to high capacity transit, Mercer Island residents should be permitted HOV lane access until the HOV lanes are converted to high occupancy toll (HOT) lanes or another tolling regimen. It is important to emphasize that we do not know how long the lanes would operate as HOV lanes, and it is possible that those lanes may be operated as tolled lanes from the time of or even before the conversion of the center roadway occurs.

We would also note that other issues apart from Mercer Island considerations are involved in HOV lane access for Mercer Island. An equitable outcome must take into account the reasonable expectations of all the users of the corridor, including users of transit and other high occupancy vehicles who must be assured that the lane meets performance standards. In addition, the access and mobility opportunities provided for Mercer Island residents include new high capacity transit uses of the corridor as well as the private passenger vehicle uses.

Thank you again for your letter. Please let us know if you have additional questions or concerns.

Sincerely,

[Signature]

Tom Fitzsimmons, Chief of Staff
Office of the Governor

Doug MacDonald, Secretary
Washington State Department of Transportation