




**BUSINESS OF THE CITY COUNCIL
CITY OF MERCER ISLAND, WA**

**AB 4314
June 2, 2008
Regular Business**

2008 NORTH MERCER WAY RESURFACING **Proposed Council Action:**
Authorize staff to advertise for construction bids.

DEPARTMENT OF Maintenance (Clint Morris)
COUNCIL LIAISON n/a
EXHIBITS n/a
APPROVED BY CITY MANAGER  5/28/08

AMOUNT OF EXPENDITURE	\$	710,000
AMOUNT BUDGETED	\$	550,000
APPROPRIATION REQUIRED	\$	n/a

SUMMARY

PROJECT HISTORY IN 6-YEAR TIP

The resurfacing of North Mercer Way, between Island Crest Way and 76th Avenue SE, was added the City's 6-Year Transportation Improvement Plan (TIP) in 2004 due to its worsening pavement conditions. Construction was originally planned for 2006 with a budget of \$250,000. During the 2006 TIP Update, staff recommended increasing the project budget based upon preliminary design scope and cost estimates. Council rescheduled the project to 2008, to occur after construction of the new Sound Transit Park and Ride facility was completed. In the approved 2006 TIP, \$50,000 was allocated in 2006 for design and \$500,000 was budgeted in 2008 for construction.

Design work began in 2006, but slowed in 2007 due to the project's scheduling change. Currently, design work on the final project plans and specifications is nearly complete, and coordination with Sound Transit and the Washington State Department of Transportation (WSDOT) regarding project construction has begun.

Staff is bringing this project back to the Council for authorization to advertise for construction bids because the estimated project costs have increased beyond the current project budget.

ROADWAY HISTORY

The portion of North Mercer Way between Island Crest Way and 76th Avenue was originally constructed in the early 1980's as part of the I-90 freeway expansion and reconstruction work. In 1994, this "North Mercer Connection" roadway received a thin asphalt overlay by WSDOT prior to being turned back to the City of Mercer Island. The 1994 work was part of a larger resurfacing project performed by WSDOT that also included two other portions of North Mercer Way, SE 24th Street from West Mercer Way to 60th Avenue, and several other small residential streets in the vicinity of the I-90 freeway work. City staff had negotiated this paving work with WSDOT to mitigate damage and wear brought about by multiple WSDOT contractors

using these roadways as haul routes during the decade-long I-90 construction activities. The 1994 paving work was administered and funded by WSDOT.

“Thin asphalt overlays” are less than 1½ inches in thickness and have a typical life span of 10 to 12 years when applied on arterial roadways with moderate to heavy traffic volume. This portion of North Mercer Way began showing pavement fatigue (alligator cracking) in 2003, which led staff to include it in the TIP for resurfacing. Since that time, pavement cracking areas have grown substantially, and extend through the entire thickness of the asphalt pavement. Numerous areas have been patched due to delaminating of the thin overlay. The current asphalt surface on North Mercer Way is now 14 years old.

Traffic counts taken in September 2006 showed an average daily traffic of just over 12,000 vehicles, of which 5% (600) are trucks and buses.

PROJECT DEVELOPMENT AND SCOPE

The current North Mercer Way resurfacing project has two primary goals: (1) to resurface the existing roadway to provide a smooth driving surface, free of potholes and patches; and (2) to increase the pavement structure for a longer service life.

The scope of the project includes resurfacing the existing roadway (curb to curb) and restriping in its current configuration (2 lanes westbound, 1 lane eastbound). Prior to the overlay, substantial areas of the roadway pavement will be removed and replaced with a thicker asphalt pavement section. In addition, a small amount of concrete curbing will be repaired, and new traffic signal detection loops will be installed in the new pavement.

During project design, testing was performed on the existing pavement to determine its thickness and strength. These tests found the average pavement depth to be 4 inches. Given the traffic volumes on North Mercer Way, which include an increasing number of buses serving the Park and Ride facility, staff recommends increasing the asphalt thickness to 8 inches. Unlike a rural roadway which can simply be overlaid with additional layers of asphalt to increase the overall pavement thickness, urban streets must match into existing curbs, sidewalks, bus landings, and intersections. The only way to increase the asphalt pavement thickness in this case is to remove the existing pavement along with some of the road base, and replace it with a thicker asphalt pavement section that still matches the surrounding curbs and bus landings.

In 2005, the City completed a similar paving project on Island Crest Way between SE 30th and SE 40th Streets. On that project, the outer lanes (next to the curbs) were found to have only a 4-inch depth of asphalt pavement. Design calculations showed that a thicker pavement was needed to match the traffic loads and volumes. This led to most of the pavement in the outer lanes being removed and replaced with an 8-inch depth of asphalt pavement. The current North Mercer Way project is very similar to the situation encountered on the Island Crest Way project. Increasing the pavement thickness on North Mercer Way will allow it to better handle bus and truck traffic in the long term. Staff anticipates this roadway's new life span to be 20 years, which is within the City's 20 to 25-year life cycle goal for arterial streets.

PROJECT COST ESTIMATE

The construction cost estimate for the work scope described above is \$550,000. Adding costs for construction contingency, project design, project management, inspection services, and an Arts contribution brings the current estimated total cost to \$710,000, as shown on the following page.

2008 NORTH MERCER WAY RESURFACING ESTIMATED PROJECT COSTS		
Construction	\$	550,000.00
Construction Contingency @ 10%	\$	55,000.00
Project Design	\$	54,500.00
Contract Administration / Project Management	\$	22,500.00
Inspection Services	\$	22,500.00
1% for the Arts	\$	5,500.00
Current Estimated Total Cost	\$	710,000.00

Increases in construction costs over the original budget can be attributed to increases in the amount of needed pavement repairs within the project limits, as well as continued annual increases in the costs of fuel, liquid asphalt, and other construction materials. As an example, the cost per ton of asphalt pavement for the 2005 Island Crest Way resurfacing project was \$50.00. In 2007, the asphalt pavement cost per ton for the SE 68th Street and 84th Avenue overlay was \$82.00. For this year's North Mercer Way resurfacing, staff is estimating \$90.00 per ton for asphalt pavement.

The project budget is currently \$550,000. Project cost estimates show that an additional \$160,000 may be needed from the Street Fund to complete this project. In April 2008, when the Council awarded the 76th Avenue Improvements construction contract, that project's budget was reduced (based on favorable construction bids) and \$288,170 was returned to the Street Fund balance. **If construction bids exceed the current budget amount, staff will request a budget appropriation upon returning to the Council for the award of the construction contract.**

PROJECT SCHEDULE

Staff's current timeline is to advertise the project for construction bids in mid-June, and return to the Council in mid-July to award a contract. Construction activities would occur in August (after Seafair) and September.

RECOMMENDATION

Street Engineer

MOVE TO: Authorize staff to advertise for construction bids for the 2008 North Mercer Way Resurfacing project.