



King County

Department of Transportation
Metro Transit
Service Development
201 South Jackson Street
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Seattle, WA 98104-3856

October 7, 2010

Memorandum

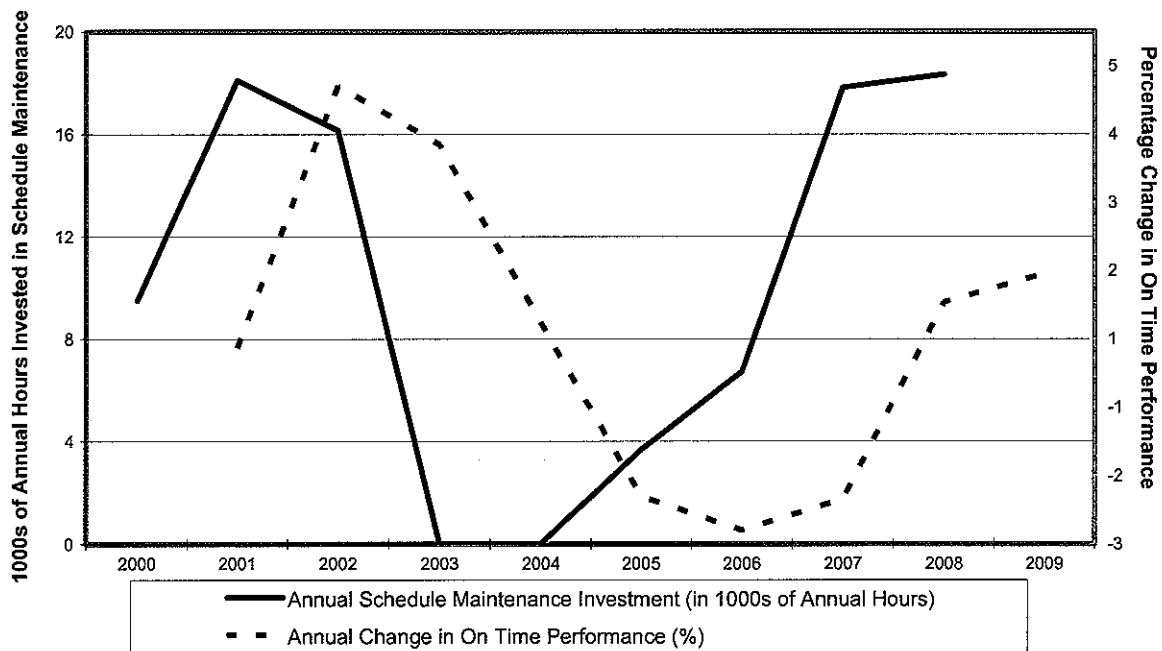
TO: Regional Transit Task Force Members

FM: Victor Obeso, Service Development, Metro Transit Division

RE: Schedule Maintenance

The purpose of this memo is to provide you with some historical context and a more detailed description of some of the trends we have seen with schedule maintenance activity and with our more recent efforts to find scheduling efficiencies in response to the 2009 performance audit. The key reason for investing in schedule maintenance is to make sure that transit schedules remain effective and reliable as traffic conditions and ridership trends change over time. As the chart below demonstrates, there is a strong correlation between investments in schedule maintenance and annual change in on time performance.

Annual Investments in Schedule Maintenance vs. Annual Change in System On Time Performance



In the 2007 Metro Transit Strategic Plan, Strategy S-2 defines schedule maintenance as an effort to:

Improve transit on-time performance through: adjustments in routing, splitting of unreliable through-route pairs, adding of recovery time between trips, moving routes between operating bases, and adding time or trips to schedules to account for slower travel speeds or recurring overloads.

From 2002 through 2009, Metro invested almost 66,000 annual hours in the schedule maintenance program. This investment amounted to about .2 percent of the system annually and never exceeded .5 percent of the system size in any particular year per Strategic Plan limits on schedule maintenance. In addition, Metro undertook a number of major service restructuring efforts in which reliability was always taken into account and invested as part of those efforts (i.e. North King County Restructure 2003, S.W. Seattle 2004, Rainier Valley 2005, South King County 2006, Central Eastside 2008, and Link Integration 2009). While each of these restructuring efforts involved reinvesting thousands of hours, they often also involved building increased service reliability into the system.

Focusing solely on the breakdown of schedule maintenance investments by subarea for the 2002 through 2009 period, the great majority of investment went into the West subarea. This was driven primarily by a need to address on-time performance issues and passenger crowding issues that were most prevalent in the West.

Schedule Maintenance by Subarea 2002-2009

Subarea	2002	2003	2004	2005	2006	2007	2008	2009	Total
East	(478)	(253)	910	(236)	1,500	1,937	2,831	(4,258)	1,953
South	4,046	(403)	(1,405)	1,006	111	2,618	1,989	2,398	10,361
West	12,578	656	494	2,903	5,128	13,261	13,497	4,977	53,494
Total	16,146	-	-	3,673	6,738	17,817	18,317	3,118	65,808

Metro is currently in the midst of a "Scheduling Efficiencies" program that is targeting the removal of 125,000 annual hours in the 2010-11 biennium. This effort will help Metro optimize cost efficiency, while continuing to monitor and strive to produce effective and reliable transit schedules. Also key in maintaining effective and reliable schedules will be recognition that some ongoing investment in schedule maintenance to add travel and layover/recovery time will be necessary and can be managed based on a transparent system of guidelines.

The update of the service guidelines and performance measures effort is currently underway and is due to be completed by February 2011. Part of the effort to develop performance measures and service guidelines includes identifying where passenger crowding is occurring in our transit system. As these thresholds are finalized and used to identify where specific trips in the system need mitigation from passenger crowding, it will not be necessary to include trip adds as a schedule maintenance activity. While passenger crowding can affect service reliability, the addition or subtraction of trips to address passenger crowding issues should be treated separately using guidelines and with consideration for plans to restructure or change service levels. Schedule maintenance would no longer include the addition or subtraction of revenue/in-service trips.