



# King County

Metropolitan King County Council

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## M A N A G E M E N T L E T T E R

DATE: April 19, 2011

TO: Metropolitan King County Councilmembers

FROM: Cheryle A. Broom, King County Auditor

SUBJECT: Follow-up on Implementation of Recommendations from 2009 Performance Audit of Transit

This memorandum provides the results of a follow-up review of our 2009 Performance Audit of Transit. Recommendations were scheduled for implementation over a three-year period. Although all recommendations are included in this memo, some are not scheduled for implementation until 2012. Overall, Transit has made significant progress toward addressing the recommendations of the 2009 performance audit and capturing the audit's estimated savings. Transit has developed a framework to ensure that implementation of audit recommendations is assigned to the appropriate staff person, the approach to implementation approved, and status monitored regularly by Transit leadership.

### Background

In 2009, the auditor's office completed a comprehensive performance audit of Transit that included six areas of focus: financial and capital planning; service development; staffing; paratransit; vehicle maintenance; and ridership data and emergency communication.

We found that the ways that Transit pursued its mission contributed to higher costs – a situation exacerbated by the fact that in the two years prior to the audit, and continuing today, Transit's economic environment has resulted in dramatically reduced revenues, and in some areas, increased costs. Our audit focused on providing information that would result in cost savings and analyses that decision-makers could utilize when making policy decisions.

### Summary of Findings

Of the audit recommendations:

<b>DONE</b>	21	have been fully implemented
<b>PROGRESS</b>	6	are in progress or partially implemented
<b>OPEN</b>	14	remain unresolved
	10	are not yet scheduled to be completed

**Fully Implemented - DONE**

Transit implemented several key recommendations in 2010. Primary among these were bus service scheduling approaches, operator staffing, Paratransit planning and programs, vehicle maintenance, and customer communication.

Transit has implemented many of the bus service efficiency recommendations ahead of schedule and has exceeded savings targets by capturing 80,744 annual hours of service (\$7.2 million). Transit has identified, and is now tracking, scheduling efficiency indicators. Transit's implementation of cycle-time analysis; use of Minbus and CrewOpt HASTUS modules; correct HASTUS calibration and use; and in-depth HASTUS training for Service Development staff have resulted in bus schedule efficiencies.

Transit has implemented two key recommendations related to operator staffing that, in concert with economic conditions that balance part-time and full-time staff, have resulted in staffing efficiencies and savings. Transit is addressing the underlying issue of reducing excess leave and capitalizing on opportunities to utilize more cost-effective staffing approaches.

In addition, Transit expanded the Paratransit Community Access Transportation (CAT) program more quickly than originally anticipated to capture \$3.6 million in savings in 2010. Transit has revised the mileage windows for preventive maintenance, reducing the level of effort required for Preventive Maintenance Inspections (PMIs) and will continue to monitor the results. Changes to Transit's customer communications has enhanced rider awareness of route-specific information during emergencies in 2010.

**Partially Implemented - PROGRESS**

In some cases, Transit has made demonstrable progress toward implementing audit recommendations, but work remains for full implementation. These recommendations include global optimization of the bus system schedules and operator staffing performance measurement. In addition, an analysis of paratransit service levels has been completed, but review and approval processes are not yet final. And while efforts have been initiated for an Access staffing model, work remains to develop a dynamic tool that Transit can use to determine staffing needs. Finally, Transit has begun to enforce penalties and incentives in their contracts and reports that they will re-evaluate their use by the end of the first quarter of 2011.

**Unresolved - OPEN**

Transit reports that nine of the 14 unresolved recommendations will be addressed by the Strategic and Comprehensive Plan due for completion in March 2011. Since we have not reviewed the plan, we cannot verify that information in the plan would result in satisfying the audit recommendations.

Other recommendations that remain unresolved include development and implementation of an economic replacement model for Transit's revenue fleet, updates to the ride free area cost calculation, and a replacement model for Transit's non-revenue fleet. Transit has noted target dates for implementation of these recommendations.

In addition, two recommendations with which Transit did not concur, the comprehensive Asset Management Guidebook and the Facilities Condition Index remain open. We continue to recommend that Transit implement these final two recommendations to assemble and fully develop their asset

management practices, ensuring that they have the tools to effectively set and meet asset management targets into the future.

*Not Yet Scheduled to Be Complete –*

In cases where a recommendation is not scheduled to be complete, but Transit provided documentation of efforts to address the recommendation, the status shows “**PROGRESS**” with a note regarding target completion date or “**DONE**.”

## PLANNING AND ANALYSIS

#	Quick Status	Recommendation	Status Detail
S1		Transit should address opportunities to enhance and expand the use of planning across the organization, especially those practices which would lead to increased efficiency and revenue generation. This planning should utilize a strategic approach that includes clear problem identification, goals for outcomes, and methods to measure progress.	<i>Implementation of this recommendation is ongoing and will be reviewed in 2012.</i>
S2		Transit should ensure that systematic, effective data analysis drives organizational choices. When decision-makers are determining Transit policy, Transit should provide thorough data analysis to inform deliberations.	<i>Implementation of this recommendation is ongoing and will be reviewed in 2012.</i>

## FINANCIAL AND CAPITAL PLANNING

#	Quick Status	Recommendation	Status Detail
A1	<b>PROGRESS</b>	Transit should create an updated version of the financial model that facilitates sensitivity analysis and has complete documentation and explicitly identified assumptions. This model should be made available to external parties such as the Office of Management and Budget and council committee staff.	Transit has hired a consultant who has developed a conceptual design for the financial plan and model. <i>Due for implementation in 1<sup>st</sup> Quarter 2011.</i>
A2	<b>OPEN</b>	Transit should propose updated financial policies; particularly those related to sales tax distribution and cost growth for consideration by the Regional Transit Committee and the King County Council.	Transit reports that they are addressing A2 with the Strategic and Comprehensive Plan. As a result of the Regional Task Force work, the completion of the plan has been postponed until <u>March 2011</u> .
A3		Transit should revise its assumptions to improve the accuracy of projections for capital expenditures and capital grant revenue.	<i>Due for implementation in 1<sup>st</sup> Quarter 2011.</i>

Metropolitan King County Councilmembers

April 19, 2011

Page 4

A4	<b>OPEN</b>	Transit should develop a plan for reducing the size of the Revenue Fleet Replacement Fund balance and submit the plan for council approval.	Transit reports that they are addressing A4 with the Strategic and Comprehensive Plan. As a result of the Regional Task Force work, the completion of the plan has been postponed until <u>March 2011</u> .
A5	<b>DONE</b>	Transit should address technical issues with its economic analysis model and provide it to the auditor's office to confirm its accuracy.	The auditor's office has evaluated the model and believe that it is technically sound.
A6	<b>OPEN</b>	Transit should create economic replacement analysis model to inform its vehicle replacement decisions, starting with a model for the Revenue Fleet.	Transit is collaborating with Portland State University to create new fleet replacement models designed to optimize a transit bus fleet. This recommendation will not be fully implemented until <u>3<sup>rd</sup> Quarter of 2011</u> .
A7		If Transit wishes to continue to use Fleet Administration's replacement criteria for its Non Revenue Vehicle (NRV) Fleet, it should complete its review of Fleet Administration's operations and maintenance data. If Transit chooses not to use Fleet Administration's replacement criteria, economic replacement analysis should be used for non-revenue vehicles. Note: This recommendation is comparable to the 2006 County Vehicle Replacement performance audit recommendation.	<i>Due for implementation in 1<sup>st</sup> Quarter 2012/2013 budget proposal.</i>
A8	<b>OPEN</b>	In 2005 we recommended that Transit complete its comprehensive Asset Management Guidebook, including all Asset Management efforts currently underway within the division. We continue to recommend that the comprehensive Asset Management Guidebook be completed.	Transit notes that they are currently in compliance with both state and federal requirements for asset management. Transit did not concur with this recommendation; however, the Auditor's Office continues to recommend that Transit complete a comprehensive Asset Management Guidebook.
A9	<b>OPEN</b>	Transit should implement a Facilities Condition Index and systemwide targets for condition ratings for the Transit Facilities Condition Report.	Transit notes that they will participate in an FTA forum in 2011 to discuss the findings of an asset management model and that further work will follow from this meeting. Transit did not concur with this recommendation; however, the Auditor's Office continues to recommend that Transit implement a Facilities Condition Index and targets for condition ratings for their Transit Facilities Condition report. Implementation postponed to <u>4<sup>th</sup> Quarter 2011</u> .

Metropolitan King County Councilmembers

April 19, 2011

Page 5

A10	<b>OPEN</b>	In its 2010 update to the Transit Comprehensive Plan, Transit should ensure that it fully incorporates all elements of facility master planning. This is comparable to a recommendation made in 2005.	Transit reports that they are addressing A10 with the Strategic and Comprehensive Plan. As a result of the Regional Task Force work, the completion of the plan has been postponed until <u>March 2011</u> .
A11	<b>OPEN</b>	Transit and the council should consider all relevant factors, including costs, when determining an appropriate fleet replacement for the trolley buses.	Transit has hired a consultant to conduct a trolley bus system evaluation. Implementation postponed to <u>2<sup>nd</sup> Quarter 2011</u> .
A12a	<b>OPEN</b>	Transit should develop and propose fare policy goals to the Regional Transit Committee and King County Council that are clearly tied to Transit's strategic plan and are representative of Transit's agencywide goals and objectives. These goals should be used as a basis for making fare policy decisions.	Transit reports that they are addressing A12a with the Strategic and Comprehensive Plan. As a result of the Regional Task Force work, the completion of the plan has been postponed until <u>March 2011</u> .
A12b	<b>OPEN</b>	As part of adopting fare policy goals, Transit should define and monitor a target farebox recovery ratio. This ratio should include only bus fares and bus fare related revenues divided by only bus operating expenses.	Transit reports that they are addressing A12b with the Strategic and Comprehensive Plan. As a result of the Regional Task Force work, the completion of the plan has been postponed until <u>March 2011</u> .
A12c	<b>OPEN</b>	Transit and policy-makers should consider further utilizing fare policy changes to generate additional revenues to assist in funding Transit operations.	Transit reports that they are addressing A12c with the Strategic and Comprehensive Plan. As a result of the Regional Task Force work, the completion of the plan has been postponed until <u>March 2011</u> .
A12d	<b>DONE</b>	Transit should reintroduce senior/disabled/youth fare discounts in line with peers and peg discounted fares to base fares by specifying a percentage discount.	Transit has moved discounted fares into alignment with other regional transit entities and recommended pegging discounted fares to base fares.
A13	<b>OPEN</b>	Transit should update and fully document the formula used to assess the City of Seattle's payment for the Downtown Seattle Ride Free Area to reflect current ridership and operating conditions including trips that are attracted by virtue of free fares. Transit and the council should then consider revising the agreement with the City of Seattle.	Transit reports that they have completed initial analysis to update the Ride Free Area formula. Implementation postponed to <u>2<sup>nd</sup> Quarter 2011</u> .

## SERVICE DEVELOPMENT / SCHEDULING

#	Quick Status	Recommendation	Status Detail
B1	<b>DONE</b>	Transit should develop a plan to implement the schedule efficiency tools related to service development in recommendations B1 a-j. The plan should identify efficiency targets and propose a timeline for putting each tool into operation.	Transit has developed a plan for implementation of schedule efficiency tools that includes timelines, targets, and impacts. They report that they are exceeding their savings targets set forth in the plan and have achieved 80,744 hours of savings to date of a total target of 125,000 hours.
B1a	<b>DONE</b>	Transit should expand its set of efficiency indicators (as noted in <i>Technical Report B: Service Development, Appendix A</i> ) and goals and use them as targets when developing schedules. These goals should be used by management to monitor the performance of the service development group and regularly communicated to decision-makers.	Transit developed a Scheduling Efficiencies report that includes the audit's recommended performance metrics. Progress toward goals is calculated and communicated.
B1b		Transit's planned standards/guidelines document should be completed, formally adopted, and published, providing a policy guide for Transit staff and reference document for external stakeholders.	<i>Due for implementation in 2<sup>nd</sup> Quarter 2011.</i>
B1c	<b>PROGRESS</b>	Transit should develop a process and procedures for periodic global optimization of its bus system schedule. This should include reviewing and completing the deadhead matrix.	Transit reports that they have made improvements to the deadhead matrix and that some global optimization processes have been initiated with more planned in the next year.
B1d	<b>DONE</b>	Transit should employ a systematic percentile-based cycle time analysis process systemwide. This system should consider both the variation of trip times within a time period (run time) and time gaps between busses (headways) to determine a minimum round trip cycle time that can be used with confidence for scheduling purposes.	Transit reports that they have implemented cycle time analysis in new schedule development in 2010/2011 and plans to continue using this process. Transit reports that they have achieved 27,000 hours of schedule efficiencies.
B1e	<b>DONE</b>	Transit should utilize HASTUS' Minbus module to implement scheduling procedures that assign vehicles to service trips most efficiently.	Transit reports that each scheduler now uses HASTUS' Minbus module when updating vehicle schedules.
B1f	<b>DONE</b>	To develop the most efficient run cut, Transit's HASTUS CrewOpt module should be utilized rather than the current manual runcutting process.	Transit reports that each scheduler now uses HASTUS' CrewOpt module when updating operator assignments.
B1g	<b>DONE</b>	Transit should ensure full calibration of HASTUS to support schedule efficiency and to reduce the time required to produce schedules.	Transit reports that HASTUS has been fully calibrated.

B1h	<b>DONE</b>	Transit should develop a systematic process for ensuring that accurate costs are programmed into HASTUS and ensure that it is updated on a regular basis.	Transit reports that they updated costs in HASTUS in 2010 to reflect calculations prepared during the audit process and that they are updating HASTUS again with 2011 costs.
B1i	<b>DONE</b>	Transit should maintain accurate data in HASTUS data fields, including restoring algorithm-related data fields to their intended use and creating new user-defined fields as needed for external systems; populating minimum recovery durations for each trip with performance-driven minimum recovery (using the results of cycle time analysis described in Chapter 4); and populating allowed vehicle groups for each trip.	Transit reports that data fields in HASTUS have been populated with accurate data.
B1j	<b>DONE</b>	Transit should ensure that Service Development staff have the knowledge to fully utilize the HASTUS system.	Transit has invested resources in expert HASTUS training, updating their skill sets and teaching new scheduling approaches. Ongoing training is planned.

## OPERATOR AND TRANSIT POLICE STAFFING

#	Quick Status	Recommendation	Status Detail
C1	<b>PROGRESS</b>	Transit should capture additional data and modify current data sources to aid in the analysis of the relationship of staffing levels and staffing resource utilization to performance.	Transit has identified several performance measures to improve staffing analysis; however, it has been challenging to put the data into a usable format. Transit IT is currently working on the issue. Implementation postponed until <u>2<sup>nd</sup> Quarter of 2011</u> .
C2	<b>DONE</b>	In order to more effectively manage the costs of planned and unplanned operator leave, the following issues should be addressed: 1) Transit should quantify the cost impacts of leave procedures, and the county's representatives should take these costs into consideration when negotiating the next labor agreement; 2) Transit should adjust its payroll procedures so that operators who run out of sick leave do not automatically default to unpaid leave of absence in conformance with the labor agreement; and 3) Transit should utilize data available in HASTUS to monitor sick leave usage in accordance with the collective bargaining agreement.	1) Transit has quantified the cost impacts of some bargaining elements. The level of detail for the analysis depends on the likelihood of inclusion in bargaining. 2) The automatic default in the payroll system has not been resolved; however, Transit has manual processes in place to catch transitions between sick leave and unpaid leave of absence. 3) Transit has developed reports in HASTUS to better monitor leave usage.

Metropolitan King County Councilmembers

April 19, 2011

Page 8

C3	<b>DONE</b>	Transit should further investigate opportunities and incentives for more extensive use of overtime in lieu of full-time staff, when such use would be cost effective, and more extensive use of part-time operators to provide backfill in lieu of using the Extra Board.	Transit has identified and implemented opportunities to use overtime over full-time staff. Transit successfully bargained for changes to the collective bargaining agreement that will increase Transit's ability to use staff more cost effectively, including more extensive use of overtime and the creation of a System Board (staff who fill in at any base).
C4	<b>DONE</b>	Transit and Metro Transit Police (MTP) management should identify opportunities to use lower cost staffing options and implement them when they are consistent with security objectives.	Transit and MTP completed analysis of staffing options, using it in combination with political and environmental factors to make staffing decisions. The analysis informed decisions related to security contracts and fare enforcement staffing decisions on Rapid Ride.
C5	<b>DONE</b>	The Metro Transit Police should strengthen its staffing management practices by employing a more statistically sound approach to planning its staffing needs and by regularly updating its employee absences to reflect actual absences and backfill needs of Transit Police Officers.	MTP has completed analysis to better understand staffing needs, particularly the need for backfill relief. In conjunction with departmentwide efforts of the Sheriff's Office, MTP is more carefully tracking non-deployable officer time and using an updated relief factor to estimate staffing needs. A statistical approach to planning staffing needs would be more accurate; however, the responsibility to develop and use such a tool lies with the Sheriff's Office rather than with Transit.
C6	<b>DONE</b>	The Metro Transit Police should work with its employees to schedule their comp time absences and avoid the need to backfill whenever possible.	MTP provided training regarding use and approval of Compensatory Time (CT). Preliminary analysis shows a positive impact on CT use.
C7	<b>DONE</b>	Transit should develop a more precise approach to calculating and charging for Sound Transit's portion of tunnel-related police costs.	Transit's contract with Sound Transit identifies a charge of 40% of staffing costs in the tunnel. The Sheriff's Office tracks and annually reconciles overtime costs for all of its contract partners, including Sound Transit.
C8	<b>OPEN</b>	Transit should develop a long-term vision and plan for the Metro Transit Police that includes a vision, goals and objectives, as well as measures and targets to track progress towards achieving these goals and objectives. This should be integrated with Transit's strategic plan.	Transit plans to include the elements of this recommendation in the Transit Strategic Plan update due in late March 2011.

## ACCESS PARATRANSIT SERVICES

#	Quick Status	Recommendation	Status Detail
D1	<b>DONE</b>	Transit should adopt a comprehensive, fully documented strategic plan and approach to address how productivity goals are to be met and should regularly reassess its paratransit productivity goal, based on historical trends and the anticipated future service environment.	Transit developed a strategic plan for Paratransit that identified 18 strategies that could lead to increased productivity. Transit plans to issue a biannual status report on progress.
D2	<b>DONE</b>	Transit should continue Access' cost containment efforts and monitor their effectiveness while expanding CAT and other alternative service programs proven to effectively offset the cost of the more expensive Access services.	Transit expanded the Community Access Transportation (CAT) program by 25% in 2009. Transit estimates that this resulted in savings of \$3.6 million in 2010. Transit completed this recommendation ahead of schedule.
D3	<b>PROGRESS</b>	Transit should submit a plan to council detailing the potential savings and impacts on customer service if Transit adjusts paratransit service and fares to levels allowed by the ADA.	Transit provided a report analyzing current service levels in comparison with ADA-allowed levels. A decision on the timing of any legislation is pending.
D4	<b>PROGRESS</b>	Transit should develop a thorough staffing model that incorporates workload factors and processes, efficiency benchmarks, impacts of workload changes on staffing needs, and effects of staffing changes on Access performance.	Transit hired a consultant who developed information that can be used as inputs to a staffing model. The model will need to be a dynamic tool that Transit can use to determine Access staffing needs.
D5	<b>PROGRESS</b>	Transit/Access should monitor and enforce its contract incentives and penalties for a period of one year, and then re-evaluate their usefulness as a tool for improving productivity and performance.	Transit has enforced its contract incentives and penalties for 10 months and has assessed \$18,475 in penalties and has awarded \$10,000 in incentives. Transit plans to re-evaluate the incentives and penalties in the <u>2<sup>nd</sup> Quarter of 2011</u> .

## VEHICLE MAINTENANCE

#	Quick Status	Recommendation	Status Detail
E1	<b>DONE</b>	Transit should initiate a pilot program to extend the preventive maintenance interval to +600/-200 miles on a control fleet at Bellevue Base.	Based on the implemented pilot program and exchange of information with other transit systems, Transit has determined that the inspections can be safely completed between 6,000 and 7,000 miles. They will continue to monitor the data and are currently rewriting the Vehicle Maintenance Plan.
E2		Transit should track and monitor planned and unplanned vehicle maintenance work and formulate a strategic approach to manage unplanned work.	<i>Due for implementation in 1<sup>st</sup> Quarter 2011.</i>
E3a		Transit should regularly monitor adherence to vehicle maintenance productivity standards and work to ensure consistency in the standards across bases.	<i>Due for implementation in 1<sup>st</sup> Quarter 2011.</i>
E3b		Transit should expand vehicle maintenance productivity standards beyond preventive maintenance inspections (PMIs) to other routine jobs.	<i>Due for implementation in 1<sup>st</sup> Quarter 2011.</i>
E3c		Transit should establish a systemwide vehicle maintenance productivity program, expanding on current productivity standards and performance measures.	<i>Due for implementation in 1<sup>st</sup> Quarter 2011.</i>

## EMERGENCY COMMUNICATION

#	Quick Status	Recommendation	Status Detail
F1		Transit should develop a detailed implementation plan and timeline for integrating new on-board and central communications systems (OBS/CCS) data with their existing data processing tools and data streams as the new system comes online.	<i>Due for implementation for 2012 system implementations.</i>
F2a	<b>OPEN</b>	Ensure that the update to Transit's strategic plan includes elements related to effective customer communication, standards for Transit's communication of changes in bus schedules or reroutes to customers, and metrics for measuring Transit's performance that include customer feedback.	Strategic Business Plan completion has been postponed until <u>March 2011</u> .

Metropolitan King County Councilmembers

April 19, 2011

Page 11

F2b	<b>OPEN</b>	Complete analysis of the communications options and developing a prioritized implementation plan. The analysis should assess how each option would meet Transit's communications goals and the potential costs and benefits of each option.	Strategic Business Plan completion has been postponed until <u>March 2011</u> .
F2c	<b>DONE</b>	Update the website so applications customers use during adverse weather are accessible and easy to use; implement a route specific e-mail notification system; and finally, implement alert information via text messaging to rider cell phones and make key website pages available to customers in a format compatible with mobile devices.	Customer communications during emergencies has improved and has been tested twice thus far in 2010-11. Transit has implemented route-specific e-mail and text message alerts. The website and web offerings have been improved.

Kymber Waltmunson, Principal Management Auditor, conducted this follow-up review with support from the original audit team. Please contact Kymber at 296-0383 or me at 296-1655 if you have any questions about the issues discussed in this letter.

CB:KW:yr

cc: Dow Constantine, County Executive  
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