

City of Alexandria, Virginia

MEMORANDUM

DATE: APRIL 15, 2011

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: JAMES HARTMANN, CITY MANAGER 

SUBJECT: BUDGET MEMO # 66: COST OF DASH'S TEN-YEAR SERVICE EXPANSION AND FLEET REPLACEMENT PLAN

This memorandum is provided in response to City Council discussion at the February 22, 2011 work session with DASH and the ATC Board of Directors. Specifically, this memo describes the estimated costs (measured in FY 2012 dollars) associated with the DASH ten-year plan for expanded fleet size and corresponding service as well as the planned bus fleet replacement plan. This memo does not describe any costs associated with the current King Street Trolley service or the potential expansion of trolley service in the future.

DASH Ten-Year Plan Costs

The current DASH ten-year plan calls for the purchase of a total of 128 buses (78 expansion buses; 50 replacement buses) between FY 2012 and FY 2021. The resulting fleet size would grow from 63 buses in FY 2011 to 141 buses by FY 2021. For the purposes of estimating costs for this memorandum, it is assumed that the City would continue the practice of purchasing hybrid buses (\$650,000 per bus). The total cost of these 128 buses is estimated at \$83.2 million, of which \$50.7 million is for fleet expansion and \$32.5 million is for planned fleet replacement. The FY 2012 – FY 2021 Proposed CIP includes \$28.3 million for replacement buses over ten years, which results in a ten-year funding deficit of \$4.2 million (about 7 buses). The current proposed Transportation Add-on Tax project list (described in Budget Memo #10) includes a total of \$8.5 million over the next ten years for DASH fleet expansion, which would leave a \$42.2 million deficit (about 65 buses). The total ten-year funding shortfall is \$46.4 million for all DASH bus purchases. See Attachment 1 for a detailed spreadsheet of these ten-year estimated costs.

In order to help offset the FY 2012 funding shortfall of \$2.58 million for the DASH fleet replacement program, in Budget Memo #20 City staff recommended that City Council reprogram the \$2.45 million in Eisenhower Avenue Widening Urban Funds previously planned for the Eisenhower Avenue Metro Platform Extension (\$0.45 million) and BRAC area

intersection improvements (\$2.0 million). However, at this time the balances are no longer required for those respective purposes as the Eisenhower Platform project has been delayed indefinitely and the Federal Government has just this week provided sufficient funding for the BRAC area intersection improvements. This action would still leave a 10-year shortfall of approximately \$1.75 million for the replacement program.

The other major cost component of the DASH ten-year plan is the new City operating subsidy associated with the expansion of service (and the bus fleet). The subsidy increase would grow as service is added consistent with DASH's 10-year plan, from approximately \$1.8 million in FY 2013 to \$12.0 million in FY 2021. These cost estimates are net of assumed revenues generated from the additional service (i.e., the estimate includes the impact of increased ridership and fare revenues). The current proposed Transportation Add-on Tax project list (described in Budget Memo #10) includes \$1.3 million to \$1.9 million per year in funding for expanded DASH operating costs. Because each new service offering is unique (different operating hours and miles), there is not a specific "operating cost per expansion bus" that can be accurately stated. Attachment 2 to this memorandum shows the detailed plan provided by ATC for expanding service by year through FY 2021.

Other Operational and Policy Impacts

The current City practice assumes any new DASH bus purchased, either replacement or expansion, will utilize hybrid technology. This practice involves a larger initial capital investment with some offsetting operational savings over the useful life of the bus. Overall, there are three types of full-size buses that the City could choose to purchase: A hybrid bus is estimated to cost \$650,000; a clean diesel bus is estimated to cost \$450,000; and a refurbished DASH bus at the end of its useful life costs an estimated \$155,000. The new hybrid and diesel buses have a useful life of about 12 years, whereas the refurbished DASH bus may only last about 4-5 years. The funding shortfall amounts described in the previous section assume the continuation of the current practice of purchase hybrid buses. However, with currently available resources for the replacement of the existing fleet, DASH will quickly fall behind. The City looks at using a combination of new and refurbished buses over the next couple of years in order to stay up-to-date on the replacement program.

The initial capital outlay required for DASH buses is only one side of the cost equation. The three types of buses each have different operating cost impacts based on fuel consumption and maintenance needs. The lifecycle cost comparison of diesel and hybrid buses is described in detail in Budget Memo # 67.

Another issue related to the DASH expansion plan is the capacity of the new DASH facility. The recently opened facility is designed to accommodate up to 96 full size DASH buses. The facility design and site plan also allow for potential future expansion of the facility to handle an additional 32 buses, for a total of 128 buses. No funding is currently available or planned for an

expansion, and no cost estimates have yet been developed for such a project. If the expansion plan proposed by DASH is followed, the facility would be at capacity by FY 2015. Beyond that, the City would either need to consider expanding the facility or storing some DASH buses outdoors. However, even with an expanded facility, the proposed DASH plan would eventually result in an over-capacity facility by FY 2019. At that point, the City would have to begin storing buses outdoors.

It should be noted that the 10-year service plan will be subject to study and possible amendment in FY 2012. The creation of high capacity transit corridors will also have significant impact on this 10-year plan, depending on who ultimately provides the service (DASH or WMATA).

ATTACHMENT: 1 – Alexandria Transit Company 10-year Service Expansion Plan

ATTACHMENT 1

PRELIMINARY ATC TRANSIT SERVICE EXPANSION PLAN – 10 YEARS

YEAR	SERVICE	PEAK FREQUENCY	ADDITIONAL PEAK BUSES	ESTIMATED TOTAL COST (FY 12 DOLLARS)	ESTIMATED SUBSIDY COST (FY 12 DOLLARS)	ESTIMATED CAPITAL COSTS
2012	Increased Frequency - AT8	10	2	\$227,000	199,000	\$1,300,000
	Increased Frequency - AT2	10	4	539,000	493,000	2,600,000
	Increased Frequency - AT1	15	4	480,000	436,000	2,600,000
	Mark Center / Potomac Yard Crosstown Route (weekday)	30	3	680,000	590,000	1,950,000
	Increase Frequency - AT10 Midday	30	0	136,000	125,000	0
	Totals			13	\$2,062,000	1,843,000
	King Street Trolley	20	3	\$626,000		N/A

YEAR	SERVICE	PEAK FREQUENCY	ADDITIONAL PEAK BUSES	ESTIMATED TOTAL COST (FY12 DOLLARS)	ESTIMATED SUBSIDY COST (FY12 DOLLARS)	ESTIMATED CAPITAL COSTS
2013	Mark Center / Potomac Yard Crosstown Route (Saturday)	45	0	\$97,000	\$87,000	
	Mark Center / Potomac Yard Crosstown Route (Sunday)	45	0	\$86,000	\$78,000	
	Potomac Yard – Landmark Crosstown Route (weekday)	60	2	\$305,000	\$263,000	\$1,300,000
	Mark Center/Potomac Yard Crosstown	15	6	1,338,000	1,161,000	3,900,000
	TOTAL			8	\$1,826,000	\$1,589,000

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2014						
	Increased Frequency on AT5	15	3	\$427,000	\$388,000	\$1,950,000
	Increased Frequency Potomac Yard/Mark Center/Landmark Crosstown Route (weekday)	15	5	\$1,264,000	\$1,125,000	3,250,000
	Potomac Yard – Landmark Crosstown Route (Saturday)	60	0	190,000	181,000	
	Potomac Yard – Landmark Crosstown Route (Sunday)	60	0	135,000	130,000	
	TOTAL		8	\$2,016,000	\$1,824,000	\$5,200,000

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2015	Increased Frequency on AT10	15	2	\$225,000	\$195,000	\$1,300,000
	Increased Frequency on AT3	15	1	\$140,000	\$110,000	650,000
	Increased Frequency on AT4	15	1	\$30,000	\$137,000	650,000
	TOTAL		4	\$395,000	\$442,000	\$2,600,000

YEAR	SERVICE	PEAK FREQUENCY	ADDITIONAL PEAK BUSES	ESTIMATED COST (FY12 DOLLARS)	ESTIMATED SUBSIDY COST (FY12 DOLLARS)	ESTIMATED CAPITAL COSTS
2016	Increased Frequency on AT6	15	4	\$490,000	\$450,000	\$2,600,000
	Increased Frequency on AT7	15	4	460,000	\$430,000	2,600,000
	TOTAL		8	\$950,000	\$880,000	\$5,200,000

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YEAR	SERVICE	PEAK FREQUENCY	ADDITIONAL PEAK BUSES	ESTIMATED TOTAL COST (FY12 DOLLARS)	ESTIMATED SUBSIDY COST (FY12 DOLLARS)	ESTIMATED CAPITAL COSTS
2017	Old Town Circulator (weekday)	15	6	\$731,000	\$574,000	\$3,900,000
	Old Town Circulator (Saturday)	30	0	148,000	130,000	
	Old Town Circulator (Sunday)	30	0	92,000	76,000	
	Van Dorn Metro – Shirlington Crosstown Route (weekday)	30	3	550,000	\$473,000	1,950,000
	Van Dorn Metro – Shirlington Crosstown Route (Saturday)	45	0	\$94,000	\$84,000	
	Van Dorn Metro – Shirlington Crosstown Route (Sunday)	45	0	\$90,000	\$82,000	
	TOTAL			9	\$1,705,000	1,419,000

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YEAR	SERVICE	PEAK FREQUENCY	ADDITIONAL BUSES	ESTIMATED TOTAL COST (FY12 DOLLARS)	ESTIMATED SUBSIDY COST (FY12 DOLLARS)	ESTIMATED SUBSIDY (FY11 DOLLARS)
2018	Eisenhower East Circulator (weekday)	10	4	\$618,000	\$558,000	\$2,600,000
	Eisenhower East Circulator (Saturday)	30		40,000	\$32,000	
	Eisenhower East Circulator (Sunday)	30		39,000	\$34,000	
	Potomac Yard Circulator (weekday)	15	4	500,000	\$446,000	2,600,000
	Potomac Yard Circulator (Saturday)	60		42,000	\$37,000	
	Potomac Yard Circulator (Sunday)	60		39,000	\$36,000	
	TOTAL			8	\$1,278,000	\$1,143,000

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YEAR	SERVICE	PEAK FREQUENCY	ADDITIONAL PEAK BUSES	ESTIMATED TOTAL COST (FY12 DOLLARS)	ESTIMATED SUBSIDY COST (FY12 DOLLARS)	ESTIMATED CAPITAL COSTS
2019	Braddock Metro / Lincolnia Crosstown Route (weekday)	30	4	\$641,000	\$561,000	\$2,600,000
	Braddock Metro / Lincolnia Crosstown Route (Saturday)	45	0	107,000	96,000	
	Braddock Metro / Lincolnia Crosstown Route (Sunday)	45	0	95,000	\$90,000	
	Landmark / Van Dorn Circulator (weekday)	15	4	722,000	607,000	2,600,000
	Landmark / Van Dorn Circulator (Saturday)	30	0	105,000	\$95,000	
	Landmark / Van Dorn Circulator (Sunday)	45	0	55,000	\$48,000	
	Cameron Station Peak Circulator (weekday)	15	2	284,000	\$254,000	1,300,000
	TOTAL			10	\$2,009,000	\$1,751,000

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YEAR	SERVICE	PEAK FREQUENCY	ADDITIONAL PEAK BUSES	ESTIMATED TOTAL COST (FY12 DOLLARS)	ESTIMATED SUBSIDY COST (FY12 DOLLARS)	ESTIMATED CAPITAL COSTS
2020	Increased Frequency on Potomac Yard / Landmark Crosstown Route (weekday)	15	4	\$1,264,000	\$1,112,000	\$2,600,000
	TOTAL		4	\$1,264,000	\$1,112,000	\$2,600,000
2021	Increased Frequency on Southern Towers / Potomac Yard Crosstown Route (weekday)	15	3	\$326,000	\$296,000	\$1,950,000
	Increased Frequency on Van Dorn / Shirlington Crosstown Route (weekday)	15	3	\$352,000	\$322,000	1,950,000
	TOTAL		6	\$678,000	\$618,000	\$3,900,000
	NEW SERVICE EXPANSION GRAND TOTAL (w/o King Street Trolley)		76	\$14,183,000	\$12,621,000	\$50,700,000