



**Metro**

**25**

**FINANCE AND BUDGET COMMITTEE  
MAY 19, 2005**

**PROJECT: TELECOMMUNICATION TRANSMISSION REPLACEMENT PROJECT**

**ACTION: APPROVE LIFE OF PROJECT BUDGET**

**RECOMMENDATION**

Establish a life of project budget for the Telecommunication Transmission Replacement Project in the amount of \$9,541,200.

**RATIONALE**

In January 2005 the Board adopted the FY06 Financial Standards, which require that all capital projects with expenditures greater than \$5 million be approved separately by the Board. The Telecommunication Transmission Replacement Project will be a five-year project, beginning in FY06.

The requested funding is for the procurement of new telecommunication equipment, professional services and Metro labor to construct a robust Wide Area Network (WAN) backbone infrastructure. The project will involve upgrading, expanding and increasing the transmission bandwidth capacity of eleven (11) hilltop and thirteen (13) division microwave radio sites, and the provisioning of multi-service fiber optic access equipment to link Metro facilities. The upgrade and increased bandwidth capacity of these microwave and fiber optic systems are essential to the continued operation of mission critical Bus and Rail, voice and high-speed data communications, e.g. ATMS, M3, UFS, PBX and Enterprise client/server applications. Additionally, the WAN will have the capacity to transport video content to support applications such as security video networking and training programs for staff located at various Metro facilities.

The current Metro microwave radio infrastructure is inadequate to support the mission critical high-speed electronic communications needs of the agency as it has exceeded the end of its useful life and maintenance parts are scarce or no longer available. The existing microwave system was originally installed in 1982 and underwent a partial upgrade in 1989.

Most of the bus divisions still have the original equipment. The Telecommunication Transmission Replacement Project will reduce, in half, the yearly expenditure of \$2.1 million for leased telecommunication services currently being provided by the local telephone companies. The new equipment is projected to have a useful life of 15 years to support current and anticipated future needs.

The projected cost for this project is based on estimates for available industry standard equipment and for professional services. Metro labor costs includes in-house engineering and craft labor requirements.

### **FINANCIAL IMPACT**

Funds for this project have been included in the FY06 budget. The project will be funded with local funds. Since this is a multi-year project, the Executive Officer and Chief Information Officer will be responsible for budgeting funds in future years. A detailed financial plan is included in Attachment A.

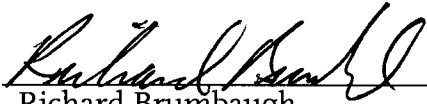
### **ALTERNATIVES CONSIDERED**

The alternative for not upgrading or replacing telecommunication transmission equipment is to continue to lease WAN services from the local telephone company. This is not recommended for two reasons. First, as the need for more capacity grows to support new services such as the video applications described earlier, so will the overall cost of leased circuits. Second, with a wide area network based solely on leased circuits, the agency is vulnerable to the performance of the telecommunications carrier. A major disruption in the carrier's ability to perform, such as during a natural disaster or labor dispute, could put the agency at substantial risk in its ability to maintain its vital communication links.

### **ATTACHMENT A**

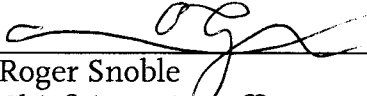
Financial Plan

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Richard Brumbaugh  
Chief Financial Officer



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Roger Snoble  
Chief Executive Officer

ATTACHMENT A

FINANCIAL PLAN

Project Number: 207010 - Telecommunication Transmission Replacement Project

Project Costs	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	5Yr Total
Labor	281,800	889,300	1,082,800	1,105,700	748,300	\$4,107,900
Equipment Acquisition	0	800,000	819,500	1,125,500	1,125,500	\$3,870,500
Material & Supplies	19,700	11,100	0	13,600	10,000	\$54,400
Professional Services	150,000	207,600	191,200	309,100	650,500	\$1,508,400
<b>Project Total</b>	<b>\$451,500</b>	<b>\$1,908,000</b>	<b>\$2,093,500</b>	<b>\$2,553,900</b>	<b>\$2,534,300</b>	<b>\$9,541,200</b>