Item #5

MEMORANDUM

April 14, 2005

TO: Transportation Planning Board

FROM: Ronald F. Kirby RFK
Director, Department of
Transportation Planning

RE: Letters Sent/Received Since the March 16 TPB Meeting

The attached letters were sent/received since the March 16 TPB meeting. The letters will be reviewed under Agenda #5 of the April 20th TPB agenda.

Attachments

Ron Kirby

From: Ron Spalding [rspalding@mdot.state.md.us]
Sent: Thursday, April 14, 2005 10:45 AM
To: Ron Kirby
Cc: Kellie Gaver; Mike Nixon; Marsha Kaiser
Subject: ICC Funding plan
Importance: High

Ron, attached is the ICC Funding Plan as approved by the Maryland General Assembly. This updates the current funding plan for the ICC CLRP/TIP submittal. If you have any questions please call me or Kellie Gaver.

ICC CONCEPTUAL FUNDING PLAN
($millions)

Components *(Funding Sources)*	**Prior Funding Plan**	**Current Funding Plan**	**Comments**
Total Cost	$1,800 - $2,100 $300 $2,100 - $2,400	$1,800 - $2,100 $300 $2,100 - $2,400	- Range in costs for alternatives; 2004 values; rounded to nearest $100 million - (Inflation adds approx. $100 million per year; approximately $300 million total) - Total; rounded to nearest $100 million; $2.4 b. assumed for finance plan purposes.
GARVEE Bonds *(Federal Funds)*	$1,000	≤ $750	- $750 million is maximum amount of GARVEES to be issued. - Future federal highway funds pay debt service - GARVEE bond term: 12 years maximum (was previously 15 year) - Maximum debt service is approx. $85 million per year. (Ramps up to maximum level over 5-6 years.) - $85 million is approx. 16% of expected average annual federal highway funding ($530 million + per year)
MdTA Bonds *(MdTA revenues)*	$1,200	$1,200	- Toll-revenue bonds are not fixed; but will be reduced if project cost <$2.447 b. - ICC would be part of Maryland Transportation Authority's system of toll highways, bridges, tunnels. - Authority issues bonds backed by Authority revenues. - Toll revenues from all facilities are pooled, supporting the total system. - ICC tolls will assist in managing traffic as well as project financing. - ICC tolls expected to pay for approximately $400 - $600 m. of $1,200 m.
Pay-As -You Go *(MDOT - TTF)* *(General Fund)*	$150	≥ $444.913	- Increased pay-go contributions offset lower GARVEE bonds and special fed. funds. - Previously $150 m. from TTF; now ≥ $180 m. from TTF - $264.913 m. to be transferred from General Fund - General Fund (payback of prior transfer from TTF) is guaranteed.
Pay-As-You-Go *(Federal Funds)*	$50	≥ $10	- Either special or regular federal funds directed to project. - Goal remains to authorize and/or appropriate up to $50 m. in special federal funds.

April 12, 2005

Mr. Ronald Kirby
Director, Transportation Planning
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, NE, Suite 300
Washington, DC 20002-4239

Dear Mr. Kirby:

As you are aware, WMATA has been playing an active role in the FY 2005 Urban Area Security Initiative (UASI) Funding discussions as an agency and as part of ESF-1 (Transportation). Lora Byala of my staff participated in a number of the initial funding discussions among the ESFs and most recently Deborah Lipman represented me at the March 22 Chief Administrative Officers (CAO) meeting where the final CAO priorities for funding were assigned.

The CAO recommendations rated two of RESF-1's three project submissions as "Priority 2." These projects, Development of Regional Capabilities to Improve Transportation System Management (CapCom) and the WMATA Backup Operations Control Center (OCC), would only receive funding if additional funding becomes available.

The WMATA Backup OCC project is of utmost importance to the security of the entire region. It will provide a critical piece in WMATA's infrastructure that is required to provide redundancy and enhanced reliability to ensure the survivability of critical operations control functions to the regional Metrorail system. Without the use of the Operations Control Center (OCC), WMATA and the region will forfeit a critical first response and evacuation asset during an emergency situation. If WMATA's OCC is disabled or had to be evacuated it will be essentially impossible to maintain rail service with any degree of reliability. More information on the project is attached to this letter.

It is our understanding that at the March 22 meeting the CAOs requested that the TPB provide an endorsement of the WMATA Backup OCC project, as it has for CapCom. WMATA requests that the TPB indicate its support for the project, either through a letter or resolution, so that should funding become available the CAOs will be able to provide funding.

Washington Metropolitan Area Transit Authority

600 Fifth Street, NW
Washington, DC 20001
202/962-1234

By Metrorail:
Judiciary Square—Red Line
Gallery Place-Chinatown—
Red, Green and
Yellow Lines
By Metrobus:
Routes D1, D3, D6, P6,
70, 71, 80, X2

A District of Columbia, Maryland and Virginia Transit Partnership

We greatly appreciate you providing this information to the TPB for their full consideration. If you have any questions please contact Deborah Lipman at 202/962-1003.

Sincerely,

Richard A. White
General Manager/Chief Executive Officer

enclosure

Proposal Summary

Experience has shown that transit systems and transit operations are a favorite target of terrorist. The current design of the Washington Metropolitan Area Authority's (WMATA) communication and train control systems is extremely vulnerable to single point failure. Incidents of this nature could totally incapacitate or severely limit WMATA's ability to operate for weeks or months at a time.

This proposal for $6million is for the design, procurement and installation of fiber optics equipment needed to provide redundancy and increased reliability to ensure the survivability of critical operations control functions to the Washington DC regional metrorail system. The intent of this effort is to ensure that the fiber optic network design is self-healing, to the greatest possible extent, and that no single-point of failure will incapacitate the overall rail system. This fiber optics equipment is an essential piece of the backbone communications components for putting in place a fully functional backup Operations Control Center (OCC). Putting in place a backup OCC will allow WMATA to address a single point of failure in its critical operational functions. The enhanced fiber optic configuration achieved through this request will also improve the communications reliability of the existing OCC.

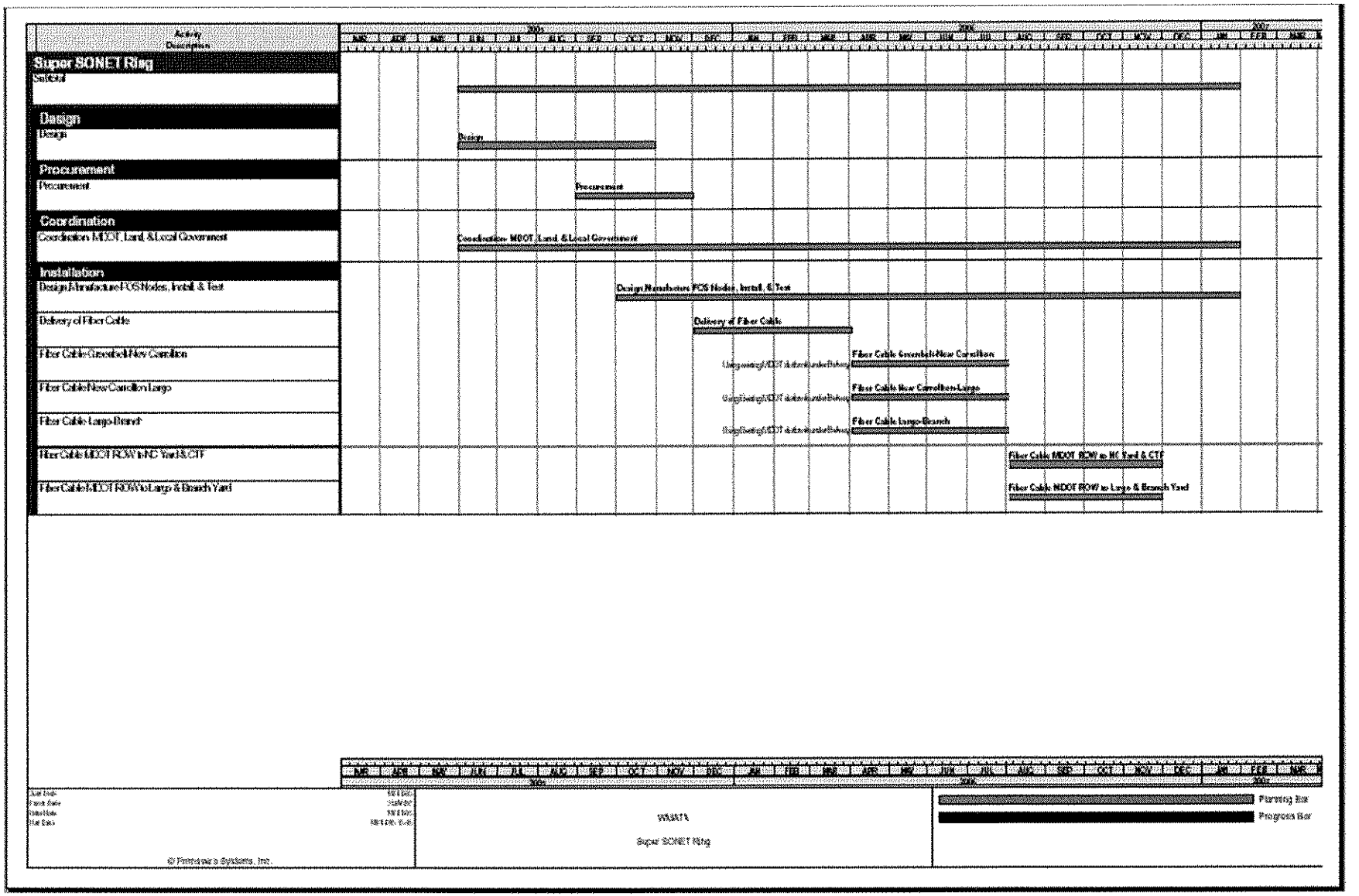
WMATA lacks a redundancy in its critical operational control functions. Without the use of the Operations Control Center (OCC), WMATA and the region would forfeit a critical first response and evacuation asset during an emergency situation. If WMATA's OCC were disabled or had to be evacuated due to a number of scenarios it would be essentially impossible to maintain rail service with any degree of reliability. Without the use of the OCC, WMATA will be unable to communicate directly with their trains and customers, and monitor data flowing from their chemical detection system, thereby reducing the ability to execute in quick fashion actions to get trains and passengers waiting in stations out of harms way as an incident is unfolding. The experience in Madrid, where multiple bombs were detonated over several minutes, illustrates the importance of having the capacity to shut down and evacuate a transit system exposed to multiple attacks as quickly as possible in an effort to reduce casualties.

This request reflects the additional responsibility that WMATA has to its riders and to the region to reduce the vulnerability of the Metro system and to enhance the ability to serve the area in the event of an emergency. During the rush hour, 30 percent of the region's commuters rely on Metrorail service, and half of peak period riders are federal employees. A recently completed security risk assessment of WMATA conducted by the Department of Homeland Security's Office for Domestic Preparedness (ODP) ranks the building that houses the OCC as WMATA's most critical asset and most at risk based on vulnerability and consequence rankings of all WMATA assets. The assessments states that "it is paramount that WMATA continue the development of a backup OCC . . . Implementation of a backup OCC would significantly reduce the risk of each of the scenarios developed for this asset." The Federal Transit Administration (FTA) also identified WMATA's lack of redundancy in critical operations areas as a significant vulnerability in a security readiness assessment conducted in 2002.

Project Goals, Objectives and Implementation Steps

1. *GOAL - NCR Eight Commitments of Action - #5 Infrastructure Protection* – transportation and transit specifically is one of the NCR's most critical assets, critical for federal continuity of government operations and emergency response/evacuation during a terrorist event.
   - 1.1. Objective 1 – Provide enhanced reliability, continuity and redundancy for critical operations control system communications
     - 1.1.1. Implementation Step 1 – Design the Super Sonet Ring to provide necessary redundancy for the current and future Operations Control Center (OCC). Design will include testing procedures necessary to measure and evaluate success of the ring topology to transmit rail information. Verification that MDOT has existing conduit from Greenbelt to Branch Avenue Station under the Beltway will be necessary.
     - 1.1.2. Implementation Step 2 – Obtain MDOT authorization to utilize conduit under Beltway. Procure and install fiber cables and fiber optic equipment for the Super SONET Ring from Metro's Greenbelt Station through New Carrollton, Addison Road and into the Branch Avenue Station utilizing third party contract(s) as well as in-house forces.

The proposed project schedule with task and activities follows.


Activity Description
Super SONET Ring
SuperSONET
Design
Design
Procurement
Procurement
Coordination
Coordination MDOT, Land, & Local Government
Installation
Design Manufacture FOS Nodes, Install, & Test
Delivery of Fiber Cable
Fiber Cable Greenbelt-New Carrollton
Fiber Cable New Carrollton-Largo
Fiber Cable Largo-Branch
Fiber Cable MDOT ROW to MC Yard & CTF
Fiber Cable MDOT ROW to Largo & Branch Yard
Planning Bar
Progress Bar
© Primavera Systems, Inc.

Project Description

Under this $6million grant, WMATA will design, procure and install part of the Super SONET Ring necessary to provide redundancy and increased reliability to ensure system operations, security and safety. SONET FOS (Synchronous Optical Network Fiber Optic System) is a standard for optical telecommunications transport. The system-wide Fiber Optics and Carrier Transmission System design serve as the transport medium to support the transmission of current and future rail system information, voice and data communications (manage train operations). The intent of this effort is to ensure that no single point of failure will incapacitate the overall system communications, reducing or interrupting rail capacity.

The basic design of the Fiber Optics System (FOS) is to provide a ring topology that will allow a variety of rail information to be sent through the system to the current and future Operations Control Center (OCC), providing redundancy and increased reliability to ensure system security and safety. There are a total of 9 rail routes that have or will have their own FOS ring. Some of the equipment to be purchased under this grant will allow the installation of a super ring that will connect three (3) of the individual route rings, providing a FOS network with a true redundancy.

The route rings will carry four types of information (Telephone Trunks, MISV data, Local Telephones, and Information/Control Data for the current OCC at Jackson Graham Building and the pre existing site for the backup OCC at the Carman Turner Facility). Each of the route rings, the Jackson Graham Building and Carman Turner Facility will eventually be connected to the super ring. The Jackson Graham Building will be changed from being the center point of all communications on the route rings to being a node on a super ring.

WMATA's request for this project is based on a DHS/ODP ***risk-based*** security assessment, in which the methodology parallels section 10 of the *HSPD-8 National Preparedness* and *HSPD-7 Critical Infrastructure Identification, Prioritization, and Protection*. The ODP assessment ranks the building that houses the OCC as WMATA's most critical asset and most at risk based on vulnerability and consequence rankings of all WMATA assets. The assessment states that "it is paramount that WMATA continue the development of the backup OCC." This assessment identified the need and WMATA security plans have prioritized this critical need. WMATA has begun the process to actively implement necessary infrastructure protection.

WMATA has applied its FY03 and FY04 UASI transit grants, totaling $6.5 million, towards design and initiation of fiber optic and radio communications procurement activities for the backup OCC. WMATA anticipates using future ODP rail/transit grants towards furthering the development of the backup OCC as well as requesting additional funds directly through the congressional appropriations process. To date, however, Congress has not been willing to direct funds in the DHS Appropriations bill to address specific critical infrastructure protection needs.

Putting in place a fully functional backup OCC with enhanced regional communications capabilities with potential applications for other regional partners addresses two priorities focused on strengthening EOC/transportation communications coordination (#2 and #9) identified by the CAOs in July 2004 as top UASI priorities. It also falls under the fourth (Infrastructure Protection) of the "Eight Commitments to Action" put into place by the NCR Senior Policy Group in August, 2002. In addition, the Department of Homeland Security's fact sheet that accompanied the January 5, 2005 release of the *National Response Plan* lists "Protect and restore critical infrastructure and key resources" in the list of National Response Plan Incident Management Priorities.

Carroll H. George

7528 COXTON CT.
ALEXANDRIA, VA 22306

April 8, 2005

Mr. Phil Mendelsohn, Chairman
Greater Washington Transportation Planning Board
777 North Capitol Street NE Suite 300
Washington DC, 20002

Brief: By **ELIMINATING THE MERGE** of the dense Route 1 traffic into the dense Beltway traffic at the Wilson Bridge work site, commuters who have no other choice of route, can approach the bridge non stop at reasonable speeds at PM peak, and the bridge can accommodate like 50% more traffic.(See attached description of the design proposal)

Dear Chairman Mendelsohn,

First let's reveal 2 hidden multipliers of that congestion chaos.

To avoid the 2 miles of traffic regularly backed up to Telegraph Road on the Beltway outer loop during the long 3 to 7 PM peak, the Woodrow Wilson Bridge Improvement Study showed most of the traffic exiting Telegraph Road to Alexandria in the morning is bypassing that 2 miles of congestion by returning in the evening via Route 1. (Morning Telegraph Road to Alexandria peak-1050v/h, from Alexandria evening peak at Telegraph-200v/h, a difference of 850v/h.)

Also Huntington is a convenient low density bypass of that congestion from Telegraph Road to Route 1, making the 3 evening approaches to the only 3 lanes from Virginia to Maryland south of central Washington the largest collection of daily stop, idle, and go, gross pollution generating, now quite expensive gas guzzling, valuable personal time wasting and frustrating home bound trips.

If Alexandria City and Prince George's County executives knew how to get that grossly polluting traffic for many hours moving out of Alexandria at uniform reasonable speeds to Prince George's County so the bridge could accommodate perhaps as much as 50% more commuters, could they convince the functional authorities, with help from others listed below to at least schedule a test at the worksite?

Considering the years of construction extreme hassle ahead at that work site, surely constituances of those listed below would look most favorably on them going on public record encouraging the functional authorities to schedule a test of that most promising much safer traffic control development since the origination of the Interstate System that can be done so quickly without funding.

Letters with attached test design to:

Gov. Mark R. Warner
Gov. Robert L. Ehrlich
Sen. John W. Warner
Sen. George Allen
Sen. Paul S. Sarbanes
Sen. Barbara A. Mikulski
Rep. James P. Moran
Rep. Steny H. Hoyer
National Highway Traffic Safety Administration
Alexandria City, Prince George's & Fairfax Counties' Elected Executives
Woodrow Wilson Bridge Project VA & MD Chief Executives
Chairman, Greater Washington Transportation Planning Board

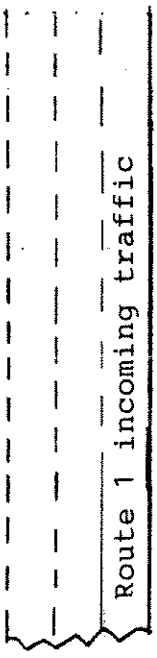
Sincerely,

Carroll George

Carroll George
Research & Development
Mechanical Design
Professional Engineer

HOW TO ELIMINATE STOP-IDLE-GO CONGESTION AT THE WILSON BRIDGE WORK SITE AT PM PEAK - ALL TRAFFIC MOVING AT REASONABLE SPEEDS

* Fig. 3-6 of the Wilson Bridge Improvement Study reveals that the PM peak traffic entering from Route 1 is 1850v/h, 32% of the 6000v/h eastbound on the bridge. Armed with that information, it is but simple logic and reasoning that all can readily understand, that the merging of Route 1 traffic can and should be eliminated by restricting the through traffic to the two left lanes and the Route 1 traffic to have exclusive use of the right lane with no interaction whatsoever between the two extremely dense traffics.



* Display signs overhead on the Telegraph Road ramp overpass a numbering of the 4 lanes from right to left. Advise drivers lanes 3 & 4 are through lanes to the bridge. Lanes 1 & 2 end at Route 1.

* There will be 3 lane drops, two for combining the three Route 1 lanes and 1 for Beltway lanes 2 & 3. All merges then will be combining 2 lanes of traffic with parrallel and equal approach infrastructure and physically restrained at merge to a near zero speed differential.

Those merges can be designed completely free of the stressful and hazardous speed differential between stopped and speeding drivers that per a 2 year study recorded 4,447 reported collisions, over 6/day, on the Capital Beltway, 85% being within 1,000ft. of entrance ramps, all resulting from speed differential hazards.

* To design the safest, least stressfull, and most efficient operating merge possible that is invulnerable to varient driver behavior, there must be a lane line in the taper to legally and visably to drivers establish which lane has the indisputable right of way, which driver sees both lane lines presenting a continuous open lane through the taper, and which driver sees a broken lane line that must be crossed to reach the common lane ahead.

* Since common law requires anyone seeking to merge into and from an ending lane into an adjacent lane to yield even to the point of stopping in dense traffic creating the speed differential safety hazard, the ending lane must not end but be made continuous by the lane line in the taper so there will never be any reason for a driver to stop.

* To guarentee that there will always be room for the other lane driver to merge in behind the same speed driver just yielded to, highly visible pavement markers can be painted at appropriate distances as guides that drivers are instructed by signage they must see 2 of before passing over the second one.

Video technology at all three tapers can if deemed advisable provide both a psychological and record control of the follow distance feature at the merge.

Given that such a design change in the traffic control at that major work site could eliminate the gross congestion both in Alexandria and on the Beltway caused by merging Route 1 with Beltway traffic, eliminating all the stopping, idling, accelerating, gross pollution generating, gross waste of now expensive gas, and frustrating stressful trips home for the thousands who have no alternate route available, functional authorities would be irresponsable not to at least test a concept that is potentially so beneficial and far safer than the presently employed system.

Carroll George

Carroll George
Research & Development Mechanical Design Engineer