GOVERNMENT OF THE DISTRICT OF COLUMBIA

APPLICANT PROFILE

FY 2005 Homeland Security Grant Program: Urban Areas Security Initiative	
PROJECT TITLE:	**WMATA Backup Operations Control Center / Enhancement of Existing OCC Communications Capabilities**
EMERGENCY SUPPORT FUNCTION:	**Transportation, Project 1-C**
PROJECT PERIOD:	**July 1, 2005 - December 31, 2006**
PROJECT SYNOPSIS:	**This proposal is to design, procure, and install Phase I of the SUPER SONET RING which is necessary to provide redundancy and increased reliability for enchanced metrorail security and safety. Transit reliability has regional implications in the event of emergency evacuations, communications, and recovery.**
IMPLEMENTING JURISDICTION:	**N/A: to be implemented by the Washington Metropolitan Area Transit Authority (WMATA) on behalf of the region.**

AGENCY: Washington Metropolitan Area Transit Authority
ADDRESS: 600 Fifth Street, NW
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AUTHORIZATION OFFICIAL

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Signature of Authorized Official **Date**

WMATA RESPONSE TO REQUEST FOR APPLICATION #05 HSGP-UASI

FY 2005 Homeland Security Grant Program
Urban Areas Security Initiative

WMATA Backup Operations Control Center
Submitted by WMATA
600 Fifth Street, NW
Washington, DC 20001

March 1, 2005

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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.

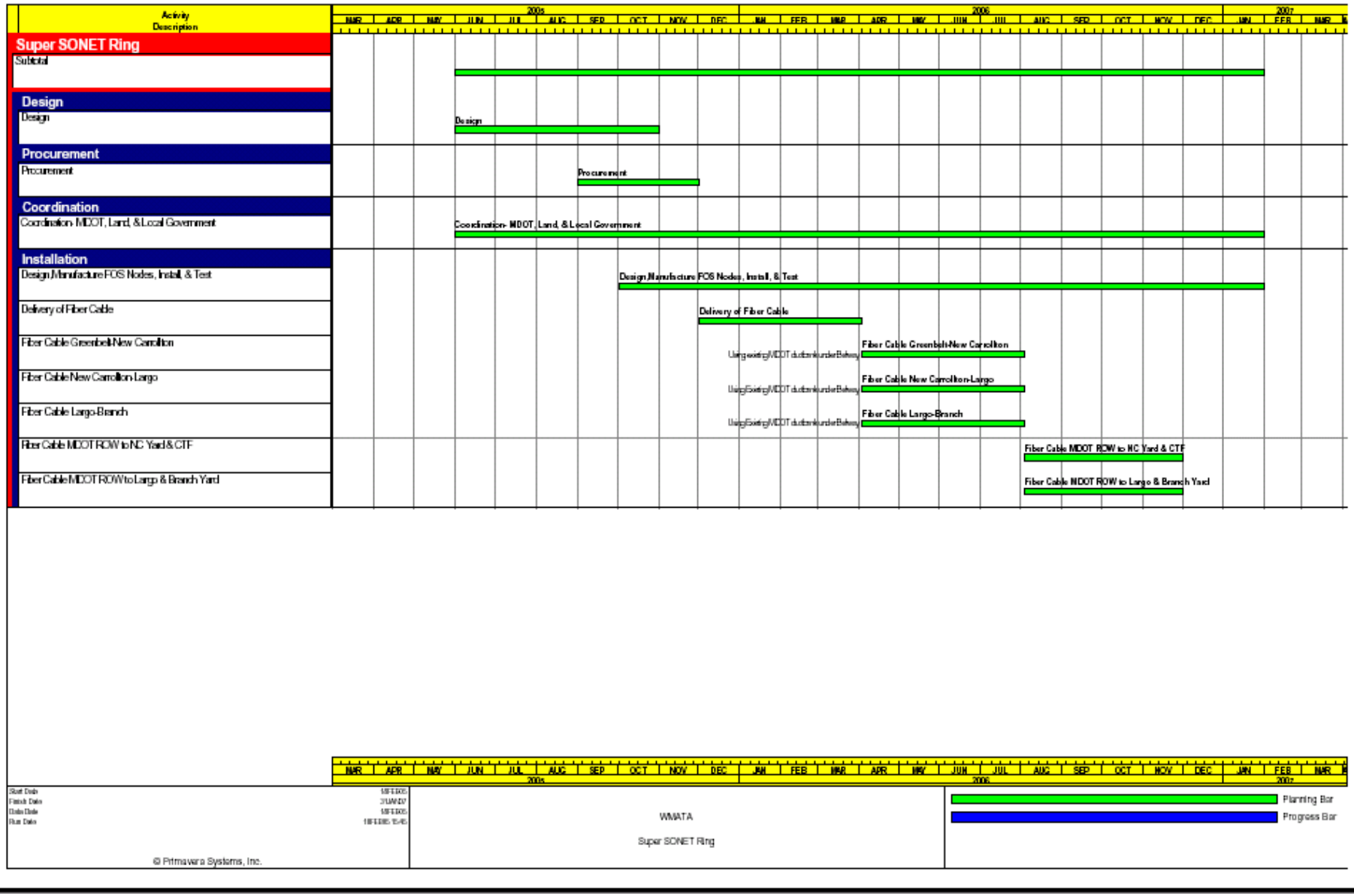
WMATA lacks a redundancy in its critical operational control functions. Without the use of the Operations Control Center (OCC), WMATA and the region would forfeit a critical first response and evacuation asset during an emergency situation. If WMATA's OCC were disabled or had to be evacuated due to a 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
2005
2006
2007
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR
Super SONET Ring
Subtotal
Design
Design
Design
Procurement
Procurement
Procurement
Coordination
Coordination- MDOT, Land, & Local Government
Coordination- MDOT, Land, & Local Government
Installation
Design /Manufacture FOS Nodes, Install, & Test
Design /Manufacture FOS Nodes, Install, & Test
Delivery of Fiber Cable
Delivery of Fiber Cable
Fiber Cable Greenbelt-New Carrollton
Using existing MDOT ductbank under Beltway
Fiber Cable Greenbelt-New Carrollton
Fiber Cable New Carrollton-Largo
Using Existing MDOT ductbank under Beltway
Fiber Cable New Carrollton-Largo
Fiber Cable Largo-Branch
Using Existing MDOT ductbank under Beltway
Fiber Cable Largo-Branch
Fiber Cable MDOT ROW to NC Yard & CTF
Fiber Cable MDOT ROW to NC Yard & CTF
Fiber Cable MDOT ROW to Largo & Branch Yard
Fiber Cable MDOT ROW to Largo & Branch Yard
Start Date
Finish Date
Data Date
Run Date
JUAN07
WMATA
Super SONET Ring
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.

Organization, Experience, and Qualifications

The Washington Metropolitan Area Transit Authority (WMATA) constructed its existing Operations Control Center (OCC) in 1976 and has operated and maintained it for over 29 years. During these years, WMATA has successfully managed its critical operational control functions at this facility. In addition to WMATA's expertise in managing and maintaining its existing OCC, WMATA has played a major role in many communications and technology developments. WMATA worked with regional transportation partners on the development of a regional transportation partner emergency communication network plan. Also, WMATA was the first transit agency to implement the smartcard technology and is leading the region in IT integration efforts, as well as installing a radio upgrade system throughout the 106 mile metro rail and regional bus systems. WMATA's experience with systems and communication technologies makes the organization well qualified to design and successfully implement this redundant ring topology.

A key component of the installation of the Super SONET Ring is access to the metrorail right of way and safety procedures during installation. WMATA personnel are uniquely qualified to provide this force account service. WMATA's staff has extensive knowledge and expertise in fiber optic configuration as they have performed similar installations and configurations in WMATA's existing facilities and right of way. Therefore, WMATA force account installation activities by in-house forces will be utilized to ensure system integrity and safety.

WMATA has extensive experience in the receipt and management of federal funding. Therefore, appropriate procurement, accounting and auditing processes and systems already exist within the organization to ensure efficient and appropriate utilization of federal grants.

WMATA has the operational experience, technological knowledge, financial structure, professional qualifications and project delivery background to successfully implement this project.

Staffing Plan: Sonet Ring

•Proposed staffing patterns:

This project implemented using a variety of communications personnel already on staff that has experience installing fiber throughout the Metrorail system. The Authority has on staff numerous Communications expertise from Project Managers, Field Engineer - Communication, Communications Inspector and Communications technicians. These personnel have installed fiber and other cables throughout the system and are also responsible for maintaining the cables on a daily basis.

•Personnel Record:

Time reported will be maintained using WMATA's existing payroll system. Discrete job number will be created to capture all costs associated with this project. Included will be accurate time reporting by individual on an hourly basis. The payroll system will provide accountability of all project hours expended and the corresponding benefits are posted under different general ledger within the job number. All pertinent personnel records (name, employee number, address, and social security numbers) are maintained in the payroll system. No additional staff will be hired to support this project.

•Qualification:

As stated in the first bullet, WMATA's communications staff have up to 30 years of experience in engineering, installation and maintaining cables, including fiber optics.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF THE DEPUTY MAYOR FOR PUBLIC SAFETY AND JUSTICE

Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements

Applicants should refer to the regulations cited below to determine the certification to which they are required to attest. Applicants should also review the instructions for certification included in the regulations before completing this form. Signature of this form provides for compliance with certification requirements under 28 CFR Part 69, "New Restrictions on Lobbying" and 28 CFR Part 67, "Government-wide Debarment and Suspension (Non-procurement) and Government-wide Requirements for Drug-Free Workplace (Grants)." The certifications shall be treated as a material representation of fact.

1. LOBBYING

As required by Section 1352, Title 31 of the U.S. Code. and implemented at 28 CFR Part 69, for persons entering into a grant or cooperative agreement over $100,000, as defined at 28 CFR Part 69, The applicant certifies that:

(a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the making of any Federal grant, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal grant or cooperative agreement;

(b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete and submit Standard Form - lll, "Disclosure of Lobbying Activities," in accordance with its instructions;

(c) The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers including sub grants, contracts under grants and cooperative agreements, and subcontracts) and that all sub-recipients shall certify and disclose accordingly.

2. DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS (DIRECT RECIPIENT)

As required by Executive Order 12549, Debarment and Suspension, and implemented at 28 CFR Part 67, for prospective participants in primary covered transactions, as defined at 28 CFR Part 67, Section 67.510—

A. The applicant certifies that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, sentenced to a denial of Federal benefits by a State or Federal court, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c.) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application had one or more public transactions (Federal, State, or local) terminated for cause or default; and

B. Where the applicant is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this application.

3. DRUG-FREE WORKPLACE (GRANTEES OTHER THAN INDIVIDUALS)

As required by the Drug Free Workplace Act of 1988, and implemented at 28 CFR Part 67, Subpart F. for grantees, as defined at 28 CFR Part 67 Sections 67.615 and 67.620—

A. The applicant certifies that it will or will continue to provide a drug-free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in The applicant's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

(b) Establishing an on-going drug-free awareness program to inform employees about—

(1) The dangers of drug abuse in the workplace;
(2) The applicant's policy of maintaining a drug-free workplace;
(3) Any available drug counseling, rehabilitation, and employee assistance programs; and

(4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

(d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will—

(1) Abide by the terms of the statement; and

(2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

(e) Notifying the agency, in writing, within 10 calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title to: Office of Grants Management and Development, 717 14th St., NW, Suite 1200, Washington, DC 20005. Notice shall include the identification number(s) of each affected grant;

(f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted—

(1) Taking appropriate personnel action against such an employee, up to and incising termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

(2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;

(3) Making a good faith effort to continue to maintain a drug free workplace through implementation of paragraphs (a), (1), (c), (d), and (e). and (f)

B. The applicant may insert in the space provided below the sites for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city. county, state, zip code)

__Washington, DC region _____

_____

_____

As the duly authorized representative of the applications, I hereby certify that the applicant will comply with the above certifications.

1. Grantee Name and Address:

__Washington Metropolitan Area Transit Authority_____
____600 Fifth Street, NW_____
____Washington, DC 20001_____

2. Application Number and/or Project Name: _WMATA Backup Operations Control Center; Enhancement of Existing OCC Capabilities_____

3. Grantee IRS/Vendor Number: ___52-0847040_____

Harold Bartlett Chief of Staff
Typed Name and Title of Authorized Representative

_____ _____
5. Signature 6. Date

GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF THE DEPUTY MAYOR FOR PUBLIC SAFETY AND JUSTICE

STANDARD ASSURANCES

The applicant hereby assures and certifies compliance with all Federal statutes, regulations, policies, guidelines and requirements, including OMB Circulars No. A-21, A-110, A-122, A-128, A-87; E.O. 12372 and Uniform Administrative Requirements for Grants and Cooperative Agreements - 28 CFR, Part 66, Common Rule, that govern the application, acceptance and use of Federal funds for this federally-assisted project.

Also, the Application assures and certifies that:

1. It possesses legal authority to apply for the grant; that a resolution, motion or similar action has been duly adopted or passed as an official act of The applicant's governing body, authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of The applicant to act in connection with the application and to provide such additional information as may be required.

2. It will comply with requirements of the provisions of the Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 P.L. 91-646 which provides for fair and equitable treatment of persons displaced as a result of Federal and federally-assisted programs.

3. It will comply with provisions of Federal law which limit certain political activities of employees of a State or local unit of government whose principal employment is in connection with an activity financed in whole or in part by Federal grants. (5 USC 1501, et. seq.).

4. It will comply with the minimum wage and maximum hour's provisions of the Federal Fair Labor Standards Act if applicable.

5. It will establish safeguards to prohibit employees from using their positions for a purpose that is or gives the appearance of being motivated by a desire for private gain for themselves or others, particularly those with whom they have family, business, or other ties.

6. It will give the sponsoring agency of the Comptroller General, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the grant.

7. It will comply with all requirements imposed by the Federal-sponsoring agency concerning special requirements of Law, program requirements, and other administrative requirements.

8. It will insure that the facilities under its ownership, lease or supervision which shall be utilized in the accomplishment of the project are not listed on the Environmental Protection Agency's (EPA), list of Violating Facilities and that it will notify the Federal grantor agency of the receipt of any communication from the Director of the EPA Office of Federal Activities indicating that a facility to be used in the project is under consideration for listing by the EPA.

9. It will comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, Public Law 93-234-, 87 Stat. 975, approved December 31, 1976. Section 102(a) requires, on and after March 2, 1975, the purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any Federal financial assistance for construction or acquisition purposes for use in any area that has been identified by the Secretary of the Department of Housing and Urban Development as an area having special flood hazards. The phrase "Federal Financial Assistance" includes any form of loan, grant, guaranty, insurance payment, rebate, subsidy, disaster assistance loan or grant, or any other form of direct or indirect Federal assistance.

10. It will assist the Federal grantor agency in its compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (16 USC 470), Executive Order 11593, and the Archeological and Historical Preservation Act of 1966 (16 USC 569a-1 et. seq.) By (a) consulting with the State Historic Preservation Officer on the conduct of investigations, as necessary, to identify properties listed in or eligible for inclusion in the National Register of Historic Places that are subject to adverse effects (see 36 CFR Part 800.8) by the activity, and notifying the Federal grantor agency of the existence of any such properties, and by (b) complying with all requirements established by the Federal grantor agency to avoid or mitigate adverse effects upon such properties.

11. It will comply, and assure the compliance of all its sub grantees and contractors, with the applicable provisions of Title I of the Omnibus Crime Control and Safe Streets Act of 1968, as amended, the Juvenile Justice and Delinquency Prevention Act, or the Victims of Crime Act, as appropriate; the provisions of the current edition of the Office of Justice Programs Financial and Administrative Guide for Grants; and all other applicable Federal laws, orders, circulars, or regulations.

12. It will comply with the provisions of 28 CFR applicable to grants and cooperative agreements including Part 18. Administrative Review Procedure; Part 20, Criminal Justice Information Systems; Part 22, Confidentiality of Identifiable Research and Statistical Information; Part 23, Criminal Intelligence Systems Operating Policies; Part 30, Intergovernmental Review of Department of Justice Programs and Activities; Part 42, Nondiscrimination/Equal Employment Opportunity Policies and Procedures; Part 61, Procedures for Implementing the National Environmental Policy Act; Part 63, Flood Plain Management and Wetland Protection Procedures; and Federal laws or regulations applicable to Federal Assistance Programs.

13. It will comply, and all its contractors will comply, with the non-discrimination requirements of the Omnibus Crime Control and Safe Streets Act of 1968, as amended, 42 USC 3789(d), or Victims of Crime Act (as appropriate); Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973, as amended; Subtitle A, Title II of the Americans with Disabilities Act (ADA) (1990); Title IX of the Education Amendments of 1972; the Age Discrimination Act of 1975; Department of Justice Non-Discrimination Regulations, 28 CFR Part 42, Subparts C, D, E and G; and Department of Justice regulations on disability discrimination, 28 CFR Part 35 and Part 39.

14. In the event a Federal or State court or Federal or State administrative agency makes a finding of discrimination after a due process hearing on the grounds of race, color, religion, national origin,

sex, or disability against a recipient of funds, the recipient will forward a copy of the finding to the Office for Civil Rights, Office of Justice Programs.

15. It will provide an Equal Employment Opportunity Program if required to maintain one, where the application is for $500,000 or more.

16. It will comply with the provisions of the Coastal Barrier Resources Act (P.L 97-348), dated October 19, 1982, (16 USC 3501 et. seq.) which prohibits the expenditure of most new Federal funds within the units of the Coastal Barrier Resources System.

_____	_____
Print Name	Print Title
_____	_____
Signature	Date

Budget Summary

Budget Category		Amount
A. Personnel	$	125,000.00
B. Fringe Benefits	$	25,000.00
C. Travel	$	-
D. Equipment	$	-
E. Supplies	$	-
F. Consultants/Contracts	$	5,691,600.00
G. Other	$	-
Total Direct Costs	**$**	**5,841,600.00**
H. Indirect Costs	$	158,400.00
TOTAL PROJECT COSTS	**$**	**6,000,000.00**

SONET RING budget
Personnel and Fringe

A. Personnel - List each position by title and name of employee, if available. Show the annual salary rate and the percentage of time to be devoted to the project. Compensation paid for employees engaged in grant activities must be consistent with that paid for similar work within the applicant organization.

Name/Position	Computation	Cost
Project Manager, Communications	25% of first calendar yr, 25% of second calendar year @ $100,000 per year	$ 50,000.00
Field Engineer - Communications	25% of first calendar yr, 50% of second calendar year @ $90,000 per year	$ 67,500.00
Contract Administrator (procurement)	10% of first year @ $75,000 per year	$ 7,500.00
	Total	**$ 125,000.00**

B. Fringe Benefits - Fringe benefits should be based on actual known costs or an established formula. Fringe benefits are for the personnel listed in budget category (A) and only for the percentage of time devoted to the project. Fringe benefits on overtime hours are limited to FICA, Workman's Compensation, and Unemployment Compensation.

Name/Position	Computation	Cost
Project Manager, Communications	20%	$ 10,000.00
Field Engineer - Communications	20%	$ 13,500.00
Contract Administrator	20%	$ 1,500.00
	Total	**$ 25,000.00**

C. Travel - Itemize travel expenses of project personnel by purpose (e.g., staff to training, field interviews, advisory group meeting, etc.). Show the basis of computation (e.g., six people to 3-day training at $X airfare, $X lodging, $X subsistence). In training projects, travel and meals for trainees should be listed separately. Show the number of trainees and unit costs involved. Identify the location of travel, if known. Indicate source of Travel Policies applied, Applicant or Federal Travel Regulations.

Purpose of Travel	Location	Item	Computation	Cost
			Total	**$ -**

SONET RING budget
Equipment and Supplies

D. Equipment - List non-expendable items that are to be purchased. Non-expendable equipment is tangible property having a useful life of more than two years. (Note: Organization's own capitalization policy and threshold amount for classification of equipment may be used). Expendable items should be included either in the "Supplies" category or in the "Other" category. Applicants should analyze the cost benefits of purchasing versus leasing equipment, especially high cost items and those subject to rapid technical advances. Rented or leased equipment costs should be listed in the "Contractual" category. Explain how the equipment is necessary for the success of the project. Attach a narrative describing the procurement method to be used.

Item	Computation	Cost
	Total	**$ -**

E. Supplies - List items by type (office supplies, postage, training materials, copying paper, and other expendable items such as books, hand held tape recorders) and show the basis for computation. (Note: Organization's own capitalization policy and threshold amount for classification of supplies may be used). Generally, supplies include any materials that are expendable or consumed during the course of the project.

Item	Computation	Cost
	Total	**$ -**

F. Consultants/Contracts - Indicate whether applicant's formal, written Procurement Policy or the Federal Acquisition Regulations are followed.

Consultant Fees: For each consultant enter the name, if known, service to be provided, hourly or daily fee (8-hour day), and estimated time on the project. Consultant fees in excess of $450 per day require additional justification and prior approval from ODP.

Name of Consultant	Service Provided	Computation	Cost
Unknown at this time	Identify the path and method that the fiber needs to be installed. Coordinate with Authority's Real Estate Office and MDOT to identify existing conduit.]	$200 per hour based on existing contract which is out for re-bid (5 months worth of work for 2 engineers).	$ 320,000.00
		subtotal	**$ 320,000.00**

Consultant Expenses: List all expenses to be paid from the grant to the individual consultant in addition to their fees (i.e., travel, meals, lodging, etc.)

Item	Location	Computation	Cost
Will depend on the selected Consultant		$100/day for 5 months	$ 10,000.00
		subtotal	**$ 10,000.00**

Contracts: Provide a description of the product or services to be procured by contract and an estimate of the cost. Applicants are encouraged to promote free and open competition in awarding contracts. A separate justification must be provided for sole source contracts in excess of $100,000.

Item	Cost
Design, manufacture and install SONET RING from Greenbelt Station thru New Carrollton Station, Thru Addison Road Station and to Branch Avenue Yard.	$ 5,061,800.00

In-house Force Account during installation - 3 operations personnel to ensure that the Contractor does not damage WMATA's assets during construction for 8 months @ $100,000 per person at Overtime rate and including fringe benefits of 32%	$	199,800.00
In-house Force Account - 1 Construction Inspector for 12 months @ $100,000 including fringe benefits of 32% (required during design and installation-field personnel)	$	100,000.00
subtotal	**$**	**5,361,600.00**

Other Costs and Indirect Costs

G. Other Costs - List items (e.g., rent, reproduction, telephone, janitorial or security services, and investigative or confidential funds) by major type and the basis of the computation. For example, provide the square footage and the cost per square foot for rent, and provide a monthly rental cost and how many months to rent.

Description	Computation	Cost
	Total	**$ -**

H. Indirect Costs - Indirect costs are allowed only if the applicant has a Federally approved indirect cost rate. A copy of the rate approval, (a fully executed, negotiated agreement), must be attached. If the applicant does not have an approved rate, one can be requested by contacting the applicant's cognizant Federal agency, which will review all documentation and approve a rate for the applicant organization, or if the applicant's accounting system permits, costs may be allocated in the direct costs categories.

Description	Computation	Cost
FTA approved Authority's Project Administration Costs	2.64%	$ 158,400.00
	Total	**$ 158,400.00**

U.S. Department
of Transportation
**Federal Transit
Administration**

Washington, DC
Metropolitan Office

1990 K Street, NW
Suite 510
Washington, DC 20006-1178
(202) 219-3562/3565
(202) 219-3545 (fax)

January 2, 2004

Mr. Richard A. White
General Manager/Chief Executive Officer
Washington Metropolitan Area Transit Authority
600 Fifth Street, NW
Washington, DC 20001-2693

Re: FTA Cost Allocation Plan Review
Final Report

Dear Mr. White:

Enclosed is a copy of the final report resulting from FTA's review of WMATA's FY2004 Cost Allocation Plan (CAP). Deva & Associates, P.C. conducted this review for FTA during the fall of 2003. Thanks to your staff for their cooperation and assistance to our consultants.

As a result of the CAP review, FTA hereby accepts your Plan and the cost allocation rate of 2.64 percent of direct costs for the period July 1, 2003 through June 30, 2004.

As required by OMB Circular A-87 and FTA's regulations in Circular 5010.1C, Chapter III, WMATA must update this Plan on an annual basis. Please also be reminded that if WMATA's proposed cost allocation rate exceeds that approved for the previous year(s) by more than ten percent, then WMATA must submit the updated Plan to FTA for review and acceptance.

Please call me at (202) 219-3562 if you have any questions.

Sincerely,

Brian A. Glenn, PE
Director

Enclosure

cc with enclosure: Peter Benjamin, WMATA, 2 copies
Rick Harcum, WMATA, 1 copy
James C. Stewart, WMATA, 1 copy

Code No.: 1148

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

JOB DESCRIPTION

POSITION: Project Manager (Communications), TA-26 DATE:

DEPT/OFFICE: TSDV/SYSP REVIEWED:

REPORTS TO: Director of Systems (SYSP) TSDV:

POSITION SUMMARY:

This position manages one or more assigned projects in communications, telecommunications and fare collection. Responsibilities include overseeing, managing, and coordinating the development of assigned projects from conceptualization to final acceptance, including planning, design, systems engineering, procurement, contract close-out, engineering analysis, testing and acceptance. The position (1) coordinates the needs of various offices; (2) resolves conflicts that impact on project schedule and costs; (3) makes decisions and recommendations that are recognized as authoritative with a far-reaching impact on the overall development and completion of the assigned projects; (4) initiates and maintains extensive contacts with key personnel and officials of other organizations within and outside the Authority; and (5) negotiates critical and controversial issues with other top level engineers and offices of other organizations, companies and representatives of state, local, and Federal governments.

The position requires a high degree of creativity, foresight and mature judgment in planning, organizing, coordinating and solving unprecedented engineering and construction problems. The position determines project needs and requirements, develops procedures and guides all engineering and construction activities to meet project deadlines. Responsibilities include leading and directing diverse staff, and selection of personnel.

DUTIES:

Prepares and recommends for approval project schedules, estimates and budgets that are complete, realistic, and fully meet project goals; and adheres strictly to approved project schedules and budgets.

Secures commitments from affected Authority departments related to contract documents, budget, and schedule. Arranges for project management coordination and controls, consistent with both project and operational needs.

Supervises subordinate staff to include recommending applicant selection, disciplinary actions, resolution of grievances, assigning duties, directing work, conducting

performance evaluations, approving leave requests and timesheets, and ensuring appropriate subordinate training is provided.

Assigns detailed work tasks to be completed by staff members.

Oversees coordination to establish schedule priorities, access requirements and allocation of work areas for each contract. Minimizes fiscal impacts by exercising maximum control and assuring that work is performed in a safe manner to meet scheduled completion dates.

Conducts project status meetings with staff. Records meeting results and transmits summaries to the AGM, Office Director, Contracting Officer, and other Department and Office Directors for appropriate action.

Conducts project status briefings for Authority Officers; the General Manager; WMATA Board Members; Federal, state, and local government offices; and local civic organizations as required.

Reviews and comments on Project Scope to ensure that program needs, schedule and costs are adhered to; coordination occurs between various departments and aspects of the project; and project elements are cost effective.

Coordinates all major events on the project by assisting various offices to solve mutually dependent items, calling conferences when necessary and chairing meetings.

Assists supporting offices in obtaining major approvals and agreements from city, state and D.C. jurisdictions, including Federal agencies, to assure project schedules and goals are met.

Conducts research and prepares recommendations for complex project management, engineering and construction problems.

KNOWLEDGE, SKILLS, AND ABILITIES:

Thorough knowledge of the principles, practices and techniques of project management, to coordinate, review and provide expert technical management for assigned projects.

Thorough knowledge of the use of project controls including critical path method scheduling and budgetary control systems.

Extensive knowledge of general communications and telecommunications engineering including: integrated radio, automatic vehicle location system, two-way radio systems with leaky line coaxial antennas in tunnels and large computer controlled bus fleet and police dispatch facilities, carrier transmission systems, closed circuit television video

surveillance, computer data interfaces, and miscellaneous associated systems technology in order to (1) design complex communications systems and telecommunications networks; (2) translate operational requirements into system, circuit and equipment hardware specifications; and (3) establish special development engineering programs to meet unusual or unique Authority system requirements.

Extensive knowledge of Automatic Fare Collection methodologies, types of fare card media and associated interfaces and equipment.

Extensive knowledge of Federal Transit Administration requirements and project management oversight.

Knowledge and skills sufficient to apply new developments to the solution of complex engineering, technical and project management problems.

Ability to supervise, train and evaluate engineers and support staff in compliance with applicable Authority personnel and labor relations policies, procedures, regulations and agreements.

Ability to independently organize and carry out assignments with minimum direction and ability to function as a leader of highly professional personnel.

Ability to develop and comprehend various types and levels of technical, contractual and legal documentation.

Ability to communicate effectively and to establish and maintain effective working relationships.
Ability to handle confidential materials and information in a professional manner.

MINIMUM QUALIFICATIONS AND EXPERIENCE:

Graduation from an accredited college or university with a Bachelor's Degree in Electrical, Electronics, or Telecommunications Engineering or a related field. A minimum of eight (8) years of demonstrated successful experience in overall technical project management within a large engineering project. Thorough knowledge or demonstrated ability to rapidly obtain knowledge of the engineering requirements, program policies and procedures that govern the Authority.

Or, an equivalent combination of post high school education in electrical, electronics, or telecommunications engineering or a related field, and more than ten (10) years of demonstrated successful experience in overall technical project management within a large engineering project. Thorough knowledge or demonstrated ability to rapidly obtain knowledge of the engineering requirements, program policies and procedures that govern the Authority.

MEDICAL GROUP:

Ability to complete satisfactorily the medical examination for this job. The employee must be able to perform the essential functions of this job either with or without reasonable accommodation(s).

FLSA: EXEMPT

Code No. 2776

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
JOB DESCRIPTION POSITION:

Field Engineer DATE: 7/15/94

(Communications), TA-20

DEPT/OFFICE: TSDV/CONS

REPORTS TO: Resident Engineer

This is highly professional field engineering work responsible for evaluating the completeness and acceptability of systems construction and installation work performed by Communications Contractors. Employee develops solutions to technical problems encountered during design, construction, installation, and start-up phases of assigned projects. Employee deals directly with Contractor personnel, local jurisdiction staff, Authority staff, and other resident offices. Employee works under general direction of the Resident Engineer and has considerable latitude for independent judgment and action within established guidelines. Performance is evaluated through a review of completed work assignments, daily discussions, reports, meetings, and assessment of construction problem resolution abilities.

DUTIES:

Achieves and maintains awareness and knowledge of state-of-the-art circuit and equipment design techniques in the communications-electronics industry.

Reviews and coordinates with appropriate offices and personnel the Contractor's design submittals, design changes and technical documentation to ensure compliance with specifications and performance requirements.

Reviews test procedures for equipment and systems to be installed and ensures that performance criteria meet contractual requirements. Monitors and participates in the Communications test program. Develops and implements computerized reporting documents and procedures. Monitors the progress of testing. Provides technical assistance to construction inspectors. Monitors and evaluates contractor tests, test procedures and quality assurance programs. Analyzes contractor test data and recommends acceptance or rejection of communications equipment and systems.

Generates and updates design review status reports, test program progress reports, substantial completion status reports, problem statements and estimates of contractor work changes utilizing spreadsheets and established databases.

Investigates recurring communications systems and equipment malfunctions. Coordinates with WMATA operations departments to address problems and concerns relative to user requirements. Initiates and/or reviews corrective actions.

Monitor status and progress to correct deficiencies. Evaluates possible corrective actions. Initiates and/or reviews change orders and monitors implementation and progress of such change orders.

Performs research pertaining to findings of fact, Resident Engineer packages/recommendations (for changes over $25,000), Resident Engineer correspondence, cost estimates, negotiation of contract modifications, evaluation of contract schedules, and preparation of final decisions. Assists in litigation support activities as necessary.

Conducts technical inspections and surveys of all work performed on communication contracts and determines the adequacy of workmanship, materials and equipment. Resolves problems identified by construction inspectors, contractors quality assurance staff, or other WMATA personnel. Follows up to ensure that problems have been resolved in a proper and timely manner.

Assists construction inspectors and supervisory construction inspector in conducting checks and inventories of materials reported as installed by contractors to ensure the correctness of contractor payment requests and other reports such as the Inspector's Daily Report. Participates in teams performing work inspection and completion inspections for systems contracts.

Reviews change order drawings, specifications and computations from designers, consultants and contractors to determine if changes can be executed as designed. Coordinates with Estimating Engineer to develop the Resident Engineer's initial cost estimate for changes. Monitors the time and materials expended on change work; tabulates contractor's actual labor hours, materials, and equipment; determines actual costs by applying pre-determined cost rates.

Coordinates the initial maintenance services provided by manufacturers and the phased transfer of maintenance responsibilities to the WMATA for services prior to completion of start-up activities.

Participates in periodic progress review and design review meetings held with the communication's contractors, WMATA support offices, and the Resident Engineer.

Reviews plans specifications and bid materials pertaining to new or potential contracts and, as appropriate, makes recommendations for needed changes.

Prepares periodic and special progress reports on the status of assigned contracts. Assists in the. development of suspension of work and stop work directives to contractors.

Performs any and all related duties as assigned by the Resident Engineer, Assistant Project Manager, Project Manager, or other designated supervisors in the employees chain of command.

KNOWLEDGE, SKILLS, AND ABILITIES:

Thorough knowledge of state-of-the-art practices in communications systems; plans, drawings and specifications pertaining to assigned contracts; status of assigned contractor submittals; WMATA rules, regulations, policies, and procedures pertaining to construction projects; contractor's in-house engineering and on-site capabilities; factory test procedures and results; policies that establish allowable field modifications; engineering details of pending change orders (PCOs); and existing site conditions.

Thorough knowledge of the principles and practices of system engineering disciplines in order to effectively carry out associated management and technical analysis tasks.

Considerable experience in the field of communications systems engineering, electrical/electronic equipment testing, and/or maintenance. Experience shall include, but is not limited to, such systems as VHF and UHF radio; supervisory alarms; closed circuit television; public address; cable plant; teleprinter networks; fire and intrusion protection systems; PCM multiplex; fiber optics; and related items. Actual field utilization experience with communication's equipment and electrical/electronic test equipment. Experience in a large transit or similar organization is helpful.

Thorough knowledge of communication and electronic principles as they relate to transit communication equipment with the ability to apply them to WMATA needs.

Demonstrated ability to locate complex equipment troubles and to prepare design changes, maintenance procedures and test procedures to analyze equipment operational capability and correct troubles, with emphasis on both system's problems and circuit problems.

Ability to prepare precise and detailed engineering reports, instructions, designs, and recommendations.

Ability to comprehend various types of complex technical documentation relative to communications and electronic disciplines.

Considerable knowledge of communications factory, field, and system's testing and ability to adapt applicable procedures to WMATA needs.

Knowledge of laws, ordinances, and regulations governing construction contracts and construction activities within the signatory jurisdictions.

Demonstrated ability to effectively use electronic test equipment including, but not limited to, spectrum analyzers; frequency counters; oscilloscopes; optical time domain reflectometers; and related equipment.
Ability to input test data into various established data bases and to develop spreadsheets.
Knowledge and ability to utilize computer programs in operation, testing, and maintenance of communications/electronic equipment and systems.

Ability to establish and maintain effective working relationships with those individuals and organizations encountered in the course of work. Ability to participate individually or as part of a group in various complex research projects as required. Ability to assemble and lead research groups gathering information for various WMATA requirements pertaining to overall management of the WMATA construction management program.

Ability to communicate effectively.

MINIMUM QUALIFICATIONS AND EXPERIENCE:

Graduation from an accredited college or university with a Bachelor's Degree in electrical, electronic or related engineering field or other directly related field. Five (5) years of progressively responsible experience in research, analyzing, inspection, maintenance, testing or evaluating communications systems. At least three (3) of the five years experience must be as a decision making member of a large scale construction management team.

Or an equivalent combination of education and experience.

LICENSE:

Registration as a Professional Engineer is desirable.

Possession of a District of Columbia, Maryland, or Virginia motor vehicle operator's permit issued from the jurisdiction of residence.

MEDICAL GROUP:

Ability to satisfactorily complete the medical examination for this job. The employee must be able to perform the essential functions of this job with or without reasonable accommodations.

Position Established: New Position 03-14-94

Code No. 2725

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

JOB DESCRIPTION

POSITION: **Construction Inspector (Communications-Electronics), TA-17** DATE: 05/07/92

DEPT/OFFICE: TSDV

REPORTS TO: Supervisory Construction Inspector

POSITION SUMMARY:

This is technical construction inspection work to ensure compliance with plans and specifications involving communications-electronics projects for metrorail. The employee is responsible for ensuring that those aspects of each project for which he/she is cognizant are completed in accordance with approved plans and specifications along with approved methods and procedures. Employee receives assignments from and reports to a Supervisory Inspector who, based upon daily contacts, observations and records, evaluates employee's performance as to effectiveness and completeness of preparation for daily duties and success in achieving contractor's compliance with contract technical, workmanship and safety provisions of the contract.

EXAMPLES OF DUTIES:

Inspects all phases of metrorail communications-electronics construction. Communications-electronics is a specialty with disciplines in electronic and electrical applications. Typical inspection will include installation and testing of cable and equipment for radio; public address; closed circuit television; fire and intrusion; telephones; carrier systems utilizing T-carrier digital format on fiber-optic facilities or copper-cable facilities.

Monitors cable installation, splicing of fiber-optic and copper-carrier cables and verification of test measurements utilizing oscilloscopes, meggers, bit error rate test sets, multimeters, frequency counters, and optical time domain reflectometers. Validate system/integration testing and operational integrity of systems.

Verifies interfaces to electrical, mechanical equipment installed by others such as fan controls, fire suppression systems, elevators and escalators. Identifies problems and recommends corrective actions particularly for interfaces between systems and work by others.

Monitors Contractor's Quality Control System (CQCS) and verifies that the installation,.material and equipment conform to contract standards. Records and reports daily construction activity as outlined in "Guidelines for Construction Inspection" and as instructed by supervisor. Conducts field surveys to detect potential problems and to ensure field changes are properly channeled and

documented. Informs contractor's field supervisory representative of non-compliance with contract provisions; monitors corrective action. Investigates problems and initiates actions for their resolution to minimize work disruption. Verifies receipt of contractor's material shipments and is able to reject defective or substandard material . Works independently with minimal supervision.

Observes installation and testing for compliance with applicable safety regulations as follows: Inspects for unsafe practices and notifies safety representative on site to take action to correct safety hazards. In emergency situations, stops the work and immediately reports the action to a supervisor. Performs daily safety inspections; prepares safety reports; and attends contractor's tool box safety meetings.

Passes directly to contractor's field representatives, as requested or as necessary, information that is related to plans and specifications and changes to the Contract. Ensures the contractor is working with approved shop drawings and up-to-date contract drawings; verifies and documents as-built conditions, particularly schematics.

Assists the Office Engineer in preparing monthly pay estimate calculations and work-to-complete forecasts.

Assists the Resident Engineer in conducting substantial completion inspections (SCI) and final acceptance inspections. Prepares work lists prior to SCI.

Works various shifts and schedules as may be assigned and, from time to time, required; and performs other duties as required and/or assigned.

KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of principles and practices of electrical and electronic construction and demonstrated ability to inspect a broad range of contract construction work including installation and testing of cable, equipment, and operation of the associated systems.

Knowledge of modulation/demodulation digital signaling and types of signal formats. Knowledge of applicable codes and standards.

Knowledge of test equipment and procedures applicable to installation, troubleshooting and system integration.

Possess good oral and written communications skills.

Ability to physically perform activities such as climbing ladders of all types, crawling through manholes and plenums, walking long distances over rough terrain and climbing long flights of stairs.

May be required to work various shifts and schedules and perform other duties as required and/or assigned.

MINIMUM QUALIFICATIONS AND EXPERIENCE:

Graduation from high school or possession of a high school equivalency certificates College level technical or engineering courses are desirable. Minimum of eight (8) years inspection experience in communications-electronics is mandatory.

Or equivalent combination of education and experience equal to a minimum of eight years.

Possession of, or ability to acquire, a valid District of Columbia, Maryland or Virginia motor vehicle operator's permit, or a permit issued from jurisdiction of residence.

MEDICAL GROUP:

Ability to complete satisfactorily the medical examination for this class.

Job Established: 05/07/92