

IFB FQ15237/GG



Washington Metropolitan Area Transit Authority

**Six (6) Tie Breaker Stations Upgrade Orange and Blue
Lines VA, DC and MD**

Contract No. FQ15237

IFB Issued: October 8, 2015

Volume 1, Bidding and Contracting Requirements

**LETTER TO BIDDERS
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA)**

DATE: October 8, 2015

SUBJECT: Invitation for Bid (IFB) FQ15237/GG
Six (6) Tie Breaker Stations Upgrade Orange and Blue Lines DC, MD and VA

The Washington Metropolitan Area Transit Authority (WMATA) requests your bid for the supply and installation of electrical equipment at Six (6) Tie Breaker Stations in DC, MD and VA, to accommodate the additional power capacity on Orange and Blue lines as required for Rail Power System Upgrades

The scope of work includes, but is not limited to:

- Replace metal enclosed DC switchgear as complete switchgear lineups.
- Remove and replace existing DC switchgear insulated floor topping.
- Connect equipment to existing DTS and ETS relay panels.
- Replace battery chargers, battery plants, DC panel-boards, and associated equipment as indicated on the drawings.
- Replace existing lighting fixtures and add new lighting fixtures
- Install new power circuits (wire and conduit) within the tie-breaker stations - 600 volt AC circuits
- Provide materials including conduits, cable trays, and support hardware.
- Provide grounding and bonding as specified and as required.
- Replace equipment and upgrade panelboard and feeder capacity within the tie-breaker stations as indicated on Contract Drawings.
- Install 3KVA isolation transformer and materials to provide ungrounded 120 VAC power circuits from normal power sources to supply heaters within DC switchgear assemblies.
- Install, and subsequently remove, temporary jumper cables and associated connections to facilitate temporary power provisions during replacement of existing DC switchgear.
- Furnish and install SCADA equipment (Distributed Input Output Modules (DIO) and Digital Trace Recorders (DTR)) as indicated on the Contract Drawings.
- Provide all equipment, testing, labor, cables, connections, etc. to complete all work required on the construction documents.
- Provide the total recommended spare parts list with unit price costs associated, and total overall estimate.

#	Station/Location	Jurisdiction	Description
1	K06TB2 Greenwich St. 2216 Greenwich St. Fairfax County, VA	VA	<ul style="list-style-type: none"> • Surface Building • Personal: Street Access • Equipment Access from Street (Grade)
2	K07TB1 Ogden St. I-66 near I-495 (Chain Marker K2-609+50) Falls Church, VA	VA	<ul style="list-style-type: none"> • Surface Building • Personal: Street Access • Equipment Access from Inbound Track 01 Side
3	K07TB2 Prosperity Ave. 2690 Prosperity Ave. Fairfax County, VA	VA	<ul style="list-style-type: none"> • Surface Building • Personal: Street Access • Equipment Access from Street (Grade)
4	G01TB Benning Road 4500 Central Ave., NE Washington, DC	DC	<ul style="list-style-type: none"> • Below Ground • Personal Access Via Safety Walk • Equipment Access from Outbound Track 01 Side
5	G02TB1 56 th Place 5711 East Capitol St. NE Washington, DC	DC	<ul style="list-style-type: none"> • Below Ground ROW • Personal access Via Fan Shaft FG3 and Safety Walk • Equipment Access from Outbound Track 01 Side
6	G02TB2 67 th Ave 1 Yost Pl. Prince Georges County, MD	MD	<ul style="list-style-type: none"> • Below Ground ROW • Personal Access Fan Shaft FG4 and Safety Walk • Equipment Access from Inbound Track 02 Side

Period of Performance:

The Contract final work completion for all six (6) tie breaker stations – maximum of 495 calendar days after Notice to Proceed issuance date. For additional details refer to CONSTRUCTION SPECIAL PROVISIONS, Paragraph 2.1 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK.

Bonds/Guarantees:

A bid guarantee, in the amount of 5% of the total bid price, is required with the bid if it is greater than \$100,000. The successful proposal must provide Performance Bond in the amount of the contract price after award of the contract and Payment Bond in the amount of 1) Fifty percent of the contract price if the construction contract price is not more than \$1,000,000; (2) Forty percent of the contract price if the contract price is more than \$1,000,000 and not more than \$5,000,000; or (3) When the contract price is more than \$5,000,000, the payment bond shall be \$2,500,000.

DBE Information:

The solicitation includes a DBE goal of **18.5%** if the bid price is \$500,000 or more. Information on the WMATA DBE program can be found at:

http://www.wmata.com/business/disadvantaged_business_enterprise/

WMATA will have a DBE office representative on hand at the Pre Bid Conference.

DBE Vendor Directory

http://www.wmata.com/business/disadvantaged_business_enterprise/dbe_search.cfm

Insurance

The successful bidder must provide:

- Commercial General Liability
- Worker's Compensation and Employer's Liability
- Business Automobile Liability
- Railroad Protective Liability (RRPL)

In lieu of providing a standalone RRPL in WMATA's name, the successful bidder may request that the contract work be covered under WMATA's blanket Railroad Protective Liability Insurance Program. Refer to Special Conditions 2.15 Indemnification and Insurance, Railroad Protective Liability Insurance (RRPL) whereby WMATA may waive the requirement for the contractor to procure the RRPL and instead be covered under WMATA's RRPL policy by pre-paying a waiver fee as determined by WMATA's Risk Management Department. The Contractor would apply for coverage under WMATA RRP policy, pay the waiver fee and submit proof of payment to the Authorized Representative. The contractor is entitled to 100% reimbursement of the actual premium paid to WMATA with no markups. The application and fee must be submitted within ten (10) calendar days of contract award. For bidding purposes, an allowance will be provided on the Unit Price Schedule. The contractor shall be reimbursed 100% of the actual waiver fee paid to WMATA.

If the contractor chooses to not utilize the WMATA RRPL, then WMATA will reimburse the contractor the actual cost with no markups up to the amount (not allowance) that would have been paid for the WMATA waiver fee

Pre-Bid Conference: will be held on October 20, 2015 starting at 10:00 AM at 8100 Professional Place, Hyattsville, MD 20785-2225, Conference Room #1, 1st Floor. WMATA will provide a presentation including the solicitation issues and technical requirements.

WMATA will invite representatives of our procurement, insurance, DBE, safety, and infrastructure rehabilitation to the Pre-Bid Conference. WMATA certified DBE's are strongly encouraged to attend.

All attendees must provide a WMATA Contractor ID or a government issued identification for entry into any WMATA facility (cameras, cell phones, computers and other mobile devices are permitted). Individuals that plan to attend the meeting are required to send an email to ggufranova@wmata.com, 48 hours in advance, with their name, title, company name, mailing address, telephone, and email for each attendee.

Site Visit: WMATA will conduct a Site Visit to one (1) Tie-Breaker Station in Virginia immediately after the Pre-Bid Conference. The site visit will start at end of the Pre Bid Conference. It is planned that the Site Visit will start around 1:30 PM. Attendees must be escorted by WMATA personnel.

All Site Visit attendees will be required to have with them OSHA approved safety vests.

Pre-Award Information: Shall not be submitted with the bid. After the bid opening, only the Apparent Low Bidder will be requested to submit Pre-Award Information.

Bids Due: November 4, 2015 by 2 pm and shall be delivered to WMATA, Office of Procurement and Materials, Room 3C-02, 600 Fifth Street, NW, Washington, DC 20001. Bids will be publicly opened and read aloud in the WMATA Meeting Room, Lobby Level, 600 Fifth Street, NW, Washington, DC 20001.

Bidders are cautioned to not take exceptions or qualify their bid! Any questions regarding the solicitation should be made in writing to the Contracting Officer no later than five (5) business days prior to the bid opening. Please carefully review the Notice to Bidders of the IFB. The Notice to Bidders addresses common problems found in previous bids that may cause bid rejection.

Virginia Contractor License

All bidders shall have a Virginia Class A contractor license.. <http://www.dpor.virginia.gov/> . This is a Commonwealth of Virginia law and WMATA complies with the law.

Basis of Award

A single contract for all items will be awarded to the lowest priced responsive and responsible bidder.

Type of Contract:

Firm fixed price contract for the items in the Unit Price Schedule.

IFB Volumes

- Volume 1, Bidding and Contracting Requirements
- Volume 2, Technical Provisions
- Volume 3, Drawings

IFB availability:

Once the IFB is issued it will be posted on the WMATA website at http://www.wmata.com/business/procurement_and_contracting/solicitations/index.cfm in Adobe Acrobat (.pdf) format. The IFB can be downloaded free of charge.

In order to avoid IFB download problems, please immediately download the latest version of Adobe Acrobat Reader available for free at <http://get.adobe.com/reader/>

Amendments: If any amendments are issued, they will be posted on the WMATA website along with the solicitation.

Buy America Act Certification (Not to be confused with Buy American)

Bidders should be fully cognizant regarding **BUY AMERICA** and be prepared to submit not only a BUY AMERICA certificate but actual proof of compliance including parts and assembly. This information will be required with the Pre Award Data submitted by the Apparent Low Bidder.

The applicable Buy America Certificate for this solicitation is “**Certification requirement for procurement of steel, iron, or manufactured products.**”

http://www.fta.dot.gov/legislation_law/12921.html

This project is funded by the Federal Transit Administration. The Buy America requirements apply to federally assisted construction contracts, and acquisition of goods or rolling stock contracts valued at more than \$100,000.

(a) *By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement it will comply with 49 U.S.C. 5323(j) and 49 C.F.R. Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. 661.7 Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11.*

(b) *An offeror must submit to the Authority the appropriate Buy America certification (below) with all bids or offers on FTA-funded contracts, except those subject to a general waiver. Offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive. This requirement does not apply to lower tier subcontractors.*

Warranty

Two years after substantial completion of each Tie-Breaker Station unless Technical Provisions indicate longer warranty period.

Contractor Personnel and WMATA Contractor ID

All on site personnel as well as various contractor management personnel must have a current WMATA Contractor ID. In order to obtain a WMATA Contractor ID all persons must pass a WMATA background check and WMATA safety training. WMATA safety training is provided in English only and translators are not allowed. WMATA will provide safety training and Contractor ID's to the successful contractor team at

no cost.

Vendor Registration:

Please visit our Internet website at <http://www.wmata.com/business/> for **New Vendor Registration and Registered Vendors (updates, etc).**

[http://www.wmata.com/business/procurement and contracting/vendor registration.cfm](http://www.wmata.com/business/procurement_and_contracting/vendor_registration.cfm)

Question regarding vendor registration should be addressed to Phillip Barrett, Jr at PbarrettJr@wmata.com or telephone 202-962-1408.

Contact Person: Guzel Gufranova, Contract Administrator, ggufranova@wmata.com, voice (202) 962-5544; or write Guzel Gufranova, Office of Procurement and Materials, Washington Metropolitan Area Transit Authority, 600 Fifth Street, NW Washington, D.C. 20001. **Email contacts are strongly preferred.**

NAICS Codes

33415	Tie Break Manufacturer
238210	Electrician Labor
484110	Shipping/Freight

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Volume 2 - Technical Provisions

Volume 3 - Drawings

CONTRACT No. IFB FQ15237/GG

BIDDING REQUIREMENTS

**Six (6) Tie Breaker Stations Upgrade Orange and Blue
Lines VA, DC and MD**

October 2015

CARE IN BIDDING

(CONSTRUCTION IFB CONTRACT)

IMPORTANT
PLEASE READ CAREFULLY

To insure submission of complete bids and to avoid irregularities that could result in a non-responsive bid, please check your bid for each of the following common responsiveness problems:

1. Have you checked your bid? Are all items included and checked for math errors?
2. Have you acknowledged and recorded the number of amendments on the bid envelope and Bid Form?
3. Have you recorded on the outside of the bid envelope a current Virginia Contractor License?
4. Does your Bid Guaranty conform to the requirement of the solicitation? A Bid Bond is required for bids in excess of \$100,000.
5. Have you signed and submitted the Bid Form?
6. Have you properly completed and checked the appropriate box for each Certification and Representation? Have you included the Representations and Certifications with your bid?
7. Have you properly executed the Buy America Certificate? Only sign in one place either for compliance or non-compliance.
8. Have you familiarized yourself with the applicable contract provisions pertaining to the WMATA DBE program for bid in excess of \$500,000? DBE contract provisions and established goals are a part of this contract.
9. Have you familiarized yourself with the Davis-Bacon Labor Standard Provisions that mandate the payment of minimum wages as determined by the Secretary of Labor?

NOTICE TO ALL VENDORS

Please be advised that all vendors and contractors who have *NOT* done business with the Washington Metropolitan Area Transit Authority (WMATA) must register in the WMATA Vendor Registration System. Registration is located at <http://www.wmata.com>
New Vendor Registration.

If you are a vendor or contractor and *HAVE* done business with WMATA in the past, please electronically request your company's User ID and Password at <http://www.wmata.com>

Attention to Disadvantaged Business Enterprise (DBE)/Small Business and Local Preference Program (SBLPP) companies:

Minority and women owned businesses who are interested in becoming a WMATA DBE should complete an online DBE application. Self-certification is required for Small Business and Local Preference as a part of the Vendor Registration.

Registered Vendor Benefits:

- Visibility to WMATA contract administrators and/or purchasing agents during the purchasing decision period;
- Visibility to other 17,500 registered vendors for possible business opportunities;
- Opportunity to update online, company information such as an e-mail address or contact person on-line;
- Sign up for electronic payment option; and
- Ability to electronically reset User Id and Password.

Any questions regarding registration may be addressed to Vendor Relations at (202) 962-1408 or procurement@wmata.com.

INVITATION FOR BIDS

DATE OF INVITATION: October 8, 2015

PROJECT DESCRIPTION: IFB FQ15237/GG
**Six (6) Tie Breaker Stations Upgrade Orange and Blue Lines
VA, DC and MD**

SEALED BIDS in singular for the work described herein will be received at or before 2:00 PM on **November 4, 2015** at the Washington Metropolitan Area Transit Authority, in the Meeting Room at the Lobby Level, 600 Fifth Street, N. W., Washington, DC 20001.

INFORMATION REGARDING BIDDING MATERIAL, BID GUARANTEE AND BONDS:

Bidding Material:

Bid Form
Representations and Certifications
Unit Price Schedule
Bid Bond (see Note #1)
Appendix B: Disadvantaged Business Enterprise (DBE) (Applies only if bid price is over \$500,000)
Specifications

A bid guarantee as herein specified is required for a bid price in excess of \$100,000, and the penal amount shall be 5 percent of the bid price. If the guarantee is submitted in the form of a bid bond, the bid bond penalty may be expressed in terms of a percentage of the bid price or may be expressed in dollars and cents.

Bonds: As required by the Specifications.

DESCRIPTION OF WORK:

Six (6) Tie Breaker Stations Upgrade Orange and Blue Lines VA, DC and MD

BID MUST SET FORTH FULL, ACCURATE AND COMPLETE INFORMATION AS REQUIRED BY THIS INVITATION FOR BIDS, INCLUDING ATTACHMENTS.

SOLICITATION INSTRUCTIONS

1. Definitions: **As used herein:**

- a. The term "solicitation" means "Invitation for Bids (IFB)" where the procurement is advertised, and "Request for Proposal (RFP)" where the procurement is negotiated.
- b. The term "offer" means "bid" where the procurement is advertised and "proposal" where the procurement is negotiated.
- c. The term "offeror" means "bidder" where the procurement is advertised and "proposer" where the procurement is negotiated.

2. Explanation to Offeror

- a. Any explanation desired by a bidder regarding the meaning or interpretation of this Invitation for bid, specifications, drawings, and other bidding documents must be requested in writing and with sufficient time allowed for a reply to reach all bidders before the time set for the opening of bids.
- b. Any interpretation made will be in the form of an amendment of this Invitation for Bid, specifications, or other bidding documents and will be furnished to all prospective bidders.
- c. Oral explanations or instructions given before the award of the contract will not be binding.

3. Prior Representations

The Authority assumes no responsibility for any understanding or representations concerning this solicitation made by any of its officers or agents prior to the issuance of the solicitation, the specifications, or related documents.

4. Pre-Bid Conference and Site Visit

Pre-Bid Conference, October 20, 2015 starting at 8:30 AM at Room 5D-02, 600 Fifth Street, NW, Washington, DC 20001. WMATA will provide a presentation including the solicitation issues and technical requirements.

WMATA will have representatives of our procurement, insurance, DBE, safety, and infrastructure rehabilitation in attendance. WMATA certified DBE's are strongly encouraged to attend.

All attendees must provide a WMATA Contractor ID or a government issued identification for entry into WMATA facility (cameras, cell phones, computers and other mobile devices are permitted). **Individuals that plan to attend the meeting are requested, but not required, to send an email to ggfranova@wmata.com , 48 hours in advance, with their name, title, company name, mailing address, telephone, and email for each attendee.**

Site Visit, WMATA will conduct a site visit to one (1) Tie-Breaker Station in Virginia immediately after the Pre-Bid Conference. The site visit will start at end of the Pre Bid Conference. It is planned that the Site Visit will start around 1:30 PM. Attendees must be escorted by WMATA personnel.

All Site Visit attendees will be required to have with them OSHA approved safety vests.

5. Revisions Prior to Date Set for Receipt of Offers

- a. The right is reserved by the Authority to revise or amend the specifications and/or Drawings prior to the date set for the opening of bids. Such revisions and amendments, if any, will be announced by an amendment or amendments to this Invitation for Bid. Copies of such amendments as may be issued will be furnished to all prospective bidders.
- b. If the revisions and amendments require material changes in quantities or prices bid, or both, the date set for the opening of bids may be postponed by such number of days as in the opinion of the Authority will enable bidders to revise their bids. In such cases, the amendment will include an announcement of the new date for the opening of bids.

6. Acknowledgment of Amendments

- a. Offerors are required to acknowledge receipt of all amendments to this Invitation on the Bid Form in the space provided, or by separate letter or telegram prior to opening of bids.
- b. Failure to acknowledge all amendments may cause the bid to be considered non-responsive to the invitation, which would require rejection of the bid. The outside of the envelope containing the offer shall also be marked to show the amendments received.

7. Preparation of Bids

- a. Bids shall be submitted on the Bid Forms furnished, or copies thereof, and must be manually signed. If erasures or other changes appear on the forms, such erasures or changes must be initialed by the person signing the bid. Unless specifically authorized in this Invitation for Bid, telegraphic bids will not be considered.
- b. The Bid Form may provide for submittals of a price or prices for one or more items which may be

lump sum bids, alternate prices, scheduled items resulting in a bid on a unit of construction or a combination thereof, or other bidding arrangements. Where the Bid Form explicitly requires that the bidder bid on all items, failure to do so will disqualify the bid. When submittal of a price on all items is not required, bidders shall insert the words NO BID in the space provided for any item on which no price is submitted.

- c. Unless specifically called for, alternate bids will not be considered.
- d. Modifications of bids already submitted will be considered if received at the office designated in this Invitation for Bid by the time set for the opening of bids. Telegraphic modifications will be considered, but not reveal the amount of the original or revised bid. Neither telegraphic nor teletype facilities are located in the offices of the Authority.

8. Submittal of Bids

- a. Offers and modifications thereof shall be enclosed in sealed envelopes and addressed to the office specified in the solicitation. The offeror shall show the hour and date specified in the solicitation for receipt, the solicitation number, and the name and address of the offeror on the face of the envelope.
- b. Telegraphic offers will not be considered unless authorized by the solicitation; however, offers may be modified or withdrawn by written or telegraphic notice, provided such notice is received prior to the hour and date specified for receipt.
- c. Facsimile offers, modifications or withdrawals will not be considered unless authorized by the Authority.

9. Late Bids and Modifications or Withdrawals (12/03)

- a. Any offer received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it--
 - (1) Was sent by registered or certified U.S. mail not later than the fifth calendar day before the date specified for receipt of offers (e.g., an offer submitted in response to a solicitation requiring receipt of offers by the 20th of the month must have been sent by registered mail by the 15th);
 - (2) Was sent by U.S. mail or a recognized commercial carrier, and it is determined by the Authority that the late receipt was due solely to mishandling by the Authority after receipt;
 - (3) Was sent by U.S. Postal Service Express Mail Next Day Service-Post Office or similar express service from a recognized commercial carrier to Addressee, not later than 5:00 p.m. at the place of mailing two working days prior to the date specified for receipt of offers. The term "working days" excludes weekends and U.S. Federal holidays; or
 - (4) Is the only offer received.
- b. Any modification of an offer, except a modification resulting from the Contracting Officer's request for "best and final" offer, is subject to the same conditions as in subparagraphs (a)(1), (2), and (3) of this provision.
- c. A modification resulting from the Contracting Officer's request for "best and final" offer received after the time and date specified in the request will not be considered unless received before award and the late receipt is due solely to mishandling by the Authority.

- d. The only acceptable evidence to establish the date of mailing of a late offer, modification, or withdrawal sent by registered or certified mail is the U.S. or Canadian Postal Service postmark on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the offer, modification or withdrawal shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, offerors should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and the envelope or wrapper.
- e. The only acceptable evidence to establish the time of receipt by the Authority is the time/date stamp of that installation on the proposal wrapper or other documentary evidence of receipt maintained by the Authority.
- f. The only acceptable evidence to establish the date of mailing of a late offer, modification, or withdrawal sent by Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on both the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph d. of this provision, excluding postmarks of the Canadian Postal Service. Therefore, offerors or quoter should request the postal clerk to place a legible hand cancellation bulls eye postmark on both the receipt and the envelope or wrapper.
- g. Notwithstanding paragraph "a" above, a late modification of any otherwise successful offer that makes its terms more favorable to the Authority will be considered at any time it is received and may be accepted.
- h. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for receipt of bids, the identity of the person requesting withdrawal is established and that person signs a receipt for the bid.

10. Contract and Bonds:

The bidder whose bid is accepted shall, within the time established in the bid, enter into a written contract with the Authority and furnish performance and payment bonds on standard Authority forms in the amount indicated in this Invitation for Bid or in the Contract Documents.

11. Bidding Documents

Free of charge on the WMATA website in Adobe Acrobat (.pdf) format at http://www.wmata.com/business/procurement_and_contracting/solicitations/index.cfm. In order to avoid IFB download problems, please immediately download the latest version of Adobe Acrobat Reader (Currently Version XI (11)) available for free at <http://get.adobe.com/reader/>. If any amendments are issued, they will be posted on the WMATA website along with the solicitation.

12. Bidder's Qualifications

- a. Before a contract is awarded to the apparent lowest bidder, the bidder will be required to submit a completed pre-award Survey Data form showing his previous experience in performing comparable work, his business and technical organization, his financial resources and plan available for performing this Contract work.
- b. In accordance with the provisions of the IFB article titled Pre-Award Information, the apparent lowest responsive bidder shall submit satisfactory evidence of the following:
 - (1) Adequate financial resources.
 - (2) Ability to comply with required performance schedule.
 - (3) Satisfactory record of performance.
 - (4) Satisfactory record of integrity
 - (5) Necessary organization, experience and expert technical skills, including, quality assurance measures and safety programs applicable to the construction to be performed.
 - (6) Affiliation with satisfactory subcontractors capable of meeting the above requirements.
 - (7) Disadvantaged Business Enterprise data as set forth in Appendix B. The submittal of certain items with the bid is required.
 - (8) Insurability.
- c. Particular evaluation shall be made of the Contractor's and/or subcontractors' experience and expertise in the performance of the following features of the work:

The entire work of the Contract, including furnishing and installing the specified materials, and all necessary labor and equipment

- d. Doubt as to technical ability, productive capability and financial strength which cannot be resolved affirmatively may result in a determination of non-responsibility by the Contracting Officer.

13. Award of Contract

- a. Award of Contract will be made to the lowest responsive and responsible bidder. .
- b. The Authority may, when in its interest, reject any or all bids or waive any informality in bids

received.

- c. The Authority may accept any item or combination of items of a bid, unless precluded by this Invitation for Bid or the bidder includes in his bid a restrictive limitation.

14. Pre-Award Information

- a. In accordance with the provisions of the Solicitation Instructions article titled "Bidder's Qualifications", the Contracting Officer will conduct a pre-award survey to determine if the bidder eligible for award is responsible both financially and technically and has the capability to perform the work of the Contract in accordance with the requirements of the Specifications and the Drawings and within the time or times specified.
- b. Accordingly, the apparent lowest responsive bidder is required to furnish, within five calendar days after bid opening, pre-award data as required by the "Bidder's Qualifications" article as follows:

(1) Pre-Award Survey Form

A completed and signed Pre-award Survey Form (that is furnished with the solicitation.

(2) Past Experience and Qualifications

The Bidder shall furnish, in addition to the information required in the Pre-Award Survey Form (PED-1), satisfactory evidence of past experience, qualifications and capabilities required by the contract plans and specifications. The following information must be included:

- (a) List of all previous contracts of similar work including, but not limited to: owner, address, phone number, architect-engineer, contract name, amount, duration, character and type of work and the portions of the work accomplished with the bidder's own forces. The Bidder shall have completed minimum two (2) projects in the rail transit industry and/or industrial sector. The Bidder shall submit minimum two (2) references from rail transit and/or industrial sectors demonstrating schedule and delivery compliance for a similar project. For the purposes of evaluating the Bidders' pre-award information the Authority may obtain and utilize past performance information from Authority records and references from other agencies for which the Bidder had previously worked.
- (b) Copies of all necessary certifications, licenses and other documentation, including any specialized licenses required to meet health and safety rules and regulations, required by the plans and specifications demonstrating that the bidder has the necessary capabilities to perform the work.
- (c) Documentation including resume(s) for performing the specified engineering functions, training and providing qualified personnel to work in the necessary Authority areas.

The following information shall be submitted regarding how the bidder proposes to accomplish the work:

- (a) A detailed narrative description of how the bidder proposes to accomplish the work of the Contract including an organization chart with responsibilities including subcontractors.
- (b) In accordance with the articles for Progress Schedules, the bidder shall submit its proposed preliminary schedule in sufficient detail to demonstrate that the bidder can accomplish the work within the prescribed period of performance including, if required, any interim

completion dates or milestones.

- (c) A list of major materials, including model numbers and catalog data, for each of the project items and other major elements of the work to include any long lead times for delivery.
 - 1. Buy America compliance – Provide a statement that each major material item complies with the Buy America Act.
- (d) A list of all major equipment that the bidder expects to use to accomplish the work of this contract.

(3) Performance Plan

a) Provide a time scale bar chart per TBS with the major elements of work including but not limited to:

- (a) Notice to Proceed
- (b) Submittals
- (c) Approvals
- (d) Fabrication and delivery
- (e) Disconnection of TBS from system
- (f) Demolition
- (g) Equipment installation
- (h) Electrical connections
- (i) Controls
- (j) Startup and testing

b) The work shall be substantially complete for K06TB2 Greenwich Street and K07- TB02 Prosperity Avenue by June 30, 2016. The work shall be complete on all the TBS by NTP + 495 calendar days.

c) Submit a list of Spare Parts as specified in Item 008 SPARE PARTS – OPTION 1 in Notes to Bidders, attached to UNIT PRICE SCHEDULE

(4) Financial Statements

Complete financial statements for the last two (2) years, including Statement of Financial Position (Balance Sheet), Results of Operations (Income Statement), Statement of Changes in Financial Position (Net Change in Resources) and Statement of Current and Retained Earnings. These statements shall be certified indicating disclosure of all facts which could impair or affect the statements presented.

(5) Affirmative Action Program

An affirmative statement by the Contractor as to its intent and ability to comply with articles for Affirmative Action or Equal Opportunity. This shall include the number of employees directly employed by the contractor.

(6) Safety Program

The following information regarding his safety program and his past safety performance:

- (a) Accident incident rates for the past twelve months for lost time accidents and for medical

cases only on comparable work.

- (b) Experience Modification Rating which compares the number of OSHA recordable injuries and illnesses for the bidder to the average for the bidder's standard industry code. **Bidders with an EMR factor greater than 1.2 will be determined to be not responsible.**
- (c) Copy of the organizational Health and Safety Program to be followed by the Contractor and all Subcontractors.
- (d) Copy of organizational Temporary Fire Protection Plan to be followed by the prime contractor and all subcontractors.
- (e) Name and address of present compensation and liability insurance carrier.
- (f) Name, address and telephone number of person in charge of the organizational safety program.

(7) Quality Assurance Program

A detailed statement in compliance with Special Conditions, Clause 2.58 Quality Assurance Program for approval by the Contracting Officer of methods to achieve a Contract Quality Assurance Program, including coordination and quality control. Relevant quality associations and certifications for all tiers to include products and materials are to be provided.

(8) Insurance

The bidder shall submit as evidence of insurability a letter from an insurance agent or broker indicating that a commitment, valid for 90 days, exists from a specific insurance carrier or carriers to provide the coverages, with limits and insured as specified therein, can be bound upon award of the contract at a price known and acceptable to the bidder. The letter shall specifically reference the IFB and Special Conditions 2.15 Indemnification and Insurance. Failure to establish insurability may result in a determination of non-responsibility.

The bidder shall provide a letter regarding Railroad Protective Liability (RRPL) stating whether they will seek the RRPL Waiver Fee option or provide their own RRPL coverage.

Doubt as to technical ability, productive capability, "good faith effort - DBE," and financial strength which cannot be resolved affirmatively may result in a determination of non-responsibility by the Contracting Officer

15. Civil Rights (12/03)

The Contractor will be required to comply with all applicable Equal Employment Opportunity and Civil Rights laws.

16. Opportunity for Disadvantaged Business Enterprises to Bid

- a. It is the policy of the Authority (WMATA), the Federal Transit Administration (FTA) and the U. S. Department of Transportation (US DOT) that Disadvantaged Business Enterprises (DBE's) shall have an equal opportunity to receive and participate in performing federally assisted contracts, including contracts and subcontracts at any tier. The DBE requirements are set forth in Appendix B to this solicitation and are applicable, if the bid/proposal is \$500,000 or more for construction

contracts, or if the bid/proposal is \$100,000 or more for supply and service contracts.

- b. If the bidder/proposer is not a DBE, then the DBE goal set forth in Appendix B shall be met by subcontracts or joint ventures with DBE's.
- c. The documentation requirements of Appendix B should be completed and submitted at the time set forth for the submittal of bids/proposals to the Authority. Any bidder/proposer who fails to complete and return this information with their bid/proposal may be deemed to be not responsible and may be ineligible for contract award. The documentation requirements are as follows:
 - (1) SCHEDULE OF DBE PARTICIPATION and executed LETTER(S) OF INTENT TO PERFORM AS A SUBCONTRACTOR/JOINT VENTURE with agreed price sufficient to meet the DBE goal set forth in Appendix B; or
 - (2) A request for waiver of the DBE goal or portion of the goal and reasons therefor as stipulated in paragraph 6.C. of Appendix B. Request must be made on company stationery and signed by the responsible official.
- d. Bidders/Proposers that fail to meet the DBE goal set forth in Appendix B and fail to demonstrate "good faith efforts" to justify waiver of the DBE goal shall be deemed to be not responsible and will be ineligible for contract award.

17. Representations, Certifications, and Acknowledgments

The offeror shall check or complete all applicable boxes or blocks on the attached "Representations and Certifications" form.

- a. Ineligible Offeror. All offerors will be required to certify that they are not on the Comptroller General's list of ineligible bidders.
- b. Parent Company. A parent company for the purposes of this offer is a company which either owns or controls the activities and basic business policies of the offeror. To own another company means the parent company must own at least a majority (more than 50 percent) of the voting rights in that company. To control another company, such ownership is not required; if another company is able to formulate, determine, or veto basic business policy decisions of the offeror, such other company is considered the parent company of the offeror. This control may be exercised through the use of dominant minority voting rights, use of proxy voting, contractual arrangements, or otherwise.
- c. Employer's Identification Number (E.I. No.). The offeror shall insert in the applicable space on the form, if it has no parent company, its own E.I. No. (Federal Social Security Number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941), or, if it has a parent company, the E.I. No. of its parent company.

18. Conditions Affecting the Work (12/03)

- a. Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the work and the general and local conditions which can affect the work or the cost thereof.
- b. Failure to do so will not relieve bidders from the responsibility for estimating properly the difficulty or associated risks and cost of successfully performing the work.

19. Notice of Protest Policy (09/03)

- a. WMATA policy and procedure for the administrative resolution of protests is set forth in Chapter 17 of the Procurement Policy Manual (PPM) The PPM contains strict rules for filing a timely protest, for responding to a notice that a protest has been filed, and other procedural matters. The Contracting Officer can furnish a copy of Chapter 17 upon request.
- b. FTA Circular 4220 latest version, paragraph 7.I addresses Bid Protests. Review of protests by FTA is discretionary and will be limited to:

- (1) a grantee's failure to follow its protest procedures, or its failure to review a complaint or protest;
or

- (2) violations of Federal law or regulation.

A protester must exhaust all administrative remedies with the Authority before filing an appeal to the FTA. An appeal to FTA must be received by the cognizant FTA regional or Headquarters Office within five (5) working days of the date the protester learned or should have learned of an adverse decision by the grantee of other basis of appeal to FTA.

- c. Alleged violations on other grounds must be submitted to the Contracting Officer who will decide the protest.
- a. The judicial authorities having jurisdiction over court actions concerning protest decisions are the United States District Courts for the Districts of Maryland, Virginia, and the District of Columbia, and the local courts in Maryland, Virginia, and the District of Columbia.

20. Requirement For Cost Data For Contract Award (12/03)

1. Bids received hereunder shall be subject to a price analysis to determine price reasonableness. A price analysis involves a comparison of the overall price to WMATA's estimate and to other prices for comparable items, either prior purchases by WMATA or by other agencies.
2. Should WMATA determine that there is not adequate price competition or that a price analysis does not provide an acceptable basis for determining price reasonableness, it may conduct a cost analysis. A cost analysis involves an evaluation of the various cost elements (labor, materials, overhead and profit) which constitute the proposed price or prices. It may include an audit of the proposer's overhead, general and administrative expenses, and profit. Such cost analysis and audit will be conducted in accordance with applicable Federal cost principles.
3. Refusal of a Bidder to provide the required information and access to its records to conduct a cost analysis, including an audit if conducted, may result in the Bidder's bid being rejected as unreasonably priced.

21. Davis-Bacon Wage Determination Decision

The Authority's Compact requires that all mechanics and laborers employed by contractors and subcontractors on construction and maintenance contracts be paid wages not less than those prevailing on similar contracts in this locality as determined by the Secretary of labor in accordance with Davis-Bacon and related Acts. These wages are set forth under Appendix D of the Contract. The applicable Labor Standards Provisions are included in the articles and appendices of this solicitation.

22. Bid Guarantee

- a. A bid guarantee is required by this Invitation for Bid. Failure to furnish a bid guarantee in the proper form and amount, by the time set for the opening of bids, may be cause for rejection of the bid. **The Bid Guarantee amount shall be 5% of the bid price.**
- b. A bid guarantee shall be in the form of a firm commitment, such as a bid bond, postal money order, certified check, cashier's check, irrevocable letter of credit from a State or Federally chartered bank or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Corporations executing the bid bond as sureties must be among those appearing on the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein. Bid guarantees, other than bid bonds, will be returned as follows:
 - (1) To unsuccessful bidders: As soon as practicable after the opening of bids.
 - (2) To the successful bidder: Upon execution of such further contractual documents and bonds as may be required by the bid as accepted.
- c. If the successful bidder, upon acceptance of his bid by the Authority within the period specified therein for acceptance (90 days if no period is specified) fails to execute such further **contractual documents, if any, and give such bond(s) as may be required by the terms the bid as** accepted within the time specified (10 days if no period is specified) after the receipt of forms by him, his Contract may be terminated for default. In such event, he shall be liable for any cost of procuring the work which exceeds the amount of his bid, and the bid guarantee shall be available toward offsetting such difference.

23. Licenses

- a. If the work described in this IFB is to be performed in Virginia, bidders are required to show evidence of a certificate of registration obtained from the State of Virginia before a bid may be received and considered.
- b. Each bidder shall place on the outside of the envelope containing the bid, and on the bid form, one of the following notations:
 - (1) REGISTERED VIRGINIA CONTRACTOR: CLASS A, NUMBER _____
 - (2) REGISTERED VIRGINIA CONTRACTOR: CLASS B, NUMBER _____

24. Advance Cost Agreement

Within 30 days after Notice of Award, the Contractor shall make available for audit review, information on its accounting system used to project fixed and variable overhead rates applicable to possible Contract changes. The Authority's Office of the Auditor General, to the extent possible, will review and approve said accounting system. When appropriate and if possible, as a result of the audit review, Advance Cost Agreements should be executed between the Contracting Officer or other delegated Authority's Representative and the Contractor. The Cost Agreements shall be a supplemental agreement to the Contract.

25. WMATA's Tax Exempt Status

- a. Pursuant to Article XVI., Paragraph 78., of the Washington Area Metropolitan Transit Authority Compact, as adopted by the State of Maryland, the District of Columbia, and the Commonwealth of Virginia, with the authorization and consent of the Congress of the United States, the Authority

has been accorded exemption from taxes as follows:

"the Authority and the Board shall not be required to pay taxes or assessments upon any of the property acquired by it or under its jurisdiction, control, possession or supervision, or upon its activities in the operation and maintenance of any transit facility or upon any revenues therefrom, and the property and income derived therefrom shall be exempted from all Federal, State, District of Columbia, municipal, and local taxation. This exemption shall include without limitation, all motor vehicle license fees, sales taxes and motor fuel taxes."

- b. It has been the practice of the District of Columbia to apply the Authority's tax exempt status to certain purchases of materials required under Authority construction contracts and acquired by contractors for physical incorporation into the project work. This has not been the practice in either Maryland or Virginia. The Authority does not represent or warrant that the District of Columbia practice applies to this project or, if it does, that it will continue in effect during the term of this project. It is the responsibility of the Contractor to determine its liability for any and all taxes applicable to this project. Assessment or payment of taxes by the Contractor, including taxes resulting from changes in existing laws or the application thereof or of new or additional taxes, shall not constitute the basis for an increase in the Contract price, except as otherwise allowed under the General Provisions Article, FEDERAL, STATE AND LOCAL TAXES, of this Contract.
- c. By submission of its bid, the bidder certifies that none of the taxes as to which the Authority is exempt are included in its bid price(s).

26. Order of Precedence

In the event of an inconsistency between provisions of this solicitation, the inconsistency shall be resolved by giving precedence in the following order:

- (a) The Bid Form,
- (b) Solicitation Instructions and Conditions,
- (c) General Provisions,
- (d) Other provisions of the contract, whether incorporated by reference or otherwise,
- (e) The Specifications, and
- (f) Drawings.

27. Contractor Performance Evaluation

The Bidder is advised that a Performance Evaluation will be completed at the end of the contract. Factors to be included in the Performance Evaluation are as follows: Quality of Work, Timely Performance, Effectiveness of Management, Compliance with Labor Standards, Compliance with Safety Standards and an Overall Evaluation. The Performance Evaluation may be used in determinations of responsibility for future WMATA contracts.

The contractor shall be expected to staff and mobilize at a level promoting performance at the maximum level of efficiency possible.

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BID FORM

DATE OF INVITATION: **October, 7, 2015**

PROJECT DESCRIPTION: Six (6) Tie Breaker Stations Upgrade Orange and Blue Lines VA, DC and MD

In compliance with your Invitation for Bid of the above date, the undersigned hereby offers and agrees to furnish all labor, equipment and materials and perform all work for:

Six (6) Tie Breaker Stations Upgrade Orange and Blue Lines VA, DC and MD

IFB FQ15237/GG

In strict accordance with the Specifications, appendices, certifications, Contract Drawings, schedules, insurance specifications and conditions for the consideration of the amounts listed on the attached Price Schedule. The undersigned further agrees that, upon written acceptance of this bid, mailed or otherwise furnished within 90 calendar days after the date of receipt of bids, he will, within 10 calendar days after receipt of the prescribed forms, execute the Contract and furnish, if required, performance and payment bonds on standard Authority forms with good and sufficient surety or sureties.

The undersigned agrees that if awarded the Contract, he will commence the work within 10 calendar days after the receipt of Notice to Proceed and that he will complete the work within the time specified.

The undersigned acknowledges receipt of the following amendments to the Solicitation Documents (Give number and date of each):

Amendment Number____, dated_____

Amendment Number____, dated_____

Amendment Number____, dated_____

Amendment Number____, dated_____

Failure to acknowledge receipt of all amendments may cause the bid to be considered not responsive to the solicitation, which would require rejection of the bid.

THE OUTSIDE OF THE ENVELOPE CARRYING THE BID SHALL ALSO BE MARKED TO SHOW THE AMENDMENTS RECEIVED AND, IF NECESSARY, THE BIDDER'S VIRGINIA REGISTRATION NUMBER.

Enclosed is the bid guarantee (when applicable) consisting of _____, in the amount of _____.

In witness whereof, each bidder hereto has executed this bid form this _____ day of _____, 20 _____.

B I D D E R:

_____	_____
<i>Firm Name</i>	<i>By (signature)</i>
_____	_____
<i>Address</i>	<i>Title</i>
_____	_____
	<i>Telephone</i>
_____	_____
	<i>Project Manager</i>
_____	_____
<i>Firm Name</i>	<i>By</i>
_____	_____
<i>Address</i>	<i>Title</i>
_____	_____
	<i>Telephone</i>
_____	_____
	<i>Project Manager</i>

DIRECTIONS FOR SUBMITTING BID:

1. Read and comply with the Solicitation Instructions. This form is to be submitted in singular. Attached certifications must be completed and returned with the bid form. **Appendix B (DBE) data must be completed and returned if bid price is \$500,000 or more.**
2. Envelopes containing bids, bid guarantee and related required documents must be sealed, marked and addressed as follows:

IF BID IS TIMELY MAILED OR
HAND DELIVERED BEFORE 1:00 PM
ON BID OPENING DAY:

IF BID IS HAND-DELIVERED
BETWEEN 1:00 PM AND 2:00PM
ON BID OPENING DAY:

WASHINGTON METROPOLITAN AREA
TRANSIT AUTHORITY, ROOM 3C02
DEPARTMENT OF PROCUREMENT
600 FIFTH STREET, N.W.
WASHINGTON, D.C. 20001

WASHINGTON METROPOLITAN AREA
TRANSIT AUTHORITY
MEETING ROOM, LOBBY LEVEL
600 FIFTH STREET, N.W.
WASHINGTON, D.C. 20001

Envelopes shall be marked in the lower left hand corner as follows:

**BID UNDER IFB FQ15237/GG AMENDMENT NUMBERS _____ RECEIVED.
REGISTERED VIRGINIA CONTRACTOR: CLASS _____, NUMBER _____**

CAUTION: DO NOT INCLUDE IN THE ENVELOPE ANY BID FOR OTHER WORK. BIDS SHOULD NOT BE QUALIFIED BY EXCEPTIONS TO THE SOLICITATION CONDITIONS.

**REPRESENTATIONS AND CERTIFICATIONS
(FEDERALLY FUNDED SUPPLY/SERVICE/CONSTRUCTION CONTRACTS)**

REPRESENTATIONS

Instructions: Check or complete all applicable boxes or blocks on this form and submit it with your offer.

1. TYPE OF BUSINESS ORGANIZATION (RC-101, MAY 07)

By submission of this offer, the offeror represents that it operates as an individual, a partnership, a limited liability company, a joint venture, a nonprofit organization, or a corporation, incorporated under the laws of the State of _____.

2. AFFILIATION AND IDENTIFYING DATA (RC-102, MAY 07)

Each offeror shall complete (a), (b) if applicable, and (c) below, representing that:

- (a) It is, is not, owned or controlled by a parent company. For this purpose, a parent company is defined as one which either owns or controls the activities and basic business policies of the offeror. To own another company means the parent company must own at least a majority, i.e., more than 50 percent, of the voting rights in that company. To control another company, such ownership is not required; if another company is able to formulate, determine or veto basic business policy decisions of the offeror, such other company is considered the parent of the offeror. This control may be exercised through the use of dominant minority voting rights, use of proxy voting, contractual arrangements or otherwise.
- (b) If the offeror is owned or controlled by a parent company, it shall insert in the space below the name and main office address of the parent company:

Name of Parent Company

Main Office Address (including ZIP Code)

- (c) If the offeror has no parent company, it shall provide in the applicable space below its own Employer's Identification Number (E.I.N.), (i.e., number used on Federal Tax Returns or, if it has a parent company, the E.I. No. of its parent company).

Offeror E.I. Number: _____ or, Parent Company's E.I. Number: _____

- (d) If a Data Universal Numbering Systems (DUNS), number has not been established for the address entered on the Solicitation, Offer, and Award Form, the Authority will arrange for the assignment of this number after award of a contract and will notify the Contractor accordingly.

3. PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (RC-103, MAY 07)

This representation is applicable to federally assisted contracts. By submission of this offer, the offeror represents that:

- (a) It has, has not, participated in a previous contract or subcontract subject to either the Equal Opportunity Clause of this solicitation, or the clause contained in Parts II and IV of Executive Order 11246, as amended; which prohibits discrimination on the basis of race, color, creed, national origin, sex, age; and
- (b) It has, has not, filed all required compliance reports; and
- (c) Representations indicating submittal of required compliance reports signed by proposed subcontractors will be obtained prior to subcontract awards.

4. DISADVANTAGED BUSINESS ENTERPRISE (RC-104, MAY 07)

This representation is applicable to federally assisted contracts. By submission of this offer, the offeror represents that:

- (a) It is, is not, a disadvantaged business enterprise.

"Disadvantaged Business Enterprise" means a for-profit small business concern that is at least 51% owned by one or more individuals who are both socially and economically disadvantaged individuals or, in the case of a corporation, in which 51% of the stock is owned by one or more such individuals; and whose management and daily business operations are controlled by one or more socially and economically disadvantaged individuals who own it.

"Socially and Economically Disadvantaged Individuals" is defined in Appendix B, Section 4, paragraph I; and

- (b) It is, is not, currently certified by WMATA as a disadvantaged business enterprise.

5. AFFIRMATIVE ACTION COMPLIANCE (RC-105, MAY 07)

This representation is applicable to federally assisted contracts of \$50,000 or more that are awarded to contractors with 50 or more employees. By submission of this offer, the offeror represents that:

- (a) It has a workforce of ___ employees.
- (b) It has developed and has on file, or has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR Parts 60-1 and 60-2), or
- (c) It has not previously had contracts subject to the written affirmative action program requirements of the rules and regulations of the Secretary of Labor.

CERTIFICATIONS

6. COVENANT AGAINST GRATUITIES (RC-106, MAY 07)

By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:

Neither it nor any of its employees, representatives or agents have offered or given gratuities (in the form of entertainment, gifts or otherwise) to any director, officer or employee of the Authority with the view toward securing favorable treatment in the awarding, amending, or the making of any determination with respect to the performing of the contract.

7. CONTINGENT FEE (RC-107, MAY 07)

By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:

- (a) It [] has, [] has not, employed or retained any company or persons (other than a full-time, bona fide employee working solely for the offeror) to solicit or secure this contract, and
- (b) It [] has, [] has not, paid or agreed to pay any company or person (other than a full-time, bona fide employee working solely for the offeror) any fee, commission, percentage, or brokerage fee contingent upon or resulting from the award of this contract.

8. CLEAN AIR AND WATER CERTIFICATION (RC-108, MAY 07)

This certification is applicable if the contract will be federally assisted and the offer exceeds \$100,000, or the Contracting Officer believes that orders under an indefinite contract in any year will exceed \$100,000 or a facility to be used has been the subject of a conviction under the Clean Air Act (42 U.S.C. 7413(c)(1)) or the Water Act (33 U.S.C. 1319(c)) and is listed by the U.S. Environmental Protection Agency (EPA) as a violating facility, and the acquisition is not otherwise exempt:

- (a) Any facility to be utilized in the performance of this proposed contract [] is, or [] is not listed on the EPA list of Violating Facilities;
- (b) Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communications from the Administrator, or a designee of the EPA, indicating that any facility which it proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and
- (c) Offeror will include a certification substantially the same as this certification, including this paragraph, in every non-exempt subcontract.

9. DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNANTARY EXCLUSION

This certification is applicable to federally assisted contracts over \$25,000.

- (a) Primary Covered Transactions. This certification applies to the offer submitted in response to this solicitation and will be a continuing requirement throughout the term of any resultant contract.
 - (1) In accordance with the provisions of subpart C of OMB guidance contained in 2 CFR part 180 as supplemented by DOT Nonprocurement Suspension and Debarment regulations at 2 CFR 1200 *et. seq.*, the offeror certifies to the best of its knowledge and belief that it and its principals:
 - (i) are not currently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal or State department or agency;

- (ii) have not, within a three-year period preceding this offer, 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;
 - (iii) are not currently 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)(ii) of this Certification; and
 - (iv) have not, within a three-year period preceding this offer, had one or more public transactions (Federal, State, or local) terminated for cause or default.
- (2) Where the offeror is unable to certify to any of the statements in this certification, the offeror shall attach an explanation to this offer.
- (b) Lower Tier Covered Transactions. This certification applies to a subcontract at any tier expected to equal or exceed \$25,000 and will be a continuing requirement throughout the term of the prime contract.
- (1) In accordance with the provisions of subpart C of OMB guidance contained in 2 CFR part 180 as supplemented by DOT Nonprocurement Suspension and Debarment regulations at 2 CFR 1200 *et. seq.*, the prospective lower tier subcontractor certifies, by submission of this offer, that neither it nor its principals is currently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal or State department or agency.
 - (2) Where the prospective lower tier subcontractor is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.
- (c) The Certification required by subparagraph (b), above, shall be included in all applicable subcontracts and a copy kept on file by the prime contractor. The prime contractor shall be required to furnish copies of certifications to the Contracting Officer upon the Contracting Officer's request.

10. CERTIFICATION OF INDEPENDENT PRICE DETERMINATION (RC-110, MAY 07)

- (a) By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:
- (1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or with any other competitor, as to any matter relating to such prices;
 - (2) Unless otherwise required by law, the prices which have been quoted in this offer have not been knowingly disclosed by the offeror and will not be knowingly disclosed by the offeror prior to the opening of bids (in the case of a sealed bid solicitation) or prior to award (in the case of a negotiated procurement), directly or indirectly, to any other offeror or to any competitor; and
 - (3) No attempt has been made or will be made by the offeror to induce any other person or firm to submit or not to submit an offer for the purpose of restricting competition.
- (b) Each person signing this offer certifies that:
- (1) He or she is the person in the offeror's organization responsible within that organization for the

decision as to the prices being offered herein and that he/she has not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above; or

- (2) He or she is not the person in the offeror's organization responsible within that organization for the decision as to the prices being offered herein, but that he/she has been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated; and will not participate, in any action contrary to (a)(1) through (a)(3) above, and as their agent does hereby so certify.

11. CERTIFICATION OF NONSEGREGATED FACILITIES (RC-111, MAY 07)

This certification is applicable to federally assisted contracts over \$10,000.

- (a) By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:

- (1) It does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control, where segregated facilities are maintained.
- (2) The offeror agrees that a breach of this certification is a violation of the Equal Opportunity Clause in the contract.
- (3) As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion or national origin, because of habit, local custom or otherwise.
- (4) It further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will:
 - (a) Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to the Equal Opportunity clause;
 - (b) Retain such certifications in its files; and
 - (c) Forward the following notice to such subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

**NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR CERTIFICATION
OF NONSEGREGATED FACILITIES**

A Certification of Nonsegregated Facilities must be submitted prior to award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for such subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually).

12. NONDISCRIMINATION ASSURANCE (RC-112, MAY 07)

By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, in connection with this procurement that it will not discriminate on the basis of race, color, creed, national origin, sex, age in the performance of this contract. The offeror is required to insert the substance of this clause in all subcontracts and purchase orders. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Authority deems appropriate. The offeror further agrees by submitting this offer that it will include this certification, without modification, in all subcontracts and purchase orders.

13. CERTIFICATION OF RESTRICTIONS ON LOBBYING (RC-113, MAY 07)

This certification is applicable to federally assisted contracts if the offer exceeds \$100,000.

- (a) By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that to the best of his or her knowledge or belief:
- (1) 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 an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to 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 contract, the undersigned shall complete and submit Standard Form--LLL, "Disclosure of Lobbying Activities."
 - (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers and that all subrecipients shall certify and disclose accordingly.
- (b) This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352, as amended. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

14. BUY AMERICA ACT CERTIFICATION (RC-114, MAY 07)

The Buy America requirements apply to federally assisted construction contracts, and acquisition of goods or

rolling stock contracts valued at more than \$100,000.

- (a) By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement it will comply with 49 U.S.C. 5323(j) and 49 C.F.R. Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. 661.7 Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11.
- (b) An offeror must submit to the Authority the appropriate Buy America certification (below) with all bids or offers on FTA-funded contracts, except those subject to a general waiver. Offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive. This requirement does not apply to lower tier subcontractors. Mark the applicable certifications below:

(1) **Certification requirement for procurement of steel, iron, or manufactured products:**

Certificate of Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it will meet the requirements of 49 U.S.C. 5323(j)(1) and the applicable regulations in 49 CFR Part 661.5.

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(1) and 49 C.F.R. 661.5, but it may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 C.F.R. 661.7.

(2) **~~Certification requirement for procurement of buses, other rolling stock and associated equipment:~~**

~~*Certificate of Compliance with 49 U.S.C. 5323(j)(2)(C)*~~

~~The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(2)(C) and the regulations at 49 C.F.R. Part 661.11.~~

~~*Certificate of Non-Compliance with 49 U.S.C. 5323(j)(2)(C)*~~

~~The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11, but may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 C.F.R. 661.7.~~

15. CERTIFICATION OF NON-DELINQUENT TAXES (RC-116, OCTOBER 2008)

This certification is applicable to federally assisted contracts.

- (a) By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:
- (1) It has not been convicted over the past three years of violating any federal criminal tax law or failed to pay any tax.
 - (2) It has certified if it has been notified of an unresolved tax lien or any unsatisfied federal tax delinquency in excess of \$3,000 and that it is paying tax debts through an installment agreement or have requested a collection due process hearing.
 - (3) The offeror agrees that a breach of this certification is a violation of the Federal Acquisition Regulation.
 - (4) As used in this certification, the term "tax delinquency" means an outstanding debt for which a notice of lien has been filed in public records.
 - (5) It further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will:
 - (a) Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to Federal Acquisition Regulation;
 - (b) Retain such certifications in its files; and
 - (c) Forward the following notice to such subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR CERTIFICATIONS OF NON-DELINQUENT TAXES

16. DISCLOSURES OF INTERESTS OF WMATA BOARD MEMBERS (RC-117, May 2013)

For purposes of this disclosure, terms in bold are defined by the Code of Ethics for Members of the WMATA Board of Directors a copy of which is available at www.wmata.com. Financial interest includes ownership interests and prospective and actual income. Firm includes parents, subsidiaries and affiliates.

By submission of this offer, the offeror certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that to the best of your knowledge, information and belief in connection with this procurement:

- (a) No WMATA **Board Member, Household Member** or **Business Associate** has a financial interest in this firm, in a **Financial Transaction** with the Authority to which this firm is a party or prospective party, or in an **Actual or Prospective Business Relationship with the Authority** to which this firm is a party.
- (b) The following WMATA **Board Member(s), Household Member(s)** or **Business Associate(s)** has a financial interest in this firm, in a **Financial Transaction** with the Authority to which this firm is a party or prospective party, or in an **Actual or Prospective Business Relationship with the Authority** to which this firm is a party, Include in Nature of Interest below a description of the financial interest and (1) for ownership interests, the value of the interest, the name and address of the firm in which the interest is held, and the total equity or equivalent interest of the firm; and (2) for income, the amount of all income

received by the **Board Member, Household Member or Business Associate** in the current and preceding fiscal year for services provided, and the name and address of the firm from which the income was received.

Name of Board Member
Household Member or
Business Associate

Nature of Interest

_____	_____
_____	_____
_____	_____

- (c) The certification required by subparagraphs (a) and (b) above shall be included in all subcontracts. The prime contractor shall furnish copies of certifications to the contracting officer and retain a copy for inspection upon the contracting officer's request.

A Certification of Non-Delinquent Taxes must be submitted prior to award of a subcontract exceeding \$100,000 which is not exempt from the provisions of Federal Acquisition Regulation. The certification may be submitted either for such subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually).

SIGNATURE BLOCK FOR ALL REPRESENTATIONS AND CERTIFICATIONS

Name of Offeror: _____

Name and Title of Authorized Representative: _____
Print and Sign Name

_____ _____
Title Date

(RC-116, OCTOBER 08)

UNIT PRICE SCHEDULE

**FQ15237 Six (6) Tie Breaker Station Upgrades Orange and Blue Lines DC, MD & VA
 Unit Price Schedule**

Item Number	Description	UOM	Unit Price	Total
001	K06-2 Greenwich St. TBS (VA) *			
a	Furnish Switchgear, Equipment, and Ancillary Components	LS	\$	\$
b	Jumper Installation/Cutover	LS	\$	\$
c	Jumper Removal/Cutover	LS	\$	\$
d	Demolition of Existing Switchgear, Equipment, & Ancillary Components	LS	\$	\$
e	Install Insulation Pad	LS	\$	\$
f	Furnish, Install, Commission, Test Battery Bank, Chargers, and Ancillary Components	LS	\$	\$
g	Installation, Commission, Testing of Switchgear, Equipment & Ancillary Components	LS	\$	\$
h	Furnish SCADA Equipment and Communications Systems	LS	\$	\$
i	Installation/Commissioning/ Testing of SCADA/Communications System	LS	\$	\$
j	Test Reports, Manuals, & As Built Drawings	LS	\$	\$
Subtotal for K06-2				\$
002	K07-1 Ogden St TBS (VA) *			
a	Furnish Switchgear, Equipment, and Ancillary Components	LS	\$	\$
b	Jumper Installation/Cutover	LS	\$	\$
c	Jumper Removal/Cutover	LS	\$	\$
d	Demolition of Existing Switchgear, Equipment, & Ancillary Components	LS	\$	\$
e	Install Insulation Pad	LS	\$	\$
f	Furnish, Install, Commission, Test Battery Bank, Chargers, and Ancillary Components	LS	\$	\$

	g	Installation, Commission, Testing of Switchgear, Equipment & Ancillary Components	LS	\$	\$
	h	Furnish SCADA Equipment and Communications Systems	LS	\$	\$
	i	Installation/Commissioning/ Testing of SCADA/Communications System	LS	\$	\$
	j	Test Reports, Manuals, & As Built Drawings	LS	\$	\$
Subtotal for K07-1					\$
003	K07-2 Prosperity Ave TBS (VA)*				
	a	Furnish Switchgear, Equipment, and Ancillary Components	LS	\$	\$
	b	Jumper Installation/Cutover	LS	\$	\$
	c	Jumper Removal/Cutover	LS	\$	\$
	d	Demolition of Existing Switchgear, Equipment, & Ancillary Components	LS	\$	\$
	e	Install Insulation Pad	LS	\$	\$
	f	Furnish, Install, Commission, Test Battery Bank, Chargers, and Ancillary Components	LS	\$	\$
	g	Installation, Commission, Testing of Switchgear, Equipment & Ancillary Components	LS	\$	\$
	h	Furnish SCADA Equipment and Communications Systems	LS	\$	\$
	i	Installation/Commissioning/ Testing of SCADA/Communications System	LS	\$	\$
	j	Test Reports, Manuals, & As Built Drawings	LS	\$	\$
Subtotal for K07-2					\$
004	G01 Benning Road TBS (DC) *				
	a	Furnish Switchgear, Equipment, and Ancillary Components	LS	\$	\$
	b	Jumper Installation/Cutover	LS	\$	\$
	c	Jumper Removal/Cutover	LS	\$	\$
	d	Demolition of Existing Switchgear, Equipment, & Ancillary Components	LS	\$	\$

	e	Install Insulation Pad	LS	\$	\$
	f	Furnish, Install, Commission, Test Battery Bank, Chargers, and Ancillary Components	LS	\$	\$
	g	Installation, Commission, Testing of Switchgear, Equipment & Ancillary Components	LS	\$	\$
	h	Furnish SCADA Equipment and Communications Systems	LS	\$	\$
	i	Installation/Commissioning/ Testing of SCADA/Communications System	LS	\$	\$
	j	Test Reports, Manuals, & As Built Drawings	LS	\$	\$
Subtotal for G01					\$
005	G02-1 56th Place TBS (DC) *				
	a	Furnish Switchgear, Equipment, and Ancillary Components	LS	\$	\$
	b	Jumper Installation/Cutover	LS	\$	\$
	c	Jumper Removal/Cutover	LS	\$	\$
	d	Demolition of Existing Switchgear, Equipment, & Ancillary Components	LS	\$	\$
	e	Install Insulation Pad	LS	\$	\$
	f	Furnish, Install, Commission, Test Battery Bank, Chargers, and Ancillary Components	LS	\$	\$
	g	Installation, Commission, Testing of Switchgear, Equipment & Ancillary Components	LS	\$	\$
	h	Furnish SCADA Equipment and Communications Systems	LS	\$	\$
	i	Installation/Commissioning/ Testing of SCADA/Communications System	LS	\$	\$
	j	Test Reports, Manuals, & As Built Drawings	LS	\$	\$
Subtotal for G02-1					\$
006	G02-2 67th Ave TBS (MD) *				
	a	Furnish Switchgear, Equipment, and Ancillary Components	LS	\$	\$
	b	Jumper Installation/Cutover	LS	\$	\$

	c	Jumper Removal/Cutover	LS	\$	\$
	d	Demolition of Existing Switchgear, Equipment, & Ancillary Components	LS	\$	\$
	e	Install Insulation Pad	LS	\$	\$
	f	Furnish, Install, Commission, Test Battery Bank, Chargers, and Ancillary Components	LS	\$	\$
	g	Installation, Commission, Testing of Switchgear, Equipment & Ancillary Components	LS	\$	\$
	h	Furnish SCADA Equipment and Communications Systems	LS	\$	\$
	i	Installation/Commissioning/ Testing of SCADA/Communications System	LS	\$	\$
	j	Test Reports, Manuals, & As Built Drawings	LS	\$	\$
Subtotal for G02-2					\$
007		Training & Software	LS	\$	\$
009		TOTAL BASE WORK (Line Items 001, 002, 003, 004, 005, 006, 007, 008)	LS	\$	\$
010		OPTION 1 – Spare Parts	LS	\$	\$
TOTAL BID PRICE (Base Work plus Option 1)				\$	

Notes

* Refer to the Scope Drawings and Specifications. Requirements for each TBS are site specific and will vary.

*** Refer to Clause 2.13 INDEMNIFICATION AND INSURANCE for WMATA Blanket RRPL Program Option.

NOTES TO BIDDERS:

Item No.	Name	Description
001 - 006	6 TBS Locations indicated on the Drawings & Specifications	The 6 TBS Locations in this Contract. Refer to the Drawings and Specifications for the Requirements at each location, as they are Site Specific and will vary.
a	Furnish Switchgear, Equipment, and Ancillary Components	Per Drawings and Specifications, purchase and supply all of the Electrical Switchgear, Equipment, and Materials necessary to complete the work at each TBS. Requirements will vary by location.
b	Jumper Installation/Cutover	Item includes all testing required prior to TBS isolation, installation of jumper cables to electrically isolate the TBS from the traction power system prior to initiation of existing equipment removal and equipment installation.
c	Jumper Removal/Cutover	Removal of jumper cables after completion of work and restore TBS back to operating condition and all required testing associated with this activity.
d	Demolition of Existing Switchgear, Equipment, & Ancillary Components	Item includes demolition, removal, and proper disposal of existing DC Switchgear as well as any electrical equipment or materials associated with this Contract as identified in the Specifications and Drawings.
e	Install Insulation Pad	Item includes removal and replacement of insulated floor topping and testing of completed insulated floor topping.
f	Furnish, Install, Commission, Test Battery Bank, Chargers, and Ancillary Components	Item includes the furnishing, installation, testing and commissioning battery bank and battery chargers, with all associated ancillary components at the locations depicted in the Design Drawings and Specifications.
g	Installation, Commission, Testing of Switchgear, Equipment & Ancillary Components	Item includes delivery of DC Switchgear and all associated ancillary components and materials from Contractor's secured storage facility to Site; furnishing electrical equipment and materials associated with installation of DC Switchgear, and lighting; installation, testing, commissioning, and Acceptance of DC Switchgear, electrical equipment and materials associated with installation of DC Switchgear, and lighting; component testing and system integration testing of TBS equipment for local control within TBS and central control from Authority's Rail Operations Controls Centers at Carmen Turner Facility and at Jackson Graham Building via the Data Transmission System (DTS). This Item does not include SCADA testing.
h	Furnish SCADA Equipment and Communications Systems	Per Drawings and Specifications, purchase and supply all SCADA equipment and Fiber optical system components, materials and any ancillary components necessary for installation.

i	Installation/Commissioning/ Testing of SCADA/Communications System	Item includes per drawings and specifications, the installation of the Contractor furnished SCADA equipment, fiber optics materials, and associated ancillary components and materials. All component simulation and cable continuity testing is included herein.
j	Test Reports, Manuals, & As Built Drawings	Item to furnish Final Test Reports, O&M Manuals, and As-built Documentation
007	Training & Software	Include Training as specified in Section 2.25.2, OPERATION AND MAINTENANCE TRAINING, and the development of a complete TBS RTU configuration file Template and site specific RTU configuration files for all 6 TBS drawings and Specifications.
008	RRPL	Railroad Protective Liability Insurance as Specified in the Special Conditions 2.13
010	Option 1 – Spare Parts	Spare parts are specific to the equipment manufacturer and will vary per location. Provide the total lump sum amount for recommended spare parts list for all the six (6) TBS in accordance with Clause 2.64 SPARE PARTS of Construction Special Provisions available to utilize by the Authority anytime during the Contract Period of Performance specified in Clause 2.1.8 FINAL WORK COMPLETION of Construction Special Provisions. The Authority is not obligated to, but may exercise the option to order spare parts anytime during the Contract Period of Performance.

NOTES TO BIDDERS:

1. The Bid Item No. Amount shall include all work at each location.
2. The Contract will be awarded on the basis of the lowest responsive total bid price from a responsible Bidder. A single contract will be awarded.
3. The Offeror must bid on all items. Failure to bid on all items shall result in bid rejection.
4. Any bid which is materially unbalanced as to prices for the various items may be rejected as non-responsive. A materially unbalanced bid is one which is based on prices which are materially overstated for other work.
5. Unit Prices - The unit prices shall constitute full compensation for all costs of performance under this contract, including but not limited to: labor, materials, equipment, supervision, quality control, testing, safety, transportation, project management, overhead, profit, bonds and other items necessary to complete the work.
6. All extensions of the unit prices shown will be subject to verification by the Authority. In case of variation between the unit prices and the extension, the unit price will be considered the bid.
7. The Bidder must furnish a Bid Guarantee in accordance with the Invitation for Bid for the Total Bid Price.
8. Performance and Payment Bonds - The Performance and Payment Bonds shall be based upon the Total Bid Price.
9. The Bidder is advised that this contract contains Davis-Bacon provisions. The Contractor will be required to submit certified payrolls on a weekly basis. Also, the Authority will monitor compliance by performing Labor Standards Interviews of the labor force. The Authority will hold retainage in a sufficient amount as may be considered necessary for any underpayment of wages and/or fringes until they are fully resolved in accordance with the Labor Provisions of the contract.
10. WMATA Railroad Protective Liability Program Option – See Special Conditions 2.13 Indemnification and Insurance. The Authority may offer to waive the requirement for the Contractor to procure RRP if 1) the work can be covered under the Authority's blanket RRP program, and 2) the Contractor prepays the waiver fee which shall be determined by the rate schedule promulgated by the insurer in effect as of the effective date of this Contract. Contractor shall be advised of and pay the applicable waiver, or procure a standalone RRP policy on the Authority's behalf.

If the contractor chooses to not utilize the WMATA RRPL, then WMATA will reimburse the contractor for the actual cost with no markups up to the amount (not allowance) that would have been paid for the WMATA waiver fee.
11. DBE data (See Appendix B) shall be submitted with the bid.~

~Applies only if total bid price (base plus option) is \$500,000 or more.

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BID BOND

Bid Invitation No. IFB FQ15237/GG

Bid Date:

Penal Sum of Bond:

5 % of Offered Price or Amount, \$:

Date Bond Executed:

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety(ies) hereto, are firmly bound to the Washington Metropolitan Area Transit Authority in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally: Provided, that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the bid identified above: NOW, THEREFORE, if the Principal, upon acceptance by the Authority of his bid identified above, within the period specified therein for acceptance (ninety [90] days if no period is specified), shall execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the bid as accepted within the time specified (ten [10] days if no period is specified) after receipt of the forms by him, or in the event of failure so to execute such further contractual documents and give such bonds, if the Principal shall pay the Authority for any cost of procuring the work which exceeds the amount of his bid, then the above obligation shall be void and of no effect.

Each Surety executing this instrument hereby agrees that its obligation shall not be impaired by any extension(s) of the time for acceptance of the bid that the Principal may grant to the Authority notice of which extension(s) to the Surety(ies) being hereby waived provided that such waiver shall apply only with respect to extensions aggregating not more than sixty (90) calendar days in addition to the period originally allowed for acceptance of the bid.

Principal(s)

1. Firm Name and Address: Signature: _____ Name and Title:	State of Inc.:	Corporate Seal
2. Firm Name and Address: Signature: _____ Name and Title:	State of Inc.:	Corporate Seal
2. Firm Name and Address: Signature: _____ Name and Title:	State of Inc.:	Corporate Seal

BID BOND page 2

Corporate Surety(ies)			
Surety A	Surety Name and Address: Signature: _____ Name and Title:	Liability Limit \$	(Seal)
		State of Inc.:	
Surety B	Surety Name and Address: Signature: _____ Name and Title:	Liability Limit \$	(Seal)
		State of Inc.:	
Surety C	Surety Name and Address: Signature: _____ Name and Title:	Liability Limit \$	(Seal)
		State of Inc.:	

Attach additional pages as needed.

Instructions

1. *This form is authorized for use whenever a bid guaranty is required in connection with construction work or the furnishing of supplies and services.*
2. *The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of this form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership or joint venture, or an officer of the corporation involved, evidence of his authority must be furnished.*
3. *The penal sum of the bond shall be expressed as either a percentage of the bid price or in dollars and cents.*
4. *Corporation executing the bond as sureties must be among those appearing on the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein. Where more than a single corporate surety is involved, their names and addresses (city and State) shall be inserted in the spaces (Surety A, Surety B, etc.) headed "Corporate Surety(ies)".*
5. *Corporations executing the bond shall affix their corporate seals.*
6. *The name of each person signing this bid bond should be typed in the space provided.*

* * *

CONTRACTING REQUIREMENTS

OFFEROR'S INFORMATION NOTICE

The following forms are included for the
offeror's information regarding
pre-award information from the apparent low bidder
and award of the Contract to the eligible bidder.

Except where indicated otherwise, they are not required to be submitted
with the bid.

PRE-AWARD SURVEY DATA FORM

PERFORMANCE BOND

PAYMENT BOND

CONSTRUCTION CONTRACT

POWER OF ATTORNEY

POWER OF EXECUTION

* * *

PRE-AWARD SURVEY DATA FORM

PROJECT DESCRIPTION: Six (6) Tie Breaker Stations Upgrade Orange and Blue Lines VA, DC and MD

1. Name of Firm: _____

2. Legal Address: _____

3. Individual Partnership Corporation Joint Venture
4. Date Organized _____
State in which incorporated _____
5. Names and Addresses of Officers or Partners:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____
6. How long has your firm been in business under its present name? _____
7. Attach as SCHEDULE 7 a list of current contracts, each with contract amount, owner, architect-engineer, character or type of work and percentage of completion. Also, include those projects on which you are apparent low bidder, but for which you have not received an award of contract.
8. What is the estimated work placement value required per year to complete the work described in SCHEDULE 7?
2015:_____ 2016:_____ 2017:_____
9. Attach as SCHEDULE 9 a list of contracts, each with contract amount, owner, architect-engineer and character or type of work, for contracts completed in the last five years.

10. Have you ever been denied an award on which you were low bidder? _____
If the answer is YES, attach as SCHEDULE 10 the full particulars regarding each occurrence.
11. Have you ever failed to complete any contract, other than current, on which you were the low bidder? _____
If the answer is YES, attach as SCHEDULE 11, the full particulars regarding each occurrence.
12. Have you ever been assessed liquidated damages or actual damages for late completion within the last five years? _____
If the answer is YES, attach as SCHEDULE 12 the full particulars regarding each occurrence.
13. Financial resources available as working capital for this Contract:
- a. Cash on hand: \$ _____ Date: _____
b. Sources of credit: _____
14. Attach as SCHEDULE 14 certified financial statements for the last two (2) years and letters from banks regarding credit as required by the Pre-Award Information article of the Invitation for Bid.
15. Attach as SCHEDULE 15 the construction experience of each officer and principal individual of your organization; include present position, years of construction experience, magnitude and type of work and in what capacity.
16. What percentage of the work (contract amount) do you intend performing with your own personnel?
_____ %
17. Attach as SCHEDULE 17 a list of all principal subcontractors and the percentage and character of work (contract amount) which each will perform. Principal items of work shall include, but not be limited to, those items listed in the Pre-Award Information article of the Invitation for Bid.
18. Attach as exhibits completed PRE-AWARD SURVEY FORM for each of the subcontractors listed in SCHEDULE 17 above.
19. If the Contractor or subcontractor is a joint venture, submit PRE-AWARD SURVEY FORM for each member of the joint venture.
20. Method to achieve and maintain staff consistent with the requirements stated in SP 2.1

The above information is confidential and will not be divulged to any unauthorized person or persons.

The signatory of this questionnaire certifies to the truth and accuracy of all statements and answers.

FOR: _____
(Name of Firm)

SIGNATURE: _____

TITLE: _____

DATED: _____

LOCATION: _____

PAYMENT BOND

Contract No. IFB FQ15237/GG

Contract Date:

Penal Sum of Bond:

Date Bond Executed:

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety(ies) hereto, are firmly bound to the Washington Metropolitan Area Transit Authority (hereinafter called the Authority) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally: Provided, that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into the contract identified above:

NOW, THEREFORE, if the Principal shall perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Authority, with or without notice to the Surety(ies), and during the life of any guaranty required under the contract, and shall also perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety(ies) being hereby waived, then the above obligation shall be void and of no effect.

- 1. A claimant is defined as one having a direct contract with the Principal or with a subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the CONTRACT.*
- 2. The above-named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due the claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.*
- 3. No suit or action shall be commenced hereunder by any claimant:*
 - a. Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to the Principal within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal at any place where he maintains an office or conducts business, or his residence or such notice shall be served in any manner in which legal process may be served in the state or District of Columbia in which the aforesaid project is located, save that such service need not be made by a public officer.*
 - b. After the expiration of one (1) year following the date of final settlement of said CONTRACT, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.*
 - c. Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.*

PAYMENT BOND – Page 2 IN WITNESS WHEREOF, the Principal and Surety(ies) have executed this performance bond and have affixed their seals on the date set forth above.

Principal(s):

1. Firm Name and Address: Signature: _____ Name and Title:	Corporate Seal State of Inc.:
2. Firm Name and Address: Signature: _____ Name and Title:	Corporate Seal State of Inc.:
3. Firm Name and Address: Signature: _____ Name and Title:	Corporate Seal State of Inc.:

Corporate Surety(ies):

Surety A	Surety Name and Address: Signature: _____ _____ Name and Title:		Liability Limit \$	(Seal)
Surety B	Surety Name and Address: Signature: _____ _____		Liability Limit \$	(Seal)

	<i>Name and Title:</i>		<i>State of Inc.:</i>
Surety C	<i>Surety Name and Address:</i>		<i>Liability Limit</i> \$
	<i>Signature:</i> _____		(Seal)
	<i>Name and Title:</i>		<i>State of Inc.:</i>

Attach additional pages as needed.

<i>Bond</i>	
<i>Premium</i>	
<i>Schedule</i>	<i>Total Premium</i> \$

Instructions

1. This form is authorized for use in connection with contracts for construction work or the furnishing of supplies and services.
2. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of this form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership or joint venture, or an officer of the corporation involved, evidence of his authority must be furnished.
3. Corporation executing the bond as sureties must be among those appearing on the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein. Where more than a single corporate surety is involved, their names and addresses (city and State) shall be inserted in the spaces (Surety A, Surety B, etc.) headed "Corporate Surety(ies)".
4. Corporations executing the bond shall affix their corporate seals.
5. The name of each person signing this performance bond should be typed in the space provided.

6. *The date this Bond is executed must be later than the contract execution date.*

PERFORMANCE BOND

Contract No. IFB FQ15237/GG

Contract Date:

Penal Sum of Bond:

Date Bond Executed:

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety(ies) hereto, are firmly bound to the Washington Metropolitan Area Transit Authority (hereinafter called the Authority) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally: Provided, that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into the contract identified above:

NOW, THEREFORE, if the Principal shall promptly make payment to all claimants as hereinafter defined supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety(ies) being hereby waived, then the above obligation shall be void and of no effect, otherwise it shall remain in full force and effect, subject, however, to the following conditions:

IN WITNESS WHEREOF, the Principal and Surety(ies) have executed this payment bond and have affixed their seals on the date set forth above.

Principal(s)

1. Firm Name and Address: Signature: _____ Name and Title:	State of Inc.:	Corporate Seal
2. Firm Name and Address: Signature: _____ Name and Title:	State of Inc.:	Corporate Seal
3. Firm Name and Address: Signature: _____ Name and Title:	State of Inc.:	Corporate Seal

PERFORMANCE BOND page 2

Corporate Surety(ies)

Surety A	Surety Name and Address:	Liability Limit \$ State of Inc.:	(Seal)
	Signature: _____		
	Name and Title:		
Surety B	Surety Name and Address:	Liability Limit \$ State of Inc.:	(Seal)
	Signature: _____		
	Name and Title:		
Surety C	Surety Name and Address:	Liability Limit \$ State of Inc.:	(Seal)
	Signature: _____		
	Name and Title:		

Attach additional pages as needed.

Instructions

- a. *This form is authorized for use in connection with contracts for construction work or the furnishing of supplies and services.*
- b. *The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of this form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership or joint venture, or an officer of the corporation involved, evidence of his authority must be furnished.*
3. *Corporation executing the bond as sureties must be among those appearing on the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein. Where more than a single corporate surety is involved, their names and addresses (city and State) shall be inserted in the spaces (Surety A, Surety B, etc.) headed "Corporate Surety(ies)".*
4. *Corporations executing the bond shall affix their corporate seals.*
5. *The name of each person signing this payment bond should be typed in the space provided.*
6. *The date this Bond is executed must be later than the contract execution date.*

* * *

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CONSTRUCTION CONTRACT

CONTRACTOR:

CONTRACT NUMBER:

IFB FQ15237/GG

DATE:

CONTRACT FOR:

Six (6) Tie Breaker Stations Upgrade Orange and Blue Lines VA, DC and MD

CONTRACT PRICE:

PERFORMANCE TIME:

In consideration of the covenants contained herein, the Washington Metropolitan Area Transit Authority (hereinafter called the Authority), represented by the Contracting Officer or other delegated Authority's Representative executing this Contract, and the individual, partnership, joint venture or corporation named above (hereinafter called the Contractor), mutually agree to perform this Contract in strict accordance with the following instruments:

ALTERATIONS:

The following alterations were made to this Contract before it was signed by the parties hereto:

In Witness Whereof, the parties hereto have executed this Contract as of the date entered above.

Contractor

ATTEST: _____ *By: _____

Contractor

ATTEST: _____ *By: _____

Contractor

ATTEST: _____ *By: _____

**WASHINGTON METROPOLITAN AREA
TRANSIT AUTHORITY**

By: _____

**NOTE: Execution for the Contractor shall be accompanied by a Power of Execution
and Certification of the person's authority to act on behalf of the Contractor.*

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS,

That _____

constituting all of the venturers of the joint venture known as

which is desirous of entering into a contract with the Washington

Metropolitan Area Transit Authority, do hereby designate and

appoint _____

one of the venturers hereinafter called the "Managing Sponsor", as their true and lawful attorney with the power, on their behalf and in the name and on behalf of the joint venture, to represent and bind the undersigned and the joint venture in all matters in connection with Contract _____, to make, execute, seal and deliver on behalf of the joint venture and as its act and deed, any and all contracts, change orders, monthly and final payment certificates and other like instruments. The undersigned specifically acknowledge and agree that the execution of such proposal or contract by the Managing Sponsor shall constitute the agreement of each venturer to be jointly and severally liable for any and all of the duties and obligations of the joint venture arising from such proposal or contract.

IN WITNESS WHEREOF, the undersigned have executed this Power of Attorney this of _____ 19

Contractor

ATTEST: _____ By _____

Contractor

ATTEST: _____ By _____

Contractor

ATTEST: _____ By _____

* * *

POWER OF EXECUTION

The undersigned, a _____
corporation, partnership, individual
under the laws of the State of _____, having principal office or
registered agent at _____
hereby nominates, constitutes and appoints _____
_____ with full power to act _____
alone or in conjunction
_____, on behalf of _____
with another person name of company

to make, execute, seal and deliver on its behalf as contractor and as its act and deed, any and all contracts, change orders, monthly and final payment certificates and other like instruments.

Such contracts, change orders, monthly and final payment certificates and other like instruments shall be binding upon said company as fully and to all intents and purposes as if such instruments had been duly executed and acknowledged and delivered by the authorized officers of the company when duly executed, as indicated above, by either one of the aforementioned persons.

Contractor
By: _____
Signature

Address

ATTEST: _____
Date

Attachment to Contract IFB FQ15237/GG
Complete certification on reverse.

CERTIFICATION

PARTNERSHIP POWER OF EXECUTION

I, _____, certify that I am a Partner of the firm named as Contractor herein; that _____ who signed this Statement on behalf of the Contractor was then a Partner of said partnership; that said Statement was duly signed for and on behalf of said partnership by authority of its partners and is within the scope of their powers.

Date Executed _____

By _____

CORPORATE POWER OF EXECUTION

I, _____, certify that I am an _____ of _____, that _____, who signed this Statement on behalf of said corporation was then an officer of said Corporation; that said Statement was duly signed for and on behalf of said Corporation.

Date Executed _____

By _____

* * *

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CONSTRUCTION GENERAL PROVISIONS

1.1 Definitions (07/03)

- a. Authority: The term Authority as used herein means the Washington Metropolitan Area Transit Authority, created effective February 20, 1967, by Interstate Compact by and between Maryland, Virginia and the District of Columbia, pursuant to Public Law 89-774, approved November 6, 1966.
- b. Contracting Officer/CO: A Contracting Officer is an employee within the Authority's Office of Procurement and Materials with authority duly delegated from the powers of the General Manager and/or Chief Procurement Officer to legally bind the Authority by signing contractual instruments, including but not limited to modifications and change orders. The Office of Procurement and Materials has been delegated broad authority regarding acquisition functions, independent from the project office. Contracting Officers have the authority to make related determinations and findings, and take other significant actions normally reserved for the Office of Procurement and Materials including, but not limited to: awards, modifications above the Authority Representative's level of authority, final payments, suspensions, terminations, debarments, assessment of liquidated damages, and issuances of final decisions under Clause 1.25 TERMINATION FOR CONVENIENCE OF THE AUTHORITY and 1.5 TERMINATION FOR DEFAULT, DAMAGES FOR DELAY AND TIME EXTENSIONS of Construction General Provisions. The term includes certain other representatives of the Authority acting within delegated limits of authority. In general, the Authority's primary point of contact for pre-award administration and fiscal closeout resides with the Contracting Officer, and the primary point of contact for the post-award contract administration is the Authority Representative.
- b. Contracting Officer Representative (COR)/Authority Representative (AR): The Authority Representative is the person responsible for post award execution of an Authority contract in the most effective, economical, and timely manner. Upon Contract award, the Authority Representative is the Authority's primary point of contact with the Contractor. In addition, the Authority Representative is delegated authority to modify this Contract within specified dollar limits which are available upon request. The Authority, through its CO, may designate additional individuals, usually in the supervisory chain as the Authority Representative, who have dollar authority in excess of the Authority Representative's stated authority (see also definition of Contracting Officer). The Authority Representative may, at his or her discretion, delegate Project responsibilities to a Project Representative and certain other responsibilities to other designees. Unless the Contractor is directed to the contrary, all correspondence with respect to this Contract shall be sent to the Authority Representative.
- c. Project Representative: The term Project Representative means the individual(s), including but not limited to the Resident Engineer, to whom the Authority Representative has delegated Project responsibilities. If a Project Representative is appointed, the Project Representative represents the Authority Representative on the Project within the limits of that delegation with respect to any part of the Work.
- d. Engineer: The term Engineer is used in numerous locations in the specifications. The term Engineer is synonymous with the term Resident Engineer, Project Representative, or if no individual has been so designated, the Authority Representative.
- f. Board of Directors: The term Board of Directors means the Board of Directors of the Washington Metropolitan Area Transit Authority.
- g. The term Contractor as used in the Specifications shall mean the individual, partnership or corporation that agrees to provide all labor, material and services required under the Contract.

- h. Wherever in the Contract Documents the words "directed," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the "direction," "requirement," "order," "designation," or "prescription" of the Contracting Officer or other delegated Authority's Representative, Project Representative, or Designer, as specified, is intended and similarly the words "approved," "acceptable," "satisfactory," or words of like import, shall mean "approved by," "acceptable to," or "satisfactory to" the Contracting Officer or other delegated Authority's Representative, Project Representative, or Designer, as specified, unless otherwise expressly stated.
- i. Where the terms "as shown," "as indicated," "as detailed" or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this Contract unless stated otherwise. The word provided as used herein shall be understood to mean provided complete in place, that is furnished and installed.
- j. Substantial Completion: Work or a portion thereof that has progressed to the point where it is sufficiently complete in accordance with the Contract Documents (including receipt of test and inspection reports) so that the Work, or a specified portion thereof, can be utilized for the purpose for which it is intended, and only incidental work remains for physical completion of the Work in accordance with the Contract Documents.

1.2 Contract Documents

1.2.1 INTENT OF THE CONTRACT DOCUMENTS:

- a. The intent of the Contract Documents is to prescribe the construction and completion of the work. Where the Contract Drawings and Specifications describe portions of the work in general terms, but not in complete detail, the best general practice shall be followed and only new materials and workmanship of best standard quality shall be used. Unless otherwise specified, the Contractor shall furnish all labor, materials, tools, equipment and incidentals which are necessary to complete the work in a proper, substantial and workmanlike way.
- b. Throughout the Specifications requirements have been specified for Contract performance. Each such Contract item is mandatory and shall be performed by the Contractor.
- c. Reference to any article or paragraph within the Specifications shall imply reference to all subparagraphs there under.

1.2.2 ELEMENTS OF THE CONTRACT DOCUMENTS:

- a. The Contract Documents: The Contract Drawings, the General Provisions, the Contract Specifications and all Amendments.
- b. Contract Drawings: The official plans, profiles, cross sections, elevations, schedules and details listed or referenced in the Contract Specifications or amendments thereto and which show the locations, character, dimensions and details of the work to be performed.
- c. General Provisions: Compilation of contractual and legal requirements. In case of variance between the General Provisions, the Special Conditions and/or the Technical Provisions, the General Provisions shall take precedence.
- d. Special Conditions and Technical Provisions: Project requirements and technical specifications which include materials and construction requirements.
- e. Amendment: A document which is added to the original bidding documents during the bidding period to clarify, revise, add to or delete from the original documents or previous amendments.

1.2.3 SPECIFICATIONS AND DRAWINGS:

- a. The Contractor shall keep on the work a copy of the Drawings and Specifications and shall at all times give the Contracting Officer or other delegated Authority's Representative access thereto.
- b. Omissions: Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.
- c. Discrepancies:
 - (1) In case of discrepancy between Drawings and Specifications, the Specifications shall govern.
 - (2) In case of discrepancy in the figures, in the Drawings or in the Specifications, the matter shall be promptly submitted to the Contracting Officer or other delegated Authority's Representative who shall promptly make a determination in writing.
 - (3) Any adjustment by the Contractor without such a determination shall be at his own risk and expense.
- d. The Contracting Officer or other delegated Authority's Representative shall furnish from time to time such detail drawings and other information as he may consider necessary unless otherwise provided.

1.3 Changes

- a. The Contracting Officer or other delegated Authority's Representative may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make any change in the work within the general scope of the Contract including, but not limited to, changes:
 - (1) In the Specifications, including Drawings and designs;
 - (2) In the method or manner of performance of the work;
 - (3) In the Authority-furnished facilities, equipment, materials, services, or site; or
 - (4) Directing acceleration in the performance of work.
- b. Any other written order or an oral order, which terms as used in this Paragraph b. shall include direction, instruction, interpretation or determination from the Contracting Officer or other delegated Authority's Representative, which causes any such change, shall be treated as a change order under this Article, provided that the Contractor gives the Contracting Officer or other delegated Authority's Representative written notice stating the date, circumstances and source of the order and that the Contractor regards the order as a change order.
- c. Except as herein provided, no order, statement or conduct of the Contracting Officer or other delegated Authority's Representative shall be treated as a change under this Article or entitle the Contractor to an equitable adjustment hereunder.
- d. If any change under this Article causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this Contract, whether or not change by any order, an equitable adjustment shall be made and the Contract modified in writing accordingly; provided, however, that except for claims based on defective Specifications, no claim for any change under Paragraph b. above shall be allowed for any costs incurred more than 20 days before the Contractor gives written notice as therein required, and provided further, that in the case of defective Specifications for which the Authority is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with such defective Specifications.

- e. If the Contractor intends to assert a claim for an equitable adjustment under this Article, he must, within 30 days after receipt of a written change order under Paragraph a. above or the furnishing of a written notice under Paragraph b. above, submit to the Contracting Officer or other delegated Authority's Representative a written statement setting forth the general nature and monetary extent of such claim, unless this period is extended by the Authority. The statement of claim hereunder may be included in the notice under b. above.
- f. No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Contract.

1.4 Differing Site Conditions

- a. The Contractor shall promptly, and before such conditions are disturbed, notify the Contracting Officer or other delegated Authority's Representative in writing of the following:
 - (1) Subsurface or latent physical conditions at the site differing materially from those indicated in this Contract.
 - (2) Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract.

The Contracting Officer or other delegated Authority's Representative will promptly investigate the conditions, and if he finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this Contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the Contract modified in writing accordingly.

- b. No claim of the Contractor under this Article shall be allowed unless the Contractor has given the notice required in Paragraph a. above; provided, however, the time prescribed therefor may be extended by Contracting Officer or other delegated Authority's Representative.
- c. No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Contract.

1.5 Termination For Default, Damages For Delay And Time Extensions

- a. If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with such diligence as will ensure its completion within the time specified in this Contract, or any extension thereof, or fails to complete said work within such time, the Contracting Officer may, by written notice to the Contractor, terminate his right to proceed with the work or such part of the work as to which there has been delay. In such event, the Contracting Officer may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completing the work such materials, appliances and plant as may be on the site of the work and necessary therefor. Whether or not the Contractor's right to proceed with the work is terminated, he and his sureties shall be liable for any damage to the Authority resulting from his refusal or failure to complete the work in the specified time.
- b. If fixed and agreed liquidated damages are provided in the Contract and if the Contracting Officer so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Authority in completing the work.
- c. If fixed and agreed liquidated damages are provided in the Contract and if the Contracting Officer does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.

- d. The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if:
- (1) The delay in the completion of the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, acts of the public enemy, acts of the Authority in its contractual capacity, acts of another contractor in the performance of a contract with the Authority, fires, flood, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of subcontractors or suppliers at any tier arising from causes other than normal weather beyond the control and without the fault or negligence of both the Contractor and such subcontractors or suppliers; and
 - (2) The Contractor, within 10 days from the beginning of any such delay, unless the Contracting Officer grants a further period of time before the date of final payment under the Contract, notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of the delay and extend the time for completing the work when, in his judgment, the findings of fact justify such an extension, and his findings of fact shall be final and conclusive on the parties, subject only to appeal as provided in the DISPUTES Article of these General Provisions.
 - (3) Unusually severe weather conditions:
 - (a) Pursuant to Paragraph d.(1) above, the Authority will use the following table as a basis for determining allowable time extensions to the Contract for unusually severe weather conditions and the impact of such weather at the construction site.
 - (b) The column below labeled Work Days represents work-day delays which may be expected in each month named within the Washington Metropolitan Area, based on a five-day work week:

MONTH	WORK DAYS	MONTH	WORK DAYS
January	4	July	2
February	4	August	3
March	4	September	2
April	5	October	3
May	5	November	4
June	2	December	4

- (c) Time extensions for weather delays during a given month will be allowed only for actual work days in excess of those numbers listed above and only when those excess days of delay affect the current critical path(s) leading to specified Contract completion or milestone dates.
- (4) Authority Operations and Emergencies:
 - (a) The possibility exists that access to work may be impeded or that interruption to the work may occur, both scheduled and unscheduled, at the Authority's convenience, or specific direction, for operational or emergency reasons during contract performance ("delays from authority operations and emergencies"). It is the intent of this clause to ease the administration of delays from authority operations and emergencies.

- (b) Allowable time extensions to the contract for delays from Authority operations and emergencies shall be determined as follows:
- (1) There shall be no allowable time extension nor equitable adjustment for any delay from Authority operations and emergencies causing work stoppage of less than 15 minutes.
 - (2) The contractor shall immediately bring to the AR's attention any delay from authority operations and emergencies causing continuous work stoppage of 15 minutes or more. Any delay from authority operations and emergencies not brought to the AR's attention on the day of the delay or the following work day will not be recognized.
 - (3) If the contractor and AR agree that a delay in part (b) (2) has delayed the completion of the work, the delay shall be considered a recognized delay.
 - (4) The contractor shall submit to the AR on a weekly basis a report of recognized delays occurring during the previous week, as a precondition to the Authority considering any claim for delays from authority operations and emergencies.
 - (5) Upon the contractor submitting a claim for delays from authority operations and emergencies, the AR shall grant a non-compensable time extension of one day for any working day in which the contractor accumulates 60 or more minutes of timely submitted recognized delays, unless granting the time extension would result in providing the contractor with more than a one day time extension relating to any working day. Simultaneously, the AR shall respond to the contractor's claim, if any, for costs associated with any working day in which the contractor accumulates 90 or more minutes of timely submitted recognized delays.
- e. If, after notice of termination of the Contractor's right to proceed under the provisions of this Article, it is determined for any reason that the Contractor was not in default under the provisions of this Article, or that the delay was excusable under the provisions of this Article, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to the TERMINATION FOR CONVENIENCE OF THE AUTHORITY Article of these General Provisions.
- f. The rights and remedies of the Authority provided in this clause are in addition to any other rights and remedies provided by law under this Contract.

1.6 Disputes

- a. Except as otherwise provided in this Contract, any dispute concerning a question of fact arising under this Contract which is not disposed of by agreement shall be decided by the Contracting Officer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Contracting Officer shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Contracting Officer a written appeal addressed to the Board of Directors. The decision of the Board of Directors or its duly authorized representative for the determination of such appeals be final and conclusive unless in proceedings initiated by either party for review of such decision in a court of competent jurisdiction, the court determines the decision to have been fraudulent, or capricious or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or is not supported by substantial evidence. In connection with any appeal proceeding under this Article, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of his appeal. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract and in accordance with the Contracting Officer's decision.
- b. This DISPUTES Article does not preclude consideration of questions of law in connection with decisions provided for in Paragraph a. above. Nothing in this Contract, however, shall be construed as making final the decisions of the Board of Directors or its representative on a question of law.

1.7 Payments To Contractor

- a. The Authority will pay the Contract price as hereinafter provided.
- b. The Authority will make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer or other delegated Authority's Representative, on estimates approved by the Contracting Officer or other delegated Authority's Representative. The Contracting Officer or other delegated Authority's Representative shall review and approve the Contractor's progress payment requests based on the scheduled and actual progress of the work as reflected on the schedules and monthly updates if required by an Appendix of this Contract. The Contractor shall not be entitled to progress payments and the Contracting Officer or other delegated Authority's Representative shall have no obligation to review or approve progress payment requests if the Contractor has failed to submit or update the schedules if required by an Appendix of this Contract, or if the applicable schedule or update submitted by the Contractor fails to accurately reflect the actual progress of the work, or if the Contracting Officer or other delegated Authority's Representative declines to approve the submitted schedules for any of the reasons stated in this Contract. A decision not to approve a request for progress payments based upon the Contractor's failure to comply with the schedule and updates submission requirements, if required by an Appendix of this Contract, is committed under this Contract to the sole and absolute discretion of the Contracting Officer or other delegated Authority's Representative.
- c. If requested by the Contracting Officer or other delegated Authority's Representative, the Contractor shall furnish a breakdown of the total Contract price or lump sum bid items showing the amount included therein for each principal category of the work, in such detail as requested, to provide a basis for determining progress payments. In the preparation of estimates the Contracting Officer or other delegated Authority's Representative, at his discretion, may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site may also be taken into consideration:
 - (1) If such consideration is specifically authorized by the Contract and
 - (2) If the Contractor furnishes satisfactory evidence that he has acquired title to such material and that it will be utilized on the work covered by this Contract.
- d. Unless otherwise provided in the Specifications, if the Contract price is more than \$50,000, material delivered that will be incorporated into the project will be taken into consideration in computing progress payments, provided the material is delivered on the site, or is delivered to the Contractor and properly stored by him in a warehouse, storage yard, or similar suitable place within 25 miles of the site or such reasonable distance in excess of 25 miles as may be approved by the Contracting Officer or other delegated Authority's Representative. Before each such payment is made for delivered material on the site, the Contractor shall furnish to the Contracting Officer or other delegated Authority's Representative such evidence as he may require as proof of the ownership, quantity and value of such materials. Before each such payment is made for delivered materials off the site, the Contractor shall furnish the Contracting Officer or other delegated Authority's Representative evidence of ownership, properly executed bills of sale to the Authority for the delivered material upon which payment is being made.
- e. In making such progress payments, five percent of the estimated amount of work completed shall be retained until final completion and acceptance of the Contract work. Also, whenever the work is substantially complete, and the Contractor is in compliance with all provisions of the Contract, if the Contracting Officer or other delegated Authority's Representative considers the amount retained to be in excess of the amount adequate for the protection of the Authority, he may, at his discretion, release to the Contractor all or a portion of such excess amount. Furthermore, upon completion and acceptance of each separate building, public work, or other division of the Contract, on which the price is stated separately in the Contract, the Contracting Officer or other delegated Authority's Representative may direct the payment to be made without retention.

Where the time originally specified for completion of this Contract exceeds one year, the Contracting Officer or other delegated Authority's Representative, at any time after 50 percent of

the work has been completed, if he finds that satisfactory progress (satisfactory progress includes prosecution of physical work, adherence to DBE, SAP, quality assurance and all other provisions of the Contract) is being made, may reduce the total amount retained from progress payments to the minimum level necessary to protect the interest of the Authority.

- f. All material and work covered by progress payments made shall thereupon become the sole property of the Authority but this provision shall not be construed as relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work, or as waiving the right of the Authority to require the fulfillment of all of the terms of the Contract.
- g. Upon completion and acceptance of all work, the amount due the Contractor under this Contract shall be paid upon the presentation of a properly executed voucher and after the Contractor shall have furnished the Authority with a release, if required, of all claims against the Authority arising by virtue of this Contract, other than claims in stated amounts as may be specifically excepted by the Contractor from the operation of the release. If the Contractor's claim to amounts payable under the Contract has been assigned, a release may also be required of the assignee.
- h. Payment under this contract shall be subject to any garnishment and attachment orders issued pursuant to the laws of Maryland, Virginia and the District of Columbia, and to levies issued under the laws of the United States.
- i. Subcontract Payments
 - 1. The Contractor shall, under this contract, establish procedures to ensure timely payment of amounts due pursuant to the terms of their subcontracts. The Contractor shall pay each subcontractor for satisfactory performance of its contract, no later than ten (10) days from the date of the Contractor's receipt of payment from the Authority for work by that subcontractor. The Contractor shall also release, within ten (10) days of satisfactory completion of all work required by the subcontractor, any retention withheld from the subcontractor.
 - 2. The Contractor shall certify on each payment request to the Authority that payment has been or will be made to all subcontractors in accordance with paragraph a above. The Contractor shall notify the Contracting Officer or other delegated Authority's Representative with each payment request, of any situation in which scheduled subcontractor payments have not been made.
 - 3. If a subcontractor alleges that the Contractor has failed to comply with this provision, the Contractor agrees to support any Authority investigation, and, if deemed appropriate by the Authority, to consent to remedial measures to ensure subcontractor payment that is due.
 - 4. The Contractor agrees that the Authority may provide appropriate information to interested subcontractors who want to determine the status of Authority payments to the Contractor.
 - 5. Nothing in this provision is intended to create a contractual obligation between the Authority and any subcontractor or to alter or affect traditional concepts of privity of contract between all parties.

1.8 Assignment

- a. The Contractor shall not transfer the rights and obligations of the Contract to third parties. The Contracting Officer or other delegated Authority's Representative may recognize a third party as successor in interest to the Contract where the third party's interest is incidental to the transfer of all the assets of the Contractor, i.e., sales of assets, transfer of assets pursuant to merger or consolidation or incorporation of a proprietorship or partnership. Such recognition of the transfer shall be within the discretion of the Contracting Officer or other delegated Authority's Representative after review of the facts and circumstances surrounding each request, but the

assignment shall not be approved unless the surety, in writing, agrees to that assignment and accepts the assignee as the Contractor and principal on the payment and/or performance bonds.

- b. If this Contract provides for payments aggregating \$1,000 or more, claims for monies due or to become due the Contractor from the Authority under this Contract may be assigned to a bank, trust company or other financing institution, including any Federal lending agency, and may thereafter be further assigned and reassigned to any institution. Notice of such assignment shall be made to the Contracting Officer or other delegated Authority's Representative. Any such assignment or reassignment shall cover all amounts payable under this Contract and not already paid, and shall not be made to more than one party, except that any such assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in such financing. It is the Authority's intent to recognize assignment only to bona fide lending institutions; therefore, assignment to any private corporation, business or individual which does not qualify as such is specifically prohibited.
- c. Any attempt to transfer by assignment not authorized by this Article shall constitute a breach of the Contract and the Contracting Officer or other delegated Authority's Representative may for such cause terminate the right of the Contractor to proceed as provided in TERMINATION FOR DEFAULT, DAMAGES FOR DELAY AND TIME EXTENSIONS Article of these General Provisions, and the Contractor and his sureties shall be liable to the Authority for any excess costs incurred by the Authority.

1.9 Material And Workmanship

- a. Unless otherwise specifically provided in this Contract, all equipment, materials and articles incorporated in the work covered by this Contract are to be new and of the most suitable grade for the purpose intended. Unless otherwise specifically provided in this Contract, reference to any equipment, material, article or patented process, by trade name, make or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition, and the Contractor may, at his option, use any equipment, material, article or process which, in the judgment of the Contracting Officer or other delegated Authority's Representative, is equal to that named. The Contractor shall furnish to the Contracting Officer or other delegated Authority's Representative for his approval the name of the manufacturer, the model number and other identifying data and information respecting the performance, capacity, nature and rating of the machinery and mechanical and other equipment which the Contractor contemplates incorporating in the work. When required by this Contract or when called for by the Contracting Officer or other delegated Authority's Representative, the Contractor shall furnish the Contracting Officer or other delegated Authority's Representative for approval full information concerning the material or articles which he contemplates incorporating in the work. When so directed, samples shall be submitted for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material and articles installed or used without required approval shall be at the risk of subsequent rejection.
- b. All work under this Contract shall be performed in a skillful and workmanlike manner. The Contracting Officer or other delegated Authority's Representative may, who may require the Contractor to correct defective workmanship or materials at no additional cost to the Authority.

1.10 Inspection And Acceptance

- a. All work, which term includes but is not restricted to materials, workmanship, and manufacture and fabrication of components, shall be subject to inspection and test by the Contracting Officer or other delegated Authority's Representative or the Engineer at all reasonable times prior to acceptance. Any such inspection and test is for the sole benefit of the Authority and shall not relieve the Contractor of the responsibility of providing quality control measures to assure that the work strictly complies with the Contract requirements. No inspection or test by the Contracting Officer or other delegated Authority's Representative or the Engineer shall be construed as constituting or implying acceptance. Inspection or test shall not relieve the Contractor of responsibility for damage to or

loss of the material prior to acceptance, nor in any way affect the continuing rights of the Authority after acceptance of the completed work under the terms of Paragraph f. of this Article, except as hereinabove provided.

- b. The Contractor shall, without charge, replace any material or correct any workmanship found by the Contracting Officer or other delegated Authority's Representative or the Engineer not to conform to the Contract requirements, unless in the public interest the Contracting Officer or other delegated Authority's Representative consents to accept such material or workmanship with an appropriate adjustment in Contract price. The Contractor shall promptly segregate and remove rejected material from the premises.
- c. If the Contractor does not promptly replace rejected material or correct rejected workmanship, the Contracting Officer or other delegated Authority's Representative may:
 - (1) By contract or otherwise, replace such material or correct such workmanship and charge the costs thereof to the Contractor, or
 - (2) Terminate the Contractor's right to proceed in accordance with the TERMINATION FOR DEFAULT, DAMAGES FOR DELAY AND TIME EXTENSIONS Article of these General Provisions.
- d. The Contractor shall furnish promptly, without additional charge, all facilities, labor and material reasonably needed for performing such safe and convenient inspection and test as may be required by the Contracting Officer or other delegated Authority's Representative. All inspections and tests by the Authority shall be performed in such manner as not unnecessarily to delay the work. Special, full-size and performance tests shall be performed as described in this Contract. The Contractor shall be charged with any additional cost of inspection when material and workmanship are not ready at the time specified by the Contractor for its inspection.
- e. Should it be considered necessary or advisable by the Contracting Officer or other delegated Authority's Representative at any time before acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the Contractor shall, on request, promptly furnish all necessary facilities, labor and material. If such work is found to be defective or nonconforming in any material respect, due to the fault of the Contractor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, an equitable adjustment shall be made in the Contract price to compensate the Contractor for the additional services involved in such examination and reconstruction and, if completion of the work has been delayed thereby, he shall, in addition, be granted a suitable extension of time.
- f. Unless otherwise provided in this Contract, acceptance by the Contracting Officer or other delegated Authority's Representative shall be made as promptly as practicable after completion and inspection of all work required by this Contract. Acceptance shall be final and conclusive except as regards latent defects, fraud or such gross mistakes as may amount to fraud, or as regards the Authority's rights under any warranty or guarantee.
- g. The Contractor shall give the Contracting Officer or other delegated Authority's Representative at least 10 days advance notice of the date the work will be fully completed and ready for final inspection, test and acceptance.

1.11 Project Management And Superintendence By Contractor

The Contractor shall give his personal superintendence to the work or have a competent foreman or superintendent, satisfactory to the Contracting Officer or other delegated Authority's Representative, on the work at all times during progress, with authority to act for him.

1.12 Permits And Responsibilities

The Contractor shall, without additional expense to the Authority, be responsible for obtaining any necessary licenses and permits, and for complying with any applicable Federal, State, Local or Municipal laws, codes or regulations, in connection with the prosecution of the work. He shall be similarly responsible for all damages to persons or property that occur as a result of his fault or negligence. He shall take proper safety and health precautions to protect the work, the workers, the public and the property of others. He shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of construction thereof which theretofore may have been accepted.

1.13 CONDITIONS AFFECTING THE WORK

The Contractor shall be responsible for having taken steps reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Any failure by the Contractor to do so will not relieve the Contractor from responsibility for successfully performing the work without additional expense to the Authority. The Authority assumes no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of this Contract, unless such understanding or representations are expressly stated in the Contract.

1.14 Other Contracts

The Authority may undertake or award other contracts for additional work, and the Contractor shall fully cooperate with such other contractors and Authority employees and carefully fit his own work to such additional work as may be directed by the Contracting Officer or other delegated Authority's Representative. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor or by Authority employees.

1.15 Patent Indemnity

Except as otherwise provided, the Contractor agrees to indemnify the Authority and its officers, agents and employees against liability, including costs and expenses, for infringement upon any Letters of Patent of the United States arising out of the performance of this Contract or out of the use or disposal by or for the account of the Authority of supplies furnished or work performed hereunder.

1.16 Additional Bond Security

If any surety upon any bond furnished in connection with this Contract becomes unacceptable to the Contracting Officer or other delegated Authority's Representative, or if any such surety fails to furnish reports as to his financial condition from time to time as requested by the Contracting Officer or other delegated Authority's Representative, the Contractor shall promptly furnish such additional security as may be required from time to time to protect the interest of the Authority and of persons supplying labor or materials in the prosecution of the work contemplated by this Contract.

1.17 Covenant Against Contingent Fees

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, if no fraud is suspected, the Contracting Officer or other delegated Authority's Representative shall have the right to annul this Contract without liability or in its discretion to deduct from the Contract

price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

1.18 Officials Not To Benefit

- a. No member of Congress or resident Commissioner shall be admitted to any share or part of this Contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.
- b. No member, officer, or employee of the Authority or of a local public body during his tenure and one year thereafter shall have any interest, direct or indirect, in this Contract or the proceeds thereof.

1.19 Notice To The Authority Of Labor Disputes

- a. Whenever the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this Contract, the Contractor shall immediately give notice thereof, including all relevant information with respect thereto, to the Contracting Officer or other delegated Authority's Representative.
- b. The Contractor agrees to insert the substance of this Article, including this Paragraph b., in any subcontract hereunder as to which a labor dispute may delay the timely performance of this Contract; except that each such subcontract shall provide that in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the subcontractor shall immediately notify his next higher tier subcontractor, or the Contractor, as the case may be, of all relevant information with respect to such dispute.

1.20 Convict Labor

In connection with the performance of work under this Contract, the Contractor agrees not to employ any person undergoing sentence of imprisonment at hard labor.

1.21 Civil Rights (Revised October 20, 2000)

- a. Nondiscrimination: In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. §2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. §6102, section 202 of the American with Disabilities Act of 1990, 42 U.S.C. §12132, and Federal transit law at 49 U.S.C. §5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing regulations that FTA may issue
- b. Equal Employment Opportunity: The following equal employment opportunity requirements apply to this contract.
 - (1) Race, Color, Creed, National Origin, Sex: In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. §2000e, and Federal transit laws at 49 U.S.C. §5332, the Contractor agrees to comply with all applicable equal opportunity requirements of the U. S. Department of Labor (U.S. DOL) regulations, Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor, 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, Equal Employment Opportunity, as amended by Executive Order No. 11375, Amending Executive Order 11246 Relating to Equal Employment Opportunity, 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the

course of the Contract. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, creed, national origin, sex or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(2) Age: In accordance with Section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. §§ 623 and Federal transit law at 49 U.S.C. §5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(3) Disabilities: In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. §12112, the Contractor agrees that it will comply with the requirements of U. S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act, 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

c. The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

1.22 Utilization of Small Business Concerns

- a. It is the policy of the Authority that a fair proportion of the purchases and contracts for supplies and services for the Authority be placed with small business concerns.
- b. The Contractor agrees to accomplish the maximum amount of subcontracting to small business concerns that the Contractor finds to be consistent with the efficient performance of this Contract.

1.23 Gratuities

- a. In connection with performance of work required under this Contract, or any changes or modifications relative thereto, the giving of or offering to give gratuities (in the form of entertainment, gifts or otherwise) by the Contractor, or any agent, representative or other person deemed to be acting on behalf of the Contractor, or any supplier or subcontractor furnishing material to or performing work under this Contractor, or any agent, representative or other person deemed to be acting on behalf of such supplier or subcontractor, to any Director, Officer or employee of the Authority; or to any Director, Officer, employee or agent of any of the Authority's agents, consultants, representatives or other persons deemed to be acting for or on behalf of the Authority, with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing of such contract is expressly forbidden. The terms of this GRATUITIES Article shall be strictly construed and enforced in the event of violations hereto.
- b. Reported instances of the giving or offering to give gratuities within the context of this GRATUITIES Article will be investigated by the Board of Directors or its duly authorized representative. A preliminary investigation will be made to determine whether there is probable cause to suspect that a violation of this Article has been committed. If such probable cause is found to exist, the Board of Directors, or its duly authorized representative, shall formally notify the suspected donor corporation or individual in writing of the particulars of the event; and provide such donor the opportunity to be heard on the matter. The aim of the investigations and hearing shall be to ensure due process and to preserve the best interests and rights of all parties by the full and fair disclosure of all relevant and material information. Accordingly, the Board of Directors, or its duly authorized

representative, shall require production of all pertinent documents and records, and sworn testimony from witnesses. During the pendency of any investigation or hearing treating with a violation of this GRATUITIES Article, the Board of Directors, or its duly authorized representative, may exercise its power granted by the Washington Metropolitan Area Transit Authority Compact, Public Law 774, 80 Stat. 1324, Article V, General Powers, subparagraph (k), by issuing subpoenas to compel the attendance of necessary witnesses, and to compel production of papers, records, accounts, ledgers and documents. The subpoenas shall be enforceable by order of an appropriate United States District Court. If, after notice and hearing, or notice of the opportunity to be heard, the Board of Directors, or its duly authorized representative, finds that a violation of this GRATUITIES Article has been committed, and if no fraud is suspected, the Authority shall have the right to:

- (1) Require that the individual(s) giving or offering the gratuity be removed from further participation on any Authority projects (be terminated);
 - (2) Deny the Contractor any General and Administrative (G&A) mark-ups for all changes and/or modifications found to be tainted by the giving of or offering to give gratuities.
 - (3) Preclude the Contractor from bidding or proposing on, receiving or participating as joint venturer, subcontractor or otherwise in any Authority project for a period of five years;
 - (4) Have complete access to all of the Contractor's financial books, records and accounts for the purpose of performing a comprehensive audit of the entire project.
 - (5) In the event of repeated violations of this GRATUITIES Article or of gross or extreme conduct indicative of a corrupt intent to gain special advantage, by written notice to the Contractor, terminate the right of the Contractor to proceed under the Contract.
- c. The existence of the facts upon which the Board of Directors, or its duly authorized representative, makes findings in connection with investigations and hearings in consonance herewith shall be an issue and may be reviewed in any competent court.
- d. In the event this Contract is terminated as provided in Paragraph b.(5) hereof, the Authority shall be entitled:
- (1) To pursue the same remedies against the Contractor as it could pursue in the event of a breach of the Contract by the Contractor, and
 - (2) As a penalty in addition to any other damages to which it may be entitled by law, to exemplary damages in any amount, as determined by the Board or its duly authorized representative, which shall be not less than three nor more than 10 times the costs incurred by the Contractor in providing any such gratuities to any such officer or employee.
- e. The rights and remedies of the Authority provided in this Article shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

1.24 Federal, State, and Local Taxes

- a. The Contract price includes all applicable Federal, State and Local taxes and duties.
- b. Nevertheless, with respect to any Federal excise tax or duty on the transactions or property covered by this Contract, if a statute, court decision, written ruling or regulation takes effect after the Contract date, and results in the following:
 - (1) The Contractor being required to pay or bear the burden of any such Federal excise tax or duty or increase in the rate thereof which could not otherwise have been payable on such transactions or property, the Contract price shall be increased by the amount of such tax or duty or rate increase, provided the Contractor warrants in writing that no amount for such newly

imposed Federal excise tax or duty or rate increase was included in the Contract price as a contingency reserve or otherwise; or

- (2) The Contractor not being required to pay or bear the burden of, or in his obtaining a refund or drawback of, any such Federal excise tax or duty which would otherwise have been payable on such transactions or property or which was the basis of an increase in the Contract price, the Contract price shall be decreased by the amount of the relief, refund or drawback, or that amount shall be paid to the Authority, as directed by the Contracting Officer or other delegated Authority's Representative. The Contract price shall be similarly decreased if the Contractor, through his fault or negligence or his failure to follow instructions of the Contracting Officer or other delegated Authority's Representative, is required to pay or bear the burden of, or does not obtain a refund or drawback of, any such Federal excise tax or duty.
- c. Paragraph b. above shall not be applicable to Social Security taxes or to any other employment tax.
- d. No adjustment of less than \$100 shall be made in the Contract price pursuant to Paragraph b. above.
- e. As used in Paragraph b. above, the term Contract date means the date set for bid opening, or if this is a negotiated Contract, the Contract date. As to additional supplies or services procured by modification to this Contract, the term Contract date means the date of such modification.
- f. Unless there does not exist any reasonable basis to sustain an exemption, the Contracting Officer or other delegated Authority's Representative upon the request of the Contractor shall without further liability, furnish evidence appropriate to establish exemption from any Federal, State or Local tax; provided that, evidence appropriate to establish exemption from any Federal excise tax or duty which may give rise to either an increase or decrease in the Contract price will be furnished only at the discretion of the Contracting Officer or other delegated Authority's Representative.
- g. The Contractor shall promptly notify the Contracting Officer or other delegated Authority's Representative of matters which will result in either an increase or decrease in the Contract price, and shall take action with respect thereto as directed by the Contracting Officer or other delegated Authority's Representative.

1.25 Termination for Convenience of the Authority

- a. The performance of work under this Contract may be terminated by the Authority in accordance with this Article in whole, or from time to time in part, whenever the Contracting Officer shall determine that such termination is in the best interest of the Authority. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective.
- b. After receipt of a Notice of Termination, and except as otherwise directed by the Contracting Officer, the Contractor shall:
 - (1) Stop work under the Contract on the date and to the extent specified in the Notice of Termination;
 - (2) Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the work under the Contract as is not terminated;
 - (3) Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination;
 - (4) Assign to the Authority, in the manner, at the times, and to the extent directed by the Contracting Officer, all of the right, title and interest of the Contractor under the orders and

- subcontracts so terminated, in which case the Contracting Officer shall have the right, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
- (5) Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Contracting Officer, to the extent he may require, which approval or ratification shall be final for all the purposes of this Article;
- (6) Transfer title and deliver the following to the Authority in the manner, at the times, and to the extent, if any, directed by the Contracting Officer:
- [a] The fabricated or un-fabricated parts, work in progress, completed work, supplies and other material procured as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination.
- [b] The completed or partially completed plans, drawings, information and other property which, if the Contract had been completed, would have been required to be furnished to the Authority.
- (7) Use his best efforts to sell, in the manner, at the times, to the extent and at the price or prices directed or authorized by the Contracting Officer, any property of the types referred to in (6) above; provided, however, that the Contractor:
- [a] Shall not be required to extend credit to any purchaser, and
- [b] May acquire any such property under the conditions prescribed by and at a price or prices approved by the Contracting Officer; and provided further that the proceeds of any such transfer or disposition shall be applied in reduction of any payment to be made by the Authority to the Contractor under this Contract or shall otherwise be credited to the price or cost of the work covered by this Contract or paid in such other manner as the Contracting Officer may direct;
- (8) Complete performance of such part of the work as shall not have been terminated by the Notice of Termination; and
- (9) Take such action as may be necessary, or as the Contracting Officer may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Authority has or may acquire an interest.
- c. After receipt of a Notice of Termination, the Contractor shall submit to the Contracting Officer his termination claim, in the form and with certification prescribed by the Contracting Officer. Such claim shall be submitted promptly but in no event later than one year from the effective date of termination, unless one or more extensions in writing are granted by the Contracting Officer, upon request of the Contractor made in writing within such one year period or authorized extension thereof. However, if the Contracting Officer determines that the facts justify such action, he may receive and act upon any such termination claim at any time after such one year period or any extension thereof. Upon failure of the Contractor to submit his termination claim within the time allowed, the Contracting Officer may determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall thereupon authorize payment to the Contractor the amount so determined.
- d. Subject to the provisions of Paragraph e., the Contractor and the Contracting Officer may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of work pursuant to this Article, which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts, exclusive of settlement costs, shall not exceed the total Contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract price of work not terminated. The Contract shall be amended accordingly, and the Contractor shall be paid the agreed amount. Nothing in Paragraph e. of this Article, prescribing the amount to be paid to the Contractor in the event of failure of the Contractor and the Contracting Officer to agree upon the whole amount to be

paid to the Contractor by reason of the termination of work pursuant to this Article, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid to the Contractor pursuant to this Paragraph d.

- e. In the event of the failure of the Contractor and the Contracting Officer to agree, as provided in Paragraph d., upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this Article, the Contracting Officer shall authorize payment to the Contractor of the amounts determined by the Contracting Officer as follows, but without duplication of any amounts agreed upon in accordance with Paragraph d.:

- (1) With respect to all Contract work performed prior to the effective date of the Notice of Termination, the total, without duplication of any items, of the following:

[a] The cost of such work;

[b] The cost of settling and paying claims arising out of the termination of work under subcontracts or orders as provided in Paragraph b. (5) above, exclusive of the amounts paid or payable on account of supplies or materials delivered or services furnished by the subcontractor or suppliers prior to the effective date of the Notice of Termination of work under this Contract, which amount shall be included in the cost on account of which payment is made under Paragraph [a] above; and

[c] A sum, as profit on Paragraph [a] above, determined by the Contracting Officer to be fair and reasonable; provided, however, that if it appears that the Contractor would have sustained a loss on the entire Contract had it been completed, no profit shall be included or allowed under this Paragraph [c] and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss; and

- (2) The reasonable cost of the preservation and protection of property incurred pursuant to Paragraph b. (9); and any other reasonable cost incidental to termination of work under this Contract, including expense incidental to the determination of the amount due to the Contractor as the result of the termination of work under this Contract.

The total sum to be paid to the Contractor under Paragraph (1) above shall not exceed the total Contract price as reduced by the amount of payments made as further reduced by the Contract price of work not terminated. Except for normal spoilage, and except to the extent that the Contracting Officer shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor under Paragraph (1) above, the fair value, as determined by the Contracting Officer, of property which is destroyed, lost, stolen or damaged so as to become undeliverable to the Authority, or to a buyer pursuant to Paragraph b. (7).

- f. The Contractor shall have the right of appeal, under the DISPUTES Article, from any determination made by the Contracting Officer under Paragraph c. or e. above, except that if the Contractor has failed to submit his claim within the time provided in Paragraph c. above and has failed to request extension of such time, he shall have no such right of appeal. In any case where the Contracting Officer has made a determination of the amount due under Paragraph c. or e. above, the Authority shall pay to the Contractor the following:

(1) If there is no right of appeal hereunder or if no timely appeal has been taken, the amount so determined by the Contracting Officer, or

(2) If an appeal has been taken, the amount finally determined on such appeal.

- g. In arriving at the amount due to the Contractor under this Article the following shall be deducted:

(1) All unliquidated advance or other payment on account theretofore made to the Contractor, applicable to the terminated portion of this Contract.

(2) Any claim which the Authority may have against the Contractor in connection with this Contract.

(3) The agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the Contractor or sold, pursuant to the provisions of this Article, and not otherwise recovered by or credited to the Authority.

- h. If the termination hereunder be partial, prior to the settlement of the terminated portion of this Contract, the Contractor may file with the Contracting Officer a request in writing for an equitable adjustment of the price or prices specified in the Contract relating to the continued portion of the Contract; i.e., the portion not terminated by the Notice of Termination, and such equitable adjustment as may be agreed upon shall be made in such price or prices.
- i. The Authority may from time to time, under such items and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of this Contract whenever in the opinion of the Contracting Officer the aggregate of such payments shall be within the amount to which the Contractor will be entitled hereunder. If the total of such payment is in excess of the amount finally agreed or determined to be due under this Article, such excess shall be payable by the Contractor to the Authority upon demand, together with interest computed at the rate of six percent per annum, for the period from the date such excess payment is received by the Contractor to the date on which such excess payment is repaid to the Authority; provided, however, that no interest shall be charged with respect to any such excess payment attributable to a reduction in the Contractor's claim by reason of retention or other disposition of termination inventory until 10 days after the date of such retention or disposition, or such later date as determined by the Contracting Officer by reasons of the circumstances.
- j. Unless otherwise provided for in this Contract, or by applicable statute, the Contractor, from the effective date of termination and for a period of three years after final settlement under this Contract shall preserve and make available to the Authority at all reasonable times at the office of the Contractor but without direct charge to the Authority, all his books, records, documents and other evidence bearing on the costs and expenses of the Contractor under this Contract and relating to the work terminated hereunder, or to the extent determined by the Contracting Officer, photographs, microphotographs or other authentic reproductions thereof.

1.26 Notice and Assistance Regarding Patent and Copyright Infringement

- a. The Contractor shall report to the Contracting Officer or other delegated Authority's Representative, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this Contract of which the Contractor has knowledge.
- b. In the event of any claim or suit against the Authority on out of the use of any supplies furnished or work or services performed hereunder, the Contractor shall furnish to the Authority, when requested by the Contracting Officer or other delegated Authority's Representative, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Authority except where the Contractor has agreed to indemnify the Authority.
- c. This Article shall be included in all subcontracts.

1.27 Composition of Contractor

If the Contractor hereunder is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.

1.28 Site Investigation

The Contractor acknowledges that he has investigated and satisfied himself as to the conditions affecting the work including, but not restricted to, those bearing upon transportation, disposal, handling and storage of materials; availability of labor, water, electric power and roads; and uncertainties of weather, river stages, tides or similar physical conditions at the site, the conformation and conditions of the ground, and the character of equipment and facilities needed preliminary to and during prosecution of the work. The Contractor further acknowledges that he has satisfied himself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Authority, as well as from information presented by the Drawings and Specifications made a part of this Contract, the character and extent of existing work within or adjacent thereto, and any other work being performed thereon at the time of the submission of his bid. Nothing in this requirement shall be construed as being determinative of the character, scope or extent of the work required under this Contract. Any failure by the Contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Authority assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the Authority.

1.29 Protection of Existing Vegetation, Structures, Utilities and Improvements

- a. The Contractor shall preserve and protect all existing vegetation such as trees, shrubs and grass on or adjacent to the site of work which is not to be removed and which does not unreasonably interfere with the work. Care shall be taken in removing trees authorized for removal to avoid damage to vegetation to remain in place.
- b. The Contractor shall protect from damage all existing improvements or utilities at or near the site of the work and shall repair or restore any damage to such facilities resulting from failure to comply with the requirements of this Contract or the failure to exercise reasonable care in the performance of the work. If the Contractor fails or refuses to repair any such damage promptly, the Contracting Officer or other delegated Authority's Representative may have the necessary work performed and charge the cost thereof to the Contractor.

1.30 Operations and Storage Areas

- a. All operations of the Contractor, including storage of materials, shall be confined to areas authorized or approved by the Contracting Officer or other delegated Authority's Representative. The Contractor shall hold and save the Authority, its officers and agents, free and harmless from liability of any nature occasioned by his operations.
- b. Temporary buildings, such as storage sheds, shops and offices, may be erected by the Contractor only with the approval of the Contracting Officer or other delegated Authority's Representative, and shall be built with labor and materials furnished by the Contractor without expense to the Authority. Such temporary buildings and utilities shall remain the property of the Contractor and shall be removed by him at his expense upon the completion of the work. With the written consent of the Contracting Officer or other delegated Authority's Representative, such buildings and utilities may be abandoned and need not be removed.
- c. The Contractor shall, under regulations prescribed by the Contracting Officer or other delegated Authority's Representative, use only established roadways or construct and use such temporary roadways as may be authorized by the Contracting Officer or other delegated Authority's Representative. Where materials are transported in the prosecution of the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State or Local law or regulation. When it is necessary to cross curbsings or sidewalks, protection against damage shall be provided by the Contractor and any damaged roads, curbing or sidewalks shall be repaired by or at the expense of the Contractor.

1.31 Progress Schedules and Requirements for Maintaining Progress

- a. The Contractor shall submit a schedule to the Contracting Officer or other delegated Authority's Representative for approval, within 15 days after the award of the Contract, showing the order in which the Contractor proposes to carry on the work, the dates on which he will start the several major features, including procurement of materials, plant and equipment, and the contemplated dates for completing the same. The schedule shall be in the form of a graphic network diagram or progress chart indicating appropriately the work scheduled for accomplishment at any time. Unless otherwise specified, the Contractor shall enter on the schedule the actual progress at monthly intervals and shall immediately deliver to the Contracting Officer or other delegated Authority's Representative four copies thereof.
- b. Failure to comply with the terms of this Article may affect the processing of progress payment requests submitted by the Contractor as provided in Article 1.7, PAYMENTS TO THE CONTRACTOR, of this Contract.
- c. If, in the opinion of the Contracting Officer or other delegated Authority's Representative, the Contractor falls significantly behind the approved progress schedule, the Contractor shall take any and all steps necessary to improve his progress. The Contracting Officer or other delegated Authority's Representative, in this instance, may require the Contractor to increase the number of shifts, initiate or increase overtime operations, increase days of work in the work week, or increase the amount of construction plant, or all of them. The Contracting Officer or other delegated Authority's Representative may also require the Contractor to submit for approval supplemental progress schedules detailing the specific operational changes to be instituted to regain the approved schedule, all without additional cost to the Authority.
- d. Failure of the Contractor to comply with the requirements of the Contracting Officer or other delegated Authority's Representative under this provision shall be grounds for determination by the Contracting Officer or other delegated Authority's Representative that the Contractor is not prosecuting the work with such diligence as will ensure completion within the time specified. Upon such determination the Contracting Officer or other delegated Authority's Representative may terminate the Contractor's right to proceed with the work, or any separate part thereof, in accordance with the TERMINATION FOR DEFAULT, DAMAGES FOR DELAY AND TIME EXTENSIONS Article of these General Provisions.

1.32 Subcontractors

Within seven days after the award of any subcontract either by himself or a subcontractor, the Contractor shall deliver to the Contracting Officer or other delegated Authority's Representative a statement setting forth the name and address of the subcontractor and a summary description of the work subcontracted. The Contractor shall at the same time furnish a statement signed by the subcontractor acknowledging the inclusion in his subcontract of the clauses of this Contract entitled CIVIL RIGHTS and LABOR PROVISIONS, and other such articles specifically mentioned. Nothing contained in this Contract shall create any contractual relation between the subcontractor and the Authority.

After contract award, the Contractor will be required to submit copies of a conformed and signed subcontract agreement with all subcontractors to be used on the Contract to the Contracting Officer or designee with the price deleted. The terms of payment shall be in conformance with the "Payments to Contractor" clause in the General Provisions. The divisions or sections of the Specifications are not intended to control the Contractor in dividing the work among subcontractors or to limit the work performed by a trade.

- A. The Contractor shall not enter into subcontracts totaling in amount more than the percentage of the total Contract price permissible under WORK TO BE PERFORMED BY THE CONTRACTOR article of these Special Conditions, without the written permission of the Contracting Officer.

- B. No subcontractor shall be permitted to perform work at the site until the subcontractor, or the Contractor, in compliance with the provisions of the INDEMNIFICATION AND INSURANCE article of the Special Conditions, has furnished satisfactory evidence of insurance as required.
- C. The Authority or its representatives will not undertake to settle any difference between the Contractor and its subcontractor or between subcontractors.

1.33 Use and Possession Prior To Completion

The Authority, through the Contracting Officer or other delegated Authority's Representative, shall have the right to take possession of or use any completed or partially completed part of the work. Such possession or use shall not be deemed an acceptance of any work not completed in accordance with the Contract. While the Authority is in such possession, the Contractor, notwithstanding the provisions of the Contract entitled PERMITS AND RESPONSIBILITIES, shall be relieved of the responsibility for loss or damage to the work other than that resulting from the Contractor's fault or negligence. If such prior possession or use by the Authority delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment in the Contract price or the time of completion will be made and the Contract shall be modified in writing accordingly.

1.34 Cleaning Up

- a. The Contractor shall at all times keep the construction area, including storage areas used by him, free from accumulations of waste material or rubbish and prior to completion of the work remove any rubbish from the premises and all tools, scaffolding, equipment and materials not the property of the Authority.
 - 1. Upon completion of construction, the Contractor shall leave the work and premises in a clean, neat and workmanlike condition satisfactory to the Contracting Officer or other delegated Authority's Representative.

1.35 Contract Modifications - Requirements for Proposals, Price Breakdown and Negotiation of Profit

- a. The Contractor, in connection with any proposal he makes for a Contract modification, shall furnish a price breakdown, itemized as required by the Contracting Officer or other delegated Authority's Representative. Unless otherwise directed, the breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, subcontract and overhead costs, as well as profit, and shall cover all work involved in the modification, whether such work was deleted, added or changed. Any amount claimed for subcontracts shall be supported by a similar price breakdown. In addition, if the proposal includes a time extension, a justification therefor shall also be furnished. The proposal, together with the price breakdown and time extension justification shall be furnished by the date specified by the Contracting Officer or other delegated Authority's Representative.
- b. Where profit is negotiated as an element of price, with either the Contractor or subcontractor, a reasonable profit will be negotiated for each modification by using the following procedure as a guide:
 - (1) Breakdown:

FACTOR	RATE	WEIGHT	VALUE
Degree of Risk	20		

Relative difficulty of Work	15		
Size of Job	15		
Period of Performance	15		
Contractor's Investment	5		
Assistance by Authority	5		
Subcontracting	25		
	100		%

- (2) Based on the circumstances of each modification, each of the above factors shall be weighted from .03 to .12 as indicated below. The value shall be obtained by multiplying the rate by the weight. From the value column when totaled the fair and reasonable profit can be determined under the circumstances of the particular modification.
- [a] **Degree of risk:** Where the modified work involves no risk or the degree of risk is very small the weighting should be .03; as the degree of risk increases the weighting should be increased up to a maximum of .12. Lump sum items will generally have a higher weighted value than unit price items for which quantities are provided. Things to consider: The portion of the work to be done by subcontractors, nature of work, where work is to be performed, reasonableness of negotiated costs, and amount of labor included in cost and whether the negotiation is before or after performance of work.
 - [b] **Relative difficulty of work:** If the modified work is most difficult and complex the weighting should be .12 and should be proportionately reduced to .03 on the simplest of jobs. This factor is tied in, to some extent, with the degree of risk. Things to consider: The nature of the work, by whom it is to be done, the location and the time schedule.
 - [c] **Size of job:** All modified work not in excess of \$100,000 shall be weighted at .12. Work estimated between \$100,000 and \$5,000,000 shall be proportionately weighted from .12 to .05. Work from \$5,000,000 to \$10,000,000 shall be weighted at .04 and work in excess of \$10,000,000 at .03.
 - [d] **Period of performance:** Modifications providing for an extension of time in excess of 30 days are to be weighted at .12. Jobs of lesser duration are to be proportionately weighted to a minimum of .03 for jobs not to exceed one day. No weight is to be granted for this factor where there is no extension of the Contract performance period of interim dates due to work under this modification.
 - [e] **Contractor's investment:** To be weighted from .03 to .12 on the basis of below average, average and above average. Things to consider: Amount of subcontracting, mobilization payment item, Authority-furnished property and method of making progress payments.
 - [f] **Assistance by Authority:** To be weighted from .12 to .03 on the basis of average to above average. Things to consider: Use of Authority-owned property, equipment and facilities, and expediting assistance.
 - [g] **Subcontracting:** To be weighted inversely proportional to the amount of subcontracting. Where 80 percent or more of the work is to be subcontracted the weighting is to be .03 and such weighting proportionately increased to .12 where all the work is performed by the Contractor's own forces.

- (3) When considered necessary because of very unusual circumstances or local conditions, the range of weight may be increased to an upper limit of .15 if supported by adequate justification and if approved by the Contracting Officer or other delegated Authority's Representative.
 - (4) When negotiations between the Contracting Officer or other delegated Authority's Representative and the Contractor are joined to determine an equitable adjustment for a modification of this Contract, the Contractor shall encourage involved subcontractor(s) to be present to present their cost data and to participate in the resolution of a fair and equitable adjustment. In any event, if after reasonable effort a negotiated settlement cannot be reached between the Contracting Officer or other delegated Authority Representative and the Contractor and subcontractor(s) involved, then at the request of the subcontractor(s) concerned, the Contracting Officer or other delegated Authority's Representative may process Part 1 of a two-part modification to cover the direct costs only, as agreed upon or, if not agreed upon, as determined unilaterally by the Contracting Officer or other delegated Authority's Representative. Subcontractor(s) requests for a Part 1 modification shall be submitted to the Contractor and the Contractor shall forward such requests promptly to the Contracting Officer or other delegated Authority's Representative. Any payments received by the Contractor under this procedure shall be passed along within 10 days thereafter to the subcontractor(s) concerned.
- c. Change Orders: When the Contracting Officer or other delegated Authority's Representative directs a change in accordance with the General Provisions and the Progress Schedule requirements of the PROGRESS SCHEDULES Article of the Special Conditions, the Contractor shall identify in his proposal for equitable adjustment the network activities that precede and follow the change order work activities. If the change order work activities are performed concurrently with existing network activities, those concurrent network activities shall be identified. If the change order work activities restrain network activities, those restraints shall be identified.

1.36 Accident Prevention

- a. In order to provide safety controls for protection to the life and health of employees and other persons, for prevention of damage to property, materials, supplies and equipment, and for avoidance of work interruptions in the performance of this Contract, the Contractor shall comply with all pertinent provisions of the SAFETY REQUIREMENTS Article of the Special Conditions, and shall also take or cause to be taken such additional measures as the Contracting Officer or other delegated Authority's Representative may determine to be reasonably necessary for the purpose.
- b. The Contractor shall maintain an accurate record of, and shall report to the Contracting Officer or other delegated Authority's Representative in the manner and on the forms prescribed by the Contracting Officer or other delegated Authority's Representative exposure data and all accidents resulting in death, traumatic injury, occupational disease and damage to property, materials, supplies and equipment incidental to work performed under this Contract.
- c. The Contracting Officer or other delegated Authority's Representative will notify the Contractor of any noncompliance with the foregoing provisions and the action to be taken. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Contracting Officer or other delegated Authority's Representative may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.
- d. Compliance with the provisions of this Article by subcontractors shall be the responsibility of the Contractor.
- e. Prior to commencement of the work the Contractor shall:

- (1) Submit in writing his proposals for effectuating this provision for accident prevention.
- (2) Meet in conference with representatives of the Contracting Officer or other delegated Authority's Representative to discuss and develop mutual understanding relative to administration of the overall safety program.

1.37 Equipment

- a. The Contractor shall provide equipment, in first class working order and safe condition of sufficient quantities and sizes to complete the work as specified and detailed on the Contract Drawings within the Contract time, and shall provide adequate maintenance of this equipment throughout the length of the project.
- b. All equipment shall be approved by the Authority Representative or Engineer upon delivery to the site; and any item of equipment that at any time proves ineffectual or hazardous to personnel and/or property shall be promptly brought to acceptable condition, or shall be removed from the site as directed by the Authority Representative or Engineer.

1.38 Suspension of Work

- a. The Contracting Officer or other delegated Authority's Representative may order the Contractor in writing to suspend, delay or interrupt all or any part of the work for such period of time as he may determine to be appropriate for the convenience of the Authority.
- b. If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed or interrupted by an act of the Contracting Officer or other delegated Authority's Representative in the administration of this Contract, or by his failure to act within the time specified in this Contract, or if no time is specified, within a reasonable time, an adjustment shall be made for any increase in the cost of performance of this Contract, excluding profit, necessarily caused by such unreasonable suspension, delay or interruption and the Contract modified in writing accordingly. However, no adjustment shall be made under this Article for any suspension, delay, or interruption to the extent:
 - (1) That performance would have been so suspended, delayed or interrupted by any other cause including the fault or negligence of the Contractor or
 - (2) For which an equitable adjustment is provided for or excluded under any other provision of this Contract.
- c. No claim under this clause shall be allowed:
 - (1) For any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer or other delegated Authority's Representative in writing of the act or failure to act involved, but this requirement shall not apply as to a claim resulting from a suspension order, and
 - (2) Unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of such suspension, delay or interruption, but no later than the date of final payment under the Contract.

1.39 Audit and Inspection of Records

- a. This Article is applicable if this Contract was entered into by means of negotiation and shall become operative with respect to any modification to this Contract whether this Contract was initially entered into by means of negotiation or by means of formal advertising.

- b. The Contractor shall maintain records, and the Contracting Officer or other delegated Authority's Representative, the U.S. Department of Transportation, and the Comptroller General of the United States or any of their duly authorized representatives shall, until the expiration of three years after final payment under this Contract, have access to and the right to examine any directly pertinent books, documents, papers and records of the Contractor, involving transactions related to this Contract, for the purpose of making audit, examination, excerpts and transcriptions.
- c. The Contractor further agrees to include in all his subcontracts hereunder a provision to the effect that the subcontractor agrees that the Contracting Officer or other delegated Authority's Representative, the U.S. Department of Transportation and the Comptroller General of the United States or any of their duly authorized representatives shall, until the expiration of three years after final payment under the Contract, have access to and the right to examine any directly pertinent books, documents, papers and records of such subcontractor, involving transactions related to the subcontract, for the purpose of making audit, examination, excerpts and transcriptions.

1.40 Rights in Technical Data - Unlimited

(Also, refer to General Provisions Article 1.61 Rights in Data and Copyrights - FTA.)

- a. The Authority or any third party designated by the Authority to assist it in administration of this Contract or the inspection or verification of the product produced under this Contract, shall have the right to use, duplicate or disclose technical data, which includes computer software, in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so:
 - (1) Any manuals, instructional materials prepared for installation, operation, maintenance or training purposes;
 - (2) Technical data pertaining to end items, components or processes which were prepared for the purpose of identifying sources, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements ("form, fit and function" data; e.g., specification control drawings, catalog sheets, outline drawings; except for the computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software);
 - (3) Other technical data which has been, or is normally furnished without restriction by the Contractor or subcontractor;
 - (4) Other specifically described technical data which the parties have agreed will be furnished without restriction;
 - (5) All computer software regardless of whether it is technical data as defined in this Article 1.40, including the source code, algorithm, process, formulae, and flow charts, which is developed or materially modified by the Contractor for the Authority or for which the Authority is required by federal law or regulation to provide a royalty-free, irrevocable and nonexclusive license to the federal government.
 - (6) Shop drawings.
- b. The Authority shall have the right to use, duplicate, or disclose technical data other than that defined in Paragraph a. in whole or in part, with the express limitation that such technical data shall not, without the written permission of the party furnishing such technical data, be
 - (1) released or disclosed in whole or in part outside the Authority,
 - (2) used in whole or in part by the Authority for manufacture, or

- (3) used by a party other than the Authority except for: (i) emergency repair or overhaul, (ii) where the item or process concerned is not otherwise reasonably available to the Authority to enable timely performance of the work, or (iii) administration of this Contract or the inspection or verification of the product produced under this Contract where the third party has a written contract with the Authority to perform these efforts. In all cases described in this subsection, the release or disclosure outside of the Authority shall be subject to a written prohibition against further use, release, or disclosure by the party receiving the technical data.
- c. Technical data provided in accordance with the provisions of Paragraph b. shall be identified by a legend which suitably recites the aforesaid limitation. Nothing herein shall impair the right of the Authority to use similar or identical data acquired from other sources.
- d. Where any item is purchased as a separate item in the Contract, that purchase includes all integral parts of that item, including any computer software, source codes, algorithms, processes, formulae, and flow charts. As such, the Authority has full rights to use, duplicate, or disclose any or all parts of the item, including computer software, in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so. Should disclosure of the computer software be required only under this Paragraph, then the Contracting Officer or other delegated Authority's Representative may waive the provisions of this Paragraph if he certifies in writing that the item is commercially available from multiple sources and the product from any of those sources will be fully compatible with existing Authority property.
- e. The term technical data as used in this Article means technical writing, computer software, sound recordings, pictorial reproductions, drawings, or other graphic representations and works of a technical nature, whether or not copyrighted, which are specified to be delivered pursuant to this Contract. The term does not include financial reports, cost analyses, and other information incidental to Contract administration. Computer software as used in this Article means computer programs, computer data bases, and documentation thereof.
- f. Material covered by copyright:
- (1) The Contractor agrees to and does hereby grant to the Authority, and to its officers, agents, and employees acting within the scope of their official duties, a royalty-free, nonexclusive, and irrevocable license throughout the world for Authority purposes to publish, translate, reproduce, deliver, perform, dispose of, and to authorize others to do so, all (i) technical data and (ii) computer software covered by Article 1.40 a.(5) now or hereafter covered by copyright.
- (2) No such copyrighted matter shall be included in (i) technical data or (ii) computer software covered by Article 1.40 a.(5) furnished hereunder without the permission of the copyright owner for the Authority to use such copyrighted matter in the manner above described.
- (3) The Contractor shall report to the Authority (or higher-tier contractor) promptly and in reasonable written detail each notice or claim of copyright infringement received by the Contractor with respect to any (i) technical data or (ii) computer software covered by Article 1.40 a.(5) provided to the Authority.
- g. Relation to patents: Nothing contained in this Article shall imply a license to the Authority under any patent, or be construed as affecting the scope of any license or other right otherwise granted to the Authority under any patent.
- h. Any dispute under this Article shall be subject to the Disputes Article of this Contract.
- i. Notwithstanding any other payment provisions in this Contract, the Contracting Officer or other delegated Authority's Representative may retain from payment up to 10 percent of the Contract price until final delivery and acceptance of the technical data as defined in this Article and as required to be furnished by the Unit Price Schedule or the Contract Specifications.

1.41 Price Reduction for Defective Cost or Pricing Data - Price Adjustments

- a. This Article shall become operative only with respect to any modification of this Contract which involves aggregate increases and/or decreases in cost plus applicable profits in excess of \$100,000 unless the modification is priced on the basis of adequate competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation. The right to price reduction under this Article is limited to defects in data relating to such modification.
- b. If any price, including profit or fee, negotiated in connection with any price adjustment under this Contract was increased by any significant sums because:
- (1) The Contractor furnished cost or pricing data which was not complete, accurate and current as certified in the Contractor's Certificate of Current Cost or Pricing Data;
 - (2) A subcontractor, pursuant to the Article of this Contract entitled SUBCONTRACTOR COST AND PRICING DATA AND PRICE ADJUSTMENTS or any subcontract article therein required, furnished cost or pricing data which was not complete, accurate and current as certified in the subcontractor's Certificate of Current Cost or Pricing Data;
 - (3) A subcontractor or prospective subcontractor furnished cost or pricing data which was required to be complete, accurate and current and to be submitted to support a subcontract cost estimate furnished by the Contractor but which was not complete, accurate and current as of the date certified in the Contractor's Certificate of Current Cost or Pricing Data; or
 - (4) The Contractor or a subcontractor or prospective subcontractor furnished any data, not within Paragraph (1), (2) or (3) above, which was not accurate, as submitted; the price shall be reduced accordingly and the Contract shall be modified in writing as may be necessary to reflect such reduction.

However, any reduction in the Contract price due to defective subcontract data of a prospective subcontractor, when the subcontract was not subsequently awarded to such subcontractor, will be limited to the amount, plus applicable overhead and profit markup, by which the actual subcontract, or actual cost to the Contractor if there was not a subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor, provided the actual subcontract price was not affected by defective cost or pricing data. (Note: Since the Contract is subject to reduction under this Article by reason of defective cost or pricing data submitted in connection with certain subcontracts, it is expected that the Contractor may wish to include an article in each such subcontract requiring the subcontractor to appropriately indemnify the Contractor. However, the inclusion of such an article and the terms thereof are matters of negotiation and agreement between the Contractor and the subcontractor, provided that they are consistent with DISPUTES provisions in subcontracts. It is also expected that any subcontractor subject to such indemnification will generally require substantially similar indemnification for defective cost or pricing data required to be submitted by his lower tier subcontractors.)

1.42 Audit - Price Adjustments

- a. General: The Contracting Officer or other delegated Authority's Representative shall have the audit and inspection rights described in the applicable Paragraphs b., c. and d. below.
- b. Examination of costs: If this is a cost-reimbursement type, incentive, time and materials, labor hour or price redeterminable Contract, or any combination thereof, the Contractor shall maintain, and the Contracting Officer or other delegated Authority's Representative shall have the right to examine books, records, documents and other evidence and accounting procedures and practices, sufficient to reflect properly all direct and indirect costs of whatever nature claimed to have been incurred for the performance of this Contract. Such right of examination shall include inspection at

all reasonable times of the Contractor's plants, or such parts thereof, as may be engaged in the performance of this Contract.

- c. Cost or pricing data: If the Contractor submitted cost or pricing data in connection with the pricing of this Contract or any change or modification thereto, unless such pricing was based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, the Contracting Officer or other delegated Authority's Representative shall have the right to examine all books, records, documents and other data of the Contractor related to the negotiation, pricing or performance of such Contract, change or modification, for the purpose of evaluating the accuracy, completeness and currency of the cost or pricing data submitted. The right of examination shall extend to all documents necessary to permit adequate evaluation of the cost or pricing data submitted along with the computations and projections used therein.
- d. Not used.
- e. The Contractor shall insert a clause containing all the provisions of this Article, including this Paragraph e., in all subcontracts hereunder except altered as necessary for proper identification of the contracting parties and the Contracting Officer or other delegated Authority's Representative under this Contract.

1.43 Subcontractor Cost or Pricing Data and Price Adjustments

- a. Paragraphs b. and c. of this Article shall become operative only with respect to any change or other modification made pursuant to one or more provisions of this Contract which involves a price adjustment in excess of \$100,000. The requirements of this Article shall be limited to such price adjustments.
- b. The Contractor shall require subcontractors hereunder to submit cost or pricing data under the following circumstances:
 - (1) Prior to award of any cost-reimbursement type, incentive, or price redeterminable subcontract;
 - (2) Prior to the award of any subcontract the price of which is expected to exceed \$100,000;
 - (3) Prior to the pricing of any subcontract change or other modification for which the price adjustment is expected to exceed \$100,000; except in the case of (2) or (3) where the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public or prices set by law or regulation.
- c. The Contractor shall require subcontractors to certify that to the best of their knowledge and belief the cost and pricing data submitted under Paragraph b. above is accurate, complete and current as of the date of execution, which date shall be as close as possible to the date of agreement on the negotiated price of the Contract modification.
- d. The Contractor shall insert the substance of this Article including this Paragraph d. in each subcontract hereunder which exceed \$100,000.

1.44 Value Engineering Incentive

- a. This Article applies to those Value Engineering Change Proposals (VECP's) which are initiated and developed by the Contractor to change the Drawings, Specifications or other requirements of this Contract. In order to be accepted under this Article each VECP shall:
 - (1) Be identified by the Contractor at the time of submittal to the Contracting Officer or other delegated Authority's Representative as submitted pursuant to this Article using the prescribed WMATA VECP proposal form;

- (2) Require a change to this Contract.
 - (3) Decrease the Contract price;
 - (4) Maintain the Contract requirements such as safety, service life, reliability, economy of operation, ease of maintenance and necessary standardized and architectural features of the facility or system, and;
 - (5) Not require an unacceptable extension of original Contract duration.
 - (6) Be reviewed and evaluated by way of a two-phase process.
- b. Phase One - Conditional Approval: In addition to the use of the WMATA VECP proposal form, any VECP the Contractor submits shall be in sufficient detail to clearly define the proposed change including the following items:
- (1) A description of the difference between the existing and the proposed Contract requirements, and the comparative advantages and disadvantages of each;
 - (2) Contract requirements recommended by the Contractor to be changed;
 - (3) Separate detailed cost estimates for both the basic Contract requirement and the proposed change, and an estimate of the change in Contract price including an accounting of the costs of development and implementation and Authority review of the VECP and the sharing arrangement as set forth in the following Paragraph e.;
 - (4) A statement from the Contractor predicting any effects the proposed VECP will have on the life-cycle cost of the work to include and identify separately the cost for increased maintenance and operations;
 - (5) A statement of the time by which the proposal must be accepted so as to obtain the maximum price reduction effect and not delay the original Contract completion time. The time required for VECP review shall be considered and included in this statement and also in a separate bar chart;
 - (6) A list of codes and WMATA standards applicable to the work to be carried out by the VECP and a statement that the proposed VECP will be in compliance with the requirements set forth in listed codes and standards;
 - (7) The identification of a project where the materials, methods of construction and special equipment, where required, have been previously and successfully performed on construction similar to that which is being proposed for implementation on this Contract; and
 - (8) Preliminary architectural and engineering analysis, including calculations and 22 x 34 inch drawings in sufficient detail for each requirement of the Contract which must be changed if the VECP is accepted, with recommendations for accomplishing each change and its effect on unchanged work.
- c. The Contracting Officer or other delegated Authority's Representative may at any time during the two-phase review and evaluation process reject part or all of the VECP by giving the Contractor written notice thereof. Until final approval is issued, the Contractor shall remain obligated to perform in accordance with the terms of the original Contract. VECP's will be processed expeditiously; however, the Authority shall not be liable for any delay in acting upon any proposal submitted pursuant to this Article. The decision of the Contracting Officer or other delegated Authority's Representative about acceptance or rejection of any such proposal shall be final and shall not be subject to the DISPUTES Article of this Contract.

- (1) The Contractor has the right to withdraw part or all of the VECP at any time prior to acceptance or rejection by the Contracting Officer or other delegated Authority's Representative. Such withdrawal shall be made in writing to the Contracting Officer or other delegated Authority's Representative. If the Contractor desires to withdraw the proposal, he shall be liable for the cost incurred by the Authority in reviewing the proposal.
- d. Upon notice of conditional approval of the concept of the VECP, the Contractor shall proceed with final VECP design in accordance with the agreed schedule.
 - e. Phase Two - Final Approval: Final approval of the VECP by the Authority will be contingent upon the following items:
 - (1) The Contractor shall address, to the Authority's satisfaction, all design issues and review comments.
 - (2) An equitable adjustment in the Contract price and appropriate changes in any other affected provisions of the Contract shall be made and the Contract modified in accordance with this Article and the CHANGES or other applicable articles of this Contract.
 - (3) The net savings resulting from the change shall be shared between the Contractor and the Authority on the basis of 50 percent for the Contractor and 50 percent for the Authority. Net savings shall be determined by deducting from the estimated gross savings, the Contractor's costs of developing and implementing the proposal, including any amount attributable to a subcontractor, and the estimated amount of increased costs to the Authority resulting from the change, such as costs for review, implementation, inspection, related items and Authority-furnished property. Estimated gross savings shall include Contractor's labor, material, equipment, overhead, profit and bond. The Contract price shall be reduced by the sum of the Authority's costs and share of the net savings.
 - (4) The Contractor is entitled to share in instant Contract savings only, to the full extent provided for in this Article. For purposes of sharing, the term 'instant contract' shall not include any supplemental agreements to or other modifications of this Contract, executed subsequent to acceptance of the particular VECP, by which the Authority increases the quantity of any item or adds any item.
 - (5) Notwithstanding any review, approval or acceptance of any VECP by the Authority; the Contractor agrees to be liable to the Authority for all costs of any kind whatsoever caused by or resulting from any error, omission, deficiency or negligence, or combination thereof, of any kind in the design, drawings or specifications submitted to the Authority in connection with any VECP proposal under this Contract. The rights and remedies of the Authority provided in this clause are in addition to any other rights or remedies provided by law or under this Contract.
 - f. The Contractor will use his best efforts to include Value Engineering arrangements in any subcontract, which in his judgement, appears to offer sufficient value engineering potential.
 - g. A VECP identical to one submitted under any other contract, by this or any other Contractor, may also be submitted under this Contract.
 - h. The Contractor may restrict the Authority's right to use any VECP data by marking it with the following statement:

"This data, furnished pursuant to the VALUE ENGINEERING INCENTIVE Article of this Contract, shall not be duplicated, used or disclosed, in whole or in part, for any purpose except to evaluate the VECP, unless the proposal is accepted by the Authority. This restriction does not limit the Authority's right to use information contained in this data if it is or has been obtained, or is otherwise available, from the Contractor or from other source, without limitations. When this proposal is accepted by the Authority, the Authority shall have the right to duplicate, use and disclose any data in any manner and for any purpose whatsoever, and have others do so whether under this or any other Authority contract."

1.45 Variations in Estimated Quantities

- a. Where the quantity of a pay item in this Contract is an estimated quantity and where the actual quantity of such pay item varies more than 15 percent above or below the estimated quantity stated in this Contract, an equitable adjustment in the Contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115 percent or below 85 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Contracting Officer or other delegated Authority's Representative shall, upon receipt of a written request for an extension of time within 10 days from the beginning of such delay, or within such further period of time which may be granted by the Contracting Officer or other delegated Authority's Representative prior to the date of final settlement of the Contract, ascertain the facts and make such adjustment for extending the completion date as in his judgment the findings justify.

1.46 Contract Prices - Unit Price Schedule

Payment for the various bid items listed in the Unit Price Schedule shall constitute full compensation for furnishing all plant, labor, equipment, appliances and materials and for performing all operations required to complete the work in conformity with Drawings and Specifications. All costs for work not specifically mentioned in the Unit Price Schedule shall be included in the Contract prices for the items listed.

1.47 Progress Payment for Lump Sum Items

The Contractor shall furnish to the Contracting Officer or other delegated Authority's Representative a breakdown of the total Contract price for every lump sum item on the Unit Price Schedule, showing the amount included therein for each principal category of the work, in such detail as to provide a basis for determining progress payments. The breakdown shall be supported by such data to substantiate its correctness as the Contracting Officer or other delegated Authority's Representative may require.

1.48 Warranty of Construction

- a. **For each Tie-Breaker Station, the Contractor shall remedy at his own expense any failure of the work for a period of 2 years from Substantial Completion Inspection signature date unless VOLUME 2 TECHNICAL PROVISIONS indicate a longer warranty period**, including equipment, to conform to Contract Specifications and any defect of material, workmanship, or design in the work, but excluding any defect of any design furnished by the Authority under the Contract, provided that the Contracting Officer or other delegated Authority's Representative gives the Contractor notice of any such failure or defect promptly after discovery but not later than 24 months **unless VOLUME 2 TECHNICAL PROVISIONS indicate longer warranty period** (refer to 2.66 Correction of Deficiencies Special Provisions) after final acceptance of the work, except that in the case of defects or failures in a part of the work of which the Authority take possession prior to final acceptance, such notice shall be given not later than one year from the date the Authority take such possession. The Contractor, at his own expense, shall also remedy damage to equipment, the site, or the buildings or the contents thereof which is the result of any failure or defect, and restore any work damaged in fulfilling the terms of this Article. Should the Contractor fail to remedy any such failure or defect within a reasonable time after receipt of notice thereof, the Authority shall have the right to replace, repair or otherwise remedy such failure or defect at the Contractor's expense. This warranty shall not delay final acceptance of or final payment for the Contract work.
- b. All subcontractors', manufacturers' and suppliers' warranties and guarantees, expressed or implied, respecting any part of the work and any materials used therein shall be deemed obtained and shall

be enforced by the Contractor as the agent and for the benefit of the Authority without the necessity of separate transfer or assignment thereof; provided that, if directed by the Contracting Officer or other delegated Authority's Representative, the Contractor shall require such subcontractors, manufacturers and suppliers to execute such warranties and guarantees in writing to the Contracting Officer or other delegated Authority's Representative.

- c. Any work repaired or replaced pursuant to this Article shall also be subject to the provisions of this Article to the same extent as work originally performed. The rights and remedies of the Authority provided in this Article are in addition to and do not limit any rights afforded to the Authority by any other article of this Contract.

1.49 Time and Materials Work

- a. In the event equitable adjustment pursuant to the CHANGES Article or other articles of these General Provisions cannot be agreed to in a timely manner, the Contracting Officer or other delegated Authority's Representative reserves the right to order work on a time and materials basis. When work is ordered under this Article and notwithstanding the provisions of other articles, compensation for the work shall be determined as hereinafter provided and shall constitute the total compensation to be paid for the changes to the work. The methods, labor, materials and equipment used in the performance of such work shall be subject to the approval of the Authority Representative or Engineer.

- b. Work performed by or for the Contractor: Labor, materials, and equipment shall be furnished by the Contractor or by a subcontractor or by others on behalf of the Contractor. The Contractor will be paid therefor as hereinafter provided, except where agreement has been reached to pay in accordance with Paragraph c. below. To the totals, completed as indicated in Paragraphs b. (1) through b. (4), shall be added the following percentages, which in the aggregate shall be limited up to a maximum of:

Labor: 10 percent.

Materials: 5 percent.

Equipment rental: 5 percent.

- c. Profit shall be negotiated as provided in the CONTRACT MODIFICATIONS - REQUIREMENTS FOR PROPOSALS, PRICE BREAKDOWN AND NEGOTIATION OF PROFIT Article of these General Provisions.

A percentage for subcontract work, limited up to a maximum of 10 percent, may be added to the totals computed above. This subcontract percentage will be a one-time markup regardless of tier of the subcontractor performing the work. A percentage for Contractor's bond not to exceed one percent, may also be added to the total. For the purposes of this Article, subcontractor is defined as an individual, partnership, corporation, association, joint venture or any combination thereof, who contracts with the Contractor to perform work or labor or render service on or about the work. The term subcontractor shall not include those who supply materials only. When work paid for on time and materials basis is performed by forces other than the Contractor's organization, the Contractor shall reach agreement with such other forces as to the distribution of the payment made by the Authority for such work and no additional payment therefor will be made by the Authority by reason of performance of the work by a subcontractor or by others.

- (1) Labor: The cost of labor used in performing the work, whether the employer is the Contractor, subcontractor, or other forces, will be the sum of the following:

- [a] The gross actual wages paid including income tax withholding but not including any employer payments to or on behalf of workmen for health and welfare, pension, vacation, insurance and similar purposes.

[b] To the actual gross wages, as defined in Paragraph b. (1) [a] above, will be applied a percentage based upon current applicable labor rates concerning payments made to or on behalf of workmen other than actual wages, which percentage shall constitute full compensation for all payments other than actual gross wages as defined in Paragraph b. (1) [a] above and subsistence and travel allowance as specified in Paragraph b. (1) [c] below. The Contractor shall compute a separate percentage for each craft or a composite percentage for all crafts, if so approved by the Authority Representative or Engineer. All computed percentages shall be submitted to the Authority Representative or Engineer for approval within 90 days after receipt of Notice to Proceed or as directed by the Authority Representative or Engineer prior to any time and materials work being performed.

[c] Subsistence and travel allowance paid to such workmen if required by collective bargaining agreements.

The charges for labor shall include all classifications through foremen when engaged in the actual and direct performance of the work. They shall not include charges for such overhead personnel as assistant superintendents, superintendents, office personnel, timekeepers and maintenance mechanics.

(2) Materials: The cost of materials required for the accomplishment of the work will be delivered cost to the purchaser, whether Contractor, subcontractor or other forces, from the supplier thereof, except as the following are applicable:

[a] If a cash or trade discount by the actual supplier is offered or available to the purchaser, it shall be credited to the Authority notwithstanding the fact that such discount may not have been taken.

[b] If materials are procured by the purchaser by any method which is not a direct purchase form and a direct billing by the actual supplier to such purchaser, the cost of such materials, including handling, shall be deemed to be the price to the actual supplier as determined by the Authority Representative or Engineer.

[c] If the materials are obtained from a supply or source owned wholly or in part by the purchaser, payment therefor will not exceed the price paid by the purchaser for similar materials furnished from said source on Contract items or the current wholesale price for such materials delivered to the job site, whichever price is lower.

[d] The cost of such materials shall not exceed the lowest current wholesale price at which such materials are available in the quantities concerned, delivered to the job site, less any discounts as provided in Paragraph b. (2) [a] above.

[e] If the Contractor does not furnish satisfactory evidence of the cost of such materials from the actual supplier thereof, the cost shall then be determined in accordance with Paragraph b.(2)[d] above.

The Contractor shall not be compensated for indirect costs and profit on Authority-furnished materials.

(3) Equipment: The Contractor shall be paid for the use of equipment in accordance with the PAYMENT FOR USE OF EQUIPMENT Article of the Special Conditions. The Contractor shall furnish all data which might assist the Authority Representative or Engineer in the establishment of such rates.

[a] Operators of rented equipment will be paid for as provided under Paragraph b. (1) above.

(4) Subcontracts: The cost for subcontract work will be the actual cost to the Contractor for work performed by a subcontractor as computed in accordance with Paragraph b. above.

c. Special items of work: If the Contracting Officer or other delegated Authority's Representative and the Contractor, by agreement, determine that either (1) an item of time and materials work does

not represent a significant portion of the total Contract price, or (2) such item of work cannot be performed by the forces of the Contractor or the forces of any of his subcontractors, or (3) it is not in accordance with the established practice of the industry involved to keep the records which the procedure outlined in Paragraph b. above would require, charges for such special time and materials work item may be made on the basis of invoices for such work without complete itemization of labor, materials and equipment rental costs. To such invoiced price, less a credit to the Authority for any cash or trade discount offered or available, whether or not such discount may have been taken, will be added a negotiated amount not to exceed five percent of the discounted price, in lieu of the negotiated lump sum not to exceed the percentages provided for in Paragraph b. above.

- d. Records: The Contractor shall maintain his separate records in such a manner as to provide a clear distinction between the direct costs of work paid for on a time and materials basis and the cost of other operations.
- (1) The Contractor shall prepare, and furnish to the Authority Representative or Engineer, report sheets in duplicate of each day's work paid for on a time and materials basis the day after such work was performed. The daily report sheets shall itemize the materials used, and shall cover the direct cost of labor and the charges for equipment rental, whether furnished by the Contractor, subcontractor or other forces, except for charges described in Paragraph c. above. The daily report sheets shall provide names or identifications and classifications of workmen, the hours worked, and also the size, type and identification number of equipment, and hours operated.
 - (2) Material charges shall be substantiated by valid copies of vendor's invoices. Such invoices shall be submitted with the daily report sheets or, if not available, they shall be submitted with subsequent daily report sheets. Should said vendor's invoices not be submitted within 60 days after the date of delivery of the material or 15 days after acceptance of the work, whichever comes first, the Authority Representative or Engineer reserves the right to establish the cost of such materials at the lowest current wholesale prices at which such materials are available in the quantities concerned delivered to the location of the work less any discounts provided in Paragraph b.(2)[a] above.
 - (3) Said daily report sheets shall be signed by the Contractor or his authorized agent.
 - (4) The Authority Representative or Engineer will compare his records with the Contractor's daily report sheets, make any necessary adjustment, and compile the costs of work paid for on a time and materials basis on daily time and materials work report forms furnished by the Authority Representative or Engineer. When these daily reports are agreed upon and signed by both parties, they shall become the basis of payment for the work performed, but shall not preclude subsequent adjustment based on a later audit.
 - (5) Not used.
- e. Payment: Payment as provided in Paragraphs b. and c. above shall constitute full compensation to the Contractor for performance of work paid for on a time and materials basis and no additional compensation will be allowed therefor, except as provided in Paragraph f. below.
- f. If the work under this Article is emergency in nature or is on a critical path, i.e., completion of a milestone or overall Contract completion and affects efficient work and/or delays completion of other Contract work, the Contractor may propose a lump sum amount, adequately analyzed and certified for negotiation with the Contracting Officer or other delegated Authority's Representative as an added cost not covered by Paragraph b. (1) through b. (4) above.

1.50 Equitable Adjustment for Minor Contract Modifications

- a. When the Contracting Officer or other delegated Authority's Representative and Contractor agree to an additive or deductive amount for a modification to this Contract made pursuant to Articles of

this Contract titled, CHANGES, DIFFERING SITE CONDITIONS or VALUE ENGINEERING INCENTIVE, when the fair and reasonable price in aggregate amount does not exceed \$100,000 and further agree to an adjustment in the time for Contract performance resulting from said modification which increases or decreases the completion date 10 or less calendar days, the equitable adjustment in Contract amount shall consist of the sum of the following:

- (1) Direct costs as agreed to by the Contracting Officer or other delegated Authority's Representative and Contractor.
- (2) Job Office Overhead costs, the sum of which shall be limited to a maximum of 10 percent of direct labor costs, including fringe benefits, but excluding FICA, FUTA, and State Unemployment Insurance (SUI); a maximum of 10 percent of direct material costs; a maximum of five percent of direct equipment costs (small tools, defined as equipment less than \$2,000 in acquisition costs, are included and computed at a maximum of five percent of direct base labor wages); and a maximum of five percent of subcontract costs.
- (3) Home Office General and Administrative (G&A) costs, the sum of which shall be limited to a maximum of three percent or the audited rate of the direct costs plus job office overhead costs computed as above.
- (4) Profit will be determined in accordance with the guidelines specified in the CONTRACT MODIFICATIONS-REQUIREMENTS FOR PROPOSALS, PRICE BREAKDOWN AND NEGOTIATION OF PROFIT Article of the General Provisions.

b. In using the above rates, the following shall apply:

- (1) Payroll Tax (FICA, FUTA & SUI) amounts are added immediately after direct and indirect costs are totaled.
- (2) Subcontractors' indirect costs and profit shall be computed in the same manner as above.
- (3) Indirect costs shall not be duplicated in direct costs.
- (4) When the Contract time is increased, the change in Contract amount for direct and indirect costs computed by application of the above rates includes costs of impact and extended performance due to the time extension and no further consideration of costs arising from the specific modification and cited pending change orders (PCO's) will be given. The Contractor shall not receive both a percentage and a daily rate markup for job office overhead costs when a time extension to the Contract Performance Period is recognized.
- (5) Bond will be allowed at actual cost without markup.

c. Equipment Rates shall be determined from prior Authority audits. In the absence of audited rates for equipment owned or controlled by the Contractor, hourly rates shall be computed from the current Contractor's Equipment Cost Guide (monthly rate divided by 176).

1.51 Cost or Pricing Data

- a. The Contractor shall submit to the Contracting Officer or other delegated Authority's Representative, either actually or by specific identification in writing, cost or pricing data under the conditions described in this Paragraph and certify that, to the best of his knowledge and belief, the cost or pricing data submitted is accurate, complete and current as of the date of execution, which date shall be as close as possible to the date of agreement on the negotiated price of the Contract modification. The cost or pricing data shall be submitted at the time the Contractor submits his proposal for the pricing of any modification to his Contract, whether or not cost or pricing data was required in connection with the initial pricing of the Contract, when the modification involves aggregate increases and/or decreases in costs plus applicable profits expected to exceed

\$100,000, or less at the discretion of the Contracting Officer or other delegated Authority's Representative.

- b. The submittal of certified cost or pricing data shall not be required if the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation. The Contractor agrees that the terms "adequate price competition" and "established catalog or market prices of commercial items sold in substantial quantities to the general public" shall be determined by the Contracting Officer or other delegated Authority's Representative in accordance with the guidelines as set forth in Subpart 15.4 of the Federal Acquisition Regulations (48 CFR 15.4).
- c. Cost or pricing data consists of all facts existing up to the time of agreement on price which prudent buyers and sellers would reasonably expect to have a significant effect on the price negotiations for the modification. The definition of cost or pricing data embraces more than historical accounting data; it also includes, where applicable, such factors as subcontractor, supplier and vendor quotations, nonrecurring costs, changes in construction methods, unit cost trends such as those associated with labor efficiency and any management decisions which could reasonably be expected to have a significant bearing on costs under the proposed modification and the Contract work. Cost or pricing data consists of all facts which can reasonably be expected to contribute to sound estimates of future costs as well as to the validity of costs already incurred. Cost or pricing data, being factual, is that type of information which can be verified. Because the certificate pertains to cost or pricing data, it does not make representations as to the accuracy of the Contractor's judgment on the estimated portion of future cost or projections. The certificate does, however, apply to the data upon which the Contractor's judgment is based.

1.52 Pricing of Adjustments

- a. When costs are a factor in any determination of a Contract price adjustment pursuant to the CHANGES Article or any other provision of this Contract, such costs shall be in accordance with the contract cost principles and procedures in Subpart 31 of the Federal Acquisition Regulations (48 CFR 31). Where general and administrative expense is recoverable as part of any pricing adjustment under this Contract, the adjustment shall be based on the relationship between the Contractor's total general and administrative expenses allowable under FAR cost principles for all construction-type operations during the fiscal or calendar year covering the actual performance period of the work included in this pricing adjustment, and the Contractor's total cost input (excluding General and Administrative costs) for construction-type operations during the same period, expressed as a percentage, applied to the direct and overhead Contract costs included in the pricing adjustment.
- b. Notwithstanding any interpretation of the aforementioned contract cost principles and procedures to the contrary, the Authority shall not be liable for interest, however represented, on or as a part of any claim, request, proposal or adjustment (including equitable adjustments) whether said claim, request, proposal or adjustment (including equitable adjustment) arises under the Contract or otherwise.

1.53 Accounting and Record Keeping

- a. Applicability. This Article shall become effective for and shall apply to any adjustment in the price of this Contract initiated by the Contractor or the Authority. However, where the original amount of this Contract is less than \$1,000,000, Paragraph c. of this Article does not apply unless the adjustment is expected to exceed \$50,000.
- b. Forward Priced Adjustments. Unless expressly waived in writing in advance by the Contracting Officer or other delegated Authority's Representative, the Contractor shall furnish to the Contracting Officer or other delegated Authority's Representative a cost proposal in advance of performance of any work for which a price adjustment is requested under this Contract. The proposal format shall be as detailed in the CONTRACT MODIFICATIONS - REQUIREMENTS FOR PROPOSALS,

PRICE BREAKDOWN AND NEGOTIATION OF PROFIT Article. The Contractor shall initiate such records as are necessary to substantiate all elements of the pricing proposal, current to the date of agreement on the pricing adjustment. Such records supporting the costs of each pricing adjustment request shall be specifically segregated and identified in the Contractor's accounting system as being applicable to the pricing adjustment request.

- c. Post Pricing Adjustments. In addition to the records required to be originated under b. above, in the event pricing of an adjustment under this Contract is not agreed upon between the Contractor and the Contracting Officer or other delegated Authority's Representative prior to the commencement of work for which the pricing adjustment is requested, the Contractor and any subcontractor engaged in work for which the pricing adjustment is requested, shall maintain accounts and original cost records specifically segregated and identified by job order or other appropriate accounting procedures approved by the Contracting Officer or other delegated Authority's Representative of all incurred segregable costs related to the work for which the pricing adjustment is requested. The Contractor shall maintain accounts and records which segregate and account for the costs of all work associated with that part of the project for which the pricing adjustment is requested and shall allocate between (1) work required under the base Contract; (2) work requested to be reimbursed under the pricing adjustment; and (3) other claim, including but not limited to, changes, differing site conditions, and the like. The accounts and records so established shall accumulate such costs under logical costs groups, such as material, labor, equipment, subcontracts, field overhead and the like. The Contractor shall record these costs on a form approved by the Contracting Officer or other delegated Authority's Representative. Subject to agreement between the Contractor and the Contracting Officer or other delegated Authority's Representative, or upon direction of the Contracting Officer or other delegated Authority's Representative for work under the TIME AND MATERIALS WORK Article, the Contractor shall use Form C-113 (Daily Report - Labor, Materials and Equipment). The terms of Paragraph d. of the TIME AND MATERIALS WORK Article of this Contract shall apply regardless of the form used.
- d. Availability. The accounts, records and costs information required to be originated under b. and c. above together with all other accounts, records and costs information related to this Contract shall be maintained and made available by the Contractor or subcontractor(s):
 - (1) At the office of the Contractor or subcontractor(s) at all reasonable times for inspection, audit, reproduction or such other purposes as may be required by the Contracting Officer or other delegated Authority's Representative, or pursuant to any other provisions of this Contract;
 - (2) Until the expiration of three years from the date of payment of the final \$100 (final payment) under this Contract or such lesser time as is specified in Subpart 4.7 of the Federal Acquisition Regulations and for such longer period, if any, as is required by applicable statute, or by any other articles of this Contract, or by Paragraphs (a) and (b) below:
 - (a) If the Contract is completely or partially terminated, for a period of three years from either the date of any resulting final settlement or the date of final payment, whichever is the greater period; and
 - (b) If a pricing adjustment is involved in any appeal under the DISPUTES Article of this Contract or in any litigation related to this Contract, for a period of one (1) year following the final disposition of the appeal or litigation.
- e. When asserting a claim under the various provisions of this Contract, the Contractor shall grant the Authority access to review and ascertain the validity of the accounting records being maintained for segregation of costs, including base cost records, and to audit such costs as are deemed appropriate by the Contracting Officer or other delegated Authority's Representative. No payment shall be made to the Contractor on its claim until such records are made available and access is permitted.
- f. Limitation on Pricing Adjustment. In the event the Contractor or any subcontractor fails to originate or to maintain, or to make available any accounts or records as required under this or any other article of the Contract, any pricing adjustment or portion thereof previously granted by the

Contracting Officer or other delegated Authority's Representative for which records are not available shall be rescinded and recomputed, or if a pricing adjustment has not yet been granted shall be computed, in an amount not to exceed the direct costs for which accounts or records are not available, plus a single mark-up for indirect expenses not to exceed 10 percent of the direct costs so determined by the Contracting Officer or other delegated Authority's Representative. The adjustment will be established by the Contracting Officer or other delegated Authority's Representative based upon, at his or her election, either:

- (1) An audit of any existing books and records of the Contractor or subcontractor; or (2) an Authority estimate adopted by the Contracting Officer or other delegated Authority's Representative; or (3) a combination of (1) and (2); plus a single mark-up for indirect expenses not to exceed 10 percent of the direct costs so determined by the Contracting Officer or other delegated Authority's Representative. The Contractor and subcontractors shall not be allowed any profit for the work for which the Contractor or subcontractor fails to originate, or to maintain, or to make available any accounts or records as required under this Contract.
- g. The Contractor shall insert a clause containing all the provisions of this Article in all subcontracts issued under this Contract, modified as necessary, for proper identification of the contracting parties and the Contracting Officer or other delegated Authority's Representative under this Contract.

1.54 Cargo Preference, Use of United States-Flag Vessels

- a. Pursuant to Pub. L. 664 (46 U.S.C. 1241(b):

"Cargo Preference - Use of United States-Flag Vessels

The Contractor agrees:

- (1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners and tankers) involved, whenever shipping any equipment, materials or commodities pursuant to this Contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- (2) To furnish within 20 days following the date of loading for shipments originating within the United States, or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated on-board commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) above to the Grantee (through the prime Contractor in the case of subcontractor bill-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, D.C. 20230, marked with appropriate identification of the Project.
- (3) To insert the substance of the provisions of this Article in all subcontracts issued pursuant to this Contract."

1.55 Buy America (07/03)

The Contractor agrees to comply with 49 U.S.C. 5323(j) and 49 CFR Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 CFR 661.7, and include final assembly in the United States for 15 passenger vans and 15 passenger wagons produced by Chrysler Corporation, microcomputer equipment, software, and small purchases (currently less than \$100,000) made with capital, operating, or planning funds. Separate requirements for rolling stock are set out at 5323(j)(2)(C) and 49 CFR 661.11. Rolling stock not subject to a general waiver must be manufactured in the United States and have a 60 percent domestic content.

1.56 Certificate of Current Cost or Pricing Data

The Contractor shall provide a Certificate of Current Cost or Pricing Data as required in Subpart 15.406 of the Federal Acquisition Regulations (48 CFR Part 15.406) in support of any negotiated contract expected to exceed \$100,000 or any modification to a formally advertised or negotiated contract on which the aggregate of the increases and decreases in cost are expected to exceed \$100,000. The Contracting Officer or other delegated Authority's Representative at his discretion may request cost or pricing data for modifications on which cost are \$100,000 or less and an attendant certificate of current cost or pricing data.

1.57 Revolving Door

- a. The Contractor warrants that it will not offer employment to any officer or employee of the Washington Metropolitan Area Transit Authority (WMATA) who has been involved, directly or indirectly, in any matter of financial interest to the Contractor until at least one year after the officer or employee has ceased involvement in or responsibility for the matter.
- b. The Contractor further warrants that it will not employ any WMATA officer or employee who has had direct responsibility for any matter of financial interest to the Contractor within the year prior to the retirement or termination of the officer or employee until at least one full year after such officer or employee has left the employment of the Authority.
- c. The one year requirement described in a. and b. above may be waived at the discretion of the Contracting Officer or other delegated Authority's Representative if the WMATA employee or former employee has been subject to a Reduction in Force; in such case, the Contracting Officer or other delegated Authority's Representative will provide the Contractor with a letter to that effect.
- d. If a waiver is granted, or if a former employee of WMATA is eventually hired, the Contractor shall be responsible for ensuring that the former employee is not directly involved in negotiating or otherwise dealing with WMATA on any particular matter over which such employee had responsibility during his or her period of employment at WMATA.
- e. Should the Contractor fail to comply with paragraphs a., b. or d. above, the Contracting Officer or other delegated Authority's Representative shall have the right to withhold payment under this Contract in an amount not to exceed two percent of the total Contract amount as liquidated damages to the Authority, such withholding to be in addition to any other withholding under this Contract. Further, the Contracting Officer or other delegated Authority's Representative shall consider such violation in evaluating the Contractor's responsibility in connection with award of any other Authority contract.

1.58 Walsh-Healey Public Contracts Act

a. If this Contract is for the manufacture or furnishing of materials, supplies, articles, or equipment in an amount, which exceeds or may exceed \$10,000 and is subject to the Walsh-Healey Public Contracts Act, as amended (41 U.S.C. §§ 35-45), the following terms and conditions apply:

- (1.) All stipulations required by the Act and regulations issued by the Secretary of Labor (41 CFR Chapter 50) are incorporated by reference. These stipulations are subject to all applicable rulings and interpretations of the Secretary of Labor that are now, or may be hereafter, be in effect.
- (2.) All employees whose work relates to this Contract shall be paid not less than the minimum wage prescribed by regulations issued by the Secretary of Labor

(41 CFR 50-202.2). Learners, student learners, apprentices, and handicapped worker may be employed at less than the prescribed minimum wage (see 41 CFR 50-202.3) to the same extent that such employment is permitted under Section 14 of the Fair Labor Standards Act (41 U.S.C. 40).

1.59 Conflict Of Interest (07/03)

- a. Neither the Contractor nor any person or company affiliated with it shall have, during the term of this Contract and any extensions thereof, any contractual or other financial relationship with the Authority, with any Authority prime Contractor, or with any subcontractor or supplier to any Authority prime Contractor other than the contractual relationship established under this Contract, unless an exception is granted as described below.
- b. Upon request of the Contractor and upon full disclosure and for good cause the Contracting Officer may in his sole discretion grant an exception to the requirement of a., above, when in his judgment the exception will not create a conflict between the Contractor's duties and obligations under this Contract and the duties and obligations imposed on the Contractor under the contractual or other relationship for which an exception is requested.
- c. If, during the performance of this Contract and any extension thereof, the Contractor becomes aware of any relationship, financial interest, or other activity in which it or an affiliated person or company is involved which is not in compliance with the provisions of a., above, it shall promptly notify the Contracting Officer in writing and fully disclose all circumstances thereof. Should the Contracting Officer not grant an exception to the requirements of this Article, the Contractor shall, within ten (10) days of written notice from the Contracting Officer to do so, take all action necessary to comply with the terms of a., above.
- d. If the Contractor fails to comply with the terms of this article, the Contracting Officer, may withhold payments due under the Contract until such time as the Contractor is in compliance or, should the non-compliance remain uncorrected at the expiration of ten (10) days from written notice from the Contracting Officer as provided in c., above, terminate the Contract for default pursuant to the Default Article of this Contract.
- e. The Contractor in performing this Contract shall avoid any conduct which might result in or give the appearance of creating for Directors, Officers or employees of the Authority in their relationship with the Contractor any conflicts of interest or favoritism and/or the appearance thereof and shall avoid any conduct which might result in a Director, Officer or employee failing to adhere to the Standards of Conduct adopted by the Authority's Board of Directors.
- f. Any determination by the Contracting Officer under this Article shall be final and shall be considered a question of fact within the meaning of the Disputes Article of this Contract.

1.60 Labor Provisions (07/03)

(1) **Minimum wages** –

- (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

- Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.
- (ii) (A) The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination with 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (1)(v) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor

shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

- (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.
- (2) **Withholding** - The Authority shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the Authority may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.
- (3) **Payrolls and basic records** -
- (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- (ii) (A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Authority for transmission to the Federal Transit Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

This contract is subject to the Davis-Bacon and Related Acts. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3 and 5 are herein

incorporated by reference in this contract. The Davis-Bacon Act requires contractors and subcontractors under construction contracts and subcontracts greater than \$2,000 to submit weekly certified payrolls reports to the AR.

- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR part 5 and that such information is correct and complete;
 - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.
- (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- (iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Federal Transit Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.
- (4) Apprentices and trainees –
- (i) Apprentices - Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its

- program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division of the U.S. Department of Labor determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (ii) Trainees - Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (iii) Equal employment opportunity - The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.
- (5) **Compliance with Copeland Act requirements** - The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- (6) **Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the Federal Transit Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- (7) **Contract termination: debarment** - A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

- (8) **Compliance with Davis-Bacon and Related Act requirements** - All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (9) **Disputes concerning labor standards** - Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
- (10) **Certification of eligibility** –
- (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001

1.61 Patent and Rights in Data (07/03)

(Also, refer to General Provisions Article 1.40 Rights in Technical Data - Unlimited.)

Patent and rights in data requirements for federally assisted projects only apply to research projects in which FTA finances the purpose of the grant is to finance the development of a product or information.

A. **Rights in Data** - This following requirements apply to each contract involving experimental, developmental or research work:

- (1) The term "subject data" used in this section means recorded information, whether or not copyrighted, that is delivered or specified to be delivered under this contract. The term includes graphic or pictorial delineation in media such as drawings or photographs; text in specifications or related performance or design-type documents; machine forms such as punched cards, magnetic tape, or computer memory printouts; and information retained in computer memory. Examples include, but are not limited to: computer software, engineering drawings and associated lists; specifications, standards, process sheets, manuals, technical reports, catalog item identifications, and related information. The term "subject data" does not include financial reports, cost analyses, and similar information incidental to Project administration.
- (2) The following restrictions apply to all subject data first produced in the performance of this contract.
 - (a) Except for its own internal use, the Authority or Contractor may not publish or reproduce subject data in whole or in part, or in any manner or form, nor may the Authority or Contractor authorize others to do so, without the written consent of the Federal Government, until such time as the Federal Government may have either released or approved the release of such data to the public; this restriction on publication, however, does not apply to any contract with an academic institution
 - (b) In accordance with 49 C.F.R. § 18.34 and 49 C.F.R. § 19.36, the Federal Government reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish, or otherwise use, and to authorize others to use, for "Federal Government purposes," any subject data or copyright described in subsections (2)(b)1 and (2)(b)2 of this clause below.

As used in the previous sentence, "for Federal Government purposes," means use only for the direct purposes of the Federal Government. Without the copyright owner's consent, the Federal Government may not extend its Federal license to any other party.

1. Any subject data developed under that contract, whether or not a copyright has been obtained; and
 2. Any rights of copyright purchased by the Authority or Contractor using Federal assistance in whole or in part provided by FTA.
- (c) When FTA awards Federal assistance for experimental, developmental, or research work, it is FTA's general intention to increase transportation knowledge available to the public, rather than to restrict the benefits resulting from the work to participants in that work. Therefore, unless FTA determines otherwise, the Authority and the Contractor performing experimental, developmental, or research work required by the underlying contract to which this Attachment is added agrees to permit FTA to make available to the public, either FTA's license in the copyright to any subject data developed in the course of that contract, or a copy of the subject data first produced under the contract for which a copyright has not been obtained. If the experimental, developmental, or research work, which is the subject of the underlying contract, is not completed for any reason whatsoever, all data developed under that contract shall become subject data as defined in subsection (a) of this clause and shall be delivered as the Federal Government may direct. This subsection (c) , however, does not apply to adaptations of automatic data processing equipment or programs for the Authority or Contractor's use whose costs are financed in whole or in part with Federal assistance provided by FTA for transportation capital projects.
- (d) Unless prohibited by state law, upon request by the Federal Government, the Authority and the Contractor agree to indemnify, save, and hold harmless the Federal Government, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by the Authority or Contractor of proprietary rights, copyrights, or right of privacy, arising out of the publication, translation, reproduction, delivery, use, or disposition of any data furnished under that contract. Neither the Authority nor the Contractor shall be required to indemnify the Federal Government for any such liability arising out of the wrongful act of any employee, official, or agents of the Federal Government.
- (e) Nothing contained in this clause on rights in data shall imply a license to the Federal Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Federal Government under any patent.
- (f) Data developed by the Authority or Contractor and financed entirely without using Federal assistance provided by the Federal Government that has been incorporated into work required by the underlying contract to which this Attachment has been added is exempt from the requirements of subsections (b), (c), and (d) of this clause, provided that the Authority or Contractor identifies that data in writing at the time of delivery of the contract work.
- (g) Unless FTA determines otherwise, the Contractor agrees to include these requirements in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance provided by FTA.
- (3) Unless the Federal Government later makes a contrary determination in writing, irrespective of the Contractor's status (i.e. , a large business, small business, state government or state instrumentality, local government, nonprofit organization, institution of higher education, individual, etc.), the Authority and the Contractor agree to take the necessary actions to provide, through FTA, those rights in that invention due the Federal Government as described in U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 C.F.R. Part 401.

(4) The Contractor also agrees to include these requirements in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance provided by FTA.

B. **Patent Rights** - This following requirements apply to each contract involving experimental, developmental, or research work:

(1) **General** - If any invention, improvement, or discovery is conceived or first actually reduced to practice in the course of or under the contract to which this Attachment has been added, and that invention, improvement, or discovery is patentable under the laws of the United States of America or any foreign country, the Authority and Contractor agree to take actions necessary to provide immediate notice and a detailed report to the party at a higher tier until FTA is ultimately notified.

(2) Unless the Federal Government later makes a contrary determination in writing, irrespective of the Contractor's status (a large business, small business, state government or state instrumentality, local government, nonprofit organization, institution of higher education, individual), the Authority and the Contractor agree to take the necessary actions to provide, through FTA, those rights in that invention due the Federal Government as described in U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 C.F.R. Part 401.

(3) The Contractor also agrees to include the requirements of this clause in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance provided by FTA.

1.62 Federal Changes 07/03

a. Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Agreement (Form FTA MA (9) dated October, 2002) between the Authority and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

b. The Contractor agrees to include this clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

1.63 No Obligation by the Federal Government

(1) The Authority and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the Authority, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.

(2) The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

1.64 Program Fraud and False or Fraudulent Statements and Related Acts

- (1) The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
- (2) The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.
- (3) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

1.65 Incorporation Of Federal Transit Administration (FTA) Terms (07/03)

- a. The preceding provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220 latest version, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any Authority requests which would cause the Authority to be in violation of the FTA terms and conditions.
- b. The Contractor agrees to include this clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to the provisions.

1.66 Seat Belt Use Policy (November 2000)

The contractor agrees to comply with terms of Executive Order No. 13043 "Increasing Seat Belt Use in the United States" and is encouraged to include those requirements in each subcontract awarded for work relating to this contract.

1.67 Contract Work Hours and Safety Standards Act (07/03)

Pursuant to Section 102 (Overtime):

- (1) **Overtime requirements** - No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (2) **Violation; liability for unpaid wages; liquidated damages** - In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible

therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$ 10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

- (3) **Withholding for unpaid wages and liquidated damages** - The Authority shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.
- (4) **Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses set forth in this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in this section.

Section 107 (OSHA):

Contract Work Hours and Safety Standards Act –

- (i) The Contractor agrees to comply with section 107 of the Contract Work Hours and Safety Standards Act, 40 U.S.C. section 333, and applicable DOL regulations, " Safety and Health Regulations for Construction " 29 C.F.R. Part 1926. Among other things, the Contractor agrees that it will not require any laborer or mechanic to work in unsanitary, hazardous, or dangerous surroundings or working conditions.
- (ii) **Subcontracts** - The Contractor also agrees to include the requirements of this section in each subcontract. The term "subcontract" under this section is considered to refer to a person who agrees to perform any part of the labor or material requirements of a contract for construction, alteration or repair. A person who undertakes to perform a portion of a contract involving the furnishing of supplies or materials will be considered a "subcontractor" under this section if the work in question involves the performance of construction work and is to be performed: (1) directly on or near the construction site, or (2) by the employer for the specific project on a customized basis. Thus, a supplier of materials which will become an integral part of the construction is a "subcontractor" if the supplier fabricates or assembles the goods or materials in question specifically for the construction project and the work involved may be said to be construction activity. If the goods or materials in question are ordinarily sold to other customers from regular inventory, the supplier is not a "subcontractor." The requirements of this section do not apply to contracts or subcontracts for the purchase of supplies or materials or articles normally available on the open market.

1.68 Access to Records

- a. The Contractor shall maintain records and the Contracting Officer or other delegated Authority's Representative, the FTA Administrator or his authorized representatives, including any PMO Contractor, the U.S. Department of Transportation, and the Comptroller General of the United States or any of their duly authorized representatives shall have access to and the right to examine any books, documents, papers and records of the Contractor, involving transactions related to this Contract.
- b. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
- c. The Contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the Authority, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 49 CFR 18.39(i)(11).
- d. The Contractor agrees to include this clause in each subcontract awarded for work performed under this Contract. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

1.69 Fly America Requirements -

The Contractor agrees to comply with 49 U.S.C. 40118 (the "Fly America" Act) in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and sub-recipients of Federal funds and their contractors are required to use U.S. Flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.

1.70 Seismic Safety -

The contractor agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance to the extent required by the regulation. The contractor also agrees to ensure that all work performed under this contract including work performed by a subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

1.71 Energy Conservation -

The contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

The Contractor agrees to include the requirements of this clause in all subcontracts under this contract.

1.72 Recovered Materials -

The contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.

1.73 Contracts Involving Federal Privacy Act Requirements -

The following requirements apply to the Contractor and its employees that administer any system of records on behalf of the Federal Government under any contract:

(1) The Contractor agrees to comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C. § 552a. Among other things, the Contractor agrees to obtain the express consent of the Federal Government before the Contractor or its employees operate a system of records on behalf of the Federal Government. The Contractor understands that the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying contract.

(2) The Contractor also agrees to include these requirements in each subcontract to administer any system of records on behalf of the Federal Government financed in whole or in part with Federal assistance provided by FTA'

1.74 Pre-employment Criminal Background Check Requirement -

Criminal background checks of all contractor employees working at a WMATA facility on this contract will be required pursuant to Metro Policy/Instruction 7.40/0, Background Screenings and Metro Policy/Instruction 6.10/5, Metro Employee Identification Cards, Section 5.04. Eligibility for access to WMATA property will be based on WMATA's pre-employment Criminal Background Check criteria. WMATA will provide the contractor employees with background check consent forms that the contractor's employees must complete and sign. The forms will require the contractor employees to appear in person, provide their full legal names, including middle initials if applicable, as well as their Social Security numbers, in addition to other information that will be necessary to conduct the background checks. The operating hours are Monday through Friday from 7:30 AM – 3:30 PM except holidays. Upon receipt of the completed, signed forms, WMATA will conduct background checks including criminal court searches and Social Security Number verifications of the contractor employees. If there is derogatory information that would disqualify a contractor employee from receiving a badge to access WMATA property, the Contractor and its employee will be notified that the background check failed. The completed forms are secured in a locked file cabinet and are destroyed one year after the expiration date on the contractor employee's badge. These background checks are expected to take one (1) business day for processing. The contractor employee must allow sufficient time for completion. The background check is free of charge.

Background checks are conducted to promote a safe work environment and to protect our company's most important assets: the people we serve and the people with whom we serve. This enables WMATA management to make prudent decisions and maintain a high quality workforce. Contractor employees who successfully complete the background checks are eligible to enter WMATA property once they are issued a contractor badge. Contractor employees who do not authorize background checks or whose background checks are unsatisfactory will not be granted contractor badges or access to WMATA property. The records generated by these background checks that contain private information will not be disclosed unless disclosure is required under the PARP/Privacy Policies.

1.75 Availability of Funds For the Next Fiscal Years

Funds are not presently available for performance under this contract beyond the fiscal year which ends June 30, 2016. The Authority's obligation for performance of this contract beyond that date is contingent upon the availability of funds from which payment for contract purposes can be made. No legal liability on the part of the Authority for any payment may arise for performance under this contract until funds are made available to the Contracting Officer for performance and until the Contractor receives notice of availability, to be confirmed in writing, by the Contracting Officer. Any option exercised by the Authority which will be performed in whole or in part in a subsequent fiscal year is subject to availability of funds in the subsequent fiscal year and will be governed by the terms of this provision.

1.76 Living Wage

This contract is subject to the Authority's Living Wage Policy and implementing regulations. The Living Wage provision is required in all contracts for services (including construction) awarded in an amount that exceeds \$100,000 in a 12-month period.

(a) The Authority Living Wage Rate is adjusted annually by WMATA on or about January 1 based on the average wage rates of local jurisdictions with a living wage policy and may be reduced by the contractor's per-employee cost for health insurance.

a. The Authority Living Wage Rate for calendar year 2015 is \$13.48 per hour.

b. The Contractor shall:

(1) Pay, at a minimum, the Authority Living Wage Rate, effective during the time the work is performed, to all employees who perform work under this contract, except as otherwise provided in paragraph (d) below;

(2) Include the Living Wage clause in all subcontracts that exceed \$15,000 in a 12-month period awarded under this contract;

(3) Maintain payroll records, in accordance with the retention and examination of records requirements in the General Provisions, and include or cause to be included, the substance of this section, including this paragraph (3), in its subcontracts covered by the Living Wage requirement at all tiers; and

(4) Submit records with each monthly invoice supporting payment of the Living Wage Rate.

c. The Contractor shall not split or subdivide a contract, pay an employee through a third party, or treat an employee as a subcontractor or independent contractor to avoid compliance with the Living Wage provisions.

d. Exemptions to the Living Wage provisions include:

(1) Contracts and agreements with higher negotiated wage rates;

(2) Contracts that are subject to higher wage rates required by federal law or collective bargaining agreements (e.g., Davis Bacon);

(3) Contracts or agreements for regulated utilities;

(4) Emergency services to prevent or respond to a disaster or imminent threat to public health and safety; and

- (5) Contractors who employ fewer than ten (10) employees.
- e. The Authority may adjust the Living Wage rate effective in January of each year. The adjustment will reflect the average Living Wage Rate among Metro's Compact Jurisdictions with Living Wage provisions. If after contract award the Living Wage Rate increases, the Contractor is entitled to an equitable adjustment to the rate in the amount of the increase for employees who are affected by the escalated wage.
- f. Failure to comply with the Authority's Living Wage provisions shall result in the Authority's right to exercise available contract remedies, including contract termination or debarment from future contracts.

1.77. Government Wide Debarment and Suspension

- a. The Contractor is bound by its certification contained in its offer to the Authority that neither the Contractor, its principals, or affiliates, are excluded or disqualified, as defined at 49 C.F.R. 29.940 and 29.945. The certification is a material representation of fact, relied upon by the Authority in entering into this Contract. If it is later determined that the Contractor knowingly rendered an erroneous certification, in addition to remedies available to the Authority, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The Contractor agrees to comply with the requirements of 49 C.F.R. 29, Subpart C, throughout the term of this Contract.
- b. The Contractor agrees to include this requirement in all subcontracts at all tiers under this Contract.

1.78. Lobbying

- a. The Contractor is bound by its certification contained in its offer to the Authority regarding the use of federal or non-federal funds to influence, or attempt to influence any Federal officer or employee regarding the award, execution, continuation, or any similar action of any Federal grant or other activities as defined in 31 U.S.C. 1352, 49 CFR Part 19, or 49 C.F.R. Part 20. The Contractor agrees to comply with this requirement throughout the term of the Contract.
- b. The Contractor agrees to include these requirements in all subcontracts at all tiers under this Contract.

1.79. Clean Air

- a. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U. S. C. §§ 7401 et seq. The Contractor agrees to report each violation to the Authority and understands and agrees that the Authority will, in turn, report each violation as required to FTA and the appropriate EPA Regional Office.
- b. The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

1.80. Clean Water

- a. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U. S. C. 1251 et seq. The Contractor agrees to report each violation to the Authority and understands and agrees that the Authority will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.
- b. The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

1.81. Notification of Federal Participation

This Project is being funded in whole or part with Federal Funds.

1.82. Whistleblower Protections

Whistleblower Protection – All Contracts

- a. The Contractor and its subcontractors shall encourage their employees and independent contractors to report information—without fear of actual or threatened discrimination, retaliation or reprisal—that they in good faith reasonably believe is evidence of gross mismanagement; gross misuse or waste of public resources or funds; fraud; violation of law; abuse of authority in connection with the conduct of Metro operations or contracts; or a substantial and specific danger to health, security or safety. The Contractor and its subcontractors shall notify their employees that they may make reports under this paragraph to:
 - (1) WMATA's Office of Inspector General (OIG), in person, in writing, through the OIG Hotline (202-962-2400) or email hotline.oig@wmata.com or by any other reasonable means;
 - (2) WMATA's Metro Transit Policy Department (MTPD), in person, by telephone (202-962-2121) or by any other reasonable means, or to the OIG, if the information constitutes a potential violation of criminal law;
 - (3) WMATA's Chief Safety Officer, in person, in writing, through the SAFE Hotline (202-249-7233) or email safety@wmata.com, or by any other reasonable means; or
 - (4) Any other official, office or agency within WMATA or outside WMATA that the employee or independent contractor reasonably believes has the authority to act on the matter.
- b. The Contractor, its employees, independent contractors and subcontractors shall cooperate with any inquiry or review by an authorized official of WMATA, or by the federal government or any other governmental entity with jurisdiction over WMATA, regarding a matter that would constitute a report under paragraph (a) or a violation of this or any whistleblower provision of this Contract, and with any enforcement or judicial proceeding arising from such inquiry or review.
- c. The Contractor and its subcontractors shall not interfere with or deny the right of any employee or independent contractor of either the Contractor or any of its subcontractors to make a report under paragraph (a). The Contractor and its subcontractors shall not

recommend, take or threaten to take any action having a negative or adverse impact on any employee or independent contractor of either the Contractor or any of its subcontractors because he or she:

- (1) made or is perceived to have made a report under paragraph (a);
- (2) sought a remedy under applicable law after making a report under paragraph (a);
- (3) participated in or cooperated with an inquiry or review by an authorized official of Metro, or by the federal government or any other governmental entity with jurisdiction over Metro, regarding a matter that would constitute a report under paragraph (a) or a violation of this or any whistleblower provision of this Contract, or with an enforcement or judicial proceeding arising from such inquiry or review;
- (4) refused to obey an order that would violate law; or
- (5) refused to work or authorize work when a hazardous safety or security condition presents an imminent danger of death or serious injury, there was no reasonable alternative to refusal, there was not sufficient time to eliminate the danger in absence of refusal and the individual, where possible, notified the Contractor or subcontractor of the condition and of the intent not to perform or authorize work.
- (6) The Contractor shall include, or shall cause to be included, the substance of this section, including this paragraph (d), in its subcontracts at all tiers.

Whistleblower Protection – National Transit Systems Security Act (NTSSA), 6 U.S.C. § 1442

The Contractor and all Subcontractors are prohibited from discharging, demoting, or otherwise discriminating against an employee as a reprisal for disclosing, including a disclosure made in the ordinary course of an employee's duties, information that the employee reasonably believes is evidence of reports of fraud, waste, gross mismanagement, abuse of authority, violations of law, and threats to health, safety, and security.

- a. The Contractor and its subcontractors shall comply with the National Transit Systems Security Act (NTSSA), which prohibits discharging, demoting, suspending, reprimanding or in any other way discriminating against an employee as a reprisal for the employee lawfully and in good faith—
 - (1) reporting a hazardous safety or security condition;
 - (2) refusing to work when a hazardous safety or security condition presents an imminent danger of death or serious injury, there is no reasonable alternative to refusal, there is not sufficient time to eliminate the danger in absence of refusal and the individual, where possible, has notified the Contractor or subcontractor of the condition and of the intent to not perform work;
 - (3) refusing to authorize the use of any safety or security related equipment, track or structures, if the individual is responsible for their inspection or repair and reasonably believes they are in a hazardous safety or security condition, there is no reasonable alternative to refusal, there is not sufficient time to eliminate the danger in absence of refusal and the individual, where possible, has notified

the Contractor or subcontractor of the condition and of the intent not to authorize use of hazardous equipment or infrastructure unless corrected;

- (4) providing information for or directly assisting in an investigation of conduct that the individual reasonably believes to be in violation of federal law regarding safety, security or fraud, waste or abuse of funds intended for safety or security;
 - (5) refusing to violate or assist in violation of federal public transportation safety or security law;
 - (6) cooperating with a safety or security investigation by the U.S. Secretary of Transportation, U.S. Secretary of Homeland Security or the National Transportation Safety Board;
 - (7) furnishing information to law enforcement agencies relating to an accident or incident resulting in damage to property, injury or death; or
 - (8) filing a complaint under the NTSSA or testifying regarding such complaint.
- (b) The contractor shall notify the Authority of any instance, related to this Contract, of a report under paragraph (a)(1) or refusal under paragraphs (a)(2), (3) or (5).
 - (c) The enforcement, filing and investigation of complaints, and remedies under this section shall be governed by the NTSSA, applicable federal regulations and federal law.
 - (d) This section shall be interpreted in accordance with the NTSSA. If any provision is found to be in conflict with the NTSSA, the NTSSA shall govern.
 - (e) The Contractor shall include, or shall cause to be included, the substance of this section, including this paragraph (e), in its subcontracts at all tiers.

1.83. Non Discrimination Assurance

- a. Nondiscrimination Assurance: In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. §2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. §6102, section 202 of the American with Disabilities Act of 1990, 42 U.S.C. §12132, and Federal transit law at 49 U.S.C. §5332, the contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing regulations that FTA may issue.

The contractor, sub-recipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Design-Builder shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

- b. Equal Employment Opportunity: The following equal employment opportunity requirements apply to this contract.

- (1) Race, Color, Creed, National Origin, Sex: In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. §2000e, and Federal transit laws at 49 U.S.C. §5332, the Contractor agrees to comply with all applicable equal opportunity requirements of the U. S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor, " 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Contract. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, creed, national origin, sex or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
 - (2) Age: In accordance with Section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. §§ 623 and Federal transit law at 49 U.S.C. §5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
 - (3) Disabilities: In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. §12112, the Contractor agrees that it will comply with the requirements of U. S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
- c. The Contractor also agrees to include all of these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

1.84. Drug and Alcohol Testing

Contractors who perform safety-sensitive functions shall be subject to compliance with a drug and alcohol testing program according to Federal guidelines published in FTA regulations (49 CFR Part 655).

CONSTRUCTION SPECIAL PROVISIONS

2.1 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK

2.1.1 WORK COMMENCEMENT (09/03)

- a. The Contractor shall commence work within ten (10) calendar days after the date of receipt of NTP and shall prosecute said work diligently to completion.
- b. A Pre-Construction Conference attended by the Authority and the Contractor and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules, procedures for handling Submittals, processing Applications for Payment, maintaining required records, quality control, and other matters.
- c. In the event the signed Contract with required insurance and bonds is not returned to the Authority within ten (10) calendar days after date of award and/or further, if approval has not been obtained within that ten (10)-day period for the Safety Superintendent, the Contracting Officer or other delegated Authority's Representative may issue the NTP and Contract time will start upon its receipt. However, no work at the site shall be performed until the above requirements have been met. When NTP is issued by facsimile, the date of the facsimile transmission shall constitute receipt.
- e. Upon issuance of NTP, contract time will start. When NTP is issued by facsimile, the date of the facsimile transmission shall constitute receipt.
- f. WMATA S&I facilities are in operation for 24 hours/7 days a week/365 days a year. Contract work must be sequenced and scheduled to minimize impact on facility work.

2.1.2 MATERIAL DELIVERY:

- a. Material delivery may be to a contractor controlled facility in advance of installation at the designated WMATA installation locations. The Authority, through its authorized representatives, will inspect the equipment upon delivery prior to acceptance and payment.

2.1.3 SUBSTANTIAL COMPLETION INSPECTION

The Authority shall conduct Substantial Completion Inspections for each Tie Breaker Station. The Substantial Completion date shall establish the cut-off date for liquidated damages liability and the commencement of the warranty, as applicable.

2.1.4 ACCESS TO SITE AND HOURS OF WORK

a. SUMMARY

This Clause 2.1.4 specifies requirements for gaining Access to Site and describes work hours the Contractor will be allowed at the Site.

b. DEFINITIONS

- (1) Access: The Contractor's right to work at the Site as approved by the Authority.
- (2) Non-Revenue Weekday: Monday to Friday when the Authority is not operating revenue service trains and the track is made available to the Contractor.
- (3) Revenue Service Adjustment (RSA) - There are two service conditions:
 - Weekend Single Tracking (single rail operation) is when one (1) of the two (2) main line Metrorail tracks is removed from service between two (2) or more Interlockings during revenue service hours and the track is made available to the Contractor.
 - Total Shutdown is when both main line Metrorail tracks are removed from service between two (2) or more Interlockings during revenue service hours and the tracks are made available to the Contractor.
- (4) Site: The areas that are occupied by or used by the Contractor and Subcontractors during performance of the construction of the Project as indicated in the IFB Documents.

c. REFERENCES

The Contractor shall comply with the following Authority's Standard Operating Procedures:

- (1) Metrorail Safety Rules and Procedures Handbook (MSRPH) and Temporary Orders to MSRHP
- (2) WMATA, Office of Rail Transportation Maintenance Operations Control, Administrative Procedure OAP 200-33, Site Specific Work Plan (SSWP)
- (3) Roadway Worker Protection Manual (RWPM)
- (4) Revenue Service Adjustment Form
- (5) Red Tag Form
- (6) General Orders and Track Rights System (GOTRS) Request Form
- (7) Escort Request Form
- (8) Switch Order Form
- (9) Site Specific Work Plan (SSWP) Form
- (10) Authority Standard Operating Procedures – SOP #19, SOP #28, SOP #39, SOP #41, SOP # 49

d. SUBMITTALS:

Submit the following documents to the COR for approval to work in accordance with 2.5,
CONTRACTOR'S SUBMITTALS:

- (1) Requests for Revenue Service Adjustment (RSA) 90 Days prior to the Work start date. The Contractor must have received Authority RSA approval prior to requesting track rights in the Authority GOTRS system.
- (2) An approved Site Specific Work Plan (SSWP) is required to perform Work on Authority property. Submit a SSWP request to the COR 90 Days prior to the planned start of Work

- date. The request shall include the completed SSWP Form and supporting documents as defined in Operational Administrative Procedure (OAP) 200-33, Site Specific Work Plan (SSWP). The Contractor must have received Authority SSWP approval prior to requesting track rights in the Authority GOTRS system.
- (3) Track Rights requests are required for all Roadway access including Non-revenue and RSA access. Track rights requests by the Contractor must be submitted not later than 21 Calendar Days prior to Monday of the week when the Work is to start. The Authority will enter the request into the GOTRS system.
 - (4) Switch Orders are required for all electrical switching. As part of Switch Order procedure the Contractor shall submit detailed information identifying the breaker and panel for the electrical work at the time of GOTRS request submission.
 - (5) Submit Escort Request Form by Monday 12:00 for the following week's planned Work. All Work on WMATA property will require WMATA Escort support.
 - (6) Submit requests for Authority inspection, testing and approval of rail mounted track equipment 60 Days prior to use of equipment on the Roadway.
 - (7) Submit documentation of operator qualifications and certifications for rail mounted track equipment for Authority review and approval 60 Days prior to use of equipment on the Roadway.
 - (8) Submit requests to access the shop aprons, yards and yard tracks 7 Days in advance of requiring access to perform Work.
 - (9) All requests are subject to approval by the Authority.
 - (10) Refer to Clause 2.8 PROGRESS SCHEDULES of Construction Special Provisions for schedule submittals

e. IDENTIFICATIONS CARDS

- (1) All Contractor Personnel and its Subcontractors needing to access to track way or WMATA operating facilities must have WMATA Safety Certification badges. Additionally, the Contractor and its Subcontractors shall provide its personnel, visiting or working at the Site, with WMATA Contractor Identification Badges showing the employer's name and the employee's name, number, and photo I.D. Both badges shall be displayed in a prominent manner on each person while engaged in the Work. Access to the Site will be granted only to properly accredited representatives of the Contractor and its Subcontractors when they have completed the required WMATA safety certification and training and received Photo ID Badges.
- (2) The Contractor and Subcontractor requiring entry into the rail revenue operating system, including rail maintenance yards, for performance of the Work shall provide such employees requiring entry with photo identification cards issued by the Authority with a Roadway Worker Protection (RWP) training endorsement. RWP training, as administered by the Authority, will be required for the Contractor and Subcontractor employees prior to working in the rail revenue operating system and rail maintenance yards. Contractor's Safety Superintendent shall schedule the RWP training through the COR.
- (3) The Contractor shall obtain and be responsible for administering the use of WMATA contractor identification badges in accordance with Authority POLICY/INSTRUCTION

No. 6.10/5 dated May 18, 2011. The WMATA contractor identification badges are not valid for transportation on Metrobus or Metrorail and identification badges will be valid up to a maximum of one year. Should the Contractor's and Subcontractor's employees not have valid WMATA contractor identification badges, they will be dismissed from the Site and their work hours will not be compensated by WMATA.

f. TRACKWAY AND SAFETY WALK ACCESS TO TBS LOCATIONS

Trackway and Safety Walk Access to TBS for personnel, material and equipment is described below:

(1) Personnel Access:

- i. "Platform": Personnel shall access the G01 Benning Road (DC) TBS on foot via the safety walk from the nearest Metro Rail Station under the supervision of an Authority escort in accordance with SOP #49. Contractor shall install temporary guardrail and safety fencing to secure access to TBS from the trackway. Temporary guardrail and safety fencing shall be located to maintain clearance to the train clearance envelope. The Authority will provide escort support as outlined in Contractor's work plan approved by the Authority.
- ii. "Train Drop": Not Used
- iii. "Track" and "Track Walk": Personnel shall access the G02-1 56th Place TBS (DC) and G02-2 67th Avenue TBS (MD) locations via Ventilation/Fan Shaft at the street level, down a stairwell to the track level, and continue on foot via the safety walk from the nearest Metro Rail Station under the supervision of an Authority escort in accordance with SOP #19. In the event these locations prove it is not possible to erect temporary guardrail and safety fencing, procedures will be followed in accordance with SOP #49. The Authority will provide escort support as outlined in Contractor's work plan approved by the Authority.

(2) Material and Equipment Access:

"Track": At locations where the only access to a TBS is via the track way, i.e. at K07-1 Ogden St TBS (VA), G01 Benning Rd TBS (DC), G02-1 56th Place TBS, G02-2 67th TBS (MD), a prime mover, standard flat car, and operator will be provided by the Authority during Non-Revenue Weekday Hours for removal of material and equipment and delivery of material and equipment in accordance with Section 2.1.5 WORK TRAINS. This service shall be coordinated through the Authority under the supervision of an Authority escort in accordance with SOP #28. When applicable and if the sequence of work permits, Contractor shall schedule this service to supply multiple TBS locations in the same trip. Materials and equipment will be picked up and dropped off from Metro Rail Yards as coordinated by the Authority.

The Contractor shall plan for all tools, materials, and equipment needed to complete the work to be delivered directly to each TBS prior to the commencement of the work.

g. LOCAL STREETS, VENTILATION AND FAN SHAFTS ACCESS TO TBS LOCATIONS

Local streets or ventilation and fan shafts access to TBS for personnel, material and equipment is described below:

(1) Personnel Access:

- i. "Access Road" or "Grade Level": Personnel shall access K06-02 Greenwich St, K07-01 Ogden St, and K07-02 Prosperity Ave TBSs from access roads or grade level under the supervision of an Authority escort in accordance with SOP #49. The Authority will provide escort support as outlined in contractor's work plan approved by the Authority.
- ii. "Fan Shaft" or "Vent Shaft": Personnel shall access G02-01 56th Place and G02-02 67th Ave TBSs via fan shaft or vent shaft stairs under the supervision of an Authority escort in accordance with SOP #49. Access route shall be delineated with temporary guardrail and safety fencing where applicable and approved during the SSWP process. The Authority will provide escort support as outlined in contractor's work plan approved by the Authority.

- (2) Material and Equipment Access from "Access Road" or "Grade Level" or "Hatch": Remove or deliver material and equipment at K06-02 Greenwich St and K07-02 Prosperity Ave TBSs under the supervision of an Authority escort in accordance with SOP #49.

h. HOURS OF WORK

- (1) The Contractor shall work such hours per shift, as many shifts per day and as many days per week as necessary to complete the various parts of the Work. The Contractor shall complete the entire Work within the dates specified and within the restrictions listed below.
- (2) Work within Authority Roadway, on station platforms and within Authority operating facilities affecting revenue service shall be carried out during Non-Revenue Hours of Work and shall be conducted under the oversight of Authority escorts.
- (3) The Contractor shall coordinate and schedule all Work with the Authority to ensure that the Contractor's activities do not interfere with the operation of or access to the Authority's facilities.
- (4) On Site work shall be performed during cut over activities (COA); Equipment Removal and Delivery (ERD) and Installation and Commissioning (IC):
 - i. Cut Over Activities **(COA)**:
 - (a) The cutover activities include the isolation of the switchgear to facilitate replacement and the normalization of the switchgear after the installation and commissioning is complete.

1. Roadway Access hours for cut over activities at Tie Breaker Stations are **01:30 – 04:00**.
 2. When requiring work trains, working shifts should arrive at the Authority designated yard in accordance with loading times scheduled with the Authority and outlined in Section 2.1.5 Work Trains.
 3. Reporting time to the site when not requiring work trains shall be coordinated through the Authority. The Authority will provide escort support as outlined in SOPs #28 and 49 and approved through the Contractor's work plan. The Contractor shall be mobilized and ready to commence COA activities once Roadway Access is granted. Insufficient preparedness on behalf of the Contractor shall be considered a delay by the Contractor.
- (b) Cut Over activities for Tie Breaker Stations include but are not limited to:
1. Layout of Jumper Cables along the Right of Way to connect the 3rd rail segments for isolation of the Tie Breaker Station switchgear
 2. Removal of track feeder cables at the 3rd rail
 3. Connection of Jumper Cables
 4. Removal of Jumper Cables and reconnection of track feeder cables after the work has been completed
- (c) One week should be assumed to successfully complete Cut Over Activities
- ii. Equipment Removal and Delivery (**ERD**)
- (a) The Roadway access hours for equipment, tools, and materials that are to be removed and/or delivered by track vehicles or work trains are **01:30 – 04:00**. See table below for equipment delivery method.
1. When requiring work trains, working shifts should arrive at the Authority designated yard in accordance with loading times scheduled with the Authority and outlined in Section 2.1.5 Work Trains.
 2. Reporting time to the Site when not requiring work trains shall be coordinated through the Authority. The Authority will provide escort support as outlined in SOP #49 and approved through the Contractor's work plan. The Contractor shall be mobilized, and ready to access the Roadway for Equipment Removal or Delivery once Roadway Access is granted. Insufficient preparedness on behalf of the Contractor shall be considered a delay by the Contractor.

- (b) The access hours for equipment, tools, and materials that are to be removed and/or delivered via drive up location shall be coordinated with the Authority and the Local Jurisdiction.
 - (c) The Contractor is responsible to adhere to Local Jurisdictional ordinances and is responsible for any obtaining any permits, street closures, etc., required for street delivery. See table below for equipment delivery method.
 - iii. **Installation and Commissioning (IC)**
 - (a) After the cutover and isolation of the switchgear has been completed, personnel are expected to work a minimum 8 hour shift, 5 days a week. Site specific allowances shall be coordinated through the Authority and are listed in the table below.
 - (b) Personnel Access to the Site is listed in the table below.

A. TABLE 1. ACCESS HOUR TABLE

#	Location	Description	Personnel Access	Equipment Removal/Delivery Method	Access Hour Allowances
1	K06-02 Greenwich St TBS (VA)	Surface Building	Local Street Access	Street Access	COA 0130 - 0400
					ERD *
					IC ** 24 hours
2	K07-01 Ogden St TBS (VA)	Surface Building	Street Drop off Access (Median of Route 66)	Inbound Track 01	COA 0130 - 0400
					ERD 0130 - 0400
					IC 24 hours
3	K07-02 Prosperity Ave TBS (VA)	Surface Building	Local Street Access	Street Access	COA 0130 - 0400
					ERD *
					IC ** 24 hours
4	G01 Benning Rd TBS (DC)	Below Ground ROW Beyond Platform	Via Platform to Safety Walk	Outbound Track 01	COA 0130 - 0400
					ERD 0130 - 0400
					IC 24 hours
5	G02-01 56 th Place TBS (DC)	Below Ground ROW Tunnel	Via Fan Shaft FG3 and Safety Walk	Outbound Track 01	COA 0130 - 0400
					ERD 0130 - 0400
					IC 24 hours
6	G02-02 67 th Ave TBS (MD)	Below Ground ROW Tunnel	Via Fan Shaft FG4 and Safety Walk	Inbound Track 02	COA 0130 - 0400
					ERD 0130 - 0400
					IC 24 hours

* Contractor shall be responsible to confirm allowable ERD work hours with Local Jurisdictions and COTR

** Contractor shall be responsible to confirm allowable IC work hours with the Local Jurisdiction. Contractor shall coordinate specific work hours with the Authority.

The Authority reserves the "Report to Site" times to establish the required safety conditions within the Roadway. The column in Table 1 labeled "Access Hour Allowances" indicates the time the Contractor shall be granted access to the Work in the Roadway. The Contractor is to report at the Authority designated Yard no later than the time established under Section 2.1.5 Work Trains for work involving the use of Trains. The On-Site access reporting time will be coordinated through the Authority in accordance with the work activity. Reporting times will be approved in Contractor project schedules and should include sufficient time to allow for Safety Briefing instruction and preparation of Roadway access activities when applicable.

- (c) Project Schedule shall include a detailed construction-phasing plan based on the Hours of Work commitments by the Authority.
- (d) There are Federal Holidays that occur on Monday's throughout the year creating a 3-day weekend. In addition to the Hours of Work indicated herein, on holiday weekends listed below, Weekend Single Tracking Revenue Service Adjustment (RSAs) may be permitted between 22:00 Friday and 04:00 Tuesday and Total Shutdown RSAs may be permitted between 03:00 Saturday and 04:00 Tuesday:
1. Martin Luther King Day
 2. President's Day
 3. Memorial Day
 4. Columbus Day
 5. Labor Day
 6. Inauguration Day
- (e) RSAs will not be permitted during the following periods in any calendar year:
1. March 12 through April 21
 2. April 30-May 1, 2016; April 29-30, 2017 (Race for the Cure)
 3. The week containing July 4 including the preceding and succeeding weekends
 4. October 22-23, 2016; October 28-29, 2017 (Marine Corps Marathon)
 5. Thanksgiving eve through the following Monday
 6. Christmas Eve and Christmas Day
 7. New Year's Eve and New Year's Day
- (f) Many times during a calendar year there are large events scheduled in the Washington DC area that require special attention by the Authority. These events are typically scheduled no sooner than 90 Days in advance of their occurrence. Plan no more than three such events in any calendar year. The Authority will notify the Contractor of the scheduling of these events as soon as they become known. If the event conflicts with a scheduled RSA or Non-Revenue Weekday Access, then the Contractor RSAs or Non- Revenue Weekday Access will need to be advanced or delayed to the next available date.
- (g) There shall be no RSAs starting prior to 01:30 on nights of regularly scheduled events such as sporting events, concerts, etc. The Contractor shall not make any RSA or Non-Revenue Weekday Access requests that conflict with regularly scheduled sporting events.
- (h) Emergencies, excluding acts of God, arise during the course of Metrorail operations that could cause the cancellation of a scheduled RSA or Non-Revenue Weekday Access. Anticipate no more than four cancellations within a calendar year. If an emergency occurs, the Contractor RSAs will need to be delayed to the next available date.
- (i) If an emergency situation arises due to reasons including, but not limited to,

loss of power, accident, terrorism, traffic overload, etc., the Contractor may be denied access to a previously approved Access schedule. If the Contractor is already on Site, Contractor may be directed to discontinue Work and clear the Site within fifteen (15) minutes.

An Authority escort or inspector shall be present at the Site at all times while Contractor personnel are working.

2.1.5 WORK TRAINS

- a. A work train will be available for transporting equipment, materials and tools to/from the work areas. The work train will consist of a Prime Mover and Standard Flat Car. It is the contractor's responsibility to confirm that materials will fit within the WMATA Dynamic Envelope shown in Appendix I "Dynamic Outline Diagram", once loaded onto the Standard Flat Car. If a Low Boy Flat Car is required it is the Contractors responsibility to provide. All Contractor provided rail mounted vehicles/cars must be inspected by WMATA Track and Structures prior to being permitted to operate on the system.
- b. The quantity of work trains to support Contractor activities is limited; therefore, advanced requests of at least 15 working days must be made by the Contractor to reserve the work train and to obtain corresponding track rights approval for third-rail outages. Any work performed by the Contractor within the track areas, including work performed on/from the work train, requires third-rail outages. The Contractor shall plan his work activities accordingly. Work trains are dispatched from a transit yard on the associated transit line where the work will be performed. Listed below are the approximate times that the work trains will be available for use by the Contractor; however, the exact time of arrival at the work site and the departure to the transit yard will be affected by the distance of the work site from the transit yard, other rail traffic, and directions by the Operations Control Center (OCC). It is also noted that revenue operational requirements could delay or prevent use of the work trains, even though scheduled in advance and approved. The Contractor shall anticipate delays when using work trains in his work activities. Contractor personnel will not be allowed to ride on the work trains and is required to provide the appropriate transportation between the transit yards and the work sites.

Approximate times that a work train will be available:

Event	Weekdays (Monday - Friday)	Weekends (Saturday & Sunday)
Pre-load work train at yard	10:00 p.m. (previous day)	11:00 p.m. (previous day)
Depart from yard towards work site	12:45 a.m.	3:15 a.m.
Depart from work site towards yard	4:00 a.m.	5:00 a.m.

The Contractor shall request for the use of a work train and/or a third-rail outage at least 15 working days prior to the proposed work date. The request shall include a complete schedule showing the times and personnel requirements to perform the work. The request shall be directed to the AR for appropriate coordination. However, final approval for track rights, third-rail outages, and train reservations will not be made until the close of business of the Wednesday preceding the Authority work week (Saturday

through Friday) of the scheduled work activities. Approval will be based upon the assurance of providing safe work conditions of all maintenance and Contractor activities within the track areas on any particular day in accordance with established Authority procedures, upon the impact to other Authority scheduled activities, and upon the availability of the work trains. The Contractor shall alter his work activities at no additional cost to the Authority if requested track rights, third-rail outages, and/or use of work trains are denied prior to the start of the Authority work week of the scheduled work activities. The Contractor shall complete all preliminary work preparation possible prior to performing work within the track areas to minimize the work time needed within the track areas.

All equipment required to load and unload the work trains at the transit yards shall be provided and operated by the Contractor. Contractor shall also provide a Low Boy Flat Car to transport equipment if required.

Prior to use of the Contractor's Low Boy Flat Car on Work Site, the Contractor shall coordinate sixty (60) Days in advance with the COR to arrange for Authority inspection, testing and approval of a Low Boy Flat Car.

The Contractor shall be responsible for all necessary transport, loading and offloading, rigging, lifting, set up, and removal of a Low Boy Flat Car to and from Authority property. The Contractor shall transport a Low Boy Flat Car to one of the WMATA rail yards within the system for certification testing and provide a pilot and operator as needed. Authority rail yards are located at the end of each line apart from Brentwood Yard which is located in the middle of the Red Line. The Contractor will also be required to transport a Low Boy Flat Car from the yard where testing occurs to a different yard at a later time to set up this equipment for use for this Work. For additional details refer to Appendix J "OFFICE OF RAIL TRANSPORTATION MAINTENANCE OPERATIONS CONTROL ADMINISTRATIVE PROCEDURE".

WMATA rail yard addresses are listed below:

Shady Grove	15903 Somerville Rd., Rockville MD 20855
Brentwood	601 T St., NE, Washington DC 20018
Glenmont Yard	12750 Layhill Rd, Silver Spring MD 20906
West Falls Church	7251-B Idylwood Rd, Falls Church VA 22043
New Carrollton	4300 Garden City Dr, Landover MD 20785
Greenbelt	5801-A Sunnyside Ave, College Park MD 20740
Branch Ave	5700-AB Capital Gateway Dr, Suitland MD 20747
Alexandria	3201 Eisenhower Ave, Alexandria VA 22314

Large equipment requiring delivery by rail shall be delivered only during Non-Revenue Hours of Work and may only be loaded onto or offloaded from the WMATA system with prior authorization by COR.

2.1.6 WMATA HOURS OF OPERATION

- A. Yard Operations are continuous 24 hours a day, 7 days a week.
- B. Revenue hours are the hours during which train service is open to passenger traffic. Metrorail hours of train operation are published on the www.wmata.com website and are

subject to change. Except when these hours are extended for special events or disrupted due to emergencies, they are:

- A. Monday through Thursday: 05:00 to 24:00
- B. Friday: 05:00 to 03:00 Saturday
- C. Saturday: 07:00 to 03:00 Sunday
- D. Sunday: 07:00 to 24:00

C. Rush hours are Monday through Friday 05:00 to 09:30 and 15:00 to 19:00.

D. Non-rush hours are the revenue hours during which train service is not designated as rush hour traffic:

- A. Monday through Thursday: 09:30 to 15:00 and 19:00 to 24:00
- B. Friday: 09:30 to 15:00 and 19:00 to 03:00 Saturday
- C. Saturday and Sunday: All revenue hours

E. WMATA Non-revenue hours are defined as the hours during which train service is closed to passenger traffic:

- D. Monday through Friday 00:00 to 05:00
- E. Saturday and Sunday 03:00 to 07:00

F. It may be necessary to extend Metrorail revenue hours to accommodate special events. The Authority will inform the Design-Builder of special events as soon as practical that may impact work hours so that Work can be planned accordingly.

2.1.7 INTERIM WORK COMPLETION MILESTONE

- a. The Contractor shall substantially complete the manufacturing and construction of K06TB2 Greenwich Street and K07TB2 Prosperity Avenue, to constitute successful completion of the interim work milestone by June 30, 2016.

2.1.8 FINAL WORK COMPLETION

- a. The Contractor shall complete the contract items in full to include all Substantial Completion Inspection (SCIs) punchlist items, final cleanup, and receipt of all deliverables to constitute successful completion of work. Final Work Completion, including any outstanding punchlist items and closeout will be NTP + 495 days.

2.1.9 EARLY COMPLETION

If the Contractor shall submit a schedule or express an intention to complete the work earlier than any required milestone, interim or final completion date, the Authority shall not be liable for any costs incurred because of delay or hindrance should the Contractor be unable to complete the work before

such milestone, interim or final completion date. The duties, obligations and warranties of the Authority to the Contractor shall be consistent with and applicable only to the completion of the work and completion dates set forth in this Contract.

2.2 LIQUIDATED DAMAGES

2.2.1 NOT USED

2.2.2 ASSESSMENT OF DAMAGES - FINAL WORK

a) In case of failure on the part of the Contractor to complete the work within the time specified for Final Work Completion for the Contract in Clause 2.1.8 of Construction Special Provisions or any extensions thereof, the Contractor shall pay to the Authority as liquidated damages, pursuant to the TERMINATION FOR DEFAULT, DAMAGES FOR DELAY AND TIME EXTENSIONS article of the General Provisions, the sum of \$3,460 for each calendar day of delay.

b) The maximum liquidated damages for each calendar day of delay shall not exceed \$3,460.

c) The total amount of liquidated damages that the Authority may assess for any and all non-excusable delays shall not exceed 25 percent of the total Contract price.

2.3 CONTRACT AND BONDS

a. Requirements: Within 10 calendar days after the prescribed forms are presented for signature to the bidder to whom award is made a written Contract on the form provided shall be executed and delivered to the Contracting Officer or other delegated Authority's Representative, together with a performance bond and payment bond if the Contract price is \$100,000 or more, each with good and sufficient surety or sureties acceptable to the Authority. Corporations executing the bonds as sureties must be among those appearing on the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein. The penal sums of such bonds shall be as follows:

(1) Performance Bond:

(a) The penal sum of the performance bond shall equal 100 percent of the Contract price.

(2) Payment Bond:

(a) When the Contract price is \$1,000,000 or less, the penal sum of the payment bond shall be 50 percent of the Contract price.

(b) When the Contract price is in excess of \$1,000,000 but not more than \$5,000,000, the penal sum shall be 40 percent of the Contract price.

(c) When the Contract price is more than \$5,000,000, the penal sum shall be \$2,500,000.

b. Failure to furnish: In the event the required bonds are not furnished as specified, the Contracting Officer or other delegated Authority's Representative may issue the NTP as specified in the article titled COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK. However, no payment will be made to the Contractor until the required bonds are furnished.

2.4 AUTHORITY-FURNISHED DOCUMENTS

2.4.1 CONTRACT WORK

- a. The work shall conform to the Contract Drawings listed in Volume 3 Drawings of this Contract.
- b. The general character and scope of the work are shown. The Contractor shall conduct the work within the areas defined on the Contract Drawings as the limits of work, except when otherwise authorized by the Contracting Officer or other delegated Authority's Representative.

2.4.2 CONTRACT DOCUMENTS

- a. One set of Contract Documents, each set consisting of Contract Drawings, and Specifications, will be furnished the Contractor without charge, except for applicable publications referenced in the technical provisions. Additional documents will be furnished on request at the cost of reproduction.
- b. In case of differences between half-size and full-size Contract Drawings, the full-size Contract Drawings shall govern. In case of differences between small-scale details and large-scale details, the large-scale details shall govern. Schedules on Contract Drawings shall take precedence over conflicting information on any other Contract Drawings. On the Contract Drawings where a portion of the work is drawn out and the remainder is shown in outline, the parts drawn out shall apply also to all other like portions of the work.
- c. Standard drawings may be included in the Contract Drawings. Their application is made specific by notation on each such drawing included.
- d. Omissions from the Contract Drawings or Specifications or the inadequate description of details of the work which are manifestly necessary to carry out the intent of the Drawings and Specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or inadequately described details of the work.
- e. The Contractor shall check all Contract Drawings furnished him immediately upon receipt and shall promptly notify the Contracting Officer or other delegated Authority's Representative in writing of discrepancies. Dimensions on Drawings shall be followed in preference to scale measurements. The Contractor shall compare Drawings and verify the figures before laying out the work and shall be responsible for any errors which might have been avoided thereby.
- f. The dimensions and descriptions given on the Contract Drawings for adjacent work are based on design drawings. It shall be the responsibility of the Contractor to verify all as-built conditions and interface information.

2.5 CONTRACTOR'S SUBMITTALS

Unless otherwise required by the technical specifications:

2.5.1 GENERAL

- a. Interpretation of approval and review: The approval or review of submittals will be general; neither approval nor review shall be construed as:
 - (1) Permitting any departure from the Contract requirements,

- (2) Relieving the Contractor of the responsibility for any errors including details, dimensions and materials, or
- (3) Approving departures from details furnished by the AR except as otherwise specified.
- b. The Contractor shall make submittals sufficiently in advance of construction requirements to permit no less than **30** calendar days for checking and appropriate action. Submittals shall be shown on the Progress Schedules.
- c. The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of material or from proceeding with any part of the work prior to the approval of specified or directed submittals.

2.5.2 SHOP DRAWINGS

- a. The Contractor shall, unless otherwise directed, submit .pdf (11"x17") format of shop drawings to the AR for approval using standard transmittal forms in accordance with detailed instructions furnished by the AR. A supply of these forms is available without cost to the Contractor.
- b. Shop drawings shall be complete, detailed and dimensioned and shall include the following:
 - (1) Fabrication, erection, layout and setting drawings.
 - (2) Complete list of materials.
 - (3) Schedules.
 - (4) Manufacturer's drawings.
 - (5) Wiring and control diagrams, as applicable.
 - (6) Catalog cuts or entire catalogs: Six originals.
 - (7) Descriptive literature.
 - (8) Performance and test data.
 - (9) Drawings prepared by the Contractor for permanent structures, equipment and systems designed by him to comply with the Specifications.
 - (10) Additional requirements specified in the technical specifications.
- c. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for approval and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. The CQCS Manager shall review drawings and schedules to verify Contractor approval and compliance with the terms of the Contract prior to submittal, and shall indicate CQCS verification by signature or stamp thereon. Drawings or schedules submitted without this stamp of approval may be returned to the Contractor for resubmittal. Where specified to be certified by a professional engineer, certification of shop drawings shall comply with such requirements of the WORKING DRAWINGS article.
- d. The maximum size of each sheet shall be 22 inches by 34 inches. Each shop drawing shall have a blank area printable 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block in the lower right hand corner shall display the following:

- (1) Number and title of the Drawing.
 - (2) Date of Drawing or revision.
 - (3) Name of project.
 - (4) Name of Contractor and subcontractor submitting drawing.
 - (5) Clear identification of contents and location of the work.
 - (6) Title and number of Specifications section.
- e. Drawings for work on utility facilities, street and other facilities which are constructed for owners other than the Authority shall be coordinated so that the information required by these owners is included on the shop drawings for their facilities.
- f. If drawings show variations from the Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, the AR may approve any or all such variations, subject to a proper adjustment in the Contract. If the Contractor fails to describe such variations he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such drawings have been approved.
- g. If the drawings or schedules as submitted include such variations and show a departure from the Contract requirements, which the AR finds to be in the interest of the Authority and to be so minor as not to involve a change in the Contract price or time for performance, the AR may approve the drawings.
- h. If approved by the AR, each copy of the shop drawings will be identified as having received such approval by being so stamped and dated. Shop drawings stamped NOT APPROVED and with required corrections shown will be returned to the Contractor for correction and resubmittal. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Contractor shall direct specific attention, in writing or on resubmitted shop drawings, to revisions other than the corrections requested by the AR on previous submittals. The Contractor shall make corrections as directed. If the Contractor considers any corrections indicated on the drawings to constitute a change to the Contract Drawings or Specifications, notice as required under the CHANGES article shall be given to the Contracting Officer or other delegated Authority's Representative. One reproducible and two prints of each shop drawing will be returned to the Contractor.
- i. When the shop drawings have been completed, to the satisfaction of the AR, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the AR.
- j. After written approval of the drawings, the Contractor shall supply the AR with four additional prints of the approved drawings if the drawings have been approved subject to certain revisions prior to commencing such work.
- k. Before final substantial completion, the Contractor shall furnish to the AR one set of record shop drawings, all clearly revised and completed and brought up to date, showing the permanent construction as actually made. Drawings shall be either drawn in ink on tracing cloth, or reproduced on Mylar from which clear prints can be made.

2.5.3 WORKING DRAWINGS

- a. When used in the Specifications, the term WORKING DRAWINGS shall be considered to mean the Contractor's plan for temporary structures such as decking, temporary bulkheads, support of excavation, support of utilities, groundwater control systems, and forming and falsework; for underpinning; and for such other work as may be required for construction but which do not become an integral part of the completed project.
- b. The Contractor shall, unless otherwise directed, submit .pdf format (11"x17") and (22"x34") of each working drawing.
- c. Working drawings and calculations as submitted shall meet the requirements of Article 2.5.2.d., and be certified by a professional engineer registered in the area where the work will be performed and shall convey, or be accompanied by, information sufficient to completely explain the structure, machine or system described and its intended manner of use.

2.5.4 SAMPLES

- a. The Contractor shall submit samples for approval as specified or as directed which shall be delivered to the AR as specified or directed. The Contractor shall prepay shipping charges on samples. Materials or equipment for which samples are required shall not be used in the work until approved.
- b. Each sample shall be labeled as follows:
 - (1) Name of project.
 - (2) Name of Contractor and subcontractor.
 - (3) Material or equipment represented.
 - (4) Place of origin.
 - (5) Name of producer and brand, if any.
 - (6) Location in project. Samples of finish materials shall have additional markings identifying them under the schedules.
- c. The Contractor shall mail, under separate cover, a letter in triplicate submitting each shipment of samples and containing the information required in Paragraph b. above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the AR. Approval of a sample shall be only for the characteristics or use named in such approval and shall not be construed to change or modify Contract requirements. Substitutions will not be permitted unless they are considered to be in the best interests of the Authority.
- d. Approved samples not destroyed in testing shall be sent to the AR. Approved samples in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in the work shall match the approved samples. Samples which fail testing or are not approved will be disposed of, unless the Contractor requests, at the time of submittal, that they be returned to him at his expense.
- e. Failure of any material to pass the specified tests will be sufficient cause for refusal to consider, under this Contract, further samples of the same brand or make of that material. The AR reserves the right to disapprove any material or equipment which has previously proved unsatisfactory in service.

- f. Samples of various materials or equipment delivered on the site or in place may be taken by the AR for testing. When a sample fails to meet Contract requirements, it will automatically void previous approvals of the item(s) tested. The Contractor shall replace such materials and equipment to meet Contract requirements or proper adjustment of the Contract price shall be made as determined by the AR.
- g. When tests are required, only one test of each sample will be made at the expense of the Authority. Samples which do not meet specified requirements will be rejected. Retesting of additional samples will be made by the AR at the expense of the Contractor.

2.5.5 CERTIFICATION

- a. The Contractor shall submit the original and two copies of certification, unless otherwise specified.
- b. Certificates:
 - (1) The Contractor shall submit the following:
 - (a) Certificates to demonstrate proof of compliance with requirements specified in the technical specifications for each of the following:
 - [1] Products and materials.
 - [2] Functioning and testing of equipment and systems.
 - [3] Qualifications of personnel, manufacturers, fabricators and installers.
 - (2) Each certificate shall be signed by an official authorized to certify in behalf of the issuing organization and shall bear the name and address of the Contractor, the project name and location; if for a material, quantity and date(s) of shipment or delivery to which the certificates apply shall be indicated.
 - (3) Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet the specified requirements.
- c. Certified test reports:
 - (1) Submit original.
 - (2) Unless otherwise specified, testing shall be conducted by an independent testing agency which certifies that it complies with the recommended requirements of the American Council of Independent Laboratories or ASTM E329.

2.5.6 DOCUMENTATION

The Contractor shall submit to the AR the original and two copies of each of the following when so specified in the technical specifications and as follows:

- a. Test reports of previous testing:
 - (1) Where specified in the technical specifications, the Contractor may in lieu of testing submit certified test reports of previous testing of factory supplied components, if approved under similar Authority contracts.

(2) Include the following:

- (a) Certification that materials meet or exceed specified test requirements.
 - (b) Name and address of testing laboratory.
 - (c) Dates of tests to which reports apply.
 - (d) Certification that materials provided are the same as those tested.
- b. Calculations including, but not limited to, the support for the stinger system at all locations by a professional engineer licensed in the respective jurisdiction.
- c. Miscellaneous documentation:
- (1) Specified items such as delivery tickets, batch tickets and bills of materials.

2.6 WORK TO BE PERFORMED BY THE CONTRACTOR

- a. The Contractor shall execute on the site, with his own organization, work equivalent to at least **40** percent of the total Contract work, the percentage being determined by the dollar value of the Contract work done by his own organization in comparison to the Contract Price. The Authority shall not be responsible for performance of any portion of the contract work. The cost of work performed by skilled and unskilled labor carried on the Contractor's own payroll, together with the cost of materials installed, may be included in the above percentages. The Contractor's mark-up for overhead and profit on work performed by subcontractor(s) shall not be included in determining this percentage.
- b. If, during the progress of the work hereunder, the Contractor requests a reduction in such percentage; and the Contracting Officer or other delegated Authority's Representative determines that it would be to the Authority's advantage, the percentage of the work required to be performed by the Contractor may be reduced provided written approval of such reduction is obtained by the Contractor from the Contracting Officer or other delegated Authority's Representative.

2.7 AUTHORITY REPRESENTATIVE (AR)

- a. The work will be conducted under the general direction of the Contracting Officer (CO) or other delegated Authority Representative (AR). The AR has authority to take all actions authorized herein and as may be otherwise delegated by the CO.
- b. Not Used.
- c. The presence or absence of the AR or other Authority inspection staff will not relieve the Contractor from the requirements of the Contract.
- d. Upon failure of the Contractor to comply with any of the requirements of the Contract Drawings, Specifications, or other Contract documents, the AR may stop any operation of the Contractor affected by such failure until the failure is corrected. Time lost during such work stoppage will be regarded as Contract time for which no extension will be granted, and no increase in cost to the Contractor caused by the stoppage shall be subject to claim against the Authority.
- e. The authorized representatives of public and private utilities, and other agencies, have the right to inspect their facilities, communicating through the AR as follows:

- (1) Inspection or supervision of work by utility forces and utility's contractors.
 - (2) Inspection of work by Authority contractors on, or adjacent, to utility facilities.
 - (3) Access to the site construction and the right to inspect all project works by the U.S. Government, jurisdictional agencies and public and private interests and utilities.
- f. In the event that the Contractor's work endangers utility property or facilities, the utility's representative shall immediately inform the AR of the impending hazard. When time does not permit this action, the utility representative is authorized to stop such work until the AR is present, or until safety of the utility property is ensured. Any such stop order is to be delivered to the Contractor's representative in writing and the Contractor shall report in writing and explain the stop order to the AR at the earliest opportunity. Any handwritten note with date, time and inspector's signature is acceptable.
- g. Highway and roadway facilities which may be affected by Authority construction are considered for the purpose herein as utility facilities.

2.8 PROGRESS SCHEDULES -

- a. In lieu of the progress schedules required in the General Provisions Articles for PROGRESS SCHEDULES AND REQUIREMENTS FOR MAINTAINING PROGRESS, the Contractor shall submit a schedule showing the critical path(s) and details the sequence in which the Contractor proposes to carry on the work required under this Contract. The progress schedule and all subsequent submissions shall be prepared using the latest version of Primavera Project Planner (P6) in **XER File** with an electronic file copy submitted to the AR. The progress schedule documents consist of two distinct submittal sets as follows:
- (1) The initial progress schedule which shall include a detailed schedule in bar graph format and a supporting narrative and **electronic** data for each phase of the project.
 - (2) The monthly progress status reports, each of which shall include an updated schedule in spreadsheet and bar graph format, a supporting narrative and **electronic** data for each phase of the project.
- b. Initial progress schedule:
- (1) The initial progress schedule shall be submitted for approval within fifteen (15) calendar days after NTP. The AR **shall** have a minimum of 15 calendar days after receipt of the submittal to respond. Upon receipt of the AR's comments, the Contractor shall make necessary changes and deliver the corrected initial progress schedule to the AR within 10 calendar days. **No progress payments shall be made until the initial progress schedule is reviewed and approved.** Submittal of the initial progress schedule shall include four copies of the detailed schedule and four copies of the supporting narrative for each phase of the project, and the **electronic** data containing the schedule.
 - (2) The detailed schedule chart shall include the following:
 - (a) A time scale in calendar days with day number one being the day after receipt by the Contractor of the NTP.
 - (b) Activity bars which schedule all work included in the Contract. The activity bars shall be solid bars which begin on the planned start date and end on the planned completion date for each activity. Durations of workday and man-hours to complete activity will be reflected.

- (c) Activity description for each activity bar. Activity descriptions shall be brief but shall describe discrete items of work that must be accomplished under the Contract.
 - (d) The Contract requirements shall be clearly shown on the schedule. The schedule shall include at least one activity bar for each required milestone date.
 - (e) A title block, revision block, and a legend shall be included.
 - (f) The data date shall be the date of NTP.
- (3) The supporting narrative for all phases of the project shall include the following:
- (a) The Contractor's general approach for meeting all the milestone dates required by the Contract.
 - (b) A discussion of the activities which the Contractor considers most critical in meeting contract completion dates.
 - (c) A listing of the holidays and special non-work days planned during the performance period.
- (4) The approved initial progress schedule shall be the schedule to be used by the Contractor for planning, scheduling, managing and executing the Contract work. The approved initial progress schedule shall not be revised without prior approval or direction **by the Authority Representative**.
- c. The monthly progress status report:
- (1) Not later than 30 calendar days after receipt of NTP and monthly thereafter until all Contract work is complete, the Contractor shall submit a monthly status report with data date as the last day of each pay period. Each monthly progress status report shall include four copies of the updated schedule chart, four copies of a supporting narrative and electronic data for all phases.
 - (2) Prior to submittal of the monthly progress status report, the Contractor shall submit a draft updated schedule chart. The Contractor shall participate with the AR in monthly meetings, on dates and at locations as directed. The purpose of the meetings is a joint review and agreement of the draft updated schedule and job progress. Job progress shall specifically include the following:
 - (a) Actual performance and completion dates for activities completed during the report period.
 - (b) Actual start dates, remaining durations, and percent complete for in-progress activities commenced during the report period.
 - (c) Estimated start dates for activities scheduled to commence during the month following the report period. Contractor shall maintain weekly schedule recording locations of systems currently working and percent complete on each. Additionally, a monthly, quarterly, semi-annual, and annual cumulative percentage of work complete as it applies in a hierarchal manner.
 - (d) Proposed changes and/or revisions to the initial progress schedule.
 - (e) The Contractor shall not delete or add any scheduled activities, restraints or durations to the approved baseline schedule without the express approval of the Authority Representative.

If additional activity or restraints are required, clearly identify the changes and explain the rationale for such deletions or additions in the Contractor's Narrative.

- (3) After discussion and agreement on these data, the Contractor shall submit to the AR four final copies of the monthly progress status report and the data diskette with the monthly progress payment schedule within seven days after the last day of the pay period. Upon receipt of the monthly progress status report, the AR will expedite the processing of the monthly progress payment.
 - (4) The updated schedule chart shall include the following:
 - (a) Update the schedule on a copy of the detailed schedule chart which was included in the approved initial progress schedule. Create a copy of schedule file with a new file name and keep the initial program schedule intact. Update the schedule in newly created file.
 - (b) The data date indicated by a vertical line from top to bottom of the sheet at the appropriate place on the time scale and labeled with the data date.
 - (c) Progress for each activity bar indicated by a second bar below the initial schedule activity bar. The progress bar shall start on the date the activity actually started and shall end on the date the activity actually was completed. The initial schedule activity bars shall not be changed unless a proposed revision is approved. The progress bars shall be shown in a pattern which will distinguish them from the scheduled activity bars.
 - (d) The actual start date shall be noted at the beginning of each progress and the actual completion date shall be noted at the end of each progress bar.
 - (e) The percent complete as the data date shall be noted at the end of each progress bar.
 - (5) The supporting narrative shall include the following:
 - (a) A list of activities in progress as of the data date with the scheduled start date, actual start date, percent complete and scheduled completion date noted for each activity.
 - (b) A list of activities completed during the report period with the scheduled and actual start dates and the scheduled and actual completion dates noted activity.
 - (c) A list of activities planned to start during the next report period with scheduled and planned start dates for each activity noted.
 - (d) A discussion of activities which are behind schedule including the reasons for delay and corrective actions planned or implemented to get back on schedule.
 - (e) A list of approved revisions to the progress schedule with the reason for each revision noted.
 - (f) The status of each of the Required Completion Dates included in the Contract schedule milestone dates.
- d. When needed or so directed by the Authority, the Contractor shall revise the progress schedule to reflect changes in the Contractor's planned sequence of work or to reflect scope and time changes included in Contract modifications. All such revisions are subject to approval **by the AR**.

e. 90-DAY SCHEDULE

- (1) A schedule depicting activities occurring in the upcoming 90-Day period in greater detail than specified in the Initial 90-Day and Project Schedules. The logic shall follow the logic of the approved Project Schedule.
- (2) The schedule shall be time scaled and may be submitted in either bar chart or Critical Path Method (CPM) format.
- (3) Activities shall be 10 Days or less duration with particular focus on design, procurement, and associated activities to be performed in this time frame.
- (4) The 90-Day Schedule shall be updated and submitted monthly for review and approval by the Contracting-Officer Representative.

f. THREE-WEEK WORK PLAN

- (1) A schedule in a calendar time-scaled bar chart format depicting the Contractor's intended work activities for the upcoming 3-week period shall be submitted on a weekly basis due on the first working day of each week. Each activity having 1 day duration shall be prominently noted.
- (2) Deviations, including but not limited to sequences of work, timing, and durations of activities from the Initial 90-Day or Project Schedules shall be noted and explained in writing.
- (3) The form of submittal shall not be less than 8-1/2 by 11 inches in size.

2.9 DETERMINATION OF PROGRESS -

- a. Independent of progress payments made pursuant to the PAYMENTS TO CONTRACTOR article of the General Provisions, progress schedules prepared under the requirements of the PROGRESS SCHEDULES article, shall provide as schedules progress for only 50 percent of the estimated invoiced cost of materials or equipment delivered to the site but not incorporated in the work as of the time of the scheduled delivery thereof.
- b. In determining progress accomplished, the AR will allow as an element of work accomplished, i.e., progress toward completion, only 50% of the invoiced cost of materials or equipment delivered to the site but not incorporated in the construction up to the time the materials or equipment are actually incorporated in the work.

2.10 LAYOUT OF WORK

Refer to Volume 3 Drawings

2.11 PHYSICAL DATA - NOT USED

2.12 TEMPORARY UTILITY AND ELECTRICAL SERVICES

- a. The Contractor will be permitted the use of existing water facilities. The fire line facilities shall be used only with approval before each use and inspection after use.

- b. The Contractor will be permitted the use of existing A/C electrical circuits, providing the Contractor ensures that he does not overload circuits. Contractor shall coordinate with the facility manager the location of 120-volt A/C circuits. Contractor shall bring its own 125 DC power supply.
- c. The Contractor shall provide temporary electrical service of sufficient capacity to serve his requirements during the life of the Contract. The source of temporary power for testing may be the temporary service, portable generator or other approved system which will deliver power at the voltage and other characteristics required to accomplish testing as specified. Circuits and construction for temporary systems shall suit the needs of the work and comply with NEC and the codes and regulations of the jurisdictional authorities.
- d. Temporary services shall be furnished, installed, connected and maintained by the contractor in an approved manner. Prior to completion of the work, the Contractor shall remove all temporary services and restore affected areas as approved.

2.13 INDEMNIFICATION AND INSURANCE

Indemnification

- a. Contractor shall indemnify, defend and hold harmless the Authority, its directors, officers, employees and agents, from all liabilities, obligations, damages, penalties, claims, costs, charges and expenses (including reasonable attorney's fees), of whatsoever kind and nature for injury, including personal injury or death of any person or persons, and for loss or damage to any property, including the property of the Contractor and the Authority, occurring in connection with, or in any way arising out of the use, occupancy and performance of the work and/or any acts in connection with activities to be performed under this contract, unless the loss or damage is due to the sole negligence of the Authority. Nothing in the preceding sentence shall be deemed to relieve Contractor from ultimate liability for any obligation of Contractor under this Contract.
- b. Contractor shall indemnify, defend and hold harmless the Authority, its directors, officers, employees and agents, against any and all claims, liabilities, losses, demands, damages, penalties, costs, charges, remedial costs, environmental claims, fees or other expenses including attorneys' fees, related to, arising from or attributable to any effluent or other hazardous waste, residue, contaminated soil or other similar material discharged from, removed from, or introduced on, about or under the job site; provided, however, that the foregoing indemnity does not apply to loss or damage due to preexisting conditions, whether known or unknown.
- c. If any action or proceeding relating to the indemnification required is brought against the Authority, then upon written notice from the Authority to the Contractor, the Contractor shall, at the Contractor's expense, resist or defend such action or proceeding by counsel approved by the Authority in writing, such approval not to be unreasonably withheld, but no approval of counsel shall be required where the cause of action is resisted or defended by counsel of any insurance carrier obligated to resist or defend the same. The Authority reserves the right to use its own counsel under this indemnity at Contractor's sole cost and expense.
- d. Contractor understands and agrees that it is Contractor's responsibility to provide indemnification to the Authority pursuant to this Section. The provision of insurance, while anticipated to provide a funding source for this indemnification, is in addition to any indemnification requirements and the failure of Contractor's insurance to fully fund any indemnification shall not relieve the Contractor of any obligation assumed under this indemnification.

Minimum Insurance Requirements

The following outlines the minimum insurance coverages and limits of insurance for those coverages that

Contractor will be required to purchase and maintain. Contractor shall procure, at its sole cost and expense, the minimum required insurance as follows:

General Insurance Requirements

- 1) Contractor is required to maintain the insurance coverage(s) outlined in this Section for a period of time commencing the sooner of the execution of this contract, or the start of Work, and continuing through the completion of all work including any and all punch list and warranty work, without interruption.
- 2) The insurance coverage and limits of insurance outlined herein are minimum coverage and limits. Contractor is encouraged, at its sole cost and expense, to purchase any additional insurance coverages and or limits of insurance that Contractor deems prudent and necessary to manage risk in the completion of this contract.
- 3) Upon written request from WMATA, contractor shall provide copies of any and all policy(s) required by these Minimum Insurance Requirements, including all endorsement(s), within 5 business days of such request.
- 4) Receipt, review and communications regarding Certificates of Insurance (COI), Insurance Policy(s), endorsements or other materials utilized to document compliance with these Minimum Insurance Requirements does not constitute acceptance by WMATA.
- 5) Insurance Policies must be written on admitted paper, (unless otherwise indicated herein) with insurance companies having an A. M. Best rating of at least A- VII.
- 6) Unless otherwise noted, "Claims Made" insurance policies are not acceptable.
- 7) Any insurance policy utilizing a Self-Insured Retention (SIR) requires written approval from WMATA.
- 8) Contractor is required to incorporate these Minimum Insurance Requirements into contract requirements of all Sub-contractors of every tier. Contractor, at its sole peril, may amend the insurance for its Sub-contractors, but doing so does not relieve Contractor from its respective liability to WMATA.
- 9) Compliance with these Minimum Insurance Requirements does not relieve Contractor from its respective liability to WMATA, even if that liability exceeds the minimum insurance requirements.

Workers' Compensation and Employer's Liability

Required Minimum Limits of Coverage:

Workers' Compensation	Statutory	
Employers' Liability	\$1,000,000	Each Accident
	\$1,000,000	Disease Policy Limit
	\$1,000,000	Disease Each Employee

Required Minimum Coverage(s):

- 1) Workers' Compensation Statutory Coverage must be provided on an "All States" basis.
- 2) Contractor and Sub-contractors of any tier performing work within 500 feet of navigable water must have their Workers' Compensation Policy endorsed to provide coverage for both Jones Act Liability and Longshore and Harbor Workers' Compensation Act Liability.

Commercial General Liability

Required Minimum Limits of Coverage:

\$10,000,000	Each Occurrence Limit
\$10,000,000	General Aggregate Limit

\$10,000,000	Products and Completed Operations Limit
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Required Minimum Coverage(s):

- 1) Commercial General Liability (CGL) coverage form shall be ISO Occurrence Form CG0001 (12/04) or its equivalent. Equivalency determination shall be made in WMATA's sole and unreviewable discretion.
- 2) Required minimum limits of coverage may be achieved through a combination of the aforementioned CGL coverage form and Umbrella Excess Liability coverage form(s), provided that the umbrella excess liability coverage form(s) provide the same or broader coverage than the prescribed CGL coverage form.
- 3) Policy shall be endorsed with Additional Insured Endorsement(s) in compliance with the "Additional Insured" Section below. Commercial General Liability and Umbrella Excess Liability forms must provide defense coverage for additional insureds. The Additional Insured Endorsement shall include Products and Completed Operations Coverage with no limitation on when claims can be made. The coverage provided by the additional insured endorsement shall be at least as broad as the Insurance Service Office, Inc.'s Additional Insured Form CG 20 10 11 85 or CG 20 26 11 85 as determined by WMATA.
- 4) Policy shall be endorsed with a Waiver of Subrogation Endorsement(s) in compliance with the "Waiver of Subrogation" Section below.
- 5) The definition of "Insured Contract" shall be modified to provide coverage for contractual liability for contracts for construction or demolition operations that are within 50 feet of a railroad, and sidetrack agreements.
- 6) Defense Costs (Allocated Loss Adjustment Expense) must be included and in excess of the policy limits for all Primary Liability and Umbrella Excess Liability Policies.
- 7) Policy shall be endorsed with ISO endorsement CG 25 03 03 97; "Designated Construction Project(s) General Aggregate Limit", and designate "Any and all construction projects" as the Designated Construction project.
- 8) Policy shall be endorsed with ISO endorsement CG 25 04 03 97; "Designated Location General Aggregate Limit", and designate "Any and all locations" as the Designated Location.

Railroad Protective Liability Insurance (RRP)

For work within 50 feet of WMATA railroad tracks or work within WMATA rail stations, Railroad Protective Liability Insurance is required with the following minimum limits of coverage:

\$5,000,000	Each Occurrence Limit
\$10,000,000	Aggregate Limit

Required Minimum Coverage(s):

- 1) Railroad Protective Liability (RRP) policy on a policy form that is acceptable to WMATA, issued by an insurance company that is acceptable to WMATA.
- 2) WMATA shall be the first Named Insured.
- 3) Cost of RRP shall be the sole responsibility of Contractor.
- 4) The "Wet Ink" original RRP policy shall be sent to WMATA at following address:

Washington Metropolitan Area Transit Authority
Office of Insurance, Room 8F
600 Fifth Street, NW
Washington, DC 20001

WMATA Blanket RRP Program Option

WMATA may offer to waive the requirement for the Contractor to procure RRP if 1) the work qualifies for coverage under WMATA's blanket RRP program, and 2) the Contractor prepays the RRP waiver fee which shall be determined by the rate schedule promulgated by the insurer in effect as of the effective date of this Contract. Contractor shall be advised of, and pay the applicable waiver fee, or procure a standalone RRP policy on WMATA's behalf if Contractor decides against the WMATA Blanket RRP Program option.

Business Auto Liability

Required Minimum Limits of Coverage:

\$2,000,000	Combined Single Limit
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Required Minimum Coverage(s):

- 1) Business Auto Liability shall be written on ISO Business Auto Coverage Form CA 00 01 03 06, or its equivalent. Equivalency determination shall be made in WMATA's sole and unreviewable discretion.
- 2) Policy shall be endorsed with Additional Insured Endorsement(s) in compliance with the "Additional Insured" Section below.
- 3) Policy shall be endorsed with a Waiver of Subrogation Endorsement(s) in compliance with the Waiver of Subrogation" Section below.
- 4) Business Auto Liability minimum Combined Single Limit requirements may be obtained through the combination of a Primary Business Auto Liability policy and an Umbrella Excess Liability policy provided that the Umbrella Excess Liability policy complies with items 1 through 3 above.

Additional Insured(s)

Contractor and Sub-contractors of every tier are required to add WMATA, WMATA Board of Directors and the Northern Virginia Transportation Authority (NVTA) or its Bond Trustee as additional insured(s) on all insurance policies purchased by Contractor and Sub-contractors of every tier, including excess liability policy(s), with the exception of Workers' Compensation and Professional Liability.

- 1) Coverage provided to any Additional Insured shall be primary and non-contributory to any other insurance available to the Additional Insured, including coverage afforded to the WMATA as an additional insured by Sub-contractors, and from other third parties.
- 2) Coverage provided to any Additional Insured shall be for claims arising out of both ongoing operations and products and completed operations hazard.
- 3) Coverage available to any Additional Insured under the products and completed operations hazard can only be limited to the applicable statute of repose in the jurisdiction(s) where the contract scope of work takes place.
- 4) The coverage provided by the additional insured endorsement shall be at least as broad as the Insurance Service Office, Inc.'s Additional Insured Form CG 20 10 11 85 or CG 20 26 11 85 as determined by WMATA.

Waiver of Subrogation

Contractor and Sub-contractors of every tier are required to have all insurance policies required under these Minimum Insurance Requirements endorsed to waive the respective insurance company's rights of recovery against WMATA, and the WMATA Board of Directors.

- 1) Waiver shall be provided on an endorsement that is acceptable to WMATA.

Certificate of Insurance (COI)

Contractor shall provide WMATA an ACORD Certificate of Insurance (COI) and copy of the Additional Insured endorsements as evidence that the insurance requirements of this Section have been satisfied.

Certificates of Insurance shall be emailed to COI@WMATA.COM.

The cert holder box should read:

Washington Metropolitan Area Transit Authority
Office of Insurance, Room 8F
600 Fifth Street, NW
Washington, DC 20001

Additionally;

- 1) Proposed material modifications to insurance required under this Section must be received by WMATA at least 30 days prior to the effective date of the proposed modifications to such insurance.
- 2) WMATA's receipt of copies of any COI, policy endorsements or policies does not relieve Contractor of the obligation to remain in compliance with the requirements of this Section at all times. Contractor's failure to comply with these insurance requirements shall constitute a material breach of this Contract.
- 3) Receipt of the COI does not constitute acceptance of the insurance outlined above.

2.14 NOT USED

2.15 SAFETY REQUIREMENTS

- A. The Contractor shall be responsible for ensuring compliance with the most stringent provisions of the applicable occupational safety and health statutes and regulations of the District of Columbia, State of Maryland, Commonwealth of Virginia or political subdivision in which the work is being performed, and the Department of Labor OSHA standards. In addition, the Contractor must comply with the following documents: the WMATA Construction Safety and Environmental Manual; the WMATA System Safety Program Plan; the Metrorail Safety Rules and Procedures Handbook (for contracts in which work is performed on, or interfaces with the Metrorail System); and the Department Bus Service Employee Handbook (for contracts in which work is performed on, or interfaces with the Metrobus System or facilities); Consolidated Plan prepared by WMATA for each Bus Division and Rail Yard in order to minimize the potential for pollutant discharge to the environment; the National Institute for Occupational Safety and Health (NIOSH) guidelines; the American Conference of Governmental Industrial Hygienists (ACGIH) guidelines; the American National Standards Institute (ANSI) guidelines; and the U.S. Army Corps of Engineers Safety and Health Requirements Manual. The contractor shall also be responsible for compliance with applicable National Fire Protection Association (NFPA) Standards 13, 14, 24, 25 and 130. Further, the Contractor shall ensure that all methods of performing the work do not involve danger to the personnel employed thereon, the public, or private property, whether or not these methods are cited or indicated in the Contract documents. Should charges of violation of any of the above be issued to the Contractor in the course of the work, a copy of each charge shall be immediately forwarded to WMATA's Representative.
- B. The Contractor shall employ and assign to the work Safety Superintendent(s) and a separate certified First Aid Attendant, based on the contract need. At the site of the work, a first aid station shall be established and fully equipped to meet the needs of the anticipated work force. In no event shall work at the site be performed until the approved Safety Superintendent and First Aid Attendant are on duty at the site. WMATA's Representative in coordination with the Department of System Safety & Risk Protection (SARP) will determine the needed coverage for Safety Superintendent(s) and First Aid Attendant per the following category:

Category II. - The Safety Superintendent may be the project foreman or an employee who is on-site at all times while work is being performed, and who has the added duty of supervising the safety of persons, equipment, and property affected by contract work. The need for separate First Aid Attendant coverage will be determined by WMATA's Representative.

Any selected Safety Superintendent shall have specialized training and experience in construction safety supervision and have a thorough knowledge of all OSHA regulations. Safety Superintendent shall have the ability to develop and conduct safety training courses. Safety Superintendent shall be familiar with industrial hygiene equipment and testing as required for the protection of all personnel and the public. The Safety Superintendent and First Aid Attendant shall be responsible for First Aid and CPR at the site and must have current First Aid and CPR certificates. Employees expected to render First Aid or CPR must be trained in Blood borne Pathogens in accordance with 29 CFR Part 1910.1030. If, at any time, the work site is without the services of an approved Safety Superintendent and First Aid Attendant for a period of 15 calendar days or more, the work may be closed down at the discretion of WMATA's Representative. The Safety Superintendent must be acceptable to WMATA's Representative and his/her performance will be reviewed and documented by WMATA's Representative on a continuing basis. If the Safety Superintendent's effectiveness is below standard, the Contractor shall provide immediate replacement at the WMATA Representative's direction. Once employed, the Safety Superintendent shall not be changed without permission of WMATA's Representative. A resume must be submitted documenting the education and experience of the individuals assigned to perform the duties of Safety Superintendent.

- C. The Contractor shall submit a construction safety plan to WMATA's Representative for review prior to commencement of work. The Contractor shall, within five days after receipt of Notice to Proceed (NTP), submit through WMATA's Representative to the Department of System Safety & Risk Protection, a request for the Authority to schedule and conduct safety instructions at the earliest possible time for all Contractor personnel who will be engaged in the performance of Contract work on or above or under the right-of-way. The Authority will schedule and conduct for all of the Contractor's work force, an eight-hour long course of instruction related to work on the Authority's Rail Operating System. The Contractor shall not perform work at the Contract site(s) on or above or under the right-of-way, until all personnel of the contract work force have attended the Right-of-Way training as specified and have been furnished evidence of attendance. The Contractor shall follow all applicable RAIL Operational Rules: Department of Operations Administrative Procedures (OAPs), Standard Operating Procedures (SOPs), Metrorail Safety Rules and Procedures Handbook, and General and Special Orders while working in the operational railroad system. For any work within Start-Up limits all contractor's personnel shall receive WMATA Start-up Lockout/Tagout training prior to commencing the work. Copies of training documents through WMATA's Representative shall be forwarded to the Department of System Safety & Risk Protection prior to work. The Contractor shall conduct Tool Box Safety Talk meetings each night before starting work and submit the Tool Box forms each month. The Contractor shall complete Construction Safety Survey forms for each work week (template issued by WMATA).

Upon completion of a project but before the start of the revenue service, system operation or before the re-starting the operation of the renovated system or facility, the Department of System Safety & Risk Protection in coordination with WMATA's Representative will conduct the System Safety Certification to certify that all practical steps have been taken to optimize the operational safety of WMATA. The System Safety Certification Program will be conducted in accordance with the Authority's System Safety Program Plan, section 3.3.5, System Safety Certification; and System Safety Rules and Procedure Manual, section 2.2/0, Safety Certification Program. The Contractor shall conduct Tool Box Safety Talk meetings each night before starting work and submit the Tool Box forms each month. The Contractor shall complete Construction Safety Survey forms for each work week (template issued by WMATA).

- D. The jurisdictional Fire Marshals prohibit the use of oxygen-acetylene welding/cutting equipment or flammable materials anywhere in the Metrorail system during revenue hours. After each work shift, all flammable materials must be removed from the Metrorail system. The storage of hazardous and flammable materials (including such items as rags, mops, paper towels, or other combustible materials contaminated with hazardous or flammable products) on WMATA property, is restricted. Contractors seeking to store hazardous or flammable materials on WMATA property must request permission from WMATA's Representative. It may not always be possible to grant permission to store hazardous or flammable materials on WMATA property. If permission is granted, the Contractor must store the materials in compliance with the jurisdictional codes and regulations. In addition, a copy of the material safety data sheets (MSDSs) for each specific chemical and the quantity of each chemical to be stored on the site shall be provided to WMATA's Representative. The Contractor shall acquire permits for use of hazardous materials as required by the jurisdictional Fire Marshal.
- E. Contractors must submit MSDSs for ALL chemicals to be used on Authority property to WMATA's Representative along with a brief description of how and where they will be used, and if wastes will be generated. The MSDSs will be reviewed by WMATA's Department of System Safety & Risk Protection (SARP) and if approved, the materials can be used in the system. If they are rejected, the contractor must identify a substitute that will meet SARP's criteria for approval in addition to WMATA's Representative criteria for performance. The MSDSs must be recent (preferably less than 3 years old) and comply with the OSHA Hazard Communication Standard 29 CFR Part 1910.1200. The Contractor is responsible for complying with the requirements of the MSDSs.
- F. The use of explosives for the performance of Contract work will not be permitted without written authorization from WMATA's Representative.
- G. Prior to performing any work on or above or under the right-of-way, arrangements shall be made through WMATA's Representative for access rights and power outage in accordance with WMATA SOPs No. 19, No. 28 and No. 33 contained in the Metrorail Safety Rules and Procedures Handbook and with OAPs No. 100-9 and No. 200-10. All special requests for access, single tracking, power outages, escorts, and other Authority support shall be submitted in writing through WMATA's Representative to the appropriate RAIL officials within the time frame as set forth in the HOURS OF WORK Article of these Special Conditions.
- H. For any work within confined spaces, the Contractor and all Subcontractors shall comply with all OSHA, state and local jurisdictional rules and regulations for confined spaces. As a minimum, the Contractor shall follow 29 CFR Part 1910.146 for all permit confined space work on Authority property, including construction. A detailed site specific Confined Space Program shall be submitted to WMATA for review for all work requiring entry into permit confined spaces as defined by 29 CFR Part 1910.146. No work shall be performed in any area considered to be a permit confined space until the Contractor's Confined Space Program is reviewed by WMATA. Prior to the initial entry into any confined space (permit or non-permit), the Contractor shall coordinate entry with WMATA's Representative and take air quality readings to establish base readings and conditions. At a minimum, oxygen, lower explosive limit, carbon monoxide, and hydrogen sulfide, shall be measured. Measurement of additional parameters may be required depending on the location of the space and potential for atmospheric hazards related to contamination or work activities. These results shall be provided to WMATA's Representative for recording purposes and will determine if atmospheric hazards exist which would classify the space as a permit-required confined space. Continuous and follow-up monitoring of air quality shall meet OSHA requirements, and all subsequent results shall be provided to WMATA's Representative.
1. Prior to the start of any work involving non-permit confined spaces, the Contractor shall

submit to WMATA's Representative a copy of the following:

- a. Written Job Hazard Analysis for any work to be performed in the confined space, including MSDSs for chemicals to be used in the space.
 - b. Written Emergency Response Plan which identifies emergency responders for rescue operations.
 - c. Written plan for a temporary Fire Protection System for use during the term of the Contract, which shall be subject to approval by WMATA's Representative. This plan shall include provisions for Fire Protection Systems and Equipment as required by OSHA, Safety and Health Regulations for Construction, 29 CFR Part 1926, Subpart F - Fire Protection and Prevention, and applicable NFPA Standards.
 - d. Identification of air monitoring devices that will be used to monitor air quality at the work site. Provide copies of most recent manufacturer calibration and all Contractor field calibration checks. As a minimum, WMATA requires field calibration checks on air monitoring instruments, each day (or shift) before use. As a minimum, the field calibration check information must include the date, time, calibration check data, and the printed name and signature of the person performing the calibration check.
 - e. Documentation to show that all personnel working in or near **non-permit** confined spaces are trained in Confined Space Awareness.
2. Prior to the start of any work involving permit-required confined spaces, the Contractor shall submit to WMATA's Representative a copy of the following:
- a. Written Job Hazard Analysis for any work to be performed in the confined space, including MSDSs for chemicals to be used in the space.
 - b. Written site specific Confined Space Program.
 - c. Confined space permit for applicable space. Each permit is valid for a maximum of 24 hours. (Submit to WMATA's Representative at least 48 hours before entry.)
 - d. Written Respiratory Protection Program.
 - e. Written Emergency Response Plan which identifies emergency responders for rescue operations.
 - f. Written plan for a temporary Fire Protection System for use during the term of the Contract, which shall be subject to approval by WMATA. This plan shall include provisions for Fire Protection Systems and Equipment as required by OSHA, Safety and Health Regulations for Construction, 29 CFR Part 1926, Subpart F - Fire Protection and Prevention. Contractor shall ensure that work activities do not adversely impact existing fire protection system(s) i.e., sprinklers, stand pipes, portable extinguisher, etc.
 - g. Identification of air monitoring devices that will be used to monitor air quality at the work site. Provide copies of most recent manufacturer calibration and all Contractor field calibration checks. As a minimum, WMATA requires field calibration checks on air monitoring instruments, each day (or shift) before use. As a minimum, the field calibration check information must include the date, time, calibration check data, and the printed name and signature of the person performing the calibration check.
 - h. Documentation to show that all Confined Space entrants and attendants are trained in

Confined Space Entry, including hands-on-training. Documentation to show that all personnel working near the permit-required confined spaces (no entry) are trained in Confined Space Awareness.

- i. Documentation to show that all personnel required to wear respiratory protection have received respiratory protection training, have been fit tested for the respirators they are required to wear (applies to tight fitting respirators) and have been medically evaluated to verify that they have no health problem that would interfere with their safe use of a respirator.
- j. A warning sign to identify the work site as a permit-required confined space requiring authorization to enter.
- k. The Contractor is required to notify the state of Maryland at least 24 hours prior to entering permit-required confined spaces located in the state of Maryland. The Contractor will be given a log number by the State which they must provide to WMATA's Representative
- l. Contractor must provide a Job Hazard Analysis prior to the start of each phase of work.
- j. Work clothing consists of long pants, shirts with long or short sleeves, sturdy work boots, and appropriate personal protective equipment. Jewelry that hangs, loose clothing or clothing with non-detachable hoods, drawstrings, or anything that can become entangled in machinery, shall not be worn on the work site if machinery is in use on the work site. Personal protective equipment such as hard hats and footwear shall meet the requirements of 29 CFR Parts 1910.135 and 1910.136. Athletic-type footwear shall not be worn on WMATA work sites.
- k. Smoking is prohibited in the Metrorail system, at WMATA facilities, and in WMATA vehicles. WMATA's Representative, will select a designated smoking area outside the system and/or facilities and Contractor employees will be informed of its location. Contractor personnel found smoking in un-designated areas on WMATA property or in the Metrorail system will be subject to removal from WMATA property. The Contractor's Safety Superintendent shall be responsible for ensuring compliance.
- l. The OSHA standard for sanitation, 29 CFR Part 1910.141, shall be followed. Prior to starting work, the contractor should furnish for the contractor's staff, necessary toilet convenience secluded from public view. They should be kept in a clean and sanitary condition and should comply with the requirements and regulations of the area in which the work is being performed. Potable drinking water shall be provided with individual cups and sanitary conditions for the water dispenser shall be maintained. A common drinking cup and other common utensils are prohibited.
- m. Contractor and Subcontractor employees shall cooperate with representatives of the Authority and federal, state, and local regulatory agencies during site inspections or investigations. Inspection and investigation activities do not involve directing of Contractor's work, but may involve interviews with Contractor and Subcontractor personnel. CAPM, ENSV and SARP will notify WMATA's Representative of any operation that is not in compliance with federal, state, or local health and safety or environmental regulations or WMATA policy and procedures, and that may require the Contractor or Subcontractor to stop work on a specific task or operation.
- n. For any work at heights above six feet, the Contractor must submit a detailed, site-specific Fall Protection Plan. The Contractor must comply with the most stringent OSHA requirements for Walking-Working Surfaces (29 CFR Part 1910 Subpart D), Scaffolds

(29 CFR Part 1926, Subpart L), and Fall Protection 29 CFR Part 1926, Subpart M.

- o. The Contractor and all Subcontractors shall comply with 29 CFR Part 1910.95, *Occupational Noise Exposure* for all work on Authority property, including construction. This standard requires that employees exposed to continuous noise in excess of the OSHA Action Level, participate in a Hearing Conservation Program. Instruments used for noise measurements must be appropriate for the type of noise being measured (impact/impulse or continuous).
- p. If the work involves removal of paints or coatings, the Contractor must test the paint or coatings to determine if they contain heavy metals such as lead that require special handling and disposal considerations. As a minimum, testing should be conducted for the eight Resource Conservation and Recovery Act (RCRA) of 1976 and amendments metals (arsenic, barium, cadmium, chromium, lead, mercury, silver, and selenium). If any of these are present, the components will require special handling and disposal to prevent exposure to workers, patrons, the community, and the environment.

The Contractor and/or Subcontractor performing lead-based paint abatement, removal, or control, must have all licenses and accreditations required by the jurisdiction in which the work is performed. Jurisdictions that do not have their own state lead plans fall under the auspices of the Environmental Protection Agency (EPA). The Contractor and Subcontractor employees are required to have medical monitoring to meet the requirements of 29 CFR Parts 1910.1025 and 1926.62. As a minimum, medical monitoring shall consist of biological monitoring for lead and zinc protoporphyrin and shall include a physician's medical determination. As a minimum, biological monitoring shall be conducted immediately prior to working on a WMATA property where the employee may be exposed to lead, and immediately upon completion of this work. The Contractor and Subcontractor employees shall receive training for lead workers and supervisors as required by the jurisdictional regulations. Documentation shall be provided to WMATA's Representative prior to commencement of work. All documentation shall be authentic and verifiable. All materials must be handled and disposed of in compliance with the jurisdictional regulations. MSDSs for replacement paints/coatings must be reviewed by WMATA prior to use on WMATA property.

- q. If the work involves removal of insulation, flooring, cove base, mastic, ceiling tile, roofing materials, or any other material that is suspected of containing asbestos, the Contractor must have the materials sampled and analyzed to determine if they contain asbestos. If the Contractor and/or Subcontractor will be handling or removing asbestos-containing materials, the Contractor and/or Subcontractor must have all licenses and accreditations required by the jurisdiction in which the work is performed. The Contractor and Subcontractor employees are required to have medical monitoring to meet the requirements of 29 CFR Parts 1910.1001 and 1926.1101. The Contractor and Subcontractor employees shall receive training for asbestos workers and supervisors as required by the jurisdictional regulations. Documentation shall be provided to WMATA's Representative prior to commencement of work. All documentation shall be authentic and verifiable. All materials must be handled and disposed of in compliance with the jurisdictional regulations. All replacement materials shall be free of asbestos.

Contractors shall follow the WMATA Technical Specification for Asbestos Removal.

- r. Contractor and Subcontractor employees shall not be exposed to asphalt fumes in excess of the National Institute for Occupational Safety and Health (NIOSH) recommended ceiling limit of 5 milligrams of asphalt fumes per cubic meter of air

(5 mg/m³), in any 15 minute period. NIOSH provides recommendations for control of asphalt fumes.

- s. Work that generates visible dust requires submission of a Dust and Debris Control Plan to prevent exposure of employees, patrons, and the community to dust including crystalline silica dust. Be prepared to submit air monitoring data to demonstrate effectiveness of dust control measures. If dust cannot be controlled, submit Respiratory Protection Program in compliance with 29 CFR Part 1926.103 or 29 CFR Part 1910.134, and be prepared to submit evidence of air monitoring, training documentation, medical clearance for respirator use, and respirator fit tests for tight-fitting respirators.
- t. The Contractor shall ensure that the level of exhaust emissions from equipment such as air compressors and generators, are within acceptable limits to comply with clean air regulations and that workers are not exposed to exhaust fumes or gases (carbon monoxide, sulfur dioxide, nitrogen oxides, hydrogen sulfide, aldehydes) in excess of the most stringent of occupational exposure limits.
- u. The Contractor shall submit a Waste Water Discharge Plan that describes how the Contractor will treat and release waste water generated by activities at the work site, for all work that generates waste water. Contractor shall also comply with Consolidated Plan prepared by WMATA for Bus Divisions and Rail Yards.
- v. For abrasive blasting activities, the Contractor must submit MSDSs for abrasives to WMATA's Representative prior to abrasive blasting activities. Only abrasives containing less than 1 percent crystalline silica shall be used for abrasive blasting.
- w. For hot work activities, the Contractor and Subcontractors shall provide documentation on certification for personnel who perform welding on WMATA property. Ventilation in accordance with OSHA regulations, shall be provided for hot work such as welding, cutting, or brazing.
- x. At the site of the work, a First Aid Kit shall be provided and fully equipped to meet the needs of the anticipated work force. Employees expected to render First Aid or CPR must have the proper current certifications and be trained in Blood-borne Pathogens in accordance with 29 CFR Part 1910.1030.
- y. The contractor shall be responsible for all subcontractors, suppliers and other persons working under the contractor's direction to comply with all requirements as noted above and herein, and shall disseminate these requirements to those personnel. Contractors and Subcontractors shall ensure that their personnel complete safety training by WMATA on the rules and procedures for working on the right-of-way before starting such work.
- z. The Contractor shall immediately report all accidents and incidents (including near misses) that occur during the performance of the work, to WMATA's Representative.
- AA. Work shall not be performed in any area in use by the public, unless specifically required by the Contract or directed in writing by WMATA's Representative. The Contractor shall give at least 48 hours notice to WMATA's Representative before beginning such work.
- BB. In cases where the movement of motorized equipment is necessary, flag persons shall be provided to warn and direct personnel and patrons away from the area of travel. Flag persons must be certified as trained in proper flagging techniques and Contractor employees involved in traffic control and devices must be certified as trained in traffic

management as required by the State or local jurisdiction. Certification must be documented. WMATA's Representative shall be notified before using heavy equipment in or near stations and their entrances, building entrances, bus bays, sidewalks, etc. Under no circumstances shall motorized equipment be left unattended with the motor idling. Always remove keys from motorized equipment not in use. Provide proper blocks as necessary to prevent running away of any equipment.

CC. When it is necessary to maintain use of work areas involving stations, sidewalks, elevators, platforms, bus shelters, vehicular roadways, building entrances, corridors, etc., the Contractor shall protect the area with guardrails, substantial barricades, temporary fences, overhead protection, and temporary partitions as deemed necessary by WMATA's Representative. Under no circumstances will yellow or orange tape strung between barricades, or the like, be acceptable as a substantial barricade. Open manholes, access openings or other breaks in the normal walking surface shall be isolated from personnel and the public using barricades.

DD. Sidewalks, entrances, platforms, mezzanines or any other location where personnel or the public traverses, shall always be kept clear of obstruction, tools, ladders, work debris, excavation materials, etc. When necessary, temporary sidewalks, or pathways shall be provided for pedestrian traffic. Temporary sidewalks or pathways shall be free of tripping hazards and protected by proper guardrails and barricades. Temporary means of egress and access shall be marked for easy recognition. If work is required above sidewalks or pathways, substantial overhead protection shall be provided. Protected walkways shall be approved by WMATA's Representative.

EE. Appropriate warning signs and instructional safety signs shall be conspicuously posted in all areas involving construction activities. Work involving electrical systems or equipment in or near the area to which personnel or the public have access shall be isolated using barricades, partitions, etc. Exposed, live circuits shall not be left accessible to personnel or the public or left dangling overhead. Before completion of the work, the Contractor shall:

1. Ensure that all wiring is insulated and properly positioned.
2. Verify grounding, bonding, or both, of all metallic conduit, wiring or electrical equipment that is in the areas of contractual effort, and to which the public can make contact.
3. Notify WMATA's Representative immediately in those instances where verification cannot be made.
4. Contractor's personnel working near the platform edge or in the right-of-way shall wear reflective safety vests with the tear-away feature, to identify them to passing trains, as directed by SARP at the right-of-way safety training required in this Section. The safety vests shall comply with the ANSI/ISEA 107-1999 guideline entitled *American National Standard for High-Visibility Safety Apparel*. All of the Contractor's personnel are required to attend safety training provided by SARP before starting work near the platform edge or in the right-of-way.

FF. Use of Cranes and Derricks:

1. General Safety Requirements. Comply with the following:

[1] 29 CFR Part 1910.180 through Part 1910.189.

[2] 29 CFR Part 1926.550 through Part 1926.556

[3] U.S. Army Corps of Engineers, Safety Manual EM-385-1-1.

2. No part of any Crane or Derrick Boom shall swing over WMATA patrons, tracks or stations without a WMATA Representative-approved shield or approved procedure.
3. Placement of Crane or Derrick shall be coordinated with WMATA's Representative.
4. Rights for use of the Crane or Derrick affecting Metrorail Operations are granted through SOPs No. 19 and 33 of the Metrorail Safety Rules and Procedures Handbook.
5. A supervisory or a red tag power outage is required. Exceptions may be granted on an individual basis after a review and approval by the Authority.
6. Hardhat requirements are enforced.
7. "Swing Stop" requirements may be instituted based on the hazards involved.
8. Use of Cranes and Derricks over common corridor railroads and highways is under the rules of the affected common corridor railroad or highway owner.

GG. All site visits for visitors and tours shall be coordinated through WMATA's Representative in accordance with the WMATA Construction Safety and Environmental Manual.

HH. ENVIRONMENTAL SAFETY REQUIREMENTS

The Contractors and Subcontractors shall be responsible for complying with the most stringent of federal, state, or local environmental regulations for air, water, land, and waste in order to maintain the safety and health of employees, WMATA patrons, and the community.

II. If the work task requires specialized licenses for example "lead or asbestos abatement contractor's license", Contractors and Subcontractors shall be required to show evidence of such registration prior to commencement of work. If the work requires specialized training for example lead or asbestos training, Contractors and Subcontractors shall be required to show evidence that their employees have received such training prior to commencement of work.

JJ. If the work requires transportation of hazardous materials or hazardous substances, Contractors and Subcontractors are required to provide evidence of Department of Transportation General Awareness Driver's Training in compliance with 49 CFR Part 172 and Commercial Driver's License in compliance with 49 CFR Parts 390-397, prior to commencement of work.

KK. All hazardous materials and hazardous substances, must be stored in "Performance Oriented Packaging" in compliance with 49 CFR Part 178, Subpart L.

LL. If the work requires disposal of hazardous wastes, disposal must be to a Treatment/Storage/Disposal facility with a Part B Permit and the waste hauler must have a state or local license and U.S. EPA identification number. The Contractors and Subcontractors shall be required to provide evidence of all applicable licenses and permits along with the name and address of the waste

disposal facility where hazardous waste materials are to be disposed, prior to commencement of work.

- MM. If the work involves response to spills of hazardous materials, hazardous substances or hazardous wastes, the Contractor or Subcontractor personnel shall have appropriate training that complies with 29 CFR Part 1910.120.

NN. CONTRACTOR'S SAFETY SUBMITTALS.

On-site work activities shall not begin until the appropriate submittals are provided to WMATA by the prime Contractor and the Subcontractor performing the work shall submit the following documentation.

1. Job Hazard Analysis (prior to each phase of work).
2. Site-specific Emergency Response Plan.
3. Site-specific Temporary Fire Protection System Plan.
4. Documentation of Safety Superintendent's experience in construction safety.
5. Experience Modification Rating for the last 2 years.
6. Accident/illness rates for lost time accidents/illnesses over the last 2 years.
7. Record of federal, state, or local violations of environmental and occupational safety and health regulations for the last 2 years.
8. Organizational Health and Safety Program including OSHA required programs applicable to the work and site. For work and sites not addressed in the original Organizational Health and Safety Program, addenda may be added when the work and sites are identified, however, the addenda must be submitted to WMATA's Representative for review prior to the commencement of specified work.
9. Site-specific Waste Water Discharge Plan (if waste water is generated).
10. Site-specific Pollution Control Program.
11. Site-specific Dust and Debris Control Plan.
12. Blood-borne Pathogens Exposure Control Plan.
13. Hearing Conservation Program if employees are exposed to continuous noise in excess of the OSHA Action Level.
14. Respiratory Protection Program if employees are exposed to dust (including crystalline silica) or other toxic atmospheres in excess of the OSHA permissible exposure limits. If a respiratory program is required, the Contractor also must provide documentation of training, medical clearance for respirator use and respirator fit testing.
15. Hot Work Program.
16. Lockout Tagout Program.

17. Site-specific Confined Space Program.
18. Documentation of applicable training, licenses, certifications, including First Aid and CPR certificates and Blood-borne Pathogens training.
19. Identity of all materials or chemicals the Contractor will use on Authority property (including welding rods), material safety data sheets (MSDSs) for these products, and a brief explanation of how they will be used and if any wastes will be generated.
20. Identity of equipment that may generate toxic atmospheres such as gasoline or diesel-powered generators, welding and cutting equipment.
21. Documentation of licenses and certificates required for lead or asbestos abatement or other work requiring licensing or certification such as welding.
22. Certificate of Insurance, including pollution liability coverage, endorsed to WMATA is required for Contractors or subcontractors performing work involving hazardous materials, hazardous substances, hazardous wastes, or contaminated soil or water.
23. Results of sampling (paint, soil, water, or other materials) required for determining pre-work conditions and the presence of existing contamination.
24. Baseline biological monitoring for lead exposure (within the month prior to work on WMATA property that may involve exposure to lead).

The following submittals are required **at least weekly** after work activities have commenced on the site:

25. Notification of medical surveillance results that exceed action levels for all Contractor and Subcontractor employees working on this project.
26. Notification of all medical removals or restricted duty assignments of Contractor and Subcontractor employees working on this project.
27. Periodic noise monitoring, air monitoring, personal exposure data, equipment emissions, and breathing air quality, as applicable.
28. Records of daily field calibration checks for monitoring equipment.
29. Results of laboratory analysis for any additional sampling (paint, soil, water, or other materials) conducted during the project.

SARP will request the following documentation be submitted **by the Contractor upon completion of work:**

30. Results of laboratory analysis for any sampling (paint, soil, water, or other materials) collected after completion of activities at each site.
31. Documentation of final medical surveillance results. The samples are to be collected upon completion of work on this project and before employees

start work on any other projects.

HAZARDOUS MATERIALS SUBMITTALS

The following documentation shall be provided to WMATA prior to transport or disposal of hazardous materials or substances:

1. Documentation of licenses, certificates, and U.S. EPA identification numbers required for transportation of hazardous materials, hazardous substances, or hazardous wastes.
2. Documentation of licenses, permits, and certificates required for disposal of hazardous wastes including the name and address of the waste disposal facility where hazardous waste materials are to be disposed.

2.16 SANITARY PROVISIONS

The OSHA standard for sanitation, 29 CFR Part 1910.141, shall be followed. Prior to starting work, the Contractor shall furnish for the use of his force on the work necessary toilet conveniences secluded from public view. They shall be kept in a clean and sanitary condition and shall comply with the requirements and regulations of the area in which the work is being performed. Potable drinking water shall be provided with individual cups and sanitary conditions for the water dispenser shall be maintained. A common drinking cup and other common utensils are prohibited.

2.17 SUBCONTRACTS

- a. The divisions or sections of the Specifications are not intended to control the Contractor in dividing the work among subcontractors or to limit the work performed by a trade.
- b. The Contractor shall not enter into subcontracts totaling in amount more than the percentage of the total Contract price permissible under WORK TO BE PERFORMED BY THE CONTRACTOR article of these Special Conditions, without the written permission of the Contracting Officer or other delegated Authority's Representative.
- c. Before entering into any subcontracts, the Contractor shall submit a written statement to the Contracting Officer or other delegated Authority's Representative giving the name and address of the proposed subcontractor, the portion of the work and material which he is to perform and furnish, and any other information tending to prove that the proposed subcontractor has the necessary facilities, skill, integrity, past experience and financial resources to perform the work in accordance with the terms and conditions of this Contract.
- d. No subcontractor shall be permitted to perform work at the site until he, or the Contractor, in compliance with the provisions of the INDEMNIFICATION AND INSURANCE article of these Special Conditions, has furnished satisfactory evidence of insurance as required.
- e. The Contractor shall promptly, upon request, file with the AR a conformed copy of the subcontract, with the price and terms of payment deleted.
- f. The Authority or its representatives will not undertake to settle any difference between the Contractor and his subcontractors or between subcontractors.

2.18 PAYMENT FOR USE OF EQUIPMENT – NOT USED

2.19 HISTORICAL AND SCIENTIFIC SPECIMENS

Articles of historical or scientific value including, but not limited to, coins, fossils and articles of antiquity which may be uncovered by the Contractor during the progress of the work shall become the property of the Authority. Such findings shall be reported immediately to the AR who will determine the method of removal, where necessary, and the final disposition thereof.

2.20 SALVAGE OF MATERIALS AND EQUIPMENT

- a. The Contractor is responsible for proper disposal of all removed equipment and materials. The Authority may request salvaged equipment or parts to be delivered to an Authority storage facility designated by the AR.
- b. The Contractor shall maintain adequate property control records and receipts for materials or equipment specified to be salvaged. The Contractor shall be responsible for the adequate storage and protection of salvaged materials and equipment and shall replace all salvage materials and equipment which are broken or damaged during salvage operations as the result of his negligence or while in his care.
- c. All material not reused shall become the property of the Contractor and removed from the site.

2.21 ENVIRONMENTAL CONTROL

- a. The Contractor shall:
 - (1) Maintain temperature and humidity to protect work, in progress and in place, as well as permanent equipment and materials, stored and installed, against damage from heat, cold and dampness.
 - (2) Take such steps as necessary to protect such work from other adverse conditions.

2.22 SIGNS

- a. The Contractor shall furnish and erect at the work site one portable Authority project sign.
- b. Sign size, content, lettering and format shall be as shown at the end of this Section.
- c. The exact location of the sign shall be as directed.
- d. The sign shall be maintained during the work and removed upon its completion.

2.23 CONSTRUCTION SEQUENCE AND STAGING

2.23.1 CONSTRUCTION SEQUENCE

- a. Constraints:
 - (1) Adjacent Tie Breaker Stations cannot be offline in succession simultaneously.
 - (2) No more than (2) locations will be offline at the same time at the Authority's discretion.
 - (3) A location may not be started until the preceding locations DC Gear has been rigged into the room.
 - (4) Sequence is at the discretion of the Authority and is based on Contractors ability to demonstrate successful, timely completion of work

- b. Sequencing for the (6) Locations should consider the following:
- (1) K06TB2 Greenwich St. and K07TB2 Prosperity Avenue must be substantially completed by June 30th, 2016 as outlined in Section 2.1.7, Interim Work Completion Milestone.
 - (2) Remaining locations include K07TB1 Ogden St, G01TB Benning Road, G02TB1 56th Place and G02TB2 67th Ave. should be completed in accordance with Section 2.1.8, Final Work Completion, and must adhere to the above, 2.23.1.a. Constraints (1)-(4).
- c. The Contractor shall conduct his work in a manner that will minimize interference with the operations of other contractors involved in the performance of related work. He shall bring his work to a stage of completion that will conform to the requirements specified in the WORK BY OTHERS article of these Special Conditions.
- d. The Contractor's particular attention is directed to the fact that both vehicular and pedestrian traffic must be maintained on the various existing streets within and adjacent to the project site at all times during the duration of the Contract.
- e. The Contractor shall coordinate all staging activities with the appropriate facilities managers as to work area, storage area and equipment movement

2.23.3 CONSTRUCTION STAGING - NOT USED

2.24 MEASUREMENTS

All dimensions shown on Contract Drawings and Specification shall be field verified by the Contractor by actual measurement of the existing work. Discrepancies between the Contract Drawings, Specifications and the existing conditions shall be referred to the AR prior to the commencement of work which would be affected.

2.25 OPERATION AND MAINTENANCE

2.25.1 OPERATION AND MAINTENANCE MANUALS

- a. The Contractor shall furnish manuals for equipment and systems as follows:

1. SUBMITTALS

- i. Make all submittals as specified below.
- ii. Operation and Maintenance:
 - (a) Furnish all completed Operation and Maintenance related materials.
 - (b) Furnish manuals for equipment and systems as required by the Contract Documents.
 - (c) Data copy included from standard catalogs shall be edited to reflect only conditions pertinent to this Contract.
 - (d) Data copy shall be suitable for dry-copy reproduction on standard office copy machines.
 - (e) Hard copy manuals shall be prepared using the following materials:

(1) Binder:

- i. One of following:
 - a. Loose-leaf; three-ring with elliptical rings; stiff cover with covering resistant to oil, water, and wear; reinforced hinges; label holder on spine; mechanical device to open, close and lock rings; and sheet lifters. Size for 8-1/2-inch by 11-inch paper, 3-inch maximum capacity.
 - b. Loose-leaf three-post binder conforming to FS UU-B-320, Type II, Class 2, with covering resistant to oil, water, and wear; label holder on spine; size for 8-1/2-inch by 11-inch paper; capacity as required, 4-inch maximum thickness.
- ii. When the assembled data exceeds the capacity of one binder, provide additional binders as necessary.

(2) Pages:

- I. Originals: White, 60-pound bond with plastic-reinforced binding edge.
 - II. Catalog data: Offset-printed copy on white paper, with plastic-reinforced edge.
 - III. Standard: 8-1/2 inches by 11 inches.
 - IV. Fold-out: 11 inches by 8-1/2 inches for binding portion of page plus 7-1/2 inches for each additional portion of folded page; title and page number visible without unfolding. Provide a filler at the binding edge of fold-out pages, equal in thickness to the folded portion.
 - V. Holes punched for standard three-ring binder.
 - VI. Consecutively numbered.
- (f) Electronic Copies shall accompany the paper copies of all submittals of all manuals. These electronic copies shall be submitted in an editable, non-copyrighted Microsoft Office format. There shall be two electronic copies per submitted manual delivered one each to the programs office and to the applicable training department.

(g) Manuals shall include the following data:

- (1) Table of contents.
- (2) Contractor's name, address and telephone number, with similar data for its 24-hour service organization.
- (3) Manufacturer's name, address and telephone number, with similar data for its local representative, distributor, and service agency.
- (4) Catalog, model, and serial number of equipment installed. Include WMATA unit numbers where applicable.

- (5) Description of equipment.
- (6) Detailed Theory of Operation of each system and subsystem to Lowest Repairable Unit (LRU).
- (7) Troubleshooting and Diagnostic Procedures for each piece of equipment delivered to LRU.
- (8) Block Diagrams and Schematics of equipment as installed
- (9) Software administrative procedures for data input, failure diagnosis and system restoration.
- (10) Statement of warranty as specified.
- (11) Description of modification, servicing and repairs performed prior to start of warranty.
- (12) Dates warranty begins and expires.
- (13) Standard starting, stopping and operating procedures.
- (14) Emergency and special operating procedures.
- (15) Routine maintenance procedures.
- (16) Servicing and lubrication schedule.
- (17) Manufacturer's printed operating and maintenance instructions, manufacturer's parts list, illustrations, and diagrams.
- (18) One copy of each wiring diagram.
- (19) List of spare parts, prices and recommended stock quantities for routine maintenance of the equipment for 2 years and list of spare parts that are considered critical and for which extended time frames for acquisition would create undesirable down-time for equipment.
- (20) List of special tools required to perform inspection, adjustment, maintenance, and repair. Special tools are those developed to perform a unique function related to the particular equipment and not available from commercial sources.
- (21) Copy of each approved Shop Drawing of equipment and system. Include drawings, which show outline dimensions, weights, and assembly data. Do not include drawings, which show manufacturing details.

(h) Manuals submittal schedule:

- (1) Four copies of sample formats and outlines of contents in draft form 120 Days prior to the time scheduled for operation inspection, testing, or acceptance of the equipment.
- (2) Four copies of complete manual in final form 45 Days prior to the time scheduled for operation inspection, testing, or acceptance of the equipment.
- (3) Four bound sets and electronic media of approved manual before the time scheduled for operation inspection, testing, or acceptance of the equipment.
 - i. Electronic copy files shall be in latest version of Adobe (.PDF) file format.
 - ii. Shop Drawings submitted with manuals shall be in AutoCAD (.DWG) file format. Line work shall be shown on designated layers in accordance with standard CAD layering guidelines as specified in the WMATA CAD Manual. Images shall be clear, sharp, and readily legible.

- iii. The Authority reserves the right to have any images, illustrations, diagrams, and drawings resubmitted until the Contracting Officer Representative approves their legibility.

- (4) In addition to the other requirements of this Section, if manufacturer's hardcopy illustrations, diagrams, and drawings are also used in the preparation of Operation and Maintenance manual illustrations, diagrams, and drawings, they shall also be furnished in Adobe (.PDF) file formats.

2.25.2 OPERATION AND MAINTENANCE TRAINING

a. Summary

1. This Section includes the general requirements for operation and maintenance training for equipment and systems provided by the Contractor and the general requirements for a Project performance demonstration.
2. Training shall be conducted according to the following classes:
 - i. Operations and Maintenance (O&M) Training: for preventive maintenance instructions (PMI) and corrective maintenance and adjustment of all equipment in its anticipated installed environment.
 - ii. Engineering and Test Technician Training: for performing reliability-oriented inspection, maintenance, diagnostic tests, calibration, troubleshooting and repair of traction power substation and tie-breaker station equipment classes in accordance with applicable IEEE, ANSI, ASTM standards, and applicable INETA test procedures. Engineering and technician training shall include training in utilization of diagnostic test equipment, Software Applications in conjunction with appropriate test, function/signal generation, measurement hardware to calibrate and test the operation of tie-breaker station equipment, microprocessor multi-function electrical protection relays, and the setting of Power Digital Meter for monitoring purposes.

b. DEFINITIONS

1. Acronyms used in this specification have the following definitions:
 - i. TSMT – Technical Skills and Maintenance Training
 - ii. ROQT – Rail Operations Quality Training
 - iii. TTDC – Technical Training Document Control

c. SUBMITTALS

1. Submit in accordance with Special Provisions, the following at the times stated:
 - i. Training plan preliminary submittal: One electronic copy and one printed paper copy not later than 60 Days after commencement of construction work. Submittal shall include at a minimum:

- (a) Instructional outline: A complete, accurate, and detailed listing of topics to be addressed in the instructional program using the specified content list.
 - (b) Specimens of instructional material to be used
 - (c) Descriptions of audio-visual material and equipment to be used
- ii. Training plan intermediate submittal: One electronic copy and one printed paper copy not later than 60 Days after approval of preliminary submittal.
 - (a) All material submitted for intermediate submittal incorporating or resolving comments.
 - (b) Complete instructional plans including audio-visual aids and descriptions of instructional techniques and procedures.
- iii. Training plan final submittal: One electronic copy and one printed paper copy not later than 30 Days prior to scheduled date for operation inspection, testing, or acceptance of the equipment.
 - (a) All material submitted for intermediate submittal incorporating or resolving comments.
- iv. Training Contract closeout submittal: As specified in 2.25.1.
- v. Training instructor's qualifications.
- vi. A complete set of all training manuals, handouts, aides and presentations, for instructor and student, shall be provided at the end of the vendor's first training class to each of the audience's training groups (two sets when there are two supporting training groups, etc.) in an approved, editable electronic format, and free from copyright restrictions.
- vii. Printed copies of each student guide and student-learning materials (schematics, books of plans, etc., as determined useful) shall be prepared and bound by equipment's training provider. Provide one printed copy for each student to use during training and to keep after class completion
- viii. Printed copies of the instructor's guide, student guide, presentation, and all supplemental training materials for each of the audience group's training instructors (not to exceed five copies), free from copyright restrictions, shall be provided at the end of the first vendor training session.
- ix. Performance demonstration plan and procedures: submit for Approval as part of the final design review package but no later than 90 Days prior to first performance demonstration.

d. OPERATIONS AND MAINTENANCE

1. General:

- i. Where specified, develop and conduct a program to train selected Authority personnel in the operation and maintenance of equipment and systems furnished.
 - ii. Furnish instructors, instructional materials, and audio-visual aids and equipment.
 - iii. The Authority will furnish physical facilities.
2. Operation training:
- i. Operations training shall be tailored specifically to the WMATA equipment being purchased and training shall be designed to teach all trainees the functional use of all of the major modes of equipment operation.
 - ii. The training shall be sufficient in quality and scope to bring personnel to a level of operating proficiency such that vendor support is not needed during routine equipment operation in any mode or capacity.
3. Maintenance training:
- i. Maintenance training shall be tailored specifically to the WMATA equipment being purchased and shall be designed to develop the knowledge and skills required to maintain and repair all item(s) delivered under the Contract. Maintenance training shall address the detailed theory of operation, maintenance, testing, repair, overhaul, replacement, alignment, and troubleshooting of the delivered equipment (hardware and software).
4. Other Training:
- i. Any other training (as determined by WMATA) necessary to support the safe operation, use, or maintenance of the equipment.
5. Training Plan:
- i. Training plan shall contain an organized summary of the events, and associated times, necessary for the completion of all materials necessary to successfully perform the required training. The plan shall be submitted to the applicable end user's training group(s) (TTDC, TSMT, or ROQT currently) within a Contract specified period after NTP has been issued. The training plan must address all deliverables using a timeline that includes periods for review, feedback, resubmission, approval, and delivery accomplishing all by a Contract-determined date related to the equipment being placed into service. The training plan shall include the following:
 - (a) Course list including course title, duration, audience, audience size, and purpose
 - (b) Course outline: A course outline with measurable learning objectives shall be provided. The course outline shall provide a topic outline for each item of equipment. Maintenance training shall include a section devoted to system fault analysis and trouble-shooting. The learning objectives shall be stated for each topic.

- (c) Lesson plans: A set of lesson plans shall be developed for each item of equipment corresponding to the topic outline and shall contain the following information: Lesson title, instruction time, objectives, training aids required, instructing sequence (outline), tests, and summary.
- (d) Instructor qualifications: A description of the instructor's qualifications for each class must be submitted to the end user's training group(s) (TTDC, TSMT, or ROQT currently) for approval as part of the training plan. The description (resumé, curriculum vitae, or other description of instructional qualifications) shall document a thorough knowledge of the subject equipment, an understanding of the adult learning process, and demonstrated experience in vocational instruction.
- (e) Audience qualifications and prerequisites: For the purpose of course development and presentation, vendors shall assume all WMATA students are high school graduates (or equivalent) and that maintenance personnel will possess the ability to use basic hand tools and electronic test equipment.
- (f) Instruction and testing methods to be utilized
- (g) Summary of the strategies to be employed in the accomplishment of the training
- (h) Proposed schedule of delivery of materials and training

6. Instructor's Guide:

- i. The instructor's guide for each course shall contain all the information and direction necessary for the instructor to make an effective presentation. The instructor's guides shall include adequate guidelines to conduct a comprehensive training program. Individual lessons within the course shall be organized as separate blocks (or modules), which may be taught as a unit. In some instances, the same standard operating procedures could be used for train operators, transportation supervisors, and central control supervisors. The instructor's guide shall contain, at a minimum:
 - (a) Program overview stating the overall program goals
 - (b) Training syllabus
 - (c) Lesson plans arranged as a session by session outline containing the following:
 - 1. Overview of each lesson
 - 2. Outline of major topics to be covered including timelines for each course, lesson, and topic
 - 3. Outline of learning objectives for each major topic
 - 4. Information regarding important subjects and terms to be emphasized during each section of the training
 - 5. References to the associated Student Guide pages and presentation slides
- ii. A guide (FAQ) providing questions/problems and answers as related to course content

7. Student's Guides:

- i. Student guides for each course that shall contain all the information and direction necessary the student to interact effectively in the learning environment. The student guides shall be written in a fully developed prose format, developed in the same modular format as the instructor's guides. The student's guides should contain, at a minimum:
 - (a) Program overview/introduction
 - (b) Statement of overall program goals
 - (c) All major topics to be covered
 - (d) Student learning objectives associated with each of the major topics stated in quantifiable terms
 - (e) All illustrations, block diagrams, charts, schematics, wiring diagrams, logic flow diagrams, troubleshooting guides, graphics, and visual aids that may be used during course presentation to enhance presentation content and provide a seamless facilitation of instruction
 - (f) Supplemental materials that may be necessary to facilitate theoretical discussions

8. Training Presentations

- i. Training Presentations shall be matched to the instructor guides and student guides and shall facilitate seamless, effective communication of the course information to the target audience.
- ii. Training Presentation format(s) shall be agreed upon by the target audience's training group(s) (TTDC, TSMT, ROQT, currently).
- iii. Power Point Presentations: Power Point Presentations will be made for each piece of installed equipment designed to follow the curriculum as outlined in the Instructor Guide. Presentations are to be in-depth presentations designed to accomplish the stated learning objectives on each piece of equipment when used in conjunction with the provided Student Manuals.

9. Training Aides:

- i. Depending upon the equipment or system(s), a functional mockup or a functional representation may be required. These may be in the form of animated illustrations, animated schematics, interactive video training, or any accepted media format as determined by the audience's training group.
- ii. Installed equipment shall be used in the course of instruction.
- iii. Training shall include practical exercises that permit the trainees to perform hands-on work using installed equipment under normal operating conditions.
- iv. Training equipment: Special tools required for maintenance training shall be supplied by the Contractor and delivered to the Authority after completion of the course.

- v. Test equipment: Test equipment required for maintenance training shall be supplied by the Contractor and delivered to the Authority after completion of the course.
- vi. All mockups become the property of audience's training group after completion of the final scheduled training class. Supplemental materials shall be demonstrated as fully operable during the first training class. All necessary repairs to the supplemental materials are the responsibility of the vendor for the duration of vendor training sessions.

10. OEM Operator's Manual(s) describing the equipment's or system's operation in each mode and capacity of use.

- i. OEM Technical Manuals describing the detailed theory of operation, maintenance, testing, repair, overhaul, replacement, alignment, and troubleshooting shall be delivered to the appropriate training groups.

11. Engineering and Test Technician Training Equipment

- i. Necessary training equipment, mockups/simulators, Contractor-provided relays, and Contractor-supplied test equipment may be shipped to and stored at the training facility in coordination with OPER-TRNG. Authority-owned spare protective relays may be provided in coordination with and conditionally based on the approval TSSM superintendent.
- ii. Installed Authority-owned equipment may be used in coordination with and conditionally based on the approval of OPER-TRNG.
- iii. Training shall include practical exercises that permit the trainees to perform hands-on work using Contractor-supplied equipment or Authority-owned installed equipment conditional to OPER-TRNG approval.
- iv. Training equipment: Specialized tools, other than basic hand tools, laptop/notebook computers, application software, connection and interface devices required for training shall be supplied by the Contractor.
- v. Test Equipment: Specialized test equipment, other than standard VOMs, laptop/notebook computers, application software, connection and interface devices required for training, shall be required for maintenance training and be supplied by the Contractor.
- vi. All computers received and owned by WMATA shall be procured and processed in accordance with Authority Published P/I (Policy and Instruction).
- vii. The Contractor shall provide a list of recommended engineering books (e.g., system design, micro-processor, and programming) to complement the training.

e. MATERIALS AND INSTRUCTION

1. Training materials shall be provided and approved by audience's training groups (TTDC, TSMT, or ROQT) prior to the final acceptance of training schedule or training date(s).
2. Training materials updates are required when, in the scope of the Contract, changes or Modifications are made that affect the operation or maintenance of the contracted item(s).

3. Instruction shall include material covered in the operation and maintenance manuals as well as the following:
 - i. Detailed theory of operation to one level below Lowest Repairable Unit (LRU)
 - ii. Practical aspects of operation
 - iii. Description of system, equipment, and components
 - iv. Functional characteristics of system, equipment, and components
 - v. Emergency operating procedures
 - vi. Location, removal, and reinstallation of components
 - vii. Maintenance procedures
 - viii. Servicing intervals and schedules
 - ix. Block diagrams of equipment hardware and software functionality as installed
 - x. Schematics of equipment hardware as installed
 - xi. Diagnosis and problem solving (troubleshooting)
 - xii. Repair
 - xiii. Overhaul
4. Daily class duration shall be a nominal 7-1/2-hour shift, with advantageous combinations of theoretical/classroom instruction and hands-on practice, utilizing operational equipment, presentations, mockups, and test equipment as applicable. For on-the-job training (OJT) at work locations as applicable, training shall include participation in installation activities, fault diagnosis, and equipment alignment/adjustment exercises.
5. Training Application
 - i. The training program shall consist of the following:

Course Title	Course Length	Class size in persons	Number of Courses	Total number of course hours per person per class
Operation and Maintenance Training	40 hours	25	3	120
Engineering and Test Technician Training	32 hours	15	1	32

2.25.3 PREVENTIVE MAINTENANCE INSTRUCTIONS (PMI)

- a. Prepare PMI for each piece of equipment with scheduled maintenance per O&M manuals. A sample of PMI is attached in Appendix C as a guide.

2.26 ABBREVIATIONS

AASHTO: American Association of State Highway and Transportation Officials

ABS: Acrylonitrile-Butadiene-Styrene

ac:	Alternating Current
ACI:	American Concrete Institute
ACGIH:	American Conference of Governmental Industrial Hygienists
AFD:	Alexandria Fire Department
AHDGA:	American Hot Dip Galvanized Association, Inc
AI:	Asphalt Institute
AISC:	American Institute of Steel Construction
AISI:	American Iron and Steel Institute
AMTRAK:	National Railroad Passenger Corporation
ANSI:	American National Standards Institute (synonymous with USASI-ASA)
AR	Authority Representative
AREA:	American Railway Engineering Association
ASHRAE:	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASNT:	American Society of Nondestructive Testing
ASTM:	American Society for Testing and Materials
AWG:	American Wire Gauge (synonymous with Brown and Sharpe)
AWS:	American Welding Society
AWPA:	American Wood Preservers' Association
AWQB:	Air and Water Quality Bureau (Department of DCDES)
BG&E:	Baltimore Gas and Electric Company
BLS:	Bureau of Labor Statistics
B&O:	Baltimore & Ohio Railroad (Division of CSX Transportation)
BOCA:	Building Officials and Code Administrators International
BTU:	British Thermal Unit
BTUH:	British Thermal Units Per Hour
C:	Celsius (Centigrade)
CAGI:	Compressed Air and Gas Institute

CE:	U.S. Army Corps of Engineers
cfm:	Cubic Feet Per Minute
CISPI:	Cast Iron Soil Pipe Institute
CMU:	Concrete Masonry Unit
C&O:	Chesapeake and Ohio Railroad (Division of CSX Transportation)
CONRAIL:	Consolidated Rail Corporation (formerly Penn Central)
C&P:	Chesapeake and Potomac Telephone Company
CQCS:	Contractor's Quality Control System
CRSI:	Concrete Reinforcing Steel Institute
dB:	Decibel
dc:	Direct Current
DFT:	Dry Film Thickness
DILM:	Ductile Iron Pipe, Cement-Lined and Coated, Mechanical Joint
DILP:	Ductile Iron Pipe, Cement-Lined and Coated, Push-On Joint
DPST:	Double Pole, Single Throw
DTS:	Data Transmission System
EPA:	Environmental Protection Agency
EPR:	Ethylene Propylene Rubber
F:	Fahrenheit
FAA:	Federal Aviation Administration
FCCCR:	Foundation for Cross Connection Control Research of the University of Southern California Engineering Center
FHWA:	Federal Highway Administration
FM:	Factory Mutual Associates
FS:	Federal Specifications
FED STD:	Federal Standard
FTA:	Federal Transit Administration

GPH:	Gallons Per Hour
GSA:	General Services Administration
HOA:	HAND/OFF/AUTOMATIC
HP:	Horsepower
HVAC:	Heating, Ventilating and Air Conditioning
ICEA:	Insulated Cable Engineers Association
ICI	Industrial Coatings International
ID:	Inside Diameter
IEEE:	Institute of Electrical and Electronic Engineers
IPS:	Iron Pipe Size
ISEA:	Industrial Safety Equipment Association
JGB:	Jackson Graham Building (formerly OCCB)
kHz:	Kilo Hertz
kV:	Kilovolts
kVA:	Kilovolts amperes
kW:	Kilowatts
L/DR:	Length-to-Diameter Ratio
LED:	Light Emitting Diode
mV:	1,000 volts
mVA:	1,000-amperes
MCM:	1,000 Circular Mills
MCP:	Motor Circuit Protector
MDNR:	Maryland Department of Natural Resources
METRO:	Logo for the Washington Metropolitan Area Transit Authority
MNCPPC:	Maryland National Capitol Park and Planning Commission
MS:	Military Specification
MSDS:	Material Safety Data Sheet
MSG:	Manufacturers' Standard Gauge

MIL STD:	Military Standard
MSHA:	Maryland State Highway Administration
MSS:	Manufacturer's Standardization Society of the Valve and Fitting Industry
MWRA:	Maryland Water Resources Administration (Part of MDNR)
NAAMM:	National Association of Architectural Metal Manufacturers
NACE:	National Association of Corrosion Engineers
NBS:	National Bureau of Standards
NC:	Normally Closed
NCMA:	National Concrete Masonry Association
NEBB:	National Environmental Balancing Bureau
NEC:	National Electrical Code
NEMA:	National Electrical Manufacturers Association
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NO:	Normally Open
NPS:	National Park Service
NTP:	Notice to Proceed
NTIS:	National Technical Information Service
NWS:	National Weather Service (Formerly U.S. Weather Bureau)
OCCB:	Operations Control Center Building 600 Fifth Street, N.W. Washington, D.C. 20001 (See JGB)
OD:	Outside Diameter
ORD:	Operation Readiness Date
OS&Y:	Outside Stem and Yoke
OSHA:	Occupational Safety and Health Administration
PCI:	Pre-stressed Concrete Institute
PDI:	Plumbing and Drainage Institute

PE:	Polyethylene
PEI:	Porcelain Enamel Institute
PEPCO:	Potomac Electric Power Company
PGFD:	Prince Georges County, Fire Department
PGDPW&T:	Prince Georges County Department of Public Works and Transportation
PGSCD:	Prince Georges County Soil Conservation District
PPHM:	Parts Per Hundred Million
PPL:	Plantation Pipeline Company
PPM:	Parts Per Million
psf:	Pounds Per Square Foot
psi:	Pounds Per Square Inch
psig:	Pounds Per Square Inch Gauge
PVC:	Polyvinyl Chloride
RF&P:	Richmond, Fredricksburg and Potomac Railroad
rms:	Root Mean Square
rpm:	Revolutions Per Minute
ROD:	Revenue Operation Date
RQD:	Rock Quality Designation
RLA:	Redevelopment Land Agency (Department of DCHCD)
RSA:	Revenue Service Adjustment
SDI:	Steel Deck Institute or Steel Door Institute, depending upon context in which it occurs
SMACNA:	Sheet Metal and Air Conditioning Contractors National Association
S1S:	Smooth One Side
S2S:	Smooth Both Sides
SJI:	Steel Joist Institute

SR:	Southern Railway Company
SPDT:	Single Pole, Double Throw
SPST:	Single Pole, Single Throw
SSPC:	Steel Structures Painting Council
TGA:	Thermo gravimetric Analysis
UL:	Underwriter's Laboratories, Incorporated
UPS:	Unit Price Schedule or Uninterruptible Power System, depending upon context in which it occurs
USBR:	U. S. Bureau of Reclamation
USCG:	U. S. Coast Guard
USCS:	U. S. Commercial Standard
USDA/SCS:	U. S. Department of Agriculture - Soil Conservation Service
USDOT:	U. S. Department of Transportation
USN/CD:	U. S. Navy, Chesapeake Division
USPS:	U. S. Product Standard
USSG:	United States Standard Gauge
WAD:	Washington Aqueduct Division (Element of U.S. Army C.E., Baltimore District)
WGL:	Washington Gas Light Company
WSSC:	Washington Suburban Sanitary Commission
WTC:	Washington Terminal Company (AMTRAK)
XLPE:	Cross-Linked Polyethylene

2.27 CONTRACT RECORD DRAWINGS

a. General:

- (1) During construction, the Contractor shall maintain a record set of Contract Drawings annotated to show all changes incorporated as work progresses. Information shall include, but not be limited to, the following:
 - (a) Depths of various elements of foundations in relation to survey data.
 - (b) Horizontal and vertical locations of underground electrical and utility facilities referenced to survey data. Unless otherwise specified, verify measurements within a 12-inch tolerance; verify storm and sanitary sewer pipe inverts within 0.01 foot.

- (c) Location of interior utilities and appurtenances concealed in construction, referenced to visible and accessible features of the structure.
 - (d) Field changes of dimensions and detail.
 - (e) Changes accomplished by change orders.
 - (f) Construction left in place, such as temporary support systems and concrete outside neat lines of permanent structures, including notes defining types and locations of items.
- (2) Before the scheduled date of final substantial completion, the Contractor shall submit approved as-built record drawings for the completed work.

All draft and final drawings submitted in a (.PDF) format shall be one file with drawings in proper sequence besides ACAD files.

b. As-built drawings:

- (1) Draft Deliverable: Submit to the Authority, for review and comment, separate sets of draft As-Built Drawings in both an AutoCAD (.DWG) file format and an Adobe (.PDF) file 11"x17" size format (.PDF files shall be capable of printing full-size drawings 22"x34" size.), in print quality black and white, with all fonts embedded. The latest versions of both file formats shall be used. All line work shall be shown in accordance with the WMATA CAD Manual. Images shall be clear, sharp, and readily legible. The Authority reserves the right to have drawing(s) resubmitted until the Contracting Officer Representative accepts the legibility of the drawing contained in the file. In addition, submit one set of full-size and two sets of half-size black ink on white paper copies of draft As-Built Drawings for review and comment by the Authority in accordance with Section 2.5, CONTRACTOR'S SUBMITTALS.
- (2) Upon return of one set of full-size black ink on white paper copy of the draft As-Built Drawings with Authority comments, incorporate additions and corrections resulting from Authority review comments. Contractor shall direct specific attention, by annotation on resubmitted As-Built Drawings, to revisions other than the corrections requested by the Contracting Officer Representative on previous submittals.
- (3) Final Deliverable: By the date scheduled for receipt of final approved As-Built Drawing deliverables in the Contract Schedule, separate sets of As-Built Drawings in both an AutoCAD (.DWG) file format and an Adobe (.PDF) file format, in print quality black and white, with all fonts embedded. Submit one set of full-size and two sets of half-size 11"x17" size black ink on white paper copies, produced from the Adobe file 22"x34" size, to the Contracting Officer Representative for review and Approval. If this submittal is found to be incomplete it will be returned to the Contractor with comments for re-submittal.
- (4) The completed As-Built Drawings do not require the signature of the Engineer or Architect of Record. Each completed As-Built Drawing produced in Adobe (.PDF) electronic format shall have the signature of an officer of the Contractor's organization, certifying compliance with as-built conditions, using a stamp as follows:

AS - BUILT

(DATE)

I CERTIFY THAT THIS DRAWING

ACCURATELY DEPICTS THE WORK
AS CONSTRUCTED

(AN OFFICER OF THE CONTRACTOR)

CONTRACTOR'S NAME

2.28 CERTIFICATION OF NONSEGREGATED FACILITIES BY CONTRACTORS AND SUBCONTRACTORS

Prior to the award of any subcontract, or federally assisted construction contract or subcontract, required to contain the Equal Opportunity article contained in his Contract, the Contractor shall obtain the certification set forth in the Invitation for Bids. This certification may be required by the Contractor, either for each subcontract or for all subcontracts during a period, i.e., quarterly, semiannually, or annually.

2.29 WAGE RATES

- a. The minimum wages, which in addition to basic hourly rate of pay include fringe benefit payments to be paid laborers and mechanics on this project pursuant to the LABOR PROVISIONS article of the General Provisions, as determined by the Secretary of Labor to prevail for corresponding classes of laborers and mechanics employed on projects similar in character to the Contract work in the pertinent locality, are set forth as an appendix to these Special Conditions.
- b. Any class of laborers and mechanics not listed but employed on this Contract shall be classified or reclassified conformably to the schedule set out therein by mutual agreement between the Contractor and class of labor concerned, subject to the prior approval of the Contracting Officer or other delegated Authority's Representative. In the event the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers and mechanics to be used, the question, accompanied by the recommendation of the Contracting Officer or other delegated Authority's Representative, shall be referred to the Secretary of Labor for final determination.

2.30 AFFIRMATIVE ACTION COMPLIANCE (RC-105, MAY 07)

This representation is applicable to federally assisted contracts of \$50,000 or more that are awarded to contractors with fifty (50) or more employees. By submission of this bid, the bidder represents that:

- (a) It has a workforce of _____ employees.
- (b) It [] has developed and has on file, or [] has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR Parts 60-1 and 60-2), or
- (c) It [] has not previously had contracts subject to the written affirmative action program requirements of the rules and regulations of the Secretary of Labor.

2.31 TECHNICAL REFERENCES

- a. When reference is made to codes, regulations, reference standards and specifications, the work shall conform to the edition current as of the date of receipt of bids, unless otherwise specified.
- b. Where reference standards and specifications conflict with Contract requirements, the Contract requirements shall govern.

2.32 COMMUNITY RELATIONS - NOT USED

2.33 DEFINITION OF TERMS

For the purposes of this Contract, the following terms and their derivative forms shall be accorded the meanings assigned below:

- a. Specified: Unless otherwise stated, as required by the Contract Specifications for the project.
- b. Shown: Unless otherwise specified, as shown on the Contract Drawings. Synonyms: Detailed, scheduled.
- c. Approved: Unless otherwise specified, as approved by the Engineer. Synonyms: Satisfactory, accepted.
- d. Directed: Unless otherwise specified, as directed by the Authority Representative or Contracting Officer. Synonyms: Designated, ordered, prescribed.
- e. AR: Authority Representative.
- f. Jurisdictional Authorities: State, federal and local authorities or agency thereof having jurisdiction over work to which reference is made.
- g. Work: Labor, supervision, services, materials, machinery, equipment, tools, supplies and facilities to accomplish the requirements of the Contract.
- h. Provided: Furnished, installed complete in place and successfully tested to demonstrate satisfactory operation.
- i. Submit: Unless otherwise specified, transmit to the AR for approval, information or record.
- j. Shall/Will/May:
 - (1) Shall: Indicates action which is mandatory on the part of the Contractor.
 - (2) Will: Indicates probable action by the Authority or its representatives.
 - (3) May: Indicates permissible action.
- k. Similar: Generally the same but not necessarily identical; details shall be worked out in relation to location and relation to other parts of the work.
- l. Including/consisting of:
 - (1) Including: Introduces a partial, representative listing of things or actions.

(2) Consisting of: Introduces a complete listing of things or actions which constitutes the whole.

m. Article: An element of the Specifications bearing its own alphanumeric designation.

2.34 IDENTIFICATIONS

a. Not used.

b. Not used.

c. CTC: Capital Transit Consultants.

d. The Jurisdictional agencies:

(1) Occupational Safety and Health Administration

(2) Environmental Protection Agency

(3) Washington, D.C.

(4) State of Maryland.

(a) Prince Georges County

(b) Montgomery County

(5) State of Virginia

(a) Fairfax County

(b) City of Alexandria and all sub-agencies therein.

2.35 ENGINEER'S FACILITY - NOT USED

2.36 PRECONSTRUCTION INSPECTION

a. Conditional inspection of buildings or structures in the immediate vicinity of the project which may reasonably be expected to be affected by the work will be performed by and be the responsibility of the Contractor.

b. The Contractor shall document in writing, including photographs, the general condition and defects from the inspection and submit to the AR within five calendar days after inspection.

2.37 DETECTION OF MOVEMENT - NOT USED

2.38 PHOTOGRAPHS -

A. Pre-Construction Photographs shall be submitted prior to start of construction. As soon as the

construction operations has been initiated at the site, the Contractor shall submit (to the AR) a series of digital photographs taken each month of progress and/or problems which effect his performance. Subject-specific construction photographs such as, but not limited to still photos showing potential change, non-conformance, quality, and property damage photo documentation shall be submitted monthly or weekly (if needed by AR) until completion of all physical work. The actual number of photos and locations shall be based on the amount of progress/and or problems encountered each month. The photo's need to be coordinated with the AR and staff to ensure proper coverage or areas. For informational purposes, each new stage of work shall be photographed to include major work areas and activities in progress. Contractor shall not be paid until the photographs are submitted to the Engineer within 10 days after taking. Completion of construction photographs shall be submitted prior to Substantial Completion.

- B. Digital photo's shall be submitted to the AR monthly in JPEG format via email (to AR) or as directed. Each print shall be identified on a permanent file so that the following data is recorded for each photo to include: the specific contract number; photo number, ex. Photo #1 of ..., job location such as survey stationing, to include looking north... or west...etc., date of the photo, progress or problems identified...in the lower right hand corner of the photo or on a separate file. Electronically label each still photograph with the following information on the bottom left corner:

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

Contract No. _____
Contract Title: _____
Prime Contractor: _____
Date photo taken: _____ Photograph No. _____
Identify Job location, area, elev., Room#, facing north, south, etc. on each photo:
Description of work in progress: _____
or Problems encountered: _____

2.39 WORK BY OTHERS

- a. This Contract is one of a series of contracts for the construction of the Washington Metropolitan Area Transit System. During the progress of the work under this Contract it will be necessary for other contractors and persons employed by the Authority to work in or about the project. The Authority reserves the right to put such other contractors to work and to afford such access to the site of the work to be performed hereunder at such times as the Authority deems proper. The Contractor shall not impede or interfere with the work of such other contractors engaged in or about the work and shall so arrange and conduct his work that such other contractors may complete their work at the earliest date possible. The cooperation of the Contractor with the other contractors is mandatory.
- b. The exercise of such right aforesaid by the Authority to permit other Contractors and others to do work in or about the contract area shall in no way nor to any extent relieve the Contractor from liability for loss and damage to the work due to or resulting from his operations.
- c. The AR will decide any disputed questions regarding the performance of the work, access to the site, cleaning up the site and priority of performance between the various contractors.
- d. The Contractor shall inform the AR in writing of all agreements pertaining to coordinating his work with the work of other contractors engaged upon the project.
- e. Provisions similar to the above shall apply to the relations between the Contractor and utility companies performing work in connection with Authority construction. Permit free and clear access

to utility personnel for purposes of inspection, maintenance, providing for additional service requirements and construction of new facilities.

- f. The Contractor shall cooperate with all other contractors requiring access to the work, regarding access to the site, maintenance of security, temporary facilities, cleaning of the site and like matters requiring common effort.
- g. Other contracts, as necessary, may be performed at this location at the sole discretion of the Authority. Further, the Authority may perform work with its own forces at any time during the contract period of performance.
- h. When transportation services, or other activities of the Authority are to be disrupted, the Contractor shall provide such advance notice as directed.

2.40 UTILITIES

- a. Within the limits of and adjacent to the project there may exist public and private utilities in the form of sanitary sewers, storm drains, traffic and street light systems, parking meters, streetcar tracks, gas lines, steam lines, water lines, fire hydrants, oil fill lines, and aerial and underground power, fire alarm, police, telegraph and telephone lines. The Contract or Informational Drawings may show some known public and private utilities in their approximate locations within the limits of the project which are expected to interfere with the work. The Contractor is, however, cautioned that these locations are not guaranteed, nor is there any guarantee that all utility lines in existence within the limits of the project have been shown. All utilities shown or encountered in the work shall be maintained and protected in their locations unless otherwise shown or specified.
- b. The Contractor shall, through the AR, establish and maintain direct and continuous contact, with the owners or operators of the respective utilities and shall cooperate with them at all times and in all places of the work. Before commencing construction, the Contractor shall verify the locations of all utilities which may be affected by his operations, and shall submit his plan for performing the work to the AR for review and approval and to the utility owner. No work in the vicinity of or which may affect utilities shall be started until approved.
- c. The Contractor shall notify the AR, "Miss Utility," utility companies and the jurisdictional agencies at least 48 hours in advance of construction which may interfere with the operation of such utilities.
- d. Damage to utility lines caused by the Contractor's operations shall be immediately reported by him to the AR and to the utility company or jurisdictional agency affected, which will, in general, make its own repairs at the Contractor's expense.

2.41 ACCESS TO FIRE HYDRANTS AND FIRE ALARM BOXES

- a. Whenever the work is being carried on, free access must be given to each fire hydrant, fire alarm box and connection to standpipe; when required, hydrants shall be extended by suitable tubes or piping to an accessible point as approved and to the satisfaction of the jurisdictional fire department. Obstructions shall not be piled at any time or placed within 10 feet of any fire hydrant, standpipe connections and other suppression devices or fire alarm box; where materials are unavoidably piled or placed in the vicinity of a fire hydrant, standpipe connections and other suppression devices or fire alarm box and to such height as to prevent the same from being readily seen, the position of such hydrants, standpipe connections and other suppression devices or fire alarm box shall be indicated by suitable signs and lights, both day and night.

- b. The Contractor shall safeguard, maintain and protect the wires, cables, ducts, manholes, posts and poles, signals, and alarm boxes of the fire departments. He shall not cause any interruption to fire department fire alarm telegraph service, and in case of accident, shall promptly notify the fire department. No fire department wire, cable, duct, manhole, post or pole, signal or fire alarm box shall be disturbed, except in the presence of a representative of the Bureau of Fire Alarm Telegraph. In case any such wire, cable, duct, manhole, post or pole, signal or fire alarm box is disturbed, the Contractor shall immediately notify the AR, and it shall be restored immediately to its original condition.

2.42 CONTRACTOR'S PLANT - NOT USED

2.43 CONTRACTOR'S EMPLOYEES (07/03)

- a. The Contractor and his subcontractors shall provide their personnel with distinctive badges showing the employer's name and employee's name or number. These badges shall be displayed in a prominent manner on each person while engaged on the work. Access to the sites shall be granted only to properly accredited representatives of the Contractors and his subcontractors.
- b. If any subcontractor or person employed by the Contractor appears to the AR to be incompetent or careless or to act in a disorderly or improper manner, his services in connection with the work shall be immediately terminated upon request by the AR and he shall not again be employed on the work.
- c. The Contractor and subcontractors requiring entry into the rail operating system for performance of Contract work shall provide such employees requiring entry with photo identification cards issued by the Authority. The Contractor shall obtain and be responsible for administering the use of the identification cards in accordance with most recent governing Authority POLICY/INSTRUCTION. The ID cards are not valid for transportation on Metrobus or Metrorail and will be valid for the duration of the contract up to a maximum of one year.

2.44 HOURS OF WORK

Within the limitations of these specifications, the Contractor shall work such hours per shift, with or without overtime, as many shifts per day and as many days per week as necessary to complete the various parts of the work and the entire work within the dates specified.

2.45 NOISE CONTROL

- b. The Contractor is responsible for adhering to the Local Jurisdictional Noise Control Ordinances.
- a. The Contractor shall take every action possible to minimize noise caused by his operations. When required by jurisdictional agencies, noise producing work shall be performed in less sensitive hours of the day or week as directed. Noise produced by the work shall be maintained at or below the decibel levels specified and within the time periods specified.

2.45.1 PROTECTION OF PUBLIC AND EMPLOYEES

- a. Noise abatement measures and precautions shall be taken in order to reduce exposure to noise. Permissible noise exposure shall be calculated in accordance with the procedures established under the Walsh-Healy Public Contracts Act. Sound levels for public noise exposure due to construction will be measured at the closest point adjacent to the site in normal use by the public while construction work is in progress. The Contractor is required to adhere to 29 CFR 1910.95 *Occupational Noise Exposure*, for all work on Authority property, including construction. Employee noise exposure levels will be measured at the employees' normal work station. In either case sound levels shall not exceed the following:

Exposure per day in hours	Sound level in dBA*
8	90
6	92
4	95
3	97
2	100
1-1/2	102
1	105
1/2	110
1/4 or less	115

- b. Sound levels shall be measured on the A-weighted network of a general purpose sound level meter, conforming to ANSI S1.4 at slow response. Sound level for impulse or impact noise, i.e., noise of duration less than one second, shall not exceed a peak sound pressure level of 140 dB when measured on an approved impact noise analyzer. Instruments used for measurements should have a pulse range of at least 60 decibels (dB) and be capable of measuring impulses of duration down to 20 milliseconds.
- c. In underground or tunnel construction, individual hearing protection devices capable of reducing noise exposures to OSHA permissible exposure limits, shall be provided.
- d. The Contractor and all Subcontractors shall comply with all 29 CFR 1910.95 *Occupational Noise Exposure* for all work on Authority property, including construction. This standard requires that employees exposed to noise in excess of 85 dBA (slow response), participate in a Hearing Conservation Program.

2.45.2 NOISE RESTRICTIONS AT AFFECTED STRUCTURES

In addition to the provisions of Article 2.45.1, sound levels for noise due to construction activities will be monitored at the building line of structures affected acoustically by the Contractor's operations and plant. Sound levels for noise from equipment shall be measured at the building line on the A weighting network of a general purpose sound level meter at slow response. To minimize the effect of reflective sound waves at buildings, measurements may be taken three to six feet in front of the building face.

2.45.2.1 MOBILE EQUIPMENT

Sound levels for nonscheduled, intermittent, short term noise from mobile equipment shall not exceed the following dBA levels:**

RESIDENTIAL STRUCTURES	CATEGORIES			
	I	II	III	IV
Daily, except Sundays and Legal Holidays 7:00 AM to 7:00 PM	75	80	85	85

All other times	60	65	70	75
BUSINESS-COMMERCIAL STRUCTURES CATEGORIES	I	II	III	IV
Daily, including Sundays and Legal Holidays, all hours; maximum	85	85	85	85

2.45.2.2 STATIONARY EQUIPMENT

Sound level limits for repetitively scheduled and relatively long-term noise from stationary equipment shall not exceed the following dBA levels:**

RESIDENTIAL STRUCTURES	CATEGORIES			
	I	II	III	IV
Daily, except Sundays and Legal Holidays 7:00 AM to 7:00 PM	60	65	70	75
All other times	50	55	60	65
BUSINESS-COMMERCIAL STRUCTURES	CATEGORIES			
	I	II	III	IV
Daily, including Sundays and Legal Holidays, all hours, maximum.	70	70	75	75

2.45.2.3 NOISE ABATEMENT MEASURES

The Contractor shall provide such equipment and sound-deadening devices and take such noise abatement measures that are necessary to comply with the requirements of this Contract, consisting of, but not limited to, the following:

- a. Shields or other physical barriers to restrict the transmission of noise.
- b. Soundproof housings or enclosures for noise-producing machinery.
- c. Efficient silencers on air intakes of equipment.
- d. Efficient intake and exhaust mufflers on internal combustion engines.
- e. Line hoppers and storage bins with the sound-deadening material.
- f. The prohibition of the use of air-driven or gasoline-driven saws.
- g. Conducting truck loading, unloading and hauling operations so that noise is kept to a minimum.
- h. Routing of construction equipment and vehicles carrying spoil, concrete or other materials over streets that will cause the least disturbance to residents in the vicinity of the work. The AR shall be advised in writing of the proposed haul routes prior to the Contractor securing a permit from the local government.

- i. Siting of stationary equipment shall be subject to the approval of the AR in accordance with the CONTRACTOR'S PLANT article of these Special Conditions.

2.45.3 CONSTRUCTION EQUIPMENT NOISE

Powered equipment, truck or power hand tool that produce a maximum sound level exceeding the following limits shall not be used during construction operations. The sound level limits specified are referenced to a distance of 50 feet from the equipment. Sound levels shall be measured in substantial conformity with the Standards and Recommended Practices established by the Society of Automotive Engineers, Inc., including the latest revisions to SAE J366a and SAE J952b.

- a. Construction and industrial machinery, such as crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic power equipment. Sound level limit: 90 dBA.
- b. Highway trucks: Sound level limit: 88 dBA.

- 2.45.4 Where required by agencies having jurisdiction, certain noise-producing work may have to be performed during other than regular working hours or only at specified periods.

**Measured on the A-weighted network of a general purpose sound level meter that conforms to the current American National Standards Institute specification S1.4, at slow response. Sound level for impulse or impact noise (noise of duration less than one second) shall not exceed a peak sound pressure level of 140 dB when measured on an approved impact noise analyzer. Instruments used for measurements should have a pulse range of at least 60 dB and be capable of measuring impulses of duration down to 20 milliseconds.*

Sound level for impulsive or impact noise (noise of duration less than one second) shall not exceed a peak sound pressure level of 140 dB when measured on an approved impact noise analyzer. In lieu of the above procedure, 125 dB measured on the C weighting network of a General Purpose sound level meter at fast response will be accepted as an equivalent measure of the peak sound pressure level.

***Measured at the building line on the A-weighted network of a general purpose sound level meter at slow response. To minimize the effect of reflective sound waves at buildings, measurements may be taken three to six feet in front of building face.*

2.46 WORK, STORAGE AND PARKING AREA

- a. Parking facilities for the Contractor's personnel and those of his subcontractors' personnel shall be the Contractor's responsibility. The storage and work facilities provided by the Authority shall not be used for parking by the Contractor or his personnel.
- b. The areas shown as the Contractor's work and storage area will be provided to the Contractor without charge. Additional work and storage space, if required, shall be obtained by the Contractor. The contractor shall store the materials off the worksite in a secured facility. No storage shall be allowed in public areas or WMATA property including the platforms.

2.47 HAZARDOUS MATERIALS

- a. Explosives - The use of explosives for the performance of Contract work will not be permitted.
- b. Flammable Materials - The jurisdictional Fire Marshals prohibit the use of oxygen-acetylene welding/cutting equipment or flammable materials anywhere in the Metrorail system during hours of system operation. After each work shift, all flammable materials must be removed from Authority property.
- c. Chemicals and Hazardous Materials - Material Safety Data Sheets for all chemicals and hazardous materials to be used by the Contractor and Subcontractors, must be submitted for approval prior to use on Authority property.

2.48 MOBILIZATION AND PREPARATORY WORK

- a. Mobilization and preparatory work shall include mobilization of construction equipment, materials, supplies, appurtenances and the like, manned and ready for commencing and continuing the work as well as subsequent demobilization and removal from the site of such equipment, appurtenances and the like upon completion of the work.
- b. Mobilization and preparatory work shall include assembly and delivery to the site of the plant, equipment, materials and supplies necessary for the prosecution of the work that are not intended to be incorporated in the work; the clearing of and preparation of the Contractor's work area; the complete assembly, in working order, of equipment necessary to perform the required work; personnel services and hire of plant on work preparatory to commencing actual work; plus all other preparatory work required to permit commencement of the actual work on construction items for which payment is provided under the terms of the Contract.
- c. The Contractor shall conduct his work in accordance with the requirements of the SAFETY REQUIREMENTS article of these Special Conditions.
- d. When separate payment for mobilization and preparatory work is provided in the Contract, payment will be made in the amount provided in the UPS.
- e. When separate payment for mobilization and preparatory work is provided in the Contract, such payment will be made progressively, up to 100 percent of the fixed lump sum Contract price for mobilization as shown on the UPS, as mobilization occurs. The payment will be made in the form of six equal monthly payments with the first payment beginning 30 calendar days after receipt of NTP.
- f. Partial payments may be reduced by an amount determined by the AR if, in his determination, one or a combination of the following conditions applies:
 - (1) The plant and equipment at the site are insufficient or are not suitable for the performance of the work.
 - (2) The plant and equipment brought on the project are not being utilized or sufficiently utilized for prosecution of the work.
 - (3) The plant and equipment brought on the project and committed to the work are removed from the project without permission of the AR.
- g. In the event of such a reduction in partial payments, the remainder of the partial payments which are unpaid at the date of such reduction will be paid with subsequent progress payments as and when the conditions stated are rectified.

2.49 MAINTENANCE OF TRAFFIC - NOT USED

2.50 POLLUTION ABATEMENT

- a. The Contractor shall by every means possible conduct his operations in a manner to minimize pollution of the environment surrounding the area of work. Specific controls shall be applied as follows:

(1) Material transport: Trucks leaving the site and entering paved public streets shall be cleaned of mud and dirt clinging to the body and wheels of the vehicles. Trucks arriving and leaving the site with materials shall be loaded so as to prevent dropping materials and debris on the streets. The Contractor shall maintain a suitable vehicle cleaning installation and inspection installation with permanent crew for this purpose. Spills of materials in public areas shall be removed immediately.

(2) Waste materials: No waste or erosion materials shall be allowed to enter natural or man-made water or sewage removal systems. Erosion materials from excavations, borrow areas or stockpiled fill shall be contained within the work area. The Contractor shall develop methods to control waste and erosion including such means as filtration, settlement and manual removal.

- (a) The Contractor shall comply with the following:

[1] Maryland:

[a] Chapter 245 of the Acts of the 1970 General Assembly of the State of Maryland which provides for a statewide erosion and sediment control program in Maryland under the guidance of the Department of Natural Resources.

[b] Prior to the start of the applicable earthwork construction the Contractor shall submit schedules for accomplishment of erosion control work in the State of Maryland as are applicable for earthwork under this Contract. No earthwork operations in the State of Maryland shall be started until the Contractor's erosion control schedules and methods of operation have been approved.

(3) Burning: No burning of waste shall be allowed without written permission. When permission is granted, burning shall be conducted in accordance with the regulations of the jurisdictional agency.

(4) Dust control: The Contractor shall by water sprinkling or other approved methods continuously control dust generated by his operations.

(5) The Contractor, subcontractors and suppliers must submit evidence to the Authority that the governing air pollution criteria will be met. This evidence and related documents will be retained by the Authority for on-site examination by FTA.

- b. The Contractor shall submit a program for pollution control prior to beginning operations.

c. Demolition shall be performed in compliance with the requirements of the United States Environmental Protection Agency, National Emission Standards for Hazardous Air Pollutants, Section 112 of the Clean Air Act as amended 42 U.S.C. 1857 et seq. (the Act). This act covers air pollution from asbestos, beryllium, and mercury and requires prior notification to the Agency of intent to demolish a building having these materials and certain precautionary measures during demolition.

- d. Clean air and water:

(1) The Contractor agrees as follows:

- (a) To comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 U.S.C. 1857, et seq., as amended by Pub. L. 91-604) and Section 308 of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq., as amended by Pub. L. 92-500), respectively, relating to inspection, monitoring, entry, reports and information, as well as other requirements specified in Section 114 and Section 308 of the Air Act and the Water Act, respectively, and all regulations and guidelines issued there under before the award of this Contract.
- (b) That no portion of the work required by this prime Contract will be performed in a facility listed on the EPA List of Violating Facilities on the date when this Contract was awarded unless and until the EPA eliminates the name of such facility or facilities from such listing.
- (c) To comply with clean air standards, clean water standards, and the Resource Conservation and Recovery Act (RCRA), at the facility in which the Contract is being performed.
- (d) To insert the substance of the provisions of this clause into any nonexempt subcontract, including this paragraph.
- (e) To obtain any necessary waste water discharge permits prior to discharging waste water generated at the work site.

(2) The terms used in this article have the following meanings:

- (a) The term Air Act means the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub. L. 91-604).
- (b) The term Water Act means Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub. L. 92-500).
- (c) The term clean air standards means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions or other requirements which are contained in, issued under or otherwise adopted pursuant to the Air Act or Executive Order 11738, an applicable implementation plan as described in Section 110(d) of the Clean Air Act (42 U.S.C. 1857c-5(d)), an approved implementation procedure or plan under Section 111(c) or Section 111(d), respectively, of the Air Act (42 U.S.C. 1857c-6(c) or (d)), or an approved implementation procedure under Section 112(d) of the Air Act (42 U.S.C. 1857c-7(d)).
- (d) The term clean water standards means any enforceable limitation, control, condition, prohibition, standard or other requirement which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the EPA or by a State under an approved program, as authorized by Section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pretreatment regulations as required by Section 307 of the Water Act (33 U.S.C. 1317).
- (e) The term compliance means compliance with clean air or water standards and with the Resource Conservation and Recovery Act (RCRA). Compliance shall also mean compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the EPA or an air or water pollution control agency in accordance with the requirements of the Air Act, Water Act, RCRA, and regulations issued pursuant thereto.

(f) The term facility means any building, plant, installation, structure, mine, vessel or other floating craft, location or site of operations, owned, leased or supervised by a contractor or subcontractor, to be utilized in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant installation or structure, the entire location or site shall be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are co-located in one geographical area.

(g) The term RCRA means the Resource Conservation and Recovery Act of 1976.

2.51 RESTORATION OF EXISTING FACILITIES

During construction operations on this Contract certain areas currently grassed, landscaped or otherwise improved may be disturbed or damaged. The Contractor shall restore such areas disturbed or damaged by his operations.

2.52 ACCESS TO ADJACENT PROPERTY

The Contractor shall conduct construction operations in such a manner as to cause as little inconvenience as possible to owners of property affected by such operations. Convenient access to all property from roads and highways along the line of work shall be maintained. When access to adjacent properties is temporarily cut off due to the Contractor's operations, the Contractor shall render every assistance to provide access to the property and the transfer of commodities, including refuse, to and from the property.

2.53 PAVEMENT RESTORATION -

The Contractor shall secure permits from each jurisdictional agency for all pavement restoration within the limits of said agency's jurisdiction. The Contractor shall submit working drawings of such pavement restoration prepared in accordance with the requirements of the Contract Documents and the jurisdictional agency to the AR for approval by the agency

2.54 LICENSES

2.54.1 CONTRACTOR'S LICENSE

a. The Contractor, whether resident or nonresident of the state in which the work will be performed, will be required to show evidence of a certificate of registration as required by the following:

- (1) District of Columbia
- (2) Maryland
- (3) Virginia and including any local jurisdictions therein.

2.55 ENGINEER'S CHANGE HOUSE FACILITY - NOT USED

2.56 WORK ON OR UNDER NATIONAL PARK SERVICE LAND - NOT USED

2.57 BASIS OF PAYMENT

A. In consideration of its undertaking under this Contract, the Contractor will be paid monthly the sums set

forth in this Contract, which shall constitute complete payment for all Work required to be performed under this Contract and for all expenditures, which may be made and expenses incurred. The basis of payment will be the Contract Price, as shown in the CONSTRUCTION CONTRACT FORM, and which shall constitute complete compensation for performance of all Work required by the Contract.

B. Standby cost for delayed or cancelled Site access: In the event the Contractor is delayed in the performance of the Work due to Authority delayed or cancelled Site access, the following basis of payment shall apply:

1. The "Hours of Work" is the period during which the Contractor has use of the Site. The "Hours of Work" will exclude the periods required by the Authority to safely secure the Site before the start of the "Hours of Work" and to restore the Site to an operational state after completion of the "Hours of Work".

2. Delay will be measured relative to "Hours of Work" only. The "Hours of Work" shall be determined based upon weekly coordination between the Contracting Officer Representative (COR) and the Contractor as defined in Clause 2.1.4 ACCESS TO SITE AND HOURS OF WORK of Construction Special Provisions. If the Authority delays the "Access to Site Time", but is also able to delay the "Off Site Time", and the Contractor is able to work for a number of hours equivalent to the Hours of Work, this will not constitute a delay. If the Contractor is not given the access for a number of hours equivalent to the Hours of Work, only the differential between the hours the Contractor was given the access and the Hours of Work will constitute a Delay.

3. Delays caused by actions of the Authority may occur at the start of the "Hours of Work", during the "Hours of Work", or at the end of the "Hours of Work."

a. A delay at the start of the "Hours of Work" occurs when the Authority does not grant access to the Site by the scheduled start time. A delay at the start of the "Hours of Work" will be measured from the scheduled start of the "Hours of Work" until the time the Contractor is granted access to the Site;

b. A delay during the "Hours of Work" occurs when the Authority requests the Contractor to vacate the Site and the Contractor is later allowed to return to the Site. A delay during the "Hours of Work" will begin when the Contractor is directed to stop Work to vacate the Site and will end when the Contractor returns to the Site and resumes Work.

c. A delay at the end of the "Hours of Work" occurs when the Authority requests the Contractor to vacate the Site early. A delay at the end of the "Hours of Work" will be measured from the time the Contractor is directed to vacate the Site until the scheduled end of the "Hours of Work".

3. Delayed Access by the Authority

The Contractor will be compensated for the direct labor costs, as standby cost, incurred for the aggregate of delays that exceed 60 minutes relative to the "Hours of Work" specified in Table 2.57-01.

Shifts requiring Track Rights: These are weeknight shifts as may be required to perform jumper cable preparation and removal, Cutover Activities (COA) and Equipment Delivery and Removal Activities (ERD). For such shifts Track Rights are generally scheduled from 01:30 to 04:00 HRS.

Shifts Not Requiring Track Rights: These are day or night shifts after the TBS is isolated, during which only Escort support is required, referred to as Installation and Commissioning Activities (IC).

4. Canceled Site Access by the Authority

When access to the Site is cancelled by the Contracting Officer Representative with less notice than specified in Table 2.57-02, the Authority will pay the standby cost shown in that Table. However, if Contractor is able to reassign the work crew to other work, regardless of the time of the notice given by the Contracting Officer Representative, no payment will be made. If the Authority did not grant any Access during the scheduled Hours of Work stated in Clause 2.1.4 ACCESS TO SITE AND HOURS OF WORK of Construction Special Provisions and Table 2.57-01 hereto due to Authority caused delay, it shall be interpreted as Authority-caused cancellation with less than 24 hour notice; and the Contractor shall be compensated in accordance with Table 2.57-02. The scheduled shift hours will be approved in the required 3 week forecast schedule provided by the Contractor and approved by the Authority.

5. No payment will be made in those cases where:

a) Authority caused delay is less than 60 minutes.

b) A delay at the start of the "Hours of Work" occurs and the Authority then grants Access to the Site. If the Contractor elects to cancel Work or proceeds working and then elects to cease working and leaves the Site prior to the scheduled end of the "Hours of Work", no payment for that remaining time will be made to the Contractor.

c) Authority provides notice of cancellation to the Contractor by the number of hours equal to or greater than the number of hours specified in Table 2.57-02.

6. Prior to the completion of each shift at each work location, the Contractor and the Contracting Officer Representative or designee shall sign a Daily Report, Period of Delay form, which shall document the work start and completion times, the duration of the delay, the reason for the delay by either the Authority or the Contractor or both, the reason for the Contractor leaving the Site prior to the scheduled end of the "Hours of Work" period, details of the work performed and/or planned, and the names of the crew members present, including foremen, but excluding salaried supervision. Certified payrolls shall establish the hourly rates of the crew members.

7. If the Authority delays vary for different work locations during one Access event, the Contractor may use the delay for the work location that was delayed the most as the delay for calculation of extension to Period of Performance and Make-up Access defined in Table 2.57-01.

8. The Contractor shall not be entitled to compensation for equipment, overhead, profit or extended overhead costs for Authority caused delay or cancellation under this Section; however, this Section does not prohibit the Contractor from seeking an equitable adjustment for equipment costs under other sections of the Contract such as Clause 1.38 SUSPENSION OF WORK and Clause 1.35 CONTRACT MODIFICATIONS - REQUIREMENTS FOR PROPOSALS, PRICE BREAKDOWN AND NEGOTIATION OF PROFIT of Construction General Provisions. Authority caused delays or cancellations may provide a basis to grant an extension to the Period of Performance in accordance with Tables 2.57-01 and 2.57-02.

9. All requests for standby costs for Authority caused delay and/or Authority caused cancellation and/or any other claim requests shall be submitted to the Contracting Officer Representative with the next progress payment or within 30 Days, whichever is longer, and shall include applicable properly completed Daily Report and Period of Delay Form. The Contractor waives any right to standby costs where the delays are not documented prior to the completion of the shift and the request for payment is not submitted to the Contracting Officer Representative with the next progress payment or within 30 Days, whichever is longer. All the requests shall contain a full written proposal in accordance with Clause 1.35 CONTRACT MODIFICATIONS - REQUIREMENTS FOR PROPOSALS, PRICE BREAKDOWN AND NEGOTIATION OF PROFIT of Construction General Provisions.

10. The Authority will provide Make-up Access as early as possible for Authority caused delays or cancellations in accordance with Tables 2.57-01 and 2.57-02.

11. If the Contractor elects to cancel the Work prior to the start of the Hours of Work, that access event may be lost as described in Table 2.57-03. If Contractor does not provide written notice of cancellation within the time indicated in Table 2.57-03, that access event will be lost. If the Contractor provides written notice of cancellation within the time indicated in Table 2.57-03, the access event may be rescheduled by the Authority.

12. The delay is called a concurrent delay if both the Contractor and the Authority cause delay at the same time. A concurrent delay is an excusable, but not a compensable delay. The Contractor shall be entitled to an extension of Period of Performance and/or Make-up Access if the extension is justified by the Time Impact Analysis. However neither the Authority nor the Contractor may recover delay damages resulting from concurrent delays.

13. Third party delay is a delay without the fault or negligence of either the Authority or the Contractor. The Contractor shall be entitled to an extension of Period of Performance and/or Make-up Access if the extension is justified by the Time Impact Analysis and the Authority and the Contractor agree that the delay arose from unforeseeable causes beyond the control of the Contractor. Third party delay is generally non-compensable.

TABLE 2.57-01

AUTHORITY CAUSED DELAY		
	Roadway Non-Revenue – Weekday Access for Cut Over Activities (COA) & Equipment Removal & Delivery (ERD)	Installation & Commissioning (IC)
Hours of Work	01:30 to 04:00	Typical 8 hour shift as approved
Access Window	2.5 Hours	in Contractor provided Work Plan
Shift Expectation	10 pm to 6 am	8 hour shift approved by WMATA
Delayed Hours within Access Window	<i>Equal to or more than 60 min within ACCESS WINDOW</i>	<i>Equal to or more than 3 hours</i>
Standby Cost: Compensation for Direct Labor	Actual time lost	

Make-up Access Provided by the Authority	1 Non-Revenue Weekday	
Extended Period of Performance	Yes, if justified by Time Impact Analysis	Yes, if justified by Time Impact Analysis
Delayed Hours within Access Window	<i>Less than 60 min</i>	<i>Less than 3 hours</i>
Standby Cost: Compensation for Direct Labor	No	Actual time lost
Make-up Access Provided by the Authority	No	1 Non-Revenue Weekday if accumulated Hours Delayed for multiple shifts are equal to or more than 8 hours
Extended Period of Performance	No	Yes, if justified by Time Impact Analysis

TABLE 2.57-02

AUTHORITY CANCELLATION OF ACCESS		
	Roadway Non-Revenue – Weekday Access for Cut Over Activities (COA) & Equipment Removal & Delivery (ERD)	Installation & Commissioning (IC)
Make-up Access Provided by the Authority	One Non-Revenue Weekday	
Hours of Work Access Window	01:30 to 04:00 2.5 Hours	Typical 8 hour shift as approved in Contractor provided Work Plan
Shift Expectation	10 pm to 6 am	8 hour shift approved by WMATA
Notice by Authority before the start of “Hours of Work”	<i>Equal to or less than 24 hours</i>	<i>Equal to or less than 24 hours</i>
Standby Cost: Compensation for Direct Labor	The scheduled shift hours	
Extended Period of Performance	Yes, if justified by Time Impact Analysis	Yes, if justified by Time Impact Analysis

Notice by Authority before the start of "Hours of Work"	<i>More than 24 hours</i>	<i>More than 24 Hours</i>
Standby Cost: Compensation for Direct Labor	No	No
Extended Period of Performance	Yes, if justified by Time Impact Analysis	Yes, if justified by Time Impact Analysis

TABLE 2.57-03

CONTRACTOR REQUEST FOR CANCEL ACCESS	
Non Revenue-Weekday Access for COA, ERD, & IC	
Contractor's Notice given to Authority before Start of "Hours of Work"	Equal to or less than 5 Days
Scheduled access event will be lost to the Contractor	
Contractor's Notice given to Authority before Start of "Hours of Work"	More than 5 Days
Access event may be rescheduled by the Authority	

2.58 QUALITY ASSURANCE & QUALITY CONTROL COMPLIANCE

PART 1 GENERAL

2.58.1 Quality Management System/Project Specific Quality Management Plan

- A. This Section specifies the Quality Management System (QMS) that shall be established, documented, maintained, and executed by the Contractor for the length of the contract to ensure that the performed work and services conform to the specified requirements. The selected bid contractor shall establish, document, maintain and execute a QMS which contains a Project Specific Quality Management Plan (PSQMP)

- B. The QMS/PSQMP shall be an executable system of Quality Assurance and Quality Controls that address the elements stated in FTA-IT-90-5001-02.1. The QMS/PSQMP shall follow FTA-IT-90-5001-02.1 (inclusive of all 15 elements) utilizing the FTA Quality Management System Guideline elements as stated in FTA-PA-27-5194-12.1 along with ISO 9001:2008 and ISO 10013 Standards as guides. As a minimum, the QMS Manual shall include all required Policies, Procedures, and the PSQMP

describing how this project specific QMS will be documented, implemented, executed and revised as necessary.

- C. The Quality Manual, Policies, Procedures, and PSQMP shall be approved by the Executive(s) responsible for the Contracting entity then forwarded to WMATA for review and approval.
- D. The QMS/PSQMP shall be established and approved by the Authority prior to implementation.
- E. The contractor shall not perform any services and work until the Authority approves and validates the QMS and PSQMP meets or exceeds FTAIT-90-5001.02.1 QA/QC guidelines; inclusive of all 15 required elements contained within.
- F. Initial submission and subsequent revisions of the Quality Management Manual and Quality Management Procedures shall require Authority approval. In addition, the execution of the QMS shall authorize the Authority to audit any contractor, subcontractor, consultant and/or supplier any time at the Authorities discretion, throughout the term of the Contract.
- G. The purpose for a QMS/PSQMP requirement is to document how the contractor will execute the work to assure that:
 - 1. Material, equipment, construction, and workmanship are furnished in conformance with the original Contract Design Drawings and Design Specifications Issued for Construction and with all jurisdictional codes and regulations, including the requirement for certification of Americans with Disabilities Act Accessibility Guidelines (ADAAG) regulations compliance submittal at completion of construction by the Contractor. The Contractor's attention is directed to the fact that all projects are subject to FTA assessment for ADAAG compliance.
 - 2. The work is properly completed, tested, and furnished to the Authority on time as specified in this Contract and WMATA Safety and Security Certification Program Plan.
- H. The QMS/PSQMP shall be revised, updated, and approved as necessary throughout the term of the Contract to reflect changes determined by management review, internal audit and/or Authority audit or Assessment to be necessary to improve the Quality system(s). Any revision of the QMS or PSQMP must be submitted to the Authority for approval.
- I. Certification of the Contractor to ISO 9001 is not required. However, certain suppliers and manufacturers shall be certified as required in the specifications.
- J. The principal role of the Authority, Office of Quality Assurance and Warranty (QAAW), will be oversight of the effectiveness and compliance of the Contractor's QMS including the PSQMP, Quality Assurance, quality control, inspections, testing and all processes and procedures therein. This notice extends to all subcontractors, consultants and suppliers.
- K. At its sole discretion, the Authority may conduct audits, tests, and inspections in addition to those performed by the Contractor. The Authority reserves the right to attendance and oversight of any audit, inspection, and/or testing performed by the contractor, subcontractor, consultant or supplier. Any deficiencies discovered shall be documented and presented to the immediate attention of the Contractor including written follow-up

notification to the Contractor.

2.58.2 Project Specific Quality Management Plan

- A. The PSQMP shall include, at minimum, the following elements and supporting documentation:

1. Management Responsibility:

- a. The Contractor shall define and document a Quality Policy that includes objectives for each specific project and should communicate, implement, and maintain that Policy at all levels of its organization.
- b. The contractor management shall designate a representative, who will have defined authority and responsibility for ensuring that the Quality Management System and Quality Management Plan is established, implemented, maintained, and continually evaluated and improved.
- c. The contractor management shall also identify those persons responsible for the quality assurance functions and shall define, and document the responsibility, authority, and interrelation of those persons.
- d. The contractor Quality Manager shall:
 - 19 Have written authority from the contracting Executive to stop work, if necessary, for quality improvement.
 - 20 Have no other assigned duties except to establish, document, implement and maintain the Quality Management System for this contract.
 - 21 Report directly to and be supervised by an Officer of the Contractor at a level above that of the Project Manager responsible for the project.
 - 22 Serve as a liaison officer with WMATA and the jurisdictional agencies on matters relating to the Contractor's quality system
 - 23 Be responsible for ensuring that the Quality System is effective in ensuring that the Contract requirements are satisfied.
 - 24 Be responsible for the oversight of onsite and offsite testing by the Contractor, subcontractors and suppliers.
- e. The contractor shall establish, document, execute and maintain an Authority approved Project Specific Quality Management Plan for the successful completion of this project.

2. Documented Quality Management System:

- a. The Contractor shall established, document, maintained, and execute an operational and Authority approved QMS/PSQMP throughout the term of the Contract to ensure project quality objectives are met and satisfied.
- b. The QMS/PSQMP requirements shall extend to the contractors consultants, sub- contractors, and suppliers as appropriate.

3. Design Control:

- a. During the development of the project's Design Criteria and/or Design Quality Plan, the designer shall insert Quality Assurance and Quality Control provisions and references to the project's Quality Management System within the Design Quality Plan.
- b. The designer shall establish and maintain procedures in the Project Specific Quality Management plan to control and verify the design of the project in order to ensure that the design criteria, specified requirements, and other requirements of the relevant regulatory agencies are met.
- c. Design Control includes ensuring that the design requirements are understood,

planning and scheduling the design interfaces and the design verification activities, executing the design verification activities, and controlling design changes through project completion.

4. Document Control:

- a. Procedures for control of project documents shall be established and maintained at all times.
- b. The document control measures and procedures shall ensure that all relevant documents are current and readily available to all users who require them.
- c. Electronic document distribution and management shall be managed and documented in the same manner as hard copy distribution and management.
- d. The following rating scale shall be used for all documents and submittals requiring review:
 - i. **Code 1: Approved** (work may proceed)
 - ii. **Code 2: Approved as noted** (notations that do not alter the document: i.e.... Grammatical errors)
 - iii. **Code 3: Revise and resubmit** (Do not use until revised and approved)
 - iv. **Code 4: Review not required** (work may proceed)
 - v. All submittals shall be submitted for approval to the Authority
- e. The Contractor shall use a computerized database to identify and manage the current revision of instructions, procedures, drawings, software revision numbers and specifications.
- f. The database shall be kept current throughout the term of the Contract. The Contractor shall provide the Authority real-time access to the information in this database through a direct connection or web-page access.

5. Purchasing:

- a. The Contractor shall establish documented procedures to ensure that the purchased service(s) or product(s) conforms to the specified requirements of this contract.
- b. The QMS requirements of the prime contractor shall extend to suppliers as appropriate; to include audit schedules for the various phases, elements or segments of the project.
- c. When Authority inspection is required, presented in written notification, the Contractor shall add to the purchasing document the following statement:
 - i. **“Authority inspection is required prior to shipment from your plant”.**
 - ii. Upon receipt of this order, promptly notify the Authority’s Representative at the Authority, in writing, so that appropriate planning for Authority inspection can be accomplished.
- d. Purchased material, equipment, and services shall be documented and controlled to ensure that they are properly integrated into the work.
- e. Procedural means shall be included to assure that Contractor sub- consultants,

suppliers and subcontractors satisfactorily demonstrate and document an adequate system for managing quality to the Contractor.

- f. The Contractor shall have procedures for providing adequate surveillance of sub consultants, subcontractors and suppliers to assure conformance with the Quality Management System and Specification requirements. This surveillance shall include inspection and audit of off-site activities of Contractor sub consultants, subcontractors and suppliers.

6. Product Identification and Traceability:

- a. Procedures shall be established and maintained within the QMS/PSQMP for identifying and controlling items of production (batch, materials, parts, and components) to prevent the use of incorrect or defective items, nonconformance control, perform effective corrective action(s) and to ensure that only correct and acceptable items are used or installed.

7. Process Control:

- a. Suppliers and contractors shall establish procedures which identify and plan the production and installation processes that directly affect quality and shall ensure these processes are performed under controlled conditions.
- b. Special processes, the results of which cannot be verified by subsequent inspection and testing of the product, shall be continuously monitored and documented.
- c. The contractor shall ensure that any activities related to the expectations of the Authority or other involved agencies are carefully monitored and controlled by identifying and documenting any necessary specification(s) and determining a method to verify that they are met.

8. Inspection and Testing:

- a. Inspection and testing procedures shall be established, planned and executed as necessary to verify quality.
- b. Procedures shall be specified, documented, implemented, and the results documented for receiving incoming products, and for final inspection and testing.
- c. Testing shall be included, where appropriate, in the specifications; including references to testing procedures, frequency and location, requirements for witnessing of tests and necessary "hold points", and where factory inspection and/or testing is recommended prior to shipping.
- d. Procedures shall be established to show as part of any test plan for, specifications, tolerances, type of test, applicable standard, how the tests are to be conducted, recorded and completion status.
- e. The contractor shall develop, document and implement subcontractor quality oversight; including inspection and testing required by the Contract Documents
- f. Daily Quality Reports shall be provided to the Authority that summarizes the construction activities, record the inspections and tests completed and associated results, and record deficiencies identified during the previous 24 hours.
- g. The Inspection and Test Plans shall include the following:
 - i. A matrix of all tests required by the Contract Documents to be performed by Contractor, suppliers, or subcontractors.
 - ii. Samples of test reports (documentation to be used) - the test reports are to meet the minimum requirements called for in the applicable test standards or specifications.
 - iii. Provisions for coordinating onsite and offsite testing.
 - iv. Provisions for meeting the Authority notification criteria for planned tests and inspections specified to be witnessed by the Authority. Provide the

- Authority a minimum of 14 calendar days advance notice.
- v. Test Plans shall delineate the specific inspections and tests required to assure that characteristic design and Contract requirements of structures, components and systems are fully complied with.

9. Inspection, Measuring, and Test Equipment:

- a. Contractor shall establish documented inspection, measuring, and test equipment procedures and processes to identify, control, calibrate, and maintain inspection, measuring, and test equipment in order to demonstrate the conformance of work to the specified requirements.
- b. Documented procedures and records shall be made for recalibration of such equipment in a timely manner and documented in the QMS.
- c. A schedule of testing equipment that needs periodic and regularly scheduled recalibration shall be required of the sub-contractor(s) and be checked by the contractor(s) QA personnel.
- d. All contractor(s), subcontractor, consultant or supplier testing equipment shall be calibrated prior to its use on the project.

10. Inspection and Test Status:

- a. Means and procedures shall be established and provided for identifying the inspection and test status of work during production and installation. The purpose of this is to ensure that only work that has passed the required inspections and testing is accepted.

11. Nonconformance:

- a. Procedures shall be established and maintained for the immediate control of nonconforming work, in order to ensure that such work is not inadvertently used or installed.
- b. Nonconforming work shall be identified, documented, and evaluated to determine appropriate disposition and immediately reported to the Authority, Office of Quality Assurance & Warranty.

12. Corrective Action:

- a. Corrective action procedures shall be established, documented, and maintained throughout the term of the project.
- b. These procedures shall include directions for investigation of the root cause of nonconforming work and the corrective action needed to prevent recurrence, and procedures for analysis to detect and eliminate potential causes of nonconforming work.
- c. Qualified Authority personnel shall verify and document that the corrective action has been accomplished.
- d. The contractor shall determine and document preventive action to eliminate the causes of potential nonconformance(s) in order to prevent their occurrence and shall submit such documentation to the Authority for review.
- e. The contractor shall implement and document all changes in procedures resulting from preventive action, corrective action, and continual improvement initiatives.
- f. If the corrective action cannot be performed within the 30 days, immediate notification to the Authority shall be made in writing.

13. Quality Records:

- a. Procedures shall be established, documented and maintained for all quality records and the security of those records throughout the length of the project.
- b. Quality Record procedures shall identify which records should be kept, responsibility for production and collection, and responsibility for indexing, filing, storage, maintenance, and disposition of quality records.

14. Quality Audits:

- a. A Quality audit program shall be established, documented and maintained to ensure that the elements of the QMS and PSQMP are functioning as intended.
- b. Procedures for the audit schedule shall be established, documented and maintained for each required element, phase, test, consultant(s), sub-contractor, and supplier(s), as appropriate.
- c. Internal Quality Audits shall be performed at least quarterly.
- d. The contractor shall immediately provide the audit results to the Authority Representative and complete required corrective actions within 30 days of the audit. If the corrective action cannot be performed within the 30 days, immediate notification to the Authority shall be made in writing.

15. Training:

- a. Procedures shall be established and documented to ensure all training documentation, to include but not limited to, operational manuals, technical manuals, manufacturer documentation, drawings, and technical specifications are delivered to the Authority prior to final payment. Delivery of the above mentioned documents shall be in the form of hard-copy and electronic format.
- b. The contractor shall provide Authority trainers all necessary training to ensure full understanding and operational knowledge of the product(s), service(s) and system(s).

B. Quality Assurance Standards applicable to the work include the following:

1. FTA Quality Management System Guidelines- FTA-PA-27-5194-12.1
2. FTA Quality Assurance and Quality Control Guidelines- FTA-IT-90-5001-02.1
3. ISO 9001:2008: Quality systems - Model for quality assurance in design, development, production, installation and servicing.
4. ISO 10013 - Guidelines for Developing Quality Manuals.

C. Definitions:

1. For definitions regarding quality used in this clause 2.58, refer to FTA Quality Management System Guidelines- FTA-PA-27-5194-12.1

2.58.3 RELATED DOCUMENTS:

- A. Roadway Worker Protection Manual
- B. Metrorail Safety Rules and Procedures Handbook

2.58.4 PROGRAM REQUIREMENTS:

- A. During the term of the Contract, the Contractor shall exercise positive control over all of the work, including that of sub consultants, subcontractors, fabricators, manufacturers,

installers, and suppliers (suppliers and subcontractors) in accordance with the Quality Manual and Quality Procedures described in an approved Contractor Quality Management System.

- B. In addition to the QMS and PSQMP, the contractor shall develop, implement and update any plan that fundamentally impacts the satisfactory execution of work or production. These plan(s) shall supplement and shall be integral components of the QMS and PSQMP; to be added to the PSQMP within 10 business days of plan approval.

2.58.5 OVERVIEW OF PROPOSED QUALITY MANAGEMENT SYSTEM:

- A. For the purpose of pre-qualification only, all bidders shall submit a previously utilized QMS/PSQMP from a past, similar, project that was modeled on FTA Quality Management System Guidelines- FTA-PA-27-5194-12.1 or FTA-IT-90-5001-02.1 or ISO 9001:2008 or similar quality control system(s). This shall be submitted with the Phase One Qualifications or Technical Proposal.

2.58.6 SUMMARY OF SUBMITTALS

- A. Quality Management System
1. Finalized Quality Management System (Quality Manual and Quality Procedures) One (1) original and one (1) electronic copy (NTP plus 30 calendar days and when revised)
 2. Finalized Project Specific Quality Management Plan One (1) original and one (1) electronic copy (NTP plus 30 calendar days and when revised)
 3. Daily Quality Reports One (1) original and one (1) electronic copy (Daily)
 4. Summary of Management Review; One (1) original and one (1) electronic copy (monthly during the first six (6) months after NTP; no less than quarterly thereafter)
 5. Review and Disposition of Nonconforming Product One (1) original and one (1) electronic copy (as occurring)
 6. Report of Audit Results including sub/supplier Audits One (1) original and one (1) electronic copy (within five days of the completion of an audit)
 8. Report of Completion of Corrective Actions One (1) original and one (1) electronic copy (within 30 days of an audit). If the corrective action cannot be performed within the 30 days, immediate notification to the Authority shall be made in writing.
 9. Statement of Compliance Quality Certification for Payment Verification One (1) original and one (1) electronic copy (included with each payment request)
 10. Inspection and Test Plans One (1) original and one (1) electronic copy (NTP plus 60 calendar days for Civil and Structural work, others minimum thirty (30) calendar days in advance of the covered work scheduled to start).

2.58.7 QUALITY MANAGER

- A. The Contractor shall provide a full-time Quality Manager. The Quality Manager shall be trained as a Lead Auditor through an approved certification agency (RAB, ASQ, etc...) and shall have 10 years of related experience including 5 years of management positions in a production, manufacturing, or construction environment and experience in QA/QC auditing.

- B. In the event that the Quality Manager is not found to be competent or to have sufficient relevant experience, the Authority will request that the Quality Manager be removed from the project. In that event, the Contractor shall submit a new candidate for consideration within ten (10) calendar days by submitting a resume.

- C. In addition to the Quality Manager, the Contractor shall assign additional trained and experienced staff to fulfill Contract and Contractor requirements for meeting quality. The Contractor shall provide sufficient resources to effectively manage quality related functions including the following:
 - 1. Quality Management System Administration
 - 2. Document Review and Control
 - 3. Construction Quality
 - 4. Subcontractor Quality
 - 5. Oversight of Quality Control
 - 6. Configuration Management
 - 7. Inspection & Testing

2.58.8 CONTRACT DATA REQUIREMENTS LIST (CDRL)

- A. The contract data requirements list (CDRL) is a list of authorized data requirements for a specific procurement that forms a part of the contract. CDRLs identify the data and documentation products that shall be formally delivered by the Contractor to the Authority for approval.

- B. The contractor shall be responsible for submitting CDRL's within ninety (90) days of award of contract based on the Scope of Work (SOW).

2.58.9 STATEMENT OF COMPLIANCE QUALITY CERTIFICATION FOR PAYMENT CERTIFICATION

- A. The Contractor shall provide the original and six (6) paper copies and an electronic copy of an approved QA/QC Manager's Statement of Compliance Quality Certification with each pay request stating that the PSQMP has effectively ensured that the items requested for payment have been designed or constructed to meet the design requirements, and/or have been inspected and tested as required to comply with Contract requirements including those of the PSQMP.

- B. Work for which satisfactory records for design, drawings, testing, inspection or other quality elements are not available shall not qualify for payment.

2.59 EXISTING SURFACES

- a. Existing surfaces shall be carefully protected during placing of concrete and other operations under this Contract to avoid damaging existing surfaces.

- b. Existing surfaces marred or damaged by operations under this Contract shall be repaired or replaced by the Contractor as directed and at no additional cost to the Authority.

- c. The Contractor shall maintain precast concrete protective coverings, if provided under a previous contract, from the completion of the previous contract to the completion of this Contract, at which time he shall remove and dispose of the precast concrete protective covering.

2.60 EMBEDDED ITEMS

When reinforcing steel or other items embedded in the concrete are encountered in a drilling or coring operation, the operation shall be stopped. The AR shall be notified and determination made by him whether the embedded item may be cut through. If it is not permissible to cut through the embedded item, the holes shall be drilled in another location and the original holes patched to the AR's satisfaction.

2.61 PROTECTIVE DEVICES

a. General requirements:

- (1) Wherever necessary, shown or specified, the Contractor shall erect and maintain signs, fences, barricades and pedestrian bridges and provide watchmen for the protection of public travel, the work site, adjoining property and adjoining public places.
- (2) The Contractor shall take positive measures to prevent entry into the site of the work and storage areas by children, animals and unauthorized adults and vehicles.
- (3) Protective devices shall be in accordance with the regulations of OSHA and jurisdictional agencies.

2.62 WORKING AREA WOODEN FENCING - NOT USED

2.63 AUTHORITY-FURNISHED PROPERTY - NOT USED

2.64 SPARE PARTS

- a. This Contract includes the requirement for spare parts, either specifically identified in the unit price schedule or to be identified later during the term of the Contract. The Contractor shall assure that all spare parts required by this Contract are provided and delivered in accordance with the following paragraphs.
- b. The Contractor shall submit to the Engineer a list of required spare parts either specifically identified in the unit price schedule or later identified by the Authority in accordance with a separate provision of this Contract. The list provided by the Contractor shall include model numbers, part numbers, component name, manufacturer's name, price, quantities, available packaging, special storage and handling requirements, and anticipated annual usage. In addition, the spare parts listing will include the following additional information as appropriate:
 - (1) Group the list by system and subsystem for stocking identification. Include order and procurement information for subassemblies and components.
 - (2) Correlate the required quantities with the reliability requirements and lead time considering the following classifications:
 - (a) Wear: Components which may be expected to require regular replacement under normal maintenance schedule and operations, such as mechanical parts subject to continuous operation within projected mean time between failure levels.

- (b) Consumables or expendables: Components which are consumed, used up, destroyed or, upon failure, are otherwise made unusable for their intended purpose and are economically unrecoverable except for inherent scrap value.
 - (c) Recoverable or repairable: Components which, upon failure, are capable of being repaired or remanufactured to a serviceable, operational condition and maintained available for use within their initial intended purpose. Such items should be accounted for via appropriate asset records.
 - (d) Long lead: Components which are not available at short notice from commercial distributors or within 48 hours from the manufacturer, such as specially made or selected components.
 - (e) Cross referencing: Where replacement components are common to more than one system or subsystem, include a cross reference and indexing system in the replacement components list.
 - (f) Non-unique parts: In all components lists, items which are not unique to the system and have been manufactured by others shall be identified by the manufacturer's name and part number, as well as by the proposer's component number, if any.
- c. Within 30 days after the Contractor submits the required spare parts listing, the Engineer will provide the Contractor with shipping instructions and with WMATA stock numbers for each item the Contractor is required to furnish. The Contractor agrees to ship the required parts to the destination points specified by the Engineer and to include the Contract number, manufacturer part number, quantity, unit price, and WMATA part number on the shipping document.
 - d. The identification of the individual manufacturer's part numbers will be cross referenced to the assigned WMATA stock numbers by including a column with appropriate heading adjacent to the manufacturer's part numbers in any parts manual or listing provided in accordance with paragraph b. above.
 - e. Parts furnished in accordance with this provision shall not be used to satisfy replacement needs under any warranty provision of this Contract.
 - f. Spare parts will be the same in all respects as their counterparts furnished as part of the assembled equipment to be delivered under the terms of this Contract.
 - g. Unless otherwise specified in this Contract, the spare parts are to be delivered at the same time as the counterpart equipment delivery. The spare parts are to be properly packaged or crated so as to prevent damage during shipment and long term storage. The spare parts will be labeled in accordance with the instructions contained in paragraph c. above.

2.65 RELIABILITY

- A. Requirements: This article specifies the establishment of a System Reliability Program which shall be applied to all the equipment to be furnished under this contract. The Proposer shall furnish predicted design reliabilities.
- B. Reliability Table: The Proposer shall provide a table with a line item for each piece of equipment. Each line item shall be assigned: a unit of measure, an importance index, a decision risk, the minimum MTBF and the maximum MTTR. In general the following shall be included in the table separately or if not available as part of the larger unit: the DC Breakers, DC Switchgear, relays, control components, switches and misc. components that can result in DC power failure.

C. DEFINITIONS

1. Meanings of terms not defined herein are in accordance with the latest edition of "Rapid Transit Systems Glossary of Reliability, Availability and Maintainability Terminology," as prepared by the American Public Transit Association," Washington, D.C.
2. Mean Time Between Failures (MTBF): The average time that an equipment will operate without a chargeable failure.

$$\text{MTBF} = \frac{\text{operating time}}{\text{number of chargeable failures}}$$

3. Decision Risks:

Authority Risk - The probability of accepting the total system with a true MTBF equal to the reported MTBF.

Proposer Risk - The probability of rejecting the total system with a true MTBF equal to the reported MTBF.

4. Importance Index: A factor used to convert the MTBF of all line items of the Table of Reliability to a common base for the purpose of trade off analysis and requirement distribution. The following factors are considered in selecting the value of the Importance index for each line item:
 - a. Impact of failures in this line item on system operation.
 - b. Repair time required per failure.
 - c. Estimated quantity used in system.
5. Failure: Any malfunction or fault which prevents or limits equipment from performing its function in accordance with these specifications.
6. Mean Time to Restore (MTTR) The combined average time required to: (1) troubleshoot, and (2) repair the equipment for operation after report of a failure.

$$\text{MTTR} = \frac{\text{restore time accumulated}}{\text{number of chargeable failures}}$$

- D. The System Reliability Program shall describe how the reliability data was collected, what standards were used, and any clarifications or comments necessary for reviewers to evaluate the information including a description of the test facilities. If information is from an installation site not owned by the manufacturer, the owners name, address, contact person, phone number, and nature of operations shall be included.

2.66 CORRECTION OF DEFICIENCIES

- a. Definitions: As used in this Article:
 - (1) Deficiency:

- (a) Materials or equipment will be regarded as having a deficiency if a type of material or equipment in like service accumulates a failure rate greater than five percent within a period of 24 months following final acceptance by the Authority.
 - (b) Systems or subsystems will be regarded as having a deficiency if they exhibit any condition or characteristics which are not in compliance with the requirements and intent of this Contract anytime during a period extending for 24 months following their final acceptance by the Authority.
- (2) Correction:
- (a) Correction of materials or equipment exhibiting a failure rate greater than five percent means taking of any and all actions necessary to correct the deficiencies, including removal and replacement of all pieces of material or equipment in like service in a manner satisfactory to the Engineer.
 - (b) Correction of systems or subsystems exhibiting one or more deficiencies means taking any and all actions necessary to eliminate any and all deficiencies in a manner satisfactory to the Engineer.
- b. General:
- (1) The rights and remedies of the Authority provided in this Article:
 - (a) Shall not be affected in any way by any other provisions under this Contract concerning the conclusiveness of inspection and acceptance; and
 - (b) Are in addition to and do not limit any rights afforded to the Authority by any other article of this Contract.
 - (2) This Article shall apply only to those deficiencies discovered by either the Authority or the Contractor within 24 months after acceptance.
 - (3) The Contractor shall not be responsible under this Article for the correction of deficiencies in Authority-furnished property, except for deficiencies in installation, unless the Contractor performs or is obligated to perform any modifications or other work on such property. In that event, the Contractor shall be responsible for correction of deficiencies to the extent of such modifications or other work.
 - (4) The Contractor shall not be responsible under this Article for the correction of deficiencies caused by the Authority.
- c. Deficiencies of accepted materials, equipment, systems or subsystems:
- (1) Notice of deficiency to Contractor: If the Contracting Officer determines that a deficiency exists in any of the materials, equipment, systems or subsystems provided the Authority under this Contract, he shall promptly notify the Contractor of the deficiency, in writing, within 30 days.
 - (2) Recommendation for correction: Upon timely notification of the existence of such a deficiency, or if the Contractor independently discovers a deficiency in accepted materials, equipment, systems or subsystems, the Contractor shall promptly submit to the Contracting Officer his recommendation for corrective actions, together with supporting information in sufficient detail for the Contracting Officer to determine what corrective action, if any, shall be undertaken. The recommendation shall be submitted to the Contracting Officer within 15 working days of discovery or receipt of notice of the deficiency.

- (3) Direction to Contractor concerning correction of deficiencies: Within 30 days after receipt of the Contractor's recommendations for corrective action and adequate supporting information, the Contracting Officer, at his sole discretion, shall give the Contractor written notice not to correct any deficiency, or to correct or partially correct any deficiency within a reasonable time and at a specified location.
 - (4) Correction of deficiencies by Contractor: The Contractor shall promptly comply with any timely written direction by the Contracting Officer to correct or partially correct a deficiency, at no increase in the Contract price. The Contractor shall also prepare and furnish to the Authority data and reports applicable to any correction required under this Article (including revision and updating of all other affected data called for under this Contract) at no increase in the Contract price.
 - (5) Schedule of deficiency corrections: The Contractor shall prepare Schedule of Deficiency Corrections and deliver it to the Authority for approval within 15 working days of discovery of deficiency by the Contractor or receipt of notice of discovery of a deficiency by the Authority.
 - (6) Modification of Contract with respect to uncorrected deficiencies: In the event of timely notice of a decision not to correct or only to partially correct a deficiency, the Contractor shall submit within 15 working days, a technical and cost proposal to amend the Contract to permit acceptance of the affected materials, equipment, systems or subsystems in accordance with the revised requirements, and an equitable reduction in Contract price shall promptly be negotiated by the parties and stated in a modification to this Contract.
- d. Deficiencies in materials, equipment, systems or subsystems: If the Contractor becomes aware at any time before acceptance by the Authority (whether before or after tender to the Authority) that a deficiency exists in any materials, equipment, systems or subsystems, he shall promptly correct the deficiency or, if he elects to invoke the procedures in Paragraph c. above, he shall promptly communicate information concerning the deficiency to the Contracting Officer, in writing, together with his detailed recommendation for corrective action.
- e. No extension in time for performance; no increase in Contract price:
- (1) In no event shall the Authority be responsible for extension or delays in the schedule deliveries or periods of performance under this Contract as a result of the Contractor's obligations to correct deficiencies, nor shall there be any adjustment of the delivery schedule or period of performance as a result of such correction of deficiencies, except as may be agreed to by the Authority in a supplemental agreement with adequate consideration.
 - (2) It is hereby specifically recognized and agreed by the parties hereto that this Article shall not be construed as obligating the Authority to increase the Contract price of this Contract.
- f. Transportation charges:
- (1) When the Authority returns supplies to the Contractor for correction or replacement pursuant to this Article, the Contractor shall be liable for transportation charges up to an amount equal to the cost of transportation by the usual commercial method of shipment from the designated destination point under this Contract to the Contractor's plant, in addition to any charges provided for by (2) below. The Contractor shall also bear the responsibility for the supplies while in transit.
 - (2) When compliance with the terms of this Article by the Contractor involves shipment of corrected or replacement supplies from the Contractor to the Authority, the Contractor shall be liable for transportation charges up to an amount equal to the cost of transportation by the usual

commercial method of shipment from the Contractor's plant to the designated destination point under this Contract, in addition to any charges provided for by (1) above. The Contractor shall also bear the responsibility for the supplies while in transit.

- g. Failure to correct: If the Contractor fails or refuses to (1) present a detailed recommendation for corrective action in accordance with c. above, (2) correct deficiencies in accordance with c.(3) above, or (3) prepare and furnish data and reports in accordance with Paragraph c.(4) above, the Contracting Officer shall give the Contractor written notice specifying the failure or refusal and setting a period after receipt of the notice within which it must be corrected. If the failure or refusal is not corrected within the specified period, the Contracting Officer may, by contract or otherwise, as required:

(1) Obtain detailed recommendations for corrective action;

(2) (a) Correct the materials, equipment, systems or subsystems, or

(b) Replace the materials, equipment, systems or subsystems; and if the Contractor fails to furnish timely disposition instructions, the Contracting Officer may dispose of non-conforming materials, equipment, systems or subsystems for the Contractor's account in a reasonable manner, in which case the Authority is entitled to reimbursement from the Contractor or from the proceeds for the reasonable expense of care and disposition, as well as for excess costs incurred or to be incurred; and

(3) Obtain applicable data and reports; and charge to the Contractor the cost occasioned to the Authority thereby.

- h. Correction of deficient replacements and reperformances: Any materials or equipment corrected or furnished in replacement and any systems or subsystems revised pursuant to this Article shall also be subject to all the provisions of the Contract to the same extent as materials, equipment, systems or subsystems initially accepted, i.e., for a new 24-month period.

- i. Disassembly/reassembly expense: The Contractor shall be liable for reasonable cost of disassembly/reassembly of larger items necessary to remove the materials or equipment to be inspected and/or returned for correction or replacement.

- j. Warranties:

1. The Contractor shall remedy at his own expense any failure of the work for a period of **one year** to conform to Contract Specifications and any defect of material, workmanship, or design in the work, but excluding any defect of any design furnished by the Authority under the Contract, provided that the CO or the AR gives the Contractor notice of any such failure or defect promptly after discovery but not later than two years after final acceptance of the work **unless VOLUME 2 TECHNICAL PROVISIONS indicate a longer warranty period**, except that in the case of defects or failure in part of the work of which the Authority takes possession prior to final acceptance, such notice shall be given not later than two years from the date the Authority took such possession. The Contractor, at his own expense, shall also remedy damage to equipment, the site, or the buildings or the contents hereof which is the result of any failure or defect, and restore any work damaged in fulfilling the terms of this Article. Should the Contractor fail to remedy any such failure or defect within a reasonable time after receipt of notice thereof, the Authority shall have the right to replace, repair or otherwise remedy such failure or direct at the Contractor's expense. This Warranty shall not delay final acceptance of or final payment for the Contract work.

2. The AR shall perform a Substantial Completion Inspection (SCI) per location. The warranty shall be applied commencing with the SCI date.

3. All subcontractor's, manufacturers' and suppliers' warranties and guarantees, expressed or implied, respecting any part of the work and any materials used therein shall be deemed obtained and shall be enforced by the Contractor as the agent and for the benefits of the Authority without the necessity of separate transfer or assignment thereof; provided that, if directed by CO, the Contractor shall require such subcontractors, manufacturers and suppliers to execute such warranties and guarantees in writing to the CO or the AR.
4. Any work repaired or replaced pursuant to this Article shall also be subject to the provisions of this Article to the same extent as work originally performed, the rights and remedies of the Authority provided in this Article are in addition to and do not limit any rights afforded to the Authority by any other article of this Contract.
5. The Contractor is responsible for all testing, and to provide all personnel, equipment, supplies, facilities, transportation, materials, supervision, and other items necessary in performance of this contract for complete testing requirements specified herein and in other sections of this contract. Be it known this equipment, individually at each location, is integrated as part of the WMATA revenue system immediately upon energization. Contractor is responsible for immediate emergency response and will provide problem diagnosis, repairs, and system restoration at no additional cost to the Authority, regardless of root cause of failure, for a period of 1 year after accepted Substantial Completion Inspection. Services to be provided include all testing, safety equipment, contract equipment repair and contract equipment replacement if deemed required by the Authority.
6. The Contractor shall, upon notification from the Authority, provide response and correction to addressed equipment, including testing, and in compliance with each individual testing section, within 4 hours of notification, be onsite at the specified location within the 4 hour time frame, and confirm within 2 hours of original notification. Noted that a 24/7 response time is required. Contractor shall provide continuous everyday service, 8 hour minimum on site, including weekends, as specified – for 365 days starting from the date of Substantial Completion Inspection.

2.67 CLEANING UP

In addition to and in accordance with the requirements of the General Provisions, the Contractor shall accomplish the following:

- a. Clean up each work site and surrounding area at the end of each work day or work shift as directed, and secure equipment and materials so as to prevent safety hazards and to permit normal movement of passengers and Authority personnel on and along the station platform area.
- b. Ensure that the track drains and the trainway, consisting of trackbed and adjacent areas, remain continuously free of debris and other foreign matter.
- c. Take all necessary steps to ensure that public areas are entirely free of obstructions, tools, debris, etc., at all times during their use by the public.
- d. Dispose of removed materials off site in accordance with regulations of federal, state and/or local jurisdictional agencies as applicable.

2.68 CONTRACTOR'S QUALIFICATIONS

- a. In addition to the Bidder's Qualifications outlined in the Solicitation Instructions, the Contractor and/or its subcontractor(s) shall have performed at least three contracts of similar scope to these specified in Volume 2 of the Technical Provisions within the past ten years. The degree of difficulty of these projects must at least be equal to the scope of work outlined in this contract. The Contractor must show that he was the principal contractor for this work.
- b. Personnel: The contractor shall submit a list of the supervisory personnel that supervised the above projects. The contractor must also furnish the AR with a list of personnel that will supervise the contract. Must have an approved individual, present for all shifts, with experience working on High-Voltage and/or Traction Power equipment, in operating transit or railroad equipment rooms.
 1. Submit the following within 10 Days of Award in accordance with Contractor's Submittal:
 - (b) Evidence of qualifications and experience of Key Staff to include resume and references from last three employers
 - (c) Foreman and Journeyman Electricians: Evidence of successful completion of an industry approved journeyman electrician apprentice program; provide copy of current Journeymen's License.
 - (d) Foreman: Evidence of attainment of the position of Foreman
 - (e) Safety Superintendent: Identified candidate may be requested to attend an interview with Authority Safety staff. Approval by Authority Safety Department is required.
 2. The Contractor shall be responsible for constructing the Project and for furnishing and managing the services of Subcontractors and vendors, to perform all manufacture, fabrication, installation, testing, and commissioning to complete the Project in accordance with the Contract Documents, all applicable jurisdictional codes and regulations, the approved Quality Management System; the approved Safety Plan; the approved Systems Integration Testing Plan, and environmental and other applicable requirements to achieve Acceptance in accordance with the approved Project Schedule.
 - (a) All personnel involved in the performance of construction work shall be experienced and qualified to perform their trade, and all construction work shall be performed in a skilled and workmanlike manner.
 - (b) Contracting Officer Representative reserves the right to reject any Key Staff that do not meet the required qualifications.
 - (c) Individuals holding these key staff positions shall not be changed without written Authority approval for substitutions of Key Staff.
 - (d) Key Staff shall be supported by a SSWP/Track Access Coordinator having the required level of skill to deliver the Project in accordance with the Contract Documents and the approved Project Schedule.
 - (e) Key Staff:
 - (1) Project Manager (part time)
 - i. Shall have a minimum of 5 years' experience in electrical contracting, equipment installation and system commissioning; a minimum of 2 years in the rapid transit industry; and a minimum of 5 years in a supervisory capacity on projects of similar type and financial magnitude; traction power experience is preferred.
 - ii. Responsible for managing all facets of the Project and has overall responsibility for its successful and timely completion.

- iii. Supervises the Key Staff, shall be the sole point of contact with the Contracting Officer Representative, shall be responsible for coordinating with outside agencies as required, shall be responsible for managing cost and maintaining schedule of the Project, shall be responsible for ensuring that QA/QC and Safety guidelines are followed, and shall be responsible for manufacturing, installing, testing, commissioning, and close-out of the Project. Responsibilities include but are not limited to acquiring and managing Subcontractors, fabricators and Suppliers; development, management, and implementation of Project Schedule; preparation, submittal, and management of submittals; maintaining as-built documentation; and coordinating with outside agencies on construction related matters.

(2) Technical Support Lead/Project Engineer (part time)

- i. Shall have a minimum of 5 years' experience in design and implementation of traction power equipment (high voltage electrical engineer), a minimum of 2 years in rapid transit industry
- ii. Responsible for technical support to Contractor and available as needed for resolution of technical issues
- iii. Responsibilities include but are not limited to performing facility inspections during equipment demolition, troubleshooting during equipment installation, generating requests for information, oversight of testing and commissioning, performance of substantial completion inspections as each TBS is completed, and performing Project Scheduler duties as defined in Section 01322, CONTRACT PROGRESS REPORTING, Article 3.03 therein.

(3) General Superintendent (part time)

- i. Shall have a minimum of 5 years' experience in high voltage traction power equipment installation and system commissioning, a minimum of 2 years in rapid transit industry, and a minimum of 5 years in a supervisory capacity supervising projects of a similar type
- ii. Responsible for oversight of day-to-day demolition, equipment installation, testing, and commissioning at the Site
- iii. Responsibilities include but are not limited to supervising equipment installation activity, overseeing coordination among Subcontractors, coordinating with Quality Manager and Safety Manager in the implementation of Project Quality and Safety plans, and ensuring that equipment installation is based on current Contract Documents and is in compliance with applicable codes and standards.

(4) Quality Manager (part time)

- i. Shall be trained as a Lead Auditor in a Registrar Accreditation Board of the American Society for Quality (RABASQ) approved course on the requirements of ISO 9001 and with a minimum of 5 years of related experience including a minimum of 2 years of management positions in a production, manufacturing, or construction environment performing QA/QC auditing. Transit industry experience is preferred

- ii. Reports to one or more levels of management above the Contractor's Project Manager.
- iii. Responsible for the Quality Assurance (QA) and Quality Control (QC) for the Project and shall be fully familiar with the Federal Transit Agency's (FTA) Quality requirements.
- iv. Shall be, at a minimum, a half time staff member of the Contractor and shall establish, implement, and maintain the Quality Management System, shall report directly to and be supervised by an Officer of the Contractor at a level above that of the Project Manager responsible for the Project, shall serve as a liaison officer with the Authority and the Jurisdictional Authorities on matters relating to the Contractor's quality system, shall be responsible for ensuring that the Quality Management System is effective in ensuring that the Contract requirements are satisfied, and shall be responsible for the oversight of onsite and offsite testing by the Contractor.
- v. The Quality Manager may be approved as the Safety and Security Certification Manager as defined in Section 01115, SAFETY AND SECURITY CERTIFICATION.

(5) Safety Superintendent

- i. Shall have a minimum of 15 years' experience in heavy industry construction safety practices and with a minimum of 5 years in rapid transit construction in operating conditions, and shall have completed OSHA Construction Safety Training (30 hour course) and First Aid/CPR/Blood Borne Pathogens Training. A Certified Safety Professional (CSP) is preferred, but not required.
- ii. Responsible for development of a construction safety plan
- iii. Shall be a full time member of the Contractor and devotes full time to worksite safety in implementing, enforcing, and maintaining the safety program for the Contractor and Subcontractor forces. The Safety Superintendent shall have no duty other than safety supervision of persons, equipment, and property affected by Contract work.
- iv. Shall have specialized training and experience in construction safety supervision and have a thorough knowledge of all OSHA regulations; shall have the ability to develop and conduct safety-training courses; and shall be familiar with industrial hygiene equipment and testing as required for the protection of all personnel and the public.

(6) Foreman (full time)

- i. Shall have a minimum of 5 years' experience working with high voltage and/or DC traction power equipment and a minimum of 2 years' experience actively working in and around an electrified rail transit system; hold a current Journeyman's license through the completion of an industry approved journeyman electrician apprentice program; and the attainment of the position of Foreman for a minimum of 2 years with oversight of a crew of no less than six Journeyman Electricians.

(7) Journeyman Electricians (full time)

- i. Shall have a minimum of 2 years' experience working with high voltage and/or DC traction power equipment and a minimum of 1 year experience actively working in and around and electrified rail transit system; hold a current journeymen's license through the completion of an industry approved journeyman electrician apprentice program.

2.69 TIME EXTENSIONS DUE TO AUTHORITY ACTIONS

(NOTE: This provision is supplemental to General Provision Article 1.5 TERMINATION FOR DEFAULT, DAMAGES FOR DELAY AND TIME EXTENSIONS)

- a. The possibility exists that interruptions to work may occur, both scheduled and unscheduled, at the Authority's convenience, or specific direction, for operational or emergency reasons during contract performance. Such interruptions include, but are not limited to: access delays, power outages, equipment failure. For the purpose of determining whether or not such delay, if any, should result in an extension to the final completion date, Two (2) types of delay will be recognized as follows:
 - (1) An Access Delay, defined as any recorded instance of contractor inability to enter a scheduled station location due to Authority action at the beginning of a work shift which the Contractor had scheduled and the AR approved. In order to be recognized, any such delay must be of a continuous nature with duration of not less than 30 minutes, and must be mutually agreed to by the Contractor and the AR.
 - (2) A Work Stoppage Delay, defined as any recorded instance of Authority-directed or controlled delay (not including stop work orders issued for Safety or Work Quality problems as permitted by the Contract) to the actual work performance of the contractor during the period of work in and around the immediate work area during the work hours which the Contractor had scheduled and the AR approved. In order to be recognized, any such work stoppage must be of a continuous nature with a duration of not less than 30 minutes per instance, and must be mutually agreed to by the Contractor and the AR.
- b. An extension to the final completion date, as applicable, of one (1) day MAY be granted for each recognized instance of Access Delay combined with Work Stoppage Delay which has a cumulative impact greater than 60 minutes for work performed on Weekdays. The maximum time extension per week is seven (7) calendar days.
- c. If concurrent work will be performed at more than one station location on any given workday and that recognized delays could occur at more than one work location, a time extension will not be allowed for such concurrent delay. That location with the greatest amount of recognizable delay per day will be used to determine the applicable time extension, if any, with the following conditions:
 - (1) Access Delay and Work Stoppage Delay of the greatest continuous duration will only be recognized at one location per day of work performance.
 - (2) Access Delays and Work Stoppage Delays will be cumulative within the workweek in which they occur, with the exception that concurrent delays will not be recognized for more than one location per day of work performance.
 - (3) Each recognized instance of Work Stoppage Delay will be applied to the cumulative total.
- d. Administration of these time extensions, if any, will be as follows: The Contractor shall submit his claim, if any, and a time entitlement analysis illustrating the effect of the delay on the final

completion date to the AR on a weekly basis. Carryover, if any, will not be applied to the subsequent period for determination of time extension.

2.70 PROJECT MANAGEMENT SOFTWARE SYSTEM

The Contractor shall use the Authority's internet based project management software system for submitting, reviewing and tracking documents of this Contract, The system is provided and administered by the Authority and is currently called "Procore".

The Contractor shall use this internet, web based project management software system to manage all the documents issued to the Authority. This system was selected by the Authority and is designed to address the record keeping and communications requirements for the Authority's contracts, including this Contract.

The Contractor is encouraged to include this requirement in contracts with its subcontractors to facilitate the flow of documentation. If a subcontract is executed without this requirement it shall not relieve the Contractor's obligation to the Authority.

1. The Authority retains control and ownership of the system's database during the duration and upon completion of the Contract.
2. The Contractor shall, at no additional cost to the Authority, provide the necessary equipment and services at the Contractor's facilities to actively participate in the above mentioned internet based project management software system.

As a minimum, this requirement shall include:

- a. All hardware to operate the system at the Contractor's facilities.
 - b. The necessary telephone or other data lines to connect the hardware to the internet at the Contractor's facilities [a Digital Subscriber Line (DSL) is the minimum recommended for optimum performance];
 - c. An internet service provider for access by the Contractor's personnel to the Web site of the internet based project management software system; and
 - d. The necessary project personnel to participate.
3. The Authority will provide informal training to Contractor's key project personnel in using the internet based project management software system. Training will be provided at the Authority's location that will be determined after the Contract award. The number of individuals that will be trained shall be limited to only those Contractor's employees who will actively participate in the system.
 4. The Authority reserves the right during the period of this Contract to expand the data that is to be entered into the internet based project management software system for document control.

2.71 PRE-INSTALLATION MEETINGS

- a. When required in individual Specification Sections, convene pre-installation meetings at the Project Site before starting the Work of those specific Sections.
- b. Require attendance of the parties directly affecting, or affected by, the Work of specific Section.
- c. Notify the Authority Representative 4 days in advance of the pre-installation meeting date.
- d. Prepare a meeting agenda for and preside over the pre-installation meeting.

- (1) Review conditions of installation, preparation, and installation procedures.

(2) Review coordination with related Work.

- e. Notify the Authority Representative 4 days in advance of the pre-installation meeting date.
- f. Record minutes and distribute copies to participants within 2 days after the pre-installation meeting, with 2 copies each to the Engineer, Authority, and those affected by decisions made.

2.72 PRODUCT WARRANTIES

- a. Obtain warranties and bonds executed in duplicate by responsible Subcontractors, suppliers, and manufacturers within 10 days after completion of the applicable item of Work.
- b. Execute and assemble transferable warranty documents and bonds from Subcontractors, suppliers, and manufacturers.
- c. Verify the documents are in the proper form, contain full information, and are notarized.
- d. Co-execute submittals when required.
- e. Include a table of contents, and assemble the documents in a three D side ring binder with a durable plastic cover.
- f. Submit the warranties and bonds to the Authority Representative prior to the final Application for Payment.
 - (1) For equipment or component parts of equipment put into service during construction with the Owner's permission, submit warranty and bond documents within 10 days after acceptance.
 - (2) For equipment or component parts of equipment other than those put into service during construction with the Owner's permission, submit warranty and bond documents within 10 days after the date of final substantial completion, but prior to the final Application for Payment.
 - (3) For items of Work for which acceptance is delayed beyond final substantial completion, submit warranty and bond documents within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty or bond period.

2.73 PRODUCT SUBSTITUTION PROCEDURES

- a. The Contract is based on products and standards established in the Contract Documents without consideration of proposed substitutions.
- b. The products specified define the standard of quality, type, function, dimension, appearance, and performance required.
- c. Substitution proposals are permitted for specified products except where specified otherwise.
 - (1) Do not substitute products unless the substitution has been accepted and approved in writing by the Authority Representative.
- d. The Authority Representative will consider requests for substitutions only within 15 days after date of execution of the Owner-Contractor Contract Agreement.
- e. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.
- f. Document each request with complete data, substantiating compliance of the proposed substitution with the requirements of the Contract Documents, including:
 - (1) The proposed substitution's manufacturer's name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.
 - (2) Itemized point-by-point comparison of the proposed substitution with the specified

- product, listing variations in quality, performance, and other pertinent characteristics.
- (3) Reference to the Article and Paragraph numbers in Specification Section.
 - (4) Cost data comparing the proposed substitution with the specified product, and the amount of net change to the Contract Price.
 - (5) Changes required in other Work.
 - (6) Availability of maintenance service, and the source of replacement parts as applicable.
 - (7) Certified test data to show compliance with the performance characteristics specified.
 - (8) Samples when applicable or requested.
 - (9) Other information as necessary to assist Authority Representative's evaluation.
- g. A request constitutes a representation that the Offeror or Contractor:
- (1) Has investigated the proposed product, and determined that it meets or exceeds the quality level of the specified product.
 - (2) Will provide the same warranty for substitution as for the specified product.
 - (3) Will coordinate the installation, and make changes to other Work that may be required for the Work to be complete with no additional cost to Authority.
 - (4) Waives claims for additional costs or time extension that may subsequently become apparent.
 - (5) Will coordinate the installation of the an accepted substitute, making such changes as may be required for the Work to be complete in all respects.
 - (6) Will reimburse the Authority for review or redesign services associated with re-approval by the Authorities Having Jurisdiction.
- h. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals without a separate written request or when acceptance will require revision to the Contract Documents.
- i. Substitution Submittal Procedure:
- (1) Submit requests for substitutions on the form attached to end of this Article.
 - (2) Submit 3 copies of each Request for Substitution for consideration.
 - (3) Limit each request to one proposed substitution.
 - (4) Submit Shop Drawings, Product Data, and certified test results attesting to the proposed product equivalence.
 - (5) The burden of proof is on the proposer.
 - (6) The Authority Representative will notify the Offeror or Contractor in writing of the decision to accept or reject each substitution request.

REQUEST FOR SUBSTITUTIONS FORM				
PROJECT: _____	DATE: _____			
LOCATION: _____				
PROJECT NO.: _____	SUBSTITUTION REQUEST NO.: _____			
RE: _____				
SPECIFICATION SECTION(S) / DRAWING(S) TO WHICH THIS REQUEST APPLIES				
Section Title(s): _____	Section/Drawing Number(s): _____			
Section Article(s)/ Paragraph(s)/ Subparagraph(s): _____	Section Page Number(s): _____			
PROPOSED SUBSTITUTION				
Substitution Description:				
	Original	Proposed Substitution		
Supplier:				
Trade/Brand Name:				
Model Number(s):				
Installer(s):				
Differences Between Proposed Substitution and Specified Product:	Point-by point comparative data attached			
Substitution History	New Product	1-4 Years Old	5-10 Years Old	More Than 10 Years Old
Does the substitution affect other parts of the Work? No Yes (If yes, explain below)				

BENEFITS TO OWNER OF ACCEPTING SUBSTITUTION	
Savings to Owner: _____ _____ \$ _____	Change in Contract Time?
	No
	Yes _____ Days Added _____ Days Deducted

REASON(S) FOR NOT PROVIDING SPECIFIED ITEM OR METHOD

Supporting Data Attached:	Drawings	Product Data	Samples	Tests
	Reports	Other _____		

Attachments:

CONTRACTOR CERTIFICATION AND SIGNATURES			
Submitted by: _____		Firm: _____	
The Undersigned certifies that the:			
<ul style="list-style-type: none">• Proposed substitution has been fully investigated and determined to be equal or superior in all respects to the specified product.• Same warranty will be furnished for the proposed substitution as for the specified product.• Same maintenance service and source of replacement parts, as applicable, is available.• Proposed substitution will have no adverse effect on other trades and will not affect or delay the progress schedule.• Cost data as stated above is complete; claims for additional costs, related to the accepted substitution, which may subsequently become apparent are to be waived.• Proposed substitution does not affect dimensions and functional clearances.• Contractor will make payment for changes to design, including Engineer's design, equipment, detailing, and construction costs caused by the substitution.• Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.			
Contractors Signature: _____		Date: _____	
ENGINEER'S REVIEW AND DISPOSITION			
Substitution approved: Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.			
Substitution approved as noted: Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.			
Substitution rejected: Provide specified materials and methods.			
Substitution request received too late: Provide specified materials and methods.			
Engineers Signature: _____		Date: _____	
Additional Comments:	Contractor	Supplier	Subcontractor
	Manufacturer	Engineer	Other _____

2.74 MANUFACTURING'S INSTALLATION INSTRUCTIONS

- a. Submit the manufacturer's installation instructions for the Authority Representative's knowledge.
- b. Submit printed instructions for the delivery, storage, assembly, installation, startup, adjusting, and finishing, to the Authority Representative in quantities specified for Product Data.

- c. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

2.75 MANUFACTURER'S FIELD REPORTS

- a. Submit reports for the Authority Representative's knowledge.
- b. Submit the report in duplicate within 24 hours of observation to the Authority Representative for information.
- c. Submit the reports for information for assessing conformance with the information given and the design concept expressed in Contract Documents.

2.76 MANUFACTURING'S FIELD SERVICES

- a. When specified in individual Specification Sections, require material or product suppliers or manufacturers to provide qualified Staff personnel to observe Site conditions; conditions of surfaces and installation; quality of workmanship; startup of equipment; testing, adjusting, and balancing of equipment; and commissioning] as applicable, and to initiate instructions when necessary.
- b. Submit the qualifications of the observer to the Authority Representative 30 days in advance of the required observations.
- c. The observer is subject to the approval of the Authority Representative.
- d. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to the manufacturer's written instructions.
- e. Refer to the "Manufacturer's Field Reports" Article for reporting requirements.

2.77 MOCK-UP REQUIREMENTS

- a. Tests will be performed under provisions identified in this Article and identified in individual product Specification Sections.
- b. Assemble and erect the specified or indicated items with the specified or indicated attachment and anchorage devices, flashings, seals, and finishes.
- c. Accepted mockups shall be the comparison standard for remaining Work.
- d. Where a mockup has been accepted by the Authority Representative and is specified in the product Specification Sections to be removed, remove the mockup and clear the area when directed to do so by the Authority Representative.

2.78 TESTING AND INSPECTION SERVICES

- a. Employ and pay for the services of an independent testing agency or laboratory acceptable to Owner to perform specified testing.
 - (1) Before starting Work, submit the testing laboratory name, address, and telephone number, and the names of a full-time Professional Engineer or specialist and responsible officer.
 - (2) Certify that the independent testing agency or laboratory complies with the recommended requirements of the American Council of Independent Laboratories or ASTM E329.
 - (3) Submit a copy of the report of the laboratory facilities' inspection made by the Materials Reference Laboratory of the National Bureau of Standards during its most recent inspection, with the memorandum of remedies of deficiencies reported by the inspection.
- b. The independent testing agency or laboratory will perform tests, inspections, and other services specified in individual Specification Sections and as required by the Authority Representative or the Authorities Having Jurisdiction.
 - (1) Laboratory: The laboratory must be authorized to operate at the Project location.
 - (2) Laboratory Staff: The laboratory must maintain a full-time Professional Engineer or other specialist on staff to review services.

- (3) Testing Equipment: The laboratory must only use test equipment calibrated at reasonable intervals with devices of an accuracy traceable to the National Bureau of Standards or accepted values of natural physical constants.
 - (4) As specified in Paragraph 2.5.6, if specified in the technical specifications and approved under similar Authority contracts, the Contractor may in lieu of testing submit certified test reports of previous testing of factory supplied components.
- c. Testing, inspections, and source quality control may occur on or off the Project Site.
- (1) Perform off-Site testing as required by the Authority Representative.
- d. The original and two copies of Test Reports shall be submitted by the independent firm to the Authority Representative, Contractor, and Authorities Having Jurisdiction, in duplicate, indicating the observations and results of tests and compliance or noncompliance with the Contract Documents.
- (1) Submit a final report indicating correction of Work previously reported as noncompliant.
- e. Cooperate with the independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
- (1) Notify the Authority Representative and the independent firm 24 hours before the expected time for operations requiring services.
 - (2) Make arrangements with the independent firm, and pay for additional Samples and tests required for the Contractor's use.
- f. Employment of the testing agency or laboratory shall not relieve the Contractor of the obligation to perform the Work according to requirements of the Contract Documents.
- g. Retesting or re-inspection required because of nonconformance with specified or indicated requirements shall be performed by the same independent firm on instructions from the Authority Representative
- (1) Payment for retesting or re-inspection will be charged to the Contractor by deducting testing charges from Contract Sum/Price
- h. Testing Agency/Laboratory Responsibilities:
- (1) Test Samples of mixes submitted by the Contractor.
 - (2) Provide qualified personnel at the site.
 - (3) Cooperate with the Authority Representative and Contractor in performance of services.
 - (4) Perform sampling and testing of products indicated in the Contract Documents according to specified standards.
 - (5) Ascertain compliance of materials and mixes with the requirements of Contract Documents.
 - (6) Promptly notify the Authority Representative and Contractor of observed irregularities or nonconformance of Work or products.
 - (7) Perform additional tests required by the Authority Representative.
 - (8) Attend preconstruction meetings and progress meetings.
- i. After each test, have the Testing Agency/Laboratory promptly prepare and submit the original copy of the test report to the Authority Representative, Contractor, and certified

copies to the Authorities Having Jurisdiction.

- (1) When requested by the Authority Representative, provide an interpretation of the test results.
- (2) The test report shall include the following information:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and Specification Section.
 - f. Location in Project.
 - g. Type of inspection or test.
 - h. Date of test.
 - i. Results of tests.
 - j. Conformance with Contract Documents.

k. Limits on Testing Agency/Laboratory Authority:

- (1) The agency or laboratory may not release, revoke, alter, or enlarge on the requirements of the Contract Documents.
- (2) The agency or laboratory may not approve or accept any portion of the Work.
- (3) The agency or laboratory may not assume the duties of Contractor.
- (4) The agency or laboratory has no authority to stop the Work.
- (5) For scheduled testing requirements, the contractor shall coordinate with WMATA for access to WMATA property for the performance of this work. The contractor shall contact WMATA 48 hours prior to the scheduled activity to confirm and coordinate access if needed.

2.79 PRODUCT DELIVERY REQUIREMENTS

- a. Transport and handle products according to the manufacturer's instructions.
- b. Promptly inspect shipments to ensure the products comply with the requirements, the quantities are correct, and the products are undamaged.
- c. Provide equipment and personnel to handle products; use methods to prevent soiling, disfigurement, or damage.

2.80 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- a. Store and protect products according to the manufacturer's instructions.
- b. Store products with seals and labels intact and legible.
- c. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable for the product.
- d. For exterior storage of fabricated products, place products on sloped supports aboveground.
- e. Provide bonded off-site storage and protection when the site does not permit on-site storage or protection.
- f. Cover products subject to deterioration with impervious sheet covering; and provide ventilation to prevent condensation and degradation of products.
- g. Store loose granular materials on solid flat surfaces in a well-drained area, and prevent mixing them with foreign matter.
- h. Provide equipment and personnel to store the products; and use methods to prevent soiling, disfigurement, or damage.
- i. Arrange the storage of products to permit access for inspection.

- (1) Periodically inspect the stored products to verify they are undamaged and are maintained in acceptable condition.

2.81 SPARE PARTS AND MAINTENANCE PRODUCT

- a. Furnish spare parts in accordance with the requirements specified in Special Provision 2.64 (WMATA to Confirm Provision Number) and as indicated herein.
- b. Furnish spare parts, maintenance, and extra products in quantities specified in individual Specification Sections.
- c. Deliver spare parts, maintenance, and extra products to the project site and place them in a location as directed by the Authority Representative; and obtain receipts for them prior to final payment.

2.82 MAINTENANCE SERVICE

- a. Furnish service and maintenance of components indicated in Specification Sections during the warranty period.
- b. Examine system components at a frequency consistent with reliable operation.
- c. Clean, adjust, and lubricate components as required.
- d. Include a systematic examination, adjustment, and lubrication of components.
- e. Repair or replace parts whenever required.
- f. Use parts produced by the manufacturer of the original component.
- g. Do not assign or transfer maintenance service to an agent or Subcontractor without prior written consent of the Authority Representative.

2.83 CUTTING AND PATCHING

- a. Employ skilled and experienced installers to perform cutting and patching.
- b. Submit written request in advance of cutting or altering elements affecting:
 - (1) Structural integrity of element.
 - (2) Integrity of weather-exposed or moisture-resistant elements.
 - (3) Efficiency, maintenance, or safety of element.
 - (4) Visual qualities of sight-exposed elements.
 - (5) Work of Owner or separate contractor.
- b. Execute cutting, fitting, and patching [including excavation and fill] to complete Work and to:
 - (1) Fit the several parts together, to integrate with other Work.
 - (2) Uncover Work to install or correct ill-timed Work.
 - (3) Remove and replace defective and nonconforming Work.
 - (4) Remove samples of installed Work for testing.
 - (5) Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- c. Execute Work by methods to avoid damage to other Work and to provide proper surfaces to receive patching and finishing.
- d. Cut masonry and concrete materials using masonry saw or core drill.
- e. Restore Work with new products according to requirements of Contract Documents.
- f. Fit Work tight to pipes, sleeves, ducts, conduits, and other penetrations through surfaces.

- g. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- h. At penetrations of fire-rated walls, partitions, ceiling, or floor construction, completely seal voids with fire-rated material according to the technical specifications to the full thickness of the penetrated element.
- i. Refinish surfaces to match adjacent finishes.
 - (1) For continuous surfaces, refinish to the nearest intersection; for assembly, refinish entire unit.
- j. Identify hazardous substances or conditions exposed during the Work to Architect/Engineer for decision or remedy.

2.84 PROTECTING INSTALLED CONSTRUCTION

- a. Protect installed Work and provide special protection where specified in individual Specification Sections.
- b. Provide temporary and removable protection for installed products. Control activity in immediate Work area to prevent damage.
- c. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- d. Use durable sheet materials to protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects.
- e. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- f. Prohibit traffic from landscaped areas.

2.85 FINAL CLEANING

- a. In addition to the requirements specified in Special Provision 2.67, perform the final cleaning specified in this Article.
- b. Execute final cleaning prior to final Project assessment.
 - (1) Employ experienced personnel or professional cleaning firm.
- c. Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains, and foreign substances; polish transparent and glossy surfaces; and vacuum carpeted and soft surfaces.
- d. Clean equipment and fixtures to sanitary condition with appropriate cleaning materials.
- e. Replace filters of operating equipment.
- f. Clean debris from roofs, gutters, downspouts, and drainage systems.
- g. Clean the site; sweep paved areas, rake clean landscaped surfaces.
- h. Remove waste and surplus materials, rubbish, and construction facilities from the site.

2.86 TESTING, ADJUSTING, AND BALANCING

- a. Owner will appoint, employ, and pay for services of an independent firm to perform testing, adjusting, and balancing.
- b. The independent firm will perform services specified in the mechanical technical specifications.
- c. Reports will be submitted by independent firm to the Authority Representative indicating observations and results of tests and indicating compliance or noncompliance with requirements of Contract Documents.

2.87 STARTING OF SYSTEMS

- a. Coordinate the schedule for startup of various equipment and systems.
- b. Notify the Authority Representative 7 days prior to the startup of each item.
- c. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause

- damage.
- d. Verify that tests, meter readings, and electrical characteristics agree with those required by the equipment or system manufacturer.
 - e. Verify that wiring and support components for equipment are complete and tested.
 - f. Execute startup under the supervision of manufacturer's representative or Contractors' personnel according to the manufacturer's instructions.
 - g. When specified in individual Specification Sections, require the manufacturer to provide an authorized representative who will be present at site to inspect, check, and approve the equipment or system installation prior to startup and who will supervise placing the equipment or system in operation.
 - h. Submit a written report that verifies the equipment or system has been properly installed and is functioning correctly.

2.88 PROTECTION OF EXISTING BUILDINGS AND EQUIPMENT

- a. The Contractor shall take precautions to protect both the existing building and the existing equipment. In addition, all shop equipment in and around the limits of work must remain operational throughout the entire construction process. Should the need to limit the use of a WMATA equipment item for any reason during construction, the Contractor must get prior approval from the owner.

2.89 SITE SPECIFIC WORK PLANS

- a. Prior to performing the Work (all construction activities including but not limited to electrical, mechanical, plumbing, structural, concrete, etc.), the Contractor shall prepare a Site Specific Work Plan (SSWP) in accordance with WMATA standards for review and approval by the Authority Representative. The standard SSWP format is shown in Appendix F; prior to any submissions the contractor is to verify with the AR for any changes in the format.
- b. The SSWP shall be submitted in Microsoft Word form a minimum of 90 days prior to the start of the portion of the construction for which the SSWP is applicable.
- c. The AR will need to obtain switching orders (SO) for any power related work, as well as any work requiring support personnel (i.e. sprinkler, fire alarm, etc.). The SO's must be requested, in writing, a minimum of 30 day prior to beginning work on the task covered by the SO.
- d. Contractor shall prepare a Site Specific Work Plan (SSWP) for each Bid Items in this Contract.
- e. The contractor is to provide a detailed description of the work to be conducted under the SSWP, this information needs to be provided in the Description of work and in the Work Activity Schedule.
- f. Prior to performing the Work (all construction activities included but not limited to electrical, mechanical, plumbing, structural, concrete, etc.), the Contractor shall prepare a Site Specific Work Plan (SSWP) in accordance with WMATA standards for review and approval by the Authority Representative. The standard SSWP format is shown in Appendix F and shall be submitted in Microsoft Word form 90 days prior to the start of construction. The contractor shall verify with AR for any changes in the format.

2.90 TEMPORARY STORAGE AND STAGING AREAS

- a. Contractor to coordinate with the Authority for the staging area.

2.91 BARRIERS

- a. Description
 - (1) Contractor is required to provide and maintain barriers, enclosures and/or fencing

required by the Authority Representative, including barricades for designated Contractor work areas, Contractor laydown areas, and to protect shop areas that shall remain open during each phase of the project, including:

- (a) Dustproof and smoke resistant barricades
- (b) Drawings and general provisions of the Contract apply to this Section

b. Submittals:

- (1) The contractor shall submit drawings of proposed barricade construction and layout to the Authority Representative for review and approval.
- (2) Barricades shall not be installed until the drawings for them have been approved by the Authority Representative.

c. Action Submittals:

- (1) Location plans for temporary barriers and enclosures to be used in each phase and stage of construction

Details of field assembled barricade construction

Product and manufacturer data for moveable prefabricated barricade elements such as concrete vehicle barriers and chain link fencing.

d. Project Conditions:

- (1) In all work areas, barricades shall enclose and prevent entry into the Work area and shall be full height and dustproof. Traffic cones and/or stakes with ribbons shall not be used.
 - (a) When this requirement is not feasible (equipment removal, equipment installation, etc.); written approval from the Authority Representative to waive this requirement is required.
- (2) The Contractor shall take all means to alleviate any or all tripping and falling hazards, both within the work area and around the shop floor.
- (3) Temporary barricades shall be a minimum of 6 feet high of solidly sheathed construction to obstruct views and prevent passage of dust and debris created by construction activity. Areas used exclusively for lay down purposes, and gates provided for vehicle or equipment access, may be of chain link fence construction with opaque cloth vision and dust protection.

e. Requirements:

- (1) Sheet material for dust and smoke control: Reinforced, fire-retardant Polyethylene Sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.
- (2) For any materials used that are not fire-resistant treated, apply approved fire and smoke resistant paint coatings.

f. Installation and Maintenance:

- (1) Install barricades, including gates, doors, and dustproofing, in accordance with approved plans and details for each stage and phase of the Project.
- (2) Provide suitable temporary protection for all elements within the Project that are scheduled to remain. This protection shall be suitable to maintain the current condition of those existing elements.
- (3) When barricades are removed, restore the work area to its original location.
- (4) Maintain the temporary barricades as needed to they appear in "like new" conditions at all times. Maintenance on the barricades shall continue until they are removed.

2.92 CONTRACTOR WORKING HOURS

Refer to sections 2.1.4 Site Access and Hours of Work

2.93 PROJECT PROGRESS AND SAFETY MEETING

- a. The Contractor shall conduct Progress meetings in the Washington Metropolitan Area bi-weekly at regularly scheduled times convenient for all parties involved. Progress meetings are in addition to specific meetings held for other purposes, such as coordination and special pre-installation meetings. A two week work plan shall be developed by the Contractor prior to the start of the meeting as specified in 2.8 PROGRESS SCHEDULE and will be discussed during the planning portion of the agenda. Additionally, discussions will address administrative and technical issues of concern, determining resolutions, and development of deadlines for resolution within allowable time frames. The Authority Representative or designee shall attend all progress meetings.
- b. The Contractor shall determine, together with the Authority Representative, who should attend the meeting in addition to representatives of the Authority, the Contractor, and those subcontractors, suppliers, or other entities critical to the current progress or involved in planning, coordination or performance of future activities that are part of the Work. The parties shall each be represented by persons thoroughly familiar with and authorized to conclude matters relating to the work described in the approved Final Design Drawings and Final Design Specifications Issued for Construction.
- c. Agenda discussion items shall include, but are not limited to, review of minutes of the previous progress meeting prepared by the Contractor. The Contractor shall publish an agenda at least 3 calendar days prior to the meetings and submit to the Authority Representative in accordance with 2.5 CONTRACTOR'S SUBMITTAL and will document issues of significance including submittals, schedules, quality control/assurance, safety, problems encountered, and the assignment of responsibilities for future action. Agenda items may include other items of significance that could affect progress such as:
 - Contractor's design and/or construction schedule.
 - Interface requirements.
 - Time.
 - Sequences.
 - Deliveries.
 - Off-site fabrication problems.
 - Access.
 - Site utilization.
 - Updated Submittals List and Submittals.
 - Requests for Information.
 - Non-Compliance Notices.
 - Temporary facilities and services.
 - Hours of Work.
 - Resource allocation.
 - Hazards and risks.
 - Housekeeping.
 - Quality and Work standards.
 - Safety issues.
 - Change Orders
 - Documentation of information for payment requests.
 - ADMG compliance.
- d. The Contractor shall record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting

Appendix A – Index of Drawings

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24	K07TB1-TB-202	EQUIPMENT ELEVATIONS
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Appendix B - Disadvantaged Business Enterprise

**NOTICE OF REQUIREMENTS
FOR
DISADVANTAGED BUSINESS ENTERPRISE (DBE)**

March 2012

* * *

~Applies only if bid/proposal price is \$500,000 or more for a construction contract or \$100,000 or more for a supply and service contract.

~ APPENDIX B

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

1. DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENT:

- A. The DBE requirements of the Authority's DBE Program Plan apply to this contract. Accordingly, the Contractor shall carry out the requirements of the Authority's DBE Program Plan and this Appendix in the award and administration of this U.S. Department of Transportation (US DOT) assisted contract.

2. POLICY:

- A. It is the policy of the Authority (WMATA), the Federal Transit Administration (FTA) and the US DOT that Disadvantaged Business Enterprises (DBEs) shall compete fairly to receive and participate in performing federally assisted contracts, including contracts and subcontracts at any tier. It is further the policy of the Authority, the FTA and the US DOT that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts. The Contractor hereby agrees to carry out this policy in the award and administration of subcontracts to the fullest extent possible consistent with efficient Contract performance.

3. CONTRACT GOAL:

- A. If the bidder/proposer is not a DBE, the bidder/proposer agrees that the DBE goal for this Contract shall be met by subcontractors or by joint ventures with DBEs. **The goal set forth for this Contract is 18.5% of the final Contract price, including amendments and modifications.** The amount of DBE participation will be determined by the dollar value of the work performed and/or supplies furnished by DBE firms as compared to the total value of all work performed and/or supplies furnished under this Contract. The Contractor shall have met this goal if the Contractor's DBE participation meets or exceeds this goal.
- B. In cases where work is added to the Contract by modification such that additional DBE participation is necessary to meet this goal, the Contractor shall increase the participation of one or more firms listed on the "Schedule of DBE Participation" or submit additional DBE certified firms to meet the goal. In cases where work is deleted from the Contract, the goal shall be applicable to the new Contract amount. The Contractor shall be permitted to meet the goal by revising its DBE participation, provided, however, that the revision shall not result in DBE participation that is less than the original goal.

4. DEFINITIONS:

- A. **Appendix B.** The Notice of Requirements for Disadvantaged Business Enterprise, which when attached to a solicitation, implements the DBE requirements of the Authority's DBE Program Plan in the award and administration of federally funded Authority contracts.

B. **Certified DBE.** means a for-profit small business concern (a) that is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals; (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it; and (c) whose eligibility is evidenced by a current WMATA

Certification letter, a D.C. Department of Transportation Certification letter, or a certification letter issued by the Metropolitan Washington Unified Certification Program (MWUCP).

- C. **Contractor.** One who participates, through a contract or subcontract (at any tier), in a US DOT assisted highway, transit or airport program.
- D. **DC DOT.** The District of Columbia Department of Transportation.
- F. **Good Faith Efforts.** Efforts to achieve a DBE goal or other requirements of the Authority's DBE Program Plan which by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the goal program requirement.
- G. **Joint Venture.** An association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and shares in the capital contribution, control, management, risks, and profits of the joint venture commensurate with its ownership interest.
- H. **Metropolitan Washington Unified Certification Program (MWUCP).** A unified certification program mandated by 49 CFR §26.81 between two federal transit recipients (WMATA and the D.C. Department of Transportation). The agreement became effective January 2005.
- I. **Pre-certification.** A requirement under 49 CFR §26.81(c) that all certifications by the MWUCP be made final before the due date for bids or offers on a contract on which a firm seeks to participate as a DBE.
- J. **Race-conscious.** A measure or program that is focused specifically on assisting only DBEs, including women-owned DBEs.
- K. **Race-neutral.** A measure or program that is, or can be, used to assist all small businesses. For the purposes of the DBE program, race-neutral includes gender-neutrality.
- L. **Small Business Concern.** With respect to firms seeking to participate as DBE's in US DOT assisted contracts, a small business concern as defined pursuant to Section 3 of the Small Business Act and Small Business Administration implementing regulations (13 CFR Part 121) that also does not exceed the cap on average annual gross receipts specified in 49 CFR Part 26.65(b).
- M. **Socially and Economically Disadvantaged Individual.** Any individual who is a citizen (or other lawfully admitted permanent resident) of the United States and who the Authority finds to be a socially and economically disadvantaged individual on a case-by-case basis, and any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged.
- (1) Black Americans, which includes persons having origins in any of the Black racial groups of Africa;
 - (2) Hispanic Americans, which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - (3) Native Americans, which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;

- (4) Asian-Pacific Americans, which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the North Marianas Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;
- (5) Subcontinent Asian Americans, which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;
- (6) Women; and
- (7) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

- N. **US DOT Assisted Contract.** Any contract between the Authority and a contractor (at any tier) funded in whole or in part with US DOT financial assistance, including letters of credit or loan guarantees.
- O. **Unified Certification Program (UCP).** The program mandated by 49 CFR Part 26.81(a), which requires all U. S. DOT recipients of federal financial assistance to participate in a statewide certification program by March 2002.
- P. **WMATA.** Washington Metropolitan Area Transit Authority, the transit system (rail and bus) serving the metropolitan Washington area, including parts of Virginia and Maryland.

5. HOW DBE PARTICIPATION IS COUNTED TOWARDS THE CONTRACT GOAL:

DBE participation shall be counted towards meeting the DBE goal in accordance with the following:

- A. When a DBE participates in a contract, only the value of the work actually performed by the DBE is counted towards the DBE goal.
- (1) This amount includes the entire amount of that portion of a construction contract that is performed by the DBE's own forces. This amount includes the cost of supplies and materials obtained by the DBE for the work of the contract, including supplies purchased or equipment leased by the DBE (except supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate).
 - (2) This amount includes the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of the contract, towards the DBE goal, provided the fee is reasonable and not excessive as compared with fees customarily allowed for similar services.
 - (3) When a DBE subcontracts part of its work under the contract to another firm, the value of the subcontract work may be counted towards the DBE goal only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count towards the DBE goal.

B. When a DBE performs as a participant in a joint venture, the portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract that a DBE performs with its own forces towards the DBE goal may be counted.

C. Expenditures to a DBE contractor towards the DBE goal may be counted only if the DBE is performing a commercially useful function on that contract.

- (1) A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, the Authority will consider the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.
- (2) A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation.
- (3) If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or if the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work, the Authority will presume that the DBE is not performing a commercially useful function.

D. The following factors will be used by the Authority in determining whether a DBE trucking company is performing a commercial useful function:

- (1) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible for on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting the DBE goal.
- (2) The DBE must itself own and operate at least one fully licensed, insured and operational truck used on the contract.
 - (3) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers, it employs.
- (3) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
- (5) The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the

lessee, since these services are not provided by a DBE.

- (6) The lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the terms of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

E. The following factors will be used to count expenditures with DBEs for materials or supplies towards the DBE goal:

- (1) If the materials or supplies are obtained from a DBE manufacturer, 100 percent of the cost of the materials or supplies will be counted towards the DBE goal. A manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the contract.
- (2) If the materials or supplies are purchased from a DBE regular dealer, 60 percent of the cost of the materials or supplies will be counted towards the DBE goal. A regular dealer is a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt without owning, operating, or maintaining a place of business as provided in this paragraph if this person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by long-term lease agreement and not on an ad hoc or contract-by-contract basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this paragraph.
- (3) With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials and supplies required on a job site, may be counted towards the DBE goal, provided the fees are reasonable and are not excessive as compared with fees customarily allowed for similar services. The cost of the materials and supplies themselves may not be counted towards the DBE goal.

F. All DBE firms must be pre-certified. Participation by a firm that is not currently certified as a DBE by the Authority at the time of the due date for bids or offers on a contract, does not count towards the DBE goal. All DBE firms must be in compliance with 49 CFR, Part 26.

G. The dollar value of work performed under the contract by a firm who has been decertified as a DBE by the MWUCP does not count towards the DBE goal.

H. The participation of a DBE subcontractor does not count towards the Contractor's DBE goal until the amount

being counted towards the goal has been paid to the DBE.

6. BID AND PROPOSAL REQUIREMENTS (WITH THE BID/PROPOSAL):

The bidder/proposer shall submit the following with its bid/proposal. Any bidder/proposer who fails to complete and return this information with its bid/proposal shall be deemed to be not responsive and may be ineligible for contract award. Bidders/proposers that fail to meet the DBE goal above and fail to demonstrate "good faith efforts" to justify waiver of the DBE goal (see paragraph 6.C. below) shall be deemed to be not responsible and will be ineligible for Contract award.

- A. Completed "Schedule of DBE Participation" (Attachment B-1) sufficient to meet the above goal. If the bidder/proposer is a DBE firm and intends to satisfy the appropriate DBE requirement with its own firm, it must indicate in the Schedule the area of work and percentage it will perform to satisfy the goal. All bidder/proposers must attach current WMATA, DC DOT or MWUCP certification letters for each DBE listed on the Schedule.
- B. Executed "Letters of Intent to Perform as a Subcontractor/Joint Venture" (Attachment B-2). If the bidder/proposer is not a DBE or intends to satisfy the requirements through other DBE firms, then it must attach these letters from each certified DBE listed on the Schedule.
- C. Justification for grant of relief (Appendix B waiver of DBE goal). If in the submittal of its bid/proposal, the bidder/proposer fails to meet the DBE goal above, the bidder/proposer has the burden of furnishing sufficient documentation with its bid/proposal of its "good faith efforts" to justify a grant of relief (waiver) from the goal or portion of the goal. Such justification shall be in the form of a detailed report. The following is a list of actions which shall be considered as part of the bidder's/proposer's good faith efforts to obtain DBE participation. This list is neither a mandatory checklist nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases:
- (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid/proposal meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder/proposer must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder/proposer must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
 - (2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goal will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
 - (3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
 - (4) (a) Negotiating in good faith with interested DBEs. It is the bidder's/proposer's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of

DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work. "DBE Unavailability Certifications" (Attachment B-3) shall be completed as appropriate.

- (b) A bidder/proposer using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as the contract goal into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's/proposer's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder/proposer of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- (5) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids/proposals in the contractor's efforts to meet the project goal.
- (6) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
- (7) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

7. BID AND PROPOSAL REQUIREMENTS (APPARENT SUCCESSFUL BIDDER/PROPOSER):

The bidder/proposer shall submit the following items within ten (10) calendar days after notification that they are the apparent successful bidder/proposer:

- A. A copy of a current WMATA, D.C. DOT or MWUCP certification letter(s) shall be attached to the DBE Schedule of Participation to evidence DBE pre-certification.
- B. DBE Manufacturer's Affidavit, if applicable, must be submitted in order to receive 100 percent of the allowable credit for expenditures to DBE manufacturers/suppliers (Attachment B-4). By submission of this Affidavit, the bidder/proposer certifies that it is satisfied that the manufacturer meets the requirements of 49 CFR Part 26.
- C. Schedule B Information for Determining Joint Venture Eligibility, if applicable (Attachment B-5, pgs. 1, 2, 3, 4). Submittal shall be signed by all parties, dated and notarized.
- D. Copy of Joint Venture Agreement, if applicable. Submittal shall be signed by all parties, dated and notarized.
- E. Certification letter of the DBE regular dealer/supplier, if applicable. If the bidder/proposer wants to receive the maximum allowable credit of its expenditures for material(s) or supplies required under this Contract, from DBE regular dealers/suppliers, the DBE must submit a signed and notarized statement on their letterhead, that they are a regular dealer of the material(s) or supplies. By submission of this statement, the bidder/proposer certifies that it is satisfied that the subcontractor is a regular dealer/supplier that meets the requirements of 49 CFR Part 26.
- F. For Design-Build contracts, if a DBE goal is specified in Section 00872, DBE GOAL REQUIREMENTS, the proposer shall submit with its initial Price Proposal a list of DBE-certified firms that it intends to enter into subcontract agreements with for this Contract. If no goal is specified in Section 00872 of the solicitation and the proposer still intends to utilize DBEs in the performance of this Contract, the proposer shall submit with its initial Price Proposal a list of those DBE-certified firms. The documentation requirements of Section 00453 of the solicitation shall be completed and submitted at the time set forth for the submittal of Best and Final Offer (BAFO) to the Authority for any Contract in which a DBE goal is applicable or for any Contract in which there was no goal established, but the proposer identified DBE-certified firms that it intends to enter into subcontract agreements with in its initial Price Proposal. Any proposer who fails to complete and return the following information, if applicable, with their BAFO Price Proposal may be deemed to be not responsible and may be ineligible for contract award. Proposers that fail to meet the DBE goal, if any, specified in Section 00872 and fail to demonstrate a good faith effort and to justify waiver of the DBE goal may be deemed to be not responsible and may be ineligible for contract award.

8. CONTRACT ADMINISTRATION REQUIREMENTS:

The following requirements apply after contract award:

- A. The Contractor shall include the following provision in the General Provisions of each subcontract it awards in support of the DBE goal:

“The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of US DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in termination of this contract or such other remedy as the recipient deems appropriate.”
- B. (1) The Contractor shall monitor the performance of, collect and report data on DBE participation to the WMATA's DBE office on the attached "Prompt Payment Report-Prime Contractor's Report" (Attachment B-6) which shall be submitted monthly with each payment request. Failure to submit these reports may result in suspension of contract payments. The Contractor shall certify with each payment request that payment

has been or will be made to all subcontractors due payment, within ten (10) days after receipt of payment from the Authority for work by that subcontractor. The Contractor shall inform the COR or COTR, with their payment request, of any situation in which scheduled subcontractor payments have not been made and the reason therefore.

(2) The Contractor shall require each sub-contractor to complete and forward to the DBE Liaison Officer on a monthly basis a "Prompt Payment Report-Subcontractor's Report" (Attachment B-7). The sub-contractor shall certify that payment has been received.

C. The Contractor shall have a continuing obligation to maintain a schedule for participation by DBE contractor(s) to meet its goal set forth above in this Appendix. The Contractor shall not have work performed nor the materials or supplies furnished by any individual or firm other than those named in the "Schedule of DBE Participation." If at any time, the Contractor believes or has reason to believe that it needs to obtain a substitute for a DBE contractor named in the "Schedule of DBE Participation", the Contractor shall, within ten (10) days, notify the contracting officer and the DBE office of that fact in writing. Situations which may warrant substitution for a DBE firm include, but are not limited to the following:

- (1) Evidence of change in ownership or circumstances regarding the firm's status as a DBE.
- (2) Death or physical disability, if the named subcontractor or DBE partner of the joint venture is an individual.
- (3) Dissolution, if a corporation or partnership.
- (4) Bankruptcy of the subcontractor, subject to applicable bankruptcy law, and only instances where the bankruptcy affects the Contractor's ability to perform.
- (5) Inability to furnish a reasonable performance or payment bond, if required.
- (6) Inability to obtain, or loss of, a license necessary for the performance of the particular category of work.
- (7) Failure or inability to comply with a requirement of law applicable to contractors and subcontractors on a construction, alteration or repair project.
- (8) Failure or refusal to execute the subcontract in accordance with the terms of an offer submitted to the Contractor prior to the Contractor's submission of its bid/proposal, but only where the contracting officer or other delegated authority's representative can ascertain with reasonable certainty the terms of such offer. In the absence of any other factors, such a failure or refusal will be considered an unusual situation only if the bidder/proposer obtained, prior to bidding/proposing, an enforcement commitment from the subcontractor involved.
- (9) Failure to comply with the terms and conditions of this Contract or those of its subcontract or joint venture agreement.

Within 30 days thereafter, the Contractor shall, if necessary to achieve the Appendix B goal, make every reasonable effort to subcontract the same or other work equivalent in value to other certified DBE firms. The Contractor must have the prior written approval of the contracting officer and the DBE office before substitution for a DBE subcontractor, regardless of the reason for substitution. Failure to obtain Authority approval could result in the Authority declaring the Contractor ineligible to receive further

Authority contracts for three years from the date of the finding.

- D. The contractor shall forward copies of all subcontracts to the DBE office at the time of their execution.
- E. If the contracting officer or other delegated authority's representative determines that the Contractor has failed to comply with this Appendix B, he/she will notify the Contractor of such non-compliance and the action to be taken. The Contractor shall, after receipt of such notice, take corrective action. If the Contractor fails or refuses to comply promptly, the contracting officer or other delegated authority's representative may issue a "stop work order" stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop work order shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor. When the Authority proceeds with such formal actions, it has the burden of proving that the Contractor has not met the requirements of this Appendix, but the Contractor's failure to meet its Appendix B goal shall shift to it the requirement to come forward with evidence to show that it has met the good faith requirements of this Appendix. Where the Contractor, after exhausting all its administrative and legal remedies and procedures is found to have failed to exert a "good faith effort" to involve DBE's in the work as herein provided, the Authority may declare the Contractor ineligible to receive further Authority contracts for three years from the date of the finding.
- F. The Contractor agrees to cooperate in any studies or surveys as may be conducted by the Authority which are necessary to determine the extent of the Contractor's compliance with this Appendix.
- G. The Contractor shall keep records and documents for two years following performance of this Contract to indicate compliance with this Appendix. These records and documents, or copies thereof, shall be made available at reasonable times and places for inspection by any authorized representative of the Authority and will be submitted upon request together with any other compliance information which such representative may require.
- H. If the Authority, the FTA or the US DOT has reason to believe that any person or firm has willfully and knowingly provided incorrect information or made false statements regarding the DBE Program, the matter shall be referred to the WMATA's DBE office.
- I. Failure by the Contractor to carry out the requirements of this Appendix is a material breach of this Contract, which may result in the termination of this Contract under the Default provision of this Contract or such other remedy as the Authority deems appropriate.

SUMMARY OF SUBMITTALS

With the Bid/Proposal

1. Completed "Schedule of DBE Participation" (Attachment B-1) with current certification letters attached for each listed DBE.
2. Executed "Letters of Intent to Perform as a Subcontractor/Joint Venture" (Attachment B-2).
3. Justification for grant of relief (waiver of DBE goal), if applicable. Include completed "DBE Unavailability Certifications" (Attachment B-3) as appropriate.

Bid and Proposal Requirements (Apparent Successful Bidder/Proposer)

1. All DBEs must submit a copy of their current WMATA or DC DOT certification letters or a certification letter issued by the MWUCP.
2. DBE Manufacturer's Affidavit, if applicable, must be submitted in order to receive 100 percent of the allowable credit for expenditures to DBE manufacturers/suppliers (Attachment B-4).
3. Schedule B Information for Determining Joint Venture Eligibility, if applicable (Attachment B-5, pgs. 1, 2, 3, 4).
4. Copy of Joint Venture Agreement, if applicable.
5. Certification letter of the DBE regular dealer/supplier, if applicable.

After Contract Award

1. Prompt Payment Report-Prime Contractor's Report" Attachment B-6) – submitted monthly.
2. Prompt Payment Report-Subcontractor's Report" (Attachment B-7) - submitted monthly.
3. Request to substitute DBE contractor (see paragraph 8.C.) – submitted as required.
4. Copies of subcontracts-submitted at the time of their execution.

SUBMIT WITH BID/PROPOSAL
SCHEDULE OF DBE PARTICIPATION

Contract No. _____
Project Name _____
Name of Bidder/Proposer _____

The bidder/proposer shall complete this Schedule by identifying only those DBE firms, with scope of work and price, who have agreed to perform work on this Contract. The prices for the work/supplies of these firms shall be at prices amounting to at least the DBE percentage goal of the total contract price. The bidder/proposer agrees to enter into a formal agreement with the DBE firm(s) listed for the work and at, or greater than, the prices listed in this Schedule subject to award of a Contract with the Authority. If the total amount is less than the DBE percentage goal, a justification for waiver of DBE goal shall be attached to this Schedule.

Name of DBE Subcontractor	Address	Type of Work (Electrical, Paving, Etc.) and Contract Items or Parts Thereof to be Performed and Work Hours Involved	Agreed Price
Subtotal \$ DBE Subcontractors			
Name of DBE Prime Contractor	Address	Type of Work (Electrical, Paving, Etc.) and Contract Items or Parts Thereof to be Performed and Work Hours Involved	Agreed Price
Subtotal \$ DBE Prime Contractor			
TOTAL \$ ALL DBE CONTRACTORS		TOTAL	

_____ Signature of Contractor Representative

_____ Title

_____ Date

Contract Number: _____
 Project Name: _____

**LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR/JOINT VENTURE
(ALL ITEMS MUST BE COMPLETED)**

TO:

(Name of Bidder/Proposer)

The undersigned intends to perform work in connection with the above projects as (check one):

_____ an individual

_____ a corporation

_____ a partnership

_____ a joint venture

Specify in detail particular work items or parts thereof to be performed:

at the following price: \$ _____

Please indicate _____% of the dollar value of the subcontract that will be awarded to non-DBE contractors, if applicable. The undersigned will enter into a formal agreement with you for the above work upon your execution of a contract with the Authority.

Name of DBE Subcontractor/Joint Venture

Phone Number

Address

WMATA Vendor ID #/DBE Cert. #

Signature & Title

Date

The following is to be completed by the Prime Contractor. A copy of this letter must be returned to the DBE subcontractor to indicate acceptance.

To:

(Name of DBE)

You have projected your interest and intent for such work, and the undersigned is projecting completion of such work as follows:

Attachment B-2

WORK ITEMS

PROJECTED DBE COMMENCEMENT DATE

PROJECTED DBE COMPLETION DATE

(Date)

(Name of Prime Contractor &
Acceptance Signature)

SUBMIT WITH BID / PROPOSAL
DBE UNAVAILABILITY CERTIFICATION

I, _____, _____, of _____
(Name) (Title) (Bidder/Proposer)

certify that on _____ I contacted the following DBE contractor to obtain a proposal for work
(Date)
items to be performed on Contract Number _____.

DBE Contractor

Work Items
Sought

Form of Bid Sought (i.e., Unit Price, Materials and Labor Only, Etc.)

To the best of my knowledge and belief, said DBE contractors were unavailable (exclusive of unavailability due to lack of agreement on price) for work on this project, or unable to prepare a proposal, for the following reason(s):

Signature: _____

Date: _____

_____ was offered an opportunity to bid on the above
(Name of DBE Contractor)
identified work on _____ by _____
(Date) (Source)

The above statement is true and accurate account of why I did not submit a bid on this project.

(Signature of DBE Contractor)

(Title)

Attachment B3

DBE Certification Instructions
Important Notice

If you do not have a current, official letter of certification from WMATA, D.C. DOT or MWUCP, you are not pre-certified and are therefore not eligible to participate as a Disadvantaged Business Enterprise on the proposal.

For those who wish to access the MWUCP certification application, it may be found on the internet at the following address:

https://www.wmata.com/business/disadvantaged_business_enterprise. Go to "Procurement and Contracting", click on "Disadvantaged Business Enterprise", then click on "DBE Application for Certification".

49 CFR Part 26 gives Metropolitan Washington Unified Certification Program (MWUCP) 90 days in which to process a complete DBE application. In order to become certified and participate in the MWUCP, you must comply with the procedures that follow. Certification must be final before the due date for bids or offers on a contract on which a firm seeks to participate as a DBE.

Instructions

49 CFR Part 26.81(d) of the Certification Procedures requires a firm to be certified as a DBE in its "home state", where it has its principal place of business, in order to become certified outside such "home state". Therefore, you must attach a copy of a valid DBE Certification letter from your home state Department of Transportation to the MWUCP Application. In addition, submit the pertinent documents for your company listed below. The application should be completed in full and **NOTARIZED**.

General (All firms must submit documents under General)

- Current (unaudited) Financial Statements
- Prior three (3) years Federal Tax Returns
- Resume of Principal(s) and Key Personnel
- Third Party Agreements, such as Rental and Management Agreements
- Licenses to Do Business
- Personal Net Worth (PNW) Statement
- Statement of Disadvantage
- No Change Affidavit or Notice of Change (where applicable)

Corporations

- Articles of Incorporation
- By-Laws
- Stock Ownership Options
- Copy of Stock Certifications of Each Holder
- Copy of Voting Rights
- Record of First Organizational Meeting

Partnerships

- Partnership Agreement

Proprietorships

- IRS Employer ID Number
- WMATA Vendor ID#

Limited Liability Companies

- Operating Agreement

Certificate of Formation, Operating Agreement with any amendments
U.S. Corporate or Partnership Income Tax Returns

Change of Status Review

On or before each certification anniversary date, you must submit a No Change Statement attesting that there have been no changes in the firm's circumstances affecting its ability to meet the eligibility requirements of 49 CFR Part 26 or WMATA's DBE Program Plan. Those firms which have undergone changes in circumstances must submit a Notice Regarding Change for review by the Office of Procurement and Materials, DBE Unit. A review of these changes shall be made to determine if the firm is in compliance with the 49 CFR Part 26.

Affidavit Enclosure

NOTE: When completing MWUCP Application, complete all information blocks. Type "N/A" if item does not apply to you or your firm.

DBE MANUFACTURER'S AFFIDAVIT

I hereby declare and affirm that I am _____ (Title)
and duly authorized representative of _____ (Name of Company),
a _____ owned and controlled enterprise
whose address is _____

I further declare and affirm that company employees (persons not on the payroll of and/or performing the same tasks for disadvantaged owned business having any interest in the affiant's business) operate the following company equipment relative to the manufacturing process:

Equipment

Type	Function	Model	Age	Make

Number of employees involved in the manufacturing process: _____

The undersigned swears that the foregoing statements are true and correct and fully understands that WMATA may rely on these statements in determining whether a WMATA prime contractor purchasing goods from the undersigned's manufacturing concern is entitled to a 100% credit of such purchases towards its DBE goal. The undersigned further understands that any material misrepresentation will be grounds for initiating action under Federal or state laws concerning false statements.

Signature of Affiant Printed Name

Date: _____ State: _____ County: _____

On this _____ day of _____, 19_____,

before me appeared _____
(Name)

to me personally known, who, being duly sworn, did execute the foregoing Affidavit, and did state that he or she was properly authorized by _____
(Name of Firm)

to execute the Affidavit and did so as his or her free act and deed.

(Seal) Sworn and subscribed before me _____

(Notary Public)

Commission Expires: _____

Information For Determining Joint Venture Eligibility

.....
..

Name and address of Joint Venture:

.....
.....

Contact Person: _____ Telephone: _____

Have you attached a copy of the Joint Venture agreement? Yes No

NOTE: Affidavit will not be processed without a copy of the Joint Venture agreement.

.....
..

Name and address of Joint Venture partner: _____

.....
.....

Contact Person: _____ Telephone: _____

Status of firm: DBE. Non-Minority.

Does firm have current WMATA, DC DOT or MWUCP DBE certification? Yes No

.....
..

Name and address of Joint Venture partner: _____

.....
.....

Contact Person: _____ Telephone: _____

Status of firm: DBE. Non-Minority.

Does firm have current WMATA, DC DOT or MWUCP DBE certification? Yes No

.....
..

Describe the nature of the Joint Venture business:

Describe the role in the Joint Venture of each partner listed above:

Describe the experience and business qualifications of each partner in the Joint Venture listed above:

.....
.

Information For Determining Joint Venture Eligibility

.....
Indicate the percentage of ownership in the Joint Venture for each Joint Venture partner, indicating dollar amounts wherever applicable.

<i>Name of Partner</i>	<i>Percentage of Ownership</i>	<i>Profit and Loss Sharing</i>	<i>Capital Contributions including Equipment</i>	<i>Other Agreements</i>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

TOTALS:

.....
..
Identify by name, title, race, sex and company affiliation those individuals responsible for the management control of and participation in this contract:

- Financial decisions, such as payroll, insurance, surety and/or bonding requirements:*
Name: _____ Race: _____
Title: _____ Sex: Male Female
Company affiliation: _____
- Management decisions, such as estimating, marketing and sales, hiring and firing, purchasing supplies:*
Name: _____ Race: _____
Title: _____ Sex: Male Female
Company affiliation: _____
- Supervision of field operations:*
Name: _____ Race: _____
Title: _____ Sex: Male Female
Company affiliation: _____

.....
..
Information For Determining Joint Venture Eligibility

.....
..
The undersigned swear that the foregoing statements are correct and include all material information necessary to identify and explain the terms and operations of our following named Joint Venture:

and the intended participation by each Joint Venturer in the undertaking. Further the undersigned covenant and agree to provide the Authority current, complete and accurate information regarding actual Joint Venture work and the payment thereof and any proposed changes in any of the Joint Venture arrangements and to permit the audit and examination of the books, records and files of the Joint Venture, or those of each Joint Venturer relevant to the Joint Venture, by authorized representatives of the Authority or the Federal funding agency. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under Federal and State laws concerning false statements.

It is recognized and acknowledged that the Authority's DBE Program shall have access to the information provided herein above for the purpose of establishing eligibility and authenticity of the minority/woman-owned status of the Joint Venture.

It is understood that trade secrets and information privileged by law, as well as commercial, financial, geological and geophysical data furnished will be protected.

_____	_____
(NAME OF FIRM)	(NAME OF SECOND FIRM)
_____	_____
(SIGNATURE OF AFFIANT)	(SIGNATURE OF AFFIANT)
_____	_____
(PRINT NAME)	(PRINT NAME)
_____	_____
(TITLE)	(TITLE)
_____	_____
(DATE)	(DATE)

Information For Determining Joint Venture Eligibility

.....
..
Date: _____ State: _____ County: _____

On this _____ day of _____,
19_____,

before me appeared

(Name)
to me personally known, who, being duly sworn, did execute the foregoing Affidavit, and did state that
he
or she was properly authorized by _____
(Name of Firm)
to execute the Affidavit and did so as his or her free act and deed.

(Seal) _____ Sworn and subscribed before me
(Notary Public)

Commission Expires:

.....
..
Date: _____ State: _____ County: _____

On this _____ day of _____,
19_____,

before me appeared

(Name)
to me personally known, who, being duly sworn, did execute the foregoing Affidavit, and did state that
he
or she was properly authorized by _____
(Name of Firm)
to execute the Affidavit and did so as his or her free act and deed.

(Seal) _____ Sworn and subscribed before me
(Notary Public)

Commission Expires:

Washington Metropolitan Area Transit Authority
 DISADVANTAGED BUSINESS ENTERPRISE (DBE)
 MONTHLY PROMPT PAYMENT REPORT

PRIME – CONTRACTOR’S REPORT

This report is required to be submitted to the Office of Procurement, DBE Branch 600 5th Street, NW, Suite 3C, Washington, DC 20001, pursuant to the requirements of WMATA’s DBE Program Plan and §26.29 of 49 CFR Part 26.

Contract No.: _____ Reporting Period: _____

Name of Prime Contractor: _____ DBE – Yes or No _____

Prime Contract Amount: _____ Total Received this Reporting Period: _____ Total Received to Date: _____
 DBE Goal _____

Name of Sub-Contractor	DBE (Y/N)	Description of Work	Date Contract Awarded	of	Amount of Sub-Contractor Award	Amount Paid This Reporting Period	Cumulative Paid To Sub-Contractor	% of Physical Work Complete
TOTAL								

I certify the information furnished with respect to DBE subcontractor performance correct to the best of my knowledge and represents a current status of the prime contractor with the DBE subcontractors for the designated period covered by this report. Further, those subcontractors, due payment pursuant to the terms of their subcontracts will be paid within ten days after receipt of payment from WMATA.

By: _____ Title: _____ Date: _____

Washington Metropolitan Area Transit Authority

**DISADVANTAGED BUSINESS ENTERPRISE (DBE)
 MONTHLY PROMPT PAYMENT REPORT**

SUBCONTRACTOR'S REPORT

This report is required to be submitted to the Office of Procurement, DBE Branch 600 5th Street, NW, Suite 3C, Washington, DC 20001, pursuant to the requirements of WMATA's DBE Program Plan and §26.29 of 49 CFR Part 26.

Contract No.: _____ Reporting Period: _____

Name of Subcontractor: _____ DBE – Yes or No _____

Subcontractor Contract Amount: _____ Total Received this Reporting Period: _____ Total Received to Date: _____

Name of Sub-Contractor	DBE (Y/N)	Description of Work	Date of Contract Awarded	Amount of Sub-Contractor Award	Amount Paid This Reporting Period	Cumulative Paid To Sub-Contractor	% of Physical Work Complete
TOTAL							

I certify the information furnished with respect to DBE subcontractor performance correct to the best of my knowledge and represents a current status for the designated period covered by this report. Further, those contractors, due payment pursuant to the terms of their subcontracts will be paid within ten days after receipt of payment from the Contractor.

By: _____ Title: _____ Date: _____

Appendix C – Preventive Maintenance Instructions Sample

Washington Metropolitan Area Transit
Six (6) TBS Upgrades Orange and Blues Lines DC, MD and VA

No. FQ15237
Date: July 2015



Washington Metropolitan Area Transit Authority

PREVENTIVE MAINTENANCE INSPECTION

for

**35kV AC
WESTINGHOUSE LOAD BREAK
INTERRUPTER SWITCH TYPE WLI
INSTALLED AT C99 TP
(for S&I SHOP DC POWER)
728/1090 DAY INSPECTION**

PMI

Preventive Maintenance Inspection

1 of 24

Washington Metropolitan Area Transit
Six (6) TBS Upgrades Orange and Blues Lines DC, MD and VA

No. FQ15237
Date: July 2015



Washington Metropolitan Area Transit Authority

SYSTEMS MAINTENANCE BRANCH

PREVENTIVE MAINTENANCE INSTRUCTION (PMI)

35kV AC
WESTINGHOUSE LOAD BREAK
INTERRUPTER SWITCH TYPE WLI
INSTALLED AT C99 TP
(for S&I SHOP DC POWER)
728/1090 DAY INSPECTION

REVISION NUMBER _____ REVISION DATE 9/28/2012

APPROVALS:




TSSM - POWER SUPERINTENDENT DATE

TIES - CENI DEPUTY CHIEF ENGINEER - POWER DATE

TSSM - GENERAL SUPERINTENDENT DATE

REVIEWED BY: E Rose

Washington Metropolitan Area Transit
Six (6) TBS Upgrades Orange and Blues Lines DC, MD and VA

WARNING		
	Hazardous voltages and high speed moving parts may cause death, serious personal injury or equipment damage. Always follow Red Tag Procedures. De-energize the equipment before maintenance. Maintenance should be performed only by qualified personnel. Follow all safety instructions.	
WARNING		
	Failure to maintain the equipment could result in death, serious injury or equipment failure, and can prevent successful functioning of the connected apparatus.	
WARNING		
	Maintenance must be performed only by qualified persons as defined by the section "Qualified Person" in this procedure.	
WESTINGHOUSE LOAD INTERRUPTER SWITCH WLI	Page 3 of 24	Rev. 11/2001

Washington Metropolitan Area Transit
Six (6) TBS Upgrades Orange and Blues Lines DC, MD and VA

QUALIFIED PERSON

For the purpose of this Preventive Maintenance Inspection, a qualified person is person who is familiar with the installation, construction, operation, and maintenance of the equipment and the hazards involved. In addition, this person has the following qualifications:

1. Is trained and authorized to energize, de-energize, ground, tag and clear circuits and equipment in accordance with established procedures and safety practices.
2. Is trained in the proper care and use of protective equipment such as rubber gloves, hard hat, safety glasses and face shields and flash clothing in accordance with established safety practices.
3. Is trained in rendering first aid and CPR.
4. Is trained in the use and care of high voltage test equipment.

Suggested Reference Material for additional training purposes includes:

OSHA STANDARDS 29CFR 1910 Occupational Safety and Health Standards
1910 Subpart J General Environmental Controls - 1910.147 Lockout / Tagout
1910 Subpart R – Special Industries 1910.269 Electric Power Generation,
Transmission and Distribution
1910.269 (a) General
1910.269 (b) Medical services and first aid
1910.269 (c) Job briefing
1910.269 (d) Lockout/Tagout
1910.269 (e) Enclosed spaces
1910.269 (h) Ladders, platforms, step bolts, and manhole steps 1910.269
(i) Hand and portable power tools
1910.269 (k) materials handling and storage
1910.269 (l) Working on or near exposed energized parts
1910.269 (m) Deenergizing lines and equipment for employee
protection 1910.269 (n) Grounding for the protection of employees
1910.269 (o) Testing and test facilities
1910.269 (t) Underground electrical installations
1910.269 (u) Substations
1910.269 (x) Definitions
1910.269 Appendix E Reference Documents

Washington Metropolitan Area Transit
Six (6) TBS Upgrades Orange and Blues Lines DC, MD and VA

No. FQ15237
Date: July 2015

SUGGESTED ADDITIONAL SAFETY REFERENCES MATERIAL

WMATA Metrorail Safety Rules and Procedures Handbook, SOP 28, SOP 39

ANSI/NFPA 70E – Standard for Electrical Safety In The Workplace, Article 130, Arc Flash Hazard Awareness, Analysis, Determination of Flash Protection Boundaries and Requirement for Personal Protection Equipment (PPE)

ANSI-C2/IEEE-C2 Section 43- Minimum Approach Distance to Energized Parts

ASTM F496 - Standard Specification for In-Service Care of Insulating Gloves and Sleeves

ASTM F696 - Standard Specification for Leather Protectors for Rubber Insulating Gloves and Mittens

ASTM F855 - Standard Specification for Temporary Grounding Systems to Be Used on De-Energized Electrical Power Lines and Equipment

National Institute for Occupational Safety and Health (NIOSH), Electrical Safety Training Booklet, free down load at www.cdc.gov/niosh/docs/2002-123/2002-123a.html

Washington Metropolitan Area Transit
Six (6) TBS Upgrades Orange and Blues Lines DC, MD and VA

SUGGESTED TECHNICAL REFERENCE MATERIAL

Westinghouse	Load Break Interrupter Switch Type WLI Installation, Operation and Maintenance Instruction Booklet
NETA	Maintenance Testing Specifications For Electrical Power Distribution Equipment
ANSI/IEEE Std. 100	IEEE Standard Dictionary of Electrical and Electronics Terms
ANSI/IEEE Std. 902	Guide for Maintenance, Operation and Safety of Industrial and Commercial Power Systems
ANSI/NFPA 70B	Recommended Practice for Electric Equipment Maintenance
ANSI/IEEE Std. 902	Guide for Maintenance, Operation and Safety of Industrial and Commercial Power Systems
NEMA B4	Guidelines for Inspection and Preventive Maintenance of Circuit Breakers in Commercial and Industrial Applications

WESTINGHOUSE LOAD INTERRUPTER SWITCH WLI

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Preventive Maintenance Inspection

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Washington Metropolitan Area Transit
Six (6) TBS Upgrades Orange and Blues Lines DC, MD and VA

**35 kV AC WESTINGHOUSE NO-LOAD INTERRUPTER
SWITCH TYPE WLI**

1.0 INTRODUCTION

1. Prior to performing this PMI procedure conduct a job briefing outlining any safety concerns and potential hazards. Inform the MOC of procedure to be performed. Have on hand a copy of this procedure along with the required PMI Data Sheets, the required equipment listed in 3.0 of this procedure, a copy of the specific Manufacturer's Maintenance Manual 31-935, the electrical schematics and wiring diagrams of C99 TPSS.
2. This PMI is written for the two 34.5KV Westinghouse type WLI Load Interrupter Switches installed in the WMATA C99 TP for C99 S&I shop TB in a duplex switchgear assembly configuration. (Fig. 1, 2)
3. The C99 TPSS duplex switchgear configuration consist of two Westinghouse load Interrupter switches 35KV, type WLI with a common load side bus to feed Rectifier transformer # 3. Rectifier transformer breakers 11 and 12 supply 34.5KV to the two switches. Key interlocks A1, A3 and A4 are supplied to prevent paralleling the incoming sources, and to prevent opening the front door of each vertical section containing one of the two switches unless both rectifier transformer breakers and both switches are locked open.
4. C99 TP Westinghouse WLI switches are NO-LOAD switches, and are Kirk Key interlocked to each other and to the associated rectifier transformer breaker to prevent switches to be open under load and to prevent both switches from being closed at the same time. Under no circumstances both switches should be closed at the time to supply power to the rectifier #3 feeding the S&I shop TB.
5. Performance of this PMI will require a scheduled Red Tag power outage for C99TP Breakers 11, 12, 21, 22, 23 and the entire Alexandria S&I Shop TB Substation. Refer to the attached Alexandria Yard C99 TP single line drawing (Figure 1), to be used only for this preventive maintenance procedure.
6. The purpose of performing this PMI is to reduce hazards to life and property that can result from failure or malfunction of electrical systems and equipment. Effective PMI can aid in reducing unscheduled outages by identifying, through regular service intervals, equipment conditions and irregularities which can cause malfunctions or equipment failure.
7. PMI of the Westinghouse 34.5 kV AC load interrupter switch type WLI will include an inspection, cleaning, checking and an overall evaluation of the cubicle and the load break switch and associated components and high voltage fuses (if applicable). As necessary, adjustments should be made to insure operation and/or alignments are within manufacturer's stated tolerances.

WESTINGHOUSE LOAD INTERRUPTER SWITCH WLI

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Washington Metropolitan Area Transit
 Six (6) TBS Upgrades Orange and Blues Lines DC, MD and VA

No. FQ15237
 Date: July 2015



Fig. 1 WESTINGHOUSE 34.5KV LOAD INTERRUPTER SWITCH TYPE WLI

Westinghouse		
WLI Load Interrupter Switchgear		
Built on Order # BA-58Q00CNL		
Drawing # CN-796A57A02		
Switch Style		4893A0IG06
KV Rating	Ampere Rating	
Nominal 34.5	Continuous	600
Maximum 38.0	Interrupting	600
B.I.L. 150	Momentary	40,000
	Fault Close	30,000
Westinghouse Electric Corp. Distribution Equipment Div. Cincinnati, Ohio U.S.A.		

Fig. 2 Westinghouse WLI Load Interrupter Switch

WESTINGHOUSE LOAD INTERRUPTER SWITCH WLI

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2.0 SAFETY

1. Read and understand these instructions before attempting any assembly, operation, or maintenance of the switch. Do not attempt to operate a connected WLI switch until the rectifier transformer breakers 11 and 12 have been open and rack out, and switches are disconnected from all electric power sources.
2. Do not attempt to close both WLI switches at the same time except as part of an interlock maintenance check when all power has been removed from the line and load sides of the switchgear.
3. All personnel shall follow all the accepted safety practices and procedures while performing this PMI and exercise appropriate caution. Warnings are included to alert the technician to tests and measurements that warrant special care and attention.
4. Ground leads or their equivalent should be attached to both sides of the switch. Make certain that safety grounds are properly in-place on both the jaw and hinge sides of the switch before working inside the switch cubicle or on the switch.
5. There are several interlocks on the switches. Under **NO** circumstances should they be made inoperative when the switch is *in service*, as they are designed to provide personnel protection as well as electric system operational integrity.
6. Never energize the switch without the arc chutes and barriers installed in place.
7. Make sure all safety interlocks are working properly prior to energizing.
8. Never install fuses with a rating greater than that listed on the switch nameplate.

CAUTION



All test equipment used must have been provided by WMATA and must carry current test certification.

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Six (6) TBS Upgrades Orange and Blues Lines DC, MD and VA

CAUTION

DO NOT REMOVE COVERS OR OPEN DOORS OR WORK ON EQUIPMENT UNLESS POWER HAS BEEN TURNED OFF AND ALL CIRCUITS DE-ENERGIZED AND/OR PROPERLY DISCONNECTED/GROUNDED.

DISCONNECT, DE-ENERGIZE, LOCK-OUT AND PROPERLY GROUND CIRCUIT(S) BEFORE WORKING ON EQUIPMENT.

USE PROPER SAFETY PRECAUTIONS WHEN WORKING ON THIS EQUIPMENT.

SOME PROCEDURES REQUIRE WORK AROUND MOVING PARTS, e.g. OPERATING HANDLE, CHAIN AND SPROCKET, STORED ENERGY MECHANISM, etc. TO AVOID PERSONAL INJURY, EXTREME CAUTION MUST BE EXERCISED TO STAY CLEAR (HEAD, HANDS, ETC.) OF THE PATH OF THESE MOVING PARTS AND SWITCH CONTACTS WHILE PERFORMING THIS PML.

3.0 EQUIPMENT

1. Switching suit with rubber gloves (with clean leather protectors)
2. Insulated fuse pullers
3. Digital multi meter
4. Flashlight
5. Specific Manufacturer's technical manual
6. Lint-free rags or cleaning wipes
7. Vacuum and non-conductive hose
8. Scotch-Brite pads / file
9. Cleaning solvent
10. Sand paper and paint
11. Micro-ohm meter
12. Lubricating grease, D50H15 or equivalent (R91-50-0015)
13. Contact grease, D50H47, Westinghouse Graphite grease 53701AN or equivalent (R91-50-0014)
14. Light machine oil/Spray lubricant
15. Standard hand tools and ruler
16. 2/0 AWG Trifurcated Safety Ground Sets (Two Sets)

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18. 2/0 AWG Safety Grounding Jumpers (Two Sets)
19. PMI calibration stickers
20. High Voltage Gloves

4.0 SWITCHGEAR DE-ENERGIZATION

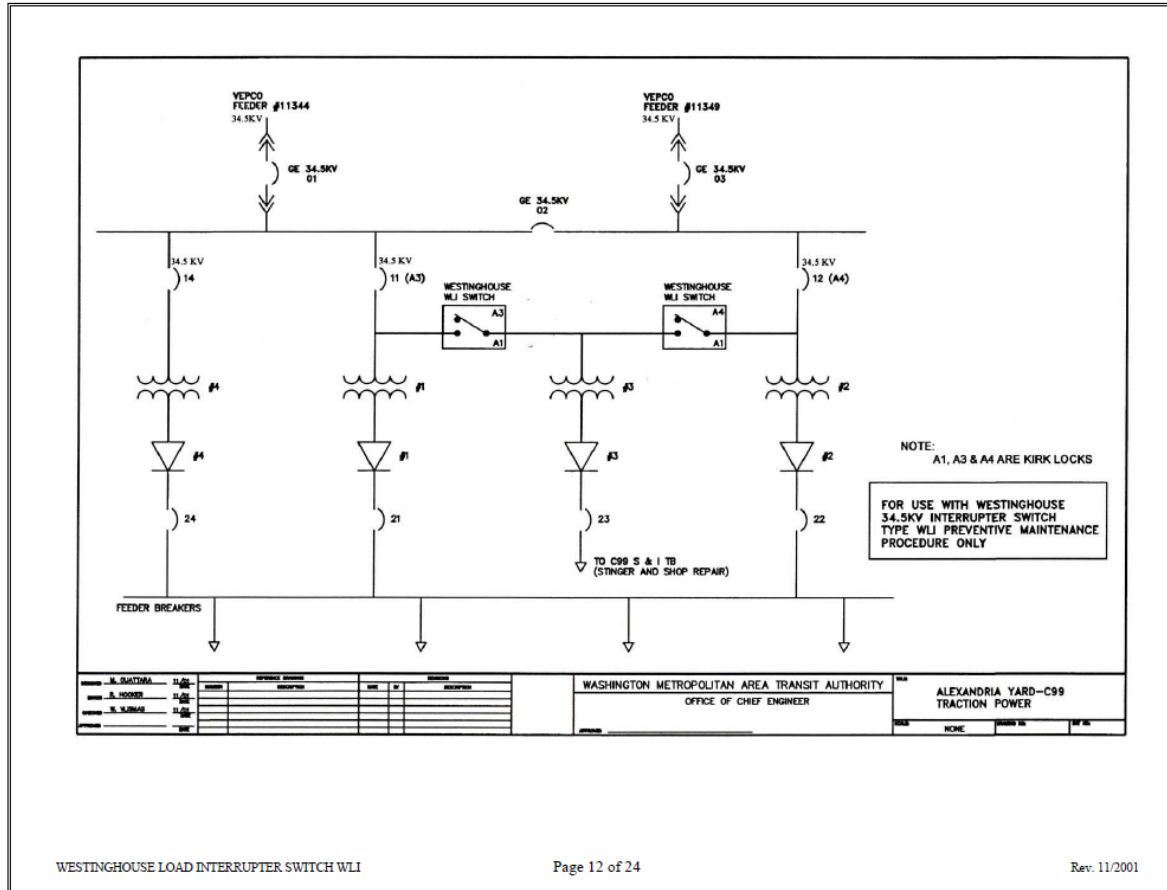
Prior to beginning the PMI, switching procedure and operational verification listed below should be performed. Complete the PMI Data Sheet tabulation as you progress through this procedure.

The switches are **NO LOAD** switches, both rectifier transformer breakers must be open and racked out; key interlocks are provided so that both interrupter switches must be open and locked before either enclosure door can be open. These built-in features are designed to reduce hazards and to provide proper operating sequences. Proper operation of these interlocks is essential for safety and their proper operation should be verified during the execution of this PMI. **Both load interrupter switches MUST be maintained under the same red tag outage.** (SEE C99 TP SUBSTATION ONE-LINE)

1. Verify that both incoming breakers are closed, the tie breaker open, all rectifier transformer breakers are closed, all rectifiers are running, all cathode breakers closed, all feeder breakers closed, and only one (1) Load Interrupter Switch is closed (Same switch will be closed back after the maintenance is completed).
2. Request permission from MOC and the yard tower to start the red tag switching.
3. Coordinate the switching with Alexandria S&I Shop CMNT Supervisor.
4. De-energize and rack out Rectifier Transformer Breakers # 11 and 12, remove Kirk Keys and insert into correspondent locks A3 and A4 on the Load Interrupter Switches (Fig. 3A, B, C, locks are marked with permanent marker).
5. Rack out cathode breakers 21, 22, and 23.
6. Turn and unlock A3 or A4 lock on the "closed" interrupter switch and pull the handle to the "open" position.
7. Turn the A1 key to lock both Interrupter switches to the "open" position.
8. Verify that rectifier transformer breaker # 14 is closed and all track feeder breakers are closed.
9. Proceed with the PMI after red tag has been issued.

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No. FQ15237
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Fig. 3A WLI SWITCH IN OPEN POSITION
(With non removable operating handle)



Fig. 3B WLI SWITCH IN CLOSED POSITION
(with removable slow close handle on the left)

WESTINGHOUSE LOAD INTERRUPTER SWITCH WLI

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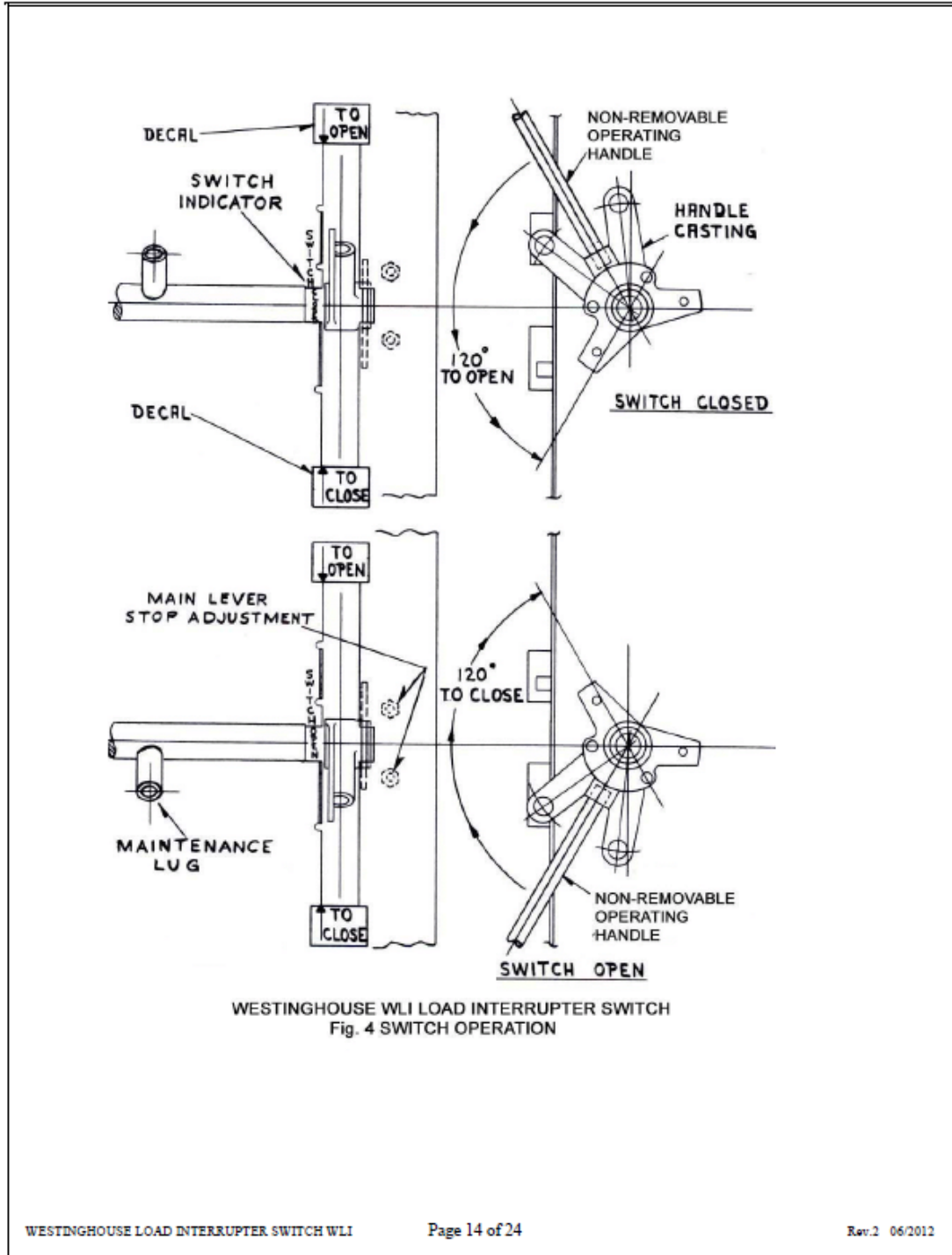
Rev. 11/2001

Preventive Maintenance Inspection

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5.0 SWITCH GROUNDING MECHANISM

The main blade mechanism is operated by a compression spring charged manually by rod connected to the switch shaft. To close the switch, a non-removable handle is extended and then rotated through an angle of 120°. This charges the compression spring and as the spring lever goes over toggle, the energy is transferred to the switch shaft which snaps the switch closed. (Fig. 4)

(Fig. 4, 5 and 6) On opening of the switch, the main blades open first which shunts the current through the spring loaded flicker blades. Further travel of the main blades causes the flicker blades to snap out of their contacts fingers arcs are draws within the De-ion arc chute.

After opening the switches and before opening doors, use viewing window to insure that all three switch blades are disengaged. If necessary, use a flashlight to verify all three contacts are open. Hot stick (34.5 KV AC) and Install grounds on the hinge side of the OPEN load interrupter switch. NOTE: You may also install additional grounds on the fuses (if provided) in the lower compartment which are in series with the disconnect switch and on the jaw side of the OPEN switch, at your discretion.

De-energize all AC and DC control power to the high voltage interrupter switch enclosure by opening control power disconnect switches and/or removing control power fuses, and verify that any and all potential back feed sources (motors, generators, control/potential/power transformers, cubicle heater supplies, etc.) have been properly isolated and safely grounded

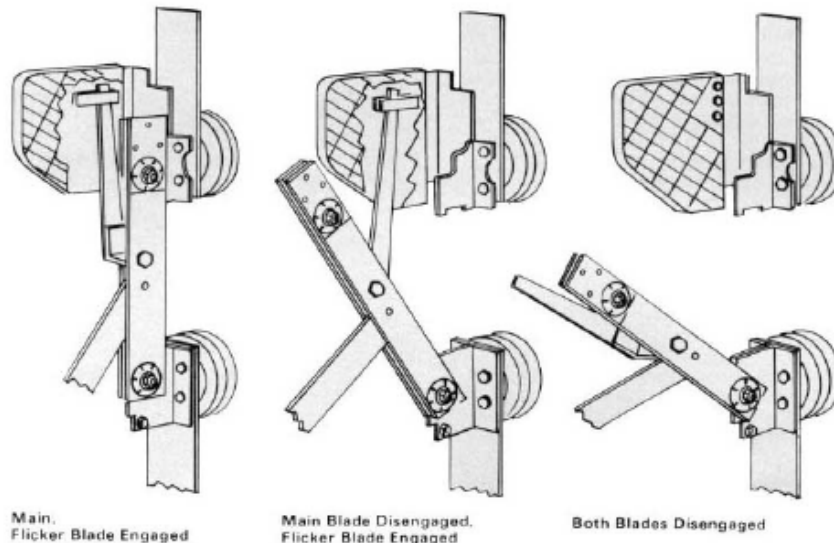


Fig. 5 SWITCH MECHANISM

Washington Metropolitan Area Transit
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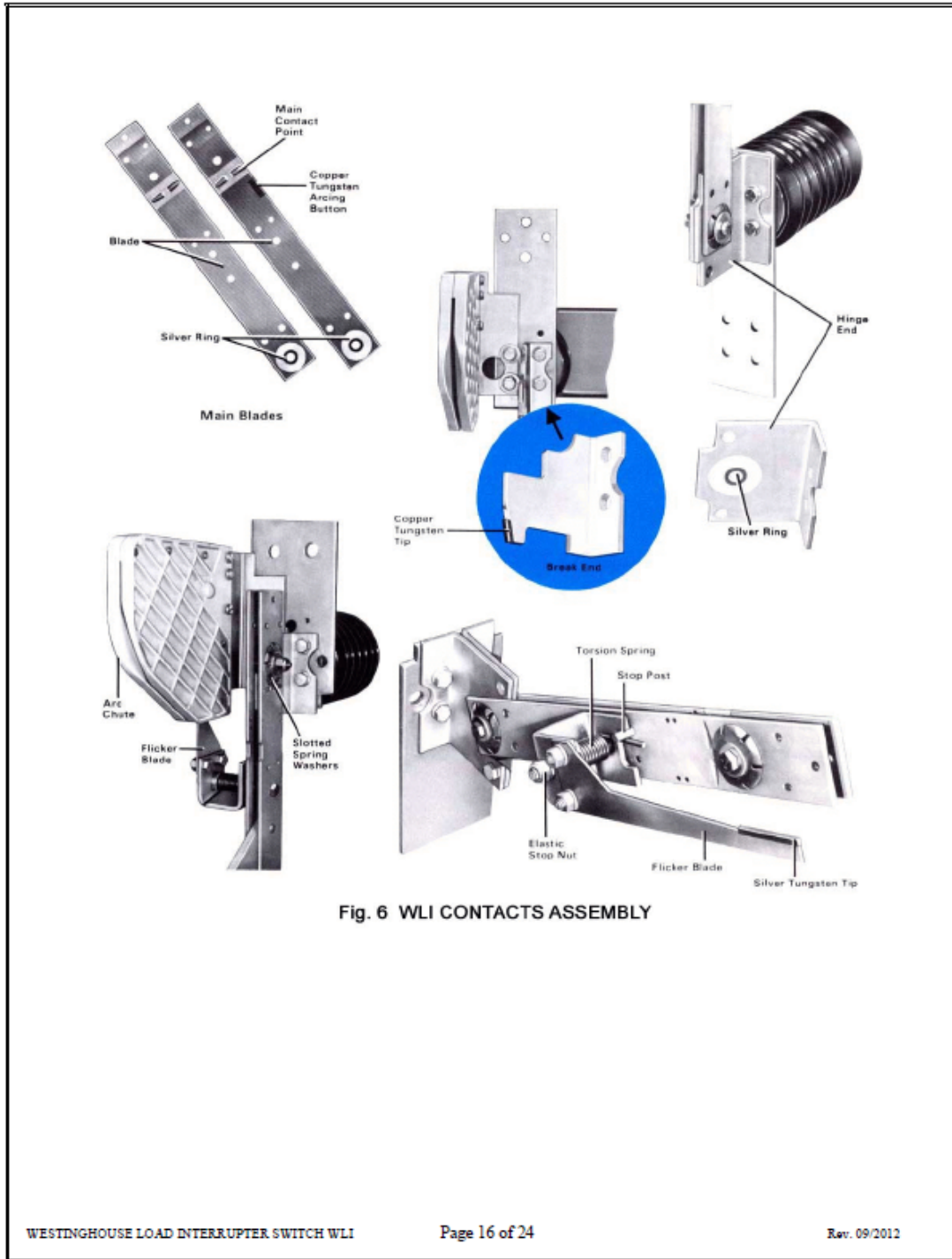


Fig. 6 WLI CONTACTS ASSEMBLY

WESTINGHOUSE LOAD INTERRUPTER SWITCH WLI

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Rev. 09/2012

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6.0 CUBICLE PROCEDURE

1. Open BOTH switch compartments, Re-verify that all required grounds have been installed. Thoroughly clean the interior of all compartments, including all interior devices, current carrying components, switch operating arms, insulators, barrier boards, cubicle heaters, instruments, etc. of all dust, dirt and particles.
2. Inspect switches internally and externally for any sign of rust or corrosion. Any rust or corrosion shall be eliminated at once by sanding and touch up painting, unless the condition is severe or extensive enough to justify taking out a FSR number.
3. Check buses, Cables and connections for evidence of overheating or weakening of the insulation.
4. Inspect for loose hardware and any sign of loose/missing electrical and mechanical connections in and around the cubicle. Check anchor and structural nuts and bolts, tighten as necessary. Inspect for damaged, bent, or twisted door and compartment covers. Inspect door handles, locking bars and mechanism. Check any door interlocks, including keyed interlocks and associated locking bolts, and other mechanical mating parts for positive operation (visual check).
5. Check to see that all heaters are energized and operating.
6. Report any conditions which appear unsafe.

7.0 NO-LOAD BREAK SWITCH ASSEMBLY (Fig. 5, 6)

WARNING	
	AFTER OPENING OPERATION WAIT AT LEAST 30 SECONDS BEFORE CLOSING SWITCH. THIS ALLOWS BLADE VIBRATIONS TO DAMPEN AND DIMINISHES DAMAGING OF THE CHUTES

1. Verify that all insulators and other insulation (e.g., barrier boards, operating mechanism connecting links), and all insulated and current carrying parts have been thoroughly cleaned of all dust, dirt, soot, grease and particles. Carefully examine the insulators and other insulation for treeing, tracking, cracks and discoloration. Pay special attention to areas where the bus and/or conductor passes through an insulator or is near a barrier.

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2. Check the main blades contact pieces and the leading edges of the flicker blades for arc erosion (Fig.6). Inspect buses and other current carrying parts for discoloration or other evidence of overheating. Inspect arc chute sides and replace them if they are damaged. Check flicker blade contacts. If damage is less than half of the contacting surfaces, use a few light strokes of a fine file to clean up the arcing contacts. **Warning:** Do not attempt to file out the flicker arcing contacts pit marks, **DO NOT USE** abrasive material for cleaning (small bits of abrasive material may cause the contacts to overheat or even weld during fault).
3. Open and close the switch several time to clean the main contact. **Warning:** **DO NOT FILE** the main current currying contacts. The main blade and hinge assembly together with the breaker jaw should be replaced if evidence of excessive burning over half of the contacting surfaces.
4. Check the engagement of the flicker blades by closing the switch. Main and flicker blades should be in proper alignment with the jaws and arc chute openings respectively. Replace worn or damaged parts of the flicker blade assembly.

WARNING



DURING A SLOW CLOSE OR OPEN OPERATION, THE MECHANISM OPERATING SPRING IS BEING CHARGED AND WILL TEND TO RETURN THE SWITCH TO ITS INITIAL POSITION. THEREFORE, CARE MUST BE EXERCISED TO HOLD THE MAINTENANCE HANDLE FIRMLY UNTIL THE SPRING ENERGY IS DISCHARGED AND THE SWITCH IS RETURNED TO ITS INITIAL POSITION TO AVOID BODILY INJURY.

5. Slowly open the switch. The flickers should remain engaged in their contact fingers while the main breaker is open. When the main blades clear the break jaw, they will hit a stop on the flicker blade brackets and start the flicker blades out of their contact fingers. The blade will then nap open from the forces in their charged torsion springs.
 6. Close and Open the de-energized switch at least three times to check the performance of the operating mechanism.
- 8.0 **NO-LOAD BREAK SWITCH ASSEMBLY ALIGNMENT PROCEDURE** (Fig. 5, 6, 7)
(The following alignments are not required if the above inspection is satisfactory, check alignment after replacing any part)
1. Insulator Alignment

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All three lower insulators should be loosened and moved to the center line of the mounting holes in the support channel which is part of the switch frame.
All three Upper insulators should be placed vertically above the lower insulators on their support channel.

2. Main Blade Alignment (Fig. 7)

Loosen the four hinge terminal bolts on the top of the lower insulator. Loosen the two break jaw terminal bolts on top of the upper insulators. Slowly close the switch and hold it in the close position with the maintenance handle. Tighten up the bolts on both the hinge and jaw terminals. The upper spacer of the main blades should rest from 0.12 to 0.19 inch above the bottom of the depressions in the angular switch jaw.

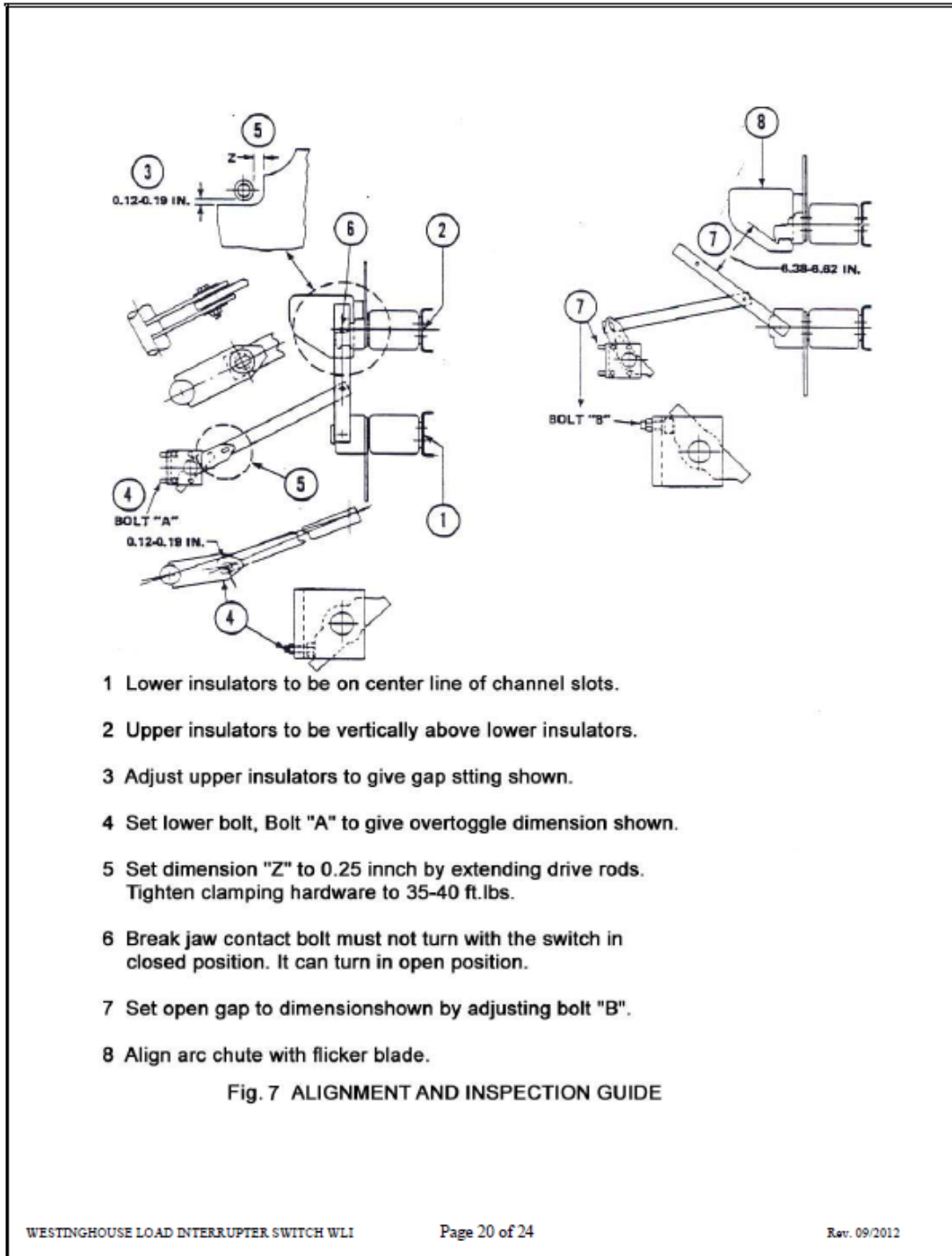
3. Open Gap Adjustment (Fig. 7.)

With the switch in open position, the distance between the nearest point of the jaw to the main blades should be 6.38 to 6.62 inches. The upper bolt (Fig. 7, *), bolt "B" on the front of L-shaped bearing support bracket adjust the open gap distance.

4. Flicker Blades and Arc Chute Adjustment (Fig. 6)

Loosen the two arc chute mounting bolt of each pole. Adjust the arc chute so that its opening is parallel to the main blade. Slowly close the switch and check that the flicker blade is in line with the arc chute opening.

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9 **TESTING**

Contact Resistance Testing

1. CLOSE the switch and use a micro-ohm meter to measure the contact resistance of each phase between the line and load terminal pads. Record readings on the Contact Resistance Tests PMI Data Sheet. If the values seem high (over 100 to 150 micro-ohms), visually check the blade wipe to insure proper contact. Open and close the switch a few times and recheck the contact resistance. If the values continue to be high, note in the Remarks section of the Data Sheet and take out a FSR as contact adjustments may be required, which is outside the scope of this PMI. Also note any readings greater than 25% of the lowest recorded resistance.

10. **GENERAL SWITCH MAINTENANCE AND LUBRICATION**

1. After completing the Inspection, Adjustments and Tests above, the switch and mechanism should again be thoroughly inspected to verify that there are no loose nuts or bolts, wiring, or damaged parts. All bearing, cam, roller and latch surfaces should be visually rechecked for evidence of damage or excessive wear.
2. Recheck the insulation (porcelain, barriers, glass reinforced plastic, etc.) to insure that their surfaces are clean and are not damaged.
3. The switch requires only moderate lubrication. The recommended lubrication details are itemized below:

Recommended Lubrication	
Main contacts	Wipe clean and apply a light coat of contact grease, D50H47 or equivalent, wipe off excess grease.
Contact portions between the blade and hinge, break jaw including arcing tip	DO NOT LUBRICATE.
Mechanism parts, bearing plates and points, sliding surfaces, pins, etc.	If grease has become oxidized (hardened or darkened), wipe clean and apply a light coat of white lubrication grease (D50H15).
Operating mechanism	Lubricate very sparingly with light machine oil, if necessary.

4. Operate the switch a few times to be sure that opening and closing operations are crisp and snappy. Verify that there is no excessive binding or friction, and that the switch moves to the fully opened and fully closed position.

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11. RESTORATION TO NORMAL SERVICE

WARNING



AFTER OPENING OPERATION WAIT AT LEAST 30 SECONDS BEFORE CLOSING SWITCH. THIS ALLOWS BLADE VIBRATIONS TO DAMPEN AND DIMINISHES DAMAGING OF THE CHUTES

1. Remove all installed grounds. Verify that all arc chutes, barriers and panels are properly in place. Restore all AC and DC control power to the cubicle (if applicable).
2. Perform an operational test to verify that ALL interlocks function properly. Perform the operational steps that would be "normal" to safely and properly OPEN and CLOSE the switch, and verify that the interlocks force the proper sequence of operation.
3. Notify the MOC that the PMI is complete and the station is ready to be normalized. Clear all Red Tags and remove all block tags.
4. Notify the Alexandria Yard Tower Supervisor and the S&I Shop CMNT-Supervisor that shop power is ready to be restored and request a "Shop Power" announcement. Do not proceed further until the "Shop Power" announcement has been made and clearance to proceed has been given by the Tower Supervisor, the CMNT-Supervisor and the MOC.
5. Close the switch that was initially closed in section 4.0, leave the other switch open.
6. Rack cathode breakers 21, 22 and 23 in the connect position.
7. Rack rectifier transformer breakers 11 and 12 in connected position and close the breakers. Verify that cathode breakers 21, 22, and 23 are closed and 750 VDC is being supplied by all three (4) rectifiers.
8. Notify the MOC, Alexandria Yard Tower Supervisor and Shady Grove CMNT Supervisor that 750 VDC Shop Power has been restored to normal.

12 PMI DATA SHEET

Fill in all "fill-in-the-blanks" data and answer all questions on PMI Data Sheet.
Note discrepancies in Remarks if adjustments or minor repairs did not correct the deficiency.

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PMI CHECK SHEET

WESTINGHOUSE TYPE WLI 34.5KV LOAD INTERRUPTER SWITCHES: C99TP

NOTE: Place a check mark () in appropriate column. If checkmark is placed in "No" column, note as comment in Remarks. Date: _____

GENERAL ITEMS:			
1.0	Job Briefing Conducted, MOC Informed of Procedure, Instruction Manuals, Drawings and Schematics Available.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2.0	Safety and Operations Requirements Reviewed, Safety Equipment and PPE Available and Being Used.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
3.0	Tools and Materials Available.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.0	Outage Coordinated with MOC, RTRA, CMNT. Breakers 11, 12, 21, 22, 23 De-energized, racked out Tested and Grounded.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
PMI INSPECTION ITEMS :		BREAKER 11 SWITCH	BREAKER 12 SWITCH
Record Switch Serial Number		Serial #: _____	Serial #: _____
Record Switch Nameplate Rating (Volts, Continuous Amps)		kV _____	kV _____
		Amps _____	Amps _____
7.0 (If Applicable)		Manuf. _____	Manuf. _____
Record Fuse Nameplate Ratings:		Model/Class _____	Model/Class _____
Do Switch Nameplate Ratings Match		kV _____	kV _____
Fuse Nameplate Ratings? Yes <input type="checkbox"/> No <input type="checkbox"/>		Continuous Amps _____	Continuous Amps _____
Do Spare Fuses' Ratings Match The Switch? Yes <input type="checkbox"/> No <input type="checkbox"/>		Interrupting Amps _____	Interrupting Amps _____
Are All Fuses Same Manufacturer? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Number of Spare Fuses: _____			
6.0-10.0	Performed Inspection, Cleaning, Contact Checks & Operational Checks	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
9.0	Switch Alignment	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
10.0	Cubicle, Switchgear Inspection Performed	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
10.0	Switch Contact Resistance Tested. Results Recorded On Test Record	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
11.0	General Switch Maintenance, Lubrication and Interlock Checks Completed	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
12.0	All Substation Equipment Restored to Normal Service.	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
13.0	All Maintenance Data Recorded on PMI Check Sheet,	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

REMARKS: _____
 TECHNICIANS: _____ CALLS: _____ DATE: _____
 SUPERVISOR: _____ CALLS: _____ DATE: _____

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PMI DATA SHEET
 NO-LOAD INTERRUPTER SWITCH
 CONTACT RESISTANCE TEST

NOTES: Fill in all relevant data fields, below. If the equipment fails a specific test, note as comment in remarks.
 Perform contact resistance test.

LOCATION:		DATE:			CUBICLE MANUFACTURER:		
EQUIPMENT TYPE:		VOLTAGE RATING (KV):			AMPS:		
MODEL NO:		SERIAL NO:			VEPCO FEEDER NO:		
WMATA Cubicle Designation	Serial Number	Contact Resistance Test (Micro-ohms)			Contact Resistance Test (Micro-ohms)		
		AØ	BØ	CØ	AØ	BØ	CØ

REMARKS: _____

TECHNICIANS: _____ CALLS: _____ DATE: _____
 SUPERVISOR: _____ CALLS: _____ DATE: _____

Appendix D - Wage Rates

APPENDIX D

WAGE RATES

CONTRACT NUMBER IFB FQ15237/GG

All on-site work to be performed at the **Heavy** Rates.

NOTICE: In accordance with 29 CFR, Part 1, the contractor will be required to pay wages which are not less than those established by the final Wage Determination Decision contained in the solicitation.

General Decision Number: DC150001 10/02/2015 DC1

Superseded General Decision Number: DC20140001

State: District of Columbia

Construction Types: Heavy (Heavy and Sewer and Water Line)
and Highway

County: District of Columbia Statewide.

HEAVY CONSTRUCTION PROJECTS (Including Sewer and Water Lines);
HIGHWAY CONSTRUCTION PROJECTS

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date

0	01/02/2015
1	01/09/2015
2	03/06/2015
3	05/01/2015
4	05/08/2015
5	06/05/2015
6	06/12/2015
7	06/26/2015
8	07/03/2015
9	07/17/2015
10	08/07/2015
11	08/14/2015
12	09/11/2015
13	09/18/2015
14	10/02/2015

ASBE0024-001 10/01/2013

Rates Fringes

Asbestos Worker/Heat and
Frost Insulator

Includes the application

of all insulating
materials, protective
coverings, coatings and
finishes to all types of
mechanical systems.....\$ 33.13 13.76

ASBE0024-002 10/09/2013

Rates Fringes

HAZARDOUS MATERIAL HANDLER

Includes preparation,
wetting, stripping,
removal, scrapping,
vacuuming, bagging and
disposing of all
insulation materials,
whether they contain
asbestos or not, from
mechanical systems.....\$ 20.86 5.46

ASBE0024-005 10/01/2013

Rates Fringes

Fire Stop Technician.....\$ 26.06 5.90

Includes the application of materials or devices within or around penetrations and openings in all rated wall or floor assemblies, in order to prevent the passage of fire, smoke or other gases. The application includes all components involved in creating the rated barrier at perimeter slab edges and exterior cavities, the head of gypsum board or concrete walls, joints between rated wall or floor components, sealing of penetrating items and blank openings.

BOIL0193-001 01/01/2014

	Rates	Fringes
Boilermakers:.....	\$ 38.07	22.58

BRDC0001-001 05/03/2015

	Rates	Fringes
Bricklayer.....	\$ 30.36	9.69

BRMD0001-004 05/03/2015

	Rates	Fringes
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BRICKLAYER

Refractory (Firebrick).....\$ 36.62 9.85

CARP0132-001 05/01/2015

Rates Fringes

Carpenter/Lather.....\$ 27.56 9.08

Piledriver.....\$ 26.79 8.85

CARP1831-001 04/01/2013

Rates Fringes

MILLWRIGHT.....\$ 31.59 8.58

CARP2311-002 05/01/2013

Rates Fringes

DIVER TENDER.....\$ 29.00 8.15

DIVER.....\$ 37.74 8.15

ELEC0026-001 06/01/2015

	Rates	Fringes
Electricians.....	\$ 42.80	15.33

ELEC0070-001 05/04/2015

	Rates	Fringes
Line Construction:		
Cable Splicers.....	\$ 35.35	19%+5.00
Equipment Operators.....	\$ 35.35	19%+5.00
Groundmen.....	\$ 16.44	19%+5.00
Linemen.....	\$ 35.35	19%+5.00
Truck Driver.....	\$ 18.69	19%+5.00

ENGI0077-001 05/01/2015

	Rates	Fringes
Power equipment operators:		
(HEAVY AND HIGHWAY		
CONSTRUCTION)		
GROUP 1.....	\$ 35.91	8.65+a
GROUP 2.....	\$ 34.36	8.65+a
GROUP 3.....	\$ 32.71	8.65+a
GROUP 4.....	\$ 29.30	8.65+a

GROUP 5.....	\$ 25.28	8.65+a
GROUP 6.....	\$ 23.23	8.65+a
GROUP 7.....	\$ 36.75	8.65+a

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Tower Cranes and Cranes 100 ton and over.

GROUP 2: 35 ton cranes & above, derricks, concrete boom pump, drill rigs (+50,000 lbs torque), mole.

GROUP 3: Cranes, hoists, drill rigs (under 50,000 lbs torque), tie back machines, paving mixers, tunnel shovels, batch plants, shields, tunnel mining machines, draglines, mucking machines, graders in tunnels, pile driving engines, welder, horizontal directional drill operator, Tug boats.

GROUP 4: Front end loaders, boom trucks, backhoes, excavators, gradalls, power driven wheel scoops & scrapers, blade graders, motor graders, bulldozers, trenching machines, ballast regulator, hoe ram, locomotive (standard, narrow gauge, tuggers).

GROUP 5: Boilers (skelton), asphalt spreaders, bullfloat finishing machines, concrete finishing machines, concrete spreaders, concrete mixer, concrete pump, well points,

hydraulic pumps, elevators, freeze uniits, tunnel motorman
or dinky operator, conveyors, grout pump, fireman, ultra
high pressure water jet cutting tool system
operator/mechanic, horizontal directional drill locator,
skid steers (fine grading), High lifts (lull type lifts).

GROUP 6: Fork lifts, ditch witch, bobcat, skid steer, space
heaters, sweepers, assistant engineers, oilers, service
unit equipment, roller.

GROUP 7: Master mechanic.

a. PAID HOLIDAYS: New Years Day, Inaugural Day, Decoration
Day, Independence Day, Labor Day, Martin Luther King's
Birthday, Veterans' Day, Thanksgiving Day, Friday after
Thanksgiving and Christmas Day.

ENGI0077-002 06/01/2015

Rates Fringes

Power equipment operators:

(PAVING AND INCIDENTAL

GRADING)

GROUP 1.....\$ 28.99 7.35

GROUP 2.....	\$ 25.85	7.35
GROUP 3.....	\$ 22.24	7.35
GROUP 4.....	\$ 20.00	7.35
GROUP 5.....	\$ 29.70	7.15

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Gradall operator, Crane.

GROUP 2: Boom Truck, Milling Machine, Excavator, Rubber Tire
Backhoe, Asphalt Paver, Asphalt Plant Engineer, Motor
Grader, Track Loader, Rubber Tire Loader, Track Dozer,
Concrete Paver.

GROUP 3: Broom Truck, Asphalt Roller.

GROUP 4: Air Compressor, Grade Rollers.

GROUP 5: Mechanic.

ENGI0077-003 07/01/2015

Rates Fringes

Power equipment operators:

(SEWER, GAS AND WATER LINE

CONSTRUCTION)

GROUP 1.....	\$ 25.60	7.35+a
GROUP 2.....	\$ 25.20	7.35+a

GROUP 3.....	\$ 24.69	7.35+a
GROUP 4.....	\$ 24.37	7.35+a
GROUP 5.....	\$ 23.55	7.35+a

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Excavators, Cranes, Gradalls.

GROUP 2: Backhoes, Front-end Loaders, Fork alift/Lull,
Bulldozers, Motor Graders. Qualified Mechanics, Hydraulic
Tamper and Hoe Pack, Paving Mixers, Pile Driving Engines,
Batch Plant, Concrete Pumps, Low-Boy Driver, Lube Truck.

GROUP 3: Trenching Machine, Well Drilling Machines, Concrete
Mixers, Motor Graders, Truck Driver.

GROUP 4. Roller, Air Compressors, Pumps, Welding Machines,
Well Points, Firemen.

GROUP 5: Oiler

a.PAID HOLIDAYS: New Year's Day, Inaugural Day, Washington's
Birthday, Decoration Day, Independence Day, Labor Day,
Veterans Day, Thanksgiving Day, Christmas Day and Martin
Luther King's Birthday.

IRON0005-001 06/01/2015

Rates Fringes

Ironworkers:

Structural, Ornamental and

Chain Link Fence.....\$ 30.65 18.135

IRON0201-001 05/01/2015

Rates Fringes

Ironworkers:

Reinforcing.....\$ 27.50 18.58

LABO0657-003 06/01/2015

Rates Fringes

Laborers: (HEAVY AND HIGHWAY
AND SEWER & WATER LINES
CONSTRUCTION)

GROUP 1.....\$ 23.67 7.31

GROUP 2.....\$ 24.06 7.31

GROUP 3.....\$ 24.27 7.31

GROUP 4.....	\$ 24.46	7.31
GROUP 5.....	\$ 24.98	7.31
GROUP 6.....	\$ 25.65	7.31
GROUP 7.....	\$ 26.30	7.31
GROUP 8.....	\$ 27.16	7.31

LABORERS CLASSIFICATIONS:

GROUP 1: Carloaders, choker setter, concrete crewman, crushed feeder, demolition laborers, including salvaging all material, loading, cleaning up, wrecking, dumpmen, flagmen, fence erector and installer (other than chain link), including installation and erection of fence, guard rails, medial rails, reference posts, guide posts and right-of-way markers, form strippers, general laborers, railroad track laborers, riprap man, scale man, stake jumper, structure mover, includes foundation, separation, preparation, cribbing, shoring, jacking and unloading of structures, water nozzleman, timber bucket and faller, truck loader, water boys, tool room men.

GROUP 2: Combined air and water nozzleman, cement handler, dope pot fireman (nonmechanical), form cleaning machine, mechanical railroad equipment (includes spiker, puller, tile cleaner, tamper, pipe wrapper, power driven wheelbarrows, operators of hand derricks, towmasters, scootcretes, buggymobiles and similar equipment), tamper or rammer operator, trestle scaffold builders over one tier high, power

tool operator (gas, electric or pneumatic), sandblast or
gunnite tailhose man, scaffold erector, (steel or wood),
vibrator operator (up to 4 feet), asphalt cutter, mortar men,
shorer and lagger, creosote material handler, corrosive enamel
or equl, paver breaker and jackhammer operators.

GROUP 3: Multi-section pipe layer, non-metallic clay and
concrete pipe layer (including caulker, collarman, jointer,
rigger and jacker, thermal welder and corrugated metal culvert
pipe layer.

GROUP 4: Asphalt block pneumatic cutter, asphalt roller,
walker, chainsaw operator with attachment, concrete saw
(walking), high scalers, jackhammer operator (using over 6
feet of steel), vibrator operator (4 feet and over), well
point installer, air trac operator.

GROUP 5: Asphalt screeder, big drills, cut of the hole drills
(1 1/2 " piston or larger), down the hole drills (3 1/2"
piston or larger) gunnite or sandblaster nozzleleman, asphalt
raker, asphalt tamper, form setter, demolition torch operator,
shotcrete nozzlelemen and potman.

GROUP 6: Powderman, master form setters.

GROUP 7: Brick paver (asphalt block paver, asphalt block

sawman, asphalt block grinder, hastings block or similar type)

GROUP 8: Licensed powdermen.

LABO0657-004 06/01/2015

Rates Fringes

Laborers: (HAZARDOUS WASTE
REMOVAL, EXCEPT ON MECHANICAL
SYSTEMS:

Preparation for, removing and
encapsulation of hazardous
materials from non-mechanical
systems)

Skilled Asbestos Abatement

Laborers.....\$ 20.26 7.31

Skilled Toxic and

Hazardous Waste Removal

Laborers.....\$ 22.93 7.31

LABO0657-005 06/01/2015

Rates Fringes

Laborers: (TUNNEL, RAISE &

SHAFT (FREE AIR)

FOR HEAVY AND SEWER & WATER

LINES CONSTRUCTION)

GROUP 1.....	\$ 24.54	7.31
GROUP 2.....	\$ 25.32	7.31
GROUP 3.....	\$ 27.30	7.31
GROUP 4.....	\$ 28.14	7.31

LABORERS CLASSIFICATIONS:

GROUP 1: Brakeman, Bull Gang, Dumper, Trackmen, Concrete Man.

GROUP 2: Chuck Tender, Powdermen in Prime House, Form Setters and Movers, Nippers, Cableman, Houseman, Groutman, Bell or Signalman, Top or Bottom Vibrator Operator.

GROUP 3: Miners, Re-Bar Underground, Concrete or Gunnite Nozzlemen, Powdermen, Timbermen and Re-Timbermen, Wood Steel Including Liner plate or Other Support, Material Motorman, Caulkers, Diamond Drill Operators, Riggers, Cement Finishers- Underground, Welders and Burners, Shield Driver, Air Trac Operator, Shotcrete Nozzlemen and Potman.

GROUP 4: Mucking Machine Operator (Air).

LABO0657-006 06/01/2015

Rates Fringes

Laborers: (TUNNEL, RAISE AND
SHAFT (COMPRESSED AIR) FOR
HEAVY CONSTRUCTION ONLY

Gauge Pressure Work Period

(Pounds)	(Hours)		
1-14	7.....	\$ 32.45	7.31
14-18	6.....	\$ 38.19	7.31

FOOTNOTE: On any requirement for air pressure in excess of 18
PSI, work periods and rates should be negotiated at a
pre-bid conference.

LABO0657-007 08/01/2014

Rates Fringes

Laborers: (PAVING AND
INCIDENTAL GRADING)

Asphalt Raker & Concrete			
Saw Operator.....	\$ 19.80		6.60
Asphalt Shoveler.....	\$ 19.17		6.60
Asphalt Tammer & Concrete			

Shoveler.....	\$ 19.44	6.60
Jack Hammer.....	\$ 19.67	6.60
Laborer.....	\$ 19.00	6.60
Sand Setter & Form Setter....	\$ 20.48	6.60

LABO0657-008 06/01/2015

Rates Fringes

LABORERS (BRICK MASONRY WORK)

Mason Tenders.....	\$ 16.54	7.31
Scaffold Builders, Mortarmen.....	\$ 17.53	7.31

MARB0002-003 05/03/2015

Rates Fringes

Marble & Stone Mason

Includes Pointing,
Caulking and Cleaning of
All Types of Masonry,
Brick, Stone and Cement
Structures.....

	\$ 35.19	15.72
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MARB0003-001 05/03/2015

	Rates	Fringes
Mosaic & Terrazzo Worker, Tile Layer.....	\$ 26.75	10.28

MARB0003-004 05/03/2015

	Rates	Fringes
Marble, Tile & Terrazzo Finisher.....	\$ 21.96	9.35

PAIN0051-001 06/01/2014

	Rates	Fringes
Painters: All Industrial Work.....	\$ 29.60	9.05
Bridges, Heavy Highway, Lead Abatement and Flame/Thermal Spray.....	\$ 33.23	9.05
Commercial and Mold Remediation, Painters, Wallcovers and Drywall Finishers.....	\$ 24.89	9.05

Metal Polishing and
Refinishing.....\$ 25.89 9.05

PLAS0891-001 02/01/2014

Rates Fringes

Cement Masons:

HEAVY CONSTRUCTION ONLY.....\$ 27.15 9.61

PLAS0891-002 06/01/2014

Rates Fringes

Cement Masons: (PAVING &
INCIDENTAL GRADING)

Cement Masons.....\$ 19.50 6.91

Concrete Saw Operators.....\$ 19.50 6.91

Form Setters.....\$ 19.50 6.91

PLUM0005-001 08/01/2015

Rates Fringes

Plumbers.....\$ 39.67 16.60+a

a. PAID HOLIDAYS: Labor Day, Veterans' Day, Thanksgiving Day and the day after Thanksgiving, Christmas Day, New Year's Day, Martin Luther King's Birthday, Memorial Day and the Fourth of July.

PLUM0602-005 08/01/2014

Rates Fringes

Steamfitter, Refrigeration &

Air Conditioning Mechanic.....\$ 38.24 19.42+a

a. PAID HOLIDAYS: New Year's Day, Martin Luther King's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and the day after Thanksgiving and Christmas Day.

SHEE0100-001 07/01/2015

Rates Fringes

Sheet Metal Worker.....\$ 39.79 16.77+a

a. PAID HOLIDAYS: New Year's Day, Martin Luther King's

Birthday, Memorial Day, Independence Day, Labor Day,
Veterans Day, Thanksgiving Day and Christmas Day

* TEAM0639-001 06/01/2015

Rates Fringes

Truck drivers: (HEAVY &
HIGHWAY CONSTRUCTION)

Tractor trailer, Low Boy....\$ 23.15 2.30+a
Truck Drivers.....\$ 21.15 2.30+a

a. VACATION: Employees will receive one (1) week's paid
vacation after one (1) year of service.

* TEAM0639-005 06/01/2015

Rates Fringes

Truck drivers: (PAVING &
INCIDENTAL GRADING)

All paving projects where
the grading is incidental
to the paving.....\$ 21.15 2.30

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification
and wage rates that have been found to be prevailing for the
cited type(s) of construction in the area covered by the wage
determination. The classifications are listed in alphabetical
order of "identifiers" that indicate whether the particular
rate is a union rate (current union negotiated rate for local),
a survey rate (weighted average rate) or a union average rate
(weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example:

PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that

classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.)

and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

General Decision Number: MD150035 10/02/2015 MD35

Superseded General Decision Number: MD20140035

State: Maryland

Construction Type: Heavy

County: Prince George's County in Maryland.

HEAVY CONSTRUCTION PROJECTS (including sewer/water construction).

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date

0	01/02/2015
1	05/01/2015
2	06/26/2015
3	07/17/2015
4	08/14/2015
5	09/11/2015
6	10/02/2015

CARP0132-016 05/01/2015

Rates Fringes

CARPENTER (Including Form
Work).....\$ 27.56 9.08

ELEC0026-019 06/01/2015

Rates Fringes

ELECTRICIAN.....\$ 42.80 15.33+a

a. PAID HOLIDAYS: New Year's Day, Inauguration Day, Martin Luther King Jr.'s Birthday, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the day after Thanksgiving Day and Christmas Day.

ENGI0077-015 05/01/2015

	Rates	Fringes
OPERATOR: Bulldozer.....	\$ 29.30	8.65+a
OPERATOR: Crane		
35 ton Cranes and Above.....	\$ 34.36	8.65+a
Cranes Below 35 tons.....	\$ 32.71	8.65+a
Tower and Climbing Cranes...	\$ 35.91	8.65+a
Tower Cranes and Cranes		
100 tons and Over.....	\$ 35.91	8.65+a
OPERATOR: Drill.....	\$ 34.36	8.65+a
OPERATOR: Excavator.....	\$ 29.30	8.65+a
OPERATOR: Loader		
Front End Loaders.....	\$ 29.30	8.65+a
OPERATOR: Mechanic.....	\$ 36.75	8.65+a
OPERATOR: Piledriver.....	\$ 32.71	8.65+a

a.PAID HOLIDAYS: New Year's Day, Inaugural Day, Decoration Day, Independence Day, Labor Day, Martin Luther King's Birthday, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving and Christmas Day.

IRON0201-006 05/01/2015

	Rates	Fringes
IRONWORKER, REINFORCING.....	\$ 27.50	18.58

LABO0657-020 06/01/2015

	Rates	Fringes
LABORER (Common or General).....	\$ 23.67	7.31
LABORER: Mason Tender - Cement/Concrete.....	\$ 24.06	7.31

PAIN0051-020 06/01/2013

	Rates	Fringes
PAINTER: Steel.....	\$ 32.66	8.91

PLAS0891-006 02/01/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 27.15	9.61

* TEAM0639-009 06/01/2015

	Rates	Fringes
TRUCK DRIVER (DUMP TRUCK).....	\$ 21.15	2.30+a

a.VACATION: Employees will receive one (1) week's paid vacation after one (1)year of service.

SUMD2010-074 07/08/2010

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 24.00	10.16
LABORER: Flagger.....	\$ 15.71	8.58
LABORER: Grade Checker.....	\$ 14.62	3.08
LABORER: Landscape.....	\$ 17.72	8.58
LABORER: Mason Tender - Brick...	\$ 15.93	7.83
LABORER: Pipelayer.....	\$ 15.50	0.00

OPERATOR: Backhoe.....	\$ 19.15	4.05
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 16.41	5.15
OPERATOR: Gradall.....	\$ 20.50	8.89
OPERATOR: Grader/Blade.....	\$ 19.00	5.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 17.53	9.07
OPERATOR: Roller.....	\$ 16.95	5.61
OPERATOR: Trackhoe.....	\$ 18.98	7.32
PAINTER: Brush, Roller and Spray.....	\$ 24.32	6.91
PIPEFITTER.....	\$ 21.25	5.31
TRUCK DRIVER: Lowboy Truck.....	\$ 17.17	9.98

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

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A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or

"UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

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A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

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With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the

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END OF GENERAL DECISION

General Decision Number: VA150043 09/11/2015 VA43

Superseded General Decision Number: VA20140043

State: Virginia

Construction Types: Heavy (Heavy and Sewer and Water Line)

Counties: Fairfax, Fairfax* and Falls Church* Counties in Virginia.

*INDEPENDENT CITIES

HEAVY CONSTRUCTION PROJECTS (Including Sewer and Water Lines)

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015
1	05/08/2015
2	08/14/2015
3	09/11/2015

BRVA0001-003 05/03/2015

	Rates	Fringes
MASON - STONE.....	\$ 35.19	16.17

CARP0132-018 05/01/2015

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 27.56	9.08

* ELEC0026-019 06/01/2015

Rates	Fringes
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ELECTRICIAN.....\$ 42.80 15.33+a

a.PAID HOLIDAYS: New Year's Day, Inauguration Day, Martin Luther King Jr.'s Birthday, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the day after Thanksgiving Day and Christmas Day.

ENGI0077-019 05/01/2013

Rates Fringes

POWER EQUIPMENT OPERATOR:

35 ton Cranes and Above.....\$ 32.89 8.45+a
Cranes Below 35 tons.....\$ 32.40 8.45+a
Mechanic.....\$ 34.34 8.45+a
Tower and Climbing Cranes...\$ 32.89 8.45+a
Tower Cranes and Cranes
100 tons and Over.....\$ 33.96 8.45+a

a.PAID HOLIDAYS: New Year's Day, Inaugural Day, Decoration Day, Independence Day, Labor Day, Martin Luther King's Birthday, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving and Christmas Day.

b. PREMIUM PAY:

Tower crane and cranes 100-ton and over to receive \$1.00 per hour premium.

LABO0710-010 04/01/2010

Rates Fringes

LABORER: Pipelayer.....\$ 16.61 5.41

PAIN0051-014 06/01/2014

Rates Fringes

GLAZIER

Glazing Contracts \$2 million and under.....\$ 24.77 9.85
Glazing Contracts over \$2 million.....\$ 28.61 9.85

PLAS0891-006 02/01/2014

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...\$ 27.15 9.61

SUVA2010-044 09/02/2010

Rates Fringes

DIVER TENDER.....\$ 22.53 3.98

DIVER.....\$ 23.73 4.21

IRONWORKER, REINFORCING.....\$ 22.45 11.85

IRONWORKER, STRUCTURAL.....\$ 20.55 8.25

LABORERS

Common or General.....\$ 11.85 1.32

Flagger.....\$ 7.39 0.20

Landscape.....\$ 10.00

POWER EQUIPMENT OPERATOR:

Backhoe.....\$ 18.47 0.75

Bobcat/Skid Loader.....\$ 11.40

Bulldozer.....\$ 17.54

Excavator.....\$ 17.79

Loader.....\$ 18.99 0.75

Trackhoe.....\$ 12.75 1.24

Tugboat.....\$ 19.00

TRUCK DRIVER, Includes All

Dump Trucks.....\$ 12.14 0.75

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification
and wage rates that have been found to be prevailing for the
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08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
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Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
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U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

Appendix E – Contractor Employees

METRO Employee Identification Cards P/I 6.10/5 approved 05/18/11

All contractor (including subcontractors, vendors, etc) personnel entering WMATA property must consent to and pass a criminal background Investigation, pass the Right of Way Training course, and obtain a WMATA Contractor Identification Badge with a Right of Way Training endorsement.

In addition, the following prime contractor personnel must complete the above criteria

Project Manager

Person in charge of the company safety program and quality assurance program

Any non craft labor personnel that require access to the worksite

Other personnel (prime contractor, subcontractors, vendors, etc) as directed by Authorized Representative

Appendix F – Site Specific Work Plans

The Contractor shall comply with WMATA Site Specific Work Plan (SSWP) procedure. The Contractor shall prepare and submit SSWP's to the AR. The SSWP submittal process may be electronic. Prepare one site-specific work plan for Six (6) Tie Breaker Station Upgrades Orange and Blue Lines DC, MD and VA.

- a. The site-specific work plan shall serve to establish the requirements for organizational and scheduling coordination between the Authority and the Contractor for the individual substation. Site-specific work plan shall include at a minimum the following items:
 1. Predicted schedule for completion of all Work by the Contractor showing major milestones. Submit not later than 60 days prior to the anticipated start of Work at the respective TBS. Exception: Authority will prepare site-specific work plans for the inspection of the ten initial TBS locations such that Contractor can begin inspections after receiving NTP.
 2. Expected or required commitments from the Authority with respect to Authority-furnished escorts or access rights. Include expected date(s) of occurrence and anticipated durations of time. Submit not later than 60 days prior to the anticipated start of work at the respective substation.
 3. Identification of requirements for access to right-of-way by the Contractor. Submit not later than 60 days prior to the anticipated start of work at the respective substation.
 4. Expected or required commitments from the Authority with respect to support of testing by the Contractor. Include expected date(s) of occurrence and anticipated durations of time. Submit not later than 60 days prior to the anticipated start of work at the respective station.
 5. Drawings for revised layout of equipment if necessitated because replacement equipment is larger than existing equipment. Submit not later than 30 days prior to anticipate start of work to install the relevant equipment.
 6. Drawings showing mechanical and electrical details of temporary or permanent connections to existing equipment. Submit not later than 60 days prior to the anticipated start of work at the respective station. Include the following:
 - i. Temporary provisions for support, protection, or electrical insulation associated with cables connecting to existing-to-be-replaced equipment.
 - ii. Temporary configuration drawings shall be submitted to WMATA for review to document all phases of the Work.
 - iii. Anticipated outages of Authority equipment or systems associated with work by the Contractor. All anticipated outages shall be scheduled during non-revenue periods. Include expected date(s) of occurrence for outages and anticipated durations of time. Submit not later than 60 days prior to the anticipated start of work at the respective substation.
 - iv. Identification and required scheduling of other events to be initiated by the Authority or others, which impact Contractor's work or schedule. Submit not later than 60 days prior to the anticipated start of work at the respective tie-breaker station.

The site-specific work plan for the (6) TBS locations will be subject to review by the Authority. Revisions to the site-specific work plan(s) may be mandated by the Authority to serve the best interests of the Authority; such revisions shall be accommodated by the Contractor at no additional cost to the Authority.

This Appendix F comprises of the following documents:

- SSWP procedure or OPER Administrative Procedure 200-33
- SSWP Lite simplified workflow
- SSWP Process Timeline
- SSWP blank application form

These documents are provided below.

SITE SPECIFIC WORK PLAN (SSWP)



Date Created: _____
Date Revised: _____

SUMMARY STATEMENT: _____

FROM: _____

DISTRIBUTION: OPER/OLIA
SARP/PVFL
RAIL/OCCO
RRTS/TAMC

WORK PLAN

Description of Work: _____

Project Start

Date

Time

Proposed Work Start

Date

Time

Project End

Date

Time

Proposed Work End

Date

Time

24 Hour Closure

EMI # _____

Attached (Check YES or NO)

YES _____

NO _____

LOCATION

Chain Markers _____ to _____	Chain Markers _____ to _____	Chain Markers _____ to _____
------------------------------	------------------------------	------------------------------

Power Outage Required _____

Revenue Service Adjustment Form Attached _____

Support
Escort (s)

Department	_____	#Personnel Required	_____
Support Departments	_____	# Personnel Required	_____
Support Departments	_____	# Personnel Required	_____

List of Equipment to be used

Materials: _____ Staging Locations: _____

SAFETY PLAN

Safety Requirements _____
PPE and Other Safety Equipment _____
Protected Work Area _____ Actual Work Area -
Schematics Attached _____

Work Activity Schedule

Activity	
From	To
Critical Milestones	
Contingency Plan	
	Type as much as you like in here.... add more lines as needed, just hit return
Activity	
From	To
Critical Milestones	
Contingency Plan	Type as much as you like in here.... add more lines as needed, just hit return
Activity	
From	To
Critical Milestones	
Contingency Plan	Type as much as you like in here.... add more lines as needed, just hit return
Activity	
From	To
Critical Milestones	
Contingency Plan	Type as much as you like in here.... add more lines as needed, just hit return

Approvals:

Requested by:

Signature Print Name Date

Requesting Office
Director/General Supt.:

Signature Print Name Date

Concurrence:

Supporting Director/
General Superintendent

Signature Print Name Date

Director OCCO (required
for RSA)

Signature Print Name Date

Line Director
(required for RSA)

Signature Print Name Date

OPER/OLIA

Signature Print Name Date

Approvals:

SARP/PVFL

Signature Print Name Date

RRTS/TAMC

Signature Print Name Date

WORK SITE REPRESENTATIVES:

	<u>DATE/HOURS</u>	<u>NAMES</u>	<u>ORGANIZATION</u>	<u>TELEPHONE</u>
1.				(Office Cell [e-mail])
2.				(Office Cell [e-mail])
3.				(Office Cell [e-mail])
4.				(Office Cell [e-mail])
5.				(Office Cell [e-mail])
6.				
7.				
8.				
9.				
CENTRAL CONTROL:			WMATA, OCC	(202) 962-XXXX [Line] Line Desk OPS [#]
POLICE:			WMATA, MTPD	(202) 962-2121
AMBULANCE:				911
FIRE DEPARTMENTS:				911
HOSPITAL: [if applicable to project]			[NAME, ADDRESS]	

Appendix G - SAFETY AND SECURITY CERTIFICATION PROCESS

PART 1 GENERAL

1.01 Summary

This section specifies the process used to certify the safety and security related elements of the WMATA system contract.

1.02 Related Documents

WMATA Safety & Security Certification Program Plan
Project Specific Safety and Security Program Plan (To be formulated and provided by Contractor)
Preliminary Certifiable Items List (CIL) (To be provided prior to award)
WMATA Daily ATC Certification Procedures
WMATA ATC System Integrity Maintenance Practices
FTA Handbook for Transit Safety & Security Certification
Section 01113, System Integration
Section 01114, Safety & Environmental Requirements
Section 01142, Site Specific Work Plan

1.03 General

The purpose of the Safety and Security Certification Program is to ensure that:

The design, construction, fabrication, installation, testing and commissioning of all critical elements (civil, structural and systems) have been evaluated for conformance with the safety and security requirements and to verify their readiness for operational use.

WMATA's bus and rail systems are operationally safe and secure for customers, employees and the general public.

The objective is to achieve acceptable risk through a systematic approach to hazard analysis and management, criteria adherence, design and construction certification and review, and formal contract acceptance. This is accomplished through documentation and verification that:

System safety hazards are identified, assessed, and mitigated to acceptable and manageable risk levels.

Security vulnerabilities are identified and assessed, and documented action is taken to resolve identified unwarranted risk.

Appropriate codes, guidelines and standards have been reviewed to provide a basis for safety and security considerations in final design documents.

Facilities, systems and/or equipment have been designed, constructed, inspected and tested in accordance with applicable codes and standards.

1.04 Safety and Security Certification Process Requirements

WMATA SAFE, with the coordination and cooperation of WMATA's SCRC, shall ensure the Contractor establishes and maintains a systematic, documented, comprehensive, verifiable, and continuous System Safety and Security Certification process that is applied throughout the duration of the contract to implement

the intent of the WMATA Safety & Security Certification Program Plan. At a minimum, WMATA SAFE and members of the WMATA SCRC shall ensure that the Contractor's Safety & Security Certification Program:

Complies with the WMATA Safety & Security Certification Program Plan. When applicable the Contractor will be required to prepare a Project Specific Certification Plan (also referred to as the project's Safety and Security Certification Management Plan (SSCMP)).

Requires that Contractor assign a Certification Manager and additional resources as required to manage the Safety & Security Certification process from the notice-to-proceed throughout the lifecycle of the project on behalf of the contractor. The Certification Manager shall be subject to review and approval by WMATA SAFE.

Requires that Safety and Security Certification activities be included on the project master schedule critical path for each phase of the project lifecycle (design, construction, testing and pre-revenue service) and that clear certification milestones be identified throughout the life cycle of the project. The Contractor must track the completion of the Safety and Security Certification effort and provide bi-monthly (every 60 days) reports to WMATA Project Management and WMATA SAFE on the progress of the certification effort.

Perform a Hazard Analyses (HA) and a Threat and Vulnerability Assessments (TVA) to identify potential hazards, threats and vulnerabilities that may present risks to the system and to identify and implement acceptable mitigations to eliminate and/or control identified risks.

Participate in WMATA led working groups whose purpose is to oversee and manage the administration of the safety and security certification for the Project and to ensure all WMATA requirements with regards to safety are being met.

Support development of a Certifiable Items Lists (CIL), which can be developed using the results of hazard analyses and threat and vulnerability assessments or other methods that are acceptable to WMATA SAFE and Project Management, and support maintenance of an electronic CIL that shall be updated based on inputs from the working group.

Demonstrate, document and certify that Final Design has been performed in compliance with and satisfies all applicable codes and standards.

Conduct tests and inspections to demonstrate and document compliance with contract requirements; to demonstrate that actions taken to eliminate and control risks identified through the hazard analysis and threat and vulnerability assessment processes have been implemented and are effective; and to demonstrate that completed facilities, systems, and equipment function as intended.

Maintain a database that documents completed analyses, approvals of designs, design changes and variances, inspections, tests, and other necessary information required for each certifiable item identified on the CIL. This shall include the maintenance of an electronic document management system that enables retrieval of the aforementioned documentation for each certifiable element.

Encompasses personnel training and qualification requirements. This shall include the provision of documentation that verifies that all required personnel training and qualification for operations, maintenance, and emergency response has been completed by all necessary personnel.

Documents that the requirements for operational and system integrated tests have been fulfilled to WMATA's satisfaction.

Includes the issuance of a Safety and Security Certificate for each CIL element upon completion of the

certification effort for that element. The Safety and Security Certificate must be signed by the Contractor Representative, the WMATA Project Manager, the AGM of Rail/Bus Operations, and by Plant Maintenance (as applicable) prior to being signed by the Chief Safety Officer.

Final acceptance and substantial completion notification shall not be issued until the Safety & Security Certification Report (see part 2.01 of this section) has been received and approved by WMATA's Safety Certification Review Committee and signed off by WMATA's Executive Management. Receipt of this acceptance is provided by the issuance of the WMATA System Safety & Security Certification Certificate of Compliance.

1.05 Additional Information – Roadway Worker Protection Training – All Contractor personnel that will be on site will be required to attend and complete WMATA Roadway Worker Protection Training, Level 1.

PART 2 PRODUCTS

When applicable, the contractor may be required to develop and submit for approval a Project Specific Certification Plan (also referred to as project's Safety and Security Certification Management Plan). This plan must be developed at the beginning of the project along with the project's other management plans. It must adhere to the requirements of WMATA's Safety and Security Certification Program Plan, and must specify how the project will be certified.

2.02 This Section specifies requirements to produce a Safety and Security Certification Report which shall certify that at the time of final acceptance, all Safety Critical Elements of the Contract are safe for passengers, WMATA employees, emergency responders, and the general public. The Safety and Security Certification Report must also ensure that all Safety Critical Elements are in compliance with regulatory codes and WMATA's standards.

The Safety Certification Report must consist of:

Completed Safety and Security Certifiable Items List

One paper copy of Safety and Security Certifiable Items List's referenced backup documentation

Final electronic copy of a populated CIL with all backup referenced documents

Record of Safety and Security Certification upon completion of each phase of the project life cycle (design, construction, testing and pre-revenue service) to include copies of the Certificates of Compliance that were issued per element completion.

Preparation of an Open Item Status Report, to display the status of all open items identified during the conduct of the certification program.

Preparation of a chronological summary report to display and discuss the safety certification activities that have been conducted.

PART 3 EXECUTION

Certification Manager

The Contractor shall appoint a Certification Manager to lead and coordinate the Contractor's Safety & Security Certification Program Plan. The Certification Manager shall have more than 10 years of safety and security related experience working with large multiple disciplinary rail transit projects in a management role and specific design experience with transit facilities and systems (train control, communications, fire protection, vehicles, and traction power). The Certification Manager shall be subject to review and approval by WMATA SAFE and will be in place from the notice-to-proceed throughout the lifecycle of the project.

PART 4 MEASUREMENT AND PAYMENT

4.01 Measurement

Safety and Security Certification must be included on the project master schedule critical path for each phase of the project life cycle (design, construction, testing and pre-revenue service) and certification milestones must be identified within the life cycle of the project.

4.02 Payment

Final acceptance and substantial completion notification shall not be issued until the Safety & Security Certification Report (see part 2.01 of this section) has been received and approved by WMATA's Safety Certification Review Committee and signed off by WMATA's Executive Management. Receipt of this acceptance is provided by the issuance of the WMATA System Safety & Security Certification Certificate of Compliance.

END OF SECTION



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
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Appendix H SOP 19 – Maintenance and Testing on Revenue Facility, SOP 28 – Protection for Roadway Workers, SOP 39 – Lockout Tagout Procedure for Traction Power Substations, SOP 41- WMATA ESCORT PROCEDURES FOR NON-ROADWAY, SOP 49 Designation of Qualified TBS & TPSS as “Special Construction Sites:

SOP #19 MAINTENANCE AND TESTING ON RAIL FACILITIES

19.1 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to ensure consistency and provide guidance for all personnel desiring the use of the revenue railroad, yards and Rail facilities for all maintenance and testing.

19.2 SCOPE

This SOP is applicable to WMATA employees, contractors, consultants, and all other personnel desiring access to the revenue railroad or other WMATA Rail facilities for maintenance or testing.

19.3 DEFINITIONS

19.3.1 Access Rights: Permission to enter the Roadway.

19.3.2 Exclusive Rights: A section of the track that is restricted for use by one group.

19.3.3 General Orders and Track Rights System (GOTRS): A mainframe computer program that is used by WMATA employees only to enter track rights request in accordance with OAP 100-9.

19.3.4 Piggybacking: An independent work gang under the supervision of a gang leader. This gang is working within the authorized working limits of a RWIC. The gang leader is under the authority of the RWIC.

19.3.5 Rail Service Adjustment (RSA): A temporary adjustment to the Metrorail operating schedule in order to accommodate maintenance or construction activities on the Metrorail main line during revenue service.

19.3.6 Routine Maintenance: Preventive or corrective maintenance actions that have an approved written procedure and can be performed without effecting revenue service.

19.3.7 Site Specific Work Plan (SSWP): Describes the construction and/or



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installation and associated schedule of work to be performed at specific locations where track usage or other interface with the operating rail road is required.



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19.4 RESPONSIBILITIES

- 19.4.1 The Managing Director of OPER RTRA is responsible for approval of the operational plan or Site Specific Work Plan (SSWP) for all tests to be performed on the revenue railroad, yards or in WMATA Rail facilities.
- 19.4.2 The Manager of Track Access for Maintenance and Construction (TAMC) subject to the approval of Superintendent of ROCC is responsible for issuance, and implementation of the General Orders. The General Orders are used to define track sections for maintenance, testing and construction activities. The General Orders will remain in effect until fulfilled, superseded or canceled by the Superintendent of ROCC or one of his/her designee's.
- 19.4.3 WMATA offices, contractors, and consultants are responsible for scheduling all activities in accordance with this SOP.
- 19.4.4 Superintendents assigned to OPER are responsible for providing support services when requested, and subsequently approved in accordance with this SOP.
- 19.4.5 Maintenance Managers and Project Managers are responsible for providing approved Site Specific Work Plans (SSWP) as outlined in Operations Administrative Procedure (OAP) 200-33.
- 19.4.6 Personnel requiring access rights are responsible for advising ROCC of their work areas and after approval by ROCC, monitoring the appropriate radio frequencies during access.

19.5 PROCEDURES

Procedure #	Content
19.5.1	Piggy Backing
19.5.2	Exclusive Rights
19.5.3	Access Rights
19.5.4	General Orders Procedures
19.5.5	General Orders Format and Content
19.5.6	Suspension of a General Order
19.5.7	Modification of a General Order
19.5.8	Construction and Conducting Test



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19.5.1 Piggy Backing:

- 19.5.1.1 When a maintenance organization desires to work in an area controlled by rights of another maintenance organization (Piggy Back), they must request permission from the primary rights holder through the GOTRS system. Approval will be granted by the primary track rights holder through the GOTRS system.
- 19.5.1.2 The first junior piggy back rights holder shall become the primary rights holder when the primary rights holder cancels.
- 19.5.1.3 The on-site maintenance supervisor, crew leader or escort of the crew who holds the track rights is responsible for all activities within the work area, to include but not be limited to: all communication and coordination with ROCC; coordination of movement of work vehicles within the work area with notification to ROCC; verification of third rail power and placement of safety equipment; monitoring of the activities of all crews within the work area; and, ensuring that all personnel and equipment of all crews in the work area are clear and that the entire area is safe for train movement prior to turning the work area back over to ROCC.
- 19.5.1.4 The on-site maintenance supervisor, crew leader or escort of the piggyback area is responsible to ensure site specific activities in the piggyback zone conform to all rules and procedures.
- 19.5.1.5 In instances where the requestor requires track rights in an area adjacent to an area in which personnel are working in the TPSS or Tiebreaker room (see possible exceptions in TBS and TPSS diagrams), refer to SOP # 39.
- 19.5.1.6 In instances where the requestor requires track rights to the same area, refer to SOP # 39.

19.5.2 Exclusive Rights:

- 19.5.2.1 All requests to obtain exclusive use of a section of a yard track (Yard Contact Rails) must be submitted to and approved by the Superintendent of Rail Transportation in charge of the specified yard. Joint approval with Director of ROCC is required if yard work has potential of impacting revenue service.
- 19.5.2.2 All request to obtain exclusive use of a section of mainline track must be submitted to TAMC (thru GOTRS) and be approved by the Director of ROCC and appear on the General Orders.



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19.5.3 Access Rights:

19.5.3.1 All requests to obtain access rights must be coordinated with and be approved by ROCC prior to entering the Roadway. ROCC must also be notified when personnel have completed their tasks and are clear of the Roadway.

19.5.3.2 Requests for track access with red tag power outages must contact MOC and ROCC for coordination, execution and issuance.

19.5.4 General Orders Procedures:

19.5.4.1 All requests for track rights must be submitted via the General Orders and Track Rights System (GOTRS) to ROCC/TAMC by 0600 hours on the Monday four weeks preceding the scheduled week of work, unless adjusted or approved by the AGM-TIES on a case-by-case basis as needed.

19.5.4.2 Only the Director of ROCC may approve the issuance of the General Orders for request after track allocations have been scheduled.

19.5.4.3 When red tags or supervisory outages are issued an early clearing time may be required. Any deviation from scheduled times must be approved by the on duty Assistant Superintendents of ROCC and MOC.

19.5.4.4 All requests must include the following information:

19.5.4.4.1 Department requesting rights.

19.5.4.4.2 Date and hours of the request.

19.5.4.4.3 Line, track and Chainage.

19.5.4.4.4 Contact rail status (type of outage).

19.5.4.4.5 Equipment to be utilized.

19.5.4.4.6 Individual/Department making the request.

19.5.4.4.7 Purpose of the request.



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19.5.5 General Orders Format and Content:

19.5.5.1 General Orders heading will be identified by bold type reading “General Orders”. The heading will include the date of the order, the number of the general order and to whom the order is addressed. The General Orders numbers will be continuous on a yearly basis.

19.5.5.2 The General Orders will identify for each approved area:

19.5.5.2.1 The work to be performed and type of rights requested.

19.5.5.2.2 The contractor and/or WMATA Department involved.

19.5.5.2.3 The date and hours.

19.5.5.2.4 The identification and location of the work area involved.

19.5.5.2.5 The contact rail status (type of outage) when necessary.

19.5.5.2.6 Instructions for flagging when necessary.

19.5.6 Suspension of a General Order:

19.5.6.1 ROCC Managers have the Authority to suspend or cancel a portion, or all of the General Orders when conditions require it.

19.5.6.2 When a general order is canceled ROCC will immediately notify all concerned parties and document all actions taken.

19.5.7 Modification of a General Order:

19.5.7.1 After publication of a General Order, modification will not be allowed except for emergencies or cancellation of rights. All cancellation will be documented by ROCC identifying the rationale for the cancellation.

19.5.7.2 Emergency modifications of the General Orders will be allowed only when conditions exist which will cause a portion of the mainline to be taken out of service during revenue hours.



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19.5.8 Construction and Conducting Test:

19.5.8.1 Personnel requiring access to the revenue railroad or WMATA Rail facilities for testing or construction must provide a Site Specific Work Plan as directed in OAP 200-33 to TAMC no later than (60) days prior to the date of the maintenance, construction or testing procedure, unless adjusted or approved by the AGM-TIES on a case-by-case basis as needed.

19.5.8.2 The requestor shall be responsible for obtaining a “Covenant not to Sue” from all non WMATA personnel involved in maintenance procedures.

19.5.8.3 After approval of the SSWP by TAMC, the appropriate Superintendent shall provide the necessary support as identified in the SSWP. Also a single point of contact shall be provided for the requestor. This individual will be responsible for the safety of Operations personnel and equipment while the maintenance procedure is performed. Any modification to the operational scenario will be coordinated through the individual designated as the single point of contact.

19.6 REFERENCES

19.6.1 OPA 200-33

19.6.2 SOP # 23

19.6.3 SOP # 28

19.6.4 SOP # 39



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**SOP # 28 PROTECTION FOR ROADWAY WORKERS AND ESTABLISHMENT OF
THIRD RAIL POWER OUTAGES AND WORK AREAS ON THE
ROADWAY**

28.1 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to describe, in detail, the responsibilities and procedures for the removal and restoration of third rail power and the establishment of work areas.

28.2 SCOPE

This SOP is applicable to all WMATA and non-WMATA personnel who perform, supervise, or manage work on the mainline and yard Roadway.

28.3 DEFINITIONS

28.3.1 Foul Time (FT): A method of Roadway protection in which all trains and/or track equipment are STOPPED. The RWIC requests ROCC to stop all traffic until the RWIC reports clear of the track. This is used only for short time periods in specific segments of track such as work areas, blind spots and no clearance zones.

28.3.2 Fouling A Track: The placement of an individual or equipment in such proximity to a track that the individual or equipment could be struck by a moving train or on-track equipment.

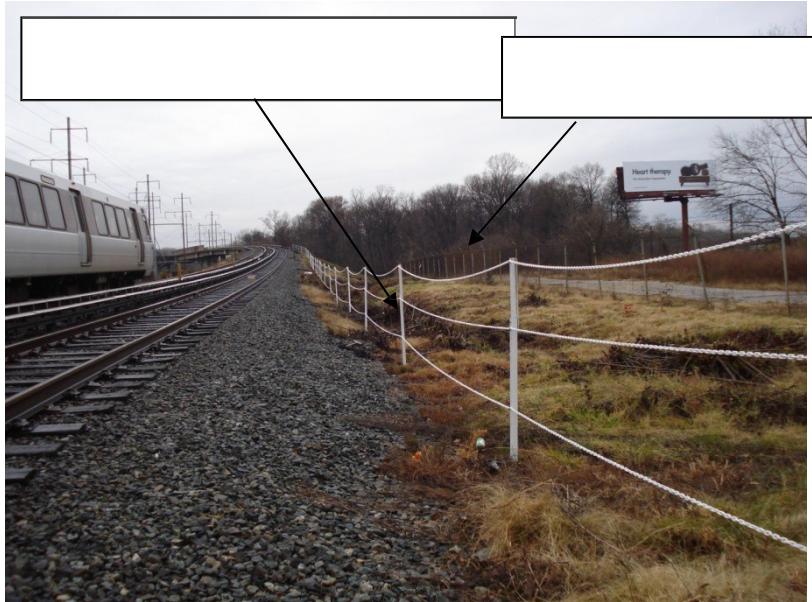
28.3.3 Inaccessible Track (IT): A section of track where a physical barrier has been placed to prevent trains and/or track equipment from entering the work area. (i.e. derailleurs, barricade, rail out, etc.).

28.3.4 Individual Train Detection (ITD): A method where an individual provides for their own protection. The individual detects approaching trains and moves to a place of safety before the train arrives. For Lone Workers, this method of detection may ONLY be used under circumstances strictly defined in the RWPM.

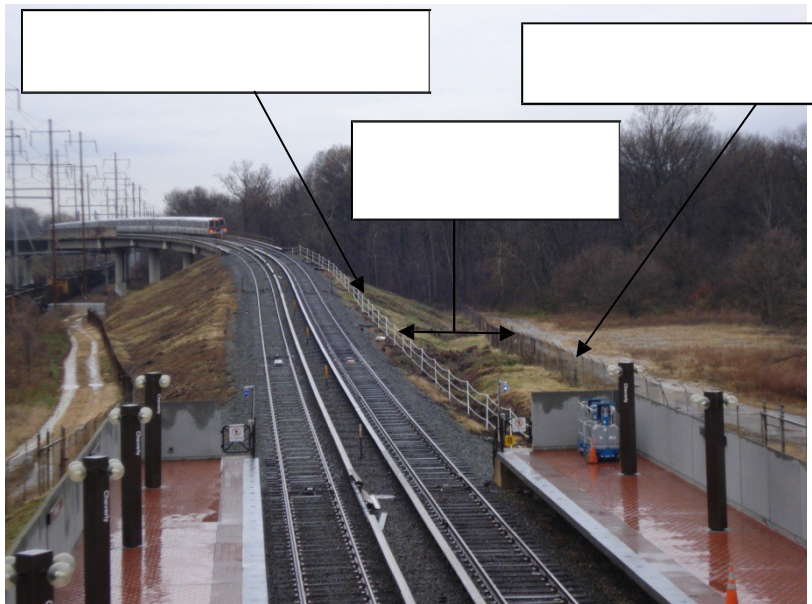
28.3.5 Intermediate boundary fence: A five (5) foot high, plastic chain fence which is positioned ten (10) feet from the end of the cross ties along sections of Metrorail above ground roadway. Where constructed, it separates Metro property into roadway and NON-roadway territory. Individuals on the track side of the Intermediate boundary fence are considered "on" the roadway; individuals on the non-track side of the Intermediate boundary fence are considered "off" the roadway. (Pictures 1 and 2).



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Picture 1



Picture 2

28.3.6 Lone Worker: A RWIC qualified single Roadway worker who provides for their own protection. This individual is not a member of a work gang. A lone worker is not engaged in a common task with another Roadway worker.



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- 28.3.7 **Qualified Person:** The worker has successfully completed training and demonstrated the knowledge and ability to perform their duties. WMATA will maintain the appropriate standards and records. Roadway workers shall be required to re-qualify.
- 28.3.8 **Roadway:** Any location where roadway worker protection is required:
- 28.3.8.1 On at-grade track, it is all areas between the roadway fences, except where an intermediate boundary fence exists.
 - 28.3.8.2 On aerial structures, it is all areas between hand railings to include all safety walks.
 - 28.3.8.3 In tunnel areas, it is all areas between tunnel walls to include all safety walk areas and open shafts and ancillary areas.
 - 28.3.8.4 In transition areas, it includes fence to fence, wall to wall, railing to railing, fence to wall, fence to railing, and wall to railing.
 - 28.3.8.5 The shop aprons, yards and their tracks are excluded from the Roadway, and from the Roadway Worker Protection Rules, with the exception of the yard's arrival and departure tracks, and in areas where track repair work is being performed, in which case, Roadway Worker Protection Rules will be put in place for the gangs and workers associated with that track work and its associated work zone. Embedded tracks within maintenance facilities are not considered part of the Roadway; however, carwash tracks are included. Station platforms are not considered part of the Roadway nor are the walkways beyond the station platform end-gates protected by handrails. However, any maintenance or construction, the use of tools, ladders, scaffolds or lifts that have the potential for **fouling the track** requires a RWIC to use Roadway worker protection in accordance with the RWPM, even if performed behind the hand rails.
 - 28.3.8.6 Individuals are considered off the Roadway if they are on the non-track side of the intermediate boundary fence. Walkways protected by handrails beyond the station platform end-gates are not considered part of the Roadway. All non-WMATA employees must be escorted and be granted permission by ROCC to go beyond end-gates.



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Roadway begins at end of handrail



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- 28.3.9 Roadway Flag Person: A qualified employee designated by the RWIC to direct or restrict the movement of trains. Roadway Flag Persons shall be equipped to properly provide proper warnings. Their SOLE duty is to look out for approaching trains and/or track equipment. From a place of safety, Roadway Flag Persons shall signal trains to **STOP** before entering the working limits. Roadway Flag Persons will not permit the movement of trains and/or track equipment into the working limits unless authorized by the RWIC.
- 28.3.10 Roadway Worker: Any employee or contractor whose duties could potentially cause them to foul the Roadway.
- 28.3.11 Roadway Worker in Charge (RWIC): A qualified employee responsible for the Roadway safety for all workers and work gangs within their working limits.
- 28.3.12 Roadway Worker Protection (RWP) Manual:
- 28.3.13 Shop Apron: A concrete or asphalt area between shop doors and ballasted tracks.
- 28.3.14 Train coordination: A method of establishing working limits on track upon which a train holds exclusive authority to move whereby the train yields that authority to a Roadway Worker in Charge (RWIC).
- 28.3.15 Vehicle Flag Person (VFP): A qualified employee who is assigned to a rail vehicle for flagging purposes.
- 28.3.16 Watchman/Lookout: A qualified employee who provides warning to Roadway workers of approaching trains and/or track equipment. A Watchman/Lookout's sole duty is to warn workers to move to, and remain in, a place of safety for an ample time before the arrival of trains or rail vehicles.
- 28.3.17 Work Crew/Gang: Two or more railroad workers organized to work together on a common task; including the RWIC.
- 28.3.18 Work Zone: A segment of track within working limits that is being occupied for maintenance or repair.
- 28.3.19 Work Zone Authorization: The written authorization designed to convey rights to obstruct or use a designated section of track between specified points and for a specified period of time with or without the removal of third rail power or signal power.



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28.4 RESPONSIBILITIES

- 28.4.1 All personnel who perform or supervise work on the Roadway are responsible for ensuring that their actions, work areas and third rail power outages conform to the requirements of this SOP and the RWP Manual.
- 28.4.2 All personnel shall be trained and qualified in Roadway safety, according to their role and function, prior to entering WMATA's Roadway.
- 28.4.3 MOC and ROCC personnel are responsible for ensuring that field personnel are conforming to this SOP when work is being performed on the Roadway.
- 28.4.4 Supervisors and managers of personnel working on the Roadway are responsible for ensuring that their assigned personnel are properly and fully trained on the content of this SOP and the Roadway Worker Protection Manual and are working in full compliance with both documents at all times. The Roadway Worker in Charge (RWIC) shall focus on rules/compliance/oversight and the safety of their work crews. The RWIC shall not engage in any other job site work activities.



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28.5 PROCEDURES

Procedure #	Content
28.5.1	Guidelines for the Removal of Third Rail Power for WMATA Employees
28.5.2	Guidelines for the Removal of Third Rail Power for Non-WMATA Personnel
28.5.3	Special Requirements for Non-WMATA Personnel
28.5.4	Removal of Third Rail Power and Establishment of a Work Area Under a Red Tag Outage
28.5.5	Restoration of Third Rail Power and Clearing of a Work Area Under a Red Tag Outage
28.5.6	Removal of Third Rail Power and Establishment of a Work Area Under a Supervisory Outage
28.5.7	Restoration of Third Rail Power and Clearing of a Work Area Under a Supervisory Outage
28.5.8	Additional Requirements when more than One Crew is Working in a Single Work Area (Piggybacking)
28.5.9	Additional Protection Requirements when Single-Tracking
28.5.10	Establishment of a Work Area without a Power Outage
28.5.11	Clearing of a Work Area
28.5.12	Working on Roadway without a Work Area Established
28.5.13	Use of Derailers
28.5.14	Personnel Responding to Incident on Roadway
28.5.15	Working on WMATA Property Outside the Roadway (beyond the Intermediate Boundary Fence)
28.5.16	Establishment of Work Area in the Yard Car Wash Facility (except Branch Ave.)
28.5.17	Removal of Third Rail Power and Establishment of a Work Area under a <u>Remote</u> Red Tag Outage for Branch Avenue Yard Carwash Facility <u>only</u> .
28.5.18	Restoration of Third Rail Power and Establishment of a Work Area under a <u>Remote</u> Red Tag Outage for Branch Avenue Yard Carwash Facility <u>only</u> .



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28.5.19	Roadway Clarifications: D&G Platform, Alexandria Yard Platform, Shady Grove Yard Lead, Brentwood Yard
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28.5.1 Guidelines for the Removal of Third Rail Power for WMATA Employees:

28.5.1.1 A red tag power outage is required for all activities that require contact with the third rail or items connected to the third rail, with the exception listed in Appendix D.

28.5.1.2 A supervisory power outage is required for all activities on the Roadway not covered by Section 28.5.1.1 of this procedure. When incidental contact with the third rail is possible, Safety Department approved rubber mats shall be used to protect affected employees.



Warning: The third rail shall always be considered energized during supervisory outages.

28.5.1.3 Exceptions to 28.5.1.2 are made for employees performing certain routine inspection and maintenance activities that do not require third rail power outages. These exceptions require the approval of the Chief Safety Officer and the Assistant General Manager of Rail Operations Delivery and are listed in Appendix A of this SOP.

28.5.1.4 When a power outage is required, it need cover only the entire actual work area and does not have to cover the adjacent safety zones. Protected work areas outside of the actual work area do not require a power outage.

28.5.2 Guidelines for the Removal of Third Rail Power for Non-WMATA Personnel:

28.5.2.1 A red tag power outage is required for all activities that require contact with the third rail or items connected to the third rail, with the exception listed in Appendix D.

28.5.2.2 A supervisory power outage is required for all activities on the Roadway not covered by Section 28.5.2.1 of this procedure.



Warning: The third rail shall always be considered energized during supervisory outages.

28.5.2.3 When a power outage is required, it must cover the entire actual work area, but does not have to cover the adjacent safety zone.



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- 28.5.2.4 Municipal Response Agencies (i.e. Fire Departments) – no power outage required; protection ensured by WMATA Roadway Worker in Charge from the Office of Emergency Management (OEM).
- 28.5.3 Special Requirements for Non-WMATA Personnel:
- 28.5.3.1 Non-WMATA personnel cannot enter the Roadway while the third rail is energized, except for those referenced in 28.5.3.7 and in appendix A.
- 28.5.3.2 The point of entry and exit onto the Roadway for non-WMATA personnel must be within the actual work area limits. However, when this is not possible, a qualified RWIC may ask permission from ROCC to remove third rail power and stop all Class 1 and Class 2 equipment movement to allow the non-WMATA personnel into the actual work area limits.
- 28.5.3.3 Non-WMATA personnel cannot enter the Roadway without a trained and certified WMATA RWIC.
- 28.5.3.4 Non-WMATA personnel must possess a valid orange WMATA contractor ID with a Roadway training endorsement before entering the Roadway. This ID shall be displayed on an outer garment at all times while on WMATA property.
- 28.5.3.5 Non-WMATA personnel who will be performing work on the rail system, prior to performing that work, must successfully complete an approved WMATA course on the rail system, procedures, restrictions and any other pertinent information as applicable.
- 28.5.3.6 WMATA RWICs shall ensure the Non-WMATA personnel have a valid orange contractor ID that is not expired and is stamped with the Roadway Trained endorsement, prior to allowing those personnel onto the Roadway.
- 28.5.3.7 Representatives from the Tri-State Oversight Committee and the National Transit Safety Board shall have access to energized operational tracks with an assigned WMATA RWIC for the purposes of observing tests and performing inspections. Protection provided these personnel shall be consistent with the Metrorail Safety Rules and Procedures Handbook.



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- 28.5.4 Removal of Third Rail Power and Establishment of a Work Area Under a Red Tag Outage.
- 28.5.4.1 The WMATA maintenance personnel that require the outage shall submit the request via GOTRS (General Orders – Track Rights System).
- 28.5.4.2 Prior to the start of work, the RWIC shall, contact the MOC to verify that the red tag has been activated and obtain the red tag number.
- 28.5.4.3 After receiving the red tag number from MOC and prior to beginning work, the RWIC shall contact ROCC by radio advising them of the red tag number and request permission to enter the track bed to test the third rail and protect the work area. The RWIC shall establish the appropriate protection and verify the necessary protection elements for the type of protection required with ROCC as defined in Appendix B.
- 28.5.4.4 Once verification between ROCC and the RWIC is complete according to Appendix B, control of the work area is passed from ROCC to the RWIC. ROCC shall not execute, nor authorize, movement of switches within the working limits without approval of the RWIC.
- 28.5.4.5 Prior to starting work, the RWIC shall brief the personnel of the work crew on applicable WMATA safety rules/procedures, track(s) involved, work area limits, the means of protection, safe areas in which to clear, red tag number and any restrictions on the work, and document meeting on department issued safety briefing form (see Appendix C of this SOP for example).
- 28.5.4.6 In the event the work continues through an MOC or ROCC shift change, it shall be the responsibility of the initial MOC or ROCC Supervisor to advise the relief person of the details involving the work taking place, including the name of the Red Tag Holder and/or the RWIC. ROCC Controllers shall contact and be briefed by the RWIC on the protection required / type of protection for work zones on their lines when changing shifts.
- 28.5.4.7 If the Red Tag Holder is to be relieved, both the original Red Tag Holder and the new Red Tag Holder must contact MOC and ROCC advising them of the change prior to making the change.



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28.5.5 Restoration of Third Rail Power and Clearing of a Work Area Under a Red Tag Outage:

28.5.5.1 The RWIC shall contact MOC advising them that the work area has been inspected for re-energization, all personnel/equipment are clear and the red tag can be cleared identifying it by number.

28.5.5.2 After contacting MOC, the RWIC shall contact ROCC advising them that all personnel/equipment are clear of the work area and that the red tag has been cleared through MOC.

28.5.5.3 Prior to allowing personnel to leave the area, ROCC shall verify removal of the shunt straps when the work has been completed, time period has ended or when requiring the personnel to clear.

28.5.5.4 ROCC shall ensure that the times the shunt straps are applied and removed are recorded on the ROCC radio tape and/or in writing.

28.5.5.5 ROCC shall remove prohibit exit commands only after the person holding the red tag has reported personnel and equipment clear of the track.

28.5.5.6 When the red tag is cleared, MOC shall in coordination with ROCC, direct power crews to remove block tags, rack in and place in remote the appropriate circuit breakers at the involved substations.

28.5.5.7 MOC shall advise ROCC that the breakers for each outage area are positioned to be re-energized.

28.5.5.8 MOC and ROCC shall cause announcements to be made on MOC and ROCC radio nets that power is being restored and allow at least one minute for a response to the announcement before closing breakers.

28.5.5.9 ROCC shall restore power by supervisory control as described in SOP 2.5.6 and notify MOC of any circuit breakers that do not close.



Notice: Personnel are not to enter/re-enter the Roadway, unless authorized by the ROCC Supervisor.

28.5.6 Removal of Third Rail Power and Establishment of a Work Area Under a Supervisory Outage:

28.5.6.1 The WMATA maintenance personnel requiring the outage shall submit the request via General Orders Track Rights System (GOTRS).



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- 28.5.6.2 Prior to allowing work to begin, the RWIC shall contact ROCC by radio and request that the supervisory outage be initiated.
- 28.5.6.3 ROCC shall initiate the outage recording the date/time that power removal was completed, the breaker number(s) involved, and the name of the person in charge of the work crew in the request log.
- 28.5.6.4 ROCC shall then contact the RWIC. The RWIC shall establish the appropriate protection and verify the necessary protection elements for the type of protection required with ROCC as defined in Appendix B.
- 28.5.6.5 Once verification between ROCC and the RWIC is complete according to Appendix B, including verification of work limits by chain markers and track number, control of the work area is passed from ROCC to the RWIC. ROCC shall not execute, nor authorize, movement of switches within the working limits without approval of the RWIC.
- 28.5.6.6 Prior to allowing the crew to begin work, the RWIC shall brief personnel of the work crew that the third rail is to be considered energized at all times and not to make contact with it or its connected equipment. In addition, personnel will be advised of any applicable rules, procedures or restrictions, the track(s) involved, work area limits, the means of protection and safe areas in which to clear, and document meeting on department issued safety briefing form (see Appendix C of this SOP for example).
- 28.5.6.7 The RWIC must maintain contact with ROCC during the work in the event ROCC would have to clear the work area and restore power in response to an emergency. In addition, the RWIC shall periodically check the third rail to confirm it is still de-energized.
- 28.5.6.8 In the event that the work continues through an ROCC shift change, it shall be the responsibility of the initial ROCC Supervisor to advise the relief person of the outage and the name of the RWIC. ROCC Controllers shall contact and be briefed by the RWIC on the protection required / type of protection for work zones on their lines when changing shifts.
- 28.5.6.9 In the event that the work continues through the work crew's shift change, it will be the responsibility of the initial RWIC to advise ROCC of the name of the person in charge of the relief crew. At all times, ROCC must be kept informed as to who is the RWIC and responsible for clearing the work area.



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28.5.7 Restoration of Third Rail Power and Clearing of a Work Area Under a Supervisory Outage:

28.5.7.1 Upon completion of the inspection, the RWIC shall contact ROCC advising them that the work area has been inspected for re-energization, all personnel/equipment are clear of the track(s) and give ROCC clearance to re-energize the third rail in the area.

28.5.7.2 When ROCC receives the clearance from the RWIC and no other crews are holding the same third rail area out of service, ROCC shall ensure that announcements are made on their radio net and the MOC net that third rail power is being restored in the work area and allow at least one minute for a response to the announcement before closing breakers.

28.5.7.3 After announcements have been made, ROCC shall re-energize the third rail in the cleared work area. ROCC shall record the request to re-energize in the power outage or restoration request log and also the time the restoration was completed.



Notice: Personnel are not to enter/re-enter the Roadway, unless authorized by the ROCC Supervisor.

28.5.8 Additional Requirements when more than One Crew is Working in a Single Work Area (Piggybacking):

28.5.8.1 The RWIC who holds the track rights is responsible for all activities within the work area, to include but not be limited to:

28.5.8.1.1 All communication and coordination with ROCC;

28.5.8.1.2 Verification of third rail power and placement of safety equipment;

28.5.8.1.3 Monitoring of the activities of all crews within the work area, and;

28.5.8.1.4 Ensuring that all personnel and equipment of all work crews in the work area are clear and that the entire area is safe for train movement prior to turning the work area back to ROCC.

28.5.8.2 The person in charge of the piggybacking crew must contact the RWIC for permission to enter the RWIC's work area and notify ROCC.

28.5.8.3 The on-site maintenance supervisor, crew leader or escort of piggyback area is responsible to ensure site specific activities in the piggyback zone conform to all rules and procedures.



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28.5.8.4 If a rail vehicle is being used by one of the crews, a pair of red lights or flags is to be placed between the crews to limit the movement of the rail vehicle.

The supervisor shall coordinate with the supervisor of adjacent crews if work equipment is required to move past red lights.

28.5.8.5 If additional PPE, such as respirators, is required for the work of one of the crews, all personnel within the work area shall be required to wear the additional PPE.

28.5.9 Additional Protection Requirements when Single-Tracking:

If no SSRM approved physical barrier exists between the affected tracks, a restriction of 35 MPH shall be placed immediately adjacent to the actual work area on the operational track(s). The length of this restriction shall be equal to or greater than the length of the actual work area and shall parallel the entire length of the actual work area.

28.5.10 Establishment of a Work Area without a Power Outage:

28.5.10.1 The WMATA maintenance personnel requiring the work area shall submit the request via General Orders Track Rights System (GOTRS).

28.5.10.2 Prior to allowing work to begin, RWIC shall contact ROCC by radio and request permission to enter the Roadway to establish the work area. The RWIC shall establish the appropriate protection and verify the necessary protection elements for the type of protection required with ROCC as defined in Appendix B.

28.5.10.3 Once verification between ROCC and the RWIC is complete according to Appendix B, control of the work area is passed from ROCC to the RWIC. ROCC shall not execute, nor authorize, movement of switches within the working limits without approval of the RWIC.

28.5.10.4 Prior to allowing the crew to begin work, the RWIC shall brief personnel of the work crew that the third rail is energized and that entry onto the Roadway is prohibited. In addition, personnel will be advised of any applicable rules, procedures or restrictions, the track(s) involved, work area limits, the means of protection, and safe areas in which to clear, and document meeting on department issued safety briefing form (see Appendix C of this SOP for example).

28.5.10.5 The RWIC must maintain contact with ROCC during the work in the event ROCC would have to clear the work area in response to an emergency.



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28.5.10.6 In the event that the work continues through an ROCC shift change, it shall be the responsibility of the initial ROCC Supervisor to advise the relief person of the work area and the name of the RWIC. ROCC Controllers shall contact and be briefed by the RWIC on the protection required / type of protection for work zones on their lines when changed shifts.

28.5.10.7 In the event that the work continues through the work crew's shift change, it will be the responsibility of the initial RWIC to advise ROCC of the name of the person in charge of the relief crew. At all times, ROCC must be kept informed as to who is the RWIC and responsible for clearing the work area.

28.5.11 Clearing of a Work Area:

Upon completion of the inspection, the RWIC shall contact MOC and ROCC advising them that the work area has been inspected all work crews and equipment are clear of the track(s) and give ROCC clearance to establish normal operations in the area.

28.5.12 Working on Roadway without a Work Area Established:

28.5.12.1 When engaged in work for a period of more than 3-minutes at a stationary location on the Roadway, restrict speeds entering the work site by using one of the following methods:

28.5.12.1.1 Coordinate with ROCC, the application of a shunt strap on the work track in accordance with the established traffic direction. The shunt strap(s) shall be applied at a track location that will assure trains enter and travel a significant portion (at least 30%) of the work area at a restricted speed (15mph). At least one train on each track shall be allowed to operate through the affected area to observe that the desired speed has been achieved before work begins. The shunt strap must be verified by ROCC prior to the start of any wayside work and remain in place until the work is complete and all crew members have cleared to the safety walk or other known clearance area. The shunt strap shall not be placed or removed in front of a train that is visible on the affected track. ROCC shall coordinate train movement through the affected area.

28.5.12.1.2 Implement speed restrictions through the application of the ATP Slow speed couplers in the applicable Train Control Room(s). Work crews must be mindful that trains will operate through the affected area without communicating with ROCC.



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- 28.5.12.1.3 Insertion of switch crank(s) prior to the work being started. Removal of the switch crank shall take place only after all crew members have cleared to the safety walk or other known clearance area. ROCC shall coordinate train movement through the affected area.
- 28.5.12.1.4 Taking local control of the interlocking or dropping track circuits, forcing red aspects at all signals. Signals shall be cleared only after positive communication verifying that all crew members have cleared to the safety walk or other known clearance area is received by the person controlling the signals. ROCC shall coordinate train movement through the affected area.
- 28.5.12.1.5 Implement methods specified in 28.5.12.1.1 and 28.5.12.1.2 on the track(s) immediately adjacent to the work area when there is no physical barrier, such as a wall or SSRM approved barrier that obstructs or greatly impedes passage and the work being performed is more than 100 feet beyond the end of a center platform station.



Notice: Track Inspections are exempt from the restrictions cited in 28.5.13, however, when the activity transitions from inspection to hands-on work, the restriction(s) must be applied. This exemption will not preclude inspection crews from asking for and implementing speed restrictions to protect them.

- 28.5.12.1.6 When notified of an impending single track operation through their area, clear the Roadway and notify ROCC when they are totally cleared.



Notice: Roadway personnel may request a transport train in order to expedite clearing their work area.

- 28.5.12.1.7 ROCC shall:

- 28.5.12.1.7.1 Make initial radio announcements when permission to enter the roadway is granted and make periodic (20- minute) radio announcements afterwards to inform train operators of those locations where corrective maintenance actions are being performed within the dynamic outline of a train. Radio announcements shall also be made to operators moving trains or work units through Connector Tracks to different lines to inform operators of the locations of roadway workers in that territory.



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- 28.5.12.1.7.2 Periodic announcement made by Rail Control Center Supervisors on the Blue/Orange Line console (OPS 2) shall include the location of roadway workers between Rosslyn and Franconia. Periodic announcements made by Rail Control Center Supervisors on the Yellow/Green Line Console (OPS 3) shall include the location of roadway workers between Arlington Cemetery and Largo.
- 28.5.12.1.7.3 These announcements shall be made at more frequent intervals as deemed necessary by ROCC or as requested by the maintenance/wayside personnel performing the work. (Related Rule 4.183).
- 28.5.12.1.8 Prior to establishing single track operations or any train movement into mainline Connector tracks (i.e. B&E/C&A Connectors) where personnel are on the roadway:
- 28.5.12.1.8.1 Announce the limits of the operation, the affected track and request that all personnel on the operational track clear the Roadway;
- 28.5.12.1.8.2 Upon request, use the first train entering the single track area (connector track) to pick up and clear personnel on the Roadway, and;
- 28.5.12.1.8.3 Inform Roadway personnel of the location of the transport train when it is made available.
- 28.5.12.1.9 To further protect mainline work gangs performing walking inspections,
- 28.5.12.1.9.1 Place "prohibit exit" command on the signal that establishes a reverse route into the area where personnel are to walk and verify that a "Blocked Track" indication is on ROCS/AIM screen.
- 28.5.12.1.9.2 Take interlocking(s) signals (that can establish a reverse route) out of automatic mode anytime track walkers or workers occupy an area governed by automatic signaling. In cases where workers are granted permission to occupy a connector track (i.e. B&E/C&A Connectors), Controllers will contact the associated controlling console to ensure:
- 28.5.12.1.9.2.1 Signals allowing movement into the connector track on from either line, are taken out of automatic.
- 28.5.12.1.9.2.2 The block track indication is visible on the associated console, and;
- 28.5.12.1.9.2.3 A "prohibit exit" command has been placed on signal(s) which can establish a route into the connector track.



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- 28.5.12.1.9.3 Request control of the terminal interlocking and set "prohibits and block track" commands on the track section where the personnel are requesting to walk/work when granting access to Roadway at a mainline terminal.
- 28.5.12.1.9.4 Maintain control of the terminal interlocking until the personnel have either reported clear of the tracks or they have moved completely out of the section of track controlled by the terminal interlocking.
- 28.5.12.1.9.5 If positive communication is not received from personnel on the Roadway, direct the next train through the area to proceed at 10 MPH sounding the horn until sighting personnel.
- 28.5.12.1.9.6 When the crew is located, direct the Train Operator to stop and inform the personnel to clear the wayside.
- 28.5.12.1.9.7 If work crew is not located, continue to operate trains through the affected area at 10 MPH until confirmation of work crews' whereabouts is obtained.

28.5.13 Use of Derailers:

When it is deemed necessary and appropriate to apply clamp-on derailleurs to further protect a work area, the following actions shall be taken:

- 28.5.13.1 Use only derailleurs that are approved by TSSM and SAFE.
- 28.5.13.2 The direction from which unauthorized vehicle movement is to be prevented by the use of derailleurs shall be specifically written in the approved SSWP for the work. Derailleurs can be used to prevent unauthorized vehicle entry into the Protected Work Area or to prevent unauthorized vehicle exit from the Actual Work Area.
- 28.5.13.3 WMATA personnel, qualified in the installation of derailleurs, must be assigned to the work area and remain in the work area until the area is cleared.
- 28.5.13.4 The WMATA escort, who must also be qualified in the installation and removal of derailleurs, is responsible for installing and removing the derailleurs.
- 28.5.13.5 The WMATA escort shall coordinate with ROCC the exact locations, by chain marker, of installation and removal of the derailleurs. Placement of the derailleurs must be within the Protected Work Area.
- 28.5.13.6 Contractors are not permitted to install or remove derailleurs.



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- 28.5.13.7 After all personnel and equipment are clear of the Roadway and it is safe to operate trains through the area where the work took place, the derailleurs are to be removed and ROCC notified. Escorts are to verify the removal of the derailleurs and ROCC shall confirm with the Escort that all derailleurs installed have been removed by chain marker. A test train shall then be operated through the work area to confirm the work area is clear.
- 28.5.13.8 Shunt straps shall be installed within 10 feet of the derailleurs, wherever a derailer is used on mainline.
- 28.5.13.9 When the use of derailleurs are required, no access to the work area shall be permitted (with the exception of rail equipment) until the entry prevention derailleurs and the associated shunt straps and all other required safety equipment are installed.
- 28.5.13.10 When exit protection is required, no work with on track equipment is permitted until the exit prevention derailleurs and associated shunt straps and red flags/lanterns are installed at the ends of the Actual Work Area.
- 28.5.14 Personnel Responding to Incident on Roadway:
- 28.5.14.1 Employees responding to incidents on the Roadway (malfunctioning train, interlocking out of correspondence, fire in tunnel, etc.) shall request permission from ROCC and notify ROCC the direction from which the incident is to be approached. Responders are responsible for using Individual Train Detection or Lookout/Watchman as a means of protection en-route to incident.
- 28.5.14.2 Employees shall approach the incident in a manner that ensures their safety in case service is restored and trains begin moving while personnel are en-route. Employees shall use catwalks or safety walks and, when responding to malfunctioning trains, approach on the track with the malfunctioning train.
- 28.5.14.3 Upon arriving at the scene, employees shall make positive contact with the Train Operator prior to starting work on or boarding the train.
- 28.5.14.4 Responders shall use Train Coordination or Foul Time to protect themselves while addressing the incident.
- Train Operators shall not move train without permission of mechanic when mechanic working on Roadway near train.
- 28.5.15 Working on WMATA property outside the Roadway (beyond the Intermediate Boundary Fence):



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- 28.5.15.1 Employees and contractors working on the safe, non-track side of the Intermediate boundary fence will be considered off the Roadway. Hand signaling to train operators is not required.
- 28.5.15.2 Employees conducting work on WMATA property and on the safe side of the Intermediate boundary fence shall notify ROCC when starting work. ROCC permission is not required.
- 28.5.15.3 Escorts shall accompany contractors whether working on the safe side or the track side of the Intermediate boundary fence.
- 28.5.15.4 Train operators shall use caution when approaching individuals on WMATA property, but will not be required to slow trains or sound horns if personnel are on the safe side of the Intermediate boundary fence.
- 28.5.15.5 Track inspection and wayside scheduled maintenance which occurs on the track, Roadway side of the Intermediate boundary fence will be conducted primarily between 10:00 am and 3:00 pm during manual mode train operations.
- 28.5.15.6 Personnel working on the track side of the Intermediate boundary fence are considered on the Roadway and are governed by all applicable rules in the MSRP.
- 28.5.15.7 Operators shall report any personnel on WMATA property (and on either side of the Intermediate boundary fence) who are not wearing proper PPE.
- 28.5.16 Establishment of Work Area in the Yard Car Wash Facility (except Branch Ave.):
 - 28.5.16.1 Securing car wash area and car, the supervisor in charge shall:
 - 28.5.16.1.1 Ensure that cars are in the proper position and that the correct car number is in the car wash.
 - 28.5.16.1.2 Ensure that a handbrake has been applied on at least one railcar.
 - 28.5.16.1.3 Turn off Battery Circuit Breakers and secure Battery Circuit Breaker Cover.
 - 28.5.16.1.4 1000 series cars, only turn off the battery output circuit breaker.
 - 28.5.16.1.5 4000 series cars, turn off battery circuit breaker.
 - 28.5.16.1.6 2/3/5/6000 series cars, turn off the battery circuit breaker and the outside light indicator circuit breaker.



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- 28.5.16.1.7 Via the radio, request that the tower de-energize the third rail in the car wash via red tag.
- 28.5.16.1.8 Upon being notified by the tower via the radio that the third rail has been de-energized, verify that the third rail power is down with a “HOT STICK”.
- 28.5.16.1.9 Verify with the tower via the radio that you have “HOT STICKED” the third rail power in the car wash and that it is de-energized at this time.
- 28.5.16.1.10 Connect the WSAD, third rail warning system.
- 28.5.16.1.11 De-energize ground switch circuit, verify green light is on.
- 28.5.16.1.12 Install a lock on the ground switch circuit.
- 28.5.16.1.13 Report back to your supervisor that the train in the carwash is secured.
- 28.5.16.1.14 Escort contract employees to car wash. Contract employees shall not leave car wash without escort.
- 28.5.16.1.15 The on-site supervisor or contractor escort must strictly enforce contractor’s compliance with staying within boundaries of work area.
- 28.5.16.2 Preparing Train for Service, the supervisor in charge shall:
 - 28.5.16.2.1 Ensure all personnel and equipment is clear of train and third rail.
 - 28.5.16.2.2 Remove lock from ground switch circuit and energize ground switch circuit.
 - 28.5.16.2.3 Energize Battery Circuit Breakers.
 - 28.5.16.2.4 Disconnect WSAD third rail warning devise.
 - 28.5.16.2.5 Via radio, request that the tower re-energize the third rail power in the car wash.
 - 28.5.16.2.6 Upon being notified by the tower via the radio that the third rail power has been energized in the carwash, verify using a “HOT STICK” that the third rail power in the carwash is energized.
 - 28.5.16.2.7 Via radio, notify the tower that the power has been restored in the carwash and was confirmed using a “HOT STICK”.
 - 28.5.16.2.8 Remove hand brake, key up the train, recharge brake pipe and check for brakes off and perform a manual door operation functional check to both cars. Follow all steps in SOP 34.4.3



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- 28.5.16.2.9 Notify tower via radio that the train is ready to be moved out of the car wash and contact your supervisor.
- 28.5.16.3 Alarm Activation Siren and Strobe Light During Car Wash Activities, the supervisor in charge shall:
- 28.5.16.3.1 Notify Tower and immediately respond to the car wash track to ensure all personnel are safe and no injuries have been sustained. If personnel have sustained injury, notify ROCC immediately.
- 28.5.16.3.2 Via the radio, inform the tower of your arrival and utilize a HOT STICK to verify the condition of the Third Rail.
- 28.5.16.3.3 If the third rail is energized, immediately suspend all exterior cleaning operations and notify ROCC, Tower and MOC Power.
- 28.5.16.3.4 If no voltage is present, ensure proper connection and operation of the WSAD device. Notify Tower that normal exterior cleaning operation will resume at this time. If the unit is found to be defective, tag it out of service and notify your supervisor immediately.
- 28.5.16.3.5 Test and verify the proper operation of a spare WSAD device and place it in operation. Notify Tower that normal Exterior Cleaning Operation will resume at this time.
- 28.5.16.4 Alarm Activation Siren Only During Car Wash Activities, the supervisor in charge shall:
- 28.5.16.4.1 Notify Tower and immediately respond to the car wash track to ensure all personnel are safe and no injuries have been sustained. If personnel have sustained injury, notify ROCC immediately.
- 28.5.16.4.2 Via the radio, inform the tower of your arrival and utilize a Hot Stick to verify the condition of the Third Rail. If the Hot Stick will not detect voltage, verify the level of voltage with a volt meter. If voltage is present, immediately suspend all exterior cleaning operations and notify ROCC, Tower and MOC Power.
- 28.5.16.4.3 If no voltage is present, ensure proper operation of the WSAD device. Notify Tower that normal Exterior Cleaning operation will resume at this time. If the unit is found to be defective, tag it out of service and notify your Supervisor immediately.
- 28.5.16.4.4 Test and verify the proper operation of a spare WSAD device and place it in operation. Notify Tower that normal exterior cleaning operation will resume at this time.
- 28.5.17 Removal of Third Rail Power and Establishment of a Work Area under a Remote Red Tag Outage for Branch Avenue Yard Carwash Facility only:



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- 28.5.17.1 This remote red tag outage applies to Branch Avenue WMATA Yard Carwash Facility only; where vehicles are washed by hand.
- 28.5.17.2 This remote red tag outage does not require car maintenance personnel (CMNT) to submit red tag outage request via GOTRS (General Orders – Track Rights System).
- 28.5.17.3 The supervisor in charge shall via the radio, request that the tower de-energize the third rail in the car wash via a remote red tag.
- 28.5.17.4 Third Rail power is de-energized and recorded by Yard Interlocking Operator under this remote red tag outage.
- 28.5.17.5 Remote indication confirms that TPSS carwash track breaker #32 is open.
- 28.5.17.6 The Yard TPSS carwash track breaker #32 is then tagged by Yard Interlocking Operator by turning and locking the tagging control switch to tag position.
- 28.5.17.7 Control power to the carwash breaker #32 is removed by the tagging relay.
- 28.5.17.8 Remote indication confirms that TPSS carwash track breaker #32 is tagged and control power to the breaker is removed.
- 28.5.17.9 Upon being notified by the tower via the radio that the third rail has been de-energized, CMNT personnel will verify with a working hot stick that the third rail power is down.
- 28.5.17.10 CMNT personnel will verify with the tower via the radio that you have “HOT STICKED” the third rail power in the carwash and that it is de-energized at this time.
- 28.5.17.11 CMNT personnel will verify that the running rail grounding green light is on.
- 28.5.17.12 CMNT personnel will manually open the ETS circuit. Disconnect switch located in carwash bldg.
- 28.5.17.13 CMNT & Contractor personnel will place lock out/Tag out device on the ETS circuit Disconnect switch box.



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- 28.5.17.14 The ETS Disconnect switch is interlock with the (ETS) Emergency Trip Switch circuit to breaker E-F99-32 located in Branch Ave Traction Power Sub-Station and provides additional safety measure controlled by the carwash facility personnel.
- 28.5.17.15 CMNT personnel will connect a third rail warning device (WSAD) on the third rail in the actual work area. The rail warning device shall be tested before being connected to the third rail. The third rail warning devices shall be positioned so that every member of the work crew will be able to see and hear the alarms.
- 28.5.17.16 Report back to your supervisor that the train in the carwash is secured.
- 28.5.18 Restoration of Third Rail Power and Establishment of a Work Area under a Remote Red Tag Outage for Branch Avenue Yard Carwash Facility only.
- 28.5.18.1 Ensure all personnel and equipment is clear of train and third rail.
- 28.5.18.2 CMNT personnel will disconnect the third rail warning device (WSAD).
- 28.5.18.3 CMNT & Contractor will remove locks from ETS circuit disconnect switch located in carwash bldg.
- 28.5.18.4 CMNT personnel will Close ETS circuit disconnect switch.
- 28.5.18.5 The supervisor in charge shall via the radio, request that the tower re-energize the third rail in the car wash.
- 28.5.18.6 Yard Interlocking Operator unlocks the remote tagging control switch and removes the tag from the Yard TPSS carwash breaker # 32.
- 28.5.18.7 Remote indication confirms that TPSS carwash track breaker #32 is normal.
- 28.5.18.8 Yard Interlocking Operation will close breaker #32.
- 28.5.18.9 Remote indication confirms that TPSS carwash track breaker #32 is closed and third rail is energized.
- 28.5.18.10 Upon being notified by the tower via the radio that the third rail power has been energized in the carwash, verify using a “HOT STICK” that the third rail power in the carwash is energized.



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28.5.18.11 CMNT personnel will verify that the running rail grounding green light is off.

28.5.18.12 Via radio, notify the tower that the power has been restored in the carwash and was confirmed using a “HOT STICK”.

28.5.18.13 Remove hand brake, key up the train, recharge brake pipe and check for brakes off and perform a manual door operation functional check to both cars. Follow all steps in SOP 34.4.3

28.5.19 Roadway Clarifications: D&G Platform, Alexandria Yard Platform, Shady Grove Yard Lead, Brentwood Yard:

28.5.19.1 D&G Platform (Picture 3 and 4) shall be considered Roadway at all times.



Picture 3 - D & G Platform facing Benning Road portal and Minnesota Avenue aerial structure.



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Picture 4 - D & G Platform, Track 1

28.5.19.2 Alexandria Yard Platform – the walkway to the Alexandria Platform stop will be protected by an Intermediate Boundary fence. Where constructed, it separates Metro property into Roadway and Non-Roadway territory. Individuals on the track side of the Intermediate boundary fence are considered “on” the Roadway; individuals on the non-track side of the Intermediate boundary fence are considered “off” the Roadway (pictured below).





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Employees shall have an approved Safety Vest and be Roadway trained in order to walk to and from the Alexandria Platform. Non-WMATA employees must be escorted with Roadway trained employee and have on a safety vest.

Employees and contractors walking on the safe, non-track side of the Intermediate boundary fence will be considered off the Roadway. Hand signaling to train operators is not required.

28.5.19.3 Shady Grove Yard Lead – Employees traveling to/from the Shady Grove facility from the Shady Grove terminal via the paved yard lead must be Roadway trained and have on a safety vest. Non-WMATA employees must be escorted with Roadway trained employee and have on a safety vest.

28.5.19.4 Brentwood Yard;

28.5.19.4.1 The inbound platform stop shall not be used by administrative personnel or Station Managers.

28.5.19.4.2 Due to the proximity to mainline and the dangers of high speed train operations, the following sections of Brentwood Yard shall be treated as mainline track:

28.5.19.4.2.1 From B99-38 signal to B99-64 signal along the receiving and dispatch tracks;

28.5.19.4.2.2 In between the receiving and dispatch track and the inbound mainline track from B99-38 signal back towards NY Ave;

28.5.19.4.2.3 Signs shown in Figure 4 shall be placed every 20 feet on the Roadway in the areas of Brentwood Yard defined as mainline track.



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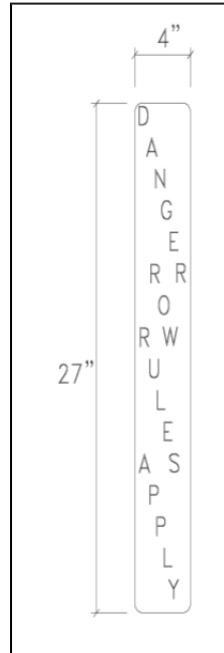


Figure 4

28.5.19.4.3 Personnel going Roadway for any reason in the areas of Brentwood Yard defined as mainline track (28.5.17.4.2) shall request permission from both the Brentwood Interlocking Operator and the ROCC Supervisor and be governed by all Roadway safety rules and procedures when personnel are on the Roadway (personnel request permission and be responsible for their own safety; train operators shall slow and sound their horns when sighting personnel in areas defined in section 28.5.17.4.2).

28.6 REFERENCES

28.6.1 SOPs # 2, # 19, # 23

28.6.2 Operating Rule 3.87

28.6.3 Safety Rules 4.1, 4.2, 4.163-4.199



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The following activities are the only exceptions to supervisory third rail power outage requirement for WMATA employees described in section 28.5.1.3:

1. Verifying third rail voltage testing devices, e.g., approved hot sticks and meters.
2. Establishing work area safety zones adjacent to the actual work area.
3. Walking and/or performing inspections on the Roadway.
4. Performing ATC switch maintenance and testing.
5. Performing ATC track circuit maintenance and testing.

The following activities are the only exceptions to red tag third rail power outage requirement for non-WMATA employees described in section 28.5.2.1:

1. Site verification and field measurements of rail flaws detected by ultrasonic rail flaw detection equipment – no power outage required; protection ensured by the WMATA Roadway Worker In Charge.
2. On-Call General Automatic Train Control and Trackwork Engineering Consultant Services – no power outage required; non-WMATA employee shall be RWP trained for contractors; protection ensured by the WMATA Roadway Worker in Charge.
3. Municipal Response Agencies (i.e. Fire Departments) - no power outage required; protection ensured by the WMATA Roadway Worker in Charge from the Office of Emergency Management (OEM).



Notice: The above are just examples. Departments should submit proposed activity exemption lists to the MSRPH Rule Book Committee for review.



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Appendix B to SOP 28

ROCC Coordination with Roadway Worker In-Charge

For Establishment of Work Zones

Protection Coordination	Inaccessible Track	Individual Train Detection	Exclusive Track Occupancy	Train Approach / Watchman-Lookout	Foul Time
Verify Shunt	R	NA	O	O	NA
Work Limits in GOTRS	R	NA	O	O	NA
Prohibit Exits	R	O	R	R	R
Speed Restriction Adjacent Track	O	NA	O	O	NA
Physical Barrier (i.e. Derailers / Switches Blocked/Clamped)	R	NA	NA	NA	NA
PPE	R	R	R	R	R
WSADS	R	NA	O	NA	NA
ROCC Notification/Pre-Fouling Briefing	R	R	R	R	R
Drop Circuits	NA	NA	O	NA	NA
Drop Signals	NA	NA	O	NA	NA
Announcements	NA	NA	R	R	R
Stop Train Movement	NA	NA	NA	NA	R

R = Required
O = Optional
NA = Not Applicable



Notice: All Rail ROCC Supervisors shall place the Human Form Indication as well as the Blocked Track Indication on the AIM screen at all fixed work locations.



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Appendix C to SOP 28 Example of Safety Briefing Form

Date: December 10, 2008	Time: 10:00 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	Line/Division: Red Line- Shady
Work Location/Track Number(s)/Chain Markers: Shady Grove to White Flint Track #1 A1-905+50-A1-600+00	Description of Work Assignment: Track Inspection	
	<input checked="" type="checkbox"/> Safety rule read pertaining to job? <hr/> Safety rule number(s) read? 4.164	
Name of employee(s) providing on-track protection: Troy Lloyd		
Department: Track	Qualifications: <input type="checkbox"/> Supervisor <input type="checkbox"/> Leadman <input type="checkbox"/> Escort <input checked="" type="checkbox"/> Track Walker	
What form of on-track protection will be used: <i>(Check all that apply)</i>		
<input type="checkbox"/> Track Out of Service Which Track is Out of Service? <input type="checkbox"/> #1 <input type="checkbox"/> #2 <input type="checkbox"/> #3		
<input checked="" type="checkbox"/> Watchman/Flagman <input type="checkbox"/> Shunt Strap(s) <input type="checkbox"/> ATP Slow Speed Couplers (Inspection duties only)		
<input type="checkbox"/> Insertion of Switch Crank <input type="checkbox"/> Local Control of Interlocking		
<input type="checkbox"/> Yes <input type="checkbox"/> No If performing Roadway maintenance work during revenue hours, is there a physical barrier such as a wall or SSRM approved barrier between you and your work area on the adjacent track(s)? If not,		
How are the adjacent track(s) protected? <input type="checkbox"/> Physical Barrier <input type="checkbox"/> Shunt(s) <input type="checkbox"/> ATP Slow Speed Couplers		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Have you discussed a safe clearing location for the passing of trains and work equipment?		
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Will the use of cranes, booms or other type equipment be utilized during revenue hours that could encroach on the dynamic outline of a passing train? If so,		



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<input type="checkbox"/> Yes <input type="checkbox"/> No Do you have flagmen assigned to each side of the work area?		
<input type="checkbox"/> Yes <input type="checkbox"/> No Do you have an employee with a radio exclusively assigned to monitor crane operations?		
If performing on-track inspection duties only, which track are you inspecting? <input checked="" type="checkbox"/> #1 <input type="checkbox"/> #2 <input type="checkbox"/> #3 What are the location(s) that you will be inspecting? Shady Grove to White Flint, including interlockings. (Employees should discuss their on-track safety procedures, watchman duties and proper PPE)		
What type of power outage is being utilized? <input type="checkbox"/> Supervisory <input type="checkbox"/> Red Tag Number _____ <input checked="" type="checkbox"/> No Power Outage Have the negative reference cables been disconnected and temporarily reconnected? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	What about your on-track safety equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No Is your WSAD in place? <input type="checkbox"/> Yes <input type="checkbox"/> No Shunts and red lanterns in place? <input type="checkbox"/> Yes <input type="checkbox"/> No Work mats in place? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Personnel have all required PPE?	
<input type="checkbox"/> If working around on track machinery and equipment, the operators must discuss the dangers of the equipment, minimum spacing between equipment and safe working speeds.		
<input type="checkbox"/> Are there other departments involved in this work assignment? If so, discuss their involvement.		
<input type="checkbox"/> Does anyone have any questions or concerns? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, have they been addressed to everyone's satisfaction? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
<i>Employees must sign the "On-Track" safety briefing sheet at the job site! (List or sign-in optional)</i>		



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Appendix D to SOP 28

Under a confirmed Supervisor Outage, momentary contact with 3rd rail components is authorized if the following conditions are met:

1. There is an operational necessity or safety situation where passengers or employees are either placed in danger or a major service disruption may occur.
2. The 3rd rail supervisory outage has been requested by a qualified RWIC with a confirmed working hotstick. Hotstick must be tested on energized rail prior to usage to assure it is working properly.
3. The crew/person making the momentary contact is equipped and in possession of the following:
 - a. WMATA SAFE Approved Insulated Gloves
 - b. Insulated/Non-Conductive Tools
 - c. WMATA SAFE Approved Safety Glasses
 - d. All other required WMATA SAFE Approved PPE for roadway access
4. The RWIC is given confirmation by line, track and chain marker by ROCC that the 3rd rail power has been de-energized by a supervisory outage.
5. The RWIC has confirmed by line, track and chain marker to ROCC that 3rd rail power is out in the area that is to be momentarily contacted and the outage has been verified by a confirmed working hotstick.
6. The RWIC shall confirm with the ROCC Control Center Supervisor that it is safe to restore power by line, track and chain marker prior to restoring power to third rail.

Momentary contact shall be defined as no more than 1-3 seconds of time necessary to strike an object to remove it from contact with other 3rd rail components or to strike a 3rd rail component to return it to proper position.

Work authorized for momentary contact with the 3rd rail under a supervisor outage shall be limited to the following:

1. Striking an insulator with an insulated hammer to remove it.
2. Striking or hitting a coverboard to remove it from interfering with the safe passage of trains.
3. Striking or hitting a section of 3rd rail to return it to alignment to return to safe operations.

To clearly define limits, the following activities **CANNOT** be completed under a Supervisor Outage:

1. Installation of 3rd rail clamps due to a 3rd rail break.
2. Installation of any insulator component.
3. The cutting, grinding or tightening of 3rd rail anchors.



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4. The removal or cutting of 3rd rail 1000 MCM cable or any cable connected to the 3rd rail.
5. The installation of any coverboard or coverboard bracket.



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SOP #39 LOCKOUT/TAGOUT PROCEDURE FOR TRACTION POWER SUBSTATIONS

39.1 PURPOSE

The purpose of this procedure is to ensure consistency and establish guidelines for WMATA and contractor personnel to use in coordinating and executing the steps of this Lockout/Tagout (LOTO) procedure, in order to provide a safe work environment and to provide safeguards against accidental or unexpected activation of traction power substation electrical equipment, related circuits and tie breaker station.

39.2 SCOPE

This document establishes requirements for the use of a Lockout/Tagout (LOTO) procedure, for all WMATA employees and contractors, desiring to perform work on the wayside in the area controlled by a traction power substation that is occupied by personnel also performing work within the substation. This document also requires the use of existing Lockout/Tagout (LOTO) procedure outlined in OAP 200-2, Policy/Procedure # 16, by personnel performing work on the high voltage traction power equipment and low voltage AC and DC equipment within the traction power substation and tie breaker room.

39.3 DEFINITIONS

39.3.1 Clearance Report: A report made by the personnel participating in the LOTO, who will inform the power coordinator that all personnel and equipment are clear of the work area.

39.3.2 Contractor : A person or business entity that is hired by WMATA to perform work, but is not an employee of WMATA.

39.3.3 Inspection Report: A report resulting from the inspection of the wayside when a LOTO key holder and/or piggy backer is absent during restoration and/or a piggy backer failing to make a clearance report at the scheduled stop time. The report is made by the Power Coordinator who advises ROCC and MOC of the results of the inspections, status of personnel, equipment, and work area.

39.3.4 Lockout/Tagout Procedure: A procedure involving the practice of using tags to increase the visibility and awareness that equipment is not to be energized and using keyed security devices to prevent accidental or unexpected activation of electrical equipment.



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- 39.3.5 Piggyback: A term used to describe the procedure which allows additional work gangs to work in the work area of a person holding rights to the work area under a third rail power red tag outage, supervisory outage or no power outage.
- 39.3.6 Power Coordinator: A qualified WMATA employee responsible for executing LOTO procedures.
- 39.3.7 Roadway Worker in Charge (RWIC): A qualified employee responsible for the Roadway safety for all workers and work gangs within their working limits.
- 39.3.8 Tie Breaker Station: The facility which houses DC track feeder breakers.
- 39.3.9 Traction Power Substation (TPSS): The facility which transforms and rectifies local utility high voltage alternating current to 750 Volts Direct Current (VDC).

39.4 RESPONSIBILITIES

- 39.4.1 Supervisors and managers are responsible for:
 - 39.4.1.1 Familiarization and compliance with the guidelines established in OAP 200-2- P/P # 16, SOP # 28, SOP # 41, MSRPH and other applicable rules and procedures.
 - 39.4.1.2 Ensuring assigned personnel are properly trained in accordance with the requirements set forth in this procedure.
 - 39.4.1.3 Enforcement of LOTO procedure, applicable publications, policies and procedures.
 - 39.4.1.4 Maintaining current copies of this procedure and other associated policies and procedures, at work sites, field offices, reporting locations and other designated locations.
 - 39.4.1.5 Ensuring assigned personnel are adequately equipped with the tools, equipment, materials and instructions required to execute this procedure in the proper and safest manner possible.
 - 39.4.1.6 Approving and disapproving piggyback requests for scheduled and unscheduled maintenance activities.



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- 39.4.1.7 Providing WMATA and contractor personnel assigned to perform LOTO duties, with copies of approved piggyback request forms, red tag outage switching orders and track rights and support request form if required.
- 39.4.2 WMATA and contractor personnel assigned LOTO duties are responsible for:
 - 39.4.2.1 Familiarization and compliance with the guidelines established in OAP 200-2-P/P # 16, SOP # 28, SOP # 41, MSRPH and other applicable rules and procedures.
 - 39.4.2.2 Ensuring the steps of this procedure are executed in a safe and expedient manner, while keeping in compliance with all related SOPs, OAPs, and MSRPH rules associated with performing LOTO duties.
 - 39.4.2.3 Enforcement of LOTO procedure and other applicable WMATA publications, policies and procedures.
 - 39.4.2.4 Ensuring each member of the WMATA and Contractor workforces has a valid ID card, and that contractor ID cards include a Traction Power Substation Equipment Safety Training Certification Label.
 - 39.4.2.5 Red tag outage switching orders, rail support request and track rights form if required and other required documents.
 - 39.4.2.6 Providing privately owned pad locks with keys for securing the group lockbox.
 - 39.4.2.7 Not leaving the area with keys, when privately owned pad locks are installed on the LOTO group Lockbox.
 - 39.4.2.8 Ensuring all initial and alternate key holders complete the process for turning over the key holding responsibilities in the event the initial key holders must leave the area or the work continues through a shift change.
- 39.4.3 The TSSM Power Coordinator is responsible for:
 - 39.4.3.1 Completing the LOTO Clearance and Inspection Checklist and documenting all other activities resulting from the execution, implementation, and enforcement and reporting of the LOTO procedures, Piggyback procedures, red tag procedures and other related activities.
 - 39.4.3.2 Ensuring all documentation provided for tracking and logging the LOTO activities, is completed, signed, filed in the designated site binder and submitted daily to other locations as required.



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- 39.4.4 The Roadway Worker in Charge (RWIC) is responsible for:
- 39.4.4.1 Coordination of de-energization and restoration of power with the Power Coordinator.
 - 39.4.4.2 Making three attempts, using any means of communications available, to contact an absent key holder, when he/she cannot be contacted for the removal of a privately owned pad lock for LOTO restoration procedures.
 - 39.4.4.3 Making three attempts, using any means of communications available, to contact the responsible piggybacker when a clearance report has not been provided or he/she cannot be contacted at the scheduled stop time.
 - 39.4.4.4 Inspection of the work area performed when the responsible piggybacker has not provided a clearance report or cannot be contacted at the scheduled stop time.
 - 39.4.4.5 Reporting the results of the inspection to ROCC/MOC, advising that he/she will cut the privately owned pad lock installed on the group lock box.
- 39.4.5 ROCC/MOC are responsible for:
- 39.4.5.1 Familiarization and compliance with the guidelines set forth in this procedure.
 - 39.4.5.2 Familiarization and compliance with the guidelines established in OAP 200-2-P/P # 16, SOP # 28, SOP # 41, MSRPH and other applicable rules and procedures.
 - 39.4.5.3 Monitoring, and documenting the activities resulting from the execution, implementation, verification and reporting of the LOTO procedures, piggyback procedures, red tag procedures and other related activities.
 - 39.4.5.4 Verification of LOTO procedures through RWIC.
 - 39.4.5.5 Possessing information on track rights and request forms, red tag outage switching orders and other required documents.
 - 39.4.5.6 Providing authorization to the TSSM Power Coordinator after completion of the inspection of the work area, to complete the LOTO restoration procedure and/or restore third rail power in accordance with OAP 200-2, PP # 16, SOP # 28, when the responsible piggybacker has not provided a clearance report or cannot be contacted at the scheduled stop time.



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39.5 PROCEDURES

Procedure #	Content
39.5.1	Lockout/Tagout De-Energization Procedures
39.5.2	Lockout/Tagout Restoration Procedures

39.5.1 Lockout/Tagout De-Energization Procedures:

39.5.1.1 All WMATA and Contractor personnel involved in the LOTO procedure shall perform all steps of this procedure, in a safe manner.

39.5.1.2 The TSSM Power Coordinator shall coordinate and ensure all steps are properly and safely executed:

39.5.1.2.1 Verify proper operation of telephones and hand held radios with ROCC and MOC.

39.5.1.2.2 Obtain copies of the LOTO De-Energization Procedure Checklist, power switching orders, support request and track rights form if required and approved piggyback request form and other required documentation.

39.5.1.2.3 Verify with the piggyback crew leader that the chain markers of the work area are correct.

39.5.1.2.4 Inventory and verify that the tools and equipment required for the LOTO and red tag power outage activities are present.

39.5.1.2.5 Verify that all personnel scheduled to participate in the LOTO activities are present at the affected traction power substation.

39.5.1.2.6 Using the copy of the red tag switching orders, identify the circuit breakers to be locked out and tagged out.

39.5.1.2.7 Using the Substation drawings, locate, de-energize and tag out the circuit breaker that provides 125 or 135 VDC control power for the affected traction power circuit breakers.

39.5.1.2.8 Inspect all circuit breaker cubicles scheduled to be locked and tagged out and verify that it is safe to install the lock out devices and pad locks.

39.5.1.2.9 Install the lock out devices, pad locks and tag out tags on the breaker cubicles in a safe manner.



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- 39.5.1.2.10 Perform an inspection and verify the security of the lock out devices, pad locks and that no debris or other existing objects are in the cubicle.
- 39.5.1.2.11 Collect and place the breaker cubicle keys for the high security pad locks installed on the lock out devices, on the breaker cubicles, inside the “Key Lock Box”.
- 39.5.1.2.12 Place the Key Lock Box containing the padlock keys, into the “Group Lock Box”.
- 39.5.1.2.13 Ensure all privately owned pad locks used by the LOTO participants, are installed on the “Group Lock Box”.
- 39.5.1.2.14 Instruct RWIC to contact ROCC to request permission to go wayside to test the affected third rail sections for de-energization, in accordance with OAP 200-2, P/P #16, SOP # 28 and SOP # 41.
- 39.5.1.2.15 Instruct the RWIC to contact ROCC and confirm the affected third rail sections have been tested and confirmed de-energized and request permission to install the protective equipment if not already installed.
- 39.5.1.2.16 Instruct the RWIC to install or verify and confirm to ROCC, that protective equipment have been properly installed in the work area in accordance with the approved chain markers, SOP # 28 and SOP # 41.
- 39.5.1.2.17 Ensure that all LOTO participants, sign the LOTO log book listing their name, phone numbers, supervisor’s name, supervisor’s phone number, the number of the assigned pad lock installed on the Group Lock Box, expected time of departure, and make a check mark indicating the witnessing of the LOTO procedure.
- 39.5.1.2.18 Inform all personnel holding keys to the privately owned pad locks on the group lock box that all locks will have to be removed when the piggyback rights holder has completed the work and cleared the work area and that any key holder not present or cannot be contacted at that time, will have their locks cut and removed from the group lock box in accordance with the guidelines set forth in this procedure.



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- 39.5.1.2.19 Inform all key holders that in the event the initial key holders must leave the area or the work continue through a shift change, the group lock box key shall be given to an alternate key holder. The original key holder shall document the LOTO log listing the name of the alternate key holder and time of departure. The new key holder shall also sign the LOTO log book listing the time and name of the person from which he received the group lock box pad lock key, his/her name, phone numbers, supervisor's, name, supervisor's phone number, the number of the assigned pad lock installed on the Group Lock Box and expected time of departure.
- 39.5.1.2.20 Shall notify ROCC/MOC and any other authorities, that the LOTO De-Energization procedures have been completed.
- 39.5.1.2.21 Shall complete the LOTO De-Energization procedure checklist and ensure all other related paper work has been properly documented, signed and filed in the site binder.
- 39.5.2 Lockout/Tagout Restoration Procedures:
 - 39.5.2.1 The TSSM Power Coordinator shall:
 - 39.5.2.1.1 Ensure the RWIC or designee is instructed to confirm with ROCC/MOC, following the clearance and inspection of the work area that all personnel and equipment are clear of the work area, protective equipment removed and the work area inspected for re-energization.
 - 39.5.2.1.2 Obtain copies of the LOTO Restoration Procedure Checklist, Switching orders, support request and track rights form, LOTO log book and prepare to begin the restoration procedures.
 - 39.5.2.1.3 Inventory and verify that the tools and equipment required for the LOTO and red tag power restoration activities are present.
 - 39.5.2.1.4 Verify that all personnel required are to participate in the LOTO restoration procedures are present at the affected traction power substation and tie breaker room.
 - 39.5.2.1.5 Determine if any personnel holding keys for the locks on the group lock box are absent or have not made a clearance report at the schedule stop time.



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- 39.5.2.1.6 If key holder(s) are absent, make three attempts, using any means of communications available, to contact the absent key holder(s). If no response is received, instruct RWIC to perform an inspection of the wayside in an attempt to locate missing key holder(s) and to determine the status of the work area.
- 39.5.2.1.7 Upon completion of the inspection of the work area, if absent key holder(s) still cannot be located and/or if equipment was found in the work area:
 - 39.5.2.1.7.1 Advise RWIC to clear any tools and equipment and re-inspect the work area for re-energization of third rail power.
 - 39.5.2.1.7.2 Cut and remove a privately owned pad lock from the group lock box.
 - 39.5.2.1.7.3 Complete the LOTO restoration procedure and/or;
 - 39.5.2.1.7.4 Restore third rail power in accordance with OAP 200-2, PP # 16, SOP # 28 and SOP # 41 if required.
- 39.5.2.1.8 If the absent personnel were located, contact ROCC/MOC, and;
 - 39.5.2.1.8.1 Complete the LOTO restoration procedure and/or;
 - 39.5.2.1.8.2 Restore third rail power in accordance with OAP 200-2, PP # 16, SOP # 28 and SOP # 41 if required.
- 39.5.2.1.9 When permission is granted, cut the pad lock and complete the LOTO Clearance and Inspection checklist documenting the activities resulting from the inspection.
- 39.5.2.1.10 Instruct all personnel holding keys for pad locks installed on the group lock box, to remove their pad locks and document the LOTO log book as required.
- 39.5.2.1.11 Using the copy of the switching orders, identify the correct breakers cubicles and remove the lock out devices and pad locks in a safe manner.
- 39.5.2.1.12 Upon completion of the removal of the pad locks, lock out devices and the tagout tags, perform an inspection and verify that no debris or other objects are remaining in the breaker cubicles.



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- 39.5.2.1.13 Release the red tag to ROCC/MOC for restoration of third rail power in accordance with OAP 200-2 P/P # 16 and SOP # 28.
- 39.5.2.1.14 Notify ROCC/MOC when third rail power restoration activities have been completed.
- 39.5.2.1.15 Inventory and secure all LOTO equipment.
- 39.5.2.1.16 Ensure the LOTO Restoration procedure checklist and other related paper work has been properly documented, signed and filed in the site binder.

39.6 REFERENCES

- 39.6.1 OAP 200-2 – Maintenance Operation Center Policy Procedure # 16 – Electrical Power Outage/Restoration.
- 39.6.2 SOP # 28 - Removal and restoration of third rail power for work by WMATA maintenance forces mainline revenue system.
- 39.6.3 SOP # 41 – WMATA Escorts
- 39.6.4 Lockout Tagout De-energization Procedure Checklist
- 39.6.5 Lockout Tagout Restoration Procedure Checklist
- 39.6.6 Lockout/Tagout (LOTO) Procedure Log Book Form
- 39.6.7 Lockout/Tagout Clearance and Inspection Report Checklist
- 39.6.8 TRAINING AND CERTIFICATION

WMATA and Contractor management and supervisory personnel shall develop and execute training programs that will provide employees with the knowledge and skills necessary to safely and effectively perform the steps of the Lockout/Tagout Procedure. These training programs at a minimum shall include but is not limited to, conducting reading sessions, question and answering session and signing a statement of understanding of the Lockout/Tagout procedure. This training is applicable to WMATA, Contractor and other personnel required to perform LOTO duties, individuals responsible for supervising and managing such activities and personnel that request such activities.



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39.6.9 TOOLS AND EQUIPMENT

The tools and equipment required for performing LOTO duties may include but are not limited to:

- All required
- PPE Portable radio
- Approved third rail voltage tester (Hot Stick) Bolt Cutters
- Multimeter
- Flashlight
- High Security Pad Locks
- Privately Owned Pad Locks
- Circuit Breaker Cubicle Lock Out Device
- Tagout Tags
- Block Tags
- Pad lock labeling kit
- LOTO Site Binder
- LOTO De-energization Procedure Checklist
- LOTO Restoration Procedure Checklist
- Key Lock Box
- Group Lock Box



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SOP # 41 WMATA ESCORT PROCEDURES FOR NON-ROADWAY

41.1 PURPOSE

The purpose of these procedures is to ensure consistency and to establish guidelines for WMATA personnel to use in coordinating and executing escort duties in order to provide safe work areas for WMATA employees and contractors. These procedures shall be accomplished with the guidelines outlined in these procedures, in accordance with SOP 28, MSRPH, and other related rules and procedures.

41.2 SCOPE

41.2.1 These procedures are applicable to WMATA personnel certified and required to perform escort duties, individuals responsible for supervising and managing such activities, and personnel that request such activities while working on the revenue system in Non-Roadway work areas.

41.2.2 This SOP does not apply to personnel working in the Roadway. Procedures requiring escort into Roadway areas shall be referred to the Roadway Worker Protection Manual (RWPM).

41.3 DEFINITIONS

Escort: A WMATA employee responsible for the safe movement of personnel through and to Non-Roadway work areas and facilities, and must comply with all WMATA policies and procedures.

41.4 RESPONSIBILITIES

41.4.1 Supervisors and Managers are Responsible for:

41.4.1.1 Familiarization and compliance with the guidelines set forth in this procedure.

41.4.1.2 Familiarization and compliance with the guidelines established in SOP # 28, MSRPH, and other applicable rules and procedures.

41.4.1.3 Ensuring that assigned personnel have been properly trained and certified in accordance with Escort Training Program requirements.

41.4.1.4 Enforcement of escort procedures and applicable publications, policies and procedures.

41.4.1.5 Coordinating escort requirements.



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- 41.4.1.6 Ensuring that personnel are adequately equipped with the tools, equipment, materials and instructions required to carry out the steps of this procedure.
- 41.4.1.7 Ensuring that a Non-Roadway and Facilities Escort Information Sheet is completed, and provided to the escort, MOC, ROCC, and personnel required having knowledge of it.
- 41.4.1.8 Ensuring escort equipment is pre-positioned at scheduled work locations are made available to the escort in advance of schedule escort activities.
- 41.4.1.9 Ensuring the requirements of this procedure is executed properly and in the safest manner possible.
- 41.4.2 Personnel assigned escort duties are responsible for:
 - 41.4.2.1 Familiarization and compliance with the guidelines set forth in this procedure.
 - 41.4.2.2 Familiarization and compliance with the guidelines established in SOP # 28, MSRPH and other applicable rules and procedures.
 - 41.4.2.3 Ensure each member of the WMATA and Contractor workforce has a valid ID card.
 - 41.4.2.4 Briefing personnel of the work crew on applicable WMATA safety rules/procedures, and any restrictions on the work area as specified by the power outage or General Orders and Track Rights System (GOTRS).
 - 41.4.2.5 Remaining at the work site and advising MOC and ROCC of any change in the assigned escort.
 - 41.4.2.6 Remaining at the work site monitoring work crews to ensure safety of the work area.
 - 41.4.2.7 Preparing and submitting completed and signed copies of the Non-Roadway and Facilities Escort checklist to the supervisor, management and other personnel as directed.
 - 41.4.2.8 Ensuring the steps of this procedure is executed in a safe and expedient manner while keeping in compliance with all applicable OAPs and the MSRPH.



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41.4.2.9 If a work activity requires a System Safety Work Plan (SSWP), a copy shall be given to the escort prior to the work being performed.

41.5 PROCEDURES

Procedure #	Content
41.5.1	Non-Roadway and Facilities Escort Procedures

41.5.1 Non-Roadway and Facilities Escort Procedures:

Escorts shall implement the following procedures for installing protective equipment, assisting with a low voltage power outage, performing safety inspections and monitoring WMATA and contractor personnel while working in facilities and/or in other Non-Roadway areas on the mainline revenue system. Escorts shall:

- 41.5.1.1 Report to the scheduled escort location not less than 1/2 hour before the scheduled work time and report presence, arrival time and purpose to MOC.
- 41.5.1.2 Give a detailed description of the work to be performed to MOC, including the facilities in which the work is scheduled to be performed and whether a low voltage power outage is scheduled for the work.
- 41.5.1.3 Inventory and test all required equipment and other items required for the escort activities in accordance with sections 5, 6 and 7.
- 41.5.1.4 Prior to the scheduled start time or at the scheduled meeting time, meet the WMATA maintenance personnel or contractor personnel at the designated meeting location. Advise the personnel of the activities that must take place before work is permitted to begin. Instruct personnel to remain clear of facilities/work areas and wait in a designated area until such time the facility/work area has been inspected and/or protected and permission to enter has been granted by ROCC and/or MOC. In addition, the briefing should include but is not limited to the following items. WMATA and contractor personnel shall:
 - 41.5.1.4.1 Comply with applicable safety rules while working in WMATA facilities and other Non-Roadway work areas.
 - 41.5.1.4.2 Wear the approved PPE at all times.
 - 41.5.1.4.3 Check with the escort before leaving the work area.



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- 41.5.1.4.4 Use the route designated by the escort when entering and leaving the Non-Roadway work area.
- 41.5.1.4.5 Only work on the equipment for which authorization has been approved. Tampering with any equipment is prohibited.
- 41.5.1.5 When preparing a work area where no power outage is required, the escort shall:
- 41.5.1.5.1 Request permission to enter the facility or work area to install safety equipment, if required, and begin work.
- 41.5.1.5.2 If required, install safety equipment in accordance with the Non-Roadway and Facilities Escort Information Sheet and or applicable procedures or instructions by MOC/ROCC. This safety equipment may include but is not limited to:
- Orange safety cones
 - Work lights
 - Orange safety netting/fencing
 - Yellow safety tape
 - Wet floor safety cones
 - Work signs (do not open; do not remove; out of service; etc...).
 - Lanterns
- 41.5.1.5.3 If required, perform visual safety inspections of tools and equipment being used. These safety inspections of equipment may include but is not limited to inspections of:
- Step ladders
 - Extension ladders
 - Scaffolds
 - Secured chains
 - Secured ropes
 - Extension cords
 - Locks
 - Mounts, brackets and other hardware
- 41.5.1.5.4 When the safety equipment installations and equipment and tool inspections have been completed, confirm to MOC/ROCC that the required safety equipment is installed and equipment inspections complete. Request permission to begin work.



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- 41.5.1.6.6 If required, perform safety inspections of tools and equipment being used. These safety inspections of equipment may include but is not limited to inspections of:
- Step ladders
 - Extension ladders
 - Scaffolds
 - Secured chains
 - Secured ropes
 - Extension cords
 - Locks
 - Mounts, brackets and other hardware
- 41.5.1.6.7 When the safety equipment installations and equipment and tool inspections have been completed, confirm to MOC/ROCC that the required safety equipment is installed and equipment inspections complete. Request permission to begin work.
- 41.5.1.6.8 In the event an emergency or a requirement to clear the facility or work area occurs, WMATA and contractor personnel and equipment shall be clear of the facility and/or work area, and shall remain clear until such time that the protective equipment has been re-installed and re-entry to the facility or work area has been authorized by MOC/ROCC and the escort.
- 41.5.1.6.9 In the event the initial escort must leave the facility or work area or the work continues through a shift change, advise MOC/ROCC of the new escort name and call number in accordance with SOP # 28.
- 41.5.1.7 When permission is granted for the new or replacement escort, perform a safety inspection of the facility/work area. The safety inspection may include but is not limited to the following checks:
- 41.5.1.7.1 Ensure door locks are operational;
 - 41.5.1.7.2 Ensure lights are operational;
 - 41.5.1.7.3 Ensure telephone is operational;
 - 41.5.1.7.4 Ensure radio is operational in facility/work area;
 - 41.5.1.7.5 Ensure floor and stairs are free of water and oil;
 - 41.5.1.7.6 Ensure loose and hanging objects are corrected;



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41.5.1.7.7 Ensure adequate ventilation and ensure fans and other devices that produce loud damaging noises are disabled.

41.5.1.8 Restoration Procedures:

41.5.1.8.1 Escorts shall implement the following procedures for removing protective equipment, removing and securing safety equipment and tools, assisting with the restoration of low voltage power outages, performing safety inspections of work areas to ensure they are returned to normal or modified configurations.

41.5.1.8.2 Prior to, or, at the scheduled work stop time, direct the WMATA or contractor crew member in charge of the work to remove all equipment and personnel from the facility or work area.

41.5.1.8.3 Contact ROCC/MOC. Advise that the WMATA or contractor personnel and equipment are clear of the facility and/or work area, that the work area will be disassembled, the protective equipment removed and the facility /work area inspected.

41.5.1.8.4 Inventory all work tools, equipment and protective equipment remaining at the work site. Ensure equipment is in their designated locations and properly and safely secured.

41.5.1.8.5 Contact ROCC/MOC and advise that all protective equipment have been removed, work tools and equipment secured and the facility/work area inspected. Advise that the low voltage tag can be cleared.

41.5.1.8.6 Complete the Non-Roadway and Facilities Escort Checklist and fax to immediate supervisor and other locations as directed.

41.6 REFERENCES

41.6.1 OAP 200-2, P/P # 16

41.6.2 SOP # 28



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SOP #49 DESIGNATION OF QUALIFIED TBS & TPSS AS “SPECIAL CONSTRUCTION SITES”

49.1 PURPOSE

The purpose of this Standard Operating Procedure is to designate Tie Breaker Stations (TBS) and Traction Power Sub Stations (TPSS), which meet all criteria listed below, as “Special Construction Sites”. This SOP also provides contractor access to TBSs and TPSSs deemed “Special Construction Sites”, without a Level 4 Escort.

49.2 SCOPE

- 49.2.1 This SOP is valid only during periods where the TBS and the TPSS are taken completely out of service, utility feeders and track feeders are disconnected, and equipment is de-energized.
- 49.2.2 This SOP requires contractors to be accompanied by a WMATA employee at all times while working in TBSs and TPSSs.
- 49.2.3 This SOP applies to contractors working in TBSs and TPSSs with a contractor representative on site who has successfully completed “OSHA 30 Hour Construction Industry Procedure” training.
- 49.2.4 This SOP applies only to TBSs and TPSSs which are non-Roadway accessible.
- 49.2.5 This SOP applies to Roadway accessible TBSs and TPSSs only with prior written approval from SAFE.

49.3 DEFINITIONS

- 49.3.1 Roadway: Any location where Roadway Worker Protection is required. For a complete definition of Roadway, refer to the MSRPH.
- 49.3.2 Special Construction Site: TBSs and TPSSs which meet all criteria of this SOP are to be considered “Special Construction Sites.” TBSs, TPSSs, and their respective accesses that are declared “Special Construction Sites” will be considered non-Roadway.
- 49.3.3 Tiebreaker Station (TBS): The facility containing track feeder breakers to connect or disconnect gapped sections of third rails via a DC bus. This facility does not transform or rectify utility high voltage but connects third rails together via the bus.



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49.3.4 Traction Power Substation (TPSS): The facility which transforms and rectifies local utility high voltage alternating current to 750 Volts Direct Current (VDC).

49.3.5 Utility: Local company which supplies power to room/equipment.

49.4 RESPONSIBILITIES

49.4.1 CENI is responsible for:

- 49.4.1.1 Ensuring each location has an approved SSWP routed to all affected departments per OAP 200-33.
- 49.4.1.2 Request and confirm electrical isolation of facilities from MOC.
- 49.4.1.3 Ensuring contractors have properly trained personnel on-site.
- 49.4.1.4 Maintaining possession of the Red Tag issued by TAMC.
- 49.4.1.5 Holding a restoration meeting upon completion of work with SMNT, the contractor, and TAMC.
- 49.4.1.6 Attending Shutdown or Single Tracking meetings when "Special Construction Sites" are within the limits of Single Tracking or Shutdowns.
- 49.4.1.7 Completion of site assessment and plan to determine location of special markings or barriers to separate Metro property into roadway and non-roadway territory. Determination of non-Roadway territory requires approval by SAFE.
- 49.4.1.8 Providing, installing, and removing, upon completion, special markings and or barriers per site assessment plan.
- 49.4.1.9 When it is required, providing basic electrical safety briefing related to TBS and/or TPSS.

49.4.2 When a TBS/TPSS is declared as a "Special Construction Site," a Level 2 Escort or Inspector is responsible for:

- 49.4.2.1 Following all requirements pertaining to this SOP.
- 49.4.2.2 Receiving basic electrical safety briefing related to TBS and/or TPSS by PWR CENI, if their regular duties are not related to work within TBS or TPSS.



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- 49.4.2.3 Providing a Safety Briefing to contractors prior to entering a TBS or TPSS.
 - 49.4.2.4 Calling MOC at (202) 962-1530 upon entry and upon exit of the TPSS and TBS.
 - 49.4.2.5 Calling MOC at (202) 962-1530 in cases of emergency.
 - 49.4.2.6 Calling Mobile Command or the RWIC upon entry and exit of a "Special Construction Site" when it falls within Shutdown or Single Tracking limits.
 - 49.4.2.7 Ensuring contractors receive a safety briefing at the designated entry point when a "Special Construction Site" is within the limits of a Shutdown or Single Tracking.
- 49.4.3 SMNT is responsible for:
- 49.4.3.1 Removal and insulating track feeder cables from third rail and equipment in the event the contractor is not required to perform this work.
 - 49.4.3.2 Providing and installing cables to jumper third rails in the event the contractor is not required to perform this work.
 - 49.4.3.3 Re-configuration of ETS for proper functionality while facility is being bypassed.
- 49.4.4 MOC is responsible for:
- 49.4.4.1 Coordinating and confirming with the Utility to de-energize both incoming feeder cables.
 - 49.4.4.2 Coordinating and confirming with the Utility for removal of all incoming feeder cables from equipment and grounding.
 - 49.4.4.3 Receiving notification from Level 2 Escort or Inspector upon entering or exiting a TBS or TPSS which has been declared a "Special Construction Site."
 - 49.4.4.4 Notifying ROCC, if necessary, based on playbook.
- 49.4.5 TAMC is responsible for:
- 49.4.5.1 Issuing Switch Orders for electrical isolation and the restoration of the TBS and TPSS.



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49.4.5.2 Notifying Mobile Command and CENI when a “Special Construction Site” will be within the limits of a Shutdown or Single Tracking.

49.4.5.3 Attending restoration meeting held by CENI.

49.4.6 SAFE is responsible for:

49.4.6.1 Additional Requirements for Roadway accessible TBSs and TPSSs:

49.4.6.1.1 Review and approval of CENI site assessment and plan for Roadway accessible sites.

49.4.6.1.2 Confirming installation of all additional protection to declare TBS, TPSS, and their access as non-Roadway.

49.5 PROCEDURES

Procedure #	Content
49.5.1	Designation of “Special Construction Sites”
49.5.2	Additional Requirements for Roadway accessible TBSs and TPSSs
49.5.3	Restoration of a “Special Construction Site” upon completion of work
49.5.4	Additional Requirements for TBS and TPSS locations declared as “Special Construction Sites” within Shutdown and Single Tracking limits

49.5.1 Designation of “Special Construction Sites”:

The following procedures must be implemented prior to designation as a “Special Construction Site”:

49.5.1.1 CENI requests MOC for electrical isolation of facility.

49.5.1.2 Establish third rail power outage per SOP #28.

49.5.1.3 Remove all breakers per lockout/tagout procedures in SOP #39.

49.5.1.4 SSWP must address, and clearly state, the escort’s responsibility around any remaining electrified circuits.

49.5.1.5 Additional Requirements for establishing TPSS as “Special Construction Site” where either or both the AC or DC gear will be completely replaced:



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- 49.5.1.5.1 Utility to de-energize both incoming feeder cables.
 - 49.5.1.5.2 Utility to remove all utility feeder cables from AC switchgear.
 - 49.5.1.5.3 Utility to ground incoming feeder cables.
 - 49.5.1.5.4 SMNT or contractor to remove track feeder cables from third rail and insulate.
 - 49.5.1.5.5 SMNT or contractor to install third rail jumper cables between affected contact rails.
 - 49.5.1.5.6 SMNT or contractor to remove track feeder cables from gear and insulate.
 - 49.5.1.5.7 SMNT confirms to MOC electrical isolation complete.
- 49.5.1.6 Additional Requirements for establishing TBS as “Special Construction Site”:
- 49.5.1.6.1 SMNT or contractor to remove track feeder cables from third rail and insulate.
 - 49.5.1.6.2 SMNT or contractor to install third rail jumper cables between affected contact rails.
 - 49.5.1.6.3 SMNT or contractor to remove track feeder cables from gear and insulate.
 - 49.5.1.6.4 SMNT confirms to MOC electrical isolation complete.
- 49.5.2 Additional Requirements for Roadway accessible TBSs and TPSSs:
- 49.5.2.1 Site assessment and plan will be completed and prepared by CENI to determine location of special markings or barriers to separate Metro property into Roadway and non-Roadway territory.
 - 49.5.2.2 SAFE to review and approve CENI assessment. SSWP to include additional requirements approved by SAFE to establish non-Roadway territory.
 - 49.5.2.3 CENI to install special markings and/or barriers per approved assessment.



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- 49.5.2.4 SAFE to inspect installed markings and/or barriers and provide final approval that the TBS, TPSS, and access are non-Roadway.
- 49.5.3 Restoration of a “Special Construction Site” upon completion of work:
 - 49.5.3.1 CENI to hold a restoration meeting with SMNT, the contractor and TAMC.
 - 49.5.3.2 TAMC to issue Switch Orders to restore the TBS or TPSS.
 - 49.5.3.3 SSWP to include restoration process per location.
 - 49.5.3.4 CENI to remove all installed special markings and or barriers.
- 49.5.4 Additional Requirements for TBS and TPSS locations declared as “Special Construction Sites” within Shutdown and Single Tracking limits:
 - 49.5.4.1 TAMC to notify CENI red tag holder that a “Special Construction Site” is within shutdown limits.
 - 49.5.4.2 CENI to attend Shutdown coordination meetings.
 - 49.5.4.3 Inspector/Escort and contractors to receive safety briefing at shutdown entry point prior to entering a “Special Construction Site”.
 - 49.5.4.4 Inspector/Escort to notify Mobile Command and MOC via telephone, when entering or exiting a “Special Construction Site”.
 - 49.5.4.5 Restoration of a “Special Construction Site” is prohibited while within the established confines of a Shutdown or Work Zone area.
 - 49.5.4.6 Restoration may occur at the conclusion of a Shutdown or Single Tracking once confirmation that everyone has cleared and the Roadway has been established.



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49.6 REFERENCES

49.6.1 MSRPH

49.6.2 OAP 200-33

49.6.3 SOP #28

49.6.4 SOP #39

49.6.5 SOP #41



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SOP #49 Ver. 1.0

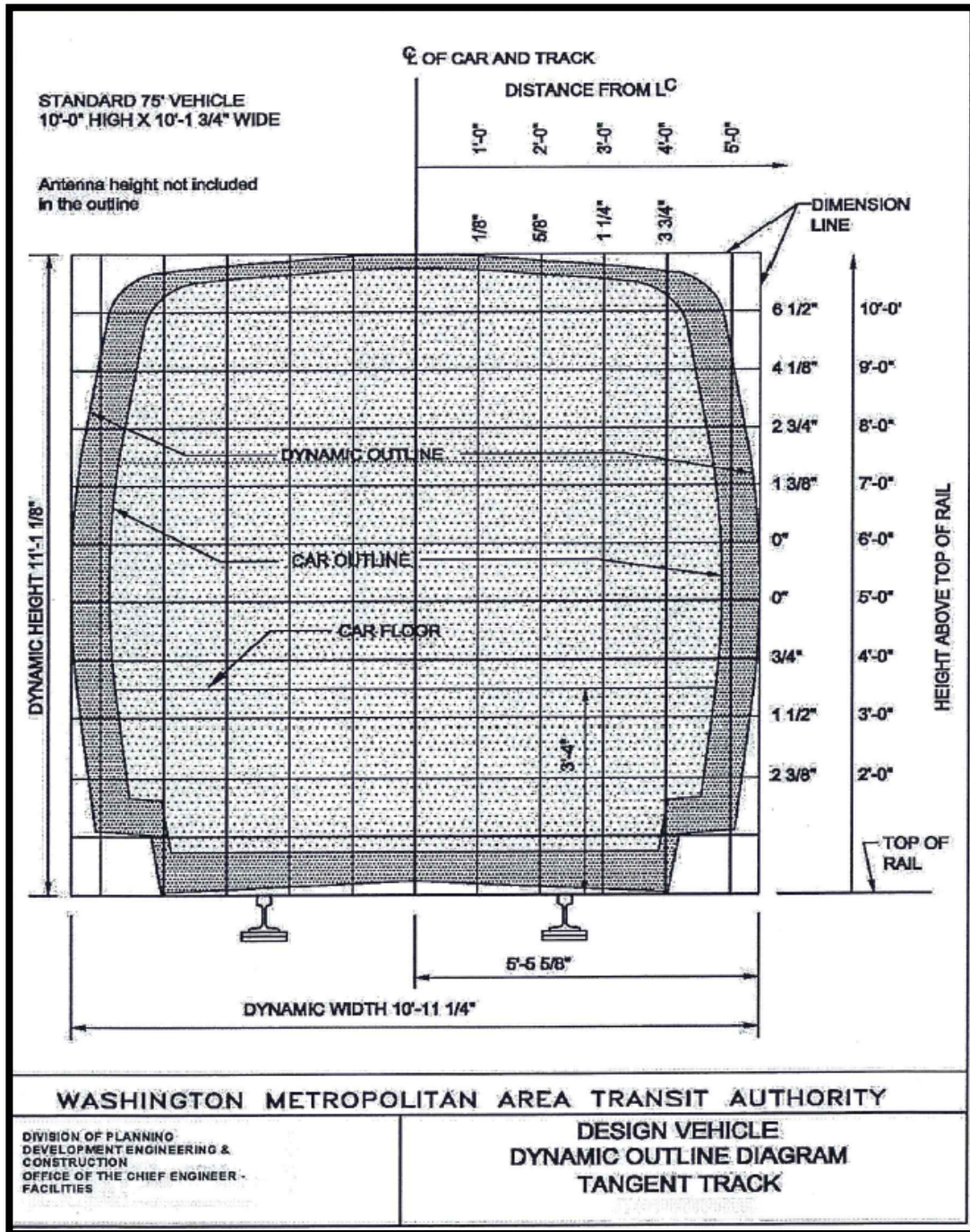
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Approved 12/27/2013



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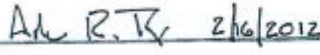
Appendix I – Dynamic Outline Diagram





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Appendix J – “Office of Rail Transportation Maintenance Operations Control Administrative Procedure”

 Washington Metropolitan Area Transit Authority OFFICE OF RAIL TRANSPORTATION MAINTENANCE OPERATIONS CONTROL Administrative Procedure			
CATEGORY Roadway Safety and Performance		TOPIC Policy and Procedure	
PROCEDURE NO. 208-04		TITLE Contractor Rail Equipment Inspection	
LATEST REVISION NO. 1	LATEST REVISION DATE February 15, 12	LATEST REVIEW DATE February 15, 12	EXPIRATION DATE None
PROCEDURE APPLIES TO All WMATA Offices which utilize contactor Class II vehicles.			
OFFICER/INDIVIDUAL OF PRIMARY RESPONSIBILITY TRST			
EFFECTIVE PAGES			
DISTRIBUTION All OAP Manual holders and users and all TRST		COORDINATION WITH OTHER PUBLICATIONS	
APPROVAL: General Superintendent/Chief		DIRECTED BY AGENCIES	
 2/6/12		 2/6/2012	



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY STANDARD OPERATING PROCEDURES

1. PURPOSE

- 1.01 The purpose of this procedure is to ensure and standardize inspection of all contractor rail equipment which is used in or on the property of the Washington Metropolitan Area Transit Authority (herein known as "Authority") and ensure said equipment is in satisfactory mechanical condition prior to or while continuing to work in or on the Authority's Roadway, Yards, Pocket Tracks or tail tracks).

2. SCOPE

- 2.01 The Scope of this procedure is all inclusive to any and all contractor equipment which is considered Rail, Hi-rail, Rail Maintenance Machine or railroad type equipment which can or does utilize the Authority's running rails at any time or any place throughout the Authority's rail system.

3. RESPONSIBILITIES

- 3.01 The Superintendent, Track Maintenance, is responsible for facilitating pre-usage inspections of rail bound and hi-rail equipment. The Superintendent, CTEM is responsible for providing expertise and support on an "as-needed basis" for these inspections.
- 3.02 WMATA Maintenance Managers or WMATA Project Managers are responsible to ensure that contractors present all rail bound equipment or Hi-rail equipment intended for use on the Authority's rail system for inspection prior to the equipment operating on WMATA's rail system.
- 3.03 WMATA Maintenance Managers and WMATA Project Managers are responsible to communicate these requirements to contractors and to ensure the contractor submits the following paperwork at the time of their equipment inspection:
- (a) Maintenance/Inspection Records
 - (b) Manufacturer's literature on maintenance standards and tolerances. (Hi-rail Gear Only)
- 3.04 Contractors are responsible to assure rail equipment which has met the WMATA inspection requirement displays a valid WMATA inspection sticker in conspicuous view on the inspected vehicle at all times.
- 3.05 Contractors are responsible to ensure their equipment is inspected once every six (6) months by an OEM certified/qualified technician from the date of the previous inspection.
- 3.06 WMATA Managers or WMATA Project Managers using contractor Hi-rail equipment are required to maintain a log of the required inspection dates to monitor and enforce the six (6) month inspection requirement.
- 3.07 Contractors are responsible to ensure contractor equipment, hi-rail gear, trucks and guide wheel assemblies, are maintained as required by the manufacturers recommendations.



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- 3.08 Hi-rail or rail bound equipment operators are required to perform a pre-operational check of their equipment before the start of any shift. This inspection must be documented on a pre-operational checklist which is to be maintained by the contractor for a period of 60 days. This checklist must include a review of all critical operational/safety features including rail gear pin placement, flange inspection, attachments such as turntables and booms, safety locks, travel lighting, work lighting and directional alarms, if applicable.
 - 3.09 Contractors are required to provide operators with a go/no go flange gauge which can be used during the pre-operational check.
 - 3.10 The Superintendent, Track Maintenance, is responsible to maintain files of all inspection and maintenance records submitted by any contractor. These records shall be kept for the duration of each project.

4. DEFINITIONS

- 4.01 **Hi-rail Vehicle:** means a roadway maintenance machine that is manufactured to meet Federal Motor Vehicle Safety Standards and is equipped with retractable flanged wheels so that the vehicle may travel over the highway or on railroad tracks.
- 4.02 **Roadway Maintenance Machine:** means a self-propelled, rail-mounted, non-highway, maintenance machine.
- 4.03 **Qualified:** means a status attained by an employee who has successfully completed any required training for, has demonstrated proficiency in, and has been authorized by the employer to perform the duties of a particular position or function.
- 4.04 **Inspection:** means careful examination or scrutiny.
- 4.05 **Maintenance:** Performing repairs, lubrication, and inspection of components on a cyclical basis based on manufactures recommendations or environmental conditions.
- 4.06 **Satisfactory:** Fulfilling expectations or needs; acceptable, though not outstanding or perfect.

5. POLICIES

- 5.01 All non-WMATA rail vehicles and/or rail equipment, to include but not limited to Hi-rail vehicles, shall be inspected by a qualified WMATA rail vehicle/equipment technician prior to being permitted to enter WMATA's roadway.
- 5.02 All non-WMATA rail vehicles and/or rail equipment shall display a valid WMATA inspection sticker in a conspicuous location at all times while on the Authority's roadway.
- 5.03 All non-WMATA hi-rail vehicles and/or rail equipment shall be inspected once every six (6) months from the date of the previous inspection. (NOTE: Hi-rail components must be thoroughly inspected per manufactures' recommendations every six (6) months. Any vehicle with Hi-rail components whose last inspection was less than six (6) months will be issued an inspection sticker which is limited to the time remaining before the next six (6)



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month inspection.)

- 5.04 All non-WMATA rail vehicles and/or rail equipment shall maintain the entire equipment/vehicle as required by the manufacturers' recommendations.
- 5.05 Contractors must submit training records for personnel qualified to operate any vehicle or equipment on WMATA's roadway upon request. This is to include training records for set up and usage of Hi-rail attachments. Hi-Rail operators must be thoroughly knowledgeable in set up and pin placement of hi-rail components.
- 5.06 As condition of valid Authority roadway inspection process, the contractor MUST be escorted by a qualified WMATA employee at all time while operating on or within the Authorities property during the inspection process.
- 5.07 Any non-WMATA rail vehicles and/or rail equipment, to include but not limited to Hi-rail vehicles, without a valid WMATA inspection sticker shall be prohibited from operating on Authority property.

6. PROCEDURE

- 6.01 All non-WMATA rail vehicles and/or rail equipment, to include but not limited to Hi-rail vehicles, shall be inspected and maintained to ensure the following requirements are met:
 - (a) All contractors must submit at least 2 years of inspection and maintenance records for Hi-rail components. Newer vehicles must have inspection records from the time they have been placed in service. The overall vehicle/equipment historical maintenance records shall be current and reflect proper maintenance over the life of the vehicle/equipment.
 - (b) All Hi-rail components shall be inspected and have bi-annual maintenance performed by a qualified OEM Equipment service technician. Documentation of inspections and maintenance performed at the six (6) month PMI will be provided to WMATA prior to issue or re-issuance of an inspection sticker.

NOTE: As inspections and maintenance procedures vary widely, the contractor's documentation must include the OEM manufacturer's applicable documentation for special instructions regarding: alignment, tolerances, wear limits, wheel loading, and inspection or maintenance methods.
 - (c) Inspection Records submitted for hi-rail maintenance and inspection shall contain the following information:
 - (1) A unique vehicle number or VIN number for the vehicle
 - (2) Hi-Rail Gear Model Number
 - (3) Hi-Rail Gear Serial Number
 - (4) Date of Inspection
 - (5) A check list of items inspected.

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- (6) A list of items in which maintenance was performed.
 - (7) Flange measurements.
 - (8) Recorded Tram Measurements including the following:
 - (i) Diagonal Measurements (LF to RR) and (RF to LR).
 - (ii) Spring Line Measurements (RF) (LF) (RR) (LR)
 - (iii) Hi-Rail Wheel Loads: (RF) (LF) (RR) (LR)
 - (9) Recorded Gauge and Back to Back Measurements
 - (i) Wheel Gauge (Front Axle) (Rear Axle)
 - (ii) Back to Back Measurements (Front Axle) (Rear Axle)
 - (d) The vehicle/equipment must have a valid inspection sticker from the appropriate local jurisdiction (State, Government).
 - (e) Must be diesel powered.
 - (f) Must be able to operate quietly for night work in urban areas.
 - (g) Must be able to clear the inspection template without making contact.
 - (h) Must be of the dimensions so as to NOT make contact with the Authority's tunnels, platforms, contact rails, assemblies and structures.
 - (i) Rail vehicle/equipment shall have one (1) Tow Eye of 2 1/16" diameter at each end of the vehicle/equipment; +/- 14 inches from top of the rail.
 - (j) All equipment including Hi-rail must be FRA 214d compliant in regards to back-up alarms and lighting.
 - (k) Rail vehicle/equipment shall be able to maintain a positive continuous shunt of track circuits while in operation during revenue service.
 - (l) Rail vehicle/equipment, if possible, should be able to maintain a positive continuous shunt of track circuits while in operation during non-revenue service.
 - (m) Rail vehicle/equipment must be able to operate on standard gage of track: set at 56 1/4 track gage.
- 6.02 The Rail vehicle/equipment shall be photographed during any first Authority inspection



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7. ENFORCEMENT

- 7.01 Any non-WMATA rail vehicles and/or rail equipment, to include but not limited to Hi-rail vehicles, without a valid WMATA inspection sticker shall be prohibited from entering the Authority's roadway.
- 7.02 If any non-WMATA rail vehicles and/or rail equipment, to include but not limited to Hi-rail vehicles, without a valid WMATA inspection sticker is found on the roadway, that piece of rail vehicle/equipment shall be immediately sent to the nearest location for removal from the Authority's roadway.
- 7.03 WMATA equipment pilots are required to ensure the equipment has a valid inspection sticker prior to embarking on WMATA's rail system.
- 7.04 Any non-WMATA rail vehicle and/or rail equipment involved in any incident including derailment, collision or major mechanical failure, must be go through a complete re-inspection process.

8. EXEPTIONS

- 8.01 There are no exceptions to this OAP.



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Appendix K - PERIOD OF DELAY TIME SHEET

Attached hereto

End of volume 1