



INVITATION FOR BID (IFB)

IFB No: FQ15155/WJG

WASHINGTON METROPOLITAN AREA

TRANSIT AUTHORITY

**BUS BAY, SAFETY AND ACCESS IMPROVEMENTS AT
FRANCONIA SPRINGFIELD METRO RAIL STATION**

DATE: APRIL 9, 2015

VOLUME 1

PROCUREMENT AND CONTRACTING REQUIREMENTS

GENERAL REQUIREMENTS


WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

SOLICITATION CERTIFICATION PAGE

FQ15155

BUS BAY, SAFETY AND ACCESS IMPROVEMENTS AT FRANCONIA SPRINGFIELD METRO RAIL STATION


APPROVED FOR RELEASE



CHEN ZHOU
PROJECT MANAGER, TIES CENI

4/6/15

DATE



DINESHKUMAR PATEL
PROJECT MANAGER, BUS BPLN

4/7/15

DATE



RICHARD OWENS
CONTRACTING OFFICER

4/7/15

DATE



OFFICE OF GENERAL COUNSEL

4/8/2015

DATE

END OF SECTION

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Section 00100

INVITATION FOR BID

This Section includes Project information for Bidders.

Notice to Bidders

Contract No. FQ15155 includes IFB Documents for:

Project Name: Bus Bay, Safety and Access Improvements at Franconia Springfield Metro Rail Station

Bid for the Work described herein shall be submitted before 2:00 PM (local time) on **May 6, 2015**.

Washington Metropolitan Area Transit Authority
600 Fifth Street, NW
Washington, DC 20001
Solicitation No.: FQ15155/WJG

Questions may be directed to William J. Geroux, Contract Administrator, telephone: (202) 962-2467; email: wgeroux@wmata.com See Section 00200, INSTRUCTIONS FOR BIDDERS, for Bid submittal instructions.

DIRECTIONS TO SUBMITTING BIDDER: Read and comply with the Invitation Instructions. In addition to other submission requirements set forth in this Invitation for Bid and all Amendments, the following must be properly executed, completed, and submitted as part of the Bid:

- A. BID:
 - 1. Bid Price Form (properly executed)
 - 2. Bid Price Schedule
 - 3. Bid Guarantee
 - 4. Bid Data Form with Supporting Data
 - 5. Representations and Certifications
 - 6. List of DBE Certified Firms
 - 7. DBE Data

BID(S) MUST SET FORTH FULL, ACCURATE, AND COMPLETE INFORMATION AS REQUIRED BY THIS INVITATION FOR BID, INCLUDING ALL AMENDMENTS.

00101 GENERAL STATEMENT OF WORK

- A. This invitation is for the submittal of Bids for a Project to construct bus bay, safety and access improvements at the Franconia Springfield WMATA Rail station. The Contractor, through itself or others, shall furnish all labor, equipment, materials, quality assurance/quality control, construction and environmental/security/safety superintendence, and field engineering services required for the construction of the Project. The Contractor is responsible for managing program and project coordination with Jurisdictional Authorities and Utilities through the

Contracting Officer Representative; obtaining all necessary permits not provided by the Authority, approval, and easements; performing architectural and engineering services; providing Submittals, field engineering support, quality management system to ensure that all work confirms to specified requirements; and providing operation and maintenance training and manuals for the systems and equipment installed. No attempt has been made to separate the Work by trades or types of construction, and the Contractor shall make its own decision as to the types of services needed to accomplish the Work.

- B. It is the responsibility of the Contractor to gather all data necessary for the performance of the Work under this Contract that are needed in addition to Authority-furnished IFB Documents.
- C. Award of the contract will be based on the lowest responsive and responsible bid.
- D. All work under this Contract shall be performed in a logical sequence as developed by the Contractor.

00102 GENERAL SCOPE OF WORK

- A. Bus Bay, Safety and Access Improvements at Franconia Springfield Metro Rail Station
 - a. Three (3) additional bus bays including bus shelters
 - b. Electrical power for:
 - 1. Proposed bus shelters
 - 2. Existing bus shelters for Customer Information Electronics Display Signs
 - 3. New Path lighting
 - 4. New LED pedestrian crossing signs in parking garage
 - 5. Lighting existing bike racks
 - 6. Canopy Lighting
 - c. Access Improvements:
 - 1. Sidewalk improvements
 - 2. Covers on bike rack shelters
 - 3. New directional signage
 - d. Safety Improvements:
 - 1. Improved pedestrian crossings

00103 PROJECT BID SCHEDULE

- A. The Bid schedule for this Project is as follows:
 - 1. Issue Invitation for Bid: April 9, 2015
 - 2. Pre-Bid Conference: April 20, 2015 9:00 AM
 - 3. Bid Due/Opening: May 6, 2015
 - 4. Projected Contract Award: NLT **May 29, 2015**

END OF SECTION

Section 00200

INSTRUCTION TO BIDDERS

This Section includes procedures with which Bidders must comply and conditions affecting award of the Contract.

00201 GENERAL INSTRUCTIONS

A. Definitions as used herein:

1. The term "Invitation" used in this document means this Invitation for Bid (IFB)
2. The term "Bid" used in this document means a response to this Invitation
3. For further explanation of Contract terms, refer to Section 00701, DEFINITIONS, of this General Conditions

B. Method of Procurement:

1. This is a technically acceptable lowest price procurement

C. Basis for Award:

1. Award will be made to that Bidder:
 - a. A single contract for all items will be awarded to the lowest responsive and responsible bidder based on price as identified in Section 00203, BID PROCEDURES, EVALUATION FACTORS, AND INSTRUCTIONS, and
2. The Authority will make a single award to one Bidder as the result of this Invitation. See Notes to Bidders in Section 00434, BID PRICE SCHEDULE, for further award information.
3. A written award of acceptance of Bid mailed or otherwise furnished by the Authority to the successful Bidder within the specified Acceptance Period shall result in a binding contract without further action by either party.

D. Type of Contract: The Authority contemplates award of a Firm Fixed Price contract.

E. Invitation for Bid (IFB) Documents:

1. IFB Documents are available on the Authority's website at:
http://www.wmata.com/business/procurement_and_contracting/solicitations/index.cfm
IFB Documents are posted in Adobe Acrobat (pdf) format. The IFB can be downloaded free of charge.
2. A Non-Disclosure Agreement (NDA) MUST be executed between WMATA and Bidder for release of Specifications and drawings related to design of the new bus shelters. The Bidder is required to complete the "Recipient" portion of the "Confidentiality and Non-Disclosure

Agreement for Proposers for IFB FQ15155” and send it as an attachment, via electronic mail to the attention of William Geroux, Contract Administrator at wgeroux@wmata.com. In the “Subject” line of your email, please insert “Solicitation FQ15155 NDA.” A copy of the NDA, fully executed by the WMATA Contracting Officer will be returned to you via electronic mail along with the specifications and drawings.

F. Preparation of Bids:

1. The Bidder shall complete the Bid Forms furnished in Section 00400, BID FORMS AND SUPPLEMENTS, or copies thereof, and submit them according to the instructions given in this IFB. If erasures or other changes appear on the forms, they must be initialed by the person signing the Bid.
2. Each Bidder shall furnish the information required by the Invitation. Bidders are expected to examine the IFB Documents. Failure to do so will be at the Bidder’s risk.

G. Explanation to Bidders:

1. All explanations desired by a Bidder regarding the meaning or the interpretation of this IFB or all other Bid documents must be requested in writing 14 Days prior to the date set for receipt of Bids to allow sufficient time for a reply to reach all Bidders before the submittal of their Bids. These requests shall be forwarded to the Contract Administrator at wgeroux@wmata.com. Oral explanations or instructions given before the award of the Contract will not be binding. Any information given to a prospective Bidder concerning the Invitation will be furnished promptly to all prospective Bidders as an Amendment to this IFB, if the information is necessary in submitting Bids or if lack of such information would be prejudicial to other prospective Bidders.
2. The Authority reserves the right to amend the IFB prior to the date set for receipt of Bids. If any amendments are issued, they will be posted on the WMATA website along with the solicitation.
3. If the revisions under Amendments would require material changes in the Bids, the date set for the receipt 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 receipt of Bids.

H. Acknowledgment of Amendments:

- A. Bidders are required to acknowledge receipt of all Amendments to this Invitation on copies of the Bid Forms and 00413, BID FORM, in the space provided. Failure to acknowledge all Amendments may cause the Bid to be considered non responsive to the Invitation, which would require rejection of the Bid.
- B. If this Invitation is amended, all terms and conditions, which are not modified, remain unchanged.

I. Submission/Withdrawal of Bids:

1. Bids and modifications thereof shall be enclosed in sealed envelopes and addressed to the office specified in the solicitation. The Bidder shall show the hour and date specified in the solicitation for receipt, the solicitation number, and the name and address of the Bidder on the face of the envelope.
2. Telegraphic bids 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.
3. Facsimile Bids, modifications or withdrawals will not be considered unless authorized by the Authority.

J. Late Bids or Withdrawals:

- 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 of 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.
- D. 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.
- K. Bid Guarantee:
1. A Bid guarantee is required by the Invitation to Bid. Failure to furnish a Bid guarantee in the proper form and amount, by the time set for the receipt of Bids, may be cause for rejection of the Bid. Bid guarantee shall be sealed, marked, and submitted in an envelope by the Bidder and received at the Office of Procurement, Washington Metropolitan Area Transit Authority, 600 Fifth Street, N.W., Washington DC 20001 by the specified closing time on the date of closing.
 2. A Bid guarantee shall be in the form of a firm commitment, such as a Bid bond (see Section 00431, BID SECURITY (Bid Bond Form)), 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, or 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:
 - a. To unsuccessful Bidders: As soon as practicable after the receipts of Bids.
 - b. To the successful Bidder:

- i. Upon execution of such further contractual documents and bonds as may be required by the Bid accepted.
- ii. If the successful Bidder, upon acceptance of its Bid by the Authority within the Acceptance Period, fails to execute such further Bid guarantees and give such bond(s) as may be required by the terms of the Contract, its Contract may be terminated for default. In such event, the successful Bidder shall be liable for any cost of procuring the Work, which exceeds the amount of its Bid, and the Bid guarantee shall be available toward offsetting such difference.

L. Minimum Bid Acceptance Period:

1. Acceptance Period, as used in this Section, means the number of Days available to the Authority for awarding a contract from the most current date specified in this Invitation for receipt of Bids.
2. The Authority requires an Acceptance Period of One-Hundred Twenty (120) Days from the due date of the Bid.

M. Contract and Bonds: The Bidder whose Bid is accepted shall, within the time established in this Invitation, enter into a written contract with the Authority and furnish performance and payment bonds on standard Authority forms in the amounts indicated in Section 00600, BONDS AND CERTIFICATES.

N. Conditions Affecting the Work:

1. Bidders are required to visit the Project Site to examine the general and local conditions, which can affect the Work or the cost thereof. See Section 00250, PRE-BID MEETINGS SCHEDULE, for further details.
2. As discussed in Section 00310, EXISTING CONDITIONS, Bidders may examine records of all original borings, test excavations, and other subsurface investigations and existing utilities and environmental investigations, if any, made for the Authority prior to the construction of the Project.

O. Opportunity for Disadvantaged Business Enterprises to Bid: The Washington Metropolitan Area Transit Authority hereby notifies all Bidders that the Bidder shall ensure that in regard to any contract entered into pursuant to this Invitation, disadvantaged business enterprises will be afforded full opportunity to submit Bids in response to this Invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for award.

P. Disadvantaged Business Enterprises: (See Section 00453, DBE DATA)

1. It is the policy of the Authority (WMATA) that Disadvantaged Business Enterprises (DBEs) shall have an equal opportunity to receive and participate in performing WMATA contracts, including contracts and subcontracts at any tier, and of the Federal Transit Administration (FTA) and the U.S. Department of Transportation (US DOT) in receiving and participating in

- federally assisted contracts. The DBE requirements, if any, are set for in Section 00453, DBE DATA, and in Section 00788, FEDERAL REGULATIONS AND CLAUSES, Paragraph Q, Disadvantaged Business Enterprises (DBE), to this Invitation, and are applicable if the Bid is \$500,000 or more for construction (and construction-related) contracts and for supply and service contracts having a total dollar value of \$100,000 or greater. The DBE goal percentages, if applicable, are listed in Section 00888, FEDERAL REGULATIONS AND CLAUSES, Paragraph Q, and Disadvantaged Business Enterprises (DBE).
2. If the Bidder is not a DBE, then the DBE goal set forth in Section 00888, FEDERAL REGULATIONS AND CLAUSES, Paragraph Q, Disadvantaged Business Enterprises (DBE), if any, shall be met by Subcontractors or joint ventures with DBEs.
 3. If a DBE goal is specified in Section 00888, FEDERAL REGULATIONS AND CLAUSES, Paragraph Q, Disadvantaged Business Enterprises (DBE), the Bidder shall submit with its Bid a list of WMATA-certified DBE firms that it intends to enter into subcontract agreements with for this Contract. The documentation requirements of Section 00453, DBE DATA, shall be completed and submitted at the time of Bid. Also, if no goal is specified in Section 00888, FEDERAL REGULATIONS AND CLAUSES, Paragraph Q, Disadvantage Business Enterprises (DBE), but the Bidder still intends to utilize DBEs in the performance of this Contract, the Bidder shall submit with its Bid a list of those WMATA-certified DBE firms. Bidders who fail to complete and return this information, if applicable, with their Bid, will be deemed to be non-responsive and will be ineligible for contract award. The documentation requirements, if applicable, are as follows:
 - a. 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 Section 00888, FEDERAL REGULATIONS AND CLAUSES, Paragraph Q, Disadvantaged Business Enterprises (DBE); or
 - b. A request for waiver of the DBE goal or portion of the goal, if any, and reasons therefore as stipulated in Paragraph F.3 of Section 00453, DBE DATA. Request must be made on company stationery and signed by the responsible official.
 4. Bidders that fail to meet the DBE goal set forth in Section 00888, FEDERAL REGULATIONS AND CLAUSES, Paragraph Q, Disadvantaged Business Enterprises (DBE), if any, and fail to demonstrate "good faith efforts" to justify waiver of the DBE goal, if any, may be deemed to be non-responsive and will be ineligible for contract award.
 5. In connection with the performance of this Contract, the Contractor agrees to cooperate with the Authority in meeting its commitments and goals with regard to the maximum utilization of Disadvantage Business Enterprises (DBE), and further agrees to exert good faith efforts to satisfy the requirements of Section 00453, DBE DATA, if applicable, by subcontracting portions of the Work to disadvantaged firms, by entering into joint ventures with disadvantaged firms, or both.
 6. If there is not goal in this Contract, DBE participation is encouraged and pursuant to the Authority's race-neutral program, is anticipated to be as specified in Section 00788,

FEDERAL REGULATIONS AND CLAUSES, Paragraph Q, Disadvantaged Business Enterprises (DBE).

- Q. Civil Rights: The Contractor will be required to comply with all applicable Equal Employment Opportunity laws and regulations of Section 00788, FEDERAL REGULATIONS AND CLAUSES, Paragraph P, Civil Rights Requirements.
- R. Debarred or Ineligible Bidders: All Bidders will be required to certify that they are not on any list of ineligible or debarred contractors (see Section 00451, REPRESENTATIONS AND CERTIFICATIONS FORM).
- S. Notice of Protest Policy:
1. WMATA policy and procedure for the administrative resolution of protests is set forth in Chapter 17 of the Procurement and Procedures 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.
 2. FTA Circular C 4220.1F, paragraph 7.l addresses Bid Protests. Review of protests by FTA is discretionary and will be limited to:
 - a. A grantee's failure to follow its protest procedures or its failure to review a complaint or protest; or
 - b. Violations of Federal law or regulation.
 3. 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 5 working days of the date the protester learned or should have learned of an adverse decision by the Authority or other basis of appeal to FTA.
 4. Alleged violations on other grounds must be submitted to the Contracting Officer who will decide to the protest.
 5. 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.
- T. Requirements for Cost Data Prior to Contract Award: The Authority had determined that certified cost or pricing data are not required for this Invitation based on the anticipation of adequate price competition. If after receipt of Bids the Authority determines that adequate price competition no longer exists, the Authority will require the Bidder(s) to submit cost data in sufficient detail to permit analysis of the cost elements which make up the proposed price(s). The preparation, submittal, and certification of Certified Cost or Pricing Data shall be as described by FAR 15.4 and in Section 00700, GENERAL CONDITIONS.
- U. Davis-Bacon Wage Determination Decision: The Authority's Compact requires that all mechanics and laborers employed by Contractor or 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 Section 00767, DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS. The Wage Determination Decision of the Secretary of Labor is referred to in Section 00767, DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS, and attached as APPENDIX D in Section 00800, SUPPLEMENTARY CONDITIONS.

V. WMATA's Tax Exempt Status:

1. 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:
 - a. "The Authority and the Board of Directors 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 there from, and the property and income derived there from 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."
2. 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 Contractor for physical incorporation into the 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 Section 00771, FEDERAL, STATE, AND LOCAL TAXES.
3. By submission of its bid, the Bidder certifies that none of the taxes to which the Authority is exempt are included in its Bid price(s) or the final Contract Price. In the event that the Authority learns that any taxes to which the Authority is exempt are included in the final Contract Price, the Authority shall be entitled to a reduction in the Contract Price reflecting such amount and a refund of monies paid related to such taxes, plus applicable interest.

W. 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 Modifications. 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 may be executed between the Contracting Officer and the Contractor. The Cost Agreements shall be a supplemental agreement to the Contract.

X. Proprietary Data in Bids:

1. The Authority will provide all reasonable precautions to ensure that proprietary, technical, and pricing information remains within the review process except where otherwise ordered by an administrative or judicial body or necessary to use in a judicial or administrative proceeding. Bidders shall attach to each page of all proprietary data submitted with the Invitation the following notation:
 - a. "This data furnished pursuant to this IFB shall not be disclosed outside the Authority, be duplicated, or used in whole or in part for any purpose other than to evaluate the offer; provided that, if a contract is awarded on the basis of that offer, the Authority shall have the right to duplicate, use, and disclose this data, in any manner and for any purpose whatsoever."
2. The Authority's right to use information contained in these data is not limited if the information is or has been obtained by the Authority from another independent legitimate source.
3. Except for the foregoing limitation, the Authority may duplicate, use and disclose in any manner and for any purpose whatsoever and have others so do, all data furnished in response to this Invitation.

- Y. Contract 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.

00202 BID FORMAT

- A. Bid Page and Character Size: The page size shall not exceed 8-1/2 by 11 inches, except for foldouts, which may not exceed 11 by 17 inches. The page margins shall not be smaller than 1 inch on all four sides. The type size for text shall not be smaller than 10 point, with at least a line spacing of one. The type size for figures and tables shall be not smaller than 8 point.
- B. Elaboration: Legibility, clarity, and completeness are essential. Unnecessarily elaborate brochures or other presentations beyond that sufficient to present a complete and effective Bid are not desired and may be construed as an indication of the Bidder's lack of cost consciousness. Elaborate artwork, expensive paper and bindings, and expensive visual and other presentation aid are neither necessary nor wanted.
- C. Completeness: Include all forms and Project-specific information as required in this Section. Include pre-printed literature if directly relevant to this Project. Failure to provide forms or any other information required in the response to this Invitation may cause the Bid to be deemed non-responsive, and the Bid may be subsequently rejected.

D. Bid: Provide one hard copy and one electronic copy (thumb drive).

<u>Volume</u>	<u>Part</u>	<u>Title</u>
1	A	Price Submission
1	B	Forms and Contractual Information

00203 BID PRICE PROCEDURES, EVALUATION FACTORS, AND INSTRUCTIONS

A. Bid Price Evaluation Factors:

1. The Authority will evaluate Bid Price for completeness, clarity, conciseness, realism, and responsiveness to the IFB-requested information
2. Submittal of Bid prices for both the Base and the Options, if any. Failure to do so will necessitate rejection of the Bid.
3. Materially unbalanced prices: Bids that are materially unbalanced as to prices for the various categories of work items may be rejected as non-responsive.
4. The Authority will compare the Bid Prices to the Authority estimate and otherwise determine reasonableness by performing a price analysis if adequate competition exists. A cost analysis will be performed, if adequate price competition does not exist, to ascertain whether or not the proposed price is fair and reasonable. The Authority may request that Bidders provide a cost breakdown, which identifies major cost drivers and request supporting documentation, such as Supplier and Subcontractor quotes in support of their Bid.

B. Bid Price Instructions: The information provided should be complete and clearly presented. If the information requested under a factor is presented elsewhere in the Bid, the Bidder should cross reference this information that is provided elsewhere rather than duplicate it.

1. Complete, sign, and submit Section 00413, BID FORM. Additionally, submit the following:
 - a. Signed and completed Section 00451, REPRESENTATIONS AND CERTIFICATIONS FORM.
 - b. A completed Section 00434, BID PRICE SCHEDULE, with an amount on each lite item where one is requested and a total amount representing the sum of individual amounts requested.
 - 1) Bid Price Schedule prices shall include all services, labor, material, equipment, overhead, incidentals, and profit, unless otherwise specified.
 - 2) In case of a discrepancy between a unit price and an extended price, the unit price will be presumed to be correct, subject however, to correction to the same extent and in the same manner as any other mistake.

-
- 3) Where the Bid Price Schedule explicitly requires 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 an item on which no price is submitted.
 - 4) Bids for construction services other than those specified will not be considered unless authorized by the Invitation. Unless specifically called for, alternate Bids will not be considered.
- c. List of DBE-certified firms that is intends to enter into subcontract agreements with (if a DBE goal is specified in Section 00888, FEDERAL REGULATIONS AND CLAUSES, Paragraph Q, Disadvantaged Business Enterprises (DBE), or if no goal is specified in Section 00888, FEDERAL REGULATIONS AND CLAUSES, Paragraph Q, Disadvantaged Business Enterprises (DBE), but the Bidder still intends to utilize DBEs in the performance of this Contract).
 - d. An executed Bid Guarantee with Surety Certificate (Section 00431, BID SECURITY (BID BOND FORM)). The Bid Guarantee shall be based on the Total Base Bid plus Total Option Price, if any. The Performance and Payment Bonds shall be based on the award amount.
 - e. A signed and completed Section 00452, BID DATA FORM, with attachments.
- C. Clarifications:
1. Clarifications, Anytime during the evaluation process of the Bid Prices, the Authority may engage in limited exchanges with the Bidder to request clarifications of any of the points, which are unclear, and to resolve minor or clerical errors. Any such exchange will be for clarification only, and will not constitute Discussions within the meaning of FAR 15.306.

00210 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

- A. Procedures for Product Substitutions During the Bidding Period – Use of brand names within the technical requirements (as used in this clause, the term “brand name” includes identification of products by make and model in IFB Documents):
1. If items called for by the IFB Specifications have been identified by a “brand name or equal” description, such identification is intended to be descriptive, but not restrictive, and is to indicate the quality and characteristics of products that will be satisfactory. Bidders offering “equal” products including products of the brand name manufacturer other than the one described by brand name, will be considered by the Authority if such products are clearly identified in the Band and are determined by the Authority to meet fully the salient characteristic requirements in the IFB Specification.
 2. Unless the Bidder clearly indicates that it is offering an “equal” product by submitting Section 00433, BRAND NAME OR EQUAL FORM, the Bidder shall be considered as offering a brand name products referenced in the IFB Documents.

3. If the Bidder proposes to furnish an “equal” product, the brand name, if any, of the product to be furnished shall be otherwise clearly identified and the determination as to equality of the product offered shall be the responsibility of the Authority and will be based on information reasonably available to the Authority.
4. If the Bidder proposes to modify a product so as to make it conform to the requirements of the IFB Specification, it shall (i) include a clear description of such proposed modifications, and (ii) clearly mark descriptive material to show the proposed modifications.
5. Caution to Bidders: The Authority is not responsible for locating or securing any information, which is not identified and reasonably available to the Authority. Accordingly, to ensure that sufficient information is available, the Bidder must furnish all descriptive material (such as catalogue cuts, illustrations, drawings, or other information) necessary for the Authority to (i) determine whether the product offered meets the salient characteristic requirements of the IFB Specification and (ii) establish exactly what the Bidder proposes to furnish and what the Authority would be binding itself to purchase by approval by the Authority. The information furnished may include specific references to information previously furnished or to information otherwise available to the Authority.

00250 PRE-BID MEETINGS SCHEDULE

- A. Unless otherwise notified, a pre-Bid conference will be held as noted in the Project Bid Schedule, Section 00103, PROJECT BID SCHEDULE. The purpose of this conference will be to answer questions regarding, or requests for clarifications of, the Invitation documents. It is requested that Bidders submit their questions and requests for clarifications of the terms, conditions, and requirements of this Invitation to Bid to the Contracting Officer in writing either in advance of the meeting or during the meeting. Questions from the floor, however, are permissible.
- B. Bidders are required to visit the Site of the Work and inform themselves of all local conditions that may affect the Work or the cost thereof.
- C. The Bidder acknowledges and agrees that it shall be bound by all the terms of the Contract regardless of its attendance at the pre-Bid conference, or the thoroughness of its Site investigation prior to submitting its Bid.

00260 PRE-AWARD MEETING

- A. The Authority requires that a pre-award meeting with the successful Bidder be held prior to the actual award of the Contract. The purpose of the meeting will be to review the successful Bidder’s understanding of the Contract Documents, contractual requirements prior to award, and to confirm the successful Bidder’s capabilities, financial standing, and past experience.
- B. The pre-award meeting will be held in the Washington Metropolitan area and shall be chaired by the Authority and attended by representatives of the Authority, the successful Bidder and its Key Staff nominated for assignment to the Contract, and major

Subcontractors if so requested by the Authority. Concerned parties shall each be represented by persons thoroughly familiar with and authorized to conclude matters relating to the Work described in the IFB Documents.

- C. Agenda discussion items for the meeting may include, but are not limited to, the following:
1. Requirements for acceptability of payment and performance bonds
 2. Requirements for DBE participation
 3. Requirements for quality assurance/quality control
 4. Percentage of construction work to be performed by Contractor's forces
 5. Verification of successful Contractor's experience with similar work, including previous Authority contracts, scheduling capabilities, and financial standing
 6. Understanding of work described in the IFB Documents and the physical constraints associated with the Work
 7. Instructions for required submittals due at the Pre-Construction Meeting including:
 - a. Identification of Key Staff
 - b. Organizational Chart
 - c. Subcontractor identifications and qualifications
 - d. Initial Project Management Plan
 - e. Quality Management Plan
 - f. Systems Integration Plan
 - g. Health and Safety Plan
 - h. Temporary Facilities Plan
 - i. Permit and Regulatory Requirements Plan
 - j. 90-Day Schedule with cost loading
 - k. Description of Compliance with Contract Documents
 - l. Execute Contract Agreement
 - m. Power of Attorney Form
 - n. Power of Execution Form
 - o. Performance Bond Form
 - p. Payment Bond Form
 - q. Insurance Certificates, and
 - r. Preliminary Schedule of Required Submittals
- D. Representations and commitments made by the successful Bidder or its Subcontractors will be construed as binding to the Contract.

END OF SECTION

Section 00300

INFORMATION AVAILABLE TO BIDDERS

This Section includes information made available to the Bidders.

00301 INVITATION FOR BID (IFB) DOCUMENTS

- A. The IFB Documents, including General Conditions, Supplementary Conditions, General Requirements, Specifications, Drawings, reports, safety and security requirements, and quality requirements of this Invitation FQ15155 as referenced in this Section establish requirements for the construction of the Project. These IFB Documents shall be used by the Bidder to prepare the Bid.

00302 GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, AND GENERAL REQUIREMENTS

- A. The General Conditions, Supplementary Conditions, and General Requirements (Division 1 of the Contract Specifications) contain requirements for the administration and construction of the Project.

00303 CONTRACT SPECIFICATIONS

- A. Specifications (Division 2 through 16 of the Contract Specifications) are the parts of the Contract Documents containing written directions or requirements that specify the requirements, which must be fulfilled for the completion of the Work.
- B. The WMATA Manual of Design Criteria establishes general design criteria for the Project that shall govern the design of temporary works as defined in the Specifications unless jurisdictional codes and regulations are more stringent, in which case the codes and regulations shall govern.

00304 CONTRACT DRAWINGS

- A. Contract Drawings are the plans, profiles, typical cross sections, general cross sections, elevations, schedules, and details listed or included in the Contract Documents, which represent requirements for the Project.
- B. The WMATA CAD Manual shall be adhered to for preparation of As-built Drawings by the Contractor.

00310 EXISTING CONDITIONS

- A. The Bidder shall conduct a site visit to familiarize itself with the site prior to submitting a Bid. The Authority will make the Site(s) available to the Bidder for this purpose.

00320 GEOTECHNICAL REPORT [N/A]

00330 ENVIRONMENTAL REPORT [N/A]

00340 WMATA SAFETY AND SECURITY REQUIREMENTS

- A. This Section lists the safety and security related documents that establish the safety requirements for the Project.
 - 1. WMATA Construction Safety and Environmental Manual Requirements: A compilation of the safety and reporting requirements for this Project.
 - 2. WMATA Safety and Security Certification Program Plan: A compilation of the safety and security certification requirements for the Project.

00350 QUALITY ASSURANCE AND QUALITY CONTROL

- A. Section 01470, QUALITY MANAGEMENT SYSTEM, establishes the quality requirements for the development of the Quality Management Plan by the Contractor for execution of the Project.

END OF SECTION

Section 00400

BID FORMS AND SUPPLEMENTS

This Section includes forms and supplements for submitting Bids.

THIS PAGE NOT USED

Section 00410

BID FORMS

This Section includes the Bid Forms that are required to be submitted with Bid.

THIS PAGE NOT USED

Note: Failure to acknowledge receipt of all amendments may cause the Bid to be considered non-responsive to the request, which would require rejection of the Bid as unacceptable.

BIDDER:

Insert Firm Name

Insert Street Address

Insert City, State, Zip Code

Insert Telephone Number

Insert DUNS Number

Insert Name of Bidder and Bidders Title

Insert Bidders Signature

Directions for Submitting Bid

1. Read and comply with the Invitation Instructions. This form shall be submitted with your Bid.
2. Bid Form and related required documents must be sealed, marked, and addressed as follows:

**Washington Metropolitan Area Transit Authority
PRMT File Room 3C-02
Bid under FQ15155
Office of Procurement
600 Fifth Street, N.W.
Washington, DC 20001**

3. Bids shall be timely mailed or hand delivered to reach WMATA before 1400 (local time) on day of Bid opening. For Bids delivered prior to the bid opening date, please contact Demetrius Smith, Records Management Analyst, telephone: (202) 962-5149. Mr. Smith will secure your Bid until opening date.

Section 00431

BID SECURITY (BID BOND FORM)

This Section includes the Supplementary Bid Forms that are required to be submitted with the Bid.

BID BOND

Invitation for Bid No.: FQ15155

Bid Closing Date: _____
Insert date

Penal Sum of Bond: _____
Insert \$ or %

5% of Bid Price or Amount: _____
Insert amount

Date Bond Executed: _____
Insert Date

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety(ies) hereto, are firmly bond 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 this Bid identified above, within the period specified therein for acceptance (60 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 (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 its 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 60 Days in addition to the period originally allowed for acceptance of the Bid.

Principals

1. Firm Name: *Corporate Seal*

Firm Address:

Name, Title and Signature

State of Incorporation: _____

2. Firm Name: *Corporate Seal*

Firm Address:

Name, Title and Signature

State of Incorporation: _____

3. Firm Name: *Corporate Seal*

Firm Address:

Name, Title and Signature

State of Incorporation: _____

Corporate Surety(ies)

Surety A Firm Name: Corporate Seal

Firm Address:

Liability Limit:

Name, Title and Signature

State of Incorporation: _____

Surety B Firm Name: Corporate Seal

Firm Address:

Liability Limit:

Name, Title and Signature

State of Incorporation: _____

Surety C Firm Name: Corporate Seal

Firm Address:

Liability Limit:

Name, Title and Signature

State of Incorporation: _____

Attach additional pages as needed.

Instructions

1. This form is authorized for use whenever a Bid guaranty is required in connection with construction work.
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 may be expressed as a percentage of the proposal price (e.g., 5% of the Bid Price) if desired or may be expressed 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 proposal bond should be typed in the space provided.

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Section 00433

BRAND NAME OR EQUAL FORM

(Submit with Bid)

Bidder is required to state in the spaces below the Manufacturer's Name, Part/Product Number, Description, and to provide relevant specifications, including technical data and Material Safety Data Sheets. Be advised that these items, if any, are only set apart for identification. If products, other than those specified, are not listed here, the Bid will be viewed as providing the as-specified products.

Spec Section/Product Specified:	_____
Manufacturer:	_____
Product Proposed:	_____
Spec Section/Product Specified:	_____
Manufacturer:	_____
Product Proposed:	_____
Spec Section/Product Specified:	_____
Manufacturer:	_____
Product Proposed:	_____
Spec Section/Product Specified:	_____
Manufacturer:	_____
Product Proposed:	_____

Note: If applicable, attach additional sheets as necessary in this format. This form is included to establish a format for submission by the Bidder of an "or Equal" and will be utilized for the Bid submittal to the Authority for equal products by the Contract. *This form may also be used during the construction of the Contract.*

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Section 00434

BID SCHEDULE

(Submit with Bid)

A. DESCRIPTION OF WORK

The Contractor shall build the Facilities in the manner and at the location set forth in the IFB Documents of this Invitation, and in accordance with the Bid as finally accepted by the Authority. The Contractor shall construct the facility in strict accordance with the Contract Documents and in full compliance with the Rules and Regulations of the Jurisdictional Authorities.

B. BID SCHEDULE

The Contractor shall furnish all necessary labor, materials, tools, equipment and supervision to construction the improvements as described in the contract specifications and drawings for Franconia Springfield Metro Station Improvement Project.

The Contract shall submit the bid breakdown for the following items:

Bid Schedule

1. All work related to Bus Bay Improvements, Safety and Access Improvements as specified in the Contract Documents including coordination of installation of bicycle cage except the following two items:	1 LS	_____
2. Bus Shelters (All electrical work shall be provided in Item 1):		
a. Three at new Bus Bays	1 LS	_____
b. Seven at existing Bus Bays	1 LS	_____
c. Attic light fixture and spare parts for Bus Shelters (See Section 01110)	1 LS	_____
3. Managers Kiosk (All electrical work shall be provided in Item 1)	1 LS	_____
	Total Bid Price	_____

NOTE:

1. Pricing must be provided for all of the above items.
2. The Contractor will require grouping the schedule of values with the consultation of WMATA before submission.

C. The Contractor shall comply with the following Federal Transportation Administration (FTA) TIGER Grant No. 8 (“Transportation Investments Generating Economic Recovery”) requirements:

1. The Project shall complete as defined in the schedule duration for reimbursement of FTA Grant Funding.
2. The Contractor shall submit accurate and true job hour reports for their own work forces and subcontractors work forces working both on-site and off-site as per Appendix C (Volume 6 “Attachments”) on a monthly basis. The Contractor shall add names of additional trades as applicable to the Project. The report shall be submitted to the designated WMATA Representative within the first week of each month for work performed the previous month.
3. The Contractor shall submit a monthly report with the following information within the first ten (10) days of the month for work performed the previous month:
 - a. Accomplishments of month
 - b. Financial status of the Project with DBE goal
 - c. Schedule status of the project including important milestones for look ahead
 - d. Schedule impact and its recover status
 - e. Important milestones for next three months (look ahead)
 - f. Work photographs taken for activities (before, during and after completion of activities) arranged in sequential order for each month
 - g. Project risks with risk mitigation plans
 - h. Pending action items for project including Contractor, Subcontractors, and Vendors and probable resolution dates and actions
 - i. Inspection and testing reports
4. The Contractor shall include approved payment schedules with each invoice submission.
5. The Contractor shall submit monthly DBE forms within the first week of each month for work performed the previous month.
6. The Contractor shall comply with BUY AMERICA clause (Section 00788 F).
7. The Contractor shall submit payroll certifications with name of employee, hours worked, hourly rates and total amounts on monthly basis by close of business the last business day of each month for work performed the previous month.

Name of Bidder or Contractor: _____

Section 00451

REPRESENTATIONS AND CERTIFICATIONS FORM

(Submit with Bid)

REPRESENTATIONS AND CERTIFICATIONS

(Federally Funded Supply/Service/Construction Contracts)

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

A. REPRESENTATIONS

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

By submission of this Bid, the Bidder represents that it operates as

- An individual
- A partnership
- A limited liability company
- A joint venture
- A nonprofit organization
- A corporation, incorporated under the laws of the State of _____
Insert State

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

Each Bidder 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 Proposer. 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 bidder, such other company is considered the parent of the Bidder. This control may be exercised through the use of dominant minority voting rights, use of proxy voting, contractual arrangements or otherwise.

Bidder: _____
Insert Name

Parent Company: _____
Insert Parent Company Name or "None"

Main Office Address: _____
Insert Street Address, City, State and Zip Code

-
- b. If the Bidder has no parent company, it shall provide in the applicable space below its own Employer's Identification Number (EIN), (i.e., number used on Federal Tax Returns or, if it has a parent company, the EIN of its parent company). Bidder EIN: _____ or Parent Company's EIN: _____
 - c. If a Data Universal Numbering Systems (DUNS) number has not been established for the address entered on the Invitation, Bid, 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 Bid, the Bidder 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 Bid, the Bidder 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 15% 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 the 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 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 had not previously had contracts subject to the written affirmative action program requirements of the rules and regulations of the Secretary of Labor.

B. CERTIFICATIONS

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

By submission of this Bid, the Bidder certifies, and in the case of a joint Bid, 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 proposed 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.

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

By submission of this Bid, the Bidder certifies, and in the case of a joint Bid, 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 Bidder) 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 Bidder) any fee, commission, percentage, or brokerage fee contingent upon or resulting from the award of this Contract.

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

This certification is applicable if the Contract will be federally assisted and the Bid 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 is not currently certified by WMATA as a disadvantaged business enterprise.
- b. AFFIRMATIVE ACT listed on the EPA list of Violating Facilities:
- c. Bidder shall 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

- d. Proposer shall include a certification substantially the same as this certification, including this paragraph, in every non-exempt Subcontract.

4. DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSION (RC-109, MAY 07)

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

- a. Primary Covered Transactions. This certification applies to the Proposal 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 Appendix A to 49 Code of Federal Regulations (CFR) Part 29, the Proposer certifies to the best of its knowledge and belief that it and its principals:

- (a) are not currently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal or State department or agency;

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

- (c) are not 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 B.4.a(1)(b) of this Certification; and

- (d) have not, within a three-year period preceding this Proposal, had one or more public transactions (Federal, State, or local) terminated for cause or default.

- (2) Where the Proposer is unable to certify to any of the statements in this certification, the Proposer shall attach an explanation to this Proposal.

- 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 Appendix B to 49 Code of Federal Regulations (CFR) Part 29, the prospective lower tier Subcontractor certifies, by submission of this Bid, 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 Bid.
 - c. The Certification required by paragraph B.4.b above shall be included in all applicable Subcontracts and a copy kept on file by the Contractor. The Contractor will be required to furnish copies of certifications to the Contracting Officer upon the Contracting Officer's request.
5. CERTIFICATION OF INDEPENDENT PRICE DETERMINATION (RC-110, MAY 07)
- a. By submission of this Bid, the Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, that in connection with this procurement:
 - (1) The prices in this Bid have been arrived at independently, without, for the purpose of restricting competition, any consultation, communications, or agreement with any other Bidder 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 Bid have not been knowingly disclosed by the Bidder and will not be knowingly disclosed by the Bidder 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 Bidder or to any competitor; and
 - (3) No attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition.
 - b. Each person signing this Bid certifies that:
 - (1) He or she is the person in the Bidder's organization responsible within that organization for the decision as to the prices being proposed 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 Bidder's organization responsible within that organization for the decision as to the prices being proposed herein, be 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.
6. CERTIFICATION OF NONSEGREGATED FACILITIES (RC-111, MAY 07)

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

-
- a. By submission of this Bid, the Bidder certifies, and in the case of a joint Bid, each party hereto 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 Bidder 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 with 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).

C. NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR CERTIFICATIONS OF NON-SEGREGATED FACILITIES

A Certification of Non-segregated 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).

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

By submission of this Bid, the Bidder certifies, and in the case of a joint Bid, each party hereto 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 Bidder 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 Bidder further agrees by submitting this Bid that it will include this certification, without modification, in all Subcontracts and purchase orders.

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

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

a. By submission of this Bid, the Bidder certifies, and in the case of a joint Bid, 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 any 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 sub-awards at all tiers and that all sub-recipients 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.

3. 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 Bid, the Bidder certifies, and in the case of a joint Bid, 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 project 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 in 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11.

- b. Bidder must submit to the Authority the appropriate Buy America certification (below) with all Bids on FTA-funded contracts, except those subject to a general waiver. Bids 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:

- a. Certificate of Compliance with 49 U.S.C. 5323(j)(1). The Bidder 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.
- b. Certificate of Non-Compliance with 49 U.S.C. 5323(j)(1). The Bidder hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(1) and 49 CFR Part 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 CFR 661.7.

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

- a. Certificate of Compliance with 49 U.S.C. 5323(j)(2)(C). The Bidder hereby certifies that it will meet the requirements of 49 U.S.C. 5323(j)(2)(C) and the regulations in 49 CFR Part 661.11.
- b. Certificate of Non-Compliance with 49 U.S.C. 5323(j)(2)(C). The Bidder hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(2)(C) and 49 CFR Part 661.11, 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 CFR 661.7.

4. PRE-EMPLOYMENT CRIMINAL BACKGROUND CHECK REQUIREMENT

- a. Criminal background checks of all Contractor employees working at a WMATA facility on this Contract will be required. Eligibility for access to WMATA property will be based on the WMATA's pre-employment Criminal Background Check criteria. WMATA will provide the Contractor employees with background check forms that the Contractor employees must complete and sign. The forms will require the Contractor employees to appear in person, provide their full legal names, including middle if applicable, as well as their Social Security number, in addition to other information that will be necessary to conduct the background check. The operating hours are Monday through Friday from 0700 to 1530 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 Subcontractor employee will be notified that the background check failed. The completed forms are

secured in a locked file cabinet and are destroyed one (1) year after the expiration date on the Contractor's employee badge. These background checks are expected to take one (1) business day to processing, so the Contractor employee must allow sufficient time for completion. The background check is free of charge.

- b. 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 in making prudent decisions and maintaining 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. On the other hand, 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.

5. CERTIFICATION OF NON-DELINQUENT TAXES

This certification is applicable to federally-assisted contracts.

- a. By submission of this Bid, the Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, that in connection with this procurement:
 - (1) It has not been convicted over the past 3 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 Bidder 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) If 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):

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

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).

E. 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 Bidder 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:

1. 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.
2. 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.

SIGNATURE BLOCK FOR ALL REPRESENTATIONS AND CERTIFICATIONS

BIDDER:

Insert firm name

Insert street name

Insert city, state, zip code

Insert telephone number

Representative authorized to act on
Bidder's behalf:

Insert name, title

Date: _____
Insert date

Insert/Print Name of Bidder

Insert Bidder's title

Insert Signature of Bidder

Section 00452

BID DATA FORM

(Submit with Bid)

Contract Number: FQ15155

Date of Request: _____

Project Name: Bus Bay, Safety and Access Improvements at Franconia Springfield Metro Rail Station

Project Location: 6880 Frontier Drive, Springfield, Virginia 22150

1. Name of Firm:
2. Legal Address:
3. Legal Entity: Individual Partnership Joint Venture Corporation
4. Date Organized:
5. State in which incorporated:
6. Names and addresses of Officers or Partners:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____
7. How long has your firm been in business under its present name? _____
Number of Years
8. Attach as SCHEDULE 7 a list of current contracts, each with contract amount, owner, architect-engineer, and 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.
9. Attach as SCHEDULE 8 a list of contracts, each with contract amount, owner, architect engineer, and character or type of work, for contracts completed in the last 5 years.

-
10. What is the estimated work placement value required per year to complete the work described in SCHEDULE 7? 20xx: \$ _____ 20xx: \$ _____ 20xx: \$ _____
11. Have you ever been denied an award on which you were low bidder? Yes No If the answer is YES, attach as SCHEDULE 10 the full particulars regarding each occurrence.
12. Have you ever failed to complete any contract, other than current, on which you were the low bidder? Yes No If the answer is YES, attach as SCHEDULE 11, the full particulars regarding each occurrence.
13. Have you ever been assessed liquidated damages or actual damages for late completion within the last five years? Yes No If the answer is YES, attach as SCHEDULE 12 the full particulars regarding each occurrence.
14. Financial resources available as working capital for this Contract:
- a. Case on hand: \$ _____ Date: _____
 - b. Sources of credit: _____
15. Attach as SCHEDULE 14 certified financial statements and letters from banks regarding credit as required by Section 00200, INSTRUCTIONS TO BIDDERS, of this Contract.
16. Attach as SCHEDULE 15 the design and construction experience of each officer and principal individual of your organization; including present position, years of design and construction experience, magnitude and type of work, and in what capacity.
17. What percentage of the Work (Contract amount) do you intend performing with your own personnel? _____%
18. Attach as SCHEDULE 17 a list of all Subcontractors and the percentage and character of work (Contract amount) which each will perform.
19. Attach as exhibits completed Bid Data Forms for each of the Subcontractors listed in SCHEDULE 17 above.
20. If the Contractor or Subcontractor is a joint venture, submit Bid Data Form for each member of the joint venture.

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, answers, and attachments.

For: _____

DUNS # _____

Date: _____

Signatory's Name

Signatory's Title

Signatory's Signature

Location: _____

Section 00453

DISADVANTAGED BUSINESS ENTERPRISE (DBE) DATA

(Submit with the Bid)

For Disadvantaged Business Enterprise (DBE) Data and forms, refer to Appendix B of Section 00400, BID FORMS AND SUPPLEMENTS.

Section 00492

BID AS ACCEPTED

- A. Instructions: Insert here the Bid as Accepted.
- B. See Section 00910, AMENDMENTS, for Amendment Letters.

Section 00500

AGREEMENT

NOTICE TO BIDDERS:

- A. This Section includes the Contract Form to be submitted by the successful Bidder and represents the legal instrument binding the two parties to the Work once the document is signed by the Authority and the Contractor.
- B. The following form is included for the Contractor's information and use in the event the Bidder is awarded the Contract. It is not required to be submitted with the Bid.

Section 00510

CONSTRUCTION CONTRACT FORM

Contractor:

Contract Number: FQ15155

Date:

Contract For:

Contract Price: \$

Period of Performance: _____ calendar days

In consideration of the covenants contained herein, the Washington Metropolitan Area Transit Authority (hereinafter called the Authority), represented by the Contracting Officer executing this Contract, and the individual, partnership, joint venture, or corporation named above (hereinafter, the Contractor), mutually agree to perform this Contract in strict accordance with its provisions. The Contract consists of: the IFB Documents and all documents referenced or attached to the IFB Documents including the following:

1. Bid as finally accepted.
2. Other publications referenced in the IFB Documents.
3. Amendment Number(s):

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.

Attest _____ *By: _____

Attest _____ *By: _____

Attest _____ *By: _____

Washington Metropolitan Area Transit Authority

By: _____

*NOTE: Execution for the Contractor that is an individual, corporation or partnership shall be accompanied by the Power of Execution (Section 00542) that follows. A Joint Venture Contractor must complete the Power of Attorney (Section 00541) that follows. All persons executing this Contract must complete the appropriate Certification of the person's authority to act on behalf of the Contractor.

Section 00540

ATTACHMENTS TO THE CONTRACT

Attachments to supplement the Agreement Form are included for the Bidder's information and use in the event Bidder is awarded the Contract. They are not required to be submitted with the Bid.

Section 00541

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS,

That _____
Insert names of all venturers of the joint venture

constituting all of the venturers of the joint venture known as

Insert name of the joint venture

which is desirous of entering into a contract with the

Washington Metropolitan Area Transit Authority,

do hereby designate and appoint

Insert name of appointed venturer

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 payments certificates, and other like instruments. The undersigned specifically acknowledge and agree that the execution of such Bid 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 such Bid or Contract.

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

This _____ day of _____, 2015

Contractor Name:

Attest _____

By: _____

Contractor Name:

Attest _____

By: _____

Contractor Name:

Attest _____

By: _____

Section 00542

POWER OF EXECUTION

KNOW ALL PERSONS BY THESE PRESENTS,

That _____,
Insert names of all venturers of the joint venture

constituting all of the venturers of the joint venture known as

Insert name of the joint venture

which is desirous of entering into a contract with the

Washington Metropolitan Area Transit Authority,

do hereby designate and appoint

Insert name of appointed venturer

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 payments certificates, and other like instruments. The undersigned specifically acknowledge and agree that the execution of such Bid 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 such Bid or Contract.

IN WITNESS WHEREOF, the undersigned have executed this Power of Execution

this _____ day of _____, 2015

Contractor Name:

Attest _____

By: _____

Contractor Name:

Attest _____

By: _____

Contractor Name:

Attest _____

By: _____

Section 00550

NOTICE TO PROCEED (NTP)

Section 00600

BONDS AND CERTIFICATES

This Section includes bond forms required to be submitted by the Contractor.

Section 00610

BOND REQUIREMENTS

- A. Requirements: Within 10 Days after the prescribed forms are presented for signature to the Bidder to whom award is made, a written Contract and Attachments (Power of Attorney and Power of Execution) on the forms provided in Section 00500, AGREEMENT, shall be executed and delivered to the Contracting Officer, 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 U.S. 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: The penal sum of the performance bond shall equal 100 percent of the Contract Price.
 2. Payment Bond: The penal sum of the payment bond shall equal 100 percent of the Contract Price.
- B. Failure to Furnish: In the event the required bonds are not furnished as specified, the Contracting Officer may issue the Notice to Proceed, however, no payment will be made to the Contractor until the required bonds are furnished.

Section 00611

PERFORMANCE BOND

BIDDER'S INFORMATION NOTICE: The following is included for the Bidder's information and use in the event Bidder is awarded the Contract. It is not required to be submitted with the Bid.

Contract Number: FQ15155

Date: _____

Penal Sum of Bond: \$ _____

Date Bond Executed: _____

KNOW ALL PERSONS BY THESE PRESENTS, that we, the Principle 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 and 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. Surety acknowledges Authority can advance the date of payments to Contractor, and by so doing the Surety remains liable under the terms of the bond.

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

Principals

1. Firm Name:

Corporate Seal

Firm Address:

Signature and Title

State of Incorporation:

2. Firm Name: Corporate Seal

Firm Address:

Signature and Title

State of Incorporation:

3. Firm Name: Corporate Seal

Firm Address:

Signature and Title

State of Incorporation:

Corporate Surety(ies)

Surety A Firm Name: Liability Limit: \$ Corporate Seal

Firm Address:

Signature and Title

State of Incorporation:

Surety B Firm Name: Liability Limit: \$ Corporate Seal

Firm Address:

Signature and Title

State of Incorporation:

Surety C Firm Name: Liability Limit: \$ Corporate Seal

Firm Address:

Signature and Title

State of Incorporation:

Attach additional pages as needed.

Bond		
Premium	Total Premium	\$
Schedule		

Performance Bond Instructions:

This form is authorized for use in connection with contracts for construction work or the furnishing of labor, materials, equipment, supplies, and services.

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 their authority must be furnished.

Corporation executing the bond as sureties must be among those appearing on the Treasury Department's 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)".

Section 00612

PAYMENT BOND

Contract Number: FQ15155

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 services, labor, material, and/or equipment 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:

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 Authority that every claimant as herein defined, who has not been paid in full before the expiration of a period of 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 Authority 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 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 it maintains an office or conducts business, or its 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 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.

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

Principals

- 1. Firm Name: _____ Corporate Seal
Firm Address: _____

Signature and Title
- 2. State of Incorporation: _____
Firm Name: _____ Corporate Seal
Firm Address: _____

Signature and Title
- 3. State of Incorporation: _____
Firm Name: _____ Corporate Seal
Firm Address: _____

Signature and Title
State of Incorporation: _____

Corporate Surety(ies)

Surety A Firm Name: _____ Liability Limit: \$ Corporate Seal
Firm Address: _____

Signature and Title

Surety B State of Incorporation: _____
Firm Name: _____ Liability Limit: \$ Corporate Seal
Firm Address _____

Signature and Title

Surety C State of Incorporation: _____
Firm Name: _____ Liability Limit: \$ Corporate Seal
Firm Address: _____

Signature and Title
State of Incorporation: _____

Attach additional pages as needed.

Payment Bond Instructions

1. This form is authorized for use in connection with contracts for construction work or the furnishing of labor, materials, equipment, 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 their 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.

THIS PAGE NOT USED

Section 00613

PERFORMANCE AND PAYMENT BONDS (ADDITIONAL BOND SECURITY)

If any surety upon any performance bond furnished in connection with this Contract becomes unacceptable to the Contracting Officer, or if any such surety fails to furnish reports as to its financial condition from time to time as requested by the Contracting Officer, 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.

If any surety upon any payment bond furnished in connection with this Contract becomes unacceptable to the Contracting Officer, or if any such surety fails to furnish reports as to its financial condition from time to time as requested by the Contracting Officer, 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.

Section 00620

CERTIFICATES

- A. This Section provides an area for conforming the IFB Documents with required Affidavits and Certificates provided by the Contractor; i.e., Certificates of Acceptance, Application for Payment, Insurance, Compliance including ADAAG Design and Construction Compliance and Checklists, Substantial Completion, Acceptance, and Final Payment.
- B. Instructions: Insert here all required Certificates to conform to the Contract Documents.

Section 00700

GENERAL CONDITIONS

This Section includes a compilation of contractual and legal requirements that list the rights, responsibilities, and relationships of the parties to a Contract and defines duties and limits of authority for design professionals and construction management in performance of contract administration. This Section shall be read in conjunction with Section 00800, Supplementary Conditions, which specifies modifications to these General Conditions, and which will be cited using the same last 2 digits of the Section number; i.e., a modification to Section 00724 will be indicated as Section 00824.

00701 DEFINITIONS

- A. As used throughout the Contract Documents, the following terms shall have the meanings set forth below:
1. **Acceptance:** Acknowledgement by the Authority of full and satisfactory physical completion and commissioning of all Work including Punch List items, all in accordance with the Contract Documents.
 2. **Agreement:** The Authority's form titled "Construction Contract Form" in this Invitation for Bid (IFB) that, upon execution by the Contractor and the Authority, creates the Contract between the two parties.
 3. **Amendment:** Written or graphic instructions issued to clarify, revise, add, or delete IFB requirements that are issued before the execution of the Agreement.
 4. **Approval of a Submittal or any other item** shall be solely for the purpose of establishing conformance to the Contract Documents.
 5. **As shown, as indicated, as detailed or words of similar import:** Shall be understood to mean that the reference is made to the Contract Documents.
 6. **As specified, as described, or words of similar import:** Shall be understood to mean that the reference is made to the Contract Documents.
 7. **Authority:** 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.
 8. **Bid:** The written offer of a Bid submitted to the Authority as required by the Invitation for Bid (IFB).
 9. **Bidder:** The prospective Contractor who submits a Bid to perform the Work of the Contract.

10. Board of Directors: The Board of Directors of the Washington Metropolitan Area Transit Authority.
11. Claim: A written demand or assertion by the Contractor seeking, as a legal right, the payment of money, adjustment or interpretation of Contract terms, or other relief, arising under or relating to this Contract.
12. Contract: The written Agreement between the Authority and the Contractor covering the Work as set forth in the Contract Documents.
13. Contract Documents: The documents consist of the IFB Documents, all Amendments issued before the effective date of the Agreement, and all Modifications issued after the effective date of the Contract; the Notice to Proceed; including the Contractor's Bid, as finally accepted by the Authority.
14. Contracting Officer: An employee with authority duly delegated from the powers of the Chief Procurement Officer to legally bind the Authority by signing a contractual instrument. The Contracting Officer is the Authority's primary point of contact for pre-award administration, Modifications above the limits of the Contracting Officer Representative, and Final Settlement.
15. Contracting Officer Representative: The person to whom the Contracting Officer delegates the authority and responsibility for post award execution of the Contract. The Contracting Officer Representative is the Authority's primary point of contact with its Contractor.
16. Contractor: The individual, partnership, firm, corporation, or other business entity that is contractually obligated to the Authority to furnish, through itself or others, the construction services described in the Contract, including all incidentals which are necessary to complete the Work in accordance with the Contract.
17. Contract Price: The amount payable to the Contractor under the terms and conditions of the Contract based on lump sum prices, unit prices, fixed prices, or combination thereof, with adjustments made in accordance with the Contract.
18. Day: Calendar day except where the term working day or like term is used.
19. Designer: The individual, partnership, firm, corporation or other business entity that is either the Contractor, or employed or retained by the Contractor, to manage and perform the design services for the Project.
20. Equivalent: Equal or better quality and performance to that specified in the Contract Documents.
21. Final Payment: The last payment made to the Contractor following Acceptance of the Work. For full description, refer to Section 00755, FINAL PAYMENT.

22. **General Conditions:** A compilation of contractual and legal requirements that lists the rights, responsibilities, and relationships of the parties to a contract and defines duties and limits of authority for design professionals and construction management in performance of contract administration.
23. **General Requirements:** A compilation of the conditions and performance requirements (Division 1) peculiar to the specific contract that govern the execution of the design and construction work.
24. **IFB (Invitation for Bid) Documents:** The documents as defined in Section 00301, IFB DOCUMENTS.
25. **Industry Standards:** Drawings, documents, and specifications or portions thereof published by industry organizations. Industry Standards are not Contract Documents unless specifically listed as such in a WMATA Standard Specification or WMATA Guide Specification.
26. **Jurisdictional Authority:** Refers to Federal, State, and local authorities or agencies having approval authority over work to which reference is made.
27. **Legal Requirements:** All federal, state and local laws, ordinances, rules, orders, decrees, and regulatory requirements such as: building codes, mechanical codes, electrical codes, fire codes, Americans with Disabilities Act Accessibility Guidelines (ADAAG) regulations and other regulations of any government or quasi-government entity that are applicable to the Project.
28. **Milestone:** A specified date in the Contract by which the Contractor is required to complete a designated portion or segment of the Work
29. **Modification:** A written document issued pursuant to Section 00748, CHANGES, which alters the scope of the Work, the Schedule, the Contract Price, the Period of Performance, or makes any other change to the Contract after award or execution of the Contract.
30. **Notice to Proceed:** Written notice issued by the Authority establishing the date on which the Contractor may commence Work and directing the Contractor to proceed with all or a portion of the Work.
31. **Operations Readiness Date (ORD):** The date upon which WMATA certifies that the system and equipment are complete and capable of supporting revenue rail service.
32. **Option:** A unilateral right in the Contract by which, for a specified time, the Authority may elect to purchase, at a predetermined price specified in the Contract, additional equipment, supplies, services, or work called for by the Contract.
33. **Period of Performance:** The time allotted in the Contract Documents for completion of the Work. The Period of Performance begins upon the effective date of the Notice to

Proceed and ends on the date of Acceptance. Period of Performance incorporates the Milestones established for the Contract.

34. Product Data: Information furnished by the Contractor to describe materials used for some portion of the Work, such as written or printed descriptions, illustrations, standard schedules, performance charts, instructions, brochures, and diagrams.
35. Project: The construction of the facility described in the Contract Documents.
36. Punch List: Work that remains to be completed after Substantial Completion. This Work must be completed as a condition of Final Completion and Acceptance.
37. Request for Information (RFI): The document by which the Bidders or Contractor request clarification, verification, or information concerning a portion of the IFB or the Work.
38. Shop Drawings: Fabrication, erection, layout, setting, schematic, and installation drawings prepared by the Contractor for permanent structures, equipment, and systems designed by it to comply with the Contract Documents.
39. 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.
40. 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 Contract Documents.
41. Subcontract: Any Contract between the Contractor and a Subcontractor, or between Subcontractors of any tier, to perform a portion of the Work.
42. Subcontractor: An individual, firm, partnership, or corporation that has a contractual obligation with the Contractor or other Subcontractor or Supplier.
43. Submittal: Written or graphic document or Sample prepared for the Work by the Contractor or a Subcontractor or Supplier and submitted to the Authority by the Contractor, including Shop Drawings, Product Data, Samples, certificates, schedules of material, or other data.
44. 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.
45. Substitution: An item offered by the Contractor of significant difference in material, equipment, or configuration, which functionally meets the requirements of the Contract Documents but is submitted in lieu of item specified therein.

46. Supplementary Conditions: The term Supplementary Conditions means modifications to the General Conditions for requirements unique to a specific project.
47. Supplier: A Subcontractor who is a manufacturer, fabricator, supplier, distributor, or vendor having a contract with the Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work of the Contractor or any Subcontractor.
48. Utility: A public and private facility or installation, other than a WMATA system facility, which relates to (1) the conveyance and supply of water, sewage, gas, chemicals, steam, petroleum products, and other piped installations, or (2) electrical energy, telephone, telegraph communications, radio, television, and cellular or wireless communications.
49. Utility Standards: Drawings and specifications for Utilities published or issued by municipalities or Utility companies.
50. WMATA CAD Manual: Document that establishes drafting criteria for drawings and electronic files that provide templates for drawing/plotter configuration to Bidders and Contractor.
51. WMATA Manual of Design Criteria: Document that outlines the design criteria and process requirements that must be followed for the submittal of project information to WMATA, and measures that are required when constructing a project in the vicinity of, or impacting WMATA systems and facilities.
52. WMATA Safety Manual: A compilation of the appropriate safety and reporting requirements for the Project as specified in Section 00370, WMATA SAFETY AND SECURITY REQUIREMENTS.
53. WMATA Safety and Security Certification Program Plan: A compilation of the appropriate System safety and security certification requirements for the Project.
54. Work: All design and construction services, including supervision, quality control and quality assurance, labor, materials, machinery, equipment, tools, supplies and facilities required to complete the Project, or the various separately identifiable parts thereof including but not limited to Safety, Security, System Safety Certification and Commissioning requirements, in accordance with the terms of the Contract.
55. Working Drawings: Plans prepared by the Contractor 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 as specified in Section 01330, SUBMITTAL PROCEDURES.

00702 ORDER OF PRECEDENCE

- A. Any inconsistency in this invitation or Contract shall be resolved by giving precedence in the following order:

1. Contract Modifications (only) in Section 00904, AMENDMENTS AND MODIFICATIONS
 2. The Agreement Form and Attachments in Section 00500, AGREEMENT, Section 00600, BONDS AND CERTIFICATES, and Amendments (only) in Section 00900, AMENDMENTS AND MODIFICATIONS
 3. Representations and Certifications in Section 00451, REPRESENTATIONS AND CERTIFICATIONS FORM
 4. Supplementary Conditions in Section 00800, SUPPLEMENTARY CONDITIONS.
 5. General Conditions in Section 00700, GENERAL CONDITIONS.
 6. General Requirements - Division 1
 7. WMATA Manual of Design Criteria
 8. Specifications
 9. Drawings
 10. Reports and Studies
- B. In the event of a conflict within, between, or among the above listed order of precedence, the more stringent requirement shall apply.

00703 GENERAL REQUIREMENTS, DRAWINGS, AND SPECIFICATIONS

- A. During the construction of the Project, the Contractor shall keep at the jobsite a copy of the Contract Documents. The Contractor shall at all times give the Contracting Officer Representative access thereto.
- B. The Sections of Division 1, General Requirements, procedures shall govern the execution of the Work of the Contract.
- C. Anything mentioned in the Contract Specifications and not shown on the Contract Drawings, or shown on the Contract Drawings and not mentioned in the Contract Specifications, shall be of like effect as if shown or mentioned in both.
- D. In case of discrepancy between the Contract Specifications and Contract Drawings, the Contract Specifications shall govern. In case of discrepancy among the figures within the Contract Drawings, the matter shall be promptly submitted in writing to the Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, who will promptly make a determination in writing. Notification of conflicts among the requirements and criteria either indicated in the Contract Specifications, Contract Drawings, or required by local, State, or Federal jurisdictions or Utilities, that affect the scope, cost, or quality of the Work, shall be promptly submitted in writing to the Contracting Officer Representative for a written determination in accordance with Section 01330, SUBMITTAL

PROCEDURES. Any adjustment by the Contractor without such a determination shall be at the Contractor's own risk and expense.

- E. Wherever in the Specifications the imperative form is used such as the words "directed," "ordered," "designated," "prescribed," or words of like import, it shall be understood that the "direction," "requirement," "order," "designation," or "prescription" of the Contracting Officer Representative 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 Representative.
- F. Should it appear that the Work to be performed is not sufficiently detailed or explained in the Contract Documents, then the Contractor shall promptly apply to the Contracting Officer Representative in writing in accordance with Section 01330, SUBMITTAL PROCEDURES, for such written explanations as may be necessary and shall conform to the explanation provided. The Contractor shall promptly notify the Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, of all errors, omissions, inconsistencies, or other defects including inaccuracies, which it may discover in the Contract Documents, and shall provide options to the Contracting Officer Representative to remedy such errors, omissions, or other defects, and shall obtain in writing from the Contracting Officer Representative specific instruction regarding any such error, omission, or defect before proceeding with the design work affected thereby. Omission of details of the Work from the Contract Documents or the mis-description of details of work, which are necessary to carry out the intent of the Contract Documents, or which are customarily preformed, shall not relieve the Contractor from performing such omitted work, no matter how extensive, or mis-described details of the Work, and they shall be performed as if fully and correctly set forth and described in the Contract Documents, without entitlement to a Modification hereunder.

00704 INTENT OF CONTRACT

- A. The Contractor shall, upon execution of this Contract and receipt of the Notice to Proceed (NTP), perform all work as defined herein to complete the Project as described in this Contract.
- B. It is the intent of the Contract Documents to describe a functionally complete Project to be constructed in accordance with the Contract Documents. All work, materials, or equipment that may reasonably be inferred from the Contract Documents, from prevailing custom, or from trade usage as being required to produce the intended results will be furnished and performed whether or not specifically called for. Unless otherwise defined in the Contract, when words or phrases having a well-known technical, construction industry, or trade meaning are used to describe work, labor, services, materials, tools, or equipment, such words or phrases shall be interpreted in accordance with that meaning.
- C. The Contractor accepts the relationship of trust and confidence established between it and the Authority by the Contract. The Contractor agrees to furnish the architectural, engineering, and construction services set forth herein, and agrees to furnish efficient business administration and superintendence, including quality control and quality assurance, and use its best efforts to complete the Project in the best and soundest way and

in the most expeditious and economical manner consistent with the requirements of the Contract Documents.

- D. The Contractor shall be responsible for performing or furnishing construction services and related services and require its Subcontractors to perform the services in accordance with the best general practice as specified in Section 01111, KEY CONTRACTOR STAFF. Only new materials and workmanship of best standard quality shall be used. Unless otherwise specified, the Contractor shall furnish all work, services, labor, materials, tools, equipment, and incidentals, which are necessary to complete the Work in a proper, substantial, and workmanlike manner in accordance with the Contract Documents.
- E. Nothing contained in these Contract Documents shall create a contractual relationship between the Authority and any party other than the Contractor. However, it is understood and agreed that the Authority is an intended third party beneficiary of all contracts for design, engineering, or construction services and all such Subcontracts, purchase orders, and other agreements between the Contractor and third parties related to those services. The Contractor shall incorporate the obligations of this Contract into its respective Subcontracts, supply agreements, and purchase orders.

00705 LEGAL REQUIREMENTS

- A. The Contractor shall perform the Work in accordance with all Legal Requirements as specified in Section 01420, REFERENCES, and in Section 00706, PERMITS AND RESPONSIBILITIES. The Contract Price and Period of Performance will be adjusted to compensate the Contractor for the effects of changes in the Legal Requirements enacted after the date of the Agreement affecting the performance of the Work. Such effects may include, without limitation, revisions the Contractor is required to make to the Contract Documents because of changes in Legal Requirements.
- B. The Contractor's failure to construct the Work in conformance with all applicable Legal Requirements in force as of the Notice to Proceed shall not be the basis for a change to either the Contract Price or Period of Performance. The Contractor shall remedy all such failures construct the Work in conformance with all such Legal Requirements at its own expense.
- C. The Contractor shall be responsible for remaining informed of all changes in the Legal Requirements that may occur after the Notice to Proceed and shall perform the Work in accordance with such changed Legal Requirements.

00706 PERMITS AND RESPONSIBILITIES

- A. The Contractor shall, without additional expense to the Authority, be responsible for obtaining necessary licenses, permits not provided by the Authority, and easements and for complying with applicable International, Federal, State, local, or municipal laws, codes, or regulations in connection with the prosecution of the Work. Permits provided by the Authority are noted and attached in Section 00806, PERMITS AND RESPONSIBILITIES.

- B. The Contractor shall be responsible for understanding the requirements, review, and approval processes of the Project's related governmental and regulatory agencies. The Contractor acknowledges that governmental and regulatory agencies may require a significant amount of time to review, process, and approve permit applications. Consequently, the Contractor's Project Schedule shall include adequate time to address review of permits, and even then adjustments to the Contractor's work plan may be needed due to the actual requirements, review, processing, and inspection times.
- C. The Contractor further recognizes the necessity to schedule permit-related inspections well in advance and make all reasonable accommodation necessary to facilitate said inspections so as to avoid delay in progressing or completing the Work. Any delay resulting from the Contractor's failure or tardiness in scheduling permit-related inspections of any kind will not be a basis for a delay Claim.
- D. For delays in obtaining the necessary permits, which exceed scheduled durations, are beyond the control and without the fault or negligence of the Contractor and will result in a delay of the commencement of work, the Contractor may be granted an extension of time for the performance of the Contract corresponding to the delay, provided the Contractor notifies the Contracting Officer Representative immediately upon first encountering the delay. The Contractor shall keep the Contracting Officer Representative informed as to the estimated length of the requested delay.
- E. The Contractor shall be responsible for all damages to persons or property that occur as a result of its fault or negligence or that of its Subcontractors or anyone directly or indirectly employed by the Contractor, or anyone for whose acts the Contractor may be liable, subject to an allocation or proportion of any such liability, loss, cost, or expense if caused in part by a party indemnified hereunder. The Contractor shall take proper safety and health precautions to protect the Work, the workers, the public, and the property of others. The Contractor 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 in writing by the Authority.

00707 NOT USED

00708 REQUIREMENTS FOR PROFESSIONAL REGISTRATION

- A. All architecture, engineering, and other design services rendered by or through the Contractor under this Contract shall be accomplished, reviewed, and approved by Designers licensed to practice in the particular professional field involved in the jurisdiction in which the Project being designed will be constructed. The Contractor shall comply with local laws regarding the licensing of design firms and personnel providing services for the Project.

00709 PROJECT MANAGEMENT AND SUPERINTENDENCE AND KEY STAFF

- A. The Contractor shall provide project management and direct superintendence of the Work.

- B. The Contractor shall provide personnel for the positions specifically identified by the Authority in this Contract as required Key Staff, and for any other positions the Contractor deems necessary for the successful execution during performance of the Work. Also, see Section 01111, CONTRACTOR KEY STAFF, for responsibilities of key personnel. All positions shall be filled by competent personnel satisfactory to the Contracting Officer Representative. Each position shall be held by a separate full-time employee unless otherwise specifically approved by the Authority. Individuals holding these, or any key position, shall not be changed without permission of the Contracting Officer Representative. The Contractor shall acquire written Authority approval for substitutions of key personnel as specified in Section 01111, CONTRACTOR KEY STAFF. The Contractor shall provide the Authority with all information as may be reasonably requested regarding substitutions and proposed substitutions. The substitutions and proposed substitutions shall share similar or better qualities than the personnel being substituted. The Authority shall be entitled to satisfactory performance of all services described in this Contract, and the Contractor shall promptly remove from the Project any employee or other person performing services hereunder in an unsatisfactory manner.

- C. The Contractor shall present, as specified in Section 00725, COMMENCING THE WORK, and Section 01111, CONTRACTOR KEY STAFF, credentials of the Key Staff to the Contracting Officer Representative for the Contracting Officer Representative's review and acceptance in accordance with Section 01330, SUBMITTAL PROCEDURES.

00710 WORK BY Contractor

- A. The Contractor shall perform, with its own organization, work equivalent to at least the percentage specified in Section 00810, WORK BY CONTRACTOR, for the construction work.

- B. The percentage shall be determined by the dollar value of the construction work done by its own organization in comparison to total value of construction work in the Contract. The cost of the 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 percentage. The Contractor's markup for overhead and profit on work performed by Subcontractors shall not be included in determining the percentage.

- C. If, during the progress of the Work, the Contractor requests a reduction in such percentage, and if the Contracting Officer Representative determines that it would be to the Authority's advantage, the Contracting Officer Representative may approve such a reduction at its sole discretion.

00711 SUBCONTRACTOR AGREEMENTS

- A. After Contract award, the Contractor will be required to submit copies of a conformed and signed Subcontract agreements 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 Section 00744, Method of Payment. 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.

1. The Contractor shall not enter into Subcontracts totaling in amount more than the percentage of the total Contract Price permissible under Section 00710, WORK BY CONTRACTOR, without the written permission of the Contracting Officer.
2. No Subcontractor will be permitted to perform work at the Site until the Subcontractor, or the Design-Builder, in compliance with the provisions of Section 00777, INDEMNIFICATION AND INSURANCE REQUIREMENTS, has furnished satisfactory evidence of insurance as required.
3. The Authority or its representatives will not undertake to settle any difference between the Contractor and its Subcontractor or between Subcontractors.

00712 OTHER CONTRACTS

- A. 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 its own work to such additional work as may be directed by the Contracting Officer 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.
- B. The Contractor shall conduct all work in a manner that will minimize interference with the operations of other contractors and Authority employees, if any, involved in the performance of related work. All work shall be brought to a stage of completion that will conform to the Contract Documents.

00713 CONFIDENTIALITY

- A. The Contractor or its Subcontractors shall not divulge any confidential information, which is so designated by the Authority to Contractor or its Subcontractors or acquired in the course of performance of the Work under this Contract.

00714 CONDITIONS AFFECTING THE WORK

- A. 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 as described in Section 01711, ACCEPTANCE OF CONDITIONS. Any failure by the Contractor to do so will not relieve the Contractor from responsibility for successfully performing 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.

00715 SITE INVESTIGATION

- A. The Contractor acknowledges that it has investigated and satisfied itself 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 as described in Section 01711, ACCEPTANCE OF CONDITIONS. The Contractor further acknowledges that it has satisfied itself 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 provided by the Authority and 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 its Bid as described in Section 01711, ACCEPTANCE OF CONDITIONS. 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 itself with the available information will not relieve it 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.

00716 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. Prior to beginning excavation or any other work, the Contractor shall inform the Authority of buildings or structures on which it intends to perform work or which performance of the Work will affect.
- C. The Authority shall be provided sufficient notice of this inspection and afforded an opportunity to participate in the inspection. The Contractor shall submit for Approval the preconstruction inspection records as specified in Section 01711, ACCEPTANCE OF CONDITIONS, to the Authority prior to beginning work.

00717 DIFFERING SITE CONDITIONS

- A. The Contractor shall promptly, and before such conditions are disturbed, notify in writing as described in Section 01711, ACCEPTANCE OF CONDITIONS, the Contracting Officer, through the Contracting Officer Representative, of subsurface or latent physical conditions at the Site differing materially from those indicated in this Contract or 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 this Contract .
- B. The Contracting Officer Representative will promptly investigate the conditions, and if the Contracting Officer Representative 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 will be made and the Contract modified in writing accordingly.

- C. No claim of the Contractor under this Section will be allowed unless the Contractor has given the notice required in Paragraph 0 above; provided, however, the time prescribed therefore may be extended by the Contracting Officer Representative.
- D. No claim by the Contractor for an equitable adjustment hereunder will be allowed if asserted after Final Payment under this Contract.

00718 ROLE OF THE AUTHORITY

- A. The character and extent of the Work to be performed by the Contractor shall be subject to the general oversight and general approval of the Authority.
- B. The Authority will not supervise, direct, or have control over, or be responsible for, the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incidental to the Work, or for any failure of the Contractor to comply with Legal Requirements as specified in Section 00705, LEGAL REQUIREMENTS. The Authority will not be responsible for the Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

00719 AUTHORITY REVIEWS

- A. The Authority will review information submitted by the Contractor, furnish required information and required approvals, and render decisions pertaining thereto, all in a timely manner in order to facilitate the orderly progress of the Work in cooperation with the Contractor and in accordance with the planning, scheduling, and budgetary requirements and constraints of the Project.
- B. The Authority will review and Approve Submittals solely for the purpose of establishing their conformance to the Contract Documents. Such review and Approval shall not be deemed to transfer any liability from the Contractor to the Authority.
- C. The Authority will review and Approve identified construction Submittals solely to determine if the items covered by the Submittal will, after installation or incorporation in the construction, conform to the requirements set forth in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Construction Submittals requiring Authority review and Approval are specified in Contract Specifications. Construction Submittals not so specified shall be submitted to the Authority for information only. The Authority's review and Approval of construction Submittals will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by these Contract Documents) or to safety precautions or programs incidental thereto. The Authority's Approval will be general and shall not be construed as: (1) permitting any departure from the Contract Documents; (2) relieving the Contractor of the responsibility for any errors including details, dimensions, and materials; or, (3) approving departures from details furnished by the Contractor or the Authority except as otherwise specified.

- D. The Authority reserves the right to review Submittals and to disapprove any Submittal when, in its sole judgment, the Submittal deviates from the requirements of the Contract Documents and compromises the integrity of the construction element. The Authority's review, Approval, or acceptance of any Submittal required under this Contract shall not be construed to operate as a waiver of the Contractor's responsibility for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, construction, and other services provided by the Contractor under this Contract.
- E. For the Authority's procedures for reviewing and approving Submittals, refer to Section 01330, SUBMITTAL PROCEDURES, and Section 01775, CLOSEOUT.

00720 SUBMITTALS

- A. The Contractor shall Submit for review and approval a preliminary Schedule of Required Submittals, as described in Section 01330, SUBMITTAL PROCEDURES, that the Authority reserves the right to review and Approve, and the times for submitting, reviewing, and processing each Submittal.
- B. The Contractor shall maintain a Contract Document Submittal Log as described in Section 01330, SUBMITTAL PROCEDURES, to show the status of all Submittals. The submittal log and all Approved Submittals shall be kept at the Project Site and shall at all times be made available for Authority inspection. Approved Submittals and certificates shall be turned over to the Authority at the completion of the Project as part of the Project records in accordance with Section 01775, CLOSEOUT.
- C. The Authority will, in a timely manner, review and Approve those Submittals that it deems necessary and as described in Section 01330, SUBMITTAL PROCEDURES, and Section 01775 CLOSEOUT, during the construction and closeout of the Project. The Authority's review of Submittals shall be solely for the purposes stated in Section 00719, AUTHORITY REVIEWS. The Authority's review and Approval of separate items, as such, will not indicate Approval of the assembly in which the item functions. The Contractor shall make corrections to Submittals as required and shall return corrected copy for additional review and Approval.
- D. The Authority's review and Approval of any Submittal that it deems necessary to review and Approve will not relieve the Contractor from responsibility for any variations from the requirements of the Contract Documents unless the Contractor has in writing called the Authority's attention to each such variation at the time of submission in the Submittal letter of transmittal, and the Authority has given written Approval of each such variation by specific written notation thereof incorporated in or accompanying the Submittal.
- E. Where a Submittal is required by the Contract Documents, any related work provided prior to the appropriate review and Approval of a Submittal shall be at the sole risk, expense, and responsibility of Contractor.

00721 VALUE ENGINEERING INCENTIVE

- A. This Section applies to those Value Engineering Change Proposals (VECPs), which are initiated and developed by the Contractor during the performance of the Contract to modify requirements of this Contract. In order to be accepted under this Section, each VECP shall:
1. Be identified by the Contractor at the time of submittal to the Contracting Officer Representative as submitted pursuant to this Section using the prescribed Authority VECP Proposal form;
 2. Require a significant 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;
 5. Not require an unacceptable extension of original Period of Performance; and
 6. Be reviewed and evaluated by way of a two-phase process.
- B. Phase One - Conditional Approval: In addition to the use of the Authority VECP Proposal form, all VECPs 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 0;
 4. A statement from the Contractor predicting all effects the proposed VECP will have on the life-cycle cost of the Work to include and identify separately the cost for increased or decreased maintenance and operations;
 5. A statement of the time by which the proposal must be accepted so as to obtain the maximum price reduction affect and not delay the original Period of Performance. The time required for VECP review shall be considered and included in this statement and in a separate bar chart;
 6. A list of codes and the Authority 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, and have been previously and successfully performed on construction similar to that which is being proposed for implementation on this Contract;
 8. Preliminary architectural and engineering analysis, including calculations and 11 x 17-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 affect on unchanged work.
- C. The Contracting Officer 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. VECPs will be processed expeditiously, however, the Authority shall not be liable for any delay in acting upon any proposal submitted pursuant to this Section. The decision of the Contracting Officer Representative about acceptance or rejection of any such proposal shall be final and shall not be subject to Section 00730, DISPUTE RESOLUTION.
1. The Contractor has the right to withdraw part or all of the VECP at any time prior to acceptance or rejection by the Authority. Such withdrawal shall be made in writing to the Contracting Officer through the Contracting Officer Representative. If the Contractor desires to withdraw the proposal, it 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 and submit the VECP to the Authority for Approval.
 2. An equitable adjustment in the Contract Price and appropriate changes in all other affected provisions of the Contract shall be made, and the Contract will be modified in accordance with Section 00748, CHANGES, or other applicable Sections 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 Section. 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, 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 Section are in addition to any other rights or remedies provided by law or under this Contract.
- F. The Contractor shall use its best efforts to include Value Engineering arrangements in any Subcontract, which in its judgment, 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:
 1. "This data, furnished pursuant to the VALUE ENGINEERING INCENTIVE Section 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."

00722 QUALITY ASSURANCE / QUALITY CONTROL

- A. The Contractor shall be responsible for conducting an ongoing Quality Plan as described in Section 01470, QUALITY MANAGEMENT SYSTEM, during the entire term of the Contract based on the approved detailed Quality Plan. The purpose of the Quality Plan is to effectively and economically ensure technical quality in deliverables and construction of the Work, thus reducing the potential for:
 1. Adverse construction schedule and cost impacts;
 2. Personal and public safety problems and incidents and their attendant costs;
 3. Those operational and maintenance problems, disruptions, and costs that result from design errors and omissions;

4. Poor construction quality, and
 5. Deliverables and completed work, which do not comply with applicable codes and regulations.
- B. Submit for Approval in accordance with Section 01330, SUBMITTAL PROCEDURES, all required quality Submittals as specified in Section 01470, QUALITY MANAGEMENT SYSTEM.
 - C. An effective Quality Program is fundamental to all work performed by the Contractor and will be considered by the Authority in assessing the Contractor's progress, performance, and earnings entitlement.

00723 PROGRESS SCHEDULES AND REQUIREMENTS FOR MAINTAINING PROGRESS RECORDS

- A. Progress Schedules. Prepare and submit to the Contracting Officer Representative for Approval schedules showing the order in which the Contractor proposes to carry on the Work, the dates on which it will start the several major features of the Work, including procurement of materials, plant, and equipment, and the contemplated dates for completing the same for construction. The schedules shall be in a form acceptable to the Authority, and as described in Section 01322, CONTRACT PROGRESS REPORTING, and shall be in such detail that, in conjunction with the progress reports hereinafter required, the Authority will be able to chart the status and progress of the Work while it is being performed. If actual progress deviates from the schedule, update the schedule to show the accurate progress. Failure to comply with the terms of this Section may affect the processing of progress payment requests submitted by the Contractor as provided for in this Contract.
- B. If, in the opinion of the Contracting Officer Representative, the Contractor falls significantly behind the Approved progress schedule for construction, take any and all steps necessary to improve the progress of the Work. In this event, without cost to the Authority, the Contracting Officer Representative may require the Contractor to submit for Approval supplemental progress schedules detailing the specific operational changes to be instituted to regain the Approved schedule. Additionally, the Contracting Officer Representative 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. Such requirements by the Authority shall not be construed or interpreted in such a way as to infer that the Authority is in any way responsible for the means, methods, or sequencing of the Work. The additional cost of such requirements shall be borne solely by the Contractor.
- C. Failure of the Contractor to comply with the requirements of the Contracting Officer Representative under this Section shall be grounds for determination that the Contractor is not prosecuting the Work with such diligence as will ensure completion within the time specified. Upon such determination, the Authority may terminate the Contractor's right to proceed with the Work, or any separate part thereof, in accordance with Section 00727, TERMINATION FOR DEFAULT, DAMAGES FOR DELAY, AND TIME EXTENSIONS.

00724 PERIOD OF PERFORMANCE AND PROJECT SCHEDULE

- A. Perform, complete, and advance all work under this Contract in accordance with the schedule set out in Section 00824, PERIOD OF PERFORMANCE AND PROJECT SCHEDULE.
- B. The Authority may modify the Contract, pursuant to Section 00748, CHANGES, to extend the Period of Performance as often and in periods as deemed necessary until completion of the Work under this Contract.
- C. Early Completion: If the Contractor submits a schedule or expresses 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.

00725 COMMENCING THE WORK

- A. Commence the Work within 10 Days after the date of receipt of the Notice to Proceed (NTP) and prosecute the Work diligently to complete it within the time specified in the Contract to meet all specified interim milestone dates.
- 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. For a more complete agenda, refer to Section 01312, PROJECT MEETINGS.
- C. The following items require approval prior to commencement of construction activities, or offsite fabrication associated with the Project. Submit in accordance with Section 01330, SUBMITTAL PROCEDURES:
 - 1. Executed Contract as specified in Section 00521, CONSTRUCTION CONTRACT FORM, with Power of Attorney as specified in Section 00541, POWER OF ATTORNEY, and Power of Execution as specified in Section 00542, POWER OF EXECUTION; Required Performance Bond as specified in Section 00611, PERFORMANCE BOND, and Payment Bond, as specified in Section 00612, PAYMENT BOND; Insurance Certificates as specified in Section 00778, INDEMNIFICATION AND INSURANCE REQUIREMENTS, within 10 Days after Award of Contract.
 - 2. Major Subcontractors and Key Project Personnel Confirmation as specified in Section 00709, PROJECT MANAGEMENT AND SUPERINTENDENCE AND KEY PERSONNEL, and Section 01111, CONTRACTOR KEY STAFF, within 10 Days after Award of Contract.

00726 SUSPENSION OF WORK

- A. The Authority may order the Contractor in writing to suspend, delay, or interrupt all or any part of the Work for such period as it 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, suspended, delayed, or interrupted by an act of the Contracting Officer or other delegated Contracting Officer's Representative in the administration of this Contract, or by its failure to act within the time specified in this Contract, or if no time is specified, within a reasonable time, an adjustment will 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 will be made under this Section 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 Section will be allowed:
 - 1. For any costs incurred more than 20 Days before the Contractor shall have notified the Contracting Officer or other delegated Contracting Officer's Representative in writing of the act or failure to act involved, but this requirement will 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 this Contract.
- D. Failure to agree to any adjustment shall be a dispute concerning a question of fact within the meaning of Section 00730, DISPUTE RESOLUTION.

00727 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 its 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 design product, materials, appliances, plant, and other work product as may be on the Site of the Work and necessary therefore, all of which shall become the property of the Authority. Whether or not the Contractor's right to proceed with the Work is terminated, the Contractor and its sureties shall be liable for all damage to the Authority resulting from its refusal or failure to complete the Work in the specified time.

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- 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 shall 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 shall consist of such liquidated damages until the Work is completed or accepted.
 - D. The Contractor's right to proceed shall not be so terminated or the Contractor charged with resulting damage under the following circumstances:
 - 1. If 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, floods, 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.
 - a. Unusually severe weather conditions:
 - 1) Pursuant to Paragraph 0 above, the Authority will use the following table as the basis for determining allowable time extensions to the Contract for unusually severe weather conditions and the impact of such weather at the construction Site.
 - 2) The column below labeled WORKING DAYS represents working-day delays, which may be expected in each month named within the Washington Metropolitan Area, based on a 5-day work week:

<u>Month</u>	<u>Working Days</u>
January	4
February	4
March	4
April	5
May	5
June	2
July	2
August	3
September	2
October	3
November	4
December	4

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- 3) Time extensions for weather delays during a given month will be allowed only for actual working days in excess of the 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.
 2. If the Contractor, within 10 Days from the beginning of any such delay, unless the Contracting Officer grants a further period before the date of Final Payment under the Contract, notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer will ascertain the facts and the extent of the delay and extend the time for completing the Work when, in the Contracting Officer's judgment, the findings of fact justify such an extension. The Contracting Officer's findings of fact shall be final and conclusive on the parties, subject only to appeal as provided Section 00729, DISPUTE RESOLUTION.
 3. If, after notice of termination of the Contractor's right to proceed under the provisions of this Section, it is determined for any reason that the Contractor was not in default under the provisions of this Section, or that the delay was excusable under the provisions of this Section, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to Section 00728, TERMINATION FOR CONVENIENCE OF THE AUTHORITY.
 4. The rights and remedies of the Authority provided in this Section are in addition to any other rights and remedies provided by law or under this Contract.

00728 TERMINATION FOR THE CONVENIENCE OF THE AUTHORITY

- A. The Authority may terminate this Contract in whole or, from time to time, in part, for the convenience of the Authority. The performance of work under this Contract may be terminated by the Authority in accordance with this subsection, in whole, or from time to time in part, whenever the Contracting Officer determines that such termination is in the best interest of the Authority. Any such termination will be effected by delivery to the Contractor of a Notice of Termination specifying the nature, 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:
 1. Immediately discontinue all services and 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 authorize payments on 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 it may require, which approval or ratification shall be final for all the purposes of this Section;
 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 unfabricated parts, work in process, 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. All data, record drawings and specifications, reports, estimates, summaries, and other information and materials accumulated in performing this Contract, whether completed or in process.
 7. Use 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 Paragraph 0 above, provided, however, that the Contractor:
 - a. Will 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 payments 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, submit to the Contracting Officer through the Contracting Officer Representative its 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 1 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 1-year period or authorized extension thereof. However, if the

- Contracting Officer determines that the facts justify such action, the Contracting Officer may receive and act upon any such termination Claim at any time after such 1-year period or any extension thereof. Upon failure of the Contractor to submit its termination Claim within the time allowed, the Contracting Officer may determine, on the basis of information available to the Contracting Officer, 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 0 above, 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 Section, 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 foregoing notwithstanding, the Contracting Officer will not allow anticipated profit on services not performed by the Contractor.
- E. The Contract shall be amended accordingly, and the Contractor will be paid the agreed amount. Nothing in Paragraph 0 below, 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 Section, will 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 Paragraph 0 above.
- F. In the event of the failure of the Contractor and the Contracting Officer to agree, as provided in Paragraph 0 above, upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this Section, the Contracting Officer will authorize payment to the Contractor the amounts determined by the Contracting Officer as follows, but without duplication of any amounts agreed upon in accordance with Paragraph 0:
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 0 above, exclusive of the amount paid or payable on account of supplies or materials delivered or services furnished by the Subcontractors or Suppliers prior to the effective date of Notice of Termination of work under this Contract, which amounts shall be included in the cost on account of which payment is made under Paragraph 0 above; and
 - c. A sum, as profit on Paragraph 0 above, determined by the Contracting Officer to be fair and reasonable, provided, however, that the Contracting Officer allows no anticipated profit on design services not performed by the Contractor, and, further,

if it appears that the Contractor would have sustained a loss on the entire Contract had it been completed, no profit will be included or allowed, and an appropriate adjustment will be made reducing the amount of the settlements to reflect the indicated rate of loss; and

2. The reasonable cost of the preservation and protection of property incurred pursuant to Paragraph 0 above; 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.
- G. The total sum to be paid to the Contractor under Paragraph 0 above shall not exceed the total Contract Price as reduced by the amount of payments made and 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 will be excluded from the amounts payable to the Contractor under this Section 00728, TERMINATION FOR THE CONVENIENCE OF THE AUTHORITY, 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 0 above.
- H. The Contractor shall have the right of appeal, under Section 00730, DISPUTE RESOLUTION, from any determination made by the Contracting Officer under Paragraphs 0 or 0 above, except that if the Contractor has failed to Submit its Claim within the time provided in Paragraph 0 above and has failed to request extension of such time, it shall have no such right of appeal. In any case where the Contracting Officer has made a determination of the amount due under Paragraphs 0 or 0 above, the Authority will 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.
- I. In arriving at the amount due the Contractor under this Section, the following will be deducted:
1. All un-liquidated advance or other payments 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 from sale of any materials, supplies, or other things acquired by the Contractor or sold, pursuant to the provisions of this Section, and not otherwise recovered by or credited to the Authority.
- J. 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 Representative, 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 in accordance with Section 01330, SUBMITTAL PROCEDURES.

- K. The Authority may from time to time, under such terms 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 payments is in excess of the amount finally agreed or determined to be due under this Section, such excess shall be payable by the Contractor to the Authority upon demand 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 upon demand, together with interest computed at the rate of 6 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 or other disposition of termination inventory until 10 Days after date of such retention or disposition, or such later date as determined by the Contracting Officer by reason of the circumstances.
- L. Unless otherwise provided for in this Contract, or by applicable statute, the Contractor, from the effective date of termination and for a period of 3 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 its 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 reproduction thereof.

00729 ASSIGNMENT

- A. The Contractor shall not transfer or assign this Agreement or any portion thereof or any of the rights and obligations of the Contract to any other party. The Contracting Officer 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 sole discretion of the Authority after review of the facts and circumstances surrounding each request submitted in accordance with Section 01330, SUBMITTAL PROCEDURES, but the assignment will 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 performance bonds.
- B. If this Contract provides for payments aggregating \$1,000 or more, Claims for moneys due or to become due the Contractor from the Authority, 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 such institution. Notice of such assignment shall be made to the Contracting Officer and submitted through the

Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, but the assignment will 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 performance bonds. 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 one party as agent or trustee for two or more parties participating in such financing. It is the Authority's intent to recognize assignments 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 Section shall constitute a breach of the Contract, and the Contracting Officer may for such cause terminate the right of the Contractor to proceed as provided in Section 00726, TERMINATION FOR DEFAULT, DAMAGES FOR DELAY AND TIME EXTENSIONS, and the Contractor and its sureties shall be liable to the Authority for excess costs incurred by the Authority.

00730 DISPUTE RESOLUTION

- A. Except as otherwise provided in this Contract, any dispute arising under or related to this Contract including allegations of breach of contract or similar allegations, which are not disposed of by agreement, will be decided by the Contracting Officer, who will reduce a decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Contracting Officer is 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 notice of appeal in accordance with Section 01330, SUBMITTAL PROCEDURES, addressed to the Authority Board of Directors. Such notice shall indicate that an appeal is intended and shall reference the decision and Contract number. The decision of the Board of Directors or its duly authorized representative for the determination of such appeals shall 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 Section, the Contractor will be afforded an opportunity to be heard and to offer evidence in support of its 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. The Armed Services Board of Contract Appeals is the authorized representative of the Board of Directors for finally deciding appeals to the same extent as could the Board of Directors.
- B. This Section does not preclude consideration of questions of law in connection with decisions provided for in Paragraph 0 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.

00731 USE AND POSSESSION PRIOR TO COMPLETION

- A. The Authority 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 Section 00706, PERMITS AND RESPONSIBILITIES, will be relieved of the responsibility for loss or damage to the Work other than that resulting from the Contractor's fault or negligence or that of its Subcontractors or agents. 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.

00732 ACCEPTANCE AND INSPECTION OF WORK

- A. "Acceptance," as used in this Section, means the act of the Contracting Officer Representative by which the Authority approves specific services as partial or complete performance of the Contract. As used in this Section, "Correction" means the elimination of a defect.
- B. Unless otherwise provided in this Contract, Acceptance by the Authority will 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 to the Authority's right under any warranty or guarantee. All Punch List items identified during final inspections and noted at the time of Acceptance shall be corrected by the Contractor as soon as is practicable as specified in Section 01775, CLOSEOUT.
- C. The Contracting Officer Representative will give written notices of defects or non-conformances to the Contractor if and when discovered, but no later than Acceptance of the construction work designed under this Contract as specified in Section 01775, CLOSEOUT, except for latent defects, which may be discovered following such Acceptance. This notice will state either:
 - 1. That the Contractor shall correct or re-perform defective or nonconforming services; or,
 - 2. That the Authority does not require correction or re-performance. The Contractor shall be liable to the Authority for all costs incurred of any kind caused by or resulting from the Contractor's defective workmanship or noncompliance with the Contract Documents.
- D. Should it be considered necessary or advisable by the Contractor or Authority 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, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction and pay all delay damages. If, however, such work is found to meet the requirements of the Contract Documents, an equitable adjustment will 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, the Contractor will, in addition, be granted a suitable extension of time.
- E. 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 Authority, if it so deems, at all reasonable times prior to Acceptance as specified in Section 01470, QUALITY MANAGEMENT SYSTEM, and Section 01820, DEMONSTRATION AND TRAINING. Any such inspection and testing is for the sole benefit of the Authority and shall not relieve the Contractor of the responsibility of providing quality control measures to ensure that the Work strictly complies with the Contract Documents. No inspection or test by the Authority shall be construed as constituting or implying Acceptance. Inspection or testing shall not relieve the Contractor of responsibility for damage to or loss of the material prior to Acceptance, or in any way affect the continuing rights of the Authority after Acceptance of the completed Work.
 - F. The Contractor shall furnish promptly, without additional charge, all services, work, labor, materials, tools, equipment, and facilities reasonably needed for performing such safe and convenient inspections and tests as may be required. All inspections and tests will be performed in such manner as not to unnecessarily delay the Work. The Authority shall receive adequate advance notice submitted in accordance with Section 01330, SUBMITTAL PROCEDURES, to conduct inspections and witness all tests as part of its overall quality oversight of the Project as specified in Section 01470, QUALITY MANAGEMENT SYSTEM, and Section 01820, DEMONSTRATION AND TRAINING. Tests performed that the Authority does not witness, due to the Contractor's failure to provide timely notice to the Authority of such tests, shall have no effect. Special, full scale and performance tests shall be performed as described in the Contract Documents.
 - G. If the Contractor is required to correct or re-perform, it shall be without additional cost or fee to the Authority, and services corrected or re-performed by the Contractor shall be subject to this Section to the same extent as work initially performed. If the Contractor fails or refuses to correct or revise errors or deficiencies in its performance within 30 Days of the Authority's request, the Authority may, by contract or otherwise, correct or replace with similar services and charge to the Contractor the cost incurred by the Authority thereby, or make an equitable adjustment to the Contract Price.
 - H. Failure to agree to the responsibility for costs, either those incurred by the Contractor or by the Authority, for corrective actions required by this Section, shall constitute a dispute and shall be subject to the provisions of Section 00730, DISPUTE RESOLUTION.
 - I. The rights and remedies of the Authority provided in this Section are in addition to any other rights or remedies provided by law or under this Contract.
 - J. The Contractor shall give the Contracting Officer Representative at least 14 Days advance notice of the date the Work, or separate portion thereof, will be fully completed and ready for final inspection, testing, and Acceptance as specified in Section 01470, QUALITY MANAGEMENT SYSTEM, Section 01775, CLOSEOUT, and Section 01820, DEMONSTRATION AND TRAINING.

00733 AUTHORITY-FURNISHED PROPERTY

- A. The Authority will make available to the Contractor, for use only in connection with this Contract, the property, if any, described in the Section 00833, AUTHORITY-FURNISHED PROPERTY, hereinafter referred to as Authority-furnished property, at the times and locations stated therein. If the Authority-furnished property, suitable for its intended use, is not made available to the Contractor, the Contracting Officer will, upon timely written request from the Contractor to the Contracting Officer Representative, if the facts warrant such action, equitably adjust any affected provision of this Contract pursuant to any procedures of Section 00748, CHANGES.
- B. Title to Authority-furnished property shall remain with the Authority. The Contractor shall maintain adequate property control records of Authority-furnished property in accordance with sound industrial practice.
- C. Unless otherwise provided in this Contract, the Contractor, upon acceptance of Authority-furnished property, assumes the risk of and shall be responsible for loss thereof or damage thereto except for reasonable wear and tear and except to the extent that such property is consumed in the performance of this Contract.
- D. The Contractor shall, upon completion of this Contract, prepare for shipment, deliver FOB origin, or dispose of all Authority-furnished property not consumed in the performance of this Contract or not theretofore delivered to the Authority as directed. The net proceeds of such disposal will be credited to the Contractor price or paid in such other manner as may be directed.

00734 MATERIAL, WORKMANSHIP, AND EQUIPMENT

- A. Unless otherwise specifically provided in this Contract, all equipment, material, and articles incorporated in the Project covered by this Contract shall be new and of the most suitable grade for the purpose intended. Notwithstanding the Authority's review and Approval of any substitution, nothing herein relieves the Contractor of its obligations to satisfy its requirements under the Contract.
- B. Unless otherwise specifically provided in this Contract, reference to any equipment, material, or article to be incorporated in the Project and any patented process, by trade name, make, or catalog number in the Contract Documents shall be regarded as establishing a standard of quality and shall not be construed as limiting competition, and the Contractor may, at its option, use any equipment, material, article, or process which, in the judgment of the Authority, is equal to that named. When required by this Contract or when called for by the Authority, the Contractor shall furnish to the Authority for Approval in accordance with Section 01330, SUBMITTAL PROCEDURES, 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. The Contractor shall furnish the Authority for Approval in accordance with Section 01330, SUBMITTAL PROCEDURES, full information concerning the material or articles, which are contemplated to be incorporated

into the Work. When required by the Contract or when so directed by the Authority, Samples shall be submitted for approval in accordance with Section 01330, SUBMITTAL PROCEDURES, 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.

- C. The Contractor shall provide construction equipment in first class working order and safe condition, of sufficient quantities and sizes to complete the Work as specified and detailed in the Contract Documents within the Period of Performance, and shall provide adequate maintenance of this equipment throughout the duration of the Project.
- D. Items of equipment that, at any time, prove ineffectual or hazardous to personnel or property, shall be promptly brought to acceptable condition or shall be removed from the Site as directed by the Authority or by any Jurisdictional Authority.

00735 HAZARDOUS MATERIALS

- A. The Authority will be responsible for the presence of and any associated consequences of asbestos, PCBs, petroleum, and other hazardous waste or like materials and radioactive materials (Hazardous Materials) on the Project if such presence is unknown, unexpected, or not identified in information provided by the Authority, or not otherwise known to the Contractor prior to the preparation of its Bid. The Contractor shall, upon encountering or recognizing such Hazardous Materials, immediately stop work in the affected area and report the condition to the Contracting Officer Representative in writing. The Contractor shall submit a hazardous material report in accordance with Section 01330, SUBMITTAL PROCEDURES. The Authority shall have no responsibility or liability for any Hazardous Material that is brought to the Project or handled by the Contractor or any Subcontractor.

00736 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 the 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. The Contractor shall be obligated to replace or restore all existing vegetation that is destroyed, removed, or damaged in the performance of the Work to the condition that existed before work commenced.
- B. The Contractor shall protect from damage all adjacent property including, but not limited to, land, existing structures, improvements, and utilities at or near the Site of the Work and shall repair or restore 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 Representative may have the necessary work performed and charge the cost thereof to the Contractor.
- C. Protection is more fully described in Section 01723, PROTECTION OF ADJACENT CONSTRUCTION.

00737 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 Representative. Temporary buildings such as storage sheds, shops, and offices may be erected by the Contractor only with the Approval of the Contracting Officer 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 the Contractor at its expense upon the completion of the Work. With the written consent of the Contracting Officer Representative, such buildings and utilities may be abandoned and need not be removed. Temporary construction facilities are more fully described in Section 01520, TEMPORARY CONSTRUCTION FACILITIES.
- B. The Contractor shall, under regulations prescribed by the Contracting Officer Representative, use only established roadways or construct and use such temporary roadways as may be authorized by the Contracting Officer 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 curbs or sidewalks, protection against damage shall be provided by the Contractor, and damaged roads, curbs, or sidewalks shall be repaired by or at the expense of the Contractor.

00738 ACCIDENT PREVENTION

- A. To provide safety controls for protection to the life and health of employees and other persons, for prevention of damage to property, materials, supplies, equipment, and for avoidance of work interruptions in the performance of this Contract, the Contractor shall comply with all pertinent provisions of Authority safety requirements as specified in Section 01114, SAFETY/ENVIRONMENTAL REQUIREMENTS, and shall also take or cause to be taken such additional measures as the Contracting Officer Representative may determine to be reasonably necessary for that purpose.
- B. All construction work under this Contract shall be performed in a skillful and workmanlike manner. The Contracting Officer Representative may, in writing, require the Contractor to remove from the Project any employee the Contracting Officer Representative deems to be incompetent, careless, or objectionable on other reasonable grounds related to the advancement of the Project.
- C. The Contractor shall maintain an accurate record of and shall report to the Contracting Officer Representative in the manner and on the forms prescribed by the Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 immediately after of such incident.
- D. The Contracting Officer Representative will notify the Contractor of 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 its 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 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.

- E. Compliance with the provisions of this Section by Subcontractors shall be the responsibility of the Contractor.
- F. Prior to commencement of the Work, the Contractor shall:
 - 1. Submit in writing in accordance with Section 01330, SUBMITTAL PROCEDURES, proposals for effectuating this provision for accident prevention;
 - 2. Meet in conference in accordance with Section 01312, PROJECT MEETINGS, with the Authority to discuss and develop mutual understanding relative to administration of the overall safety program.

00739 FIRE PROTECTION EQUIPMENT AND LIFE SAFETY AGREEMENT

- A. The Contractor shall submit, in accordance with Section 01330, SUBMITTAL PROCEDURES, a plan for a temporary fire protection system with provisions for fire protection systems and equipment as specified in Section 01114, SAFETY/ENVIRONMENTAL REQUIREMENTS, for use during the term of the Contract.

00740 PROTECTION OF PERSONS AND PROPERTY

- 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. The Contractor shall comply with the approved Organizational Health and Safety Program as specified in Section 01114, SAFETY/ENVIRONMENTAL REQUIREMENTS, which is to be submitted by the Contractor prior to commencement of construction work in accordance with Section 01330, SUBMITTAL PROCEDURES. 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 the Contracting Officer Representative. The Contractor shall promptly notify the Authority of all damage to property of the Authority or others and of injuries sustained by any persons, of which the Contractor becomes aware, including but not limited to, employees of the Contractor, in any manner relating directly or indirectly to the Work or otherwise to this Contract.

00741 CONSIDERATION AND BASIS OF PAYMENT

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- A. In consideration of its undertaking under this Contract, the Contractor will be paid the sums set forth in this Contract, which shall constitute complete payment for all work and services 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 on Section 00521, CONSTRUCTION CONTRACT FORM, and which shall constitute complete compensation for performance of all work required by the Contract.
 - B. The Approved Monthly Progress Report and updated 90-Day Schedule as specified in Section 01322, CONTRACT PROGRESS REPORTING, and the Approved Quality Manager's Statement of Compliance Quality Certification for Payment Verification shall be the basis for progress payments to the Contractor.
 - C. The basis of payment will be the Total Base Price as negotiated and accepted. The basis of payment will include any Options exercised and any Modifications to the Contract in addition to the Total Base Price, which shall constitute complete compensation for performance of all Work required by the Contract.

00742 CONTRACT PRICES AND BID SCHEDULE

- A. Payment for the various Bid items listed in the Bid Schedule shall constitute full compensation for furnishing all plant, labor, equipment, appliances, and material and for performing all operations required to complete the Work in conformity with the Contract Documents. All costs for work not specifically mentioned in the Bid Schedule shall be included in the Contract prices for the items listed.

00743 VARIATION IN ESTIMATED QUANTITIES

- A. Where the quantity of a pay item in this Contract is an estimated quantity provided by the Authority, 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 Representative will, upon receipt of a written request submitted in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 Representative prior to the date of Final Payment of the Contract, ascertain the facts and make such adjustment for extending the Period of Performance as in the Contracting Officer Representative's judgment the findings justify.

00744 METHOD OF PAYMENT

- A. The Authority will make progress payments monthly as the Work proceeds on estimates approved by the Contracting Officer Representative for design related work and by estimates reviewed and approved by the Contracting Officer Representative for construction-related work. At least 5 Days before submission of any Application for Payment, a Preliminary Monthly Progress and Quality Status Report Review meeting will be

- held to review for acceptability of the schedules and the Quality System. The Contractor shall have an additional 5 Days to make corrections and adjustments and to complete and resubmit the schedules. A Formal Progress and Quality Status Report Review meeting will be held to approve the schedules. No progress payment will be made to Contractor until the schedules are provided and accepted by the Contracting Officer Representative, whose acceptance will not be unreasonably withheld. The progress schedule shall be acceptable to Authority as providing an orderly progression of the Work to completion within any specified Milestones and the Period of Performance, but acceptance of the progress schedule shall neither impose on Authority responsibility for the sequencing, scheduling, or work progress nor interfere with or relieve the Contractor from Contractor's full responsibility for the Work. The format and structure of the progress schedule shall be as set forth in Section 01322, CONTRACT PROGRESS REPORTING. The Authority's acceptance shall not be deemed to confirm that the schedule is a reasonable plan for performing the Work.
- B. The Contractor's progress payment requests will be reviewed based on the scheduled and actual progress of the Work as reflected on the construction schedule, cost-loaded progress schedule or bar graph as applicable, and monthly updates. The Contractor shall not be entitled to progress payments, and the Authority shall have no obligation to review or approve progress payment requests if the Contractor has failed to submit or update the schedules, 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 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 update submission requirements as committed under this Contract shall be at the sole and absolute discretion of the Contracting Officer Representative.
- C. Furnish a breakdown of the total Contract Price 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 Representative may authorize material delivered to the Site and preparatory work completed to be taken into consideration. Material delivered to the Contractor at locations other than the Site may also be taken into consideration if the Contractor furnishes satisfactory evidence that the Contractor has acquired title to such material and that it will be utilized on the Work covered by this Contract.
- D. 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 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 Representative, provided, however, that the Contractor has the proper storage facilities, security, and insurance for the stored material as Approved by the Contracting Officer Representative. Before each such payment is made for delivered material on the Site, furnish to the Contracting Officer Representative such evidence as may be required as proof of the ownership, quantity, and value of such materials. Before each such payment is made for delivered materials off the Site, furnish the Contracting Officer Representative evidence

- of ownership and properly executed bills of sale to the Authority for the delivered material upon which payment is being made.
- E. In determining progress accomplished, the Authority will allow as an element of work accomplished, i.e., progress toward completion, only 50 percent of the invoiced cost of materials or equipment delivered to the Site, or suitable location as described in Paragraph 0 above, but not incorporated in the construction up to the time the materials or equipment are actually incorporated in the Work.
 - F. In making such progress payments, 5 percent of the estimated amount of work completed will 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 Representative considers the amount retained to be in excess of the amount adequate for the protection of the Authority, the Contracting Officer Representative may use discretion in releasing to the Contractor all or a portion of such excess amount.
 - G. Where the time originally specified for completion of this Contract exceeds 1 year, the Contracting Officer Representative, at any time after 50 percent of the Work has been completed, if the Contracting Officer Representative finds that satisfactory progress (satisfactory progress includes prosecution of physical work, adherence to DBE requirements if applicable, 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.
 - H. 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.
 - I. See Section 01775, CLOSEOUT, for Final Inspection requirements.
 - J. Upon completion and Acceptance of all work, the amount due the Contractor under this Contract will be paid upon the presentation of a properly executed voucher as specified in Section 01775, CLOSEOUT, and after the Contractor shall have furnished the Authority with a release 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.
 - K. The Authority may, at its sole discretion, withhold payment to the Contractor at the appropriate percentage for work, or portions thereof, that it deems to be defective or in nonconformance with the requirements of the Contract Documents.
 - L. Satisfactory records for design, inspection, testing, or other quality elements required under the approved Quality System; operation and maintenance manuals; As-Built Drawings and As-Built Specifications; electronic media; as-built Project Schedule; spare parts list, delivery

information and distribution of spare parts; configuration management system; training manual, lesson plans, and student's training manual and electronic media of such, as applicable; survey record log; correspondence file; releases; vouchers; request for Final Payment; certifications, affidavits and warranties and guarantees; and must be submitted in order to receive payment for the completed Work. Final Payment will be made in accordance with this Section and Section 00755, FINAL PAYMENT.

00745 PROGRESS PAYMENTS FOR LUMP SUM ITEMS

- A. If requested, the Contractor shall furnish to the Contracting Officer Representative in a breakdown of the total Contract Price for every lump sum item on the Bid 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 Representative may require.

00746 GARNISHMENT OF PAYMENTS

- A. Payment under this Contract shall be subject to 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.

00747 SUBCONTRACT PAYMENTS

- A. Establish procedures to ensure timely payment of amounts due pursuant to the terms of the Subcontracts. Pay each Subcontractor for satisfactory performance of its contract, no later than 10 Days from the date of the Contractor's receipt of payment from the Authority for work by that Subcontractor. Release, within 10 Days of satisfactory completion of all work required by the Subcontractor, any retention withheld from the Subcontractor.
- B. Certify on each payment request submitted to the Authority that payment has been or will be made to all Subcontractors in accordance with Paragraph 0 above. Notify the Contracting Officer Representative with each payment request, of any situation in which scheduled Subcontractor payments have not been made.
- C. If a Subcontractor alleges that the Contractor has failed to comply with this Section, 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.
- D. 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.
- E. Nothing in this Section 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.

00748 CHANGES

- A. The Contracting Officer Representative (or Contracting Officer, depending on the level of authority required) may, at any time, and without notice to the sureties, by written order designated or indicated to be a Modification, make any change in the Work within the general scope of the Contract including, but not limited to, changes:
1. In the Scope of the Work or Contract Documents;
 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 0, shall include direction, instruction, interpretation, or determination from the Contracting Officer Representative or Contracting Officer, which causes any such change, shall be treated as a Modification under this Section, provided that the Contractor gives the Contracting Officer Representative written notice in accordance with Section 01330, SUBMITTAL PROCEDURES, stating the date, circumstances, and source of the order and that the Contractor regards the order as a Modification.
- C. Except as herein provided, no order, statement, or conduct of the Contracting Officer Representative or Contracting Officer shall be treated as a change under this Section or entitle the Contractor to an equitable adjustment hereunder.
- D. If any change under this Section 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 changed by any order, an equitable adjustment will be made and the Contract modified in writing accordingly: Provided, however, that no Claim for any change under Paragraph 0 above will be allowed for any costs incurred more than 20 Days before the Contractor gives written notice as therein required. This 20-Day limitation will be strictly applied regardless of whether the Authority is prejudiced by any lack of notice.
- E. If the Contractor intends to request an equitable adjustment under this Section, it must, within 30 Days after receipt of a written Modification under Paragraph 0 above or furnishing of a written notice under Paragraph 0 above, submit to the Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, a written proposal in accordance with this CHANGES Section, unless this period is extended by the Contracting Officer Representative. The proposal hereunder may be included in the notice under Paragraph 0 above.
- F. No Claim by the Contractor or an equitable adjustment hereunder will be allowed if asserted after Final Payment under this Contract.
- G. For additional Modification procedures see Section 01250, CONTRACT MODIFICATION PROCEDURES.

00749 PRICING OF ADJUSTMENTS

- A. When costs are a factor in any determination of a Contract Price adjustment pursuant to Section 00748, CHANGES, or any other Section of this Contract, such costs shall be in accordance with the contract cost principles and procedures in Subpart 31.1 of the Federal Acquisition Regulations (48 CFR 31.1). 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 entity'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 entity'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; i.e., general and administration expenses will be paid on a percentage of cost basis, not on a daily rate type basis.
- 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 adjustments) arises under the Contract or otherwise.

00750 ACCOUNTING AND RECORD KEEPING

- A. Applicability. This Section 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 0 of this Section does not apply unless the adjustment is expected to exceed \$50,000.
- B. Forward Price Adjustments. Unless expressly waived in writing in advance by the Contracting Officer Representative, the Contractor shall furnish to the Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 Section 00748, CHANGES. The Contractor shall initiate such records as are necessary to substantiate all elements of the pricing proposal. 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.
 - 1. In addition to the records required to be originated under Paragraph 0 above, in the event pricing of an adjustment under this Contract is not agreed upon between the Contractor and the Contracting Officer 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 Representative of all incurred separated costs related to the work for which the pricing adjustment is requested. Proposed cost records and accounting procedures shall be submitted to the Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, for approval. 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 among:

- a. Work required under the base Contract or under any Option if applicable;
 - b. Work requested to be reimbursed under the pricing adjustment; and
 - c. Other claim, including but not limited to, changes, differing Site conditions, and the like.
2. In addition to the accounting system established to segregate and account for Contract Price adjustments, which shall accumulate such costs by work activity under logical cost groups, such as material, labor, equipment, Subcontracts, field overhead, and the like, the Contractor shall maintain field records associated with these costs on a form approved by the Contracting Officer Representative. Subject to agreement between the Contractor and the Contracting Officer Representative, or upon direction of the Contracting Officer Representative for work under Section 00748, CHANGES, the Contractor shall use Authority Forms (Daily Report - Labor, Materials, and Equipment), to be supplied by the Authority at the request of the Contractor and submitted in accordance with Section 01330, SUBMITTAL PROCEDURES. The terms of Section 00748, CHANGES, shall apply regardless of the form used. The use of Authority Forms to segregate Modification costs does not, in and of itself, invoke the provisions of Section 00748, CHANGES.
- D. Availability. The accounts, records, and costs information required to be originated under Paragraphs 0 and 0 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 Representative, or pursuant to any other Sections 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 Contractor Records Retention, Subpart 4.7 of the Federal Acquisition Regulations (48 C.F.R. 4.7) and for such longer period, if any, as is required by applicable statute, or by any other Sections of this Contract, or by Paragraphs 0 and 0 below:
 - a. If the Contract is completely or partially terminated, for a period of 3 years from the date of Final Payment; and

- b. If a pricing adjustment is involved in any appeal under Section 00730, DISPUTE RESOLUTION, or in any litigation related to this Contract, for a period of 1 year following the final disposition of the appeal or litigation.
- E. When asserting a Claim under the various Sections 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 Representative. No payment will be made to the Contractor on its Claim until such records are made available and access is permitted.
- F. Limitation on Pricing Adjustment
 1. 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 Section of the Contract, any pricing adjustment or portion thereof previously granted by the Contracting Officer Representative for which records are not available, shall be rescinded and re-computed, 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 markup for indirect expenses not to exceed 10 percent of the direct costs so determined by the Contracting Officer Representative. The adjustment will be established by the Contracting Officer Representative based upon, at its election, one of the following:
 - a. An audit of any existing books and records of the Contractor or Subcontractor; or
 - b. An Authority estimate adopted by the Contracting Officer Representative; or
 - c. A combination of Paragraphs 0 and 0 above.
 2. The Contractor and Subcontractors will not be allowed any profit for the work for which the Contractor or Subcontractor fails to originate, 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 Section in all Subcontracts issued under this Contract, modified as necessary, for proper identification of the contracting parties and the Contracting Officer Representative under this Contract.

00751 AUDIT - PRICE ADJUSTMENTS

- A. General: The Authority shall have the audit and inspection rights described in the applicable Paragraphs 0, 0, and 0 below.
- B. Examination of costs: If this is a cost-reimbursement type, incentive, time and materials, labor-hour or price re-determinable contract, or any combination thereof, the Contractor shall maintain, and the Authority 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 plant, 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 submitted in accordance with Section 01330, SUBMITTAL PROCEDURES, unless such pricing was based on adequate price competition, established catalog, market prices of commercial items sold in substantial quantities to the public, prices of commercial items sold in substantial quantities to the public, or prices set by law or regulation, the Authority shall have the right to examine all books, records, documents, and other data of the Contractor related to the negotiation, pricing, or performance or 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. The Contractor shall insert a clause containing all the provisions of this Section, including this Paragraph 0 in all Subcontracts hereunder except altered as necessary for proper identification of the contracting parties and the Contracting Officer Representative under this Contract.

00752 CERTIFICATE OF CURRENT COST OR PRICING DATA

- A. The Contractor shall provide a Certificate of Current Cost or Pricing Data to the Authority in accordance with Section 01330, SUBMITTAL PROCEDURES, on a form suitable to the Contracting Officer as required in Subpart 15.403 of the Federal Acquisition Regulations (48 CFR 15.403) 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 Representative at its discretion may request cost or pricing data for modifications on which costs are less than \$100,000 and an attendant certificate of current cost or pricing data. Cost or Pricing data submittal procedures are specified in Section 00201, GENERAL INSTRUCTIONS, and Section 00748, CHANGES.

00753 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA - PRICE ADJUSTMENTS

- A. This Section shall become operative only with respect to Modifications of this Contract, which involve aggregate increases, decreases, or both 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 public, or prices set by law or regulation. The right to price reduction under this Section 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 in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 Section 00754, SUBCONTRACTOR COST OR PRICING DATA, or any Subcontract provision therein required, furnished cost or pricing data in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 in accordance with Section 01330, SUBMITTAL PROCEDURES, which was required to be complete, accurate, and current and to be submitted to support a Subcontract cost estimate furnished by the Contractor in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 Paragraphs 0, 0, or 0 above in accordance with Section 01330, SUBMITTAL PROCEDURES, which was not accurate, as submitted; then 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 in accordance with Section 01330, SUBMITTAL PROCEDURES, provided the actual Subcontract price was not affected by defective cost or pricing data. (Note: Since the Contract is subject to reduction under this Section 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 its lower tier Subcontractors.)

00754 SUBCONTRACTOR COST OR PRICING DATA

- A. The Contractor shall require Subcontractors hereunder to submit cost or pricing data in accordance with Section 01330, SUBMITTAL PROCEDURES, prior to award of any negotiated lump sum or cost-reimbursement type, incentive, or price re-determinable Subcontract over \$100,000. The Contractor shall require Subcontractors to certify that to the best of their knowledge and belief, the cost and pricing data submitted under this Paragraph 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 Subcontract. The Contractor shall

insert the substance of this Section in each of its negotiated lump sum or cost reimbursement type, price re-determinable, or incentive Subcontracts over \$100,000 hereunder. The Contractor also shall insert the substance of this Section in each Subcontract with respect to any change or other modification made pursuant to one or more Sections of this Contract, which involves a price adjustment greater than \$100,000. The Contractor shall conduct a cost analysis of all negotiated Subcontracts.

- B. The requirements that follow shall become operative only with respect to any change or other modification made pursuant to one or more Sections of this Contract, which involves a price adjustment in excess of \$100,000. The requirements of this Section shall be limited to such price adjustments:
 - 1. The Contractor shall require Subcontractors hereunder to submit cost or pricing data in accordance with Section 01330, SUBMITTAL PROCEDURES:
 - a. Prior to award of any cost-reimbursement type, incentive, or price re-determinable Subcontract;
 - b. Prior to the award of any Subcontract the price of which is expected to exceed \$100,000; or,
 - c. Prior to the pricing of any Subcontract change or other modification for which the price adjustment is expected to exceed \$100,000; except 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.
 - 2. The Contractor shall require Subcontractors to certify that to the best of their knowledge and belief the cost and pricing data submitted under this Paragraph 0 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.
- C. The Contractor shall insert the substance of this Section in each Subcontract hereunder, which exceeds \$100,000.

00755 FINAL PAYMENT

- A. The Authority will make Final Payment to the Contractor following Acceptance of Work, including receipt of releases from owners of property affected by the Contractor's performance under this Contract, and submittal of a final Affidavit of Amounts Paid to all businesses participating under the Contract. Final Payment shall include the entire sum found to be due hereunder after deducting therefrom such amounts as the terms of this Contract permit. Prior estimates and payments, including those relating to extra work or work omitted, shall be subject to correction by the Final Payment. Final Payment will be made only for materials actually incorporated in the Work; and, all materials remaining for which progress payments have been made shall revert to the Contractor, unless otherwise

agreed, and progress payments made for these items shall be deducted from the Final Payment for the Work.

- B. By accepting Final Payment, the Contractor will be deemed thereby to have released the Authority from all Claims of the Contractor and all liability to the Contractor for things done or furnished in connection with the Work and for every act and neglect of the Authority and others relating to or arising out of the Work.

00756 ACCESS AND EXAMINATION OF RECORDS

- A. The Contractor agrees to provide the Authority, the FTA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor, which are directly pertinent to this Contract for the purposes of making audits, examinations, excerpts, and transcriptions. The Contractor also agrees, pursuant to 49 CFR. 633.17 to provide the FTA Administrator or its authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U. S. C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U. S. C. 5307, 5309 or 5311.
- 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. Contractor agrees to maintain all books, records, accounts and reports required under this Contract for a period of not less than 3 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 the 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 that the Contracting Officer, and the Comptroller General of the United States and the United States Secretary of Transportation if applicable, or their duly authorized representatives, shall, until the expiration of 3 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 transcription.
- E. The Contractor further agrees to include in all its Subcontracts hereunder, a provision to the effect that the Subcontractor agrees that the Contracting Officer, and the Comptroller General of the United States and the United States Secretary of Transportation if applicable, or their duly authorized representatives, shall until the expiration of 3 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 Subcontractor involving transactions related to the Subcontract, for the purpose of making audit, examination, excerpts, and transcription. The term "Subcontract," as used in this Section, excludes:
 - 1. Purchase Orders Not Exceeding \$2,500 and,

2. Subcontracts or purchase orders for public utility services at rates established from standard costs applicable to the public.

00757 WARRANTY/GUARANTEE OF CONSTRUCTION

- A. Unless otherwise specifically provided for in the Contract, the Contractor, notwithstanding any final inspection, acceptance, or payment guarantees that all work performed and materials and equipment furnished under this Contract are in accordance with the Contract requirements. The Contractor also guarantees that when installed all materials and equipment were free from defects and will remain so for a period of at least 2 years from the date of Acceptance by the Authority.
- B. If defects of any kind should develop during the period such guarantees are in force, the Contracting Officer will immediately notify the Contractor in writing of such defects. The Authority thereupon shall have the right, by a written notice to that effect, to require the Contractor to repair or replace all inferior or defective work, material, or equipment or permit it to remain in place and assess the Contractor the costs it (the Contractor) would have incurred had the Contractor been required to effect repair or replacement.
- C. Corrections or replacement of parts, materials, equipment, supplies or construction made pursuant to the provisions of this Section shall also be subject to the provisions of the Contract including this clause to the same extent as parts, material, equipment, supplies, or construction originally installed. The warranty, with respect to such new or corrected parts, materials, equipment, supplies, or construction, shall be equal in duration as that set forth in Paragraph 0 above and shall run from the date that such parts, materials, equipment, supplies, or construction are replaced or corrected and accepted by the Authority.
- D. The Contractor guarantees to reimburse the Authority for, or to repair or replace, damages to the Site, buildings, or contents thereof that are caused by inferior or defective workmanship, or the use of inferior or defective materials or equipment in the performance of this Contract. The Contracting Officer will immediately notify the Contractor in writing when such damage occurs. The Authority shall have the right to require the Contractor to repair or replace such damaged areas or equipment, or elect to permit such damage to remain as is and assess the Contractor the costs it would have incurred had it been required to effect repair or replacement.
- E. Should the Contractor fail to proceed promptly, after notification by the Contracting Officer, to repair or replace inferior or defective work, material, or equipment, or damage to the Site, buildings, or contents, thereof, caused by inferior or defective work, or the use of inferior or defective materials, or equipment, the Authority may have such work, material, equipment, or damage repaired or replaced and charge all costs incident thereto to the Contractor.
- F. Special guarantees that may be required under the Contract shall be subject to the elections set forth above unless otherwise provided in such special guarantees.

- G. Should the Contractor fail to prosecute the Work or fail to proceed promptly to provide guarantee period services after notification by the Contracting Officer, the Authority may, subject to Section 00727, TERMINATION FOR DEFAULT, DAMAGES FOR DELAY AND TIME EXTENSIONS, contained in this Contract, and after allowing the Contractor 10 Days to correct and comply with the Contract, terminate the right to proceed with the Work (or the separable part of the Work) that has been delayed or unsatisfactorily performed. In this event, the Authority may take over the Work and complete it by contract or otherwise, and may take possession of and use any materials, appliance, and plant on the Work Site necessary for completing the Work. The Contractor and its sureties shall be liable for damages to the Authority resulting from the Contractor's refusal or failure to complete the Work within this specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes increased costs incurred by the Authority in completing the Work.
- H. The decision of the Contracting Officer as to liability of the Contractor under this Section is subject to the appeal procedure provided for in Section 00730, DISPUTE RESOLUTION, of this Contract.
- I. All Subcontractor's, manufacturers', and Suppliers' warranties and guarantees, expressed or implied, respecting any part of the Work and any material used therein shall be deemed obtained in accordance with Section 01775, CLOSEOUT, and shall be enforced by the Contractor for the benefit of the Authority without the necessity of separate transfer or assignment thereof, provided that, if directed by the Authority, the Contractor shall require such Subcontractor's, manufacturers and Suppliers to execute such warranties and guarantees in writing to the Authority in accordance with Section 01775, CLOSEOUT. In connection therewith, the Contractor further agrees to perform the Work in such a manner or consistent with and so as to preserve all such warranties and guarantees.
- J. Certain specifications Sections and General Requirements provide for a warranty longer than the general warranty provided in this Contract, or commence from dates other than Final Completion and Acceptance of the Work. Where such warranties are specified as both in addition to the general warranty and in total years, the total years shall govern, and the warranty period shall commence from Final Completion and Acceptance of the Work.

00758 CORRECTION OF DEFICIENCIES

- A. This Section shall apply only to those deficiencies discovered by either the Authority or the Contractor within 2 years after Acceptance. 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 5 percent within a period of 2 years following Acceptance by the Authority. Systems or subsystems will be regarded as having a deficiency if they exhibit conditions or characteristics, which are not in compliance with the Contract Documents, and intent of this Contract anytime during a period extending for 2 years following their Acceptance by the Authority.
- B. Notice of deficiency to Contractor: If the Authority determines that a deficiency exists in any of the materials, equipment, systems, or subsystems provided the Authority under this Contract, it will promptly notify the Contractor of the deficiency, in writing, within 30 Days.

- C. 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 Authority its recommendation for corrective actions, together with supporting information in sufficient detail for the Authority to determine what corrective action, if any, shall be undertaken in accordance with Section 01775, CLOSEOUT. The recommendation shall be submitted to the Authority within 15 working days of discovery or receipt of notice of the deficiency.
- D. 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 its sole discretion, will 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.
- E. Schedule of deficiency corrections: The Contractor shall prepare Schedule of Deficiency Corrections and deliver it to the Authority for approval in accordance with Section 01775, CLOSEOUT, within 15 working days of discovery of deficiency by the Contractor or receipt of notice of discovery of a deficiency by the Authority.
- F. Correction of deficiencies by Contractor: The Contractor shall promptly comply with all timely written directions 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 in accordance with Section 01775, CLOSEOUT, data and reports applicable to corrections required under this Section (including revision and updating of all other affected data called for under this Contract) at no increase in the Contract Price.
- G. 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 to the Authority within 15 working days, a technical and cost proposal to amend the Contract in accordance with Section 01775, CLOSEOUT, 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.
- H. Failure to correct: If the Contractor fails or refuses to present a detailed recommendation for corrective action and to prepare and furnish data and reports as required in Paragraph 0 above, then the Contracting Officer will 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. Either:
 - a. Correct the materials, equipment, systems or subsystems, or

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- K. No extension in time for performance; no increase in Contract Price: In no event shall the
 - L. Authority be responsible for extension or delays in the scheduled 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.
 - M. The Contractor shall not be responsible under this Section 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.
 - N. The Contractor shall not be responsible under this Section for the correction of deficiencies caused by the Authority.

00759 COVENANT AGAINST CONTINGENT FEES

- A. 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 utilized by the Contractor for the purpose of securing business. For breach or violation of this warranty, the Contracting Officer shall have the right to annul this Contract without liability or in his or her discretion to deduct from the Contract Price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

00760 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 Paragraph 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 tenure with the Authority or with another local public body and 1 year thereafter shall have any interest, direct or indirect, in this Contract or the proceeds thereof.

00761 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 Contract, 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 Section 00761, GRATUITIES, shall be strictly construed and enforced in the event of violations hereto.

00762 CONFLICT OF INTEREST

- A. Neither the Contractor nor any person affiliated with it shall have, during the term of this Contract and any extension 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. Such exceptions will not unreasonably be withheld.
- B. Upon request of the Contractor submitted in accordance with Section 01330, SUBMITTAL PROCEDURES, and upon full disclosure and for good cause the Contracting Officer may, at its sole discretion, grant an exception to the requirement of this Section 00762, CONFLICT OF INTEREST, when in its 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 this Section 00762, CONFLICT OF INTEREST, it shall promptly notify the Contracting Officer in writing in accordance with Section 01330, SUBMITTAL PROCEDURES, and fully disclose all circumstances thereof. Should the Contracting Officer not grant an exception to the requirements of this Section 00762, CONFLICT OF INTEREST, the Contractor shall, within 10 Days of written notice from the Contracting Officer to do so, take all action necessary to comply with the terms of this Section.
- D. If the Contractor fails to comply with the terms of this Section 00762, CONFLICT OF INTEREST, 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 10 Days from written notice from the Contracting Officer as provided in this Section, terminate the Contract for default pursuant to Section 00727, TERMINATION FOR DEFAULT, DAMAGES FOR DELAY, AND TIME EXTENSIONS, of this Contract.
- E. The Contractor, in performing this Contract, shall avoid all 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 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. The Contractor shall not, during the period of performance of the Contract, engage in any other contracts where its customary role would or might:
 - 1. Impair the actual or potential ability of the Contractor to render impartial assistance or advice to the Authority;
 - 2. Impair the Contractor's objectivity in performing this Contract or any other Authority contract, and
 - 3. Give the Contractor an unfair competitive advantage with respect to the work under another proposed Authority contract.
- G. Any determination by the Contracting Officer under this Section shall be final and shall be subject to Section 00730, DISPUTE RESOLUTION.

00763 EMPLOYMENT RESTRICTION WARRANTY

- 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 1 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 1 full year after such officer or employee has left the employment of the Authority.
- C. The 1-year restriction described in Paragraphs 0 and 0 above may be waived at the discretion of the Authority if the WMATA employee or former employee has been subject to a Reduction in Force; in such case, the Authority 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 0, 0, or 0 above, the Authority shall have the right to withhold payment under this Contract in an amount not to exceed 2 percent of the total Contract amount as liquidated damages to the Authority, such withholding shall be in addition to any other withholding or damages available for other matters under this Contract. Further, the Authority will consider such violation in evaluating the Contractor's responsibility in connection with award of any other Authority contract.

00764 CIVIL RIGHTS

- 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 the Authority, and the FTA if applicable, 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 all 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 all implementing requirements the Authority, and the FTA if applicable, 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 all implementing requirements the Authority, and the FTA if applicable, 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 all implementing requirements the Authority, and the FTA if applicable, may issue.
- C. The Contractor also agrees to include these requirements in each Subcontract, modified only if necessary to identify the affected parties.

- D. The Contractor shall make a good faith effort to contract with businesses located in the WMATA compact jurisdiction and to recruit and employ residents of that jurisdiction.

00765 DISADVANTAGED BUSINESS ENTERPRISE

- A. In connection with the performance of this Contract, the Contractor agrees to cooperate with the Authority in meeting its commitments and goals with regard to the maximum utilization of Disadvantaged Business Enterprises (DBE) and further agrees to exert good faith efforts to satisfy the requirements of Section 00453, DBE DATA, by subcontracting portions of the Work to disadvantaged firms, by entering into joint ventures with disadvantaged firms, or both.
- B. The DBE policy of the Authority underwent a complete revision October 1, 1999 to meet revised Federal requirements. The DBE provisions of this RFP are subject to revision by Amendment.
- C. The goal for this Contract is as specified in Section 00865, DISADVANTAGED BUSINESS ENTERPRISE.

00766 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.

00767 LABOR PROVISIONS

- A. Minimum Wages:
 - 1. 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), shall 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 C.F.R. Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at the 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 as specified in APPENDIX D to Section 00800, 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 29 C.F.R. §5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs that 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 at 29 C.F.R. §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 (including any additional classification and wage rates conformed under 29 C.F.R. §5.5(a)(1)(ii) And the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its Subcontractor at the Site of the Work in a prominent and accessible place where it can be easily seen by the workers.

- a. The Authority will require that any class of laborers or mechanics, including helpers, 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 Authority will approve an additional classification and wage rate and fringe benefits therefore 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 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 Authority agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the Contracting Officer Representative to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 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 Authority or will notify the Authority 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 Authority do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Authority will refer the questions, including the views of all interested parties and the recommendation of the Authority to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination with 30 Days of receipt and so advise the Authority or will notify the Authority within the 30-Day period that additional time is necessary.

- d. The wage rate (including fringe benefits where appropriate) determined pursuant to Paragraphs O and O above, shall be paid to all workers including helpers performing work in the classification under this Contract from the first day on which work is performed in the classification.
2. 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.
 3. 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 submitted through the Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, 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.
- B. Withholding: The Authority will, 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 Agreement or any other Authority contract with the same recipient, 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 or funds until such violations have ceased.
- C. Payrolls and Basic Records
1. Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the Work and preserved for a period of 3 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 C.F.R. §5 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 costs 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.

2. The Contractor shall submit weekly in accordance with Section 01330, SUBMITTAL PROCEDURES, for each week in which any Contract work is performed, a copy of all payrolls to the Authority. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 C.F.R. §5.5(a)(3)(i). 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 no. 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402. The Contractor is responsible for the submission of copies of payrolls by all Subcontractors in accordance with Section 01330, SUBMITTAL PROCEDURES.
 - a. 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 submit in accordance with Section 01330, SUBMITTAL PROCEDURES and shall certify the following:
 - 1) That the payroll for the payroll period contains the information required to be maintained under 29 C.F.R. §5.5(a)(3)(i), 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 at 29 C.F.R. 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.
 - b. The weekly submission in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 29 C.F.R. §5.5(a)(3)(ii)(B).

- c. The falsification of any of the above certifications may subject the Contractor or Subcontractor to civil or criminal prosecution under 18 U.S.C. §1001 and 31 U.S.C. §3729.

D. Apprentices and Trainees

1. The Contractor or Subcontractor shall make the records required under 29 C.F.R. §5.5(a)(3)(i) available for inspection, copying, or transcription by authorized representatives of 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 in accordance with Section 01330, SUBMITTAL PROCEDURES, or make them available, 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. Furthermore, failure to submit the required records upon request or make such records available may be grounds for debarment action pursuant to 29 C.F.R. §5.12.

- a. 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, Office of Apprenticeship, Training and Employer Labor Services, or with a State apprenticeship agency recognized by the Office, 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 Office of Apprenticeship, Training and Employer Labor Services 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 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 journeyman 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 determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in

accordance with that determination. In the event the Office of Apprenticeship, Training and Employer Labor Services, or a state apprenticeship agency recognized by the Office, 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.

2. Trainees: Except as provided in 29 C.F.R. §5.16, trainees shall 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 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 that 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.
3. Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under 29 C.F.R. Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order No. 11246, as amended 29 C.F.R. Part 30.
4. Helpers: Helpers will be permitted to work on a project if the helper classification is specified on an applicable wage determination or is approved pursuant to the conformance procedure set forth in 29 C.F.R. §5.5(a)(1)(ii). The allowable ratio of helpers to journeyman employed by the Contractor or Subcontractor on the job site shall not be greater than two helpers for every three journeymen (in other words, not more than 40 percent of the total number of journeymen and helpers in each Contractor's or in each Subcontractor's own work force employed on the job site.) Any worker listed on a payroll at a helper wage rate, who is not a helper as defined in 29 C.F.R. §5.2(n)(4), shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any helper performing work on the job site in excess of the ratio permitted shall be paid not less

than the applicable journeyman's (or laborer's, where appropriate) wage rate on the wage determination for the work actually performed.

- E. Contract Termination: Debarment. A breach of the Contract clauses in 29 C.F.R. §5.5 may be grounds for termination of the Contract, and for debarment as a Contractor or a Subcontractor as provided in 29 C.F.R. §5.12.
- F. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and related Acts contained in 29 C.F.R. Parts 1, 3, and 5 are incorporated herein by reference.
- G. Disputes Concerning Labor Standards: Disputes arising out of the Labor Standards provisions of this Contract shall not be subject to Section 00729, DISPUTE RESOLUTION, of this Contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 C.F.R. Parts 5, 6, and 7. Disputes within the meaning of this Section 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.
- H. Certification of Eligibility:
 - 1. By entering into this agreement or a third party contract financed under this agreement the Contractor certifies that neither it (nor he nor she) nor any person or firm that 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 C.F.R. §5.12(a)(1).
 - 2. 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 C.F.R. §5.12(a)(1).
 - 3. The penalty for making false statement is prescribed in the U.S. Criminal code, 18 U.S.C.1001.
- I. Overtime Requirements: Neither the Contractor nor any 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 mechanics in any work week in which he or she is employed on such work to work in excess of 40 hours in such work week unless such laborer or mechanics 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 40 hours in such work week.
- J. Violation: Liability for Unpaid Wages: Liquidated Damages: In the event of any violation of the requirements of 29 C.F.R. §5.5(b)(1), the Contractor and any Subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and Subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such district or to such territory) if the Contract is funded by the FTA, and if not, to the Authority 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 29 C.F.R. §5.5(b)(1) In the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by 29 C.F.R. §5.5(b)(1).

K. Withholding for Unpaid Wages and Liquidated Damages: The FTA or the recipient 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 Authority contract with the same Contractor or any federally-assisted contract subject to the Contract Work Hours and Safety Standards Act if FTA funding is provided for the Contract, which is held by the same 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 at 29 C.F.R. §5.5(b)(2).

L. Wage Rates:

1. 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 this Section 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 attachment to this Contract.
2. All classes 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 prior approval of the Contracting Officer Representative. In the event the interested parties cannot agree on the proper classification or reclassification of a particular class of laborer and mechanics to be used, the question, accompanied by the recommendation of the Contracting Officer Representative, shall be referred to the Secretary of Labor for final determination.
3. For Current Wage Modifications, Refer to Appendix D - WAGE DETERMINATION OF THE SECRETARY OF LABOR, included as an Appendix to Section 00800, SUPPLEMENTARY CONDITIONS.

M. Subcontracts: The Contractor or Subcontractor shall insert in all Subcontracts, the clauses set forth in Paragraphs O through M of this Section 00767, LABOR PROVISIONS, and a clause requiring the Subcontractor to include these clauses in all lower tier Subcontracts. The Contractor shall be responsible for compliance by all Subcontractors with Paragraphs O through N of this Section 00767, LABOR PROVISIONS.

00768 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).

00769 NOTICE TO THE AUTHORITY OF LABOR DISPUTES

- A. Whenever the Contractor has knowledge that an actual or potential labor dispute is delaying or threatens to delay the timely performance of this Contract, the Contractor shall immediately give notice thereof in accordance with Section 01330, SUBMITTAL PROCEDURES, including all relevant information with respect thereto, to the Contracting Officer Representative.
- B. The Contractor agrees to insert the substance of this Section 00769, NOTICE TO THE AUTHORITY OF LABOR DISPUTES, in all Subcontracts 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 its next higher tier Subcontractor, or the Contractor, as the case may be, of all relevant information with respect to such dispute.

00770 CONVICT LABOR

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

00771 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 would 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 in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 its 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 of the relief, refund, or drawback, or that amount that shall be paid to the Authority, as directed by the Contracting Officer Representative. The Contract Price shall be similarly decreased if the Contractor, through its fault or negligence or its failure to follow instructions of the Contracting Officer Representative, is required to pay or bear the burden of, or does not obtain a refund or drawback or, any such Federal excise tax or duty.
- C. Paragraph 0 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 0 above.
- E. As used in Paragraph 0 above, the term Contract Date means the date set for Bid opening. 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 Representative, upon the request of the Contractor in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 and Federal excise tax or duty, which may give rise to either increase or decrease in the Contract Price will be furnished only at the discretion of the Contracting Officer Representative.
- G. The Contractor shall promptly notify the Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 Representative.

00772 ADDITIONAL BOND AND SECURITY

- A. For information on Additional Bond Security, see Section 00613, PERFORMANCE AND PAYMENT BONDS (Additional Bond Security).

00773 PATENT AND COPYRIGHT INDEMNITY

- A. In addition to any other indemnification provided in this Contract, the Contractor agrees to defend, hold harmless, and indemnify the Authority and its officers, representatives, agents, and employees acting within the scope of their official duties, from and against any and all Claims, demands, liabilities, damages, losses, costs, and expenses (including, but not limited

to, court costs, and reasonable attorney's fees and expenses) of any nature whatsoever in any way arising out of 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. Similarly, the Contractor indemnifies the Authority from all claims of copyright infringement resultant from actions of the Contractor or any of its Subcontractors or Suppliers. Nothing in this Section shall be construed to require any indemnification, which would make this Section void or unenforceable or to eliminate or reduce any indemnification or rights, which the Authority or Contractor has by law.

00774 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT

- A. The Contractor shall report to the Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, 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 action, Claim, or suit against the Authority on account of any alleged patent or copyright infringement arising out of or related to the performance of this Contract or out of the use of any supplies furnished or work or services performed hereunder, the Contractor shall furnish to the Authority in accordance with Section 01330, SUBMITTAL PROCEDURES, when requested by the Contracting Officer Representative, all evidence and information in possession of the Contractor pertaining to such action, suit, or Claim. Such evidence and information shall be furnished at the expense of the Authority except where the Contractor has agreed to defend, indemnify, or hold harmless the Authority. This Section shall be included in all Subcontracts.

00775 AUTHORITY RIGHTS IN TECHNICAL DATA

- A. All, designs, drawings, specifications, Samples, processes (including Computer Software), laboratory testing analyses and reports, notes, As-Built Drawings produced during and after completion of construction and other work produced in the performance of this Contract, or in the contemplation or implementation thereof shall be and remain the sole property of the Authority and may be used on any other work without additional cost to the Authority. Any re-use of design services shall be at the Authority's sole risk and with respect thereto, the Contractor agrees not to assert any rights or to establish any claim under the design patent or copyright laws and not to publish or reproduce such matter in whole or in part or in any manner or form, or authorize others so to do, without the written consent of the Authority until such time as the Authority may have released such matter to the public. Further, with respect to any design or process, which the Authority desires to protect by applying for and prosecuting a design patent application, or otherwise, the Contractor agrees to furnish the Authority such duly executed instruments and other papers (prepared by the Authority) as are deemed necessary to vest in the Authority the rights granted it pursuant to this Section. The Contractor, for a period of 3 years after completion of the Project or task, agrees to furnish and to provide access to the originals or copies of all such materials on the request of the Authority.
- B. Rights in Technical Data:

1. The Authority shall have the right to use, duplicate, or disclose Technical Data, which includes, without limitation, computer software and other items listed below, in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so:
 - a. All manuals, instructional materials prepared for installation, operation, maintenance or training purposes;
 - b. 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 drawing; except that for 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);
 - c. Other Technical Data, which has been, or is normally furnished without restriction by the Contractor or Subcontractor;
 - d. Other specifically described Technical Data, which the parties have agreed will be furnished without restriction.

- C. The Authority shall have the right to use, duplicate, or disclose Technical Data other than that defined in Paragraph 0 above, 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 emergency repair or overhaul work only, by or for the Authority where the item or process concerned is not otherwise reasonably available to enable timely performance of the Work; provided, that the release or disclosure thereof outside the Authority shall be made subject to a prohibition against further use, release, or disclosure.
 4. Technical Data provided in accordance with the provisions of Paragraph B.1.b above 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.
 5. The term Technical Data as used in this Section 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 in accordance with Section 01330, SUBMITTAL PROCEDURES, and Section 01775, CLOSEOUT. The term does not include

financial reports, cost analyses, and other information incidental to Contract administration. Computer Software as used in this Section means computer programs, computer databases, and documentation thereof.

6. Material covered by copyright:

- a. 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 so to do, all Technical Data now or hereafter covered by copyright.
- b. No such copyrighted matter shall be included in Technical Data furnished hereunder without the written permission of the copyright owner for the Authority to use such copyrighted matter in the manner above described.
- c. The Contractor shall report to the Authority promptly, and in reasonable written detail, each notice or claim of copyright infringement received by the Contractor with respect to any Technical Data delivered hereunder.
- d. Relation to patents: Nothing contained in this Section 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.
- e. Any dispute under this Section shall be subject to Section 00730, DISPUTE RESOLUTION.
- f. Notwithstanding any other payment provision in this Contract, the Authority may retain from payment up to 10 percent of the Contract Price until final delivery and acceptance of the Technical Data defined in this Section and as required to be furnished by the Contract Documents.

00776 TECHNICAL DATA - WITHHOLDING OF PAYMENT

- A. If Technical Data, specified to be delivered under this Contract, is not delivered within the time specified by this Contract or is deficient upon delivery (including having restrictive markings not specifically authorized by this Contract), the Authority may until such data is accepted by the Authority, withhold payment to the Contractor of 10 percent of the total Contract Price or amount unless a lesser withholding is specified in the Contract. Payments will not be withheld nor any other action taken pursuant to this Paragraph when the Contractor's failure to make timely delivery or to deliver such data without deficiencies arises out of or is beyond the control and without the fault or negligence of the Contractor.
- B. After payments total 90 percent of the total Contract Price or amount and if all Technical Data specified to be delivered under this Contract has not been accepted, the Authority may withhold from further payment, in addition to other withholdings specified elsewhere, such sum as it considers appropriate, not exceeding 10 percent of the total Contract Price or amount unless a lesser withholding limit is specified in the Contract.

- C. The withholding of any amount or subsequent payment to the Contractor shall not be construed as a waiver of any rights accruing to the Authority under this Contract.

00777 INDEMNIFICATION AND INSURANCE REQUIREMENTS

Indemnification

1. 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 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.
2. 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 attorney's 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.
3. 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.
4. 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 (Revised March, 2015)

Article 1. General Insurance Requirements

Contractor shall procure, at its sole cost and expense the insurance outlined in this Section as follows:

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, without interruption. The coverages shall be maintained in force and effect for three years following final completion and acceptance of the work, with the exception of Professional Liability. Professional Liability insurance requirements are outlined in Article 6.
2. The insurance coverage and limits of insurance outlined in this Section are minimum coverage 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), including all endorsement(s), within 5 business days of such request.
4. Insurance policies must be written on admitted paper, (unless otherwise indicated herein) with an insurance company acceptable to WMATA.
5. Unless otherwise noted, "Claims Made" insurance policies are not acceptable.
6. Any insurance policy utilizing a self-insured retention (SIR) requires approval from WMATA.
7. Contractor is required to incorporate these minimum Insurance Requirements into contract requirements of all Sub-Contractors of every tier.

Article 2. Workers' Compensation and Employer's Liability

Required Minimum Limits of Coverage:

Workers' Compensation	Statutory	
Employers' Liability	\$2,000,000	Each Accident
	\$2,000,000	Disease Policy Limit
	\$2,000,000	Disease Each Employee

Required Minimum Coverage(s):

1. Workers' Compensation Statutory Coverage must be provided on and "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.

Article 3. Commercial General Liability

Required Minimum Limits of Coverage:

\$10,000,000	Each Occurrence Limit
\$10,000,000	Project Aggregate Limit
\$10,000,000	Products and Completed Operations Limit

Required Minimum Coverage(s):

1. Commercial general liability (CGL) must include coverage for TRIA.
2. 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.
3. 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.
4. Policy shall be endorsed with Additional Insured Endorsement(s) in compliance with the "Additional Insured" Article 9 of this Section. CGL and Umbrella Excess Liability forms must provide defense coverage for additional insureds.
5. Policy shall be endorsed with a waiver of subrogation endorsement(s) in compliance with the waiver of subrogation" Article 10 of this Section.
6. The definition of "Insured Contract" **shall be modified** to provide coverage for contractual liability for contracts involving construction or demolition operations that are within 50 feet of a railroad, and sidetrack agreements.
7. Defense Costs (Allocated Loss Adjustment Expense) must be included and in excess of the policy limits for all primary and Umbrella Excess Policies.
8. 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.
9. 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.
10. 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.

Article 4. Railroad Protective Liability Insurance (RRP)

NOT REQUIRED

Article 5. 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" Article 9 of this Section.

3. Policy shall be endorsed with a Waiver of Subrogation Endorsement(s) in compliance with the Waiver of Subrogation" Article 10 of this Section.
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.

Article 6. Professional Liability Insurance

Should Contractor, any Sub-Contractor of any tier or any supplier, be required by this contract to provide design services or the services of a professional engineer, including, but not limited to stamping, sealing, or certifying blueprints or other construction-related documents, Contractor, Sub-Contractors of every tier and suppliers are required to maintain Professional Liability Insurance as follows:

- 1) Minimum Policy Limits of \$2,000,000, each claim.
- 2) Actual coverage or tail coverage must be purchased and maintained for a period of time equal to the statute of repose.
- 3) Coverage can be written on an "Occurrence" or "Claims Made" Basis.
- 4) Coverage can be written on 'Non-Admitted" paper.

Article 7. Pollution Liability Insurance

Should Contractor, any Sub-Contractor, of any tier, or any supplier, be required by this contract to perform demolition of any pre-existing structures, moving, removal, or handling of any hazardous materials, Contractor is required to maintain Pollution Liability Coverage as follows:

- 1) Minimum Policy Limits of \$2,000,000, each claim.
- 2) Coverage can be written on an "Occurrence" or "Claims Made" Basis.
- 3) Coverage can be written on 'Non-Admitted" paper.
- 4) Policy shall be endorsed with Additional Insured Endorsement(s) in compliance with the "Additional Insured" Article of this Section 9.
- 5) Policy shall be endorsed with a Waiver of Subrogation Endorsement(s) in compliance with the Waiver of Subrogation" Article of this Section 10.

Article 8. Builder's Risk

NOT REQUIRED

Article 9. Additional Insured(s)

Contractor and Sub-Contractors of every tier are required to add WMATA, its independent contractors, and the WMATA Board of Directors as additional insured(s) on all insurance policies purchased by Contractor and Sub-Contractors of every tier, with the exceptions 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 and be maintained for three years following final completion and acceptance of the work.
- 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 where the contract scope of work takes place. 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) Coverage available to the additional insureds is not limited to the minimum limits of coverage outlined in this document.

Article 10. Waiver of Subrogation

Contractor and Sub-Contractors of every tier are required to have all insurance policies purchased by Contractor and Sub-Contractors of every tier, endorsed to waive the insurance company's rights of recovery against WMATA, its independent contractors and the WMATA Board of Directors.

1. Coverage shall be provided on an endorsement that is acceptable to WMATA.

Article 11. Certificate of Insurance (COI)

Contractor shall provide WMATA an ACORD Certificate of Insurance (COI) 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) Satisfactory COI delineating all required insurance coverage requirements under this Section shall be delivered before the execution of this Contract by WMATA.
- 2) COI shall state the RFP# and the name of your WMATA Procurement contact.
- 3) Failure to provide satisfactory evidence of all required insurance may result in Contractor and/or subcontractors of every tier being denied access to work locations, including, but not limited to WMATA properties.
- 4) COI reflect total limits of insurance purchased by Contractor for the types of insurance required under this Contract.

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- 5) 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.
 - 6) 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 so comply, and to continuously comply with these insurance requirements shall constitute a material breach of this Contract.
 - 7) The ACORD COI shall specifically delineate the following:
 - a. Who is an Additional Insured under the policies delineated in this Section.
 - b. That each additional insured(s) as required under this Section is an additional insured on a primary and non-contributory basis.
 - c. That each additional insured(s) is an additional insured for ongoing operations of the Contractor in addition to the products and completed operations coverage.
 - d. That coverage providing a waiver of subrogation to each Additional Insured is compliant with the Waiver of Subrogation article of this Section.
 - e. That the issuing insurance company will mail written notice of cancellation of any of the required insurance policies to WMATA within 30 days of Cancellation. Use of "will endeavor to" as respects this requirement is not acceptable and must be deleted. Such notice shall be sent to:

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

Article 12. Additional Insurance

MCS-90 Endorsement for work involving the transportation or disposal of any hazardous material or waste off of the jobsite. If the MCS-90 Endorsement is required, minimum auto liability limits of \$5,000,000 per occurrence are also required.

Non-Owned Disposal Site (NODS) Endorsement providing coverage for the Contractor's legal liability arising out of pollution conditions at the designated non-owned disposal site.

Contractors Equipment Floater covering loss or damage to Contractor's tools, machinery, equipment and other personal property of any kind used in connection with this contract whether owned, rented or in the care, custody and control of the Contractor or its Subcontractors.

00778 LIQUIDATED DAMAGES

- A. The Contractor understands that if it fails to complete portions or all of the Work as described in Section 00724, PERIOD OF PERFORMANCE AND PROJECT SCHEDULE, the Authority will suffer damages, which have been estimated and are specified in Section 00878, LIQUIDATED DAMAGES.

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- B. The Contractor agrees that if it does not complete the Work within the specified Contract Performance Time, then the Contractor shall pay to the Authority as liquidated damages, pursuant to Section 00727, TERMINATION FOR DEFAULT, DAMAGES FOR DELAY, AND TIME EXTENSIONS, the sums per Day as separate damages for each specified completion requirement. Milestones are as defined in Section 00724, PERIOD OF PERFORMANCE AND PROJECT SCHEDULE.

00779 COMPLIANCE WITH COPELAND ACT REQUIREMENTS

- A. The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this Contract.

00780 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

- A. Overtime requirements: Neither the Contractor nor any Subcontractor contracting for any part of the Contract Work, which may require or involve the employment of laborers, mechanics, apprentices, trainees, watchmen, and guards shall require or permit any laborer, mechanic apprentice, trainee, watchman, or guard in any work week in which he or she is employed on such work to work in excess of 40 hours in such work week on work subject to the provisions of the Contract Work Hours and Safety Standards Act, unless such laborer, mechanic, apprentice, trainee, watchman, or guard receives compensation at a rate not less than 1-1/2 times his or her basic rate of pay for all such hours worked in excess of 40 hours in such work week.
- B. Violation, liability for unpaid wages, and liquidated damages. In the event of any violation of the provisions of Paragraph 0 above, the Contractor and any Subcontractor responsible therefor shall be liable to any affected employee for unpaid wages. In addition, such Contractor and Subcontractor shall be liable to the Authority for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, apprentice, trainee, watchman, or guard employed in violation of the provisions of Paragraph 0 in the sum of 10 dollars for each Day on which such employee was required or permitted to be employed on such work in excess of his or her standard work week of 40 hours without payment of the overtime wages required by Paragraph 0.
- C. Withholding for unpaid wages and liquidated damages: The Contracting Officer Representative may withhold from the Contractor, from any moneys payable on account of work performed by the Contractor or Subcontractor, such sums as may be administratively determined to be necessary to satisfy any liabilities of such Contractor or Subcontractor for unpaid wages and liquidated damages as provided in the provisions of Paragraph 0.
- D. Subcontracts: The Contractor shall insert Paragraphs 0 through 0 of this Section in all Subcontracts and shall require their inclusion in all Subcontracts of any tier.
- E. Records: The Contractor shall maintain payroll records containing the information specified in 29 CFR 516.2(a). Such records shall be preserved for 3 years from completion of this Contract.

00781 EQUITABLE ADJUSTMENT FOR MINOR CONTRACT MODIFICATIONS

- A. Where the Contracting Officer and Contractor agree to a net additional or deductive amount of direct costs for a Modification to this Contract made pursuant to articles of this Contract titled CHANGES, DIFFERING SITE CONDITIONS, or VALUE ENGINEERING INCENTIVE, which amount does not exceed \$100,000 and further agree to an adjustment in Period of Performance resulting from said Modification which increases or decreases the completion date 10 Days or less, the equitable adjustment in Contract Price shall consist of the following:
1. Direct costs as agreed to by the Contracting Officer 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); 10 percent of direct material costs; 5 percent of direct equipment costs (small tools, defined as equipment less than \$1,000 in acquisition costs, are included and computed at 5 percent of direct base labor wages.); 5 percent of Subcontract costs.
 3. Home Office General and Administrative (G&A) costs, the sum of which shall be limited to a maximum of 3 percent 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 Section 00748, CHANGES.
- B. In using the above rates, the following shall apply:
1. Payroll Tax (FICA, FUTA, and 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 change in Period of Performance is increased, the change in Contract Price 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 (PCOs) will be given.
 5. Bond will be allowed at actual cost without markup.

00782 NO FEDERAL GOVERNMENT OBLIGATIONS TO THIRD-PARTIES BY USE OF A DISCLAIMER

- A. The Authority and the Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of this 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.
- 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.

00783 PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS

- A. 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 and 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.
- B. 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.
- C. 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.

00784 FEDERAL CHANGES

- A. The 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 (14) dated October 1, 2007) 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.

00785 DRUG AND ALCOHOL TESTING

- A. The Contractor and Subcontractors providing services involving the performance of safety sensitive activities must comply with 49 U.S.C. Section 5331 and FTA regulations, "Prevention of Alcohol Misuse and Prohibited Drug Use in Transit Operations," 49 CFR Part 665.

00786 ENERGY CONSERVATION

- A. The Contractor agrees to comply with mandatory standards and policies relating to the energy efficiency, which are contained in the applicable state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.
- B. The Contractor agrees to include the requirements of this clause in all Subcontracts under this Contract.

00787 GOVERNMENT-WIDE DEBARMENT AND SUSPENSION

- A. The Contractor is bound by its certification contained in its offer to the Authority that the Contractor and none of 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.

00788 ADDITIONAL FEDERAL REGULATIONS AND CLAUSES

- A. Lobbying
 - 1. The Contractor is bound by its certification contained in its Bid 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.
 - 2. The Contractor agrees to include these requirements in all Subcontracts at all tiers under this Contract

B. Clean Air

1. 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.
2. 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.

C. Clean Water

1. 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.
2. 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.

D. Cargo Preference Requirements

1. The Contractor agrees to the following:
 - a. 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 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.
 - b. To furnish within 20 working 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 0 above to WMATA (through the Contractor in the case of a Subcontractor's bills-of-lading) and to the Office of Cargo Preference, Maritime Administration (MAR-590), 400 Seventh Street SW, Washington, DC 20590.
 - c. To include these requirements in all Subcontracts issued pursuant to this Contract when the Subcontract may involve the transport of equipment, material, or commodities by ocean liner.

E. Fly America

1. 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 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 Paragraph in all Subcontracts that may involve international air transportation.

F. Buy America

1. The Contractor agrees to 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. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11. Rolling stock must be assembled in the United States and have a 60 percent domestic content.

G. Contracts Involving Federal Privacy Act Requirements

1. 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:
 - a. 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.
 - b. 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.

H. Recovered Material

1. 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.
 2. The Contractor also agrees to include these requirements in each Subcontract financed in whole or in part with Federal assistance provided by FTA.
- I. Recycled Products
1. The Contractor agrees to comply with all the requirements of Section 6002 of the Resources 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.
 2. The Contractor also agrees to include these requirements in each Subcontract financed in whole or in part with Federal assistance provided by FTA.
- J. Seismic Safety
1. 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.
- K. Seat Belt Use Policy
1. 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.
- L. Incorporation of Federal Transit Administration (FTA) Terms
1. The preceding provisions include, in part certain Standard Terms and Conditions required by the U.S. Department of Transportation (DOT), whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F or any revisions thereto, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all DOT or 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.

2. 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.

END OF SECTION

Section 00800

SUPPLEMENTARY CONDITIONS

This Section includes Modifications to the Section 00700, GENERAL CONDITIONS, for requirements unique to a specific project and is hereby incorporated into the General Conditions by reference. This Section 00800, SUPPLEMENTARY CONDITIONS, which specifies modifications to the General Conditions, shall be read in conjunction with Section 00700, GENERAL CONDITIONS, and which will be cited in Section 00700, GENERAL CONDITIONS, using the same last two digits of the Section number; i.e., a modification to Section 00724, COMMENCING THE WORK, is indicated as Section 00824, COMMENCING THE WORK.

00810 WORKS BY CONTRACTOR

Modify Section 00710, WORK BY CONTRACTOR, to delete Paragraph A. and substitute the following Paragraph:

- A. The Contractor shall perform, with its own organization, work equivalent to at least 20% of the value for the construction work.

00824 PERIOD OF PERFORMANCE AND PROJECT SCHEDULE

Modify Section 00724, PERIOD OF PERFORMANCE AND PROJECT SCHEDULE, to delete Paragraph A and substitute the following Paragraph and subparagraphs:

- A. The Contractor shall perform, complete, and advance all Work under this Contract in accordance with the schedule set out:
 - 1. Interim & Final Work Completion:
 - a. Milestone 1: Canopy Shop Drawing Submittal (PE stamped and sealed) – Complete all calculations, design and shop drawings, Notice to Proceed + 40 Days
 - b. Milestone 2: All Work Completion – Perform, complete and advanced all work including final completion and close out under this Contract, Notice to Proceed + 275 Days
- B. The Authority may modify the Contract, pursuant to Section 00748, CHANGES, to extend the Period of Performance as often and in time periods as deemed necessary until completion of the Work under this Contract.
- C. Early Completion: If the Contractor submits, in accordance with Section 01332, CONTRACT PROGRESS REPORTING, a schedule or expresses 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.

00833 AUTHORITY-FURNISHED PROPERTY

Modify Section 00733, AUTHORITY-FURNISHED PROPERTY, to delete Paragraphs A through D and substitute the following Paragraph:

- A. The Authority will not furnish property, real or otherwise, through the terms of this Contract. The Contractor is required to purchase or lease any property needed for, but not limited to, laydown, storage, or employee parking in its obligations to comply with the Project requirements.

00841 CONSIDERATION AND BASIS OF PAYMENT

Modify Section 00741, CONSIDERATION AND BASIS OF PAYMENT, in its entirety, and substitute the following:

- A. In consideration of its undertaking under this Contract, the Contractor will be paid the sums set forth in this Contract, which shall constitute complete payment for all work and services 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 on Section 00510, 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 work area. The "Hours of Work" will exclude the periods required by the Authority to safely secure the work area before the start of the "Hours of Work" and to restore the work area 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 Section 01141, ACCESS TO SITE. If the Authority delays the "Access to Site Time", but is also able to delay the "Off Site Time", as defined in Table 01141-01 to Section 01141 ACCESS TO SITE, and the Contractor is able to work for a number of hour's equivalent to the Hours of Work, this will not constitute a delay. If the Contractor is not given the access for a number of hour's 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 work area 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 work area.
 - b. A delay during the “Hours of Work” occurs when the Authority requests the Contractor to vacate the work area and the Contractor is later allowed to return to the work area. A delay during the “Hours of Work” will begin when the Contractor is directed to stop work to vacate the work area and will end when the Contractor returns to the work area and resumes work.
 - c. A delay at the end of the “Hours of Work” occurs when the Authority requests the Contractor to vacate the work area early. A delay at the end of the “Hours of Work” will be measured from the time the Contractor is directed to vacate the work area until the scheduled end of the “Hours of Work”.
4. The Contractor will be compensated for the direct labor costs incurred for the aggregate of delays that exceed 30 minutes relative to the “Hours of Work”. For payment purposes, delays will be rounded to the nearest 30 minutes provided the Contractor remains mobilized until granted access or until the Contractor elects to cancel the work, or the Contracting Officer Representative cancels access for the period. However if the Contractor elects to cancel work due to a lack of time remaining in the “Hours of Work” period to complete the planned work element, as verified by the Period of Delay form, the Contractor will be compensated for the aggregate of delays that exceed 30 minutes rounded to the nearest 30 minutes from the time access was cancelled to the scheduled end of the “Hours of Work” period.
5. When access to the work area is cancelled by the Contracting Officer Representative with less notice than noted below, the Authority will pay standby cost of not more than the scheduled “Hours of Work” period.
 - a. Weeknights: Twenty-four before the planned start time of the scheduled “Hours of Work.”
 - b. Weekdays: Twenty-four hours before the planned start time of the scheduled “Hours of Work.”
 - c. Weekends: No compensation will be provided for cancellation of planned work.
6. No payment will be made in those cases where:
 - a. A delay at the start of the “Hours of Work” is less than 1 hour and the Authority grants access but the Contractor elects to cancel work, except that payment for

delay cost will be made in accordance with Paragraph B.4 above if the scheduled "Hours of Work" period is 3 hours or less.

- b. A delay at the start of the "Hours of Work" is less than 1 hour and the Authority grants access and the Contractor proceeds working and then elects to cease working and leaves the worksite prior to the scheduled end of the "Hours of Work".
7. Prior to the completion of each shift, the Contractor and the Contracting Officer Representative or designee shall sign a Period of Delay form, which shall document the work start and completion times, the duration of the delay, the reason for the delay, the reason for the Contractor leaving the Site prior to the scheduled end of the "Hours of Work" period, and the names of the crew members present, including foremen, but excluding salaried supervision. The Contractor shall not be entitled to compensation for equipment, overhead, profit or extended overhead costs 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 and access delays may provide a basis to grant a non-compensable extension to the Period of Performance. Certified payrolls shall establish the hourly rates of the crewmembers. All requests for payment for delay costs shall be submitted to the Contracting Officer Representative with the next progress payment or within 30 Days, whichever is longer. The Contractor waives any right to delay 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.

00844 METHOD OF PAYMENT

Modify Section 00744, METHOD OF PAYMENT, to add Paragraphs M and N:

- M. As a condition of Final Payment, in addition to the retainage specified in Section 00744, Method of Payment, \$410,000 will be withheld until approved As-built Project Schedule is delivered to the Contracting Officer Representative and is determined to be complete and accurate.
- N. As a condition of Final Payment, in addition to the retainage specified in this Section, \$25,000 will be withheld until Operation and Maintenance Training is complete and accepted.

00865 DISADVANTAGED BUSINESS ENTERPRISE

Modify Section 00765, DISADVANTAGED BUSINESS ENTERPRISE, to delete Paragraph B and substitute the following:

The goal of DBE participation established for this Contract is **18%** percent of the Contract Price.

00878 LIQUIDATED DAMAGES

Modify Section 00778, LIQUIDATED DAMAGES, to delete Paragraph A. and substitute the following Paragraph and subparagraphs:

- A. The Contractor understands that if it fails to complete portions of or all of the Work as described in Section 00824, PERIOD OF PERFORMANCE AND PROJECT SCHEDULE, the Authority will suffer damages, which have been estimated and are as specified below:
 - 1. Milestone 1: Canopy Drawing Submittal (PE stamped and sealed) – Complete all calculations, design and shop drawings, Notice to Proceed + 40 Days: \$600 per day.
 - 2. Milestone 2: All Work Completion – Perform, complete and advanced all work including final completion and close out under this Contract, Notice to Proceed + 275 Days: \$1,800 per day.

00891 LIVING WAGE

- A. 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.
 - 1. The Authority Living Wage Rate is \$13.46 per hour, and may be reduced by the Contractor's per-employee cost for health insurance.
 - 2. The Contractor shall:
 - a. 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;
 - b. Include the Living Wage clause in all Subcontractors that exceed \$15,000 in a 12-month period awarded under this Contract;
 - c. Maintain payroll records, in accordance with the retention and examination of records requirements in the General Conditions, and shall include a similar provision in affected Subcontracts that requires the Subcontractor to maintain its payroll records for the same length of time; and
 - d. Submit records with each monthly invoice supporting payment of the Living Wage Rate.
 - 3. 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.
 - 4. Exemptions to the Living Wage provisions include:

- a. Contracts and agreements with higher negotiated wage rates;
 - b. Contracts that are subject to higher wage rates required by federal law or collective bargaining agreements (e.g., Davis Bacon);
 - c. Contracts or agreements for regulated utilities;
 - d. Emergency services to prevent or respond to a disaster or imminent threat to public health and safety; and
 - e. Contractors who employ fewer than ten employees
5. 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.
 6. 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.

00892 NOTIFICATION OF FEDERAL PARTICIPATION

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

00893 WHISTLEBLOWER PROTECTIONS

- A. 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.
 1. Under the National Transit Systems Security Act (NTSSA), 6 U.S.C. §1142, employees of Metro contractors or subcontractors may file a complaint of discrimination with the U.S. Department of Labor, for lawfully and in good faith:
 - a. reporting a hazardous safety or security condition;
 - b. 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 Metro contractor or subcontractor of the condition and of the intent to not perform work;
 - c. 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 Metro contractor or subcontractor of the condition and of the intent not to authorize use of hazardous equipment or infrastructure unless corrected;

- d. 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;
 - e. refusing to violate or assist in violation of Federal safety or security law;
 - f. 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;
 - g. furnishing information to law enforcement agencies relating to an accident or incident resulting in damage to property, injury, or death; or
 - h. filing a complaint under the NTSSA or testifying regarding such complaint.
2. Under the American Recovery and Reinvestment Act (ARRA), Public Law 111-5, § 1553, employees of Metro contractors or subcontractors may file a complaint of discrimination with the Inspector General of the appropriate federal agency for reporting to supervisors and other authorized individuals and agencies evidence that the individual reasonably believes demonstrates:
- a. gross mismanagement of an ARRA project;
 - b. gross waste of ARRA funds;
 - c. a substantial and specific danger to public health and safety related to an ARRA project;
 - d. violation of law relating to ARRA funds or an ARRA project; or
 - e. abuse of authority related to the implementation of ARRA funds.
- B. The Contractor will be required to post a notice of the rights and remedies provided to employees under Section 1553 of the American Recovery and Reinvestment Act of 2009. The Contractor also agrees to include these requirements in each Subcontract financed in whole or in part with Covered Funds. The notice must substantially comply with the sample notice, which may be downloaded at:

<http://www.recovery.gov/sites/default/files/Whistleblower+Poster.pdf>

00894 COMMUNITY OUTREACH

- A. The Authority will establish a program of public contact for conducting effective relationships with communities and businesses in proximity to the construction areas. Do not initiate contact with the public without Contracting Officer Representative approval.
- B. The Authority will contact those residents and business owners who might reasonably be expected to be affected by the construction and make known to them the name of the Authority's representative on the worksite with responsibility for community outreach and explain to them the means by which the representative can be contacted expeditiously.
- C. Contractor shall designate an on-Site, community outreach liaison with 24-hour, on-call availability for the duration of the Contract. Community outreach liaison duties include:
 - 1. Staying informed of problems caused by the construction.
 - 2. Assisting the Authority in notifying adjacent owners of upcoming work
 - 3. Preparing and posting advance notice signs as necessary to inform public and surrounding businesses of upcoming construction activities.
 - 4. Assisting the Authority in responding to complaints
 - 5. Attending public outreach meetings, as necessary: Meetings can include regular construction information meetings, quarterly open houses, media inquiries, tours, ground breaking, and other milestone events.
 - 6. Accommodating Site tours: Tours shall be arranged through the Contracting Officer Representative.

Appendix D - Wage Determination of the Secretary of Labor

END OF SECTION

Section 00900

AMENDMENTS AND MODIFICATIONS

Section 00910

AMENDMENTS

Section 00920

CLAIMS

Section 00930

CLARIFICATIONS AND PROPOSALS

Section 00940

MODIFICATIONS

SECTION 01000
SCOPE OF WORK

PART 1 – GENERAL

1.01 SUMMARY

- A. The Contractor shall furnish all labor, materials, equipment, storage, permits, transportation, small tools, temporary measures and other items necessary to satisfactorily complete the project as written in the specifications and as shown on the Contract Drawings.
- B. Unless specifically stated otherwise, all work shall conform to the respective construction standards and specifications of the jurisdiction having authority or the Authority. If/where no such standards and/or specifications exist, the work shall be performed in accordance with the applicable prevailing industry standards.

PART 2 – PARTICULARS

- 2.01 The Contractor shall be responsible for all permits and jurisdictional inspections, including permissions from Fairfax County for the encroachments into the adjacent Sanitary Sewer Easement and Resource Protection Area; federal and jurisdictional safety requirements; and codes pertaining to this project.
- 2.02 The Contractor shall be properly licensed to do business in Fairfax County, VA. The Contractor shall be in possession of a valid contracting license, as required prior to commencement of this project.
- 2.03 The Contractor shall remove from the Authority's property all debris resulting from demolition to locations off the Authority's property and obtain written permits and release from the owners of the property where the materials will be deposited. This includes demolition and removal of all existing concrete, accessories, and appurtenances shown on contract drawings.
- 2.04 The Contractor shall coordinate his efforts in the performance of this contract, including with the COR
- 2.05 The Contractor shall be responsible for all permits and shall complete the work required under this Contract in accordance with the National Electrical Code® (NEC) and all safety and all other jurisdictional codes pertaining to this project.
- 2.06 The Contractor shall perform all work, including the erection of canopies, bus shelters, bus manager's kiosk, and retaining walls, in strict accordance with the manufacturers' recommendations and the sequence of construction approved by the COR.
- 2.07 The Contractor shall be responsible for environmental conditions as follows: If existing construction and materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify the COR. Hazardous materials will be removed by WMATA under a separate contract. Erosion and sedimentation control measures shall be installed in accordance with a detailed plan prepared by the Contractor and approved by the jurisdictional authority and the COR.
- 2.08 The Contractor shall be responsible for protection of adjacent area and adjacent occupied areas including as follows: Provide required barriers to seal off hazardous materials from the adjacent areas. Provide required barriers to keep the public from entering the work areas and keep the public safe from work activities in adjacent areas. Pedestrian access to station entrance and bus bays with required walkways to be maintained and protected from construction work activities.

Provide sufficient measures to protect the environment, including the adjacent Resource Protection Area, as required by the AR and jurisdictional authorities.

2.09 The Contractor is cautioned that storage for materials and equipment in the immediate area of the station is very limited. Likewise, access over the access drives to the station for transport of materials and equipment is very limited, and storing of any materials should be at least 30 feet from the edge of roadway. A work and storage area will be made available for use by the Contractor in or near the Station property.

- A. During permitted work periods, the bus lane will be available for access to the work area by Contractor's equipment and forces.
- B. Bus operations will be maintained on a minimum of seven (7) bus bays at all times. No activity of the Contractor shall interfere with such operations, except as approved by the COR.
- C. The bus bays and corresponding stops (listed on both the existing shelters and signs) shall be maintained and any temporary relocation needs to be coordinated with COR so as to avoid any confusion between the transit operators and patrons.
- D. Access to and from the bus bays is to be maintained at all times.
- E. Contractor is responsible for following traffic closures (MUTCD) requirements and getting approval from the COR for setting up the partial lane closures.

2.10 The Contractor shall be responsible for preparation of a detailed Construction Phasing Plan that maintains safe and efficient operation of the Station, including a plan for the Maintenance of Traffic (MOT) during the construction. A Conceptual Maintenance of Traffic Plan, a Phasing Plan, and a Walkway Construction Schedule plan are included in the contract drawings for the Contractor's general guidance; however, the Contractor's Construction Phasing Plan will be the official plan for the construction. The Plan shall include phasing to assure the continued and safe operation of at least seven (7) bus bays at all times, include proposed working hours, and must receive prior approval from the jurisdictional authorities, if required by code, and the COR prior to commencement of work.

- A. The MOT plan shall include a detail for the proposed end treatment (i.e. crash cushions, attenuators, etc.) for all exposed concrete barriers for all phases of construction.
- B. The MOT plan shall include the need for a line item for use of temporary pavement markings, striping, etc. for all phases of construction.
- C. The MOT plan shall verify providing adequate lateral clearance to accommodate the movement of bus operations, work vehicles, materials, etc.
- D. All flaggers used for MOT shall be certified per the requirements of Virginia Department of Transportation.

2.11 The Contractor will be required to prepare and submit to the COR typical sections and profiles, including ties to existing grades, for all proposed bike/pedestrian routes to assure compliance with the intent of the construction plans and specifications, and the latest Americans with Disabilities Act (ADA) Standards for Accessible Design. Any field surveys necessary for preparation of the typical sections and profiles, or verification of compliance, will be the responsibility of the Contractor. Work for construction of the proposed bike/pedestrian routes will not commence prior to the submittal and acceptance of the pertinent typical sections and profiles by the COR.

- 2.12 At the completion of each allowable work period, the work areas must be secured. The areas adjacent to the work areas shall be left in a condition to permit station operations with no impact on the safety of passengers or the safe operation of buses.

PART 3 – SPECIFIED WORK

3.01 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING MAJOR WORK ITEMS:

- A. Plans and Permits:
1. Verification of existing conditions as indicated on the Existing Conditions Plan in the contract drawings, including the performance of any necessary supplemental field-run surveys by a Professional Land Surveyor licensed to practice in the Commonwealth of Virginia, and any additional resources necessary for the Contractor's satisfaction.
 2. Preparation of prerequisite typical sections, and plans referenced in Section 1.02, above.
 3. Obtaining all necessary permits and approvals necessary to the performance of the work, including those stated in Section 1.02, above.
- B. Certification of Flaggers:
1. Certified flaggers per the requirements of Virginia Department of Transportation shall be used for MOT. All flaggers shall be required to maintain and possess proper documentation at all times. Any persons not in possession of the required paperwork shall be removed from the work site until proper documentation can be verified by the appropriate source.
- C. Demolition:
1. Removal of vegetation, paving, curbs (and gutters), sidewalks, light fixtures, pavement markings, signage, and other miscellaneous items as shown on the Demolition Plan in the contract drawings, and per the approved Construction Phasing and MOT plans referenced in Section 1.02, above.
 2. For any proposed saw cut including grade breaks along the traveled way resulting in a change of elevation to the motoring public, the project shall adhere to MUTCD or AASHTO standards, whichever is the more stringent, pertaining to mitigation of roadway drop-offs.
- D. Construction of Proposed Improvements (per the Contractor's phasing plans):
1. Installation of Erosion and Sedimentation Control measures per the Contractor's plan, as referenced in Section 1.02, above.
 2. Construction of any temporary items, including temporary electrical/lighting, crosswalk, security fencing, and signage, and MOT, as referenced in Section 1.02, above.
 3. Construction of permanent pavement, curbs (and gutters), sidewalks, ramps, pavement markings, signage, retaining walls, storm drainage, underground utilities, lighting fixtures, canopies foundations, bus shelters, bus managers kiosk, bike lockers, etc. per the contract drawings and the phasing mentioned in Section 1.02.
 4. Construct canopies, remaining hardscape and landscape items (including new trees and tree wells), electrical/lighting/telecommunications connections, and stone infiltration bed as shown on the contract drawings.
- E. Final Clean-up:
1. Remove any remaining erosion and sedimentation control measures.
 2. Stabilize any remaining disturbed areas with vegetative cover.
 3. Remove any remaining MOT measures.
 4. Clean site and confirm operation of all improvements to satisfaction of COR.
- F. Final As-built Survey to develop final as-built drawings within 30 calendar days of the substantial completion of contract work.

END OF SECTION

SECTION 01110
SUMMARY OF WORK

PART 1 – GENERAL

1.01 SUMMARY

- A. The Work includes constructing the Project as indicated in the Contract Documents.
- B. The completed Project will result in the complete construction, testing, and commissioning of the following Authority items at Bus Bays Improvements, Safety and Access Improvements at Franconia Springfield Metrorail Station. The Base Contract Work generally includes, but not limited to, the following:
 - 1. Installation of Erosion and Sedimentation Control Measures
 - 2. Construction of any temporary items, including temporary electrical/lighting, crosswalk, security fencing, and signage, and MOT
 - 3. Construction of clearing and grubbing, earthwork, permanent pavement, curbs (and gutters), sidewalks, ramps, pavement markings, signage, retaining walls, storm water management, underground utilities, lighting fixtures, bus canopies foundations, bus shelters, bus managers kiosk, bike lockers, etc.
 - 4. Construct bus canopies, remaining hardscape and landscape items (including new trees and tree well installation), electrical/lighting/telecommunications connections, and stone infiltration bed
- C. Refer to Spec 01000 for details
- D. The Project shall function as an integral part of and be fully compatible with the existing WMATA system. All construction work shall be performed such so as to have minimal negative impact to the overall transit operations and its patrons.

1.02 DAYS/HOURS OF WORK

- A. The standard work week for the Contract will be Monday-Friday, with the work scheduled between 6:00 AM to 3:00 PM, unless otherwise approved by the COR or as defined in Section 01141, ACCESS TO SITE. A WMATA approved Traffic Control Plan shall be used as the standard for all matters involving traffic control throughout the life of the project.
- B. Provide Contracting Officer Representative 7 Days advance notice prior to changing shift hours and 48 hours advance notice for planned work shifts outside the established work week and work day.

1.03 LOCATION

- A. The Project is located at Franconia Metro Rail Station on Metro Yellow line in Fairfax County. The Project Site is location is provided on contract documents.

1.04 SITE LOGISTICS

- A. Construction equipment and materials may be staged on Site. Coordinate with Contracting Officer Representative for the location of the staging area.
 - 1. Staging shall be prohibited in the pedestrian walkway, emergency path/driveway, bus traffic lanes, and other restricted area as defined by signs at project site. .

B. Parking

1. WMATA will not provide parking at the project site. The contractor vehicle can be parked at the Metro Garage by paying parking fees.
2. Contractor parking is prohibited on Bus Lanes, Restricted Areas, Sidewalk, and on Grass Area except in confined work area with necessary barricades with prior approval from the authority.

C. Constraints on Construction

1. Work Sequence

- a. Construction shall be completed as per criteria specified on the contract documents by developing and having approval of phasing plan and MOT plan for the project. The contractor shall plan phasing of work to have continuous operation of seven bus bays at all time.
- b. Schedule the execution of work to avoid interference with normal functions of the bus services. Contractor shall submit phasing plan to COR for review and approval.
- c. Before commencing work of each phase, submit a schedule to the COR showing the work sequence, the commencement and completion dates, and the move out and move-in dates of personnel for the various phases of the work.
- d. On completion, each phase of the Work shall be fully operational.

2. Special Events

- a. Minimize risks to the public during special community events that are located in close proximity to the Project Site.
- b. Construction activities shall be coordinated with the Authority when working on the area near to the special community/authority event to reduce construction impacts during duration of events.
- c. Maintain a Special Community Event List in coordination with the Authority for the duration of the Contract. The list shall identify local special holidays, parades, festivals, and other similar events that are within the proximity of the Project construction area and operations. The list shall include the following information:

- (1) Name and general description of the event
- (2) Date, time of day, and duration
- (3) Location(s)

D. Work performed by Others:

Construction of Bicycle Lockers/Cage in front of parking garage

E. Coordination of Work with Others: Coordinate Work through the Contracting Officer Representative with the following:

1. Utilities and jurisdictional authorities affected by or having jurisdiction over the Project.
2. Other Contracting Officer Representatives, Authority consultants, and contractors associated with adjacent projects.

- F. Survey Work: Perform as needed to execute the Project as specified in Section 1721, LAYOUT OF WORK AND FIELD ENGINEERING. The contractor shall identify and mark the underground utilities prior to commence of the Work.
- G. Design Completion: Perform or furnish design professional services for specified elements of the Project. Perform the design services in accordance with the specifications and requirements of the Contract and in accordance with professional standards of skill, care, and diligence adhered to by firms recognized for their expertise, experience, and knowledge in performing these services. The Contractor shall be responsible for the professional quality, technical accuracy, completeness, and coordination of the all contracted services. All design professional services for the project shall be performed and approved by a registered Professional Engineer licensed to practice engineering in all jurisdictions where the specified elements of the Project will be constructed.
- H. Permits: The Authority has provided permits noted and attached in Section 00806, PERMITS AND RESPONSIBILITES. Contractor shall obtain all additional permits from Utilities and Jurisdictional Authorities as needed.
 - 1. The Contractor shall, without additional expense to the Authority, be responsible for obtaining and maintaining in good standing) all required necessary licenses, permits not provided by the Authority, and easements and for complying with applicable International, Federal, State, local, or municipal laws, codes, or regulations in connection with the prosecution of the Work.
- I. Safety: Establish and manage Project safety in accordance with Section 01114, SAFETY/ ENVIRONMENTAL REQUIREMENTS and safety and security certification in accordance with Section 01115, SAFETY AND SECURITY CERTIFICATION.
- J. Quality: Establish and manage a Quality System in accordance with Section 01470, QUALITY MANAGEMENT SYSTEM.
- K. Testing and Systems Integration Testing
 - 1. Establish and perform component testing as specified in various specification sections and in accordance with Section 01470, QUALITY MANAGEMENT SYSTEM. Develop a Systems Integration Testing Plan and perform and manage Systems Integration testing for the project in accordance with Section 01113, SYSTEMS INTEGRATION TESTING.
 - 2. Provide and manage the services of an independent testing agency that shall conduct material testing and maintain all records for the project.
 - 3. The independent testing agency and independent inspectors may be provided through a single entity.
- L. As-Built Documents: Maintain a hard copy drawing and specification record of as-built conditions during construction phase, and provide As-Built Drawings and As-Built Specifications at the completion of the Project in accordance with Section 01775, CLOSEOUT.
- M. Demonstration and Training: Demonstrate equipment and systems and provide training to WMATA staff as indicated in Section 01820, DEMONSTRATION AND TRAINING.
- N. Salvaging of Materials and Equipment
 - 1. Maintain property control records for materials or equipment to be salvaged. The Contractor shall be responsible for the storage and protection of salvaged materials and equipment and shall replace salvage materials and equipment, which are broken or damaged during salvage operations as the result of negligence or while in the Contractor's care.
 - 2. Salvaged material not specified for reuse shall become the property of the Contractor and shall be removed from the Site.

3. The following materials or equipment shall be salvaged for reuse: Not applicable.
4. The contractor shall provide following items as attic materials at the end of project at WMATA location (either at Metro Rail Station Storage Room or CTF Building in Landover). The contractor shall coordinate for date, time and location with the Authority before bringing at the specified locations:
 - a. Light Fixtures:
 - 4 each for each type of light fixtures.
 - b. Bus Shelters parts (10 of each following list) and size as per contract documents:
 - 1). Roof glazing panels – left side
 - 2). Roof glazing panels – inside
 - 3). Roof glazing panels – right side
 - 4). Side glazing panels – front
 - 5). Side glazing panels – rear
 - 6). Rear glazing panels – rear windscreen

Q . WORK AND STORAGE/LAYDOWN AREA

The areas designated by the Authority 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's use of laydown areas other than those identified by the Authority must be approved by the Contracting Officer Representative prior to their use. The Contractor shall submit a materials storage plan as described in Section 01330, SUBMITTAL PROCEDURES, for approval 60 Days prior to the start of construction.

PART 1 – PRODUCTS (not used)

PART 2 – EXECUTION (not used)

END OF SECTION

SECTION 01111
CONTRACTOR KEY STAFF

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies key staff that forms the Contractor's team and identifies their basic functions.

1.02 REFERENCES

- A. United States Green Building Council (USGBC)
 - 1. Leadership in Environmental Engineering and Design (LEED)
 - a. New Construction and Major Renovation
- B. Registrar Accreditation Board of the American Society for Quality (RABASQ)
- C. Occupational Safety and Health Association (OSHA)
 - 1. Construction Safety Training
 - 2. First Aid/CPR/Blood Borne Pathogens Training

1.03 SUBMITTALS

- A. Submit the following within 10 Days of Award in accordance with Section 01330, SUBMITTAL PROCEDURES:
 - 1. Evidence of qualifications and experience of Key Staff.

1.04 CONTRACTOR

- A. 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, and construction 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.
- B. 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.
- C. Individuals holding these key staff positions shall not be changed without written Authority approval for substitutions of key staff.
- D. Key Staff
 - 1. Construction Project Manager
 - a. Shall have an undergraduate degree in engineering with a minimum of 15 years experience in managing complex multi-discipline heavy construction projects and a minimum of 10 years managing the construction of projects of a similar type and financial magnitude in the rapid transit industry.

- b. Responsible for managing construction of all facets of the Project and has overall responsibility for its successful and timely completion.
 - c. 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 testing, commissioning, and close-out of the Project. Responsibilities include but are not limited to acquiring construction permits not furnished by the Authority; managing Subcontractors, independent testing companies, fabricators and Suppliers; development, management, and implementation of Project Schedule; preparation, submittal, and management of construction submittals; maintaining as-built documentation; and coordinating with outside agencies and Utility companies on construction related matters. The Construction Manager is responsible to ensure that construction is based on the Contract Documents and that all applicable codes and standards are complied with.
2. Construction General Superintendent
 - a. Shall have a minimum of 15 years experience in complex multi-discipline heavy construction, a minimum of 10 years in rapid transit industry, and a minimum of 5 years in a supervisory capacity supervising projects of a similar type and financial magnitude.
 - b. Responsible for oversight of day-to-day construction at the Site.
 - c. Responsibilities include but are not limited to supervising construction activity, overseeing coordination between Subcontractors, coordinating with Quality Manager and Safety Manager in the implementation of project Quality and Safety plans, and ensuring that construction is based on current Shop Drawings and Working Drawings. The Construction General Superintendent is also responsible for maintaining as-built documentation.
3. Quality Manager
 - a. A degreed engineer and 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 10 years of related experience including a minimum of 5 years of management positions in a production, manufacturing, or construction environment performing QA/QC auditing. Transit industry experience is preferred.
 - b. Reports to one or more levels of management above the Contractor's Project Manager.
 - c. 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.
 - d. Shall be a full 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.
 - e. The Quality Manager may be approved as the Safety and Security Certification Manager as defined in Section 01115, SAFETY AND SECURITY CERTIFICATION.
 - f. Shall have some experience with LEED Rating System and be responsible for ensuring the LEED design and construction goals are met or exceeded.
 4. Safety Superintendent
 - a. Shall have a degree in engineering with a minimum of 10 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 and First Aid/CPR/Blood Borne Pathogens Training. Shall be a Certified Safety Professional (CSP).

- b. Responsible for development of a construction safety plan.
- c. 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. The Contractor shall employ and assign full-time a Safety Superintendent on Site at all times.
- d. Shall have specialized training and experience in construction safety supervision and have a thorough knowledge of all OSHA regulations. The Safety Superintendent shall have the ability to develop and conduct safety-training courses. The Safety Superintendent shall be familiar with industrial hygiene equipment and testing as required for the protection of all personnel and the public.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01114
SAFETY/ENVIRONMENTAL REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes construction safety and security and environmental safety requirements for the Project including WMATA's Safety Awareness Program.

1.02 REFERENCES

- A. WMATA Construction Safety and Environmental Manual (CSEM)
- B. ANSI/ISEA 107 - American National Standard for High-Visibility Safety Apparel
- C. Occupational Safety and Health Association (OSHA)
 - 1. 29 CFR §1910
 - 2. 29 CFR §1926
 - 3. 49 CFR §172
 - 4. 49 CFR §390-397
- D. U.S. Army Corps of Engineers - Safety Manual EM-385-1-1
- E. National Commission for the Certification of Crane Operators
- F. Resource Conservation and Recovery Act (RCRA) of 1976 and amendments
- G. Department of Bus Service Employee's Handbook
- H. WMATA, Office of Rail Transportation Maintenance Operations Control, Administrative Procedure OAP 200-33, Site Specific Work Plan (SSWP)
- I. WMATA Construction Safety and Environmental Manual

1.03 QUALITY ASSURANCE

- A. Safety Superintendent: As specified in Section 01111, CONTRACTOR KEY STAFF
- B. First Aid Attendant
 - 1. Shall have current First Aid and CPR certification. A resume, certifications, and evidence of training shall be submitted documenting education and experience.
 - 2. Shall be trained in Blood-borne Pathogens in accordance with CFR §1910.1030.

1.04 SUBMITTALS

- A. Submit to the Contracting Officer Representative for approval in accordance with Section 01330, SUBMITTAL PROCEDURES, 60 Days prior to commencing construction, unless noted otherwise:
1. Documentation and Certifications of Safety Superintendent's and First Aid Attendant's, as applicable, experience in construction safety
 2. Contractor's Organizational Health and Safety Program Plan that includes OSHA required plans listed below that are applicable to the Work
 - a. Site-specific Emergency Response Plan
 - b. Site-specific Temporary Fire Protection System Plan
 - c. Site-specific Waste Water Discharge Plan if wastewater is generated
 - d. Site-specific Pollution Control Program
 - e. Site-specific Dust and Debris Control Plan
 - f. Site-Specific Work Plans for all work that will be performed in the right-of-way and operational ancillary rooms within the station
 - g. Site-specific Fall Protection Plan
 - h. Bloodborne Pathogens Exposure Control Plan
 - i. Hearing Conservation Program if employees are exposed to continuous noise in excess of the OSHA Action Level
 - j. 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, provide documentation of training, medical clearance for respirator use, and respirator fit testing.
 - k. Hot Work Program
 - l. Lockout Tagout Program
 3. Job Hazard Analysis submitted prior to each element of construction.
 4. Documentation to show that all Confined Space entrants and attendants are trained in Confined Space Entry, including hands-on-training or Confined Space Awareness, as applicable, and possess applicable licenses and certifications.
 5. Identity of all materials or chemicals to be used 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 wastes will be generated. Submit MSDS Review Request Forms prior to the use these materials or chemicals.
 6. CCO certificates before crane operators work on the Site.
- B. Submit to the Contracting Officer Representative for information in accordance with Section 01330, SUBMITTAL PROCEDURES, 60 Days prior to commencing construction, unless noted otherwise:
1. Certificates of Insurance for pollution liability coverage, if applicable, in accordance with Section 00877, INDEMNIFICATION AND INSURANCE REQUIREMENTS, for Contractor or

Subcontractors performing work involving hazardous materials, hazardous substances, hazardous wastes, or contaminated soil or water.

2. Results of noise monitoring, air monitoring, and soil, water or waste sampling submitted weekly during work activities.
3. Documentation of medical surveillance submitted monthly.
4. Identity of equipment that may generate toxic atmospheres such as gasoline or diesel-powered generators, welding, and cutting equipment
5. Documentation of licenses and certificates required for lead or asbestos abatement, UST removal, or installation, OSHA's Hazardous Waste Operations and Emergency Response Standard (HAZWOPER), or other work requiring licensing or certification such as welding.
6. Documentation of licenses, certificates, and U.S. EPA identification numbers required for transportation of hazardous materials, hazardous substances, or hazardous wastes.
7. 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.
8. Certification of Crane Operators Certificate before the crane operator works on the Site.
9. 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 Design-Builder field calibration checks.

1.05 SAFETY REQUIREMENTS

- A. The Contractor shall be responsible for all Subcontractors, Suppliers, and other persons working under its direction to comply with all requirements as noted herein, and shall disseminate these requirements to those personnel.
- B. 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 personnel. The Contracting Officer Representative will notify the Contractor if any operation that is not in compliance with federal, state, or local health and safety or environmental regulations or Authority policy and procedures, and that may require the Contractor to stop work on a specific task or operation.
- C. Immediately report all accidents and incidents (including near misses) that occur during the performance of the Work to the Contracting Officer Representative.
- D. 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 Authority property, is restricted. Contractors seeking to store hazardous or flammable materials on Authority property must obtain approval from the Authority by submitting material safety data sheet (MSDS) for each specific chemical and the quantity of each chemical to be stored on the Site. It may not always be possible to grant permission to store hazardous or flammable materials on Authority property. If permission is granted, store the materials in compliance with the jurisdictional codes and regulations. Acquire permits for use of hazardous materials as required by the jurisdictional Fire Marshal.
- E. The use of explosives for the performance of Contract work will not be permitted without written Approval from the Contracting Officer Representative. Obtain all permits and approvals from the Jurisdictional Authorities.

- F. Prior to performing any work on or above or under the right-of-way, arrangements shall be made through the Contracting Officer Representative for access rights and power outage in accordance with SOP No. 19 contained in the Metrorail Safety Rules and Procedures Handbook and OAP 200-33 (SSWP). All special requests for access, single tracking, power outages, escorts, and other Authority support shall be submitted in writing. Site Specific Work Plans shall be submitted for all Work conducted in Authority Right-of Way and any operational facility. Ensure that personnel complete safety training by Authority on the rules and procedures for working on the Right-of-Way before starting such work.
- G. Employ and assign to the construction work a Safety Superintendent as specified in Section 01111, CONTRACTOR KEY STAFF, and a separate certified First Aid Attendant for on-site work activities. A first aid station shall be established and fully equipped to meet the needs of the anticipated work force. The certified First Aid Attendant shall be on duty in the first aid station at all times when construction work is in progress except when on emergency calls. In no event shall work at the Site be performed until the approved Safety Superintendent and First Aid Attendant are available to the Project.
- H. 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 Days or more, the Work may be closed down at the discretion of the Contracting Officer Representative. The Safety Superintendent and First Aid Attendant shall be acceptable to the Contracting Officer Representative, and their performance will be reviewed and documented by the Contracting Officer Representative on a continuing basis. If the Safety Superintendent's and First Aid Attendant's effectiveness is below standard, the Contractor shall provide immediate replacement at the Contracting Officer Representative's direction. Once employed, the Safety Superintendent and First Aid Attendant shall not be changed without permission of the Contracting Officer Representative.
- I. For all work within Confined Spaces, comply with all OSHA, state, and local Jurisdictional Authority rules and regulations for confined spaces defined by 29 CFR §1910.146. Confined spaces shall be classified as either non-permit confined space or permit-required confined space in accordance with OSHA regulations.
- J. Prior to the initial entry into a confined space, coordinate entry with the Contracting Officer 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.
- K. Air quality and any additional parameter reading results shall be provided to the Contracting Officer Representative for recording purposes and shall 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 the Contracting Officer Representative.
- L. Prior to the start of any work involving non-permit confined spaces, submit the following:
 - 1. Written Job Hazard Analysis for all work to be performed in the confined space, including MSDSs for chemicals to be used in the space. Submit MSDSs for all chemicals to be used on Authority property 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 Authority and if approved, the materials can be used in the system. If they are rejected, submit a substitute for Authority approval. The MSDSs must be recent (less than 3 years old) and comply with the OSHA Hazard Communication Standard 29 CFR §1910.1200. The Contractor is responsible for complying with the requirements of the MSDSs.
 - 2. Written Emergency Response Plan, which identifies emergency responders for rescue operations.

3. Written plan for a temporary Fire Protection System as specified in Section 00740, PROTECTION OF PERSONS AND PROPERTY, for use during the term of the Contract, for Authority approval. Ensure that work activities do not adversely impact existing fire protection system(s) i.e., sprinklers, stand pipes, and portable extinguisher.
 4. 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, Authority requires field calibration checks on air monitoring instruments, each day (or shift) before use. The field calibration check information shall include the date, time, calibration check data, and the printed name and signature of the person performing the calibration check.
 5. Documentation to show that all personnel working in or near non-permit confined spaces are trained in Confined Space Awareness.
- M. Prior to the start of any work involving permit-required confined spaces, submit the following in addition to those items required for non-permit confined spaces:
1. Confined space permit for applicable space. Each permit is valid for a maximum of 24 hours.
 2. Written Respiratory Protection Program.
 3. 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.
 4. A warning sign to identify the work Site as a permit-required confined space requiring authorization to enter.
 5. The Contractor is required to notify the State at least 24 hours prior to entering permit-required confined spaces or to employ State certified Safety personnel who will manage permit-required confined space access and who will perform the required record keeping.
- N. Provide a Job Hazard Analysis prior to the start of each phase of work.
- O. 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 §1910.135 and §1910.136. Athletic-type footwear shall not be worn on the Site.
- P. Smoking is prohibited in the Metrorail system, Metrobus system, other Authority facilities, and in Authority vehicles. The Contracting Officer Representative will select a designated smoking area outside the system or facilities and Contractor will be informed of its location. Contractor personnel found smoking in un-designated areas will be subject to removal from Authority property. The Contractor's Safety Superintendent shall be responsible for ensuring compliance.
- Q. The OSHA Standard for Sanitation, 29 CFR §1910.141, shall be followed. Prior to starting work, furnish for the Contractor's staff, necessary toilet convenience secluded from public view. They should 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.
- R. For all work at heights above 6 feet, submit a detailed, site-specific Fall Protection Plan. 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.

- S. Comply with 29 CFR §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).
- T. If the Work involves removal of paints or coatings, 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 shall be conducted for the eight metals (arsenic, barium, cadmium, chromium, lead, mercury, silver, and selenium) required by the Resource Conservation and Recovery Act (RCRA) of 1976 and amendments. 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's personnel performing lead-based paint abatement, removal, or control, shall have all licenses and accreditation 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 shall provide medical monitoring to meet the requirements of 29 CFR §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 Authority property where the employee may be exposed to lead, and immediately upon completion of this work. The Contractor shall provide training for lead workers and supervisors as required by the jurisdictional regulations. Documentation shall be submitted to the Contracting Officer Representative prior to commencement of work. All documentation shall be authentic and verifiable. All materials shall be handled and disposed of in compliance with the jurisdictional regulations. MSDSs for replacement paints/coatings must be approved by Authority prior to use on Authority property.
- U. 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 will be handling or removing asbestos-containing materials, the Contractor shall have all licenses and accreditations required by the jurisdiction in which the work is performed. The Contractor is required to provide medical monitoring to meet the requirements of 29 CFR §1910.1001 and §1926.1101. The Contractor shall provide training for asbestos workers and supervisors as required by the jurisdictional regulations. Documentation shall be provided to the Contracting Officer Representative prior to commencement of work. All documentation shall be authentic and verifiable. All materials shall be handled and disposed of in compliance with the jurisdictional regulations. All replacement materials shall be free of asbestos.
- V. Contractor's personnel 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/m^3), in any 15-minute period. NIOSH provides recommendations for control of asphalt fumes.
- W. 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 §1926.103 or 29 CFR §1910.134, and submit evidence of air monitoring, training documentation, medical clearance for respirator use, and respirator fit tests for tight-fitting respirators.
- X. 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.
- Y. For all work generating waste water, submit a Waste Water Discharge Plan that describes how the Contractor will treat and release wastewater generated by activities at the work Site, for all work that generates wastewater. Apply for Temporary Discharge Permit from local sewer authority, as required by specific site activities. Comply with Consolidated Plan prepared by Authority for Bus Divisions and Rail Yards.
- Z. For Abrasive Blasting activities, all MSDSs for abrasives shall be submitted for Approval prior to abrasive blasting activities. Only abrasives containing less than 1 percent crystalline silica shall be used for abrasive blasting.
- AA. For Hot Work activities, provide documentation on certification for personnel who perform welding on Authority property. Ventilation in accordance with OSHA regulations shall be provided for hot work such as welding, cutting, or brazing.
- BB. 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 shall have the proper current certifications and be trained in Bloodborne Pathogens in accordance with 29 CFR §1910.1030.
- CC. Work shall not be performed in any area in use by the public, unless specifically required by the Contract or directed in writing by the Contracting Officer Representative. Give at least 72 hours notice to the Contracting Officer Representative before beginning such work.
- DD. In cases where the movement of Contractor's motorized equipment is necessary, flag persons shall be provided to warn and direct personnel and patrons away from the area of travel. Flag persons shall be certified as trained in proper flagging techniques and Contractor employees involved in traffic control and devices shall be certified as trained in traffic management as required by the State or local jurisdiction. Certification shall be documented.
- EE. When it is necessary to maintain use of work areas involving stations, sidewalks, pedestrian bridges, elevators, platforms, bus shelters, vehicular roadways, building entrances, and corridors, protect the area with guardrails, substantial barricades, temporary fences, overhead protection, and temporary partitions as deemed necessary by the Contracting Officer 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.
- FF. 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, and excavation materials. 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, overhead protection shall be provided. Protected walkways shall be Approved by the Authority.
- GG. 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 and partitions. Exposed, live circuits shall not be left accessible to personnel or the public or left dangling overhead. Before completion of the Work:
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 the Contracting Officer 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 the Authority at the right-of-way safety training required in this Section. The safety vests shall comply with the ANSI/ISEA 107 guideline entitled American National Standard for High-Visibility Safety Apparel. All of the Contractor's personnel are required to attend safety training provided by the Authority before starting work near the platform edge or in the right-of-way.

HH. Use of Cranes and Derricks:

1. General Safety Requirements. Comply with the following:
 - a. 29 CFR §1910.180 through §1910.189.
 - b. 29 CFR §1926.550 through §1926.556
 - c. U.S. Army Corps of Engineers, Safety Manual EM-385-1-1.
 2. No part of any crane or derrick boom shall swing over Authority patrons, tracks, or stations without an Authority Approved shield or procedure.
 3. Placement of crane or derrick shall be coordinated with the Contracting Officer Representative.
 4. NOT USED
 5. Hardhat requirements are enforced.
 6. "Swing Stop" requirements may be instituted based on the hazards involved.
 7. Use of cranes and derricks over common corridor railroads and highways is under the rules of the affected common corridor railroad or highway owner.
 8. All cranes used for erecting components of precast concrete on the Project shall be equipped with Load Moment Indicating (LMI) devices or Rated Capacity Indicators (RCI), an anti-two-block device. All crane operators shall be certified to operate the type of crane used by the National Commission for the Certification of Crane Operators (CCO) and their CCO certificates shall be submitted to the Contracting Officer Representative. To increase the factor of safety when picking structural elements of the building, all cranes shall have load capacity charts reduced (de-rated) by a factor of 30 percent. Submit a lift plan showing all pertinent information demonstrating that the total load does not exceed 70 percent of the maximum before crane delivery to the Project Site.
- II. All jobsite visits for visitors and tours shall be coordinated through Contracting Officer Representative in accordance with the WMATA Construction Safety and Environmental Manual, and Contractor insurance requirements.

1.06 ENVIRONMENTAL SAFETY REQUIREMENTS

- A. Comply 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, Authority patrons, and the community.
- B. If task requires specialized licenses or certifications, for example "lead or asbestos abatement contractor's license or certified tank installer/remover", show evidence of such registration prior to commencement of work. If the Work requires specialized training, for example lead or asbestos

- training, show evidence that employees have received such training prior to commencement of work.
- C. If the Work requires transportation of hazardous materials or hazardous substances, provide evidence of Department of Transportation General Awareness Driver's Training in compliance with 49 CFR §172 and Commercial Driver's License in compliance with 49 CFR §390-397, prior to commencement of work.
 - D. All hazardous materials and hazardous substances shall be stored in "Performance Oriented Packaging" in compliance with 49 CFR §178, Subpart L.
 - E. If the Work requires disposal of hazardous wastes, disposal shall be to a Treatment/Storage/Disposal facility with a Part B Permit and the waste hauler shall have a state or local license and U.S. EPA identification number. Apply and pay for temporary EPA Generator ID number required to dispose of hazardous waste. Submit 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.
 - F. If the Work involves response to spills of hazardous materials, hazardous substances or hazardous wastes, all personnel shall have appropriate training that complies with 29 CFR §1910.120.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01115
SAFETY AND SECURITY CERTIFICATION

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes the process used to certify that the WMATA system complies with the specified safety and security requirements.

1.02 REFERENCES

- A. Federal Transit Administration
 - 1. Handbook of Transit Safety and Security Certification
 - 2. Guideline 5800.1 - Safety and Security Management Guide for Major Capital Projects
- B. Transportation Safety Institute
- C. WMATA Safety and Security Certification Program Plan

1.03 JOB CONDITIONS

- A. The Certifiable Items List (CIL) that shall be completed by the Contractor throughout the Period of Performance of this Contract is provided as an attachment to this Specification Section. The design related entries in the CIL have been completed by the Authority. A sample CIL with all entries completed is also attached to this Specification Section.

1.04 SUBMITTALS

- A. Submit the following documents for approval in accordance with Section 01330, SUBMITTAL PROCEDURES:
 - 1. Safety and Security Certification Management Plan (SSCMP) within 60 Days of NTP.
 - 2. Updated CIL for construction and testing every 60 Days for the duration of the Contract.
 - 3. If design changes are proposed by Contractor, updated CIL submitted with each Contractor proposed design change.
 - 4. If design changes are proposed by Contractor, updated Hazard and Vulnerability Resolution and Tracking System submitted with each Contractor proposed design change.
 - 5. If design changes are proposed by Contractor, updated Hazard Analysis and Threat Vulnerability Assessment submitted with each Contractor proposed design change.
 - 6. Final CIL for construction and testing component and Certification Report for construction and testing component in accordance with FTA Guideline 5800.1, Safety and Security Management Guidance for Major Capital Projects. Include design component of CIL and Certification Report if design changes were proposed by the Contractor and Approved by the Authority.

1.05 QUALITY

- A. Contractor's Certification Program Representative shall have, within the last 3 years, completed a recognized certification training course provided by Federal Transportation Administration (FTA),

Transportation Safety Institute (TSI), or other recognized Safety and Security Certification Training Agency.

1.06 GENERAL

- A. The purpose of the Safety and Security Certification program is to ensure that:
1. Design changes proposed by Contractor, construction, fabrication, installation, testing, and commissioning of all safety critical facility and system elements have been evaluated for compliance with the safety and security requirements, including applicable codes and standards, and to verify their readiness for operational use.
 2. WMATA's rail and bus facilities and systems are operationally safe and secure for customers, employees, and the public.
- B. The objective is to achieve an acceptable level of safety and security risk through a systematic approach to safety hazard and security vulnerability management through adherence with the design criteria, compliance with technical specifications, and testing verification.

1.07 SECURITY AND SAFETY CERTIFICATION PROCESS

- A. Participate in the WMATA Safety and Security Certification Program Plan for the duration of the Contract as follows:
1. Contractor's Certification Program Representative shall manage and oversee compliance with the WMATA Safety and Security Certification Program Plan requirements.
 2. Participate in working groups with Authority Safety, Security, and Project Staff to establish the certification status of the items on the CIL.
 3. Identify certifiable items for Contractor proposed design changes and complete development of the Authority provided CIL to address all Contract specific items requiring safety and security certification based on the construction and testing plan, and input from the working group.
 4. Identify the safety and security design criteria, technical specifications, and testing requirements, including applicable codes and standards, for each certifiable item on the CIL that resulted from a Contractor proposed design change.
 5. Demonstrate that the design complies with the identified safety and security requirements for those items on the CIL that resulted from a Contractor proposed design change.
 6. Demonstrate that the construction, fabrication, and installation comply with the safety and security requirements for those items on the CIL.
 7. Demonstrate through testing the compliance with the safety and security requirements for those items on the CIL.
 8. If changes are proposed to the design, identify and categorize project hazards by their potential severity and probability of occurrence. Analyze each hazard for its potential impact to the Project.
 9. If changes are proposed to the design, evaluate project for susceptibility to potential threats and identify design corrective actions that can reduce or mitigate the risk of serious consequences from a security incident. Analyze each identified threat for its potential impact to the Project.
 10. Provide and update a tracking system for all hazards and threat vulnerabilities identified as a result of Contractor proposed design changes.
 11. Maintain a document management system within the Authority's Project Management Software System (PMSS) that enables the retrieval of verification documentation that demonstrates compliance with the safety and security requirements in construction, fabrication, installation, and testing for each item in the CIL. Verification documentation may

consist of drawings, reports, fabrication approvals, inspection, test results, certificates, or other supporting documents.

12. Complete the construction/installation, and testing sections of the CIL as compliance is achieved and provide the required CIL verification documentation to WMATA as the construction and testing progresses.

13. Prepare construction and testing component of Certification Report and include design component if design changes were proposed by the Contractor and Approved by the Authority.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 CERTIFICATION PROGRAM REPRESENTATIVE

A. Appoint a Certification Program Representative with the qualifications noted in this Section to lead and coordinate the certification process.

3.02 SAFETY AND CERTIFICATION PROGRAM WORKSHOPS

A. Conduct Safety and Security workshops on a monthly basis for the duration of the Contract.

3.03 CIL AND FINAL REPORT

A. Prepare, update and complete CIL throughout the Period of Performance of the Contract and prepare final CIL and Certification Report prior to Acceptance of the Project.

ATTACHMENTS [Volume 6]

- a. The design related entries in the CIL have been completed by the Authority
- b. A sample CIL with all entries completed
- c. Template for SSCMP

END OF SECTION

SECTION 01116
IDENTIFICATION AND SECURITY

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes identification and security requirements for work on Authority Property.

1.02 DEFINITIONS

- A. Authority Property: Includes the Authority's Rail and Bus Operating System and Authority administrative facilities, whether under construction or being rehabilitated.

1.03 SUBMITTALS

- A. Forms necessary to initiate background check process, including color copy of the front and back of Contractor personnel's Driver License or other accepted form of identification.

1.04 PRE-EMPLOYMENT CRIMINAL BACKGROUND CHECK

- A. 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 0700 to 1530 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 1 year after the expiration date on the Contractor employee's badge. These background checks are expected to take 1 business day for processing. The Contractor employee must allow sufficient time for completion. The background check is free of charge.

- B. 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.

1.05 IDENTIFICATION AND SECURITY CHECKS

- A. All employees of the Contractor and its Subcontractors working on WMATA projects shall prominently display an identification badge issued by the Authority.

B. Contractor Photo ID Badges: Individuals requiring the Contractor photo ID badges are subject to the following identification and security checks

1. Provide valid and current photo identification, such as a State-issued Driver's License, State-issued Identification Card, U.S. Passport, or identification from the Immigration and Naturalization Service, such as a Permit to Work or a Permanent Residence Card (Green Card).
2. The individual's identification may be matched against the FBI Watch List and security clearance.
3. The photo identification will be matched against the Contractor's list of employees authorized to work on a particular job.

1.06 NON-CONFORMANCE

A. In the event any employee of the Contractor or its Subcontractors fails to adhere to the requirements of this Section, the employee or Subcontractor will be removed from the job until non-conformance is corrected. Such removal will not be grounds for any time extension or additional compensation.

1.07 ADMINISTRATION

A. Contractor Photo ID Badge:

1. A Contractor Photo ID badge will be required if the individual will be present on Authority Property. Issuance of the Contractor Photo ID badge will require the individual to schedule and report to the Authority's Jackson Graham Building at 600 Fifth Street, NW, Washington DC for processing.
2. Contractor Photo ID badge takes approximately 14 Days to obtain unless personnel have lived outside of the United States within the last year, in which case the background checking process will require additional time to complete.
3. It will be the Contractor's responsibility to immediately notify the Contracting Officer Representative if a worker loses his or her Contractor Photo ID badge. A fee will be charged for each lost badge.
4. All Contractor Photo ID badges shall be returned to the Contracting Officer Representative when they are no longer needed.
5. Contractor Photo ID badges shall be renewed on an annual basis.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01141
ACCESS TO SITE

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies requirements for gaining access to Site and describes work hours the Contractor will be allowed in Authority Roadway and Operating Facilities.

1.02 REFERENCES

- A. The Contractor shall comply with the following Authority's Standard Operating Procedures:
 - 1. WMATA, Office of Rail Transportation Maintenance Operations Control, Administrative Procedure OAP 200-33, Site Specific Work Plan (SSWP)
 - 2. General Orders and Track Rights System (GOTRS) Request Form
 - 3. Escort Request Form
 - 4. Switch Order Form
 - 5. Site Specific Work Plan (SSWP) Form

1.03 SUBMITTALS

- A. Submit the following documents to the COR for approval to work in accordance with Section 01330, SUBMITTAL PROCEDURES:
 - 1. 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.
 - 2. 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.
 - 3. Submit Escort Request Form by Monday 12:00 for the following week's planned Work. Only electrical switching will require WMATA escort for this project.
- B. All requests are subject to approval by the Authority.

1.04 IDENTIFICATION CARDS

- A. The Contractor and its Subcontractors working at the Site shall provide their personnel with WMATA Contractor Identification Badges showing the employer's name and the employee's name, number, and photo I.D. These badges shall be displayed in a prominent manner on each person while engaged on the Work. Access to the Site shall be granted only to properly accredited representatives of the Contractor and its Subcontractors.
- B. 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.

1.05 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:
 - 1. Monday through Thursday: 05:00 to 24:00
 - 2. Friday: 05:00 to 03:00 Saturday
 - 3. Saturday: 07:00 to 03:00 Sunday
 - 4. 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:
 - 1. Monday through Thursday: 09:30 to 15:00 and 19:00 to 24:00
 - 2. Friday: 09:30 to 15:00 and 19:00 to 03:00 Saturday
 - 3. 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:
 - 1. Monday through Friday 00:00 to 05:00
 - 2. Saturday and Sunday 03:00 to 07:00

1.06 HOURS OF WORK

- A. Standard hours of work are between 06:00 to 15:00. If work shall prohibit the riders to access the stairs, elevators, escalators, pedestrian bridges or stations Contractor shall perform the work during WMATA Non-revenue hours as specified in 1.05.E.1
- B. The Contractor shall coordinate and schedule all Work with the COR to ensure that the Contractor's activities do not interfere with the operation of or access to the Authority's facilities.
- C. The Contractor may be allowed to work on weekends if the work is not impacting operations or access to the facility. The Contractor shall coordinate and schedule all work with the COR/COTR.

Table 01141-01

Work Hour Category	Report to Site Time	Access to Site Time	Off Site Time	Hours of Work
Revenue Hours	Mon-Fri 06:00	Mon-Fri 06:30	Mon-Fri 15:00	8 hours considering lunch and miscellaneous disruption
Non-Revenue Hours	Mon-Fri 23:00	Mon-Fri 00:30	Mon-Fri 05:00	4 hours considering lunch and miscellaneous disruption

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01180
PROJECT UTILITY INTERFACE

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the Contractor's responsibilities regarding interface with Utility companies and agencies.

1.02 SUBMITTALS

- A. Submit sets of drawings and specifications to those Utilities and agencies affected by construction as required. Provide the Contracting Officer Representative with an electronic copy of all transmittal letters and other communications and replies thereto as each is sent to or received from a Utility or agency.
- B. Complete list of affected Utilities and agencies to the Contracting Officer Representative:
- C. Shop Drawings for utility connections and special facilities developed during construction.

1.03 UTILITIES AND AGENCIES

- A. Comply with the requirements of each Utility and agency.
- B. The Utilities and agencies listed hereinafter may not be all inclusive. Recommend additional agencies/utility companies as appropriate. Determine all affected Utilities including but not limited to the following agencies or their successor agencies and submit complete list to the Contracting Officer Representative:
 - 1. Verizon
 - 2. NOT USED
 - 3. Washington Gas.
 - 4. PEPCO.
 - 5. Fairfax County Public Works and Environmental Services
 - 6. Comcast.
 - 7. Cox Cable.
 - 8. Plantation Pipeline Company.
 - 9. Other identified utility owner (cable, fuel lines, etc.) whose facility will be affected by the construction.

PART 2 – PRODUCTS

2.01 APPROVED PRODUCTS

- A. All products to be utilized on any utility shall be as approved by that Utility.

PART 3 – EXECUTION

3.01 DESIGN, CONSTRUCTION, AND MAINTENANCE OF UTILITY FACILITIES

- A. All work performed by the Contractor on any utility, if any, shall be performed in accordance with the requirements of that Utility and the full knowledge of the Contracting Officer Representative.
- B. Contract Drawings indicate where Utilities will self-perform design, construction, and maintenance of their facilities in relation to this Contract. Coordinate the schedule and the interface for the Work of the Contract with the work done by Utility.
- C. Provide the Utilities with detailed Shop Drawings for utility connections and special facilities during construction.

END OF SECTION

SECTION 01250
CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies procedures for making Contract Modifications.

1.02 GENERAL

- A. Out-of-Scope Items. Specific approval must be received from the Contracting Officer Representative prior to doing work, which may be considered to be outside the Scope of Work and for which additional reimbursement may be requested in accordance with the General Conditions.
- B. Requests for additional work may be initiated by the Authority. Claims for an increase in Contract Price shall be thoroughly documented as specified in the General Conditions and directed to the Contracting Officer Representative who, upon Approval, will issue a Modification stating the amount of the increase in fee.
- C. Should the Contractor be excused from the provision of certain services identified in this Scope of Work, the Contractor will be requested to give a credit to the Authority. The offer for the credit shall be documented and directed to the Contracting Officer Representative who, upon Approval at the appropriate level, will issue a Modification.

1.03 TIME AND MATERIALS WORK FOR THE CONSTRUCTION EFFORT

- A. In the event equitable adjustment cannot be agreed to in a timely manner, the Authority reserves the right to order work on a time and materials basis as specified in the General Conditions. When work is ordered under this Section, notwithstanding the provisions of other Sections, 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.
- B. Work performed by or for the Contractor: labor, materials, services, 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 Article 1.03C. below.
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 Article 1.03B.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 Article 1.03B.1.a above and subsistence and travel allowance as specified in Article 1.03B.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. All computed percentages shall be submitted to the Contracting Officer Representative for Approval within 30 Days after start of construction work

or as directed by the Contracting Officer Representative prior to 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 from 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 Contracting Officer Representative.
 - 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 discount as provided in Article 1.03B.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 Article 1.03B.2.d above.
 - f. The Contractor will not be compensated for indirect costs and profit on Authority-furnished materials.
 3. Equipment: The Contractor will be paid for the use of equipment in accordance with the Contract. The Contractor shall furnish all data, which might assist the Authority in the establishment of such rates.
 - a. Operators of equipment will be paid under Article 1.03B.1 above.
 - b. Small tools (defined as equipment less than \$2,000 in acquisition costs) are computed at a maximum of 5 percent of direct base labor wages.
 4. Subcontracts: The cost for Subcontract work at any tier will be the actual cost to the Contractor/Subcontractor for work performed by a Subcontractor as computed in accordance with Articles 1.03B.1 through 1.03B.3 above. 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 a 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 therefore will be made by the Authority by reason of performance of the Work by a Subcontractor or by others.

5. To the totals, completed as indicated in Articles 1.03B.1 through 1.03B.4, shall be added field office overhead as follows:
 - a. If the costs determined above do not exceed \$100,000 and the adjustment in time for Contract performance is 10 Days or less, the markup shall be computed in accordance with Article 1.04 below.
 - b. In all other cases, the most recent audited daily field office overhead rate will be used.
 6. Home Office General and Administrative (G&A) costs will be determined using the most recent audited rate at the time the work was accomplished. A fixed rate of 3 percent will be used in the absence of an audited rate.
 7. Profit will be negotiated as provided in Article 1.07 below.
 8. A percentage for Contractor's bond, not to exceed 1 percent, may be added.
- C. Special items of work: If the Contracting Officer Representative and the Contractor, by agreement, determine that either: an item of time and materials work does not represent a significant portion of the total Contract Price, or such item of work cannot be performed by the forces of the Contractor or the forces of any of its Subcontractors, or it is not in accordance with the established practice of the industry involved to keep the records, which the procedure outlined in Article 1.03B 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 5 percent of the discounted price, in lieu of the negotiated lump sum not to exceed the percentages provided for in Article 1.03B above.
- D. Records: The Contractor shall maintain its 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 Contracting Officer Representative one electronic copy of report sheets of each day's work paid for on a time and materials basis the day after such work was performed. The daily report sheet 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 Article 1.03C above. The daily report sheet shall provide names or identifications and classifications of workmen, the hours worked, and 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 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 Article 1.03B.2.a above.
 3. Said daily report sheets shall be signed by the Contractor or its authorized agent.
 4. The Contracting Officer Representative will compare the Authority's 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. 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. The use of any specific Authority form, such as the Daily Report – Labor, Materials, & Equipment Form C-113, to segregate change order costs does not, in and of itself, invoke the provisions of this Article 1.03 or other provision of this Contract.

- E. Payment: Payment as provided in Articles 1.03B and 1.03C 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 therefore.

1.04 EQUITABLE ADJUSTMENT FOR MINOR CONTRACT MODIFICATIONS FOR THE CONSTRUCTION EFFORT

- A. When the Authority and Contractor agree to an additive or deductive amount for a Modification to this Contract made pursuant to this Contract when the fair and reasonable price in aggregate amount does not exceed \$100,000, and further agree to an adjustment in the time for Period of Performance resulting from said Modification, which increases or decreases the completion date 10 or less Days, the equitable adjustment in Contract amount shall consist of the sum of the following:

1. Direct labor, material, and equipment costs as agreed to by the Authority and Contractor (small tools, defined as equipment less than \$2,000 in acquisition costs, are included in equipment costs and computed at a maximum of 5 percent of direct base labor wages.)
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 5 percent of direct equipment costs (including small tools); and a maximum of 5 percent of Subcontract costs.
3. Home Office General and Administrative (G&A) costs are computed using the most recent audited rate or a fixed rate of 3 percent in the absence of an audited rate.
4. Profit will be determined in accordance with the guidelines specified in Article 1.06 below.

- B. In using the above rates, the following shall apply:

1. Payroll Tax (FICA, FUTA, and 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 Period of Performance 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 (PCOs) will be given. The Contractor will not receive both a percentage and a daily rate markup for job office overhead costs when a time extension to the Period of Performance is recognized.
5. Bond costs 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 in the same fashion as described in Article 1.07D.

1.05 COST OR PRICING DATA

- A. The Contractor shall submit to the Contracting Officer Representative, either actually or by specific identification in writing an electronic copy of cost or pricing data under the conditions described in this Paragraph and certify that, to the best of the Contractor's 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 its proposal for the pricing of any Modification to this 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 or decreases in costs plus applicable profits expected to exceed \$100,000, or less at the discretion of the Contracting Officer Representative.
- B. The submittal of certified cost or pricing data will 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" will be determined by the Authority in accordance with the guidelines as set forth in Subpart 15.8 of the Federal Acquisition Regulations (48 CFR 15.8).
- 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 costs or projections. The certificate does, however, apply to the data upon which the Contractor's judgment is based.

1.06 CONTRACT MODIFICATIONS, REQUIREMENTS FOR PROPOSALS, PRICE BREAKDOWN, NEGOTIATION OF PROFIT

- A. The Contractor, in connection with any proposal it makes for a Contract Modification as specified in Section 00750, ACCOUNTING AND RECORD KEEPING, shall furnish a price breakdown, itemized as required by the Contracting Officer 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 therefore shall also be furnished. The original and one electronic copy of the proposal, together with the price breakdown and time extension justification, shall be furnished by the date specified by the Contracting Officer 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:

<u>Factor</u>	<u>Rate</u>	<u>Weight</u>	<u>Value</u>
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		
TOTAL	100%		

2. Based on the circumstances of each Modification, each of the above factors shall be weighted from 0.03 to 0.12 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 0.03. As the degree of risk increases, the weighting should be increased up to a maximum of 0.12. Lump sum items will have generally a higher weighted value than unit price items for which quantities are provided. Other 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, amount of labor included in costs, 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 0.12 and should be proportionately reduced to 0.03 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 0.12. Work estimated between \$100,000 and \$5,000,000 shall be proportionately weighted from 0.12 to 0.05. Work from \$5,000,000 to \$10,000,000 shall be weighted at 0.04, and work in excess of \$10,000,000 at 0.03.
- d. Period of performance: Modifications providing for an extension of time in excess of 30 Days shall be weighted at 0.12. Jobs of lesser duration shall be proportionately weighted to a minimum of 0.03 for jobs not to exceed 1 Day. No weight will be granted for this factor where there is no extension of the Period of Performance or interim dates due to work under this Modification.
- e. Contractor's investment: Should be weighted from 0.03 to 0.12 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: Should be weighted from 0.12 to 0.03 on the basis of average to above average. Things to consider: Use of Authority-owned property, equipment and facilities, and expediting assistance.
 - g. Subcontracting: Should be weighted inversely proportional to the amount of Subcontracting. Where 80 percent or more of the Work is to be Subcontracted, the weighting should to be 0.03, and such weighting proportionately increased to 0.12 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 0.15 if supported by adequate justification and Approved by the Authority.
 - 4. When negotiations between the Contracting Officer or the Contracting Officer 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 and 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 the Contracting Officer Representative and the Contractor and the Subcontractor(s) involved, then at the request of the Subcontractor(s) concerned, the Contracting Officer or the Contracting Officer 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 the Contracting Officer 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 Representative. Any payments received by the Contractor under this procedure shall be passed along within 10 Days thereafter to the Subcontractor concerned.
- C. Change orders: When the Contracting Officer directs a change in accordance with the provisions of this Contract, the Contractor shall identify in its 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.

1.07 PAYMENT FOR USE OF EQUIPMENT

- A. The following methods of determination of equipment costs shall apply to all adjustments to Contract Prices arising under the provisions of the Contract except for Section 00728, TERMINATION FOR CONVENIENCE OF THE AUTHORITY, provisions thereunder.
- B. Allowable ownership and operating expense for construction plant and equipment in sound workable condition, owned by the Contractor, Joint Venture, Partnership, organizations under common control, and any equipment under lease purchase or sale-lease back agreements, will be paid for at hourly rates applicable to the Period of Performance, published in the Rental Rate Blue Book for Construction Equipment (Blue Book) by PRIMEDIA Information, Inc., by applying the following formula: the Regular Hourly Rate shall be 75 percent of the sum of the monthly rate (area adjustment map not used) divided by 176 and the estimated operating cost per hour. Regular Hourly Rate shall be full compensation for equipment ownership and operating expenses and shall include the cost of fuel, oil, lubricants, supplies, spare parts, repairs and maintenance, major overhauls, mechanics and servicing labor, depreciation, storage, insurance, interest, taxes, record keeping, and all incidentals. The cost of equipment operators is not included. For forward pricing, the Blue Book rates in effect at the time of negotiations shall apply. For retrospective pricing, the Blue Book rates in effect at the time the work was performed shall apply. Manufacturers ratings and manufacturer-approved modifications shall be used to

classify equipment for the determination of the Regular Hourly Rate. The hourly rates are calculated as shown in the following example:

	Regular Hourly Rate	Multi-shift Hourly Rate	Standby Hourly Rate
Monthly Rental Cost	\$6,070.00	\$6,070.00	\$6,070.00
Divided by Hours	176	176	176
Hourly Rental Cost	\$34.49	\$34.49	\$34.49
Hourly Operating Cost	18.20	18.20	18.20
Subtotal	52.69	52.69	52.69
Adjustment	75%	75%	75%
Regular Hourly Rate	39.52	39.52	39.52
Status	100%	60%	40%
Payment Rate	\$39.52	\$23.71	\$15.81

1. For Contractor owned equipment as identified in Article 1.07B, the first 8 hours, or fraction thereof, usage in any one day shall be paid for at the Regular Hourly Rate, and any additional time in excess of 8 hours, shall be considered to be an additional shift, or fraction thereof, and shall be paid for at 60 percent of the Regular Hourly Rate. Standby time, if authorized by the Contracting Officer Representative, will be paid for at 40 percent of the Regular Hourly Rate. Standby time shall be limited to the regular 8-hour shift and shall not exceed 40 hours in a week. Any usage time less than 30 minutes shall be considered to be 1/2 hour.
2. For third-party rented equipment, the Authority will accept rental rates actually paid and substantiated by certified reproduced copies of invoices or bills. Such invoices or bills shall indicate the amount of operating expenses and operator wages and fringes, if any, included in the rental rate. In no case shall the bare rental rate per hour (operating expense, and operator wages and fringes not included) exceed the appropriate Regular Hourly Rate. Where required, the operating costs per hour will be agreed upon between the Contractor and the Authority using operating costs per hour from the Blue Book for the same or similar equipment
3. When approved by the Contracting Officer Representative, use of equipment not listed in the Blue Book will be permitted. An equitable hourly rate for such equipment will be established by the Contracting Officer Representative based on Contractor furnished cost data and basic information concerning the equipment. Information required to determine rates includes, but is not limited to, manufacturer, year, size, model, serial number, capacity, and weight. This information shall be furnished to the Contracting Officer Representative prior to the use of the equipment. Authority shall be granted audit access to verify information related to or pursuant to this Section.
4. The Regular Hourly Rate does not include "move-in" and "move-out" costs.
5. These equipment rates shall apply to equipment in sound workable condition. The equipment shall be of approved size and capacity to provide normal output or

production required for the work to be done. Equipment not meeting these requirements may be used only with the Contracting Officer Representative's approval and at agreed, reduced rates. Usage time or standby time will not be allowed while equipment is inoperative due to breakdown, and such equipment shall be removed from the jobsite at the direction of the Contracting Officer Representative.

- C. Items of equipment with an acquisition cost of \$2,000 or less shall be considered as small tools.
- D. Equipment costs that are paid under the equipment use rate shall not be duplicated in the Contractor's other direct or indirect costs.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01310

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies general administrative, procedural and coordination requirements for the project including:
 - 1. Project Management Plan
 - 2. General Project Coordination Procedures
 - 3. Coordination Drawings
 - 4. Project Interface Management
 - 5. Administrative and Supervisory Personnel
 - 6. Correspondence

1.02 SUBMITTALS

- A. Staff Names and Directory - Submit one electronic copy of a list of principal staff assignments, including Superintendent and other personnel in attendance at Project site at least 30 calendar days prior to the start of any construction work. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone.
- A. Project Management Plan - Within 20 Days after award of the contract the Contractor shall submit a Project Management Plan (PMP) that describes its approach to the Design, Construction and Systems Installation and Integration work. The PMP shall follow the outline submitted with its Technical Proposal as specified in Section 00203 TECHNICAL AND PRICE PROPOSAL PROCEDURES AND EVALUATION FACTORS, AND INSTRUCTIONS, and as finally accepted in Section 00491 TECHNICAL PROPOSAL AS FINALLY ACCEPTED. The PMP shall include charts, narratives, plans and other requested information to describe the organization, relationships and responsibilities of project management. The original, six paper copies and one electronic copy of the PMP shall be submitted in accordance with Section 01330, SUBMITTAL PROCEDURES. The PMP shall be revised for major changes in organization or approach to the work as necessary during the progress of the work and specifically for safety program plans as specified in Section 01114, SAFETY/ENVIRONMENTAL REQUIREMENTS and for quality management plans as specified in Section 01470, QUALITY MANAGEMENT SYSTEM.

1.03 PROJECT MANAGEMENT PLAN

- A. Overview/Executive Summary: Provide a narrative detailed Overview of the Project Control and Management System to be utilized for this Project. Identify critical areas, method of problem resolution, lines of communications and responsibility. Detail the overall management strategy for accomplishing all aspects of the required work. The Contractor

shall demonstrate understanding of the management techniques required for proper implementation and control of the work.

- B. Organization: Provide a project organizational chart including a definition of the responsibilities shown therein. Show how this project management structure fits into the corporate management structure. Show the limits of authority and lines of authority of personnel to be assigned to the Contract. Include information regarding the positions they will fill and the percentage of time they are expected to devote to the work. In addition, identify who is responsible for project staffing, coordination with the Authority, jurisdictional inspectors/authorities and others, integrating design and construction aspects of the work, etc. Define who makes all major decisions pertaining to the overall project, including project staffing for design and construction management and who makes all day-to-day decisions. Identify who is the: Architect of Record, Structural Engineer of Record, Civil Engineer of Record, Electrical Engineer of Record, Mechanical Engineer of Record, and Systems Engineer of Record.
- C. Project and Program Management and Control:
1. Subcontractor Management: Provide a narrative of procedures for coordinating, managing and controlling the work and the work of subcontractors: Identify who is responsible. Identify who reviews and approves subcontractor designs. Identify who reviews and approves subcontractor submittals. Identify who inspects and accepts subcontractor construction/installation work. Identify who reviews, verifies and approves subcontractor requests for equitable adjustment in subcontract price and period of performance. Identify who coordinates with the Authority, jurisdictional inspectors/authorities and others. Identify persons responsible for the procurement of construction materials and Systems equipment to be installed and for securing construction equipment to be utilized for the construction/installation, and include plans and procedures to ensure timely delivery of materials to achieve project schedule.
 2. Quality Management: Quality Control/Quality Assurance - provide a narrative description of the quality control/assurance organization for this Contract including numbers, qualifications, duties, responsibilities and authority of personnel, as well as, a description of the methods by which the applicable quality requirements of the Contract will be regulated, maintained and monitored. In addition, describe your proposed Quality Control/Quality Assurance (QC/QA) Plans and Quality Program, and the responsible component of each organization involved in this work. Indicate how interfaces between various quality control organizations will be accomplished to ensure compliance with the overall quality control requirements. Identify who monitors all design and construction work for compliance with QC/QA Plans and supervises the design and construction QC/QA Staff. Identify who approves submittals. Identify who performs inspections and documents material/equipment testing. Identify who is responsible for managing and implementing the QC/QA Plans and maintaining contact with the Authority's Representative for the purpose of providing up-to-date, accurate design and construction status with emphasis given to deviations from the Contract Documents. Refer to Section 00722, QUALITY ASSURANCE/CONTROL and Section 01470, QUALITY MANAGEMENT SYSTEM for a detailed description of required quality management plans including Quality Plan and Proposed Interim Inspection and Test Plans and other quality requirements.
 3. Systems Integration Management: NOT USED
 4. Safety Program Management: Provide the information regarding your proposed safety program management for this Contract as defined in Section 01114, SAFETY AND REQUIREMENTS.

5. DBE Program Management: Identify who is responsible for assuring that the DBE Program in accordance with Authority policy as specified in Section 00453 DBE DATA and 49 CFR Part 23 and that the goals are being met.
6. Design and Construction Management: Provide description of the design and construction support and project engineering services for furnishing required drawings and other submittals. Identify persons responsible for preparing and approving design drawings, specifications, calculations, working drawings, shop drawings, operation and maintenance manuals, as-built drawings, as-built specifications, etc. Refer to SECTION 01111, CONTRACTOR KEY STAFF, for a detailed description of Design and Construction Management requirements.
7. Temporary Facilities: Identify who is responsible for janitorial services, trash and snow removal, recycling and equipment repair/maintenance for the Contracting Officer Representative's Site Facility and for maintenance of parking areas associated with the COR's Site Facility, temporary access roads and storage/laydown areas as specified in Section 01520, TEMPORARY CONSTRUCTION FACILITIES.
8. Contract Administration: Identify who is responsible for the management of pending change and change orders and payment requests as specified in Section 00748, CHANGES, Section 01250, CONTRACT MODIFICATION PROCEDURES, Section 00830, DISPUTE RESOLUTION if applicable and Section 00844, METHOD OF PAYMENT and Section 00721, VALUE ENGINEERING INCENTIVE.
9. Permit and Regulatory Compliance: Identify who coordinates with the Authority, jurisdictional authorities and others for obtaining permits, approvals, etc. from the entities specified in Section 01410, REGULATORY REQUIREMENTS and Section 01420 REFERENCES.

1.04 COORDINATION

- A. Coordinate construction operations and Design-Build activities included in various Sections of the Specifications to ensure efficient and orderly design and installation of each part of the Work. Coordinate planning, design and construction operations, included in different Sections that depend on each other for proper installation, connection, and operation. Coordination extends to and includes the interfaces between this and other contracts and existing facilities within the system.
- B. The Contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each subcontractor shall coordinate its operations with other operations included in different Sections that depend on each other for proper installation, connection, and operation.
 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components with other subcontractors to ensure maximum accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
 4. All work under this Contract shall be performed generally in accordance with the construction sequence and staging and maintenance of traffic requirements shown on the approved detailed plans of the work following a logical sequence developed by the Contractor as specified in Section 01530, TEMPORARY DECKING and in Section

01550, MAINTENANCE OF TRAFFIC, CONSTRUCTION SEQUENCE AND STAGING, ACCESS AND PARKING.

5. The Contractor shall conduct its work in a manner that will minimize interference with the operations of other contractors involved in the performance of related work.
 6. The Contractor's particular attention is directed to the fact that both vehicular traffic and pedestrian traffic must be continuously maintained and remain unimpeded at all times throughout the duration of the work at the site(s) as specified in Section 01550, MAINTENANCE OF TRAFFIC, CONSTRUCTION SEQUENCE AND STAGING, ACCESS AND PARKING.
 7. A method of staging shall be developed that specifically complies with all requirements pertaining to the maintenance of both vehicular and pedestrian traffic onsite and the use of all approved working and storage/laydown areas. The staging plan shall incorporate and comply with all limitations imposed elsewhere in this Project Manual, and six paper copies and one electronic copy of the staging plan shall be submitted to the Contracting Officer Representative for approval, working drawings including comprehensive sequence and staging plans in accordance with Section 01330, DESIGN AND CONSTRUCTION SUBMITTAL PROCEDURES. No work shall be started prior to approval by the Authority as specified in Section 01550, MAINTENANCE OF TRAFFIC, CONSTRUCTION SEQUENCE AND STAGING, ACCESS AND PARKING.
 8. 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. The Contractor is responsible for coordinating access to the site from the public roadways, including, but not limited to, the delivery of all materials by the Contractor to the site from public roads. All such use of public roadways shall be coordinated with the jurisdictional authority(ies). The staging plan shall incorporate and comply with all limitations imposed elsewhere in this Project Manual, and shall be submitted to the Contracting Officer Representative for review, and shall also be submitted to the jurisdictional agency(ies) of the area(s) where the work is to be performed, for their (its) approval, working drawings including comprehensive sequence and staging plans in accordance with Section 01330, DESIGN AND CONSTRUCTION SUBMITTAL PROCEDURES. No work shall be started prior to approval by the jurisdictional agency(ies) as specified in Section 01530, TEMPORARY CONSTRUCTION and in Section 01550, MAINTENANCE OF TRAFFIC, ACCESS AND PARKING.
- C. As necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings. Prepare similar memoranda for Authority Representative and separate subcontractors if coordination of their Work is required.
- D. The Contractor shall coordinate its design and construction activities if applicable, with governmental, public and private agencies and others. Such coordination shall include acquiring permits and approvals and attending conferences as may be authorized and required by the Agency. The Contractor shall prepare and submit to the Contracting Offer Representative within 7 days, one electronic copy of a memorandum of record of all such conferences attended. The Contractor shall promptly bring to the attention of the Contracting Offer Representative, by written notice, any betterments or other work considered to be a change requested by private and public agencies and property owners that have not already been authorized by the Authority.
- E. Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other subcontractors to avoid conflicts and to ensure

orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's cost-loaded schedules and updates as described in Section 01322, CONTRACT PROGRESS REPORTING.
2. Installation and removal of temporary facilities and controls as described in Section 01500 Temporary Facilities and Controls.
3. Delivery and processing of submittals as described in Sections 01330, 01780 and 01820 and elsewhere in this Project Manual.
4. Meetings, as described in Section 01312, PROJECT MEETINGS.
5. Safety, as described in Section 01114, SAFETY / ENVIRONMENTAL REQUIREMENTS and Safety Management as described in Section 00844.
6. Quality Management as described in Section 01470, QUALITY MANAGEMENT SYSTEM.
7. Not Used
8. Project closeout activities as described in Section 01775, CLOSEOUT.

1.05 CORRESPONDENCE

- A. All correspondence shall be referenced to the Authority Contract number.
- B. Three copies of matters relating to the Contract, change proposals, billings and other matters shall be addressed and sent to the Contracting Officer Representative.
- C. Three copies of matters relating to the technical performance of the work and the schedule thereof shall be sent to the Design-Professional and the Contracting Officer Representative.
- D. Three copies of correspondence between the Contractor and third parties shall be sent to the Contracting Officer Representative.
- E. Copies of all correspondence are to be retained by the Contractor and forwarded to the Contracting Officer Representative as a complete correspondence file at the completion of the Contract as specified in Section 01775, CLOSEOUT.

PART 2 PRODUCTS [Not Applicable]

PART 3 EXECUTION

3.01 PERSONNEL

- A. Provide administrative and supervisory personnel as required for proper performance of the Work and additional special personnel required for coordination of operations with subcontractors as needed. The Contractor shall provide personnel for the positions specifically identified by the Authority in this Contract as required Key Personnel (see Section 00203, TECHNICAL AND PRICE PROCEDURES; EVALUATION FACTORS, AND

INSTRUCTIONS) and in addition, any other personnel essential for performance of the work as identified by the Contractor (see the Contractor's TECHNICAL PROPOSAL AS FINALLY ACCEPTED, Section 00491), and for any other positions the Contractor deems necessary for the successful execution during performance of the Contract work.

- B. If any subcontractor or person employed by the Contractor appears to the Authority to be incompetent or careless or to act in a disorderly or improper manner, that person's services in connection with the work shall be immediately terminated upon request by the Contracting Officer Representative and that person shall not again be employed on the Work.

END OF SECTION

SECTION 01312
PROJECT MEETINGS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements for Project meetings.
- B. During the term of this Contract, attend meetings and conferences with officials of the Authority, governmental agencies, and others interested in the Work as may be directed by the Contracting Officer Representative. Meeting minutes, prepared by either the Contractor or the Contracting Officer Representative as specified herein, shall state the place and time of the meeting, the names and identification of those present, a brief description of the matters discussed, and the agreements reached.
- C. Meetings shall be held in the Project office or at other locations in the Washington Metropolitan Area, as needed. Contractor and other concerned parties attending these meetings shall each be represented by persons thoroughly familiar with and authorized to conclude matters relating to the Work described in the Contract Documents.

1.02 PRE-CONSTRUCTION MEETINGS

- A. Conduct pre-construction meetings at the Site prior to the start of construction activities that require special coordination for those activities that are deemed to require a separate meeting because of the technical nature of the installation.
- B. The Contractor's Key Staff, Subcontractors, representatives of manufacturers and fabricators involved in or affected by the installation, coordination, or integration with their materials and installations that have preceded or will follow and the Authority, the Contracting Officer Representative, and other representatives of the Authority shall attend the meeting.
- C. Notify the Authority in advance of the date, time, location, and topics for review and discussion at each pre-construction meeting. Ensure that other attendees are properly notified. Topics that may require pre-construction meetings include, but are not limited to the following:
 - 1. Installation of equipment or systems
 - 2. Items that require connection to existing Authority equipment or systems as applicable
 - 3. Other pre-installation meetings as may be called by the Contractor or the Contracting Officer Representative
- D. Agenda discussion items for the meeting may include, but are not limited to, the following:
 - 1. Safety
 - 2. QA/QC
 - 3. ADAAG compliance
 - 4. LEED Compliance-NOT USED
 - 5. Temporary facilities
 - 6. Space and access limitations

7. Shop Drawings, Working Drawings, Product Data, Quality Control Samples, Certifications, and Documentation
 8. Purchases and deliveries
 9. Manufacturers' recommendations
 10. Inspection and testing requirements
 11. Required performance results
 12. Recording requirements
 13. Possible conflicts and compatibility problems
 14. Weather limitations
 15. Schedule
- E. Work shall not proceed if the meeting cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of work and schedule a follow-up meeting with the Authority at the earliest date.
- F. Record meeting minutes and distribute copies to everyone in attendance and to others affected by decisions or actions resulting therefrom.

1.03 PROGRESS MEETINGS

- A. Conduct progress meetings 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 pre-construction meetings. A Three-Week Work Plan will be developed by the Contractor prior to the start of the meeting as specified in Section 01322, PROGRESS REPORTING, 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.
- B. Determine, together with the Contracting Officer Representative, who should attend the meeting in addition to the Contracting Officer Representative, other representatives of the Authority, the Contractor's Key Staff, 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.
- C. Contracting Officer Representative will publish an agenda prior to each meeting and will distribute copies to Contractor. Agenda items may include:
1. Review of minutes of the previous progress meeting
 2. Contractor's construction schedule and construction sequence
 3. Safety, including discussions of hazards and risks
 4. QA/QC, including discussion of Non-Compliance Notices
 5. ADAAG compliance
 6. LEED Compliance-NOT USED
 7. Temporary facilities and services
 8. Site utilization, Site access needs and Hours of Work issues
 9. Testing and systems integration testing
 10. Updated submittals list and submittal priorities

11. Requests for Information
 12. Documentation of information for payment requests
 13. Pending Change Orders and Modifications
 14. Resource allocation
 15. Off-Site fabrication problems
 16. Purchases and deliveries
 17. Housekeeping
- D. The Contracting Officer Representative will record meeting minutes and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting. Meeting minutes will document issues of significance including submittals, schedules, quality assurance/quality control, safety, problems encountered, and the assignment of responsibilities for future action.

1.04 PROGRESS AND QUALITY STATUS REPORT REVIEWS

- A. A preliminary progress and quality status report meeting will be held on a monthly basis prior to the submittal of the Contractor's final Monthly Progress Report and associated documents. The purposes of the meeting are to review and determine the status of each activity in relation to the Contractor's draft Monthly Progress Report and any deficiencies based on the Quality System as specified in Section 01470, QUALITY MANAGEMENT SYSTEM, in order to develop an informal agreement on the monthly progress payment request.
- B. The meetings shall be attended by the Contractor's Key Personnel, the Contracting Officer Representative, and other representatives of the Authority.
- C. The Monthly Progress Report and associated documents, as specified in Section 01322, CONTRACT PROGRESS REPORTING, shall be updated on a monthly basis. Job progress shall specifically include actual start and completion dates for all activities completed during the reporting period, actual start dates and percent complete for activities started but not completed during the reporting period, estimated start dates for activities scheduled to start during the next period, approved changes in durations of activities, and separate tabulation of monthly earnings including a cumulative tabulation of monthly earnings to date. In computing the monthly earnings, no value will be allowed for partially completed activities.
- D. Update the Monthly Progress Report and associated documents to incorporate all changes agreed to during the preliminary progress and quality status report meeting. A formal progress and quality status report meeting will be held prior to the submittal of the Contractor's progress payment request. The purpose of the meeting is to review and develop a formal joint agreement on the Monthly Progress Report, job progress, pay items, and quality certification. This meeting shall be held 5 working days after the preliminary progress and quality status report meeting.
- E. Submit the approved Monthly Progress Report and the progress payment request in accordance with Section 00744, METHOD OF PAYMENT.

1.05 CHANGE MEETINGS

- A. Separate meetings will be held in the Washington Metropolitan Area by either the Authority or the Contractor, on an ad hoc basis, to discuss and resolve change order issues as they arise during the course of construction.
- B. This meeting shall be attended by the Contractor's Key Staff, Contracting Officer Representative, and those Subcontractors, Suppliers, or other entities critical to the resolution of any open issues. The parties shall each be represented by persons thoroughly familiar with and authorized to conclude matters relating to the Work described in the Contract Documents.

- C. The Contracting Officer Representative will record meeting minutes and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01321
CONSTRUCTION PHOTOGRAPHS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes procedural requirements for photographic documentation, including digital images and video recordings.

1.02 SUBMITTALS

- A. Make submittals in accordance with Section 01330, SUBMITTAL PROCEDURES, and as described in Section 01322, CONTRACT PROGRESS REPORTING.
- B. Key Plan: Submit key plan 30 Days prior to start of construction. If vantage points are altered, submit key plan updates with corresponding photographic documentation submittal.
- C. Digital Still Photographs: Submit with record of photographs indicating name of photographer, identification of vantage point, date of photograph and electronic file name. Submit the following types of still photographs:
1. Pre-Construction Photographs: Submit 30 Days prior to start of construction. No less than 100 pictures.
 2. Monthly Construction Photographs: Submit every 30 Days. No less than 20 Pictures per month
 3. Subject-specific construction photographs such as, but not limited to still photos showing potential change, non-conformance, quality, and property damage, and LEED-required photo documentation.
 4. Completion of Construction Photographs: Submit within 30 Days of Notice of Substantial Completion.
- D. Digital Video Recordings: Submit with a record of the contents of each segment of the video recording identifying name of photographer, location, time of day, viewing direction, traveling direction, and starting and ending points. Submit the following types of video recordings:
- E. Pre-Construction Video Recording: Submit 30 Days prior to start of construction.
1. Monthly Video Recordings: Submit every 30 Days.
- F. Photographer and Videographer Information: Submit a complete list of photographer names and contact information within 30 Days of Notice to Proceed.
- G. Usage Rights Documentation: Obtain and transfer copyright usage rights from photographers to the Authority for unlimited reproduction of photographic documentation within 30 Days of Notice to Proceed.

1.03 QUALITY ASSURANCE

- A. Qualifications:
1. Photographer Qualifications: Professional photographer experienced in construction photography for a minimum of 3 years.

- 2. Videographer Qualification: A professional firm experienced in audio-video documentation for construction or similar documentary projects for a minimum of 3 years.

PART 2 – PRODUCTS

2.01 KEY PLAN

- A. Indicate project site with notation of vantage points marked for location and direction of each still photograph and video recording.
- B. Include location and type and model of still and video camera(s).
- C. Include description of vantage point indicating location, direction (by compass point), and elevation.

2.02 STILL PHOTOGRAPHS

- A. Camera Specifications: Provide digital camera with sensor resolution of a minimum of 8 megapixels for producing color digital photographs.
- B. Format:
 - 1. Set camera to produce a digital stamp of the current date and time on each image.
 - 2. Provide required images in .JPG format.
 - 3. Digital photographic files shall be capable of producing standard commercial quality photographs, 8 inches by 10 inches in size.
 - 4. Identification:
 - 5. Electronically label each still photograph with the following information on the bottom left corner:

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

Project: _____ Contract No.: _____

Contractor _____

Photograph No. _____ Date: _____

Description: _____

2.03 DIGITAL VIDEO RECORDINGS

- 1. Camera Specifications: Provide digital video camera for producing color digital video images and meeting the following requirements: Capable of producing NTSC 1080 lines/60 fields
- 2. Resolution in the Y channel shall contain a minimum of 500 TV lines at center, utilizing no less than three charge-coupled-device (CCD) chips, each containing no less than 5 megapixels for optimum picture clarity
- 3. Format: Set camera to produce a digital stamp of the current date and time on each video sequence containing the month, day, year, hours, minutes, and seconds.
- 4. Provide high-resolution NTSC or agreed upon format.
- B. Identification: Electronically label video recordings with the following information: location, project name, and municipality. With each submittal, provide the following information:

1. Name of Project
2. Contract Number
3. Name of Contractor
4. Video recording ID number
5. Date video recording was recorded
6. Description

PART 3 – EXECUTION

3.01 GENERAL

- A. All photographic and video documentation shall be captured digitally. Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

3.02 STILL PHOTOGRAPH REQUIREMENTS

A. Preconstruction Photographs:

1. Provide pre-construction still photographs at each site.
2. Take sufficient overlapping still photographs to show existing conditions of adjacent properties before starting the Work.
3. No construction shall begin prior to Contracting Officer Representative review and approval of the pre-construction photographs of the construction area.
4. Take still photos at locations to be disturbed or likely to be affected by construction and at locations designated by the Contracting Officer Representative.

B. Monthly Construction Photographs: Take still photos of construction during the progress of the Work.

1. Take a minimum of twenty still construction photos at each site every 30 Days starting after the pre-construction digital survey and continuing until Substantial Completion is achieved.

C. Subject-specific Construction Photographs:

1. If there are any evident changes in conditions, non-conformance in the Work, or signs of potential damage to property or constructed project, take sufficient photographs to document the conditions and no less than ten still photographs.
2. The photographer shall provide scale to the area/condition, such as a tape measure to substantiate cracking.
3. Provide construction photos as required to demonstrate compliance with established LEED design goals.

D. Final Completion Construction Photographs:

1. Take a minimum of twenty still photos at each site at Substantial Completion.

3.03 VIDEO RECORDING REQUIREMENTS

A. General:

1. Audio:

- a. Begin each recording with the name of videographer, Project name, Contract number, date and start time, location, and direction of travel.
- b. End recording with date and time.
- c. Narration: Describe scenes on video recording by audio narration. Include description of items being viewed, recent events, and planned activities. At each change in location, describe vantage point, location, direction (by compass point), and elevation or story of construction.

2. Video:

- a. Set to continuously record: transparent digital information shall include the date and time of recording.

B. Preconstruction Video Recordings:

1. Document the entire Project Site.

- a. Include all surface features located within at least 300 feet of the construction site and accompany with appropriate audio description. Include all existing curbs, sidewalks, driveways, ditches, paved areas, landscaping, trees, culverts, headwalls, retaining walls and buildings.

2. Duration: approximately 120 minutes.

C. Monthly Construction Video Recordings: Select vantage points to show status of construction and progress since last video recordings were recorded. Minimum recording time shall be 30 minutes.

END OF SECTION

SECTION 01322
CONTRACT PROGRESS REPORTING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the requirements for reporting progress and the development and maintenance of schedules and work plans for the construction of the Project.
- B. The Contractor shall carefully monitor the progress of the Work during construction and provide the Authority with Monthly Progress Reports detailing the progress of that work.
- C. The approved schedules shall be used by the Contractor to ensure adequate planning, scheduling, managing, and executing of the Work, to enable the Authority to evaluate work progress and progress payments, to identify actual or potential time impacts, and to assist with the determination of recovery and acceleration efforts. These approved schedules shall not be revised without the prior approval or direction of the Contracting Officer Representative.

1.02 REFERENCES

- A. American Association of Construction Engineers (AACE)
- B. Associated General Contractors of America (AGC) - Construction Planning and Scheduling Manual
- C. Project Management Institute (PMI)

1.03 QUALITY ASSURANCE

- A. Project Scheduler
 - 1. The Contractor shall engage the services of a full time scheduler who is skilled in the time and cost application of scheduling using PDM network techniques for heavy construction projects. The scheduler shall be trained in the use of the specified scheduling software. The scheduler shall have a minimum of eight (8) years experience in preparing and maintaining schedules as well as analyzing delays and preparing time impact analyses.
 - 2. Scheduler shall be certified as a Planning and Scheduling Professional (PSP) per AACE International or a Scheduling Professional (PMI-SP) per PMI.
 - 3. The Contractor's scheduler may or may not be an independent consultant; however, the scheduler shall be available to the Contractor and Contracting Officer Representative to address schedule questions and shall attend all progress and schedule review meetings convened by the Contracting Officer Representative.
 - 4. In the event that the scheduler is not found to be competent or to have sufficient relevant experience as determined by the Authority, the Authority will request that the Project scheduler be removed from the Project pursuant to Section 00709, PROJECT MANAGEMENT AND SUPERINTENDENCE AND KEY STAFF. In that event, the Contractor shall submit a new candidate for consideration within 10 Days for consideration and approval by the Authority.

1.04 SUBMITTALS

- A. Make the following submittals in accordance with Section 01330, SUBMITTAL PROCEDURES:
- B. Scheduler's resume and qualifications

- C. Monthly Progress Status Report shall be submitted in electronic format in MS Word and Adobe (.PDF) and formatted to 8-1/2 by 11 inches or 11 by 17 inches in size.
- D. All schedules and reports shall be prepared and submitted in electronic format and labeled in the header and/or footer with the Contract Number, Project name, Contractor's name, title identifying nature of the schedule or report, data date, update number, and page number out of the total number of pages. Additionally, schedules shall include Project start and finish date, run date and time, filter name, and legend (bar charts only).
- E. Schedule submittals including Initial Schedule, Baseline Schedule, Monthly Update Schedules, Revised Baseline Schedules, Recovery Schedules, Acceleration Schedules, Fragnets, and As-built Schedules shall be generated in Oracle Primavera Project Planner P6, compatible with Version 8.2 for Windows, and formatted as follows:
 - 1. Schedule Submittals: P6 XER file, Acrobat (.PDF) files, and a minimum of one (1) 11x17 inch paper hardcopy of each.
 - 2. Schedule Narrative: PDF file format and a minimum of one (1) 8-1/2 x 11 inch paper hardcopy.
- F. Schedule submittals including 90-Day Rolling Schedule, Three Week Work Plan, and Testing and Commissioning Schedule shall be generated in Primavera Project Planner P6 Version 8.2 (or compatible with) for Windows and formatted as follows:
 - 1. Schedule Submittals: Acrobat (.PDF) files, and a minimum of one (1) 11x17 inch paper hardcopy of each.
 - 2. Schedule Narrative: PDF file format and a minimum of one (1) 8-1/2 x 11 inch paper hardcopy.
- G. For distribution at schedule meetings, provide additional hardcopies of schedule documents as requested by the Contracting Officer Representative.
- H. Submit schedule documents for presentations and wall mounting on paper size no smaller than 24 inches wide by 36 inches long and no larger than 36 inches wide by 48 inches long.
- I. Contractor's schedules and Monthly Progress Reports shall be submitted as specified in Table 01322-01. Contracting Officer Representative will review and return the Contractor's schedule submittal with comments in the number of Days specified in Table 01322-01 from the date of receipt:

Table 01322-01: Submission Dates and Review Times

Description	Submission Due	WMATA Review Time (Typical per submittal)
Initial Schedule	NLT 15 Days after Award	21 Days
Baseline Schedule	NLT 30 Days before conclusion of Initial Schedule Time Period	21 Days
Monthly Update Schedule (Draft)	NLT 5 Days after closing date of update period and NLT 5 Days prior to Application for Payment	5 Days
Monthly Update Schedule (Final)	NLT 5 Days after receiving the Authority's comments of Monthly Update Schedule (Draft)	5 Days
Monthly Progress Report	NLT 15 Days after closing date of the update period	7 Days
90-Day Rolling Schedule	Submit with Monthly Progress Report	7 Days
Three-Week Work Plan	Weekly, for Information Only	Weekly Meeting
Fragnet (Time Extension Request)	Provide written Notice of Delay within 10 Days of the start of potential delay event; follow-up with schedule Fragnet upon end of delay event.	14 Days
Testing & Commissioning	Per Equipment Specification Requirement	21 Days or per Spec Requirement
As-Built Schedule and Narrative	NLT 14 Days after Project Completion	14 Days

- J. The Contractor shall make all corrections to the schedule requested by the Contracting Officer Representative and resubmit the schedule for approval. If the Contractor does not agree with the Contracting Officer Representative's comments, the Contractor shall provide written notice of disagreement within 5 Days from the receipt of the Contracting Officer Representative's comments for the Project Schedule. Contracting Officer Representative's comments to the schedules with which the Contractor disagrees shall be resolved in a meeting held for that purpose.
- K. Resubmittals shall conform to the same requirements as original submittals.
- L. Schedule Submission Package Requirements:
1. Initial Schedule Submission Package
 - a. P6 XER File for Initial Baseline
 - b. Layout Files (PDF and 1 hardcopy each): All Activities, organized by WBS/Start; Critical Path, organized by WBS/Start
 - c. Float Report
 - d. Predecessor-successor report
 - e. Initial Schedule Development Narrative
 2. Baseline Schedule Submission Package

- a. P6 XER File for Project Baseline
 - b. Layout Files (PDF and 1 hardcopy): All Activities, organized by WBS/Start; Critical Path, organized by WBS/Start; Budgeted Cost, organized by Price Proposal Line Item
 - c. Float report
 - d. Predecessor-successor report
 - e. Baseline Schedule Development Narrative
3. Monthly Schedule Update Submission Package
- a. P6 XER File for Progress Only + Others when required
 - b. Layout Files (PDF and 1 hardcopy each): All Activities by WBS/Start; Critical Path by WBS/Start; Budgeted–Earned Value Costs, by Price Proposal Line Item
 - c. Change Report (“Digger”) Report
 - d. Predecessor-successor report
 - e. Float report
 - f. Monthly Schedule Update Narrative
4. As-Built Schedule Submission Package
- a. P6 XER File,
 - b. Layout Files PDF and 1 hardcopy: All Activities by WBS/Start
 - c. As Built Schedule Narrative

1.05 GENERAL REQUIREMENTS

- A. The schedules must meet the Milestones specified in General Conditions Section 00824, PERIOD OF PERFORMANCE AND PROJECT SCHEDULE REQUIREMENTS.
- B. CPM terminology, definitions and conventions as required herein shall be consistent with the technical portions of the latest edition of the Associated General Contractors Manual titled Construction Planning & Scheduling.
- C. Scheduling Software
 1. This project requires the use of a construction industry standard critical path method scheduling system that utilizes the precedence diagram method (PDM) of analysis and reporting. The scheduling software that shall be utilized is Oracle Primavera P6, Version 8.2 or shall be compatible with Version 8.2.
 2. Sub-tier contractors may use other scheduling software satisfactory to the Contractor and major subcontractors, but it is the responsibility of the Contractor to incorporate and integrate the sub-tier contractor schedules into the Project Schedule.

1.06 SCHEDULE TECHNICAL REQUIREMENTS

- A. Schedule Float - Definitions and Ownership
 1. Definitions of Float

- a. Free Float is the length of time the start of an activity can be delayed without delaying the start of a successor activity.
- b. Total Float is the length of time along a given network path that the actual start and finish of an activity or activities can be delayed without delaying Project Milestones.
- c. Project Float is the length of time between the Contractor early completion (Substantial Completion or similar activity) and the Contract completion date.

2. Ownership of Float

- a. Float available in the schedule at any time shall not be considered for the exclusive use of either the Authority or the Contractor. During the course of contract execution, any float generated due to the efficiencies of either party is not for the sole use of the party generating the float; rather it is for the benefit of the Project. Efficiencies gained as a result of favorable weather within a calendar month, where the number of days of normally anticipated weather is less than expected, will also contribute to the reserve of float.
 - b. A schedule showing work completing in less time than the Contract duration, and accepted by the Authority, will be considered to have Project Float. Project Float will be a resource available to both the Authority and the Contractor.
 - c. Contractor acknowledges it has included in its bid or proposal overhead and administrative costs to cover the entire Period of Performance and that no additional compensation will be paid for such costs in the event the Contractor is unable for any reason to finish early.
 - d. No time extensions will be granted nor delay damages paid unless a delay impacts the Project's most critical path and:
 - (1) Consumes all available float or contingency time, including Project Float; and
 - (2) Extends the work beyond the Contract completion date
- B. Work Breakdown Structure: All Project Schedule work activities shall be contained in a multilevel Work Breakdown Structure (WBS) structure, commensurate with the complexity of the project, for organization of the entire work effort. The WBS structure shall define and separate major phases of the project, work areas, and work types under which all activities will be placed. The WBS shall be established in detail down to the work package level; for the Initial Schedule, this requirement need only apply to the activities in the initial period; the WBS shall be expanded in full to the work package level for the Baseline Schedule.
- C. Activity Data: The minimum required activity data that shall be maintained for each activity is listed below. This data shall be displayed in the required schedules as appropriate to the purpose of the schedule. The Contracting Officer Representative may require additional data such as total shifts or other resource data:
1. Activity ID: Logical nomenclature should be employed, using a prefix of the activity ID to categorize the overall project into more manageable sub-areas, with an incremented numerical value as a suffix. Once assigned, an activity ID shall not be changed; should the scope of the work activity be deleted or change significantly, the Contractor shall propose in his activity update the Activity to be deleted and, with approval, replace with a new Activity
 2. Activity Description: Activity descriptions shall be brief but shall convey the scope of work described. Unusual abbreviations shall be explained in a legend or in the schedule narrative. If an activity includes work to be performed by a Disadvantaged Business Enterprise (DBE), that fact shall be identified in the activity description by inclusion of an appropriate parenthetical

entry as suffix "Activity Description + (DBE name)." Percentages shall not be used in activity descriptions, e.g., "Place West Footing (0—50 percent)" is not acceptable.

3. Original Duration: The number of workdays planned for the task activity. In preparation of schedule durations, the Contractor shall recognize that there are site access restrictions during WMATA train operational hours, and that durations need to be estimated to account for these restricted working hours (also see Calendar ID discussion below). The original duration, as assigned and approved in a Baseline Schedule submission, shall not be revised without WMATA approval. Justification shall be provided for making such changes in a schedule update.
4. Remaining Duration: For in-progress activities, the progress only remaining duration shall consider the physical percent complete of progress made to date, with the software generated calculated remaining duration. Changes to the calculated remaining duration shall be submitted for approval via a RECOVERY or REVISED UPDATE schedule.
5. Percent Complete: Shall be measured on a physical percent complete basis.
6. Early Start date/Early Finish date: As generated by the schedule software.
7. Late Start/Late Finish dates: As generated by the schedule software.
8. Baseline Start and Finish Dates: When required, baseline start and finish dates shall be shown to assess the current Monthly Update Schedule vs. the Baseline Schedule.
9. Calendar ID: All calendars and calendar assignments shall be in accordance with Section 01141, ACCESS TO SITE and subject to WMATA approval. Task activities and intermediate Contractor Milestones shall be assigned to work-day calendars. Contractual Finish Milestones shall be set to a 7-day calendar.
10. Total Float: A software calculated value, in workdays and/or in calendar days.
11. Predecessors and Successors: Listing of precedent activities logic-tied to the Start and those subsequent activities logic-tied to the Finish of the activity.
12. Budgeted Cost (total value): Monetary value assigned to an activity as budgeted labor, non-labor, or materials cost, or any combination thereof, as long as the cost amounts roll-up to the total activity cost, then to the assigned Schedule of Values, and ultimately to the Total Project Cost. Earned Value shall record the amount billable-to-date for the specific activity.
13. Resources: Crew description (size and work shift) and Equipment Usage
14. Activity Codes: For the purpose of providing additional organizing capabilities to facilitate understanding and analysis of the schedule, as a minimum, Global or Project Activity Codes shall be established for:
 - a. Responsibility (Contractor, Subcontractors, WMATA, other Agencies)
 - b. Schedule of Values (per the application for progress payment)
 - c. Work Areas (e.g., Track ROW, Platform, Mezzanine, Substation, Communications Rooms)
 - d. Work Shift (e.g., Day, Evening, Night, Weekend Outage)
 - e. Applicable CSI Specification Number
 - f. Contract Modification Number

g. Other Codes as may be requested by WMATA

D. Time-scaled Graphic Network or Bar Chart Diagram (Gantt chart):

1. Logic-tied activity network set to a timescale appropriate to the length of project or time period of schedule focus.
2. Activity bars shall have differentiating colors and format to distinguish between summary bars, task activities, level-of effort activities, and Milestones; Baseline Schedule vs. Previous Month Update vs. Current Monthly Update Schedule for actual duration and remaining duration.
3. Relationship lines defining predecessor and successor relationships. Each bar shall contain the following information positioned above, below or adjacent to it in a consistent and legible manner: Activity description and start and finish dates. Lag time in work days shall be displayed on each relationship line where it occurs. Relationship lines may be omitted in some schedules if so directed by the Authority.

E. Schedule Software Settings and Restrictions

1. Lags: Lags will not be used when the creation of an activity will perform the same function. Use of lags must be minimized and restricted to only those situations where it is not possible to properly define the start or finish of an activity by the use of a normal Finish-to-Start, Start-to-Start or Finish-to-Finish relationship. Negative lags are not permitted. The Contractor will identify any lag proposed and provide an explanation for the purpose of the lag in the narrative.
2. Activity Constraints: Date/time constraints, other than those required by the Contract, will not be allowed unless approved by the Contracting Officer Representative. The Contractor will identify any constraints proposed and provide an explanation for the purpose of the constraint in the schedule narrative.
3. Default Progress Data: Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in the CPM scheduling software system. Actual Start and Actual Finish dates on the CPM schedule shall match the dates provided by the Access Utilization Reports. These reports will be the basis for updating the schedule. Remaining Durations for in-progress activities will be updated by actual measured or estimated work progression.
4. Schedule calculations and Out-of-Sequence progress (if applicable) setting shall be "Retained Logic". "Progress Override" setting shall not be used. All activity durations and float values shall be shown in Days. Activity progress shall be shown using Remaining Duration. Date format will be DDMMYY (i.e., 11DEC02). Default activity type shall be set to "Task."
5. Individual schedule activities shall not exceed 20 work days in duration certain procurement and delivery activities, which may exceed 20 work days with the Approval of the Contracting Officer Representative. Activities exceeding 20 work days in duration shall be subdivided into multiple activities. When a calendar other than five work days per week is used, the elapsed time of a work activity from early start to early finish shall not exceed one month.
 - a. With the exception of the Contract Award, Start Project and End Project Milestone activities, no activities will be open-ended; each activity will have predecessor and successor ties. Once an activity exists on the schedule it may not be deleted or renamed, and must remain in the schedule, except with written Approval of the Contracting Officer Representative. No more than 25 percent of the activities may be critical or near critical. Critical will be defined as having zero days of Total Float. "Near critical" will be defined as having Total Float in the range of 1 to 10 work days.

- b. Schedule activities shall be sufficiently described to include what is to be accomplished and identified by the applicable work areas. Activities shall be grouped to assist in the understanding of the activity sequence. Contractor shall group activities by category of work, work area and/or responsibility. Work that is to be performed by the Contractor and by subcontractors shall be clearly defined in the activity coding.
6. Procurement Activities: Tasks related to the procurement of material or equipment shall be included as separate activities in the schedules. Examples of procurement activities include, but are not limited to; material/equipment submittal preparation, submittal and approval of material/equipment; delivery of O&M manuals; material/equipment fabrication and delivery, delivery of spare parts and special tools, notification of owner furnished material/ equipment delivery requirement, etc. Where fabrication of major equipment will take more than 60 days, a separate activity will be shown for fabrication. It is recommended that procurement activities reference the Specification number associated with the item in their activity description.
7. Authority and Agency Activities: Authority and other agency activities that could impact progress shall be clearly identified. These activities include, but are not limited to; submittal reviews, Authority/agency conducted inspections and tests, environmental permit approvals by regulators, utility outages, Notice to Proceed and delivery of Authority furnished material/equipment. If applicable, show activities indicating Authority furnished materials/equipment utilizing delivery dates indicated in the General Provisions.
8. Construction Quality Management (CQM) Activities: CQM activities will identify the preparatory phase and initial phase for each definable feature of work identified in the Contractor's Quality Control Plan as described in the Quality Management System. These activities shall be included in the Baseline Schedule.
9. Construction Activities: Construction activities shall include, but are not limited to: Tasks related to mobilization or demobilization; the installation of temporary or permanent work by trades; testing and inspections of installed work by technicians, inspectors or engineers.
10. Commissioning Activities: Start-up and testing of equipment; commissioning of building and related systems; scheduling of specified manufacturer's representatives; Substantial Completion; Pre-Final Inspection; Final Acceptance Inspection; final clean-up; training to be provided; and administrative tasks necessary to start, proceed with, accomplish or finalize the contract as defined in the Special Conditions.

1.07 PROJECT SCHEDULE

A. Initial Schedule

1. The Initial Schedule shall describe the Contractor's detail plan for permitting and critical submissions of long lead items, including equipment and materials to be employed on the project during the first 120 Days of the Contract. The Initial Schedule shall also contain sufficient information to define the early critical path of the Project, as mutually agreed to by the Contractor and the Contracting Officer Representative. The Initial Schedule shall incorporate commitments made in the Pre-award Schedule submitted with the Contractor's technical proposal.
2. The Initial Schedule shall be cost loaded, logic based, time-scaled activity network schedule and may be submitted in Critical Path Method (CPM) format. The Initial Schedule shall include the same requirements as the Baseline Schedule with the exception of information that is not reasonably available in the first 120 Days of the Contract.
3. The Initial Schedule submittal shall be accompanied by a written narrative that describes the detailed schedule and the approach to the Work that the Contractor intends to employ during the initial 120-Day period of the Contract, and a general, less detailed schedule and approach planned for the remainder of the Period of Performance.

4. A schedule meeting will be held to discuss the requirements for the Initial and Project Schedules within 7-days of Notice to Proceed.
 5. The Initial Schedule will be used to process progress payments for the 120-Day period following Notice to Proceed until the Baseline Schedule is Approved.
- B. Baseline Schedule
1. Contractor shall expand the Initial Schedule with all required detail for the full Period of Performance of the Contract, and upon approval by the Authority, this will be referred to as the Baseline Schedule. The logic contained in the approved Initial Schedule, but without progress, shall be incorporated into the Baseline Schedule.
 2. The Baseline Schedule is a time scaled, fully cost loaded, CPM network diagram schedule that shall be submitted to the Authority for review and Approval NLT 30 Days before the expiration of the Initial Schedule period.
 3. The Initial Schedule will no longer be used to determine monthly progress payments subsequent to approval of the Baseline Schedule by the Authority.
 4. The Baseline Schedule must meet all of the Milestones listed under Special Conditions Section 00824, PERIOD OF PERFORMANCE AND PROJECT SCHEDULE.
- C. Monthly Update Schedule
1. Subsequent to the approval of the Baseline Schedule the Contractor shall submit a Monthly Update Schedule (Draft), by only incorporating the progress of the Work to date, such as activity's actual start date, percent completion and/or actual finish date. The Monthly Update Schedule (Draft) shall not be revised to include additional activities, deleted activities, revised activity original durations, revised network logic, or any other changes to the schedule. No activity budget cost change will be allowed without the approval from the Authority.
 2. Monthly Update Schedule (Draft) shall be submitted no later than 5 Days after the closing date of the update period and no later than 5 Days prior to submittal of Application for Payment.
 3. The Authority will review the Monthly Update Schedule (Draft) and provide comments no later than 5 Days after receipt or in the progress and quality status review meeting. Within 5 Days of receipt of the Authority's comments, Contractor shall provide a revised Monthly Update Schedule as part of the Monthly Progress Report that addresses the Authority's comments. Delay mitigation shall be demonstrated by applying Recovery Schedule or Acceleration Schedule procedures as indicated in Article 1.08 of this Section. Upon receipt of the Authority's review and Approval, the Monthly Update Schedule will become the basis of the next month's update.
 4. The Monthly Update Schedule revision numbers shall be incremented with each monthly submission cycle.
- D. Revised Baseline Schedule
1. Subsequent to the approval of the Baseline Schedule, if due to major scope change, contract milestone change, or access dates change, or if for reason other than recovery or acceleration the Contractor requests major change to the Baseline Schedule, upon the request of the Authority, the Contractor shall submit a Revised Baseline Schedule.
- E. As-Built Schedule
1. Retain all monthly schedule updates until the Work has been accepted.

2. After all Contract work items are complete, and as a condition of Final Payment, the Contractor shall submit one copy of an As-Built Schedule showing actual start and finish dates for all work activities and milestones, based on the accepted monthly updates. The schedule submittals shall be in tabular and in time-scaled PDM plot formats. See Section 00744, METHOD OF PAYMENT, for additional retainage to be withheld until the As-Built Schedule is delivered to the Contracting Officer Representative, is reviewed, and is determined to be complete and accurate.

1.08 SUPPLEMENTAL SCHEDULES

A. Recovery Schedule

1. If according to the current Monthly Update Schedule - Draft, the Contractor is 30 or more Days behind the Contract completion date of any milestone, or the schedule contains 30 or more Days of negative float, considering all granted time extensions, and this delay is solely the responsibility of the Contractor, the Contractor shall submit a Recovery Schedule, showing a practical plan to complete the work within the Period of Performance of the Contract. The Contractor shall execute some or all of the following remedial actions: (i) increase construction labor in such quantities and crafts as necessary to eliminate the backlog of work; (ii) increase the number of working hours per shift, shifts per working day, working days per week, the amount of construction equipment or any combination to eliminate the backlog of work. The Authority may withhold progress payments until a revised schedule, acceptable to the Contracting Officer Representative, is submitted by the Contractor.
2. This requirement does not restrict the Contractor from submitting a Recovery Schedule for delays of less than 30 Days.
3. Written notification and explanation for the proposed changes in the form of a narrative shall accompany each submittal.

B. Acceleration Schedule

1. Should there be a need for the Authority to accelerate a project Milestone or Contract completion to an earlier finish than either the current forecasted contractual finish date or impacted finish date indicated, the Contractor, at the Authority's request, shall prepare an Acceleration Schedule and execute the Work utilizing additional resources, work hours, and/or equipment as may be required.
2. The Contractor, for its own benefit, may submit an Acceleration Schedule, subject to Authority Approval, however, the inability to finish earlier than the pre-accelerated Contract completion date, regardless of the reason for delays, shall not be a basis for a claim for additional time and cost. Also, such schedule rejection shall not be a basis for a claim for additional cost. Any acceleration taken without the Authority's written approval and agreement to pay is at the Contractor's expense.

C. Fragnet Schedule

1. Should the Monthly Update Schedule show any schedule activity or activities being impacted due to actions that are not the responsibility of the Contractor, for which Contractor submits a claim, the Contractor shall furnish a Fragnet Schedule identifying the delay as a part of any time extension request.
2. A Fragnet Schedule is defined as the sequence of new activities and/or activity revisions, logic relationships that are proposed to be added to the current Monthly Update Schedule to demonstrate the influence of impacts to the schedule.

3. The delay event, as a new activity, shall be inserted by the Contractor into a separate copy of the contemporaneous Monthly Update Schedule with appropriate logic ties over the period of the claimed delay. The delay event shall not be inserted as an activity into the logic of the Monthly Update Schedule however, it shall be described as a cause for delay in the narrative submitted with the contemporaneous Monthly Progress Report.
4. Fragnet Schedules will be evaluated by the Authority as part of the Time Impact Analysis. If accepted, the delay activity or activities shall be inserted into the subsequent Monthly Update Schedule of record following acceptance of the delay event.

D. Commissioning and Acceptance Schedules

1. Detailed schedules of factory and field testing and commissioning activities with activities as required per the applicable equipment specification.
2. Separate commissioning and acceptance schedules required in accordance with other sections of the contract documents shall be coordinated with, and integrated into, the schedules described in this specification. Commissioning activities, including commissioning reviews, , construction and acceptance phase activities, shall be included in the Project Schedule.

E. 90-Day Rolling Schedule

1. A schedule prepared by the Contractor depicting activities occurring in the upcoming 90-Day period in greater detail than specified in the Initial 120-Day and monthly updates of the Project Schedule. The logic shall follow the logic of the approved Baseline 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 procurement, and associated activities to be performed in this time frame.
4. The 90-Day Rolling Schedule shall be updated and submitted monthly for review and Approval by the Contracting-Officer Representative.
5. This schedule will be included in the request for track access. Additionally, this schedule may be used as an attachment with the Site Specific Work Plan (SSWP) pending the scope and duration of an item work.

F. Three Week Work Plan

1. A schedule prepared by the Contractor in a calendar time-scaled bar chart format depicting the Contractor's past week's activities and the intended work activities for the upcoming two-week period. The Three Week Work Plan shall be submitted on a weekly basis due on the first working day of each week.
2. Deviations, including but not limited to sequences of work, timing, and durations of activities from the Initial Schedule or Monthly Update Schedule shall be noted and explained in writing.
3. The form of submittal may be formatted smaller than specified in Article 1.03 herein; however, the format shall not be less than 8-1/2 by 11 inches in size.

G. Daily Work Plan

1. Upon receipt of the Authority's approval of GOTRs, Switch Order and Escort Request, the Contractor shall submit a detailed Daily Work Plan, provide the following information: Date, Planned Start Time and Finish time, GOTRs ID,

Power Outage Requirement, Point of Contact, Emergency Contract, Detailed Work Planned Hour by Hour, Planned Deliverable and Productivity, Associated Activity ID from the current Monthly Schedule Update, Number of Crews, Crew Size and Crew Mix, Planned Equipment, Tools, and Material. If there is any known Ball Games and Events.

2. The Daily Work Plan shall be submitted no later than 5 Days prior to work start.

1.09 MONTHLY SCHEDULE UPDATE NARRATIVE

- A. A written narrative shall accompany each Monthly Progress Report describing the Contractor's approach and methods for completion of the work. The narrative shall be adequate for the Contracting Officer Representative to understand the schedule and specifically identify the Critical Path, roles and activities of the Contractor, his major subcontractors, Authority, and key third parties.
- B. The narrative shall include:
 1. Overall Status of Milestone forecast completion dates vs. previous month (slip or gain, Project total float)
 2. Progress made in each area of the project: activities completed, activities started
 3. Discussion of the previous Critical path: Progress vs. Planned (per previous update) vs. Actual; with discussion of delayed activities, including the reason for the delay to the previously planned critical path activities in the current update period.
 4. Discussion of the current forward-looking critical path
 5. Changes in the following: New activities, logic interdependencies, Milestones, planned sequence of operations, critical path, and resource loading. All changes (i.e., remaining duration changes, logic changes, new logic, new activities, changes due to Modifications, changes in work sequence, entry of as-built relationship logic, etc.) shall be recorded. If using Primavera to develop the schedule narrative, add change notes to the activity notebook field (use the notebook category "Update Notes" to record changes). The log shall include as a minimum, the date and reason for the change, and description of the change.
 6. The Contractor shall submit the calendar(s) used to calculate the CPM schedule, including: (i) the proposed number of work days per week; (ii) the planned number of shifts per day; (iii) the number of hours per shift; and (iv) all non-work days, including expected weather days as quantified in Section 00728, Termination for Default, Damages for Delay, and Time Extensions.
 7. Explanation of percent completes progressing in reverse;
 8. Explanation for failure to commence any activity that should have started but did not;
 9. Changes to durations in excess of 25 percent of baseline durations, defined as actual duration plus remaining duration exceeding the Original Duration by 25 percent of the original duration; original durations will not be changed;
 10. Pending items and status thereof, including permits, change orders, and time extensions;
 11. Status of Final Completion and interim Milestones;
 12. Current and potential delays (describe cause of the delay and corrective action(s)); and
 13. Description and evaluation of the Critical Path(s) and any schedule problem areas not included above.

14. The descriptive information in the narrative shall cite the respective Activity ID and activity description when feasible. A computer generated log report shall accompany the narrative as support for item (2) above. If the computer software allows, explanation of changes may be incorporated into the schedule using the software's activity note keeping function. A computer generated report containing this information may be used to fulfill select portions of the narrative Report.

1.10 MONTHLY PROGRESS REPORT

- A. The Monthly Progress Report shall include a narrative, monthly schedule updates, a Quality Compliance Certification and construction photographs as follows:
 1. Monthly Schedule Update Narrative.
 2. Schedules including the Initial Schedule, or Baseline Project, or the Monthly Update Schedule as appropriate; 90-Day Rolling Schedule; and a Three-Week Work Plan. Schedules shall clearly identify the critical path(s).
 3. Project Financial Status with DBE Status Report, including cash flow curves indicating graphically the total percentage of work activity/event dollar value completed and scheduled to be in place on early finish, late finish, and actual finish on a monthly and cumulative basis.
 4. Quality Compliance Certification as specified in Section 01470, QUALITY MANAGEMENT SYSTEM.
 5. A summary of meetings or conferences held or attended during the report period.
 6. A listing of actions or decisions required of the Authority with an indication of the date by which such action or decision is required to avoid any adverse impact on the schedule.
 7. Utility/Jurisdictional Authority coordination and approvals report. Include telephone conversations and dates of contact made with each Utility/Jurisdictional Authority.
 8. Construction photographs, as described in Section 01321, CONSTRUCTION PHOTOGRAPHS.
 9. Project risk log and mitigation plans.
 10. Action items from the Authority, Contractor, Subcontractors, material and equipment suppliers and vendors, with action plan and dates.
 11. Monthly progress payment is contingent upon the Authority's approval of the Monthly Progress Report.
 12. Monthly certified payroll

1.11 DAILY REPORT (FORM C-113)

- A. A Daily Report shall be generated onsite by the Contractor and signed by both COR or COR's representative and the Contractor's field representative at the end of each shift. Detailed progress and achievement shall be documented in the report such as Report to Site Time, Actual Start Time, Actual Finish Time, Name of the Field Personnel and their company, Equipment used, Material used, Work completed, WMATA Staff Onsite, Delays, Safety Issues, etc.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 GENERAL

- A. Scheduling and executing of the Project Work in accordance with the schedule are the responsibility of the Contractor.
- B. The submittal of schedules shall be understood to be the Contractor's representation that the schedule meets the requirements of the Contract Documents and that the Work will be executed in the sequence and duration Indicated in the schedule.
- C. All schedule submittals are subject to review and Approval by the Contracting Officer Representative. The Authority retains the right to withhold progress payments until the Contractor submits a Monthly Progress Report with all specified contents that is acceptable to the Contracting Officer Representative.
- D. Scheduling Responsibilities
 - 1. Schedule Development
 - a. Project Schedules shall be fully integrated to incorporate input from subcontractors of every tier.
 - b. Separate subcontractor schedules from subcontractors of any tier shall not be submitted and will bear no contractual significance.
 - c. All costs incurred by the Contractor in complying with the contract scheduling requirements shall be considered to be included in its price proposal including Acceleration Schedules initiated by the Contractor, Recovery Schedules and Fragnet modeling.
 - 2. Schedule Certification
 - a. Submittal of the Baseline Schedule and subsequent Monthly Update Schedules will be understood to be the Contractor's certification that the submitted schedules meet the requirements of the Contract Documents, represent the Contractor's plan of how the work will be accomplished, and accurately reflects the work that has been accomplished.
 - 3. Schedule Adherence
 - a. The schedule system shall be used as an ongoing project management tool to assist the Contractor in keeping the Work on schedule and for assisting the Contractor to complete the Work within the specified time. Regardless of data contained in the schedule system, the Contractor will be held responsible for the unjustified failure to complete the Work within the specified Period of Performance.
 - 4. Planning and Implementation
 - a. The Contractor shall:
 - (1) Accurately represent to the Authority its schedule for execution of the Work; and,
 - (2) Utilize the schedules made available by the Contractor to the Authority without material deviation.
 - 5. Schedule Approval

- a. Approval of the schedule by the Authority is only for the purpose of establishing that the schedule complies with the Contract Documents.
- b. Approval of the schedule by the Authority does not warrant, either expressly or implicitly, the feasibility, logic, and/or durations of activities. These matters are and remain the responsibility of the Contractor.
- c. For the purposes of this specification, it is agreed the definition of "Approval" is: Receipt by the Authority with the understanding that the Contractor has fulfilled its duty to prepare a schedule that adheres to the specific requirements of the Contract specifications and complies with the general industry scheduling practices as a planning/management tool for the day-to-day direction of project resources. Review comments made by the Authority on the Contractor's schedule(s) will not relieve the Contractor from compliance with requirements of the Contract Documents.

3.02 PROJECT SCHEDULE PREPARATION

- A. The project schedules shall show clearly the sequence and interdependence of activities and shall include:
 1. Milestone completion dates; phasing and staging of the work as specified shall be prominently identified.
 2. Task activities of all Contractor's and Subcontractor's encompassing the entire scope of work and Interface, coordination, and dependencies with preceding, concurrent, and follow-on contractors and/or utility companies.
 3. Activities by other agencies and entities that have necessary involvement in the prosecution of the work, including, but not limited to acquisition of permits and agreements, plan reviews, utility connections, and final inspections
 4. Submittals and Authority review thereof
 5. Procurement, fabrication, delivery, installation, and testing of major materials and equipment
 6. Delivery of the Authority-furnished equipment, if any
 7. Material, construction equipment and equipment restrictions, if any
 8. Inspection of the work including pre-acceptance punch list and Acceptance
 9. Closeout activities and Final Completion
- B. Cost Loading
 1. The Initial Schedule and Project Schedules shall be cost-loaded with the monetary value for Payment of each task activity indicated in the Project Schedule and shall be identified in a Table of Activity Data following the description.
 2. The allocation of monetary values assigned to activities shall be subject to Authority approval and will contain, as close as can reasonably be determined, all labor, equipment, material and subcontractor cost plus its proportional share of all indirect costs.
 3. Project mobilization costs and/or monthly administrative costs, where they are separate from finished work Schedule of Values (or bid items), shall be captured in a separate section of the schedule Work Breakdown Structure (WBS). If separate mobilization costs are not identified in the Price Proposal Schedule, the Contractor shall submit a request to WMATA and the costs for mobilization shall be segregated from other Price Proposal Schedule line items in a manner acceptable to the Authority.

4. The total of all values allocated to the individual work activities shall equal the appropriate line items in the Bid PriceSchedule; the sum of all values shall equal the total Contract value. The Contractor shall coordinate with COR to set up schedule cost accounts to reflect the Authority grant application line items.
 5. Should the Contractor intend to deliver materials and receive payment under the Material-on-Site provision of the contract, with the approval of the Contracting Officer Representative, a materials-on-site (MOS) delivery activity shall be incorporated into the schedule. The cost allocated to the installation activity shall be reduced by the approved MOS activity amount. The activity description will contain the MOS designation and a MOS activity code will be assigned.
 6. The monetary value assigned to an MOS activity will be arrived at by considering only the monetary values of the specific materials' costs exclusive of the monetary values of the installation activities to which they relate. The monetary value of the delivery activity will equal the projected invoiced values of materials, as restricted above and in other relevant provisions of the Contract, to be delivered to the site. The Contractor shall submit a separate, detailed breakdown of the projected total of all MOS activities.
- C. Float Sequestering: Use of float sequestering techniques such as preferential sequencing or logic (arranging critical path activities more susceptible to the Authority or third party-caused delay), unreasonable lead/lag logic restraint, extended activity times, expected finish dates, or imposed constraint dates other than the Milestones required by the Contract shall be cause for rejection of the schedule, revisions and/or updates.

3.03 MONTHLY PROGRESS REPORT AND PAYMENT

- A. Submit Monthly Progress Report as indicated for Authority Approval. No Application for Payment will be processed without an Authority approved Monthly Progress Report.
- B. The approved Project Schedule will be used as the basis for progress payments to the Contractor. Payments will be made by the Contracting Officer Representative only for activities that are 100 percent complete.

3.04 REQUEST FOR TIME EXTENSIONS

A. Request for Time Extensions

1. The Contractor is responsible for submitting a written request for any extensions of Period of Performance no later than 10 Days after the beginning of the impact or delay. Requests not submitted timely, in writing or submitted without the required documentation, will not be considered by the Contracting Officer.
2. The request shall include documentation with written justification for the extension of time, schedule activities affected, supporting evidence, and specific references to the Contract for which the basis of the request is being made.
3. When a directed change to the contract work results in a change to Milestones or Period of Performance, the Contractor shall submit proposed revisions to the Monthly Update Schedule with a Fragnet as defined in the time impact analysis method described below. The conformed Fragnet revisions to the Monthly Update Schedule activities shall be made in accordance with the resulting Contract Modification. Interim changes may be incorporated into the Monthly Update Schedule prior to execution of a Modification upon Approval of the Contracting Officer. Such changes are subject to adjustment pending the execution of the Modification. Financial data shall not be incorporated into the schedule until the Modification is executed by the Authority and the Contractor.

B. Time Impact Analysis

1. Time Impact Analysis shall be used by the Contracting Officer and Contractor in determining if a time extension or reduction to the Milestones or Period of Performance is justified. The Contractor shall provide a Time Impact Analysis to the Contracting Officer for any directed contract change and Claim or Request for Equitable Adjustment by the Contractor as well as support for a schedule related Value Engineering Proposal or Variance Request.
2. The Contractor shall submit a Time Impact Analysis illustrating the influence of each change or delay on the Milestones or Period of Performance. Unless the Contracting Officer requests an interim update to the schedule, the accepted monthly update of the Project Schedule just preceding the directive to proceed with the change or the start of the earliest impacted activity of a claim shall be used to display the impacts. Unless requested by the Contracting Officer, no other changes will be incorporated into the schedule being used to justify the change impact.
3. Each Time Impact Analysis shall include a Fragnet demonstrating how the Contractor proposes to incorporate the impact into the Project Schedule. The Fragnet shall identify the predecessors to the new activities and demonstrate the impacts to successor activities. The Time Impact Analysis will also include concurrent delays and impacts caused by the Contractor's own work during the impact period. Upon request or at its own discretion, the Contractor shall provide alternate Time Impact Analyses that reflect no-cost and/or extra-cost schedule changes that may be implemented to mitigate the delay.
4. The Contractor shall provide the Fragnet activities and relationships being added and also insert the Fragnet into the accepted current monthly Project Schedule update, run the schedule calculations and submit the impacted schedule with the proposal, claim, etc. Include a narrative report describing the effects of new activities and relationships to interim and contract completion dates, with each Time Impact Analysis. Submit time extension requests with a Time Impact Analysis and one hard copy of the Fragnet (in a graphic format), impacted schedule (with Fragnet loaded), Total Float Report, Narrative Report and Log Report.
5. If the Contracting Officer finds the Contractor is entitled to an extension of time of any completion date under the provisions of the contract, the Authority's determination of the total number of days extension will be granted only to the extent that equitable time adjustments for the activity or activities affected exceed the total float along the paths involved of the most critical path to project completion.
6. Critical delays, i.e., delays that may affect the activities on the current critical path, will be contemporaneously discussed and mutually agreed by all the parties involved. In case the quantum of delays or impact cannot be resolved, the background, issues, work performed, as well as start and finish dates of delays shall be well-documented in chronological order. The Contracting Officer's determination of merit for time extensions(s) will be awarded after the Authority finds entitlement to the Contractor's request and only after the alleged delays are demonstrated to impact the most critical path(s).
7. Following the Contractor's receipt of a contract modification on a Standard Form C-35 signed by the Authority, the revised Contract completion date mutually agreed to during final settlement shall be incorporated into the Project Schedule. Mutually agreed changes to the Project Schedule shall be made by the Contractor by the next monthly schedule update.

END OF SECTION

SECTION 01330
SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the general requirements and procedures for preparing and submitting design and construction documents to the Authority and Jurisdictional Authorities for approval or for information. The submittals shall consist of, but not be limited to design drawings, computations, and specifications; Shop Drawings; Working Drawings; product data; samples; documents, letters, certifications and reports; permit applications and Jurisdictional Authority approval documents; and other submittals.

1.02 DEFINITIONS

- A. Schedule of Required Submittals: A compendium of all required design and construction related submittals identified throughout the Contract Documents.
- B. Contract Document Submittal Log: A document indicating the status of all Required Submittals listed in the Schedule of Required Submittals.

1.03 SUBMITTAL SCHEDULE

- A. Provide a preliminary Schedule of Required Submittals, as described in Section 00720, SUBMITTALS, within 14 Days after the effective date of Notice to Proceed (NTP) for the Authority's review. The preliminary Schedule of Required Submittals shall be updated through discussions with the Authority during weekly progress meetings or through special meetings subsequent to initial Authority approval.
- B. Submit a Contract Document Submittal Log, as described in Section 00720, SUBMITTALS, within 30 Days after the effective date of NTP. The Contract Document Submittal Log, created in MS Excel or MS Access, shall consist of all submittals required by the Contract Documents. Populate the Contract Document Submittal Log with submittal data as the design and construction progresses. The Contract Document Submittal Log shall list all versions of a submittal, however only one version of a submittal may be in effect at any one time.
- C. Submit a final Schedule of Required Submittals within 60 Days after the effective date of NTP.
- D. Submittals made shall be arranged and maintained in a tabular format by specification Section as well as in chronological order by the dates required for construction. The log shall include:
 - 1. Scheduled date for initial Submittal, review, and "need" date for acceptance in order to fabricate and install, corresponding to the Project Schedule activity.
 - 2. Contract number, specification Section number and title
 - 3. Name of Subcontractor
 - 4. Type of Submittal (Shop Drawings, product data, samples, or other), description of the item, name of manufacturer, trade name, and model number
 - 5. Highlight submittals that are on the critical path and require expedited review to meet the schedule. Indicate lead time to the date of fabrication and installation.
 - 6. State if submitted for approval or information.

7. If a Submittal is a safety critical item based on the approved Certifiable Items List (CIL), include the "Item" number and "Section" (paragraph) number, as shown on the Certifiable Items List.
8. Re-submittals: Reason for change
9. Tested/Inspected By: Identify the entity performing the test

E. The Contract Document Submittal Log shall be updated and submitted on a monthly basis.

1.04 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Submit one electronic copy in the format specified, unless noted otherwise, through the Authority's Project Management Software System (PMSS). The Contracting Officer's Representative will return one electronic copy through the PMSS.
- B. Allow 21 Days for review of submissions and resubmissions.
- C. The Contracting Officer's Representative will discard submittals received from sources other than the Contractor.
- D. Prepare separate submittals for each item in a specification Section. Group them in the order listed, paragraph by paragraph, and package them together.
- E. Transmit submittals of related parts of the Work concurrently such that processing will not be delayed for coordination. Incomplete submittals will be returned to the Contractor with no action taken by the Authority.
- F. Place a permanent label or title block on each submittal item for identification.
 1. Indicate Project name and Contract number, the date of submission, reference to the specification Section article, and drawing number and detail to which the submittal applies.
 2. Indicate name of firm or entity that prepared each submittal.
 3. Provide a blank space approximately 5 by 5 inches, in the lower right corner of each drawing just above the title block, to record the Contractor's review and approval markings and action taken by the Contracting Officer Representative.
- G. All submittals shall be accompanied with a transmittal form containing the following minimum information.
 1. Project name and Contract number, the date of submission, Subcontractor, Supplier, manufacturer name, and submittal number
 2. Submittal purpose and description
 3. Reference to the specification Section, drawing number, and title
 4. Reference applicable standards, such as ASTM or Federal Specification numbers
 5. Location(s) where product is to be installed, as appropriate
 6. Identification of deviations from the Contract Documents
 7. Notation that Submittal is a safety critical item, if identified on the "Certifiable Items List"

1.05 MEETING MINUTES

- A. Prepare meeting minutes that are the responsibility of the Contractor immediately after each meeting. Submit draft copy to Contracting Officer Representative for review within 5 Days in MS Word format.
- B. Submit final meeting minutes in Adobe (.PDF) format 3 Days after receipt of Authority review.

1.06 SHOP DRAWINGS

- A. General:
 - 1. Submit Shop Drawings in AutoCAD and Adobe (.PDF) formats.
 - 2. Shop Drawings shall indicate all pertinent features of the products and the method of fabrication, connection, erection, or assembly with respect to the Work.
 - 3. The first drawings submitted by Contractor, Subcontractor, or vendor will be reviewed for conformance with this Section. Once accepted, use the drawing format as a standard for subsequent drawings.
- B. Dimensioning: Follow applicable dimensioning and tolerance practices as specified in ANSI/ASME Y14.5.
 - 1. Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 - 2. Provide sufficient dimensions on drawings so that size, shape, and location may be determined without calculation.
 - 3. Show each dimension clearly so that only one interpretation is possible. Show each dimension for a feature once.
 - 4. Text must be legible on 11 by 17-inch prints.
 - 5. Include on the Shop Drawings details necessary for the installation, maintenance, and repair of all equipment provided.

1.07 WORKING DRAWINGS

- A. Submit Working Drawings in AutoCAD and Adobe (.PDF) formats.
- B. Working Drawings indicate the Contractor's plan for temporary structures that will not become part of the completed Project 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.
- C. Working Drawings and calculations shall be signed and sealed by a professional engineer registered in the jurisdiction 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.

1.08 PRODUCT DATA

- A. Submit product data in Adobe (.PDF) format.
- B. If information must be specially prepared for a submittal because standard published data is not suitable for use, submit as Shop Drawings, not as product data.

- C. Modify manufacturers' standard drawings, catalog cuts, brochures, diagrams, schedules, performance charts, illustrations, calculations, printed installation, erection, application, and placing instructions, and other descriptive data to delete information that is not applicable to the Contract. Indicate dimensions, clearances, performance characteristics, capacities, wiring and piping diagrams, and controls. Supplement standard information with additional information applicable to this Contract.
- D. Submit product data concurrent with samples.

1.09 SAMPLES

- A. Submit samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittals and actual components as delivered and installed.
- B. Maintain sets of accepted samples at the Site, available for quality control comparisons throughout the course of construction activity. Sample sets may be used to determine conformance of construction associated with each set.
 - 1. Samples that may be incorporated into the Work are indicated in individual specification Sections. Samples not incorporated into the Work, or otherwise designated as the Authority's property, are the property of Contractor.
- C. Samples for Verification: Submit full-size units or samples of a size indicated, physically identical with material or the product proposed for use and that shows a full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
- D. Number of Samples: Submit 5 sets of Samples. The Contracting Officer Representative will retain 3 Sample sets; the remainder will be returned. Mark up and retain one returned Sample set as a project record sample.
 - 1. Submit a single sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
- E. If variations in color, pattern, texture, or other characteristics are inherent in the material or product represented by a sample, submit at least 3 sets of paired units that show approximate limits of variations.

1.10 CERTIFICATES AND CERTIFICATIONS

- A. Submit original certificates and certifications in MS Word and Adobe (.PDF) formats.
- B. Provide certificates and certifications that demonstrate proof of compliance with Contract specification requirements for products, materials, equipment, and systems.
- C. Authority Approval of a certification shall not be construed as relieving the Contractor from furnishing products that meet the specified design intent.

1.11 REPORTS

- A. Submit original reports, signed and sealed by a professional engineer in the jurisdiction that the Work is to be constructed, and any related drawings in MS Word, AutoCAD and Adobe (.PDF) formats.

- B. Provide reports that demonstrate proof of compliance with Contract specification requirements. The reports include manufactured products, materials, research, equipment, systems, and test reporting in the field or laboratory.
- C. Authority Approval of submitted reports shall not be construed as relieving the Contractor from furnishing products that meet the specified design intent.

1.12 DATA

- A. Submit data and any related drawings in MS Word, AutoCAD and PDF formats.
- B. Provide written and graphic information including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations that demonstrate proof of compliance with Contract specification requirements. Provide the name and version of software used for calculations.
- C. Authority Approval of submitted data shall not be construed as relieving the Contractor from furnishing products that meet the specified design intent.

1.13 CONSTRUCTION PHOTOGRAPHS AND VIDEO

- A. All still photographic documentation of the Work shall be provided by the Contractor in digital format.
- B. Video documentation recordings of the Work, accompanied with audio recording, shall be provided by the Contractor in digital format.
- C. For detailed submittal procedures see Section 01321, CONSTRUCTION PHOTOGRAPHS.

1.14 AS-BUILT DOCUMENTS

- A. Maintain a record set of drawings and specifications that reflect as-built conditions and that are annotated to show all changes incorporated as Work progresses.
- B. Submit As-Built Drawings in AutoCAD and bookmarked-by-discipline Adobe (.PDF) formats that can be plotted either as full-size or half-size drawings that are scalable.
- C. Submit approved As-Built Documents for the completed Work as specified in Section 01775, CLOSEOUT, as elements of the Work are completed and before the scheduled date of Substantial Completion.

1.15 CONTRACTOR'S REVIEW

- A. Review each submittal, including all those provided by Subcontractors and Suppliers of any tier, check for coordination with other Work and for compliance with the Contract Documents. Note inconsistencies with Contract Documents. Submittals shall bear the Contractor's approval stamp and initials of the reviewer before submitting to the Authority.
- B. Each submittal transmittal form shall be signed by the Contractor with a statement, "Having checked this submission, we certify that it conforms to the requirements of the Contract in all respects, except as otherwise indicated".
- C. Do not start work where submittals are required until submittal review is completed by the Authority and Approval, if required, has been received.
- D. Identify approval methods of the various jurisdictional authorities and obtain their approvals as required.

1.16 AUTHORITY'S REVIEW

- A. The Contracting Officer Representative shall receive construction submittals from the Contractor and will distribute them within the Authority for review.
 - 1. Shop Drawings, samples, and other submission reviews by the Authority will not include checking of dimensions for potential conflicts.
 - 2. Approval by the Authority of a specific item will not indicate Approval of an assembly of which the item is a component.
 - 3. Incomplete submittals will be returned for resubmission without review.
- B. Submittals that are reviewed by the Authority will be returned to the Contractor with one of the following approval codes:
 - 1. Code 1: Approved Without Condition or Comment.
 - 2. Code 2: Approved As Noted, Resubmittal Not Required. The Contractor shall comply with changes, conditions, or comments on the submittal.
 - 3. Code 3: Disapproved. The entire submittal is disapproved and shall be resubmitted.

1.17 RESUBMISSIONS, DISTRIBUTION, AND USE

- A. Make resubmissions in same form and number of copies as initial submittal. Note the date and content of previous submittal. Clearly indicate extent of revision.
- B. Furnish copies of final submittals to manufacturers, Subcontractors, Suppliers, fabricators, installers, Jurisdictional Authorities, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- C. Retain complete copies of submittals on Site.

1.18 RFI ADMINISTRATIVE REQUIREMENTS

- A. Submit one electronic copy on the RFI form provided by the Authority, through the Authority's Project Management Software System (PMSS). The Contracting Officer's Representative will return one electronic copy through the PMSS.
- B. Allow 14 Days for the review of each RFI.
- C. The Contracting Officer's Representative will discard RFIs received from sources other than the Contractor.
- D. All submittals shall be accompanied with a transmittal form containing the following minimum information.
 - 1. Project name and Contract number, the date of submission, and RFI number
 - 2. Clear statement of the question to be addressed by the Authority
 - 3. Reference to the specification Section, drawing number, and title that is the subject of the RFI

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

- A. Canopy Submittals

The contractor shall submit detailed Canopy submittal including foundation work within in 40 Days from Notice to Proceed Date. The contractor is required to submit all accurate related information in the submittal to obtain one time approval from the Authority.

PART 4 –

END OF SECTION

SECTION 01410
REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes information required for conformance to regulatory requirements, such as building codes, mechanical codes, electrical codes, ADAAG regulations, or other regulations applicable to the Project.

1.02 GENERAL

- A. Meet or exceed the WMATA Manual of Design Criteria and WMATA Standard Specifications relevant for each element of the Work as these represent the standards to be used for design and construction. Comply with all Federal, state, and local laws and regulations that control the design and construction of the Project, and meet or exceed the laws and standards relevant for each element of the Work to be installed if they are more stringent than the WMATA Manual of Design Criteria and WMATA Standard Specifications.

1.03 THE JURISDICTIONAL AUTHORITIES, RAILROADS, UTILITIES, AND MISCELLANEOUS AGENCIES

- A. Coordinate with the following entities as appropriate and relevant to the Project.

B. Federal agencies:

1. Environmental Protection Agency (EPA)
2. Federal Aviation Administration (FAA)
3. Federal Highway Administration (FHWA)
4. Federal Transit Administration (FTA)
5. General Services Administration (GSA)
6. Department of the Interior:
 - a. National Park Service (NPS), National Capital Region
7. Occupational Safety and Health Administration (OSHA)
8. U.S. Army, Corps of Engineers (COE):
 - a. Washington Aqueduct Division
 - b. Baltimore District
 - c. Norfolk
9. U.S. Coast Guard (USCG)
10. U.S. Navy, Naval Facilities Engineering Command (NAVFAC)
11. Architectural and Transportation Barriers Compliance Board (ATBCB):
 - a. American with Disabilities Act Accessibility Guidelines (ADAAG)

12. Federal Emergency Management Agency (FEMA)
 13. U.S. Army Engineer District
 14. Department of Defense (DOD)
- C. District of Columbia:
1. Department of Consumer and Regulatory Affairs:
 - a. Building and Land Regulation Administration
 2. Department of Environmental Services
 3. Department of Health (Environmental Health Administration)
 4. Department of Housing and Community Development:
 - a. Redevelopment Land Agency
 5. Department of Human Services
 6. Department of Public Works:
 - a. Bureau of Traffic Services
 - b. Design and Engineering Construction Administration
 - c. Bureau of Design, Engineering and Research
 - (1) Traffic and Electrical Services Division
 - d. Bureau of Engineering and Construction
 - (1) Project Development Division
 7. Department of Recreation and Parks
 8. Department of Transportation:
 - a. Office of Mass Transit
 9. Fire Department
 10. Metropolitan Police Department
 11. Department of Sanitary Engineering
 12. Department of Highway Facilities
 13. Department of Planning
- D. State of Maryland:
1. Department of Transportation
 - a. State Highway Administration
 - b. State Railroad Division

- c. Office of Traffic
 - d. Office of the District Engineer (District #3)
 - 2. Department of Natural Resources:
 - a. Water Resources
 - 3. Department of Health and Mental Hygiene
 - 4. Department of the Environment:
 - a. Industrial Waste Division
 - 5. Department of Transportation
- E. Montgomery County:
 - 1. Department of Transportation
 - 2. Storm Water Control
 - 3. Department of Fire and Rescue Services
 - 4. Department of Public Works
 - 5. Soil Conservation District
 - 6. Department of Environmental Protection:
 - a. Division of Pollution Control
 - b. Sediment Control Permit
 - 7. Office of Architectural Service
 - 8. Police Department
- F. Prince George's County:
 - 1. Department of Public Works and Transportation
 - 2. Soil Conservation District
 - 3. Health Department
 - 4. Fire Department
 - 5. Department of Environmental Resources
- G. Commonwealth of Virginia:
 - 1. Department of Public Works and Transportation
 - 2. Virginia Department of Highways and Transportation
 - 3. Virginia (Northern) Planning District Commission
 - 4. Virginia (Northern) Park Authority

5. Virginia (Northern) Transportation Commission
 6. Virginia State Water Control Board
 7. Virginia State Highway Commissioner
- H. City of Alexandria:
1. Department of Transportation and Environmental Services
 2. Fire Department
 3. Alexandria Sanitation Authority
 4. Police Department
- I. Arlington County:
1. Department of Public Works:
 - a. Utilities Department
 2. Arlington County Department of Environmental Services
 3. Arlington County Fire Department
 4. Arlington County Sheriff and Police Department
 5. Highway Facilities
 6. Fire Prevention Code
- J. Fairfax County:
1. Water Authority
 2. Park Authority
 3. Fire and Rescue Services
 4. Soil Conservation District
 5. Department of Public Works and Environmental Services
 6. Transportation Planning Branch
 7. Police Department
- K. City of Falls Church:
1. Water Authority
 2. Department of Public Works
 3. Department of Public Utility
 4. Police Department
- L. City of Greenbelt

- M. City of College Park
- N. Town of Riverdale
- O. Town of Capital Heights
- P. Town of Cheverly:
 - 1. Building and Fire Prevention
 - 2. Police Department
- Q. Town of Seat Pleasant
- R. Town of University Park
- S. Town of Riverdale
- T. Town of Berwyn Heights
- U. City of Rockville
- V. City of Fairfax
- W. Railroads:
 - 1. Consolidated Rail System Corporation
 - 2. CSX Transportation:
 - a. Baltimore and Ohio Railroad
 - b. Chesapeake and Ohio Railroad
 - c. Richmond, Fredericksburg and Potomac Railroad Company
 - 3. National Railroad Passenger Corporation (AMTRAK):
 - a. Washington Terminal Company
 - 4. Southern Railway System
 - 5. Norfolk Southern Corporation
 - 6. Penn Central Transportation Company
 - 7. Philadelphia, Baltimore & Washington Railroad Co.
- X. Utilities: See Section 01180, PROJECT UTILITY SOURCES.
- Y. Miscellaneous agencies:
 - 1. Maryland-National Capital Park and Planning Commission
 - 2. Metropolitan Washington Airports Authority
 - 3. National Capitol Planning Commission
 - 4. Washington Suburban Transit Commission

- 5. Metropolitan Washington Council of Governments
- 6. American Association of State Highway and Transportation Officials (AASHTO)
- Z. Other
 - 1. U.S. Green Building Council (USGBC)

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01420
REFERENCES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section lists the reference standards cited in the Contract Documents, the organizations or Jurisdictional Authorities whose standards are cited, and common acronyms used in the Contract Documents.
- B. When reference is made to codes, regulations, reference standards, and specifications, the Work shall conform to the current edition as of the date of Award, unless it is superseded by Jurisdictional Authorities.

1.02 ABBREVIATIONS AND ACRONYMS

AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ABS	Acrylonitrile-Butadiene-Styrene
ac	Alternating Current
ACGIH	American Conference of Governmental Industrial Hygienists
ACI	American Concrete Institute
A/D	Analog to Digital
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AHA	American Hardboard Association
AHDGA	American Hot Dip Galvanized Association, Inc
AI	Asphalt Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Moving and Conditioning Association
AMTRAK	National Railroad Passenger Corporation
ANSI	American National Standards Institute (synonymous with USASI-ASA)
API	American Petroleum Institute
AREMA	American Railway Engineering and Maintenance of Way Association
ARI	Air Conditioning and Refrigeration Institute
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASNT	American Society of Nondestructive Testing
ASTM	American Society of Testing and Materials
ATBCB	Architectural and Transportation Barriers Compliance Board
AT&T	American Telephone and Telegraph Company

AWG	American Wire Gauge (synonymous with Brown and Sharpe)
AWI	Architectural Woodwork Institute
AWWA	American Water Works Association
AWS	American Welding Society
AWPA	American Wood Preservers' Association
BG&E	Baltimore Gas and Electric Company
BIA	Brick Institute of America
BLS	Bureau of Labor Statistics
B&O	Baltimore & Ohio Railroad (Division of the 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	US 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 the CSX Transportation)
CONRAIL	Consolidated Rail Corporation (formerly Penn Central)
CQCS	Contractor's Quality Control System
CRSI	Concrete Reinforcing Steel Institute
CSX	CSX Transportation (formerly Chessie System, B&O, C&O, and Chesapeake & Ohio)
CTI	Cooling Tower Institute
dB	Decibel(s)
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 (formerly UMTA)
GPH	Gallons Per Hour
GSA	General Services Administration
HOA	HAND/OFF/AUTOMATIC
HP	Horsepower
HVAC	Heating, Ventilating and Air Conditioning
IBC;	International Building Code
ICEA	Insulated Cable Engineers Association
ICI	Industrial Coatings International
ID	Inside Diameter
IEEE	Institute of Electrical and Electronic Engineers
IPS	Iron Pipe Size
ISO	International Organization for Standardization
JGB	Jackson Graham Building 600 Fifth Street, N.W. Washington, D.C. 20001
kHz	Kilo Hertz
kV	Kilovolts
kVA	Kilovolts-amperes
kW	Kilowatts
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
mV	1,000 volts
mVA	1,000 volts-amperes
MCM	1,000 Circular Mils
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
MSG	Manufacturers' Standard Gauge
MIL STD	Military Standard

MSHA	Maryland State Highway Administration
MSS	Manufacturer's Standardization Society of the Valve and Fitting Industry
MTPD	Metro Transit Police Department
MUTCD	Manual of Uniform Traffic Control Devices
MWAA	Metropolitan Washington Airports Authority
MWRA	Maryland Water Resources Administration (Part of MDNR)
NAAMM	National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NAVFAC	Naval Facilities Engineering Command
NBGQA	National Building Granite Quarries Association
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
OCCB	Operations Control Center Building 600 Fifth Street, N.W. Washington, D.C. 20001 (see JGB)
OD	Outside Diameter
OS&Y	Outside Stem and Yoke
OSHA	US Department of Labor, Occupational Safety and Health Administration
PCI	Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
PE	Polyethylene
PEI	Porcelain Enamel Institute
PEI	Petroleum Equipment 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
PPM	Parts Per Million
psf	Pounds Per Square Foot
psi	Pounds Per Square Inch
psig	Pounds Per Square Inch Gauge
PVC	Polyvinyl Chloride
RCRA	Resource Conservation and Recovery Act
rms	Root Mean Square
rpm	Revolutions Per Minute
ROD	Revenue Operation Date
RQD	Rock Quality Designation
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
SPDT	Single Pole, Double Throw
SPST	Single Pole, Single Throw
SSPC	Steel Structures Painting Council
TBM	Tunnel Boring Machine
TCA	Tile Council of America
TGA	Thermogravimetric Analysis
UFAS	Uniform Federal Accessibility Standards
UL	Underwriters Laboratories, Incorporated
UMTA	Urban Mass Transit Administration
UPS	Unit Price Schedule or Uninterruptible Power System, depending upon context in which it occurs
USBR	US Bureau of Reclamation
USCG	US Coast Guard
USCS	US Commercial Standard
USDA/SCS	US Department of Agriculture - Soil Conservation Service
USDOT	US Department of Transportation
USGBC	US Green Building Council
USN/CD	US Navy, Chesapeake Division
USPS	US Product Standard
USSG	United States Standard Gauge

WAD Washington Aqueduct Division (Element of U.S. Army C.E., Baltimore District)
WSSC Washington Suburban Sanitary Commission
XLPE Cross-Linked Polyethylene

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01470
QUALITY MANAGEMENT SYSTEM

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the Contractor's requirements to formalize a system that documents the structure, responsibilities, and procedures required to achieve effective quality management of the Work throughout the duration of the Contract.
- B. The Quality Management System shall be consistent with ISO 9001 standard. The Contractor is not required to be ISO certified, however, certain Suppliers and manufacturers shall be certified as required in these specifications.
- C. The Quality Management System shall include a Quality Plan, Inspection and Test Plans, and corresponding procedures and forms necessary to establish, document, maintain, and execute work that conforms to the Contract Documents.
- D. Inspection and Testing shall be performed by qualified staff and laboratories as specified herein.

1.02 REFERENCES

- A. Federal Transit Administration (FTA)
 - 1. FTA-PA-27-5194-12.1, Quality Management System Guidelines
- B. International Organization for Standardization (ISO)
 - 1. ISO 9001 – Quality Management Systems
 - 2. ISO 10013 – Guidelines for Quality Management System Documentation
- C. U.S. national standards maintained by the U.S. National Institute of Standards and Technology (NIST) and the U.S. Naval Observatory.

1.03 SUBMITTALS

- A. Make submittals in accordance with Section 01330, SUBMITTAL PROCEDURES, and as noted below. Submit plans, procedures, audit schedules and certifications for Approval. Remaining submittals are for information.
- B. Quality Plan: Contract-specific Quality Plan modeled after ISO 9001 within 30 Days of NTP and with each revision. As a minimum, the following quality elements shall be included in the Quality Plan.
 - 1. Management Responsibility
 - 2. Document Control
 - 3. Subcontracting and Purchasing
 - 4. Product Identification and Traceability
 - 5. Inspection and Testing
 - 6. Inspection Measuring and Test Equipment

7. Inspection and Test Status
 8. Nonconformance
 9. Corrective Action
 10. Quality Records
 11. Quality Audits
 12. Training
- C. Quality Procedures: Procedures for each of the quality elements in the Quality Plan within 120 Days of NTP.
- D. Inspection and Test Plans/Specific: Submit Work task or component specific Inspection and Test Plans a minimum 60 Days in advance of when the covered work is scheduled to begin.
- E. Quality Reports: Submit the following reports in accordance with the approved Quality Plan and Quality Procedures.
1. Daily Quality Reports: Daily.
 2. Test Status Reports: Monthly.
 3. Review and Disposition of Nonconforming Product: With each occurrence.
 4. Summary of Management Reviews: Monthly during the first 6 months after NTP and not less than quarterly thereafter.
 5. Proposed audit schedule within 60 Days of NTP.
 6. Report of audit results and completion of corrective actions within 30 Days of the completion of an Audit.
 7. Quality Compliance Certification with each Monthly Progress Report

1.04 QUALITY MANAGEMENT SYSTEM REQUIREMENTS

A. Quality Management System

1. The Quality Management System shall be updated to improve the system as necessary throughout the Period of Performance of the Contract to reflect changes determined to be necessary by Contractor management review, Contractor internal audit, and Authority audit. Each update of the Quality Management System requires Authority Approval.
2. During the Period of Performance, exercise positive control over all of the Work, including that of subconsultants, Subcontractors, fabricators, manufacturers, installers, and Suppliers in accordance with the Quality Plan and Quality Procedures described within the approved Contractor Quality Management System.
3. The execution of the Quality Management System shall be subject to Authority audit throughout the Period of Performance of the Contract.

B. Quality Plan

1. The Quality Plan shall include the signatures of the Officer(s) responsible for the Contractor entity indicating their approval of the Quality Management System.

2. Quality Manager
 - a. Shall have the qualifications specified in Section 01111, CONTRACTOR KEY STAFF.
 - b. Shall perform as the Contractor's Management Representative.
 - c. Is responsible for implementing the Quality Management System and shall have the authority to stop the Work.
3. Document Control: Current version of all documents shall be managed in the Authority's Project Management Software System (PMSS). The database shall be kept current throughout the Period of Performance of the Contract.
4. Subcontracting and Purchasing
 - a. Purchased material, equipment, and services shall be controlled to ensure that they are properly integrated into the Work.
 - b. Assure that Contractor's subconsultants, Suppliers, and Subcontractors satisfactorily demonstrate and document an adequate system for managing quality to the Contractor.
 - c. Provide adequate surveillance of subconsultants, 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's subconsultants, Subcontractors, and Suppliers.
5. Product Identification and Traceability: The Contractor 's Quality Management System shall include provisions to identify and provide traceability of products and materials where appropriate and as required in the Contract Specifications.
6. Inspection and Testing/General
 - a. Establish an Inspection and Test Plan that conforms to the Quality Management System and the Contract Specifications and that allows for tracking of actual performance of inspections and tests.
 - b. The Inspection and Test Plan shall incorporate elements of the Authority furnished Inspection Guidelines, Part 2, as needed to meet the requirements of the Quality Plan.
 - c. Testing laboratories shall be certified as required by the Contract Specifications.
 - d. The Inspection and Test Plan shall be designed to assure that testing is performed to demonstrate that components and systems perform satisfactorily in service. Testing shall be performed by qualified and experienced personnel, and using certified in accordance with approved test procedures. Tests shall incorporate acceptance limits defined by industry codes and standards or by the Issued for Construction Specifications; the more restrictive standard shall take precedence. All test results shall be documented and submitted to the Authority for review.
 - e. Provide the Authority 14 working days notice of tests except when greater notice is required in these specifications.
 - f. Include instructions necessary to implement source inspections; receiving inspections; inspection of work in progress; hold point inspections, and completion inspections.
 - g. Forms for recording test results and authorized approval signatures shall be used for all tests. Each test form shall identify the applicable specification Section, Article, and Paragraph.

- e. Retain quality records for the duration required to meet statutory requirements.

12. Quality Audits

- a. Management reviews conducted by Contractor:

- (1) Management reviews shall occur monthly during the first 6 months of the Contract and not less than quarterly thereafter.
- (2) Written summaries of findings and major corrective actions shall be provided to the Contracting Officer Representative within 5 Days of completion of each review.

- b. Internal quality audits conducted by Contractor:

- (1) Internal audits shall be performed at least quarterly.
- (2) Deficiencies in the Quality Management System, the causes of deficiencies in the Quality Management System, and the status of corrective action and preventive action, when appropriate shall be recorded in the audit results.
- (3) Audit results shall be provided to the Contracting Officer Representative within 14 Days of the audit with a plan for corrective and preventative action.
- (4) Provide notification of completed corrective and preventative action.

13. Training: Establish, maintain, and provide the training needs for all personnel performing activities affecting quality. Refer to Section 01820, Demonstration and Training.

C. Inspection and Test Plans/Specific

1. As a minimum, Inspection Plans shall include the following information:

- a. A matrix of all inspections required by the Contract Specifications to be performed by Contractor, Suppliers, or Subcontractors and their frequency.
- b. Established hold points that require work stoppage until Authority action relative to that work activity is complete.
- c. Established witness points that identify when Authority notification is required for a Contractor work activity.
- d. Checklists to be utilized.

2. As a minimum, the Test Plans shall include the following information:

- a. A matrix of all tests required by the Contract Specifications to be performed by Contractor, Suppliers, or Subcontractors.
- b. Samples of test reports: the test reports shall meet the minimum requirements called for in the applicable test standards specified in the Contract Specifications.
- c. Provisions for coordinating onsite and offsite testing.
- d. 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 Days advance notice.
- e. Description of test
- f. Specification Section, Article, and Paragraph related to each test

- g. Type of test
- h. Applicable standard
- i. Test frequency
- j. Responsibility for test performance
- k. Completion status
- l. Means of tracking and recording corrective actions being taken to assure compliance with the Issued for Construction Specifications.
- m. Means for recording test results.

D. QUALITY REPORTS

1. Daily Quality Reports: Daily quality reports shall summarize the construction activities to the Authority, record the inspections and tests completed and the results, and record deficiencies identified, during the previous 24 hours of work. These reports shall be provided to the Contracting Officer Representative daily.
2. Test Status Report: Track and report the status of testing. Revisions, updates, and additions the test status report shall be submitted to the Contracting Officer Representative at least monthly.
3. Quality Compliance Certification: As specified in Section 00744, METHOD OF PAYMENT, the Quality Manager's Quality Compliance Certification shall be provided with each Monthly Progress Report stating that application of the Quality Management System has demonstrated that the items requested for payment have been constructed to meet the contract requirements and have been inspected and tested as required to comply with the Contract Documents. Work for which satisfactory records for design, testing, inspection, or other quality elements are not available, will not qualify for payment.

1.05 AUTHORITY QUALITY OVERSIGHT

- A. The principal role of the Authority in the implementation of the Contractor Quality Program will be oversight of the effectiveness of the Contractor's Quality Management System including quality control and quality assurance activities. The Authority reserves the right to conduct inspection of all phases of construction by Authority field staff. Deficiencies discovered will be brought to the immediate attention of the Contractor including written follow-up notification.
- B. When the Authority determines that the approved Quality Management System or plans, or any portion or feature thereof, are not controlling work sufficiently for the Work to conform to the Contract Documents, Contractor shall take appropriate action to correct such deficiencies. The Contracting Officer Representative may stop the Work activities if the Quality Management System is not functioning properly due to lack of Contractor's staff or for any other Contract non-compliance.
- C. Notwithstanding the above, Authority inspection, testing, or other actions shall not constitute Acceptance of work, nor shall it relieve the Contractor of its contractual responsibilities.
- D. When Authority inspection is required, add to the purchasing document the following statement:

"Authority inspection is required prior to shipment from the plant. Upon receipt of this order, promptly notify the Contracting Officer Representative, in writing, so that appropriate planning for Authority inspection can be accomplished."

1.06 AUTHORITY AUDITS OF THE CONTRACTOR'S QUALITY MANAGEMENT SYSTEM

- A. At its sole discretion, the Authority may conduct audits, tests, and inspections in addition to those performed by the Contractor.
- B. There will be an ongoing review and evaluation of implementation of the Contractor's Quality Management System to verify that the Contractor is effectively controlling the quality of construction.
- C. Audits include audits of fabricators, Subcontractors, subconsultants, Suppliers, and third-party audits (i.e., ISO audits, trade organization certification audits, and audits required to maintain laboratory or testing accreditation).
- D. If the implementation of the Contractor's Quality Management System is determined to be ineffective by the Authority, the Authority, at its sole discretion, may withhold payment for any and all work it deems to be deficient or non-conforming to the Contract Documents. The Contractor will be expected to make whatever changes are necessary in the organization or in the Quality Management System to provide effective control of the quality of the Work.
- E. The Authority will perform audits to verify that the Contractor is effectively controlling the quality of the Work. The basis for the audits will be the Quality Management System and the Contract Documents.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01510
TEMPORARY UTILITIES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies requirements for temporary utilities for use during construction.
- B. Temporary utilities required include but are not limited to:
 - 1. Water service and distribution.
 - 2. Temporary electric power and light.
 - 3. Telephone service.
 - 4. Storm and sanitary sewer.

1.02 REFERENCES

- A. American National Standards Institute (ANSI)
 - 1. ANSI-A10 Series standards for Safety Requirements for Construction and Demolition
- B. National Electrical Contractors Association (NECA)
 - 1. NECA Electrical Design Library, Temporary Electrical Facilities
- C. National Electrical Manufacturers Association (NEMA)
- D. National Fire Protection Association (NFPA)
 - 1. NFPA 70, National Electrical Code
 - 2. NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations
- E. Occupational Safety and Health Administration (OSHA)
- F. Underwriters Laboratories (UL)

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01330, SUBMITTAL PROCEDURES, and with additional requirements as specified for each.
 - 1. Reports for tests, inspections, meter readings, and similar procedures performed for temporary utilities.
 - 2. Indicate the schedule for implementation and termination of each temporary utility as appropriate to the Authority as described in Section 01322, CONTRACT PROGRESS REPORTING.

1.04 QUALITY ASSURANCE

- A. Comply with industry standards and applicable laws and regulations of Jurisdictional Authorities including but not limited to:
 - 1. Building Code requirements

2. Health and safety regulations
 3. Utility company regulations
 4. Police, Fire Department, and Rescue Squad rules
 5. Environmental protection regulations
- B. Comply with NFPA Code 241, ANSI-A10, and NECA Electrical Design Library, Temporary Electrical Facilities. For electrical service, comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70.
- C. Arrange for the inspection and testing of each temporary utility before use, and coordinate all requirements for certifications and permits. The Contracting Officer Representative shall be notified sufficiently in advance, but with no less than 24 hours notice, so as to be present at all planned inspections and onsite activities.

1.05 PROJECT CONDITIONS

- A. Incorporate into the Project Schedule dates for implementation and termination of each temporary utility. At the earliest practicable time and when acceptable to the Authority, change over from use of temporary service to use of the permanent service.
- B. Keep temporary services and facilities clean and neat in appearance. Temporary utilities shall operate in a safe and efficient manner. Take all necessary fire prevention measures and shall ensure that utilities are not overloaded or permitted to interfere with progress of the Work. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on the Site.
- C. Determine temporary utility services requirements and shall make arrangements with utility companies and governmental agencies to obtain such services.
- D. Provide temporary electrical service of sufficient capacity to serve the temporary 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.
- E. Temporary services shall be furnished, installed, connected, and maintained by the Contractor as approved by the Contracting Officer Representative. Prior to completion of the Work, the Contractor shall remove all temporary services and restore affected areas as approved.
- F. Shop drawings for all temporary utility and electrical services shall be submitted for approval. Power supply shall be of such quantity and type required to perform the Work. Maximum primary voltage shall be 600 volts, unless otherwise approved. Lighting equipment shall be of the type and quantity needed to provide illumination of all project areas. Materials for and installation of temporary services shall comply with OSHA requirements.
- G.

1.06 ACCESS TO FIRE HYDRANTS AND FIRE ALARM BOXES

- A. Whenever the Work is being carried out, free access must be given to each fire hydrant, fire alarm box and 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 or fire alarm box and, where materials are placed in the vicinity of a fire hydrant or fire alarm box and to such

height as to prevent the same from being readily seen, the position of such hydrants or fire alarm boxes shall be indicated by suitable signs and lights, both day and night.

- B. Safeguard, maintain, and protect the wires, cables, ducts, manholes, posts, and poles, signals, and alarm boxes of fire departments. Do not cause interruption to the 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 such wire, cable, duct, manhole, post or pole, signal, or fire alarm box is disturbed, the Contractor shall immediately notify the Contracting Officer Representative, and it shall be restored immediately to its original condition.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01520
TEMPORARY CONSTRUCTION FACILITIES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes requirements for temporary facilities for use during construction.
- B. Temporary facilities required include but are not limited to temporary heating and cooling field offices, Contracting Officer Representative's Project office (co-located with Contractor's field office), parking area, on-site plant, sanitary facilities and drinking water, waste disposal services, rodent and pest control, first aid station, storage sheds, storage and laydown areas, and miscellaneous services and facilities.

1.02 REFERENCES

- A. American National Standards Institute (ANSI)
 - 1. ANSI-A10 Series Standards for Safety Requirements for Construction and Demolition
- B. International Building Code (IBC)
- C. National Electrical Contractors Association (NECA)
 - 1. NECA Electrical Design Library, Temporary Electrical Facilities
- D. National Electrical Manufacturers Association (NEMA)
- E. National Fire Protection Association (NFPA)
 - 1. NFPA 70, National Electrical Code
 - 2. NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations
- F. Occupational Safety and Health Administration (OSHA): 29 CFR § 1910

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01330, SUBMITTAL PROCEDURES, and with additional requirements as specified for each.
 - 1. Site plans indicating all temporary facilities, utility connections, traffic flows, and working drawings of temporary facilities for approval by Authority and applicable Jurisdictional Authorities within 14 Days of Notice to Proceed.
 - 2. Reports of the results of tests, inspections, meter readings, and similar procedures performed for temporary facilities for the Authority's information and records.
 - 3. A plan of the on-Site plant layout for approval 14 Days prior to the start of construction.
 - 4. A schedule indicating implementation and termination of each temporary facility within 14 Days prior to the start of construction or other period as may be approved by the Contracting Officer Representative.

1.04 QUALITY ASSURANCE

- A. Comply with industry standards and applicable laws and regulations of Jurisdictional Authorities, including but not limited to:
 - 1. Building Code requirements - local and international as applicable
 - 2. Health and safety regulations
 - 3. Utility company regulations
 - 4. Police, Fire Department and Rescue Squad rules
 - 5. Environmental protection regulations
 - 6. Governmental Agencies
- B. Comply with NFPA Code 241, ANSI-A10 Construction Package, and NECA Electrical Design Library. For Electrical Service, comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70. Also comply with the IBC as applicable.
- C. Arrange for the inspection and testing of each temporary facility before use and secure necessary certifications and permits. The Authority shall be kept informed of all planned inspections and onsite activities.

1.05 PROJECT CONDITIONS

- A. Incorporate into the Project Schedule dates for implementation and termination of each temporary facility. At the earliest practicable time and when acceptable to the Authority, change over from use of temporary facilities to use of the permanent facilities if applicable.
- B. Keep temporary facilities clean and neat in appearance. Temporary facilities shall be operated in a safe and efficient manner. Take the necessary fire prevention measures and do not overload facilities, or permit them to interfere with progress of the Work. Hazardous, dangerous, or unsanitary conditions and public nuisances shall not be allowed to develop or persist on the Site.

1.06 CONTRACTOR'S ON-SITE PLANT

- A. All necessary construction in connection with the on-Site plant shall be done in a neat workmanlike manner to the Authority's satisfaction.
- B. Sufficient construction plant shall be provided and maintained at points where work is in progress to adequately meet demands of the Work and with ample margin for emergencies or overload. The plant shall be of sufficient capacity, in the opinion of the Authority, to permit a rate of progress, which will ensure completion of the Work within the time specified in the Contract. The Authority shall have the right to reject or condemn any plant, apparatus, or staging, which in its opinion is unsafe, improper or inadequate. The Contractor is not relieved of its responsibility for the safe, proper, lawful construction, maintenance and use of such plant, apparatus, or staging, whether the Authority exercises this authority or not. Condemned plant or equipment shall be brought to acceptable condition or shall be removed from the Site.
- C. The location of stationary equipment and the location of miscellaneous mobile equipment shall be subject to Authority Approval.

1.07 CONTRACTING OFFICER REPRESENTATIVE'S FACILITY NOT USED

1.08 SANITARY PROVISIONS

- A. The OSHA standard for sanitation, 29 CFR § 1910.141 et. seq. shall be used. Prior to starting work, the Contractor shall furnish for use of its force on the Work necessary toilet conveniences secluded from public view. They shall be kept in a clean and sanitary condition and comply with the requirements and regulations of the area in which the work is performed. Potable water shall be provided with individual cups, and sanitary conditions for the water dispenser shall be maintained. A common drinking cup or other common utensils shall not be used.

1.09 WORK AND STORAGE/LAYDOWN AREA

- A. The areas designated by the Authority 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's use of laydown areas other than those identified by the Authority must be approved by the Contracting Officer Representative prior to their use. The Contractor shall submit a materials storage plan as described in Section 01330, SUBMITTAL PROCEDURES, for approval 60 Days prior to the start of construction.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01530
TEMPORARY DECKING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies requirements for temporary decking and pedestrian bridges that may be required for the purpose of maintaining the flow of vehicular and pedestrian traffic during the construction period. Temporary decking and pedestrian bridges includes their support system over excavated areas.
- B. Decking and temporary grade crossing for vehicular traffic as applicable shall be constructed of suitable materials in accordance with Jurisdictional Authority requirements.
- C. Bridges for pedestrians shall be constructed of suitable materials in accordance with Jurisdictional Authority and ADAAG requirements.
- D. When the deck beams or other members supporting such deck are required to carry the support of excavation loads, these members shall also be in compliance with the requirements of Section 02260, SUPPORT OF EXCAVATION.

1.02 RELATED SECTIONS

- A. Section 02260, SUPPORT OF EXCAVATION
- B. Section 02845, TRAFFIC CONTROL DEVICES

1.03 REFERENCES

- A. Americans with Disabilities Act Accessible Guidelines (ADAAG)
 - 1. Standards for Accessible Design
- B. American Association of State Highway and Transportation Officials (AASHTO):
 - 1. AASHTO Standard Specification for Highway Bridges.
- C. American Welding Society (AWS):
 - 1. AWS D1.1 Structural Welding Code - Steel
- D. ASTM International (ASTM):
 - 1. ASTM D2555 Standard Practice for Establishing Clear Wood Strength Values
 - 2. ASTM E274 Standard Test Method for Skid Resistance of Paved Surfaces Using a Full Scale Tire.

1.04 DESIGN CRITERIA

- A. Base designs on WMATA Manual of Design Criteria as a minimum.
- B. Design temporary decking and support system for AASHTO HS20 loading and impact, earth pressures, utility loads, and other applicable live impact and dead loads, including the Contractor's equipment, whether the temporary decking is intended for support of vehicular or pedestrian traffic.

- C. When excavation or construction equipment is to be operated from decking, design decking using actual maximum loads in accordance with design criteria of referenced AASHTO specification, unless otherwise shown.
- D. Design supporting members to allow clearance for existing and relocated utilities.
- E. Provide suitable openings for access for servicing utilities and fire fighting. Provide flush covers for openings.
- F. Bridges for pedestrians shall be constructed of approved suitable materials in accordance with local requirements, be provided with handrails or with sides tightly boarded in accordance with such requirements and shall have a minimum width of 4 feet or such greater minimum width as will accommodate the normal traffic flow at the particular location.
- G. All designs shall comply with ADAAG regulations.

1.05 SUBMITTALS

- A. Submit the following no less than 60 Days prior to the start of construction to the Authority for Approval as specified in Section 01330, SUBMITTAL PROCEDURES, and obtain Jurisdictional Authority approval for:
 - 1. Working Drawings:
 - a. Prior to installation of elements for support of excavation, submit Working Drawings and design calculations for temporary decking and pedestrian bridges.
 - b. Show proposed procedures and methods of constructing temporary structures including support system and necessary construction details.
 - 2. Certifications:
 - a. If previously used materials are utilized, submit certified information concerning each previous use, such information shall include, but not be limited to, the following:
 - (1) Purpose
 - (2) Duration
 - (3) Type of loading
- B. Submit to the Jurisdictional Authority of the area where the Work is to be performed, for its approval, Working Drawings including maintenance of traffic comprehensive staging and decking plans prior to the time public traffic pattern closures and changes are proposed as specified in Section 01550, MAINTENANCE OF TRAFFIC, CONSTRUCTION SEQUENCE AND STAGING, ACCESS AND PARKING. Jurisdictional Authority approval must be obtained at least 30 Days prior to installation of temporary decking.

1.06 JOB CONDITIONS:

- A. Responsibilities:
 - 1. Design, construction, maintenance, and removal of temporary construction including decking and support systems are the responsibility of the Contractor.
 - 2. Perform work in accordance with construction sequence and maintenance of traffic schedules acceptable to the Authority and requirements of the Jurisdictional Authorities as specified in Section 01550, MAINTENANCE OF TRAFFIC, ACCESS AND PARKING.

3. Provide access to Authority personnel for inspections of temporary decking as requested by the Contracting Officer Representative.
4. Maintain vehicular and pedestrian access to buildings at levels existing prior to start of Contract work. Maintain persons with disabilities access in accordance with ADAAG.
5. Perform work in accordance with specified safety requirements as described in Section 01114, SAFETY/ENVIRONMENTAL REQUIREMENTS.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Timber, Steel, Concrete, and Other Materials:

1. Used materials are permitted in lieu of new materials provided they are sound and free from defects, which might impair their strength.
2. Timber: Structural lumber, visually graded in accordance ASTM D2555, minimum working stress: 1,100 psi.

B. Welding: Have welding performed by certified welders and in accordance with the requirements of the AWS D1.1.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Comply with the requirements of Section 02260, SUPPORT OF EXCAVATION. Install and maintain decking at design elevations. Accessibility and decking surfaces and slopes shall be in accordance with ADAAG regulations.
- B. Mechanically laminate decking elements in panels not less than 5 feet wide.
- C. Fabricate, install, and maintain pedestrian bridges at design elevations and as shown on the approved Working Drawings and in accordance with local requirements. All profile grades and cross-slopes or other features required in an accessible path shall be provided and maintained to ADAAG requirements.
- D. Provide and maintain skid-resistant surface.
- E. If asphalt or asphaltic concrete is used on decking, mechanically bond asphalt or asphaltic concrete to decking.
- F. Maintain decking free of snow, ice, water, mud, and debris.
- G. Place premixed asphaltic patching material to provide smooth transitions between existing pavement surfaces and decking and between existing pavement surfaces and pedestrian bridges, and elsewhere as required to provide proper drainage and prevent ponding of water.
- H. As removal of pavement and sidewalk progress, furnish and install barricades in accordance with Section 01560, TEMPORARY BARRIERS AND ENCLOSURES, and requirements of the Jurisdictional Authorities.
- I. Along sides of decked areas for pedestrian walkways where such walkways are adjacent to vehicular traffic, install concrete barriers as specified in Section 01560, TEMPORARY BARRIERS AND ENCLOSURES, and Section 02845, TRAFFIC CONTROL DEVICES, as shown on approved

maintenance of traffic plan as specified in Section 01550, MAINTENANCE OF TRAFFIC, ACCESS AND PARKING.

- J. Install wooden fence as specified in Section 01560, TEMPORARY BARRIERS AND ENCLOSURES, along sides of decked areas for pedestrian walkways where such walkways are adjacent to open areas, staging/storage areas, and other areas used by the Contractor. Paint barricades and fences and maintain in good repair as specified in Section 01560, TEMPORARY BARRIERS AND ENCLOSURES.
- K. Erect and maintain load limit and other signs as specified in Section 01580, PROJECT SIGNS, to restrict loading on decking so that it does not exceed maximum design loading.
- L. Remove temporary decking along with support systems when no longer required. Comply with the requirements of Section 02260, SUPPORT OF EXCAVATION, when removing support system.

3.02 FIELD QUALITY CONTROL

A. Allowable tolerances:

- 1. Maintain surface elevations at abutting elements within plus or minus 1/4 inch.
- 2. Do not allow horizontal gaps to exceed 3/8 inch or ADAAG requirements whichever is more stringent.
- 3. All profile grades and cross-slopes, curb ramps, ramps, or other features required in an accessible path shall be provided and maintained to ADAAG requirements

B. Skid-Resistant Surface. Provide skid-resistant surface having a Skid Number at 30 mph (SN 30) of no less than 35 when measured in accordance with ASTM E274, and skid resistance shall be in accordance with ADAAG regulations.

C. Protect existing vegetation, structures, utilities and improvements.

3.03 VENTILATION

A. When excavations are decked, provide ventilation as required by the applicable code requirements and Jurisdictional Authorities. Provide ventilation, which meets specified safety requirements as described in Section 01114, SAFETY/ENVIRONMENTAL REQUIREMENTS.

3.04 ILLUMINATION

- A. In areas covered by decking, supply and maintain illumination of sufficient intensity to permit safe and expeditious conduct of all phases of construction and inspection of support system, lagging, bracing, and utilities maintained in place.
- B. Provide illumination, which meets specified safety requirements as described in Section 01114, SAFETY/ENVIRONMENTAL REQUIREMENTS.

END OF SECTION

SECTION 01550
MAINTENANCE OF TRAFFIC, ACCESS, AND PARKING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes requirements for maintenance of existing pedestrian and vehicular traffic onsite and offsite; construction sequence, and staging; maintaining access to and from the Site including construction areas, haul routes, and temporary roads with traffic control; and for Contractor parking.

1.02 REFERENCES

- A. Manual of Uniform Traffic Control Devices (MUTCD)

1.03 SUBMITTALS

- A. Submit the following Working Drawings in accordance with Section 01330, SUBMITTAL PROCEDURES, for Jurisdictional Authority approval such that approval is obtained 30 Days prior to start of the work. Submit to Authority for Approval prior to Jurisdictional Authority review.

- 1. Maintenance of Traffic Plan (MOT Plan)

- B. Submit the following shop drawings in accordance with Section 01330, SUBMITTAL PROCEDURES, for Jurisdictional Authority approval such that approval is obtained prior to start of the work. Submit to Authority for Approval prior to Jurisdictional Authority review.

- 1. Plan showing locations of access points to fire hydrants and fire alarm boxes
 - 2. Plan showing locations of staging, working, storage, and lay down areas

1.04 MAINTENANCE OF TRAFFIC

- A. Maintain traffic and erect and maintain traffic control devices in accordance with the applicable MUTCD, and as required by the Jurisdictional Authority of the area where the Work is to be performed and as per Contract Documents including, but not limited to, the following for each construction sequence and maintenance of traffic stage:

- 1. Temporary directional and electrical warning and detour signs
 - 2. Temporary barricades
 - 3. Temporary lighting, overhead warning lights, flashing lights, and lanterns
 - 4. Temporary paving and striping

- B. Traffic control signs: Traffic control signs shall be standard signs of the Jurisdictional Authority. Each change in location of traffic shall be adequately posted with a minimum of two signs mounted on barricades or standard posts. All signing shall be constructed, maintained, and removed in accordance with the requirements of the latest published standard of the Jurisdictional Authority.

- C. Striping: Provide all necessary temporary striping required in connection with all temporary street work. Remove or obliterate existing or temporary pavement markings whenever vehicular traffic is moved to newly available pavement areas or to different traffic patterns.

- D. Redirecting traffic: Obtain approval from Jurisdictional Authority for channeling and shifting of traffic lanes as well as barricading of traffic in connection with this work.
- E. Temporary closing: Prior to the temporary closing to traffic of part of any public street, sidewalk, or other access or prior to changing traffic patterns from those existing, obtain approval from the appropriate Jurisdictional Authority. Deviations from this shall be for a bona fide emergency only and as approved by the Jurisdictional Authority.
- F. Contractor's surface operations: Schedule surface operations so as not to be working intermittently throughout the area. Excavation or construction activities shall be carefully scheduled and vigorously pursued to completion as required to permit opening of street areas to traffic as soon as possible without unnecessary delays.
- G. Temporary walkways: In areas where the removal of existing sidewalks is necessary, access to adjacent businesses, entrances and properties shall be maintained by temporary walkways having a width of not less than 6 feet.
- H. Intersections: Intersections shall be excavated and decked in stages as shown on Working Drawings and as approved by the Jurisdictional Authority. Construction shall be so staged that the required number of traffic lanes on each street shall be provided at all times during these operations. Upon completion of decking, traffic in all intersections shall be fully maintained.
- I. Temporary pavement and patching: Construct, maintain, and remove temporary pavement and patching required to safely and expeditiously handle vehicular and pedestrian traffic within or adjacent to the Site. The temporary pavement composition and patch shall conform to the requirements of the Jurisdictional Authority. Construction, maintenance, and removal required by the Contractor's operations off the Site shall be included under this Section.
- J. Contractor access to pedestrian bridge and Station areas: Pedestrian traffic must be maintained at all times in pedestrian bridge and Station areas. Contractor access routes to the platform shall be as directed, and all access to the Work sites shall be arranged through the Contracting Officer Representative. The Contractor shall familiarize itself with the Station layout. Use of the Station escalators by Contractor personnel for delivery and removal construction material is expressly prohibited. The combination of Contractor personnel and miscellaneous material loads shall conform to the load restrictions of Station elevators.
- K. The use of staging, working, storage, and lay down areas must be as approved by the Contracting Officer Representative and the Jurisdictional Authority.
- L. Jurisdictional Authority maintenance of traffic approval must be obtained at least 30 Days prior to the time public traffic pattern closures and changes are to be made and Authority maintenance of traffic Approval must be obtained 60 Days prior to start of construction on Authority property.

1.05 CONSTRUCTION SEQUENCE AND STAGING

- A. All work under this Contract shall be performed in accordance with the approved detailed plan of the Work following a logical sequence developed by the Contractor.
- B. The Contractor's particular attention is directed to the fact that both vehicular and pedestrian traffic must be maintained on the existing roads adjacent to the Site at all times for the duration of the Contract.
- C. Structures constructed underground by cut-and-cover methods require the Contractor to provide temporary decking as specified in Section 01530, TEMPORARY DECKING, over open excavations for the maintenance of vehicular and pedestrian traffic. In order that disruptions to traffic may be kept to a minimum, perform the decking operations, the utility work, and the subsequent paving and restoration operations in stages.

- D. A method of staging and requirements pertaining to the number of traffic lanes to be provided during rush hours and non-rush hours, shifting of traffic lanes, the use of working, storage and laydown areas, and other requirements pertaining to the maintenance of traffic as previously specified shall be developed by the Contractor as part of this Contract.
- E. The sequence in which the various stages are to be performed shall be under the control of the Contractor, provided that stage work within the limits of one stage is completed before work in another stage is commenced; and provided that all other requirements pertaining to maintenance of traffic are approved by the Jurisdictional Authority. No work shall be started prior to approval.

1.06 ACCESS TO ADJACENT PROPERTY

- A. 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 line of work shall be maintained. When access to adjacent properties is temporarily cut off due to the Contractor's operations, render every assistance to provide access to the property and the transfer of commodities, including refuse, to and from the property.

1.07 ACCESS TO FIRE HYDRANTS AND FIRE ALARM BOXES

- A. Refer to Section 01510, TEMPORARY UTILITIES, for access to fire hydrants and fire alarm boxes.

1.08 CONTRACTOR'S PERSONNEL AND CONTRACTOR'S SUBCONTRACTORS PARKING

- A. Parking facilities for the Contractor's personnel and that of Subcontractors shall be the Contractor's responsibility, unless space is made available by the Authority. The storage/laydown and work facilities provided by the Authority, if any, shall not be used for parking by the Contractor or Contractor personnel.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01560
TEMPORARY BARRIERS AND ENCLOSURES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes requirements for temporary barriers and enclosures. This Section also includes facilities for protection of occupants entering or exiting spaces during construction.

1.02 GENERAL

- A. Wherever necessary, shown or specified, erect and maintain signs, fences, barricades and pedestrian bridges for the protection of public travel, the work site, adjoining property and adjoining public places.
- B. Take positive measures to prevent entry into the Site of the Work and storage areas by children, animals, and unauthorized adults and vehicles.
- C. Appropriate warning signs and instructional safety signs as specified in Section 01580, PROJECT SIGNS, shall be conspicuously posted in all areas involving construction activities. Furnish signs and attach to, as applicable, the protective devices enclosing the Contractor's work, access, operating, and platform storage and site storage/laydown areas as applicable; pedestrian sidewalks, streets, and parking lots adjacent to the work area; and excavations and openings. The storage/laydown areas as designated by the Authority, if any, and as specified in Section 01520, TEMPORARY CONSTRUCTION FACILITIES, shall be fenced and signage shall be provided to prevent unauthorized entry. Stored materials shall be bundled or tied down by the Contractor.
- D. Protective devices shall be in accordance with codes and regulations of Jurisdictional Authorities.
- E. All work pertaining to this Section shall meet ADAAG requirements.

1.03 SUBMITTALS

- A. Submit the following Shop Drawings in accordance with Section 01330, SUBMITTAL PROCEDURES.
 - 1. Location and fence material of fencing for pedestrian access areas.

1.04 TEMPORARY FENCES

- A. Provide temporary fencing within the construction area to fence off pedestrian sidewalks, streets and parking areas from operating, access and work areas and Site storage/laydown areas.
- B. Temporary fences shall be substantially constructed in a neat appearance.
- C. Working Area Wooden Fencing
 - 1. Provide 6-foot high temporary working area wooden fencing as shown or as directed and as specified. Working area wooden fencing shall serve two purposes: to protect pedestrian access areas from hazardous construction activities, and to enclose the Contractor's work, access, storage, and operating areas.
 - 2. The location of fence for pedestrian access areas adjacent to the Work area and for enclosing Contractor's work areas shall be as specified and consistent with the Contractor's approved Working Drawings for maintenance of traffic plans.

D. Working Area Chain-link Fencing

1. Provide 6-foot high temporary working area chain-link fencing as specified to fence off storage area from operating areas, and if necessary, to fence off pedestrian access areas.
2. The location of fence for pedestrian access areas adjacent to the Work area and to the storage areas shall be as specified and consistent with the Contractor's approved Working Drawings for maintenance of traffic plans.

1.05 TREE AND PLANT PROTECTION

- A. Protect trees and plants not slated to be removed or replaced from construction activities.

1.06 PROTECTION OF UTILITIES

- A. Protect existing utilities.

1.07 PROTECTION OF EXISTING STRUCTURES AND IMPROVEMENTS

- A. Protect Existing Structures and Improvements.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Barricades shall be substantial in character, neat in appearance, and of approved size and arrangement.
- B. Barricade materials shall be as approved. Lumber for barriers as applicable and working area wooden fencing shall be exterior grade, treated to be fire-retardant, pressure impregnated with resin salt as approved. Exterior latex paint for barriers and working area wooden fencing shall be as specified in Section 09920, FIELD PAINTING. Color shall be as approved by the Contracting Officer Representative. Provide necessary fencing hardware, locks, gates and all other incidentals as approved.
- C. All chain-link fencing shall be anti-climbing type, with plastic inserts, barbed wire (where indicated), and as specified in Section 02820, FENCING.
- D. Warning signage shall be as specified in Section 01580, PROJECT SIGNS.
- E. Structural lumber for decking shall be as specified in Section 01530, TEMPORARY CONSTRUCTION.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. As removal of pavement and sidewalk progresses as applicable and furnish and install barricades in accordance with requirements of the Jurisdictional Authorities. During the prosecution of the Work, barricade or close excavations and openings in floors, walls, and other parts of the structures and excavations while such openings are not in regular use as applicable. Barricade or close such openings before Acceptance of the Work. Barricades shall be anchored to the ground on all sides of excavations. Work involving electrical systems or equipment in or near the area to which personnel or the public have access shall be isolated using barricades.
- B. Flashing yellow lights shall be mounted and maintained on barricades at maximum intervals of 25 feet.

- C. Fabricate and erect in accordance with local requirements pedestrian barriers as applicable and working area wooden fencing with a stud framework and a covering of tightly fitted plywood sheets. Paint with two coats of exterior latex paint. Install hardware, locks, gates, and all other incidentals. Furnish and install wooden fence along sides of decked areas for pedestrian walkways as applicable where such walkways are adjacent to open areas, staging/storage areas, and other areas used by the Contractor.
- D. Erect chain-link fencing consisting of a post-and-rail framework with chain-link fabric; install hardware, locks, gates, and all other incidentals; and insert plastic inserts into the chain link fence.
- E. Along sides of decked areas for pedestrian walkways as applicable, where such walkways are adjacent to vehicular traffic, install concrete barriers as shown on approved maintenance of traffic plan.
- F. Erect, fabricate, attach, and maintain safety warning and other signs.
- G. Protect existing vegetation, structures, utilities, and improvements.
- H. Provide maintenance for all barricades, barriers, temporary fences, pedestrian bridges, signage, and existing vegetation, structures, utilities, and improvements protection as applicable for the duration of the Contract. Immediately prior to completion of the Contract, completely remove the items and restore the area.

END OF SECTION

SECTION 01570
TEMPORARY CONTROLS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes security, site, environmental, construction noise, vibration, pollution abatement, use of explosives, controls and management of historical and scientific specimens, required to allow construction to proceed.

1.02 REFERENCES

- A. U.S. Code, Title 42 (The Public Health and Welfare):
 - 1. Chapter 15B (Air Pollution Control), Section 1857, et seq., as amended by Pub. L. 91-604)
 - 2. U.S. Code, Title 33 (Navigation and Navigable Waters):
 - 3. Chapter 26 (Water Pollution Prevention and Control), Section 308 (33 U.S.C. 1251 et seq., as amended by Pub. L. 92-500)
- B. Society of Automotive Engineers, Inc., SAE J366b and SAE J952b

1.03 SUBMITTALS

- A. Submit the following for approval 60 Days prior to start of construction in accordance with Section 01330, SUBMITTAL PROCEDURES, and with the additional requirements as specified for each:
 - 1. All necessary Working Drawings, specifications, permits, and certifications necessary to comply with local Jurisdictional Authority's erosion and sediment control statues, ordinances, and requirements including, but not limited to current DC Standards and Specifications for Soil Erosion and Sediment Control (DC E&S).
 - 2. Required evidence that the governing air pollution criteria will be met. These criteria and related documents will be retained by the Authority for on-Site examination by FTA as applicable.
 - 3. Program for pollution control prior to beginning operations
 - 4. Proposed haul routes.
 - 5. Plan indicating monitoring locations, including the timing of monitoring measurements to be taken at the construction Site boundaries and at nearby residential, commercial, and industrial property lines.
 - 6. Report articles of historical or scientific value.

1.04 SITE SECURITY

- A. Watchmen: Employ watchmen in adequate numbers to safeguard the Site during non-working hours, night-shift operations, and holidays. If the Authority at any time determines the staff insufficient or incompetent, personnel increases or replacements shall be provided immediately at no additional cost to the Authority.

1.05 EROSION AND SEDIMENT CONTROL

- A. Erosion and sediment materials: No erosion or sediment 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 Site. Develop methods to control waste and erosion including such means as filtration, settlement, and manual removal.
- B. Comply with and provide all necessary drawings, specifications, permits, and certifications necessary to comply with local Jurisdictional Authority's erosion and sediment control statutes, ordinances, and requirements including, but not limited to current DC Standards and Specifications for Soil Erosion and Sediment Control (DC E&S).

1.06 POLLUTION ABATEMENT

- A. Conduct 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 vehicle. Trucks arriving and leaving the Site with materials shall be loaded so as to prevent dropping materials and debris on the streets. Trucks carrying dirt from the Site shall have their loads covered to minimize fugitive dust. 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 materials shall be allowed to enter natural or man-made water or sewage removal systems. Develop methods to control waste including such means as filtration, settlement, and manual removal.
 3. Burning: No burning of waste will be allowed without written permission from the Authority. When permission is granted, burning shall be conducted in accordance with the regulations of the Jurisdictional Authority. Submit request to the affected jurisdiction for approval.
 4. Dust control: By water sprinkling or by other approved methods, continuously control dust generated by construction operations.
 5. Noise control: Refer to Article 1.08 below.
 6. Submit evidence that the governing air pollution criteria will be met. These criteria and related documents will be retained by the Authority for on-Site examination by FTA as applicable.
 7. Submit a program for pollution control that is in compliance with the Air Act and the Water Act prior to beginning operations.
 8. Clean air and water:
 - a. The Contractor agrees as follows:
 - (1) 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.
 - (2) That no portion of the Work required by this Contract will be performed in a Facility listed on the Environmental Protection Agency 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.

- (3) To use its best management practices to comply with clean air standards and clean water standards at the Facility in which or Site on which the Work is being performed.

b. The terms used in this Article have the following meanings:

- (1) 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).
- (2) 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).
- (3) 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)).
- (4) 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).
- (5) The term compliance means compliance with Clean Air or Water Standards. 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 or Water Act and regulations issued pursuant thereto.
- (6) 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 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.

1.07 ENVIRONMENTAL CONTROL

- A. Maintain temperature and humidity to protect the Work in progress and in place, as well as permanent equipment and materials, stored and installed, against damage from heat, cold, and dampness and take such steps as necessary to protect such work from other adverse conditions.

1.08 CONSTRUCTION NOISE CONTROL

- A. Noise control: Take every action possible to minimize the noise caused by construction operations. When required by Jurisdictional Authorities, 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 periods specified.

1. Protection of the 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 property line of adjacent residential, commercial, or industrial property or at the property line of the public right-of-way, or 50 feet from the noise source, whichever is greatest, when work is in progress in the public right-of-way, while construction work is in progress. Employee noise exposure levels shall be measured at the employees' normal workstation. In either case sound levels shall not exceed the following:

Exposure per Day (hours)	Sound Level (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. Above-ground, repetitive, high-level impact noise will be permitted only between 8:00 AM and 9:00 PM. Repetitive impact noises in the receiving property shall not exceed the following dB limitations:

Duration of Impact Noise	Commercial or Residential Zone	Industrial Zone
More than 12 minutes in any hour	70	77
Less than 30 seconds in any hour	85	92
Less than 3 minutes in any hour	80	87
Less than 12 minutes of any hour	75	82

- c. In underground or tunnel construction work, where the above requirements may not be obtained, provide individual auditory protection.

2. Noise restrictions at affected property: In addition to the provisions of Article 1.02A.1 above, sound level for noise due to construction activities shall be monitored at the property line of property affected acoustically by the Contractor's operations and plant. Sound levels for noise from equipment shall be measured at the property 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 3 to 6 feet in front of any building face.

- a. Construction equipment: Sound levels for unscheduled, intermittent, short-term noise from equipment shall not exceed the following dBA levels:

- (1) Residential Property
 - (a) Daily, 7:00 AM to 9:00 PM: 75 dBA
 - (b) Daily, 9:00 PM to 10:00 PM: 55 dBA
 - (c) Daily, 10:00 PM to 7:00 AM: 50 dBA
- (2) Business, Industrial, and Commercial Property:
 - (a) Daily, including Sundays and Legal Holidays, 7:00 AM to 9:00 PM: 82 dBA
 - (b) Daily, including Sundays and Legal Holidays, 9:00 PM to 7:00 AM: 62 dBA
- b. Mobile equipment in the public right-of-way: Truck or other powered equipment, which moves off the Site in the public right-of-way and that produces a maximum sound level exceeding the following limits when moving in the public right-of-way shall not be used on this Contract. The sound level limits specified are referenced to a distance of 50 feet from the equipment. Sound levels shall be measured in conformity with the Standards and Recommended Practices established by the Society of Automotive Engineers, Inc., including the latest revisions to SAE J366b and SAE J952b.
 - (1) Mobile construction and industrial machinery as defined in Article 1.08A.3 below:
 - (a) Sound Level Limits
 - (i) Manufactured before July 1, 1975: 90 dBA
 - (ii) Manufactured after July 1, 1975: 80 dBA
 - (iii) Manufactured after July 1, 1982: 77 dBA
 - (2) Trucks:
 - (a) Sound Level Limits
 - (i) Manufactured before July 1, 1975: 88 dBA
 - (ii) Manufactured after July 1, 1975: 83 dBA
 - (iii) Manufactured after July 1, 1982: 80 dBA
- c. Noise abatement measures: 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:
 - (1) Shields or other physical barriers to restrict the transmission of noise.
 - (2) Soundproof housings or enclosures for noise-producing machinery.
 - (3) Efficient silencers on air intakes for equipment.
 - (4) Efficient intake and exhaust mufflers on internal combustion engines.
 - (5) Lining of hoppers and storage bins with sound-deadening material.
 - (6) Conducting truck loading, unloading and hauling operations so that noise is kept to a minimum.

- (7) 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 Contracting Officer Representative shall be informed in writing in accordance with Section 01330, SUBMITTAL PROCEDURES, of the proposed haul routes prior to the Contractor's securing a permit from the local government.
 - (8) Siting of stationary equipment shall be subject to Approval in accordance with Section 01520, TEMPORARY CONSTRUCTION FACILITIES.
3. Definitions: The following definitions shall be used in differentiating mobile equipment from stationary equipment:
- a. Mobile construction equipment: Any motorized vehicle powered by an internal combustion engine or electric drive, which is capable of being operated as a vehicle either on the construction Site or in the public right-of-way.
 - (1) Construction equipment is mobile equipment any time it is operated in an automotive mode when performing construction tasks. Such equipment includes compactors, paving machines, front-end loaders, back hoes, scrapers, pavers, ditchers, and trucks.
 - (2) Some construction equipment while in transit may have the characteristic of mobile equipment, but for the purposes of this definition are not to be so considered. Such equipment includes generators, power shovels, cranes, pile drivers, drilling rigs, concrete mixers, pumps, trash compactors, bar benders, and other similar truck-mounted devices.
 - b. Stationary construction equipment: Any device, tool, or other mechanical system powered by an internal combustion engine, pneumatic engine, or electric motor, which does not employ any of the above power sources for automotive propulsion for more than 10 minutes out of every working hour while engaged in construction tasks. Examples of such equipment include truck-mounted compressors, generators, power shovels, pile drivers, cranes, drilling rigs, concrete mixers, pumps, trash compactors, bar benders, augers, and other similar truck-mounted devices.

1.09 CONSTRUCTION VIBRATION CONTROL

- A. Do not cause or permit, beyond the property line of a source, vibration of sufficient intensity to cause another person to be aware of the vibration by such direct means as sensation of touch or visual observation of moving objects. The observer shall be located at or within the property line of the receiving property when vibration determinations are made. Prepare and submit in accordance with Section 01330, SUBMITTAL PROCEDURES, a plan indicating monitoring locations, including the timing of monitoring measurements to be taken at the construction Site boundaries and at nearby residential, commercial, and industrial property lines. Comply with vibration limitation requirements of environmental reports, if provided.

1.10 EXPLOSIVES

- A. The use of explosives for the performance of Contract work will not be permitted.

1.11 HISTORICAL AND SCIENTIFIC SPECIMENS

- A. 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. Work in the area where discovered shall cease, and such findings shall be reported immediately to the Contracting Officer Representative in accordance with Section 01330, SUBMITTAL PROCEDURES, who will determine the method of removal, where necessary, and the final disposition thereof.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01580
PROJECT SIGNS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes the requirements for Project signs that will be required at the Site during the construction of the Project.

1.02 PROJECT IDENTIFICATION SIGNS

- A. Furnish Authority Project identification signs in the locations at the Site selected by the Contracting Officer Representative.
- B. Sign size, content, lettering, and format for the large permanent-mount WMATA sign shall be as directed by the Authority and shall be shown on the Contractor's Working Drawings.
 - 1. Refer to Contract Drawings for signage details.
 - 2. Provide project identification sign of 4 feet x6 feet Aluminum with vinyl coating, as approved by the Authority
- C. Signs shall be installed 20 Days after Notice to Proceed is given, shall be maintained during the Work, and shall be removed upon the completion of the Project.

1.03 WARNING SIGNS AND INSTRUCTIONAL SAFETY SIGNS

- A. Provide "No Trespassing" signs, load limit on decking, and other warning and instructional safety aluminum signs with minimum 2-inch high Helvetica Medium style lettering and mount at locations on fencing/barriers/barricades/pedestrian bridges and on other areas as directed. Sign panel size and thickness shall be as directed. Mount the signs with stainless-steel cap screws with hex nuts and lock washers.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01610
BASIC PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in construction of the Project.
- B. Administrative procedures for handling requests for substitutions made after award of the Contract are included under Section 01630, PRODUCT SUBSTITUTION PROCEDURES.

1.02 DEFINITIONS

- A. As used herein, the term brand name includes identification of products by make and model. If items called for in the Contract Documents have been identified by a brand name or equal description, such identification is intended to be descriptive, but not restrictive, and is to indicate the quality and characteristics of products that will be satisfactory. Contract Specifications identifying equal products including products of the brand name manufacturer other than the one described by brand name as specified in Section 01630, PRODUCT SUBSTITUTION PROCEDURES, will be considered if such products are clearly identified and are determined by the Designer and the Authority to meet fully the salient characteristics of the products specified in the Contract Documents.

1.03 SUBMITTALS

- A. Submit for review an initial product list with 30 Days of NTP in accordance with Section 01330, SUBMITTAL PROCEDURES. A written explanation for omissions of data and for known variations from Contract requirements shall be included.
- B. Submit for review and Approval a completed product list including a written explanation for omissions of data and for variations from Contract requirements within 30 Days after date of commencement of the construction work. Authority will notify Contractor of acceptance or rejection of the documentation within 21 Days of receipt of the submittal.
- C. Authority Acceptance of the product list does not constitute a waiver of the requirement that products comply with the Contract Documents.

1.04 QUALITY ASSURANCE

- A. Provide products of the same kind from a single source.
- B. Except for required labels and operating data, the manufacturer's or producer's nameplates or trademarks shall not be attached or imprinted on exposed surfaces.
 - 1. Labels: Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.
 - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service connected or power-operated equipment. The nameplate shall contain the following information and other essential operating data:
 - a. Name of product and manufacturer
 - b. Model and serial number
 - c. Capacity

- d. Speed
- e. Ratings

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. All products shall be delivered, stored, and handled in accordance with the manufacturer's recommendations so as to prevent damage, deterioration, loss, or invalidation of the manufacturer's warranty.
- B. Schedule delivery to minimize long-term storage at the Site and to prevent overcrowding of construction storage and staging areas.
- C. Coordinate the time of delivery with the installation schedule to ensure that hazardous, easily damaged, or those items sensitive to deterioration, theft, and other losses are stored for a minimum holding period.
- D. Products shall be delivered to the Site in the manufacturer's original sealed container or other appropriate packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- E. Products shall be inspected upon delivery by the Contractor to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected. Documentation noting the time, date, and manner of delivery shall be maintained by the Contractor. A statement attesting to the inspection of the products at time of delivery shall be included in the documentation signed by the Contractor's authorized representative.
- F. Products shall be stored at the Site in a manner that will facilitate inspection and measurement of quantity or counting of units. Heavy materials shall be stored in a manner that will not damage supporting construction. Products subject to damage by the elements shall be stored under cover in weather-tight enclosures with ventilation adequate to prevent condensation. Temperature and humidity shall be maintained within range required by manufacturer's instructions.

PART 2 – PRODUCTS

2.01 PRODUCT SELECTION

- A. Provide products that comply with the Contract Documents. All products to be installed in the Work shall be undamaged and, unless otherwise permitted, unused at the time of installation. Products shall include all accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and suitable for the intended use.
- B. Unless otherwise specified, provide standard products of the type that have been produced and used successfully in similar situations on other Authority projects of a similar nature.
- C. Procedures governing product selection include:
 - 1. Where only a single product or manufacturer is named and the notation "no substitution is permitted" is included in the specification, provide the product indicated. No substitutions will be permitted.
 - 2. Where two or more products or manufacturers are named followed by the notation "no substitutions are permitted" is included in the specification, provide one of the products indicated. No substitutions will be permitted.
 - 3. Where the Contract Documents list products or manufacturers that are available and acceptable for incorporation into the Work, accompanied by the term "...or equal or ...or approved equal, the Contractor may propose any available product that complies with

Contract requirements. Comply with the requirement of Section 01630, PRODUCT SUBSTITUTION PROCEDURES, to obtain approval for use of an unnamed product.

4. Where the Contract Documents list the salient features that explicitly describe a product or assembly and a brand name is not included, provide a product or assembly that provides the listed features and otherwise complies with the Contract requirements.
5. Where the Contract Documents explicitly require compliance with performance requirements, and the product complies with those requirements based on the manufacturer's recommended use of the product for the application indicated in the Contract Drawings (as evidenced in published product literature, or by the manufacturer's certification of performance), the Contractor may submit the product for incorporation into the Work.
6. Where the Contract Documents require only compliance with an imposed code, standard, or regulation, the Contractor may select a product that complies with the standards, codes, or regulations specified.
7. Visual Matching: Where specifications require matching an established item, the Authority's decision will be final on whether a proposed product matches satisfactorily. Where no product is available that adequately matches adjacent products or complies with the other specified requirements, comply with provisions of Section 01630, PRODUCT SUBSTITUTION PROCEDURES, for selection of an alternate product.
8. Where specified product requirements include the phrase ...as selected from manufacturer's standard colors, patterns, textures..., select a manufacturer that provides a range of colors in a product that meets all other Contract Document requirements. In this situation, standard shall imply regularly or routinely produced.

PART 3 – EXECUTION

3.01 PRODUCT LIST

- A. Prepare a product list in tabular form acceptable to the Authority showing products specified in the Contract Documents. Coordinate the timing of delivery of products on the product list with the Contractor's Project Schedule as specified in Section 01322, CONTRACT PROGRESS REPORTING, and Contract Document Submittal Log as specified in Section 01330, SUBMITTAL PROCEDURES. At a minimum, provide the following information for each product:
 1. Related specification Section number
 2. Generic name used in the Contract Documents.
 3. Proprietary name, model number, and similar designation
 4. Manufacturer's name and address
 5. Supplier's name and address
 6. Installer's name and address
 7. Projected delivery date and length of delivery period
- B. Within 14 Days of receipt of product list submittals, Contracting Officer Representative will notify the Contractor of Authority acceptance or rejection of the product list. If rejected, product list shall be corrected by the Contractor and resubmitted for review.

3.02 INSTALLATION OF PRODUCTS

- A. Comply with the manufacturer's instructions and recommendations for installation of all products installed under this Contract unless otherwise specified. Products shall be accurately located, aligned with other elements of the Work, and securely installed in place. All exposed surfaces shall be clean as specified in Section 01740, CLEANING, and protected as necessary to prevent damage and deterioration as specified in Section 01723, PROTECTION OF ADJACENT CONSTRUCTION.

END OF SECTION

SECTION 01630
PRODUCT SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for handling requests for substitutions made after award of the Contract.
- B. Other requirements governing the Contractor's selection of products and product options are included under Section 01610, BASIC PRODUCT REQUIREMENTS.

1.02 DEFINITIONS

- A. Definitions used in this Section are not intended to change the meaning of other terms used in the Contract Documents.
- B. Contractor requests for changes in products, materials, equipment, and methods of construction as required or specified by Contract Documents are considered requests for substitutions. The following are not considered substitutions:
 - 1. Revisions to Contract Documents requested by the Authority.
 - 2. Specified options of products and construction methods included in Contract Documents. Note that products submitted under an or equal or not limited to provision are considered to be substitutions as specified in Section 00210, SUPPLEMENTARY INSTRUCTIONS TO BIDDERS.
 - 3. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.03 SUBMITTALS

- A. Requests for substitution from the Contractor during construction will be considered by the Authority if received with adequate time to allow for Authority review and Approval without delaying the Project Schedule. Requests received that may delay the Project Schedule will be considered or rejected at the sole discretion of the Authority.
 - 1. Submit one electronic copy in Adobe (.PDF) file format of the Brand Name or Equal Form, Section 00433, BRAND NAME OR EQUAL FORM, for each request for substitution to the Contracting Officer Representative for consideration of the form and in accordance with procedures required for Change Order proposals as specified in Section 00748, CHANGES, as deemed appropriate by the Contracting Officer Representative.
 - 2. In each substitution request, identify the product and fabrication or installation method to be replaced. The related WMATA Standard Specification Section or Contract Drawing numbers shall be referenced in the submittal. Complete documentation showing compliance with the requirements for substitutions shall also be submitted including the following information as appropriate:
 - a. Product Data, including drawings, fabrication, and installation procedures
 - b. Samples, where samples of the specified product are requested
 - c. A detailed comparison of significant qualities/salient features of the proposed substitution with those of the material or work specified. Significant qualities shall include elements

such as size, weight, durability, performance, visual effect, code compliance, maintenance requirements, energy usage, and environmental considerations.

- d. Coordination information, including a list of changes or modifications made necessary to other parts of the Work and to construction performed by the Authority or separate contractors.
- e. A statement indicating the substitution's effect on the Contractor's Construction Schedule. Indicate the effect of the proposed substitution on overall Period of Performance.
- f. Cost comparison between the product specified and the requested substitution, including a proposal of the net change, if any in the Contract Price.
- g. Certification by the Contractor that the substitution proposed is equal to or better in every respect to that required under the Contract, and that the product will perform as intended. Include a waiver of rights to additional payment or time that may subsequently become necessary should the product fail to perform adequately, or because of changes to other work were required as a consequence of the substitution.
- h. Failure by the Contractor to include the above requirements in the submittal may be cause for rejection of the submittal in its entirety.
- i. If deemed necessary and within 14 Days of receipt of the submittal, the Contracting Officer Representative may request additional information or documentation that, in its sole judgment is required for the evaluation of the substitution request. Within 21 Days of receipt of the original substitution request or of requested additional information or documentation, the Contractor will be notified of acceptance or rejection of the proposed substitution. If a decision on the use of a proposed substitute cannot be made or obtained within the time allocated, the product specified by name in the Contract Documents shall be used.

1.04 SUBSTITUTION PROCEDURE

- A. The Contractor's request for substitution may be rejected by the Contracting Officer Representative if the substitution would involve:
 1. Extensive revisions to Contract Documents
 2. A proposed change not in keeping with the general intent of Contract Documents
 3. An untimely request, not fully documented when submitted
 4. A request that is directly related to an or equal clause or similar language in the Contract Documents
 5. A product or method of construction that could not be provided within the Period of Performance
 6. A product or method of construction that could not be approved by a governing authority
 7. Additional responsibilities or expense to the Authority (including additional expenses for redesign and evaluation services, increased cost of related construction, and other similar considerations) that outweighs any advantage that is being offered to the Authority as a result of the substitution
 8. A method of construction that cannot be provided in a manner that is compatible with other materials, the product cannot be coordinated with other materials, and a warranty cannot be provided for the product in accordance with the requirements of the Contract even though the Contractor expresses a willingness to certify that the apparent deficiencies can be corrected.

- B. Neither the Contractor's submittal nor the Authority's review or Approval of Shop Drawings, product data, or samples that relate to a substitution constitutes an Approval of the requested substitution. Submission of Shop Drawing, product data, or sample submittals does not relieve the Contractor from fulfilling Contract requirements for substitutions.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01711
ACCEPTANCE OF CONDITIONS

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies basic requirements for determining acceptable conditions for installation.

1.02 SUBMITTALS

- A. One electronic copy of the preconstruction inspection records

1.03 PRECONSTRUCTION INSPECTION REQUIREMENTS

- A. Prior to beginning construction work, the Contractor shall inform the Authority of buildings or structures on which it intends to perform work or which performance of the Work will affect.
- B. 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 jointly by the Authority and the Contractor. This inspection will be conducted prior to the commencement of construction work to determine pre-existing conditions. After this inspection, the Authority will not assume any responsibility for damages arising from the Work performed and it shall be the responsibility of the Contractor to correct all damages caused by performance of the Work.
- C. Examine substrates, areas, and conditions, with Authority personnel present, for compliance with requirements for installed tolerance and other conditions affecting performance. Record observations from the required preconstruction inspection.
- D. Where a written inspection report requires listing conditions detrimental to performance of the Work, include the following:
 - 1. Description of the Work
 - 2. List of detrimental conditions, including substrates
 - 3. List of unacceptable installation tolerances
 - 4. Recommended corrections

1.04 EXAMINATION

- A. General: Verify dimensions shown on existing work and dimensions required for work that is to connect with work not in place in accordance with Section 01721, LAYOUT OF WORK AND FIELD ENGINEERING.
- B. Existing Conditions
 - 1. The existence and location of Site improvements, above and below-ground utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of above and below-ground utilities, mechanical and electrical systems, and other construction affecting the Work. Verify the location and point of connection of utility services.
 - 2. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, water service pipes, and electrical services.

3. Furnish location data for work related to the Project that must be performed by public utilities serving the Project Site.
- C. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- D. Examine rough-in for mechanical and electrical systems to verify actual location of connections before equipment and fixture installation.
- E. Examine new and existing facilities for suitable conditions where products and systems are to be installed.

1.05 ACCEPTANCE OF CONDITIONS

- A. Examine substrates, areas, and conditions, with contract personnel present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work
 - b. List of detrimental conditions, including substrates
 - c. List of unacceptable installation tolerances
 - d. Recommended corrections
 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 4. Examine new and existing facilities for suitable conditions where products and systems are to be installed.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Proceeding with work indicates acceptance of surfaces and conditions.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01721
LAYOUT OF WORK AND FIELD ENGINEERING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes general procedural requirements for layout of work and field engineering including, examination, preparation, construction layout, installation, survey personnel, equipment and calibration requirements, survey standards, surveys procedures, and formats for figures and reports.

1.02 RELATED SECTIONS

- A. Section 01711 – ACCEPTANCE OF CONDITIONS

1.03 REFERENCES

- A. DIN (Deutsches Institut fur Normung) 18723 – Specification for Theodolite Accuracy
- B. Federal Geodetic Control Committee (FGCC):
 - 1. Standards and Specifications for Geodetic Control Networks
- C. National Oceanic and Atmospheric Administration (NOAA):
 - 1. Manual National Ocean Survey (NOS), National Geodetic Survey (NGS) 3 Geodetic Leveling
- D. National Society of Professional Surveyors (NSPS)
 - 1. American Congress on Surveying and Mapping (ACSM).

1.04 SUBMITTALS

- A. Survey personnel qualification data: Resumé and proof of certification or registration for all project surveyors. Resumés shall include information to demonstrate their capabilities and experience. Include lists of three completed projects with owner, project names, project duration, project description, project addresses, and phone numbers for the Survey Manager and survey crew chiefs.
- B. Survey equipment: List of equipment and instruments to be used on the Project and include manufacturer specifications, date of purchase and last date of service for all instruments. Notify the Contracting Officer Representative when changes to equipment are made and submit an updated list of equipment and instruments.
- C. Electronic distance measuring instruments: All measurements, computations, and results from the required calibration exercise.
- D. Procedures for Control Surveys, Structural As-built Surveys, Movement Detection Surveys, Early Alignment As-built Surveys, and Hi-Lo Surveys, Post Construction Alignment As-built Surveys and Final Trackway Monumentation Surveys.
- E. Horizontal and vertical trackway alignment revisions with supporting calculations and data.
- F. Supporting documents, calculations, and data for required remedial actions.
- G. Numbering sequence for trackway vertical control monumentation.

H. Log of layout control work. Record deviations from required lines and levels.

I. Survey data reduction and calculations for Bid Schedule items of work.

J. Post construction Monument Record Sheets.

1.05 QUALITY ASSURANCE

A. Verify and maintain records to document personnel certification; equipment maintenance, calibration and adjustment; and use of required procedures for field work and office computations. These records shall be maintained by the surveyor in responsible charge of the Work. Verification of compliance shall be included in the Contractor's overall Quality Assurance program and provided to the Contracting Officer Representative quarterly or upon request.

B. Survey Personnel

1. Ensure that all personnel are qualified to perform the Work.
2. Provide a Survey Manager to plan, execute, and verify all survey work (or survey work as established by the Contracting Officer Representative).
3. The Authority may choose to withhold payment for all construction work if the Contractor fails to provide qualified survey personnel.
4. All personnel performing or assisting in survey activities, including construction layout, shall be Certified Survey Technicians (CST) by and through the National Society of Professional Surveyors (NSPS) - American Congress on Surveying and Mapping (ACSM).
 - a. Each member of the Contractor's survey staff shall be certified in one or more of the Certified Survey Technician levels when assigned to a WMATA project. There are four levels of certification in the CST program. Certification is by experience and examination. Refer to NSPS Figure 1.05-1 for the levels of the CST Program.
 - b. The Authority will accept registration as a Land Surveyor or Property Line Surveyor, in Virginia, Maryland, or the District of Columbia in lieu of CST certification.
 - c. Survey consultants hired by the Contractor to provide survey services are bound by the same CST requirements contained in the Contract.
 - d. Surveyors working under the direction of a Licensed Surveyor or Property Line Surveyor are not exempt from the CST requirement.
 - e. Use of craft personnel as substitute for temporary survey staff is not acceptable unless they are a Certified Survey Technician.
 - f. With concurrence by the Contracting Officer Representative and WMATA Quality Assurance Manager, a Contractor's surveyor without CST certification may temporarily work on a WMATA contract prior to taking the CST exam, if the surveyor:
 - (1) Fulfills the minimum education and or experience requirements for the position held as described in the CST Program Book.
 - (2) Submits a copy of the CST application to the Contracting Officer Representative along with other documentation of education and or work experience.
 - (3) Is scheduled to take the next available CST exam.

- (4) Requests in writing, a temporary waiver of the CST requirement pending the outcome of the results of the CST exam with the understanding that failure to pass the CST exam will result in said surveyor's removal from the WMATA Contract.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 GENERAL REQUIREMENTS

- A. The Authority has established, or will establish, such general reference points including horizontal control points and vertical benchmarks as will enable the Contractor to proceed with the Work. If the Contractor finds that previously established reference points have been destroyed or displaced, or that none have been established, it shall promptly notify the Contracting Officer Representative.
- B. The Contractor shall lay out its work from reference points established by previous construction or from established reference points shown in the Contract and shall be responsible for all measurements in connection therewith. The Contractor shall furnish stakes, templates, platforms, equipment, tools, materials, and labor as may be required in laying out any part of the Work from the reference points established by previous construction or by the Authority. The Contractor will be held responsible for the execution of the Work to such lines and grades as directed.
- C. Protect and preserve the established reference points and shall make no changes in locations without approval by the Authority. Reference points lost, disturbed by construction, destroyed, or which require shifting because of necessary changes in grades or locations shall, subject to prior approval, be replaced and accurately located at the Contractor's expense by a registered surveyor in the area where the Work is to be performed or a qualified certified survey technician (CST Level IV). Reference points replaced by the Contractor's surveyor shall be done in accordance with the FGCC Standards and Specifications for Geodetic Control Networks using First Order, Class 1 specifications for horizontal control work and Second Order, Class 1 specifications for vertical control work.
- D. For the purpose of this Section, the Contractor shall provide competent engineering services as necessary to execute the Work. It shall verify the dimensions shown before undertaking construction work and shall be responsible for the accuracy of the finished Work.

3.02 EXAMINATION

- A. General: Dimensions shown on existing work and dimensions required for work that is to connect with work not in place shall be verified by the Contractor by actual measurement of the existing work. Discrepancies between the Contract Documents and the existing conditions shall be referred to the Contracting Officer Representative before work affected thereby has been performed.
 1. The Contractor shall compare drawings and verify the dimensions before laying out the Work and shall be responsible for errors, which might have been avoided thereby.
 2. Dimensions and descriptions given on the Contract Documents for adjacent work shall be verified by the Contractor. It is the responsibility of the Contractor to verify all as-built conditions and interface information by actual field measurement.

- B. Existing Conditions: The existence and location of site improvements, utilities, both underground and above ground, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work. Call Miss Utility at 1-(800) 257-7777 before beginning any excavation or demolition project.
1. Before construction, verify the location and points of connection of utility services and the locations and invert elevations at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project Site.
- C. Acceptance of Conditions: In accordance with Section 01775, CLOSEOUT.

3.03 PREPARATION

- A. Existing Utility Information: Furnish information to local Utility and the Contracting Officer Representative that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate and obtain approval from authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Authority or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify the Contracting Officer Representative and Utility representative not less than 5 working days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without written permission from the Utility and the Authority.
- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Contract Drawings.
- E. Review of Contract Documents and Field Conditions: Immediately upon discovery of the need for clarification of the Contract Documents, submit a Request for Information to the Contracting Officer Representative. Include a detailed description of the problem encountered, together with recommendations for changing the Contract Documents.

3.04 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on the Contract Drawings. If discrepancies are discovered, notify Contracting Officer Representative promptly.
- B. General: Engage qualified Certified Survey Technician(s) to lay out the Work using accepted surveying practices.
1. Establish benchmarks and control points to set lines and levels at each stage of construction and elsewhere as needed to locate each element of the Project.
 2. Establish dimensions within tolerances indicated. Do not scale Contract Drawings to obtain required dimensions.

3. Inform installers of lines and levels to which they must comply.
 4. Check the location, level, and plumb, of every major element as the Work progresses.
 5. Notify the Contracting Officer Representative when deviations from required lines and levels exceed allowable tolerances.
 6. Close Site surveys with an error of closure equal to or less than the standard established or referenced herein.
- C. The tolerances generally applicable in setting survey stakes or marks shall be as set forth below. These tolerances shall not supersede stricter tolerances required by the Contract Documents and shall not otherwise relieve the Contractor of responsibility for measurements in compliance therewith. The tolerances listed below are not to be used for setting or re-establishing primary and secondary control markers or final alignment monumentation.
1. Tolerances: Tolerances in setting survey stakes or markers shall not exceed the following:

<u>Horizontal Survey Stakes or Markers</u>	<u>Distance</u>	<u>Tangent</u>
Horizontal marks on hubs on centerline and offset centerlines.	1:35,000	0.02 ft.
Intermediate stakes or hubs on centerlines and offset centerlines.	1:35,000	0.02 ft.
Rough excavation and embankment for roads and other work not otherwise provided.	1:10,000	0.50 ft.
Trimming of excavation and embankment unless otherwise provided.	1:10,000	0.50 ft.
Structures-Building construction.	1:35,000	0.02 ft.
Trimming or preparation of earth subgrade for trackbeds, roadways, and concrete pipes.	1:20,000	0.04 ft.
Trackbed and roadway sub-base and base, steel pipe and other work not otherwise provided for.	1:20,000	0.04 ft.
Track invert and roadway surfacing, steel reinforcement, concrete pipe and other formed concrete.	1:35,000	0.02 ft.

<u>Vertical Grade Stakes or Markers</u>	<u>Elevation (Plus/Minus)</u>
Rough excavation and embankment for roads and other work not otherwise provided.	0.20 ft.
Trimming of excavation and embankment unless otherwise provided.	0.20 ft.
Structures-Building construction.	0.01 ft.
Trimming or preparation of earth sub-grade for trackbeds, roadways, concrete pipe and other concrete structures.	0.05 ft.
Trackbed and roadway sub-base and base, steel pipe and other work not otherwise provided for.	0.05 ft.
Track invert and roadway surfacing, steel reinforcement, concrete pipe and other formed concrete.	0.02 ft. (Track invert only minus 0.00 ft. high, plus 0.04 ft. low)
Equipment Installation.	As required by manufacturer.

- D. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- E. Building Lines and Levels: Locate and lay out control lines and grades for structures, building foundations, column grids, and floor grades, including those required for mechanical and electrical work. Transfer survey reference line markings and elevations for use with control lines and grades. Level foundations and piers from two or more locations.
- F. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available to the Contracting Officer Representative upon request.

3.05 FIELD ENGINEERING

- A. Identification: Authority will provide and identify existing benchmarks and control points to be used for the duration of the Contract.
- B. Reference Points: Locate existing and verify by field traverse permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent primary benchmarks, deep benchmarks, and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval by the Contracting Officer Representative. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to the Contracting Officer Representative before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain permanent secondary control points on Project Site, referenced to data established by survey control points. Comply with WMATA Standard Drawing for Survey Monuments.

1. Record benchmark locations, with horizontal and vertical data, on record copy of Contract Drawings.
 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- D. When the Contract Specifications require Bid Schedule items of work to be measured by surveying methods, perform all such surveys, including control surveys run for establishing the measurement reference lines. Perform all survey data reduction and calculations and supply the reduced survey data in an understandable and readable format.

3.06 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
1. Make vertical work plumb and make horizontal work level unless otherwise specified.
- B. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for uniform spacing.
- C. The Contractor's surveys are a part of the Work and may be checked by the Authority at any time. The Contractor shall be responsible for lines, grades, or measurements which do not comply with specified or proper tolerances, or which are otherwise defective, and for any resultant defects in the Work. The Contractor will be required to conduct re-surveys or check surveys to correct errors indicated by review of the Work.

3.07 SURVEY EQUIPMENT AND CALIBRATION REQUIREMENTS

- A. Survey Equipment: All electronic distance measuring instruments (or total station theodolites) shall be checked by the Contractor against a National Geodetic Survey (NGS) range of known distances at least once every 6 months.
1. All distance measurements shall be computed using the procedures in NOS NGS-10, Use of Calibration Base Lines. The actual measurements shall be recorded, atmospheric corrections applied, and then adjusted by least squares to compute a constant, as well as, a relative correction factor (scale correction).
 2. National Geodetic Survey has established specific calibration baselines for the purpose of comparing survey equipment to known monumentation to verify the instruments vertical angles, horizontal angles, and difference in elevation for compliance with the manufacturer's specifications. Verification of angle measurement and difference in elevation shall only be done by the Contractor if all other methods of verification acceptable to the Authority have been exhausted.
 3. Bring each electronic distance meter (EDM) or total station theodolite to the Corbin, VA Geomagnetic observatory (phone 703-373-7605) or similar NGS facility and compare their instrument(s) to known NGS values whenever there is any question as to the correct operation, accuracy and functionality of the Contractor's survey equipment. Minimally, this will be done every 6 months or after a damaged instrument has been repaired and before it is put back in service. The Contractor shall supply the Contracting Officer Representative with all appropriate documentation from this exercise.

4. All total station distance measuring devices and prisms shall be serviced every 6 months and checked frequently over lines of known distances. Generally, this exercise shall be conducted in the spring and fall.
5. Results of this calibration exercise shall be forwarded to the Authority. Correction factor's shall be posted in the Contractor's office computing area and applied as required to maintain the desired accuracy.
6. Adjustment and certification documents from a supplier or manufacture are not allowed as a substitution for the distance calibration exercise at a NGS or similar facility.
7. Records of instrument calibration and adjustment shall be maintained as a part of the Contractor's quality control program.
8. Use of the NGS baseline for checking distances is not intended to take the place of normal maintenance, cleaning, and adjustment of the Contractor's instruments.
9. Every 6 months, or whenever the difference between direct and reverse readings of the theodolite depart from 180 degrees by more than 30 seconds, the instrument shall be adjusted for collimation error. Readjustment of the crosshairs and level bubble shall be done whenever their misadjustments affect the instrument reading by the amount of the least count.
10. Instruments found to be in disrepair or out of adjustment shall be removed and repaired or replaced.
11. All steel tapes shall be compared with the Contractor's EDM at least every 6 months. The Contractor shall number all tapes and measuring chains, record comparisons, compute correction factors, and forward to the Authority upon request or whenever equipment is changed. In addition, tape correction information shall be posted in the Contractor's office computing area and applied as required to maintain the desired accuracy.
12. Provide and maintain the ability in-house to check and adjust all tribrachs for eccentricity. Adjustment checks shall be made weekly or as necessary. A record of adjustments to all tribrachs shall be kept current and made available to the Authority monthly or upon request. Each tribrach shall be numbered and tagged with the date of the last adjustment.

3.08 SURVEY STANDARDS

- A. Maintain accuracy standards for all control surveys performed under the terms of this Contract in accordance with the following table:

Primary horizontal control surveys	First order
Primary vertical control surveys	Second order, Class I
Secondary horizontal control surveys	Second order, Class I
Secondary vertical control surveys	Second order, Class II

1. Primary control is defined as the original control provided to the Contractor at the start of the Contract. Secondary control is defined as the control established and used by the Contractor during construction. All secondary control traverse stations shall be set with permanent markers.
2. Control surveys and computations including surveys of main control lines to determine alignment of major structure components shall be performed in accordance with Second Order Class I requirements.

3. Unless specified, the Contractor will not be required to perform First-Order survey work unless Contractor destroys primary control points included in the Contract Documents or set by WMATA after contract NTP. GPS shall not be used by the Contractor to re-establish destroyed primary control unless approved by the Contracting Officer Representative.
 4. The Contractor should expect all primary or secondary horizontal control traverses they perform to meet a 1:50,000 distance accuracy closure. All vertical control traverses shall have a closure accuracy that does not fall below that specified for Second Order, Class II surveys.
 5. Survey procedures and accuracy are a function of the types of survey that is being performed. The Contractor is responsible for ensuring the use of proper procedures to maintain accuracy requirements contained in the Contract.
 6. Use the closed traverse method in setting controls by starting at and ending at known or previously established traverse stations and benchmarks.
 7. All distances over 100 feet shall be measured by the use of electronic distance measuring instrument (EDMI). Critical distances under 100 feet shall be checked with a distance meter.
- B. Horizontal Traverse
1. Conventional traverse work shall be performed in accordance with the requirements defined in the FGCC Standards and Specifications for Geodetic Control Networks, Federal Geodetic Control Committee.
 2. All survey field data shall be provided to the Authority upon request in a Star*Net digital input file format.
 - a. All reduced horizontal traverse measurements shall be provided in a set reduction report in an ASCII text file format which clearly lists the following data:
 - (1) Individual observations in an orderly format along with the mean angle from each direct and reverse observation.
 - (2) Horizontal angle mean, vertical angle mean and slope distance mean for each set of observations.
 - (3) Standard deviation of the observations, and maximum, minimum, range and collimation error for each set of observations. Refer to Figure 3.08-1 for a sample set reduction report.
 3. Accuracy requirements:
 - a. First Order control surveys:
 - (1) Horizontal and vertical angle circle reading observation accuracy (standard deviation) of 0.5 seconds (DIN 18723) and read to 0.1 of a second.
 - (2) Occupied station centering (eccentricity) accuracy of 1 mm.
 - (3) Electronic distances measuring accuracy (standard deviation) of 1 mm plus or minus 1 ppm and read to 0.001 feet.
 - b. Second Order control surveys:
 - (1) Horizontal and vertical angle circle reading observation accuracy (standard deviation) of 1.0 second (DIN 18723) and read to 1.0 second or less if possible.
 - (2) Occupied station-centering (eccentricity) accuracy of 1 mm.

- (3) Electronic distances measuring accuracy (standard deviation) of 2 mm plus or minus 2 ppm and read to 0.001 feet.
- (4) All horizontal traverse adjustments shall be performed using a minimally constrained Least Squares adjustment method which will produce the following output:
 - (a) Summary of unadjusted input observations
 - (b) Statistical summary
 - (c) Chi Square test
 - (d) Adjusted observations and residuals
 - (e) Residual summary
 - (f) Adjusted bearings and horizontal distances (grid and ground)
 - (g) Horizontal unadjusted traverse closures
 - (h) Adjusted coordinates
 - (i) Convergence angles and grid factors at stations
 - (j) Standard deviations, error propagation and error ellipses
- (5) All horizontal traverse adjustment results shall be provided to the Authority upon request.

C. Vertical Traverse

1. Differential leveling shall be performed in accordance with the requirements for Second-Order, Class I geodetic leveling surveys as defined in the Standards and Specifications for Geodetic Control Networks, Federal Geodetic Control Committee (FGCC), and NOAA Manual NOS NGS 3 Geodetic Leveling, National Geodetic Survey (NGS).
 - a. The survey Subcontractor shall provide documentation of staff calibration, which includes certificates for expansion coefficient and length calibration.
2. All reduced vertical traverse data shall be provided to the Authority upon request in a Star*Net-Lev digital input file format.
 - a. All vertical traverse data shall be provided as a data reduction report in an ASCII text file format, which clearly lists the following data:
 - (1) Individual observations with the point identifier,
 - (2) Distance from instrument to staff (rod) for each observation,
 - (3) Backsight staff (rod) reading and foresight staff (rod) reading,
 - (4) Number of measurements taken and standard deviation per staff (rod) reading, and
 - (5) Cumulative station differences
3. Accuracy Requirements:
 - a. Differential leveling observation accuracy (standard deviation) of 0.4 mm and read to 0.0001 feet

4. The Contractor may use electronic digital levels and bar coded leveling staffs. The use of leveling staffs with ground plate (turning turtle) is required.
5. Use calibrated invar staffs (level rods) for all control work including final vertical monumentation installation.
6. Use semi-precise level rods or equal equipment for level work.
7. All vertical traverse adjustments shall be performed using a minimally constrained Least Squares adjustment method after a vertical traverse meets the minimum closure requirements referenced herein.
8. All vertical traverse adjustment results shall be provided to the Authority upon request.

3.09 SURVEYS AND PROCEDURES

A. Control Surveys

1. Verify Project primary control monumentation and provide adjustment computations to the Contracting Officer Representative.
2. Replace primary control monuments that have been destroyed or damaged and provide adjustment computations to the Contracting Officer Representative.
 - a. Provide Monument Record Sheets to the Contracting Officer Representative.
3. Establish secondary control monumentation along the Authority's construction project and provide adjustment computations to the Contracting Officer Representative.
 - a. Horizontal and vertical control discs shall be installed in accordance with WMATA Standards.
 - b. Horizontal and vertical control discs set on direct fixation trackways shall be recessed to protect them from disturbance.
 - c. Provide Monument Record Sheets to the Contracting Officer Representative.

B. Structural As-Builts

1. General Requirements: Structural as-builts are required to check for out-of-tolerance construction, which may impact other structures or compromise train clearances along the trackway.
 - a. All methods, equipment and procedures used by the Contractor to perform structural checks shall be approved by the Contracting Officer Representative prior to commencement of the Work.
 - b. This survey data must be analyzed by the Contractor and the Authority for compliance with construction and rail tolerances.
 - c. This survey data must be analyzed by the Contractor and the Authority to determine what remedial action, if any, may be required to address out-of-tolerance construction and the impact of structural misalignment on the final placement of other structures and rail.
 - (1) If the survey data reveals out-of-tolerance construction, which will impact the placement of other structures along the trackway, the Contractor shall take appropriate remedial action to comply with the Contract Documents.

- (a) If minimally out-of-tolerance, perform horizontal and vertical alignment revisions to minimize the impact of the misalignment on the future placement of adjoining structures and rail along the trackway.
 - (b) If significantly out-of-tolerance and an acceptable alignment revision cannot be used to compensate for out-of-tolerance construction, then demolish and remove the structure and re-install.
 - (2) All alignment revisions and remedial actions shall be approved by the Contracting Officer Representative prior to commencement of the Work.
 2. Verify existing primary horizontal and vertical controls and re-establish, if destroyed or disturbed, and provide adjustment computations to the Contracting Officer Representative.
 3. Provide Monument Record Sheets to the Contracting Officer Representative.
 4. Establish a secondary horizontal and vertical control system on the Authority's structures and reference to the approved project primary horizontal and vertical control system. The secondary control system established on or within trackway structures shall be used for detailed cross sections, Hi-Lo surveys and placement of final trackway monumentation. The secondary control system shall be adequately referenced so it can be readily recovered. Horizontal and vertical control discs shall be installed in accordance with WMATA standard.
 - a. Horizontal and vertical control discs set on direct fixation trackways shall be recessed to protect them from disturbance.
 - b. Provide Monument Record Sheets to the Contracting Officer Representative.
 5. Verify structural concrete placement for compliance with Contract Documents, and provide the final results to the Contracting Officer Representative when requested.
- C. Post Construction Alignment As-built Surveys
1. General Requirements: Post construction alignment as-built surveys are required to check trackway structures for compliance with Contract Documents and to check for out-of-tolerance construction, which may impact train clearance tolerances.
 2. All methods, equipment, and procedures used by the Contractor to perform post construction alignment as-built surveys shall be approved by the Contracting Officer Representative prior to commencement of the Work.
 - a. This survey data must be analyzed by the Contractor and the Authority for compliance with construction and rail tolerances.
 - b. This survey data must be analyzed by the Contractor and the Authority to determine what remedial action, if any, may be required to address out-of-tolerance construction and the impact of structural misalignment on the final placement of the rail.
 - (1) If the survey data reveals out-of-tolerance construction, which will impact the placement of other structures along the trackway, the Contractor shall take appropriate remedial action to comply with the Contract Documents.
 - (a) If minimally out-of-tolerance, perform horizontal and vertical alignment revisions to minimize the impact of the misalignment on the future placement of adjoining structures and rail along the trackway.
 - (b) If significantly out-of-tolerance and an acceptable alignment revision cannot be used to compensate for out-of-tolerance construction, then demolish and remove the structure and re-install.

- (2) All alignment revisions and remedial actions shall be approved by the Contracting Officer Representative prior to commencement of the Work.
3. Verify existing primary horizontal and vertical controls and re-establish, if destroyed or disturbed, and provide adjustment computations to the Contracting Officer Representative for approval. Provide Monument Record Sheets to the Contracting Officer Representative.
4. Establish a secondary horizontal and vertical control system on the Authority's structures and reference to the approved project primary horizontal and vertical control system. The secondary control system established on or within trackway structures shall be used for detailed as-built cross sections, hi-lo surveys, and placement of final trackway monumentation. The secondary control system shall be adequately referenced so it can be readily recovered.
 - a. Horizontal and vertical control discs shall be installed in accordance with WMATA Standards.
 - b. Horizontal and vertical control discs set on direct fixation trackways shall be recessed to protect them from disturbance.
 - c. Provide Monument Record Sheets to the Contracting Officer Representative.
5. Provide a report to the Contracting Officer Representative comparing the as-built location of the structure to the plan location as well as the theoretical dynamic outline of the train along the tunnels, retained areas, and aerial structures.
 - a. These cross sections must show computed clearances between the as-built location of the structure as well as the theoretical dynamic outline of the train.
 - b. This data must be analyzed by the Contractor and the Authority for compliance with construction and train clearance tolerances.
 - c. This data must be analyzed by the Contractor and the Authority to determine what remedial action, if any, may be required to address out-of-tolerance construction and the impact of structural misalignment on the final placement of the tracks.
6. Install and reference all permanent, secondary, and final monumentation required for construction, trackwork, and other system-wide facilities.
 - a. Provide Monument Record Sheets to the Contracting Officer Representative.
7. Coordinate the post construction alignment as-built survey work with the Contracting Officer Representative.

3.10 FIGURES AND REPORT FORMATS

Figure 1.05-1

Levels of the Certified Survey Technician Program

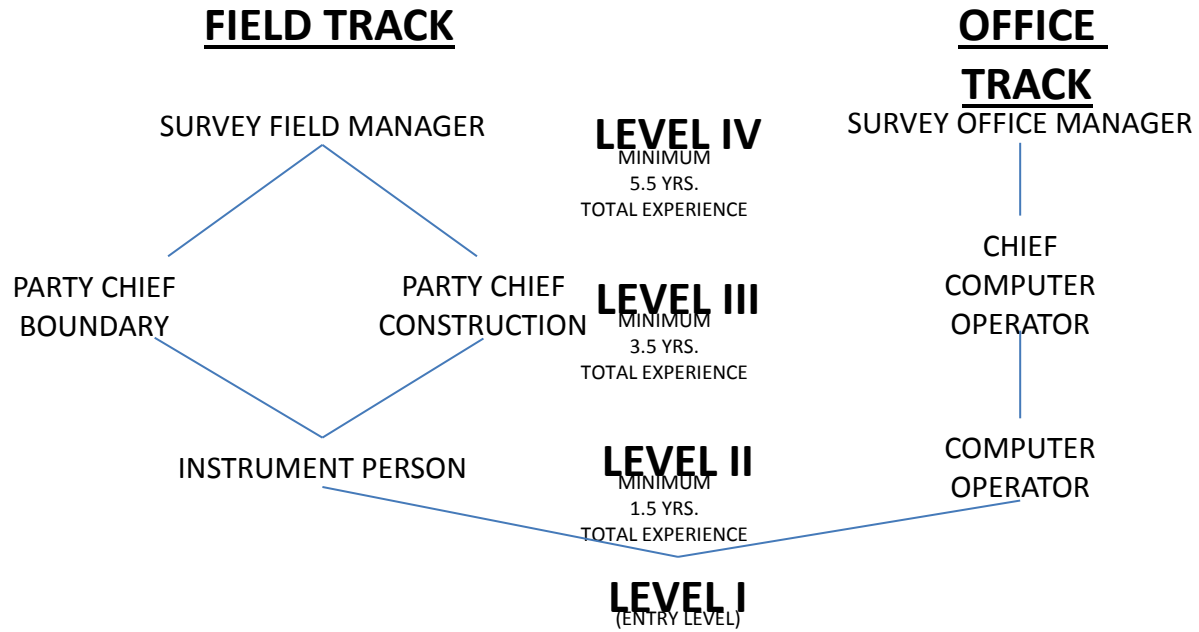


Figure 3.08-1

TRAVERSE SET REDUCTION

PR:METRO2.PRJ DT:05/01/01 ID:METRO CENTER NM:TRAVERSE

Occupied Station: Pt. No. 101, A-101 METRO B/D
 Backsight: Pt. No. 100, A-100 METRO B/D
 Foresight: Pt. No. 102, A-102 METRO B/D

HORIZONTAL ANGLE REDUCTION

Set Rejection Criterion: Deviation from Mean greater than 3 inches

Set No.	Face	Backsight	Foresight	Horiz. Angle	Mean Dev.
1	1	0-00-00.0	191-05-13.0		
	2	180-00-01.0	11-05-12.4		
	Mean	0-00-00.50	191-05-12.70	191-05-12.20	0-00-01.03
2	1	359-59-59.6	191-05-14.0		
	2	180-00-01.0	11-05-12.1		
	Mean	0-00-00.30	191-05-13.05	191-05-12.75	0-00-00.48
3	1	359-59-59.5	191-05-13.0		
	2	179-59-59.8	11-05-12.2		
	Mean	359-59-59.65	191-05-12.60	191-05-12.95	0-00-00.27
4	1	359-59-57.2	191-05-13.1		
	2	179-59-59.7	11-05-13.8		
	Mean	359-59-58.45	191-05-13.45	191-05-15.00	- 0-00-01.78

Mean Horiz. Angle: 191-05-13.23
 Std. Deviation (obs): 0-00-01.23
 Std. Deviation (mean): 0-00-00.61
 Maximum: 191-05-15.00
 Minimum: 191-05-12.20
 Range: 0-00-02.80
 Collimation Error: 0-00-02.5

BACKSIGHT ZENITH/SLOPE DISTANCE REDUCTION

Zenith Rejection Criterion: Deviation from Mean greater than 5 inches
 Slope Distance Rejection Criterion: Deviation from Mean greater than 0.01 feet

Set No.	Face	Zenith	Mean Dev.	Slope Distance	Mean Dev.
5	1	90-27-40.6		215.316	
	2	269-32-20.3		215.316	
	Mean	90-27-40.15	0-00-00.08	215.316	0.00
6	1	90-27-41.7		215.316	
	2	269-32-20.5		215.316	
	Mean	90-27-40.60	0-00-00.53	215.316	0.00
7	1	90-27-40.4		215.316	
	2	269-32-21.5		215.316	
	Mean	90-27-39.45	0-00-00.61	215.316	0.00

Mean Zenith Angle: 90-27-40.07 Mean Slope Distance : 215.316
 Std. Deviation (obs): 0-00-00.57 Std. Deviation (obs): 0.000
 Std. Deviation (mean): 0-00-00.33 Std. Deviation (mean): 0.000
 Maximum: 90-27-40.60
 Minimum: 90-27-39.45
 Range: 0-00-01.15
 Collimation Error: 0-00-02.2

FORESIGHT ZENITH/SLOPE DISTANCE REDUCTION

Zenith Rejection Criterion: Deviation from Mean greater than 5 inches
 Slope Distance Rejection Criterion: Deviation from Mean greater than 0.01 feet

Set No.	Face	Zenith	Mean Dev.	Slope Distance	Mean Dev.
5	1	89-29-50.9		275.692	
	2	270-30-10.5		275.691	
	Mean	89-29-50.20	0-00-01.01	275.692	0.00
6	1	89-29-52.1		275.692	
	2	270-30-09.3		275.691	
	Mean	89-29-51.40	0-00-00.18	275.692	0.00
7	1	89-29-52.6		275.692	
	2	270-30-08.5		275.691	
	Mean	89-29-52.05	0-00-00.83	275.692	0.00

END OF SECTION

SECTION 01722
MOBILIZATION

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes specifications for the following:
1. Organization and mobilization of Contractor's forces;
 2. Design, fabrication, and transportation of construction plant and equipment to the Site and setting up of same;
 3. Transporting various tools, materials, and equipment to the Site; and
 4. Erection of temporary buildings and facilities required for staging and construction operations.
- B. Mobilization shall include mobilization of all construction equipment, temporary facilities, materials, supplies, appurtenances, staffed and ready for commencing and prosecuting the Work; and the subsequent demobilization and removal from the Site of said equipment, appurtenances, and the like upon completion of the Work.
- C. Mobilization shall also include assembly and delivery to the Site of plant, equipment, materials, and supplies necessary for the prosecution of work, which 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 preparatory to commencing actual work; and all other preparatory work required to permit commencement of the actual work on construction items for which payment is provided under the Contract.
- D. The Contractor shall conduct its work in accordance with the safety requirements of Section 01114, SAFETY/ENVIRONMENTAL REQUIREMENTS. In case of a conflict between the various jurisdictional and WMATA or Contractor's organizational safety requirements, the more stringent requirements shall apply.
- E. When separate payment for mobilization and preparatory work is provided in the Contract, payment will be made in the amount provided in the Unit Price Schedule. Payment of mobilization is detailed in 1.05 F.
- F. When separate payment for mobilization and preparatory work is provided in the Contract, such payment will be a fixed lump sum Contract price for mobilization as shown in the Unit Price Schedule, as mobilization occurs per each part of the contract. The payment will be made in accordance with the unit price schedule.
- G. Partial payments may be reduced by an amount determined by the Contracting Offer Representative if, in his/her 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 are committed to the work are removed from the project without permission of the Contracting Officer Representative.

H. 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.

I.

1.02 SUBMITTALS

A. Refer to Section 01330, SUBMITTAL PROCEDURES, for submittal requirements and procedures for the following submittals:

1. A layout of the construction sites including fences, roads, parking, buildings, staging, and storage areas, within 7 Days after the Notice to Proceed
2. Schedule for mobilization of field office within 7 Days after Notice to Proceed

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 DELIVERY

A. Delivery to the jobsite of construction tools, equipment, materials, and supplies shall be accomplished in conformance with local governing ordinances and regulations.

3.02 TOOLS AND SUPPLIES

- A. Provide construction tools, equipment, materials, and supplies of the types and quantities that will facilitate the timely execution of the Work.
- B. Provide personnel, products, construction materials, equipment, tools, and supplies at the jobsite at the time they are scheduled to be installed or utilized.

3.03 PLANT LOCATION

A. Locate plant or plants appropriately close to the portion of the Work for which it will be used.

3.04 DEMOBILIZATION

- A. Upon completion of the Work, remove construction tools, apparatus, equipment, unused materials, and supplies, plant, temporary facilities, and personnel from the jobsite.
- B. Restore all areas utilized for the Contractor's temporary facilities and staging purposes to their original, natural state or, when called for in the Contract Documents, complete such areas as indicated.

END OF SECTION

SECTION 01723
PROTECTION OF ADJACENT CONSTRUCTION

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the appropriate methods for protection of adjacent construction when performing installations and improvements in and around existing facilities.

1.02 PROTECTION OF EXISTING SURFACES

- A. Existing surfaces shall be carefully protected during construction operations under this Contract to avoid damaging existing surfaces.
 - 1. Existing surfaces shall be protected by the Contractor from all possible damages including chipping, staining, and corroding during performance of the Work.
 - 2. If damage occurs, the Contractor shall repair or replace to match original undisturbed conditions.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

**SECTION 01731
CUTTING AND PATCHING**

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies the appropriate methods for performing cutting and patching when installations occur in existing facilities or for improvements including selective demolition, salvaging of materials and equipment, and restoring of pavement and other surfaces and improved areas from damage caused by the Contractor's operations.

1.02 SUBMITTALS

- A. Written Request: Submit a written request for approval by the Contracting Officer Representative prior to cutting and patching. A written request is required for any cutting or alteration, which affects:
1. The work of the Authority or any separate contractor,
 2. The structural value or integrity of any element of the Project,
 3. The integrity or effectiveness of weather exposed or moisture-resistant elements or systems,
 4. Building aesthetic qualities for exterior areas or in occupied spaces, or
 5. The efficiency, operation life, maintenance, or safety of operational systems.
- B. Cutting and Patching Proposal: Include in written request the following:
1. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
 2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 3. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
- C. Structural Elements: Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure to satisfy requirements.
- D. Should conditions of work or schedule indicate change of materials or methods, submit written recommendations to the Contracting Officer Representative, including:
1. Conditions indicating change,
 2. Recommendations for alternative materials or methods, and
 3. Resubmittal as required for substitution.
- E. Approval by the Contracting Officer Representative to proceed with cutting and patching work does not waive the Authority's right to later require complete removal and replacement of any part of the Work found to be unsatisfactory.

1.03 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load carrying capacity or load deflection ratio. Obtain prior approval from the Contracting Officer Representative of the cutting and patching procedures proposed.
- B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety. Obtain prior approval from the Contracting Officer Representative of the cutting and patching procedures proposed.
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Contracting Officer Representative's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching.
 - 1. If possible, retain the original installer or fabricator to cut and patch exposed Work. If it is impossible to engage the original installer or fabricator, engage another recognized experienced and specialized firm.
 - 2. Remove and replace construction cut and patched in a visually unsatisfactory manner.

1.04 EMBEDDED ITEMS

- A. When reinforcing steel, conduit or other items embedded in the concrete are encountered in a drilling or coring operation, the operation shall be stopped and the Contracting Officer Representative immediately notified. Determine whether the embedded item may be cut through and if determined to be permissible, obtain Contracting Officer Representative's concurrence before doing so. If it is not permissible to cut through the embedded item, holes shall be drilled in another location and the original holes patched as directed by Contracting Officer Representative.

1.05 PAVEMENT AND IMPROVED AREAS RESTORATION

- A. As applicable, secure permits from the Jurisdictional Authority for all pavement restoration within the limits of said Jurisdictional Authority. Submit Working Drawings of such pavement restoration prepared in accordance with the requirements of the Contract Documents and the Jurisdictional Authority to the Jurisdictional Authority for approval.
- B. During construction operations on this Contract, certain areas currently grassed, landscaped, or otherwise improved may be disturbed or damaged. Restore such areas as specified in Section 00736, PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES AND IMPROVEMENTS.
- C. Existing surfaces marred or damaged by operations under this Contract shall be repaired or replaced by the Contractor to the condition prior to being marred or damaged as approved by the Contracting Officer Representative.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. General: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used, use materials whose installed performance will equal or surpass that of existing materials.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
- B. After uncovering work, inspect conditions affecting installation of new products.
- C. Report unsatisfactory or questionable conditions to the Contracting Officer Representative in writing, and do not proceed with the Work until the Contracting Officer Representative has provided further instruction.

3.02 PREPARATION PRIOR TO CUTTING AND PATCHING

- A. Temporary Support: Provide shoring, bracing, and support as required to maintain structural integrity of the affected portion of the Work.
- B. Protection: Protect existing equipment during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.03 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or elements adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.
 - 1. In general, where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill.
 - 4. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated, or abandoned. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after bypassing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 - 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

3. Where removal of walls or partitions extends from one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.
4. Where patching occurs within a smooth painted surface, apply a primer and second coat over the patched area and extend the final coat over the entire unbroken area containing the patch.
5. Patch, repair, or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.

3.04 CLEANING

- A. General: Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Completely remove paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION

SECTION 01740
CLEANING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes specifications for furnishing all labor, materials, equipment, and services, and performing all operations necessary for, and properly incidental to, cleanup during construction and final cleaning of the facilities and site prior to Acceptance by the Authority.

1.02 RELATED SECTIONS

- A. [Division 16, Electrical], for conduit cleaning.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION

3.01 CLEANUP DURING CONSTRUCTION

- A. Keep the entire Site in a neat and orderly condition at all times during construction. Conduct a general cleanup of the Site daily as a part of the Work. Provide general daily cleanup and disposal service for removal of waste and rubbish from the jobsite. Clean material as necessary prior to incorporating into the Work.
- B. Dispose and recycle waste, trash, and debris in a safe, acceptable manner, in accordance with applicable laws and ordinances and as prescribed by Jurisdictional Authorities. Do not bury waste material and debris on the Site. Burning of trash and debris on the Site is prohibited.
- C. Provide daily litter pickup within Project limits. Provide adequate number of trash receptacles for worker's lunches, cigarette butts, and other miscellaneous garbage.

3.02 FINAL CLEANING OF FACILITIES

- A. Prior to final inspection by the Contracting Officer Representative, and after all construction work is essentially complete, thoroughly clean facilities utilizing professional facility cleaners.
- B. Items to be cleaned include, but are not limited to, all glass, doors, opening frames, grilles, trim, exposed non-ferrous metal surfaces, floor coverings, light fixtures and plates, plumbing fixtures and trim, and all finish surfaces throughout the construction.
- C. Vacuum-clean where appropriate and remove all spots, smears, dust, debris, hand prints, and defacements of every sort, including those of vandals. Use commercial cleaning compounds where necessary.
- D. Follow the recommendations of the manufacturers of the materials and items to be cleaned for all cleaning, polishing, and treatment such as waxing or sealing.
- E. Final cleaning shall be in accordance with the project's LEED objectives.

3.03 FINAL SITE CLEANUP

- A. Prior to final inspection, thoroughly clean the entire Site so it is in a neat, acceptable condition. Remove from the entire Site all construction equipment and facilities, construction waste and unused materials, dunnage, loose rock and stones, excess earth, and debris of any description resulting from the Work.

- B. Hose down and scrub clean where necessary all pavement and paved walks.
- C. Thoroughly remove mortar droppings from concrete slabs and pavement. Hose down and scrub clean all concrete flatwork and exposed vertical surfaces of concrete and masonry. Clean all rail surfaces, special trackwork, track drains, handholes, and manholes.
- D. All drainage systems shall be free and clear. All drainage systems and sewers shall be pressure cleaned and inspected, and all catch basins and sumps shall be cleaned.
- E. All conduits shall be cleaned and openings protected as specified in [Division 16, Electrical].
- F. All spare material shall be delivered to the Authority.

END OF SECTION

SECTION 01775
CLOSEOUT

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes specifications for performing all operations necessary for and incidental to closing out a Contract and assisting in the Authority's final inspection.
- B. This Section includes procedures for closeout submittals including the following:
 - 1. Operation and maintenance manuals;
 - 2. As-Built Drawings and Specifications;
 - 3. Spare parts list, delivery information, and distribution of spare parts;
 - 4. Training manuals, lesson plans, and student's training manuals and electronic media of such, as applicable;
 - 5. Survey record log;
 - 6. Correspondence file;
 - 7. Releases;
 - 8. Vouchers;
 - 9. Records for design (if provided by Contractor), inspection, testing and other quality elements;
 - 10. Request for final payment;
 - 11. Certifications, affidavits, and warranties and guarantees; and
 - 12. Correction of deficiencies submittals as applicable
- C. This Section establishes required actions by the Contractor for facility systems and subsystems commissioning that include the preparation of an asset database, the preparation of preventive maintenance instructions, and labeling and packaging of spare parts.

1.02 REFERENCES

1.03 CLOSEOUT SCHEDULE AND PROCEDURE

- A. Changes from Original Conditions:
 - 1. Upon completion of the Work and prior to Substantial Completion, the Contractor shall examine each property to determine changes from the original conditions established by the preconstruction inspection, and Section 01711, ACCEPTANCE OF CONDITIONS, and shall furnish a written description to the Contracting Officer Representative of measures taken to correct damage that may have resulted from performance of this Contract, and shall obtain a written release from each owner accepting condition of the building or structure, corrections, or both, thereby relinquishing any claim against the Contractor. In the event any owner refuses to furnish a release of claims, the Contractor shall notify the Contracting Officer Representative in writing.

2. The Authority will not assume responsibility for alleged damages arising from the Work performed under this Contract.
- B. Requirements Preparatory to Final Inspection by the Authority:
1. Notify the Contracting Officer Representative to perform a preliminary final inspection for the purpose of determining the state of completion of the Work. Notify the Contracting Officer Representative at least 14 Days in advance of requested inspection. The Contracting Officer Representative will perform the inspection within 3 working days of the requested date. From the information gathered from this inspection, the Contracting Officer Representative will prepare a Punch List of work to be performed, corrected, or completed before the Work will be accepted. All work on the Punch List shall be completed by the Contractor prior to final inspection.
 2. Temporary facilities, except as may be required during Punch List work, shall be removed from the Site.
 3. Clean the Site and all applicable appurtenances and improvements as specified in Section 01740, CLEANING.
 4. Properly mount operating instructions for equipment and post as specified or required.
- C. Final Inspection by the Authority:
1. After all requirements preparatory to the final inspection have been completed as hereinbefore specified, notify the Contracting Officer Representative to perform the final inspection. Notice shall be given at least 14 Days in advance of the time the Work will be available for final inspection. The Contracting Officer Representative will perform the inspection within 3 working days of the requested date.
 2. Contractor or its principal superintendent, authorized to act on behalf of the Contractor, shall accompany the Contracting Officer Representative on the final inspection, as well as any principal Subcontractors that the Contracting Officer Representative may request to be present.
 3. If the Work has been completed in accordance with the Contract Documents, and no further corrective measures are required, the Contracting Officer Representative will accept the Work and will issue a Certificate of Completion as evidence of acceptance.
 4. If the Work has been substantially completed in accordance with the Contract Documents, and the Work can be used for its intended purpose with only minor corrective measures required, the Contracting Officer Representative will conditionally accept the Work and will issue a Certificate of Substantial Completion based upon the Contractor's assurance that corrective measures will be completed within the shortest practicable time. A fixed schedule for such corrective measures shall be submitted to the Contracting Officer Representative for approval.
 5. If the Work has not been substantially completed in accordance with the Contract Documents, and several or many corrective measures are still required, the Contracting Officer Representative will not issue a Certificate of Substantial Completion. Instead, a new Punch List will be prepared based on the information gathered from the final inspection, and the Contractor will be required to complete this work and then call for another final inspection, following the procedure outlined above.
- D. Asset and Parts Databases:
1. Prepare an asset database listing system and subsystem assets with attribute data to include asset name, asset location, description, contract number and specification section, supplier/vendor, manufacturer name and contact information, make, model number, serial

number, year of manufacture, purchase price, expected useful life, installation date, acceptance date, Contractor and manufacturer's warranty period with start date, digital link to warranty documentation, digital link to Operation and Maintenance Manual, and special tools required to perform asset maintenance. Provide this asset database for assets as determined by Authority review of an asset list submittal prepared by Design-Builder. The asset list submittal shall be based on equipment and systems noted below.

2. Prepare a parts database listing parts for assets with attribute data to include parent asset name, part name, description, contract number and specification section, supplier/vendor, manufacturer name and contact information, illustrated parts catalog (IPC) drawing number, vendor catalog number, original equipment manufacturer (OEM) part number, model number, unit cost, unit of measure for the part(s), number of spare units provided, replacement lead time, forecasted usage, hazardous material designation, and storage and handling instructions. Provide this parts database for parts as determined by Authority review of a parts list submittal prepared by Design-Builder. The parts list submittal shall be based on the lowest maintainable parts for each asset as defined in the Operation and Maintenance Manuals.
3. Databases shall provide asset and parts information for the following equipment and systems:
 - a. **Electrical Systems**
4. Sample asset table and parts table are attached at the end of this Section for the Contractor's guidance in preparing the asset database.

E. Preventive Maintenance Instructions:

1. Prepare preventive maintenance instructions for each asset, including asset name, asset location, manufacturer name, model number, serial number, maintenance instructions for each asset and each scheduled maintenance based on requirements of the associated Operations and Maintenance Manual, and identification of special test equipment required to test the asset subsequent to performing maintenance.
2. A sample preventive maintenance instruction is attached at the end of this Section for the Contractor's guidance in preparing the preventive maintenance instructions.

1.04 SUBMITTALS

- A. Make all submittals in accordance with Section 01330, SUBMITTAL PROCEDURES, and as specified below.
- B. Operation and Maintenance:
 1. Furnish manuals for equipment and systems as required by the Contract Documents.
 2. Data copy included from standard catalogs shall be edited to reflect only conditions pertinent to this Contract.
 3. Data copy shall be suitable for dry-copy reproduction on standard office copy machines.
 4. Hard copy manuals shall be prepared using the following materials:
 - a. Binder:
 - (1) 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.
 - (2) When the assembled data exceeds the capacity of one binder, provide additional binders as necessary.
- b. Pages:
 - (1) Originals: White, 60-pound bond with plastic-reinforced binding edge.
 - (2) Catalog data: Offset-printed copy on white paper, with plastic-reinforced edge.
 - (3) Standard: 8-1/2 inches by 11 inches.
 - (4) 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.
 - (5) Holes punched for standard three-ring binder.
 - (6) Consecutively numbered.
5. 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.
6. Manuals shall include the following data:
 - a. Table of contents.
 - b. Design-Builder's name, address and telephone number, with similar data for its 24-hour service organization.
 - c. Manufacturer's name, address and telephone number, with similar data for its local representative, distributor, and service agency.
 - d. Catalog, model, and serial number of equipment installed. Include WMATA unit numbers where applicable.
 - e. Description of equipment.
 - f. Detailed Theory of Operation of each system and subsystem to Lowest Repairable Unit (LRU)
 - g. Troubleshooting and Diagnostic Procedures for each piece of equipment delivered to LRU
 - h. Block Diagrams and Schematics of equipment as installed
 - i. Software administrative procedures for data input, failure diagnosis and system restoration
 - j. Statement of warranty as specified.
 - k. Description of modification, servicing and repairs performed prior to start of warranty.
 - l. Dates warranty begins and expires.

- m. Standard starting, stopping and operating procedures.
 - n. Emergency and special operating procedures.
 - o. Routine maintenance procedures.
 - p. Servicing and lubrication schedule.
 - q. Manufacturer's printed operating and maintenance instructions, manufacturer's parts list, illustrations, and diagrams.
 - r. O&M data as required to meet LEED required design goals.
 - s. One copy of each wiring diagram.
 - t. List of spare parts, prices and recommended stock quantities for routine maintenance of the equipment for 1 year and list of spare parts that are considered critical and for which extended time frames for acquisition would create undesirable down-time for equipment.
 - u. 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.
 - v. 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.
7. Manuals submittal schedule:
- a. 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.
 - b. Four copies of complete manual in final form 45 Days prior to the time scheduled for operation inspection, testing, or acceptance of the equipment.
 - c. Four bound sets and electronic media of approved manual before the time scheduled for operation inspection, testing, or acceptance of the equipment.
 - (1) Electronic copy files shall be in latest version of Adobe (.PDF) file format. Files shall be submitted in accordance with Section 01330, SUBMITTAL PROCEDURES.
 - (2) 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.
 - (3) The Authority reserves the right to have any images, illustrations, diagrams, and drawings resubmitted until the Contracting Officer Representative approves their legibility.
 - d. 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.
8. If operation and maintenance training is included in the Contract, provide to each trainee, hard and electronic copies of approved operation and maintenance manuals for this purpose as specified in Section 01820, DEMONSTRATION AND TRAINING.

9. Furnish additional operation and maintenance manuals required for LEED Silver Certification in accordance with the quantity and documentation requirements for LEED for New Construction and Major Renovation.
- C. As-Built Drawings and Specifications:
1. General:
 - a. As-Built Drawings shall include Shop Drawings, Working Drawings, and field prepared drawings.
 - b. Maintain a hard copy drawing and specification record of as-built conditions on a set of Contract Documents as the Work progresses. The Contract Documents shall be kept current with all Modifications issued by the Authority. The hard copy drawing and specification record shall be maintained at the Contractor's field office. Periodic review of the completeness of the hard copy record will be conducted by the Authority as deemed necessary to ensure the record is kept up to date.
 2. As-Built Drawings:
 - a. 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 format (.PDF files shall be capable of printing full-size drawings.), 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 01330, SUBMITTAL PROCEDURES.
 - b. 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.
 - c. 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 black ink on white paper copies, produced from the Adobe file, 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.
 - d. 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

I CERTIFY THAT THIS DRAWING
ACCURATELY DEPICTS THE WORK
CONSTRUCTED AS OF

(date)

(an officer of the Contractor)

Contractor's Name

3. As-Built Specifications:

- a. By the date scheduled for receipt of final approved As-Built Specification deliverables in the Contract Schedule, submit As-Built Specifications in both latest version of MSWord (.DOCX) file format with tracked changes and an Adobe (.PDF) file format, in print quality black and white. Submit two bound sets of black ink on white paper copies produced from the Adobe (.PDF) format to the Contracting Officer Representative for review and acceptance in accordance with Section 01330, SUBMITTAL PROCEDURES.

D. As-Built Project Schedule:

1. Submit one electronic copy of the approved As-Built Project Schedule as required.

E. Spare Parts:

1. This Contract includes the requirement for spare parts, either specifically identified in the price schedule or to be identified later during the term of the Contract. Ensure that all spare parts required by this Contract are provided and delivered in accordance with the following paragraphs.
2. Submit to the Authority the one electronic copy of the list of required spare parts specifically identified in the Contract Documents. The list provided by the Contractor shall include part name, model number, part number, serial number, stock number, component name, location for use, manufacturer's name and contact information, unit cost, quantity, available packaging, special storage and handling instructions, replacement schedule, and anticipated annual usage. In addition, the spare parts listing shall include the following additional information as appropriate:
 - a. Group the list by system and subsystem for inventory system identification. Include order and procurement information for subassemblies and components.
 - b. Correlate the required quantities with the reliability requirements and lead time considering the following classifications:
 - (1) 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.
 - (2) 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.
 - (3) 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 shall be accounted for via appropriate asset records.
 - (4) Long lead: Components, which are not available on short notice from commercial distributors or within 48 hours from the manufacturer, such as specially made or selected components.

- (5) 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.
 - (6) 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 Contractor's component number, if any.
3. Within 30 Days after the Contractor submits the required spare parts listing, the Authority will provide the Contractor with shipping instructions and with WMATA stock numbers for each item the Contractor is required to furnish. Spare parts shall be packaged such that parts for a particular asset or a particular facility are grouped together. The Contractor shall ship, within a 25-mile radius of the Project, the required parts to the designated points specified by the Authority and shall include the Contract number, manufacturer part number, quantity, unit price, and WMATA part number on the shipping document.
 4. The identification of the individual manufacturer's part numbers shall 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 Article 1.04E.2 above.
 5. Parts furnished in accordance with this provision shall not be used to satisfy replacement needs under any warranty provision of this Contract.
 6. Spare parts shall 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.
 7. Unless otherwise specified in this Contract, the spare parts shall be delivered at the same time as the counterpart equipment delivery. The spare parts shall be properly packaged or crated so as to prevent damage during shipment and long-term storage. The spare parts shall be labeled in accordance with the instructions contained in Article 1.04D.2 above.
- F. Asset and Parts Database submitted in MS Excel format.
1. Asset list based on equipment and systems specified for review and finalization by Authority.
 2. Parts list based on lowest maintainable parts as defined in Operating and Maintenance Manuals for review and finalization by Authority.
 3. Asset database tables based on the sample asset database table provided. Asset database shall be limited to the asset list approved by the Authority based on the submittal defined in 1.04.F.1.
 4. Parts database tables based on the sample parts database table provided for each system specified. Parts database shall be limited to the parts list approved by the Authority based on the submittal defined in 1.04.F.2.
- G. Preventive Maintenance Instructions as described above.
- H. Survey Field Notes in accordance with Section 01330, SUBMITTAL PROCEDURES:
1. As applicable, submit electronic media of the following as specified in Section 01721, LAYOUT OF WORK AND FIELD ENGINEERING:
 - a. Survey Record Log.
- I. Releases and Vouchers:

1. As applicable, submit one original hard copy and electronic media, in Adobe (.PDF) file format, of releases and vouchers.
- J. Records for Inspection, Testing, and Other Quality Elements:
1. Submit one original hard copy and electronic media, in Adobe (.PDF) file format, of records for inspection, testing or other quality elements as more fully specified in Section 01470, QUALITY MANAGEMENT SYSTEM.
- K. Request for Final Payment:
1. Submit one original hard copy and electronic media, in Adobe (.PDF) file format, of final payment request. Final Settlement will be made in accordance with Section 00744, METHOD OF PAYMENT.
- L. Correction of Deficiencies Submittals:
1. As applicable, submit original hard copy and electronic media, in Adobe (.PDF) file format, of Schedule of Deficiency Corrections, Recommendation for Corrective Actions, together with supporting information, Data and Reports applicable to any correction, and a Technical and Cost Proposal to amend the Contract to permit acceptance of the affected materials, equipment, systems, or subsystems as specified in Section 00758, CORRECTION OF DEFICIENCIES.
- M. Certifications, Affidavits, and Warranties and Guarantees:
1. Required Affidavits, Certificates, Written Descriptions and Releases and Warranties and Guarantees provided by the Contractor; i.e., Certificates of Acceptance and Compliance, Certification that all facilities were constructed in conformance with ADAAG regulations (Form attached at end of Section), of System Safety and Security, of Substantial Completion, and of Final Payment; Written Description of measures taken to correct damage that may have resulted from performance of this Contract; Written Releases; Contractor's executed Affidavit of Payment of All Applicable Taxes and License Fees in connection with the Contract and Affidavit of Payment of Debts and Claims; Consent of Surety Company to Final Payment; Warranties and Guarantees as specified in Section 00757, WARRANTY/GUARANTEE OF CONSTRUCTION, and Section 00758, CORRECTION OF DEFICIENCIES, and various Sections of the Contract Specifications as applicable: Submit the original hard copy and one electronic copy in Adobe (.PDF) file format.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION

SECTION 01820
DEMONSTRATION AND TRAINING

PART 1 – GENERAL

1.01 SUMMARY

- A. 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.

1.02 DEFINITIONS

- A. Acronyms used in this specification have the following definitions:
 - 1. TSMT – Technical Skills and Maintenance Training
 - 2. BUS – WMATA Department of BUS Services
 - 3. TTDC – Technical Training Document Control

1.03 SUBMITTALS

- A. Submit in accordance with Section 01330, SUBMITTAL PROCEDURES, the following at the times stated:
 - 1. 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
 - 2. 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 preliminary submittal incorporating or resolving comments.
 - b. Complete instructional plans including audio-visual aids and descriptions of instructional techniques and procedures.
 - 3. 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.
 - 4. Training contract closeout submittal: As specified in Section 01775, CLOSEOUT.
 - 5. Training instructor's qualifications.
 - 6. 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.

7. 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
8. 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.
9. 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.
10. Provide video documentation of demonstration and training classes to satisfy LEED requirements.

1.04 OPERATION AND MAINTENANCE TRAINING

A. General:

1. Where specified, develop and conduct a program to train selected Authority personnel in the operation and maintenance of equipment and systems furnished.
2. Furnish instructors, instructional materials, and audio-visual aids and equipment.
3. The Authority will furnish physical facilities.

B. Operations training:

1. 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.
2. 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.

C. Maintenance training:

1. 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).

D. Other Training:

1. Any other training (as determined by WMATA) necessary to support the safe operation, use, or maintenance of the equipment.

E. Training Plan:

1. 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 BUS 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. 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 BUS 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.
- c. Audience qualifications and prerequisites: For the purpose of course development and presentation, vendors shall assume all WMATA students are high school graduates (or equivalent)
- d. Instruction and testing methods to be utilized
- e. Summary of the strategies to be employed in the accomplishment of the training
- f. Proposed schedule of delivery of materials and training

F. Instructor's Guide:

1. 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
 - d. Suggested instructional methods/learning activities
 - e. Required equipment or resources needed for effective instruction
 - f. Test question pool(s) with each question referenced to the respective learning objective(s) and student guide or other instructional materials

2. A guide (FAQ) providing questions/problems and answers as related to course content

G. Student's Guides:

1. 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

H. Training Presentations:

1. 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.
2. Training Presentation format(s) shall be agreed upon by the target audience's training group(s) (TTDC, TSMTBUS, currently).

I. Training Aides:

1. 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, model(s) of the equipment, actual device(s), interactive video training, or any accepted media format as determined by the audience's training group.
2. 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.

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

1. 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.

1.05 MATERIALS AND INSTRUCTION

- A. Training materials shall be provided and approved by audience's training groups (TTDC, TSMT or BUS) prior to the final acceptance of training schedule or training date(s).
- B. 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).

- C. Instruction shall include material covered in the operation and maintenance manuals as well as the following:
1. Detailed theory of operation to one level below Lowest Repairable Unit (LRU)
 2. Practical aspects of operation
 3. Description of system, equipment, and components
 4. Functional characteristics of system, equipment, and components
 5. Emergency operating procedures
 6. Location, removal, and reinstallation of components
 7. Maintenance procedures
 8. Servicing intervals and schedules
 9. Block diagrams of equipment hardware and software functionality as installed
 10. Schematics of equipment hardware as installed
 11. Diagnosis and problem solving (troubleshooting)
 12. Repair
 13. Overhaul
- D. 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.
- E. Operating and maintenance training shall be completed prior to the time scheduled for operation inspection, testing, or acceptance of the equipment. In addition to the retainage specified in Section 00744, METHOD OF PAYMENT, payment will be withheld until training is complete and accepted.
- F. Furnish to applicable training group, a minimum of four O&M Manuals as described in Section 01775, CLOSEOUT, for each piece of equipment and system, unless otherwise specified, and a minimum of one editable, non-copyrighted electronic copy in a Microsoft Office format, as specified.

1.06 PROJECT PERFORMANCE DEMONSTRATION

- A. Integrated system testing shall culminate in a project performance demonstration that shall simulate all operations and shall exercise all systems and system elements. Prepare performance demonstration plan and procedures. Include testing of anticipated normal and abnormal operations, in addition to simulations of emergency operations. Performance demonstration plan shall delineate the following:
1. Tests to be performed
 2. Date and time when each test is to be performed
 3. An outline of the test parameters

4. Pass/fail criteria, which must be quantified and measurable
- B. The project performance demonstration shall include those static and dynamic tests used to demonstrate that the Design-Builder designed the systems and subsystems according to the specification and the performance specified, and shall include:
 1. All necessary functional and performance testing conducted during construction and manufacture of the system elements; and
 2. Operational tests, which include integrated testing of system interfaces to assure that the Project as a whole is capable of operating as specified.

PART 2 – PRODUCTS (not used)

PART 3 – EXECUTION (not used)

END OF SECTION