



MARYLAND TRANSIT ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION

Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
Darrell B. Mobley, Acting Secretary • Ralign T. Wells, Administrator

TO: All Planholders
FROM: Maryland Transit Administration
SUBJECT: **ADDENDUM NO. 5**
Contract No.: T-1196-0140
Bus Main Shop
DATE: May 28, 2013

Enclosed and effective this date is Addendum No. 5 to the subject Contract. This change delays the Bid Opening Date to **June 13, 2013, 2pm EST.**

A conformed copy of the revised specification sections is attached. A list of the changes made to this contract is attached to this Addendum. Also attached are the answers to contractors' questions, if any.

This Addendum does revise drawings for this contract. Please email me with your company's name and mailing address at JJohnson14@mta.maryland.gov if you would like a copy of the revised Addendum No. 5 CD drawings sent to you.

The Bidder shall acknowledge receipt of this Addendum by completing and returning this form with the bid package.

All other terms and conditions remain unchanged.

Sincerely,

Joseph Johnson, Procurement Officer
Professional Services/Construction/Installation Section
Procurement Division

Acknowledgement of receipt of ADDENDUM # 5 to Solicitation #T-1196-0140

Vendor Name: _____

Authorized Representative's Signature

Date

ADDENDUM NO.: 5
DATE: 05/28/13
CONTRACT NO.: T-1196-0140

The following additions, deletions, and modifications are hereby made a part of the Contract Documents of Bus Main Shop, Contract No.: T-1196-0140.

Item No.	Page	Modification
I. CONTRACT SPECIFICATIONS		
1	TOC	Revised to show sections that have changed
2	NTC 1-7	Revised Bidder's Work With Own Forces percentage from "not less than 50%" to "not less than 25%"
3	Bid Form 4-14	Revised to add Bid Item 75, Fall Protection, LS, 1 and renumbered Bid Items accordingly.
II. SPECIAL PROVISIONS		
1	Section 01110 Pg. 01110-2	Revised sections 1.04 A and B to reflect the Liquidated Damages of \$1,375.00 per calendar day and total calendar days for the contract as being 548 CD as shown in the table at the bottom of the page.
2	Section 02741, Pg. 02741-6	Revised section 4.1 to reflect that Asphalt Paving will be paid for at the Contract unit price bid per CY for Portland Cement Concrete Paving.
3	Section 03450, Pg. 03450-20	Revised section 4.01 to reflect that Arch. Precast Concrete is included in the LS price bid for Unit Masonry
4	Section 05120, Pg 05120-4	Revised section 1.06 A to remove the sentence "Signed and seal Fabrication drawings by a Professional Engineer." Note that the requirements for stamped and signed calculations for delegated design components remain, as defined in the contract documents.
5	Section 05120, Pg. 05120-4	Revised section 1.06 B to require the steel Fabricator to be an AISC Certified Steel Plant, Category STD.
6	Section 05120, Pg. 05120-4	Revised section 1.06 C to require the steel erector to be an AISC Certified Steel Erector, Category CSE.
7	Section 06615, Pg. 06615-3	Revised section 4.01 B to reflect that Simulated Stone Countertops is included in the LS price bid for Plastic Lam Faced Arch Cabinets.
8	Section 08120, Pg. 08120-3	Revised section 4.01 B to reflect that Fiberglass Doors and Frames is included in the LS price bid for Steel Doors and Frames
III. DRAWINGS		
1	Drawing E503, sheet 415 of 437	Revised line diagram changing the transfer switch from a 3 pole to 4 pole at the ATS-EQ and ATS-LS

2	Drawing M403, sheet 273 of 437	Added entire drawing, Mechanical Sections to the set. This drawing was missing in the original advertised document set.
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All other conditions of this IFB remain the same.
Also attached are the answers to contractors' questions.

SECTION 01110**SUMMARY OF WORK****PART 1 - GENERAL****1.01 CONTRACT DESCRIPTION**

- A. This Contract is for the construction of the Bus Main Shop for MTA at the main campus, 1501 Washington Boulevard, Baltimore, Maryland.
- B. The work involves construction of: the Main Rebuild Shop for engines and transmissions for all buses in the MTA fleet, and the Air-Conditioner Shop for all buses. It is a three story, high bay steel framed building with full architectural, mechanical, and electrical support amenities. The site work includes installation of all new utilities, parking lot paving, drainage, stormwater management, signing, pavement markings, retaining walls, fences and other aesthetic improvements.
- C. The site work also includes the demolition of existing building slab and foundations, a stone out-building, demolition of asphalt parking lot, and existing utilities under the slab and pavement. There is an existing party wall supported by steel beam buttresses that belongs to the adjacent property owner, and is to remain.

1.02 GENERAL

- A. The Contractor's operations shall conform to all applicable State and Local regulations.
- B. Wherever these Special Provisions refer to the Administration, they shall be understood to mean the Maryland Transit Administration (MTA). Whenever reference is made to Engineer, it shall mean the Administration representative for the contract.
- C. Submittals shall be made in accordance with Section 01300 SUBMITTALS.

1.03 CONTRACT DOCUMENTS: The work shall be performed in accordance with the following documents:

- A. The General Provisions for Construction Contracts dated October 2001, issued by the Maryland Department of Transportation; and the Supplemental General Provisions issued by the Maryland Transit Administration; both contained in the Contract Specifications Book.
- B. The Special Provisions, Divisions 1 through 16; the Notice to Contractors;

the List of Contract Drawings; and the various forms and exhibits; all contained in the Contract Specifications Book.

- C. The Maryland Department of Transportation State Highway Administration Standard Specifications for Construction and Materials, dated July 2008, and latest addenda, as referenced by the Special Provisions.
- D. The Liability Insurance Requirements; and the MTA Project Safety Plan; all issued by the Maryland Transit Administration of the State of Maryland Department of Transportation and contained in the Contract Specifications Book.
- E. The Contract Drawings, Standard Plates and Reference Drawings, contained in the Contract Specifications Book or bound separately in the Contract Drawings Books.

1.04 COMPLETION TIME AND LIQUIDATED DAMAGES

- A. Pursuant to General Provisions Articles GP-8.02 and GP-8.03, commence work on or before the date specified in the Notice to Proceed (NTP) and complete the specified portions of the work within (548) calendar days.
- B. In the event that the Contractor fails to complete the specified work within the specified number of days after Notice to Proceed, with the exception of extensions granted by change order, liquidated damages in the amount of \$1,375.00 will be assessed pursuant to General Provisions Article GP-8.09 for each calendar day the completion of the specified work is delayed. The Contractor shall pay to the Administration the applicable amount specified and pursuant to General Provisions Article GP-8.09 as liquidated damages for every additional calendar day in excess of the number of days prescribed. The Administration may deduct the sum of liquidated damages from any monies due or that may become due the Contractor under the Contract, or if such monies are insufficient, the Contractor or sureties thereof shall pay to the Administration any deficiency within 30 calendar days.

WORK ITEM	NUMBER OF CALENDAR DAYS	LIQUIDATED DAMAGES PER CALENDAR DAY
Completion of <u>All</u> Contract work	<u>548 CD</u>	\$1,375.00

1.05 COMPLETION TIME AND OTHER SCHEDULE REQUIREMENTS

- A. Pursuant to Article GP-8.03 of the General Provisions, commence work

on or before the date stipulated in the Notice to Proceed (NTP) and complete the entire work within the number of calendar days specified in 1.04 above.

- B. Other schedule requirements are given in Section 01300 SUBMITTALS.

1.06 CONTRACTOR REPRESENTATIVES

- A. Designate in Writing within five (5) days after receiving the Notice to Proceed (NTP), the name, official mailing address and telephone number of the Contractor's representative having complete authority to represent and to act for the Contractor.

1.07 LIABILITY INSURANCE REQUIREMENTS

- A. MTA has chosen to provide Workers' Compensation, General Liability, Excess Liability, Builders Risk, Pollution Liability and Railroad Protective coverage on behalf of contractors and subcontractors working on this project. This approach to project insurance is commonly called a wrap-up or owner controlled insurance program (OCIP). Specific information regarding Liability Insurance Requirements are contained in the Contract Specification Book. (See Table of Contents for location of this information.)
- B. Contractors and subcontractors are to bid work for this project net of insurance (i.e. , The Cost of Workers' Compensation, General Liability, Excess Liability, Builders Risk, Pollution Liability and Railroad Protective applicable to the work site is not be to included in the bid price). All bidders must complete the Insurance Premium Worksheet and forward to MTA with the rest of your bid package. The Premium Worksheet is included in the bid package as form I, Exhibit A. This form should include the Contractor's work as well as the work of all subcontractors included in the initial bid. The insurance premium shown on this form, or the pro rata portion thereof, will be added to the base bid in the event you are excluded from the wrap-up program or the program is terminated mid-term.

1.08 PAYMENTS TO CONTRACTORS

- A. By submitting a response to this solicitation, the Bidder agrees to accept payments by electronic funds transfer unless the State Comptroller's Office grants an exemption. Specific information regarding electronic funds transfer requirements and how to register for it are contained in the Contract Specification Book (See Table of Contents for location of this information.)

1.09 CONTINGENT ITEMS

- A. Construction items for which quantities are listed in the Unit Price Schedule as "Contingent" are established for the purpose of obtaining bids on one or more pay items that may be incorporated into the project.
- B. The Engineer will have sole discretion in determining whether and to what extent these items will be incorporated into the project. The Engineer may order these items to be used at any location within the project and anytime during the work. In most cases contingent items will not be shown on the Plans. The estimated quantities specified in the Unit Price Schedule for these items are presented solely for the purpose of obtaining a representative bid price. The total of actual quantities required for the construction may be only a fraction of, or many times the estimated quantity. The requirements of GP-4.04 (Variations in Estimated Quantities) shall apply.

1.10 ELIMINATED ITEMS

- A. Should any Contract items contained in the Unit Price Schedule be found unnecessary for the proper completion of the work contracted, the Engineer may, upon written order to the Contractor, eliminate such Contract items from the Contract.
- B. No allowance will be made for items so eliminated in making final payment to the Contractor except for material costs incurred prior to notification of the eliminated of the items.

PART 2 - PRODUCTS**NOT USED****PART 3 - EXECUTION****NOT USED****PART 4 - MEASUREMENT AND PAYMENT****1.11 SUMMARY OF WORK**

- A. Summary of Work will not be measured for payment.
- B. Summary of Work will not be paid for directly, but will be considered incidental to the individual work items.

END OF SECTION

SECTION 02741
ASPHALT PAVING
PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Hot-mix asphalt patching.
 - 2. Hot-mix asphalt paving.
 - 3. Hot-mix asphalt overlay.
- B. Related Requirements:
 - 1. Section 02317 "Excavation and Fill" for subgrade preparation, fill material, unbound-aggregate subbase and base courses, and for aggregate pavement shoulders.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project Site.

1.3 SUBMITTALS

- A. In accordance with SECTION 01300 – SUBMITTALS submit the following, for review or approval by the Engineer.
 - 1. Product Data: For each type of product.
 - 2. Material Certificates: For each paving material.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A paving-mix manufacturer registered with and approved by authorities having jurisdiction or the Maryland Department of Transportation.
- B. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of Maryland Department of Transportation for asphalt paving work.

PART 2 - PRODUCTS**2.1 AGGREGATES**

- A. Coarse Aggregate: ASTM D 692/D 692M, sound; angular crushed stone, crushed gravel, or cured, crushed blast-furnace slag.
- B. Fine Aggregate: ASTM D 1073 or AASHTO M 29, sharp-edged natural sand or sand prepared from stone, gravel, cured blast-furnace slag, or combinations thereof.
- C. Mineral Filler: ASTM D 242/D 242M or AASHTO M 17, rock or slag dust, hydraulic cement, or other inert material.

2.2 ASPHALT MATERIALS

- A. Asphalt Binder: AASHTO M 320, PG 64-22.
- B. Tack Coat: ASTM D 977 or AASHTO M 140 emulsified asphalt, or ASTM D 2397 or AASHTO M 208 cationic emulsified asphalt, slow setting, diluted in water, of suitable grade and consistency for application.

2.3 MIXES

- A. Hot-Mix Asphalt: Dense-graded, hot-laid, hot-mix asphalt plant mixes; designed according to procedures in AI MS-2, "Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types" to match existing pavement section.

PART 3 - EXECUTION**3.1 PATCHING**

- A. Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches (300 mm) into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new subgrade.
- B. Portland Cement Concrete Pavement: Break cracked slabs and roll as required to reseal concrete pieces firmly.
 - 1. Remove disintegrated or badly cracked pavement. Excavate rectangular or trapezoidal patches, extending into perimeter of adjacent sound pavement, unless otherwise indicated. Cut

excavation faces vertically. Recompact existing unbound-aggregate base course to form new subgrade.

- C. Tack Coat: Before placing patch material, apply tack coat uniformly to vertical asphalt surfaces abutting the patch. Apply at a rate of 0.05 to 0.15 gal./sq. yd. (0.2 to 0.7 L/sq. m).
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- D. Placing Patch Material: Fill excavated pavement areas with hot-mix asphalt base mix for full thickness of patch and, while still hot, compact flush with adjacent surface.

3.2 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
- B. Proof-roll subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
- C. Herbicide Treatment: Apply herbicide according to manufacturer's recommended rates and written application instructions. Apply to dry, prepared subgrade or surface of compacted-aggregate base before applying paving materials.
- D. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal./sq. yd. (0.2 to 0.7 L/sq. m).
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.3 PLACING HOT-MIX ASPHALT

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand in areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.

1. Spread mix at a minimum temperature of 250 deg F (121 deg C).
 2. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet (3 m) wide unless infill edge strips of a lesser width are required.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.4 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
1. Clean contact surfaces and apply tack coat to joints.
 2. Offset longitudinal joints, in successive courses, a minimum of 6 inches (150 mm).
 3. Offset transverse joints, in successive courses, a minimum of 24 inches (600 mm).
 4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."

3.5 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
1. Complete compaction before mix temperature cools to 185 deg F (85 deg C).
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.

- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
 - 1. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent or greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- G. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.6 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances:
 - 1. Base Course: Plus or minus 1/2 inch (13 mm).
 - 2. Surface Course: Plus 1/4 inch (6 mm), no minus.
- B. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot (3-m) straightedge applied transversely or longitudinally to paved areas:
 - 1. Base Course: 1/4 inch (6 mm).
 - 2. Surface Course: 1/8 inch (3 mm).
 - 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch (6 mm).

3.7 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

- B. Replace and compact hot-mix asphalt where core tests were taken.
- C. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

PART 4 - MEASUREMENT AND PAYMENT

4.1 ASPHALT PAVING

- A. Asphalt Paving measured per cubic yard will include all the work necessary for furnishing and installing the material for payment.
- B. Asphalt Paving will be paid for at the Contract unit price bid per cubic yard of Portland Cement concrete pavement placed and accepted, which will be full compensation for all material, equipment, tools, labor and all work incidental to complete the item as specified and shown on the Drawings.

END OF SECTION

SECTION 03450**ARCHITECTURAL PRECAST CONCRETE****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Architectural precast concrete cladding trim units.

1.03 DEFINITION

- A. Design Reference Sample: Sample of approved architectural precast concrete color, finish and texture, preapproved by Architect.

1.04 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide architectural precast concrete units and connections capable of withstanding the following design loads within limits and under conditions indicated:
 - 1. Wind Loads: Uniform pressure of 30 lbs. force per square foot, acting inward or outward.
 - 2. Design framing system and connections to maintain clearances at openings, to allow for fabrication and construction tolerances, to accommodate live-load deflection, shrinkage and creep of primary building structure, and other building movements as follows:
 - a. Upward and downward movement of 1/2 inch (13 mm).
 - 3. Thermal Movements: Provide for in-plane thermal movements resulting from annual ambient temperature changes of 100 deg F.

1.05 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each precast concrete mixture. Include compressive strength and water-absorption tests.

- C. Shop Drawings: Detail fabrication and installation of architectural precast concrete units. Indicate locations, plans, elevations, dimensions, shapes, and cross sections of each unit. Indicate joints, reveals, and extent and location of each surface finish. Indicate details at building corners.
1. Indicate separate face and backup mixture locations and thicknesses.
 2. Indicate welded connections by AWS standard symbols. Detail loose and cast-in hardware and connections.
 3. Indicate locations, tolerances, and details of anchorage devices to be embedded in or attached to structure or other construction.
 4. Indicate locations, extent, and treatment of dry joints if two-stage casting is proposed.
 5. Include plans and elevations showing unit location and sequence of erection for special conditions.
 6. Indicate location of each architectural precast concrete unit by same identification mark placed on panel.
 7. Indicate relationship of architectural precast concrete units to adjacent materials.
 8. Indicate locations and details of brick units, including corner units and special shapes, and joint treatment.
 9. Indicate locations and details of stone facings, anchors, and joint widths.
 10. Design Modifications: If design modifications are proposed to meet performance requirements and field conditions, submit design calculations and Shop Drawings. Do not adversely affect the appearance, durability, or strength of units when modifying details or materials and maintain the general design concept.
 11. Comprehensive engineering analysis signed and sealed by the qualified professional engineer responsible for its preparation. Show governing panel types, connections, and types of reinforcement, including special reinforcement. Indicate location, type, magnitude, and direction of loads imposed on the building structural frame from architectural precast concrete.
- D. Samples: For each type of finish indicated on exposed surfaces of architectural precast concrete units, in sets of 3, illustrating full range of

finish, color, and texture variations expected; approximately 12 by 12 by 2 inches.

1. When other faces of precast concrete unit are exposed, include Samples illustrating workmanship, color, and texture of backup concrete as well as facing concrete.

E. Qualification Data: For Installer and for fabricator.

F. Welding certificates.

G. Material Certificates: For the following items, signed by manufacturers:

1. Cementitious materials.
2. Reinforcing materials and prestressing tendons.
3. Admixtures.
4. Structural-steel shapes and hollow structural sections.
5. Stone anchors.

H. Material Test Reports: For aggregates.

I. Source quality-control test reports.

J. Field quality-control test and special inspection reports.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: A precast concrete erector qualified and designated by PCI's Certificate of Compliance to erect Category A (Architectural Systems) for non-load-bearing members.

B. Fabricator Qualifications: A firm that assumes responsibility for engineering architectural precast concrete units to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.

1. Participates in PCI's plant certification program at time of bidding and is designated a PCI-certified plant for Group A, Category A1 - Architectural Cladding and Load Bearing Units or participates in APA's "Plant Certification Program for Production of Architectural Precast Concrete Products" and is designated an APA-certified plant.

- C. **Testing Agency Qualifications:** An independent testing agency qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
- D. **Design Standards:** Comply with ACI 318 (ACI 318M) and design recommendations of PCI MNL 120, "PCI Design Handbook - Precast and Prestressed Concrete," applicable to types of architectural precast concrete units indicated.
- E. **Quality-Control Standard:** For manufacturing procedures and testing requirements, quality-control recommendations, and dimensional tolerances for types of units required, comply with PCI MNL 117, "Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products."
- F. **Welding:** Qualify procedures and personnel according to AWS D1.1/D.1.1M, "Structural Welding Code - Steel"; and AWS D1.4, "Structural Welding Code - Reinforcing Steel."
- G. **Sample Panels:** After sample approval and before fabricating architectural precast concrete units, produce a minimum of 2 sample pieces approximately 2 feet by 2 feet by 6 inches in area for review by Architect. Incorporate full-scale details of architectural features, finishes, textures, and transitions in sample pieces.
1. Locate pieces where indicated or, if not indicated, on site at the Contractor's direction.
 2. Damage part of an exposed-face surface for each finish, color, and texture, and demonstrate adequacy of repair techniques proposed for repair of surface blemishes.
 3. After acceptance of repair technique, maintain one sample piece at manufacturer's plant and one at Project site in an undisturbed condition as a standard for judging the completed Work.
 4. Demolish and remove sample pieces when directed.
- H. **Mockups:** After sample piece approval but before production of architectural precast concrete units, construct full-sized mockup to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Build mockup as indicated on Drawings architectural precast concrete complete with anchors, connections, flashings, and joint fillers.
 2. Approved mockups may become part of the completed Work if undamaged at time of Substantial Completion.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents unless such deviations are specifically approved by Architect in writing.
- I. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Section 01310 "Project Management and Coordination."

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver architectural precast concrete units in such quantities and at such times to limit unloading units temporarily on the ground.
- B. Support units during shipment on nonstaining shock-absorbing material.
- C. Store units with adequate dunnage and bracing and protect units to prevent contact with soil, to prevent staining, and to prevent cracking, distortion, warping or other physical damage.
- D. Place stored units so identification marks are clearly visible, and units can be inspected.
- E. Handle and transport units in a position consistent with their shape and design in order to avoid excessive stresses which would cause cracking or damage.
- F. Lift and support units only at designated points shown on Shop Drawings.

1.08 SEQUENCING

- A. Furnish loose connection hardware and anchorage items to be embedded in or attached to other construction without delaying the Work. Provide locations, setting diagrams, templates, instructions, and directions, as required, for installation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Fabricators: Subject to compliance with requirements, provide products by one of the following:
 1. Smith Midland Corporation.
 2. High Concrete Group.
 3. Oldcastle Precast Building Systems Division.

2.02 MOLD MATERIALS

- A. Molds: Rigid, dimensionally stable, non-absorptive material, warp and buckle free, that will provide continuous and true precast concrete surfaces within fabrication tolerances indicated; nonreactive with concrete and suitable for producing required finishes.
 - 1. Mold-Release Agent: Commercially produced liquid-release agent that will not bond with, stain or adversely affect precast concrete surfaces and will not impair subsequent surface or joint treatments of precast concrete.
- B. Form Liners: Units of face design, texture, arrangement, and configuration indicated. Furnish with manufacturer's recommended liquid-release agent that will not bond with, stain, or adversely affect precast concrete surfaces and will not impair subsequent surface or joint treatments of precast concrete.
- C. Surface Retarder: Chemical set retarder, capable of temporarily delaying final hardening of newly placed concrete mixture to depth of reveal specified.

2.03 REINFORCING MATERIALS

- A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.
- B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
- C. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
- D. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.
- E. Supports: Suspend reinforcement from back of mold or use bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place according to PCI MNL 117.

2.04 CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, Type I or Type II, white, unless otherwise indicated.
 - 1. For surfaces exposed to view in finished structure, mix gray with white cement, of same type, brand, and mill source.

- B. Supplementary Cementitious Materials:
1. Fly Ash: ASTM C 618, Class C or F, with maximum loss on ignition of 3 percent.
 2. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
- C. Normal-Weight Aggregates: Except as modified by PCI MNL 117, ASTM C 33, with coarse aggregates complying with Class 5S. Stockpile fine and coarse aggregates for each type of exposed finish from a single source (pit or quarry) for Project.
1. Face-Mixture-Coarse Aggregates: Selected, hard, and durable; free of material that reacts with cement or causes staining; to match selected finish sample.
 - a. Gradation: Uniformly graded.
 2. Face-Mixture-Fine Aggregates: Selected, natural or manufactured sand of same material as coarse aggregate, unless otherwise approved by Architect.
- D. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of concrete and complying with chemical limits of PCI MNL 117.
- E. Air-Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.
- F. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and to not contain calcium chloride, or more than 0.15 percent chloride ions or other salts by weight of admixture.
1. Water-Reducing Admixtures: ASTM C 494/C 494M, Type A.

2.05 STEEL CONNECTION MATERIALS

- A. Carbon-Steel Shapes and Plates: ASTM A 36/A 36M.
- B. Carbon-Steel-Headed Studs: ASTM A 108, AISI 1018 through AISI 1020, cold finished, AWS D1.1/D1.1M, Type A or B, with arc shields and with minimum mechanical properties of PCI MNL 117, Table 3.2.3.
- C. Carbon-Steel Plate: ASTM A 283/A 283M.
- D. Malleable Iron Castings: ASTM A 47/A 47M.

- E. Carbon-Steel Castings: ASTM A 27/A 27M, Grade 60-30 (Grade 415-205).
- F. High-Strength, Low-Alloy Structural Steel: ASTM A 572/A 572M.
- G. Carbon-Steel Structural Tubing: ASTM A 500, Grade B.
- H. Wrought Carbon-Steel Bars: ASTM A 675/A 675M, Grade 65 (Grade 450).
- I. Deformed-Steel Wire or Bar Anchors: ASTM A 496 or ASTM A 706/A 706M.
- J. Carbon-Steel Bolts and Studs: ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); carbon-steel, hex-head bolts and studs; carbon-steel nuts, ASTM A 563 (ASTM A 563M); and flat, unhardened steel washers, ASTM F 844.
- K. High-Strength Bolts and Nuts: ASTM A 325 (ASTM A 325M), Type 1, heavy hex steel structural bolts; heavy hex carbon-steel nuts, ASTM A 563 (ASTM A 563M); and hardened carbon-steel washers, ASTM F 436 (ASTM F 436M).
- L. Shop-Primed Finish: Prepare surfaces of nongalvanized steel items, except those surfaces to be embedded in concrete, according to requirements in SSPC-SP 3 and shop-apply lead- and chromate-free, rust-inhibitive primer, complying with performance requirements in Section 09900, according to SSPC-PA 1.
- M. Welding Electrodes: Comply with AWS standards.

2.06 ACCESSORIES

- A. Precast Accessories: Provide clips, hangers, plastic or steel shims, and other accessories required to install architectural precast concrete units.

2.07 GROUT MATERIALS

- A. Sand-Cement Grout: Portland cement, ASTM C 150, Type I, and clean, natural sand, ASTM C 144 or ASTM C 404. Mix at ratio of 1 part cement to 2-1/2 parts sand, by volume, with minimum water required for placement and hydration.

2.08 CONCRETE MIXTURES

- A. Prepare design mixtures for each type of precast concrete required.

1. Limit use of fly ash and silica fume to 20 percent of portland cement by weight.
- B. Design mixtures may be prepared by a qualified independent testing agency or by qualified precast plant personnel at architectural precast concrete fabricator's option.
- C. Limit water-soluble chloride ions to maximum percentage by weight of cement permitted by ACI 318 (ACI 318M) or PCI MNL 117 when tested according to ASTM C 1218/C 1218M.
- D. Normal-Weight Concrete Mixtures: Proportion full-depth mixture by either laboratory trial batch or field test data methods according to ACI 211.1, with materials to be used on Project, to provide normal-weight concrete with the following properties:
 1. Compressive Strength (28 Days): 5000 psi (34.5 MPa) minimum.
 2. Maximum Water-Cementitious Materials Ratio: 0.45.
- E. Water Absorption: 6 percent by weight or 14 percent by volume, tested according to PCI MNL 117.
- F. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content complying with PCI MNL 117.
- G. When included in design mixtures, add other admixtures to concrete mixtures according to manufacturer's written instructions.
- H. Color of Precast: Match PCI Color 109, with medium sandblast finish.
- I. Components:
 1. Cement: White
 2. Fine Aggregate: Crushed buff limestone.
 3. Coarse Aggregate: ¼" to ½" buff limestone.

2.09 MOLD FABRICATION

- A. Molds: Accurately construct molds, mortar tight, of sufficient strength to withstand pressures due to concrete-placement operations and temperature changes and for prestressing and detensioning operations. Coat contact surfaces of molds with release agent before reinforcement is placed. Avoid contamination of reinforcement and prestressing tendons by release agent.

1. Place form liners accurately to provide finished surface texture indicated. Provide solid backing and supports to maintain stability of liners during concrete placement. Coat form liner with form-release agent.
- B. Maintain molds to provide completed architectural precast concrete units of shapes, lines, and dimensions indicated, within fabrication tolerances specified.
 1. Form joints are not permitted on faces exposed to view in the finished work.
 2. Edge and Corner Treatment: Uniformly chamfered.

2.10 FABRICATION

- A. Cast-in Anchors, Inserts, Plates, Angles, and Other Anchorage Hardware: Fabricate anchorage hardware with sufficient anchorage and embedment to comply with design requirements. Accurately position for attachment of loose hardware, and secure in place during precasting operations. Locate anchorage hardware where it does not affect position of main reinforcement or concrete placement.
 1. Weld-headed studs and deformed bar anchors used for anchorage according to AWS D1.1/D1.1M and AWS C5.4, "Recommended Practices for Stud Welding."
- B. Furnish loose hardware items including steel plates, clip angles, seat angles, anchors, dowels, cramps, hangers, and other hardware shapes for securing architectural precast concrete units to supporting and adjacent construction.
- C. Cast-in reglets, slots, holes, and other accessories in architectural precast concrete units as indicated on the Contract Drawings.
- D. Cast-in openings larger than 10 inches (250 mm) in any dimension. Do not drill or cut openings or prestressing strand without Architect's approval.
- E. Reinforcement: Comply with recommendations in PCI MNL 117 for fabricating, placing, and supporting reinforcement.
 1. Clean reinforcement of loose rust and mill scale, earth, and other materials that reduce or destroy the bond with concrete. When damage to epoxy-coated reinforcing exceeds limits specified in ASTM A 775/A 775M, repair with patching material compatible with coating material and epoxy coat bar ends after cutting.

2. Accurately position, support, and secure reinforcement against displacement during concrete-placement and consolidation operations. Completely conceal support devices to prevent exposure on finished surfaces.
 3. Place reinforcement to maintain at least 3/4-inch (19-mm) minimum coverage. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Direct wire tie ends away from finished, exposed concrete surfaces.
 4. Place reinforcing steel and prestressing strand to maintain at least 3/4-inch (19-mm) minimum concrete cover. Increase cover requirements for reinforcing steel to 1-1/2 inches (38 mm) when units are exposed to corrosive environment or severe exposure conditions. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Direct wire tie ends away from finished, exposed concrete surfaces.
 5. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh spacing and wire tie laps, where required by design. Offset laps of adjoining widths to prevent continuous laps in either direction.
- F. Reinforce architectural precast concrete units to resist handling, transportation, and erection stresses.
- G. Comply with requirements in PCI MNL 117 and requirements in this Section for measuring, mixing, transporting, and placing concrete. After concrete batching, no additional water may be added.
- H. Place face mixture to a minimum thickness after consolidation of the greater of 1 inch (25 mm) or 1.5 times the maximum aggregate size, but not less than the minimum reinforcing cover specified.
- I. Place concrete in a continuous operation to prevent seams or planes of weakness from forming in precast concrete units.
- J. Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items, and minimize pour lines, honeycombing, or entrapped air on surfaces. Use equipment and procedures complying with PCI MNL 117.
- K. Comply with PCI MNL 117 for hot- and cold-weather concrete placement.
- L. Identify pickup points of architectural precast concrete units and orientation in structure with permanent markings, complying with markings indicated on Shop Drawings. Imprint or permanently mark

casting date on each architectural precast concrete unit on a surface that will not show in finished structure.

- M. Cure concrete, according to requirements in PCI MNL 117, by moisture retention without heat or by accelerated heat curing using low-pressure live steam or radiant heat and moisture. Cure units until compressive strength is high enough to ensure that stripping does not have an effect on performance or appearance of final product.
- N. Discard and replace architectural precast concrete units that do not comply with requirements, including structural, manufacturing tolerance, and appearance, unless repairs meet requirements in PCI MNL 117 and Architect's approval.

2.11 FABRICATION TOLERANCES

- A. Fabricate architectural precast concrete units straight and true to size and shape with exposed edges and corners precise and true so each finished panel complies with PCI MNL 117 product tolerances as well as position tolerances for cast-in items.
- B. Fabricate architectural precast concrete units straight and true to size and shape with exposed edges and corners precise and true so each finished panel complies with the following product tolerances:
 - 1. Overall Height and Width of Units, Measured at the Face Exposed to View: As follows:
 - a. 10 feet (3 m) or under, plus or minus 1/8 inch (3 mm).
 - b. 10 to 20 feet (3 to 6 m), plus 1/8 inch (3 mm), minus 3/16 inch (5 mm).
 - 2. Overall Height and Width of Units, Measured at the Face Not Exposed to View: As follows:
 - a. 10 feet (3 m) or under, plus or minus 1/4 inch (6 mm).
 - b. 10 to 20 feet (3 to 6 m), plus 1/4 inch (6 mm), minus 3/8 inch (10 mm).
 - 3. Total Thickness or Flange Thickness: Plus 1/4 inch (6 mm), minus 1/8 inch (3 mm).
 - 4. Variation from Square or Designated Skew (Difference in Length of the Two Diagonal Measurements): Plus or minus 1/8 inch per 72 inches (3 mm per 1830 mm) or 1/2 inch (13 mm) total, whichever is greater.
 - 5. Length and Width of Block-outs and Openings within One Unit: Plus or minus 1/4 inch (6 mm).

6. Dimensions of Haunches: Plus or minus 1/4 inch (6 mm).
 7. Haunch Bearing Surface Deviation from Specified Plane: Plus or minus 1/8 inch (3 mm).
 8. Difference in Relative Position of Adjacent Haunch Bearing Surfaces from Specified Relative Position: Plus or minus 1/4 inch (6 mm).
 9. Bowing: Plus or minus L/360, maximum 1 inch (25 mm).
 10. Local Smoothness: 1/4 inch per 10 feet (6 mm per 3 m).
 11. Warping: 1/16 inch per 12 inches (1.5 mm per 300 mm) of distance from nearest adjacent corner.
- C. Position Tolerances: For cast-in items measured from datum line location, as indicated on Shop Drawings.
1. Weld Plates: Plus or minus 1 inch (25 mm).
 2. Inserts: Plus or minus 1/2 inch (13 mm).
 3. Handling Devices: Plus or minus 3 inches (75 mm).
 4. Reinforcing Steel and Welded Wire Fabric: Plus or minus 1/4 inch (6 mm) where position has structural implications or affects concrete cover; otherwise, plus or minus 1/2 inch (13 mm).
 5. Reinforcing Steel Extending out of Member: Plus or minus 1/2 inch (13 mm) of plan dimensions.
 6. Tendons: Plus or minus 1/4 inch (6 mm), vertical; plus or minus 1 inch (25 mm), horizontal.
 7. Location of Rustication Joints: Plus or minus 1/8 inch (3 mm).
 8. Location of Opening within Panel: Plus or minus 1/4 inch (6 mm).
 9. Location of Flashing Reglets: Plus or minus 1/4 inch (6 mm).
 10. Location of Flashing Reglets at Edge of Panel: Plus or minus 1/8 inch (3 mm).
 11. Reglets for Glazing Gaskets: Plus or minus 1/8 inch (3 mm).
 12. Location of Bearing Surface from End of Member: Plus or minus 1/4 inch (6 mm).

13. Allowable Rotation of Plate, Channel Inserts, and Electrical Boxes: 2-degree rotation or 1/4 inch (6 mm) maximum over the full dimension of unit.
14. Position of Sleeve: Plus or minus 1/2 inch (13 mm).

2.12 FINISHES

- A. Panel faces shall be free of joint marks, grain, and other obvious defects. Corners, including false joints shall be uniform, straight, and sharp. Finish exposed-face surfaces of architectural precast concrete units to match approved sample pieces and as follows:
 1. PCI's "Architectural Precast Concrete - Color and Texture Selection Guide," of plate numbers indicated.
 2. As-Cast Surface Finish: Provide surfaces free of pockets, sand streaks, and honeycombs.
 3. Abrasive-Blast Finish: Use abrasive grit, equipment, application techniques, and cleaning procedures to expose aggregate and surrounding matrix surfaces.
- B. Finish exposed top surfaces of architectural precast concrete units to match face-surface finish.
- C. Finish unexposed surfaces of architectural precast concrete units by float finish.

2.13 SOURCE QUALITY CONTROL

- A. Quality-Control Testing: Test and inspect precast concrete according to PCI MNL 117 requirements. If using self-consolidating concrete, also test and inspect according to PCI TR-6, "Interim Guidelines for the Use of Self-Consolidating Concrete in Precast/Prestressed Concrete Institute Member Plants."
- B. Owner will employ an independent testing agency to evaluate architectural precast concrete fabricator's quality-control and testing methods.
 1. Allow Owner's testing agency access to material storage areas, concrete production equipment, concrete placement, and curing facilities. Cooperate with Owner's testing agency and provide samples of materials and concrete mixtures as may be requested for additional testing and evaluation.
- C. Strength of precast concrete units will be considered deficient if units fail to comply with ACI 318 (ACI 318M) requirements for concrete strength.

- D. Testing: If there is evidence that strength of precast concrete units may be deficient or may not comply with ACI 318 (ACI 318M) requirements, precaster will employ an independent testing agency to obtain, prepare, and test cores drilled from hardened concrete to determine compressive strength according to ASTM C 42/C 42M.
1. A minimum of three representative cores will be taken from units of suspect strength, from locations directed by Architect.
 2. Cores will be tested in an air-dry condition.
 3. Strength of concrete for each series of 3 cores will be considered satisfactory if average compressive strength is equal to at least 85 percent of 28-day design compressive strength and no single core is less than 75 percent of 28-day design compressive strength.
 4. Test results will be made in writing on same day that tests are performed, with copies to Architect, Contractor, and precast concrete fabricator. Test reports will include the following:
 - a. Project identification name and number.
 - b. Date when tests were performed.
 - c. Name of precast concrete fabricator.
 - d. Name of concrete testing agency.
 - e. Identification letter, name, and type of precast concrete unit(s) represented by core tests; design compressive strength; type of break; compressive strength at breaks, corrected for length-diameter ratio; and direction of applied load to core in relation to horizontal plane of concrete as placed.
- E. Patching: If core test results are satisfactory and precast concrete units comply with requirements, clean and dampen core holes and solidly fill with precast concrete mixture that has no coarse aggregate, and finish to match adjacent precast concrete surfaces.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine supporting structural frame or foundation and conditions for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

- C. Do not install precast concrete units until supporting cast-in-place building structural framing has attained minimum allowable design compressive strength or supporting steel or other structure is complete.

3.02 INSTALLATION

- A. Install clips, hangers, bearing pads, and other accessories required for connecting architectural precast concrete units to supporting members and backup materials.
- B. Erect architectural precast concrete level, plumb, and square within specified allowable tolerances. Provide temporary supports and bracing as required to maintain position, stability, and alignment as units are being permanently connected.
 - 1. Install temporary steel or plastic spacing shims or bearing pads as precast concrete units are being erected. Tack weld steel shims to each other to prevent shims from separating.
 - 2. Maintain horizontal and vertical joint alignment and uniform joint width as erection progresses.
 - 3. Remove projecting lifting devices and grout fill voids within recessed lifting devices flush with surface of adjacent precast surfaces when recess is exposed.
 - 4. Unless otherwise indicated, maintain uniform joint widths of 3/4 inch (19 mm).
- C. Connect architectural precast concrete units in position by bolting, welding, grouting, or as otherwise indicated on Shop Drawings. Remove temporary shims, wedges, and spacers as soon as practical after connecting and grouting are completed.
 - 1. Do not permit connections to disrupt continuity of roof flashing.
- D. Welding: Comply with applicable AWS D1.1/D1.1M and AWS D1.4 for welding, welding electrodes, appearance, quality of welds, and methods used in correcting welding work.
 - 1. Protect architectural precast concrete units and bearing pads from damage by field welding or cutting operations, and provide noncombustible shields as required.
 - 2. Welds not specified shall be continuous fillet welds, using no less than the minimum fillet as specified by AWS.

3. Clean weld-affected metal surfaces with chipping hammer followed by brushing, and apply a minimum 4.0-mil- (0.1-mm-) thick coat of galvanized repair paint to galvanized surfaces according to ASTM A 780.
 4. Clean weld-affected metal surfaces with chipping hammer followed by brushing, and reprime damaged painted surfaces.
 5. Remove, reweld, or repair incomplete and defective welds.
- E. At bolted connections, use lock washers, tack welding, or other approved means to prevent loosening of nuts after final adjustment.
1. Where slotted connections are used, verify bolt position and tightness. For sliding connections, properly secure bolt but allow bolt to move within connection slot. For friction connections, apply specified bolt torque and check 25 percent of bolts at random by calibrated torque wrench.
- F. Grouting Connections: Grout connections where required or indicated. Retain grout in place until hard enough to support itself. Pack spaces with stiff grout material, tamping until voids are completely filled. Place grout to finish smooth, level, and plumb with adjacent concrete surfaces. Keep grouted joints damp for not less than 24 hours after initial set. Promptly remove grout material from exposed surfaces before it affects finishes or hardens.

3.03 ERECTION TOLERANCES

- A. Erect architectural precast concrete units level, plumb, square, true, and in alignment without exceeding the noncumulative erection tolerances of PCI MNL 117, Appendix I.
- B. Erect architectural precast concrete units level, plumb, square, and true, without exceeding the following noncumulative erection tolerances:
1. Plan Location from Building Grid Datum: Plus or minus 1/2 inch (13 mm).
 2. Plan Location from Centerline of Steel: Plus or minus 1/2 inch (13 mm).
 3. Top Elevation from Nominal Top Elevation: As follows:
 - a. Exposed Individual Panel: Plus or minus 1/4 inch (6 mm).
 - b. Non-Exposed Individual Panel: Plus or minus 1/2 inch (13 mm).
 - c. Exposed Panel Relative to Adjacent Panel: 1/4 inch (6 mm).

- d. Non-Exposed Panel Relative to Adjacent Panel: 1/2 inch (13 mm).
4. Support Elevation from Nominal Support Elevation: As follows:
 - a. Maximum Low: 1/2 inch (13 mm).
 - b. Maximum High: 1/4 inch (6 mm).
5. Maximum Plumb Variation over the Lesser of Height of Structure or 100 Feet (30 m): 1 inch (25 mm).
6. Plumb in Any 10 Feet (3 m) of Element Height: 1/4 inch (6 mm).
7. Maximum Jog in Alignment of Matching Edges: 1/4 inch (6 mm).
8. Joint Width (Governs over Joint Taper): Plus or minus 1/4 inch (6 mm).
9. Maximum Joint Taper: 3/8 inch (10 mm).
10. Joint Taper in 10 Feet (3 m): 1/4 inch (6 mm).
11. Maximum Jog in Alignment of Matching Faces: 1/4 inch (6 mm).
12. Differential Bowing or Camber, as Erected, between Adjacent Members of Same Design: 1/4 inch (6 mm).
13. Opening Height between Spandrels: Plus or minus 1/4 inch (6 mm).

3.04 FIELD QUALITY CONTROL

- A. Special Inspections: Engage a qualified special inspector to perform the following special inspections and prepare reports:
 1. Erection of precast concrete members.
- B. Testing Agency: Engage a qualified testing agency to perform tests and inspections and prepare test reports.
- C. Field welds will be subject to visual inspections and nondestructive testing according to ASTM E 165 or ASTM E 709. High-strength bolted connections will be subject to inspections.
- D. Testing agency will report test results promptly and in writing to Contractor and Architect.
- E. Repair or remove and replace work where tests and inspections indicate that it does not comply with specified requirements.

- F. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.05 REPAIRS

- A. Repair architectural precast concrete units if permitted by Architect. The Architect reserves the right to reject repaired units that do not comply with requirements.
- B. Mix patching materials and repair units so cured patches blend with color, texture, and uniformity of adjacent exposed surfaces and show no apparent line of demarcation between original and repaired work, when viewed in typical daylight illumination from a distance of 20 feet (6 m).
- C. Prepare and repair damaged galvanized coatings with galvanizing repair paint according to ASTM A 780.
- D. Wire brush, clean, and paint damaged prime-painted components with same type of shop primer.
- E. Remove and replace damaged architectural precast concrete units when repairs do not comply with requirements.

3.06 CLEANING

- A. Clean surfaces of precast concrete units exposed to view.
- B. Clean mortar, plaster, fireproofing, weld slag, and other deleterious material from concrete surfaces and adjacent materials immediately.
- C. Clean exposed surfaces of precast concrete units after erection and completion of joint treatment to remove weld marks, other markings, dirt, and stains.
 - 1. Perform cleaning procedures, if necessary, according to precast concrete fabricator's recommendations. Clean soiled precast concrete surfaces with detergent and water, using stiff fiber brushes and sponges, and rinse with clean water. Protect other work from staining or damage due to cleaning operations.
 - 2. Do not use cleaning materials or processes that could change the appearance of exposed concrete finishes or damage adjacent materials.

PART 4 - MEASUREMENT AND PAYMENT

4.01 ARCHITECTURAL PRECAST CONCRETE

- A. The Architectural Precast Concrete work required under this Section will not be measured for payment.
- B. Architectural Precast Concrete will be paid for and included in the lump sum bid price for Unit Masonry, complete in place, accepted, which price will be full compensation for all material, equipment, tools, labor, and all work incidental to complete the item as specified.

END OF SECTION

SECTION 05120
STRUCTURAL STEEL
PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes structural steel.

1.02 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.
1. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
 - a. AISC 303 (2005) Code of Standard Practice for Steel Buildings and Bridges
 - b. AISC 325 (2005) Manual of Steel Construction
 - c. AISC 326 (2002) Detailing for Steel Construction
 - d. AISC 350 (2005) Specification for Structural Steel Buildings
 - e. AISC 360 (2005) Specification for Structural Steel Buildings, with Commentary
 - f. AISC 810 (1997) Erection Bracing of Low-Rise Structural Steel Frames/Fisher and West
 - g. AISC FCD(1995a) Quality Certification Program Description
 2. AMERICAN WELDING SOCIETY (AWS)
 - a. AWS D1.1/D1.1M (2006) Structural Welding Code – Steel
 3. ASME INTERNATIONAL (ASME)
 - a. ASME B46.1 (2002) Surface Texture (Surface Roughness, Waviness and Lay)
 4. ASTM INTERNATIONAL (ASTM)
 - a. ASTM A 108 (2007) Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished
 - b. ASTM A 123/A 123M (2008) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
 - c. ASTM A 143/A 143M (2007) Standard Practice for Safeguarding Against Embrittlement of Hot-Dip

- Galvanized Structural Steel Products and Procedure for Detecting Embrittlement
- d. ASTM A 153/A 153M (2005) Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
 - e. ASTM A 242/A 242M (2004e1) Standard Specification for High-Strength Low-Alloy Structural Steel
 - f. ASTM A 307 (2007b) Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength
 - g. ASTM A 325 (2009) Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength
 - h. ASTM A 36/A 36M (2008) Standard Specification for Carbon Structural Steel
 - i. ASTM A 501 (2007) Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
 - j. ASTM A 514/A 514M (2005) Standard Specification for High-Yield-Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding
 - k. ASTM A 53/A 53M (2007) Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
 - l. ASTM A 6/A 6M (2008a) Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
 - m. ASTM A 780 (2001; R 2006) Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
 - n. ASTM A 992/A 992M (2006a) Standard Specification for Structural Steel Shapes
 - o. ASTM B 695 (2004) Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel
 - p. ASTM F 436 (2009) Hardened Steel Washers

1.03 DEFINITIONS

- A. Structural Steel: Elements of structural-steel frame, as classified by AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."
- B. Heavy sections: Rolled and built-up sections as follows:
 - 1. Shapes included in ASTM A 6/A 6M with flanges thicker than 1-1/2 inches.
 - 2. Welded built up members w/ plates thicker than 2 inches.
 - 3. Column base plates thicker than 2 inches.

1.04 PERFORMANCE REQUIREMENTS

- A. Shear Connections: Provide details of simple shear connections required by the Contract Documents to be selected or completed by structural-steel fabricator.
 - 1. Select and complete connections using schematic details indicated and AISC 360.
- B. Moment Connections: Provide type FR, fully restrained at all locations shown on the plans or details unless a design moment is indicated. Provide comprehensive engineering design by a professional engineer registered in the State of Maryland.
- C. Braced Frame and Truss Connections: Provide comprehensive engineering design by a Professional Engineer registered in the State of Maryland for the unfactored loads indicated in the drawings.

1.05 SUBMITTALS

- A. In accordance with SECTION 01300 – SUBMITTALS submit the following, for review or approval by the Engineer.
 - 1. Product Data: For each type of product indicated.
 - 2. Shop Drawings: Show fabrication of structural-steel components.
 - a. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
 - b. Include embedment drawings.
 - c. Indicate all shop welds by standard AWS symbols, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
 - d. For structural-steel connections indicated to be designed by the contractor, submit comprehensive calculations, signed and sealed by the qualified professional engineer registered in the State of Maryland responsible for their preparation.
 - 3. Qualification Data: For qualified Installer, and fabricator.
 - 4. Welding certificates, welding procedure specifications (WPSs) and procedure qualification records (PQRs).
 - 5. Mill test reports for structural steel, including chemical and physical properties.
 - 6. Source quality-control reports.

7. Product Test Reports: Supply the certified manufacturer's mill reports which clearly show the applicable ASTM mechanical and chemical requirements together with the actual test results for the supplied fasteners:
 - a. Bolts, nuts, and washers including mechanical properties and chemical analysis.
 - b. Tension-control, high-strength Load Indicator bolt-nut-washer assemblies.
 - c. Shear stud connectors.
8. Paint Compatibility Certificates: From manufactures of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.
9. Product Test Reports: For the following:
 - a. Bolts, nuts, and washers including mechanical properties and chemical analysis.
 - b. Shear stud connectors.
 - c. Shop primers.
 - d. Nonshrink grout.
10. Field quality-control and special inspection reports.

1.06 QUALITY ASSURANCE

- A. Drawing Requirements: Submit fabrication drawings for approval prior to fabrication. Prepare in accordance with AISC 326 and AISC 325. Fabrication drawings shall not be reproductions of contract drawings. Include complete information for the fabrication and erection of the structure's components, including the location, type, and size of bolts, welds, member sizes, member lengths, connection details, blocks, copes and cuts. If necessary, shoring and temporary bracing shall be designed and submitted for record purposes, with calculations, as part of the drawings. Member substitutions of details shown on the contract drawings shall be clearly highlighted on the fabrication drawings. Explain the reasons for any deviations from the contract drawings.
- B. Fabricator Qualifications: Work shall be fabricated by a qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD.
- C. Installer Qualifications: A qualified installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector, Category CSE.
- D. Prequalification of Welding Operators: All fabrication shop welders, welding operators, and tackers shall be qualified in accordance with AWS

D1.1, as modified by AWS D1.5M/D1.5. The contractor shall ensure that the fabricator retains certified copies of the qualification test records (AWS D1.1, Appendix E) and requalification test, if appropriate, for use by the Department's authorized representative upon demand. In addition, records shall be maintained by the contractor to ensure compliance with AWS requirements for the period of effectiveness as indicated in AWS D1.1, section 5.30.

E. Preinstallation Conference: Conduct conference at Project site.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.

1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.

B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.

1. Fasteners may be repackaged provided the Department's testing and inspecting agency observes repackaging and seals containers.

2. Clean and relubricate bolts and nuts that become dry or rusty before use.

1.08 COORDINATION

A. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

PART 2 - PRODUCTS

2.01 STRUCTURAL-STEEL MATERIALS

A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.

B. W-Shapes: ASTM A 992/A 992M.

C. Channels, Angles -Shapes: ASTM A36.

- D. Plate and Bar: ASTM A36.
- E. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B, structural tubing.
- F. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B.
- G. Welding Electrodes: Comply with AWS requirements.

2.02 BOLTS, CONNECTORS, AND ANCHORS

- A. High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade C, heavy-hex carbon-steel nuts; and ASTM F 436, Type 1, hardened carbon-steel washers; all with plain finish.
 - 1. Direct-Tension Indicators: ASTM F 959, Type 325, compressible-washer type with plain finish.
- B. Shear Connectors: ASTM A 108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1/D1.1M, Type B.
- C. Unheaded Anchor Rods: ASTM F 1554, Grade 55, weldable.
 - 1. Configuration: Straight.
 - 2. Finish: Plain.
- D. Headed Anchor Rods: ASTM F 1554, Grade 55, weldable, straight.
 - 1. Finish: Mechanically desposited zinc unheaded anchor rods .
- E. Threaded Rods: ASTM A 36/A 36M.
 - 1. Finish: Plain.
- F. Clevises and Turnbuckles: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1035.

2.03 PRIMER

- A. Low-Emitting Materials: Paints and coatings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- B. Primer: Comply with Section 09900 "Painting".

2.04 GROUT

- A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive and nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.05 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC 360.
- B. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.
- C. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.
 - 1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.5M/D1.5.
- D. Bolt Holes: Cut, drill, or punch standard bolt holes perpendicular to metal surfaces.
- E. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.
- F. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel framing members.
 - 1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
 - 2. Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.

2.06 SHOP CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Snug tightened.

- B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

2.07 SHOP PRIMING

- A. Shop prime steel surfaces except the following:
 - 1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of 2 inches.
 - 2. Surfaces to be field welded.
 - 3. Surfaces to be high-strength bolted with slip-critical connections.
 - 4. Surfaces to receive sprayed fire-resistive materials (applied fireproofing).
 - 5. Galvanized surfaces.
- B. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:
 - 1. SSPC-SP 2, "Hand Tool Cleaning."
- C. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a minimum dry film thickness of 1.5 mils. Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.

2.08 SOURCE QUALITY CONTROL

- A. Testing Agency: The Contractor shall engage at his own expense an independent testing and inspecting agency to perform shop tests and inspections and prepare test reports.
 - 1. Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections.
- B. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.
- C. Bolted Connections: Shop-bolted connections will be tested and inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

- D. Welded Connections: In addition to visual inspection, shop-welded connections will be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
1. Liquid Penetrant Inspection: ASTM E 165.
 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 3. Ultrasonic Inspection: ASTM E 164.
 4. Radiographic Inspection: ASTM E 94.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify, with steel Erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
1. Prepare a certified survey of bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.

3.03 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Base Bearing and Leveling Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
1. Set plates for structural members on wedges, shims, or setting nuts as required.

2. Weld plate washers to top of baseplate.
 3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 4. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
- C. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."
- D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
1. Level and plumb individual members of structure.
 2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.
- E. Splice members only where indicated. Splices not indicated require approval by the Department.
- F. Do not use thermal cutting during erection unless approved by the Department. Finish thermally cut sections within smoothness limits in AWS D1.1.
- G. Use of a Gas Cutting torch in the field for correcting fabrication errors will not be permitted on any major member in the structural framing.
- H. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.
- I. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1 and manufacturer's written instructions.

3.04 FIELD CONNECTIONS

- A. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Snug tightened.
- B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.

3.05 FIELD QUALITY CONTROL

- A. Special Inspections: Engage a qualified special inspector to perform special inspections required by the International Building Code Chapter 17 including the following:
 - 1. Verify structural-steel materials and inspect steel frame joint details.
 - 2. Verify weld materials and inspect welds.
 - 3. Verify connection materials and inspect high-strength bolted connections.
- B. Bolted Connections: Bolted connections will be tested and inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- C. Welded Connections: Field welds will be visually inspected according to AWS D1.1/D1.1M.
 - 1. In addition to visual inspection, field welds will be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - a. Liquid Penetrant Inspection: ASTM E 165.
 - b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 - c. Ultrasonic Inspection: ASTM E 164.
 - d. Radiographic Inspection: ASTM E 94.

- D. In addition to visual inspection, test and inspect field-welded shear connectors according to requirements in AWS D1.1/D1.1M for stud welding and as follows:
 - 1. Perform bend tests if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
 - 2. Conduct tests according to requirements in AWS D1.1/D1.1M on additional shear connectors if weld fracture occurs on shear connectors already tested.
- E. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

3.06 REPAIRS AND PROTECTION

- A. **Galvanized Surfaces:** Clean areas where galvanizing is damaged by handling, transporting, bolting, or missing and repair galvanizing to comply with ASTM A 780 zinc rich paint. Do not heat surfaces which repair paint has been applied.

PART 4 - MEASUREMENT AND PAYMENT**4.01 STRUCTURAL STEEL**

- A. Structural Steel will not be measured for payment.
- B. All costs associated with the work in this section will be paid for as part of the lump sum bid price for Structural Steel.

END OF SECTION

SECTION 06615**SIMULATED STONE COUNTERTOPS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes:
 - 1. Solid-surface-material countertops and backsplashes.

1.03 SUBMITTALS

- A. In accordance with SECTION 01300 – SUBMITTALS, submit the following for review or approval by the Engineer.
 - 1. Product Data: For countertop materials.
 - 2. Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.
 - 3. Samples for Initial Selection: For each type of material exposed to view.

1.04 PROJECT CONDITIONS

- A. Field Measurements: Verify dimensions of countertops by field measurements after base cabinets are installed but before countertop fabrication is complete.

1.05 COORDINATION

- A. Coordinate locations of utilities that will penetrate countertops or backsplashes.

PART 2 - PRODUCTS**2.01 SOLID-SURFACE-MATERIAL COUNTERTOPS**

- A. Configuration: Provide countertops with the following front and backsplash style:
1. Front: 1-1/2-inch (38-mm) laminated bullnose.
 2. Backsplash: Radius edge with 3/8-inch (9.5-mm) radius.
 3. Endsplash: Matching backsplash.
- B. Countertops: 1/2-inch- thick, solid surface material with front edge built up with same material.
- C. Backsplashes: 1/2-inch-thick, solid surface material.
- D. Fabrication: Fabricate tops in one piece with shop-applied edges unless otherwise indicated. Comply with solid-surface-material manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.
1. Fabricate with loose backsplashes for field assembly.

2.02 COUNTERTOP MATERIALS

- A. Certified Wood Materials: Fabricate countertops with wood and wood-based products produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."
- B. Particleboard: ANSI A208.1, Grade M-2-Exterior Glue.
- C. Plywood: Exterior softwood plywood complying with DOC PS 1, Grade C-C Plugged, touch sanded.
- D. Adhesives: Adhesives shall not contain urea formaldehyde.
- E. Solid Surface Material: Homogeneous solid sheets of filled plastic resin complying with ANSI SS1.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Avonite Surfaces.
 - b. E. I. du Pont de Nemours and Company.
 - c. Meganite Inc.
 - d. Wilsonart International.

2. Type: Provide Standard Type or Veneer Type made from material complying with requirements for Standard Type, as indicated unless Special Purpose Type is indicated.
3. Sink Bowls: Provide stainless steel under-mount sink bowls as described in Section 15422, Commercial Sinks.
4. Colors and Patterns: As indicated in the drawings by manufacturer's designations.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install countertops level to a tolerance of 1/8 inch in 8 feet.
- B. Fasten countertops by screwing through corner blocks of base units into underside of countertop. Pre-drill holes for screws as recommended by manufacturer. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
 1. Install backsplashes and endsplashes to comply with manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.
 2. Seal edges of cutouts in particleboard subtops by saturating with varnish.

PART 4 - MEASUREMENT AND PAYMENT

4.01 SIMULATED STONE COUNTERTOPS

- A. The Simulated Stone Countertops work required under this Section will not be measured for payment.
- B. The Simulated Stone Countertops will be paid for and included in the lump sum bid price for Plastic Laminate Faced Architectural Cabinets, complete in place, accepted, which price will be full compensation for all material, equipment, tools, labor, and all work incidental to complete the item as specified.

END OF SECTION

SECTION 08120**FIBERGLASS DOORS AND FRAMES****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. This section includes requirements for providing all new fiberglass doors and frames as indicated in accordance with the Contract Documents.

1.02 SUBMITTALS

- A. In accordance with SECTION 01300 – SUBMITTALS submit the following, for review or approval by the Engineer.
1. General: Submit each item in this Article according to the General Requirements and the conditions of the Contract and Division 1 Specification sections.
 - a. Manufacturer's descriptive literature for doors and frames. Include data and details for door construction, panel (internal) reinforcement, insulation, and door edge construction.
 - b. Shop drawings for doors and frames showing elevations, construction details, hardware provisions, method of glazing, and installation details. Include a schedule showing doors and frames location.
 2. Related Sections: The following sections contain requirements that relate to this Section:
 - a. Division 8 Section "Door Hardware" for door hardware.

1.03 QUALITY ASSURANCE

- A. Single- Source Responsibility: Obtain doors from one source and by a single manufacturer.

1.04 DELIVERY AND STORAGE

- A. All materials shall be delivered to the site in sealed, undamaged containers fully identified with the manufacturer's name, project number, the tag location, the door type, color and weight. Store doors and frames under cover in clean, dry, ventilated, and accessible location, with 1/4 inch air space between door. Replace damaged materials with new.

1.05 WARRANTY

- A. Door and frame manufacturer shall provide unconditional ten year warranty against failure due to corrosion of doors and frames from specified environment.

PART 2 - PRODUCTS**2.01 ACCEPTABLE MANUFACTURERS**

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the work include, but are not limited to the following:
 - 1. Chem-Pruf Door Company, Brownsville, Texas

2.02 DOOR

- A. Doors shall be made of fiberglass reinforced plastic (FRP) using resins tailored to the specific corrosive environment and have a fiberglass content of 25% by weight. The doors shall be flush construction, having no seams or cracks. All mortises shall be molded in at the factory. Cores of doors shall be insulated with urethane foam.
- B. Stiles and rails shall be molded in one continuous piece.
- C. Door plates shall be molded in one continuous piece.
- D. Adequate reinforcing and compression members shall be used to accommodate surface hinges, closers, locksets, and push or pull plates. In no case shall screws be used into fiberglass matrix to provide holding for hinges, locks or closers or any structured attachment. Thru-bolting is recommended for attachment of hinges and closers. A compression member shall be located in the matrix to provide resistance to the torquing of thru-bolts.
- E. All reinforcing resins shall contain a halogenated additive or co-reactant plus Antimony Trioxide to achieve a flame spread of 25 or less per ASTM B-84 and shall be self-extinguishing per ASTM D-735.
- F. The color of the doors shall be integrally molded as the part is made. The color of the doors shall be grey.

2.03 FRAME

- A. Frames shall be similar to the doors in construction and materials except the frames shall be solid fiberglass. The stop and frame shall be molded all in one piece. Mortises shall be molded into the frames. The color of

the frames shall be integrally gelcoated when molded. The color of the frames shall be selected by the County from manufacturer's full range of color samples including optional colors.

- B. Reinforcement for mounting hinges, closers, etc. shall be of buried steel plates strategically located and buried in the resin-glass matrix.
- C. The jamb shall be flat on the backside.

2.04 ANCHORS

- A. Frame anchors shall be stainless steel expansion type bolts for securing frame to masonry opening.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Installation of doors and frames shall be in strict compliance with the manufacturer's written instructions using non-corrosive materials and methods.
- B. Installation of door hardware is specified in Section 08710.

3.02 ADJUSTING & CLEANING

- A. Adjust door hardware to operate correctly in accordance with hardware manufacturer's maintenance instructions.
- B. Clean surfaces of door opening assemblies and sight-exposed door hardware in accordance with manufacturer's maintenance instructions.

PART 4 - MEASUREMENT AND PAYMENT

4.01 FIBERGLASS DOORS AND FRAMES

- A. The Fiberglass Doors and Frames work required under this Section will not be measured for payment.
- B. Fiberglass Doors and Frames will be paid for and included in the lump sum bid price for Steel Doors and Frames, complete in place, accepted, which price will be full compensation for all material, equipment, tools, labor, and all work incidental to complete the item as specified.

END OF SECTION



PROJECT: T-1196-0140 Bus Main Shop

INVITATION FOR BID - QUESTIONS / RESPONSES

		Responses to Questions	
No.	Spec. Page #, Section & Para #	Question	Response to Question
1	Struct Steel spec Section 05120	The Struct Steel spec Section 05120 (para 1.06, part A) calls for the contractor to provide <u>Signed and seal Fabrication drawings by a Professional Engineer</u> , which is generally EXCLUDED by most of the Steel subcontractors. Please confirm that this will be required to be provided by the Steel Fabricator for this project, or change this requirement to make the project engineer responsible for this.	The specification will be revised to remove the sentence "Signed and seal Fabrication drawings by a Professional Engineer." Note that the requirements for stamped and signed calculations for delegated design components remain, as defined in the contract documents.
2	Struct Steel spec Section 05120	The Struct Steel spec Section 05120 (para 1.06, part B) calls for the "Fabricator" to be an <u>AISC-Certified Plant, Category CBR</u> (CBR = Major Bridge Fabrication). Since this project is NOT a bridge, we request that you change the requirement to be an <u>AISC-Certified Plant, Category STD</u> (STD = The Building Standard).	The specification will be revised to require the steel Fabricator to be an AISC Certified Steel Plant, Category STD.
3	Struct Steel spec Section 05120	The Struct Steel spec Section 05120 (para 1.06, part C) calls for the "installer" to be an <u>AISC-Certified Erector, Category ACSE</u> (which is an Advanced Certified Steel Erector). This is typically required only for Bridges and very complex Steel Structures, and ACSE Certified Erectors are very hard to find. Since this project is NOT a bridge or a complex structure, we request that you change the requirement to be an <u>AISC-Certified Erector, Category CSE</u> (CSE = Certified Steel Erector).	The specification will be revised to require the steel erector to be an AISC Certified Steel Erector, Category CSE.
4	PWA Drawings "Developer Agreement #1241"	The following ten CIVIL dwgs are located after the Electrical dwgs in Vol 2, under a heading called PWA DRAWINGS: CS-1 COVER SHEET, S-1 SEWER PLAN AND PROFILE, SD-1 STORM DRAIN PLAN AND PROFILE, SD-2 STORM DRAIN STRUCTURAL NOTES AND DETAILS, SD-3 STORM DRAIN DETAILS, E-1 ELECTRIC PLAN, PROFILE, AND DETAIL, C-1 SIDEWALK IMPROVEMENT PLAN, MOT-1 BUSH STREET ROAD CLOSURE, MOT-2 BUSH STREET DETOUR PLAN, MOT-3 GWYNNS FALLS TRAIL DETOUR PLAN. We have questions regarding these 10 PWA dwgs labeled "Developer Agreement #1241". 1. Please confirm if this work is part of our contract, or for our reference only ? 2. There is an E-1 dwg showing Ductbanks & Street Lighting. Who will pay the Power Company for this work? 3. Where do all these costs go on the Bid Forms?	1. This Work is part of the Contract. 2. This work is part of the Contract. 3. The costs for this work are to be included in the specific line items in the bid form.



PROJECT: T-1196-0140 Bus Main Shop

INVITATION FOR BID - QUESTIONS / RESPONSES

No.	Spec. Page #, Section & Para #	Question	Responses to Questions
5		<p>The following Specification Sections do NOT have a corresponding Bid Item. Please tell us where we should put the costs for these trades: 02741 Asphalt Paving 02920 Lawns & Grasses 03450 Arch Precast Concrete 06615 Simu Stone Countertops 08120 Fiberglass Doors & Frames 10522 Fire Extinguisher Cabinets 10523 Fire Extinguishers 10605 Wire Mesh Partitions 11515 Fabricated Equipment 13120 Fall Protection System</p>	<p>Response to Question</p> <p>02741 Asphalt Paving will be paid for at the Contract unit price per CY for Portland Cement Concrete Paving.</p> <p>02920 Lawns & Grasses - is included in the LS bid price for 02630 Storm Drainage, as stated in specification</p> <p>03450 Arch Precast Concrete -is included in the LS bid price for 04810 Unit Masonry</p> <p>06615 Simu Stone Countertops -is included in the LS bid price for 06412 Plastic Lam Faced Arch Cabinets</p> <p>08120 Fiberglass Doors and Frames - is included in the LS bid price for 08110 Steel Doors and Frames</p> <p>10522 Fire Extinguisher Cabinets - is included in the LS bid price for 13930 Fire Systems, as stated in specification</p> <p>10523 Fire Extinguishers - place is included in the LS bid price for 13930 Fire Systems, as stated in specification</p> <p>10605 Wire Mesh Partitions - is included in the LS bid price for 10505 Metal Lockers, as stated in specification</p> <p>11515 Fabricated Equipment - is included in the LS bid price for 11510 Shop Equipment, as stated in specification</p> <p>13120 Fall Protection will be added as a new bid line item</p>
6	Spec Section 09671	<p>Will equivalent manufacturers of Resinous Flooring that meet or exceed Specification 09671 be acceptable? Or do you have to use the manufactures listed under division 09671, Paragraph 2.01.</p>	<p>If the product is comparable to the basis of design indicated and specifications found in the contract documents, it can be submitted for review and consideration</p>
7	Spec Section 02630 and Drawings C109-C110	<p>Please clarify what type of trench drain frame and grate is required per Plans C109-110 and spec 2630 Storm Drain? The plans and spec does not specify what type frame and grate type? What load classification, heavy or light duty, any special requirements like ADA or high heel proof, what metal type – galvanized, stainless or ductile iron is required?</p>	<p>A light duty galvanized grate is acceptable, and there are no special requirements.</p>
8	Spec Section 02630 and Drawings C109-C110	<p>Does the catch basins need to be 2'x2' or can we go 14" x20" which is compatible with the trench drain system?</p>	<p>A 14"x20" basin is acceptable.</p>



PROJECT: T-1196-0140 Bus Main Shop

INVITATION FOR BID - QUESTIONS / RESPONSES

		Responses to Questions	
No.	Spec. Page #, Section & Para #	Question	Response to Question
9		The plumbing specifications require underground storm drains to be extra heavy cast iron soil pipe and fittings whereas the underground drain, waste and vent systems are specified as service weight cast iron pipe and fittings. Because extra heavy cast iron is a special order and service is permitted for the DWV systems underground we request permission to use service weight for the storm drains as well.	Please follow the specification for bidding purposes. The extra heavy pipe is a request of MTA.
10	Spec Section 08361, Part 2.07	Section 08361:2.07 Door Assembly: Wayne Dalton listed as basis-of-design product followed by Arm-R-Lite, C.H.I. Overhead Doors and Clotpay; however, Overhead Door Corporation is not listed as a comparable vendor. Overhead Door Corporation provides an equivalent to the specified BOD product. Can Overhead Door Corporation be added to the list of vendors?	If the product is comparable to the basis of design indicated and specifications found in the contract documents, it can be submitted for review and consideration
11	Spec Section 16231, part 2.08	Written specifications Section 16231 page 16 Paragraph 2.08, Outdoor Generator Enclosure B. 2. Automatic Dampers. Automatic dampers are not available on this size factory standard weather enclosure. These automatic dampers would need to be outsourced to a special housing factory in order to meet the specifications. Please clarify as far as the automatic dampers and if fixed louvers are acceptable	Factory standard fixed louvers are acceptable.
12	Drawing E326, (Sht 409 of 437)	Drawing E326 (sheet 409 of 437) provides the generator layout. It appears the generator has three (3) circuit breakers. Drawing E503 (sheet 415 of 437) provides the generator layout. It appears the generator denotes one 450amp circuit breaker. Please clarify the quantity of circuit breakers and their amperage.	There is a single generator output breaker to tap trough. The outputs shown on the details are for the Generator accessories i.e. jacket water heater, battery charger, etc.
13	Drawing E326, (Sht 409 of 437)	Drawing E326 (sheet 409 of 437) provides a layout of the automatic transfer switches (EQ & LS). Each transfer switch indicates 4pole. Drawing E503 (sheet 415 of 437) provides a layout of two automatic transfer switches each of these transfer switch denotes 3pole. Please clarify 3pole or 4pole	All transfer switches are 4 pole.
14	Drawing M403	Drawing M403, Sheet 273 is listed on the Index of Drawings but was not included on the CD. Please furnish this drawing.	Drawing M403 will be issued in an addendum.
15	Spec Section 01110, Part 1/04	How much are liquidated damages for this project? Section SP-2,para.1.04 has conflicting information.	Liquidated damages are \$1,375.00 per calendar day.



PROJECT: T-1196-0140 Bus Main Shop

INVITATION FOR BID - QUESTIONS / RESPONSES

		Responses to Questions	
No.	Spec. Page #, Section & Para #	Question	Response to Question
16		Is a separate fulltime Safety Engineer required for this project or can the Superintendent also be the Safety Engineer?	The CSHPG Section 2 defines the Contractor's Safety Engineer – A full time safety professional employed by the contractor to manage the Contractor's safety efforts. In addition, it defines the Contractor's Safety Supervisor – A Contractor's employee separate from the superintendent hired to perform various tasks including safety and other related duties such as traffic control, utility coordination, etc. Page 6, Section 5 of the CSHPG addresses approval of the Designated Safety Representative by OSQARM. It is MTA's desire that the Contractor's Safety Engineer would be the "corporate" safety person and there needs to be someone other than the superintendent designated as the project (on-site) safety person.
17	Spec Section 14450	We would like to request an approved equal status be given to a lifting product different from what is described in section 14450, Part 1 of the upcoming bid, MTA contract # T-1196-0140. The product being submitted for this approval/application process is manufactured by Stertil-Koni USA and it meets and exceeds the specifications set forth in the bid package. The model number and description is as follows: Lift name: SKY 250 Wash Bay model; Model number 41317000; The salient characteristics of this lift are: Runway length: 48'; Capacity: 78,000lb; Flush mount: Yes; Wash Bay application: Yes (Galvanized componentry & Stainless Steel Control Console)	Stertil-Koni is an approved manufacturer per paragraph 2.01 H.2 of the spec. If a manufacturers product meets the contract specifications, the product will be considered during the shop drawing review phase of the project.
18	Spec Section 09671	Is the architect permitting equivalent substitutions for the resinous flooring that is specified in section 09671-Resinous Flooring? Is the following acceptable?	If the product is comparable to the basis of design indicated and specifications found in the contract documents, it can be submitted for review and consideration
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**BUS MAIN SHOP
CONTRACT NO. T-1196-0140
CONTRACT SPECIFICATIONS BOOK**

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**STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
NOTICE TO CONTRACTORS**

BUS MAIN SHOP

CONTRACT NO.: T-1196-0140

DATE: March 22, 2013

1. DESCRIPTION OF WORK

- A. This Contract is for the construction of the Bus Main Shop for MTA at the main campus, 1501 Washington Boulevard, Baltimore, Maryland.

The work involves construction of: the Main Rebuild Shop for engines and transmissions for all buses in the MTA fleet, and the Air-Conditioner Shop for all buses. It is a three story, high bay steel framed building with full architectural, mechanical, and electrical support amenities. The site work includes installation of all new utilities, parking lot paving, drainage, storm water management, signing, pavement markings, retaining walls, fences and other aesthetic improvements.

The site work also includes the demolition of existing building slab and foundations, a stone out-building, demolition of asphalt parking lot, and existing utilities under the slab and pavement. There is an existing party wall supported by steel beam buttresses that belongs to the adjacent property owner, and is to remain.

- B. Estimated value for this work is in the range over \$15,000,001-\$30,000,000.

2. DEADLINE FOR QUESTIONS

Questions regarding the work should be directed in writing to Mr. Joseph Johnson at the Administration Offices or via Internet address jjohnson14@mta.maryland.gov. Facsimile messages will not be accepted unless accompanied by telephone notification at (410) 767-3363. Our fax number is (410) 333-4810. Questions directed to this office must be received no later than **May 17, 2013** at the close of the business day. Questions should be submitted on company letterhead. No interpretations other than written shall be binding on the Administration.

3. PRE-BID MEETING & SITE VISIT

A Pre-Bid meeting for the purpose of explaining the Project will be held on **May 9, 2013** at 10:30 a.m., local time at the Administration Headquarters, 6 St. Paul Street, 7th Floor, Conf Rms 731-732, Baltimore, Maryland 21202-1614.

A Site Visit will be held on **May 9, 2013** immediately following the Pre-Bid

Meeting.

It is strongly suggested that the person(s) responsible for the preparation of bid documents for bidders attend the Pre-Bid Meeting and the site visit. INSTRUCTIONS CRITICAL TO THE PREPARATION OF THE CONTRACT DOCUMENTS WILL BE PRESENTED AT THE PRE-BID MEETING.

4. BID DUE DATE & TIME

Sealed Bids addressed to the Maryland Transit Administration, Procurement Division, 6 St. Paul Street, Baltimore, Maryland 21202-1614, and marked "Bid for Contract No. T-1196-0140 – Bus Main Shop Modernization Project", will be received at the above address until but not after 2:00 P.M. local time, **May 29, 2013**. At that time, the Bids will be publicly opened and read aloud at a location at the same address. Hand delivered bids should be deposited in the Bid Box located on the 7th Floor before the 2:00 P.M. deadline. Any bids received after the date and time specified shall not be considered.

5. ELECTRONIC VERSION OF BID DOCUMENTS

The bid documents will be available by electronic means. The Bidder acknowledges and accepts full responsibility to ensure that the Bidder has made no changes to the Administration's bid documents. In the event of a conflict between the versions of the bid documents in the bidder's possession and the version maintained by the Procurement Officer, the version maintained by the Procurement Officer shall govern.

6. AVAILABILITY OF DOCUMENTS

Specifications may be downloaded from the MTA web site located at www.mta.maryland.gov. Bidders will be required to register the first time specifications are downloaded and a login number will be assigned. This number should be used every time the bidder downloads the documents for this contract. Bidders must supply accurate information in order to receive notice of all subsequent addenda.

TO OBTAIN THE SPECIFICATIONS: Please visit MTA's website (www.mta.maryland.gov) , follow the links for "Business" – "Procurement" - "Bids/Solicitations", and download the Specifications for this procurement.

TO OBTAIN THE DRAWINGS: e-mail Mr. Joseph Johnson at jjohnson14@mta.maryland.gov requesting the contract drawings and supplying the following information: the contact person, company name, mailing address, phone # and e-mail address. The drawings (CD) will be mailed to you at no cost. You also have the option of picking up the CD containing the drawings at: 6 Saint Paul Street, 7th floor, Baltimore, MD 21202.

7. **ADDENDA**

Bidders are required to acknowledge all addenda with their bid package. Although the MTA endeavors to send out all addenda to this solicitation in a timely manner, it is the responsibility of the contractors to make sure they received all appropriate documents prior to the bid due date.

8. **EMARYLAND MARKETPLACE REGULATIONS**

Use of “e-Maryland Marketplace”

“e-Maryland Marketplace” is an electronic commerce system administered by the Maryland Department of General Services.

Registration is free and will provide a means for your business to receive e-mail notifications of upcoming contracting opportunities in specified areas of interest and expertise. This means that all such information is immediately available to subscribers to e-Maryland Marketplace. Because of the instant access afforded by e-Maryland Marketplace, it is recommended that all Bidders interested in doing business with Maryland State agencies subscribe to e-Maryland Marketplace. For more eMM registration information, visit the website: <http://ebidmarketplace.com>.

9. **BID BOND**

Each bid exceeding \$100,000 must be accompanied by a Bid Bond in the amount of five percent (5%) of the Bid Price. Bid, payment, and performance security may be in the form of: (1) a bond executed by a surety company authorized to do business in the State; (2) a bond executed by an individual surety that meets certain criteria; (3) another form of security required by State or federal law; or (4) another form of security satisfactory to the unit awarding the contract. Sections 13-207, 13-216, 17-104 of the State Finance and Procurement Article, Annotated Code of Maryland.

10. **PAYMENT AND PERFORMANCE BONDS**

Payment and Performance Bonds in the amount of the Contract Price will be required by the awardee. Upon receiving notification of contract award, the Contractor shall deliver the bond to the MTA no later than the time the Contractor executes the contract. Bid, payment, and performance security may be in the form of: (1) a bond executed by a surety company authorized to do business in the State; (2) a bond executed by an individual surety that meets certain criteria; (3) another form of security required by State or federal law; or (4) another form of security satisfactory to the unit awarding the contract. Sections 13-207, 13-216, 17-104 of the State Finance and Procurement Article, Annotated Code of Maryland.

11. **ELECTRONIC FUNDS TRANSFER**

On every solicitation for a contract expected to exceed \$200,000, the bidder will be required to accept payments by electronic funds transfer (EFT) unless the State Comptroller's Office grants an exemption.

12. DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

- A. DISADVANTAGED BUSINESS ENTERPRISES ARE ENCOURAGED TO RESPOND TO THIS SOLICITATION NOTICE.**
- B. The Maryland Transit Administration hereby notifies all bidders that, in regard to any Contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full opportunity to submit Bids in response to this Notice, and will not be subjected to discrimination on the basis of political or religious opinion or affiliation, race color, creed, sex, age or national origin in consideration for an award.
- C. It is the goal of the Administration that Disadvantaged Business Enterprises participate in all Contracts. Each Contract will contain goals for Disadvantaged Business Enterprise participation on a contract-to-contract basis. A subcontracting goal of thirty percent (30%) has been established for this procurement. All bidders must submit with their bid a fully executed copy of the Certified DBE Utilization and Fair Solicitation Affidavit (MDOT DBE FORM A) and DBE Participation Schedule (MDOT DBE FORM B). If the bidder fails to submit these completed forms with the bid as required, the procurement officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award. **ALL DBE FIRMS MUST BE CERTIFIED BY THE MARYLAND DEPARTMENT OF TRANSPORTATION. NO OTHER CERTIFICATIONS WILL BE ACCEPTED.**
- D. **A contractor may count toward its DBE goal 60 percent of its expenditures for materials and supplies required under the contract and obtained from a DBE regular dealer, and 100 percent of such expenditures to a DBE manufacturer. The DBE credited supplies may not exceed 60 percent of the entire contract goal.**
- E. New versions of Sections 13-103, 13-104 and 14-303 of the State Finance and Procurement Article of the Maryland Code, relating to increased bid/proposal documentation of DBE commitments, are effective as of October 1, 2004. The Contract under this solicitation will be awarded in accordance with these new requirements. As a result, new bid submission requirements, including certain revised DBE documents, are in effect for this solicitation. These new requirements are set forth elsewhere in this solicitation.

- F. As a result of the revisions to Sections 13-103, 13-104 and 14-303, certain existing portions of the Code of Maryland Regulations (COMAR) relating to post bid/proposal submission of DBE subcontractors are inconsistent with the revised statute. To the extent the provisions of COMAR relating to post bid identification of DBE subcontractors are inconsistent with the requirements of this solicitation, the requirements of this solicitation shall control the award of a Contract. Questions or concerns regarding the DBE requirements of this solicitation must be raised prior to the opening of bids or receipt of initial proposals
- G. Effective on October 1, 2009, Minority Business Enterprise (MBE) firms may elect to be dually certification as woman-owned businesses and as members of an ethnic or racial category. For purposes of achieving any gender or ethnic/racial MBE participation subgoals in a particular contract, an MBE firm that has dual certification may participate in the contract either as a woman-owned business or as a business owned by a member of a racial or ethnic minority group, **but not both**.

WARNING – PLEASE READ:

- ◆ **A firm must be listed in the MDOT MBE/DBE Directory with the gender category in order to be used to meet the gender subgoal.**
- ◆ **A firm must be listed in the MDOT MBE/DBE Directory with an ethnic/racial category in order to be used to meet the ethnic/racial subgoal.**
- ◆ **A firm must be listed in the MDOT MBE/DBE Directory with both the gender and ethnic/racial categories in order for a contractor to have the option of selecting which of those categories it will use for the firm on a State contract.**
- ◆ **Contractors should designate whether the MBE firm will be used as a woman-owned business or as a business owned by a member of a racial/ethnic group before calculating the percentage of MBE participation goals and subgoals they intend to meet.**

Maryland's MBE/DBE Directory will reflect the dual certification status beginning October 1, 2009. You can access the MBE/DBE Directory at <http://mbe.mdot.state.md.us>. Firms with dual certification will now be listed as follows:

Example:

ABC Corporation, Inc.
123 Corporate Circle
Hanover, MD 21076
Female/African American
00-000

13. AFFIRMATIVE ACTION REQUIREMENTS

Bidders on this Work will be required to comply with MTA Affirmative Action Requirements and all applicable Equal Employment Opportunity Laws and Regulations.

14. FEDERAL FUNDING

Any contract resulting from bids submitted is subject to a Financial Assistance Contract between the Administration and the U.S. Department of Transportation. Federal funds will be used to finance 80% of the cost of this contract.

15. SUSPENSION AND DEBARMENT CERTIFICATION

All bidders will be required to certify that they are not on the GSA List of Parties Excluded from Procurement and the List of Contractors Suspended or Debarred from Contracting with the State of Maryland. All bidders must also be in good standing with the State Assessment & Taxation Department.

16. CONTRACTOR'S QUESTIONNAIRE

All Bidders shall submit a fully executed copy the Contractor's Questionnaire Pre-Award Evaluation Data Form with the bid package.

17. INSURANCE REQUIREMENTS

The Administration has chosen to provide Workers' Compensation, General Liability, Excess Liability, Builders Risk, Pollution Liability and Railroad Protective coverage on behalf of Contractors and subcontractors working on this project. This approach to project insurance is commonly called a wrap-up or owner controlled insurance program (OCIP). Specific information regarding Liability Insurance Requirements is contained in the Contract Specifications.

Please note that an Insurance Cost Worksheet must be included with each bid package.

18. USE OF BIDDER'S OWN FORCES

The bidder with his own forces shall perform not less than twenty-five percent (25%) of the work at the project site.

19. BUY AMERICA REQUIREMENTS

This contract is subject to Section 165, "Buy America", of the Surface Transportation Assistant Act of 1982, U.S. Public Law 197-424, and regulations and/or guidance implementing this statutory provision issued by the Federal Transit Administration of the U.S. Department of Transportation. The contract is further subject to the Buy American Steel requirements of Chapter 02 of subtitle 11 of the Code of Maryland Regulations, Title 21, State Procurement Regulations.

20. CANCELLATION OR REJECTION OF BIDS

Notice to Contractors may be canceled in accordance with State Procurement Regulations.

The Administration reserves the right to reject any and all bids and/or waive technical defects if, in its judgment, the interests of the Administration so require.

21. CERTIFICATION REGARDING INVESTMENT ACTIVITIES IN IRAN

All bidders will be required to certify that they are not on the list created by the Board of Public Works as a person engaging in investment activities in Iran as described in §17-702 of State Finance & Procurement; and is not engaging in investment activities in Iran as described in State Finance & Procurement Article, §17-702.

22. LOCATION OF THE PERFORMANCE OF SERVICES DISCLOSURE

All bidders will be required to disclose the location of the performance of services pursuant to Md. Ann. Code, State Finance and Procurement Article, § 12-111, and in conjunction with the bid submitted in response to this Multi-Step IFB.

23. MERCURY AFFIDAVIT

Bidders are required to complete the Mercury Affidavit in its entirety.

24. CONFLICT OF INTEREST AFFIDAVIT

Bidders are required to complete the Conflict of Interest Affidavit in its entirety.

Item	Section	Description	Estimate of Quantity	Unit	Unit Price	Total Price
001	01130	Mobilization	1	LS	\$650,000	\$650,000
002	01210	Miscellaneous Work Allowance	1	ALL	\$700,000	\$700,000
003	01450	Quality Assurance and Quality Control	1	ALL	\$250,000	\$250,000
004	01523	Engineer's Field Office Type 3	1	LS		
005	01523	Motor Vehicle	1	LS		
006	01550	Maintenance of Traffic	1	LS		
007	01550	Drums for Maintenance of Traffic	23	EA		
008	01550	Type III Barricades for Maintenance of Traffic	4	EA		
009	01550	Temporary Traffic Signs	332	SF		
010	01570	Passive Ventilation Systems	1	ALL	\$60,000	\$60,000

011	02221	Building Demolition	1	LS		
012	02317	Class 1 Excavation	4500	CY		
013	02317	Class 1-A Excavation	600	CY		
014	02317	Select Borrow	3500	CY		
015	02317	Crusher Run Aggregate (CR-6)	200	CY		
016	02317	Graded Aggregate Base (GAB)	2300	CY		
017	02317	No. 57 Aggregate	2100	CY		
018	02317	Nonwoven Geotextile	1000	SY		
019	02317	Woven Separation Geotextile	300	SY		
020	02317	Geosynthetic Subgrade Stabilization Using GAB	600	SY		
021	02317	Test Pits	50	CY		

022	02370	Erosion and Sediment Control	1	LS		
023	02455	HP 12 x74 Piles	14100	LF		
024	02460	Dynamic Test Piles	360	LF		
025	02510	Water Distribution	1	LS		
026	02530	Sanitary Sewerage	1	LS		
027	02584	Underground Ducts and Utility Structures	1	LS		
028	02630	Storm Drainage	1	LS		
029	02630	Stormwater Detention System	1	LS		
030	02630	Stormwater Treatment System	1	LS		
031	02630	Hydrodynamic Separator	1	LS		
032	02750	Portland Cement Concrete Pavement	3400	CY		

033	02763	Pavement Markings	1	LS		
034	02821	Chain Link Fences and Gates	1	LS		
035	02870	Bollards- Permanent	54	EA		
036	02870	Bollards- Removable	19	EA		
037	02870	Site Furnishings	1	LS		
038	03300	Cast-In-Place Concrete	1	LS		
039	03410	Precast Planks	1	LS		
040	04810	Unit Masonry	1	LS		
041	05120	Structural Steel	1	LS		
042	05120	Steel Joist Framing	1	LS		
043	05310	Steel Deck	1	LS		

044	05500	Metal Fabrications	1	LS		
045	05811	Architectural Joint Systems	1	LS		
046	06105	Miscellaneous Carpentry	1	LS		
047	06412	Plastic Laminate Faced Architectural Cabinets	1	LS		
048	07115	Bituminous Dampproofing	1	LS		
049	07131	Self Adhering Sheet Waterproofing	1	LS		
050	07210	Building Insulation	1	LS		
051	07412	Standing Seam Metal Panels	1	LS		
052	07417	Insulated Metal Wall Panels	1	LS		
053	07620	Sheet Metal Flashing and Trim	1	LS		
054	07811	Sprayed Fire Resistive Materials	1	LS		

055	07841	Through Penetration Fire Stop Systems	1	LS		
056	07920	Joint Sealants	1	LS		
057	08110	Steel Doors and Frames	1	LS		
058	08310	Overhead Coiling Doors	1	LS		
059	08311	Access Doors and Frames	1	LS		
060	08361	Sectional Overhead Doors	1	LS		
061	08441	Aluminum Framed Entrances and Storefronts	1	LS		
062	08710	Door Hardware	1	LS		
063	09111	Non-load Bearing Steel Framing	1	LS		
064	09250	Gypsum Board	1	LS		
065	09511	Acoustic Panel Ceiling	1	LS		

066	09653	Resilient Wall Base and Accessories	1	LS		
067	09671	Resinous Flooring	1	LS		
068	09900	Painting	1	LS		
069	10155	Toilet Compartments	1	LS		
070	10213	Fixed Louvers	1	LS		
071	10434	Panel Signage	1	LS		
072	10505	Metal Lockers	1	LS		
073	10801	Toilet and Bath Accessories	1	LS		
074	11510	Shop Equipment	1	LS		
075	13120	Fall Protection	1	LS		
076	13852	Digital, Addressable Fire Alarm System	1	LS		

077	13930	Fire Systems	1	LS		
078	14210	Electric Traction Elevator	1	LS		
079	14450	Lifts	1	LS		
080	14600	Cranes	1	LS		
081	15057	Plumbing Systems	1	LS		
082	15058	HVAC Systems	1	LS		
083	15119	Mechanical Systems	1	LS		
084	16000	Electrical Systems	1	LS		
085	16120	#250 KCM CMIL Copper Cable	158	CLF		
086	16120	#350 KCM CMIL Copper Cable	31	CLF		
087	16120	#6000 KCM CMIL Copper Cable	27	CLF		

088	16120	# 2/0 Copper Cable AWG THHN-THWN	6	CLF		
089	16120	# 4/0 Copper Cable AWG THHN-THWN	18	CLF		
090	16120	#1 Copper Cable AWG THHN-THWN	8	CLF		
091	16120	#2 Copper Cable AWG THHN-THWN	56	CLF		
092	16120	#3 Copper Cable AWG THHN-THWN	6	CLF		
093	16120	#4 Copper Cable AWG THHN-THWN	8	CLF		
094	16120	#6 Copper Cable AWG THHN-THWN	64	CLF		
095	16120	#8 Copper Cable AWG THHN-THWN	16	CLF		
096	16120	#10 Copper Cable AWG THHN-THWN	128	CLF		
097	16120	#12 Copper Cable AWG THHN-THWN	337	CLF		
098	16130	PVC 1" SCH 40	300	LF		

099	16130	PVC 2" SCH 40	600	LF		
100	16130	PVC 3" SCH 40	900	LF		
101	16130	PVC 4" SCH 40	960	LF		
102	16130	PVC 5" SCH 40	140	LF		
103	16130	RGS 3/4"C	4700	LF		
104	16130	RGS 1 "C	1500	LF		
105	16130	RGS 1 1/4"C	780	LF		
106	16130	RGS 2" C	90	LF		
107	16130	RGS 2 1/2"C	3790	LF		
108	16130	RGS 3"C	460	LF		
109	16130	Cable tray	1850	LF		

Basis of Award: Total amount of items 001 thru 109

(figures)

(words)

110		Insurance Premium (Contingency)	LS	LS	LS	
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This amount will only be added to the base bid in the event that the bidder is excluded from the wrap-up insurance program or the program is terminated mid-term. The Insurance Premium Worksheet must be attached to the bid.



MARYLAND TRANSIT ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION

Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
Darrell B. Mobley, Acting Secretary • Ralign T. Wells, Administrator

TO: All Planholders
FROM: Maryland Transit Administration
SUBJECT: **ADDENDUM NO. 4**
Contract No.: T-1196-0140
Bus Main Shop
DATE: May 14, 2013

Enclosed and effective this date is Addendum No. 4 to the subject Contract. This change does not delay the Bid Opening Date. This changes the Estimated Contract Value and Deadline for Questions.

The Bidder shall acknowledge receipt of this Addendum by completing and returning this form with the bid package.

All other terms and conditions remain unchanged.

Sincerely,

Joseph Johnson, Procurement Officer
Professional Services/Construction/Installation Section
Procurement Division

Acknowledgement of receipt of ADDENDUM # 4 to Solicitation #T-1196-0140

Vendor Name: _____

Authorized Representative's Signature

Date

ADDENDUM NO.: 4
DATE: 05/014/13
CONTRACT NO.: T-1196-0140

The following additions, deletions, and modifications are hereby made a part of the Contract Documents of Bus Main Shop, Contract No.: T-1196-0140.

Item No.	Page	Modification
I. CONTRACT SPECIFICATIONS		
1	NTC – p. 1	Revise Estimated Value of Contract Estimate Value for this work is in the range of : \$15,000,001 to \$30,000,000
1	NTC – p.1	Revised Deadline for Questions From April 18, 2013 to May 17, 2013

**STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
NOTICE TO CONTRACTORS**

**BUS MAIN SHOP MODERNIZATION
PROJECT**

CONTRACT NO.: T-1196-0140

DATE: March 22, 2013

1. DESCRIPTION OF WORK

- A. This Contract is for the construction of the Bus Main Shop for MTA at the main campus, 1501 Washington Boulevard, Baltimore, Maryland.

The work involves construction of: the Main Rebuild Shop for engines and transmissions for all buses in the MTA fleet, and the Air-Conditioner Shop for all buses. It is a three story, high bay steel framed building with full architectural, mechanical, and electrical support amenities. The site work includes installation of all new utilities, parking lot paving, drainage, storm water management, signing, pavement markings, retaining walls, fences and other aesthetic improvements.

The site work also includes the demolition of existing building slab and foundations, a stone out-building, demolition of asphalt parking lot, and existing utilities under the slab and pavement. There is an existing party wall supported by steel beam buttresses that belongs to the adjacent property owner, and is to remain.

- B. Estimated value for this work is in the range of: \$15,000,001 to 30,000,000

2. DEADLINE FOR QUESTIONS

Questions regarding the work should be directed in writing to Mr. Joseph Johnson at the Administration Offices or via Internet address jjohnson14@mta.maryland.gov. Facsimile messages will not be accepted unless accompanied by telephone notification at (410) 767-3363. Our fax number is (410) 333-4810. Questions directed to this office must be received no later than **May 17, 2013** at the close of the business day. Questions should be submitted on company letterhead. No interpretations other than written shall be binding on the Administration.

3. PRE-BID MEETING & SITE VISIT

A Pre-Bid meeting for the purpose of explaining the Project will be held on **May 9, 2013** at 10:30 a.m., local time at the Administration Headquarters, 6 St. Paul Street, 5th Floor Conference Room, Baltimore, Maryland 21202-1614.



MARYLAND TRANSIT ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION

Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
Darrell B. Mobley, Acting Secretary • Ralign T. Wells, Administrator

TO: All Planholders
FROM: Maryland Transit Administration
SUBJECT: **ADDENDUM NO. 3**
Contract No.: T-1196-0140
Bus Main Shop
DATE: May 8, 2013

Enclosed and effective this date is Addendum No. 3 to the subject Contract. This change does not delay the Bid Opening Date. This changes the Pre-Bid Meeting location to the 7th Floor Conference Rooms, 731-732.

The Bidder shall acknowledge receipt of this Addendum by completing and returning this form with the bid package.

All other terms and conditions remain unchanged.

Sincerely,

A handwritten signature in blue ink, appearing to read "Joseph Johnson".

Joseph Johnson, Procurement Officer
Professional Services/Construction/Installation Section
Procurement Division

Acknowledgement of receipt of ADDENDUM # 3 to Solicitation #T-1196-0140

Vendor Name: _____

Authorized Representative's Signature

Date

ADDENDUM NO.: 3
DATE: 05/08/13
CONTRACT NO.: T-1196-0140

The following additions, deletions, and modifications are hereby made a part of the Contract Documents of Bus Main Shop, Contract No.: T-1196-0140.

Item No.	Page	Modification
I. CONTRACT SPECIFICATIONS		
1	NTC – p. 1	Changed Pre-Bid Meeting Location From “5 th Floor Conference Room” to “7 th Floor, Conf Rms 731-732”

**STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
NOTICE TO CONTRACTORS**

BUS MAIN SHOP

CONTRACT NO.: T-1196-0140 **DATE:** March 22, 2013

1. DESCRIPTION OF WORK

A. This Contract is for the construction of the Bus Main Shop for MTA at the main campus, 1501 Washington Boulevard, Baltimore, Maryland.

The work involves construction of: the Main Rebuild Shop for engines and transmissions for all buses in the MTA fleet, and the Air-Conditioner Shop for all buses. It is a three story, high bay steel framed building with full architectural, mechanical, and electrical support amenities. The site work includes installation of all new utilities, parking lot paving, drainage, storm water management, signing, pavement markings, retaining walls, fences and other aesthetic improvements.

The site work also includes the demolition of existing building slab and foundations, a stone out-building, demolition of asphalt parking lot, and existing utilities under the slab and pavement. There is an existing party wall supported by steel beam buttresses that belongs to the adjacent property owner, and is to remain.

B. Estimated value for this work is in the range over \$15,000,000.

2. DEADLINE FOR QUESTIONS

Questions regarding the work should be directed in writing to Mr. Joseph Johnson at the Administration Offices or via Internet address jjohnson14@mta.maryland.gov. Facsimile messages will not be accepted unless accompanied by telephone notification at (410) 767-3363. Our fax number is (410) 333-4810. Questions directed to this office must be received no later than **April 18, 2013** at the close of the business day. Questions should be submitted on company letterhead. No interpretations other than written shall be binding on the Administration.

3. PRE-BID MEETING & SITE VISIT

A Pre-Bid meeting for the purpose of explaining the Project will be held on **May 9, 2013** at 10:00 a.m., local time at the Administration Headquarters, **6 St. Paul Street, 7th Floor, Conf Rms 731-732, Maryland 21202-1614.**

A Site Visit will be held on **May 9, 2013** immediately following the Pre-Bid



MARYLAND TRANSIT ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION

Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
Darrell B. Mobley, Acting Secretary • Ralign T. Wells, Administrator

TO: All Planholders

FROM: Maryland Transit Administration

SUBJECT: **ADDENDUM NO.2**
Contract No.: T-1196-0140
Bus Main Shop

DATE: May 3, 2013

Enclosed and effective this date is Addendum No. 1 to the subject Contract. This change does not delay the Bid Opening Date. This changes the pre-bid meeting location to the 5th Floor Conference Room.

The Bidder shall acknowledge receipt of this Addendum by completing and returning this form with the bid package.

All other terms and conditions remain unchanged.

Sincerely,

Joseph Johnson, Procurement Officer
Professional Services/Construction/Installation Section
Procurement Division

Acknowledgement of receipt of ADDENDUM # 2 to Solicitation #T-1196-0140

Vendor Name: _____

Authorized Representative's Signature

Date

ADDENDUM NO.: 2
DATE: 05/03/2013
CONTRACT NO.: T-1196-0140

The following additions, deletions, and modifications are hereby made a part of the Contract Documents of Bus Main Shop, Contract No.: T-1196-0140.

Item No.	Page	Modification
I. CONTRACT SPECIFICATIONS		
1	NTC – Notice to Contractor	Changed Pre-Bid Meeting Location <i>From “7th Floor Conference room(s) 731-733” to “5th Floor Conference Room”</i>

**STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
NOTICE TO CONTRACTORS**

**BUS MAIN SHOP MODERNIZATION
PROJECT**

CONTRACT NO.: T-1196-0140

DATE: March 22, 2013

1. DESCRIPTION OF WORK

- A. This Contract is for the construction of the Bus Main Shop for MTA at the main campus, 1501 Washington Boulevard, Baltimore, Maryland.

The work involves construction of: the Main Rebuild Shop for engines and transmissions for all buses in the MTA fleet, and the Air-Conditioner Shop for all buses. It is a three story, high bay steel framed building with full architectural, mechanical, and electrical support amenities. The site work includes installation of all new utilities, parking lot paving, drainage, storm water management, signing, pavement markings, retaining walls, fences and other aesthetic improvements.

The site work also includes the demolition of existing building slab and foundations, a stone out-building, demolition of asphalt parking lot, and existing utilities under the slab and pavement. There is an existing party wall supported by steel beam buttresses that belongs to the adjacent property owner, and is to remain.

- B. Estimated value for this work is in the range over \$15,000,000.

2. DEADLINE FOR QUESTIONS

Questions regarding the work should be directed in writing to Mr. Joseph Johnson at the Administration Offices or via Internet address jjohnson14@mta.maryland.gov. Facsimile messages will not be accepted unless accompanied by telephone notification at (410) 767-3363. Our fax number is (410) 333-4810. Questions directed to this office must be received no later than April 18, 2013 at the close of the business day. Questions should be submitted on company letterhead. No interpretations other than written shall be binding on the Administration.

3. PRE-BID MEETING & SITE VISIT

A Pre-Bid meeting for the purpose of explaining the Project will be held on May 9, 2013 at 10:30 a.m., local time at the Administration Headquarters, 6 St. Paul Street, 5th Floor Conference Room, Baltimore, Maryland 21202-1614.



MARYLAND TRANSIT ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION

Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
Darrell B. Mobley, Acting Secretary • Ralign T. Wells, Administrator

TO: All Planholders
FROM: Maryland Transit Administration
SUBJECT: **ADDENDUM NO.1**
Contract No.: T-1196-0140
Bus Main Shop
DATE: March 26, 2013

Enclosed and effective this date is Addendum No. 1 to the subject Contract. This change does not delay the Bid Opening Date.

A conformed copy of the revised specification sections is attached. A list of the changes made to this contract is attached to this Addendum.

The Bidder shall acknowledge receipt of this Addendum by completing and returning this form with the bid package.

All other terms and conditions remain unchanged.

Sincerely,

Joseph Johnson, Procurement Officer
Professional Services/Construction/Installation Section
Procurement Division

Acknowledgement of receipt of ADDENDUM # 1 to Solicitation #T-1196-0140

Vendor Name: _____

Authorized Representative's Signature

Date

ADDENDUM NO.: 1
DATE: 03/26/13
CONTRACT NO.: T-1196-0140

The following additions, deletions, and modifications are hereby made a part of the Contract Documents of Bus Main Shop, Contract No.: T-1196-0140.

Item No.	Page	Modification
I. CONTRACT SPECIFICATIONS		
1	Cover Page	Changed Contract Name <i>From "Bus Main Shop Modernization Project" to "Bus Main Shop"</i>
2	TOC	Changed Contract Name <i>From "Bus Main Shop Modernization Project" to "Bus Main Shop"</i>
3	Volume 1 Cover Page	Changed Contract Name <i>From "Bus Main Shop Modernization Project" to "Bus Main Shop"</i>
4	Vendor Comments	Changed Contract Name <i>From "Bus Main Shop Modernization Project" to "Bus Main Shop"</i>
5	NTC	Changed Contract Name <i>From "Bus Main Shop Modernization Project" to "Bus Main Shop"</i>
6	Sample Contract Agreement	Changed Contract Name <i>From "Bus Main Shop Modernization Project" to "Bus Main Shop"</i>
7	Volume II Cover Page	Changed Contract Name <i>From "Bus Main Shop Modernization Project" to "Bus Main Shop"</i>

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION



Bus

Contract Specification Book

BUS MAIN SHOP

CONTRACT NO. T-1196-0140

DATE: March 22, 2013

**BUS MAIN SHOP
 CONTRACT NO. T-1196-0140
 CONTRACT SPECIFICATIONS BOOK**

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CONTRACT NO. T-1196-0140

BUS MAIN SHOP

Volume I of II

MARYLAND TRANSIT ADMINISTRATION

VENDOR COMMENTS

To help us improve the quality of State solicitations, and make our procurement process more responsive and business-friendly, we ask that you take a few minutes to complete this form. Thank you for your assistance.

Bid/Proposal No.: T-1196-0140

Contract Title: Bus Main Shop

I. If you are not bidding, please indicate why:

- Other commitments preclude our participation at this time.
- The subject of the contract is not in our business line.
- We lack experience in the work/commodities required.
- The scope of work is beyond our current capacity.
- We cannot be competitive. (Please explain below.)
- The specifications are either unclear or too restrictive. (Please explain below.)
- Bid/proposal requirements, other than specifications, are unreasonable or too risky. (Please explain below.)
- Time for completion is insufficient.
- Bonding/insurance requirements are prohibitive. (Please explain below.)
- Doing business with government is simply too complicated.
- Prior experience with State of Maryland contracts was unprofitable or otherwise unsatisfactory. (Please explain below.)
- Other: _____

II. Please explain your response further, offer suggestions, or express concerns. (use the back for additional information.)

Remarks: _____

OPTIONAL:

Vendor Name: _____ Date: _____
Contact: _____ Phone: _____
Address or e-mail: _____

THANK YOU !!!!!!!

**STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
NOTICE TO CONTRACTORS**

BUS MAIN SHOP

CONTRACT NO.: T-1196-0140

DATE: March 22, 2013

1. DESCRIPTION OF WORK

- A. This Contract is for the construction of the Bus Main Shop for MTA at the main campus, 1501 Washington Boulevard, Baltimore, Maryland.

The work involves construction of: the Main Rebuild Shop for engines and transmissions for all buses in the MTA fleet, and the Air-Conditioner Shop for all buses. It is a three story, high bay steel framed building with full architectural, mechanical, and electrical support amenities. The site work includes installation of all new utilities, parking lot paving, drainage, storm water management, signing, pavement markings, retaining walls, fences and other aesthetic improvements.

The site work also includes the demolition of existing building slab and foundations, a stone out-building, demolition of asphalt parking lot, and existing utilities under the slab and pavement. There is an existing party wall supported by steel beam buttresses that belongs to the adjacent property owner, and is to remain.

- B. Estimated value for this work is in the range over \$15,000,000.

2. DEADLINE FOR QUESTIONS

Questions regarding the work should be directed in writing to Mr. Joseph Johnson at the Administration Offices or via Internet address jjohnson14@mta.maryland.gov. Facsimile messages will not be accepted unless accompanied by telephone notification at (410) 767-3363. Our fax number is (410) 333-4810. Questions directed to this office must be received no later than **April 18, 2013** at the close of the business day. Questions should be submitted on company letterhead. No interpretations other than written shall be binding on the Administration.

3. PRE-BID MEETING & SITE VISIT

A Pre-Bid meeting for the purpose of explaining the Project will be held on **May 9, 2013** at 10:30 a.m., local time at the Administration Headquarters, 6 St. Paul Street, 7th Floor Conference Room(s) 731-732, Baltimore, Maryland 21202-1614.

A Site Visit will be held on May 9, 2013 immediately following the Pre-Bid Meeting.

It is strongly suggested that the person(s) responsible for the preparation of bid documents for bidders attend the Pre-Bid Meeting and the site visit. INSTRUCTIONS CRITICAL TO THE PREPARATION OF THE CONTRACT DOCUMENTS WILL BE PRESENTED AT THE PRE-BID MEETING.

4. BID DUE DATE & TIME

Sealed Bids addressed to the Maryland Transit Administration, Procurement Division, 6 St. Paul Street, Baltimore, Maryland 21202-1614, and marked "Bid for Contract No. T-1196-0140 – Bus Main Shop Modernization Project", will be received at the above address until but not after 2:00 P.M. local time, May 29, 2013. At that time, the Bids will be publicly opened and read aloud at a location at the same address. Hand delivered bids should be deposited in the Bid Box located on the 7th Floor before the 2:00 P.M. deadline. Any bids received after the date and time specified shall not be considered.

5. ELECTRONIC VERSION OF BID DOCUMENTS

The bid documents will be available by electronic means. The Bidder acknowledges and accepts full responsibility to ensure that the Bidder has made no changes to the Administration's bid documents. In the event of a conflict between the versions of the bid documents in the bidder's possession and the version maintained by the Procurement Officer, the version maintained by the Procurement Officer shall govern.

6. AVAILABILITY OF DOCUMENTS

Specifications may be downloaded from the MTA web site located at www.mta.maryland.gov. Bidders will be required to register the first time specifications are downloaded and a login number will be assigned. This number should be used every time the bidder downloads the documents for this contract. Bidders must supply accurate information in order to receive notice of all subsequent addenda.

TO OBTAIN THE SPECIFICATIONS: Please visit MTA's website (www.mta.maryland.gov), follow the links for "Business" – "Procurement" - "Bids/Solicitations", and download the Specifications for this procurement.

TO OBTAIN THE DRAWINGS: e-mail Mr. Joseph Johnson at jjohnson14@mta.maryland.gov requesting the contract drawings and supplying the following information: the contact person, company name, mailing address, phone # and e-mail address. The drawings (CD) will be mailed to you at no cost. You also have the option of picking up the CD containing the drawings at: 6 Saint Paul Street, 7th floor, Baltimore, MD 21202.

7. **ADDENDA**

Bidders are required to acknowledge all addenda with their bid package. Although the MTA endeavors to send out all addenda to this solicitation in a timely manner, it is the responsibility of the contractors to make sure they received all appropriate documents prior to the bid due date.

8. **EMARYLAND MARKETPLACE REGULATIONS**

Use of “e-Maryland Marketplace”

“e-Maryland Marketplace” is an electronic commerce system administered by the Maryland Department of General Services.

Registration is free and will provide a means for your business to receive e-mail notifications of upcoming contracting opportunities in specified areas of interest and expertise. This means that all such information is immediately available to subscribers to e-Maryland Marketplace. Because of the instant access afforded by e-Maryland Marketplace, it is recommended that all Bidders interested in doing business with Maryland State agencies subscribe to e-Maryland Marketplace. For more eMM registration information, visit the website: <http://ebidmarketplace.com>.

9. **BID BOND**

Each bid exceeding \$100,000 must be accompanied by a Bid Bond in the amount of five percent (5%) of the Bid Price. Bid, payment, and performance security may be in the form of: (1) a bond executed by a surety company authorized to do business in the State; (2) a bond executed by an individual surety that meets certain criteria; (3) another form of security required by State or federal law; or (4) another form of security satisfactory to the unit awarding the contract. Sections 13-207, 13-216, 17-104 of the State Finance and Procurement Article, Annotated Code of Maryland.

10. **PAYMENT AND PERFORMANCE BONDS**

Payment and Performance Bonds in the amount of the Contract Price will be required by the awardee. Upon receiving notification of contract award, the Contractor shall deliver the bond to the MTA no later than the time the Contractor executes the contract. Bid, payment, and performance security may be in the form of: (1) a bond executed by a surety company authorized to do business in the State; (2) a bond executed by an individual surety that meets certain criteria; (3) another form of security required by State or federal law; or (4) another form of security satisfactory to the unit awarding the contract. Sections 13-207, 13-216, 17-104 of the State Finance and Procurement Article, Annotated Code of Maryland.

11. **ELECTRONIC FUNDS TRANSFER**

On every solicitation for a contract expected to exceed \$200,000, the bidder will be required to accept payments by electronic funds transfer (EFT) unless the State Comptroller's Office grants an exemption.

12. **DISADVANTAGED BUSINESS ENTERPRISE PROGRAM**

A. DISADVANTAGED BUSINESS ENTERPRISES ARE ENCOURAGED TO RESPOND TO THIS SOLICITATION NOTICE.

B. The Maryland Transit Administration hereby notifies all bidders that, in regard to any Contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full opportunity to submit Bids in response to this Notice, and will not be subjected to discrimination on the basis of political or religious opinion or affiliation, race color, creed, sex, age or national origin in consideration for an award.

C. It is the goal of the Administration that Disadvantaged Business Enterprises participate in all Contracts. Each Contract will contain goals for Disadvantaged Business Enterprise participation on a contract-to-contract basis. A subcontracting goal of thirty percent (30%) has been established for this procurement. All bidders must submit with their bid a fully executed copy of the Certified DBE Utilization and Fair Solicitation Affidavit (MDOT DBE FORM A) and DBE Participation Schedule (MDOT DBE FORM B). If the bidder fails to submit these completed forms with the bid as required, the procurement officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award. ALL DBE FIRMS MUST BE CERTIFIED BY THE MARYLAND DEPARTMENT OF TRANSPORTATION. NO OTHER CERTIFICATIONS WILL BE ACCEPTED.

D. **A contractor may count toward its DBE goal 60 percent of its expenditures for materials and supplies required under the contract and obtained from a DBE regular dealer, and 100 percent of such expenditures to a DBE manufacturer. The DBE credited supplies may not exceed 60 percent of the entire contract goal.**

E. New versions of Sections 13-103, 13-104 and 14-303 of the State Finance and Procurement Article of the Maryland Code, relating to increased bid/proposal documentation of DBE commitments, are effective as of October 1, 2004. The Contract under this solicitation will be awarded in accordance with these new requirements. As a result, new bid submission requirements, including certain revised DBE documents, are in effect for this solicitation. These new requirements are set forth elsewhere in this solicitation.

- F. As a result of the revisions to Sections 13-103, 13-104 and 14-303, certain existing portions of the Code of Maryland Regulations (COMAR) relating to post bid/proposal submission of DBE subcontractors are inconsistent with the revised statute. To the extent the provisions of COMAR relating to post bid identification of DBE subcontractors are inconsistent with the requirements of this solicitation, the requirements of this solicitation shall control the award of a Contract. Questions or concerns regarding the DBE requirements of this solicitation must be raised prior to the opening of bids or receipt of initial proposals
- G. Effective on October 1, 2009, Minority Business Enterprise (MBE) firms may elect to be dually certification as woman-owned businesses and as members of an ethnic or racial category. For purposes of achieving any gender or ethnic/racial MBE participation subgoals in a particular contract, an MBE firm that has dual certification may participate in the contract either as a woman-owned business or as a business owned by a member of a racial or ethnic minority group, **but not both**.

WARNING – PLEASE READ:

- ◆ **A firm must be listed in the MDOT MBE/DBE Directory with the gender category in order to be used to meet the gender subgoal.**
- ◆ **A firm must be listed in the MDOT MBE/DBE Directory with an ethnic/racial category in order to be used to meet the ethnic/racial subgoal.**
- ◆ **A firm must be listed in the MDOT MBE/DBE Directory with both the gender and ethnic/racial categories in order for a contractor to have the option of selecting which of those categories it will use for the firm on a State contract.**
- ◆ **Contractors should designate whether the MBE firm will be used as a woman-owned business or as a business owned by a member of a racial/ethnic group before calculating the percentage of MBE participation goals and subgoals they intend to meet.**

Maryland's MBE/DBE Directory will reflect the dual certification status beginning October 1, 2009. You can access the MBE/DBE Directory at <http://mbe.md.state.md.us>. Firms with dual certification will now be listed as follows:

Example:

ABC Corporation, Inc.
123 Corporate Circle
Hanover, MD 21076
Female/African American
00-000

13. AFFIRMATIVE ACTION REQUIREMENTS

Bidders on this Work will be required to comply with MTA Affirmative Action Requirements and all applicable Equal Employment Opportunity Laws and Regulations.

14. FEDERAL FUNDING

Any contract resulting from bids submitted is subject to a Financial Assistance Contract between the Administration and the U.S. Department of Transportation. Federal funds will be used to finance 80% of the cost of this contract.

15. SUSPENSION AND DEBARMENT CERTIFICATION

All bidders will be required to certify that they are not on the GSA List of Parties Excluded from Procurement and the List of Contractors Suspended or Debarred from Contracting with the State of Maryland. All bidders must also be in good standing with the State Assessment & Taxation Department.

16. CONTRACTOR'S QUESTIONNAIRE

All Bidders shall submit a fully executed copy the Contractor's Questionnaire Pre-Award Evaluation Data Form with the bid package.

17. INSURANCE REQUIREMENTS

The Administration has chosen to provide Workers' Compensation, General Liability, Excess Liability, Builders Risk, Pollution Liability and Railroad Protective coverage on behalf of Contractors and subcontractors working on this project. This approach to project insurance is commonly called a wrap-up or owner controlled insurance program (OCIP). Specific information regarding Liability Insurance Requirements is contained in the Contract Specifications.

Please note that an Insurance Cost Worksheet must be included with each bid package.

18. USE OF BIDDER'S OWN FORCES

The bidder with his own forces shall perform not less than fifty percent (50%) of the work at the project site.

19. BUY AMERICA REQUIREMENTS

This contract is subject to Section 165, "Buy America", of the Surface Transportation Assistant Act of 1982, U.S. Public Law 197-424, and regulations and/or guidance implementing this statutory provision issued by the Federal Transit Administration of the U.S. Department of Transportation. The contract is further subject to the Buy American Steel requirements of Chapter 02 of subtitle 11 of the Code of Maryland Regulations, Title 21, State Procurement Regulations.

20. CANCELLATION OR REJECTION OF BIDS

Notice to Contractors may be canceled in accordance with State Procurement Regulations.

The Administration reserves the right to reject any and all bids and/or waive technical defects if, in its judgment, the interests of the Administration so require.

21. CERTIFICATION REGARDING INVESTMENT ACTIVITIES IN IRAN

All bidders will be required to certify that they are not on the list created by the Board of Public Works as a person engaging in investment activities in Iran as described in §17-702 of State Finance & Procurement; and is not engaging in investment activities in Iran as described in State Finance & Procurement Article, §17-702.

22. LOCATION OF THE PERFORMANCE OF SERVICES DISCLOSURE

All bidders will be required to disclose the location of the performance of services pursuant to Md. Ann. Code, State Finance and Procurement Article, § 12-111, and in conjunction with the bid submitted in response to this Multi-Step IFB.

23. MERCURY AFFIDAVIT

Bidders are required to complete the Mercury Affidavit in its entirety.

24. CONFLICT OF INTEREST AFFIDAVIT

Bidders are required to complete the Conflict of Interest Affidavit in its entirety.

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
CONTRACT AGREEMENT
FOR
BUS MAIN SHOP

CONTRACTOR: _____ CONTRACT NO.: T-1196-0140

_____ DATE: _____
(To Be Filled in by the Administration)

THIS CONTRACT, made and entered into as of the above date by and between the MARYLAND TRANSIT ADMINISTRATION ("MTA"), a modal agency of the Maryland Department Of Transportation acting for and on behalf of the State of Maryland, and _____, a _____ (hereinafter called "Contractor")

In the event of any discrepancy or dispute, the following is the order of precedence: (1) The Contract, (2) Specifications, (3) Drawings, (4) Supplementary General Provisions, and (5) General Provisions.

Contractor covenants and agrees to perform all obligations of Contractor set forth in this Contract and in the documents listed below, which documents are incorporated herein by reference and which documents together with this Contract are hereinafter called "Contract Documents".

- * Exhibit A Contract Specification Book which includes the MDOT General Provisions, the MTA Supplementary General Provisions, and the Special Provisions
- * Exhibit B Contract Drawings
- * Exhibit C Addendum No. 0 to 0
- * Exhibit D Contract Affidavit

PERIOD OF PERFORMANCE: _____ Calendar Days from NTP

LIQUIDATED DAMAGES: \$ _____

COMPENSATION:

In consideration of the faithful performance of all of Contractor obligations hereunder, the Administration shall pay to Contractor the compensation specified in Exhibit "A" Bid Form.

Aggregate Contract Amount: \$ _____

ADDRESSES:

Contractor:

Administration:

Department of Transportation
Maryland Transit Administration
6 St. Paul Street
Baltimore, Maryland 21202-1614

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the date first above written.

WITNESS:

(Signature)

(Federal Tax ID Number)

(Printed Name)

(Title)

WITNESS:

MARYLAND TRANSIT ADMINISTRATION

(Printed Name)

(Title)

Approved as to Form and Legal Sufficiency:

APPROVED BY BOARD OF PUBLIC WORKS

Date: _____ Item No.: _____

Assistant Attorney General

CONTRACT NO. T-1196-0140

BUS MAIN SHOP

Volume II of II