HCPS Forest Hill Annex
Addendum # 02
July 18th 2023

This addendum is to be attached to the HCPS Forest Hill Annex bid drawings dated 07-18-2023. This addendum modifies and becomes part of the contract documents. Work and/or materials not specifically mentioned herein are to be as shown on the drawings and in the general notes.

These items in the addendum have no specific order. All contractors are responsible for checking all items.

NOTICE – BIDDERS SUBMITTING BIDS SHALL ENSURE USE OF CORRECT BID FORM. CORRECT BID FORM SHALL BE AS ISSUED IN ADDENDUM #1

Please see attached sign in sheet from pre-bid meeting for list of interested bidders.

RFI Responses:

1.1. **Question:** Drawing A3.1 calls for a roof infill and to match existing. What is the existing roof and is there a warranty?
   **Answer:** The existing roof is Multi-Ply Built-Up Roof (BUR). There is no roof warranty presently.

1.2. **Question:** Please provide a color for SS-1 Solid Surface HI-MAC LG. The cost can range from $16-100/sqft.
   **Answer:** Color to be as selected by architect from manufacturer’s standard product line.

1.3. **Question:** Drawing A4.1 contains a print shop equipment schedule – please confirm the equipment is by owner.
   **Answer:** Confirmed that all equipment and furniture is by owner.

1.4. **Question:** Are wage rates required on this project? If so, please provide them.
   **Answer:** No, there are no wage rates required on this project.

1.5. **Question:** Do existing frames get finished?
   **Answer:** Yes, finish existing frames to match new finishes.

1.6. **Question:** Alternate 1 calls for seal and repaint 2 existing exterior CMU walls. Is that where the SW Clarishield sealer is going to be used or is that being used somewhere else?
   **Answer:** The sealer will be used on the print shop floor only. The exterior wall should receive a MPI #10 system.

1.7. **Question:** In the 8000 openings there are no overhead door specs, only fire door specs
   **Answer:** This is correct. The only overhead doors being utilized are coiling overhead fire doors as outlined in the drawings and spec section 083344 - OVERHEAD COILING FIRE CURTAINS

1.8. **Question:** There are no elevations showing head room for any of the OH doors.
   **Answer:** Overhead fire curtains shall be mounted to existing cmu walls and should have adequate clearance to structure.

Drawings:

   - Second floor plan changed to exposed ceiling and change to 1’0” x 4’0” light fixtures mounted to the structure.
   - Note to clarify ceiling condition in room 126. Existing ceiling to remain and lighting fixture replaced.

1.11. Replace: A2.1 Exterior Elevations, Revision 2, Addendum 2, Dated 07-18-2023
   - Note added to establish Basis of Design insulated metal panel.

1.12. Replace: A4.1 Print Shop New Work Plan, Revision 2, Addendum 2, Dated 07-18-2023
Addendum #2
HCPS Forest Hill Annex

- Print shop equipment schedule amended to indicate that all furniture and equipment in this area is owner provided.
1.13. Replace: A4.4 2F/WH Offices New Work Plan, Revision 2, Addendum 2, Dated 07-18-2023
   - Word “slab” omitted in 4/A4.4.
   - Second floor plan changed to exposed ceiling and change to 1’0” x 4’0” light fixtures mounted to the structure.
   - Note to clarify ceiling condition in room 126. Existing ceiling to remain and lighting fixture replaced.
1.15. Replace: A4.6 – Interior Elevations, Revision 2, Addendum 2, Dated 07-18-2023
   - 1/A4.6 through 6/A4.6 edited to reference section details 20/A4.6, 21/A4.6 and 22/A4.6 where applicable. Countertop materials also specified.
1.16. Replace: A5.1 – Details, Revision 2, Addendum 2, Dated 07-18-2023
   - Note added to establish Basis of Design insulated metal panel.
1.17. Replace: A6.1 – Schedules and Door Types, Revision 2, Addendum 2, Dated 07-18-2023
   - Note added that existing door frames should be painted.
1.18. Replace: A8.1 – Finish Schedule, Revision 2, Addendum 2, Dated 07-18-2023
   - List of alternates has been created and detailed.
   - Added note for color of solid surface material.
1.19. Replace E105 - First and Second Floor Plans – Revisions to light fixture type on second floor.
1.20. Replace E110 - First and Second Floor Plans – Revisions to smoke detector mounting location.

Specifications:
1.21. Replace Section 00002 - TABLE OF CONTENTS with attached.
1.22. Replace Section 00100 - INSTRUCTION TO BIDDERS with attached.
1.23. Replace Section 006600 - Minority Business Enterprise Requirements with attached.
1.24. Replace Section 011000 - SUMMARY with attached.
1.25. Add attached Section 055000 - METAL FABRICATIONS
1.26. Add attached Section 093013 - CERAMIC TILING
1.27. Replace Section 011000 - SUMMARY with attached.
1.28. Replace Section 283111 - Addressable Fire-Alarm Systems with Attached.

Attachments:
1.1. PRE-BID MEETING SIGN IN SHEET
1.2. Drawing Sheet: A1.2, Dated 7-18-2023
1.3. Drawing Sheet: A2.1, Dated 7-18-2023
1.4. Drawing Sheet: A4.1, Dated 7-18-2023
1.5. Drawing Sheet: A4.4, Dated 7-18-2023
1.6. Drawing Sheet: A4.5, Dated 7-18-2023
1.7. Drawing Sheet: A4.6, Dated 7-18-2023
1.8. Drawing Sheet: A5.1, Dated 7-18-2023
1.9. Drawing Sheet: A6.1, Dated 7-18-2023
1.10. Drawing Sheet: A8.1, Dated 7-18-2023
1.11. Drawing Sheet: E105, Dated 7-18-2023
1.12. Drawing Sheet: E110, Dated 7-18-2023
1.13. Section 00002 - TABLE OF CONTENTS
1.14. Section 00100 - Instruction To Bidders
1.15. Section 006600 - Minority Business Enterprise Requirements
1.16. Section 011000 - Summary
1.17. Section 055000 - Metal Fabrications
1.18. Section 093013 - Ceramic Tiling
1.19. Section 011000 - Summary
1.20. Section 283111 - Addressable Fire-Alarm

End of Addendum #2
# Pre-Bid Meeting Attendance Sheet
## Forest Hill Annex Upgrades & Print Shop Relocation
**Tuesday, July 11, 2023 @ 10:00 am**
Forest Hill Annex
101 Industrial Lane, Forest Hill, MD 21050
**Bid Opening – July 25, 2023 2:00 PM**

<table>
<thead>
<tr>
<th>Name</th>
<th>Company &amp; Address</th>
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A. Field verify all existing construction related conditions prior to starting new work and coordinate with the architect or owner representative.
B. The general contractor shall be solely responsible for evaluating all existing and proposed new work and making necessary adjustments. Any necessary adjustments related to the existing conditions shall be completed prior to starting new work.
C. The general contractor shall provide temporary structural support for all existing and proposed new work.
D. The general contractor shall be responsible for adequately supporting and protecting the existing structure during all phases of construction.

E. The general contractor shall be responsible for coordinating all electrical and mechanical fixtures with MEP drawings to avoid potential issues with the structure.
F. The general contractor shall be responsible for ensuring the stability of the structure during construction.

G. The general contractor shall be responsible for coordinating all demolition and construction activities to minimize disruption of the normal daily functioning of the owner's occupied areas.

H. The general contractor shall be responsible for maintaining the building in a watertight condition at all times.

I. The general contractor shall be responsible for ensuring the structural adequacy of all shoring and bracing.

J. The general contractor shall be responsible for providing temporary supports for all existing and proposed new work.

K. The general contractor shall be responsible for coordinating all existing and proposed new work with the architect or owner representative.

L. The general contractor shall be responsible for ensuring the structural integrity of the existing building during all phases of construction.

M. The general contractor shall be responsible for ensuring the safety of the existing building during all phases of construction.

N. The general contractor shall be responsible for ensuring the stability of the existing building during all phases of construction.

O. The general contractor shall be responsible for coordinating all electrical and mechanical fixtures with MEP drawings to avoid potential issues with the structure.

P. The general contractor shall be responsible for ensuring the structural integrity of the existing building during all phases of construction.

Q. The general contractor shall be responsible for coordinating all existing and proposed new work with the architect or owner representative.

R. The general contractor shall be responsible for ensuring the safety of the existing building during all phases of construction.

S. The general contractor shall be responsible for ensuring the stability of the existing building during all phases of construction.

T. The general contractor shall be responsible for coordinating all electrical and mechanical fixtures with MEP drawings to avoid potential issues with the structure.

U. The general contractor shall be responsible for ensuring the structural integrity of the existing building during all phases of construction.

V. The general contractor shall be responsible for coordinating all existing and proposed new work with the architect or owner representative.

W. The general contractor shall be responsible for ensuring the safety of the existing building during all phases of construction.

X. The general contractor shall be responsible for ensuring the stability of the existing building during all phases of construction.

Y. The general contractor shall be responsible for coordinating all electrical and mechanical fixtures with MEP drawings to avoid potential issues with the structure.

Z. The general contractor shall be responsible for ensuring the structural integrity of the existing building during all phases of construction.
**ELEVATION KEYNOTES**

1. EXISTING WALL AND PAINT TO REMAIN
2. NEW MAPES FREE STANDING CURTAIN WALL SHADE - ALTERNATE #4
3. NEW STOREFRONT GLAZING / INSULATION SYSTEM
4. NEW WINDOWS - ALTERNATE #3
5. NEW DOORS, SEE FLOOR PLAN
6. EXISTING WINDOW SYSTEM TO REMAIN

**EXISTING WALL AND PAINT TO REMAIN**

**NEW MAPES FREE STANDING CURTAIN WALL SHADE - ALTERNATE #4**

**NEW STOREFRONT GLAZING / INSULATION SYSTEM**

**NEW WINDOWS - ALTERNATE #3**

**NEW DOORS, SEE FLOOR PLAN**

**EXISTING WINDOW SYSTEM TO REMAIN**
GENERAL CONSTRUCTION NOTES:

A. FIELD VERIFY ALL EXISTING CONSTRUCTION-RELATED CONDITIONS PRIOR TO STARTING NEW CONSTRUCTION WORK. COMPLY WITH ALL REQUIREMENTS OF THE LOCAL CODES.

B. MAINTAIN THE BUILDING IN A WATERTIGHT CONDITION AT ALL TIMES.

C. WHERE A RATING HAS BEEN GIVEN TO AN EXISTING WALL, SEAL AND FIREPROOF ALL PENETRATIONS (EXISTING OR NEW) PER THAT RATING.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTION, AND/OR MISALIGNMENT IN ACCORDANCE WITH APPLICABLE CODE STANDARDS AND GOOD PRACTICE.


F. ALL EXISTING EXPOSED FINISHES IN AREAS OF WORK ARE TO BE PATCHED AND FINISHED TO MATCH SURROUNDING NEW SURFACES.

G. CONTRACTOR TO COORDINATE BLOCKING REQUIREMENTS FOR ALL WALL MOUNTED EQUIPMENT AND ACCESSORIES.

H. ALL FURNITURE IS TO BE REUSED FROM EXISTING SPACE UNLESS NOTED OTHERWISE.

NEW WORK PLAN KEYNOTES

1. PROVIDE NEW SECURITY CAGE POST OVER NEW FINISH FLOOR - TYP.
2. PROVIDE OPEN SECURITY GATE (WITHOUT ROOF) @ 8'-0" A.F.F. - BASIS OF DESIGN ULINE WIRE SECURITY ROOM
3. SEE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

NEW WORK LEGEND

- SHEET HALL
- NEW WALL
- NEW DOOR
- NEW NO DOOR
- EXISTING DUCTWORK
- FINISHED CEILING
- FINISHED FLOOR
- EXIST FLOOR
- SCHEDULED FLOOR FINISH
- SECURITY GATE POST BOTTOM PLATE
- SECURE POST TO FLOOR PER MFR RECOMMENDATIONS
- 1/2" MAX.
- SECURITY GATE POST
- SECURITY GATE ATTACHMENT DETAIL
- SECURITY NEW DOOR POST
- SECURITY POST SCREW CAP
- SECURITY POST SCREW CAP
- SECURITY POST SCREW CAP

NEW WORK PLAN INSTRUCTIONS

- PROVIDE SECURITY CAGE POST OVER MAN FLUSH, TOP
- PROVIDE KEYS
- PROVIDE SECURITY CAGE OVER SERVICE FLOOR & PILLAR
- PROVIDE SECURITY OVER ENTRANCE DOOR & SECURITY GATE

I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NUMBER: 2F/WH OFFICES NEW WORK PLAN

AS NOTED

RENOVATIONS FOR

7/10/23

SAFETY GATE

FOR

1/12

7/18/23

REV# DATE DESCRIPTION

1 7/10/23 REVISION 1
2 7/18/23 REVISION 2

ADDITION TO FIRST FLOOR

EQUIPMENT ACCESS DOORS BY REMOVABLE SAFETY GATE
1. Install new storage shed outside science kit area (133) as shown on A1.1.
2. Install new freestanding curtain wall shade as shown on A2.1.
3. Replace windows in main office area as shown on A2.1.
4. Repoint existing CMU walls adjacent to cooler (137) as shown on A1.1.

**Alternates**

- GWB
- VB
- EB Epoxy Base
- Plastic Laminate PLAM - Wilsonart HP Laminate
- 06 - Cabinets
- 2'-0" x 4'-0" Acoustical ceiling tile ACT-1 Armstrong 895
- 05 - Ceilings
- Solid Surface SS-1 LG Hi-Mac Color to be selected by architect from manufacturer's standard product line.
- 04 - Counters
- 6x6 Ceramic wall tile CT-1 Daltile Color Wheel Classic
- 03 - Walls
- Integral wall base WB-1 Integral Base
- Vinyl wall base VB-1 Johnsonite 4" high cove
- 02 - Wall bases
- Sealed concrete SC-1
- Integral floor base EPX-1 Stonhard Stoneshield
- 12x12 Vinyl composite tile VCT-1 Armstrong Standard Excelon
- 01 - Floors
- 100B 7 SF Closet VCT-1 VB-1 PT-1 PT-1 PT-1 ACT-1 7' - 11"
- 100A 162 SF Waiting area VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 8' - 3"
- 202 446 SF Mech - - - - - - - 9' - 10"
- 201 572 SF Mech VCT-1 VB-1 - - - - - 9' - 6 1/2"
- 200 1255 SF Storage VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 8' - 2"
- 138 3450 SF Freezer - - - - - - - 16' - 0"
- 137 874 SF Cooler - - - - - - - 8' - 0"
- 136 262 SF Storage - - - - - - - 8' - 0"
- 132 1916 SF Storage - VB-1 - PT-1 (NEW WALL) - - - 17' - 8" See finish note 1
- 131 120 SF Science Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 9' - 0"
- 130 221 SF Meeting VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 9' - 0"
- 129 649 SF Library Processing Center VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 9' - 0"
- 128 2746 SF Warehouse area 2 - - - - - - - 15' - 8"
- 127 63 SF MDF VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 9' - 0"
- 126 86 SF Mech EPX-1 EB - - - - - 7' - 3"
- 125 2839 SF Print Shop SC-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 9' - 0"
- 124 80 SF Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 9' - 0"
- 123 231 SF Cubicles VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 9' - 0"
- 122 136 SF Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 GWB 8' - 0"
- 121 6456 SF Warehouse area 1 - - - - - - - 16' - 0"
- 120 119 SF Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 7' - 11"
- 118 125 SF Mech - - - - - - - 15' - 10"
- 117 394 SF Corridor VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 8' - 9"
- 116 63 SF Toilet EPX-1 EB PT-1 PT-1 PT-1 ACT-2 9' - 0" See epoxy floor base details
- 115 58 SF Toilet EPX-1 EB PT-1 PT-1 PT-1 CT-1 ACT-2 9' - 0" See epoxy floor base details
- 114 197 SF Storage VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 8' - 11"
- 113 236 SF Break Room VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 9' - 0"
- 112 282 SF Back Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 8' - 9"
- 111 404 SF Instruction VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 8' - 11"
- 110 27 SF Toilet EPX-1 EB PT-1 CT-1 PT-1 CT-1 ACT-2 7' - 6" See epoxy floor base details
- 109 308 SF Conference VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 8' - 1"
- 108 180 SF Copy Room VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 8' - 0"
- 107 599 SF Front Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 8' - 3"
- 106 136 SF Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 7' - 11"
- 105 170 SF Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 7' - 11"
- 104 88 SF Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 7' - 11"
- 103 88 SF Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 7' - 11"
- 102 88 SF Office VCT-1 VB-1 PT-1 PT-1 PT-1 PT-1 ACT-1 7' - 11"
GENERAL SHEET NOTES:
1. REFER TO SHEET E001 FOR LEGEND, ABBREVIATIONS, & GENERAL PROJECT NOTES.
2. REFER TO SHEET E401 FOR PANELBOARD SCHEDULES.
3. REFER TO SHEET E001 FOR LEGEND, ABBREVIATIONS, & GENERAL PROJECT NOTES.
4. REFER TO SHEET E401 FOR PANELBOARD SCHEDULES.
5. LIGHTING CONTROL DEVICES SHALL CONTROL ALL FIXTURES IN THE SPACE, UNLESS OTHERWISE NOTED.

LIGHTING - FIRST FLOOR PLAN - AREA 2

REV# | DATE | DESCRIPTION
--- | --- | ---
2 | 7/18/2023 | ADDENDUM 02
1 | RECONNECT ALL LIGHT FIXTURES IN SPACE TO EXISTING CIRCUIT. EXTEND WIRE AND CONDUIT AS NECESSARY.
2 | PROVIDE NEW CONTROL WIRING AND CONDUIT FROM LIGHTING CONTROL DEVICE TO LED LIGHT FIXTURES.
3 | PROVIDE CEILING MOUNTED OCCUPANCY SENSOR.
4 | PROVIDE WALL MOUNTED DIMMER SWITCH WITH ON/OFF PUSH BUTTON AND RAISE/LOWER CONTROLS.
5 | PROVIDE LOW VOLTAGE WALL SWITCH WITH ON/OFF PUSH BUTTONS.
6 | NO WORK IN THIS SPACE UNLESS OTHERWISE NOTED.
7 | SURFACE MOUNT TO EXISTING STRUCTURE. USE JUNCTION BOXES AND UNISTRUT AS NECESSARY.

LIGHTING - SECOND FLOOR PLAN

REV# | DATE | DESCRIPTION
--- | --- | ---
2 | 7/18/2023 | ADDENDUM 02
1 | RECONNECT ALL LIGHT FIXTURES IN SPACE TO EXISTING CIRCUIT. EXTEND WIRE AND CONDUIT AS NECESSARY.
2 | PROVIDE NEW CONTROL WIRING AND CONDUIT FROM LIGHTING CONTROL DEVICE TO LED LIGHT FIXTURES.
3 | PROVIDE CEILING MOUNTED OCCUPANCY SENSOR.
4 | PROVIDE WALL MOUNTED DIMMER SWITCH WITH ON/OFF PUSH BUTTON AND RAISE/LOWER CONTROLS.
5 | PROVIDE LOW VOLTAGE WALL SWITCH WITH ON/OFF PUSH BUTTONS.
6 | NO WORK IN THIS SPACE UNLESS OTHERWISE NOTED.
7 | SURFACE MOUNT TO EXISTING STRUCTURE. USE JUNCTION BOXES AND UNISTRUT AS NECESSARY.
INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAVE BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MAY NOT INDICATE ACTUAL EXISTING CONDITIONS IN DETAIL OR DIMENSION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.

UNLESS OTHERWISE NOTED, SPECIAL SYSTEMS ITEMS SHOWN HEAVY SOLID (         ) SHALL BE NEW, AND SPECIAL SYSTEMS ITEMS SHOWN LIGHT SOLID (         ) SHALL BE EXISTING TO REMAIN.

INSTALL ALL FIRE ALARM DEVICES PER REQUIREMENTS OF NFPA 72.

ALL FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM CONTROL PANEL. EXISTING FIRE ALARM CONTROL PANEL IS BOSCH D9412GV4.

ALL DEVICES SHOWN MOUNTED TO EXISTING WALLS SHALL BE SURFACE MOUNTED AND FED WITH SURFACE MOUNTED RACEWAY. ALL DEVICES SHOWN MOUNTED IN NEW WALLS SHALL BE RECESSED FED BY CONDUIT CONCEALED IN THE WALL.

PROVIDE CAT 6 CABLE FROM ALL DATA/VOICE OUTLETS BACK TO DATA RACK IN MDF ROOM 127. REFER TO DETAILS ON SHEET E302.
SECTION 000002 – TABLE OF CONTENTS

DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS

Section 00003  List of Drawings - Corrected per Addendum 2, Dated 07-18-2023
Section 00020  Invitation to Bid
Section 00100  Instructions to Bidders - Corrected per Addendum 2, Dated 07-18-2023
Section 00300  Form of Proposal
Section 00500  Contract Forms
Section 00610  Performance Bond
Section 00620  Payment Bond
Section 00630  Affidavit of Qualification to Bid
Section 00640  Criminal Offender Contract Affidavit
Section 00650  Contractor Qualification Statement
Section 00660  Minority Business Enterprise Requirements - Corrected per Addendum 2, Dated 07-18-2023
Section 00800  Amendments to General Conditions
Section 00900  Supplementary General Conditions

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Section 221116 Domestic Water Piping
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Forest Hill Annex Improvements and
Print Shop Relocation
FWA # 2231009.00
Division 23 – Heating, Ventilating, and Air-Conditioning

Section 230500 Basic Mechanical Materials and Methods
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Section 230517 Sleeves and Sleeve Seals for HVAC Piping
Section 230529 Hangers and Supports for Mechanical Piping and Equipment
Section 230548 Vibrations and Seismic Controls for Mechanical Piping and Equipment
Section 230553 Identification for Mechanical Piping and Equipment
Section 230593 Testing, Adjusting, and Balancing for HVAC
Section 230713 Duct Insulation
Section 230719 HVAC Piping Insulation
Section 230800 Systems Commissioning
Section 230900 Instrumentation and Control for HVAC
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MASTERSPEC

HARFORD COUNTY PUBLIC SCHOOLS
FOREST HILL ANNEX IMPROVEMENTS AND PRINT SHOP RELOCATION

SECTION 00100 – INSTRUCTIONS TO BIDDERS

PART 1 - PROPOSALS

1.1 Sealed proposals for: FOREST HILL ANNEX IMPROVEMENTS AND PRINT SHOP RELOCATION, shall be received at the Harford County Public Schools Facilities Management Complex, Hickory College Building, 2209 Conowingo Road, Bel Air, Maryland, until 2:00 p.m. local time on July 25th, 2023. Bidders shall submit the completed Attachment D-1A “MBE Utilization and Fair Solicitation Affidavit and MBE Participation Schedule” for Participation of Certified Minority Business Enterprises within thirty (30) minutes of submitting the bid proposal; failure to submit will result in the bid being determined non-responsive. Then at 2:30 p.m. local time all bids will be publicly opened and read.

1.2 All proposals shall be submitted in duplicate on the detached proposal forms provided by the architect. Each bidder must submit a Base Bid (provided for on the proposal forms), and give all other information called for on the proposal form.

1.2.1 Bids

A. Base Bid: One lump sum is required. The bid sum represents the cost to perform the work as described in the bidding documents complete and properly executed.

B. Base Bids: More than one lump sum bid is required. See SUMMARY section of Division 1, General Requirements, for scope of work for each lump sum bid. Lump sum bid shall not include any work for which unit price is required.

C. Alternate Prices: Alternate prices are required for alternates scheduled in SUMMARY section of Division 1, General Requirements. State amount to be added or deducted for each alternate.

D. Unit Prices: A price stated in the bid as a per unit of measurement of materials, equipment or services. This price represents work in place, i.e inclusive of all overhead and profit.

E. Basis of Award:

1. The Owner reserves the right to accept, as may be determined by the Contracting Officer to be in the best interest of the Owner, the lump sum bid, unit price bid(s), and if any, some or all of the bids on Alternates.

1.3 PRE-BID REQUIREMENTS AND NOTICES

1. A pre-bid conference will be held on Tuesday, July 11, 2023 @ 10:00 a.m. local time

2. Bidders’ participation is encouraged although attendance is not mandatory. The conference will provide opportunity for discussion of the nature of the work and problems that may be entailed, as well as to answer questions concerning contract provisions and requirements, including drawings and specifications. Bidders are requested to submit questions relative to the bidding documents in advance of the meeting so that the Architect may prepare responses.

3. No oral statement made by an Owner representative during the pre-bid conference, nor any written record of such oral statements as may be made and subsequently furnished to the bidder, will be deemed to have the effect of adding to, modifying, or otherwise varying from the written provisions of the invitation for bids (including, but not limited to
specifications, drawings and written amendments to the solicitation). In the event the discussion or questions raised during the pre-bid conference indicate a need to modify the invitation for bids, an amendment to the solicitation will be issued in writing; any such amendment to the solicitation must be acknowledged in the same manner and under the same conditions as all other written amendments to an invitation for bids.

B. Visit to Site: To arrange for the site visit, contact the following person: Harry Miller, Assistant Supervisor in Planning and Construction at 410-809-6120.

1.4 All proposals must be signed with a full name and address of the bidder, if an individual; if a partnership, with the partnership name by a member of the firm, giving also the full name and address of each member; if a corporation, by an officer in the corporate name with the corporate seal attached to such signature.

1.5 Proposals in duplicate shall be enclosed and sealed in a plain envelope marked on the outside: “FOREST HILL ANNEX IMPROVEMENTS AND PRINT SHOP RELOCATION”

1.6 The bidder shall submit the completed Attachment 1A Minority Business Enterprise Utilization and Fair Solicitation Affidavit and the Schedule for Participation of Certified Minority Business Enterprises within thirty (30) minutes of submitting the bid proposal; failure to submit will result in the bid being determined non-responsive. The apparent low bidder shall submit additional minority business enterprise material and supporting data which is specified in the bid documents within ten (10) working days after notification that the firm is the apparent low bidder.

PART 2 – ACCEPTANCE OF PROPOSALS

2.1 No proposals may be withdrawn for at least ninety (90) days after the time set for delivery of proposals.

2.2 The Owner reserves the right to waive any informalities in bidding, to accept any bids or unit prices, or to award the Contract to those parties deemed most advantageous to its best interests.

2.3 All bids may be rejected at the discretion of the Owner. Any bid may be rejected for lack of conformity with notice and instruction to bidders, interest of any person in more than one proposal, evidence of collusion between bidder, unbalanced proposal, or lack of responsibility of bidders.

2.4 The Owner reserves the right to accept the base bid and the alternates in any order.

PART 3 – ADDENDA AND INTERPRETATIONS

3.1 No interpretation of the meaning of the drawings, specifications or other Contract Documents will be made to any bidder orally. Every request for such interpretation should be in writing, addressed to Frederick Ward Associates, 5 S. Main Street, Bel Air, MD 21014, or emailed to Bill Starr at bstarr@fredward.com to be given consideration, and must be received at least six (6) days prior to the date fixed for the opening of the bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the drawings and specifications which will be mailed by registered mail with return receipt requested or faxed to all prospective bidders (at the respective addresses furnished for such purpose). Failure of any bidder to receive any such addenda or interpretations shall not relieve any bidder from any obligations under his bid as submitted. All addenda so issued shall become part of the Contract Documents.

3.2 Bidders are requested to study the drawings and specifications in sufficient detail to ask as many of their questions as possible during the first half of the bidding period to avoid elaborate “last minute” addenda.
PART 4 – FAMILIARITY WITH THE WORK

4.1 Before submitting proposals, bidders should carefully examine the proposed Contract Documents, inspect the site of the project, acquaint themselves with all governing laws, ordinances, etc., and thoroughly familiarize themselves with all matters which may affect the performance of the work. The act of submitting a proposal shall be considered as meaning that the bidder has so familiarized himself, and therefore, no concession will be granted by the Owner because of any claim of misunderstanding or lack of information.

4.2 Only those manufacturers specifically listed by name shall form the basis for all bids. Failure to do so shall be at the risk of the Contractor. Any further requests for substitutions will only be considered following the award of Contract.

PART 5 – BID SECURITY

5.1 Bidder shall furnish with his proposal, a certified check made payable to the Owner or an approved Bid Bond in an amount not less than 5% of the amount of the Combined Bids. This bid security may be held by the Owner up to sixty (90) days after date of receiving bids, after which time they shall be returned to the bidder.

5.2 Bid security shall be forfeited to the Owner should the Contractor to whom the bid is awarded fail to execute the contract and to furnish an approved contract security bond as required by the specifications within ten (10) days from the date of award.

PART 6 – CONTRACT SECURITY

6.1 The Contractor shall furnish a surety bond in an amount at least equal to one hundred percent (100%) of the contract price as security for the faithful performance of this contract and for payment of all persons performing labor and furnishing material in connection with the contract. It is to be a corporate bond with an approved bonding company.

PART 7 – COPIES OF PLANS

7.1 General contractors may secure a loan of one (1) set of plans and specifications at no cost on a flash drive upon providing company contact information to Harford County Public Schools.

PART 8 – BIDDER QUALIFICATIONS

8.1 **Contractor’s Qualification Statement**
Construction contractor’s wishing to submit proposals issued by Harford County Public Schools shall be pre-qualified by Harford County Public Schools as set forth by the Code of Maryland Regulations (COMAR), Article 21.05.02.05.

8.2 As set forth in the Invitation To Bid, construction contractor’s wishing to submit proposals issued by Harford County Public Schools shall be pre-qualified by Harford County Public Schools by submitting a Contractor’s Qualification Statement (AIA Document A305 – 2020) three (3) days prior to receipt of bids, to Harford County Public Schools Planning & Construction Department, 102 South Hickory Avenue, Bel Air, Maryland 21014. Failure to provide valid and complete information may result in the proposal being rejected as non-responsive.

8.3 The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information for this purpose. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the work. Conditional bids will not be accepted.
PART 9 – CONTRACTOR CERTIFICATE OF REGISTRATION

9.1 Bidders are required under Article 56, Section 270, Annotated Code of Maryland, to show evidence of Certificate of Registration before the proposal may be received and considered. The bidder shall place on the outside of the envelope containing the “Registered Maryland Contractor Number______________________.”

9.2 Numbers may be obtained from the State License Bureau, 301 West Preston Street, Baltimore, Maryland 21201.

PART 10 – LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE ON TIME:

****CONTRACTORS TO BE SUBSTANTIALLY COMPLETE WITH PROJECT PHASES BY:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>Wednesday November 15th, 2023</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Tuesday February 20th, 2024</td>
</tr>
<tr>
<td>Phase 3</td>
<td>Thursday May 23rd, 2024</td>
</tr>
<tr>
<td>Phase 4</td>
<td>Wednesday September 11th, 2024</td>
</tr>
</tbody>
</table>

10.1 A clause will be inserted in the Contract between the Owner and Contractor to the effect that, from the compensation otherwise to be paid, the Owner may retain the sum of One Thousand Dollars ($1,000.00) for each calendar day of delay beyond the Substantial and/or Final Completion Dates stipulated in the Contract for occupancy and use.

10.2 The time in which the Contractor agrees to complete the Work is of the essence to the Contract and failure to complete within the Contract Time specified will entitle the Owner to, and he will, deduct and retain out of monies which may be due the Contractor under the Contract, the sum stated above and in the proposal from each calendar day, in excess of the time stated, including Sundays and legal holidays. The sum shall not be considered as a penalty, but as a sum mutually agreed upon as the ascertained damages suffered by the Owner because of the delay, official starting date being 5 days after the Building Permit has been issued, or 5 days after issuance of the Notice to Proceed, whichever is later.

10.3 Requests for extension of the Contract Time due to strikes, lack of materials or any condition over which the Contractor has no control will be reviewed by the Owner after written application is made for a time extension to the Architect. Any request for an extension of Contract Time is to be made immediately upon occurrence of conditions, which, in the opinion of the Contractor, warrant such an extension with reasons clearly stated and detailed proof given for such delays beyond Contractor’s control, these to be made in writing to the Architect. In establishing the time of construction completion, the weather conditions as no request for an extension of time due to weather conditions will be considered unless accompanied by Weather Bureau documentary evidence showing by comparison that such weather is abnormal to any of the past five years.

10.4 This contract requires the Contractor to make good faith efforts to comply with the Minority Business Enterprise (MBE) Program and contract provisions. The Owner and the Contractor acknowledge and agree that the Owner will incur damages, including but not limited to loss of good will, detrimental impact on economic development, and diversion of internal staff resources, if the Contractor does not make good faith efforts to comply with the requirements of the MBE Program and MBE contract provisions. The parties further acknowledge and agree that the damages the Owner might reasonably be anticipated to accrue as a result of such lack of compliance are difficult to ascertain with precision.

10.5 Therefore, upon a determination by the Owner that the Contractor failed to make good faith efforts to comply with one or more of the specified MBE Program requirements or contract provisions, the Contractor expressly agrees that the Owner may withhold payment on any invoices as a set-off against liquidated damages owed. The Contractor further agrees that for each specified violation, the agreed upon liquidated damages are reasonably proximate to the loss the Owner is anticipated to incur as a result of such violation.
a. Failure to submit each monthly payment report in full compliance with COMAR 21.11.02.13B (3): $ 33.80 per day until the monthly report is submitted as required.

b. Failure to include in its agreements with MBE subcontractors a provision requiring submission of payment reports in full compliance with COMAR 21.11.03.13B (4): $ 118.32 per MBE subcontractor.

c. Failure to comply with COMAR 21.11.03.12 in terminating, canceling, or changing the scope of work/value of a contract with an MBE subcontractor and/or amendment of the MBE participation schedule: the difference between the dollar value of the MBE participation commitment on the MBE participation schedule and for that specific MBE firm and the dollar value of the work performed by that MBE firm for the contract.

d. Failure to meet the Contractor’s total MBE participation goal and subgoal commitments: the difference between the dollar value of the total MBE participation commitment on the MBE participation schedule and the MBE participation actually achieved.

10.6 Notwithstanding the use of liquidated damages, the Owner reserves the right to terminate the contract and exercise all other rights and remedies provided in the contract or by law.

PART 11 – TAXES

11.1 The Contractor shall pay all required Federal, State, and local sales and use taxes, and similar levies on material, tools and equipment purchased to complete the contract.

PART 12 – CONTRACT DOCUMENTS

12.1 At such time as the Project is awarded, the successful bidder will be given, free of charge for construction purposes, one (1) set of Contract Documents and all remaining sets of Contract Documents and compact discs. If the Contractor needs additional sets, he may purchase them from the Architect by paying the actual reproduction costs plus handling charge.

PART 13 – INSPECTION OF SITE

13.1 Each bidder shall visit the Job Site and inform himself as to the conditions under which the Work is to be done. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of the Contract Documents and to complete the contemplated Work for the consideration set forth in his bid.

PART 14 – AWARD OF CONTRACT

14.1 Tie Bids: In the event of tie bids where all factors are equal, award shall be made to the Harford County Bidder, the Out-of-County Bidder, the Bidder incorporated in Maryland, and the Bidder not incorporated in the State of Maryland, in that order of preference. If bidders within these geographic designations are equal as to all factors of consideration, the award shall be made by a toss of the coin.

PART 15 – BUY AMERICAN STEEL

15.1 Consistent with the provisions of the Maryland Annotated Code, Article 7A, Sections 68 through 72, inclusive, known as the “Buy American Steel” Act of the General Assembly of Maryland, Acts of 1978.

15.2 Wherever in these INSTRUCTIONS TO BIDDERS, “steel product, as hereafter defined, are part of the supplies, services or construction required by Owner, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works, the parties bidding shall predicate their base offer solely upon “steel products” manufactured in the United States of America or one of its territories,
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continental or insular, subject to the jurisdiction of the United States in sufficient quantities to meet the requirements of the Contract, in which event the Base Bid is to contain a certification to this effect.

15.3 Each bidder shall furthermore attach to his BID FORM (using the Form for Substitution of Materials), the proposed cost of the supplies, services or construction required by Owner where foreign “steel products” are proposed to be used.

15.4 The Owner, in addition to all other reservation set forth in the Bidding Requirements, shall at the time of the issuance of the Award and Contract pursuant thereto, determine whether the supplies, services or construction required is to utilize steel products of domestic or foreign origin.

15.5 Note further that in the event the Award and Contract pursuant thereto is predicted upon the utilization of domestic “steel products”, then, in addition to all other requirements mandated for performance hereafter in these INSTRUCTIONS TO BIDDERS, and all documents issued in association to whom the Award and Contract pursuant thereto is issued, shall as a further condition precedent to the obtaining of Final Payment from Owner, furnish same with a certificate under oath that all “steel products” supplied, delivered or constructed were of domestic origin.

15.6 The “Buy American Steel” Act of Maryland defines “steel products” as any product: “rolled, formed, shaped, drawn, extruded, forged, cast, fabricated, or otherwise similarly processed, or processed by a combination of two or more of such operations from steel made in the United States by the open-hearth, basic oxygen, electric furnace, bessemer, or other steel making process”. The Contractor should comply with the provisions of Section 17.301 through and including 17.306 of the State Finance and Procurement Article of the Annotated Code of Maryland (as amended from time to time), entitled “Steel Procurement for Public Works.”

15.7 The Contractor’s Affidavit of Compliance with said provisions may be required before payment is made.

PART 16 – MINORITY BUSINESS ENTERPRISES IN PUBLIC SCHOOL CONSTRUCTION PROJECTS

16.1 The successful bidder shall comply with the attached Section 00660, Harford County Public Schools and State of Maryland, Administrative Procedure, dated February 5th 2021, including the following forms pertaining to a Minority Business Enterprises.

Certified Minority Business Enterprise Utilization and Fair Solicitation Affidavit and MBE Participation Schedule
Outreach Efforts Compliance Statement
Minority Business Enterprises Subcontractor Project Participation Statement
Minority Subcontractor Unavailability Certificate
MBE Waiver Documentation
Standard Monthly Contractor’s Requisition for Payment
Close-Out Cost Summary

PART 17 – VENDOR/CONTRACTOR DISQUALIFICATION BRIBERY

17.1 A person convicted for bribery, attempted bribery, or conspiracy to bribe shall be disqualified from entering into a contract with any county or other subdivision of the State. Every business entity, upon submitting a bid or otherwise applying for a contract, shall have been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of the State or Federal Government.

PART 18 – AFFIDAVIT: EMPLOYMENT OF SEX OFFENDERS AND OTHER CRIMINAL OFFENDERS

18.1 The General Contractor shall acknowledge the following requirements of Section 11-722 of the Criminal Procedure Article, and Section 6-113 of the Education Article, Annotated Code of Maryland, as
described in Section 00900- Supplementary General Conditions; Article 19 – Special Policies; 19.3, 19.4, 19.5, 19.6 and 19.7.

18.2 The apparent low bidder shall complete and submit the Employment of Sex Offenders and Other Criminal Offenders Affidavit, (Section 00640), which is specified in the bid documents within ten (10) working days after notification that the firm is the apparent low bidder.

PART 19 – INFORMATIONAL PRICES

19.1 Within 2 days after notification of apparent low bidder, the successful bidder must provide the following list of informational prices to Harford County Public Schools (HCPS). The informational prices are to be used for accounting purposes by the Owner and will in no way affect the award of the total contract to the lowest qualifying bidder. However, Contractor’s first requisition for payment will be withheld until requested prices have been submitted.

PART 20 – WORK HOURS

20.1 The Contractor will be allowed to work at the project site as follows:

a. School Year: Between the hours of 6:30 AM and Dusk, local time, Monday through Friday. To be re-evaluated if work is a disturbance.
b. Summer Break: Between the hours of 6:30 AM and Dusk, local time, Monday through Friday.
c. Weekend work is encouraged.

20.2 Work outside the specified hours may be allowed with 72 hours minimum notice to the Owner. Work on Saturday and Sunday may be scheduled, with prior approval from the Owner. The Owner reserves the right to disapprove or suspend a request to work outside of normal working hours. The Owner also reserves the right to determine when building coverage is necessary or in the best interest of HCPS. The cost of providing building maintenance personnel onsite for weekend work or after hours work shall be borne by the Contractor. For information purposes only, the current prevailing overtime and holiday rates for County maintenance personnel is between $28.00 and $42.00 per hour.

20.3 Holiday work, as determined by the yearly published HCPS school calendar, may be allowed with 72 hours minimum notice to the Owner. Work on holidays, if approved, may be performed from 8:00 AM to 4:30 PM. The Owner reserves the right to disapprove or suspend a request to work on holidays. The Owner also reserves the right to determine when building coverage is necessary or in the best interest of HCPS. The cost of providing building maintenance personnel onsite for holiday work shall be borne by the Contractor. For information purposes only, the current prevailing overtime and holiday rates for County maintenance personnel is between $28.00 and $42.00 per hour.

20.4 Inclement Weather: In the case of inclement weather, the Contractor will not be permitted to work inside Harford County Public Schools during the time of delayed openings, or at all if the school is closed. Should Harford County Public Schools issue a inclement weather modified weather schedule, the contractor shall contact proper HCPS point of contact to determine if the school is open for contractors.”
Minority Business Enterprises are encouraged to respond to the invitation.

Minority Business Enterprise documentation is required for this project.

It is the intent of Harford County Public Schools to actively participate in the achievement of the MBE participation requirement contained herein. The contractor or suppliers who provide materials, supplies, equipment, and/or services for this project shall attempt to achieve a **minimum percent as noted below**. The bidder may use the Maryland Department of Transportation web site [www.mdot.state.md.us](http://www.mdot.state.md.us) to help locate Maryland Department of Transportation certified Minority Business Enterprises.

The bidder or offeror shall submit with its bid or proposal a completed “**MBE Utilization and Fair Solicitation Affidavit & MBE Participation Schedule**” (Attachment D-1A) that identifies the bidder or offeror’s specific commitment of certified minority business and certifies it made a good faith effort to achieve the goal established in the solicitation. The MBE Participation Schedule shall include the name of each certified MBE that will participate in the project including its respective MBE classification, and shall include the items of work to be performed or furnished and the committed price or the percentage of the contract to be paid to each MBE for the work or supply.

The failure of a bidder to complete and submit all of the required forms as required by the MBE procedures dated February 5, 2021, shall result in a determination that the bid is not responsive.

**Note: The contract goals for various package bids shall be:**

<table>
<thead>
<tr>
<th>Package</th>
<th>MBE Goal Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project overall</td>
<td>25% Overall, 8% African American, 11% Women</td>
</tr>
</tbody>
</table>

Minority Business Enterprise Requirements

Harford County Public Schools
Attachment D.  Minority Business Enterprise (MBE) Forms

D-1A
MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT
& MBE PARTICIPATION SCHEDULE

PART 1 - INSTRUCTIONS

PLEASE READ BEFORE COMPLETING THIS DOCUMENT

This form includes Instructions and the MBE Utilization and Fair Solicitation Affidavit & MBE Participation Schedule which must be submitted with the bid/proposal. If the bidder/offeror fails to accurately complete and submit this Affidavit and Schedule with the bid or proposal, the Procurement Officer shall deem the bid non-responsive or shall determine that the proposal is not reasonably susceptible of being selected for award unless the inaccuracy is determined to be the result of a minor irregularity that is waived or cured in accordance with COMAR 21.06.02.04.

1. Contractor shall structure its procedures for the performance of the work required in this Contract to attempt to achieve the minority business enterprise (MBE) subcontractor participation goal stated in the Invitation for Bids or Request for Proposals. Contractor agrees to exercise good faith efforts to carry out the requirements set forth in these Instructions, as authorized by the Code of Maryland Regulations (COMAR) 21.11.03.

2. MBE Goals and Subgoals: Please review the solicitation for information regarding the Contract’s MBE overall participation goals and subgoals. After satisfying the requirements for any established subgoals, the Contractor is encouraged to use a diverse group of subcontractors and suppliers from the various MBE classifications to meet the remainder of the overall MBE participation goal.

3. MBE means a minority business enterprise that is certified by the Maryland Department of Transportation (“MDOT”). Only MBEs certified by MDOT may be counted for purposes of achieving the MBE participation goals. In order to be counted for purposes of achieving the MBE participation goals, the MBE firm, including a MBE prime, must be MDOT-certified for the services, materials or supplies that it is committed to perform on the MBE Participation Schedule. A firm whose MBE certification application is pending may not be counted.

4. Please refer to the MDOT MBE Directory at https://mbe.mdot.maryland.gov/directory/ to determine if a firm is certified with the appropriate North American Industry Classification System (“NAICS”) Code and the product/services description (specific product that a firm is certified to provide or specific areas of work that a firm is certified to perform). For more general information about NAICS codes, please visit https://www.census.gov/eos/www/naics/. Only those specific products and/or services for which a firm is certified in the MDOT Directory can be used for purposes of achieving the MBE participation goals. CAUTION: If the firm’s NAICS Code is in graduated status, such services/products may not be counted for purposes of achieving the MBE participation goals. A NAICS Code is in the graduated status if the term “Graduated” follows the Code in the MDOT MBE Directory.

5. Guidelines Regarding MBE Prime Self-Performance. Please note that when a certified MBE firm participates as a prime contractor on a Contract, a procurement agency may count the distinct, clearly defined portion of the work of the Contract that the certified MBE firm performs with its own workforce toward fulfilling up to, but no more than, fifty-percent (50%) of the overall...
MBE participation goal, including up to one hundred percent (100%) of not more than one of the MBE participation subgoals, if any, established for the Contract.

✓ In order to receive credit for self-performance, an MBE prime must be certified in the appropriate NAICS code to do the work and must list its firm in the MBE Participation Schedule, including the certification category under which the MBE prime is self-performing and include information regarding the work it will self-perform.

✓ For the remaining portion of the overall goal and the remaining subgoals, the MBE prime must also identify on the MBE Participation Schedule the other certified MBE subcontractors used to meet those goals or request a waiver.

✓ These guidelines apply to the work performed by the MBE Prime that can be counted for purposes of meeting the MBE participation goals. These requirements do not affect the MBE Prime’s ability to self-perform a greater portion of the work in excess of what is counted for purposes of meeting the MBE participation goals.

✓ Please note that the requirements to meet the MBE participation overall goal and subgoals are distinct and separate. If the contract has subgoals, regardless of MBE Prime’s ability to self-perform up to 50% of the overall goal (including up to 100% of any subgoal), the MBE Prime must either commit to use other MBEs for each of any remaining subgoals or request a waiver. As set forth in Attachment 1-B Waiver Guidance, the MBE Prime’s ability to self-perform certain portions of the work of the Contract will not be deemed a substitute for the good faith efforts to meet any remaining subgoal or the balance of the overall goal.

✓ In certain instances where the percentages allocated to MBE participation subgoals add up to more than 50% of the overall goal, the portion of self-performed work that an MBE Prime may count toward the overall goal may be limited to less than 50%. Please refer to the Governor’s Office of Small Minority & Women Business Affairs’ website for the MBE Prime Regulations Q&A for illustrative examples.


6. Subject to items 1 through 5 above, when a certified MBE performs as a participant in a joint venture, a procurement agency may count a portion of the total dollar value of the Contract equal to the distinct, clearly-defined portion of the work of the Contract that the certified MBE performs with its own forces toward fulfilling the Contract goal, and not more than one of the Contract subgoals, if any.

7. The work performed by a certified MBE firm, including an MBE prime, can only be counted towards the MBE participation goal(s) if the MBE firm is performing a commercially useful function on the Contract. Please refer to COMAR 21.11.03.12-1 for more information regarding these requirements.

8. **Materials and Supplies: New Guidelines Regarding MBE Participation.**

✓ **Regular Dealer (generally identified as a wholesaler or supplier in the MDOT Directory):**
Up to 60% of the costs of materials and supplies provided by a certified MBE may be counted towards the MBE participation goal(s) if such MBE is a Regular Dealer of such materials and supplies. Regular Dealer is defined as a firm that owns, operates, or maintains a store, a warehouse, or any other establishment in which the materials, supplies, articles, or equipment are of the general character described by the specifications required under the contract and are bought, kept in stock, or regularly sold or leased to the
public in the usual course of business; and does not include a packager, a broker, a manufacturer’s representative, or any other person that arranges or expedites transactions.

Example for illustrative purposes of applying the 60% rule:

Overall contract value: $2,000,000
Total value of supplies: $100,000

Calculate Percentage of Supplies to overall contract value: $100,000 divided by $2,000,000 = 5%

Apply 60% Rule - Total percentage of Supplies/Products 5% x 60% = 3%

3% would be counted towards achieving the MBE Participation Goal and Subgoal, if any, for the MBE supplier in this example.

✓ Manufacturer: A certified MBE firm’s participation may be counted in full if the MBE is certified in the appropriate NAICS code(s) to provide products and services as a manufacturer.

✓ Broker: With respect to materials or supplies purchased from a certified MBE that is neither a manufacturer nor a regular dealer, a unit may apply the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, fees, or transportation charges for the delivery of materials and supplies required on a procurement toward the MBE contract goals, provided a unit determines the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. A unit may not apply any portion of the costs of the materials and supplies toward MBE goals.

✓ Furnish and Install and other Services: The participation of a certified MBE supplier, wholesaler, and/or regular dealer certified in the proper NAICS code(s) to furnish and install materials necessary for successful contract completion may be counted in full. Includes the participation of other MBE service providers in the proper NAICS code(s) may be counted in full.

9. Dually certified firms. An MBE that is certified in more than one subgroup category may only be counted toward goal fulfillment of ONE of those categories with regard to a particular contract.

Example: A woman-owned Hispanic American (dually certified) firm may be used to fulfill the women-owned OR Hispanic American subgoal, but not both on the same contract.

10. CAUTION: The percentage of MBE participation, computed using the percentage amounts determined for all of the MBE firms listed in PART 3, MUST meet or exceed the MBE participation goal and subgoals (if applicable) as set forth in PART 2 for this solicitation. If a bidder/offor is unable to meet the MBE participation goal or any subgoals (if applicable), then the bidder/offor must request a waiver in PART 2 or the bid will be deemed not responsive, or the proposal not reasonably susceptible of being selected for award. You may wish to use the attached Goal/Subgoal Worksheet to assist in calculating the percentages and confirming that your commitment meets or exceeds the applicable MBE participation goal and subgoals (if any).

11. If you have any questions as to whether a firm is certified to perform the specific services or provide specific products, please contact MDOT’s Office of Minority Business Enterprise at 1-
800-544-6056 or via email to mbe@mdot.state.md.us sufficiently prior to the submission due date.

Subgoals (if applicable)

Total African American MBE Participation: 
Total Asian American MBE Participation: 
Total Hispanic American MBE Participation: 
Total Women-Owned MBE Participation: 

Overall Goal

Total MBE Participation (include all categories): 

%
PART 2 - MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT &
MBE PARTICIPATION SCHEDULE

This MBE Utilization and Fair Solicitation Affidavit and MBE Participation Schedule must be completed in its entirety and included with the bid/proposal. If the bidder/offeror fails to accurately complete and submit this Affidavit and Schedule with the bid or proposal as required, the Procurement Officer shall deem the bid non-responsive or shall determine that the proposal is not reasonably susceptible of being selected for award.

In connection with the bid/proposal submitted in response to Solicitation No. ____________,
I affirm the following:

1. MBE Participation (PLEASE CHECK ONLY ONE)

☐ I acknowledge and intend to meet IN FULL both the overall certified Minority Business Enterprise (MBE) participation goal of _____ percent and all of the following subgoals:

   _____ percent for African American-owned MBE firms
   _____ percent for Hispanic American-owned MBE firms
   _____ percent for Asian American-owned MBE firms
   _____ percent for Women-owned MBE firms

Therefore, I am not seeking a waiver pursuant to COMAR 21.11.03.11. I acknowledge that by checking the above box and agreeing to meet the stated goal and subgoal(s), if any, I must complete PART 3 - MBE Participation Schedule and Part 4 Signature Page in order to be considered for award.

OR

☐ After making good faith outreach efforts prior to making this submission, I conclude that I am unable to achieve the MBE participation goal and/or subgoals. I hereby request a waiver, in whole or in part, of the overall goal and/or subgoals. I acknowledge that by checking this box and requesting a partial waiver of the stated goal and/or one or more of the stated subgoal(s) if any, I must complete Part 3, the MBE Participation Schedule and Part 4 Signature Page for the portion of the goal and/or subgoal(s) if any, for which I am not seeking a waiver, in order to be considered for award. I acknowledge that by checking this box and requesting a full waiver of the stated goal and the stated subgoal(s) if any, I must complete Part 4 Signature Page in order to be considered for award.
Additional MBE Documentation

I understand that if I am notified that I am the apparent awardee or as requested by the Procurement Officer, I must submit the following documentation within 10 working days of receiving notice of the potential award or from the date of conditional award (per COMAR 21.11.03.10), whichever is earlier:

(a) Good Faith Efforts Documentation to Support Waiver Request (Attachment D-1C)
(b) Outreach Efforts Compliance Statement (Attachment D-2);
(c) MBE Subcontractor/MBE Prime Project Participation Statement (Attachments D-3A and 3B);
(d) Any other documentation, including additional waiver documentation if applicable, required by the Procurement Officer to ascertain bidder or offeror responsibility in connection with the certified MBE participation goal and subgoals, if any.

I understand that if I fail to return each completed document within the required time, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award. If the contract has already been awarded, the award is voidable.

Information Provided to MBE firms

In the solicitation of subcontract quotations or offers, MBE firms were provided not less than the same information and amount of time to respond as were non-MBE firms.
PART 3 - MBE PARTICIPATION SCHEDULE

This document must be included with the bid or offer. If the bidder or offeror fails to submit this form with the bid or offer 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.

<table>
<thead>
<tr>
<th>1. Prime Contractor’s Name</th>
<th>2. Prime Contractor’s Address/Telephone Number</th>
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D-7
PART 3 - MBE PARTICIPATION SCHEDULE

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8. Reviewed and Accepted by Board of Education MBE Liaison

Name: ____________________________
Title: ____________________________
Date: ____________________________

Total MBE Participation: $ ___________ %
Total African-American MBE Participation: $ ___________ %
Total Women MBE Participation: $ ___________ %
Total Other MBE Participation: $ ___________ %
PART 4 – SIGNATURE PAGE

To complete Affidavit committing to MBE(s) or requesting waiver, Bidder/Offeror must sign below:

I solemnly affirm under the penalties of perjury that: (i) I have reviewed the instructions for the MBE Utilization & Fair Solicitation Affidavit and MBE Schedule, and (ii) the information contained in the MBE Utilization & Fair Solicitation Affidavit and MBE Schedule is true to the best of my knowledge, information and belief.

Bidder/Offeror Name  
(PLEASE PRINT OR TYPE)  
Signature of Authorized Representative

Address  
Printed Name and Title

City, State and Zip Code  
Date

SUBMIT THIS AFFIDAVIT WITH BID/PROPOSAL
D-1B WAIVER GUIDANCE

GUIDANCE FOR DOCUMENTING GOOD FAITH EFFORTS TO MEET MBE PARTICIPATION GOALS

In order to show that it has made good faith efforts to meet the Minority Business Enterprise (MBE) participation goal (including any MBE subgoals) on a contract, the Offeror must either (1) meet the MBE Goal(s) and document its commitments for participation of MBE Firms, or (2) when it does not meet the MBE Goal(s), document its Good Faith Efforts to meet the goal(s).

I. Definitions

MBE Goal(s) – “MBE Goal(s)” refers to the MBE participation goal and MBE participation subgoal(s).

Good Faith Efforts - The “Good Faith Efforts” requirement means that when requesting a waiver, the Offeror must demonstrate that it took all necessary and reasonable steps to achieve the MBE Goal(s), which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient MBE participation, even if those steps were not fully successful. Whether the Offeror requests a waiver made adequate good faith efforts will be determined by considering the quality, quantity, and intensity of the different kinds of efforts that the Offeror has made. The efforts employed by the Offeror should be those that one could reasonably expect the Offeror to take if the Offeror were actively and aggressively trying to obtain MBE participation sufficient to meet the MBE contract goal and subgoals. Mere pro forma efforts are not good faith efforts to meet the MBE contract requirements. The determination concerning the sufficiency of the Offeror's good faith efforts is a judgment call; meeting quantitative formulas is not required.

Identified Firms – “Identified Firms” means a list of the MBEs identified by the procuring agency during the goal setting process and listed in the procurement as available to perform the Identified Items of Work. It also may identify additional MBEs identified by the Offeror as available to perform the Identified Items of Work, such as MBEs certified or granted an expansion of services after the procurement was issued. If the procurement does not include a list of Identified Firms, this term refers to all of the MBE Firms (if State-funded) the Offeror identified as available to perform the Identified Items of Work and should include all appropriately certified firms that are reasonably identifiable.

Identified Items of Work – “Identified Items of Work” means the Proposal items identified by the procuring agency during the goal setting process and listed in the procurement as possible items of work for performance by MBE Firms. It also may include additional portions of items of work the Offeror identified for performance by MBE Firms to increase the likelihood that the MBE Goal(s) will be achieved. If the procurement does not include a list of Identified Items of Work, this term refers to all of the items of work the Offeror identified as possible items of work for performance by MBE Firms and should include all reasonably identifiable work opportunities.

MBE Firms – “MBE Firms” refers to firms certified by the Maryland Department of Transportation (“MDOT”) under COMAR 21.11.03. Only MDOT-certified MBE Firms can participate in the State’s MBE Program.

II. Types of Actions Agency will Consider

The Offeror is responsible for making relevant portions of the work available to MBE subcontractors and suppliers and select those portions of the work or material needs consistent with the available MBE subcontractors and suppliers, so as to facilitate MBE participation. The following is a list of types of actions the procuring agency will consider as part of the Offeror's Good Faith Efforts when the Offeror fails to meet the MBE Goal(s). This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Identify Proposal Items as Work for MBE Firms

1. Identified Items of Work in Procurements
   (a) Certain procurements will include a list of Proposal items identified during the goal setting process as possible work for performance by MBE Firms. If the procurement provides a list of Identified Items of Work, the Offeror shall make all reasonable efforts to solicit quotes from MBE Firms to perform that work.
   (b) Offerors may, and are encouraged to, select additional items of work to be performed by MBE Firms to increase the likelihood that the MBE Goal(s) will be achieved.

2. Identified Items of Work by Offerors
   (a) When the procurement does not include a list of Identified Items of Work or for additional Identified Items of Work, Offerors should reasonably identify sufficient items of work to be performed by MBE Firms.
(b) Where appropriate, Offerors should break out contract work items into economically feasible units to facilitate MBE participation, rather than perform these work items with their own forces. The ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the Offeror of the responsibility to make Good Faith Efforts.

B. Identify MBE Firms to Solicit

1. MBE Firms Identified in Procurements

(a) Certain procurements will include a list of the MBE Firms identified during the goal setting process as available to perform the items of work. If the procurement provides a list of Identified MBE Firms, the Offeror shall make all reasonable efforts to solicit those MBE firms.

(b) Offerors may, and are encouraged to, search the MBE Directory to identify additional MBEs who may be available to perform the items of work, such as MBEs certified or granted an expansion of services after the solicitation was issued.

2. MBE Firms Identified by Offerors

(a) When the procurement does not include a list of Identified MBE Firms, Offerors should reasonably identify the MBE Firms that are available to perform the Identified Items of Work.

(b) Any MBE Firms identified as available by the Offeror should be certified to perform the Identified Items of Work.

C. Solicit MBEs

1. Solicit all Identified Firms for all Identified Items of Work by providing written notice. The Offeror should:

(a) provide the written solicitation at least 10 days prior to Proposal opening to allow sufficient time for the MBE Firms to respond;

(b) send the written solicitation by first-class mail, facsimile, or e-mail using contact information in the MBE Directory, unless the Offeror has a valid basis for using different contact information; and

(c) provide adequate information about the plans, specifications, anticipated time schedule for portions of the work to be performed by the MBE, and other requirements of the contract to assist MBE Firms in responding. (This information may be provided by including hard copies in the written solicitation or by electronic means as described in C.3 below.)

2. "All" Identified Firms includes the MBEs listed in the procurement and any MBE Firms you identify as potentially available to perform the Identified Items of Work, but it does not include MBE Firms who are no longer certified to perform the work as of the date the Offeror provides written solicitations.

3. "Electronic Means" includes, for example, information provided via a website or file transfer protocol (FTP) site containing the plans, specifications, and other requirements of the contract. If an interested MBE cannot access the information provided by electronic means, the Offeror must make the information available in a manner that is accessible to the interested MBE.

4. Follow up on initial written solicitations by contacting MBEs to determine if they are interested. The follow up contact may be made:

(a) by telephone using the contact information in the MBE Directory, unless the Offeror has a valid basis for using different contact information; or

(b) in writing via a method that differs from the method used for the initial written solicitation.

5. In addition to the written solicitation set forth in C.1 and the follow up required in C.4, use all other reasonable and available means to solicit the interest of MBE Firms certified to perform the work of the contract. Examples of other means include:

(a) attending any pre-Proposal meetings at which MBE Firms could be informed of contracting and subcontracting opportunities; and

(b) if recommended by the procurement, advertising with or effectively using the services of at least two minority focused entities or media, including trade associations, minority/women community organizations, minority/women contractors' groups, and local, state, and federal minority/women business assistance offices listed on the MDOT Office of Minority Business Enterprise website.
D. Negotiate with Interested MBE Firms

Offerors must negotiate in good faith with interested MBE Firms.

1. Evidence of negotiation includes, without limitation, the following:
   (a) the names, addresses, and telephone numbers of MBE Firms that were considered;
   (b) a description of the information provided regarding the plans and specifications for the work selected for subcontracting and the means used to provide that information; and
   (c) evidence as to why additional agreements could not be reached for MBE Firms to perform the work.

2. The Offeror using good business judgment would consider a number of factors in negotiating with subcontractors, including MBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration.

3. The fact that there may be some additional costs involved in finding and using MBE Firms is not in itself sufficient reason for the Offeror's failure to meet the contract MBE goal(s), as long as such costs are reasonable. Factors to take into consideration when determining whether an MBE Firm's quote is excessive or unreasonable include, without limitation, the following:
   (a) dollar difference between the MBE subcontractor's quote and the average of the other subcontractors' quotes received by the Offeror;
   (b) percentage difference between the MBE subcontractor's quote and the average of the other subcontractors' quotes received by the Offeror;
   (c) percentage that the MBE subcontractor's quote represents of the overall contract amount;
   (d) number of MBE firms that the Offeror solicited for that portion of the work;
   (e) whether the work described in the MBE and Non-MBE subcontractor quotes (or portions thereof) submitted for review is the same or comparable; and
   (f) number of quotes received by the Offeror for that portion of the work.

4. The above factors are not intended to be mandatory, exclusive, or exhaustive, and other evidence of an excessive or unreasonable price may be relevant.

5. The Offeror may not use its price for self-performing work as a basis for rejecting an MBE Firm's quote as excessive or unreasonable.

6. The "average of the other subcontractors' quotes received" by the Offeror refers to the average of the quotes received from all subcontractors. Offeror should attempt to receive quotes from at least three subcontractors, including one quote from an MBE and one quote from a Non-MBE.

7. The Offeror shall not reject an MBE Firm as unqualified without sound reasons based on a thorough investigation of the firm's capabilities. For each certified MBE that is rejected as unqualified or that placed a subcontract quotation or offer that the Offeror concludes is not acceptable, the Offeror must provide a written detailed statement listing the reasons for this conclusion. The Offeror also must document the steps taken to verify the capabilities of the MBE and Non-MBE Firms quoting similar work.

   (a) The factors to take into consideration when assessing the capabilities of an MBE Firm, include, but are not limited to the following: financial capability, physical capacity to perform, available personnel and equipment, existing workload, experience performing the type of work, conduct and performance in previous contracts, and ability to meet reasonable contract requirements.

   (b) The MBE Firm's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of Proposals in the efforts to meet the project goal.

E. Assisting Interested MBE Firms

When appropriate under the circumstances, the decision-maker will consider whether the Offeror offered reasonable efforts to assist interested MBR Firms in obtaining:

1. The bonding, lines of credit, or insurance required by the procuring agency or the Offeror; and

2. Necessary equipment, supplies, materials, or related assistance or services.
III. Other Considerations

In making a determination of Good Faith Efforts the decision-maker may consider engineering estimates, catalogue prices, general market availability and availability of certified MBE Firms in the area in which the work is to be performed, other Proposals or offers and subcontract Proposals or offers substantiating significant variances between certified MBE and Non-MBE costs of participation, and their impact on the overall cost of the contract to the State and any other relevant factors.

The decision-maker may take into account whether the Offeror decided to self-perform subcontract work with its own forces, especially where the self-performed work is identified Items of Work in the procurement. The decision-maker also may take into account the performance of other Offerors in meeting the contract. For example, when the apparent successful Offeror fails to meet the contract goal, but others meet it, this reasonably raises the question of whether, with additional reasonable efforts, the apparent successful Offeror could have met the goal. If the apparent successful Offeror fails to meet the goal, but meets or exceeds the average MBE participation obtained by other Offerors, this, when viewed in conjunction with other factors, could be evidence of the apparent successful Offeror having made Good Faith Efforts.

IV. Documenting Good Faith Efforts

At a minimum, the Offeror seeking a waiver of the MBE Goal(s) or a portion thereof must provide written documentation of its Good Faith Efforts, in accordance with COMAR 21.11.03.11, within 10 Business Days after receiving notice that it is the apparent awardee. The written documentation shall include the following:

A. Items of Work (Complete Good Faith Efforts Documentation Attachment D-1C, Part 1)

A detailed statement of the efforts made to select portions of the work proposed to be performed by certified MBE Firms in order to increase the likelihood of achieving the stated MBE Goal(s).

B. Outreach/Solicitation/Negotiation

1. The record of the Offeror’s compliance with the outreach efforts prescribed by COMAR 21.11.03.09C(2)(a). (Complete Outreach Efforts Compliance Statement - D-2).

2. A detailed statement of the efforts made to contact and negotiate with MBE Firms including:
   
   (a) the names, addresses, and telephone numbers of the MBE Firms who were contacted, with the dates and manner of contacts (letter, fax, e-mail, telephone, etc.) (Complete Good Faith Efforts Attachment D-1C- Part 2, and submit letters, fax cover sheets, e-mails, etc. documenting solicitations); and
   
   (b) a description of the information provided to MBE Firms regarding the plans, specifications, and anticipated time schedule for portions of the work to be performed and the means used to provide that information.

C. Rejected MBE Firms (Complete Good Faith Efforts Attachment D-1C, Part 3)

1. For each MBE Firm that the Offeror concludes is not acceptable or qualified, a detailed statement of the reasons for the Offeror’s conclusion, including the steps taken to verify the capabilities of the MBE and Non-MBE Firms quoting similar work.

2. For each certified MBE Firm that the Offeror concludes has provided an excessive or unreasonable price, a detailed statement of the reasons for the Offeror’s conclusion, including the quotes received from all MBE and Non-MBE firms proposing on the same or comparable work. (Include copies of all quotes received.)

3. A list of MBE Firms contacted but found to be unavailable. This list should be accompanied by an MBE Unavailability Certificate (see D-1B - Exhibit A to this Part 1) signed by the MBE contractor or a statement from the Offeror that the MBE contractor refused to sign the MBE Unavailability Certificate.

D. Other Documentation

1. Submit any other documentation requested by the Procurement Officer to ascertain the Offeror’s Good Faith Efforts.

2. Submit any other documentation the Offeror believes will help the Procurement Officer ascertain its Good Faith Efforts.
D-1B - Exhibit A
MBE Subcontractor Unavailability Certificate

1. It is hereby certified that the firm of ____________________________
   located at ____________________________________________________
   (Number) (Street)
   (City) (State) (Zip)
   was offered an opportunity to bid on Solicitation No. _______________________
   in ______________________ County by ____________________________
   (Name of Prime Contractor's Firm)
   ******************************************************************************

2. ____________________________ (Minority Firm), is either unavailable for the work/service or unable to prepare a
   Proposal for this project for the following reason(s):

   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________

   ******************************************************************************

   (Signature of Minority Firm’s MBE Representative) (Title) (Date)
   (MDOT Certification #) (Telephone #)
   ******************************************************************************

3. To be completed by the prime contractor if Section 2 of this form is not completed by the minority firm.

   To the best of my knowledge and belief, said Certified Minority Business Enterprise is either unavailable for the
   work/service for this project, is unable to prepare a Proposal, or did not respond to a request for a price Proposal and has
   not completed the above portion of this submittal.

   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________

   (Signature of Prime Contractor) (Title) (Date)
<table>
<thead>
<tr>
<th>Prime Contractor:</th>
<th>Project Description:</th>
<th>PROJECT/CONTRACT</th>
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</thead>
<tbody>
<tr>
<td>Offeror Company Name, Street Address, Phone</td>
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<td>Solicitation #:</td>
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</table>

Parts 1, 2, and 3 must be included with this certificate along with all documents supporting your waiver request.

I affirm that I have reviewed **Attachment D-1B**, Waiver Guidance. I further affirm under penalties of perjury that the contents of Parts 1, 2, and 3 of this **Attachment D-1C** Good Faith Efforts Documentation Form are true to the best of my knowledge, information, and belief.

Company: 

Company Name (please print or type)

By: 

Signature of Authorized Representative

Printed Name: 

Printed Name

Title: 

Title

Date: 

Date

Address: 

Company Address
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST
PART 1 – IDENTIFIED ITEMS OF WORK OFFEROR MADE AVAILABLE TO MBE FIRMS

<table>
<thead>
<tr>
<th>Prime Contractor:</th>
<th>Project Description:</th>
<th>PROJECT/CONTRACT</th>
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<tbody>
<tr>
<td>Offeror Company Name, Street Address, Phone</td>
<td>Solicitation #:</td>
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</tbody>
</table>

Identify those items of work that the Offeror made available to MBE Firms. This includes, where appropriate, those items the Offeror identified and determined to subdivide into economically feasible units to facilitate the MBE participation. For each item listed, show the anticipated percentage of the total contract amount. It is the Offeror’s responsibility to demonstrate that sufficient work to meet the goal was made available to MBE Firms, and the total percentage of the items of work identified for MBE participation equals or exceeds the percentage MBE goal set for the procurement. Note: If the procurement includes a list of Proposal items identified during the goal setting process as possible items of work for performance by MBE Firms, the Offeror should make all of those items of work available to MBE Firms or explain why that item was not made available. If the Offeror selects additional items of work to make available to MBE Firms, those additional items should also be included below.

<table>
<thead>
<tr>
<th>Identified Items of Work</th>
<th>Was this work listed in the procurement?</th>
<th>Does Offeror normally self-perform this work?</th>
<th>Was this work made available to MBE Firms? If no, explain why not.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>□ Yes □ No</td>
<td>□ Yes □ No</td>
<td>□ Yes □ No</td>
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<td>□ Yes □ No</td>
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<td>□ Yes □ No</td>
<td>□ Yes □ No</td>
<td>□ Yes □ No</td>
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</tbody>
</table>

☐ Please check if Additional Sheets are attached.
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST
PART 2 – IDENTIFIED MBE FIRMS AND RECORD OF SOLICITATIONS

<table>
<thead>
<tr>
<th>Prime Contractor:</th>
<th>Project Description:</th>
<th>PROJECT/CONTRACT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Offeror Company Name, Street Address, Phone</strong></td>
<td></td>
<td>Solicitation #:</td>
</tr>
</tbody>
</table>

Identify the MBE Firms solicited to provide quotes for the Identified Items of Work made available for MBE participation. Include the name of the MBE Firm solicited, items of work for which quotes were solicited, date and manner of initial and follow-up solicitations, whether the MBE provided a quote, and whether the MBE is being used to meet the MBE participation goal. MBE Firms used to meet the participation goal must be included on the MBE Participation Schedule. Note: If the procurement includes a list of the MBE Firms identified during the goal setting process as potentially available to perform the items of work, the Offeror should solicit all of those MBE Firms or explain why a specific MBE was not solicited. If the Offeror identifies additional MBE Firms who may be available to perform Identified Items of Work, those additional MBE Firms should also be included below. Copies of all written solicitations and documentation of follow-up calls to MBE Firms must be attached to this form. This list should be accompanied by a Minority Contractor Unavailability Certificate signed by the MBE contractor or a statement from the Offeror that the MBE contractor refused to sign the Minority Contractor Unavailability Certificate (Attachment D-1B - Exhibit A). If the Offeror used a Non-MBE or is self-performing the identified items of work, Part 4 must be completed.

<table>
<thead>
<tr>
<th>Name of Identified MBE Firm &amp; MBE Classification</th>
<th>Describe Item of Work Solicited</th>
<th>Initial Solicitation Date &amp; Method</th>
<th>Follow-up Solicitation Date &amp; Method</th>
<th>Details for Follow-up Calls</th>
<th>Quote Rec’d</th>
<th>Quote Used</th>
<th>Reason Quote Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Name:</td>
<td></td>
<td>Date:</td>
<td>Date:</td>
<td>Time of Call:</td>
<td>Yes □ Yes</td>
<td>No □ No</td>
<td>□ Used Other MBE</td>
</tr>
<tr>
<td>MBE Classification</td>
<td></td>
<td>Mail □ E-mail □ Facsimile □</td>
<td>Phone □ Mail □ Facsimile □ E-mail</td>
<td>Spoke with:</td>
<td>Yes □ Yes</td>
<td>No □ No</td>
<td>□ Used Non-MBE</td>
</tr>
<tr>
<td>(Check only if requesting waiver of MBE subgoal.)</td>
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<td></td>
<td>□ Self-performing</td>
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<tr>
<td>□ African American-Owned</td>
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<tr>
<td>□ Hispanic American-Owned</td>
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<tr>
<td>□ Asian American-Owned</td>
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<td>□ Women-Owned</td>
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<tr>
<td>□ Other MBE Classification</td>
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</tr>
</tbody>
</table>

| Firm Name:                                        |                                | Date:                            | Date:                             | Time of Call:               | Yes □ Yes  | No □ No    | □ Used Other MBE     |
| MBE Classification                                |                                | Mail □ E-mail □ Facsimile □      | Phone □ Mail □ Facsimile □ E-mail | Spoke with:                | Yes □ Yes  | No □ No    | □ Used Non-MBE       |
| (Check only if requesting waiver of MBE subgoal.)|                                |                                  |                                   |                             |            |            | □ Self-performing    |
| □ African American-Owned                          |                                |                                  |                                   |                             |            |            |                      |
| □ Hispanic American-Owned                         |                                |                                  |                                   |                             |            |            |                      |
| □ Asian American-Owned                            |                                |                                  |                                   |                             |            |            |                      |
| □ Women-Owned                                     |                                |                                  |                                   |                             |            |            |                      |
| □ Other MBE Classification                         |                                |                                  |                                   |                             |            |            |                      |

☐ Please check if Additional Sheets are attached.
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST
PART 3 – ADDITIONAL INFORMATION REGARDING REJECTED MBE QUOTES

This form must be completed if Part 1 indicates that an MBE quote was rejected because the Offeror is using a Non-MBE or is self-performing the Identified Items of Work. Provide the Identified Items Work, indicate whether the work will be self-performed or performed by a Non-MBE, and if applicable, state the name of the Non-MBE. Also include the names of all MBE and Non-MBE Firms that provided a quote and the amount of each quote.

<table>
<thead>
<tr>
<th>Prime Contractor:</th>
<th>Project Description:</th>
<th>PROJECT/CONTRACT NUMBER:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offeror Company Name, Street Address, Phone</td>
<td></td>
<td>Solicitation #:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Describe Identified Items of Work Not Being Performed by MBE (Include spec/section number from Proposal)</th>
<th>Self-performing or Using Non-MBE (Provide name)</th>
<th>Amount of MBE Quote</th>
<th>Name of Other Firms who Provided Quotes &amp; Whether MBE or Non-MBE</th>
<th>Amount Quoted</th>
<th>Indicate Reason Why MBE Quote Rejected &amp; Briefly Explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Self-performing</td>
<td>☐ Using Non-MBE</td>
<td>S</td>
<td>☐ MBE ☐ Non-MBE</td>
<td>S</td>
<td>☐ Price ☐ Capabilities ☐ Other</td>
</tr>
<tr>
<td>☐ Self-performing</td>
<td>☐ Using Non-MBE</td>
<td>S</td>
<td>☐ MBE ☐ Non-MBE</td>
<td>S</td>
<td>☐ Price ☐ Capabilities ☐ Other</td>
</tr>
<tr>
<td>☐ Self-performing</td>
<td>☐ Using Non-MBE</td>
<td>S</td>
<td>☐ MBE ☐ Non-MBE</td>
<td>S</td>
<td>☐ Price ☐ Capabilities ☐ Other</td>
</tr>
<tr>
<td>☐ Self-performing</td>
<td>☐ Using Non-MBE</td>
<td>S</td>
<td>☐ MBE ☐ Non-MBE</td>
<td>S</td>
<td>☐ Price ☐ Capabilities ☐ Other</td>
</tr>
<tr>
<td>☐ Self-performing</td>
<td>☐ Using Non-MBE</td>
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<td>☐ MBE ☐ Non-MBE</td>
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<td>☐ Price ☐ Capabilities ☐ Other</td>
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<tr>
<td>☐ Self-performing</td>
<td>☐ Using Non-MBE</td>
<td>S</td>
<td>☐ MBE ☐ Non-MBE</td>
<td>S</td>
<td>☐ Price ☐ Capabilities ☐ Other</td>
</tr>
<tr>
<td>☐ Self-performing</td>
<td>☐ Using Non-MBE</td>
<td>S</td>
<td>☐ MBE ☐ Non-MBE</td>
<td>S</td>
<td>☐ Price ☐ Capabilities ☐ Other</td>
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</table>

☐ Please check if Additional Sheets are attached.
OUTREACH EFFORTS COMPLIANCE STATEMENT

Complete and submit this form within 10 Business Days of notification of apparent award or actual award, whichever is earlier.

In conjunction with the Proposal submitted in response to Solicitation No. ________________, I state the following:

1. Offeror identified subcontracting opportunities in these specific work categories:

   __________________________________________

   __________________________________________

2. Attached to this form are copies of written solicitations (with Proposal instructions) used to solicit certified MBE firms for these subcontract opportunities.

3. Offeror made the following attempts to personally contact the solicited MDOT-certified MBE firms:

   __________________________________________

   __________________________________________

4. Please Check One:
   □ This project does not involve bonding requirements.
   □ Offeror assisted MDOT-certified MBE firms to fulfill or seek waiver of bonding requirements. (DESCRIBE EFFORTS):

   __________________________________________

   __________________________________________

5. Please Check One:

   Offeror did attend the pre-Proposal conference.
   ________

   No pre -Proposal meeting/conference was held.
   ________

   Offeror did not attend the pre-Proposal conference.
PLEASE PRINT OR TYPE

Company:

Company Name (please print or type)

By:

Signature of Authorized Representative

Printed Name:

Printed Name

Title:

Title

Date:

Date

Address:

Company Address
CERTIFIED MBE SUBCONTRACTOR PARTICIPATION CERTIFICATION

INSTRUCTIONS:

PRIME CONTRACTOR: After completing SECTIONS A, B, and D, provide this form to each certified Minority Business Enterprise subcontractor (MBE) listed on the MBE Participation Schedule (Attachment D-1A) allowing sufficient time for the MBE to respond within the required timeframe.

CERTIFIED MBE SUBCONTRACTOR: Complete SECTION C to acknowledge and certify the information in SECTION A. Return the completed form directly to the Procurement Officer identified in SECTION D within 10 days after notice from the Prime Contractor of the State's intent to award the Contract. Provide a copy to the Prime Contractor.

If this form is not returned within the required time, the Procurement Officer may determine that the Prime Contractor is not responsible and therefore not eligible for Contract Award.

SECTION A

Provided that (Prime Contractor) ___________________________ is awarded the State contract in conjunction with Solicitation Number ___________________________, (Prime Contractor) ___________________________ intends to enter into a subcontract with (Certified MBE Subcontractor) ___________________________ with MDOT Certification Number ___________________________ committing to participation by (Certified MBE Subcontractor) ___________________________ of at least $ ___________________________ which equals ______% of the Total Contract Value for the following products/services:

<table>
<thead>
<tr>
<th>NAICS CODE</th>
<th>WORK ITEM, SPECIFICATION NUMBER, LINE ITEMS OR WORK CATEGORIES (IF APPLICABLE)</th>
<th>DESCRIPTION OF SPECIFIC PRODUCTS AND/OR SERVICES</th>
</tr>
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</table>

The Contractor and certified MBE each acknowledge that, for purposes of determining the accuracy of the information provided herein, the Procurement Officer may request additional information, including, without limitation, copies of the subcontract agreements and quotes. The Contractor and certified MBE each solemnly affirms under the penalties of perjury that: (i) the information provided in this Certified MBE Subcontractor Participation Certification is true to the best of its knowledge, information and belief, and (ii) it has fully complied with the State Minority Business Enterprise law, State Finance and Procurement Article §14-308(a)(2), Annotated Code of Maryland which provides that, except as otherwise provided by law, a Contractor may not identify a certified MBE in a Bid/Proposal and:

(1) fail to request, receive, or otherwise obtain authorization from the MBE to identify the MBE in its Bid/Proposal;
(2) fail to notify the MBE before execution of the Contract of its inclusion of the Bid/Proposal;
(3) fail to use the MBE in the performance of the Contract; or
(4) pay the MBE solely for the use of its name in the Bid/Proposal.
SECTION B – Prime Contractor

Signature of Representative: 

Printed Name and Title: 

Prime Firm’s Name: 

Federal Identification Number: 

Street Address, City, State, Zip Code: 

Phone: 

Date: 

SECTION C – Certified MBE Subcontractor

Signature of Representative: 

Printed Name and Title: 

MBE Firm’s Name: 

Federal Identification Number: 

Street Address, City, State, Zip Code: 

Phone: 

Date: 

SECTION D

This completed form is due to the Procurement Officer on or before: 

Solicitation #: Solicitation Title: 

Agency/Dept.: Procurement Officer: 

Phone: Email: 

Street Address, City, State, Zip Code: 


Attachment D – MBE Forms effective date: February 5, 2021
D-3B
MBE PRIME PROJECT PARTICIPATION CERTIFICATION

Please complete and submit this form to attest to each specific item of work that your MBE firm has listed on the MBE Participation Schedule (Attachment D-1A) for purposes of meeting the MBE participation goals. This form must be submitted within 10 Business Days of notification of apparent award. If the Offeror fails to return this affidavit within the required time, the Procurement Officer may determine that Proposal is not susceptible of being selected for Contract award.

Provided that ________________ (Prime Contractor’s Name) with Certification Number ________________ is awarded the State contract in conjunction with Solicitation No. ________________, such MBE Prime Contractor intends to perform with its own forces at least $______________ which equals to ___% of the Total Contract Amount for performing the following goods and services for the Contract:

<table>
<thead>
<tr>
<th>NAICS CODE</th>
<th>WORK ITEM, SPECIFICATION NUMBER, LINE ITEMS OR WORK CATEGORIES (IF APPLICABLE)</th>
<th>DESCRIPTION OF SPECIFIC PRODUCTS AND/OR SERVICES</th>
<th>VALUE OF THE WORK</th>
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</thead>
<tbody>
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</tbody>
</table>

MBE Prime Contractor

Company:

Company Name (please print or type)

FEIN:

Federal Identification Number

Company Address:

Phone:

Printed Name:

Title:

By:

Signature of Authorized Representative

Date:
D-4A
Minority Business Enterprise Participation
Prime Contractor Paid/Unpaid Invoice Report

<table>
<thead>
<tr>
<th>Report #:</th>
<th>Contract #:</th>
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<tr>
<th>Reporting Period (Month/Year):</th>
<th>Contracting Unit:</th>
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<thead>
<tr>
<th>Prime Contractor: Report is due to the MBE Liaison by the 10th of the month following the month the services were provided.</th>
<th>Contract Amount:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Please number reports in sequence</td>
<td>MBE Subcontract Amt:</td>
</tr>
<tr>
<td></td>
<td>Project Begin Date:</td>
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<td>Project End Date:</td>
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<td>Services Provided:</td>
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<tr>
<th>Prime Contractor:</th>
<th>Contact Person:</th>
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<tr>
<th>MBE Subcontractor Name:</th>
<th>Contact Person:</th>
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<th>Phone:</th>
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<table>
<thead>
<tr>
<th>Subcontractor Services Provided:</th>
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<tbody>
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</table>

<table>
<thead>
<tr>
<th>List all payments made to MBE subcontractor named above during this reporting period:</th>
<th>List dates and amounts of any outstanding invoices:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Invoice #</th>
<th>Amount</th>
<th>Invoice #</th>
<th>Amount</th>
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<tbody>
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<td>1.</td>
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<table>
<thead>
<tr>
<th>Total Dollars Paid: $</th>
<th>Total Dollars Unpaid: $</th>
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</table>

- If more than one MBE subcontractor is used for this contract, you must use separate Attachment D-4A forms. Information regarding payments that the MBE prime will use for purposes of meeting the MBE participation goals must be reported separately in Attachment D-4B.

- Return one copy (hard or electronic) of this form to the following addresses (electronic copy with signature and date is preferred):

  Contract Monitor Name
  Address
  Email
  Signature (Required)

  Contracting Unit
  City, State Zip
  Phone Number
  Date
**D-4B**

**Minority Business Enterprise Participation**

**MBE Prime Contractor Report**

<table>
<thead>
<tr>
<th>MBE Prime Contractor:</th>
<th>Contract #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification Number:</td>
<td>Contracting Unit:</td>
</tr>
<tr>
<td>Report #:</td>
<td>Contract Amount:</td>
</tr>
</tbody>
</table>

**Reporting Period (Month/Year):**

**MBE Prime Contractor: Report is due to the MBE Liaison by the 10th of the month following the month the services were provided.**

*Note: Please number reports in sequence*

<table>
<thead>
<tr>
<th>Total Value of the Work to the Self-Performed for purposes of Meeting the MBE participation goal/subgoals:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Begin Date:</td>
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<tr>
<td>Project End Date:</td>
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</table>

<table>
<thead>
<tr>
<th>Contact Person:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
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<tr>
<td>City:</td>
</tr>
<tr>
<td>Phone:</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Invoice Number</th>
<th>Value of the Work</th>
<th>NAICS Code</th>
<th>Description of Specific Products and/or Services</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

**Return one copy (hard or electronic) of this form to the following addresses (electronic copy with signature and date is preferred):**

Contract Monitor Name

Address

Email

Signature (Required)

Contracting Unit

City, State Zip

Phone Number

Date

---

Attachment D – MBE Forms  Page D-26  effective date: February 5, 2021
**D-5**

**Minority Business Enterprise Participation**

**MBE Subcontractor Paid/Unpaid Invoice Report**

<table>
<thead>
<tr>
<th>Report #:</th>
<th>Contract #:</th>
</tr>
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</table>

**Reporting Period (Month/Year):**

**Report is due by the 10th of the month following the month the services were performed.**

<table>
<thead>
<tr>
<th>Contracting Unit:</th>
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<tr>
<th>MBE Subcontract Amt:</th>
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<table>
<thead>
<tr>
<th>Project Begin Date:</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Project End Date:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Services Provided:</th>
</tr>
</thead>
</table>

**MBE Subcontractor Name:**

**MDOT Certification #:**

**Contact Person:**

**Address:**

<table>
<thead>
<tr>
<th>City:</th>
<th>State:</th>
<th>ZIP:</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Phone:</th>
<th>FAX:</th>
<th>E-mail:</th>
</tr>
</thead>
</table>

**Subcontractor Services Provided:**

**List all payments received from Prime Contractor during reporting period indicated above.**

<table>
<thead>
<tr>
<th>Invoice Amount</th>
<th>Date</th>
<th>Invoice Amount</th>
<th>Date</th>
</tr>
</thead>
<tbody>
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<td>1.</td>
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</table>

**Total Dollars Paid: $**

**Prime Contractor:**

<table>
<thead>
<tr>
<th>Contract Person:</th>
</tr>
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</table>

**List dates and amounts of any unpaid invoices over 30 days old.**

<table>
<thead>
<tr>
<th>Invoice Amount</th>
<th>Date</th>
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</table>

**Total Dollars Unpaid: $**

**Return one copy of this form to the following addresses (electronic copy with signature and date is preferred):**

<table>
<thead>
<tr>
<th>Contract Monitor Name</th>
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<thead>
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<th>Contracting Unit</th>
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</table>

<table>
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<tr>
<th>City, State Zip</th>
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<tr>
<th>Phone Number</th>
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<tr>
<th>Date</th>
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</thead>
</table>
CERTIFIED MINORITY BUSINESS ENTERPRISE PARTICIPATION
STANDARD MONTHLY CONTRACTOR’S REQUISITION FOR PAYMENT

LEA: ___________________________ DATE: ________________
FACILITY NAME: ___________________________ PSC NO: ________________
SCOPE OF WORK: ___________________________ REQ NO: __________________

<table>
<thead>
<tr>
<th>Name of MBE Subcontractor</th>
<th>MDOT Certification Number and Classification</th>
<th>TOTAL MBE Contract Amount</th>
<th>Amount to be Paid THIS Requisition</th>
<th>TOTAL Paid to Date</th>
<th>If amount paid is LESS than TOTAL MBE Contract Amount, EXPLAIN VARIANCE</th>
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</table>

TOTAL $ $ $

MDOT Certification Number and Classification can be located at http://mbe.state.mdot.state.md.us/directory/

**MBE Classification:**
- African American = AA
- Hispanic American = H
- Native American = N
- Asian American = A
- Women = W

African American/Women = AW
Hispanic American/Women = HW
Native American/Women = NW
Asian American/Women = AW

I certify that the figures and information presented above represent accurate and true statements, that timely payments have been and will be made to suppliers and subcontractors on this project as requisitioned payments are received, and in accordance with our contracts.

__________________________________________________________
Name of Contractor Firm

__________________________________________________________
Contractor Federal Tax ID #

__________________________________________________________
Authorized Contractor Signature/Date

__________________________________________________________
Contractor MBE Classification # (if applicable)

__________________________________________________________
Signature of LEA MBE Liaison/Date
THIS FORM TO BE COMPLETED BY PRIME CONTRACTOR ONLY

1. **LEA** – Enter full name of LEA
2. **Facility Name** – Enter full name of school/facility
3. **Scope of Work** – Enter type of work being performed (i.e. New, Renovation, Roof, HVAC, ASP – flooring, QZAB – Media Center, etc.)
4. **Date** – Date of Requisition
5. **PSC No** – Enter full PSC Number as assigned by PSCP
6. **REQ No** – Enter the number of the corresponding Requisition for Payment
7. **Name of MBE Subcontractor** – Enter full name of MBE Subcontractor
8. **MDOT Certification Number & Classification** – Enter the 5 digit MDOT Certification Number and corresponding MDOT for each MBE Subcontractor; MDOT Classifications and the MDOT website are listed on this form
9. **TOTAL MBE Contract Amount** – Enter Original Total MBE Contract Amount as state on MBE Attachments B and D; this amount should NOT be altered with change order amounts, changes to scope of work, etc. which may affect contract amount
10. **Amount to be Paid THIS Requisition** – Enter the amount to be paid to the MBE Subcontractor for work applicable to this requisition
11. **TOTAL Paid to Date** – Enter the Total amount paid to date to the MBE Subcontractor, this amount should NOT include the amount being paid on this requisition, only the total of prior payments
12. **MBE has Received FINAL payment** – Enter YES if the MBE Subcontractor has been aid in full, enter NO if the MBE Subcontractor has NOT been paid in full
13. **If amount paid is LESS that TOTAL MBE Contract Amount, EXPLAIN VARIANCE** – Enter a brief reason for the MBE Subcontractor NOT being paid equal to or greater than the ORIGINAL Total MBE Contract Amount as stated on this form and MBE Attachments B and D; additional documentation may be required to be submitted for variance explanations
14. **Name of Contractor Firm** – Enter full name of Prime Contractor
15. **Authorized Contractor Signature/Date** – The authorized individual employed by the Prime Contractor who filled this form out should date and sign here
16. **Contractor Federal Tax ID #** - Enter the Federal Tax ID Number of the Prime Contractor
17. **Contractor MBE Classification #** - Enter the MDOT MBE Classification Number if the Prime Contractor is a MDOT Certified MBE company
18. **Name of LEA MBE Liaison** – PRINT the name of the LEA MBE Liaison (or other LEA authorized employee) responsible for VERIFYING ALL INFORMATION filled out by the Prime Contractor on this form
19. **Signature of LEA MBE Liaison/Date** – Signature of the person VERIFYING ALL INFORMATION filled out by the Prime Contractor on this form (signature of person stated in step 18)
# Attachment H

## CLOSE-OUT SUMMARY

**LEA:** _____________________________  **DATE:** _____________________________

**SCHOOL NAME:** ___________________________  **PSC NO:** _____________________

### Public School Construction  
### Local and Other

<table>
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<tr>
<th>Allocation:</th>
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<tbody>
<tr>
<td>Cash Disbursements:</td>
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</tbody>
</table>

<table>
<thead>
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<th>Approved Contracts</th>
<th>Expenditures</th>
<th>Balance</th>
<th>Approved Contracts</th>
<th>Expenditures</th>
<th>Total Expenditures</th>
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<tbody>
<tr>
<td>Construction</td>
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<tr>
<td>A/E</td>
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<tr>
<td>Related Costs</td>
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<td><strong>Total</strong></td>
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I hereby certify that the data shown hereon is correct and request this project be closed.

Signature of LEA Representative

---

### FOR STATE USE ONLY

**ADJUSTMENTS:**

<table>
<thead>
<tr>
<th>Allocation:</th>
<th>Initials</th>
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<tbody>
<tr>
<td>Cash:</td>
<td>Date</td>
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</table>

**AUDIT COMMENTS:**

<table>
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<tr>
<th>Initials</th>
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<tbody>
<tr>
<td>Date</td>
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</table>
SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Multiple Work Packages.
5. Owner-furnished/Contractor-installed (OFCI) products.
6. Owner-furnished/Owner-installed (OFOI) products.
7. Coordination with occupants.
8. Work restrictions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 DEFINITIONS

A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

1.4 PROJECT INFORMATION


1. Project Location: 101 Industrial Lane, Forest Hill, Maryland 21050, United States.

B. Owner: BOARD OF EDUCATION OF HARFORD COUNTY, 102 SOUTH HICKORY AVENUE, BEL AIR, MARYLAND 21014, Maryland, United States.

1. Owner's Representative: Harry Miller, Project Manager.

C. Architect: Frederick Ward Associates, 5 S Main St, Bel Air, Maryland, 21014.

1.5 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:

1. Demolition and new construction as defined in the Bid Drawings and other Work indicated in the Contract Documents.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.6 PHASED CONSTRUCTION

A. Construct the Work in phases, with each phase substantially complete as indicated in section 00100 part 10.

B. Before commencing Work of each phase, submit an updated copy of Contractor's construction schedule, showing the sequence, commencement and completion dates, and move-out and -in dates of Owner's personnel for all phases of the Work.

1.7 OWNER-FURNISHED/CONTRACTOR-INSTALLED (OFCI) PRODUCTS

A. Owner's Responsibilities: Owner will furnish products indicated and perform the following, as applicable:

1. Provide to Contractor Owner-reviewed Product Data, Shop Drawings, and Samples.
2. Provide for delivery of Owner-furnished products to Project site.
3. Upon delivery, inspect, with Contractor present, delivered items.
   a. If Owner-furnished products are damaged, defective, or missing, arrange for replacement.
4. Obtain manufacturer's inspections, service, and warranties.
5. Inform Contractor of earliest available delivery date for Owner-furnished products.

B. Contractor's Responsibilities: The Work includes the following, as applicable:

1. Designate delivery dates of Owner-furnished products in Contractor's construction schedule, utilizing Owner-furnished earliest available delivery dates.
2. Review Owner-reviewed Product Data, Shop Drawings, and Samples, noting discrepancies and other issues in providing for Owner-furnished products in the Work.
3. Receive, unload, handle, store, protect, and install Owner-furnished products.
4. Make building services connections for Owner-furnished products.
5. Protect Owner-furnished products from damage during storage, handling, and installation and prior to Substantial Completion.
6. Repair or replace Owner-furnished products damaged following receipt.
1.8 COORDINATION WITH OCCUPANTS

A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.

2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.9 WORK RESTRICTIONS

A. Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Limit work between school start a.m. to school dismissal p.m., Monday through Friday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.

1. Weekend Hours: As scheduled in advance with HCPS.

2. Early Morning Hours: As scheduled in advance with HCPS.

3. Hours for Utility Shutdowns: As scheduled in advance with HCPS.

4. Hours for Core Drilling and trenching: As scheduled in advance with HCPS.

C. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner.

1. Notify Owner not less than two days in advance of proposed disruptive operations.

2. Obtain Owner's written permission before proceeding with disruptive operations.

D. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.

E. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on Project site is not permitted.

F. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

G. Employee Screening: Comply with Owner's requirements for and background screening of Contractor personnel working on Project site.

1. Maintain list of approved screened personnel with Owner's representative.
HCPS Forest Hill Annex Improvements and Print Shop Relocation

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000
SECTION 055000 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Steel framing and supports for applications where framing and supports are not specified in other Sections.

1.3 COORDINATION

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written instructions to ensure that shop primers and topcoats are compatible with one another.

B. Coordinate installation of metal fabrications that are anchored to or that receive other work. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.4 ACTION SUBMITTALS

A. Product Data: For the following:

1. Fasteners.

B. Shop Drawings: Indicate fabrication and installation details. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items. Provide Shop Drawings for the following:

1. Steel framing and supports for mechanical and electrical equipment.
2. Steel framing and supports for applications where framing and supports are not specified in other Sections.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For professional engineer's experience with providing delegated design engineering services of the kind indicated, including documentation that engineer is licensed in the jurisdiction in which Project is located.
B. Mill Certificates: Signed by stainless steel manufacturers, certifying that products furnished comply with requirements.

C. Welding certificates.

D. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.

E. Research Reports: For post-installed anchors.

1.6 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel in accordance with the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."
3. AWS D1.6/D1.6M, "Structural Welding Code - Stainless Steel."

1.7 FIELD CONDITIONS

A. Field Measurements: Verify actual locations of walls, floor slabs, decks, and other construction contiguous with metal fabrications by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 METALS

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

B. Steel Plates, Shapes, and Bars: ASTM A36/A36M.

C. Steel Tubing: ASTM A500/A500M, cold-formed steel tubing.

D. Steel Pipe: ASTM A53/A53M, Standard Weight (Schedule 40) unless otherwise indicated.
2.3 FASTENERS

A. General: Unless otherwise indicated, provide Type 304 stainless steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, at exterior walls. Select fasteners for type, grade, and class required.

1. Provide stainless steel fasteners for fastening aluminum stainless steel or nickel silver.

B. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A307, Grade A; with hex nuts, ASTM A563; and, where indicated, flat washers.

C. High-Strength Bolts, Nuts, and Washers: ASTM F3125/F3125M, Grade A325, Type 3, heavy-hex steel structural bolts; ASTM A563, Grade DH3, heavy-hex carbon-steel nuts; and where indicated, flat washers.

D. Stainless Steel Bolts and Nuts: Regular hexagon-head annealed stainless steel bolts, ASTM F593; with hex nuts, ASTM F594; and, where indicated, flat washers; Alloy Group 1.

E. Anchor Bolts: ASTM F1554, Grade 36, of dimensions indicated; with nuts, ASTM A563; and, where indicated, flat washers.

1. Hot-dip galvanize or provide mechanically deposited, zinc coating where item being fastened is indicated to be galvanized.

F. Anchors, General: Capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing in accordance with ASTM E488/E488M, conducted by a qualified independent testing agency.

G. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors.

1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, unless otherwise indicated.


2.4 MISCELLANEOUS MATERIALS

A. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.

1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

B. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.

C. Shop Primer for Galvanized Steel: Primer formulated for exterior use over zinc-coated metal and compatible with finish paint systems indicated.
D. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

E. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.

F. Shrinkage-Resistant Grout: Factory-packaged, nonmetallic, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

G. Concrete: Comply with requirements in Section 033000 "Cast-in-Place Concrete" for normal-weight, air-entrained concrete with a minimum 28-day compressive strength of 3000 psi.

2.5 FABRICATION, GENERAL

A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

D. Form exposed work with accurate angles and surfaces and straight edges.

E. Weld corners and seams continuously to comply with the following:
   1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
   2. Obtain fusion without undercut or overlap.
   3. Remove welding flux immediately.
   4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing.

F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless otherwise indicated. Locate joints where least conspicuous.

G. Fabricate seams and other connections that are exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.

J. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/8 by 1-1/2 inches, with a minimum 6-inch embedment and 2-inch hook, not less than 8 inches from ends and corners of units and 24 inches o.c., unless otherwise indicated.

2.6 MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.

B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.
   1. Fabricate units from slotted channel framing where indicated.
   2. Furnish inserts for units installed after concrete is placed.

C. Fabricate supports for operable partitions from continuous steel beams of sizes recommended by partition manufacturer with attached bearing plates, anchors, and braces as recommended by partition manufacturer. Drill or punch bottom flanges of beams to receive partition track hanger rods; locate holes where indicated on operable partition Shop Drawings.

D. Fabricate steel girders for wood frame construction from continuous steel shapes of sizes indicated.
   1. Provide bearing plates welded to beams where indicated.
   2. Drill or punch girders and plates for field-bolted connections where indicated.
   3. Where wood nailers are attached to girders with bolts or lag screws, drill or punch holes at 24 inches o.c.

E. Fabricate steel pipe columns for supporting wood frame construction from steel pipe with steel baseplates and top plates as indicated. Drill or punch baseplates and top plates for anchor and connection bolts and weld to pipe with fillet welds all around. Make welds the same size as pipe wall thickness unless otherwise indicated.
   1. Unless otherwise indicated, fabricate from Schedule 40 steel pipe.
   2. Unless otherwise indicated, provide 1/2-inch baseplates with four 5/8-inch anchor bolts and 1/4-inch top plates.

F. Galvanize miscellaneous framing and supports where indicated.

G. Prime miscellaneous framing and supports with zinc-rich primer where indicated.
2.7 MISCELLANEOUS STEEL TRIM

A. Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where possible.

B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.

1. Provide with integrally welded steel strap anchors for embedding in concrete or masonry construction.

C. Galvanize and prime miscellaneous steel trim.

D. Prime miscellaneous steel trim with zinc-rich primer.

2.8 GENERAL FINISH REQUIREMENTS

A. Finish metal fabrications after assembly.

B. Finish exposed surfaces to remove tool and die marks and stretch lines, and to blend into surrounding surface.

2.9 ALUMINUM FINISHES

A. As-Fabricated Finish: AA-M12.

B. Clear Anodic Finish: AA-M10C22A41 Mechanical finish as fabricated. Architectural Class I, clear coating 0.018 mm or thicker.

C. Paint: Urethane over chemically pretreated substrate.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C. Field Welding: Comply with the following requirements:
1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag screws, wood screws, and other connectors.

E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

F. Corrosion Protection: Coat concealed surfaces of aluminum that come into contact with grout, concrete, masonry, wood, or dissimilar metals with the following:

   1. Cast Aluminum: Heavy coat of bituminous paint.
   2. Extruded Aluminum: Two coats of clear lacquer.

3.2 INSTALLATION OF MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.

END OF SECTION 055000
SECTION 093013 - CERAMIC TILING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Glazed wall tile.
   2. Tile backing panels.
   3. Waterproof membranes.
   4. Crack isolation membranes.
   5. Setting material.

B. Related Requirements:
   1. Section 079200 "Joint Sealants" for sealing of movement joints in tile surfaces.

1.2 DEFINITIONS

A. General: Definitions in ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.

B. Face Size: Actual tile size, excluding spacer lugs.

C. Module Size: Actual tile size plus joint width indicated.

1.3 ACTION SUBMITTALS

A. Product Data:
   1. Glazed wall tile.
   2. Waterproof membranes.
   3. Crack isolation membranes.

B. Samples for Initial Selection: For tile, grout, and accessories involving color selection or shade variation.

1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of product, including product use classification.

1.5 QUALITY ASSURANCE

A. Installer Qualifications:
1. Installer's supervisor for Project holds the International Masonry Institute's Supervisor Certification.
2. Installer employs only Ceramic Tile Education Foundation Certified Installers for Project.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.

B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.

C. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

D. Store liquid materials in unopened containers and protected from freezing.

1.7 FIELD CONDITIONS

A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in "Referenced Standards" Article in the Evaluations and manufacturer's written instructions.

1.8 WARRANTY

A. System Warranty: Manufacturer's non-prorated comprehensive warranty that agrees to repair and replace defective installation areas, material, and labor that fail under normal usage within specified warranty period.

1. Warranty Period: Five years from date of Product Purchase.

PART 2 - PRODUCTS

2.1 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

1. Provide tile complying with Standard Grade requirements.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other requirements specified.

C. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.
D. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.

1. Where tile is indicated for installation in wet areas, do not use back- or edge-mounted tile assemblies unless tile manufacturer specifies in writing that this type of mounting is suitable for installation indicated and has a record of successful in-service performance.

E. Factory-Applied Temporary Protective Coating: Where indicated under tile type, protect exposed surfaces of tile against adherence of mortar and grout by precoating with continuous film of petroleum paraffin wax, applied hot. Do not coat unexposed tile surfaces.

2.2 PORCELAIN TILE

A. Ceramic Tile Type CT-1: Glazed.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:
   a. Daltile; a brand of Dal-Tile Corporation.
2. Face Size: 3x6.
3. Face Size Variation: Rectified.
6. Physical Properties: Chemical resistant when tested with indicated chemicals in accordance with ASTM C650.
7. Tile Color, Glaze, and Pattern: As selected by Architect from manufacturer's full range.
8. Grout Color: As selected by Architect from manufacturer's full range.
9. Precoat with temporary protective coating.
10. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:
   a. Base Cap: Surface bullnose, module size same as adjoining flat tile.
   b. Wainscot Cap: Surface bullnose, module size same as adjoining flat tile.
   c. Wainscot Cap for Flush Conditions: Regular flat tile for conditions where tile wainscot is shown flush with wall surface above it; same size as adjoining flat tile.
   d. External Corners: Surface bullnose, module size.
   e. Internal Corners: Field-butted square corners.
   f. Tapered Transition Tile: Shape designed to effect transition between thickness of tile floor and adjoining floor finishes of different thickness, tapered to provide reduction in thickness from 1/2 to 1/4 inch across nominal 4-inch dimension.

2.3 WATERPROOF MEMBRANES

A. General: Manufacturer's standard product, selected from the following, that complies with ANSI A118.10 and ANSI A118.12 and is recommended by manufacturer for application indicated. Include reinforcement and accessories recommended by manufacturer.
B. Waterproof Membrane, Fluid Applied: Liquid-latex rubber or elastomeric polymer with continuous fabric reinforcement.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:
   a. MAPEI Corporation.

2.4 CRACK ISOLATION MEMBRANES

A. General: Manufacturer's standard product that complies with ANSI A118.12 for standard performance and is recommended by manufacturer for application indicated. Include reinforcement and accessories recommended by manufacturer.

B. Manufacturers: Subject to compliance with requirements, provide products by the following:

1. MAPELASTIC CI as manufactured by MAPEI Corporation.

2.5 GROUT MATERIALS

A. Sand-Portland Cement Grout: ANSI A108.10, consisting of white or gray cement and white or colored aggregate as required to produce color indicated.

B. Water-Cleanable Epoxy Grout: ANSI A118.3, with a VOC content of 65 g/L or less.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:
   a. MAPEI Corporation.

2. Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 and 212 deg F, respectively, and certified by manufacturer for intended use.

C. Grout for Pregrouted Tile Sheets: Same product used in factory topregrout tile sheets.

2.6 MISCELLANEOUS MATERIALS

A. Metal Flooring Transitions: Profile designed specifically for flooring applications; height to match tile and setting-bed thickness.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:
   a. Schluter Systems L.P.

2. Description: L-shaped.

3. Material and Finish: Metallic or combination of metal and PVC or neoprene base; polished chrome anodized aluminum exposed-edge material.

B. Metal Edge Trim: Profile designed for wall terminations and edge protection.
1. **Manufacturers:** Subject to compliance with requirements, provide products by the following:
   a. Schluter Systems L.P.

2. **Description:** L-shaped.

3. **Terminations:** End caps Inside corners Outside corners matching edge-protection profile.

4. **Material and Finish:** Color-coated aluminum exposed-edge material.

C. **Grout Sealer:** Grout manufacturer’s standard product for sealing grout joints that does not change color or appearance of grout.

**PART 3 - EXECUTION**

3.1 **EXAMINATION**

A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.

2. Verify that concrete substrates for tile floors installed with adhesives comply with surface finish requirements in ANSI A108.01 for installations indicated.
   a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.
   b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding.

3. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.

4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 **PREPARATION**

A. Remove coatings, including curing compounds or other coatings, that are incompatible with tile-setting materials.

B. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with adhesives or thinset mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.

C. Where indicated, prepare substrates to receive waterproof membrane by applying a reinforced mortar bed that complies with ANSI A108.1 and is sloped 1/4 inch per foot toward drains.
D. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

E. Substrate Flatness:

1. For tile shorter than 15 inches, confirm that structure or substrate is limited to variation of 1/4 inch in 10 ft. from the required plane, and no more than 1/16 inch in 12 inches when measured from tile surface high points.
2. For large format tile, tile with at least one edge 15 inches or longer, confirm that structure or substrate is limited to 1/8 inch in 10 ft. from the required plane, and no more than 1/16 inch in 24 inches when measured from tile surface high points.

F. Field-Applied Temporary Protective Coating: If indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

3.3 INSTALLATION OF CERAMIC TILE SYSTEM

A. Install tile backing panels and treat joints in accordance with ANSI A108.11 and manufacturer's written instructions for type of application indicated.

B. Install waterproof membrane to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness that is bonded securely to substrate.

1. Allow waterproof membrane to cure and verify by testing that it is watertight before installing tile or setting materials over it.

C. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness that is bonded securely to substrate.

1. Allow crack isolation membrane to cure before installing tile or setting materials over it.

D. Mix mortars and grouts to comply with "Referenced Standards" Article in the Evaluations and mortar and grout manufacturers' written instructions.

1. Add materials, water, and additives in accurate proportions.
2. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

E. Install tile in accordance with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of ANSI A108 series that are referenced in TCNA installation methods and specified in tile installation schedules, and apply to types of setting and grouting materials used.
1. For the following installations, follow procedures in ANSI A108 series of tile installation standards for providing 95 percent mortar coverage:
   a. Exterior tile floors and walls.
   b. Tile floors in wet areas.
   c. Tile swimming pool decks.
   d. Tile floors in laundries.
   e. Tile floors consisting of tiles 8 by 8 inches or larger.
   f. Tile floors consisting of rib-backed tiles.
2. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
3. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
4. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.
5. Where accent tile differs in thickness from field tile, vary setting-bed thickness so that tiles are flush.
6. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
   a. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets, so joints between sheets are not apparent in finished Work.
   b. Where adjoining tiles on floor, base, walls, or trim are specified or indicated to be same size, align joints.
   c. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on floor, base, walls, or trim, align joints unless otherwise indicated.
7. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.

F. Movement Joints: Provide movement joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated on Drawings. Form joints during installation of setting materials, mortar beds, and tile. Keep joints free of dirt, debris, and setting materials prior to filling with sealants. Do not saw-cut joints after installing tiles.

1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.

G. Metal Flooring Transitions: Install where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with top of tile.

H. Metal Wall Trim: Install at locations indicated on Drawings.
I. Grout Sealer: Apply grout sealer to cementitious grout joints in tile floors in accordance with manufacturer's written instructions. As soon as sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

3.4 ADJUSTING AND CLEANING

A. Remove and replace tile that is damaged or that does not match adjoining tile. Provide new matching units, installed as specified and in a manner to eliminate evidence of replacement.

B. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
   1. Remove grout residue from tile as soon as possible.
   2. Clean grout smears and haze from tile in accordance with tile and grout manufacturer's written instructions. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

3.5 PROTECTION

A. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.

B. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.

C. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

3.6 INTERIOR CERAMIC TILE INSTALLATION SCHEDULE

A. Interior Wall Installations, Masonry or Concrete:
   1. TCNA W202I: Thinset mortar over waterproof membrane.
      a. Ceramic Tile Type: .
      b. Thinset Mortar: Water-cleanable epoxy mortar.
      c. Grout: Water-cleanable epoxy grout.
      e. Joint Width: 3/16 inch.
      f. Movement Joints: Types located on Drawings.

B. Interior Wall Installations, Wood or Metal Studs or Furring:
   1. TCNA W245: Thinset mortar on glass-mat, water-resistant gypsum backer board over waterproof membrane.
      a. Ceramic Tile Type: .
b. Thinset Mortar: Improved modified dry-set mortar.
c. Grout: Water-cleanable epoxy grout.
e. Joint Width: 1/8 inch.
f. Movement Joints: Types located on Drawings.
SECTION 283111 - DIGITAL, ADDRESSABLE FIRE ALARM SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section describes the requirements for providing an analog addressable fire alarm system along with all related equipment, cabling and component necessary to provide a complete and operational system.

B. The fire alarm/electrical contractor shall provide all necessary equipment, material, design, hardware, software, programming and labor to modify the existing fire alarm control panel (Manufacturer: BOSCH D9412GV4) to incorporate new additional zones, and initiating appliance devices, as required by the contract documents. Provides standby battery calculations on the revised fire alarm system and replace existing batteries of sufficient sizes indicated by the standby calculations.

C. Construction Phasing:

1. Existing Fire Alarm System shall remain intact. The new fire alarm system components, devices, conduit, and wiring, shall be installed so as to not interfere with the existing system equipment. All new fire alarm devices shall be connected to the existing fire alarm control panel.

2. Coordinate and provide fire watch programs when construction phasing requires disruption of manual or automatic fire detection and alarm systems in the existing or newly implemented phased areas of the building.

D. Section Includes:

1. Fire Alarm Control Panel (existing)
2. Smoke detectors.
4. Digital alarm communicator transmitter (existing)

1.3 DEFINITIONS

A. HCPS: Harford County Public School System.

B. EMT: Electrical Metallic Tubing.

C. FACP: Fire Alarm Control Panel.

D. HLI: High Level Interface.

F. PC: Personal computer.

G. VESDA: Very Early Smoke-Detection Apparatus.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product, including furnished options and accessories.

1. Include construction details, material descriptions, dimensions, profiles, and finishes.
2. Include rated capacities, operating characteristics, and electrical characteristics.

B. Shop Drawings: For fire-alarm system.

1. Comply with recommendations and requirements in the "Documentation" section of the "Fundamentals" chapter in NFPA 72.
2. Include plans, elevations, sections, details, and attachments to other work.
3. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and locations. Indicate conductor sizes, indicate termination locations and requirements, and distinguish between factory and field wiring.
4. Detail assembly and support requirements.
5. Include voltage drop calculations for notification-appliance circuits.
6. Include battery-size calculations.
7. Include input/output matrix.
8. Include statement from manufacturer that all equipment and components have been tested as a system and meet all requirements in this Specification and in NFPA 72.
9. Include performance parameters and installation details for each detector.
10. Verify that each duct detector is listed for complete range of air velocity, temperature, and humidity possible when air-handling system is operating.
11. Provide program report showing that air-sampling detector pipe layout balances pneumatically within the airflow range of the air-sampling detector.
12. Include plans, sections, and elevations of heating, ventilating, and air-conditioning ducts, drawn to scale; coordinate location of duct smoke detectors and access to them.
   a. Show critical dimensions that relate to placement and support of sampling tubes, detector housing, and remote status and alarm indicators.
   b. Show field wiring required for HVAC unit shutdown on alarm.
   c. Locate detectors according to manufacturer’s written recommendations.
   d. Show air-sampling detector pipe routing.

C. General Submittal Requirements:

1. Submittals shall be approved by authorities having jurisdiction prior to submitting them to Architect.
2. Shop Drawings shall be prepared by persons with the following qualifications:
   a. Trained and certified by manufacturer in fire-alarm system design.
b. NICET-certified, fire-alarm technician; Level III minimum.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Field quality-control reports.

1.6 SAMPLE WARRANTY: FOR SPECIAL WARRANTY.

1.7 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For fire-alarm systems and components to include in emergency, operation, and maintenance manuals.

1. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

   a. Comply with the "Records" section of the "Inspection, Testing and Maintenance" chapter in NFPA 72.
   b. Provide "Fire Alarm and Emergency Communications System Record of Completion Documents" according to the "Completion Documents" Article in the "Documentation" section of the "Fundamentals" chapter in NFPA 72.
   c. Complete wiring diagrams showing connections between all devices and equipment. Each conductor shall be numbered at every junction point with indication of origination and termination points.
   d. Riser diagram.
   e. Device addresses.
   f. Air-sampling system sample port locations and modeling program report showing layout meets performance criteria.
   g. Record copy of site-specific software.
   h. Provide "Inspection and Testing Form" according to the "Inspection, Testing and Maintenance" chapter in NFPA 72, and include the following:

      1) Equipment tested.
      2) Frequency of testing of installed components.
      3) Frequency of inspection of installed components.
      4) Requirements and recommendations related to results of maintenance.
      5) Manufacturer's user training manuals.
   i. Manufacturer's required maintenance related to system warranty requirements.
   j. Abbreviated operating instructions for mounting at fire-alarm control unit and each annunciator unit.

B. Software and Firmware Operational Documentation:

   1. Software operating and upgrade manuals.
   2. Program Software Backup: On magnetic media or compact disk, complete with data files.
3. Device address list.
4. Printout of software application and graphic screens.

1.8 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Lamps for Remote Indicating Lamp Units: Quantity equal to 10 percent of amount installed, but no fewer than one unit.
2. Lamps for Strobe Units: Quantity equal to 10 percent of amount installed, but no fewer than one unit.
3. Smoke Detectors, Fire Detectors: Quantity equal to 10 percent of amount of each type installed, but no fewer than one unit of each type.
4. Detector Bases: Quantity equal to two percent of amount of each type installed, but no fewer than one unit of each type.
5. Keys and Tools: One extra set for access to locked or tamper proof components.
6. Audible and Visual Notification Appliances: One of each type installed.
7. Fuses: Two of each type installed in the system. Provide in a box or cabinet with compartments marked with fuse types and sizes.

1.9 QUALITY ASSURANCE

A. Installer Qualifications: Personnel shall be trained and certified by manufacturer for installation of units required for this Project.

B. NFPA Certification: Obtain certification according to NFPA 72 by an NRTL (nationally recognized testing laboratory).

1.10 PROJECT CONDITIONS

A. Perform a full test of the existing system prior to starting work. Document any equipment or components not functioning as designed.

B. Interruption of Existing Fire-Alarm Service: Do not interrupt fire-alarm service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary guard service according to requirements indicated:

1. Notify Owner no fewer than seven days in advance of proposed interruption of fire-alarm service.
2. Do not proceed with interruption of fire-alarm service without Owner's written permission.

C. Use of Devices during Construction: Protect devices during construction unless devices are placed in service to protect the facility during construction.
1.11 SEQUENCING AND SCHEDULING

A. Existing Fire-Alarm Equipment: Maintain existing equipment fully operational until new equipment has been tested and accepted. As new equipment is installed, label it "NOT IN SERVICE" until it is accepted. Remove labels from new equipment when put into service, and label existing fire-alarm equipment "NOT IN SERVICE" until removed from the building.

B. Equipment Removal: After acceptance of new fire-alarm system, remove existing disconnected fire-alarm equipment and wiring.

1.12 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace fire-alarm system equipment and components that fail in materials or workmanship within specified warranty period.

1. Warranty Extent: All equipment and components not covered in the Maintenance Service Agreement.

2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: BOSCH D9412GV4 is the existing fire alarm control panel for this building.

2.2 FIRE-ALARM CONTROL PANEL

A. Manufacturers: BOSCH D9412GV4 is the existing fire alarm control panel for this building. Provide all necessary equipment, material, design, hardware, software, programming, and labor to modify the existing fire alarm control panel (Manufacturer: BOSCH D9412GV4) to incorporate new additional zones, initiating and notification appliance devices, as required by the contract documents. Provide standby battery calculations on the revised fire alarm system and replace existing batteries of sufficient sizes indicated by the standby calculations.

1. Noncoded, UL-certified addressable system
2. Door Controls: Door hold-open devices that are controlled by smoke detectors at doors in smoke-barrier walls shall be connected to fire-alarm system.
3. Transmission to Remote Alarm Receiving Station: Automatically transmit alarm, supervisory, and trouble signals to a remote alarm station.
4. Primary Power: 24-V dc obtained from 120-V ac service and a power-supply module. Initiating devices, notification appliances, signaling lines, trouble signals, supervisory and digital alarm communicator transmitters shall be powered by 24-V dc source.

a. Alarm current draw of entire fire-alarm system shall not exceed 80 percent of the power-supply module rating.
5. Secondary Power: 24-V dc supply system with batteries, automatic battery charger, and automatic transfer switch.

6. Instructions: Computer printout or typewritten instruction card mounted behind a plastic or glass cover in a stainless-steel or aluminum frame. Include interpretation and describe appropriate response for displays and signals. Briefly describe the functional operation of the system under normal, alarm, and trouble conditions.

2.3 SYSTEM DESCRIPTION

A. Noncoded, UL-certified addressable system, with multiplexed signal transmission and horn/strobe evacuation.

B. Automatic sensitivity control of certain smoke detectors.

C. All components provided shall be listed for use with the selected system.

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.4 SYSTEMS OPERATIONAL DESCRIPTION

A. Fire-alarm signal initiation shall be by one or more of the following devices and systems:
   2. Smoke detectors.
   3. Duct smoke detectors.

B. Fire-alarm signal shall initiate the following actions:
   1. Continuously operate alarm notification appliances.
   2. Identify alarm and specific initiating device at fire-alarm control unit and remote annunciators.
   3. Transmit an alarm signal to the remote alarm receiving station.
   4. Unlock electric door locks in designated egress paths.
   5. Switch heating, ventilating, and air-conditioning equipment controls to fire-alarm mode.
   6. Activate emergency shutoffs for gas and fuel supplies.
   7. Record events in the system memory.

C. Supervisory signal initiation shall be by one or more of the following devices and actions:
   1. Valve supervisory switch.

D. System trouble signal initiation shall be by one or more of the following devices and actions:
   1. Open circuits, shorts, and grounds in designated circuits.
2. Opening, tampering with, or removing alarm-initiating and supervisory signal-initiating devices.
3. Loss of communication with any addressable sensor, input module, relay, control module, remote annunciator, printer interface, or Ethernet module.
4. Loss of primary power at fire-alarm control unit.
5. Ground or a single break in internal circuits of fire-alarm control unit.
6. Abnormal ac voltage at fire-alarm control unit.
7. Break in standby battery circuitry.
8. Failure of battery charging.
9. Abnormal position of any switch at fire-alarm control unit or annunciator.

E. System Supervisory Signal Actions:

1. Initiate notification appliances.
2. After a time delay of 200 seconds, transmit a trouble or supervisory signal to the remote alarm receiving station.

2.5 SYSTEM SMOKE DETECTORS

A. Manufacturers: The new devices shall be compatible with the existing Fire Alarm System.

B. General Requirements for System Smoke Detectors:

1. Comply with UL 268; operating at 24-V dc, nominal.
2. Detectors shall be four-wire type.
3. Base Mounting: Detector and associated electronic components shall be mounted in a twist-lock module that connects to a fixed base. Provide terminals in the fixed base for connection to building wiring.
4. Self-Restoring: Detectors do not require resetting or readjustment after actuation to restore them to normal operation.
5. Integral Visual-Indicating Light: LED type, indicating detector has operated and power-on status.

C. Photoelectric Smoke Detectors:

1. Detector address shall be accessible from fire-alarm control unit and shall be able to identify the detector's location within the system and its sensitivity setting.
2. An operator at fire-alarm control unit, having the designated access level, shall be able to manually access the following for each detector:
   a. Primary status.
   b. Device type.
   c. Present average value.
   d. Present sensitivity selected.
   e. Sensor range (normal, dirty, etc.).

2.6 NOTIFICATION APPLIANCES

A. Manufacturers: The new devices shall be compatible with the existing Fire Alarm System.
B. General Requirements for Notification Appliances: Connected to notification-appliance signal circuits, zoned as indicated, equipped for mounting as indicated, and with screw terminals for system connections.

1. Combination Devices: Factory-integrated audible and visible devices in a single-mounting assembly, equipped for mounting as indicated, and with screw terminals for system connections.

C. Horns: Electric-vibrating-polarized type, 24-V dc; with provision for housing the operating mechanism behind a grille. Comply with UL 464. Horns shall produce a sound-pressure level of 90 dBA, measured 10 feet from the horn, using the coded signal prescribed in UL 464 test protocol.

D. Visible Notification Appliances: Xenon strobe lights complying with UL 1971, with clear or nominal white polycarbonate lens mounted on an aluminum faceplate. The word "FIRE" is engraved in minimum 1-inch-high letters on the lens.

1. Rated Light Output:
   a. 15/30/75/95 cd, selectable in the field.

2. Mounting: Wall mounted unless otherwise indicated.
3. Flashing shall be in a temporal pattern, synchronized with other units.
5. Mounting Faceplate: Factory finished, [red] [white].

E. Control Module:

1. Operate notification devices.

2.7 WIRE AND WIRING SYSTEM

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. West Penn Wire/COT; a division of Cable Design Technologies
2. Comtran Corporation
3. Helix/HiTemp Cables, Inc, a Draka USA Company
4. Rockbestos-Suprenant Cable Corporation, a Mamlon Group Company

B. Non-power-limited circuits: Solid-copper conductors with 600-V rated, 75 deg. C, color coded insulation

1. Low voltage circuits: No. 16 AWG minimum
2. Line-voltage circuits: No. 12 AWG, minimum

C. Power-limited circuits: NFPA 70, Types FPL, FPLR, or FPLP as recommended by manufacturer

D. Wiring System: Class A in accordance with NFPA 72.
2.8 DIGITAL ALARM COMMUNICATOR TRANSMITTER

A. Digital alarm communicator transmitter is existing to remain.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions for compliance with requirements for ventilation, temperature, humidity, and other conditions affecting performance of the Work.

   1. Verify that manufacturer's written instructions for environmental conditions have been permanently established in spaces where equipment and wiring are installed, before installation begins.

B. Examine roughing-in for electrical connections to verify actual locations of connections before installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FIRE WATCHES

A. Coordinate with HCPS and provide required fire watches required by NFPA and AHJ when construction work disrupts existing fire alarm systems and new fire alarm systems phased into services and operating concurrently with existing fire alarm system.

3.3 EQUIPMENT INSTALLATION

A. Comply with NFPA 72, NFPA 101, and requirements of authorities having jurisdiction for installation and testing of fire-alarm equipment. Install all electrical wiring to comply with requirements in NFPA 70 including, but not limited to, Article 760, "Fire Alarm Systems."

   1. Devices placed in service before all other trades have completed cleanup shall be replaced.
   2. Devices installed but not yet placed in service shall be protected from construction dust, debris, dirt, moisture, and damage according to manufacturer's written storage instructions.

B. Install wall-mounted equipment, with tops of cabinets not more than 78 inches above the finished floor.

C. Smoke-Detector Spacing:

   1. Comply with the "Smoke-Sensing Fire Detectors" section in the "Initiating Devices" chapter in NFPA 72, for smoke-detector spacing.
   2. Smooth ceiling spacing shall not exceed 30 feet.
   3. Spacing of detectors for irregular areas, for irregular ceiling construction, and for high ceiling areas shall be determined according to Annex A in NFPA 72.
4. HVAC: Locate detectors not closer than 36 inches from air-supply diffuser or return-air opening.

5. Lighting Fixtures: Locate detectors not closer than 12 inches from any part of a lighting fixture and not directly above pendant mounted or indirect lighting.

D. Install a cover on each smoke detector that is not placed in service during construction. Cover shall remain in place except during system testing. Remove cover prior to system turnover.

E. Duct Smoke Detectors: Comply with NFPA 72 and NFPA 90A. Install sampling tubes so they extend the full width of duct. Tubes more than 36 inches long shall be supported at both ends.

1. Do not install smoke detector in duct smoke-detector housing during construction. Install detector only during system testing and prior to system turnover.

F. Remote Status and Alarm Indicators: Install in a visible location near each smoke detector that is not readily visible from normal viewing position.

G. Audible Alarm-Indicating Devices: Install not less than 6 inches below the ceiling. Install bells and horns on flush-mounted back boxes with the device-operating mechanism concealed behind a grille. Install all devices at the same height unless otherwise indicated.

H. Visible Alarm-Indicating Devices: Install adjacent to each alarm bell or alarm horn and at least 6 inches below the ceiling. Install all devices at the same height unless otherwise indicated.

3.4 PATHWAYS

A. Pathways above recessed ceilings and in non accessible locations may be routed exposed.

1. Exposed pathways located less than 96 inches above the floor shall be installed in EMT.

B. Pathways shall be installed in EMT.

C. Exposed EMT shall be painted red enamel.

3.5 IDENTIFICATION

A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 270553 "Identification for Communications Systems."

B. Install framed instructions in a location visible from fire-alarm control unit.

3.6 GROUNDING

A. Ground fire-alarm control unit and associated circuits; comply with IEEE 1100. Install a ground wire from main service ground to fire-alarm control unit.

B. Ground shielded cables at the control panel location only. Insulate shield at device location.
3.7 FIELD QUALITY CONTROL

A. Field tests shall be witnessed by authorities having jurisdiction and Owner’s Representative.

B. Manufacturer’s Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

C. Perform tests and inspections.

D. Perform the following tests and inspections with the assistance of a factory-authorized service representative:
   
   1. Visual Inspection: Conduct visual inspection prior to testing.
      
      a. Inspection shall be based on completed record Drawings and system documentation that is required by the "Completion Documents, Preparation" table in the "Documentation" section of the "Fundamentals" chapter in NFPA 72.
      b. Comply with the "Visual Inspection Frequencies" table in the "Inspection" section of the "Inspection, Testing and Maintenance" chapter in NFPA 72; retain the "Initial/Reacceptance" column and list only the installed components.


   3. Factory-authorized service representative shall prepare the "Fire Alarm System Record of Completion" in the "Documentation" section of the "Fundamentals" chapter in NFPA 72 and the "Inspection and Testing Form" in the "Records" section of the "Inspection, Testing and Maintenance" chapter in NFPA 72.

E. Reacceptance Testing: Perform reacceptance testing to verify the proper operation of added or replaced devices and appliances.

F. Fire-alarm system will be considered defective if it does not pass tests and inspections.

G. Prepare test and inspection reports.

H. Maintenance Test and Inspection: Perform tests and inspections listed for weekly, monthly, quarterly, and semiannual periods. Use forms developed for initial tests and inspections.

I. Annual Test and Inspection: One year after date of Substantial Completion, test fire-alarm system complying with visual and testing inspection requirements in NFPA 72. Use forms developed for initial tests and inspections.

3.8 MAINTENANCE SERVICE

A. Initial Maintenance Service: Beginning at Substantial Completion, maintenance service shall include 12 months' full maintenance by skilled employees of manufacturer's designated service organization. Include preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper operation. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.
1. Include visual inspections according to the "Visual Inspection Frequencies" table in the "Testing" paragraph of the "Inspection, Testing and Maintenance" chapter in NFPA 72.


3.9 SOFTWARE SERVICE AGREEMENT

A. Comply with UL 864.

B. Technical Support: Beginning at Substantial Completion, service agreement shall include software support for two years.

C. Upgrade Service: At Substantial Completion, update software to latest version. Install and program software upgrades that become available within two years from date of Substantial Completion. Upgrading software shall include operating system and new or revised licenses for using software.

1. Upgrade Notice: At least 30 days to allow Owner to schedule access to system and to upgrade computer equipment if necessary.

3.10 DEMONSTRATION

A. Train Owner’s maintenance personnel to adjust, operate, and maintain fire-alarm system.