

**ADDENDUM NO. 1
TO
CONTRACT DOCUMENTS AND SPECIFICATIONS
FOR
ORANGE COUNTY – EUBANKS WASTE & RECYCLING FACILITY
IMPROVEMENTS
ISSUED FOR BID – DECEMBER 2015**

ISSUED: January 15, 2016

TO: All Official Plan Holders

The following revisions, additions, and clarifications are hereby made part of the Contract Documents and Specifications for the above-referenced project and shall be taken into account in the preparation of all Bids and the execution of all Work. All items in conflict with the Addenda are hereby deleted. This addendum is made part of the Contract Documents and shall be noted on the proposal.

I. SPECIFICATIONS

- Ad-1-1. Section 07176 Liquid Water Repellent, **ADD**
- Ad-1-2. Section 07210 Building Insulation, **ADD**
- Ad-1-3. Section 07190 Under Slab Vapor Retarder, **ADD**
- Ad-1-4. Section 07534 Adhered Elastomeric (EPDM) Sheet Roofing, **ADD**
- Ad-1-5. Section 07600 Flashing and Sheet Metal, **ADD**
- Ad-1-6. Section 08363 Overhead Door – Sectional Steel, **REPLACE** in its entirety **WITH** Section 08332 Steel Rolling Overhead Doors.
- Ad-1-7. Section 08700 Finish Hardware, 08700/3/3.3/A.
 - (1) **REPLACE** “HW-6” with “HW-1”
 - (2) **ADD** The following Hardware Sets:
 - HW-2: Butts
Lockset – Entrance
Closer
Kickplate
Threshold
Weatherstripping
 - HW-3: Butts
Latchset – Passage
Closer
Kickplate

HW-4: Butts
Lockset – Privacy
Closer
Kickplate

Ad-1-8. Section 08800 Glass and Glazing,

- (1) **REPLACE** -“International Code Council (ICC):
International Building Code and associated standards, 2006 Edition
including all amendments, referred to herein as Building Code.”
with the following:

“2012 North Carolina Building Code, including all amendments,
referred to herein as Building Code.”

Ad-1-9. Section 06100 Rough Carpentry, 06100/1/1.2/A/7/a.

- (1) **REPLACE** -“International Code Council (ICC):
International Building Code and associated standards, 2006 Edition
including all amendments, referred to herein as Building Code.”
with the following:

“2012 North Carolina Building Code, including all amendments,
referred to herein as Building Code.”

Ad-1-10. Section 08100 Hollow Metal Doors and Frames, 06100/1/1.2/A/5/a.

- (1) **REPLACE** -“International Code Council (ICC):
International Building Code and associated standards, 2006 Edition
including all amendments, referred to herein as Building Code.”
with the following:

“2012 North Carolina Building Code, including all amendments,
referred to herein as Building Code.”

Ad-1-11. Section 08525 Aluminum Windows, 06100/2/2.1/1.

- (1) **DELETE** – “a. Wausau Metals Corp., 2250 – T Series.”
(2) **REPLACE** – “b. Kawneer Company Inc., 8225 – T Series.” with the
following:

“a. Kawneer Company Inc., 8470TL Series., or approved equal.”

Ad-1-12. Section 13120 Attendant Booth, 13120/1/1.1/A/2/h.

- (1) **REPLACE** – “Standing seam roof” with the following:

“Manufacturers standard low sloped roofing system.”

Ad-1-13. Section 13120 Attendant Booth, 13120/2/2.2/B/1.

- (1) **REPLACE** – “91 IN overall exterior height.” with the following:
“See Contract Drawings.”

Ad-1-14. Section 13120 Attendant Booth, 13120/2/2.2/B/2.

- (1) **REPLACE** – “8 FT ± 6 IN.” with the following:
“See Contract Drawings.”

Ad-1-15. Section 13120 Attendant Booth, 13120/2/2.2/B/3.

- (1) **REPLACE** – “4 FT ± 3 IN.” with the following:
“See Contract Drawings.”

Ad-1-16. Section 13120 Attendant Booth, 13120/2/2.11/A.

- (1) **REPLACE** – “Exterior, waterproof, standing seam roof shall be constructed of minimum 24-gauge steel. The exterior roof structure shall be shipped completely assembled.” with the following:
“Manufacturers standard exterior, waterproof, low slope roofing system. The exterior roof structure shall be shipped completely assembled.”

II. DRAWINGS

Ad-1-17. **REMOVE** Sheet 02A-01 Floor Plan, RCP and Roof Plan and **REPLACE** with attached, revised Sheet 02A-01.

Ad-1-18. **REMOVE** Sheet 01A-02 Household Hazardous Materials Facility Exterior Elevations and **REPLACE** with attached, revised 01A-02.

Ad-1-19. **REMOVE** Sheet 00A-01 Room Finish and Door Schedule and **REPLACE** with attached, revised Sheet 00A-01.

II. CLARIFICATIONS

Ad-1-20. **ADDED** the Pre-Bid Attendance Sheet and is attached.

Ad-1-21. Electronic files may be obtained by those that purchased contract documents by contacting Mrs. Andrea Diano-Nass as indicated in the advertisement for bids.

Ad-1-22. The days and times of construction are provided in Section 01040 – Coordination.

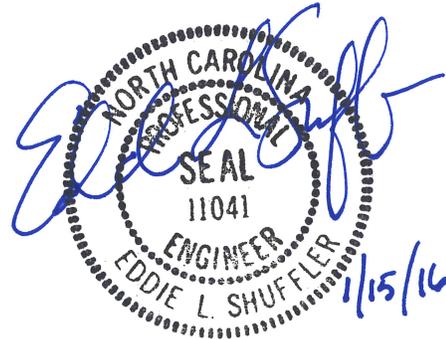
Ad-1-23. **ADDED** The guidelines and forms for MBE and Safety Record information as required under the specifications are attached. These forms must be completed in accordance with the specifications and returned with the bid.

Respectfully submitted,

HDR Engineering, Inc. of the Carolinas



Ed Shuffler, PE
Project Manager



Attachments: Pre-Bid Conference Attendance Sheet
Revised Specifications Table of Contents
New Sections: 07176 – Liquid Water Repellent
07210 – Building Insulation
07190 – Under Slab Vapor Retarder
07534 – Adhered Elastomeric (EPDM) Sheet Roofing
07600 – Flashing and Sheet Metal
08332 – Steel Rolling Overhead Doors
Reissued Drawings – 00A-01, 01A-01, 02A-01
MBE Guidelines and Forms

ORANGE COUNTY
EUBANKS ROAD WASTE & RECYCLING FACILITY IMPROV.
PRE-BID MEETING 1/12/16

<u>NAME</u>	<u>COMPANY</u>	<u>TELEPHONE & EMAIL</u>
John Muter	Muter Construction	(919) 749-9340 jmuter@muterconstruction.com
Danny Hoyle	DH Griffin Infrastructure	(336) 669-2139 dhoyle@DHGriffin.com
Jeff Robinson	OC	
Gayle Wilson	OC	
David Cannon	OC	
Gordon Dively	OC	
ED SUTKIN	HDR	
Jerry Smith	W.L. Bishop	732 2546 jerry@wlbishop.com
MIKE SEDLOCK	FRED SMITH	919-583-3526 mike.sedlock@fredsmithcompany.net

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00600	BONDS AND CERTIFICATES
00700	GENERAL CONDITIONS

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1 **SECTION 07176**
2 **LIQUID WATER REPELLENT**

3 **PART 1 - GENERAL**

4 **1.1 SUMMARY**

- 5 A. Section Includes:
- 6 1. Liquid water repellent.
 - 7 a. Contractor shall apply to exterior surface of all exterior CMU walls.
- 8 B. Related Sections include but are not necessarily limited to:
- 9 1. Division 00 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
 - 10 2. Division 01 - General Requirements.
 - 11 3. Division 03 - Concrete.
 - 12
 - 13 4. Section 04220 - Concrete Masonry.

14 **1.2 QUALITY ASSURANCE**

- 15 A. Material must not inhibit the adhesion of future paint coatings.

16 **1.3 SUBMITTALS**

- 17 A. Shop Drawings:
- 18 1. See Specification Section 01340 for requirements for the mechanics and administration of
 - 19 the submittal process.
 - 20 2. Product technical data including:
 - 21 a. Acknowledgement that products submitted meet requirements of standards referenced.
 - 22 b. Manufacturer's installation instructions.
- 23 B. Informational Submittals:
- 24 1. See Specification Section 01340 for requirements for the mechanics and administration of
 - 25 the submittal process.
 - 26 2. Letter from manufacturer stating that product is suitable for intended use and is compatible
 - 27 with and will not cause discoloration of precolored masonry units.
 - 28 3. Field conducted water spray test results.
 - 29 4. Warranty.

30 **1.4 WARRANTY**

- 31 A. Provide manufacturer's standard five (5) year performance warranty.

32 **PART 2 - PRODUCTS**

33 **2.1 ACCEPTABLE MANUFACTURERS**

- 34 A. Subject to compliance with the Contract Documents, the following manufacturers are
- 35 acceptable:
- 36 1. Liquid water repellent:
 - 37 a. L&M Construction Chemicals, Inc.
 - 38 b. Chemprobe Technologies, Inc.
 - 39 c. Hydrozo, Inc.
 - 40 d. Degussa.
- 41 B. Submit request for substitution in accordance with Specification Section 01640.

42 **2.2 MATERIALS**

- 43 A. Liquid Water Repellent Type 1:

- 1 1. Clear, penetrating micro-emulsion water repellent formulated for sealing concrete masonry.
- 2 a. Water based, VOC compliant, odorless.
- 3 1) VOC: Less than 195 g/L.
- 4 b. Non-yellowing, non-staining.
- 5 c. Provides both surface barrier and penetrating chemical action-forming barrier.
- 6 2. Surface barrier shall protect against water intrusion, mildew, dirt and airborne contaminants.
- 7 3. L&M Construction Chemicals, Inc. "HYDROBLOCK."

8 **PART 3 - EXECUTION**

9 **3.1 PREPARATION**

- 10 A. Protect adjacent surfaces not intended to be covered.
- 11 B. Clean surfaces to be covered in accordance with manufacturer's recommendations.
- 12 C. Make all mortar repairs at least 48 HRS prior to application.
- 13 D. Allow masonry surfaces to cure minimum of 10 days prior to application.

14 **3.2 INSTALLATION AND APPLICATION**

- 15 A. Install products in accordance with manufacturer's instructions.
- 16 1. At a minimum apply material in accordance with manufacturer's recommended application
- 17 rates using procedures and equipment recommended by manufacturer.
- 18 a. Apply two (2) coats of material.
- 19 B. Apply liquid water repellent "Type 1" to exterior concrete block surfaces.

20 **3.3 FIELD QUALITY CONTROL**

- 21 A. Manufacturer or manufacturer's designated representative shall conduct a water spray test to an
- 22 area of the wall for a period of 5 HRS.
- 23 1. Water from the spray shall impact the wall at a 45-degree angle to the vertical and shall
- 24 cover an area of not less than 9 SF.
- 25 2. Water flow shall be minimum 5 gpm at 60 psi pressure.
- 26 3. If, within 5 HRS, moisture appears on the inside face of the wall within the test area, the
- 27 wall shall be recoated.
- 28 B. Retest as required.
- 29 C. Recoat as required until wall area remains dry within limits of testing procedure.
- 30 D. Results of this test shall be used to determine material quantity in excess of manufacturer's
- 31 minimum recommended amounts to be applied per square foot to the building surface.
- 32 E. Protect adjacent materials not required to be coated.

34 **END OF SECTION**

1 **SECTION 07190**
2 **UNDER SLAB VAPOR RETARDER**

3 **PART 1 - GENERAL**

4 **1.1 SUMMARY**

- 5 A. Section Includes:
- 6 1. Under slab vapor retarder.
 - 7 a. Contractor shall install vapor retarder under concrete slab of all buildings.
 - 8 B. Related Specification Sections include but are not necessarily limited to:
 - 9 1. Division 00 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
 - 10 2. Division 01 - General Requirements.

11 **1.2 QUALITY ASSURANCE**

- 12 A. Referenced Standards:
- 13 1. American Concrete Institute (ACI):
 - 14 a. 302.2R, Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.
 - 15 2. ASTM International (ASTM):
 - 16 a. D882, Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
 - 17 b. D1709, Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method.
 - 18 c. E96, Standard Test Methods for Water Vapor Transmission of Materials.
 - 19 d. E1643, Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
 - 20 e. E1745, Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.

24 **1.3 SUBMITTALS**

- 25 A. Shop Drawings:
- 26 1. See Specification Section 01340 for requirements for the mechanics and administration of the submittal process.
 - 27 2. Product technical data including:
 - 28 a. Acknowledgement that products submitted meet requirements of standards referenced.
 - 29 b. Product data sheet on vapor retarder sheet and vapor retarder tape.
 - 30 c. All accessories proposed for use.
 - 31 d. Manufacturer's installation instructions.
- 32
- 33 B. Samples:
- 34 1. Provide two (2) 6 IN x 6 IN samples of vapor retarder material taped together using the vapor retarder tape proposed.
 - 35 2. Provide two (2) samples of all accessories proposed for use.
- 36
- 37 C. Informational Submittals: Manufacturer's recommendation on vapor retarder tape.

38 **PART 2 - PRODUCTS**

39 **2.1 ACCEPTABLE MANUFACTURERS**

- 40 A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
- 41 1. Vapor retarder:
 - 42 a. Fortifiber Corporation.
 - 43 b. Layfield Group
 - 44 c. Raven Industries.
- 45

- 1 d. Reef Industries.
- 2 e. Stego Industries.
- 3 f. WR Meadows, Inc.

4 B. Submit request for substitution in accordance with Specification Section 01640.

5 **2.2 PERFORMANCE REQUIREMENTS**

- 6 A. Vapor Retarder:
 - 7 1. ASTM E1745, Class A.
 - 8 2. Thickness: Minimum 15 mil.
 - 9 3. Water vapor permeance: 0.03 maximum per ASTM E96.
 - 10 4. Puncture resistance: ASTM D1709, Method B, 2200 grams.
 - 11 5. Minimum tensile strength: 45 LBS/IN, ASTM D882.

12 **2.3 ACCESSORIES**

- 13 A. Pipe Boots: Manufacturer's standard boot fabricated to maintain the integrity of the vapor
- 14 retarder system.
- 15 B. Vapor Retarder Tape: As recommended by vapor retarder manufacturers.

16 **PART 3 - EXECUTION**

17 **3.1 INSTALLATION**

- 18 A. Install products in accordance with manufacturer's instructions, ASTM E1643 and ACI 302.2R.
- 19 B. Provide vapor retarder under concrete slab of buildings.
 - 20 1. Place continuous vapor retarder above granular fill subgrade material, unless noted
 - 21 otherwise.
- 22 C. Lap minimum 6 IN and seal in accordance with ASTM E1643 and manufacturer's
- 23 recommendations.
- 24 D. Extend to extremities of area and seal to adjacent elements.
- 25 E. Seal all penetrations: Provide pipe boot for all pipes or conduit penetrating the floor slab.

26 **3.2 FIELD QUALITY CONTROL**

- 27 A. Ensure proper precautions are implemented to prevent damage to installed vapor retarder
- 28 membrane prior to and during pouring of concrete floor slab.
- 29 B. Inspect vapor retarder immediately prior to placement of concrete.
 - 30 1. Patch all punctures, tears, holes, etc.
 - 31 a. Repair with additional layer of vapor retarder and seal entire patch with vapor retarder
 - 32 tape or as recommended by manufacturer.
 - 33 b. Lap all repairs minimum 6 IN.

34 **END OF SECTION**

1 **SECTION 07210**
2 **BUILDING INSULATION**

3 **PART 1 - GENERAL**

4 **1.1 SUMMARY**

- 5 A. Section Includes:
- 6 1. Building insulation.
- 7 a. Does not include roof insulation or roof vapor retarder; see Specification Section
- 8 07543.
- 9 B. Related Specification Sections include but are not necessarily limited to:
- 10 1. Division 00 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
- 11 2. Division 01 - General Requirements.
- 12 3. Section 04220 - Concrete Masonry.

13 **1.2 QUALITY ASSURANCE**

- 14 A. Referenced Standards:
- 15 1. ASTM International (ASTM):
- 16 a. C272, Standard Test Method for Water Absorption of Core Materials for Structural
- 17 Sandwich Constructions
- 18 b. C423, Standard Test Method for Sound Absorption and Sound Absorption Coefficients
- 19 by the Reverberation Room Method.
- 20 c. C518, Standard Test Method for Steady-State Thermal Transmission Properties by
- 21 Means of the Heat Flow Meter Apparatus.
- 22 d. C578, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- 23 e. C665, Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light
- 24 Frame Construction and Manufactured Housing.
- 25 f. D1621, Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
- 26 g. E96, Standard Test Methods for Water Vapor Transmission of Materials.
- 27 2. Underwriters Laboratories, Inc. (UL):
- 28 a. Building Materials Directory.

29 **1.3 SUBMITTALS**

- 30 A. Shop Drawings:
- 31 1. See Specification Section 01340 for requirements for the mechanics and administration of
- 32 the submittal process.
- 33 2. Product technical data including:
- 34 a. Acknowledgement that products submitted meet requirements of standards referenced.
- 35 b. Manufacturer's installation instructions.
- 36 c. Manufacturer's recommendations on sealants, tapes and mastics.
- 37 B. Informational Submittals:
- 38 1. See Specification Section 01340 for requirements for the mechanics and administration of
- 39 the submittal process.
- 40 2. Certification from insulation manufacturer stating that insulation proposed is acceptable for
- 41 intended use per the Drawings.

42 **PART 2 - PRODUCTS**

43 **2.1 ACCEPTABLE MANUFACTURERS**

- 44 A. Subject to compliance with the Contract Documents, the following manufacturers are
- 45 acceptable:

- 1 1. Rigid extruded polystyrene board insulation:
 - 2 a. Dow.
 - 3 b. Diversifoam Products.
 - 4 c. Owens Corning.
 - 5 2. Foamed plastic insulation:
 - 6 a. Poly Master, Inc.
 - 7 b. The Icynene Insulation System.
 - 8 c. Insta-Foam Products.
- 9 B. Submit request for substitution in accordance with Specification Section 01640.

10 2.2 MATERIALS

- 11 A. Rigid Polystyrene Board Insulation:
 - 12 1. Extruded: ASTM C578, Type IV.
 - 13 a. Water vapor transmission: ASTM E96, 1.1 perm-IN maximum.
 - 14 b. Water absorption: ASTM C272, 0.3 percent maximum.
 - 15 c. Thermal resistance: ASTM C518 at 75 DegF mean temperature, 5.0/IN.
 - 16 2. Provide insulation designed for intended use.
 - 17 a. Perimeter insulation and protection board.
 - 18 1) Similar to Dow "Styrofoam PERIMATE."
 - 19 2) Compressive strength: ASTM D1621, 30 psi.
 - 20 3) Thickness:
 - 21 a) Perimeter insulation: 1 IN.
 - 22 b) Protection board: 1 IN.
 - 23 4) Edges:
 - 24 a) Long edge: Shiplap.
 - 25 b) Short edge: Square.
 - 26 b. Rigid insulation above grade:
 - 27 1) Similar to Dow "CAVITYMATE Plus."
 - 28 2) Compressive strength: ASTM D1621, 25 psi.
 - 29 3) Thickness: As indicated on drawings
 - 30 4) Edges: Square.
- 31 B. Sealant and Mastic (for setting polystyrene and/or polyisocyanurate insulation board):

32 Manufacturer's recommended standard.
- 33 C. Foamed Plastic Insulation:
 - 34 1. Two component powdered resin and aqueous foaming agent.
 - 35 a. Formaldehyde free.
 - 36 2. Thermal conductivity (K-Factor): 0.216 (BTU/HR)/(SF)(DegF)/(IN), ASTM C518.
 - 37 3. Water vapor transmission: ASTM E96, maximum 6.631 perm IN.
 - 38 4. Contractor shall install foamed plastic insulation in all non-grouted cells of exterior CMU

39 walls and interior wall between conditioned and non-conditioned or semi-conditioned

40 spaces or as noted on the contract drawings.

41 PART 3 - EXECUTION

42 3.1 INSTALLATION

- 43 A. Install products in accordance with manufacturer's instructions.
- 44 B. General:
 - 45 1. Insulate full thickness over surfaces to be insulated.
 - 46 2. Fit tightly around obstructions, fill voids.
 - 47 3. Cover all penetrations (electrical junction boxes, switch boxes, piping, conduits, etc.) with

48 insulation, taking care not to compromise the workings of the device.
 - 49 4. Apply single or double layer to achieve total thickness.
 - 50 a. If double layer is provided, stagger all joints minimum 12 IN.

- 1 5. Do not use broken or torn pieces of insulation.
2 1. Install so that completed installation is vapor tight.
3 a. Seal all joints.
4 b. Seal to abutting materials to maintain vapor retarder integrity.
5 c. Provide manufacturer's recommended solvent-free sealant compatible with insulation
6 board for rigid board insulation.
7 1) Tape is not acceptable for use with rigid board insulation.
- 8 C. Rigid Insulation at Perimeter Below Grade and Under Slab:
9 1. Install insulation below grade on inside face of foundation walls.
10 a. Install in mastic with tight joints.
11 b. Install insulation horizontally under floor slabs.
12 2. Where footings are located below the design frost line, extend insulation down to the design
13 frost line.
14 a. Where indicated on the Drawings, extend beyond the design frost line.
15 3. Where footings are located at the design frost line, extend insulation down to top of footing
16 or as indicated on Drawings.
17 4. Protect insulation from damage and/or displacement during backfilling and/or pouring of
18 floor slab.
- 19 D. Foamed Plastic Insulation:
20 1. Install in all exterior wall concrete masonry block cores and where noted, in selected interior
21 wall concrete masonry block cores.
22 a. Not required in veneer cores.
23 b. Do not install in bond beams.
24 c. Do not install in cores to receive vertical reinforcing.
25 d. Do not install in cores noted to be grouted solid.
26 2. Install in accordance with manufacturer's recommendations.
27 3. Ensure that foam completely fills all cores to be insulated.

28 3.2 FIELD QUALITY CONTROL

- 29 A. Repair or replace damaged insulation as directed by Engineer.

30 **END OF SECTION**

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1 **SECTION 07534**

2 **ADHERED ELASTOMERIC (EPDM) SHEET ROOFING**

3 **PART 1 - GENERAL**

4 **1.1 SUMMARY**

- 5 A. Section Includes:
- 6 1. Adhered elastomeric roofing.
 - 7 2. Roof insulation.
 - 8 3. Vapor retarder.
- 9 B. Related Specification Sections include but are not necessarily limited to:
- 10 1. Division 00 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
 - 11 2. Division 01 - General Requirements.
 - 12 3. Section 06100 - Rough Carpentry.
 - 13 4. Section 07600 - Flashing and Sheet Metal.
 - 14 5. Section 16100 - Electrical: Basic Requirements.

15 **1.2 QUALITY ASSURANCE**

- 16 A. Referenced Standards:
- 17 1. ASTM International (ASTM):
 - 18 a. C578, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - 19 b. C642, Standard Test Method for Density, Absorption, and Voids in Hardened Concrete.
 - 20 c. D395, Standard Test Methods for Rubber Property - Compression Set.
 - 21 d. D573, Standard Test Method for Rubber - Deterioration in an Air Oven.
 - 22 e. D746, Standard Test Method for Brittleness Temperature of Plastics and Elastomers by
23 Impact.
 - 24 f. D4637, Standard Specification for EPDM Sheet Used in Single-Ply Roof Membrane.
 - 25 g. D6294, Standard Test Method for Corrosion Resistance of Ferrous Metal Fastener
26 Assemblies Used in Roofing and Waterproofing.
 - 27 h. E96, Standard Test Methods for Water Vapor Transmission of Materials.
 - 28 2. FM Global (FM):
 - 29 a. Approval Guide:
 - 30 1) 1-28, Design Wind Loads.
 - 31 2) Fire Resistance Ratings of Building Materials.
 - 32 b. 4470, Approval Standard for Single-Ply, Polymer-Modified Bitumen Sheet, Built-Up
33 Roof (BUR) and Liquid Applied Roof Assemblies for use in Class 1 and
34 Noncombustible Roof Deck Construction.
 - 35 3. Underwriters Laboratories, Inc. (UL):
 - 36 a. Building Materials Directory.
- 37 B. Qualifications:
- 38 1. Applicator factory trained and approved in writing by roofing manufacturer.
 - 39 2. Applicator shall have a minimum of 10 years experience installing roof membrane systems
40 similar to system specified.
 - 41 a. Minimum of five (5) years of the 10 years experience shall have been spent installing
42 roof systems manufactured by the company proposed for use.

43 **1.3 DEFINITIONS**

- 44 A. Installer or Applicator:
- 45 1. Installer or applicator is the person actually installing or applying the product in the field at
46 the Project site.
 - 47 2. Installer and applicator are synonymous.

1 **1.4 SUBMITTALS**

2 A. Shop Drawings:

- 3 1. See Specification Section 01340 for requirements for the mechanics and administration of
4 the submittal process.
- 5 2. Fabrication and/or layout drawings:
- 6 a. Scaled outline of roof showing slopes, walkway pad layout, edge details, penetrations
7 and details, and any special condition not covered on the Drawings.
- 8 1) Minimum plan scale: 1/8 IN = 1 FT.
9 2) Minimum detail scale: 1-1/2 IN = 1 FT.
- 10 b. Provide tapered insulation shop drawings illustrating installation patterns and
11 dimensions for each tapered module.
- 12 3. Product technical data including:
- 13 a. Acknowledgement that products submitted meet requirements of standards referenced.
14 b. Manufacturer's installation instructions.
15 c. Product data sheet on all components of roof system.

16 B. Maintenance Information:

- 17 1. See Specification Section 01340 for requirements for the mechanics and administration of
18 the submittal process.

19 C. Informational Submittals:

- 20 1. See Specification Section 01340 for requirements for the mechanics and administration of
21 the submittal process.
- 22 2. Certifications Prior to Installation:
- 23 a. Certification of applicator qualifications.
24 b. Certificates showing testing agency approval of assembly for ratings indicated.
25 c. Letter from roofing manufacturer and insulation manufacturer stating that roof
26 insulation being used is compatible with roofing system and will perform properly for
27 intended use.
28 d. Letter from mechanical fastener manufacturer stating that fasteners being used are
29 compatible with roofing system and will perform properly for intended use.
30 e. Letter from roofing manufacturer and insulation manufacturer stating that treated wood
31 specified is compatible with roofing system and is acceptable for intended use.
32 f. Letter from adhesive manufacturer and insulation manufacture stating that adhesive
33 being used is compatible with roof insulation and will perform properly for intended
34 use.
- 35 3. Certifications for final closeout:
- 36 a. Certification by roofing manufacturer's representative that roof has been installed
37 properly.
38 b. Warranty.

39 **1.5 WARRANTY**

- 40 A. Manufacturer's 10 year labor and materials watertight warranty signed by roofing material's
41 manufacturer and applicator.
- 42 1. Warranty to cover all materials provided by roofing manufacturer.
43 2. Warranty to include provision to allow Owner to make emergency repairs.

44 **PART 2 - PRODUCTS**

45 **2.1 ACCEPTABLE MANUFACTURERS**

- 46 A. Subject to compliance with the Contract Documents, the following manufacturers are
47 acceptable:
- 48 1. Roofing system:
- 49 a. Carlisle SynTec Systems.
50 b. Firestone Building Products Co.

- 1 c. Johns Mannville.
- 2 2. Vapor retarder:
- 3 a. Carlisle SynTec Systems.
- 4 b. Firestone Building Products Co.
- 5 c. Johns Mannville.
- 6 3. Adhesive:
- 7 a. As recommended by roofing manufacturer and approved by insulation manufacturer.
- 8 4. Polystyrene insulation:
- 9 a. Carlisle SynTec.
- 10 b. Dow Building Solutions.
- 11 c. Owens Corning.
- 12 5. Polyisocyanurate insulation:
- 13 a. Atlas Roofing Corporation.
- 14 b. Carlisle SynTec.
- 15 c. Firestone Building Products Company.
- 16 d. Hunter Panels.
- 17 e. Johns Manville.
- 18 f. RMAX, Inc.
- 19 6. Other materials:
- 20 a. Manufacturers as noted.

21 B. Submit request for substitution in accordance with Specification Section 01640.

22 **2.2 DESIGN CRITERIA**

- 23 A. Roof Assembly Design Criteria:
- 24 1. Fire resistance:
- 25 a. UL Class A roof covering.
- 26 2. Hail and wind uplift resistance:
- 27 a. FM 1-28: Class 1-90.
- 28 B. Roofing System: Fire rated fleece back single-ply rubber membrane (EPDM) fully adhered over
- 29 insulation, over sheathing, over vapor retarder.

30 **2.3 SYSTEM COMPONENTS**

- 31 A. Use only materials approved by roofing materials manufacturer.
- 32 B. Roofing Membrane:
- 33 1. EPDM rubber sheet with non-woven polyester fleece backing.
- 34 2. 0.060 IN thick.
- 35 3. Color: White.
- 36 4. ASTM D4637.
- 37 5. Fire rated.
- 38 C. Roof Insulation:
- 39 1. Extruded polystyrene.
- 40 a. ASTM C578, Type IV.
- 41 b. Provide insulation with appropriate facers to accept membrane adhesive.
- 42 2. Compressive Strength: 25 psi minimum.
- 43 3. Density: 1.6 pcf minimum.
- 44 4. Water Vapor permeance: 1.1 perm-IN max.
- 45 5. Water absorption: 0.3 percent maximum.
- 46 6. Thermal resistance (R value at 75 DegF): 5.0 per inch.
- 47 7. Approved by roofing manufacturer.
- 48 8. Thickness: { Minimum 3 IN.
- 49 9. Taper to provide slope of 1/2 IN per foot or as noted on the Drawings.
- 50 10. Roof crickets: Tapered insulation sloped to provide minimum 3/4 IN per foot slope.
- 51 D. Vapor Retarder:

- 1 1. Maximum perm rating: 0.10 gms H2O/100 SQ IN/24 HRS, ASTM E96, Procedure A.
- 2 a. Fire rated with fire rated adhesive as recommended by manufacturer.
- 3 2. Acceptable to roof membrane manufacturer and insulation manufacturer.
- 4 3. Compatible with adhesives being used.
- 5 E. Sheathing: Minimum 1/2 IN thick fire-rated material approved by the roofing manufacturer, UL
- 6 and FM.
- 7 F. Flashing: 0.060 IN thick EPDM.
- 8 G. Wood Blocking and Nailers: See Specification Section 06100.
- 9 H. Adhesives, Tapes, Cements and Sealants: Roofing manufacturer's standard.
- 10 I. Provide all miscellaneous accessories as required.
- 11 J. Fasteners:
- 12 1. Ferrous components:
- 13 a. Test in accordance with ASTM D6294.
- 14 b. Meet or exceed FM 4470.
- 15 2. Provide stainless steel for all exposed fasteners.

16 **2.4 ACCESSORIES**

- 17 A. Use manufacturer's standard prefab rubber accessories where available.
- 18 1. Nailing strips: As detailed and required by manufacturer.
- 19 2. Pipe flashings: Provide for each pipe penetration; include all clamps and adhesive.
- 20 3. Pipe, duct and conduit supports:
- 21 a. 100 percent recycled rubber.
- 22 1) Density: ASTM C642, minimum 0.50 OZ/cubic IN.
- 23 2) Compressive deformation:
- 24 a) ASTM D395.
- 25 b) 5 percent at 70 psi and 72 DegF.
- 26 3) Brittleness at low temperature: ASTM D746, -50 DegF.
- 27 4) Weathering: ASTM D573, 70 HRS at 120 DegF.
- 28 b. Uniform load capacity: 500 LB per lineal FT.
- 29 c. Size:
- 30 1) Width: 6 IN.
- 31 2) Length and height as necessary for item being supported.
- 32 d. Compatible with modular framing.
- 33 e. Provide modular framing, pipe supports, pipe clamps or other accessories as necessary
- 34 for items being supported.
- 35 f. Similar to Cooper B-Line "DURA-BLOK."

36 **2.5 MAINTENANCE MATERIALS**

- 37 A. Provide Owner with patch repair kit containing as a minimum.
- 38 1. Lap sealant.
- 39 2. Piece of roofing membrane 2 x 2 FT.
- 40 3. Adhesive and primer.
- 41 B. Instruct Owner's personnel on making emergency patch and repairs to roof.
- 42 C. Owner to notify roofing manufacturer within three (3) working days if emergency repairs are
- 43 made by Owner personnel.

44 **PART 3 - EXECUTION**

45 **3.1 INSTALLATION**

- 46 A. Install products in accordance with manufacturer's instructions.

- 1 B. Provide wood nailers and blocking as necessary for a complete installation.
- 2 C. Installation of Vapor Retarder:
- 3 1. Install vapor retarder over decking, using adhesive recommended by roofing manufacturer.
- 4 a. Extend up face of parapet wall to top of insulation.
- 5 2. Lap side joints 4 IN, lap ends 6 IN and seal all laps with adhesive.,
- 6 3. Repair all damage and tears in accordance with vapor retarder manufacturer's
- 7 recommendations.
- 8 D. Installation of Sheathing:
- 9 1. Lay sheathing tightly butted and cut to fit around all penetrations.
- 10 2. Attach sheathing to deck using mechanical fasteners in accordance with manufacturer and
- 11 FM recommendations.
- 12 3. Calk around all penetrations with sealant acceptable to sheathing, roof membrane, and
- 13 insulation manufacturer.
- 14 E. Provide roofing manufacturer's recommended sleeper at all duct support structures, condensing
- 15 units or similar equipment.
- 16 1. Fasten sleeper to deck as necessary to resist uplift.
- 17 2. Flash sleeper to roof membrane as recommended by roofing manufacturer.
- 18 F. Installation of Insulation:
- 19 1. Cut insulation neatly to fit around all roof penetrations and projections.
- 20 2. Butt joints tightly.
- 21 3. Attach insulation using mechanical fasteners in accordance with manufacturer's
- 22 recommendations for uplift rating required.
- 23 4. Provide tapered insulation where shown or required.
- 24 5. Provide cricket behind all roof penetrations larger than 12 IN.
- 25 G. Installation of Roofing:
- 26 1. Install roofing using adhesive recommended by roofing manufacturer.
- 27 2. Seal seams with lap sealant same day they are laid.
- 28 a. Extend roofing or flashing up face of parapet, over top of wood blocking and down face
- 29 of wall to bottom of wood blocking:
- 30 1) Provide in one (1) piece with no horizontal joints.
- 31 3. Install flashing at all vertical surfaces, roof interruptions and penetrations.
- 32 a. Flash all roof penetrations in accordance with roofing manufacturer's standard details.

33 **3.2 FIELD QUALITY CONTROL**

- 34 A. Provide services of manufacturer's field service representative as required.
- 35 B. Protect installed insulation from water using water cut-offs in bad weather and at end of work
- 36 period.
- C. Remove and replace wet insulation and sheathing.

38 **END OF SECTION**

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SECTION 07600
FLASHING AND SHEET METAL

3 **PART 1 - GENERAL**

4 **1.1 SUMMARY**

- 5 A. Section Includes:
- 6 1. Architectural flashing and sheet metal work.
 - 7 2. Factory formed fascia and coping system(s).
 - 8 3. Prefinished gutters and downspouts.
- 9 B. Related Specification Sections include but are not necessarily limited to:
- 10 1. Division 00 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
 - 11 2. Division 01 - General Requirements.
 - 12 3. Section 07534- Adhered Elastomeric (EPDM) Sheet Roofing.
 - 13 4. Section 07600 - Joint Sealants.

14 **1.2 QUALITY ASSURANCE**

- 15 A. Referenced Standards:
- 16 1. American Architectural Manufacturers Association (AAMA):
 - 17 a. 2605, Voluntary Specification, Performance Requirements and Test Procedures for
 - 18 Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
 - 19 2. American National Standards Institute/Single Ply Roofing Industry (ANSI/SPRI):
 - 20 a. ES-1, Wind Design Standard for Edge Systems Used with Low Slope Roof Systems.
 - 21 3. ASTM International (ASTM):
 - 22 a. A653, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron
 - 23 Alloy Coated (Galvannealed) by the Hot-Dip Process.
 - 24 b. A666, Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel
 - 25 Sheet, Strip, Plate, and Flat Bar.
 - 26 c. B32, Standard Specification for Solder Metal.
 - 27 d. B209, Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 28 4. FM Global (FM).
 - 29 5. Sheet Metal and Air Conditioning Contractors' National Association (SMACNA):
 - 30 a. Architectural Sheet Metal Manual, Seventh Edition, 2012.
- 31 B. Qualifications:
- 32 1. Sheet metal fabricator shall have minimum 10 years experience in fabrication of sheet metal
 - 33 items similar to items specified.
 - 34 2. Sheet metal installer shall have minimum five (5) years experience installing sheet metal
 - 35 items specified.

36 **1.3 DEFINITIONS**

- 37 A. Installer or Applicator:
- 38 1. Installer or applicator is the person actually installing or applying the product in the field at
 - 39 the Project site.
 - 40 2. Installer and applicator are synonymous.
- 41 B. PVDF: Polyvinylidene fluoride.

42 **1.4 SUBMITTALS**

- 43 A. Shop Drawings:
- 44 1. See Specification Section 01340 for requirements for the mechanics and administration of
 - 45 the submittal process.
 - 46 2. Product technical data including:
 - 47 a. Acknowledgement that products submitted meet requirements of standards referenced.

- 1 b. Manufacturer's installation instructions.
- 2 3. Fabrication and/or layout drawings.
- 3 a. Scaled drawing showing expansion joint locations, special conditions, profile, fastening
- 4 and jointing details.
- 5 1) Minimum plan scale: 1/8 IN = 1 FT.
- 6 2) Minimum detail scale: 1-1/2 IN = 1 FT.
- 7 4. Fabricator qualifications.
- 8 5. Installer qualifications.
- 9 B. Samples:
- 10 1. Finish and color samples for each product specified for Engineer preliminary color
- 11 selection.
- 12 2. For final color selection, provide two (2) 2 IN x 3 IN colored metal samples for each color
- 13 selected during the preliminary color selection.
- 14 C. Informational Submittals:
- 15 1. See Specification Section 01340 for requirements for the mechanics and administration of
- 16 the submittal process.
- 17 2. Warranty: Manufacturer's sample warranty language.

18 **PART 2 - PRODUCTS**

19 **2.1 ACCEPTABLE MANUFACTURERS**

- 20 A. Subject to compliance with the Contract Documents, the following manufacturers are
- 21 acceptable:
- 22 1. Pre-finished sheet metal:
- 23 a. Carlisle.
- 24 b. Firestone Building Products.
- 25 c. Petersen Aluminum Corp.
- 26 2. Factory-formed fascia system.
- 27 a. W.P. Hickman Co.
- 28 b. Metal Era, Inc.
- 29 3. Factory-formed coping system.
- 30 a. W.P. Hickman Co.
- 31 b. Metal Era, Inc.
- 32 4. Butyl sealant:
- 33 a. Pecora.
- 34 b. Sika.
- 35 c. Tremco.
- 36 B. Submit request for substitution in accordance with Specification Section 01640.

37 **2.2 MATERIALS**

- 38 A. Sheet Metal:
- 39 1. Aluminum: ASTM B209.
- 40 2. Galvanized Steel: ASTM A653.
- 41 3. Stainless Steel: ASTM A666.
- 42 a. Type 304.
- 43 B. Fasteners: Non-ferrous compatible with sheet metal.
- 44 C. Sealants:
- 45 1. Non-curing Butyl Sealant:
- 46 a. Pecora "BA-98".
- 47 b. Sika "SikaLastomer 511".
- 48 c. Tremco "TremPro JS-773".

- 1 2. Building sealants:
- 2 a. See Specification Section 07900.
- 3 D. Fasteners: Non-ferrous compatible with sheet metal.
- 4 E. Retainer Clips and Continuous Cleats: Galvanized steel or stainless steel.
- 5 F. Solder: ASTM B32.
- 6 G. Dissimilar Metal Protection: Comply with Specification Section 09905.

7 **2.3 MANUFACTURED ITEMS**

- 8 A. Factory Formed Fascia Systems:
 - 9 1. Formed fascia cover snap locked to extruded aluminum anchor bar.
 - 10 2. ANSI/SPRI ES-1 tested.
 - 11 3. FM Approved.
 - 12 4. Fascia cover:
 - 13 a. Aluminum.
 - 14 1) Thickness: 0.050 IN.
 - 15 5. Factory fabricated accessories, including but not limited to:
 - 16 a. Corners, end caps, end terminations.
 - 17 b. All accessories to be factory mitered and welded.
- 18 B. Factory Formed Coping System:
 - 19 1. Formed coping piece which locks to anchor plate fastened to top of wall.
 - 20 2. ANSI/SPRI ES-1 tested.
 - 21 3. FM approved.
 - 22 4. Coping cover:
 - 23 a. Aluminum.
 - 24 1) Thickness: 0.050 IN.
 - 25 5. Anchor plate: Galvanized steel, minimum 20 GA.
 - 26 6. Splice plates: Aluminum, minimum 0.032 IN.
 - 27 a. Continuous, minimum 6 IN long.
 - 28 b. Front and back legs with extruded butyl seal.
 - 29 c. Finish: Match coping.
 - 30 7. Factory fabricated accessories, including but not limited to:
 - 31 a. Corners, end caps, end terminations.
 - 32 b. All accessories to be factory mitered and welded.
- 33 C. Finish:
 - 34 1. PVDF coating with minimum 70 percent resin content.
 - 35 a. Meet requirements of AAMA 2605.
 - 36 1) Color: To be selected by the owner.

37 **2.4 FABRICATED ITEMS**

- 38 A. General:
 - 39 1. Shop fabricate items to maximum extent possible.
 - 40 a. Fabricate true and sharp to profiles and sizes indicated on Drawings.
 - 41 1) Shop fabricate and weld or solder all corners.
 - 42 2. Pre-finished aluminum:
 - 43 a. Thickness: Minimum 0.050 IN.
 - 44 b. Texture: Smooth.
 - 45 c. Coated on exposed face with PVDF coating having a minimum 70 percent resin content and a minimum 1.0 mil dry film thickness.
 - 46 1) Meet requirements of AAMA 2605.
 - 47 2) Color: Match coping and fascia.
- 49 B. Retainer Clips and Continuous Cleats:
 - 50 1. 0.050 IN stainless steel.

- 1 C. Gutters:
- 2 1. Style 'F' gutter per SMACNA Figure 1-2.
- 3 2. Size: 6 IN wide by 6IN high.
- 4 3. Seamless construction fabricated in longest practical lengths.
- 5 D. Downspouts:
- 6 1. Rectangular closed-face style similar to SMACNA Figure 1-32B.
- 7 a. Locate lock-seam on back face.
- 8 2. Fabricated in longest practical lengths.
- 9 3. Size: 4 IN x 4IN min.

10 PART 3 - EXECUTION

11 3.1 PREPARATION

- 12 A. Provide items to be built into other construction to Contractor in time to allow their installation.

13 3.2 INSTALLATION

- 14 A. Install products in accordance with manufacturer's instructions, SMACNA, and as indicated on
- 15 Drawings.
- 16 B. Weld aluminum to achieve weathertight joints and required details.
- 17 1. Do not weld slip joints.
- 18 2. Touch-up damaged prefinished items.
- 19 C. Set top edges of membrane flashing and sheet metal flashing into reglets wherever practicable.
- 20 1. Surface applied terminations will be allowed only where specifically detailed or otherwise
- 21 approved in writing by the Engineer.
- 22 2. Provide counterflashing at all reglets.
- 23 3. Seal reglets and counterflashings.
- 24 D. Fasten materials at intervals recommended by SMACNA.
- 25 E. Install slip joints to allow for thermal movement as recommended by SMACNA and
- 26 manufacturer.
- 27 1. Maximum spacing: 10 FT OC.
- 28 2. Provide slip joint 24 IN from corners.
- 29 3. Provide slip joint at each vertical expansion joint location in wall.
- 30 a. Provide break in continuous cleat at each vertical expansion joint.
- 31 b. The above expansion joints do not include brick veneer expansion joints.
- 32 F. Seal slip joints with two (2) beads of non-curing butyl sealant on each side of slip joint overlap.
- 33 G. Form flashings to provide spring action with exposed edges hemmed or folded to create tight
- 34 junctures.
- 35 H. Provide dissimilar metals and materials protection where dissimilar metals come in contact or
- 36 where sheet metal contacts mortar, concrete masonry or concrete.
- 37 I. Provide all miscellaneous sheet metal items not specifically covered elsewhere, as indicated or
- 38 required to provide a weathertight installation.
- 39 1. Provide all components necessary to create weather-tight junctures between roofing and
- 40 sheet metal work.
- 41 J. Installation of Gutters:
- 42 1. Install gutters using gutter straps in accordance with SMACNA Table 1-8 (built-in gutters)
- 43 and Figure 1-12 through 1-20 (hanging gutters).
- 44 a. Provide gutter brackets or hangers at 24 IN OC maximum.
- 45 b. Provide expansion joints in gutters per SMACNA Figure 1-5.
- 46 c. Install gutters to provide positive drainage to downspout locations.
- 47 d. Seal all joints in gutters to provide completely water tight system.

- 1 e. Provide 1/4 IN x 1/4 IN aluminum mesh debris screen continuous on top of gutter.
2 1) Screen shall be mounted in aluminum frame which will allow replacement of
3 screen without damage to gutter, screen or screen frame.
- 4 K. Installation of Downspouts:
5 1. Install downspouts in locations shown on the Drawings.
6 2. Provide downspout anchor straps per SMACNA Figure 1-35 as appropriate for downspout
7 style.
8 3. Provide gutter to downspout connection per SMACNA Figure 1-33B, Detail 1.
9 4. Seal all joints in downspout for a complete watertight system.
10 5. Angle bottom of downspout out away from building to direct discharge onto concrete
11 splashblock.
12 6. Anchor hanger straps to building wall with stainless steel screws and anchor sleeves
13 appropriate for wall construction.
14 a. Provide minimum of two (2) anchors per strap.
15 7. Maximum spacing of hanger straps shall be 10 FT with minimum of two (2) hanger straps
16 per vertical piece of downspout.
17 8. Spacing and location of hanger straps shall be consistent from downspout to downspout.

19

END OF SECTION

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1 **SECTION 08332**
2 **STEEL ROLLING OVERHEAD DOORS**

3 **PART 1 - GENERAL**

4 **1.1 SUMMARY**

- 5 A. Section Includes:
- 6 1. Steel rolling overhead doors.
 - 7 a. Motor operated.
 - 8 b. Insulated.
 - 9 B. Related Specification Sections include but are not necessarily limited to:
 - 10 1. Division 00 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
 - 11 2. Division 01 - General Requirements.

12 **1.2 QUALITY ASSURANCE**

- 13 A. Referenced Standards:
- 14 1. ASTM International (ASTM):
 - 15 a. A123/A123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron
 - 16 and Steel Products.
 - 17 b. A653, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron
 - 18 Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 19 c. E283, Standard Test Method for Determining the Rate of Air Leakage Through
 - 20 Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences
 - 21 Across the Specimen.
 - 22 2. National Electrical Manufacturers Association (NEMA):
 - 23 a. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).
- 24 B. Qualifications:
- 25 1. Installer to be licensed or approved in writing by door manufacturer.

26 **1.3 DEFINITIONS**

- 27 A. Installer or Applicator:
- 28 1. Installer or applicator is the person actually installing or applying the product in the field at
 - 29 the Project site.
 - 30 2. Installer and applicator are synonymous.

31 **1.4 SUBMITTALS**

- 32 A. Shop Drawings:
- 33 1. See Specification Section 01340 for requirements for the mechanics and administration of
 - 34 the submittal process.
 - 35 2. Product technical data including:
 - 36 a. Acknowledgement that products submitted meet requirements of standards referenced.
 - 37 b. Manufacturer's installation instructions.
 - 38 c. Manufacturer's standard color charts.
 - 39 3. Schedule of doors using same reference number for openings as indicated on Drawings.
 - 40 4. Motor operator and accessories technical data including complete wiring and control
 - 41 diagrams.
 - 42 5. Certifications:
 - 43 a. Certification of installer qualifications.
- 44 B. Samples:
- 45 1. Actual metal color samples of manufacturer's full line of colors available.
- 46 C. Contract Closeout Information:

- 1 1. Operation and Maintenance Data:
2 a. See Specification Section 01340 for requirements for the mechanics, administration,
3 and the content of Operation and Maintenance Manual submittals.
4 D. Informational Submittals:
5 1. See Specification Section 01340 for requirements for the mechanics and administration of
6 the submittal process.

7 **PART 2 - PRODUCTS**

8 **2.1 ACCEPTABLE MANUFACTURERS**

- 9 A. Subject to compliance with the Contract Documents, the following manufacturers are
10 acceptable:
11 1. Steel rolling overhead doors:
12 a. The Cookson Company.
13 b. Cornell Iron Works.
14 c. Wayne Dalton.
15 d. Overhead Door Corp.
16 e. Raynor.
17 B. Submit request for substitution in accordance with Specification Section 01640.

18 **2.2 MATERIALS**

- 19 A. Door Curtain and Hood: Galvanized steel, ASTM A653, G-60.
20 B. Insulation: Closed cell polyurethane foam.
21 1. CFC free.
22 C. Weatherproofing: Neoprene or vinyl.
23 D. Guides, Head Plates and Pipe Barrel: Galvanized steel, ASTM A123/A123M.
24 E. Fasteners: Same material as door construction.

25 **2.3 ACCESSORIES**

- 26 A. Motor Operator:
27 1. Minimum 1/2 HP, 208/1/60.
28 a. Motor shall be sized by door manufacturer for door size indicated on Drawings.
29 b.
30 c. Provide manufacturer's standard reversing controller with motor thermal protection if
31 motor is not internally protected.
32 2. Instant reversing with electric reversing safety edge and weather seal on bottom of door.
33 a. Provide complete wiring connections for instant reversing safety edge to motor operator
34 including all intermediate junction boxes, conduit, disconnects, wiring and low voltage
35 wiring.
36 3. Opening and closing rate: Between 2/3 and 1 FPS.
37 4. Standard oiltight three (3) pushbutton control(s).
38 a. NEMA 4X.

39 **2.4 FABRICATION**

- 40 A. Door Curtain:
41 1. Insulated flat profile with interlocking face sheets:
42 a. 2-5/8 IN high.
43 b. Exterior face: Minimum 22 GA.
44 c. Interior face: Minimum 24 GA.
45 d. Galvanized steel endlocks.
46 e. Core: Insulated.
47 2. Weather stripping:

- 1 a. Guide sealing adjustable weatherstripping at jambs and lintel (exterior doors only).
- 2 3. Bottom bar: Reversing electric safety edge with weatherseal.
- 3 4. Finish: Factory prime and finish coats.
- 4 a. Prime coat: Minimum 0.2 mil baked-on prime paint.
- 5 b. Finish coat: Minimum 0.6 mil baked-on polyester powder coat.
- 6 c. Color: To be selected by Owner from manufacturer's complete offering.
- 7 B. Hood:
- 8 1. Minimum 24 GA.
- 9 2. Provide full length air baffle weatherstripping at all exterior doors.
- 10 3. Finish: Match door curtain.
- 11 C. Guides:
- 12 1. Mounting:
- 13 a. Interior face of wall.
- 14 2. Manufacturer's standard structural angle guide system for size of door specified.
- 15 a. Cold-rolled guides are not acceptable.
- 16 b. Furnish wind locks.
- 17 3. Finish: Match door curtain.
- 18 D. Head Plates:
- 19 1. Galvanized Stainless steel plate mounted to guides.
- 20 2. Sized to support counter balance assembly, curtain{, motor operator} and hood.
- 21 3. Finish: Match door curtain.
- 22 E. Counterbalance Assembly:
- 23 1. Pipe barrel:
- 24 a. Galvanized steel pipe shaft.
- 25 b. Maximum deflection: 0.03 IN/FT.
- 26 2. Torsion springs:
- 27 a. Oil-tempered helical torsion springs on cast anchors.
- 28 b. 50,000 cycle.
- 29 3. Adjustable tension wheel.
- 30 F. Trim Pieces: Material and finish to match curtain.
- 31 G. Wind Load: 30 psf minimum.
- 32 H. Operation:
- 33 1. Motor operated with chain operator backup.
- 34 I. Insulated door system: Overhead Door Corp. "625" Series.

35 **2.5 SOURCE QUALITY CONTROL**

- 36 A. Air Infiltration: 1.98 CFM/SF of door when tested on a 10 FT x 10 FT door in accordance with
- 37 ASTM E283 with 25 mph wind load.

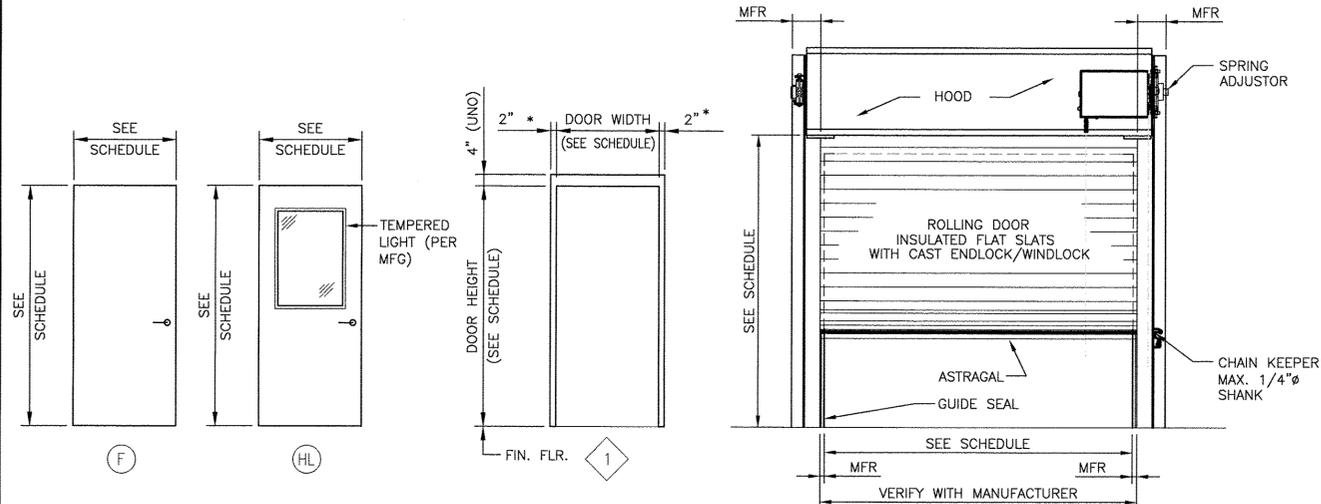
38 **PART 3 - EXECUTION**

39 **3.1 INSTALLATION**

- 40 A. Install products in accordance with manufacturer's instructions.
- 41 B. Installation shall be done by manufacturer's authorized representative.
- 42 C. Provide all required trim, weatherstripping, closures etc., for complete weather tight installation.
- 43 D. Adjust for proper counter balance.
- 44 E. Seal along bottom of vertical track (guides), seal the vertical joint between the two (2) separate
- 45 track angles (if not filled by welding) and seal all holes in vertical track (not being used for
- 46 fasteners) to provide a completely weather tight track and door system.

ROOM FINISH SCHEDULE										
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALLS				CEILING		REMARKS
				NORTH	EAST	SOUTH	WEST	HEIGHT	FINISH	
HOUSEHOLD HAZARDOUS MATERIALS FACILITY										
101	MATERIAL RECEIVING/STORAGE	C	N	MLP	MLP	MLP	MLP	-	ESP	
102	OFFICE	C	N	CMU	CMU	CMU	MLP	8'-0"	ESP	
SCALEHOUSE										
201	VESTIBULE	VCT	RV	CMU	CMU	CMU	CMU	9'-0"	ACT	
202	RESTROOM	VCT	RV	CMU	CMU	CMU	CMU	9'-0"	GYP	
203	SCALE ROOM	VCT	RV	CMU	CMU	CMU	CMU	9'-0"	ACT	
FLOOR	BASE	WALLS				CEILING				
C	SEALED CONCRETE	N	NONE	CMU	CONCRETE MASONRY - PAINTED		ES	EXPOSED STRUCTURE		
VCT	VINYL COMPOSITE TILE	RV	RESILIENT VINYL	MLP	PRE-ENGINEER BLDG- METAL WALL PANEL		ESP	EXPOSED STRUCTURE, PAINTED		

DOOR SCHEDULE												
DOOR NUMBER	SIZE (W x H)	DOOR			FRAME			HARDWARE SET	FIRE RATING	DETAIL	REMARKS	
		TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH					
HOUSEHOLD HAZARDOUS MATERIALS FACILITY												
101A	3'-0"x7'-0"	HL	B	E	1	B	E	HW-1	-	3,4	PER PEMB MFR	
101B	8'-0"x8'-0"	RO	C	G	-	C	E	-	-	5,6		
101C	8'-0"x8'-0"	RO	C	G	-	C	E	-	-	5,6		
102A	3'-0"x7'-0"	HL	B	E	1	B	E	HW-1	-	3,4	PER PEMB MFR	
SCALEHOUSE												
201A	3'-0"x7'-0"	HL	B	E	1	B	E	HW-2	-	1, 2		
202A	3'-0"x7'-0"	F	B	E	1	B	E	HW-4	-	1, 2		
203A	3'-0"x7'-0"	HL	B	E	1	B	E	HW-3	-	1, 2		
MATERIAL	FINISH											
A	ALUMINUM	E				EPOXY PAINT						
B	HOLLOW METAL - GALVANIZED	F				FACTORY FINISHED- MATCH EXISTING						
C	STEEL - GALVANIZED	G				FACTORY FINISHED PVDF COATING						

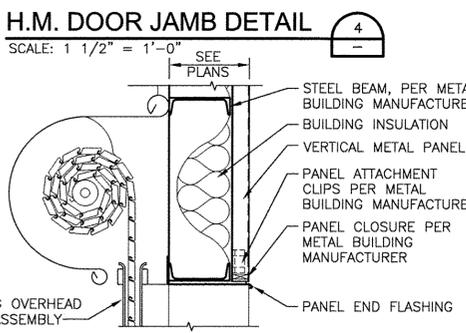
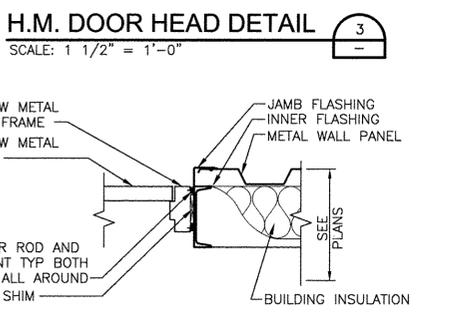
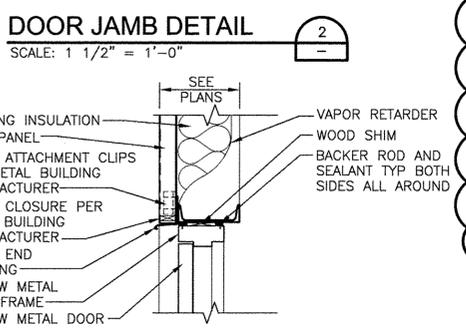
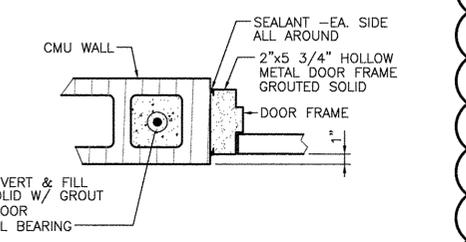
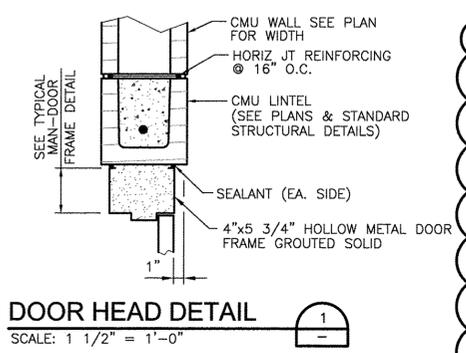


DOOR TYPES

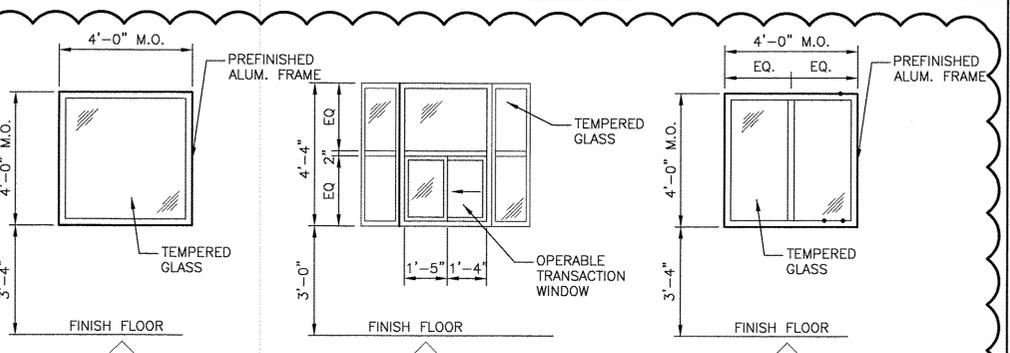
FRAME TYPES

OVERHEAD ROLLING DOOR

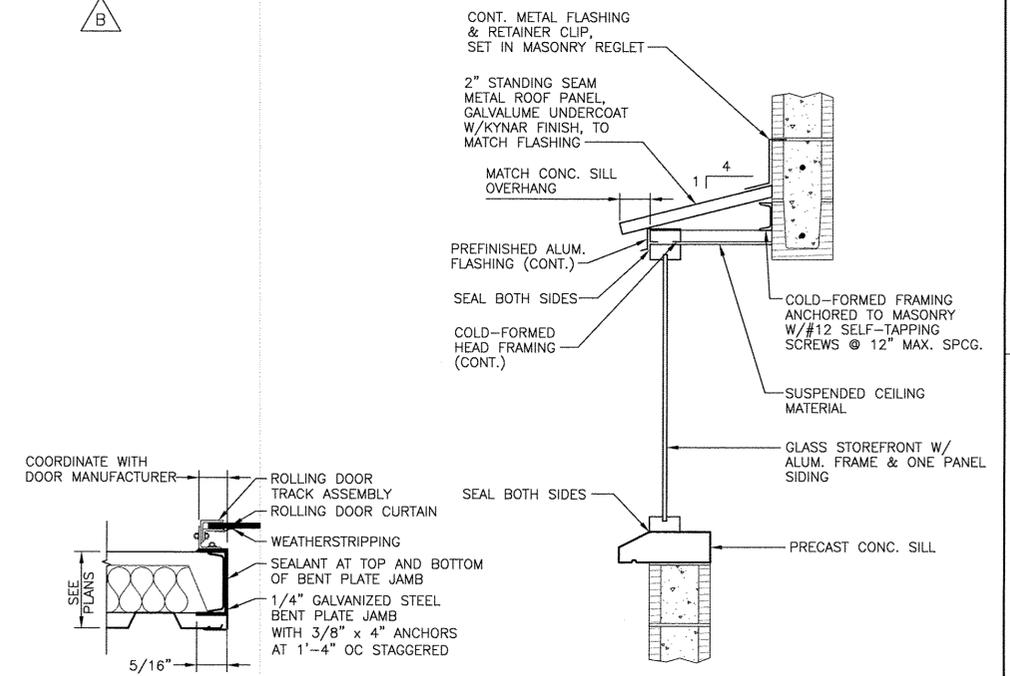
(* INDICATES DIMENSION TO BE VERIFIED PRIOR TO CONSTRUCTION.)



ROLLING OVERHEAD DOOR HEAD
 SCALE: 1 1/2" = 1'-0"



WINDOW TYPES
 NOT TO SCALE



ROLLING OVERHEAD DOOR JAMB
 SCALE: 1 1/2" = 1'-0"

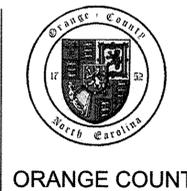
SECTION A
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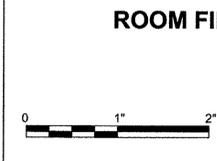
HDR Engineering, Inc. of the Carolinas
 N.C.B.E.L.S. License Number: F-0116
 555 Fayetteville Street, Suite 900
 Raleigh, NC 27601
 919.232.6657

ISSUE	DATE	DESCRIPTION
B	01/13/16	ADDENDUM #1
A	12/2015	ISSUED FOR BID

PROJECT MANAGER	E. SHUFFLER, PE
PROJECT ENGINEER	T. YANOSCHAK, PE
STRUCTURAL	
PLUMBING	
ELECTRICAL	
DRAWN BY	
PROJECT NUMBER	



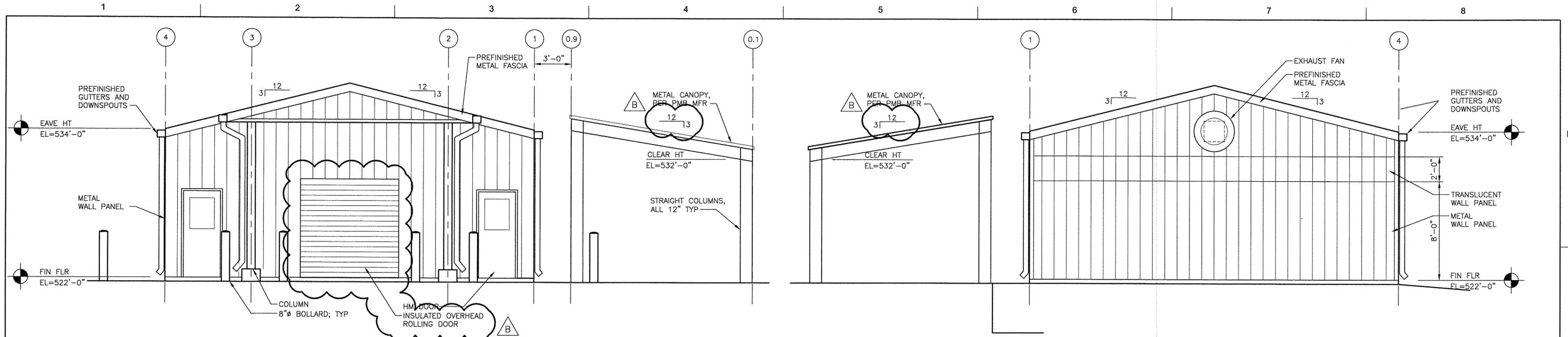
Orange County
 Construction Drawings
 for Eubanks Road
 Convenience Center Expansion
 NORTH CAROLINA



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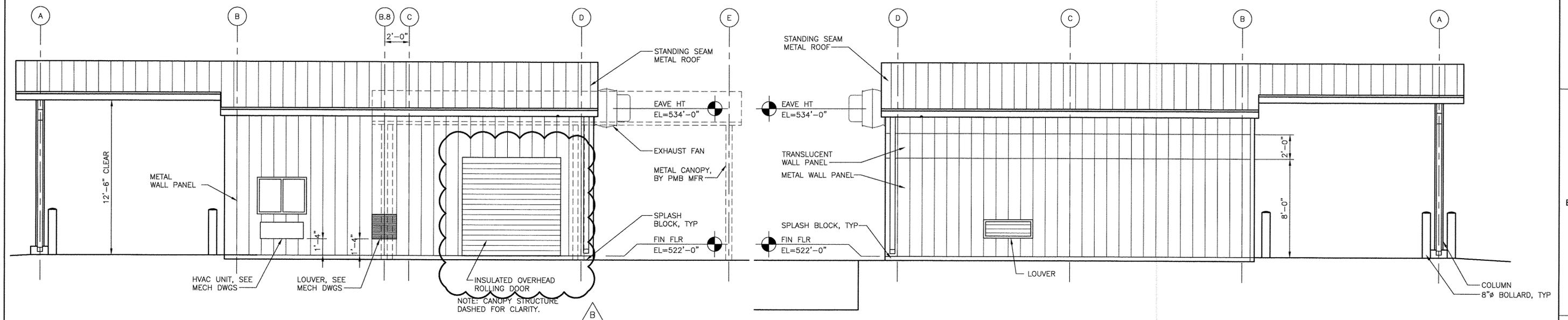
SHEET
00A-01

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NORTH ELEVATION
1/4"=1'-0" 01A-01

SOUTH ELEVATION
1/4"=1'-0" 01A-01



WEST ELEVATION
1/4"=1'-0" 01A-01

EAST ELEVATION
1/4"=1'-0" 01A-01

NOTE:
BASE ELEVATION 100'-0" = SITE ELEVATION 522.0



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STRUCTURAL	
PLUMBING	
ELECTRICAL	
DRAWN BY	G. HUNEYCUTT
PROJECT NUMBER	350207-142839-018



ORANGE COUNTY

Orange County
Construction Drawings
for Eubanks Road
Convenience Center Expansion

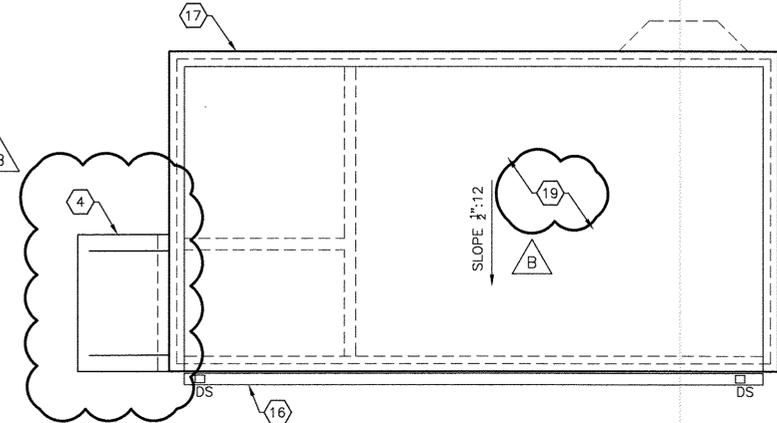
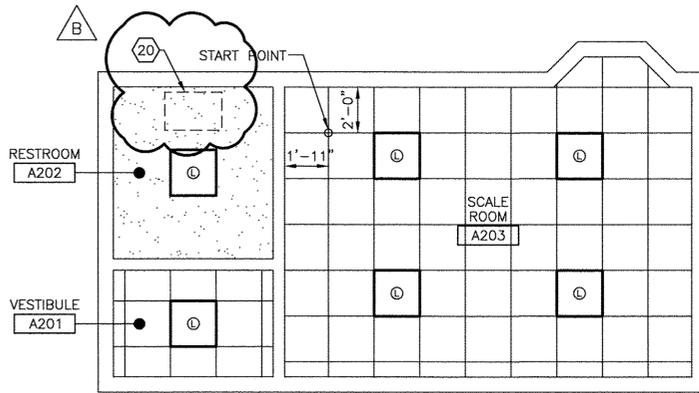
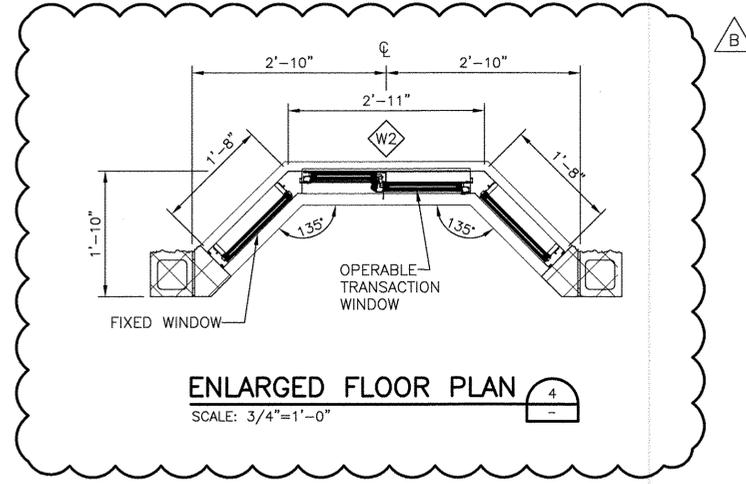
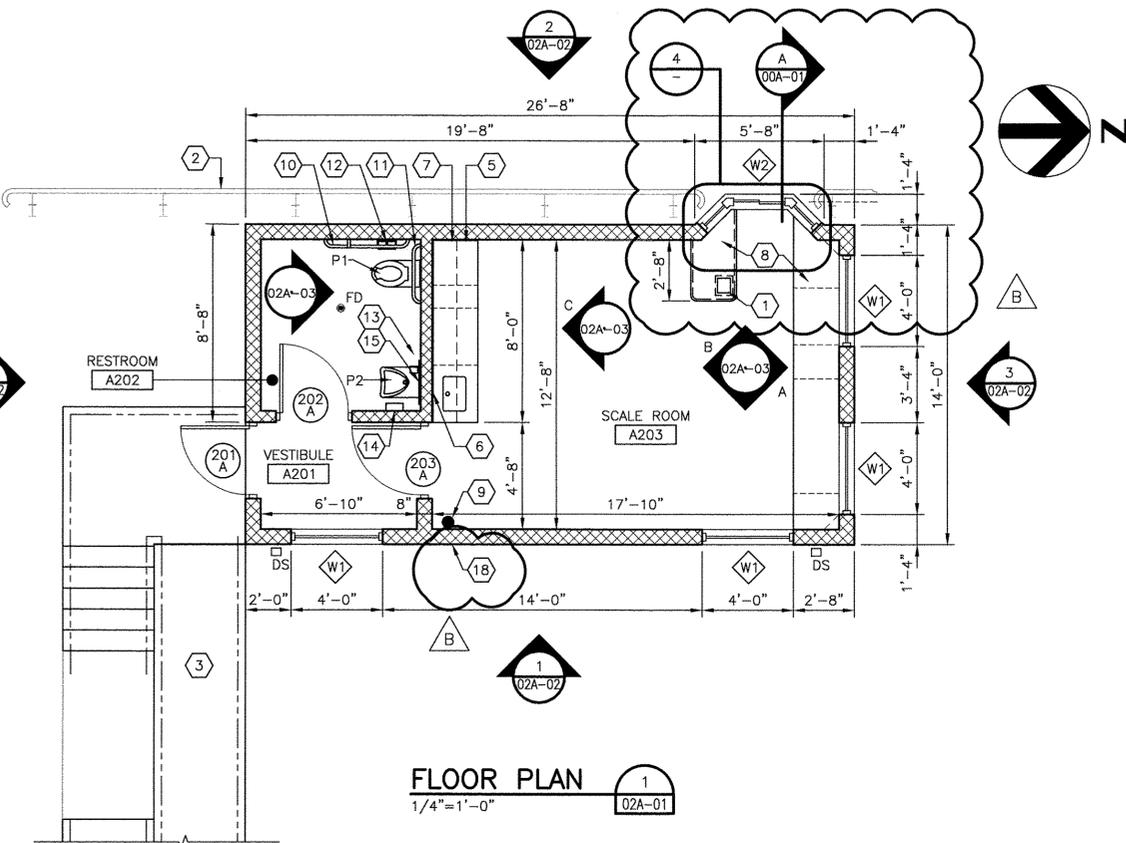
NORTH CAROLINA



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SCALE | AS SHOWN

SHEET
01A-02

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GENERAL NOTES:
1. SEE SHEET ODA-01 FOR DOOR AND ROOM FINISH SCHEDULE AND DETAILS.
2. SEE STRUCTURAL SHEETS FOR DOOR AND WINDOW OPENING SIZES AND LOCATIONS.

- KEYNOTES:**
- 1 UNDERCOUNTER CASH DRAWER WITH KEYLOCK
 - 2 STANDARD ROADWAY GUARDRAIL (SEE CIVIL DRAWINGS AND STANDARD DETAILS)
 - 3 HANDICAP RAMP (SEE STRUCTURAL DRAWINGS)
 - 4 PREFABRICATED CANOPY OVER PERSONNEL DOOR. FINISH TO BE SAME AS WINDOW FRAMES. FLASH TO WALL AND DRAIN PER MANUFACTURER'S RECOMMENDATIONS TO PROVIDE WEATHERTIGHT INSTALLATION. CHILDERS MODEL EB-16, OR APPROVED EQUAL
 - 5 COUNTER W/ CABINETS AND SINK. PROVIDE AN OPEN LOWER CABINET SECTION FOR INSTALLATION OF AN UNDERCOUNTER REFRIGERATOR PROVIDED BY OWNER. VERIFY REFRIGERATOR DIMENSIONS WITH OWNER PRIOR TO FABRICATION.
 - 6 PROVIDE OUTLETS FOR APPLIANCES ABOVE AND UNDER COUNTER.
 - 7 OVERHEAD CABINETS
 - 8 COUNTERTOP
 - 9 WALL MOUNTED FIRE EXTINGUISHER
 - 10 GRAB BAR X 4' LONG
 - 11 GRAB BAR X 3' LONG
 - 12 TTD
 - 13 LSD
 - 14 PTD
 - 15 MIRROR
 - 16 DOWNSPOUT AND GUTTER
 - 17 PARAPET
 - 18 SPLIT-FACE CMU. FILL ALL NON-GROUTED CELLS WITH FOAMED PLASTIC INSULATION
 - 19 SINGLE PLY EPDM ROOFING SYSTEM W/ TAPERED INSULATION SLOPE TO GUTTER. MIN 3" INSULATION.
 - 20 20"x30" CEILING ACCESS HATCH BY BILCO OR APPROVED EQUAL W/ FINISH TO MATCH CEILING.

- LEGEND:**
- 8" SPLIT-FACED CMU WALL
 - 2' X 2' LIGHT FIXTURE (SEE ELECTRICAL SHEETS)
 - 2' X 2' SUSPENDED CEILING TILES
 - GYPSUM CEILING, PAINTED

NOTE: CENTER CEILING GRIDS IN ROOM AS SHOWN, UNLESS OTHERWISE NOTED.

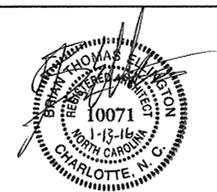
NOTE: SEE MECHANICAL AND ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.



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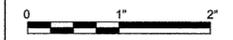
PROJECT MANAGER	E. SHUFFLER, P.E.
PROJECT ENGINEER	T. YANOSCHAK, PE
STRUCTURAL	
PLUMBING	
ELECTRICAL	
DRAWN BY	G. HUNEYCUTT
PROJECT NUMBER	350207-142839-018



ORANGE COUNTY

Orange County
Construction Drawings
for Eubanks Road
Convenience Center Expansion

NORTH CAROLINA



FILENAME: ODA-01.dwg
SCALE: 1/4" = 1'-0"

SHEET
02A-01

**SCALE HOUSE
FLOOR PLAN, RCP AND ROOF PLAN**

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GUIDELINES FOR RECRUITMENT AND SELECTION OF MINORITY BUSINESSES

These guidelines were adapted for use on this project by the County of Orange from the “Guidelines for Recruitment and Selection of Minority Businesses for Participation in State Construction Office Projects”, developed by the State Construction Office.

In accordance with G.S. 143-128.2 (SB 914 ratified December 6, 2001), the County of Orange has enacted a verifiable ten percent (10%) minority business participation goal for the total monetary value of this project. These guidelines are published to accomplish that end.

SECTION 1: INTENT

It is the intent of these guidelines that the County of Orange, as awarding authority for construction projects, and the contractors and subcontractors performing the construction contracts awarded shall cooperate and in good faith do all things legal, proper and reasonable to achieve the statutory goal of ten percent for participation by minority businesses in each construction project permitted by SB 914. Nothing contained in these guidelines shall be considered to require awarding authorities to award contracts or to make purchase of materials or equipment from minority-business contractors who do not submit the lowest responsible bid or bids.

SECTION 2: DEFINITIONS

1. Minority - a person who is a citizen or lawful permanent resident of the United States and who is:
 - a. Black, that is, a person having origins in any of the black racial groups in Africa;
 - b. Hispanic, that is, a person of Spanish or Portuguese culture with origins in Mexico, South or Central America, or the Caribbean Islands, regardless of race;
 - c. Asian American, that is, a person having origins in any of the original peoples of the Far East, Southeast Asia and Asia, the Indian subcontinent, the Pacific Islands;
 - d. American Indian or Alaskan Native, that is , a person having origins in any of the original peoples of North America;
 - e. Female.
 - f. “Socially disadvantaged individual”, as defined in 15 U.S.C. 637. These are individuals who have “been subjected to racial or ethnic prejudice or cultural bias because of their identify as a member of a group without regard to their individual qualities”; or
 - g. “Economically disadvantaged individual” as defined in 15 U.S.C. 637. This is an individual “whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business who are not socially disadvantaged.”
2. Minority Business - means a business:
 - a. In which at least fifty-one percent (51%) is owned by one or more minority persons, or in the case of a corporation, in which at least fifty-one percent (51%) of the stock is owned by one or more minority persons; and

- b. Of which the management and daily business operations are controlled by one or more of the minority persons who own it.
- 3. Owner - The County of Orange.
- 4. Bidder - Any person, firm, partnership, corporation, association, or joint venture seeking to be awarded a public contract or subcontract.
- 5. Contract - A mutually binding legal relationship or any modification thereof obligating the seller to furnish equipment, material or services, including construction, and obligating the buyer to pay for them.
- 6. Contractor - Any person, firm, partnership, corporation, association, or joint venture which has contracted with the County of Orange to perform construction work or repair.
- 7. Subcontractor - A firm under contract with the Prime Contractor for supplying materials or labor and materials and/or installation. The subcontractor may or may not provide materials in his subcontract. Work subcontracted in an emergency and which could not have been anticipated is excluded as a part of this program.
- 8. Verifiable goal means that the awarding authority has adopted written guidelines specifying the actions that the prime contractor must take to ensure a good faith effort in the recruitment and selection of minority businesses for participation in contracts awarded; the required actions must be documented in writing by the contractor to the appropriate awarding authority.

SECTION 3: RESPONSIBILITIES

- 1. Minority Business Program of the County of Orange (hereafter referred to a Minority Business Program).

The Minority Business Program will establish a program pursuant to which it shall certify to interested persons, businesses qualifying as Minority Business Enterprises (MBE). The information solicited from the applicant will be used by the Minority Business Program to:

- a. Determine MBE certification, i.e., that those certified are MBEs under GS 143-128 as a contractor and/or subcontractor.
- b. Identify those areas of work for which there are certified MBEs, as requested.
- c. Provide interested parties with a list of prospective certified MBE contractors and subcontractors.
- d. Assist in the determination of technical assistance in the certification program that needs to be provided.

In addition to being responsible for the certification of those small and emerging businesses that want to participate, the Minority Business Program will:

- 1. Maintain a current list of certified MBEs of those certified. The list furnished shall include the areas of work in which each MBE is interested.
- 2. Work with the North Carolina Association of Minority Businesses, the Carolinas Branch AGC, the Carolina Electrical Contractors Association and the North Carolina Association of Plumbing-Heating-Cooling Contractors in developing and implementing a certification program intended to improve the ability of MBE's to compete in this program.

- 2. Owner

The owner will:

- a. Attend the scheduled prebid conference.
- b. Identify or determine those work areas of a contract where MBEs may have an interest in performing contract work.
- c. At least ten (10) days prior to the scheduled day of bid opening, the Owner will notify certified MBEs of potential contracting opportunities listed in the proposal. The notification will include the following:
 1. A description of the work for which the bid is being solicited.
 2. The date, time and location where bids are to be submitted.
 3. The name of the individual within the agency/institution who will be available to answer questions about the project.
 4. Where bid documents may be reviewed.
 5. Any special requirements that may exist, such as insurance, licenses, bonds and financial arrangements.

If there are more than three (3) certified MBEs in the general locality of the project who offer similar contracting or subcontracting services in the specific trade, the Owner shall notify three (3) , but may contact more, if the Owner so desires.

- d. Maintain documentation of any contacts, correspondence, or conversations with MBE firms made in an attempt to meet the goals.

2. Prime Contractor

Under the single prime contract system, the prime contractor will:

- a. Attend the scheduled prebid conference.
- b. Identify or determine those work areas of a contract where MBEs may have an interest in performing contract work.
- c. At least ten (10) days prior to the scheduled day of bid opening, notify certified MBEs of potential contracting opportunities listed in the proposal. The notification will include the following:
 1. A description of the work for which the bid is being solicited.
 2. The date, time and location where bids are to be submitted.
 3. The name of the individual within the agency/institution who will be available to answer questions about the project.
 4. Where bid documents may be reviewed.
 5. Any special requirements that may exist, such as insurance, licenses, bonds and financial arrangements.

If there are more than three (3) certified MBEs in the general locality of the project who offer similar contracting or subcontracting services in the specific trade, the Contractor shall notify three (3) , but may contact more, if the Contractor so desires.

- d. During the bidding process, comply with the contractor(s) requirements listed in the proposal for minority participation.
- e. Submit with the bid a description of that portion of the work to be executed by MBEs expressed as a percentage of the total price.
- f. Identify the MBEs the bidder intends to use on the contract, along with the dollar amount of the work to be performed by each minority business.
- g. Submit an affidavit that details the good faith efforts taken to procure minority business participation.
- h. Upon being named the apparent low bidder, the bidder shall provide the necessary

documentation as listed in the contract documents. Failure to comply with procedural requirements as defined in contract documents may render that bid as non-responsive and may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

- i. Upon being named apparent low bidder, the bidder shall provide an affidavit that lists the proportion of the work to be performed by MBEs. If the MBEs do not account for ten percent (10%) of the contract price, the bidder must submit an affidavit that verifies the bidder's good faith efforts by certifying that it has undertaken at least five of the following ten (10) steps:
 1. Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contract or available on these State or local government-maintained lists at least ten (10) days before the bid or proposal date and notifying them of the nature and scope of the work to be performed.
 2. Made the construction plans, specifications, and requirements available for review by prospective minority businesses, or providing these documents to them at least ten (10) days before the bid proposals are due.
 3. Broke down or combined elements of work into economically feasible units to facilitate minority participation.
 4. Worked with minority trade, community, or contractor organizations identified by the Office of Historical Underutilized Businesses and included in the bid documents that provided assistance in recruitment of minority businesses.
 5. Attended any prebid meetings scheduled by the public owner.
 6. Provided assistance in getting required bonding or insurance or providing alternatives to bonding or insurance for subcontractors.
 7. Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualifications should have the reasons documented in writing.
 8. Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help the minority businesses in establishing credit.
 9. Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
 10. Provide quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.
 - j. During the construction of the project, if it becomes necessary to replace an MBE subcontractor, advise the owner of the circumstances involved.
 - k. If, during the construction of a project, additional subcontracting opportunities become available, make a good faith effort to solicit subbids from MBEs.
3. MBE Responsibilities

While MBEs are not required to become certified in order to participate in this program, it is recommended that they become certified and should take advantage of the appropriate technical assistance that is made available. In addition, MBEs who are contacted by owners or bidders must respond promptly whether or not they wish to submit a bid.

SECTION 4: DISPUTE PROCEDURES

It is the policy of this County that disputes between an agency and another person that involve a person's rights, duties, or privileges should be settled through informal procedures. To that end, MBE disputes arising under these guidelines should be resolved, if possible, by informal proceedings arranged by the Owner.

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State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- 1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- 6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

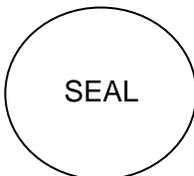
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

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State of North Carolina --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____

(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____ contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

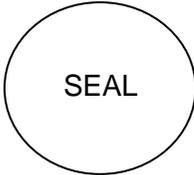
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

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State of North Carolina - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.
 This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the _____
 (Name of Bidder)

_____ (Project Name)
 Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

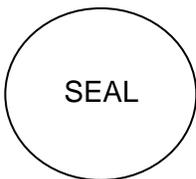
*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



Signature: _____

Title: _____

State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

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State of North Carolina AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

Project ID# _____ (Project Name) Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

Contractor's Safety Record Information

The Contractor's safety record shall be reviewed and evaluated in addition to other quality and performance criteria as part of bid evaluation process. Failure to provide the requested information and documentation may result in rejection of your bid as non-responsive.

Accordingly, all bidders must submit the following information regarding their safety record.

The following definitions shall apply to this section:

"DART incident rate" – Acronym for "Days Away, Restrictions and Transfers". The DART incident rate may be used to show the relative level of injuries and illnesses within a firm compared to the industry. It is based only on those injuries and illnesses severe enough to warrant "Days Away, Restrictions and Transfers". The DART incident rate is calculated using OSHA's Form 300 and the following formula:

$$\frac{((\text{Number of entries in column H (days away from work)} + \text{column I (job transfer or restriction)}) \times 200,000) / (\text{Number of hours worked by all employees})}{= \text{DART Incident rate.}}$$

"EMR" – Acronym for "Experience Modification Rate," is an indicator of a contractor's past safety performance, widely used by the insurance industry as an equitable means of determining premiums for workers' compensation insurance. The rating system considers the average workers' compensation losses for a given firm's type of work and amount of payroll and predicts the dollar amount of expected losses to be paid by that employer in a designated rating period, usually three years. The rating is based on comparison of firms doing similar types of work, and the employer is rated against the average expected performance in each work classification. Losses incurred by the employer for the rating period are then compared to the expected losses to develop an experience rating.

"OSHA" – Acronym for the Federal Occupational Health and Safety Administration. The term "OSHA" as used in this Policy also refers to any state or local agency having jurisdictional authorization to enforce worker safety requirements and assess fines or warnings for violation of worker safety standards.

1. OSHA DART Incident Rate. Provide the bidder's DART Incident Rate calculated from OSHA's Form 300 for the last three years and the other required information shown in the example table below. *The bidder must attach all supporting documentation and calculations including certified OSHA forms.*

YEAR	CONTRACTOR DART INCIDENT RATE	INDUSTRY DART INCIDENT RATE	INDUSTRY FIELD AND CODE

2. Experience Modification Rate (EMR). Provide the bidder's most recent Experience Modification Rate (EMR) based on insurance claims history. *The bidder must provide the source of the EMR information and contact information of insurer entity providing the EMR.*

YEAR	CONTRACTOR EMR	INDUSTRY FIELD AND CODE	NAME AND CONTACT INFO FOR EMR INFORMATION

3. Answer the following OSHA Specific Questions:

(a) Within the last 2 years, has the bidder received any citations classified by OSHA as being (1) serious, (2) willful and/or (3) repeat violations where your company operates?

Yes _____ No _____

If yes, attach a copy of each such citation and violation.

(b) Has the bidder experienced any work-related fatalities within the last five years?

Yes _____ No _____

(c) Has the bidder had any citations issued by OSHA as a result of work related fatalities within the past 5 years?

Yes _____ No _____

(d) Is the bidder under investigation for any work-related fatalities?

Yes _____ No _____

(e) If your answer is “yes” to 3(b), (c) or (d), provide a copy of the citation(s), list of number(s) of fatalities and documented explanation of the fatality.

4. Safety Plan:

(a) Does the company have a written safety program that includes responsibility for all aspects of safety management?

Yes _____ No _____

(b) Does the company have a written plan for safety training of new employees and ongoing training of existing employees?

Yes _____ No _____

(c) Does the company have documented evidence of safety training that they have conducted?

Yes _____ No _____

(d) If the company has employees with limited English ability, does the company have a written plan for ensuring that their employees understand the training they are being given?

Yes _____ No _____

(e) Do all supervisors have an appropriate documented level of OSHA training (e.g., a minimum of 30 hour OSHA construction safety training)?

Yes _____ No _____

(f) Do employees have documented basic OSHA 10 hour construction safety training?

Yes _____ No _____

(g) Does the company have a documented Hazard Communication Program?

Yes _____ No _____

5. Required Written Explanation of Safety Record. If the bidder has any of the following: (a) DART incident rate greater than its industry average, (b) an EMR greater than 1.0, (c) answered “yes” to any of the OSHA Specific Question above, or (d) answered “no” to any of the Safety Plan questions, the bidder shall provide the County, in its bid, a detailed written explanation of its safety record and the reasons why such safety history is NOT representative of its future performance and what specific actions it has taken to improve its overall safety record. Failure to provide a written explanation of its safety record pursuant to this paragraph may be deemed as non-responsive by the County.