

Missouri
Department
of Transportation



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March 30, 2009

Addendum No. 001

9-090410A

To: Plans and Specifications Holders List for: Missouri Department of Transportation –
District 5, Covered Concrete Wash Pad,
Chamois, Missouri

The bid opening date/time is hereby changed to: **April 14, 2009 at 3:00 PM** local time.

Time for Completion is hereby changed to **25 working days**.

Guided work site visits are scheduled for **April 7 and 9, 2009 at 9:00 AM** local time.

In the Specifications:

Division 1:

**DELETE ORIGINAL SECTION 01500 AND REPLACE IT WITH ATTACHED
SECTION 01500 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

Division 7:

ADD ATTACHED SECTION 07612 – SHEET METAL ROOFING

**DELETE ORIGINAL SECTION 07900 AND REPLACE IT WITH ATTACHED
SECTION 07900 – JOINT SEALERS**

**SECTION 01500
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities: Electricity, telephone service, facsimile service and sanitary facilities.
- B. Temporary Controls: enclosures and fencing, protection of the Work and water control.
- C. Construction Facilities: progress cleaning and temporary buildings.

1.2 TEMPORARY ELECTRICITY

- A. Cost: By Contractor; pay for temporary power service furnished by MoDOT.

1.3 TEMPORARY WATER SERVICE

- A. Connect to existing water source as directed for construction operations at time of project mobilization.
- B. Contractor will reimburse Owner for water used in construction as agreed upon at time of project mobilization.

1.4 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.

1.5 WATER CONTROL

- A. Grade site to drain. Maintain excavations free of water. Provide, operate and maintain pumping equipment.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

1.6 EXTERIOR ENCLOSURES

- A. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.7 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

1.8 SECURITY

- A. Provide security and facilities to protect Work and existing facilities and Owner's operations from unauthorized entry, vandalism or theft.
- B. Coordinate with Owner's security program.

1.9 ACCESS ROADS

- A. Provide and maintain access to fire hydrants, free of obstructions.
- B. Provide means of removing mud from vehicle wheels before entering streets.
- C. Designated existing on-site roads may be used for construction traffic.

1.10 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris and rubbish from site periodically and dispose off-site.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.11 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities and materials prior to Final Application for Payment inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

**SECTION 07612
SHEET METAL ROOFING**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Pre-finished steel sheet roofing, associated flashings and underlayment.
- B. Counter flashings.
- C. Integral gutters and downspouts.
- D. Snow guards.
- E. Integral fascias.

1.2 RELATED SECTIONS

- A. Section 07620 - Sheet Metal Flashing and Trim.
- B. Section 07631 - Gutters and Downspouts.
- C. Section 07900 - Joint Sealers.

1.3 REFERENCES

- A. AAMA 603.8 - Voluntary Performance Requirements and Test Procedures for Pigmented Organic Coatings on Extruded Aluminum.
- B. AAMA 605.2 - Specification for High Performance Organic Coatings on Architectural Extrusions and Panels.
- C. ASTM A526/A526M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.

1.4 SUBMITTALS FOR REVIEW

- A. Section 01300 - Submittals: Procedures for submittals.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations and installation details.
- C. Product Data: Provide data on metal types, finishes and characteristics.

1.5 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements, except as otherwise noted.
- B. Fabricator and Installer Qualifications: Company specializing in sheet metal roof installations with minimum four years experience.

1.6 DELIVERY, STORAGE, AND PROTECTION

- A. Section 01600 - Material and Equipment: Transport, handle, store, and protect.
- B. Stack material to prevent twisting, bending or abrasion and to provide ventilation. Slope metal sheets to ensure drainage.
- C. Prevent contact with materials that may cause discoloration or staining.

1.7 WARRANTY

- A. Section 01700 - Contract Closeout. 01740 - Warranties.

PART 2 PRODUCTS

2.1 SHEET MATERIALS

- A. Metal panels are GALVALUME™ (Max Rib Ultra) 80,000#/SI minimum yield strength structural grade sheet steel. The paint process is a Kynar 500/Hylar 5000 Fluoropon paint system. Utilizing the full strength 70% PVDF (fluoropolymer) resin and durable ceramic pigmentation. Panels shall be fastened with nails or screws, which are compatible to the panels in both life expectancy and environmental stability. All panels will be one piece unless lengths greater than 40 feet are required or the panels must be shortened to accommodate certain building features. (GALVALUME™) is a trademark of the Bethlehem Steel Corporation. Kynar 500 is a registered trademark of Elf Atochem North America, Inc. Hylar 5000 is a trademark of Ausimont USA, Inc. Fluoropon is a registered trademark of the Valspar Corporation. Roofing & Siding color to match existing Pole Barn Building.

2.2 ACCESSORIES

- A. Fasteners: The steel panels shall be fastened to building framing by plated steel sharp point screws with zinc/aluminum/cast nonferrous alloy hex washer heads pre-assembled with aluminum bond seal washers, which cannot red rust and are compatible with steel panel. Woodzac by Construction Fasteners, Inc., or equal are acceptable.
- B. Underlayment: (2 layers) ASTM D226, organic roofing felt.
- C. Snow Guards: Equal to SnowBlox, SnoBar by Action Manufacturing, LLC, Engle, CO Ph: (800) 711-9724.
1. Design Requirements: Continuous linear roof snow retention system along front of building should have a minimum performance of 500# per lineal foot of bar without deflection. Connection must be used at every roof seam.
 2. Bar: 16 ga. galvanized steel with Polane Plus Enamel. Bar color to match metal roof or as selected by Architect.
 3. Connection: Stainless steel U- Bracket with stainless steel screws.
 4. Substrate Below Roof Panel: 2-Ply purlin at eave attachment line or double stagger line.
 5. Quality Assurance: 5-years
- D. Warranty:
1. Max-Rib Steel Panels:
 - a. 30 Years against Crack, Peel, Blister or Flake of Paint Coating
 - b. 40 Years against Chalk in Excess of 8 Per ASTM D-4214 Method D659
 - c. 40 Years against Change of Color in Excess of 5 per ASTM D-2244
- E. Trim and Flashing: 0.0158-inch min. thickness steel on gables, ridge, corners, base with same paint finish as roofing panels.
- F. Closure Strips: 1" wide closed-cell linked expanded polyurethane, to match panel corrugation
- G. Continuous Vented Steel Soffit Panels: 0.0158-inch min. thickness steel on gables, ridge, corners, base with same paint finish as roofing panels
1. Performance Requirements:
 - a. Soffits shall be fabricated and installed to withstand positive and negative wind pressure loads in accordance with applicable codes.
 - b. Soffit system to accommodate without damage to components or failure of weather barrier movement caused by seasonal temperature cycling and deflection of structural support framing.
 - c. Moisture entering or condensation occurring within soffit system shall drain to exterior.
 2. Trim:
 - a. Provide trim pieces as detailed on manufacturer's installation manual and as required for complete, weathertight, functional installation.
 - b. Steel Trim: Fabricate from same material as soffit to shape, dimensions, and profile required to accommodate soffit panel and project conditions. Provide with channels to receive panels, flanges for concealed weathertight attachment, and slotted attachment holes. Color shall match or coordinate with soffit color. In order to eliminate or minimize visible joints, form in longest possible lengths with 10 feet being minimum.
 1. J-channel: ½ inch wide channel to receive soffit panels with ½ inch attachment flange.
 2. Reverse Frieze Molding: F-shaped piece with ½ inch wide channel to receive soffit panels.
Soffit T-Bar: Double channel to receive two soffit panels with exposed face.

2.3 FABRICATION

- A. Form sections true to shape, accurate in size, square and free from distortion or defects.
- B. Fabricate cleats of same material as sheet, minimum 3 inches wide, interlockable with sheet.
- C. Fabricate starter strips of same material as sheet, intermittent to minimum 3 inches wide, interlockable with sheet.
- D. Form pieces in longest practical lengths.
- E. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- F. Form material with standing seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- G. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
- H. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.
- I. Fabricate flashings to allow toe to extend 2 inches over roofing. Return and brake edges.
- J. Fabricate snow guards in accordance with SMACNA Plate.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Inspect roof deck to verify deck is clean and smooth, free of depressions, waves or projections, properly sloped to drains, valleys and/or eaves.
- B. Verify deck is dry and free of snow or ice.
- C. Verify correct placement of wood nailers [and insulation positioning between nailers.
- D. Verify roof openings, curbs, pipes, sleeves, ducts or vents through roof are solidly set, reglets are in place and nailing strips located.
- E. Verify roofing termination and base flashings are in place, sealed, and secure.

3.2 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Install surface mounted reglets true to lines and levels. Seal top of reglets with sealant.
- C. Back paint concealed metal surfaces and surfaces in contact with dissimilar metals with protective backing paint to a minimum dry film thickness of 15 mil.

3.3 INSTALLATION - FLASHINGS

- A. Conform to SMACNA details.
- B. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
- C. Cleat and seam all joints.
- D. Apply plastic cement compound between metal flashings and felt flashings.
- E. Fit flashings tight in place. Make corners square W/ surfaces true and straight in planes and lines accurate to profiles.
- F. Seal metal joints watertight.

3.4 PROTECTION OF FINISHED WORK

- A. Section 01700 - Contract Closeout: Protecting installed work.
- B. Do not permit traffic over unprotected roof surface.

END OF SECTION

**SECTION 07900
JOINT SEALERS**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Sealants and joint backing.
- B. Precompressed foam sealers.
- C. Hollow gaskets.

1.2 RELATED SECTIONS

- A. Section 07311: Sealants required in conjunction with waterproofing.
- B. Section 08800 - Glazing: Glazing sealants and accessories.
- C. Section 09260 - Gypsum Board Systems: Acoustic sealant.

1.3 REFERENCES

- A. ASTM C834 - Standard Specification for Latex Sealing Compounds.
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
- C. ASTM C1193 - Standard Guide for Use of Joint Sealants.
- D. ASTM D1056 - Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber.
- E. ASTM D1565 - Standard Specification for Flexible Cellular Materials - Vinyl Chloride Polymers and Copolymers (Open-Cell Foam).
- F. ASTM D1667 - Standard Specification for Flexible Cellular Materials - Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section and approved by manufacturer.

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.6 COORDINATION

- A. Section 01039 - Coordination and Meetings: Coordination requirements.
- B. Coordinate the work with all sections referencing this section.

1.7 WARRANTY

- A. Section 01700 - Warranties.
- B. Correct defective work within a five-year period after Date of Substantial Completion.
- C. Warranty: Include coverage for installed sealants and accessories which fail to achieve airtight seal and exhibit loss of adhesion or cohesion or do not cure.

1.8 SEALANTS

- A. Type I - Exterior Expansion Joint Sealer: Precompressed foam sealer; urethane with water-repellent:
 - 1. Face color: Gray.
 - 2. Size as required providing watertight seal when installed.
 - 3. Provide product recommended by manufacturer for traffic-bearing use.
 - 4. Applications: Use for:
 - a. Exterior wall expansion joints
 - b. Paving surface joints
 - c. Set in floor components
- B. Type II - Exterior Metal Lap Joint Sealant: Butyl or polyisobutylene, non-drying, non-skinning, non-curing.
 - 1. Applications: Use for:
 - a. Concealed sealant bead in sheet metal work.
 - b. Concealed sealant bead in siding overlaps.
- C. Type III - Interior Floor Joint Sealant: Polyurethane, self-leveling; ASTM C920, Grade P, Class 25, Uses T, M and A; single or multi-component.
 - 1. Approved by manufacturer for wide joints up to 1-1/2 inches.
 - 2. Standard colors matching finished surfaces.
 - 3. Applications: Use for:
 - a. Expansion joints in floors.
- D. Type IV - Concrete Paving Joint Sealant: Polyurethane, self-leveling; ASTM C920, Class 25, Uses T, M and A; single or multi-] component.
 - 1. Gray color.
 - 2. Applications: Use for:
 - a. Joints in sidewalks and vehicular paving.

PART 2 PRODUCTS

2.2 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: Round foam rod compatible with sealant; ASTM D1056, sponge or expanded rubber; oversized 30 to 50 percent larger than joint width.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that substrate surfaces and joint openings are ready to receive work.
- B. Verify that joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

- A. Remove loose materials and foreign matter that might impair adhesion of sealant.
- B. Clean and prime joints in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Protect elements surrounding the work of this section from damage or disfiguration.

3.3 INSTALLATION

- A. Perform installation in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- D. Install bond breaker where joint backing is not used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges and sags.
- F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- G. Tool joints concave.
- H. Precompressed Foam Sealant: Do not stretch; avoid joints except at corners, ends, and intersections; install with face 1/8 to 1/4 inch below adjoining surface.
- I. Compression Gaskets: Avoid joints except at ends, corners, and intersections; seal all joints with adhesive; install with face 1/8 to 1/4 inch below adjoining surface.

3.4 CLEANING

- A. Clean adjacent soiled surfaces.

3.5 PROTECTION OF FINISHED WORK

- A. Protect sealants until cured.

END OF SECTION