



ADDENDUM NO. 2

TO THE CONTRACT DOCUMENTS FOR

WELL NO. 6

PROJECT NO. 17022.00

LEEDS, ALABAMA

JANUARY 2018

PREPARED BY:



INSITE
ENGINEERING

InSite Engineering, LLC
5800 FELDSPAR WAY
HOOVER, ALABAMA 35244
PHONE: 205-733-9696
FAX: 205-733-9697



Copyright 2017

This page intentionally left blank.

ADDENDUM NO. 2

OWNER: LEEDS WATER WORKS BOARD
PROJECT: WELL NO. 6
PROJECT NUMBER: 17022.00

The Contractor shall incorporate the following changes into the Contract Documents and include the cost of all changes listed herein in his proposed contract prices. **The Contractor must acknowledge receipt of this Addendum on Page 1 of the Bid Form.** The above referenced Contract Documents are hereby amended as described below:

Changes to Specifications:

- A2.1 Add Section 074110 **METAL ROOF, WALL, & SOFFIT PANELS (ADDENDUM NO. 2)**
- A2.2 Add Section 079200 **JOINT SEALANTS (ADDENDUM NO. 2)**
- A2.3 Section 048100 **UNIT MASONRY ASSEMBLIES:** Under Paragraph 2.2.D, add 4. The color of the CMU shall be as selected by the Owner from the manufacturers full range of Standard Colors.

Changes to Drawings

- A2.4 Sheet DT-3 **MISCELLANEOUS DETAILS:** Remove Detail 1, Safety Shower Eye Wash.

Other Clarifications

The following questions have been asked during the bid period:

- Q1: The plans call for a metal roof over the building. Specification 053100 is for a roof deck, but not actual roofing. Are you looking for a standing seam roof or for a ribbed screw down panel?

A standing seam roof is required and is outlined in the attached Specification Section 074110.

- Q2. What warranty is required for the roof?

See attached Specification Section 074110, Article 1.5.

ADDENDUM NO. 2
LEEDS WATER WORKS BOARD
WELL NO. 6
JANUARY 15, 2018
Page 2 of 2

Q3. Is the split face CMU to be colored, painted, or just sealed?

The CMU shall be colored. The color shall be selected from the manufacturers full range of standard colors.

Q4. What is specified for the building ceiling? Painted plywood?

The building ceiling shall be painted plywood.

Q5. What material do you want at the gable ends above the CMU, or is the CMU to extend up?

The gable ends above the CMU shall be metal panels.

Q6. Most of the plans and specs reference wood trusses, however Sheet 22 (SD-1) references light gauge steel trusses. Are wood trusses acceptable?

Wood trusses are acceptable.

Q7. Where is the eyewash/shower to be located? There is a standard detail on sheet 27.

A safety eyewash/shower is not required.

Q8. What is the estimate for this job?

\$850,000

The above changes shall be incorporated into the Contract Documents for the above referenced project. The bidder must acknowledge receipt of this Addendum on Page 1 of the Bid Form.

Additional Attachments

Section 074110 **METAL ROOF, WALL, & SOFFIT PANELS (ADDENDUM NO. 2)**

Section 079200 **JOINT SEALANTS (ADDENDUM NO. 2)**

END OF ADDENDUM NO. 2

SECTION 074110 – METAL ROOF, WALL & SOFFIT PANELS (ADDENDUM No. 2)

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Standing-seam metal roof and wall panels.
 2. Metal soffit panels.

1.2 PERFORMANCE REQUIREMENTS

- A. Hydrostatic-Head Resistance: No water penetration when tested according to ASTM E 2140.
- B. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.
1. Uplift Rating: UL 90.
- C. FMG Listing: Provide metal roof panels and component materials that comply with requirements in FMG 4471 as part of a panel roofing system and that are listed in FMG's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FMG markings.
1. Fire/Windstorm Classification: Class 1A-105.
 2. Hail Resistance: SH.
- D. Structural Performance: Provide metal roof panel assemblies capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, based on testing according to ASTM E 1592 and in compliance with 2006 IBC:
1. Wind Loads: Determine loads based on the following minimum design wind pressures:
 - a. Basic wind speed (3-second gust): 100 mph
 - b. Exposure Category: B (Surface Roughness B)
 - c. Occupancy Category (Importance Category): III
 2. Live/Snow Loads: 20 lbf/sq. ft.
 3. Deflection Limits: Metal roof panel assemblies shall withstand wind and snow loads with vertical deflections no greater than 1/180 of the span.
- E. Roof panel and flashing attachments shall be designed to accommodate the thermal expansion and contraction of the exterior material through a total of 120 degrees F temperature change.
- F. The installation shall be designed to safely resist positive and negative loads in accordance with ASCE 7 and 2006 IBC.

- G. Roof panels shall be able to support walking loads without excessive distortion or telegraphing of the structural supports. For the maximum span used on the project, panels shall withstand a 250 lb. concentrated load applied to a four square inch pad located at the center of the panel flat without buckling of the rib or noticeable permanent distortion of the panel.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication and installation layouts of metal roof panels; details of edge conditions, side-seam and endlap joints, panel profiles, corners, anchorages, trim, flashings, closures, and accessories; and special details. Distinguish between factory- and field-assembled work. Shop Drawings shall be sealed by a professional engineer registered in the State of Alabama.
- C. Samples: For each type of exposed finish required.
- D. Delegated-Design Submittal: For metal roof panel assembly indicated to comply with performance requirements and design criteria, including analysis data and calculations signed and sealed by the qualified professional engineer responsible for their preparation.
- E. Coordination Drawings: Roof plans, drawn to scale, based on input from installers of the items involved.
- F. Manufacturer Certificates: Signed by manufacturer certifying that roof panels comply with energy performance requirements specified in "Performance Requirements" Article.
 - 1. Submit evidence of meeting performance requirements.
- G. Product test reports.
- H. Field quality-control reports.
- I. Maintenance data.
- J. Warranties: Samples of special warranties.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by manufacturer.
- B. Pre-installation Conference: Conduct conference at Project site

1.5 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace metal roof panel assemblies that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Twenty years from date of Substantial Completion.
 2. No Wind Speed Exception: Weathertightness warranty shall not include any exceptions for wind speed (e.g. gale force winds) less than the 100 mph basic wind speed criteria specified herein under “structural performance: wind loads”.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal roof panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
1. Finish Warranty Period: 20 years from date of Substantial Completion.
- C. Standard manufacturer’s roofing guarantees or warranties which contain language regarding the governing of the guarantee/warranty by any state other than the State of Alabama must be amended to exclude such language, and substitute the requirement that the Laws of the State of Alabama shall govern all such guarantees.

PART 2 - PRODUCTS

2.1 PANEL MATERIALS

- A. Metallic-Coated Steel Sheet: Restricted flatness steel sheet metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
1. Recycled Content: Provide steel sheet with average recycled content such that postconsumer recycled content plus one-half of preconsumer recycled content is not less than 25 percent.
 2. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation; structural quality.
 3. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40; structural quality.
 4. Surface: Smooth, flat finish.
 5. Exposed Coil-Coated Finish:
 - a. 3-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat.
 6. Concealed Finish: Manufacturer's standard white or light-colored acrylic or polyester backer finish.
- B. Aluminum Sheet: Coil-coated sheet, ASTM B 209, alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.
1. Surface: Smooth, flat finish.
 2. Exposed Coil-Coated Finish:
 - a. 3-Coat Fluoropolymer: AAMA 620. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat.
 3. Concealed Finish: White or light-colored acrylic or polyester backer finish.
- C. Panel Sealants:

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing; 1/2 inch wide and 1/8 inch thick.
2. Joint Sealant: ASTM C 920; as recommended in writing by metal roof panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.2 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: 30 to 40 mils thick minimum, consisting of slip-resisting, polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
1. Thermal Stability: Stable after testing at 240 deg F; ASTM D 1970.
 2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F; ASTM D 1970.
 3. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Carlisle Coatings & Waterproofing Inc., Div. of Carlisle Companies Inc.; CCW WIP 300HT.
 - b. Grace Construction Products; a unit of Grace, W. R. & Co.; Ultra.
 - c. Henry Company; Blueskin PE200 HT.
 - d. Metal-Fab Manufacturing, LLC; MetShield.
 - e. Owens Corning; WeatherLock Metal High Temperature Underlayment.
- B. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.

2.3 MISCELLANEOUS METAL FRAMING

- A. Miscellaneous Metal Framing, General: ASTM C 645, cold-formed metallic-coated steel sheet, ASTM A 653/A 653M, G60 hot-dip galvanized or coating with equivalent corrosion resistance unless otherwise indicated.
- B. Hat-Shaped, Rigid Furring Channels:
1. Nominal Thickness: As required to meet performance requirements .
 2. Depth: As indicated
- C. Cold-Rolled Furring Channels: Minimum 1/2-inch-wide flange.
1. Nominal Thickness: As required to meet performance requirements .
 2. Depth: As indicated.
 3. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with nominal thickness of 0.040 inch.
 4. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch-diameter wire, or double strand of 0.048-inch-diameter wire.
- D. Z-Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches, wall attachment flange of 7/8 inch, and depth required to fit insulation thickness indicated.

1. Nominal Thickness: As required to meet performance requirements.

2.4 MISCELLANEOUS MATERIALS

- A. Panel Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide exposed fasteners with heads matching color of metal roof panels by means of plastic caps or factory-applied coating. Provide EPDM, PVC, or neoprene sealing washers.
- B. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.5 STANDING-SEAM METAL ROOF

- A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.
 1. Steel Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1514.
 2. Aluminum Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1637.
 3. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Architectural Metal Systems, a Nucor company
 - b. ATAS International, Inc.
 - c. Bigbee Steel Buildings, Inc.
 - d. Butler Manufacturing; a BlueScope Steel company.
 - e. Ceco Building Systems
 - f. CENTRIA Architectural Systems.
 - g. Englert, Inc.
 - h. Fabral.
 - i. IMETCO.
 - j. MBCI; a division of NCI Building Systems, L. P.
 - k. Merchant & Evans.
 - l. Metecno-Morin; Division of Metecno Inc.
 4. Profile: Vertical-rib, seamed -joint, as indicated on Drawings.
 5. Material: Zinc-coated (galvanized) steel sheet, 0.034-inch nominal thickness.
 - a. Exterior Finish: 3-coat fluoropolymer .
 - b. Color: As selected by Architect from manufacturer's full range.
 6. Clips: Floating to accommodate thermal movement.
 - a. Material: Stainless steel.
 7. Joint Type: As standard with manufacturer.
 8. Panel Coverage: 16".
 9. Panel Height: 2" minimum.

2.6 METAL WALL (OR “FASCIA”) PANELS

- A. General: Provide factory-formed metal wall panels designed to be installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners and factory-applied sealant in side laps. Include accessories required for weathertight installation.
1. Finish: As selected by Architect from manufacturer’s full range. Architect may select a different color from manufacturer’s full range for different areas (e.g. roof, soffit, wall panels) at no additional cost.
 2. Sealant: Factory-applied within interlocking joint
 3. Manufacturers: Refer to list of standing-seal metal roof panel manufacturers.
 4. Material: Same material and finish as metal roof panels.
 5. Profile: 3/4" Ribbed-Profile, Concealed-Fastner Metal Wall Panels: Formed with vertical panel edges and a flat pan between panel edges; with flush joint between panels.

2.7 METAL SOFFIT PANELS

- A. General: Provide factory-formed metal soffit panels designed to be installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners and factory-applied sealant in side laps. Include accessories required for weathertight installation.
- B. Metal Soffit Panels:
1. Finish: As selected by Architect from manufacturer’s full range. Architect may select a different color from manufacturer’s full range for different areas (e.g. roof, soffit, wall panels) at no additional cost.
 2. Sealant: Factory applied within interlocking joint.
 3. Manufacturers: Refer to list of standing-seam metal roof and wall panel manufacturers
 4. Profile: Flush-Profile with Reveal joint as indicated on Drawings.
 5. Material: Match roof panel.
 6. Panel Coverage: Match roof panel.
 7. Panel Height: 3/4 inch.

2.8 ACCESSORIES

- A. Roof Panel Accessories: Provide components approved by roof panel manufacturer and as required for a complete metal roof panel assembly including trim, copings, fasciae, corner units, ridge closures, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.
1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal roof panels.
 2. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch-thick, flexible closure strips; cut or premolded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
 3. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.

- B. Flashing and Trim: Formed from same material as roof panels, prepainted with coil coating, minimum 0.018 inch thick. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal roof panels.
- C. Gutters: Formed from same material roof panels. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inchlong sections, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Furnish gutter supports spaced a maximum of 36 inches o.c., fabricated from same metal as gutters. Provide wire ball strainers of compatible metal at outlets. Finish gutters to match metal roof panels .
- D. Downspouts: Formed from same material as roof panels. Fabricate in 10-foot-long sections, complete with formed elbows and offsets, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual". Finish downspouts to match gutters.
- E. Roof Curbs: Fabricated from same material as roof panels, minimum 0.048 inch thick; with bottom of skirt profiled to match roof panel profiles, and welded top box and integral full-length cricket. Fabricate curb subframing of minimum 0.0598-inch-thick, angle-, C-, or Z-shaped steel sheet. Fabricate curb and subframing to withstand indicated loads, of size and height indicated. Finish roof curbs to match metal roof panels.
 - 1. Insulate roof curb with 1-inch-thick, rigid insulation.

2.9 FABRICATION

- A. Fabricate and finish metal roof panels and accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes and as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.
- B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- C. Fabricate metal roof panel side laps with factory-installed captive gaskets or separator strips that provide a tight seal and prevent metal-to-metal contact, in a manner that will seal weathertight and minimize noise from movements within panel assembly.
- D. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Miscellaneous Framing: Install subpurlins, eave angles, furring, and other miscellaneous roof panel support members and anchorage according to metal roof panel manufacturer's written instructions.

3.2 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply at locations indicated on Drawings, wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps with roller. Cover underlayment within 14 days.
- B. Apply slip sheet over underlayment before installing metal roof panels.
- C. Install flashings to cover underlayment to comply with requirements specified in Division 7 Section "Sheet Metal Flashing and Trim."

3.3 METAL ROOF PANEL INSTALLATION

- A. Standing-Seam Metal Roof Panels: Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended by manufacturer.
 - 1. Install clips to supports with self-tapping fasteners.
 - 2. Install pressure plates at locations indicated in manufacturer's written installation instructions.
 - 3. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.
- B. Metal Soffit Panels: Provide metal soffit panels full width of soffits. Install panels perpendicular to support framing.
 - 1. Flash and seal panels with weather closures where metal soffit panels meet walls and at perimeter of all openings.

3.4 ACCESSORY INSTALLATION

- A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
 - 1. Install components required for a complete metal roof panel assembly including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.

2. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
3. Provide elbows at base of downspouts to direct water away from building.

3.5 CLEANING

- A. Remove temporary protective coverings and strippable films, if any, as metal roof panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of metal roof panel installation, clean finished surfaces as recommended by metal roof panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION 074110

This page intentionally left blank.

SECTION 079200 – JOINT SEALANTS (ADDENDUM No. 2)

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Silicone joint sealants.
 2. Urethane joint sealants.
 3. Latex joint sealants.
 4. Acoustical joint sealants.

1.2 PRECONSTRUCTION TESTING

- A. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates. Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

1.3 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples: For each kind and color of joint sealant required.
- C. Joint-Sealant Schedule: Include the following information:
1. Joint-sealant application, joint location, and designation.
 2. Joint-sealant manufacturer and product name.
 3. Joint-sealant formulation.
 4. Joint-sealant color.
- D. Product test reports.
- E. Preconstruction field-adhesion test reports.
- F. Field-adhesion test reports.
- G. Warranties.

1.4 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.

- B. Preinstallation Conference: Conduct conference at Project site.

1.5 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Two years from date of Substantial Completion..

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Stain-Test-Response Characteristics: Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

2.2 SILICONE JOINT SEALANTS

- A. Mildew-Resistant Silicone Joint Sealant : ASTM C 920.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
 - a. BASF Building Systems.
 - b. Dow Corning Corporation.
 - c. GE Advanced Materials - Silicones.
 - d. May National Associates, Inc.
 - e. Pecora Corporation.
 - f. Polymeric Systems, Inc.
 - g. Schnee-Morehead, Inc.
 - h. Sika Corporation; Construction Products Division.
 - i. Tremco Incorporated.
 - 2. Type: Single component (S) or multicomponent (M).
 - 3. Grade: Pourable (P) or nonsag (NS).
 - 4. Class: 100/50 .
 - 5. Uses Related to Exposure: Nontraffic (NT).

2.3 URETHANE JOINT SEALANTS

A. Urethane Joint Sealant : ASTM C 920.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. BASF Building Systems.
 - b. Bostik, Inc.
 - c. Lyntal, International, Inc.
 - d. May National Associates, Inc.
 - e. Pacific Polymers International, Inc.
 - f. Pecora Corporation.
 - g. Polymeric Systems, Inc.
 - h. Schnee-Morehead, Inc.
 - i. Sika Corporation; Construction Products Division.
 - j. Tremco Incorporated.
2. Type: Single component (S) or multicomponent (M).
3. Grade: Pourable (P) or nonsag (NS).
4. Class: 100/50 .
5. Uses Related to Exposure: Traffic (T) .

2.4 LATEX JOINT SEALANTS

A. Latex Joint Sealant : Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. BASF Building Systems.
 - b. Bostik, Inc.
 - c. May National Associates, Inc.
 - d. Pecora Corporation.
 - e. Schnee-Morehead, Inc.
 - f. Tremco Incorporated.

2.5 ACOUSTICAL JOINT SEALANTS

A. Acoustical Joint Sealant : Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Pecora Corporation.

- b. USG Corporation.

2.6 JOINT SEALANT BACKING

- A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) Type B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

2.7 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints..

PART 3 - EXECUTION

3.1 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
 - 1. Remove laitance and form-release agents from concrete.
 - 2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.2 INSTALLATION

- A. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealant from surfaces adjacent to joints.
 - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 - 3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
- F. Acoustical Sealant Installation: Comply with ASTM C 919 and with manufacturer's written recommendations.
- G. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.3 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
 - 1. Extent of Testing: Test completed and cured sealant joints as follows:

- a. Perform 5 tests for the first 500 feet of joint length for each kind of sealant and joint substrate.
 - b. Perform 1 test for each 1000 feet of joint length thereafter or 1 test per each floor per elevation.
2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
- B. Evaluation of Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.4 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces.
1. Joint Locations:
 - a. Isolation and contraction joints in cast-in-place concrete slabs.
 - b. Tile control and expansion joints.
 - c. Other joints as indicated.
 2. Joint Sealant: Urethane.
 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
 - a. Construction joints in cast-in-place concrete.
 - b. Control and expansion joints in unit masonry.
 - c. Joints between metal panels.
 - d. Joints between different materials listed above.
 - e. Perimeter joints between materials listed above and frames of doors windows and louvers.
 - f. Control and expansion joints in ceilings and other overhead surfaces.
 - g. Other joints as indicated.
 2. Joint Sealant: Silicone.
 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- C. Joint-Sealant Application: Interior joints in horizontal traffic surfaces.
1. Joint Locations:
 - a. Control and expansion joints in tile flooring.

- b. Other joints as indicated.
 - 2. Joint Sealant: Urethane.
 - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- D. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
- 1. Joint Locations:
 - a. Control and expansion joints on exposed interior surfaces of exterior walls.
 - b. Perimeter joints of exterior openings where indicated.
 - c. Tile control and expansion joints.
 - d. Vertical joints on exposed surfaces of interior unit masonry concrete walls and partitions.
 - e. Joints on underside of plant-precast structural concrete beams and planks.
 - f. Perimeter joints between interior wall surfaces and frames of [interior doors][windows] and elevator entrances.
 - g. Other joints as indicated.
 - 2. Joint Sealant: Latex.
 - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- E. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.
- 1. Joint Sealant Location:
 - a. Joints between plumbing fixtures and adjoining walls, floors, and counters.
 - b. Tile control and expansion joints where indicated.
 - c. Other joints as indicated.
 - 2. Joint Sealant: Silicone.
 - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- F. Joint-Sealant Application: Interior acoustical joints in vertical surfaces and horizontal nontraffic surfaces.
- 1. Joint Location:
 - a. Acoustical joints where indicated.
 - b. Other joints as indicated.
 - 2. Joint Sealant: Acoustical.
 - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

END OF SECTION 079200

This page intentionally left blank.