



DALLAS-FORT WORTH
INTERNATIONAL AIRPORT

ADDENDUM NO. 3

TO THE REQUEST FOR BIDS

Contract No. 9500401

**IMPROVEMENTS TO EXPANSION JOINTS,
DRAINAGE AND WATERPROOFING AT THE DFW
RENTAL CAR FACILITY**

April 13, 2010

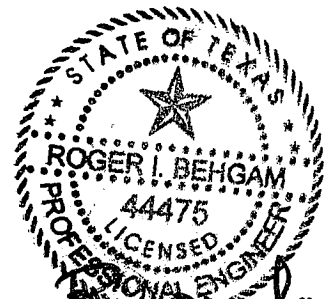
THE REQUEST FOR BIDS (RFB) FOR THE ABOVE IS HEREBY REVISED AS FOLLOWS:

THIS ADDENDUM CONSISTS OF 8 PAGES.

SPECIFICATIONS

- Change 1.** In Section 07900, "Joint Sealers" deleted joint types not used. Foam Sealant Type 14 was inadvertently deleted with Addendum No 2 and is hereby added back to this Section. Type 14 is to be used at "Pitch Pan" conditions as referenced in 3.7.C of the attached Section 07900.

END OF ADDENDUM NO. 3



04.13.10
URS FIRM NO. 3162

SECTION 07900

JOINT SEALERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Preparation of interior and exterior joint substrate surfaces.
 2. Install sealers, primers, bond breakers, and fillers as required.
 3. Install interior and exterior joint sealants, including sidewalk joints and cover plate.

1.2 REFERENCES

- A. American Society for Testing and Materials:
1. ASTM C 834 – Standard Specification for Latex Sealants.
 2. ASTM C 920 – Standard Specification for Elastomeric Joint Sealants.
 3. ASTM C 1193 – Standard Guide for Use of Joint Sealants.
 4. ASTM C 1311 – Standard Specification for Solvent Release Sealants.
 5. ASTM D 1056 – Flexible Cellular Materials - Sponge or Expanded Rubber.

1.3 SYSTEM DESCRIPTION

- A. Design Requirements:
1. Exterior: Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and air tight continuous seals without causing staining or deterioration of joint substrates.
 2. Interior: Provide joint sealants that have been produced and installed to maintain airtight continuous seals that are water resistant and cause no staining or deterioration of joint substrates.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, specifications, recommendations and instructions for surface preparation, sealant and backing installation, and related materials.
- B. Samples: Submit standard color charts for selection; furnish samples of custom colors as applicable.
- C. Certificates: Submit letter of certification from manufacturer or certified test laboratory reports that materials meet the following:
1. Sealant materials are chemically compatible with each other and proposed substrate, comply with Specification requirements, and are intended for applications indicated.
 2. Sealant, primers, and cleaners required for sealant installation comply with local regulations controlling use of volatile organic compounds.

1.5 QUALITY ASSURANCE

- A. Qualifications - Applicator: Provide documentation of minimum three years experience approved by sealant manufacturer.
- B. Pre-Installation Meeting: Prior to installation of sealant, meet at project site to review material selections, joint preparations, installation procedures and coordination with other trades. Meeting shall include the sealant Installer, Contractor, Manufacturer's representative, and representatives of other trades or subcontractors affected by sealant installation. Examine sample installations which have been prepared. Determine and document whether everyone present is in agreement that the proposed installations are likely to perform as required. Notify Architect prior to meeting as to time, place and date of meeting.
- C. Field Adhesion Hand Pull Test: Upon installation of all sealants, contractor is perform a Field Adhesion Hand Pull Test. Procedure is as follows:
1. Make a knife cut horizontally from one side of the joint to the other.
 2. Make two vertical cuts (from the horizontal cut) approximately 3" (75mm) long, at both sides of the joint.
 3. Place a 1" (25 mm) mark on the sealant tab.
 4. Grasp a 2" (50 mm) piece of sealant firmly just beyond the 1" (25 mm) mark and pull at a 90° angle.
 5. If dissimilar substrates are being sealed, check the adhesion of sealant to each substrate separately. This is accomplished by extending the vertical cut along one side of the joint, checking adhesion to the opposite side, and then repeating for the other surface.
 6. Pass/fail criteria for each sealant are shown in the following table. If the sealant does not pass according to the guidelines provided, consult your local Dow Corning Project Manager or Distributor Representative.
 7. Inspect the joint for complete fill. The joint should not have voids, and joint dimensions should match those shown in the weathersealing details (see "Joint Design"). Your Dow Corning Project Manager can assist in determining when corrective action is required.
 8. Record the test results in a field adhesion test log. An example is provided later in this section. This log will need to be retained as a part of Dow Corning's warranty procedure. Some building officials may also require it.
- NOTE:** When a sealant is used to weatherseal between two dissimilar substrates, it is recommended that the sealant adhesion to each side of the joint be individually tested. (See step 5.)

1.6 DELIVERY STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multicomponent materials.

- B. Store and handle materials in compliance with manufacturer's recommendation to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.7 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate conditions are outside limits permitted by joint sealant manufacturer or below 40 deg. F.
 - 2. When temperature conditions cause joint widths to be at either maximum or minimum design conditions.
 - 3. When joint substrates are wet.

1.8 WARRANTY

- A. Exterior Sealants: Warrant materials against air and water leakage for a minimum twenty year period.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

2.2 SEALING AND CAULKING MATERIALS

- A. Polyurethane Sealant - Type No. 1:
 - 1. One-component, non-sag, low modulus, moisture curing, polyurethane joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT, M, A, and O (FS TT-S-0000230C).
 - 2. Acceptable Products:
 - a. Dymonic/Dymonic FC by Tremco.
 - b. Sonolastic NP-1 by BASF.
 - c. Dynatrol I by Pecora
 - d. Or equal (submit for approval)
- B. Polyurethane Sealant - Type No. 2:
 - 1. Two or three-component, non-sag, low-modulus, modified polyurethane joint sealant; ASTM C 920, Type M, Grade NS, Class 100/50, Use NT, M, A, and O (FS TT-S-00227E).
 - 2. Acceptable Products:
 - a. Sonolastic NP-2 by BASF.
 - b. Dynatrol II by Pecora.
 - c. Dymeric 240/240FC by Tremco.
 - d. Or equal (submit for approval)
- C. Silicone Sealant Type - No. 9:
 - 1. One-component, medium-modulus, moisture cured, elastomeric, silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use A, M, G, and O (FS TT-S-001543A).
 - 2. Acceptable Products:
 - a. DC-795 by Dow Corning.

- b. Silpruf SCS SCS2000 by General Electric.
 - c. Spectrem-2 by Tremco.
 - d. 895 by Pecora.
 - e. Or equal (submit for approval)
- D. Foam Sealant – Type No. 14
- 1. Polyurethane Spray Foam two-component; ASTM D 1623 & 2842
 - 2. Acceptable Products:
 - a. Froth-Pak by Dow Chemical
 - b. Or equal (submit for approval)

2.3 ACCESSORIES

- A. Joint Cleaner: Non-corrosive type recommended by sealant manufacturer, compatible with joint forming materials.
- B. Primer: Non-staining type recommended by sealant manufacturer to suit application and substrate materials.
- C. Backer Rod:
 - 1. Combination cell compatible with sealant; sized and shaped to control depth of sealant; and to maintain 25 to 50 percent compression of material, ASTM D 1056.
 - 2. Acceptable Products:
 - a. Denver Foam.
 - b. Ethafoam SB, Dow Chemical.
 - c. Sof Rod by I.T.D.
 - d. Or equal (submit for approval)
- D. Bond Breaker: Pressure sensitive adhesive polyethylene tape recommended by sealant manufacturer to suit application.
- E. Masking Tape: Pressure sensitive adhesive paper tape.
- F. Sealant Tape:
 - 1. Compressible adhesive-cohesive tape of cross-linked butyl polyisobutylene rubber that accommodates variations and movement, sized as necessary to allow for joint movement of ± 25 percent.
 - 2. Acceptable Products:
 - a. 440 by Tremco.
 - b. Extru-Seal by Pecora.
 - c. PTI-606 by Protective Treatments, Inc.
 - d. Or equal (submit for approval)
- G. Expansion Joint Filler:
 - 1. Closed cell polyethylene compatible with sealant.
 - 2. Asphalt impregnated fiberboard not acceptable.
 - 3. Acceptable Product: Sonofoam Closed Cell Backer-Rod by Sonneborn.
 - 4. Or equal (submit for approval)
- H. Sidewalk Joint Cover Plate:
 - 1. Use $\frac{1}{4}$ " slip resistant steel plate.

2.4 MIXING

- A. Mix components in accordance with manufacturer's recommendations.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints to be sealed for construction defects which could adversely affect execution of Work.
- B. Ensure that concrete has cured 28 days minimum before commencing sealing operations.
- C. Compressible Fillers: Verify actual width of each type joint to be sealed against indicated joint width to ensure compliance with specified percentage of compression required.
- D. Determine in conjunction with sealant manufacturer's representative if adhesion testing is necessary prior to application of materials. Submit letter of certification from sealant manufacturer accepting substrate conditions for sealant.

3.2 PREPARATION

- A. Clean joint surfaces using joint cleaner as necessary, free of dust, dirt, oil, grease, rust, lacquers, laitance, release agents, liquid water repellent, moisture or other matter which might adversely affect adhesion of sealants.
- B. Etch concrete, masonry and plaster joint surfaces to remove excess alkalinity. Etch with 5 percent solution of muriatic acid. Neutralize with dilute ammonia solution. Rinse thoroughly with water and allow to dry.
- C. Steel Surfaces: Scrape and wire brush to remove loose mill scale. Remove dirt, oil or grease by solvent cleaning. Wipe surfaces with lintless paper towels.
- D. Aluminum Surfaces:
 - 1. Clean off temporary protective coatings.
 - 2. When masking tape is used for a protective cover, remove tape just prior to applying sealant.
- E. Roughen joint surfaces on non-porous materials. Rub with fine abrasive cloth or wool to produce a dull sheen.
- F. Mask areas adjacent to joints as necessary.
- G. Apply primer as recommended by manufacturer. Do not allow primer or sealants to spill or migrate onto adjoining surfaces.
- H. Precompressed Joint Sealer:

1. Remove shrink wrap or vacuum pack from each section for immediate insertion into joints, taking care not to pull or stretch material.
2. Remove wrapping from that quantity which can be installed immediately.
3. Joining of individual strips accomplished by means of scarfed joints cut at 45 degrees relative to sides of joint.
4. Push scarfed ends well over one another to form tight joints.
5. In areas of pedestrian traffic where precompressed joint sealer is used as secondary seal, depress strips to required depth to permit application of bond breaker and sealant.

3.3 APPLICATION

- A. Install sealant materials in accordance with ASTM C 1193 and manufacturer's written instructions.
- B. Install backing material in joints using blunt instrument to avoid puncturing.
- C. Do not twist rod while installing.
- D. Install backing to form joint depth of 50 percent of joint width, minimum of 1/4" deep.
- E. Apply sealant in joints using pressure gun with nozzle cut to fit joint width.
- F. Deposit sealant in uniform, continuous bead.
- G. Tool joints to required configuration within manufacturer's recommended setting time.
- H. If masking materials are used, remove immediately after tooling.

3.4 Sidewalk Joint Cover Plate

- A. Install as shown on drawings and at locations directed by the Owner's Authorized Representative.

3.5 FIELD QUALITY CONTROL

- A. Manufacturer's Representative:
 1. No sealants may be used unless a qualified representative is present at start up of work to advise installer of proper procedures and precautions for use of materials and to check installation.
 2. Contractor shall give manufacturer notice one week prior to start-up that his presence will be required, to ensure proper installation of his materials.

3.6 CLEANING

- A. Remove excess materials adjacent to joints as Work progresses to eliminate evidence of spillage or damage to adjacent surfaces.
- B. Remove and replace improperly sealed joints.

- C. Clean or replace materials or surfaces that are damaged by sealing operations.

3.7 SCHEDULE OF SEALANTS AND CAULKS

- A. Interior and exterior building joints subject to dynamic movement, not exposed to foot or vehicular traffic: Sealant Type No. 2 or 9.
- B. Sealants in adjacent to Roof Membrane: Sealant Type 1.
- C. Pitch pan condition on main canopy as described on sheet A02-05 in the general notes: Sealant Type No. 14.

3.8 COLOR SCHEDULE

- A. Curtain Wall and Storefronts: Custom color as selected by Architect.
- B. Other Exposed Locations: Manufacturer's standard color line as selected by Architect.
- C. Non-exposed Locations: Manufacturer's standard.

3.9 MEASUREMENT

- A. Sealants are not measured separately and such cost is subsidiary to other items.
- B. Sidewalk Joint Cover Plate is measured per linear foot.

3.10 PAYMENT

- A. Costs for sealants are not paid directly and is subsidiary to other pay items. Cost for furnishing material and accessories, cleaning, preparation, application, protection and final clean up of sealants shall be included in cost for other items measured such as Items 7 thru 15.
- B. Sidewalk Joint Cover Plate is paid per linear foot installed. Cost shall cover furnishings and installing the cover plates.

END OF SECTION