



CLARK COUNTY CORRESPONDENCE

DATE: August 11, 2016

TO: Holders of Specifications Relating to:
Bid #2643 - Court House Weatherproofing

FROM: Priscilla Ricci, C.P.P.B. PR
Senior Buyer

SUBJECT: Corrections to Specifications

ADDENDUM #1

Please note the following changes to specifications for Bid #2643. Bidder shall acknowledge receipt by inserting the Addenda number where indicated on the signed Addendum #1 tab sheet.

THE FOLLOWING CHANGES, ADDITIONS, AND DELETIONS TO THE CONTRACT HEREBY BECOME A PART OF THE CONTRACT DOCUMENTS.

ADDITIONS:

- Section 003930 Concrete Rehabilitation Epoxy Injected Crack Repair – 5 pages
- Pre-Bid Sign In Sheet from Wednesday, August 10, 2016 – 1 page
- New Tab Sheet labeled – Bid #2643 – Court House Weatherproofing – Addendum #1 – 2 pages

CHANGE:

The bid due date has been changed from Tuesday, August 16, 2016 to Tuesday, August 23, 2016

Additional Information/Clarifications to Specifications

Question 1) If work cannot be completed in this calendar year because of weather can it be completed in the spring?

Answer 1) Yes

Question 2) It will be necessary to install temporary tie back anchors in some areas, which require drilling in to the concrete walls. Will this be acceptable?

Answer 2) Yes

Question 3) How many contractors have committed to bidding this project?

Answer 3) Contractors who attended the pre-bid conference are listed on the attached sign in sheet. The plan holders list has the names of all bidders that have requested the bid.

Question 4) Is it possible to get a one week extension?

Answer 4) Yes, the bid date has been extended for an additional week.

**Section 003930 Concrete
Rehabilitation Epoxy Injected Crack Repair**

Part 1 - General

1.01 Summary

- A. This specification describes the pressure injection of cracks with an epoxy resin adhesive.

1.02 Quality Assurance

- A. Manufacturing qualifications: The manufacturer of the specified product shall be ISO 9001/9002 certified and have in existence a recognized ongoing quality assurance program independently audited on a regular basis.
- B. Contractor qualifications: Contractor shall be qualified in the field of concrete repair and protection with a successful track record of 5 years or more. Contractor shall maintain qualified personnel who have received product training by a manufacturer's representative.
- C. Install materials in accordance with all safety and weather conditions required by the manufacturer, or as modified by applicable rules and regulations of local, state and federal authorities having jurisdiction. Consult Material Safety Data Sheets for complete handling recommendations.

1.03 Delivery, Storage, and Handling

- A. All materials must be delivered in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers. Damaged material must be removed from the site immediately.
- B. Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.
- C. Condition the specified product as recommended by the manufacturer.

1.04 Job Conditions

- A. Environmental Conditions: Do not apply material if it is raining or snowing or if such conditions appear to be imminent. Minimum application temperature 40°F (5°C) and rising.
- B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified product.

1.05 Submittals

- A. Submit two copies of manufacturer's literature, to include: Product Data Sheets, and appropriate Material Safety Data Sheets (MSDS).

1.06 Warranty

- A. Provide a written warranty from the manufacturer against defects of materials for a period of one (1) year, beginning with date of substantial completion of the project.

Part 2 - Products

2.01 Manufacturers

- A. **Basis of Design Sikadur 52**, as manufactured by Sika Corporation, 1682 Marion Williamsport Road, Marion, Ohio 43302 is considered to conform to the requirements of this specification.
- B. **Basis of Design Sikadur 33** as manufactured by Sika Corporation, 1682 Marion Williamsport Road, Marion, Ohio 43302 is considered to conform to the requirements of this specification

2.02 Materials

- A. Epoxy resin adhesive for pressure injection of cracks shall be **Sikadur 52**:
 - 1. Component "A" shall be a modified epoxy resin of the diglycidether bisphenol A Type containing suitable viscosity control agents. It shall not contain butyl glycidyl ether.
 - 2. Component "B" shall be primarily a reaction product of a selected amine blend with an epoxy resin of the diglycidether bisphenol A Type containing suitable viscosity control agents, pigments, and accelerators.
 - The ratio of component A: componet B shall be 2:1 by volume
 - The material shall not contain asbestos.
- B. Epoxy resin adhesive for sealing of cracks & porting devices shall be **Sikadur 33**:
 - 1. Component "A" shall be a modified epoxy resin of the diglycidether bisphenol A Type containing suitable viscosity control agents. It shall not contain butyl glycidyl ether.
 - 2. Component "B" shall be primarily a reaction product of a selected amine blend with an epoxy resin of the diglycidether bisphenol A Type containing suitable viscosity control agents, pigments, and accelerators.
 - The ratio of component A: Componet B shall be 1:1 by volume
 - The material shall not contain asbestos.
- C. Porting devices as required for either manual or automated application. Porting devices for automated application shall be supplied from manufacturer of the pressure injection equipment.

2.03 Performance Criteria

- A. Properties of the mixed epoxy resin adhesive used for the pressure injection grouting::
 - 1. Pot Life: min. 30 minutes (60 gram mass) @ 73° F
 - 2. Tack-FreeTime: 90oF (32oC) 1.5 to 2 hours
 - 75oF (24oC) 3 to 3.5 hours
 - 40oF (5oC) 14-16 hours
 - Viscosity: Approx. 200 cps.
 - Color: Clear, pale yellow

B. Properties of the cured epoxy resin adhesive used for pressure injection grout:

1. Compressive Strength (ASTM D-695) min.

- a. 3 day: 10,000 psi (68.9 MPa)
- b. 7 day: 11,300 psi (77.9 MPa)
- c. 28 day: 12,000 psi (82.7 MPa)

Compressive Modulus, psi: min.

- a. 7 day 350,000 psi (2,400 Mpa)

2. Shear Strength (ASTM D-732)

- a. 14 day: 4,300 psi (29.6 MPa)

3. Flexural Strength (ASTM D-790) min.

- a. 14 day: 5,400 psi (37.2 MPa)

Tangent Modulus of Elasticity in Bending

- b. 14 day: 380,000 psi (2600 Mpa)

1. Bond Strength (ASTM C-882), 14 days (moist cure)

- a. Hardened Concrete to Hardened Concrete 2,200 psi (15 Mpa)

- b. Water Absorption (ASTM D-570), 7 day

- a. 24 hour immersion 1.50%

C. Tensile Properties (ASTM D-638)

- a. 7 day Tensile Strength 7,900 psi (54 Mpa)

Elongation at Break 3.1%

- b. 14 day Modulus of Elasticity 200,000 psi (1400 Mpa)

D. Properties of the mixed epoxy resin adhesive used for sealing of cracks & porting devices::

- 1. Pot Life: min. 15 minutes (60 gram mass) @ 73° F

- 2. Tack-Free Time: 40°F(4°C) 73°F(23°C) 90°F(32°C)

1.5 -1.75 hrs 25-30 min. 20-25 min.

Consistency: Non-Sag smooth paste

Color: Concrete Gray

E. Properties of the cured epoxy resin adhesive used for sealing of cracks & porting devices:

- 1. Compressive Strength (ASTM D-695) min. @ 73F

- a. 1 hr: 5,600 psi (38.6 MPa)

- b. 1 day: 8,600 psi (59.3 MPa)

- c. 28 day: 9,400 psi (64.8 MPa)

Compressive Modulus, psi

a. 7 day 960,000 psi (Mpa)

2. Shear Strength (ASTM D-732)

a. 1 day: 2,200 psi (15.2 MPa)

F. Flexural Strength (ASTM D-790) min.

14 day: 4,800 psi (33.1 MPa)

Tangent Modulus of Elasticity in Bending min.

b. 14 day: 1,200,000 psi

G. Bond Strength (ASTM C-882), 2 day (dry cure)

a. Hardened Concrete to Hardened Concrete 3,000 psi (20.6 Mpa)

1. Water Absorption (ASTM D-570), 7 day

a. 24 hour immersion 0.36%

2. Tensile Properties (ASTM D-638) min.

a. 7 day Tensile Strength 3,300 psi (22.7 Mpa)

Elongation at Break 0.2%

b. 14 day Modulus of Elasticity 830,000 psi (2800 Mpa)

Part 3 - Execution

3.01 Mixing and Application

A. Mixing the epoxy resin adhesive for sealing the cracks & porting devices: Premix each component. Proportion one parts by volume of Component "A" to one part Component "B" into a clean, dry mixing pail. Mix thoroughly for 3 minutes with a jiffy paddle on a low-speed (400-600 rpm) drill. Mix only that quantity of material that can be used within its potlife (25-35 minutes 73F).

B. Mixing of the epoxy resin adhesive used for the pressure injection grouting:

1. Manual: Proportion two parts by volume of Component "A" to one part Component "B" into a clean, dry mixing pail. Mix thoroughly for 3 minutes with a jiffy paddle on a low-speed (400-600 rpm) drill. Mix only that quantity of material that can be used within its potlife (20-30 minutes 73F).

C. Placement procedure:

1. The epoxy resin adhesive for sealing the cracks & porting device: Set the porting devices as required by the equipment manufacturer. Spacing of the porting devices shall be accomplished as required to achieve the travel of the epoxy resin for the pressure injection grouting between ports and fill the cracks to the maximum. On structures open on both sides, provide porting devices on opposite sides at staggered elevations. Apply the mixed epoxy resin adhesive for sealing over

cracks and around each porting device to provide an adequate seal to prevent the escape of the epoxy resin adhesive for the injection grouting. Where required by the Engineer, apply the epoxy resin adhesive for sealing in such a manner that minimal defacing or discoloration of the substrate shall result.

2. The epoxy resin adhesive for the pressure injection grouting:

Manual: Load the mixed epoxy resin adhesive for grouting into a disposable caulking cartridge or bulk-loading caulking gun. Inject the prepared cracks with a constant pressure in order to achieve maximum filling & penetration without the inclusion of air pockets or voids in the epoxy resin adhesive. Begin the pressure injection at the widest part of the crack being injected and continue until there is the appearance of epoxy resin adhesive at an adjacent port, thus indicating travel. When travel is indicated, the decision to discontinue or continue the pressure injection from that port should be made by the Contractor based on his experience, with the approval of the Engineer. Continue procedure until pressure injectable cracks have been filled.

Automated: Dispense the epoxy resin adhesive for grouting under constant pressure in accordance with procedures recommended by the equipment manufacturer as required to achieve maximum filling and penetration of the prepared cracks without the inclusion of air pockets or voids in the epoxy resin adhesive. The pressure injection of single or multiple ports, by use of a manifold system, is possible. This decision should be made by the Contractor, with the approval of the Engineer. Continue the approved procedure until all pressure injectable cracks have been filled.

D. If penetration of any cracks is impossible, consult the Engineer before discontinuing the injection procedure. If modification of the proposed procedure is required to fill the cracks, submit said modification in writing to the Engineer for acceptance prior to proceeding.

E. Adhere to all limitations and cautions for the epoxy resin adhesive in the manufacturer's current printed literature.

3.02 Cleaning

- A. After the epoxy resin adhesive for grouting has cured, the epoxy resin adhesive for sealing cracks and porting devices shall be removed as required by the Engineer. Clean the substrate in a manner to produce a finish appearance acceptable to the Owner.
- B. The uncured epoxy resin adhesive can be cleaned from tools with approved solvent. The cured epoxy resin adhesive can only be removed mechanically.
- C. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

Prebid Sign in Sheet

Date 8-10-16

Clark County Courthouse Water Proofing Project

Bid #2643

	<u>NAME</u>	<u>COMPANY</u>	<u>CONTACT INFO</u>
1.	Rock A Eggers	Pioneer Waterproofing	503-807-2664
2.	Ryan Inman	ARI	253-220-8455
3.	richard grays	consultant	503.307.9995
4.			
5.			
6.			
7.			
8.			
9.			
10.			

PART VII - BID TABULATION

BID NO. 2643

**PROPOSAL FORM:
CLARK COUNTY WASHINGTON - PURCHASING DEPT.
1300 FRANKLIN / SUITE 650, VANCOUVER WA 98660**

Attention:

Having carefully examined the Invitation to Bid, Instructions to Bidders, General Conditions of the Contract, Supplementary General Conditions, Drawings, and the Specifications as well as the premises and conditions affecting the work, the undersigned proposes to furnish all plant, labor and material called for by the documents for Court House Weatherproofing.

Base Bid \$ _____

Washington State Sales Tax – 8.4% \$ _____

NET TOTAL BID \$ _____

Additive Number 1 - Unit Price Bid Item #1 Section 030100 Concrete Repair

Unit price per cubic foot for concrete repair in accordance with referenced specification Section 030100.

Base Bid \$ _____

Washington State Sales Tax – 8.4% \$ _____

NET TOTAL BID \$ _____

Additive Number 2 - Unit Price Bid Item #2 Section 003930 Concrete Rehabilitation Epoxy Injected Crack Repair

Unit price per lineal foot for epoxy injection in accordance with referenced specification Section 003930.

Base Bid \$ _____

Washington State Sales Tax – 8.4% \$ _____

NET TOTAL BID \$ _____

NOTE: Failure to acknowledge receipt of Addendum will render the bid non-responsive and therefore void.

ADDENDUM:

Bidder shall insert number of each Addendum received. If no addendum received, please mark "NONE".

No. _____ Dated: _____ No. _____ Dated: _____

No. _____ Dated: _____ No. _____ Dated: _____

BID SECURITY:

Enclosed is Bid Security as required, consisting of a _____ in the amount of \$ _____, which is equal to five percent of the total amount of the proposal.

HAZARD COMMUNICATION PROGRAM

The undersigned agrees to be in compliance with the Clark County Hazard Communications Program while on Clark County premises.

PROPOSAL FORM (continued)

STARTING TIME AND TIME OF COMPLETION:

The undersigned agrees that if awarded the contract he will start construction within five (5) calendar days after receiving written notice to proceed, and will complete the work within _____calendar days after receiving such notice.

OWNER'S RIGHT RESERVED:

To reject any or all bids, to waive informalities, and to accept only such bids as may appear in the best interest of the owner.

CERTIFICATION:

The undersigned certifies that this bid has been arrived by the bidder independently and has been submitted without any collusion designed to limit independent bidding or competition.

PROPOSALS SUBMITTED WITHOUT A SIGNATURE BELOW WILL BE REJECTED.

Name of Individual Business Owner,
Partnership or Corporation:

Address: _____

Telephone _____

Fax Number _____

UBI# _____

OMWBE Certification # _____

Contractor Registration Number

Required Attachments:
1-Bid Security

Signature of Owner, Partner, or
Corporate Official:

Print Name

(Contact E-mail address)

DATE

Official or Title of Official signing for
Corporation:

If Corporation, Attest:

Secretary of Corporation

State in which Incorporated