



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

June 1, 2026

SUBJECT: FAI Route 57 (I-57)
Project NHPP-I4SM(301)
Section (38-4,38-5)BR,D,CR
Iroquois County
Contract No. 66M80
Item No. 59, June 12, 2026 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Revised the Schedule of Prices.
2. Revised the Table of Contents to the Special Provisions.
3. Added pages 232-242 to the Special Provisions.
4. Revised sheets 6, 7, 15, 137, 186, 187, 210, 225, 226, 240, 247-249, and 255-258 of the Plans.

Prime contractors must utilize the enclosed material when preparing their bid and must include any changes to the Schedule of Prices in their bid.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Jack A. Elston'.

Jack A. Elston, P.E.
Bureau Chief, Design and Environment

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PREFORMED PAVEMENT JOINT SEAL

Effective: October 4, 2016

Revised: March 24, 2023

Description. This work shall consist of furnishing all labor, equipment and materials necessary to prepare the joint opening and install pavement joint seal(s) at the locations specified. Unless otherwise detailed on the plans, the joint shall be sized for a rated movement of 2 inches (50 mm).

Materials: Unless otherwise specified, one of the following prefabricated joint seals will be permitted.

- (a) Preformed Elastomeric Joint Seal. This material shall be according to Section 1053.01.
- (b) Preformed Pre-compressed, Silicone Coated, Self-Expanding Sealant System. This Sealant system shall be comprised of three components: 1) cellular polyurethane foam impregnated with hydrophobic 100% acrylic, water-based emulsion, factory coated with highway-grade, fuel resistant silicone; 2) field-applied epoxy adhesive primer, 3) field-injected silicone sealant bands.

The preformed, pre-compressed silicone joint seal shall, as a minimum, be according to the following:

- The joint seal shall be held in place by a non-sag, high modulus silicone adhesive.
- The joint seal shall be compatible with the epoxy and header material.
- The joint seal shall withstand the effects of vertical and lateral movements, skew movements and rotational movement without adhesive or cohesive failure.
- The joint seal shall be designed so that, the material is capable of movement of +50%, -50% (100% total) of nominal material size.
- The gland shall not contain any open, unsealed joints along its length in its final condition.
- Changes in plane and direction shall be executed using factory fabricated 90 degree transition assemblies. The transitions shall be watertight at the inside and outside corners through the full movement of the product.
- The depth of the joint shall be recessed 3/4 in. (19 mm) below the riding surface throughout the normal limits of joint movement.
- The joint seal shall be resistant to ultraviolet rays.
- The joint seal shall be resistant to abrasion, oxidation, oils, gasoline, salt, and other materials that may be spilled on or applied to the surface.
- The manufacturer shall certify that the joint composition shall be free of any waxes or wax compounds; asphalts or asphalt compounds.

Added June 1, 2026

The joint material shall meet the following physical properties:

| Property | Requirement | Test Method |
|--|-------------------------------|--------------------|
| Tensile Strength of Silicone Coating (min) | 140 psi | ASTM D 412 |
| UV Resistance of Joint System | No Changes--2000 Hours | ASTM C793 |
| Density of Cellular Polyurethane Foam | 4.0 lb/ cu ft (200kg/cu m) | ASTM D545 |
| Heat Aging Effects (Silicone Coating) | No cracking, chalking | ASTM C 792 |
| Joint System Operating temp range (min) | -40° F to 185° F | ASTM C 711 |

The adhesive shall be a two-component, 100% solid, modified epoxy meeting the requirements of ASTM C881, Type I, Grade 3, Class B & C. The adhesive shall also have the following properties:

| Property | Requirement | Test method |
|--------------------------|-------------------------|--------------------|
| Tensile Strength | 2,500 psi (24 MPa) min. | ASTM D638 |
| Compressive Strength | 7000 psi (48 MPa) min. | ASTM D695 |
| Bond Strength (Dry Cure) | 2000 psi (28MPa) min | ASTM C882 |
| Water Absorption | 0.1% by weight | ASTM D570 |

The silicone band adhesive shall have the following properties:

| Property | Requirement | Test Method |
|-------------------------|---|--------------------|
| Movement Capability | +50/-50% | ASTM C 719 |
| Elongation at Break | >600% | ASTM D 5893 |
| Slump | ≤0.3" | ASTM D 2202 |
| Hardness (Shore A) max. | 20 | ASTM C 661 |
| Tack free time (max) | 60 minutes | ASTM C 679 |
| Heat Aging Effects | No cracking, chalking | ASTM C 792 |
| Resilience | ≥ 75% | ASTM D5329 |
| Bond | 0% Adhesive or Cohesive Failure after 5 cycles @100%extension | ASTM D 5329 |

Added June 1, 2026

(c) Performed Silicone Joint Seal. The preformed silicone joint seal used for this item shall conform to the following specifications:

**Table 1
 Physical Properties of Preformed Silicone Gland**

| Property | Requirement | Test Method |
|----------------------------------|---------------------------|-------------|
| Rated Movement Capability | +2 ¼ inch total | N/A |
| Tensile Strength, psi. | 1000 min | ASTM D 412 |
| Elongation | 400% min | ASTM D 412 |
| Tear (die B) | 100 ppi. min | ASTM D 624 |
| Hardness Durometer (Shore A). | 55 +/- 5 max | ASTM D 2240 |
| Compression set at 212°F, 70 hrs | 30% max | ASTM D 395 |
| Heat Aged Properties | 5pt max loss on Durometer | ASTM D 573 |
| Tensile and Elongation % Loss | 10 % max | |

The color of the preformed silicone seal shall be black, made by the addition of Carbon Black fillers which increases UV resistance, tensile strength, and abrasion wear properties.

The locking adhesive shall be non-sag, high modulus silicone adhesive conforming to the following specifications:

**Table 2
 Physical Properties of the Silicone Locking Adhesive**

| Property | Requirement | Test Method |
|--------------------------|---------------------------------------|-------------|
| Tensile Strength, psi. | 200 min | ASTM D 412 |
| Elongation, % | 450 min | ASTM D 412 |
| Tack Free Time, minutes. | 20 max. | ASTM C 679 |
| Cure Time ¼" bead, hrs | 24 max | ASTM C 679 |
| Resistance to U.V. | No cracking, chalking, or degradation | ASTM C793 |
| VOC (g/L) | 0 | ASTM D 3960 |

Any rips, tears, or bond failure will be cause for rejection.

The two part epoxy primer shall be supplied for application to the vertical faces of the joint opening. The supplied primer shall be equally as effective when bonded to concrete or steel. This primer shall meet the following criteria:

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Table 3
Physical Properties of Preformed Silicone Joint System Primer

| Property | Requirement | Test Method |
|----------------------------------|-------------|---------------------------------------|
| Viscosity (cps) | 44 | ASTM D 2196 |
| Color | Light Amber | Visual |
| Solids (%) | 41 | ASTM D 4209 |
| Specific Gravity | 0.92 | ASTM D 1217 |
| Product Flash Point (°F, T.C.C.) | 48 | ASTM D 56 |
| Package Stability | N/A | One year in tightly sealed containers |
| Cleaning | N/A | Mineral Spirits |
| VOC (g/L) | 520 | ASTM D 3960 |

- (d) Preformed Inverted EPDM Joint Seal. The preformed inverted EPDM joint seal used for this item shall conform to the following specifications:

Table 1
Physical Properties of Preformed Silicone Gland

| Property | Requirement | Test Method |
|----------------------------------|--------------------|-------------|
| Rated Movement Capability | Up To 5 inch total | N/A |
| Tensile Strength, psi. | 1200 psi min | ASTM D 412 |
| Elongation | 400 % min | ASTM D 412 |
| Tear (Die C) | 150 pli. min | ASTM D 624 |
| Durometer Content | 50 +/- 5 max | ASTM D 2240 |
| Water Resistance (70 hrs @ 100c) | 10% max | ASTM D 471 |
| Ozone Resistance | 100 min | ASTM D 1171 |

Added June 1, 2026

Table 2
Physical Properties of the V-Epoxy-R

V-Epoxy-R adhesive meets the requirements of ASTM C881 Type III, Grade 2. The adhesive shall also have the following properties:

| Property | Requirement | Test Method |
|---|---------------------------------------|-------------|
| Color | Gray | Visual |
| Viscosity | 45,000 CP (typ.) | N/A |
| Gel Time (minutes) | 30 min. | ASTM C 881 |
| Shelf Life (Separate Sealed Containers) | 12 Months | N/A |
| Resistance to U.V. | No cracking, chalking, or degradation | ASTM C793 |
| VOC (g/L) | 0 | ASTM D 3960 |

Any rips, tears, or bond failure will be cause for rejection.

- (e) Bonded Preformed Joint Seal. This joint system shall consist of preformed elastomeric seal bonded to the side walls of the joint opening using an adhesive as specified by the Manufacturer of the joint seal.

The bonded preformed joint seal shall be according to Table 1 of ASTM D2628 with the following exceptions: Compression set shall not be over 40 percent when tested according to Method B (Modified) of ASTM D 395 after 70 hours at 212 °F (100 °C). The Compression-Deflection requirement will not apply to the bonded preformed joint seal.

The adhesive shall be epoxy base, dual component, which resists salt, diluted acids, alkalis, solvents, greases, oils, moisture, sunlight and weathering. Temperatures up to 200 °F (93 °C) shall not reduce bond strength. At 68 °F (20 °C), the bond strength shall be a minimum of 1000 psi (6.9 MPa) within 24 hours.

Any primers or cleaning solutions used on the faces of the joint or on the profile of the sides of the bonded preformed joint seal shall be supplied by the manufacturer of the bonded preformed joint seal.

Any additional installation materials and adhesive for splicing joint sections shall be as supplied by the manufacturer of the preformed joint seal.

The Contractor shall submit the Manufacturer's material certification documentation stating that their materials meet the applicable requirements of this specification for the joint seal(s) installed.

Added June 1, 2026

CONSTRUCTION REQUIREMENTS

General. The Contractor shall furnish the Engineer with the manufacturer's product information and installation procedures at least two weeks prior to installation.

The minimum ambient air temperature in which the joint seal can be installed is 40° F (4.4° C) and rising, except for bonded preformed joint seals which shall not be installed when temperatures below 50 °F (10 °C) are predicted within a 48 hour period.

The joint surface shall be completely dry before installing the Joint Seal. For newly placed concrete, the concrete shall be fully cured and allowed to dry out a minimum of seven additional days prior to placement of the seal. Cold, wet, inclement weather will require an extended drying time.

The Joint Seal shall not be installed immediately after precipitation or if precipitation is forecasted for the day. Joint preparation and installation of Joint Seal shall be done during the same day.

Surface Preparation. Surface preparation shall be according to the joint seal manufacturer's written instructions.

After surface preparation is completed, the joint shall be cleaned of debris using compressed air with a minimum pressure of 90 psi (620 kPa). The air compressor shall be equipped with traps to prevent the inclusion of water and/or oil in the air line. The compressed air shall be according to the cleanliness requirements of ASTM D 4285.

When priming is required per the manufacturer's instruction, this operation shall immediately follow cleaning.

Joint Installation. The Joint installation shall be per the manufacturer's instructions; special attention shall be given to ensure the joint seal is properly recessed below the top of the riding surface as recommended by the manufacturer.

For bonded joint seals the seal shall be inserted into the joint and held tightly against both sides of the joint until sufficient bond strength has been developed to resist the expected expansion forces.

Opening to traffic. As these joint systems are supposed to be recessed below the top of the riding surface, there should be no restriction, based on the joint seal installation, on when these joints can be reopened to traffic.

Method of Measurement. The installed prefabricated joint seal will not be measured for payment.

Basis of Payment. The prefabricated joint seal will not be paid for separately but shall be considered included in the cost of the adjacent concrete work involved.

Added June 1, 2026

FIBER WRAP

Description

This work shall consist of furnishing and installing fiber-reinforced polymer (FRP) wraps at the locations shown in the plans. The FRP strengthening shall be of the size, type, layer, materials, tension, and spacing shown in the plans. The Contractor shall submit drawings of the FRP strengthening system, showing materials, components, and installation procedures to the Engineer for approval prior to ordering materials and commencing work.

All other concrete repairs and/or modifications shall be completed prior to performing this work. Concrete placed in areas receiving FRP wraps shall have a maximum moisture content of 4% using a digital moisture meter before wrapping begins unless bond testing shows no detrimental effect for installing prior to obtaining the required moisture content. All manufacturers' recommendations for surface preparation and installation of FRP wraps shall be followed.

Submittals

The following submittals, but not limited to, shall be required of the FRP system manufacturer, installation contractor, and inspection agency. All submittals, except daily installation logs, shall be given to the Engineer for review allowing at least 60 days for approval.

Submittals required of the FRP system manufacturer:

- Product information and data sheets indicating physical, mechanical and chemical properties and limitations of the FRP system and all its components, including the protective coating.
- Tensile properties for the FRP system shall be reported in accordance with ASTM D7565 in units of kips/inch/ply for strength and modulus (stiffness). FRP systems not reporting their design properties in accordance with ASTM D7565 are not allowed.
- Durability test data and structural test reports of the FRP system for the proposed application in the expected environmental conditions.
- Installation and maintenance instructions and general recommendations regarding each material used in the FRP system. Note that surface preparation requirements shall be included in the installation procedures.
- Material Safety Data Sheets of each product used and certification that all materials abide by all local, state, and federal environmental and worker's safety laws and regulations.
- Quality control procedures for tracking FRP materials and material certifications.
- List of projects where similar FRP system has been implemented.

Submittals required of the FRP system installation Contractor:

- Documentation from the FRP system manufacturer stating the Contractor has been trained to install the FRP system shown on the design plans.
- List of completed projects by the Contractor where similar FRP system has been implemented. Include location, owner, engineer and contact numbers associated with each project.
- Quality control procedures, daily installation data logs, and any other inspection forms used by the Contractor.

Added June 1, 2026

If an independent inspection agency is used, the following submittals are required of the FRP system inspection agency:

- Qualifications and a list of each inspector used on the project.
- Sample inspection forms to be used during inspection.
- List of prior inspections performed by each inspector used on the project.

Material Requirements.

The Contractor shall inspect and ensure all materials meet specifications, conform to design plans and are undamaged upon job-site arrival. All products shall be delivered to the job-site in their original, un-opened containers with the Manufacturer’s name, labels, product identification, and batch numbers. Ensure FRP system materials are protected from chemicals, dirt, extreme temperatures, moisture, and physical damage, by storing, handling, and applying materials according to manufacturer and OSHA recommendations.

FRP shall be high modulus, high strength fiber fabric of the type, size, layer, materials, tension, spacing and location as specified on the design plans. FRP Reinforcement shall meet the requirements as listed below:

| <i>Minimum FRP Cured Composite Property Requirements</i> | | |
|---|--------------|------------------|
| | Carbon Fiber | |
| Property | | ASTM Test Method |
| Prior to testing, laminate samples shall be cured at least 7 days at 70°F then post-cured at 140°F for 48 hours | | |
| Tensile Strength | 160.9 ksi | D3039 |
| Tensile Modulus | 1,039 ksi | D3039 |
| Elongation at break | 1.45% | D3039 |
| Thickness per Layer | 0.04 in. | |
| Visual Defects | None | D2563 |

Fabric saturant (saturating resin) and concrete primer shall be two-component, 100% solids, tolerant to moisture, high strength and high modulus epoxy. Manufacturer’s recommendations for mixing shall be followed. Components of saturating resin may be proportioned; however, provision shall be made for checking the accuracy of proportions and mixing. Dilution of components will not be permitted. Mixtures shall be used within its pot life.

A vapor permeable, UV resistant polymer or acrylic based protective coating shall be used. The protective coating shall be applied according to the manufacturer’s recommendations.

Construction Requirements.

A technical representative from the manufacturer shall be on site at the start of the installation and for as long as needed to ensure the contractor is installing the material in accordance with the Installation manual. All costs associated with providing a technical representative shall be the responsibility of the Contractor.

The Contractor shall maintain a Daily Installation Log. The log shall be available for review by the Engineer, and a copy shall be furnished to the Engineer at completion of installation and construction for each day’s production. The Log shall provide material traceability and process records for each wrap and shall include all the following information:

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- a) Date, time and specific location of installation.
- b) Construction and installation requirements, including drawings and references thereto.
- c) Surface preparation methods.
- d) Widths and lengths of cracks not injected with epoxy.
- e) Material information including product description, data of manufacturer, product and fiber batch numbers, mixture ratios, mixing times, appearance description of mixed resins (i.e. primers, putties, saturants, adhesives, and protective coatings used for the day)
- f) Ambient temperatures, humidity, and general weather observations at the beginning, middle and end of each wrap installation shift.
- g) Concrete surface temperature, concrete moisture content and surface cleanliness.
- h) Heat sources used for increase surface temperature or curing.
- i) Number of FRP layers used, composite thickness measurements, curing progress of resins including full documentation of curing temperature ramping and final curing temperature and thickness measurements of protecting coating used.
- j) Location and size of FRP debonding or air voids.
- k) Documentation stating installation procedures were followed.
- l) Pull off test results including bond strength, failure mode, and location.
- m) Other general work progress.

Surface Preparation:

FRP wraps shall be placed on sound concrete having a maximum moisture content of 4%. All bond inhibiting and foreign materials, including but not limited to dust, laitance, paint, grease, curing compounds, impregnations and waxes, shall be removed from the concrete surface by blast cleaning or equivalent mechanical means. All concrete surfaces shall be air blasted and vacuumed clean to a dust-free condition.

All concrete surface irregularities shall be ground smooth and/or filled with an approved repair technique. See special provision for Structural Repair of Concrete. All sharp edges shall be ground smooth and flush. All repairs shall be completed in such a manner as to not damage the existing structure. When wrapping FRP around exterior corners of rectangular cross sections, the corners should be rounded to a minimum of $\frac{3}{4}$ " radius. Interior corners shall be smoothed by troweling epoxy mortar into the corners. After concrete surface preparation has been completed, adhesive strength of the concrete shall be verified by random pull-off testing according to ACI 503R as per the direction of the Engineer.

All cracks greater than 0.012 in. shall be injected with epoxy according to Section 590 of the Standard Specifications for Road and Bridge Construction and paid for as Epoxy Crack Injection.

Constituent Material Application:

All materials shall be applied according to conditions (i.e. surface temperature of the concrete, air temperature, relative humidity, and corresponding dew point) recommended by the FRP manufacturer.

Components of saturating resin may be proportioned and mixed by hand or by automatic equipment. Provision shall be made for checking the accuracy of proportions and mixing. Diluting is not permitted.

Added June 1, 2026

The saturating resin shall be applied to a properly prepared substrate as a surface primer. The primer should be applied uniformly on the prepared surface to all areas of concrete receiving the FRP wrap according to the manufacturer's specifications. Primed surfaces shall be protected from all contaminants (e.g. dust, moisture, etc.) prior to the application of the FRP wraps.

The resin-to-fabric ratio shall be verified and documented on the daily installation data log. Saturating resin shall be applied uniformly to prepared surfaces. FRP-ply orientation shall not deviate from the orientation shown on the design plans. Fiber wraps shall be handled in a manner to maintain fiber straightness and prevent fiber damage. Any kinks, folds, or severe waviness should be reported to the Engineer. If multiple fabric layers are being placed, successive layers shall be placed before the complete curing of the previous layer to ensure complete bonding between layers. Entrapped air beneath each layer of fabric shall be rolled out before the saturating resin sets.

Subject to approval by the Engineer, the Contractor may provide suitable enclosures to permit application and curing of the fiber wrap during inclement weather. Provisions shall be made to control atmospheric conditions artificially within the enclosures within the limits specified for application and curing of the fiber wrap.

The FRP system shall be protected from rain, sand, dust, and other foreign particles during and after curing as per the Engineer and manufacturer's recommendations.

The Contractor shall inspect the cured FRP system to ensure saturating resin has completely cured. The Contractor must check for defects such as voids, delaminations, external cracks, chips, cuts, loose fibers, external abrasions, blemishes, foreign inclusions, depressible raised areas, or fabric wrinkles. All defects with a dimension greater than 1½ inch, or an area greater than one square inch, or defects with any dimension greater than 1 inch within one foot from another defect area of similar size, shall be repaired or replaced as determined by the Engineer. Repairs shall be made according to manufacturer's recommendations and as specified by the Engineer. For large defected areas, additional layers of FRP maybe required as per the Engineer.

A vapor permeable, UV resistant polymer or acrylic based protective coating shall be used. The protective coating shall be compatible with the FRP system and applied according to the manufacturer's recommendations. Any solvents used to clean the FRP surface prior to the application of the protective coating shall be approved by the FRP manufacturer since solvents can have harmful effects on the polymer fabric. Two layers of protective coating shall be applied to all surfaces of the fiber wrap.

The cost of the protective coating is included in the cost of this work.

Method of Measurement.

FRP wraps will be computed for payment in place in square feet based on the surface area measurements of the substrate to be repaired. The measured quantity will not be modified for multiple layers of FRP needed as shown in the design plans.

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Basis of Payment.

This work will be paid for at the contract unit price per square foot for FIBER WRAP. Payment shall constitute full compensation for all materials, labor, tools, equipment, and incidentals necessary to complete the work.

Full compensation for any additional testing, materials, enclosures, or work required because of the use of a particular type of fiber wrap, shall be considered as included in the item FIBER WRAP.

Added June 1, 2026