

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

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March 14, 2014

03-Nev,Pla-80, 267-VAR

03-4M7104

Project ID 0313000027

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN NEVADA AND PLACER COUNTIES AT VARIOUS LOCATIONS.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on Wednesday, March 26, 2014.

This addendum is being issued to revise the *Notice to Bidders and Special Provisions*.

In the *Notice to Bidders and Special Provisions*, in the "STANDARD PLANS LIST," the following Standard Plan is added as follows:

"T59 Temporary Water Pollution Control Details (Temporary Concrete Washout Facility)"

In the Special Provisions, Section 15-4.01A(1) is added as follows:

**"Add to section 15-4.01A(1):**

Design and construct temporary decking under section 48."

In the Special Provisions, Section 15-5.05A(2) is added as attached.

In the Special Provisions, Section 15-5.05A(3), is added as attached.

In the Special Provisions, Section 15-5.05C, paragraphs are added as attached:

In the Special Provisions, Section 15-5.06C(1), the following paragraphs are replaced as follows:

**"Replace the 20th paragraph of section 15-5.06C(1) with:**

Protect the overlay from moisture for not less than 4 hours after finishing. Do not allow traffic or equipment on the overlay for not less than 4 hours after final finishing.

**Replace the 21st paragraph of section 15-5.06C(1) with:**

Completed polyester-concrete deck surfaces must have a uniform surface texture with a coefficient of friction of at least 0.35 when tested under California Test 342 and a surface smoothness complying with section 51-1.01D(4)(b)."

In the Special Provisions, Section 15-5.09, is replaced as attached.

In the Special Provisions, Section 15-5.10, is replaced as attached.

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To *Bid* book holders:

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the *Notice to Bidders* section of the *Notice to Bidders and Special Provisions*.

Submit the *Bid* book as described in the *Electronic Bidding Guide* at the Bidders' Exchange website.

**[http://www.dot.ca.gov/hq/esc/oe/electronic\\_bidding/electronic\\_bidding.html](http://www.dot.ca.gov/hq/esc/oe/electronic_bidding/electronic_bidding.html)**

Inform subcontractors and suppliers as necessary.

This addendum, EBS addendum file and attachments are available for the Contractors' download on the Web site:

**[http://www.dot.ca.gov/hq/esc/oe/project\\_ads\\_addenda/03/03-4M7104](http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/03/03-4M7104)**

If you are not a *Bid* book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

  
JODY JONES  
District Director

Attachments

**Add to section 15-5.05A(2):**

Submit a public safety plan. Include with the submittal:

1. Public notification letter describing the work to be performed with treatment work locations, dates and times. Include a list of addresses of delivery and posting of the letter.
2. Airborne emissions monitoring plan. A CIH certified in comprehensive practice by the American Board of Industrial Hygiene must prepare and execute the plan. The plan must have at least 4 monitoring points including the mixing point, application point, and point of nearest public contact.
3. Action plan for protecting the public if airborne emissions levels exceed permissible levels.
4. Copy of the CIH's certification.

Submit results from airborne emissions monitoring of the test area before starting production work.

Submit results from production airborne emissions monitoring as an informational submittal after completing treatment activities.

**Replace the paragraphs of section 15-5.05A(3) with:**

Complete a test area before starting deck treatment activities. Notify the Engineer at least 15 days before treating the test area.

The test area must be:

1. At least 500 sq ft
2. Within the project limits outside the traveled way at an authorized location
3. Constructed (1) using the same materials, equipment, and construction methods to be used in the work and (2) under conditions similar to those anticipated when the work will be performed.
4. Demonstrate suitability of the airborne emissions monitoring plan

The completed test area must demonstrate (1) compliance with these specifications and (2) that the work will be completed within the time allowed.

The Engineer performs friction testing of the treated test area under California Test 342. Allow 10 days after completion of the test area for the Engineer to perform the test.

Do not perform deck treatment activities until the test area is authorized. The authorized test area is the standard of comparison in determining the acceptability of treated deck surfaces.

The Engineer may perform testing under California Test 342 to verify the coefficient of friction of the treated deck surfaces.

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**Add to section 15-5.05C:**

Deliver the public notification letter to residences and businesses within 100 feet of treatment work and to local fire and police officials at least 7 days before starting treatment activities. Post the letter at the job site.

Monitor airborne emissions during treatment activities.

**Replace the 8th paragraph of section 15-5.05C with:**

Apply the abrasive sand finish no sooner than 20 minutes after applying resin. The sand application rate must at least 2 lb/sq yd or until saturation as determined by the Engineer. Apply absorbent material before opening lane to traffic. Remove excess sand and absorbent material by vacuuming or power sweeping.

**Replace the 9th paragraph of section 15-5.05C with:**

The coefficient of friction of the treated surface must be at least 0.35 when tested under California Test 342.

Traffic or equipment is not allowed on the treated surface until you have verified that the following conditions have been met and the Engineer has authorized the opening of the treated surface to traffic and equipment:

1. Treated deck surface is tack free and not oily
2. Sand cover adheres and resists brushing by hand
3. Excess sand and absorbent material has been removed
4. No material will be tracked beyond the limits of treatment by traffic

Replace section 15-5.09 with:

**15-5.09 POLYESTER CONCRETE EXPANSION DAMS**

**15-5.09A General**

Section 15-5.09 includes specifications for constructing polyester concrete expansion dams.

Polyester concrete expansion dams must comply with the specifications for polyester concrete overlays in section 15-5.06, except a trial slab is not required.

Reinforcement must comply with section 52.

**15-5.09B Materials**

Not Used

**15-5.09C Construction**

For new asphalt concrete overlays, place the asphalt concrete overlay before starting polyester concrete activities. Saw cut and remove asphalt concrete at expansion dam locations.

For existing asphalt concrete overlays, remove expansion dams and asphalt concrete to the limits shown. Removing expansion dams must comply with section 15-4 except a bridge removal work plan is not required.

Where a portion of the asphalt concrete overlay is to remain, saw cut a 2-inch-deep neat line along the edge to remain in place before removing the asphalt concrete. Do not damage the existing surfacing to remain in place.

Prepare the deck surface under section 15-5.01C(2).

You may use a mechanical mixer to mix the polyester concrete for expansion dams. The mixer capacity must not exceed 9 cu ft unless authorized. Initiate the resin and thoroughly blend it immediately before mixing it with the aggregate. Mix the polyester concrete for at least 2 minutes before placing.

The application rate of methacrylate resin must be approximately 100 sq ft/gal.

You may place and finish expansion dams using hand methods.

Protect expansion dams from moisture, traffic, and equipment for at least 4 hours after finishing.

For expansion dams over 6 feet long, install 1/4-inch-wide joint material at 6-foot intervals across the width of the expansion dam. Joint material must be either expanded polyurethane or expanded polyethylene.

**15-5.09D Payment**

Not Used

**Replace section 15-5.10 with:**

**15-5.10 MULTILAYER POLYESTER OVERLAY**

**15-5.10A General**

**15-5.10A(1) Summary**

Section 15-5.09 includes specifications for placing a multilayer polyester overlay system.

A technical representative from the material manufacturer must be present during the overlay application.

**15-5.10A(2) Definitions**

**basalt aggregates:** a dark-colored, fine-grained, igneous rock aggregate composed mainly of plagioclase and pyroxene minerals

**calcined bauxite aggregates:** a stable aluminium oxide based aggregate produced by heating high alumina containing bauxite ore.

**copper slag:** a by-product produced during the matte smelting and refining of copper.

**multilayer polyester overlay system:** Two layers of polyester resin binder combined with a blend of specially selected aggregate broadcast onto a spread resin binder.

**slag aggregate:** a nonmetallic by-product produced in a molten condition simultaneously with iron in blast furnaces.

**15-5.10A(3) Submittals**

Submit the surface abrasion resistance tests results for each aggregate shown.

Submit a work plan for overlay placement. Include the following:

1. Schedule of overlay work and testing for each bridge
2. Placement methods, including:
  - 2.1. The manufacturer's application instructions
  - 2.2. Description of equipment for applying polyester resin
  - 2.3. Description of equipment for continuously measuring, mixing, and placing the multilayer polyester overlay
  - 2.4. Method for isolating expansion joints
3. Method for storage and handling of polyester resin and multilayer polyester overlay components
4. Method for disposal of excess polyester resin, multilayer polyester overlay components and containers
5. Curing time for multilayer polyester overlay

With each shipment of polyester resin binder, submit a material safety data sheets for each component.

**15-5.10B Quality Control and Assurance**

Complete a trial overlay before starting production overlay activities.

The trial overlay must:

1. Be at least 12 feet wide by 6 feet long and the same thickness as the project overlay
2. Be constructed on a prepared concrete base
3. Be placed within the project limits at an authorized location
4. Be constructed using the same equipment as the production work
5. Replicate field conditions for the production work
6. Be used to determine the initial polyester resin binder set time
7. Demonstrate suitability of the proposed means and methods

The Engineer determines acceptability of the trial overlay.

Dispose of the trial overlay and concrete base after acceptance.

### 15-5.10C MATERIALS

Multilayer polyester overlay consists of polyester resin binder and aggregate.

Polyester resin binder must comply with section 15-5.06B.

Aggregate must be calcined bauxite, copper slag, basalt or coarse aggregate.

Coarse aggregate must comply with section 90-1.02C(2) and the following requirements:

Aggregate Requirements		
Property	Requirement	Test Method
Aggregate Abrasion Value	10% max	California Test 211
Aggregate Grading: No. 6 Sieve	95% min	California Test 202
No. 16 sieve	5% max	California Test 202
Aggregate Acid Insolubility	Greater than 90%	ASTM D3042
Aggregate Magnesium Soundness	30% max	ASTM C88

Calcined bauxite, copper slag, and basalt aggregate must be commercial quality.

### 15-5.10D CONSTRUCTION

Prepare the deck surface before placing the overlay.

Overlay thickness must be from 1/4 and 3/8 inches.

Place and cure multilayer polyester overlay under the polyester resin manufacturer's instructions.

Use the type of aggregate as shown.

Each overlay layer must contain:

1. At least 2-1/2 pounds of polyester resin binder per square yard.
2. At least 13 pounds of retained aggregate per square yard.

The deck surface must be dry before Applying resin. The deck surface must be from 50 to 100 degrees F. Relative humidity must be not more than 85 percent.

Use automated continuous applicator equipment to place the overlay. The applicator equipment must continuously mix, meter, monitor, and apply the polyester resin binder and aggregate while placing an overlay layer.

The second overlay layer must be place:

1. Within:4 hours after completing the first layer
2. After the first overlay layer must be completely cured

Hand application of overlays is allowed in areas less than 200 square feet.

Remove excess and loose aggregate by power sweeping.

The surface texture of the overlay must be uniform and must have a coefficient of friction of not less than 0.35. The Engineer tests the coefficient of friction of the overlay surfaces under California Test 342. Portions of completed overlay surfaces having a coefficient of friction less than 0.35 must be removed under the manufacturer's instructions and have the overlay reapplied.

The smoothness of the finished surface will be tested with a straightedge. The surface must not vary more than 0.02 foot in any direction from the lower edge of a 12 ± 0.2-foot-long straightedge placed in any direction. Any surface that fails must be removed by grinding and have the overlay reapplied.

Grinding failed surface areas must comply with section 42-3.

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Determine the surface abrasion resistance for each multilayer polyester overlay aggregate under California Test 550.

Do not allow traffic on the overlay until after the minimum time recommended under the resin manufacturer's instructions.

Equipment must be fitted with suitable traps, filters, drip pans, or other devices necessary to prevent oil or other deleterious material from being deposited on the deck.

If magnesium phosphate concrete is placed before the deck overlay, the magnesium phosphate concrete must be placed at least 72 hours before placing the polyester binder coat.

If modified high alumina based concrete is placed before the deck overlay, the polyester binder coat must not be placed on the existing concrete deck surface until at least 30 minutes after final set.

Expansion joints and deck drains must be adequately isolated prior to overlaying.

**15-5.10E PAYMENT**

Not Used