

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

OFFICE ENGINEER

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*Flex your power!  
Be energy efficient!*

April 26, 2012

06-Kin,Tul-198-R21.5/28.3, 0.0/R3.4

06-0L0504

Project ID 0600000936

ACNH-P198(059)E

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN KINGS AND TULARE COUNTIES NEAR HANFORD FROM 0.5 MILE EAST OF ROUTE 43/198 SEPARATION TO 0.4 MILE WEST OF ROUTE 99/198 SEPARATION.

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 Tuesday, May 1, 2012.

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

In the Special Provisions, Section 10-2.05, "IRRIGATION SYSTEMS", subsection, "ELECTRIC AUTOMATIC IRRIGATION COMPONENTS," is added after the subsection "GATE VALVES," as attached.

In the Special Provisions, Section 10-2.05, "IRRIGATION SYSTEMS", subsection, "ARMOR CLAD CONDUCTORS," is added before the subsection "IRRIGATION SYSTEMS FUNCTIONAL TEST," as attached.

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.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the Bid book.

Submit bids in the Bid book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

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

**[http://www.dot.ca.gov/hq/esc/oe/project\\_ads\\_addenda/06/06-0L0504](http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/06/06-0L0504)**

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,



REBECCA D. HARNAGEL  
Chief, Office of Plans, Specifications & Estimates  
Office Engineer  
Division of Engineering Services

Attachments

## **ELECTRIC AUTOMATIC IRRIGATION COMPONENTS**

Attention is directed to the provisions in "Electric Service (Irrigation)" of these special provisions regarding electrical power for irrigation controllers and irrigation controller enclosure cabinets.

### **Electric Remote Control Valves**

Electric remote control valves shall conform to the provisions in Section 20-2.23, "Control Valves," of the Standard Specifications and the following:

- A. Valves shall be brass, construction.
- B. Valves shall be combination angle pattern (bottom inlet and side inlet) installed as an angle pattern (bottom inlet), as shown on the plans.

### **Pull Boxes**

Pull box installations shall conform to the provisions in Section 20-5.027I, "Conductors, Electrical Conduits and Pull Boxes," of the Standard Specifications.

### **Conductors**

Low voltage, as used in this section "Conductors," shall mean 36 V or less.

Markers for the control conductors shall be identified with the appropriate number or letter designations of irrigation controllers and station numbers. Markers for neutral conductors shall be identified with the appropriate number or letter designations of the irrigation controllers.

The color of low voltage neutral and control conductor insulation, except for the striped portions, shall be homogeneous throughout the entire thickness of the insulation.

Insulation for conductors may be UL listed polyethylene conforming to UL44 test standards with a minimum insulation thickness of 41 mils for wire sizes 10AWG and smaller.

## **ARMOR-CLAD CONDUCTORS**

Armor-clad conductors shall be used in direct burial applications from pull boxes adjacent to irrigation controller to remote control valves and other irrigation facilities in conformance with the details shown on the plans and these special provisions.

Armor-clad conductors shall conform to the following:

- A. Conductors shall be the proper size for the application, and shall be solid, uncoated copper with a conductor size not less than 90 percent of the AWG diameter required.
- B. At the Contractor's option, conductor insulation coverings shall be either of the following:
  - 1. Polyvinyl chloride (PVC) conforming to UL style, Type UF 60°C, 600 V. Average thickness of insulation shall be not less than 60 mils, with a minimum thickness of 54 mils, or
  - 2. UL listed polyethylene conforming to UL44 test standards with a minimum insulation thickness of 41 mils for wire sizes 10AWG and smaller.
- C. Armor shall be a minimum 0.005-inch thick by 0.50-inch wide Type 304 stainless steel tape that is helically wrapped over each conductor with a 33 percent minimum overlap.
- D. Outer jacket for conductors shall be sunlight resistant PVC and shall conform to the Insulated Power Cable Engineer's Association (ICEA) S-61-402, NEMA Standard WC5, and UL Listing 1263. Nominal thickness of the outer jacket shall be 30 mils with a minimum thickness of 24 mils.

Armor-clad conductors will be measured and paid for as control and neutral conductors.