

June 5, 2014

SUBJECT: FAU Route 3778 (Crawford Avenue) Section (1212.2, 1112.1, 0708)RS Cook County Contract No. 60Y03 Item No. 30, June 13, 2014 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. Replaced the Schedule of Prices
- 2. Revised page ii of the Table of Contents to the Special Provisions
- 3. Added pages 93-99 to the Special Provisions
- 4. Revised sheets 1, 2 & 5 of the Plans
- 5. Added sheets 15A-15C to the Plans

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

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

John D. Baranzelli, P.E. Acting Engineer of Design and Environment

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By: Ted B. Walschleger, P. E. Engineer of Project Management

cc: John Fortmann, Region 1, District 1; Tim Kell; Estimates

MS/kf

State Job # - C-91-287-14

Project Number

Route

FAU 3778

County Name - COOK- -Code - 31 - -

*REVISED: JUNE 02, 2014

District - 1 - -

Section Number - (1212.2,1112.1,0708)RS

ltem Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
XZ043900	PREF JOINT FILLER REM	FOOT	5,120.000				
*ADD X0301242	PIEZO AXLE SEN CL 2	FOOT	4.000				
X2020110	GRADING & SHAP SHLDRS	UNIT	14.000				
X4060110	BIT MATLS PR CT	POUND	34,184.000				
X4400100	PCC SURF REM VAR DP	SQ YD	8,100.000				
X5537800	SS CLEANED 12	FOOT	3,400.000				
*ADD X8730810	EC C CONOGA 30003	FOOT	403.000				
Z0004562	COMB C C&G REM & REPL	FOOT	750.000				
Z0018500	DRAINAGE STR CLEANED	EACH	47.000				
Z0030850	TEMP INFO SIGNING	SQ FT	51.400				
20201200	REM & DISP UNS MATL	CU YD	2.000				
21101615	TOPSOIL F & P 4	SQ YD	155.000				
25200110	SODDING SALT TOLERANT	SQ YD	155.000				
40600400	MIX CR JTS FLANGEWYS	TON	100.000				
40600827	P LB MM IL-4.75 N50	TON	2,835.000				

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ltem Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
40600895	CONSTRUC TEST STRIP	EACH	1.000				
40600982	HMA SURF REM BUTT JT	SQ YD	653.000				
40600985	PCC SURF REM BUTT JT	SQ YD	458.000				
40601005	HMA REPL OVER PATCH	TON	141.000				
40603085	HMA BC IL-19.0 N70	τον	87.000				
40603340	HMA SC "D" N70	τον	4,307.000				
42001300	PROTECTIVE COAT	SQ YD	563.000				
42400200	PC CONC SIDEWALK 5	SQ FT	450.000				
42400800	DETECTABLE WARNINGS	SQ FT	70.000				
44000155	HMA SURF REM 1 1/2	SQ YD	264.000				
44000159	HMA SURF REM 2 1/2	SQ YD	10,203.000				
44000600	SIDEWALK REM	SQ FT	450.000				
44002210	HMA RM OV PATCH 2 1/2	SQ YD	1,007.000				
44003100	MEDIAN REMOVAL	SQ FT	2,364.000				
44003510	MEDIAN REMOVAL (PD)	SQ FT	47,303.000				

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ltem Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
44022029	PARTIAL DEPTH REM 3	SQ YD	515.000				
44201765	CL D PATCH T2 10	SQ YD	700.000				
44201769	CL D PATCH T3 10	SQ YD	350.000				
44201771	CL D PATCH T4 10	SQ YD	465.000				
48102100	AGG WEDGE SHLD TYPE B	TON	30.000				
60251740	CB ADJ NEW T24F&G	EACH	3.000				
60252800	CB RECONST	EACH	6.000				
60300105	FR & GRATES ADJUST	EACH	17.000				
60300305	FR & LIDS ADJUST	EACH	26.000				
60624600	CORRUGATED MED	SQ FT	2,364.000				
66900200	NON SPL WASTE DISPOSL	CU YD	5.000				
66900450	SPL WASTE PLNS/REPORT	L SUM	1.000				
66900530	SOIL DISPOSAL ANALY	EACH	1.000				***************************************
67000400	ENGR FIELD OFFICE A	CAL MO	6.000				
67100100	MOBILIZATION	L SUM	1.000				

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ltem Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
70100310	TRAF CONT-PROT 701421	L SUM	1.000				
70100460	TRAF CONT-PROT 701306	L SUM	1.000				
70100600	TRAF CONT-PROT 701336	L SUM	1.000				
70102625	TR CONT & PROT 701606	L SUM	1.000				
70102632	TR CONT & PROT 701602	L SUM	1.000				
70102635	TR CONT & PROT 701701	L SUM	1.000				
70102640	TR CONT & PROT 701801	L SUM	1.000				
70300100	SHORT TERM PAVT MKING	FOOT	19,650.000				
70300210	TEMP PVT MK LTR & SYM	SQ FT	437.000				
70300220	TEMP PVT MK LINE 4	FOOT	32,210.000				
70300240	TEMP PVT MK LINE 6	FOOT	1,321.000				
70300260	TEMP PVT MK LINE 12	FOOT	1,106.000				
70300280	TEMP PVT MK LINE 24	FOOT	173.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	13,287.000				
78000100	THPL PVT MK LTR & SYM	SQ FT	437.000				

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District - 1 - -

Section Number - (1212.2,1112.1,0708)RS

ltem Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
78000200	THPL PVT MK LINE 4	FOOT	32,210.000				
78000400	THPL PVT MK LINE 6	FOOT	1,321.000				
78000600	THPL PVT MK LINE 12	FOOT	1,106.000				
78000650	THPL PVT MK LINE 24	FOOT	173.000				
78100100	RAISED REFL PAVT MKR	EACH	845.000				
78300200	RAISED REF PVT MK REM	EACH	600.000				
*ADD 81028730	UNDRGRD C CNC 1 1/4	FOOT	87.200				
*ADD 81028770	UNDRGRD C CNC 3	FOOT	84.500				
*ADD 81400200	HD HANDHOLE	EACH	2.000				
*ADD 88600100	DET LOOP T1	FOOT	430.000				
88600600	DET LOOP REPL	FOOT	372.000				
89502376	REBUILD EX HANDHOLE	EACH	2.000				
89502378	REBLD EX HH TO HD HH	EACH	2.000				

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FAU Route 3778 (Crawford Avenue) Section (1212.2, 1112.1, 0708) RS Cook County Contract 60Y03

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Revised 6/5/14

HEAVY-DUTY HANDHOLE

DESCRIPTION

This item shall consist of constructing a heavy-duty handhold cast in place, complete with frame and cover and in accordance with the following requirements and conforming in all respects to the lines, grades, and dimensions shown on the plans or as directed by the Engineer. All handholds shall be installed in accordance with Section 814 of the Standard Specifications.

MATERIALS

All materials shall conform to Article 1085.59, and all handholds shall be constructed of Class SI concrete conforming to Article 1020 of the Standard Specifications.

CONSTRUCTION DETAILS

Heavy-duty handholds shall be constructed in accordance with the details shown on the plans and conform to the following requirements:

<u>Concrete</u>: Concrete construction shall be done in accordance with the provisions of Concrete for Structures and Incidental Construction contained in Section. 503 of the Standard Specifications.

<u>Placing Castings</u>: Castings shall be set accurately to the finished elevation so that no subsequent adjustment will be necessary. Castings shall be set flush with a sidewalk or pavement surface. When installed in an earth shoulder away from the pavement edge, the top surface of the casting shall be 1 inch above the finished surface of the ground.

<u>Backfilling</u>: Any backfilling necessary under a pavement, shoulder, and sidewalk or within 2 feet of the pavement edge shall be made with sand or stone screenings.

<u>Forming</u>: Forms will be required for the inside face of the handhold wall, and across all trenches leading into the handhold excavation. The ends of conduits leading into the handhold shall fit into a conduit bell which shall fit tightly against the inside form and the concrete shall be carefully placed around it so as to prevent leakage.

<u>French Drain</u>: A French drain conforming to the dimensions shown on the plans shall be constructed in the bottom of the handhold excavation.

<u>Steel Hooks</u>: Each handhold shall be provided with four galvanized steel hooks of appropriate size, one on each wall of the handhold.

<u>Frame and Cover</u>: The outside of the cover shall contain a recessed ring (Type-G) for lifting and a legend "IDOT OPP" cast-in.

<u>Cleaning</u>: The handhold shall be thoroughly cleaned of any accumulation of silt, debris, or foreign matter of any kind, and shall be free from such accumulations at the time of final inspection.

BASIS FOR PAYMENT

This work will be paid for at the contract unit price each for HEAVY DUTY HANDHOLE which price shall be payment in full for all necessary excavating, backfilling, disposal of surplus material and form work, frame and cover, and furnishing all materials.

PIEZO AXLE SENSORS, CLASS-II

DESCRIPTION

This item consists of installing one Class II Piezo Axle Sensor (AMP Model No. 0-1004673-0 BLC Sensor Class II or equivalent), in each lane indicated on the plans.

The use of Global Resin Epoxy or equivalent is necessary for proper bonding. A minimum of thirty (30) days cure time for new asphalt is required before the epoxy is used for bonding. To accelerate cure time of the epoxy at temperatures below 50°F an epoxy heater will be furnished by IDOT. The contractor shall provide a 240V generator capable of providing at least 3,600 watts of power.

Piezo axle sensors may not be installed before permanent striping is completed on a newly resurfaced section of road. Installation of an automated traffic recorder must be completed no later than sixty (60) days after installation is begun.

MATERIAL

The Class II axle sensors, necessary RG58C/U transmission cable and Global Epoxy or equivalent for encapsulating sensors shall be furnished by the Contractor. ROADTRAX BLC Traffic Sensors manufactured by AMP Incorporated or equivalent shall be installed at this location. The axle sensor shall be flexible along its longitudinal axis to allow the sensor to easily conform to the profile of the lane in which it is being installed. Class II axle sensors shall be manufactured with suitable lengths of RG58C/U transmission cable for continuous run from axle sensor through the handhole to the cabinet. Splicing of transmission cable to axle sensor shall not be permitted unless approved in advance and supervised by Mr. Ramon Taylor of the Illinois Department of Transportation.

INSTALLATION

Installation shall be in accordance with the attached instructions. The Engineer should be advised at least three days prior to installation. Mr. Ramon Taylor of the Illinois Department of Transportation, telephone (217) 782-2065, must be present to supervise installation of the axle sensors.

Heated loop sealers shall not be used to seal the RG58C/U transmission cable in the pavement sawcut. Sealex or equivalent loop sealant shall be used.

TESTING

Piezo axle sensors shall be tested immediately upon installation and again at the time of Final Acceptance Inspection in the presence of the Engineer. The tests shall be performed utilizing an oscilloscope to ensure acceptable, clean signals of proper amplitude and polarity. Sensors that fail to test satisfactorily shall be repaired or replaced before final acceptance.

BASIS FOR PAYMENT

This work shall be paid for at the contract unit price per linear foot for PIEZO AXLE SENSOR, CLASS II, measured along the sawcut in the pavement containing the axle sensor. The lead-in measured from the end of the axle sensor to the dive hole shall be paid for at the contract unit price per linear foot for detector loop type I. The lead-in from the dive hole to the cabinet shall be considered incidental since it is provided with the sensor.

DETECTOR LOOP LEAD-IN CABLE IN CONDUIT, CONOGA-30003

DESCRIPTION

This work consists of furnishing and installing loop detector lead-in cables or interconnect cables of the number of pairs specified in the conduit in accordance with the requirements of the Standard Specifications, Section 886 and the following exceptions or additions:

MATERIALS

The Traffic Count Detector Loop Lead-in Cable shall be Canoga 30003 or equivalent.

INSTALLATION

Each end of the cable shall be identified with wire markers as directed by the Engineer.

The drain wire of each pair shall be grounded to chassis ground in the cabinet only for interference suppression.

The electrical values of the cable shall be metered by the Contractor, in the presence of the Engineer, after they are spliced to the detector loop. Acceptance of the cable as metered shall be determined by the Engineer.

BASIS FOR PAYMENT

This work shall be paid for at the contract unit price per lineal foot for ELECTRIC CABLE IN CONDUIT, CONOGA-30003.

DETECTOR LOOP, TYPE I

DESCRIPTION

This item shall consist of furnishing, installing and testing 6' X 8' rectangular detector loops at the locations shown on the plans. The detector loops shall be installed in accordance with all details shown on the plans and applicable portions of Section 886 of the Standard Specifications. All sawcutting, detector loop installation, joint sealing, lead-ins, and testing necessary to complete the installation shall conform to the following requirements:

MATERIALS

The cable used for detector loop shall be #14-7 strand XHHW XLP-600V, encased in orange Detecta-duct tubing as manufactured by Kris-Tech Wire Company, Inc or equivalent. All loop wire shall be UL listed. Lead-ins shall be Conoga-30003 cable or equivalent from the handhole to the cabinet. The jacket shall be made of high-density polyethylene.

At ambient air temperatures above 50 degrees F, joint sealer having a minimum tensile strength of 100 P.I.E. when tested by ASTM Method D638-58T shall be used. The sealer shall have sufficient strength and resiliency to withstand stresses caused by vibrations, and pavement expansion and contraction due to temperature changes. Adhesion of the sealer to Portland cement concrete shall be at least equal to the tensile strength of the concrete. The joint sealer shall have a maximum cure time of 30 minutes. Curing shall be defined as the capability of withstanding normal traffic loads without degradation. The sealer shall meet or exceed the specifications of OZ GEDNEY DOZSeal 230 filling compound.

If the ambient air temperature is below 50 degrees F, a hard asphalt-base filling and insulating compound having a high softening point and a high pouring temperature shall be used. The filling compound shall have a softening point of not less than 235 degrees F, a summer pouring temperature of 375 degrees F, and a winter pouring temperature of 425 degrees F.

INSTALLATION DETAILS

The Engineer shall be contacted regarding proposed changes in loop locations necessitated by badly deteriorated pavement. The Engineer may relocate such loops. Detector loops may not be installed before permanent striping is completed on a newly resurfaced section of road.

Slots in the pavement shall be cut with a concrete sawing machine in accordance with the applicable portions of Section 420.05 of the Standard Specifications. The slot must be clean, dry, and oil-free. Wire shall be inserted in the pavement slot with a blunt tool which will not damage the insulation. Loops shall not be dry cut. Loops shall not be installed at an outside temperature below 50° F unless directed by Engineer.

All excess joint sealer shall be removed so that the level of the sealer in the sawcut is at the same level as the adjoining pavement.

Plastic sleeving shall be used to insulate the wire where loop wire crosses cracks and joints in the pavement. The sleeving shall be properly sealed with electrical tape to prevent joint sealer from entering sleeves. Sleeving shall extend a minimum of 8 inches each side of joint.

Detector loops shall be centered in all traffic lanes unless designated otherwise on the plans or by the Engineer. Traffic lanes shall be referred to by number, and loop wire shall be color-coded and labeled accordingly. Lane #1 shall be the southbound (westernmost) or westbound (northernmost) outside lane. Subsequent lanes are to be coded sequentially towards the opposite outside shoulder. A chart which shows the coding for each installation shall be included in each cabinet. Core holes will not be allowed at corners of loops. Sawcuts for all detector loops and lead-ins shall not be greater than 2 3/4 inches in depth.

All detector loops shall contain four (4) turns of #14 wire. Detector loops shall not be connected in series with other loops. Each detector loop shall have its own lead-in cable to the cabinet when said detector loop is over 150 feet from the cabinet. The loop lead-in shall be a Canoga 30003 cable or equivalent. Loop and lead-in wires shall be free from kinks or any insulation abrasions. Lead-ins shall be twisted in such a manner so as to prevent mechanical movement between the individual cables. Lead-in cable shall be brought into a cabinet or handhole at the time the detector loop is placed in the pavement.

Where lead-in runs are less than 150 feet, the loop wire shall be utilized as lead-in to the point of termination without splices, being twisted 5 turns per foot. The loop wire will be paid for as lead-in from the handhole to the point of termination in the cabinet.

Loop lead-ins placed in handholes shall be coiled, taped and secured to the upper portion of the handhole to protect against water damage. The excess coiled wire should not exceed 6' in length. Any other method of installation will require prior written approval of the Engineer. Each loop lead-in shall be color coded and tagged at each angled drilled hole, handhole, and junction box through which it passes and at the termination point in the cabinet.

An angled hole shall be drilled at least 12 inches in from the edge of pavement through which the 1 1/4 inch PVC conduit containing the loop lead-in cable shall be installed (see plan detail).

The loop shall be spliced to the lead-in wire with a barrel sleeve, crimped and soldered. Adhesive-lined heat shrink tubing shall be used to provide waterproof protection for the splice. The soldered connection shall be made with a soldering iron or soldering gun. No other method will be acceptable, i.e. the use of a torch to solder will not be acceptable. The heat shrink tubing shall be shrunk with a heat gun. No other method will be acceptable, i.e. the use of a torch will be acceptable, i.e. the use of a torch will be acceptable. The use of a torch will be acceptable. No burrs shall be left on the wire when soldering is finished. Cold solder joints will not be acceptable.

The Traffic Count Detector Loop color code shall be as follows:

GRAY
ORANGE
PURPLE
BLUE
GREEN
YELLOW
BROWN
WHITE

At locations where there are more than eight loops , loops number nine through number sixteen shall repeat the same color code, but all loops shall additionally be marked to identify the lane.

In addition to color codes each loop shall be identified with a written label attached to the loop wire, or lead-in wire. The tags shall be Panduit #MP250W175-C or equivalent. All wires and cables shall be identified in each handhole or cabinet the cable passes through, or terminates in. The labels shall be attached to the cable by use of two cable ties.

PROTECTION OF WORK

Electrical work, equipment and appurtenances shall be protected from damage during construction until final acceptance. Electrical duct openings shall be capped or sealed to prevent the entrance of water and dirt. Wiring shall be protected from mechanical injury.

STANDARDS OF INSTALLATION

Electrical work shall be completed in a neat and workmanlike manner in accordance with the best practices of the trade. Unless otherwise indicated, materials and equipment shall be new and installed in accordance with the manufacturer's recommendations.

Except as specified elsewhere herein, materials and equipment shall be in conformance with the requirements of Section 106 of the Standard Specifications.

TESTING

Detector loops shall be tested immediately upon installation at each automated traffic recording station and again at the time of Final Acceptance Inspection in the presence of the Engineer. Items which fail to test satisfactorily shall be repaired or replaced before final acceptance.

An electronic test instrument capable of measuring large values of electrical resistance, such as a megger, shall be used to measure the resistance of the detector loop and its lead-in. The resistance of the loop and its lead-in shall be a minimum of 100 megohms above ground under any conditions of weather or moisture. The resistance tests and all electronic tests shall be performed in the presence of the Engineer any number of times as specified by the Engineer. The loop and loop lead-in shall have an inductance between 100 microhenries and 350 microhenries. The continuity test of the loop and loop lead-in shall not indicate a resistance greater than two (2) ohms. The Contractor shall conduct all testing in the presence of the Engineer and all readings will be recorded by the Engineer. Testing shall be done with an approved loop tester.

METHOD OF MEASUREMENT

The detector loop measurement shall be the length of sawcut in the pavement which contains loop wire. The actual length of wire used in the sawcut shall not be considered in any measurement.

BASIS FOR PAYMENT

This item will be paid at the contract unit price per lineal foot for DETECTOR LOOP, TYPE I.