April 14, 2017

SUBJECT: PARK ROADS (Beall Woods State Park)

Section PARK ROADS 2017-2

Wabash County Contract No. 46418

Item No. 55, April 28, 2017 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 pages 12-14 and 21-22 of the Special Provisions
- 3. Revised sheets 2, 4, 58, 59 and 61-68 of 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,

Maureen M. Addis, P.E.

Engineer of Design and Environment

By: Ted B. Walschleger, P. E.

Tete Jalucklyon P.E.

**Engineer of Project Management** 

cc: Jeff South, Region 4, District 7; Tim Kell; Estimates

CWR/ck

State Job # - C-30-020-16

County Name - WABASH- -

Code - 185 - - District - 7 - -

Section Number - PARK ROADS 2017-02

**Project Number** 

\*REVISED: APRIL 13, 2017

Route

**PARK ROAD** 

| Item<br>Number | Pay Item Description  | Unit of<br>Measure | Quantity | х | Unit Price | = | Total Price |
|----------------|-----------------------|--------------------|----------|---|------------|---|-------------|
| X0300019       | REM REIN PARKING BLKS | EACH               | 70.000   |   |            |   |             |
| X0301339       | REM EX PARKING BLOCKS | EACH               | 24.000   |   |            |   |             |
| X0301797       | GATE REMOVAL          | EACH               | 4.000    |   |            |   |             |
| X0320055       | WTR TWR (FREEZEPROOF) | EACH               | 1.000    |   |            |   |             |
| X0321309       | CONCRETE PAD          | SQ YD              | 8.000    |   |            |   |             |
| X0322939       | RELOC EX FLAR END SEC | EACH               | 1.000    |   |            |   |             |
| X0323013       | TUBULAR STEEL GATE    | EACH               | 2.000    |   |            |   |             |
| X0324062       | ENTRANCE SIGN         | L SUM              | 1.000    |   |            |   |             |
| X0325777       | BFLOW PREVENT/ENCLOSE | EACH               | 1.000    |   |            |   |             |
| X0325790       | WATER HYDRANT         | EACH               | 2.000    |   |            |   |             |
| X0326498       | GFCI20A DX RECEPTACLE | EACH               | 4.000    |   |            |   |             |
| X0327680       | TRENCH DRAIN          | FOOT               | 44.000   |   |            |   |             |
| X0696100       | PARKING BLOCKS        | EACH               | 36.000   |   |            |   |             |
| X1400094       | LUM LED HM LOW WATT   | EACH               | 7.000    |   |            |   |             |
| X1400224       | LIGHT POLE SPC 30'    | EACH               | 7.000    |   |            |   |             |

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**PARK ROAD** 

| ltem<br>Number | Pay Item Description  | Unit of<br>Measure | Quantity  | X | Unit Price | = | Total Price |
|----------------|-----------------------|--------------------|-----------|---|------------|---|-------------|
| X1400225       | SLR LED LGHT UNIT CMP | EACH               | 1.000     |   |            |   |             |
| X2010400       | STUMP REMOVAL ONLY    | UNIT               | 27.000    |   |            |   |             |
| X2200003       | FENCE (SPECIAL)       | FOOT               | 32.000    |   |            |   |             |
| X2600016       | MINOR SIGN COMPLETE   | EACH               | 16.000    |   |            |   |             |
| X4020900       | AGG SURF CSE B SPL    | SQ YD              | 2,175.000 |   |            |   |             |
| X6061055       | CONCRETE ISLAND SPL   | SQ FT              | 370.000   |   |            |   |             |
| X6340205       | GUARD POSTS REMOV     | EACH               | 58.000    |   |            |   |             |
| X7010216       | TRAF CONT & PROT SPL  | L SUM              | 1.000     |   |            |   |             |
| X7240300       | SIGN REMOVAL          | EACH               | 18.000    |   |            |   |             |
| X7330064       | SIGN SUPPORT SPL      | EACH               | 16.000    |   |            |   |             |
| X8570100       | DISCONNECT SWITCH     | EACH               | 3.000     |   |            |   |             |
| X8780105       | CONC FDN SPL          | EACH               | 4.000     |   |            |   |             |
| Z0004002       | BOLLARDS              | EACH               | 3.000     |   |            |   |             |
| Z0013300       | CONC REM SPEC         | SQ YD              | 6.000     |   |            |   |             |
| Z0056700       | SAN SEW 4             | FOOT               | 40.000    |   |            |   |             |

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**PARK ROAD** 

| Item<br>Number | Pay Item Description | Unit of Measure | Quantity   | x | Unit Price | = | Total Price |
|----------------|----------------------|-----------------|------------|---|------------|---|-------------|
| 20200100       | EARTH EXCAVATION     | CU YD           | 811.000    |   |            |   |             |
| 20800150       | TRENCH BACKFILL      | CU YD           | 63.000     |   |            |   |             |
| 21101600       | TOPSOIL F & P VAR DP | SQ YD           | 14,329.000 |   |            |   |             |
| 21400100       | GRADING & SHAP DITCH | FOOT            | 120.000    |   |            |   |             |
| 28000305       | TEMP DITCH CHECKS    | FOOT            | 113.000    |   |            |   |             |
| 28000500       | INLET & PIPE PROTECT | EACH            | 2.000      |   |            |   |             |
| 35101600       | AGG BASE CSE B 4     | SQ YD           | 1,183.000  |   |            |   |             |
| 35101800       | AGG BASE CSE B 6     | SQ YD           | 1,526.000  |   |            |   |             |
| 40200100       | AGG SURF CSE A       | TON             | 7.000      |   |            |   |             |
| 40600275       | BIT MATLS PR CT      | POUND           | 4,850.000  |   |            |   |             |
| 40600290       | BIT MATLS TACK CT    | POUND           | 10,697.000 |   |            |   |             |
| 40600400       | MIX CR JTS FLANGEWYS | TON             | 1.600      |   |            |   |             |
| 40600982       | HMA SURF REM BUTT JT | SQ YD           | 245.000    |   |            |   |             |
| 40600990       | TEMPORARY RAMP       | SQ YD           | 36.000     |   |            |   |             |
| 40602978       | HMA BC IL-9.5 N50    | TON             | 611.000    |   |            |   |             |

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| Item<br>Number | Pay Item Description | Unit of<br>Measure | Quantity  | x | Unit Price | = | Total Price |
|----------------|----------------------|--------------------|-----------|---|------------|---|-------------|
| 40603310       | HMA SC "C" N50       | TON                | 2,691.000 |   |            |   |             |
| 42000060       | WELDED WIRE REINF    | SQ YD              | 160.000   |   |            |   |             |
| 42000100       | PCC PVT 6            | SQ YD              | 128.000   |   |            |   |             |
| 42000300       | PCC PVT 8            | SQ YD              | 32.000    |   |            |   |             |
| 42400200       | PC CONC SIDEWALK 5   | SQ FT              | 1,183.000 |   |            |   |             |
| 42400800       | DETECTABLE WARNINGS  | SQ FT              | 38.000    |   |            |   |             |
| 44000100       | PAVEMENT REM         | SQ YD              | 262.000   |   |            |   |             |
| 44000600       | SIDEWALK REM         | SQ FT              | 1,206.000 |   |            |   |             |
| 44201761       | CL D PATCH T1 10     | SQ YD              | 65.000    |   |            |   |             |
| 44201765       | CL D PATCH T2 10     | SQ YD              | 97.000    |   |            |   |             |
| 48101500       | AGGREGATE SHLDS B 6  | SQ YD              | 263.000   |   |            |   |             |
| 50105220       | PIPE CULVERT REMOV   | FOOT               | 803.000   |   |            |   |             |
| 542C0213       | P CUL CL C 1 8       | FOOT               | 34.000    |   |            |   |             |
| 542C0217       | P CUL CL C 1 12      | FOOT               | 451.000   |   |            |   |             |
| 542C0220       | P CUL CL C 1 15      | FOOT               | 86.000    |   |            |   |             |

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| Item<br>Number | Pay Item Description  | Unit of<br>Measure | Quantity  | x | Unit Price | = | Total Price |
|----------------|-----------------------|--------------------|-----------|---|------------|---|-------------|
| 542C0223       | P CUL CL C 1 18       | FOOT               | 303.000   |   |            |   |             |
| 54213447       | END SECTIONS 12       | EACH               | 24.000    |   |            |   |             |
| 54213450       | END SECTIONS 15       | EACH               | 6.000     |   |            |   |             |
| 54213453       | END SECTIONS 18       | EACH               | 10.000    |   |            |   |             |
| 54215543       | MET END SEC 8         | EACH               | 1.000     |   |            |   |             |
| 56200300       | WATER SERV LINE 1     | FOOT               | 9.000     |   |            |   |             |
| 56200500       | WATER SERV LINE 1 1/2 | FOOT               | 67.000    |   |            |   |             |
| 60605900       | COMB CC&G TB9.12      | FOOT               | 76.000    |   |            |   |             |
| 63400105       | GUARD POSTS           | EACH               | 45.000    |   |            |   |             |
| 67000500       | ENGR FIELD OFFICE B   | CAL MO             | 4.000     |   |            |   |             |
| 67100100       | MOBILIZATION          | L SUM              | 1.000     |   |            |   |             |
| 72000100       | SIGN PANEL T1         | SQ FT              | 82.000    |   |            |   |             |
| 73000100       | WOOD SIN SUPPORT      | FOOT               | 331.000   |   |            |   |             |
| 78001100       | PT PVT MK LTRS & SYMB | SQ FT              | 102.800   |   |            |   |             |
| 78001110       | PAINT PVT MK LINE 4   | FOOT               | 2,696.000 |   |            |   |             |

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| Item<br>Number | Pay Item Description  | Unit of<br>Measure | Quantity  | X | Unit Price | = | Total Price |
|----------------|-----------------------|--------------------|-----------|---|------------|---|-------------|
| 78001130       | PAINT PVT MK LINE 6   | FOOT               | 2,665.000 |   |            |   |             |
| 80400100       | ELECT SERV INSTALL    | EACH               | 1.000     |   |            |   |             |
| 81028720       | UNDRGRD C CNC 1       | FOOT               | 110.000   |   |            |   |             |
| 81028750       | UNDRGRD C CNC 2       | FOOT               | 102.000   |   |            |   |             |
| 81603010       | UD 2#10#10GXLPUSE 3/4 | FOOT               | 642.000   |   |            |   |             |
| 81603063       | UD 4#10 #10GXLP 1P    | FOOT               | 292.000   |   |            |   |             |
| 81702110       | EC C XLP USE 1C 10    | FOOT               | 895.000   |   |            |   |             |
| *REV 83600200  | LIGHT POLE FDN 24D    | FOOT               | 42.000    |   |            |   |             |
| 84200600       | REM LT U NO SALV      | EACH               | 4.000     |   |            |   |             |
| 84500120       | REMOV ELECT SERV INST | EACH               | 1.000     |   |            |   |             |
| 89502300       | REM ELCBL FR CON      | FOOT               | 2,685.000 |   |            |   |             |

| CONTRACT NUMBER       | 46418 |
|-----------------------|-------|
| THIS IS THE TOTAL BID | \$    |

#### NOTES:

- 1. Each PAY ITEM should have a UNIT PRICE and a TOTAL PRICE.
- 2. The UNIT PRICE shall govern if no TOTAL PRICE is shown or if there is a discrepancy between the product of the UNIT PRICE multiplied by the QUANTITY.
- 3. If a UNIT PRICE is omitted, the TOTAL PRICE will be divided by the QUANTITY in order to establish a UNIT PRICE.
- 4. A bid may be declared UNACCEPTABLE if neither a unit price nor a total price is shown.

#### **GUARD POSTS**

This item shall consist of furnishing and installing guard posts at the locations noted in the plans in accordance with the details in the plans, this special provision, and Section 634 of the Standard Specifications with the exception of the hemispherical shape of the top. The top of the guard posts shall not be rounded, but shall be sloped at 45 degrees to the horizontal. The cross section of the guard posts shall be nominal 6 inches by 6 inches. The posts shall be 6 feet in length. They shall be placed so that the tip of the bollard is 24 inches above the ground.

This work will be paid for at the contract unit price per Each for GUARD POSTS and no further compensation will be allowed.

#### **GUARD POSTS REMOVAL**

This item shall consist of the removal and disposal of existing guard posts at the locations noted in the plans in accordance with applicable portions of Section 632 of the Standard Specifications and this special provision. The existing guard posts shall not be salvaged or used for any of the proposed guard posts.

This work will be paid for at the contract unit price per Each for GUARD POSTS REMOVAL and no further compensation will be allowed.

### **LIGHT POLE, SPECIAL, 30'**

<u>Description.</u> This work consists of furnishing and installing an aluminum light pole complete with an arm of the size specified in the plans, in accordance with the applicable requirements of Section 830 of the Standard Specifications for Road and Bridge Construction, and as specified herein.

Holes for conductor and mounting hardware shall be factory drilled at the height specified in the plans for a GFCI box, when required, and for a pole mounted disconnect switch, when required.

<u>Finish.</u> Poles, arms, and attachments shall be dark bronze anodized aluminum alloy according to ASTM B211, 6061-T6.

<u>Basis of Payment.</u> This work will be paid for at the contract unit price per each for LIGHT POLE, SPECIAL, 30'.

Revised 4-14-17

### **LUMINAIRE, LED, HORIZONTAL MOUNT**

<u>Description:</u> This work consists of furnishing all materials, equipment, and labor necessary to install Light-Emitting Diode (LED) luminaires as shown on the plans, in accordance with the applicable requirements of Section 821 of the Standard Specifications for Road and Bridge Construction, and as specified herein.

**General:** The luminaire shall be assembled in the continental U.S.A. and shall be assembled by and manufactured by the same Manufacturer. Quick connect/disconnect plugs shall be supplied between the discrete electrical components within the luminaire such as the driver, surge protection device, and optical assembly for easy removal. The quick connect/disconnect plugs shall be operable without the use of tools and while wearing insulated gloves. The luminaire shall be in compliance with ANSI C136.37. LED light source(s) and driver(s) shall comply with the material requirements of the Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU.

Manufacturer Experience. The luminaire shall be designed to be incorporated into a lighting system with an expected 30-year lifetime. The luminaire's Manufacturer shall have a minimum of 30 years of experience manufacturing High Intensity Discharge (HID) roadway luminaires and shall have a minimum of 5 years of experience manufacturing LED roadway luminaires. The luminaire's Manufacturer shall have a minimum of 5,000 total LED roadway luminaires installed on a minimum of 30 separate installations, all within the continental U.S.A.

<u>Housing:</u> The housing shall be designed to ensure maximum heat dissipation and to prevent the accumulation of water, ice, dirt and debris. A passive cooling method with no moving or rotating parts shall be employed for heat management. The effective projected area of the luminaire shall not exceed 1.4 sq. ft. The total weight of the luminaire(s) and accessories shall not exceed 75 pounds. Wiring within the electrical enclosure shall be rated at 600 V, 221 °F (105 °C) or higher.

Finish. Painted or finished luminaire surfaces exposed to the environment, shall exceed a rating of six according to ASTM D1654 after 1000 hours of ASTM B117 testing. The coating shall exhibit no greater than 30 % reduction of gloss according to ASTM D523, after 500 hours of ASTM G154 Cycle 6 QUV® accelerated weathering testing.

Attachment. The luminaire shall slip-fit on a mounting arm with a 2 in (5 cm) diameter tenon (2.375 in (6 cm) outer diameter), and shall have a barrier to limit the amount of insertion. The luminaire shall be provided with a leveling surface and shall be capable of being tilted  $\pm 5$  degrees from the axis of attachment in not more than 2.5 degree increments and rotated to any degree with respect to the supporting arm.

Receptacle. The luminaire shall include a fully prewired, 7-pin twist lock ANSI C136.41 compliant receptacle. Unused pins shall be connected as directed by the Manufacturer and as approved by the Engineer. A shorting cap shall be provided with the luminaire. A photocell shall be installed on top of luminaire. The furnishing and installation of photocell shall be included in this pay item.

Vibration Characteristics. All luminaires shall pass ANSI C136.31 requirements. Roadway luminaires mounted on a bridge and high mast luminaires shall be rated for "3G" peak acceleration. Vibration testing shall be run using the same luminaire in all three axes.

Labels and Decals. All luminaires shall have external labels in compliance with the latest version of ANSI C136.15 and internal labels in compliance with the latest version of ANSI C136.22.

The luminaire shall be listed for wet locations by a Nationally Recognized Testing Laboratory (NRTL) as defined by OSHA and shall be in compliance with UL 8750 and UL 1598. It shall be identified as such by the holographic UL tag/sticker on the inside of the luminaire.

Hardware. All external fasteners shall be stainless steel. All hardware shall have corrosion resistance.

<u>Optical Assembly:</u> The LED optical assembly, consisting of LED packages, shall have a minimum Ingress Protection rating of IP66 according to ANSI C136.25-2013. Circuiting shall be designed to minimize the impact of individual LED failures on the operation of the other LEDs.

The optical assembly shall utilize high brightness, long life, minimum 70 color rendering index (CRI), 3,000 K color temperature (+/-300 K) LEDs binned according to ANSI C78.377. Lenses shall be UV-stabilized acrylic or glass. Provisions for house-side shielding shall be provided when specified.

Lumen depreciation at 50,000 hours of operation shall not exceed 15% of initial lumen output at the specified LED drive current and an ambient temperature of 77 °F (25 °C).

The assembly shall have individual serial numbers or other means for Manufacturer tracking.

**Photometric Performance:** The classification of LED luminaires shall be as follows:

The LED luminaire shall have a wattage ≤ 110, and initial lumens within the range of 10,000 to 11,000. Luminaires with lumens below the stated minimums will not be accepted.

Testing. Luminaires shall be tested according to IES LM-79. The laboratory performing this test shall hold accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) under NIST. Submitted reports shall have a backlight, uplight, and glare (BUG) rating according to IESNA TM-15 including a luminaire classification system graph with both the recorded lumen value and percent lumens by zone.

Lumen maintenance shall be measured for the LEDs according to LM-80, or when available for the luminaires according to LM-84. The LM-80 report shall be based on a minimum of 6,000 hours, yet 10,000 hour reports shall be provided for luminaires where those tests have been completed.

Thermal testing shall be provided according to UL 1598. The luminaire shall start and operate in the ambient temperature range specified. The maximum rated case temperature of the driver, LEDs, and other internal components shall not be exceeded when the luminaire is operated in the ambient temperature range specified.

### STATE OF ILLINOIS ILLINOIS DEPARTMENT OF TRANSPORTATION LUMINAIRE PERFORMANCE TABLE FOR LUMINAIRE 1

| GIVEN CONDITIONS |  |                 |
|------------------|--|-----------------|
| ROADWAY DATA     | Pavement Width (in one direction only)   | 65 ft.          |
|                  | Pavement Width (in opposite direction)   | N/A             |
|                  | Number of Lanes (in one direction only)  | N/A             |
|                  | Number of Lanes (in opposite direction)  | N/A             |
|                  | Median width                             | N/A             |
|                  | I.E.S. Surface Classification            | R4              |
|                  | Q-Zero Value                             | .07             |
| LIGHT POLE DATA  | Mounting Height                          | 30 ft.          |
|                  | Mast Arm Length                          | 1 ft.           |
|                  | Pole Set-Back From Edge of Pavement      | 5 ft.           |
| LUMINAIRE DATA   | Luminaire Type                           | LED             |
|                  | Luminaire Lumens                         | 10,000 – 11,000 |
|                  | I.E.S. Vertical Distribution             |                 |
|                  | I.E.S. Control Of Distribution           |                 |
|                  | I.E.S. Lateral Distribution              | Type III        |
|                  | Lamp Lumen Depreciation Factor           | 0.90 min        |
|                  | Dirt Depreciation Factor                 | 0.80            |
|                  | Equipment Factor                         | 0.95            |
|                  | Total Light Loss Factor                  | 0.684 min       |
| LAYOUT DATA      | Spacing                                  | 140 ft.         |
|                  | Configuration                            | Opposite        |
|                  | Luminaire Overhang over edge of pavement | -4 ft.          |

**NOTE**: Variations from the above specified I.E.S. distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

### PERFORMANCE REQUIREMENTS

**NOTE**: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above. TM-21 and LM-80 reports must be attached and must support the Lamp Lumen Depreciation Factor given above.

| LUMINANCEAverage Luminance, $L_{AVE}$ N/AUniformity Ratio, $L_{AVE}/L_{MIN}$ N/AUniformity Ratio, $L_{MAX}/L_{MIN}$ N/AMax. Veiling Luminance Ratio, $L_V/L_{AVE}$ N/AColor Temperature3.000 CCT | ILLUMINATION | Minimum Horizontal Illumination, $E_{\text{MIN}}$<br>Uniformity Ratio, $E_{\text{AVE}}/E_{\text{MIN}}$ | 5 Lux / 0.50 fc<br>4.0:1 |
|--|--------------|--|--------------------------|
| Max. Veiling Luminance Ratio, L <sub>V</sub> /L <sub>AVE</sub> N/A   | LUMINANCE    | _  |                          |
|  |              | Uniformity Ratio, L <sub>MAX</sub> /L <sub>MIN</sub>   | N/A                      |
| Color Temperature 3.000 CCT  |              | Max. Veiling Luminance Ratio, L <sub>V</sub> /L <sub>AVE</sub>   | N/A                      |
| 5,555 55 1   |              | Color Temperature  | 3,000 CCT                |