Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

November 8, 2011

SUBJECT: FAP Route 350 (IL 50)
Project ACBHF-0350 (035)
Section 3068A-B-R-1
Cook County
Contract No. 60N88
Item No. 36, November 18, 2011 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

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

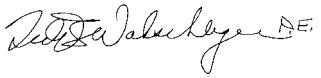
1. Revised the Schedule of Prices.
2. Revised the Table of Contents to the Special Provisions.
3. Revised pages 98 - 104, 109, 112 & 114 of the Special Provisions.
4. Revised sheets 4 & 6 of the Plans.

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,

Scott E. Stitt, P.E.
Acting Engineer of Design and Environment



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

cc: Diane O'Keefe, Region 1, District 1; Mike Renner; D.Carl Puzey; Estimates

TBW:MS:jc

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 60N88

State Job # - C-91-428-11
PPS NBR - 1-75745-0100
County Name - COOK- -
Code - 31 - -
District - 1 - -
Section Number - 3068A-B-R-1

Project Number
ACBHF-0350/035/

Route
FAP 350

* REVISED NOVEMBER 07, 2011

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0300864	MAINT OF NAVIGATION	L SUM	1.000				
X0325541	REM EX LIGHTING SYSTM	L SUM	1.000				
X5030530	FLOOR DRAIN EXTENSION	EACH	24.000				
X6060500	CORRUGATED MED REM	SQ FT	663.000				
X7030030	WET REF TEM TAPE T3 4	FOOT	9,113.000				
X7030040	WET REF TEM TAPE T3 6	FOOT	190.000				
X8050050	SERV INSTALL TY C SPL	EACH	1.000				
* ADD X8100055	CON T 1 1/2 PVC GALVS	FOOT	85.000				
X8110509	CON FLX MET WP 3.0	FOOT	10.000				
X8110551	CON FLX NON-MET WP1.0	FOOT	25.000				
X8110553	CON FLX NON-MET WP1.5	FOOT	100.000				
X8260112	MAINT NAV LT SYSTEM	CAL MO	5.000				
X8410102	TEMP LIGHTING SYSTEM	L SUM	1.000				
X8771100	MAST ARM REPL SPECIAL	EACH	3.000				
Z0001905	STRUCT STEEL REPAIR	POUND	16,240.000				

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Z0007112	C&D LEAD PT CL RES	L SUM	1.000				
Z0010501	CLEAN & PT STL BR N1	L SUM	1.000				
Z0012102	CONC BR DECK SCAR 3/8	SQ YD	2,300.000				
Z0012193	BR DK TH POLY OVL 3/8	SQ YD	2,300.000				
Z0012754	STR REP CON DP = < 5	SQ FT	408.000				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000				
Z0015802	PLUG EX DK DRAINS	EACH	8.000				
Z0016200	DECK SLAB REP (PART)	SQ YD	3.000				
Z0021902	SILICONE JT SEAL 1/2	FOOT	22.000				
Z0030255	IMP ATTN TEMP FRN TL2	EACH	2.000				
Z0030322	IMP ATTN REL FRN TL2	EACH	2.000				
Z0030850	TEMP INFO SIGNING	SQ FT	100.000				
Z0033028	MAINTAIN LIGHTING SYS	CAL MO	5.000				
Z0053800	RIVET REMOV & REPL	EACH	240.000				
Z0062456	TEMP PAVEMENT	SQ YD	74.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
20100110	TREE REMOV 6-15	UNIT	6.000				
21101615	TOPSOIL F & P 4	SQ YD	250.000				
25000210	SEEDING CL 2A	ACRE	0.100				
25000400	NITROGEN FERT NUTR	POUND	4.000				
25000500	PHOSPHORUS FERT NUTR	POUND	4.000				
25000600	POTASSIUM FERT NUTR	POUND	4.000				
25200200	SUPPLE WATERING	UNIT	8.000				
44000100	PAVEMENT REM	SQ YD	74.000				
50102400	CONC REM	CU YD	26.100				
50157300	PROTECTIVE SHIELD	SQ YD	60.000				
50300255	CONC SUP-STR	CU YD	26.100				
50300300	PROTECTIVE COAT	SQ YD	91.000				
50800205	REINF BARS, EPOXY CTD	POUND	6,040.000				
50800515	BAR SPLICERS	EACH	70.000				
52000110	PREF JT STRIP SEAL	FOOT	241.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
58700300	CONCRETE SEALER	SQ FT	195.000				
59000200	EPOXY CRACK INJECTION	FOOT	6.000				
60624600	CORRUGATED MED	SQ FT	663.000				
67000400	ENGR FIELD OFFICE A	CAL MO	8.000				
67100100	MOBILIZATION	L SUM	1.000				
70102625	TR CONT & PROT 701606	L SUM	1.000				
70102640	TR CONT & PROT 701801	L SUM	1.000				
70103815	TR CONT SURVEILLANCE	CAL DA	5.000				
70106800	CHANGEABLE MESSAGE SN	CAL MO	10.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	3,133.000				
70400100	TEMP CONC BARRIER	FOOT	625.000				
70400200	REL TEMP CONC BARRIER	FOOT	600.000				
78008200	POLYUREA PM T1 LTR-SY	SQ FT	36.000				
78008210	POLYUREA PM T1 LN 4	FOOT	6,794.000				
78008230	POLYUREA PM T1 LN 6	FOOT	165.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
78008250	POLYUREA PM T1 LN 12	FOOT	124.000				
78100100	RAISED REFL PAVT MKR	EACH	103.000				
78100105	RAISED REF PVT MKR BR	EACH	38.000				
78200530	BAR WALL MKR TYPE C	EACH	100.000				
78300100	PAVT MARKING REMOVAL	SQ FT	2,510.000				
78300200	RAISED REF PVT MK REM	EACH	141.000				
80400200	ELECT UTIL SERV CONN	L SUM	1.000		2,500.000		2,500.000
* DELETE ~~81000500~~	~~CON T 1 1/2 GALVS~~	~~FOOT~~	~~85.000~~				
81100320	CON AT ST 1 PVC GS	FOOT	670.000				
81100510	CON AT ST 1.5 GS PVC	FOOT	630.000				
81100805	CON AT ST 3 PVC GALVS	FOOT	10.000				
81300320	JUN BX SS AS 8X8X6	EACH	9.000				
81300810	JUN BX SS AS 18X12X8	EACH	3.000				
81603035	UD 2#6 #6G XLPUSE 1	FOOT	280.000				
81702110	EC C XLP USE 1C 10	FOOT	2,500.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
81702130	EC C XLP USE 1C 6	FOOT	1,920.000				
* REV 81900200	TR & BKFIL F ELECT WK	FOOT	365.000				
82102250	LUM SV HOR MT 250W	EACH	4.000				
82200605	WATWY OBS WARN LM LED	EACH	6.000				
83008500	LT P A 40MH 12MA	EACH	1.000				
83600200	LIGHT POLE FDN 24D	FOOT	7.000				
83800205	BKWY DEV TR B 15BC	EACH	1.000				
84301200	REM NAV OBS WL SYSTEM	L SUM	1.000				

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No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement. Please contact ComEd, New Business Center Call Center, at 866 NEW ELECTRIC (1-866-639-3532) to begin the service connection process. The Call Center Representatives will create a work order for the service connection. The representative will ask the requestor for information specific to the request. The representative will assign the request based upon the location of project.

The Contractor should make particular note of the need for the earliest attention to arrangements with ComEd for service. In the event of delay by ComEd, no extension of time will be considered applicable for the delay unless the Contractor can produce written evidence of a request for electric service within 30 days of execution.

Method of Payment. The Contractor will be reimbursed to the exact amount of money as billed by ComEd for its services. Work provided by the Contractor for electric service will be paid separately as described under ELECTRIC SERVICE INSTALLATION. No extra compensation shall be paid to the Contractor for any incidental materials and labor required to fulfill the requirements as shown on the plans and specified herein.

For bidding purposes, this item shall be estimated as $2,500.

Basis of Payment. This work will be paid for at the contract lump sum price for ELECTRIC UTILITY SERVICE CONNECTION which shall be reimbursement in full for electric utility service charges.

TRENCH AND BACKFILL FOR ELECTRICAL WORK
Effective: January 1, 2011

Revise the first sentence of Article 819.03(a) of the Standard Specifications to read:

"Trench. Trenches shall have a minimum depth of 30 in. (760 mm) or as otherwise indicated on the plans, and shall not exceed 12 in. (300 mm) in width without prior approval of the Engineer."

Revise the first sentence of Article 819.03(a) of the Standard Specifications to read:

"Trench. Trenches shall have a minimum depth of 30 in. (760 mm) or as otherwise indicated on the plans, and shall not exceed 12 in. (300 mm) in width without prior approval of the Engineer."

Revise the second sentence of Article 819.03(b) of the Standard Specifications to read:

"The installation depth shall have a minimum depth of 30 in. (760 mm) below the finished grade or as shown on the plans."

Revise the first sentence of Article 819.05 of the Standard Specifications to read:

"Underground cable marking tape shall have a reinforced metallic detection strip."

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Revise the second paragraph of Article 1066.05 of the Standard Specifications to read:

"The tape shall be a woven reinforced polyethylene tape with a metallic core or backing that is detectable."

LUMINAIRE (ALSIP LIGHTING)
Effective: January 1, 2011

Add the following to first paragraph of Article 1067(c) of the Standard Specifications:

"The reflector shall not be altered by paint or other opaque coatings which would cover or coat the reflecting surface. Control of the light distribution by any method other than the reflecting material and the aforementioned clear protective coating that will alter the reflective properties of the reflecting surface is unacceptable"

Add the following to Article 1067(e) of the Standard Specifications:

"The ballast shall be a High Pressure Sodium, high power factor, constant wattage auto-regulator, lead type (CWA) for operation on a nominal 240 volt system."

Revise Article 1067(e)(1) of the Standard Specifications to read:

"The high pressure sodium, auto-regulator, lead type (CWA) ballast shall be designed to ANSI Standards and shall be designed and rated for operation on a nominal 240 volt system. The ballast shall provide positive lamp ignition at the input voltage of 216 volts. It shall operate the lamp over a range of input voltages from 216 to 264 volts without damage to the ballast. It shall provide lamp operation within lamp specifications for rated lamp life at input design voltage range. Operating characteristics shall produce output regulation not exceeding the following values:

Nominal Ballast Wattage	Maximum Ballast Regulation
750	25%
400	26%
310	26%
250	26%
150	24%
70	18%

For this measure, regulation shall be defined as the ratio of the lamp watt difference between the upper and lower operating curves to the nominal lamp watts; with the lamp watt difference taken within the ANSI trapezoid at the nominal lamp operating voltage point parallel to the minimum lamp volt line:

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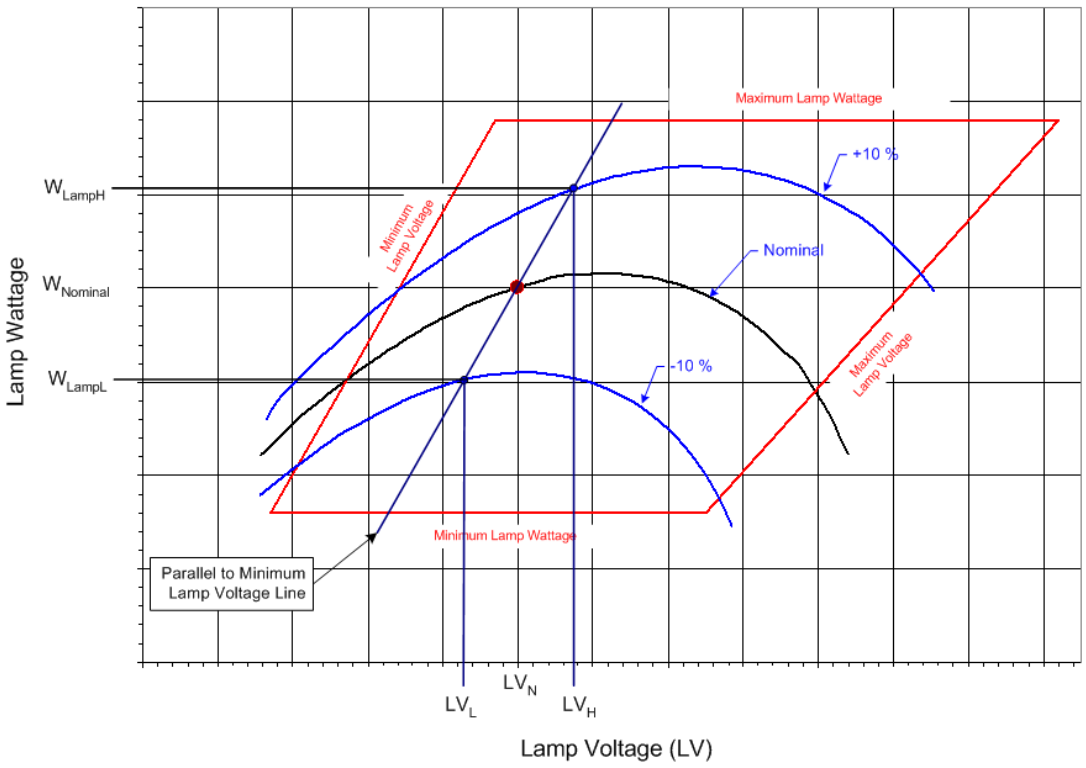

$$\text{Ballast Regulation} = \frac{W_{LampH} - W_{LampL}}{W_{LampN}} \times 100$$

where:

W_{LampH} = lamp watts at +10% line voltage when Lamp voltage = LV_H

W_{LampL} = lamp watts at - 10% line voltage when lamp voltage = LV_L

W_{lampN} = lamp watts at nominal lamp operating voltage = LV_N

Wattage	Nominal Lamp Voltage, LV_N	LV_L	LV_H
750	120v	115v	125v
400	100v	95v	105v
310	100v	95v	105v
250	100v	95v	105v
150	55v	50v	60v
70	52v	47v	57v

Ballast losses, based on cold bench tests, shall not exceed the following values:

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Nominal Ballast Wattage	Maximum Ballast Losses
750	15%
400	20%
310	21%
250	24%
150	26%
70	34%

Ballast losses shall be calculated based on input watts and lamp watts at nominal system voltage as indicated in the following equation:

$$\text{Ballast Losses} = \frac{W_{Line} - W_{Lamp}}{W_{Lamp}} \times 100$$

where:
W_{line} = line watts at nominal system voltage
W_{lamp} = lamp watts at nominal system voltage

Ballast output to lamp. At nominal system voltage and nominal lamp voltage, the ballast shall deliver lamp wattage with the variation specified in the following table.

Nominal Ballast Wattage	Output to lamp variation
750	± 7.5%
400	± 7.5%
310	± 7.5%
250	± 7.5%
150	± 7.5%
70	± 7.5%

Example: For a 400w luminaire, the ballast shall deliver 400 watts ±7.5% at a lamp voltage of 100v for the nominal system voltage of 240v which is the range of 370w to 430w.

Ballast output over lamp life. Over the life of the lamp the ballast shall produce average output wattage of the nominal lamp rating as specified in the following table. Lamp wattage readings shall be taken at 5-volt increments throughout the ballast trapezoid. Reading shall begin at the lamp voltage (L_V) specified in the table and continue at 5 volt increments until the right side of the trapezoid is reached. The lamp wattage values shall then be averaged and shall be within the specified value of the nominal ballast rating. Submittal documents shall include a tabulation of the lamp wattage vs. lamp voltage readings.

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Nominal Ballast Wattage	LV Readings begin at	Maximum Wattage Variation
750	110v	± 7.5%
400	90v	± 7.5%
310	90v	± 7.5%
250	90v	± 7.5%
150	50v	± 7.5%
70	45v	± 7.5%

Example: *For a 400w luminaire, the averaged lamp wattage reading shall not exceed the range of* ±7.5*% which is 370 to 430 watts*"

Add the following to Article 1067(f) of the Standard Specifications:

"Independent Testing. Independent testing of luminaires shall be required whenever the quantity of luminaires of a given pay item, as indicated on the plans, is 50 or more. For each luminaire type to be so tested, one luminaire plus one luminaire for each 50 luminaires shall be tested. Example: *A plan pay item quantity of 75 luminaires for a specific pay item would dictate that 2 be tested; 135 luminaires would dictate that three be tested*." If the luminaire performance table is missing from the contract documents, the luminaire(s) shall be tested and the test results shall be evaluated against the manufacturer's data as provided in the approved material submittal. The test luminaire(s) results shall be equal to or better than the published data. If the test results indicated performance not meeting the published data, the test luminaire will be designated as failed and corrective action as described herein shall be performed.

The Contractor shall be responsible for all costs associated with the specified testing, including but not limited to shipping, travel and lodging costs as well as the costs of the tests themselves, all as part of the bid unit price for this item. Travel, lodging and other associated costs for travel by the Engineer shall be direct-billed to or shall be pre-paid by the Contractor, requiring no direct reimbursement to the Engineer or the independent witness, as applicable"

The Contractor shall select one of the following options for the required testing with the Engineer's approval:

a. Engineer Factory Selection for Independent Lab: The Contractor may select this option if the luminaire manufacturing facility is within the state of Illinois. The Contractor shall propose an independent test laboratory for approval by the Engineer. The selected luminaires shall be marked by the Engineer and shipped to the independent laboratory for tests.

b. Engineer Witness of Independent Lab Test: The Contractor may select this option if the independent testing laboratory is within the state of Illinois. The Engineer shall select, from the project luminaires at the manufacturer's facility or at the Contractor's storage facility, luminaires for testing by the independent laboratory.

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c. Independent Witness of Manufacturer Testing: The independent witness shall select from the project luminaires at the manufacturers facility or at the Contractor's storage facility, the luminaires for testing. The Contractor shall propose a qualified independent agent, familiar with the luminaire requirements and test procedures, for approval by the Engineer, to witness the required tests as performed by the luminaire manufacturer.

   The independent witness shall as a minimum meet the following requirements:

   - Have been involved with roadway lighting design for at least 15 years.
   - Not have been the employee of a luminaire or ballast manufacturer within the last 5 years.
   - Not associated in any way (plan preparation, construction or supply) with the particular project being tested.
   - Be a member of IESNA in good standing.
   - Provide a list of professional references.

   This list is not an all inclusive list and the Engineer will make the final determination as to the acceptability of the proposed independent witness.

d. Engineer Factory Selection and Witness of Manufacturer Testing: The Contractor may select this option if the luminaire manufacturing facility is within the state of Illinois. At the Manufacturer's facility, the Engineer shall select the luminaires to be tested and shall be present during the testing process. The Contractor shall schedule travel by the Engineer to and from the Manufacturer's laboratory to witness the performance of the required tests."

   Should any of the tested luminaires fail to satisfy the specifications and perform according to approved submittal information, the luminaire shall be unacceptable and be replaced by alternate equipment meeting the specifications with the submittal and testing process repeated in their entirety; or corrections made to achieve required performance. In the case of corrections, the Contractor shall advise the Engineer of corrections made and shall request a repeat of the specified testing and, if the corrections are deemed reasonable by the Engineer, the testing process shall be repeated. The number of luminaires to be tested shall be the same quantity as originally tested; i.e. if three luminaires were tested originally, one, two or three failed, another three must be tested after corrective action is taken.

Add the following to Article 1067.02(a)(1) of the Standard Specifications:

"The beam of maximum candlepower for luminaires specified or shown to have a 'medium' distribution shall be at 70 degrees from the horizontal ± 2.5 degrees. Submittal information shall identify the angle."

Revise Article 1067.06(a)(1) of the Standard Specifications to read:

"The lamps shall be of the clear type and shall have a color of 1900° to 2200° Kelvin."

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Add the following table(s) to Article 1067 of the Standard Specifications:

IDOT DISTRICT 1 LUMINAIRE PERFORMANCE TABLE

GIVEN CONDITIONS		
ROADWAY DATA	Pavement Width	48 (ft)
	Number of Lanes	4
	I.E.S. Surface Classification	R3
	Q-Zero Value	.07
LIGHT POLE DATA	Mounting Height	40 (ft)
	Mast Arm Length	12 (ft)
	Pole Set-Back From Edge of Pavement	4 (ft)
LUMINAIRE DATA	Lamp Type	HPS
	Lamp Lumens	27,000
	I.E.S. Vertical Distribution	Medium
	I.E.S. Control Of Distribution	Cutoff
	I.E.S. Lateral Distribution	Type III
	Total Light Loss Factor	0.7
LAYOUT DATA	Spacing	215 (ft)
	Configuration	Opposite
	Luminaire Overhang over edge of pavement	8(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		
ILLUMINATION	Ave. Horizontal Illumination, $\mathbf{E_{AVE}}$	1.3 Lux
	Uniformity Ratio, $\mathbf{E_{AVE}/E_{MIN}}$	3:1 (Max)
LUMINANCE	Average Luminance, $\mathbf{L_{AVE}}$	0.9 Cd/m^2
	Uniformity Ratio, $\mathbf{L_{AVE}/L_{MIN}}$	3:1 (Max)
	Uniformity Ratio, $\mathbf{L_{MAX}/L_{MIN}}$	5:1 (Max)
	Veiling Luminance Ratio, $\mathbf{L_V/L_{AVE}}$	0.3 (Max)

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Basis of Payment. Navigation lights including swivel mount, and all mounting hardware will be measured and paid for at the contract unit price per each for WATERWAY OBSTRUCTION WARNING LUMINAIRE, LED.

REMOVAL OF NAVIGATION OBSTRUCTION WARNING LIGHTING SYSTEM (IDOT LIGHTING)

Description. This work shall consist of the removal and disposal of existing navigation lights and all associated hardware and appurtenances, including luminaires, conduit, cable, junction boxes, hangers and associated hardware, as shown on the plans and as directed by the Engineer.

Method of Measurement. All navigation luminaires, and appurtenant equipment which is removed and disposed of as indicated, will be measured for payment on a lump sum basis.

Basis of Payment. This work will be paid for at the contract lump sum price for REMOVAL OF NAVIGATION OBSTRUCTION WARNING LIGHTING SYSTEM.

CONDUIT, FLEXIBLE NON-METALLIC, WEATHERPROOF, 1" DIAMETER (IDOT LIGHTING)
CONDUIT, FLEXIBLE NON-METALLIC, WEATHERPROOF, 1.5" DIAMETER (ALSIP LIGHTING)

Description. This work shall consist of furnishing and installing conduit in accordance with Article 811 of the Standard Specifications. Materials shall meet the follow requirements:

1. Liquidtight flexible nonmetallic conduit shall have a smooth inner surface with integral reinforcement within the conduit wall and be designated as a Type LFNC-B (for FNMC-B).

2. Liquidtight flexible nonmetallic conduit shall be listed to UL standard UL1660.

3. Liquidtight flexible nonmetallic conduit shall be flame resistant and when used with listed fittings, is approved for the installation of electrical conductors.

4. Liquidtight flexible nonmetallic conduit shall be installed in accordance with Article 351, Part B of the National Electrical Code (NEC) and other applicable sections of the NEC and/or local electrical codes.

5. Liquidtight Flexible Nonmetallic Conduit shall be marked ‘OUTDOOR’ for outdoor applications exposed to sunlight and weathering conditions.

6. Liquidtight Fittings shall be listed for the use with Liquidtight Flexible Nonmetallic Conduit and shall be marked LFNC-B (FNMC-B). Liquidtight Fittings uses for direct burial applications shall be listed for ‘Wet Locations’.

Basis of Payment. This work shall be paid for at the contract unit price per foot for CONDUIT, FLEXIBLE NON-METALLIC, WEATHERPROOF, of the diameter specified, which price shall include all labor, material and equipment necessary to install the conduit in a manner described herein.

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The potential cost of replacing or repairing any malfunctioning or damaged equipment shall be included in the bid price of this item and will not be paid for separately.

Lighting System Maintenance Operations

The Contractor's responsibilities shall include the maintenance of lighting units (including sign lighting), cable runs and lighting controls. In the case of a pole knockdown or sign light damage caused by normal vehicular traffic, the Contractor shall promptly clear the lighting unit and circuit discontinuity and restore the system to service.

The following chart lists the maximum response, service restoration, and permanent repair time the Contractor will be allowed to perform corrective action on specific lighting system equipment.

INCIDENT OR PROBLEM	SERVICE RESPONSE TIME	SERVICE RESTORATION TIME	PERMANENT REPAIR TIME
Control cabinet out	1 hour	4 hours	7 Calendar days
Hanging mast arm	1 hour to clear	na	7 Calendar days
Motorist caused damage or leaning light pole 10 degrees or more	1 hour to clear	4 hours	7 Calendar days
Circuit out – Needs to reset breaker	1 hour	4 hours	na
Circuit out – Cable trouble	1 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	1 hour	4 hours	na
Outage (single or multiple) found on night outage survey or reported to EMC	Na	na	7 Calendar days

- **Service Response Time** -- amount of time from the initial notification to the Contractor until a patrolman physically arrives at the location.

- **Service Restoration Time** – amount of time from the initial notification to the Contractor until the time the system is fully operational again (In cases of motorist caused damage the undamaged portions of the system are operational.)

- **Permanent Repair Time** – amount of time from initial notification to the Contractor until the time permanent repairs are made if the Contractor was required to make temporary repairs to meet the service restoration requirement.

Damage caused by the Contractor’s operations shall be repaired at no additional cost to the Contract.

Contractor's Responsibilities shall also include weekly night-time patrol of the lighting system, with patrol reports filed immediately with the Engineer and with deficiencies corrected in accordance with this specification. Patrol reports shall be presented on standard forms as designated by the Engineer.

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Maintenance shall include, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, Contractor operations, or other means. The potential cost of replacing or repairing any malfunctioning or damaged equipment shall be included in the bid price of this item and will not be paid for separately.

The following chart lists the maximum response, service restoration, and permanent repair time the Contractor will be allowed to perform corrective action on specific lighting system equipment.

INCIDENT OR PROBLEM	SERVICE RESPONSE TIME	SERVICE RESTORATION TIME	PERMANENT REPAIR TIME
Navigation light outage	na	na	24 hours

- **Service Response Time** -- amount of time from the initial notification to the Contractor until a patrolman physically arrives at the location.
- **Service Restoration Time** – amount of time from the initial notification to the Contractor until the time the system is fully operational again (In cases of motorist caused damage the undamaged portions of the system are operational.)
- **Permanent Repair Time** – amount of time from initial notification to the Contractor until the time permanent repairs are made if the Contractor was required to make temporary repairs to meet the service restoration requirement.

Failure to provide this service will result in liquidated damages of $500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of $500 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. Repeated failures and/or a gross failure of maintenance shall result in the State's Electrical Maintenance Contractor being directed to correct all deficiencies and the resulting costs deducted from any monies owed the contractor.

Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

Contractor's Responsibilities shall also include weekly night-time patrol of the lighting system, with patrol reports filed immediately with the Engineer and with deficiencies corrected in accordance with this specification. Patrol reports shall be presented on standard forms as designated by the Engineer.

Operation of Navigation Lighting

The navigation lighting shall be operational every night, dusk to dawn. Duplicate navigation lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously. Navigation lighting systems shall not be kept in operation during long daytime periods. The contractor shall demonstrate to the satisfaction of the Engineer that the navigation lighting system is fully operational prior to submitting a pay request. Failure to do so will be grounds for denying the pay request.

Basis of Payment. Maintenance of navigation lighting systems shall be paid for at the contract unit price per calendar month or fraction thereof for MAINTENANCE OF NAVIGATION LIGHTING SYSTEM, which shall include all work as described herein.

Revised 11/8/2011