GENERAL LIGHTING NOTES

1. ALL PROPOSED LIGHTING UNITS SHALL BE LABELED ACCORDING TO THE STANDARD SPECIFICATIONS, WITH POLE NUMBERS ATTACHED WITH STAINLESS STEEL BANDING. LIGHTING UNIT NUMBERING SHALL BE AS DIRECTED BY THE ENGINEER.

2. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ELECTRICAL WORK WITH OTHER TRADES.

3. LIGHT POLE FOUNDATIONS SHALL BE INSTALLED PLUMB AND FLUSH WITH THE PROPOSED GRADE AND SHALL MEET THE HEIGHT REQUIREMENTS OF ARTICLE 836.03 OF THE STANDARD SPECIFICATIONS. CONCRETE FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH HIGHWAY STANDARD 836001. WASHERS USED TO INSTALL THE POLE SHALL BE LARGE ENOUGH TO FULLY COVER THE SLOTTED HOLES IN THE POLE BASE PLATE.

4. THE CONTRACTOR SHALL INSTALL LIGHT POLES AT THE LOCATIONS INDICATED ON THE PLANS, MAINTAINING ADEQUATE CLEARANCE FROM UTILITY LINES. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY CLEARANCES PER THE NATIONAL ELECTRIC SAFETY CODE AND/OR THE REQUIREMENTS OF THE UTILITY COMPANIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL CONFLICTS BETWEEN PROPOSED LIGHT POLE LOCATIONS AND EXISTING UTILITY LINES. THE LOCATION OF BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE SHOWN FOR INFORMATION ONLY. REROUTING, DISCONNECTION, RELOCATION, PROTECTION, ETC., OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY AND OWNER. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

5. THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS TO BE INCLUDED WITH THE APPLICABLE UNIT DUCT OR UNDERGROUND CONDUIT PAY ITEM.

6. INSTALL HORIZONTAL MOUNT LUMINAIRES PERPENDICULAR TO THE CENTERLINE OF THE ROADWAY AS REQUIRED BY ARTICLE 821.04 OF THE STANDARD SPECIFICATIONS.

7. UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, SHALL BE SCHEDULE 80 AS NOTED IN THE PLANS.

8. POLE FOUNDATIONS SHALL BE INSTALLED 20 FT. FROM THE EDGE OF PAVEMENT. NO POLES SHALL BE INSTALLED IN THE FLOWLINE OF A DITCH.

9. LIGHTING CONTROLLER SHALL BE EQUIPPED WITH CONVENIENCE RECEPTACLE AND CABINET LIGHT PER ARTICLE 1068.01 (e)(7).

400W LUMINAIRE PERFORMANCE TABLE

GIVEN CONDITIONS

ROADWAY DATA

PAVEMENT WIDTH	16 FT
NUMBER OF LANES	1
MEDIAN WIDTH	N/A
IES SURFACE CLASSIFICATION	R3
Q-ZERO VALUE	0.07

LIGHT POLE DATA

MOUNTING HEIGHT	50 FT
DAVIT ARM LENGTH	15 FT
POLE SET BACK FROM EDGE OF PAVEMENT	20 FT

LUMINAIRE DATA

LAMP TYPE	HPS
LAMP LUMENS	50,000
IES VERTICAL DISTRIBUTION	M
IES CONTROL OF DISTRIBUTION	FC
IES LATERAL DISTRIBUTION	3
TOTAL LIGHT LOSS FACTOR	0.684

LAYOUT DATA

SPACING	250 FT
CONFIGURATION	Single Sided
LUMINAIRE OVERHANG OVER EDGE OF PAVEMENT LANE	-5 FT

NOTE: VARIATIONS FROM THE ABOVE SPECIFIED IES 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.

ILLUMINATION

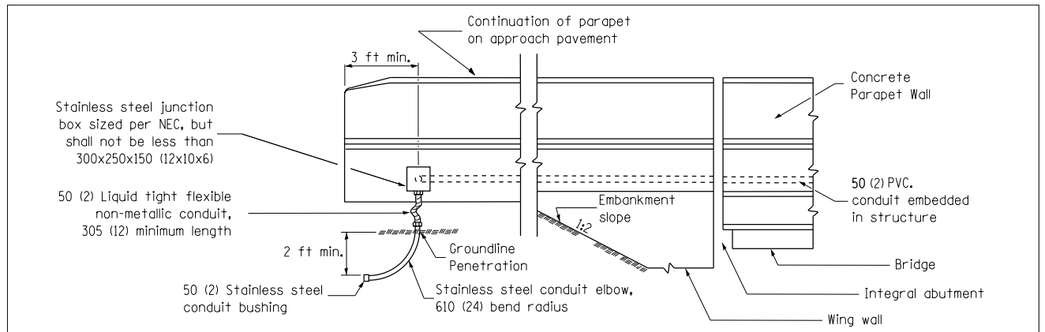
AVERAGE HORIZONTAL ILLUMINATION (E_{AVE})	0.9 fc
UNIFORMITY RATIO (E_{AVE} / E_{MIN})	3.0

LUMINANCE

AVERAGE LUMINANCE (L_{AVE})	0.6 Cd/m^2
UNIFORMITY RATIOS (L_{AVE} / L_{MIN})	3.5
(L_{MAX} / L_{MIN})	6.0
MAXIMUM VEILING LUMINANCE RATIO (L_V / L_{AVE})	0.30

TOTAL BILL OF MATERIALS

PAY ITEM	DESCRIPTION	UNIT	QUANITY TOTALS
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1
81028760	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2 1/2" DIA.	FOOT	462
81028780	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 3 1/2" DIA.	FOOT	69
81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	440
81300530	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	4
81603000	UNIT DUCT, 600V, 2-1C NO. 8, 1/C NO. 8 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	6,332
81603010	UNIT DUCT, 600V, 2-1C NO. 10, 1/C NO. 10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	3,040
81702450	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	462
82102400	LUMINAIR, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	29
82500360	LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 100AMP	EACH	1
83003400	LIGHT POLE, ALUMINUM, 45 FT. M.H., 10 FT. DAVIT ARM	EACH	2
83004600	LIGHT POLE, ALUMINUM, 50 FT. M.H., 15 FT. DAVIT ARM	EACH	27
83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	189
83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE	EACH	27
X8110522	CONDUIT ATTACHED TO STRUCTURE, 2" DIA. STAINLESS STEEL	FOOT	40



CONDUIT EXITING PARAPET ON APPROACH DETAIL
(INTEGRAL ABUTMENT)

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

FILE NAME = D468409-PLAN-LIGHTING-DETAILS-SHT1.dgn	USER NAME = danw	DESIGNED - DBS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING PLAN DETAILS AND NOTES		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - PSBA	REVISED -				313	7-2 ; 6-1	HENDERSON	976	452
	PLOT SCALE = 120.0000 ' / in.	CHECKED - CSB	REVISED -						CONTRACT NO. 68409		
	PLOT DATE = 11/12/2012	DATE - 10/2012	REVISED -		SCALE: NTS	SHEET 5 OF 6 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		