02/03/98

PROJECT REFERENCE NO.	SHEET NO.
I-3318BB	E1

PLANS AND DETAILS FOR PROPOSED LIGHTING /ELECTRICAL CONSTRUCTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022582 PAUL FI-BUN CHAN

DocuSigned by: Paul Chan 11/3/2015

△ NOTES

1. INSTALL ALL BORE PITS OUTSIDE THE CLEAR ZONE, AS DEFINED BY THE 2011 AASHTO ROADSIDE DESIGN GUIDE OR AS DIRECTED BY THE ENGINEER.
2. LOCATE ALL JUNCTION BOXES OUTSIDE CLEAR ZONE AND IN AN AREA UNLIKELY TO BE USED BY TRAFFIC.
3. INSTALL RIGID GALVANIZED CONDUIT (RGC) ABOVE GROUND, AND POLYVINYL CHLORIDE (PVC) SCHEDULE 40 CONDUIT UNDERGROUND, EXCEPT AS MODIFIED ON THESE PLANSHEETS OR IN APPLICABLE SECTIONS OF THE ROADWAY STANDARD DRAWINGS FOR THIS PROJECT.
4. TYPE PC18 JUNCTION BOXES ARE 18″ L X 12″ W X 18″ H. UNLESS OTHERWISE NOTED ON THE PLANS, ALL JUNCTION BOXES ARE TO BE TYPE PC18
5. RELOCATE EXISTING HIGH MAST HM1 AS SHOWN. ABANDON OR REMOVE POLE FOUNDATION. REMOVE AND DISPOSE OF EXISTING JUNCTION BOX JB4. INSTALL NEW JUNCTION BOX JB11 WITHIN 10′ OF FOUNDATION OF RELOCATED HM1 AND INTERCEPT EXISTING CIRCUITRY. INSTALL NEW CONDUCTOR FROM JB11 TO RELOCATED HM1.
6. ORIGINAL LIGHTING PLANS GENERATED FROM TIP PROJECT I-3605.
7. ENSURE THAT LED LUMINAIRES WILL BE ABLE TO BE PROPERLY MOUNTED ON THE EXISTING 24″ TENON ARMS ON THE HIGH MAST CARRIER RING. PROVIDE LONGER TENON ARMS IF REQUIRED.

SCOPE OF WORK

RENOVATE EXISTING ROADWAY LIGHTING SYSTEM BY REPLACING ALL HIGH PRESSURE SODIUM (HPS) HIGH MAST LUMINAIRES WITH LIGHT EMITTING DIODE LUMINAIRES (LED) HIGH MAST LUMINAIRES. ALSO RELOCATE HIGH MAST POLE, REMOVE FEEDER CIRCUIT CONDUCTORS IN CONFLICT WITH CONSTRUCTION AND INSTALL NEW JUNCTION BOX.

DESIGN CRITERIA

0.8 AVERAGE FOOTCANDLE ON TRAVEL LANES

4:1 AVERAGE TO MINIMUM UNIFORMITY RATIO ON TRAVEL LANES

2005 AASHTO ROADWAY LIGHTING DESIGN GUIDE

2014 NATIONAL ELECTRICAL CODE

2011 AASHTO ROADSIDE DESIGN GUIDE

ROADWAY STANDARDS

THE FOLLOWING ROADWAY ENGLISH STANDARDS AS APPEAR IN "NCDOT ROADWAY STANDARD DRAWINGS", ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD NO.	TITLE
1410.01	FEEDER CIRCUITS
1411.01	ELECTRICAL JUNCTION BOXES

ALL WORK SHALL BE IN CONFORMANCE WITH DIVISION 14 OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DATED JANUARY 2012.

LEGEND

- 120′ — EXISTING 120′ HIGH MAST STANDARD. RELOCATE AS SHOWN. ABANDON OR REMOVE RELOCATED POLE FOUNDATION. REMOVE LUMINAIRES ON ALL POLES AND REPLACE WITH 550W MAXIMUM, 53,000 MINIMUM DELIVERED LUMENS, TYPE V LED LUMNAIRES. MAXIMUM BUG RATING 5-0-5.
- EXISTING CONTROL SYSTEM. NO CHANGE REQUIRED.
- EXISTING ELECTRICAL JUNCTION BOX. NO CHANGE REQUIRED UNLESS OTHERWISE NOTED ON THE PLANS.
- JB1 — PROPOSED ELECTRICAL JUNCTION BOX SEE DETAILS & TABLE B, THIS SHEET
- 1 — REFERENCE TO CORRESPONDING NOTE AS NUMBERED
- A1 / 6 — PROPOSED FEEDER CIRCUIT CONTROL SYSTEM(A), CIRCUIT(1) PLAN SYMBOL (6) SEE TABLE A, THIS SHEET
- A1 — EXISTING FEEDER CIRCUIT CONTROL SYSTEM(A), CIRCUIT(1)
- PROPOSED ELECTRICAL DUCT SIZE 2″, 3″ OR 4″ TYPE (JA) OR (BD)
  - 2″, 3″ OR 4″ ELEC. DUCT JA & BD
- EXISTING ELECTRICAL DUCT SIZE 2″, 3″ OR 4″
  - 2″, 3″ OR 4″ ELEC. DUCT

TABLE "A"
CIRCUITRY CONDUCTOR CONDUIT TYPE & SIZE

PLAN SYMBOL	DESCRIPTION		CONTRACT ITEM
8	2 #8 Ø 1 #10G 1.5″ P	2 AWG SIZE 8 CONDUCTOR (BK & RD) 1 AWG SIZE 10 GROUNDING CONDUCTOR 1.5″ PVC CONDUIT	2 - 8 W/G FEEDER CIRCUIT IN 1.5″ CONDUIT
*8	2 #8 Ø 1 #10G	2 AWG SIZE 8 CONDUCTOR (BK & RD) 1 AWG SIZE 10 GROUNDING CONDUCTOR	2 - 8 W/G FEEDER CIRCUIT

TABLE "B"
JUNCTION BOX SUMMARY

NUMBER	LOCATION	TYPE		SHEET
JB1	EXISTING	PC18		E2
JB2	EXISTING	PC18		E2
JB3	EXISTING	PC18		E2
JB4	EXISTING - TO BE REMOVED	PC18		E2
JB5	EXISTING	PC18		E2
JB6	EXISTING	PC18		E2
JB7	EXISTING	PC18		E2
JB8	EXISTING	PC18		E2
JB9	EXISTING	PC18		E2
JB10	EXISTING	PC18		E2
JB11	-LRPA- STA. 15+10 38′ LT	PC18		E2
TOTALS		1		

ABBREVIATIONS

BD	BURIED	PVC	PVC SCHEDULE 40 CONDUIT
LT	LIGHT	RGC	RIGID GALVANIZED STEEL CONDUIT
JA	JACKED	C	CONDUIT
MH	MOUNTING HEIGHT	CKT	CIRCUIT
Ø	PHASE	N	NEUTRAL
SER LAT	SERVICE LATERAL	G	GROUND
ABN	ABANDON OR REMOVE	HM	HIGH MAST

COMPUTED BY: RGH DATE: 11/3/15

CHECKED BY: PC DATE: 11/3/2015

03-NOV-2015 14:18
R:\Lighting\Electrical\Lighting Design\I3318BB_le_PSH_E1.dgn
$$$$USERNAME$$$$