PROJECT REFERENCE NO.	SHEET NO.
B-5119	E1

PLANS AND DETAILS FOR PROPOSED LIGHTING /ELECTRICAL CONSTRUCTION

△ 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 BR18 JUNCTION BOXES ARE 18″ L X 12″ W X 6″ H.
5. TYPE PC30 JUNCTION BOXES ARE 30″ L X 17″ W X 18″ H.
6. INTERCEPT AND TIE TO EXISTING UNDERGROUND CONDUIT. INSTALL NEW CONDUCTOR AS SHOWN.
7. ORIGINAL LIGHTING DESIGN GENERATED FROM STATE PROJECT I-303E, LET JULY 1992.
8. REPLACE CONDUCTORS IN MEDIAN BARRIER. SIZE AS SHOWN.
9. TYPE PC18 JUNCTION BOXES ARE 18″ L X 12″ W X 18″ H.
10. COIL A MINIMUM 25′ OF CONDUCTOR IN JUNCTION BOX FOR FUTURE CONNECTION TO CCTV CAMERA DISCONNECT. CAMERA, DISCONNECT & CONNECTION TO DISCONNECT WILL BE PROVIDED BY OTHERS.

SCOPE OF WORK

REMOVE AND REINSTALL EXISTING LIGHTING EQUIPMENT IN CONFLICT WITH CONSTRUCTION. REMOVE AND REPLACE EXISTING UNDERPASS LIGHTING SYSTEM (UPL-2) UNDER BRIDGE #349. TROUBLESHOOT AND REPAIR TWO EXISTING LIGHTING SYSTEMS.

DESIGN CRITERIA

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
1403.01	HIGH MOUNT LUMINAIRES
1404.01	LIGHT STANDARDS
1405.01	STANDARD FOUNDATION
1406.01	LIGHT STANDARD LUMINAIRES
1409.01	ELECTRICAL DUCT
1410.01	FEEDER CIRCUITS
1411.01	ELECTRICAL JUNCTION BOXES
1412.01	UNDERPASS LIGHTING

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

LEGEND

- 100′ — EXISTING 100′ HIGH MAST STANDARD TO REMAIN. NO CHANGES REQUIRED.
- EXISTING SINGLE ARM LIGHT STANDARD TO BE REMOVED. ABANDON OR REMOVE FOUNDATION.
- EXISTING TWIN ARM LIGHT STANDARD. REMOVE FOR EXISTING BARRIER OBLITERATION AND REPLACE ON NEW BARRIER. REPLACE LUMINAIRE WITH NEW 400 HPS LUMINAIRE. IES DISTRIBUTION: MEDIUM, SEMI-CUTOFF, TYPE II. 240 VAC
- EXISTING TWIN ARM LIGHT STANDARD. NO CHANGES REQUIRED.
- EXISTING UNDERPASS WM TYPE LUMINAIRE TO REMAIN OR BE REMOVED AS NOTED.
- PROPOSED UNDERPASS LUMINAIRE, TYPE WM, 100W HPS
- EXISTING UNDERPASS BREAKER PANEL TO REMAIN OR BE REMOVED AS NOTED.
- PROPOSED UNDERPASS BREAKER PANEL.
- EXISTING CONTROL SYSTEM. NO CHANGES REQUIRED.
- EXISTING ELECTRICAL JUNCTION BOX.
- PROPOSED ELECTRICAL JUNCTION BOX SEE DETAILS & TABLE B, THIS SHEET
- EXISTING ELECTRICAL JUNCTION BOX TO BE REMOVED AND REPLACED WITH NEW.
- △1 — REFERENCE TO CORRESPONDING NOTE AS NUMBERED
- C A1 6 — PROPOSED FEEDER CIRCUIT CONTROL SYSTEM(A), CIRCUIT(1) PLAN SYMBOL (6) SEE TABLE A, THIS SHEET
- C A1 — EXISTING FEEDER CIRCUIT AS LABELED. NO CHANGES REQUIRED.
- C ABN — EXISTING FEEDER CIRCUIT TO BE ABANDONED.
- EXISTING ELECTRICAL DUCT AND CONDUCTOR

TABLE "A"
CIRCUITRY CONDUCTOR CONDUIT TYPE & SIZE

PLAN SYMBOL	DESCRIPTION		CONTRACT ITEM
8N	1 #8 Ø 1 #8N 1 #10G 1.5″ P	1 AWG SIZE 8 CONDUCTOR (BK) 1 AWG SIZE 8 NEUTRAL CONDUCTOR (WH) 1 AWG SIZE 10 GROUNDING CONDUCTOR 1.5″ PVC CONDUIT	#8 WITH NEUTRAL FEEDER CIRCUIT IN 1.5″ CONDUIT
6	2 #6 Ø 1 #8G 1.5″ P	2 AWG SIZE 6 CONDUCTOR (BK & RD) 1 AWG SIZE 8 GROUNDING CONDUCTOR 1.5″ PVC CONDUIT	2 - 6 W/G FEEDER CIRCUIT IN 1.5″ CONDUIT
*6	2 #6 Ø 1 #8G	2 AWG SIZE 6 CONDUCTOR (BK & RD) 1 AWG SIZE 8 GROUNDING CONDUCTOR	2 - 6 W/G FEEDER CIRCUIT
2	2 #2 Ø 1 #4G 1.5″ P	2 AWG SIZE 2 CONDUCTOR (BK & RD) 1 AWG SIZE 4 GROUNDING CONDUCTOR 1.5″ PVC CONDUIT	2 - 2 W/G FEEDER CIRCUIT IN 1.5″ CONDUIT
*2	2 #2 Ø 1 #4G	2 AWG SIZE 2 CONDUCTOR (BK & RD) 1 AWG SIZE 4 GROUNDING CONDUCTOR	2 - 2 W/G FEEDER CIRCUIT

TABLE "B"
JUNCTION BOX SUMMARY

NUMBER	LOCATION	TYPE			SHEET
JB1	EXISTING				E2
JB2	EXISTING				E2
JB3	EXISTING				E2
JB4	31+40 -L-	BR18			E2
JB5	EXISTING				E2
JB6	US29 NBL BETWEEN I-85 NBL & I-85 SBL STRUCTURES			PC30	E2
JB7	NEAR CS "W"		PC18		E2
JB8	NEAR HM13		PC18		E2
JB9	NEAR PROPOSED ITS CCTV CAMERA			PC30	E2
TOTALS		1	2	2	

TABLE "C"
ELECTRICAL DUCT SUMMARY
(ESTIMATED LENGTH IN FEET)

		TYPE					
		JACKED (JA) FEET			BURIED (BD) FEET		
LOCATION	SHEET	SIZE 2″	SIZE 3″	SIZE 4″	SIZE 2″	SIZE 3″	SIZE 4″
UNDER RAMP NEAR CS "W", BETWEEN JB7 & JB8	E2		35				
TOTALS			35				

ABBREVIATIONS

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

NORTH CAROLINA PROFESSIONAL SEAL 022582 ENGINEER PAUL KI-BUN CHAN

DocuSigned by: Paul Chan 10/17/2014
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