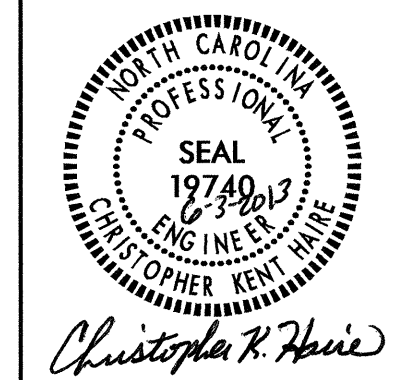


PLANS AND DETAILS FOR PROPOSED LIGHTING /ELECTRICAL CONSTRUCTION



NOTES

- 1 AT THESE LOCATIONS, PROVIDE ELECTRICAL DUCT IN ACCORDANCE WITH NEC EQUIRMENTS FOR AN APPROVED RACEWAY FOR ELECTRICAL CIRCUITS. SEE TABLE "C"
- 2 INSTALL ALL BORE PITS OUTSIDE THE CLEAR ZONE, AS DEFINED BY THE 2011 AASHTO ROADSIDE DESIGN GUIDE OR AS DIRECTED BY THE ENGINEER.
- 3 LOCATE ALL JUNCTION BOXES OUTSIDE CLEAR ZONE AND IN AN AREA UNLIKELY TO BE USED BY TRAFFIC.
- 4 LOCATE PROPOSED CONTROL SYSTEM IN AN AREA ACCESSIBLE FOR MAINTENANCE VEHICLES AND OUTSIDE OF CLEAR ZONE AS DEFINED BY THE 2011 AASHTO ROADSIDE DESIGN GUIDE.
- 5 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.
- 6 TYPE PC18 JUNCTION BOXES ARE 18" L X 12" W X 18" H.
- 7 TYPE PC30 JUNCTION BOXES ARE 30" L X 17" W X 18" H.
- 8 TYPE PC36 JUNCTION BOXES ARE 36" L X 24" W X 18" H.
- 9 AT LOCATIONS WHERE STATIONING IS NOT AVAILABLE, INSTALL PROPOSED DUCT FOR BEST ALIGNMENT OF CIRCUITRY.

SCOPE OF WORK

PLACE ROADWAY LIGHTING SYSTEM INTO SERVICE BY PROVIDING AND INSTALLING 60' HIGH MOUNT STANDARDS WITH LED LUMINAIRES, 35' SINGLE ARM LIGHT STANDARDS WITH LED LUMINAIRES, UNDERGROUND CIRCUITRY, CONTROL SYSTEM AND JUNCTION BOXES.

DESIGN CRITERIA

- 2005 AASHTO ROADWAY LIGHTING DESIGN GUIDE
- 2009 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 5TH EDITION AND LATEST INTERIM SPECIFICATIONS VALID AT THE TIME OF LETTING
- FATIGUE CATEGORY II SHALL BE USED IN DESIGN
- DESIGN HIGH MOUNT SUPPORT FOR BASIC WIND SPEED OF 90 MPH
- DESIGN HIGH MOUNT STANDARD FOUNDATION FOR BASIC WIND SPEED OF 90 MPH. ANY CONTRACTOR-DESIGNED SITE SPECIFIC FOUNDATION DESIGN SHALL BE DESIGNED FOR THE SAME WIND SPEED
- 2011 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
1401.01	HIGH MOUNT STANDARD
1402.01	HIGH MOUNT FOUNDATION
1403.01	HIGH MOUNT LUMINAIRES
1404.01	LIGHT STANDARDS
1405.01	STANDARD FOUNDATION
1406.01	LIGHT STANDARD LUMINAIRES
1407.01	ELECTRIC SERVICE POLE AND LATERAL
1408.01	LIGHT CONTROL SYSTEM
1409.01	ELECTRICAL DUCT
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, EXCEPT AS MODIFIED IN THE PROJECT SPECIAL PROVISIONS.

LEGEND

- PROPOSED 60' HIGH MAST STANDARD W/ HM FOUNDATION & (4) HM LUMINAIRES LED, CUTOFF, TYPE V, SYMMETRICAL
- PROPOSED LIGHT STANDARD TYPE MTLT 35' WITH 15' SINGLE ARM. INCLUDES STANDARD FOUNDATION TYPE R1 OR R2 & LED CUTOFF ROADWAY LUMINAIRE WITH ASYMMETRIC TYPE III DISTRIBUTION.
- PROPOSED CONTROL SYSTEM WITH PC36 JUNCTION BOX. BREAKER SIZE SHOWN IN LOAD SCHEDULE, SHEET E2
- PROPOSED ELECTRICAL JUNCTION BOX SEE DETAILS & TABLE B, THIS SHEET
- REFERENCE TO CORRESPONDING NOTE AS NUMBERED
- PROPOSED FEEDER CIRCUIT CONTROL SYSTEM(A), CIRCUIT(1) PLAN SYMBOL (6) SEE TABLE A, THIS SHEET
- PROPOSED SERVICE POLE AND LATERAL 30' CLASS 4 3#1/0 USE CONDUCTORS 2" CONDUIT
- PROPOSED ELECTRICAL DUCT SIZE 2", 3" OR 4" TYPE (JA) OR (BD) LOCATION: SEE TABLE C, THIS SHEET

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
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 #10G	2 AWG SIZE 6 CONDUCTOR (BK & RD) 1 AWG SIZE 8 GROUNDING CONDUCTOR	2 - 6 W/G FEEDER CIRCUIT

NUMBER	LOCATION	TYPE	SHEET
JB1	-RPA- STA. 17+41, 34' LT	PC30	E2
JB2	-RPA- STA. 17+41, 34' RT	PC30	E2
JB3	I-26 EB, NEAR HM1, 30' FROM EOP	PC18	E2
JB4	I-26 WB, ACROSS FROM JB3, 20' FROM EOP	PC18	E2
JB5	-RPB- STA. 16+60, 25' LT	PC18	E2
JB6	-RPB- STA. 16+60, 40' RT	PC18	E2
JB7	-L- STA. 28+73, 120' RT	PC18	E2
JB8	-L- STA. 22+50, 90' LT	PC30	E2
JB9	-RPC- STA. 22+98, 40' RT	PC30	E2
JB10	-RPC- STA. 22+94, 32' LT	PC18	E2
JB11	I-26 EB ACROSS FROM JB12, 20' FROM EOP	PC18	E2
JB12	I-26 WB NEAR HM5, 20' FROM EOP	PC18	E2
JB13	-RPD- STA. 16+94, 36 RT	PC18	E2
JB14	-RPD- STA. 16+94, 33' LT	PC18	E2
JB15	-L- STA. 33+26, 91' LT	PC18	E2
JB16	-L- STA. 33+12, 82' RT	PC18	E2
JB17	-L- STA. 24+58, 141' RT	PC18	E2
TOTALS		13	4

LOCATION	RACEWAY	SHEET	TYPE					
			JACKED (JA) FEET			BURIED (BD) FEET		
			SIZE 2"	SIZE 3"	SIZE 4"	SIZE 2"	SIZE 3"	SIZE 4"
-RPD- STA. 16+93		E2		40				
-L- STA. 33+18		E2		145				
-RPB- STA. 16+60		E2		40				
I-26 WEST OF STRUCTURE		E2		120				
I-26 EAST OF STRUCTURE		E2		120				
-RPA- STA. 17+42	JB1 - JB2	E2				70		
-RPA- STA. 17+42		E2				40		
-L- STA. 22+44	CSA - JB8	E2					230	
-L- STA. 22+44		E2			160			
-RPC- STA. 22+95	JB9 - JB10	E2				80		
-RPC- STA. 22+95		E2			55			
TOTALS				465	255	380		

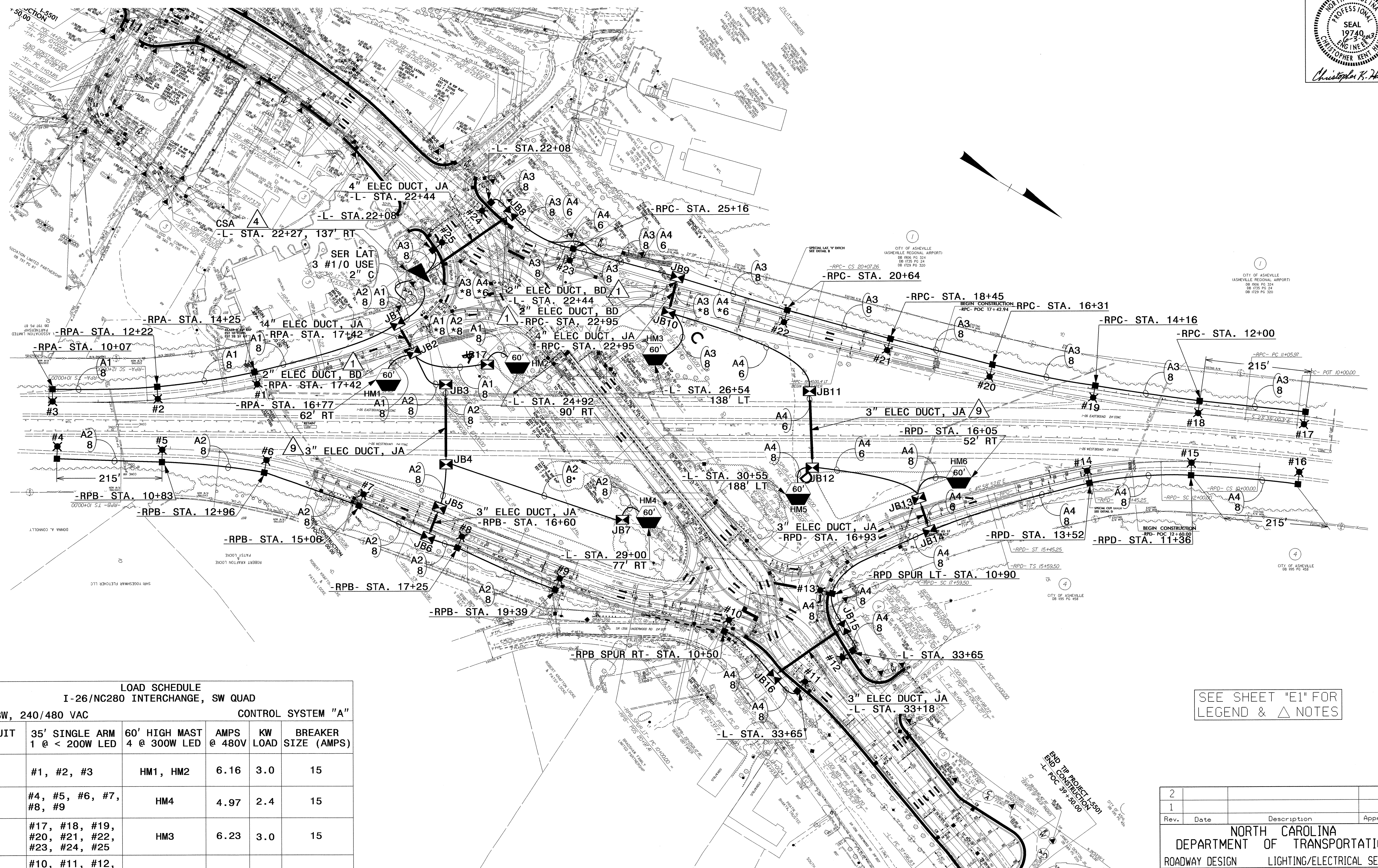
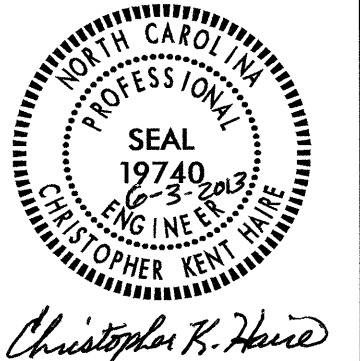
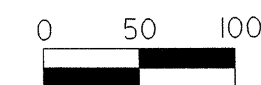
BD	BURIED	PVC	PVC SCHEDULE 40 CONDUIT
LT	LIGHT	RGC	RIGID GALVANIZED STEEL CONDUIT
JA	JACKED	C	CONDUIT
MH	MOUNTING HEIGHT	CKT	CIRCUIT
Ø	PHASE	N	NEUTRAL
SER LAT	SERVICE LATERAL	G	GROUND
		HM	HIGH MAST

COMPUTED BY: RGH DATE: 6/3/13
 CHECKED BY: _____ DATE: _____

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USE FOR LIGHTING CONSTRUCTION ONLY



LOAD SCHEDULE
I-26/NC280 INTERCHANGE, SW QUAD
CONTROL SYSTEM "A"

CIRCUIT ID	35' SINGLE ARM 1 @ < 200W LED	60' HIGH MAST 4 @ 300W LED	AMPS @ 480V	KW LOAD	BREAKER SIZE (AMPS)
A1	#1, #2, #3	HM1, HM2	6.16	3.0	15
A2	#4, #5, #6, #7, #8, #9	HM4	4.97	2.4	15
A3	#17, #18, #19, #20, #21, #22, #23, #24, #25	HM3	6.23	3.0	15
A4	#10, #11, #12, #13, #14, #15, #16	HM5, HM6	7.84	3.8	15
SPARE					15
TOTAL	25	6	25.2	12.2	

SEE SHEET "E1" FOR LEGEND & △ NOTES

2			
1			
Rev.	Date	Description	Approved
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION LIGHTING LAYOUT I-26/NC280 INTERCHANGE BUNCOMBE COUNTY			
Drawn By:	RGH	Approved By:	Dwg No.:

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