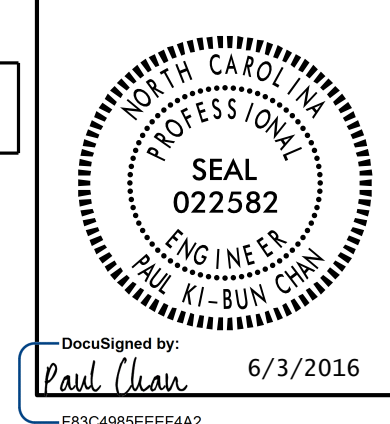


PLANS AND DETAILS FOR PROPOSED LIGHTING /ELECTRICAL CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DocuSigned by:
Paul Chan 6/3/2016
F83C488EEEF42

NOTES

- 1 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.
- 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 SEE LIGHTING DETAILS PLAN SHEETS E6-E7 FOR CAPITAL BOULEVARD BRIDGE OVER PEACE STREET AND SHEETS E8-E9 FOR THE WADE AVENUE FLYOVER BRIDGE RESPECTIVELY, FOR CONDUIT AND AESTHETIC LIGHTING LUMINAIRES ATTACHMENT DETAILS.
- 5 INSTALL RIGID GALVANIZED CONDUIT (RGC) ABOVE GROUND, AND POLYVINYL CHLORIDE (PVC) SCHEDULE 40 CONDUIT UNDERGROUND, EXCEPT AS MODIFIED ON THESE PLAN SHEETS OR IN APPLICABLE SECTIONS OF THE ROADWAY STANDARD DRAWINGS FOR THIS PROJECT.
- 6 TYPE PC30 JUNCTION BOXES ARE 30" L X 17" W X 18" H.
- 7 TYPE PC18 JUNCTION BOXES ARE 18" L X 12" W X 18" H.
- 8 REFER TO LIGHTING DETAILS PLAN SHEETS E6 & E7 FOR DETAILS ON CONNECTING CONDUCTORS TO THE WALLPACK LED LUMINAIRES AND TO THE AESTHETIC LIGHTING LUMINAIRE CIRCUITS AL1 & AL2 ON THE CAPITAL BOULEVARD BRIDGE OVER PEACE STREET.
- 9 REFER TO LIGHTING DETAILS PLAN SHEETS E8 & E9 FOR DETAILS ON CONNECTING CONDUCTORS TO THE AESTHETIC LIGHTING LUMINAIRE CIRCUITS AL3/AL4 & AL5/AL6 ON THE WADE AVENUE BRIDGE OVER CAPITAL BOULEVARD.
- 10 THE SPOTLIGHT LUMINAIRE SHALL HAVE A LIGHT BEAM SPREAD THAT HIGHLIGHTS THE DECORATIVE MEDALLION FROM THE GROUND AND SPREADS LIGHT UP THE FACE OF THE WALL. RECOMMENDED LIGHT SPREAD ANGLE IS 14 DEGREES.
- 11 INSTALL CONDUIT AND CONDUCTORS UNDER SIDEWALK. COORDINATE WORK WITH PRIME CONTRACTOR TO INSTALL CONDUIT PRIOR TO POURING SIDEWALK.
- 12 INSTALL CONTROL SYSTEM 5.5' FROM FACE OF PROPOSED GUARDRAIL.
- 13 SPOTLIGHT LUMINAIRE SPL6 TO BE INSTALLED IN AREA WITH RIP RAP. FOUNDATION MAY BE NEAR FLUSH WITH RIP RAP AT THIS LOCATION.
- 14 INSTALL PC18 JUNCTION BOX WITHIN 2 FEET OF SPOTLIGHT FOUNDATION.
- 15 TYPE CAST IRON JUNCTION BOXES (CIJB) ARE 12"L X 12"W X 8"H. CIJB SHALL HAVE A CONTINUOUS HINGE ON THE LID.

SCOPE OF WORK

THIS PROJECT INCLUDES PROVIDING AND INSTALLING CONDUIT, JUNCTION BOXES, CONTROL SYSTEMS AND DECORATIVE LIGHTING AT TWO STRUCTURES ALONG THE PROJECT CORRIDOR. DECORATIVE LIGHTING IS AS FOLLOWS:

CAPITAL BOULEVARD BRIDGE OVER PEACE STREET
LED WALL MOUNT UNDERPASS LIGHTS
LED AESTHETIC LIGHTING LUMINAIRES FOR BACK LIGHTING OF ARCHITECTURAL METAL FASCIA ATTACHED TO THE GIRDER ON BOTH SIDES
LED SPOTLIGHTS FOR MEDALLIONS/WALL WASH AT THE END BENTS

WADE AVENUE BRIDGE OVER PEACE STREET
LED AESTHETIC LIGHTING LUMINAIRES FOR BACK LIGHTING OF ARCHITECTURAL METAL FASCIA ATTACHED TO THE GIRDER ON BOTH SIDES
LED SPOTLIGHTS FOR MEDALLIONS/WALL WASH AT THE END BENTS

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
1407.01	ELECTRIC SERVICE POLE AND LATERAL
1408.01	LIGHT CONTROL SYSTEM (SHEET 3 ONLY)
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

- PROPOSED CONTROL SYSTEM, SEE DETAIL SHEET E5. BREAKER SIZE SHOWN IN LOAD SCHEDULES, SHEETS E2 & E3
- PROPOSED WALL PACK LUMINAIRE, TYPE IV WM, LED, BUG RATING B1-U3-G4, 75W MAX., 4200 LUMENS MIN.
- PROPOSED SPOTLIGHT LUMINAIRE, 30W LED MAX, 1280 LUMENS, SEE SPECIAL PROVISIONS FOR COLOR TEMPERATURE
SEE NOTE 10 FOR RECOMMENDED LIGHT SPREAD ANGLE. SEE SHEET E4 FOR INSTALLATION DETAILS.
- PROPOSED ELECTRICAL JUNCTION BOX, SEE TABLE B, THIS SHEET
- REFERENCE TO CORRESPONDING NOTE AS NUMBERED
- PROPOSED 4 FT LED AESTHETIC LIGHTING LUMINAIRE, 15W/775 LUMENS MINIMUM PER FOOT, 30 DEG. X 60 DEG. BEAM ANGLE. (COLOR TEMPERATURE TO BE DETERMINED AT MOCK-UP) SYMBOL DOES NOT REPRESENT A SPECIFIC NUMBER OF 4FT LUMINAIRES. REFER TO LOAD SCHEDULES FOR ACTUAL NUMBER OF LUMINAIRES.
- 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

2", 3" OR 4" ELEC. DUCT JA & BD

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 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

NUMBER	LOCATION	TYPE	SHEET
JB1	17+85 -Y1- 70' LT	PC30	E2
JB2	17+85 -Y1- 70' RT	PC30	E2
JB3	22+10 -FLYOVER- 50' LT	PC18	E3
JB4	18+90 -FLYOVER- 50' RT	PC18	E3
TOTALS		2	2

LOCATION	RACEWAY	SHEET	TYPE						
			JACKED (JA) FEET			BURIED (BD) FEET			
			SIZE 2"	SIZE 3"	SIZE 4"	SIZE 2"	SIZE 3"	SIZE 4"	
17+85 -Y1-		E2			150				
17+85 -Y1-	JB1 - JB2	E2				170			
17+85 -Y1-	JB1 - CIJB	E2				60			
22+10 -FLYOVER-	JB3 - CIJB	E3				70			
18+90 -FLYOVER-	JB4 - CIJB	E3				70			
TOTALS					150	370			

BD	BURIED	PVC	PVC SCHEDULE 40 CONDUIT
LT	LIGHT	RGS/RGC	RIGID GALVANIZED STEEL CONDUIT
JA	JACKED	CON	CONDUIT
MH	MOUNTING HEIGHT	CKT	CIRCUIT
Ø	PHASE	N	NEUTRAL
SER LAT	SERVICE LATERAL	G	GROUND
CIJB	CAST IRON JUNCTION BOX	HM	HIGH MAST

COMPUTED BY: AB DATE: _____
CHECKED BY: PKC DATE: _____