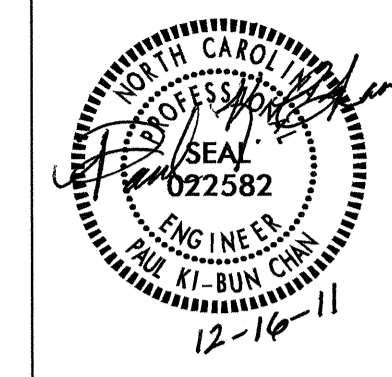


PLANS AND DETAILS FOR PROPOSED LIGHTING /ELECTRICAL CONSTRUCTION



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 2002 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 2002 AASHTO ROADSIDE DESIGN GUIDE.
- 5 TYPE PC18 JUNCTION BOXES ARE 18" L X 12" W X 18" H.
- 6 TYPE PC30 JUNCTION BOXES ARE 30" L X 17" W X 18" H.
- 7 SINGLE ARM STANDARDS #5 AND #10 TO BE INSTALLED 60' FROM SINGLE ARM POLES 1 AND 49, RESPECTIVELY, OF AREA "A" SITE LIGHTING PLAN AS SHOWN IN CONTRACT P-1382.
- 8 USE 60' SPACING BETWEEN ALL SINGLE ARM LIGHT STANDARDS.
- 9 DUCTBANKS WILL NOT BE REQUIRED ON THIS PROJECT SHOULD THE DUCTBANKS FOR P1382 BE INSTALLED PRIOR TO CONSTRUCTION OF U-5132.

SCOPE OF WORK

PLACE ROADWAY LIGHTING SYSTEM INTO SERVICE BY PROVIDING AND INSTALLING 80' & 100' HIGH MOUNT STANDARDS WITH HIGH PRESSURE SODIUM LUMINAIRES, UNDERGROUND CIRCUITRY, CONTROL SYSTEM AND JUNCTION BOXES.

DESIGN CRITERIA

- 2005 AASHTO ROADWAY LIGHTING DESIGN GUIDE
- 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 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 130 MPH
- DESIGN HIGH MOUNT STANDARD FOUNDATION FOR BASIC WIND SPEED OF 130 MPH. ANY CONTRACTOR-DESIGNED SITE SPECIFIC FOUNDATION DESIGN SHALL BE DESIGNED FOR THE SAME WIND SPEED
- 2008 NATIONAL ELECTRICAL CODE
- 2002 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
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.

LEGEND

- PROPOSED 100' HIGH MAST STANDARD W/ HM FOUNDATION & (6) HM LUMINAIRES 750W HPS, MEDIUM, CUTOFF, TYPE V
- PROPOSED 80' HIGH MAST STANDARD W/ HM FOUNDATION & (8) HM LUMINAIRES 400W HPS, MEDIUM, CUTOFF, TYPE V
- PROPOSED CONTROL SYSTEM WITH PC36 JUNCTION BOX. BREAKER SIZES 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
- PROPOSED SINGLE ARM LIGHT STANDARD. INSTALL 5'-6" BEHIND GUARDRAIL OR 16' FROM EDGE OF PAVEMENT. SEE DETAIL SHEET E3 FOR POLE, LUMINAIRE AND FOUNDATION DETAILS
- 3/4" PVC CONDUIT. CONDUCTORS TO BE INSTALLED IN SEPARATE CONTRACT. INSTALL PULLSTRING IN ALL EMPTY CONDUITS.

PLAN SYMBOL	DESCRIPTION	CONTRACT ITEM
8	2 #8 Ø 1 #10G 1 1/2" PVC	2 AWG SIZE 8 CONDUCTOR (BK & RD) 1 AWG SIZE 10 GROUNDING CONDUCTOR 1.5" PVC CONDUIT
*8	2 #8 Ø 1 #10G	2 AWG SIZE 8 CONDUCTOR (BK & RD) 1 AWG SIZE 10 GROUNDING CONDUCTOR

NUMBER	LOCATION	TYPE	SHEET
JB1	18+39 -SBL- 100' RT	PC30	E2
JB2	18+53 -NBL- 70' LT	PC18	E2
JB3	14+23 -RPD- 65' RT	PC18	E2
JB4	30+10 -L- 100' RT	PC18	E2
JB5	30+10 -L- 100' LT	PC18	E2
JB6	13+87 -LPB- 145' RT	PC18	E2
JB7	13+00 -LPB- 55' RT	PC18	E2
JB8	13+00 -LPB- 40' LT	PC18	E2
JB9	26+80 -L- 105' LT	PC18	E2
TOTALS		8	1

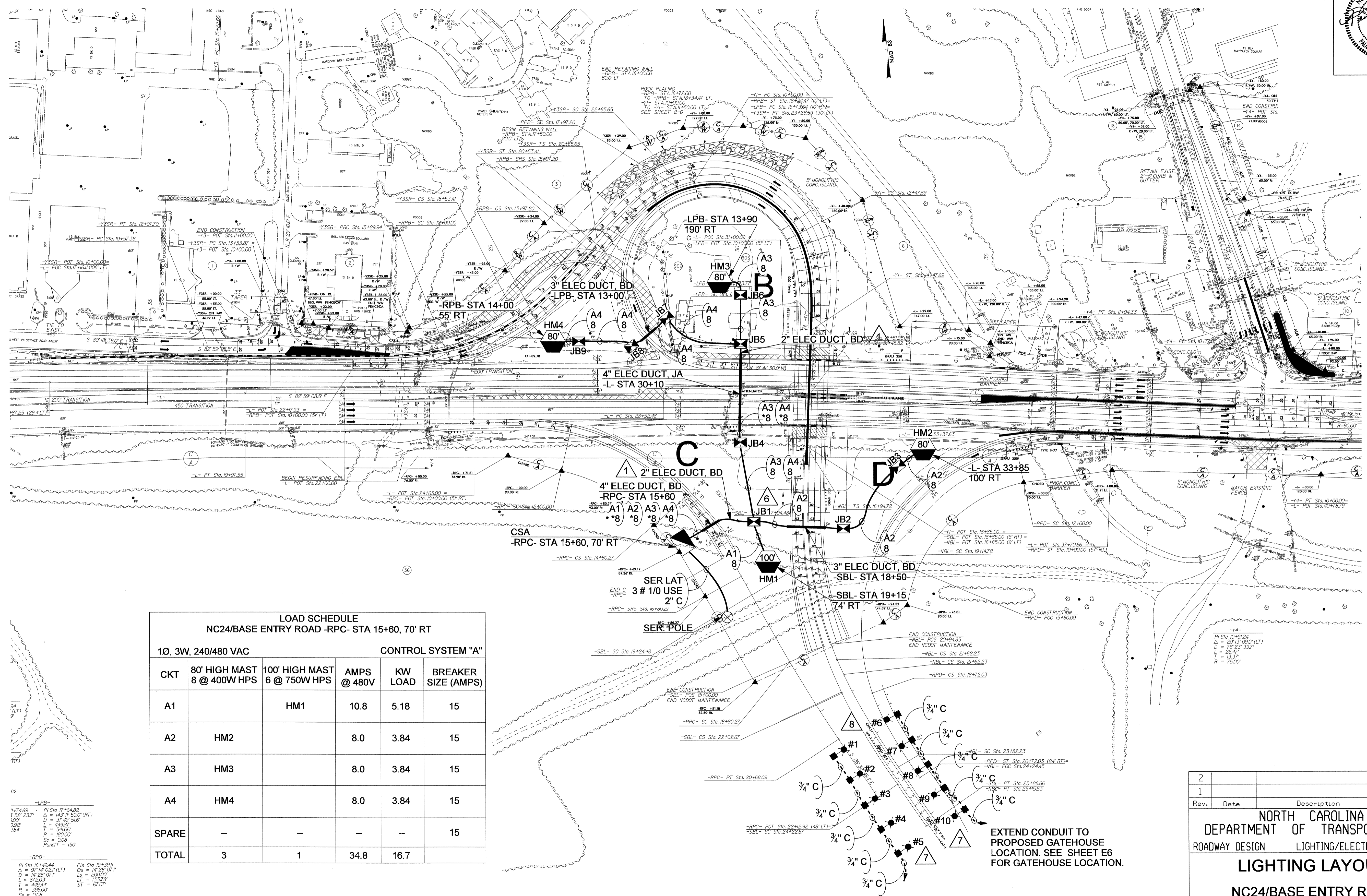
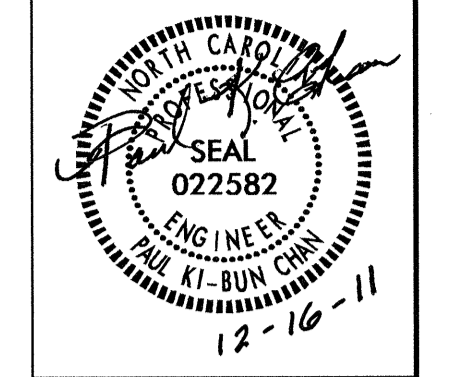
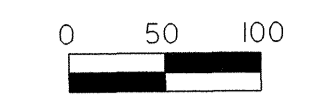
LOCATION	RACEWAY	SHEET	TYPE					
			JACKED (JA) FEET			BURIED (BD) FEET		
			SIZE 2"	SIZE 3"	SIZE 4"	SIZE 2"	SIZE 3"	SIZE 4"
15+60 -RPC-		E2						45
15+60 RPC	CSA - JB1	E2				160		
30+10 -L-		E2			160			
30+10 -L-	JB4 - JB5	E2				200		
18+50 -SBL-		E2					80	
13+00 -LPB-		E2					40	
TOTALS					160	360	120	45

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: 12/16/11
 CHECKED BY: PAC DATE: 12-16-11

03-JAN-2012 09:44 R:\Lighting\Electrical\Lighting Design\U5132_1e_psh_e.Ldgn rghd1 AT RD258197

USE FOR LIGHTING CONSTRUCTION ONLY



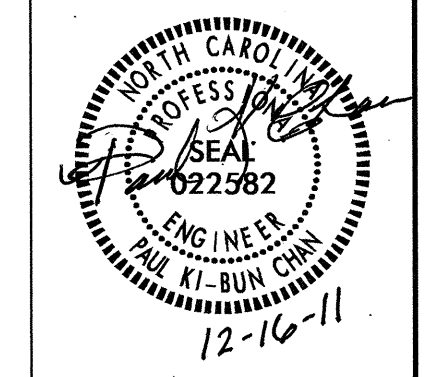
LOAD SCHEDULE
NC24/BASE ENTRY ROAD -RPC- STA 15+60, 70' RT

CKT	10, 3W, 240/480 VAC		CONTROL SYSTEM "A"		
	80' HIGH MAST 8 @ 400W HPS	100' HIGH MAST 6 @ 750W HPS	AMPS @ 480V	KW LOAD	BREAKER SIZE (AMPS)
A1		HM1	10.8	5.18	15
A2		HM2	8.0	3.84	15
A3		HM3	8.0	3.84	15
A4		HM4	8.0	3.84	15
SPARE					15
TOTAL	3	1	34.8	16.7	

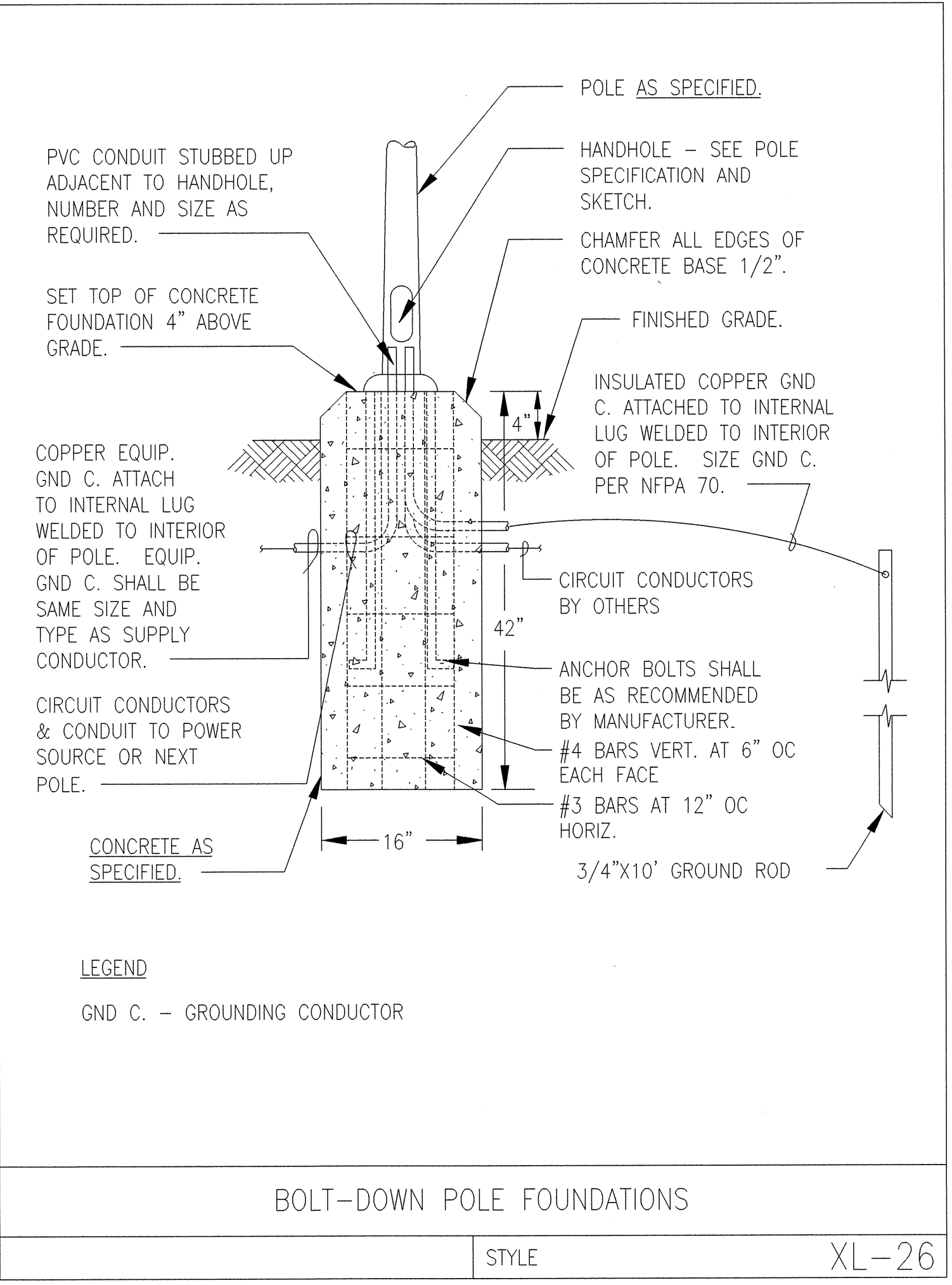
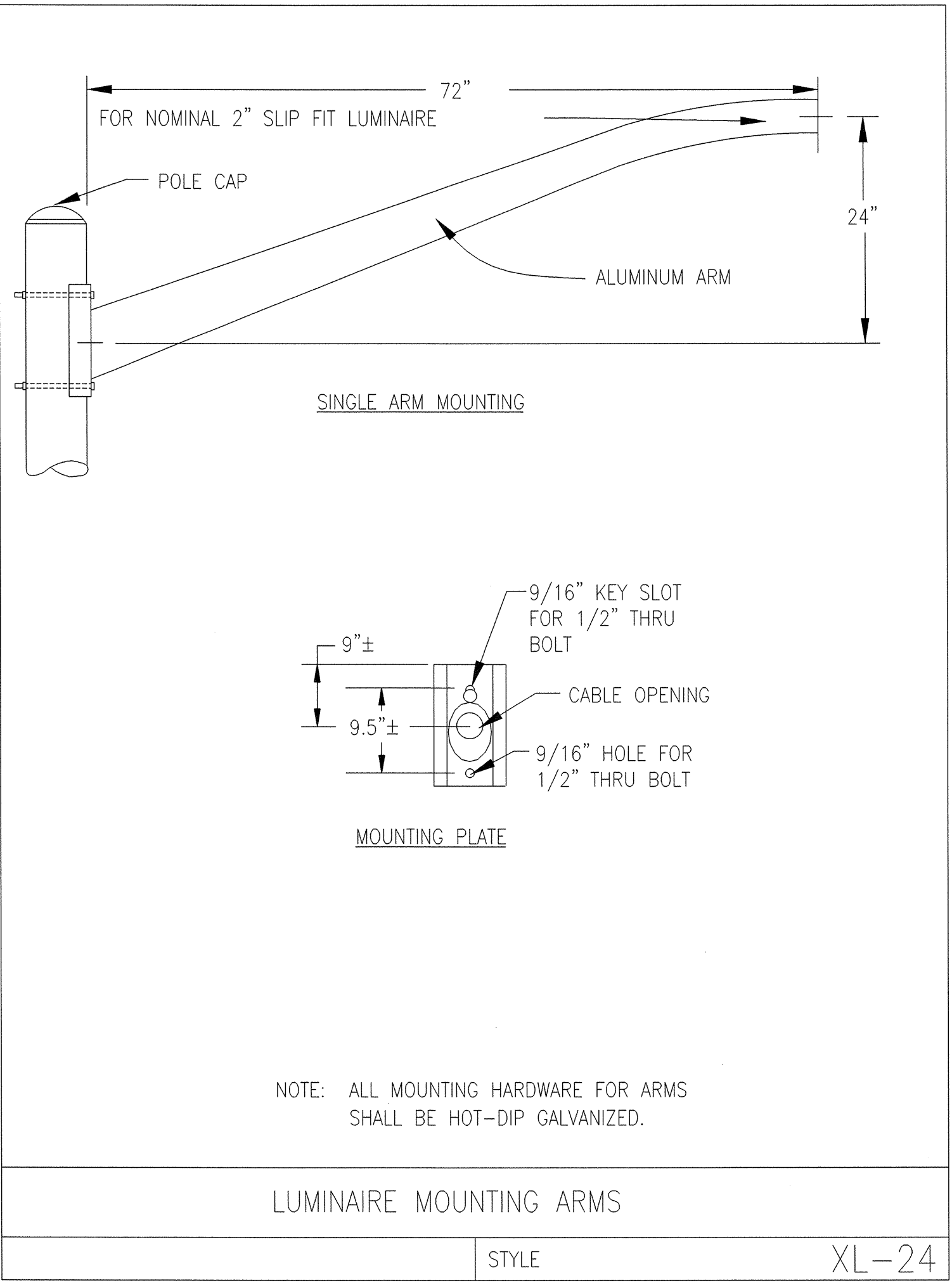
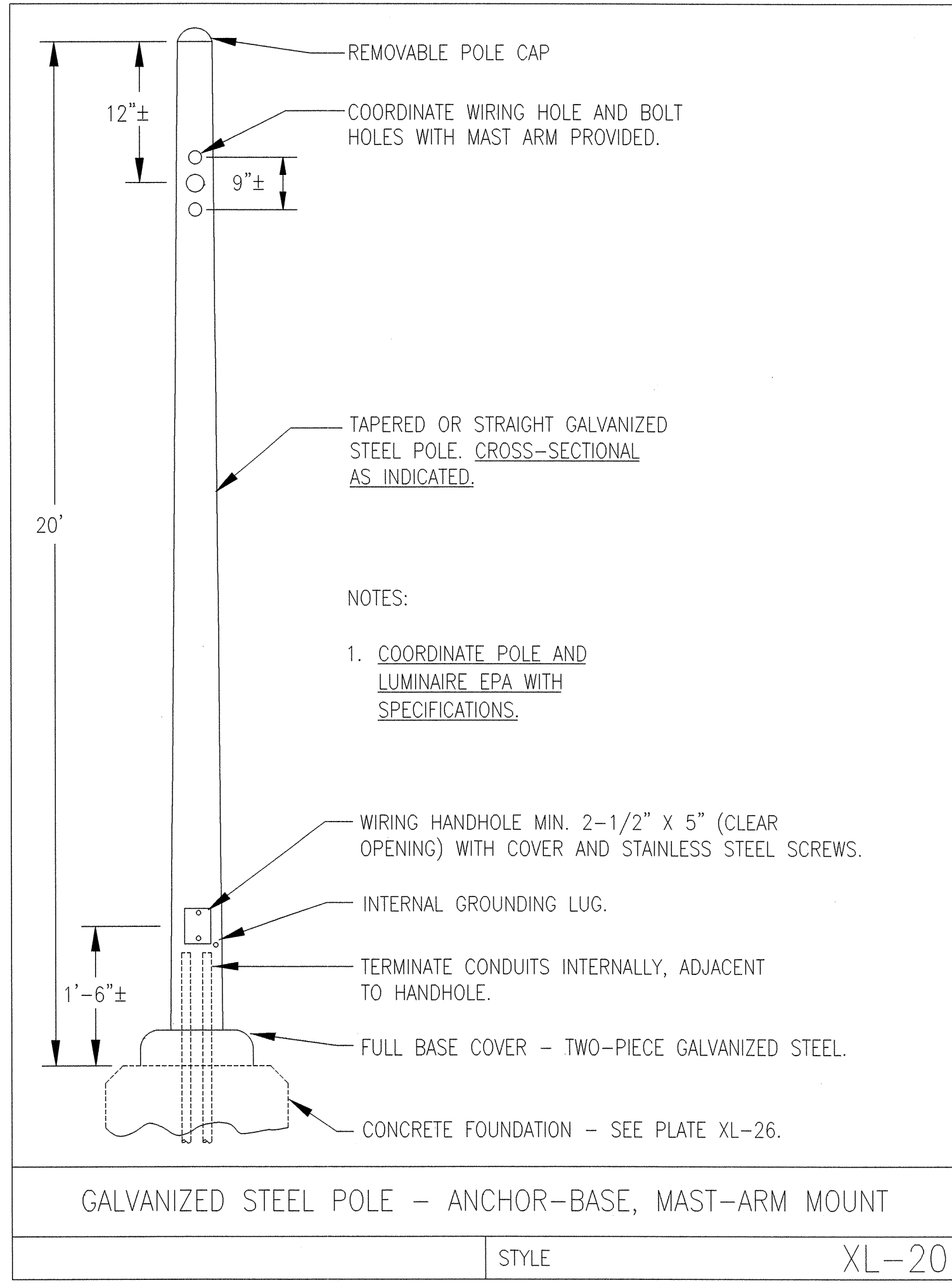
1/4" = 1' (VERTICAL)
1/8" = 1' (HORIZONTAL)
PI STA 17+64.82
D = 57' 14" (22.17 RT)
L = 14' 23" (5.47 RT)
T = 449.50'
R = 1800.00'
S = 0.08
Runoff = 150'

2			
1			
Rev.	Date	Description	Approved
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION LIGHTING LAYOUT NC24/BASE ENTRY ROAD INTERCHANGE ONSLOW COUNTY			
Drawn By:	RGH	Approved By:	PAC
Dwg No.:			

16-DEC-2011 10:15:59
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 rgnall rd:568197

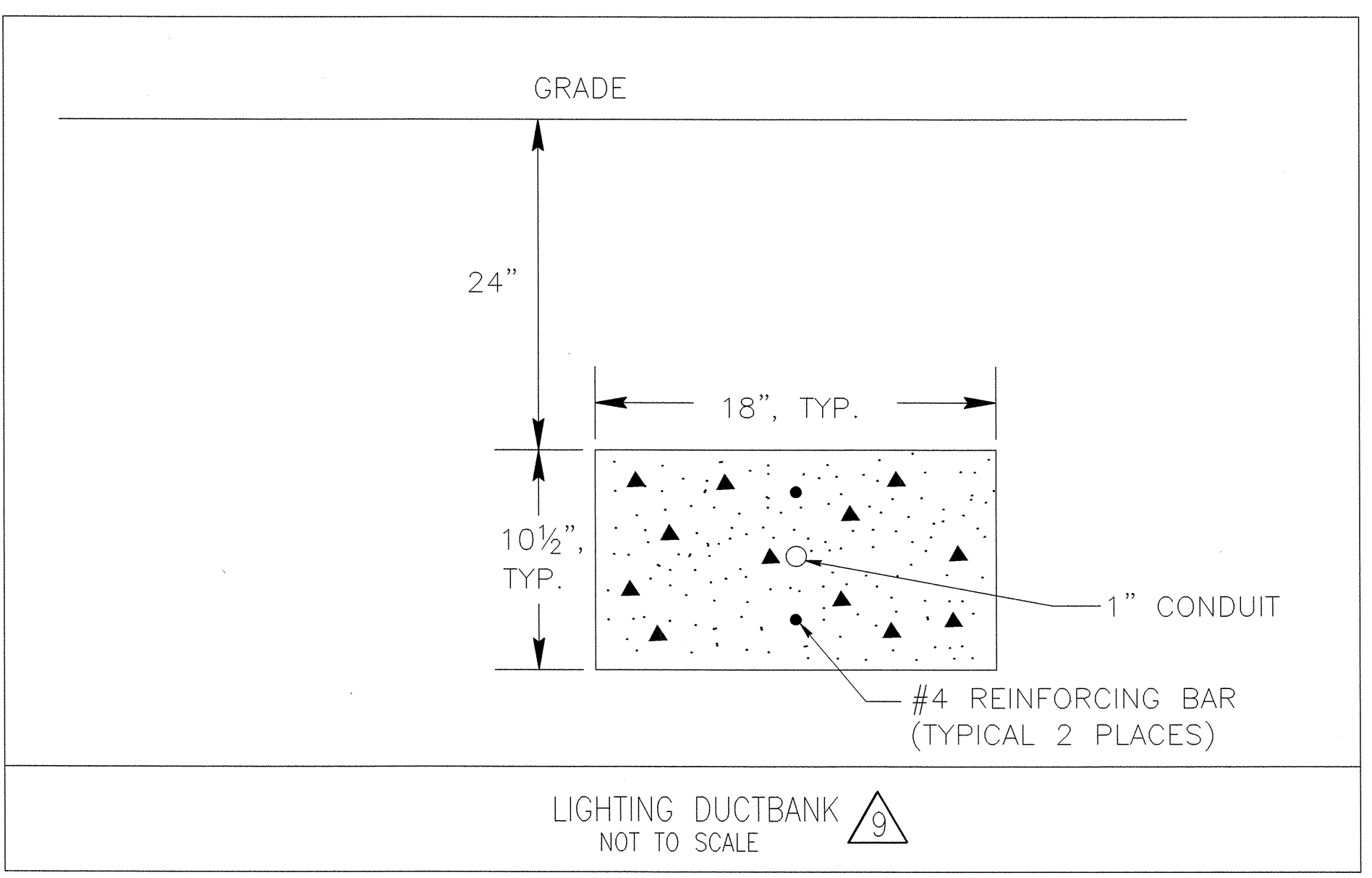


USE FOR LIGHTING CONSTRUCTION ONLY



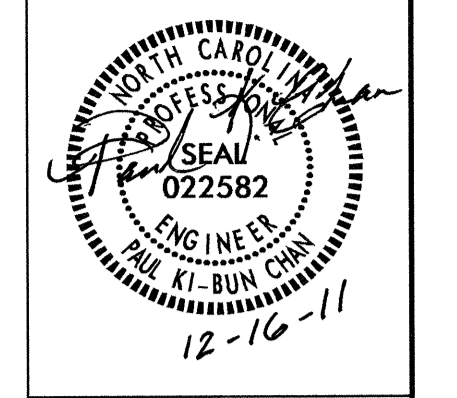
SEE SHEET "E1" FOR LEGEND & △ NOTES

SITE LIGHTING FIXTURE SCHEDULE									
Symbol	Label	Catalog Number	Description	Lamp	Watts	Voltage	Mounting	Notes	Dimensions
●	SA	VISIONAIRE: ELE-3-T4-240L-3-UNV-MAF-SL MOUNTED ON KW:RTST20-6.5-11-G-115S-NC OR APPROVED EQUAL	LED AREA LIGHT	240 WHITE LIGHT EMITTING DIODES (LEDS) EACH WITH CLEAR HEMISPHERICAL INTEGRAL LENS, VERTICAL BASE-UP POSITION.	264	277	POLE MOUNTED 20'-0" AFG		33"L x 14.5"W x 4"D



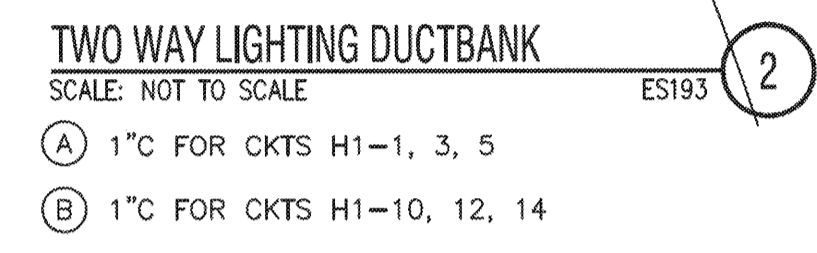
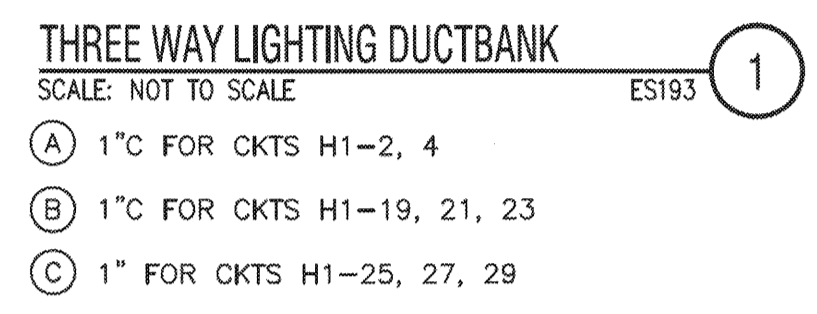
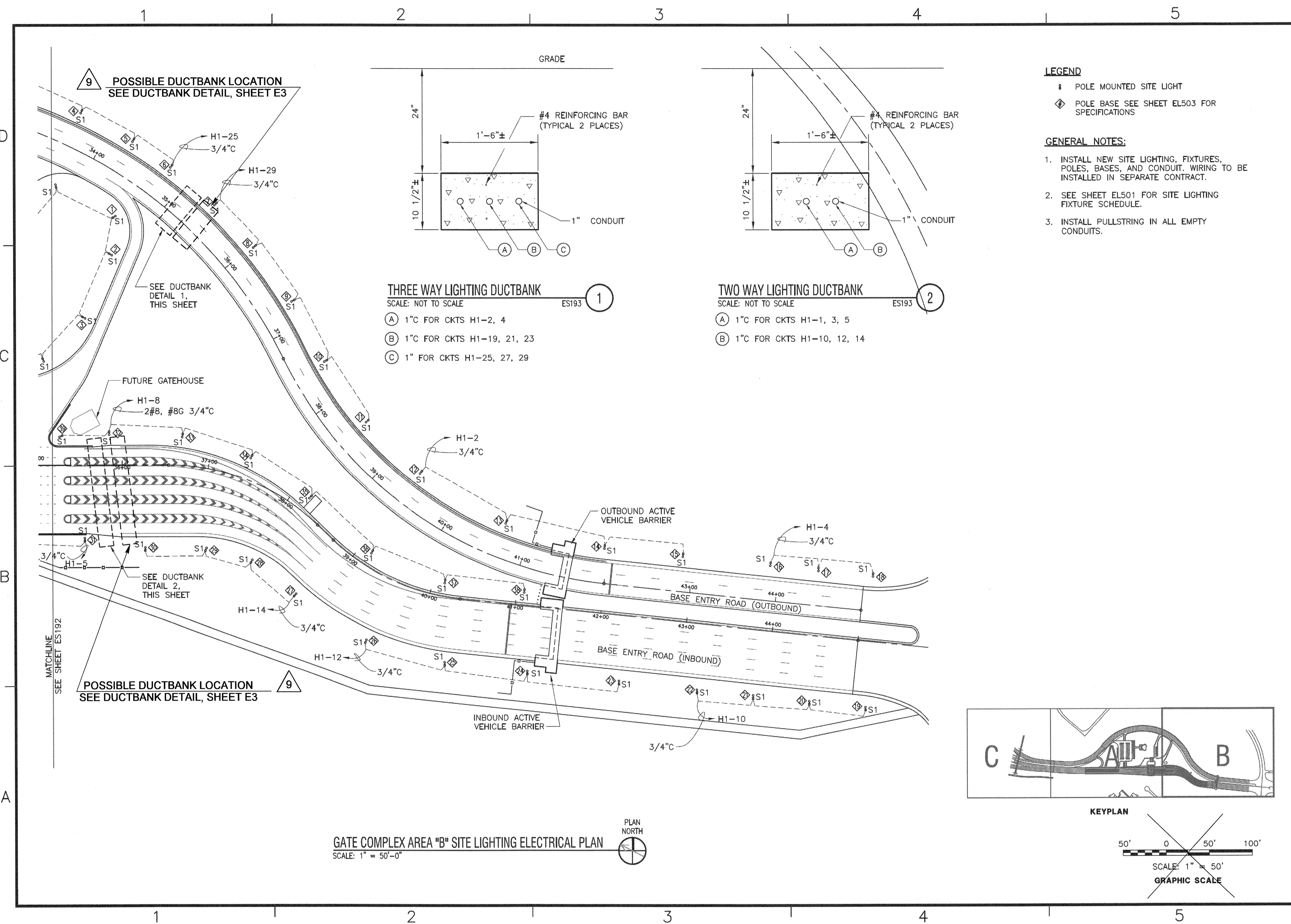
2				
1				
Rev.	Date	Description	Approved	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION SINGLE ARM POLE, SINGLE ARM FOUNDTION AND DUCTBANK DETAILS ONSLOW COUNTY Drawn By: RGH Approved By: PKC Dwg No.:				

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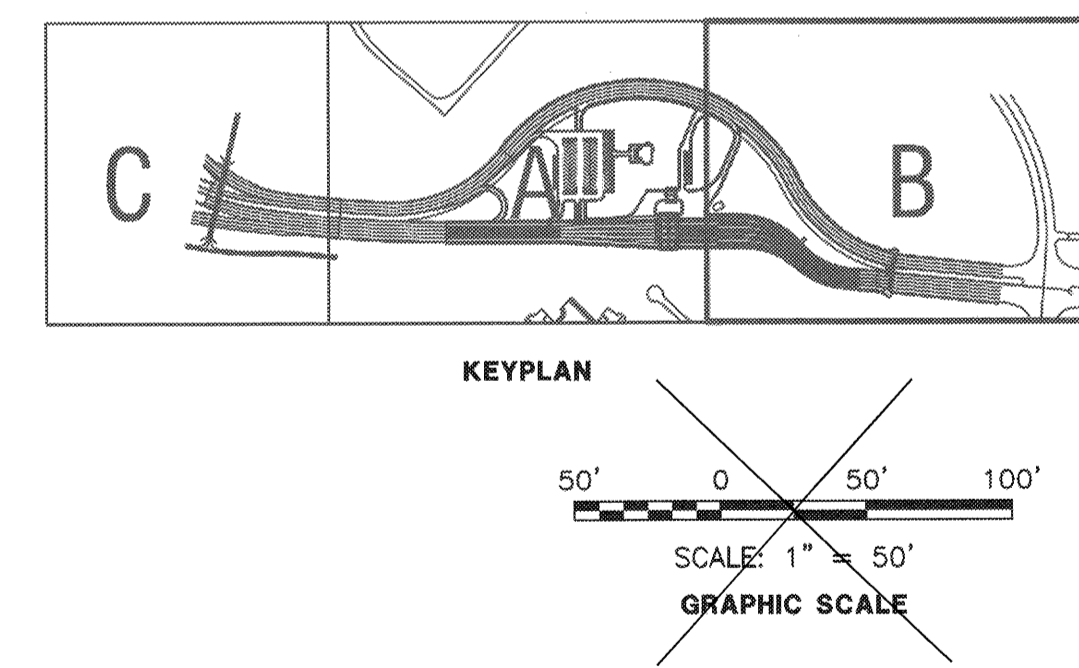


NO SCALE

SEE SHEET "E1" FOR LEGEND & △ NOTES



- LEGEND**
- ⊠ POLE MOUNTED SITE LIGHT
 - ◆ POLE BASE SEE SHEET EL503 FOR SPECIFICATIONS
- GENERAL NOTES:**
- INSTALL NEW SITE LIGHTING, FIXTURES, POLES, BASES, AND CONDUIT. WIRING TO BE INSTALLED IN SEPARATE CONTRACT.
 - SEE SHEET EL501 FOR SITE LIGHTING FIXTURE SCHEDULE.
 - INSTALL PULLSTRING IN ALL EMPTY CONDUITS.



GATE COMPLEX AREA "B" SITE LIGHTING ELECTRICAL PLAN
SCALE: 1" = 50'-0"

NAVFAC ENGINEERING

CE M S ENGINEERING

CHIEF ENGINEERING: 3509 Hwy 108a, Suite 100, Lenoir, NC 28540, PH: 252-757-2637, www.cemse.com, Chief Project Engineer: Project Manager: C. Mason

NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC

NAVAL STATION - NORFOLK, VA

MARINE CORPS BASE, CAMP LEJEUNE, JACKSONVILLE, NC

FY10 MCON P1382

NEW BASE ENTRY POINT

GATE COMPLEX AREA "B" SITE LIGHTING ELECTRICAL PLAN

SCALE: AS NOTED

PROJECT NO.: P-1382

CONSTR. CONTR. NO.: 140085-09-C-3217

NAVFAC DRAWING NO.: 12586445

SHEET 229 OF 287

ES193

DATE: 02/09/11

THIS EXCERPT OF PLANS FROM MCON P1382 PROVIDED HERE FOR INFORMATION ONLY

Rev.	Date	Description	Approved
2			
1			

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION

BASE ENTRY DETAILS

GATE COMPLEX AREA SITE ELECTRICAL PLANS

ONSONG COUNTY

Drawn By: **RGH** Approved By: _____ Dwg No.: _____

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