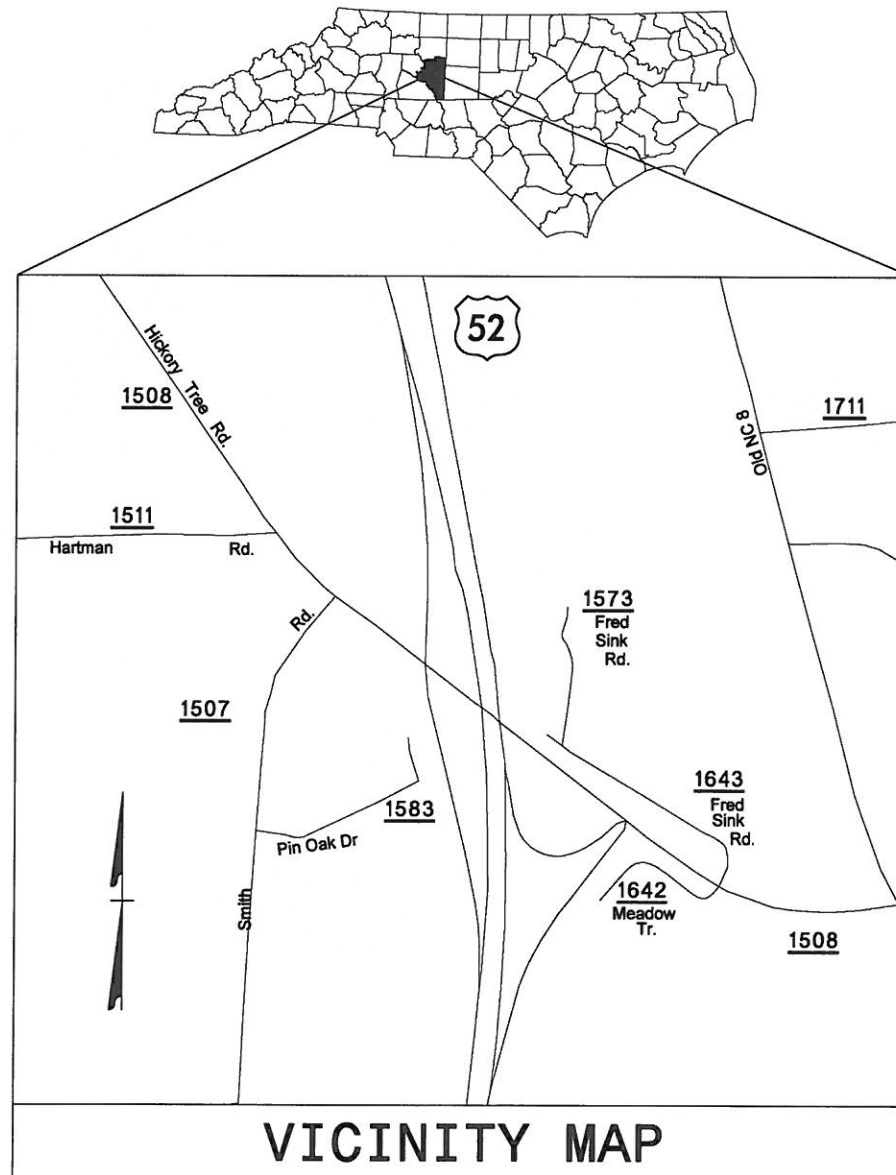


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

DAVIDSON COUNTY



VICINITY MAP

LOCATION: INTERCHANGE OF US-52 AND SR-1508 (HICKORY TREE ROAD)
TYPE OF WORK: LIGHTING / ELECTRICAL CONSTRUCTION



WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 713-2800 FAX: (919) 711-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
DAVID BISSETTE, P.E. TRAFFIC CONTROL PROJECT ENGINEER
MICHAEL STEELMAN TRAFFIC CONTROL PROJECT DESIGN ENGINEER
DURWOOD KENNEDY, P.E. TRAFFIC CONTROL DESIGN ENGINEER



INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, INDEX OF SHEETS AND MANAGEMENT STRATEGIES
TMP-2	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, GENERAL NOTES AND PHASING

MANAGEMENT STRATEGIES

THE PROPOSED GUARDRAIL AND LIGHTING/ELECTRICAL CONSTRUCTION WILL BE PERFORMED USING A COMBINATION OF LANE CLOSURES, ROAD CLOSURES AND SHOULDER CLOSURES.

SHEET NO.

TMP-1

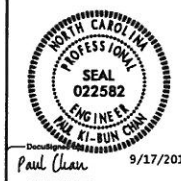
WBS 75022

TIP PROJECT:

APPROVED: *David Bissette*
DATE: 9/22/2004

SEAL





PLANS AND DETAILS FOR PROPOSED LIGHTING /ELECTRICAL CONSTRUCTION

NOTES

- 1 AT THESE LOCATIONS, PROVIDE ELECTRICAL DUCT IN ACCORDANCE WITH NEC REQUIREMENTS 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 PC36 JUNCTION BOXES ARE 36" L X 24" W X 18" H.
- 8 INSTALL ELECTRICAL DUCT AND JUNCTION BOXES FOR BEST ALIGNMENT OF CIRCUITRY.
- 9 HIGH MAST SYMBOL SHOWN DASHED AND UNFILLED FOR CLARITY.
- 10 DIMENSIONS SHOWN IN GUARDRAIL DETAILS ARE TO THE CENTER OF THE PROPOSED HIGH MAST FOUNDATION.
- 11 DIMENSIONS SHOWN ARE FROM THE CENTER OF THE HIGH MAST FOUNDATION TO A POINT PERPENDICULAR TO THE EDGE OF PAVEMENT.

SCOPE OF WORK

PLACE ROADWAY LIGHTING SYSTEM INTO SERVICE BY PROVIDING AND INSTALLING 100' & 120' HIGH MOUNT STANDARDS WITH HIGH PRESSURE SODIUM 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 110 MPH. ANY CONTRACTOR-DESIGNED SITE SPECIFIC FOUNDATION DESIGN SHALL BE DESIGNED FOR THE SAME WIND SPEED
 2014 NATIONAL ELECTRICAL CODE
 2011 AASHTO ROADSIDE DESIGN GUIDE

ROADWAY STANDARDS

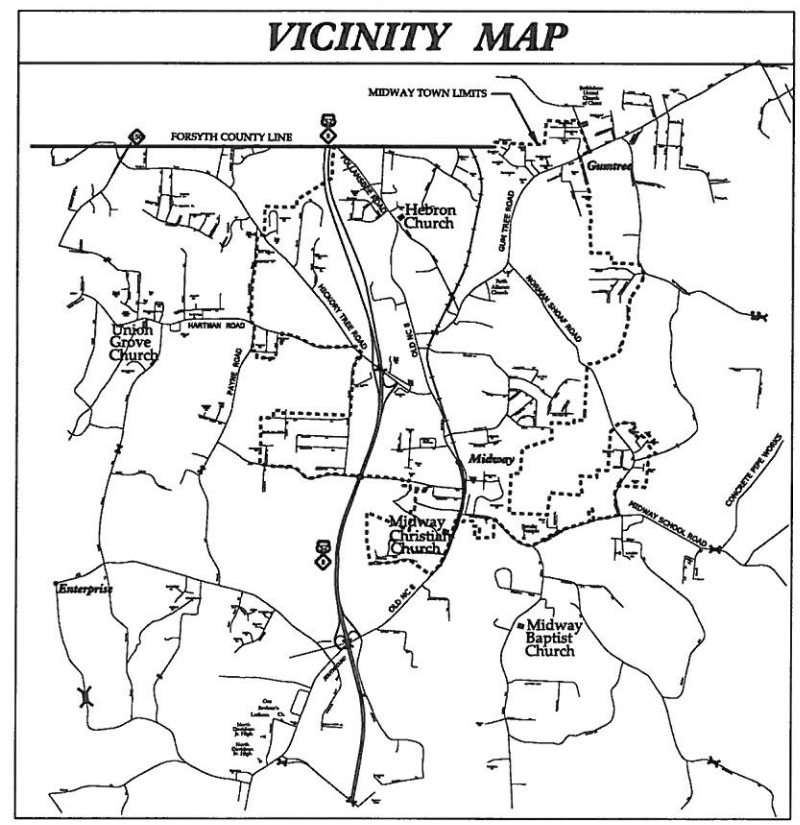
THE FOLLOWING ROADWAY ENGLISH STANDARDS AS APPEAR IN "NCDOT ROADWAY STANDARD DRAWINGS", ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD NO.	TITLE
862.02	GUARDRAIL INSTALLATION
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 LIGHTING 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 120' HIGH MAST STANDARD W/ HM FOUNDATION & (8) HM LUMINAIRES 750W HPS, MEDIUM, CUTOFF, TYPE V
- 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 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 - 8 W/G FEEDER CIRCUIT IN 1.5" CONDUIT
*8	2 #8 Ø 1 #10G	2 - 8 W/G FEEDER CIRCUIT
6	2 #6 Ø 1 #8G 1.5" P	2 - 6 W/G FEEDER CIRCUIT IN 1.5" CONDUIT
*6	2 #6 Ø 1 #10G	2 - 6 W/G FEEDER CIRCUIT
4	2 #4 Ø 1 #6G 1.5" P	2 - 4 W/G FEEDER CIRCUIT IN 1.5" CONDUIT
*4	2 #4 Ø 1 #6G	2 - 4 W/G FEEDER CIRCUIT

NUMBER	TYPE	SHEET
JB1	PC18	E2
JB2	PC18	E2
JB3	PC18	E2
JB4	PC36	E2
JB5	PC36	E2
JB6	PC36	E3
JB7	PC18	E3
JB8	PC18	E3
JB9	PC36	E3
JB10	PC18	E3
JB11	PC18	E3
JB12	PC18	E3
TOTALS	8	4

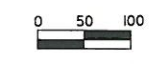
LOCATION	RACEWAY	SHEET	TYPE							
			JACKED (JA) FEET			BURIED (BD) FEET				
			SIZE 2"	SIZE 3"	SIZE 4"	SIZE 2"	SIZE 3"	SIZE 4"		
NEAR CONTROL SYSTEM "A"	JB6 - JB7	E2			80	120				
UNDER US52	JB9 - JB10	E3			150	185				
NEAR HM4		E2		30						
TOTALS				30	230	205				

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

COMPUTED BY: RGH DATE: 9/17/14
 CHECKED BY: _____ DATE: _____

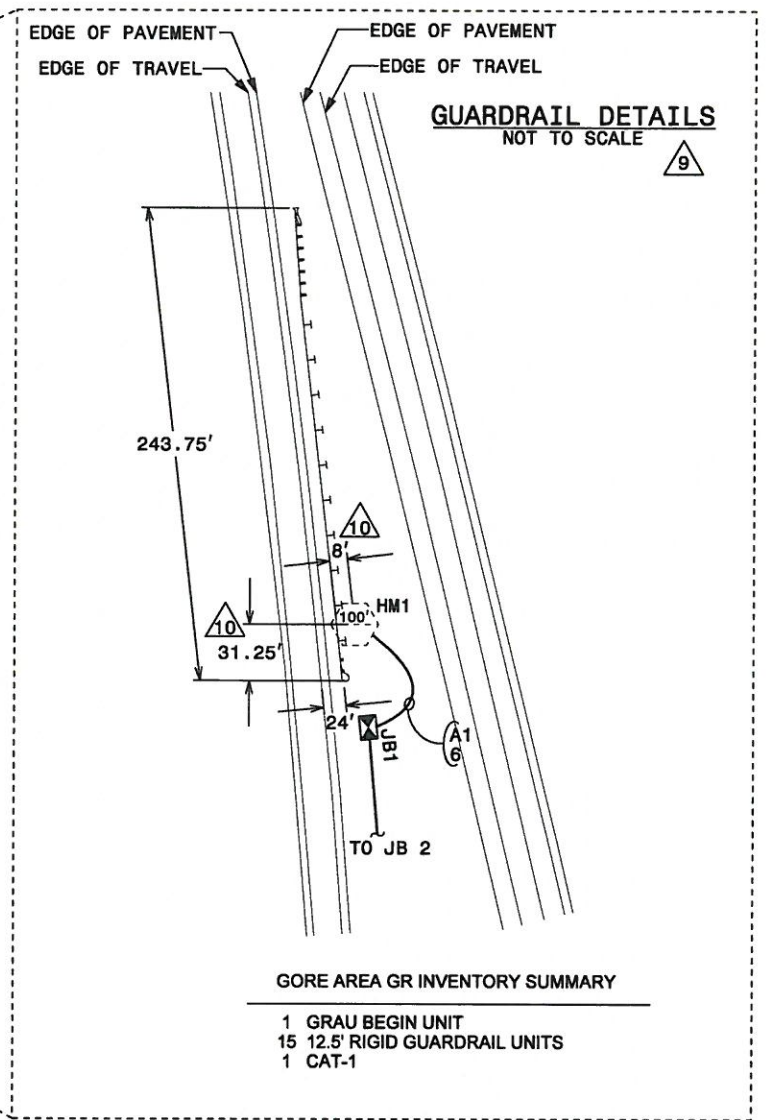
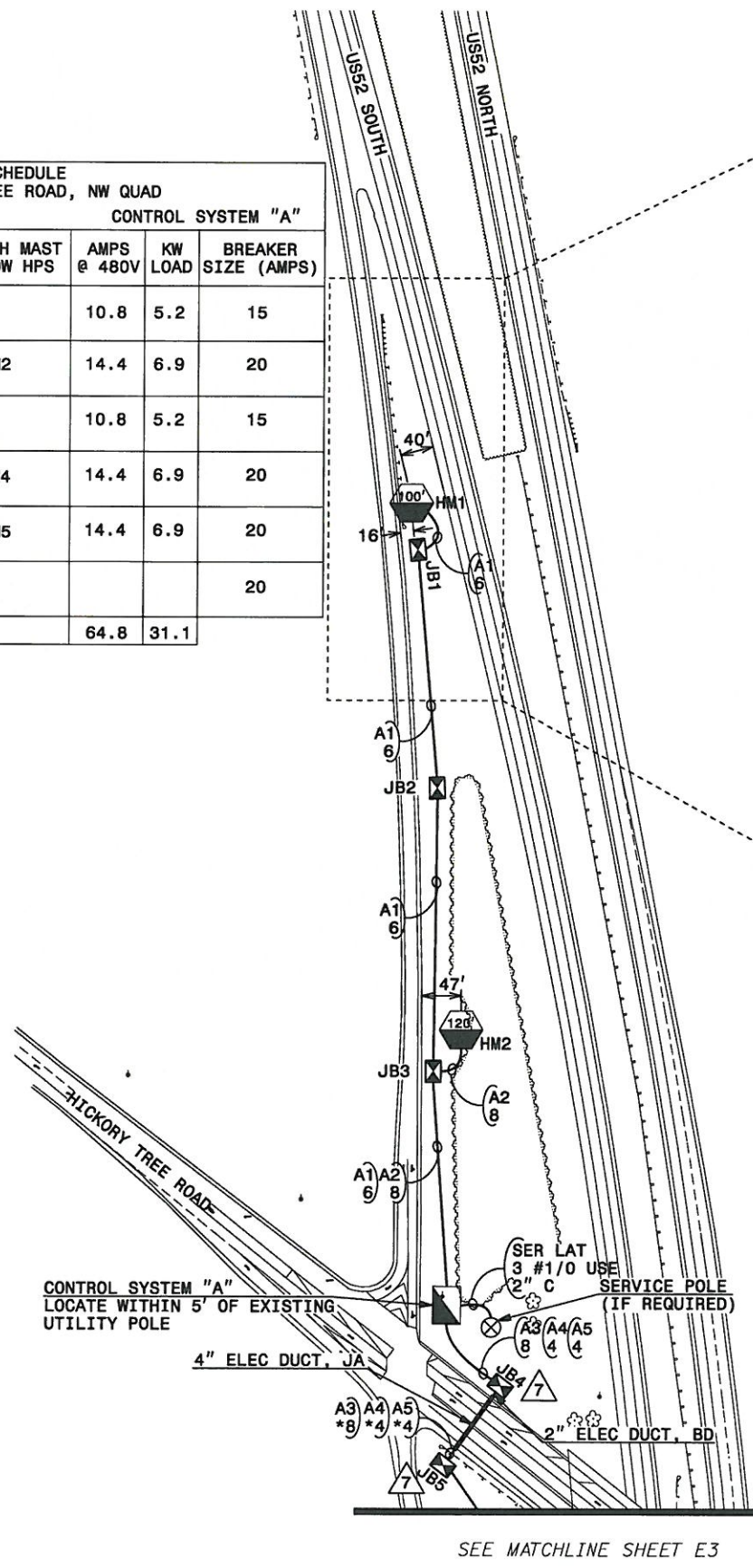
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 \$\$\$USERNAME\$\$\$

USE FOR LIGHTING CONSTRUCTION ONLY



LOAD SCHEDULE
US52/HICKORY TREE ROAD, NW QUAD
1Ø, 3W, 240/480 VAC CONTROL SYSTEM "A"

CIRCUIT ID	100' HIGH MAST 6 @ 750W HPS	120' HIGH MAST 8 @ 750W HPS	AMPS @ 480V	KW LOAD	BREAKER SIZE (AMPS)
A1	HM1		10.8	5.2	15
A2		HM2	14.4	6.9	20
A3	HM3		10.8	5.2	15
A4		HM4	14.4	6.9	20
A5		HM5	14.4	6.9	20
SPARE					20
TOTAL			64.8	31.1	



SEE SHEET "E1" FOR
LEGEND & △ NOTES

2			
1			
Rev.	Date	Description	Approved
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION LIGHTING LAYOUT US52/HICKORY TREE ROAD INTERCHANGE (SHEET 1 OF 2) DAVIDSON COUNTY			
Drawn By:	RGH	Approved By:	Dwg No.:

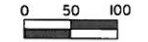
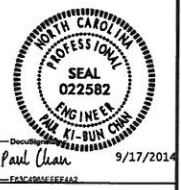
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SEE MATCHLINE SHEET E3

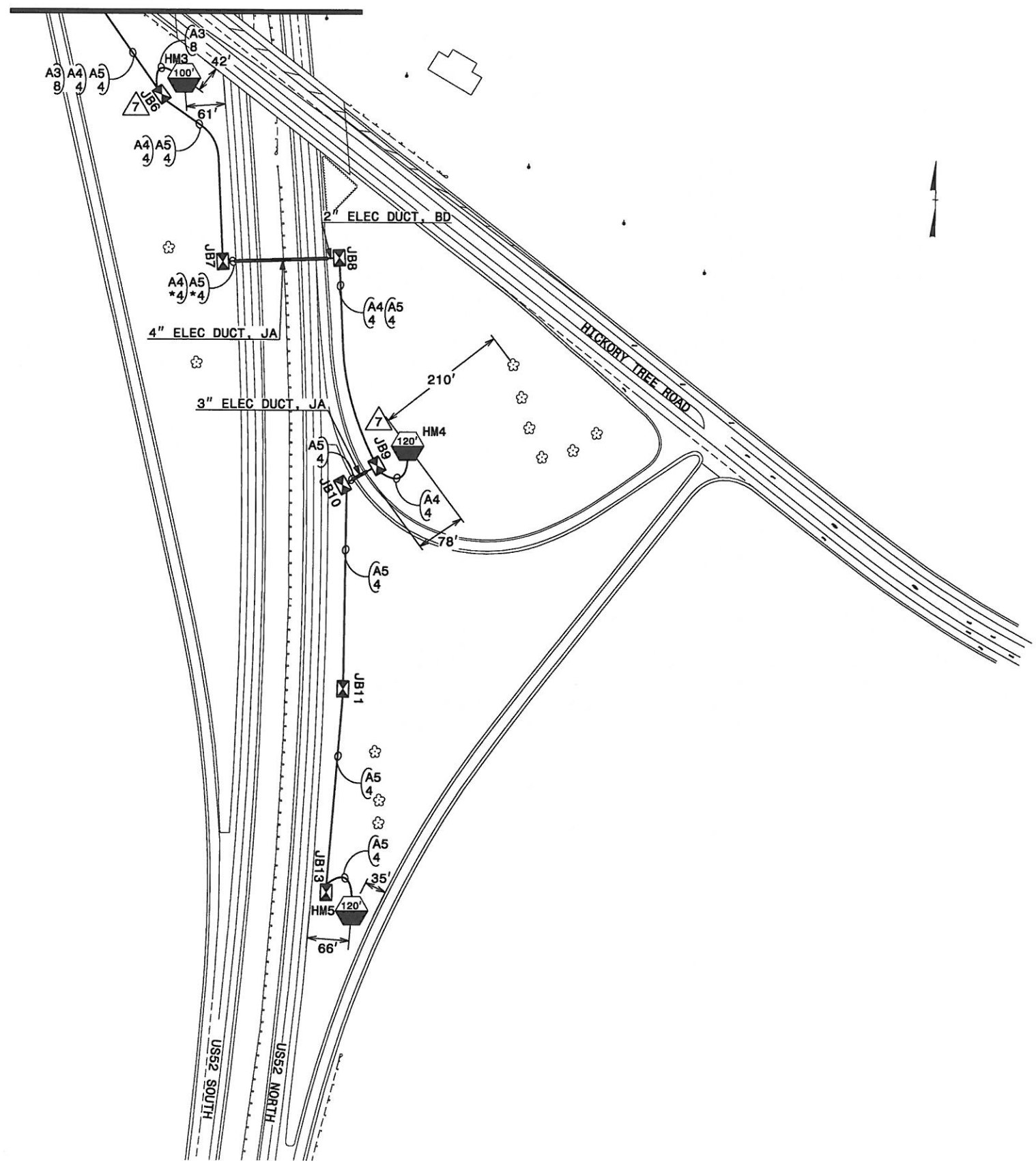
02/03/98

USE FOR LIGHTING CONSTRUCTION ONLY

PROJECT REFERENCE NO. WBS 75022	SHEET NO. E3
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SEE MATCHLINE SHEET E2



8 11
SEE SHEET "E1" FOR
LEGEND & △ NOTES

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 \Dot\df\projects\Groups-RDCC\RD06-Haire\Lighting & Electrical Squad-Chan\Projects\US52-Hickory Tree Road, Davidson Co\US52-Hickory Tree Rd.le.psh.e3.dsn.dgn
 rghall AT RD258197

2			
1			
Rev.	Date	Description	Approved
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN LIGHTING/ELECTRICAL SECTION			
LIGHTING LAYOUT US52/HICKORY TREE ROAD INTERCHANGE (SHEET 2 OF 2) DAVIDSON COUNTY			
Drawn By:	RGH	Approved By:	Dwg No.: