

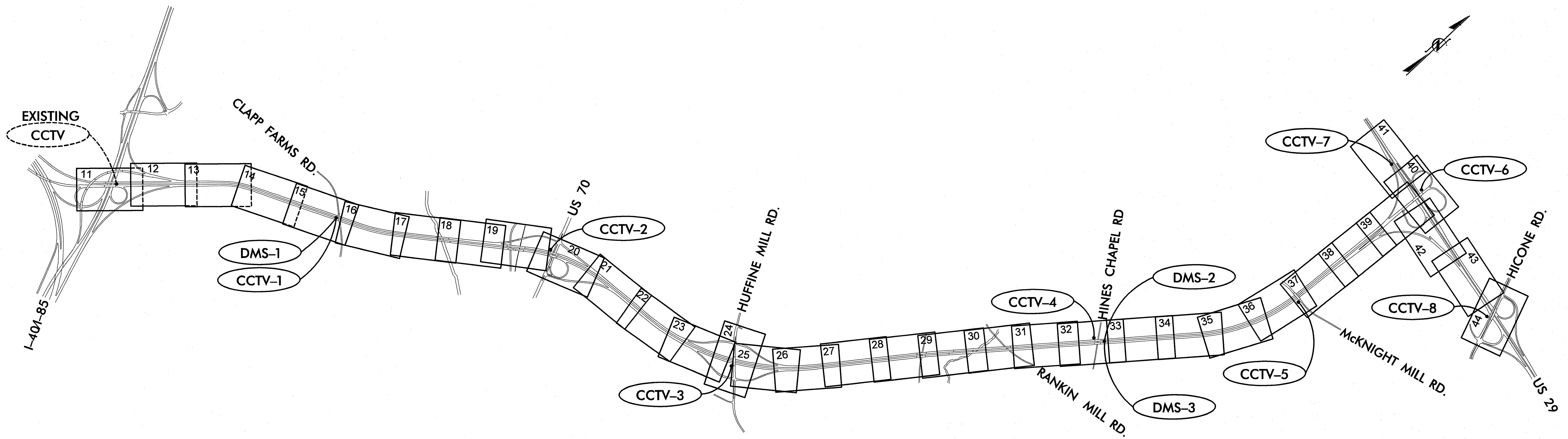
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2525B	ITS-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34821.3.S6		CONST.	
34821.1.1		PE	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

LOCATION: GREENSBORO EASTERN URBAN LOOP FROM I 40 TO US 29 NORTH OF GREENSBORO

TYPE OF WORK: COMMUNICATIONS CABLE AND CONDUIT ROUTING, CCTV CAMERA AND DYNAMIC MESSAGE SIGN INSTALLATION



FINAL PLANS

CONTRACT: C203399 TIP PROJECT: U-2525B

2012 STANDARD SPECIFICATIONS	
PROJECT LENGTH PROJECT LENGTH = 7.5 MILES	
LETTING DATE: MAY 20, 2014	
INDEX OF SHEETS	
SHEET ITS-1	TITLE SHEET
SHEET ITS-2	CONSTRUCTION NOTES AND LEGEND
SHEET ITS-3-10	TYPICAL DETAILS
SHEET ITS-11-44	CABLE ROUTING PLANS
SHEET ITS-45-51	SPLICE DETAILS

ROADWAY STANDARD DRAWINGS	
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "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
1700.01	ELECTRICAL SERVICE OPTIONS
1700.02	ELECTRICAL SERVICE GROUNDING
1715.01	UNDERGROUND CONDUIT-TRENCHING
1716.01	JUNCTION BOXES
1720.01	WOOD POLES
1730.01	FIBER OPTIC CABLE
1751.01	CONTROLLER AND CABINETS
1751.02	CONTROLLER AND CABINETS

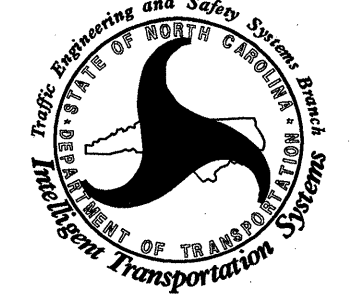
NC DOT CONTACTS:
TRANSPORTATION SAFETY AND MOBILITY
INTELLIGENT TRANSPORTATION SYSTEMS SECTION
THOMAS G. PARKER - ITS PROJECT ENGINEER
SHERRY C. YOW - ITS PROJECT DESIGN ENGINEER

PLANS PREPARED BY:

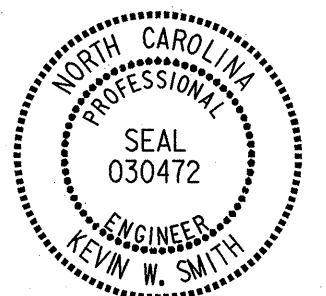


Kimley-Horn and Associates, Inc.
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P.O. Box 33068
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(919) 677-2000

KIMLEY-HORN CONTACTS: T.F. BURCHETT, P.E. - PROJECT MANAGER
KEVIN W. SMITH, P.E. - PROJECT ENGINEER



750 Greenfield Pkwy., Garner, NC 27529

 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER KEVIN W. SMITH 030472 SIGNATURE: <i>Kevin W. Smith</i> DATE: 12/19/13	SEAL SIGNATURE: _____ DATE: _____
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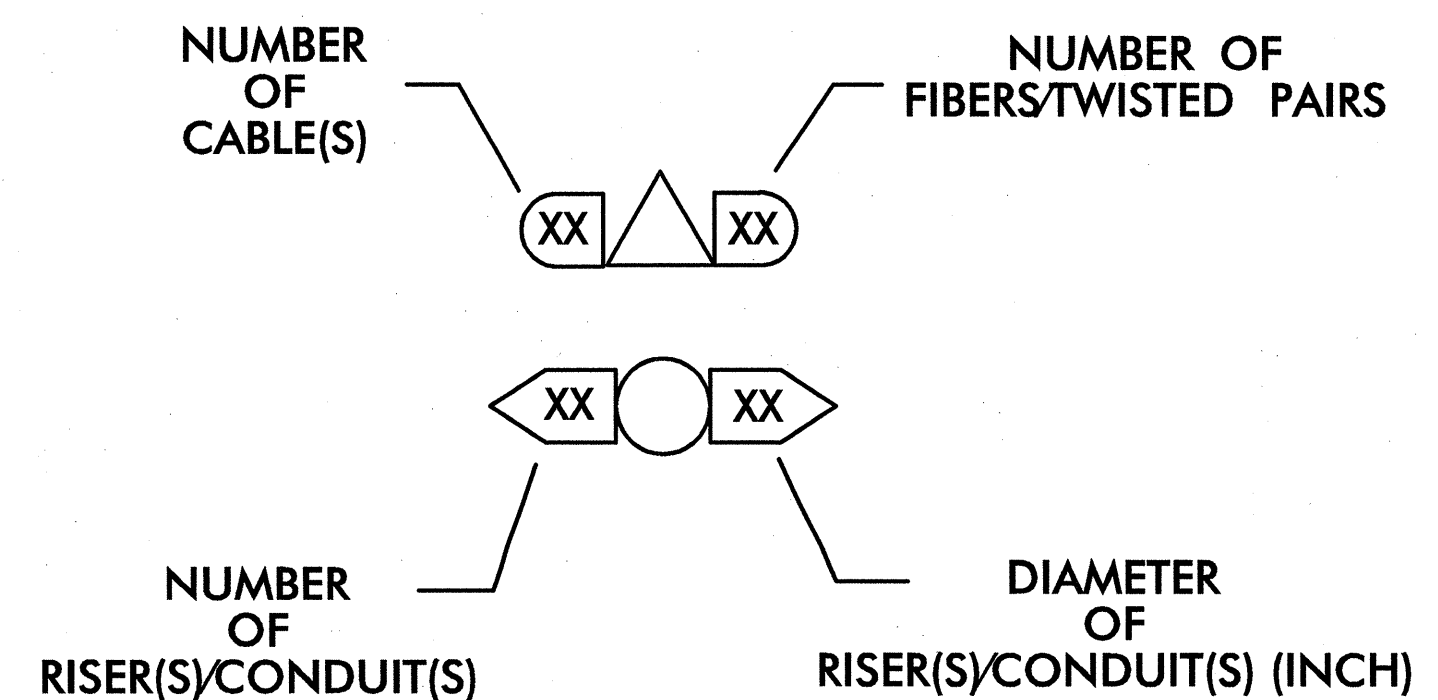
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LEGEND

- NEW FIBER OPTIC COMMUNICATIONS CABLE
- NEW CONDUIT
- EXISTING CONDUIT
- NEW DIRECTIONAL DRILLED CONDUIT
- NEW BORED AND JACKED CONDUIT
- EXISTING GUARDRAIL
- EXISTING CONTROLLED ACCESS FENCE
- NEW JUNCTION BOX
- EXISTING JUNCTION BOX
- NEW WOOD POLE
- EXISTING WOOD POLE
- NEW SPlice ENCLOSURE
- EXISTING SPlice ENCLOSURE
- NEW METAL POLE
- EXISTING METAL POLE
- EXISTING CCTV CAMERA ASSEMBLY
- NEW CCTV CAMERA ASSEMBLY
- EXISTING OVERHEAD DMS STRUCTURE
- PROPOSED OVERHEAD DMS STRUCTURE
- PROPOSED PEDESTAL-MOUNTED DMS STRUCTURE
- NEW STANDARD GUY ASSEMBLY
- NEW STANDARD GUY USING EXISTING ANCHOR
- NEW SIDEWALK GUY ASSEMBLY
- NEW CABLE STORAGE RACKS (SNOW SHOES)
- EXISTING FIELD EQUIPMENT CABINET
- NEW FIELD EQUIPMENT CABINET
- NEW ELECTRICAL SERVICE
- EXISTING ELECTRICAL SERVICE
- SIGNAL POLE
- EXISTING ITS DEVICE NUMBER
- NEW ITS DEVICE NUMBER

CONSTRUCTION NOTE SYMBOLOGY KEY

- INDICATES NUMBER OF CABLES, LOOPS, ETC.
- INDICATES NUMBER OF FIBERS PER CABLE, TWISTED PAIRS PER CABLE, ETC.
- INDICATES NUMBER OF RISER(S)/CONDUIT(S)
- INDICATES DIAMETER OF RISER(S)/CONDUIT(S) (INCH)



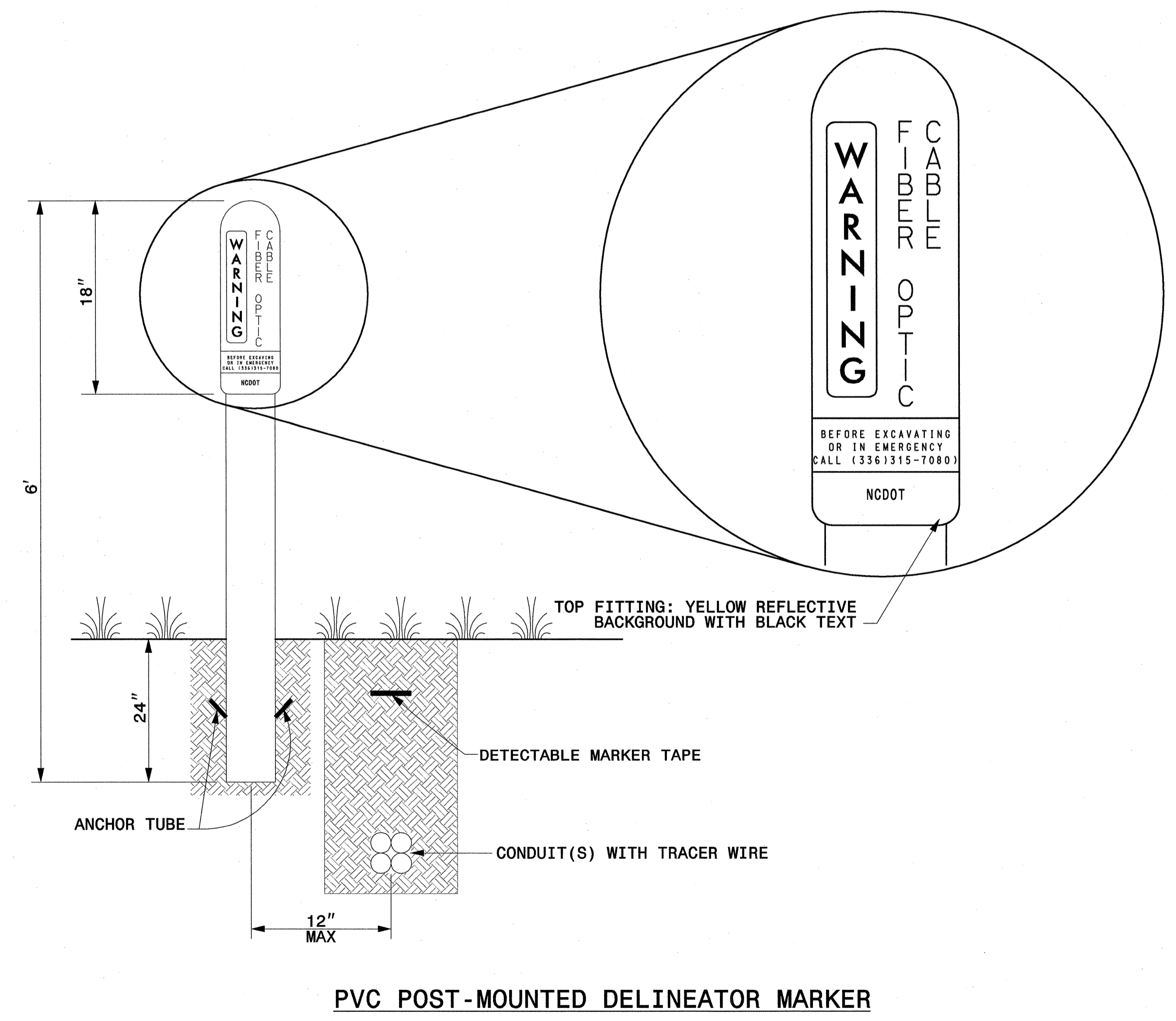
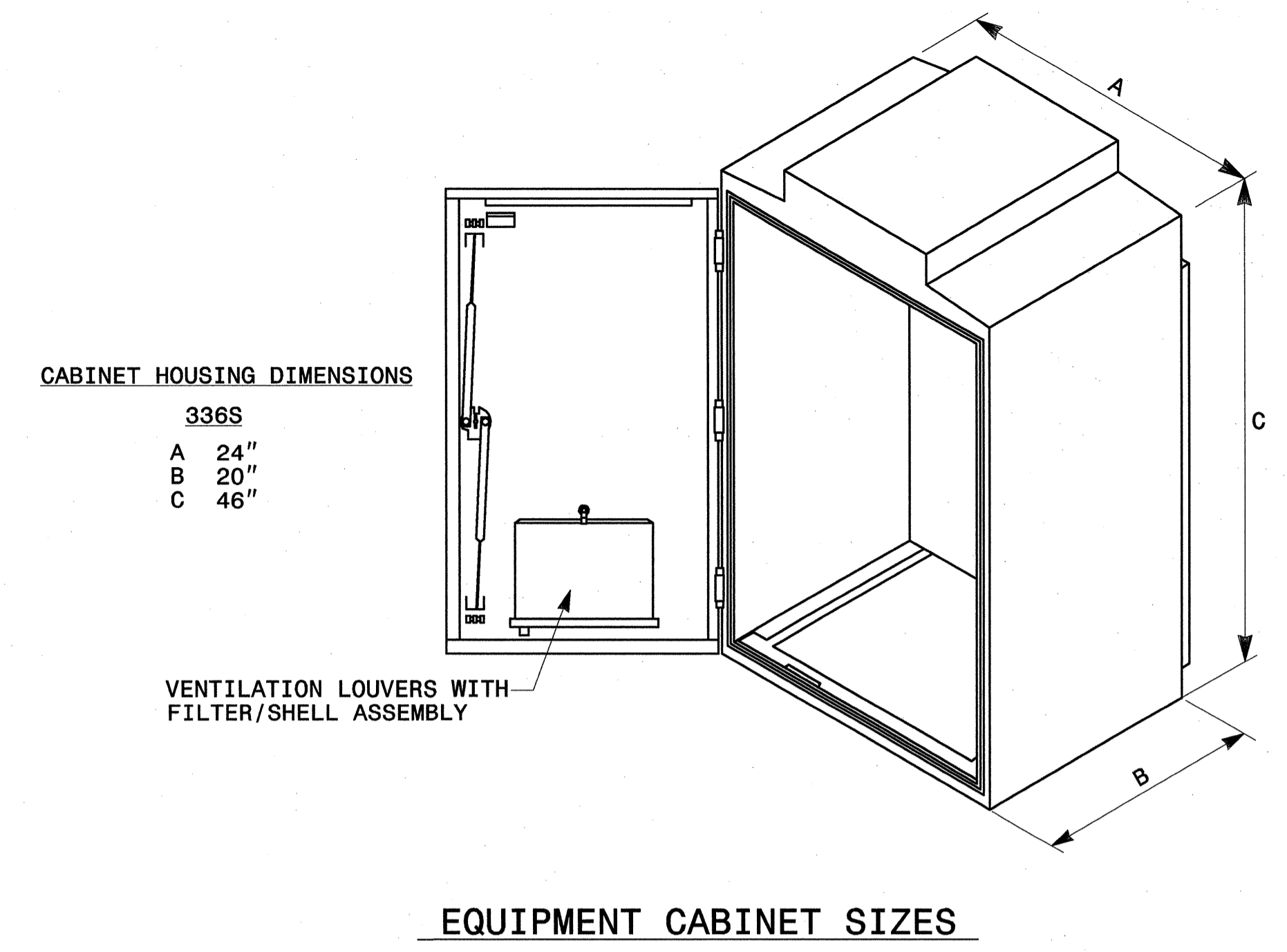
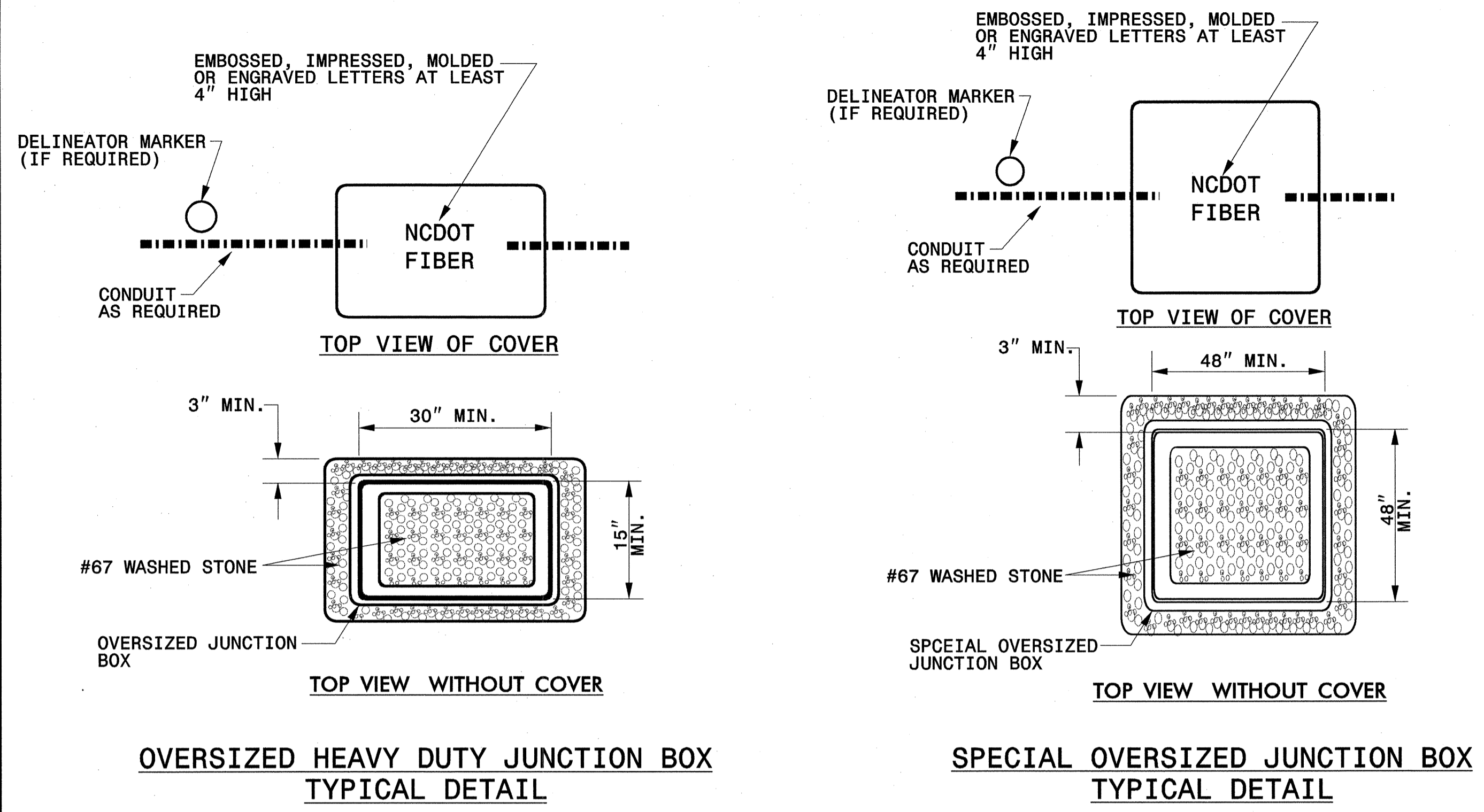
- 1 INSTALL 3-WIRE COPPER SERVICE ENTRANCE CONDUCTORS
- 2 INSTALL 4-WIRE COPPER FEEDER CONDUCTORS
- 3 INSTALL 3-WIRE COPPER FEEDER CONDUCTORS
- 4 INSTALL SMFO CABLE
- 5 REUSE EXISTING SMFO CABLE
- 6 INSTALL FIBER OPTIC DROP CABLE
- 7 INSTALL TRACER WIRE
- 8 TRENCH
- 9 INSTALL PVC CONDUIT
- 10 INSTALL RIGID, GALVANIZED STEEL CONDUIT
- 11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
- 12 INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL
- 13 INSTALL POLYETHYLENE CONDUIT IN EXISTING OUTERDUCT
- 14 INSTALL POLYETHYLENE CONDUIT
- 15 DIRECTIONAL DRILL CONDUIT
- 16 BORE AND JACK CONDUIT
- 17 INSTALL CABLE(S) IN EXISTING CONDUIT
- 18 INSTALL CABLE(S) IN NEW CONDUIT
- 19 INSTALL CABLE(S) IN EXISTING RISER
- 20 INSTALL CABLE(S) IN NEW RISER
- 21 INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS
- 22 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- 23 INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- 24 INSTALL NEW CONDUIT INTO NEW POLE MOUNTED CABINET
- 25 INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET
- 26 TERMINATE COMMUNICATIONS CABLE ON EXISTING TELEMETRY INTERFACE PANEL IN TRAFFIC SIGNAL CONTROLLER CABINET
- 27 INSTALL NEW TELEMETRY INTERFACE PANEL IN TRAFFIC SIGNAL CONTROLLER CABINET
- 28 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPlice CABLE IN CABINET
- 29 INSTALL UNDERGROUND SPlice ENCLOSURE
- 30 MODIFY EXISTING UNDERGROUND SPlice ENCLOSURE
- 31 MODIFY EXISTING BASE MOUNTED SPlice CABINET
- 32 INSTALL BASE MOUNTED SPlice CABINET
- 33 REMOVE EXISTING SPlice CABINET
- 34 INSTALL CABINET FOUNDATION

- 35 REMOVE EXISTING CABINET FOUNDATION
- 36 INSTALL CCTV CAMERA ASSEMBLY
- 37 INSTALL CCTV CAMERA METAL POLE WITH LOWERING DEVICE AND FOUNDATION
- 38 INSTALL CCTV CAMERA METAL POLE AND FOUNDATION
- 39 INSTALL STANDARD JUNCTION BOX
- 40 INSTALL OVERSIZED JUNCTION BOX
- 41 INSTALL SPECIAL OVERSIZED JUNCTION BOX
- 42 INSTALL WOOD POLE
- 43 INSTALL 6" x 6" WOOD PEDESTAL
- 44 INSTALL AERIAL GUY ASSEMBLY
- 45 INSTALL STANDARD GUY ASSEMBLY
- 46 INSTALL SIDEWALK GUY ASSEMBLY
- 47 INSTALL MESSENGER CABLE
- 48 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
- 49 REMOVE EXISTING COMMUNICATIONS CABLE
- 50 INSTALL TELEPHONE SERVICE
- 51 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
- 52 INSTALL DELINEATOR MARKER
- 53 STORE 30 FEET OF COMMUNICATIONS CABLE
- 54 LASH CABLE(S) TO NEW MESSENGER CABLE
- 55 LASH CABLE(S) TO EXISTING MESSENGER CABLE
- 56 INSTALL NEW EQUIPMENT CABINET DISCONNECT
- 57 MODIFY EXISTING ELECTRICAL SERVICE
- 58 INSTALL NEW ELECTRICAL SERVICE
- 59 INSTALL NEW POLE MOUNTED CABINET
- 60 INSTALL FIELD ETHERNET SWITCH
- 61 INSTALL VIDEO CODEC UNIT
- 62 INSTALL DMS ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
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 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

CONSTRUCTION NOTES AND LEGEND							
DIVISION 07 GUILFORD COUNTY PLAN DATE: DECEMBER 11, 2013 REVIEWED BY: PREPARED BY: J. CROSS REVIEWED BY: K. SMITH							
250 N. Greenfield Place, Garner, NC 27529 SCALE 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS	INIT.	DATE			
REVISIONS	INIT.	DATE					
SIGNATURE: DATE: 12/19/13 CADD Filename:		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER KEVIN W. SMITH 030472					



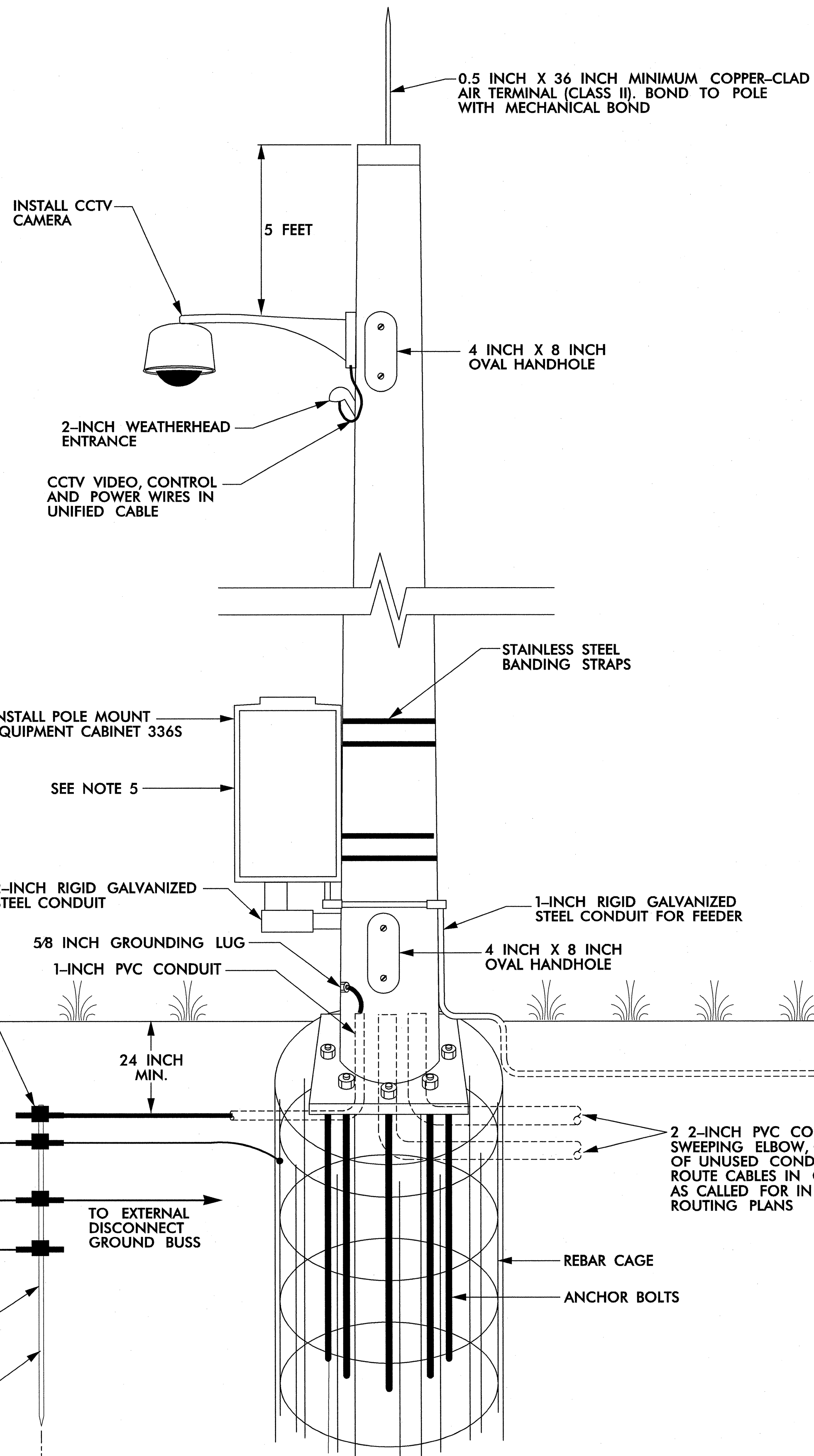
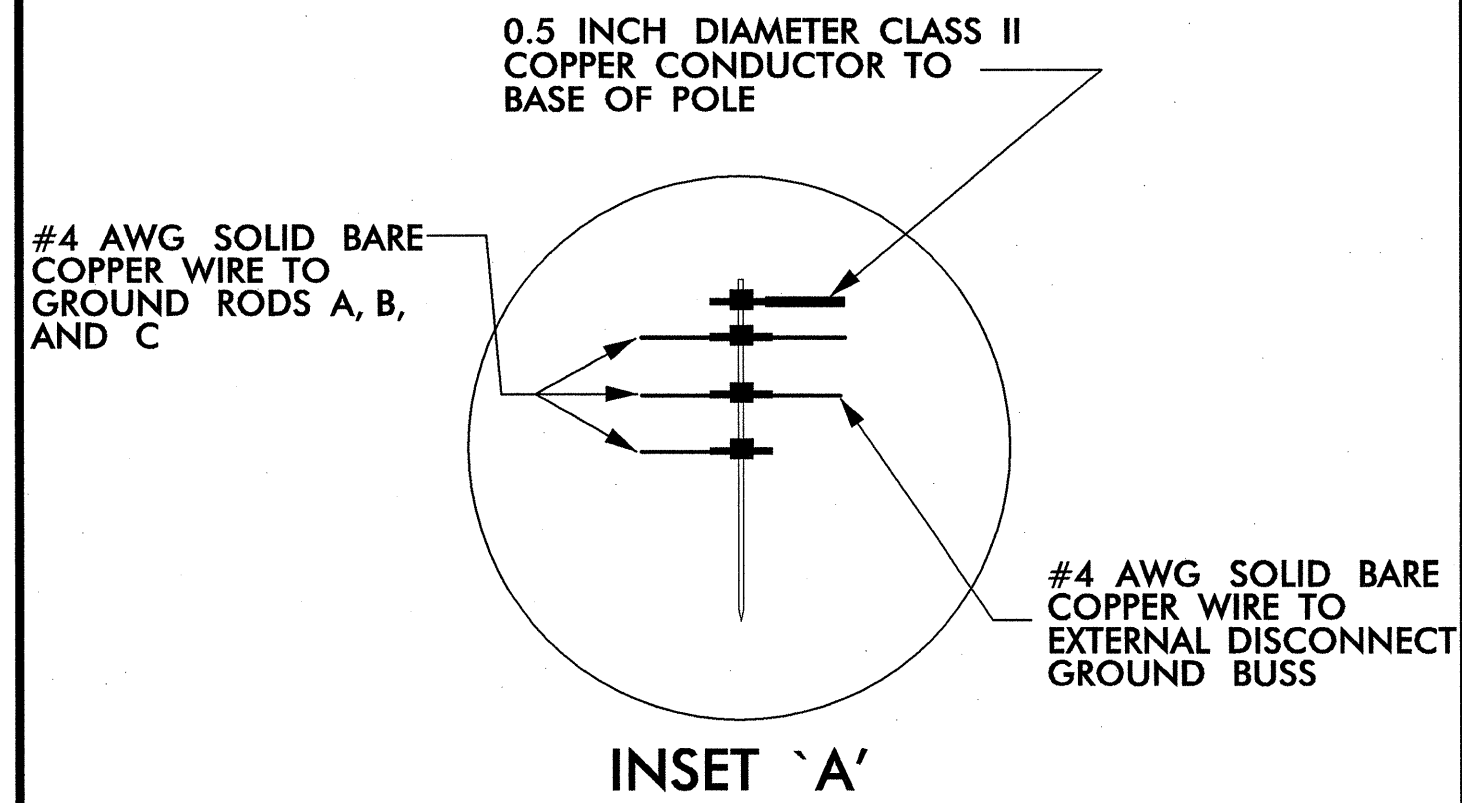
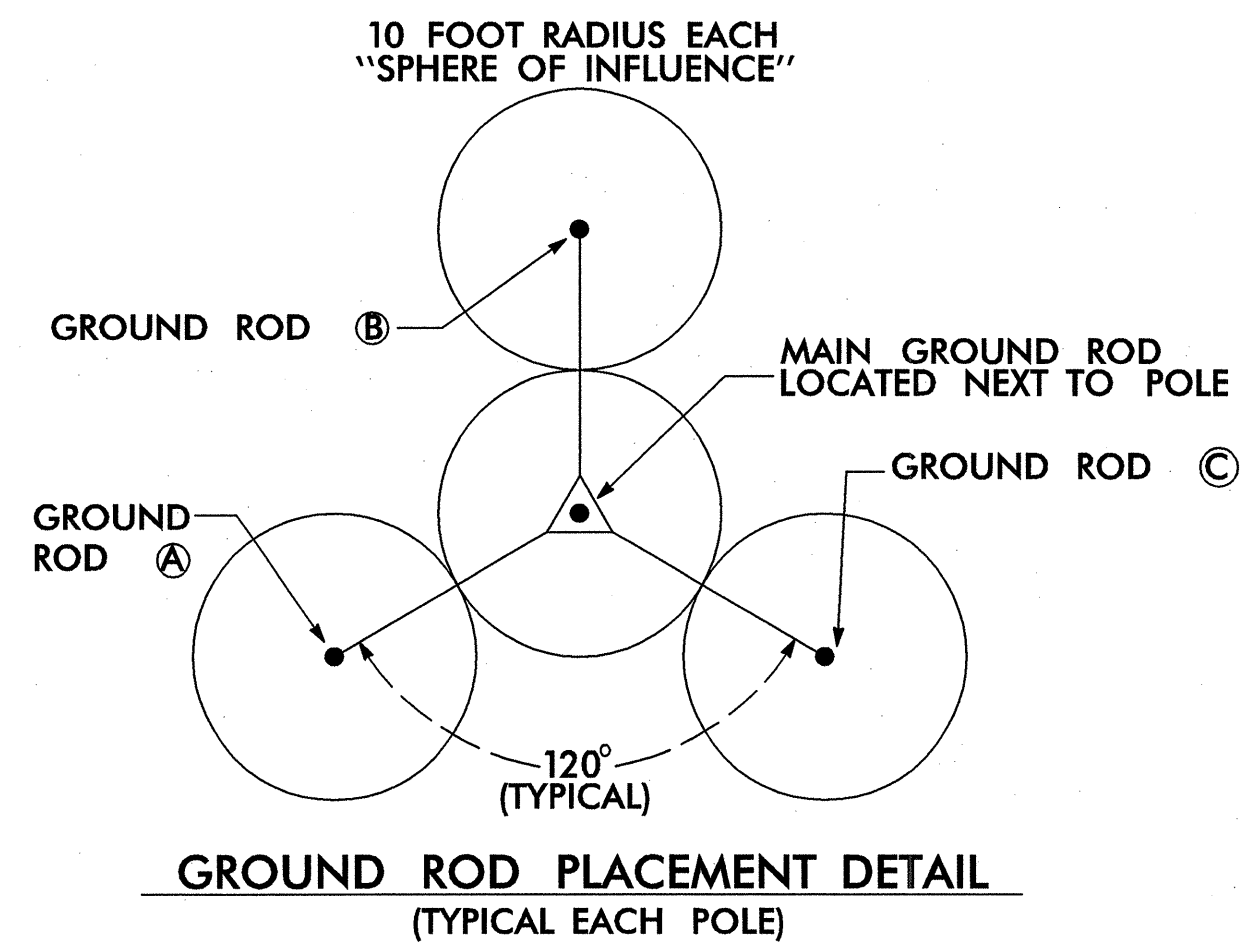
NOTE:
BACKFILL WITH EXCAVATED MATERIAL AND COMPACT THE SOIL TO 95% OF ITS ORIGINAL DENSITY. REMOVE ROCK AND DEBRIS FROM BACKFILL MATERIAL.

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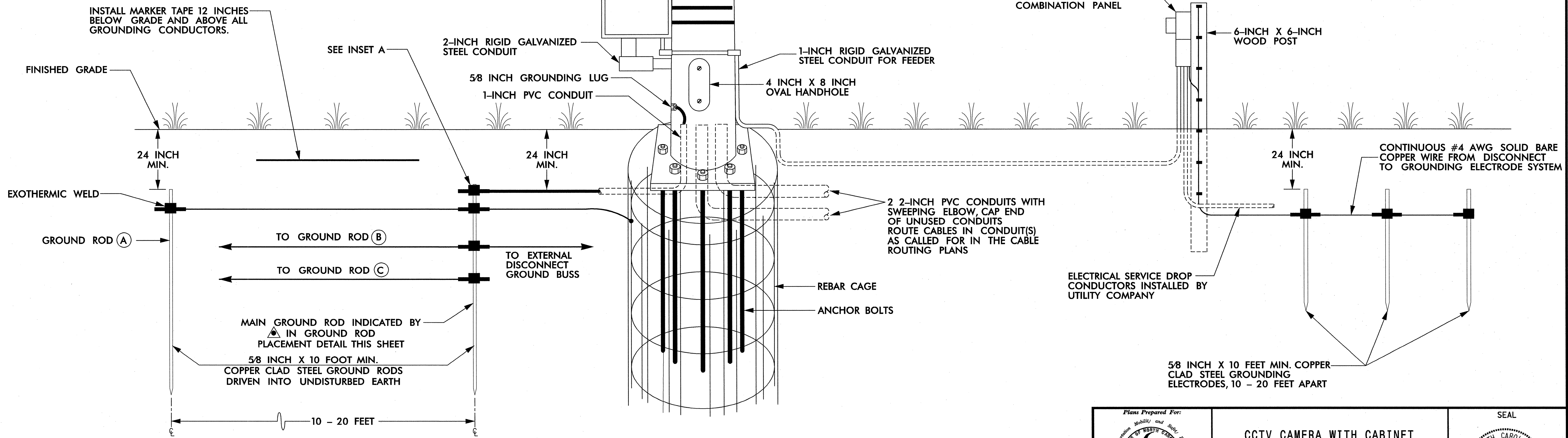
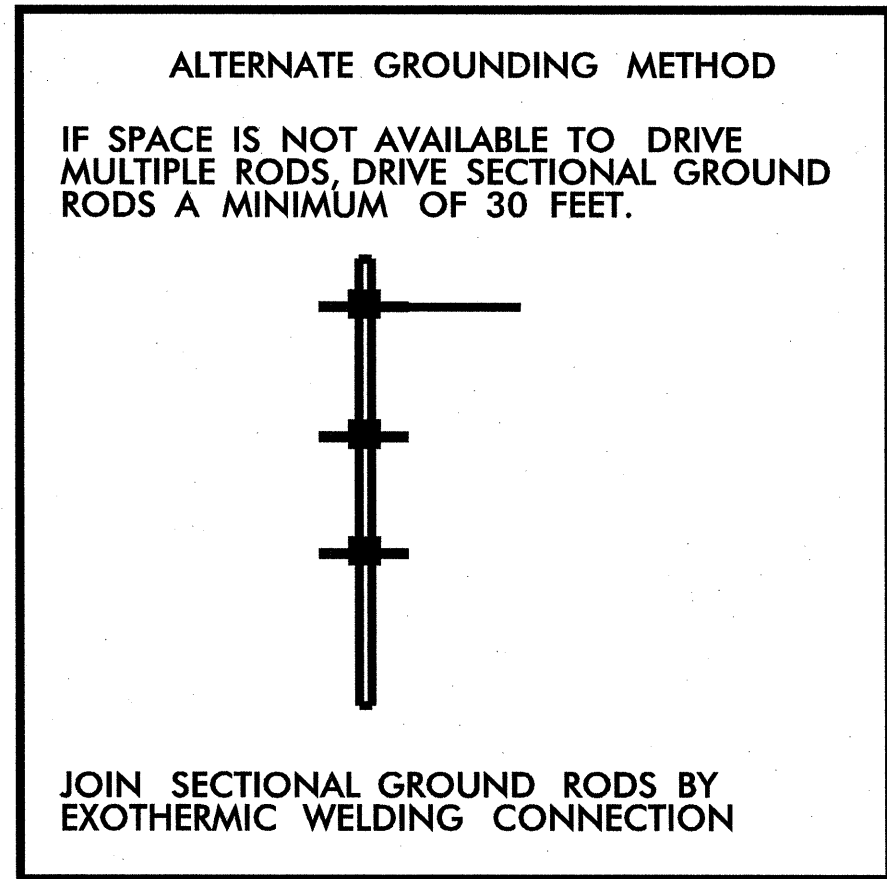
	TYPICAL DETAILS		
	DIVISION 07 GUILFORD COUNTY		
PLAN DATE: DECEMBER 11, 2013		REVIEWED BY:	
PREPARED BY: J. CROSS		REVIEWED BY: K. SMITH	
SCALE	REVISIONS	INIT.	DATE
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		SIGNATURE: <i>Kevin W. Smith</i> DATE: 12/19/13	

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- NOTES**
1. BOND 0.5 INCH DIAMETER, 28 STRAND (MINIMUM) CLASS II COPPER CONDUCTOR TO THE MAIN GROUND ROD BY AN EXOTHERMIC WELD METHOD.
 2. EXOTHERMICALLY WELD ALL CONNECTIONS TO GROUND RODS.
 3. BOND #4 AWG SOLID BARE COPPER WIRE TO REBAR CAGE AND THE MAIN GROUND ROD BY AN EXOTHERMIC WELD METHOD.
 4. ENSURE CAMERA HOUSING, CAMERA, AND PAN -TILT UNIT ARE BONDED TO POLE.
 5. REMOVE BONDING JUMPER BETWEEN EQUIPMENT CABINET GROUND BUSS AND NEUTRAL BUSS.
 6. THE CONTRACTOR MAY, UPON APPROVAL OF THE ENGINEER, INSTALL A 30-FOOT SECTIONAL GROUND ROD WHEN CONDITIONS WILL NOT ALLOW FOR THE INSTALLATION OF THE 3 - RADIAL GROUND RODS.
 7. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.

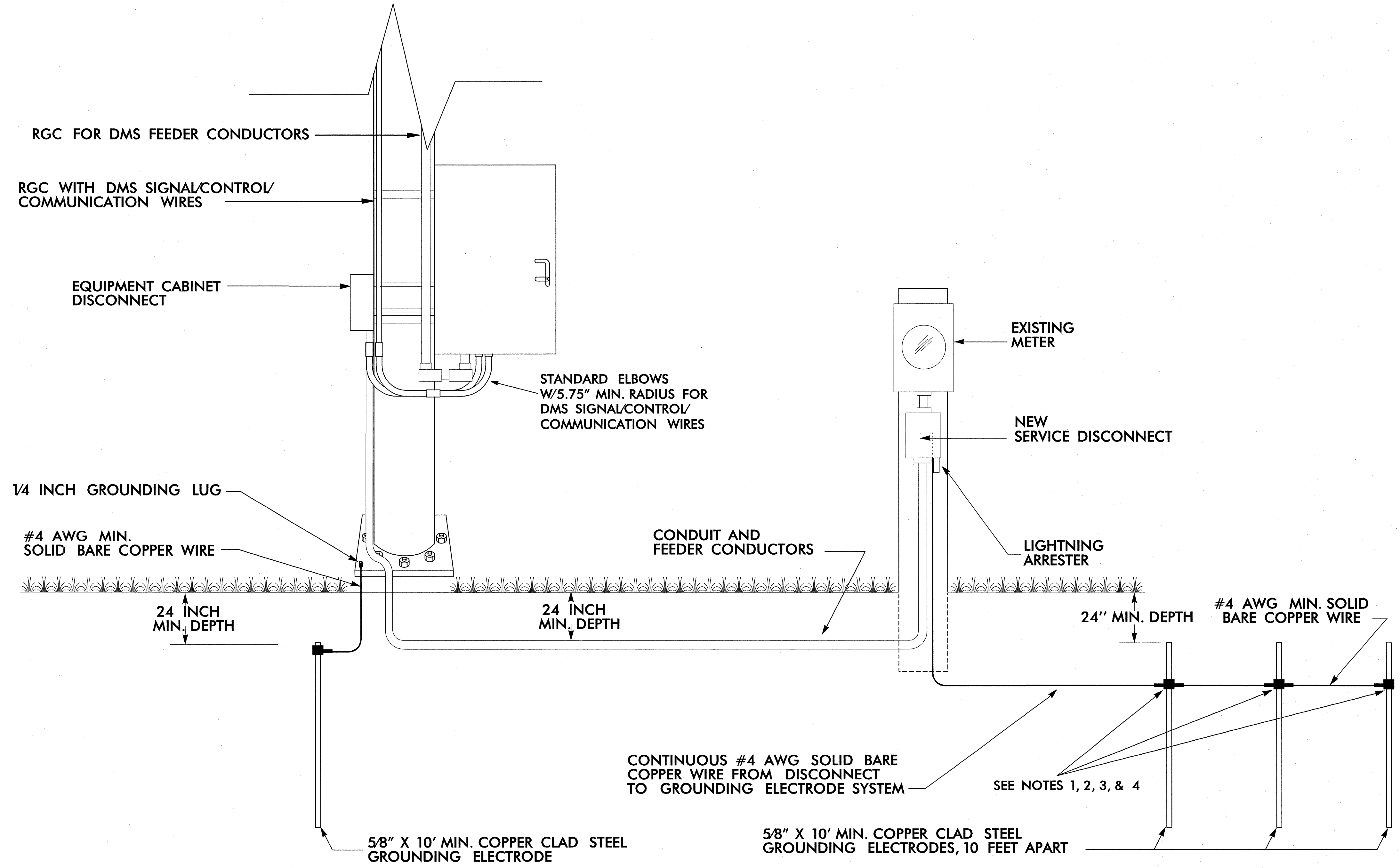


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CCTV CAMERA WITH CABINET ON METAL POLE	
DIVISION 07 GUILFORD COUNTY	
PLAN DATE: DECEMBER 11, 2013 REVIEWED BY:	
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE
SCALE: 0	SIGNATURE: <i>Kevin W. Smith</i> DATE: 12/12/13



NOTES

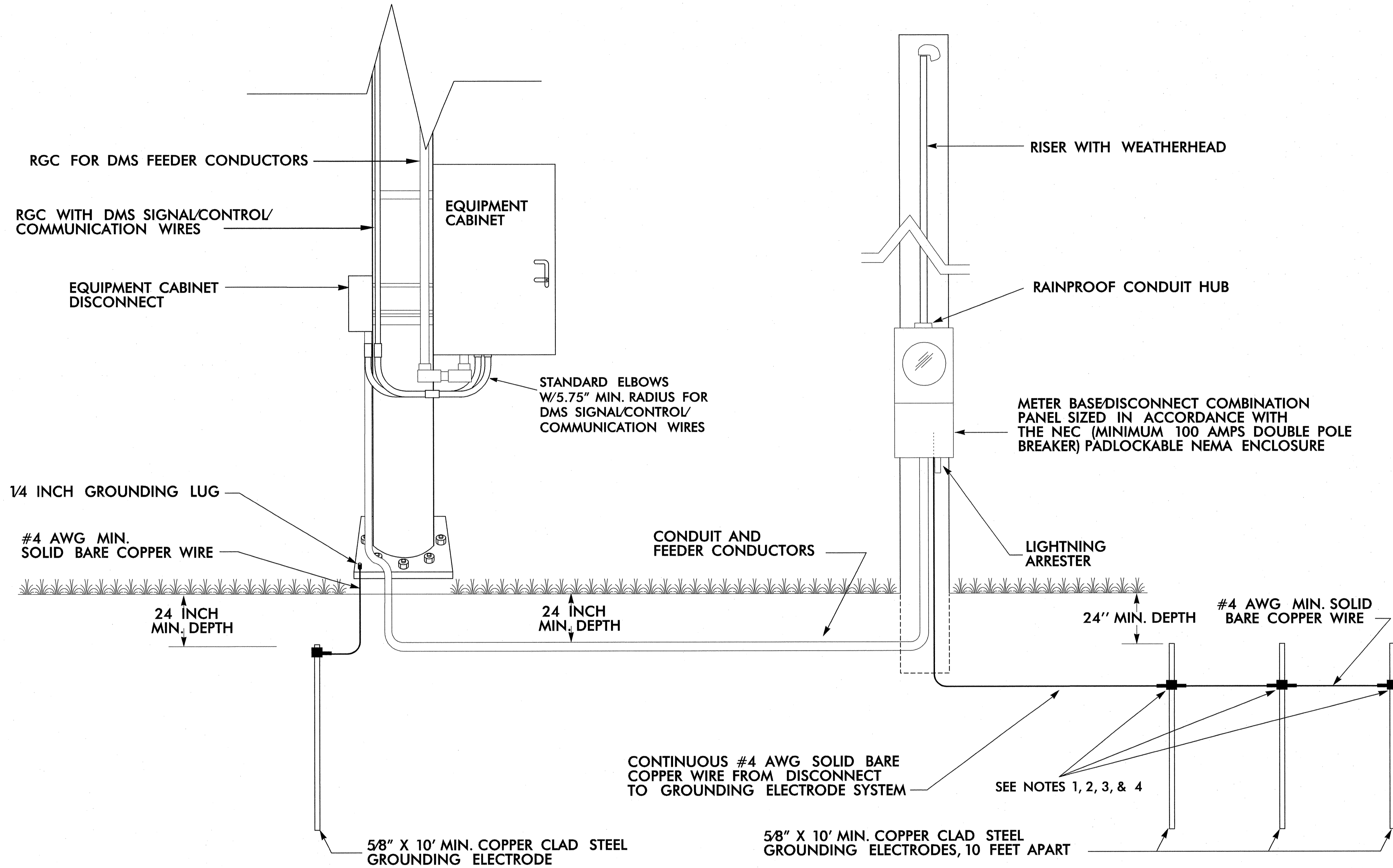
1. INSTALL A MINIMUM OF THREE (3) GROUNDING ELECTRODES SPACED A MINIMUM OF 10 FEET APART. ENSURE THAT EXISTING UNDERGROUND FACILITIES ARE NOT DAMAGED DURING INSTALLATION.
2. TEST GROUNDING SYSTEM USING AN APPROVED METHOD. SYSTEM SHOULD MEASURE TWENTY (20) OHMS OR LESS. ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER TO MEET THIS REQUIREMENT.
3. EXOTHERMICALLY WELD ALL CONNECTIONS TO GROUND RODS.
4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
5. REMOVE BONDING JUMPER IN EQUIPMENT CABINET IF INSTALLED BETWEEN AC NEUTRAL AND EQUIPMENT GROUND.
6. BOND ALL RIGID GALVANIZED STEEL CONDUITS ENTERING THE CABINET TO "EQUIPMENT GROUND".
7. INSTALL CONDUIT BETWEEN DISCONNECT AND CABINET.
8. ENSURE EQUIPMENT GROUND IS ELECTRICALLY BONDED TO CABINET.

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PLANS PREPARED IN THE OFFICE OF:

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Plans Prepared For: DEPARTMENT OF TRANSPORTATION 750 N. Greenfield Pkwy., Garner, NC 27529		DYNAMIC MESSAGE SIGN ELECTRICAL SERVICE AND GROUNDING TYPICAL DETAIL		SEAL
DIVISION 07 PLAN DATE: DECEMBER 11, 2013 PREPARED BY: J. CROSS		GUILFORD COUNTY REVIEWED BY: K. SMITH		SIGNATURE: <i>Kevin W. Smith</i> DATE: 12/19/13 CADD File Name:
SCALE: 0		REVISIONS:		

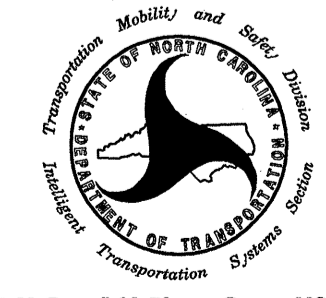



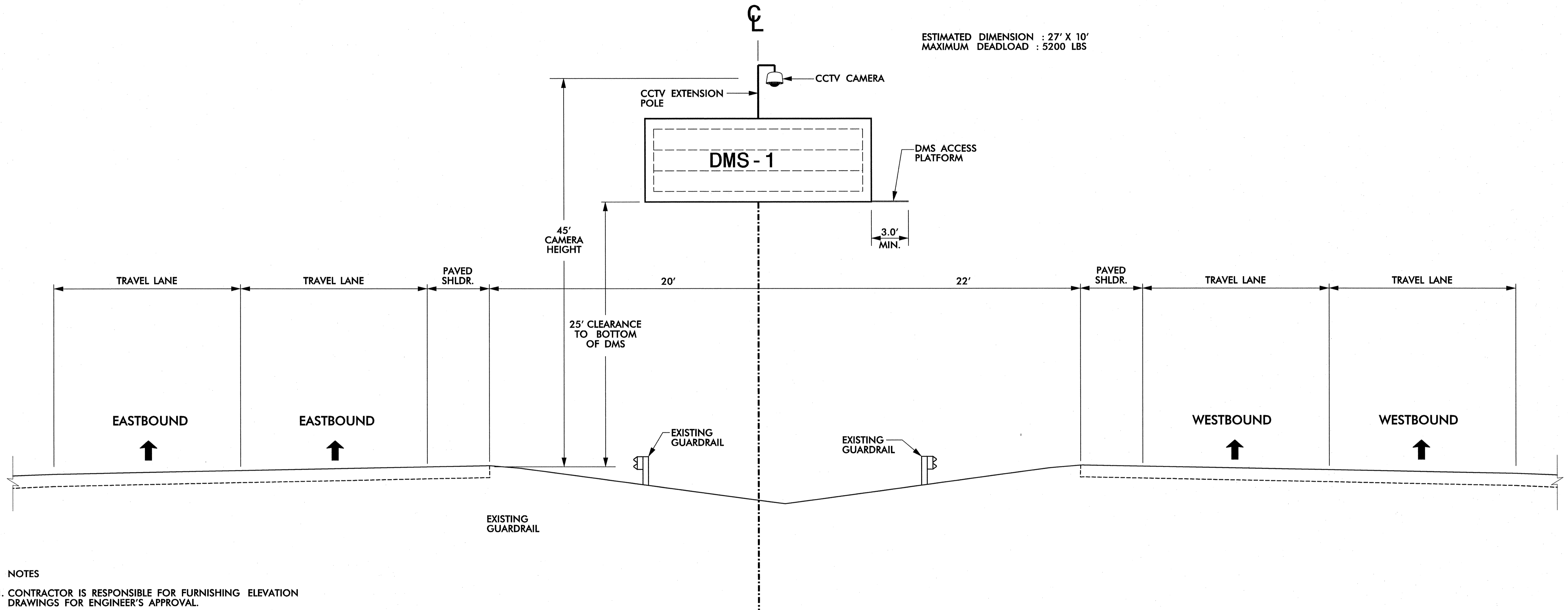
NOTES

1. INSTALL A MINIMUM OF THREE (3) GROUNDING ELECTRODES SPACED A MINIMUM OF 10 FEET APART. ENSURE THAT EXISTING UNDERGROUND FACILITIES ARE NOT DAMAGED DURING INSTALLATION.
2. TEST GROUNDING SYSTEM USING AN APPROVED METHOD. SYSTEM SHOULD MEASURE TWENTY (20) OHMS OR LESS. ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER TO MEET THIS REQUIREMENT.
3. EXOTHERMICALLY WELD ALL CONNECTIONS TO GROUND RODS.
4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
5. REMOVE BONDING JUMPER IN EQUIPMENT CABINET IF INSTALLED BETWEEN AC NEUTRAL AND EQUIPMENT GROUND.
6. BOND ALL RIGID GALVANIZED STEEL CONDUITS ENTERING THE CABINET TO "EQUIPMENT GROUND".
7. INSTALL CONDUIT BETWEEN DISCONNECT AND CABINET.
8. ENSURE EQUIPMENT GROUND IS ELECTRICALLY BONDED TO CABINET.

PLANS PREPARED IN THE OFFICE OF:

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Plans Prepared For:  DIVISION 07 750 N. Greenfield Place - Garner, NC 27529		DYNAMIC MESSAGE SIGN ELECTRICAL SERVICE AND GROUNDING TYPICAL DETAIL DIVISION 07 GUILFORD COUNTY PLAN DATE: DECEMBER 11, 2013 PREPARED BY: J. CROSS REVISIONS: _____ INIT. DATE: _____ REVIEWED BY: K. SMITH REVISIONS: _____ INIT. DATE: _____ SCALE: 0 _____ SIGNATURE:  12/19/13 DATE: _____ SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030472 CADD File Name: _____	
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NOTES

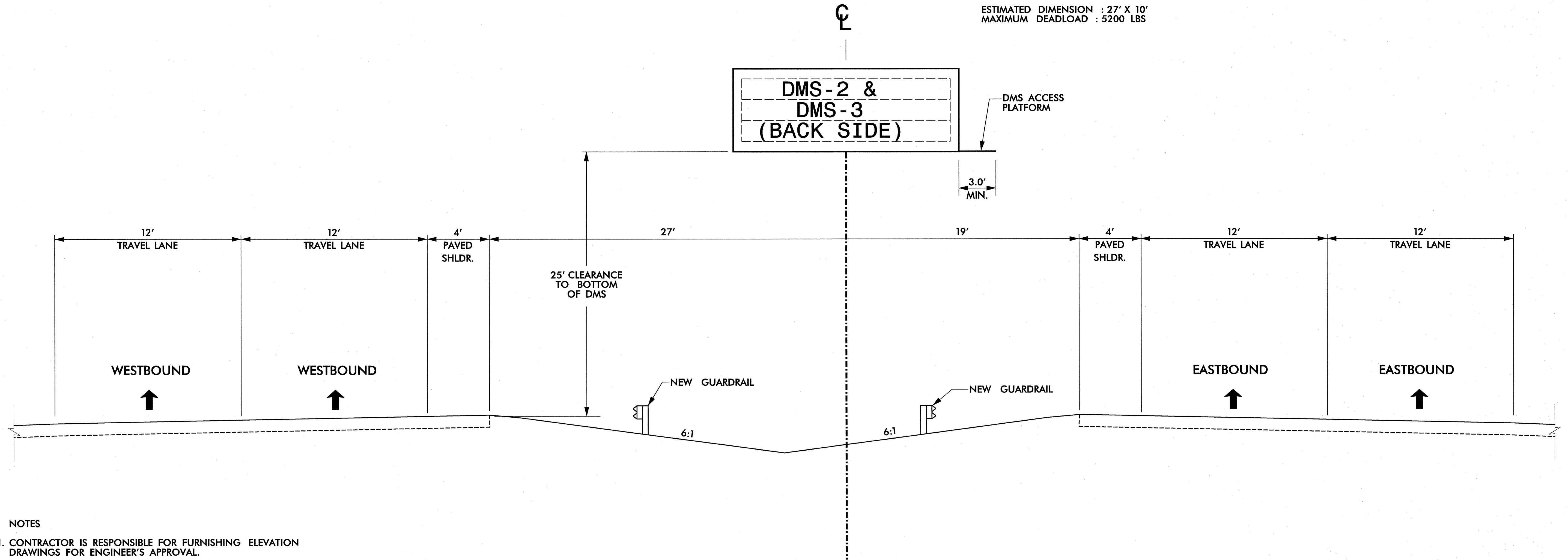
1. CONTRACTOR IS RESPONSIBLE FOR FURNISHING ELEVATION DRAWINGS FOR ENGINEER'S APPROVAL.
2. PROVIDE A FIXED LADDER LEADING TO THE ACCESS PLATFORM.
3. EQUIP THE LADDER WITH A SECURITY COVER (LADDER GUARD). START THE FIRST LADDER RUNG NO MORE THAN 18 INCHES ABOVE A CONCRETE LANDING PAD. DESIGN RUNGS ON 12 INCH CENTER-TO-CENTER TYPICAL SPACING.
4. INSTALL A CONCRETE LANDING PAD MEASURING A MINIMUM 4 INCHES DEEP, 24 INCHES WIDE, AND 36 INCHES LONG DIRECTLY BENEATH THE LADDER.
5. USE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
6. FIELD VERIFY ALL FOOTING ELEVATIONS AND GROUND SLOPES AT THE FOOTING USING THE LATEST NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
7. ENSURE THAT THE TOP OF THE FOOTING EXTENDS AT LEAST 6 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.
8. DESIGN AND CONSTRUCT THE PEDESTAL STRUCTURE AND DMS ENCLOSURE TO WITHSTAND WIND VELOCITIES OF 90 MPH.
9. VERIFY ALL UNDERGROUND UTILITY LOCATIONS BEFORE BEGINNING ANY UNDERGROUND WORK. DO NOT DAMAGE ANY EXISTING UTILITIES OR NCDOT CABLES DURING CONSTRUCTION.
10. DESIGN THE STRUCTURE TO ACCOMMODATE THE INSTALLATION OF THE DMS WITH A CCTV CAMERA EXTENSION POLE.
11. SEE ROADWAY PLANS FOR GUARDRAIL DETAILS.

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Plans Prepared For: 		DMS-1 INSTALLATION		SEAL 	
DIVISION 07		GUILFORD COUNTY		PREPARED BY: J. CROSS	
PLAN DATE: DECEMBER 11, 2013		REVIEWED BY: K. SMITH		DATE: 12/19/13	
PREPARED BY: J. CROSS		REVIEWED BY: K. SMITH		SIGNATURE: <i>Kevin W. Smith</i>	
SCALE: 0		REVISIONS:		DATE:	
CADD File name:					



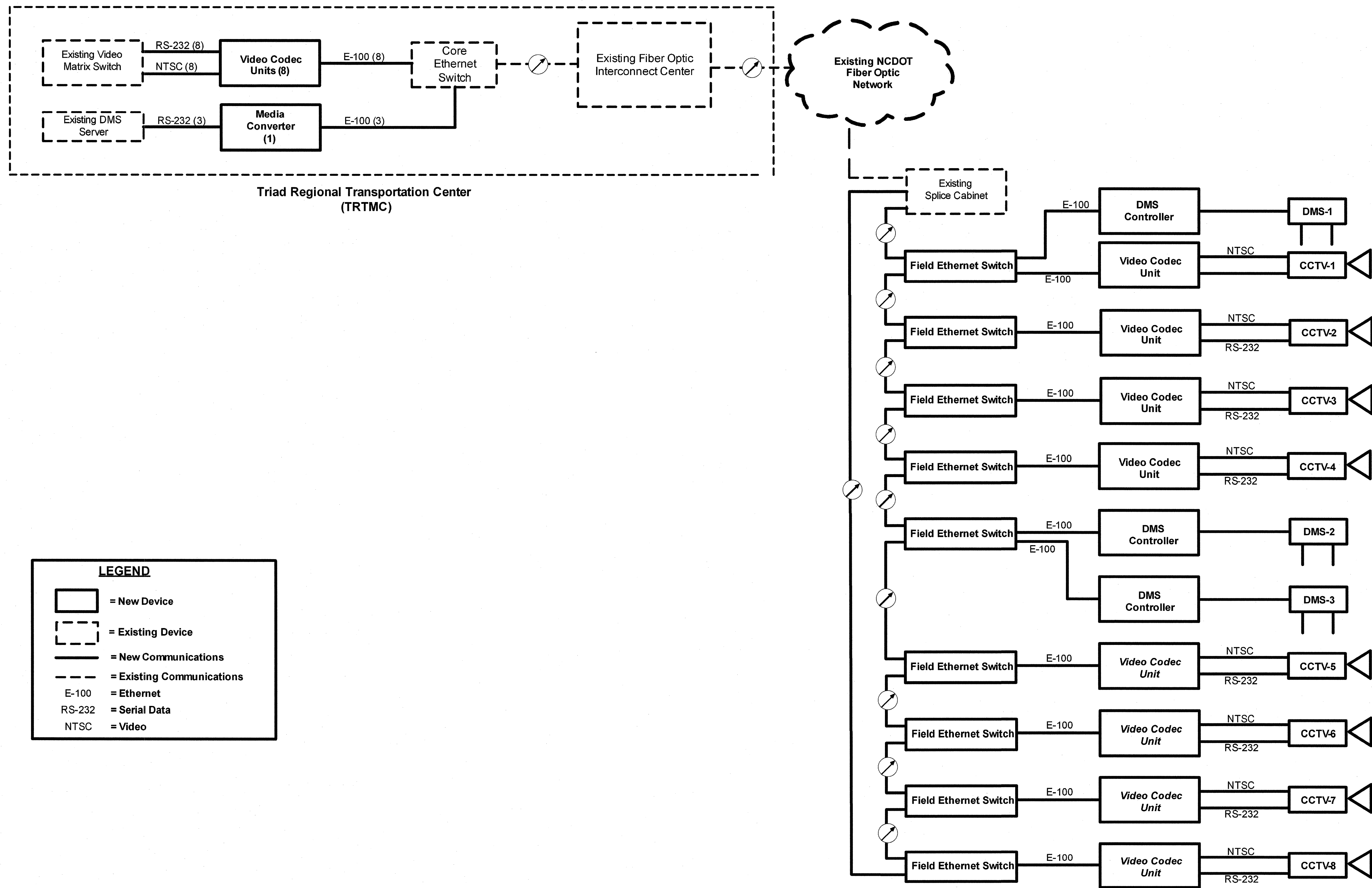
NOTES

1. CONTRACTOR IS RESPONSIBLE FOR FURNISHING ELEVATION DRAWINGS FOR ENGINEER'S APPROVAL.
2. PROVIDE A FIXED LADDER LEADING TO THE ACCESS PLATFORM.
3. EQUIP THE LADDER WITH A SECURITY COVER (LADDER GUARD). START THE FIRST LADDER RUNG NO MORE THAN 18 INCHES ABOVE A CONCRETE LANDING PAD. DESIGN RUNGS ON 12 INCH CENTER-TO-CENTER TYPICAL SPACING.
4. INSTALL A CONCRETE LANDING PAD MEASURING A MINIMUM 4 INCHES DEEP, 24 INCHES WIDE, AND 36 INCHES LONG DIRECTLY BENEATH THE LADDER.
5. USE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
6. FIELD VERIFY ALL FOOTING ELEVATIONS AND GROUND SLOPES AT THE FOOTING USING THE LATEST NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
7. ENSURE THAT THE TOP OF THE FOOTING EXTENDS AT LEAST 6 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.
8. DESIGN AND CONSTRUCT THE PEDESTAL STRUCTURE AND DMS ENCLOSURE TO WITHSTAND WIND VELOCITIES OF 90 MPH.
9. VERIFY ALL UNDERGROUND UTILITY LOCATIONS BEFORE BEGINNING ANY UNDERGROUND WORK. DO NOT DAMAGE ANY EXISTING UTILITIES OR NCDOT CABLES DURING CONSTRUCTION.
10. SEE ROADWAY PLANS FOR GUARDRAIL DETAILS.

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(919) 677-2000

	DMS-2 & 3 INSTALLATION		
	DIVISION 07 GUILFORD COUNTY		
PLAN DATE: DECEMBER 11, 2013 REVIEWED BY:		PREPARED BY: J. CROSS REVIEWED BY: K. SMITH	
SCALE: 0		REVISIONS INIT. DATE	
SIGNATURE: <i>J. Cross</i> DATE: 12/19/13		SEAL: <i>K. Smith</i> DATE: 12/19/13	

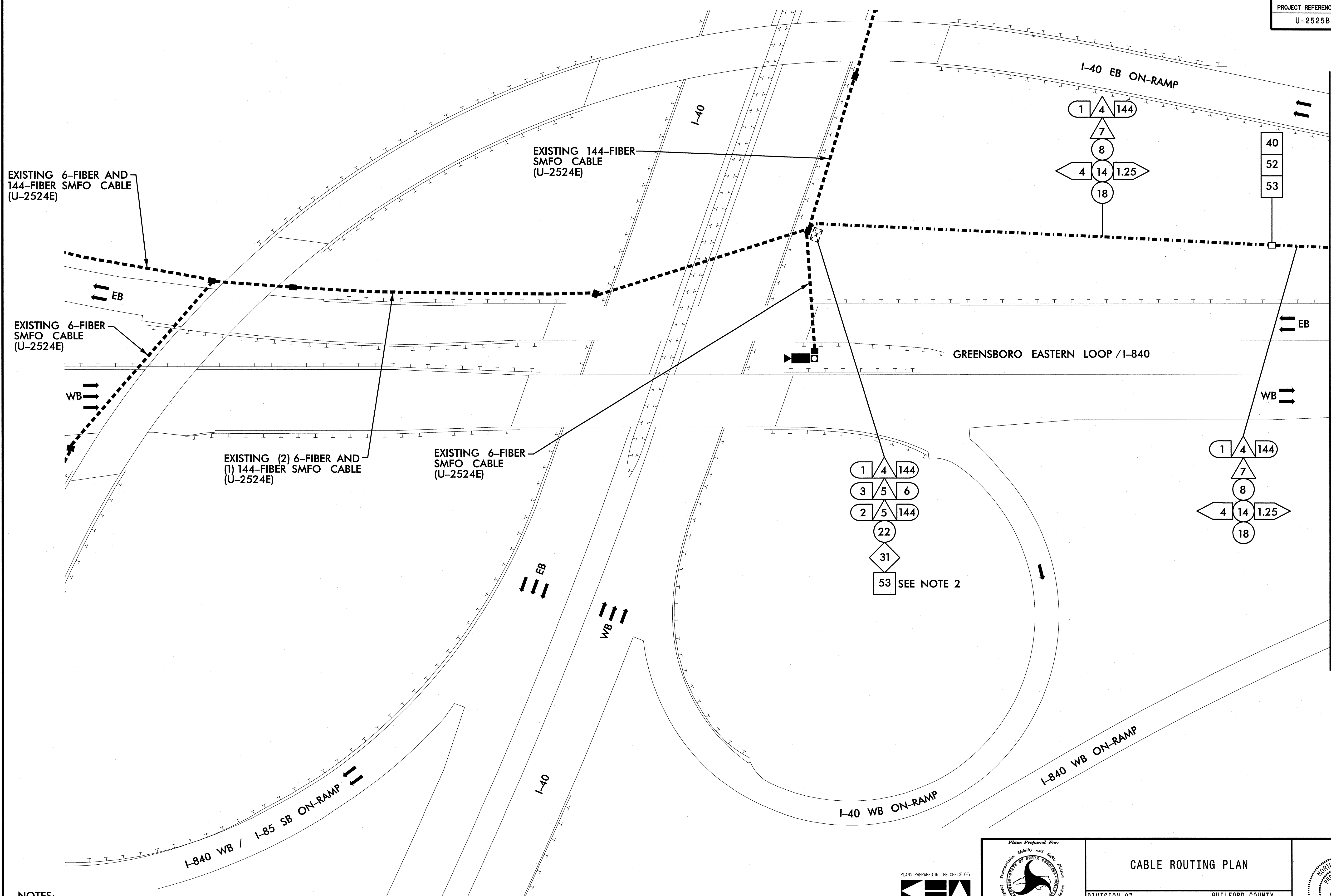


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PLANS PREPARED IN THE OFFICE OF:

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 (919) 677-2200

		SYSTEM BLOCK DIAGRAM		SEAL 	
DIVISION 07		GUILFORD COUNTY		REVIEWED BY: K. SMITH	
PLAN DATE: DECEMBER 11, 2013		PREPARED BY: J. CROSS		REVIEWED BY: K. SMITH	
SCALE: 0		REVISIONS		INIT. DATE	
SIGNATURE: <i>J. Cross</i>		DATE: 12/12/13		CADD Filename:	



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- NOTES:**
1. MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY.
 2. INTEGRATE NEW FIBER OPTIC CABLE WITH EXISTING SPLICE CABINET AS SHOWN IN THE SPLICE DETAIL.

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 Raleigh, NC 27636
 (919) 877-2000

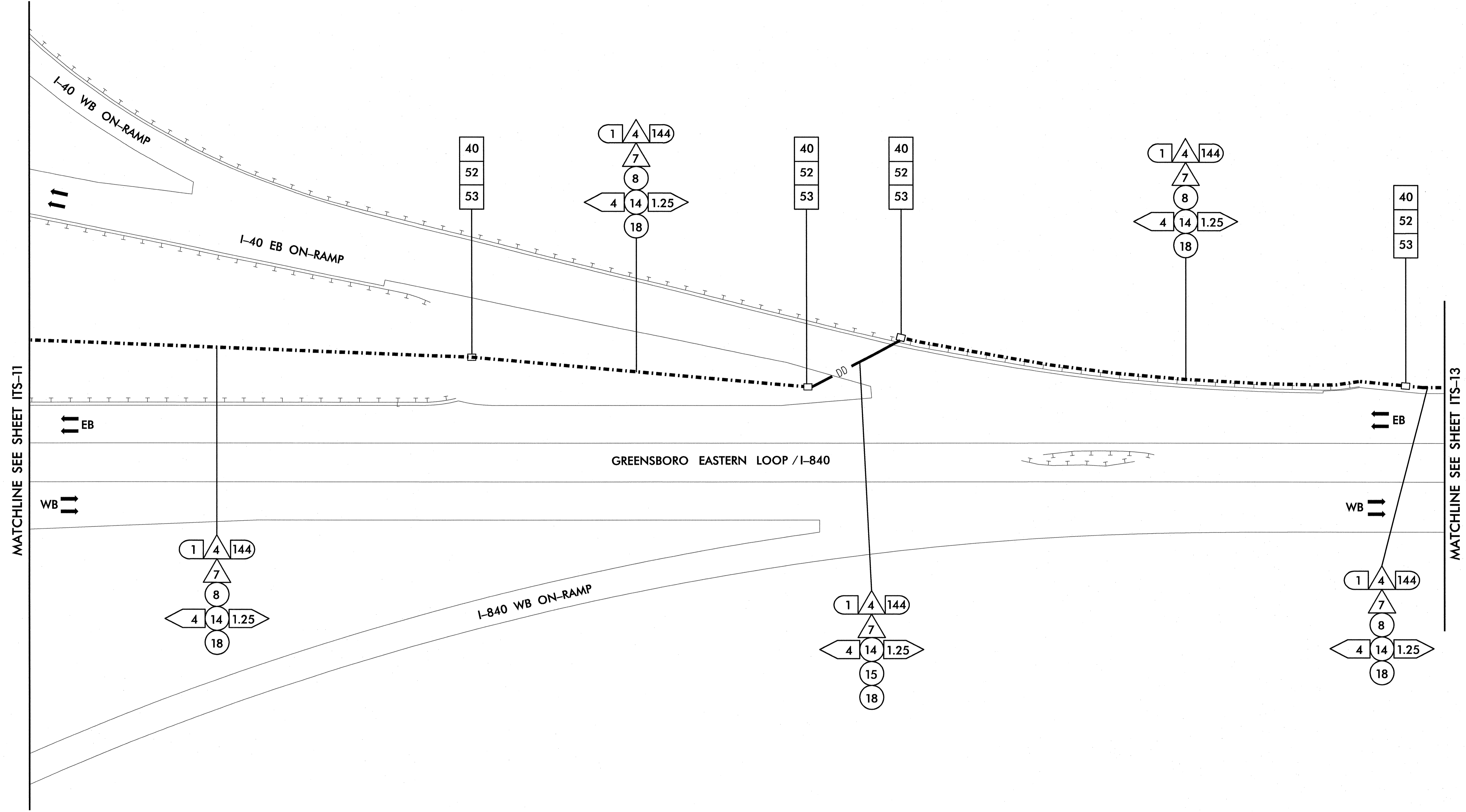
Plans Prepared For:

 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE: 0 50

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 ENGINEER
 KEVIN W. SMITH
 SIGNATURE: *Kevin W. Smith* DATE: 12/19/13
 CADD Filename:



MATCHLINE SEE SHEET ITS-11

MATCHLINE SEE SHEET ITS-13

GREENSBORO EASTERN LOOP / I-840

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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 919-677-2000

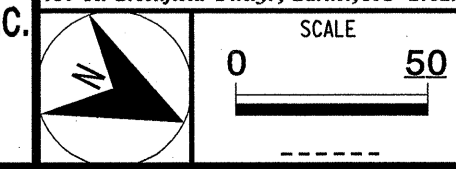
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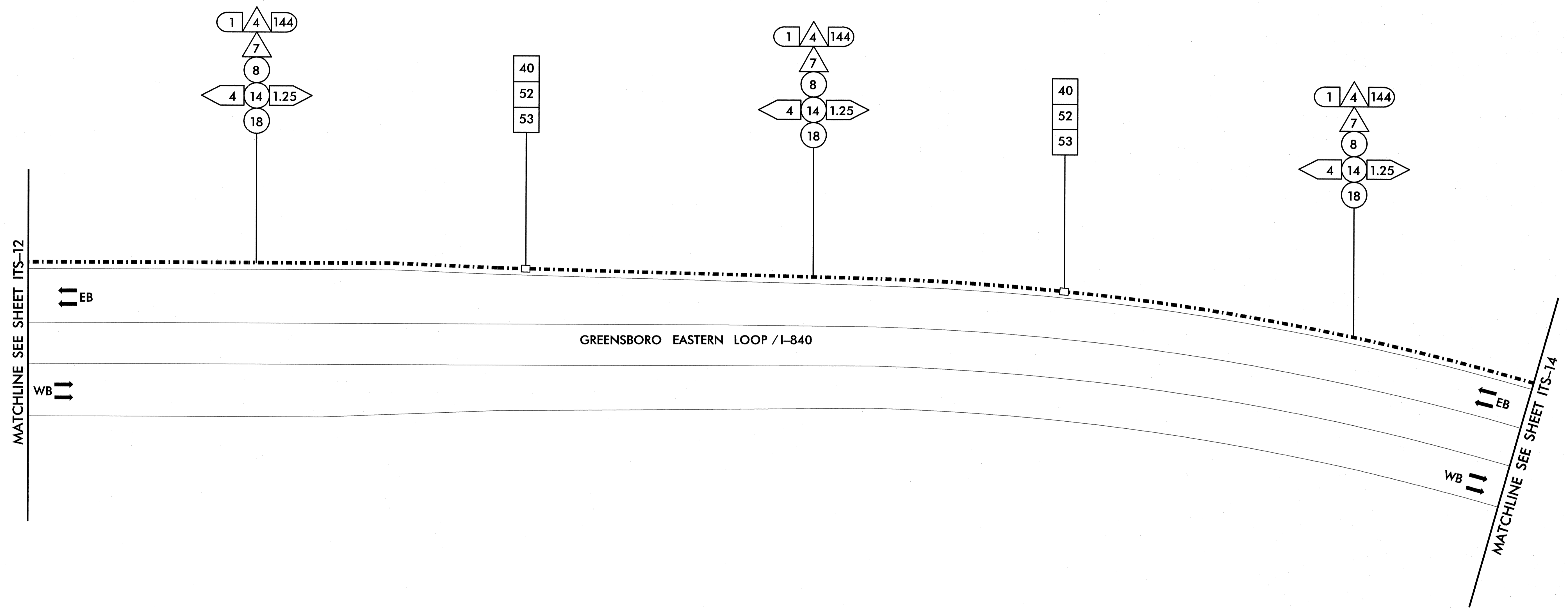
 750 N. Greenfield Pkwy., Garner, NC 27529

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

12/19/13
 SIGNATURE DATE
 CADD File name:





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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
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PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 671-2000

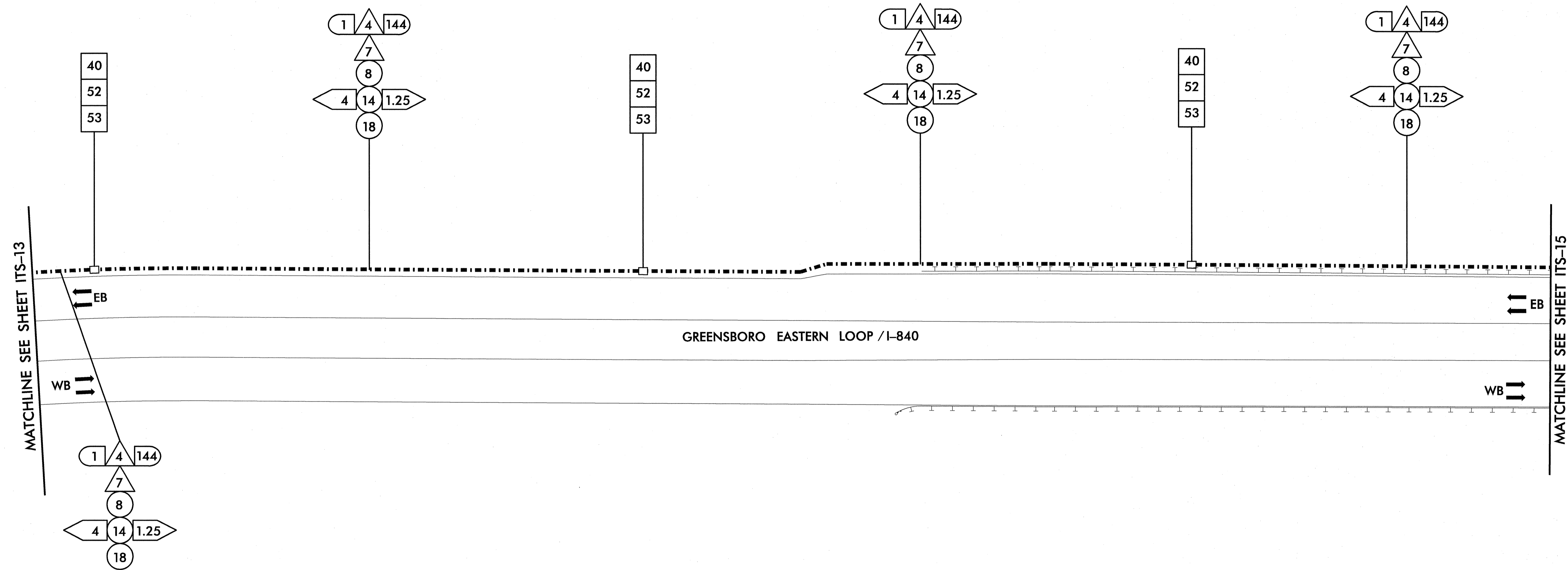
Plans Prepared For:

 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE
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CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 ENGINEER
 KEVIN W. SMITH
 SIGNATURE: *Kevin W. Smith* DATE: 12/19/13
 CADD Filename: _____



GREENSBORO EASTERN LOOP / I-840

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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 919.671-2000

Plans Prepared For:

 750 N. Greenfield Pkwy., Garner, NC 27529

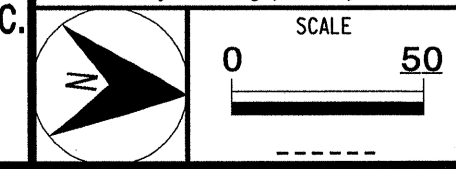
CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

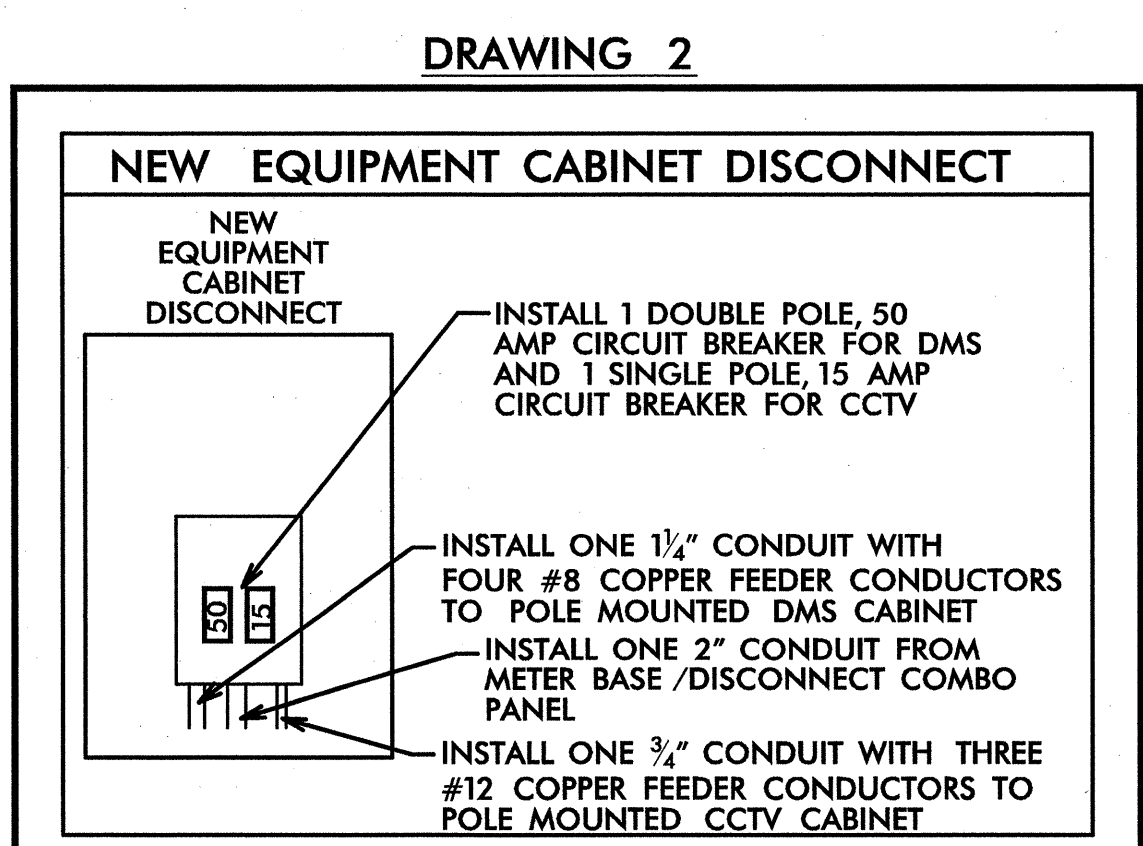
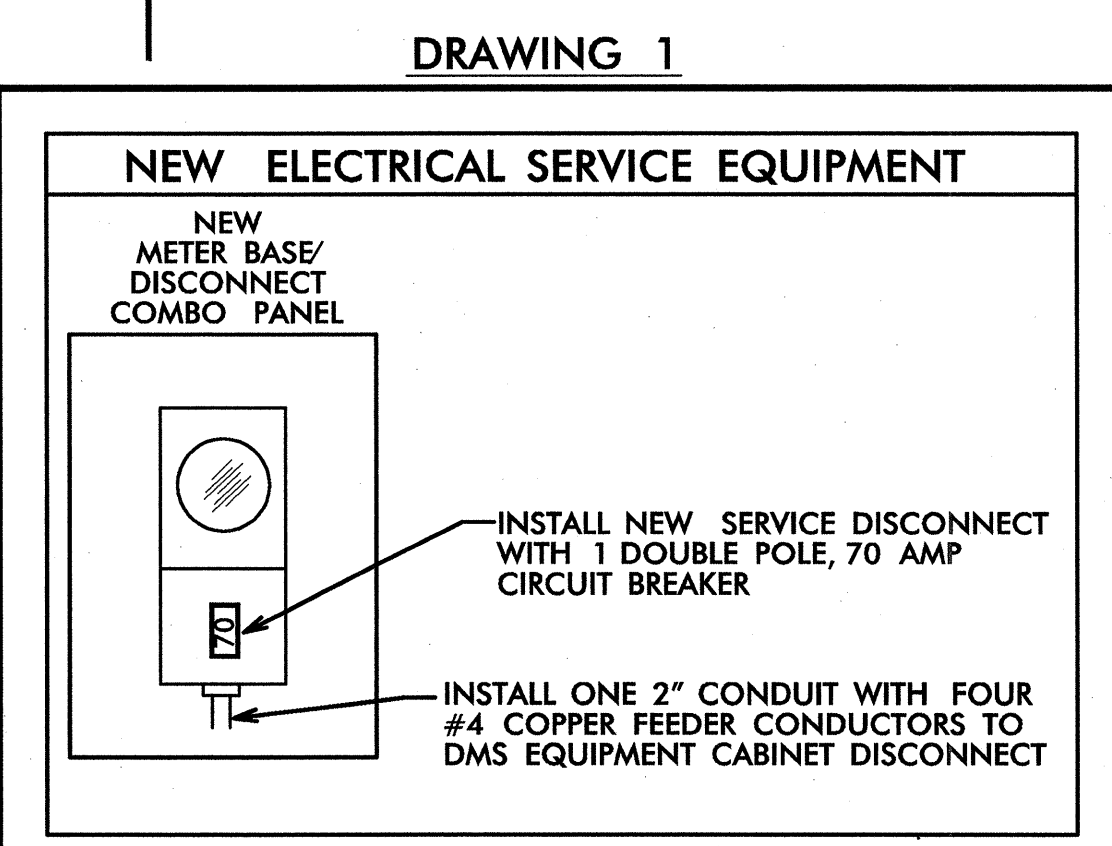
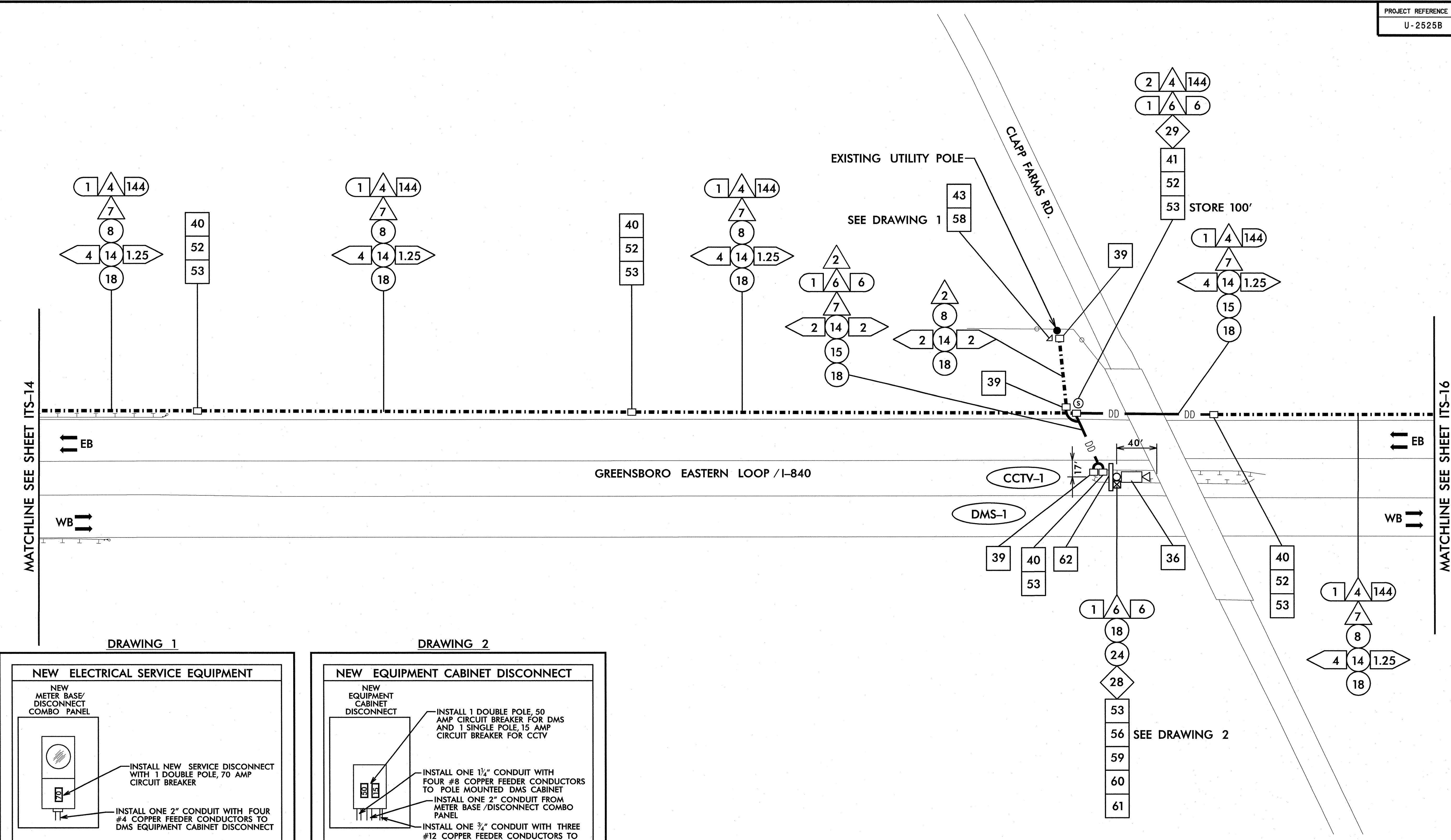
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SEAL
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 ENGINEER
 KEVIN W. SMITH

Kevin W. Smith 12/11/13
 SIGNATURE DATE

CADD File Name: _____





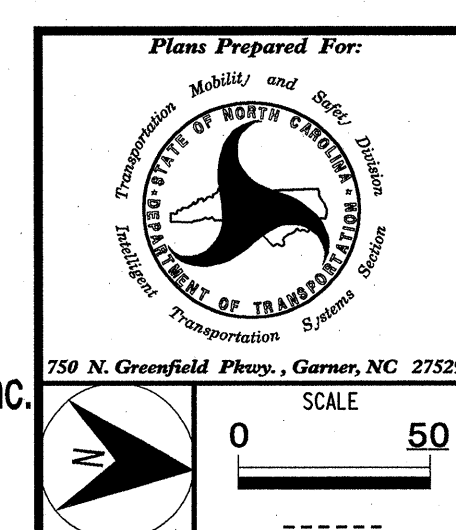
NOTE:
ELECTRICAL SERVICE DETAILS AND CONSTRUCTION METHODS DEPICT FIELD CONDITIONS AT THE TIME OF DESIGN. CONTRACTOR TO VERIFY ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION AND OBTAIN APPROVAL FROM ENGINEER PRIOR TO MAKING ANY CHANGES.

- NOTES:**
1. MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY.
 2. CONTACT REGIONAL ITS ENGINEER TO CONFIRM LOCATION OF DMS.
 3. INSTALL NEW DMS, WALKWAY, LADDER, CCTV EXTENSION POLE, AND POLE MOUNTED CABINET ON NEW DMS STRUCTURE.
 4. MOUNT CCTV CAMERA 45' ABOVE GRADE.
 5. INSTALL NEW GROUNDING SYSTEM AS SHOWN ON ITS-6 AND AS DESCRIBED IN THE PROJECT SPECIAL PROVISIONS.

6. INSTALL 6" x 6" WOOD PEDESTAL 10' FROM EXISTING DUKE ENERGY POWER POLE.
7. INSTALL CONDUITS FOR FEEDER CONDUCTORS AND FIBER OPTIC CABLE IN SAME BORE AND /OR TRENCH. USE SEPERATE CONDUITS FOR POWER AND COMMUNICATIONS.
8. CONTACT GARY VONCANNON (DUKE ENERGY) AT (336)632-3848 TO OBTAIN POWER TO ELECTRICAL SERVICE.
9. SEE ROADWAY PLANS FOR GUARDRAIL DETAILS.

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
NC License #F-0102
P.O. Box 33068
Raleigh, NC 27636
(919) 677-2000

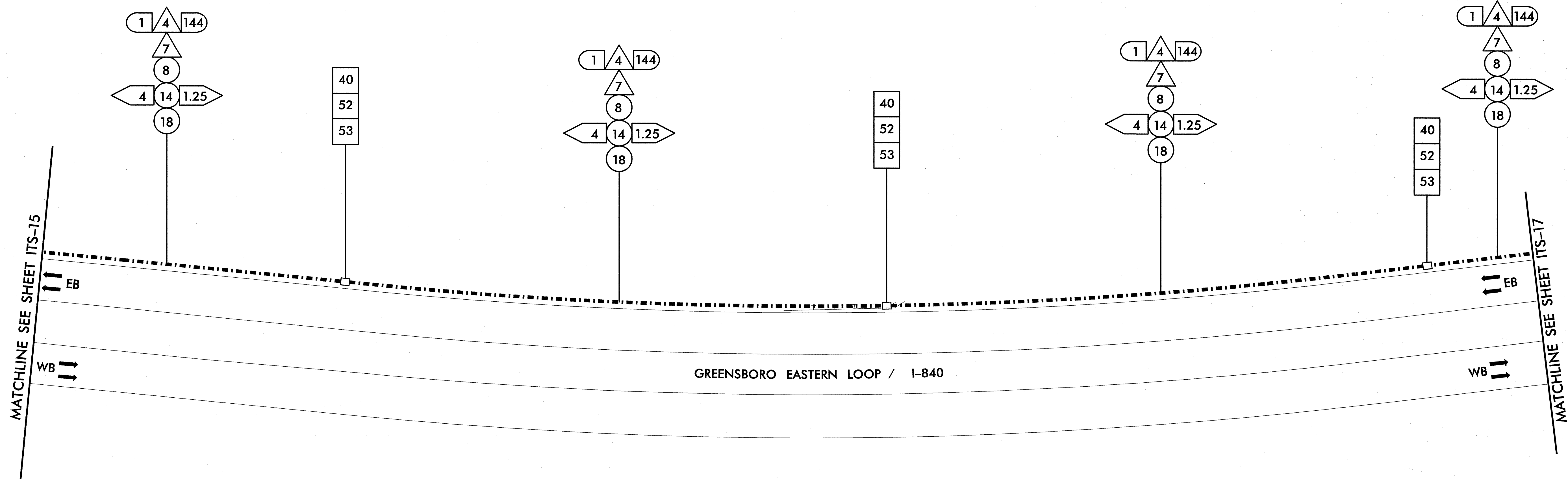


CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

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ENGINEER KEVIN W. SMITH
SIGNATURE DATE 12/19/13
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GREENSBORO EASTERN LOOP / I-840

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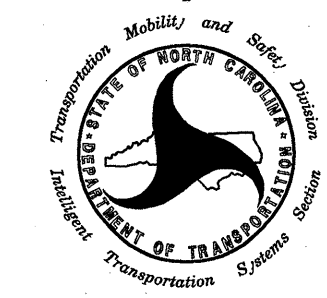
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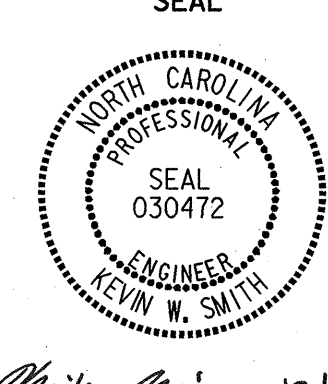
NOTE:
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PLANS PREPARED IN THE OFFICE OF:

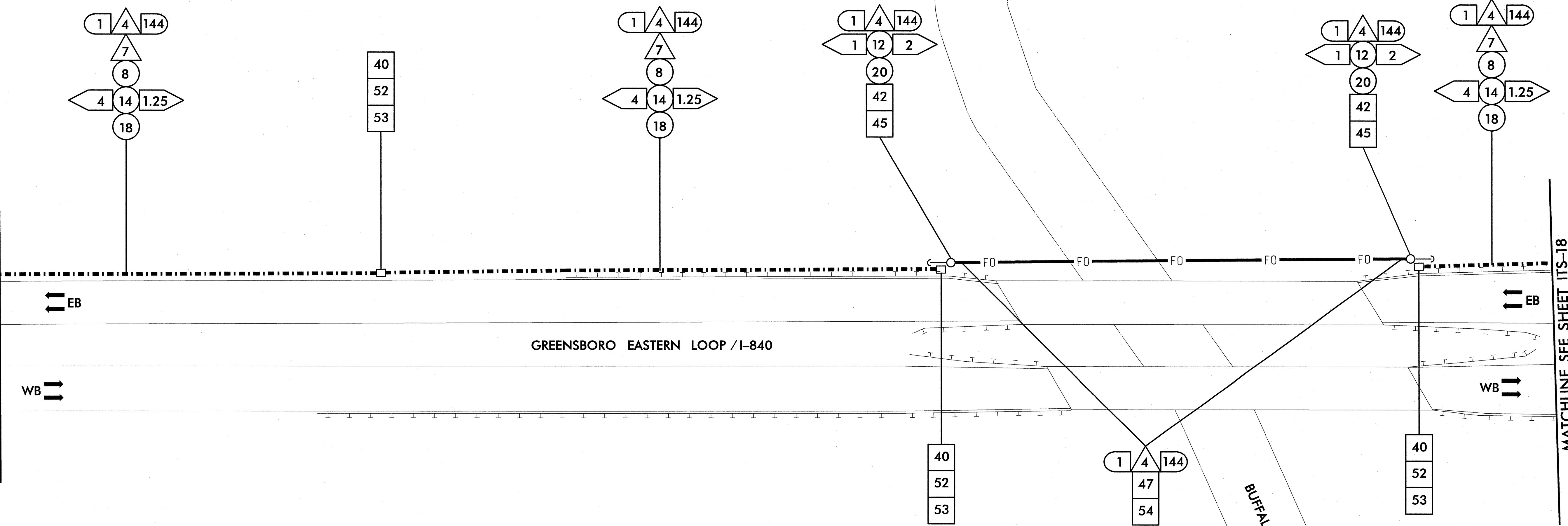
**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

Plans Prepared For:

 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE
 0 50

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY: _____
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 ENGINEER
 KEVIN W. SMITH
 SIGNATURE: *Kevin W. Smith* DATE: 12/19/13
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MATCHLINE SEE SHEET ITS-16



MATCHLINE SEE SHEET ITS-18

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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
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PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

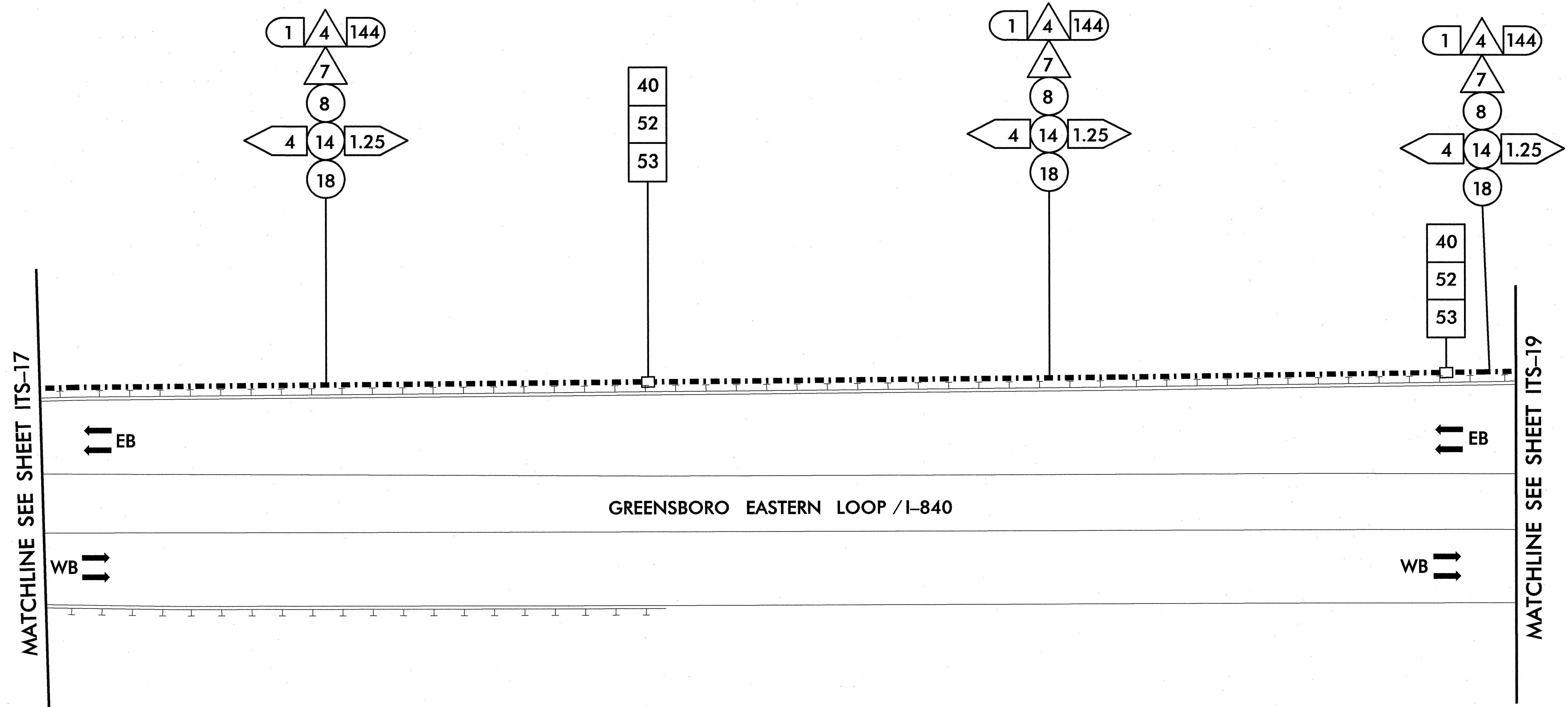
Plans Prepared For:

 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 750 N. Greenfield Pkwy., Garner, NC 27529

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 KEVIN W. SMITH
 ENGINEER
 SIGNATURE: *Kevin W. Smith* DATE: 12/11/13
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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
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 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 871-2000

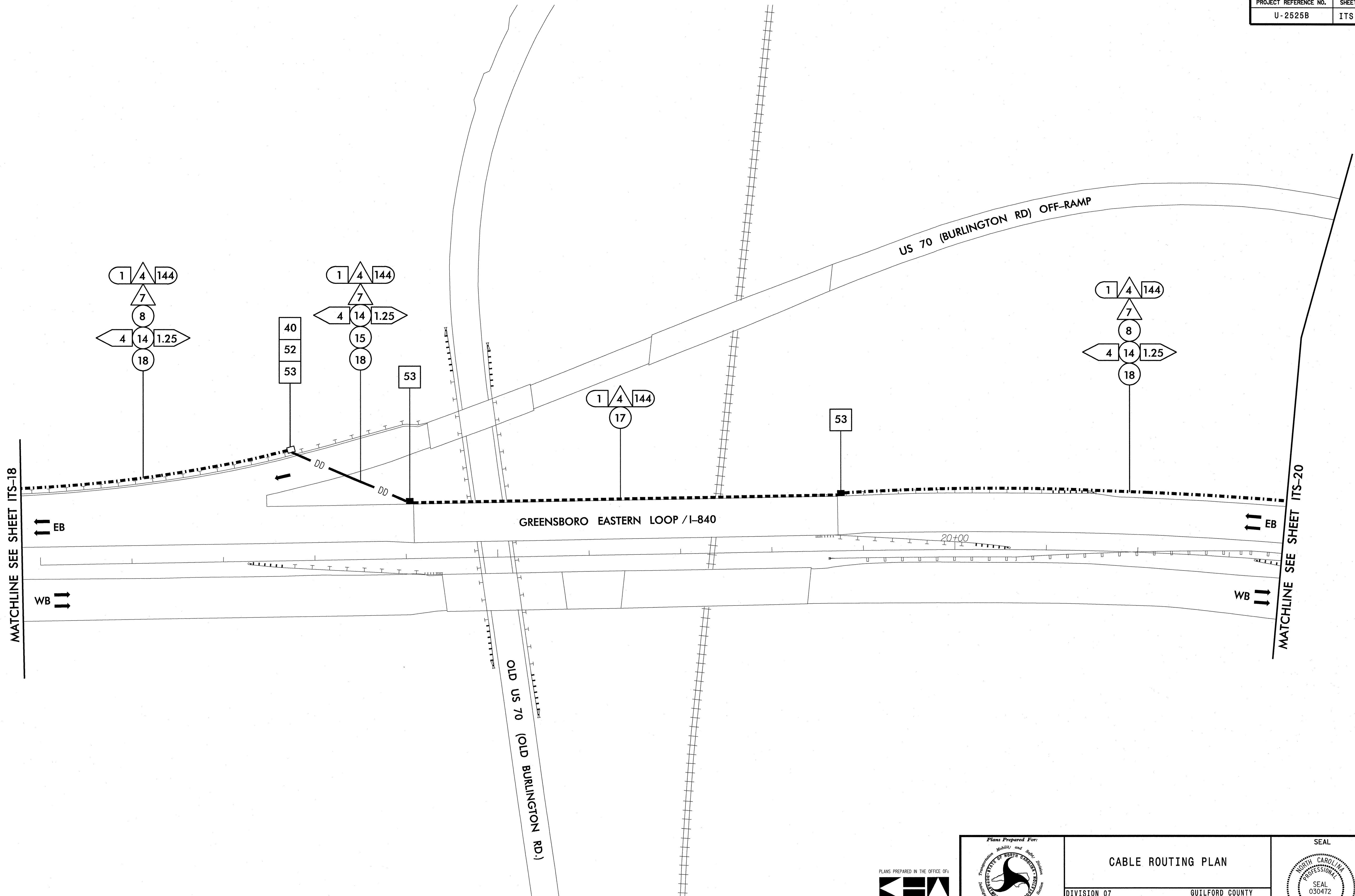
Plans Prepared For:

 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE: 0 50

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

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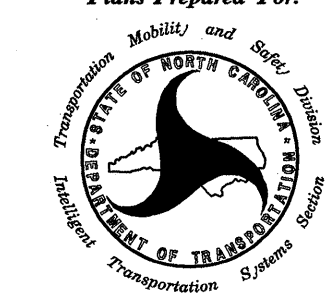
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 SIGNATURE: *Kevin W. Smith* DATE: 12/19/13
 CADD Filename:




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NOTE:
MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
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THE ROADWAY

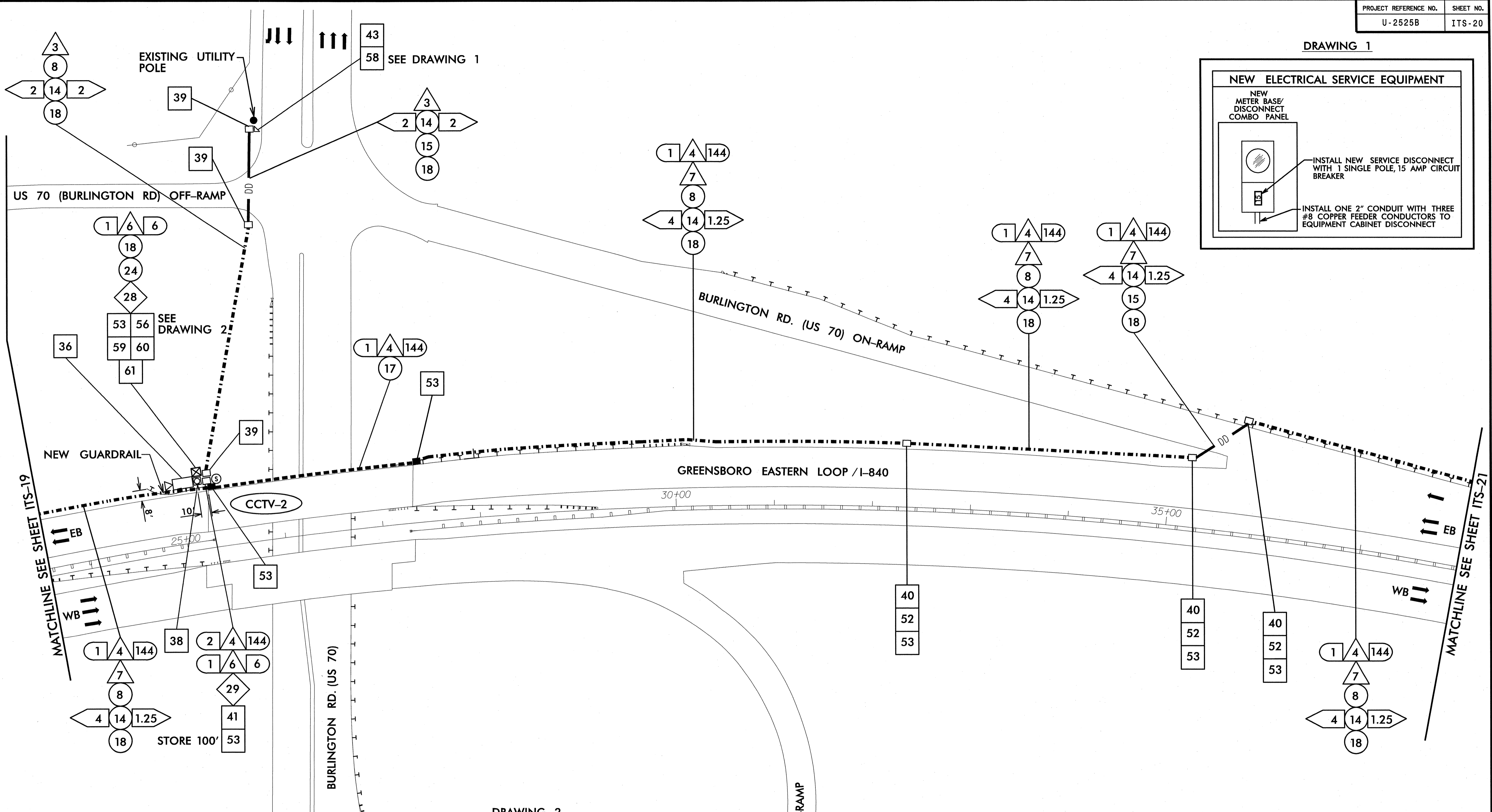
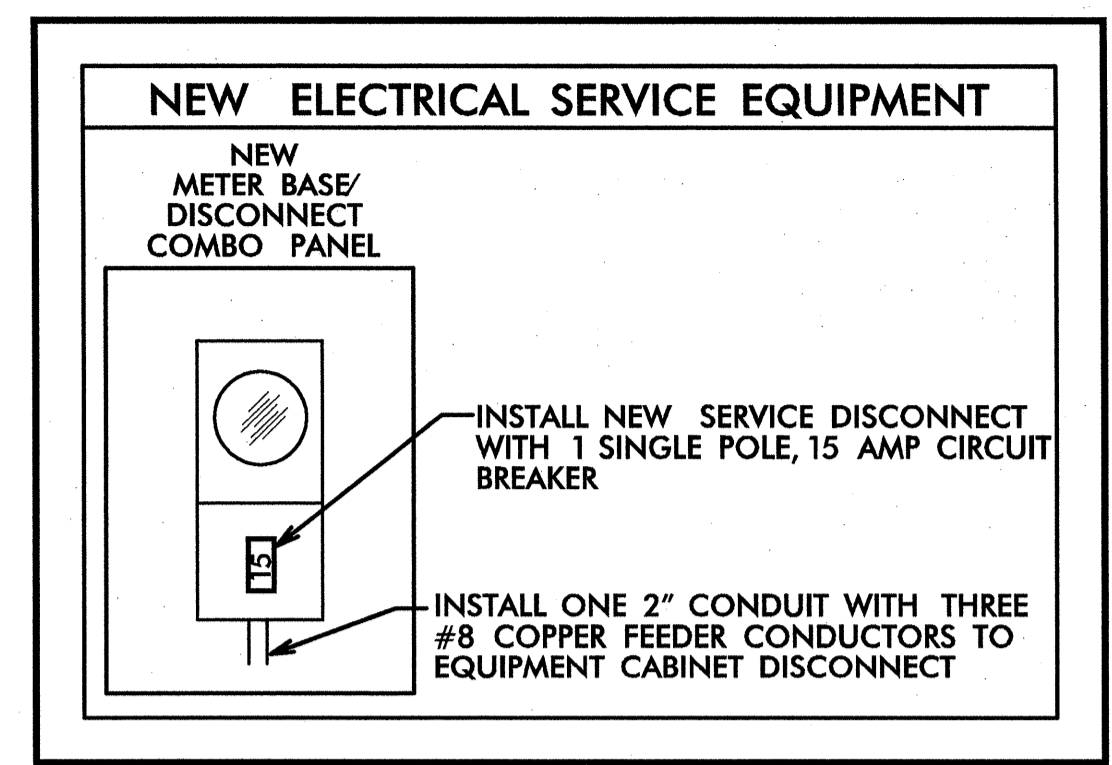
PLANS PREPARED IN THE OFFICE OF:
**Kimley-Horn
and Associates, Inc.**
NC License #F-0102
P.O. Box 33068
Raleigh, NC 27636
(919) 877-2000

Plans Prepared For:

 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE 0 50

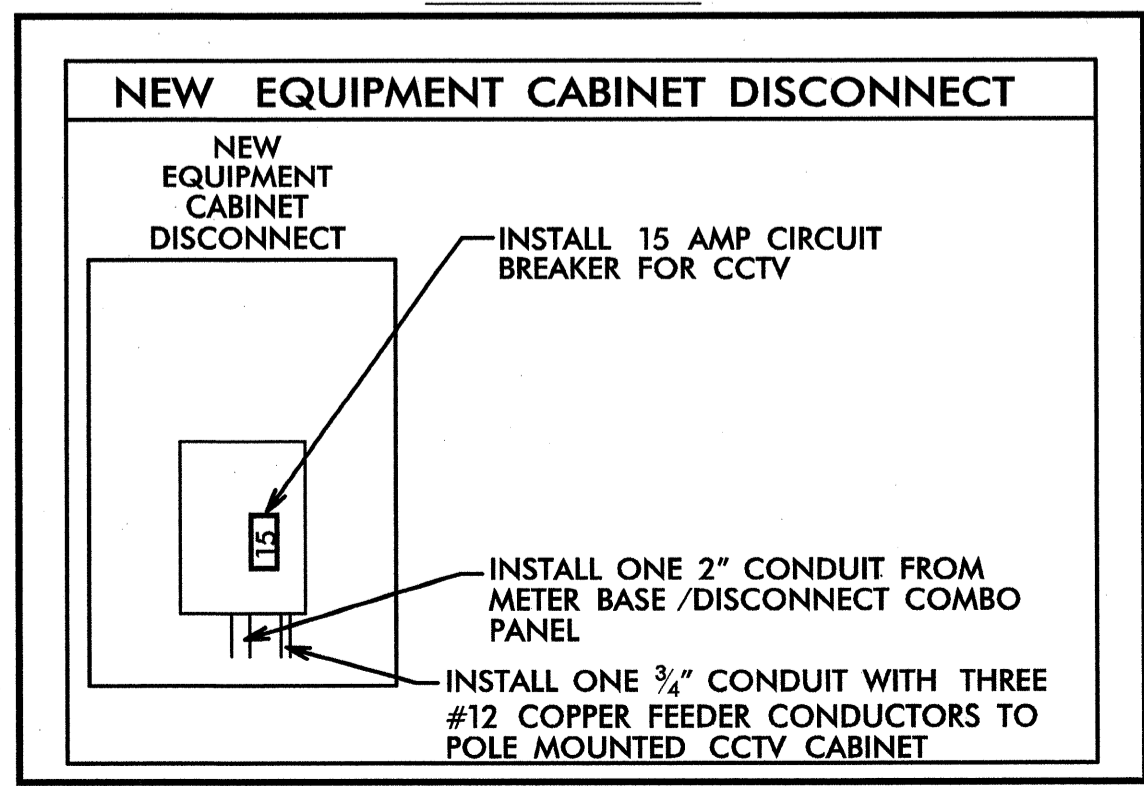
CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 ENGINEER
 KEVIN W. SMITH
 SIGNATURE DATE 12/12/13
 CADD File name:

DRAWING 1



DRAWING 2



NOTE: ELECTRICAL SERVICE DETAILS AND CONSTRUCTION METHODS DEPICT FIELD CONDITIONS AT THE TIME OF DESIGN. CONTRACTOR TO VERIFY ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION AND OBTAIN APPROVAL FROM ENGINEER PRIOR TO MAKING ANY CHANGES.

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 2. CONTACT REGIONAL ITS ENGINEER TO CONFIRM LOCATION OF CCTV.
 3. MOUNT CCTV CAMERA 45' ABOVE GRADE.
 4. INSTALL NEW FIELD EQUIPMENT CABINET ON NEW CCTV POLE.
 5. INSTALL NEW GROUNDING SYSTEM AS SHOWN ON ITS-4 AND AS DESCRIBED IN THE PROJECT SPECIAL PROVISIONS.
 6. INSTALL 6" x 6" WOOD PEDESTAL 10' FROM EXISTING DUKE ENERGY POWER POLE.
 7. CONTACT GARY VONCANNON (DUKE ENERGY) AT (336)632-3848 TO OBTAIN POWER TO ELECTRICAL SERVICE.
 8. SEE ROADWAY PLANS FOR GUARDRAIL DETAILS.

Plans Prepared For: STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Kimley-Horn and Associates, Inc. 750 N. Greenfield Plaza, Garner, NC 27529
 NC License #F-002
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

CABLE ROUTING PLAN

DIVISION 07 GUILFORD COUNTY

PLAN DATE: DECEMBER 11, 2013 REVIEWED BY: J. CROSS

PREPARED BY: J. CROSS REVIEWED BY: K. SMITH

SCALE: 0 50

REVISIONS: _____

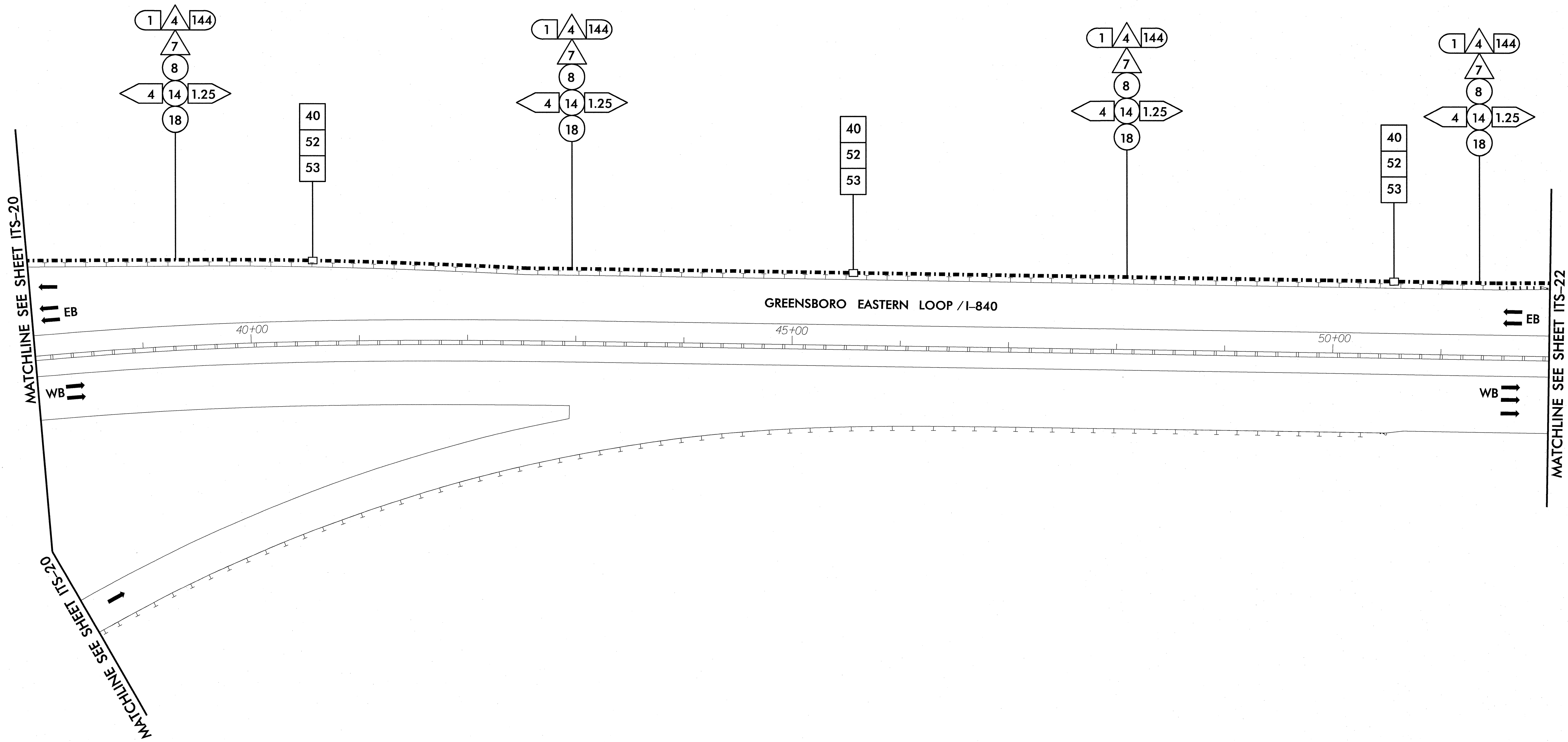
INIT. DATE

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Signature: *Kevin W. Smith* 12/11/13
 DATE

CADD File name: _____

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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
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 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 1991-2000

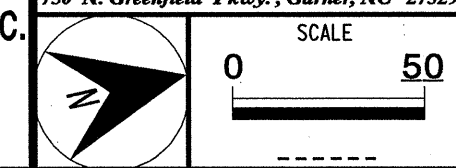
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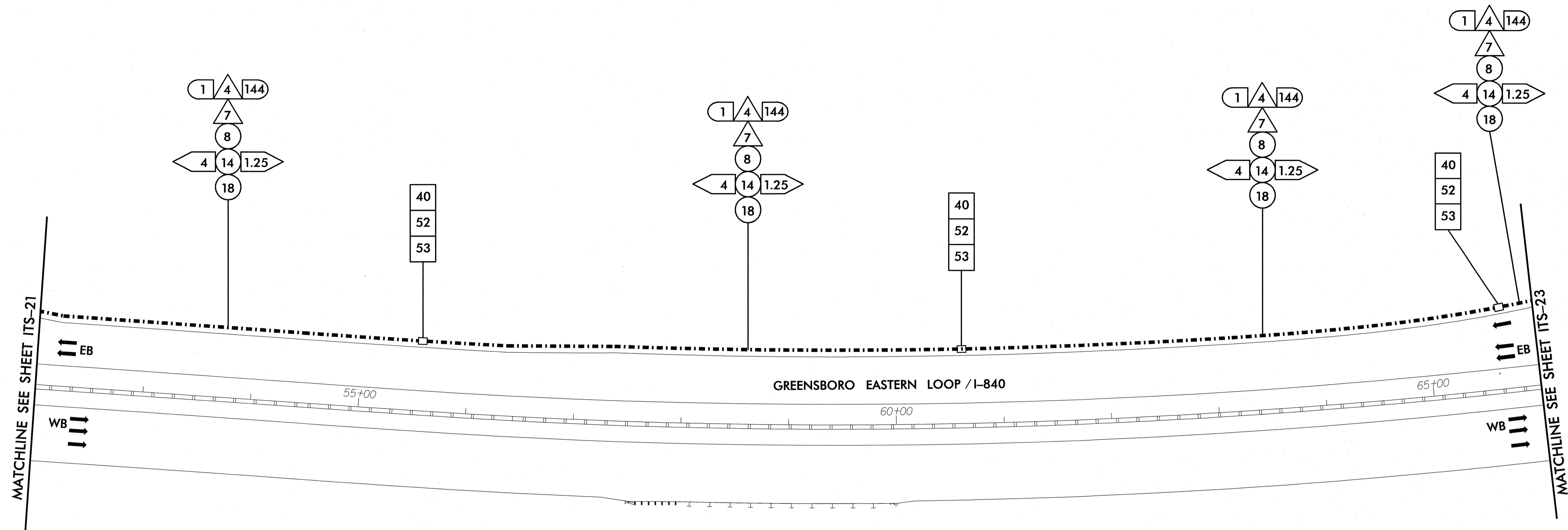
 750 N. Greenfield Pkwy., Garner, NC 27529

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 SIGNATURE: *Kevin W. Smith* 12/19/13
 DATE: 12/19/13
 CADD File name:





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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
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PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 877-7000

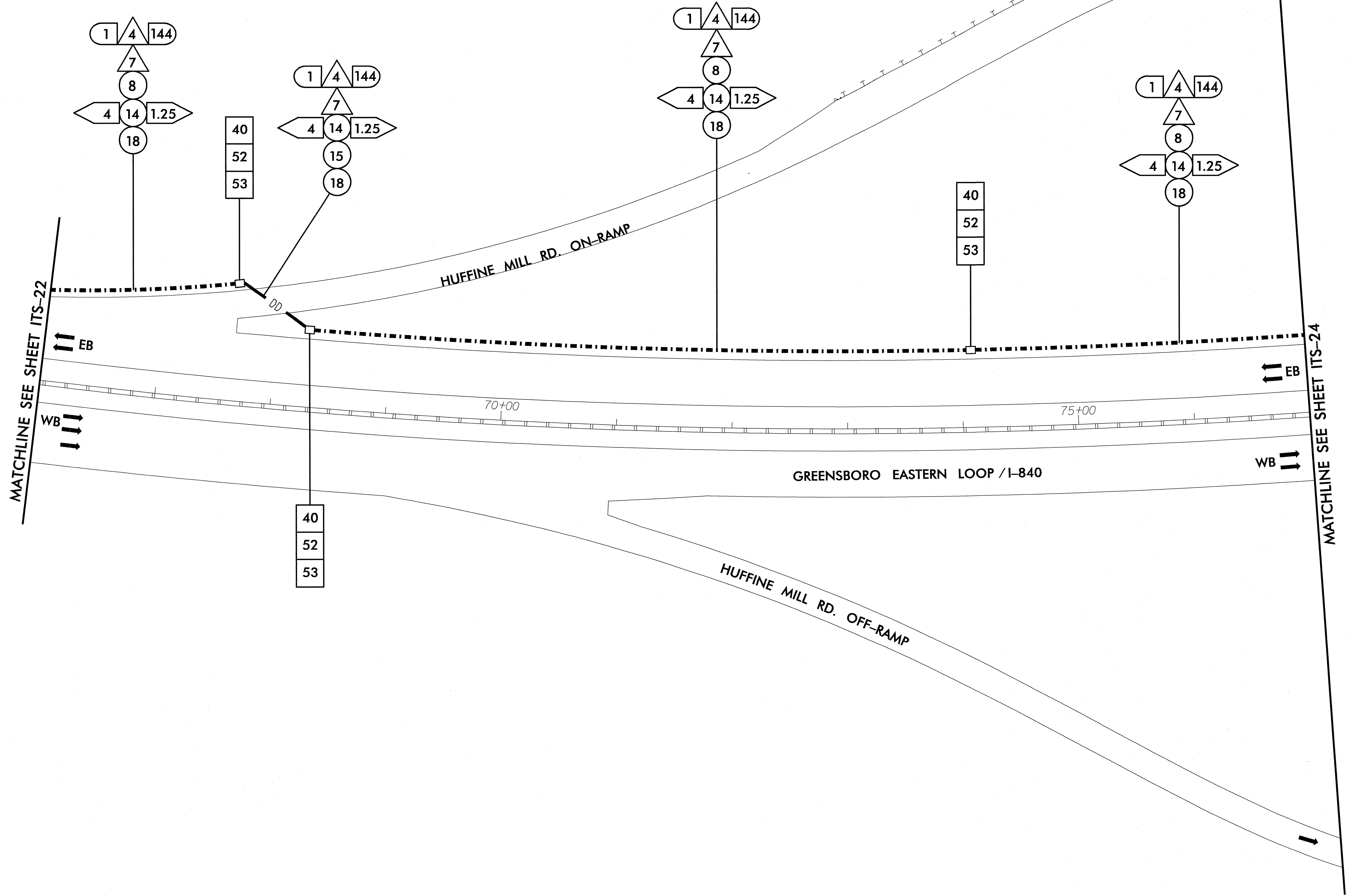
Plans Prepared For:

 TRANSPORTATION DIVISION
 750 N. Greenfield Pkwy., Garner, NC 27529

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 ENGINEER
 KEVIN W. SMITH
 SIGNATURE: *Kevin W. Smith* DATE: 12/11/13
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NOTE:
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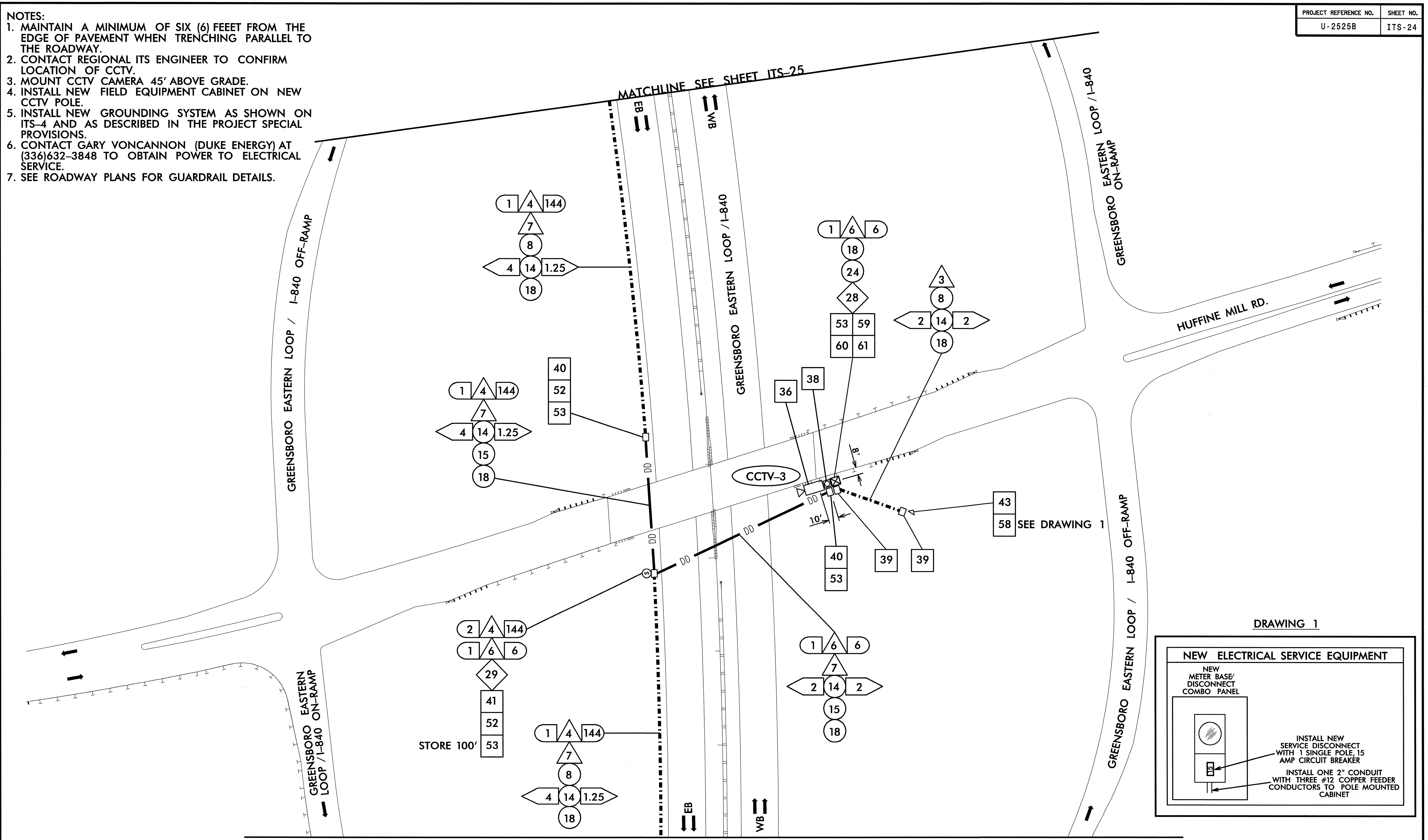
PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 671-2000

Plans Prepared For: 750 N. Greenfield Pkwy., Garner, NC 27529		CABLE ROUTING PLAN		SEAL 	
DIVISION 07		GUILFORD COUNTY		PLAN DATE: DECEMBER 11, 2013	
PREPARED BY: J. CROSS		REVIEWED BY: K. SMITH		REVISIONS	
SCALE 0 50		INIT. DATE		SIGNATURE DATE	
		12/11/13		CADD File Name:	

NOTES:

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2. CONTACT REGIONAL ITS ENGINEER TO CONFIRM LOCATION OF CCTV.
3. MOUNT CCTV CAMERA 45' ABOVE GRADE.
4. INSTALL NEW FIELD EQUIPMENT CABINET ON NEW CCTV POLE.
5. INSTALL NEW GROUNDING SYSTEM AS SHOWN ON ITS-4 AND AS DESCRIBED IN THE PROJECT SPECIAL PROVISIONS.
6. CONTACT GARY VONCANNON (DUKE ENERGY) AT (336)632-3848 TO OBTAIN POWER TO ELECTRICAL SERVICE.
7. SEE ROADWAY PLANS FOR GUARDRAIL DETAILS.



DRAWING 1

NEW ELECTRICAL SERVICE EQUIPMENT

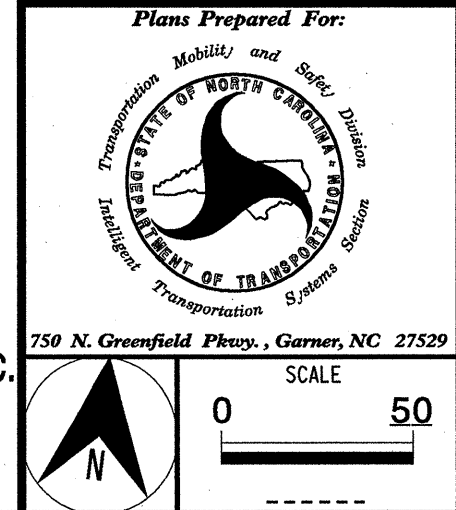
NEW METER BASE/DISCONNECT COMBO PANEL

INSTALL NEW SERVICE DISCONNECT WITH 1 SINGLE POLE, 15 AMP CIRCUIT BREAKER

INSTALL ONE 2" CONDUIT WITH THREE #12 COPPER FEEDER CONDUCTORS TO POLE MOUNTED CABINET

NOTE:
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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
NC License #F-0102
P.O. Box 33068
Raleigh, NC 27636
(919) 671-2000

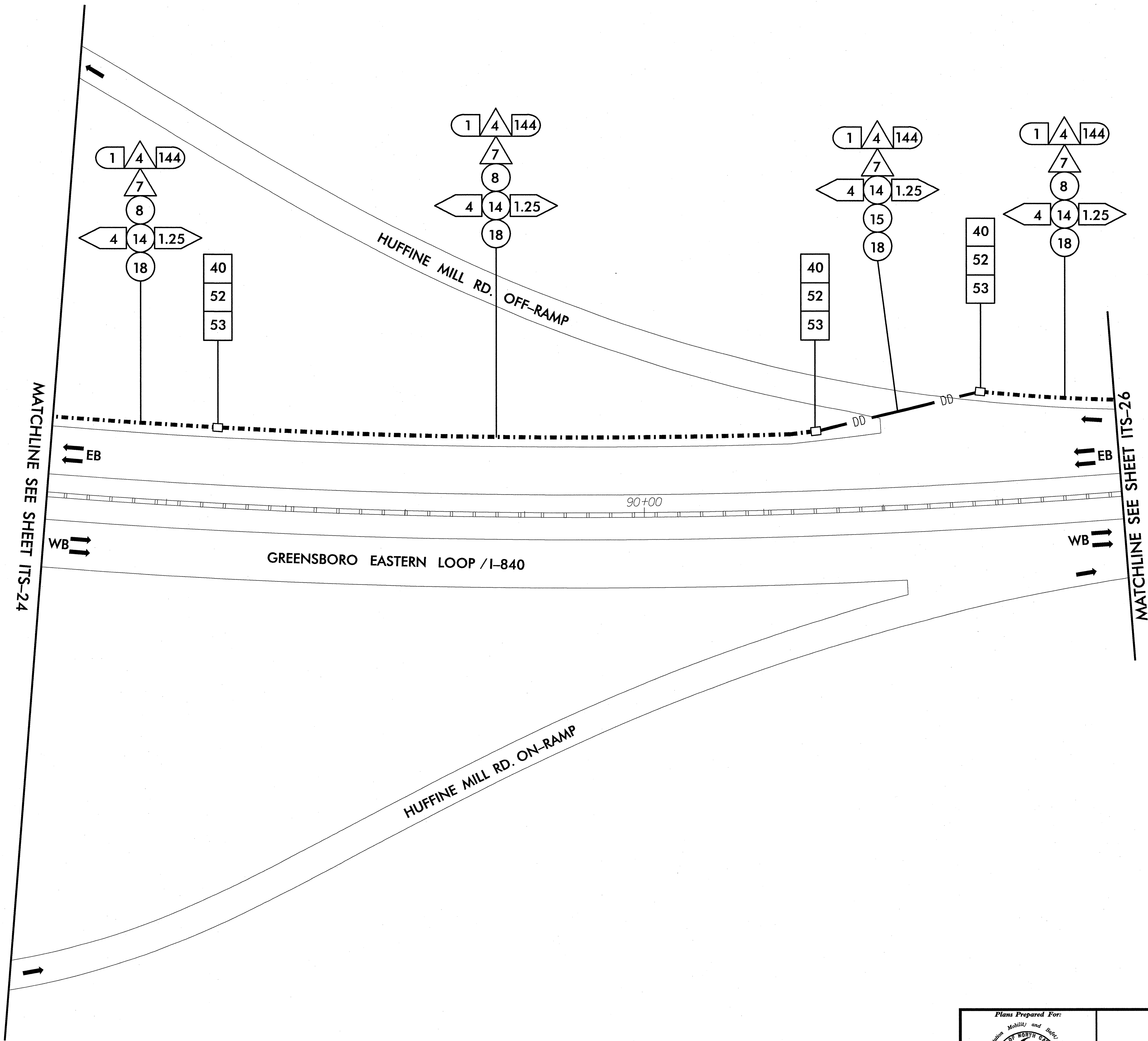


CABLE ROUTING PLAN

DIVISION 07		GUILFORD COUNTY	
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:		
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH		
REVISIONS	INIT.	DATE	

SEAL

STATE OF NORTH CAROLINA
PROFESSIONAL ENGINEER
SEAL
030472
KEVIN W. SMITH
12/10/13
SIGNATURE DATE



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NOTE:
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PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
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 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 671-2000

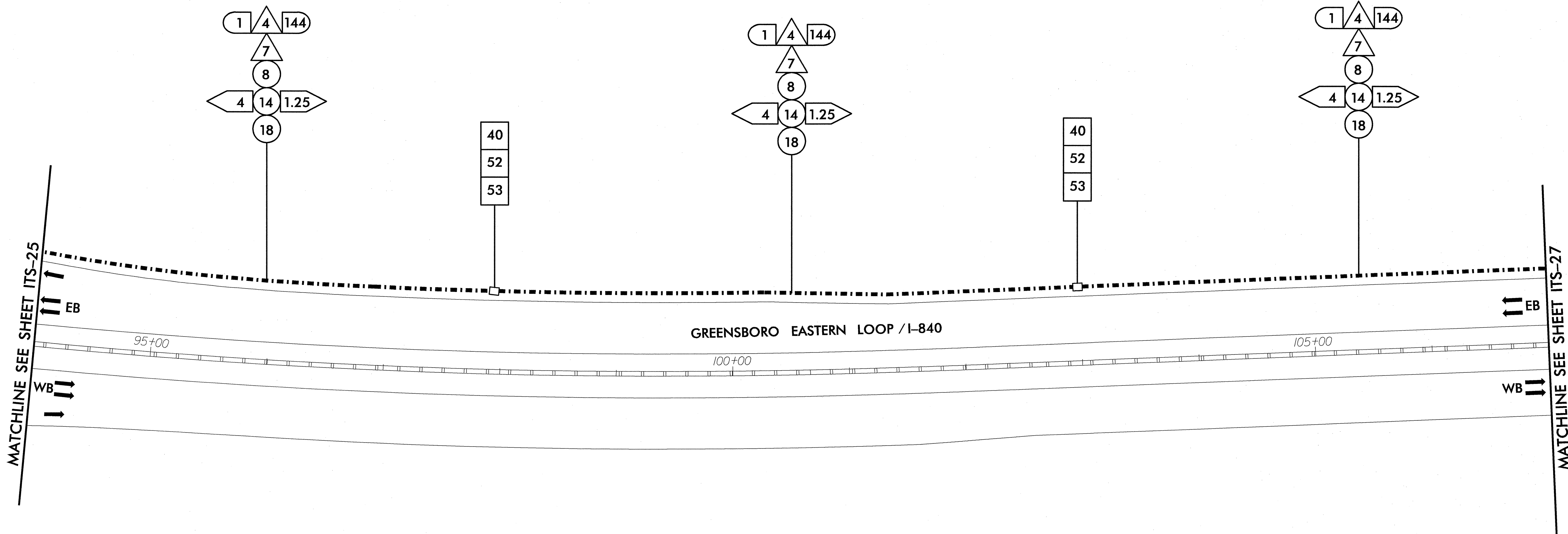
Plans Prepared For:

 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE
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CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 KEVIN W. SMITH
 ENGINEER
 12/19/13
 SIGNATURE DATE
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NOTE:
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 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 617-2000

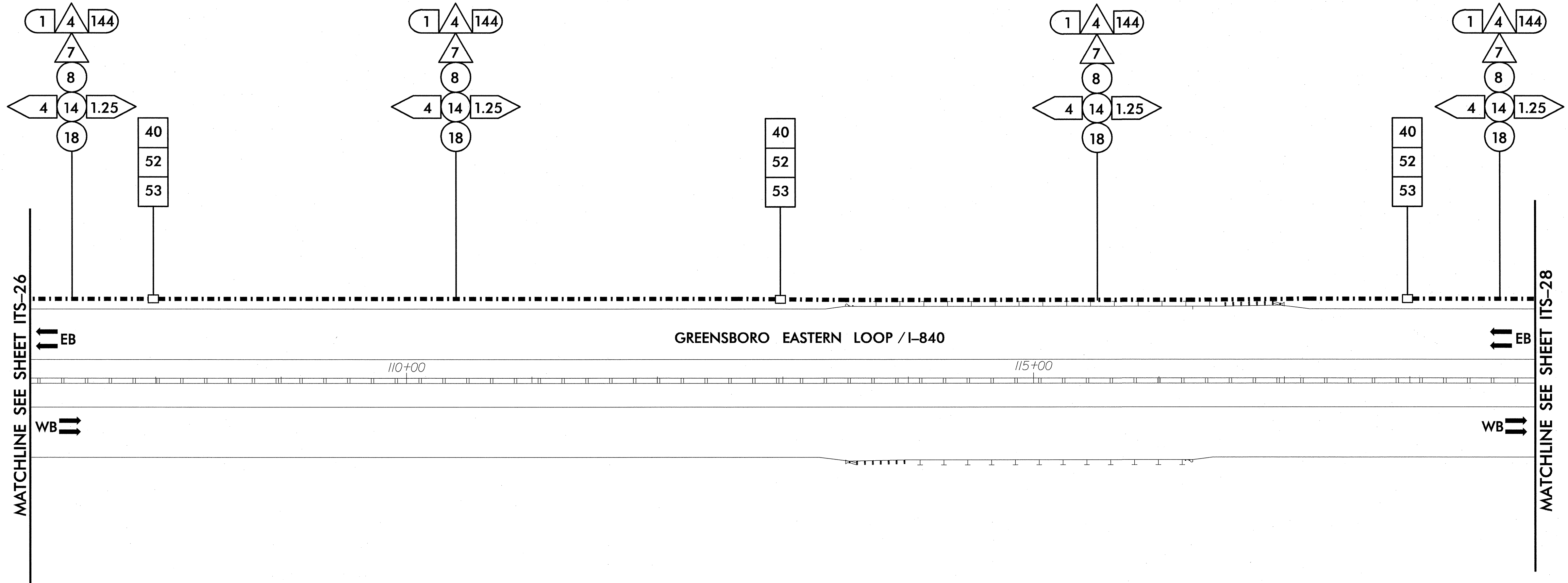
Plans Prepared For:

 TRANSPORTATION SYSTEMS SECTION
 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE 0 50

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

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 KEVIN W. SMITH
 ENGINEER
 SIGNATURE DATE 12/11/13
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 Raleigh, NC 27636
 (919) 671-2000

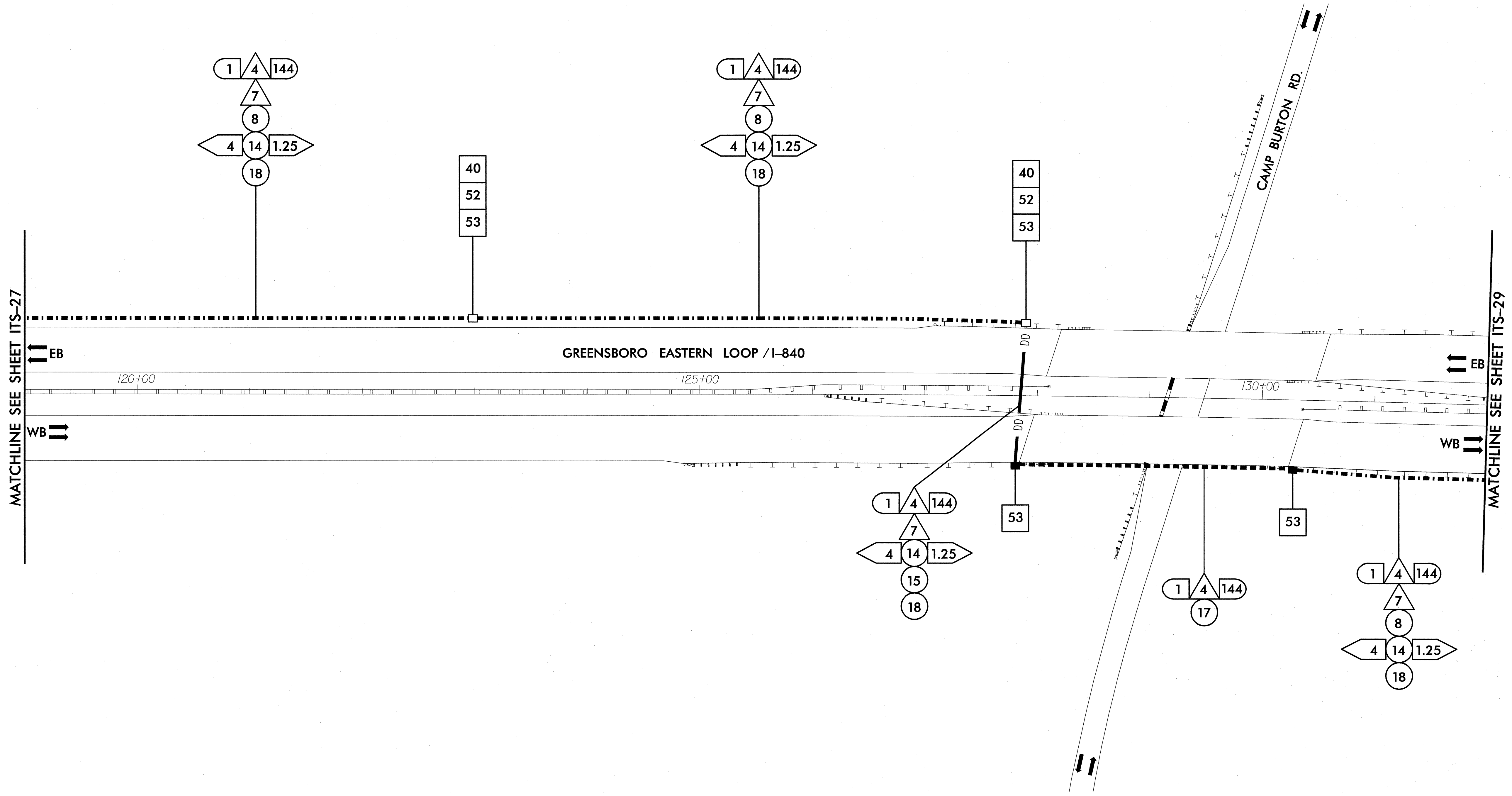
Plans Prepared For:

 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE
 0 50

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 ENGINEER
 KEVIN W. SMITH
 SIGNATURE DATE 12/19/13
 CADD Filename:



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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 877-2000

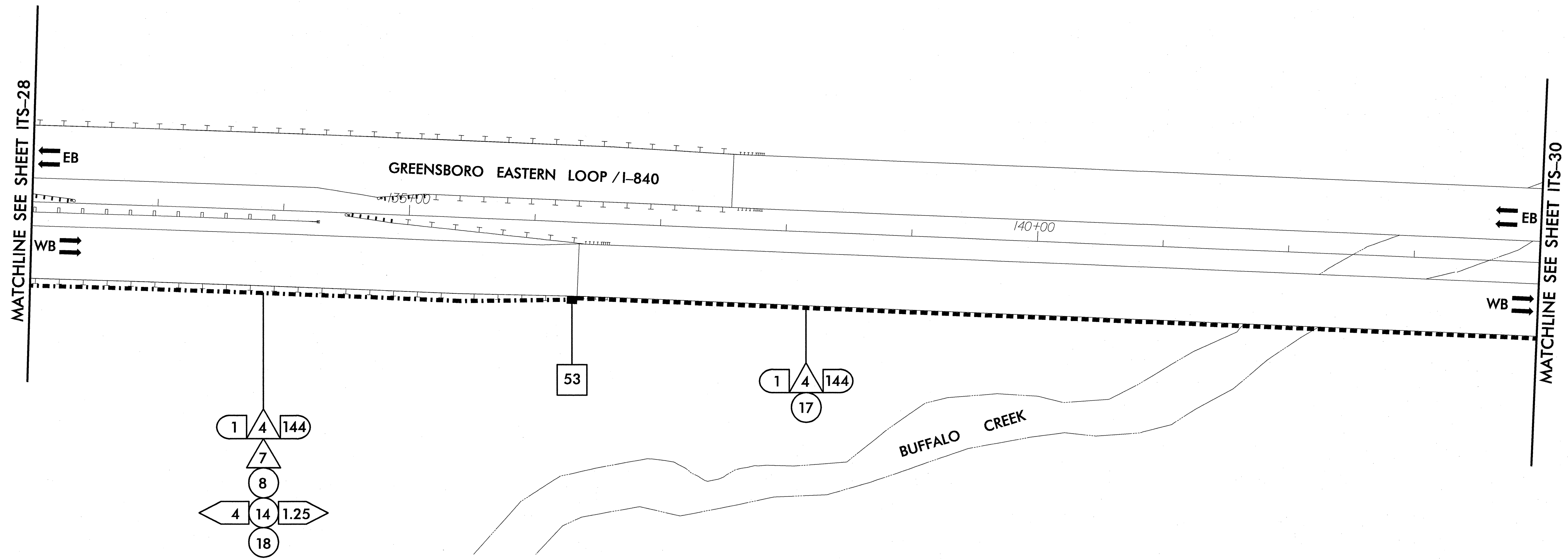
Plans Prepared For:

 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE: 0 50

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 ENGINEER
 KEVIN W. SMITH
 SIGNATURE: *Kevin W. Smith* DATE: 12/19/13
 CADD Filename:



MATCHLINE SEE SHEET ITS-28

MATCHLINE SEE SHEET ITS-30

NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

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PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 877-2000

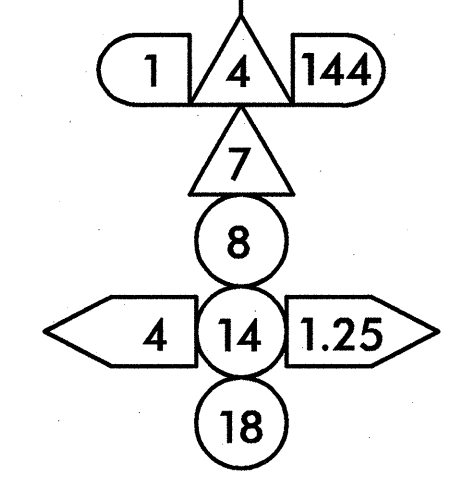
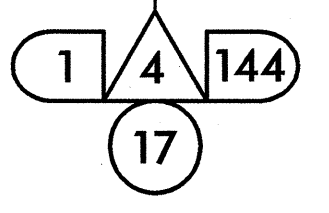
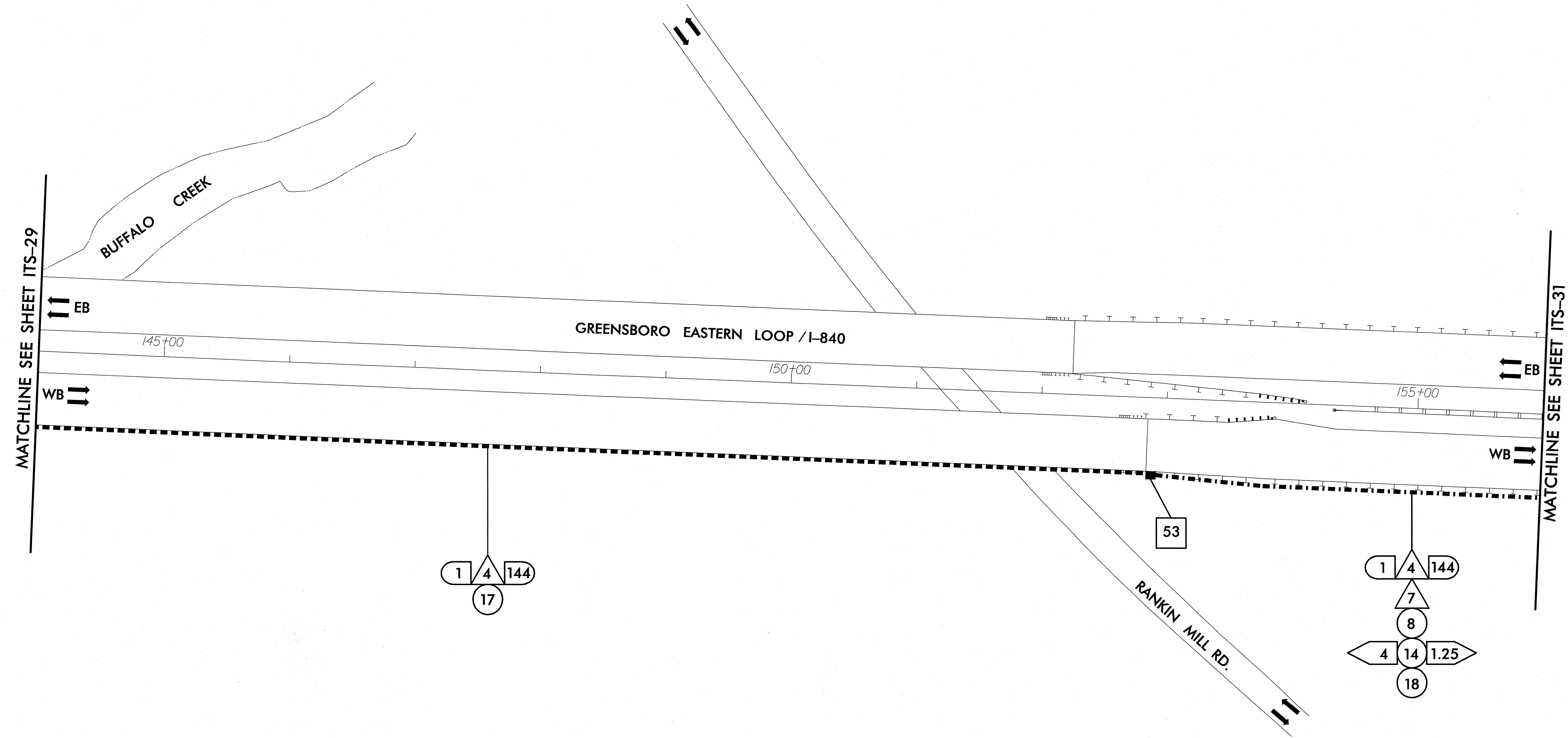
Plans Prepared For:

 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE: 0 = 50'

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

SIGNATURE DATE 12/19/13
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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 877-2000

Plans Prepared For:

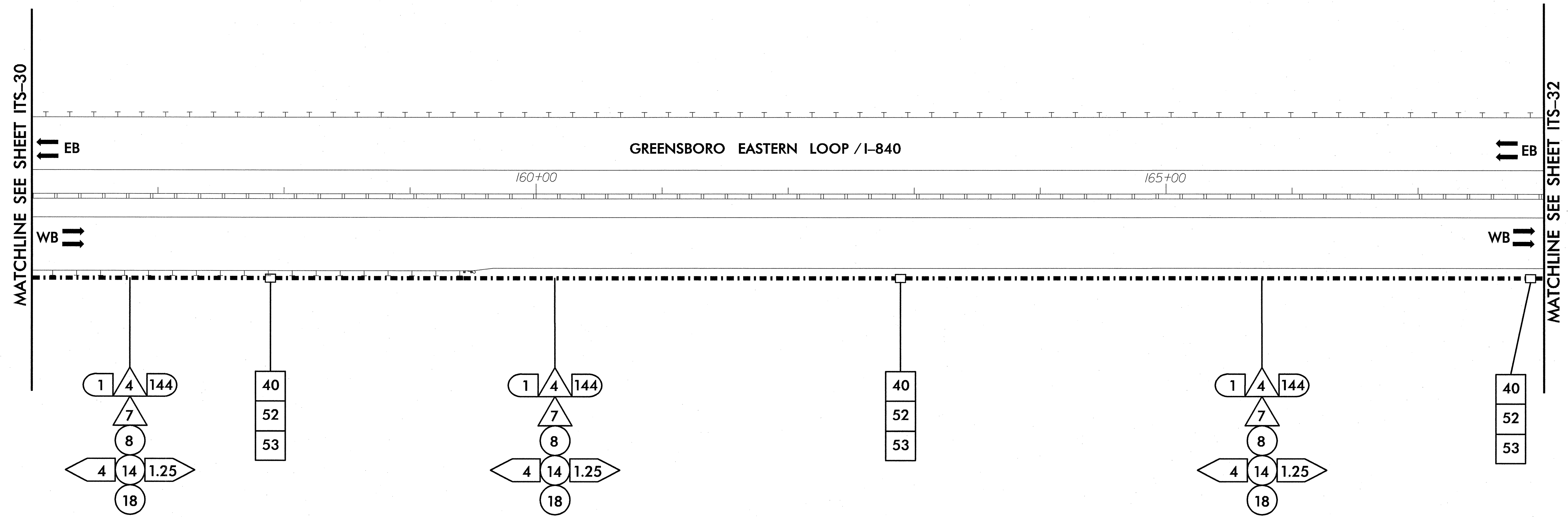
 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE

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CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

ENGINEER
 KEVIN W. SMITH
 SIGNATURE DATE 12/19/13
 CADD File name:

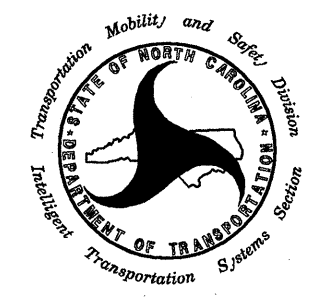


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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY


PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 671-2000

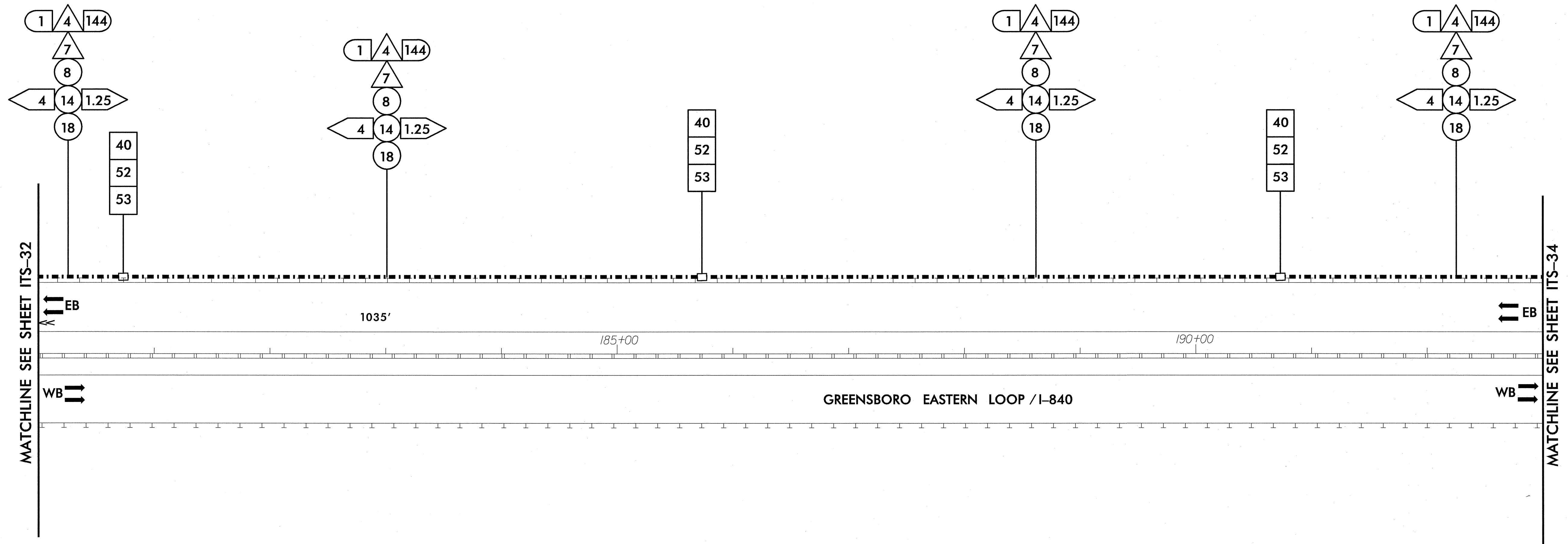
Plans Prepared For:

 750 N. Greenfield Place, Garner, NC 27529
 SCALE: 0 = 50'

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL



ENGINEER
 KEVIN W. SMITH
 SIGNATURE: *Kevin W. Smith* DATE: 12/19/13
 CADD Filename:



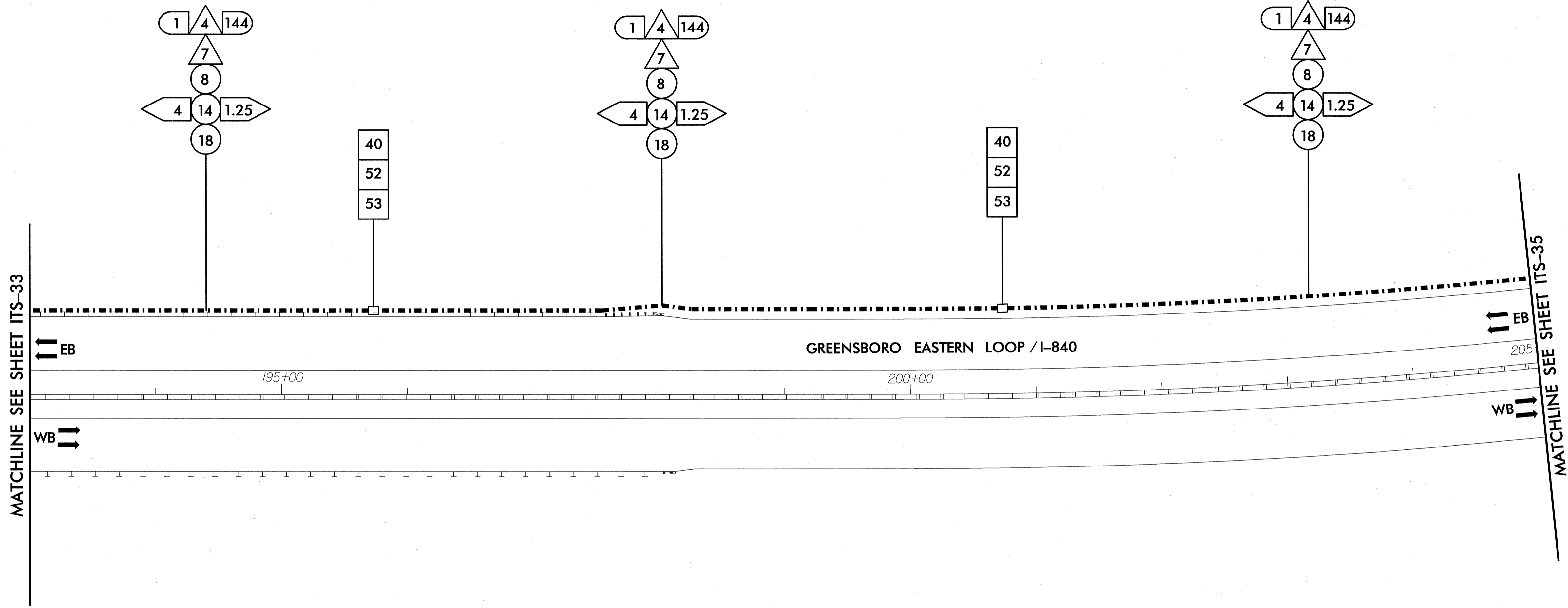
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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 617-2000

 Plans Prepared For: 750 N. Greenfield Pkwy., Garner, NC 27529	CABLE ROUTING PLAN		SEAL KEVIN W. SMITH ENGINEER 12/19/13					
	DIVISION 07 PLAN DATE: DECEMBER 11, 2013 PREPARED BY: J. CROSS	GUILFORD COUNTY REVIEWED BY: REVIEWED BY: K. SMITH		<table border="1"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS	INIT.	DATE	
REVISIONS	INIT.	DATE						



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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

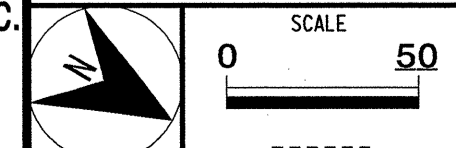
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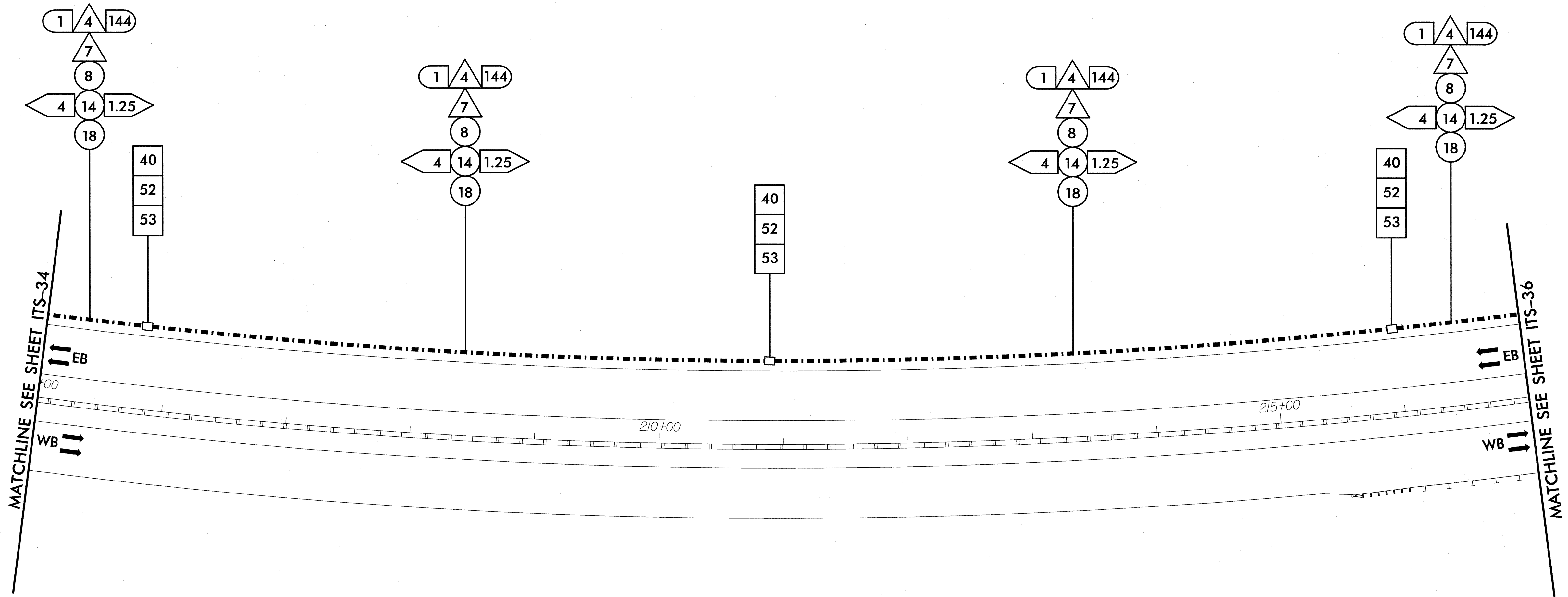
 750 N. Greenfield Pkwy., Garner, NC 27529

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

Kevin W. Smith 12/11/13
 SIGNATURE DATE
 CADD Filename:





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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

Plans Prepared For:

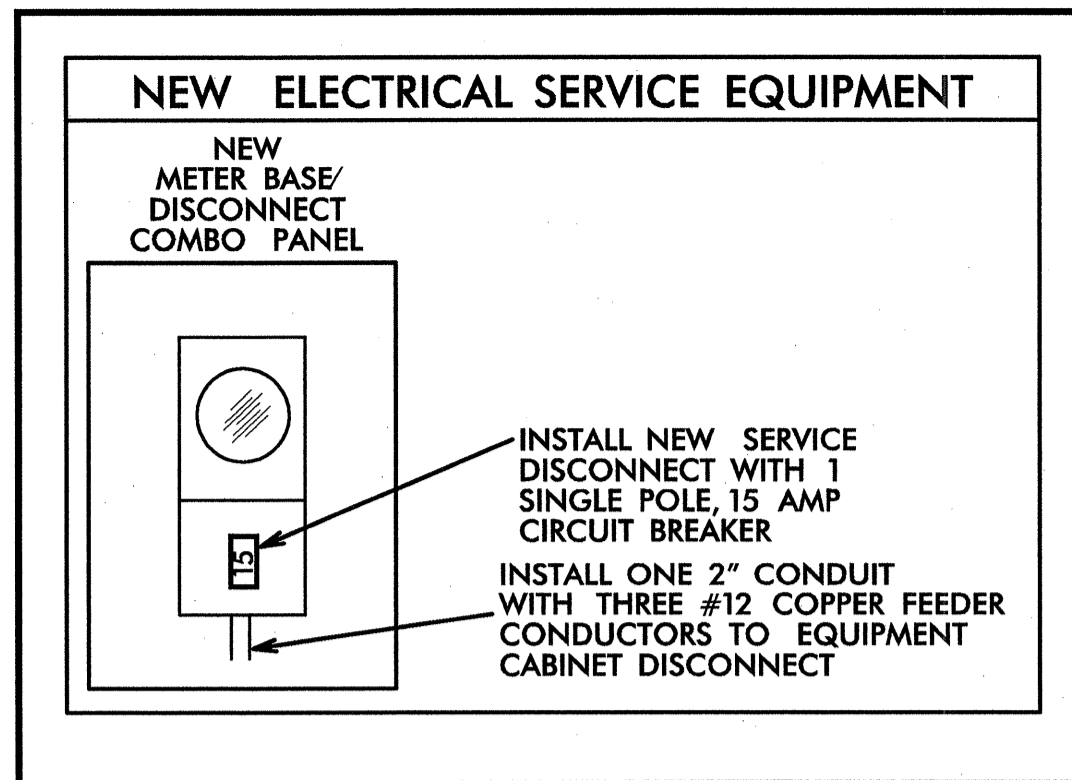
 250 N. Greenfield Place, Garner, NC 27529
 SCALE: 0 50

CABLE ROUTING PLAN			
DIVISION 07		GUILFORD COUNTY	
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:		
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH		
REVISIONS	INIT.	DATE	

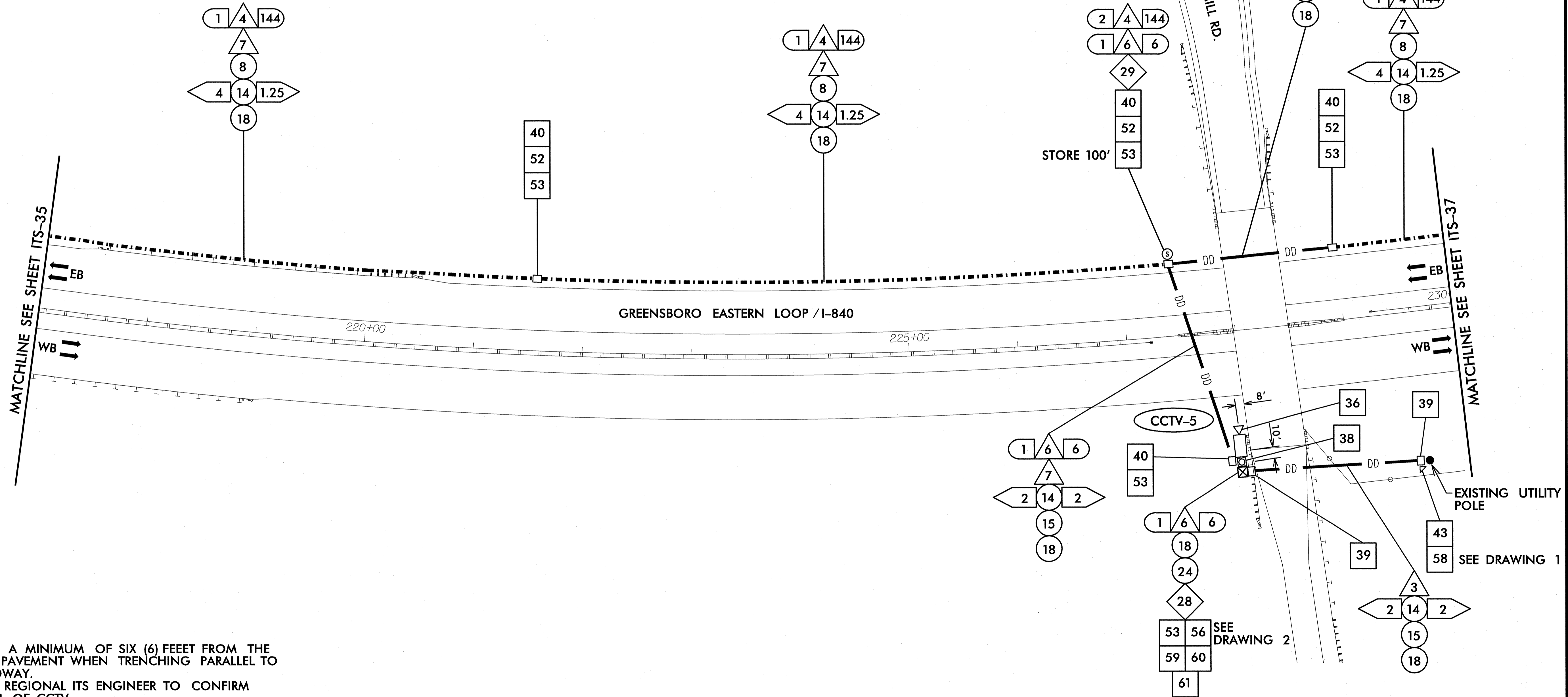
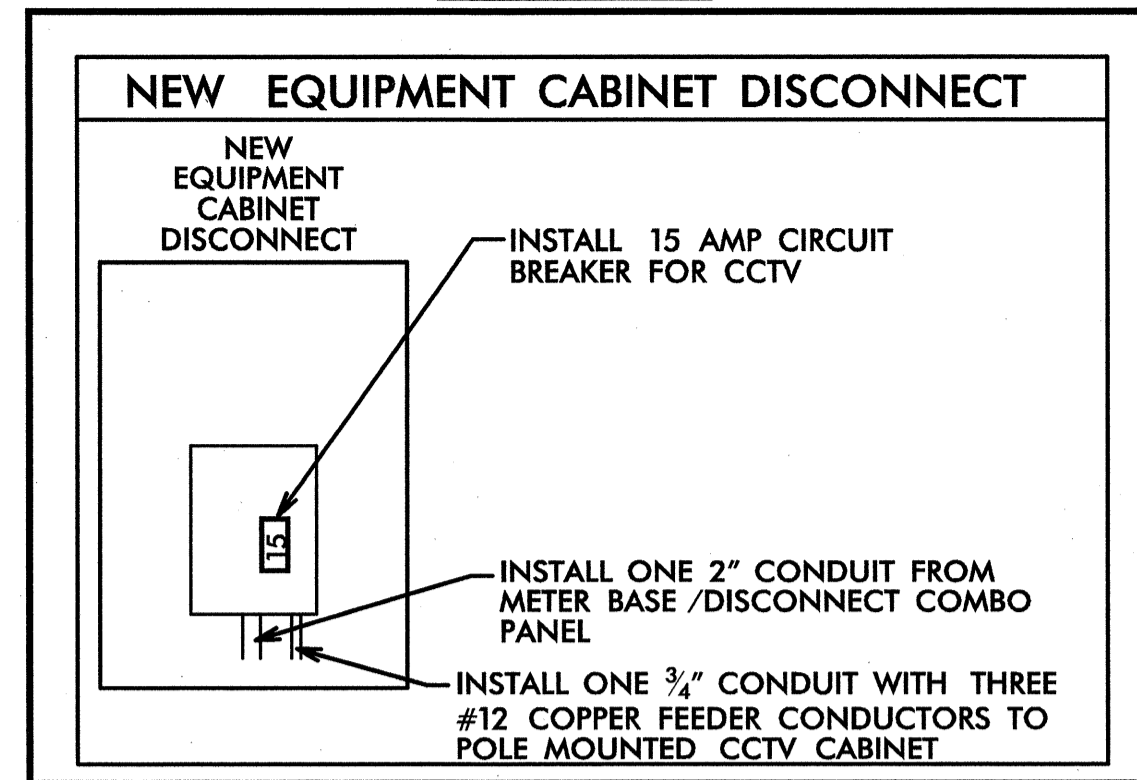
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 SIGNATURE: *Kevin W. Smith* DATE: 12/19/13
 CADD Filename:

DRAWING 1



DRAWING 2



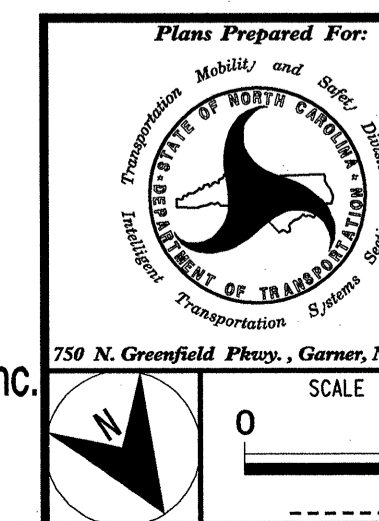
NOTES:

1. MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY.
2. CONTACT REGIONAL ITS ENGINEER TO CONFIRM LOCATION OF CCTV.
3. MOUNT CCTV CAMERA 45' ABOVE GRADE.
4. INSTALL NEW FIELD EQUIPMENT CABINET ON NEW CCTV POLE.
5. INSTALL NEW GROUNDING SYSTEM AS SHOWN ON ITS-4 AND AS DESCRIBED IN THE PROJECT SPECIAL PROVISIONS.
6. INSTALL 6" x 6" WOOD PEDESTAL 10' FROM EXISTING DUKE ENERGY POWER POLE.
7. CONTACT GARY VONCANNON (DUKE ENERGY) AT (336)632-3848 TO OBTAIN POWER TO ELECTRICAL SERVICE.
8. SEE ROADWAY PLANS FOR GUARDRAIL DETAILS.

NOTE: ELECTRICAL SERVICE DETAILS AND CONSTRUCTION METHODS DEPICT FIELD CONDITIONS AT THE TIME OF DESIGN. CONTRACTOR TO VERIFY ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION AND OBTAIN APPROVAL FROM ENGINEER PRIOR TO MAKING ANY CHANGES.

PLANS PREPARED IN THE OFFICE OF:

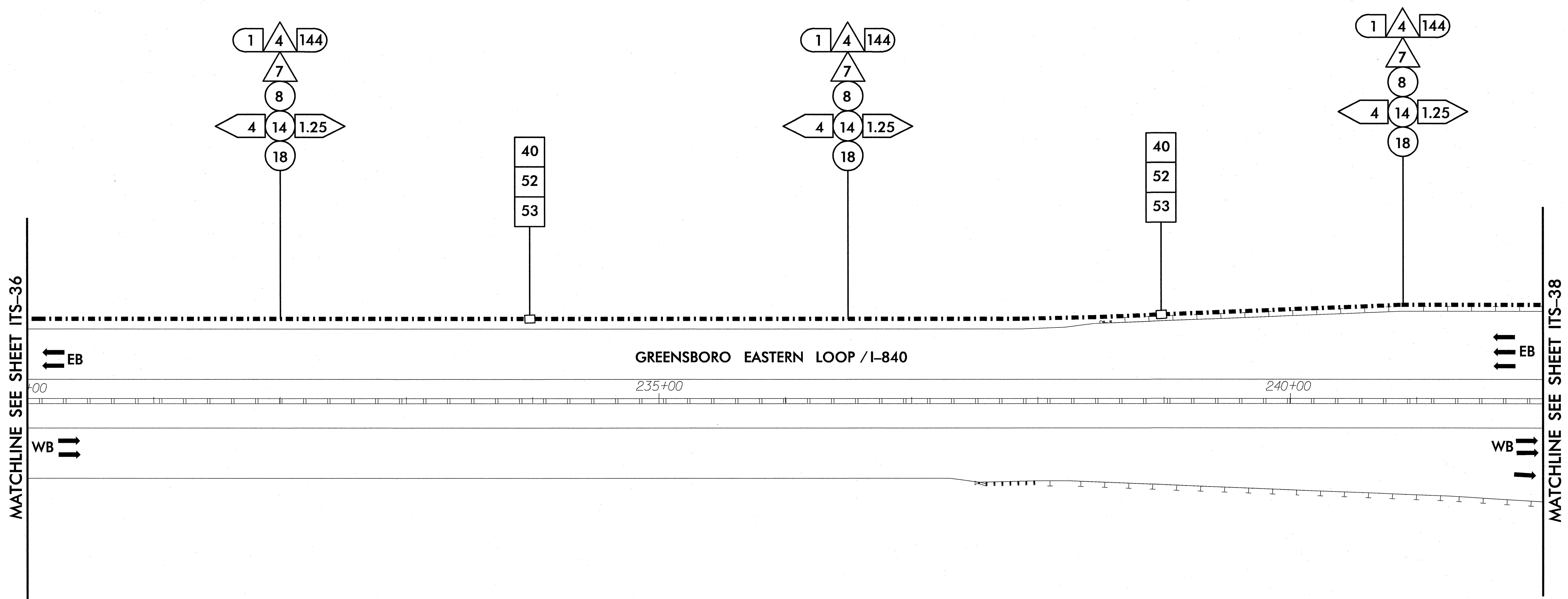
 Kimley-Horn and Associates, Inc.
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 877-2000



CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. SMITH
 SEAL 030472
 SIGNATURE: *Kevin W. Smith* 12/11/13
 DATE
 CADD Filename:

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MATCHLINE SEE SHEET ITS-36

MATCHLINE SEE SHEET ITS-38

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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

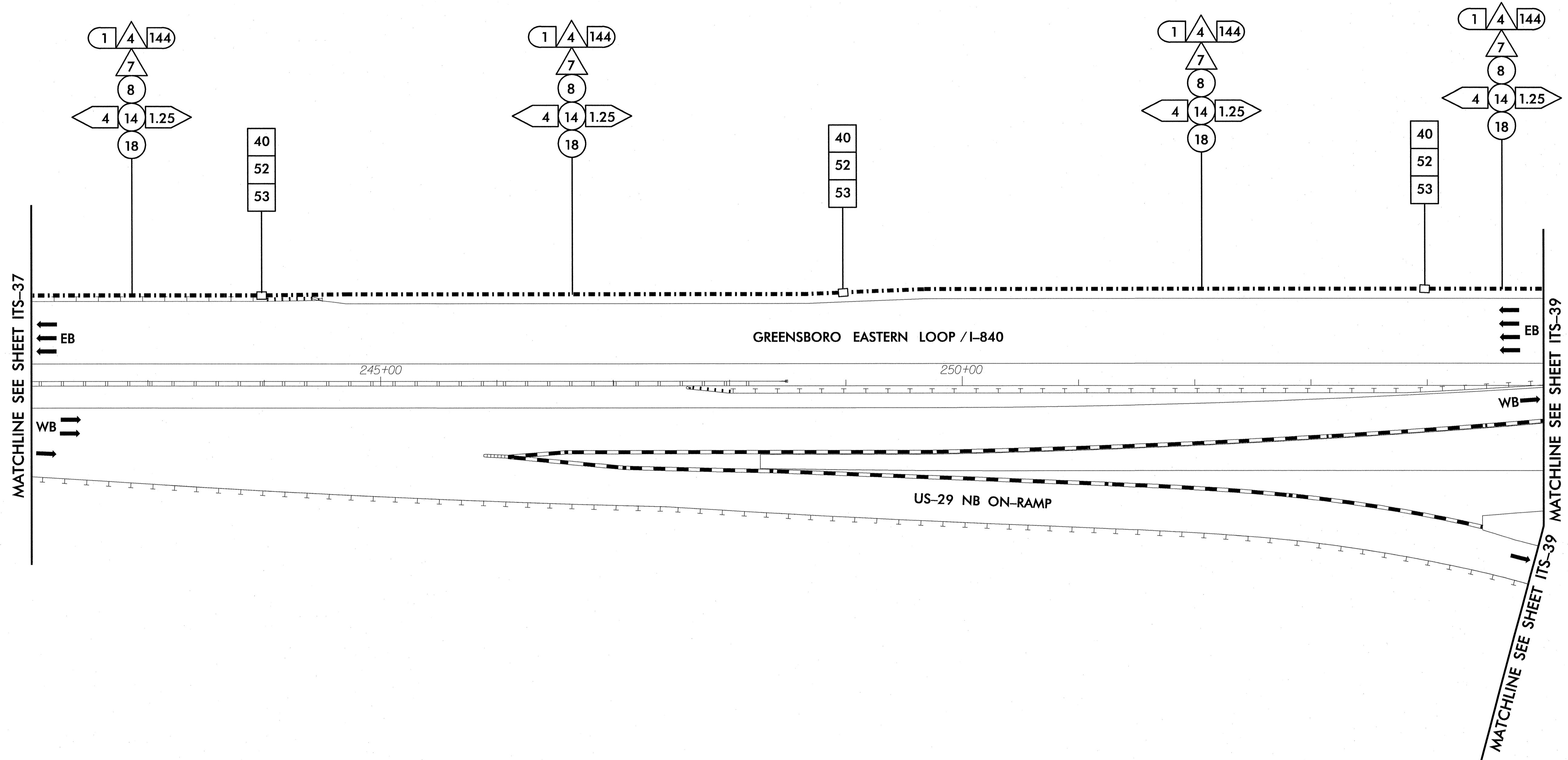
Plans Prepared For:

 250 N. Greenfield Plaza, Garner, NC 27529
 SCALE: 0 50

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 ENGINEER
 KEVIN W. SMITH
 SIGNATURE: *K. Smith* DATE: 12/19/13
 CADD Filename:

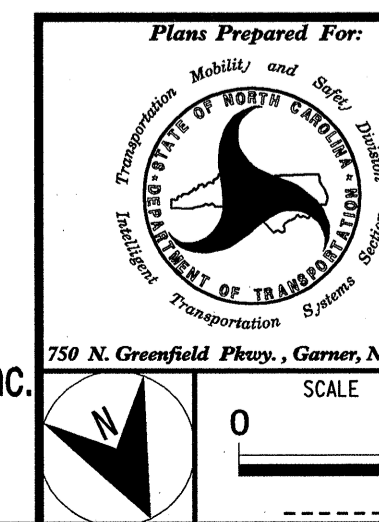


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NOTE:
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 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

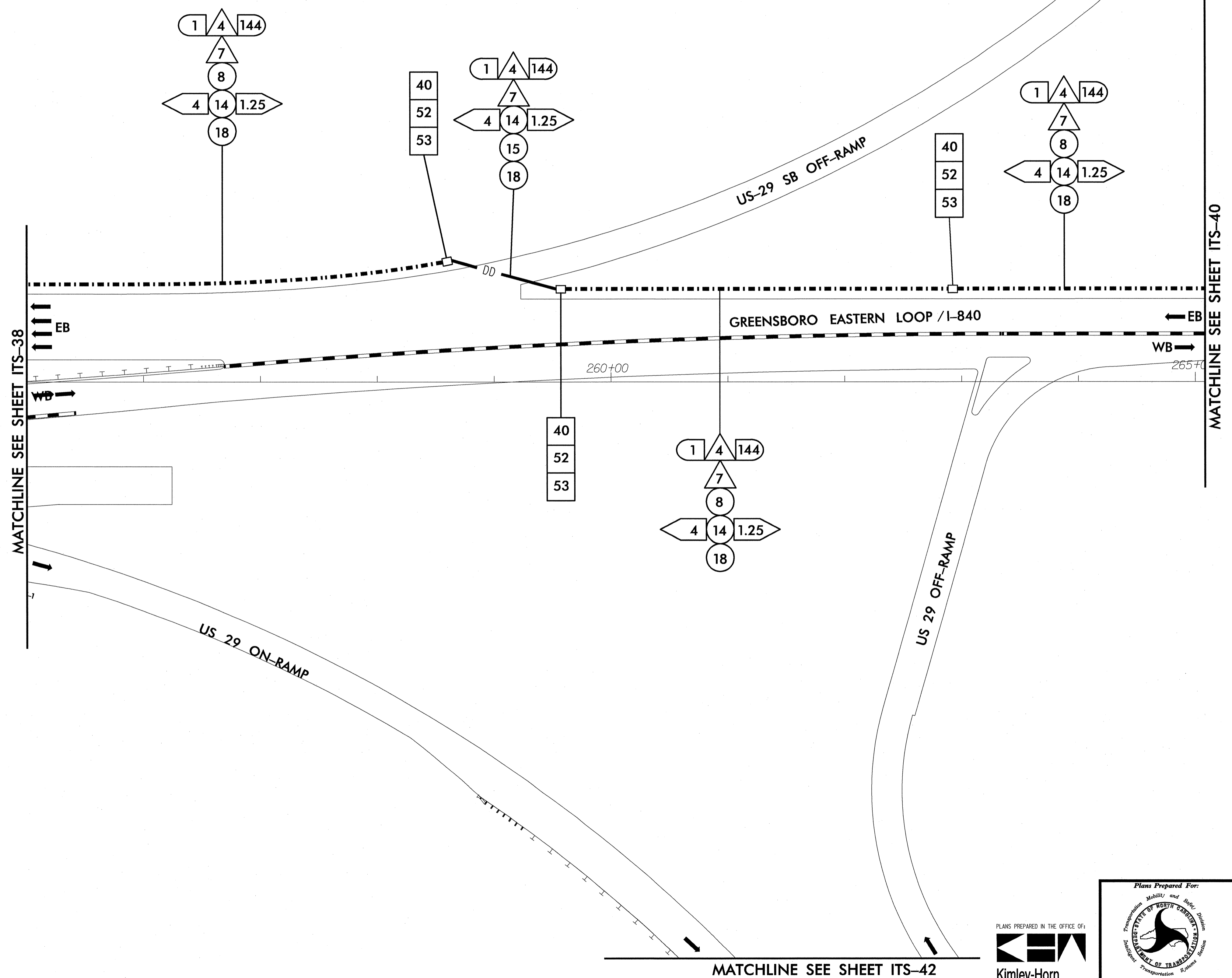
**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000



CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 SIGNATURE: *Kevin W. Smith* DATE: 12/19/13
 CADD Filename:



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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

MATCHLINE SEE SHEET ITS-42

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

Plans Prepared For:

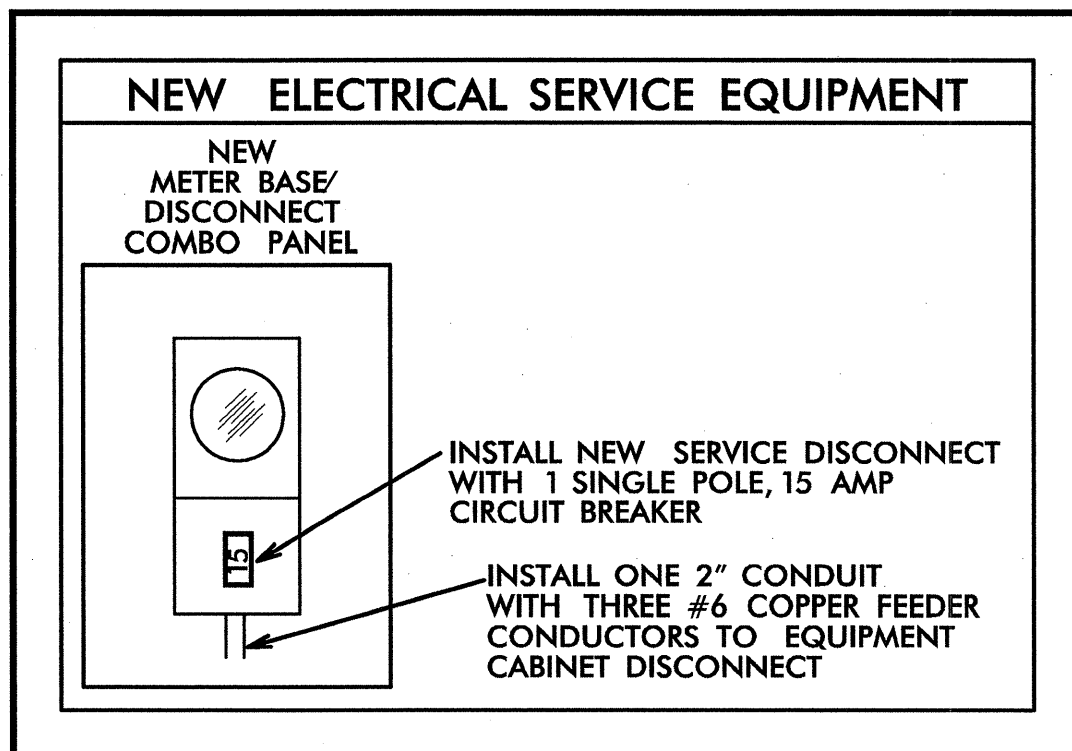
 750 N. Greenfield Pkwy., Garner, NC 27529
 SCALE: 0 50

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

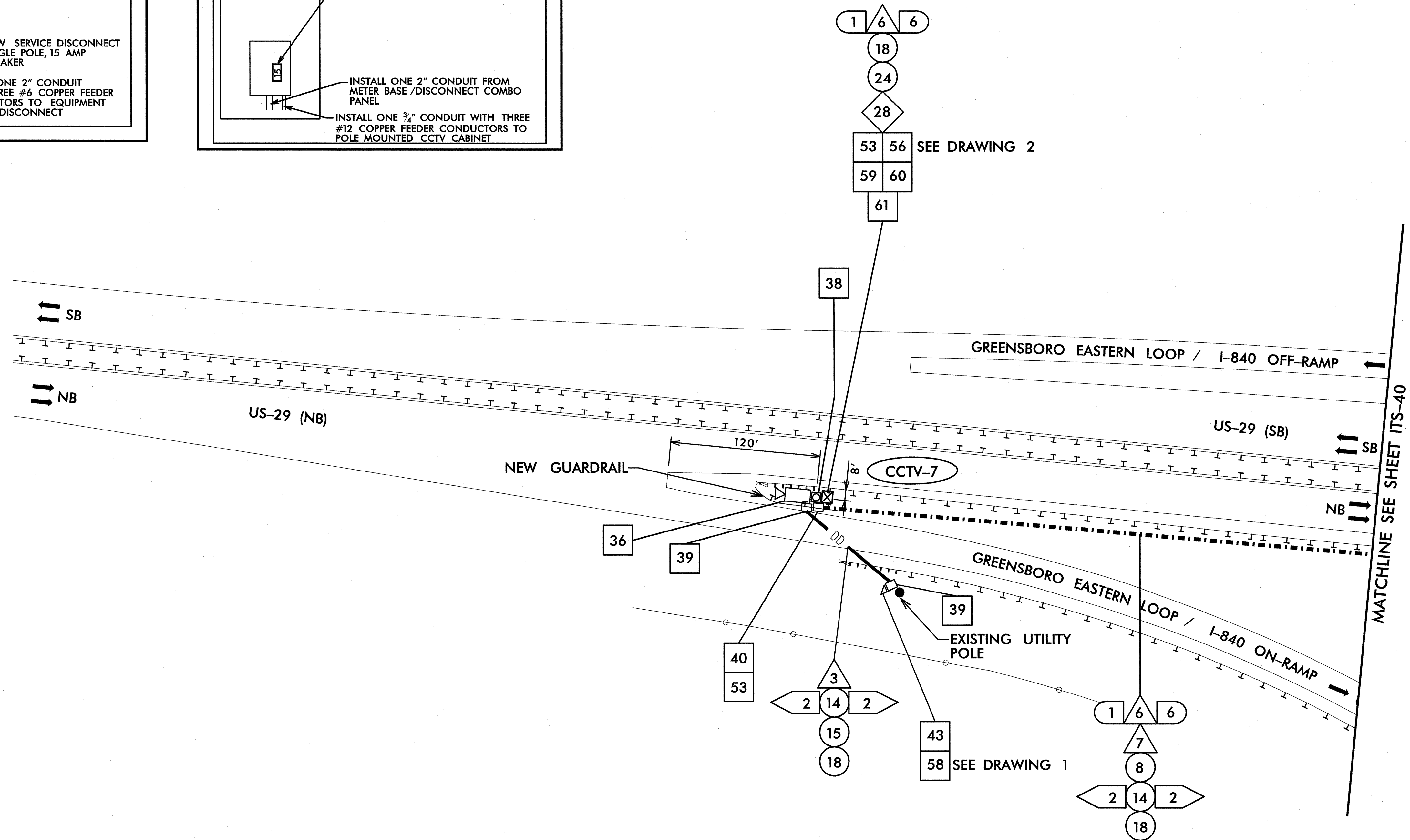
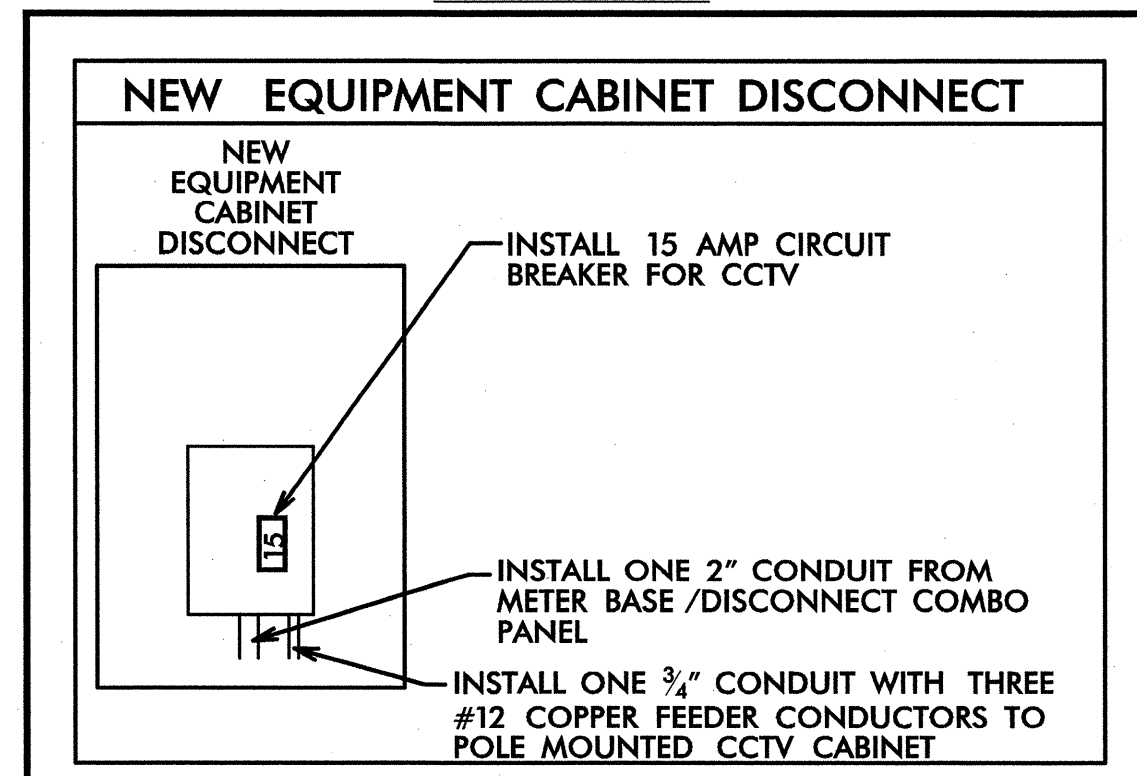
SEAL

 ENGINEER
 KEVIN W. SMITH
 SIGNATURE: *Kevin W. Smith* DATE: 12/19/13
 CADD Filename:

DRAWING 1



DRAWING 2



NOTES:

1. MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY.
2. CONTACT REGIONAL ITS ENGINEER TO CONFIRM LOCATION OF CCTV.
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NOTE: ELECTRICAL SERVICE DETAILS AND CONSTRUCTION METHODS DEPICT FIELD CONDITIONS AT THE TIME OF DESIGN. CONTRACTOR TO VERIFY ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION AND OBTAIN APPROVAL FROM ENGINEER PRIOR TO MAKING ANY CHANGES.

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PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27635
 (919) 671-2000

Plans Prepared For:

750 N. Greenfield Pkwy., Garner, NC 27529

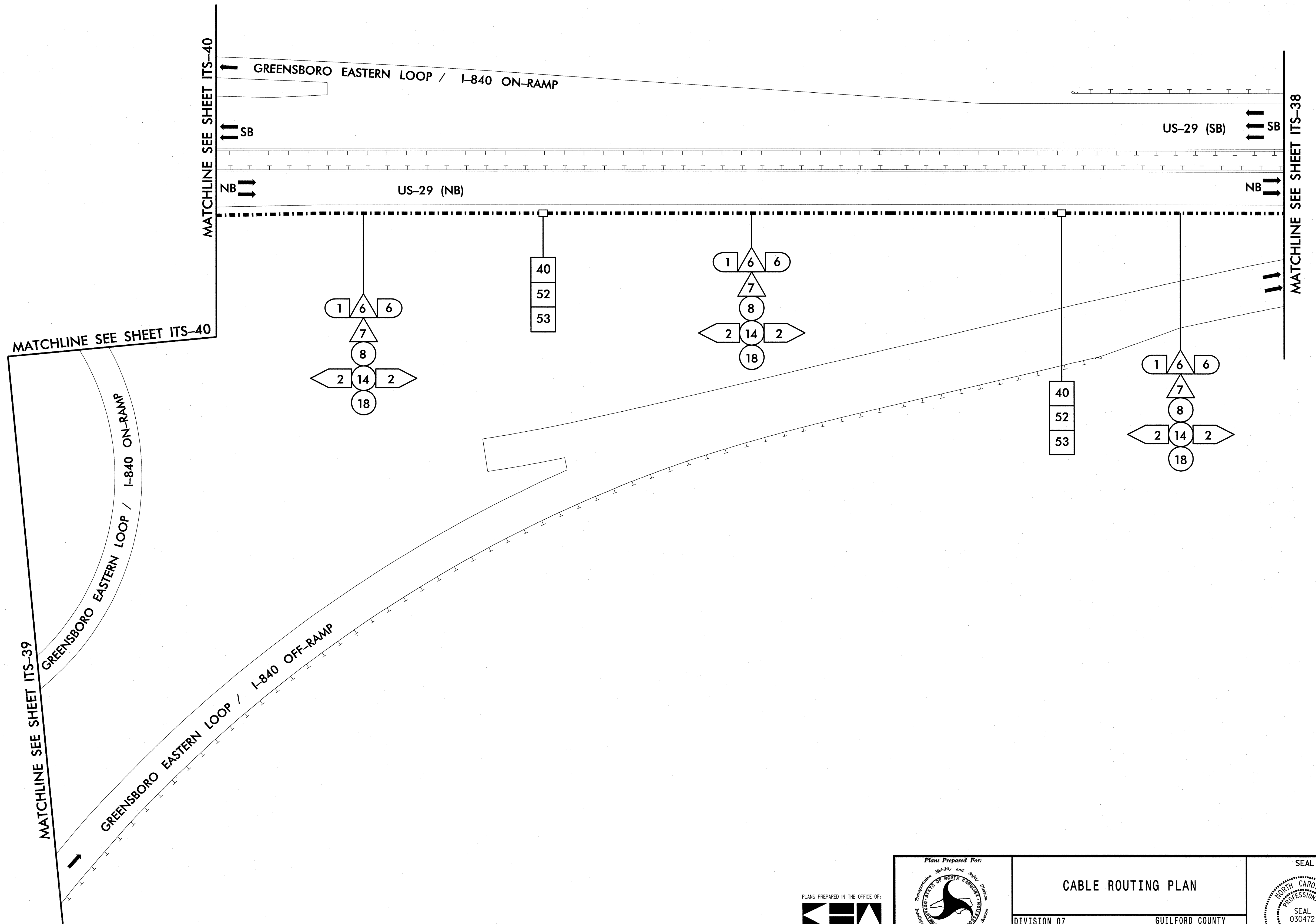
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CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

12/19/13

CADD Filename:



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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

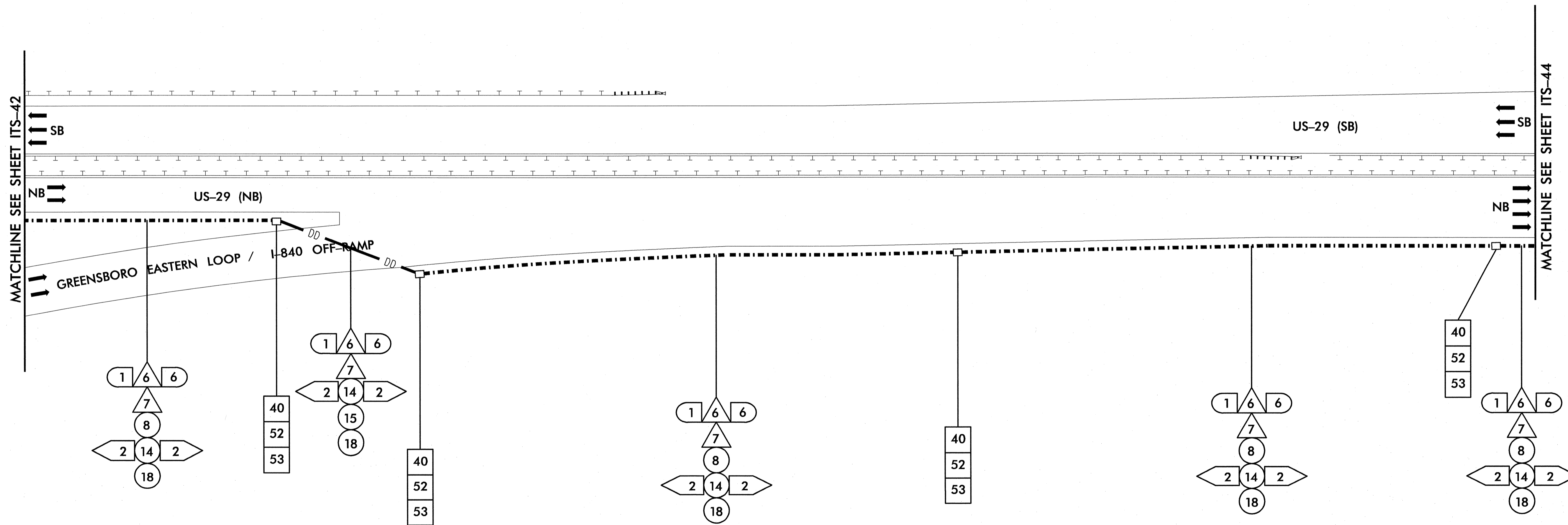
Plans Prepared For:

 750 N. Greenfield Place, Garner, NC 27529

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 KEVIN W. SMITH
 ENGINEER
 12/12/13
 SIGNATURE DATE
 CADD File name:

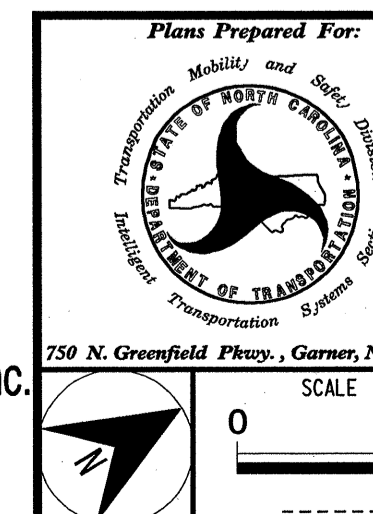


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NOTE:
 MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE
 EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO
 THE ROADWAY

PLANS PREPARED IN THE OFFICE OF:

**Kimley-Horn
 and Associates, Inc.**
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 671-2000

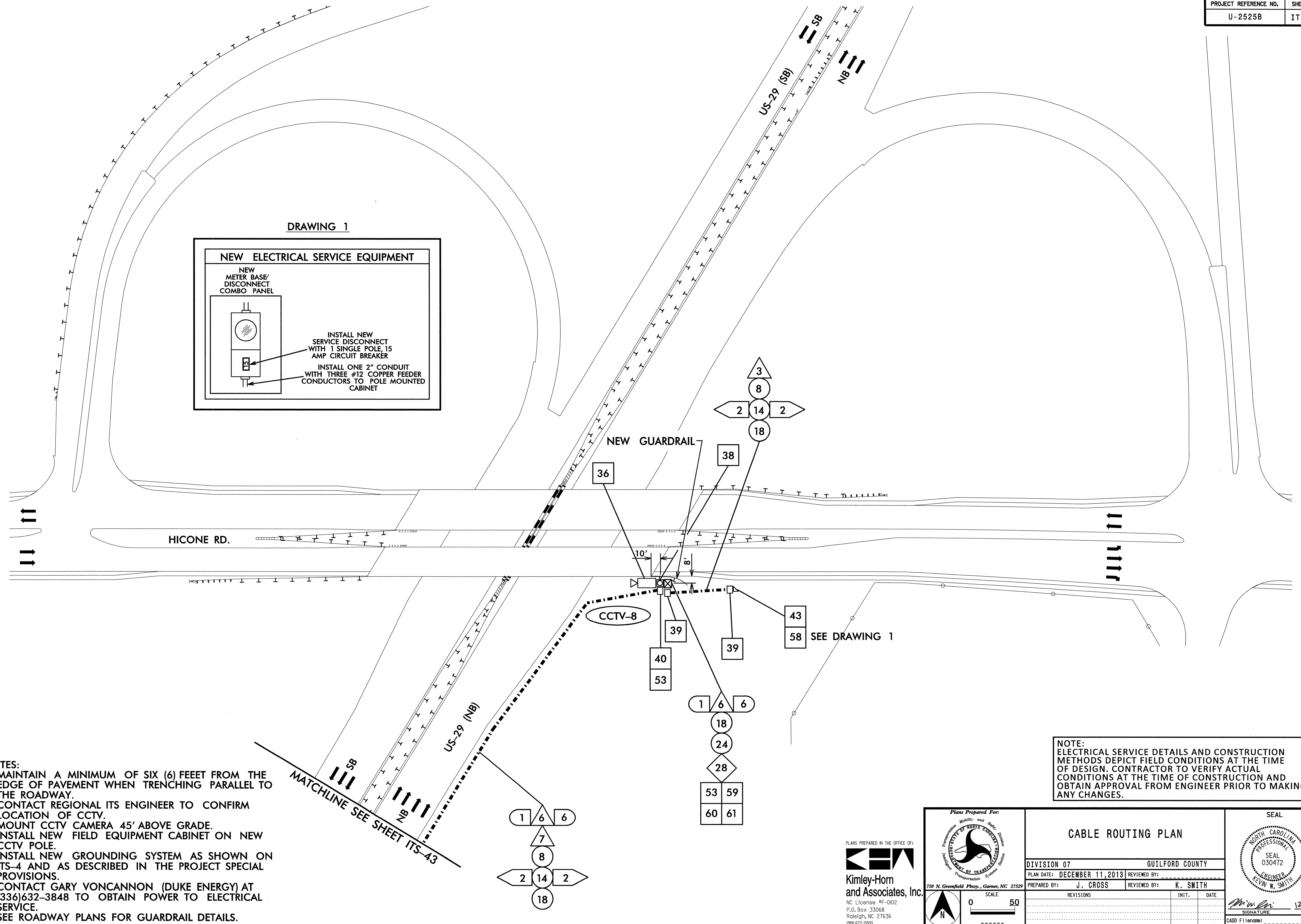
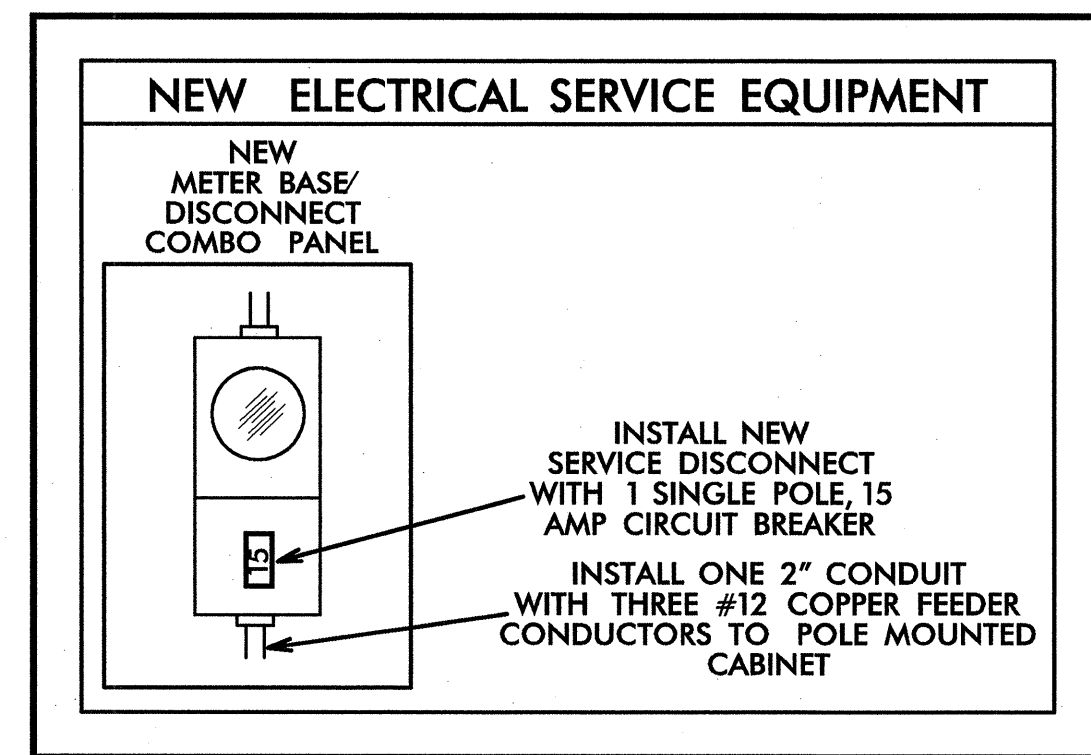


CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

 SIGNATURE: *Kevin W. Smith* DATE: 12/14/13
 CADD Filename:

DRAWING 1



NOTE:
ELECTRICAL SERVICE DETAILS AND CONSTRUCTION METHODS DEPICT FIELD CONDITIONS AT THE TIME OF DESIGN. CONTRACTOR TO VERIFY ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION AND OBTAIN APPROVAL FROM ENGINEER PRIOR TO MAKING ANY CHANGES.

- NOTES:**
1. MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY.
 2. CONTACT REGIONAL ITS ENGINEER TO CONFIRM LOCATION OF CCTV.
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 7. SEE ROADWAY PLANS FOR GUARDRAIL DETAILS.

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

Plans Prepared For:

750 N. Greenfield Pkwy., Garner, NC 27529

CABLE ROUTING PLAN	
DIVISION 07	GUILFORD COUNTY
PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH
REVISIONS	INIT. DATE

SEAL

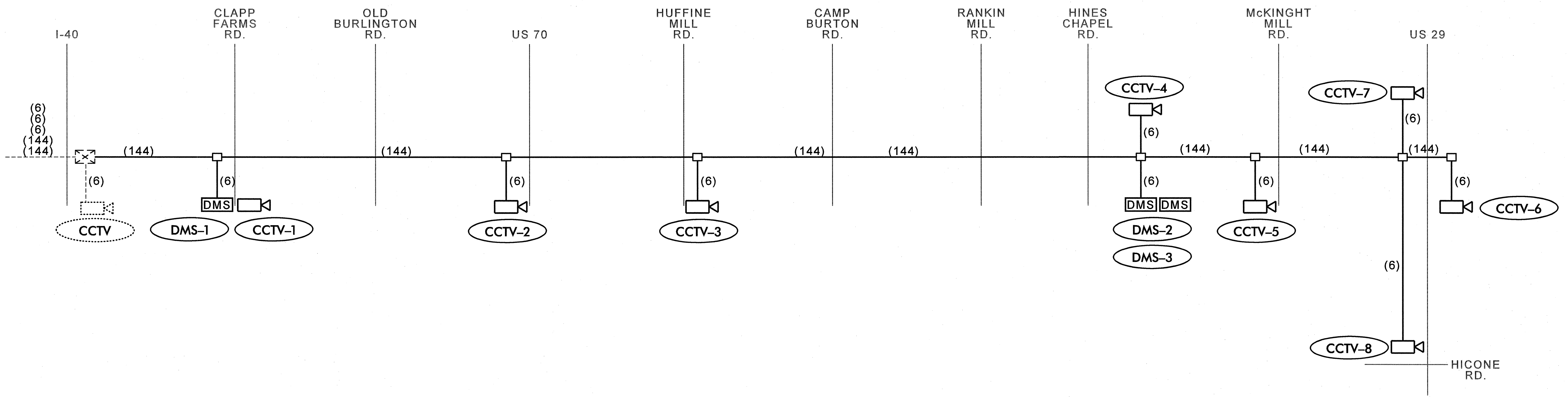
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 ENGINEER KEVIN W. SMITH

12/19/13
 SIGNATURE DATE
 CADD Filename: _____

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LEGEND

(XXXX)	DEVICE ID NUMBER
(X)	SPLICE NUMBER
(XX)	XX-FIBER SMFO CABLE
---	EXISTING FIBER OPTIC CABLE
---	PROPOSED FIBER OPTIC CABLE
■	EXISTING SPLICE ENCLOSURE
□	PROPOSED SPLICE ENCLOSURE
⊠	EXISTING SPLICE CABINET
◻	PROPOSED CCTV
◻	EXISTING CCTV
DMS	PROPOSED DMS
DMS	EXISTING DMS



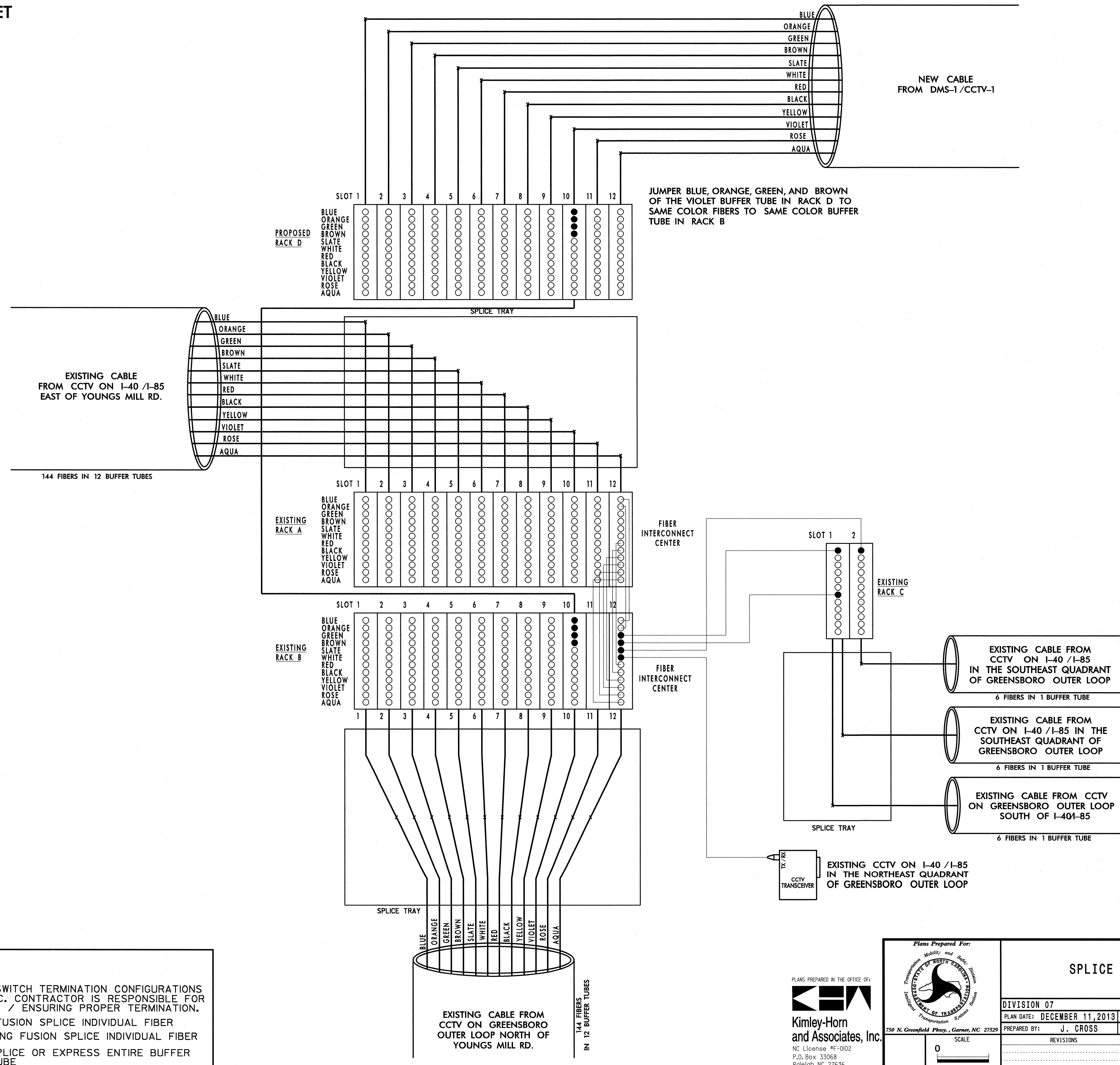
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PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 671-2000

Plans Prepared For: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 730 N. Greenfield Place, Garner, NC 27529		CABLE SCHEMATIC		SEAL KEVIN W. SMITH
DIVISION 07 GUILFORD COUNTY		PLAN DATE: DECEMBER 11, 2013 REVIEWED BY:		
PREPARED BY: J. CROSS REVIEWED BY: K. SMITH		REVISIONS INIT. DATE		
SCALE 0 50		SIGNATURE DATE 12/19/13		
CADD Filename:				

**EXISTING SPLICE CABINET
AT I-401-85 AND I-840**



12/19/2013 9:07:20 AM K:\RAL_TPTD\ITS\00036651\U-2525B\Planets\U2525B_ITS_psm46.dgn

COLOR CODE	
TIA/EIA	598-C
(1) BLUE	(7) RED
(2) ORANGE	(8) BLACK
(3) GREEN	(9) YELLOW
(4) BROWN	(10) VIOLET
(5) SLATE	(11) ROSE
(6) WHITE	(12) AQUA

LEGEND

ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.

X - NEW FUSION SPLICE INDIVIDUAL FIBER
 O - EXISTING FUSION SPLICE INDIVIDUAL FIBER

[BUFFER TUBE] SPLICE OR EXPRESS ENTIRE BUFFER TUBE

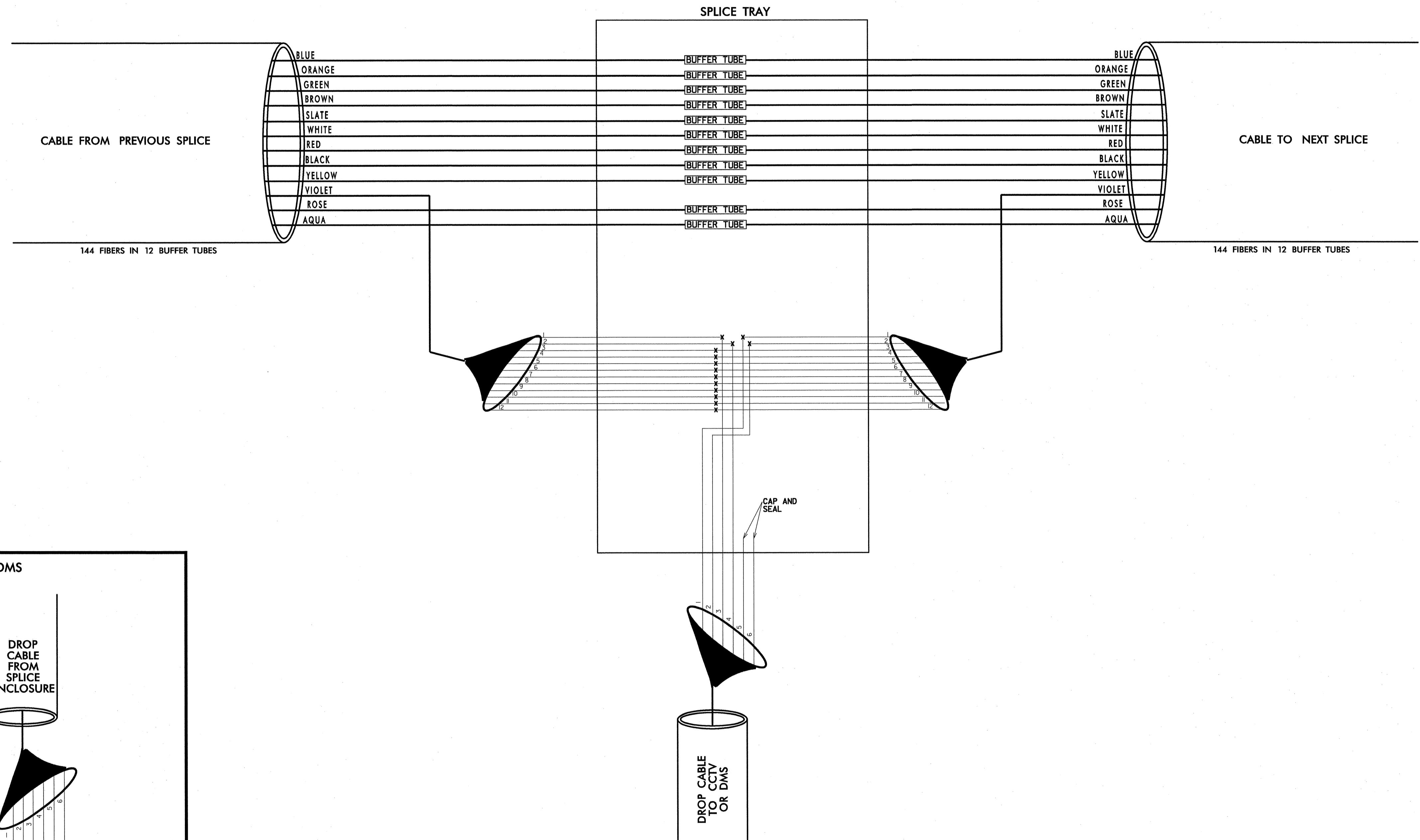
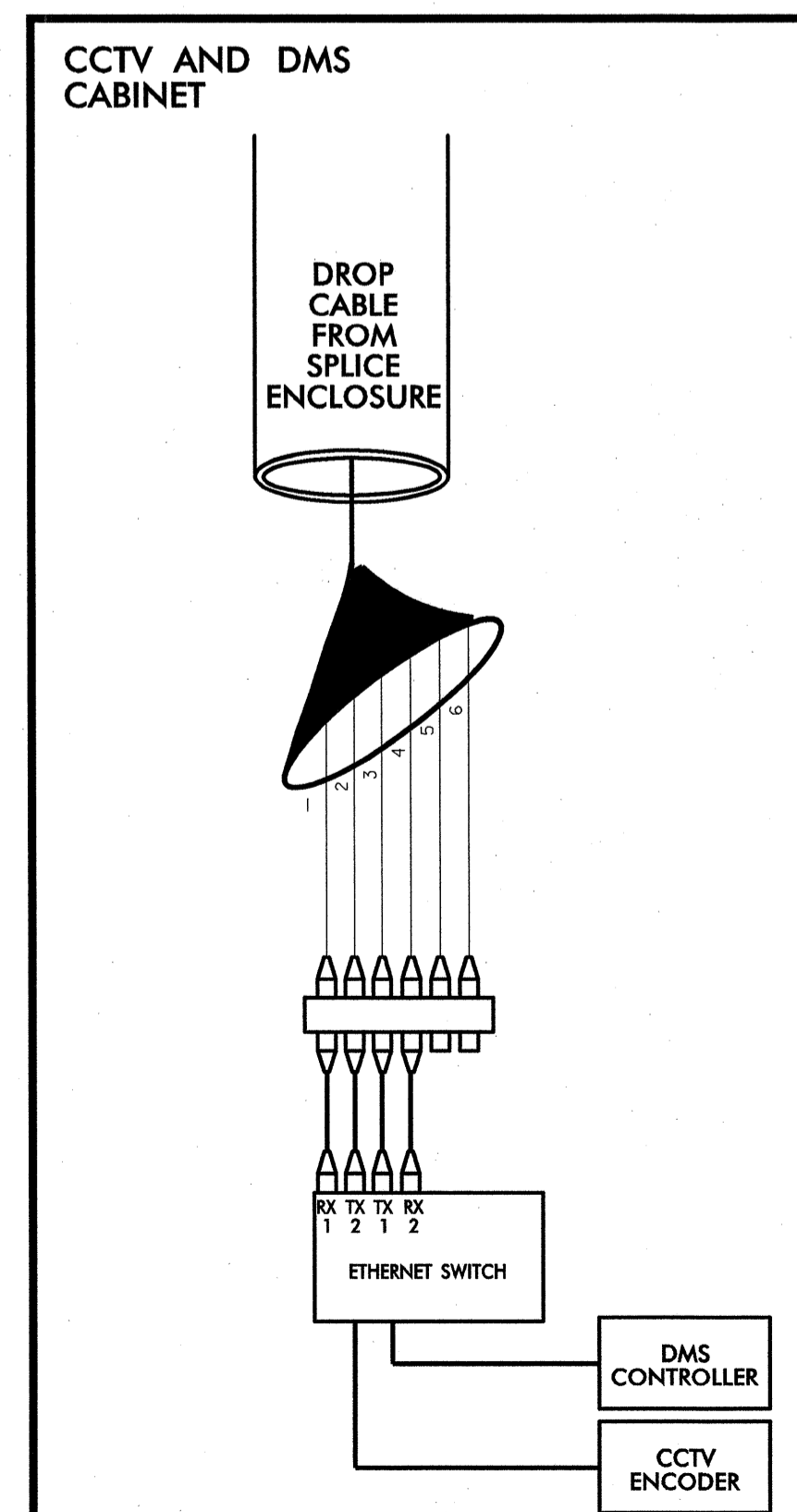
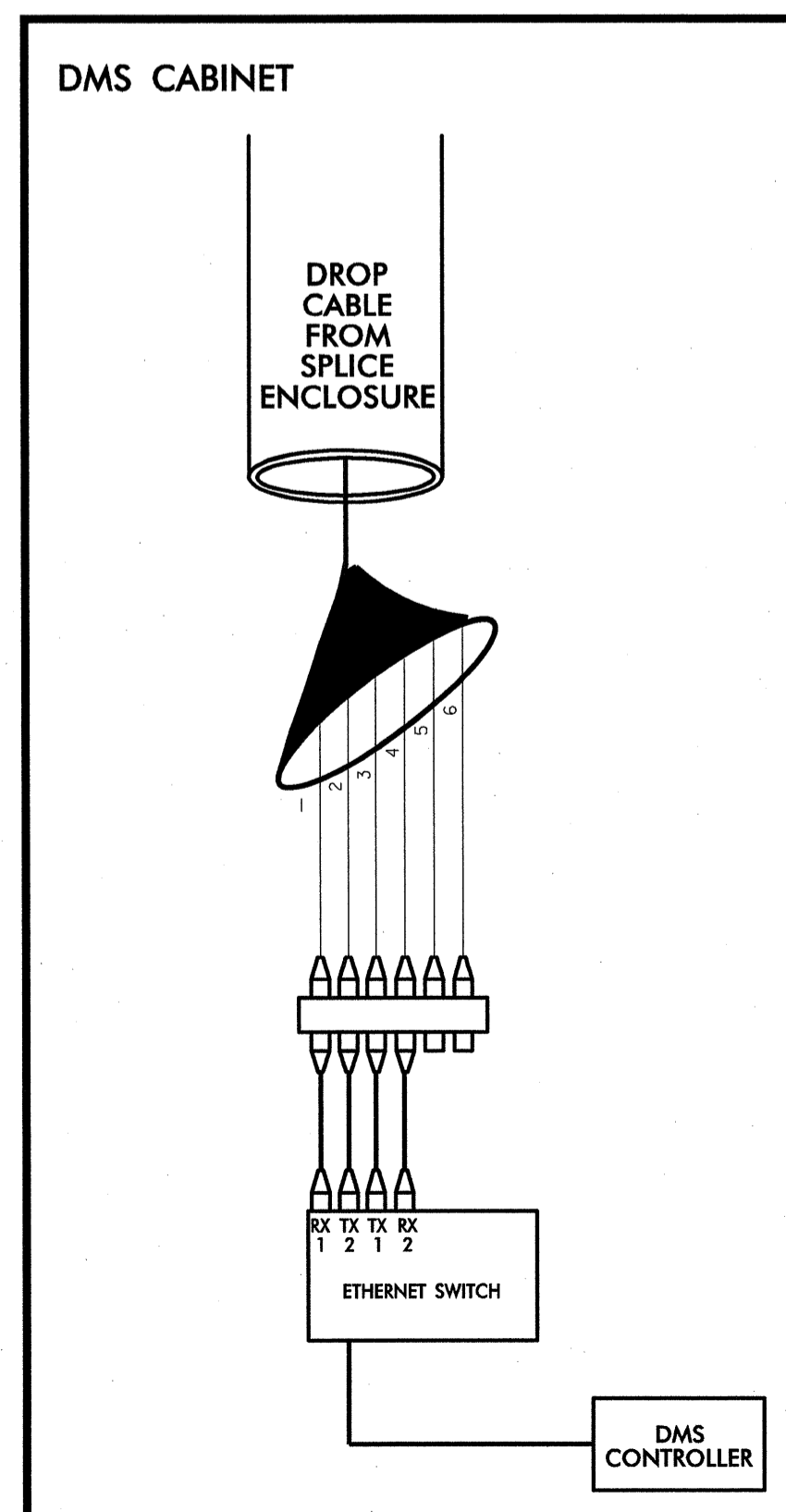
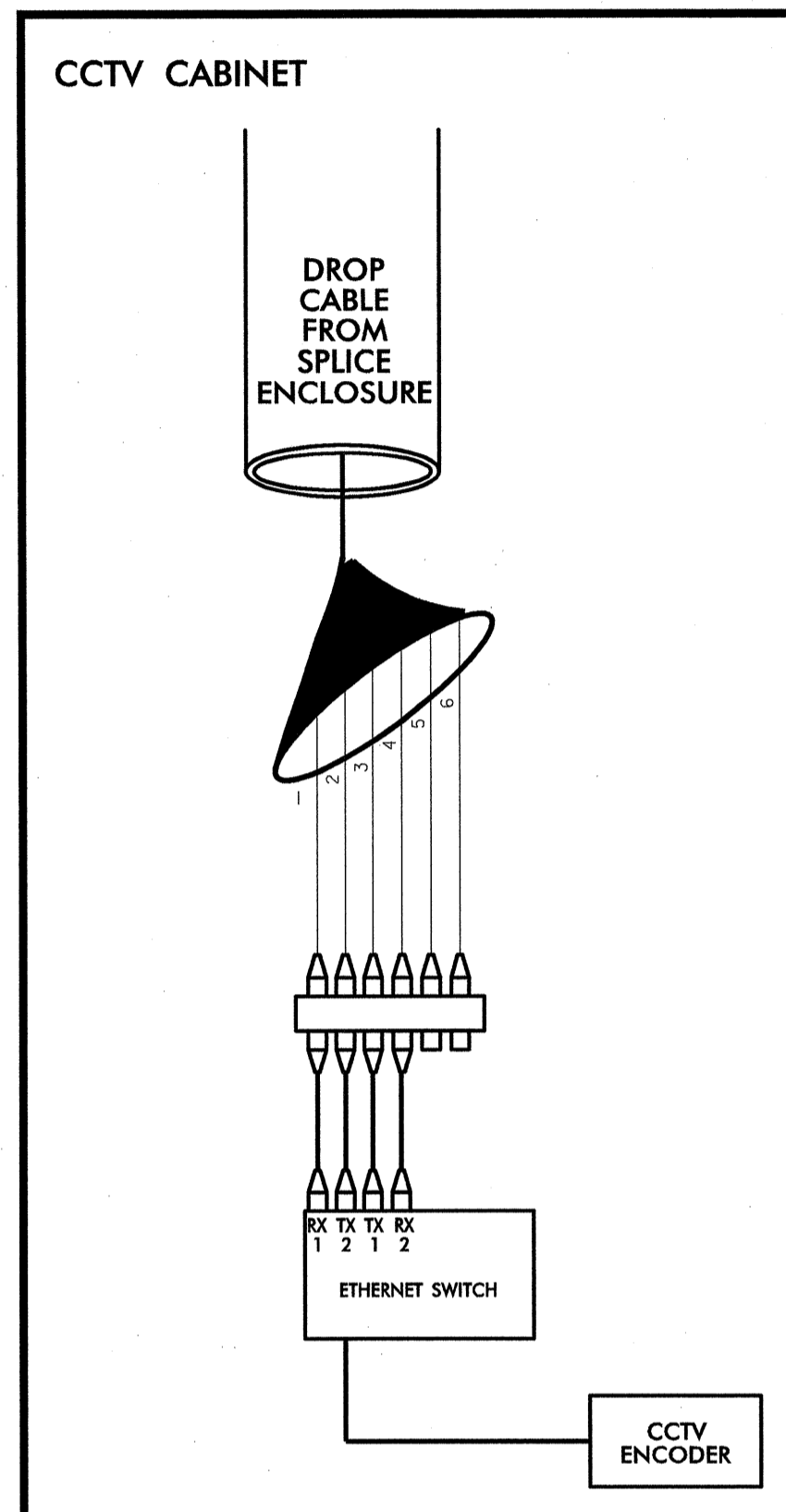
PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 671-2000

Plans Prepared For: 		SPLICE DETAIL		SEAL
DIVISION 07 PLAN DATE: DECEMBER 11, 2013 PREPARED BY: J. CROSS SCALE: 0		GUILFORD COUNTY REVIEWED BY: K. SMITH REVISIONS: _____ INIT. DATE: _____ SIGNATURE: <i>K. Smith</i> DATE: 12/19/13		

NEW SPLICE ENCLOSURES AT
CCTV-2,3,5 AND DMS-1 /CCTV-1

EXPRESS ALL FIBERS IN BLUE, ORANGE, GREEN,
BROWN, SLATE, WHITE, RED, BLACK, YELLOW,
ROSE AND AQUA BUFFER TUBES



COLOR CODE TIA/EIA 598-C		LEGEND	
(1) BLUE	(7) RED	ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.	
(2) ORANGE	(8) BLACK	X - NEW FUSION SPLICE INDIVIDUAL FIBER	
(3) GREEN	(9) YELLOW	O - EXISTING FUSION SPLICE INDIVIDUAL FIBER	
(4) BROWN	(10) VIOLET	[BUFFER TUBE] SPLICE OR EXPRESS ENTIRE BUFFER TUBE	
(5) SLATE	(11) ROSE		
(6) WHITE	(12) AQUA		

PLANS PREPARED IN THE OFFICE OF:

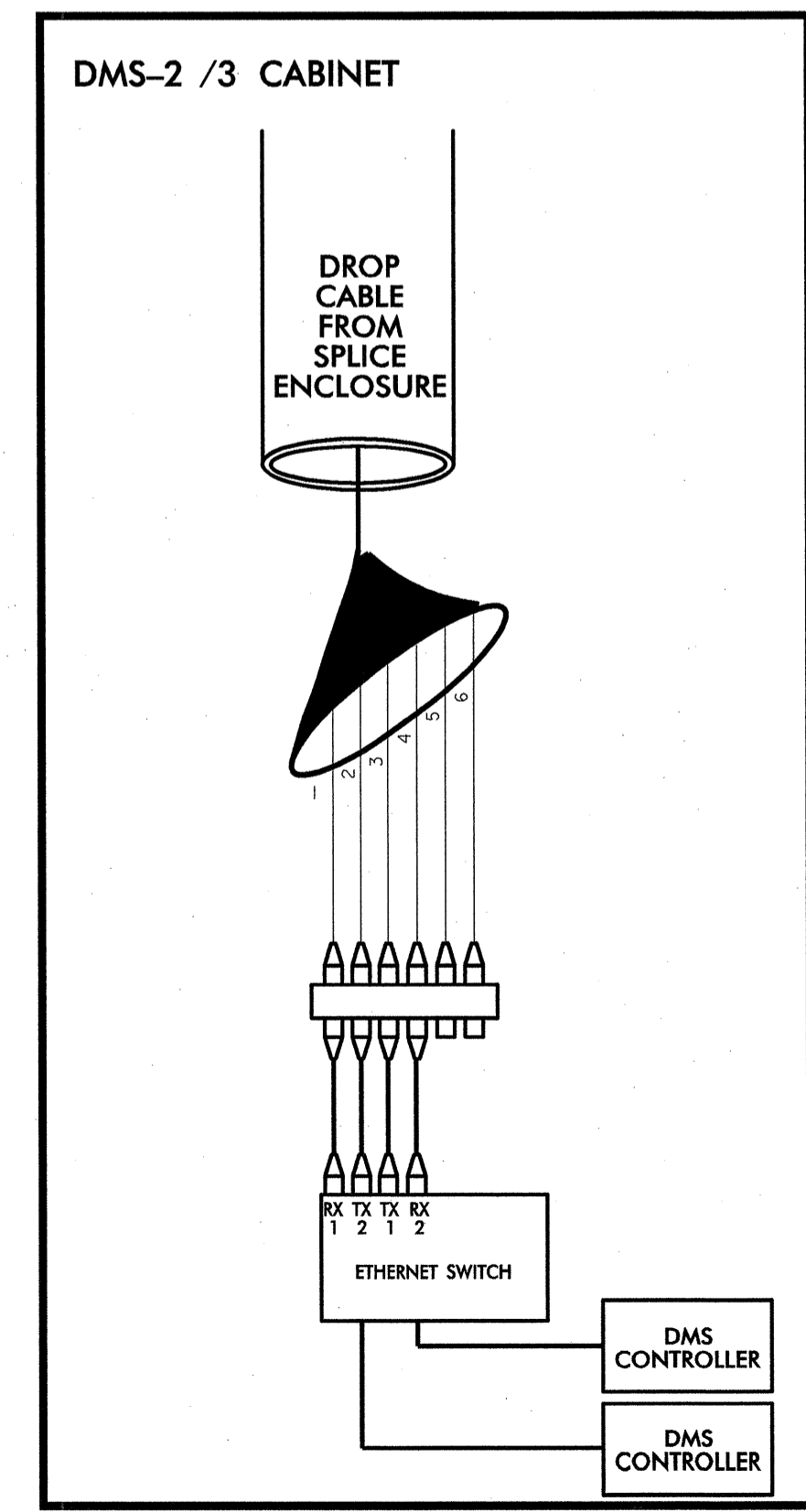
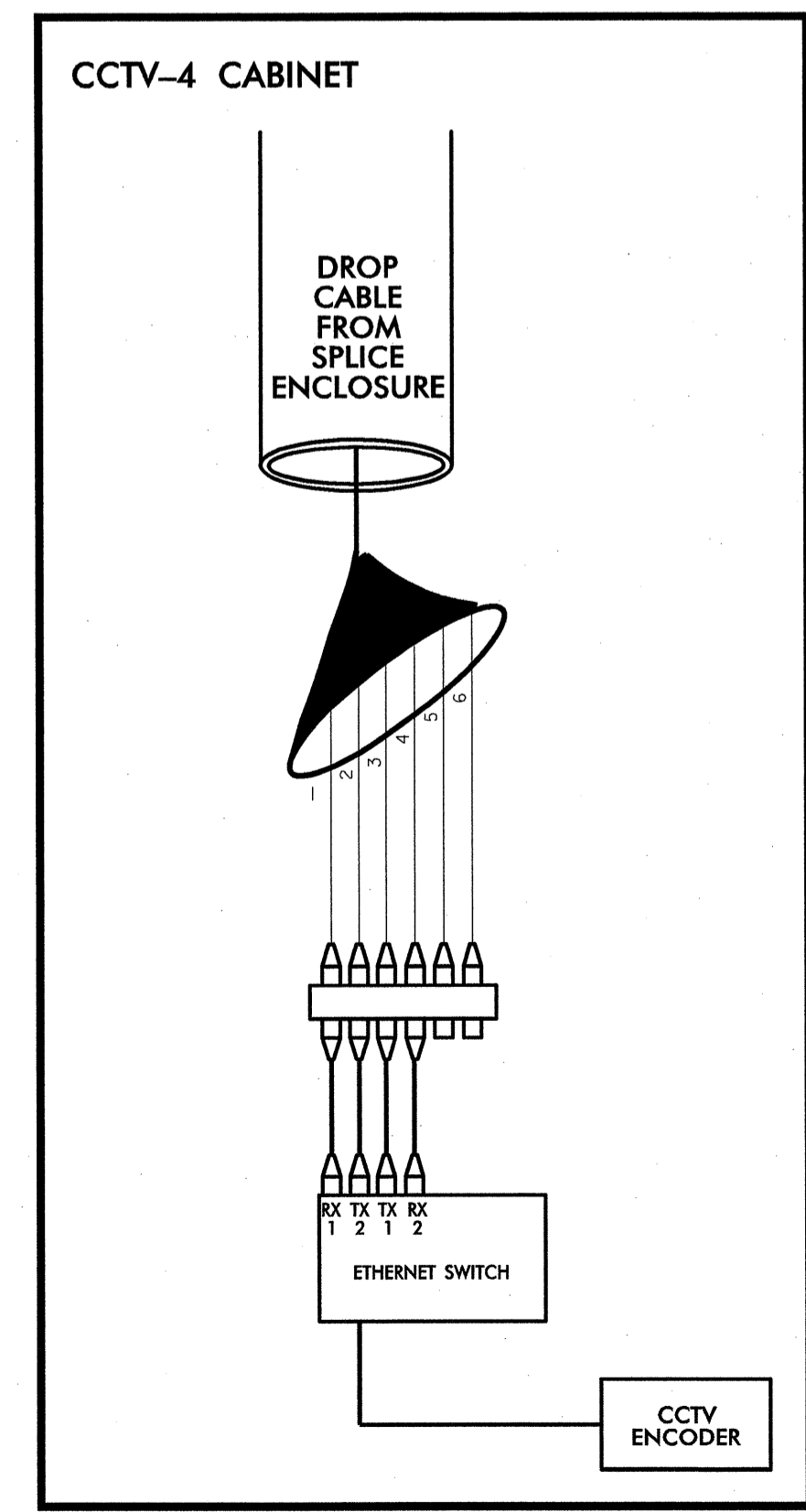
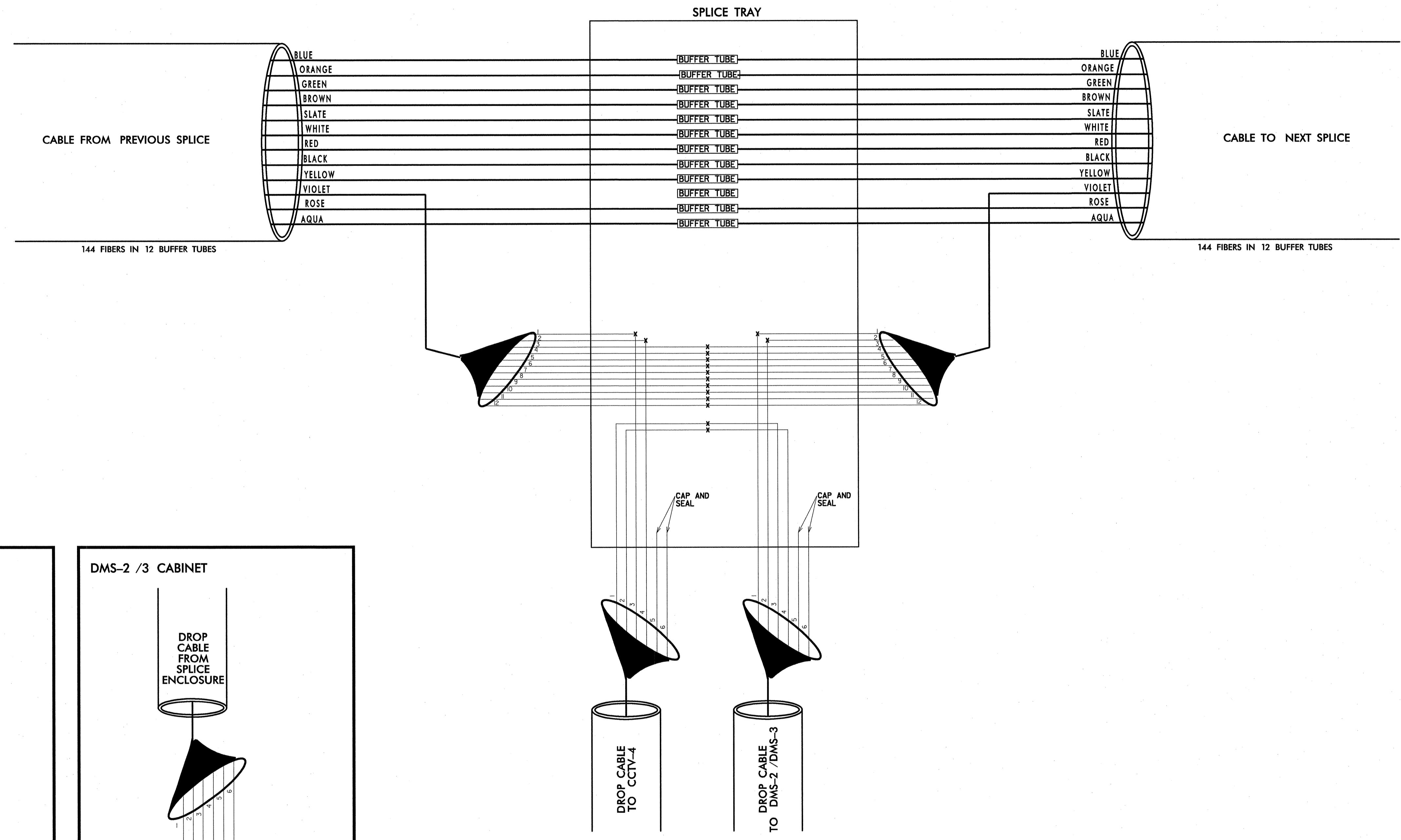
Kimley-Horn and Associates, Inc.
NC License #F-0102
P.O. Box 33068
Raleigh, NC 27636
(919) 671-2000

	SPLICE DETAIL	
	DIVISION 07 GUILFORD COUNTY PLAN DATE: DECEMBER 11, 2013 REVIEWED BY:	
PREPARED BY: J. CROSS REVIEWED BY: K. SMITH		REVISIONS INIT. DATE
SCALE: 0		SIGNATURE: <i>Kevin W. Smith</i> DATE: 12/19/13
CADD Filename:		

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**NEW SPLICE ENCLOSURE
AT CCTV-4 AND DMS-2 /DMS-3**

**EXPRESS ALL FIBERS IN BLUE, ORANGE, GREEN,
BROWN, SLATE, WHITE, RED, BLACK, YELLOW,
ROSE AND AQUA BUFFER TUBES**



COLOR CODE TIA/EIA 598-C		LEGEND	
(1) BLUE	(7) RED	ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.	
(2) ORANGE	(8) BLACK	X - NEW FUSION SPLICE INDIVIDUAL FIBER	
(3) GREEN	(9) YELLOW	O - EXISTING FUSION SPLICE INDIVIDUAL FIBER	
(4) BROWN	(10) VIOLET	[BUFFER TUBE] SPLICE OR EXPRESS ENTIRE BUFFER TUBE	
(5) SLATE	(11) ROSE		
(6) WHITE	(12) AQUA		

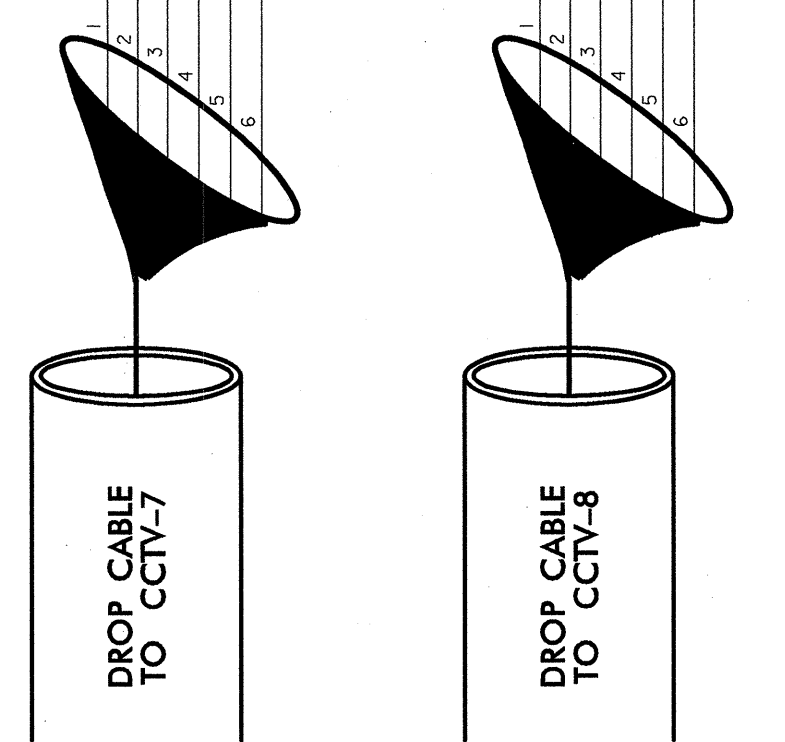
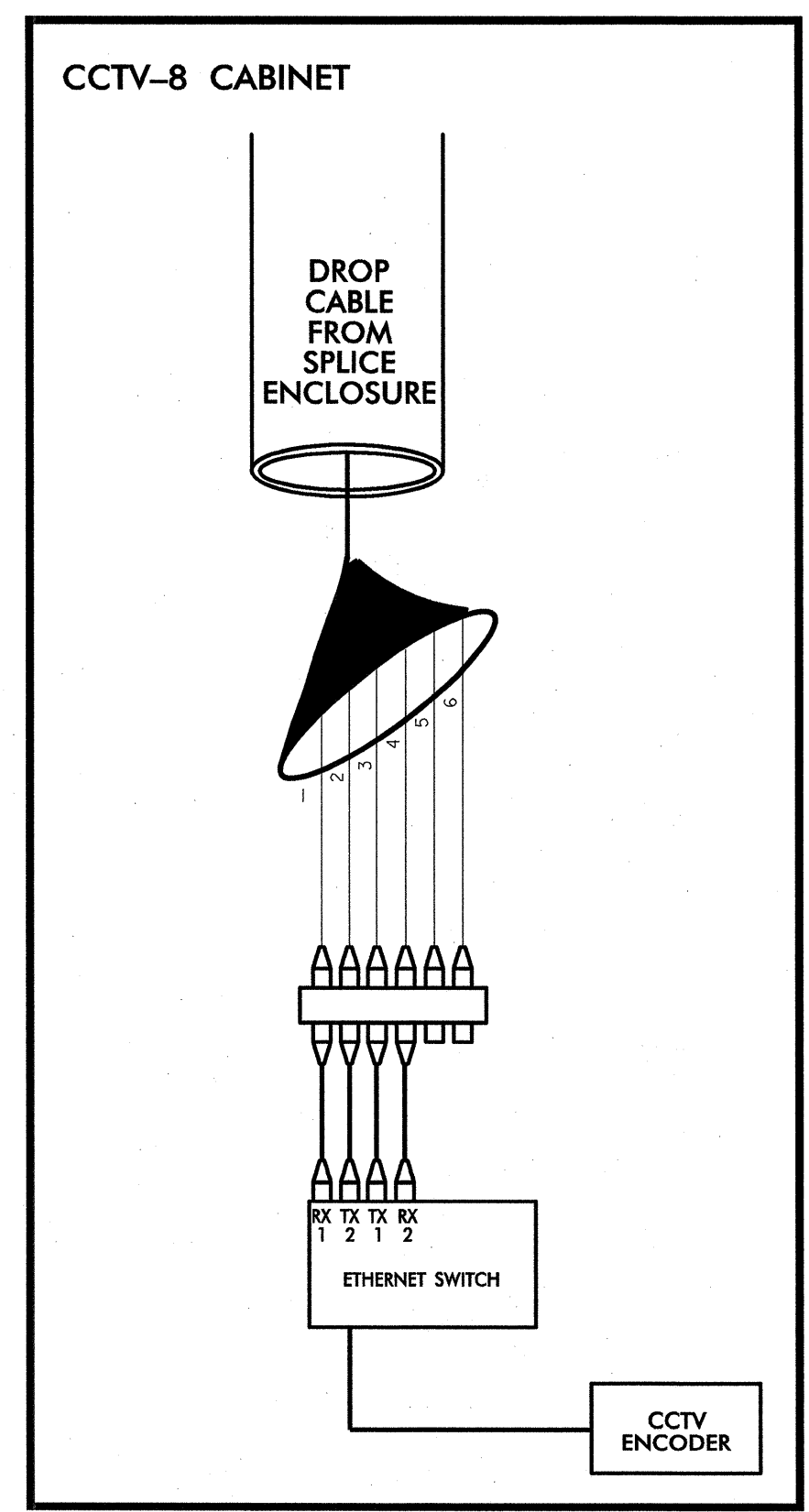
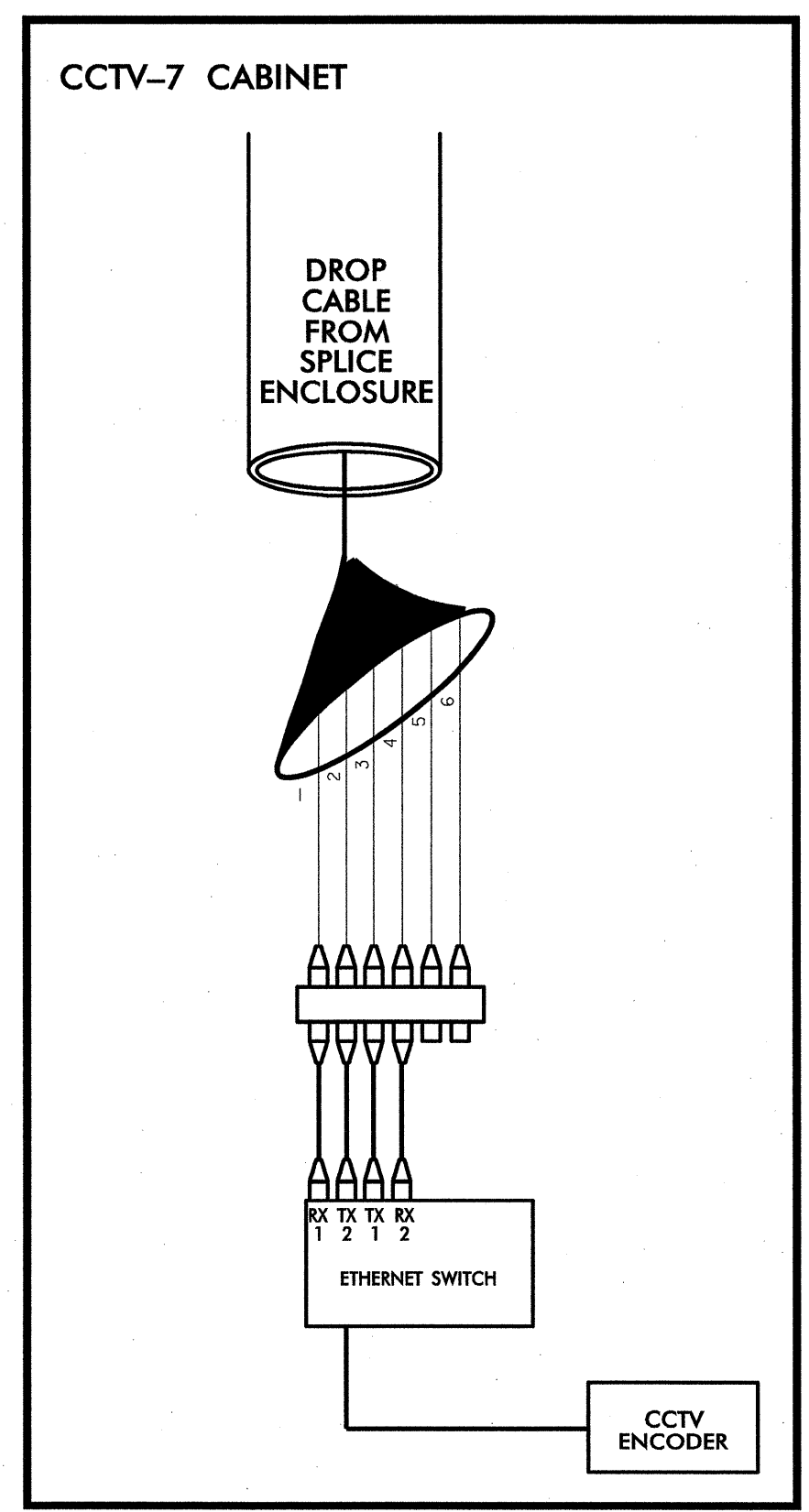
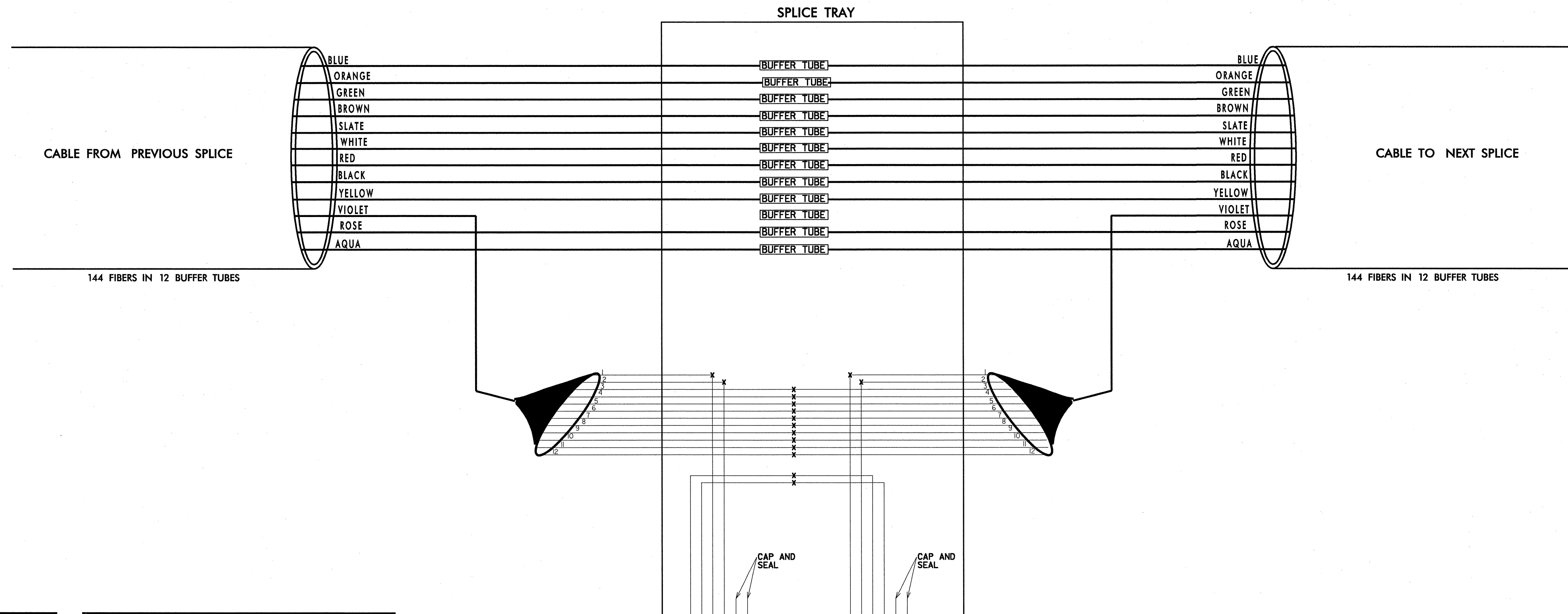
PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
NC License #F-0102
P.O. Box 33068
Raleigh, NC 27636
(919) 677-2000

	SPLICE DETAIL	
	DIVISION 07 GUILFORD COUNTY	
PLAN DATE: DECEMBER 11, 2013		REVIEWED BY:
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH	
SCALE: 0	REVISIONS	INIT. DATE

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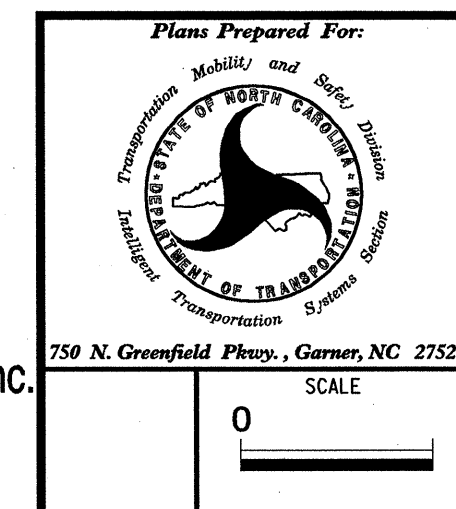
NEW SPLICE ENCLOSURE
SOUTH OF US 29

EXPRESS ALL FIBERS IN BLUE, ORANGE, GREEN,
BROWN, SLATE, WHITE, RED, BLACK, YELLOW,
ROSE AND AQUA BUFFER TUBES



COLOR CODE TIA/EIA 598-C		LEGEND	
(1) BLUE	(7) RED	ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.	
(2) ORANGE	(8) BLACK	X - NEW FUSION SPLICE INDIVIDUAL FIBER	
(3) GREEN	(9) YELLOW	O - EXISTING FUSION SPLICE INDIVIDUAL FIBER	
(4) BROWN	(10) VIOLET	[BUFFER TUBE] SPLICE OR EXPRESS ENTIRE BUFFER TUBE	
(5) SLATE	(11) ROSE		
(6) WHITE	(12) AQUA		

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
N.C. License #F-0102
P.O. Box 33068
Raleigh, NC 27636
(919) 677-2000

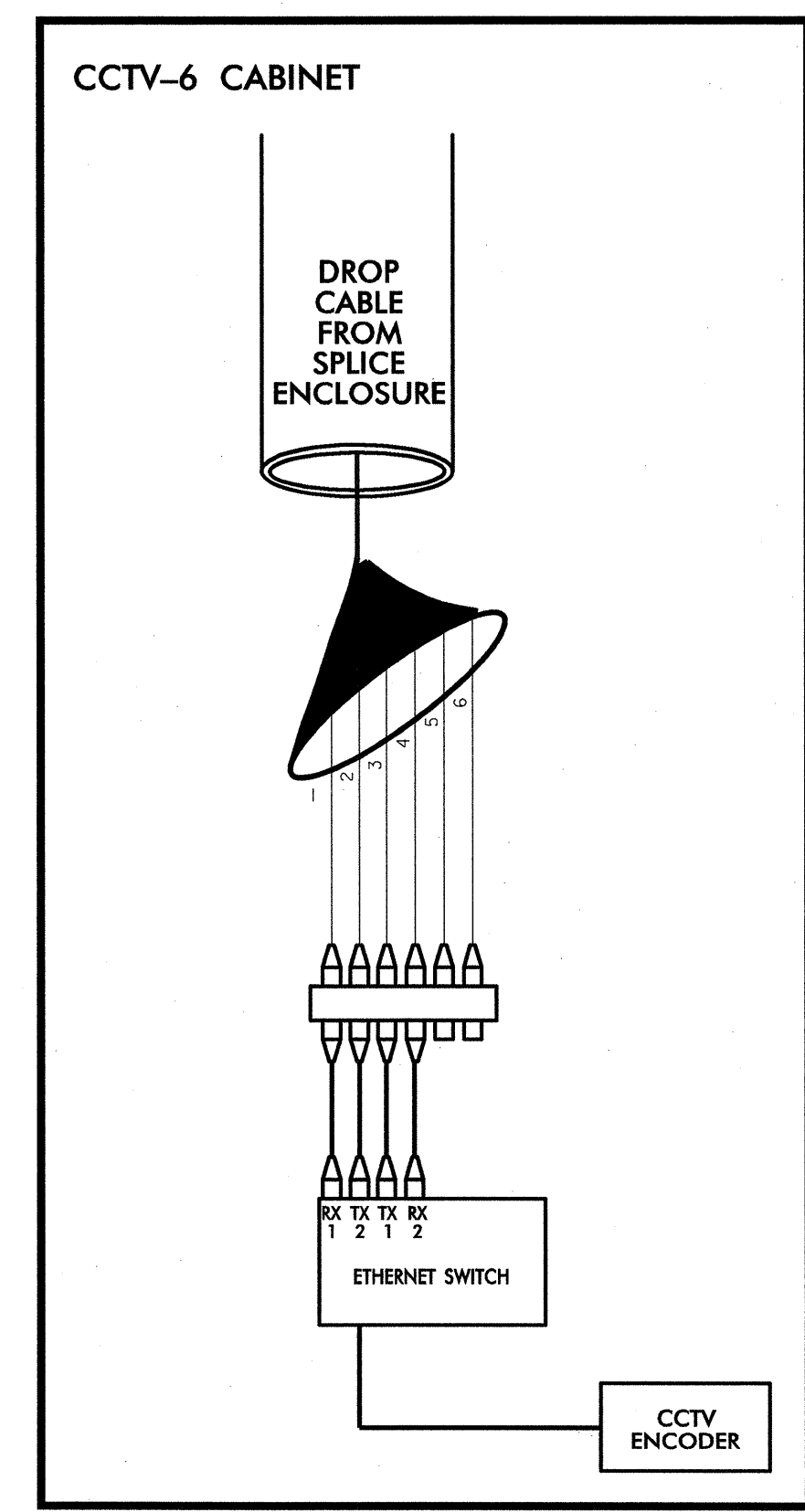
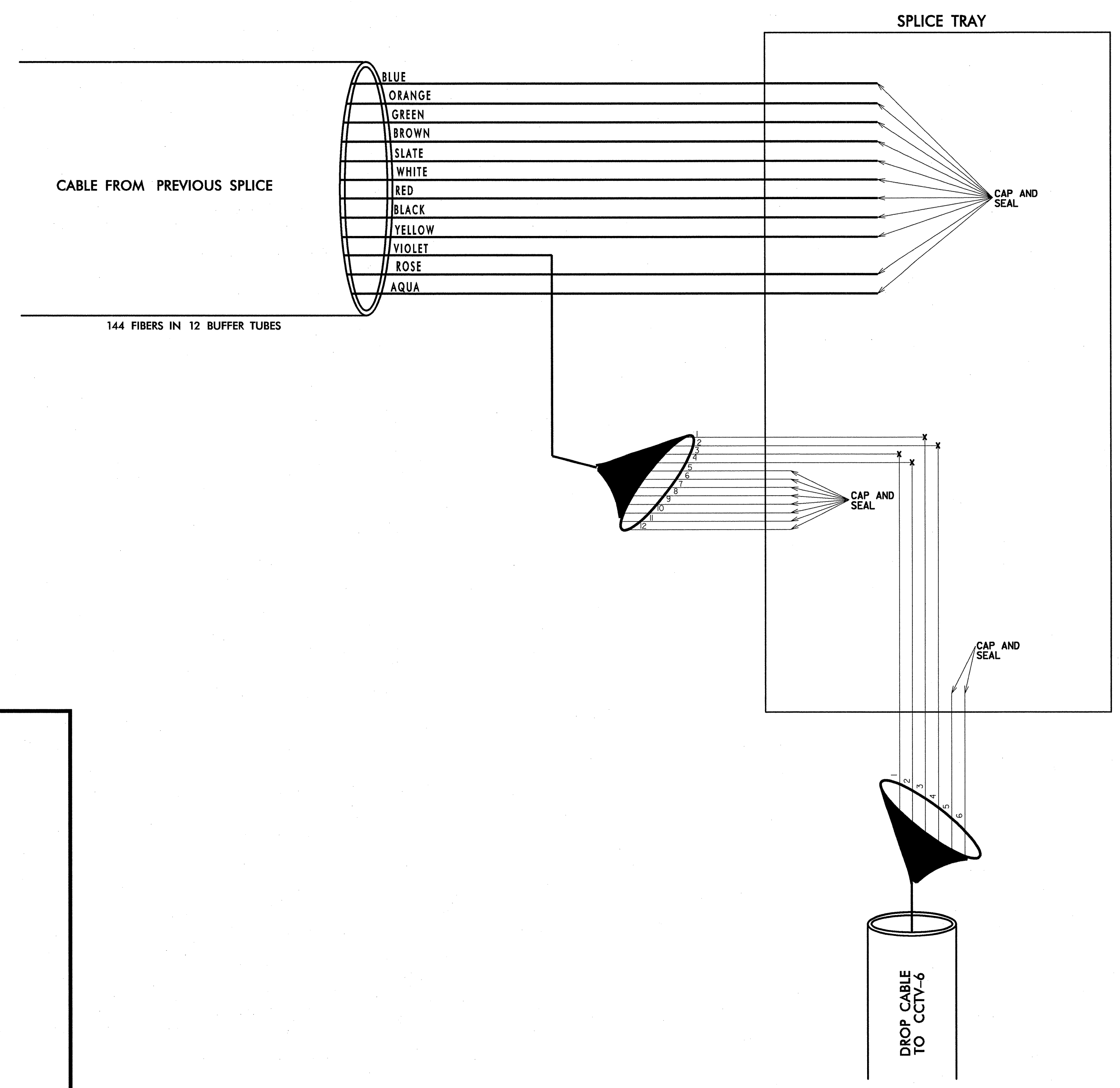


SPLICE DETAIL			
DIVISION 07		GUILFORD COUNTY	
PLAN DATE: DECEMBER 11, 2013		REVIEWED BY:	
PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH	INIT.	DATE
REVISIONS			

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
KEVIN W. SMITH
030472
12/19/13
DATE

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NEW SPLICE ENCLOSURE AT CCTV-6



COLOR CODE TIA/EIA 598-C		LEGEND	LEGEND
(1) BLUE	(7) RED	ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.	X - NEW FUSION SPLICE INDIVIDUAL FIBER
(2) ORANGE	(8) BLACK		O - EXISTING FUSION SPLICE INDIVIDUAL FIBER
(3) GREEN	(9) YELLOW		[BUFFER TUBE] SPLICE OR EXPRESS ENTIRE BUFFER TUBE
(4) BROWN	(10) VIOLET		
(5) SLATE	(11) ROSE		
(6) WHITE	(12) AQUA		

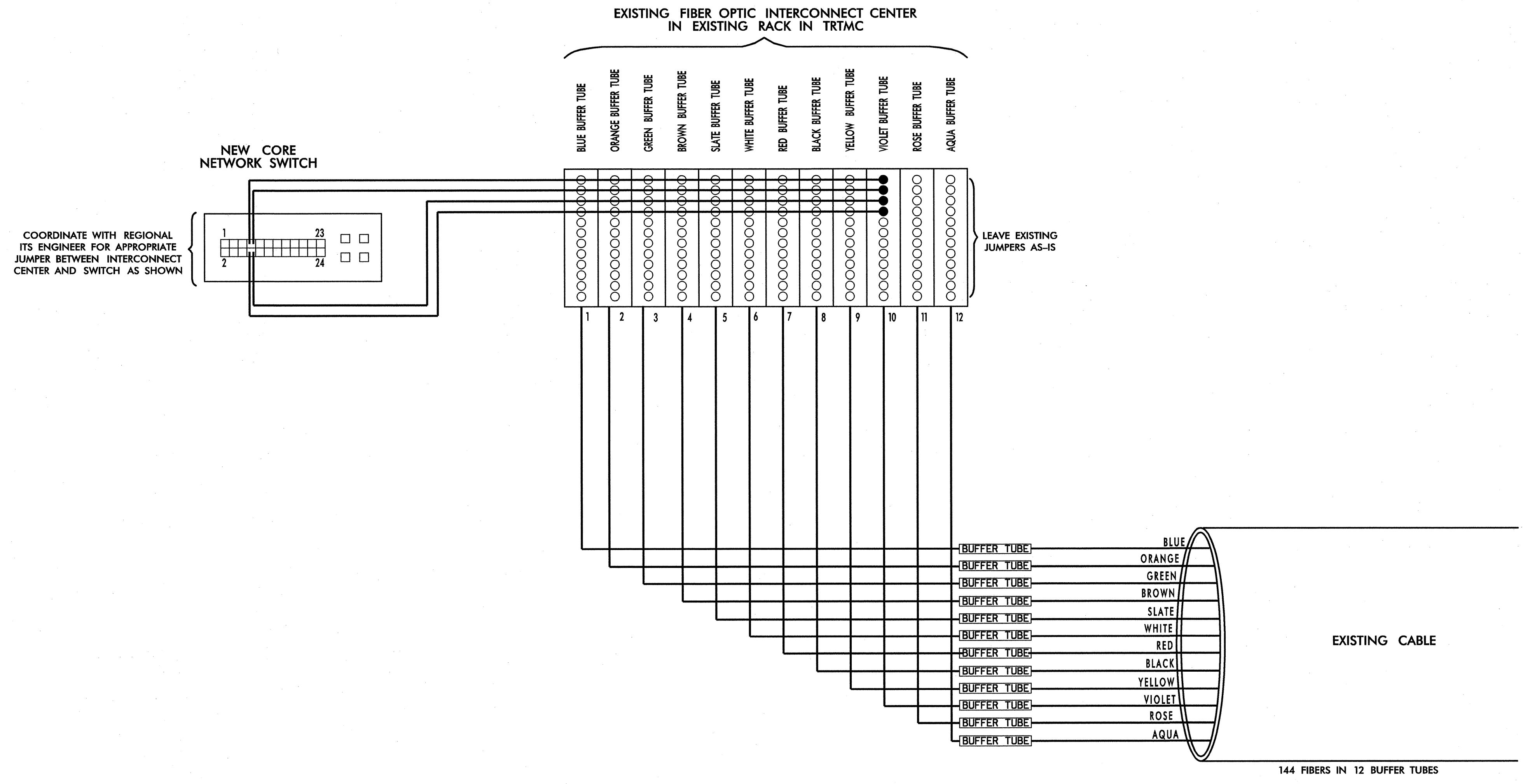
PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

 Plans Prepared For: Transportation Mobility and Safety Division DEPARTMENT OF TRANSPORTATION 750 N. Greenfield Place, Garner, NC 27529	SPLICE DETAIL		SEAL KEVIN W. SMITH ENGINEER 12/19/13 SIGNATURE DATE CADD Filename:
	DIVISION 07 GUILFORD COUNTY		
	PLAN DATE: DECEMBER 11, 2013	REVIEWED BY:	
	PREPARED BY: J. CROSS	REVIEWED BY: K. SMITH	
SCALE	REVISIONS	INIT.	DATE
0			

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**EXISTING INTERCONNECT CENTER
IN EXISTING RACK IN TRTMC**



COLOR CODE TIA/EIA 598-C		LEGEND	LEGEND
(1) BLUE	(7) RED	ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION. X - NEW FUSION SPLICE INDIVIDUAL FIBER O - EXISTING FUSION SPLICE INDIVIDUAL FIBER [BUFFER TUBE] SPLICE OR EXPRESS ENTIRE BUFFER TUBE	
(2) ORANGE	(8) BLACK		
(3) GREEN	(9) YELLOW		
(4) BROWN	(10) VIOLET		
(5) SLATE	(11) ROSE		
(6) WHITE	(12) AQUA		

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
 NC License #F-0102
 P.O. Box 33068
 Raleigh, NC 27636
 (919) 677-2000

Plans Prepared For: 250 N. Greenfield Place, Garner, NC 27529		SPLICE DETAIL		SEAL KEVIN W. SMITH ENGINEER
DIVISION 07 PLAN DATE: DECEMBER 11, 2013 PREPARED BY: J. CROSS		GUILFORD COUNTY REVIEWED BY: K. SMITH		REVISIONS INIT. DATE SIGNATURE DATE 12/19/13
SCALE: 0		REVISIONS INIT. DATE		