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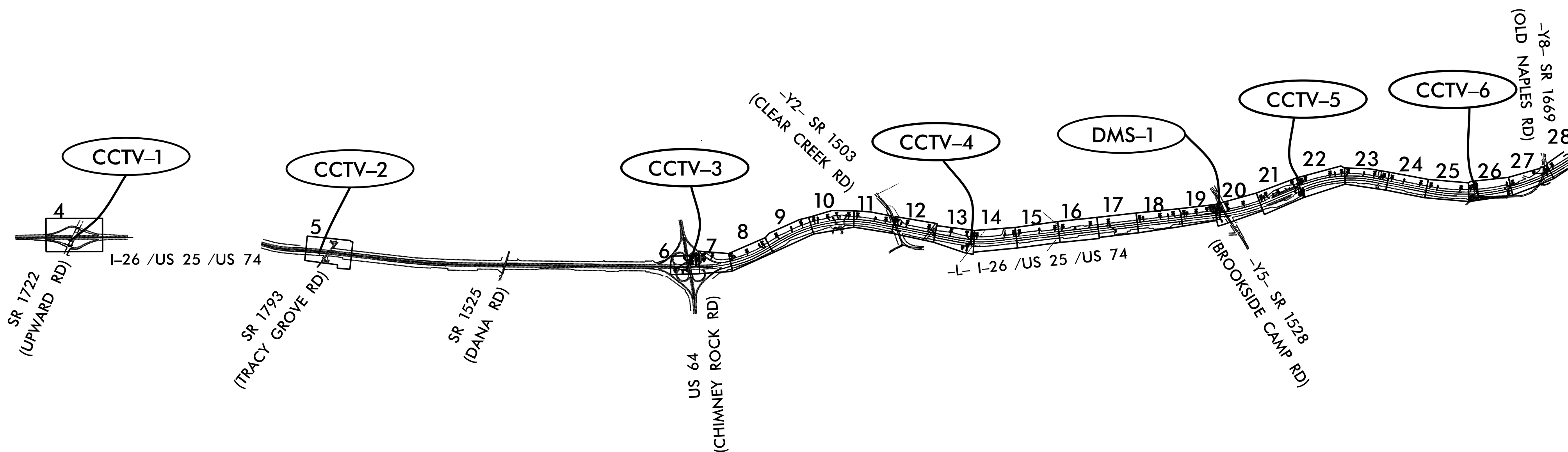
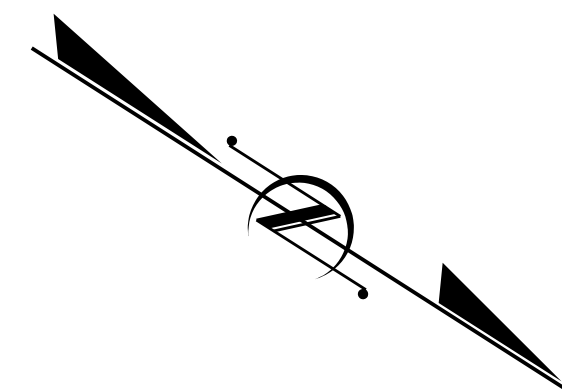
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

LOCATION: I-26 FROM SR 1722 (UPWARD RD) TO JUST NORTH OF SR 1669 (OLD NAPLES RD)

TYPE OF WORK: FIBER, CCTV CAMERA AND DYNAMIC MESSAGE SIGN INSTALLATIONS



TIP PROJECT: I-4400BB

CONTRACT:

**DOCUMENT NOT CONSIDERED FINAL
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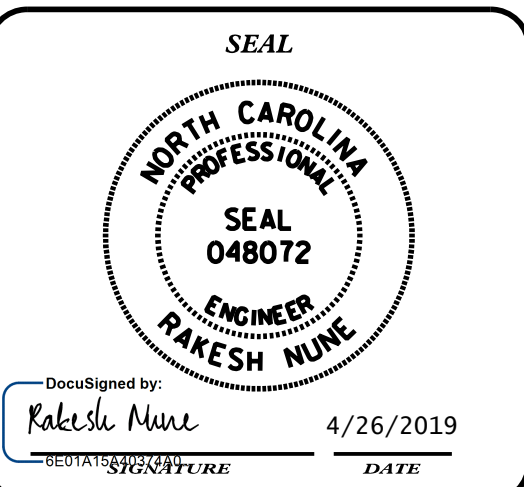
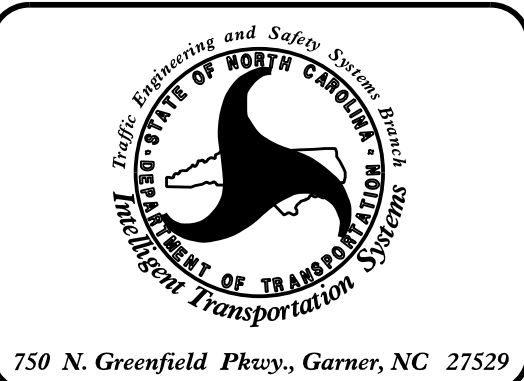
2018 STANDARD SPECIFICATIONS	
PROJECT LENGTH PROJECT LENGTH = 5.114 MILES	
LETTING DATE: JUNE 2019	
INDEX OF SHEETS	
ITS-01	TITLE SHEET
ITS-02	NETWORK BLOCK DIAGRAM
ITS-03	CONSTRUCTION NOTES AND LEGEND
ITS-04-28	COMMUNICATION ROUTING PLANS
ITS-29	DMS ELEVATION
ITS-30-34	SPLICE DETAILS
ITS-35-37	TYPICAL DETAILS

ROADWAY STANDARD DRAWINGS

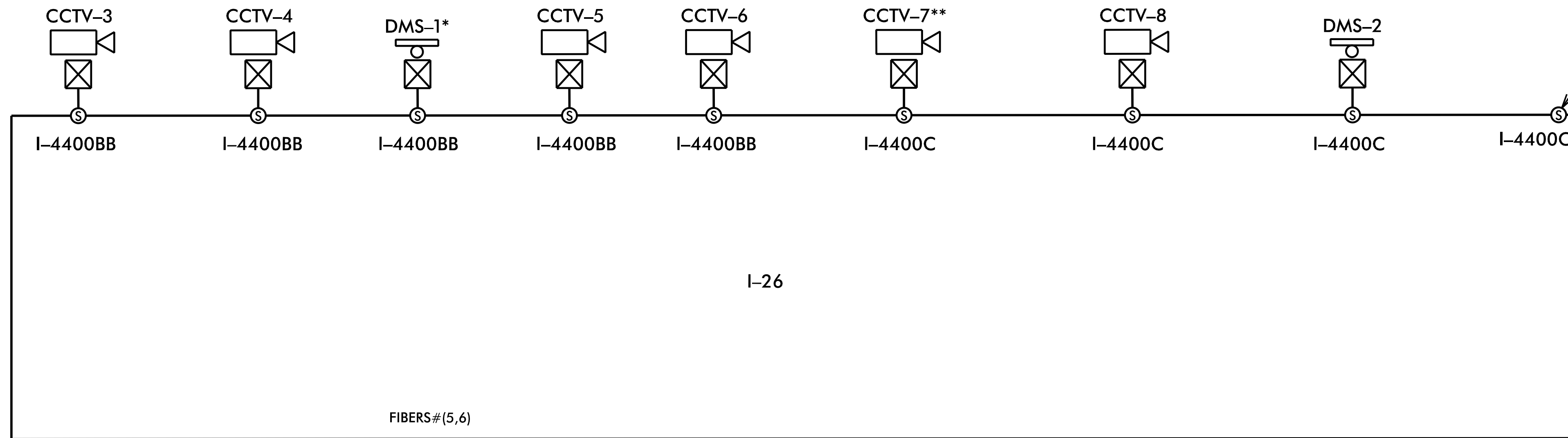
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" ROADWAY DESIGN UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE	STD. NO.	TITLE
862.01	GUARDRAIL PLACEMENT	1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
862.02	GUARDRAIL INSTALLATION	1180.01	SKINNY - DRUM
862.03	STRUCTURE ANCHOR UNIT	1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
862.04	ANCHORING END OF GUARDRAIL	1261.02	GUARDRAIL AND BARRIER DELINEATORS -TYPES AND MOUNTING
865.01	CABLE GUIDERAIL	1262.01	GUARDRAIL END DELINEATION
1101.01	WORK ZONE WARNING SIGNS	1700.01	ELECTRICAL SERVICE OPTIONS
1101.02	TEMPORARY LANE CLOSURES	1700.02	ELECTRICAL SERVICE GROUNDING
1101.04	TEMPORARY SHOULDER CLOSURES	1715.01	UNDERGROUND CONDUIT-TRENCHING
1101.01	TRAFFIC CONTROL DESIGN TABLES	1716.01	JUNCTION BOXES
1110.02	PORTABLE WORK ZONE SIGNS	1720.01	WOOD POLES
1115.01	FLASHING ARROW BOARDS	1721.01	GUY ASSEMBLY
1130.01	DRUMS	1751.02	CONTROLLER AND CABINETS
1135.01	CONES		
1150.01	FLAGGING DEVICES		

NCDOT CONTACTS:	
ANNA G. HENDERSON, PE	DIVISION 13 TRAFFIC ENGINEER
STEVEN BUCHANAN	DIVISION 14 TRAFFIC ENGINEER
SCOTT M. COLLIER, PE	REGIONAL TRAFFIC SAFETY ENGINEER
GREGG GREEN	SIGNALS COMMUNICATIONS PROJECT ENGINEER
PLANS PREPARED BY:	
HNTB	
HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 (919) 546-8997 NC License No: C-1554	
HNTB CONTACTS:	
N.R. SIMMONS, PE, PTOE - PROJECT MANAGER	
D.L. JONES, PE - SENIOR ITS PROJECT MANAGER	
R. NUNE, PE - SENIOR ITS DESIGN ENGINEER	
A. ALI - ITS ENGINEER I	
A.H. THORNBURG, PE - DESIGN ENGINEER III	
T.R. TERRELL - SENIOR DESIGN TECHNICIAN	

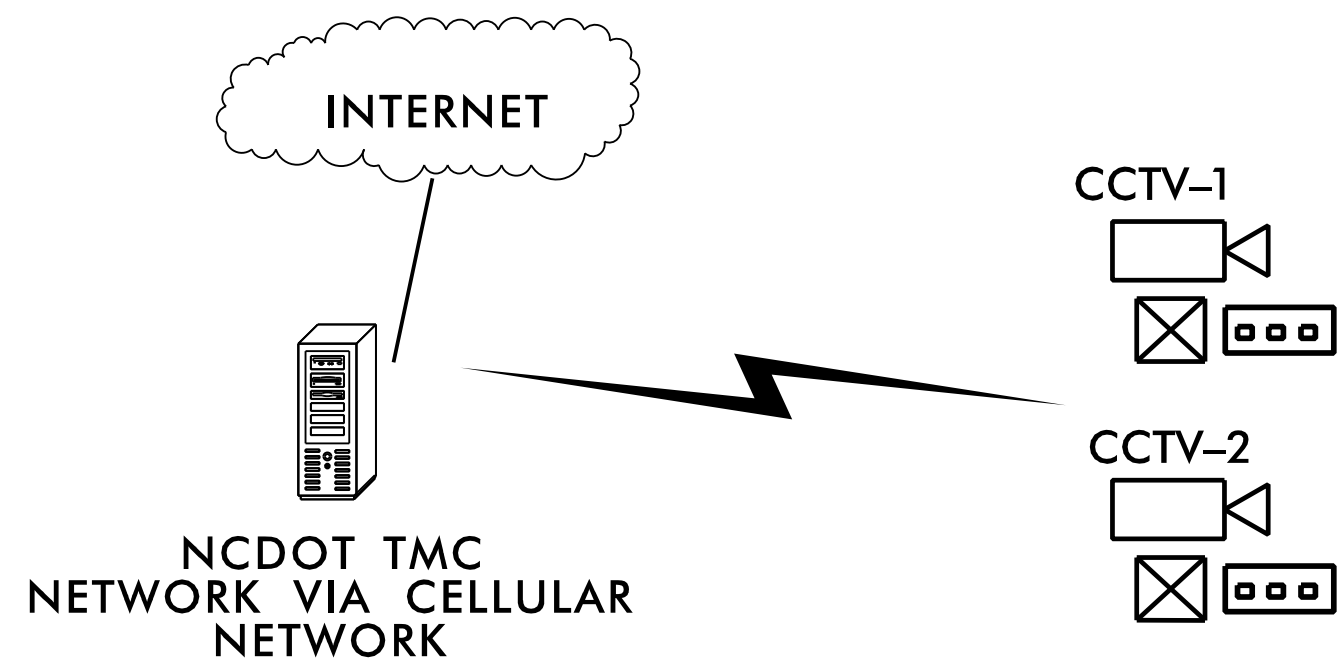


BLOCK DIAGRAM APPLIES TO I-4400BB AND I-4400C



NOTE: FIBERS #3,4 AND FIBERS# 7,8 ARE CONNECTED TO SOLAR PANEL POWERED DEVICES FROM SECTION I-4700

*PROPOSED DMS IS REPLACING EXISTING DMS AT THIS LOCATION.
 **PROPOSED CCTV IS REPLACING EXISTING CCTV AT THIS LOCATION.



LEGEND	
	EXISTING ITS EQUIPMENT CABINET
	PROPOSED ITS EQUIPMENT CABINET
	SPLICE ENCLOSURE
	CCTV (EXISTING)
	CCTV (PROPOSED)
	DMS PEDESTAL MOUNTED WITH CABINET
	CELLULAR MODEM IN CABINET
	CONNECTION TO EXISTING NETWORK
	NETWORK CONNECTION BY THIRD PARTY

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTES:

1. THIS BLOCK DIAGRAM IS AN APPROXIMATE REPRESENTATION OF CONNECTIONS. SEE SPLICE DIAGRAMS SHEETS FOR DETAILED CONNECTIONS.
2. CONTACT NCDOT FOR NETWORK CONFIGURATION WHICH CONSISTS OF BUT IS NOT LIMITED TO IP ADDRESS, VLAN NUMBER, ACL AND PORT CONFIGURATION.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH NCDOT PERSONNEL TO OBTAIN ALL RELEVANT NETWORK INFORMATION BEFORE TESTING.
4. ALL SWITCHES SHALL BE CONFIGURED PER NCDOT SECURITY REQUIREMENTS.

HNTB HNTB NORTH CAROLINA, P.C.
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 Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	I-4400BB NETWORK BLOCK DIAGRAM		SEAL Rakesh Nune ENGINEER RAKESH NUNE
	Division 14 Henderson Asheville PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons	Documented by: Rakesh Nune 4/26/2019 REVISIONS: _____ INIT. DATE _____ _____ _____ CADD File Name: I4400BB ITS-02.dgn	

- 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 INSTALL CAT 5e CCTV 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 HEAT-SHRINK TUBING
- 13 INSTALL HEAT-SHRINK TUBING RETROFIT KIT
- 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 ENTRANCE
- 22 INSTALL NEW CONDUIT INTO NEW CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHEN AVAILABLE)
- 23 INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHEN AVAILABLE)
- 24 INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
- 25 INSTALL NEW RISER INTO POLE MOUNTED CABINET
- 26 TERMINATE FIBER-OPTIC CABLE ON INTERCONNECT CENTER IN CCTV EQUIPMENT CABINET
- 27 INSTALL NEW ETHERNET EDGE SWITCH IN CABINET
- 28 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPlice CABLE IN CABINET
- 29 INSTALL UNDERGROUND SPlice ENCLOSURE
- 30 INSTALL AERIAL SPlice ENCLOSURE
- 31 INSTALL SPlice CABINET
- 32 MODIFY EXISTING SPlice ENCLOSURE OR INTERCONNECT CENTER
- 33 REMOVE EXISTING SPlice CABINET
- 34 INSTALL CABINET FOUNDATION
- 35 REMOVE EXISTING CABINET FOUNDATION
- 36 INSTALL CCTV CAMERA ASSEMBLY

- 37 REMOVE EXISTING DMS, CABINET AND STRUCTURE
- 38 INSTALL CCTV CAMERA METAL POLE AND FOUNDATION
- 39 INSTALL STANDARD (ELECTRICAL) JUNCTION BOX
- 40 INSTALL OVERSIZED JUNCTION BOX
- 41 INSTALL SPECIAL OVERSIZED JUNCTION BOX
- 42 INSTALL CELL MODEM
- 43 REMOVE EXISTING METAL POLE AND FOUNDATION
- 44 INSTALL AERIAL GUY ASSEMBLY
- 45 INSTALL STANDARD GUY ASSEMBLY
- 46 INSTALL SIDEWALK GUY ASSEMBLY
- 47 INSTALL MESSENGER CABLE
- 48 REMOVE EXISTING COMMUNICATIONS CABLE
- 49 EXISTING SIGNAL CABINET
- 50 CONDUITS INSTALLED IN BRIDGE STRUCTURE (SEE ROADWAY PLANS)
- 51 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
- 52 INSTALL DELINEATOR MARKERS
- 53 STORE 30 FEET OF COMMUNICATIONS CABLE (EACH CABLE), EXCEPT AS NOTED ON PLANS
- 54 REMOVE EXISTING CABINET
- 55 LASH CABLE(S) TO EXISTING SIGNAL /COMMUNICATION CABLE
- 56 LASH CABLES TO NEW MESSENGER CABLE
- 57 MODIFY EXISTING ELECTRICAL SERVICE
- 58 INSTALL NEW ELECTRICAL SERVICE
- 59 BOND TRACER WIRE TO EQUIPMENT GROUND BUS ON ONE END
- 60 BOND MESSENGER TO POLE GROUND
- 61 BOND RISER TO POLE GROUND
- 62 INSTALL DMS, PEDESTAL STRUCTURE, ACCESS LADDER AND DMS FOUNDATION
- 63 INSTALL POLE MOUNTED CABINET
- 64 INSTALL NEW EQUIPMENT CABINET DISCONNECT
- 65 INSTALL GROUND MOUNTED CABINET
- 66 INTERCEPT EXISTING JUNCTION BOX
- 67 INSTALL CCTV CAMERA EXTENSION POLE
- 68 INSTALL SOLAR PANEL ASSEMBLY
- 69 REMOVE WOOD POLE
- 70 INSTALL WOOD POLE
- 71 REMOVE EXISTING CCTV CAMERA

LEGEND

	FD	NEW FIBER OPTIC COMMUNICATIONS CABLE
	EXI	EXISTING COMMUNICATIONS CABLE
	REM	EXISTING COMMUNICATIONS CABLE TO BE REMOVED
		NEW CONDUIT
		EXISTING CONDUIT
	DD	NEW DIRECTIONAL DRILLED CONDUIT
		EXISTING GUARDRAIL
		NEW GUARDRAIL
		NEW CHAIN LINK FENCE
		EXISTING METAL POLE WITH MASTARM
		NEW METAL POLE WITH MASTARM
		EXISTING RIGHT OF WAY
		NEW OVERSIZED HEAVY DUTY JUNCTION BOX
		EXISTING JUNCTION BOX
		NEW OVERSIZED HEAVY DUTY JUNCTION BOX WITH SPlice ENCLOSURE
		EXISTING OVERSIZED HEAVY DUTY JUNCTION BOX WITH NEW SPlice ENCLOSURE
		NEW SPECIAL OVERSIZED HEAVY DUTY JUNCTION BOX WITH SPlice ENCLOSURE
		EXISTING SPECIAL OVERSIZED HEAVY DUTY JUNCTION BOX WITH NEW SPlice ENCLOSURE
		NEW WOOD POLE
		EXISTING WOOD POLE
		NEW AERIAL SPlice
		EXISTING AERIAL SPlice
		NEW SPlice ENCLOSURE
		EXISTING SPlice ENCLOSURE
		NEW METAL POLE
		EXISTING METAL POLE
		NEW DMS
		EXISTING DMS
		NEW CCTV CAMERA ASSEMBLY
		EXISTING CCTV CAMERA ASSEMBLY
		NEW STANDARD GUY ASSEMBLY
		NEW SIGNAL CABINET
		EXISTING STANDARD GUY ASSEMBLY
		EXISTING SIGNAL CABINET
		NEW ITS EQUIPMENT CABINET
		EXISTING ITS EQUIPMENT CABINET
		NEW SOLAR PANEL ASSEMBLY
		NEW ELECTRICAL SERVICE
		EXISTING ELECTRICAL SERVICE
	SP	SIGNAL POLE
	XXX-#	CCTV/DMS NUMBER
	XX-XXXX	SIGNAL INVENTORY NUMBER

ATTACHMENT POINT:

DISTANCE ABOVE INCHES REFERENCE POINT

REFERENCE POINT DISTANCE BELOW INCHES

CONSTRUCTION NOTE SYMBOLOGY KEY

NUMBER OF CABLE(S), LOOPS, ETC. NUMBER OF FIBERS / TWISTED PAIRS PER CABLE, ETC.

NUMBER OF RISER(S) / CONDUIT(S) DIAMETER OF RISER(S) / CONDUIT(S) (INCH)

NUMBER OF DEVICES NUMBER OF FIBERS

NUMBER OF CABLES REMOVE OR MODIFY CABLE

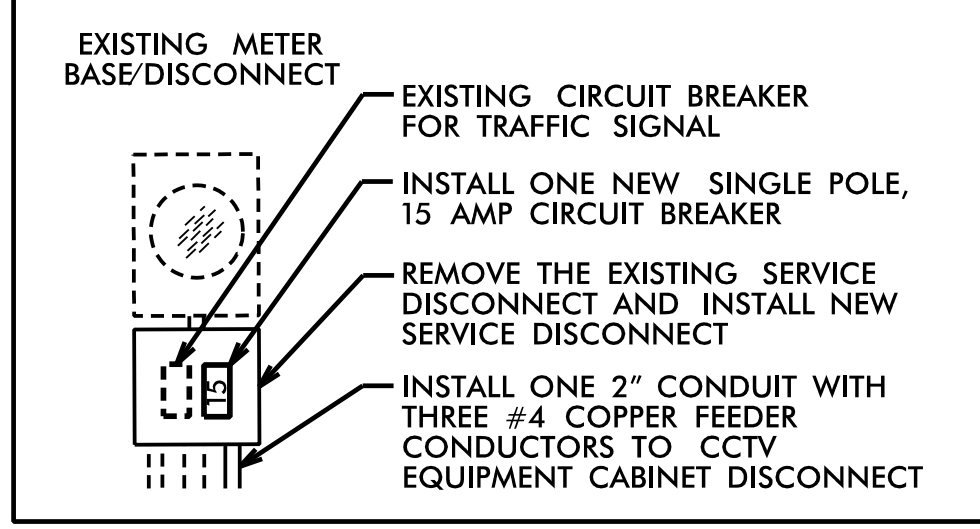
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	I-4400BB CONSTRUCTION NOTES AND LEGEND	
	Division 14 Henderson Asheville	PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell
PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons	SCALE: NONE	DocuSigned by: Rakesh Nune 4/26/2019 SIGNATURE DATE
CADD File Name: I4400BB ITS-03.dgn		

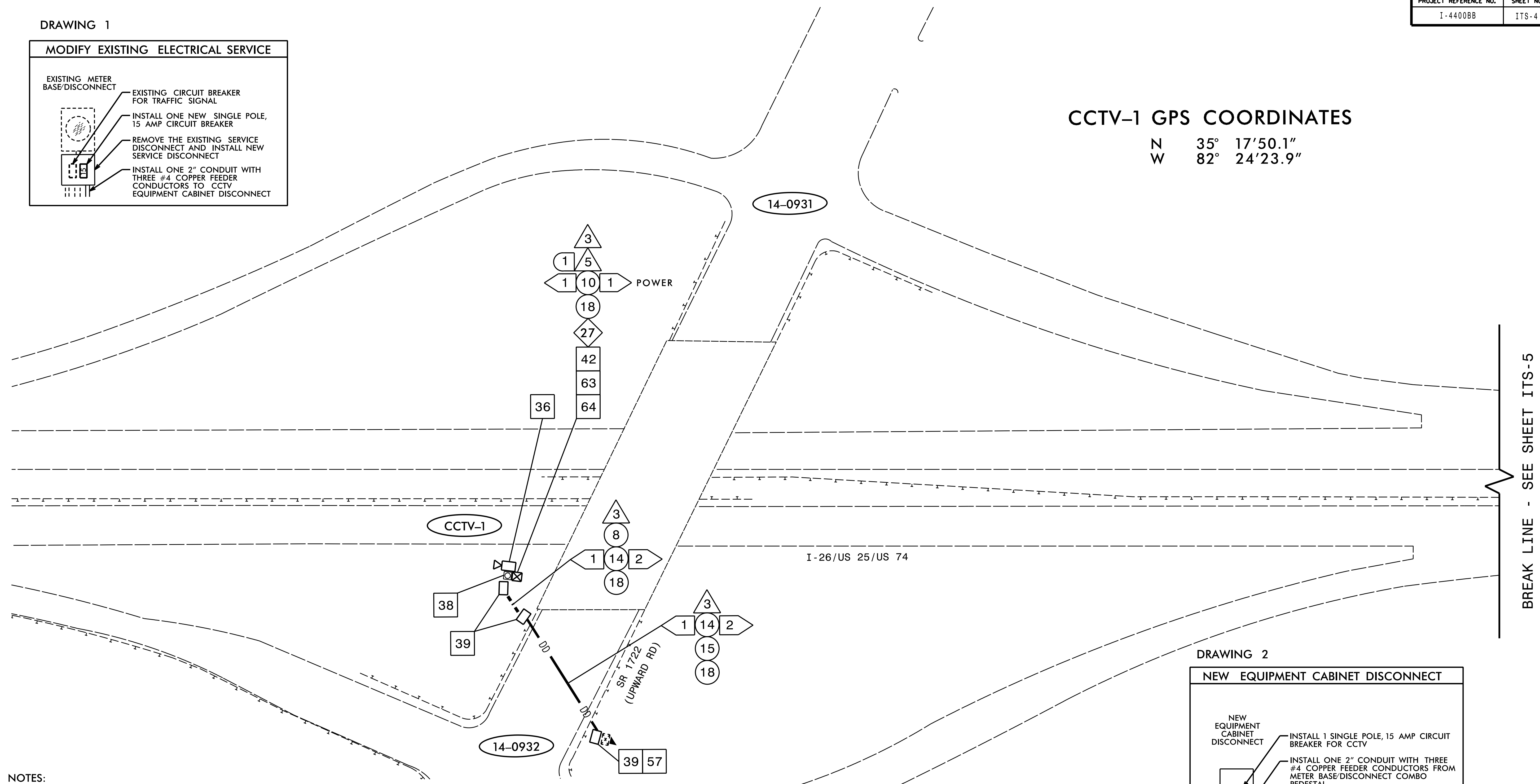
DRAWING 1

MODIFY EXISTING ELECTRICAL SERVICE



CCTV-1 GPS COORDINATES

N 35° 17'50.1"
W 82° 24'23.9"

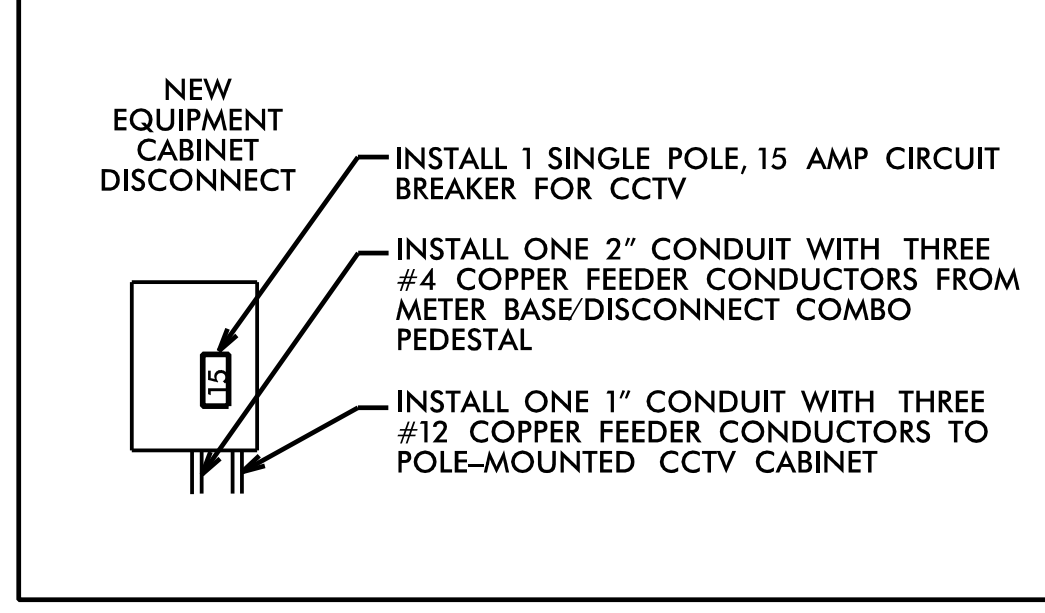


NOTES:

1. MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY.
2. CONTACT DEPUTY DIVISION TRAFFIC ENGINEER CHAD FRANKLIN FOR DIVISION 14 AT (828) 631-1151 TO CONFIRM THE LOCATION OF THE CCTV /DMS.
3. DO NOT INSTALL CONDUIT OR JUNCTION BOXES UNTIL THE PROPOSED LOCATION OF THE CCTV CAMERA /DMS HAS BEEN CONFIRMED BY THE DIVISION TRAFFIC ENGINEER.
4. INSTALL CONDUITS FOR FEEDER CONDUCTORS AND FIBER OPTIC CABLE IN THE SAME BORE AND /OR TRENCH. USE SEPARATE CONDUITS, RED FOR POWER AND ORANGE FOR COMMUNICATIONS.
5. DO NOT INSTALL ELECTRICAL POWER CONDUCTORS AND FIBER-OPTIC CABLE INSIDE THE SAME JUNCTION BOX.
6. MOUNT THE CCTV CAMERA 45' ABOVE GRADE.
7. MOUNT THE CCTV CAMERA 5' BELOW THE TOP OF THE POLE.
8. INSTALL A NEW DMS, WALKWAY, LADDER, AND POLE-MOUNTED CABINET ON THE NEW DMS STRUCTURE.
9. INSTALL A LEVEL CONCRETE TECHNICIAN PAD MEASURING A MINIMUM OF 4 INCHES THICK, 24 INCHES WIDE AND 36 INCHES LONG AT THE FRONT DOOR OF THE CCTV /DMS EQUIPMENT CABINET. SEE TYPICAL DETAILS SHEET.
10. CONTACT DUKE ENERGY AT (800) 653-5307 TO ARRANGE FOR POWER TO ELECTRICAL SERVICE.
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE AVAILABLE FAULT CURRENT INFORMATION FROM THE POWER COMPANY FOR THE REQUIRED ELECTRICAL SERVICE AND PLACE A "FAULT CURRENT" STICKER INSIDE THE SERVICE DISCONNECT PANEL WITH THE DATE AND AVAILABLE FAULT CURRENT ON THE STICKER.
12. SIX (6) WEEKS PRIOR TO BEGINNING WORK ON THE DEVICES, CONTACT THE DIVISION 13 DEPUTY TRAFFIC ENGINEER TO ARRANGE FOR THE DIVISION TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY SUBNET MASK AND VLAN ID INFORMATION, NOTIFY THE DEPUTY TRAFFIC ENGINEER AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTION PROPERLY. WORK IS NOT COMPLETE UNTIL THE SYSTEM IS BACK UP AND FUNCTIONAL.
13. NCDOT DIVISION 14 WILL FURNISH AND INSTALL THE CELL MODEM. CONTACT SIX (6) WEEKS PRIOR TO BEGINNING WORK.

DRAWING 2

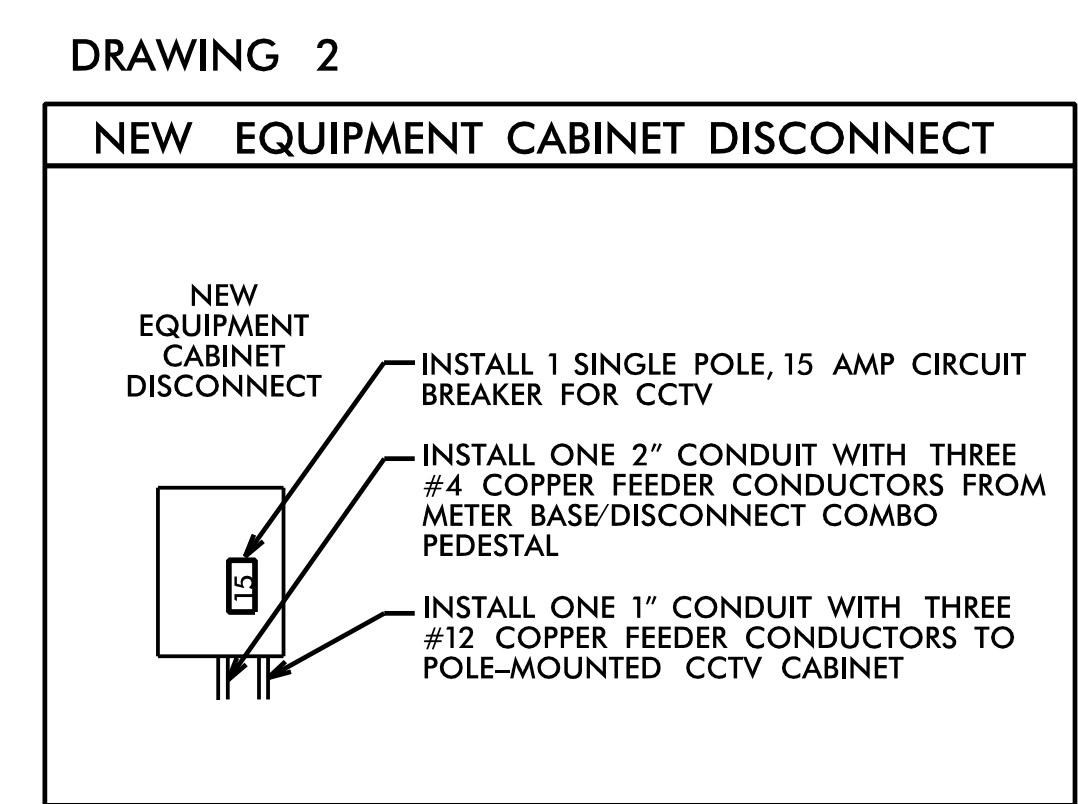
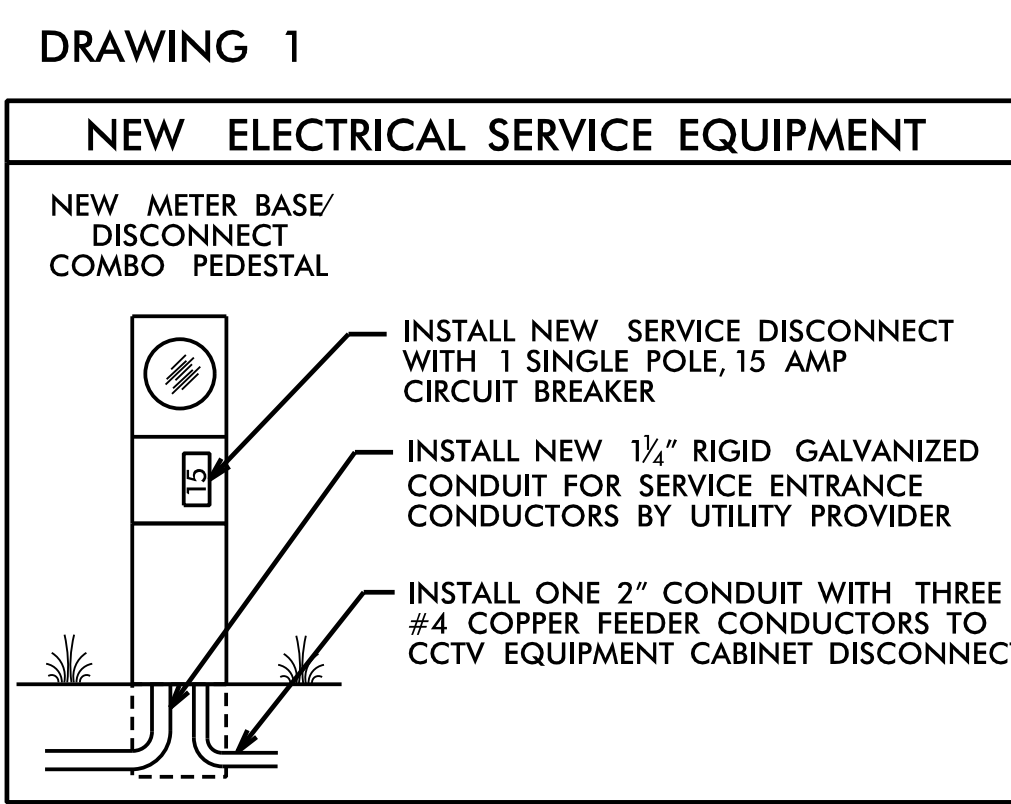
NEW EQUIPMENT CABINET DISCONNECT



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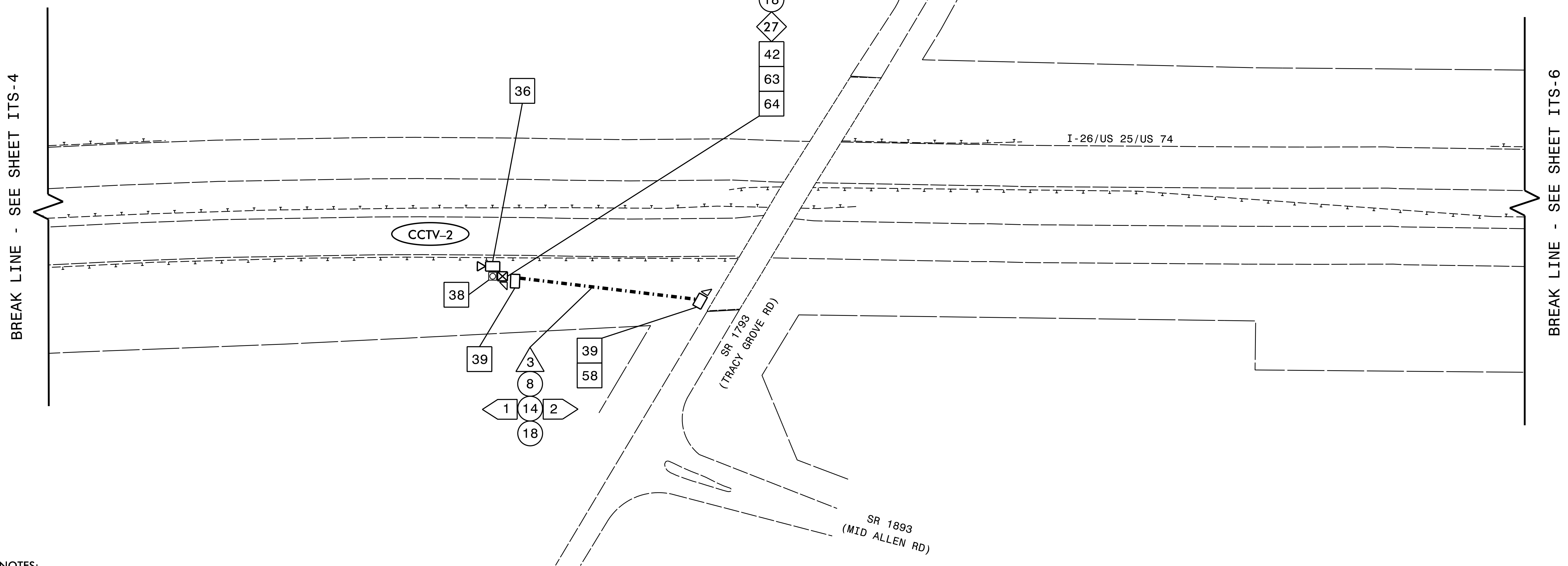
<p>HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554 (919) 546-8997</p>	<p>I-4400BB CABLE ROUTING PLAN</p>									
	<p>Division 14 Henderson Asheville</p> <p>PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell</p> <p>PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		NO.	DESCRIPTION	INIT.	DATE			
NO.	DESCRIPTION	INIT.	DATE							

BREAK LINE - SEE SHEET ITS-5



CCTV-2 GPS COORDINATES

N 35° 18'55.9"
W 82° 25'12.9"



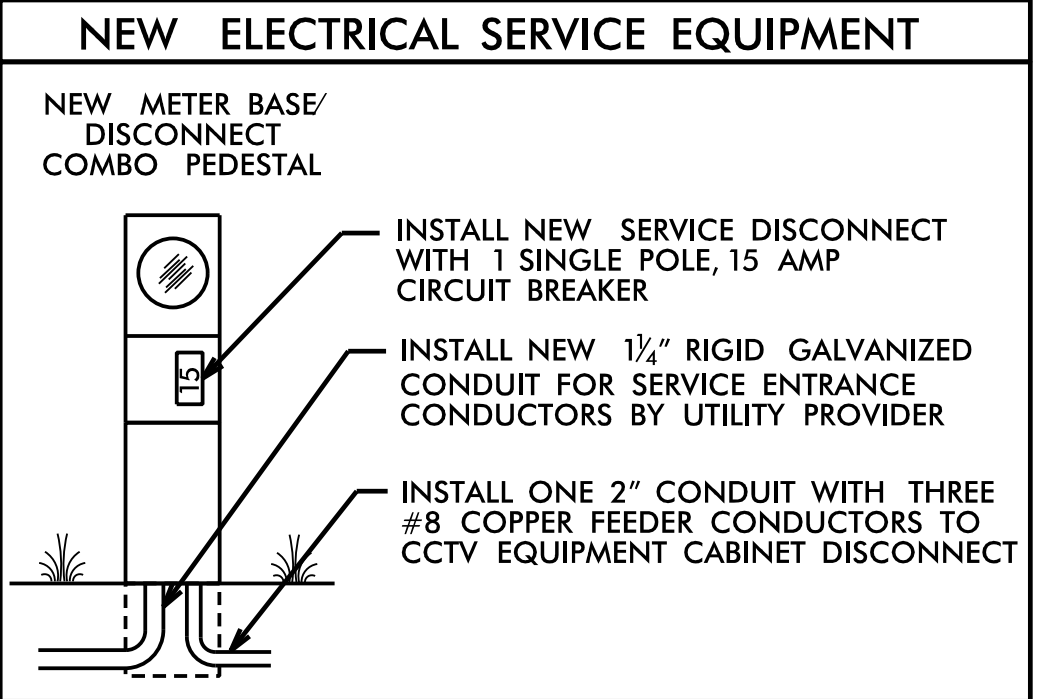
NOTES:

1. MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY.
2. CONTACT DEPUTY DIVISION TRAFFIC ENGINEER CHAD FRANKLIN FOR DIVISION 14 AT (828) 631-1151 TO CONFIRM THE LOCATION OF THE CCTV /DMS.
3. DO NOT INSTALL CONDUIT OR JUNCTION BOXES UNTIL THE PROPOSED LOCATION OF THE CCTV CAMERA /DMS HAS BEEN CONFIRMED BY THE DIVISION TRAFFIC ENGINEER.
4. INSTALL CONDUITS FOR FEEDER CONDUCTORS AND FIBER OPTIC CABLE IN THE SAME BORE AND /OR TRENCH. USE SEPARATE CONDUITS, RED FOR POWER AND ORANGE FOR COMMUNICATIONS.
5. DO NOT INSTALL ELECTRICAL POWER CONDUCTORS AND FIBER-OPTIC CABLE INSIDE THE SAME JUNCTION BOX.
6. MOUNT THE CCTV CAMERA 45' ABOVE GRADE.
7. MOUNT THE CCTV CAMERA 5' BELOW THE TOP OF THE POLE.
8. INSTALL A NEW DMS, WALKWAY, LADDER, AND POLE-MOUNTED CABINET ON THE NEW DMS STRUCTURE.
9. INSTALL A LEVEL CONCRETE TECHNICIAN PAD MEASURING A MINIMUM OF 4 INCHES THICK, 24 INCHES WIDE AND 36 INCHES LONG AT THE FRONT DOOR OF THE CCTV /DMS EQUIPMENT CABINET. SEE TYPICAL DETAILS SHEET.
10. CONTACT DUKE ENERGY AT (800) 653-5307 TO ARRANGE FOR POWER TO ELECTRICAL SERVICE.
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE AVAILABLE FAULT CURRENT INFORMATION FROM THE POWER COMPANY FOR THE REQUIRED ELECTRICAL SERVICE AND PLACE A "FAULT CURRENT" STICKER INSIDE THE SERVICE DISCONNECT PANEL WITH THE DATE AND AVAILABLE FAULT CURRENT ON THE STICKER.
12. SIX (6) WEEKS PRIOR TO BEGINNING WORK ON THE DEVICES, CONTACT THE DIVISION 14 DEPUTY TRAFFIC ENGINEER TO ARRANGE FOR THE DIVISION TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY SUBNET MASK AND VLAN ID INFORMATION, NOTIFY THE DEPUTY TRAFFIC ENGINEER AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTION PROPERLY. WORK IS NOT COMPLETE UNTIL THE SYSTEM IS BACK UP AND FUNCTIONAL.
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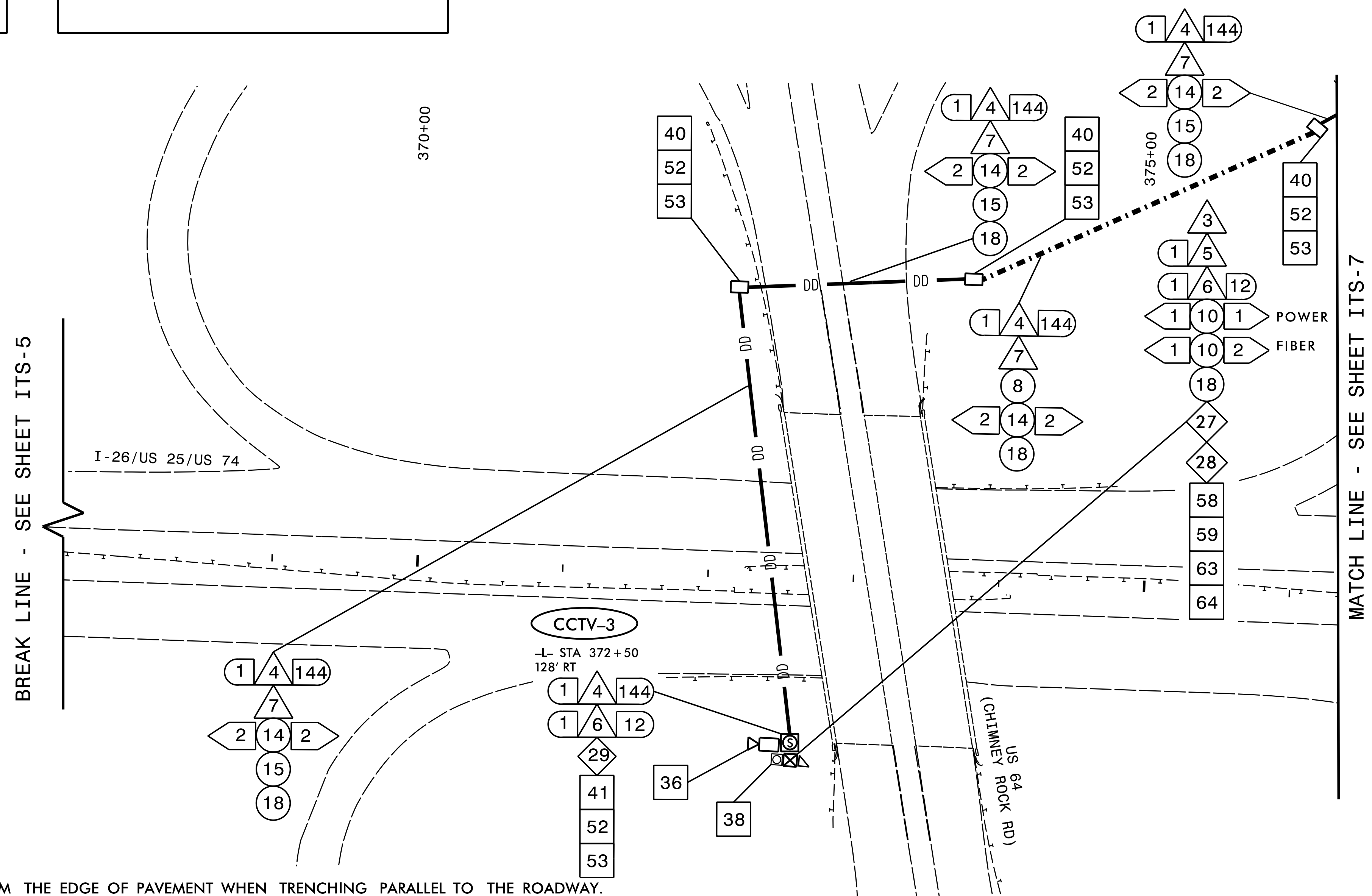
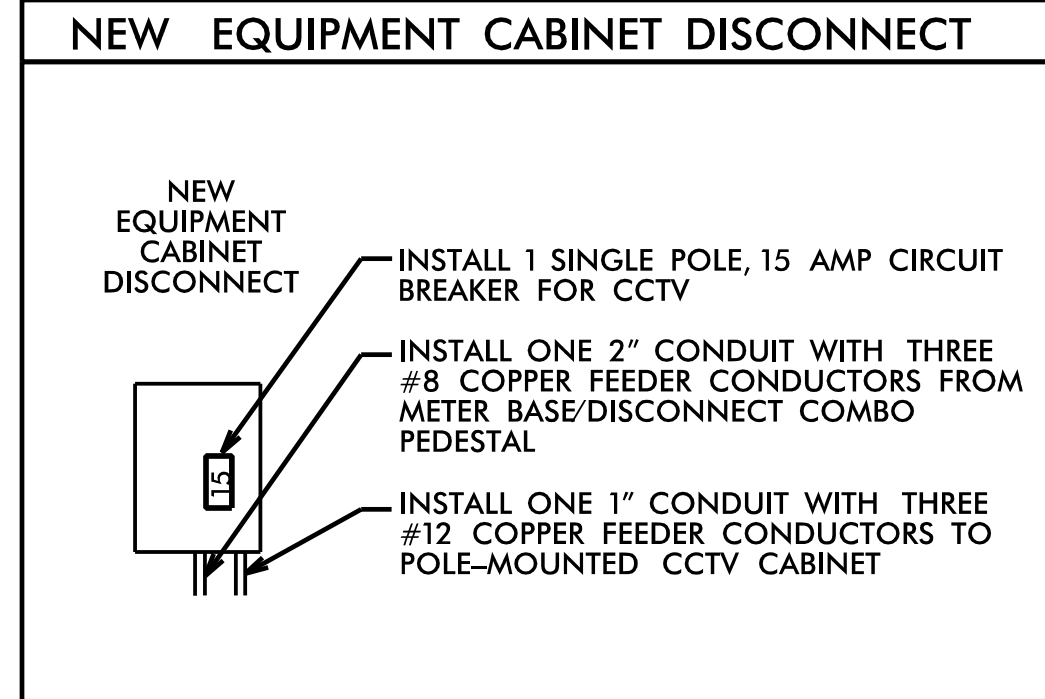
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<p>HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554 (919) 546-8997</p>	<p>I-4400BB CABLE ROUTING PLAN</p>									
	<p>Division 14 Henderson Asheville</p> <p>PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell</p> <p>PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		NO.	DATE	INIT.	DATE			
NO.	DATE	INIT.	DATE							

DRAWING 1 NEW ELECTRICAL SERVICE EQUIPMENT



DRAWING 2 NEW EQUIPMENT CABINET DISCONNECT



NOTES:

1. MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY.
2. CONTACT DEPUTY DIVISION TRAFFIC ENGINEER CHAD FRANKLIN FOR DIVISION 14 AT (828) 631-1151 TO CONFIRM THE LOCATION OF THE CCTV /DMS.
3. DO NOT INSTALL CONDUIT OR JUNCTION BOXES UNTIL THE PROPOSED LOCATION OF THE CCTV CAMERA /DMS HAS BEEN CONFIRMED BY THE DEPUTY DIVISION TRAFFIC ENGINEER.
4. INSTALL CONDUITS FOR FEEDER CONDUCTORS AND FIBER OPTIC CABLE IN THE SAME BORE AND /OR TRENCH. USE SEPARATE CONDUITS, RED FOR POWER AND ORANGE FOR COMMUNICATIONS.
5. DO NOT INSTALL ELECTRICAL POWER CONDUCTORS AND FIBER-OPTIC CABLE INSIDE THE SAME JUNCTION BOX.
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Plans Prepared for:

I-4400BB
CABLE ROUTING PLAN

Division 14 Henderson Asheville

PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell

PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons

REVISIONS	INIT.	DATE

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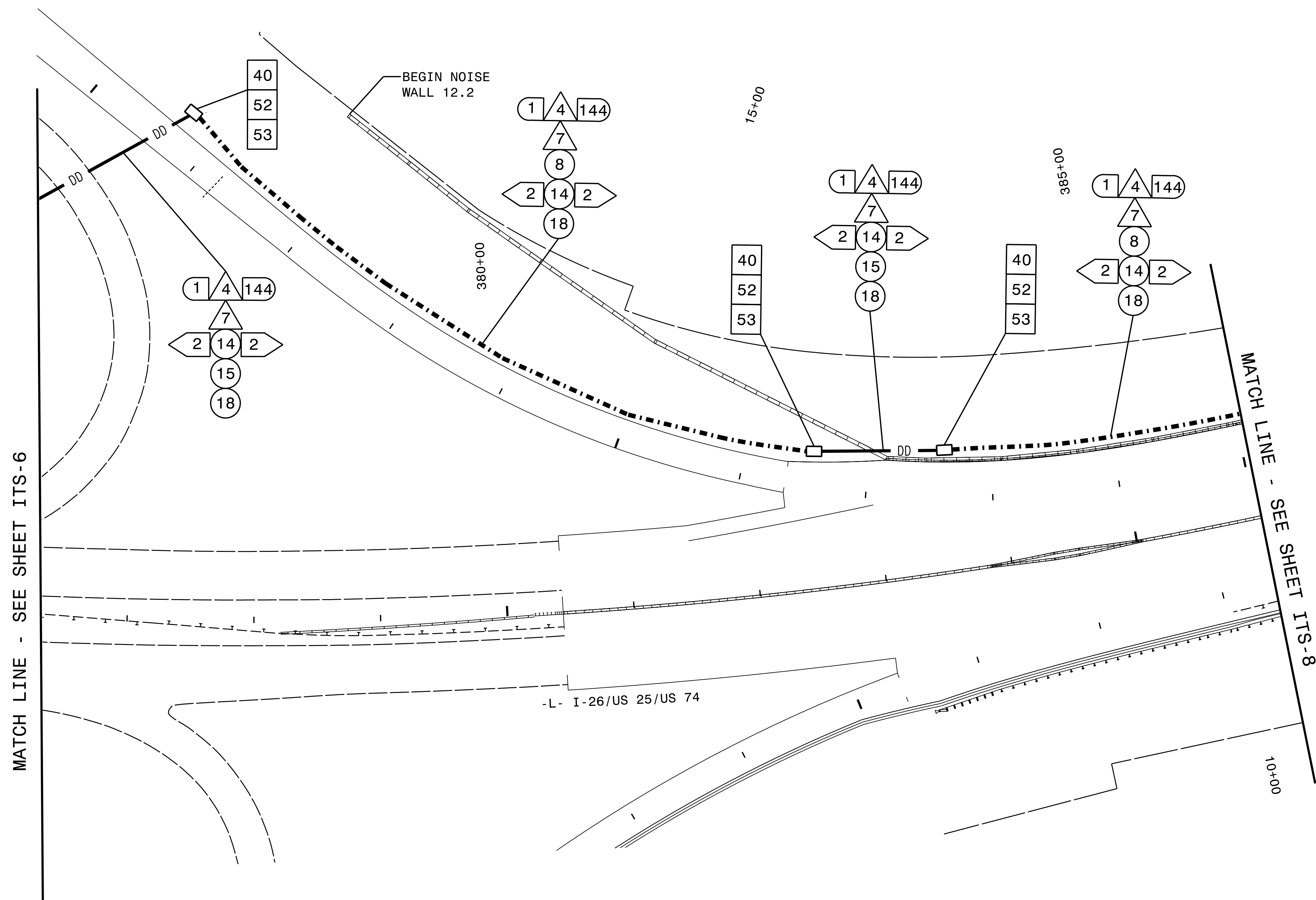
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Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 048072
RAKESH NUNE

DocuSigned by:
Rakesh Nune 4/26/2019

SIGNATURE DATE

CADD Filename: I-4400BB ITS-06.dgn



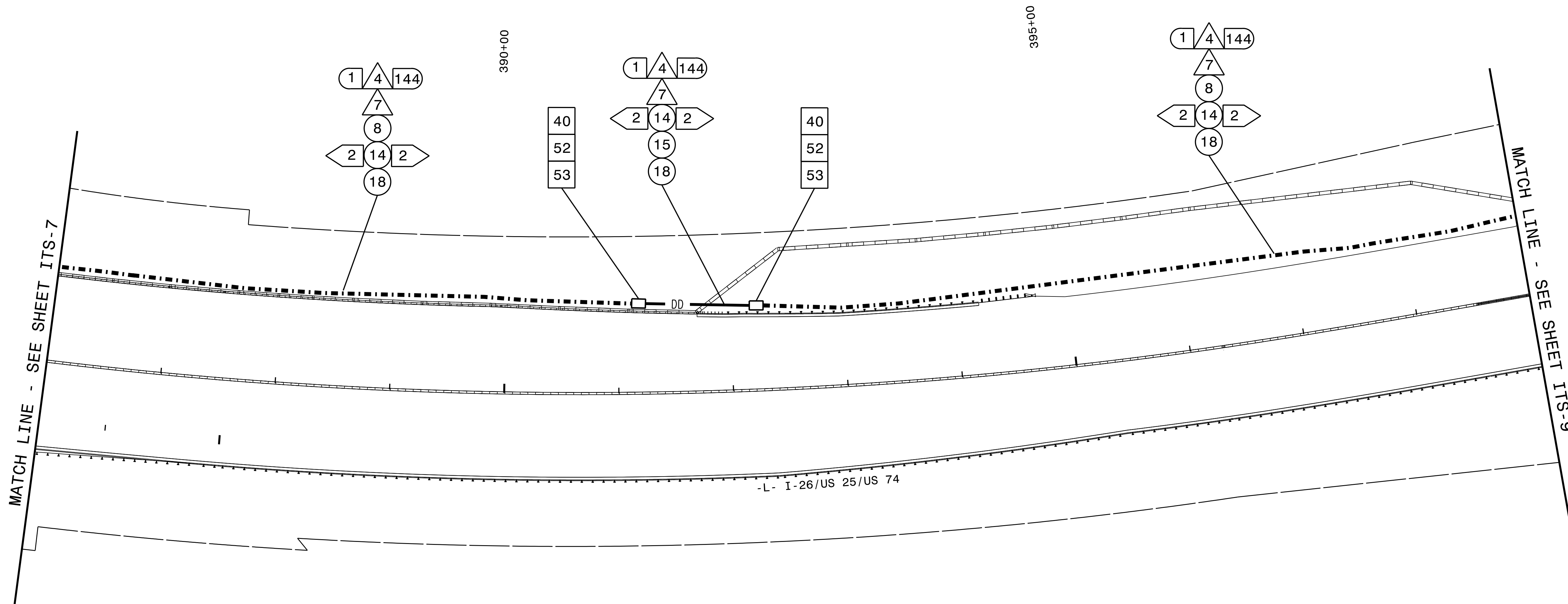
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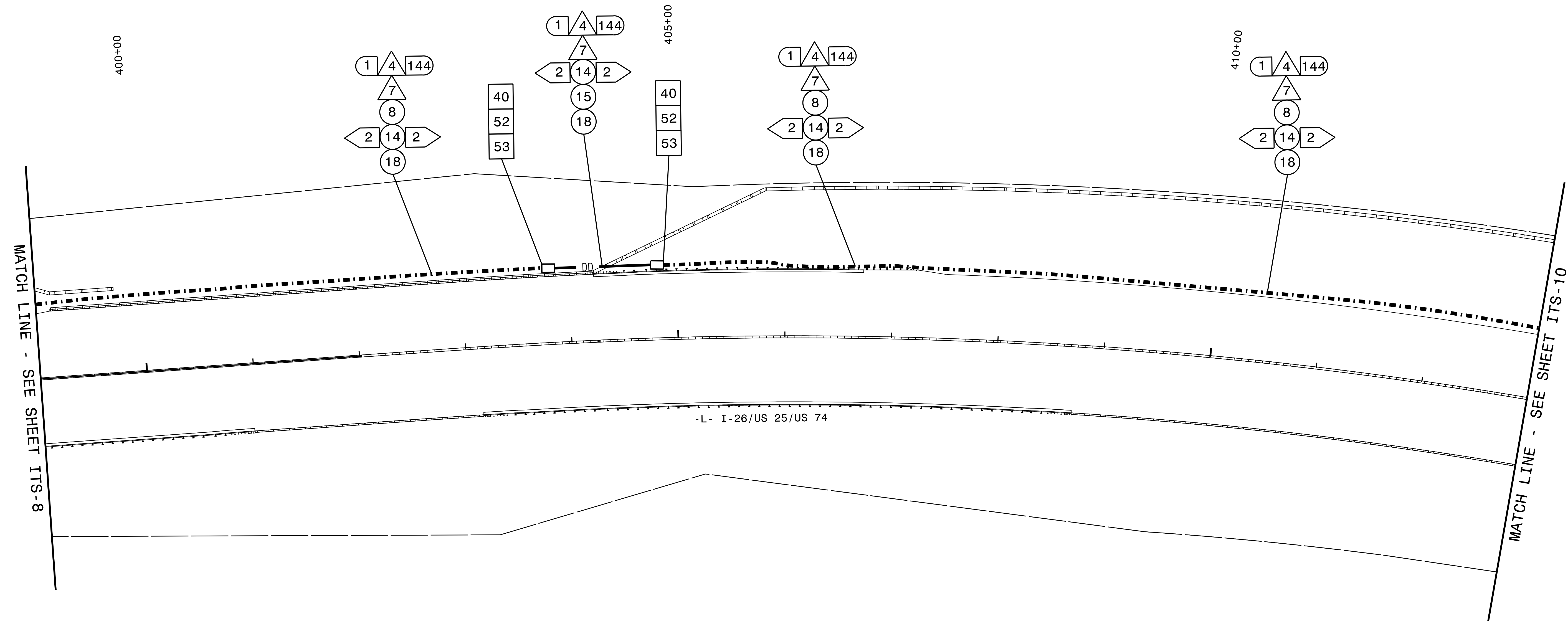
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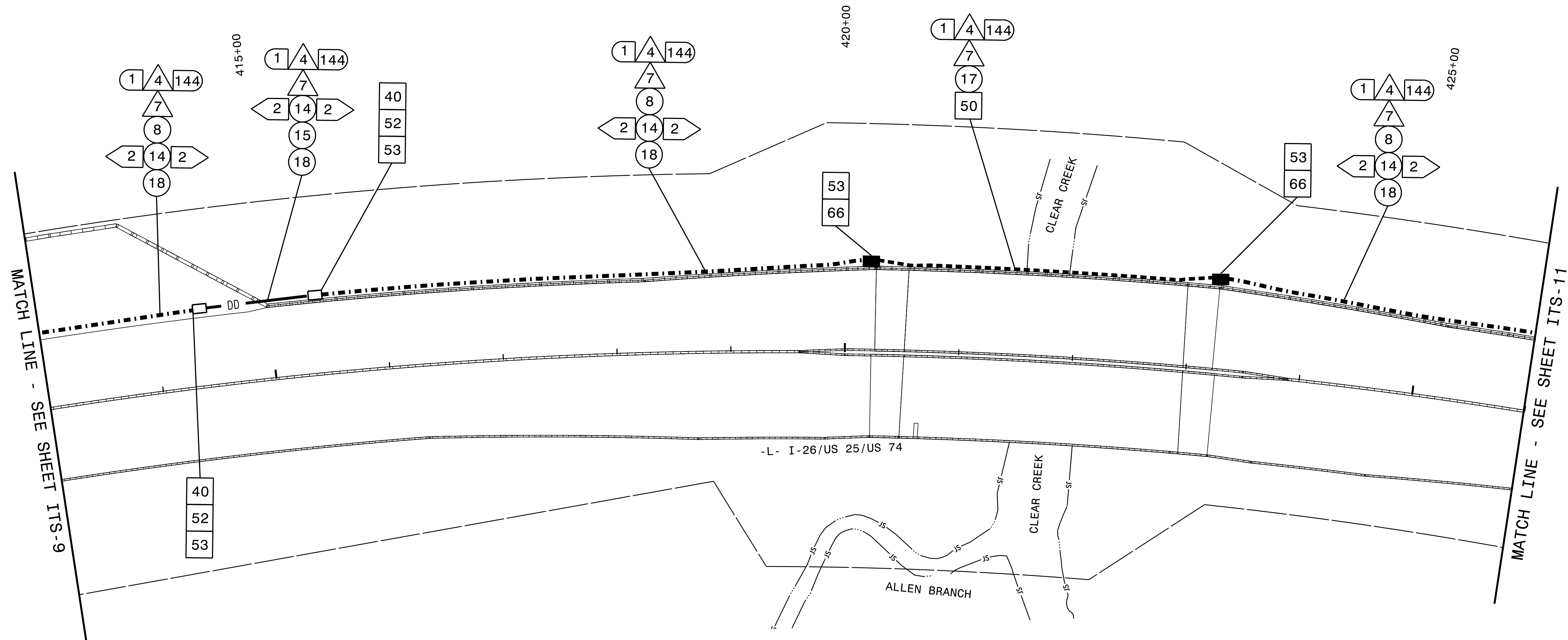
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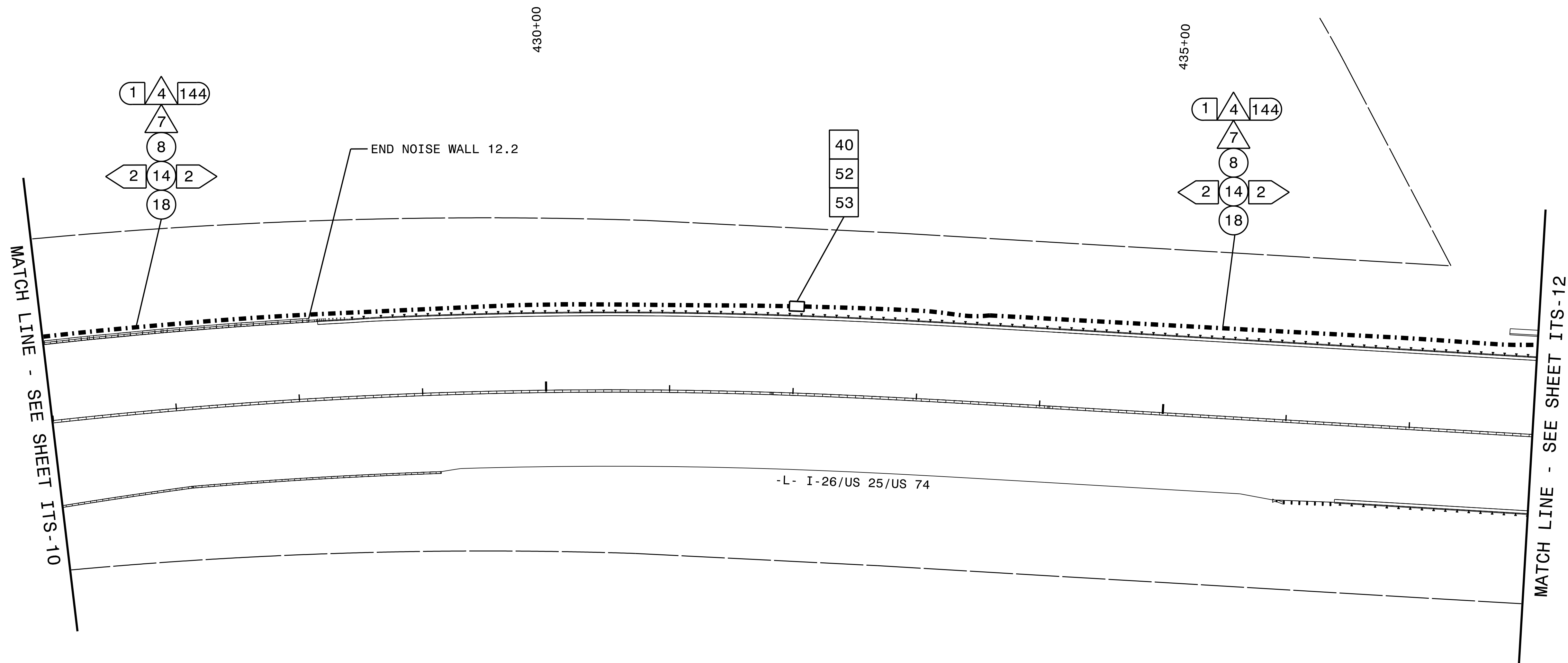
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	Division 14 Henderson Asheville		
250 N. Greenfield Place, Garner, NC 27529	PLAN DATE: November 2018	REVIEWED BY: T.R. Terrell	DocuSigned by: Rakesh Nune 7/9/2019
SCALE 0 50 1"=50'	PREPARED BY: Atizaz Ali	REVIEWED BY: N.R. Simmons	REVISIONS INIT. DATE
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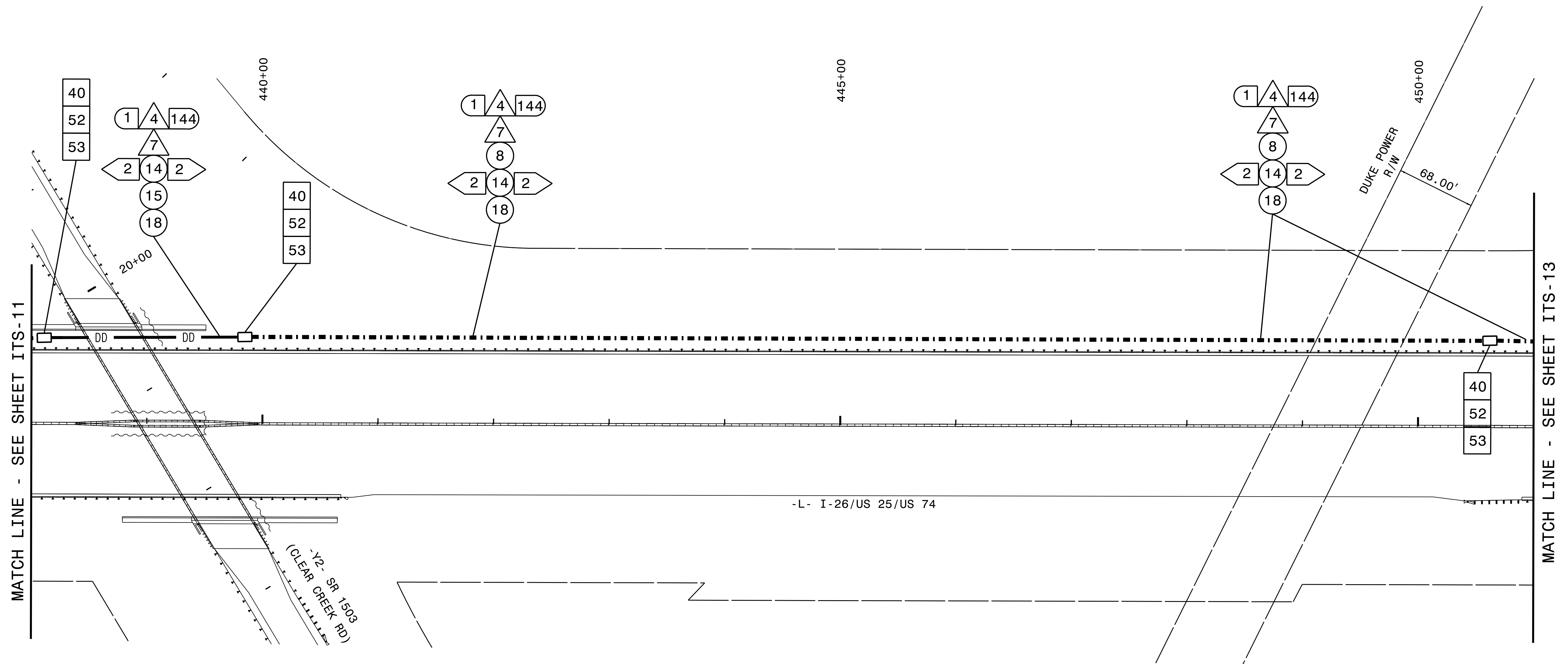
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<p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>PREPARED BY: Atizaz Ali</p>	<p>REVIEWED BY: N.R. Simmons</p>	<p>DocuSigned by: Rakesh Nune 7/9/2019</p>							
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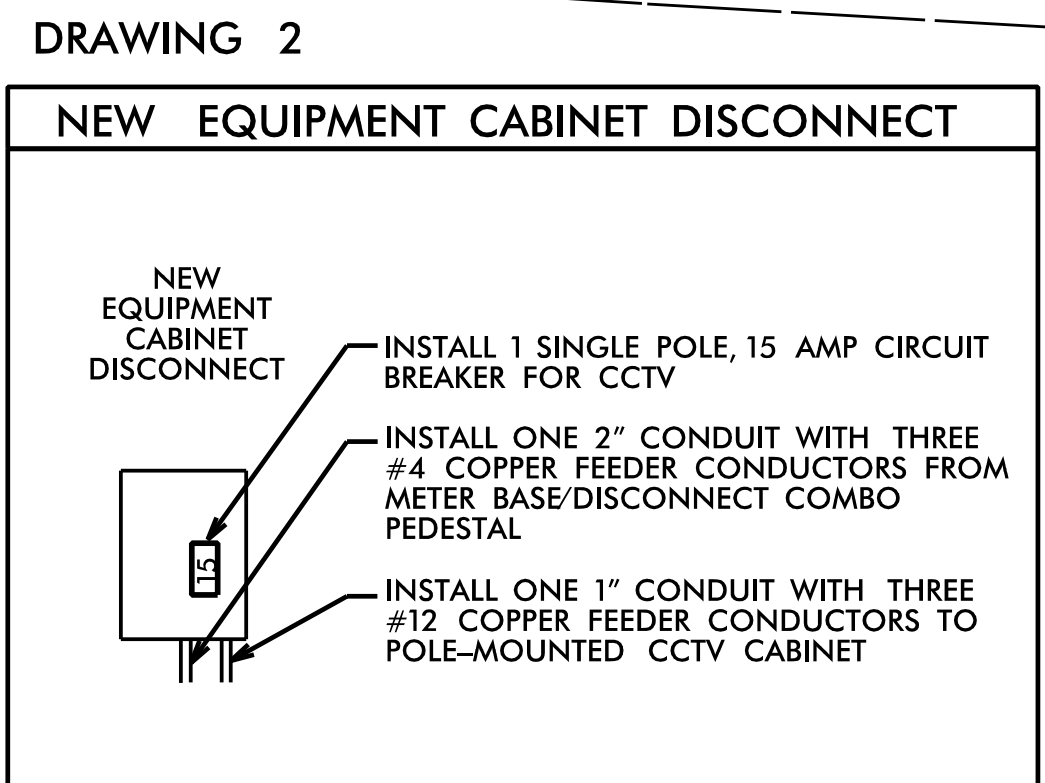
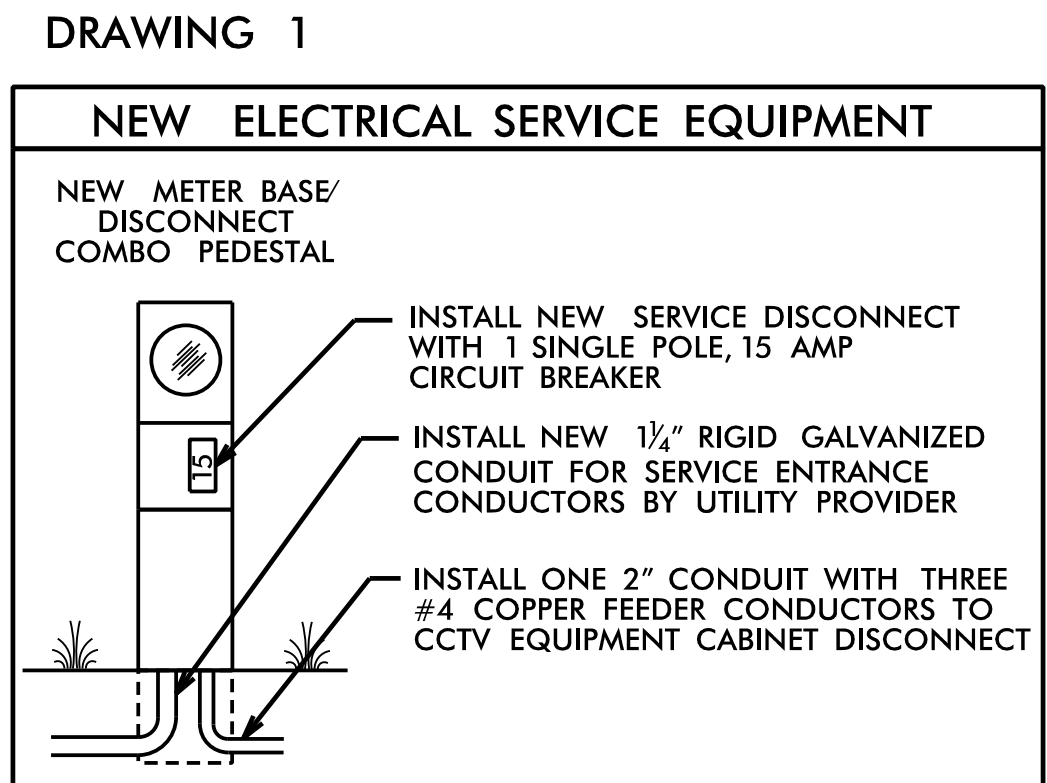
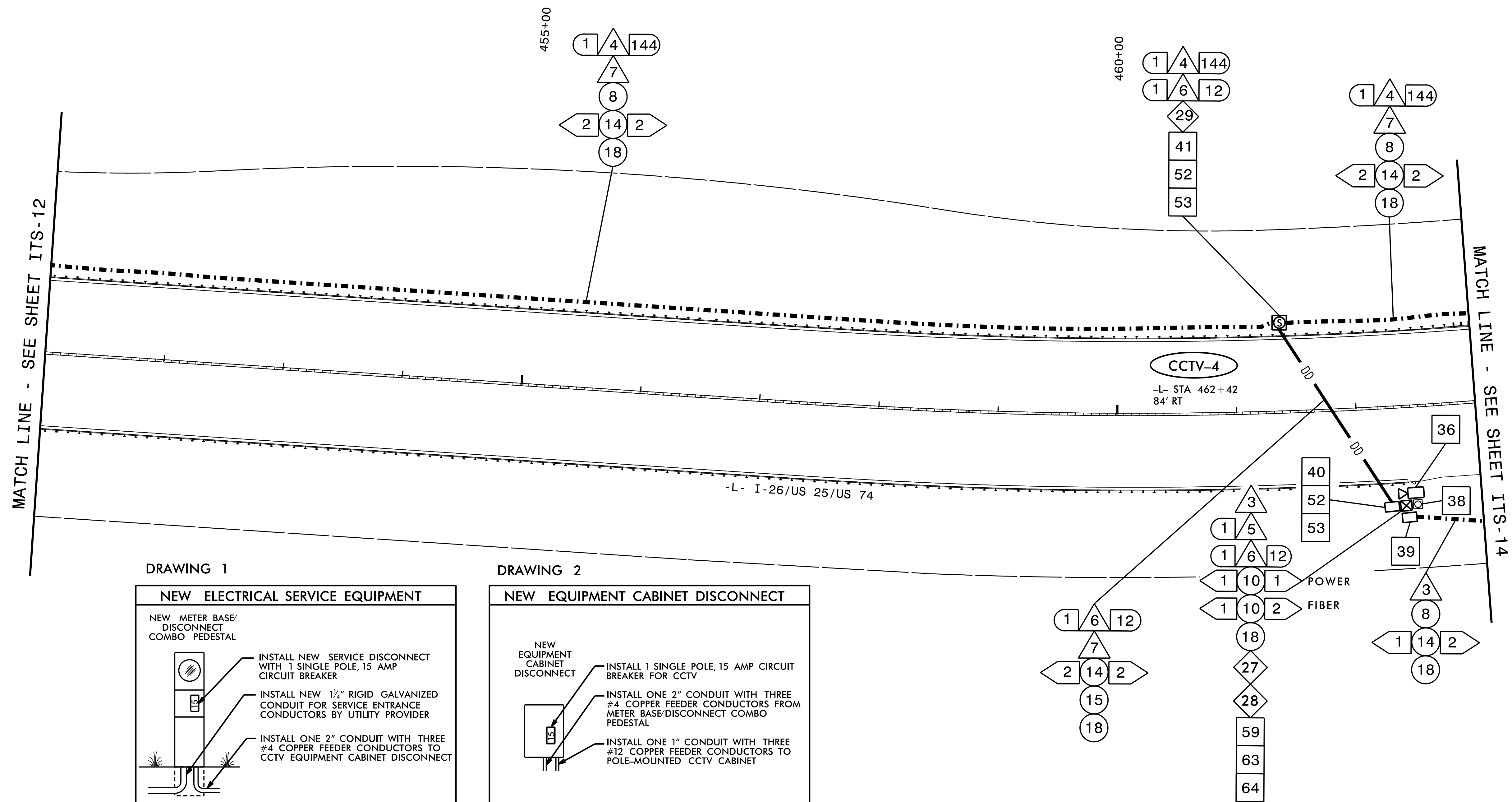
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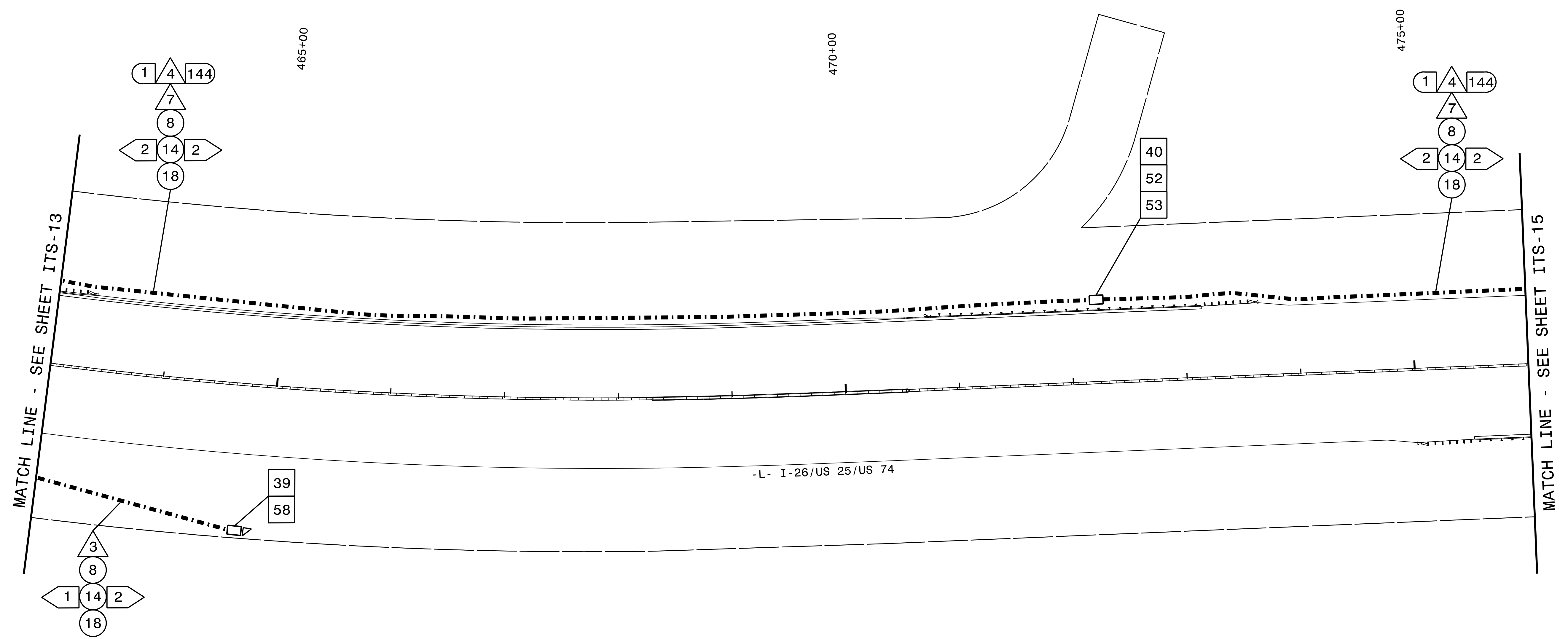


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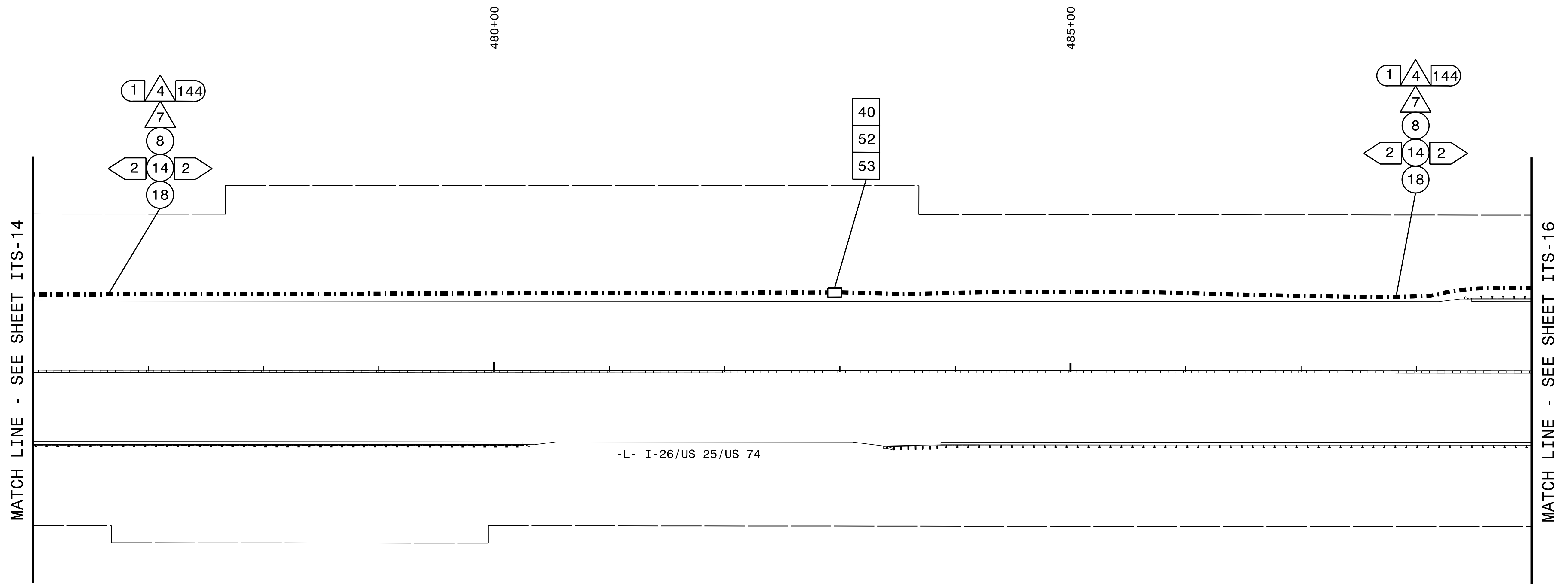
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	Division 14 Henderson Asheville	PLANNED BY: November 2018		REVIEWED BY: T.R. Terrell								
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MATCH LINE - SEE SHEET ITS-14

MATCH LINE - SEE SHEET ITS-16



NOTES:

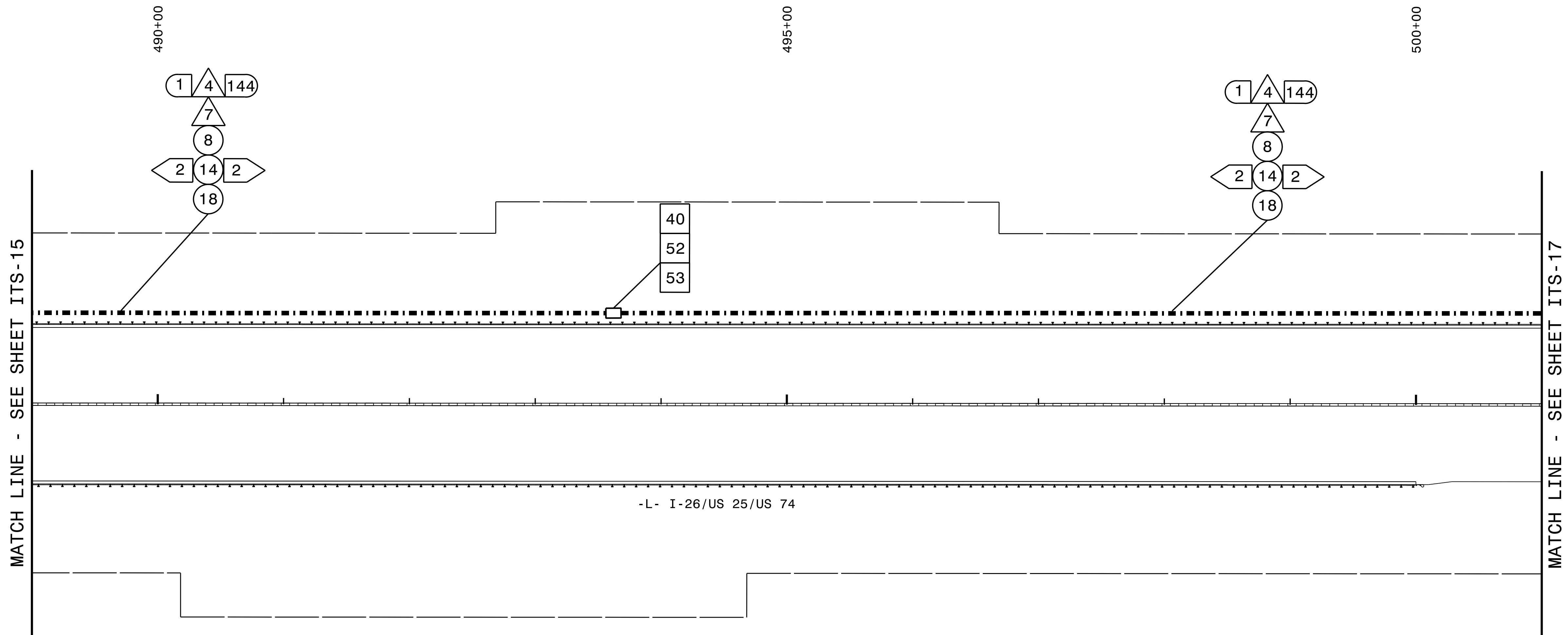
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(919) 546-8997

Plans Prepared for:  250 N. Greenfield Place, Garner, NC 27529	I-4400BB CABLE ROUTING PLAN		SEAL  ENGINEER RAKESH NUNE
	Division 14 Henderson Asheville	PLAN DATE: November 2018	
PREPARED BY: Atizaz Ali	REVIEWED BY: N.R. Simmons	REVISIONS	INIT. DATE
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CADD File name: I-4400BB ITS-15.dgn			DATE





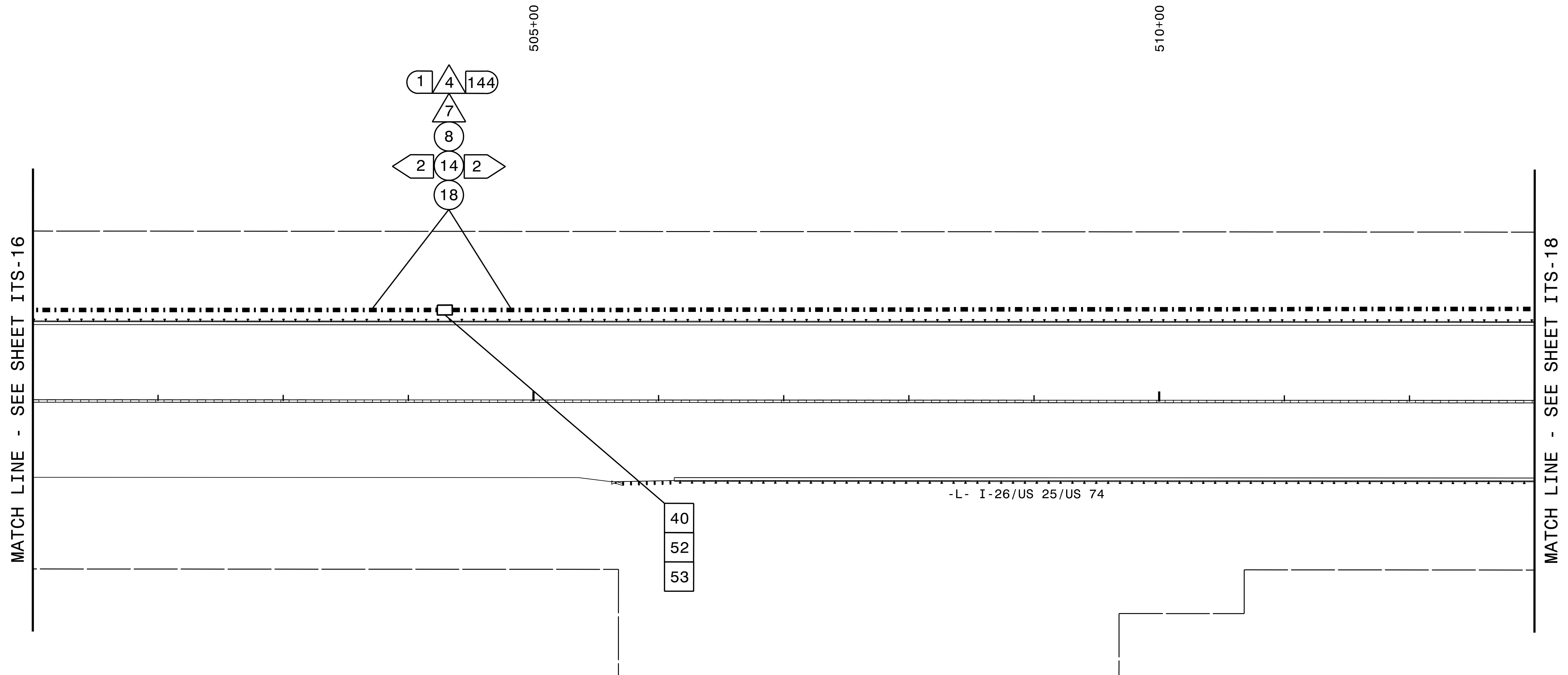
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 Plans Prepared for: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 250 N. Greenfield Place, Garner, NC 27529	I-4400BB CABLE ROUTING PLAN		
	Division 14 Henderson Asheville PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons	DocuSigned by: Rakesh Nune 4/26/2019 SIGNATURE DATE CADD Filename: I-4400BB ITS-16.dgn	



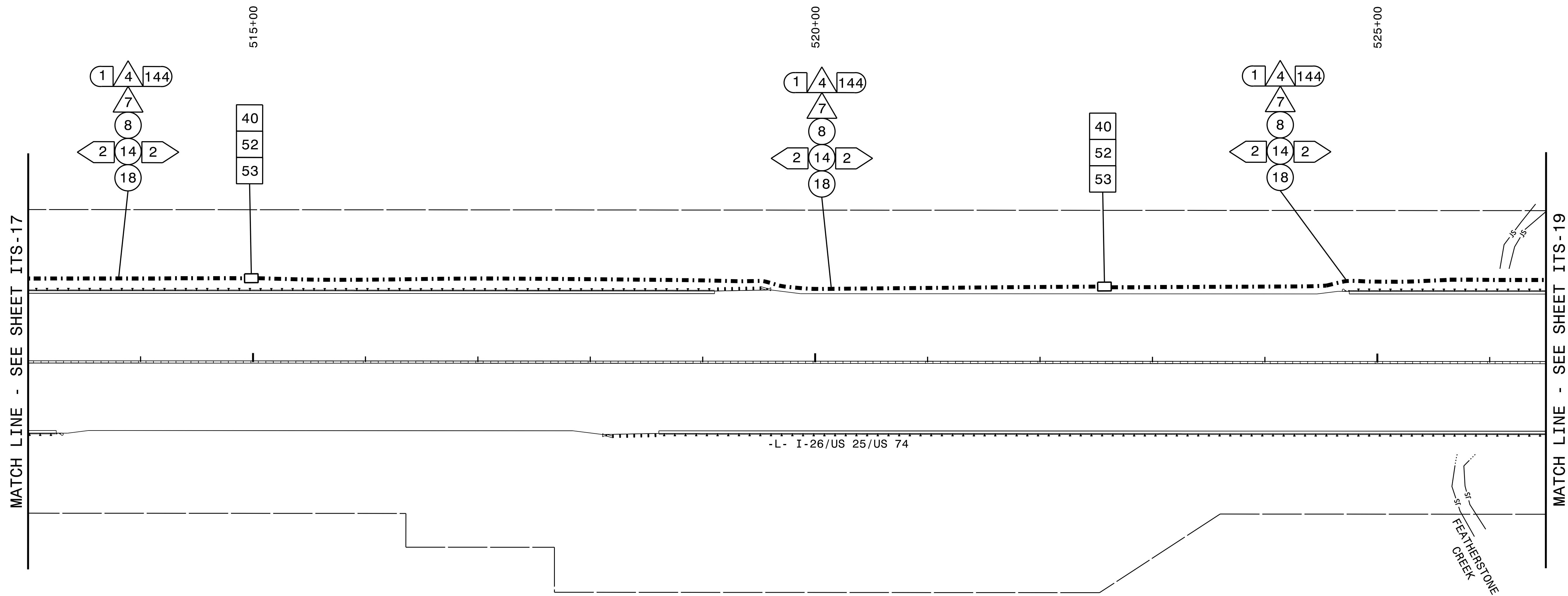
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	<p>Division 14 Henderson Asheville</p>	<p>PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell</p>		<p>PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons</p>					
<p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>SCALE 0 50 1"=50'</p>	<table border="1"> <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				<p>DocuSigned by: Rakesh Nune 4/26/2019</p> <p>SIGNATURE DATE</p>
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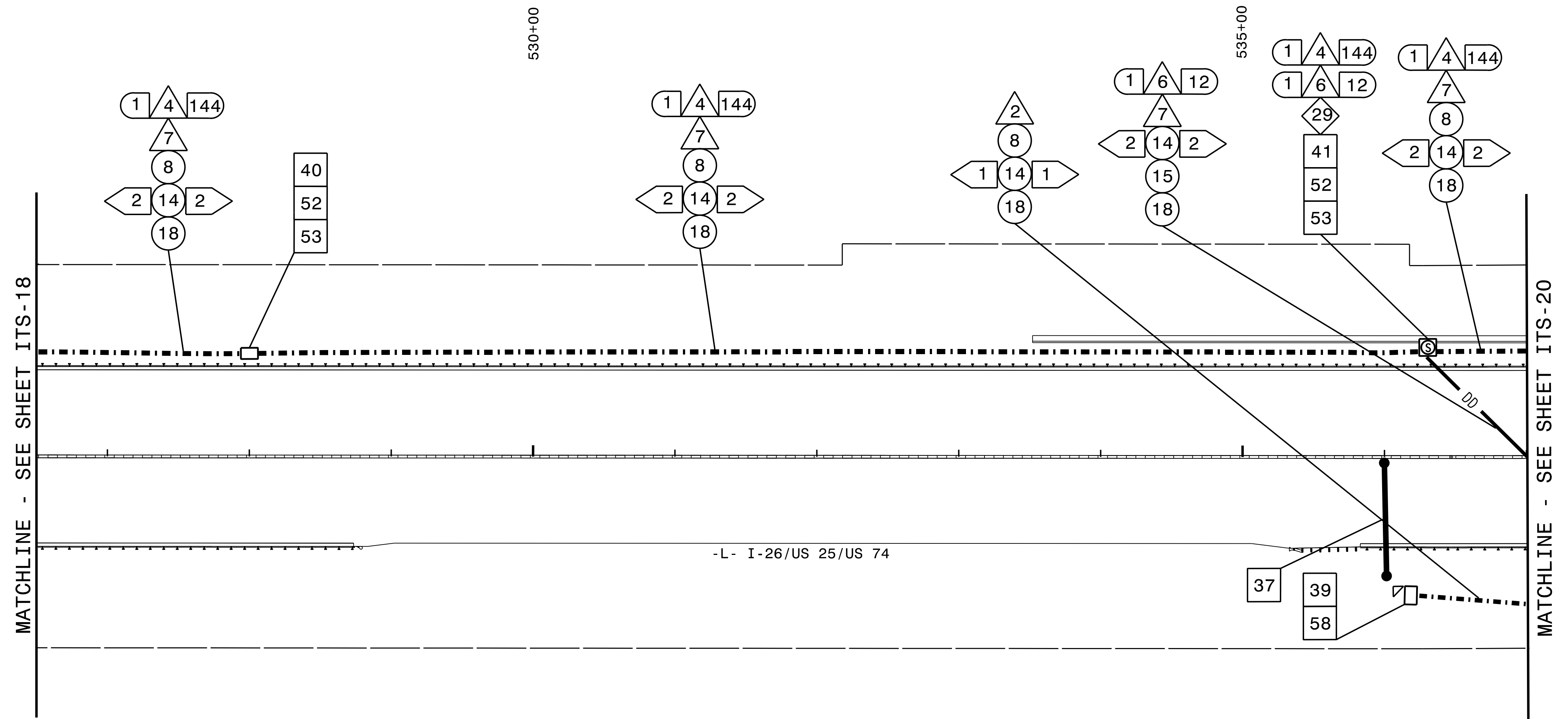
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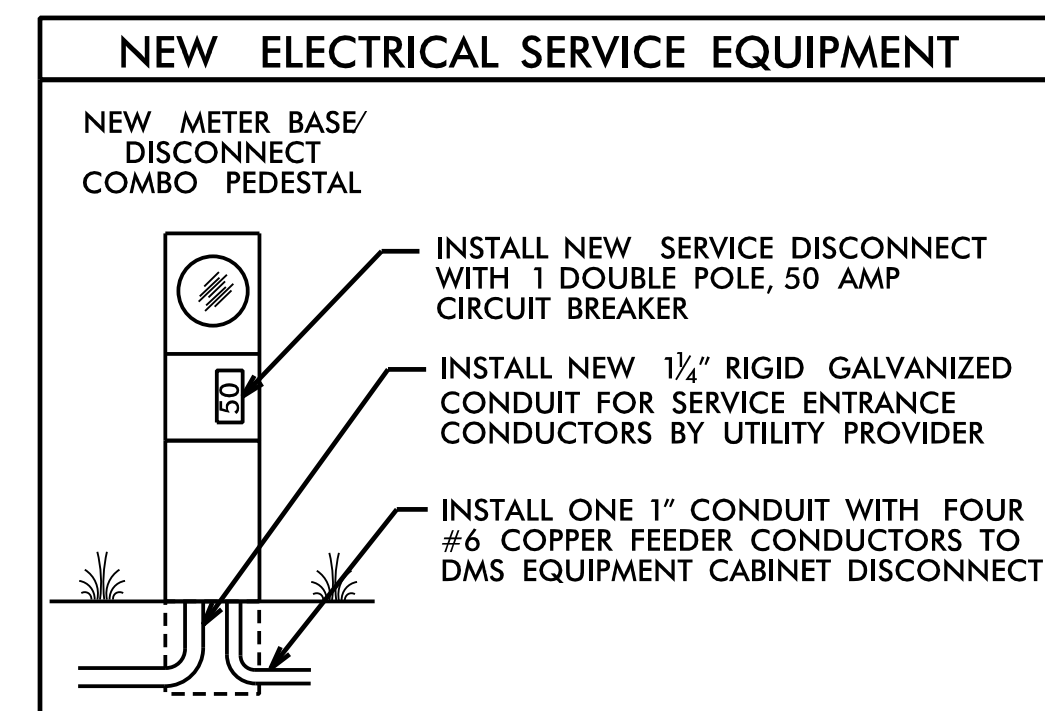
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	I-4400BB CABLE ROUTING PLAN		
	Division 14 Henderson Asheville	PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell	
759 N. Greenfield Place, Garner, NC 27529	SCALE 0 50 1"=50'	REVISIONS INIT. DATE	DocuSigned by: Rakesh Nune 4/26/2019 SEAL SIGNATURE DATE CADD Filename: I-4400BB ITS-18.dgn



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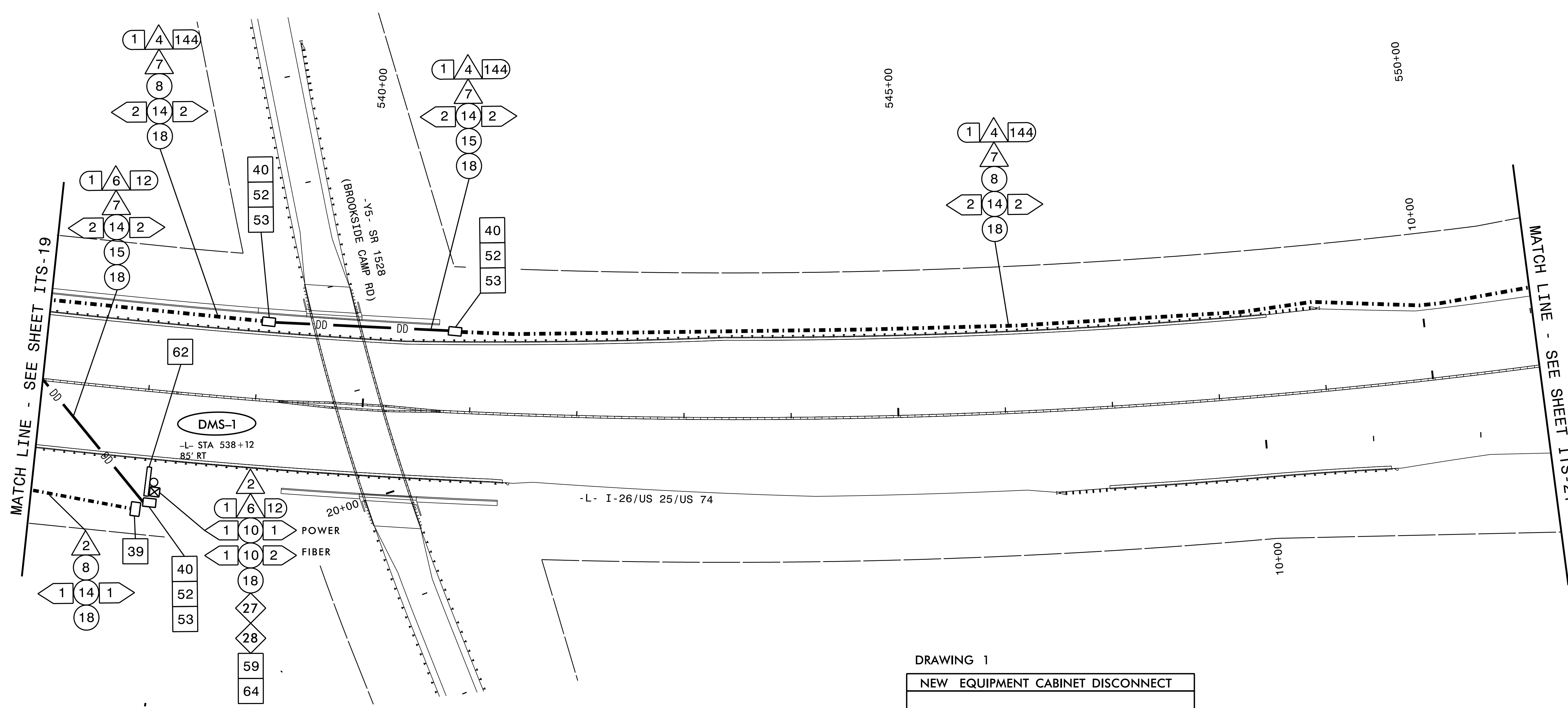
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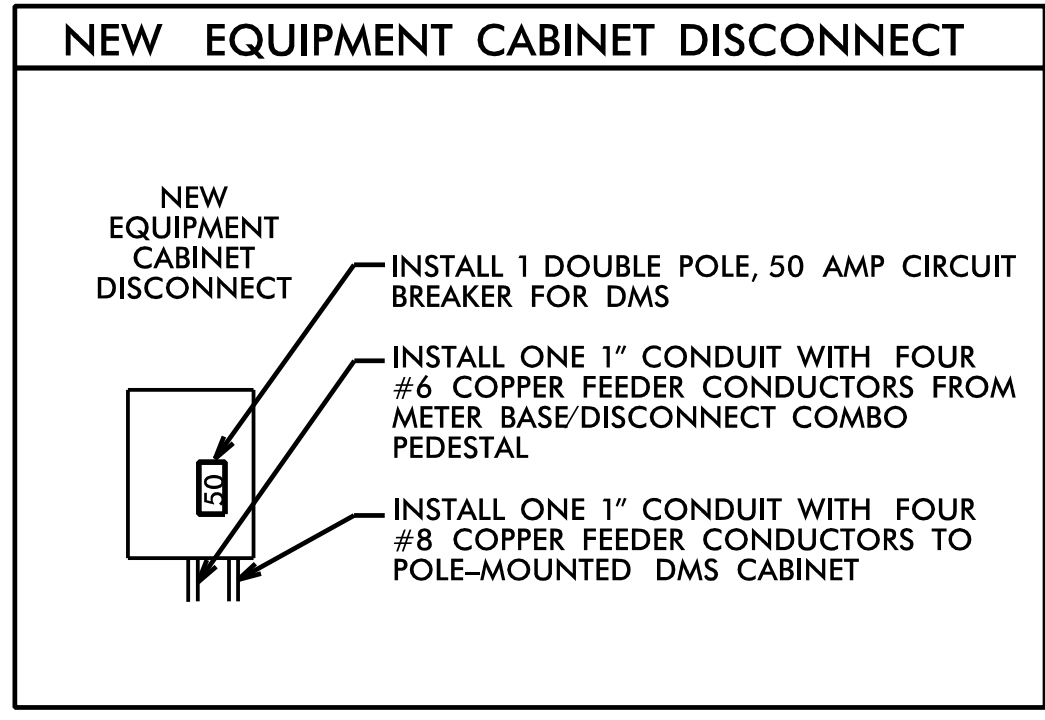
Plans Prepared for: 	I-4400BB CABLE ROUTING PLAN		SEAL
	Division 14 Henderson Asheville		
PLAN DATE: November 2018	REVIEWED BY: T.R. Terrell		
PREPARED BY: Atizaz Ali	REVIEWED BY: N.R. Simmons		
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DRAWING 1



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Plans Prepared for:

250 N. Greenfield Place, Garner, NC 27529

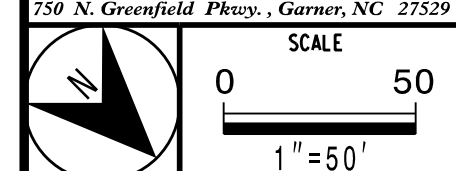
I-4400BB CABLE ROUTING PLAN	
Division 14 Henderson Asheville	
PLAN DATE: November 2018	REVIEWED BY: T.R. Terrell
PREPARED BY: Atizaz Ali	REVIEWED BY: N.R. Simmons
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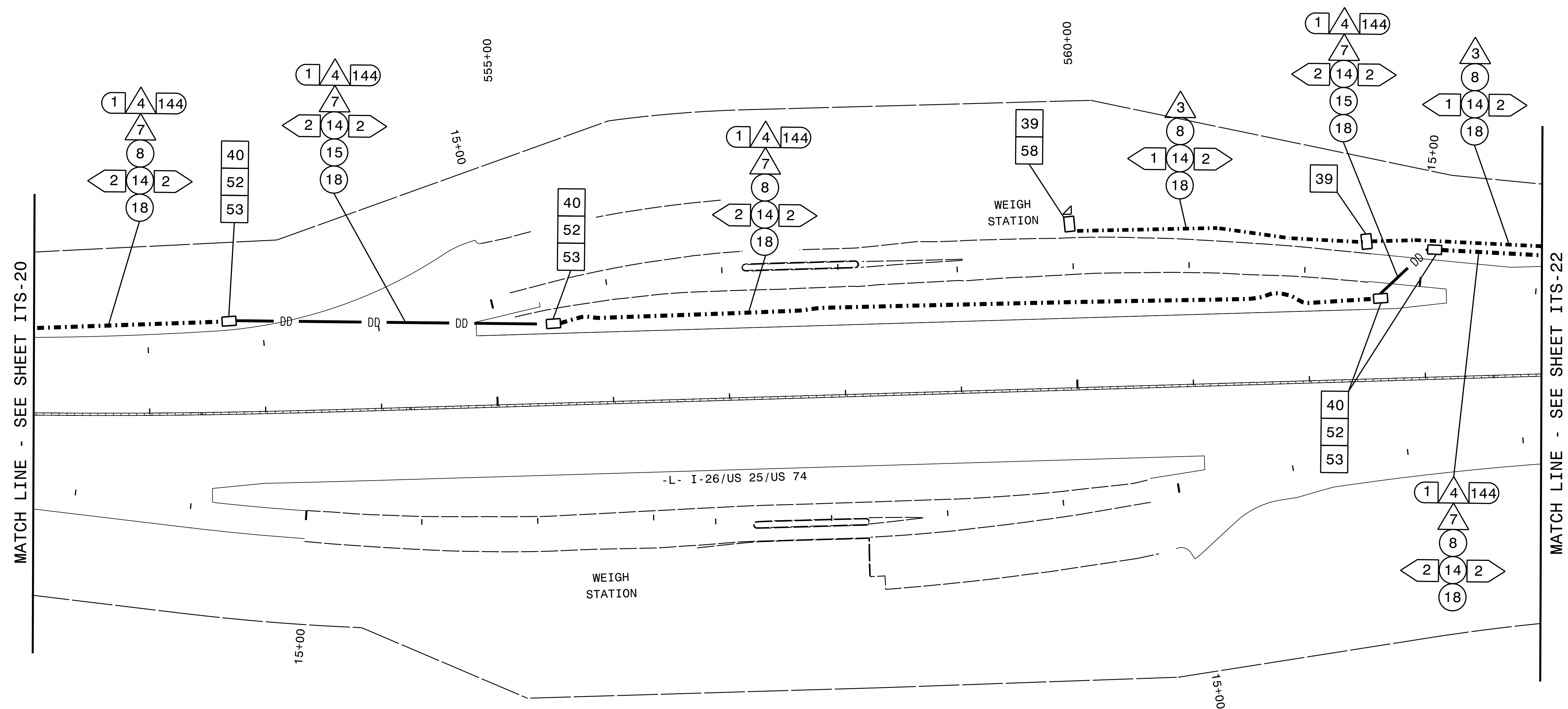
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DocuSigned by:
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4/26/2019

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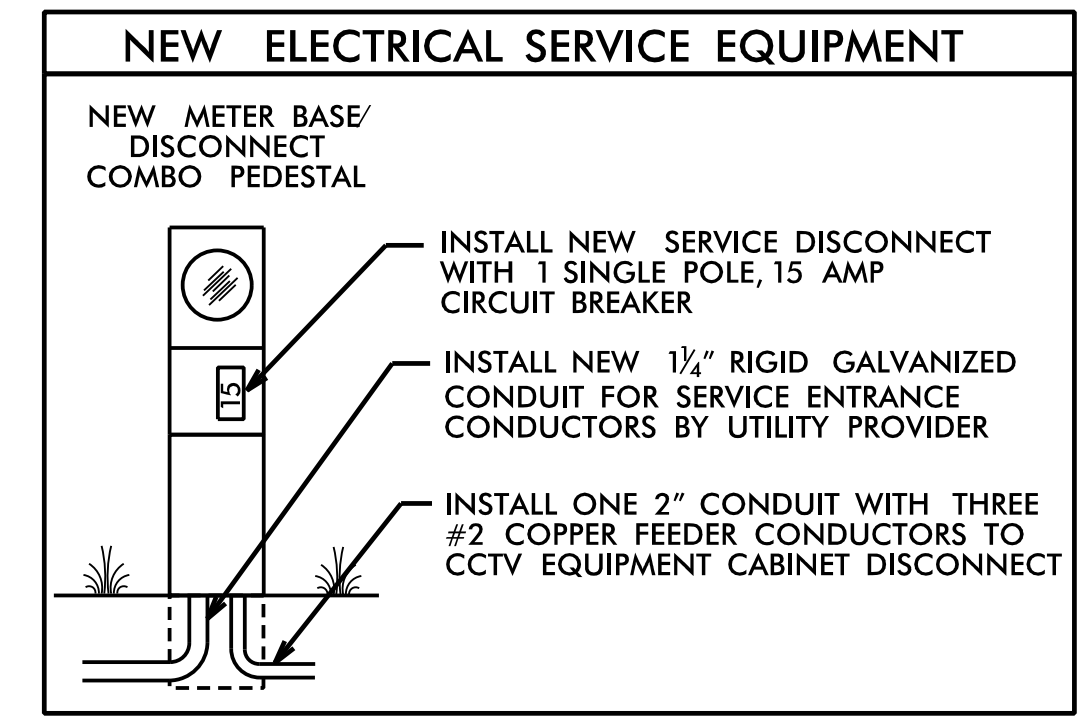




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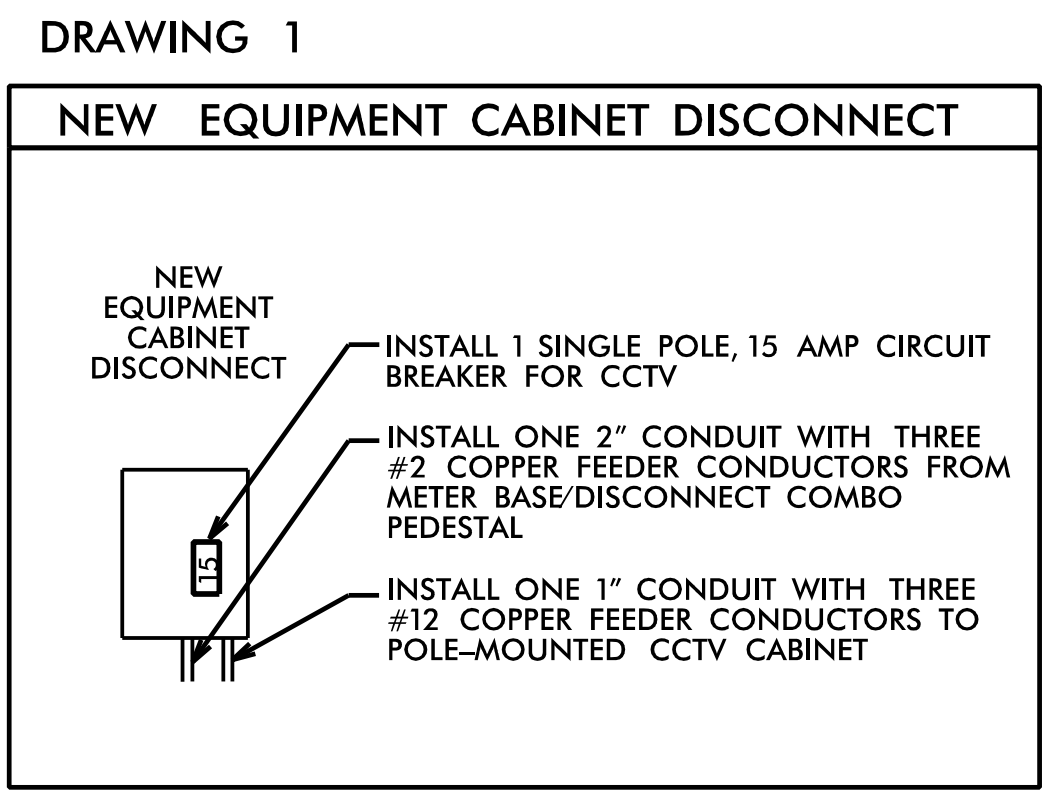
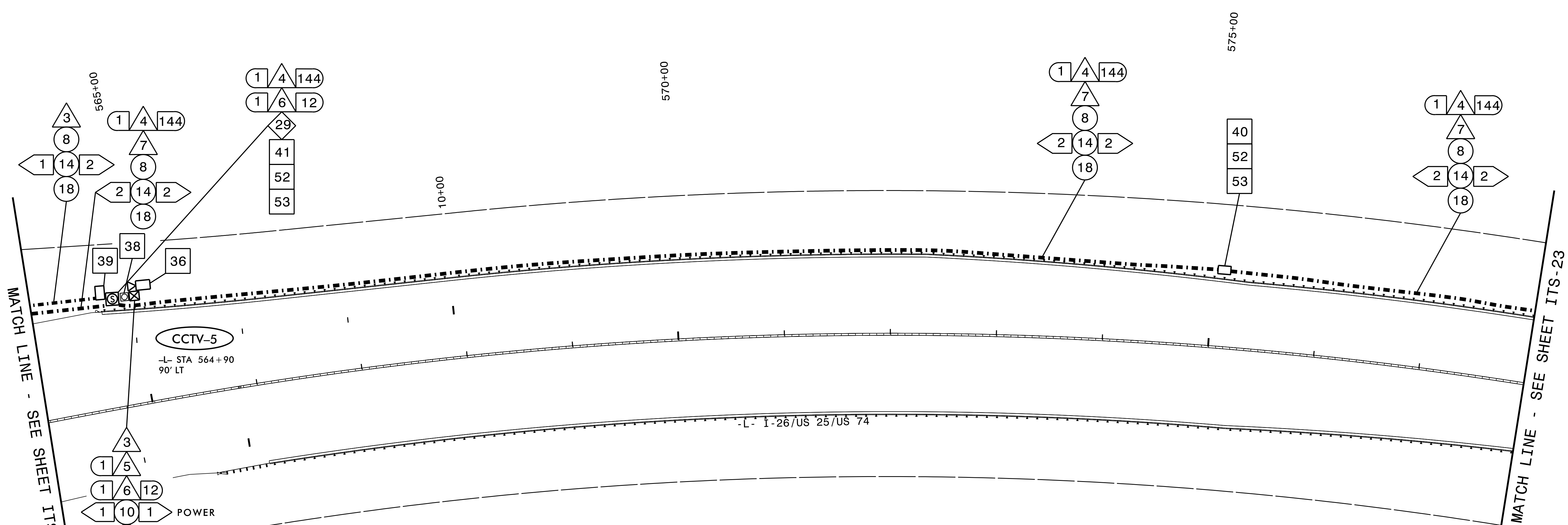
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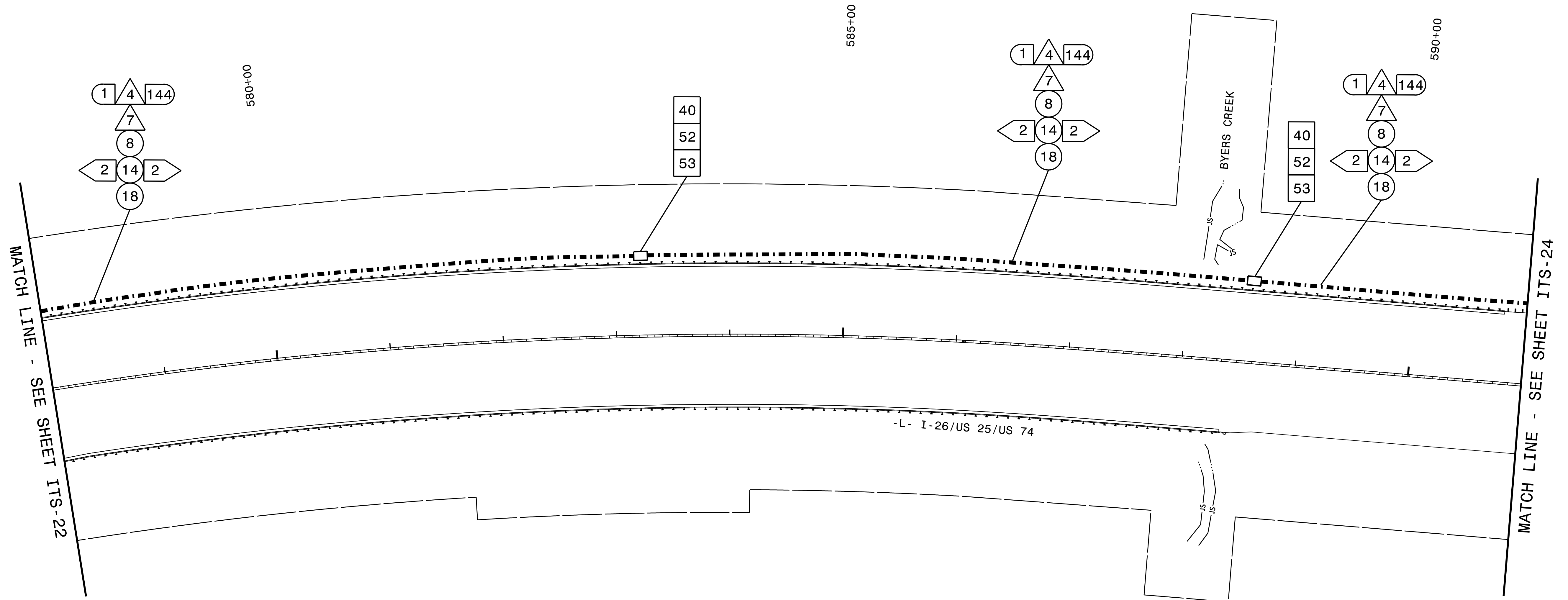
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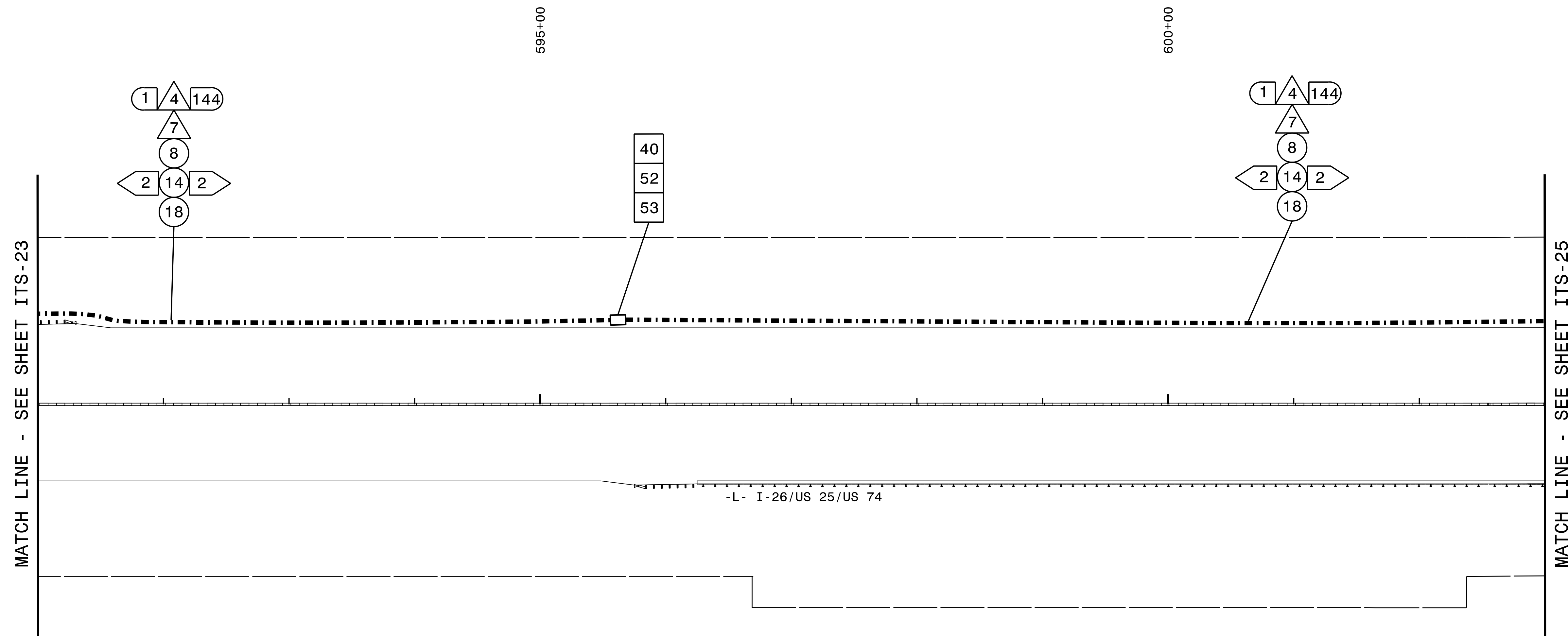
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**DOCUMENT NOT CONSIDERED FINAL
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Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	I-4400BB CABLE ROUTING PLAN		SEAL ENGINEER RAKESH NUNE
	Division 14 Henderson Asheville	PLAN DATE: November 2018	
PREPARED BY: Atizaz Ali	REVISIONS	REVIEWED BY: N.R. Simmons	DocuSigned by: Rakesh Nune 4/26/2019 SEAL SIGNATURE DATE CADD Filename: I-4400BB ITS-23.dgn

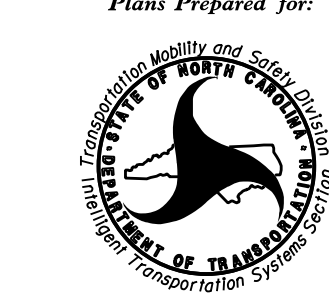



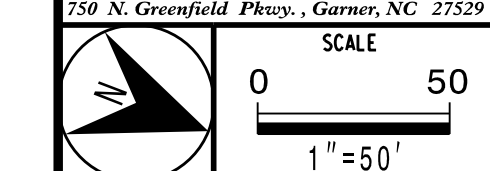
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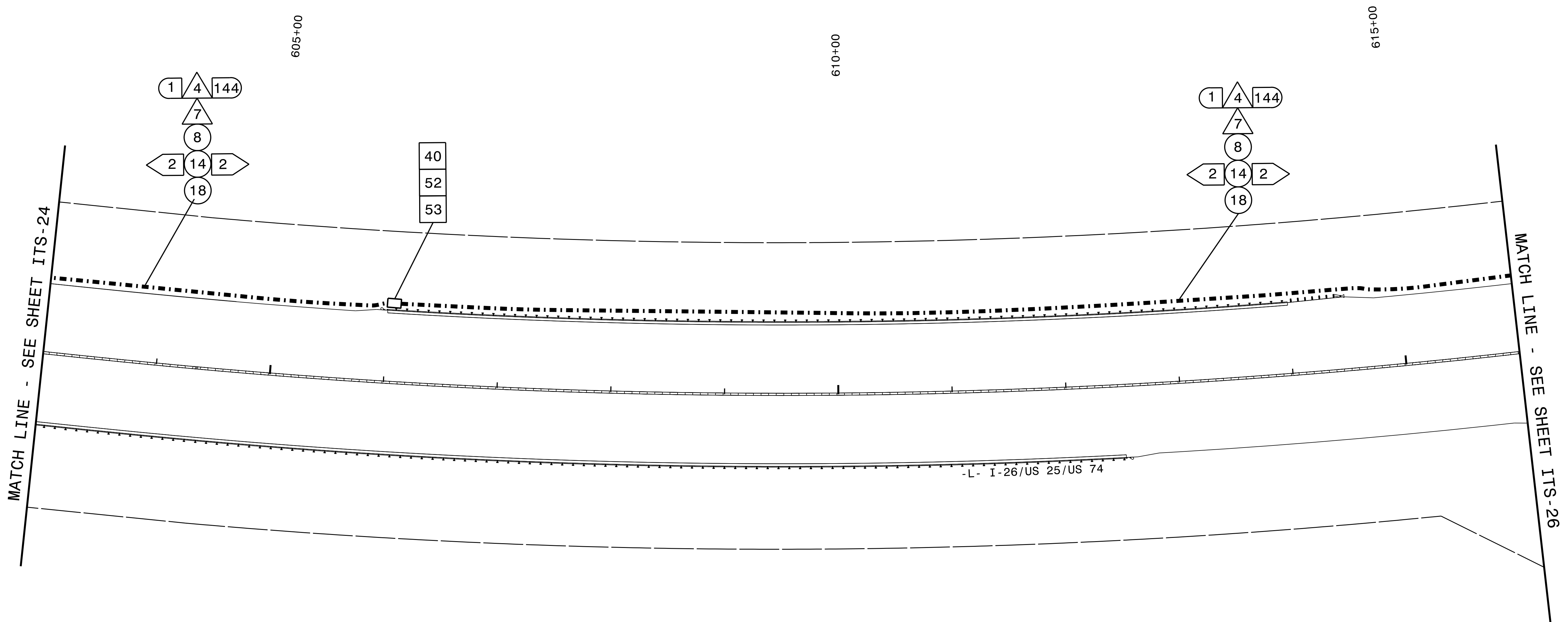
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 Plans Prepared for: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 250 N. Greenfield Place, Garner, NC 27529	I-4400BB CABLE ROUTING PLAN		
	Division 14 Henderson Asheville		
PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons	PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell	DocuSigned by: Rakesh Nune 4/26/2019 SIGNATURE DATE CADD Filename: I-4400BB ITS-24.dgn	





NOTES:

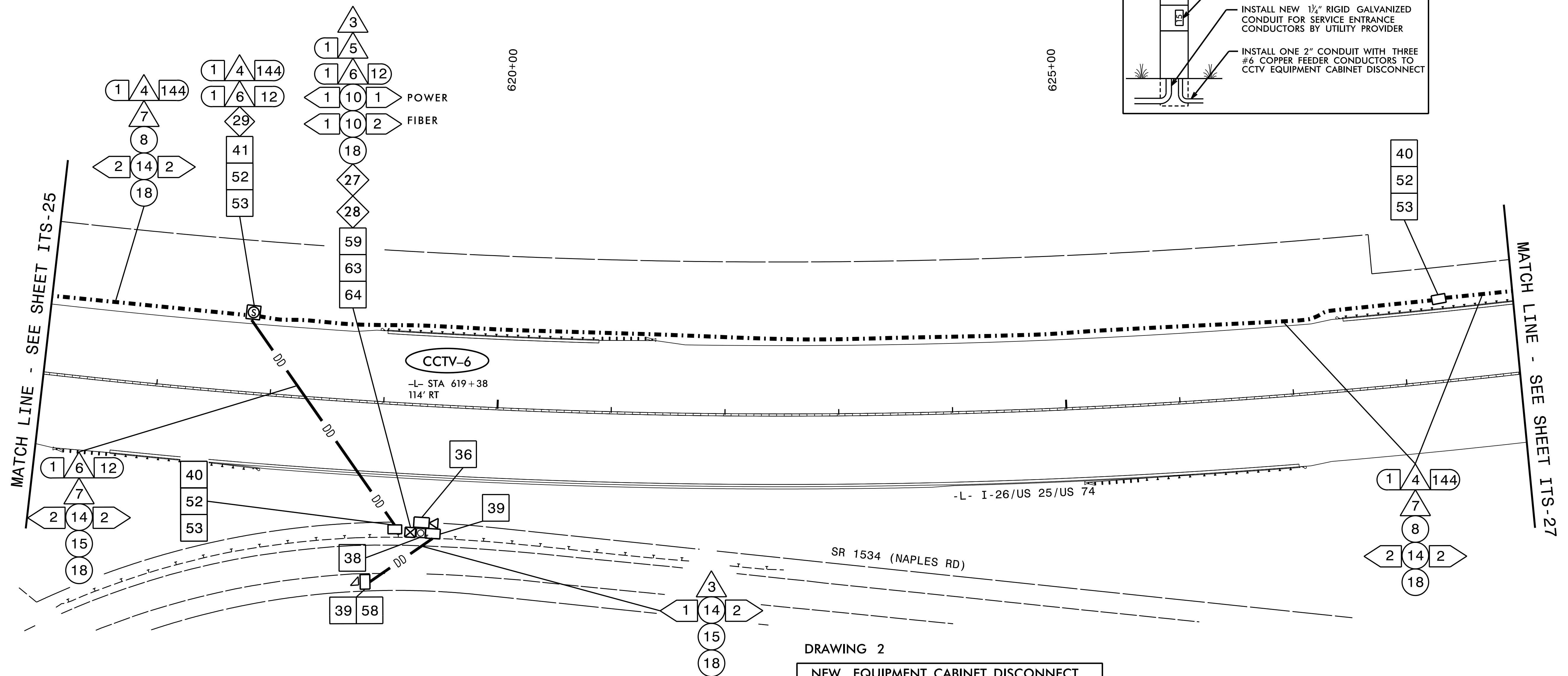
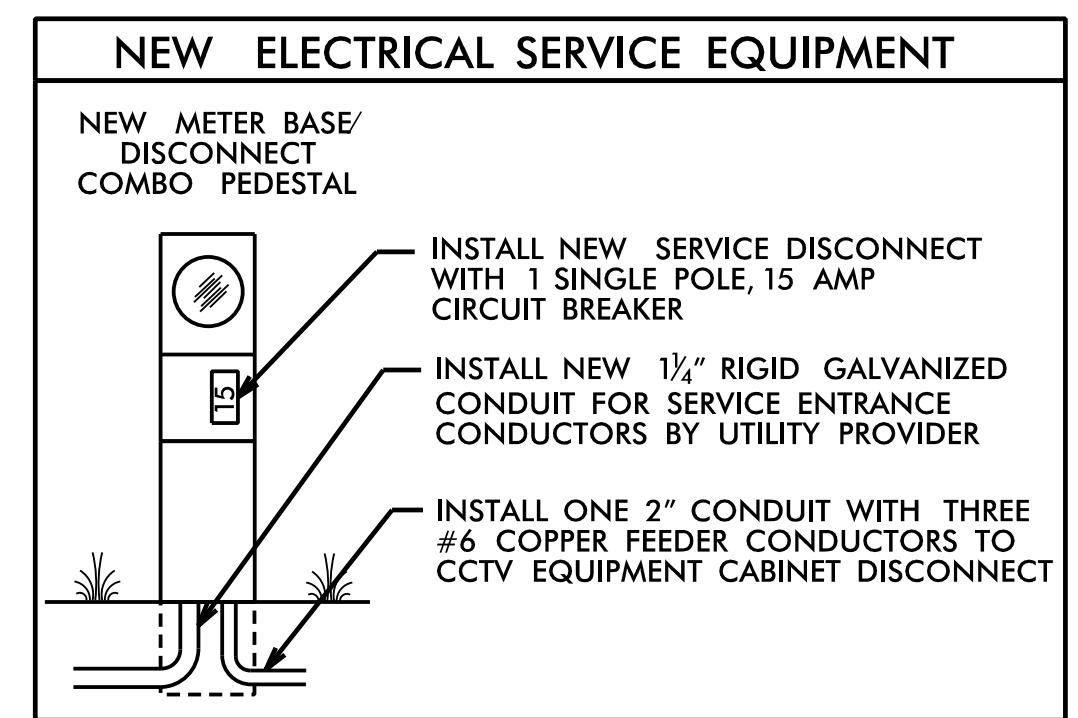
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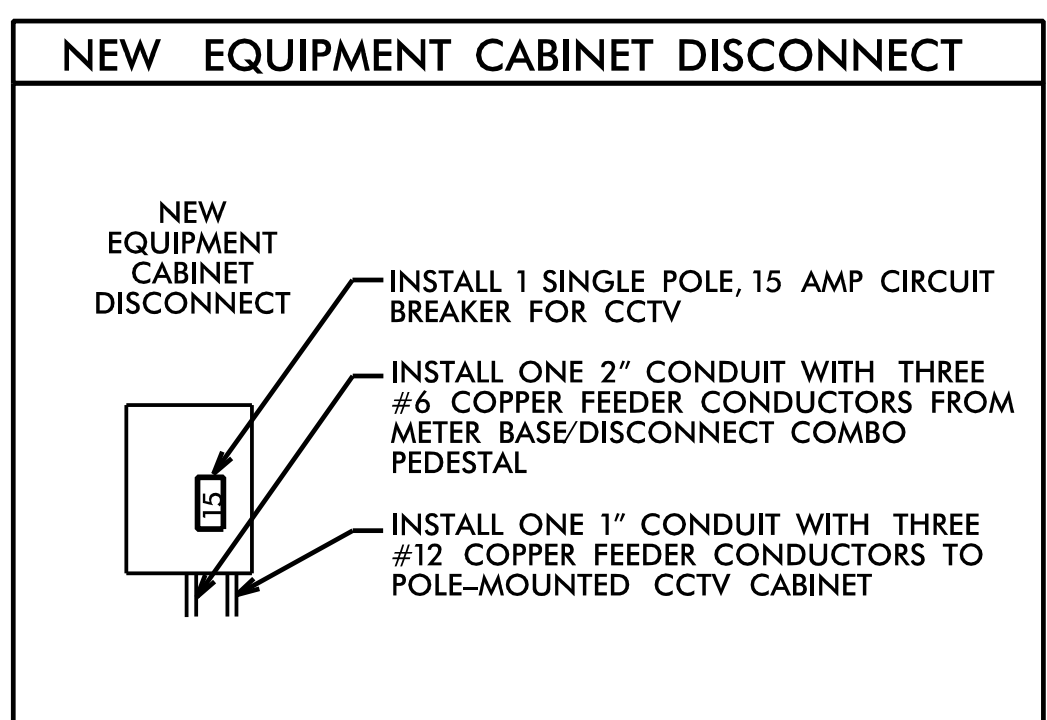
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	I-4400BB CABLE ROUTING PLAN								
	Division 14 Henderson Asheville	PLANNED BY: November 2018		REVIEWED BY: T.R. Terrell					
	SCALE 0 50 1"=50'	PREPARED BY: Atizaz Ali	REVIEWED BY: N.R. Simmons						
<table border="1"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS	INIT.	DATE				DocuSigned by: Rakesh Nune 4/26/2019 SEAL DATE CADD File name: I-4400BB ITS-25.dgn	
REVISIONS	INIT.	DATE							

DRAWING 1



DRAWING 2



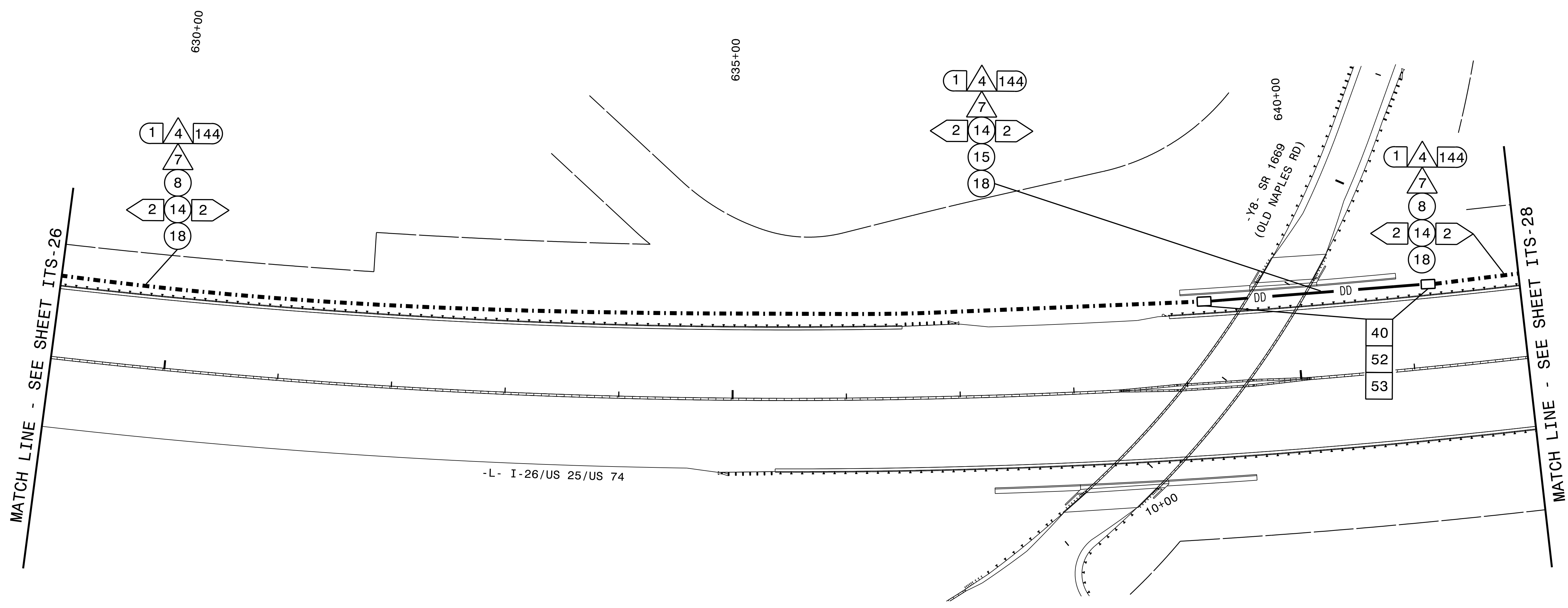
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12. SIX (6) WEEKS PRIOR TO BEGINNING WORK ON THE DEVICES, CONTACT THE DIVISION 14 DEPUTY TRAFFIC ENGINEER TO ARRANGE FOR THE DIVISION TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY SUBNET MASK AND VLAN ID INFORMATION, NOTIFY THE DEPUTY TRAFFIC ENGINEER AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTION PROPERLY. WORK IS NOT COMPLETE UNTIL THE SYSTEM IS BACK UP AND FUNCTIONAL.

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 Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	I-4400BB CABLE ROUTING PLAN		 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER RAKESH NUNE
	Division 14 Henderson Asheville PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons	DocuSigned by: Rakesh Nune 4/26/2019 SIGNATURE DATE CADD File name: I-4400BB ITS-26.dgn	



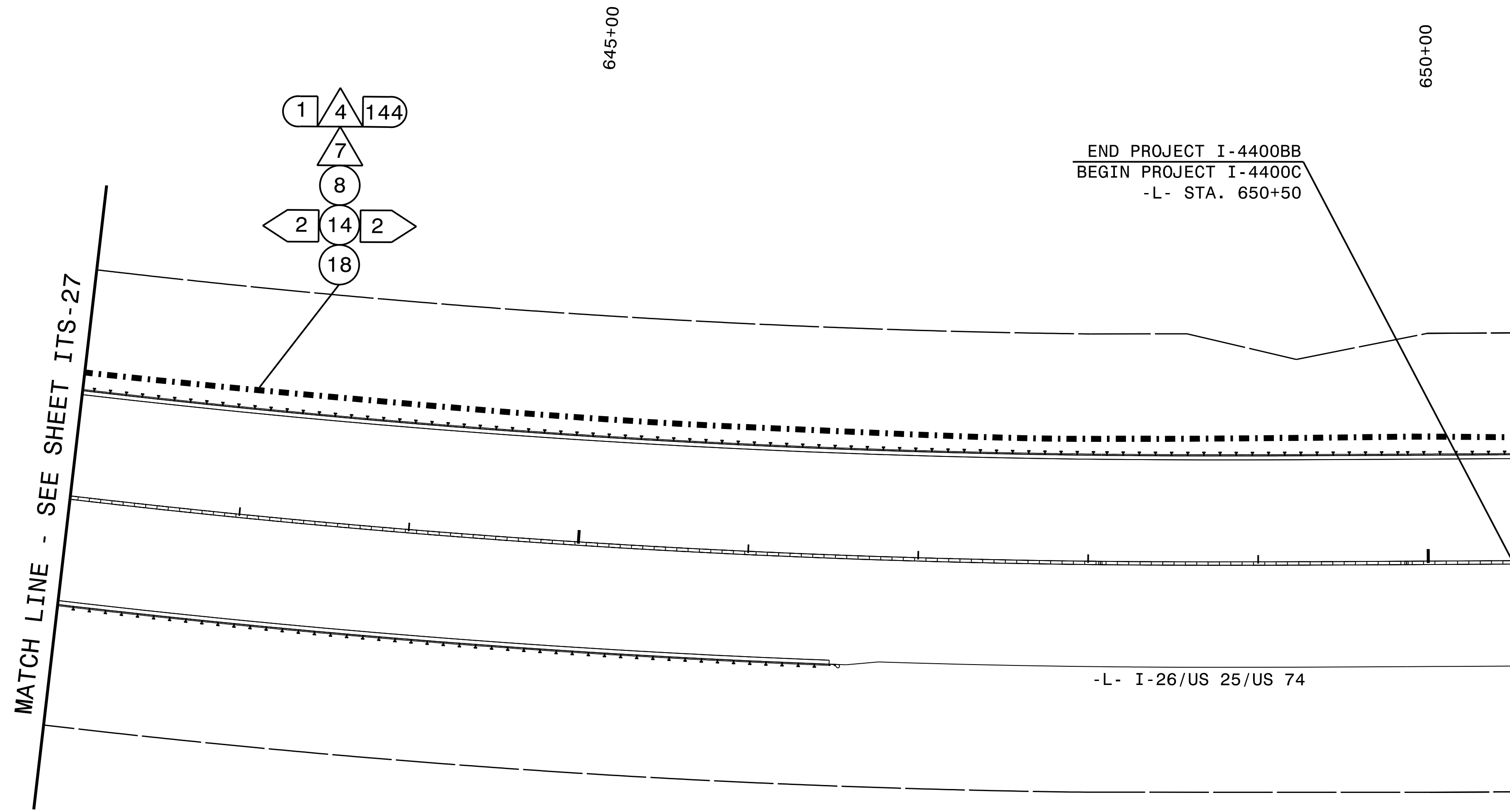
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	I-4400BB CABLE ROUTING PLAN											
	Division 14 Henderson Asheville	PLANNED BY: November 2018		REVIEWED BY: T.R. Terrell								
	PREPARED BY: Atizaz Ali	REVIEWED BY: N.R. Simmons										
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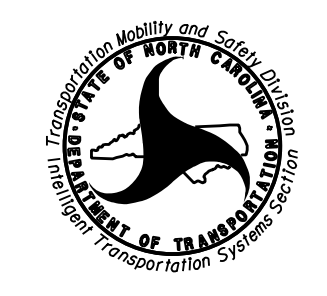



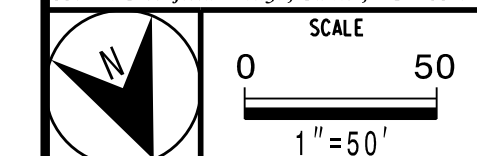
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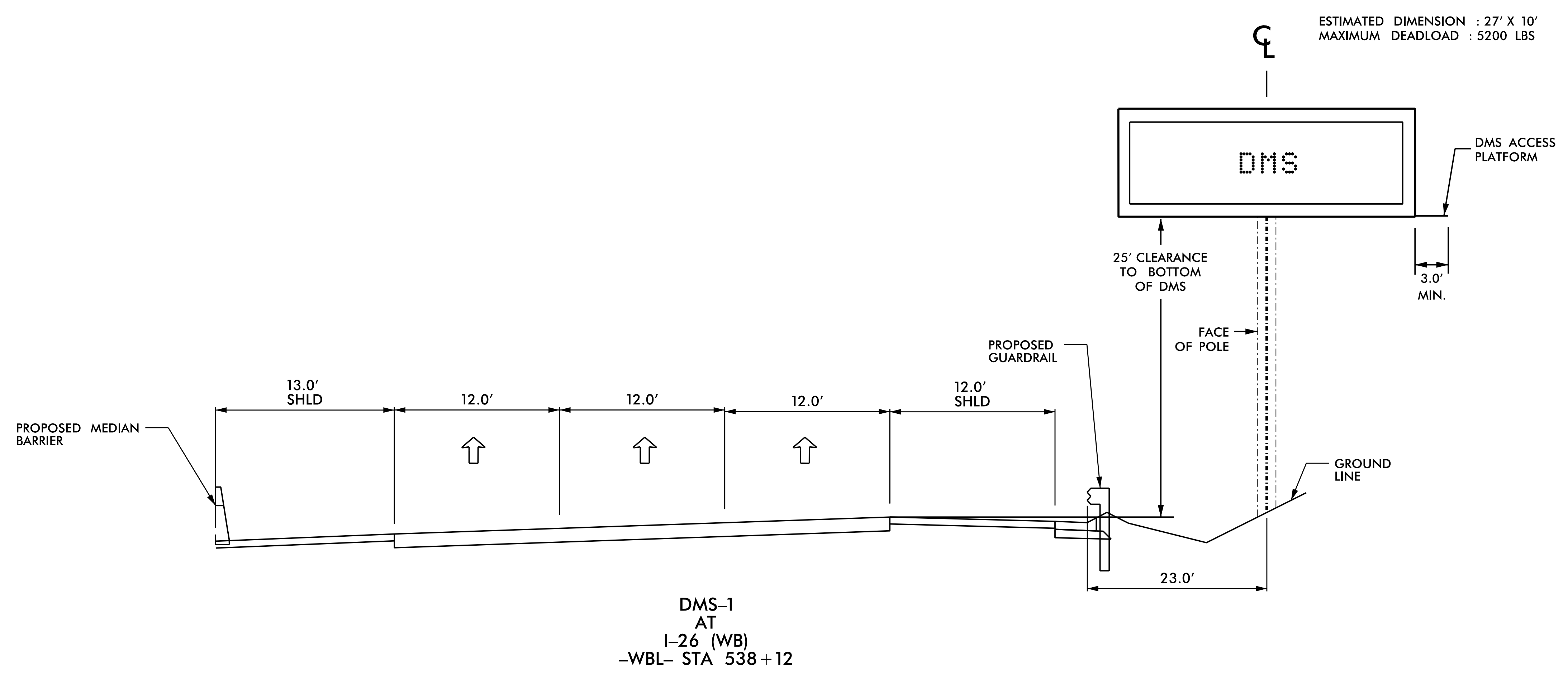
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Plans Prepared for:  250 N. Greenfield Place, Garner, NC 27529	I-4400BB CABLE ROUTING PLAN		SEAL  ENGINEER RAKESH NUNE
	Division 14 Henderson Asheville		
PLAN DATE: November 2018	REVIEWED BY: T.R. Terrell		
PREPARED BY: Atizaz Ali	REVIEWED BY: N.R. Simmons		
REVISIONS	INIT.	DATE	DocuSigned by: Rakesh Nune 4/26/2019 SEAL 048072 SIGNATURE DATE CADD Filename: I-4400BB ITS-28.dgn





ESTIMATED DIMENSION : 27' X 10'
 MAXIMUM DEADLOAD : 5200 LBS

NOTES:

1. FIELD VERIFY ALL FOOTING ELEVATIONS AND GROUND SLOPES AT THE FOOTING USING THE LATEST NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. CONTRACTOR IS RESPONSIBLE FOR FURNISHING ELEVATION DRAWINGS FOR ENGINEER'S APPROVAL.
2. USE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
3. 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.
4. DESIGN AND CONSTRUCT THE PEDESTAL STRUCTURE AND DMS ENCLOSURE TO WITHSTAND WIND VELOCITIES OF 130 MPH.
5. VERIFY ALL UNDERGROUND UTILITY LOCATIONS BEFORE BEGINNING ANY UNDERGROUND WORK. DO NOT DAMAGE ANY EXISTING UTILITIES OR NCDOT CABLES DURING CONSTRUCTION.

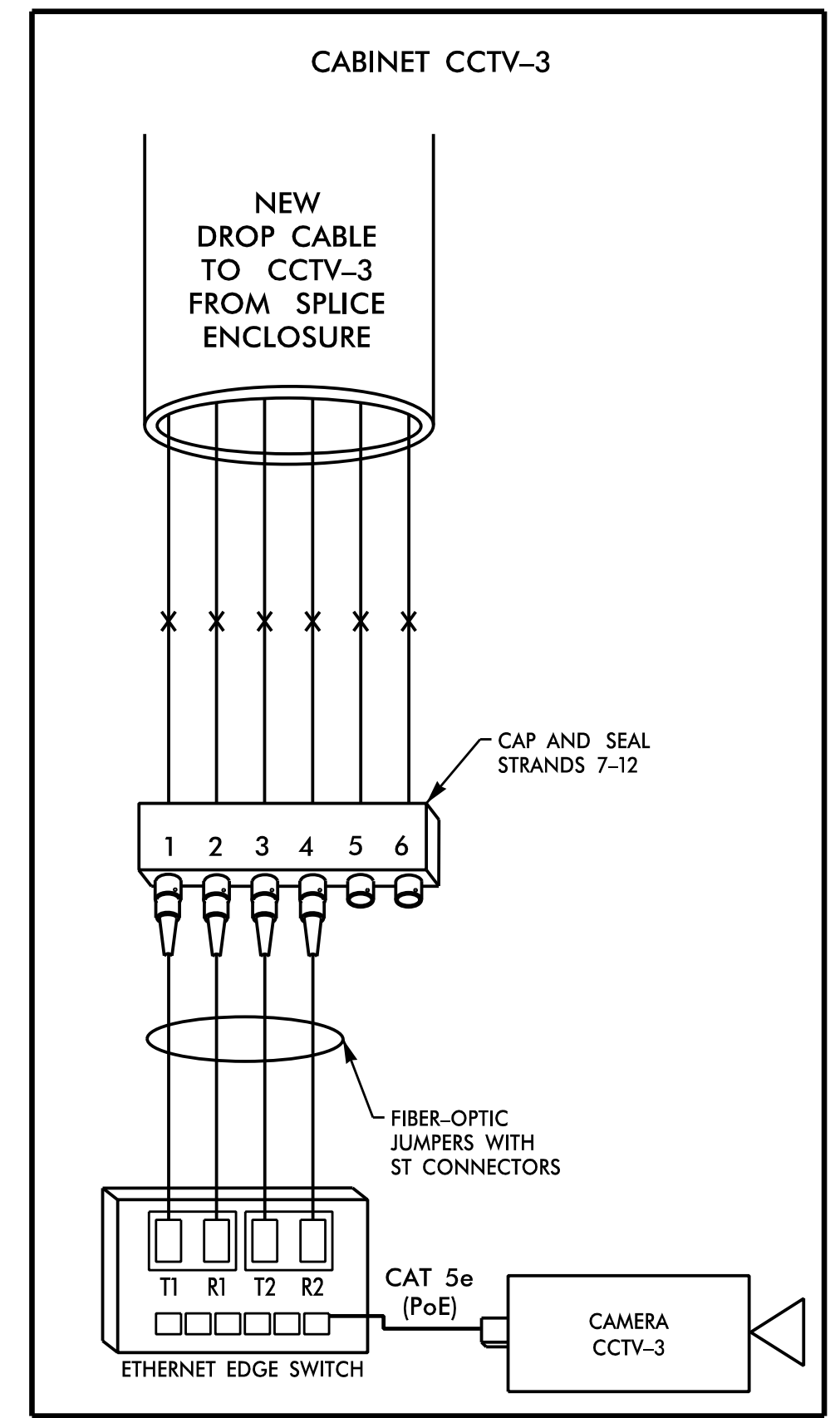
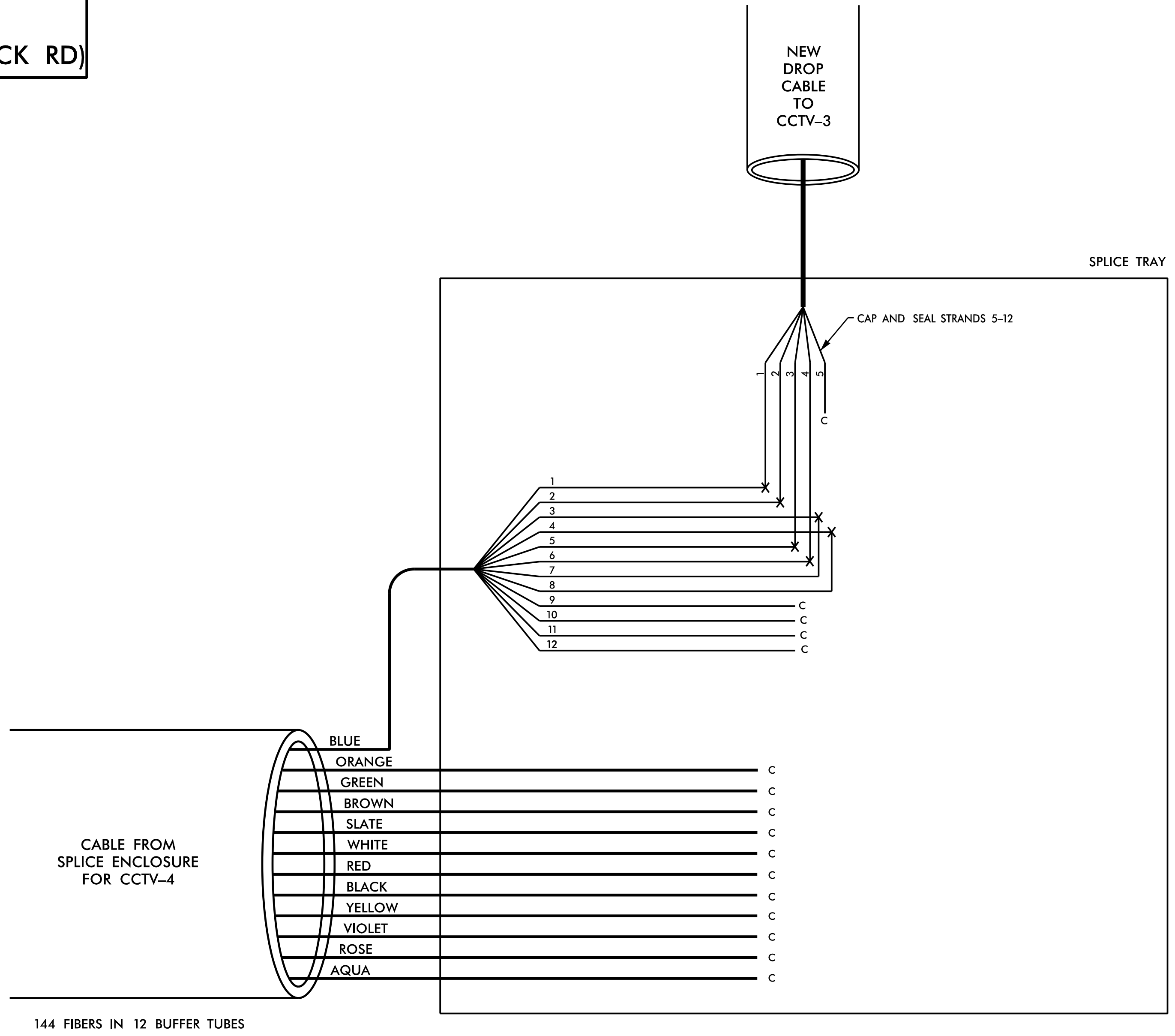
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	I-4400BB DMS-1 ELEVATION		
	Division 14 Henderson Asheville	PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell	
SCALE 0 50 1"=50'	REVISIONS _____ _____ _____	INIT. DATE _____ _____ _____	DocuSigned by: Rakesh Nune 4/26/2019 SIGNATURE DATE _____
CADD File name: I4400BB ITS-29.dgn			

CCTV-3
I-26 (WB)
AT
-L- STA. 372+50
NEAR US-64 (CHIMNEY ROCK RD)

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
(3) GREEN	(9) YELLOW	C = CAP AND SEAL		
(4) BROWN	(10) VIOLET	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING		
(5) SLATE	(11) ROSE	BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR		
(6) WHITE	(12) AQUA			



NOTES:

- UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
- UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
- ETHERNET EDGE SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING /ENSURING PROPER TERMINATION.
- INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

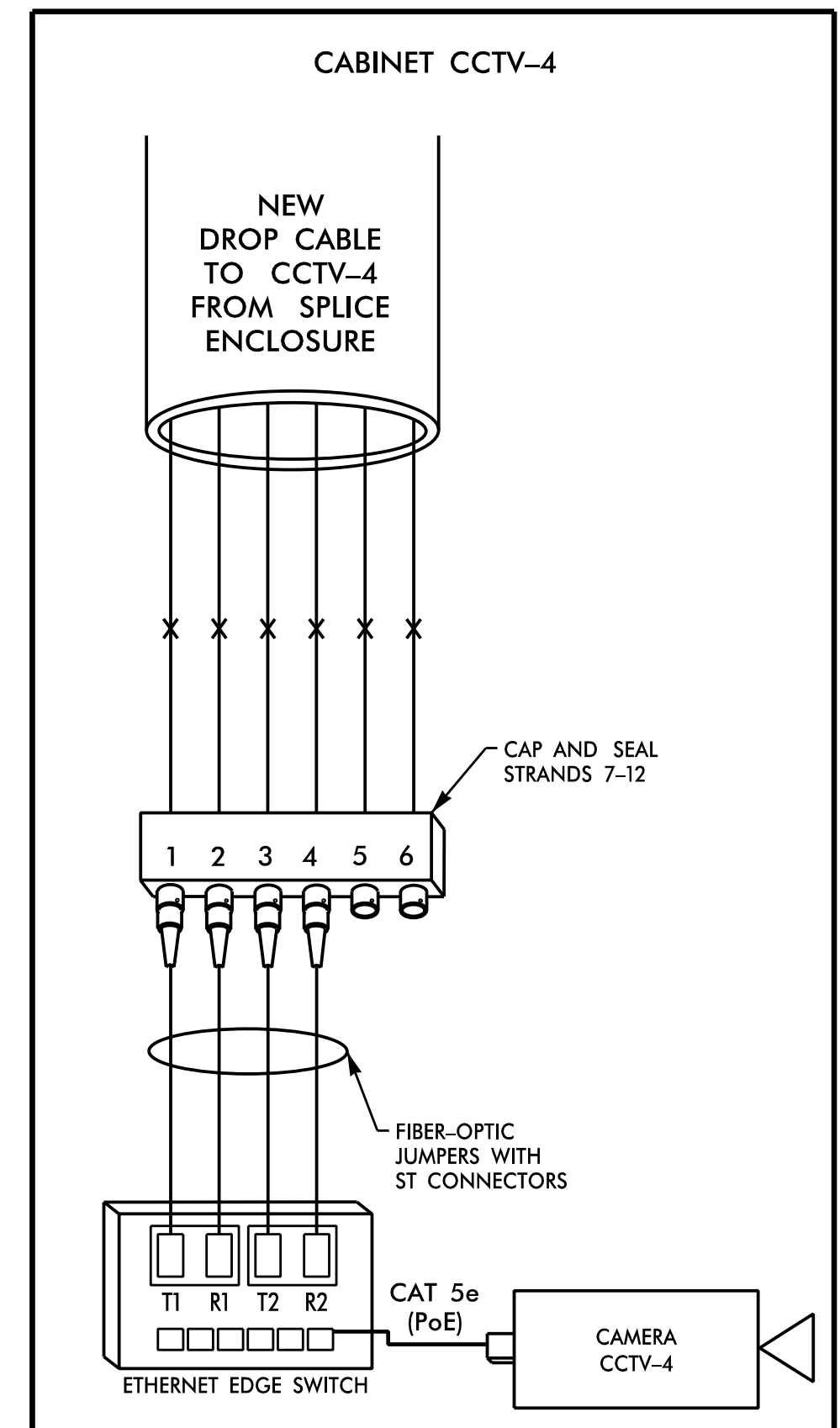
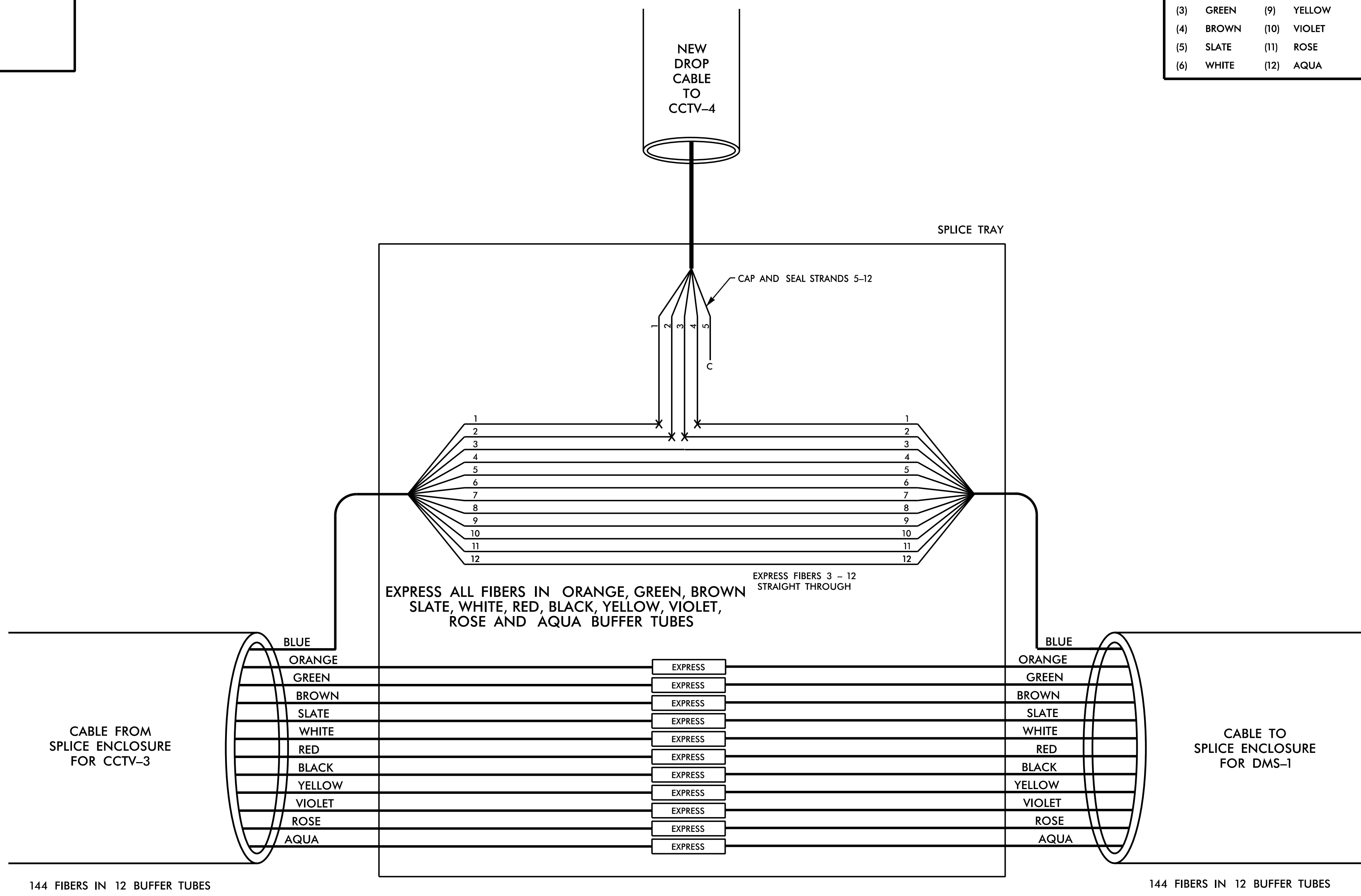
- (1) SPLICE
- (2) DATE
- (3) COMPANY NAME
- (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	I-4400BB ITS DEVICES SPLICE DETAILS		SEAL RAKESH NUNE ENGINEER
	Division 14 PLAN DATE: November 2018 PREPARED BY: Atizaz Ali	Henderson ASHEVILLE REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons	
SCALE: NONE	REVISIONS: _____ INITI: _____ DATE: _____		ADD File name: I4400BB ITS-30.dgn

CCTV-4
I-26 (WB)
AT
-L- STA. 462 + 42

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
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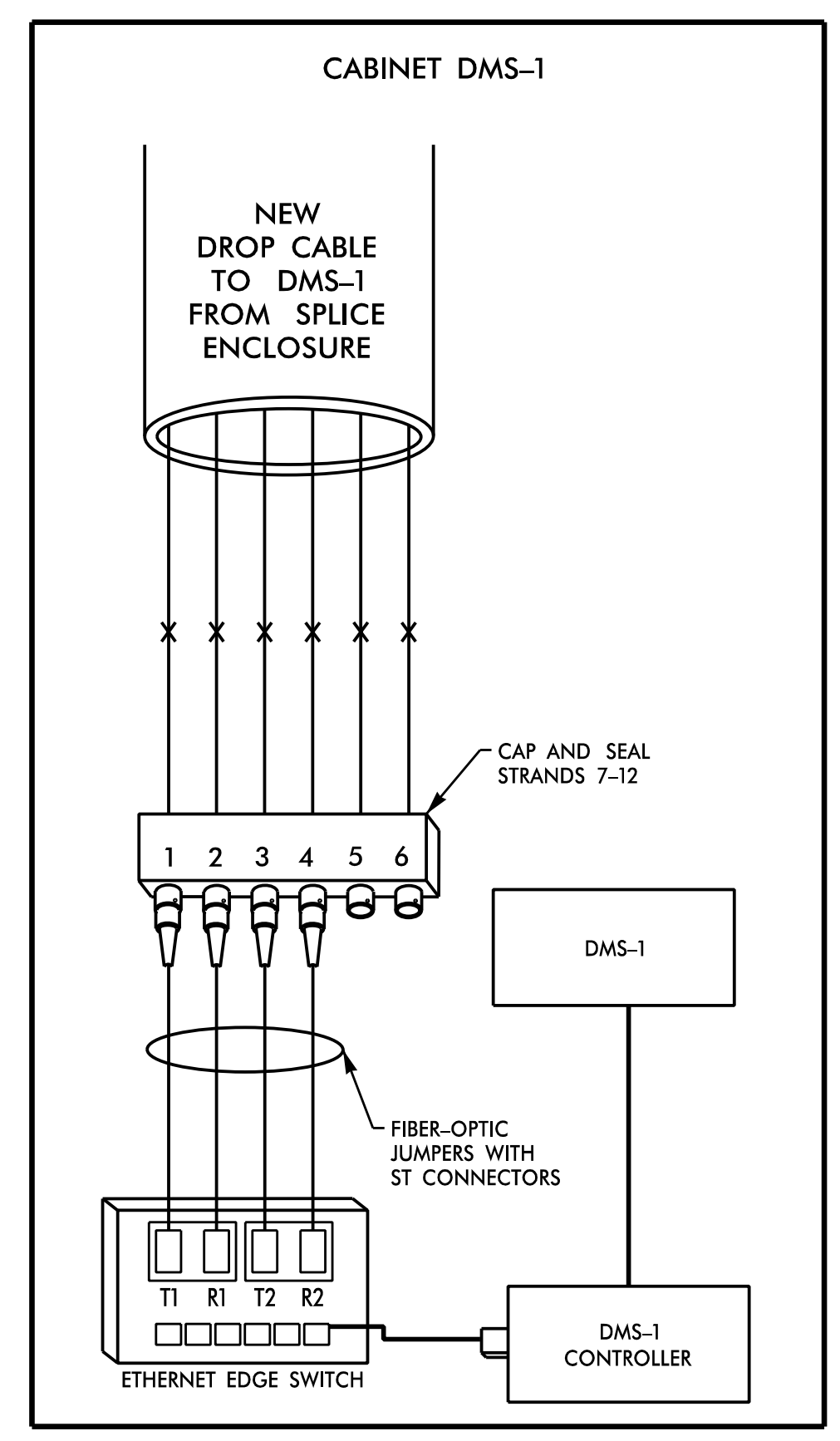
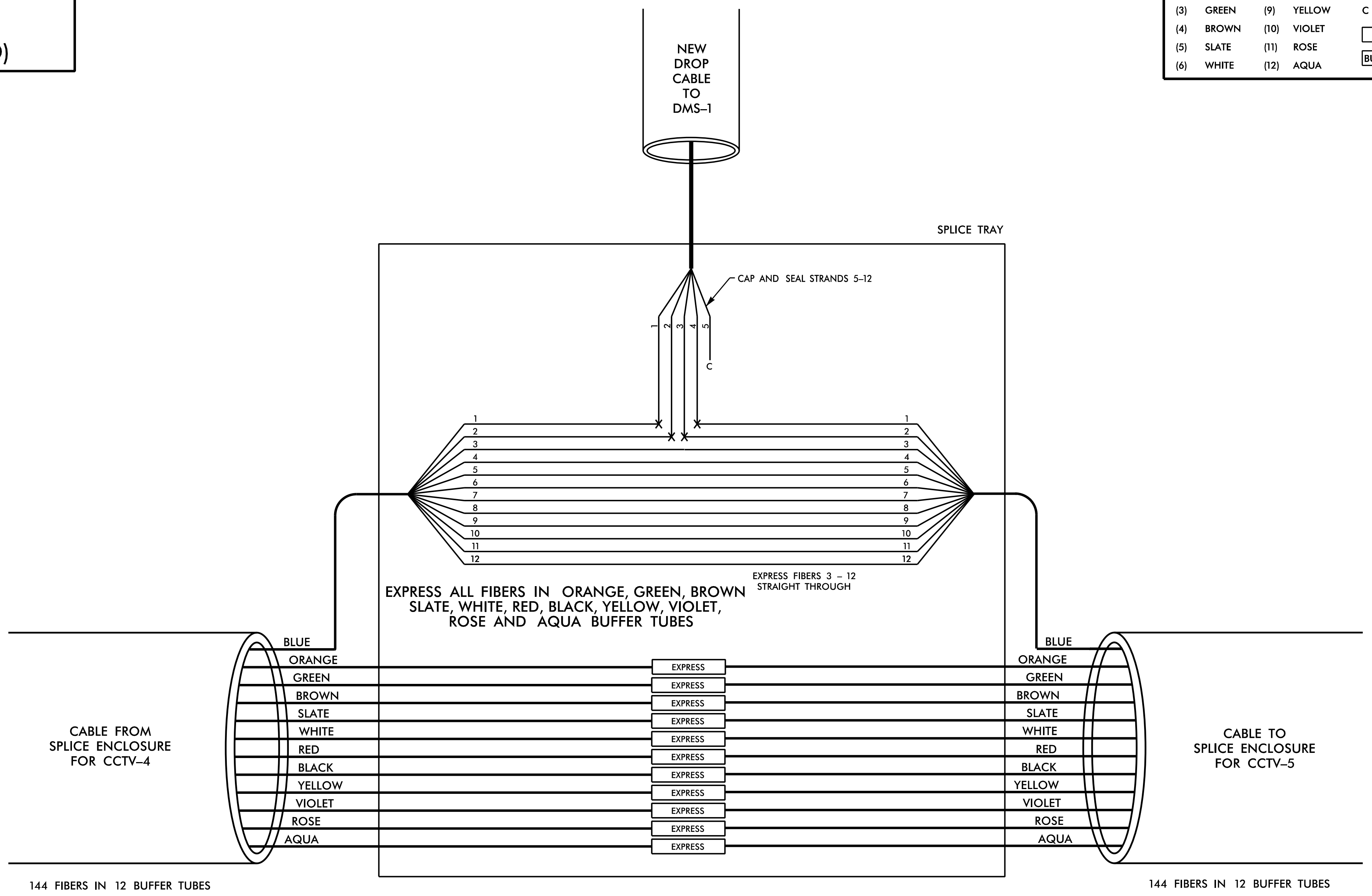
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PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

<p>Plans Prepared for: Department of Transportation State of North Carolina</p>	I-4400BB ITS DEVICES SPLICE DETAILS		SEAL
	Division 14 Henderson Asheville	PLAN DATE: November 2018 PREPARED BY: Atizaz Ali REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons	
250 N. Greenfield Place, Garner, NC 27529	SCALE NONE	REVISIONS _____ _____ _____	INIT. DATE _____ _____ _____
ADD File name: I4400BB ITS-31.dgn			DocuSigned by: Rakesh Nune 4/26/2019 _____ SIGNATURE DATE

DMS-1
I-26 (WB) AT
-L- STA. 538+12
NEAR SR 1528
(BROOKSIDE CAMP RD)

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
(3) GREEN	(9) YELLOW	C = CAP AND SEAL		
(4) BROWN	(10) VIOLET	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING		
(5) SLATE	(11) ROSE	BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR		
(6) WHITE	(12) AQUA			



NOTES:

- UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
- UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
- ETHERNET EDGE SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING /ENSURING PROPER TERMINATION.
- INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

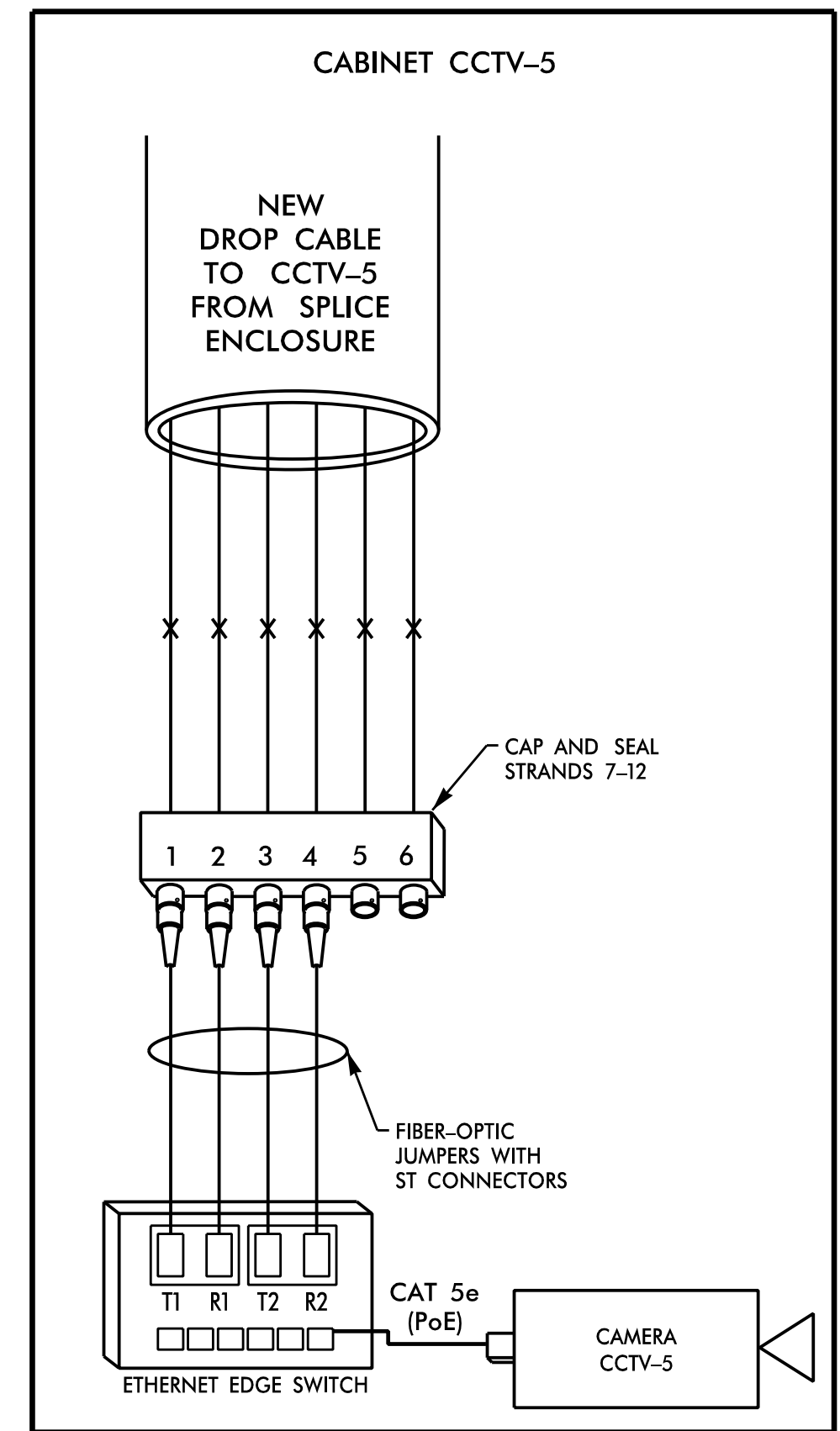
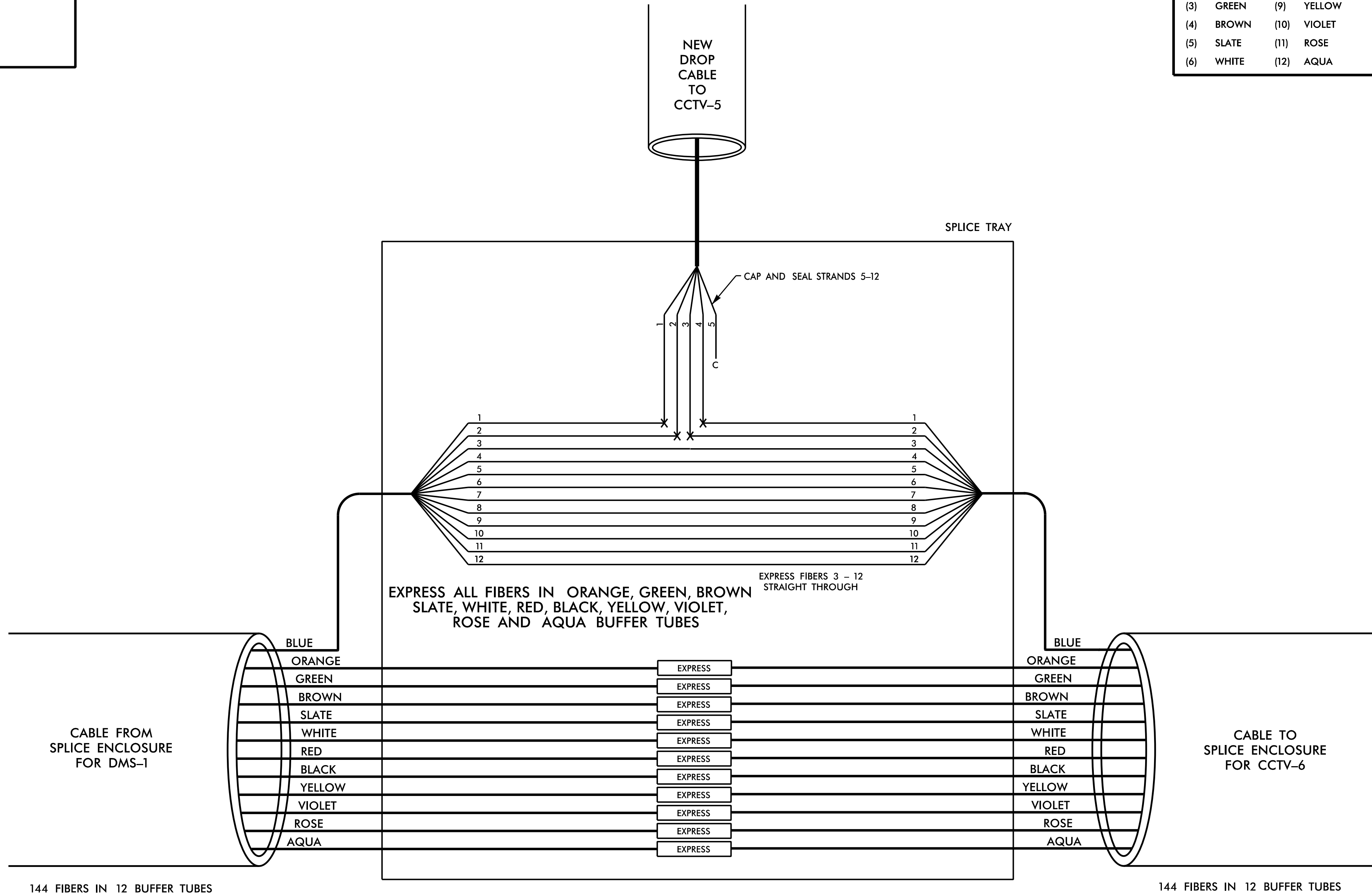
- (1) SPLICE
- (2) DATE
- (3) COMPANY NAME
- (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

<p>Plans Prepared for: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION</p>	<p>I-4400BB ITS DEVICES SPLICE DETAILS</p>								
	<p>Division 14 Henderson Asheville</p>								
<p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>PLAN DATE: November 2018</p>	<p>REVIEWED BY: T.R. Terrell</p>	<p>DocuSigned by: Rakesh Nune 4/26/2019</p>						
<p>SCALE NONE</p>	<p>PREPARED BY: Atizaz Ali</p>	<p>REVIEWED BY: N.R. Simmons</p>	<p>REVISIONS</p> <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							
<p>ADD File name: I4400BB ITS-32.dgn</p>			<p>SIGNATURE DATE</p>						

CCTV-5
I-26 (EB)
AT
-L- STA. 564+90

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
(3) GREEN	(9) YELLOW	C = CAP AND SEAL		
(4) BROWN	(10) VIOLET	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING		
(5) SLATE	(11) ROSE	BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR		
(6) WHITE	(12) AQUA			



NOTES:

- UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
- UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
- ETHERNET EDGE SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING /ENSURING PROPER TERMINATION.
- INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

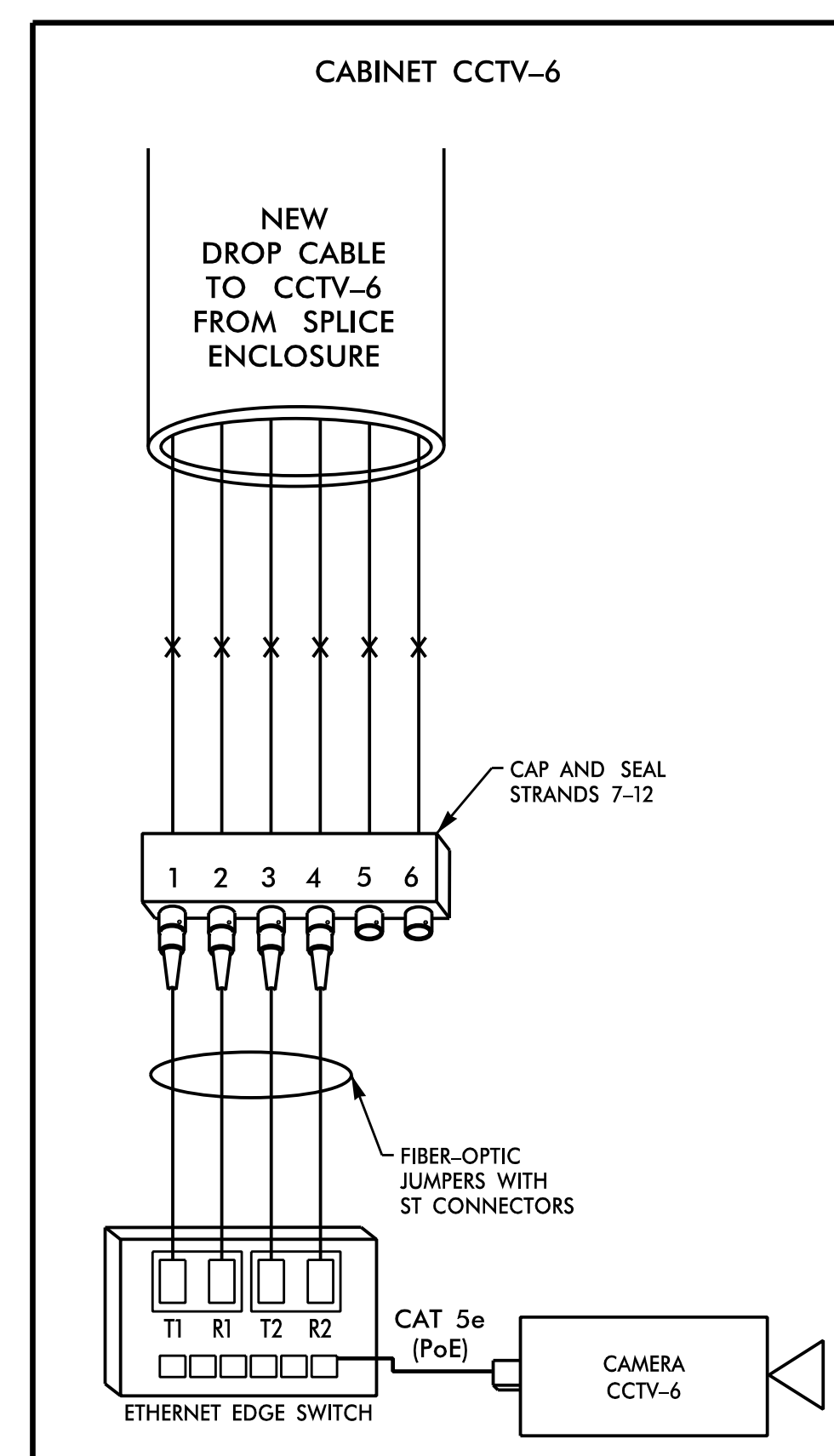
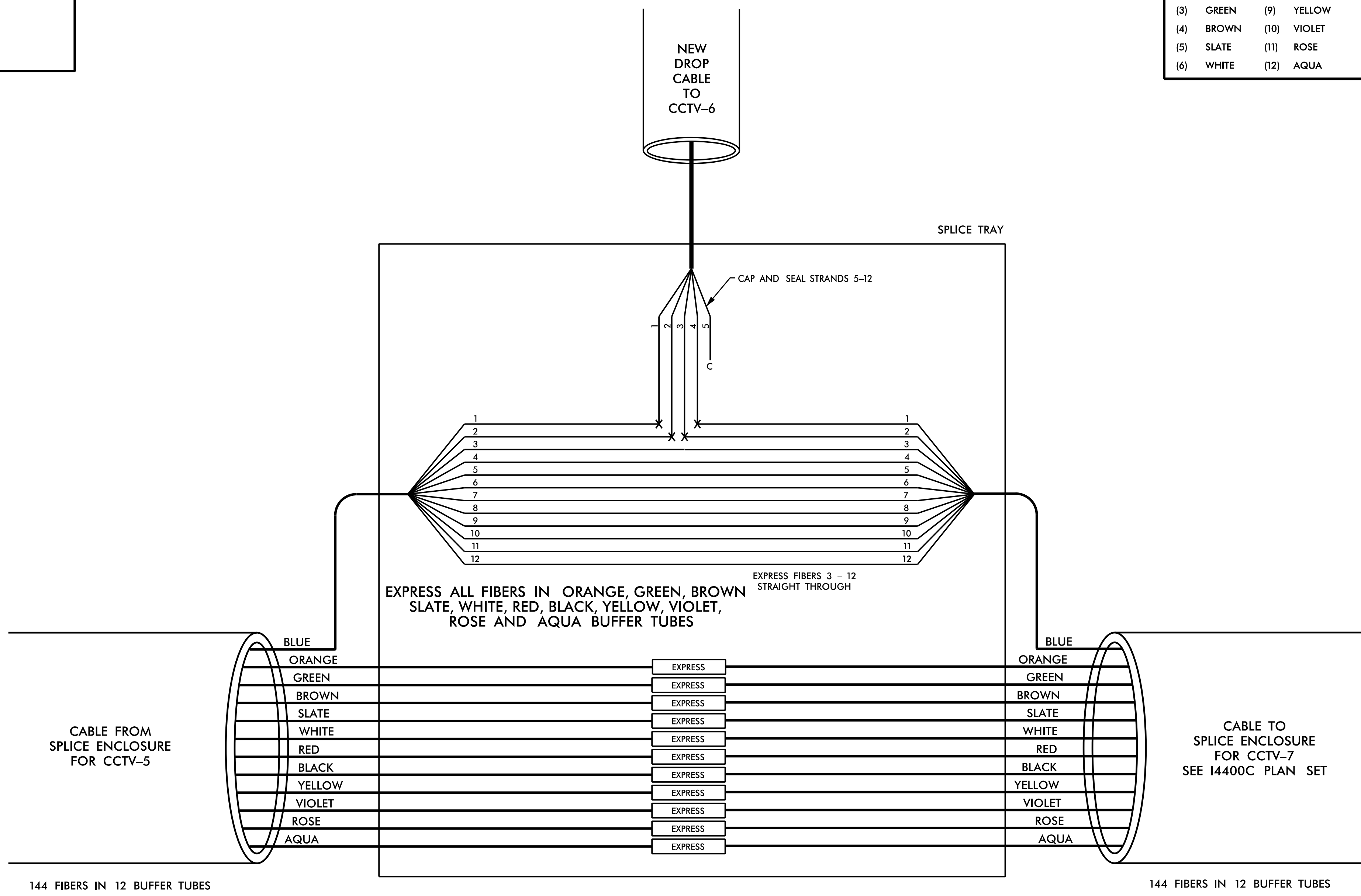
- (1) SPLICE
- (2) DATE
- (3) COMPANY NAME
- (4) NAME OF INDIVIDUAL PERFORMING THE SPlicing

PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

<p style="text-align: center;">Plans Prepared for:</p> <p style="text-align: center;">250 N. Greenfield Place, Garner, NC 27529</p>	<p>I-4400BB</p> <p>ITS DEVICES SPLICE DETAILS</p>		<p>SEAL</p> <p>SEAL</p> <p>RAKESH NUNE</p>
	<p>Division 14 Henderson Asheville</p> <p>PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell</p> <p>PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons</p>		
SCALE	REVISIONS	INIT.	DATE
NONE			
<p>DocuSigned by:</p> <p>Rakesh Nune</p> <p>4/26/2019</p>		<p>DATE</p> <p>4/26/2019</p>	

CCTV-6
I-26 (WB)
AT
-L- STA. 619+38

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
(3) GREEN	(9) YELLOW	C = CAP AND SEAL		
(4) BROWN	(10) VIOLET	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING		
(5) SLATE	(11) ROSE	BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR		
(6) WHITE	(12) AQUA			



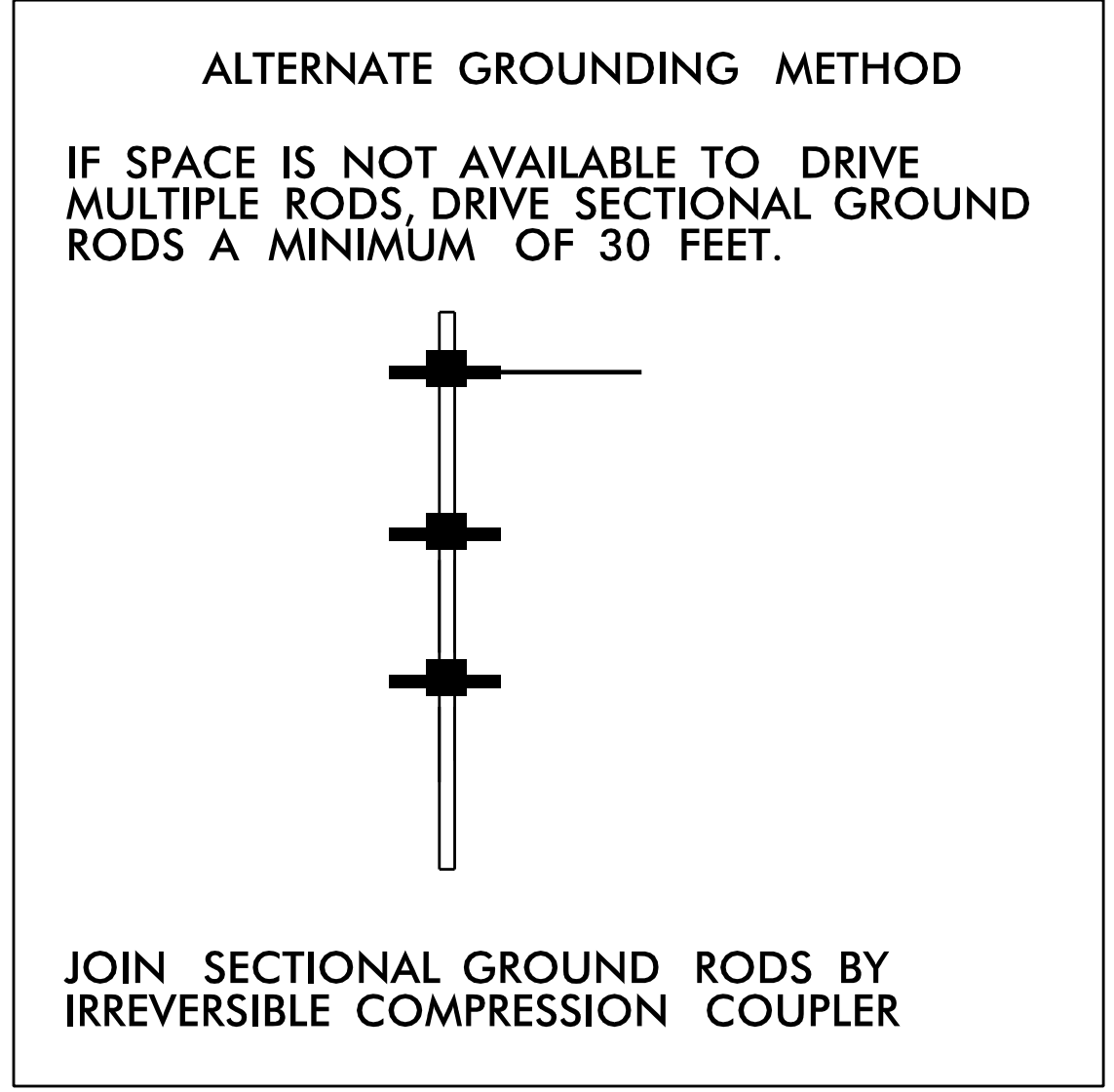
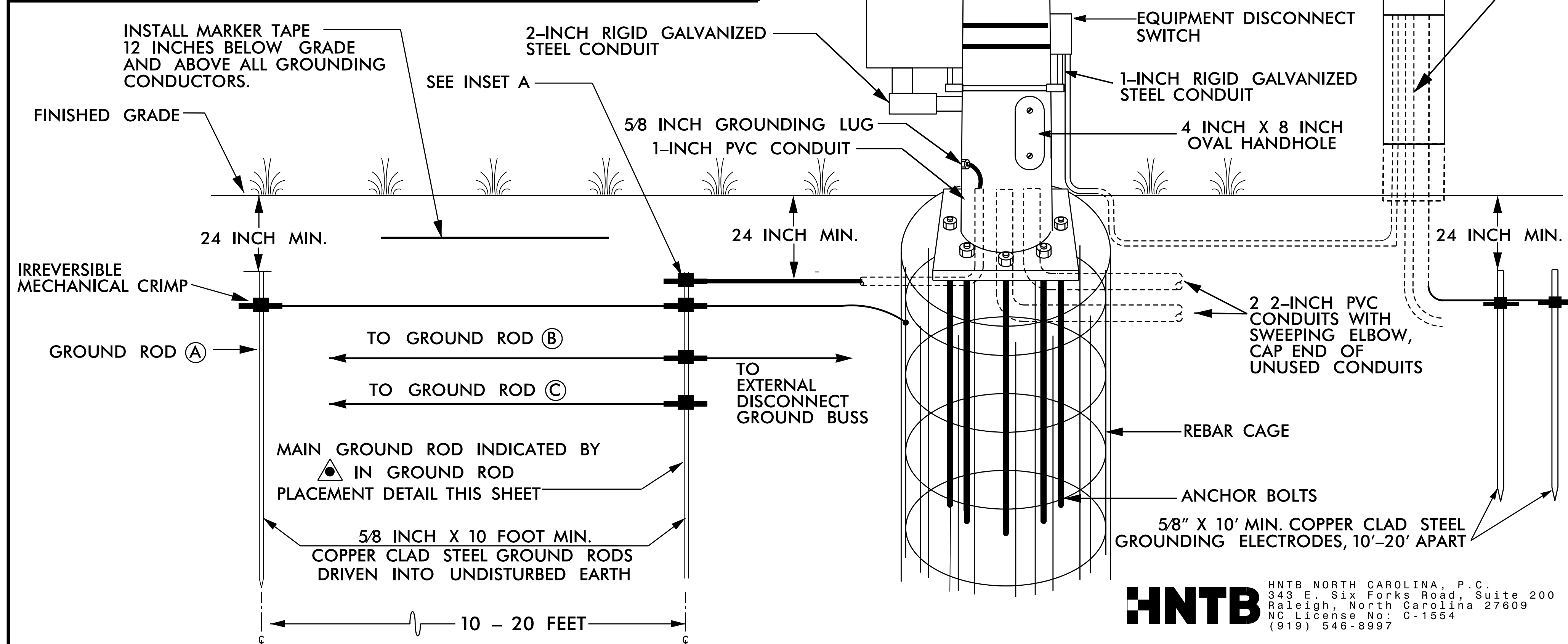
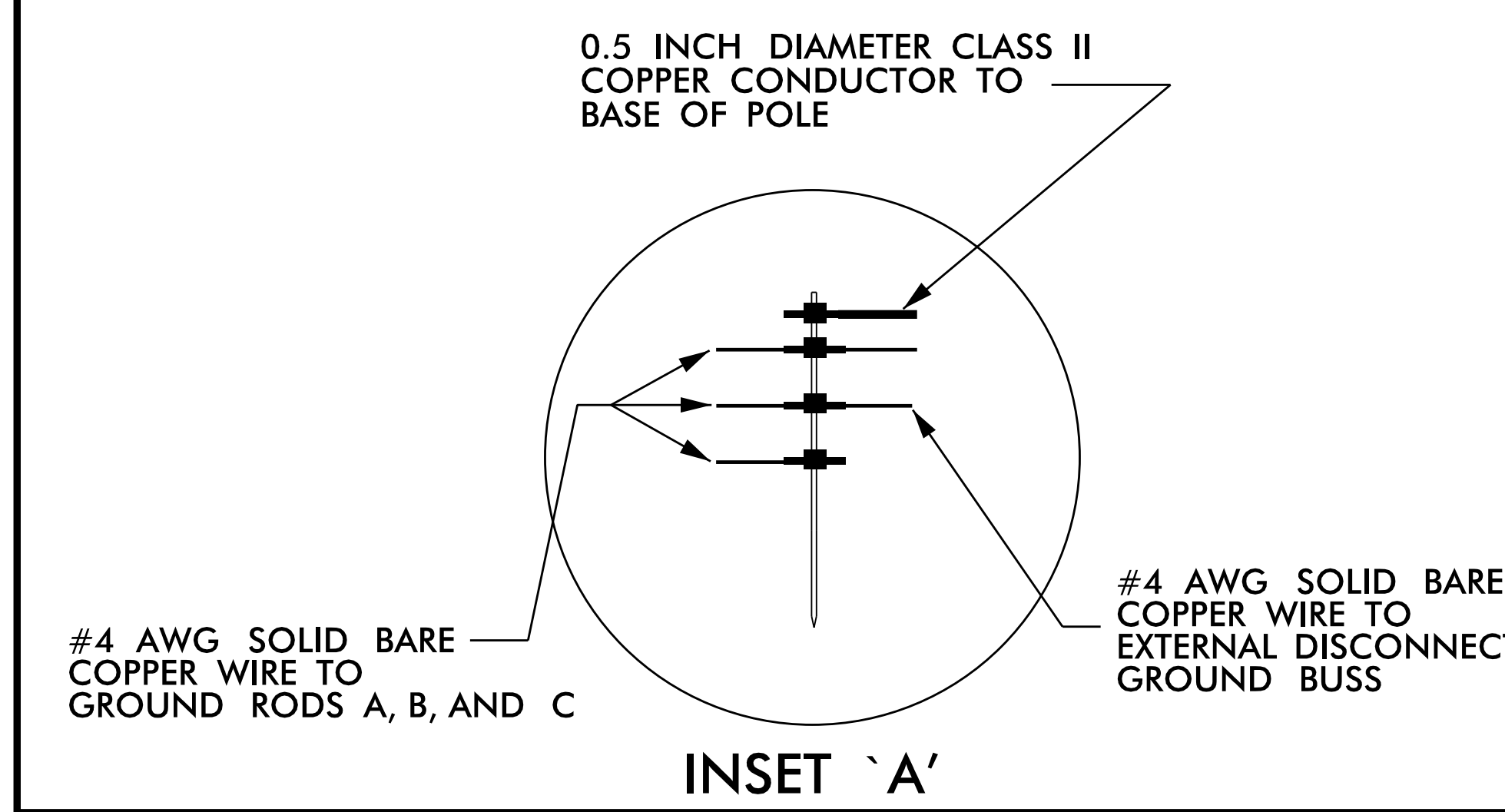
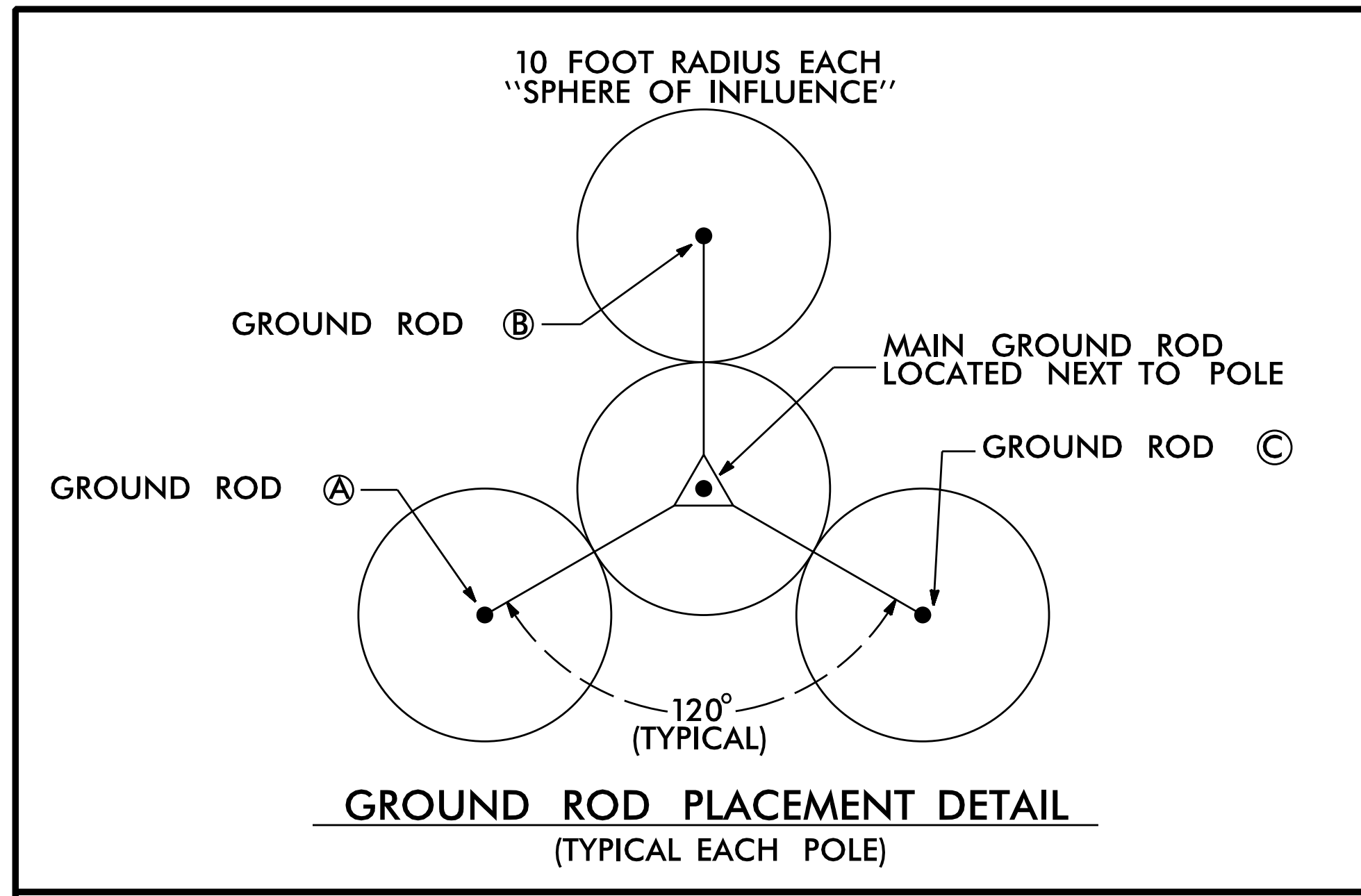
NOTES:

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- ETHERNET EDGE SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING /ENSURING PROPER TERMINATION.
- INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

- (1) SPLICE
- (2) DATE
- (3) COMPANY NAME
- (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

<p>Plans Prepared for: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION</p>	I-4400BB ITS DEVICES SPLICE DETAILS		
	Division 14 Henderson Asheville PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons	SCALE: NONE REVISIONS: _____ INITI: _____ DATE: _____ SIGNATURE: _____ DATE: 4/26/2019 ADD File name: I4400BB ITS-34.dgn	

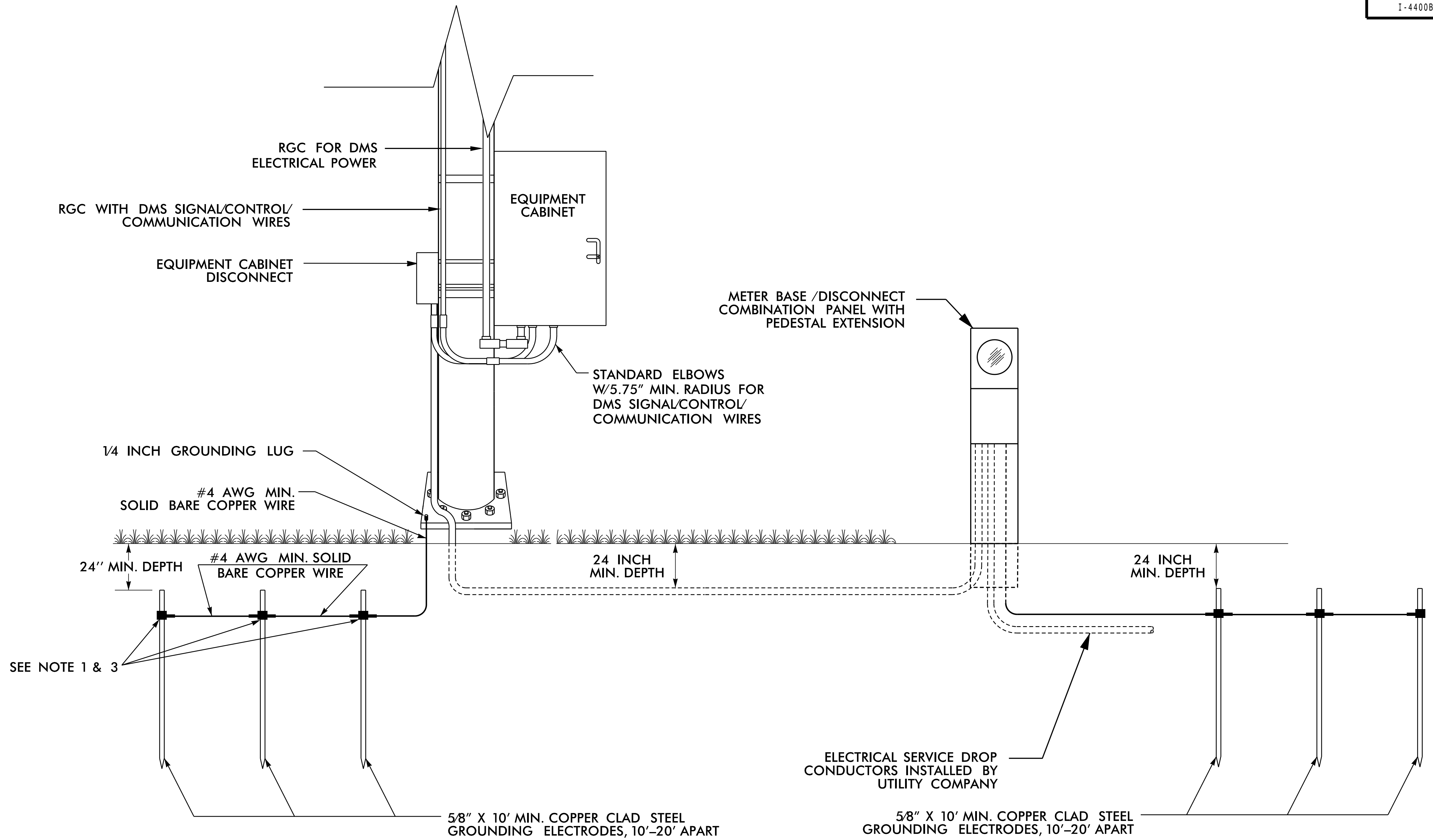


NOTES

1. BOND 0.5 INCH DIAMETER, 28 STRAND (MINIMUM) CLASS II COPPER CONDUCTOR TO THE MAIN GROUND ROD BY AN IRREVERSIBLE MECHANICAL CRIMP METHOD.
2. ALL CONNECTIONS TO GROUND RODS SHOULD BE MADE WITH AN IRREVERSIBLE MECHANICAL CRIMP METHOD.
3. BOND #4 AWG SOLID BARE COPPER WIRE TO REBAR CAGE AND THE MAIN GROUND ROD BY AN IRREVERSIBLE MECHANICAL CRIMP.
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.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

<p>HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554 (919) 546-8997</p>	<p>Plans Prepared for:</p> <p>CCTV CAMERA INSTALLATION FOR METAL POLE WITH UNDERGROUND ELECTRICAL SERVICE TYPICAL DETAIL</p>		
	<p>Division 14 Henderson Asheville</p> <p>PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell</p> <p>PREPARED BY: Atizaz Ali REVIEWED BY: N.R. Simmons</p>	<p>SCALE: NONE</p>	



NOTES:

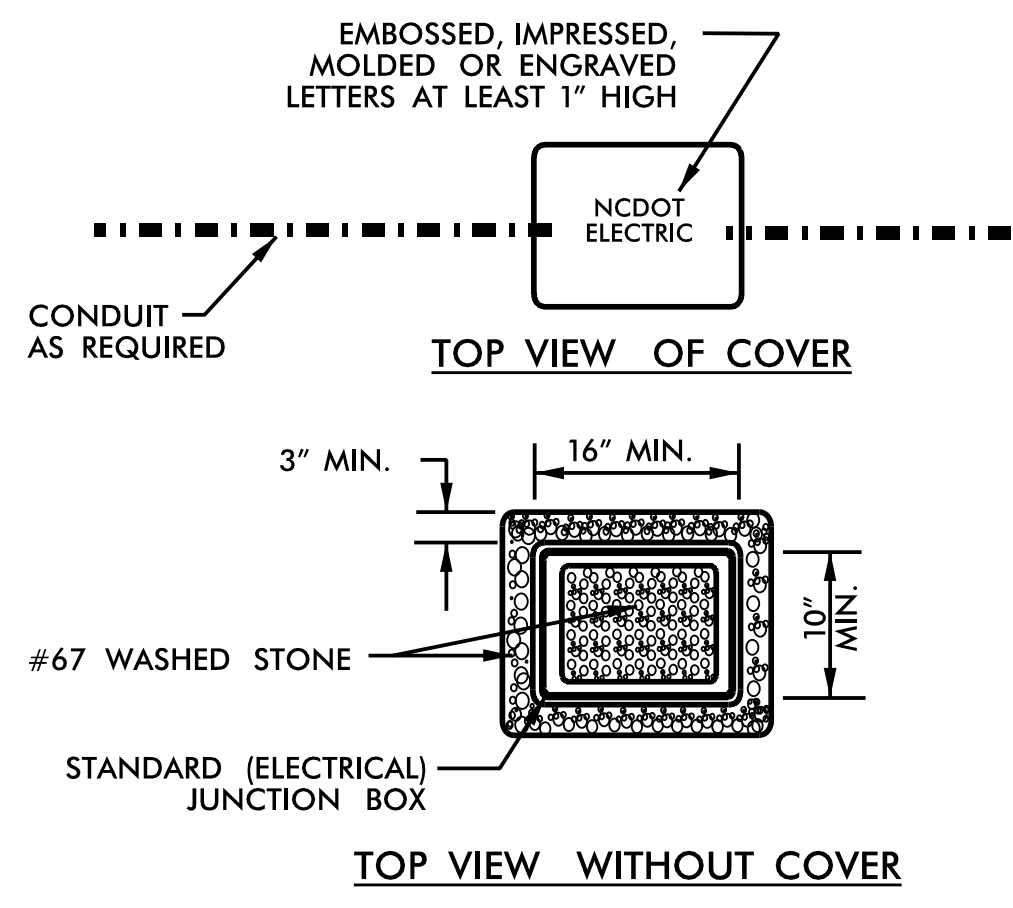
1. INSTALL A MINIMUM OF 3 GROUND RODS SPACED A MINIMUM OF 10 FEET APART. ENSURE THAT EXISTING UNDERGROUND FACILITIES ARE NOT DAMAGED DURING INSTALLATION.
2. TEST GROUNDING SYSTEM USING AN APPROVED METHOD. SYSTEM SHALL MEASURE TWENTY (20) OHMS OR LESS. ADDITIONAL GROUND RODS SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER TO MEET THIS REQUIREMENT.
3. ALL CONNECTIONS TO GROUND RODS SHOULD BE MADE WITH AN IRREVERSIBLE MECHANICAL CRIMP METHOD.
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 EQUIPMENT CABINET.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

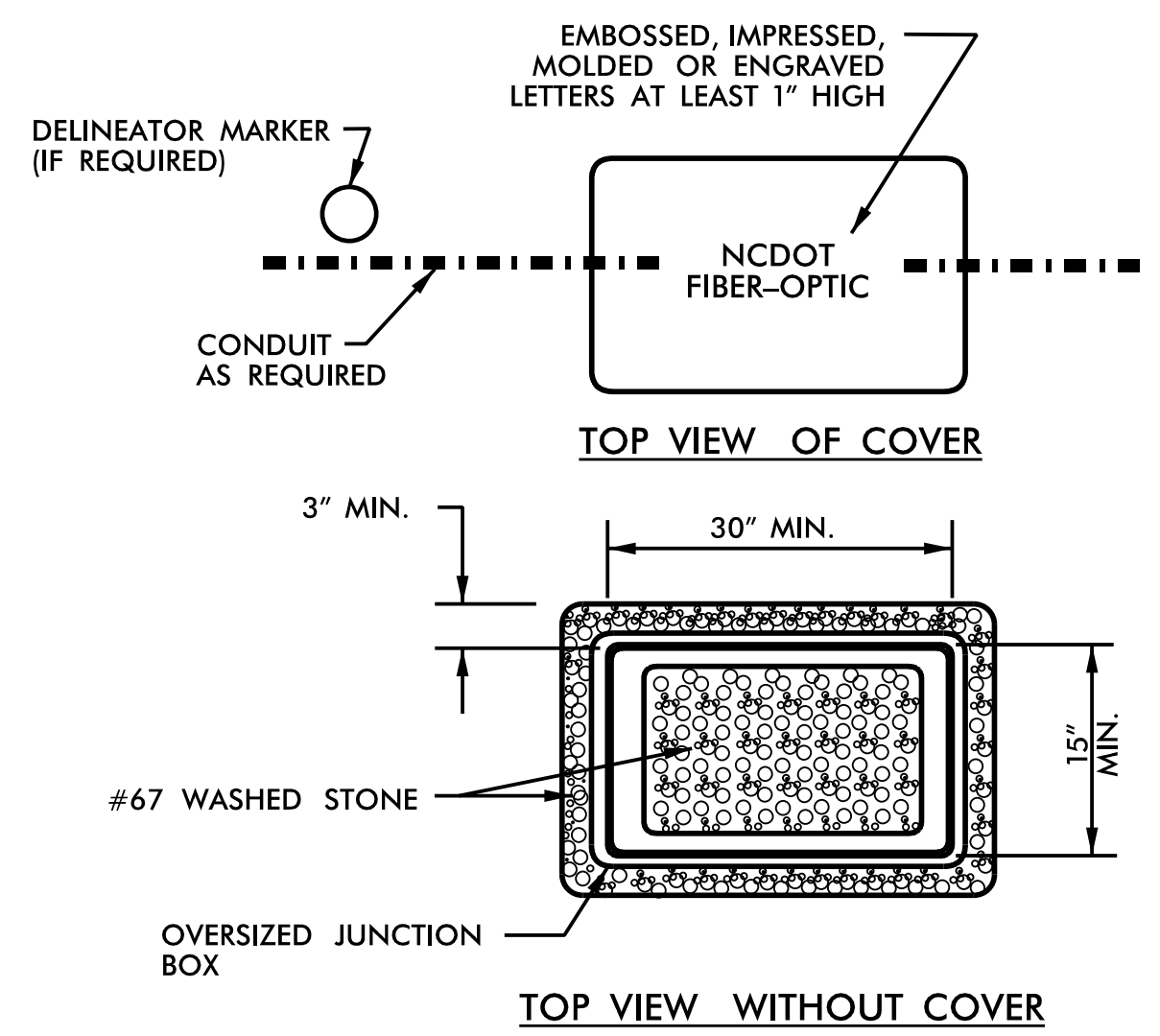
HNTB
 HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 546-8997

<p>Plans Prepared for:</p>	<p>DYNAMIC MESSAGE SIGN NEW ELECTRICAL SERVICE AND GROUNDING DETAIL</p>		<p>SEAL NORTH CAROLINA PROFESSIONAL ENGINEER RAKESH NUNE</p>
	<p>Division 14 Henderson Asheville</p>	<p>PLAN DATE: November 2018 REVIEWED BY: T.R. Terrell</p>	
<p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>PREPARED BY: Atizaz Ali</p>	<p>REVIEWED BY: N.R. Simmons</p>	<p>DocuSigned by: Rakesh Nune 4/26/2019</p>
<p>SCALE NONE</p>	<p>REVISIONS</p>	<p>INIT. DATE</p>	<p>SIGNATURE DATE</p>
<p>CADD File name: I4400BB ITS-36.dgn</p>			

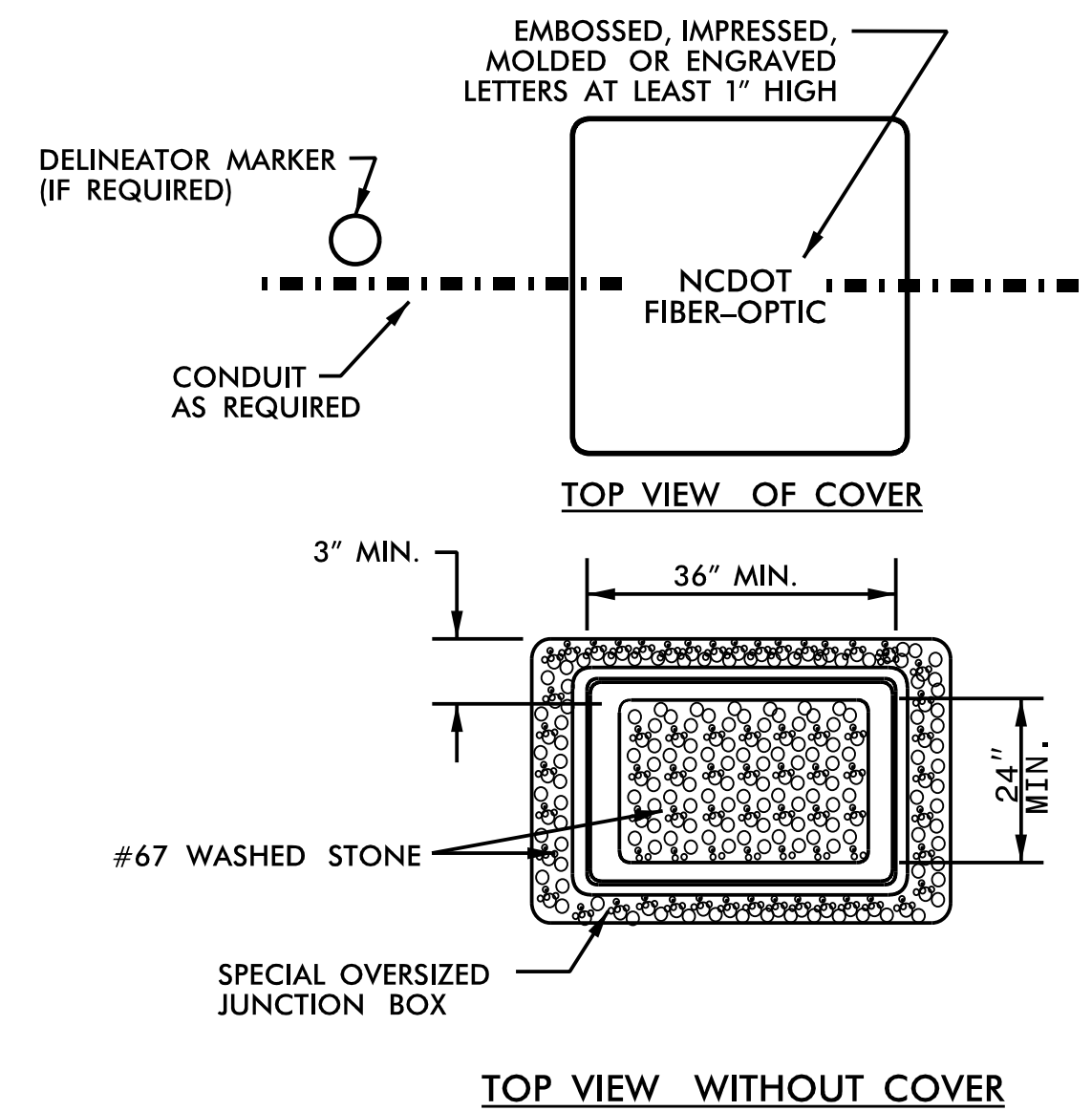
**STANDARD (ELECTRICAL)
JUNCTION BOX**



**OVERSIZED HEAVY DUTY
JUNCTION BOX**

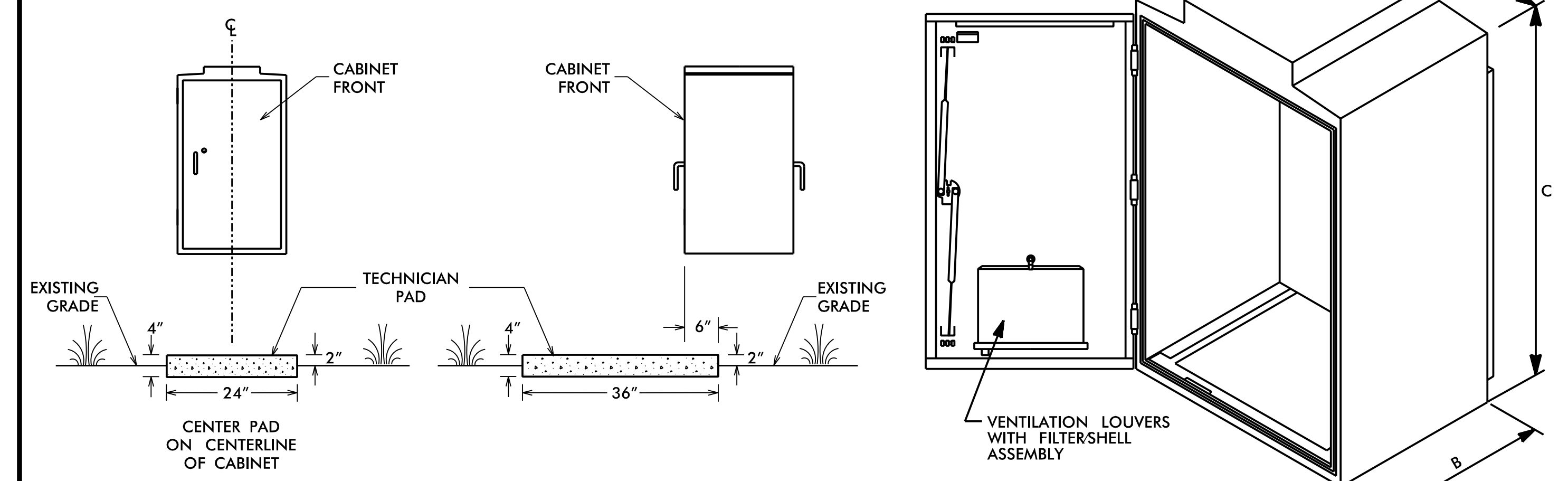


**SPECIAL OVERSIZED HEAVY DUTY
JUNCTION BOX**

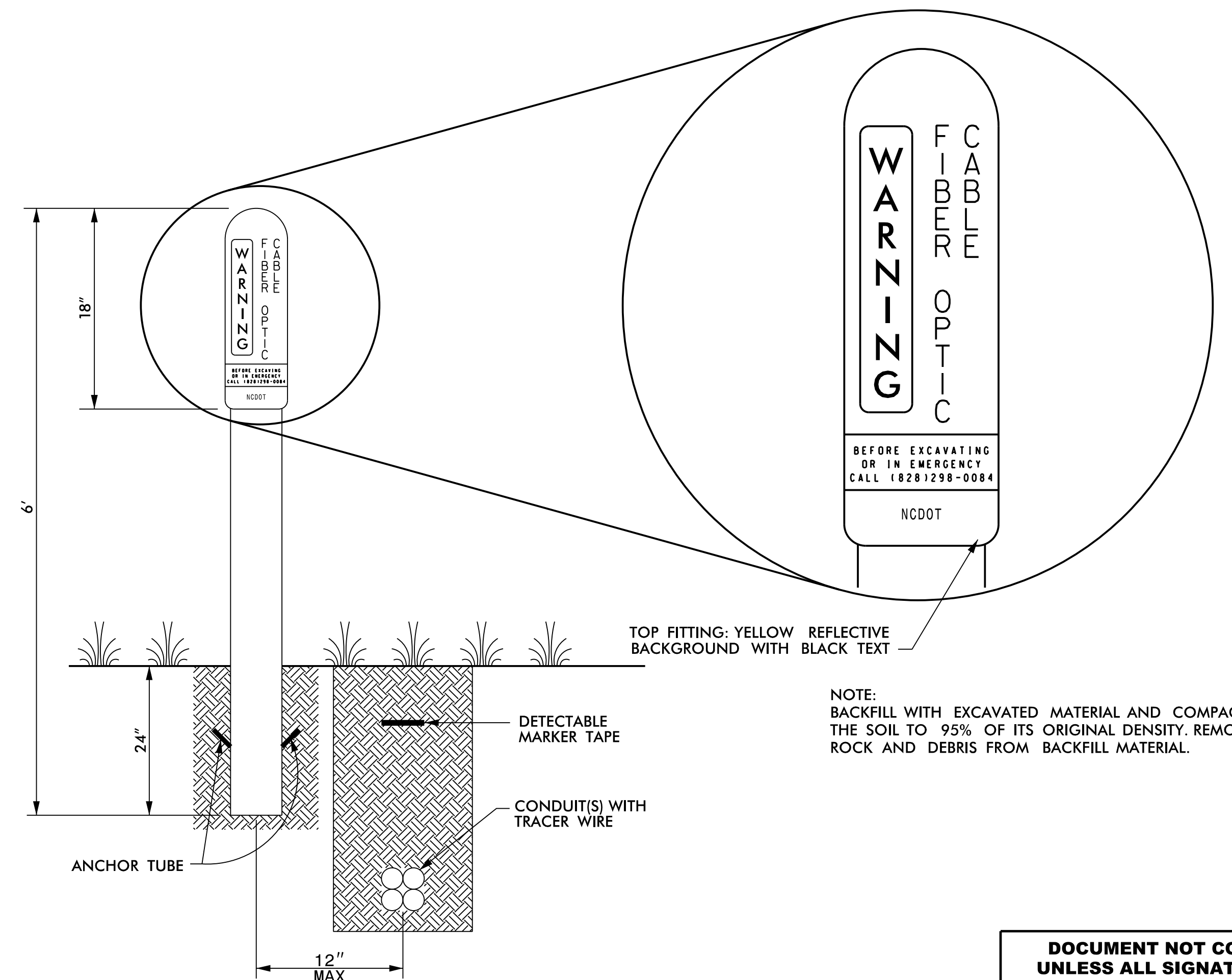


CABINET HOUSING DIMENSIONS

3365
A 24"
B 20"
C 46"



**EQUIPMENT CABINET
AND TECHNICIAN PAD**



PVC POST-MOUNTED DELINEATOR MARKER

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HNTB HNTB NORTH CAROLINA, P.C.
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Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	Division 14 Henderson Asheville		SEAL Rakesh Nune ENGINEER RAKESH NUNE
	SCALE NONE	TYPICAL DETAILS	
PLAN DATE: November 2018 PREPARED BY: Atizaz Ali		REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons	
REVISIONS		INIT.	DATE
SIGNATURE		DATE	
CADD File name: I4400BB ITS-37.dgn			