

DRY SOIL CONDITION

		STANDARD STRAIN POLES						STANDARD FOUNDATIONS 48" Diameter Drilled Pier Length (L) - Feet						Reinforcement				
		Case No.	Pole Height (Ft.)	Base Plate BC (In.)	Reactions at the Pole Base			Clay				Sand			Longitudinal		Stirrups	
					Axial (kip)	Shear (kip)	Moment (ft-kip)	Medium N-Value 4-8	Stiff N-Value 9-15	Very Stiff N-Value 16-30	Hard N-Value >30	Loose N-Value 4-10	Medium N-Value 11-30	Dense N-Value >30	Bar Size (#)	Quantity	Bar Size (#)	Spacing (in.)
WIND ZONE 1	LIGHT	S26L3	26	25	2	11	270	18	12.5	9	8	14.5	11	10	8	13	4	12
		S30L3	30	25	2	11	300	18.5	13	9	8	15	11.5	10	8	14	4	12
		S35L3	35	25	3	11	320	19	13.5	9.5	8	15	11.5	10.5	8	15	4	12
	HEAVY	S30H3	30	29	3	16	450	23	16	11	8	17.5	13.5	11.5	8	18	4	12
		S35H3	35	29	4	16	515	24.5	16.5	12	8.5	18.5	14	12	8	20	4	12
WIND ZONE 2	LIGHT	S26L2	26	23	2	10	245	17	12	8.5	8	14	11	9.5	8	13	4	12
		S30L2	30	23	2	10	270	18	12.5	8.5	8	14.5	11	10	8	13	4	12
		S35L2	35	23	3	10	300	18.5	13	9	8	14.5	11.5	10	8	14	4	12
	HEAVY	S30H2	30	29	3	15	415	22	15	10.5	8	17	13	11.5	8	17	4	12
		S35H2	35	29	4	15	475	23.5	16	11.5	8	18	13.5	12	8	19	4	12
WIND ZONE 3	LIGHT	S26L2	26	23	2	10	245	17	12	8.5	8	14	11	9.5	8	13	4	12
		S30L2	30	23	2	10	270	18	12.5	8.5	8	14.5	11	10	8	13	4	12
		S35L2	35	23	3	10	300	18.5	13	9	8	14.5	11.5	10	8	14	4	12
	HEAVY	S30H2	30	29	3	15	415	22	15	10.5	8	17	13	11.5	8	17	4	12
		S35H2	35	29	4	15	475	23.5	16	11.5	8	18	13.5	12	8	19	4	12
WIND ZONE 4	LIGHT	S26L1	26	22	2	8	190	15.5	10.5	8	8	13	10	9	8	12	4	12
		S30L1	30	22	2	8	205	15.5	11	8	8	13	10	9	8	12	4	12
		S35L1	35	22	3	8	230	16.5	11.5	8	8	13.5	10.5	9	8	12	4	12
	HEAVY	S30H1	30	25	3	12	320	19.5	13.5	9.5	8	15	12	10.5	8	15	4	12
		S35H1	35	25	4	12	350	20	14	10	8	15.5	12	10.5	8	15	4	12
WIND ZONE 5	LIGHT	S26L2	26	23	2	10	245	17	12	8.5	8	14	11	9.5	8	13	4	12
		S30L2	30	23	2	10	270	18	12.5	8.5	8	14.5	11	10	8	13	4	12
		S35L2	35	23	3	10	300	18.5	13	9	8	14.5	11.5	10	8	14	4	12
	HEAVY	S30H2	30	29	3	15	415	22	15	10.5	8	17	13	11.5	8	17	4	12
		S35H2	35	29	4	15	475	23.5	16	11.5	8	18	13.5	12	8	19	4	12

Fabrication Design Notes:


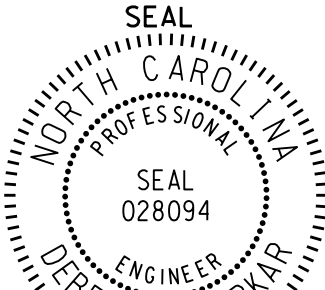
1. Values shown in the "Reactions at the Pole Base" column represent the minimum acceptable capacity allowed for design using a design CSR of 1.00.
2. Min. base plate thickness (T) is 2.0 inches.

Foundation Selection:

1. Perform a standard penetration test at each proposed foundation site to determine "N" value.
2. Select the appropriate wind zone from M 1 drawing.
3. Select the soil type (Clay or Sand) that best describes the soil characteristics.
4. Get the appropriate standard pole case number from the plans or from the Engineer.
5. Select the appropriate column in the chart based on soil type and "N" value. Select the appropriate row based on the pole load case.
The foundation depth is the value where the column and the row intersect.
6. Reference Drilled Shafts: Construction Procedures and Design Methods, FHWA -IF-99-025

- S30H1 - Hard Clay-Stirrup Spacing: 6 in. c/c
- Dense Sand-Stirrup Spacing: 6 in. c/c
- S30H2 - Very Stiff Clay: Stirrup Spacing: 6 in. c/c
- Hard Clay: Stirrup Spacing: 6 in. c/c
- Medium Clay: Stirrup Spacing: 6 in. c/c
- Dense Sand: Stirrup Spacing: 6 in. c/c
- S30H3 - Very Stiff Clay: Stirrup Spacing: 6 in. c/c
- Hard Clay: Stirrup Spacing: 6 in. c/c
- Medium Clay: Stirrup Spacing: 6 in. c/c
- Dense Sand: Stirrup Spacing: 6 in. c/c
- S35H1 - Hard Clay: tirrup Spacing: 6 in. c/c
- Dense Sand: Stirrup Spacing: 6 in. c/c
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- S35H3 - Very Stiff Clay: Stirrup Spacing: 6 in. c/c
- Hard Clay: Stirrup Spacing: 6 in. c/c
- Medium Clay: Stirrup Spacing: 6 in. c/c
- Dense Sand: Stirrup Spacing: 6 in. c/c

48" Dia. Foundations Concrete Volume (cubic yards) = (0.465) x Foundation Depth

	<p>Standard Strain Pole Foundation for Dry Soil Condition</p> <p>PLAN DATE: SEPTEMBER 2013 DESIGNED BY: C.B. COGDILL PREPARED BY: N. BITTING REVIEWED BY: D. SARKAR</p>										
<p>SCALE: 0 NA</p> <p>None</p>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	REVISIONS	INIT.	DATE							<p>DocuSigned by: Deborah C. Sarkar 3/26/2014 44EB3E2E147E4C4</p>
REVISIONS	INIT.	DATE									

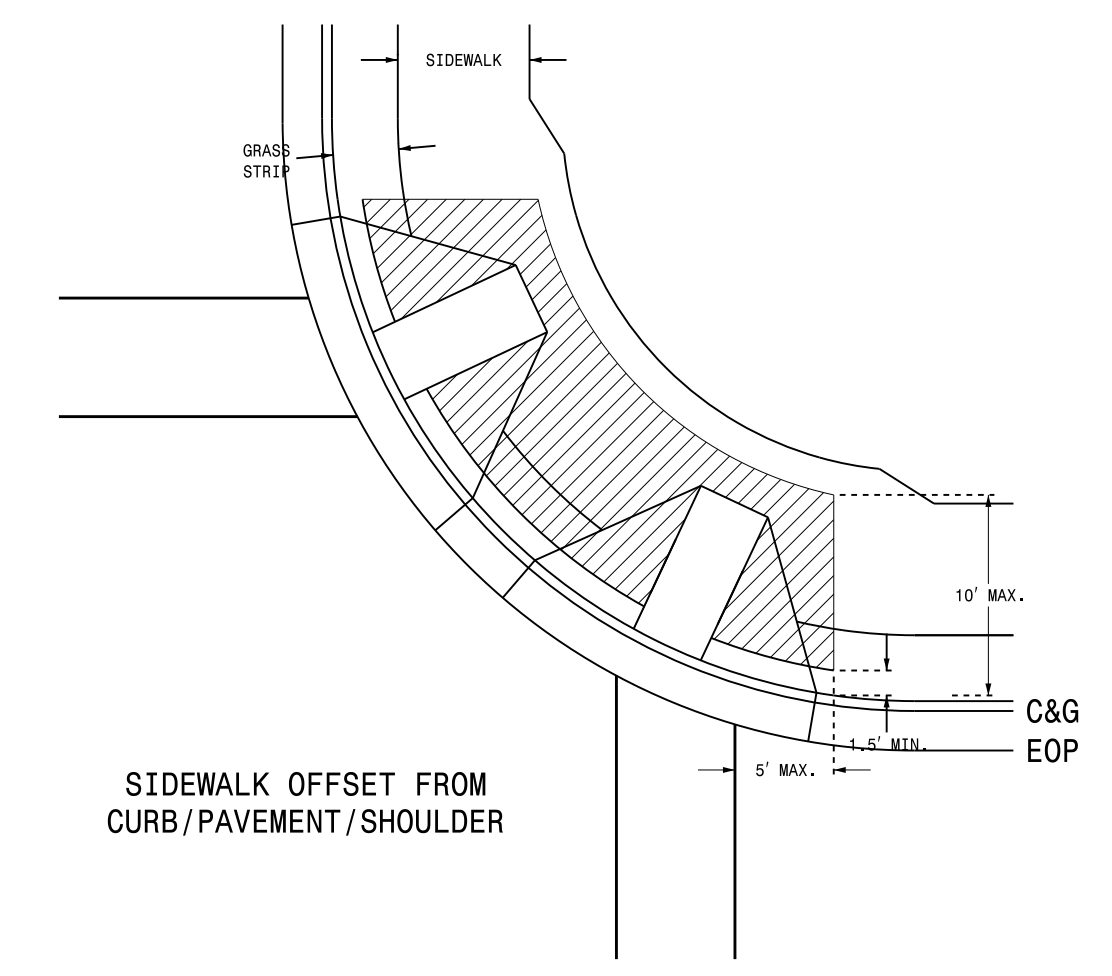
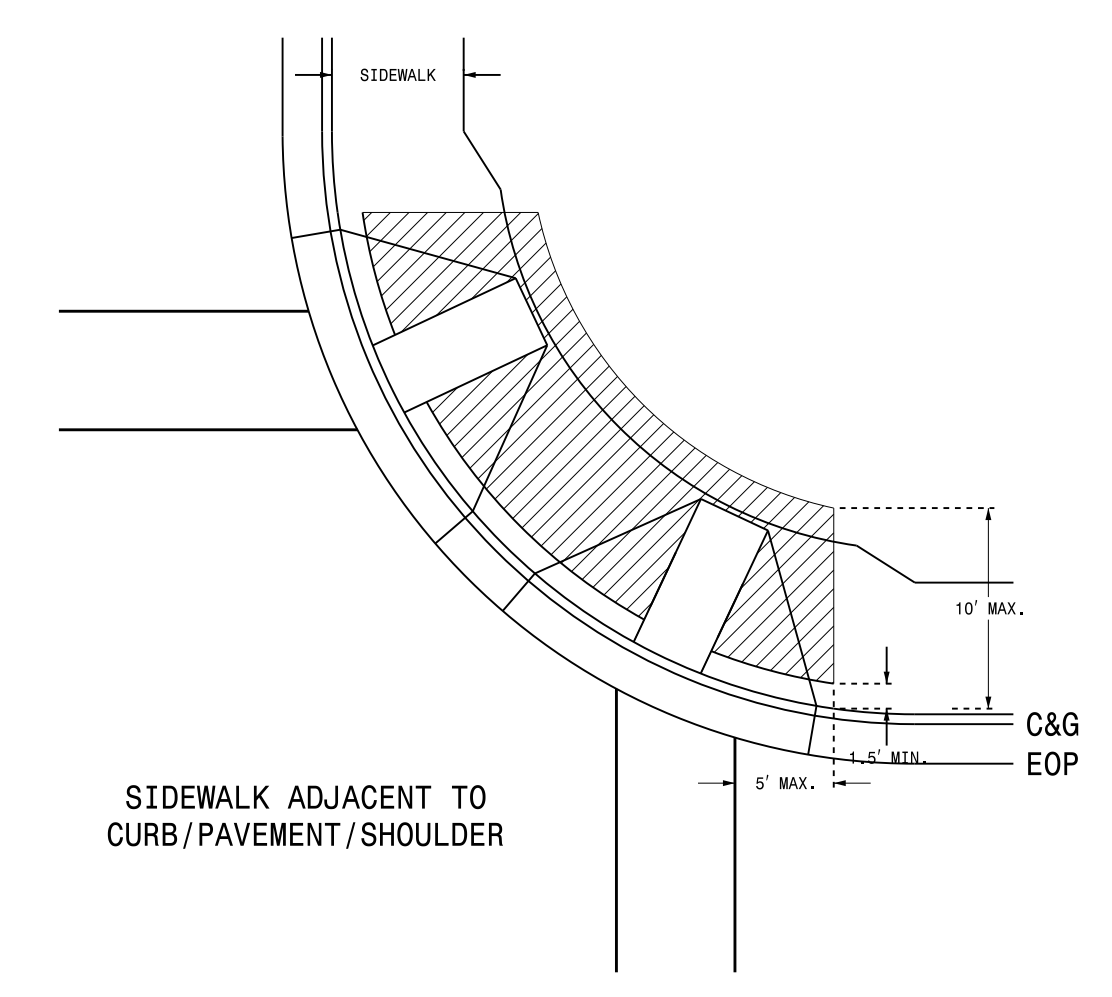
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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

06-14

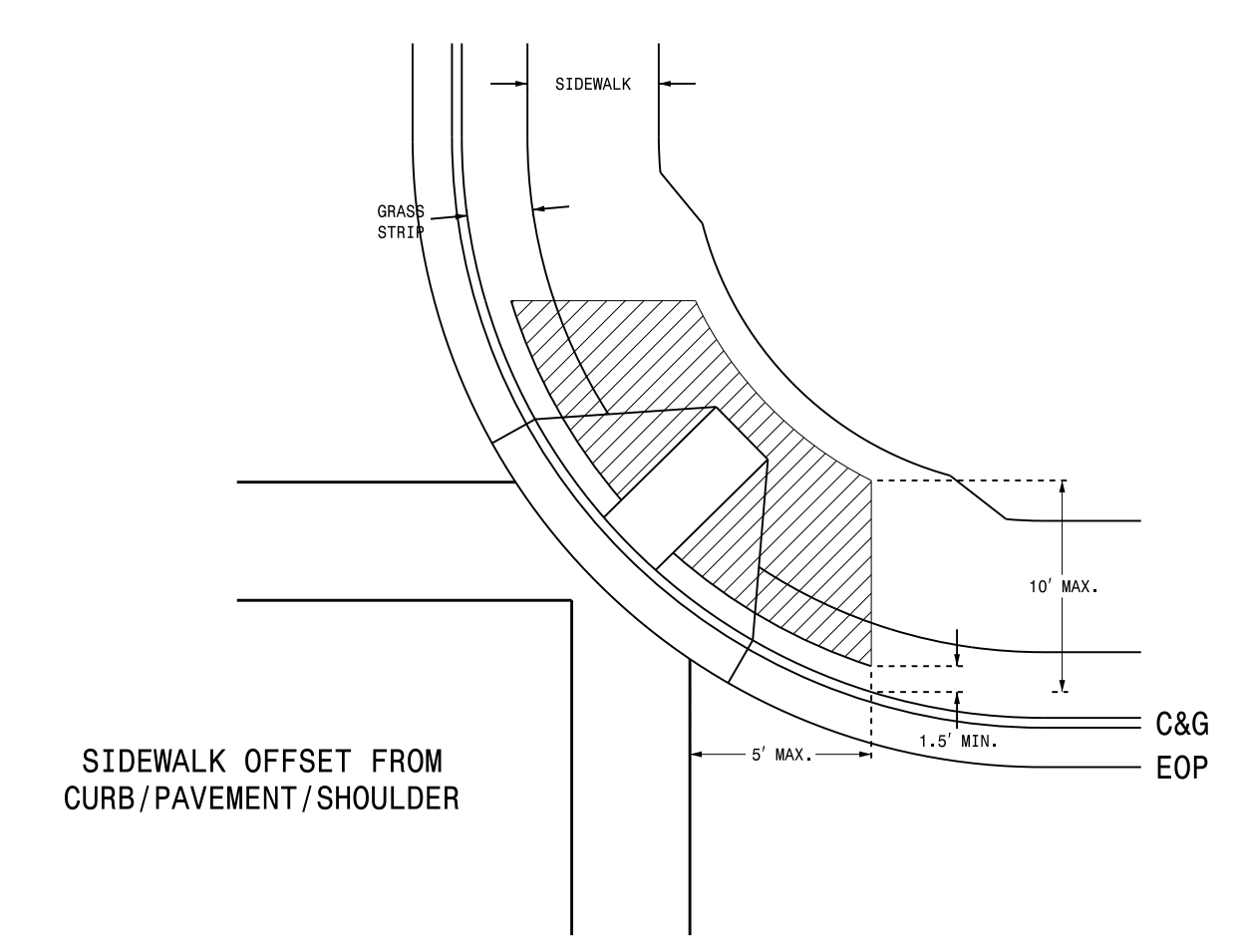
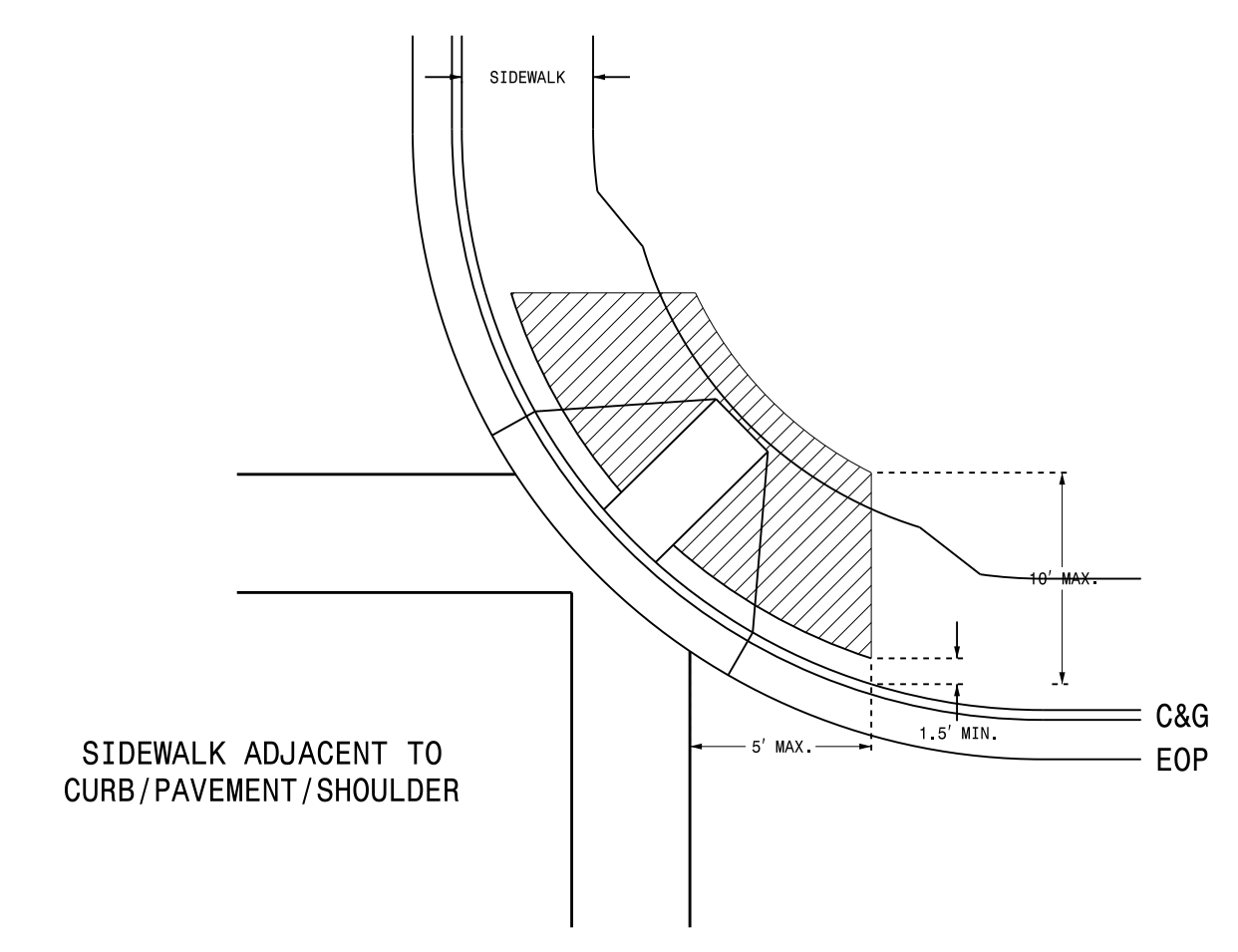
ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 1 OF 3
1705D01

PUSHBUTTON PLACEMENT
SEPARATE CURB RAMPS



PUSHBUTTON PLACEMENT
SHARED CURB RAMP



- NOTES**
1. Pushbutton pedestals should not be located further than 10 feet from the edge of curb, shoulder, or pavement.
 2. The face of the pushbutton should be parallel to the applicable crosswalk.
 3. Separate pushbuttons used on the same corner should be separated by a distance of at least 10 feet.
 4. Pushbuttons shall be installed adjacent to a level surface with a maximum reach distance of 10 inches.
 5. Maintain 4 feet of clearance around pedestal if located in sidewalk.
 6. Refer to section 1705 of the 2012 NCDOT Roadway Standard Drawings for Pushbutton Assembly details.
 7. Refer to section 1743 of the 2012 NCDOT Roadway Standard Drawings for Pedestal details.
 8. Contact Division Traffic Engineer for pushbutton location approval prior to installation.
 9. Curb ramps are for symbolic use only and may not reflect actual design or field conditions.

PROPOSED	LEGEND
	Signal Pole
	Type I Pushbutton Post
	Type II Signal Pedestal
	Pushbutton & Sign
	Pedestrian Signal Head
	Curb Ramp
	Pushbutton Location Area

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RALEIGH, N.C.

06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 1 OF 3
1705D01

See Plate for Title

Prepared in the Offices of:

750 N. Greenfield Parkway
Garner, NC 27529

SEAL

DocuSigned by:
Robert J. Ziemba
18084828744604

SIGNATURE

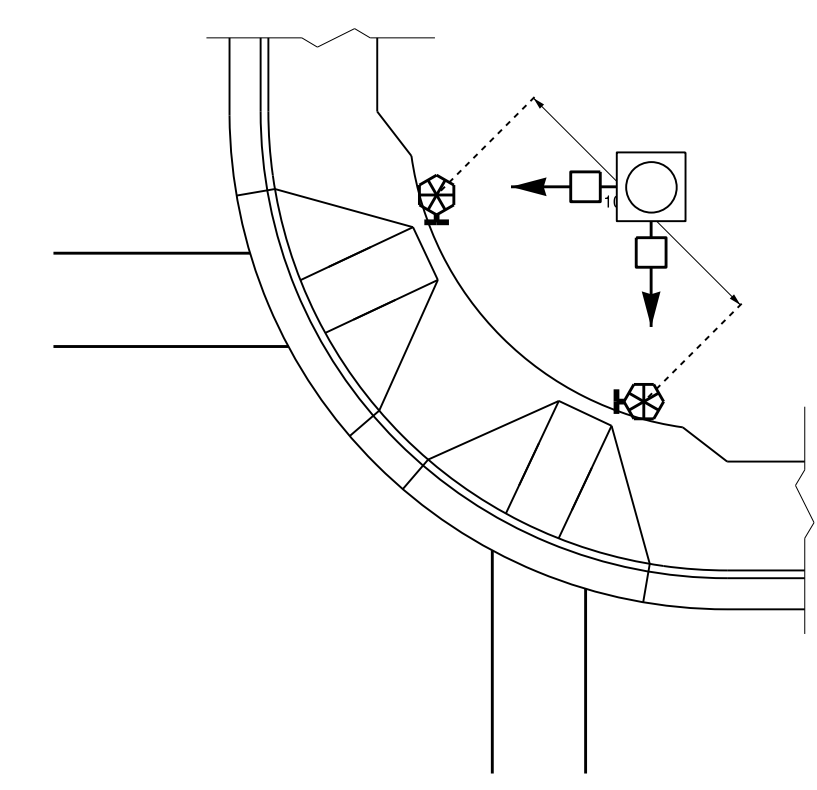
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DATE

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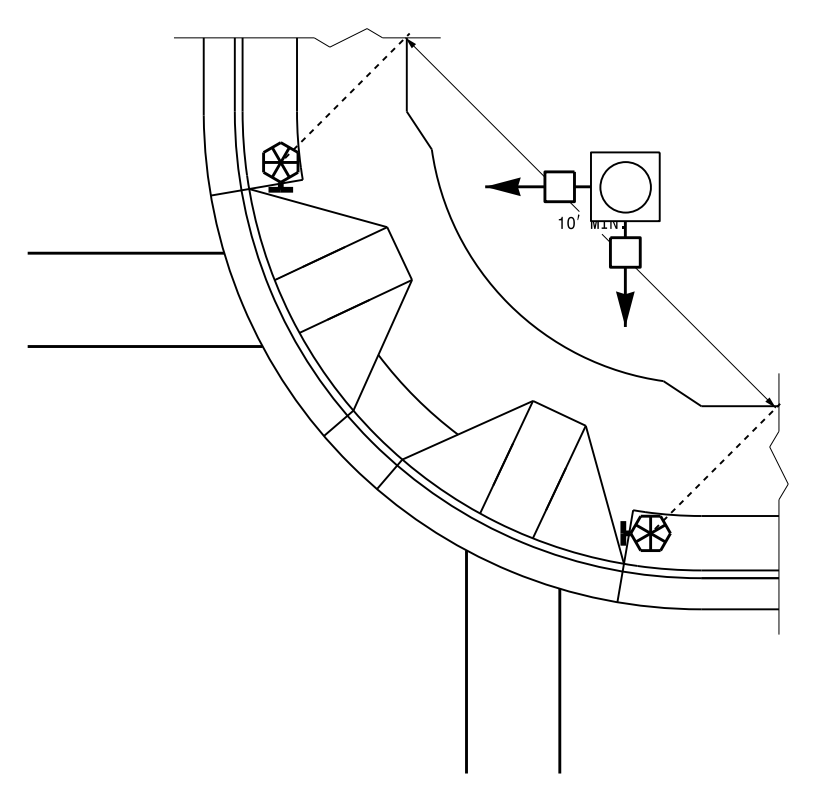
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RALEIGH, N.C.

06-14
ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL
SHEET 2 OF 3
1705D01

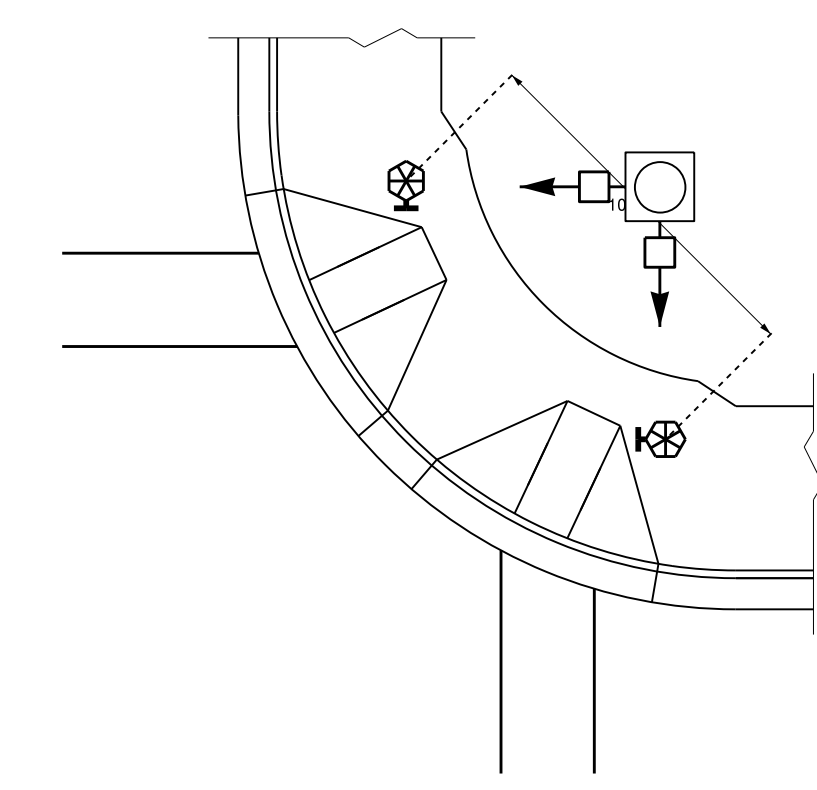
TYPICAL PUSHBUTTON LOCATIONS (CASE I)
SEPARATE CURB RAMPS W/ TYPE I PEDESTALS



BACK OF SIDEWALK IS WITHIN 10'
OF CURB OR PAVEMENT/SHOULDER



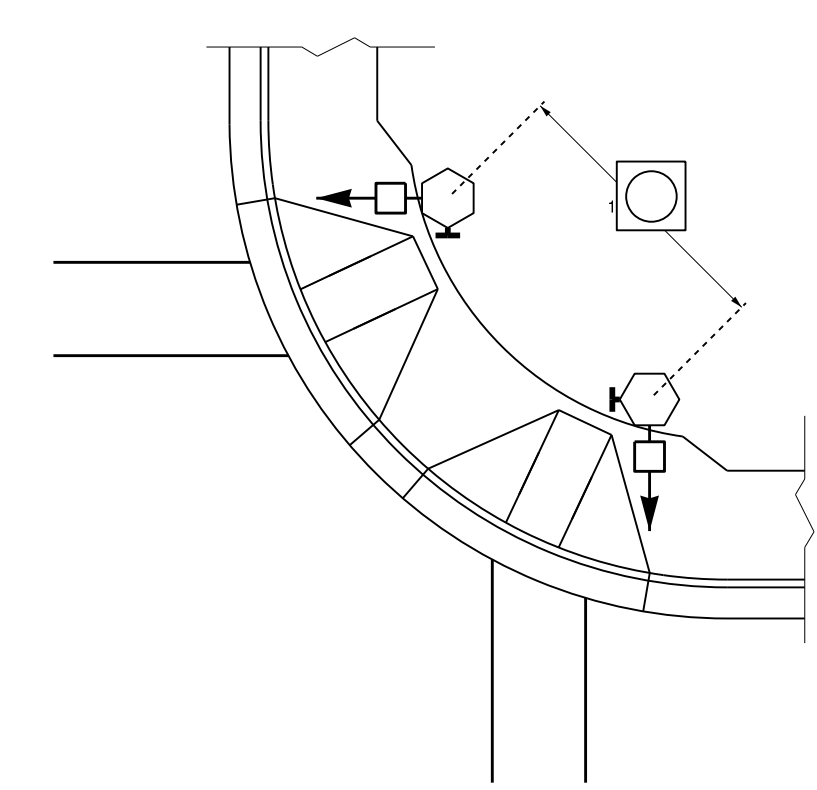
GRASS STRIP PLACEMENT IF BACK
OF SIDEWALK EXCEEDS 10' FROM
CURB OR PAVEMENT/SHOULDER



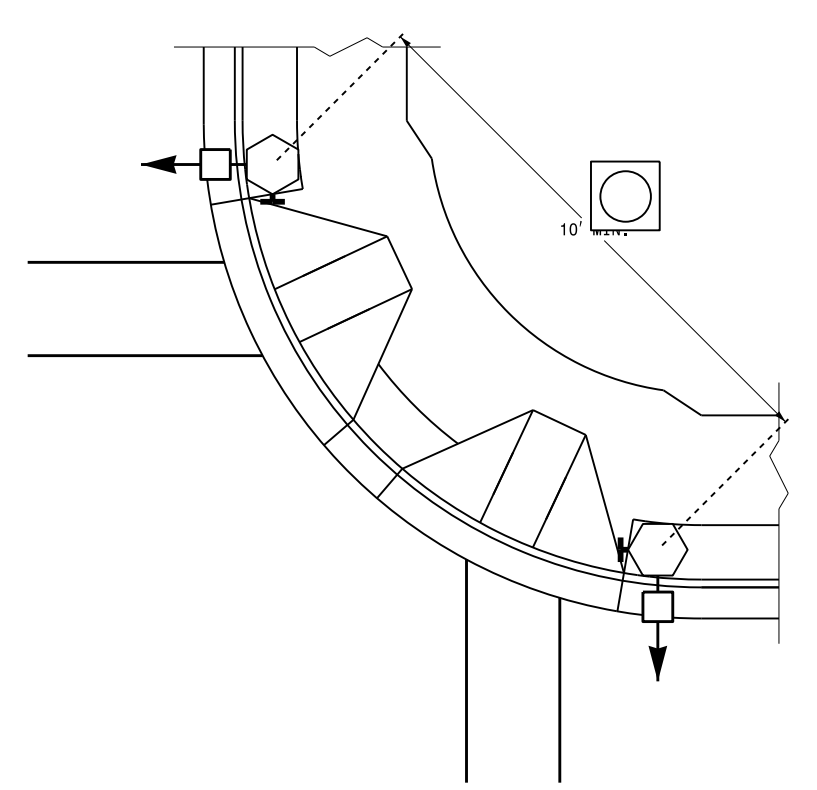
PUSHBUTTON PLACEMENT
IN WIDE SIDEWALK

- PROPOSED**
- Signal Pole
 - Type I Pushbutton Post
 - Type II Signal Pedestal
 - Pushbutton & Sign
 - Pedestrian Signal Head
 - Curb Ramp
 - Pushbutton Location Area
- LEGEND**

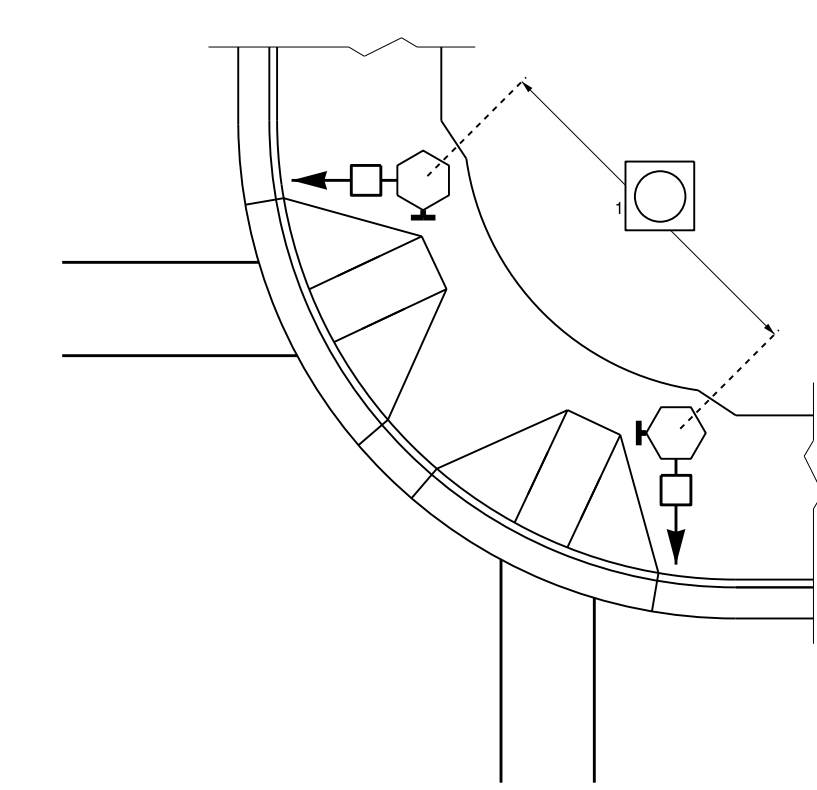
TYPICAL PUSHBUTTON LOCATIONS (CASE II)
SEPARATE CURB RAMPS W/ TYPE II PEDESTALS



BACK OF SIDEWALK IS WITHIN 10'
OF CURB OR PAVEMENT/SHOULDER

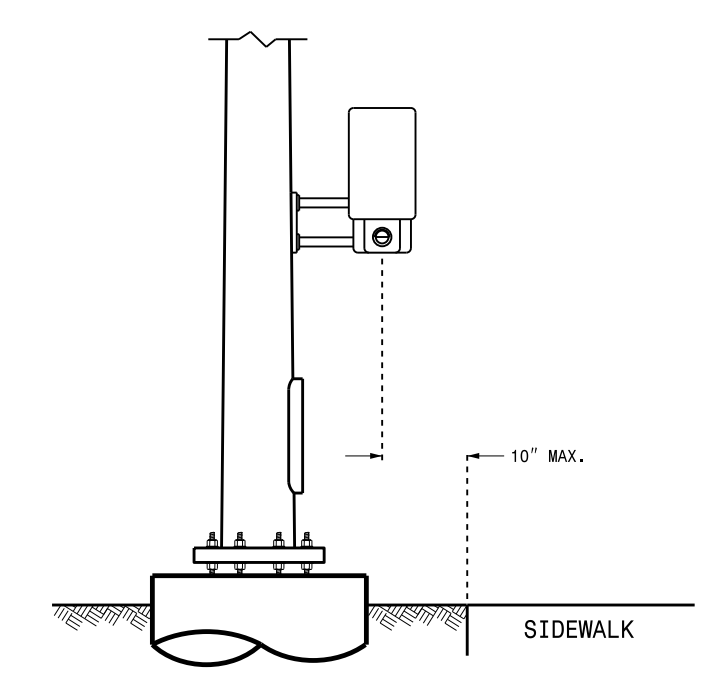


GRASS STRIP PLACEMENT IF BACK
OF SIDEWALK EXCEEDS 10' FROM
CURB OR PAVEMENT/SHOULDER



PUSHBUTTON PLACEMENT
IN WIDE SIDEWALK

OPTIONAL PUSHBUTTON EXTENSION
FACE OF PUSHBUTTON PARALLEL TO
APPLICABLE CROSSWALK



STATE OF NORTH CAROLINA
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ENGLISH DETAIL DRAWING FOR
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PLACEMENT DETAIL
SHEET 2 OF 3
1705D01

See Plate for Title

Prepared in the Offices of:

750 N. Greenfield Parkway
Garner, NC 27529

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1888488274464

SIGNATURE

6/17/2014
DATE

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RALEIGH, N.C.

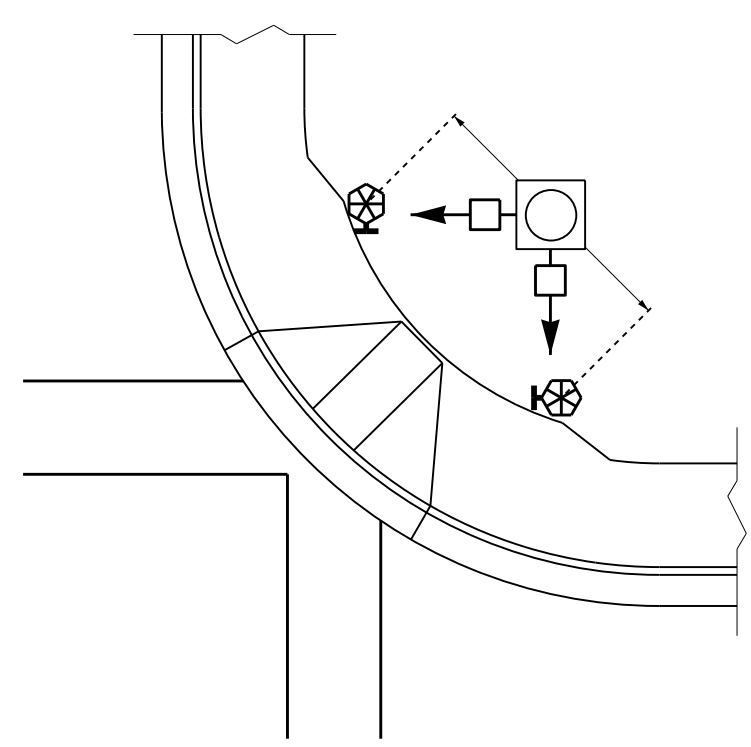
06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

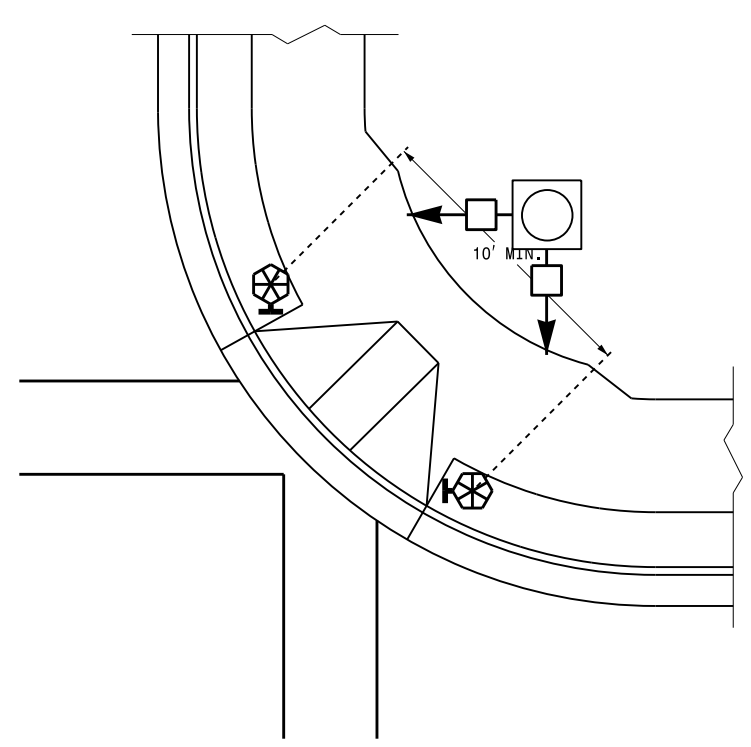
SHEET 3 OF 3
1705D01

TYPICAL PUSHBUTTON LOCATIONS (CASE III)

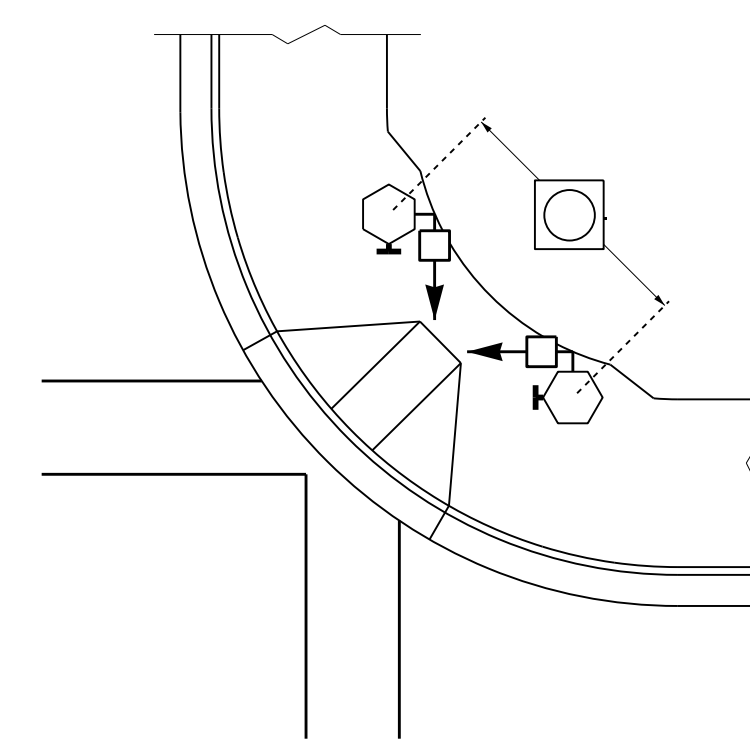
SHARED CURB RAMPS



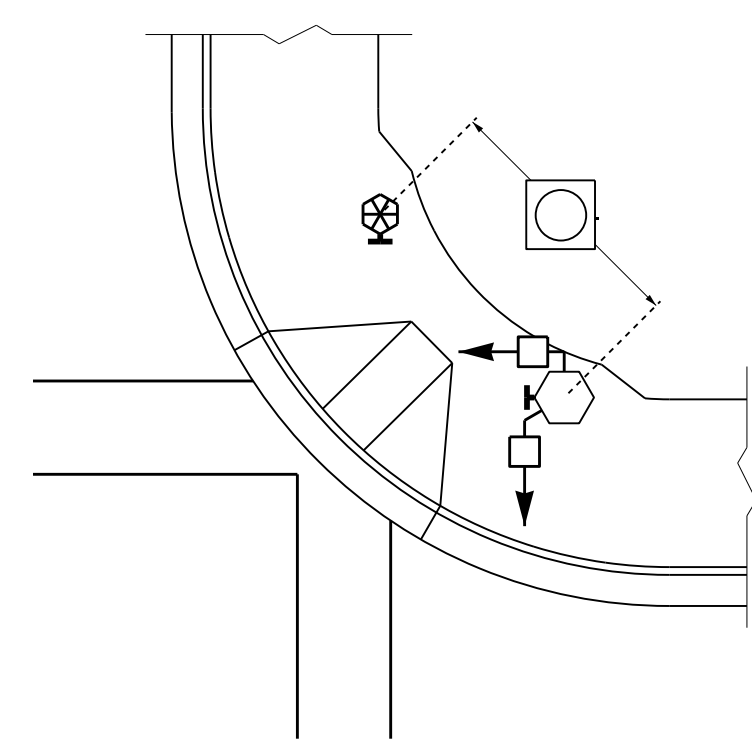
BACK OF SIDEWALK IS WITHIN 10' OF CURB OR PAVEMENT/SHOULDER



GRASS STRIP PLACEMENT IF BACK OF SIDEWALK EXCEEDS 10' FROM CURB OR PAVEMENT/SHOULDER

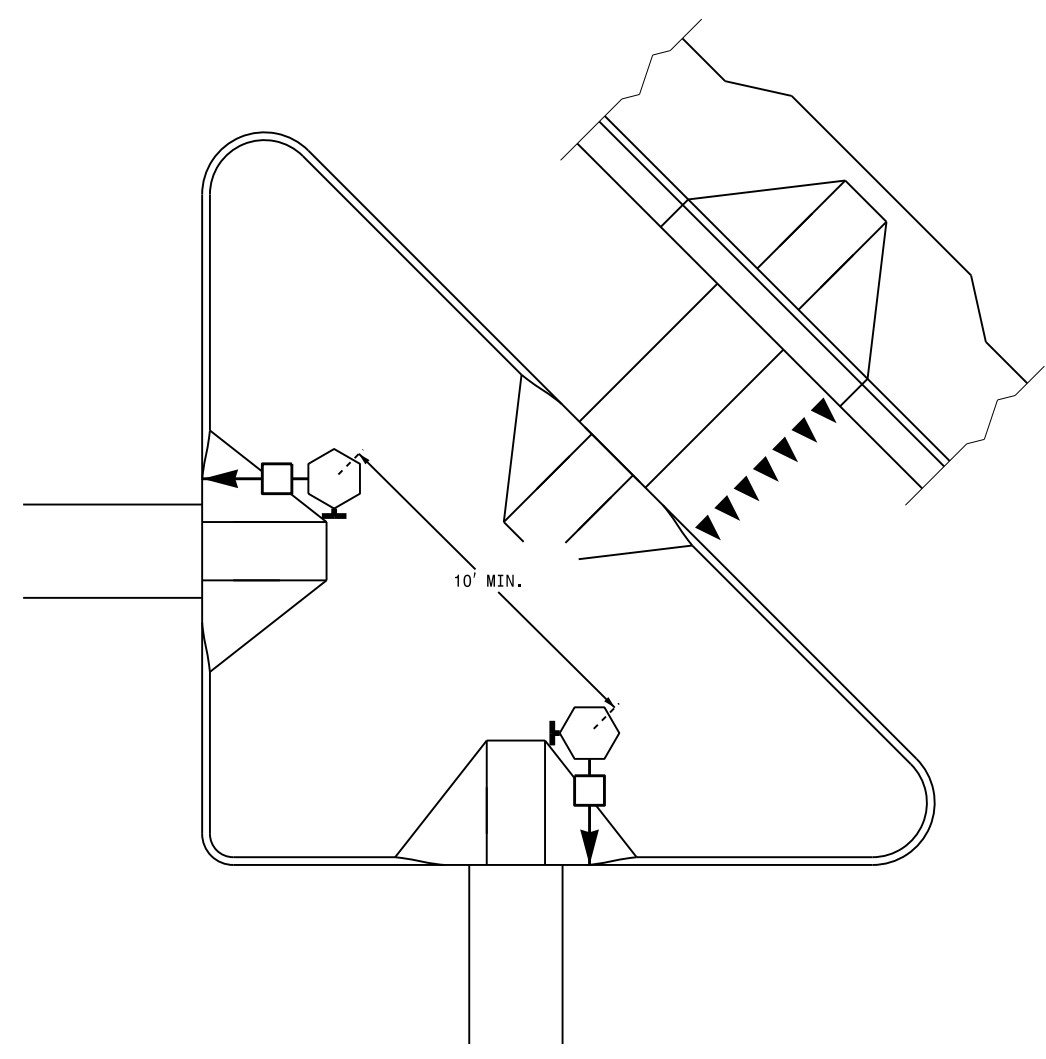


PUSHBUTTON PLACEMENT IN WIDE SIDEWALK (CORRESPONDING PUSHBUTTONS AND SIGNAL HEADS ON DIFFERENT PEDESTALS)

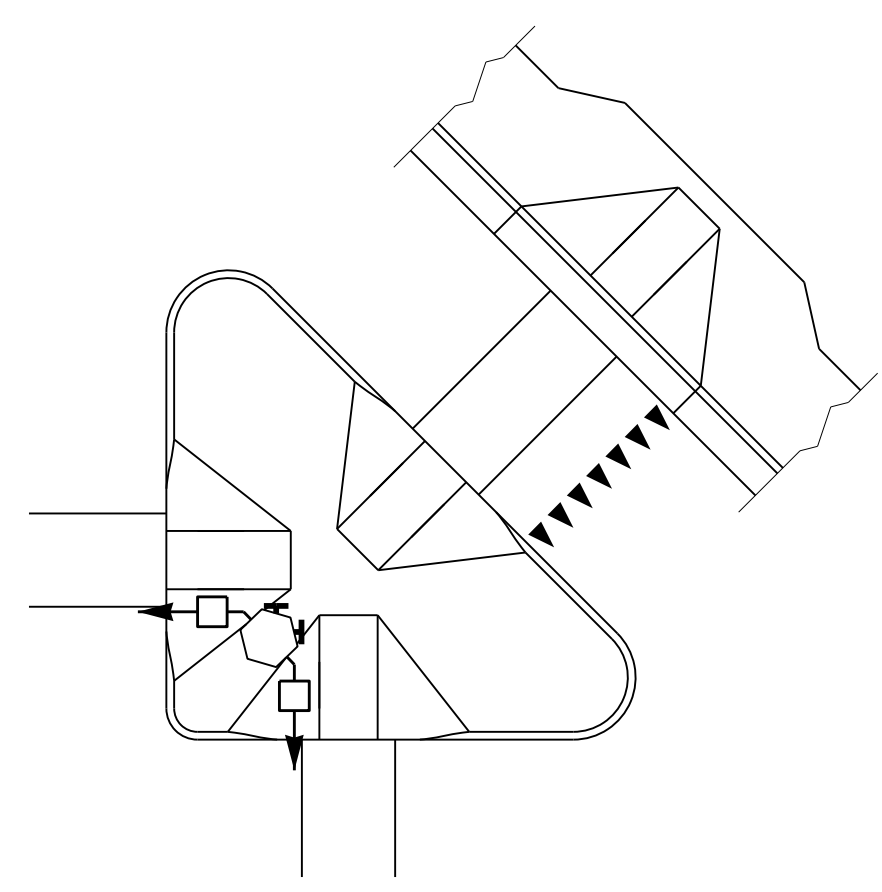


PUSHBUTTON PLACEMENT WITH SHARED TYPE II SIGNAL PEDESTAL AND TYPE I PUSHBUTTON POST

TRAFFIC ISLAND PUSHBUTTON LOCATIONS



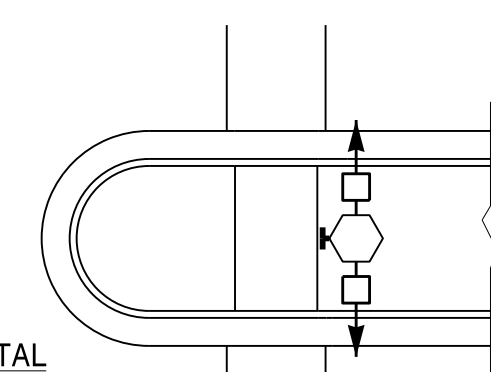
PUSHBUTTON PLACEMENT IN LARGE "PORK CHOP ISLAND" WITH SEPARATE PEDESTALS



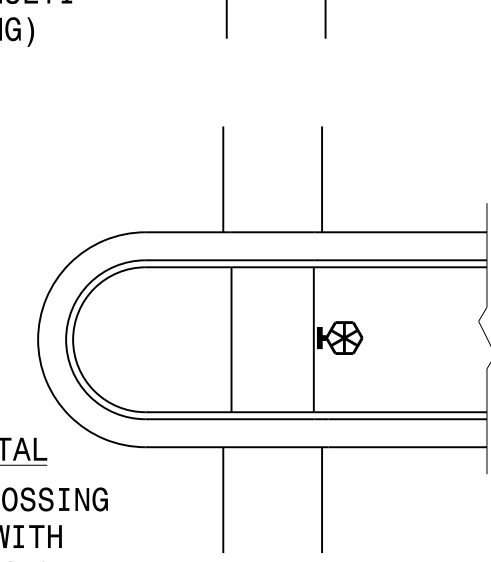
PUSHBUTTON PLACEMENT IN SMALL "PORK CHOP ISLAND" WITH SHARED PEDESTAL

PUSHBUTTON PLACEMENT IN MEDIAN

TYPE II PEDESTAL (FOR STAGED OR MULTI-PHASE CROSSING)



TYPE I PEDESTAL (FOR COMPLETE CROSSING CURB TO CURB WITH OPTIONAL REFUGE)



PROPOSED

	Signal Pole
	Type I Pushbutton Post
	Type II Signal Pedestal
	Pushbutton & Sign
	Pedestrian Signal Head
	Curb Ramp
	Pushbutton Location Area

LEGEND

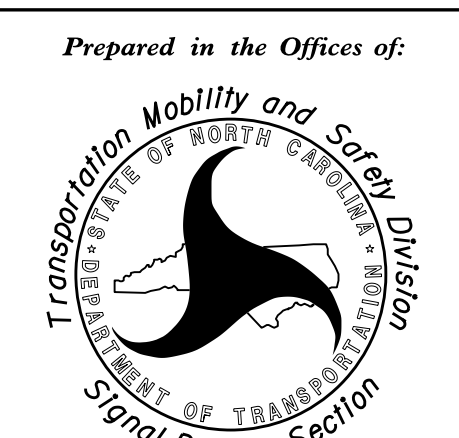
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

06-14

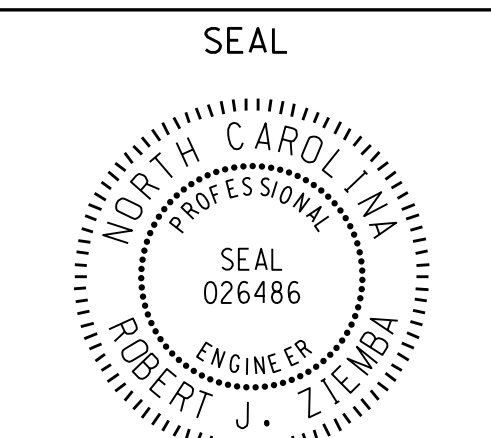
ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 3 OF 3
1705D01

See Plate for Title



750 N. Greenfield Parkway
Garner, NC 27529



DocuSigned by:
Robert J. Ziemba
18084982744494

6/17/2014
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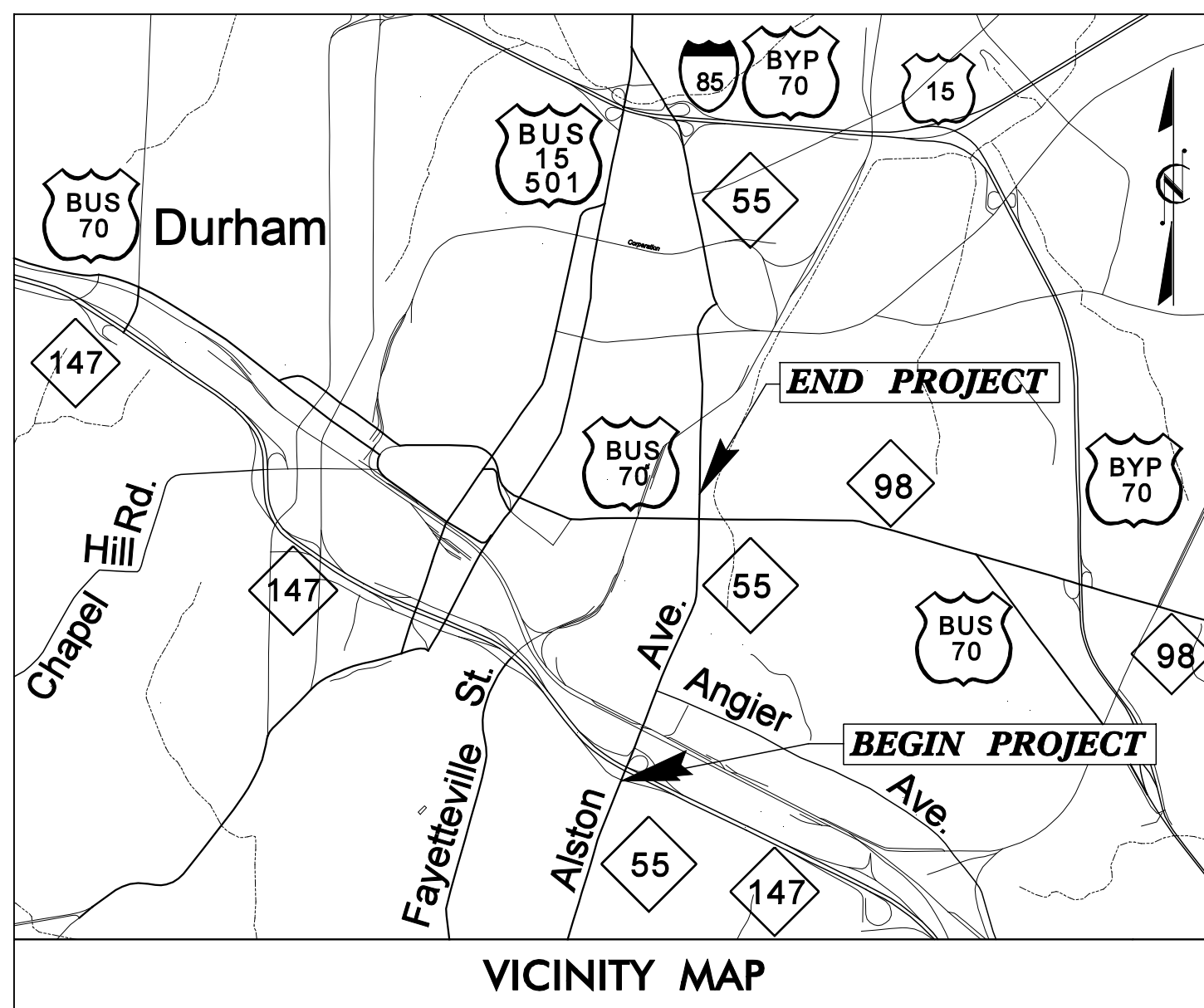
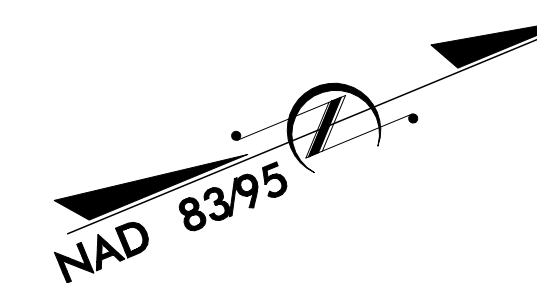
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DIVISION OF HIGHWAYS

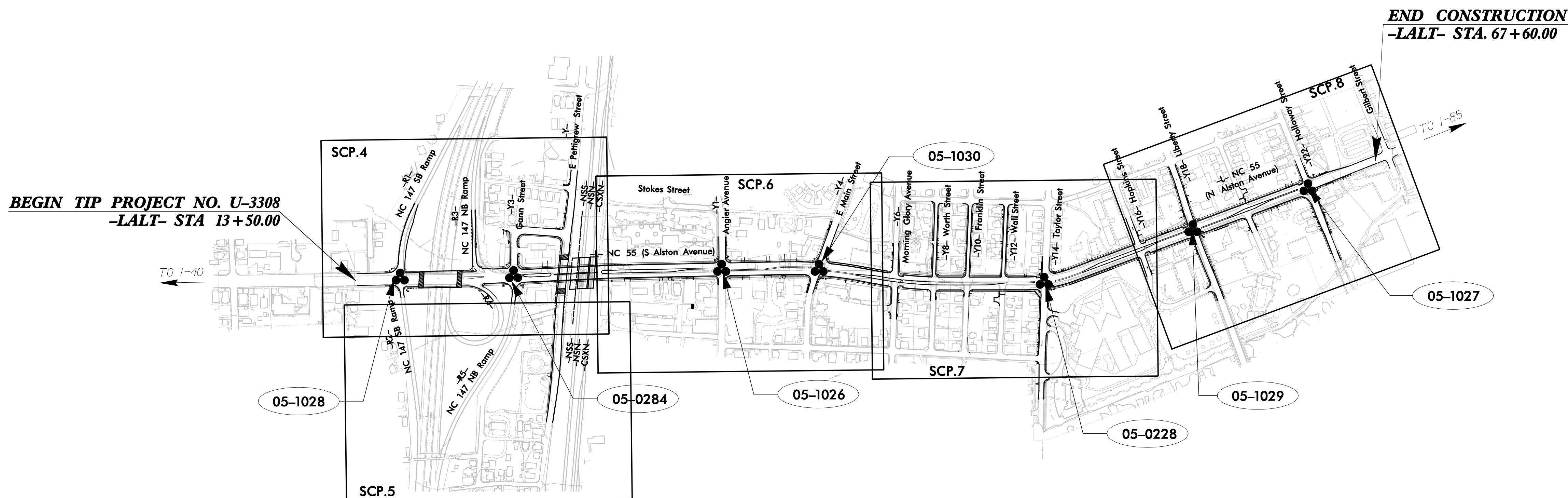
DURHAM COUNTY

**LOCATION: NC 55 (ALSTON AVE.) FROM NC 147 (I.L. "BUCK" DEAN
FREEWAY) TO NORTH OF US 70 BUS/NC 98 (HOLLOWAY ST.)**

TYPE OF WORK: COMMUNICATIONS CABLE ROUTING



VICINITY MAP



INDEX OF PLANS

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SCP.2	Construction Notes
SCP.3	Cable Notes
SCP.3.I	CCTV Camera Installation for Metal Pole with Underground Electrical Service Typical Detail
SCP.4 thru SCP.8	Communications Cable and Conduit Routing Plan
SCP.9 thru SCP.18	Splice Details

Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012

PLANS PREPARED BY:



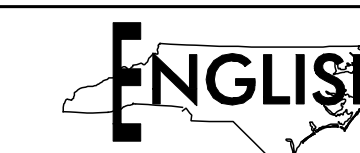
JOSEPH B KOPASKIE, P.E. - PROJECT ENGINEER
CLIFTON LAWSON, P.E. - DESIGN ENGINEER

LEGEND

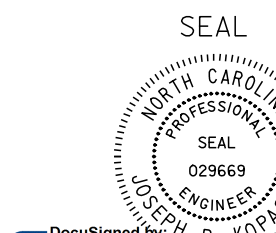
##-#### SIGNAL INVENTORY NUMBER

TRANSPORTATION PLANS PREPARED FOR:

MOBILITY AND SAFETY DIVISION / ITS & SIGNALS UNIT
ROBERT J. ZIEMBA, P.E. - CENTRAL REGION SIGNALS ENGINEER
GEORGE C. BROWN, P.E. - SIGNAL EQUIPMENT DESIGN ENGINEER
I. NEIL AVERY - SIGNAL COMMUNICATIONS PROJECT ENGINEER



ALL DIMENSIONS IN THESE PLANS ARE IN FEET UNLESS OTHERWISE NOTED



12/21/2015 DATE

12/21/2015 G:\Transportation\TR13.017.00 NCDOT 2012 Traffic LSA\TR13.017.03 U-3308 Signals\Traffic\Cable Routing\TIP U-3308 Cable Routing PLANS\SCPL_REV-12-18-15.dgn jk.kopaskie

TIP PROJECT: U-3308

CONTRACT: C203567

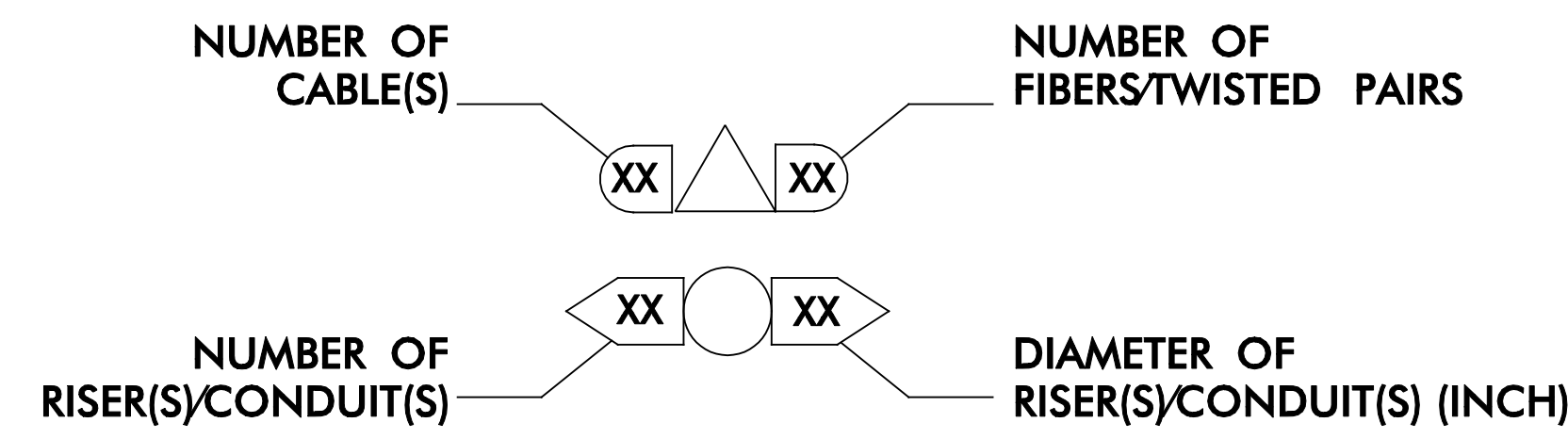
- 1 INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
- 2 INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
- 3 INSTALL REA, PE – 39, (UNDERGROUND) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
- 4 INSTALL SMFO CABLE
- 5 INSTALL MMFO CABLE
- 6 INSTALL FIBER 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
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- 13 INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
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- 38A EXISTING CCTV CAMERA METAL POLE AND FOUNDATION
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- 43 REMOVE EXISTING WOOD POLE
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- 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
- 51A EXISTING CABLE STORAGE RACKS (SNOW SHOES) WITH 100 FEET OF CABLE
- 52 INSTALL DELINEATOR MARKER
- 53 STORE 60 FEET OF COMMUNICATIONS CABLE
- 53A STORE 20 FEET OF COMMUNICATIONS CABLE
- 54 LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
- 55 LASH CABLE(S) TO EXISTING MESSENGER CABLE
- 56 LASH CABLE(S) TO NEW MESSENGER CABLE
- 57 MODIFY EXISTING ELECTRICAL SERVICE
- 58 INSTALL NEW ELECTRICAL SERVICE
- 58A EXISTING ELECTRICAL SERVICE
- 59 REUSE EXISTING TRANSCEIVER FOR MVD
- 59A INSTALL TRANSCEIVER FOR MVD
- 60 INSTALL POLE MOUNTED CCTV CABINET
- 60A EXISTING POLE MOUNTED CCTV CABINET
- 61 INSTALL FIBER OPTIC DATA TRANSCIEVER
- 61A EXISTING FIBER OPTIC DATA TRANSCIEVER
- 62 INSTALL FIBER OPTIC VIDEO TRANSMITTER W/DATA
- 62A EXISTING FIBER OPTIC VIDEO TRANSMITTER W/DATA

- 62B RELOCATE AND REUSE EXISTING FIBER OPTIC VIDEO TRANSMITTER W/DATA AND INSTALL NEW VIDEO ENCODER
- 63 INSTALL POLE MOUNTED MICROWAVE VEHICLE DETECTOR
- 63A EXISTING POLE MOUNTED MICROWAVE VEHICLE DETECTOR
- 63B RELOCATE AND REUSE EXISTING POLE MOUNTED MICROWAVE VEHICLE DETECTOR

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)



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Fax: 919-789-9591
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	CONSTRUCTION NOTES		SEAL
	Division 5 Durham County Durham PLAN DATE: December 2015 REVIEWED BY: C Lawson PREPARED BY: J Kopaskie REVIEWED BY:		
SCALE 0 N/A			

LEGEND

	NEW FIBER OPTIC COMMUNICATIONS CABLE
	NEW TWISTED PAIR COMMUNICATIONS CABLE
	EXISTING COMMUNICATIONS CABLE
	EXISTING COMMUNICATIONS CABLE TO BE REMOVED
	NEW AERIAL GUY ASSEMBLY
	NEW CONDUIT
	EXISTING CONDUIT
	NEW DIRECTIONAL DRILLED CONDUIT
	NEW BORED AND JACKED CONDUIT
	NEW JUNCTION BOX
	EXISTING JUNCTION BOX
	EXISTING WOOD POLE (NOT AFFECTED BY PROJECT)
	EXISTING WOOD POLE (TO BE REMOVED BY OTHERS)
	NEW WOOD POLE (BY OTHERS)
	EXISTING AERIAL SPLICE ENCLOSURE
	NEW AERIAL SPLICE ENCLOSURE
	NEW METAL POLE
	EXISTING METAL POLE
	NEW CCTV CAMERA ASSEMBLY
	EXISTING CCTV CAMERA ASSEMBLY
	NEW STANDARD GUY ASSEMBLY
	NEW SIDEWALK GUY ASSEMBLY
	NEW CABLE STORAGE RACKS (SNOW SHOES)
	EXISTING CONTROLLER AND CABINET
	EXISTING SPLICE CABINET
	NEW SPLICE CABINET
	SIGNAL POLE
	SIGNAL INVENTORY NUMBER
	YAGI ANTENNA (SINGLE)
	OMNI ANTENNA

CABLE ROUTING NOTES:

1) CONTRACTOR SHALL RELOCATE EXISTING GPS UNITS TO NEW CABINETS AT THE FOLLOWING LOCATIONS AS SHOWN ON THE PLANS AND LISTED BELOW:

- A) SIGNAL CABINET 05-1028 - NC 55 (S ALSTON AVE) AT NC 147 SB RAMPS
- B) SIGNAL CABINET 05-0284 - NC 55 (S ALSTON AVE) AT NC 147 NB RAMP/GANN ST
- C) SIGNAL CABINET 05-1026 - NC 55 (S ALSTON AVE) AT SR 1926 (ANGIER AVE)
- D) SIGNAL CABINET 05-1030 - NC 55 (S /N ALSTON AVE) AT E. MAIN ST
- E) SIGNAL CABINET 05-0228 - NC 55 (N ALSTON AVE) AT TAYLOR ST
- F) SIGNAL CABINET 05-1029 - NC 55 (N ALSTON AVE) AT LIBERTY ST

NEW CABINETS WILL BE PLACED AT THESE LOCATIONS AS PART OF THE TEMPORARY SIGNAL INSTALLATION REQUIRED TO SUPPORT ROADWAY CONSTRUCTION. ALL GPS UNITS SHALL REMAIN OPERATIONAL UNTIL SWITCH OVER TO THE NEW FIBER OPTIC COMMUNICATIONS IS COMPLETE. THIS SHALL OCCUR WHEN THE FINAL SIGNAL AT EACH LOCATION LISTED ABOVE IS INSTALLED AND OPERATIONAL. RETURN GPS UNITS TO THE ENGINEER ONCE FIBER OPTIC COMMUNICATIONS SYSTEM IS OPERATIONAL.

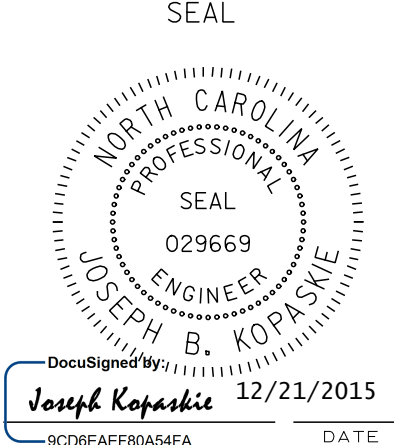
- 2) CUT NCDOT/CITY OF DURHAM COMMUNICATIONS CABLE D1027 AT CABINET #05-1027 AND BACK PULL CABLE TO EXISTING OVER SIZED JUNCTION BOX. REROUTE CABLE D1027 VIA NEW CONDUIT TO NEW CABINET AND SPLICE IN ACCORDANCE WITH PLANS.
- 3) COORDINATE ALL WORK WITH THE ENGINEER AND THE CITY OF DURHAM TRAFFIC MANAGEMENT CENTER (MR. PETE NICHOLAS (919) 560-4366).
- 4) INSTALL NEW RISERS, CONDUIT, JUNCTION BOXES AND FIBER OPTIC DROP CABLE BETWEEN ALL PROPOSED AERIAL SPLICE ENCLOSURES AND CABINETS PRIOR TO PERFORMING THE SWITCH OVER FROM TIME BASED COORDINATION/GPS UNITS TO THE NEW FIBER OPTIC COMMUNICATIONS CABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT COMMUNICATIONS TO ALL CHANNELS AFFECTED BY THE CONSTRUCTION ARE OPERATIONAL AND FUNCTIONING ONCE THE FIBER OPTIC CABLE SWITCH OVER HAS BEEN COMPLETED.
- 5) IT IS A MANDATORY REQUIREMENT THAT THE CONTRACTOR TAG AND LABEL ALL FIBER OPTIC CABLES AT EACH SNOW SHOE ARRANGEMENT, AERIAL SPLICE ENCLOSURE, AND SPLICE CABINET. CABLE ID MARKERS CAN BE FOUND IN SECTION 1098-10 OF THE 2012 NCDOT "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES". REPLACE THE CONTACT PHONE NUMBER WITH THE CABLE ID NUMBER AS SHOWN IN THE PLANS.
- 6.) RETURN EXISTING CCTV CAMERA, CCTV EQUIPMENT CABINET, AND WOOD POLE TO ENGINEER. RELOCATE MVD TO NEW METAL POLE. REMOVE EXISTING ELECTRICAL SERVICE.
- 7.) SUBSEQUENT TO THE INSTALLATION OF THE PROPOSED CCTV CAMERA ASSEMBLY AND CCTV METAL POLE, CUT EXISTING CCTV-3 /MVD-7 DROP CABLE AT EXISTING CCTV EQUIPMENT CABINET AND BACK PULL CABLE. REROUTE VIA NEW CONDUIT TO NEW CCTV EQUIPMENT CABINET. STORE EXCESS COMMUNICATIONS CABLE IN EXISTING JUNCTION BOX. INSTALL NEW SPLICE IN ACCORDANCE WITH PLANS AT CCTV-3 /MVD-7 EQUIPMENT CABINET.
- 8.) EXISTING CONDUIT SHOWN FOR INFORMATION PURPOSES. REPLACE ONLY IF DAMAGED BY CONSTRUCTION.
- 9.) LOCATION OF PROPOSED CCTV CAMERA POLE IS APPROXIMATE ONLY. CONTRACTOR SHALL COORDINATE LOCATION WITH THE REGIONAL ITS ENGINEER TO IDENTIFY AN APPROVED LOCATION THAT IS SUITABLE FOR THE PROPOSED CCTV POLE PRIOR TO INSTALLATION.

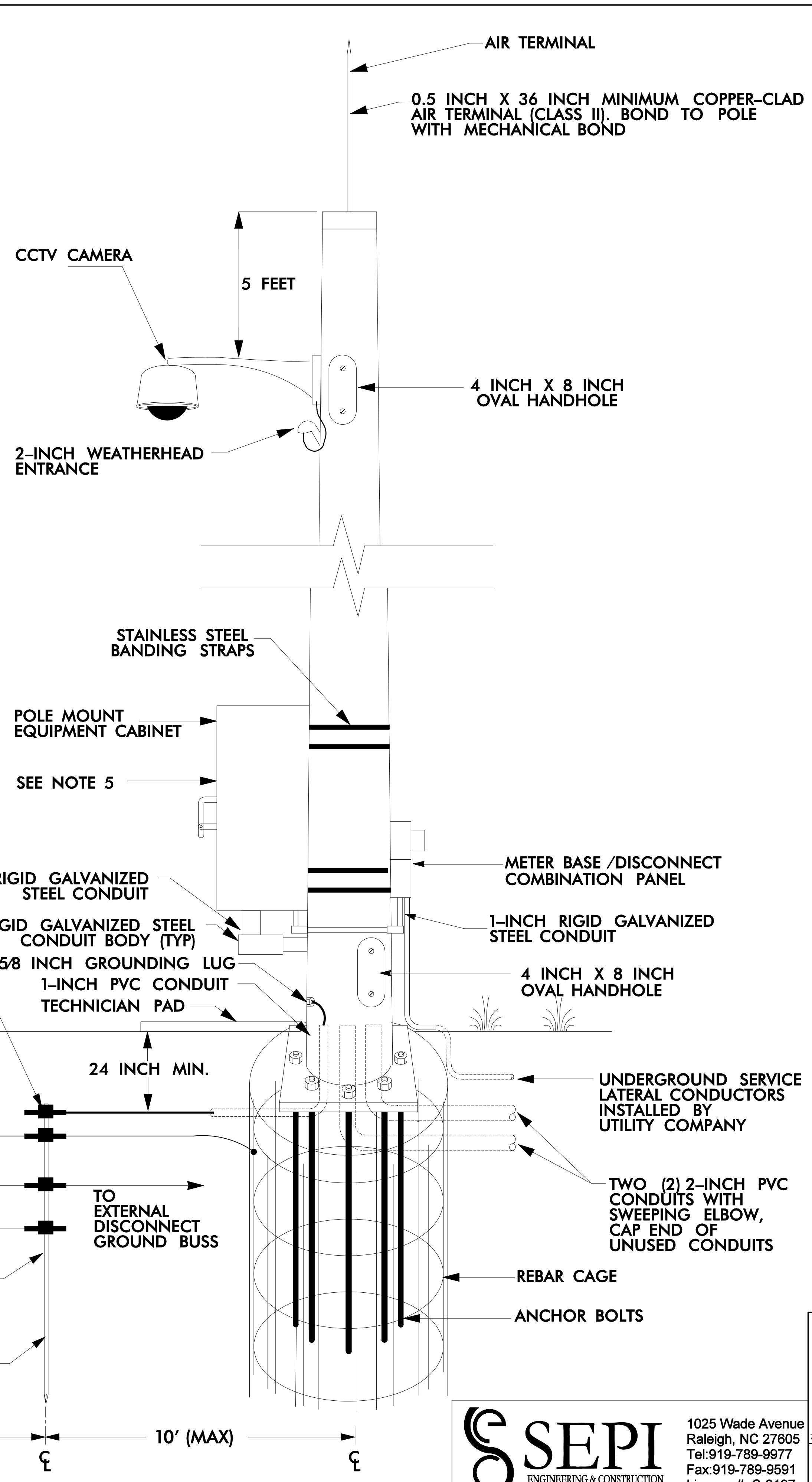
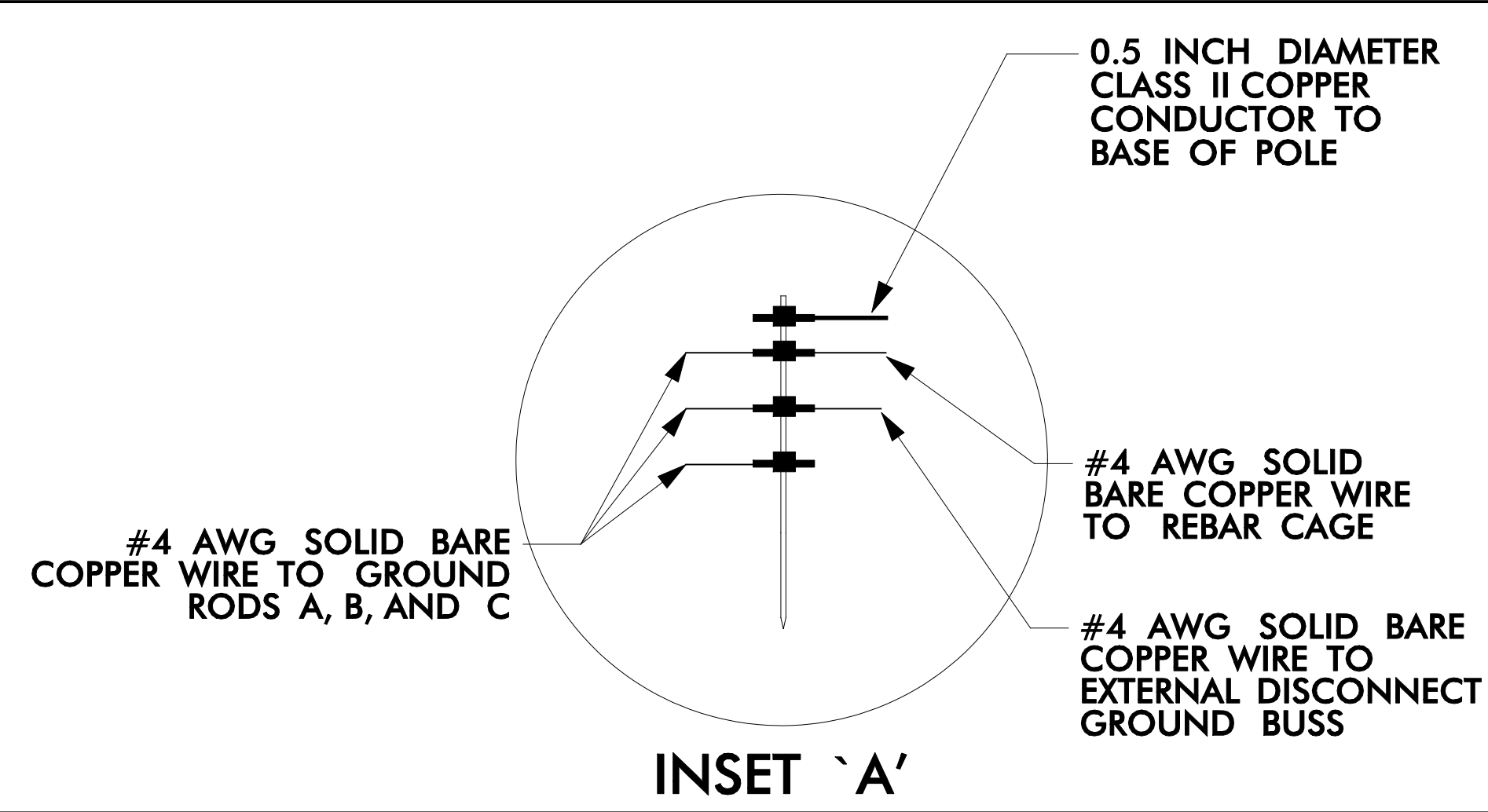
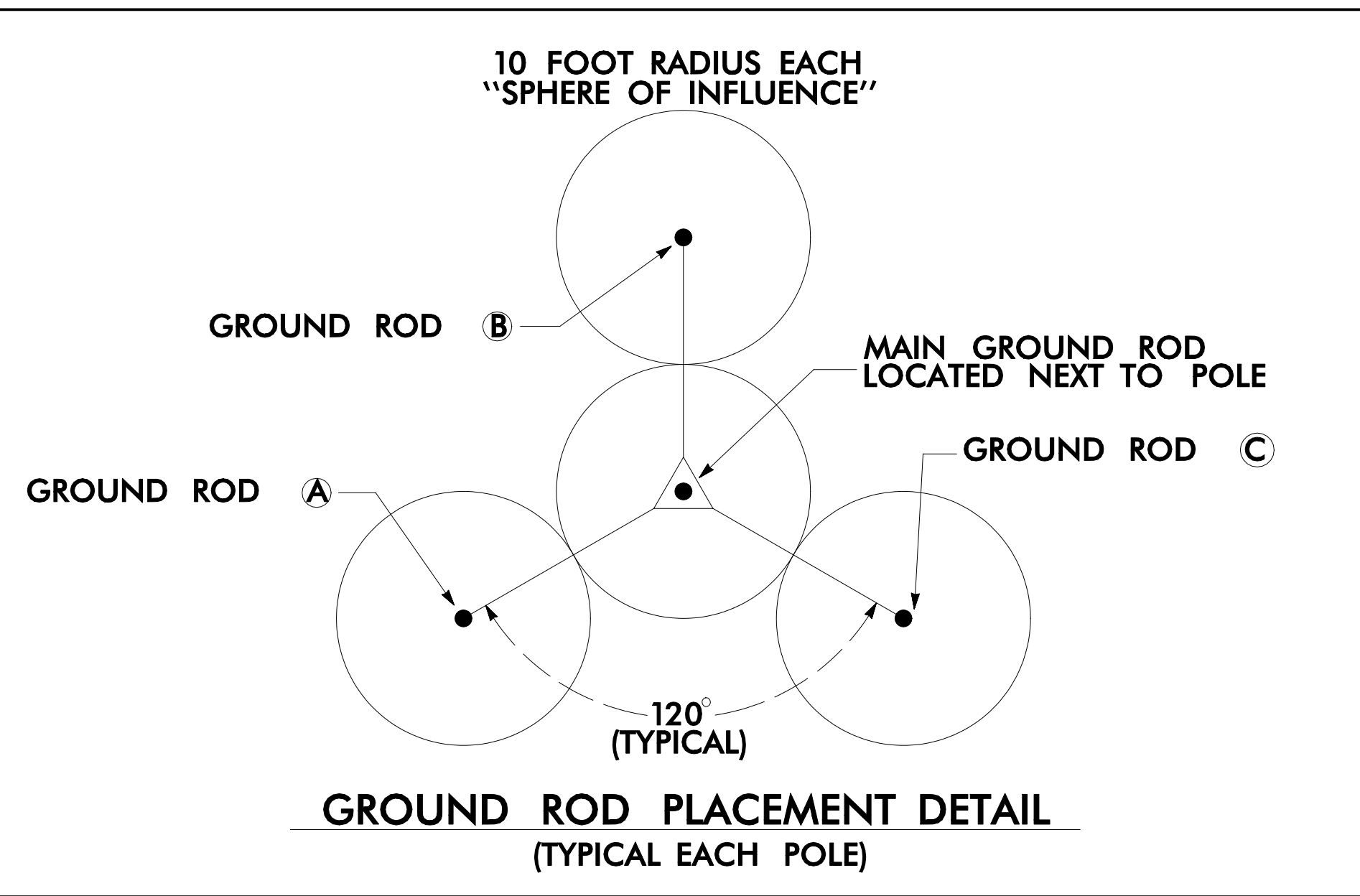
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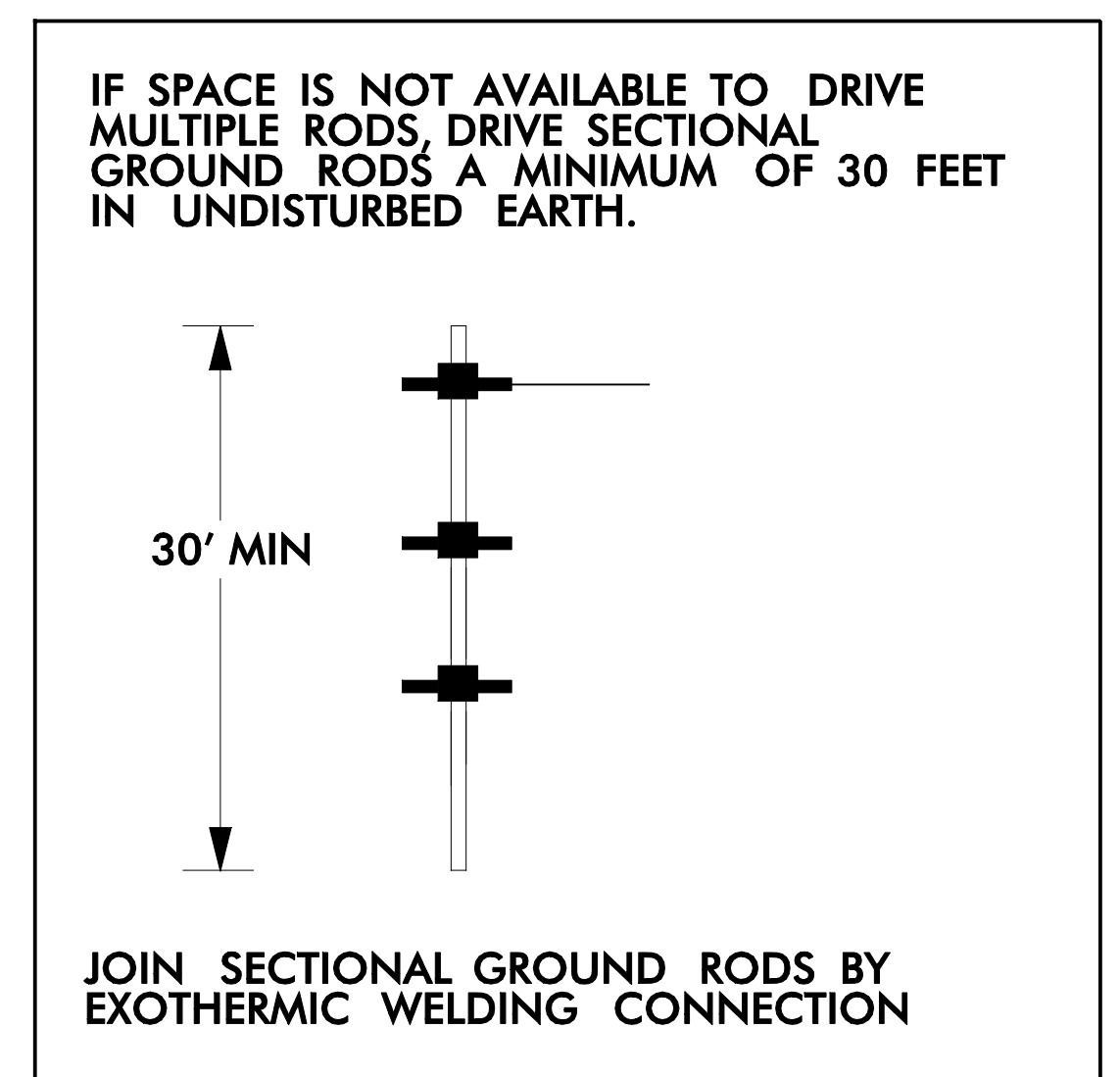


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Tel: 919-789-9977
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	COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN LEGEND AND NOTES	
	Division 5 Durham County Durham PLAN DATE: December 2015 PREPARED BY: J Kopaskie	REVIEWED BY: C Lawson REVIEWED BY:
REVISIONS	INIT.	DATE
SCALE: 0 N/A		DATE: 12/21/2015

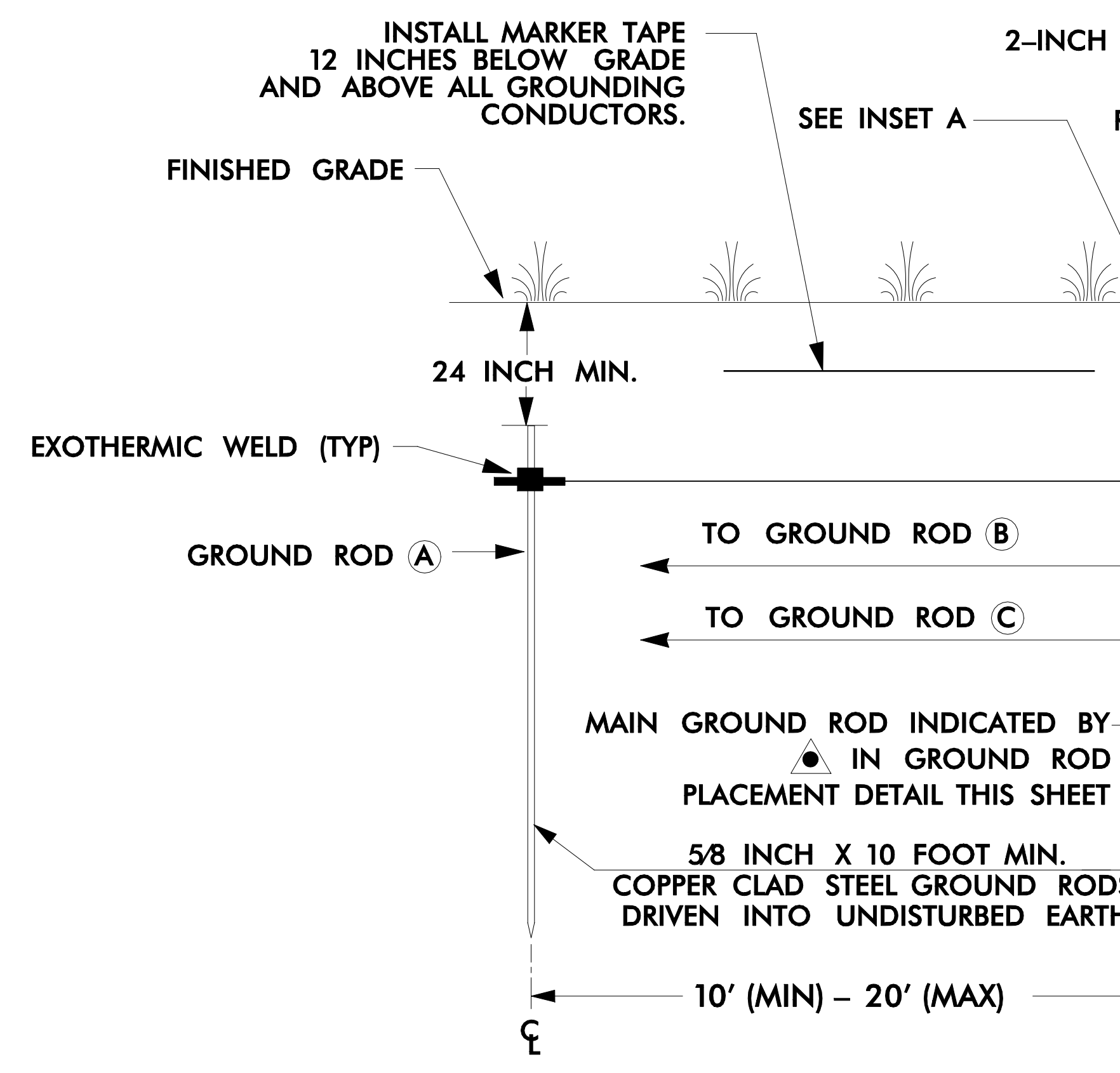


ALTERNATE GROUNDING METHOD DETAIL



NOTES

- BOND 0.5 INCH DIAMETER, 28 STRAND (MINIMUM) CLASS II COPPER CONDUCTOR TO THE MAIN GROUND ROD BY AN EXOTHERMIC WELD METHOD.
- EXOTHERMICALLY WELD ALL CONNECTIONS TO GROUND RODS.
- BOND #4 AWG SOLID BARE COPPER WIRE TO REBAR CAGE AND THE MAIN GROUND ROD BY AN EXOTHERMIC WELD METHOD.
- ENSURE CAMERA HOUSING, CAMERA, AND PAN -TILT UNIT ARE BONDED TO POLE.
- REMOVE BONDING JUMPER BETWEEN EQUIPMENT CABINET GROUND BUSS AND NEUTRAL BUSS.
- 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.
- INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.



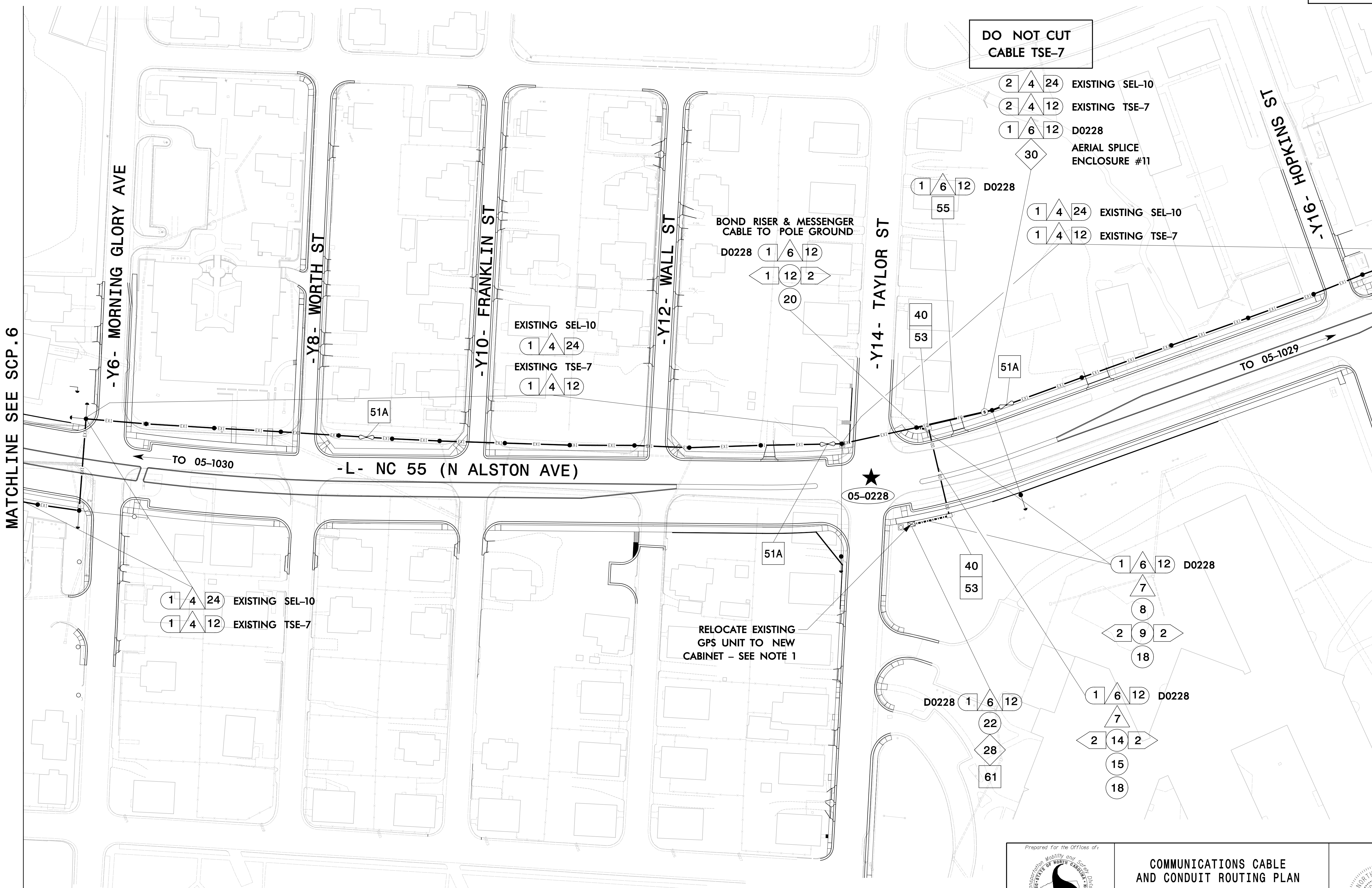
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Tel: 919-789-9977
Fax: 919-789-9591
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	<p>Prepared For the Office of:</p> <p>CCTV CAMERA INSTALLATION FOR METAL POLE WITH UNDERGROUND ELECTRICAL SERVICE TYPICAL DETAIL</p> <p>DIVISION 95 Durham County Durham</p>		<p>SCALE</p> <p>0</p> <p>N/A</p>
	<p>PLAN DATE: December 2015</p> <p>PREPARED BY: J Kopaskie</p>	<p>REVIEWED BY: C Lawson</p> <p>REVIEWED BY:</p>	

**DO NOT CUT
CABLE TSE-7**



MATCHLINE SEE SCP.6

MATCHLINE SEE SCP.8

1 4 24 EXISTING SEL-10
1 4 12 EXISTING TSE-7

EXISTING SEL-10
1 4 24
EXISTING TSE-7
1 4 12

BOND RISER & MESSENGER
CABLE TO POLE GROUND
D0228 1 6 12
1 12 2
20

2 4 24 EXISTING SEL-10
2 4 12 EXISTING TSE-7
1 6 12 D0228
30 AERIAL SPLICE
ENCLOSURE #11

1 4 24 EXISTING SEL-10
1 4 12 EXISTING TSE-7

1 6 12 D0228
7
8
2 9 2
18

D0228 1 6 12
22
28
61

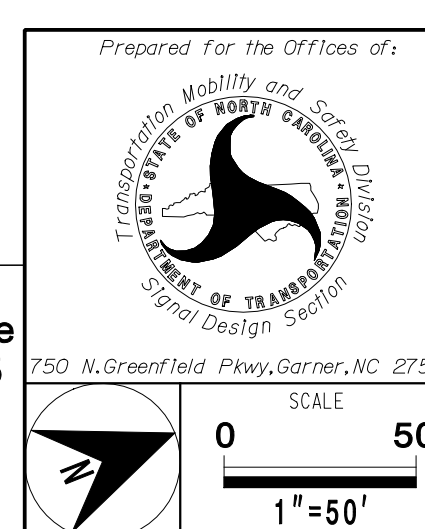
1 6 12 D0228
7
2 14 2
15
18

RELOCATE EXISTING
GPS UNIT TO NEW
CABINET - SEE NOTE 1

12/17/2014 G:\w\enr\p\101\on\13\017_00_NCDOT_2012_Traffic_LSA\13-017-03_U-3308_Signals\MT\off\cable Routing Plans\SCP.7.dgn J.Kopaskie

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1025 Wade Avenue
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Tel: 919-789-9977
Fax: 919-789-9591
License #: C-2197



COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN

Division 5 Durham County Durham

PLAN DATE: November 2014 REVIEWED BY: J. Hohanadel

PREPARED BY: J. Kopaskie REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL

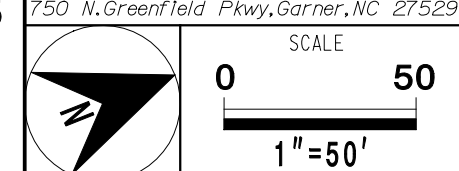
NORTH CAROLINA PROFESSIONAL ENGINEER

JEFFREY H. HOCHANDEL

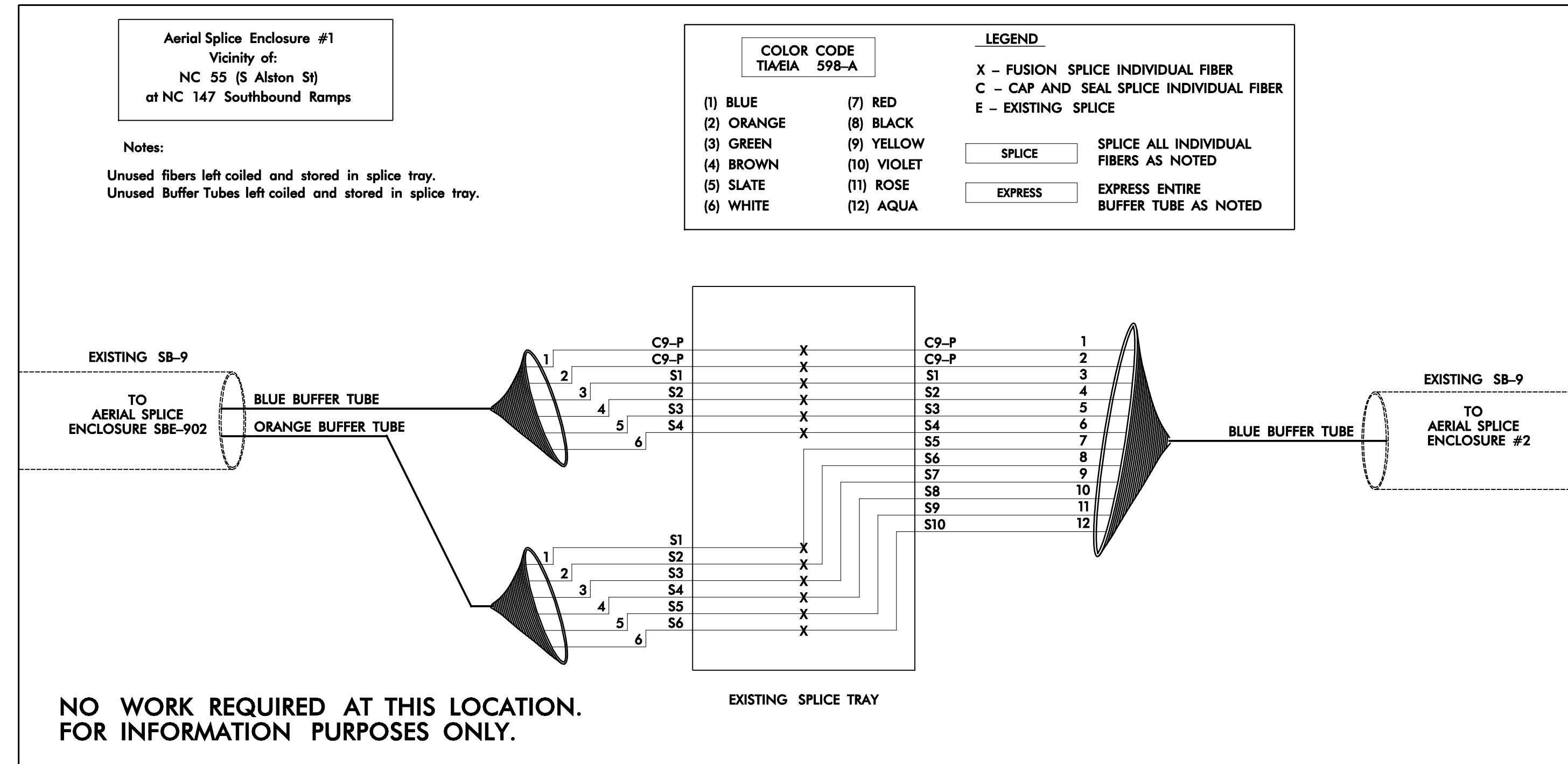
28430

12/22/2014

SIG. INVENTORY NO.



FIBER OPTIC CABLE

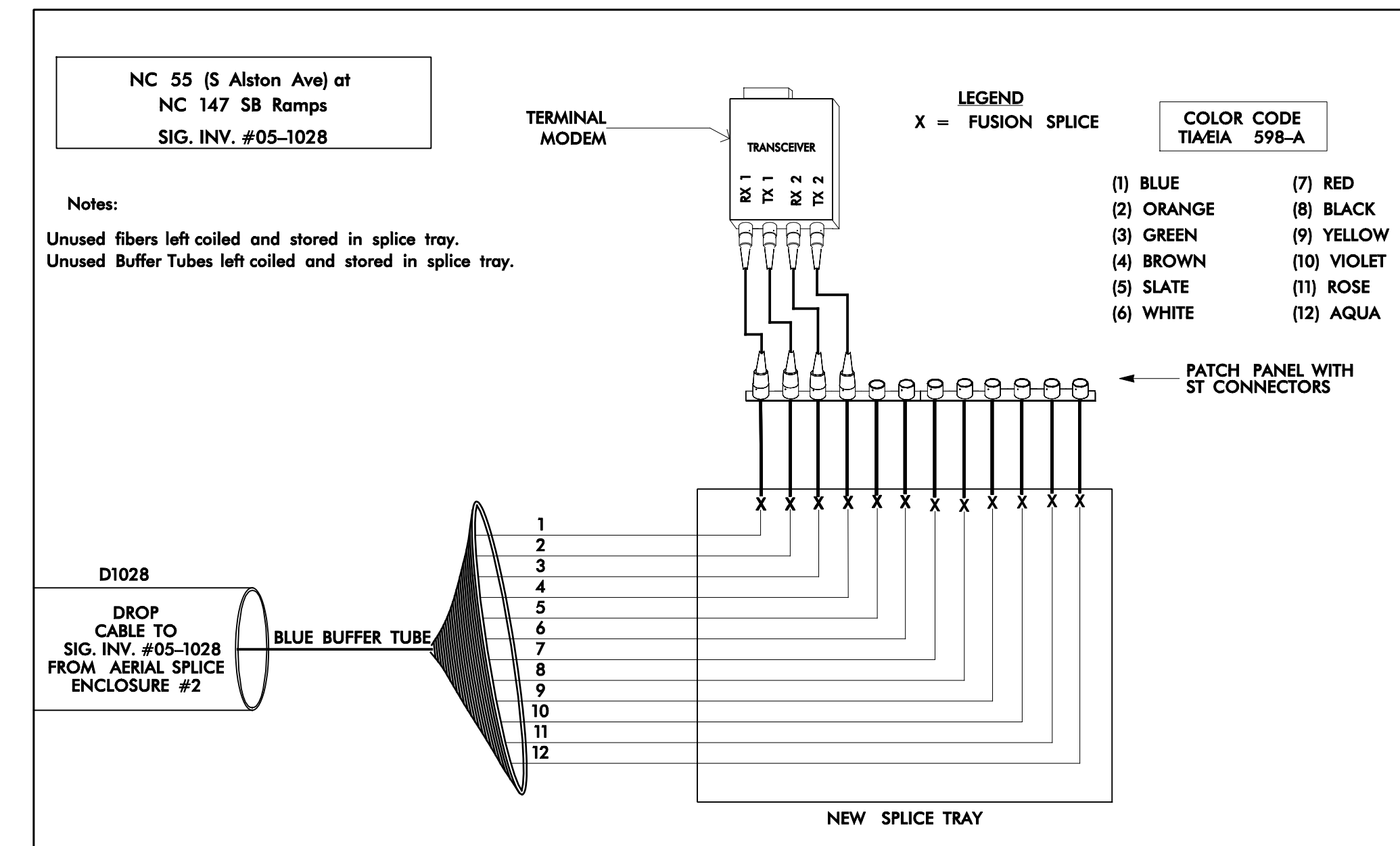
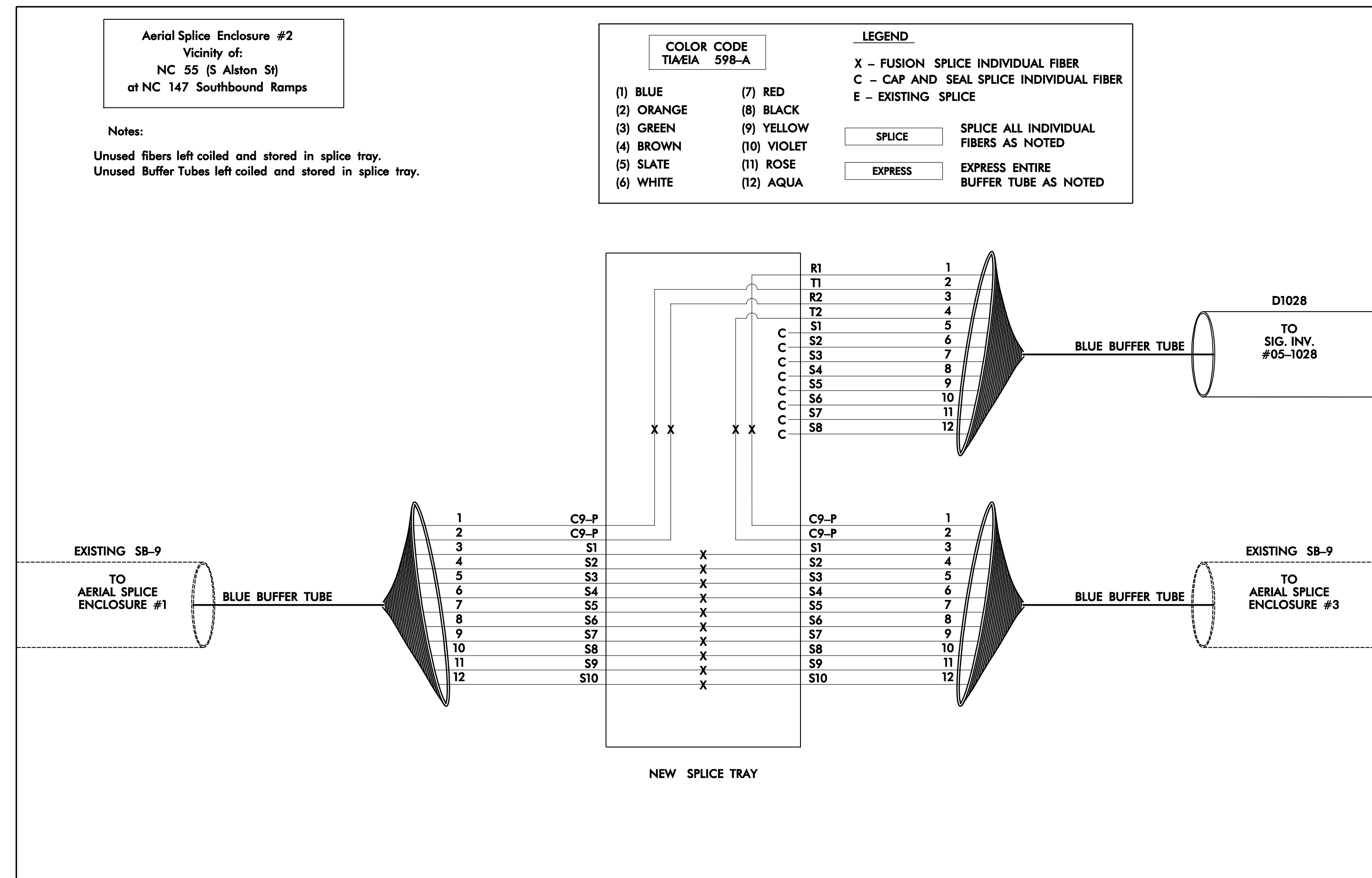


INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING:
REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

- 1) SPLICE LOCATION
- 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.

FIBER OPTIC CABLE



12/17/2014 6:41:10 AM W:\Projects\1017\1017-00_NCDOT_2012_Traffic_LSA\TR13-017-03_U-3308_Signals\Traffic\Cable_Routing\PLANS\SCP9 thru SCP18.dgn J.Kopaskie

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1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License #: C-2197

Prepared For the Office of:

750 N. Greenfield Pkwy, Garner, NC 27529

**NC 55 (ALSTON AVE.)
SPLICE DETAILS**

Division 5 Durham County Durham

PLAN DATE: November 2014 REVIEWED BY: J Hochanadel

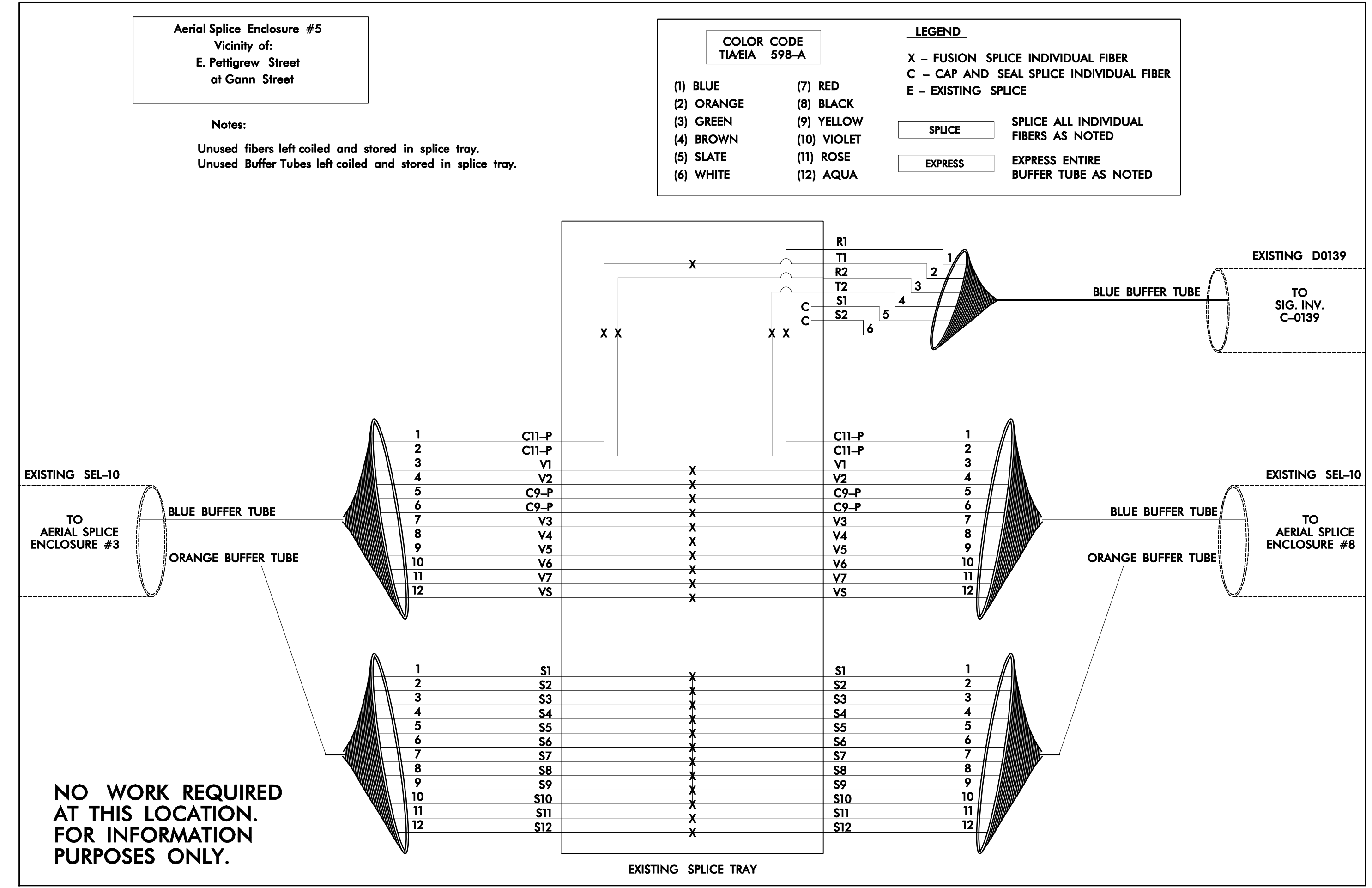
PREPARED BY: J Kopaskie REVIEWED BY:

REVISIONS	INIT.	DATE

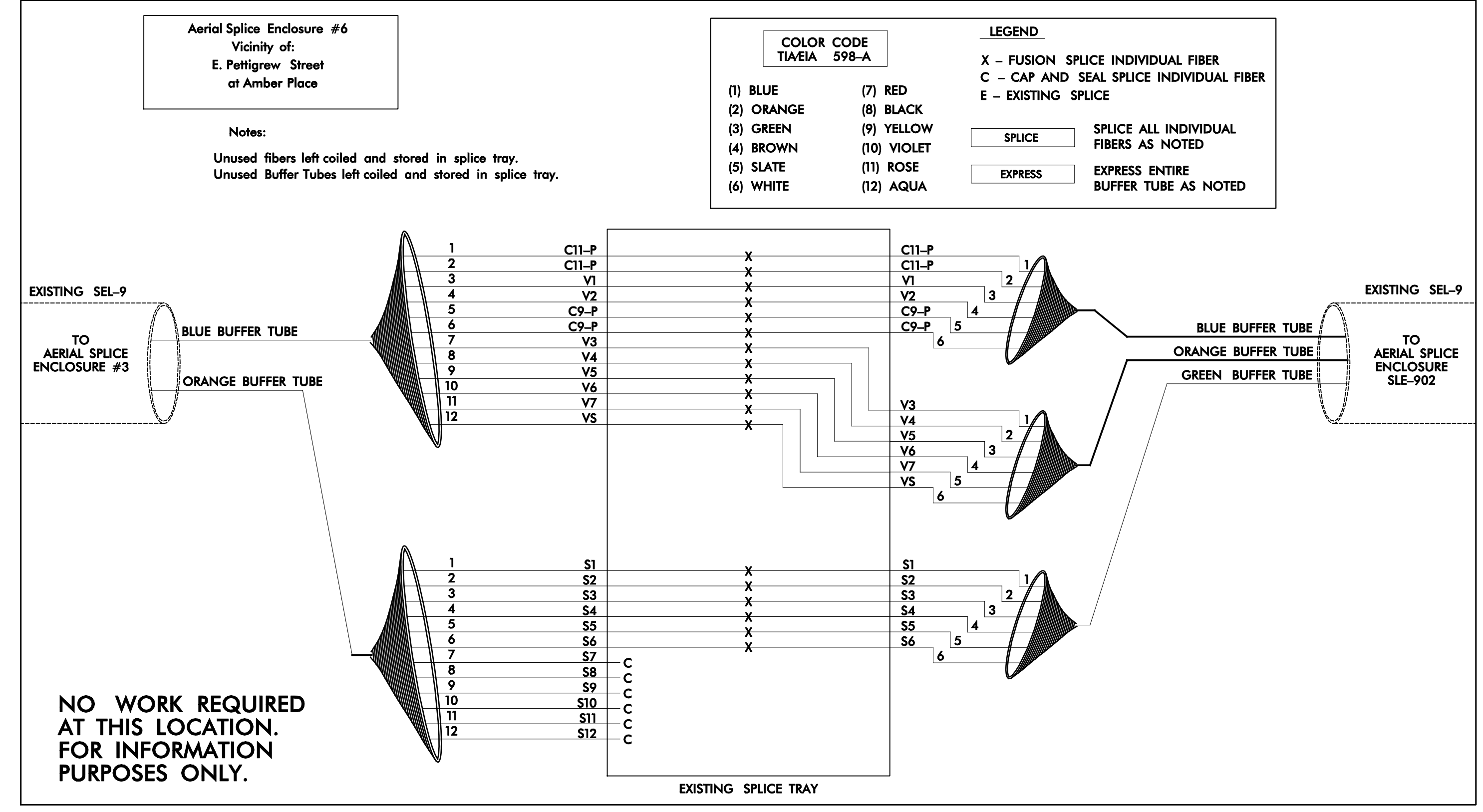
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FIBER OPTIC CABLE



FIBER OPTIC CABLE



INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING:
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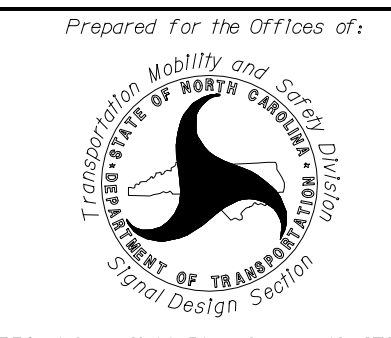
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**NC 55 (ALSTON AVE.)
SPLICE DETAILS**

Division 5 Durham County Durham

PLAN DATE: November 2014 REVIEWED BY: J. Hohanadel

PREPARED BY: J. Kopaskie REVIEWED BY:

REVISIONS	INIT.	DATE

CADD Filename: -

SEAL

JEFFREY HOCHANADEL
PROFESSIONAL ENGINEER
LICENSE NO. 28430

12/22/2014

FIBER OPTIC CABLE

Aerial Splice Enclosure #7
 Vicinity of:
 NC 55 (S Alston St)
 at Angier Avenue

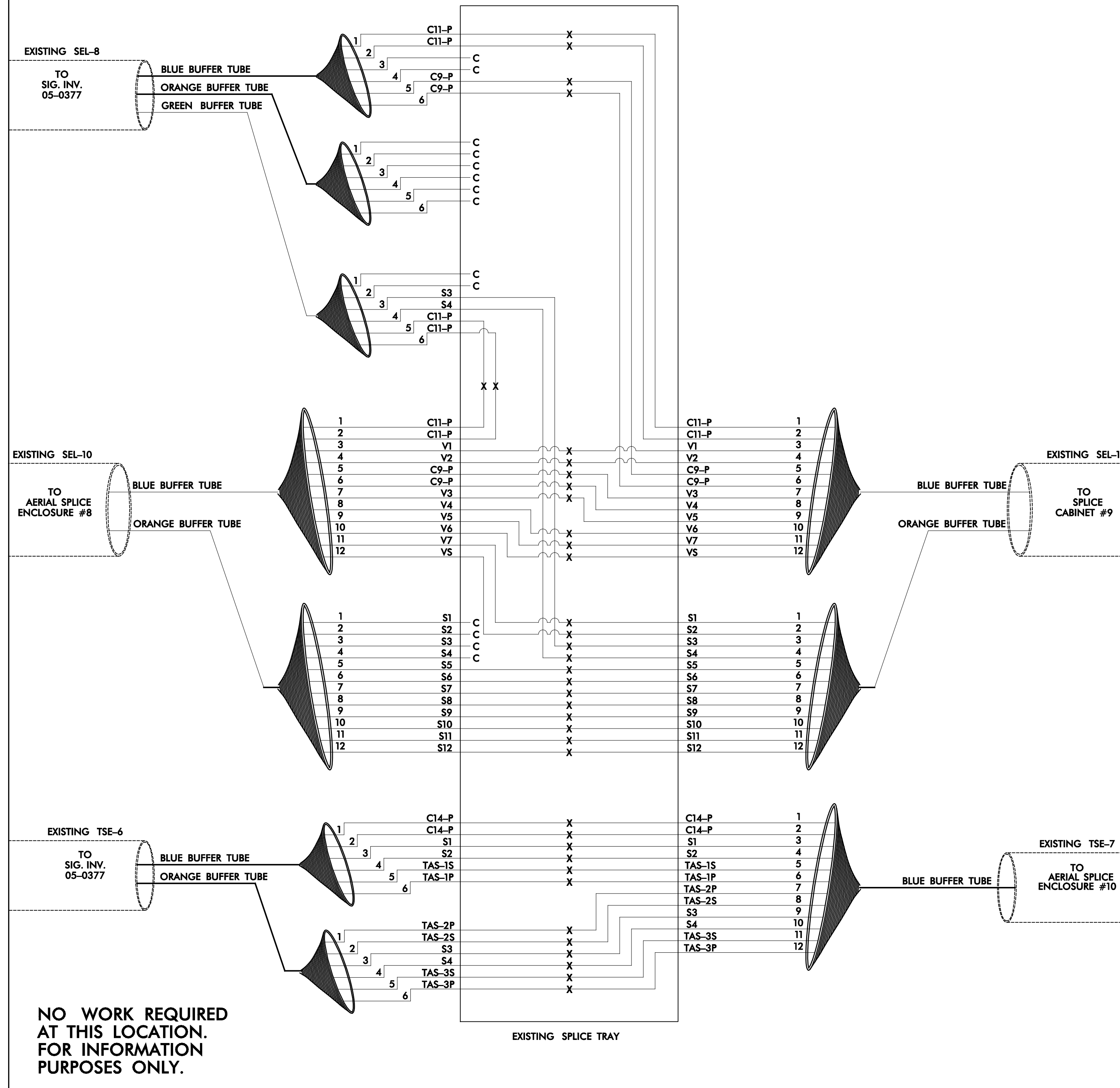
Notes:
 Unused fibers left coiled and stored in splice tray.
 Unused Buffer Tubes left coiled and stored in splice tray.

COLOR CODE
 TIA/EIA 598-A

- | | |
|------------|-------------|
| (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

- X - FUSION SPLICE INDIVIDUAL FIBER
 C - CAP AND SEAL SPLICE INDIVIDUAL FIBER
 E - EXISTING SPLICE
- SPICE SPLICE ALL INDIVIDUAL FIBERS AS NOTED
 EXPRESS EXPRESS ENTIRE BUFFER TUBE AS NOTED



NO WORK REQUIRED
AT THIS LOCATION.
FOR INFORMATION
PURPOSES ONLY.

INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING:
REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

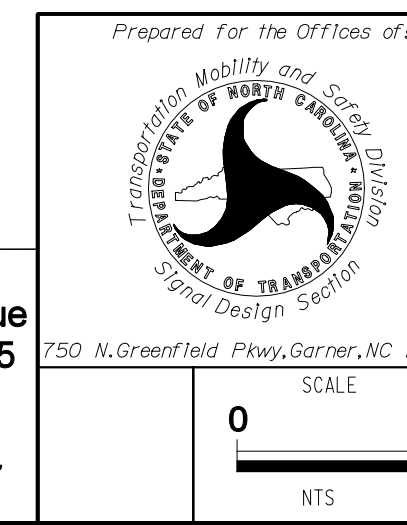
- 1) SPLICE LOCATION
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PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY TAKE A
DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION
SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR
TEST RESULTS.

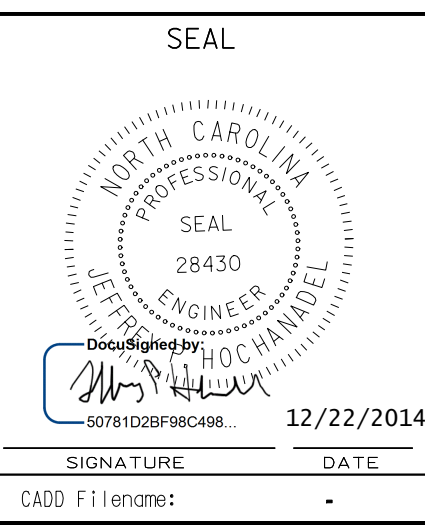
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 j.kopaskie



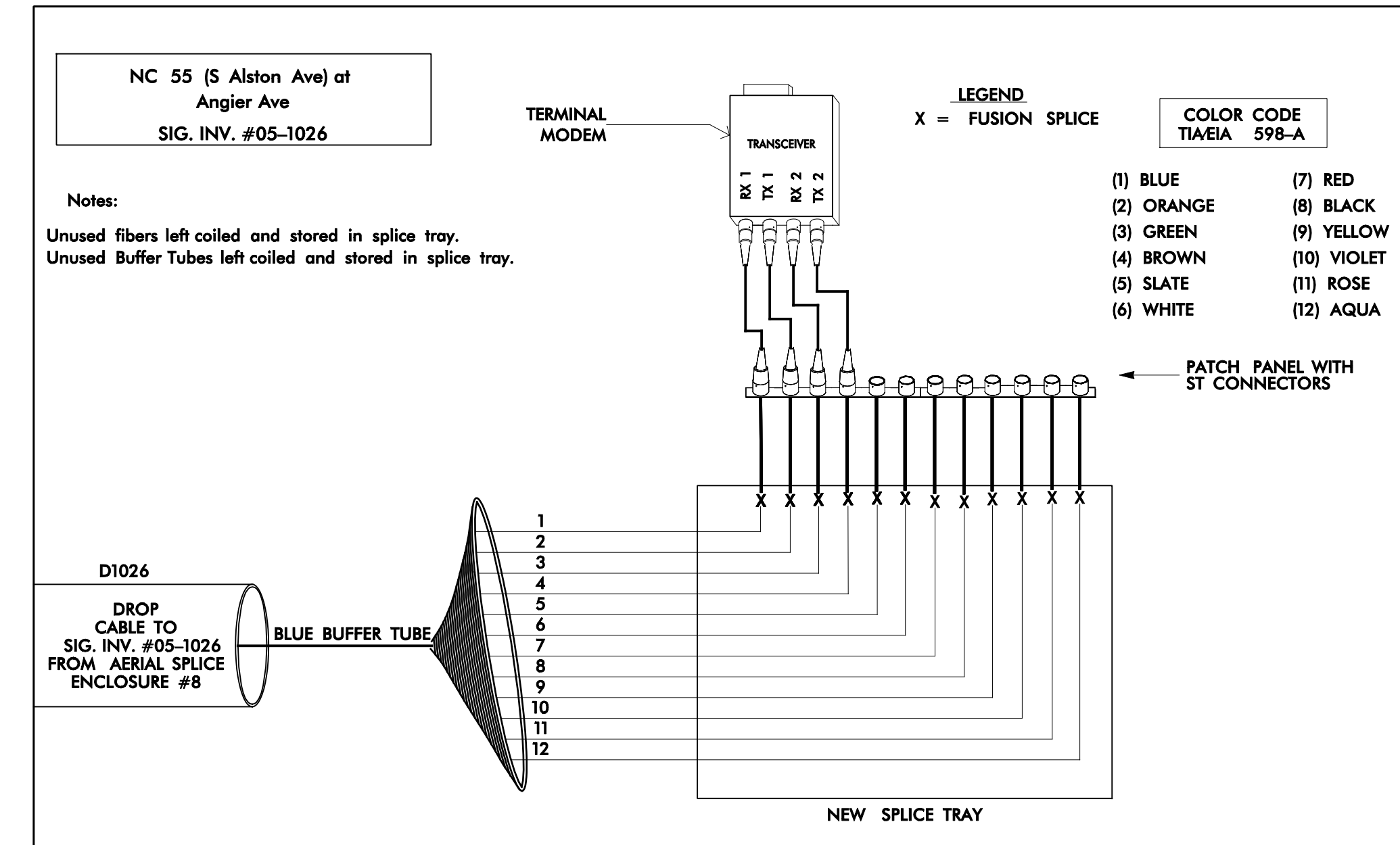
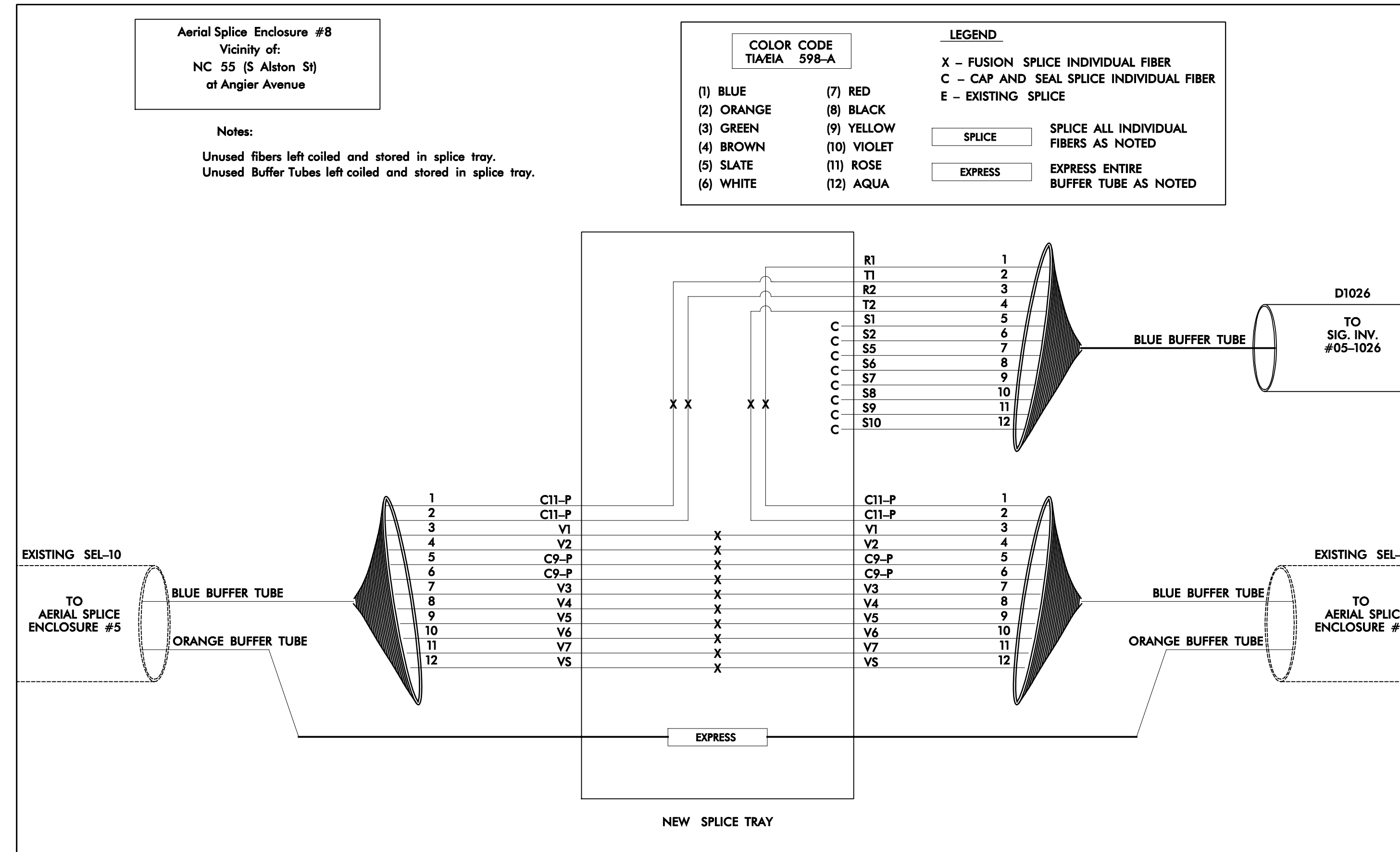
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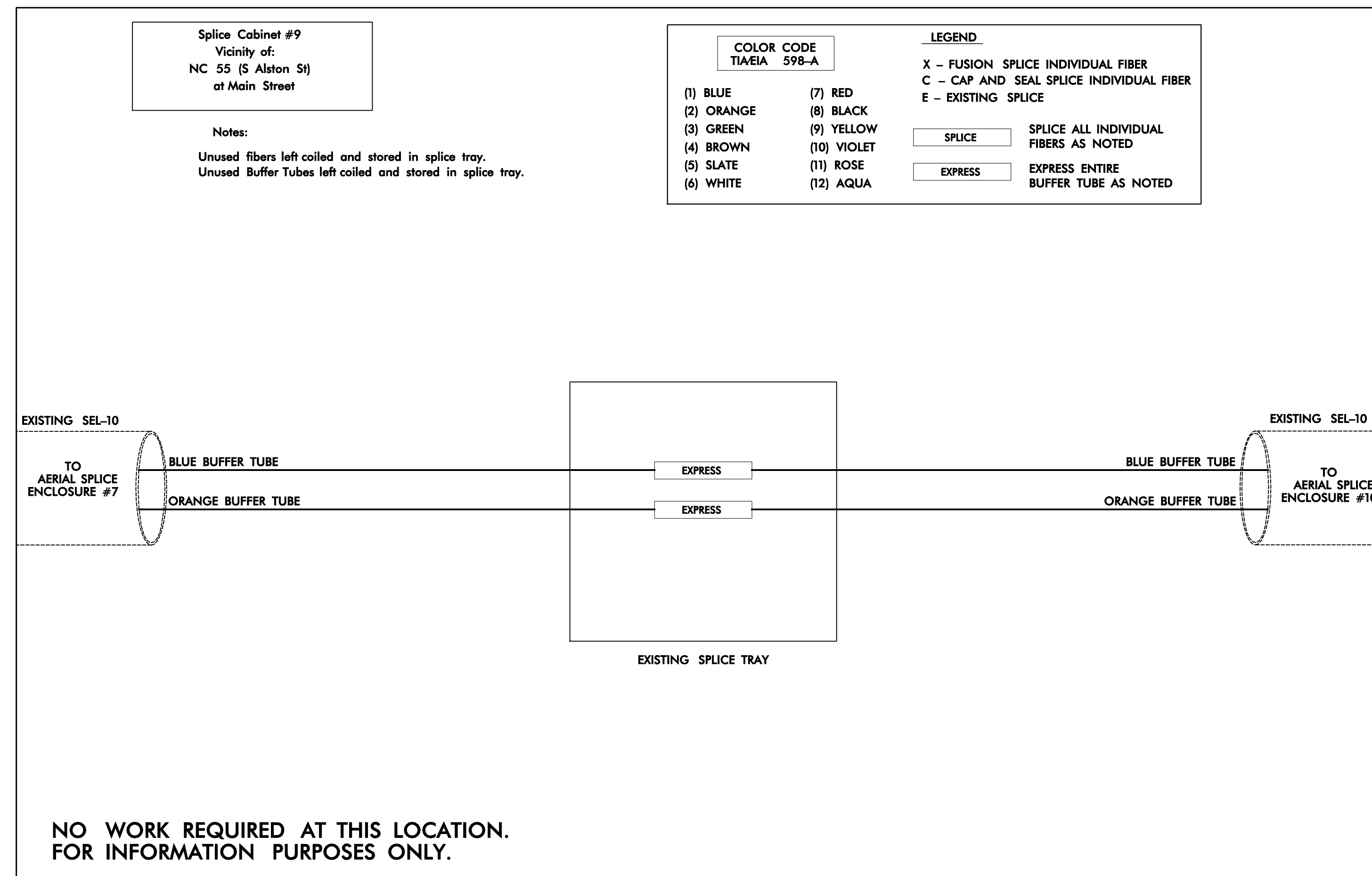
NC 55 (ALSTON AVE.) SPLICE DETAILS	
Division 5	Durham County
PLAN DATE: November 2014	REVIEWED BY: J Hochanadel
PREPARED BY: J Kopaskie	REVIEWED BY:
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FIBER OPTIC CABLE



FIBER OPTIC CABLE



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12/17/2014 6:41:40 AM J:\Projects\13-017-00 NDDOT 2012 Traffic LS\WTR13-017-03 (U-3308 Signal)MTR\off\cable Routing\PLANS\SCP9 thru SCP18.dgn J.Kopaskie

**NO WORK REQUIRED AT THIS LOCATION.
FOR INFORMATION PURPOSES ONLY.**

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Tel: 919-789-9977
Fax: 919-789-9591
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**NC 55 (ALSTON AVE.)
SPLICE DETAILS**

Division 5 Durham County Durham

PLAN DATE: November 2014 REVIEWED BY: J Hochanadel

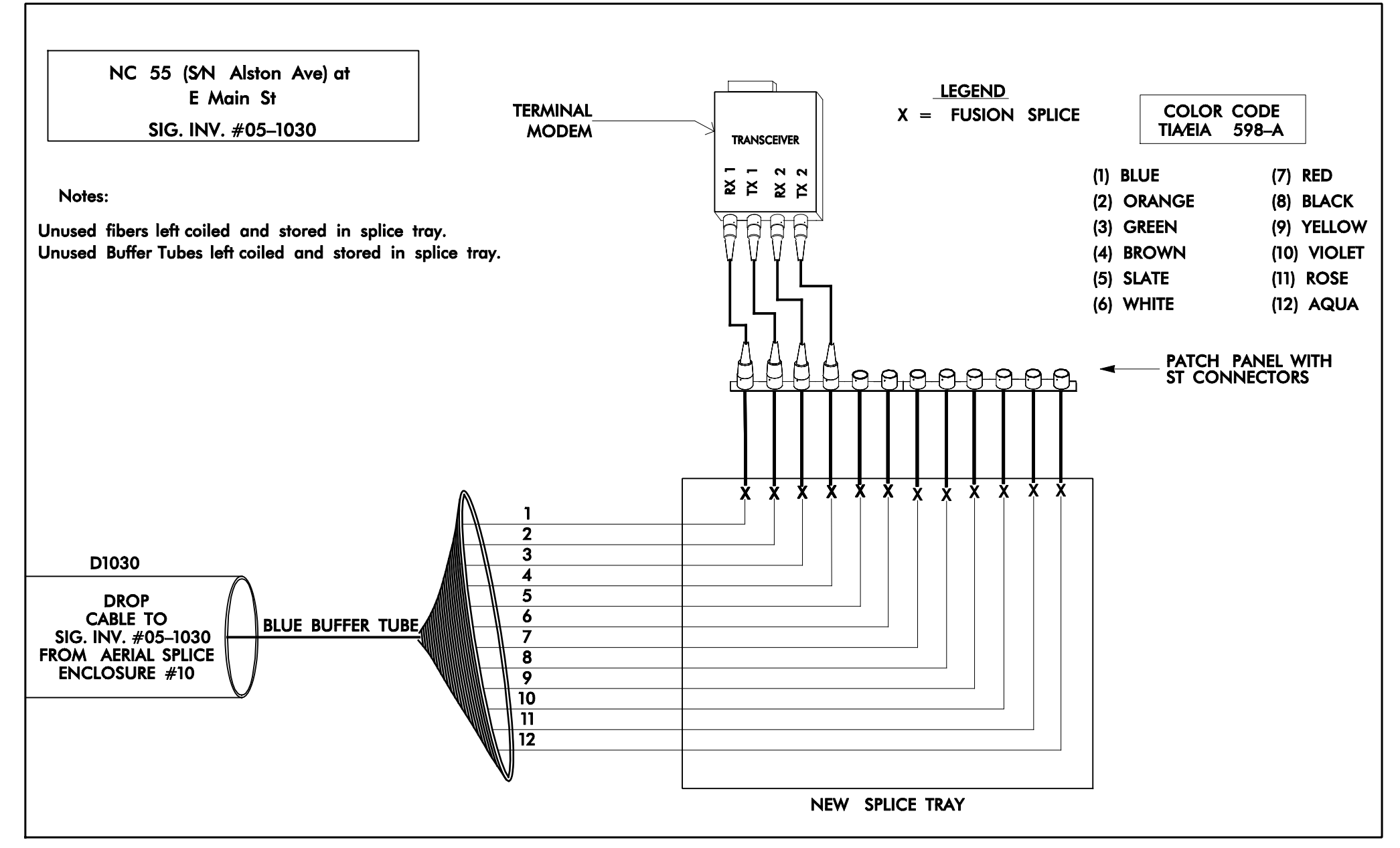
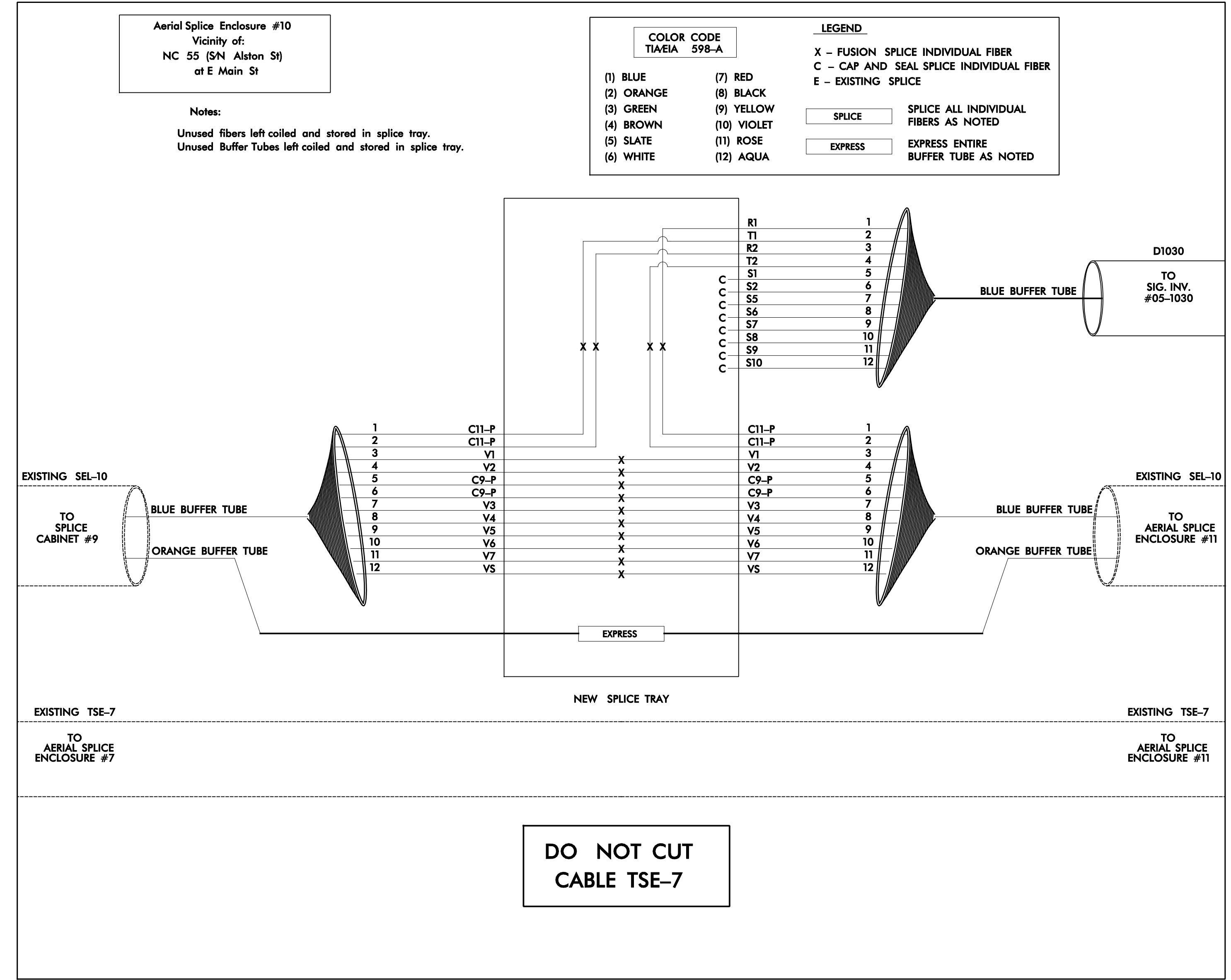
PREPARED BY: J Kopaskie REVIEWED BY:

REVISIONS	INIT.	DATE

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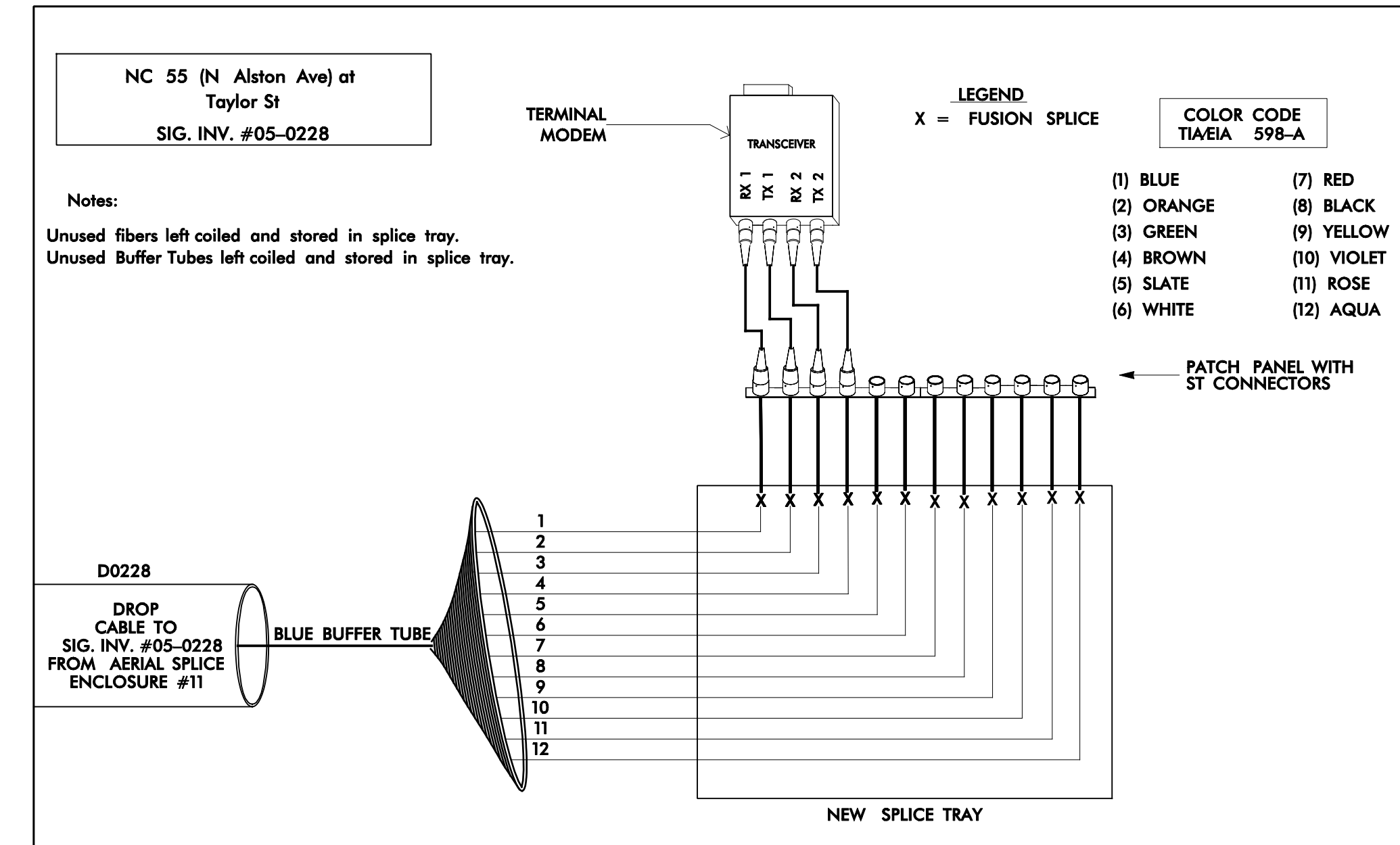
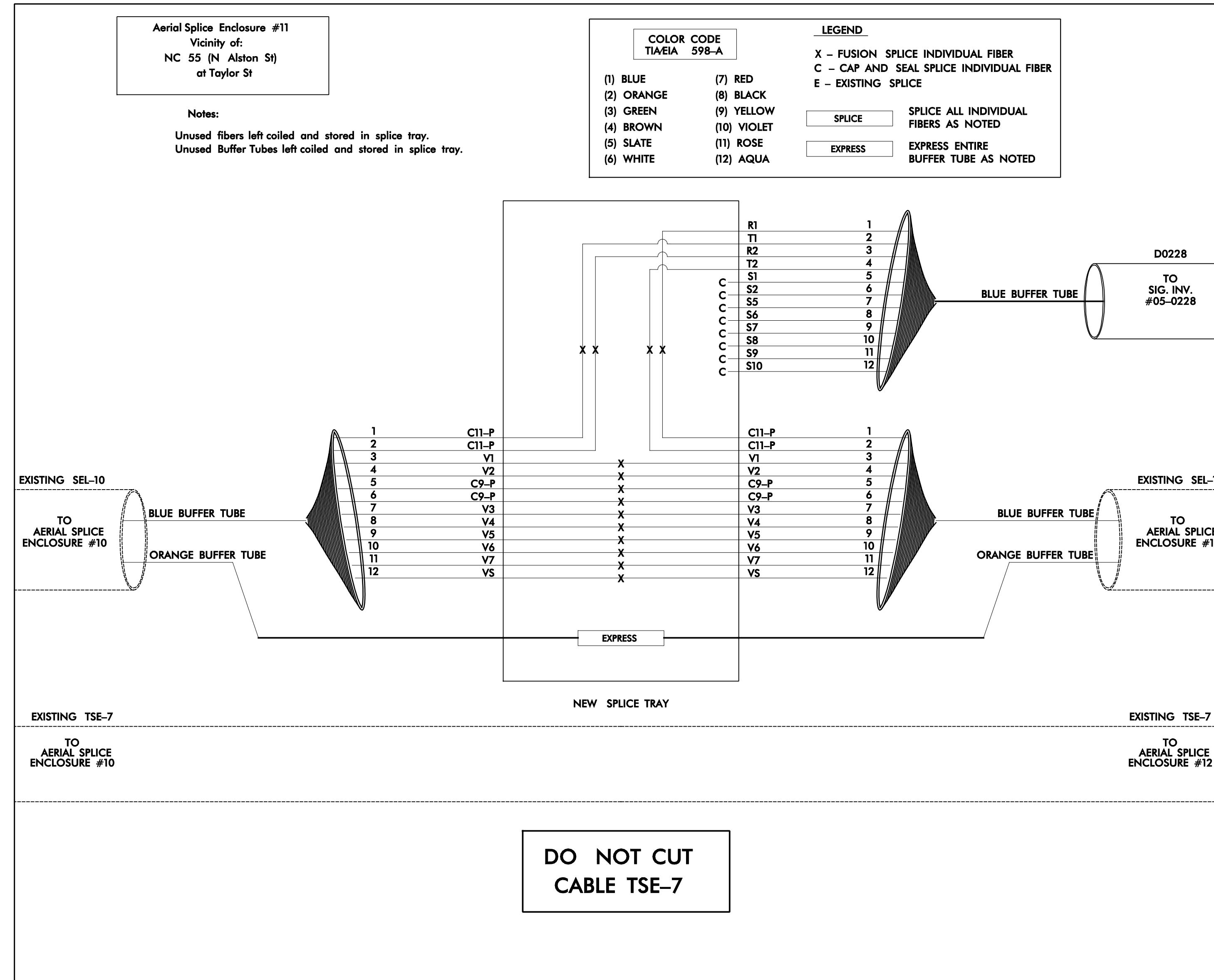
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Raleigh, NC 27605
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	NC 55 (ALSTON AVE.) SPLICE DETAILS		
	Division 5 Durham County Durham PLAN DATE: November 2014 REVIEWED BY: J. Kopaskie	REVIEWED BY: J. Hohanadel	
PREPARED BY: J. Kopaskie	REVISIONS	INIT. DATE	SIGNATURE DATE

FIBER OPTIC CABLE



INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING:
REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

- 1) SPLICE LOCATION
- 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.

SEPI
ENGINEERING & CONSTRUCTION

1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License #: C-2197

Prepared For the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

**NC 55 (ALSTON AVE.)
SPLICE DETAILS**

Division 5 Durham County Durham

PLAN DATE: November 2014 REVIEWED BY: J Hochanadel

PREPARED BY: J Kopaskie REVIEWED BY:

REVISIONS	INIT.	DATE

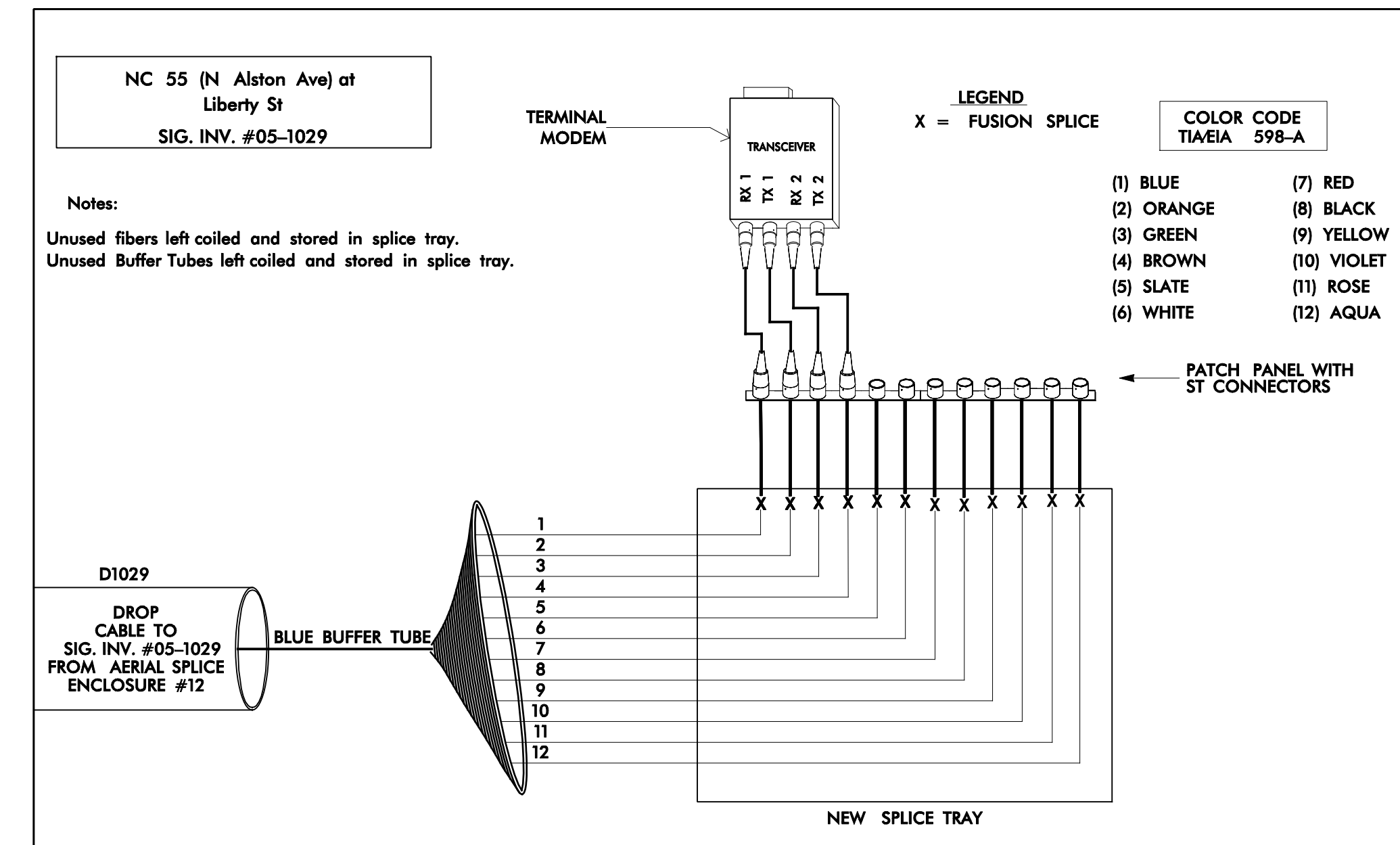
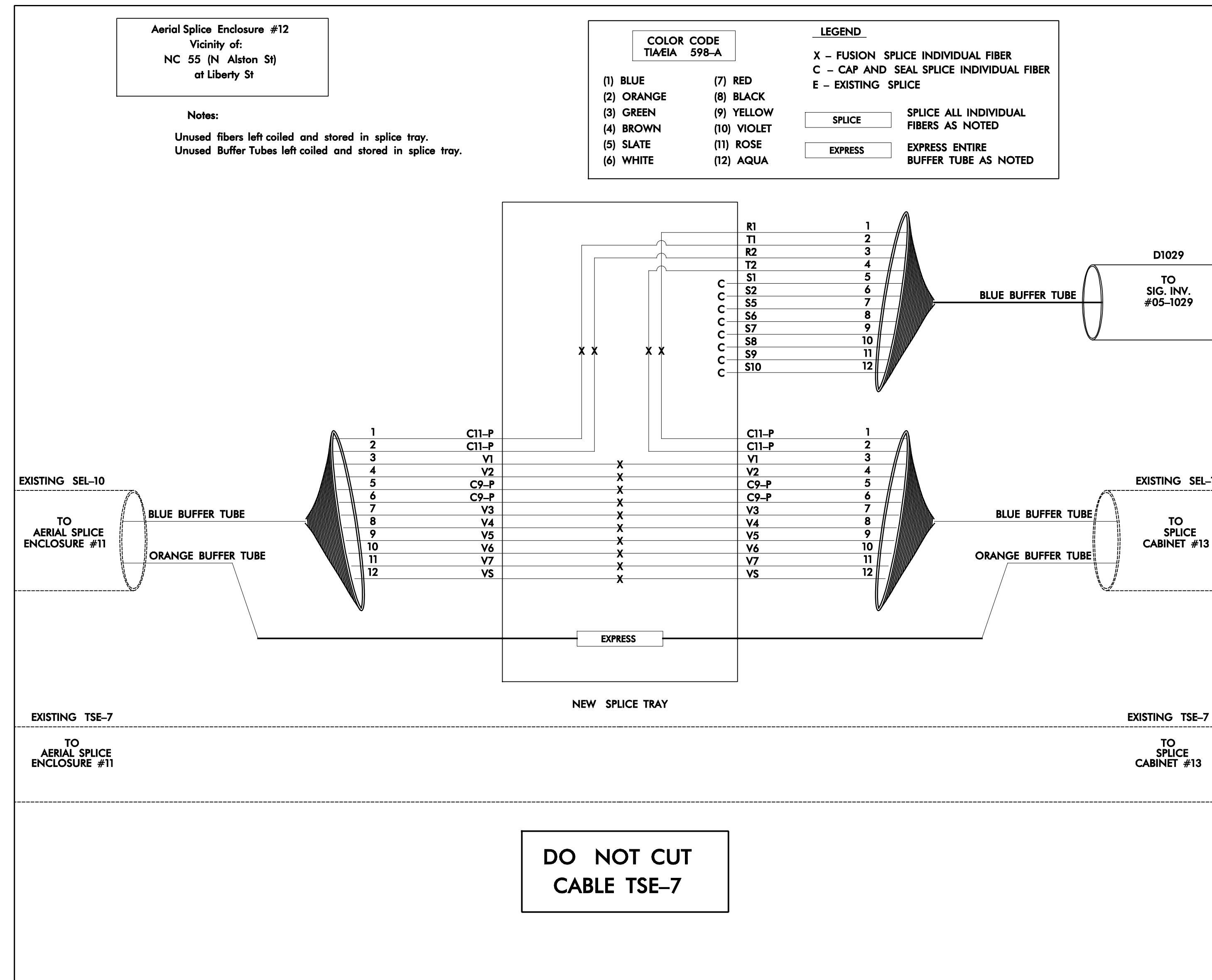
SEAL

SEAL 28430

SIGNATURE: J. Kopaskie DATE: 12/22/2014

CADD Filename: -

FIBER OPTIC CABLE



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12/17/2014 6:41:48 PM G:\tr-enabp-rch\on\WTR13-017-00 NDDT 2012 Tr-offic LSA\WTR13-017-03 (U-3308 Signal Design) Tr-offic\cable Routing Plans\SCP8.dgn J.Kopaskie

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SEAL

JEFFREY HOCHANADEL
PROFESSIONAL ENGINEER

12/22/2014

CADD Filename: -

