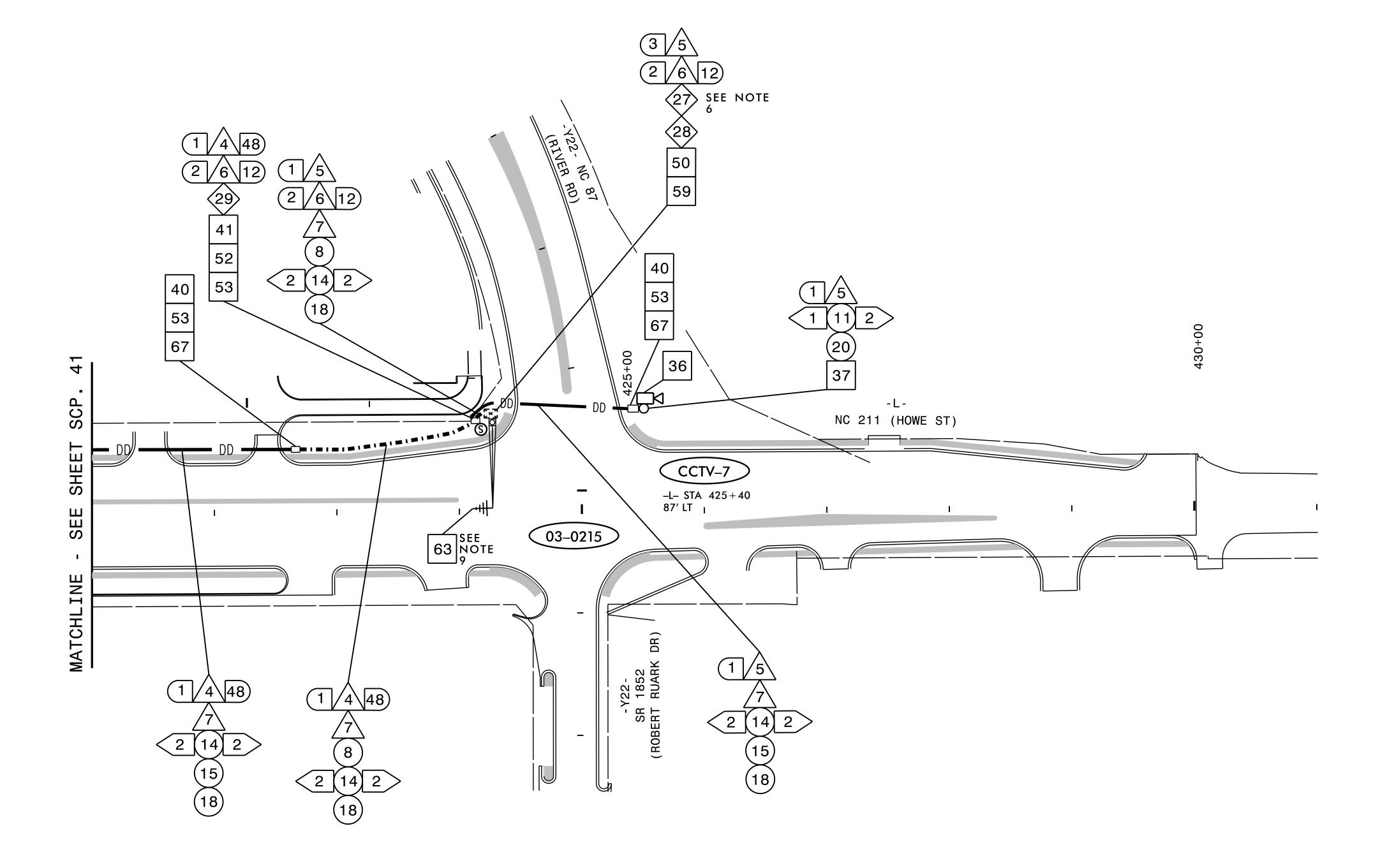


PROJECT REFERENCE NO. R-5021 MATCHL NC 211 (HOWE ST) DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED TMP - FINAL NC 211 (SOUTHPORT-SUPPLY RD / HOWE ST) CABLE ROUTING PLAN SEAL 031464 NOTES: Division 3 Brunswick Co. PLAN DATE: June 2017 REVIEWED BY: T.R. Terrell 1. MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE EDGE OF PAVEMENT AND A MINIMUM OF FIVE (5) FEET BEHIND THE MSE WALL WHEN TRENCHING PARALLEL TO THE ROADWAY.

2. SEAL ALL CONDUIT ENTRANCES WITH DUCT AND CONDUIT SEALER AT ALL JUNCTION BOX / CABINET ENTRANCES. 750 N. Greenfield Pkwy., Garner, NC 27529 PREPARED BY: N.K. Vlanich REVIEWED BY: N.R. Simmons HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

CADD Filename: R5021 scp-41.dgn

R-5021 SCP. 42



NOTES:

- 1. SIX (6) WEEKS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE DIVISION 3 DEPUTY TRAFFIC ENGINEER STONEWALL (STONEY) MATHIS, AT (910) 341–2200 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 FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND FUNCTIONAL.
- 2. CONTACT BRUNSWICK ELECTRIC MEMBERSHIP CORPORATION (910) 754–4391 TO ARRANGE FOR POWER TO ELECTRICAL SERVICE.
 3. CONTACT STONEY MATHIS (NCDOT DIVISION 3) AT (910) 341–2200 TO COORDINATE ANY TRAFFIC SIGNAL SERVICE MODIFICATIONS.

4. MAINTAIN A MINIMUM OF SIX (6) FEET FROM THE EDGE OF PAVEMENT AND A MINIMUM OF FIVE (5) FEET BEHIND THE MSE WALL

- WHEN TRENCHING PARALLEL TO THE ROADWAY.
 5. SEAL ALL CONDUIT ENTRANCES WITH DUCT AND CONDUIT SEALER AT ALL JUNCTION BOX / CABINET ENTRANCES.
- 6. ETHERNET EDGE SWITCH INSTALLED FOR TEMPORARY AND FINAL SIGNAL COMMUNICATIONS.
- 7. AT THE DIRECTION OF THE ENGINEER, PERFORM GRADING AS NEEDED WHERE GUARDRAIL, POLE INSTALLATION, AND DMS CONSTRUCTION WORK HAS BEEN PERFORMED.
- 8. 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.
- 9. AFTER THE FIBER OPTIC CABLE CONSTRUCTION IS COMPLETE AND TRAFFIC IS IN THE FINAL PATTERN, REMOVE THE EXISTING WIRELESS ASSEMBLY AND DELIVER TO DIVISION 3 TRAFFIC SERVICES.
- 10. NCDOT DIVISION 3 WILL FURNISH AND INSTALL THE CCTV AND DMS CELL MODEM. CONTACT SIX (6) WEEKS PRIOR BEGINNING WORK.



TMP - FINAL

NC 211 (SOUTHPORT-SUPPLY RD / HOWE ST)



CABLE ROUTING PLAN

Division 3 Brunswick Co. Southport

PLAN DATE: June 2017 REVIEWED BY: T.R. Terrell

Garner, NC 27529 PREPARED BY: N.K. Vlanich REVIEWED BY: N.R. Simmons

SCALE

REVISIONS INIT. DATE

N.K. Vlanich REVIEWED BY: N.R. Simmons

REVISIONS INIT. DATE

| Docusigned by: | Proposition | Propo

DOCUMENT NOT CONSIDERED FINAL

UNLESS ALL SIGNATURES COMPLETED

TH CAROL

031464

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

03–1123 NC 906 (MIDDLETON BLVD) AT

NC 211 SOUTHBOUND RAMP

LEGEND COLOR CODE TIA/EIA 598-C X = NEW FUSION SPLICE INDIVIDUAL FIBER • = EXISTING FUSION SPLICE C = CAP AND SEAL= EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER (12) AQUA TUBE COLOR TO COLOR

NEW DROP **CABLE** TO 03–1123 NEW SPLICE ENCLOSURE NEW SPLICE TRAY CAP AND SEAL STRANDS 5-12 BUFFER TUBE ORANGE BUFFER TUBE BUFFER TUBE BROWN Buffer Tube

NOTES:

- 1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
- 2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
- 3. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.

NEW

FROM SPLICE ENCLOSURE FOR INTERSCTION 03-1177

NC 211

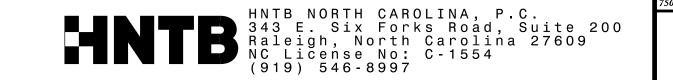
AT NC 906 RAMP

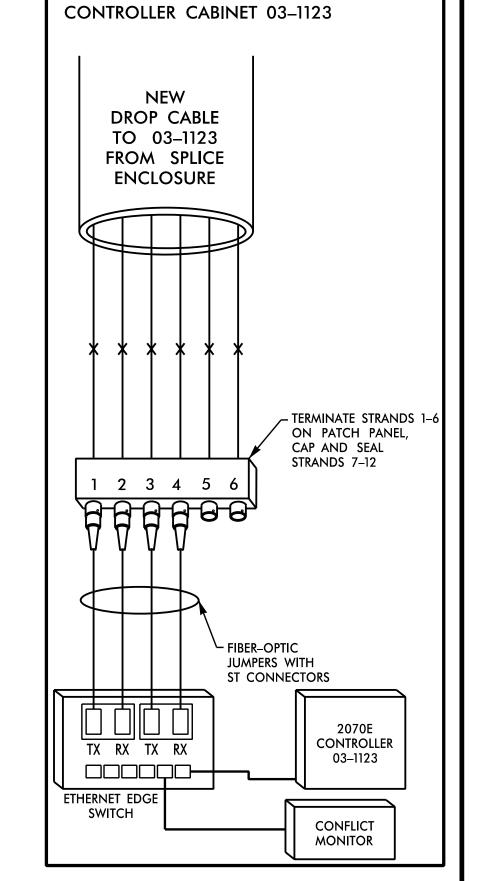
48 FIBERS IN 4 BUFFER TUBES

- 4. 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.

5. SIX (6) WEEKS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE DIVISION 3 DEPUTY TRAFFIC ENGINEER, STONEWALL (STONEY) MATHIS, AT 910-341-2200 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 FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND FUNCTIONAL.

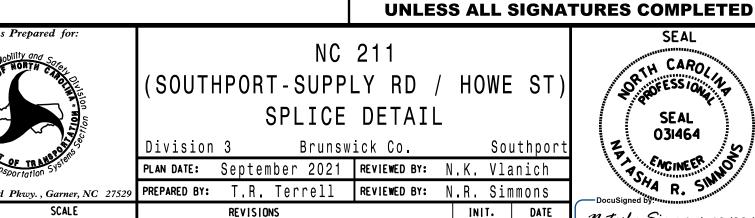




PROJECT REFERENCE NO.

R-5021

DOCUMENT NOT CONSIDERED FINAL



NONE

031464

CADD Filename: R5021 scp-43.dgn

03–1177 NC 211 AT NC 906 RAMP **LEGEND**

COLOR CODE TIA/EIA 598-C

(4) BROWN (10) VIOLET

(11) ROSE

X = NEW FUSION SPLICE INDIVIDUAL FIBER

• = EXISTING FUSION SPLICE C = CAP AND SEAL

= EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING

BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR

PROJECT REFERENCE NO.

R-5021

CONTROLLER CABINET 03-1177

NEW DROP CABLE TO 03–1177

FROM SPLICE

ENCLOSURE

1 2 3 4 5 6

निन्न निन्न

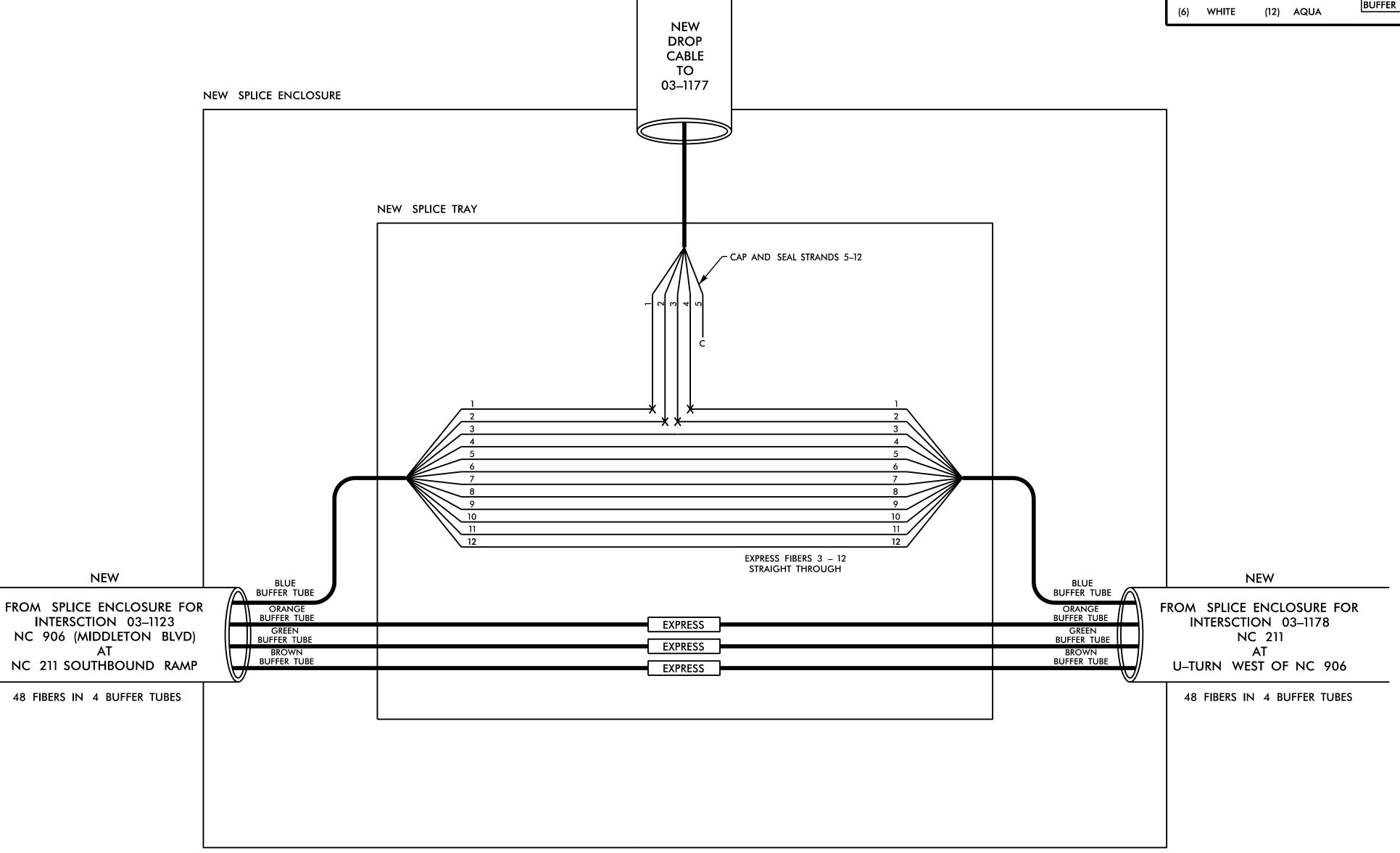
TX RX TX RX

ETHERNET EDGE

- FIBER-OPTIC

DOCUMENT NOT CONSIDERED FINAL

JUMPERS WITH ST CONNECTORS



NOTES:

- 1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
- 2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
- 3. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.

NEW

- 4. 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.

5. SIX (6) WEEKS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE DIVISION 3 DEPUTY TRAFFIC ENGINEER, STONEWALL (STONEY) MATHIS, AT 910-341-2200 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 FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND FUNCTIONAL.

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

UNLESS ALL SIGNATURES COMPLETED NC 211 (SOUTHPORT-SUPPLY RD / HOWE ST) SPLICE DETAIL Division 3 Brunswick Co. Southport PLAN DATE: September 2021 REVIEWED BY: N.K. Vlanich

PREPARED BY: T.R. Terrell REVIEWED BY: N.R. Simmons REVISIONS INIT. DATE

NONE

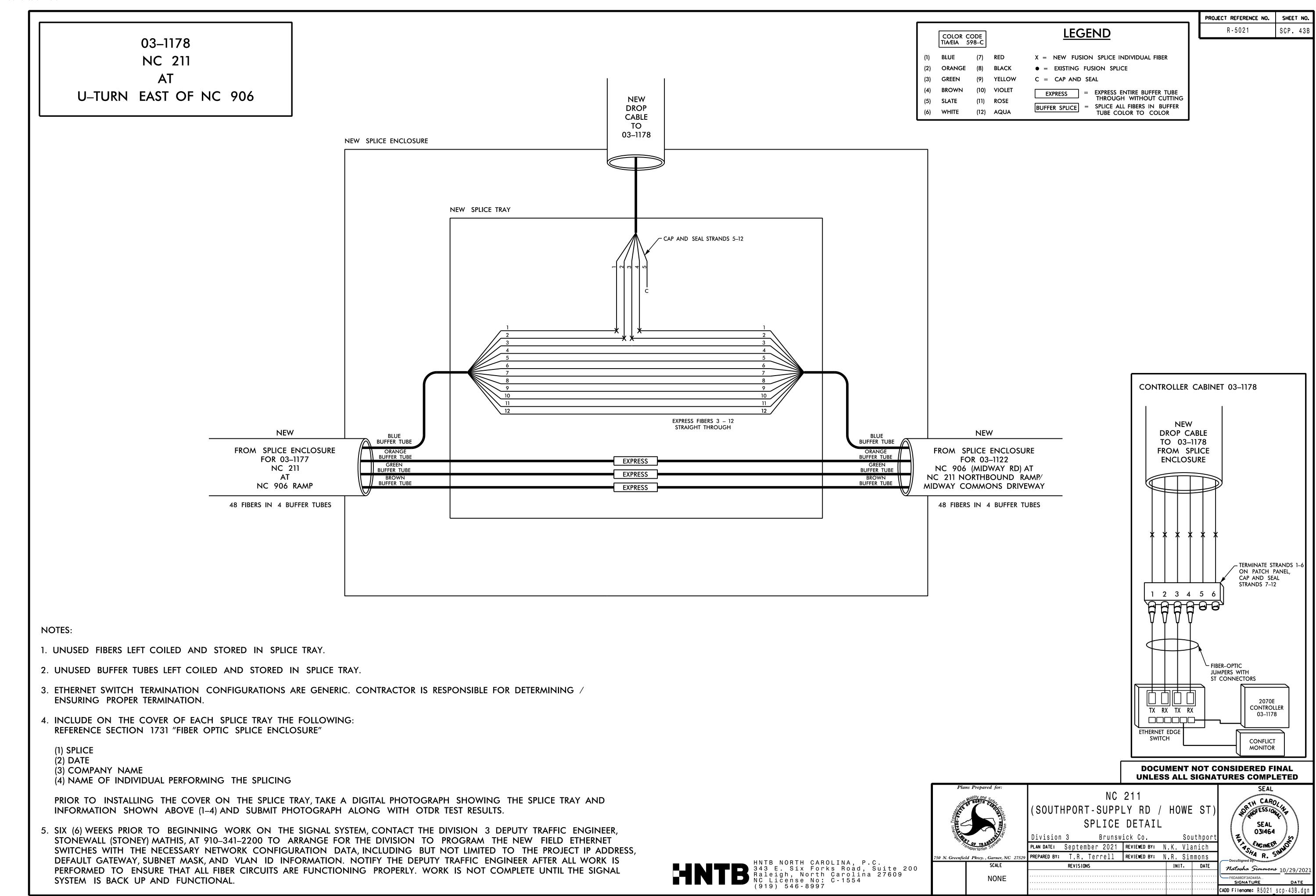
Notasha Simmons 10/29/202 CADD Filename: R5021 scp-43A.dgr

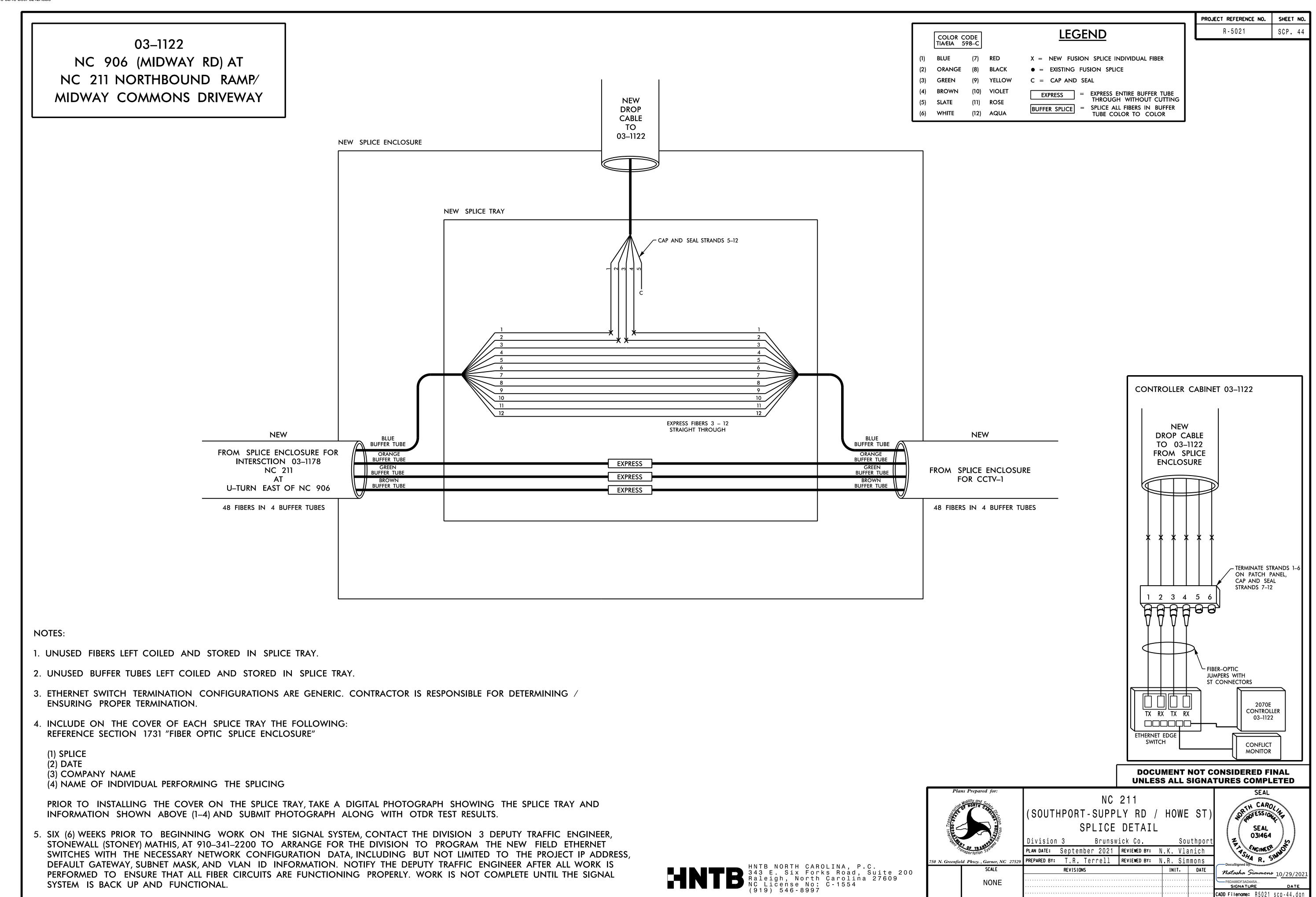
031464

- TERMINATE STRANDS 1-6 ON PATCH PANEL, CAP AND SEAL STRANDS 7-12

> 2070E CONTROLLER

CONFLICT MONITOR





CCTV-1 NC 906 NORTHBOUND RAMP AT NC 211 (SOUTHPORT-SUPPLY RD)

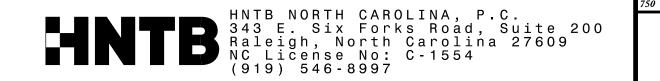
LEGEND COLOR CODE TIA/EIA 598-C X = NEW FUSION SPLICE INDIVIDUAL FIBER • = EXISTING FUSION SPLICE C = CAP AND SEAL= EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER (12) AQUA TUBE COLOR TO COLOR

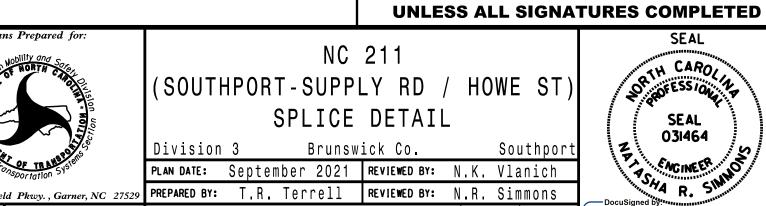
NEW DROP **CABLE** TO NEW SPLICE ENCLOSURE CCTV-1 NEW SPLICE TRAY CAP AND SEAL STRANDS 5-12 EXPRESS FIBERS 3 – 12 STRAIGHT THROUGH NEW BLUE BUFFER TUBE BLUE BUFFER TUBE FROM SPLICE ENCLOSURE FOR EXPRESS FROM SPLICE ENCLOSURE ORANGE BUFFER TUBE ORANGE BUFFER TUBE INTERSCTION 03–1122 NC 906 (MIDWAY BLVD) GREEN BUFFER TUBE GREEN BUFFER TUBE DMS-1/DMS-2 **EXPRESS** NC 211 (SOUTHPORT-SUPPLY RD) BROWN Buffer Tube BROWN BUFFER TUBE NC 211 NORTHBOUND RAMP/ AT STA 156+00 **EXPRESS** MIDWAY COMMONS DRIVEWAY 48 FIBERS IN 4 BUFFER TUBES 48 FIBERS IN 4 BUFFER TUBES

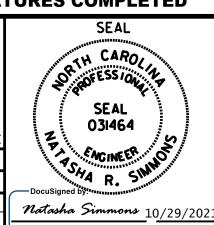
NOTES:

- 1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
- 2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
- 3. 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.







CADD Filename: R5021 scp-45.dgn

CAP AND SEAL STRANDS 1-12

CONTROLLER CABINET CCTV-1

NEW

DROP CABLE

TO CCTV-1 FROM SPLICE

ENCLOSURE

1 2 3 4 5 6 999999

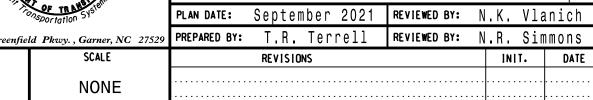
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FOR

FUTURE

PROJECT REFERENCE NO.

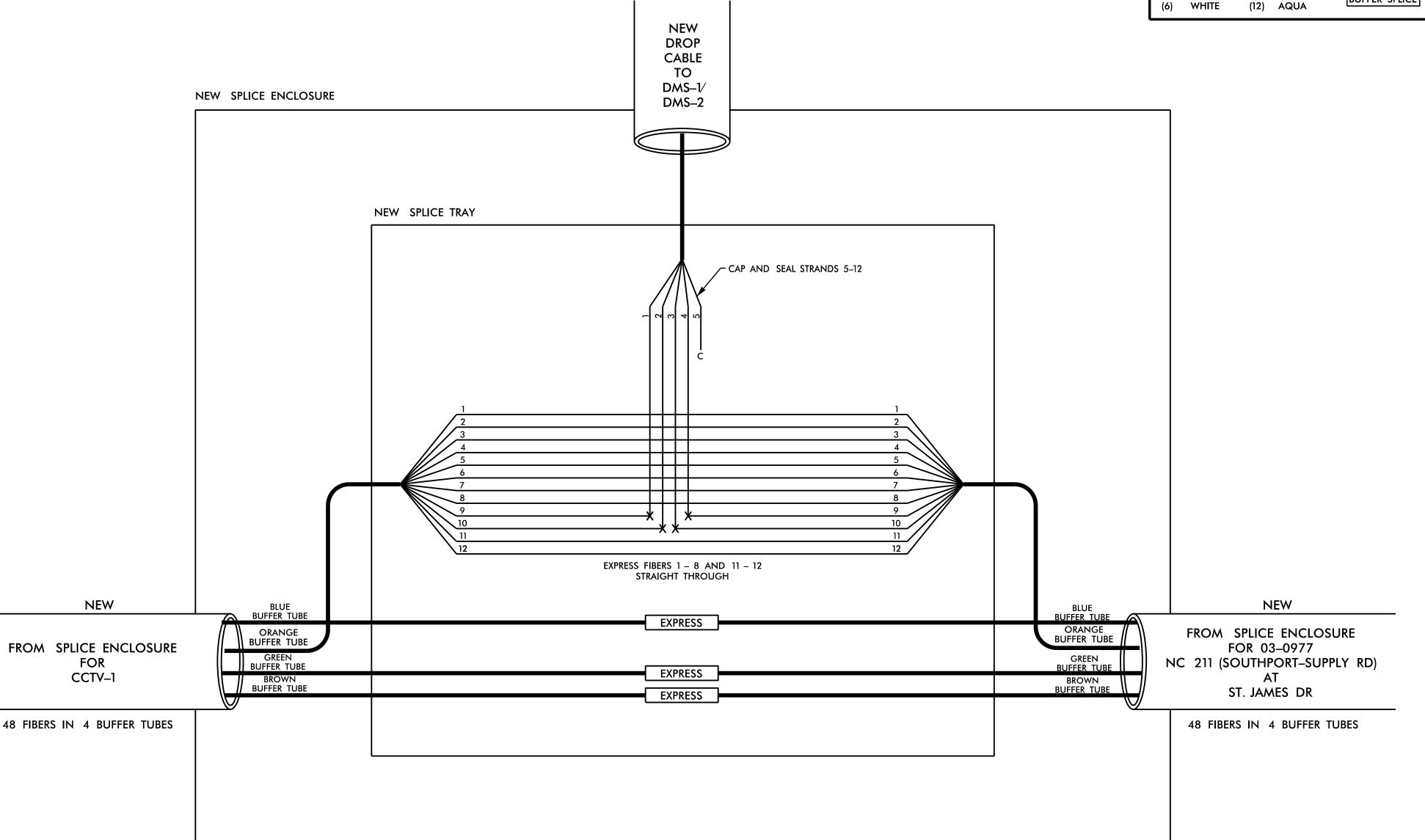
R-5021



DMS-1/DMS-2NC 211 (SOUTHPORT-SUPPLY RD) AT STA 156+00

LEGEND COLOR CODE TIA/EIA 598-C X = NEW FUSION SPLICE INDIVIDUAL FIBER • = EXISTING FUSION SPLICE C = CAP AND SEALEXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER

TUBE COLOR TO COLOR



DROP CABLE TO DMS-1/DMS-2 FROM SPLICE **ENCLOSURE**

CONTROLLER CABINET DMS-1

1 2 3 4 5 6

999999

DOCUMENT NOT CONSIDERED FINAL

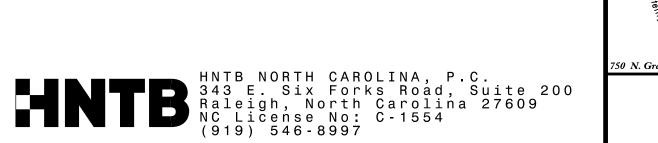
FOR FUTURE

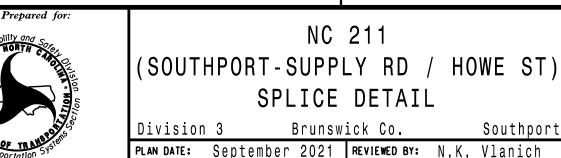
NOTES:

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- 2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
- 3. 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

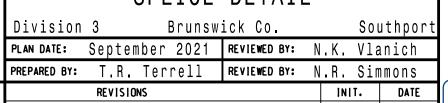
PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1–4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

4. SIX (6) WEEKS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE DIVISION 3 DEPUTY TRAFFIC ENGINEER, STONEWALL (STONEY) MATHIS, AT 910–341–2200 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 FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND FUNCTIONAL.





NONE



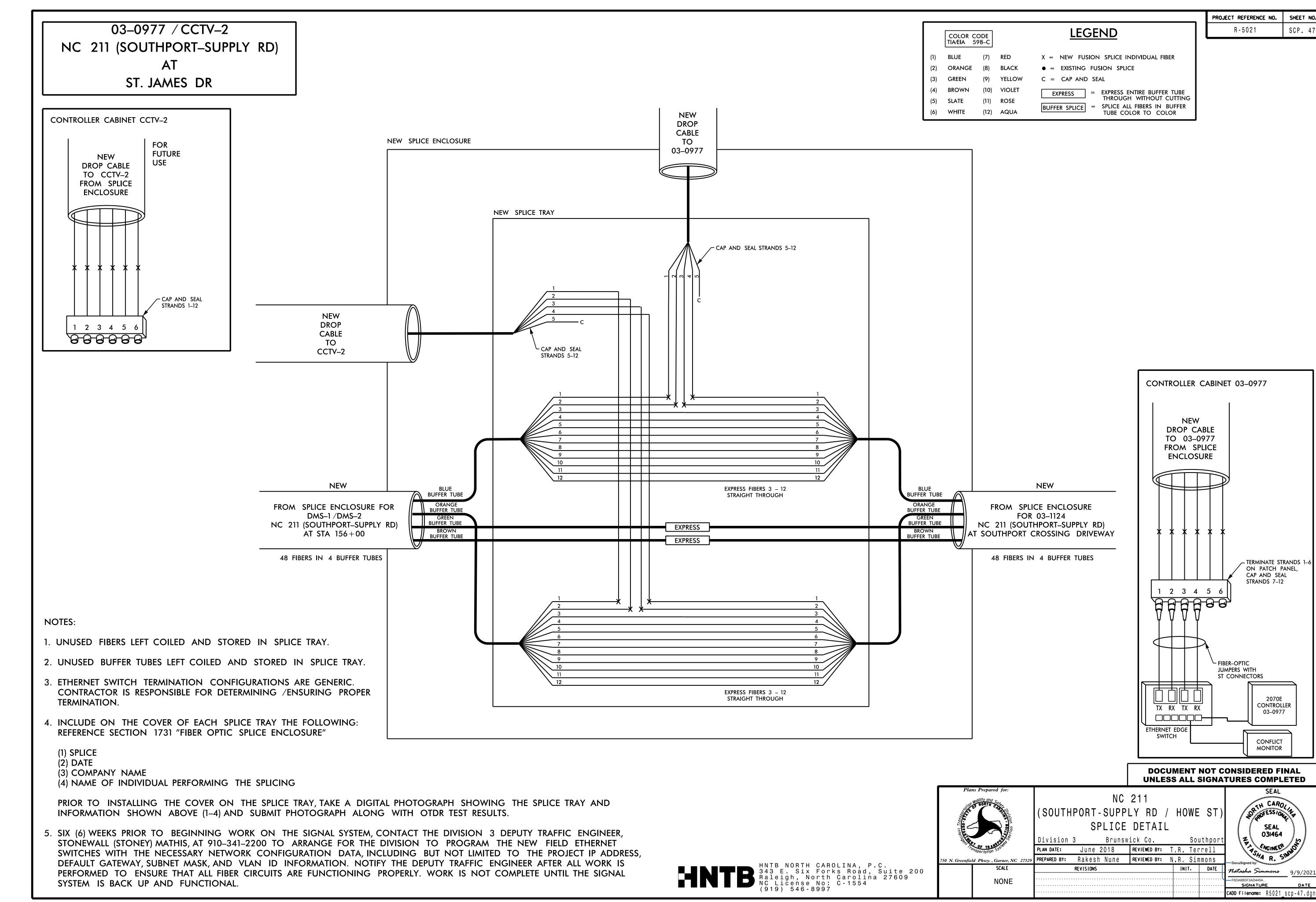
Natasha Simmons 10/29/202 CADD Filename: R5021 scp-46.dgn

UNLESS ALL SIGNATURES COMPLETED 031464

CAP AND SEAL STRANDS 1-12

PROJECT REFERENCE NO.

R-5021



CADD Filename: R5021 scp-48.dgn

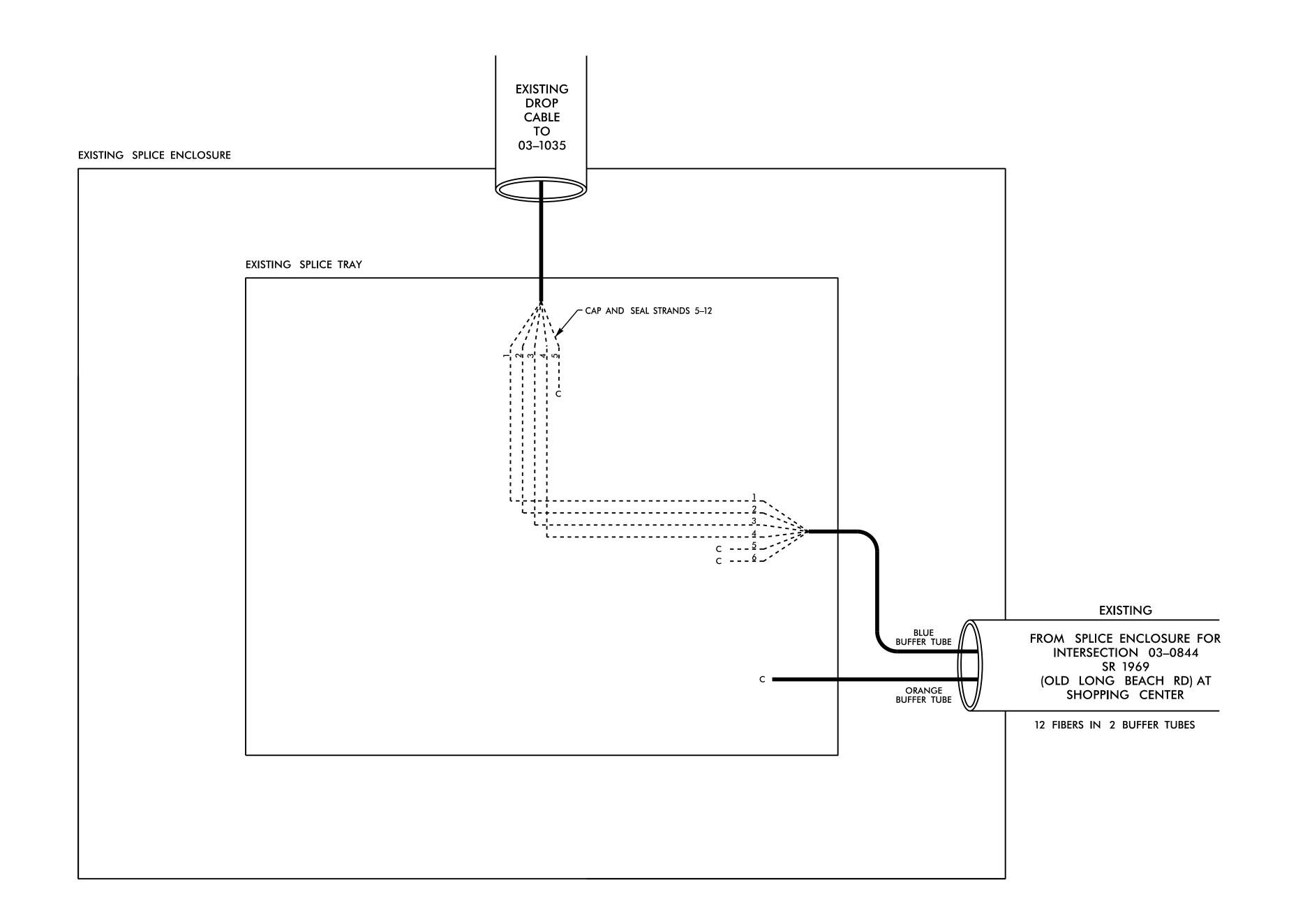
PROJECT REFERENCE NO. R-5021 **LEGEND** COLOR CODE TIA/EIA 598-C CCTV₋₃ NC 211 (SOUTHPORT-SUPPLY RD) AT X = NEW FUSION SPLICE INDIVIDUAL FIBER • = EXISTING FUSION SPLICE NC 133 (LONG BEACH RD) C = CAP AND SEAL= EXPRESS ENTIRE BUFFER TUBE NEW THROUGH WITHOUT CUTTING BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER DROP (12) AQUA TUBE COLOR TO COLOR **CABLE** TO NEW SPLICE ENCLOSURE CCTV₋₃ NEW SPLICE TRAY CAP AND SEAL STRANDS 5-12 EXPRESS FIBERS 3 – 12 STRAIGHT THROUGH NEW **EXISTING** BLUE BUFFER TUBE BLUE BUFFER TUBE **EXPRESS** ORANGE BUFFER TUBE ORANGE BUFFER TUBE FROM SPLICE ENCLOSURE FOR FROM SPLICE ENCLOSURE FOR GREEN BUFFER TUBE AT 03-1124 INTERSECTION 03-0626 /CCTV-4 GREEN BUFFER TUBE NC 211 (SOUTHPORT-SUPPLY RD) AT NC 211 SOUTHPORT-SUPPLY RD) EXPRESS BROWN BUFFER TUBE AT SOUTHPORT CROSSING DRIVEWAY SR 1969 (OLD LONG BEACH RD) **EXPRESS** 48 FIBERS IN 4 BUFFER TUBES 48 FIBERS IN 4 BUFFER TUBES CONTROLLER CABINET CCTV-3 FOR **FUTURE** DROP CABLE TO CCTV-3 FROM SPLICE **ENCLOSURE** CAP AND SEAL STRANDS 1-12 **NOTES:** 1 2 3 4 5 6 999999 1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY. **DOCUMENT NOT CONSIDERED FINAL** 2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY. **UNLESS ALL SIGNATURES COMPLETED** 3. INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: NC 211 REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE" (SOUTHPORT-SUPPLY RD / HOWE ST) (1) SPLICE SPLICE DETAIL (2) DATE 031464 Brunswick Co. Division 3 Southport (3) COMPANY NAME REVIEWED BY: T.R. Terrell PLAN DATE: June 2018 (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING PREPARED BY: Rakesh Nune REVIEWED BY: N.R. Simmons HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997 REVISIONS PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND NONE INFORMATION SHOWN ABOVE (1–4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS. CADD Filename: R5021 scp-49.dgn

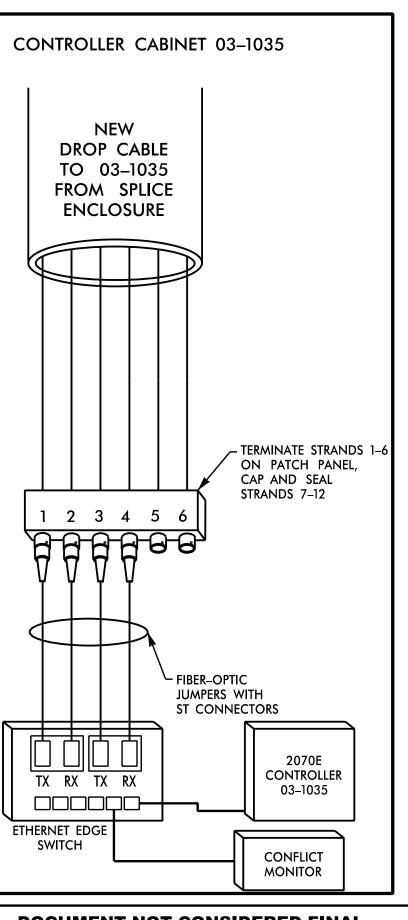
03–1035 NC 133 (LONG BEACH RD) SR 1969 (OLD LONG BEACH RD)

NO WORK ON THIS SHEET. SHOWN FOR INFORMATION PURPOSES ONLY.

LEGEND COLOR CODE TIA/EIA 598-C X = NEW FUSION SPLICE INDIVIDUAL FIBER • = EXISTING FUSION SPLICE C = CAP AND SEAL= EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR

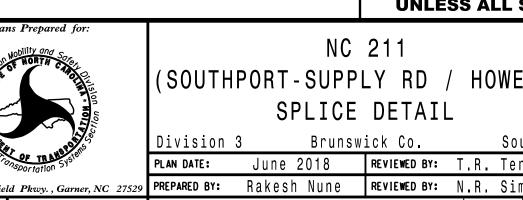
PROJECT REFERENCE NO. R-5021





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CADD Filename: R5021 scp-50.dgn



NONE

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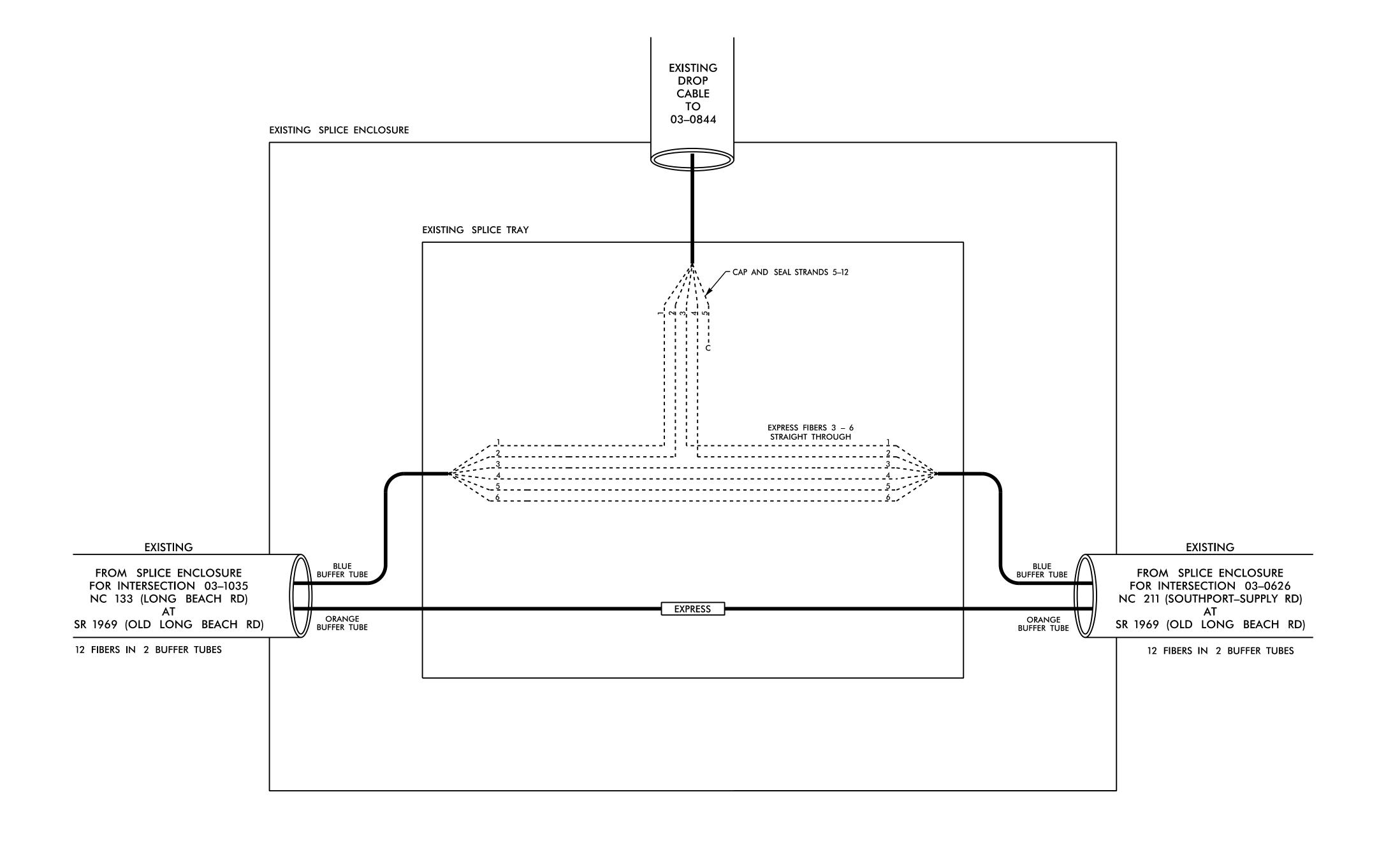
(SOUTHPORT-SUPPLY RD / HOWE ST 031464 Southpor REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons REVISIONS

03-0844 SR 1969 (OLD LONG BEACH RD) AT SHOPPING CENTER

NO WORK ON THIS SHEET.
SHOWN FOR INFORMATION PURPOSES ONLY.

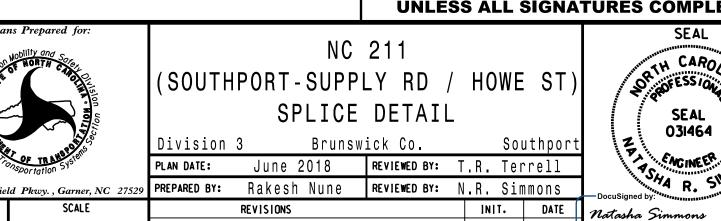
LEGEND COLOR CODE TIA/EIA 598-C X = NEW FUSION SPLICE INDIVIDUAL FIBER • = EXISTING FUSION SPLICE C = CAP AND SEAL= EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR

PROJECT REFERENCE NO. R-5021



CONTROLLER CABINET 03-0844 DROP CABLE TO 03-0844 FROM SPLICE **ENCLOSURE** – TERMINATE STRANDS 1-ON PATCH PANEL, CAP AND SEAL STRANDS 7–12 ∽ FIBER–OPTIC JUMPERS WITH ST CONNECTORS CONTROLLER TX RX TX RX 03-0844 ETHERNET EDGE CONFLICT MONITOR

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



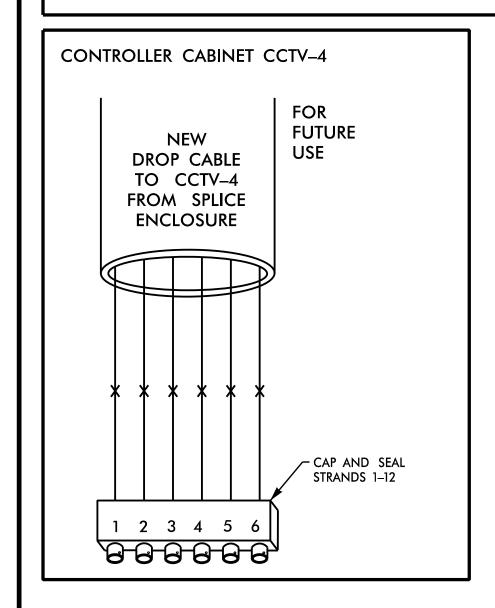
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

NONE

CADD Filename: R5021 scp-51.dgn

PROJECT REFERENCE NO. R-5021 SCP. 52 **LEGEND** COLOR CODE TIA/EIA 598-C 03-0626 /CCTV-4 /HUB CABINET NC 211 (SOUTHPORT-SUPPLY RD) AT X = NEW FUSION SPLICE INDIVIDUAL FIBER • = EXISTING FUSION SPLICE ORANGE (8) BLACK SR 1969 (OLD LONG BEACH RD) C = CAP AND SEAL(4) BROWN (10) VIOLET = EXPRESS ENTIRE BUFFER TUBE EXPRESS THROUGH WITHOUT CUTTING (5) SLATE (11) ROSE BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER WHITE (12) AQUA TUBE COLOR TO COLOR CONTROLLER CABINET 03–1125 MODIFY SPLICE ENCLOSURE **MODIFY SPLICE TRAY** NEW NEW NEW DROP CABLE **BUFFER TUBE** BUFFER TUBE TO 03-1125 SEE SHEET 53 FROM SPLICE ENCLOSURE FROM SPLICE FOR ORANGE TUBE BUFFER TUBE **BUFFER TUBE** FROM SPLICE ENCLOSURE FOR FOR INTERSECTION 03–1043 SPLICE **ENCLOSURE** GREEN BUFFER TUBE GREEN BUFFER TUBE NC 211 (SOUTHPORT-SUPPLY RD) CCTV₋₃ **EXPRESS** BROWN BUFFER TUBE BROWN BUFFER TUBE J. SWAIN BLVD **EXPRESS** 48 FIBERS IN 4 BUFFER TUBES 48 FIBERS IN 4 BUFFER TUBES * * * * * TERMINATE STRANDS 1-ON PATCH PANEL, CAP AND SEAL STRANDS 7–12 1 2 3 4 5 6 777700 - FIBER-OPTIC MASTER CONTROLLER CABINET 03-0626 JUMPERS WITH **EXISTING** ST CONNECTORS EXPRESS FIBERS 3 - 12 BLUE BUFFER TUBE FROM SPLICE ENCLOSURE FOR STRAIGHT THROUGH INTERSECTION 03-0844 EXISTING NC 133 (LONG BEACH RD) DROP CABLE TO 03-0626 ORANGE SHOPPING CENTER **BUFFER TUBE** FROM SPLICE **ENCLOSURE** 12 FIBERS IN 2 BUFFER TUBES CONTROLLER TX RX TX RX 03–1125 ETHERNET EDGE SWITCH CONFLICT MONITOR **NOTES:** TERMINATE STRANDS 1-ON PATCH PANEL, CAP AND SEAL ~_6---c UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY. 1 2 3 4 5 6 2. CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR <u>888888</u> COMPARISON TO SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH - FIBER-OPTIC RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL JUMPERS WITH ST CONNECTORS SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS. 3. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY. MASTER CONTROLLER 4. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. 03–0626 CONTRACTOR IS RESPONSIBLE FOR DETERMINING / CAP AND SEAL CAP AND SEAL STRANDS 5-12 STRANDS 5-12 ENSURING PROPER TERMINATION. CONFLICT MONITOR 5. INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: EXISTING REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE" EXISTING ETHERNET CELL **EDGE SWITCH** MODEM (1) SPLICE (2) DATE (3) COMPANY NAME (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING **DOCUMENT NOT CONSIDERED FINAL EXISTING** SHEET 1 OF 2 **UNLESS ALL SIGNATURES COMPLETED** PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING DROP DROP DROP THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH CABLE CABLE **CABLE** NC 211 OTDR TEST RESULTS. TO TO TO (SOUTHPORT-SUPPLY RD / HOWE ST) 03-0626 03–1125 CCTV-4 6. SIX (6) WEEKS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE DIVISION 3 SPLICE DETAIL DEPUTY TRAFFIC ENGINEER, STONEWALL (STONEY) MATHIS, AT 910–341–2200 TO ARRANGE FOR THE 031464 Division 3 Brunswick Co. Southport DIVISION TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION REVIEWED BY: T.R. Terrell June 2018 PLAN DATE: DATA, INCLUDING BUT NOT LIMITED TO THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK, PREPARED BY: Rakesh Nune REVIEWED BY: N.R. Simmons AND VLAN ID INFORMATION. NOTIFY THE DEPUTY TRAFFIC ENGINEER AFTER ALL WORK IS PERFORMED TO HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997 REVISIONS INIT. DATE ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND FUNCTIONAL.

CADD Filename: R5021 scp-52.dqn

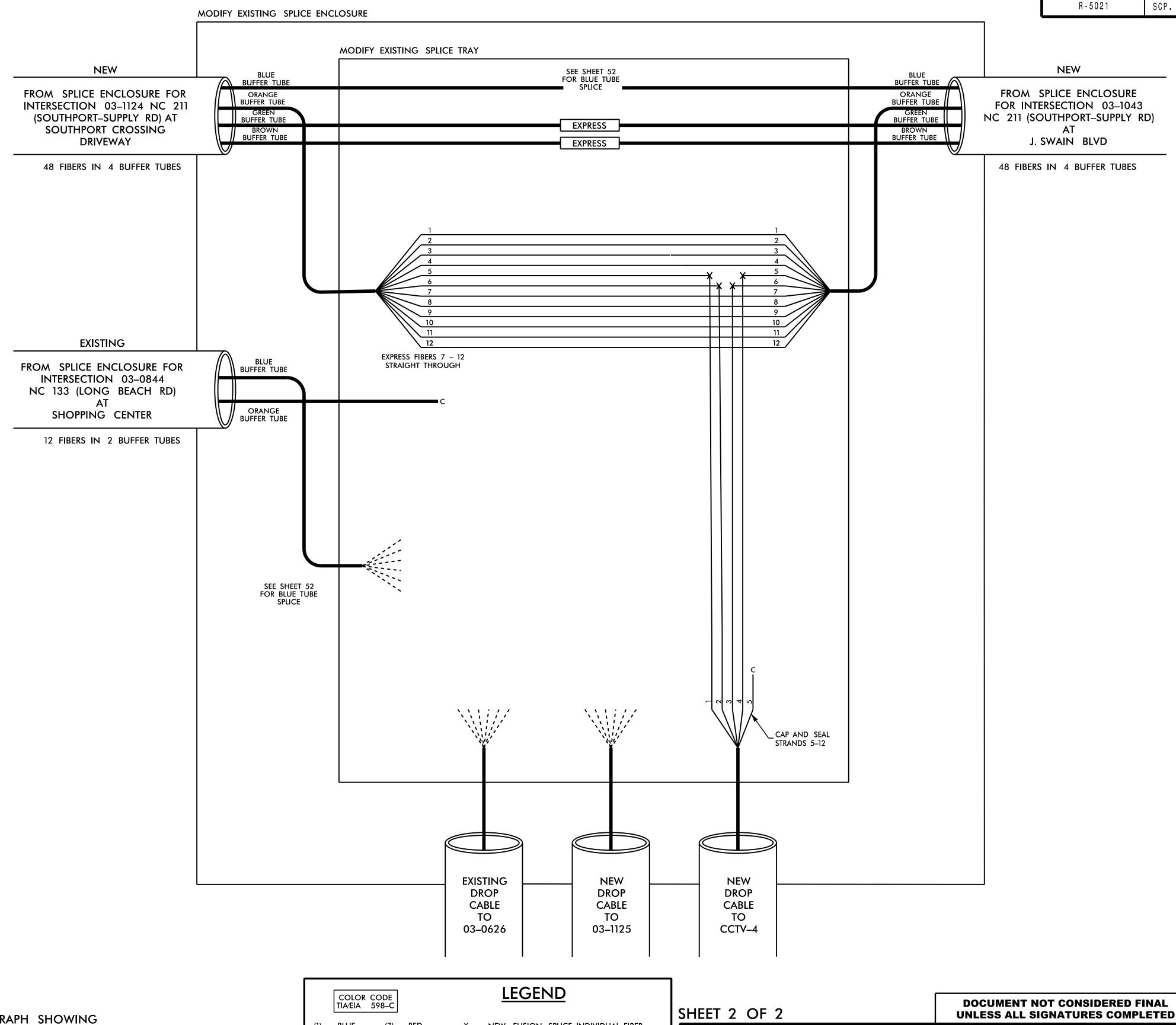


NOTES:

- 1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
- 2. CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.
- 3. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
- 4. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.
- 5. 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.

6. SIX (6) WEEKS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE DIVISION 3 DEPUTY TRAFFIC ENGINEER, STONEWALL (STONEY) MATHIS, AT 910–341–2200 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 FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND FUNCTIONAL.



X = NEW FUSION SPLICE INDIVIDUAL FIBER EXISTING FUSION SPLICE (3) GREEN C = CAP AND SEAL(10) VIOLET BROWN EXPRESS ENTIRE BUFFER TUBE **EXPRESS** THROUGH WITHOUT CUTTING (5) SLATE (11) ROSE SPLICE ALL FIBERS IN BUFFER BUFFER SPLICE (12) AQUA TUBE COLOR TO COLOR

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NC 211 (SOUTHPORT-SUPPLY RD / HOWE ST) SPLICE DETAIL Division 3 Brunswick Co

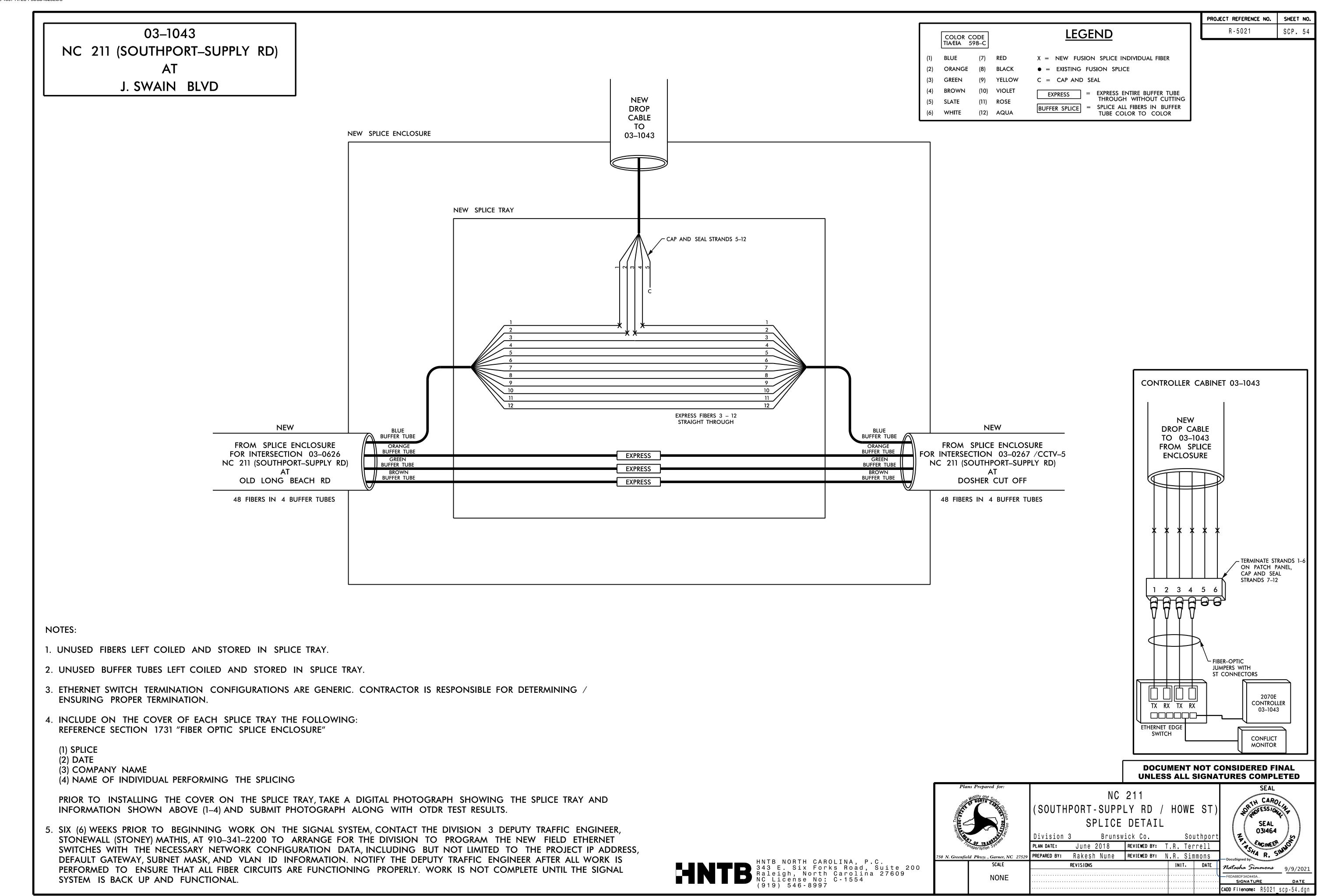
Southport REVIEWED BY: T.R. Terrell June 2018 PLAN DATE: PREPARED BY: Rakesh Nune REVIEWED BY: N.R. Simmons INIT. DATE

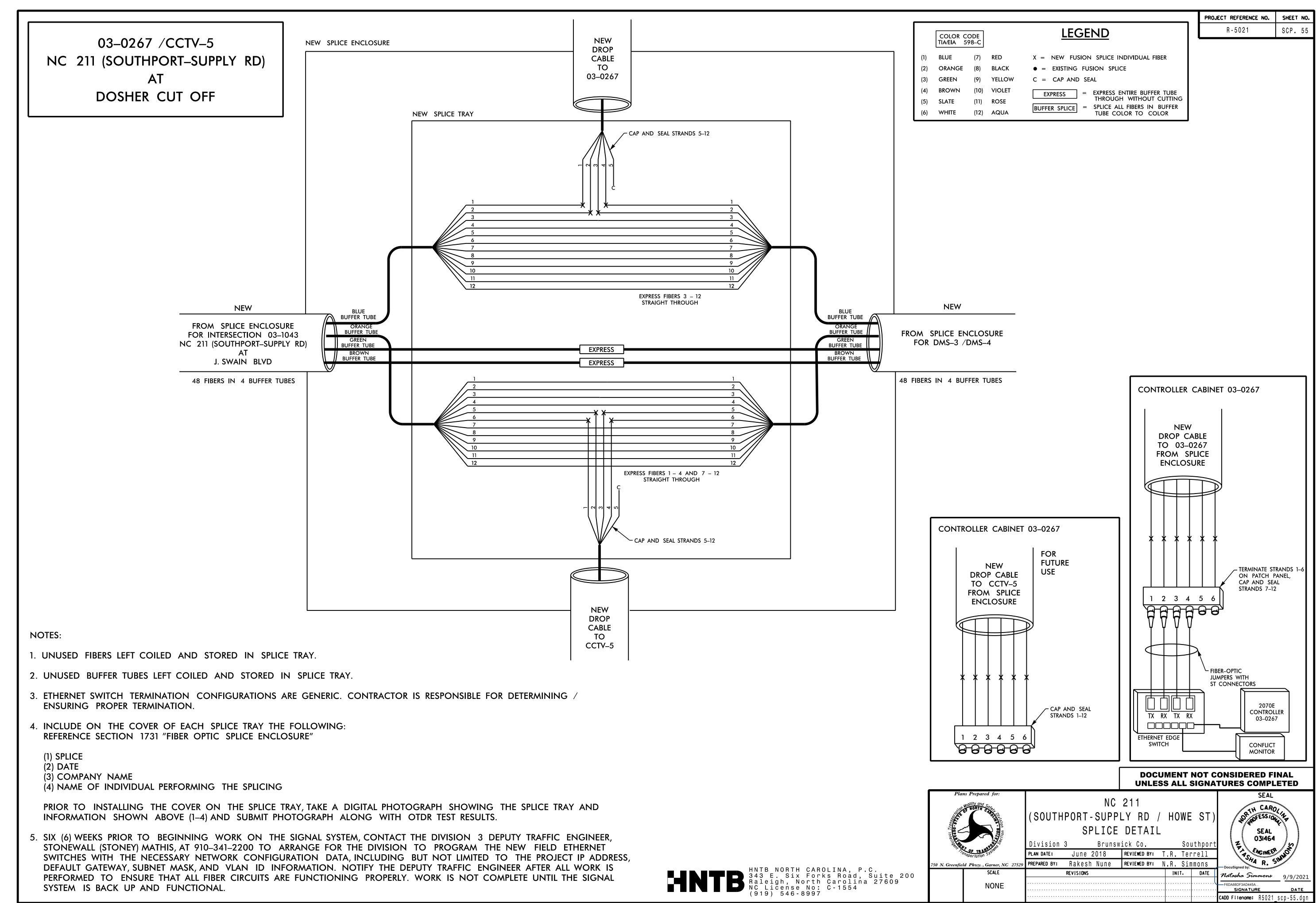
031464 Natasha Simmons

CADD Filename: R5021 scp-53.dgn

PROJECT REFERENCE NO.

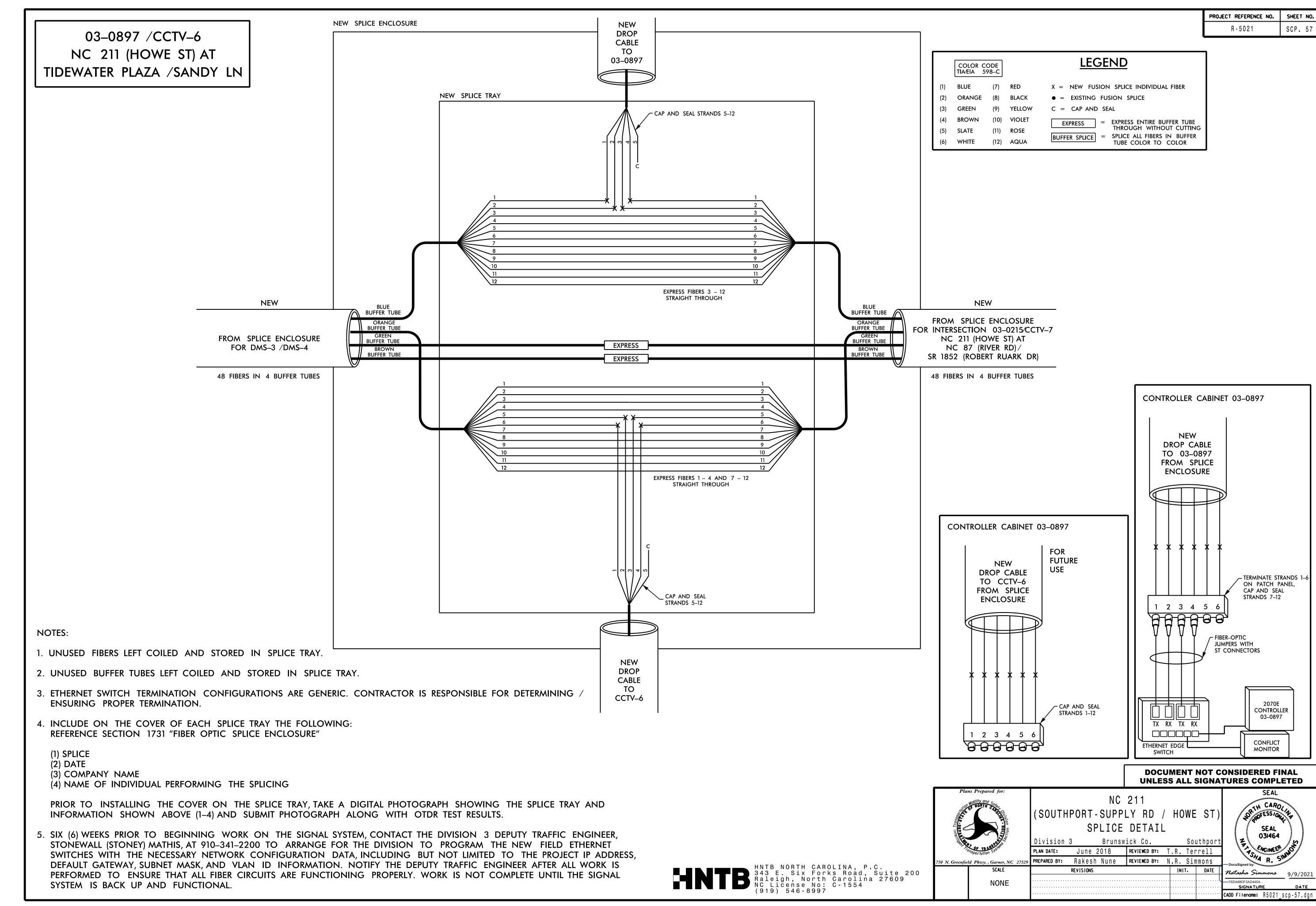
REVISIONS NONE





PROJECT REFERENCE NO. R-5021 **LEGEND** COLOR CODE TIA/EIA 598-C DMS-3 /DMS-4 NC 211 (HOWE ST) X = NEW FUSION SPLICE INDIVIDUAL FIBER • = EXISTING FUSION SPLICE AT STA 393+00 C = CAP AND SEAL(4) BROWN (10) VIOLET = EXPRESS ENTIRE BUFFER TUBE **EXPRESS** NEW THROUGH WITHOUT CUTTING DROP BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER CABLE (12) AQUA WHITE TUBE COLOR TO COLOR TO DMS-3 / DMS-4 NEW SPLICE ENCLOSURE NEW SPLICE TRAY CAP AND SEAL STRANDS 5-12 EXPRESS FIBERS 1 – 8 AND 11 – 12 STRAIGHT THROUGH NEW NEW BLUE BUFFER TUBE BLUE BUFFER TUBE EXPRESS FROM SPLICE ENCLOSURE FROM SPLICE ENCLOSURE ORANGE BUFFER TUBE ORANGE BUFFER TUBE FOR INTERSCTION 03-0897 FOR 03-0267 /CCTV-5 GREEN BUFFER TUBE NC 211 (SOUTHPORT-SUPPLY RD) NC 211 (HOWE STREET) BUFFER TUBE **EXPRESS** BROWN BUFFER TUBE BROWN BUFFER TUBE TIDEWATER PLAZA /SANDY LANE DOSHER CUT OFF **EXPRESS** 48 FIBERS IN 4 BUFFER TUBES 48 FIBERS IN 4 BUFFER TUBES CONTROLLER CABINET DMS-3 FOR **FUTURE** DROP CABLE TO DMS-3 /DMS-4 FROM SPLICE **ENCLOSURE** CAP AND SEAL STRANDS 1–12 **NOTES:** 1 2 3 4 5 6 999999 1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY. **DOCUMENT NOT CONSIDERED FINAL** 2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY. **UNLESS ALL SIGNATURES COMPLETED** 3. INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: NC 211 REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE" (SOUTHPORT-SUPPLY RD / HOWE ST) (1) SPLICE SPLICE DETAIL (2) DATE 031464 Brunswick Co. Division 3 Southport (3) COMPANY NAME REVIEWED BY: T.R. Terrell PLAN DATE: June 2018 (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING PREPARED BY: Rakesh Nune REVIEWED BY: N.R. Simmons HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997 REVISIONS PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND NONE INFORMATION SHOWN ABOVE (1–4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

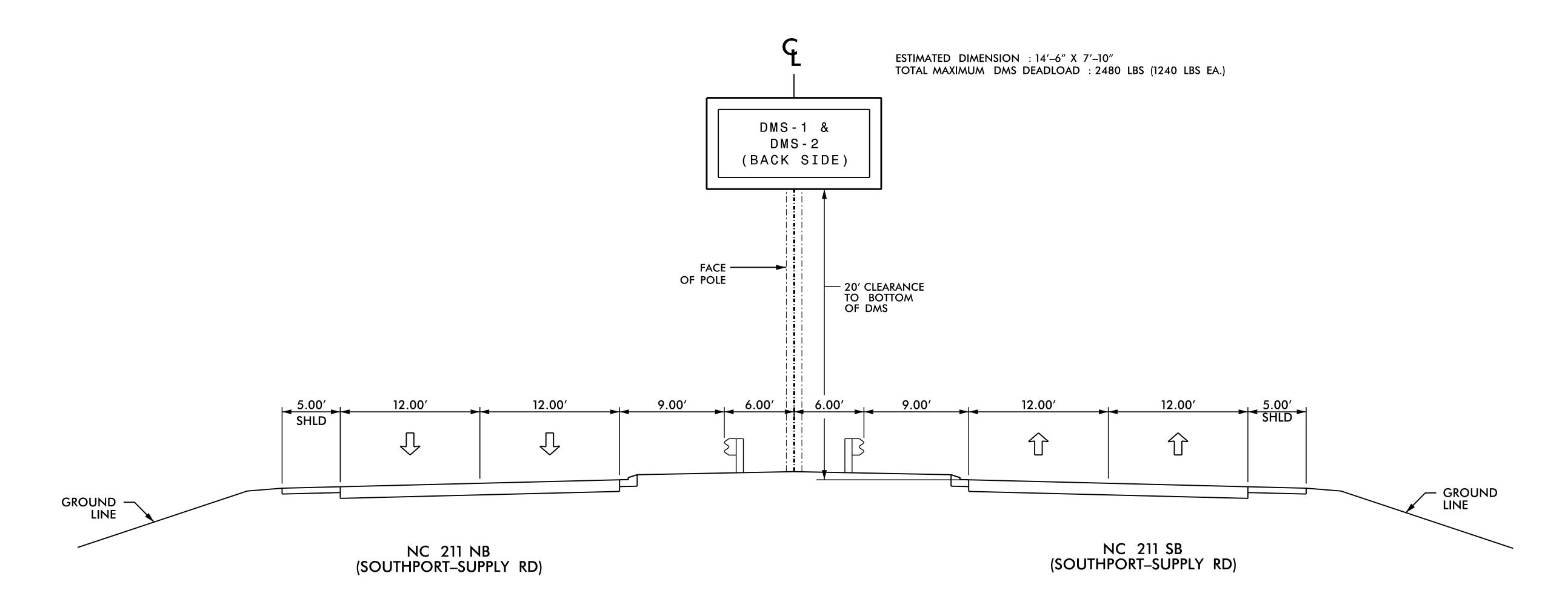
CADD Filename: R5021 scp-56.dgn



PROJECT REFERENCE NO. R-5021 **LEGEND** COLOR CODE TIA/EIA 598-C 03-0215 /CCTV-7 NC 211 (HOWE ST) AT X = NEW FUSION SPLICE INDIVIDUAL FIBER • = EXISTING FUSION SPLICE NC 87 (RIVER RD)/ C = CAP AND SEALSR 1852 (ROBERT RUARK DR) **EXPRESS ENTIRE BUFFER TUBE** THROUGH WITHOUT CUTTING NEW BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER DROP (12) AQUA TUBE COLOR TO COLOR **CABLE** TO NEW SPLICE ENCLOSURE 03–0215 NEW SPLICE TRAY CAP AND SEAL STRANDS 5-12 CONTROLLER CABINET 03-0215 NEW BLUE BUFFER TUBE DROP CABLE FROM SPLICE ENCLOSURE ORANGE BUFFER TUBE TO 03-0215 FOR INTERSECTION 03-0897/CCTV-6 GREEN BUFFER TUBE FROM SPLICE NC 211 (HOWE ST) **ENCLOSURE** BROWN BUFFER TUBE TIDEWATER PLAZA/SANDY LN 48 FIBERS IN 4 BUFFER TUBES CONTROLLER CABINET 03-0215 FOR **FUTURE** DROP CABLE TERMINATE STRANDS 1-ON PATCH PANEL, CAP AND SEAL TO CCTV-7 FROM SPLICE **ENCLOSURE NOTES:** CAP AND SEAL STRANDS 5–12 ~ FIBER-OPTIC 1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY. JUMPERS WITH ST CONNECTORS 2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY. 3. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. NEW 2070E DROP CONTRACTOR IS RESPONSIBLE FOR DETERMINING /ENSURING PROPER TERMINATION. CONTROLLER CAP AND SEAL STRANDS 1–12 03-0215 **CABLE** TO 4. INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: TX RX TX RX CCTV-7 REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE" 1 2 3 4 5 6 CONFLICT 99999 ETHERNET EDGE (1) SPLICE (2) DATE **DOCUMENT NOT CONSIDERED FINAL** (3) COMPANY NAME **UNLESS ALL SIGNATURES COMPLETED** (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING NC 211 PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND (SOUTHPORT-SUPPLY RD / HOWE ST) INFORMATION SHOWN ABOVE (1–4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS. SPLICE DETAIL 5. SIX (6) WEEKS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE DIVISION 3 DEPUTY TRAFFIC ENGINEER, 031464 Division 3 Brunswick Co Southport STONEWALL (STONEY) MATHIS, AT 910-341-2200 TO ARRANGE FOR THE DIVISION TO PROGRAM THE NEW FIELD ETHERNET REVIEWED BY: T.R. Terrell PLAN DATE: June 2018 SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO THE PROJECT IP ADDRESS, PREPARED BY: Rakesh Nune REVIEWED BY: N.R. Simmons DEFAULT GATEWAY, SUBNET MASK, AND VLAN ID INFORMATION. NOTIFY THE DEPUTY TRAFFIC ENGINEER AFTER ALL WORK IS HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997 REVISIONS INIT. DATE PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL NONE SYSTEM IS BACK UP AND FUNCTIONAL.

CADD Filename: R5021 scp-58.dqn

PROJECT REFERENCE NO. R-5021



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.

TMP - FINAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



1"=20'

NC 211 (SOUTHPORT-SUPPLY RD / HOWE ST) DMS-1 & DMS-2 ELEVATION

Brunswick Co. Division 3 PLAN DATE: June 2017 REVIEWED BY: T.R. Terrell

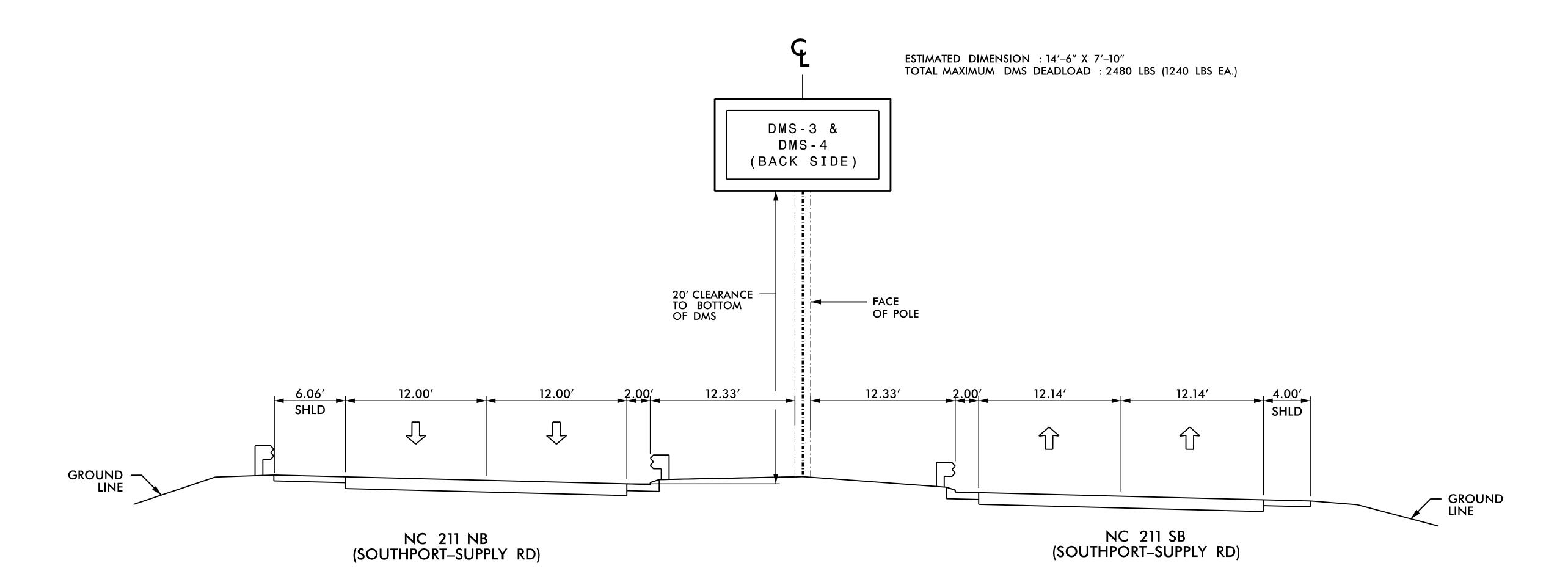
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031464

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(919) 546-8997

PREPARED BY: N.K. Vlanich REVIEWED BY: N.R. Simmons REVISIONS INIT. DATE CADD Filename: R5021 scp-59.dgn

R-5021 SCP. 6



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.

TMP – FINAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

OR SOFESSION !!

031464



1"=10'

NC 211 (SOUTHPORT-SUPPLY RD / HOWE ST) DMS-3 & DMS-4 ELEVATION

Division 3 Brunswick Co. Southpor PLAN DATE: June 2017 REVIEWED BY: T.R. Terrell
PREPARED BY: N.K. Vlanich REVIEWED BY: N.R. Simmons
REVISIONS INIT. DATE

REVIEWED BY: N.R. Simmons

INIT. DATE

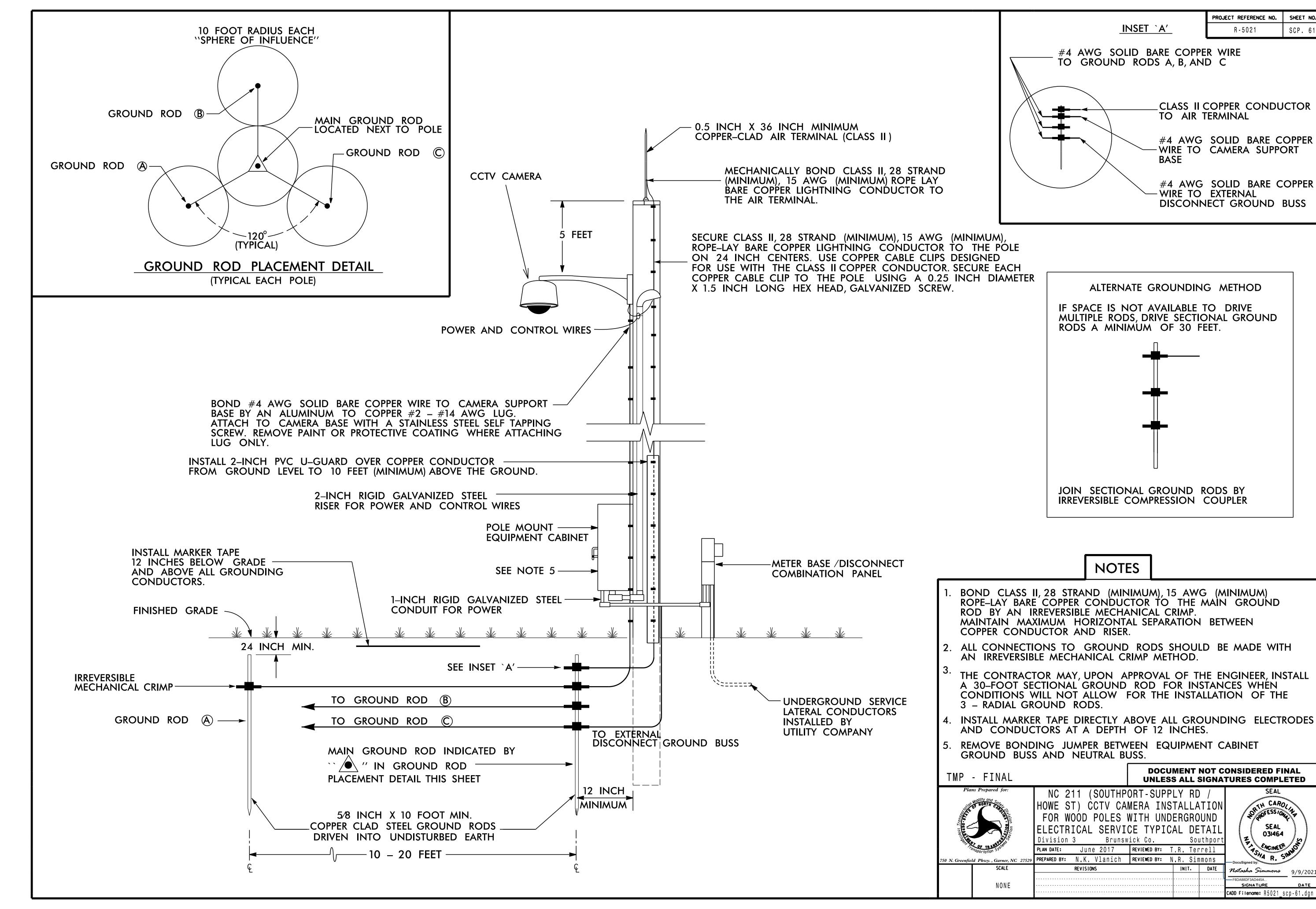
Matasha Simmons 10/29/202

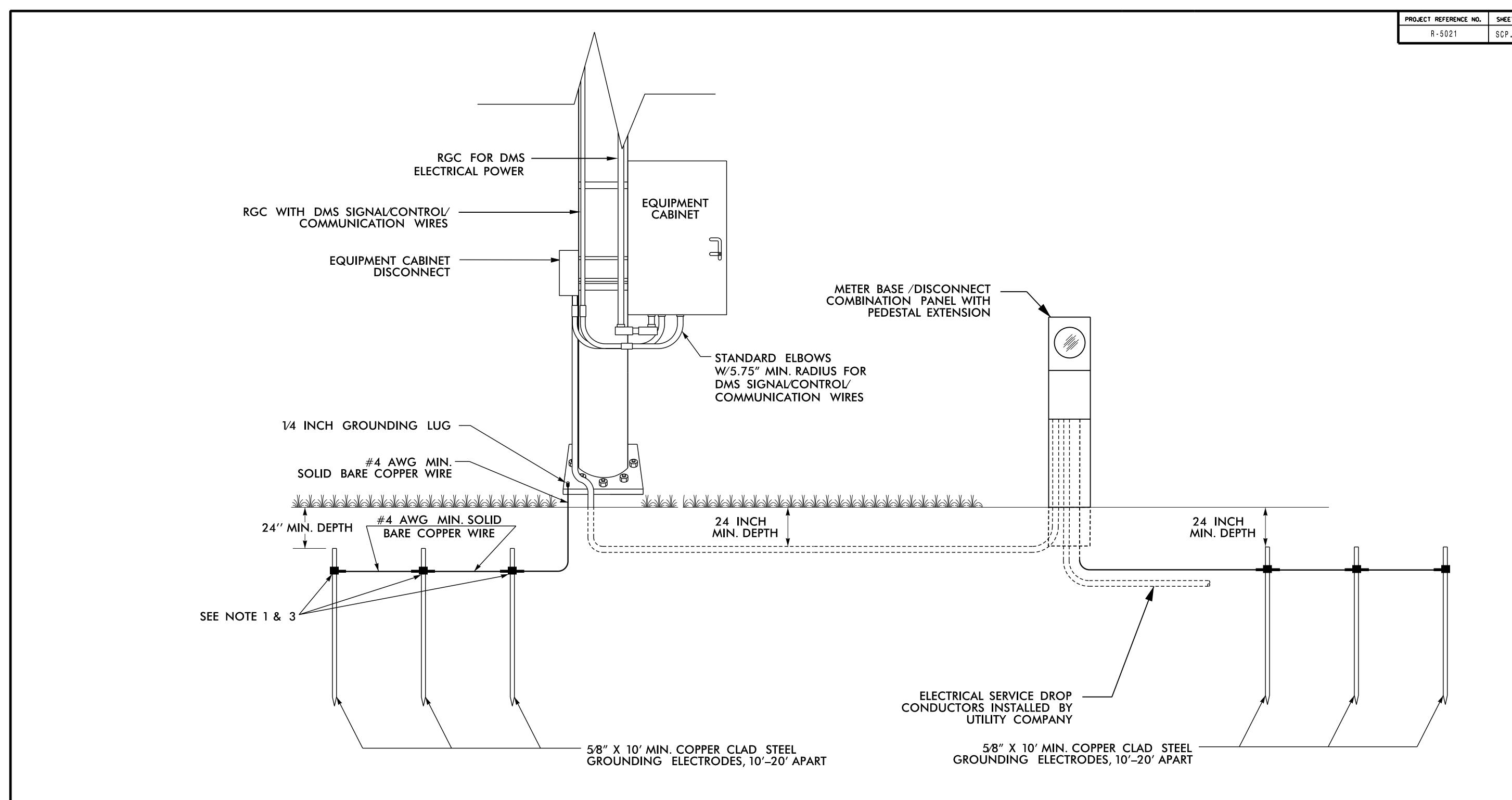
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SIGNATURE

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





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.

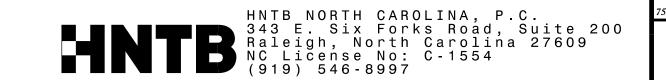
4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.

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.





TMP - FINAL

NONE

PREPARED BY: N.K. Vlanich REVIEWED BY: N.R. Simmons REVISIONS INIT. DATE

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SEAL 031464

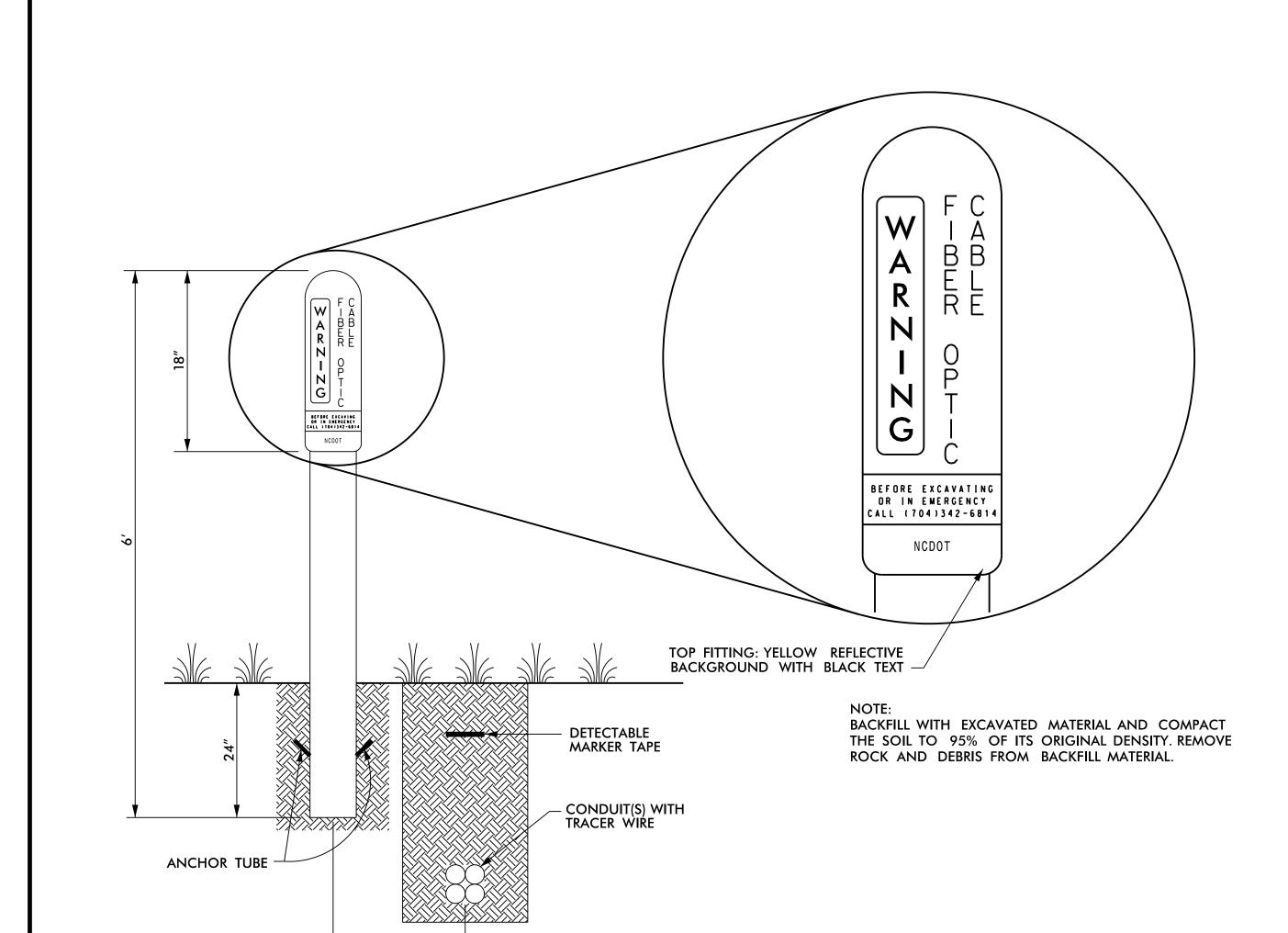
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DOCUMENT NOT CONSIDERED FINAL

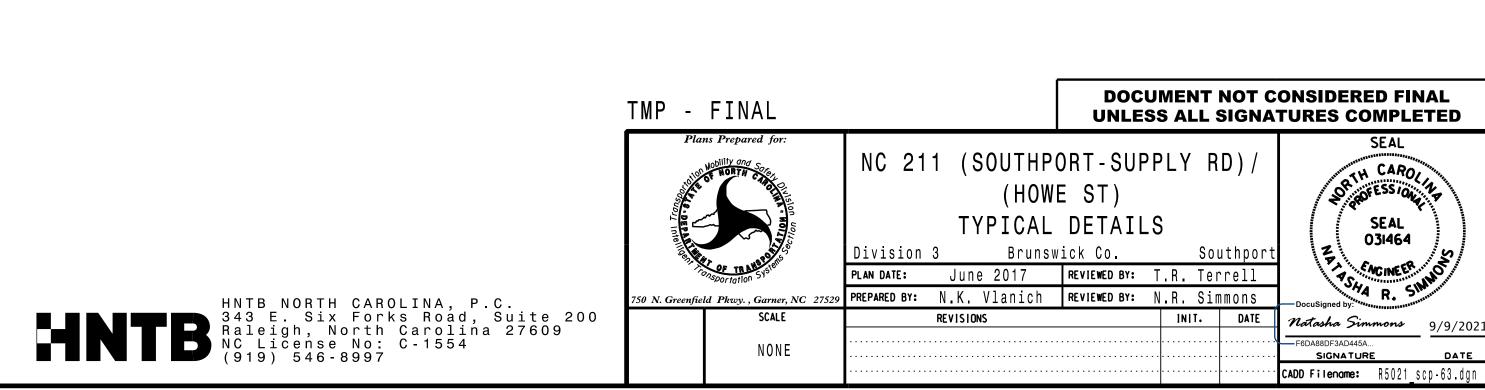
UNLESS ALL SIGNATURES COMPLETED

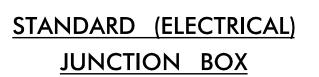
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 SHEET NO.

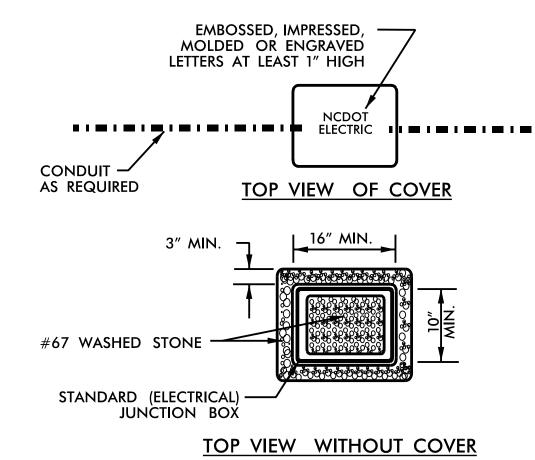
 R - 5021
 SCP. 63



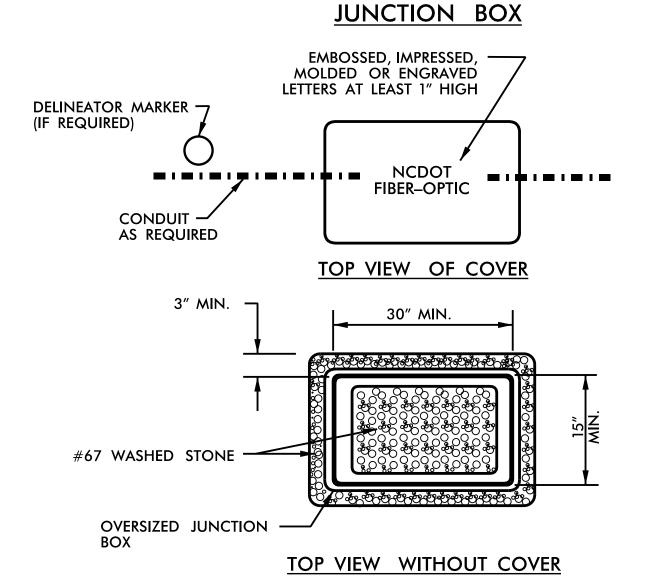
PVC POST-MOUNTED DELINEATOR MARKER



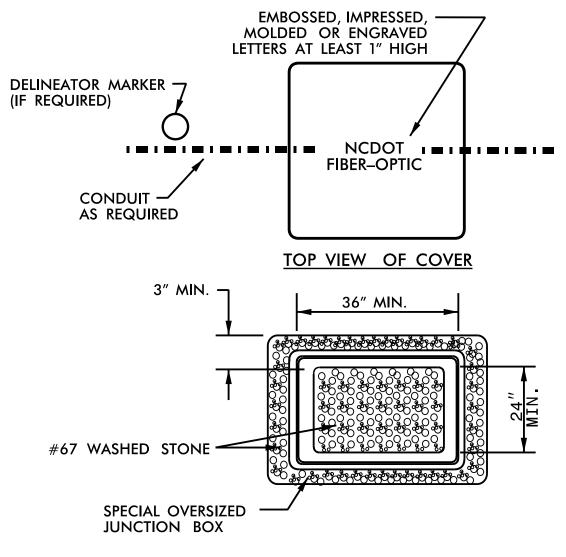




OVERSIZED HEAVY DUTY



SPECIAL OVERSIZED HEAVY DUTY JUNCTION BOX



TOP VIEW WITHOUT COVER