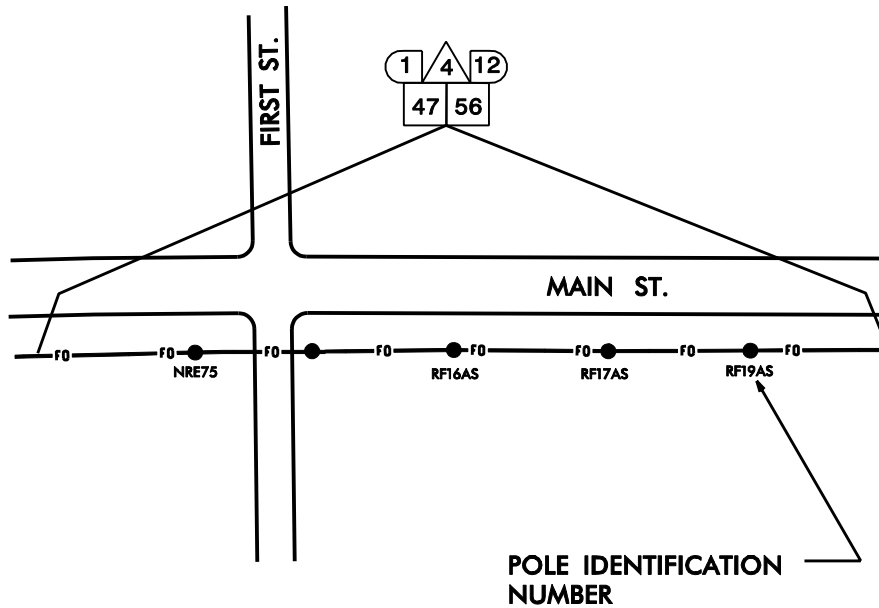


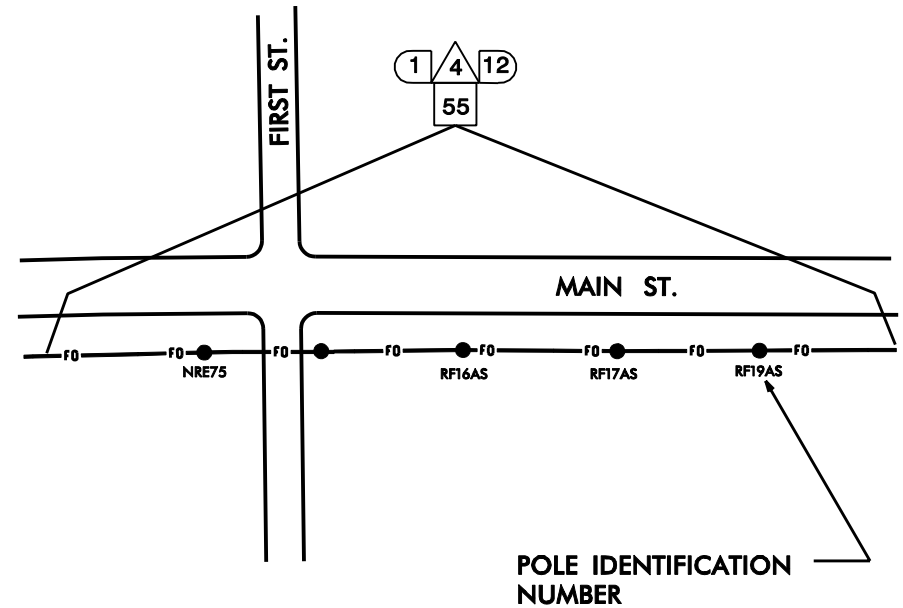
CASE 1

NEW COMMUNICATIONS CABLE LASHED TO NEW MESSENGER CABLE



CASE 2

NEW COMMUNICATIONS CABLE LASHED TO EXISTING MESSENGER CABLE



Construction Notes for Aerial Cable Run

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

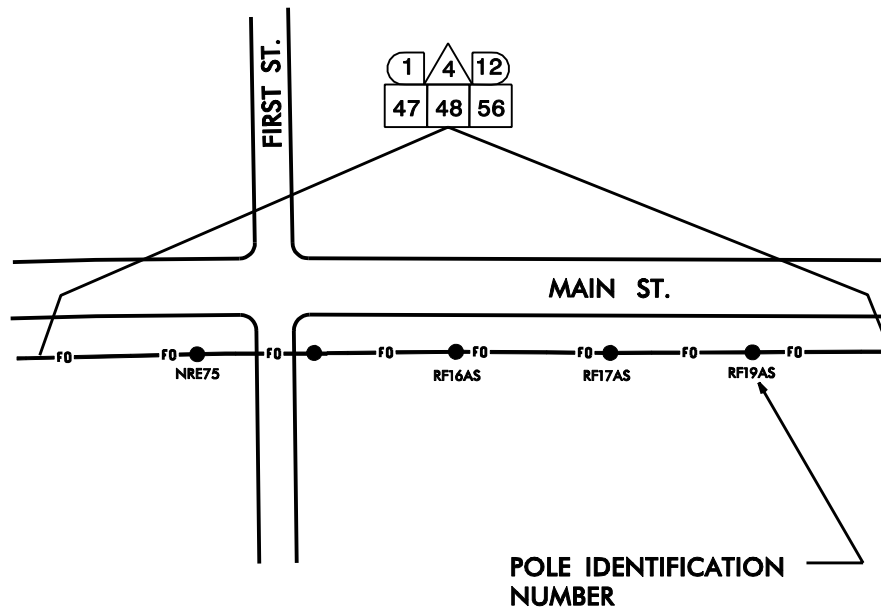
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SHEET 1 OF 3

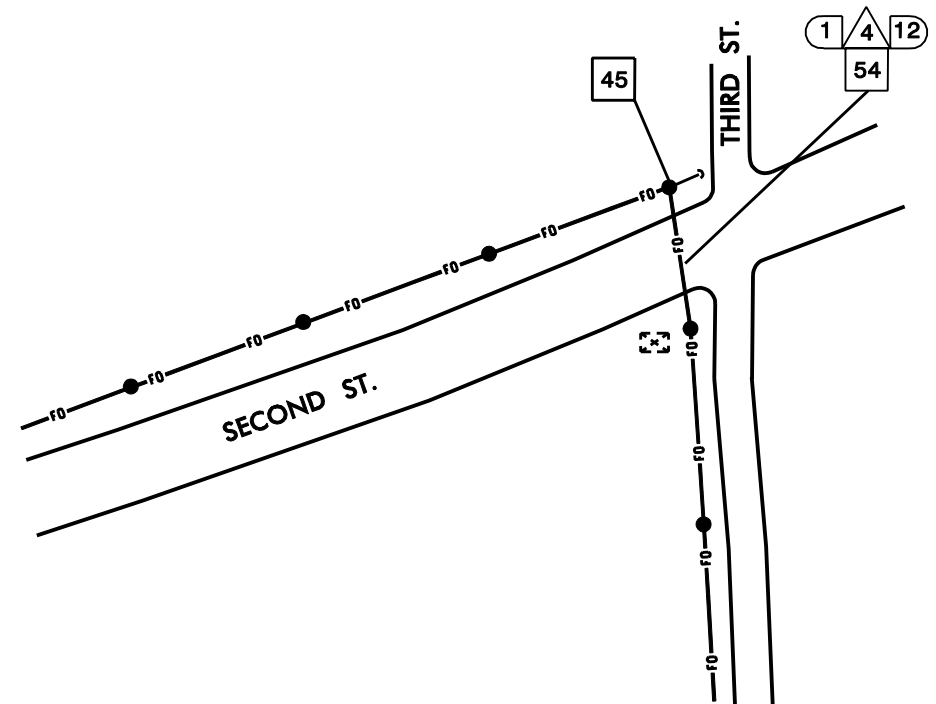
CASE 3

EXISTING COMMUNICATIONS CABLE AND
MESSENGER CABLE ARE TO BE REMOVED
NEW COMMUNICATIONS CABLE LASHED TO NEW
MESSENGER CABLE



CASE 4

NEW COMMUNICATIONS CABLE LASHED TO
EXISTING SIGNAL/COMMUNICATIONS CABLE



Construction Notes for Aerial Cable Run

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

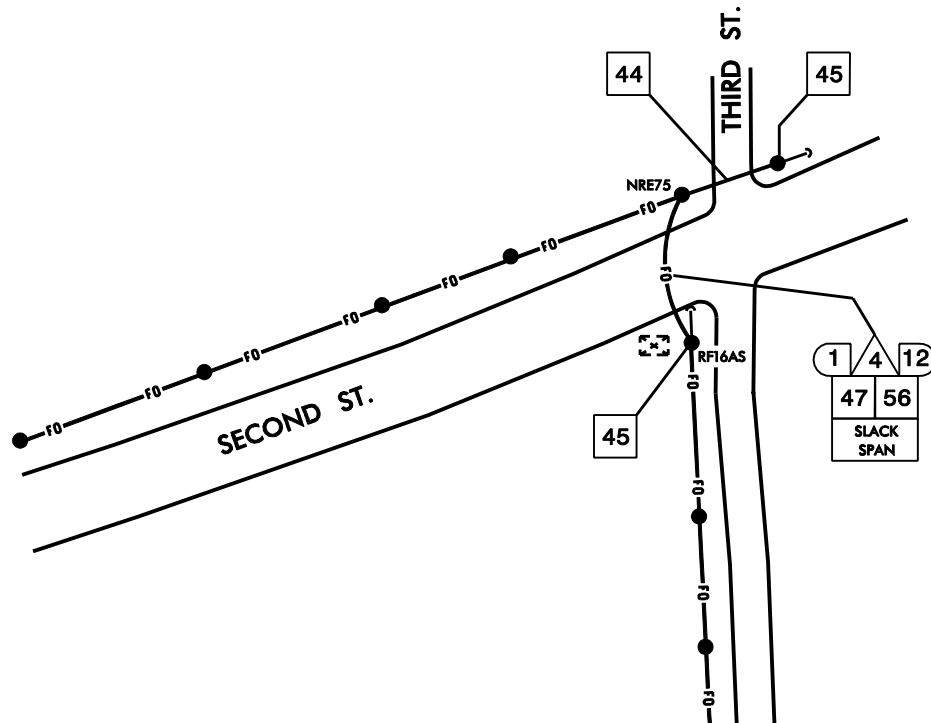
STD. NO.

4.0

SHEET 2 OF 3

CASE 5

NEW COMMUNICATIONS CABLE LASHED TO
NEW MESSENGER CABLE AND SLACK SPANNED



RESERVED FOR
FUTURE USE

NOTE: SLACK SPANNING SHOULD BE USED AS A LAST RESORT.
IN THIS CASE, A GUY COULD NOT BE PLACED ON POLE
NRE75 TO COUNTERACT THE TENSION OF THE AERIAL
INSTALLATION ALONG THIRD STREET.
THEREFORE, SLACK SPAN TO POLE RF16AS AND PLACE
DOWN GUY AT THAT POLE.

Construction Notes for Aerial Cable Run

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

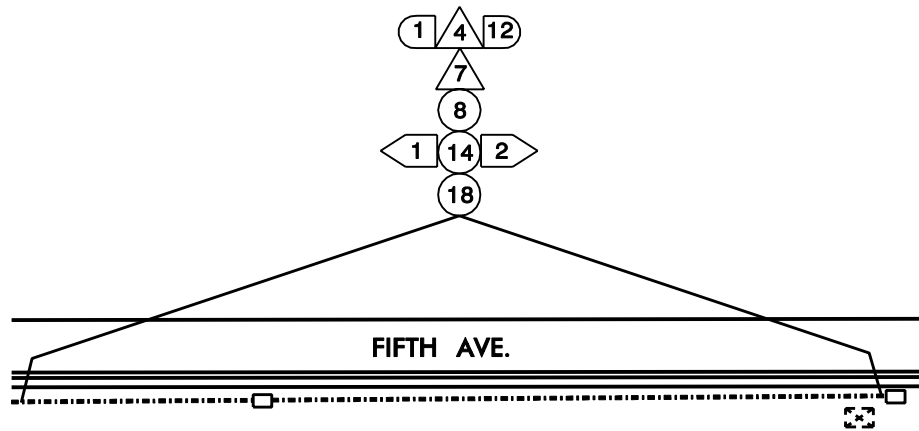
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SHEET 3 OF 3

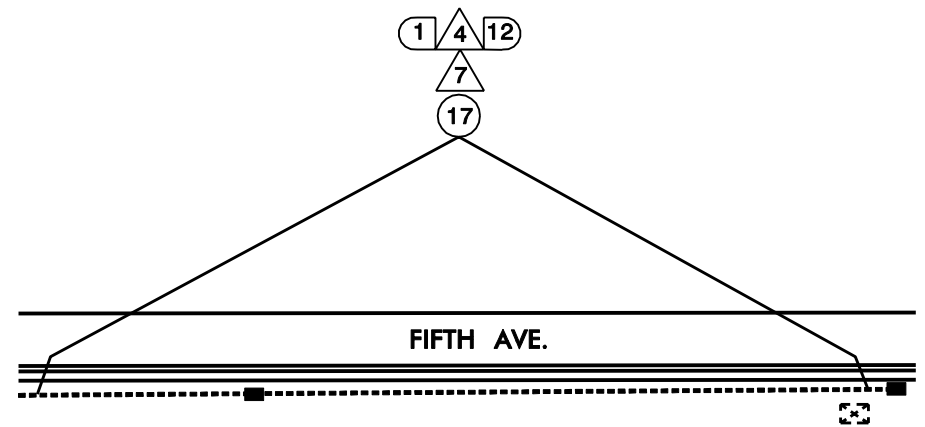
CASE 1

UNDERGROUND COMMUNICATIONS CABLE RUN
INSTALLED IN NEW CONDUIT TRENCHED OR PLOWED



CASE 2

UNDERGROUND COMMUNICATIONS CABLE RUN
INSTALLED IN EXISTING CONDUIT



Construction Notes for Trenched or Plowed Conduit

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

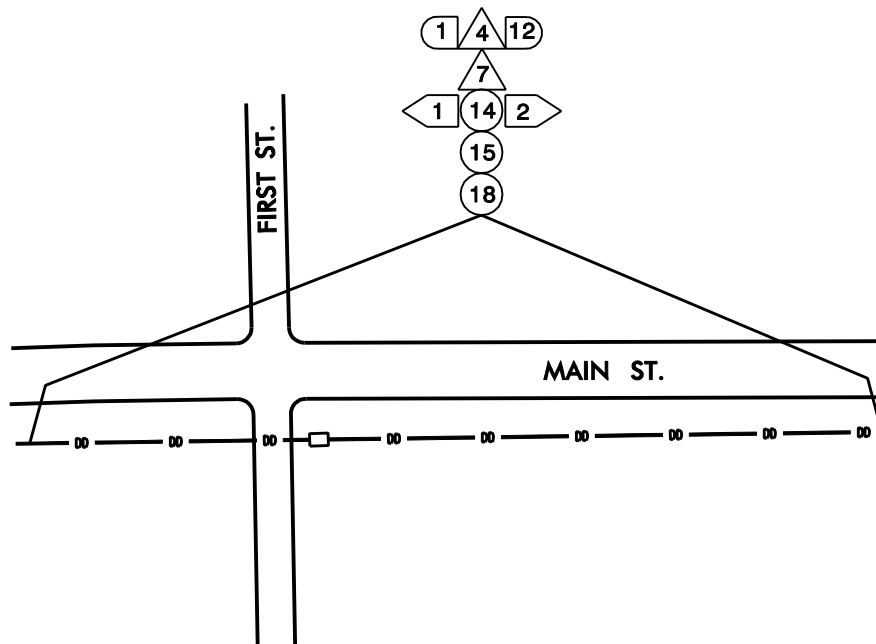
STD. NO.

4.1

SHEET 1 OF 3

CASE 3

UNDERGROUND COMMUNICATIONS CABLE RUN
INSTALLED IN NEW CONDUIT DIRECTIONALLY DRILLED



CASE 4

**RESERVED FOR
FUTURE USE**

Construction Notes for Directional Drilled Conduit

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

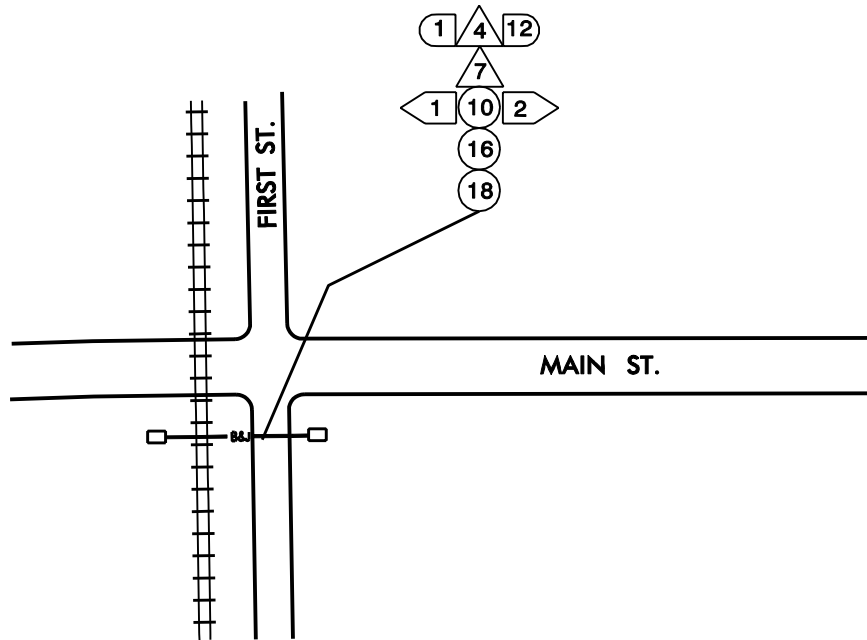
STD. NO.

4.1

SHEET 2 OF 3

CASE 5

UNDERGROUND COMMUNICATIONS CABLE RUN
INSTALLED IN NEW GALVANIZED STEEL CONDUIT



NOTE: THIS METHOD IS TYPICALLY USED FOR
CROSSING UNDER RAILROAD TRACKS. HOWEVER,
IT CAN BE USED FOR OTHER APPLICATIONS
REQUIRING GALVANIZED STEEL CONDUIT.

CASE 6

**RESERVED FOR
FUTURE USE**

Construction Notes for Bored and Jacked Conduit

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

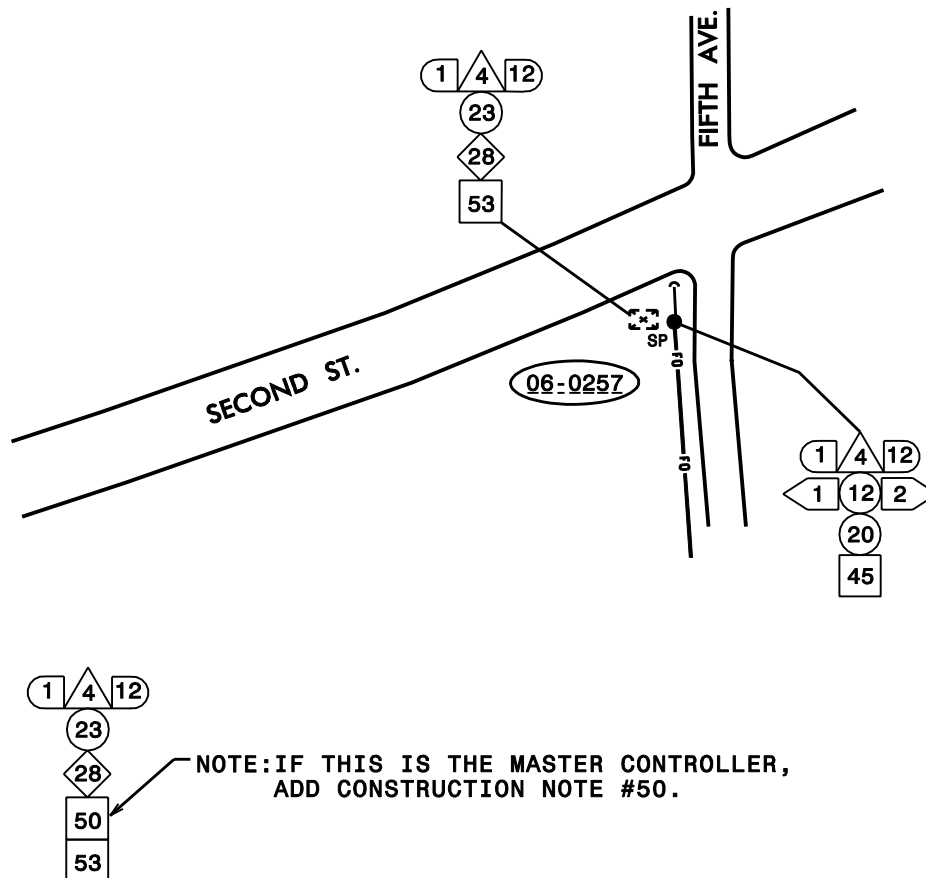
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SHEET 3 OF 3

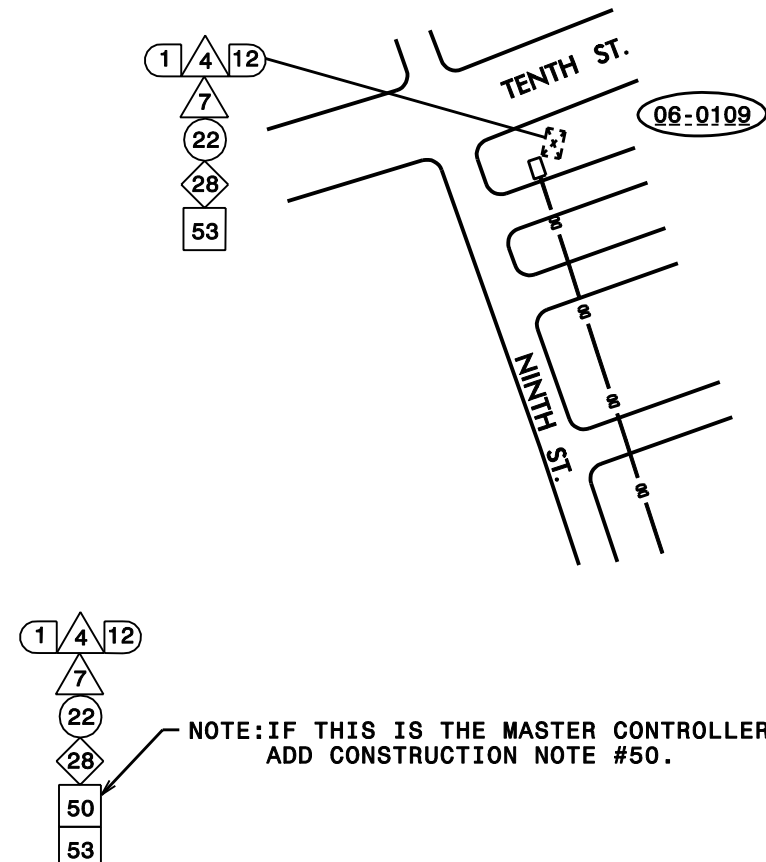
CASE 1

FIBER ROUTED FROM A POLE RISER TO A BASE MOUNTED SIGNAL CABINET AT THE END OF A RUN WITH STANDARD GUY ASSEMBLY



CASE 2

FIBER ROUTED FROM A JUNCTION BOX TO A BASE MOUNTED SIGNAL CABINET AT THE END OF A RUN (UNDERGROUND INSTALLATION - NO RISER REQUIRED)



Construction Notes for Signal Cabinets and Risers

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

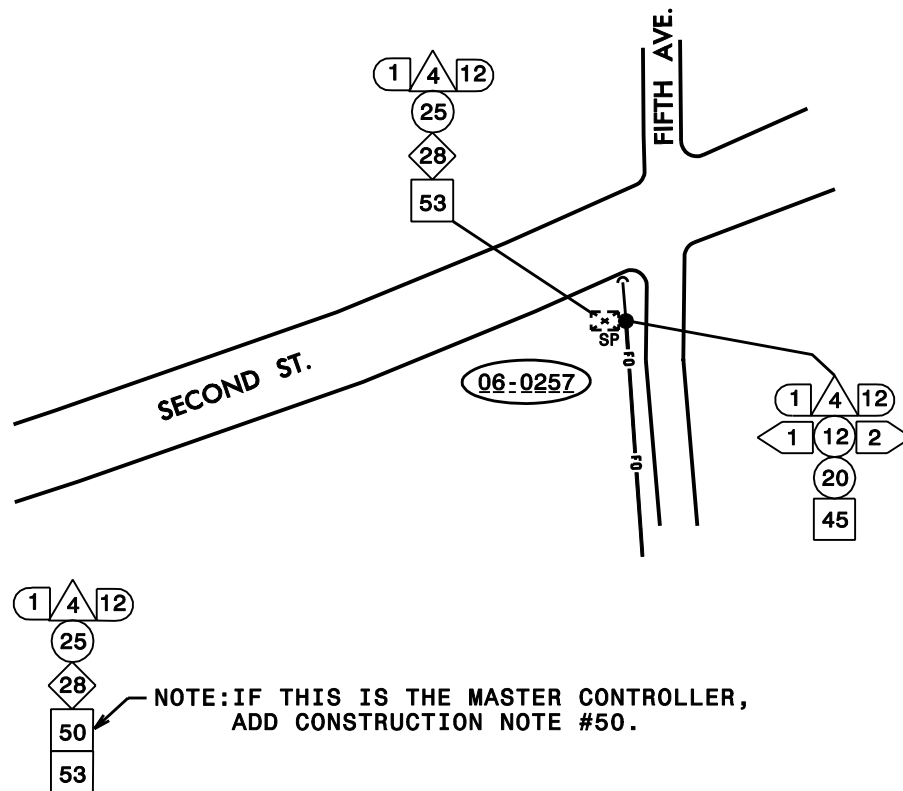
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SHEET 1 OF 4

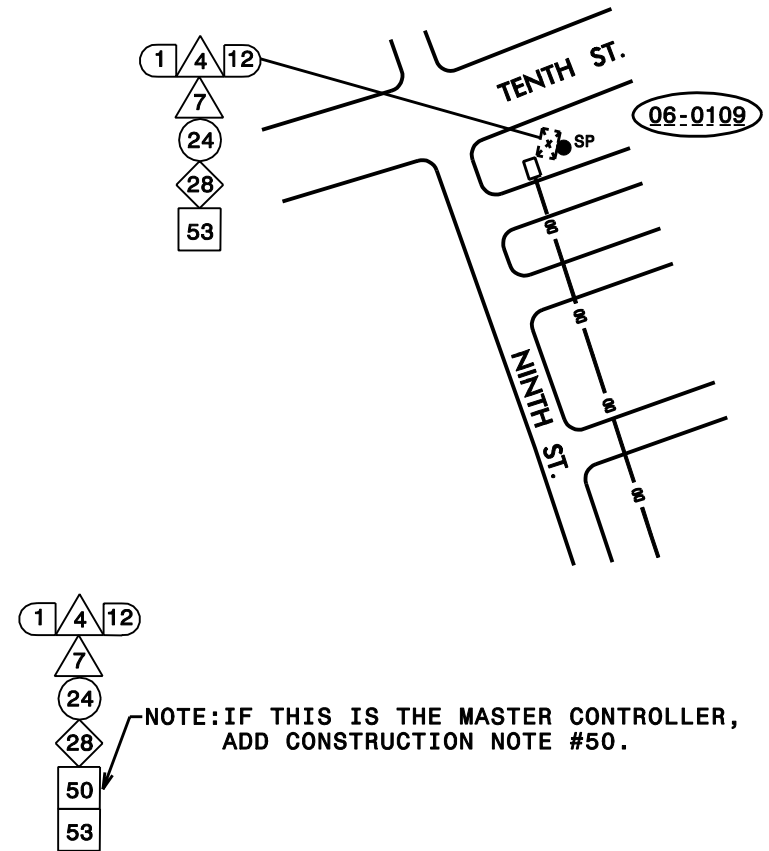
CASE 3

FIBER ROUTED FROM A POLE RISER TO A POLE MOUNTED SIGNAL CABINET AT THE END OF A RUN WITH STANDARD GUY ASSEMBLY



CASE 4

FIBER ROUTED FROM A JUNCTION BOX TO A POLE MOUNTED SIGNAL CABINET AT THE END OF A RUN (UNDERGROUND INSTALLATION - NO RISER REQUIRED)



Construction Notes for Signal Cabinets and Risers

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

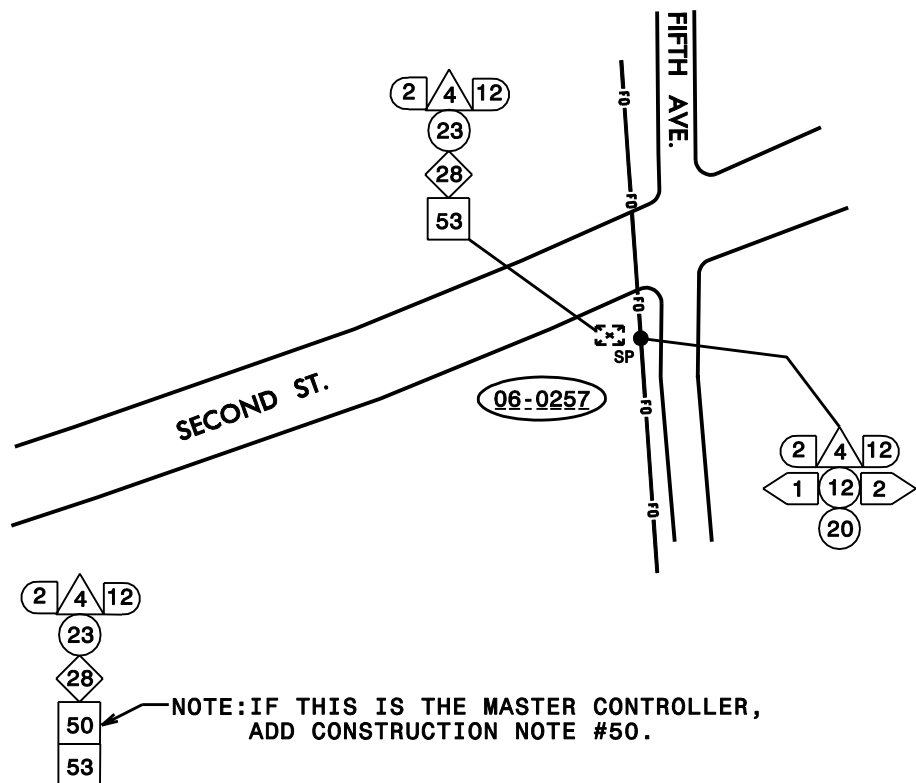
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4.2

SHEET 2 OF 4

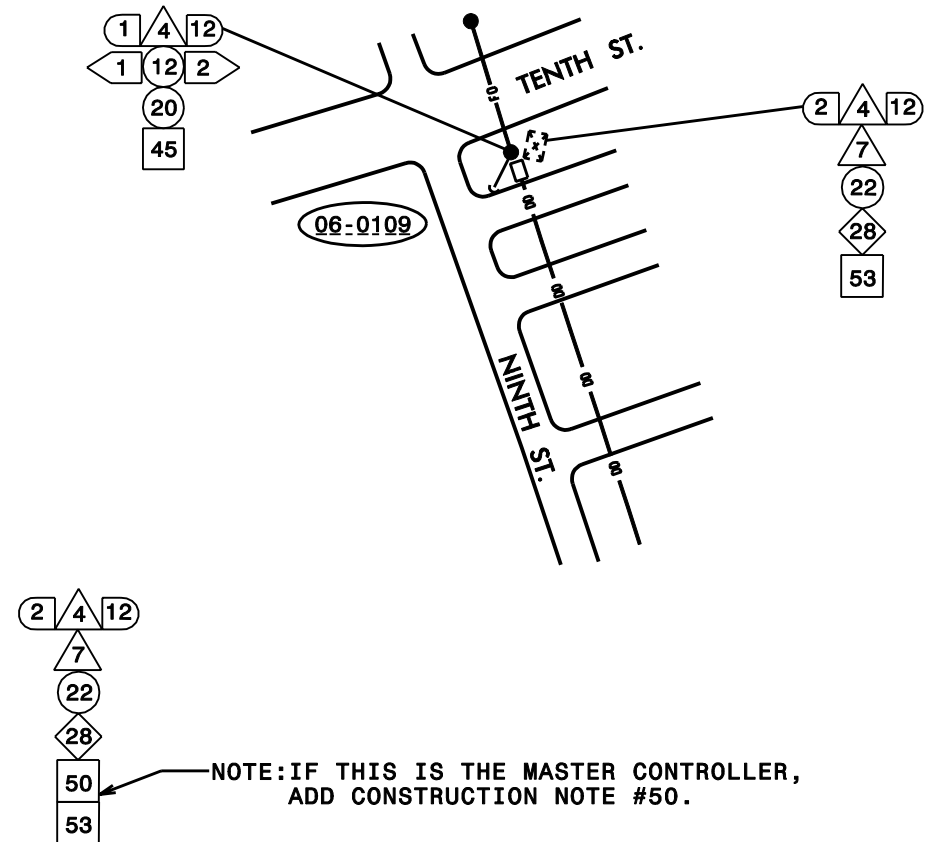
CASE 5

FIBER ROUTED FROM A POLE RISER TO A BASE MOUNTED SIGNAL CABINET AND BACK UP THROUGH RISER TO CONTINUE TO NEXT LOCATION



CASE 6

FIBER ROUTED FROM A JUNCTION BOX TO A BASE MOUNTED SIGNAL CABINET THEN UP THE POLE RISER TO CONTINUE TO NEXT LOCATION (TRANSITION FROM UNDERGROUND TO AERIAL - RISER AND GUY REQUIRED)



Construction Notes for Signal Cabinets and Risers

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

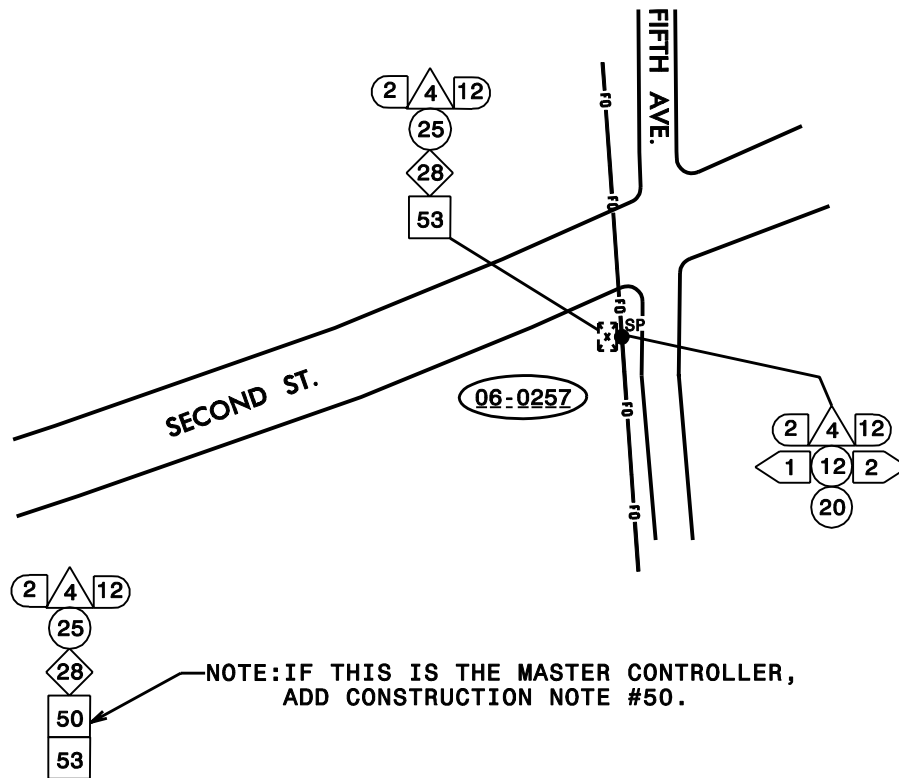
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SHEET 3 OF 4

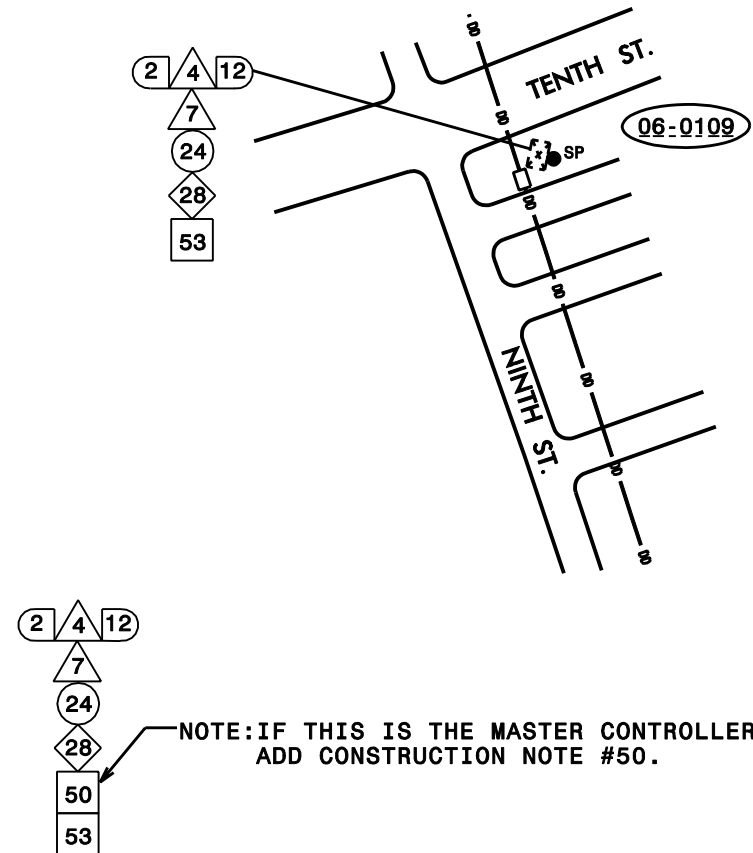
CASE 7

FIBER ROUTED FROM A POLE RISER TO A POLE MOUNTED SIGNAL CABINET AND BACK UP THROUGH RISER TO CONTINUE TO NEXT LOCATION



CASE 8

FIBER ROUTED FROM A JUNCTION BOX TO A BASE MOUNTED SIGNAL CABINET AND BACK TO THE JUNCTION BOX TO CONTINUE TO NEXT LOCATION (UNDERGROUND INSTALLATION - NO RISER REQUIRED)



Construction Notes for Signal Cabinets

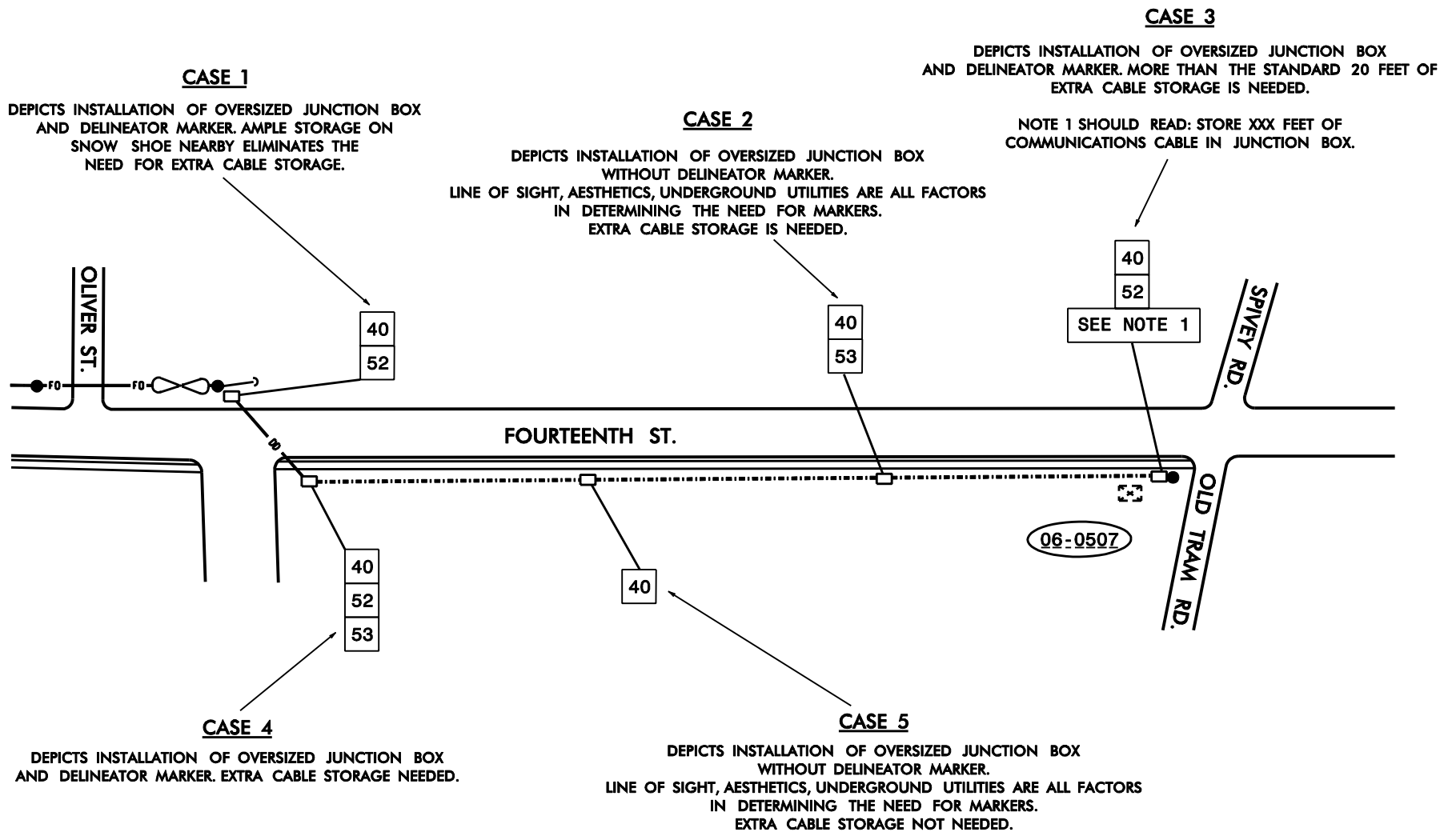
TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO.

4.2

SHEET 4 OF 4



NOTE: DISTANCE BETWEEN JUNCTION BOXES MAY VARY.

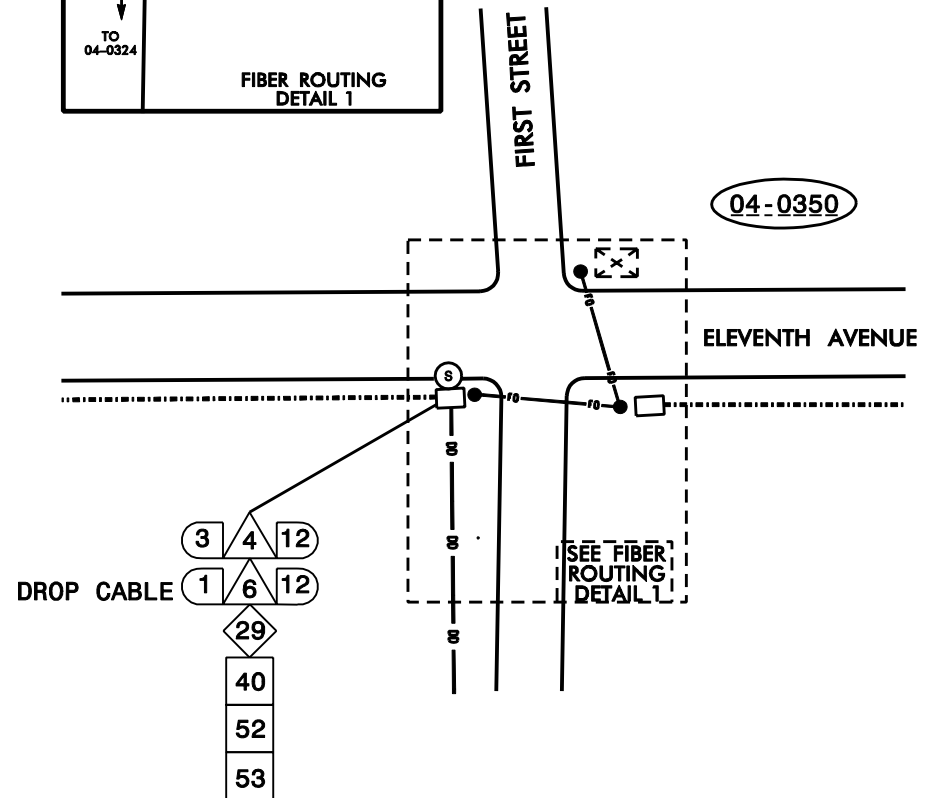
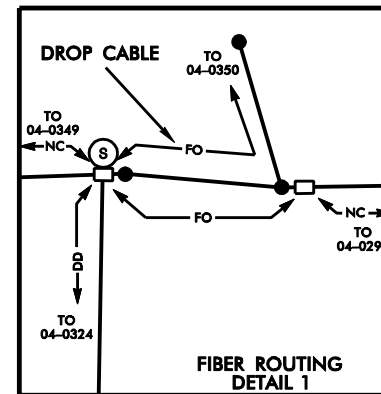
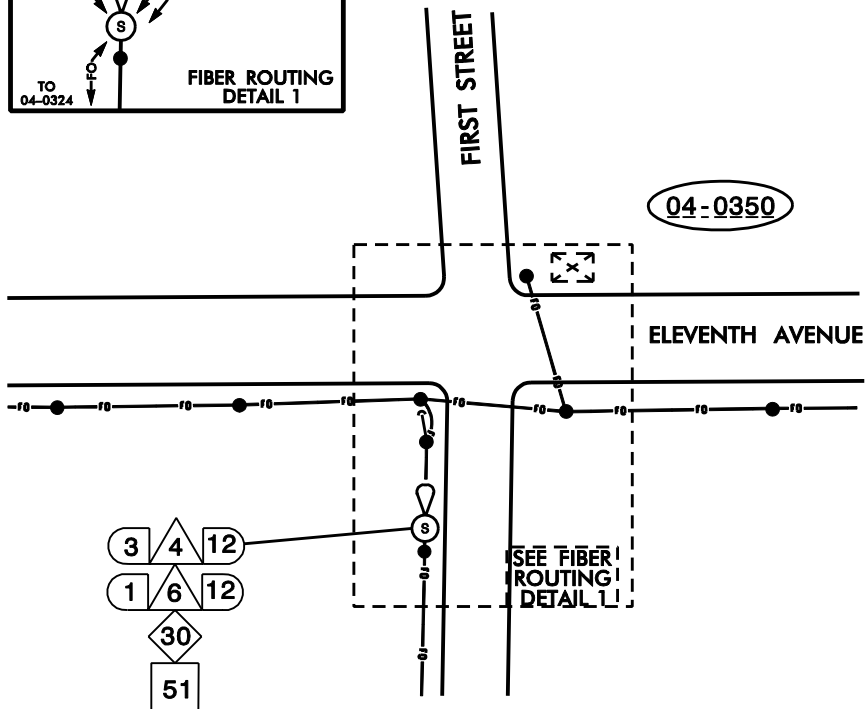
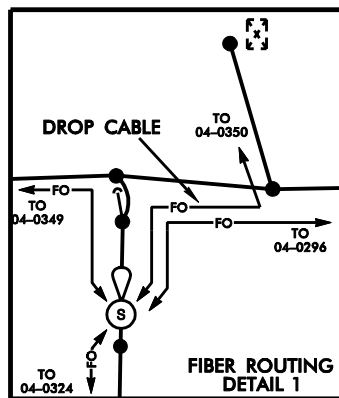
Construction Notes for Oversized Junction Box **TRAFFIC MANAGEMENT SYSTEMS SECTION** **TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH** **NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**

7-04

STD. NO.

4.3

SHEET 1 OF 1



Fiber Routing Detail Drawing for Splice Enclosures

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

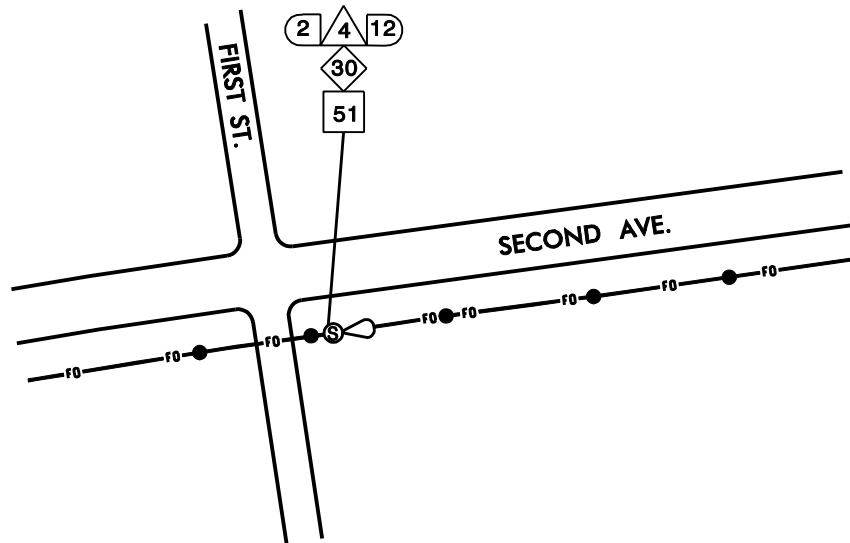
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4.4

SHEET 1 OF 4

CASE 1

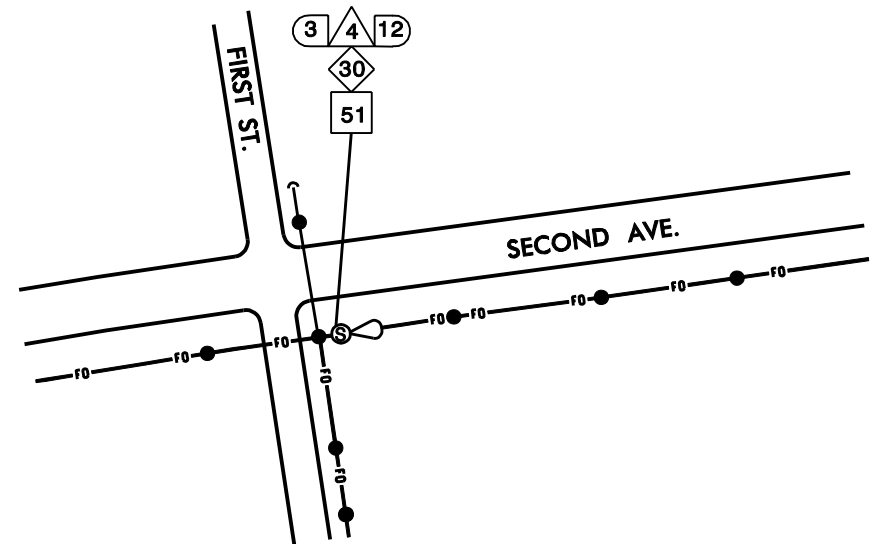
CABLE ROUTED TO AN AERIAL SPLICE ENCLOSURE
WITH ONE CABLE IN AND ONE CABLE OUT



NOTE: IN THIS CASE, THE SPLICE ENCLOSURE WOULD BE FOR A
FUTURE TRAFFIC SIGNAL, CAMERA, OR DYNAMIC MESSAGE SIGN.
THIS IS ALSO THE METHOD USED FOR TYING INTO AN EXISTING
CABLE LEFT TERMINATED AT THE POLE.

CASE 2

CABLE ROUTED TO AN AERIAL SPLICE ENCLOSURE
WITH ONE CABLE IN AND TWO CABLES OUT



Construction Notes for Splice Enclosures

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

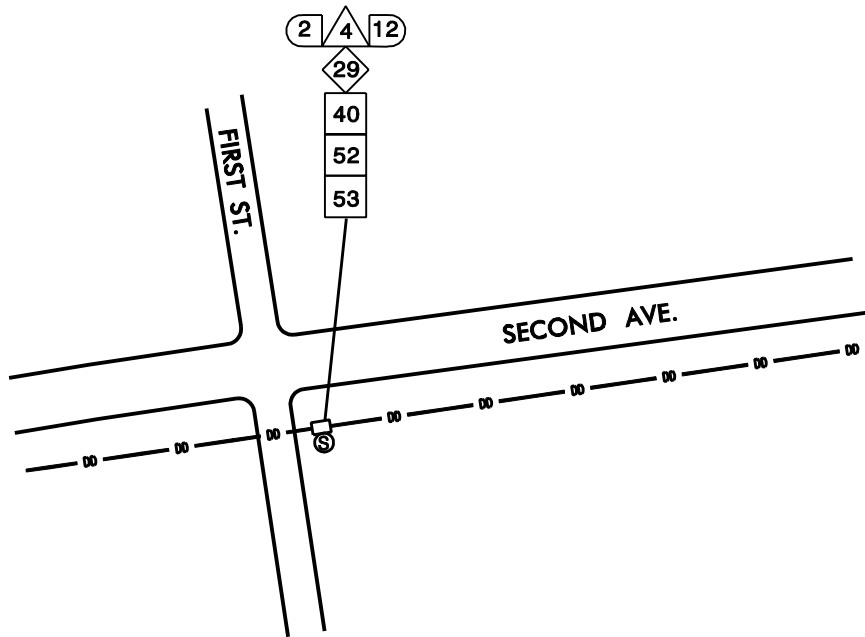
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SHEET 2 OF 4

CASE 3

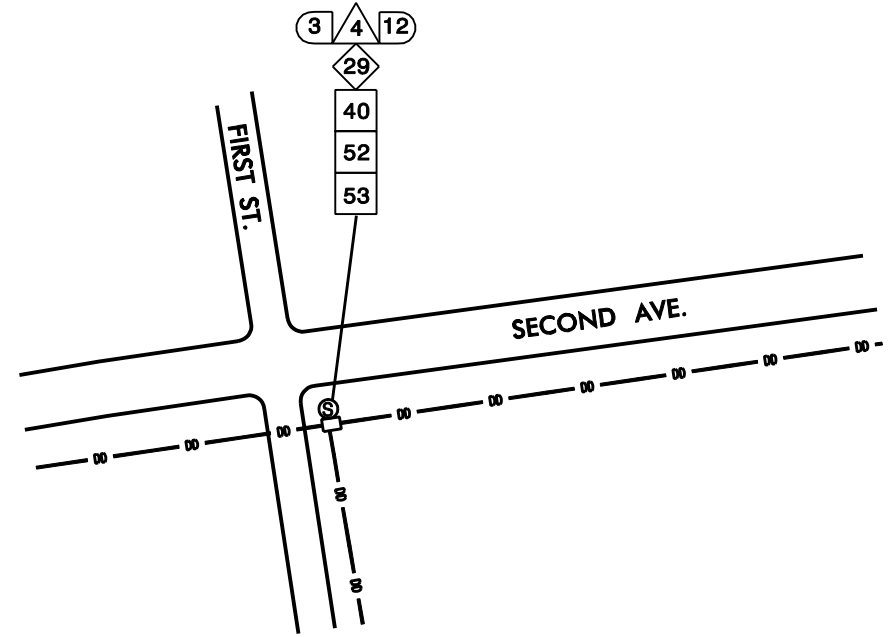
CABLE ROUTED TO AN UNDERGROUND SPLICE ENCLOSURE
WITH ONE CABLE IN AND ONE CABLE OUT



NOTE: IN THIS CASE, THE SPLICE ENCLOSURE WOULD BE FOR A
FUTURE TRAFFIC SIGNAL, CAMERA, OR DYNAMIC MESSAGE SIGN.
THIS IS ALSO THE METHOD USED FOR TYING INTO AN EXISTING
CABLE LEFT TERMINATED AT THE JUNCTION BOX.

CASE 4

CABLE ROUTED TO AN UNDERGROUND SPLICE ENCLOSURE
WITH ONE CABLE IN AND TWO CABLES OUT



Construction Notes for Splice Enclosures

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

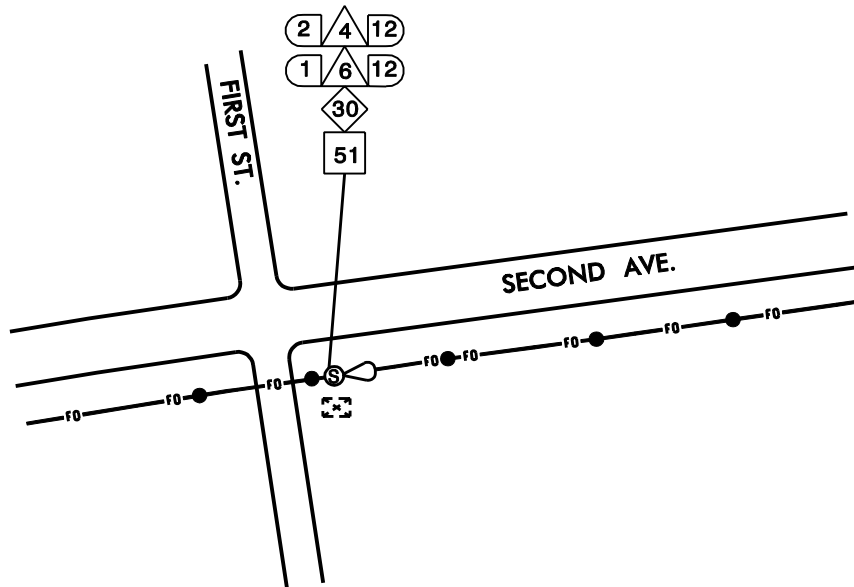
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4.4

SHEET 3 OF 4

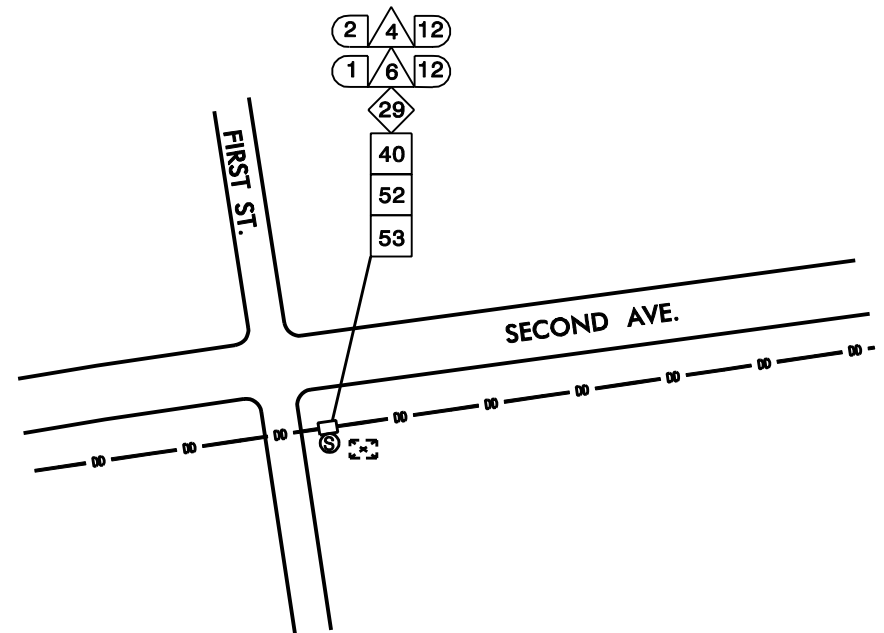
CASE 5

CABLE ROUTED TO AN AERIAL SPLICE ENCLOSURE
WITH ONE TRUNK CABLE IN, ONE TRUNK CABLE OUT
AND A DROP CABLE ROUTED TO A CABINET



CASE 6

CABLE ROUTED TO AN UNDERGROUND SPLICE ENCLOSURE
WITH ONE TRUNK CABLE IN, ONE TRUNK CABLE OUT
AND A DROP CABLE ROUTED TO A CABINET



Construction Notes for Splice Enclosures

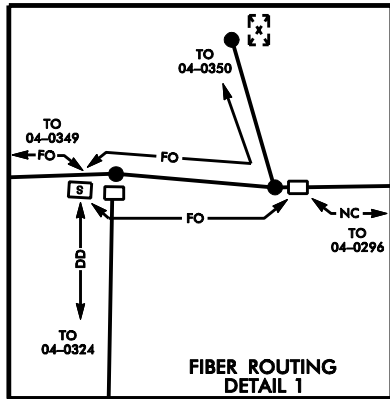
TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

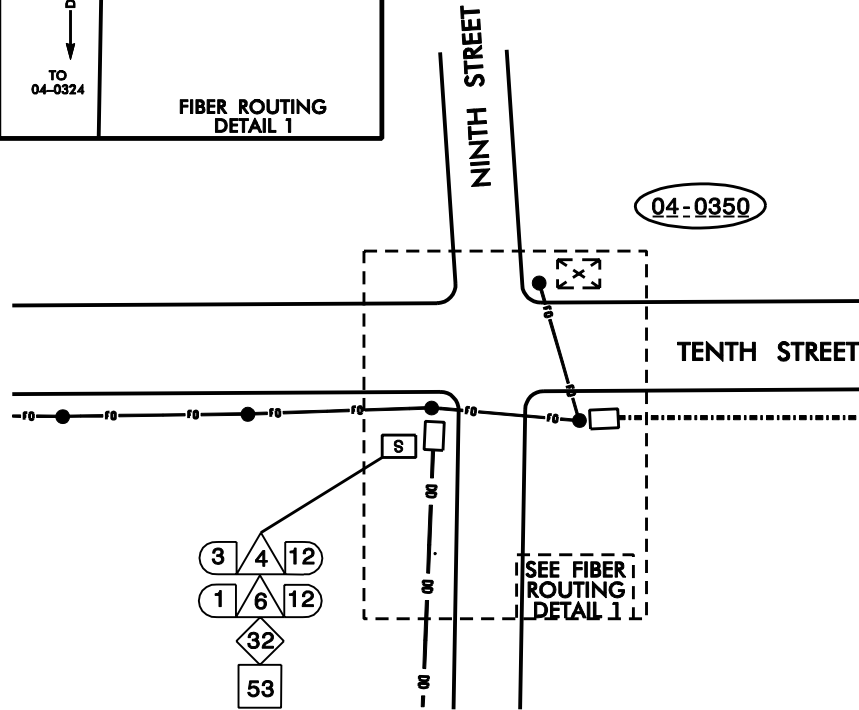
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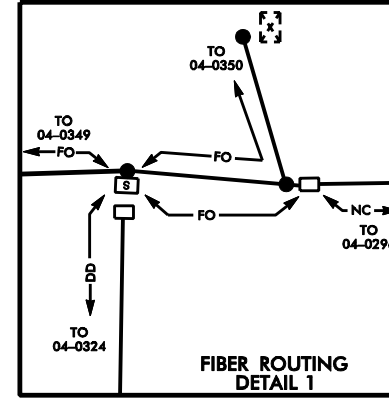
SHEET 4 OF 4



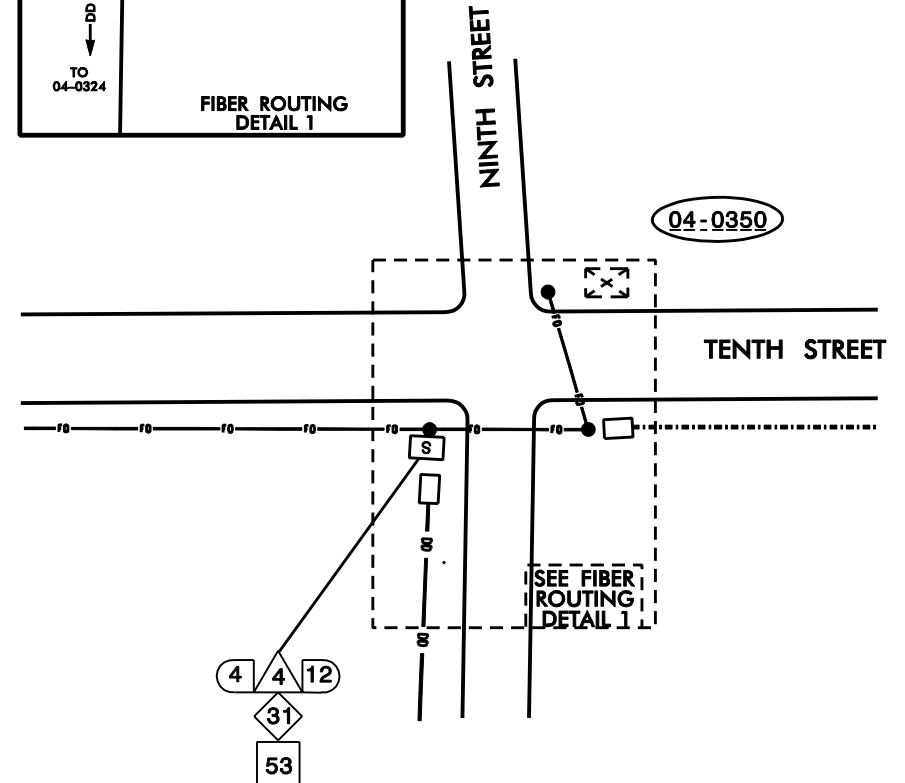
FIBER ROUTING
DETAIL 1



SEE FIBER
ROUTING
DETAIL 1



FIBER ROUTING
DETAIL 1



SEE FIBER
ROUTING
DETAIL 1

Fiber Routing Detail Drawing for Splice Cabinets

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

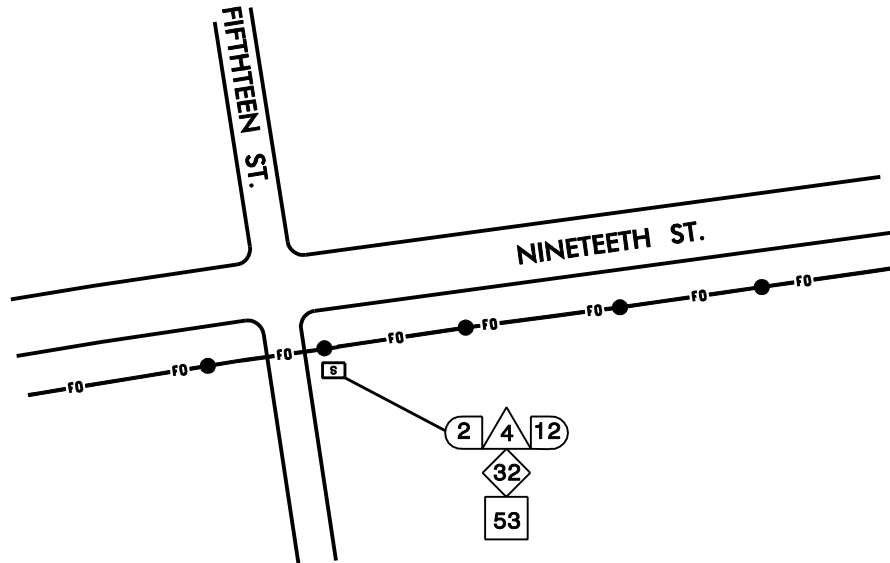
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4.5

SHEET 1 OF 5

CASE 1

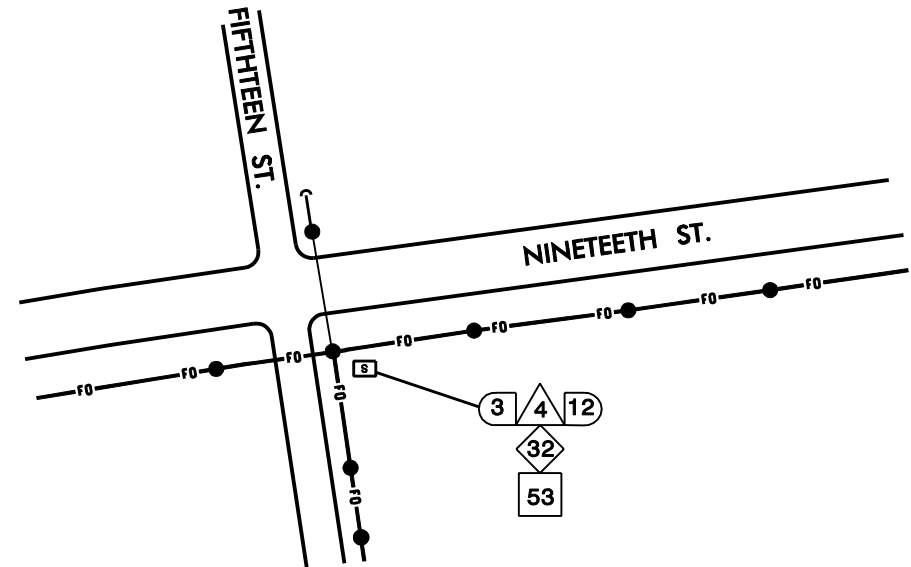
AERIAL CABLE RUN ROUTED THROUGH A RISER
TO A BASE MOUNTED SPLICE CABINET
WITH ONE CABLE IN AND ONE CABLE OUT



NOTE: IN THIS CASE, THE SPLICE CABINET WOULD BE FOR A
FUTURE TRAFFIC SIGNAL, CAMERA, OR DYNAMIC MESSAGE SIGN.
THIS IS ALSO THE METHOD USED FOR TYING INTO AN EXISTING
CABLE LEFT TERMINATED AT THE POLE.

CASE 2

AERIAL CABLE RUN ROUTED THROUGH A RISER
TO A BASE MOUNTED SPLICE CABINET
WITH ONE CABLE IN AND TWO CABLES OUT



Construction Notes for Splice Cabinets

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

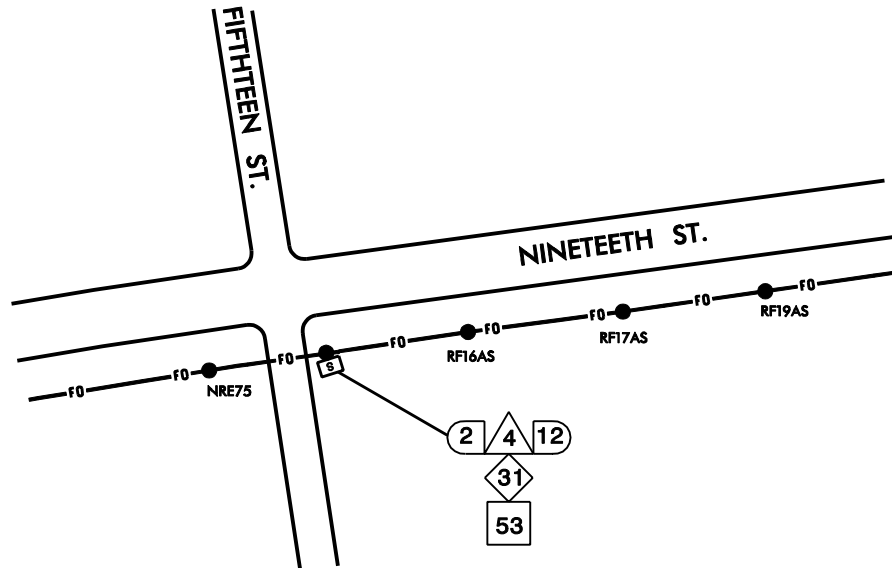
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SHEET 2 OF 5

CASE 3

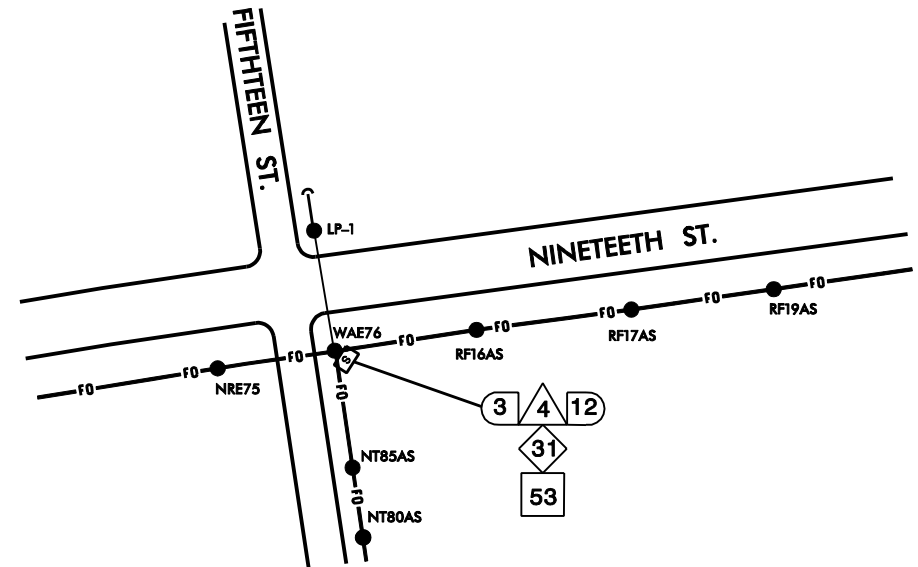
AERIAL CABLE RUN ROUTED THROUGH A RISER
TO A POLE MOUNTED SPLICE CABINET
WITH ONE CABLE IN AND ONE CABLE OUT



NOTE: IN THIS CASE, THE SPLICE CABINET WOULD BE FOR A
FUTURE TRAFFIC SIGNAL, CAMERA, OR DYNAMIC MESSAGE SIGN.
THIS IS ALSO THE METHOD USED FOR TYING INTO AN EXISTING
CABLE LEFT TERMINATED AT THE POLE.

CASE 4

AERIAL CABLE RUN ROUTED THROUGH A RISER
TO A POLE MOUNTED SPLICE CABINET
WITH ONE CABLE IN AND TWO CABLES OUT



Construction Notes for Splice Cabinets

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

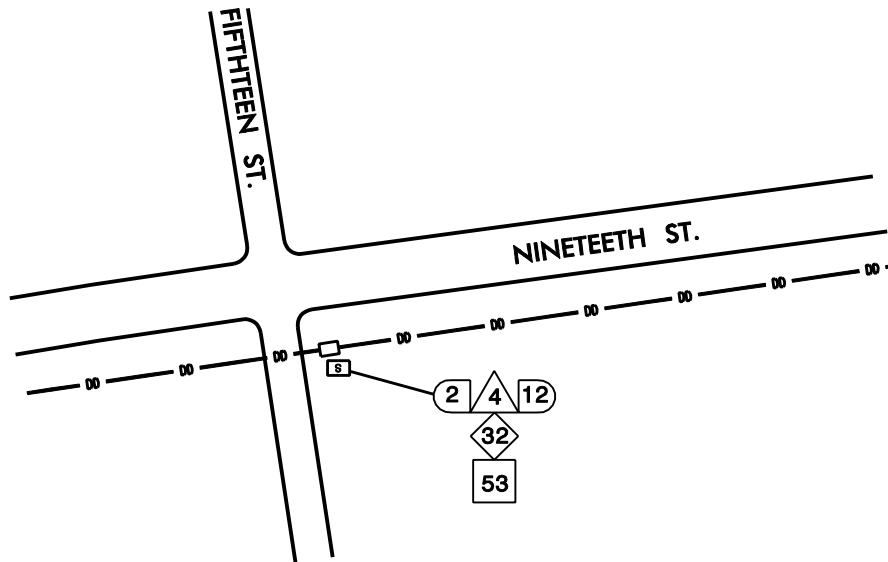
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SHEET 3 OF 5

CASE 5

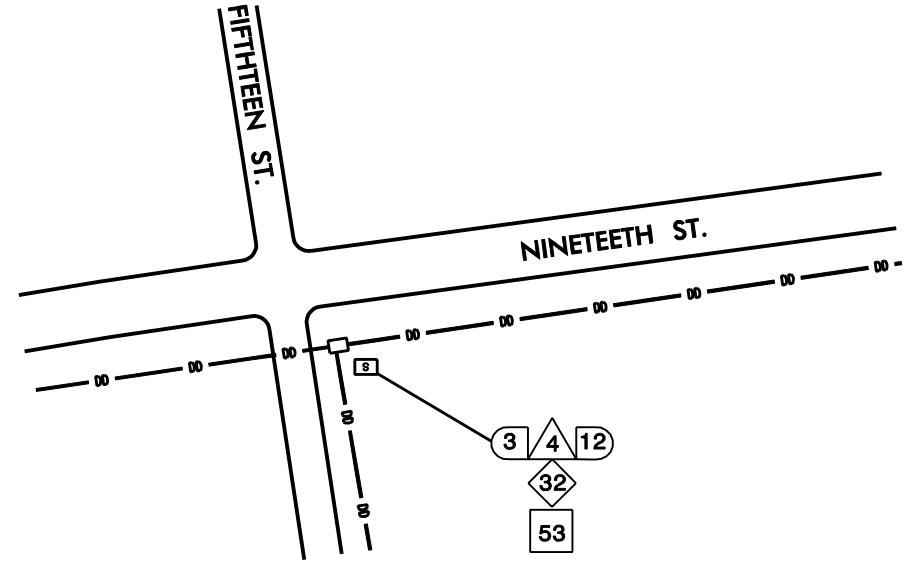
UNDERGROUND CABLE RUN ROUTED THROUGH A JUNCTION BOX
TO A BASE MOUNTED SPLICE CABINET
WITH ONE CABLE IN AND ONE CABLE OUT



NOTE: IN THIS CASE, THE SPLICE CABINET WOULD BE FOR A
FUTURE TRAFFIC SIGNAL, CAMERA, OR DYNAMIC MESSAGE SIGN.
THIS IS ALSO THE METHOD USED FOR TYING INTO AN EXISTING
CABLE LEFT TERMINATED AT THE JUNCTION BOX.

CASE 6

UNDERGROUND CABLE RUN ROUTED THROUGH A JUNCTION BOX
TO A BASE MOUNTED SPLICE CABINET
WITH ONE CABLE IN AND TWO CABLES OUT



Construction Notes for Splice Cabinets

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

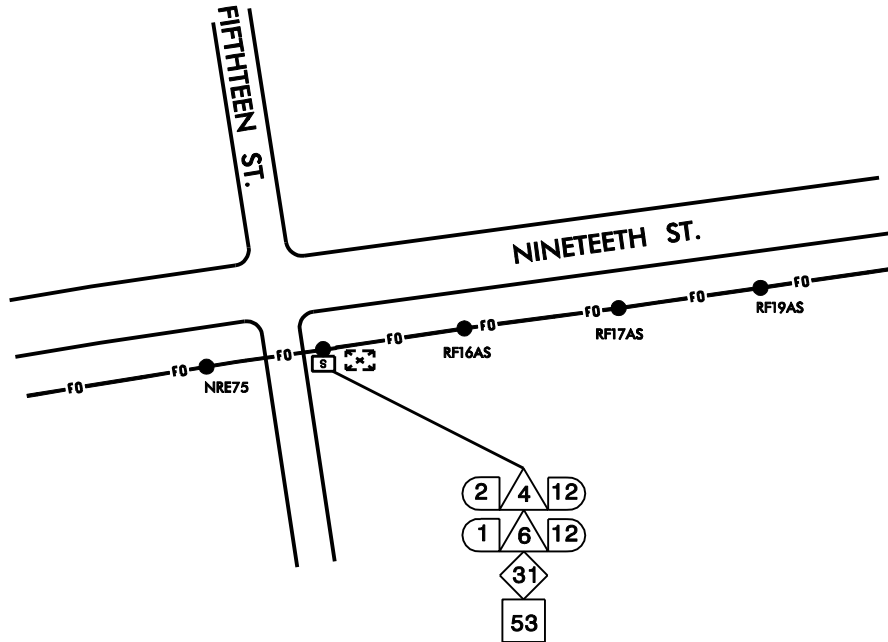
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SHEET 4 OF 5

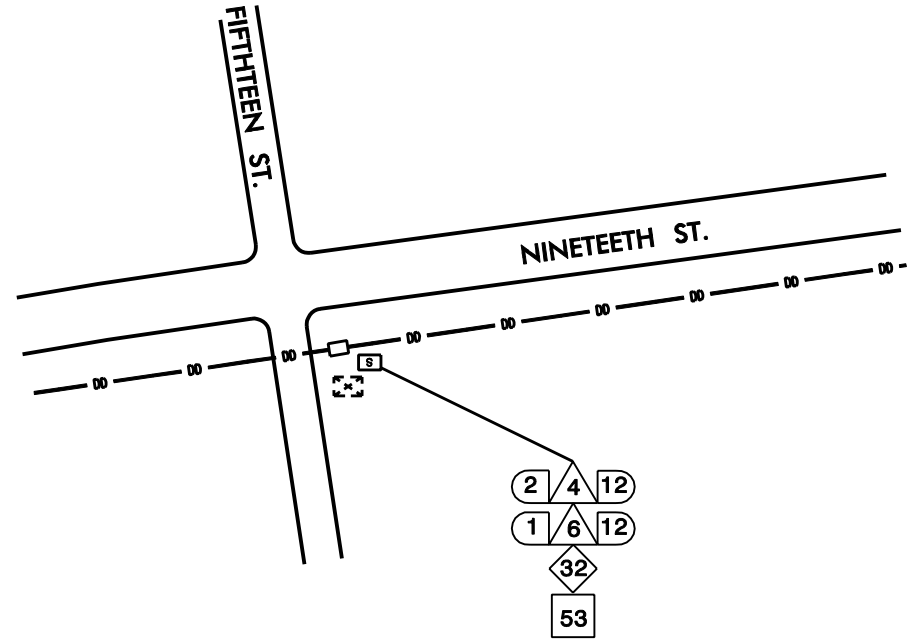
CASE 7

CABLE ROUTED TO A POLE MOUNTED SPLICE CABINET
WITH ONE TRUNK CABLE IN, ONE TRUNK CABLE OUT
AND A DROP CABLE ROUTED TO A CABINET



CASE 8

CABLE ROUTED TO A BASE MOUNTED SPLICE CABINET
WITH ONE TRUNK CABLE IN, ONE TRUNK CABLE OUT
AND A DROP CABLE ROUTED TO A CABINET



Construction Notes for Splice Cabinets

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

STD. NO.

4.5

SHEET 5 OF 5

7-04