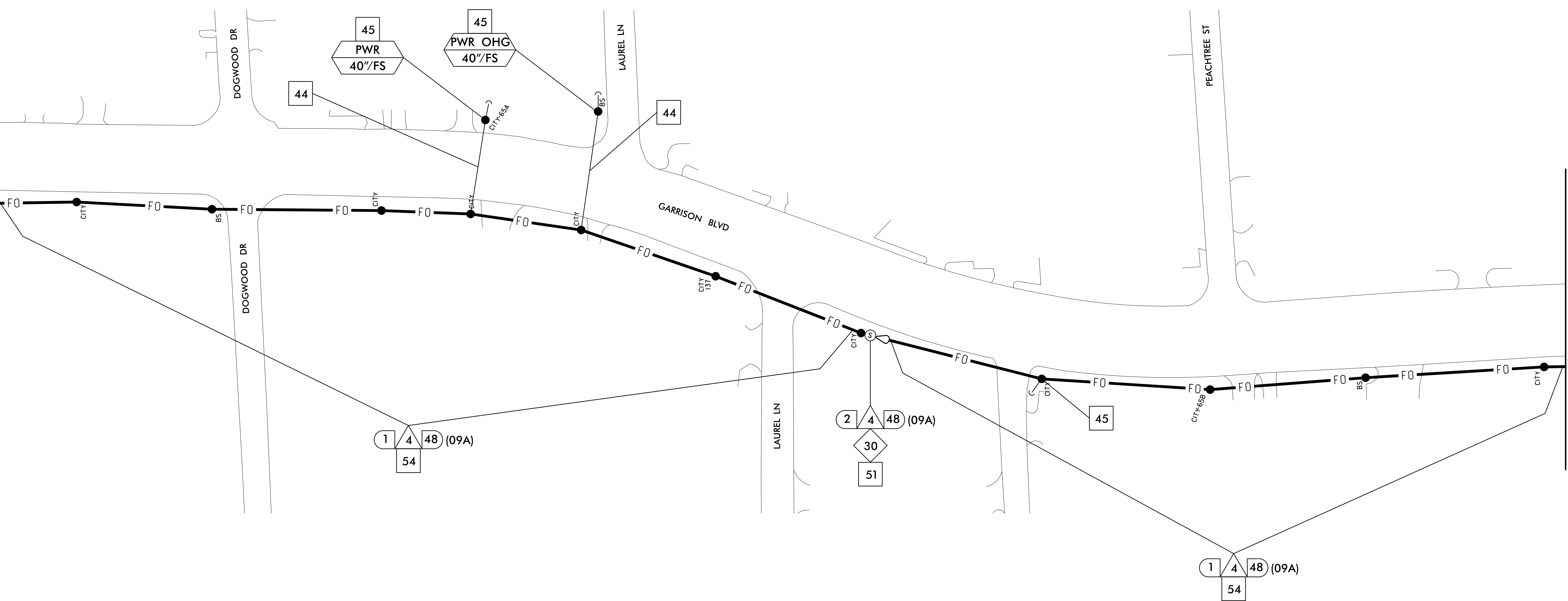


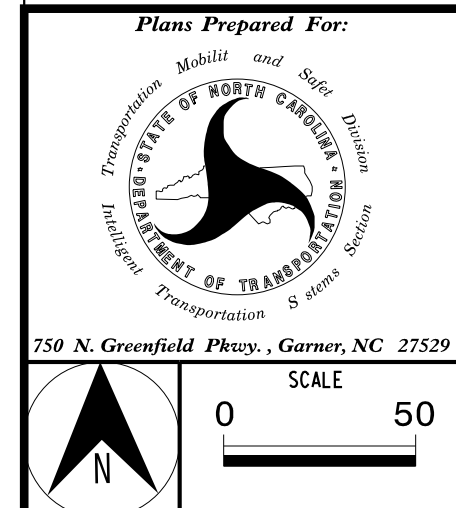
MATCH LINE, SEE SHEET CR-64

MATCH LINE, SEE SHEET CR-66



Legend table with 75 numbered items describing installation tasks such as 'INSTALL COAX CABLE', 'INSTALL RIGID, GALVANIZED STEEL RISER', 'INSTALL CABLE FOUNDATION', etc.

NOTES: 1. ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED. 2. MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.



CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN. Includes project details, dates, and revision table.

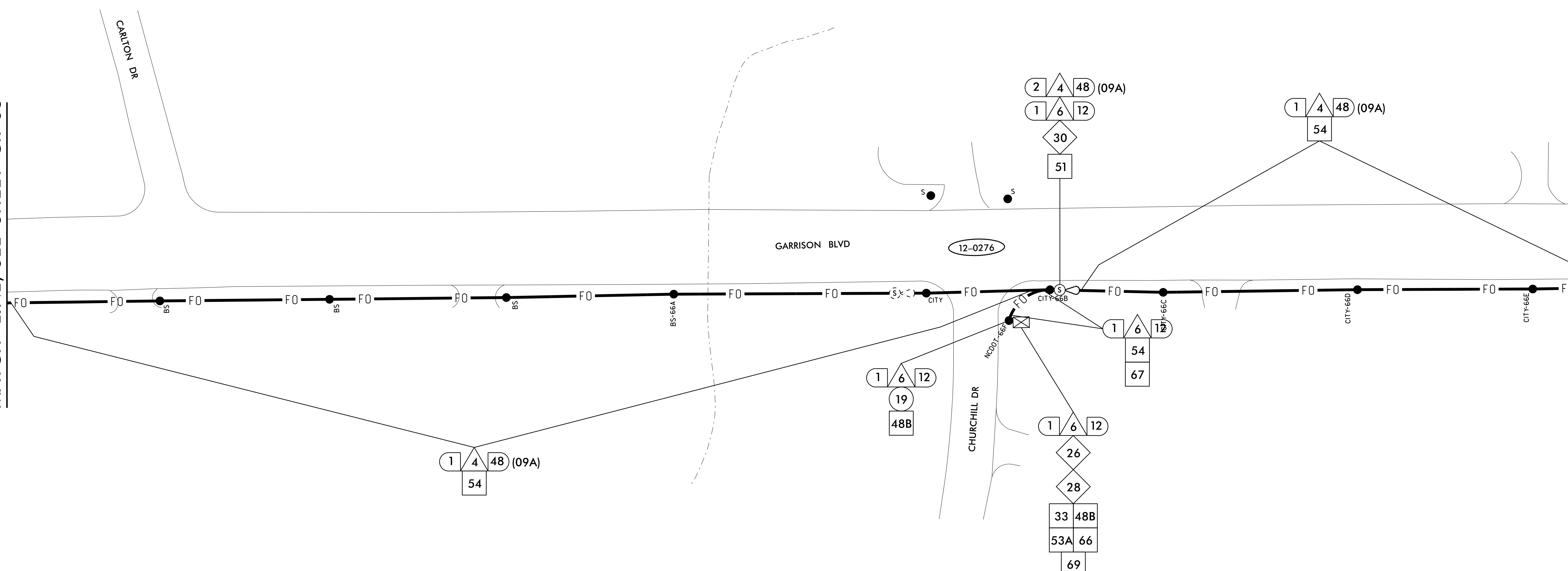
Kimley-Horn logo and contact information: NC License #F-0102, 421 Fayetteville St., Suite 600, Raleigh, NC 27601.

Professional Engineer seal for I. Van Osdel, License #28952, dated 3/18/2022.

3/17/2022 KARAL.TPTD.LTS\01036569 Gastonia SignalSystem\6 Tasks\Plans\Cable Routing\SH065\_CR.dgn

MATCH LINE, SEE SHEET CR-65

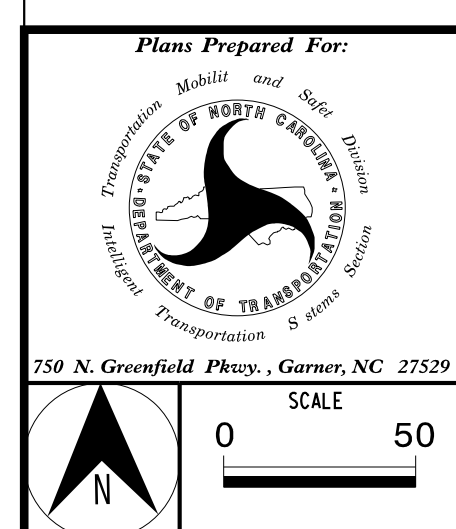
MATCH LINE, SEE SHEET CR-67



1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
2	INSTALL ETHERNET CABLE	13	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	24	INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET	35	INSTALL CCTV CAMERA POLE MOUNTED CABINET	45	INSTALL STANDARD GUY ASSEMBLY	53B	STORE 50 FEET OF EACH COMMUNICATIONS CABLE	65	INSTALL HEAT SHRINK TUBING RETROFIT KIT
3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDBLE DUCT SEAL
4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
6	INSTALL FIBER OPTIC DROP CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET	39	INSTALL JUNCTION BOX	48B	REMOVE EXISTING COMMUNICATIONS CABLE	57	MODIFY EXISTING ELECTRICAL SERVICE	69	REMOVE EXISTING SIGNAL CABINET AND CONTROLLER
7	INSTALL TRACER WIRE	18	INSTALL CABLE(S) IN NEW CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	40A	INSTALL OVERSIZED JUNCTION BOX	49	BACK PULL EXISTING COMMUNICATIONS CABLE	58	INSTALL NEW ELECTRICAL SERVICE	70	REMOVE EXISTING CCTV CAMERA ASSEMBLY
8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
10	INSTALL RIGID, GALVANIZED STEEL CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS	32	INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER	42	INSTALL WOOD POLE	52A	INSTALL DELINEATOR MARKER	61	DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS	73	MODIFY EXISTING CABINET FOUNDATION
11	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	22	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	33	INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER	43	REMOVE EXISTING WOOD POLE	52B	INSTALL JUNCTION BOX MARKER	62	BOND RISER AND MESSENGER CABLE TO POLE GROUND	74	REMOVE EXISTING WIRELESS SYSTEM
									63	BOND RISER TO POLE GROUND	75	INSTALL WIRELESS ETHERNET SYSTEM	

**NOTES:**

- ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.
- MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.



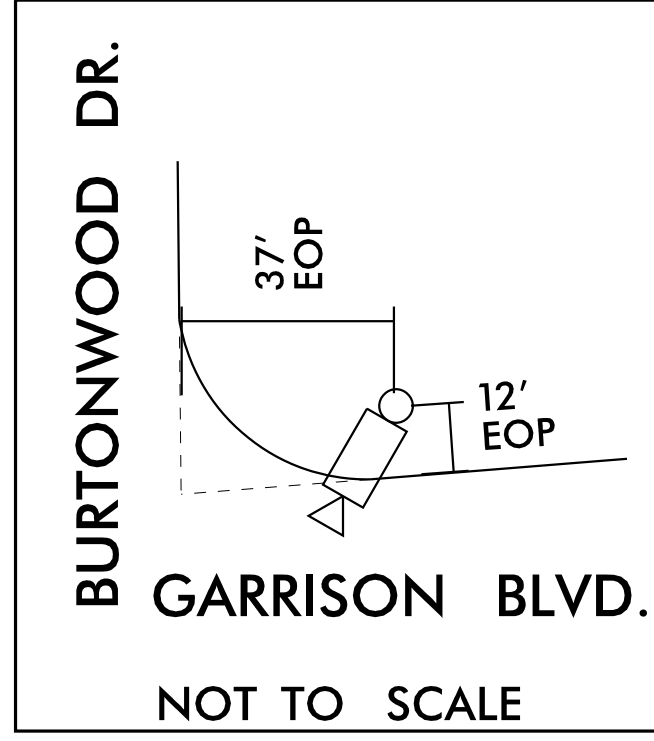
<b>CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN</b>	
DIVISION 12	GASTON COUNTY
PLAN DATE: DECEMBER 2021	REVIEWED BY: K. SMITH
PREPARED BY: S. BUTLER	REVIEWED BY: I. VAN OSDELL
REVISIONS	INIT. DATE

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 421 Fayetteville St., Suite 600  
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SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 I. VAN OSDELL  
 3/18/2022  
 DATE

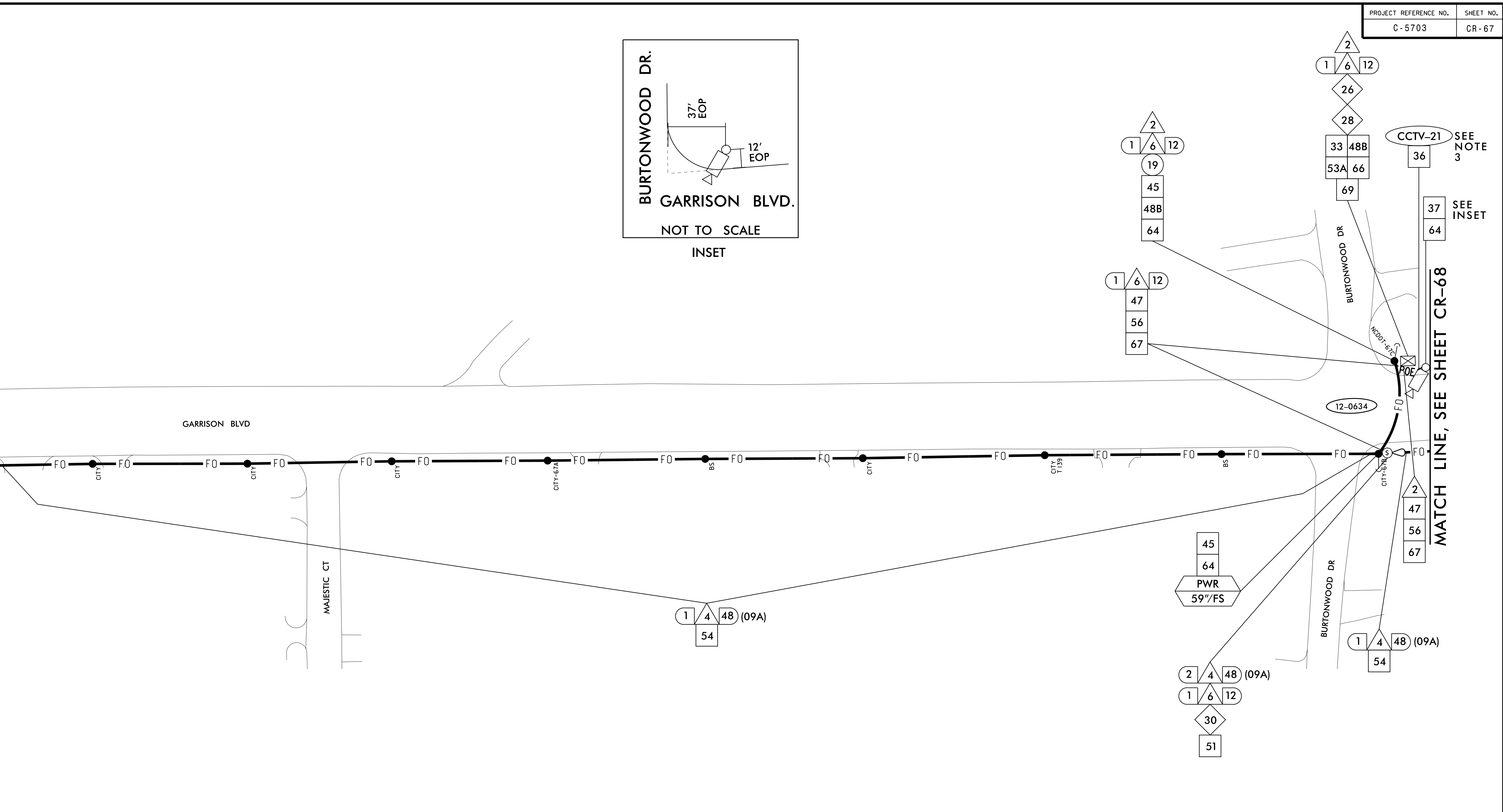
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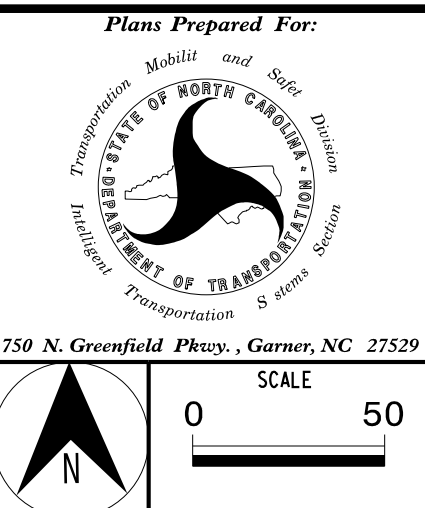
MATCH LINE, SEE SHEET CR-66

MATCH LINE, SEE SHEET CR-68



Legend table with 7 columns of numbered callouts (1-75) and their corresponding descriptions for cable installation, conduit, cabinets, and equipment.

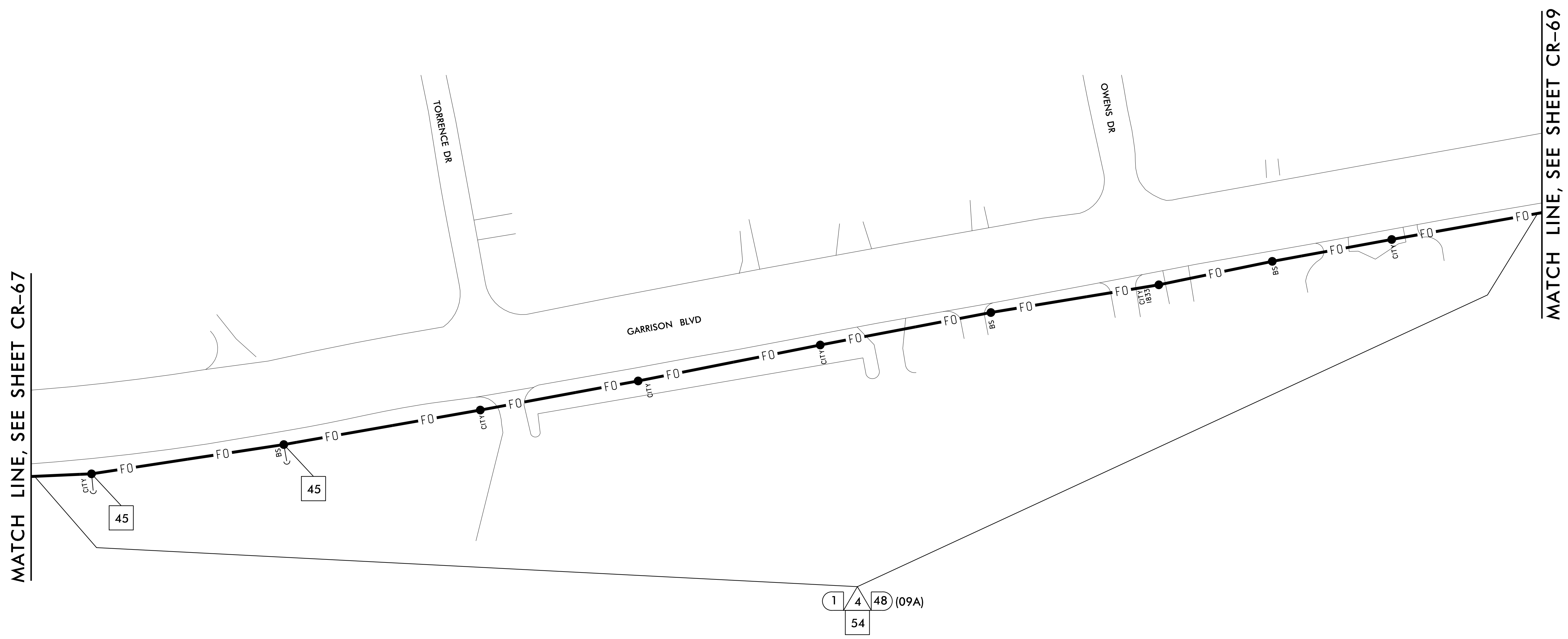
NOTES:
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3. INSTALL CCTV CAMERA ON NEW POLE AT 35 FT. SEE ITS-12.



Project information table including City of Gastonia Computerized Signal System, Communications Cable and Conduit Routing Plan, Division 12, Gaston County, Plan Date: December 2021, and Revisions table.

Kimley-Horn logo and contact information: NC License #F-0102, 421 Fayetteville St., Suite 600, Raleigh, NC 27601, Tel: (919) 677-2000, Fax: (919) 677-2050.

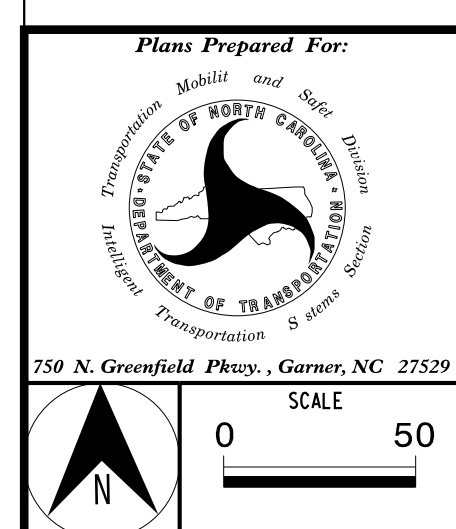
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3/17/2022 KARAL.TPTD.LTS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\SH068\_CR.dgn

1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
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4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
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**NOTES:**  
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Plans Prepared For:  
 CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

SCALE: 0 50

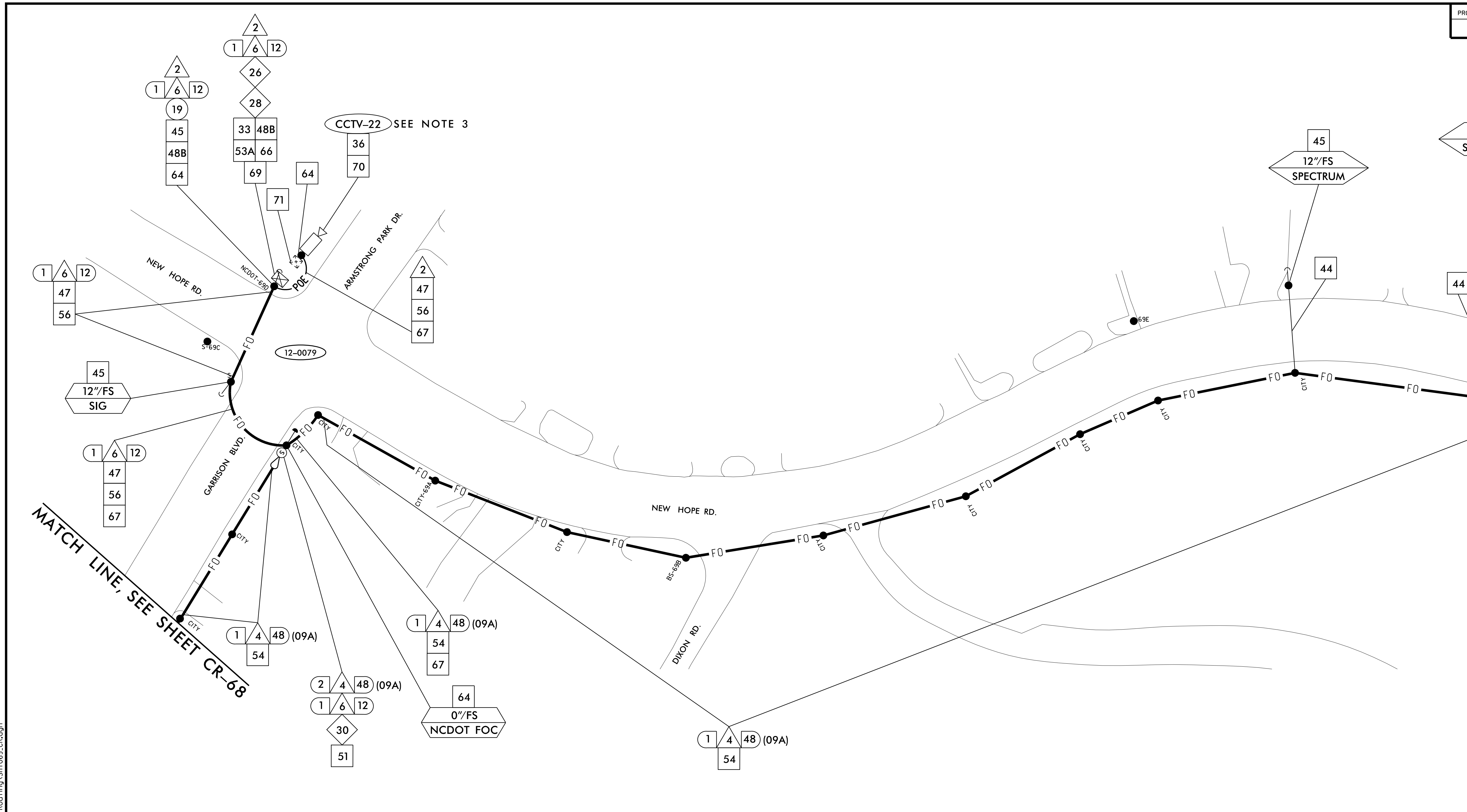
DocuSigned by: *Inger Van OsdeLL* 3/18/2022

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 Fax: (919) 677-2050

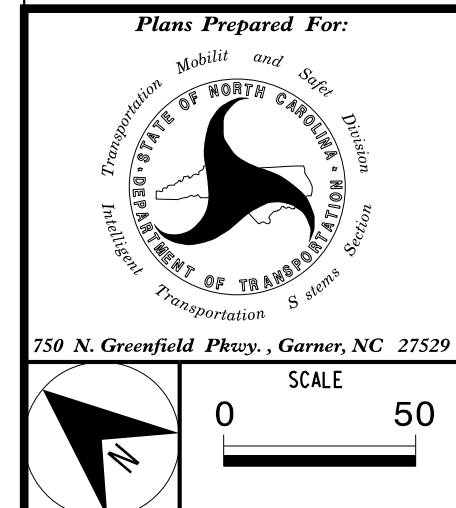
SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 MICHAEL Z. VAN OSDELL  
 License # 028952





1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
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8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
10	INSTALL RIGID, GALVANIZED STEEL CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS	32	INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER	42	INSTALL WOOD POLE	52A	INSTALL DELINEATOR MARKER	61	DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS	73	MODIFY EXISTING CABINET FOUNDATION
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**NOTES:**  
 1. ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.  
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 3. INSTALL NEW CCTV CAMERA IN PLACE OF EXISTING CCTV CAMERA.



**Plans Prepared For:**  
 CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN

**Division 12** GASTON COUNTY

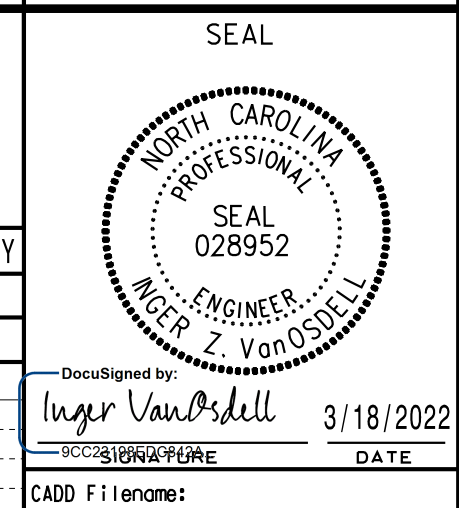
PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH  
 PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

SCALE: 0 50

DocuSigned by: Roger Van Osdel 3/18/2022

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3/17/2022 K:\RAL\TPTD\_LITS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\_SHT069\_CR.dgn

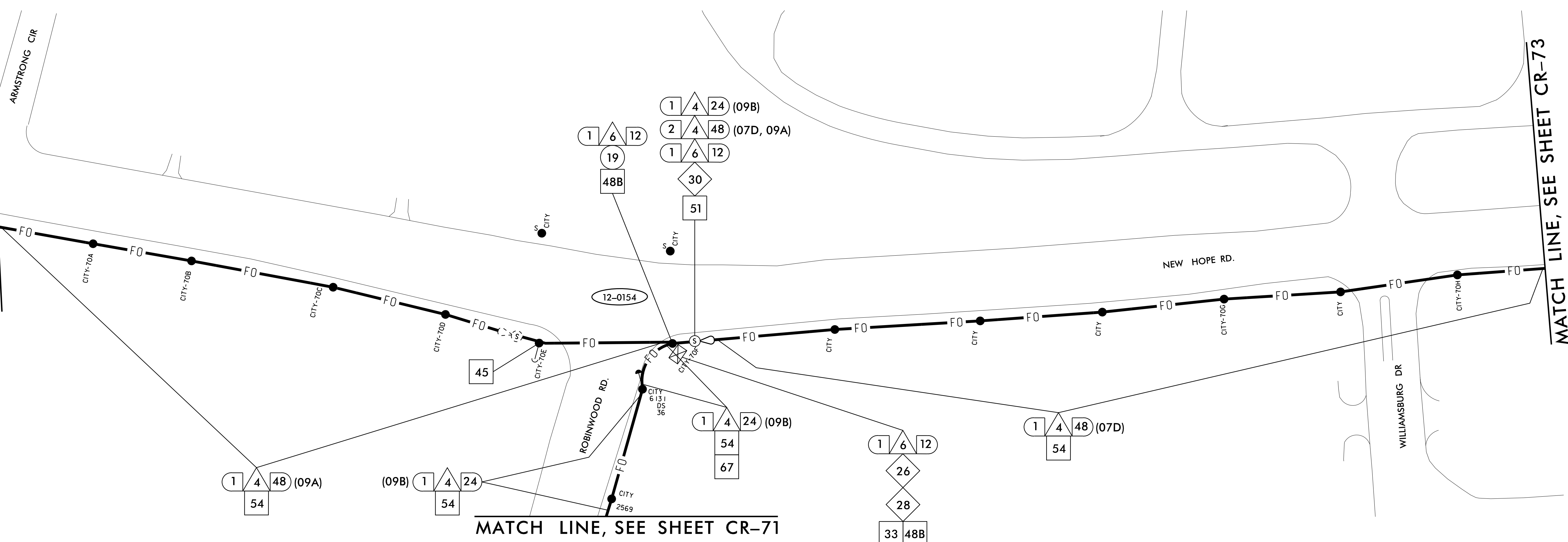
MATCH LINE, SEE SHEET CR-70

MATCH LINE, SEE SHEET CR-68



MATCH LINE, SEE SHEET CR-69

MATCH LINE, SEE SHEET CR-73

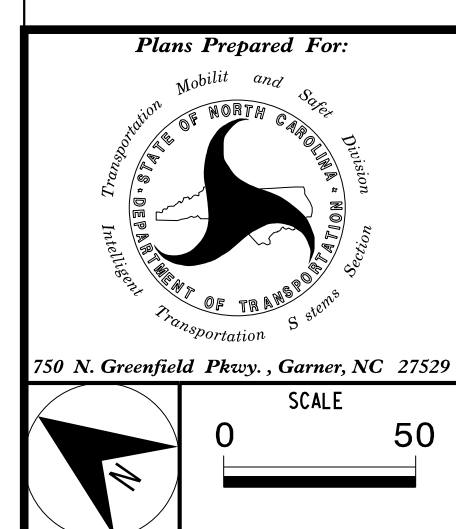


MATCH LINE, SEE SHEET CR-71

1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
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**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

SCALE: 0 50

**Kimley-Horn**

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**Kimley-Horn**  
Professional Engineer  
Seal 028952  
I. Van Osdel

DocuSigned by:  
I. Van Osdel  
3/18/2022

CADD File name:

3/17/2022 KARAL.TPTD.LTS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\_SHT070\_CR.dgn

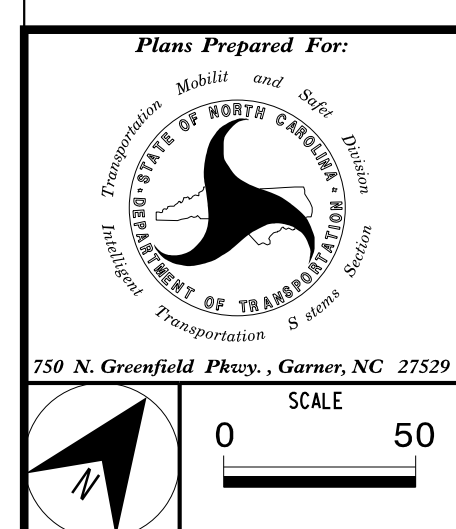




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1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
2	INSTALL ETHERNET CABLE	13	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	24	INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET	35	INSTALL CCTV CAMERA POLE MOUNTED CABINET	45	INSTALL STANDARD GUY ASSEMBLY	53B	STORE 50 FEET OF EACH COMMUNICATIONS CABLE	65	INSTALL HEAT SHRINK TUBING RETROFIT KIT
3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDBALE DUCT SEAL
4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
6	INSTALL FIBER OPTIC DROP CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET	39	INSTALL JUNCTION BOX	48B	REMOVE EXISTING COMMUNICATIONS CABLE	57	MODIFY EXISTING ELECTRICAL SERVICE	69	REMOVE EXISTING SIGNAL CABINET AND CONTROLLER
7	INSTALL TRACER WIRE	18	INSTALL CABLE(S) IN NEW CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	40A	INSTALL OVERSIZED JUNCTION BOX	49	BACK PULL EXISTING COMMUNICATIONS CABLE	58	INSTALL NEW ELECTRICAL SERVICE	70	REMOVE EXISTING CCTV CAMERA ASSEMBLY
8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
10	INSTALL RIGID, GALVANIZED STEEL CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS	32	INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER	42	INSTALL WOOD POLE	52A	INSTALL DELINEATOR MARKER	61	DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS	73	MODIFY EXISTING CABINET FOUNDATION
11	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	22	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	33	INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER	43	REMOVE EXISTING WOOD POLE	52B	INSTALL JUNCTION BOX MARKER	62	BOND RISER AND MESSENGER CABLE TO POLE GROUND	74	REMOVE EXISTING WIRELESS SYSTEM
								63	BOND RISER TO POLE GROUND	75	INSTALL WIRELESS ETHERNET SYSTEM		

NOTES:  
 1. ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.  
 2. MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.



**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

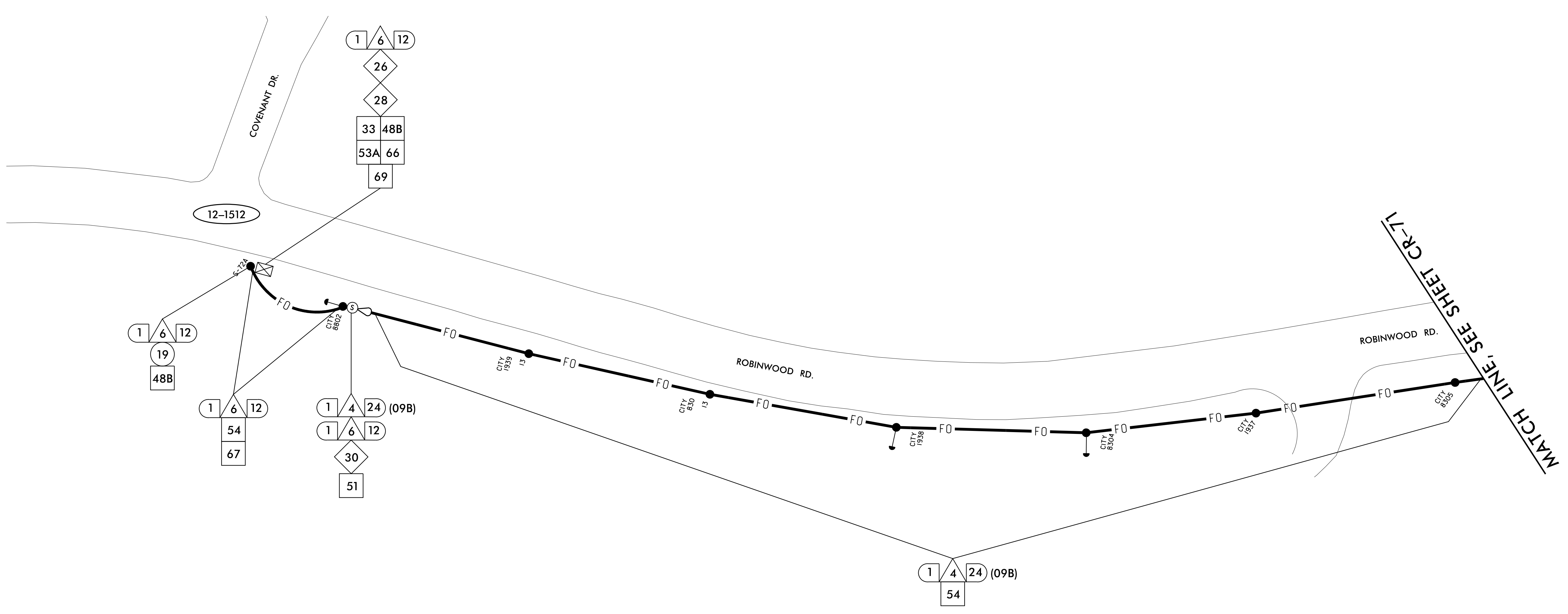
REVISIONS	INIT.	DATE

Scale: 0 to 50 feet

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SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 SEAL 028952  
 I. VAN OSDELL  
 DATE 3/18/2022

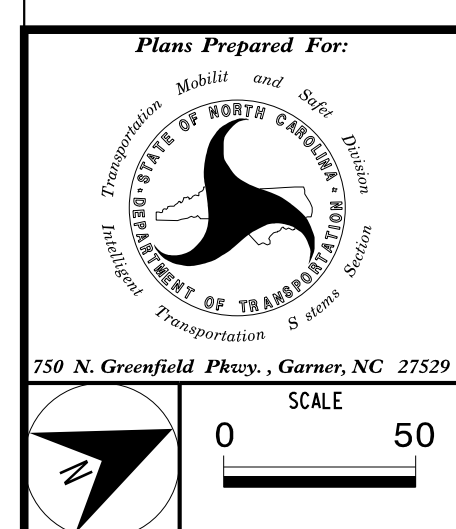


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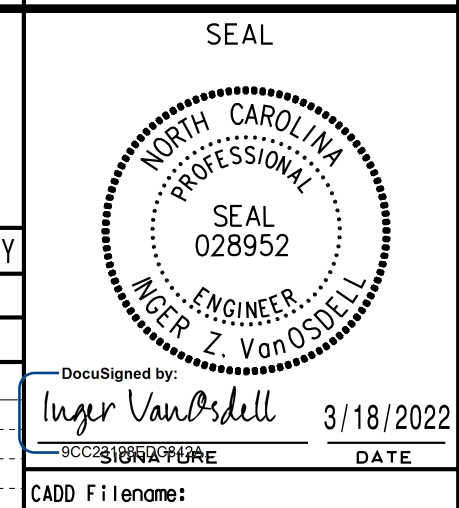
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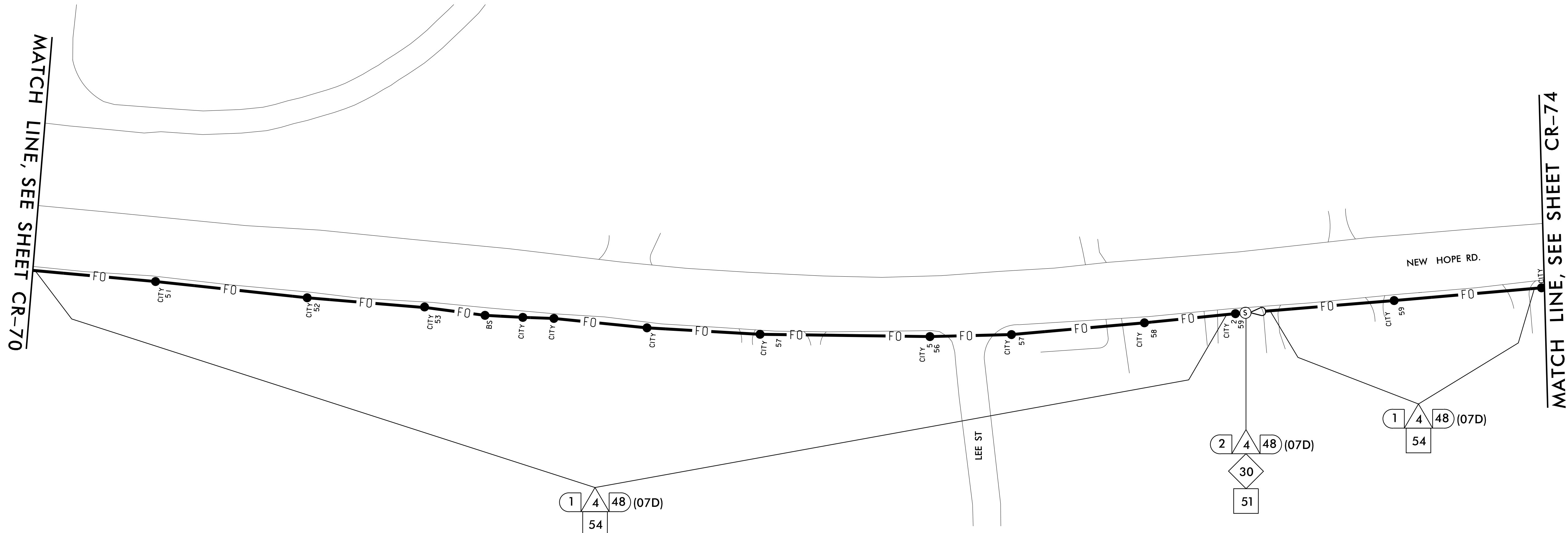
<b>Plans Prepared For:</b> 	
<b>CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN</b>	
DIVISION 12 GASTON COUNTY	
PLAN DATE: DECEMBER 2021	REVIEWED BY: K. SMITH
PREPARED BY: S. BUTLER	REVIEWED BY: I. VAN OSDELL
REVISIONS	INIT. DATE
_____	_____
_____	_____
_____	_____

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DocuSigned by:  
**Igor Van Osdel**  
 3/18/2022  
 CADD File name:





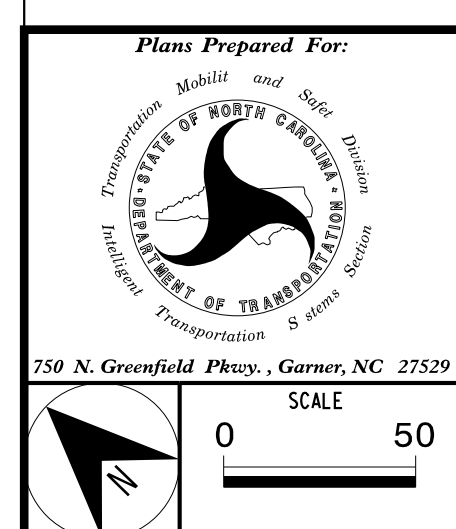
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MATCH LINE, SEE SHEET CR-74

3/17/2022 KARAL\_TPTD...ITS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\SH073\_CR.dgn

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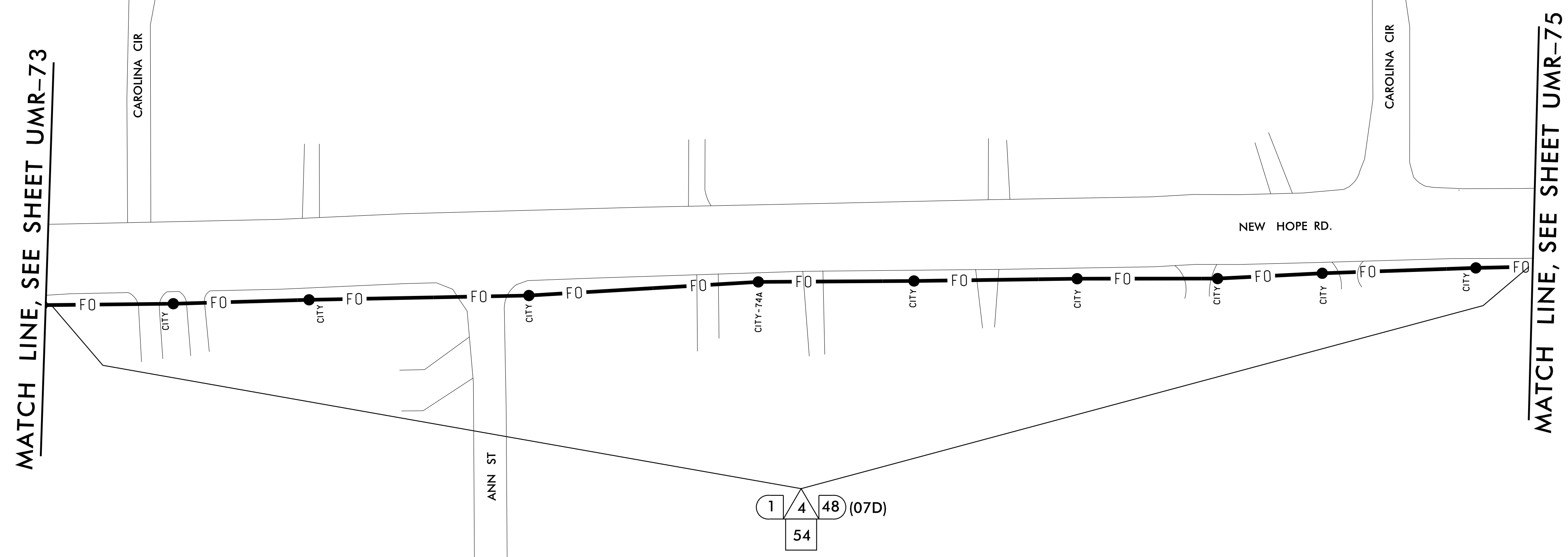
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CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN	
DIVISION 12	GASTON COUNTY
PLAN DATE: DECEMBER 2021	REVIEWED BY: K. SMITH
PREPARED BY: S. BUTLER	REVIEWED BY: I. VAN OSDELL
REVISIONS	INIT. DATE

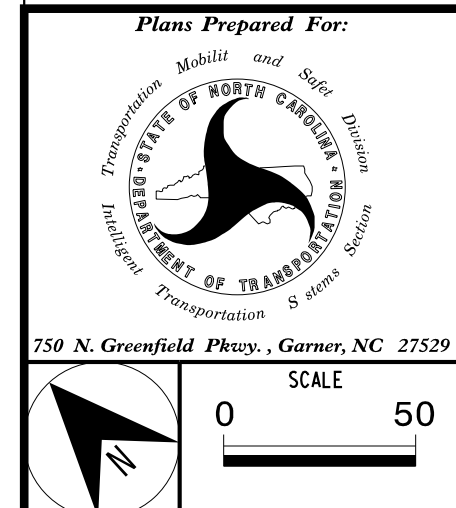
**Kimley-Horn**  
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SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 I. VAN OSDELL  
 3/18/2022  
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Plans Prepared For:

**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

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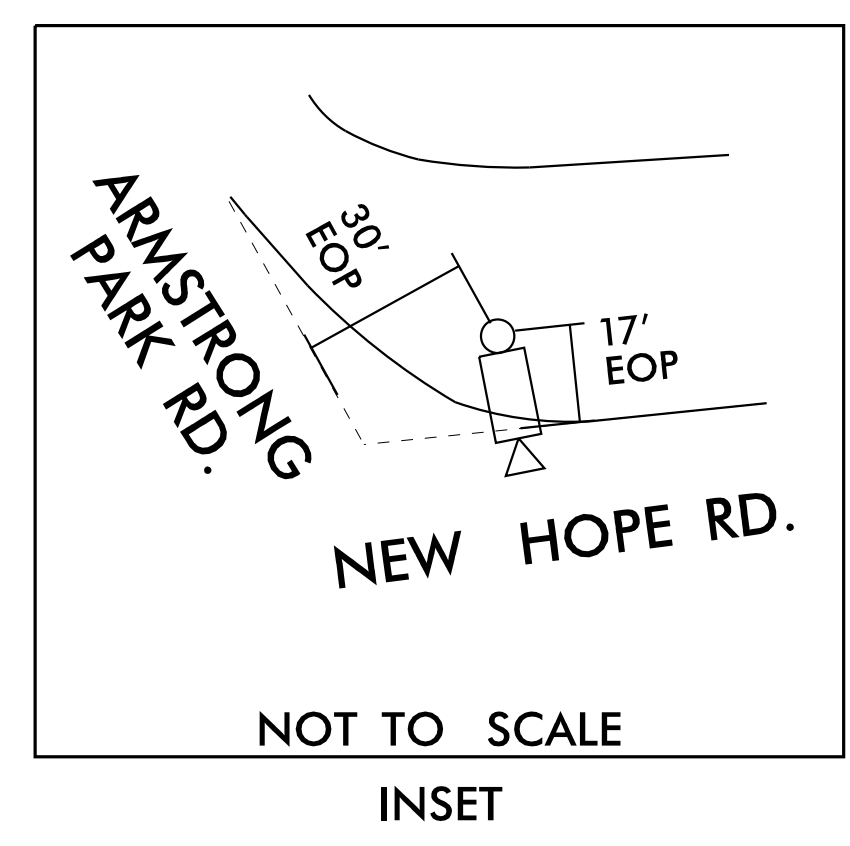
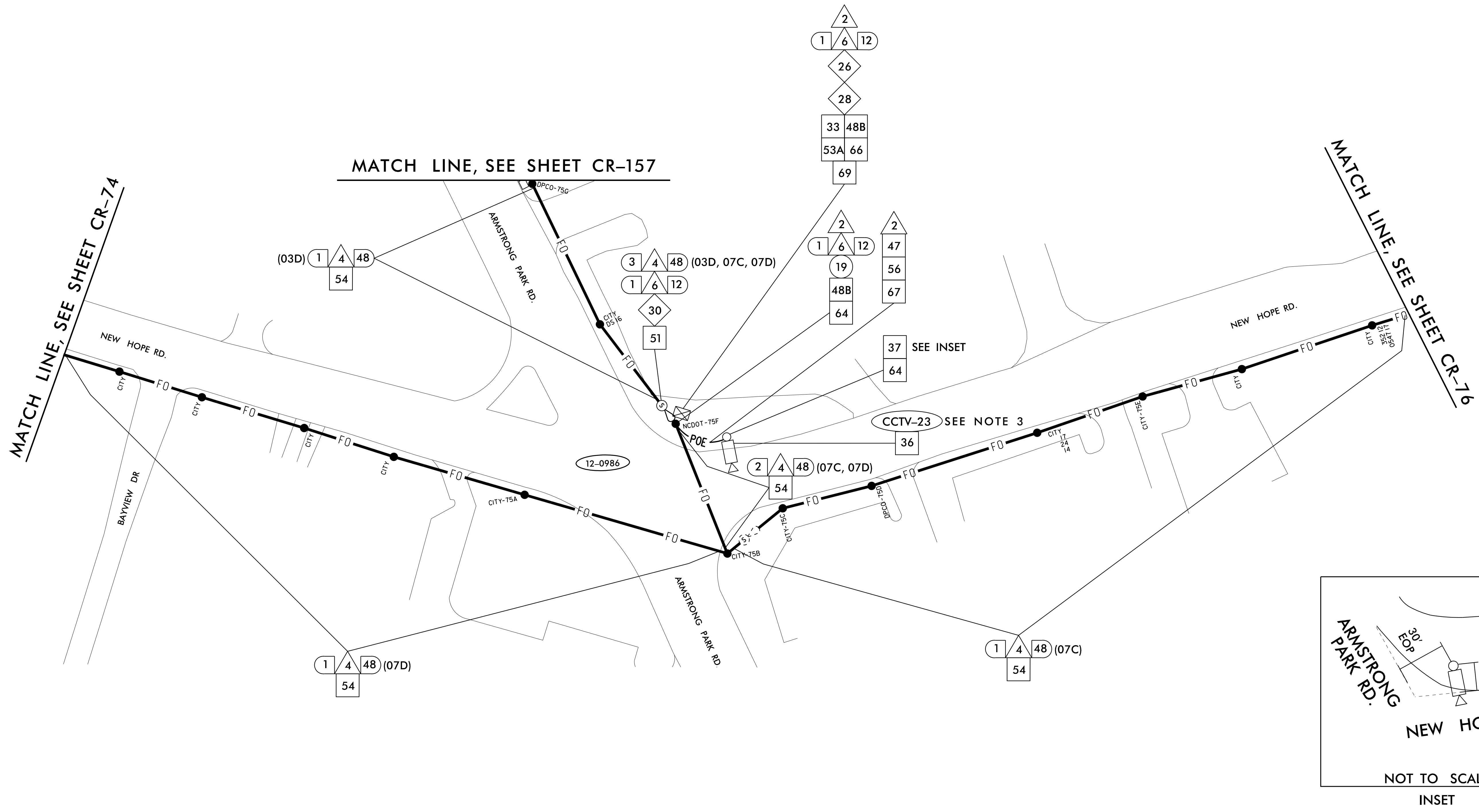
**North Carolina Professional Engineer**  
 No. 028952  
 I. Van Osdel

DocuSigned by:  
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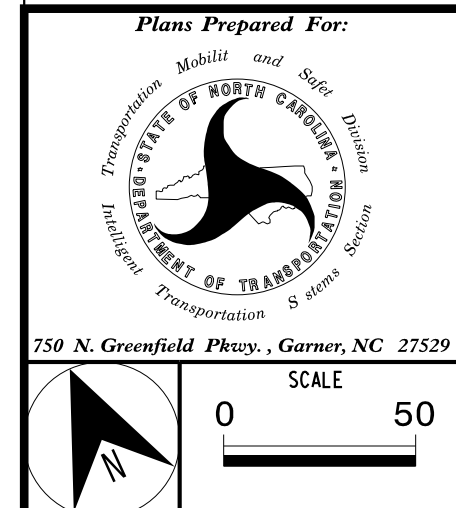




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3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDABLE DUCT SEAL
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5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
6	INSTALL FIBER OPTIC DROP CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET	39	INSTALL JUNCTION BOX	48B	REMOVE EXISTING COMMUNICATIONS CABLE	57	MODIFY EXISTING ELECTRICAL SERVICE	69	REMOVE EXISTING SIGNAL CABINET AND CONTROLLER
7	INSTALL TRACER WIRE	18	INSTALL CABLE(S) IN NEW CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	40A	INSTALL OVERSIZED JUNCTION BOX	49	BACK PULL EXISTING COMMUNICATIONS CABLE	58	INSTALL NEW ELECTRICAL SERVICE	70	REMOVE EXISTING CCTV CAMERA ASSEMBLY
8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
10	INSTALL RIGID, GALVANIZED STEEL CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS	32	INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER	42	INSTALL WOOD POLE	52A	INSTALL DELINEATOR MARKER	61	DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS	73	MODIFY EXISTING CABINET FOUNDATION
11	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	22	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	33	INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER	43	REMOVE EXISTING WOOD POLE	52B	INSTALL JUNCTION BOX MARKER	62	BOND RISER AND MESSENGER CABLE TO POLE GROUND	74	REMOVE EXISTING WIRELESS SYSTEM
								63	BOND RISER TO POLE GROUND	75	INSTALL WIRELESS ETHERNET SYSTEM		

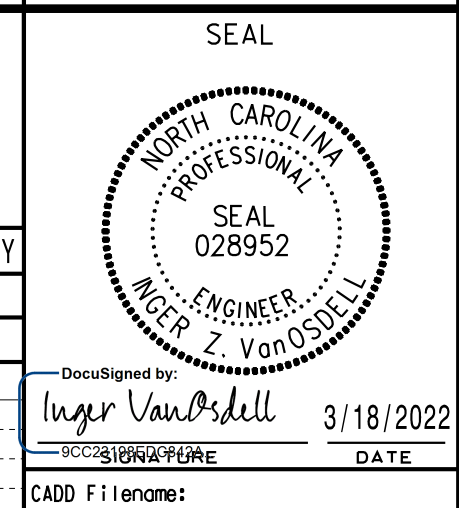
**NOTES:**

- ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.
- MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.
- INSTALL CCTV CAMERA ON NEW POLE AT 35 FT. SEE ITS-12.



CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN	
DIVISION 12	GASTON COUNTY
PLAN DATE: DECEMBER 2021	REVIEWED BY: K. SMITH
PREPARED BY: S. BUTLER	REVIEWED BY: I. VAN OSDELL
REVISIONS	INIT. DATE

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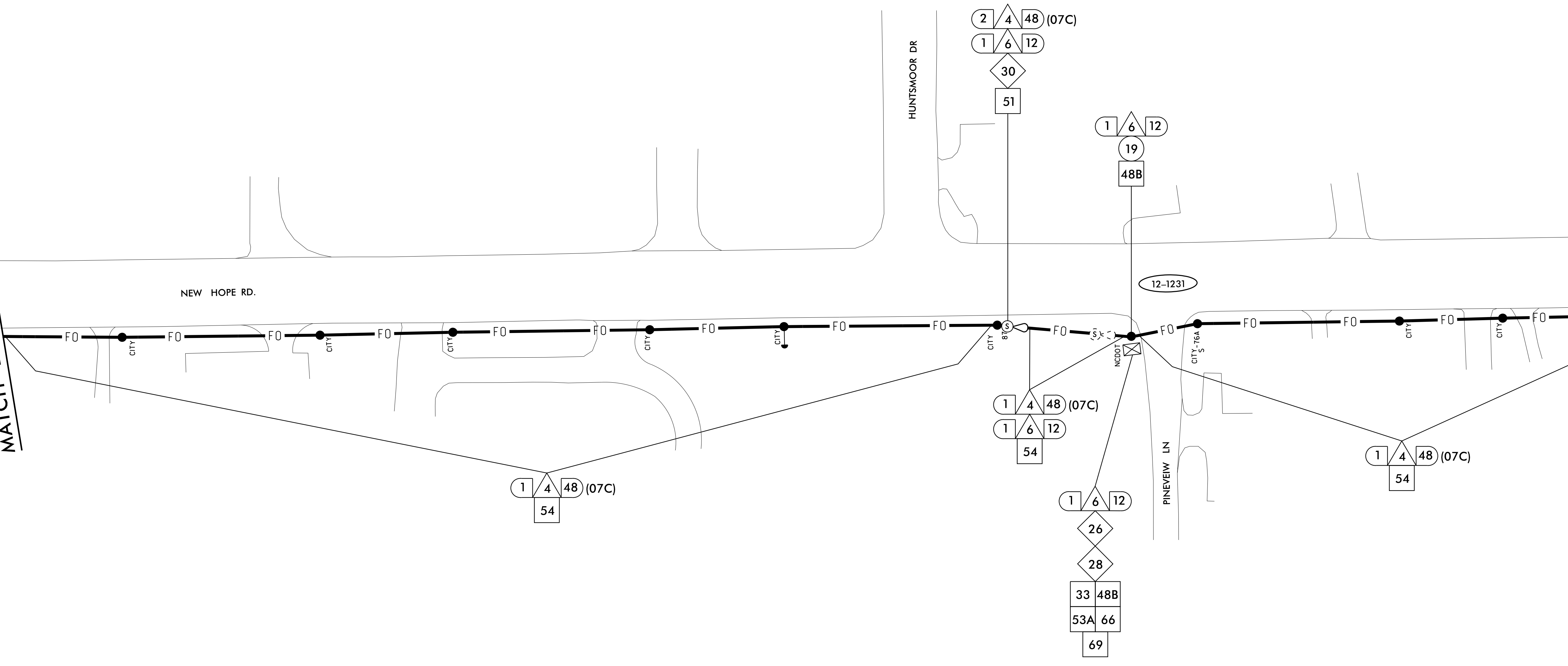


3/17/2022 KARAL.TPTD.LITS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\SH075\_CR.dgn



MATCH LINE, SEE SHEET CR-75

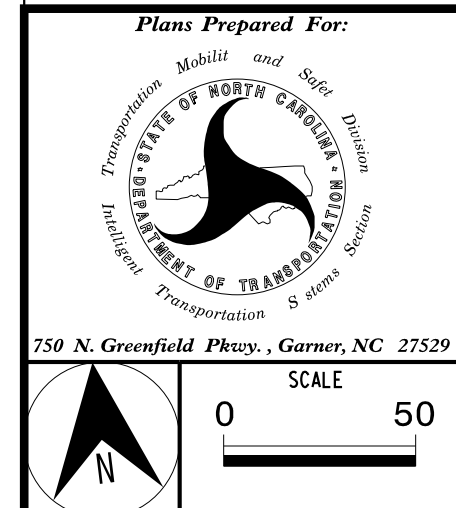
MATCH LINE, SEE SHEET CR-77



Legend table with 75 numbered items describing symbols and materials: 1. INSTALL COAX CABLE, 2. INSTALL ETHERNET CABLE, 3. EXISTING ETHERNET (OR COAX) CABLE, 4. INSTALL SMFO CABLE, 5. EXISTING SMFO CABLE, 6. INSTALL FIBER OPTIC DROP CABLE, 7. INSTALL TRACER WIRE, 8. TRENCH, 9. INSTALL PVC CONDUIT, 10. INSTALL RIGID, GALVANIZED STEEL CONDUIT, 11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD, 12. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL, 13. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT, 14. INSTALL POLYETHYLENE CONDUIT, 15. DIRECTIONAL DRILL CONDUIT, 16. BORE AND JACK CONDUIT, 17. INSTALL CABLE(S) IN EXISTING CONDUIT, 18. INSTALL CABLE(S) IN NEW CONDUIT, 19. INSTALL CABLE(S) IN EXISTING RISER, 20. INSTALL CABLE(S) IN NEW RISER, 21. INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS, 22. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE), 23. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE), 24. INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET, 25. INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET, 26. INSTALL NEW ETHERNET EDGE SWITCH, 27. INSTALL NEW FIBER OPTIC TRANSCEIVER, 28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET, 29. INSTALL UNDERGROUND SPLICE ENCLOSURE, 30. INSTALL AERIAL SPLICE ENCLOSURE, 31. MODIFY EXISTING INTERCONNECT CENTER /SPLICE ENCLOSURE, 32. INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER, 33. INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER, 34. INSTALL CABINET FOUNDATION, 35. INSTALL CCTV CAMERA POLE MOUNTED CABINET, 36. INSTALL CCTV CAMERA ASSEMBLY, 37. INSTALL CCTV CAMERA WOOD POLE, 38. INSTALL CCTV CAMERA METAL POLE AND FOUNDATION, 39. INSTALL JUNCTION BOX, 40A. INSTALL OVERSIZED JUNCTION BOX, 40B. INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24"), 41. REMOVE EXISTING JUNCTION BOX, 42. INSTALL WOOD POLE, 43. REMOVE EXISTING WOOD POLE, 44. INSTALL AERIAL GUY ASSEMBLY, 45. INSTALL STANDARD GUY ASSEMBLY, 46. INSTALL SIDEWALK GUY ASSEMBLY, 47. INSTALL MESSENGER CABLE, 48A. REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE, 48B. REMOVE EXISTING COMMUNICATIONS CABLE, 49. BACK PULL EXISTING COMMUNICATIONS CABLE, 50. INSTALL CELL MODEM AND ANTENNA, 51. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE, 52A. INSTALL DELINEATOR MARKER, 52B. INSTALL JUNCTION BOX MARKER, 53A. STORE 20 FEET OF COMMUNICATIONS CABLE, 53B. STORE 50 FEET OF EACH COMMUNICATIONS CABLE, 54. LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE, 55. LASH CABLE(S) TO EXISTING MESSENGER /SIGNAL CABLE, 56. LASH CABLE(S) TO NEW MESSENGER CABLE, 57. MODIFY EXISTING ELECTRICAL SERVICE, 58. INSTALL NEW ELECTRICAL SERVICE, 59. INSTALL NEW EQUIPMENT CABINET DISCONNECT, 60. BOND TRACER WIRE TO EQUIPMENT GROUND BUS, 61. DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS, 62. BOND RISER AND MESSENGER CABLE TO POLE GROUND, 63. BOND RISER TO POLE GROUND, 64. BOND MESSENGER CABLE TO POLE GROUND, 65. INSTALL HEAT SHRINK TUBING RETROFIT KIT, 66. INSTALL MOLDABLE DUCT SEAL, 67. SLACK SPAN, 68. INSTALL CABINET BASE ADAPTER, 69. REMOVE EXISTING SIGNAL CABINET AND CONTROLLER, 70. REMOVE EXISTING CCTV CAMERA ASSEMBLY, 71. REMOVE EXISTING CCTV CAMERA CABINET, 72. REMOVE CABINET FOUNDATION, 73. MODIFY EXISTING CABINET FOUNDATION, 74. REMOVE EXISTING WIRELESS SYSTEM, 75. INSTALL WIRELESS ETHERNET SYSTEM

NOTES: 1. ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED. 2. MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.

3/17/2022 KARAL.TPTD.LTS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\_SHT076\_Cr.dgn



CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN. DIVISION 12 GASTON COUNTY. PLAN DATE: DECEMBER 2021. REVIEWED BY: K. SMITH. PREPARED BY: S. BUTLER. REVIEWED BY: I. VAN OSDELL. Includes a table for REVISIONS with columns for REVISIONS, INIT., and DATE.

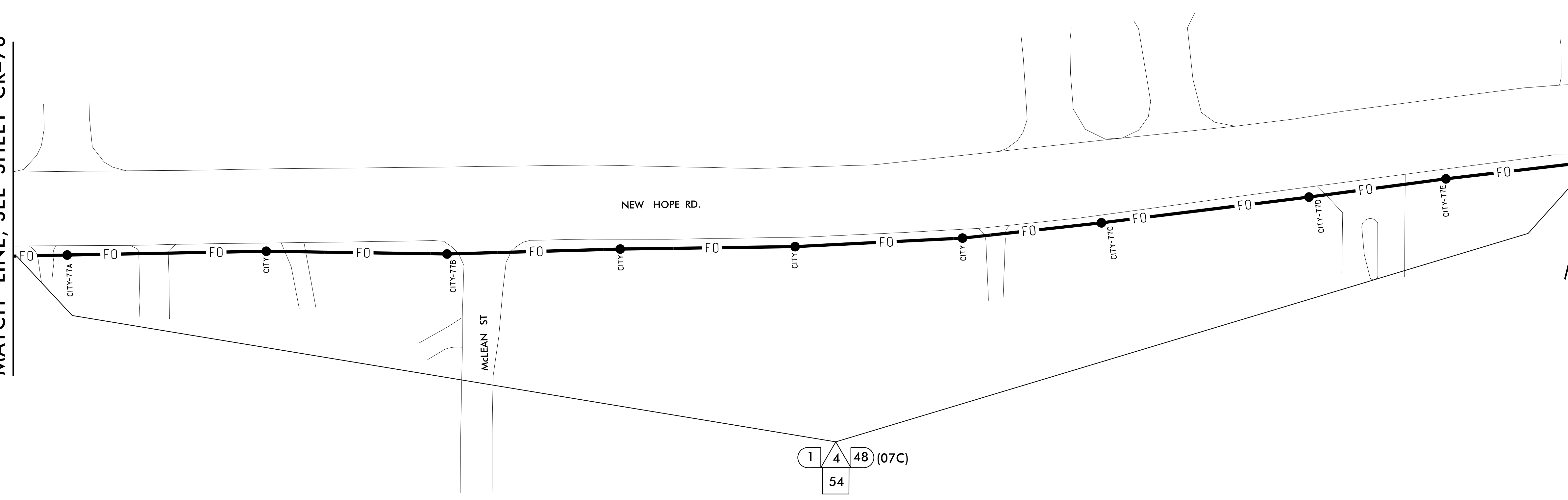
Kimley-Horn NC License #F-0102 421 Fayetteville St., Suite 600 Raleigh, NC 27601 Tel: (919) 677-2000 Fax: (919) 677-2050

SEAL NORTH CAROLINA PROFESSIONAL ENGINEER MICHAEL Z. VAN OSDELL. Date: 3/18/2022. CADD Filename:



MATCH LINE, SEE SHEET CR-76

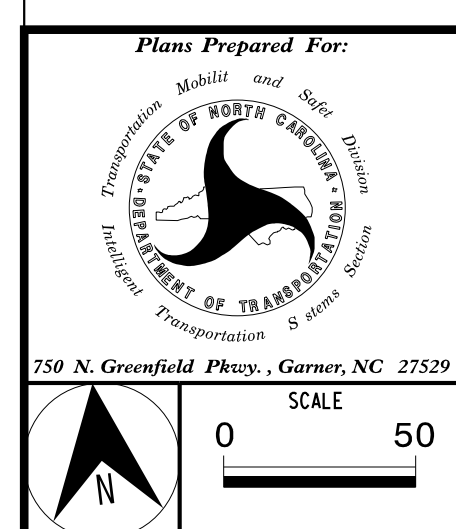
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3/17/2022 K:\ARL\TPTD\_LITS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\SH077\_CR.dgn

Legend table with 75 items detailing installation instructions for various cable types, conduits, cabinets, and equipment. Items include: 1. INSTALL COAX CABLE, 2. INSTALL ETHERNET CABLE, 3. EXISTING ETHERNET (OR COAX) CABLE, 4. INSTALL SMFO CABLE, 5. EXISTING SMFO CABLE, 6. INSTALL FIBER OPTIC DROP CABLE, 7. INSTALL TRACER WIRE, 8. TRENCH, 9. INSTALL PVC CONDUIT, 10. INSTALL RIGID, GALVANIZED STEEL CONDUIT, 11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD, 12. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL, 13. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT, 14. INSTALL POLYETHYLENE CONDUIT, 15. DIRECTIONAL DRILL CONDUIT, 16. BORE AND JACK CONDUIT, 17. INSTALL CABLE(S) IN EXISTING CONDUIT, 18. INSTALL CABLE(S) IN NEW CONDUIT, 19. INSTALL CABLE(S) IN EXISTING RISER, 20. INSTALL CABLE(S) IN NEW RISER, 21. INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS, 22. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE), 23. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE), 24. INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET, 25. INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET, 26. INSTALL NEW ETHERNET EDGE SWITCH, 27. INSTALL NEW FIBER OPTIC TRANSCEIVER, 28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET, 29. INSTALL UNDERGROUND SPLICE ENCLOSURE, 30. INSTALL AERIAL SPLICE ENCLOSURE, 31. MODIFY EXISTING INTERCONNECT CENTER /SPLICE ENCLOSURE, 32. INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER, 33. INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER, 34. INSTALL CABINET FOUNDATION, 35. INSTALL CCTV CAMERA POLE MOUNTED CABINET, 36. INSTALL CCTV CAMERA ASSEMBLY, 37. INSTALL CCTV CAMERA WOOD POLE, 38. INSTALL CCTV CAMERA METAL POLE AND FOUNDATION, 39. INSTALL JUNCTION BOX, 40A. INSTALL OVERSIZED JUNCTION BOX, 40B. INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24"), 41. REMOVE EXISTING JUNCTION BOX, 42. INSTALL WOOD POLE, 43. REMOVE EXISTING WOOD POLE, 44. INSTALL AERIAL GUY ASSEMBLY, 45. INSTALL STANDARD GUY ASSEMBLY, 46. INSTALL SIDEWALK GUY ASSEMBLY, 47. INSTALL MESSENGER CABLE, 48A. REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE, 48B. REMOVE EXISTING COMMUNICATIONS CABLE, 49. BACK PULL EXISTING COMMUNICATIONS CABLE, 50. INSTALL CELL MODEM AND ANTENNA, 51. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE, 52A. INSTALL DELINEATOR MARKER, 52B. INSTALL JUNCTION BOX MARKER, 53A. STORE 20 FEET OF COMMUNICATIONS CABLE, 53B. STORE 50 FEET OF EACH COMMUNICATIONS CABLE, 54. LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE, 55. LASH CABLE(S) TO EXISTING MESSENGER /SIGNAL CABLE, 56. LASH CABLE(S) TO NEW MESSENGER CABLE, 57. MODIFY EXISTING ELECTRICAL SERVICE, 58. INSTALL NEW ELECTRICAL SERVICE, 59. INSTALL NEW EQUIPMENT CABINET DISCONNECT, 60. BOND TRACER WIRE TO EQUIPMENT GROUND BUS, 61. DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS, 62. BOND RISER AND MESSENGER CABLE TO POLE GROUND, 63. BOND RISER TO POLE GROUND, 64. BOND MESSENGER CABLE TO POLE GROUND, 65. INSTALL HEAT SHRINK TUBING RETROFIT KIT, 66. INSTALL MOLDABLE DUCT SEAL, 67. SLACK SPAN, 68. INSTALL CABINET BASE ADAPTER, 69. REMOVE EXISTING SIGNAL CABINET AND CONTROLLER, 70. REMOVE EXISTING CCTV CAMERA ASSEMBLY, 71. REMOVE EXISTING CCTV CAMERA CABINET, 72. REMOVE CABINET FOUNDATION, 73. MODIFY EXISTING CABINET FOUNDATION, 74. REMOVE EXISTING WIRELESS SYSTEM, 75. INSTALL WIRELESS ETHERNET SYSTEM

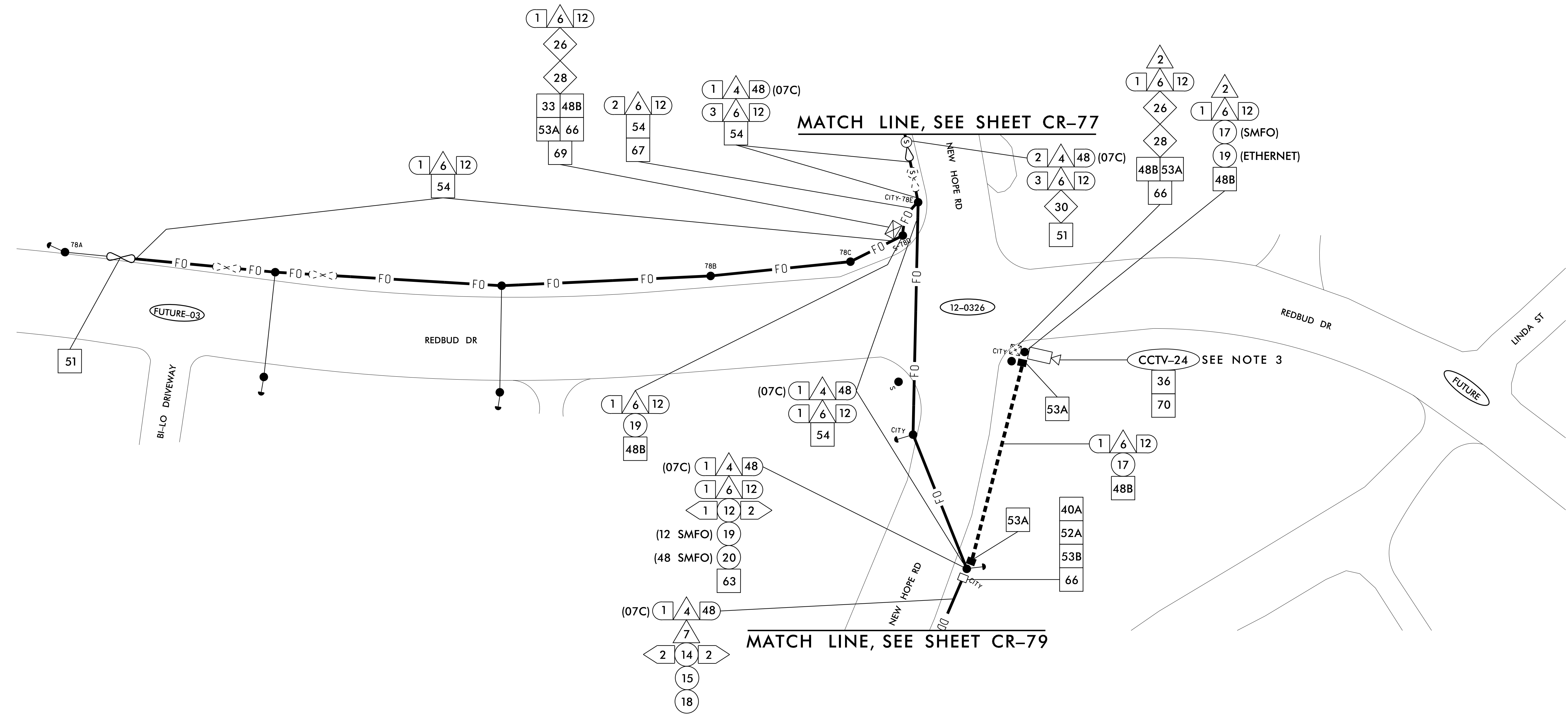
NOTES:  
1. ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.  
2. MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.



Project information table including: CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN, DIVISION 12, GASTON COUNTY, PLAN DATE: DECEMBER 2021, REVIEWED BY: K. SMITH, PREPARED BY: S. BUTLER, REVIEWED BY: I. VAN OSDELL, and a table for REVISIONS, INIT., and DATE.

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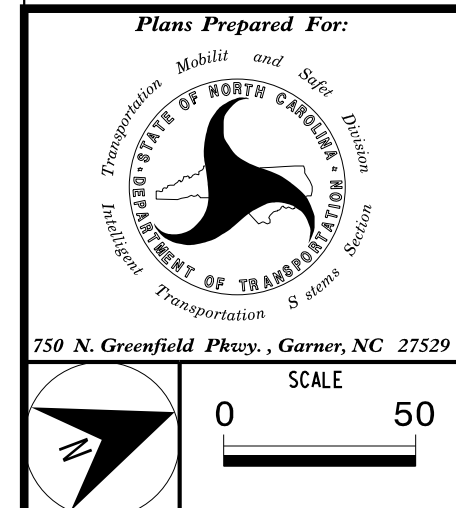
SEAL  
NORTH CAROLINA PROFESSIONAL ENGINEER  
I. VAN OSDELL  
3/18/2022  
DATE



1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
2	INSTALL ETHERNET CABLE	13	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	24	INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET	35	INSTALL CCTV CAMERA POLE MOUNTED CABINET	45	INSTALL STANDARD GUY ASSEMBLY	53B	STORE 50 FEET OF EACH COMMUNICATIONS CABLE	65	INSTALL HEAT SHRINK TUBING RETROFIT KIT
3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDBLE DUCT SEAL
4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
6	INSTALL FIBER OPTIC DROP CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET	39	INSTALL JUNCTION BOX	48B	REMOVE EXISTING COMMUNICATIONS CABLE	57	MODIFY EXISTING ELECTRICAL SERVICE	69	REMOVE EXISTING SIGNAL CABINET AND CONTROLLER
7	INSTALL TRACER WIRE	18	INSTALL CABLE(S) IN NEW CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	40A	INSTALL OVERSIZED JUNCTION BOX	49	BACK PULL EXISTING COMMUNICATIONS CABLE	58	INSTALL NEW ELECTRICAL SERVICE	70	REMOVE EXISTING CCTV CAMERA ASSEMBLY
8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
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								63	BOND RISER TO POLE GROUND	75	INSTALL WIRELESS ETHERNET SYSTEM		

**NOTES:**

- ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.
- MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.
- INSTALL NEW CCTV CAMERA IN PLACE OF EXISTING CCTV CAMERA.



Plans Prepared For:

**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

SCALE: 0 50

**Kimley»Horn**

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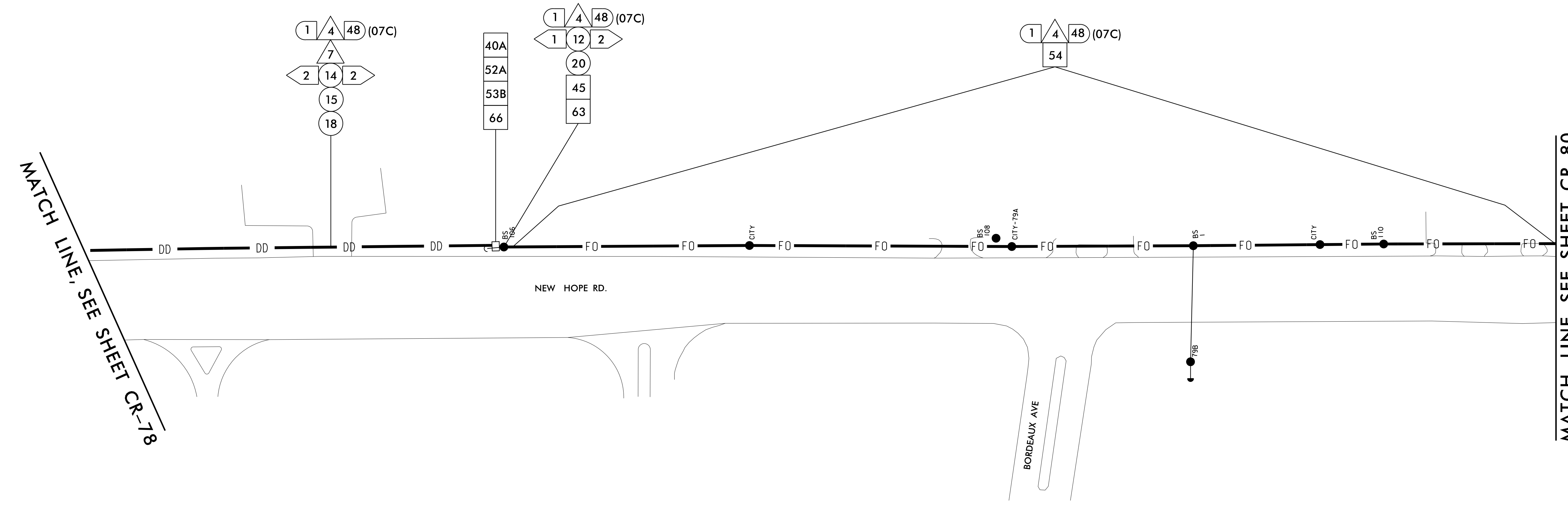
**North Carolina Professional Engineer Seal**  
028952  
I. VAN OSDELL

DocuSigned by:  
*Inger Van Osdel*  
3/18/2022

CADD File name:

3/17/2022 KARAL.TPTD.LTS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\_SHT078\_CR.dgn



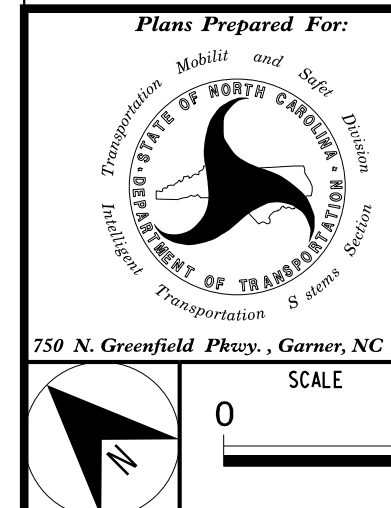


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- |  |  |  |   |  |  |   |
|--|--|--|---|--|--|---|
| 1. INSTALL COAX CABLE                                      | 12. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL                              | 23. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE) | 34. INSTALL CABINET FOUNDATION                                | 44. INSTALL AERIAL GUY ASSEMBLY  | 53A. STORE 20 FEET OF COMMUNICATIONS CABLE             | 64. BOND MESSENGER CABLE TO POLE GROUND           |
| 2. INSTALL ETHERNET CABLE                                  | 13. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT  | 24. INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET                                       | 35. INSTALL CCTV CAMERA POLE MOUNTED CABINET                  | 45. INSTALL STANDARD GUY ASSEMBLY  | 53B. STORE 50 FEET OF EACH COMMUNICATIONS CABLE        | 65. INSTALL HEAT SHRINK TUBING RETROFIT KIT       |
| 3. EXISTING ETHERNET (OR COAX) CABLE                       | 14. INSTALL POLYETHYLENE CONDUIT   | 25. INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET   | 36. INSTALL CCTV CAMERA ASSEMBLY                              | 46. INSTALL SIDEWALK GUY ASSEMBLY  | 54. LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE     | 66. INSTALL MOLDBABLE DUCT SEAL                   |
| 4. INSTALL SMFO CABLE                                      | 15. DIRECTIONAL DRILL CONDUIT  | 26. INSTALL NEW ETHERNET EDGE SWITCH   | 37. INSTALL CCTV CAMERA WOOD POLE                             | 47. INSTALL MESSENGER CABLE  | 55. LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE | 67. SLACK SPAN                                    |
| 5. EXISTING SMFO CABLE                                     | 16. BORE AND JACK CONDUIT  | 27. INSTALL NEW FIBER OPTIC TRANSCEIVER  | 38. INSTALL CCTV CAMERA METAL POLE AND FOUNDATION             | 48A. REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE                  | 56. LASH CABLE(S) TO NEW MESSENGER CABLE               | 68. INSTALL CABINET BASE ADAPTER                  |
| 6. INSTALL FIBER OPTIC DROP CABLE                          | 17. INSTALL CABLE(S) IN EXISTING CONDUIT   | 28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET         | 39. INSTALL JUNCTION BOX                                      | 48B. REMOVE EXISTING COMMUNICATIONS CABLE                                | 57. MODIFY EXISTING ELECTRICAL SERVICE                 | 69. REMOVE EXISTING SIGNAL CABINET AND CONTROLLER |
| 7. INSTALL TRACER WIRE                                     | 18. INSTALL CABLE(S) IN NEW CONDUIT  | 29. INSTALL UNDERGROUND SPLICE ENCLOSURE   | 40A. INSTALL OVERSIZED JUNCTION BOX                           | 49. BACK PULL EXISTING COMMUNICATIONS CABLE                              | 58. INSTALL NEW ELECTRICAL SERVICE                     | 70. REMOVE EXISTING CCTV CAMERA ASSEMBLY          |
| 8. TRENCH  | 19. INSTALL CABLE(S) IN EXISTING RISER   | 30. INSTALL AERIAL SPLICE ENCLOSURE  | 40B. INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24") | 50. INSTALL CELL MODEM AND ANTENNA                                       | 59. INSTALL NEW EQUIPMENT CABINET DISCONNECT           | 71. REMOVE EXISTING CCTV CAMERA CABINET           |
| 9. INSTALL PVC CONDUIT                                     | 20. INSTALL CABLE(S) IN NEW RISER  | 31. MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE                                       | 41. REMOVE EXISTING JUNCTION BOX                              | 51. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE | 60. BOND TRACER WIRE TO EQUIPMENT GROUND BUS           | 72. REMOVE CABINET FOUNDATION                     |
| 10. INSTALL RIGID, GALVANIZED STEEL CONDUIT                | 21. INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS   | 32. INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER                                      | 42. INSTALL WOOD POLE   | 52A. INSTALL DELINEATOR MARKER   | 61. DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS    | 73. MODIFY EXISTING CABINET FOUNDATION            |
| 11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD | 22. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE) | 33. INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER                         | 43. REMOVE EXISTING WOOD POLE                                 | 52B. INSTALL JUNCTION BOX MARKER   | 62. BOND RISER AND MESSENGER CABLE TO POLE GROUND      | 74. REMOVE EXISTING WIRELESS SYSTEM               |
|  |  |  |   |  | 63. BOND RISER TO POLE GROUND                          | 75. INSTALL WIRELESS ETHERNET SYSTEM              |

**NOTES:**

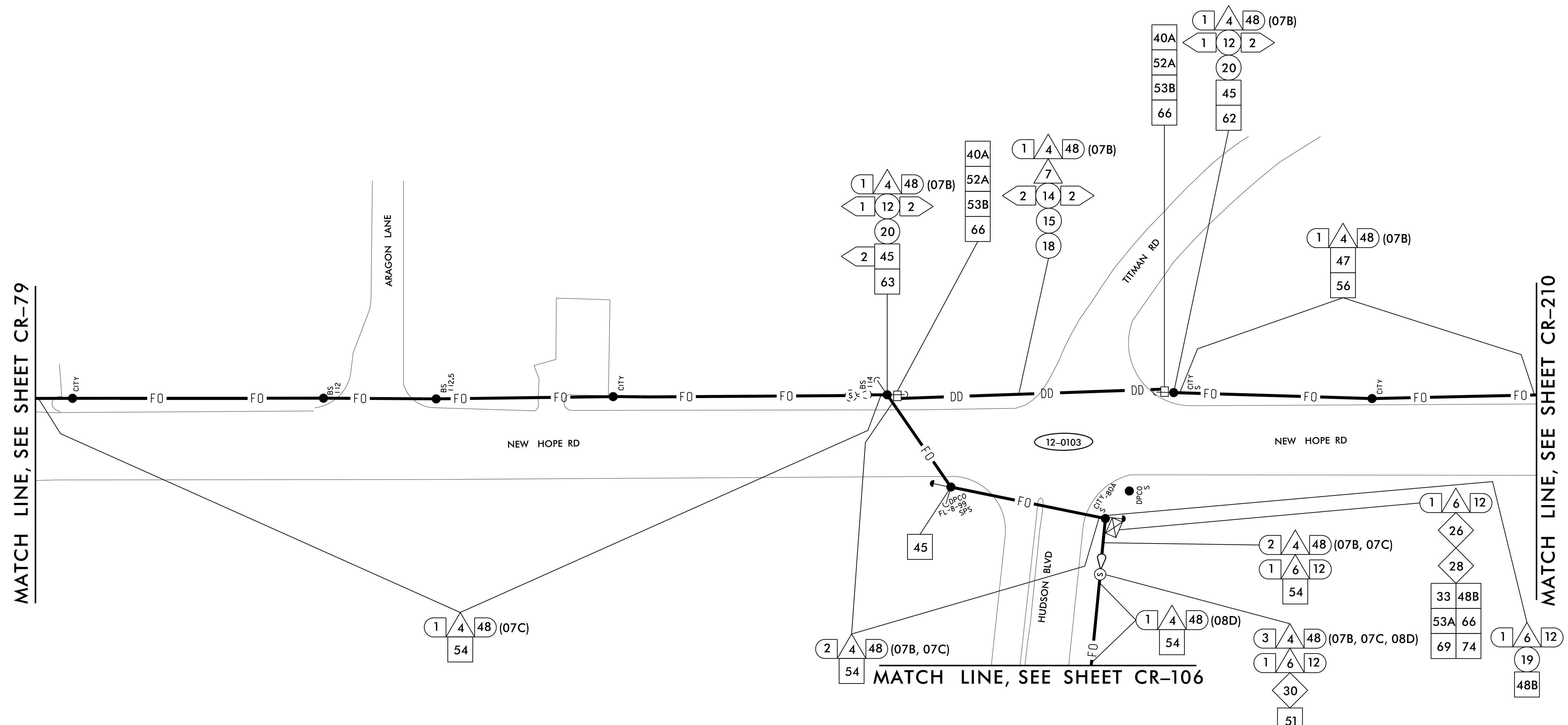
- ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.
- MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.



CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN	
DIVISION 12	GASTON COUNTY
PLAN DATE: DECEMBER 2021	REVIEWED BY: K. SMITH
PREPARED BY: S. BUTLER	REVIEWED BY: I. VAN OSDELL
REVISIONS	INIT. DATE

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 Fax: (919) 677-2050

SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 I. VAN OSDELL  
 3/18/2022  
 DATE



MATCH LINE, SEE SHEET CR-79

MATCH LINE, SEE SHEET CR-210

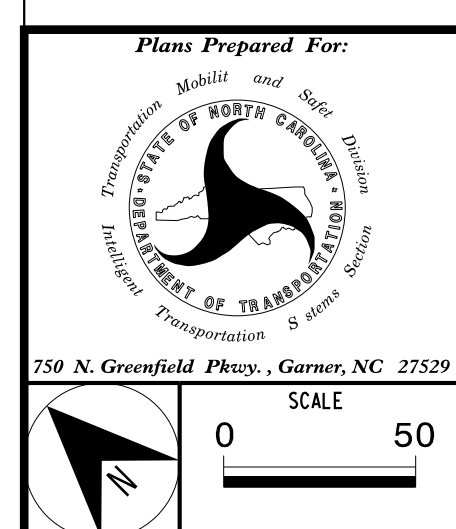
MATCH LINE, SEE SHEET CR-106

3/17/2022 KARAL.TPTD.LTS\01036569 Gastonia SignalSystem\6 Tasks\Plans\Cable Routing\SH080.CR.dgn

1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
2	INSTALL ETHERNET CABLE	13	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	24	INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET	35	INSTALL CCTV CAMERA POLE MOUNTED CABINET	45	INSTALL STANDARD GUY ASSEMBLY	53B	STORE 50 FEET OF EACH COMMUNICATIONS CABLE	65	INSTALL HEAT SHRINK TUBING RETROFIT KIT
3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDBLE DUCT SEAL
4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
6	INSTALL FIBER OPTIC DROP CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET	39	INSTALL JUNCTION BOX	48B	REMOVE EXISTING COMMUNICATIONS CABLE	57	MODIFY EXISTING ELECTRICAL SERVICE	69	REMOVE EXISTING SIGNAL CABINET AND CONTROLLER
7	INSTALL TRACER WIRE	18	INSTALL CABLE(S) IN NEW CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	40A	INSTALL OVERSIZED JUNCTION BOX	49	BACK PULL EXISTING COMMUNICATIONS CABLE	58	INSTALL NEW ELECTRICAL SERVICE	70	REMOVE EXISTING CCTV CAMERA ASSEMBLY
8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
10	INSTALL RIGID, GALVANIZED STEEL CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS	32	INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER	42	INSTALL WOOD POLE	52A	INSTALL DELINEATOR MARKER	61	DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS	73	MODIFY EXISTING CABINET FOUNDATION
11	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	22	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	33	INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER	43	REMOVE EXISTING WOOD POLE	52B	INSTALL JUNCTION BOX MARKER	62	BOND RISER AND MESSENGER CABLE TO POLE GROUND	74	REMOVE EXISTING WIRELESS SYSTEM
									63	BOND RISER TO POLE GROUND	75	INSTALL WIRELESS ETHERNET SYSTEM	

**NOTES:**

- ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.
- MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.



Plans Prepared For:

**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

Scale: 0 50

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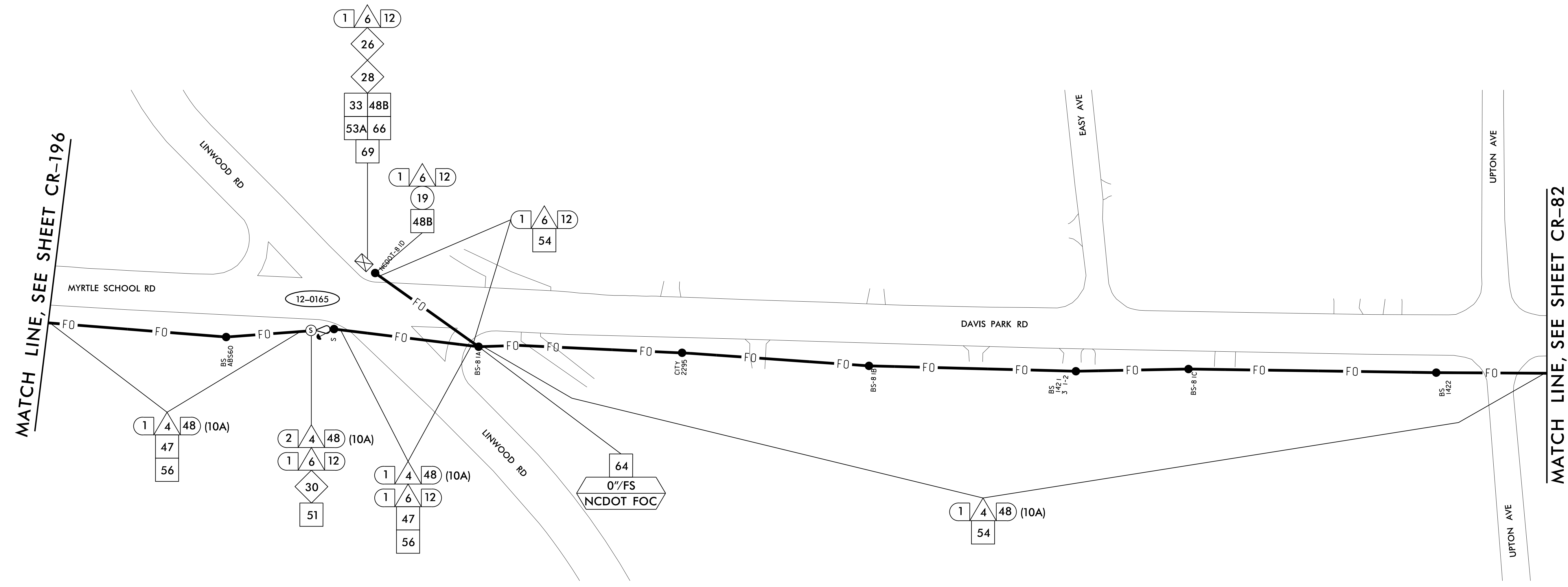
SEAL

**ROGER Z. VAN OSDELL**  
NORTH CAROLINA PROFESSIONAL ENGINEER  
LICENSE NO. 27601

DocuSigned by:  
**Roger Van Osdel** 3/18/2022

CADD File name: \_\_\_\_\_





MATCH LINE, SEE SHEET CR-196

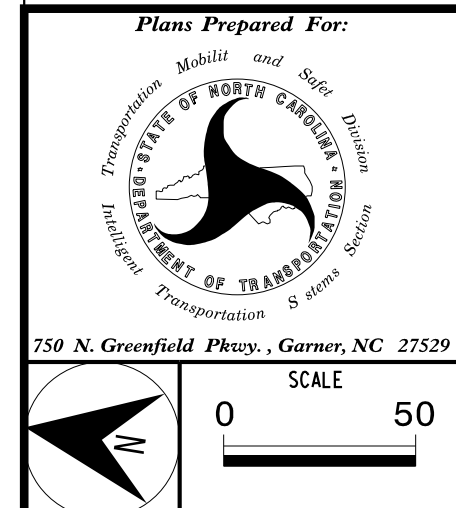
MATCH LINE, SEE SHEET CR-82

1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
2	INSTALL ETHERNET CABLE	13	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	24	INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET	35	INSTALL CCTV CAMERA POLE MOUNTED CABINET	45	INSTALL STANDARD GUY ASSEMBLY	53B	STORE 50 FEET OF EACH COMMUNICATIONS CABLE	65	INSTALL HEAT SHRINK TUBING RETROFIT KIT
3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDBLE DUCT SEAL
4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
6	INSTALL FIBER OPTIC DROP CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET	39	INSTALL JUNCTION BOX	48B	REMOVE EXISTING COMMUNICATIONS CABLE	57	MODIFY EXISTING ELECTRICAL SERVICE	69	REMOVE EXISTING SIGNAL CABINET AND CONTROLLER
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8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
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								63	BOND RISER TO POLE GROUND	75	INSTALL WIRELESS ETHERNET SYSTEM		

**NOTES:**  
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3/17/2022 KARAL.TPTD.LTS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\SH081\_CR.dgn

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Plans Prepared For:

**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

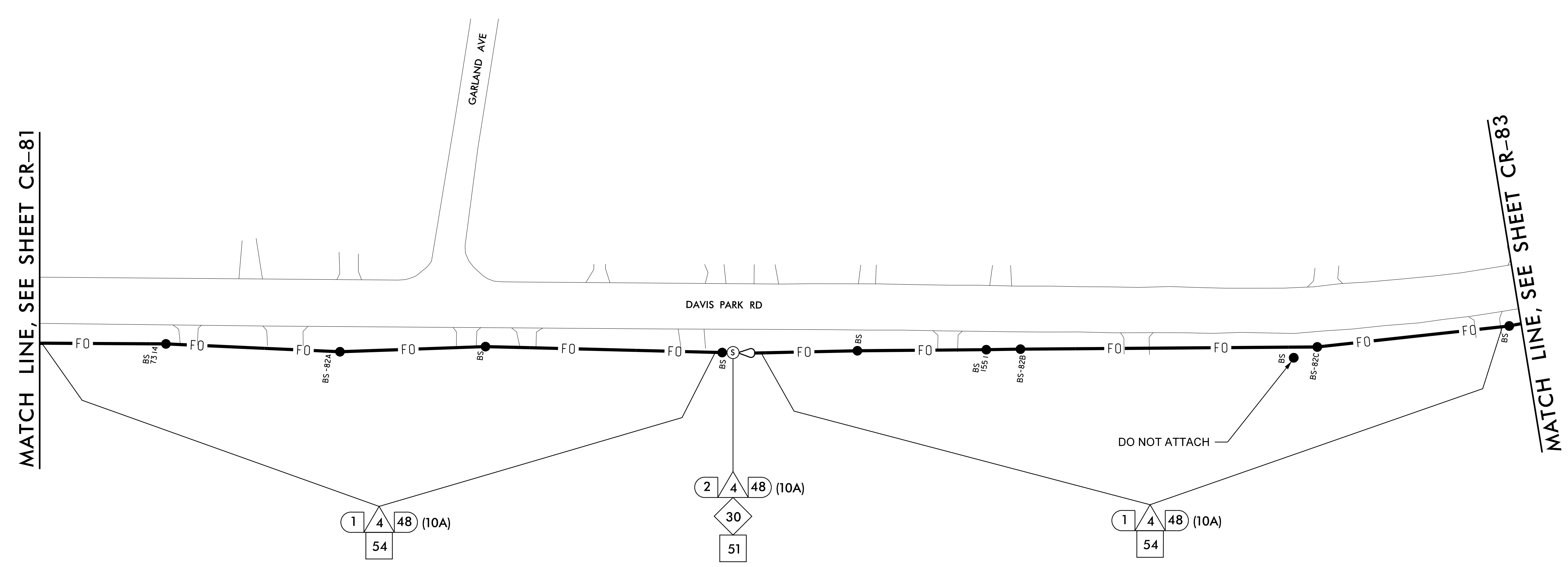
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**Kimley»Horn**

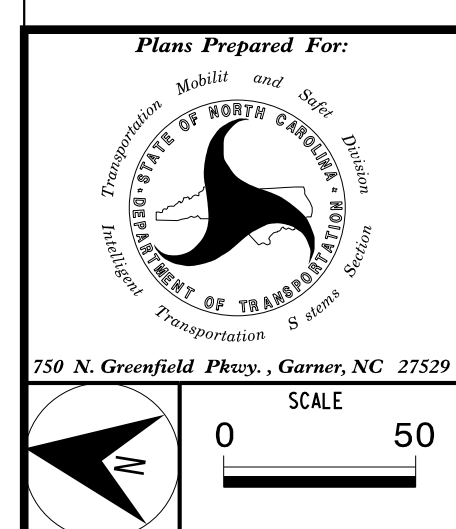
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 I. Van Osdel  
 3/18/2022

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1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
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9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
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Plans Prepared For:

**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

SCALE: 0 50

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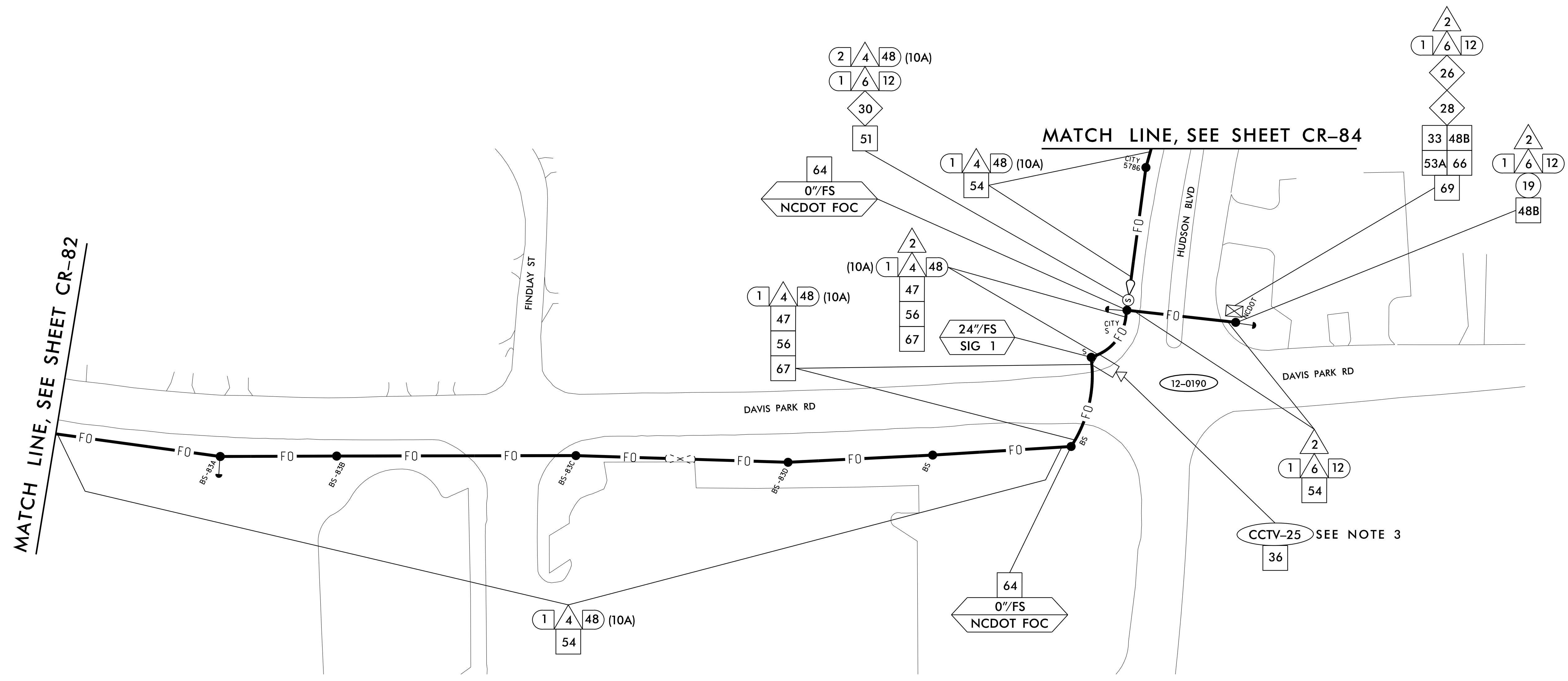
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 Inger Van OsdeLL  
 3/18/2022

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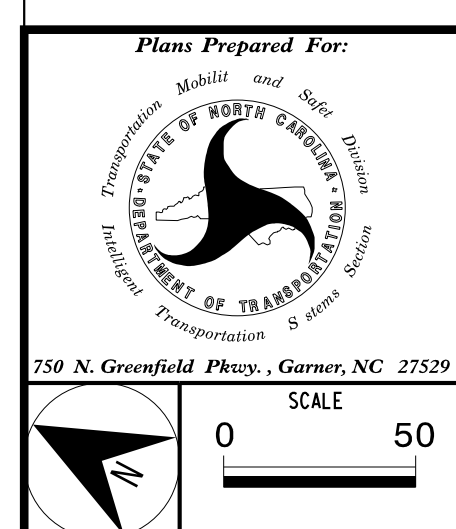
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**NOTES:**  
 1. ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.  
 2. MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.  
 3. INSTALL CCTV CAMERA 12" BELOW TOP OF POLE. SEE ITS-13.



Plans Prepared For:

**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

SCALE: 0 50

**Kimley-Horn**

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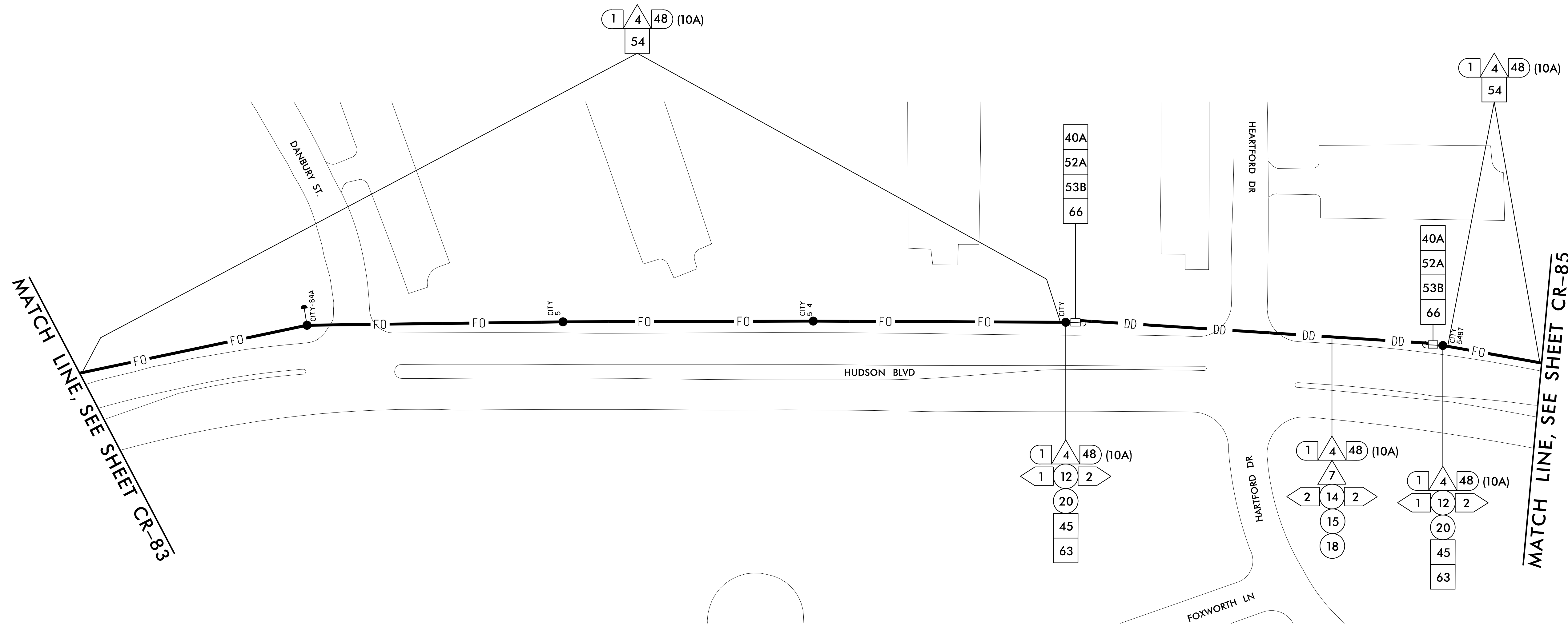
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**Kimley-Horn**

3/18/2022

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3/17/2022 KARAL.TPTD.LTS\01036569 Gastonia SignalSystem\6\_Tasks\Plans\Cable Routing\SH083.CR.dgn



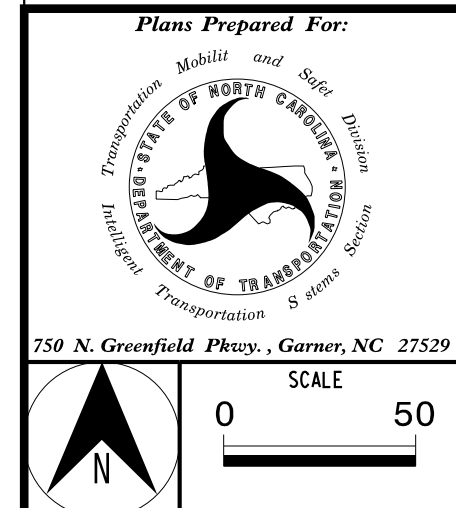
MATCH LINE, SEE SHEET CR-83

MATCH LINE, SEE SHEET CR-85

1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
2	INSTALL ETHERNET CABLE	13	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	24	INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET	35	INSTALL CCTV CAMERA POLE MOUNTED CABINET	45	INSTALL STANDARD GUY ASSEMBLY	53B	STORE 50 FEET OF EACH COMMUNICATIONS CABLE	65	INSTALL HEAT SHRINK TUBING RETROFIT KIT
3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDBLE DUCT SEAL
4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
6	INSTALL FIBER OPTIC DROP CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET	39	INSTALL JUNCTION BOX	48B	REMOVE EXISTING COMMUNICATIONS CABLE	57	MODIFY EXISTING ELECTRICAL SERVICE	69	REMOVE EXISTING SIGNAL CABINET AND CONTROLLER
7	INSTALL TRACER WIRE	18	INSTALL CABLE(S) IN NEW CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	40A	INSTALL OVERSIZED JUNCTION BOX	49	BACK PULL EXISTING COMMUNICATIONS CABLE	58	INSTALL NEW ELECTRICAL SERVICE	70	REMOVE EXISTING CCTV CAMERA ASSEMBLY
8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
10	INSTALL RIGID, GALVANIZED STEEL CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS	32	INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER	42	INSTALL WOOD POLE	52A	INSTALL DELINEATOR MARKER	61	DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS	73	MODIFY EXISTING CABINET FOUNDATION
11	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	22	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	33	INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER	43	REMOVE EXISTING WOOD POLE	52B	INSTALL JUNCTION BOX MARKER	62	BOND RISER AND MESSENGER CABLE TO POLE GROUND	74	REMOVE EXISTING WIRELESS SYSTEM
								63	BOND RISER TO POLE GROUND	75	INSTALL WIRELESS ETHERNET SYSTEM		

**NOTES:**

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Plans Prepared For:

**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

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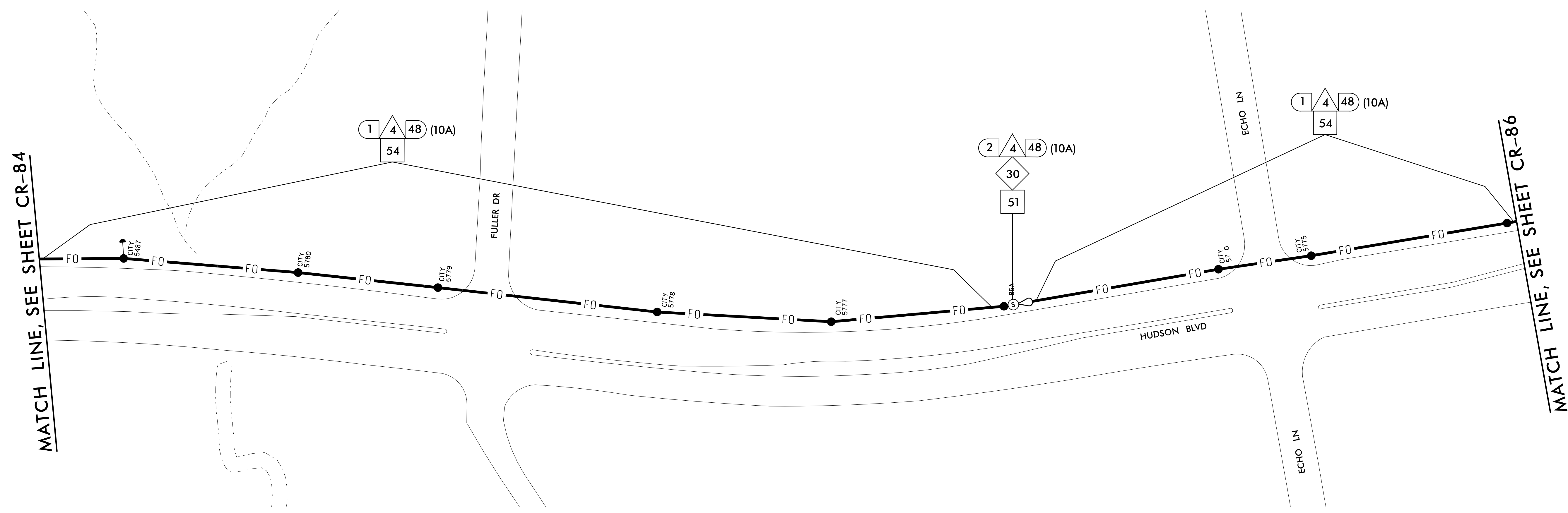
**Kimley»Horn**

DATE: 3/18/2022

CADD File name:

3/17/2022 KARAL.TPTD.LTS\01036569 Gastonia SignalSystem\6 Tasks\Plans\Cable Routing\SH084.CR.dgn



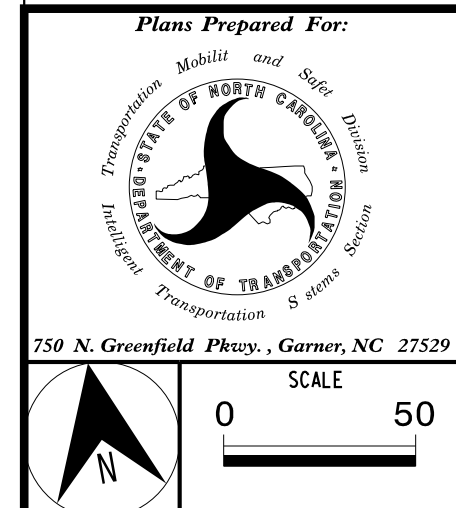


MATCH LINE, SEE SHEET CR-84

MATCH LINE, SEE SHEET CR-86

1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
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4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
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8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
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								63	BOND RISER TO POLE GROUND	75	INSTALL WIRELESS ETHERNET SYSTEM		

**NOTES:**  
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<b>CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN</b>	
DIVISION 12	GASTON COUNTY
PLAN DATE: DECEMBER 2021	REVIEWED BY: K. SMITH
PREPARED BY: S. BUTLER	REVIEWED BY: I. VAN OSDELL
REVISIONS	INIT. DATE

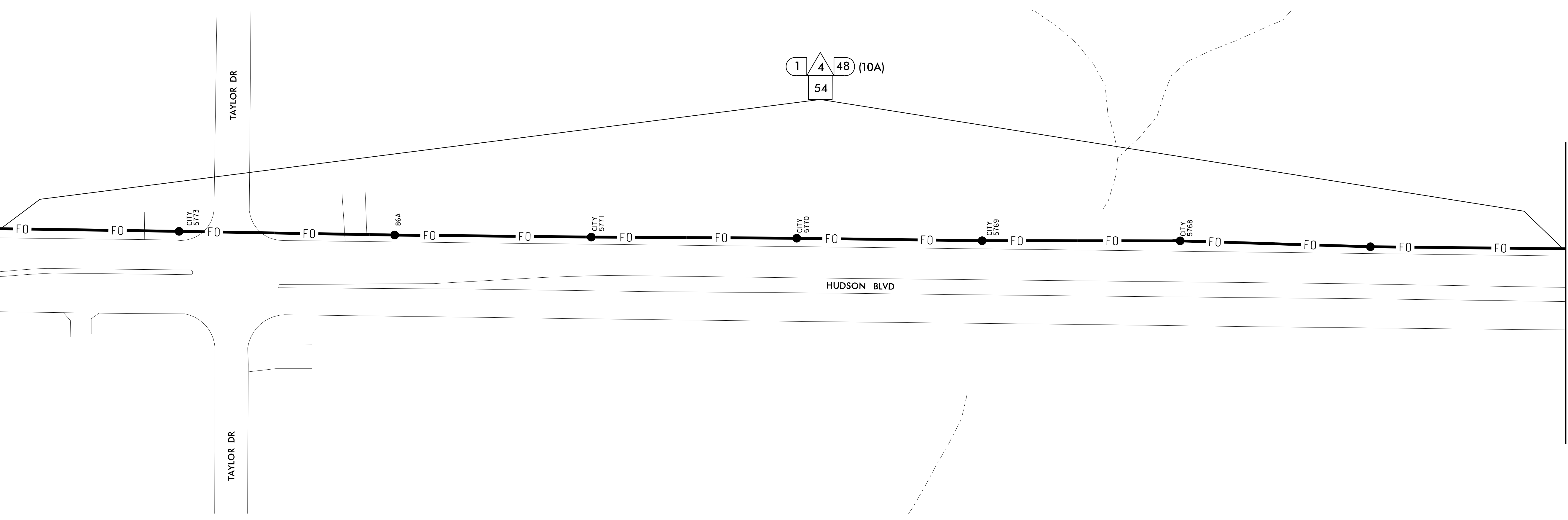
**Kimley-Horn**  
 NC License #F-0102  
 421 Fayetteville St., Suite 600  
 Raleigh, NC 27601  
 Tel: (919) 677-2000  
 Fax: (919) 677-2050

SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 SEAL 028952  
 I. VAN OSDELL  
 DATE 3/18/2022  
 CADD File name:

3/17/2022 K:\ARL\TPTD\_LITS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\_SHT085\_CR.dgn

MATCH LINE, SEE SHEET CR-85

MATCH LINE, SEE SHEET CR-87



- |  |  |  |   |  |  |   |
|--|--|--|---|--|--|---|
| 1. INSTALL COAX CABLE                                      | 12. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL                              | 23. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE) | 34. INSTALL CABINET FOUNDATION                                | 44. INSTALL AERIAL GUY ASSEMBLY  | 53A. STORE 20 FEET OF COMMUNICATIONS CABLE             | 64. BOND MESSENGER CABLE TO POLE GROUND           |
| 2. INSTALL ETHERNET CABLE                                  | 13. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT  | 24. INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET                                       | 35. INSTALL CCTV CAMERA POLE MOUNTED CABINET                  | 45. INSTALL STANDARD GUY ASSEMBLY  | 53B. STORE 50 FEET OF EACH COMMUNICATIONS CABLE        | 65. INSTALL HEAT SHRINK TUBING RETROFIT KIT       |
| 3. EXISTING ETHERNET (OR COAX) CABLE                       | 14. INSTALL POLYETHYLENE CONDUIT   | 25. INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET   | 36. INSTALL CCTV CAMERA ASSEMBLY                              | 46. INSTALL SIDEWALK GUY ASSEMBLY  | 54. LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE     | 66. INSTALL MOLDABLE DUCT SEAL                    |
| 4. INSTALL SMFO CABLE                                      | 15. DIRECTIONAL DRILL CONDUIT  | 26. INSTALL NEW ETHERNET EDGE SWITCH   | 37. INSTALL CCTV CAMERA WOOD POLE                             | 47. INSTALL MESSENGER CABLE  | 55. LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE | 67. SLACK SPAN                                    |
| 5. EXISTING SMFO CABLE                                     | 16. BORE AND JACK CONDUIT  | 27. INSTALL NEW FIBER OPTIC TRANSCEIVER  | 38. INSTALL CCTV CAMERA METAL POLE AND FOUNDATION             | 48A. REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE                  | 56. LASH CABLE(S) TO NEW MESSENGER CABLE               | 68. INSTALL CABINET BASE ADAPTER                  |
| 6. INSTALL FIBER OPTIC DROP CABLE                          | 17. INSTALL CABLE(S) IN EXISTING CONDUIT   | 28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET         | 39. INSTALL JUNCTION BOX                                      | 48B. REMOVE EXISTING COMMUNICATIONS CABLE                                | 57. MODIFY EXISTING ELECTRICAL SERVICE                 | 69. REMOVE EXISTING SIGNAL CABINET AND CONTROLLER |
| 7. INSTALL TRACER WIRE                                     | 18. INSTALL CABLE(S) IN NEW CONDUIT  | 29. INSTALL UNDERGROUND SPLICE ENCLOSURE   | 40A. INSTALL OVERSIZED JUNCTION BOX                           | 49. BACK PULL EXISTING COMMUNICATIONS CABLE                              | 58. INSTALL NEW ELECTRICAL SERVICE                     | 70. REMOVE EXISTING CCTV CAMERA ASSEMBLY          |
| 8. TRENCH  | 19. INSTALL CABLE(S) IN EXISTING RISER   | 30. INSTALL AERIAL SPLICE ENCLOSURE  | 40B. INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24") | 50. INSTALL CELL MODEM AND ANTENNA                                       | 59. INSTALL NEW EQUIPMENT CABINET DISCONNECT           | 71. REMOVE EXISTING CCTV CAMERA CABINET           |
| 9. INSTALL PVC CONDUIT                                     | 20. INSTALL CABLE(S) IN NEW RISER  | 31. MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE                                       | 41. REMOVE EXISTING JUNCTION BOX                              | 51. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE | 60. BOND TRACER WIRE TO EQUIPMENT GROUND BUS           | 72. REMOVE CABINET FOUNDATION                     |
| 10. INSTALL RIGID, GALVANIZED STEEL CONDUIT                | 21. INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS   | 32. INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER                                      | 42. INSTALL WOOD POLE   | 52A. INSTALL DELINEATOR MARKER   | 61. DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS    | 73. MODIFY EXISTING CABINET FOUNDATION            |
| 11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD | 22. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE) | 33. INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER                         | 43. REMOVE EXISTING WOOD POLE                                 | 52B. INSTALL JUNCTION BOX MARKER   | 62. BOND RISER AND MESSENGER CABLE TO POLE GROUND      | 74. REMOVE EXISTING WIRELESS SYSTEM               |
|  |  |  |   |  | 63. BOND RISER TO POLE GROUND                          | 75. INSTALL WIRELESS ETHERNET SYSTEM              |

**NOTES:**

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**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

SCALE: 0 50

**Kimley-Horn**

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SEAL

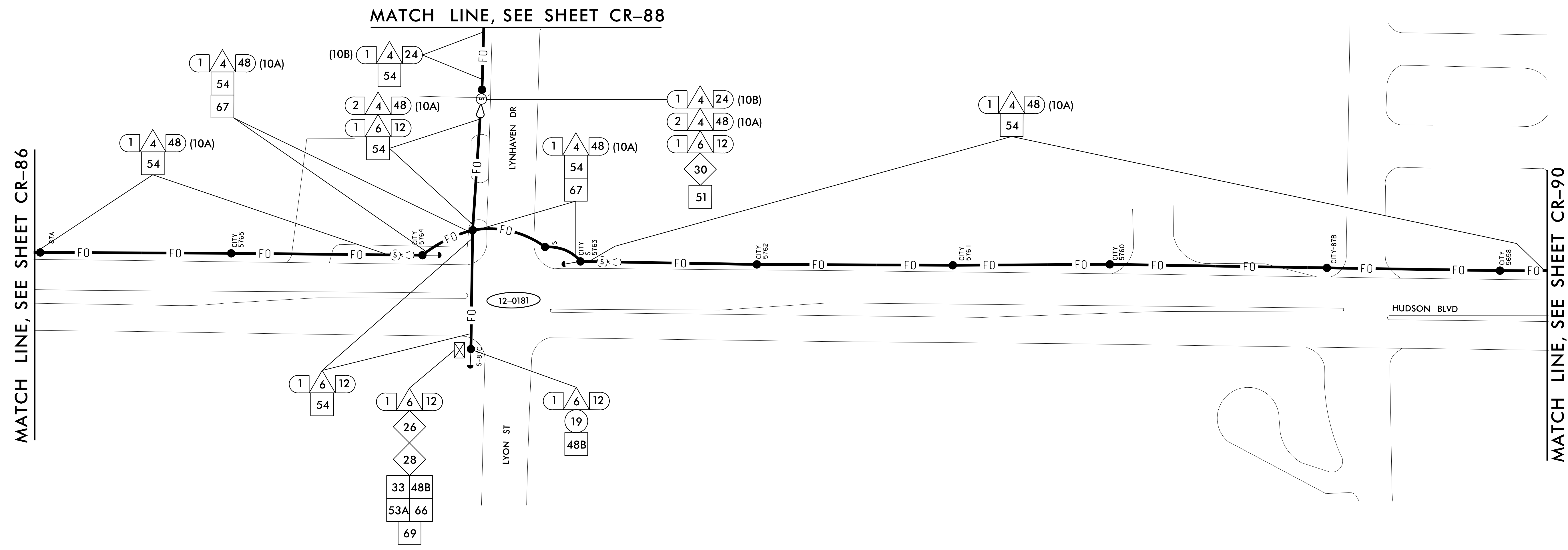
**Kimley-Horn**

Professional Engineer  
I. Van Osdel

DATE: 3/18/2022

3/17/2022 K:\RAL\_TPTD\_LITS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\_SHT086\_Cr.dgn





MATCH LINE, SEE SHEET CR-86

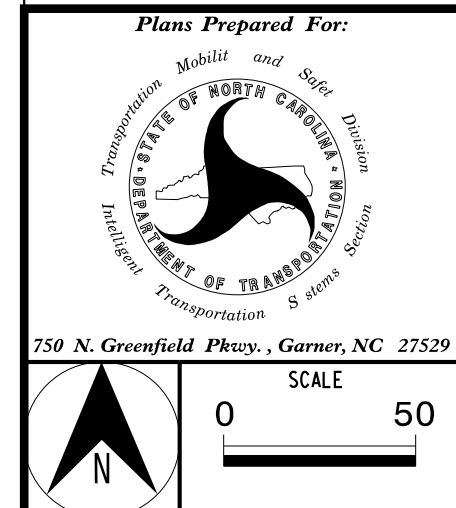
MATCH LINE, SEE SHEET CR-88

MATCH LINE, SEE SHEET CR-90

1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
2	INSTALL ETHERNET CABLE	13	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	24	INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET	35	INSTALL CCTV CAMERA POLE MOUNTED CABINET	45	INSTALL STANDARD GUY ASSEMBLY	53B	STORE 50 FEET OF EACH COMMUNICATIONS CABLE	65	INSTALL HEAT SHRINK TUBING RETROFIT KIT
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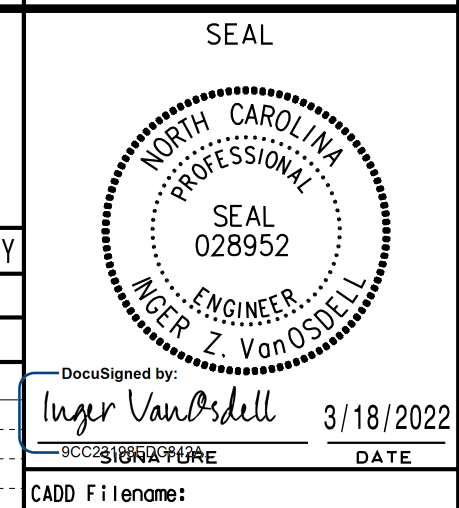
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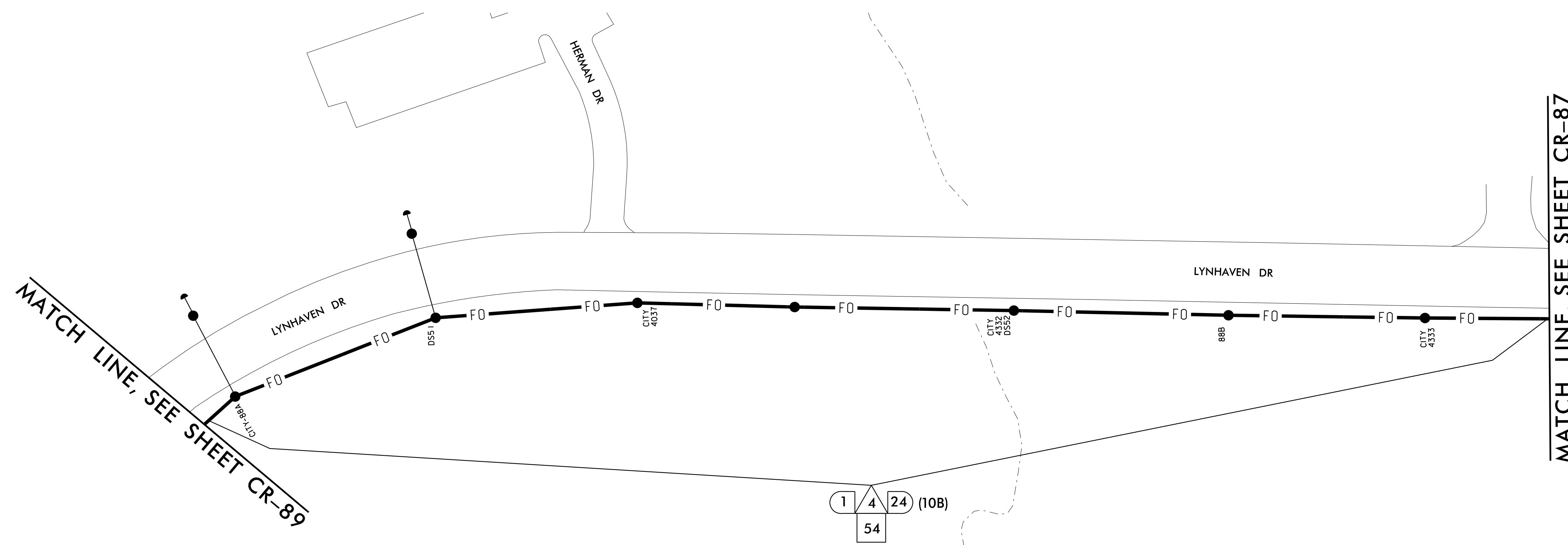


CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN	
DIVISION 12	GASTON COUNTY
PLAN DATE: DECEMBER 2021	REVIEWED BY: K. SMITH
PREPARED BY: S. BUTLER	REVIEWED BY: I. VAN OSDELL
REVISIONS	INIT. DATE

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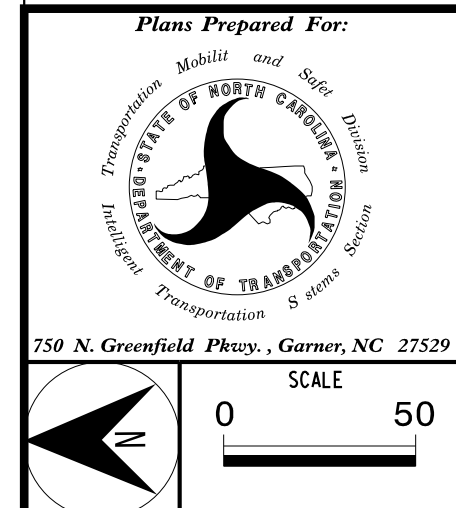


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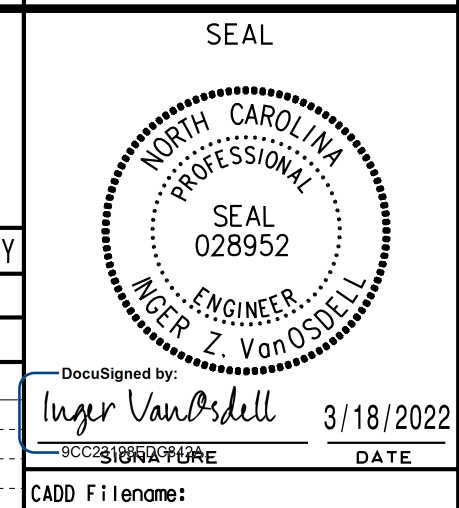
1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
2	INSTALL ETHERNET CABLE	13	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	24	INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET	35	INSTALL CCTV CAMERA POLE MOUNTED CABINET	45	INSTALL STANDARD GUY ASSEMBLY	53B	STORE 50 FEET OF EACH COMMUNICATIONS CABLE	65	INSTALL HEAT SHRINK TUBING RETROFIT KIT
3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDABLE DUCT SEAL
4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
6	INSTALL FIBER OPTIC DROP CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET	39	INSTALL JUNCTION BOX	48B	REMOVE EXISTING COMMUNICATIONS CABLE	57	MODIFY EXISTING ELECTRICAL SERVICE	69	REMOVE EXISTING SIGNAL CABINET AND CONTROLLER
7	INSTALL TRACER WIRE	18	INSTALL CABLE(S) IN NEW CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	40A	INSTALL OVERSIZED JUNCTION BOX	49	BACK PULL EXISTING COMMUNICATIONS CABLE	58	INSTALL NEW ELECTRICAL SERVICE	70	REMOVE EXISTING CCTV CAMERA ASSEMBLY
8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
10	INSTALL RIGID, GALVANIZED STEEL CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS	32	INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER	42	INSTALL WOOD POLE	52A	INSTALL DELINEATOR MARKER	61	DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS	73	MODIFY EXISTING CABINET FOUNDATION
11	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	22	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	33	INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER	43	REMOVE EXISTING WOOD POLE	52B	INSTALL JUNCTION BOX MARKER	62	BOND RISER AND MESSENGER CABLE TO POLE GROUND	74	REMOVE EXISTING WIRELESS SYSTEM
									63	BOND RISER TO POLE GROUND	75	INSTALL WIRELESS ETHERNET SYSTEM	

**NOTES:**  
 1. ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.  
 2. MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.



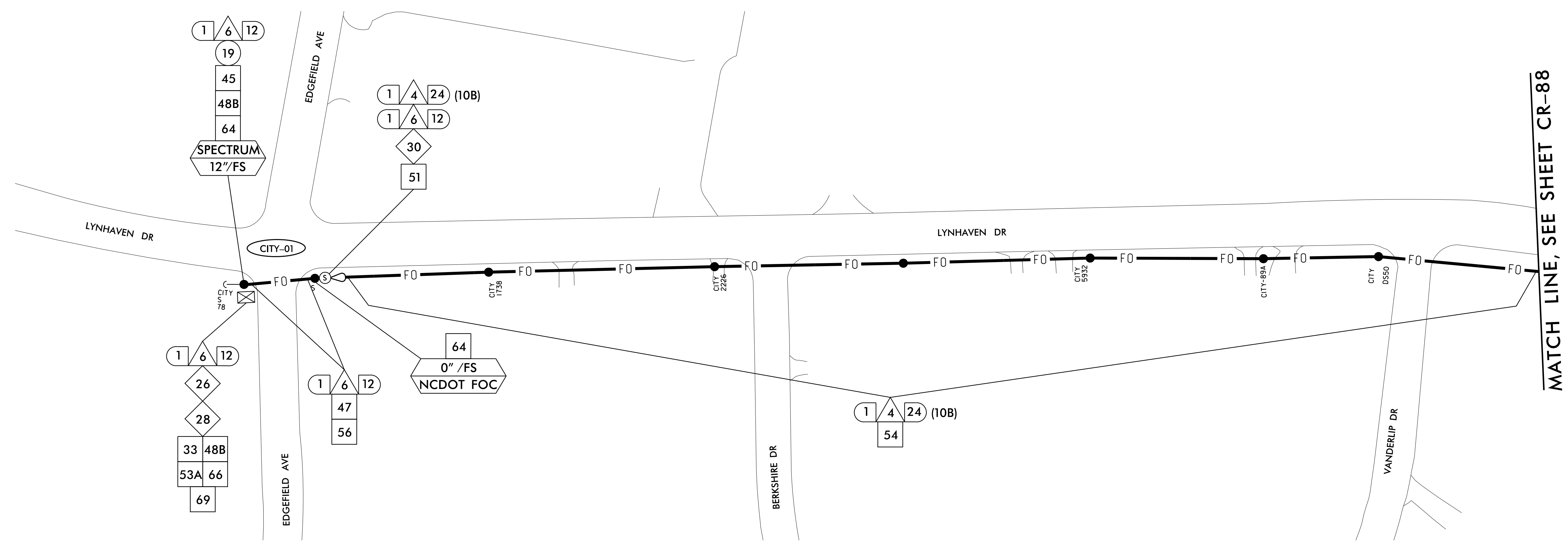
CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN	
DIVISION 12	GASTON COUNTY
PLAN DATE: DECEMBER 2021	REVIEWED BY: K. SMITH
PREPARED BY: S. BUTLER	REVIEWED BY: I. VAN OSDELL
REVISIONS	INIT. DATE

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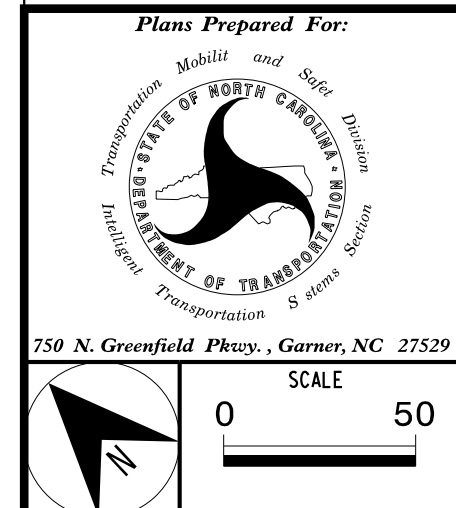


MATCH LINE, SEE SHEET CR-88

1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
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3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDBABLE DUCT SEAL
4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
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8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
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3/17/2022 KARAL.TPTD.LTS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\SH089\_CR.dgn



Plans Prepared For:  
 CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS: INIT. DATE

SCALE: 0 50

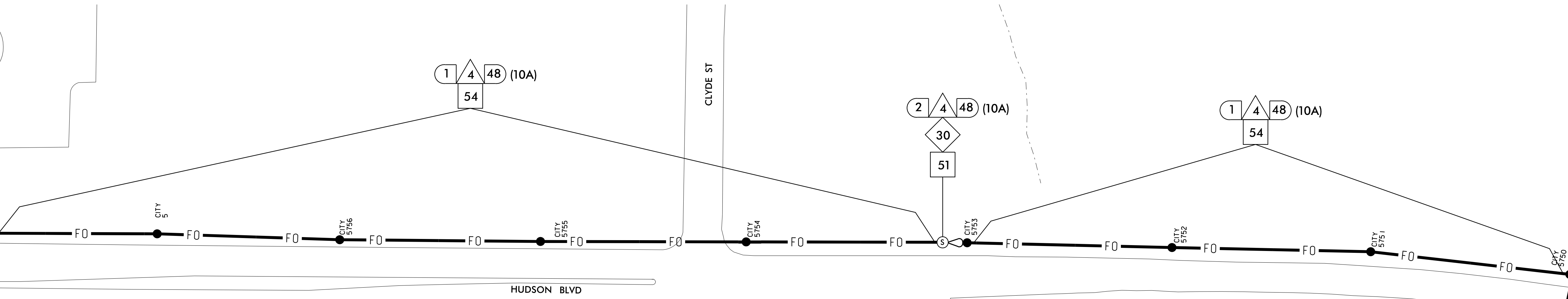
DocuSigned by: Iger Van Osdel 3/18/2022

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 Fax: (919) 677-2050

SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 IGER Z. VAN OSDEL  
 License No. 028952  
 DATE: 3/18/2022  
 CADD Filename:

MATCH LINE, SEE SHEET CR-87

MATCH LINE, SEE SHEET CR-91

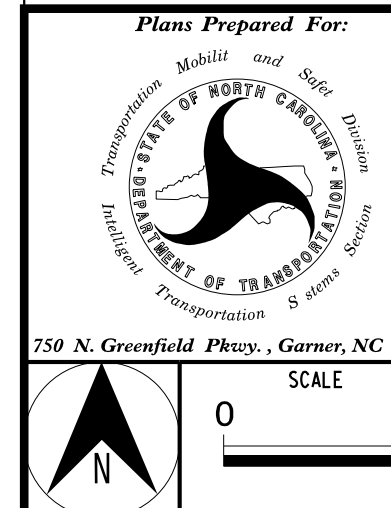


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1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
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**NOTES:**

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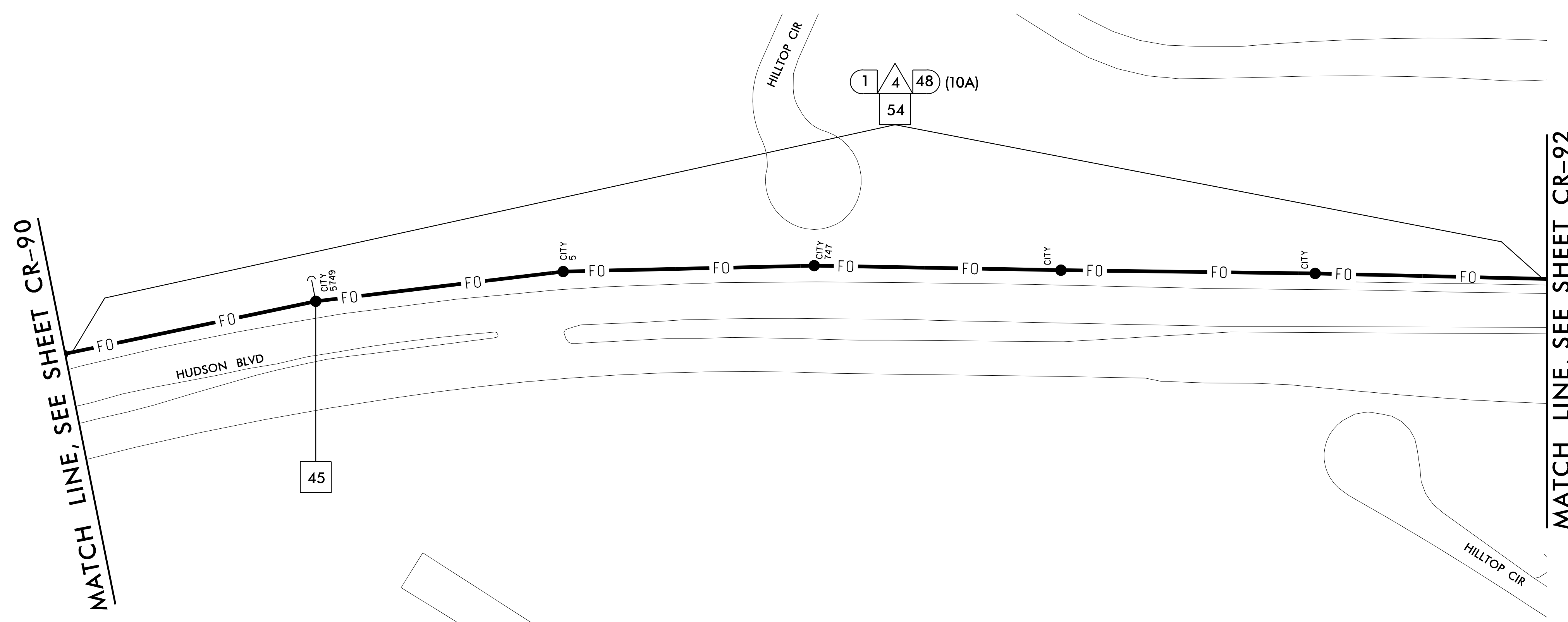


CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN	
DIVISION 12	GASTON COUNTY
PLAN DATE: DECEMBER 2021	REVIEWED BY: K. SMITH
PREPARED BY: S. BUTLER	REVIEWED BY: I. VAN OSDELL
REVISIONS	INIT. DATE

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SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 Roger Van Osdel  
 3/18/2022  
 CADD File name:





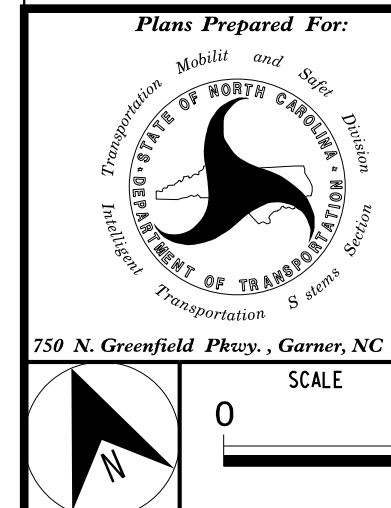
MATCH LINE, SEE SHEET CR-92

MATCH LINE, SEE SHEET CR-90

1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
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**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

SCALE: 0 50

**Kimley-Horn**

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SEAL

**NORTH CAROLINA PROFESSIONAL ENGINEER**

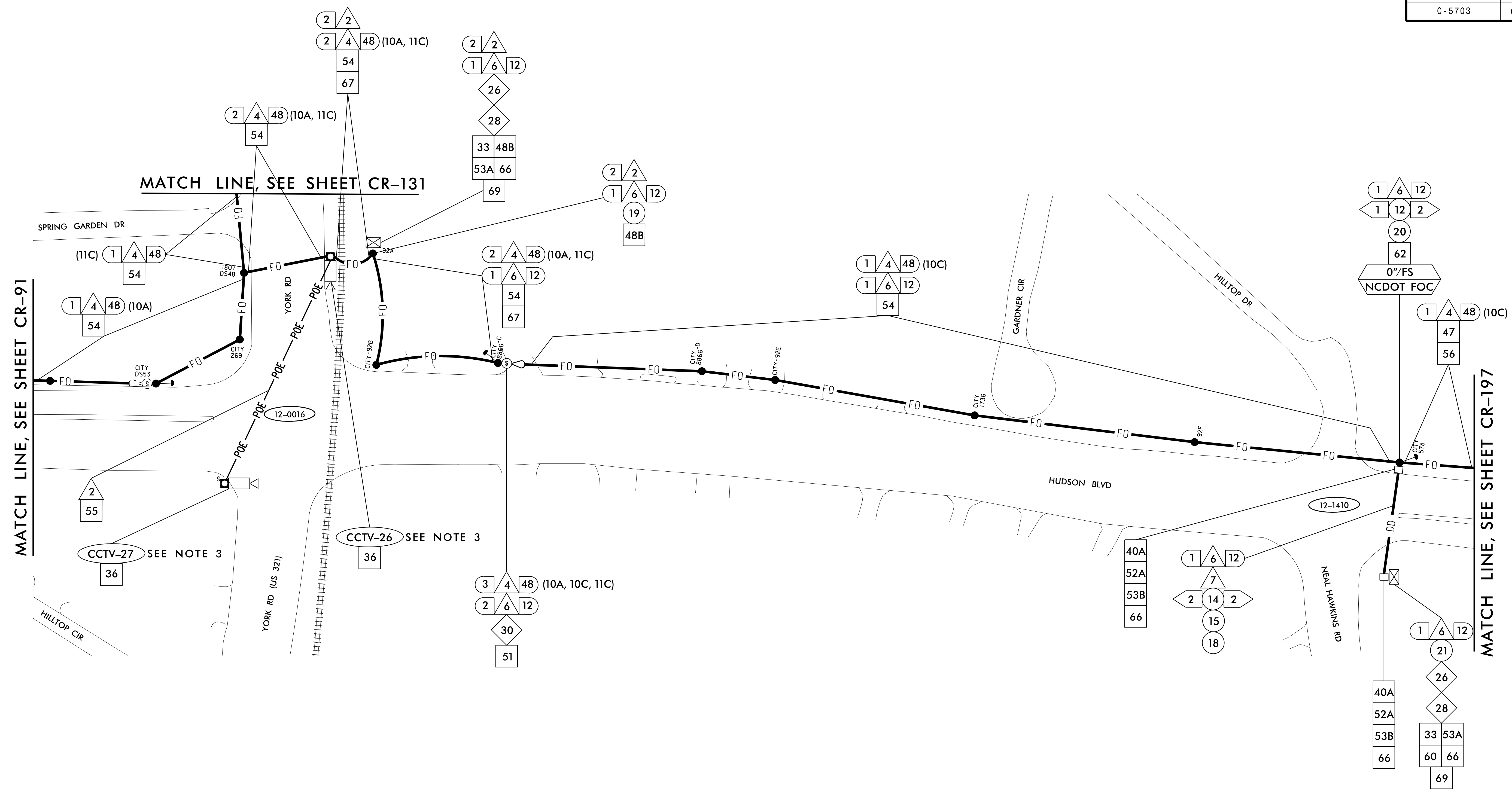
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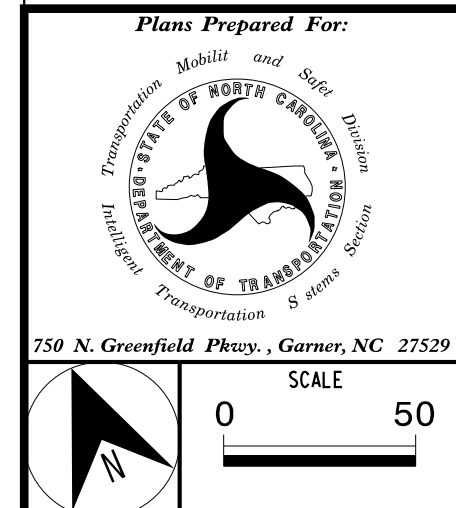
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|--|--|--|---|--|--|---|
| 1. INSTALL COAX CABLE                                      | 12. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL                              | 23. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE) | 34. INSTALL CABINET FOUNDATION                                | 44. INSTALL AERIAL GUY ASSEMBLY  | 53A. STORE 20 FEET OF COMMUNICATIONS CABLE             | 64. BOND MESSENGER CABLE TO POLE GROUND           |
| 2. INSTALL ETHERNET CABLE                                  | 13. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT  | 24. INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET                                       | 35. INSTALL CCTV CAMERA POLE MOUNTED CABINET                  | 45. INSTALL STANDARD GUY ASSEMBLY  | 53B. STORE 50 FEET OF EACH COMMUNICATIONS CABLE        | 65. INSTALL HEAT SHRINK TUBING RETROFIT KIT       |
| 3. EXISTING ETHERNET (OR COAX) CABLE                       | 14. INSTALL POLYETHYLENE CONDUIT   | 25. INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET   | 36. INSTALL CCTV CAMERA ASSEMBLY                              | 46. INSTALL SIDEWALK GUY ASSEMBLY  | 54. LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE     | 66. INSTALL MOLDBLE DUCT SEAL                     |
| 4. INSTALL SMFO CABLE                                      | 15. DIRECTIONAL DRILL CONDUIT  | 26. INSTALL NEW ETHERNET EDGE SWITCH   | 37. INSTALL CCTV CAMERA WOOD POLE                             | 47. INSTALL MESSENGER CABLE  | 55. LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE | 67. SLACK SPAN                                    |
| 5. EXISTING SMFO CABLE                                     | 16. BORE AND JACK CONDUIT  | 27. INSTALL NEW FIBER OPTIC TRANSCEIVER  | 38. INSTALL CCTV CAMERA METAL POLE AND FOUNDATION             | 48A. REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE                  | 56. LASH CABLE(S) TO NEW MESSENGER CABLE               | 68. INSTALL CABINET BASE ADAPTER                  |
| 6. INSTALL FIBER OPTIC DROP CABLE                          | 17. INSTALL CABLE(S) IN EXISTING CONDUIT   | 28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET         | 39. INSTALL JUNCTION BOX                                      | 48B. REMOVE EXISTING COMMUNICATIONS CABLE                                | 57. MODIFY EXISTING ELECTRICAL SERVICE                 | 69. REMOVE EXISTING SIGNAL CABINET AND CONTROLLER |
| 7. INSTALL TRACER WIRE                                     | 18. INSTALL CABLE(S) IN NEW CONDUIT  | 29. INSTALL UNDERGROUND SPLICE ENCLOSURE   | 40A. INSTALL OVERSIZED JUNCTION BOX                           | 49. BACK PULL EXISTING COMMUNICATIONS CABLE                              | 58. INSTALL NEW ELECTRICAL SERVICE                     | 70. REMOVE EXISTING CCTV CAMERA ASSEMBLY          |
| 8. TRENCH  | 19. INSTALL CABLE(S) IN EXISTING RISER   | 30. INSTALL AERIAL SPLICE ENCLOSURE  | 40B. INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24") | 50. INSTALL CELL MODEM AND ANTENNA                                       | 59. INSTALL NEW EQUIPMENT CABINET DISCONNECT           | 71. REMOVE EXISTING CCTV CAMERA CABINET           |
| 9. INSTALL PVC CONDUIT                                     | 20. INSTALL CABLE(S) IN NEW RISER  | 31. MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE                                       | 41. REMOVE EXISTING JUNCTION BOX                              | 51. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE | 60. BOND TRACER WIRE TO EQUIPMENT GROUND BUS           | 72. REMOVE CABINET FOUNDATION                     |
| 10. INSTALL RIGID, GALVANIZED STEEL CONDUIT                | 21. INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS   | 32. INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER                                      | 42. INSTALL WOOD POLE   | 52A. INSTALL DELINEATOR MARKER   | 61. DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS    | 73. MODIFY EXISTING CABINET FOUNDATION            |
| 11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD | 22. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE) | 33. INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER                         | 43. REMOVE EXISTING WOOD POLE                                 | 52B. INSTALL JUNCTION BOX MARKER   | 62. BOND RISER AND MESSENGER CABLE TO POLE GROUND      | 74. REMOVE EXISTING WIRELESS SYSTEM               |
|  |  |  |   |  | 63. BOND RISER TO POLE GROUND                          | 75. INSTALL WIRELESS ETHERNET SYSTEM              |

**NOTES:**

- ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.
- MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.
- INSTALL CCTV-27 12" BELOW SIGNAL SPAN AND CCTV-26 12" BELOW TOP OF POLE. SEE ITS-14.



**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

**Kimley»Horn**

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SEAL

**Kimley»Horn**

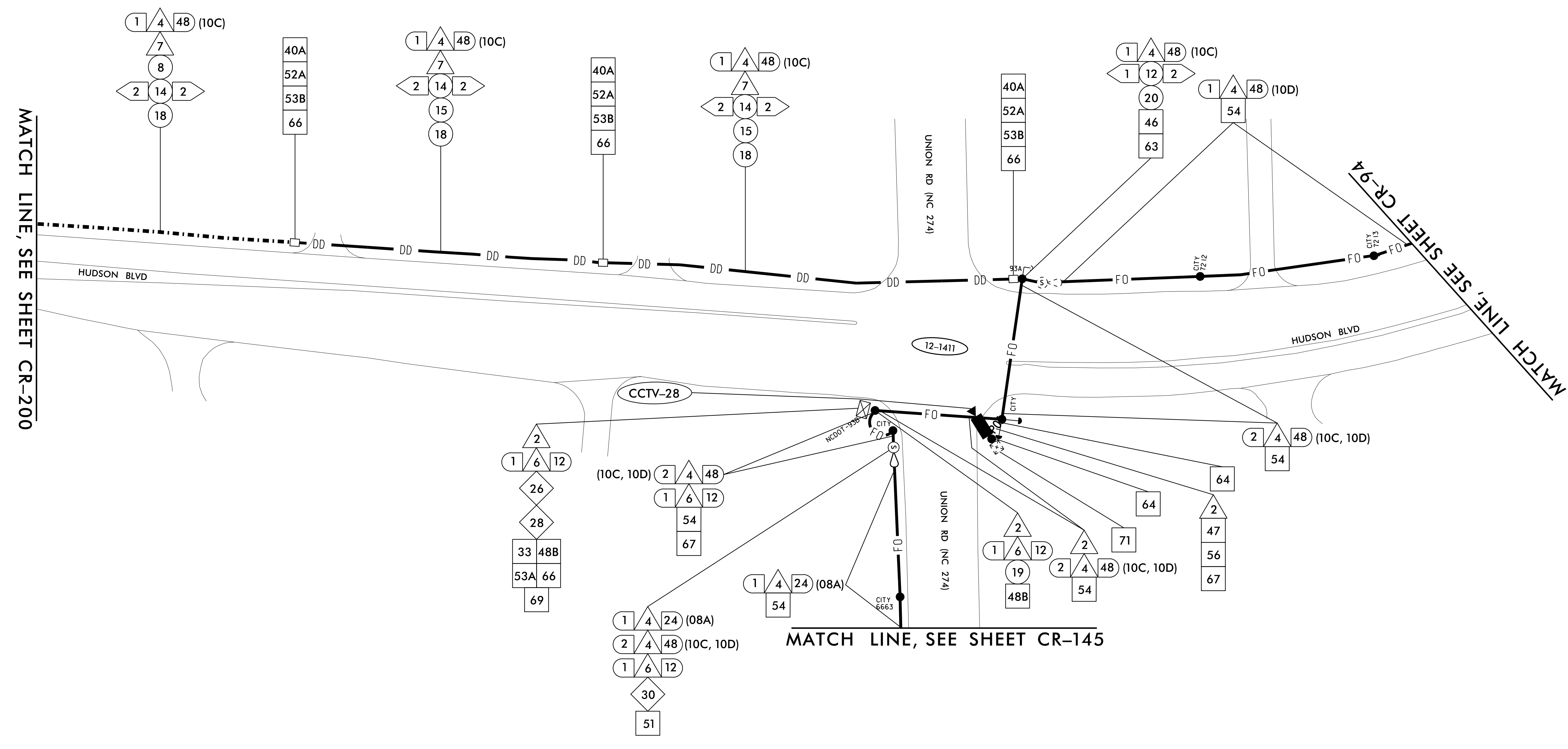
Professional Engineer  
No. 27889  
Inger Van Osdel

DATE: 3/18/2022

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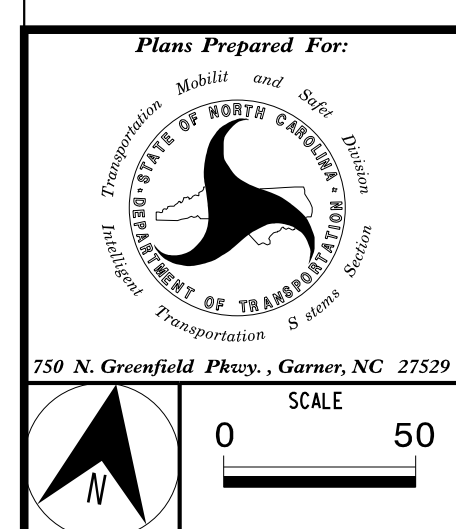
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1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
2	INSTALL ETHERNET CABLE	13	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	24	INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET	35	INSTALL CCTV CAMERA POLE MOUNTED CABINET	45	INSTALL STANDARD GUY ASSEMBLY	53B	STORE 50 FEET OF EACH COMMUNICATIONS CABLE	65	INSTALL HEAT SHRINK TUBING RETROFIT KIT
3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDABLE DUCT SEAL
4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
6	INSTALL FIBER OPTIC DROP CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET	39	INSTALL JUNCTION BOX	48B	REMOVE EXISTING COMMUNICATIONS CABLE	57	MODIFY EXISTING ELECTRICAL SERVICE	69	REMOVE EXISTING SIGNAL CABINET AND CONTROLLER
7	INSTALL TRACER WIRE	18	INSTALL CABLE(S) IN NEW CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	40A	INSTALL OVERSIZED JUNCTION BOX	49	BACK PULL EXISTING COMMUNICATIONS CABLE	58	INSTALL NEW ELECTRICAL SERVICE	70	REMOVE EXISTING CCTV CAMERA ASSEMBLY
8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
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Plans Prepared For:

**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

Scale: 0 50

DocuSigned by: Inger Van OsdeLL 3/18/2022

CADD File name: \_\_\_\_\_

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 Fax: (919) 677-2050

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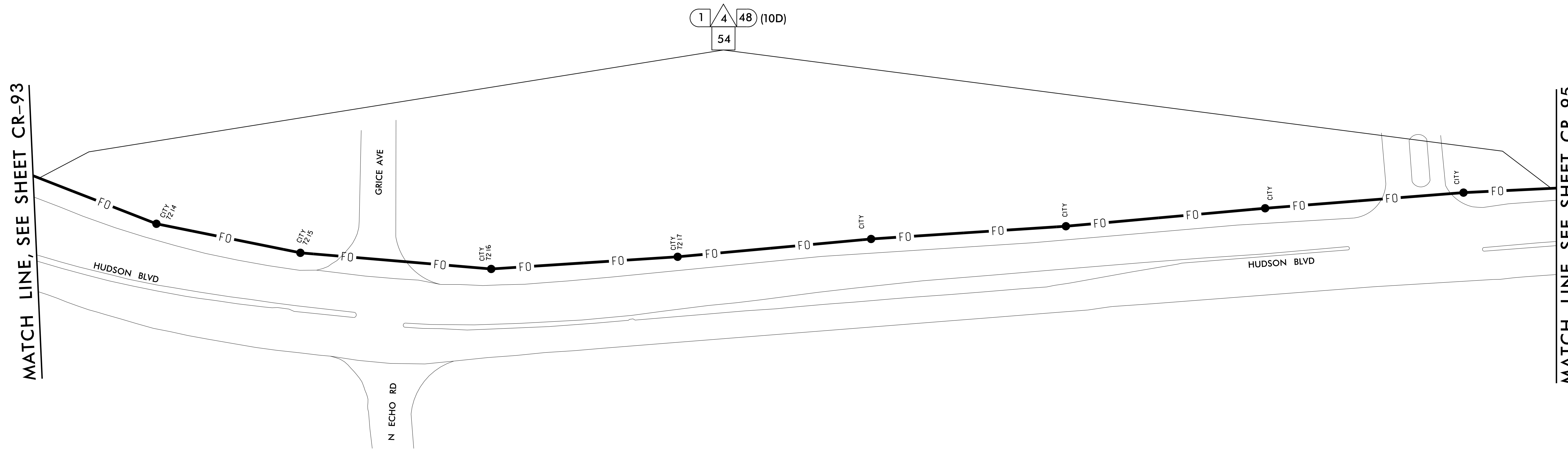
**Kimley-Horn**

Professional Engineer  
 Seal 028952

DocuSigned by: Inger Van OsdeLL 3/18/2022

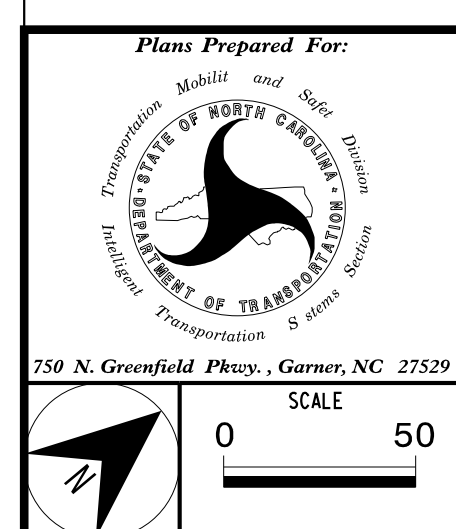
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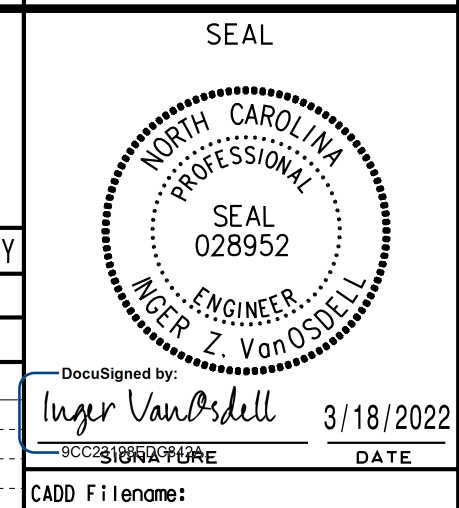
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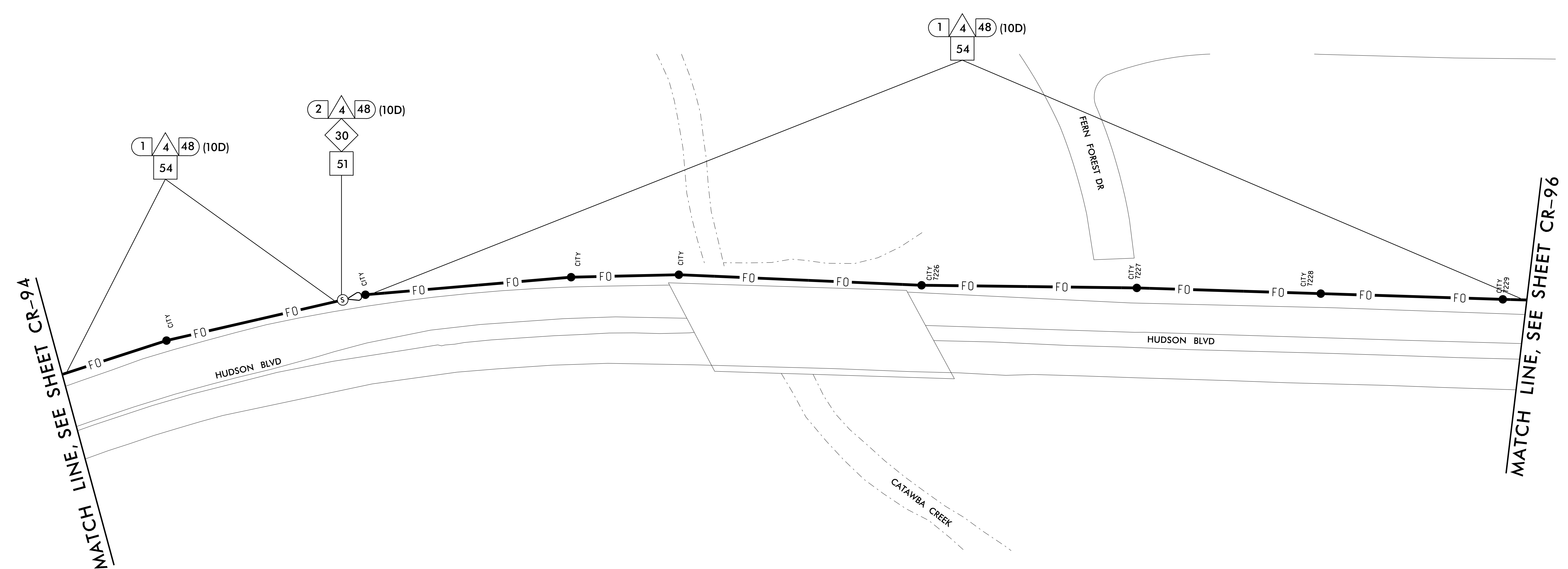
CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN	
DIVISION 12	GASTON COUNTY
PLAN DATE: DECEMBER 2021	REVIEWED BY: K. SMITH
PREPARED BY: S. BUTLER	REVIEWED BY: I. VAN OSDELL
REVISIONS	INIT. DATE

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3/17/2022  
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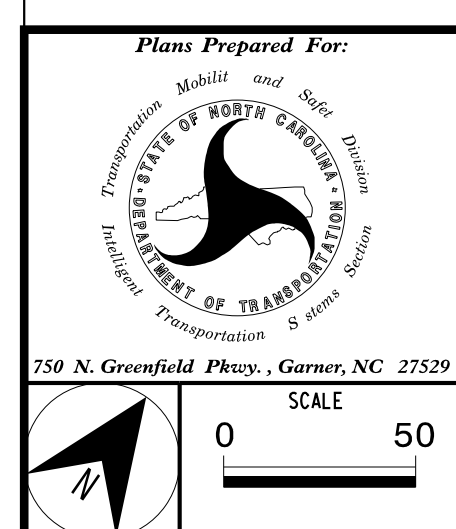
MATCH LINE, SEE SHEET CR-94

MATCH LINE, SEE SHEET CR-96

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Plans Prepared For:

**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

SCALE: 0 50

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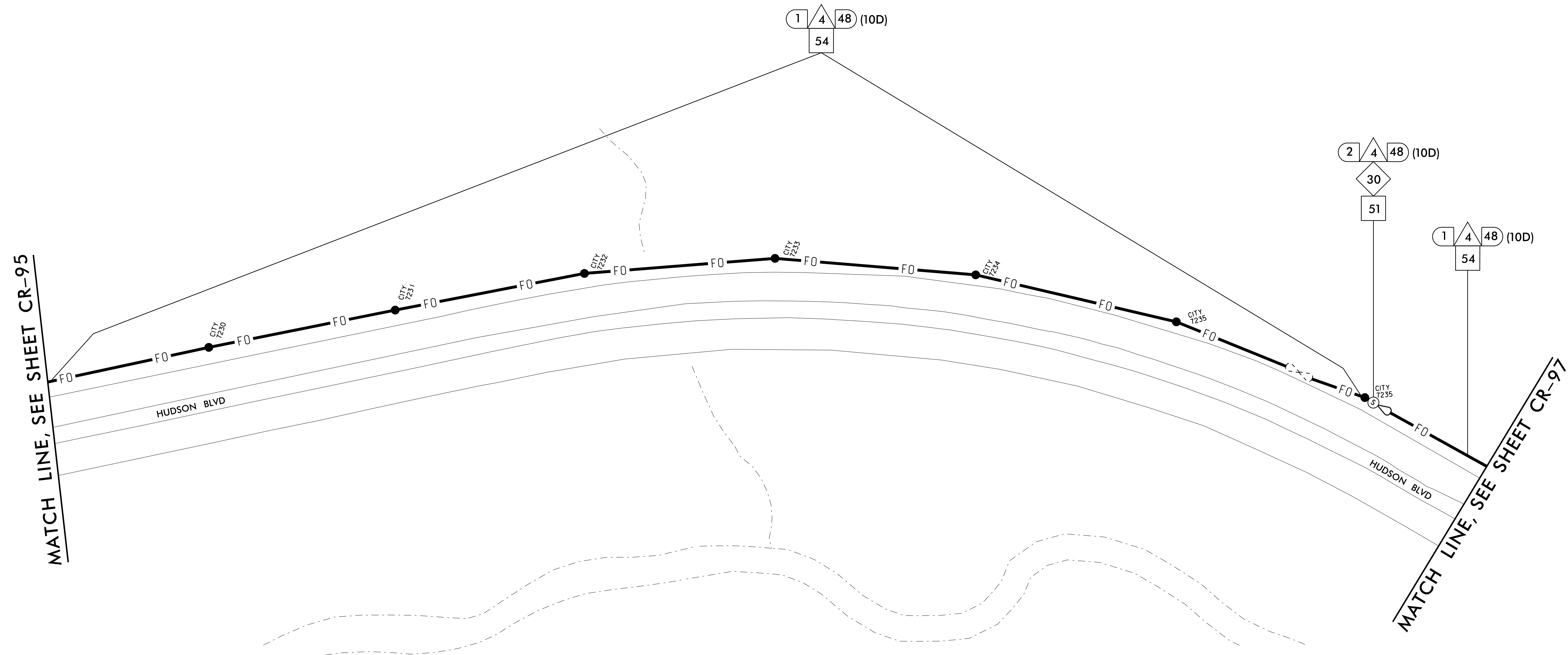
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**North Carolina Professional Engineer**  
I. VAN OSDELL  
028952

DocuSigned by:  
I. Van Osdel  
3/18/2022

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- MAINTAIN A MINIMUM OF 6 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.

Plans Prepared For:  
  
 250 N. Greenfield Place, Garner, NC 27529

**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

SCALE 0 50

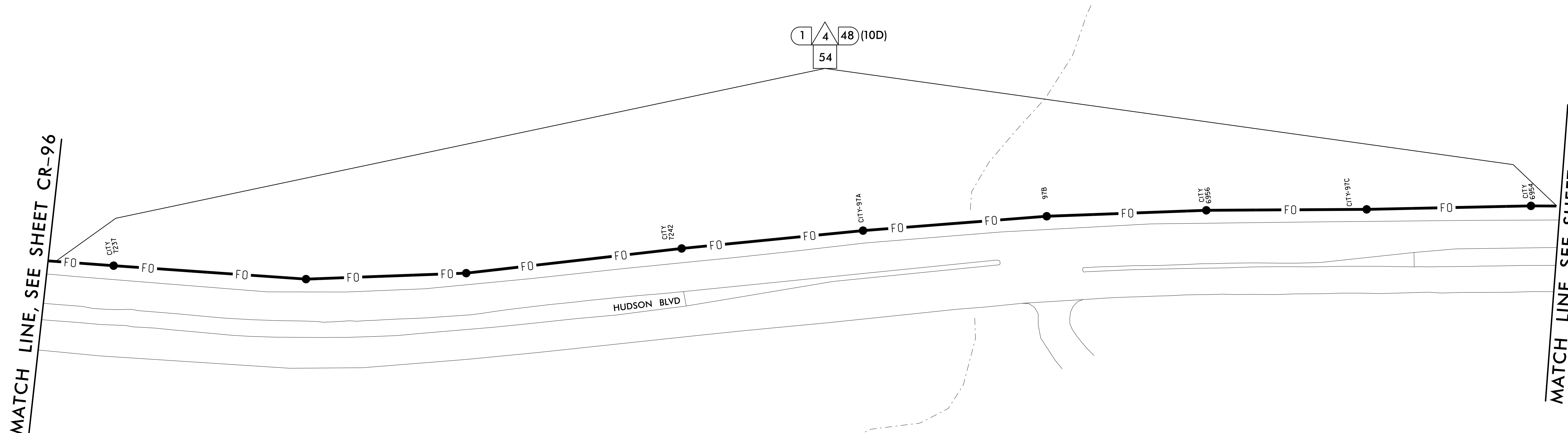
**Kimley»Horn**  
 NC License #F-0102  
 421 Fayetteville St., Suite 600  
 Raleigh, NC 27601  
 Tel: (919) 677-2000  
 Fax: (919) 677-2050

SEAL

DocuSigned by:  
 I. Van Osdel  
 3/18/2022

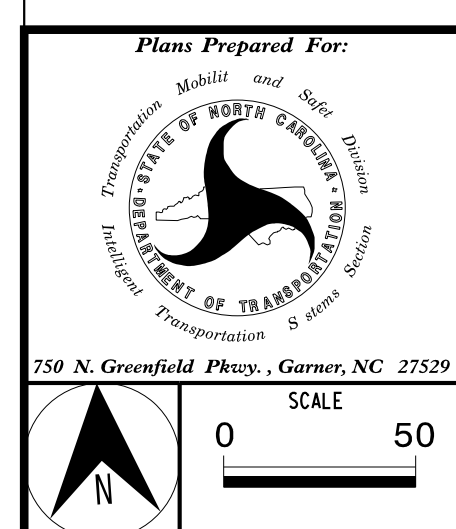
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1	INSTALL COAX CABLE	12	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL	23	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	44	INSTALL AERIAL GUY ASSEMBLY	53A	STORE 20 FEET OF COMMUNICATIONS CABLE	64	BOND MESSENGER CABLE TO POLE GROUND
2	INSTALL ETHERNET CABLE	13	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	24	INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET	35	INSTALL CCTV CAMERA POLE MOUNTED CABINET	45	INSTALL STANDARD GUY ASSEMBLY	53B	STORE 50 FEET OF EACH COMMUNICATIONS CABLE	65	INSTALL HEAT SHRINK TUBING RETROFIT KIT
3	EXISTING ETHERNET (OR COAX) CABLE	14	INSTALL POLYETHYLENE CONDUIT	25	INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	46	INSTALL SIDEWALK GUY ASSEMBLY	54	LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE	66	INSTALL MOLDBABLE DUCT SEAL
4	INSTALL SMFO CABLE	15	DIRECTIONAL DRILL CONDUIT	26	INSTALL NEW ETHERNET EDGE SWITCH	37	INSTALL CCTV CAMERA WOOD POLE	47	INSTALL MESSENGER CABLE	55	LASH CABLE(S) TO EXISTING MESSENGER / SIGNAL CABLE	67	SLACK SPAN
5	EXISTING SMFO CABLE	16	BORE AND JACK CONDUIT	27	INSTALL NEW FIBER OPTIC TRANSCEIVER	38	INSTALL CCTV CAMERA METAL POLE AND FOUNDATION	48A	REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	INSTALL CABINET BASE ADAPTER
6	INSTALL FIBER OPTIC DROP CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET	39	INSTALL JUNCTION BOX	48B	REMOVE EXISTING COMMUNICATIONS CABLE	57	MODIFY EXISTING ELECTRICAL SERVICE	69	REMOVE EXISTING SIGNAL CABINET AND CONTROLLER
7	INSTALL TRACER WIRE	18	INSTALL CABLE(S) IN NEW CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	40A	INSTALL OVERSIZED JUNCTION BOX	49	BACK PULL EXISTING COMMUNICATIONS CABLE	58	INSTALL NEW ELECTRICAL SERVICE	70	REMOVE EXISTING CCTV CAMERA ASSEMBLY
8	TRENCH	19	INSTALL CABLE(S) IN EXISTING RISER	30	INSTALL AERIAL SPLICE ENCLOSURE	40B	INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")	50	INSTALL CELL MODEM AND ANTENNA	59	INSTALL NEW EQUIPMENT CABINET DISCONNECT	71	REMOVE EXISTING CCTV CAMERA CABINET
9	INSTALL PVC CONDUIT	20	INSTALL CABLE(S) IN NEW RISER	31	MODIFY EXISTING INTERCONNECT CENTER / SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	51	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	60	BOND TRACER WIRE TO EQUIPMENT GROUND BUS	72	REMOVE CABINET FOUNDATION
10	INSTALL RIGID, GALVANIZED STEEL CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS	32	INSTALL POLE MOUNTED 336S SIGNAL CABINET AND CONTROLLER	42	INSTALL WOOD POLE	52A	INSTALL DELINEATOR MARKER	61	DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS	73	MODIFY EXISTING CABINET FOUNDATION
11	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	22	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	33	INSTALL BASE MOUNTED 332 SIGNAL CABINET WITH EXTENDER AND CONTROLLER	43	REMOVE EXISTING WOOD POLE	52B	INSTALL JUNCTION BOX MARKER	62	BOND RISER AND MESSENGER CABLE TO POLE GROUND	74	REMOVE EXISTING WIRELESS SYSTEM
								63	BOND RISER TO POLE GROUND	75	INSTALL WIRELESS ETHERNET SYSTEM		

**NOTES:**  
 1. ATTACH NEW COMMUNICATIONS CABLE TO FRONT SIDE OF POLE AT 40 INCHES BELOW POWER PRESENCE UNLESS OTHERWISE NOTED.  
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**CITY OF GASTONIA COMPUTERIZED SIGNAL SYSTEM COMMUNICATIONS CABLE AND CONDUIT ROUTING PLAN**

DIVISION 12 GASTON COUNTY

PLAN DATE: DECEMBER 2021 REVIEWED BY: K. SMITH

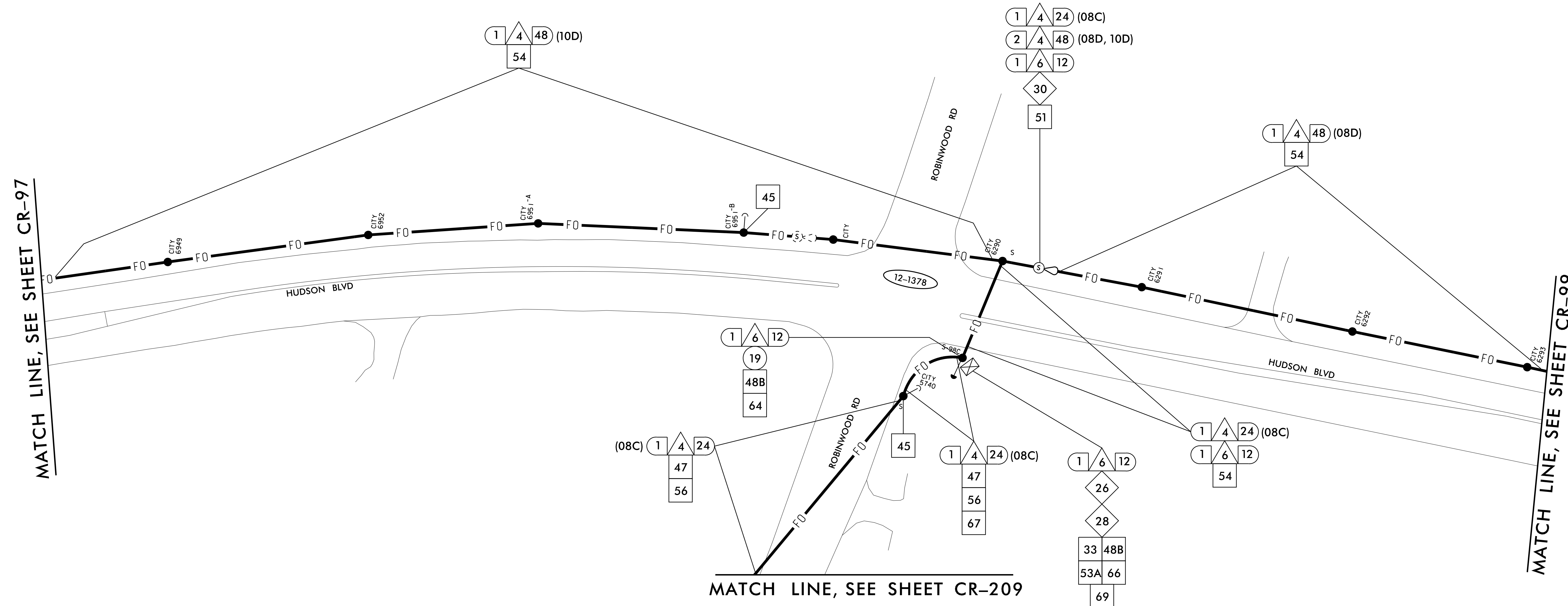
PREPARED BY: S. BUTLER REVIEWED BY: I. VAN OSDELL

REVISIONS	INIT.	DATE

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SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 SEAL 028952  
 I. VAN OSDELL  
 DATE 3/18/2022  
 CADD File name:

3/17/2022 K:\ARL\TPTD\ITS\01036569\_Gastonia\_SignalSystem\6\_Tasks\Plans\Cable\_Routing\SH097\_CR.dgn



MATCH LINE, SEE SHEET CR-97

MATCH LINE, SEE SHEET CR-99

MATCH LINE, SEE SHEET CR-209

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