TIP PROJECT: C-5224B

CONTRACT: C203195 TB

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	C-5224B	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
45437.1.1		PE
45437.3.2	CMS-0918(94)	CONST

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

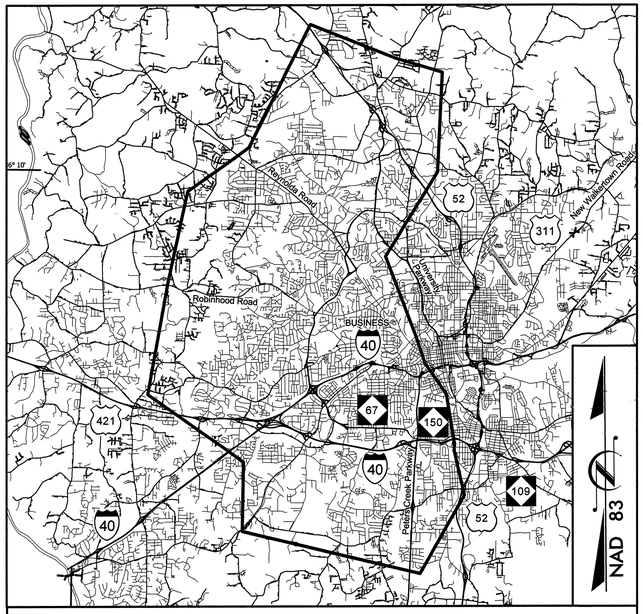
PLANS FOR PROPOSED IMPROVEMENTS

CITY OF WINSTON-SALEM

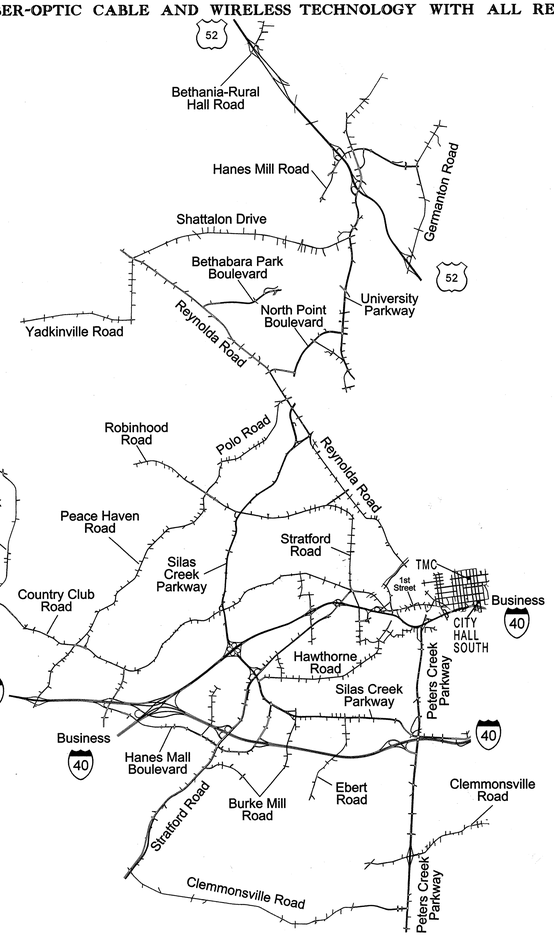
COMPUTERIZED TRAFFIC SIGNAL SYSTEM

PHASE B: WESTERN SECTION

REPLACEMENT & EXPANSION OF THE COMPUTERIZED TRAFFIC SIGNAL SYSTEM. RELATED WORK INCLUDES: UPGRADING LOCAL INTERSECTION CONTROLLERS, CABINETS, AND SYSTEM DETECTORS WITH LIMITED SIGNAL WIRING AND SIGNAL HEAD UPGRADES WHEN NECESSARY; EXPANSION OF CCTV MONITORING NETWORK; AND INSTALLATION OF A ETHERNET COMMUNICATIONS NETWORK COMPRISED OF FIBER-OPTIC CABLE AND WIRELESS TECHNOLOGY WITH ALL RELATED EQUIPMENT.



VICINITY MAP



NAD 83

Phase B

Volume I of III Communications & CCTV Field Infrastructure, Building Modifications and Special Details

2012 STANDARD SPECIFICATIONS

LETTING DATE: JULY 16, 2013

PROJECT LENGTH = 75 MILES

750 Greenfield Parkway, Garner, NC 27529

NCDOT CONTACTS:
TRANSPORTATION MOBILITY & SAFETY DIVISION
INTELLIGENT TRANSPORTATION SYSTEMS SECTION
GREG A. FULLER, PE - STATE ITS & SIGNALS ENGINEER

ATKINS
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RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

J. TODD BROOKS, PE - ATKINS PROJECT MANAGER
LISA M. MOON, PE - ATKINS SENIOR PROJECT ENGINEER
H. ALFRED BADGETT, PE - ATKINS SENIOR PROJECT ENGINEER

Winston-Salem

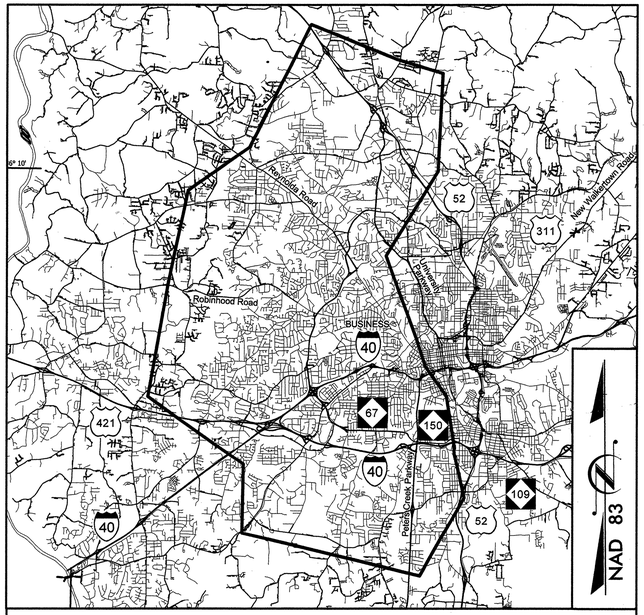
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

SIGNATURE *DATE* 3/22/13

TIP PROJECT: C-5224B

CONTRACT: C203195 TB



VICINITY MAP

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED IMPROVEMENTS

CITY OF WINSTON-SALEM

COMPUTERIZED TRAFFIC SIGNAL SYSTEM

PHASE B: WESTERN SECTION

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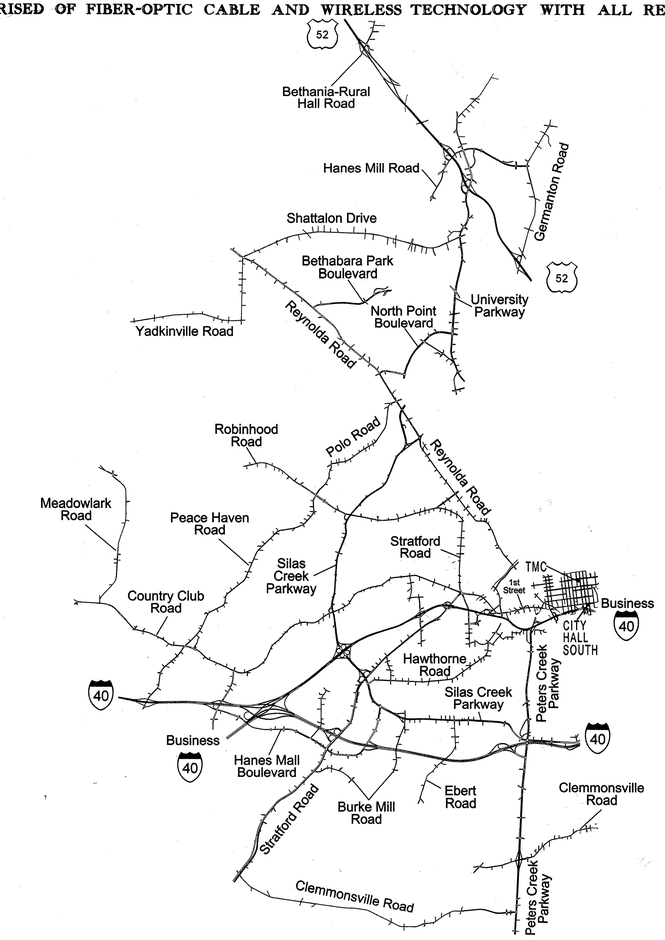

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	C-5224B	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
45437.1.1		PE
45437.3.2	CMS-0918(94)	CONST

Part 1 of 2

Phase B

Volume I of III
Communications & CCTV Field Infrastructure, Building Modifications and Special Details

2012 STANDARD SPECIFICATIONS

LETTING DATE: JULY 16, 2013

PROJECT LENGTH = 75 MILES

750 Greenfield Parkway, Garner, NC 27529

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Winston-Salem

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	2

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3	SUMMARY OF QUANTITIES
4	OVERVIEW OF PHASES A & B
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7	WIRELESS FIELD EQUIPMENT BLOCK DIAGRAM
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1	TITLE SHEET (FIBER-OPTIC SPLICING)
2	INDEX OF SHEETS AND ROADWAY STANDARD DRAWINGS
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4	CITY SIGNAL PLANS INDEX SHEET
5 THRU 25	SUMMARY OF WORK BY INTERSECTION
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ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" PROJECT SERVICES UNIT – N.C. DEPARTMENT OF TRANSPORTATION – RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE ARE HEREBY CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
848.01	CONCRETE SIDEWALK
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES – TYPE III
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED ATTENUATOR – DELINEATION
1180.01	SKINNY DRUM
1700.01	ELECTRICAL SERVICE OPTIONS
1700.02	ELECTRICAL SERVICE GROUNDING
1705.01	SIGNAL HEADS – VEHICULAR SIGNAL HEADS
1705.02	SIGNAL HEADS – PEDESTRIAN ASSEMBLIES
1705.03	SIGNAL HEADS – WIRE COLOR CONVENTIONS
1715.01	UNDERGROUND CONDUIT – TRENCHING
1716.01	JUNCTION BOXES
1720.01	WOOD POLES
1721.01	GUY ASSEMBLIES
1725.01	INDUCTIVE DETECTION LOOPS
1730.01	FIBER-OPTIC CABLE – SPARE CABLE STORAGE
1736.01	SPREAD SPECTRUM RADIO
1743.01	PEDESTAL
1751.01	CONTROLLERS AND CABINETS – CABINET COMPONENT LAYOUT
1751.02	CONTROLLERS AND CABINETS – POWER, GROUND AND AUXILIARY

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: NC Department of Transportation, Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Index of Sheets and
Roadway Standard Drawings
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL 022516 ENGINEER LISA M. MOON NORTH CAROLINA PROFESSIONAL

SIGNATURE 3-22-13 DATE

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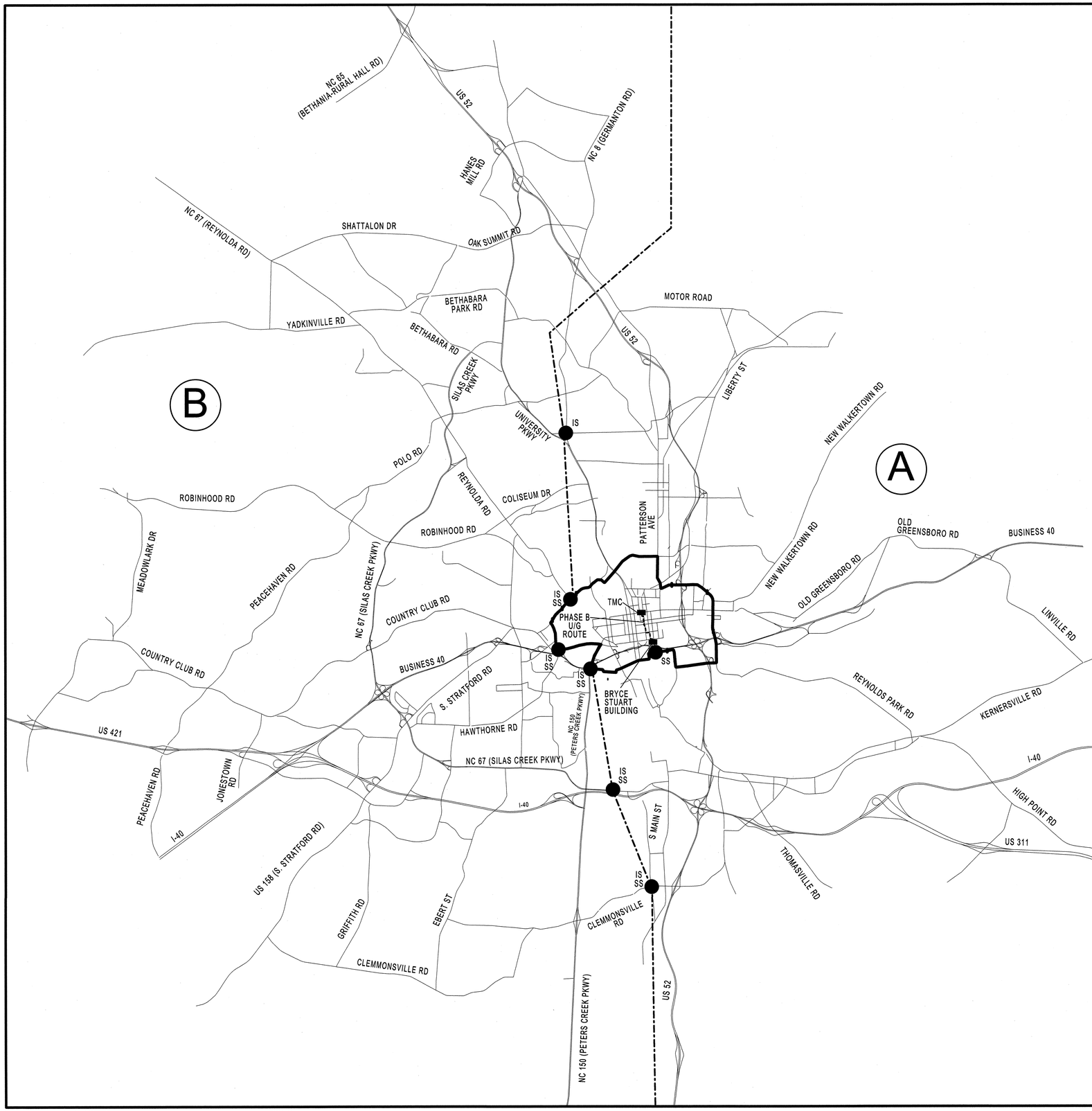
13833

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203195

SUMMARY OF QUANTITIES - C-5224B

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
2591000000-E	848	8	SY	4" CONCRETE SIDEWALK
4405000000-E	1110	840	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	72	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4415000000-N	1115	3	EA	FLASHING ARROW BOARD
4420000000-N	1120	3	EA	PORTABLE CHANGEABLE MESSAGE SIGN
4430000000-N	1130	150	EA	DRUMS
4435000000-N	1135	150	EA	CONES
4445000000-E	1145	50	LF	BARRICADES (TYPE III)
4450000000-N	1150	400	HR	FLAGGER
4480000000-N	1165	6	EA	TMA
4510000000-N	SP	450	HR	LAW ENFORCEMENT
4516000000-N	1180	100	EA	SKINNY DRUM
7060000000-E	1705	4,910	LF	SIGNAL CABLE
7120000000-E	1705	1	EA	VEHICLE SIGNAL HEAD (12", 3 SECTION)
7144000000-E	1705	13	EA	VEHICLE SIGNAL HEAD (12", 5 SECTION)
7252000000-E	1710	99,190	LF	MESSENGER CABLE (1/4")
7264000000-E	1710	125	LF	MESSENGER CABLE (3/8")
7279000000-E	1715	93,225	LF	TRACER WIRE
7301000000-E	1715	41,115	LF	DIRECTIONAL DRILL (**********) (2, 2")
7312000000-N	1716	242	EA	JUNCTION BOX (**********) (OVER-SIZED)
7312000000-N	1716	62	EA	JUNCTION BOX (**********) (SPECIAL-SIZED)
7324000000-N	1716	22	EA	JUNCTION BOX (STANDARD SIZE)
7360000000-N	1720	7	EA	WOOD POLE
7372000000-N	1721	358	EA	GUY ASSEMBLY
7384000000-E	1722	14	EA	**** RISER WITH ********** (1", HEAT SHRINK TUBING)
7408000000-E	1722	16	EA	1" RISER WITH WEATHERHEAD
7420000000-E	1722	82	EA	2" RISER WITH WEATHERHEAD
7432000000-E	1722	217	EA	2" RISER WITH HEAT SHRINK TUBING
7444000000-E	1725	2,530	LF	INDUCTIVE LOOP SAWCUT
7516000000-E	1730	312,235	LF	COMMUNICATIONS CABLE (**FIBER) (24)
7516000000-E	1730	84,380	LF	COMMUNICATIONS CABLE (**FIBER) (36)
7516000000-E	1730	3,520	LF	COMMUNICATIONS CABLE (**FIBER) (48)
7516000000-E	1730	23,195	LF	COMMUNICATIONS CABLE (**FIBER) (72)
7528000000-E	1730	44,830	LF	DROP CABLE
7540000000-N	1731	161	EA	SPLICE ENCLOSURE
7552000000-N	1731	170	EA	INTERCONNECT CENTER
7566000000-N	1733	69	EA	DELINEATOR MARKER
7575142200-N	SP	115	EA	NEW ELECTRICAL SERVICE
7575160000-E	1734	32,950	LF	REMOVE EXISTING COMMUNICATIONS CABLE
7575180000-N	1735	5	EA	CABLE TRANSFER
7636000000-N	1745	24	EA	SIGN FOR SIGNALS
7684000000-N	1750	24	EA	SIGNAL CABINET FOUNDATION
7686000000-N	1752	103	EA	CONDUIT ENTRANCE INTO EXISTING FOUNDATION
7687000000-N	1752	114	EA	MODIFY FOUNDATION FOR CONTROL-LER CABINET
7696000000-N	1751	146	EA	CONTROLLER WITH CABINET (**********) (2070L, 332, BASE MOUNTED)
7696000000-N	1751	22	EA	CONTROLLER WITH CABINET (**********) (2070L, 336S, POLE MOUNTED)
7708000000-N	1751	923	EA	DETECTOR CARD (**********) (MODEL 222)
7901000000-N	1753	142	EA	CABINET BASE EXTENDER
7901010000-N	1753	3	EA	CABINET BASE ADAPTER
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM 4" RISER WITH SEAL
7980000000-N	SP	385	EA	GENERIC SIGNAL ITEM 5/8" X 10' GROUNDING ELECTRODE
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM 900MHZ ETHERNET RADIO
7980000000-N	SP	92	EA	GENERIC SIGNAL ITEM AUXILIARY OUTPUT FILE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM CCTV CABINET (BASE MOUNT)
7980000000-N	SP	17	EA	GENERIC SIGNAL ITEM CCTV CABINET (POLE MOUNT)
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM CCTV CABINET FOUNDATION
7980000000-N	SP	18	EA	GENERIC SIGNAL ITEM CCTV CAMERA ASSEMBLY
7980000000-N	SP	15	EA	GENERIC SIGNAL ITEM CCTV WOOD POLE
7980000000-N	SP	18	EA	GENERIC SIGNAL ITEM DIGITAL HARDWARE VIDEO ENCODER
7980000000-N	SP	174	EA	GENERIC SIGNAL ITEM ETHERNET EDGE SWITCH
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM FURNISH 2018 ENHANCED CONFLICT MONITOR
7980000000-N	SP	9	EA	GENERIC SIGNAL ITEM FURNISH 2070L CONTROLLER
7980000000-N	SP	7	EA	GENERIC SIGNAL ITEM FURNISH 332 CABINET
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH 336S CABINET
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH 900MHZ ETHERNET RADIO
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH CCTV CABINET (POLE MOUNT)
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH CCTV CAMERA ASSEMBLY
7980000000-N	SP	46	EA	GENERIC SIGNAL ITEM FURNISH DETECTOR CARD (MODEL 222)
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH DIGITAL HARDWARE VIDEO ENCODER
7980000000-N	SP	9	EA	GENERIC SIGNAL ITEM FURNISH ETHERNET EDGE SWITCH
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH ETHERNET RADIO LIGHT-NING ARRESTOR
7980000000-N	SP	36	EA	GENERIC SIGNAL ITEM GUY ASSEMBLY (AERIAL)
7980000000-N	SP	37	EA	GENERIC SIGNAL ITEM GUY ASSEMBLY (SIDEWALK)
7980000000-N	SP	22	EA	GENERIC SIGNAL ITEM HEAT SHRINK TUBING RETROFIT KIT
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM HUB SPLICE CENTER (36 FIBER)
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM INSTALL CONTROLLER (2070L) IN EXISTING CABINET
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM IS 2" RISER WITH HEAT SHRINK TUBING
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM IS HEAT SHRINK TUBING RETROFIT KIT
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM IS JUNCTION BOX (OVER-SIZED)
7980000000-N	SP	12	EA	GENERIC SIGNAL ITEM IS JUNCTION BOX (SPECIAL-SIZED)
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM IS MODIFY EXISTING SPLICE
7980000000-N	SP	39	EA	GENERIC SIGNAL ITEM IS SPLICE ENCLOSURE
7980000000-N	SP	23	EA	GENERIC SIGNAL ITEM MODIFY EXISTING ELECTRICAL SERVICE (TRAFFIC SIGNAL)
7980000000-N	SP	15	EA	GENERIC SIGNAL ITEM MODIFY EXISTING SPLICE
7980000000-N	SP	22	EA	GENERIC SIGNAL ITEM POLE GROUNDING SYSTEM
7980000000-N	SP	163	EA	GENERIC SIGNAL ITEM REMOVE SPLICE CABINET
7980000000-N	SP	15	EA	GENERIC SIGNAL ITEM TERMINAL SPLICE CABINET
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM TEST CONTROLLER (2070L)
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM MODIFY CCTV SOFTWARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM MODIFY NETWORK MANAGEMENT SOFTWARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM MODIFY REGIONAL ITS GUI SOFT-WARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM MODIFY SIGNAL SYSTEM SOFTWARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM TMC MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM TRAINING
7990000000-E	SP	13,510	LF	GENERIC SIGNAL ITEM AERIAL CABLE PROTECTOR
7990000000-E	SP	2,455	LF	GENERIC SIGNAL ITEM ETHERNET CABLE
7990000000-E	SP	99,850	LF	GENERIC SIGNAL ITEM IS COMMUNICATIONS CABLE (24 FIBER)
7990000000-E	SP	195,610	LF	GENERIC SIGNAL ITEM IS COMMUNICATIONS CABLE (48 FIBER)
7990000000-E	SP	39,780	LF	GENERIC SIGNAL ITEM IS COMMUNICATIONS CABLE (96 FIBER)
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM IS DIRECTIONAL DRILL (1, 2")
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM IS TRACER WIRE
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM IS UNDERGROUND CONDUIT (1, 2")
7990000000-E	SP	17,620	LF	GENERIC SIGNAL ITEM LEAD-IN CABLE
7990000000-E	SP	760	LF	GENERIC SIGNAL ITEM PULL BACK AND REINSTALL COMMUNICATIONS CABLE
7990000000-E	SP	1,995	LF	GENERIC SIGNAL ITEM UNDERGROUND CONDUIT (1, 2")
7990000000-E	SP	49,260	LF	GENERIC SIGNAL ITEM UNDERGROUND CONDUIT (2, 2")
7991000000-E	SP	8	SF	GENERIC SIGNAL ITEM BRICK PAVERS

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	4



A — Phase Designation

Boundary between Phase A and Phase B

Red Ring

Phase B Underground Route

● Location of splice initially installed/modified in Phase A and subsequently modified in Phase B.

SS Signal System Splice Location

IS IS Splice Location

NOTES:

The intent of this overview is to illustrate the general geographic relationship between Phases A & B and general locations where the Phase A & B contractors will need to coordinate work within a common splice enclosure/center. Refer to CL sheets (Volume I), cable schematics, and Splice Details (Volume II) for specific construction details and information.

Phase A includes the Red Ring around the downtown area, the area within the Red Ring,and eastern Winston-Salem. The underground route between the TMC and Bryce Stuart Building (approximately 2200′ in length) in the downtown area will be completed under Phase B so that the existing copper system can be maintained as long as possible.

Phase B incudes western Winston-Salem and the approximately 2200′ underground route between the TMC and Bryce Stuart Building in the downtown area.

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Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System

Overview of Phases A & B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LW Moon

SCALE

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

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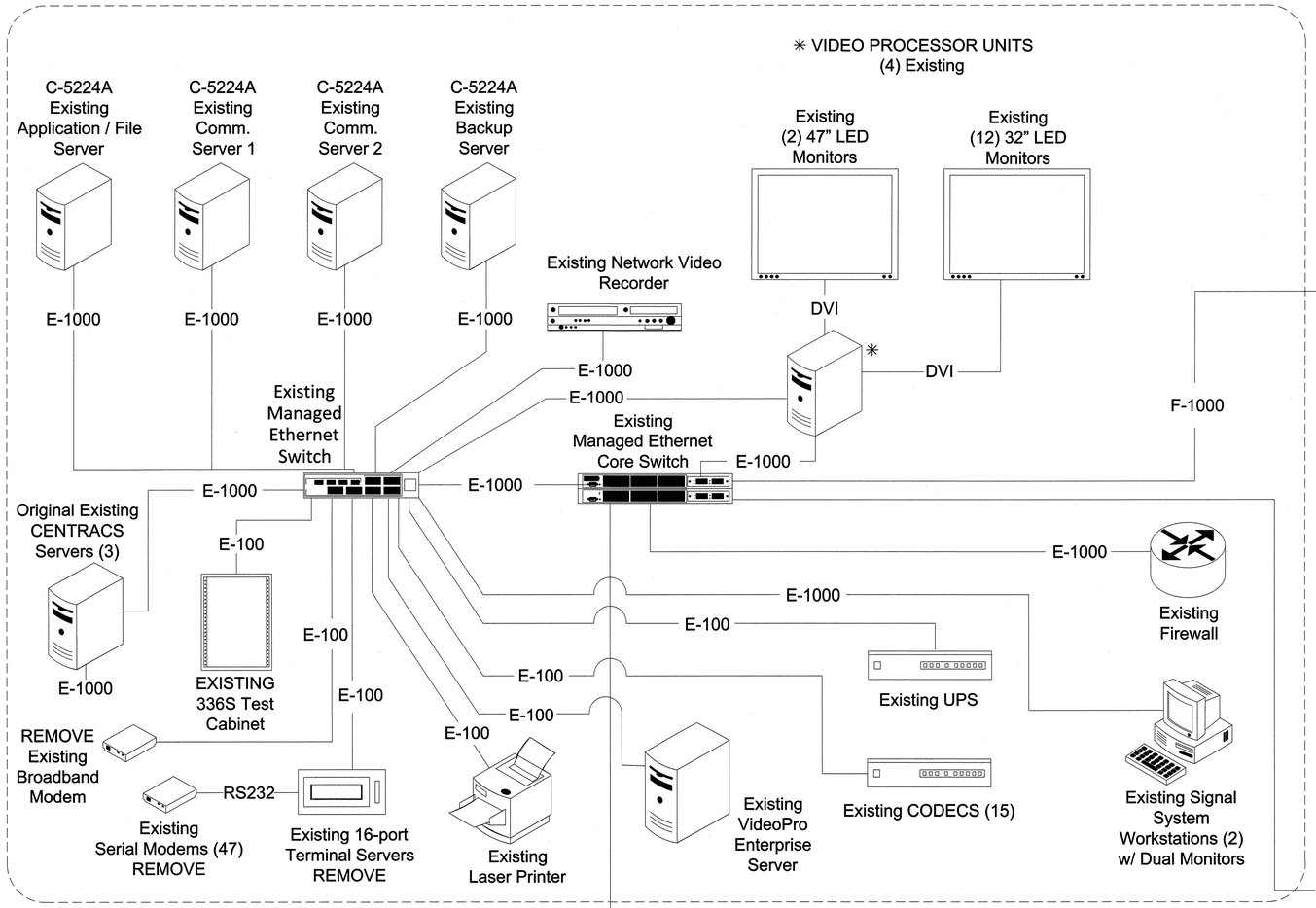
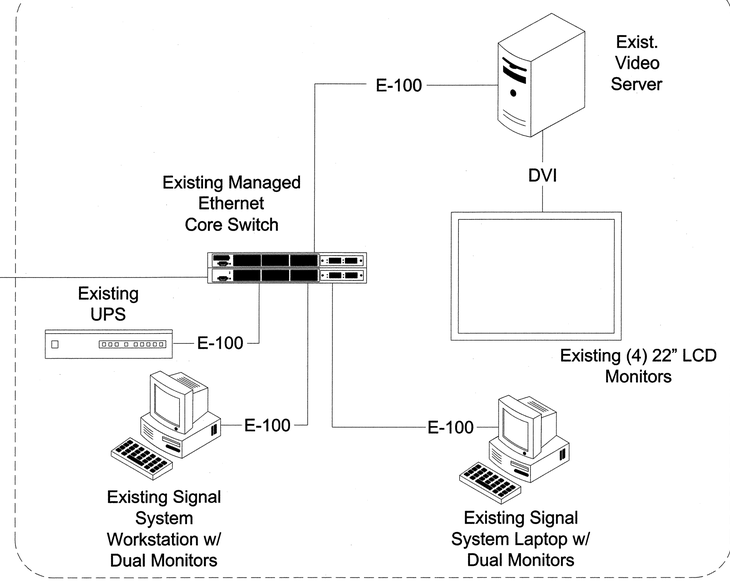
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	5

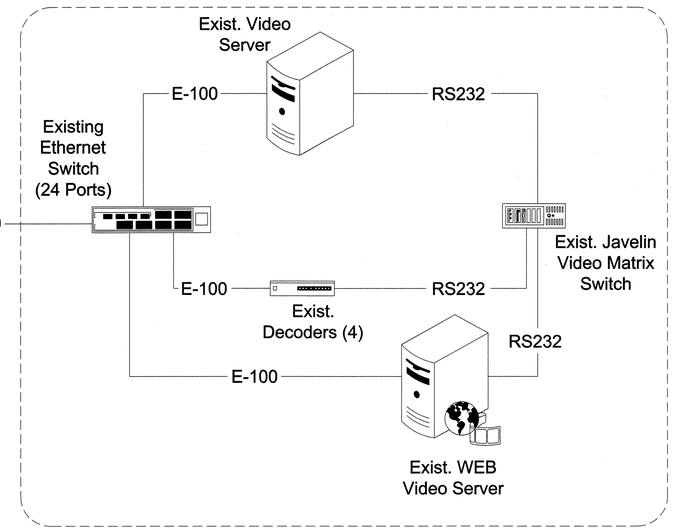
City TMC



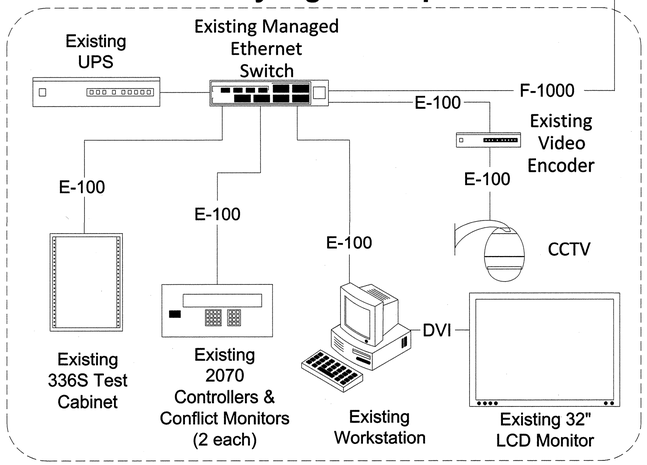
Bryce A Stuart Building



TRTMC



City Signal Shop



NOTES:

1. REMOVE REMAINING EXISTING SERIAL MODEMS, AND TERMINAL SERVERS AFTER MIGRATION OF PHASE B FROM EXISTING TWISTED-PAIR COMMUNICATIONS SYSTEM .

Connection Legend

E-100	10/100 TX Ethernet	F-100	10/100 FX Ethernet
E-1000	10/1000 TX Ethernet	F-1000	10/1000 FX Ethernet
RS232	RS232 Connection	DVI	Digital Video Interface (DVI)
NTSC	NTSC Video		

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Prepared for the Offices of:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System

Central Block Diagram (1 of 2)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	HAB
PREPARED BY:	BJS	REVIEWED BY:	JTB

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 19962 ENGINEER HENRY ALFRED BADGETT, III
SIGNATURE DATE 4/2/13

CADD Filename: phase B_centralblk_1of2.dgn

13-MAR-2013 17:18
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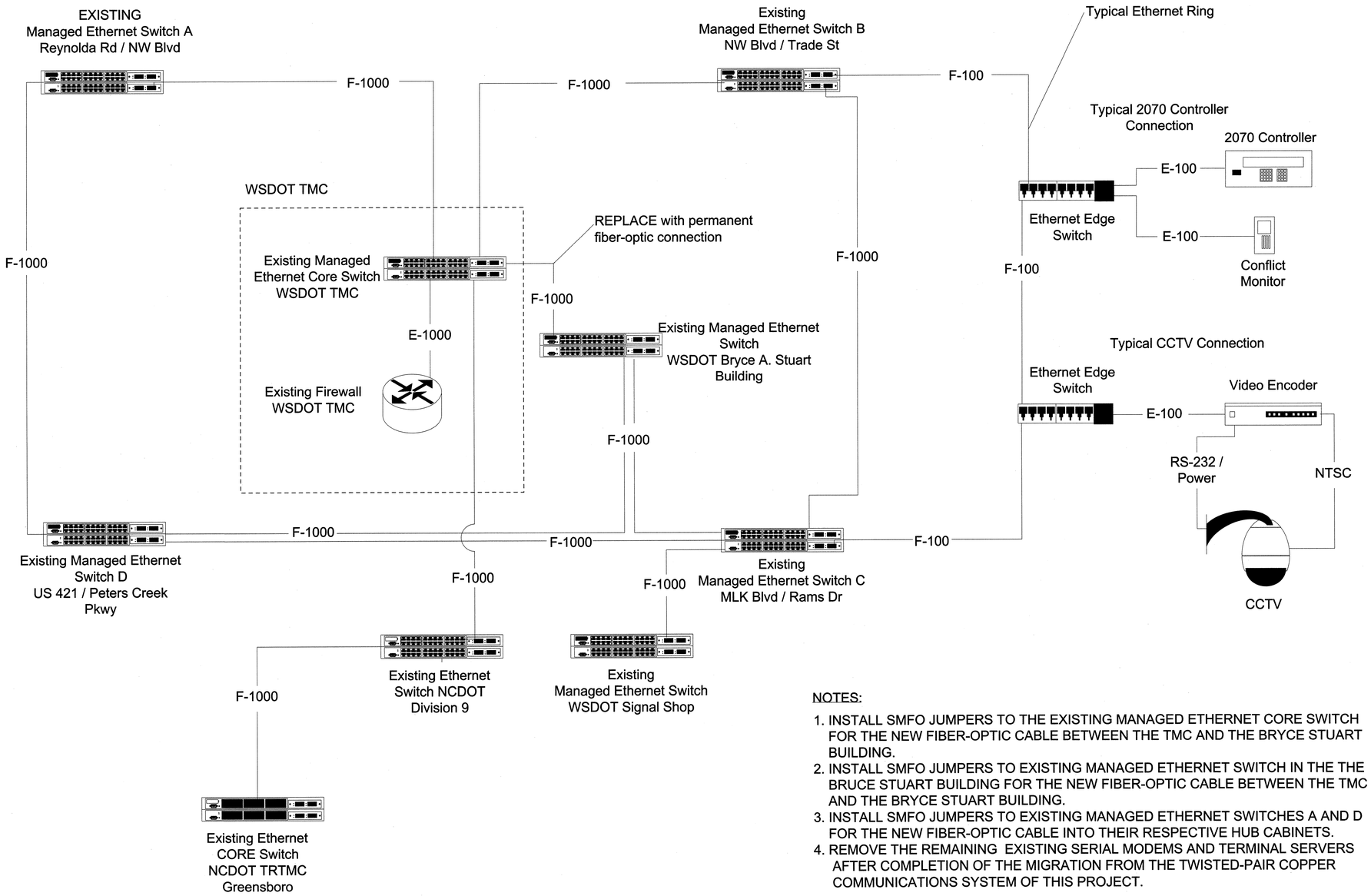
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	6



NOTES:

1. INSTALL SMFO JUMPERS TO THE EXISTING MANAGED ETHERNET CORE SWITCH FOR THE NEW FIBER-OPTIC CABLE BETWEEN THE TMC AND THE BRYCE STUART BUILDING.
2. INSTALL SMFO JUMPERS TO EXISTING MANAGED ETHERNET SWITCH IN THE THE BRUCE STUART BUILDING FOR THE NEW FIBER-OPTIC CABLE BETWEEN THE TMC AND THE BRYCE STUART BUILDING.
3. INSTALL SMFO JUMPERS TO EXISTING MANAGED ETHERNET SWITCHES A AND D FOR THE NEW FIBER-OPTIC CABLE INTO THEIR RESPECTIVE HUB CABINETS.
4. REMOVE THE REMAINING EXISTING SERIAL MODEMS AND TERMINAL SERVERS AFTER COMPLETION OF THE MIGRATION FROM THE TWISTED-PAIR COPPER COMMUNICATIONS SYSTEM OF THIS PROJECT.

Connection Legend

E-100	10/100 TX Ethernet	F-100	10/100 FX Ethernet
E-1000	10/1000 TX Ethernet	F-1000	10/1000 FX Ethernet
RS232	RS232 Connection	DVI	DVI
NTSC	NTSC Video		

ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System

Central Block Diagram (2 of 2)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	HAB
PREPARED BY:	BJS	REVIEWED BY:	JTB

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 19962 ENGINEER HENRY ALFRED BADGETT III

H Alfred Badgett 3/22/13
SIGNATURE DATE

CADD Filename: Phase B_centralblk_2of2.dgn

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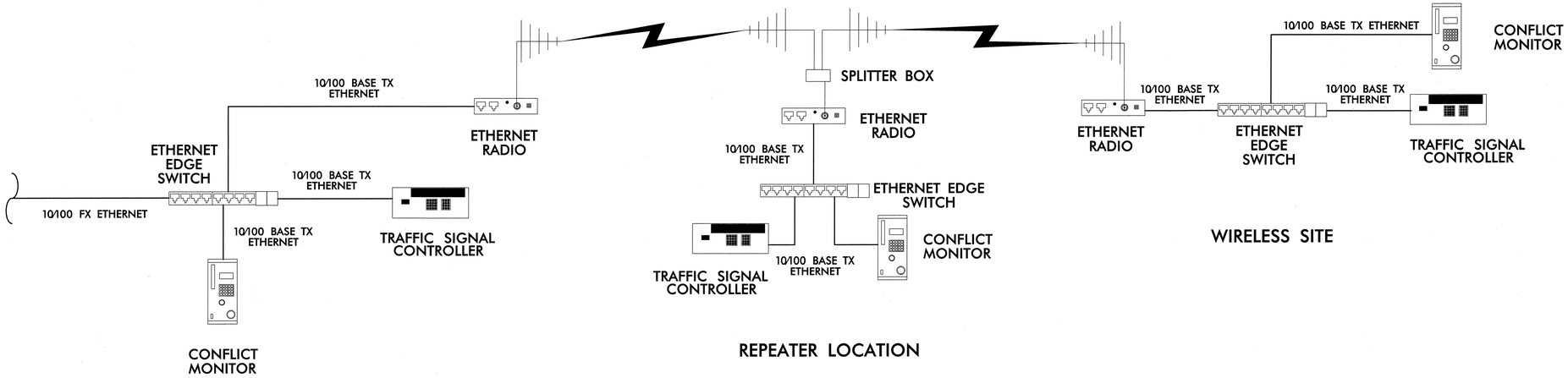
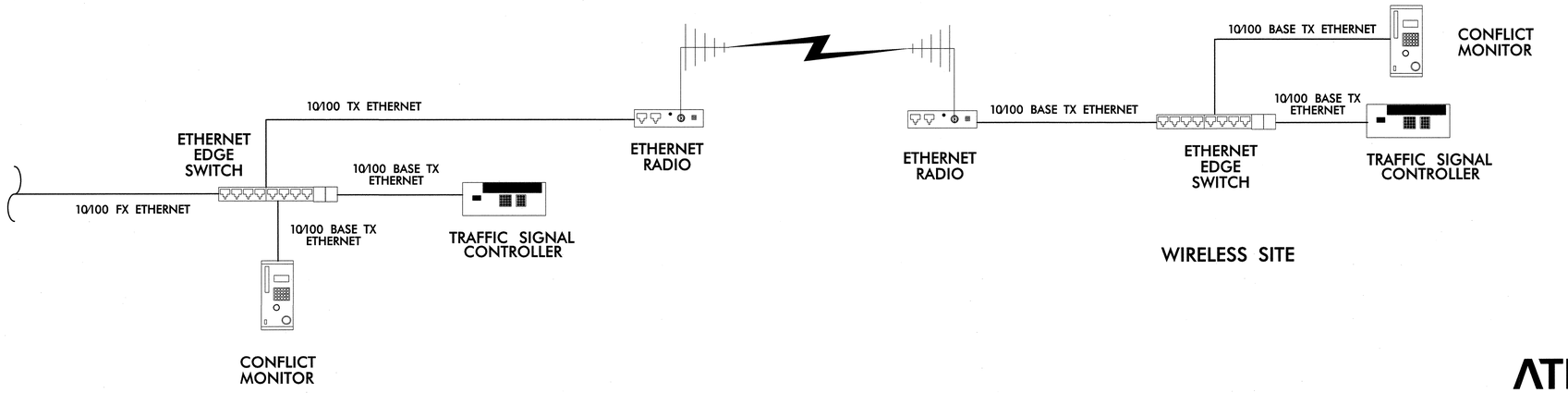
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	7

WIRELESS LINK TO TRAFFIC SIGNAL WITH REPEATER SITE



WIRELESS LINK TO TRAFFIC SIGNAL



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RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Wireless Field Equipment
Block Diagram
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	HAB
PREPARED BY:	BJS	REVIEWED BY:	JTB

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 19962 ENGINEER HENRY ALFRED BADGETT III

H Alfred Badgett 3/12/13
SIGNATURE DATE

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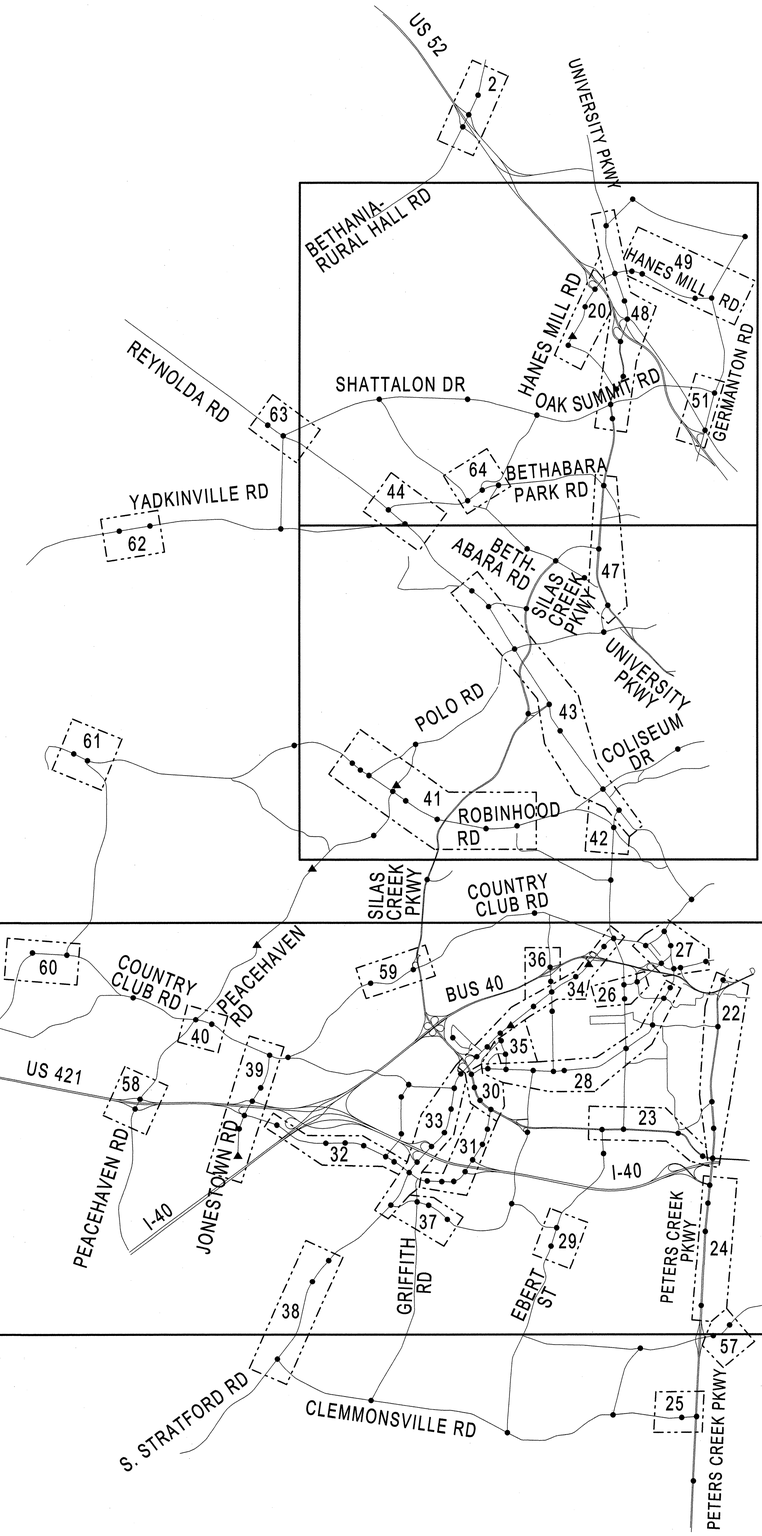
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	8



LEGEND

- TRAFFIC SIGNAL
- FUTURE SIGNAL
- CONTROL ZONE BOUNDARY

PROPOSED LOOP — 4 C, 3 D — 'COMBO' LOOP — DEDICATED LOOP — EXISTING LOOP — 4, 3 — SYSTEM DETECTOR I.D.

CONTROL ZONE IDENTIFICATION NUMBER — **11**

CITY INTERSECTION NUMBER — C-XXXX / 09-XXXX — NCDOT SIGNAL IDENTIFICATION NUMBER

ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System System Detectors and Control Zone Schematic Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	SGH	REVIEWED BY:	LM Moon

SCALE: NONE

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 029531 ENGINEER STEVEN G. HAYNIE
SIGNATURE 3/23/13 DATE

CADD Filename: Phase B Sys Det Overview.dgn

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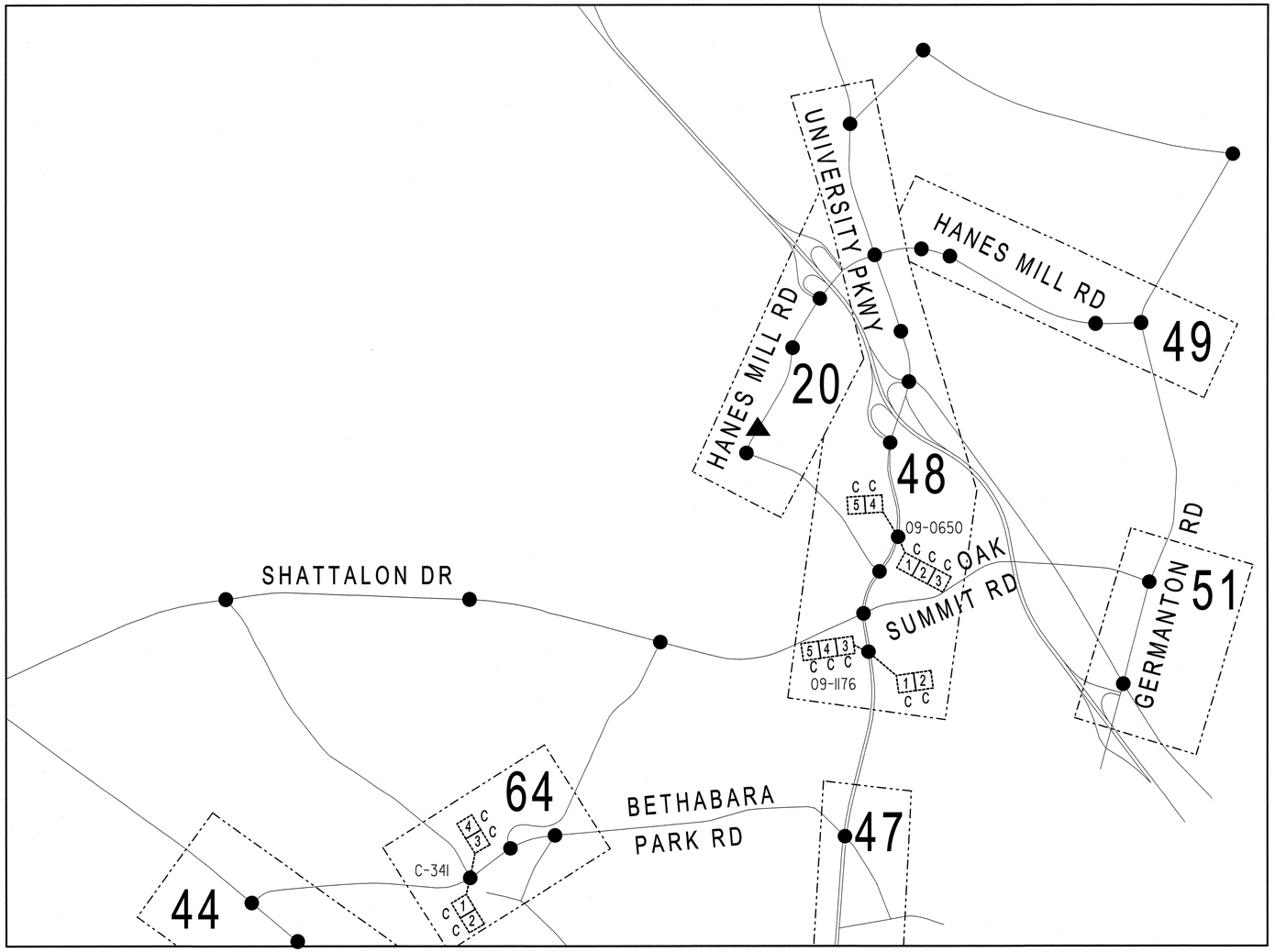
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	9



LEGEND

- TRAFFIC SIGNAL
- FUTURE SIGNAL
- CONTROL ZONE BOUNDARY

PROPOSED LOOP — 4 C / 3 D — 'COMBO' LOOP / DEDICATED LOOP — EXISTING LOOP 4 3

SYSTEM DETECTOR I.D.

CONTROL ZONE IDENTIFICATION NUMBER — **11**

CITY INTERSECTION NUMBER — C-XXXX / 09-XXXX — NCDOT SIGNAL IDENTIFICATION NUMBER

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
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Winston-Salem Signal System System Detectors and Control Zone Schematic Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	SGH	REVIEWED BY:	LM Moon

SCALE: NONE

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 029531 ENGINEER
STEVEN G. HAYNIE

SIGNATURE DATE 3/23/13

CADD Filename: Phase B Sys Det Overview.dgn

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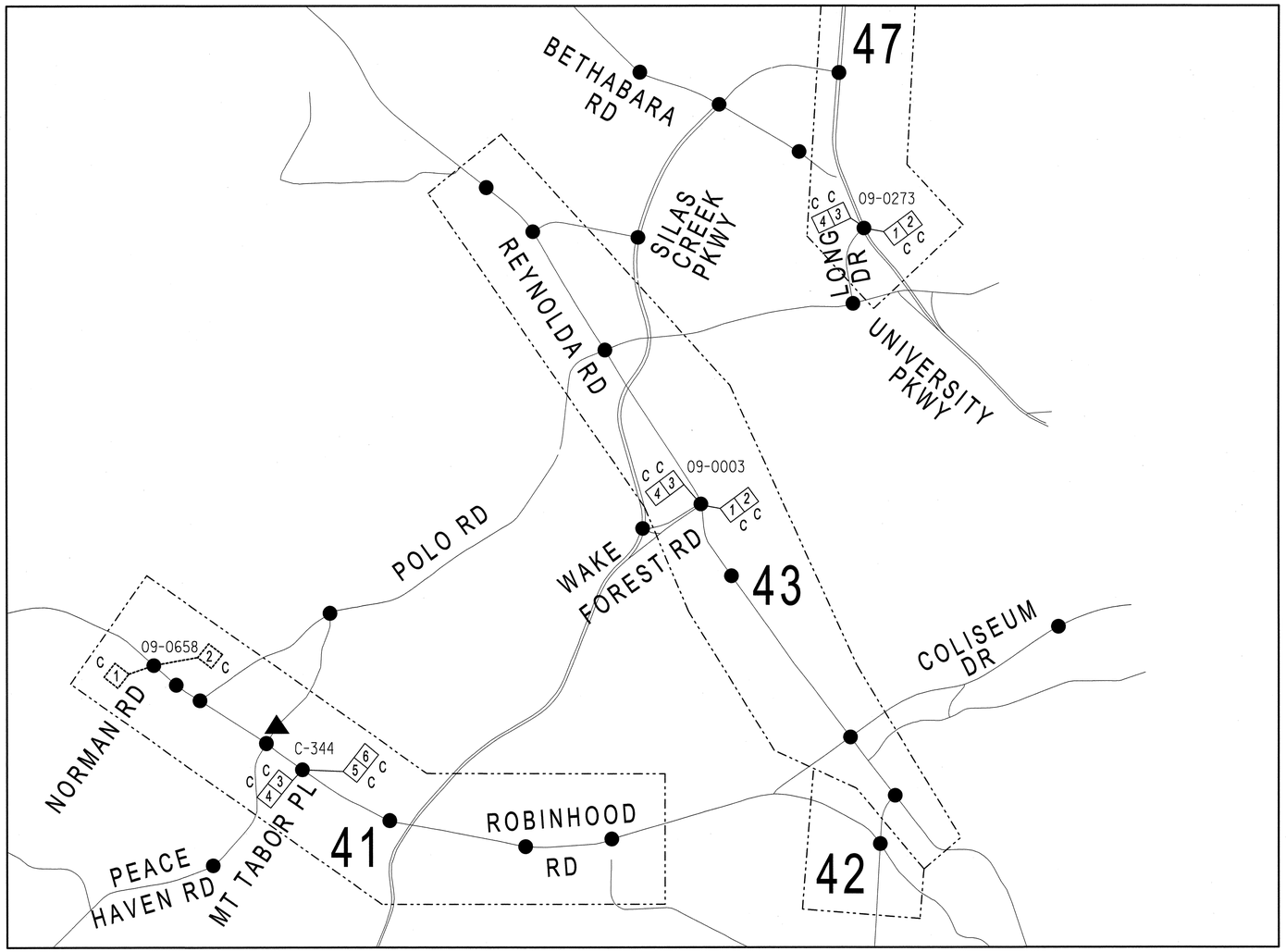
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	10



LEGEND

- TRAFFIC SIGNAL
- FUTURE SIGNAL
- CONTROL ZONE BOUNDARY

PROPOSED LOOP — 'COMBO' LOOP — EXISTING LOOP
DEDICATED LOOP
SYSTEM DETECTOR I.D.

CONTROL ZONE IDENTIFICATION NUMBER — **11**

CITY INTERSECTION NUMBER — C-XXXX / 09-XXXX — NCDOT SIGNAL IDENTIFICATION NUMBER

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Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

SCALE: NONE

Winston-Salem Signal System System Detectors and Control Zone Schematic Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	SGH	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 029531 ENGINEER STEVEN G. HAYNIE

SIGNATURE 3/22/13 DATE

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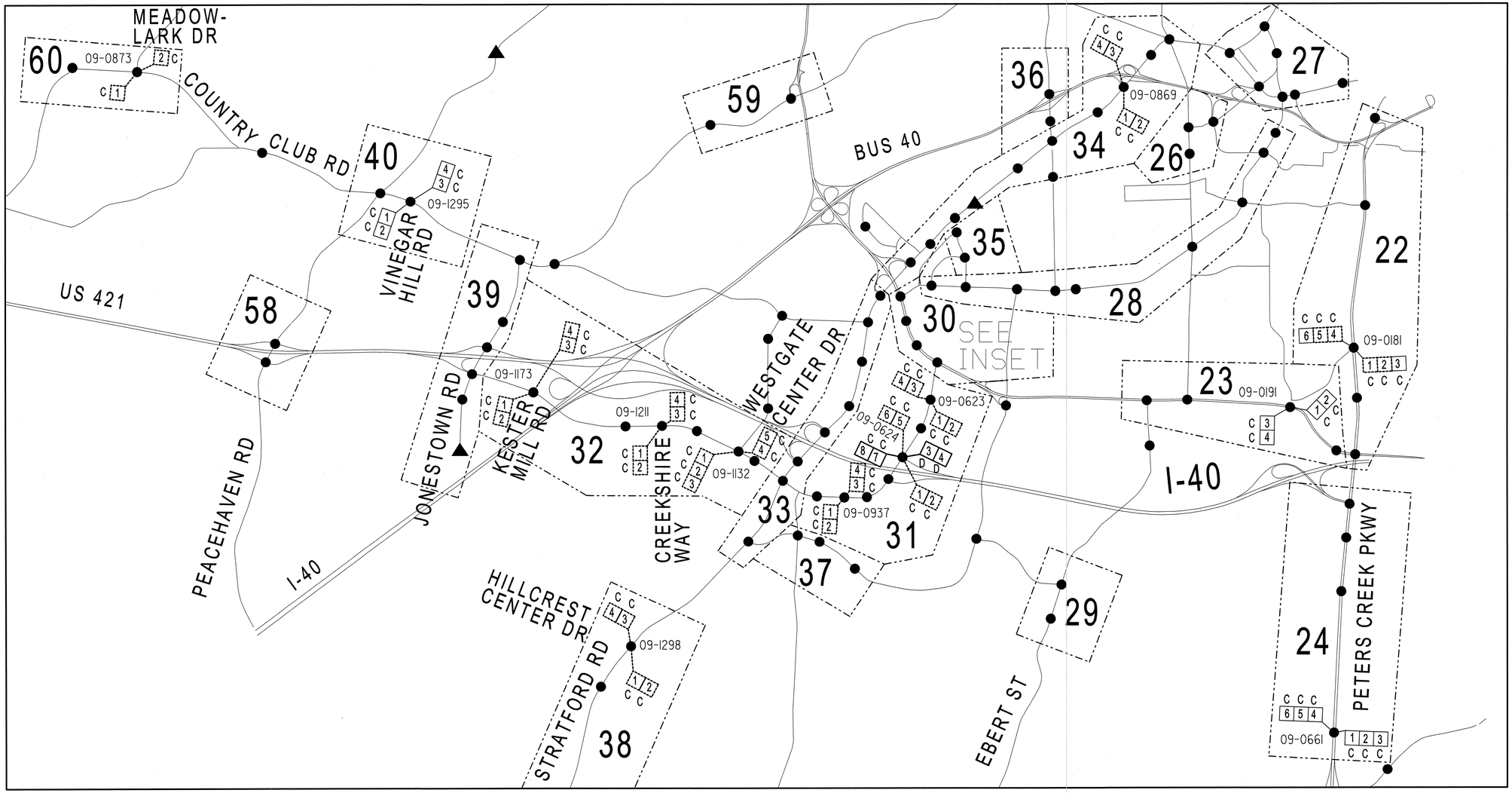
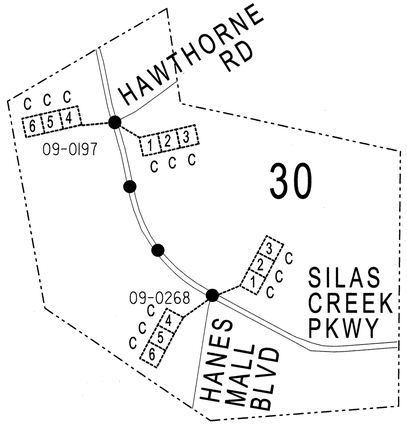
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	11





LEGEND

- ● TRAFFIC SIGNAL
- ▲ FUTURE SIGNAL
- CONTROL ZONE BOUNDARY
- PROPOSED LOOP — 'COMBO' LOOP — DEDICATED LOOP — SYSTEM DETECTOR I.D. — EXISTING LOOP
- CONTROL ZONE IDENTIFICATION NUMBER — 11
- CITY INTERSECTION NUMBER — C-XXXX 09-XXXX — NCDOT SIGNAL IDENTIFICATION NUMBER

ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division — State of North Carolina Department of Transportation — Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System System Detectors and Control Zone Schematic Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	SGH	REVIEWED BY:	LM Moon

SCALE: NONE

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 029531 ENGINEER STEVEN G. HAYNIE
SIGNATURE 3/22/13 DATE

CADD Filename: Phase B Sys Det Overview.dgn

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13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	12

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	JUNCTION BOX (STANDARD SIZE)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL -SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	WOOD POLE	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CAT 5E	2" RISER WITH WEATHERHEAD	1" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	4" RISER WITH SEAL	HEAT SHRINK TUBING RETROFIT KIT
	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-001	1,215	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
CL B-002	1,300	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-003	1,410	2	640	10	210	420	-	2	1	-	1	-	-	-	-	-	-	-	1	-	-
CL B-004	1,390	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-005	1,410	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-006	590	2	140	-	140	-	-	1	1	-	-	-	3	-	-	-	-	-	2	-	-
CL B-007	-	1	690	40	690	-	-	1	-	-	-	-	3	-	-	-	1	-	2	-	-
CL B-008	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-009	-	1	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
CL B-010	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-
CL B-011	-	2	-	140	-	-	1	-	-	-	-	-	-	-	-	-	1	-	1	-	-
CL B-012	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-013	-	1	520	25	375	-	-	-	-	-	1	-	2	-	-	-	1	-	2	-	-
CL B-014	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-015	50	1	130	-	-	130	-	1	1	-	-	-	-	-	-	-	1	-	2	-	-
CL B-016	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-017	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-018	135	3	920	-	-	920	-	1	1	-	-	-	-	-	1	2	1	-	3	-	-
CL B-019	1,380	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-020	1,400	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-021	950	2	550	-	400	150	-	5	-	-	1	-	1	-	3	-	-	-	2	-	-
CL B-022	1,430	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-023	1,400	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-024	950	1	450	-	450	-	-	1	-	-	1	-	1	-	-	-	-	-	1	-	-
CL B-025	-	-	1,370	-	1,270	100	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-
CL B-026	810	1	635	-	600	35	-	2	-	-	1	-	1	-	-	-	-	-	1	-	-
CL B-027	1,050	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-028	550	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	1
CL B-029	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
CL B-030	-	3	600	-	550	50	-	3	-	-	1	-	2	-	-	-	-	-	2	-	-
CL B-031	275	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
CL B-032	475	1	745	-	565	180	-	1	1	-	1	-	1	-	-	-	-	-	1	-	-
CL B-033	-	-	1,180	-	1,180	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-034	-	-	1,190	-	1,190	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-
CL B-035	-	-	1,030	-	430	600	-	2	1	-	2	-	-	-	-	-	-	-	-	-	-

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
- The items listed above are for informational purposes only and represent work that is necessary to complete the project and are not necessarily pay items. See Summary of Quantites and the Project Special Provisions for defined Pay Items for this contract.

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B (sheet 1 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LW Moon

SCALE	REVISIONS	INIT.	DATE
NTS			

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: Phase B Summary by CL.dgn

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13633

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	13

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	COMMUNICATIONS CABLE (72-FIBER)	REMOVE & REINSTALL COMMUNICATIONS CABLE	DROP CABLE (6-FIBER)	HAND LASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE	INTERCONNECT CENTER	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	INSTALL CCTV CAMERA ASSEMBLY	INSTALL CCTV CABINET (POLE)	INSTALL CCTV CABINET (BASE)	INSTALL CABINET FOUNDATION	INSTALL CCTV CABINET BASE EXTENDER	CCTV WOOD POLE	DIGITAL VIDEO ENCODER	NEW U/G ELEC SERVICE FOR CCTV/HUB	INSTALL 5/8" x 10' GROUNDING ELECTRODE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-001	1,200	-	-	-	-	275	600	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-002	1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-003	1,190	980	-	-	-	545	-	1	-	2	2	-	1	-	1	1	1	-	1	1	3
CL B-004	-	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-005	-	1,510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-006	1,130	1,630	-	-	-	-	-	1	-	-	-	170	-	-	-	-	-	-	-	-	-
CL B-007	-	1,540	-	-	-	295	-	1	-	1	1	690	1	1	-	-	-	1	1	-	-
CL B-008	-	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-009	-	1,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-010	-	1,590	-	-	-	335	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-011	-	1,465	-	-	-	560	-	1	-	1	1	-	1	1	-	-	-	1	1	-	-
CL B-012	-	1,150	-	-	-	450	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-013	960	1,775	-	-	-	200	-	1	-	1	1	-	1	1	-	-	-	1	1	-	-
CL B-014	-	1,560	-	-	-	175	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-015	-	1,540	-	-	-	575	-	1	-	2	2	200	1	1	-	-	-	1	1	1	3
CL B-016	-	1,520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-017	-	1,480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-018	-	1,630	-	-	-	300	-	1	-	1	1	920	1	1	-	-	-	1	1	1	3
CL B-019	1,480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-020	1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-021	1,710	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-022	1,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-023	1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-024	1,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-025	1,420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-026	1,625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-027	1,050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-028	1,400	-	-	-	-	185	-	1	-	1	1	380	-	-	-	-	-	-	-	-	-
CL B-029	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-030	1,620	-	-	-	-	-	-	-	-	-	-	560	-	-	-	-	-	-	-	-	-
CL B-031	1,460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-032	1,300	-	-	-	-	65	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-033	1,230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-034	1,240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-035	1,130	-	-	-	-	85	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B
(sheet 2 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE: March 2013 REVIEWED BY: MB Toth
PREPARED BY: JAW/BKS REVIEWED BY: LW Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE 3-22-13 DATE

CADD Filename: Phase B Summary by CL.dgn

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13853

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	14

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	REMOVE SPLICE/ HUB CABINET	UNI-DIRECTIONAL ANTENNA	900 MHz ETHERNET RADIO SYSTEM	ETHERNET CABLE (CAT 5E)	COAXIAL ANTENNA CABLE	IS JUNCTION BOX (SPECIAL -SIZED)	IS 2" RISER WITH HEAT SHRINK TUBING	IS COMMUNICATIONS CABLE (24-FIBER)	IS COMMUNICATIONS CABLE (48-FIBER)	IS COMMUNICATIONS CABLE (96-FIBER)	IS SPLICE ENCLOSURE	IS MODIFY EXISTING SPLICE	IS HEAT SHRINK TUBING RETROFIT KIT	IS BOND MESSENGER CABLE	IS REMOVE EXISTING JUNCTION BOX
	EA	EA	EA	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA	EA	EA
CL B-001	-	1	1	-	40	-	-	-	-	-	-	-	-	-	-
CL B-002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-003	-	-	-	-	-	1	-	520	820	-	1	-	-	-	-
CL B-004	-	-	-	-	-	-	-	-	1,490	-	-	-	-	-	-
CL B-005	-	-	-	-	-	-	-	-	1,510	-	-	-	-	-	-
CL B-006	-	-	-	-	-	-	-	-	2,460	-	1	-	-	-	-
CL B-007	1	-	-	65	-	-	-	-	1,530	-	-	-	-	-	-
CL B-008	1	-	-	-	-	-	-	-	1,490	-	-	-	-	-	-
CL B-009	-	-	-	-	-	-	-	-	1,530	-	-	-	-	-	-
CL B-010	1	-	-	-	-	-	-	-	1,490	-	-	-	-	-	-
CL B-011	-	-	-	165	-	-	-	-	1,465	-	-	-	-	-	-
CL B-012	3	-	-	-	-	-	-	-	1,150	-	-	-	-	-	-
CL B-013	1	-	-	50	-	-	-	910	1,560	-	1	-	-	-	-
CL B-014	1	-	-	-	-	-	-	-	1,560	-	-	-	-	-	-
CL B-015	2	-	-	-	-	-	-	-	1,530	-	-	-	-	-	-
CL B-016	1	-	-	-	-	-	-	-	1,620	-	-	-	-	-	-
CL B-017	-	-	-	-	-	-	-	-	1,480	-	-	-	-	-	-
CL B-018	1	-	-	220	-	-	-	-	1,530	-	-	-	-	-	-
CL B-019	-	-	-	-	-	-	-	-	1,480	-	-	-	-	-	-
CL B-020	-	-	-	-	-	-	-	-	1,500	-	-	-	-	-	-
CL B-021	-	-	-	-	-	-	-	-	1,710	-	-	-	-	-	-
CL B-022	-	-	-	-	-	-	-	380	1,250	-	1	-	-	-	-
CL B-023	-	-	-	-	-	-	-	1,500	-	-	-	-	-	-	-
CL B-024	-	-	-	-	-	-	-	1,530	-	-	-	-	-	-	-
CL B-025	-	-	-	-	-	-	-	1,420	-	-	-	-	-	-	-
CL B-026	-	-	-	-	-	-	-	1,525	-	-	-	-	-	-	-
CL B-027	-	-	-	-	-	-	-	1,150	-	-	-	-	-	-	-
CL B-028	1	-	-	-	-	-	-	1,400	-	-	-	-	-	-	-
CL B-029	-	-	-	-	-	-	-	1,490	-	-	-	-	-	-	-
CL B-030	-	-	-	-	-	-	-	1,620	-	-	-	-	-	-	-
CL B-031	-	-	-	-	-	-	-	1,460	-	-	-	-	-	-	-
CL B-032	-	-	-	-	-	-	-	1,400	-	-	-	-	-	-	-
CL B-033	-	-	-	-	-	-	-	1,230	-	-	-	-	-	-	-
CL B-034	-	-	-	-	-	-	-	1,240	-	-	-	-	-	-	-
CL B-035	-	-	-	-	-	-	-	1,080	-	-	-	-	-	-	-

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B (sheet 3 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: Phase B Summary by CL.dgn

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13.853

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	15

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	JUNCTION BOX (STANDARD SIZE)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL -SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	WOOD POLE	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CAT 5E	2" RISER WITH WEATHERHEAD	1" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	4" RISER WITH SEAL	HEAT SHRINK TUBING RETROFIT KIT
	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-036	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CL B-037	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-038	-	-	800	-	350	450	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-039	-	1	830	-	390	440	-	3	1	-	-	-	1	-	-	-	-	-	-	-	-
CL B-040	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-041	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-042	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-043	320	2	420	-	140	280	-	3	-	-	2	-	4	-	-	-	-	-	3	-	-
CL B-044	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
CL B-045	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-046	-	2	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	1	-	-
CL B-047	-	1	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	1
CL B-048	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
CL B-049	-	2	670	-	500	170	-	4	-	-	-	-	2	-	-	-	-	-	2	-	-
CL B-050	-	1	640	-	440	200	-	2	-	-	2	-	-	-	2	-	-	-	2	-	-
CL B-051	-	1	300	20	-	300	-	1	-	-	2	-	-	-	-	-	-	-	2	-	-
CL B-052	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-053	240	1	-	-	-	-	-	-	-	-	-	-	2	-	-	2	1	-	2	-	-
CL B-054	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-
CL B-055	-	2	-	20	-	-	-	-	-	-	-	-	1	-	2	-	1	-	1	-	-
CL B-056	-	2	250	40	180	70	-	1	1	-	1	-	-	-	-	-	-	-	3	-	-
CL B-057	75	2	500	-	-	500	-	1	1	-	-	-	2	-	-	-	-	-	2	-	-
CL B-058	-	1	250	-	-	250	-	2	-	-	-	-	-	-	-	-	-	1	2	-	-
CL B-059	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-
CL B-060	80	3	-	-	20	-	-	-	-	-	-	-	1	-	-	1	2	-	1	-	-
CL B-061	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-062	-	1	90	-	-	90	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-063	-	2	250	-	-	250	-	1	1	-	-	-	1	-	1	-	-	-	2	-	1
CL B-064	1,130	1	580	-	390	190	-	4	-	-	1	-	4	-	-	-	-	-	1	-	1
CL B-065	1,220	2	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	2	-	-	-
CL B-066	100	3	-	-	-	-	-	2	-	-	-	-	2	-	1	-	1	1	2	-	1
CL B-067	-	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CL B-068	-	1	-	-	-	-	-	-	-	-	-	-	4	-	1	-	-	-	-	-	1
CL B-069	-	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	1	-	-
CL B-070	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-

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ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE: NTS

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 1 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE 3-22-13 DATE
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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	16

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	COMMUNICATIONS CABLE (72-FIBER)	REMOVE & REINSTALL COMMUNICATIONS CABLE	DROP CABLE (6-FIBER)	HAND LASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE	INTERCONNECT CENTER	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	INSTALL CCTV CAMERA ASSEMBLY	INSTALL CCTV CABINET (POLE)	INSTALL CCTV CABINET (BASE)	INSTALL CABINET FOUNDATION	INSTALL CCTV CABINET BASE EXTENDER	CCTV WOOD POLE	DIGITAL VIDEO ENCODER	NEW U/G ELEC SERVICE FOR CCTV/HUB	INSTALL 5/8" x 10' GROUNDING ELECTRODE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-036	1,465	-	-	-	-	345	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-037	1,535	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-038	850	-	-	-	-	-	-	-	-	-	-	820	-	-	-	-	-	-	-	-	-
CL B-039	1,120	-	-	-	-	80	-	1	-	1	1	650	-	-	-	-	-	-	-	-	-
CL B-040	1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-041	1,580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-042	1,630	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
CL B-043	770	890	-	-	-	405	60	1	-	1	1	250	-	-	-	-	-	-	-	-	-
CL B-044	-	1,520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-045	-	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-046	-	1,545	-	-	-	425	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-047	-	1,550	-	-	-	240	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-048	-	1,470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-049	-	1,480	-	-	-	-	-	-	-	-	-	670	-	-	-	-	-	-	-	-	-
CL B-050	875	1,520	-	-	-	295	-	1	-	1	1	110	-	-	-	-	-	-	-	-	-
CL B-051	690	1,630	-	270	-	480	-	1	-	2	2	300	-	-	-	-	-	-	-	-	-
CL B-052	-	-	-	1,520	-	185	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-053	-	-	-	1,650	-	460	-	2	-	2	2	60	1	1	-	-	-	1	1	1	3
CL B-054	-	-	-	1,530	-	295	-	1	-	1	1	90	-	-	-	-	-	-	-	-	-
CL B-055	-	-	-	1,470	-	295	-	1	-	1	1	-	1	1	-	-	-	1	1	-	-
CL B-056	310	-	-	2,005	-	1,300	-	2	-	2	2	590	-	-	-	-	-	-	-	-	-
CL B-057	-	-	-	1,550	-	65	-	1	-	1	1	510	-	-	-	-	-	-	-	-	-
CL B-058	-	-	-	1,710	-	185	-	1	-	1	1	520	-	-	-	-	-	-	-	-	-
CL B-059	-	-	-	1,530	-	175	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-060	830	-	-	1,510	-	295	-	1	-	1	1	140	1	1	-	-	-	-	1	1	3
CL B-061	-	-	-	1,680	-	265	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-062	-	-	-	1,160	-	210	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-063	-	-	-	800	-	205	-	1	-	1	1	200	-	-	-	-	-	-	-	-	-
CL B-064	1,840	-	-	-	-	205	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-065	1,350	-	-	-	-	605	390	2	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-066	1,710	-	-	-	-	565	-	1	-	2	2	-	1	1	-	-	-	1	1	1	3
CL B-067	1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-068	1,550	-	-	-	-	195	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-069	1,590	-	-	-	-	195	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-070	1,550	-	-	-	-	115	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-

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Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B (sheet 2 of 3)
Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022518 ENGINEER LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE

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13813

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	17

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	REMOVE SPLICE/ HUB CABINET	UNI-DIRECTIONAL ANTENNA	900 MHz ETHERNET RADIO SYSTEM	ETHERNET CABLE (CAT 5E)	COAXIAL ANTENNA CABLE	IS JUNCTION BOX (SPECIAL -SIZED)	IS 2" RISER WITH HEAT SHRINK TUBING	IS COMMUNICATIONS CABLE (24-FIBER)	IS COMMUNICATIONS CABLE (48-FIBER)	IS COMMUNICATIONS CABLE (96-FIBER)	IS SPLICE ENCLOSURE	IS MODIFY EXISTING SPLICE	IS HEAT SHRINK TUBING RETROFIT KIT	IS BOND MESSENGER CABLE	IS REMOVE EXISTING JUNCTION BOX
	EA	EA	EA	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA	EA	EA
CL B-036	1	-	-	-	-	-	-	-	1,280	-	1	-	-	-	-
CL B-037	-	-	-	-	-	-	-	-	1,535	-	-	-	-	-	-
CL B-038	-	-	-	-	-	-	-	-	850	-	-	-	-	-	-
CL B-039	-	-	-	-	-	-	-	-	1,070	-	-	-	-	-	-
CL B-040	-	-	-	-	-	-	-	-	1,500	-	-	-	-	-	-
CL B-041	-	-	-	-	-	-	-	-	1,580	-	-	-	-	-	-
CL B-042	-	-	-	-	-	-	-	-	1,630	-	-	1	-	-	-
CL B-043	-	-	-	-	-	-	-	-	1,670	-	-	-	-	-	-
CL B-044	-	-	-	-	-	-	-	-	1,320	-	-	-	-	-	-
CL B-045	1	-	-	-	-	-	-	-	1,490	-	-	-	-	-	-
CL B-046	3	-	-	-	-	-	-	-	1,545	-	-	-	-	-	-
CL B-047	2	-	-	-	-	-	-	-	1,550	-	-	-	-	-	-
CL B-048	-	-	-	-	-	-	-	-	1,470	-	-	-	-	-	-
CL B-049	-	-	-	-	-	-	-	-	1,480	-	-	-	-	-	-
CL B-050	1	-	-	-	-	-	-	-	1,520	-	-	-	-	-	-
CL B-051	5	-	-	-	-	1	-	310	1,610	-	1	-	-	-	-
CL B-052	1	-	-	-	-	-	-	-	1,520	-	-	-	-	-	-
CL B-053	2	-	-	180	-	-	-	-	1,570	-	-	-	-	-	-
CL B-054	1	-	-	-	-	-	-	-	1,530	-	-	-	-	-	-
CL B-055	2	-	-	45	-	-	-	-	1,470	-	-	-	-	-	-
CL B-056	2	-	-	-	-	-	-	610	1,110	-	1	-	-	-	-
CL B-057	1	-	-	-	-	-	-	1,600	-	-	-	-	-	-	-
CL B-058	2	-	-	-	-	-	-	1,560	-	-	-	-	-	-	-
CL B-059	2	-	-	-	-	-	-	1,520	-	-	-	-	-	-	-
CL B-060	1	-	-	125	-	-	-	2,170	-	-	1	-	-	-	-
CL B-061	3	-	-	-	-	-	-	1,680	-	-	-	-	-	-	-
CL B-062	1	-	-	-	-	-	-	1,060	-	-	-	-	-	-	-
CL B-063	1	-	-	-	-	-	-	795	-	-	-	-	-	-	-
CL B-064	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-065	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-066	1	-	-	-	-	-	-	1,660	-	-	-	-	-	-	-
CL B-067	-	-	-	-	-	-	-	1,500	-	-	-	-	-	-	-
CL B-068	1	-	-	-	-	-	-	1,550	-	-	-	-	-	-	-
CL B-069	1	-	-	-	-	-	-	1,590	-	-	-	-	-	-	-
CL B-070	1	-	-	-	-	-	-	1,550	-	-	-	-	-	-	-

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B (sheet 3 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE

CADD Filename: Phase B Summary by CL.dgn

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13853

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	18

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	JUNCTION BOX (STANDARD SIZE)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL -SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	WOOD POLE	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CAT 5E	2" RISER WITH WEATHERHEAD	1" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	4" RISER WITH SEAL	HEAT SHRINK TUBING RETROFIT KIT
	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-071	390	2	135	-	35	100	-	2	-	-	-	-	3	-	-	-	-	-	2	-	-
CL B-072	-	-	1,410	-	595	795	-	5	1	-	1	-	-	-	-	-	-	-	-	-	-
CL B-073	-	-	1,650	-	627	1,008	-	5	2	-	1	-	-	-	-	-	-	-	-	-	-
CL B-074	-	-	1,330	-	930	400	-	4	2	-	-	-	-	-	-	-	-	-	-	-	-
CL B-075	-	-	1,320	-	1,030	290	-	2	1	-	1	-	-	-	-	-	-	-	-	-	-
CL B-076	-	-	1,130	-	730	400	-	4	1	-	1	-	-	-	-	-	-	-	-	-	-
CL B-077	630	2	840	-	660	180	-	4	1	-	1	-	2	-	-	-	-	-	2	-	-
CL B-078	200	1	1,180	-	-	1,180	-	1	-	-	1	-	1	-	-	-	-	-	1	-	-
CL B-079	-	-	880	-	-	880	-	1	2	-	1	-	-	-	-	-	-	-	-	-	-
CL B-080	-	-	1,310	-	-	1,310	-	2	1	-	2	-	-	-	-	-	-	-	-	-	-
CL B-081	-	-	1,340	-	-	1,340	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-082	-	-	1,500	-	1,240	260	-	2	2	-	2	-	-	-	-	-	-	-	-	-	-
CL B-083	-	-	1,390	-	1,390	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-084	-	-	1,340	-	1,070	270	-	4	-	-	1	-	-	-	-	-	-	-	-	-	-
CL B-085	-	-	1,480	-	830	650	-	4	-	-	2	-	-	-	-	-	-	-	-	-	-
CL B-086	-	-	1,280	-	1,250	30	-	2	-	-	2	-	-	-	-	-	-	-	-	-	-
CL B-087	-	2	1,360	-	1,080	280	-	1	2	-	1	-	1	-	-	-	-	-	2	-	-
CL B-088	-	2	1,170	15	870	300	-	3	2	-	2	-	-	-	-	-	-	-	2	-	-
CL B-089	-	1	500	-	370	130	-	3	-	-	2	-	-	-	-	-	-	-	1	-	-
CL B-090	50	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CL B-091	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-092	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-093	320	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	1	-	-
CL B-094	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-095	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-096	350	1	120	30	-	120	-	2	-	-	-	-	1	-	-	-	1	-	1	-	-
CL B-097	-	2	100	-	100	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-
CL B-098	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-099	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-100	-	2	530	-	415	115	-	2	-	-	-	-	1	1	1	-	-	1	1	-	-
CL B-101	440	1	130	-	130	-	-	1	-	-	-	-	3	-	-	-	-	-	1	-	-
CL B-102	120	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-103	400	1	-	-	-	-	-	-	1	-	-	1	1	-	-	-	2	-	1	-	-
CL B-104	1,430	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
CL B-105	1,430	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B
(sheet 1 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: Phase B Summary by CL.dgn

25-MAR-2013 08:50
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13813

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	19

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	COMMUNICATIONS CABLE (72-FIBER)	REMOVE & REINSTALL COMMUNICATIONS CABLE	DROP CABLE (6-FIBER)	HAND LASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE	INTERCONNECT CENTER	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	INSTALL CCTV CAMERA ASSEMBLY	INSTALL CCTV CABINET (POLE)	INSTALL CCTV CABINET (BASE)	INSTALL CABINET FOUNDATION	INSTALL CCTV CABINET BASE EXTENDER	CCTV WOOD POLE	DIGITAL VIDEO ENCODER	NEW U/G ELEC SERVICE FOR CCTV/HUB	INSTALL 5/8" x 10' GROUNDING ELECTRODE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-071	1,980	-	-	-	-	710	-	2	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-072	1,520	-	-	-	-	65	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-073	1,700	-	-	-	-	230	-	2	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-074	1,420	-	-	-	-	170	-	2	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-075	1,230	-	-	-	-	215	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-076	1,000	-	-	-	-	295	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-077	1,580	-	-	-	-	175	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-078	1,470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-079	980	-	-	-	-	75	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-080	1,350	-	-	-	-	140	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-081	1,390	-	-	-	-	125	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-082	1,650	-	-	-	-	230	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-083	1,440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-084	1,440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-085	1,580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-086	1,330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-087	1,320	540	-	-	-	510	-	2	-	2	2	330	-	-	-	-	-	-	-	-	-
CL B-088	1,760	-	-	-	-	130	-	2	-	2	2	280	-	-	-	-	-	-	-	-	-
CL B-089	1,320	-	-	-	-	-	-	-	-	-	-	390	-	-	-	-	-	-	-	-	-
CL B-090	1,490	-	-	-	-	95	230	-	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-091	1,490	-	-	-	-	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-092	1,350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-093	1,580	-	-	-	-	325	170	-	-	1	1	200	-	-	-	-	-	-	-	-	-
CL B-094	1,570	-	-	-	-	455	470	2	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-095	1,570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-096	1,470	-	-	-	-	475	-	1	-	1	1	490	1	1	-	-	-	1	1	-	-
CL B-097	1,580	-	-	-	-	85	-	1	-	1	1	370	-	-	-	-	-	-	-	-	-
CL B-098	-	1,080	-	-	-	115	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-099	-	680	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
CL B-100	1,350	-	-	-	-	170	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-101	1,380	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-102	1,280	-	-	-	-	300	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-103	450	-	-	-	-	100	-	1	-	1	2	-	-	-	-	-	-	-	-	-	-
CL B-104	1,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-105	1,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Prepared for the Offices of: Transportation Mobility and Safety Division NORTH CAROLINA DEPARTMENT OF TRANSPORTATION Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE: NTS

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 2 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M Moon 3-22-13
SIGNATURE DATE

CADD Filename: Phase B Summary by CL.dgn

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13933

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	20

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	REMOVE SPLICE/ HUB CABINET	UNI-DIRECTIONAL ANTENNA	900 MHz ETHERNET RADIO SYSTEM	ETHERNET CABLE (CAT 5E)	COAXIAL ANTENNA CABLE	IS JUNCTION BOX (SPECIAL -SIZED)	IS 2" RISER WITH HEAT SHRINK TUBING	IS COMMUNICATIONS CABLE (24-FIBER)	IS COMMUNICATIONS CABLE (48-FIBER)	IS COMMUNICATIONS CABLE (96-FIBER)	IS SPLICE ENCLOSURE	IS MODIFY EXISTING SPLICE	IS HEAT SHRINK TUBING RETROFIT KIT	IS BOND MESSENGER CABLE	IS REMOVE EXISTING JUNCTION BOX
	EA	EA	EA	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA	EA	EA
CL B-071	2	-	-	-	-	-	-	1,490	-	-	-	-	-	-	-
CL B-072	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-073	1	-	-	280	-	-	-	-	-	-	-	-	-	-	-
CL B-074	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-075	1	-	-	365	-	-	-	-	-	-	-	-	-	-	-
CL B-076	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-077	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-078	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-079	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-081	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-082	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-084	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-085	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-086	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-087	1	-	-	-	-	-	-	-	1,870	-	-	-	-	-	-
CL B-088	1	-	-	60	-	-	-	-	1,650	-	-	-	-	-	-
CL B-089	-	-	-	-	-	-	-	-	1,370	-	-	-	-	-	-
CL B-090	-	-	-	-	-	-	-	400	1,360	-	1	-	-	-	-
CL B-091	-	-	-	-	-	-	-	1,490	-	-	-	-	-	-	-
CL B-092	-	-	-	-	-	-	-	1,350	-	-	-	-	-	-	-
CL B-093	1	-	-	-	-	-	-	1,210	-	-	-	-	-	-	-
CL B-094	1	-	-	-	-	-	-	1,470	-	-	-	-	-	-	-
CL B-095	-	-	-	-	-	-	-	1,570	-	-	-	-	-	-	-
CL B-096	2	-	-	40	-	-	-	1,470	-	-	-	-	-	-	-
CL B-097	1	-	-	-	-	-	-	1,530	-	-	-	-	-	-	-
CL B-098	2	-	-	-	-	-	-	980	-	-	-	-	-	-	-
CL B-099	1	-	-	-	-	-	-	960	-	-	-	1	-	-	-
CL B-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-103	-	2	2	-	80	-	-	-	-	-	-	-	-	-	-
CL B-104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: NCDOT Integrated Mobility Division — 750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B
(sheet 3 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

SIGNATURE 3/22/13 DATE

CADD Filename: Phase B Summary by CL.dgn

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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	21

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	JUNCTION BOX (STANDARD SIZE)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL -SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	WOOD POLE	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CAT 5E	2" RISER WITH WEATHERHEAD	1" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	4" RISER WITH SEAL	HEAT SHRINK TUBING RETROFIT KIT
	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-106	1,040	3	560	-	520	40	-	4	-	-	2	-	3	-	-	-	-	-	2	-	-
CL B-107	1,340	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	1
CL B-108	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-
CL B-109	250	3	110	-	-	110	-	2	1	-	-	-	-	-	-	-	-	-	2	-	-
CL B-110	290	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
CL B-111	300	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-112	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-113	590	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-114	1,100	1	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
CL B-115	-	-	-	-	-	-	-	-	-	-	-	-	4	-	1	-	-	1	-	-	-
CL B-116	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-117	-	2	-	-	-	-	-	-	-	-	-	-	3	3	3	-	-	-	-	-	-
CL B-118	-	2	200	-	-	305	-	2	-	-	-	-	5	-	-	-	-	-	2	-	-
CL B-119	-	2	50	50	-	-	-	-	1	-	-	-	2	-	1	-	-	-	2	-	-
CL B-120	-	2	670	-	-	670	-	2	1	-	-	-	2	-		-	-	-	2	-	-
CL B-121	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
CL B-122	-	2	660	-	40	620	-	-	2	-	-	-	-	-	-	-	-	-	1	-	-
CL B-123	-	3	320	-	-	320	-	1	1	-	-	-	5	-	-	-	-	1	3	-	-
CL B-124	-	1	-	-	-	-	-	1	1	-	-	-	1	-	-	-	-	-	1	-	-
CL B-125	840	3	270	-	-	270	-	-	1	-	-	-	3	-	-	-	-	-	2	-	1
CL B-126	-	1	760	-	-	760	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-127	-	1	-	-	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	-
CL B-128	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1	-	-
CL B-129	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-131	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-132	610	2	-	-	-	-	-	-	-	-	-	-	4	-	1	-	-	1	-	-	-
CL B-133	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-135	1,140	2	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
CL B-136	460	3	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	1	2	-	-
CL B-137	1,340	1	80	-	-	80	-	2	-	-	-	2	5	1	-	-	-	-	2	-	-
CL B-138	-	1	-	-	-	-	-	-	-	-	-	-	4	1	2	-	-	-	-	-	-
CL B-139	990	2	250	-	-	250	-	2	1	-	1	-	1	1	-	-	-	-	1	-	-
CL B-140	1,650	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 1 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LW Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: Phase B Summary by CL.dgn

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13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	22

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	COMMUNICATIONS CABLE (72-FIBER)	REMOVE & REINSTALL COMMUNICATIONS CABLE	DROP CABLE (6-FIBER)	HAND LASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE	INTERCONNECT CENTER	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	INSTALL CCTV CAMERA ASSEMBLY	INSTALL CCTV CABINET (POLE)	INSTALL CCTV CABINET (BASE)	INSTALL CABINET FOUNDATION	INSTALL CCTV CABINET BASE EXTENDER	CCTV WOOD POLE	DIGITAL VIDEO ENCODER	NEW U/G ELEC SERVICE FOR CCTV/HUB	INSTALL 5/8" x 10' GROUNDING ELECTRODE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-106	1,780	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-107	1,290	-	-	-	-	225	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-108	-	1,490	-	-	-	235	100	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-109	300	1,430	-	-	-	120	180	1	-	1	1	150	-	-	-	-	-	-	-	-	-
CL B-110	-	1,620	-	-	-	400	-	2	-	2	2	300	-	-	-	-	-	-	-	-	-
CL B-111	-	1,510	-	-	-	315	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-112	-	1,610	-	-	-	-	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-113	-	1,420	-	-	-	325	-	1	-	1	1	400	-	-	-	-	-	-	-	-	-
CL B-114	-	1,510	-	-	-	-	-	-	-	-	-	1,110	-	-	-	-	-	-	-	-	-
CL B-115	760	980	-	-	-	210	-	1	-	1	1	620	-	-	-	-	-	-	-	-	-
CL B-116	-	900	-	-	-	-	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-117	240	2,100	-	-	-	-	230	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-118	-	1,635	-	-	-	-	100	-	1	-	-	320	-	-	-	-	-	-	-	-	-
CL B-119	945	-	-	-	-	785	-	1	-	2	2	155	-	-	-	-	-	-	-	-	-
CL B-120	990	-	-	-	-	90	-	1	-	1	1	680	-	-	-	-	-	-	-	-	-
CL B-121	1,740	-	-	-	-	-	270	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-122	960	-	-	-	-	140	-	2	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-123	1,680	-	-	-	-	440	-	2	-	2	2	95	-	-	-	-	-	-	-	-	-
CL B-124	700	-	-	-	-	65	-	1	-	1	1	540	-	-	-	-	-	-	-	-	-
CL B-125	1,480	-	-	-	-	670	-	2	-	2	2	280	-	-	-	-	-	-	-	-	-
CL B-126	1,340	-	-	-	-	-	-	-	-	-	-	760	-	-	-	-	-	-	-	-	-
CL B-127	1,670	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-128	1,670	-	-	-	-	85	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-129	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-130	1,130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-131	1,300	-	-	1,200	-	245	470	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-132	-	-	-	1,390	-	340	-	1	-	1	1	420	-	-	-	-	-	-	-	-	-
CL B-133	-	-	-	1,370	-	95	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-134	-	-	-	850	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
CL B-135	1,240	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-136	2,180	-	-	-	-	1,140	100	2	-	3	3	280	1	1	-	-	-	1	1	1	3
CL B-137	1,690	-	-	-	-	1,120	-	1	-	2	2	1,450	-	-	-	-	-	-	-	-	-
CL B-138	1,510	-	-	-	-	-	-	-	-	-	-	190	-	-	-	-	-	-	-	-	-
CL B-139	1,465	-	-	-	-	145	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-140	1,980	-	-	-	-	175	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-

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Prepared for the Offices of: NCDOT Transportation Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B
(sheet 2 of 3)

Division 09	Forsyth County	Winston-Salem
PLAN DATE: March 2013	REVIEWED BY:	MB Toth
PREPARED BY: JAW/BKS	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE: NTS

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	23

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	REMOVE SPLICE/ HUB CABINET	UNI-DIRECTIONAL ANTENNA	900 MHz ETHERNET RADIO SYSTEM	ETHERNET CABLE (CAT 5E)	COAXIAL ANTENNA CABLE	IS JUNCTION BOX (SPECIAL -SIZED)	IS 2" RISER WITH HEAT SHRINK TUBING	IS COMMUNICATIONS CABLE (24-FIBER)	IS COMMUNICATIONS CABLE (48-FIBER)	IS COMMUNICATIONS CABLE (96-FIBER)	IS SPLICE ENCLOSURE	IS MODIFY EXISTING SPLICE	IS HEAT SHRINK TUBING RETROFIT KIT	IS BOND MESSENGER CABLE	IS REMOVE EXISTING JUNCTION BOX
	EA	EA	EA	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA	EA	EA
CL B-106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-108	2	-	-	-	-	-	-	-	1,490	-	-	-	-	-	-
CL B-109	1	-	-	-	-	-	-	-	1,540	-	-	-	-	-	-
CL B-110	4	-	-	-	-	-	-	-	1,520	-	-	-	-	-	-
CL B-111	1	-	-	-	-	-	-	-	1,510	-	-	-	-	-	-
CL B-112	1	-	-	-	-	-	-	-	1,610	-	-	-	-	-	-
CL B-113	1	-	-	-	-	-	-	-	1,420	-	-	-	-	-	-
CL B-114	-	-	-	-	-	-	-	-	1,510	-	-	-	-	-	-
CL B-115	1	-	-	-	-	-	-	-	1,470	-	1	-	-	-	-
CL B-116	2	-	-	-	-	-	-	-	800	-	-	-	-	-	-
CL B-117	2	-	-	-	-	-	-	-	2,100	-	-	-	-	-	-
CL B-118	1	-	-	-	-	-	-	-	2,410	-	1	-	-	-	-
CL B-119	1	-	-	-	-	1	-	-	945	-	1	-	-	-	-
CL B-120	1	-	-	-	-	-	-	-	1,100	-	-	-	-	-	-
CL B-121	-	-	-	-	-	-	-	-	1,740	-	-	-	-	-	-
CL B-122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-123	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-124	-	-	-	-	-	1	-	700	-	-	1	-	-	-	-
CL B-125	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-126	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-128	1	-	-	-	-	-	-	1,320	-	-	1	-	-	-	-
CL B-129	-	-	-	-	-	-	-	1,590	-	-	-	-	-	-	-
CL B-130	-	-	-	-	-	-	-	1,030	-	-	-	-	-	-	-
CL B-131	-	-	-	-	-	-	-	1,930	-	-	1	-	-	-	-
CL B-132	-	-	-	-	-	-	-	1,290	-	-	-	-	-	-	-
CL B-133	-	-	-	-	-	-	-	1,370	-	-	-	-	-	-	-
CL B-134	-	-	-	-	-	-	-	850	-	-	1	-	-	-	-
CL B-135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-136	1	-	-	-	-	-	-	740	-	-	-	-	-	-	-
CL B-137	2	-	-	-	-	-	-	1,590	-	-	-	-	-	-	-
CL B-138	1	-	-	-	-	-	-	1,510	-	-	-	-	-	-	-
CL B-139	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
CL B-140	-	-	-	-	-	-	-	-	1,170	-	-	-	-	-	-

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ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE: NTS

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 3 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON

SIGNATURE 3-22-13 DATE

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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	24

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	JUNCTION BOX (STANDARD SIZE)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL -SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	WOOD POLE	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CAT 5E	2" RISER WITH WEATHERHEAD	1" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	4" RISER WITH SEAL	HEAT SHRINK TUBING RETROFIT KIT
	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-141	1,390	1	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
CL B-142	980	2	400	-	-	400	-	2	-	-	-	-	5	3	-	-	-	-	2	-	-
CL B-143	890	2	540	-	-	540	-	2	1	-	-	-	5	-	-	-	-	-	2	-	-
CL B-144	1,440	1	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-
CL B-145	770	3	810	-	-	810	-	3	1	-	-	-	3	-	-	-	1	-	4	-	-
CL B-146	-	2	300	-	-	300	-	1	-	-	-	-	4	-	-	-	-	-	1	-	1
CL B-147	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-148	-	2	-	30	-	-	-	-	-	-	-	-	3	-	-	-	1	-	1	-	-
CL B-149	1,130	2	-	-	-	-	-	-	1	-	-	-	3	-	2	-	-	-	1	-	-
CL B-150	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CL B-151	1,050	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	1
CL B-152	1,260	1	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-
CL B-153	1,410	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-154	1,380	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-155	1,440	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
CL B-156	1,440	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
CL B-157	1,110	3	440	-	350	90	-	4	-	-	-	-	9	-	-	-	-	-	2	-	-
CL B-158	1,380	1	-	-	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	-	-
CL B-159	620	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
CL B-160	440	1	-	-	-	-	-	-	-	-	-	-	4	2	-	-	-	-	-	-	-
CL B-161	-	2	400	-	-	400	-	2	-	-	-	-	3	-	-	-	-	-	2	-	-
CL B-162	-	1	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-
CL B-163	1,390	1	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-
CL B-164	1,380	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
CL B-165	1,310	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-166	890	2	580	-	-	580	-	2	1	-	-	-	5	1	-	-	-	-	2	-	-
CL B-167	1,320	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-168	750	2	530	-	-	530	-	2	-	-	-	-	3	-	-	-	-	-	2	-	-
CL B-169	1,370	1	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-
CL B-170	1,320	2	60	-	-	60	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-171	700	1	730	-	-	730	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-172	340	2	590	-	260	330	-	3	-	-	-	-	2	-	-	-	-	-	2	-	-
CL B-173	1,250	1	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	1	-	-	-
CL B-174	650	1	560	-	-	560	-	1	-	-	-	-	3	-	-	-	-	-	1	-	-
CL B-175	-	-	1,340	-	-	1,340	-	1	1	-	2	-	-	-	-	-	-	-	-	-	-

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: North Carolina Department of Transportation, Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE: NTS

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B (sheet 1 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: Phase B Summary by CL.dgn

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13453

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	25

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	COMMUNICATIONS CABLE (72-FIBER)	REMOVE & REINSTALL COMMUNICATIONS CABLE	DROP CABLE (6-FIBER)	HAND LASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE	INTERCONNECT CENTER	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	INSTALL CCTV CAMERA ASSEMBLY	INSTALL CCTV CABINET (POLE)	INSTALL CCTV CABINET (BASE)	INSTALL CABINET FOUNDATION	INSTALL CCTV CABINET BASE EXTENDER	CCTV WOOD POLE	DIGITAL VIDEO ENCODER	NEW U/G ELEC SERVICE FOR CCTV/HUB	INSTALL 5/8" x 10' GROUNDING ELECTRODE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-141	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-142	1,670	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-143	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-144	1,640	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-145	2,430	-	-	-	-	275	-	1	-	2	2	230	1	1	-	-	-	1	1	1	3
CL B-146	1,580	-	-	-	-	215	-	1	-	1	1	300	-	-	-	-	-	-	-	-	-
CL B-147	1,480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-148	2,040	-	-	-	-	295	-	1	-	1	1	-	1	1	-	-	-	-	1	-	-
CL B-149	1,220	-	-	-	-	75	-	1	-	1	1	860	-	-	-	-	-	-	-	-	-
CL B-150	-	-	-	-	-	365	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-
CL B-151	880	-	-	-	-	390	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-
CL B-152	1,360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-153	1,510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-154	1,480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-155	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-156	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-157	1,700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-158	1,480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-159	540	-	-	-	-	1,090	-	1	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-160	1,510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-161	1,190	-	-	-	-	-	-	-	-	-	-	430	-	-	-	-	-	-	-	-	-
CL B-162	1,360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-163	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-164	1,480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-165	1,310	-	-	-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-166	1,890	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-167	1,320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-168	1,510	-	-	-	-	-	370	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-169	1,470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-170	1,510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-171	1,620	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-172	1,060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-173	1,350	-	-	-	-	200	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-174	1,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-175	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: NC Department of Transportation, Transportation Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 2 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LW Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON
SIGNATURE 3-22-13 DATE
CADD Filename: Phase B Summary by CL.dgn

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13853

SUMMARY OF WORK BY CABLE LAYOUT PLANS

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	26

CABLE LAYOUT SHEET NUMBER	REMOVE SPLICE/ HUB CABINET	UNI-DIRECTIONAL ANTENNA	900 MHz ETHERNET RADIO SYSTEM	ETHERNET CABLE (CAT 5E)	COAXIAL ANTENNA CABLE	IS JUNCTION BOX (SPECIAL -SIZED)	IS 2" RISER WITH HEAT SHRINK TUBING	IS COMMUNICATIONS CABLE (24-FIBER)	IS COMMUNICATIONS CABLE (48-FIBER)	IS COMMUNICATIONS CABLE (96-FIBER)	IS SPLICE ENCLOSURE	IS MODIFY EXISTING SPLICE	IS HEAT SHRINK TUBING RETROFIT KIT	IS BOND MESSENGER CABLE	IS REMOVE EXISTING JUNCTION BOX
	EA	EA	EA	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA	EA	EA
CL B-141	-	-	-	-	-	-	-	-	1,490	-	-	-	-	-	-
CL B-142	-	-	-	-	-	-	-	-	1,570	-	-	-	-	-	-
CL B-143	-	-	-	-	-	-	-	-	1,590	-	-	-	-	-	-
CL B-144	-	-	-	-	-	-	-	-	1,640	-	-	-	-	-	-
CL B-145	1	-	-	-	-	1	-	-	1,910	-	1	-	-	-	-
CL B-146	1	-	-	-	-	-	-	-	1,580	-	-	-	-	-	-
CL B-147	1	-	-	-	-	-	-	-	1,480	-	-	-	-	-	-
CL B-148	2	-	-	45	-	-	-	100	1,880	-	1	-	-	-	-
CL B-149	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-150	-	-	-	-	-	1	1	-	550	-	1	-	-	-	-
CL B-151	-	-	-	-	-	-	-	-	1,100	-	-	-	-	-	-
CL B-152	-	-	-	-	-	-	-	-	1,360	-	-	-	-	-	-
CL B-153	-	-	-	-	-	-	-	-	1,510	-	-	-	-	-	-
CL B-154	-	-	-	-	-	-	-	-	1,480	-	-	-	-	-	-
CL B-155	-	-	-	-	-	-	-	-	1,540	-	-	-	-	-	-
CL B-156	-	-	-	-	-	-	-	-	1,540	-	-	-	-	-	-
CL B-157	-	-	-	-	-	-	-	-	1,700	-	-	-	-	-	-
CL B-158	-	-	-	-	-	-	-	-	1,480	-	-	-	-	-	-
CL B-159	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-161	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-163	-	-	-	-	-	-	-	-	1,490	-	-	-	-	-	-
CL B-164	-	-	-	-	-	-	-	-	1,480	-	-	-	-	-	-
CL B-165	-	-	-	-	-	-	-	-	1,410	-	-	-	-	-	-
CL B-166	-	-	-	-	-	-	-	-	1,700	-	-	-	-	-	-
CL B-167	-	-	-	-	-	-	-	-	1,420	-	-	-	-	-	-
CL B-168	-	-	-	-	-	-	-	-	1,460	-	-	-	-	-	-
CL B-169	-	-	-	-	-	-	-	-	1,470	-	-	-	-	-	-
CL B-170	-	-	-	-	-	-	-	-	1,460	-	-	-	-	-	-
CL B-171	-	-	-	-	-	-	-	-	1,570	-	-	-	-	-	-
CL B-172	-	-	-	-	-	-	-	-	1,060	-	-	-	-	-	-
CL B-173	-	-	-	-	-	-	-	-	1,350	-	-	-	-	-	-
CL B-174	-	-	-	-	-	-	-	-	1,350	-	-	-	-	-	-
CL B-175	-	-	-	-	-	-	-	-	1,390	-	-	-	-	-	-

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Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 3 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

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SUMMARY OF WORK BY CABLE LAYOUT PLANS

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	27

CABLE LAYOUT SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	JUNCTION BOX (STANDARD SIZE)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL -SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	WOOD POLE	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CAT 5E	2" RISER WITH WEATHERHEAD	1" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	4" RISER WITH SEAL	HEAT SHRINK TUBING RETROFIT KIT
	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-176	-	-	1,385	-	-	1,385	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-
CL B-177	1,220	2	160	-	-	160	-	1	-	-	-	-	6	-	-	-	-	-	1	-	-
CL B-178	1,350	1	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-
CL B-179	460	1	950	-	-	950	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-180	-	-	1,460	-	-	1,460	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
CL B-181	-	-	1,280	-	-	1,280	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-
CL B-182	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CL B-183	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-184	200	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-185	220	2	360	-	180	180	-	2	1	-	-	-	2	-	-	-	1	-	3	-	-
CL B-186	60	1	650	-	-	650	-	-	1	-	-	-	-	-	-	2	1	-	1	-	-
CL B-187	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CL B-188	120	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-189	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-190	120	3	400	-	-	400	-	1	1	-	-	-	-	-	-	-	-	-	3	-	-
CL B-191	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CL B-192	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-193	-	2	100	-	100	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-194	-	2	280	-	-	280	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-195	-	1	400	-	-	400	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-
CL B-196	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-197	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CL B-198	50	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-
CL B-199	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-200	-	-	990	-	630	360	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-201	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1
CL B-202	-	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
CL B-203	-	2	610	-	-	610	-	2	-	-	-	-	2	-	-	-	-	-	2	-	-
CL B-204	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-205	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-206	-	2	940	10	300	630	-	4	1	-	-	-	1	-	1	-	-	-	2	-	-
CL B-207	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-208	-	1	700	-	700	-	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-209	-	2	20	-	20	-	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-210	440	3	-	-	-	-	-	-	-	-	-	-	1	-	-	2	1	-	1	-	-

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ATKINS 1616 EAST WILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: NCDOT Transportation Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B
(sheet 1 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE

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SUMMARY OF WORK BY CABLE LAYOUT PLANS

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	28

CABLE LAYOUT SHEET NUMBER	COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	COMMUNICATIONS CABLE (72-FIBER)	REMOVE & REINSTALL COMMUNICATIONS CABLE	DROP CABLE (6-FIBER)	HAND LASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE	INTERCONNECT CENTER	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	INSTALL CCTV CAMERA ASSEMBLY	INSTALL CCTV CABINET (POLE)	INSTALL CCTV CABINET (BASE)	INSTALL CABINET FOUNDATION	INSTALL CCTV CABINET BASE EXTENDER	CCTV WOOD POLE	DIGITAL VIDEO ENCODER	NEW U/G ELEC SERVICE FOR CCTV/HUB	INSTALL 5/8" x 10' GROUNDING ELECTRODE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-176	1,360	-	-	-	-	150	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-177	1,520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-178	1,450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-179	1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-180	1,510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-181	1,330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-182	800	-	-	-	-	380	330	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-183	1,520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-184	1,500	-	-	-	-	300	-	1	-	1	1	400	-	-	-	-	-	-	-	-	-
CL B-185	1,870	-	-	-	-	630	-	1	-	2	2	730	1	1	-	-	-	1	1	-	-
CL B-186	2,250	-	-	-	-	70	-	1	-	1	1	-	1	1	-	-	-	1	1	1	3
CL B-187	1,320	-	-	-	-	400	320	1	-	1	1	360	-	-	-	-	-	-	-	-	-
CL B-188	2,190	-	-	-	-	480	490	1	-	1	1	200	-	-	-	-	-	-	-	-	-
CL B-189	1,520	-	-	-	-	-	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-190	1,470	-	-	-	-	250	500	1	-	1	1	400	-	-	-	-	-	-	-	-	-
CL B-191	1,600	-	-	-	-	260	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-192	1,510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-193	2,100	-	-	-	-	-	-	1	-	-	-	100	-	-	-	-	-	-	-	-	-
CL B-194	1,600	-	-	-	-	-	-	-	-	-	-	280	-	-	-	-	-	-	-	-	-
CL B-195	1,110	-	-	-	-	50	250	1	-	1	1	400	-	-	-	-	-	-	-	-	-
CL B-196	1,260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-197	1,090	-	-	-	-	90	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-198	1,300	-	-	-	-	390	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-199	1,600	-	-	-	-	-	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-200	1,040	-	-	-	-	-	-	-	-	-	-	990	-	-	-	-	-	-	-	-	-
CL B-201	2,460	-	-	-	-	530	-	2	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-202	1,580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-203	1,610	-	-	-	-	-	210	-	-	-	-	610	-	-	-	-	-	-	-	-	-
CL B-204	1,450	-	-	-	-	-	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-205	1,470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-206	1,920	-	-	-	-	120	-	1	-	1	1	650	-	-	-	-	-	-	-	-	-
CL B-207	1,500	-	-	-	-	460	-	1	-	1	1	140	-	-	-	-	-	-	-	-	-
CL B-208	1,550	-	-	-	-	-	-	-	-	-	-	700	-	-	-	-	-	-	-	-	-
CL B-209	1,610	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
CL B-210	1,440	-	-	-	-	400	-	1	-	1	1	300	1	1	-	-	-	1	1	1	3

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
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RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
North Carolina Department of Transportation
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 2 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M Moon 3-22-13
SIGNATURE DATE

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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	29

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	REMOVE SPLICE/ HUB CABINET	UNI-DIRECTIONAL ANTENNA	900 MHz ETHERNET RADIO SYSTEM	ETHERNET CABLE (CAT 5E)	COAXIAL ANTENNA CABLE	IS JUNCTION BOX (SPECIAL -SIZED)	IS 2" RISER WITH HEAT SHRINK TUBING	IS COMMUNICATIONS CABLE (24-FIBER)	IS COMMUNICATIONS CABLE (48-FIBER)	IS COMMUNICATIONS CABLE (96-FIBER)	IS SPLICE ENCLOSURE	IS MODIFY EXISTING SPLICE	IS HEAT SHRINK TUBING RETROFIT KIT	IS BOND MESSENGER CABLE	IS REMOVE EXISTING JUNCTION BOX
	EA	EA	EA	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA	EA	EA
CL B-176	-	-	-	-	-	1	-	330	1,080	-	1	-	-	-	-
CL B-177	-	-	-	-	-	-	-	1,570	-	-	-	-	-	-	-
CL B-178	-	-	-	-	-	-	-	1,450	-	-	-	-	-	-	-
CL B-179	-	-	-	-	-	-	-	1,600	-	-	-	-	-	-	-
CL B-180	-	-	-	-	-	1	-	390	1,170	-	1	-	-	-	-
CL B-181	-	-	-	-	-	-	-	-	1,330	-	-	-	-	-	-
CL B-182	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-184	-	-	-	-	-	-	-	-	340	-	1	-	-	-	-
CL B-185	2	-	-	220	-	-	-	-	1,670	-	-	-	-	-	-
CL B-186	2	-	-	135	-	1	-	-	2,250	-	1	-	-	-	-
CL B-187	-	-	-	-	-	-	-	-	1,320	-	-	-	-	-	-
CL B-188	3	-	-	-	-	-	-	-	2,140	-	1	-	-	-	-
CL B-189	-	-	-	-	-	-	-	-	1,520	-	-	-	-	-	-
CL B-190	2	-	-	-	-	-	-	-	1,520	-	-	-	-	-	-
CL B-191	2	-	-	-	-	-	-	-	1,500	-	-	-	-	-	-
CL B-192	3	-	-	-	-	-	-	-	1,510	-	-	-	-	-	-
CL B-193	2	-	-	-	-	-	-	-	1,500	-	-	-	-	-	-
CL B-194	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-195	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-197	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-198	1	-	-	220	-	-	-	-	1,220	-	1	-	-	-	-
CL B-199	-	-	-	-	-	-	-	-	1,600	-	-	-	-	-	-
CL B-200	2	-	-	-	-	-	-	-	1,040	-	-	-	-	-	-
CL B-201	1	-	-	-	-	-	-	-	1,210	-	-	-	-	-	-
CL B-202	-	-	-	-	-	-	-	-	1,880	-	1	-	-	-	-
CL B-203	1	-	-	-	-	-	-	-	1,560	-	-	-	-	-	-
CL B-204	1	-	-	-	-	-	-	-	1,450	-	-	-	-	-	-
CL B-205	-	-	-	-	-	-	-	-	1,470	-	-	-	-	-	-
CL B-206	1	-	-	-	-	-	-	-	1,470	-	-	-	-	-	-
CL B-207	1	-	-	-	-	-	-	-	1,500	-	-	-	-	-	-
CL B-208	2	-	-	-	-	-	-	-	1,600	-	-	-	-	-	-
CL B-209	1	-	-	-	-	-	-	-	1,460	-	-	-	-	-	-
CL B-210	1	-	-	250	-	-	-	-	1,540	-	-	-	-	-	-

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
NC Department of Transportation — Transportation Mobility and Safety Division — Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 3 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE: NTS

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
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SUMMARY OF WORK BY CABLE LAYOUT PLANS

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	30

CABLE LAYOUT SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	JUNCTION BOX (STANDARD SIZE)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL -SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	WOOD POLE	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CAT 5E	2" RISER WITH WEATHERHEAD	1" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	4" RISER WITH SEAL	HEAT SHRINK TUBING RETROFIT KIT
	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-211	-	3	90	-	90	-	-	-	-	-	-	-	2	-	-	-	-	-	2	-	-
CL B-212	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-213	-	2	350	50	-	350	1	2	-	-	1	-	-	-	-	-	1	-	2	-	-
CL B-214	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-215	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-216	-	2	1,360	-	840	520	-	4	1	-	2	-	1	-	-	-	-	-	2	-	-
CL B-217	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-218	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-219	-	3	20	-	-	20	-	1	-	-	-	-	1	-	-	-	-	-	2	-	-
CL B-220	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-221	380	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
CL B-222	-	1	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-
CL B-223	240	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-224	260	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
CL B-225	-	1	160	-	-	160	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-226	1,270	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-227	1,020	2	360	-	-	360	-	2	1	-	-	-	2	-	-	-	-	-	2	-	-
CL B-228	1,400	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CL B-229	820	2	580	-	-	580	-	2	-	-	-	-	3	-	-	-	-	-	2	-	-
CL B-230	1,280	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-231	1,320	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
CL B-232	230	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-233	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-234	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-235	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-236	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
CL B-237	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-238	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-
CL B-239	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-240	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-241	320	4	200	-	-	200	-	2	1	-	-	-	-	-	-	-	-	-	3	-	-
CL B-242	1,140	1	270	-	-	275	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-
CL B-243	1,410	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-244	280	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-
CL B-245	-	2	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-

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Prepared for the Offices of:
NCDOT Integrated Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 1 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	31

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	COMMUNICATIONS CABLE (72-FIBER)	REMOVE & REINSTALL COMMUNICATIONS CABLE	DROP CABLE (6-FIBER)	HAND LASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE	INTERCONNECT CENTER	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	INSTALL CCTV CAMERA ASSEMBLY	INSTALL CCTV CABINET (POLE)	INSTALL CCTV CABINET (BASE)	INSTALL CABINET FOUNDATION	INSTALL CCTV CABINET BASE EXTENDER	CCTV WOOD POLE	DIGITAL VIDEO ENCODER	NEW U/G ELEC SERVICE FOR CCTV/HUB	INSTALL 5/8" x 10' GROUNDING ELECTRODE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-211	1,130	800	-	-	-	360	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-212	-	1,440	-	-	-	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-213	700	1,340	-	-	-	300	-	1	-	1	1	-	1	1	-	-	-	1	1	-	-
CL B-214	-	1,470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-215	-	1,870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-216	530	1,790	-	-	-	50	230	1	-	1	1	460	-	-	-	-	-	-	-	-	-
CL B-217	-	1,500	-	-	-	210	380	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-218	-	1,570	-	-	-	-	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-219	630	1,500	-	-	-	400	120	1	-	1	1	20	-	-	-	-	-	-	-	-	-
CL B-220	-	1,480	-	-	-	270	880	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-221	-	1,660	-	-	-	-	170	-	-	-	-	380	-	-	-	-	-	-	-	-	-
CL B-222	-	1,390	-	-	-	-	140	-	-	-	-	-	-	-	-	-	-	-	-	-	
CL B-223	-	1,460	-	-	-	-	-	-	-	-	-	240	-	-	-	-	-	-	-	-	-
CL B-224	-	1,460	-	-	-	-	-	-	-	-	-	260	-	-	-	-	-	-	-	-	-
CL B-225	-	350	-	-	-	-	-	-	1	-	-	140	-	-	-	-	-	-	-	-	-
CL B-226	940	-	-	-	-	570	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-227	1,510	-	-	-	-	60	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-228	1,500	-	-	-	-	-	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-229	1,580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-230	1,380	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-231	1,420	-	-	-	-	-	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-232	1,780	-	-	-	-	210	100	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-233	1,560	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-234	1,520	-	-	-	-	-	310	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-235	1,540	-	-	-	-	-	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-236	1,550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-237	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-238	1,580	-	-	-	-	310	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-239	1,510	-	-	-	-	-	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-240	1,620	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-241	1,560	-	-	-	-	60	280	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-242	1,550	-	-	-	-	-	580	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-243	1,610	-	-	-	-	230	230	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-244	1,520	-	-	-	-	410	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-245	1,520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: North Carolina Department of Transportation, Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 2 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE 3-22-13 DATE

CADD Filename: Phase B Summary by CL.dgn

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13933

SUMMARY OF WORK BY CABLE LAYOUT PLANS

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	32

CABLE LAYOUT SHEET NUMBER	REMOVE SPLICE/ HUB CABINET	UNI-DIRECTIONAL ANTENNA	900 MHz ETHERNET RADIO SYSTEM	ETHERNET CABLE (CAT 5E)	COAXIAL ANTENNA CABLE	IS JUNCTION BOX (SPECIAL -SIZED)	IS 2" RISER WITH HEAT SHRINK TUBING	IS COMMUNICATIONS CABLE (24-FIBER)	IS COMMUNICATIONS CABLE (48-FIBER)	IS COMMUNICATIONS CABLE (96-FIBER)	IS SPLICE ENCLOSURE	IS MODIFY EXISTING SPLICE	IS HEAT SHRINK TUBING RETROFIT KIT	IS BOND MESSENGER CABLE	IS REMOVE EXISTING JUNCTION BOX
	EA	EA	EA	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA	EA	EA
CL B-211	2	-	-	-	-	1	-	140	1,780	-	1	-	-	-	-
CL B-212	-	-	-	-	-	-	-	-	1,440	-	-	-	-	-	-
CL B-213	1	-	-	70	-	-	-	-	2,160	-	1	-	-	-	-
CL B-214	-	-	-	-	-	-	-	-	1,470	-	-	-	-	-	-
CL B-215	-	-	-	-	-	-	-	-	1,870	-	-	-	-	-	-
CL B-216	-	-	-	-	-	-	-	-	1,740	-	-	-	-	-	-
CL B-217	1	-	-	-	-	-	-	-	1,600	-	-	-	-	-	-
CL B-218	-	-	-	-	-	-	-	-	1,470	-	-	-	-	-	-
CL B-219	2	-	-	-	-	-	-	380	1,730	-	1	-	-	-	-
CL B-220	1	-	-	-	-	-	-	1,480	-	-	-	-	-	-	-
CL B-221	-	-	-	-	-	-	-	1,660	-	-	-	-	-	-	-
CL B-222	1	-	-	-	-	-	-	1,390	-	-	-	-	-	-	-
CL B-223	-	-	-	-	-	-	-	1,460	-	-	-	-	-	-	-
CL B-224	-	-	-	-	-	-	-	1,460	-	-	-	-	-	-	-
CL B-225	2	-	-	-	-	-	-	560	-	-	1	-	1	-	-
CL B-226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-227	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-228	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-229	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-231	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-232	-	-	-	-	-	-	-	-	1,310	-	1	-	-	-	-
CL B-233	1	-	-	-	-	-	-	-	1,660	-	-	-	-	-	-
CL B-234	-	-	-	-	-	-	-	-	1,520	-	-	-	-	-	-
CL B-235	-	-	-	-	-	-	-	-	1,540	-	-	-	-	-	-
CL B-236	1	-	-	-	-	-	-	-	1,550	-	-	-	-	-	-
CL B-237	-	-	-	-	-	-	-	-	1,540	-	-	-	-	-	-
CL B-238	1	-	-	-	-	-	-	1,350	330	-	1	-	-	-	-
CL B-239	-	-	-	-	-	-	-	1,510	-	-	-	-	-	-	-
CL B-240	1	-	-	-	-	-	-	1,520	-	-	-	-	-	-	-
CL B-241	-	-	-	-	-	-	-	1,610	-	-	-	-	-	-	-
CL B-242	-	-	-	-	-	-	-	1,550	-	-	-	-	-	-	-
CL B-243	-	-	-	-	-	-	-	1,440	-	370	1	-	-	-	-
CL B-244	1	-	-	-	-	-	-	-	-	1,520	-	-	-	-	-
CL B-245	1	-	-	-	-	-	-	-	-	1,520	-	-	-	-	-

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
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ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
NC Department of Transportation — Mobility and Safety Division — Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 3 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE
3-22-13
DATE
CADD Filename: Phase B Summary by CL.dgn

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13833

SUMMARY OF WORK BY CABLE LAYOUT PLANS

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	33

CABLE LAYOUT SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	JUNCTION BOX (STANDARD SIZE)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL -SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	WOOD POLE	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CAT 5E	2" RISER WITH WEATHERHEAD	1" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	4" RISER WITH SEAL	HEAT SHRINK TUBING RETROFIT KIT
	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-246	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-247	-	-	1,360	-	1,360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-248	-	-	1,380	-	1,380	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-
CL B-249	-	-	1,910	-	1,770	140	-	3	1	-	1	-	-	-	-	-	-	-	-	-	-
CL B-250	340	2	1,060	-	770	290	-	3	2	-	1	2	2	-	-	-	-	-	2	-	-
CL B-251	-	-	990	-	770	220	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-
CL B-252	-	-	1,350	-	1,280	70	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-
CL B-253	-	-	1,450	-	1,350	100	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-
CL B-254	-	-	1,400	-	1,400	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-
CL B-255	-	-	830	-	510	-	-	1	1	2	1	-	-	-	-	-	-	-	-	-	-
CL B-256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-257	-	1	1,100	-	1,000	100	-	3	-	-	1	-	1	-	-	-	-	-	1	-	-
CL B-258	100	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
CL B-259	1,660	2	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	1	-	-
CL B-260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-261	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-262	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-263	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-264	150	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
CL B-265	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-266	15	1	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
CL B-267	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-268	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-269	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-270	-	2	110	-	-	120	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-271	80	2	110	-	-	110	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-
CL B-272	-	1	240	-	90	140	-	2	-	-	-	-	-	-	-	-	-	-	3	-	-
CL B-273	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-274	-	1	260	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-275	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-276	-	2	190	-	-	190	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-
CL B-277	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
CL B-278	-	2	210	-	210	-	-	1	1	-	-	-	1	-	-	-	-	-	2	-	-
CL B-279	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CL B-280	-	-	1,030	-	810	210	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-

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Prepared for the Offices of: NC Department of Transportation, Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B
(sheet 1 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE	REVISIONS	INIT.	DATE
NTS			

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE
CADD Filename: Phase B Summary by CL.dgn

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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	34

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	COMMUNICATIONS CABLE (72-FIBER)	REMOVE & REINSTALL COMMUNICATIONS CABLE	DROP CABLE (6-FIBER)	HAND LASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE	INTERCONNECT CENTER	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	INSTALL CCTV CAMERA ASSEMBLY	INSTALL CCTV CABINET (POLE)	INSTALL CCTV CABINET (BASE)	INSTALL CABINET FOUNDATION	INSTALL CCTV CABINET BASE EXTENDER	CCTV WOOD POLE	DIGITAL VIDEO ENCODER	NEW U/G ELEC SERVICE FOR CCTV/HUB	INSTALL 5/8" x 10' GROUNDING ELECTRODE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-246	1,340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-247	1,360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-248	1,430	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-249	1,920	-	-	-	-	200	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-250	1,480	-	-	-	-	220	-	2	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-251	1,040	-	-	-	-	60	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-252	-	1,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-253	-	1,550	-	-	-	60	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-254	-	1,450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-255	-	760	-	-	-	230	-	1	-	1	1	440	-	-	-	-	-	-	-	-	-
CL B-256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-257	-	1,280	-	-	-	-	-	-	-	-	-	1,120	-	-	-	-	-	-	-	-	-
CL B-258	-	970	-	-	-	490	-	1	-	1	1	700	-	-	-	-	-	-	-	-	-
CL B-259	1,420	-	-	-	-	580	-	1	-	1	1	-	-	-	-	-	-	-	-		
CL B-260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-261	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-262	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-263	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-264	340	410	-	-	-	340	-	2	-	1	1	140	-	-	-	-	-	-	-	-	-
CL B-265	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-266	-	-	-	-	-	600	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-267	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-268	-	-	-	-	-	600	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-270	-	-	-	-	-	320	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-271	580	-	-	-	-	210	-	1	-	1	1	190	-	-	-	-	-	-	-	-	-
CL B-272	-	-	-	-	-	1,250	-	1	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-273	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-274	-	-	-	-	-	690	-	1	1	2	2	-	-	-	-	-	-	-	-	-	-
CL B-275	-	-	-	-	-	370	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-276	1,440	-	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-	-	-	-	-
CL B-277	1,430	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-278	1,420	-	-	-	-	65	-	1	-	1	1	310	-	-	-	-	-	-	-	-	-
CL B-279	1,220	-	-	-	-	245	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-280	860	-	-	-	-	325	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: North Carolina Department of Transportation, Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B
(sheet 2 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON
SIGNATURE 3/27/13 DATE

CADD Filename: Phase B Summary by CL.dgn

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13833

SUMMARY OF WORK BY CABLE LAYOUT PLANS

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	35

CABLE LAYOUT SHEET NUMBER	REMOVE SPLICE/ HUB CABINET	UNI-DIRECTIONAL ANTENNA	900 MHz ETHERNET RADIO SYSTEM	ETHERNET CABLE (CAT 5E)	COAXIAL ANTENNA CABLE	IS JUNCTION BOX (SPECIAL -SIZED)	IS 2" RISER WITH HEAT SHRINK TUBING	IS COMMUNICATIONS CABLE (24-FIBER)	IS COMMUNICATIONS CABLE (48-FIBER)	IS COMMUNICATIONS CABLE (96-FIBER)	IS SPLICE ENCLOSURE	IS MODIFY EXISTING SPLICE	IS HEAT SHRINK TUBING RETROFIT KIT	IS BOND MESSENGER CABLE	IS REMOVE EXISTING JUNCTION BOX
	EA	EA	EA	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA	EA	EA
CL B-246	1	-	-	-	-	-	-	-	-	1,340	-	-	-	-	-
CL B-247	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-252	-	-	-	-	-	-	-	1,400	-	-	-	-	-	-	-
CL B-253	-	-	-	-	-	-	-	1,500	-	-	-	-	-	-	-
CL B-254	-	-	-	-	-	-	-	1,450	-	-	-	-	-	-	-
CL B-255	-	-	-	-	-	-	-	760	-	-	-	-	-	-	-
CL B-256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-257	-	-	-	-	-	-	-	1,380	-	-	-	-	-	-	-
CL B-258	-	-	-	-	-	-	-	870	-	-	-	-	-	-	-
CL B-259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-260	-	-	-	-	-	-	-	-	-	1,200	-	1	-	-	-
CL B-261	-	-	-	-	-	-	1	-	-	1,540	-	-	-	1	-
CL B-262	-	-	-	-	-	-	1	-	-	1,390	-	-	-	-	-
CL B-263	-	-	-	-	-	-	1	-	-	1,560	-	-	-	1	-
CL B-264	2	-	-	-	-	-	1	520	-	1,470	1	-	-	-	-
CL B-265	-	-	-	-	-	-	1	-	-	1,470	-	-	-	-	-
CL B-266	1	-	-	-	-	-	-	-	-	1,530	-	-	-	-	-
CL B-267	-	-	-	-	-	-	-	-	-	1,510	-	-	-	-	-
CL B-268	1	-	-	-	-	-	-	-	-	1,620	-	-	-	-	-
CL B-269	-	-	-	-	-	-	-	-	-	1,470	-	-	-	1	-
CL B-270	1	-	-	-	-	-	2	-	-	1,690	-	-	-	-	-
CL B-271	1	-	-	-	-	-	-	-	-	2,120	1	-	-	-	-
CL B-272	2	-	-	-	-	-	1	-	-	1,530	-	-	-	-	-
CL B-273	-	-	-	-	-	-	-	-	-	1,210	-	-	-	-	-
CL B-274	1	-	-	-	-	-	1	-	-	1,410	-	-	-	-	-
CL B-275	1	-	-	-	-	-	-	-	-	1,560	-	-	-	-	-
CL B-276	1	-	-	-	-	1	-	-	-	1,870	1	-	-	-	1
CL B-277	-	-	-	-	-	-	-	-	-	1,430	-	-	-	-	-
CL B-278	1	-	-	-	-	-	-	-	-	1,470	-	-	-	-	-
CL B-279	-	-	-	-	-	-	-	-	-	1,210	1	-	-	-	-
CL B-280	-	-	-	-	-	1	-	-	-	1,070	1	-	-	-	1

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 3 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE	REVISIONS	INIT.	DATE
NTS			

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-27-13
SIGNATURE DATE

CADD Filename: Phase B Summary by CL.dgn

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13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	36

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	JUNCTION BOX (STANDARD SIZE)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL -SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	WOOD POLE	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CAT 5E	2" RISER WITH WEATHERHEAD	1" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	4" RISER WITH SEAL	HEAT SHRINK TUBING RETROFIT KIT
	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-281	480	3	980	-	980	-	-	3	-	-	-	-	5	-	-	-	-	-	2	-	1
CL B-282	490	2	610	-	520	90	-	4	-	-	1	-	2	-	-	-	-	-	2	-	-
CL B-283	-	-	900	-	-	880	-	4	-	-	2	-	-	-	-	-	-	-	-	-	-
CL B-284	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-287	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-288	1,170	2	190	-	190	-	-	-	1	-	-	-	1	-	-	-	-	-	2	-	-
CL B-289	810	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	1	-	-	-
CL B-290	-	-	630	-	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-291	-	-	1,350	-	1,350	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-292	-	-	1,280	-	1,280	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-
CL B-293	-	-	1,210	-	1,210	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-294	290	2	1,120	-	1,120	-	-	2	-	-	1	2	2	-	-	-	-	-	2	-	-
CL B-295	-	-	450	-	450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-296	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-297	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-298	-	-	260	-	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-299	-	1	1,205	-	230	975	-	3	1	-	2	-	1	-	-	-	-	-	1	-	-
CL B-300	410	5	460	-	395	60	-	6	-	-	-	-	4	-	-	-	-	1	4	-	-
CL B-301	1,440	1	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-
CL B-302	1,430	1	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-
CL B-303	1,130	2	250	-	-	240	-	2	-	-	-	-	2	-	-	-	-	-	2	-	-
CL B-304	1,490	2	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	1	-	-
CL B-305	1,080	2	280	-	-	300	-	2	-	-	-	-	2	-	-	-	-	-	2	-	-
CL B-306	1,180	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	1	-	-	-
CL B-307	-	-	1,120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-308	-	-	900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
CL B-310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS	99,190	385	93,255	745	49,157	41,353	2	240	62	2	69	7	353	35	29	11	20	14	217	1	21

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Prepared for the Offices of: Transportation Mobility and Safety Division NORTH CAROLINA DEPARTMENT OF TRANSPORTATION Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by Cable Layout Plans - Phase B (sheet 1 of 3)
Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE

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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	37

SUMMARY OF WORK BY CABLE LAYOUT PLANS

CABLE LAYOUT SHEET NUMBER	COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	COMMUNICATIONS CABLE (72-FIBER)	REMOVE & REINSTALL COMMUNICATIONS CABLE	DROP CABLE (6-FIBER)	HAND LASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE	INTERCONNECT CENTER	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	INSTALL CCTV CAMERA ASSEMBLY	INSTALL CCTV CABINET (POLE)	INSTALL CCTV CABINET (BASE)	INSTALL CABINET FOUNDATION	INSTALL CCTV CABINET BASE EXTENDER	CCTV WOOD POLE	DIGITAL VIDEO ENCODER	NEW U/G ELEC SERVICE FOR CCTV/HUB	INSTALL 5/8" x 10' GROUNDING ELECTRODE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CL B-281	1,470	-	-	-	-	355	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-282	1,070	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-283	1,130	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
CL B-284	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-287	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-288	1,540	-	-	-	-	480	-	2	-	2	2	-	-	-	-	-	-	-	-	-	-
CL B-289	700	-	-	-	-	345	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-290	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-291	1,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-292	1,330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-293	1,260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-294	1,570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-295	500	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
CL B-296	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CL B-297	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-298	450	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
CL B-299	1,465	-	-	-	-	65	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-300	1,560	-	-	-	-	255	250	1	-	1	1	600	-	-	-	-	-	-	-	-	-
CL B-301	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-302	1,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-303	1,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-304	1,600	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-
CL B-305	1,540	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-306	820	-	-	-	-	605	440	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CL B-307	-	-	1,170	-	-	-	-	-	-	-	-	1,170	-	-	-	-	-	-	-	-	-
CL B-308	-	-	1,440	-	-	-	-	-	-	-	-	1,090	-	-	-	-	-	-	-	-	-
CL B-309	-	-	760	-	760	-	-	-	2	-	-	40	-	-	-	-	-	-	-	-	-
CL B-310	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
TOTALS	312,235	84,380	3,370	23,195	760	44,950	13,510	161	16	170	174	33,050	18	17	1	1	1	15	18	10	30

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1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
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Prepared for the Offices of:
Transportation Mobility and Safety Division
North Carolina Department of Transportation
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 2 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS | INIT. | DATE

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SUMMARY OF WORK BY CABLE LAYOUT PLANS

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	38

CABLE LAYOUT SHEET NUMBER	REMOVE SPLICE/ HUB CABINET	UNI-DIRECTIONAL ANTENNA	900 MHz ETHERNET RADIO SYSTEM	ETHERNET CABLE (CAT 5E)	COAXIAL ANTENNA CABLE	IS JUNCTION BOX (SPECIAL -SIZED)	IS 2" RISER WITH HEAT SHRINK TUBING	IS COMMUNICATIONS CABLE (24-FIBER)	IS COMMUNICATIONS CABLE (48-FIBER)	IS COMMUNICATIONS CABLE (96-FIBER)	IS SPLICE ENCLOSURE	IS MODIFY EXISTING SPLICE	IS HEAT SHRINK TUBING RETROFIT KIT	IS BOND MESSENGER CABLE	IS REMOVE EXISTING JUNCTION BOX
	EA	EA	EA	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA	EA	EA
CL B-281	1	-	-	-	-	-	-	-	-	1,550	-	-	-	-	-
CL B-282	-	-	-	-	-	-	-	-	-	1,070	-	-	-	-	-
CL B-283	-	-	-	-	-	-	-	-	-	1,080	-	-	-	-	-
CL B-284	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-287	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-289	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-291	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-293	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-294	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-295	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-296	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-297	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-298	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-299	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-300	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-305	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-306	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL B-307	-	-	-	-	-	-	-	1,170	-	-	-	-	-	-	-
CL B-308	-	-	-	-	-	-	-	1,000	-	790	-	-	-	-	-
CL B-309	1	-	-	-	-	-	-	-	-	550	1	-	-	-	-
CL B-310	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-
TOTALS	164	4	4	2,535	121	12	10	99,850	195,610	41,120	40	3	1	3	2

- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable, wireless links, and CCTV installations that are shown on the cable layout plans (i.e. CL sheets). Work to be done for traffic signals is shown separately on the signal designs and the "Summary of Work by Intersection" sheets in Volume III of III.
- The items listed above are for informational purposes only and represent work that is necessary to complete the project and are not necessarily pay items. See Summary of Quantites and the Project Special Provisions for defined Pay Items for this contract.

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Prepared for the Offices of:
Transportation Mobility and Safety Division
North Carolina Department of Transportation
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Summary of Work by
Cable Layout Plans - Phase B
(sheet 3 of 3)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 022516
ENGINEER
LISA M. MOON

Lisa M. Moon 3-25-13
SIGNATURE DATE

CADD Filename: Phase B Summary by CL.dgn

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13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	39

CCTV INSTALLATION SUMMARY

CCTV REFERENCE NUMBER	SHEET REFERENCE	LOCATION	CCTV POLE LOCATION			COMMUNICATIONS RING	POLE			CAMERA MOUNTING HEIGHT	POWER SERVICE			CABINET TYPE
			QUADRANT	FEET FROM MAIN STREET (FACE OF CURB)	FEET FROM SIDE STREET (FACE OF CURB)		TYPE	STATUS	LENGTH		TYPE	STATUS	POWER COMPANY	
8	CL B-003	PETERS CREEK PKWY @ STAFFORD VILLAGE BLVD	NE	-	-	16	METAL	EXIST	-	5' FROM POLE TOP	UNDERGROUND	NEW	DUKE	GROUND
10	CL B-007	PETERS CREEK PKWY @ SOUTHPARK BLVD	NE	19	40	16	WOOD	NEW	50'	35'	SHARED	EXIST	DUKE	POLE
9	CL B-011	PETERS CREEK PKWY @ TRADE MART BLVD	SW	10	167	16	WOOD	NEW	50'	35'	SHARED	EXIST	DUKE	POLE
5	CL B-013	SILAS CREEK PKWY @ PETERS CREEK PKWY	NE	26	11	16	WOOD	NEW	50'	35'	SHARED	EXIST	DUKE	POLE
11	CL B-015	PETERS CREEK PKWY @ LINK RD	SW	11	48	15	WOOD	NEW	50'	35'	UNDERGROUND	NEW	DUKE	POLE
12	CL B-018	PETERS CREEK PKWY @ ACADEMY ST	SW	27	18	15	WOOD	NEW	50'	35'	UNDERGROUND	NEW	DUKE	POLE
1	CL B-053	STRATFORD RD @ WESTBROOK PLAZA DR	NE	15 EOT	60	8	WOOD	NEW	50'	35'	UNDERGROUND	NEW	DUKE	POLE
2	CL B-055	STRATFORD RD @ HEALY DR	NE	12 EOT	55	8	WOOD	NEW	50'	35'	SHARED	EXIST	DUKE	POLE
4	CL B-060	STRATFORD RD @ KNOLLWOOD ST	SW	-	-	12	WOOD	EXIST	-	5' FROM POLE TOP	UNDERGROUND	NEW	DUKE	POLE
15	CL B-066	HANES MALL BLVD @ KESTER MILL RD	NW	***	***	7	WOOD	NEW	50'	35'	UNDERGROUND	NEW	DUKE	POLE
6	CL B-096	SILAS CREEK PKWY @ LOCKLAND AVE	NW	18	3 FROM DRIVE WAY	15	WOOD	NEW	50'	35'	SHARED	EXIST	DUKE	POLE
16	CL B-136	HANES MALL BLVD @ JONESTOWN RD	SW	16	34	7	WOOD	NEW	50'	35'	UNDERGROUND	NEW	DUKE	POLE
13	CL B-145	COUNTRY CLUB RD @ PEACE HAVEN RD	NE	10.5	31	6	WOOD	NEW	50'	35'	UNDERGROUND	NEW	DUKE	POLE
14	CL B-148	COUNTRY CLUB RD @ JONESTOWN RD	SW	-	-	6	WOOD	EXIST	-	5' FROM POLE TOP	SHARED	EXIST	DUKE	POLE
19	CL B-185	ROBINHOOD RD @ HUNTINGREEN LN	SW	14	88 FROM STOP BAR	5	WOOD	NEW	50'	35'	SHARED	EXIST	DUKE	POLE
20	CL B-186	ROBINHOOD RD @ PEACE HAVEN RD	SE	7	10 FROM DRIVE WAY	5	WOOD	NEW	50'	35'	UNDERGROUND	NEW	DUKE	POLE
21	CL B-210	REYNOLDA RD @ OLD TOWN DRIVE	SE	10.5	59	4	WOOD	NEW	50'	35'	UNDERGROUND	NEW	DUKE	POLE
22	CL B-213	REYNOLDA RD @ POLO RD	NW	13.5	15 FROM TRAF POLE	3	WOOD	NEW	50'	35'	SHARED	EXIST	DUKE	POLE
E8	CL B-051	HANES MALL BLVD @ STRATFORD RD	NW	-	-	9	METAL	EXIST	-	EXIST	OVERHEAD	EXIST	DUKE	POLE
E3	CL B-056	SILAS CREEK PKWY @ STRATFORD RD	NE	-	-	10	METAL	EXIST	-	EXIST	UNDERGROUND	EXIST	DUKE	POLE
E7	CL B-070	HANES MALL BLVD @ HANES SQUARE SHOP CNTR	NW	-	-	7	METAL	EXIST	-	EXIST	UNDERGROUND	EXIST	DUKE	GROUND
E9	CL B-073	HANES MALL BLVD @ BROOKVIEW HILLS BLVD	SE	-	-	8	METAL	EXIST	-	EXIST	UNDERGROUND	EXIST	DUKE	POLE
E10	CL B-075	HANES MALL BLVD @ TRULIANT WAY	NE	-	-	8	METAL	EXIST	-	EXIST	UNDERGROUND	EXIST	DUKE	GROUND
E4	CL B-088	SILAS CREEK PKWY @ HANES MALL BLVD	SE	-	-	8	WOOD	EXIST	-	EXIST	UNDERGROUND	EXIST	DUKE	GROUND
E11	CL B-198	SILAS CREEK PKWY @ YORKSHIRE RD	NW	-	-	5	WOOD	EXIST	-	EXIST	OVERHEAD	EXIST	DUKE	POLE
E6	CL B-284	HANES MILL RD @ OAK SUMMITT SHOP CNTR	NW	-	-	31	WOOD	EXIST	-	EXIST	UNDERGROUND	EXIST	DUKE	GROUND
E5	CL B-266	UNIVERSITY PKWY @ NORTHPOINT BLVD	NE	-	-	2	WOOD	EXIST	-	EXIST	UNDERGROUND	EXIST	DUKE	GROUND

*** SEE PLAN SHEET CL B-066

EOT = EDGE OF TRAVELED WAY

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NCDOT Transportation Mobility and Safety Division
750 Greenfield Parkway, Garner, NC 27529

CCTV Installation Summary
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	SGH	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 029531 ENGINEER STEVEN G. HANNE

SIGNATURE 3/22/13 DATE

CADD Filename: Phase B CCTV Summary.dgn

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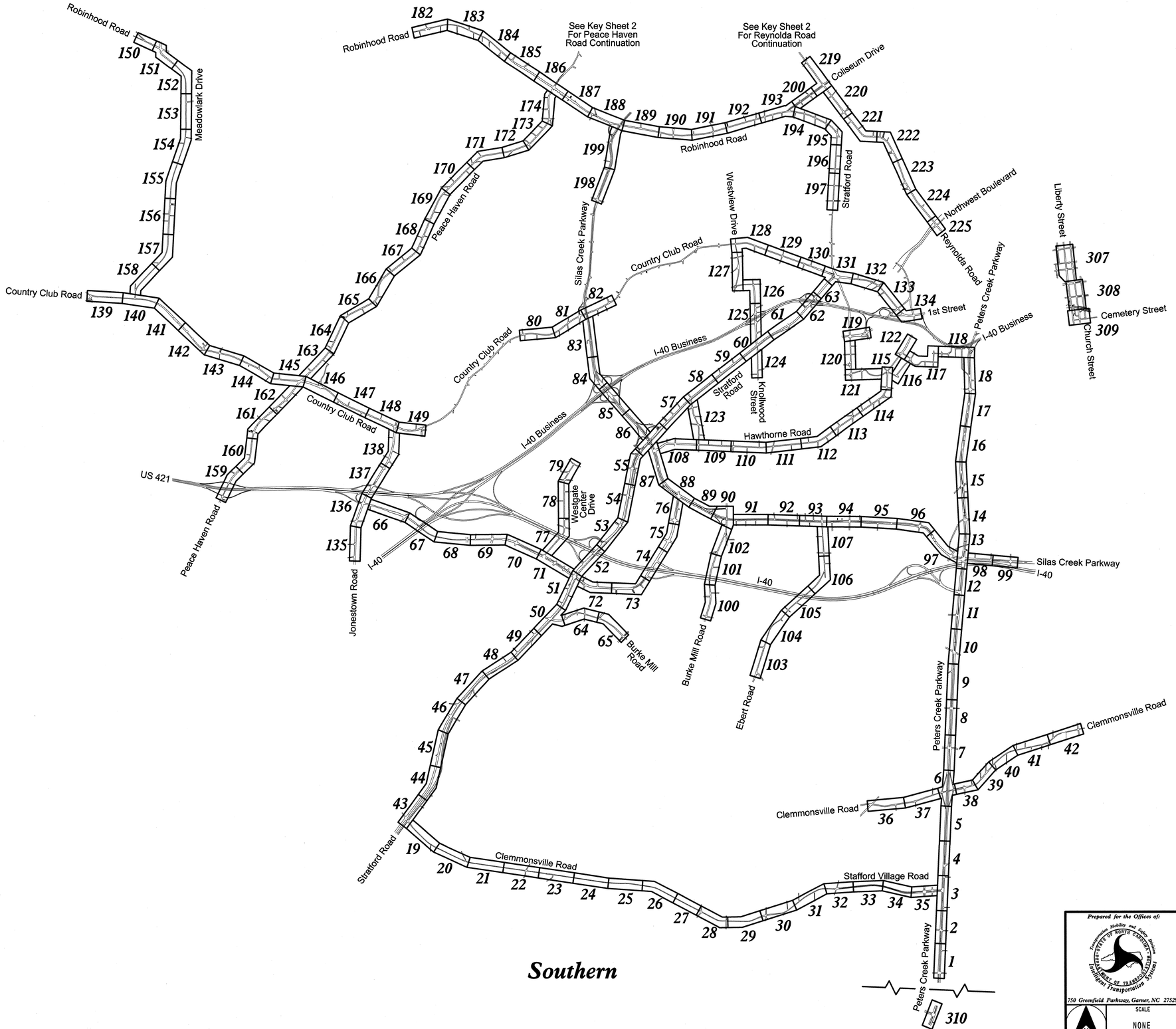
13813

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-1A



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North Carolina Department of Transportation
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Key Sheet Phase B (1 of 2)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NONE

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE

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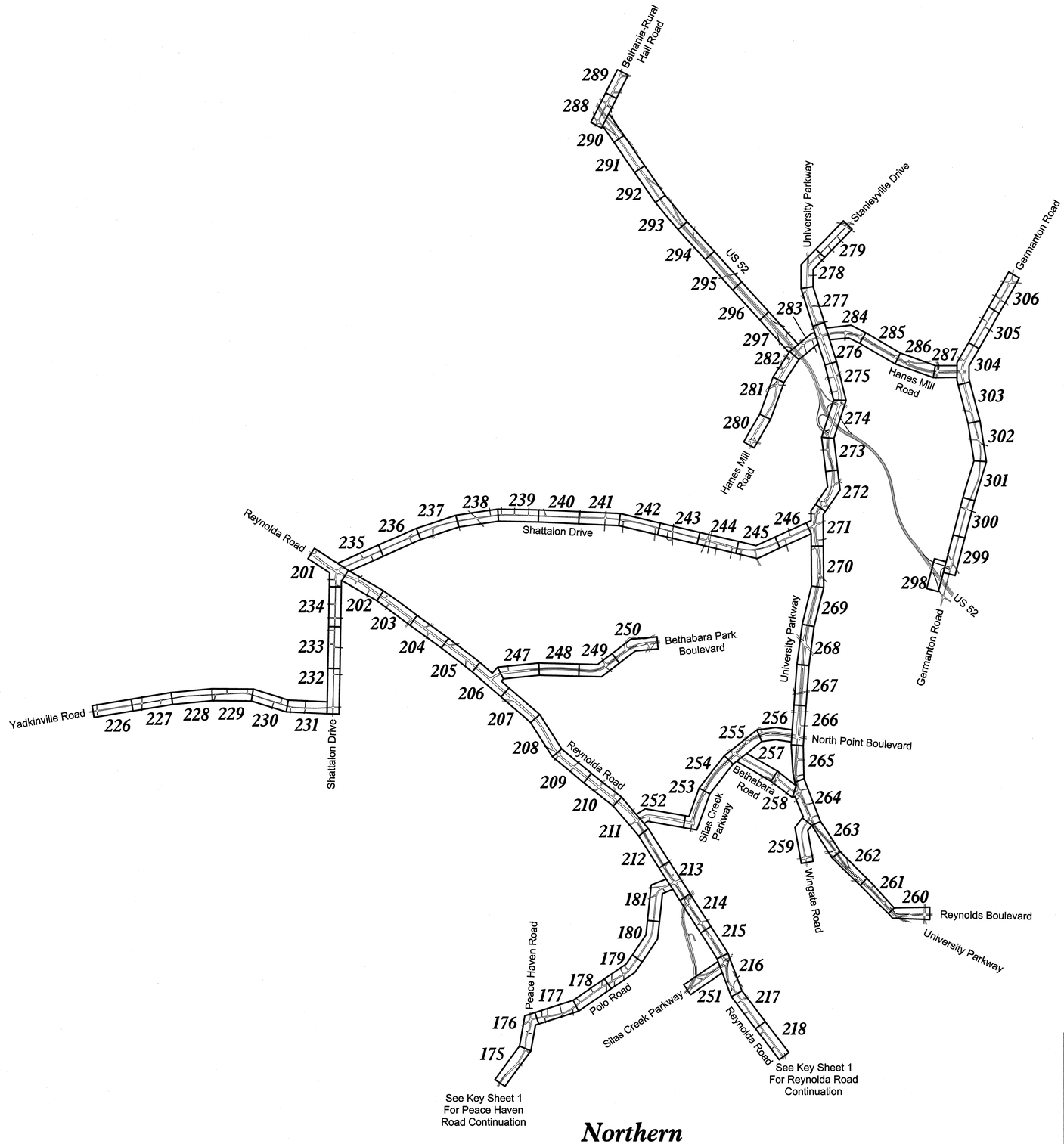
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-1B



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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans Key Sheet
Phase B
(2 of 2)

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NONE

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-1C

LEGEND

- FO — NEW FIBER OPTIC COMMUNICATIONS CABLE
- EXI — EXISTING COMMUNICATIONS CABLE
- REM — EXISTING COMMUNICATIONS CABLE TO BE REMOVED
- NEW AND EXISTING AERIAL GUY ASSEMBLY
- NEW CONDUIT
- EXISTING CONDUIT
- DD — NEW DIRECTIONAL DRILLED CONDUIT
- B&J — NEW BORED AND JACKED CONDUIT
- RAILROAD TRACK
- NEW WOOD POLE
- EXISTING WOOD POLE
- NEW METAL POLE
- EXISTING METAL POLE
- SP — SIGNAL POLE
- NEW STANDARD GUY ASSEMBLY
- EXISTING STANDARD GUY ASSEMBLY
- NEW SIDEWALK GUY ASSEMBLY
- EXISTING SIDEWALK GUY ASSEMBLY
- UNI– DIRECTIONAL RADIO ANTENNA

- NEW HUB CABINET
- NEW IS HUB CABINET
- EXISTING HUB CABINET
- EXISTING IS HUB CABINET
- NEW CONTROLLER AND CABINET
- EXISTING CONTROLLER AND CABINET
- S — NEW SPLICE CABINET
- S — EXISTING SPLICE CABINET
- S — NEW AERIAL SPLICE ENCLOSURE
- S — NEW IS AERIAL SPLICE ENCLOSURE
- S — EXISTING AERIAL SPLICE ENCLOSURE
- S — NEW UNDERGROUND SPLICE ENCLOSURE IN NEW SPECIAL–SIZED JUNCTION BOX
- S — NEW IS UNDERGROUND SPLICE ENCLOSURE IN NEW SPECIAL–SIZED JUNCTION BOX
- S — NEW UNDERGROUND SPLICE ENCLOSURE IN EXISTING SPECIAL–SIZED JUNCTION BOX
- S — EXISTING UNDERGROUND SPLICE ENCLOSURE IN EXISTING SPECIAL–SIZED JUNCTION BOX
- NEW CABLE STORAGE GUIDES (SNOW SHOES)
- NEW IS CABLE STORAGE GUIDES (SNOW SHOES)
- EXISTING CABLE STORAGE GUIDES (SNOW SHOES)

- NEW STANDARD JUNCTION BOX
- NEW IS STANDARD JUNCTION BOX
- EXISTING STANDARD JUNCTION BOX
- NEW OVERSIZED OR SPECIAL–SIZED JUNCTION BOX
- NEW IS OVERSIZED OR SPECIAL–SIZED JUNCTION BOX
- EXISTING OVERSIZED OR SPECIAL–SIZED JUNCTION BOX
- EXISTING COMMUNICATIONS MANHOLE
- 09-XXXX — NCDOT SIGNAL INVENTORY NUMBER
- C-XXX — CITY OF WINSTON–SALEM SIGNAL ID NUMBER
- CCTV-XX — CCTV CAMERA ID NUMBER
- EOP — EDGE OF PAVEMENT
- EOL — EDGE OF LANE
- BOC — BACK OF CURB
- FOC — FACE OF CURB
- NEW SYSTEM DETECTOR
- EXISTING SYSTEM DETECTOR
- NEW CCTV CAMERA ASSEMBLY
- EXISTING CCTV CAMERA ASSEMBLY

ABBREVIATIONS

AGUY	Aerial Guy
ARLT	Area Light
AT&T	AT&T
BS	Backside Attachment
CAM	Camera Bracket
CTL	CenturyLink
CITY	City of Winston–Salem
COMP	Composite Cable
DL	Drip Loop
DRP	Drop
DN	DukeNet Communications
DUKE	Duke Energy
ECC	East Coast Capital
ELEC	Electric
EXI	Existing Communications Cable
FLCAB	Flasher Cabinet
FAB	Fiber Access Point
FO	Fiber Optic
FS	Front Side Attachment
IMC	Intermediate Metallic Conduit
IS	City of Winston–Salem Information Systems
LIC	Lead–In Cable (Detector)
LV3	Level 3 Communications
MCI	MCIVerizon
MSGR	Messenger
NCDOT	North Carolina Department of Transportation
NEUT	Neutral
OH	Overhead
OSS	Overhead Sign Span
OWS	Open Wire Secondary
PWR	Power
RSR	Riser
SAME	Same Elevation/Attachment Height
SEC	Secondary Power
SGRSR	Signal Riser
SIG	Signal Span
SO	Standoff
STLT	Streetlight
SVRSR	Service Riser
TWC	Time Warner Cable
TFMR	Transformer
TOP	Top of Pole
TRI	Triplex
UNK	Unknown
WSM	Windstream
X ANY	Crossing Line, where "Any" is the abbreviation for the overhead line that is crossing exist/prop. cable route

GENERAL NOTES

1. THESE PLANS WERE PREPARED FROM INVENTORIES AND FIELD DATA COLLECTED DURING JULY 2011 THRU MAY 2012. ACTUAL CONDITIONS IN THE FIELD AT THE TIME OF CONSTRUCTION MAY BE DIFFERENT FROM THOSE SHOWN IN THE PLANS.
2. THE FIELD LOCATION OF ANY ITEM TO BE INSTALLED AS PART OF THIS PROJECT SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
3. NEW TRAFFIC SIGNAL CONTROLLER CABINETS ARE SPECIFIED ON THE SIGNAL PLANS.
4. BURIED UTILITIES AND STRUCTURES: PIPELINES, STORM SEWERS, POWER CABLES, UTILITY CABLES, BASEMENTS, AND OTHER PUBLICLY AND PRIVATELY OWNED UNDERGROUND OBSTRUCTIONS EXIST ADJACENT TO AND WITHIN THE STREET RIGHT–OF–WAY WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT. INVESTIGATE THE LOCATION OF SUCH BURIED UTILITIES AND STRUCTURES WITH PUBLIC AND PRIVATE UTILITIES.
5. THE PLAN SHEETS HAVE BEEN DEVELOPED AS CLOSE TO SCALE AS PRACTICAL. HOWEVER, ACTUAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR APPLYING THE WORK SHOWN.
6. THE ROADWAY STANDARD DRAWINGS AND THE DETAILS PROVIDED IN THIS PLAN SET SHALL ALL APPLY TO ALL WORK REQUIRED IN THIS PROJECT, WHETHER A PARTICULAR DETAIL IS SPECIFICALLY REFERENCED TO A WORK ITEM OR NOT. IN THE EVENT OF A CONFLICT, THE ORDER OF PRECEDENCE SHALL BE: THE PROJECT SPECIAL PROVISIONS, THE PLAN SET – INCLUDING DETAILS – SUPPLEMENTAL SPECIFICATIONS, THE STANDARD SPECIFICATIONS, AND THEN THE ROADWAY STANDARD DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING THE PROPER DETAILS.
7. ANY OF THE CONTRACTOR'S WORK ACTIVITIES WHICH IMPACT ANY UTILITY FACILITY SHALL BE COORDINATED WITH THE OWNER OF THE AFFECTED UTILITIES. THE CONTRACTOR SHALL FOLLOW ANY AND ALL WORK PROCEDURES THE UTILITY OWNERS MAY REQUIRE.
8. ALL WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED TO BE PERFORMED BY OTHERS.
9. AREAS WITHIN THIS PROJECT HAVE BEEN DETERMINED TO CONTAIN PROPERTIES WITH DOCUMENTED HISTORICAL SIGNIFICANCE. IF IT IS NECESSARY TO DEVIATE FROM THE PLANS IN AN AREA IDENTIFIED TO CONTAIN PROPERTIES WITH HISTORIC SIGNIFICANCE, ALERT THE ENGINEER TO CONTACT PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH – HISTORIC ARCHITECTURE GROUP OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION FOR AN EFFECTS DETERMINATION BEFORE PROCEEDING.

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Prepared for the Offices of: North Carolina Department of Transportation, Integrated Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE: NTS

Winston-Salem Signal System
Legend/ General Notes/ Abbreviations
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M Moon 3-22-13
SIGNATURE DATE

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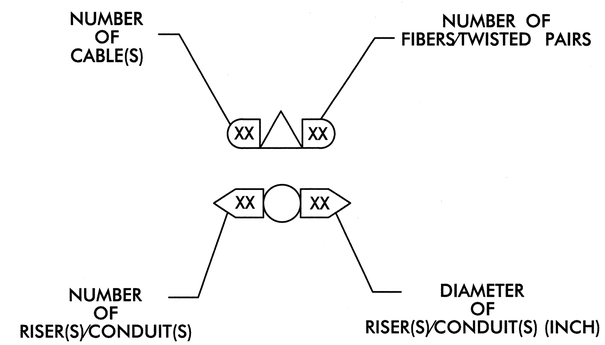
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-1D

1. INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
2. INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
3. INSTALL CATEGORY 5E CABLE
4. INSTALL SMFO CABLE
5. INSTALL COAXIAL ANTENNA CABLE
6. INSTALL FIBER–OPTIC DROP CABLE
7. INSTALL TRACER WIRE
8. INSTALL CONDUIT UNDERGROUND
9. INSTALL PVC CONDUIT
10. INSTALL RIGID, GALVANIZED STEEL CONDUIT
11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
12. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
13. INSTALL HEAT SHRINK TUBING RETROFIT KIT
14. INSTALL HIGH DENSITY 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(S)
20. INSTALL CABLE(S) IN NEW RISER(S)
21. INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS
22. INSTALL NEW CONDUIT INTO CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHEN AVAILABLE)
23. INSTALL NEW RISER INTO CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHEN AVAILABLE)
24. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
25. INSTALL NEW RISER INTO POLE MOUNTED CABINET
26. INSTALL DIGITAL VIDEO ENCODER
27. INSTALL NEW ETHERNET EDGE SWITCH IN CABINET
28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
33. REMOVE EXISTING SPLICE /HUB /CCTV CABINET
34. INSTALL CABINET FOUNDATION
35. REMOVE EXISTING CABINET FOUNDATION
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL CCTV WOOD POLE
38. INSTALL STANDARD SIZE JUNCTION BOX
39. INSTALL SPECIAL–SIZED JUNCTION BOX
40. INSTALL OVERSIZED JUNCTION BOX
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
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
55. LASH CABLE(S) TO EXISTING MESSENGER CABLE
56. LASH CABLE(S) TO NEW MESSENGER CABLE
57. MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB
58. INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB
59. INSTALL NEW POLE MOUNTED CCTV CABINET
60. INSTALL NEW BASE MOUNTED CCTV CABINET
61. INSTALL UNI–DIRECTIONAL ANTENNA
62. NOT USED
63. INSTALL 900 MHZ ETHERNET RADIO
64. INTERCEPT AND REROUTE EXISTING CONDUITS
65. BOND MESSENGER TO POLE GROUND
66. BOND RISER TO POLE GROUND
67. BOND TRACER WIRE TO POLE GROUND
68. BOND TRACER WIRE TO EQUIPMENT GROUND BUS
69. REMOVE EXISTING CCTV CAMERA ASSEMBLY
70. NOT USED
71. NOT USED
72. INSTALL MANAGED ETHERNET SWITCH

CONSTRUCTION NOTE SYMBOLOGY KEY

- (XX) INDICATES NUMBER OF CABLES, LOOPS, ETC.
- [XX] INDICATES NUMBER OF FIBERS PER CABLE, TWISTED PAIRS PER CABLE, ETC.
- <XX INDICATES NUMBER OF RISER(S)/CONDUIT(S)
- XX> INDICATES DIAMETER OF RISER(S)/CONDUIT(S) (INCH)



BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: North Carolina Department of Transportation, Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Construction Notes
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/BKS	REVIEWED BY:	LM Moon

SCALE: NTS

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON

Lisa M Moon 3-22-13
SIGNATURE DATE

CADD Filename: Phase B CLB-10-Notes.dgn

13-MAR-2013 17:19
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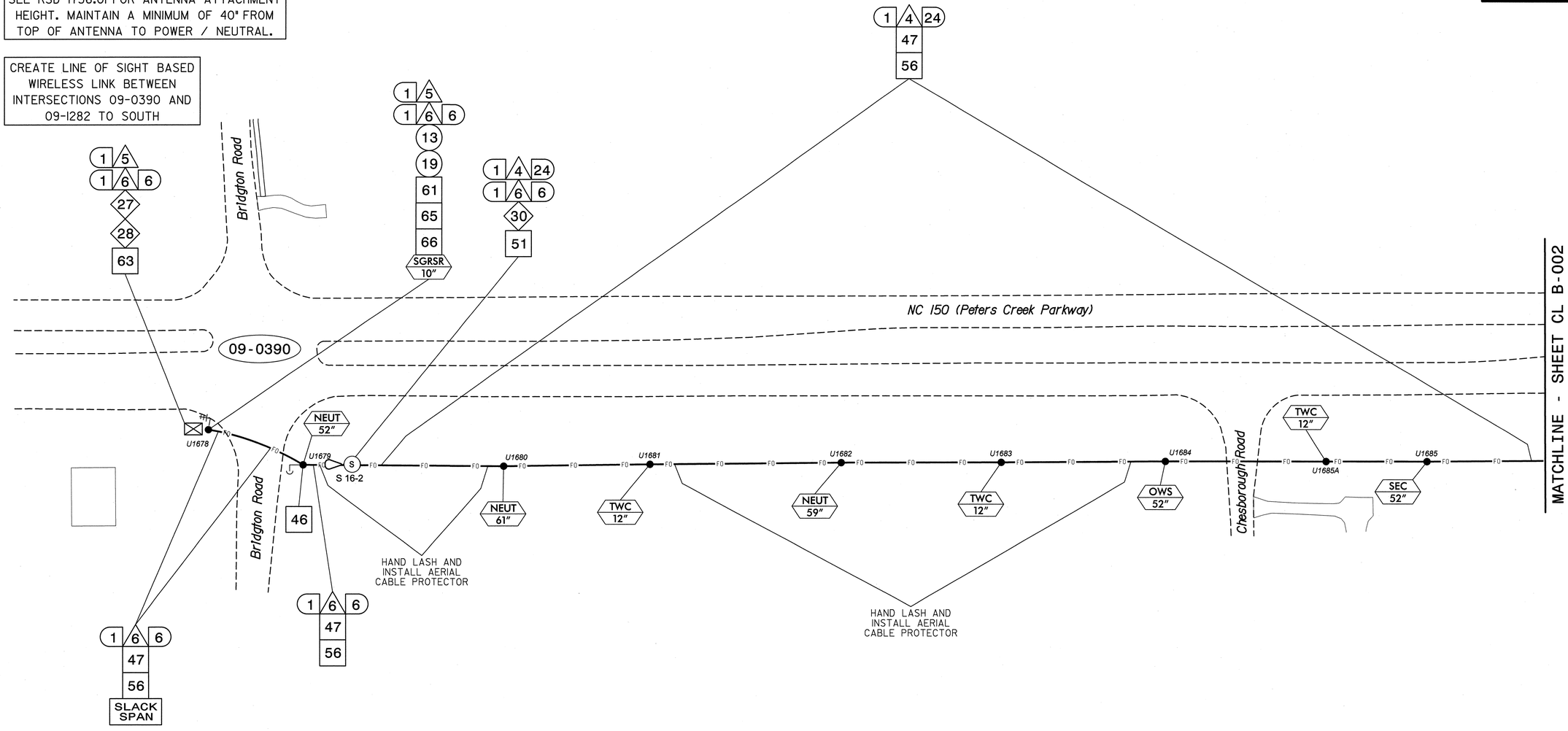
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-001

SEE RSD 1736.01 FOR ANTENNA ATTACHMENT HEIGHT. MAINTAIN A MINIMUM OF 40" FROM TOP OF ANTENNA TO POWER / NEUTRAL.

CREATE LINE OF SIGHT BASED WIRELESS LINK BETWEEN INTERSECTIONS 09-0390 AND 09-1282 TO SOUTH



NOTES:
1. UNLESS OTHERWISE NOTED:
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   - ATTACH NEW MESSENGER CABLE 40" BELOW POWER.
   - ATTACH ON FRONT SIDE (FS) OF POLE.
2. SEAL ALL CONDUIT ENDS WITH DUCT AND CONDUIT SEALER, AT ALL JUNCTION BOX/CABINET ENTRANCES.

BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1	INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	13	INSTALL HEAT SHRINK TUBING RETROFIT KIT	25	INSTALL NEW RISER INTO POLE MOUNTED CABINET	37	INSTALL CCTV WOOD POLE	49	REMOVE EXISTING COMMUNICATIONS CABLE	61	INSTALL UNI-DIRECTIONAL ANTENNA
2	INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14	INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26	INSTALL DIGITAL VIDEO ENCODER	38	INSTALL STANDARD SIZE JUNCTION BOX	50	INSTALL WIRELESS DSL	62	NOT USED
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5	INSTALL COAXIAL ANTENNA CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	53	STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65	BOND MESSENGER TO POLE GROUND
6	INSTALL FIBER-OPTIC DROP CABLE	18	INSTALL CABLE(S) IN NEW CONDUIT	30	INSTALL AERIAL SPLICE ENCLOSURE	42	INSTALL WOOD POLE	54	LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66	BOND RISER TO POLE GROUND
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ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
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Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE: March 2013 REVIEWED BY: MB Toth
PREPARED BY: JAW/AJD REVIEWED BY: LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022618 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-001.dgn

13-MAR-2013 10:19
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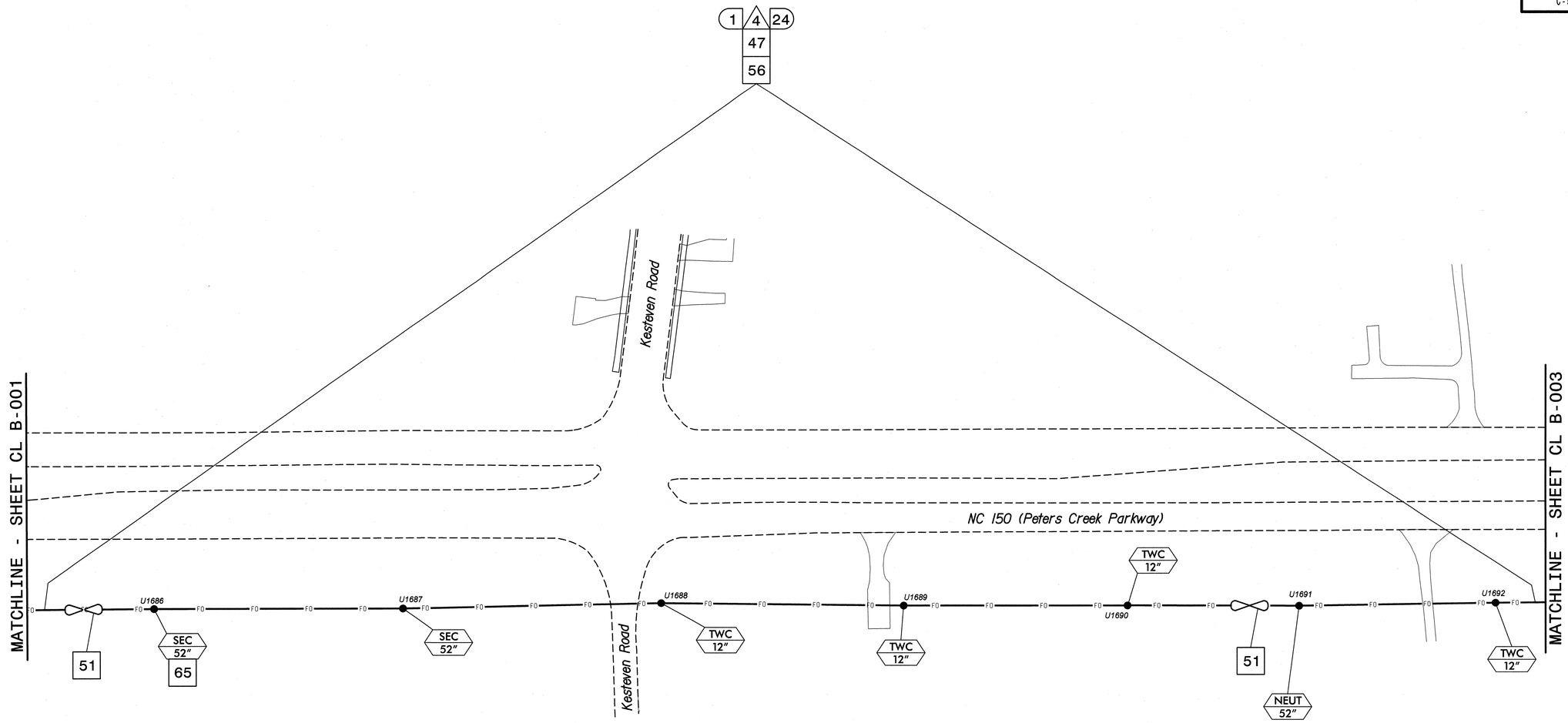
13853

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-002



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ATKINS
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Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-002.dgn

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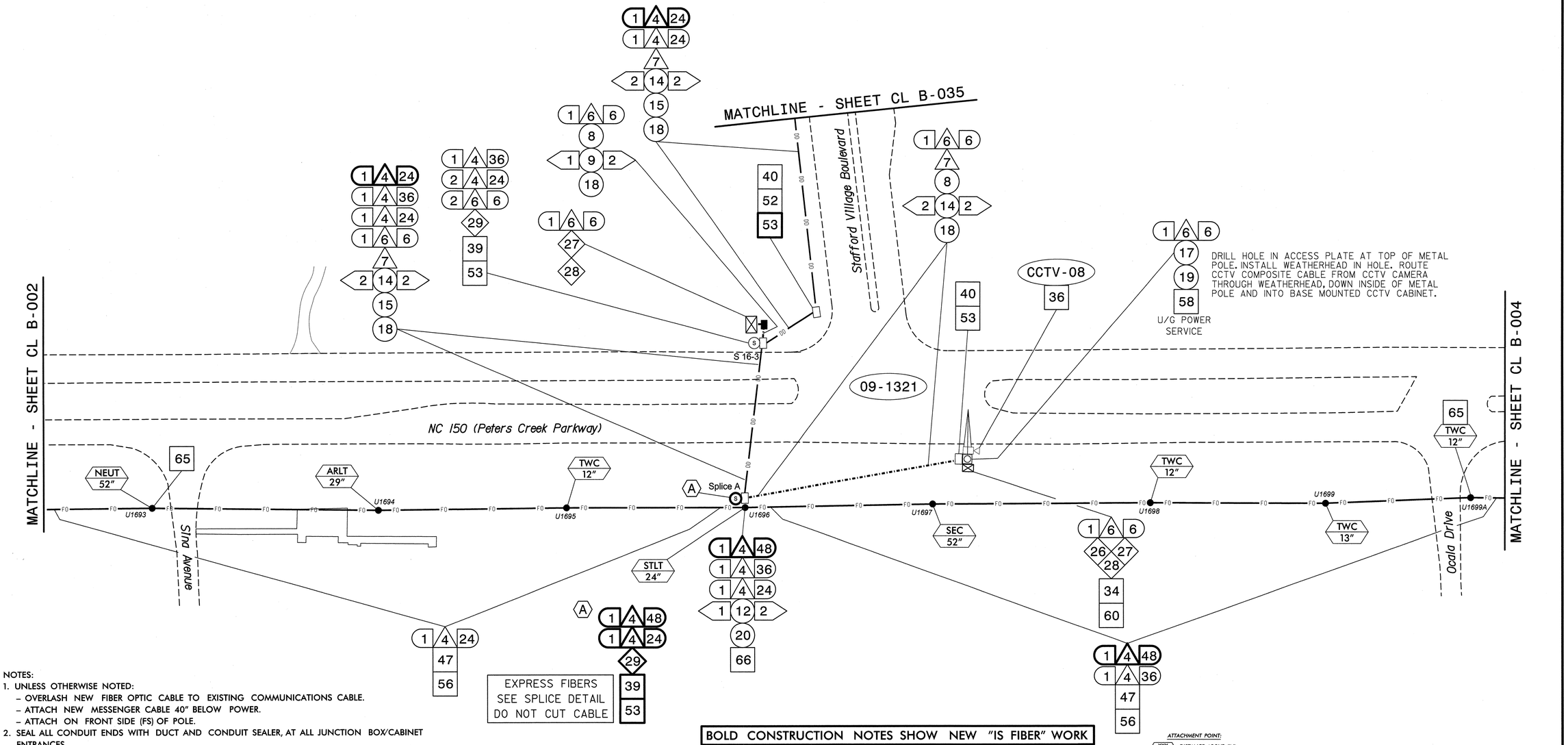
13853

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-003



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Prepared for the Offices of:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION — Integrated Mobility and Safety Division — Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE
3-22-13
DATE

CADD Filename: CL B-003.dgn

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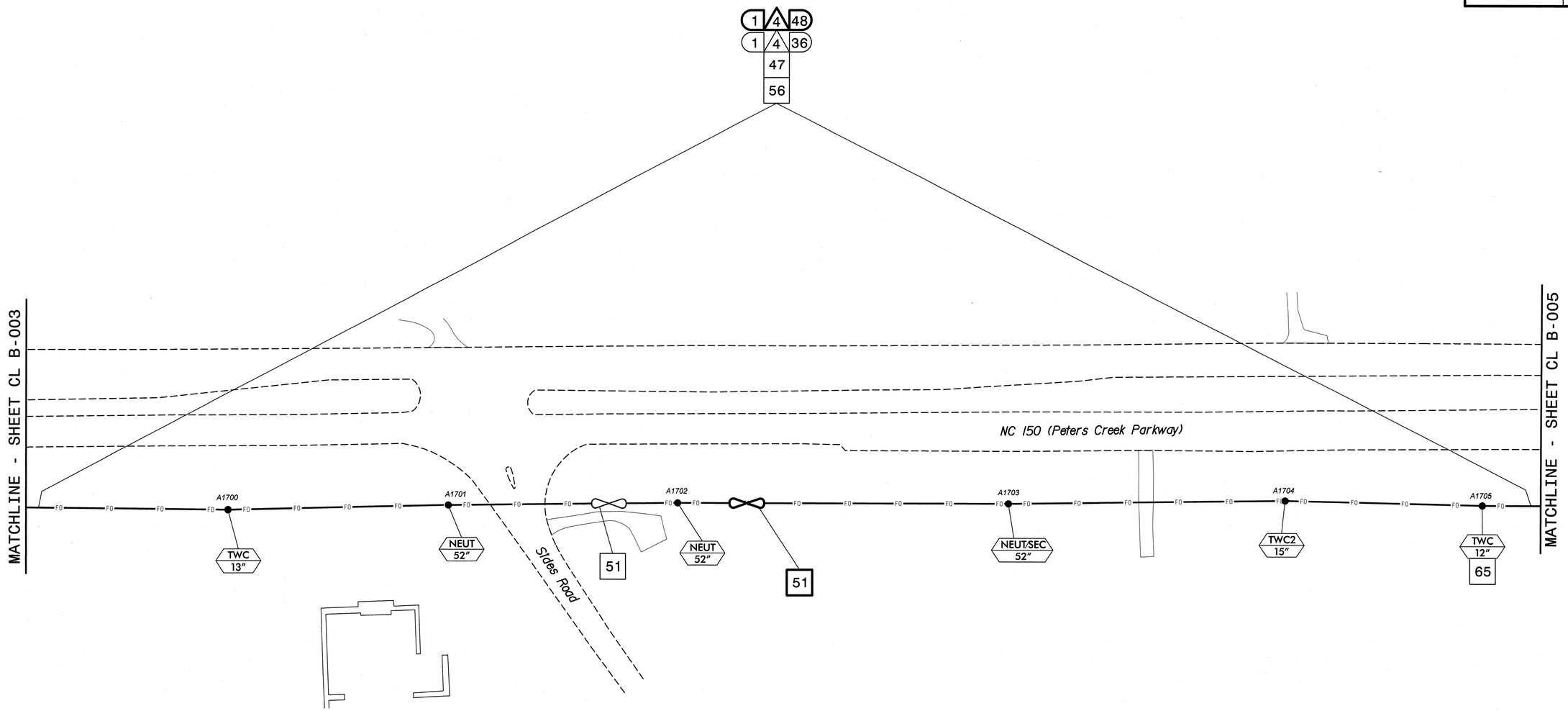
13813

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-004



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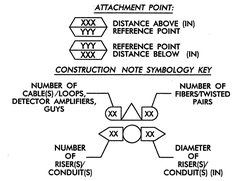
CONSTRUCTION NOTE SYMBOLOGY KEY



ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
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(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
North Carolina Department of Transportation Mobility and Safety Division
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-004.dgn

13-MAR-2013 10:30
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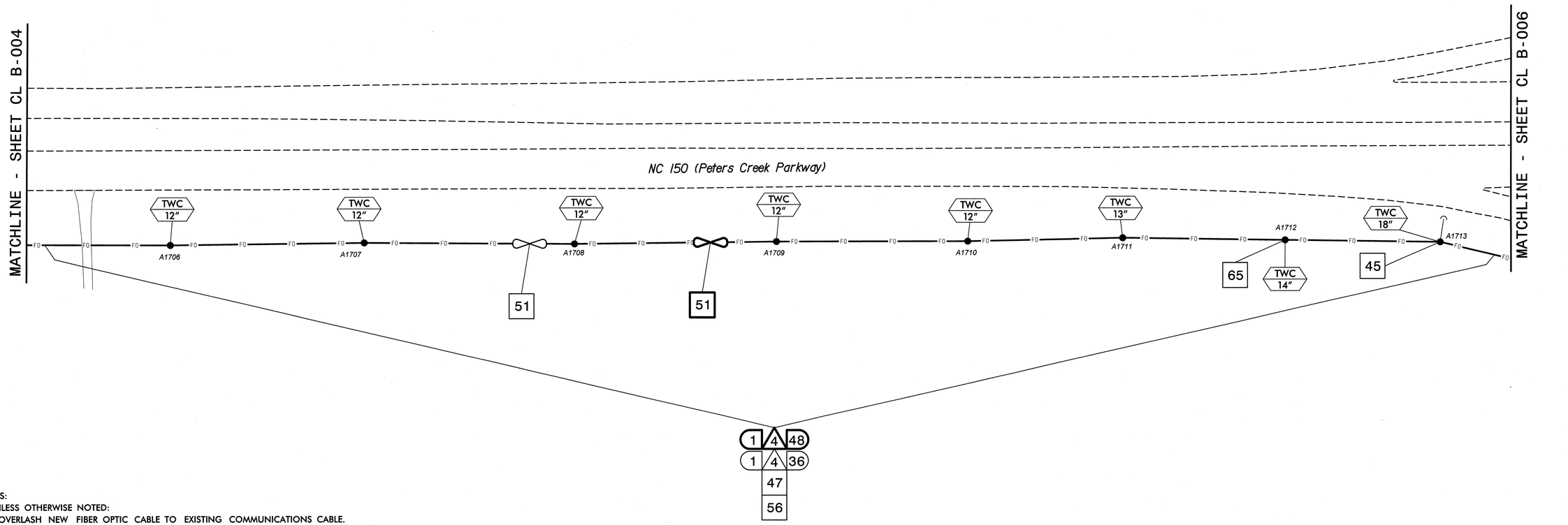
13813

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-005



NOTES:
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   - ATTACH NEW MESSENGER CABLE 40" BELOW POWER.
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2. SEAL ALL CONDUIT ENDS WITH DUCT AND CONDUIT SEALER, AT ALL JUNCTION BOX/CABINET ENTRANCES.

BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

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12. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
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17. INSTALL CABLE(S) IN EXISTING CONDUIT
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23. INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
24. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
25. INSTALL NEW RISER INTO POLE MOUNTED CABINET
26. INSTALL DIGITAL VIDEO ENCODER
27. INSTALL NEW ETHERNET EDGE SWITCH IN CABINET
28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
33. REMOVE EXISTING SPLICE /HUB /CCTV CABINET
34. INSTALL CABINET FOUNDATION
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36. INSTALL CCTV CAMERA ASSEMBLY
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49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
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68. BOND TRACER WIRE TO EQUIPMENT GROUND BUS
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70. NOT USED
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ATTACHMENT POINT:
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CONSTRUCTION NOTE SYMBOLOGY KEY
NUMBER OF CABLE(S)/LOOPS,--DETECTOR AMPLIFIERS, GUYS
NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

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750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE DATE

CADD Filename: CL B-005.dgn

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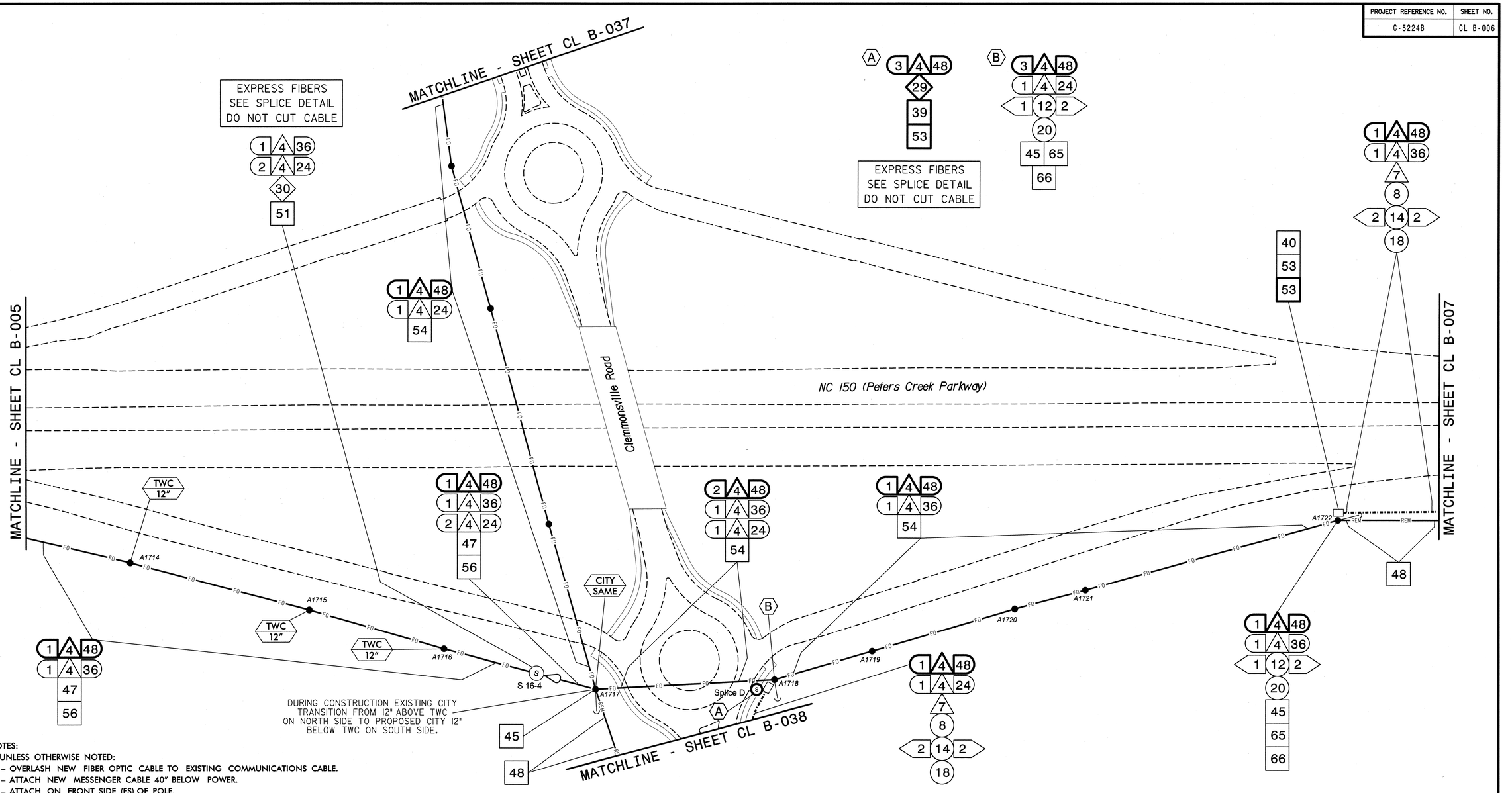
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-006



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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-006.dgn

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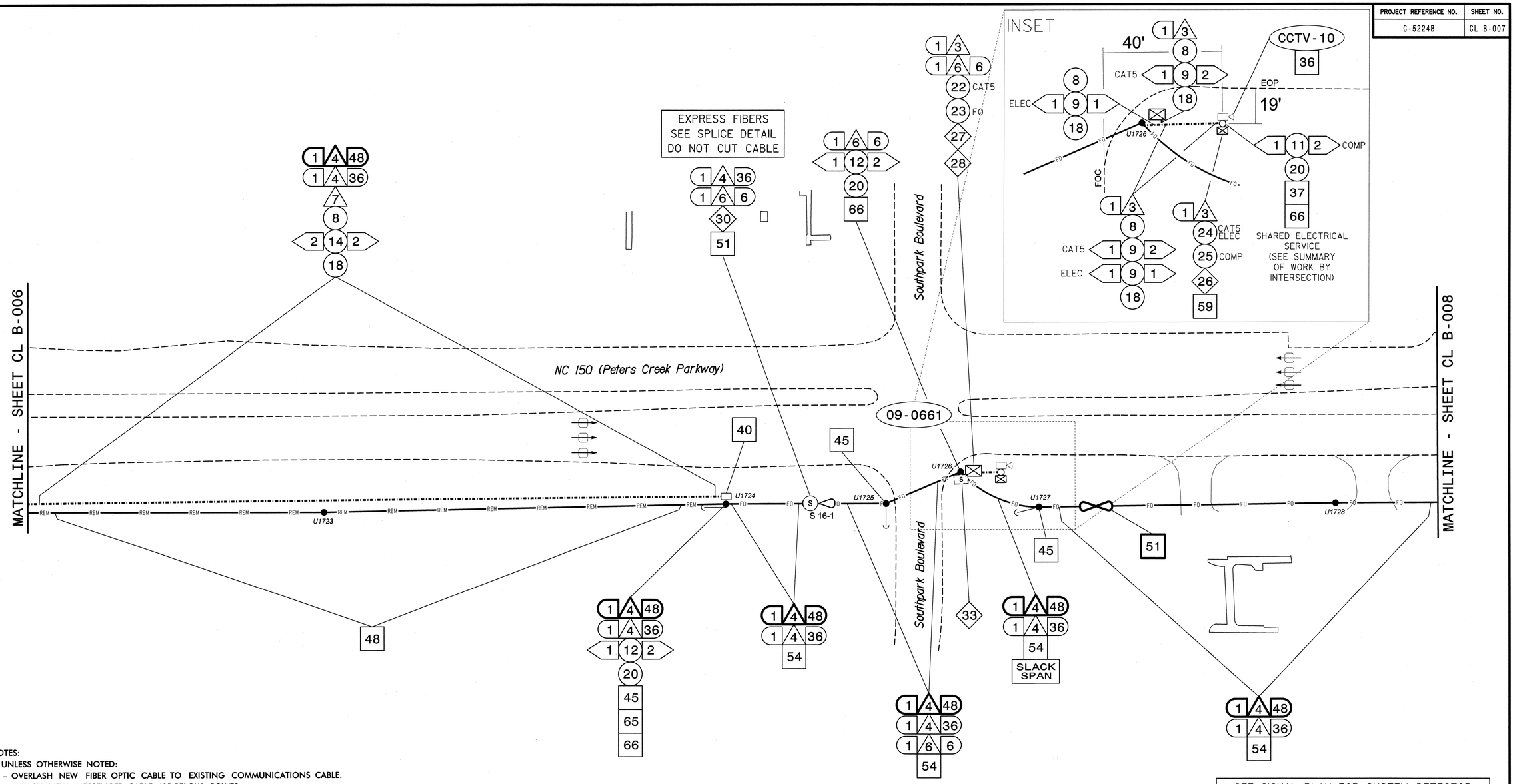
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-007



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SEE SIGNAL PLAN FOR SYSTEM DETECTOR INSTALLATION/ASSIGNMENT DETAILS. REFER TO "SYSTEM DETECTORS AND CONTROL ZONES" SCHEMATIC FOR ADDITIONAL INFORMATION.

ATTACHMENT POINT:
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YYY REFERENCE POINT DISTANCE BELOW (IN) XXX

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Winston-Salem Signal System Cable Layout Plans Phase B

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PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-007.dgn

13-MAR-2013 10:30
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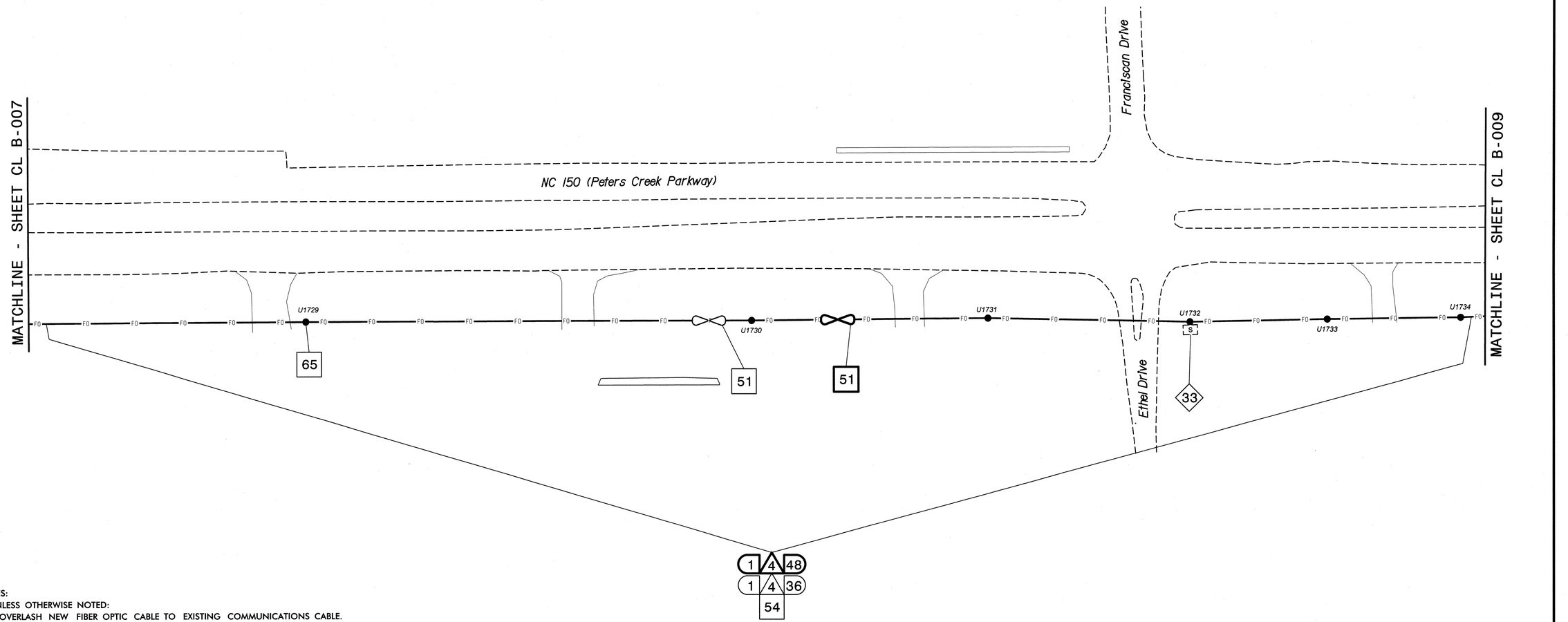
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-008



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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-008.dgn

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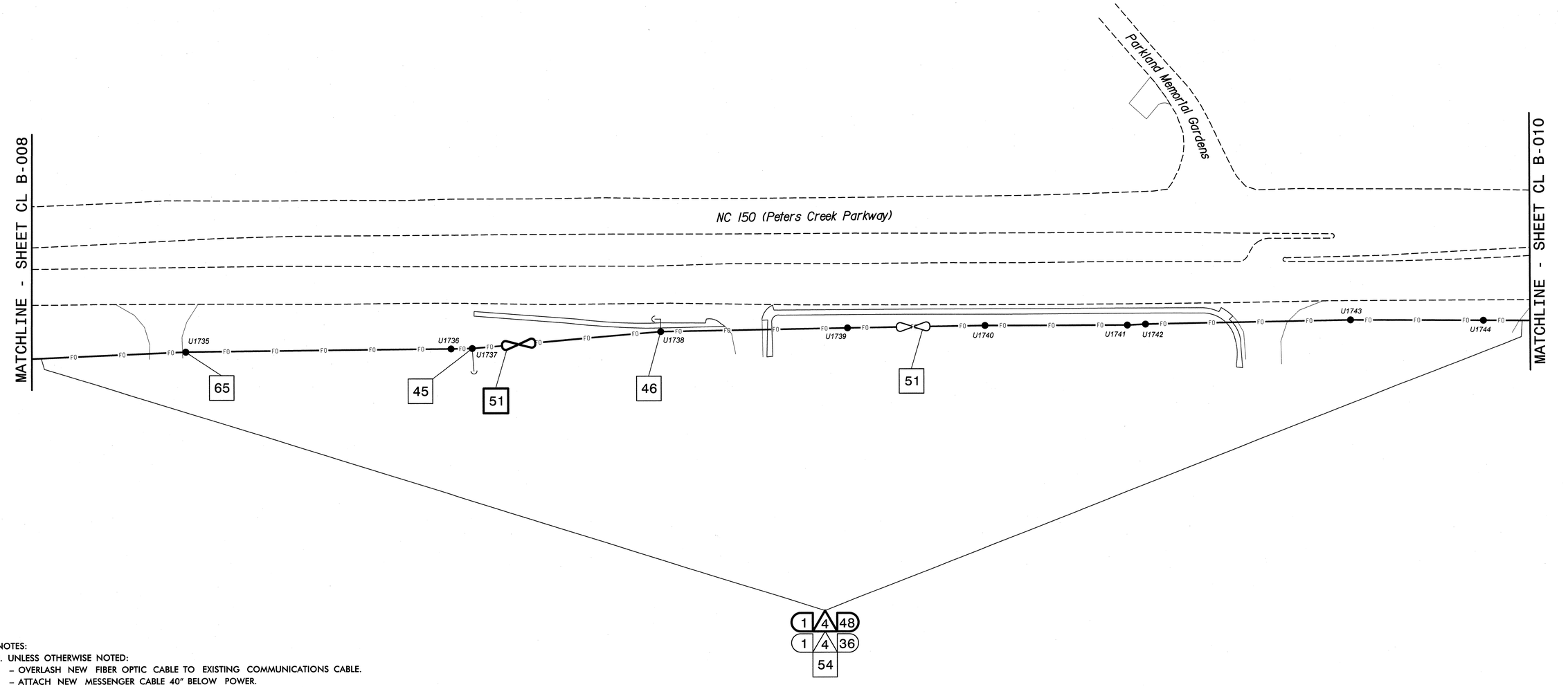
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-009



NOTES:
1. UNLESS OTHERWISE NOTED:
   - OVERLASH NEW FIBER OPTIC CABLE TO EXISTING COMMUNICATIONS CABLE.
   - ATTACH NEW MESSENGER CABLE 40" BELOW POWER.
   - ATTACH ON FRONT SIDE (FS) OF POLE.
2. SEAL ALL CONDUIT ENDS WITH DUCT AND CONDUIT SEALER, AT ALL JUNCTION BOX/CABINET ENTRANCES.

BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1 INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	13 INSTALL HEAT SHRINK TUBING RETROFIT KIT	25 INSTALL NEW RISER INTO POLE MOUNTED CABINET	37 INSTALL CCTV WOOD POLE	49 REMOVE EXISTING COMMUNICATIONS CABLE	61 INSTALL UNI-DIRECTIONAL ANTENNA
2 INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14 INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26 INSTALL DIGITAL VIDEO ENCODER	38 INSTALL STANDARD SIZE JUNCTION BOX	50 INSTALL WIRELESS DSL	62 NOT USED
3 INSTALL CATEGORY 5E CABLE	15 DIRECTIONAL DRILL CONDUIT	27 INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39 INSTALL SPECIAL-SIZED JUNCTION BOX	51 INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63 INSTALL 900 MHZ ETHERNET RADIO
4 INSTALL SMFO CABLE	16 BORE AND JACK CONDUIT	28 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	40 INSTALL OVERSIZED JUNCTION BOX	52 INSTALL DELINEATOR MARKER	64 INTERCEPT AND REROUTE EXISTING CONDUITS
5 INSTALL COAXIAL ANTENNA CABLE	17 INSTALL CABLE(S) IN EXISTING CONDUIT	29 INSTALL UNDERGROUND SPLICE ENCLOSURE	41 REMOVE EXISTING JUNCTION BOX	53 STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65 BOND MESSENGER TO POLE GROUND
6 INSTALL FIBER-OPTIC DROP CABLE	18 INSTALL CABLE(S) IN NEW CONDUIT	30 INSTALL AERIAL SPLICE ENCLOSURE	42 INSTALL WOOD POLE	54 LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66 BOND RISER TO POLE GROUND
7 INSTALL TRACER WIRE	19 INSTALL CABLE(S) IN EXISTING RISER(S)	31 INSTALL SPLICE CABINET	43 REMOVE EXISTING WOOD POLE	55 LASH CABLE(S) TO EXISTING MESSENGER CABLE	67 BOND TRACER WIRE TO POLE GROUND
8 INSTALL CONDUIT UNDERGROUND	20 INSTALL CABLE(S) IN NEW RISER(S)	32 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	44 INSTALL AERIAL GUY ASSEMBLY	56 LASH CABLE(S) TO NEW MESSENGER CABLE	68 BOND TRACER WIRE TO EQUIPMENT GROUND BUS
9 INSTALL PVC CONDUIT	21 INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS	33 REMOVE EXISTING SPLICE /HUB /CCTV CABINET	45 INSTALL STANDARD GUY ASSEMBLY	57 MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB	69 REMOVE EXISTING CCTV CAMERA ASSEMBLY
10 INSTALL RIGID, GALVANIZED STEEL CONDUIT	22 INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	34 INSTALL CABINET FOUNDATION	46 INSTALL SIDEWALK GUY ASSEMBLY	58 INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB	70 NOT USED
11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	23 INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	35 REMOVE EXISTING CABINET FOUNDATION	47 INSTALL MESSENGER CABLE	59 INSTALL NEW POLE MOUNTED CCTV CABINET	71 NOT USED
12 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24 INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36 INSTALL CCTV CAMERA ASSEMBLY	48 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60 INSTALL NEW BASE MOUNTED CCTV CABINET	72 INSTALL MANAGED ETHERNET SWITCH

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Lisa M. Moon 3-22-13
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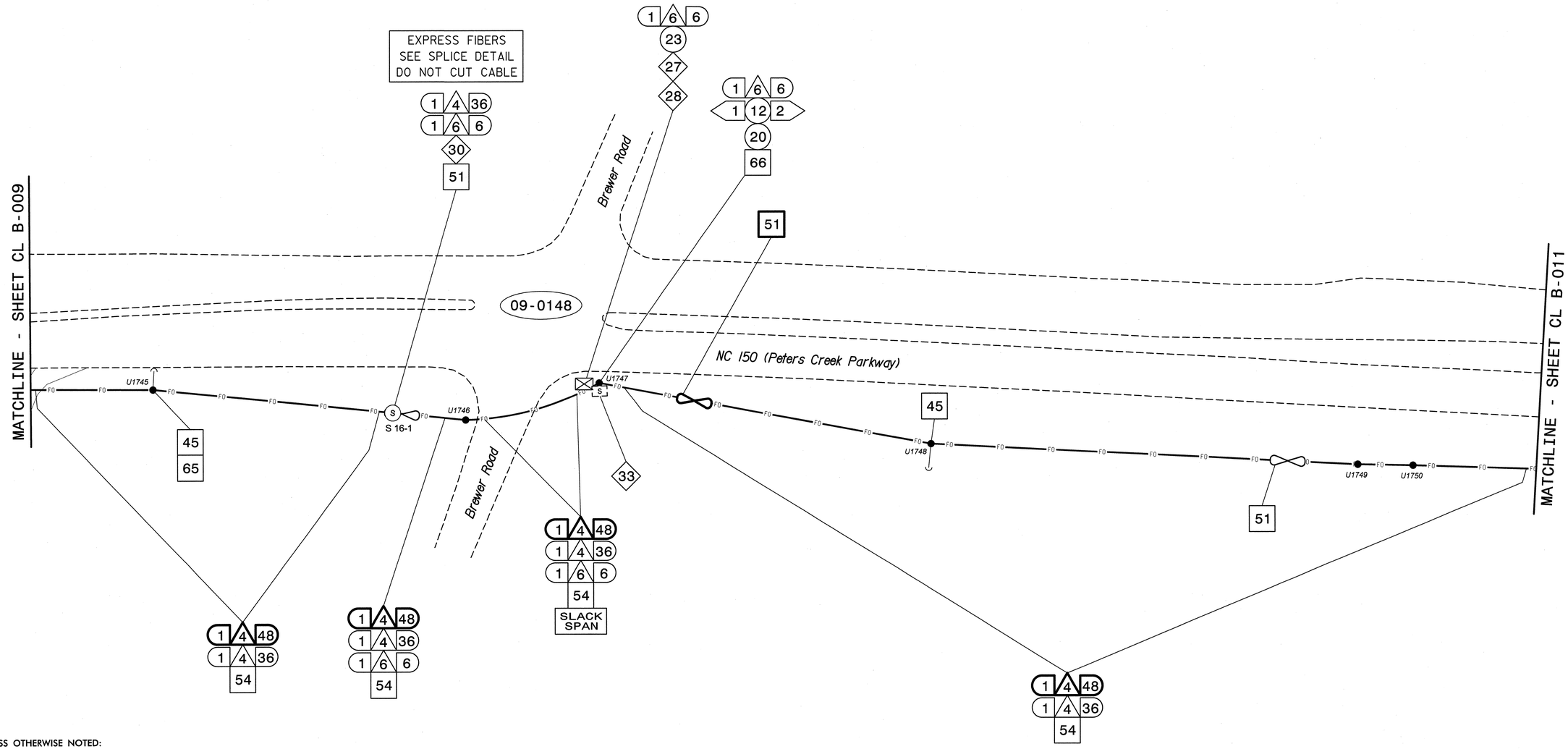

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29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
33. REMOVE EXISTING SPLICE /HUB /CCTV CABINET
34. INSTALL CABINET FOUNDATION
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36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL CCTV WOOD POLE
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50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
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61. INSTALL UNI-DIRECTIONAL ANTENNA
62. NOT USED
63. INSTALL 900 MHZ ETHERNET RADIO
64. INTERCEPT AND REROUTE EXISTING CONDUITS
65. BOND MESSENGER TO POLE GROUND
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Division 09 Forsyth County Winston-Salem

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PROJECT REFERENCE NO.	SHEET NO.
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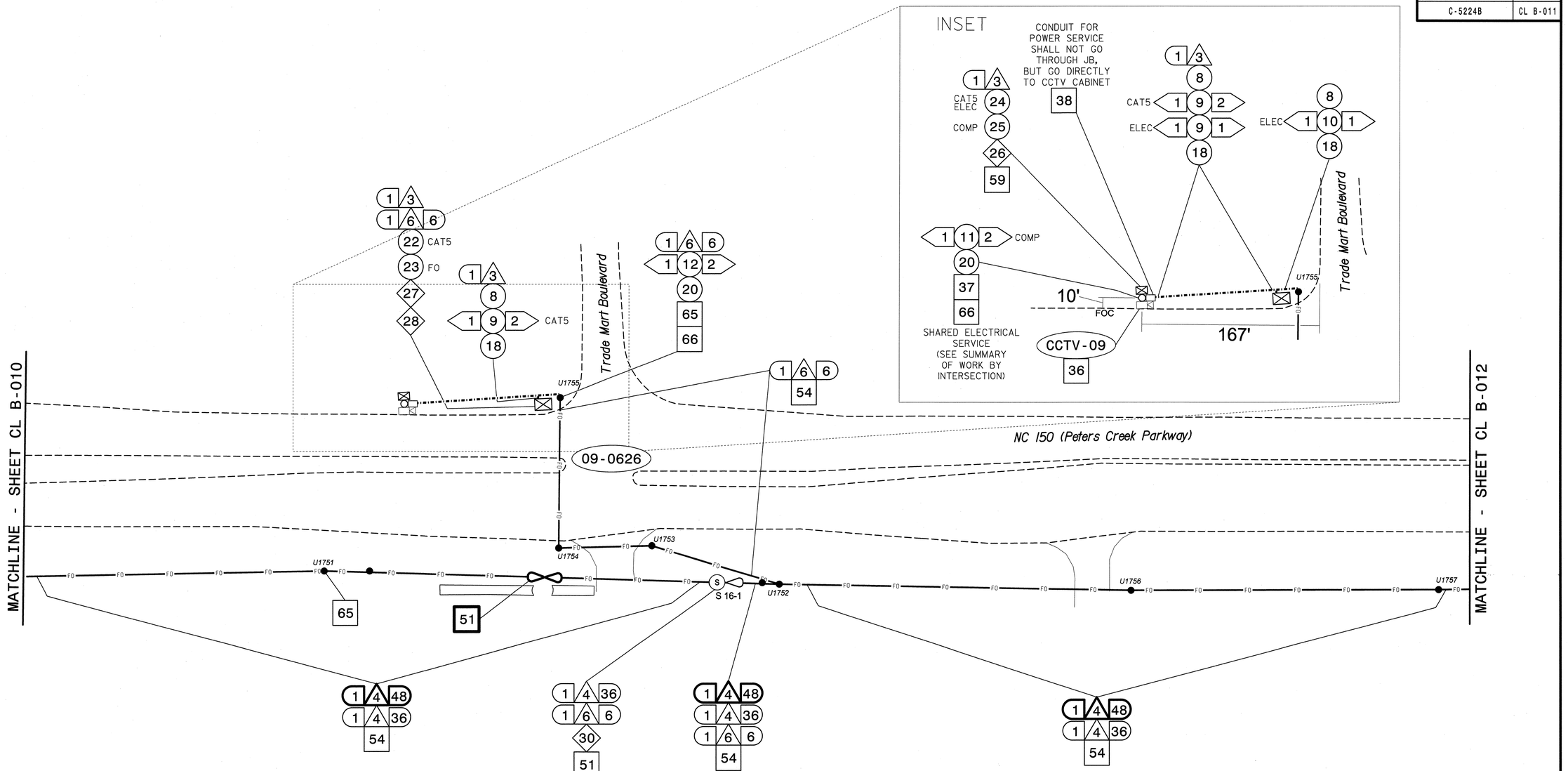

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EXPRESS FIBERS
SEE SPLICE DETAIL
DO NOT CUT CABLE

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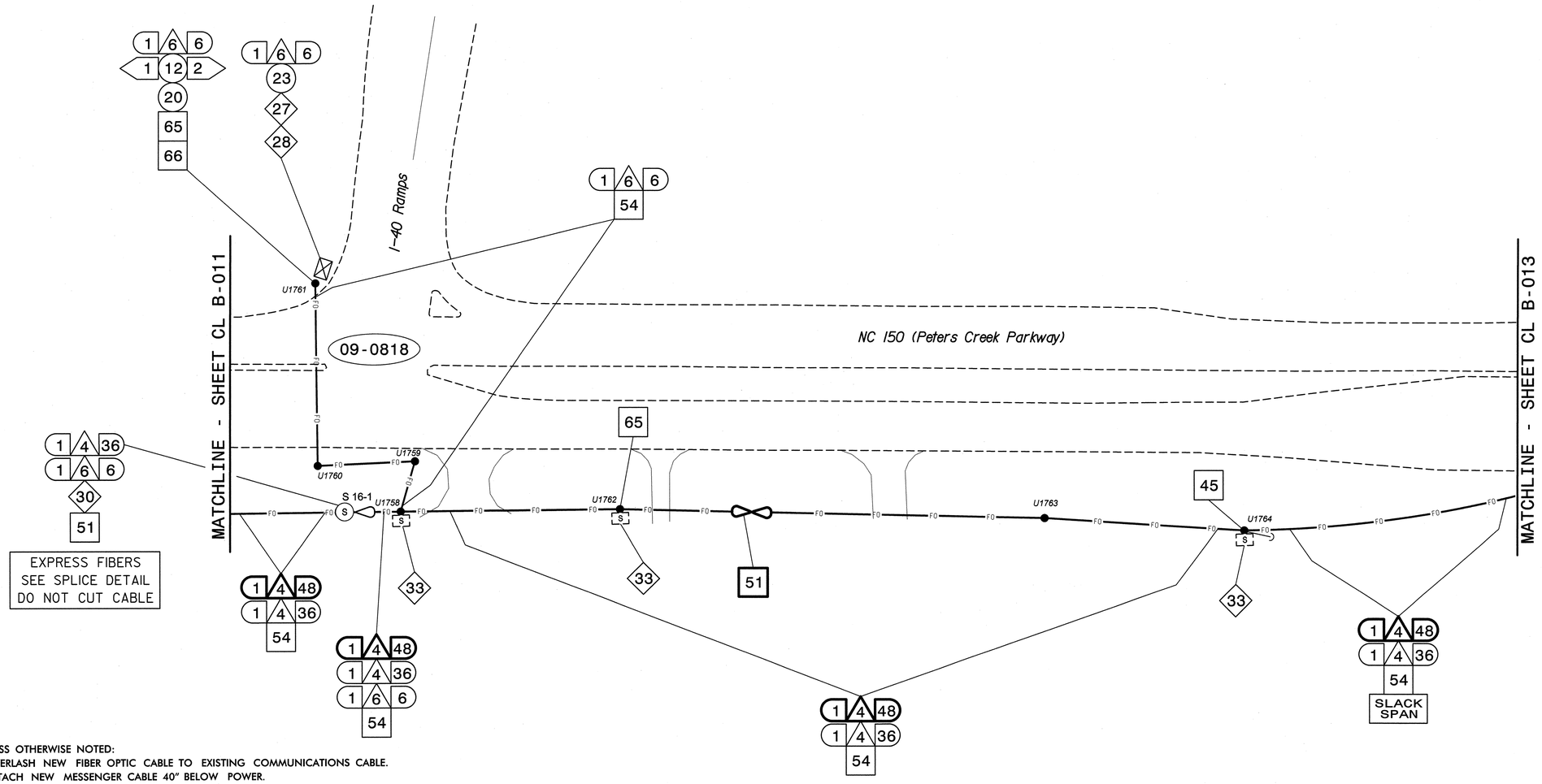

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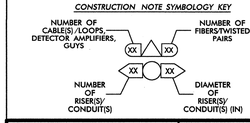

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RALEIGH, NORTH CAROLINA 27609
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Prepared for the Offices of:

North Carolina Department of Transportation — Mobility and Safety Division — Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-012.dgn

13-MAR-2013 10:30
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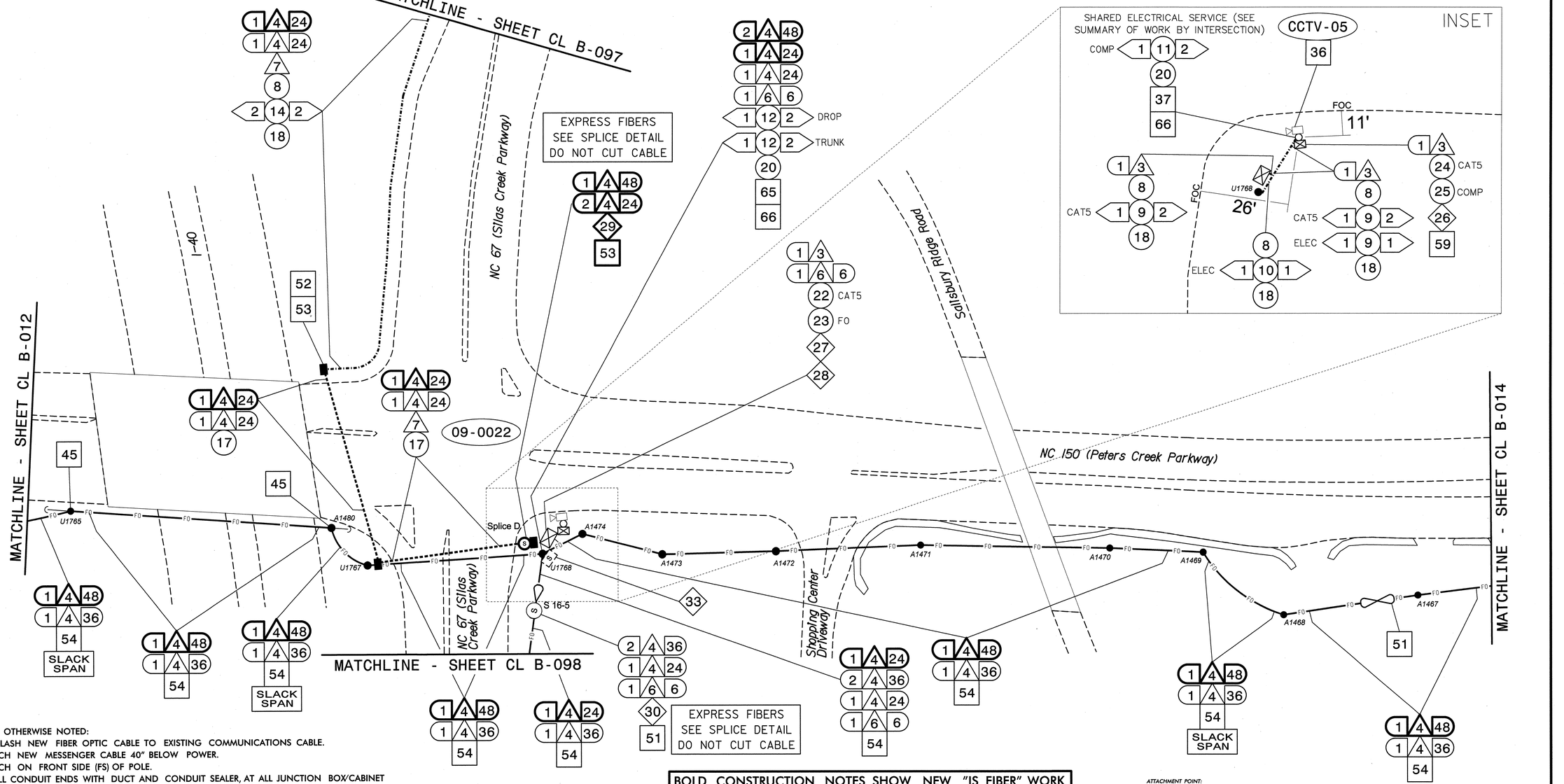
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-013



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2. SEAL ALL CONDUIT ENDS WITH DUCT AND CONDUIT SEALER, AT ALL JUNCTION BOX/CABINET ENTRANCES.

BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1. INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
2. INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
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12. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
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31. INSTALL SPLICE CABINET
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49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
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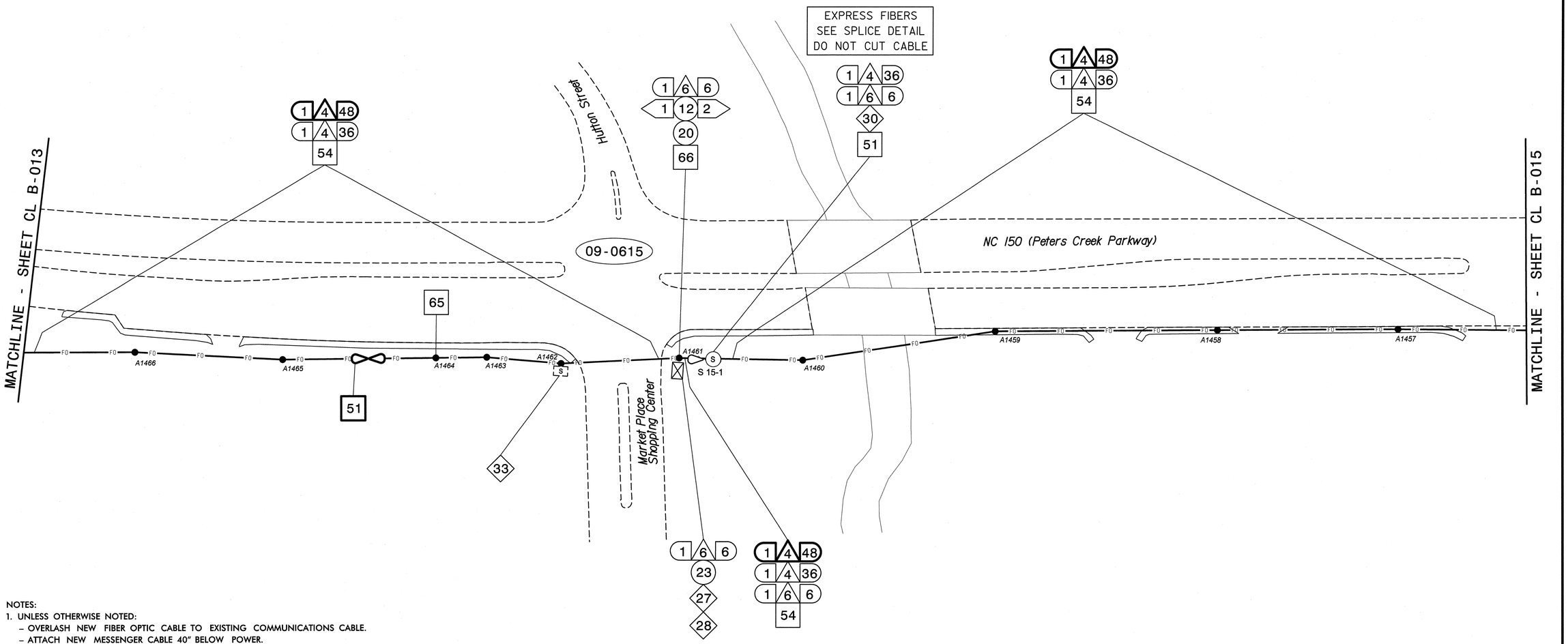

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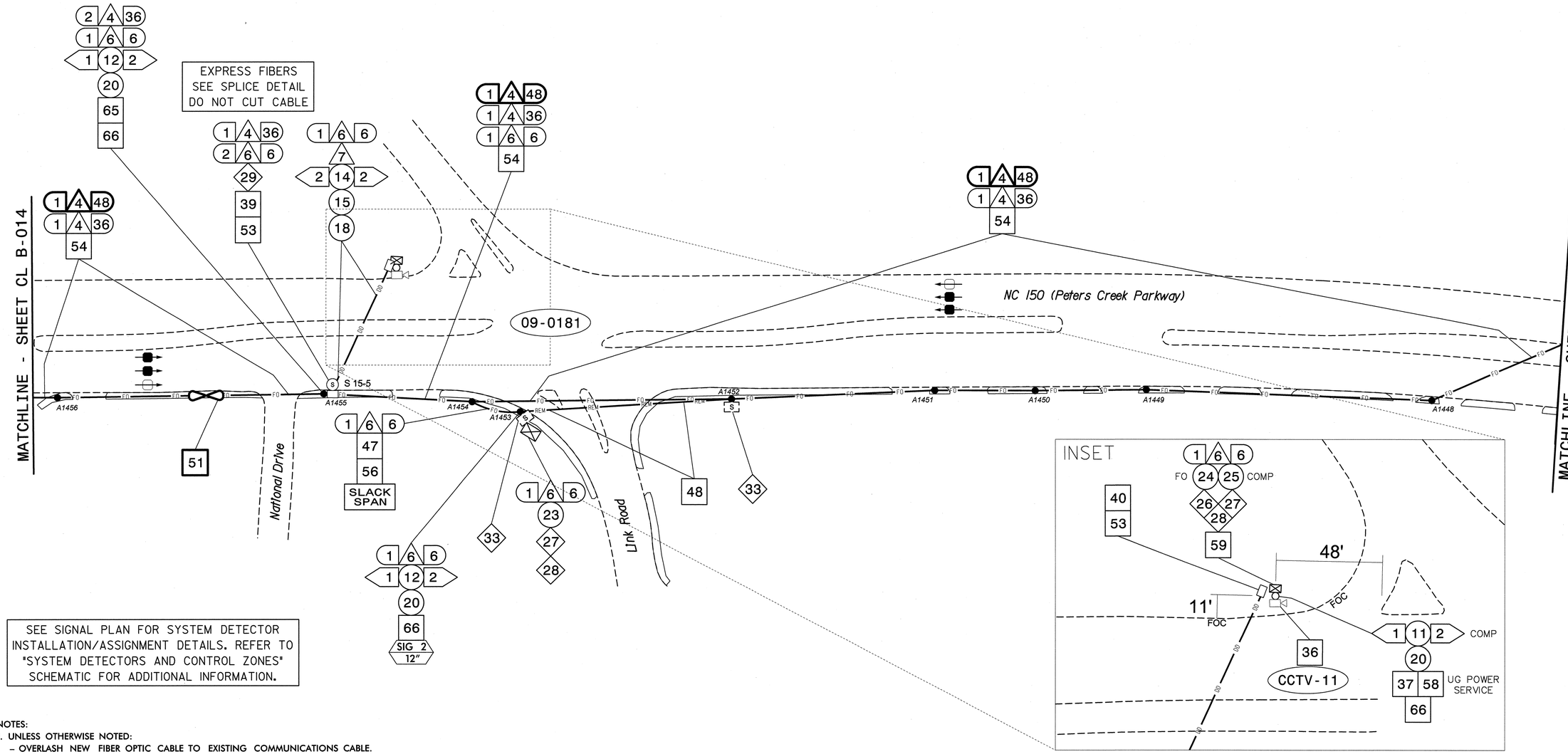

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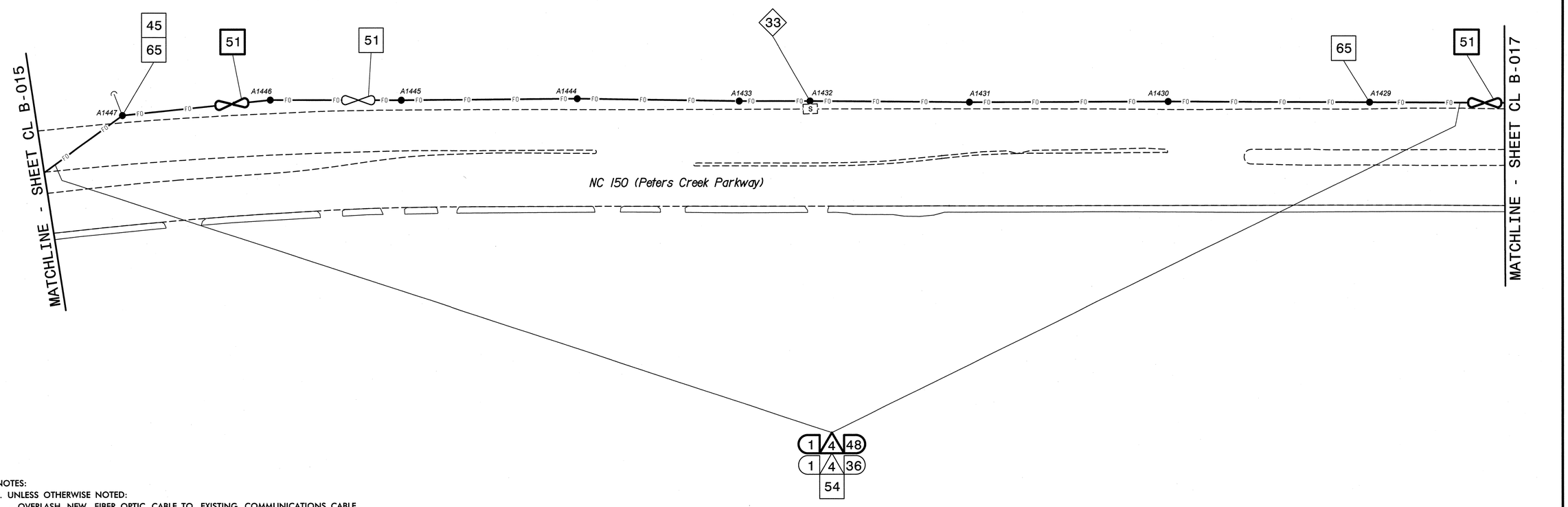

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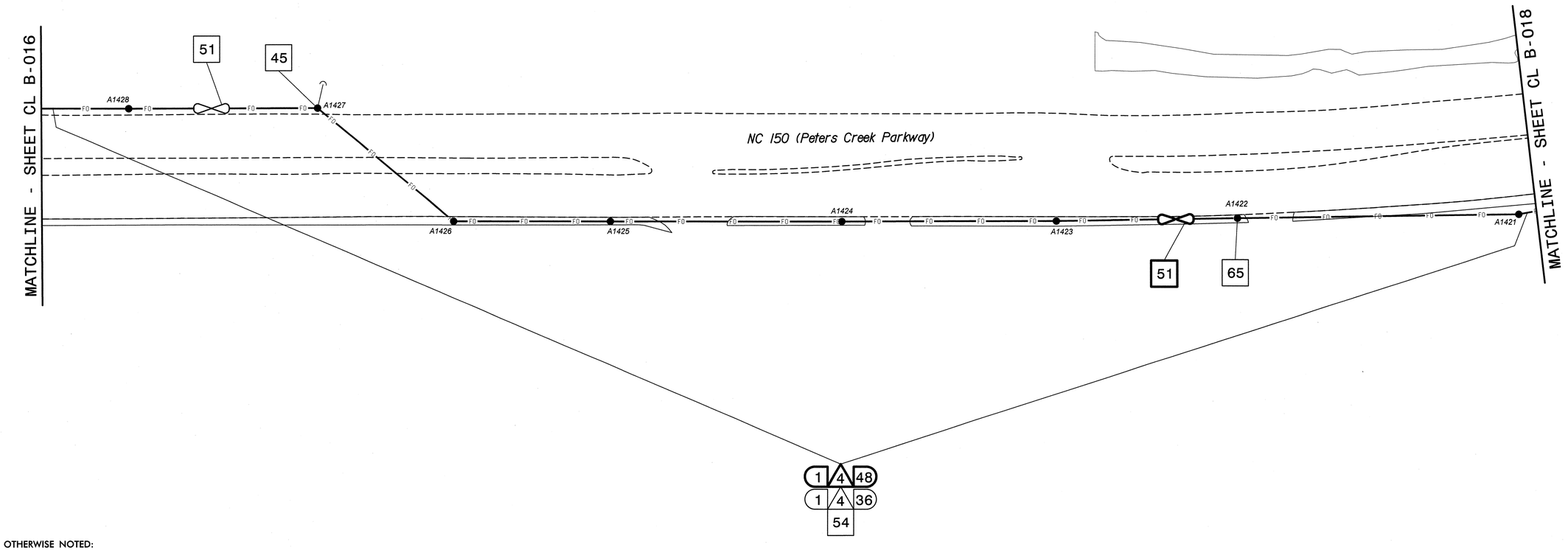

NOTES:

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BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

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2 INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14 INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26 INSTALL DIGITAL VIDEO ENCODER	38 INSTALL STANDARD SIZE JUNCTION BOX	50 INSTALL WIRELESS DSL	62 NOT USED
3 INSTALL CATEGORY 5E CABLE	15 DIRECTIONAL DRILL CONDUIT	27 INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39 INSTALL SPECIAL-SIZED JUNCTION BOX	51 INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63 INSTALL 900 MHZ ETHERNET RADIO
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5 INSTALL COAXIAL ANTENNA CABLE	17 INSTALL CABLE(S) IN EXISTING CONDUIT	29 INSTALL UNDERGROUND SPLICE ENCLOSURE	41 REMOVE EXISTING JUNCTION BOX	53 STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65 BOND MESSENGER TO POLE GROUND
6 INSTALL FIBER-OPTIC DROP CABLE	18 INSTALL CABLE(S) IN NEW CONDUIT	30 INSTALL AERIAL SPLICE ENCLOSURE	42 INSTALL WOOD POLE	54 LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66 BOND RISER TO POLE GROUND
7 INSTALL TRACER WIRE	19 INSTALL CABLE(S) IN EXISTING RISER(S)	31 INSTALL SPLICE CABINET	43 REMOVE EXISTING WOOD POLE	55 LASH CABLE(S) TO EXISTING MESSENGER CABLE	67 BOND TRACER WIRE TO POLE GROUND
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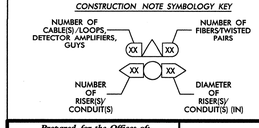

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Prepared for the Offices of:

Transportation Mobility and Safety Division — North Carolina Department of Transportation — Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-017.dgn

13-MAR-2013 10:30
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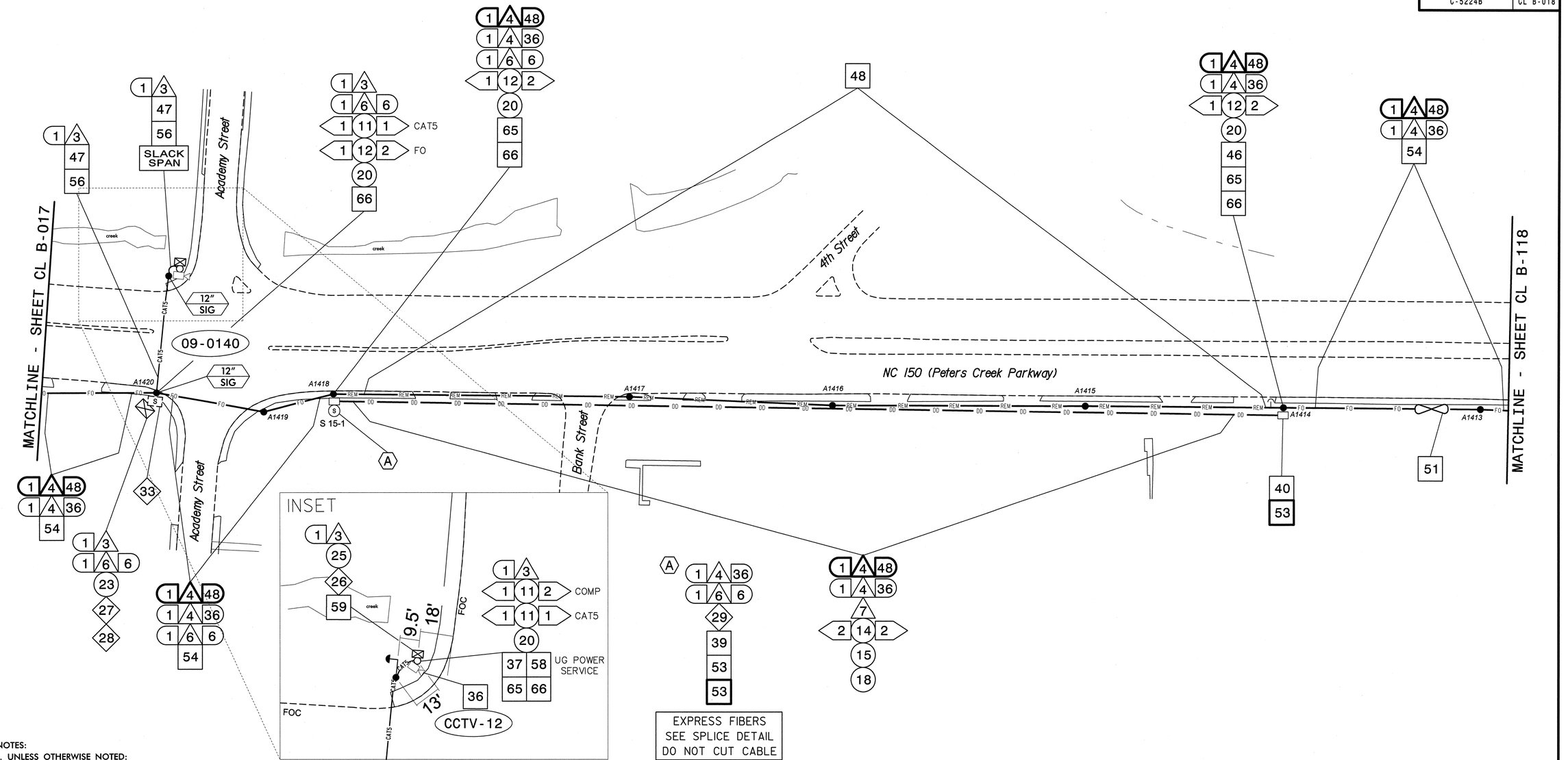
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-018



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ATKINS
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09	Forsyth County	Winston-Salem
PLAN DATE: March 2013	REVIEWED BY: MB Toth	
PREPARED BY: JAW/AJD	REVIEWED BY: LM Moon	

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE 3/22/13 DATE

CADD Filename: CL B-018.dgn

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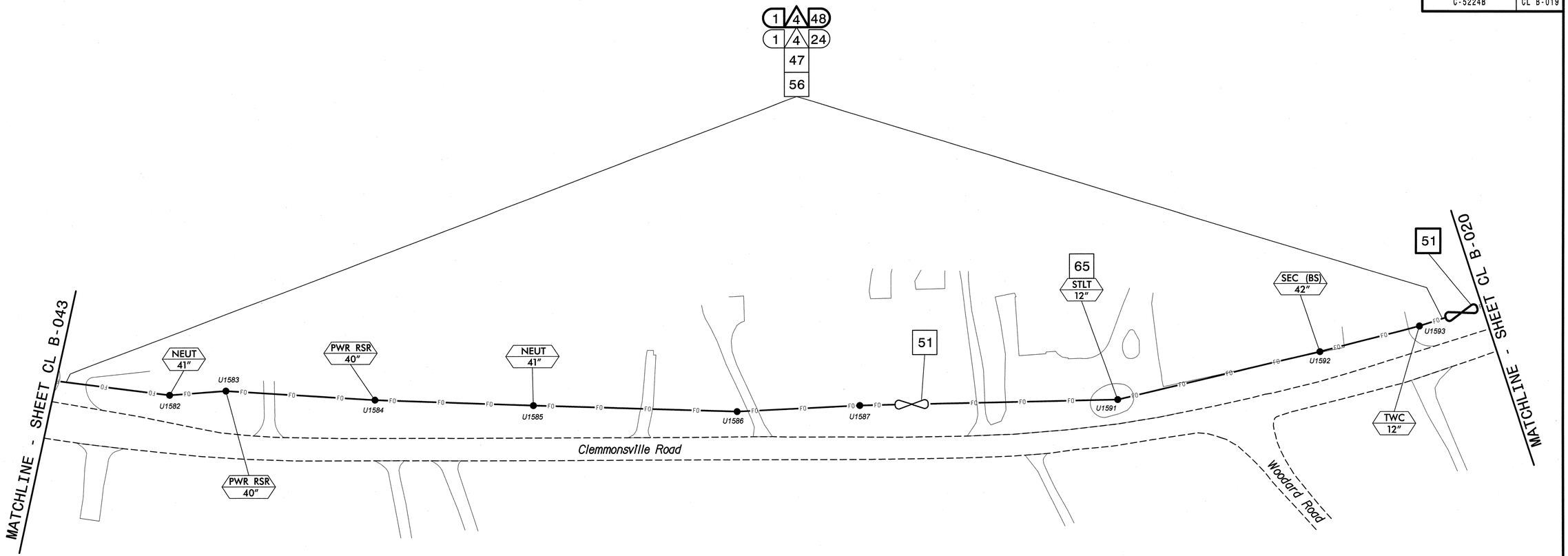
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-019



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SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-019.dgn

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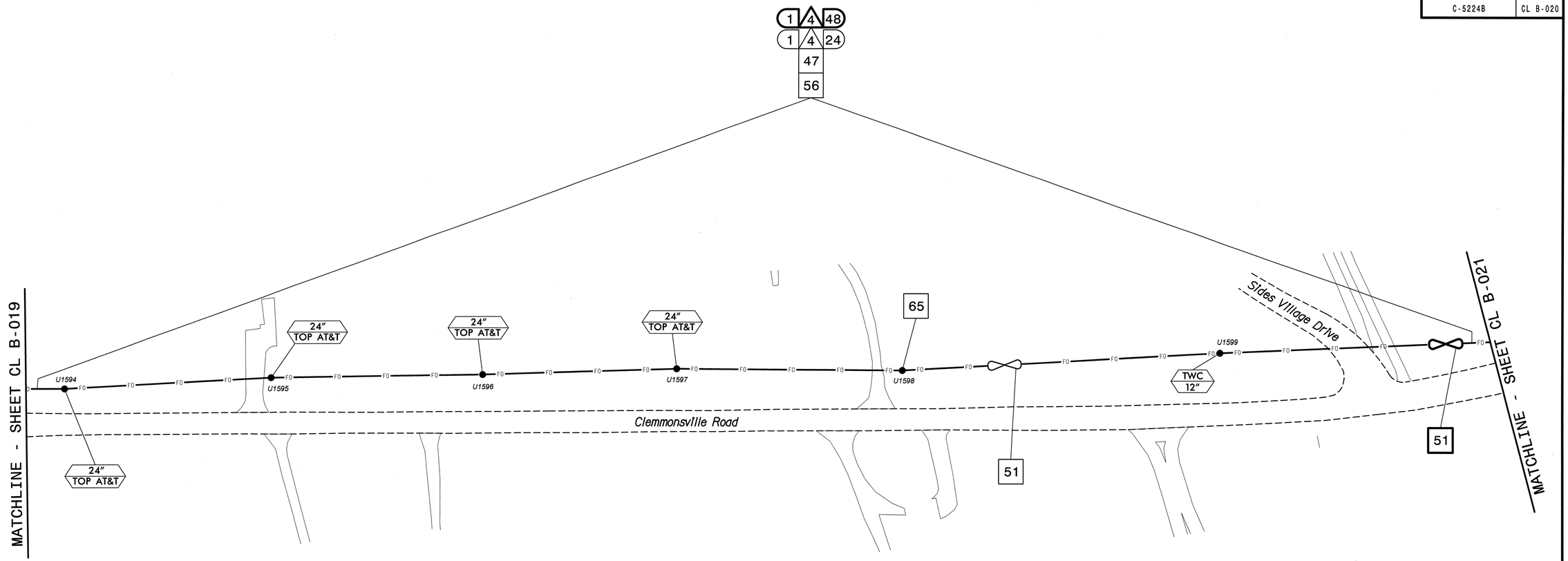
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-020



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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-020.dgn

13-MAR-2013 10:30
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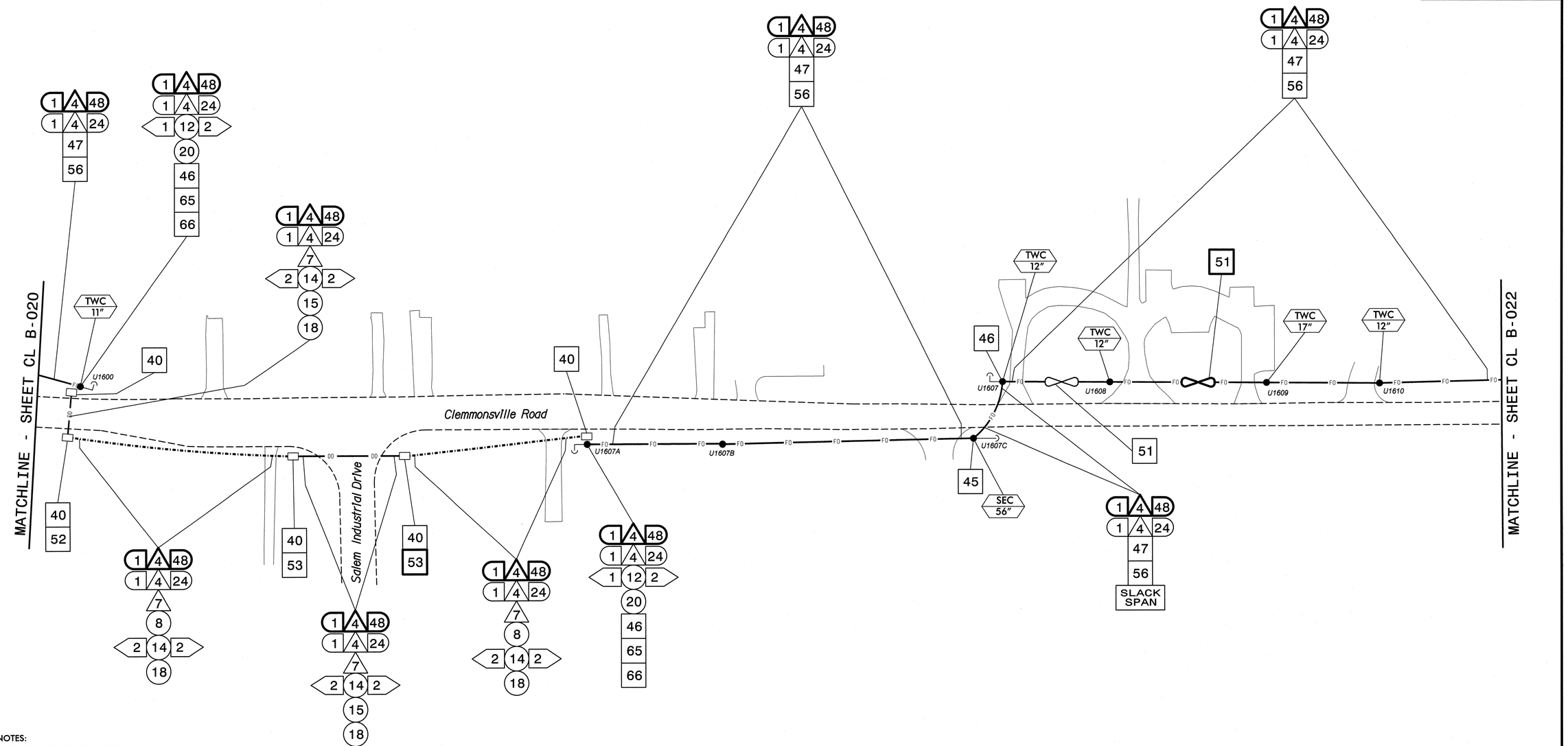
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-021



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BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

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11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
12. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
13. INSTALL HEAT SHRINK TUBING RETROFIT KIT
14. INSTALL HIGH DENSITY POLYETHYLENE CONDUIT
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16. BORE AND JACK CONDUIT
17. INSTALL CABLE(S) IN EXISTING CONDUIT
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22. INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
23. INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
24. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
25. INSTALL NEW RISER INTO POLE MOUNTED CABINET
26. INSTALL DIGITAL VIDEO ENCODER
27. INSTALL NEW ETHERNET EDGE SWITCH IN CABINET
28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
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35. REMOVE EXISTING CABINET FOUNDATION
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL CCTV WOOD POLE
38. INSTALL STANDARD SIZE JUNCTION BOX
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47. INSTALL MESSENGER CABLE
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GLUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
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ATTACHMENT POINT:
XXX DISTANCE ABOVE (IN) REFERENCE POINT
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CONSTRUCTION NOTE SYMBOLOGY KEY
NUMBER OF CABLE(S)/LOOPS, DETECTOR AMPLIFIERS, GUYS
NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
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Prepared for the Offices of:
North Carolina Department of Transportation – Transportation Mobility and Safety Division – Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON

Lisa M Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-021.dgn

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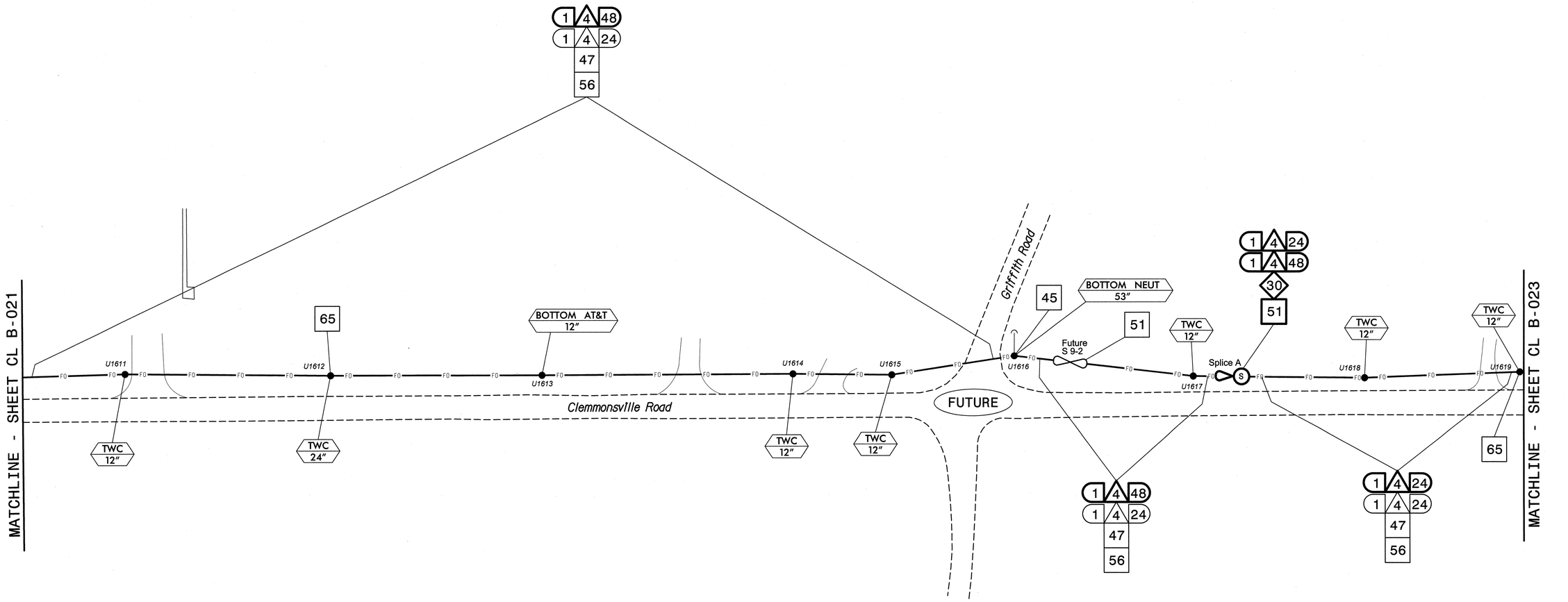
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-022



NOTES:
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750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

SIGNATURE Lisa M. Moon 3-22-13 DATE

CADD Filename: CL B-022.dgn

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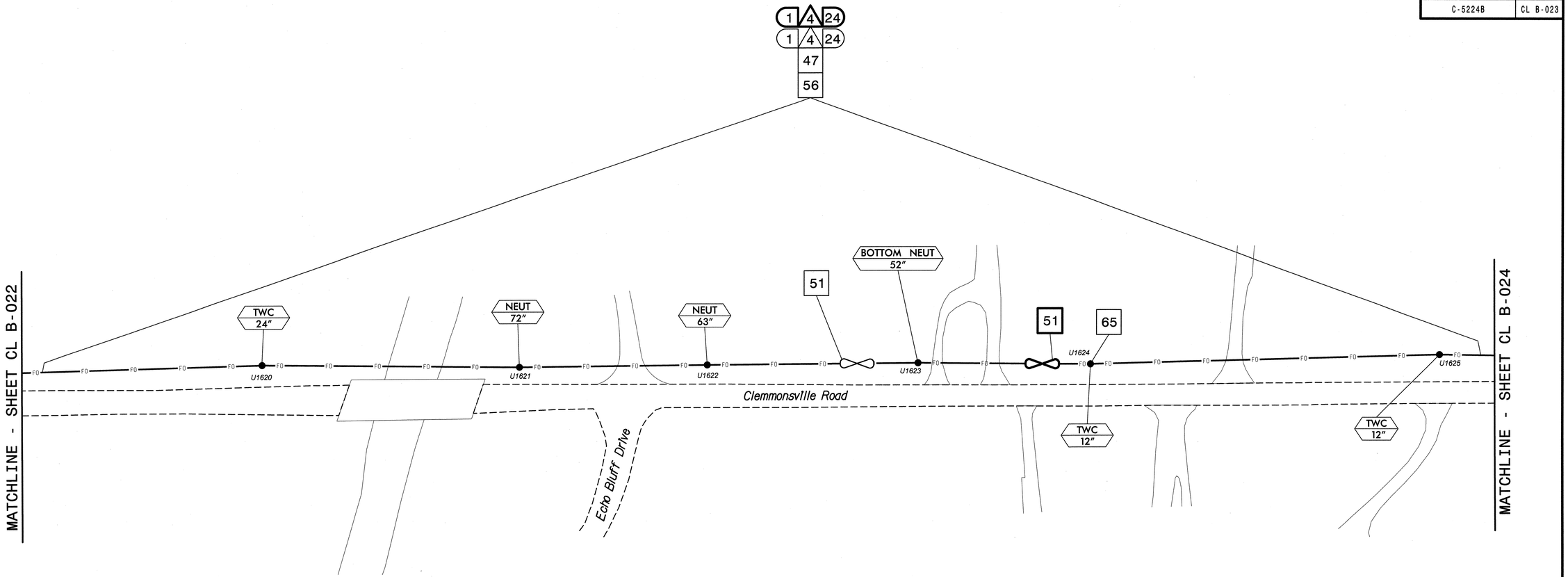
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-023



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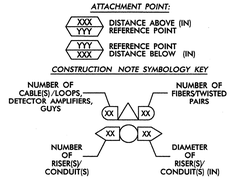

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750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-023.dgn

13-MAR-2013 11:09
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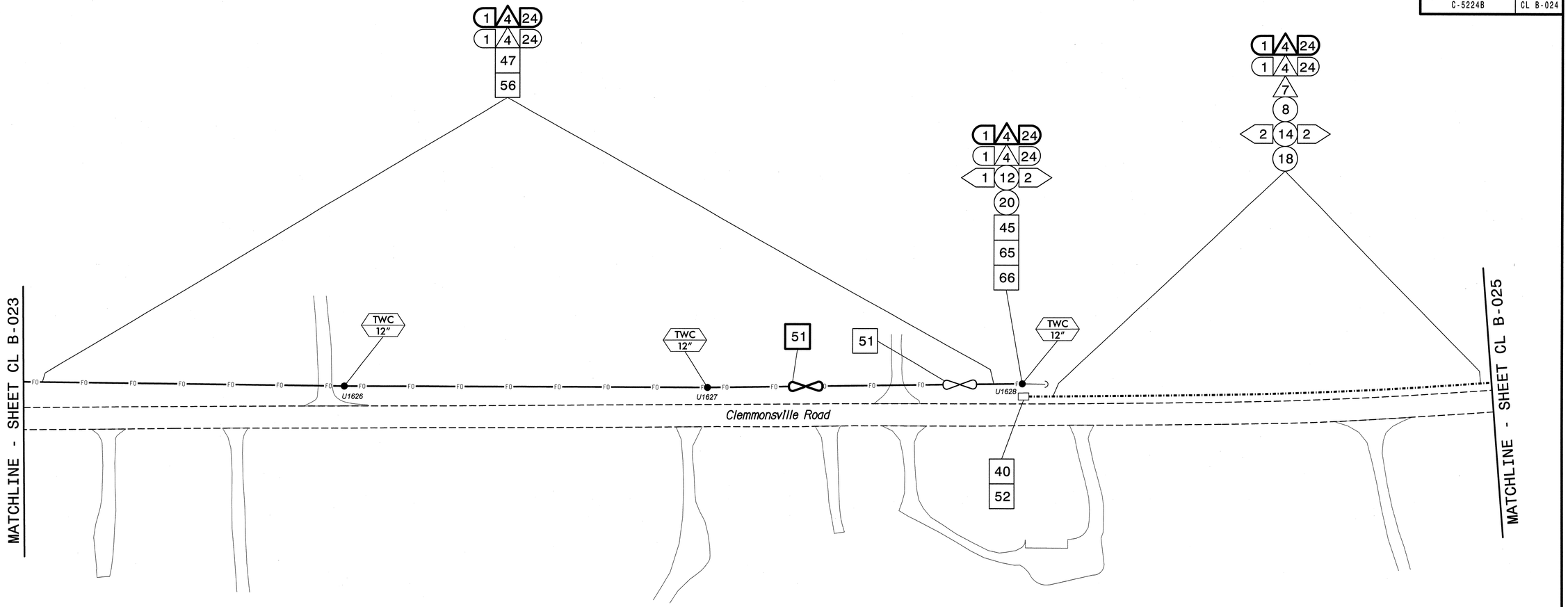
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-024



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PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

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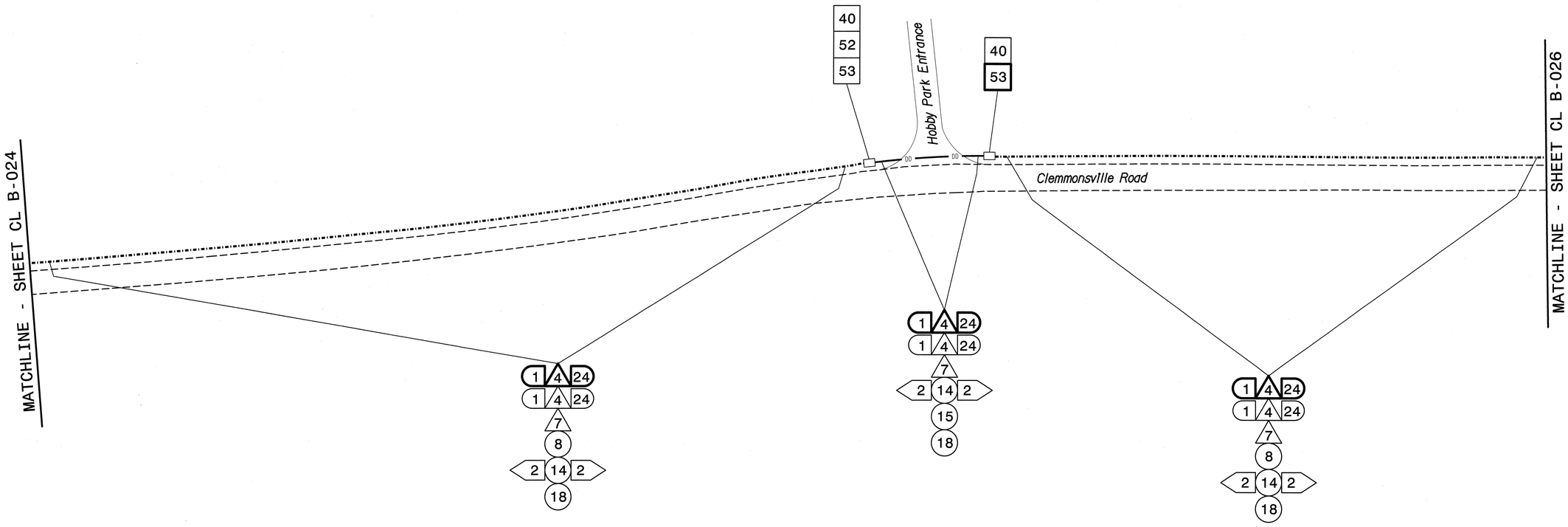

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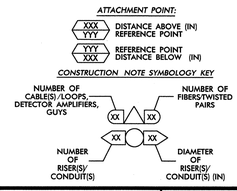

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Prepared for the Offices of:

Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-025.dgn

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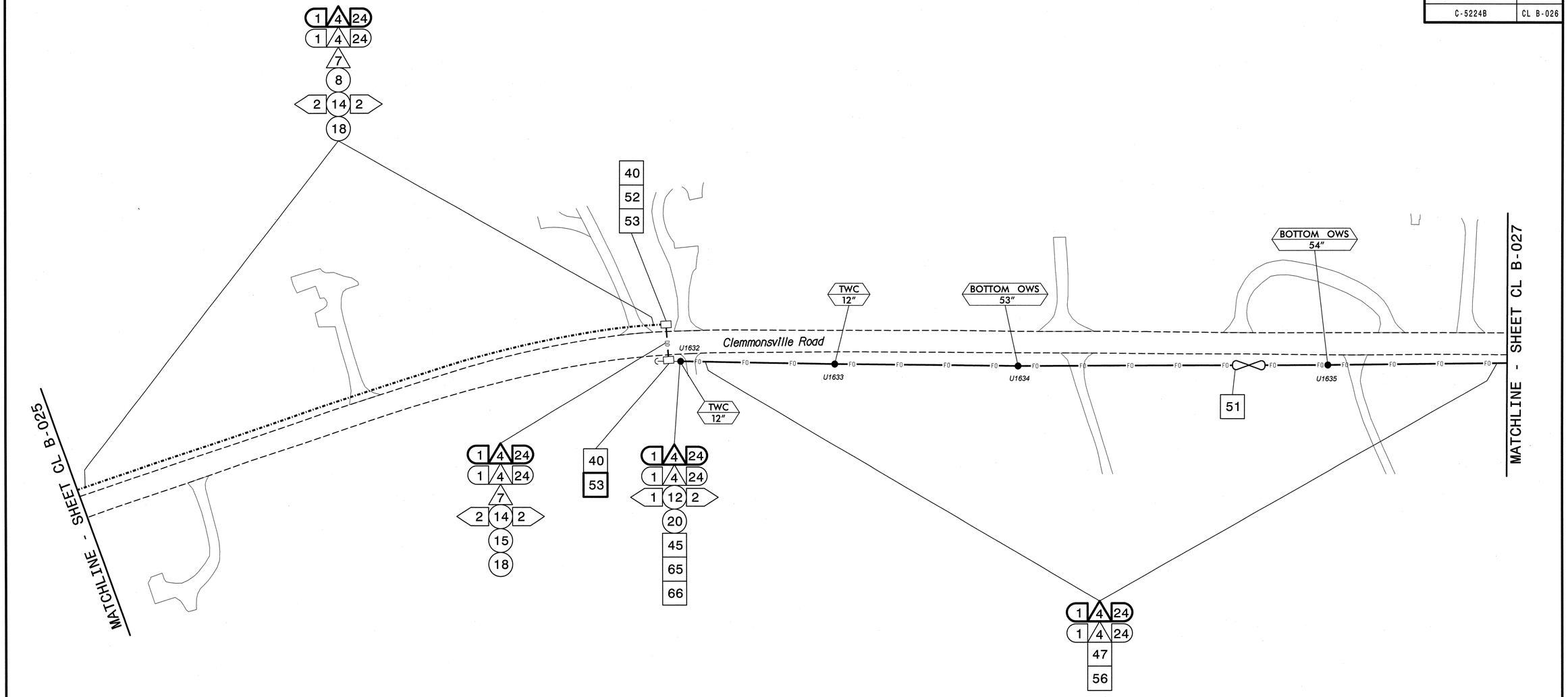
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-026



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CONSTRUCTION NOTE SYMBOLOGY KEY
NUMBER OF CABLE(S) /LOOPS, DETECTOR AMPLIFIERS, GUYS
NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

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Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE DATE 3-22-13
CADD Filename: CL B-026.dgn

13-MAR-2013 11:09
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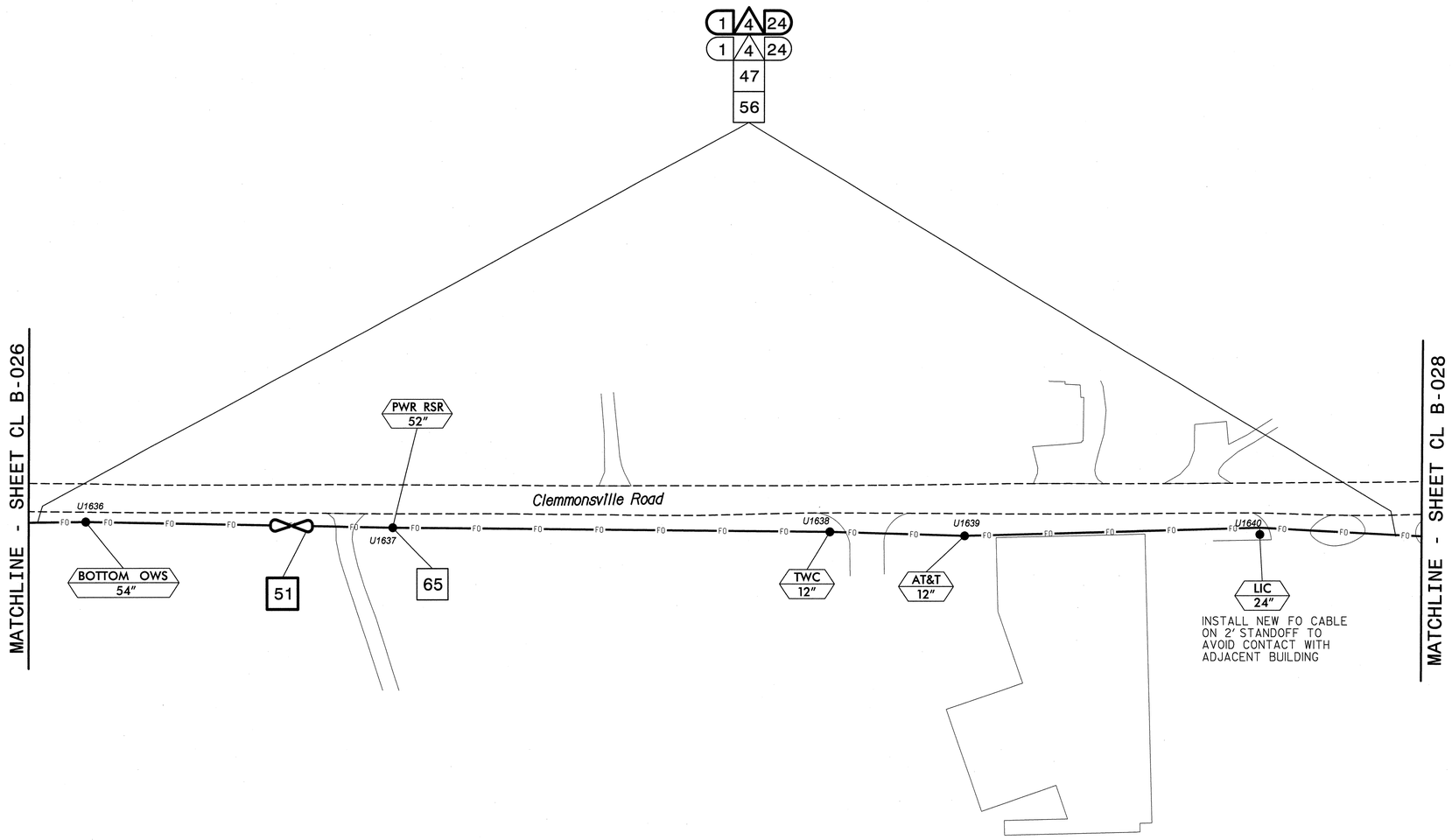
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-027



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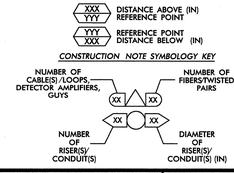

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Prepared for the Offices of:

STATE OF NORTH CAROLINA — Department of Transportation — Transportation Mobility and Safety Division — Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 | Forsyth County | Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

SIGNATURE Lisa M. Moon DATE 3-22-13

CADD Filename: CL B-027.dgn

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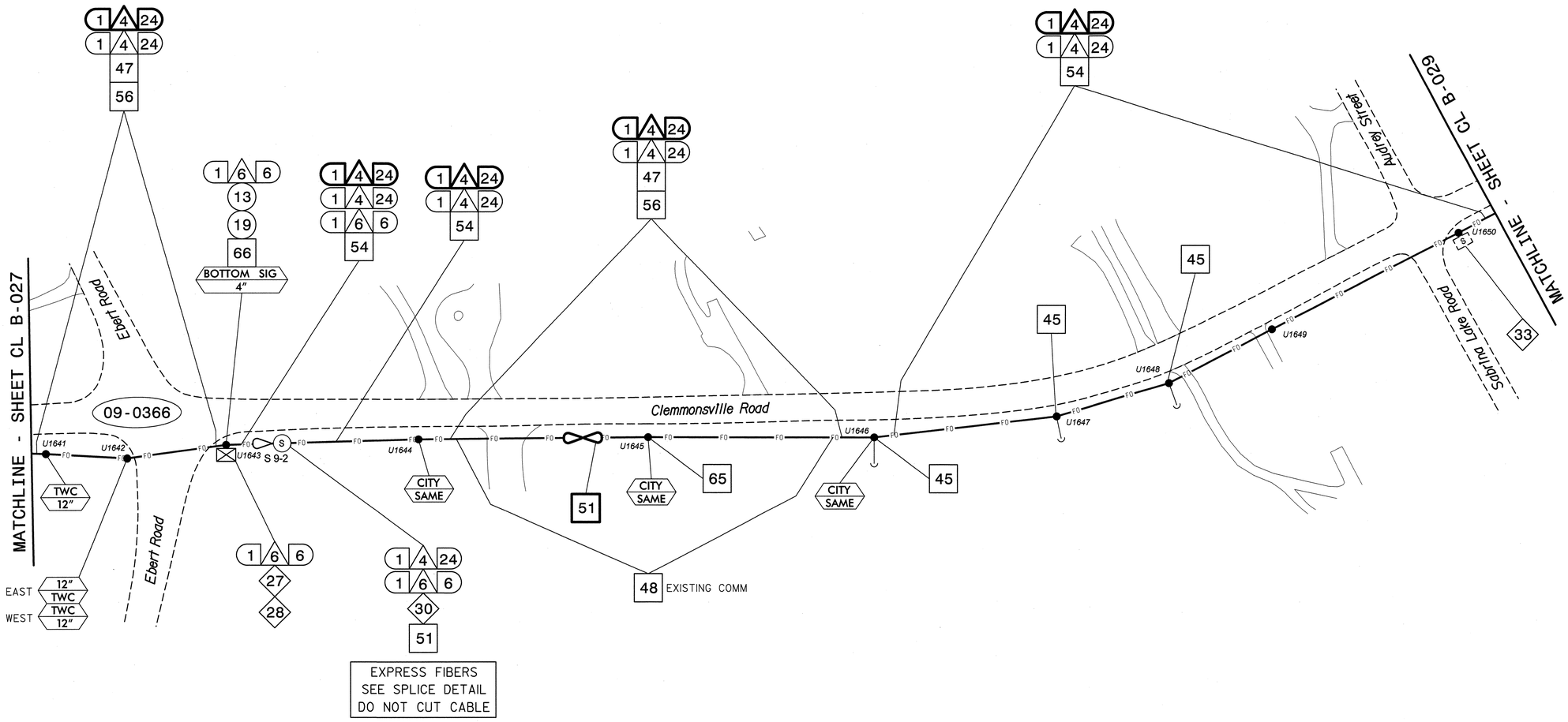
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-028



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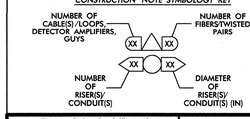

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SEAL — NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M Moon 3-22-13
SIGNATURE DATE

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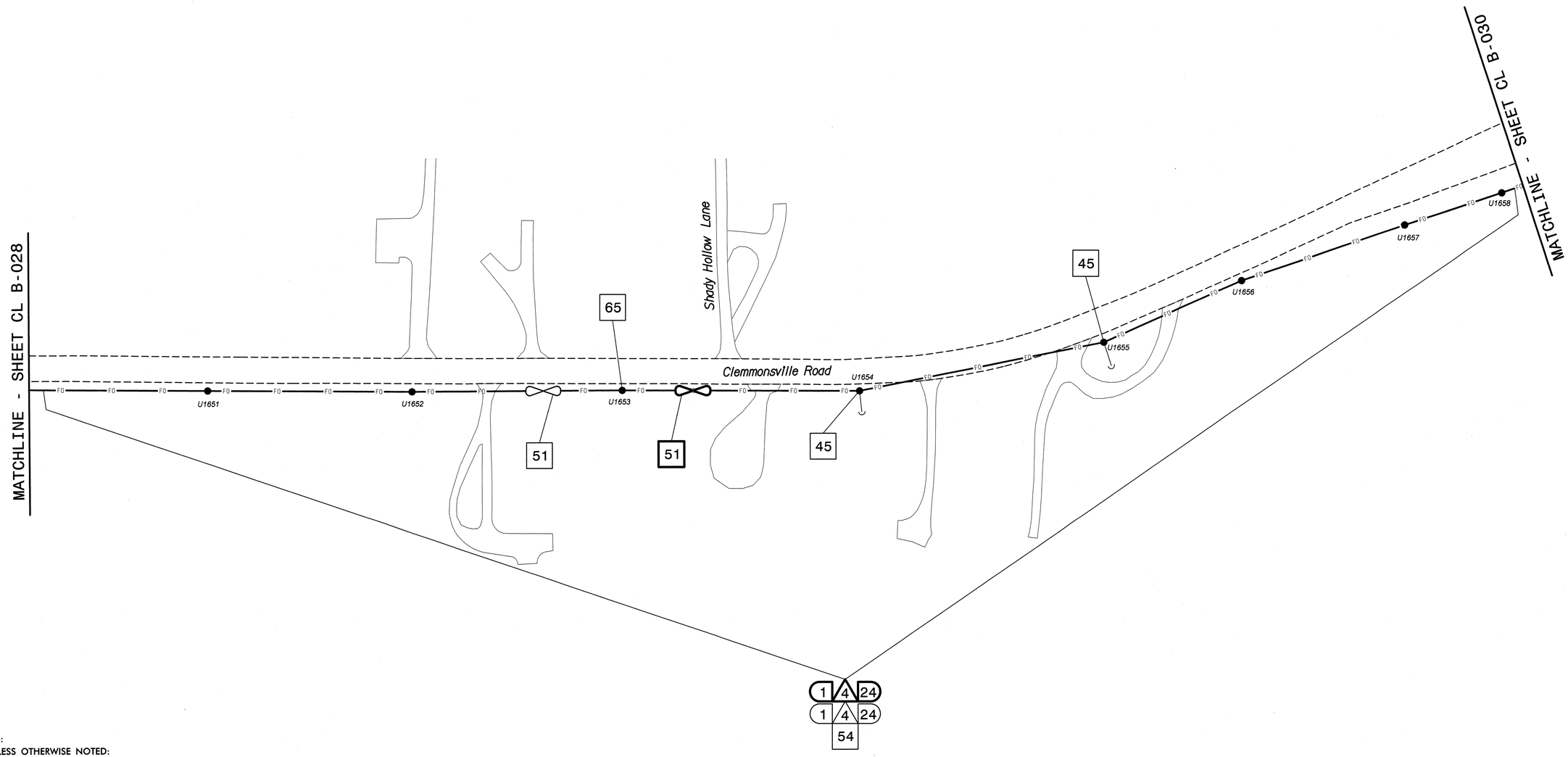
C-5224B	CL B-029



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3	INSTALL CATEGORY 5E CABLE	15	DIRECTIONAL DRILL CONDUIT	27	INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39	INSTALL SPECIAL-SIZED JUNCTION BOX	51	INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63	INSTALL 900 MHZ ETHERNET RADIO
4	INSTALL SMFO CABLE	16	BORE AND JACK CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	40	INSTALL OVERSIZED JUNCTION BOX	52	INSTALL DELINEATOR MARKER	64	INTERCEPT AND REROUTE EXISTING CONDUITS
5	INSTALL COAXIAL ANTENNA CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	53	STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65	BOND MESSENGER TO POLE GROUND
6	INSTALL FIBER-OPTIC DROP CABLE	18	INSTALL CABLE(S) IN NEW CONDUIT	30	INSTALL AERIAL SPLICE ENCLOSURE	42	INSTALL WOOD POLE	54	LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66	BOND RISER TO POLE GROUND
7	INSTALL TRACER WIRE	19	INSTALL CABLE(S) IN EXISTING RISER(S)	31	INSTALL SPLICE CABINET	43	REMOVE EXISTING WOOD POLE	55	LASH CABLE(S) TO EXISTING MESSENGER CABLE	67	BOND TRACER WIRE TO POLE GROUND
8	INSTALL CONDUIT UNDERGROUND	20	INSTALL CABLE(S) IN NEW RISER(S)	32	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	44	INSTALL AERIAL GUY ASSEMBLY	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	BOND TRACER WIRE TO EQUIPMENT GROUND BUS
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12	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	48	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60	INSTALL NEW BASE MOUNTED CCTV CABINET	72	INSTALL MANAGED ETHERNET SWITCH

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CONSTRUCTION NOTE SYMBOLOGY KEY
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NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
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Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-029.dgn

13-MAR-2013 11:09
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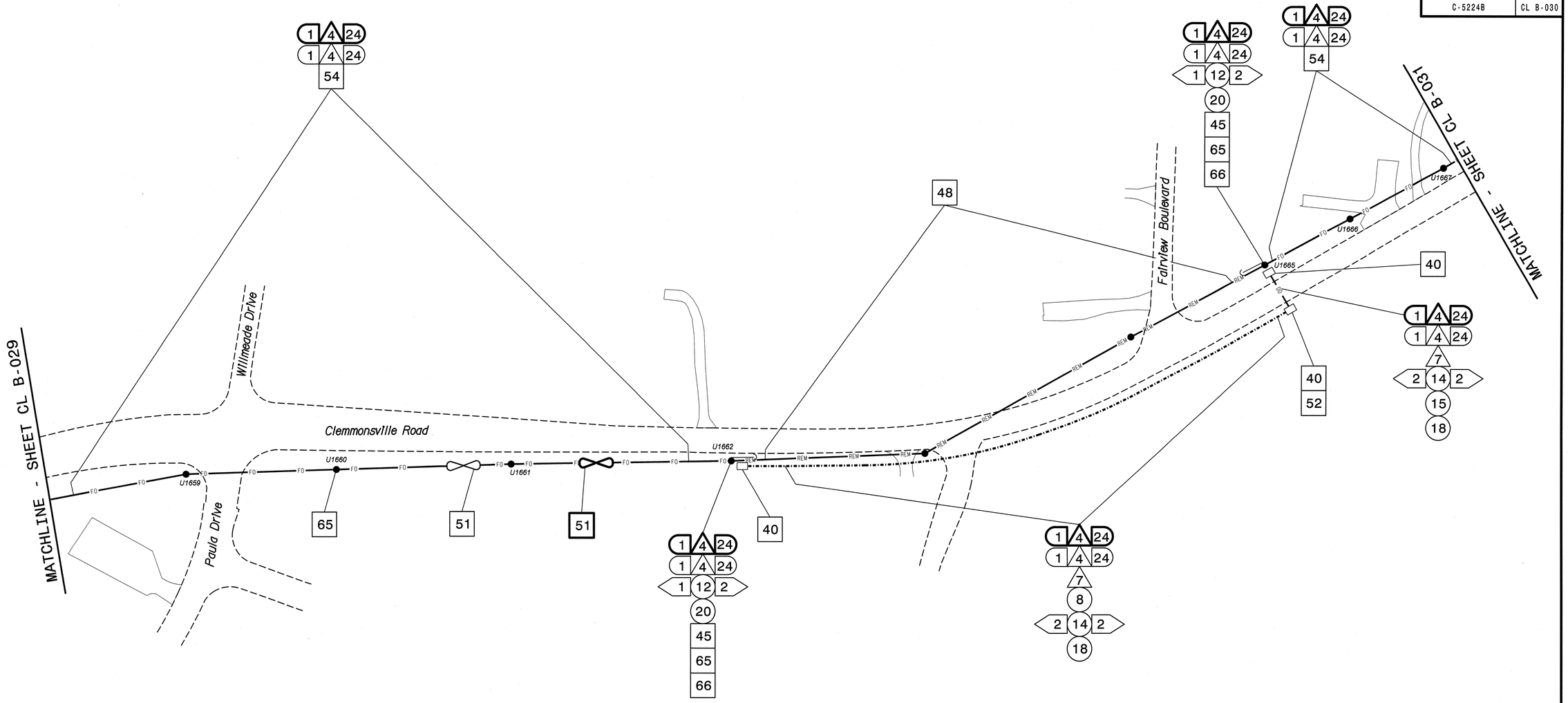
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-030



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Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE

CADD Filename: CL B-030.dgn

13-MAR-2013 11:09
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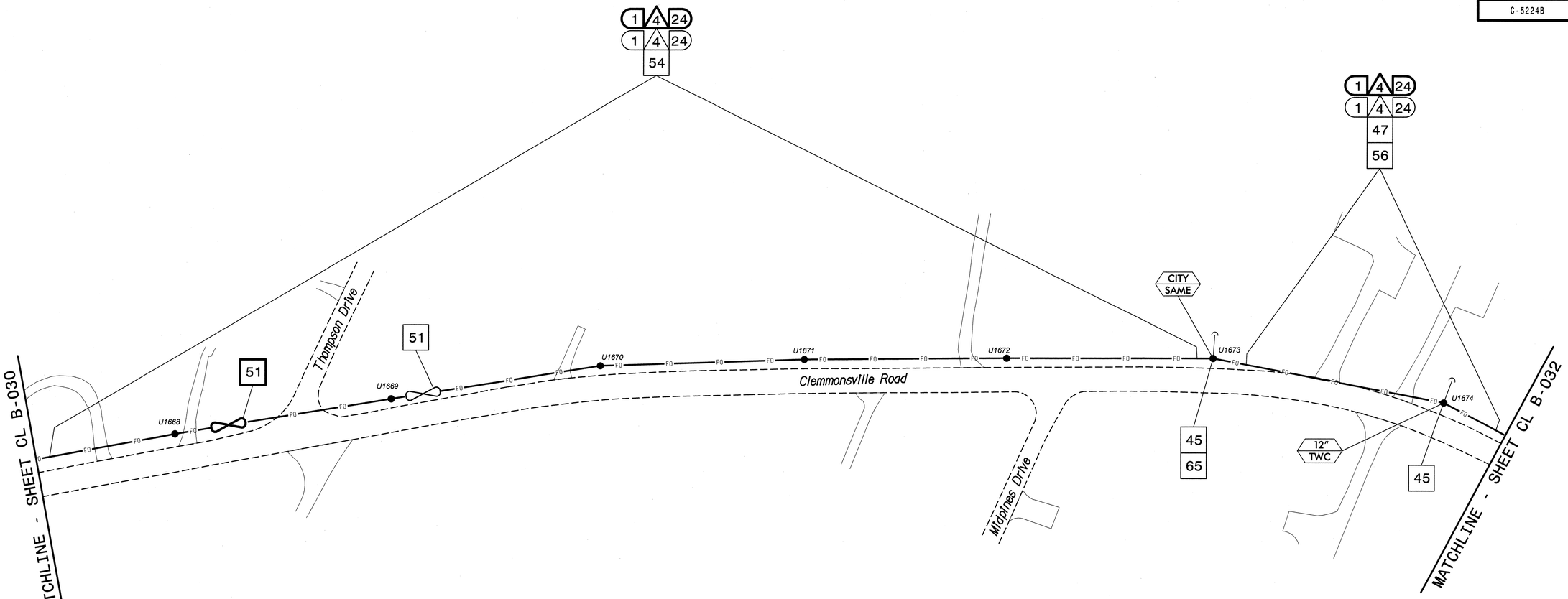
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-031



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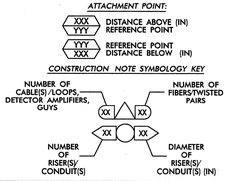

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-031.dgn

13-MAR-2013 11:09
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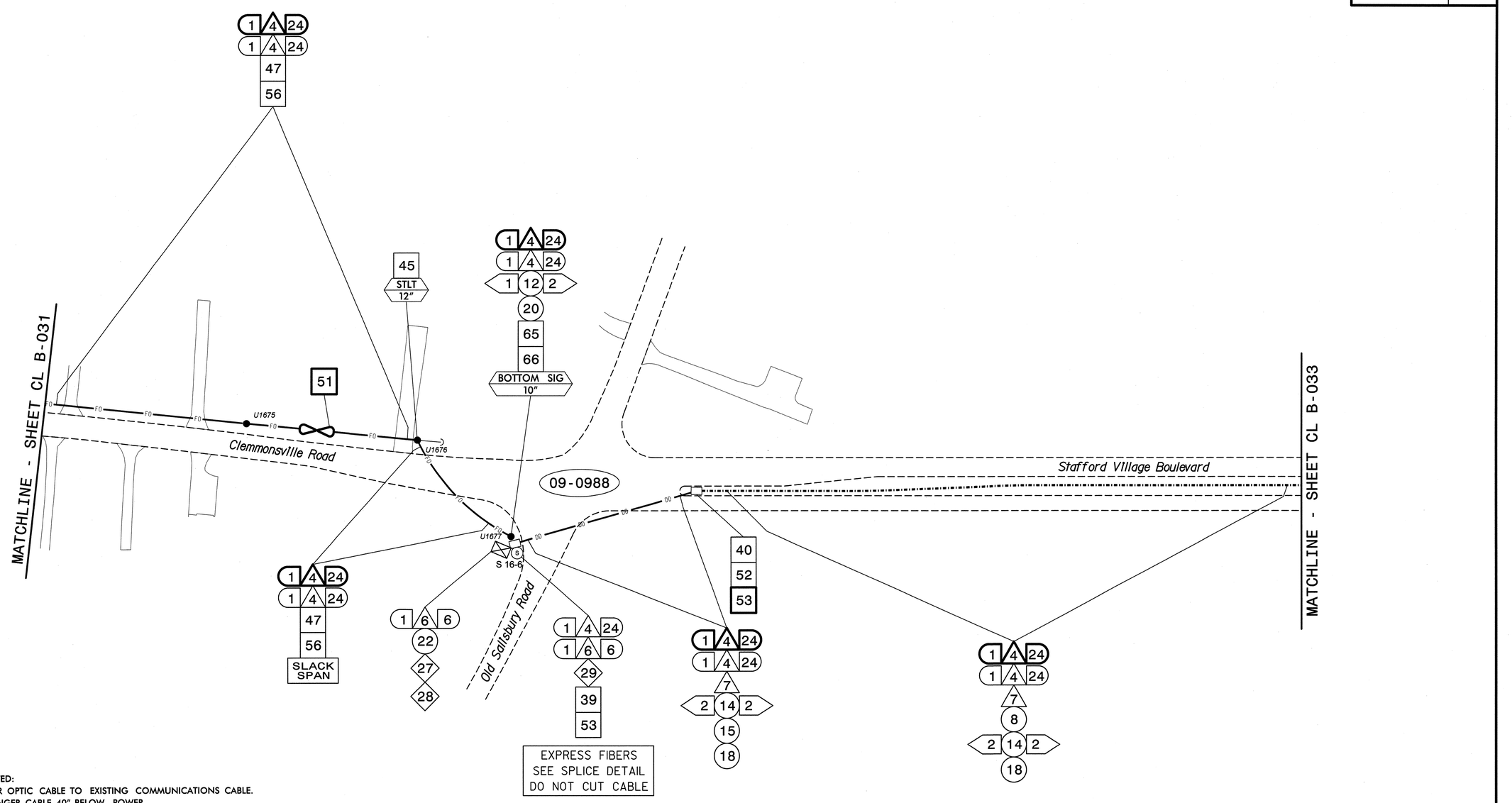
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-032



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PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE DATE 3-22-13
CADD Filename: CL B-032.dgn

19-MAR-2013 18:57
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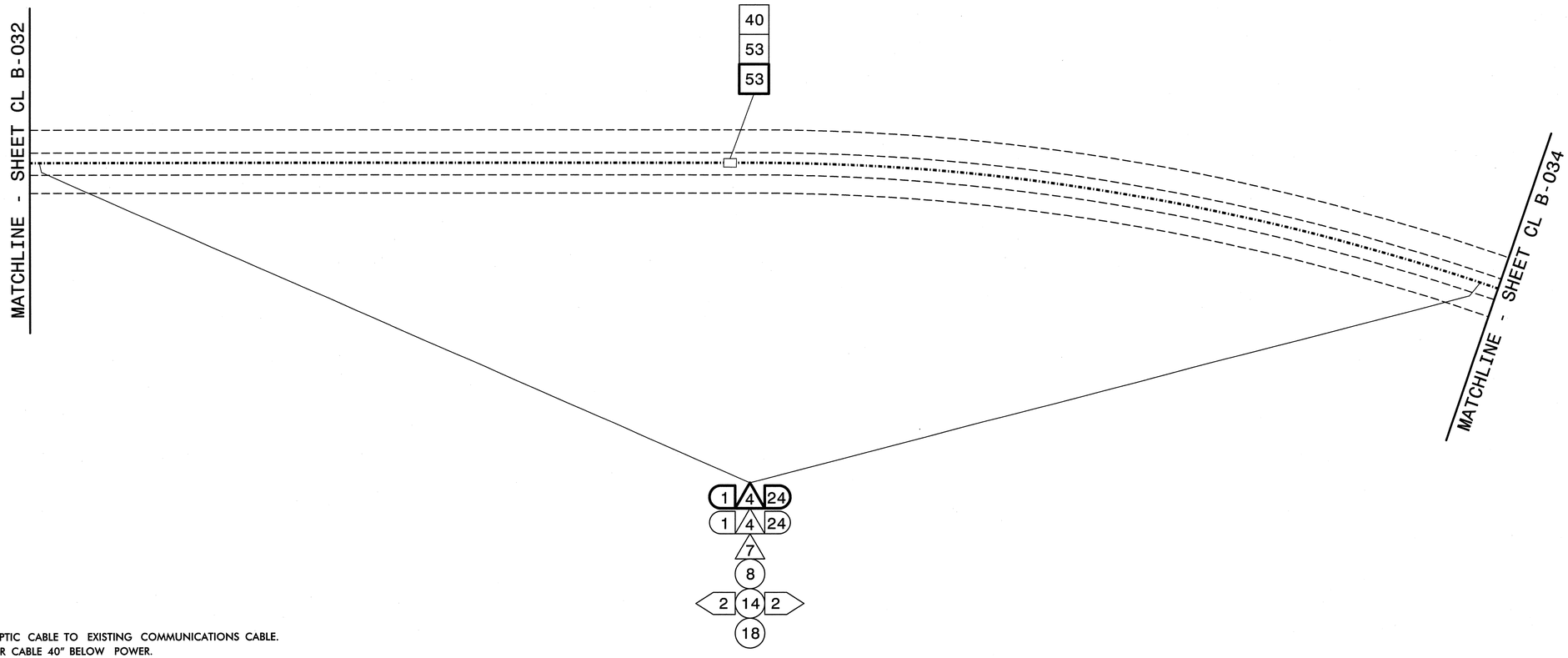
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-033



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3	INSTALL CATEGORY 5E CABLE	15	DIRECTIONAL DRILL CONDUIT	27	INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39	INSTALL SPECIAL-SIZED JUNCTION BOX	51	INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63	INSTALL 900 MHZ ETHERNET RADIO
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5	INSTALL COAXIAL ANTENNA CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	53	STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65	BOND MESSENGER TO POLE GROUND
6	INSTALL FIBER-OPTIC DROP CABLE	18	INSTALL CABLE(S) IN NEW CONDUIT	30	INSTALL AERIAL SPLICE ENCLOSURE	42	INSTALL WOOD POLE	54	LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66	BOND RISER TO POLE GROUND
7	INSTALL TRACER WIRE	19	INSTALL CABLE(S) IN EXISTING RISER(S)	31	INSTALL SPLICE CABINET	43	REMOVE EXISTING WOOD POLE	55	LASH CABLE(S) TO EXISTING MESSENGER CABLE	67	BOND TRACER WIRE TO POLE GROUND
8	INSTALL CONDUIT UNDERGROUND	20	INSTALL CABLE(S) IN NEW RISER(S)	32	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	44	INSTALL AERIAL GUY ASSEMBLY	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	BOND TRACER WIRE TO EQUIPMENT GROUND BUS
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12	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	48	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60	INSTALL NEW BASE MOUNTED CCTV CABINET	72	INSTALL MANAGED ETHERNET SWITCH

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YYY REFERENCE POINT
XXX REFERENCE POINT DISTANCE BELOW (IN)

CONSTRUCTION NOTE SYMBOLOGY KEY
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NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
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Prepared for the Offices of:
North Carolina Department of Transportation – Mobility and Safety Division – Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE
CADD Filename: CL B-033.dgn

13-MAR-2013 11:09
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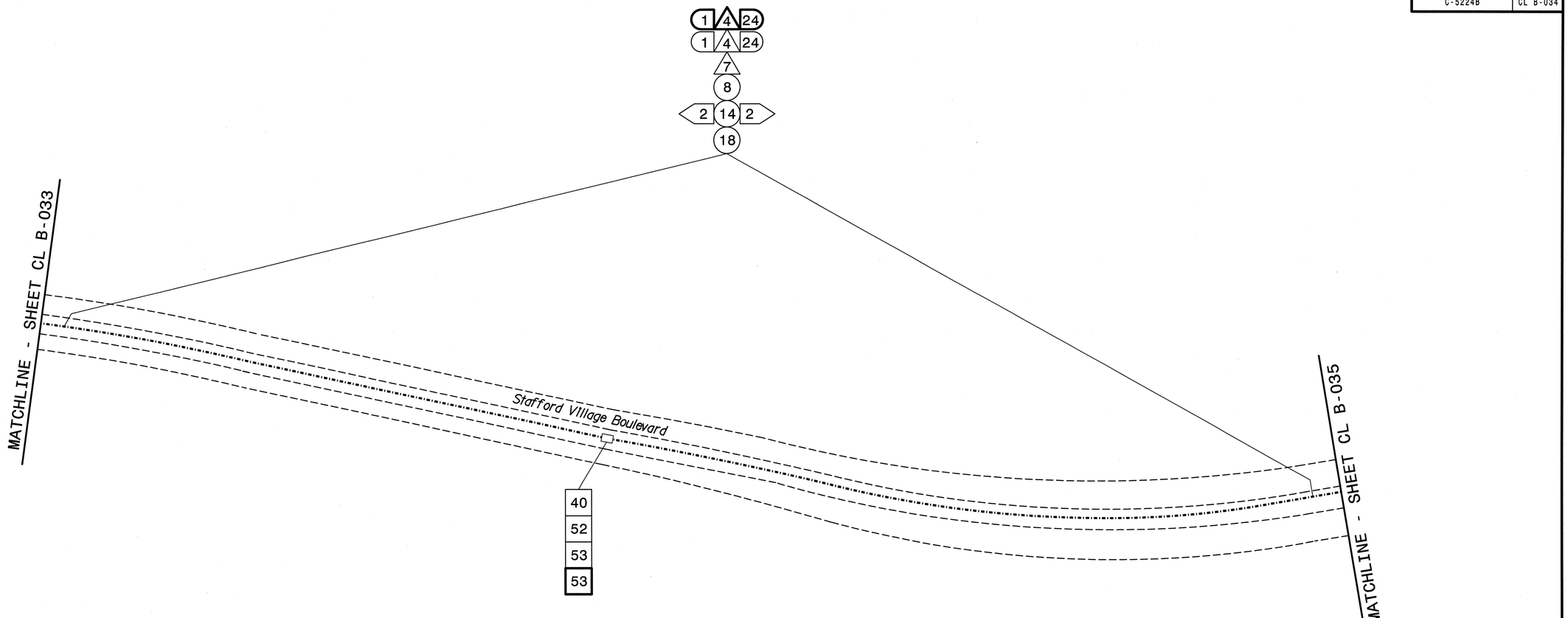
lisa.moon
(3833)

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-034



NOTES:
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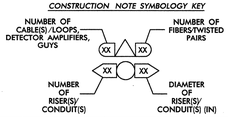

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Prepared for the Offices of:
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DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09	Forsyth County	Winston-Salem
PLAN DATE: March 2013	REVIEWED BY:	MB Toth
PREPARED BY: JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE
0 50
1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-034.dgn

13-MAR-2013 11:09
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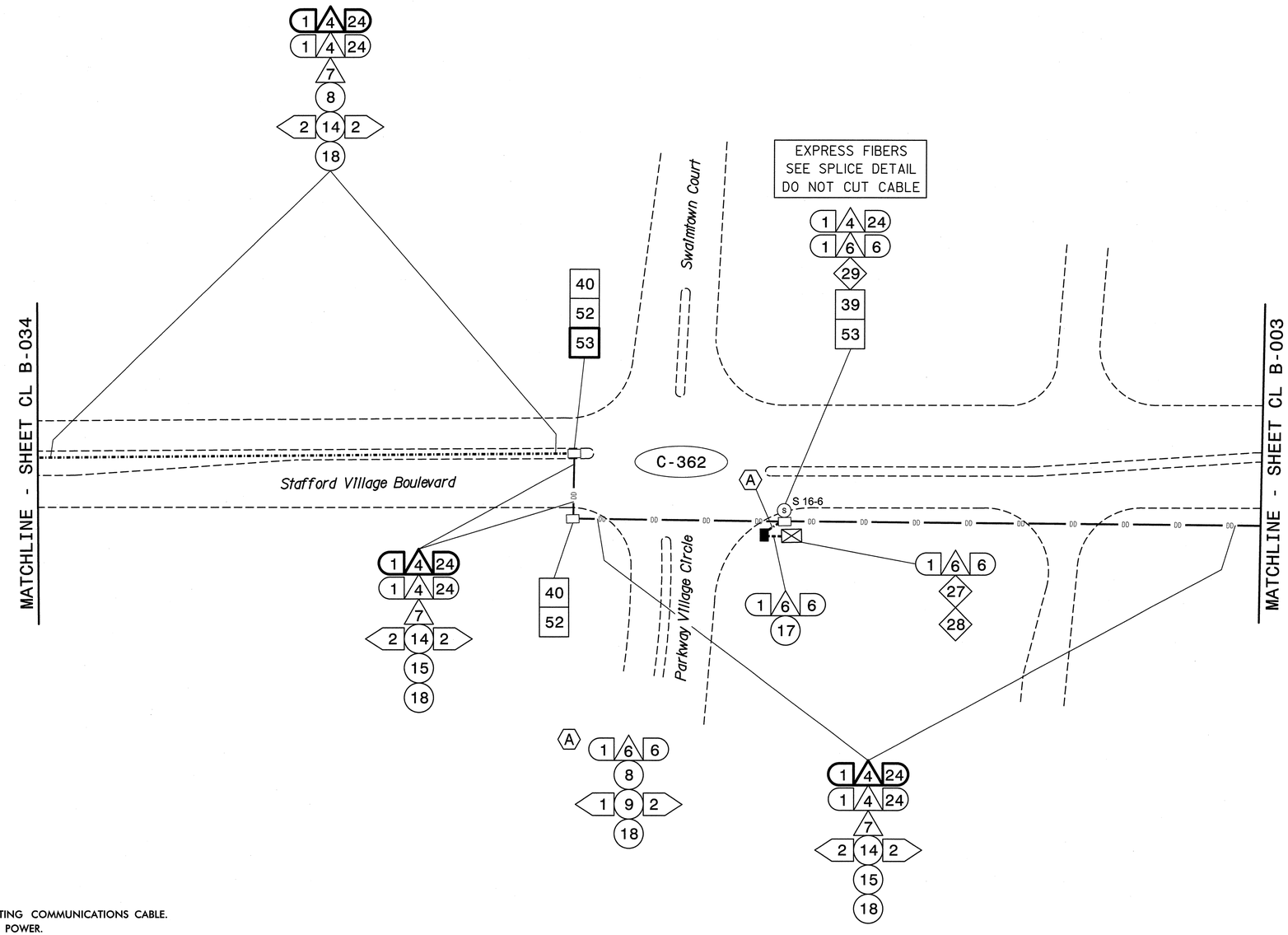
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-035



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750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-035.dgn

13-MAR-2013 11:09
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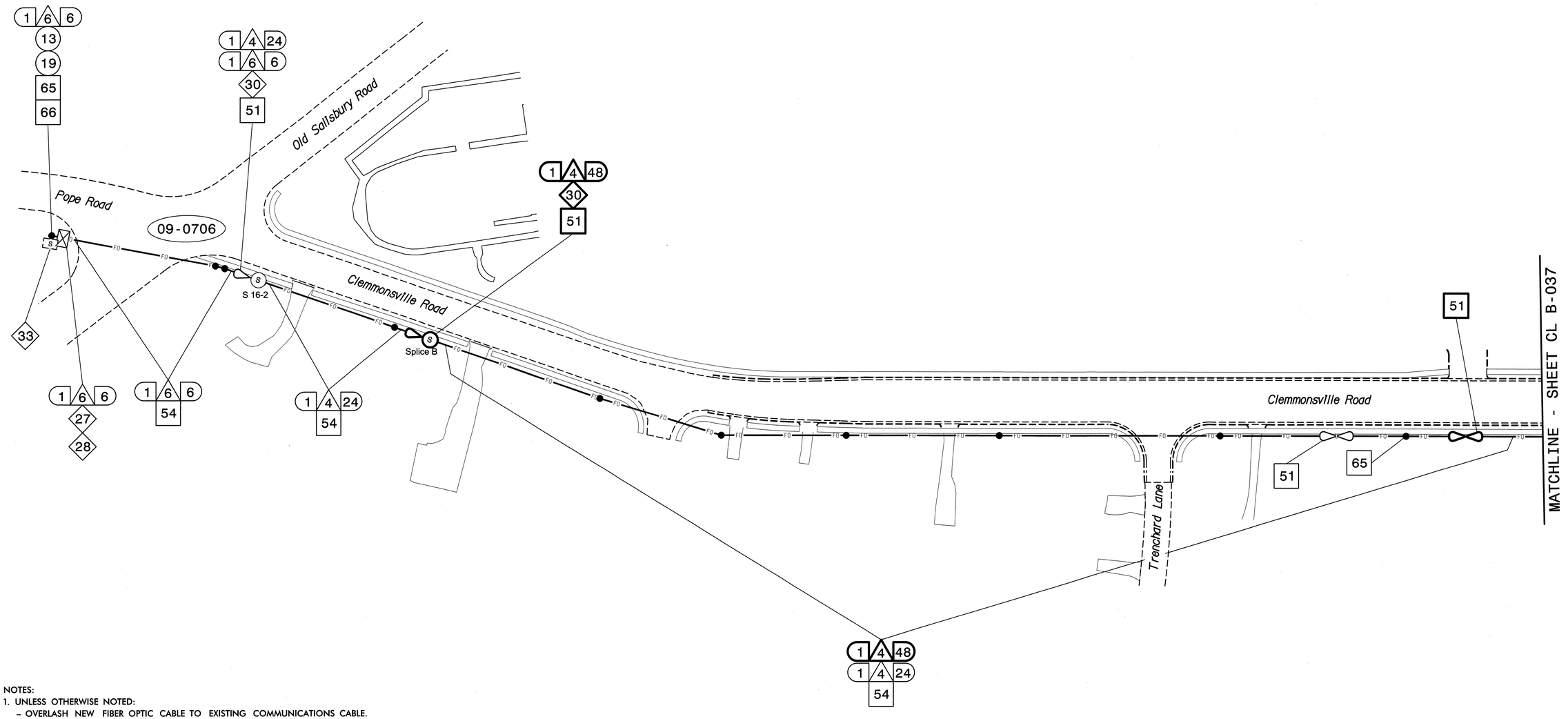
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-036



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Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-036.dgn

13-MAR-2013 11:09
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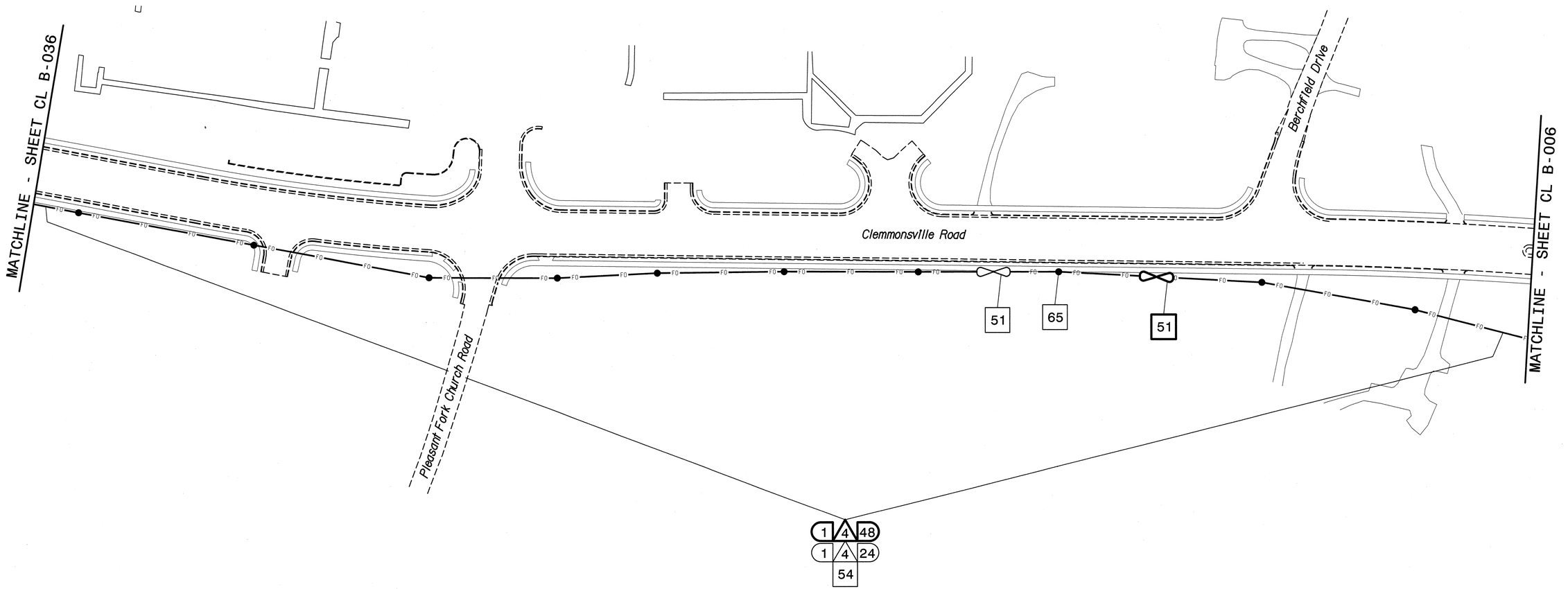
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-037



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ATKINS
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Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-037.dgn

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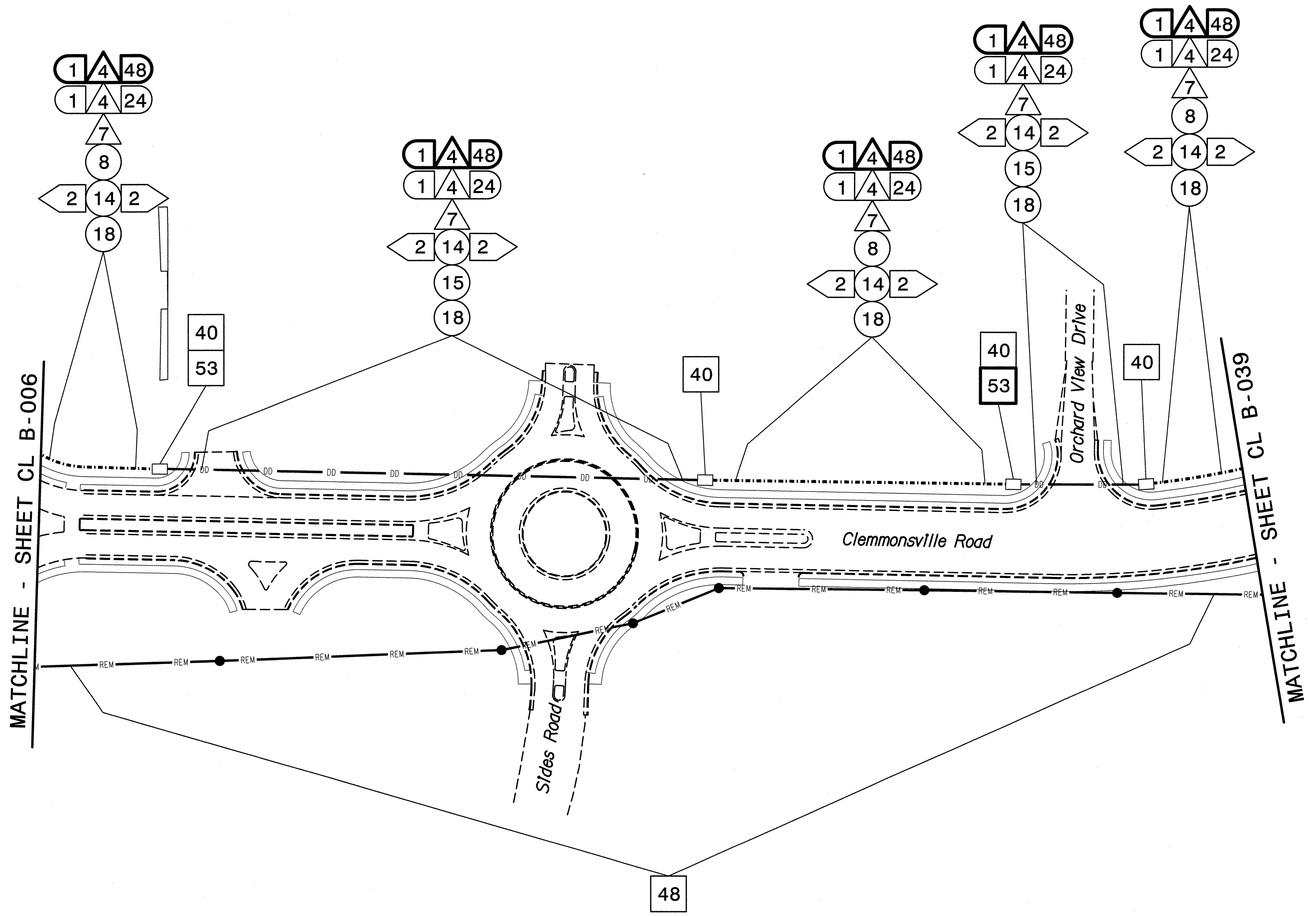
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-038



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750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-038.dgn

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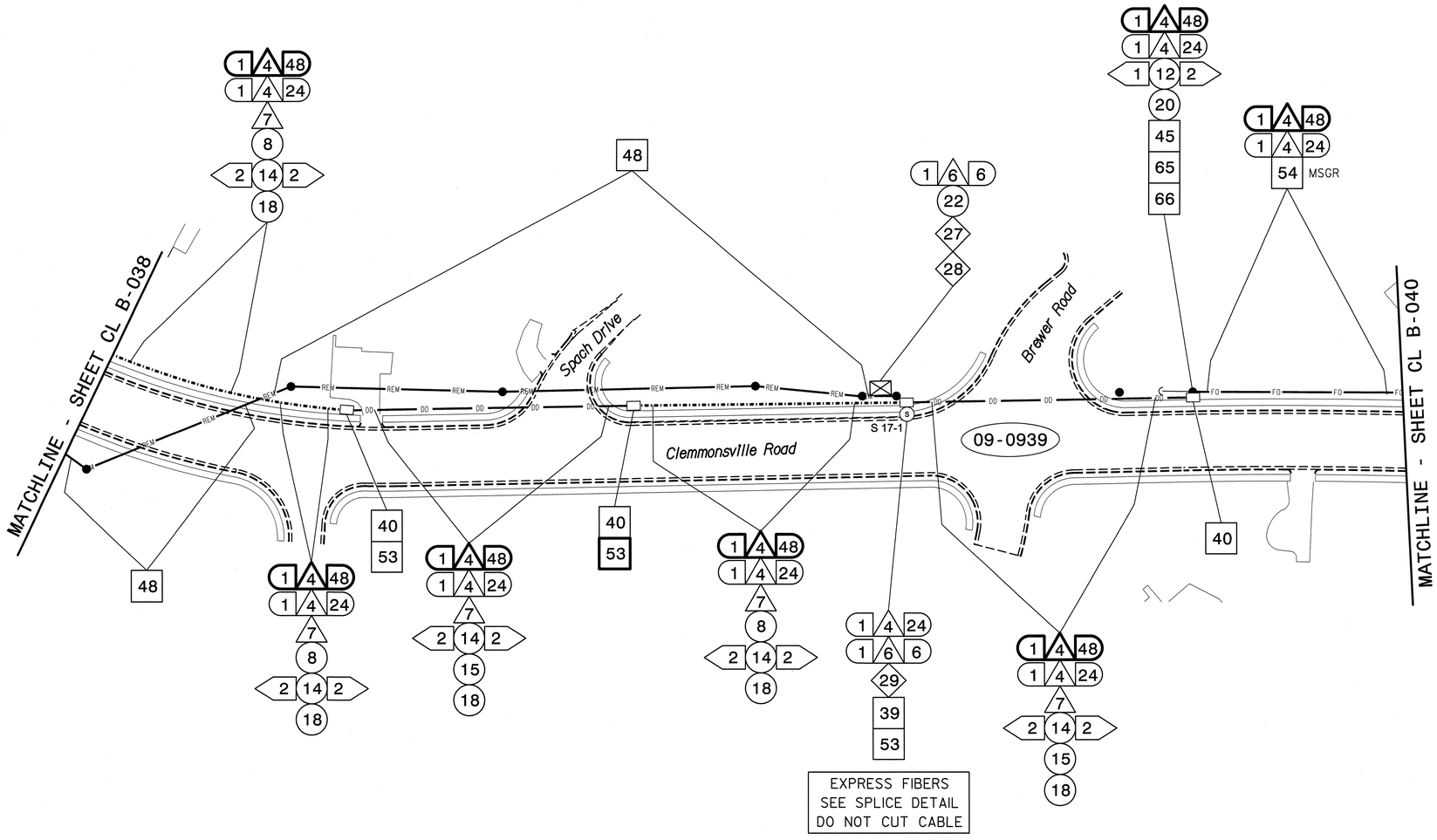
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-039



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Prepared for the Offices of:
North Carolina Department of Transportation, Mobility and Safety Division, Traffic Engineering Branch
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 | Forsyth County | Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-039.dgn

13-MAR-2013 11:09
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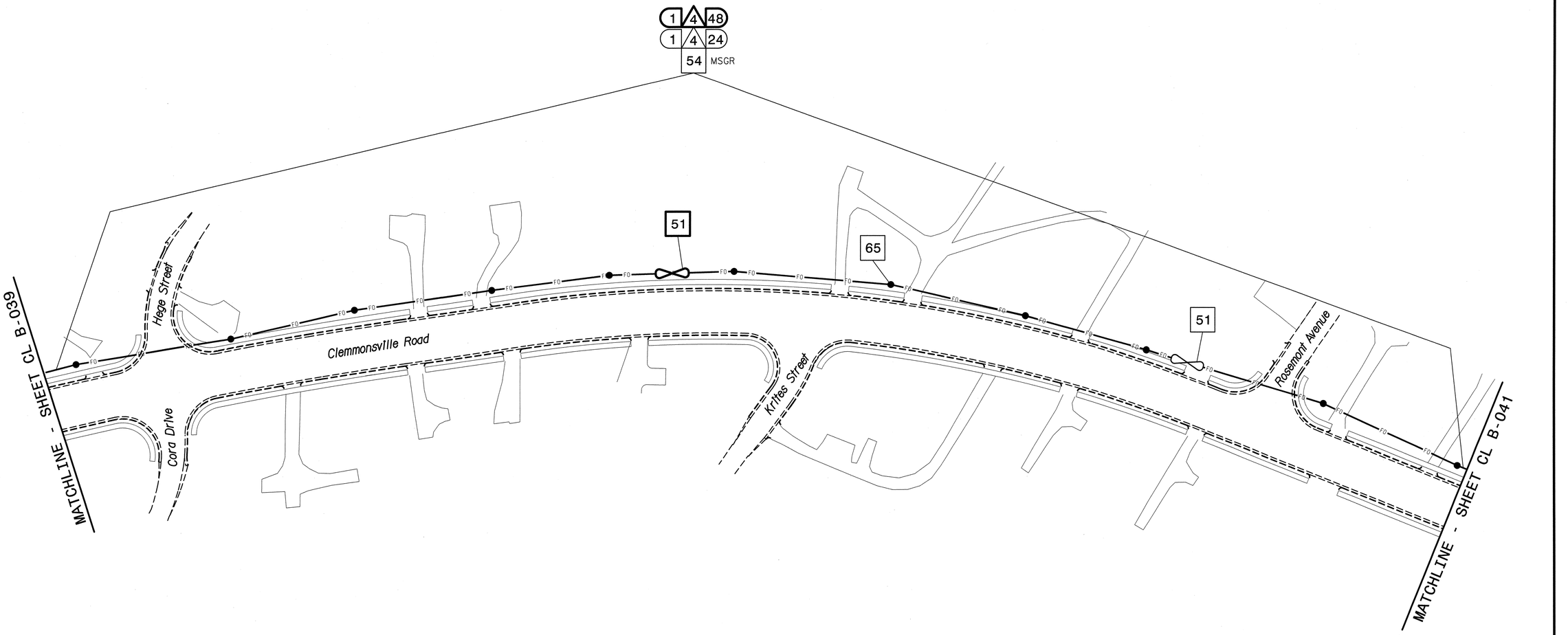
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-040



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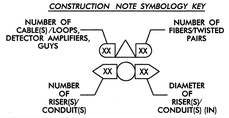

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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09	Forsyth County	Winston-Salem
PLAN DATE: March 2013	REVIEWED BY:	MB Toth
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PROJECT REFERENCE NO.	SHEET NO.
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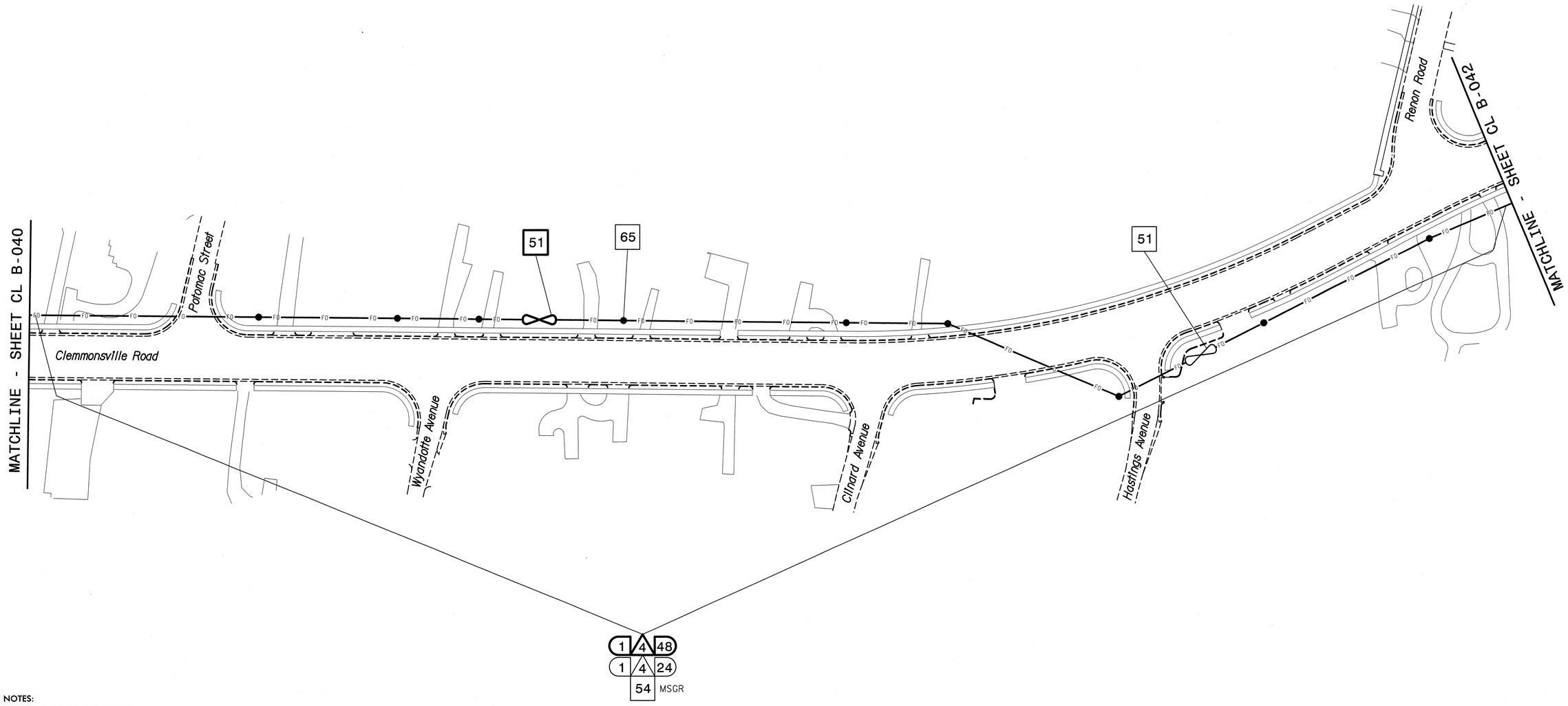

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750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-041.dgn

13-MAR-2013 11:09
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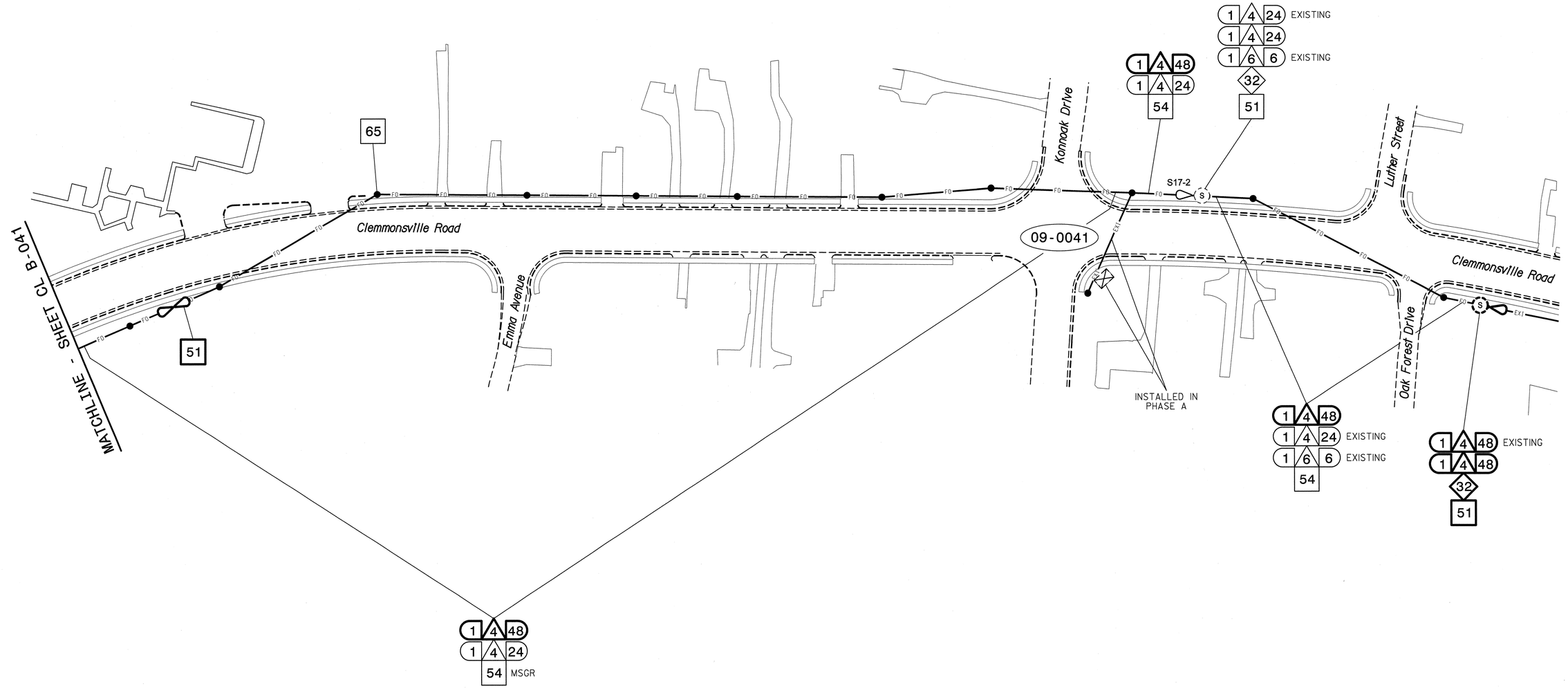
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-042



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PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

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SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-042.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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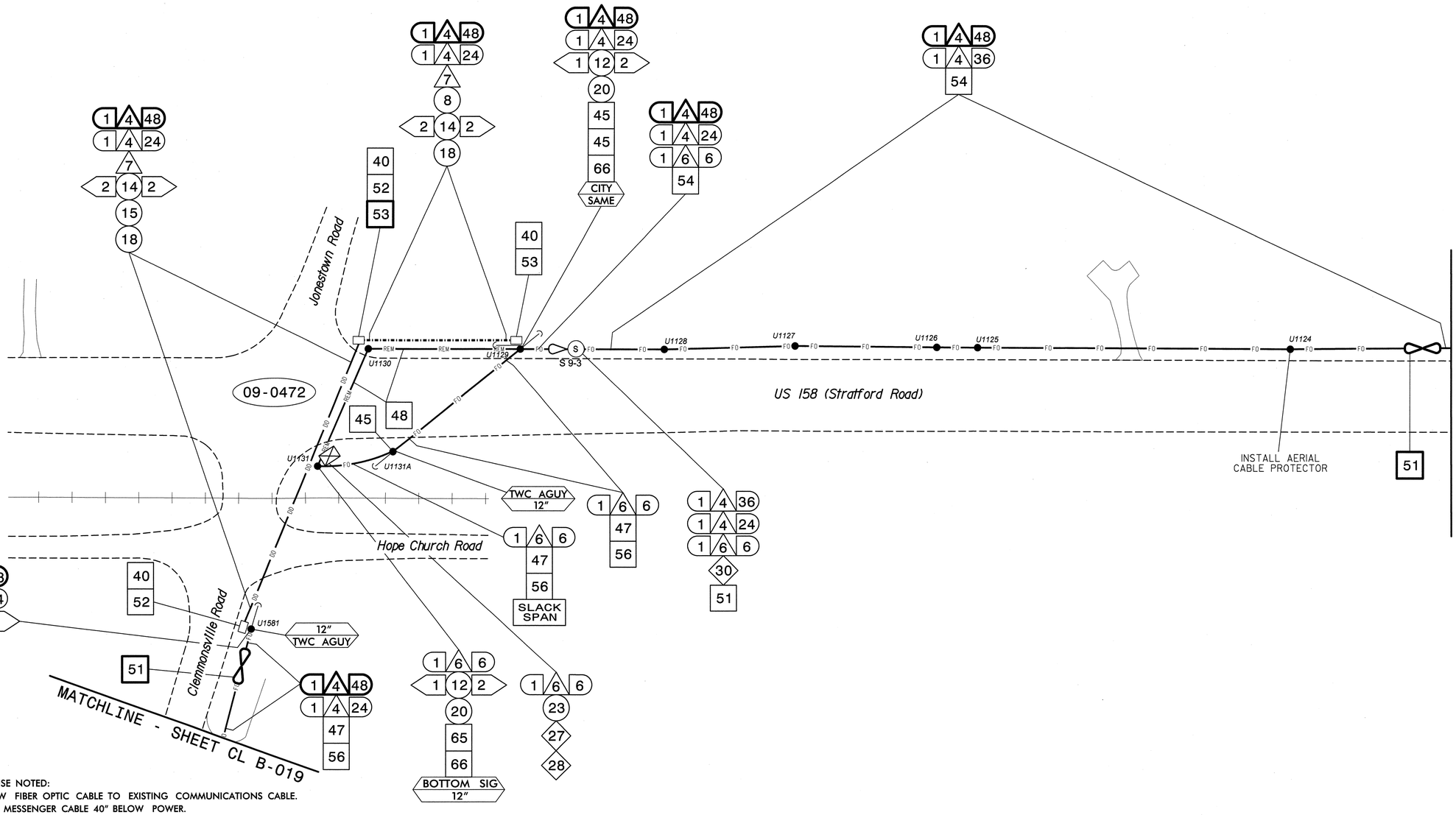

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SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-043.dgn

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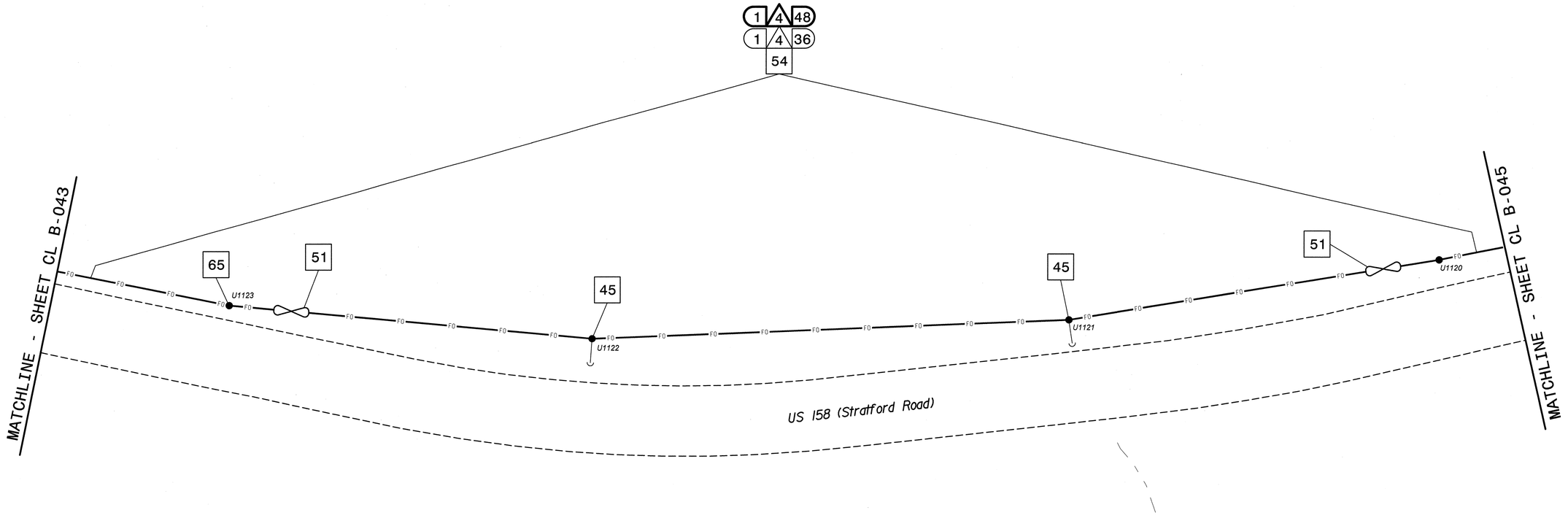
13813

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-044



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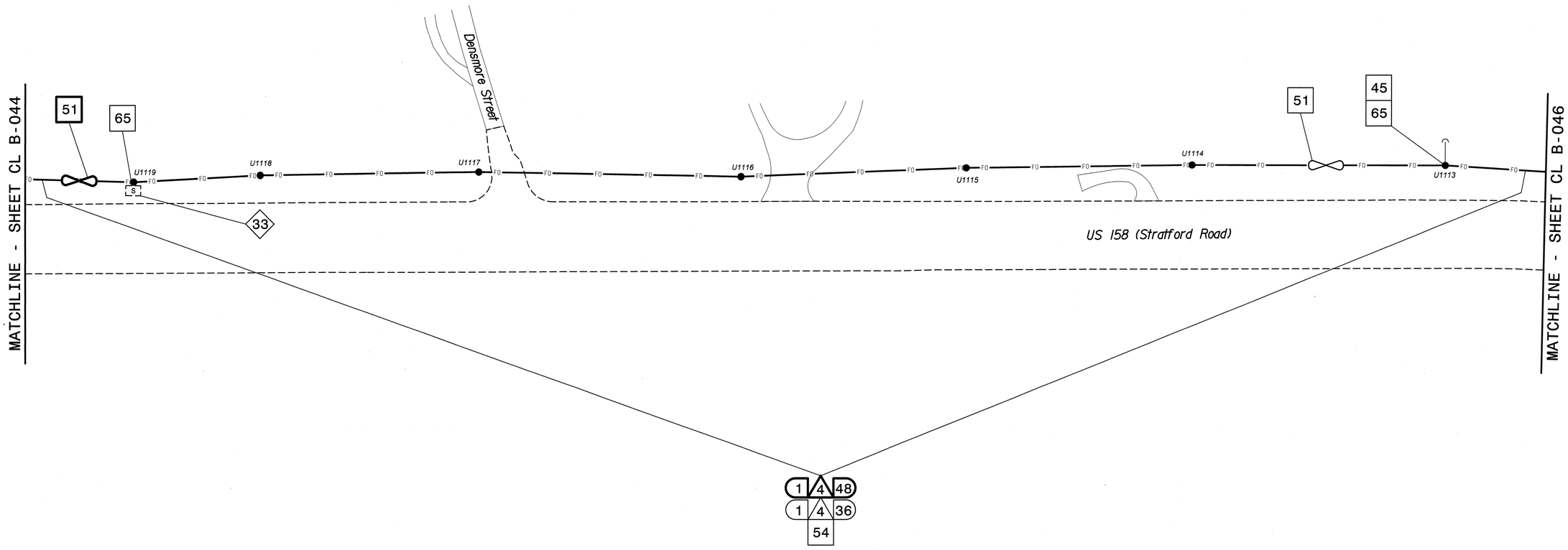
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-045



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32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
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34. INSTALL CABINET FOUNDATION
35. REMOVE EXISTING CABINET FOUNDATION
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37. INSTALL CCTV WOOD POLE
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41. REMOVE EXISTING JUNCTION BOX
42. INSTALL WOOD POLE
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48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
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70. NOT USED
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ATTACHMENT POINT:
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CONSTRUCTION NOTE SYMBOLOGY KEY
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DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

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750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SEAL 022516 — NORTH CAROLINA PROFESSIONAL ENGINEER — LISA M. MOON
SIGNATURE DATE 3-22-13
CADD Filename: CL B-045.dgn

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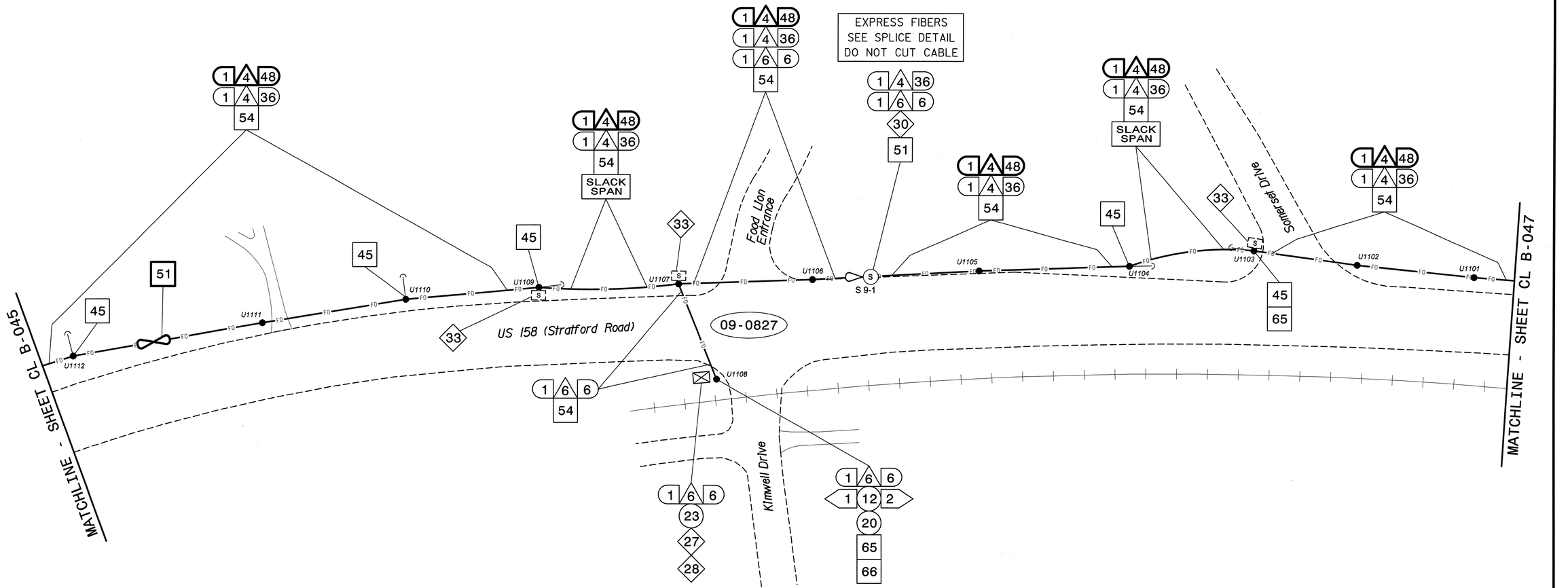
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-046



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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

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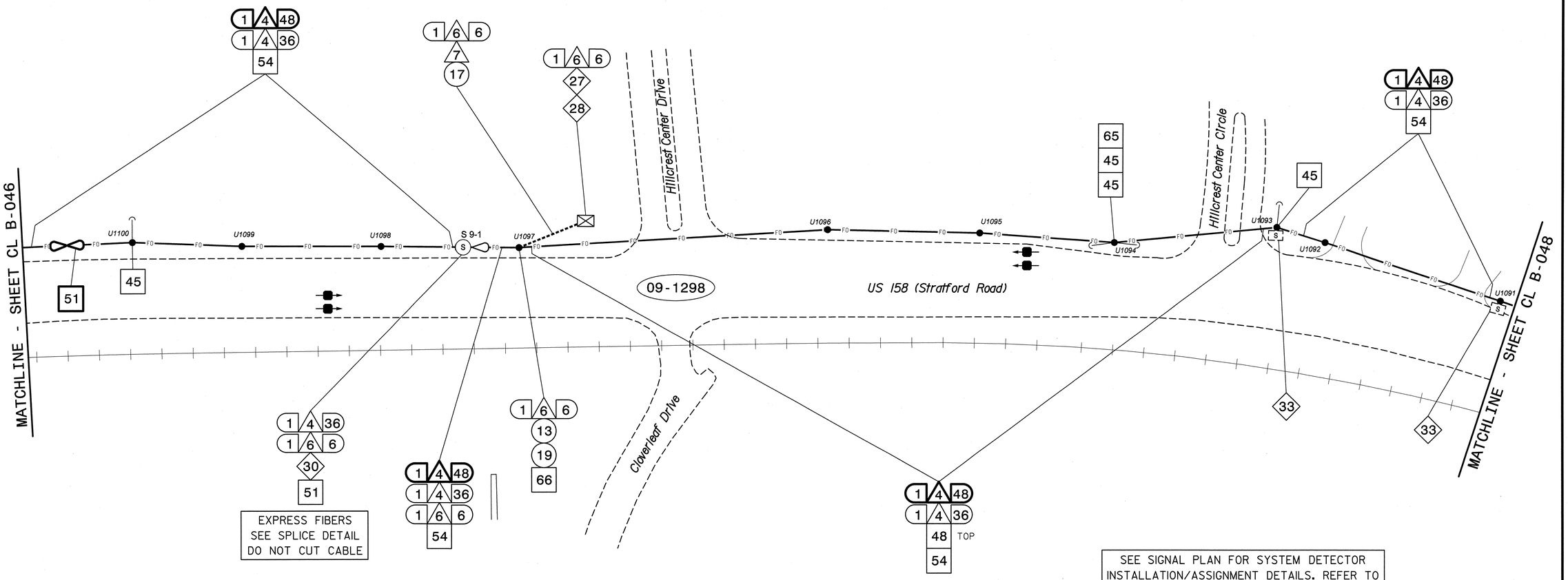

SEE SIGNAL PLAN FOR SYSTEM DETECTOR INSTALLATION/ASSIGNMENT DETAILS. REFER TO "SYSTEM DETECTORS AND CONTROL ZONES" SCHEMATIC FOR ADDITIONAL INFORMATION.

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DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE DATE 3-22-13
CADD Filename: CL B-047.dgn

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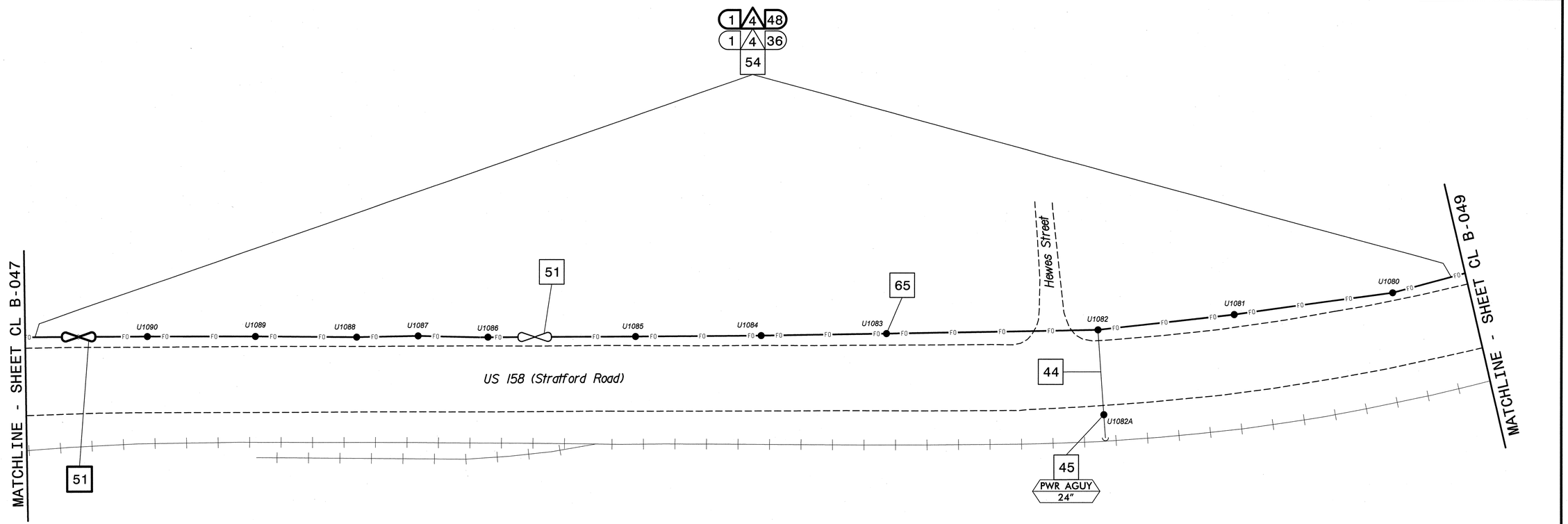
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-048



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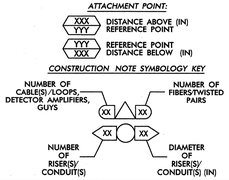

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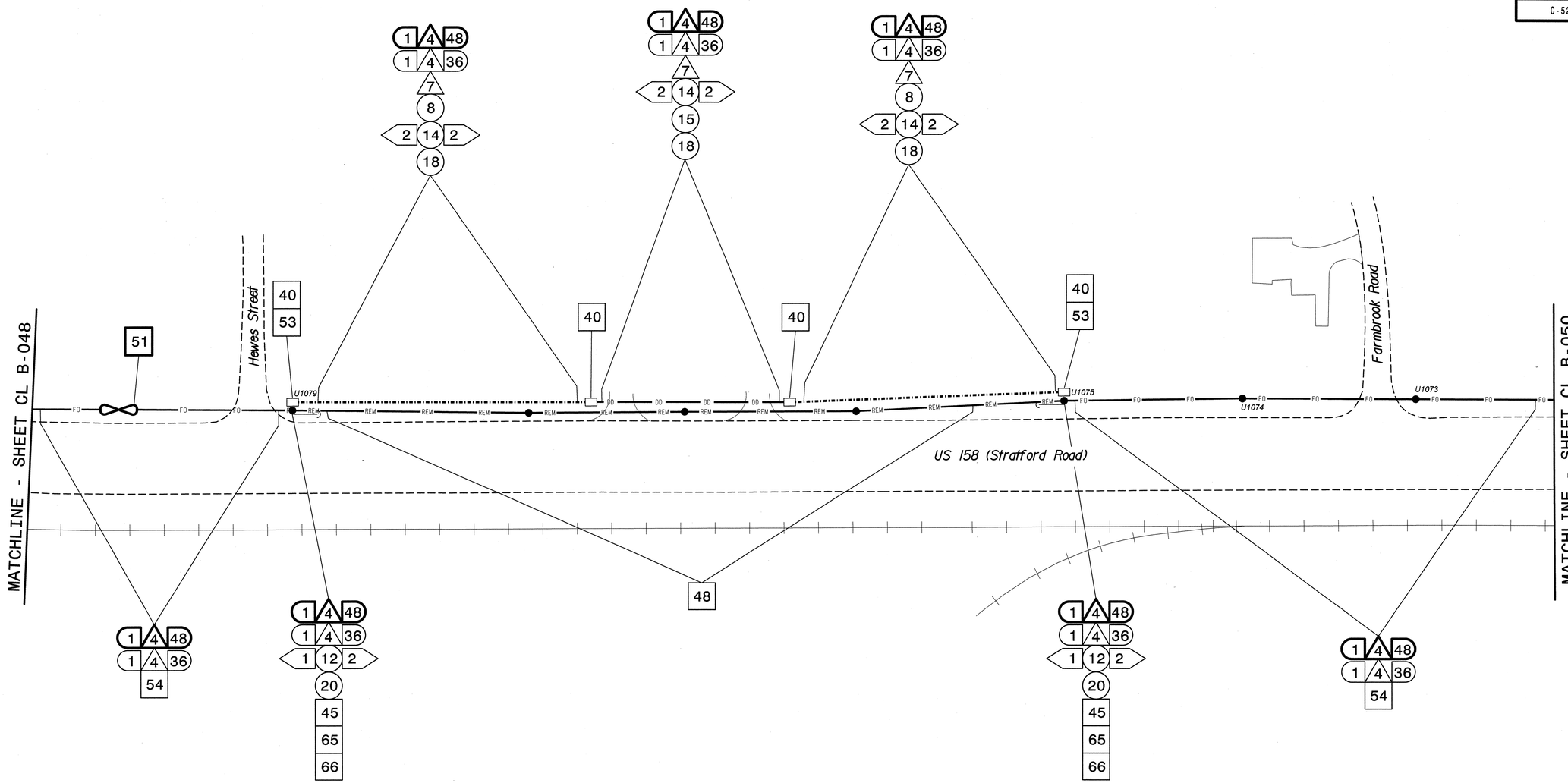

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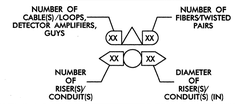
37. INSTALL CCTV WOOD POLE
38. INSTALL STANDARD SIZE JUNCTION BOX
39. INSTALL SPECIAL-SIZED JUNCTION BOX
40. INSTALL OVERSIZED JUNCTION BOX
41. REMOVE EXISTING JUNCTION BOX
42. INSTALL WOOD POLE
43. REMOVE EXISTING WOOD POLE
44. INSTALL AERIAL GUY ASSEMBLY
45. INSTALL STANDARD GUY ASSEMBLY
46. INSTALL SIDEWALK GUY ASSEMBLY
47. INSTALL MESSENGER CABLE
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
55. LASH CABLE(S) TO EXISTING MESSENGER CABLE
56. LASH CABLE(S) TO NEW MESSENGER CABLE
57. MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB
58. INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB
59. INSTALL NEW POLE MOUNTED CCTV CABINET
60. INSTALL NEW BASE MOUNTED CCTV CABINET
61. INSTALL UNI-DIRECTIONAL ANTENNA
62. NOT USED
63. INSTALL 900 MHZ ETHERNET RADIO
64. INTERCEPT AND REROUTE EXISTING CONDUITS
65. BOND MESSENGER TO POLE GROUND
66. BOND RISER TO POLE GROUND
67. BOND TRACER WIRE TO POLE GROUND
68. BOND TRACER WIRE TO EQUIPMENT GROUND BUS
69. REMOVE EXISTING CCTV CAMERA ASSEMBLY
70. NOT USED
71. NOT USED
72. INSTALL MANAGED ETHERNET SWITCH

ATTACHMENT POINT:

XXX DISTANCE ABOVE (IN) REFERENCE POINT
YYY
XXX REFERENCE POINT DISTANCE BELOW (IN)
YYY

CONSTRUCTION NOTE SYMBOLOGY KEY



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1616 EAST MILLBROOK ROAD, SUITE 310
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(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION — Integrated Mobility and Rail Division — Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-049.dgn

13-MAR-2013 11:25
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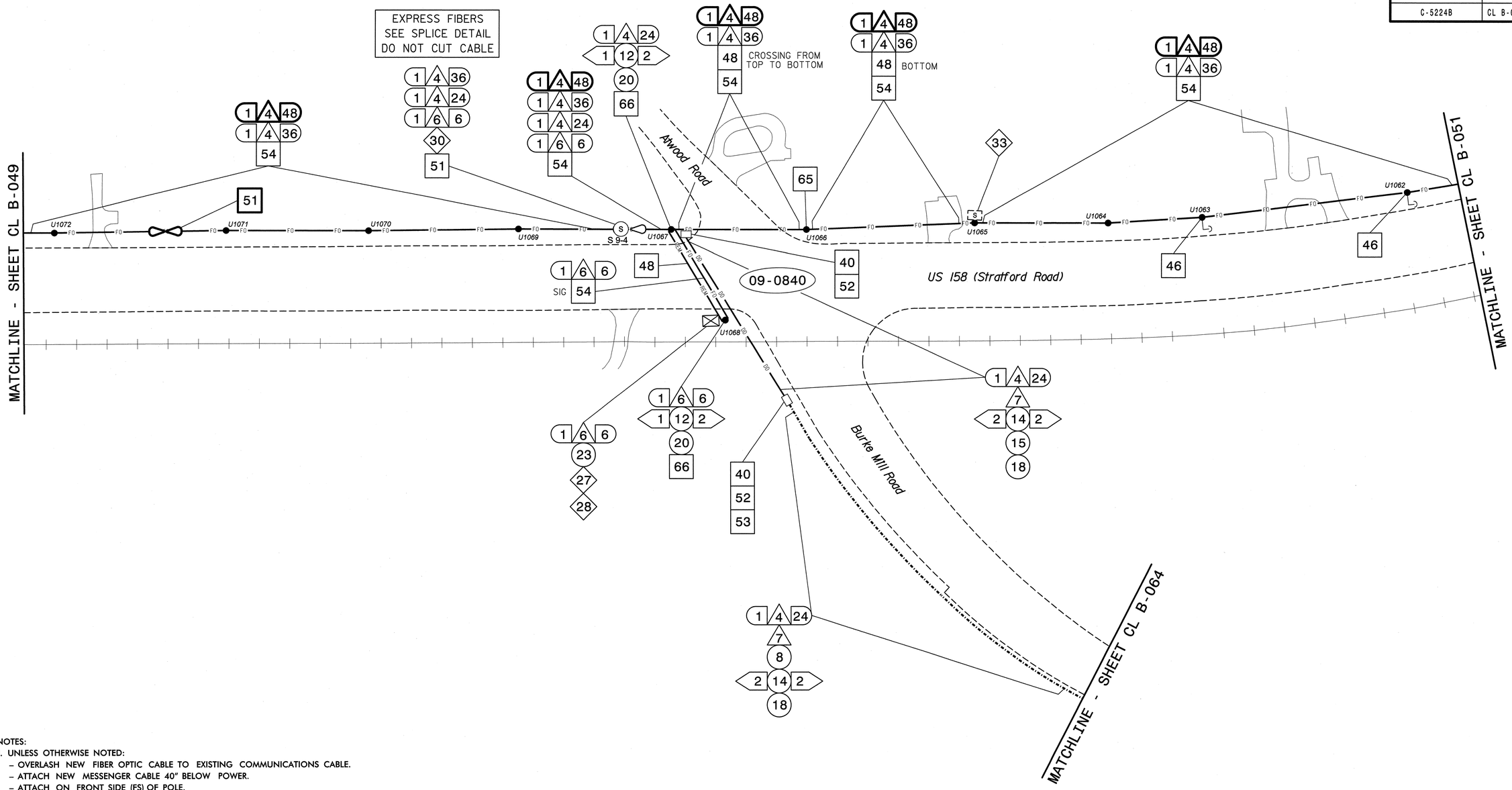
13813

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-050



NOTES:
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BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1	INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	13	INSTALL HEAT SHRINK TUBING RETROFIT KIT	25	INSTALL NEW RISER INTO POLE MOUNTED CABINET	37	INSTALL CCTV WOOD POLE	49	REMOVE EXISTING COMMUNICATIONS CABLE	61	INSTALL UNI-DIRECTIONAL ANTENNA
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North Carolina Department of Transportation — Integrated Mobility and Safety Division — Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-050.dgn

13-MAR-2013 11:25
D2:#Transportation#Traffic#Curr#100002712 Winston Salem Sig Sys#CL#Phase B#CL B-050.dgn
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-051

A: 2 4 48 / 1 4 24 / 1 4 24 / 1 6 6 / 2 12 2 (TRUNK CCTV DROP) / 20 / 66

B: 1 4 48 / 1 4 24 / 29 / 39 / 52 / 53

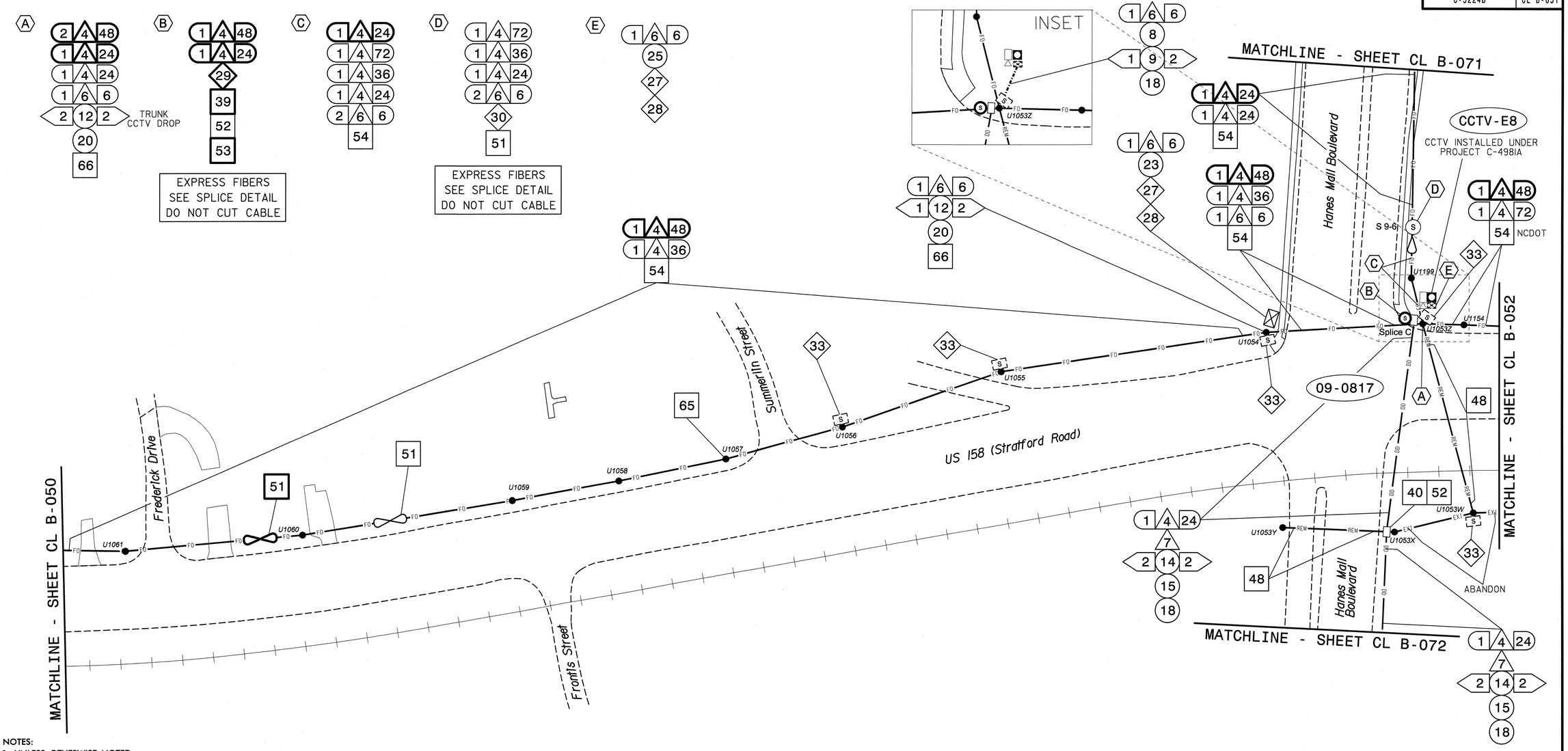
EXPRESS FIBERS SEE SPLICE DETAIL DO NOT CUT CABLE

C: 1 4 24 / 1 4 72 / 1 4 36 / 1 4 24 / 2 6 6 / 54

D: 1 4 72 / 1 4 36 / 1 4 24 / 2 6 6 / 30 / 51

EXPRESS FIBERS SEE SPLICE DETAIL DO NOT CUT CABLE

E: 1 6 6 / 25 / 27 / 28



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ATKINS
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Prepared for the Offices of: North Carolina Department of Transportation, Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE
CADD Filename: CL B-051.dgn

13-MAR-2013 11:25
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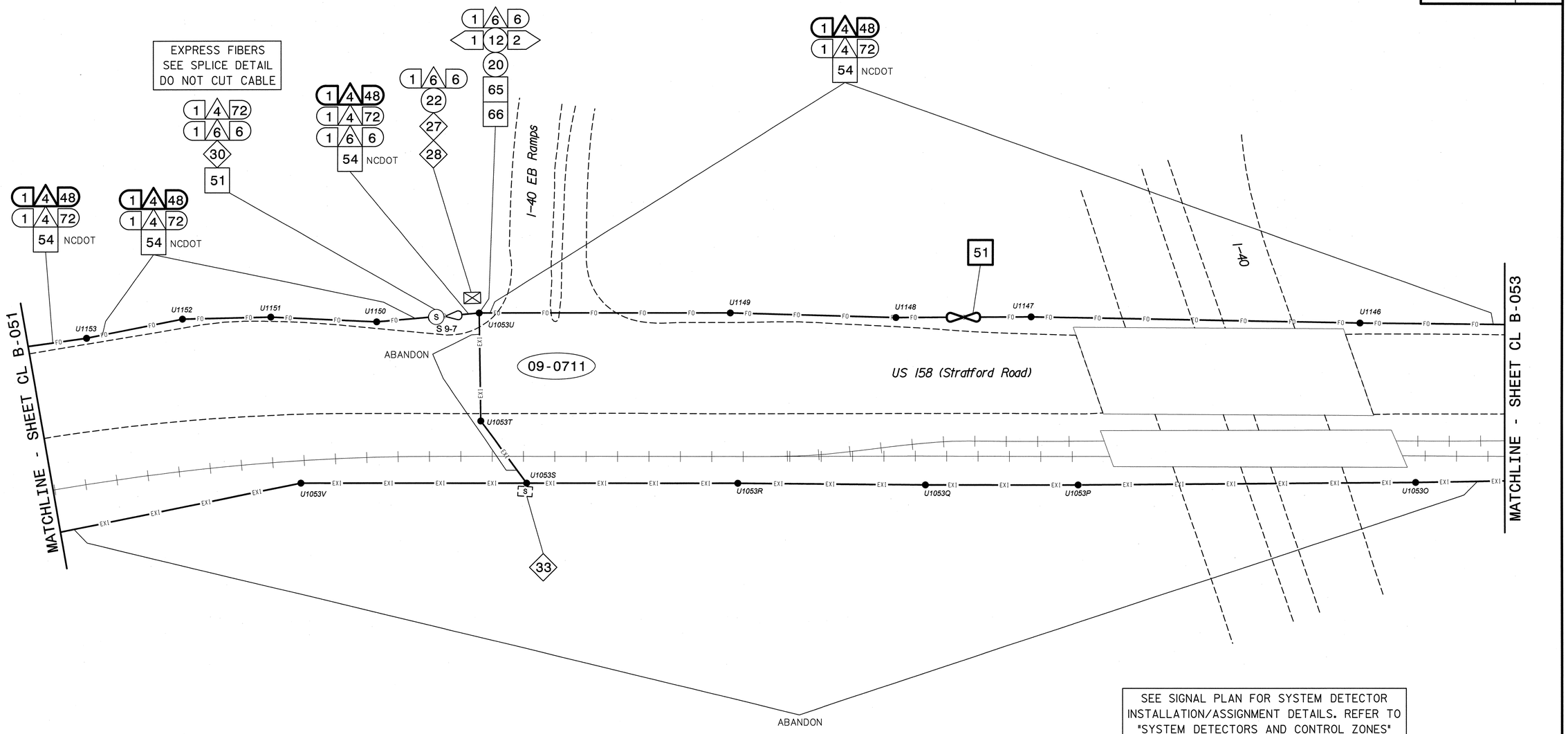
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-052



SEE SIGNAL PLAN FOR SYSTEM DETECTOR INSTALLATION/ASSIGNMENT DETAILS. REFER TO "SYSTEM DETECTORS AND CONTROL ZONES" SCHEMATIC FOR ADDITIONAL INFORMATION.

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750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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SEAL NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3.22.13
SIGNATURE DATE

CADD Filename: CL B-052.dgn

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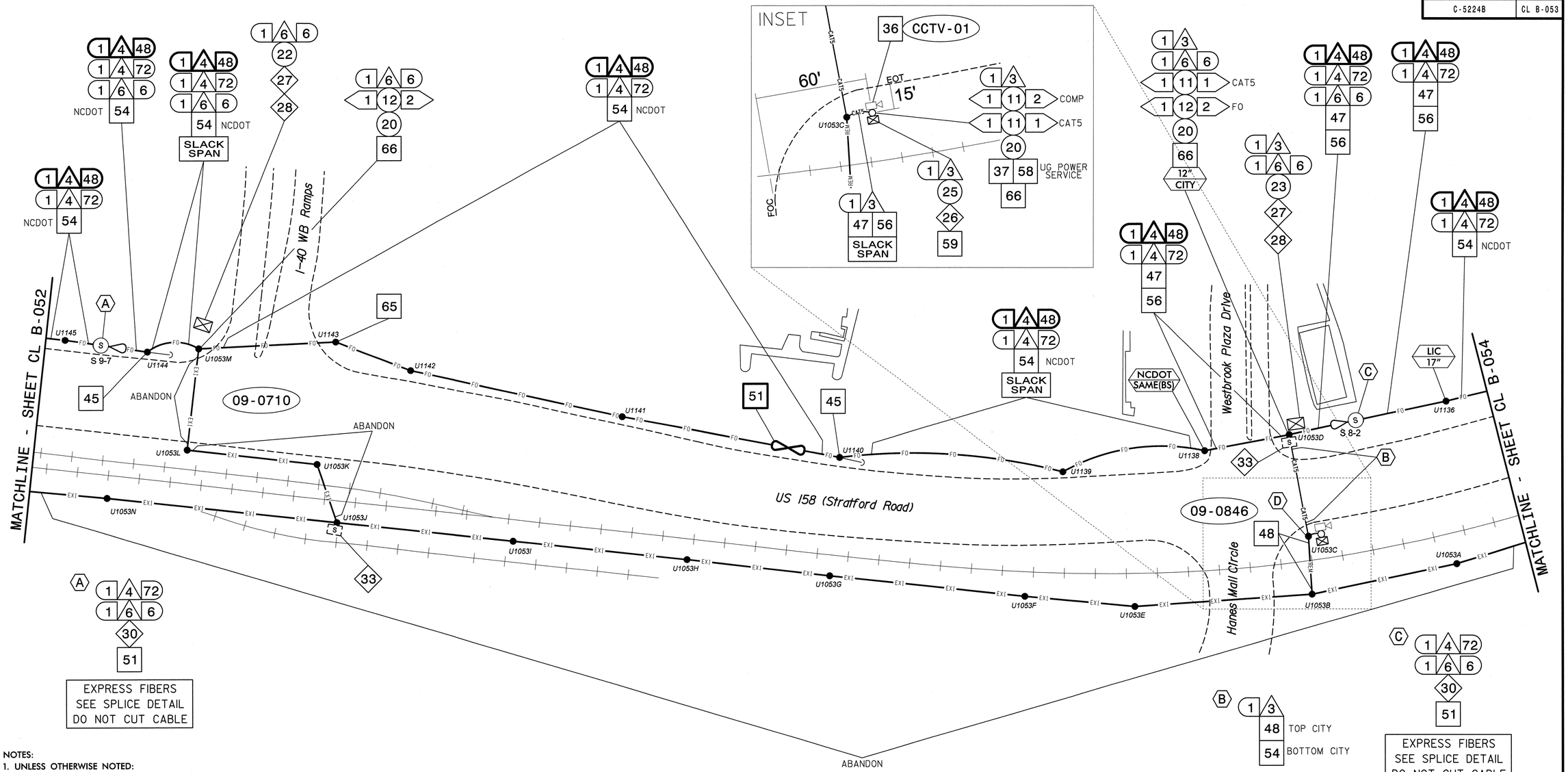

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9	INSTALL PVC CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS	33	REMOVE EXISTING SPLICE /HUB /CCTV CABINET	45	INSTALL STANDARD GUY ASSEMBLY	57	MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB	69	REMOVE EXISTING CCTV CAMERA ASSEMBLY
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DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL NORTH CAROLINA PROFESSIONAL SEAL 022518 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-053.dgn

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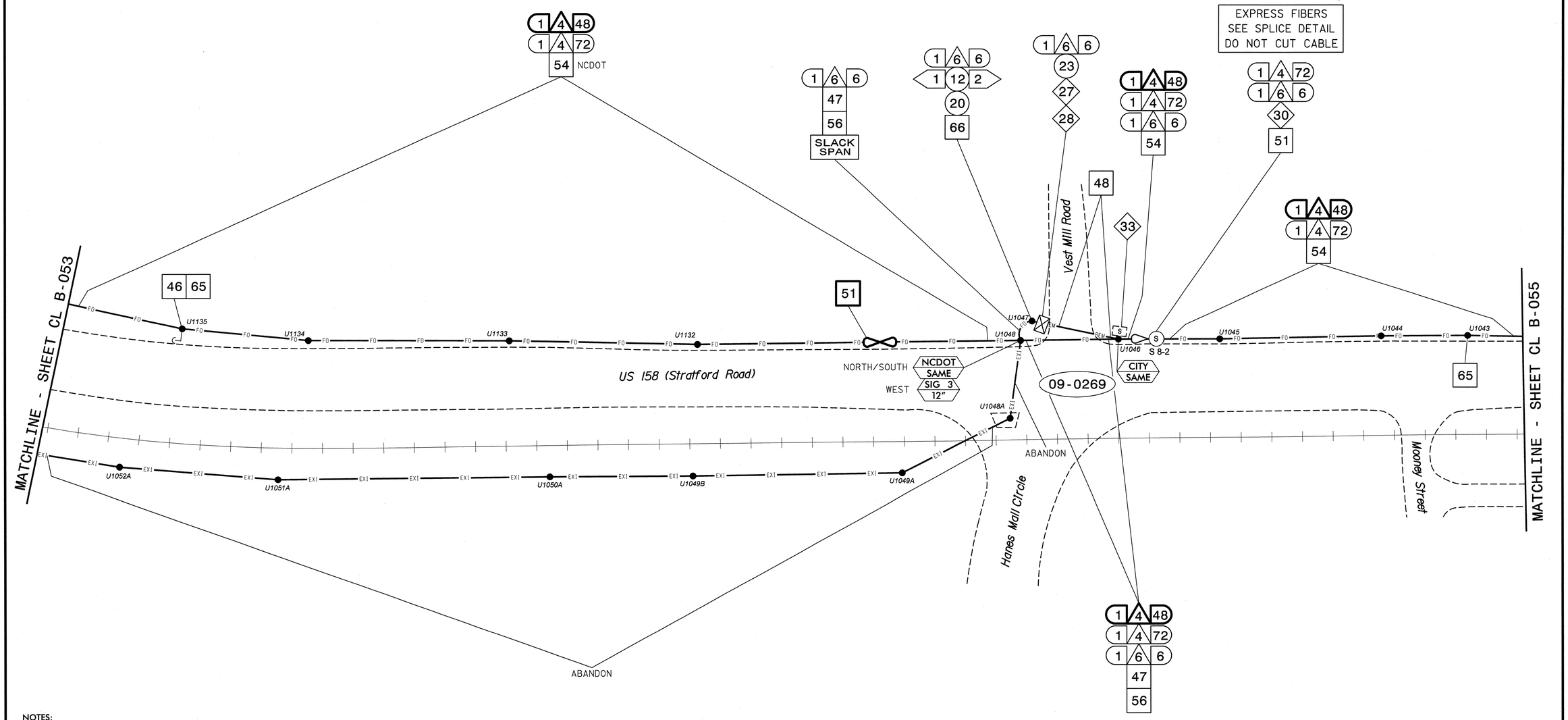
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-054



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750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE DATE
CADD Filename: CL B-054.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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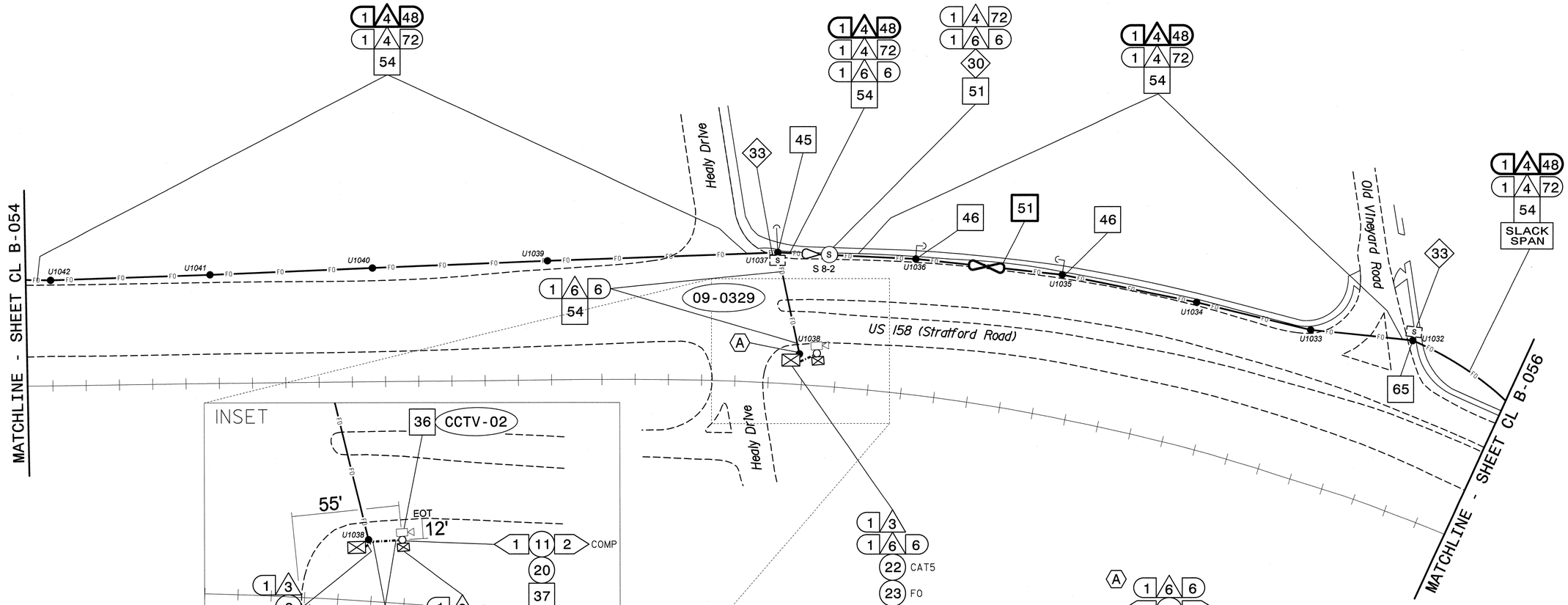

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE: March 2013 REVIEWED BY: MB Toth

PREPARED BY: JAW/AJD REVIEWED BY: LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-055.dgn

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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-056

EXPRESS FIBERS
SEE SPLICE DETAIL
DO NOT CUT CABLE

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SEE SPLICE DETAIL
DO NOT CUT CABLE

MATCHLINE - SHEET CL B-086

MATCHLINE - SHEET CL B-055

MATCHLINE - SHEET CL B-057

MATCHLINE - SHEET CL B-087

SLACK SPAN

Silas Creek SB Ramp

NC 67 (Silas Creek Parkway)

NCDOT

09-0258

09-0384

US 158 (Stratford Road)

S 10-1

S 10-6

Splice A

NEUT 48"

INSET

CCTV-E3

PWR AGUY 48"

SLACK SPAN

U1029 U1028 U1027 U1026 U1025 U1024 U1023 U1022 U1030 U1031 U1027A U1026A U1025A U1023A

SEE SIGNAL PLAN FOR SYSTEM DETECTOR INSTALLATION/ASSIGNMENT DETAILS. REFER TO "SYSTEM DETECTORS AND CONTROL ZONES" SCHEMATIC FOR ADDITIONAL INFORMATION.

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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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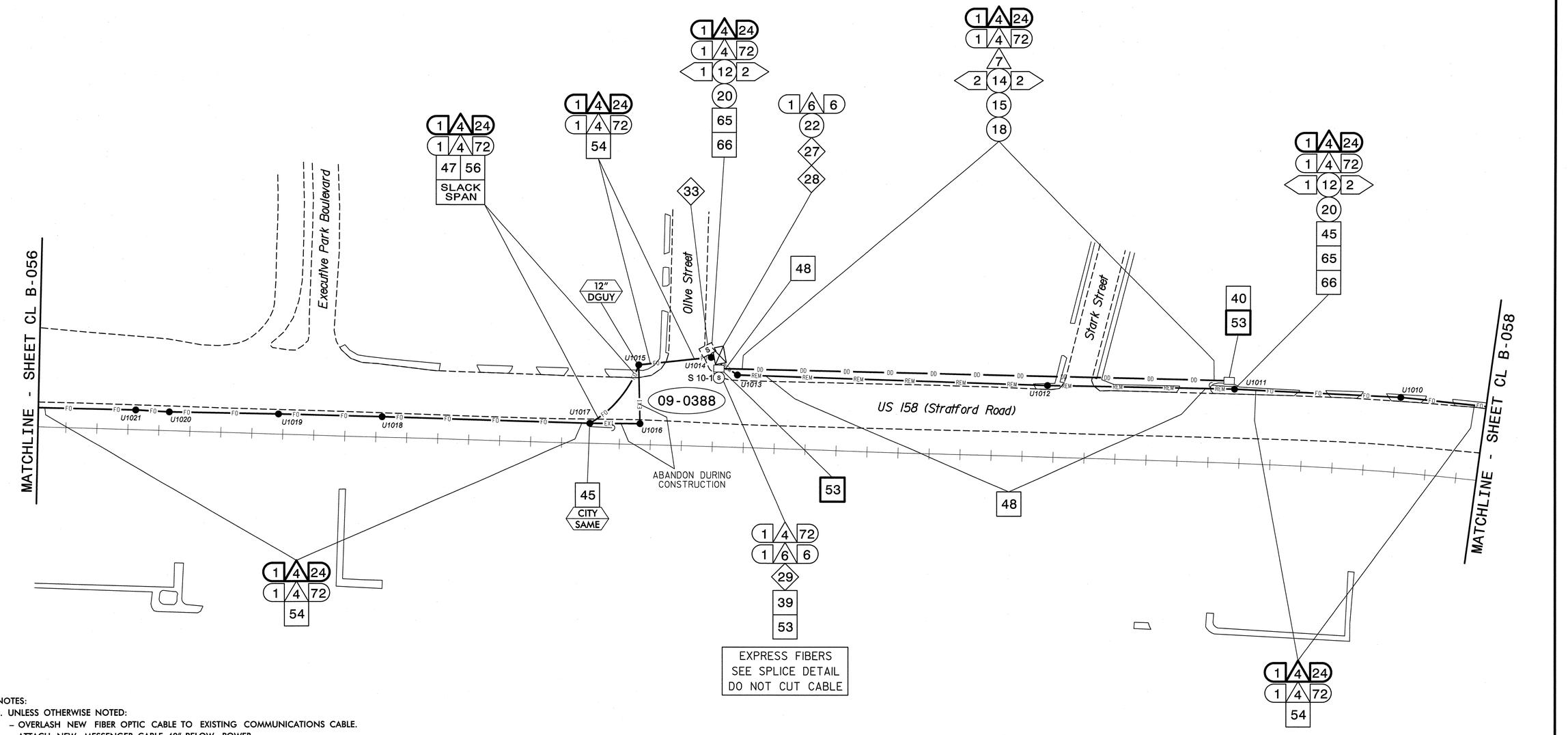

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9 INSTALL PVC CONDUIT	21 INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS	33 REMOVE EXISTING SPLICE /HUB /CCTV CABINET	45 INSTALL STANDARD GUY ASSEMBLY	57 MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB	69 REMOVE EXISTING CCTV CAMERA ASSEMBLY
10 INSTALL RIGID, GALVANIZED STEEL CONDUIT	22 INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	34 INSTALL CABINET FOUNDATION	46 INSTALL SIDEWALK GUY ASSEMBLY	58 INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB	70 NOT USED
11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	23 INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	35 REMOVE EXISTING CABINET FOUNDATION	47 INSTALL MESSENGER CABLE	59 INSTALL NEW POLE MOUNTED CCTV CABINET	71 NOT USED
12 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24 INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36 INSTALL CCTV CAMERA ASSEMBLY	48 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60 INSTALL NEW BASE MOUNTED CCTV CABINET	72 INSTALL MANAGED ETHERNET SWITCH

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YYY REFERENCE POINT DISTANCE BELOW (IN)

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NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-057.dgn

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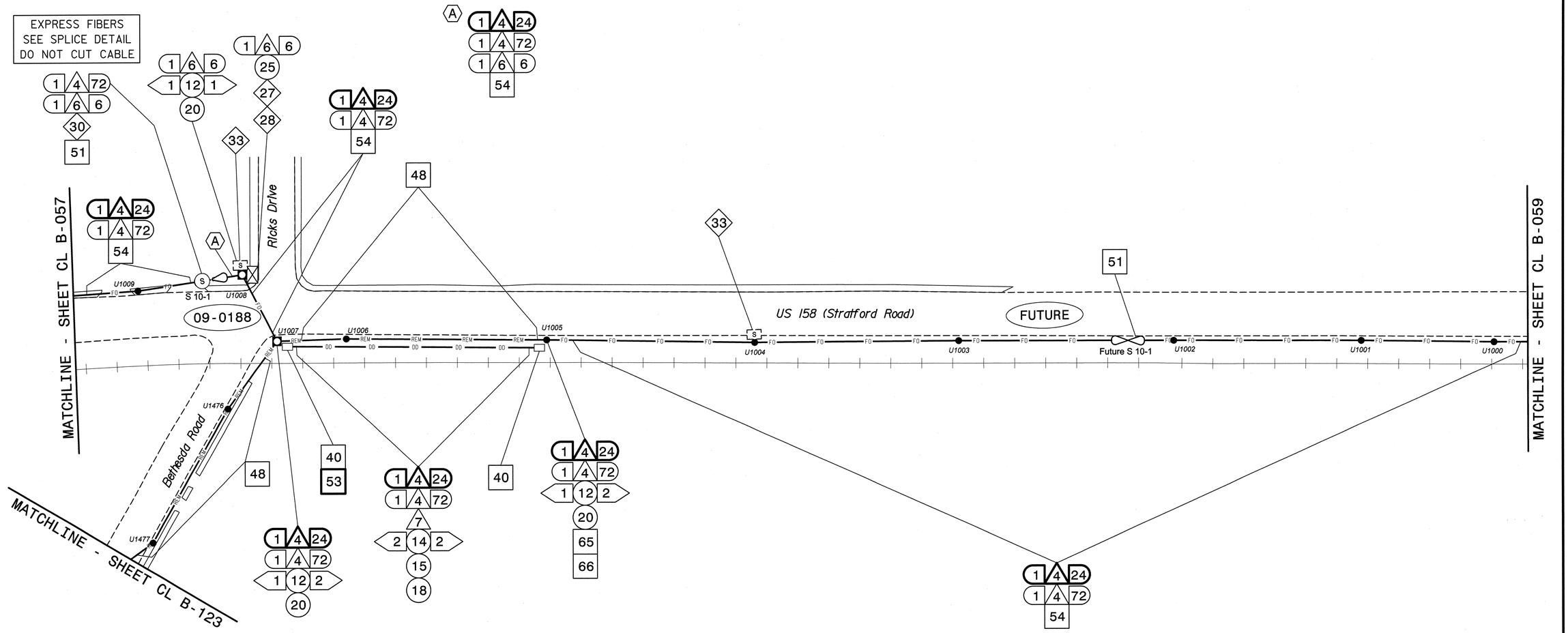
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-058



NOTES:
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BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

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2	INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14	INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26	INSTALL DIGITAL VIDEO ENCODER	38	INSTALL STANDARD SIZE JUNCTION BOX	50	INSTALL WIRELESS DSL	62	NOT USED
3	INSTALL CATEGORY 5E CABLE	15	DIRECTIONAL DRILL CONDUIT	27	INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39	INSTALL SPECIAL-SIZED JUNCTION BOX	51	INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63	INSTALL 900 MHZ ETHERNET RADIO
4	INSTALL SMFO CABLE	16	BORE AND JACK CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	40	INSTALL OVERSIZED JUNCTION BOX	52	INSTALL DELINEATOR MARKER	64	INTERCEPT AND REROUTE EXISTING CONDUITS
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6	INSTALL FIBER-OPTIC DROP CABLE	18	INSTALL CABLE(S) IN NEW CONDUIT	30	INSTALL AERIAL SPLICE ENCLOSURE	42	INSTALL WOOD POLE	54	LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66	BOND RISER TO POLE GROUND
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 | Forsyth County | Winston-Salem
PLAN DATE: March 2013 | REVIEWED BY: MB Toth
PREPARED BY: JAW/AJD | REVIEWED BY: LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE
DATE 3-27-13
CADD Filename: CL B-058.dgn

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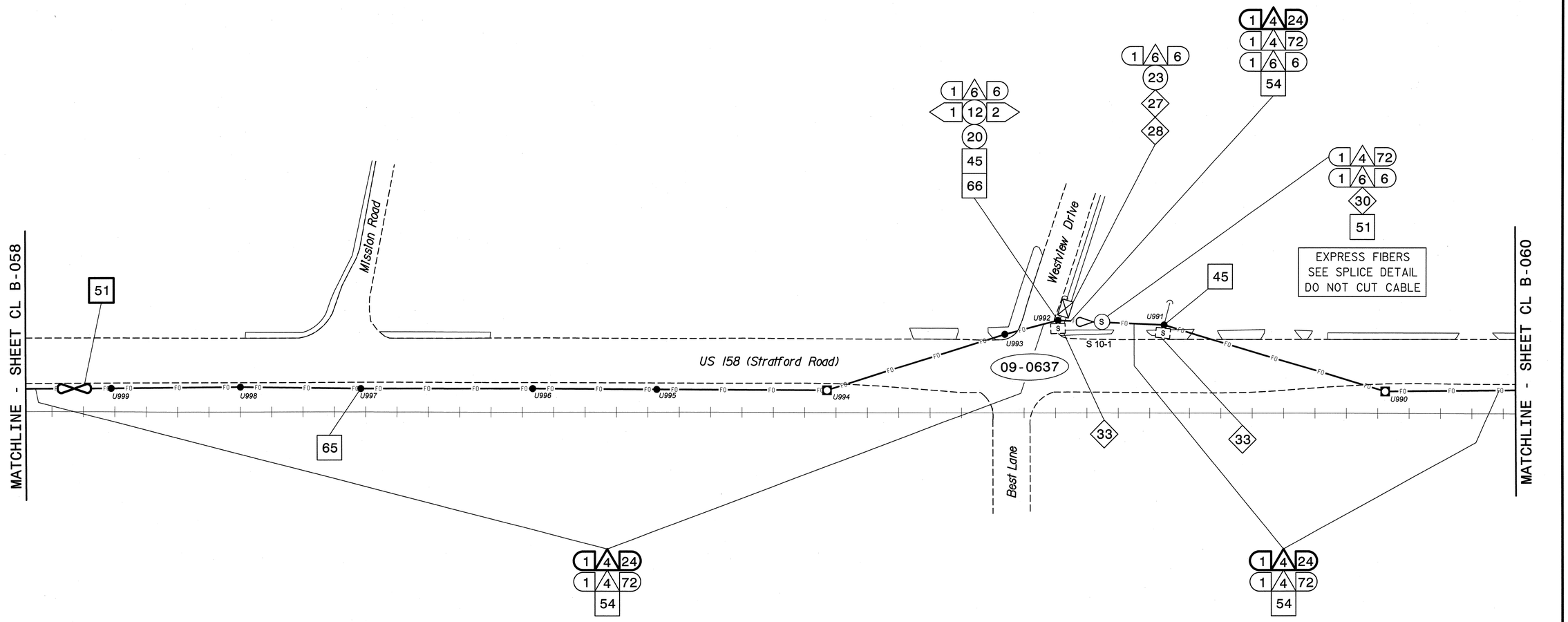
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-059



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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, State of North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-059.dgn

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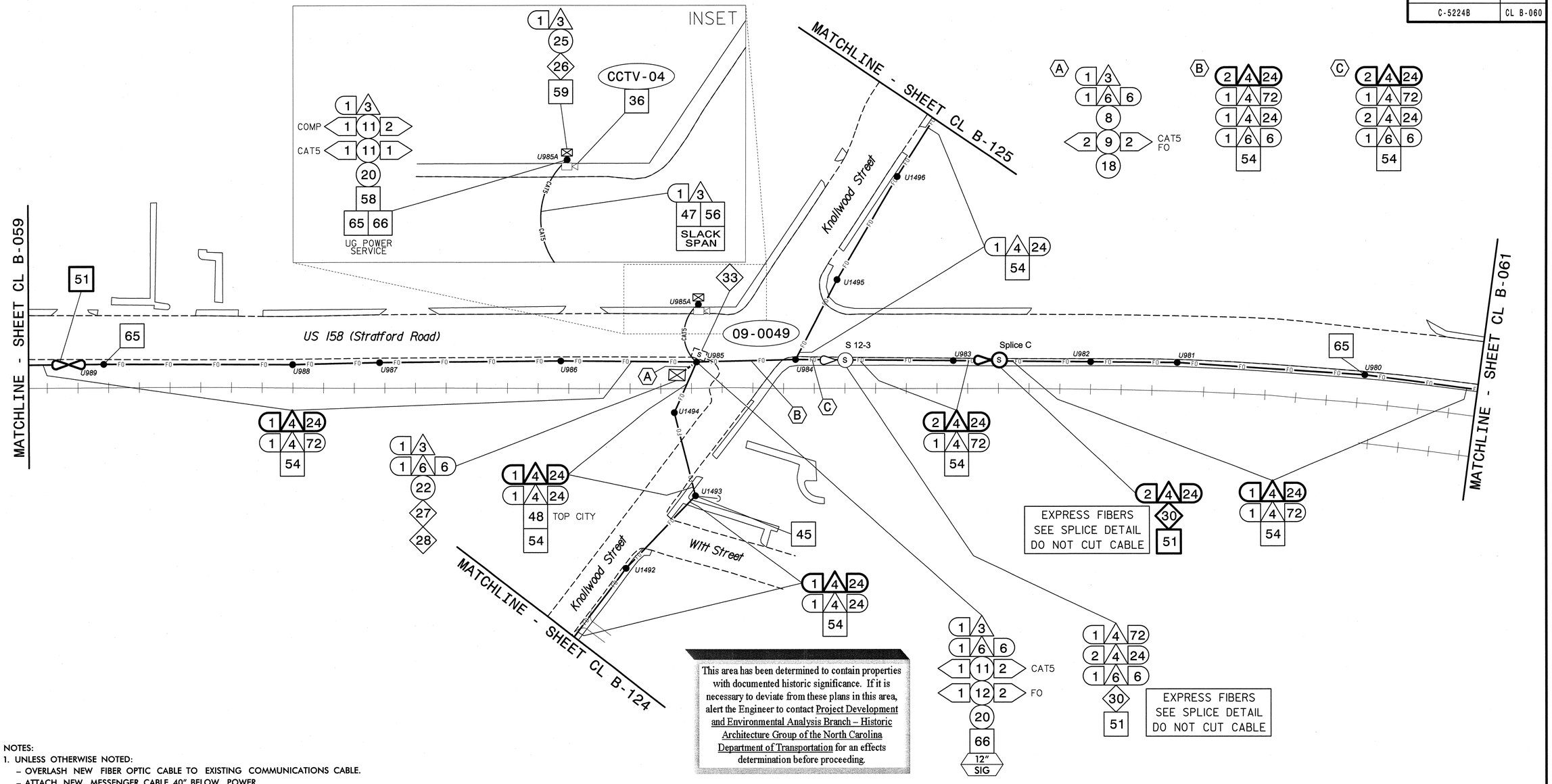
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-060



This area has been determined to contain properties with documented historic significance. If it is necessary to deviate from these plans in this area, alert the Engineer to contact Project Development and Environmental Analysis Branch – Historic Architecture Group of the North Carolina Department of Transportation for an effects determination before proceeding.

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Winston-Salem Signal System Cable Layout Plans Phase B

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PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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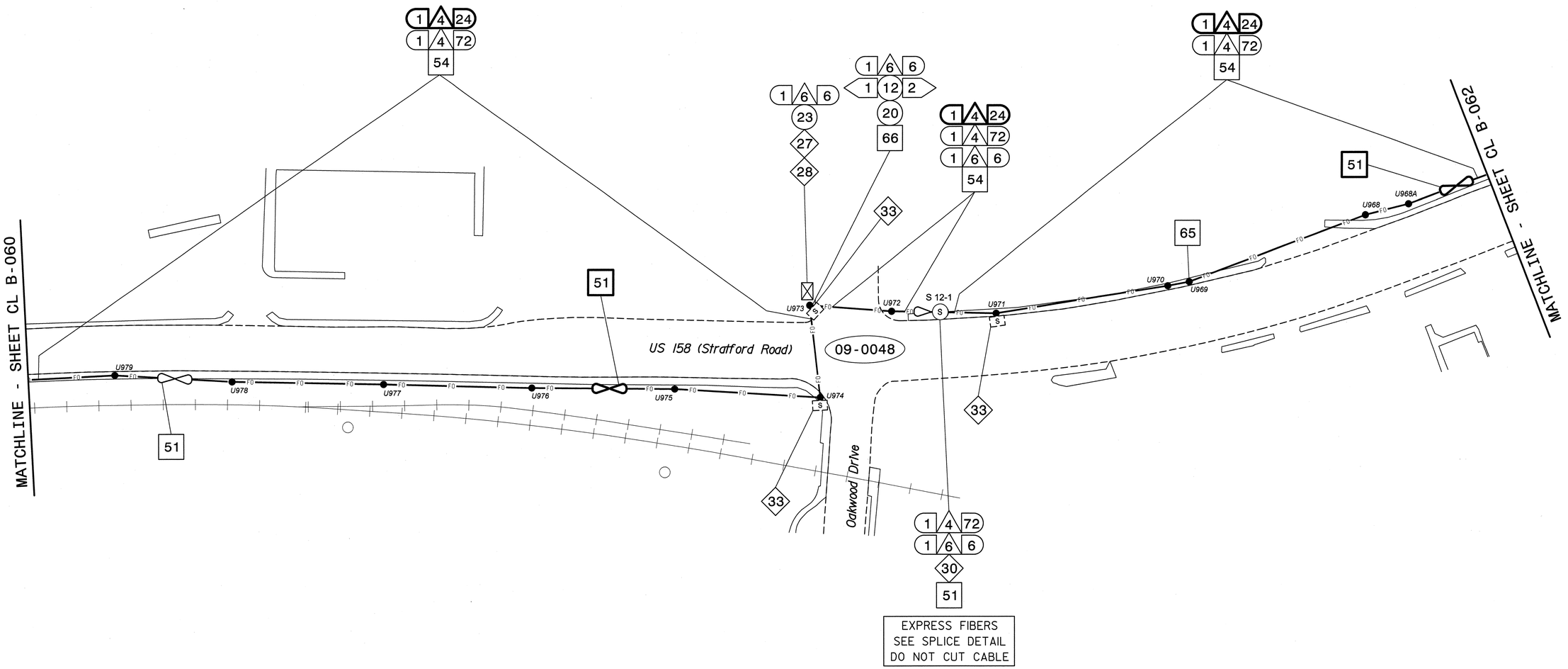

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10 INSTALL RIGID, GALVANIZED STEEL CONDUIT	22 INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	34 INSTALL CABINET FOUNDATION	46 INSTALL SIDEWALK GUY ASSEMBLY	58 INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB	70 NOT USED
11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	23 INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	35 REMOVE EXISTING CABINET FOUNDATION	47 INSTALL MESSENGER CABLE	59 INSTALL NEW POLE MOUNTED CCTV CABINET	71 NOT USED
12 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24 INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36 INSTALL CCTV CAMERA ASSEMBLY	48 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60 INSTALL NEW BASE MOUNTED CCTV CABINET	72 INSTALL MANAGED ETHERNET SWITCH

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DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-061.dgn

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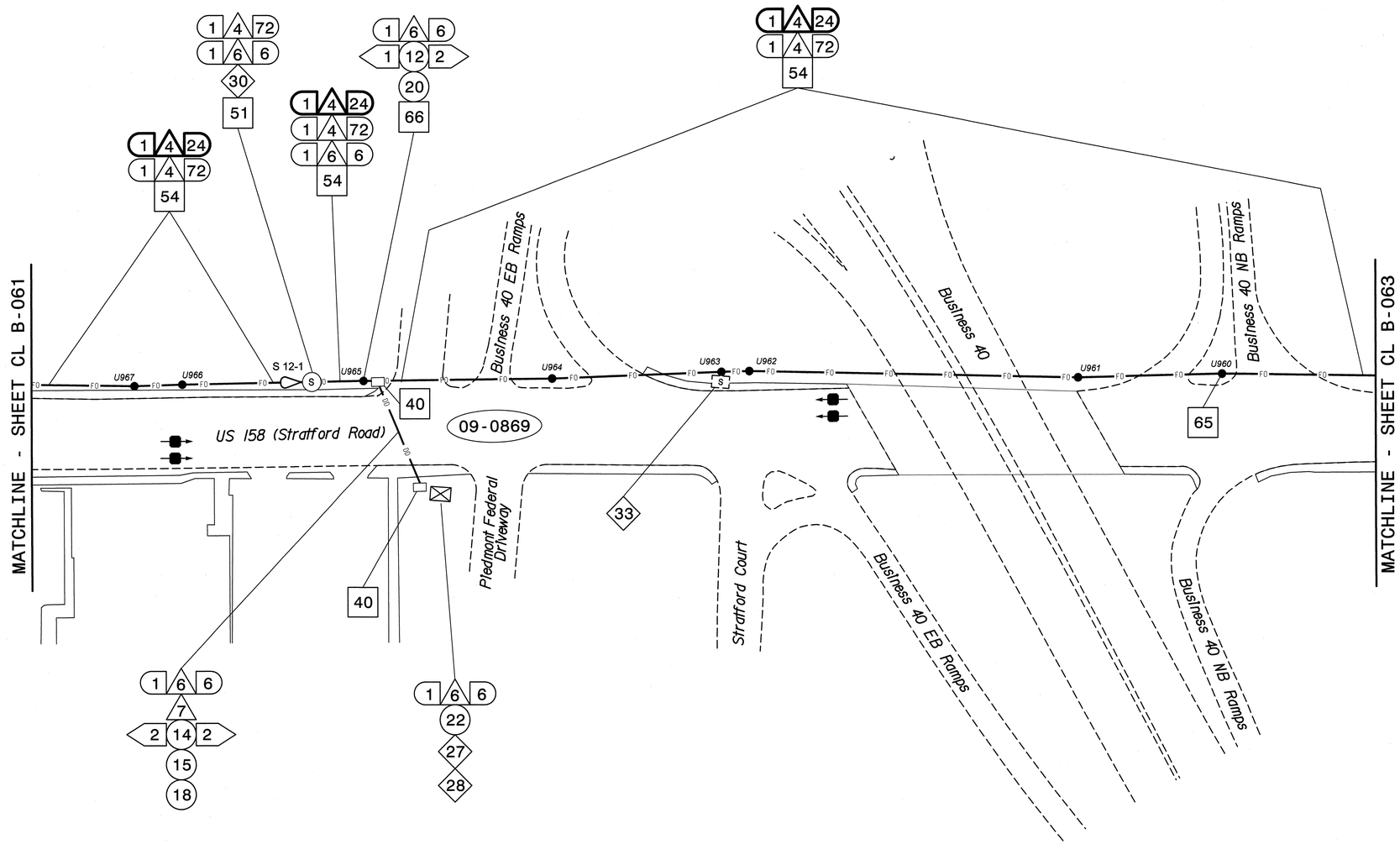
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-062



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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

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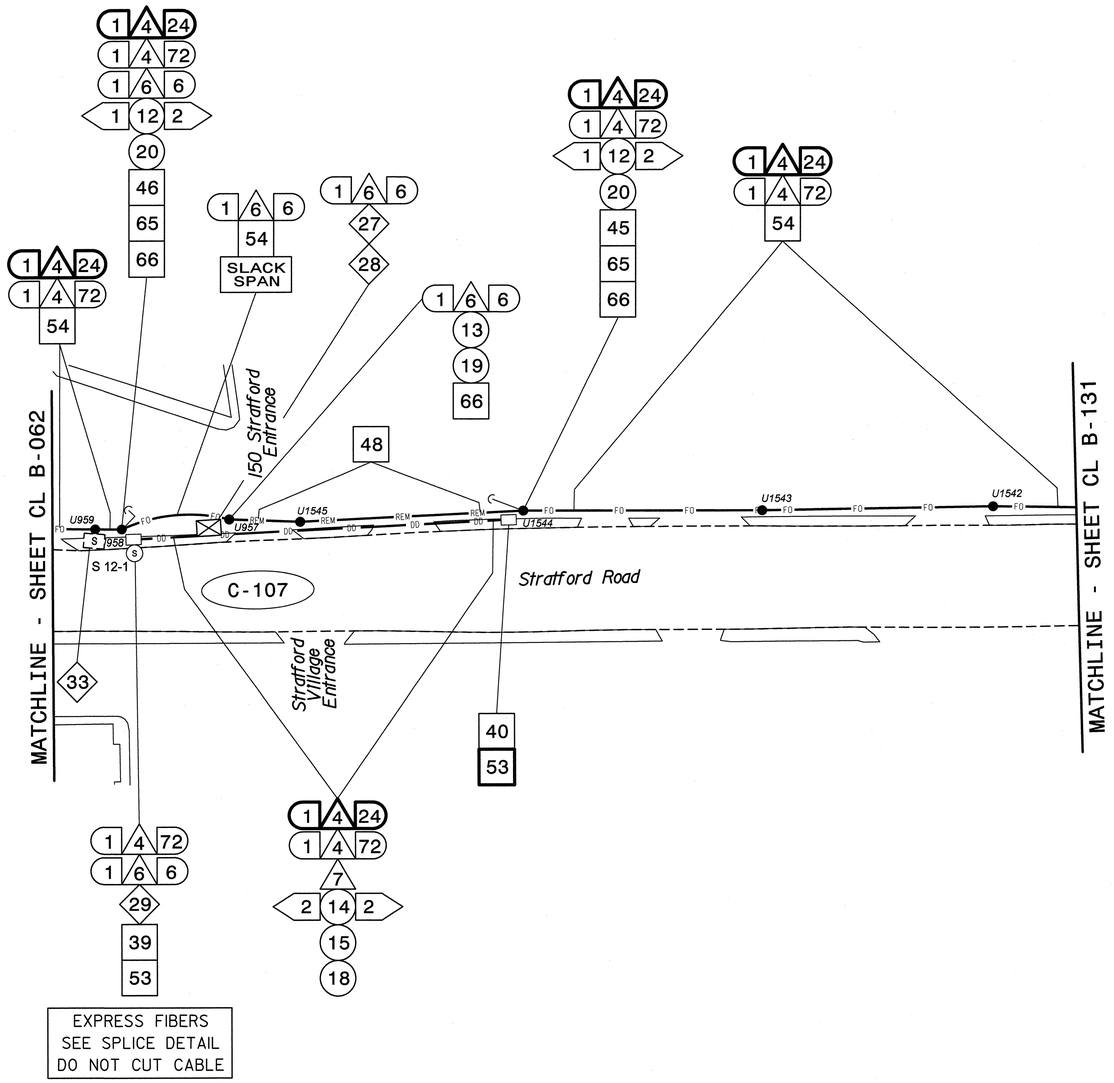

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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M Moon 3-22-13 DATE

CADD Filename: CL B-063.dgn

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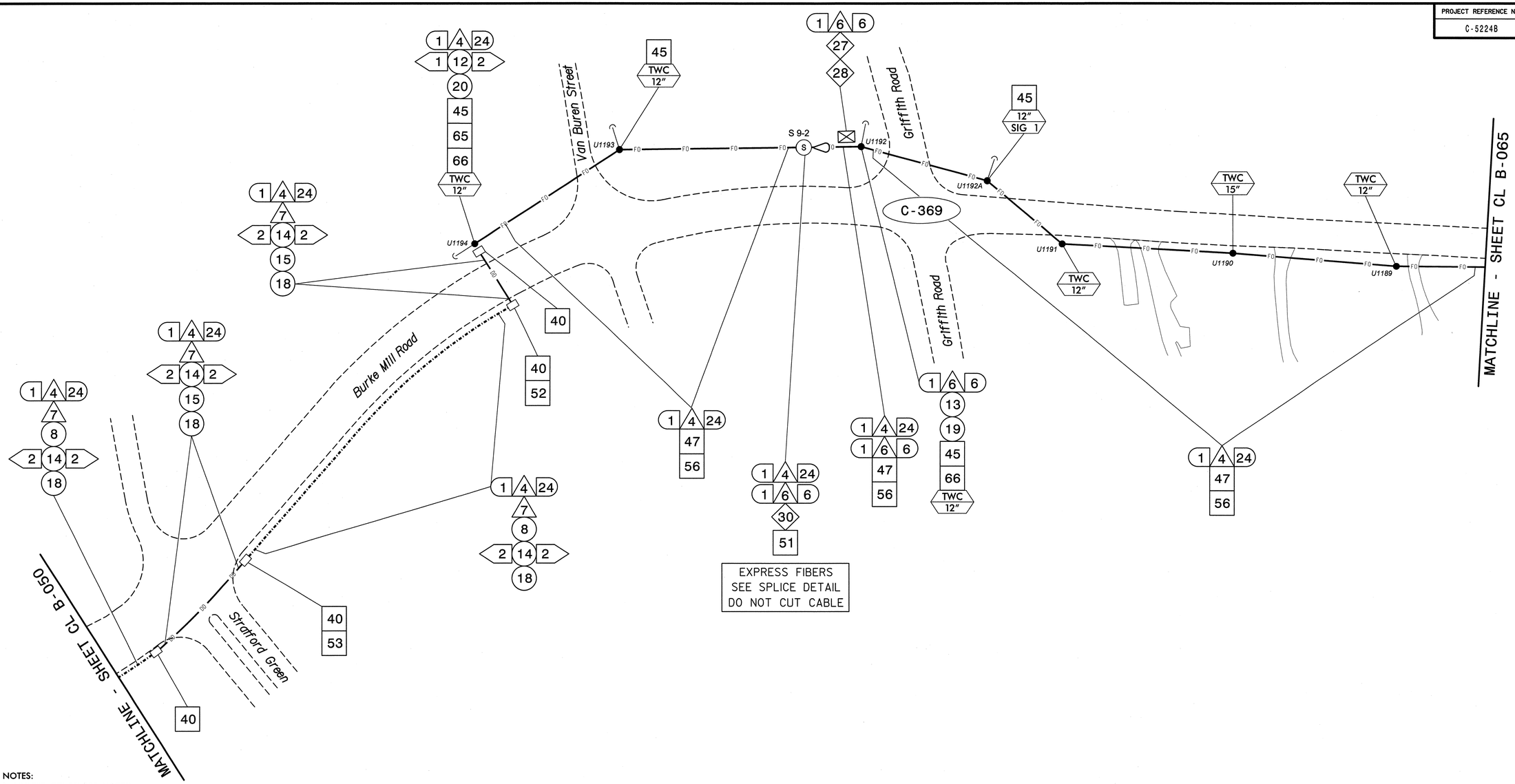
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-064



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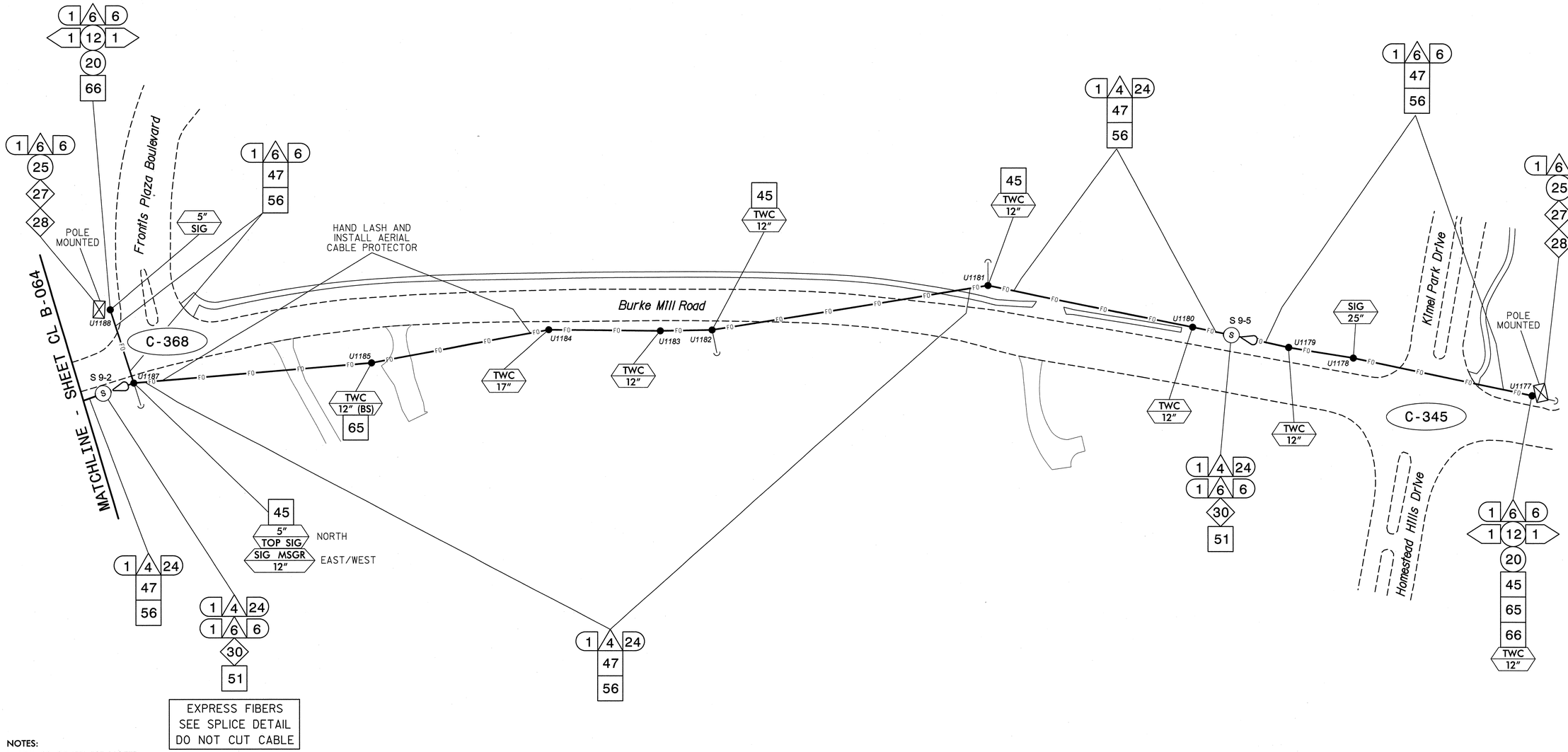

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Prepared for the Offices of:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-065.dgn

13-MAR-2013 11:25
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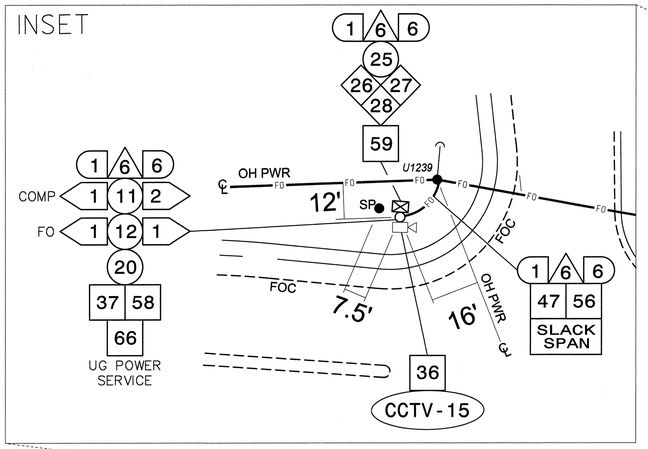
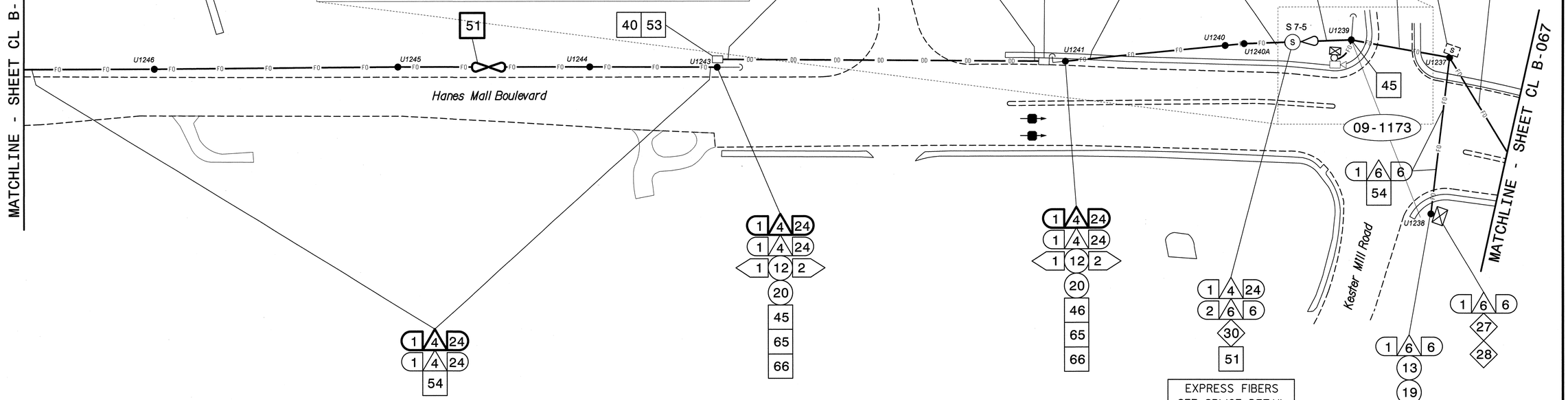
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-066





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Prepared for the Offices of:
Transportation Mobility and Data Planning
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

SIGNATURE Lisa M. Moon DATE 3-22-13

CADD Filename: CL B-066.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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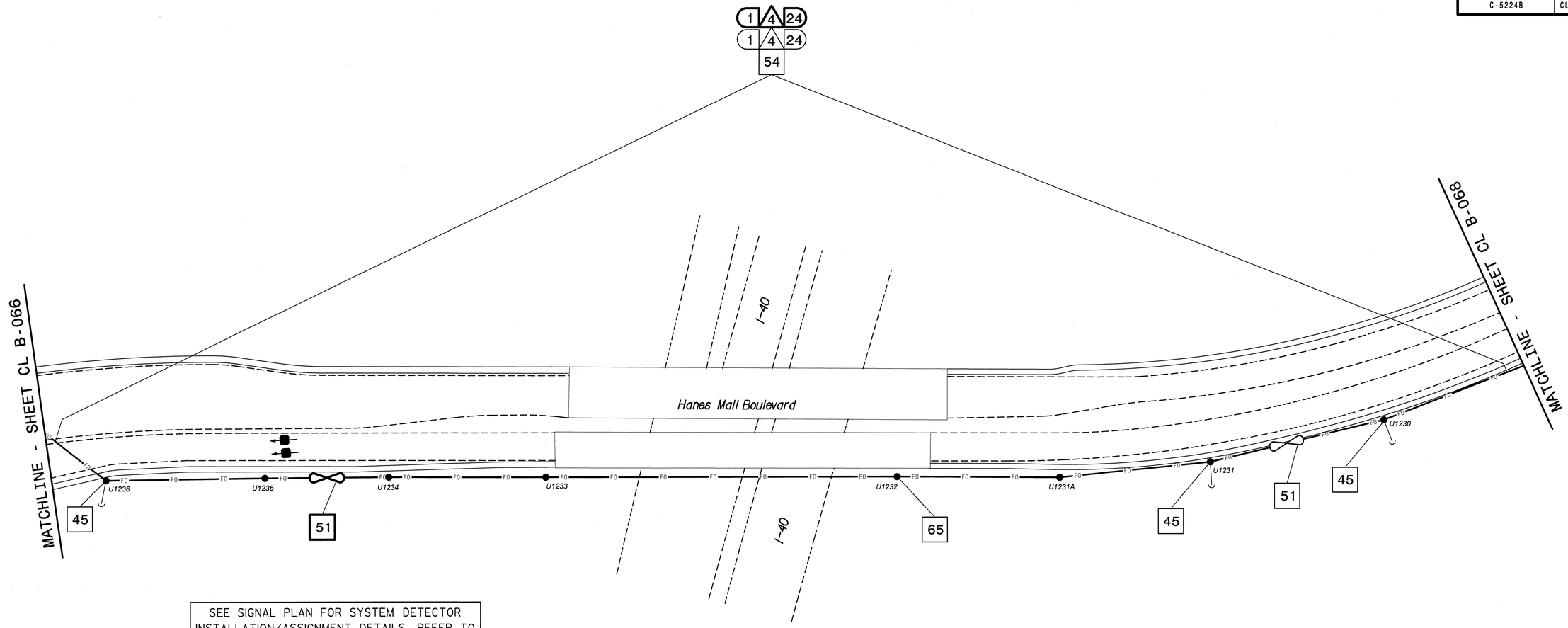

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE

CADD Filename: CL B-067.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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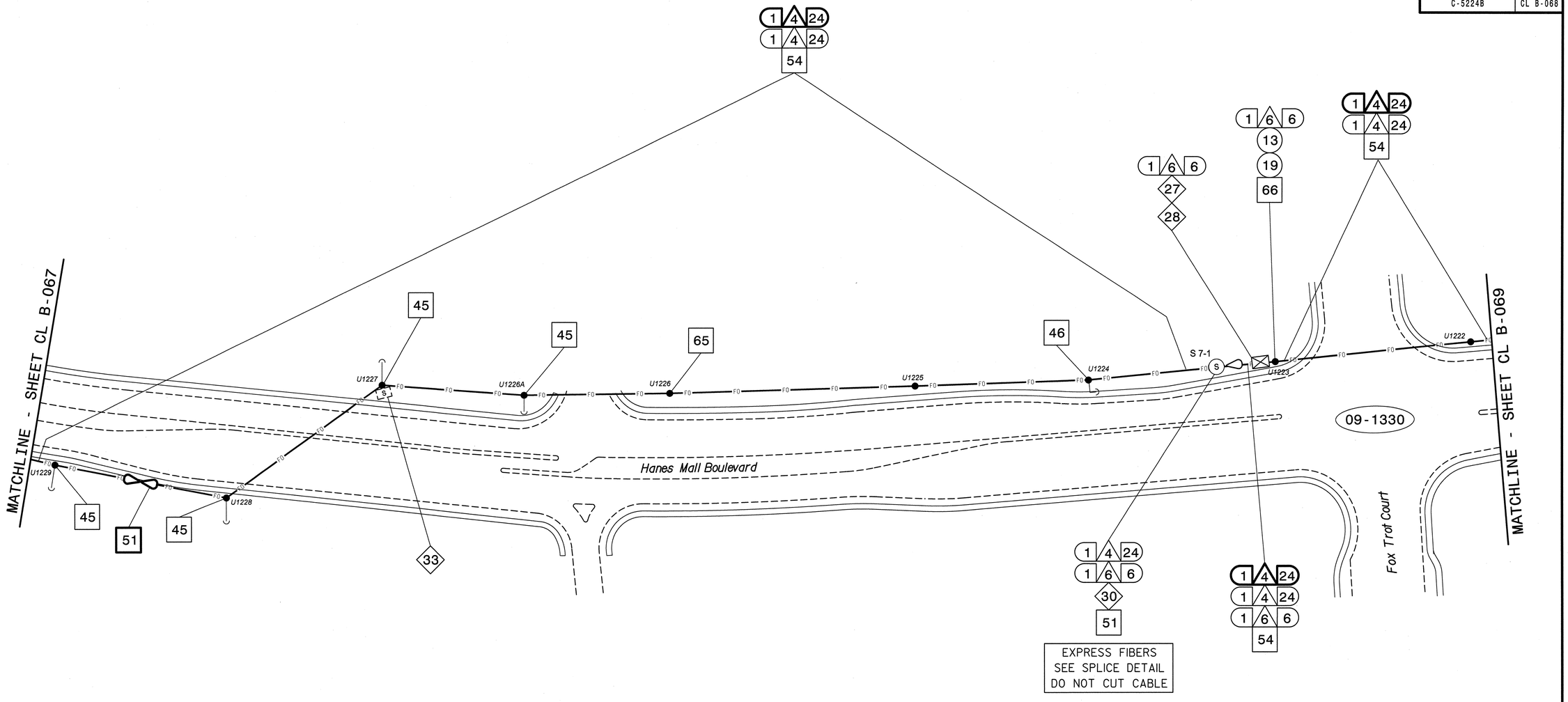

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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

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REVISIONS	INIT.	DATE

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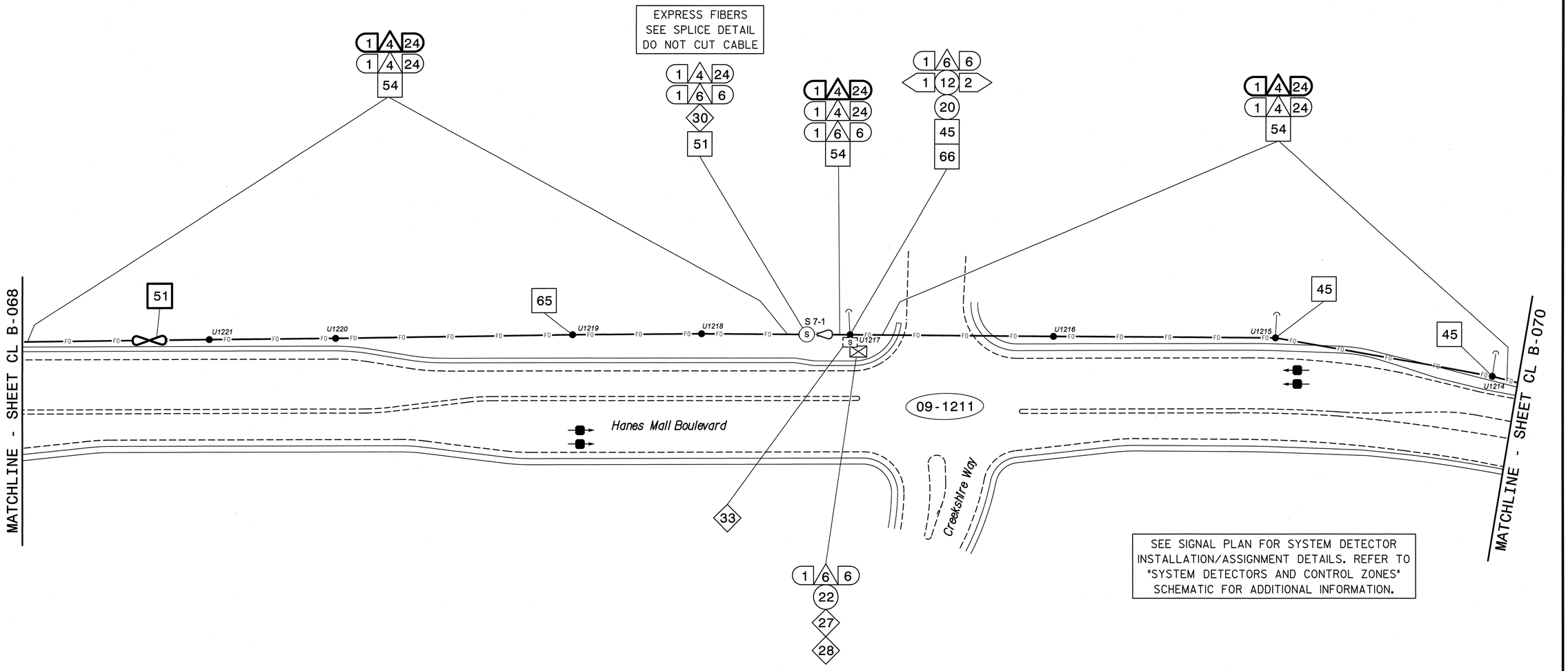

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XXX DISTANCE ABOVE (IN) REFERENCE POINT
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NUMBER OF RISER(S)/ CONDUIT(S) — DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-069.dgn

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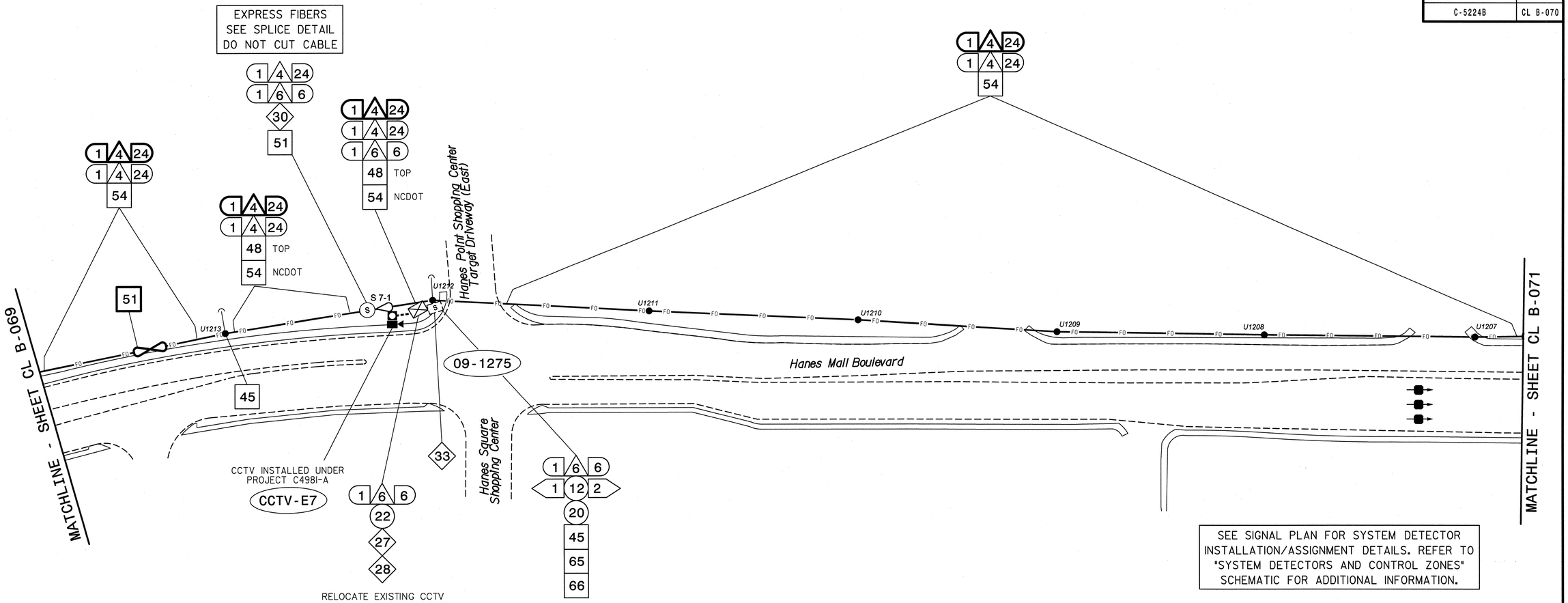
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-070



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32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
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750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON

SIGNATURE DATE 3.22.13

CADD Filename: CL B-070.dgn

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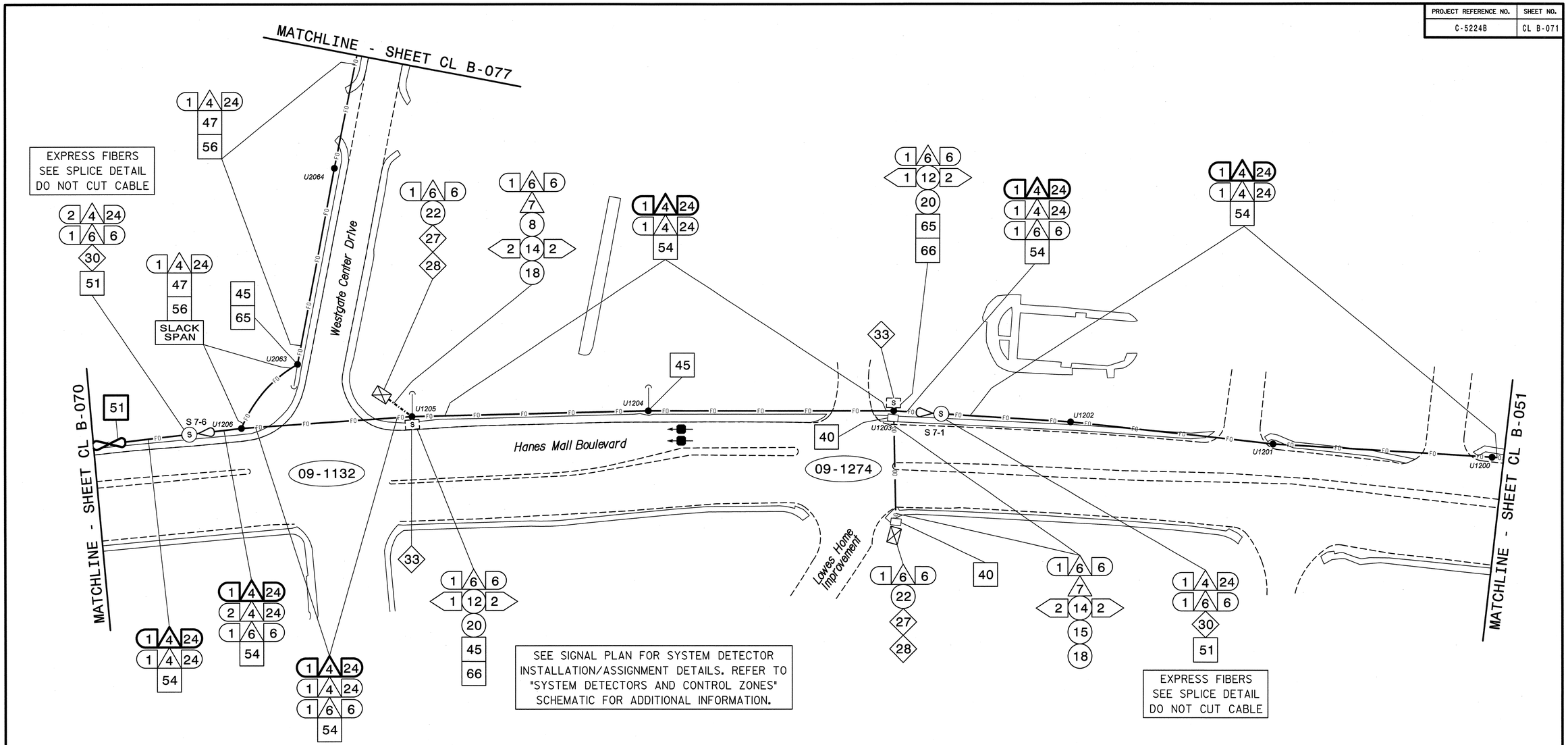
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-071



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Prepared for the Offices of:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION — Integrated Mobility and Safe Mobility — Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-071.dgn

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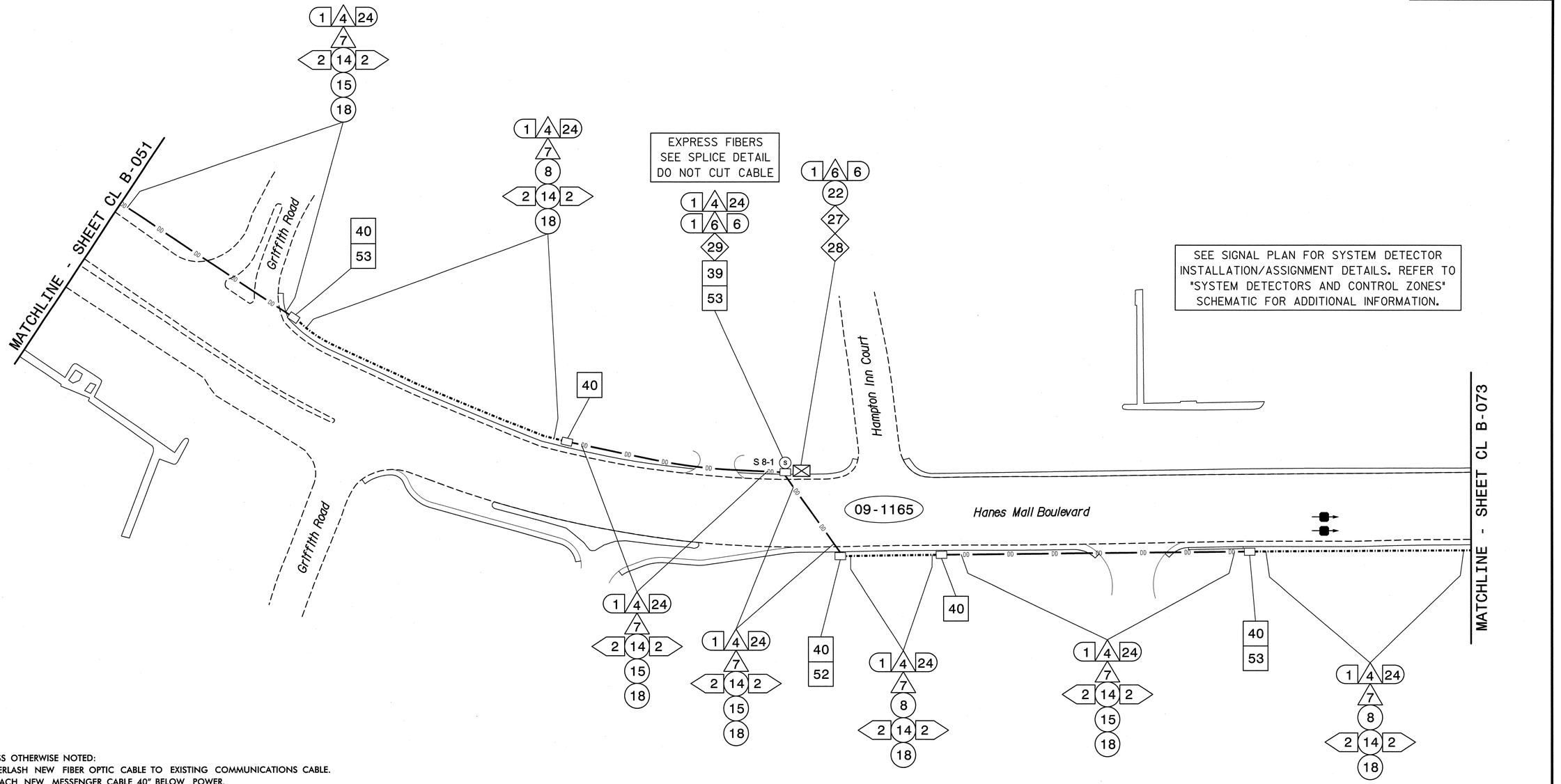
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-072



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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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SCALE 0 50 1"=50'

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PROJECT REFERENCE NO.	SHEET NO.
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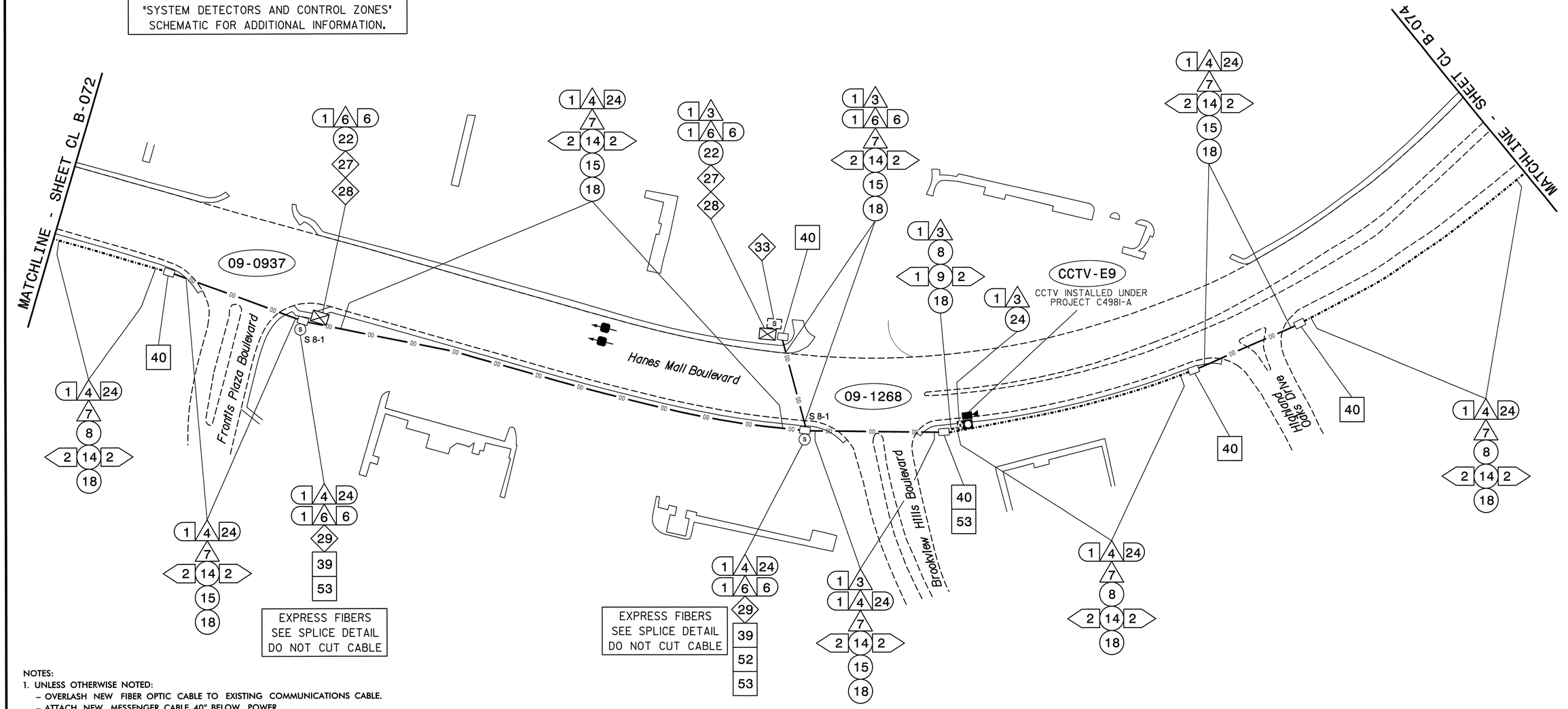
SEE SIGNAL PLAN FOR SYSTEM DETECTOR INSTALLATION/ASSIGNMENT DETAILS. REFER TO "SYSTEM DETECTORS AND CONTROL ZONES" SCHEMATIC FOR ADDITIONAL INFORMATION.



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12	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	48	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60	INSTALL NEW BASE MOUNTED CCTV CABINET	72	INSTALL MANAGED ETHERNET SWITCH

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ATKINS
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Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M Moon 3-22-13 DATE

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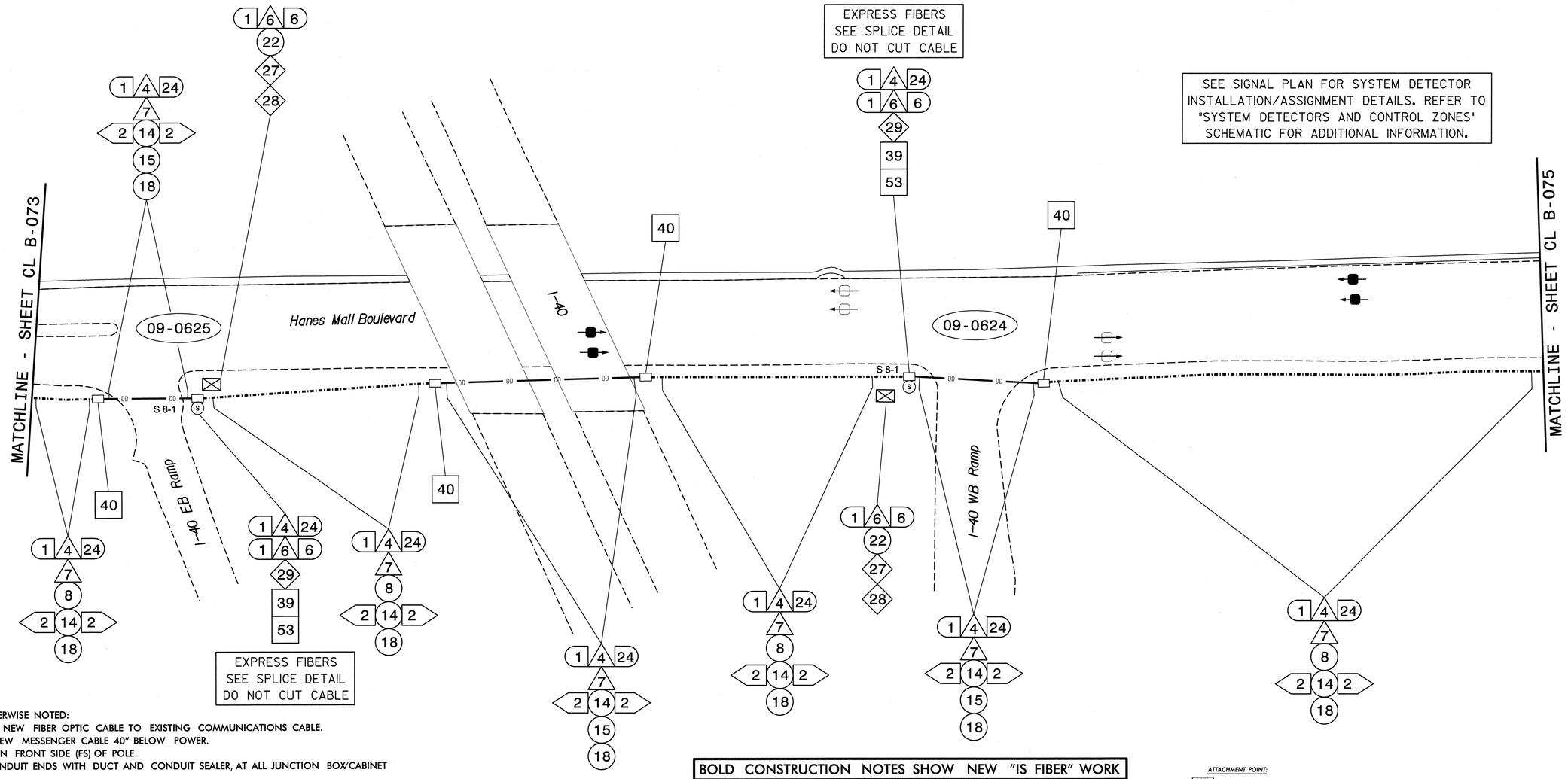
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-074



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Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

SIGNATURE Lisa M. Moon DATE 3-22-13

CADD Filename: CL B-074.dgn

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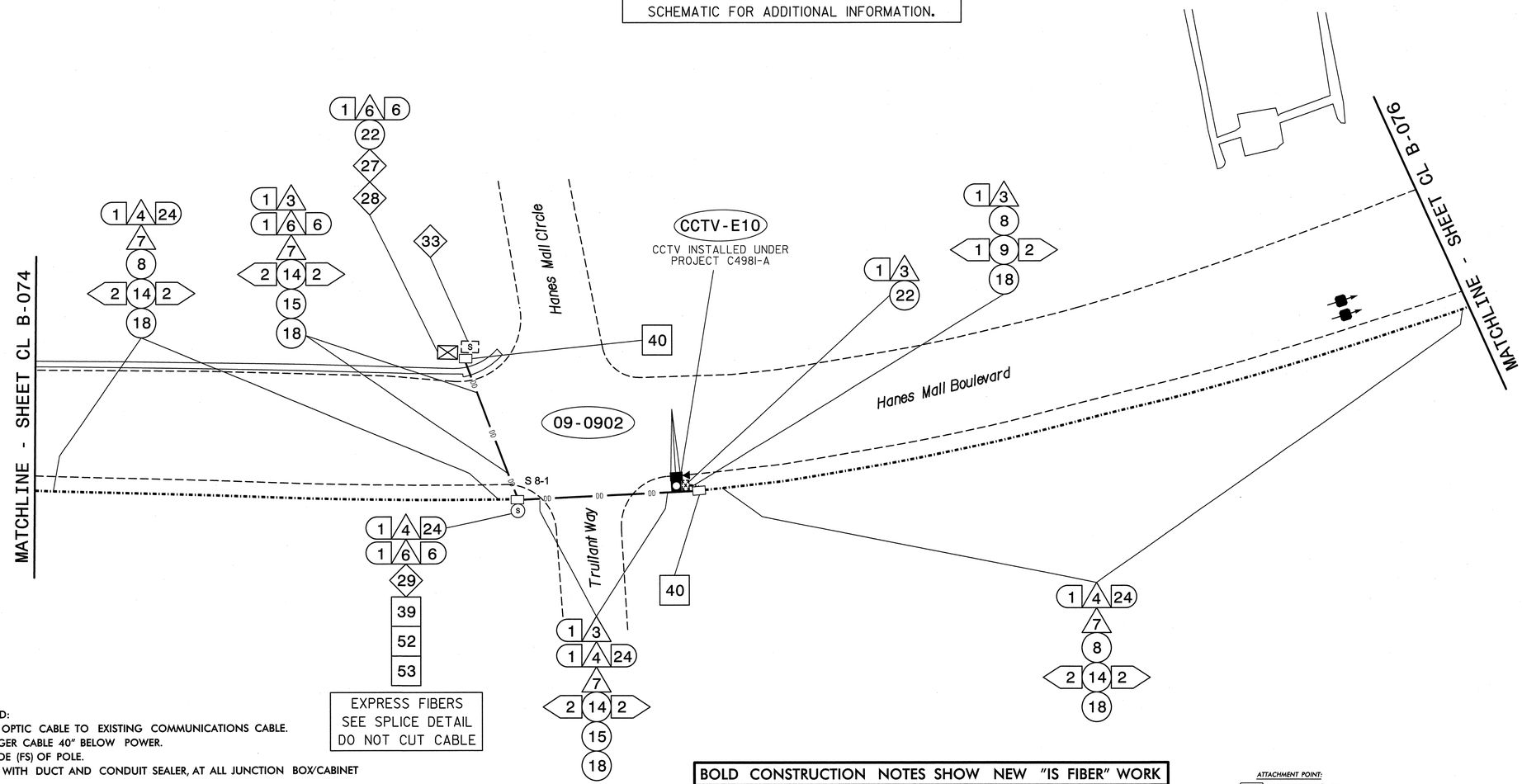
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-075

SEE SIGNAL PLAN FOR SYSTEM DETECTOR INSTALLATION/ASSIGNMENT DETAILS. REFER TO "SYSTEM DETECTORS AND CONTROL ZONES" SCHEMATIC FOR ADDITIONAL INFORMATION.



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Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE 3-22-13 DATE
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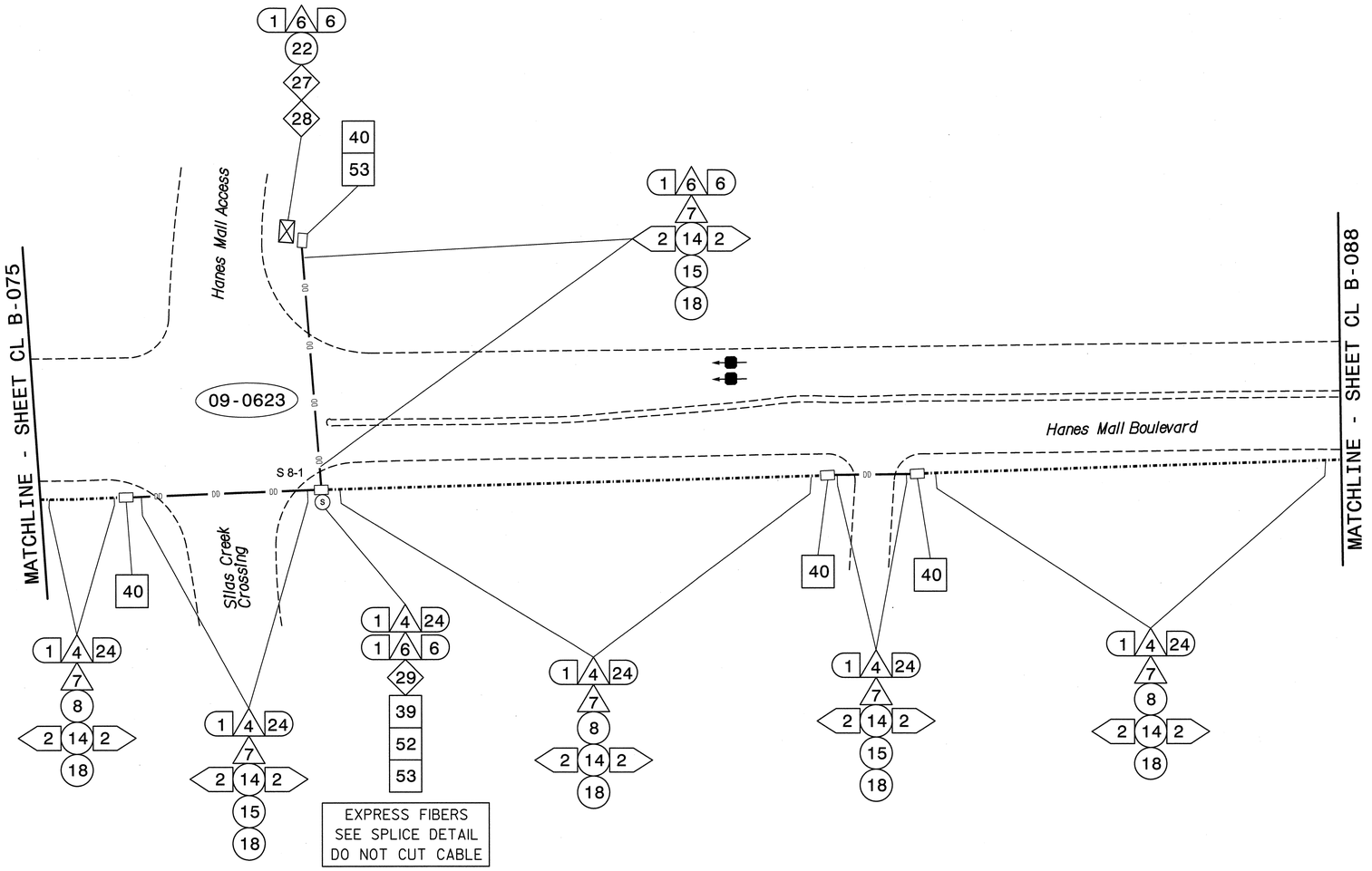
25651

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-076



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PROJECT REFERENCE NO.	SHEET NO.
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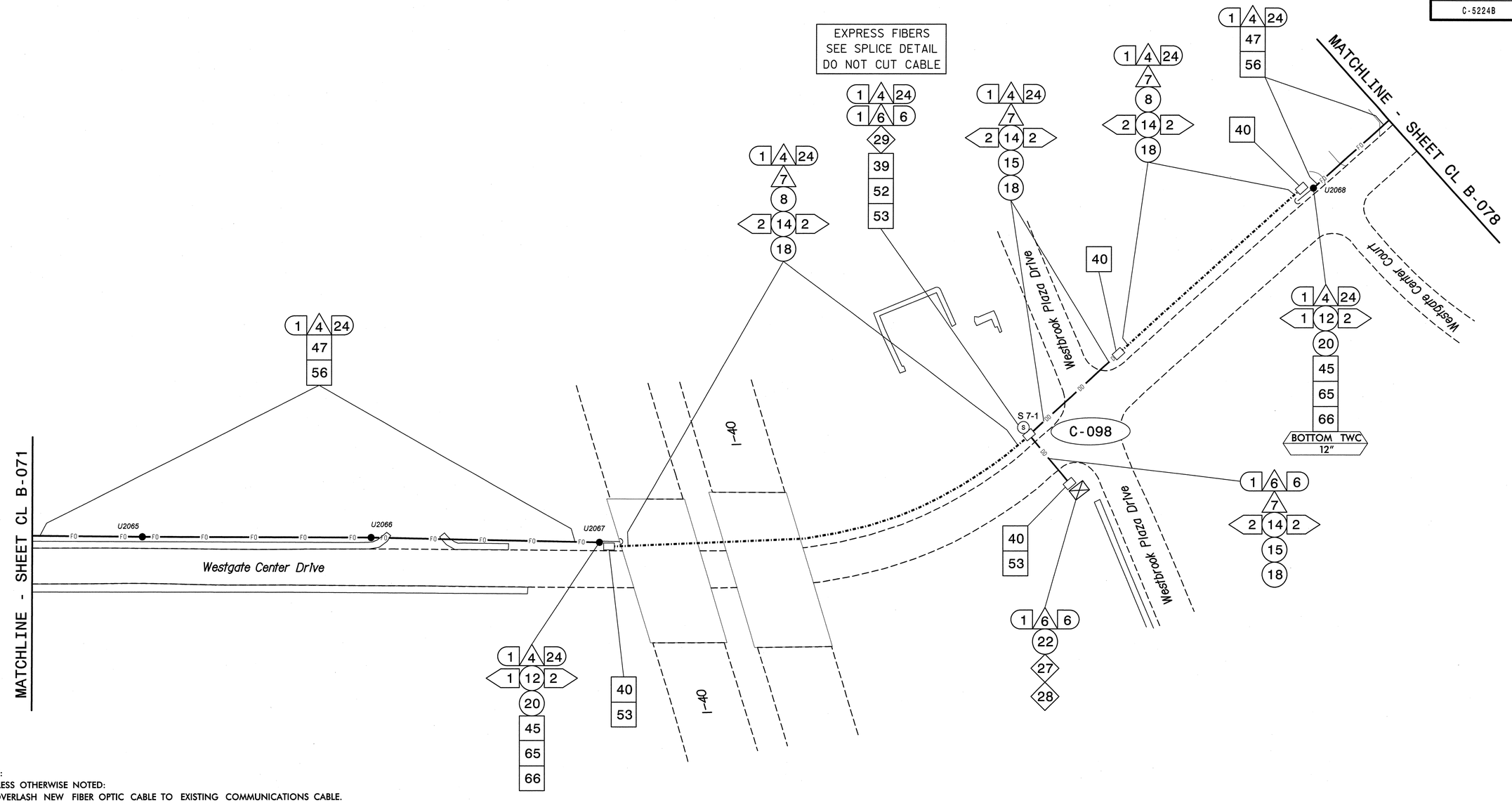

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CONSTRUCTION NOTE SYMBOLOGY KEY
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NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
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(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
North Carolina Department of Transportation — Mobility and Safety Division — Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE
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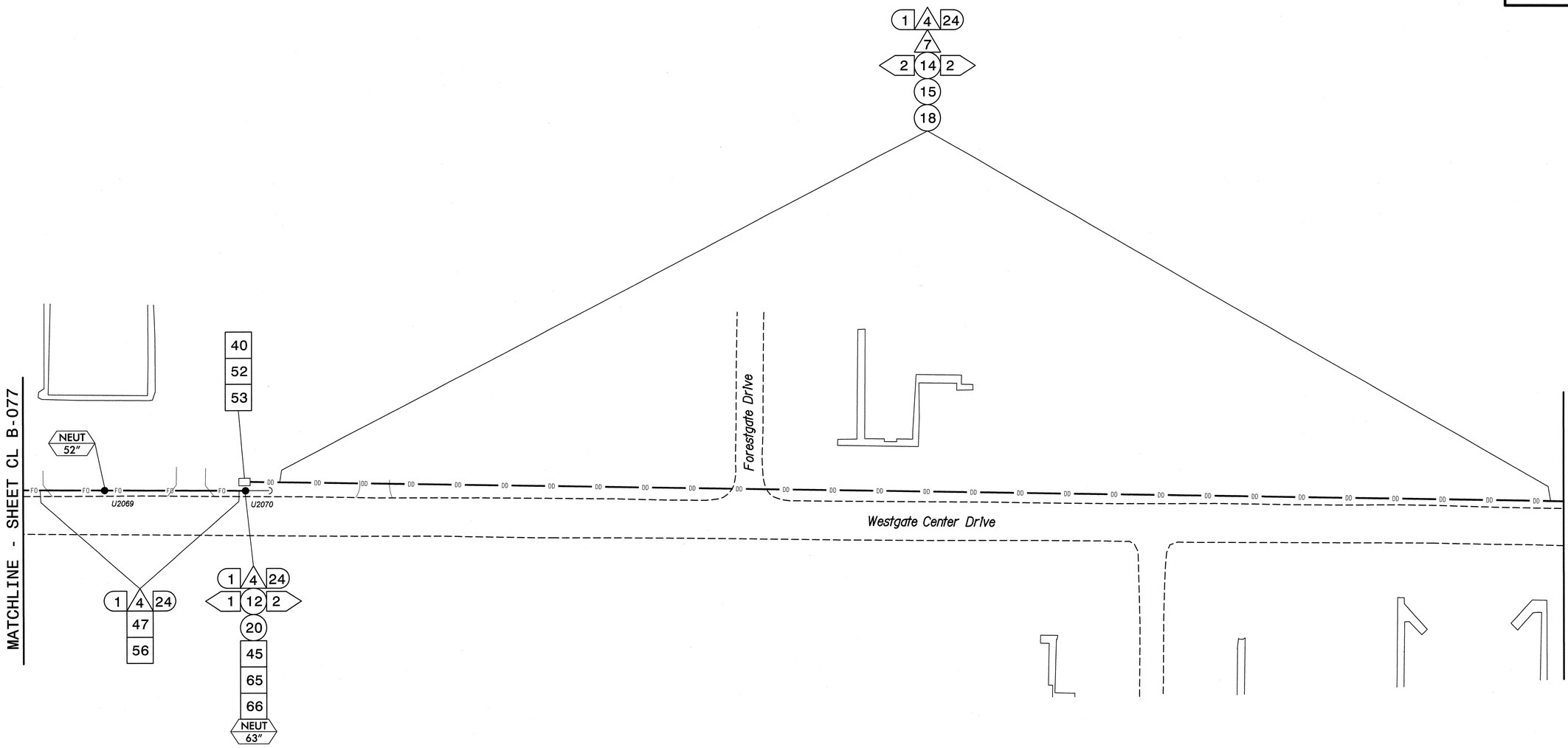
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-078



NOTES:
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2. SEAL ALL CONDUIT ENDS WITH DUCT AND CONDUIT SEALER, AT ALL JUNCTION BOX/CABINET ENTRANCES.

BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1	INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	13	INSTALL HEAT SHRINK TUBING RETROFIT KIT	25	INSTALL NEW RISER INTO POLE MOUNTED CABINET	37	INSTALL CCTV WOOD POLE	49	REMOVE EXISTING COMMUNICATIONS CABLE	61	INSTALL UNI-DIRECTIONAL ANTENNA
2	INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14	INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26	INSTALL DIGITAL VIDEO ENCODER	38	INSTALL STANDARD SIZE JUNCTION BOX	50	INSTALL WIRELESS DSL	62	NOT USED
3	INSTALL CATEGORY 5E CABLE	15	DIRECTIONAL DRILL CONDUIT	27	INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39	INSTALL SPECIAL-SIZED JUNCTION BOX	51	INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63	INSTALL 900 MHZ ETHERNET RADIO
4	INSTALL SMFO CABLE	16	BORE AND JACK CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	40	INSTALL OVERSIZED JUNCTION BOX	52	INSTALL DELINEATOR MARKER	64	INTERCEPT AND REROUTE EXISTING CONDUITS
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6	INSTALL FIBER-OPTIC DROP CABLE	18	INSTALL CABLE(S) IN NEW CONDUIT	30	INSTALL AERIAL SPLICE ENCLOSURE	42	INSTALL WOOD POLE	54	LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66	BOND RISER TO POLE GROUND
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Cable Layout Plans
Phase B

Division 09 | Forsyth County | Winston-Salem

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

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PROJECT REFERENCE NO.	SHEET NO.
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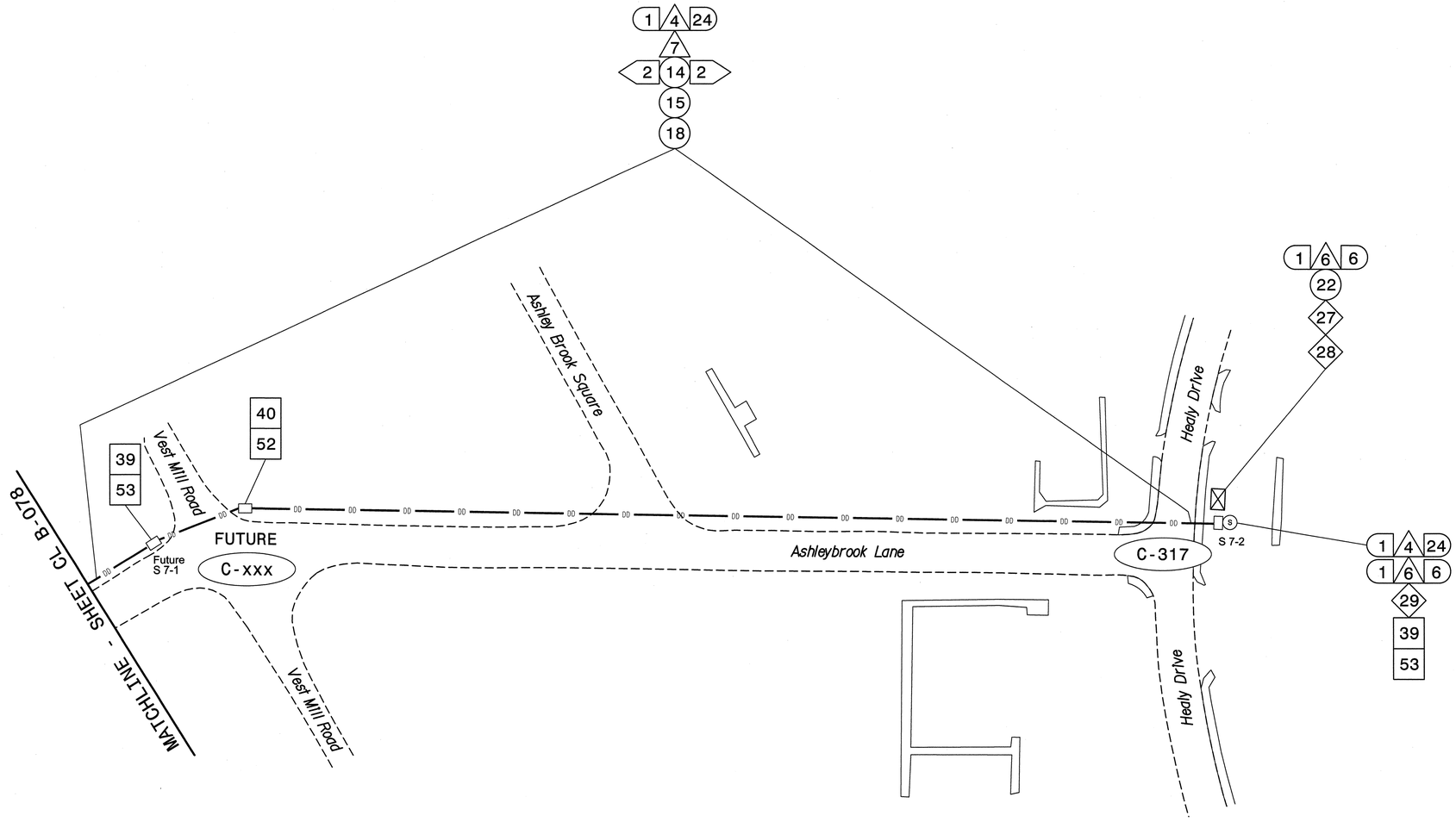

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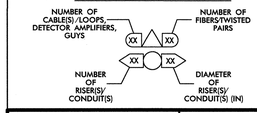

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Lisa M. Moon 3-22-13
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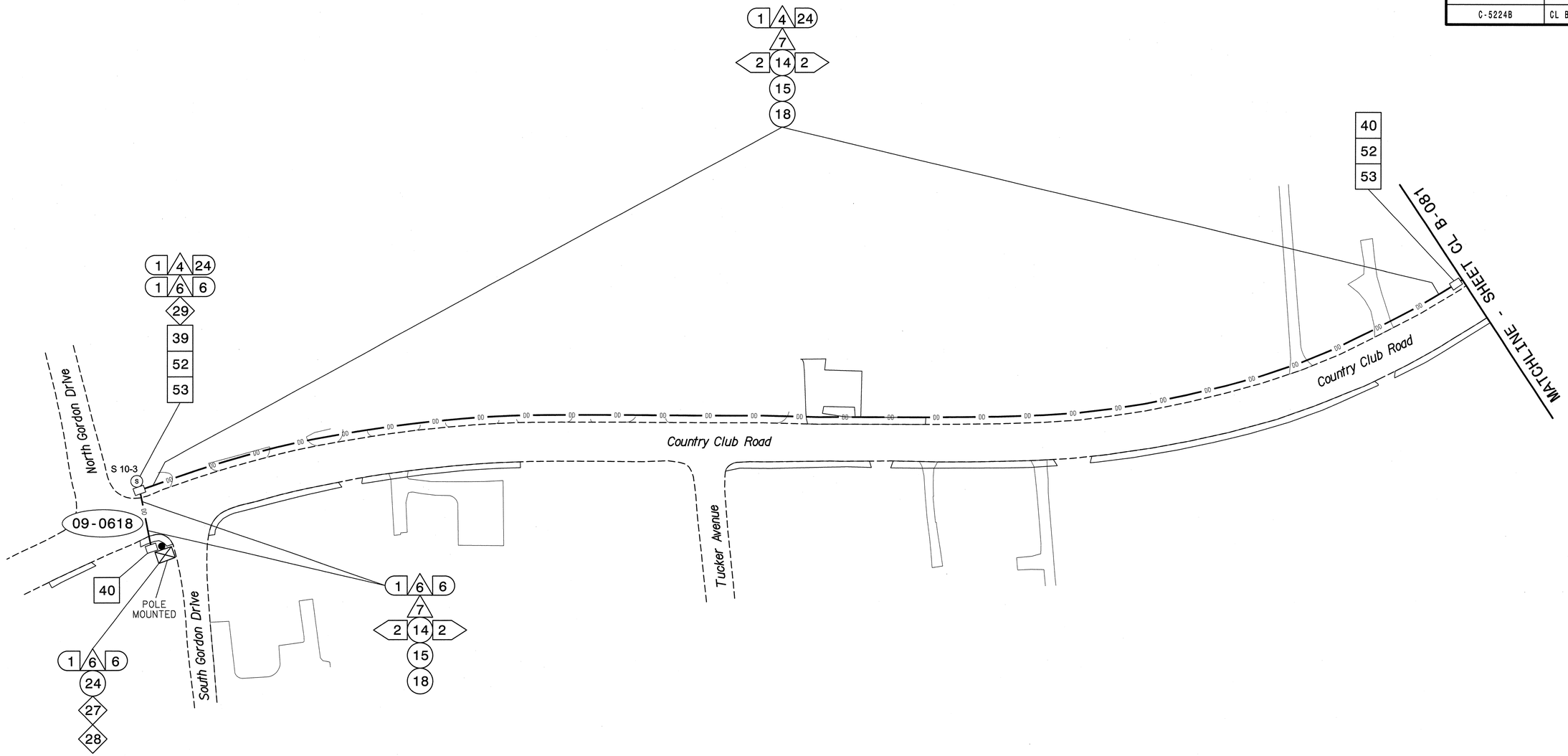

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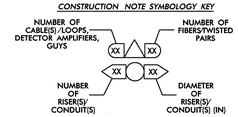

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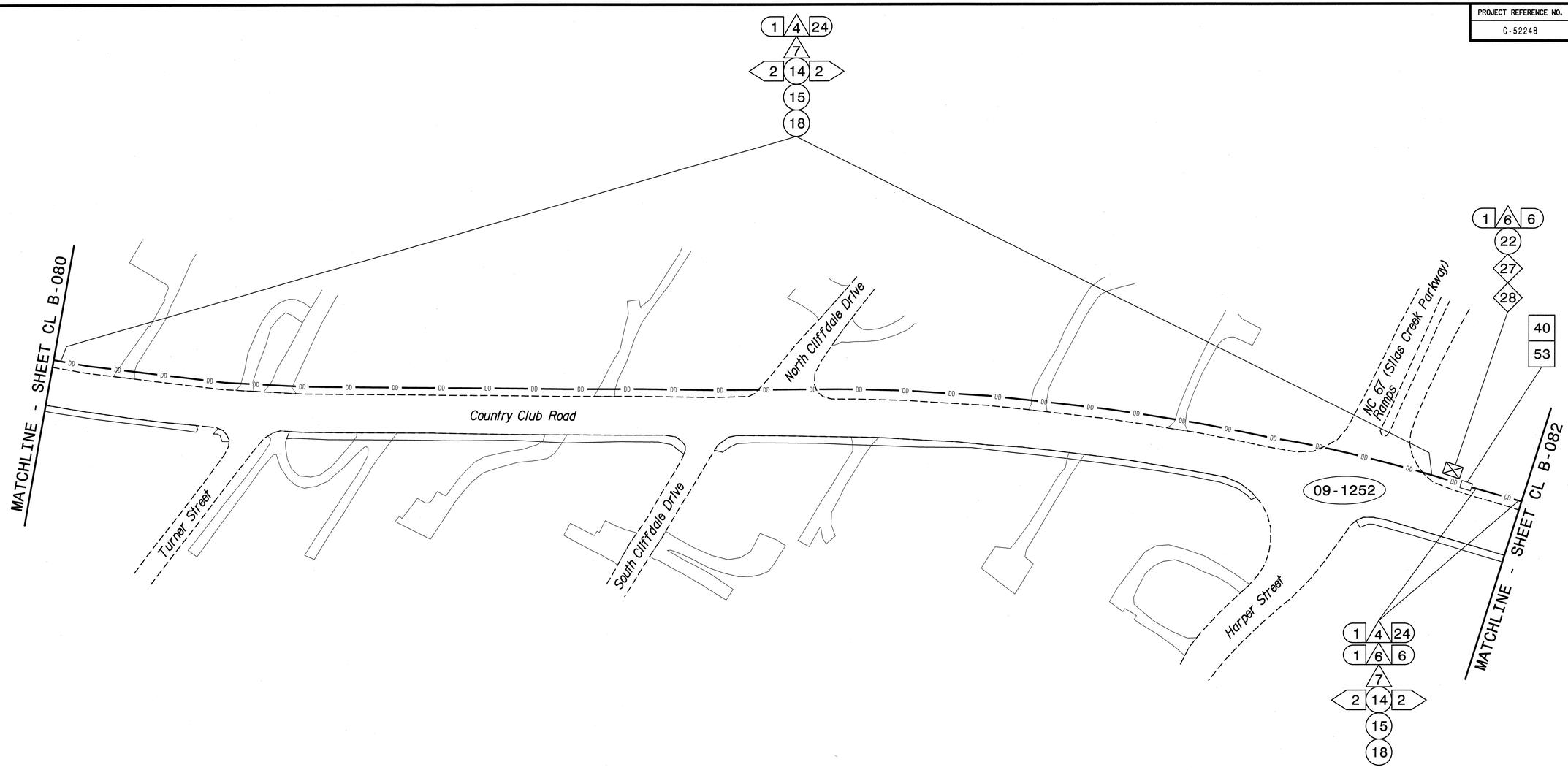

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North Carolina Department of Transportation — Mobility and Safety Division — Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13

SIGNATURE DATE

CADD Filename: CL B-081.dgn

13-MAR-2013 11:35
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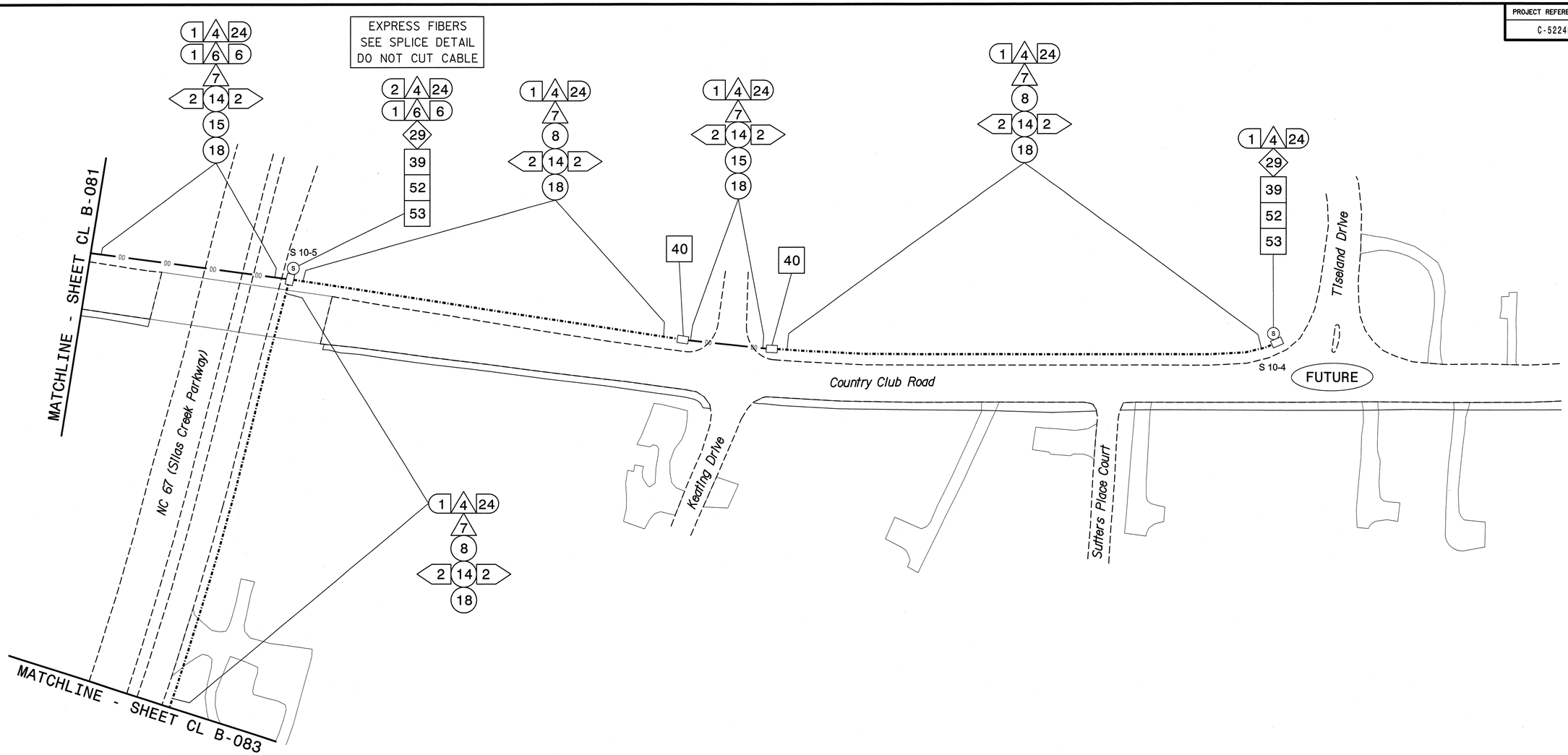
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-082



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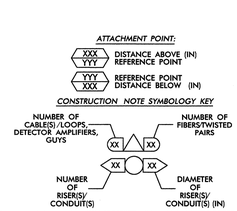

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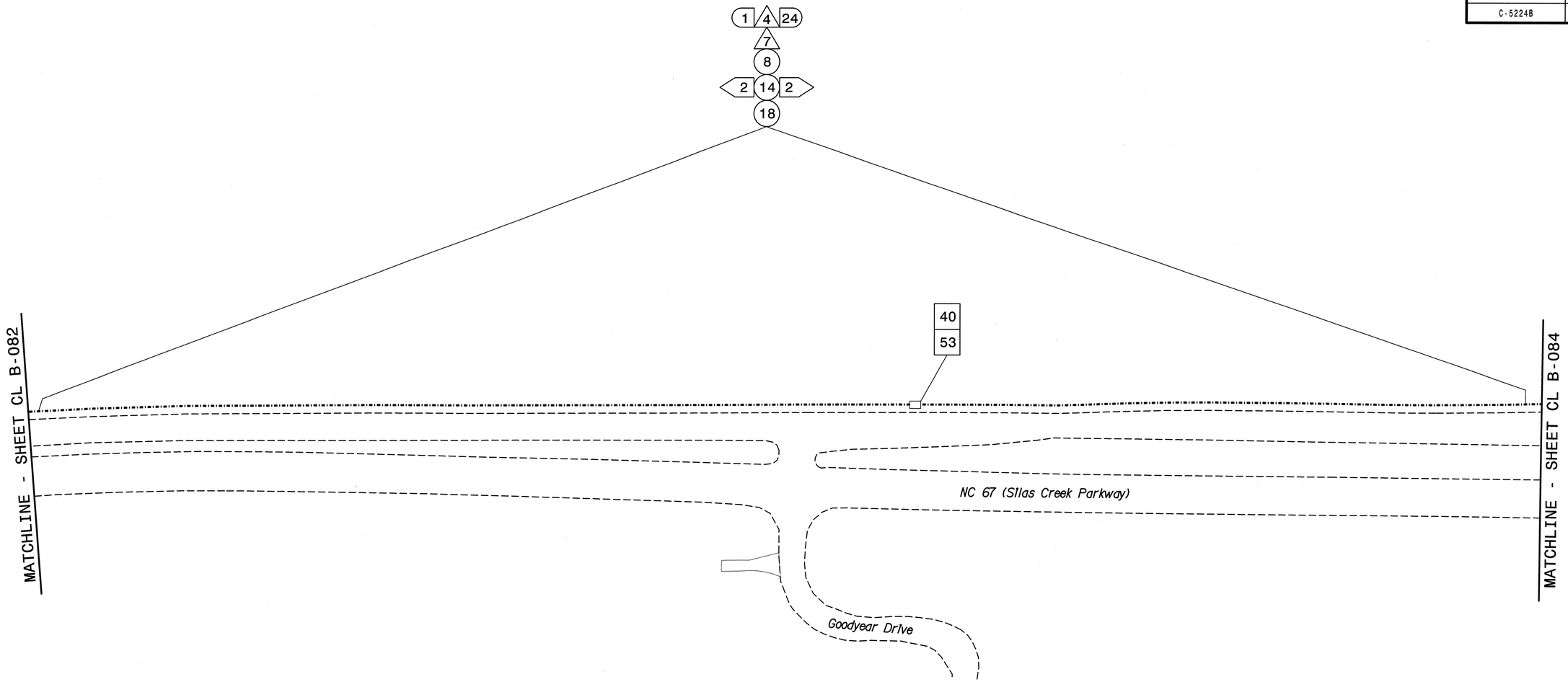

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SIGNATURE Lisa M. Moon 3-22-13 DATE

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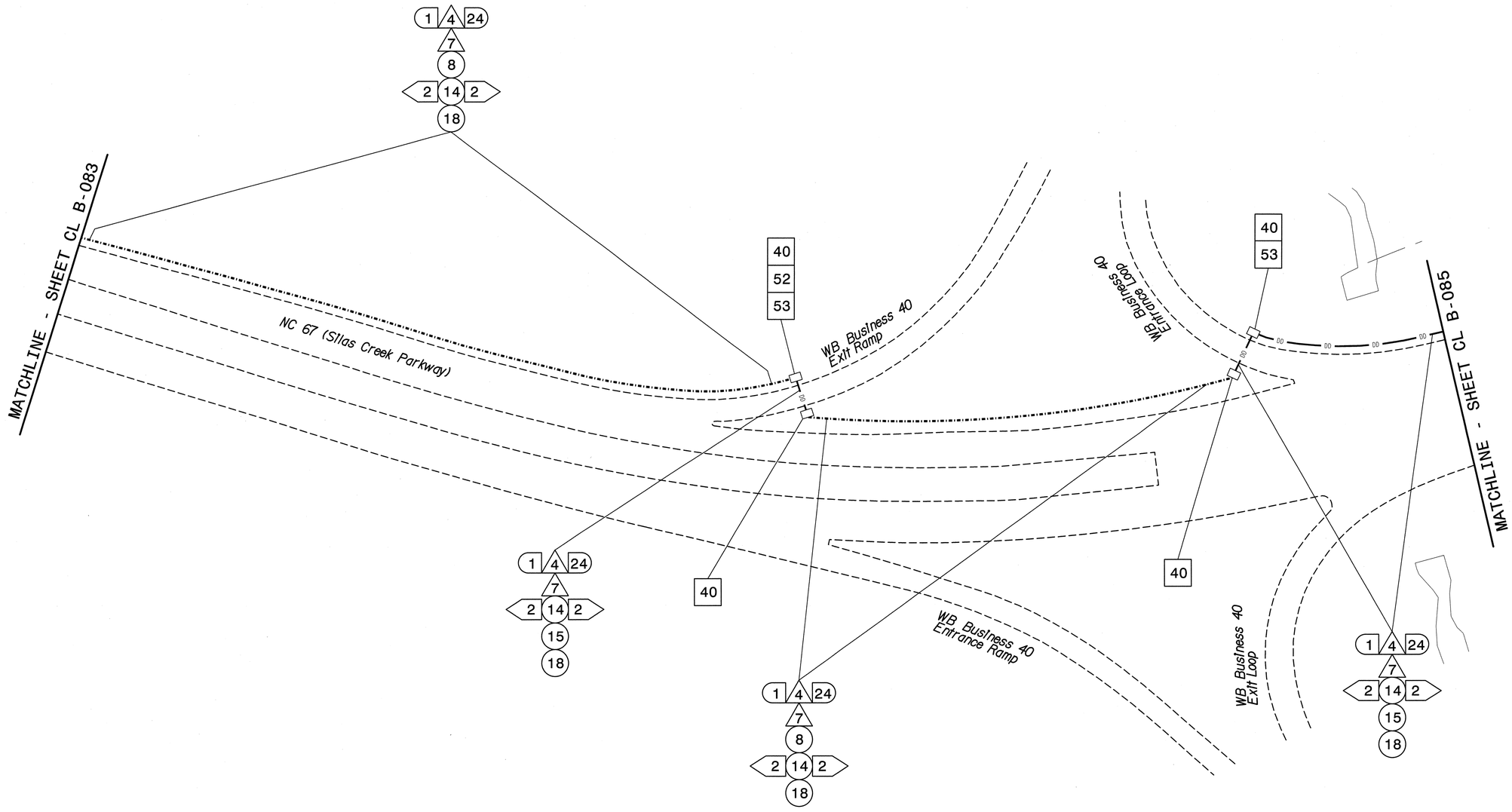

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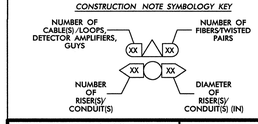

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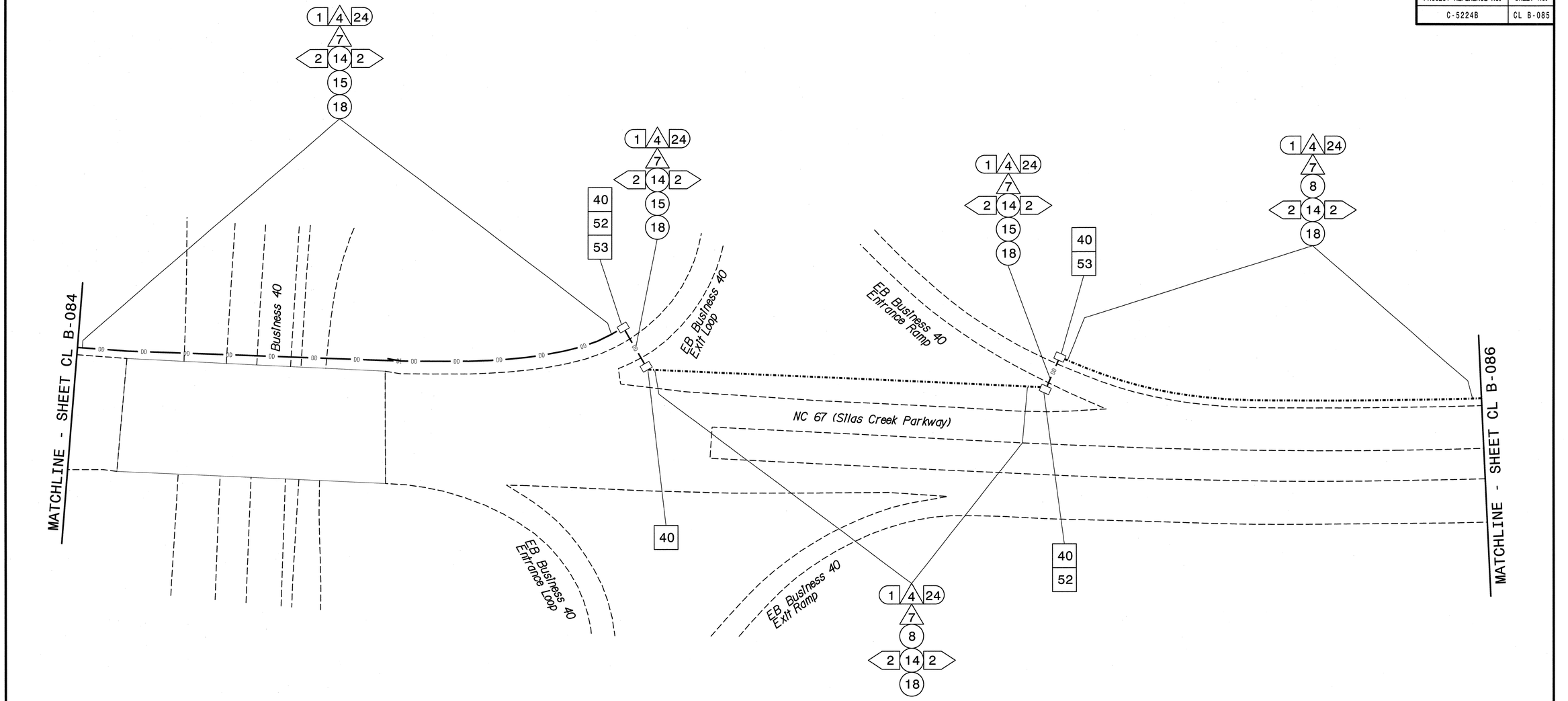

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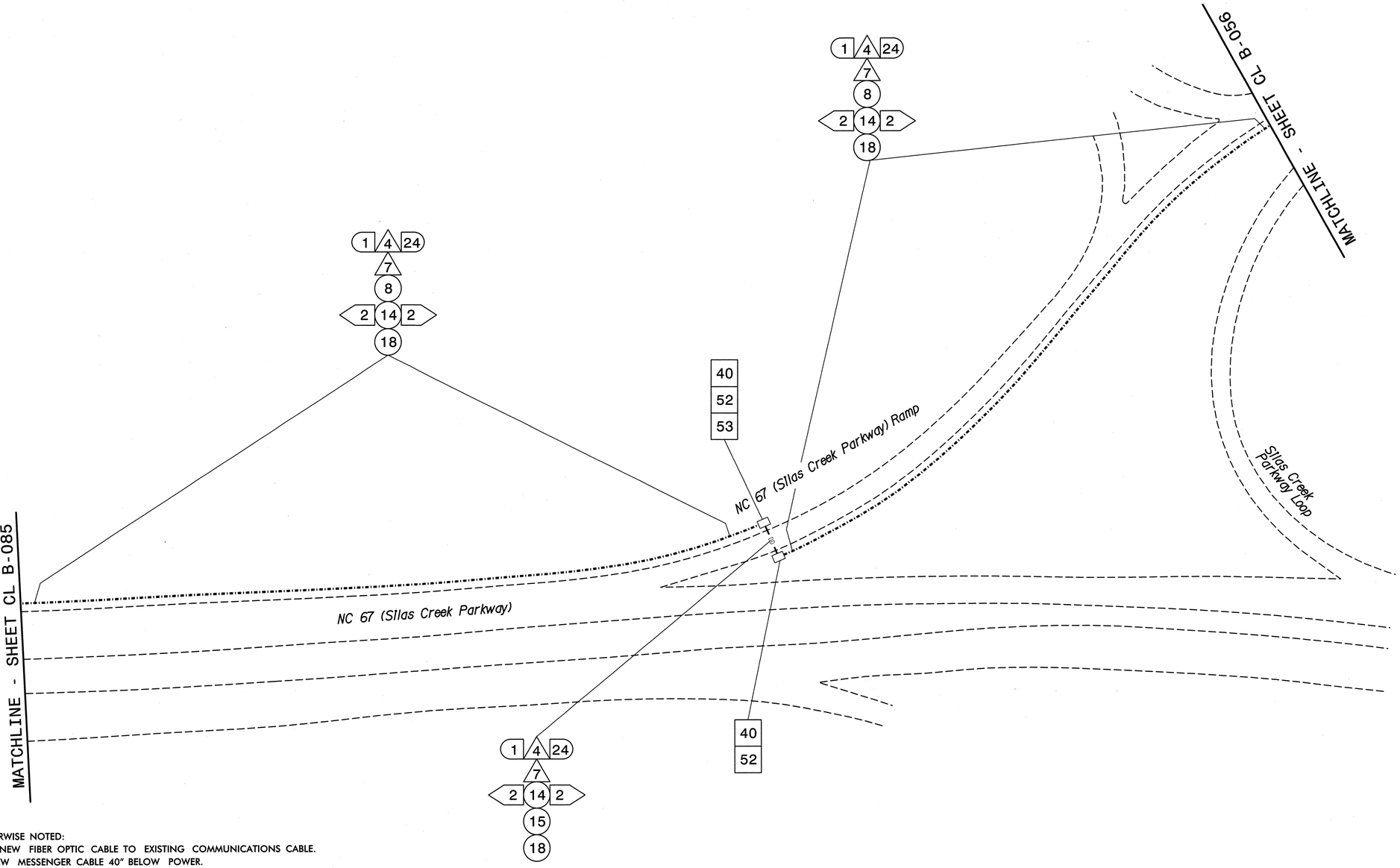

NOTES:
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BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1 INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	13 INSTALL HEAT SHRINK TUBING RETROFIT KIT	25 INSTALL NEW RISER INTO POLE MOUNTED CABINET	37 INSTALL CCTV WOOD POLE	49 REMOVE EXISTING COMMUNICATIONS CABLE	61 INSTALL UNI-DIRECTIONAL ANTENNA	
2 INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14 INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26 INSTALL DIGITAL VIDEO ENCODER	38 INSTALL STANDARD SIZE JUNCTION BOX	50 INSTALL WIRELESS DSL	62 NOT USED	
3 INSTALL CATEGORY 5E CABLE	15 DIRECTIONAL DRILL CONDUIT	27 INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39 INSTALL SPECIAL-SIZED JUNCTION BOX	51 INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63 INSTALL 900 MHZ ETHERNET RADIO	
4 INSTALL SMFO CABLE	16 BORE AND JACK CONDUIT	28 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	40 INSTALL OVERSIZED JUNCTION BOX	52 INSTALL DELINEATOR MARKER	64 INTERCEPT AND REROUTE EXISTING CONDUITS	
5 INSTALL COAXIAL ANTENNA CABLE	17 INSTALL CABLE(S) IN EXISTING CONDUIT	29 INSTALL UNDERGROUND SPLICE ENCLOSURE	41 REMOVE EXISTING JUNCTION BOX	53 STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65 BOND MESSENGER TO POLE GROUND	
6 INSTALL FIBER-OPTIC DROP CABLE	18 INSTALL CABLE(S) IN NEW CONDUIT	30 INSTALL AERIAL SPLICE ENCLOSURE	42 INSTALL WOOD POLE	54 LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66 BOND RISER TO POLE GROUND	
7 INSTALL TRACER WIRE	19 INSTALL CABLE(S) IN EXISTING RISER(S)	31 INSTALL SPLICE CABINET	43 REMOVE EXISTING WOOD POLE	55 LASH CABLE(S) TO EXISTING MESSENGER CABLE	67 BOND TRACER WIRE TO POLE GROUND	
8 INSTALL CONDUIT UNDERGROUND	20 INSTALL CABLE(S) IN NEW RISER(S)	32 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	44 INSTALL AERIAL GUY ASSEMBLY	56 LASH CABLE(S) TO NEW MESSENGER CABLE	68 BOND TRACER WIRE TO EQUIPMENT GROUND BUS	
9 INSTALL PVC CONDUIT	21 INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS	33 REMOVE EXISTING SPLICE /HUB /CCTV CABINET	45 INSTALL STANDARD GUY ASSEMBLY	57 MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB	69 REMOVE EXISTING CCTV CAMERA ASSEMBLY	
10 INSTALL RIGID, GALVANIZED STEEL CONDUIT	22 INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	34 INSTALL CABINET FOUNDATION	46 INSTALL SIDEWALK GUY ASSEMBLY	58 INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB	70 NOT USED	
11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	23 INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	35 REMOVE EXISTING CABINET FOUNDATION	47 INSTALL MESSENGER CABLE	59 INSTALL NEW POLE MOUNTED CCTV CABINET	71 NOT USED	
12 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24 INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36 INSTALL CCTV CAMERA ASSEMBLY	48 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60 INSTALL NEW BASE MOUNTED CCTV CABINET	72 INSTALL MANAGED ETHERNET SWITCH	

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ATKINS
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Prepared for the Offices of:
Traffic Engineering Branch, Traffic Management Unit, Traffic Signal Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 32273
SIGNATURE DATE

CADD Filename: CL B-086.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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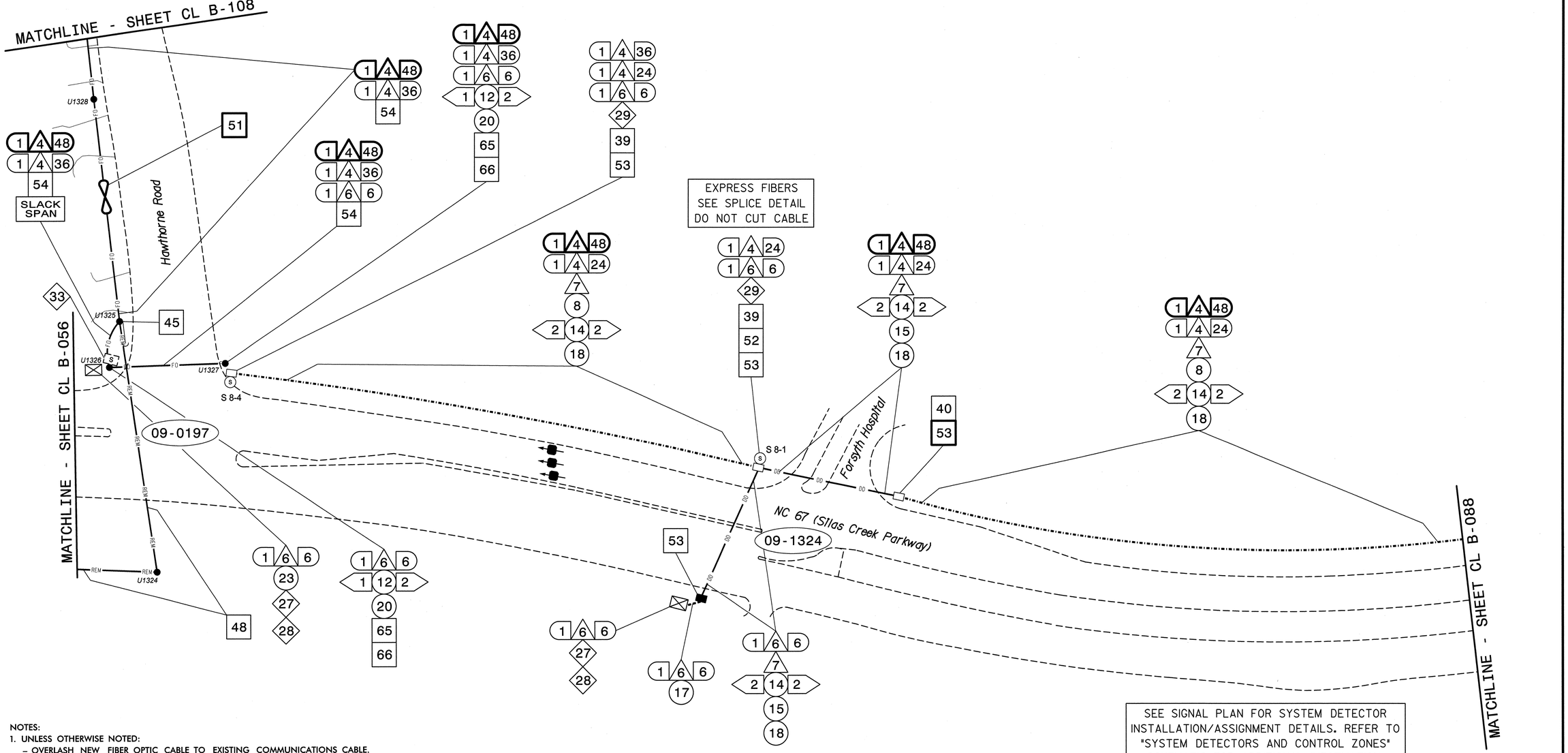

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SEE SIGNAL PLAN FOR SYSTEM DETECTOR INSTALLATION/ASSIGNMENT DETAILS. REFER TO "SYSTEM DETECTORS AND CONTROL ZONES" SCHEMATIC FOR ADDITIONAL INFORMATION.

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-087.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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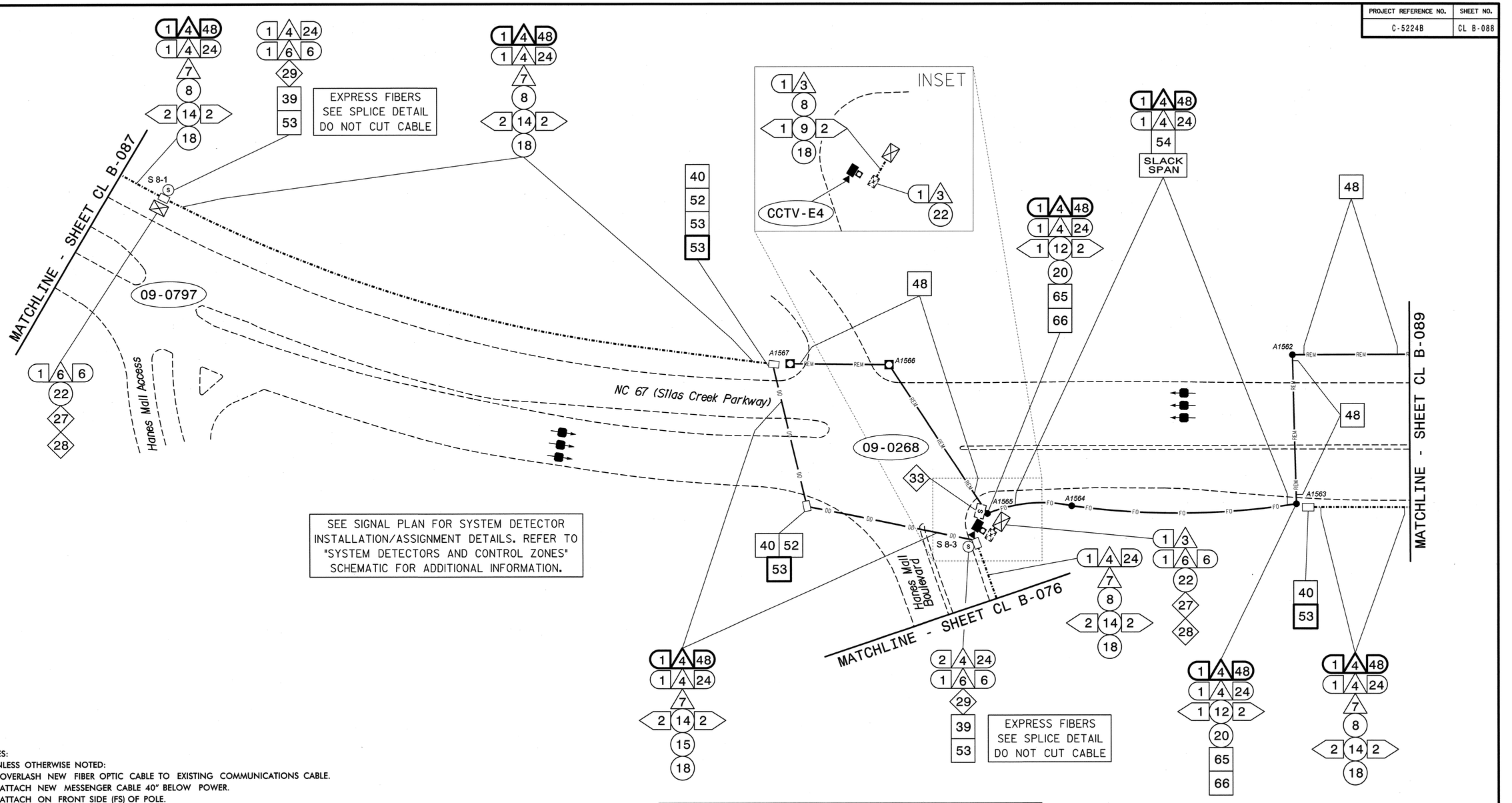

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Intelligent Transportation Systems
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Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-088.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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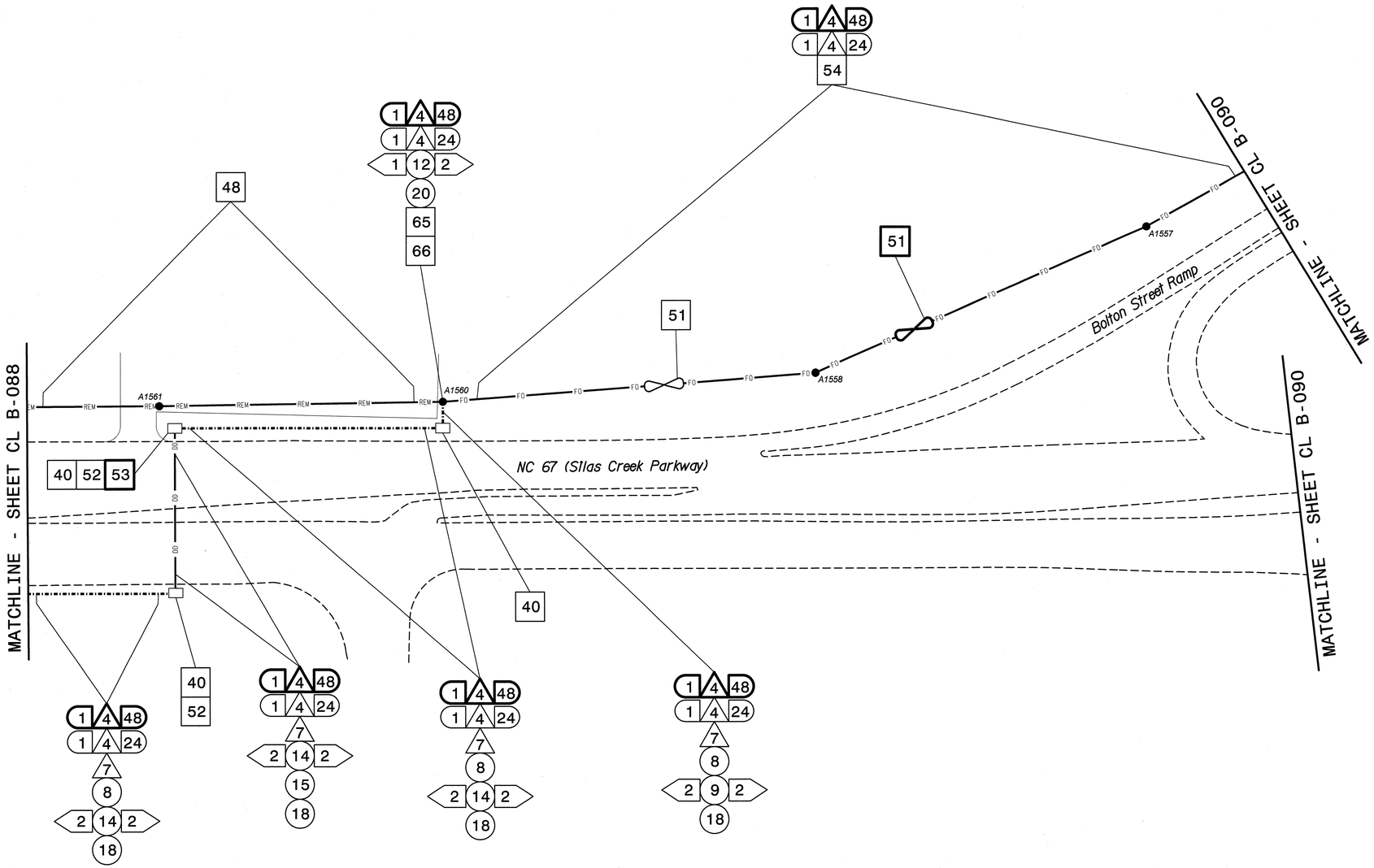

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Cable Layout Plans
Phase B

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PLAN DATE: March 2013 REVIEWED BY: MB Toth
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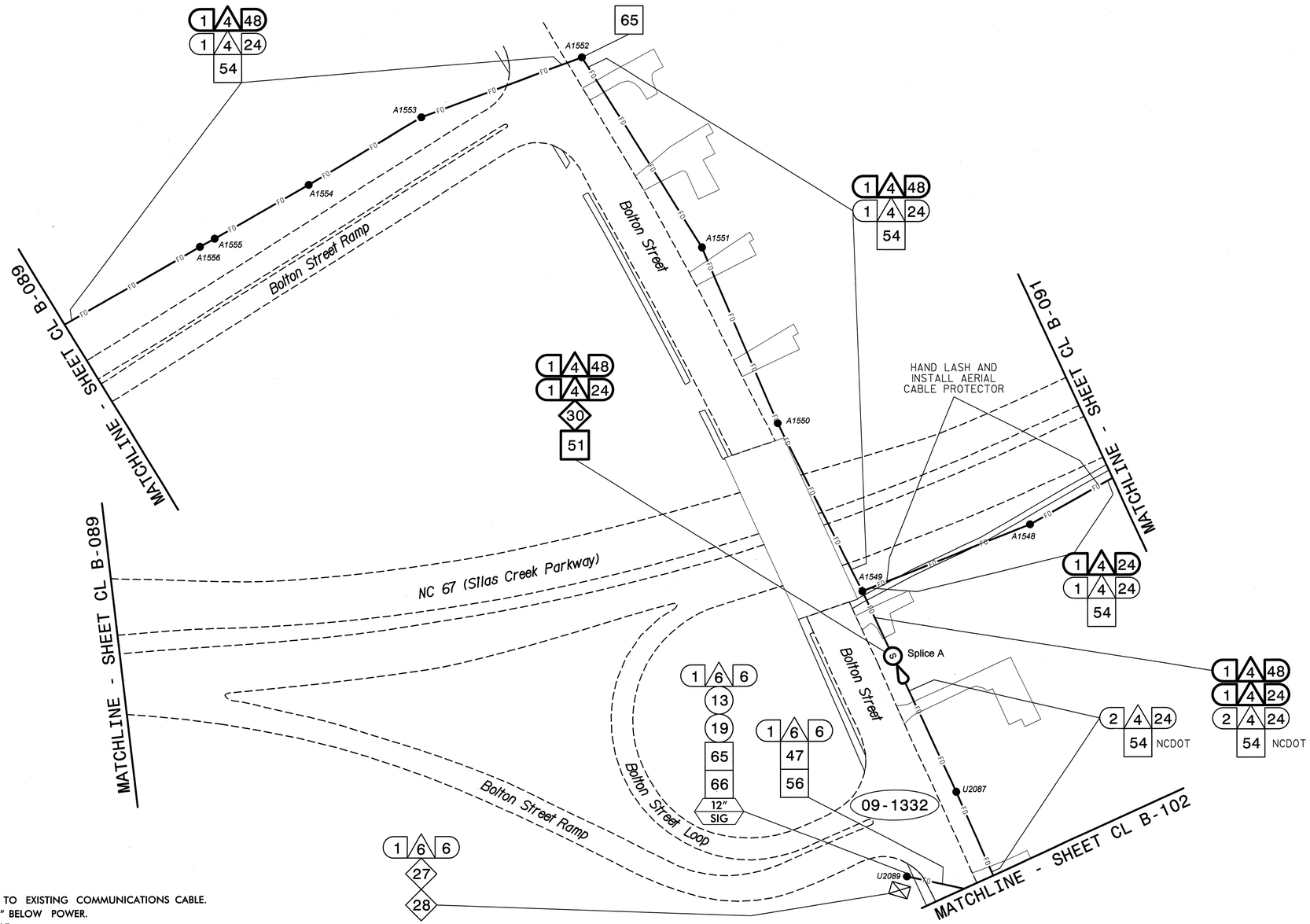

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BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

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6	INSTALL FIBER-OPTIC DROP CABLE	18	INSTALL CABLE(S) IN NEW CONDUIT	30	INSTALL AERIAL SPLICE ENCLOSURE	42	INSTALL WOOD POLE	54	LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66	BOND RISER TO POLE GROUND
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1616 EAST MILLBROOK ROAD, SUITE 310
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Prepared for the Offices of:
Transportation Mobility and Asset Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-090.dgn

13-MAR-2013 11:45
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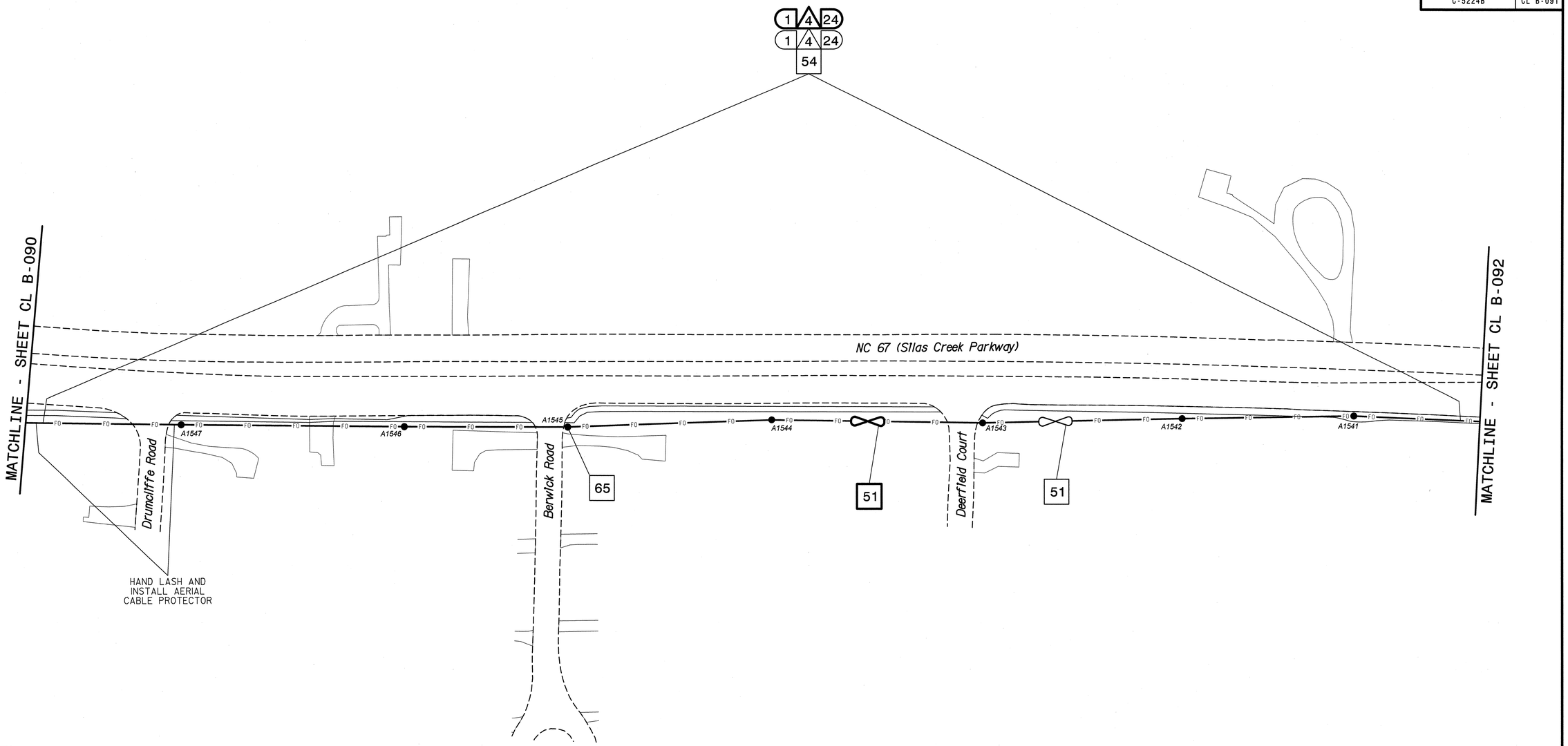

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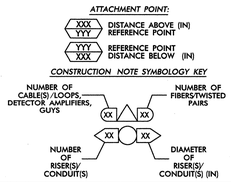

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Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

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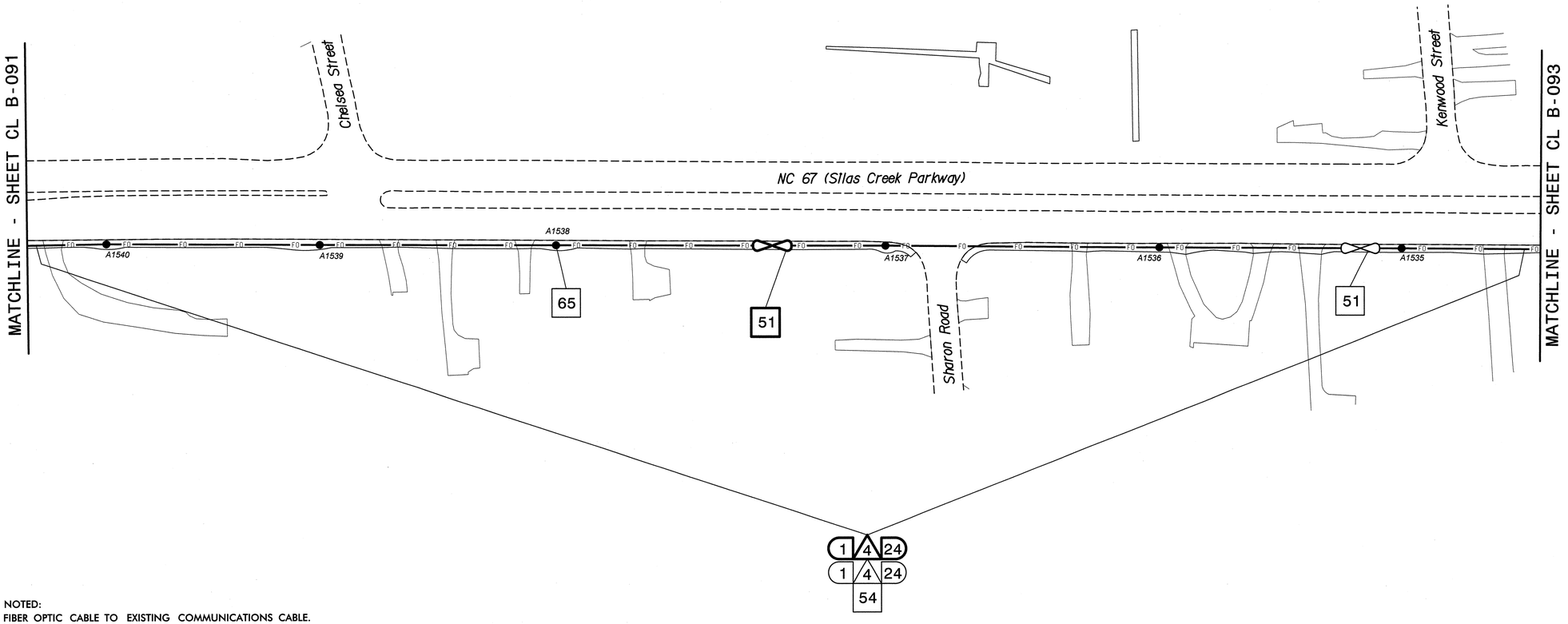

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

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750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE DATE 3/22/13
CADD Filename: CL B-092.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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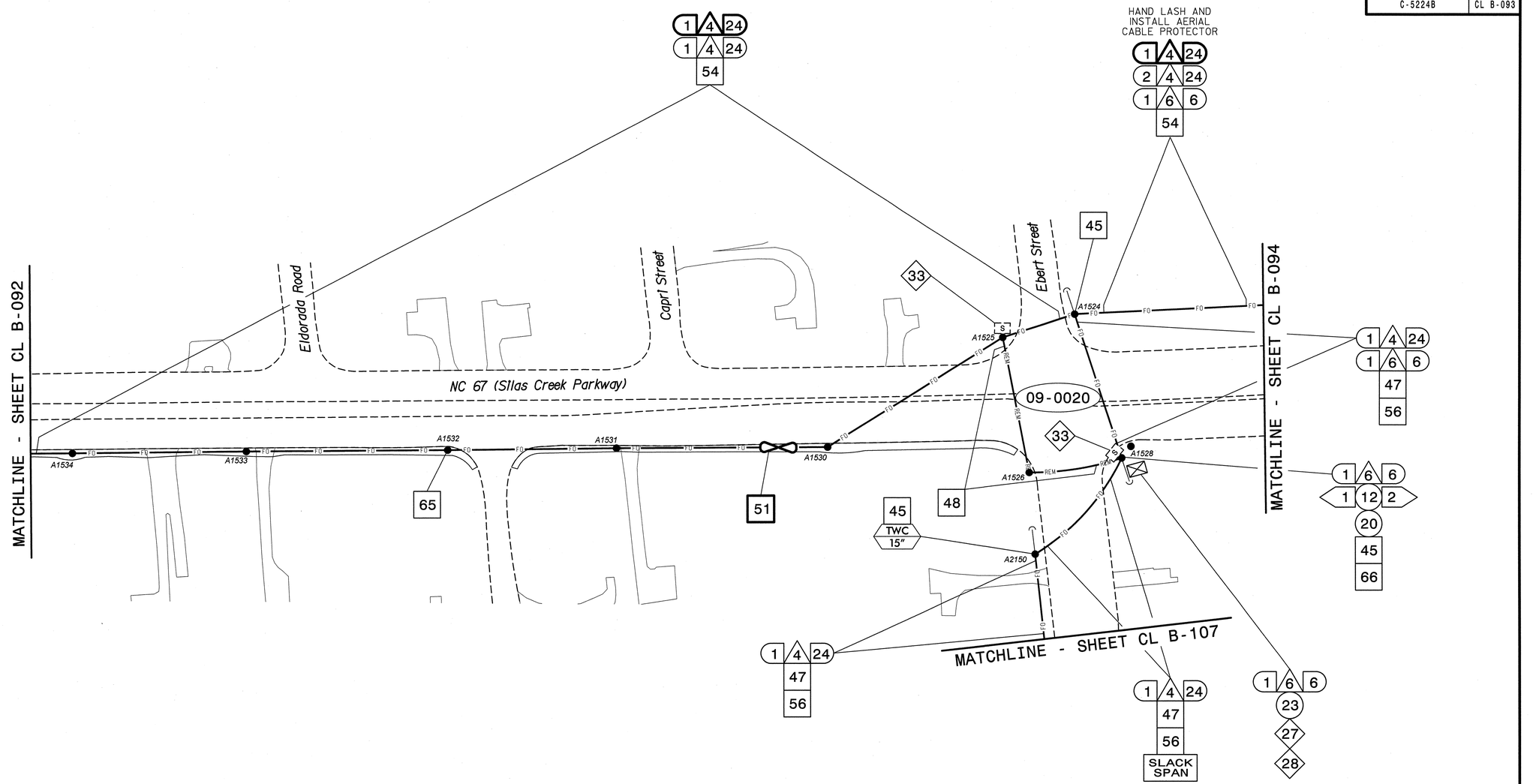

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SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

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PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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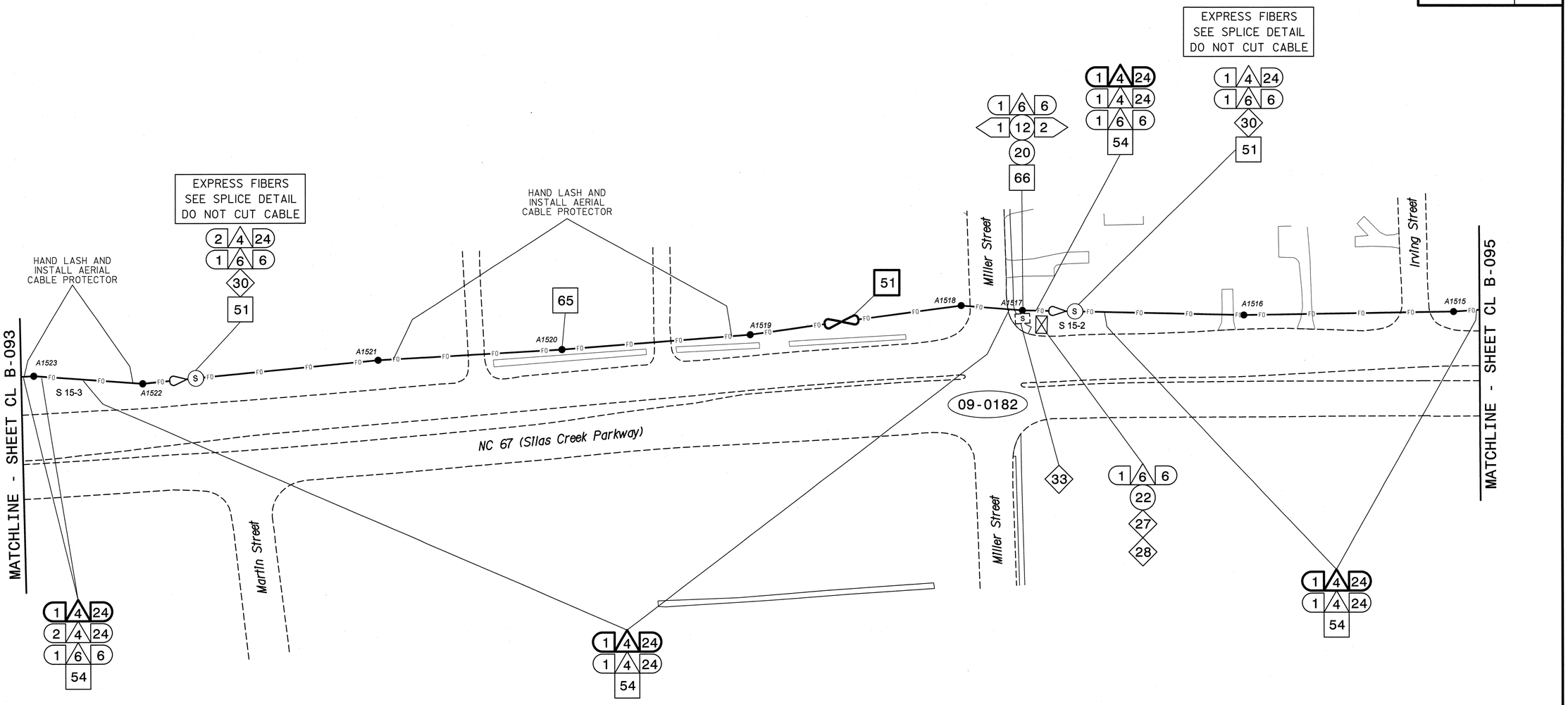

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Prepared for the Offices of:
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750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-094.dgn

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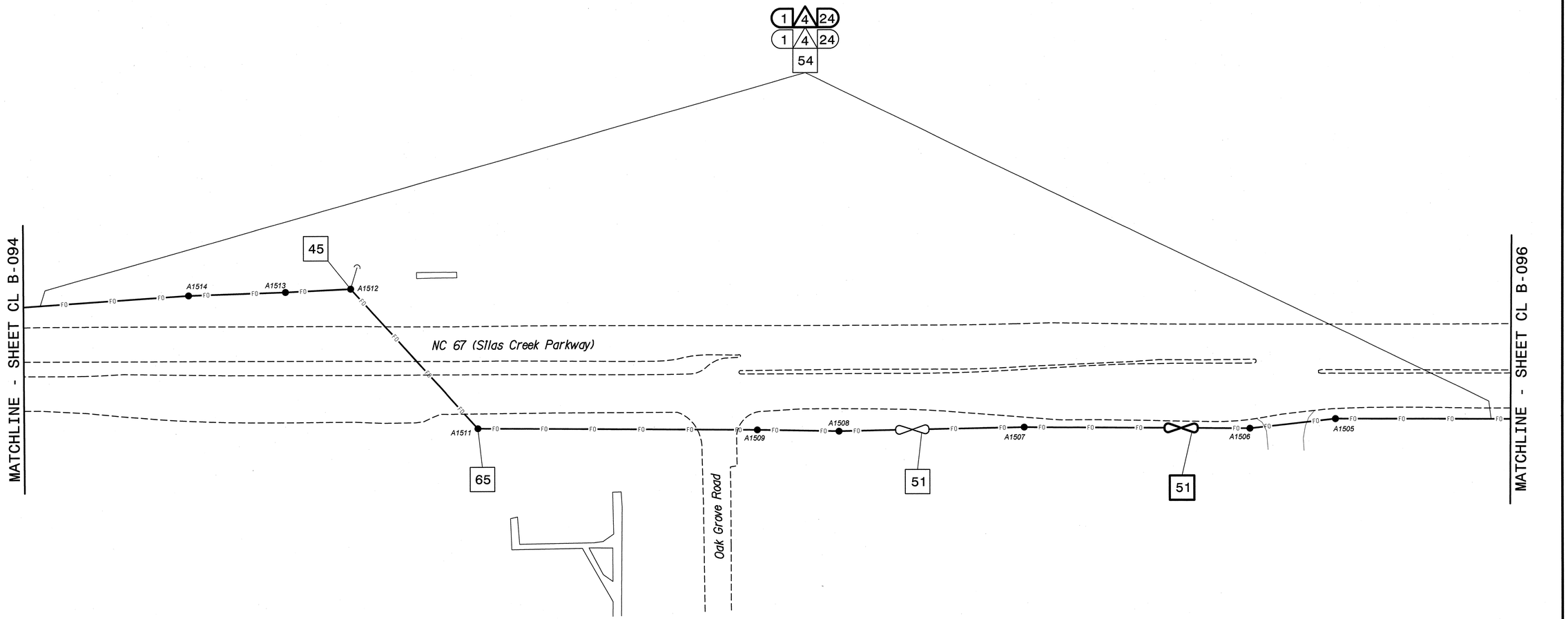

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Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE DATE 3-22-13
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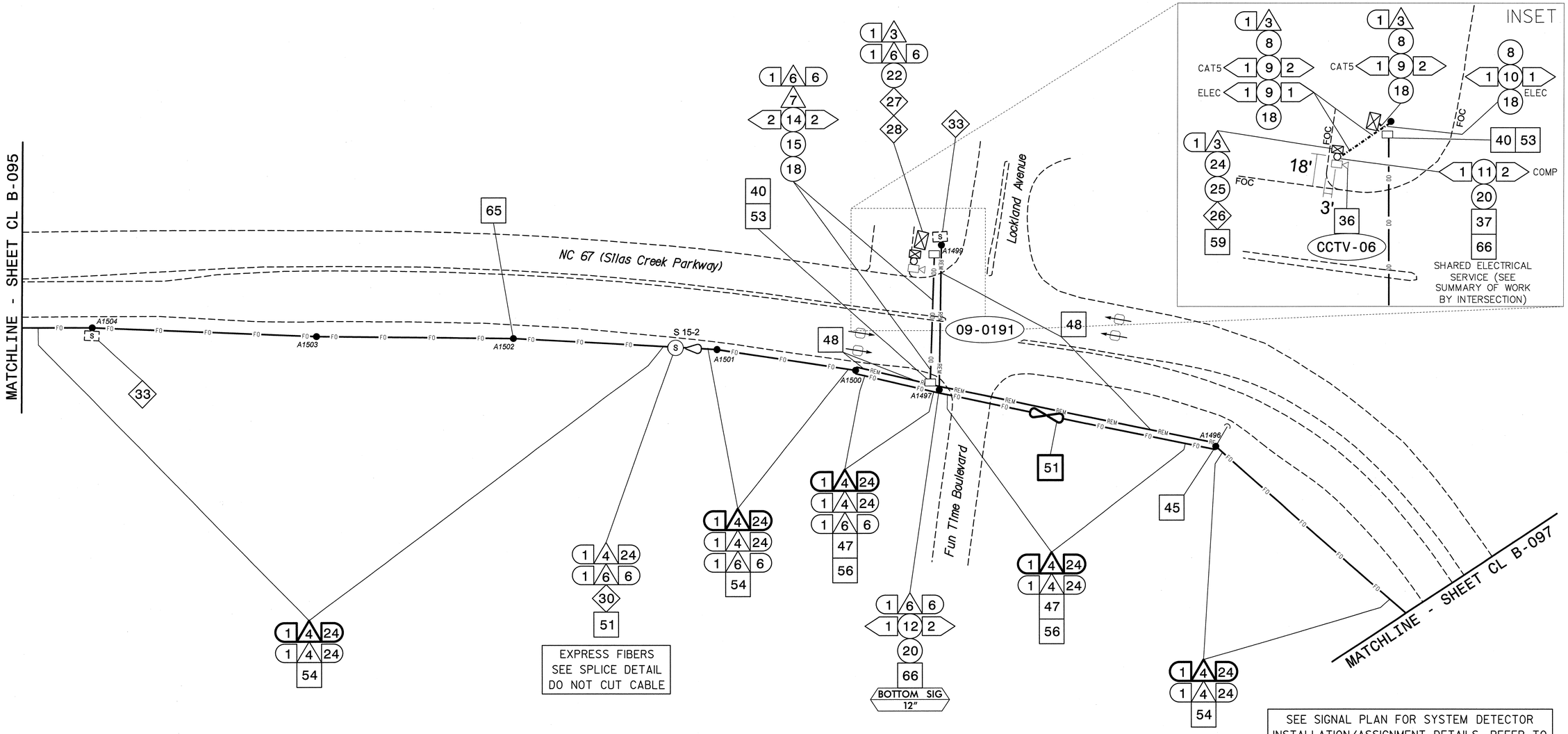

SEE SIGNAL PLAN FOR SYSTEM DETECTOR INSTALLATION/ASSIGNMENT DETAILS. REFER TO "SYSTEM DETECTORS AND CONTROL ZONES" SCHEMATIC FOR ADDITIONAL INFORMATION.

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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
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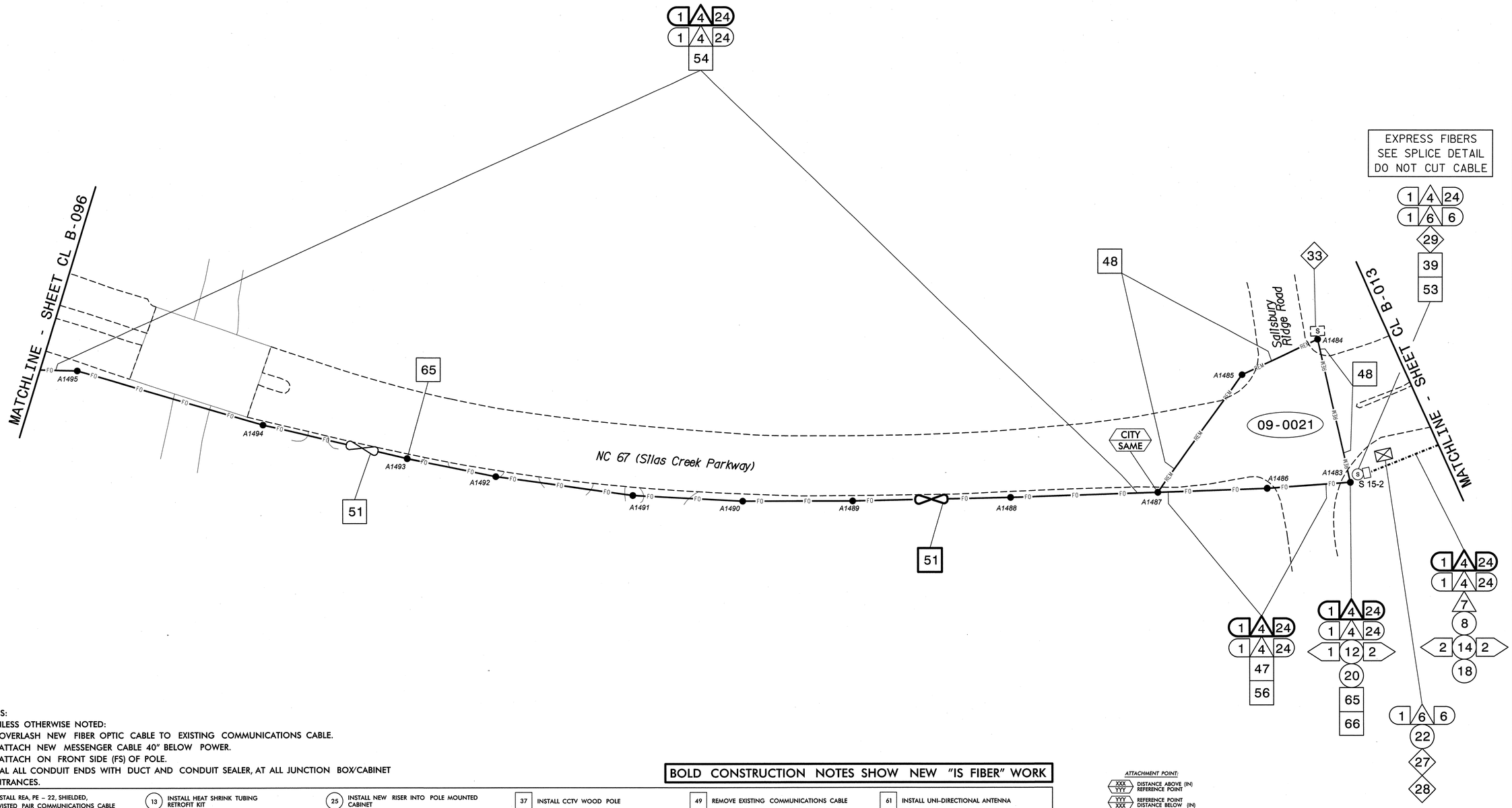

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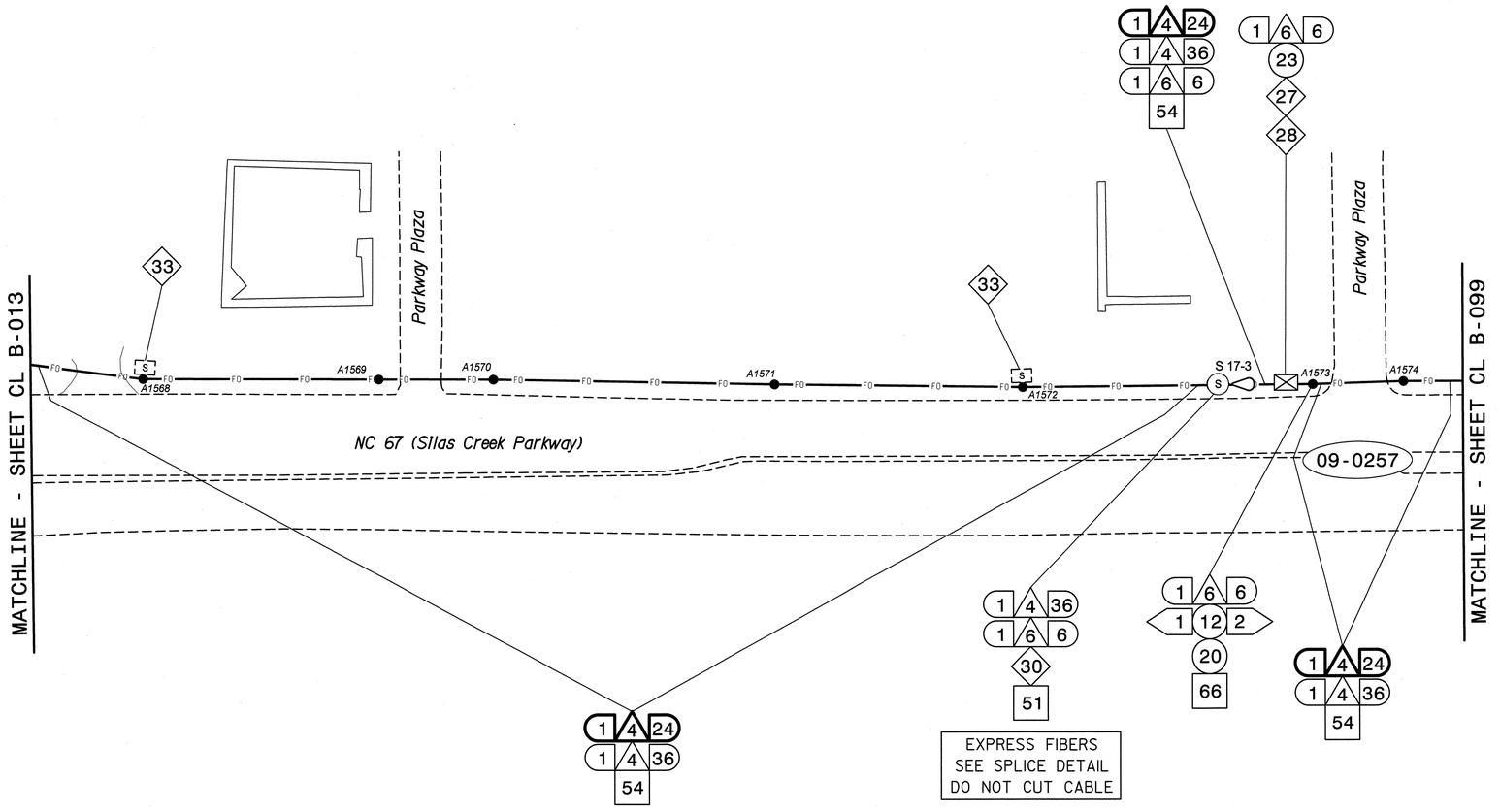

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34. INSTALL CABINET FOUNDATION
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42. INSTALL WOOD POLE
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44. INSTALL AERIAL GUY ASSEMBLY
45. INSTALL STANDARD GUY ASSEMBLY
46. INSTALL SIDEWALK GUY ASSEMBLY
47. INSTALL MESSENGER CABLE
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
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62. NOT USED
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XXX / YYY — DISTANCE ABOVE (IN) REFERENCE POINT

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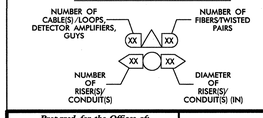
CONSTRUCTION NOTE SYMBOLOGY KEY



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Prepared for the Offices of:

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Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON

SIGNATURE Lisa M. Moon 3-22-13 DATE

CADD Filename: CL B-098.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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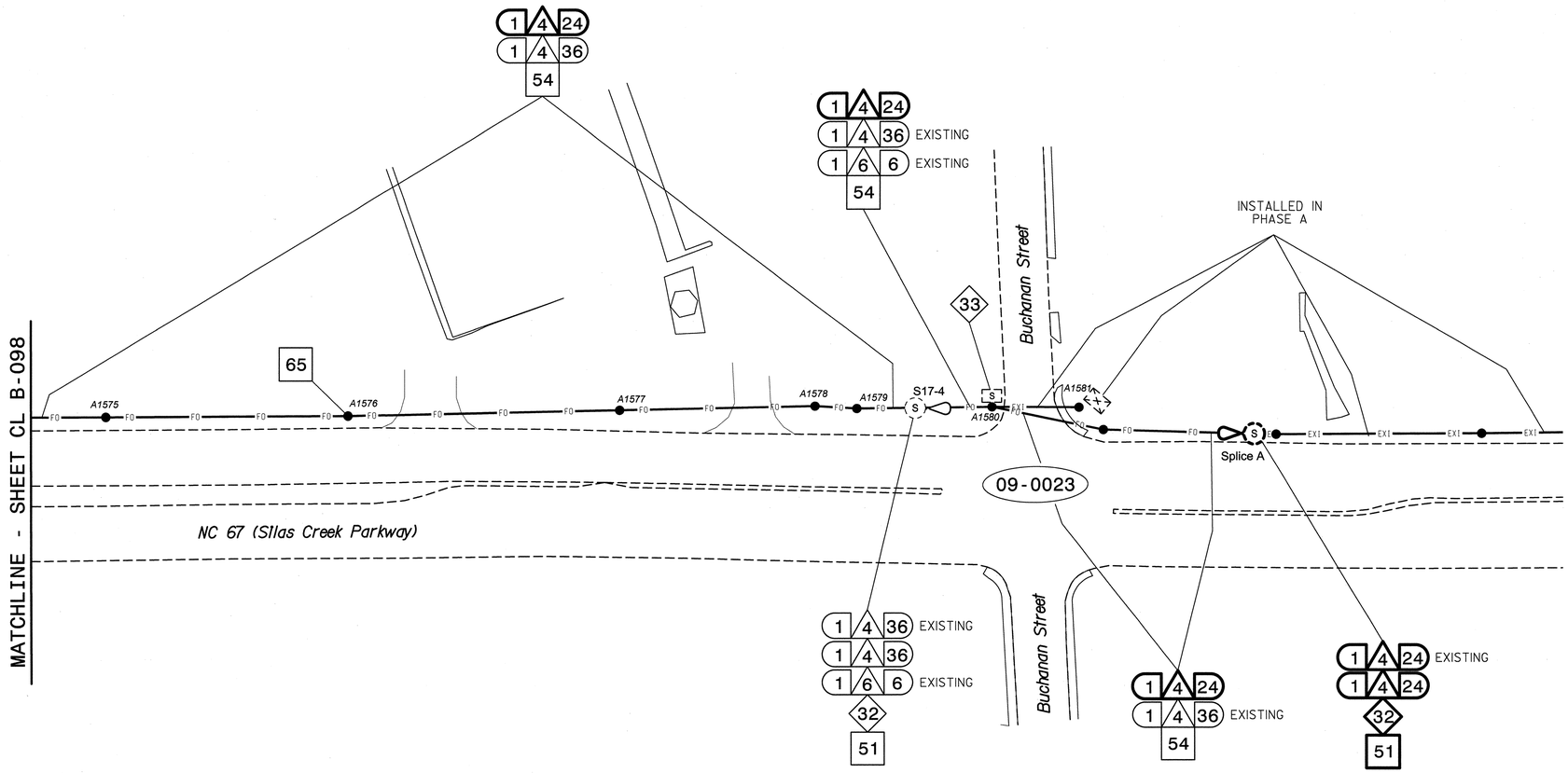

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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

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13-MAR-2013 11:45
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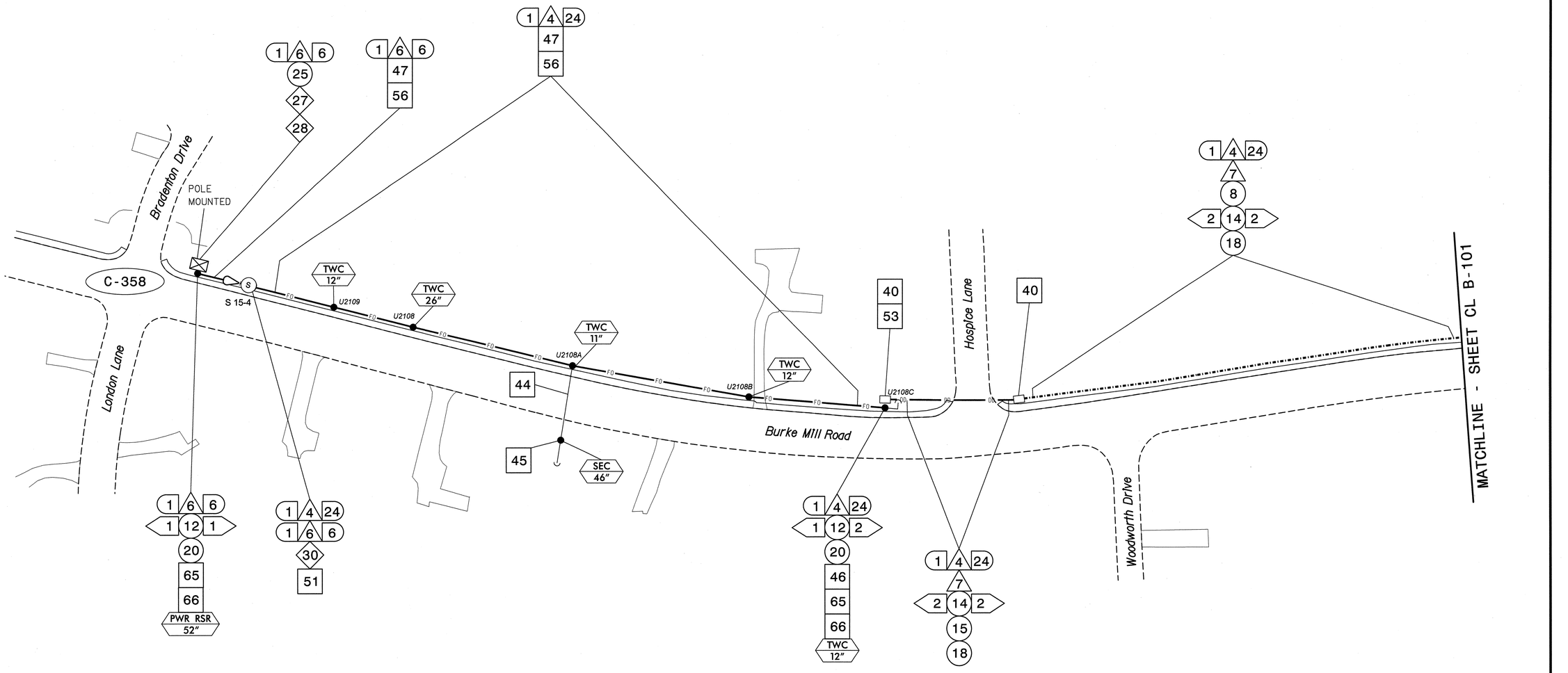
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-100



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6 INSTALL FIBER-OPTIC DROP CABLE	18 INSTALL CABLE(S) IN NEW CONDUIT	30 INSTALL AERIAL SPLICE ENCLOSURE	42 INSTALL WOOD POLE	54 LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66 BOND RISER TO POLE GROUND
7 INSTALL TRACER WIRE	19 INSTALL CABLE(S) IN EXISTING RISER(S)	31 INSTALL SPLICE CABINET	43 REMOVE EXISTING WOOD POLE	55 LASH CABLE(S) TO EXISTING MESSENGER CABLE	67 BOND TRACER WIRE TO POLE GROUND
8 INSTALL CONDUIT UNDERGROUND	20 INSTALL CABLE(S) IN NEW RISER(S)	32 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	44 INSTALL AERIAL GUY ASSEMBLY	56 LASH CABLE(S) TO NEW MESSENGER CABLE	68 BOND TRACER WIRE TO EQUIPMENT GROUND BUS
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Prepared for the Offices of:
North Carolina Department of Transportation — Integrated Mobility and Safety Division — Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

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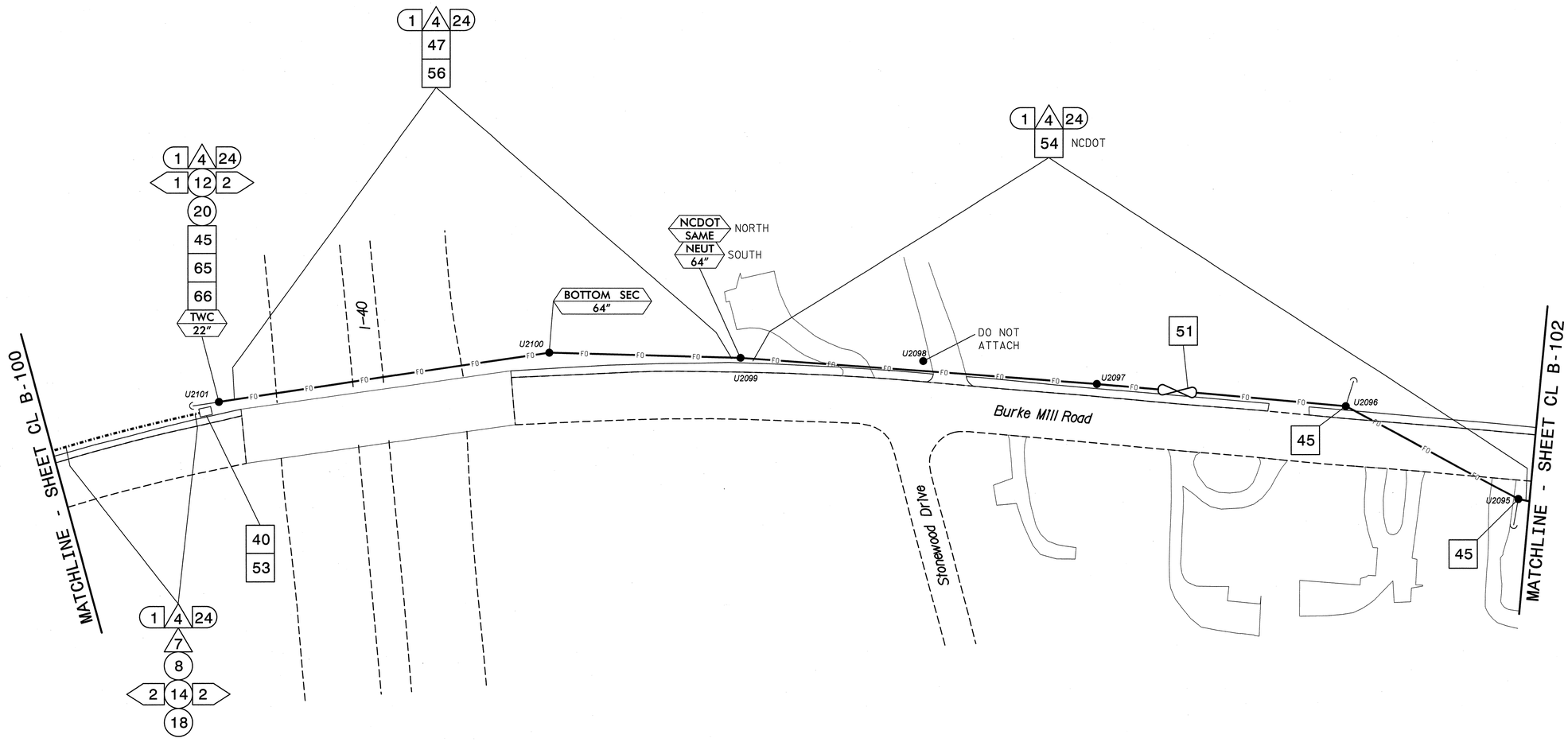
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-101



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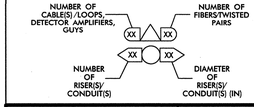

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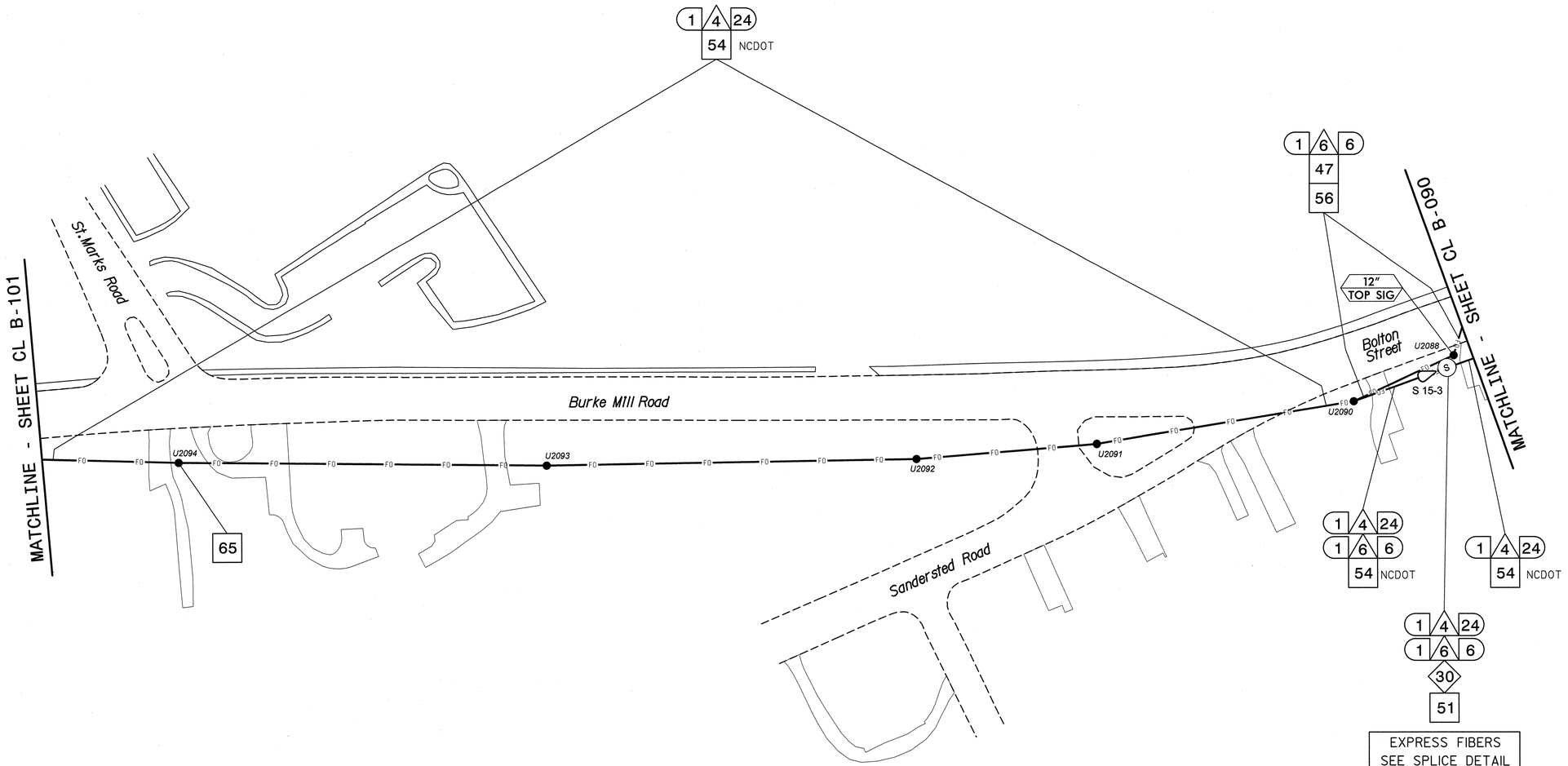
C-5224B	CL B-102



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43. REMOVE EXISTING WOOD POLE
44. INSTALL AERIAL GUY ASSEMBLY
45. INSTALL STANDARD GUY ASSEMBLY
46. INSTALL SIDEWALK GUY ASSEMBLY
47. INSTALL MESSENGER CABLE
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
55. LASH CABLE(S) TO EXISTING MESSENGER CABLE
56. LASH CABLE(S) TO NEW MESSENGER CABLE
57. MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB
58. INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB
59. INSTALL NEW POLE MOUNTED CCTV CABINET
60. INSTALL NEW BASE MOUNTED CCTV CABINET
61. INSTALL UNI-DIRECTIONAL ANTENNA
62. NOT USED
63. INSTALL 900 MHZ ETHERNET RADIO
64. INTERCEPT AND REROUTE EXISTING CONDUITS
65. BOND MESSENGER TO POLE GROUND
66. BOND RISER TO POLE GROUND
67. BOND TRACER WIRE TO POLE GROUND
68. BOND TRACER WIRE TO EQUIPMENT GROUND BUS
69. REMOVE EXISTING CCTV CAMERA ASSEMBLY
70. NOT USED
71. NOT USED
72. INSTALL MANAGED ETHERNET SWITCH

ATTACHMENT POINT:
XXX DISTANCE ABOVE (IN) REFERENCE POINT
YYY REFERENCE POINT DISTANCE BELOW (IN)

CONSTRUCTION NOTE SYMBOLOGY KEY
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Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE
CADD Filename: CL B-102.dgn

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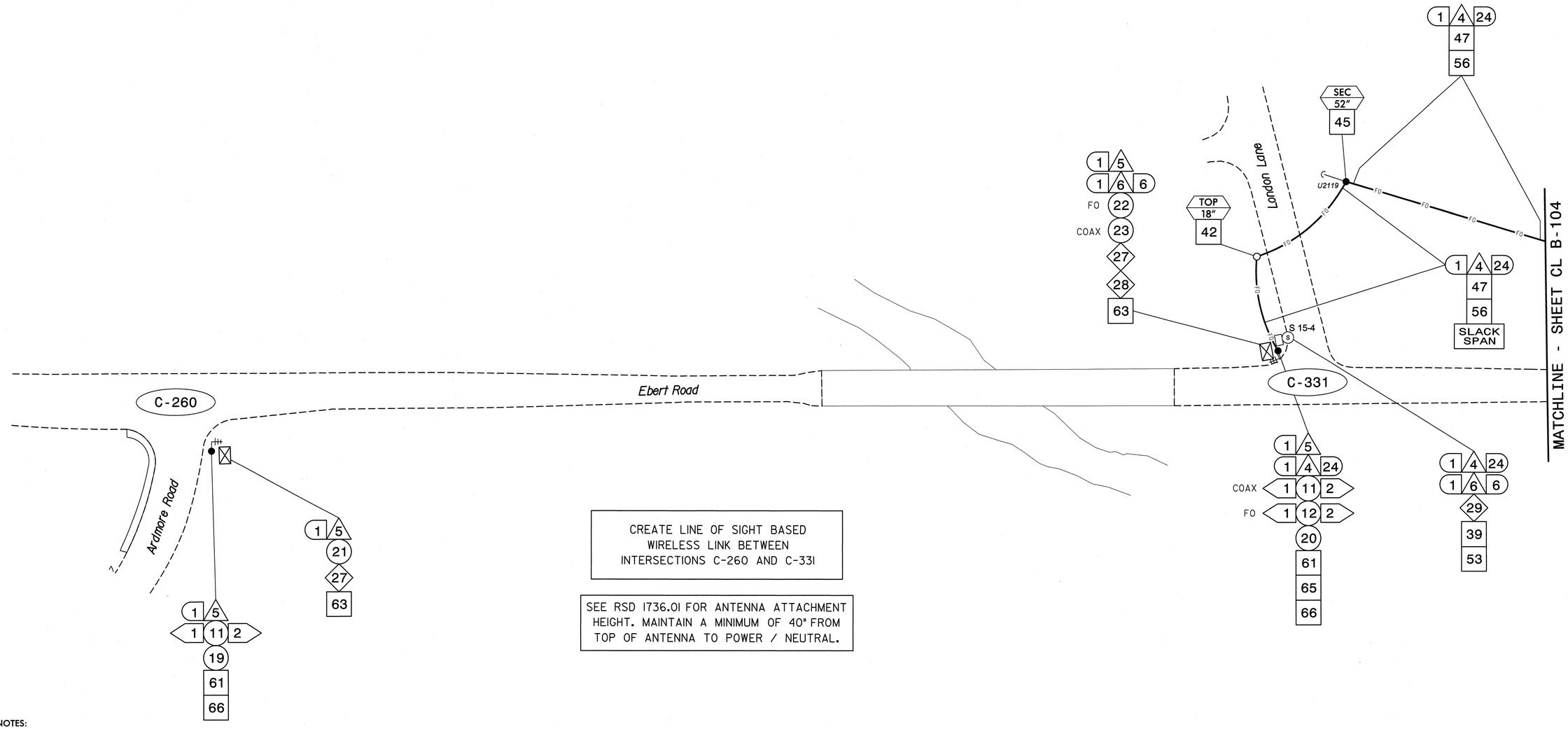
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-103



CREATE LINE OF SIGHT BASED WIRELESS LINK BETWEEN INTERSECTIONS C-260 AND C-331

SEE RSD 1736.01 FOR ANTENNA ATTACHMENT HEIGHT. MAINTAIN A MINIMUM OF 40" FROM TOP OF ANTENNA TO POWER / NEUTRAL.

NOTES:
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   - ATTACH NEW MESSENGER CABLE 40" BELOW POWER.
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750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-103.dgn

13-MAR-2013 11:45
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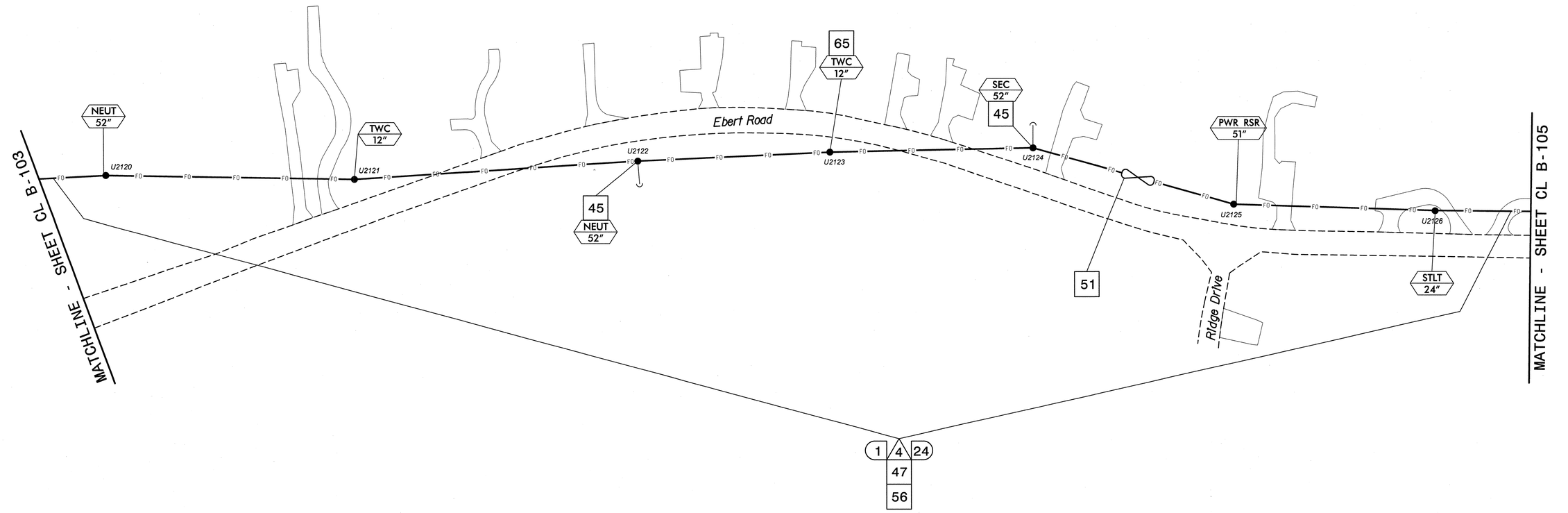
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-104



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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09	Forsyth County		Winston-Salem
PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON
SIGNATURE DATE 3-22-13
CADD Filename: CL B-104.dgn

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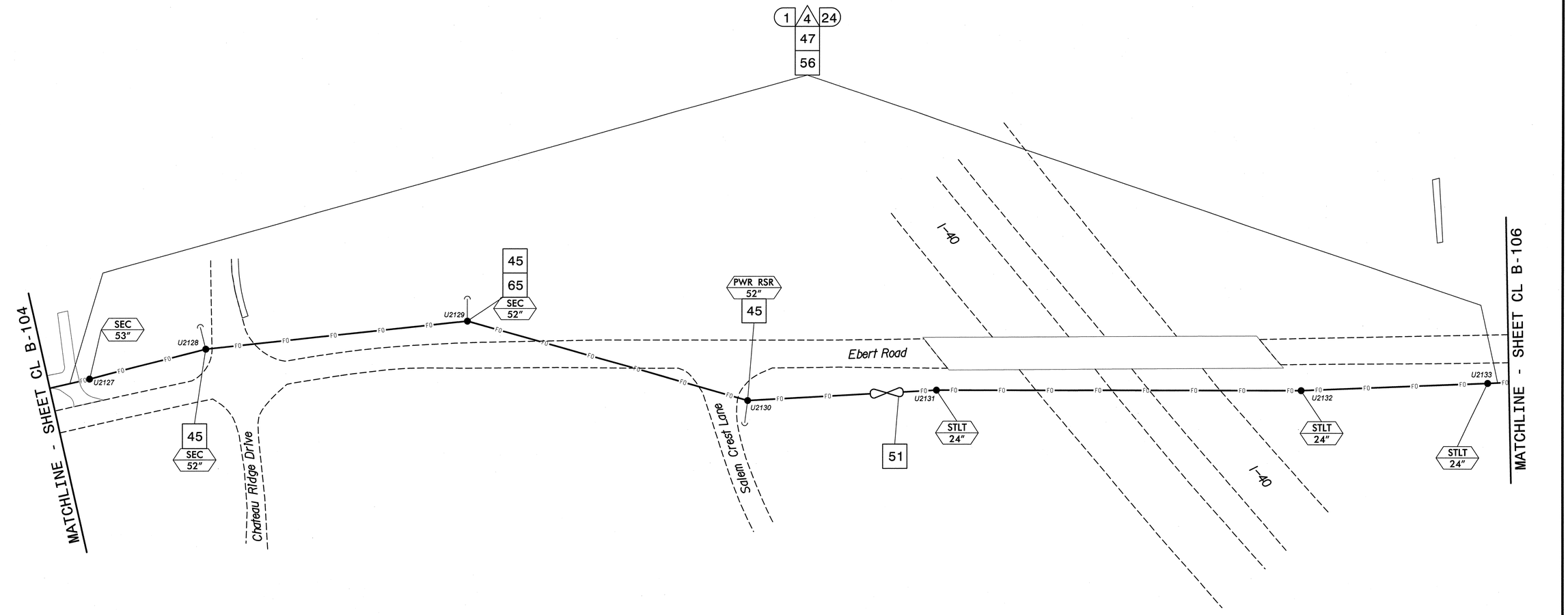
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-105



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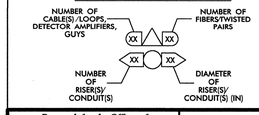

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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

SIGNATURE 3-22-13 DATE

CADD Filename: CL B-105.dgn

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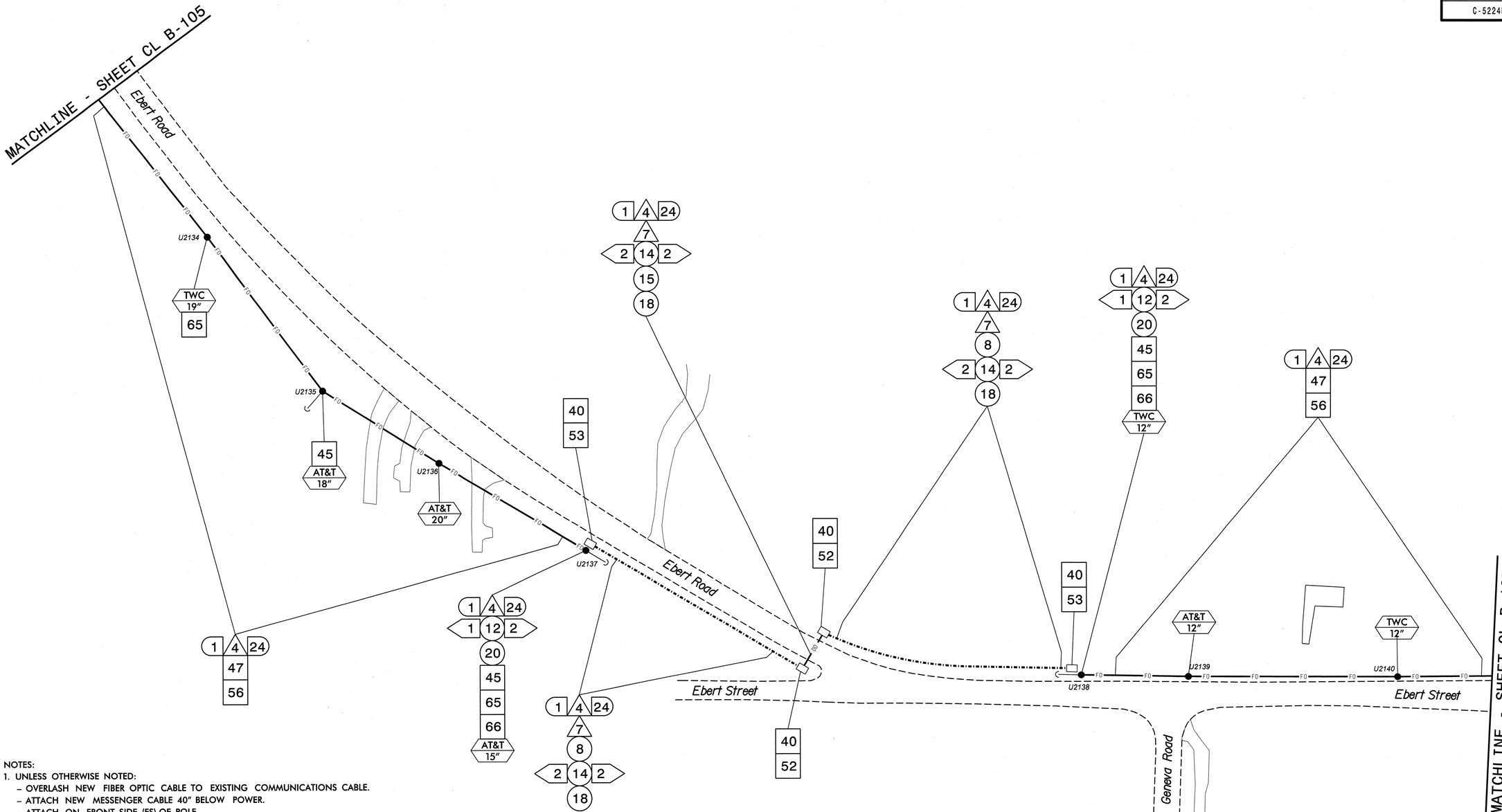
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-106



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54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
55. LASH CABLE(S) TO EXISTING MESSENGER CABLE
56. LASH CABLE(S) TO NEW MESSENGER CABLE
57. MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB
58. INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB
59. INSTALL NEW POLE MOUNTED CCTV CABINET
60. INSTALL NEW BASE MOUNTED CCTV CABINET
61. INSTALL UNI-DIRECTIONAL ANTENNA
62. NOT USED
63. INSTALL 900 MHZ ETHERNET RADIO
64. INTERCEPT AND REROUTE EXISTING CONDUITS
65. BOND MESSENGER TO POLE GROUND
66. BOND RISER TO POLE GROUND
67. BOND TRACER WIRE TO POLE GROUND
68. BOND TRACER WIRE TO EQUIPMENT GROUND BUS
69. REMOVE EXISTING CCTV CAMERA ASSEMBLY
70. NOT USED
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YYY REFERENCE POINT DISTANCE BELOW (IN)

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NUMBER OF FIBERS/TWISTED PAIRS
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DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
North Carolina Department of Transportation, Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-106.dgn

13-MAR-2013 12:00
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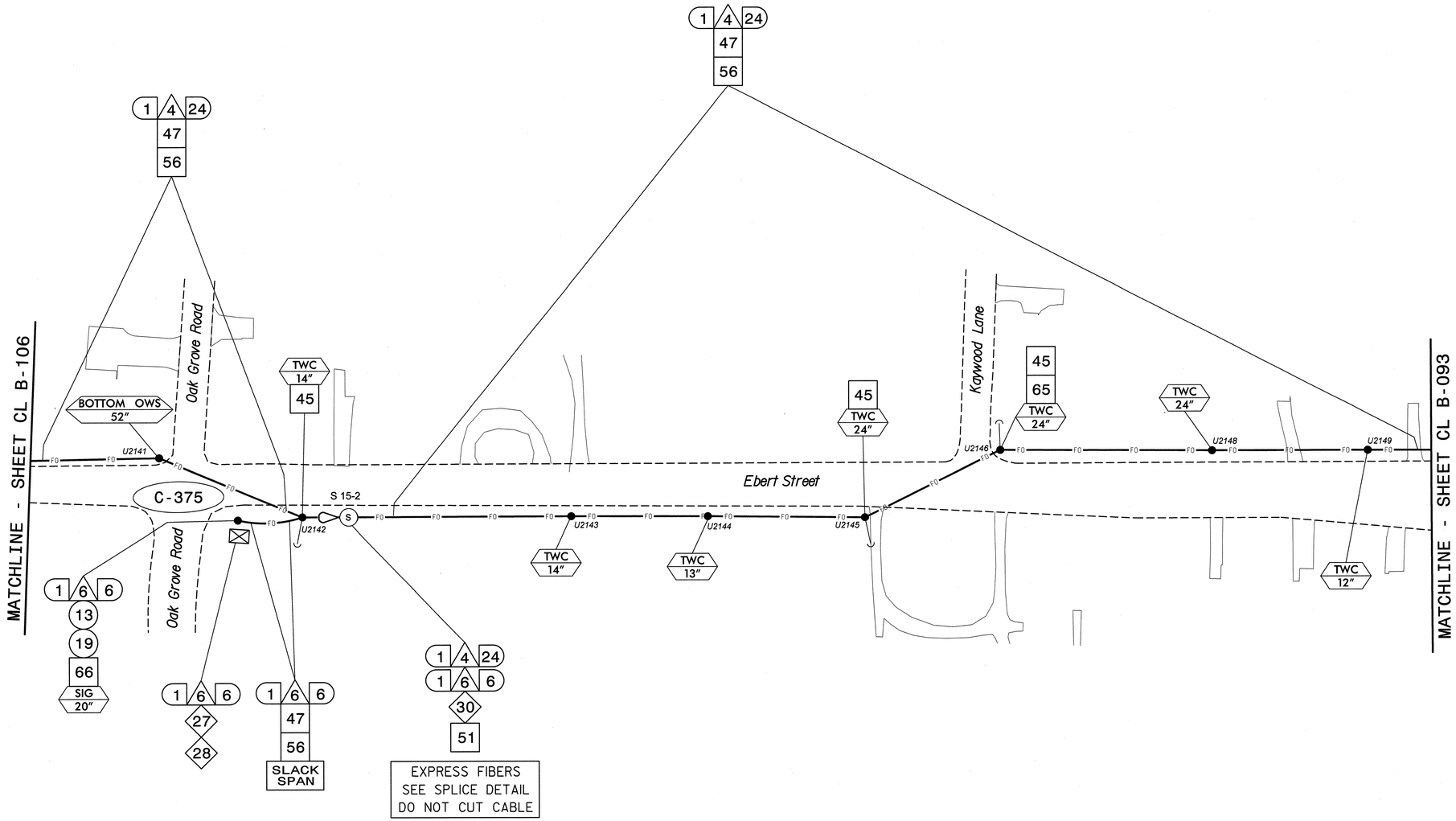
13813

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-107



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SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

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PROJECT REFERENCE NO.	SHEET NO.
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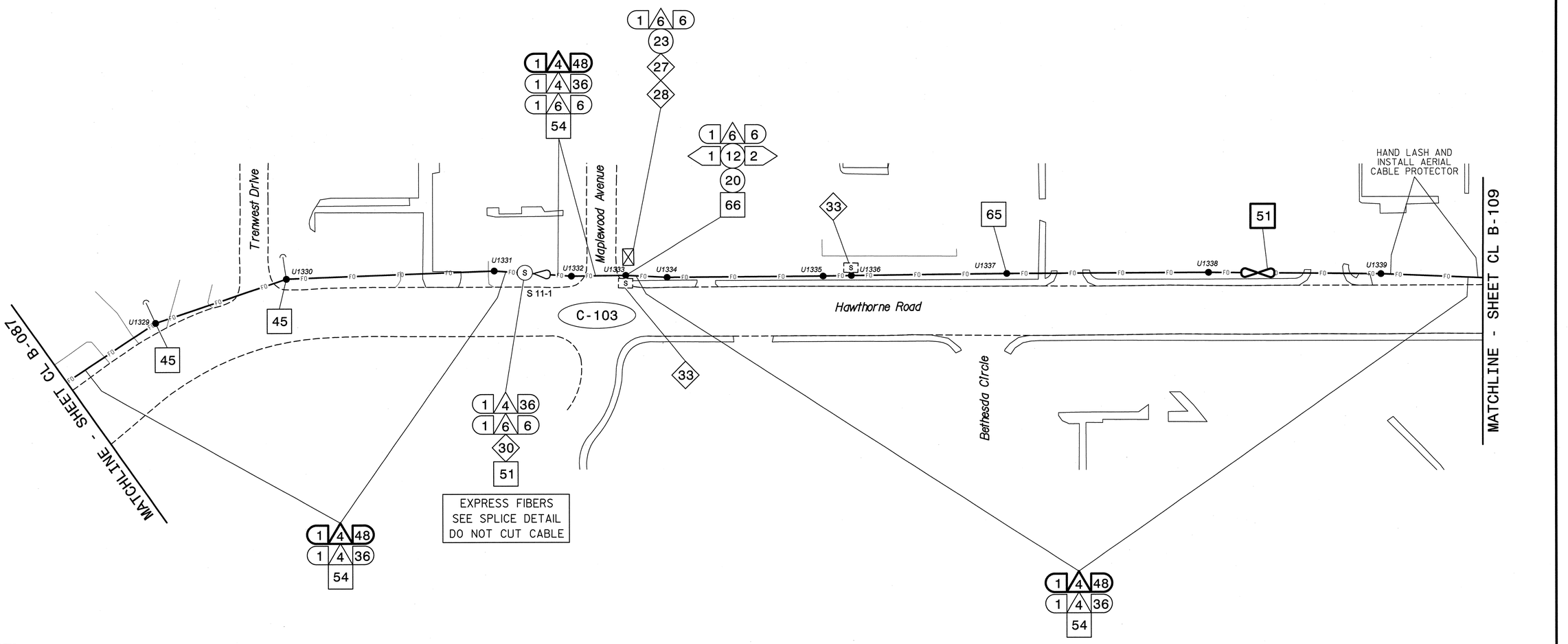

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DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09	Forsyth County	Winston-Salem
PLAN DATE: March 2013	REVIEWED BY: MB Toth	
PREPARED BY: JAW/AJD	REVIEWED BY: LM Moon	

SCALE: 0 50 — 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-108.dgn

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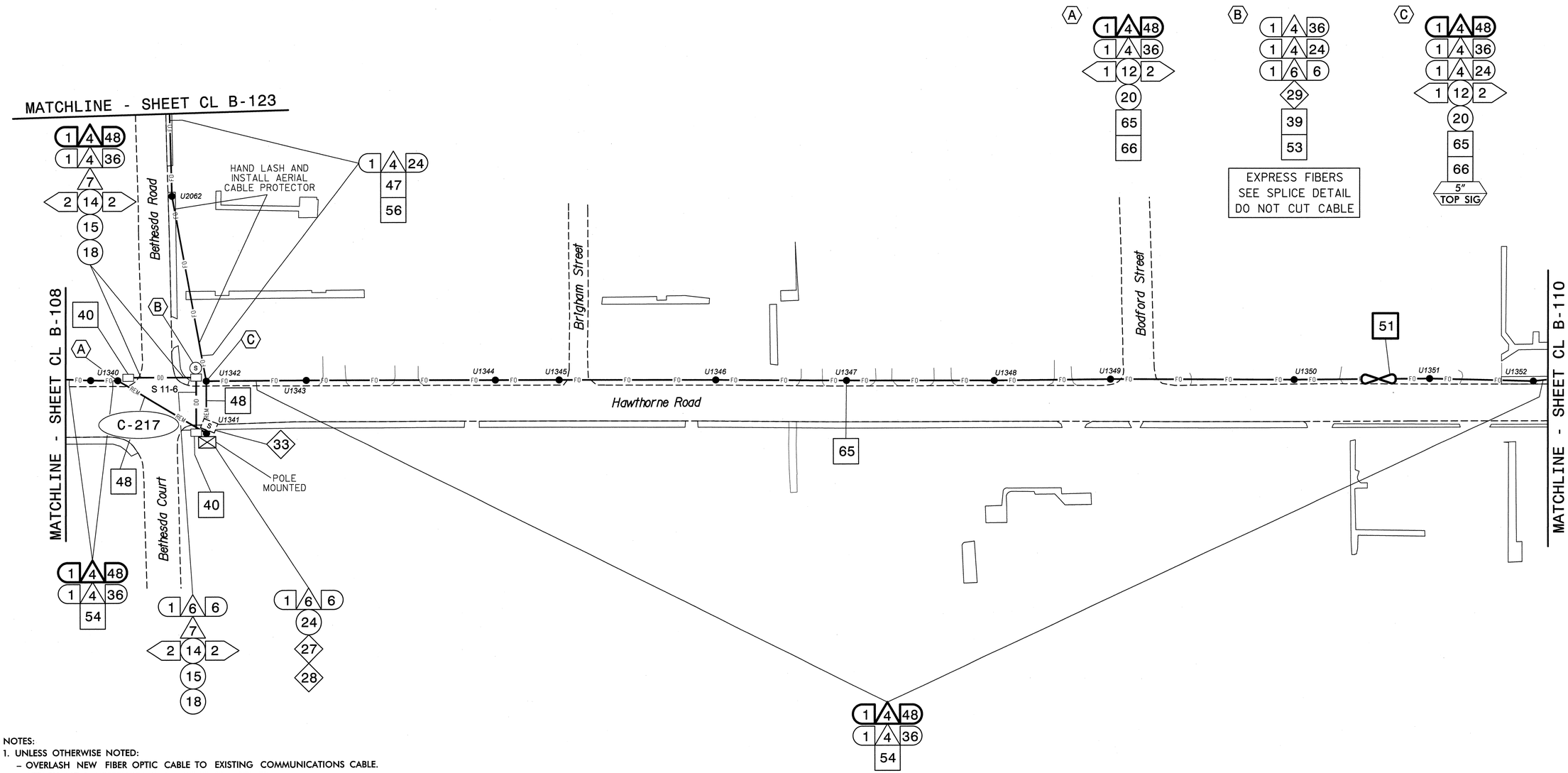
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-109



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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 32243
SIGNATURE DATE
CADD Filename: CL B-109.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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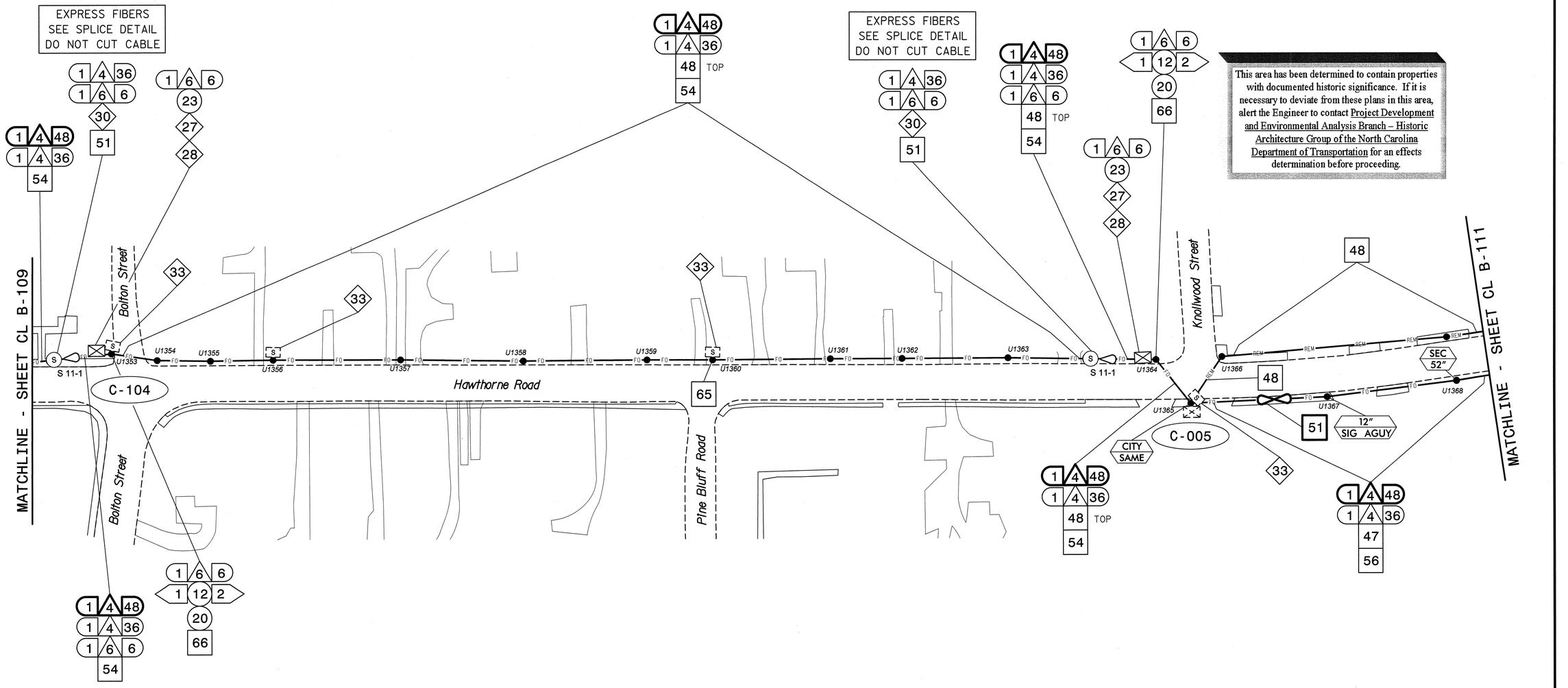

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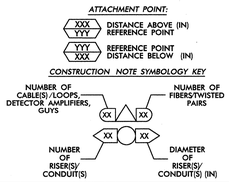

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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09	Forsyth County	Winston-Salem
PLAN DATE: March 2013	REVIEWED BY: MB Toth	
PREPARED BY: JAW/AJD	REVIEWED BY: LM Moon	

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-110.dgn

13-MAR-2013 12:00
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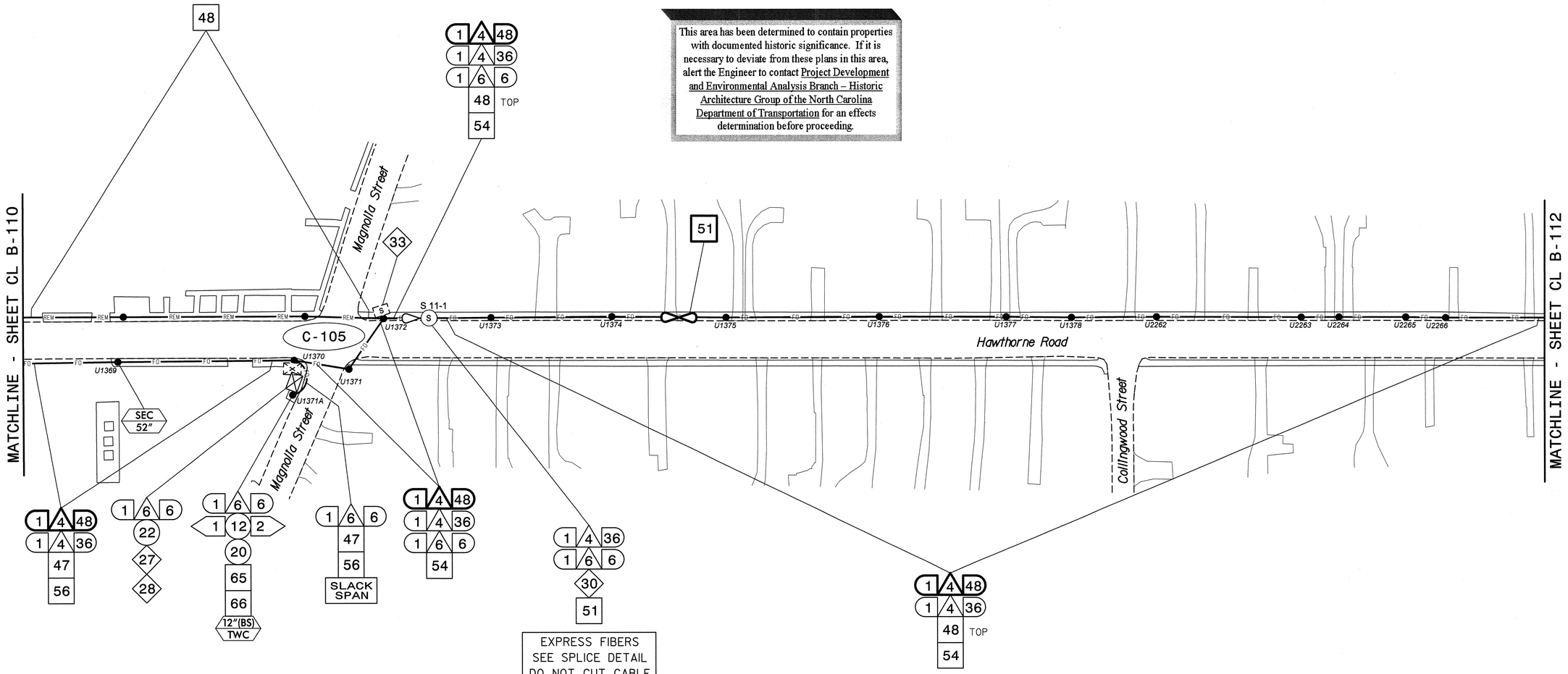
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-111



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NOTES:
1. UNLESS OTHERWISE NOTED:
   - OVERLASH NEW FIBER OPTIC CABLE TO EXISTING COMMUNICATIONS CABLE.
   - ATTACH NEW MESSENGER CABLE 40" BELOW POWER.
   - ATTACH ON FRONT SIDE (FS) OF POLE.
2. SEAL ALL CONDUIT ENDS WITH DUCT AND CONDUIT SEALER, AT ALL JUNCTION BOX/CABINET ENTRANCES.

BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1	INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	13	INSTALL HEAT SHRINK TUBING RETROFIT KIT	25	INSTALL NEW RISER INTO POLE MOUNTED CABINET	37	INSTALL CCTV WOOD POLE
2	INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14	INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26	INSTALL DIGITAL VIDEO ENCODER	38	INSTALL STANDARD SIZE JUNCTION BOX
3	INSTALL CATEGORY 5E CABLE	15	DIRECTIONAL DRILL CONDUIT	27	INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39	INSTALL SPECIAL-SIZED JUNCTION BOX
4	INSTALL SMFO CABLE	16	BORE AND JACK CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	40	INSTALL OVERSIZED JUNCTION BOX
5	INSTALL COAXIAL ANTENNA CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX
6	INSTALL FIBER-OPTIC DROP CABLE	18	INSTALL CABLE(S) IN NEW CONDUIT	30	INSTALL AERIAL SPLICE ENCLOSURE	42	INSTALL WOOD POLE
7	INSTALL TRACER WIRE	19	INSTALL CABLE(S) IN EXISTING RISER(S)	31	INSTALL SPLICE CABINET	43	REMOVE EXISTING WOOD POLE
8	INSTALL CONDUIT UNDERGROUND	20	INSTALL CABLE(S) IN NEW RISER(S)	32	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	44	INSTALL AERIAL GUY ASSEMBLY
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49	REMOVE EXISTING COMMUNICATIONS CABLE	61	INSTALL UNI-DIRECTIONAL ANTENNA				
50	INSTALL WIRELESS DSL	62	NOT USED				
51	INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63	INSTALL 900 MHZ ETHERNET RADIO				
52	INSTALL DELINEATOR MARKER	64	INTERCEPT AND REROUTE EXISTING CONDUITS				
53	STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65	BOND MESSENGER TO POLE GROUND				
54	LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66	BOND RISER TO POLE GROUND				
55	LASH CABLE(S) TO EXISTING MESSENGER CABLE	67	BOND TRACER WIRE TO POLE GROUND				
56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	BOND TRACER WIRE TO EQUIPMENT GROUND BUS				
57	MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB	69	REMOVE EXISTING CCTV CAMERA ASSEMBLY				
58	INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB	70	NOT USED				
59	INSTALL NEW POLE MOUNTED CCTV CABINET	71	NOT USED				
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, State of North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

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SIGNATURE Lisa M. Moon 3-22-13 DATE
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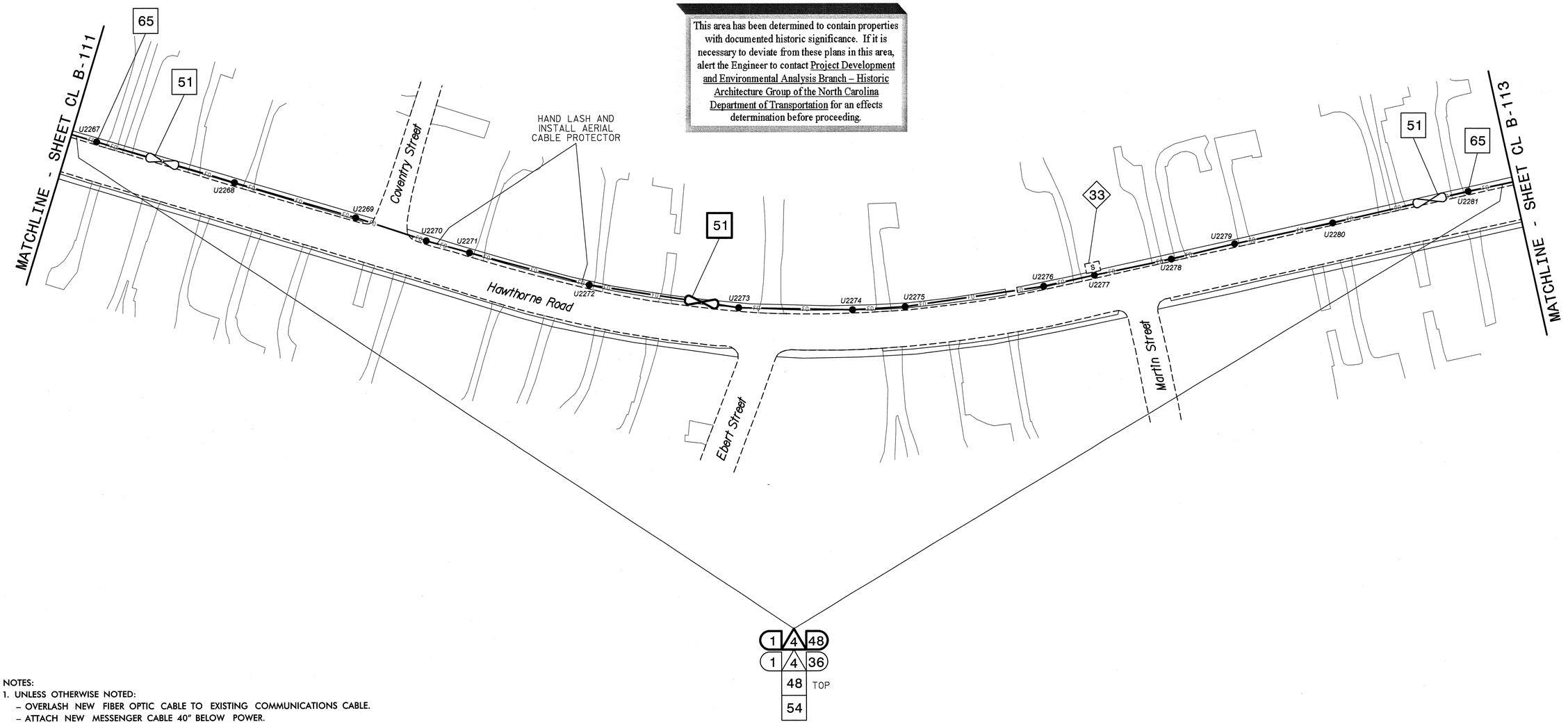

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1 4 48
1 4 36
48 TOP
54

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29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
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Prepared for the Offices of:
Traffic Engineering Branch – Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem
PLAN DATE: March 2013 REVIEWED BY: MB Toth
PREPARED BY: JAW/AJD REVIEWED BY: LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE DATE 3-22-13
CADD Filename: CL B-112.dgn

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C-5224B	CL B-113

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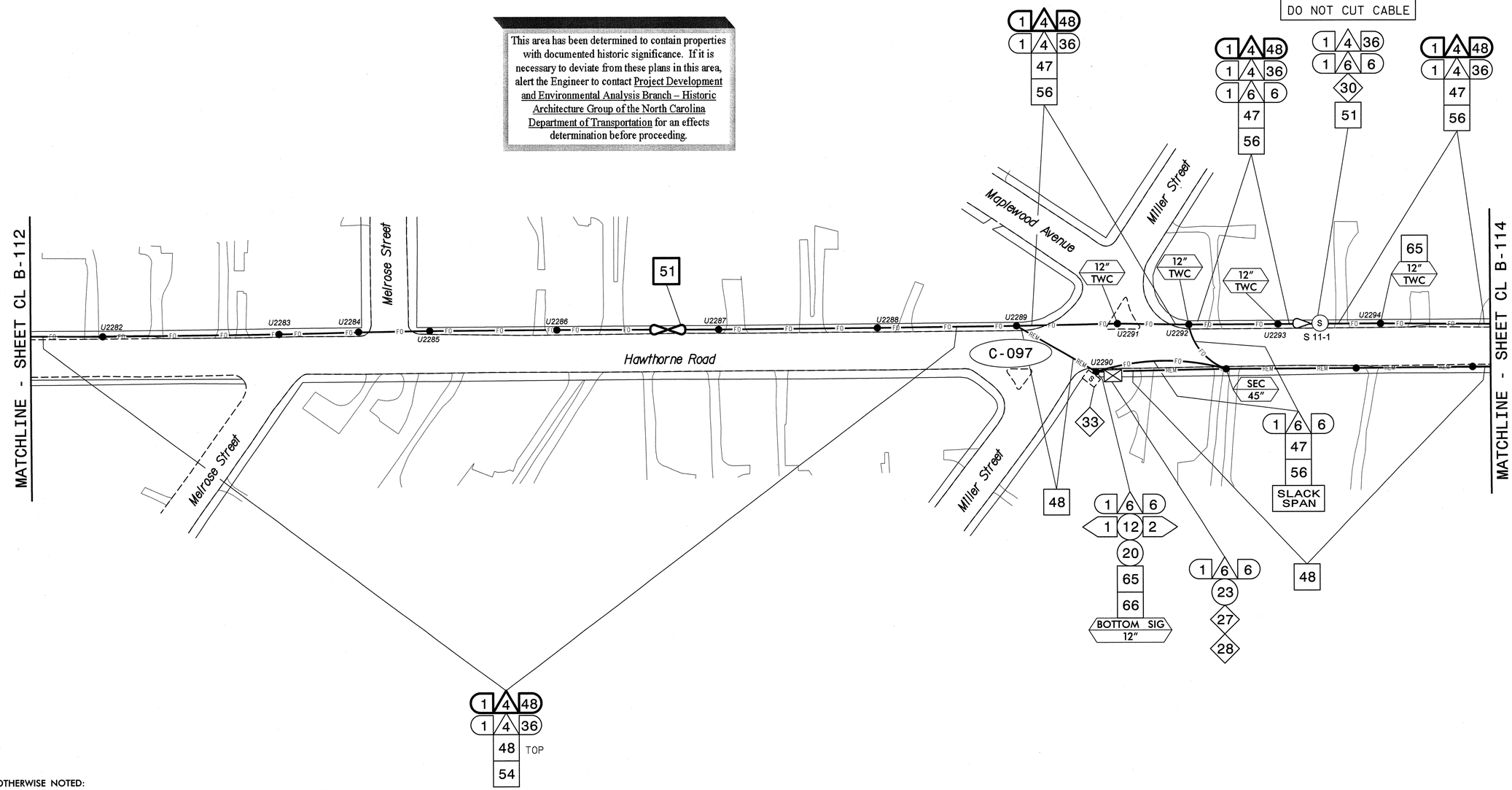
EXPRESS FIBERS
SEE SPLICE DETAIL
DO NOT CUT CABLE



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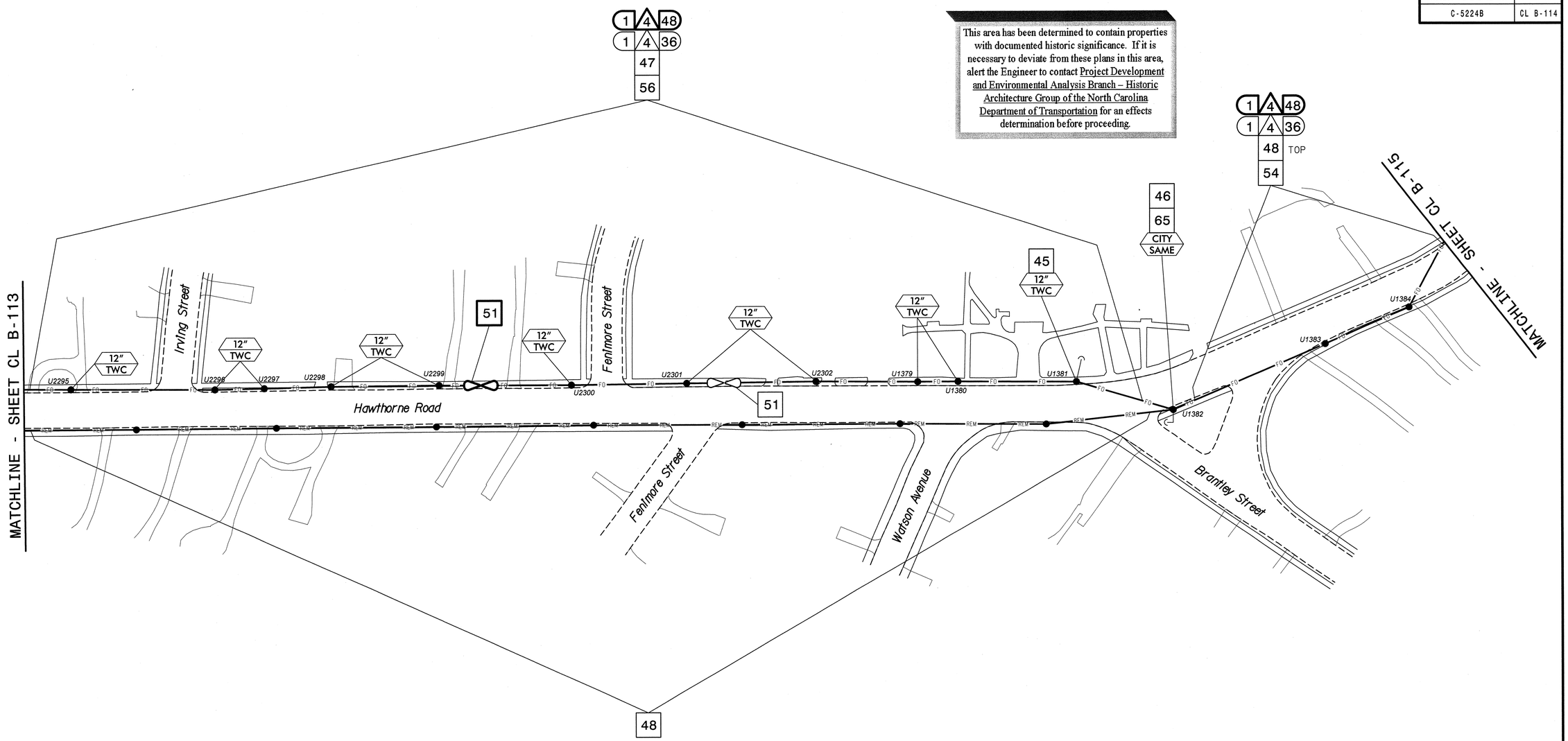
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-114



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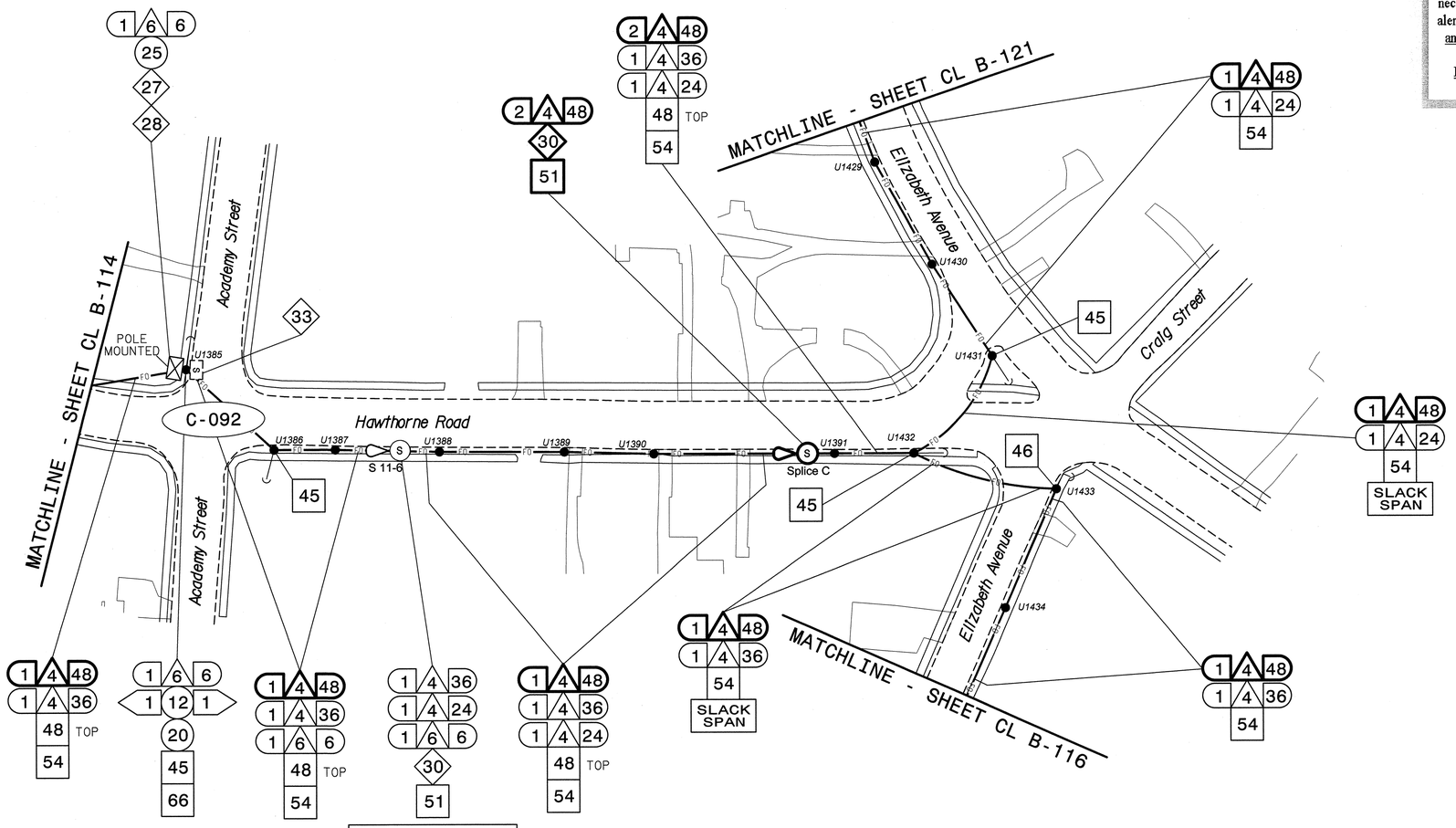

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-115.dgn

13-MAR-2013 12:00
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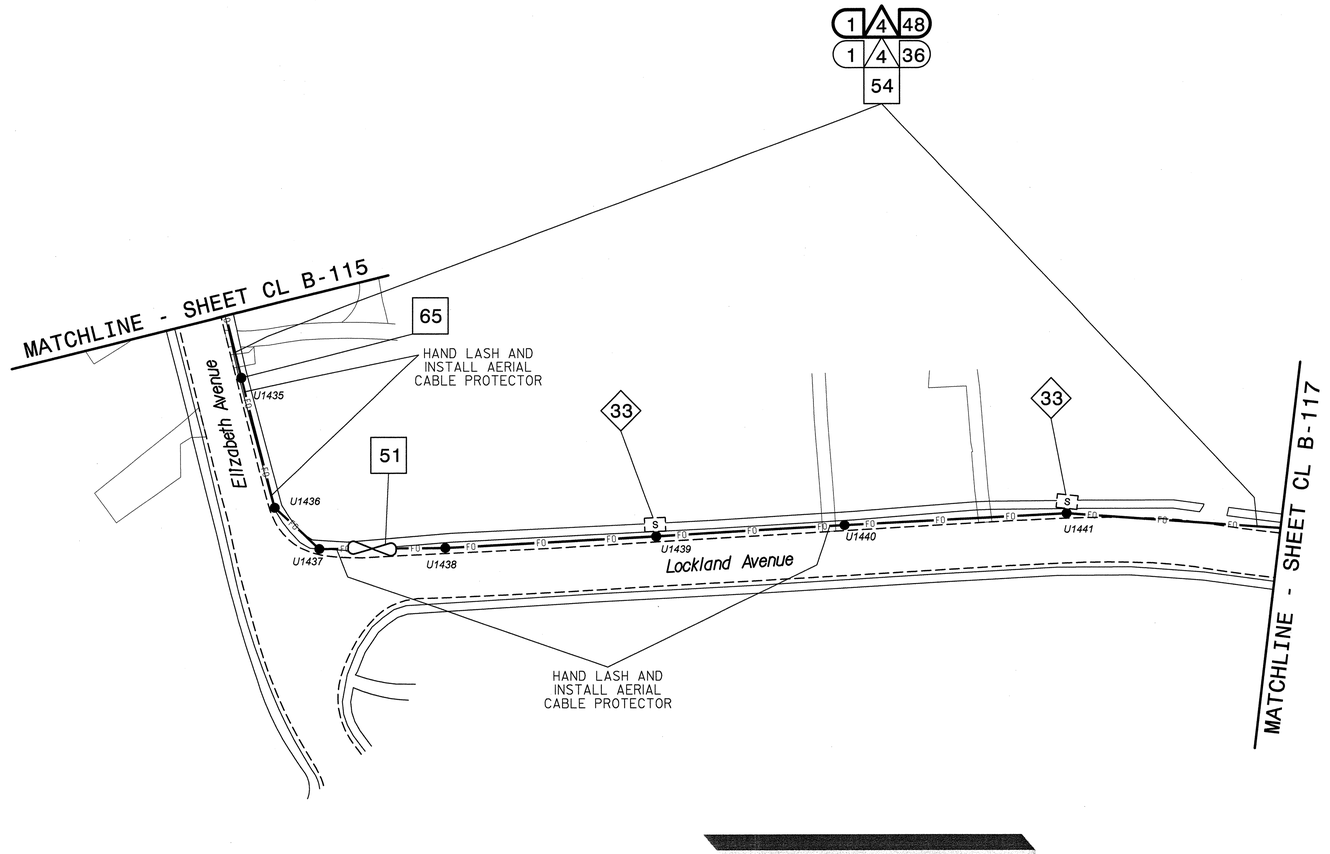
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-116



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750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE DATE 3-22-13
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PROJECT REFERENCE NO.	SHEET NO.
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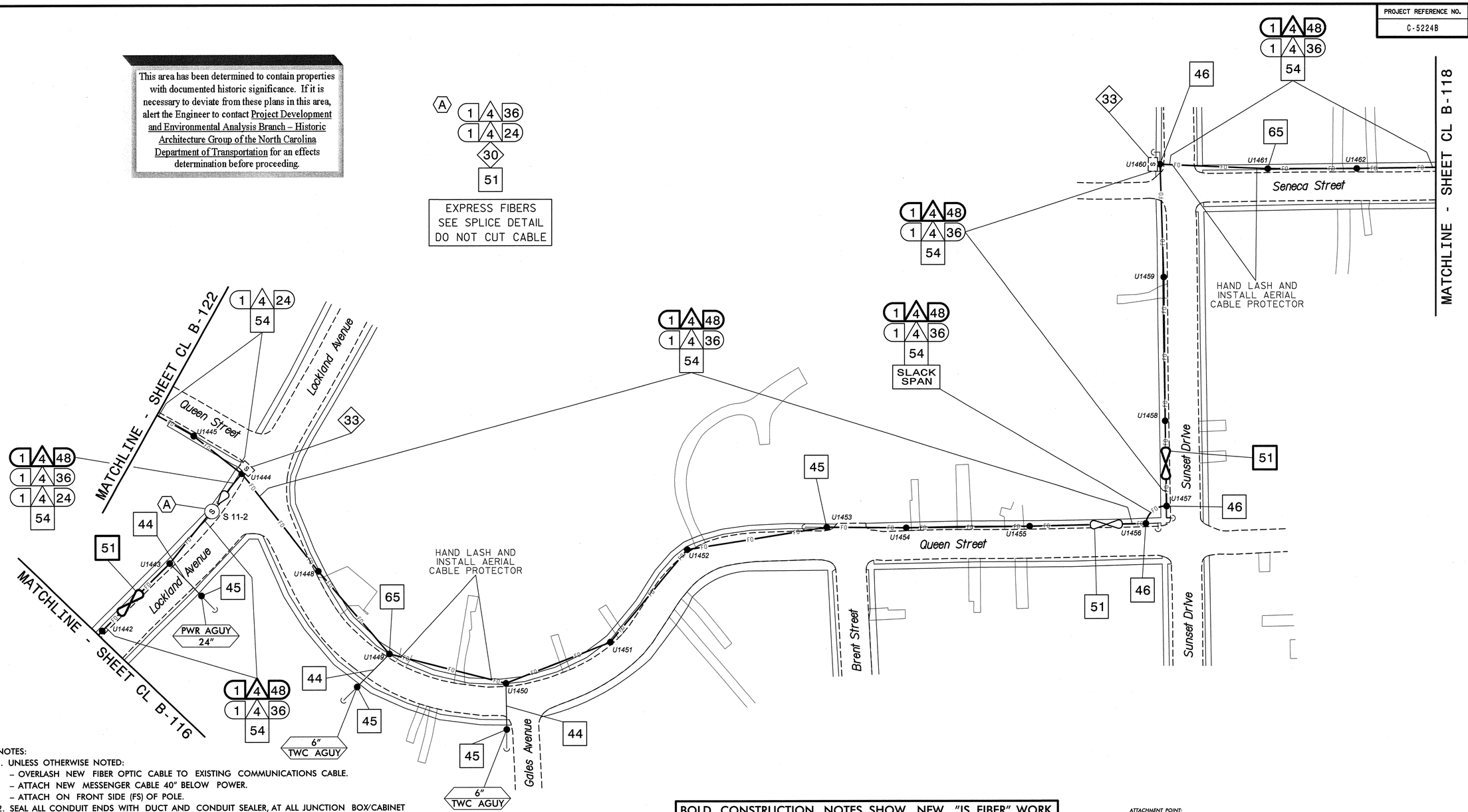
EXPRESS FIBERS
SEE SPLICE DETAIL
DO NOT CUT CABLE



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Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

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13-MAR-2013 12:00
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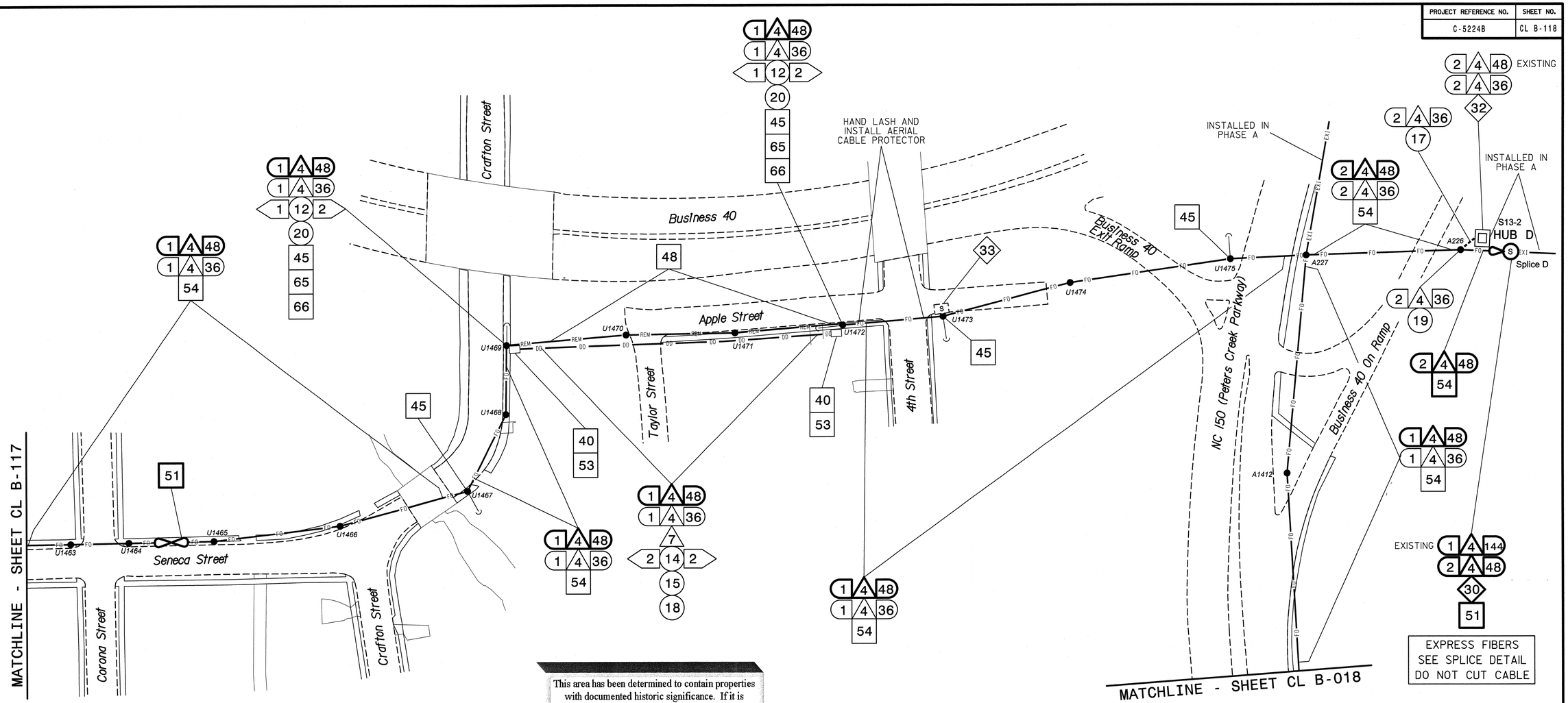
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-118



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CADD Filename: CL B-118.dgn

14-MAR-2013 10:19
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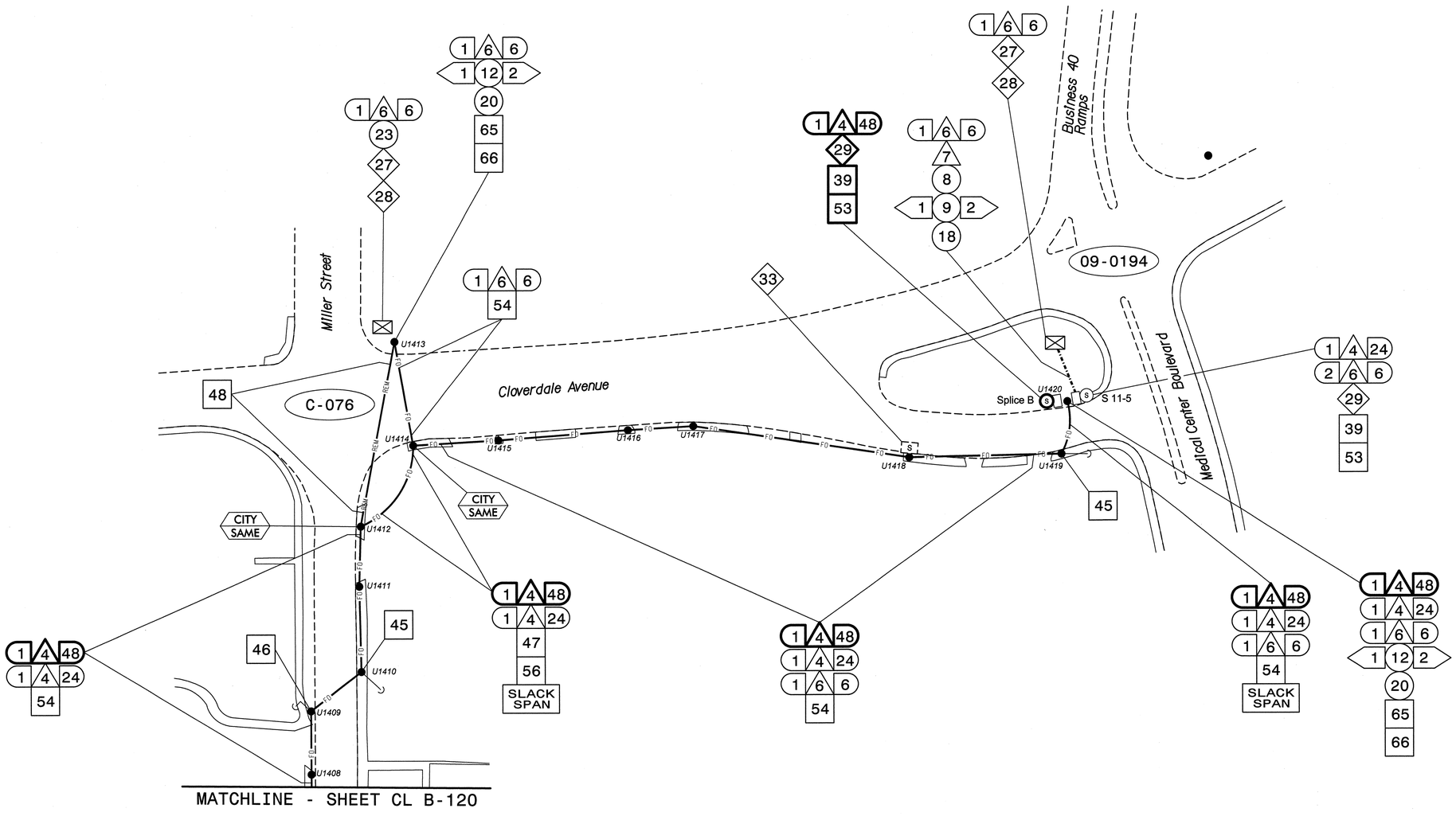
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-119



NOTES:

1. UNLESS OTHERWISE NOTED:
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   - ATTACH NEW MESSENGER CABLE 40" BELOW POWER.
   - ATTACH ON FRONT SIDE (FS) OF POLE.
2. SEAL ALL CONDUIT ENDS WITH DUCT AND CONDUIT SEALER, AT ALL JUNCTION BOX/CABINET ENTRANCES.

BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1. INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
2. INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
3. INSTALL CATEGORY 5E CABLE
4. INSTALL SMFO CABLE
5. INSTALL COAXIAL ANTENNA CABLE
6. INSTALL FIBER-OPTIC DROP CABLE
7. INSTALL TRACER WIRE
8. INSTALL CONDUIT UNDERGROUND
9. INSTALL PVC CONDUIT
10. INSTALL RIGID, GALVANIZED STEEL CONDUIT
11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
12. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
13. INSTALL HEAT SHRINK TUBING RETROFIT KIT
14. INSTALL HIGH DENSITY 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(S)
20. INSTALL CABLE(S) IN NEW RISER(S)
21. INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS
22. INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
23. INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
24. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
25. INSTALL NEW RISER INTO POLE MOUNTED CABINET
26. INSTALL DIGITAL VIDEO ENCODER
27. INSTALL NEW ETHERNET EDGE SWITCH IN CABINET
28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
33. REMOVE EXISTING SPLICE /HUB /CCTV CABINET
34. INSTALL CABINET FOUNDATION
35. REMOVE EXISTING CABINET FOUNDATION
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL CCTV WOOD POLE
38. INSTALL STANDARD SIZE JUNCTION BOX
39. INSTALL SPECIAL-SIZED JUNCTION BOX
40. INSTALL OVERSIZED JUNCTION BOX
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
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
55. LASH CABLE(S) TO EXISTING MESSENGER CABLE
56. LASH CABLE(S) TO NEW MESSENGER CABLE
57. MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB
58. INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB
59. INSTALL NEW POLE MOUNTED CCTV CABINET
60. INSTALL NEW BASE MOUNTED CCTV CABINET
61. INSTALL UNI-DIRECTIONAL ANTENNA
62. NOT USED
63. INSTALL 900 MHZ ETHERNET RADIO
64. INTERCEPT AND REROUTE EXISTING CONDUITS
65. BOND MESSENGER TO POLE GROUND
66. BOND RISER TO POLE GROUND
67. BOND TRACER WIRE TO POLE GROUND
68. BOND TRACER WIRE TO EQUIPMENT GROUND BUS
69. REMOVE EXISTING CCTV CAMERA ASSEMBLY
70. NOT USED
71. NOT USED
72. INSTALL MANAGED ETHERNET SWITCH

ATTACHMENT POINT:

XXX / YYY — DISTANCE ABOVE (IN) REFERENCE POINT

YYY / XXX — REFERENCE POINT DISTANCE BELOW (IN)

CONSTRUCTION NOTE SYMBOLOGY KEY

NUMBER OF CABLE(S) /LOOPS, DETECTOR AMPLIFIERS, GUYS — NUMBER OF FIBERS/TWISTED PAIRS

NUMBER OF RISER(S)/ CONDUIT(S) — DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

SIGNATURE DATE

CADD Filename: CL B-119.dgn

13-MAR-2013 12:00
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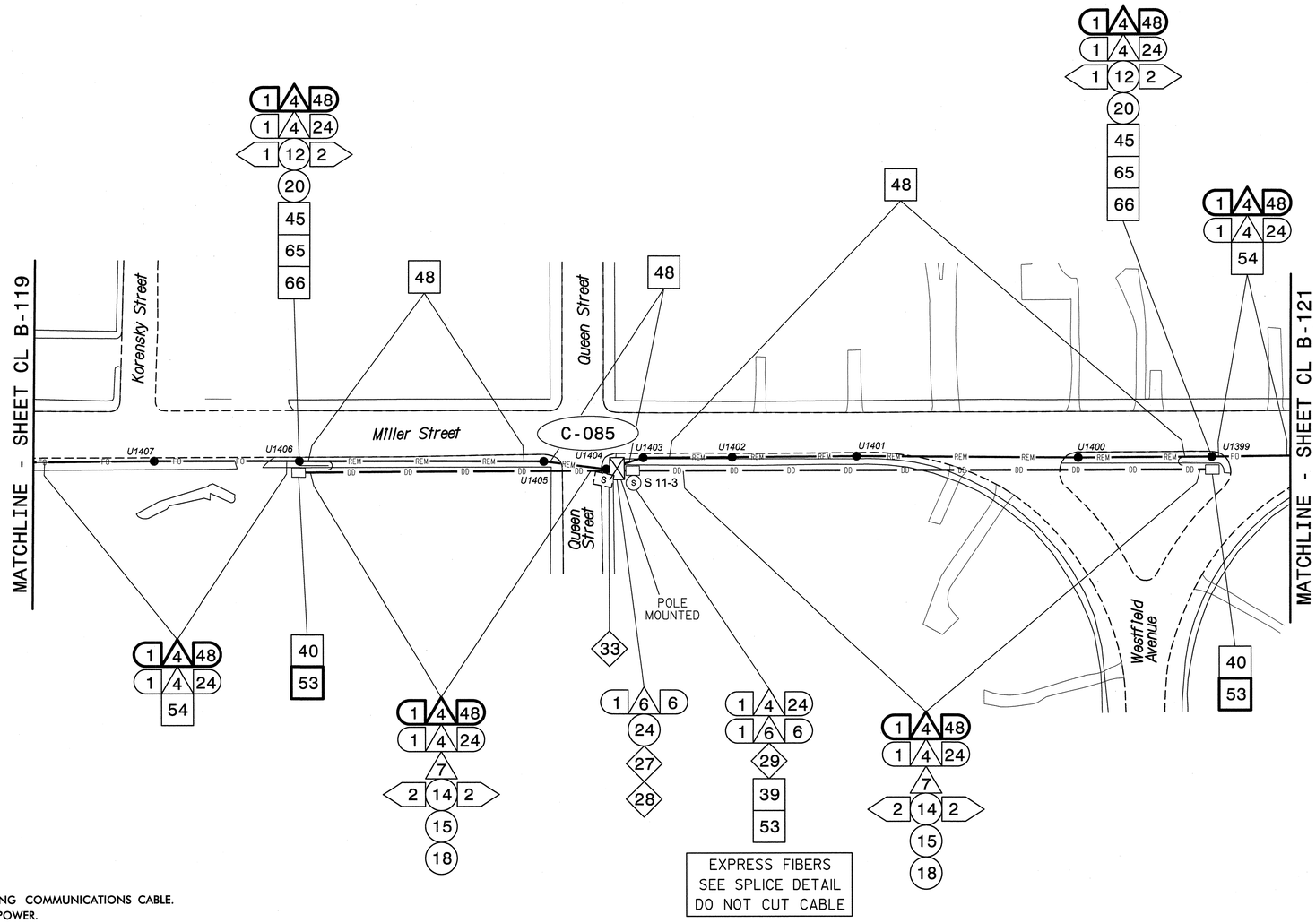
13813

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-120



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BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1	INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	13	INSTALL HEAT SHRINK TUBING RETROFIT KIT	25	INSTALL NEW RISER INTO POLE MOUNTED CABINET	37	INSTALL CCTV WOOD POLE
2	INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14	INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26	INSTALL DIGITAL VIDEO ENCODER	38	INSTALL STANDARD SIZE JUNCTION BOX
3	INSTALL CATEGORY 5E CABLE	15	DIRECTIONAL DRILL CONDUIT	27	INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39	INSTALL SPECIAL-SIZED JUNCTION BOX
4	INSTALL SMFO CABLE	16	BORE AND JACK CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	40	INSTALL OVERSIZED JUNCTION BOX
5	INSTALL COAXIAL ANTENNA CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX
6	INSTALL FIBER-OPTIC DROP CABLE	18	INSTALL CABLE(S) IN NEW CONDUIT	30	INSTALL AERIAL SPLICE ENCLOSURE	42	INSTALL WOOD POLE
7	INSTALL TRACER WIRE	19	INSTALL CABLE(S) IN EXISTING RISER(S)	31	INSTALL SPLICE CABINET	43	REMOVE EXISTING WOOD POLE
8	INSTALL CONDUIT UNDERGROUND	20	INSTALL CABLE(S) IN NEW RISER(S)	32	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	44	INSTALL AERIAL GUY ASSEMBLY
9	INSTALL PVC CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS	33	REMOVE EXISTING SPLICE /HUB /CCTV CABINET	45	INSTALL STANDARD GUY ASSEMBLY
10	INSTALL RIGID, GALVANIZED STEEL CONDUIT	22	INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	46	INSTALL SIDEWALK GUY ASSEMBLY
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12	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	48	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE

49	REMOVE EXISTING COMMUNICATIONS CABLE	61	INSTALL UNI-DIRECTIONAL ANTENNA				
50	INSTALL WIRELESS DSL	62	NOT USED				
51	INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63	INSTALL 900 MHZ ETHERNET RADIO				
52	INSTALL DELINEATOR MARKER	64	INTERCEPT AND REROUTE EXISTING CONDUITS				
53	STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65	BOND MESSENGER TO POLE GROUND				
54	LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66	BOND RISER TO POLE GROUND				
55	LASH CABLE(S) TO EXISTING MESSENGER CABLE	67	BOND TRACER WIRE TO POLE GROUND				
56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	BOND TRACER WIRE TO EQUIPMENT GROUND BUS				
57	MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB	69	REMOVE EXISTING CCTV CAMERA ASSEMBLY				
58	INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB	70	NOT USED				
59	INSTALL NEW POLE MOUNTED CCTV CABINET	71	NOT USED				
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This area has been determined to contain properties with documented historic significance. If it is necessary to deviate from these plans in this area, alert the Engineer to contact Project Development and Environmental Analysis Branch – Historic Architecture Group of the North Carolina Department of Transportation for an effects determination before proceeding.

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: North Carolina Department of Transportation, Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 | Forsyth County | Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-120.dgn

13-MAR-2013 12:00
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13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-121

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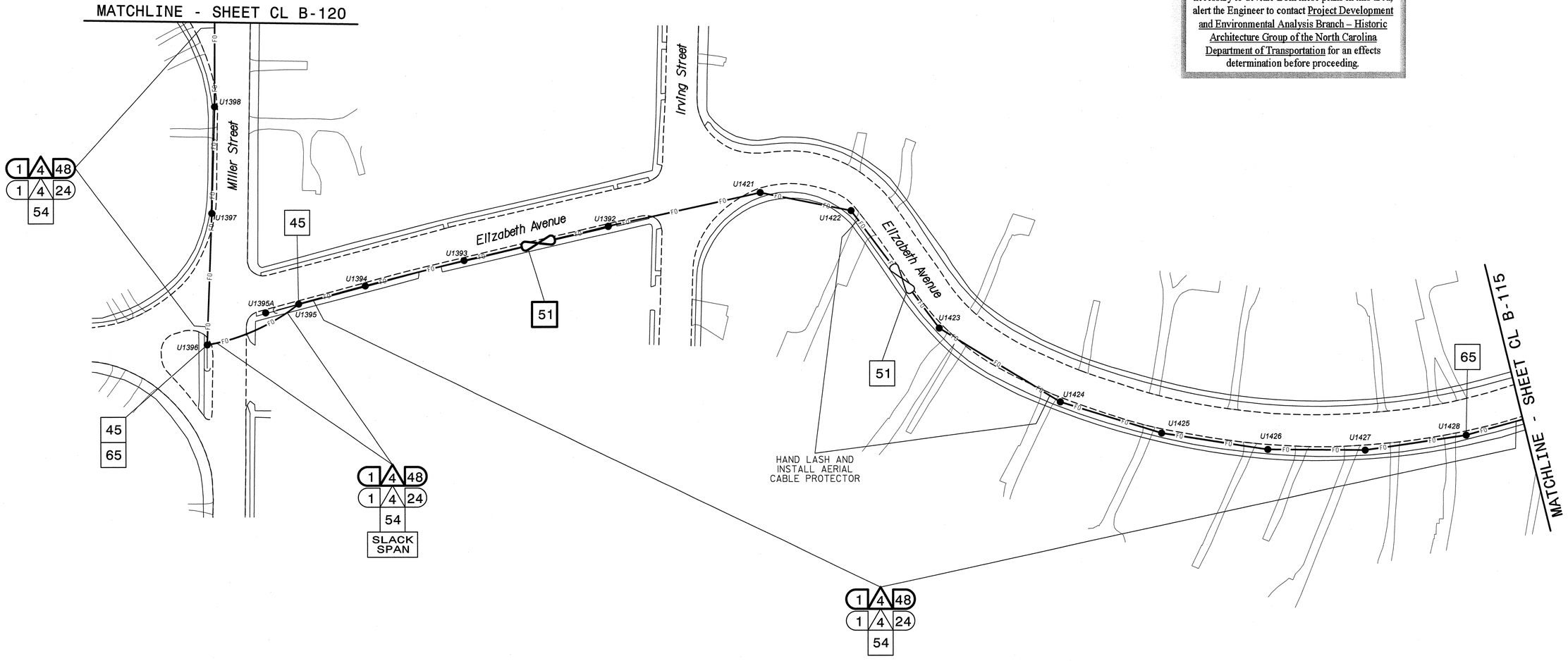

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Prepared for the Offices of: Transportation Mobility and Safety Division, STATE OF NORTH CAROLINA, DEPARTMENT OF TRANSPORTATION, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M. Moon 3/22/13 DATE
CADD Filename: CL B-121.dgn

13-MAR-2013 12:00
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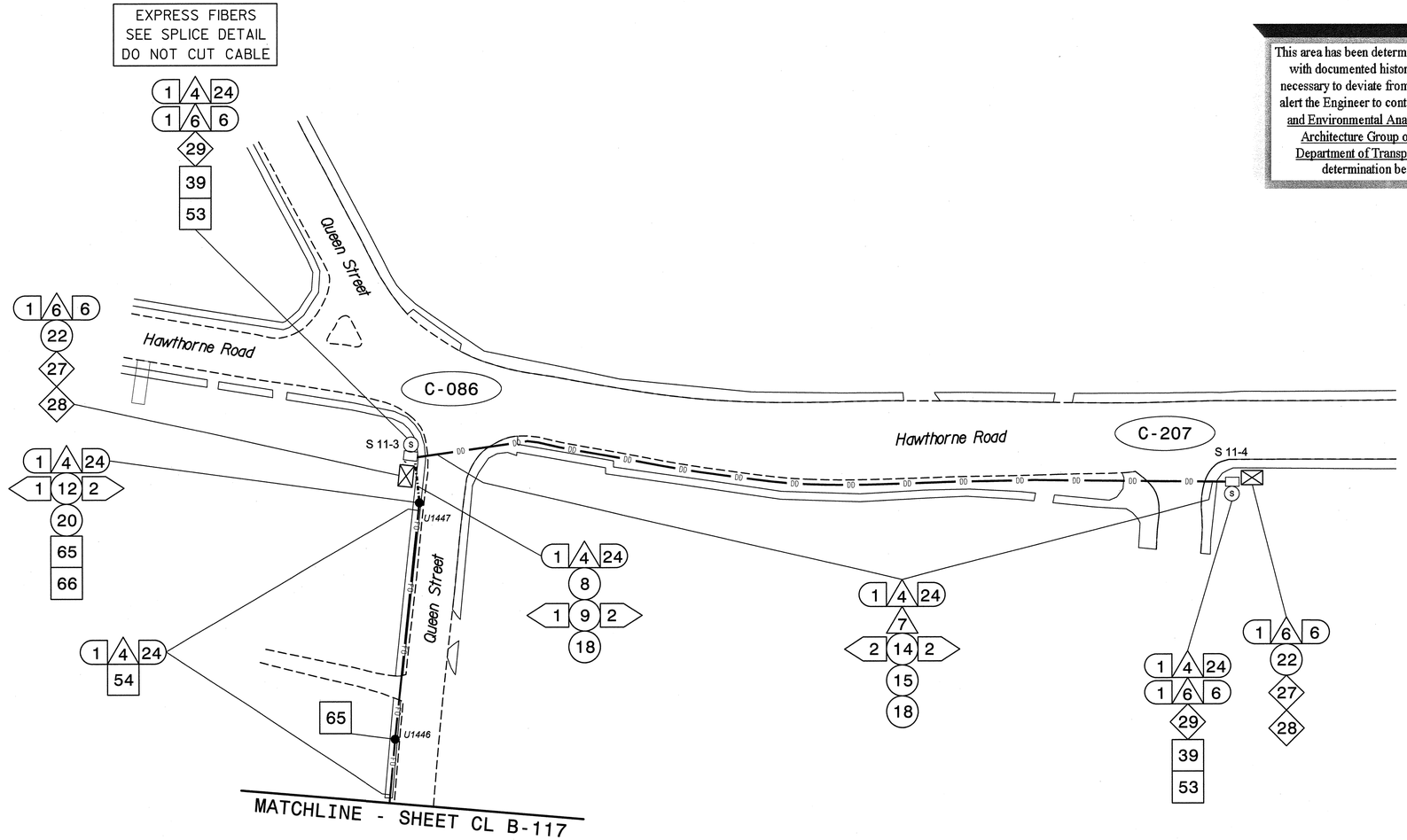
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-122



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Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE

CADD Filename: CL B-122.dgn

13-MAR-2013 12:00
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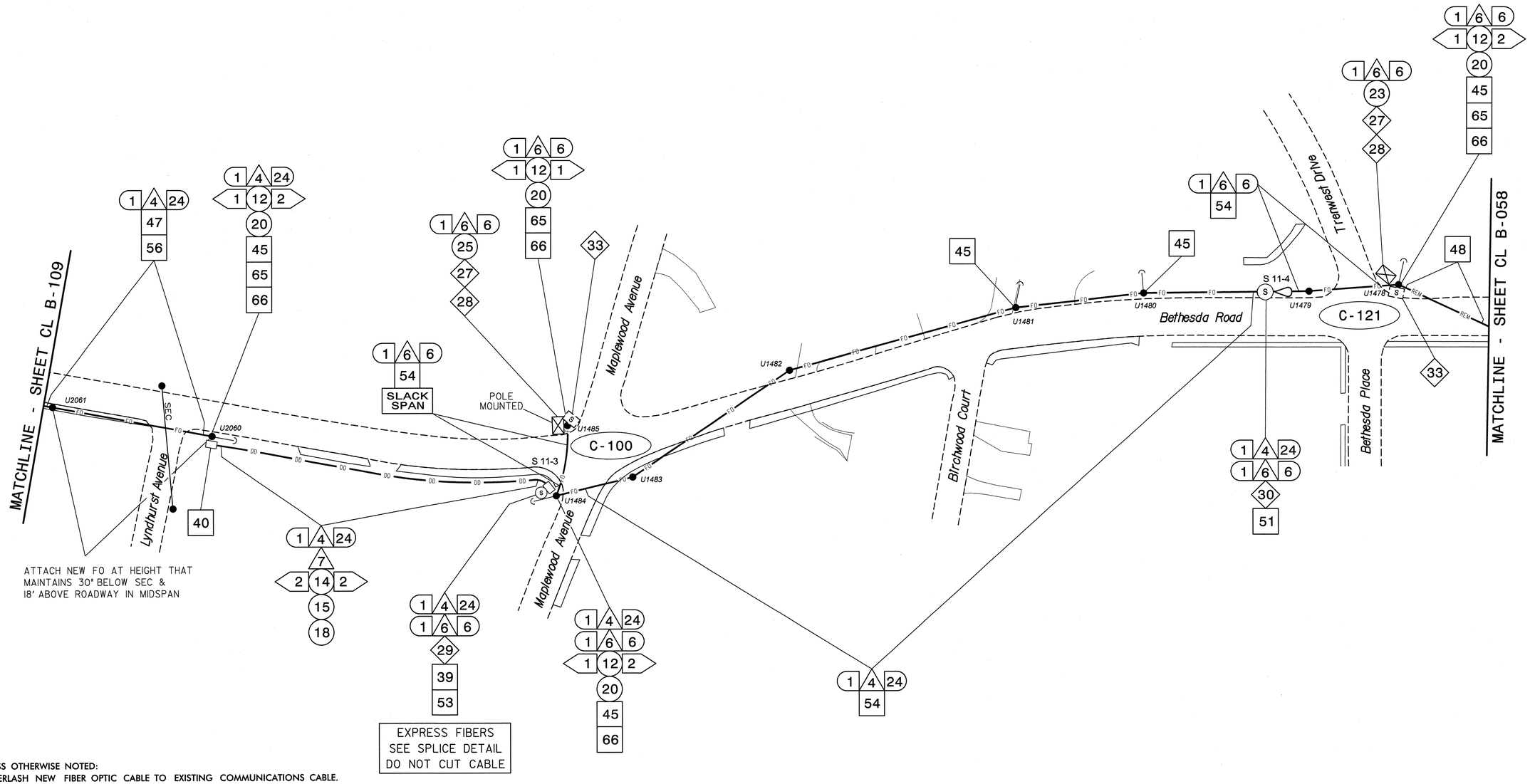
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-123



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2. SEAL ALL CONDUIT ENDS WITH DUCT AND CONDUIT SEALER, AT ALL JUNCTION BOX/CABINET ENTRANCES.

BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1. INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
2. INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
3. INSTALL CATEGORY 5E CABLE
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5. INSTALL COAXIAL ANTENNA CABLE
6. INSTALL FIBER-OPTIC DROP CABLE
7. INSTALL TRACER WIRE
8. INSTALL CONDUIT UNDERGROUND
9. INSTALL PVC CONDUIT
10. INSTALL RIGID, GALVANIZED STEEL CONDUIT
11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
12. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
13. INSTALL HEAT SHRINK TUBING RETROFIT KIT
14. INSTALL HIGH DENSITY POLYETHYLENE CONDUIT
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23. INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
24. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
25. INSTALL NEW RISER INTO POLE MOUNTED CABINET
26. INSTALL DIGITAL VIDEO ENCODER
27. INSTALL NEW ETHERNET EDGE SWITCH IN CABINET
28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
33. REMOVE EXISTING SPLICE /HUB /CCTV CABINET
34. INSTALL CABINET FOUNDATION
35. REMOVE EXISTING CABINET FOUNDATION
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL CCTV WOOD POLE
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39. INSTALL SPECIAL-SIZED JUNCTION BOX
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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
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
55. LASH CABLE(S) TO EXISTING MESSENGER CABLE
56. LASH CABLE(S) TO NEW MESSENGER CABLE
57. MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB
58. INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB
59. INSTALL NEW POLE MOUNTED CCTV CABINET
60. INSTALL NEW BASE MOUNTED CCTV CABINET
61. INSTALL UNI-DIRECTIONAL ANTENNA
62. NOT USED
63. INSTALL 900 MHZ ETHERNET RADIO
64. INTERCEPT AND REROUTE EXISTING CONDUITS
65. BOND MESSENGER TO POLE GROUND
66. BOND RISER TO POLE GROUND
67. BOND TRACER WIRE TO POLE GROUND
68. BOND TRACER WIRE TO EQUIPMENT GROUND BUS
69. REMOVE EXISTING CCTV CAMERA ASSEMBLY
70. NOT USED
71. NOT USED
72. INSTALL MANAGED ETHERNET SWITCH

ATTACHMENT POINT:
XXX DISTANCE ABOVE (IN) REFERENCE POINT
YYY REFERENCE POINT DISTANCE BELOW (IN) XXX

CONSTRUCTION NOTE SYMBOLOGY KEY
NUMBER OF CABLE(S) /LOOPS, DETECTOR AMPLIFIERS, GUYS — NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S) — DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Transportation Mobility and Safety Division, STATE OF NORTH CAROLINA, DEPARTMENT OF TRANSPORTATION, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-123.dgn

13-MAR-2013 12:01
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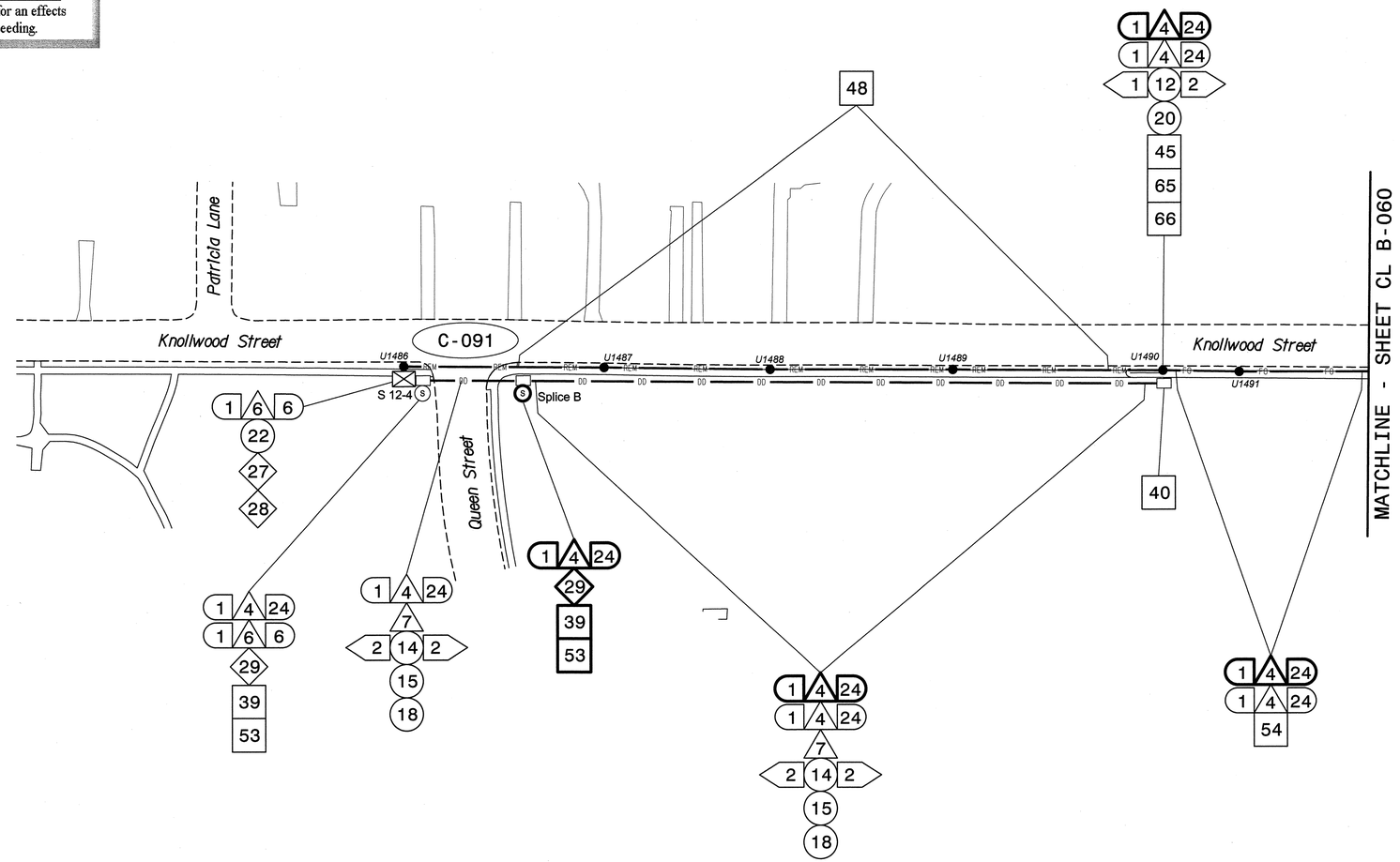
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-124

This area has been determined to contain properties with documented historic significance. If it is necessary to deviate from these plans in this area, alert the Engineer to contact Project Development and Environmental Analysis Branch – Historic Architecture Group of the North Carolina Department of Transportation for an effects determination before proceeding.



NOTES:
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5 INSTALL COAXIAL ANTENNA CABLE	17 INSTALL CABLE(S) IN EXISTING CONDUIT	29 INSTALL UNDERGROUND SPLICE ENCLOSURE	41 REMOVE EXISTING JUNCTION BOX	53 STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65 BOND MESSENGER TO POLE GROUND
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7 INSTALL TRACER WIRE	19 INSTALL CABLE(S) IN EXISTING RISER(S)	31 INSTALL SPLICE CABINET	43 REMOVE EXISTING WOOD POLE	55 LASH CABLE(S) TO EXISTING MESSENGER CABLE	67 BOND TRACER WIRE TO POLE GROUND
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ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

Lisa M. Moon 3/22/13
SIGNATURE DATE

CADD Filename: CL B-124.dgn

13-MAR-2013 12:01
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13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-125

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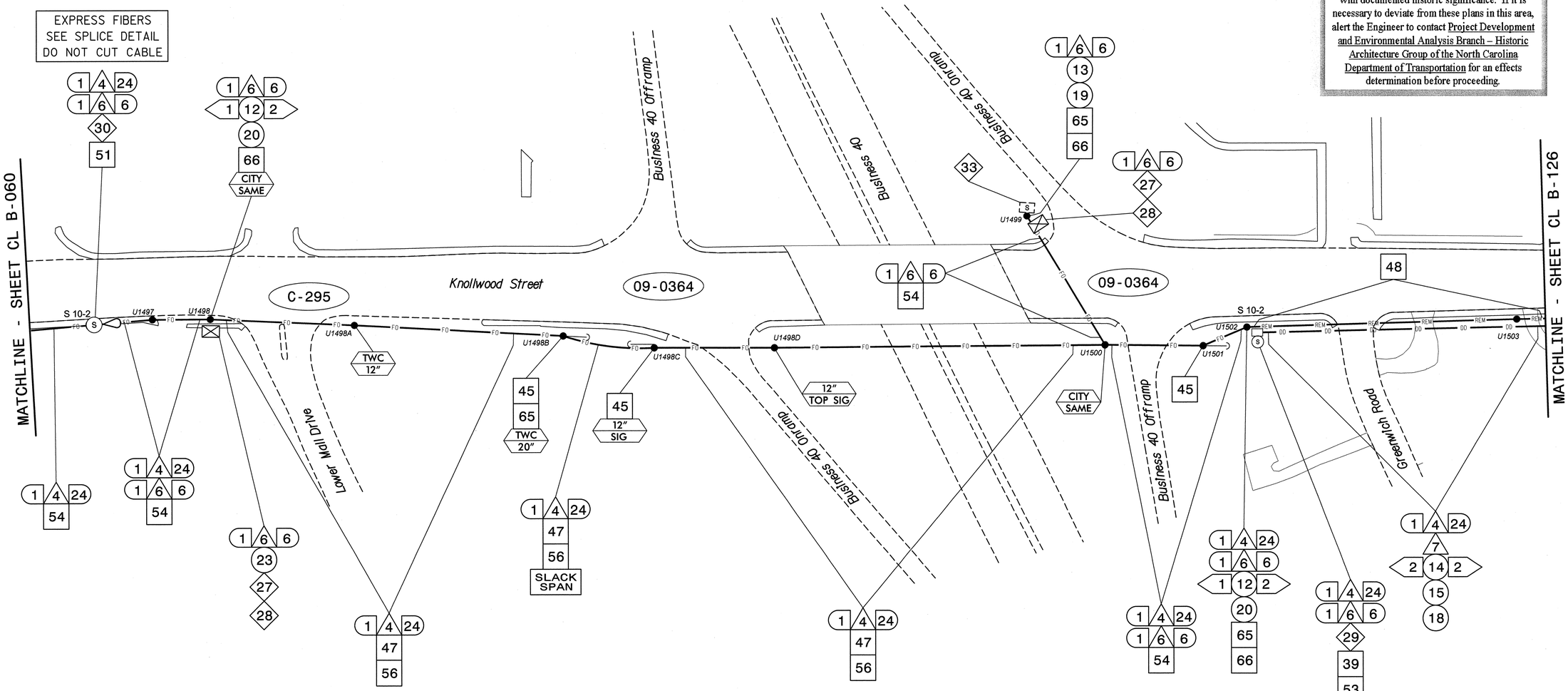

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: Traffic Engineering Branch, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LW Moon

REVISIONS	INIT.	DATE

SEAL 022516 NORTH CAROLINA PROFESSIONAL ENGINEER LISA M. MOON
SIGNATURE DATE
CADD Filename: CL B-125.dgn

13-MAR-2013 12:01
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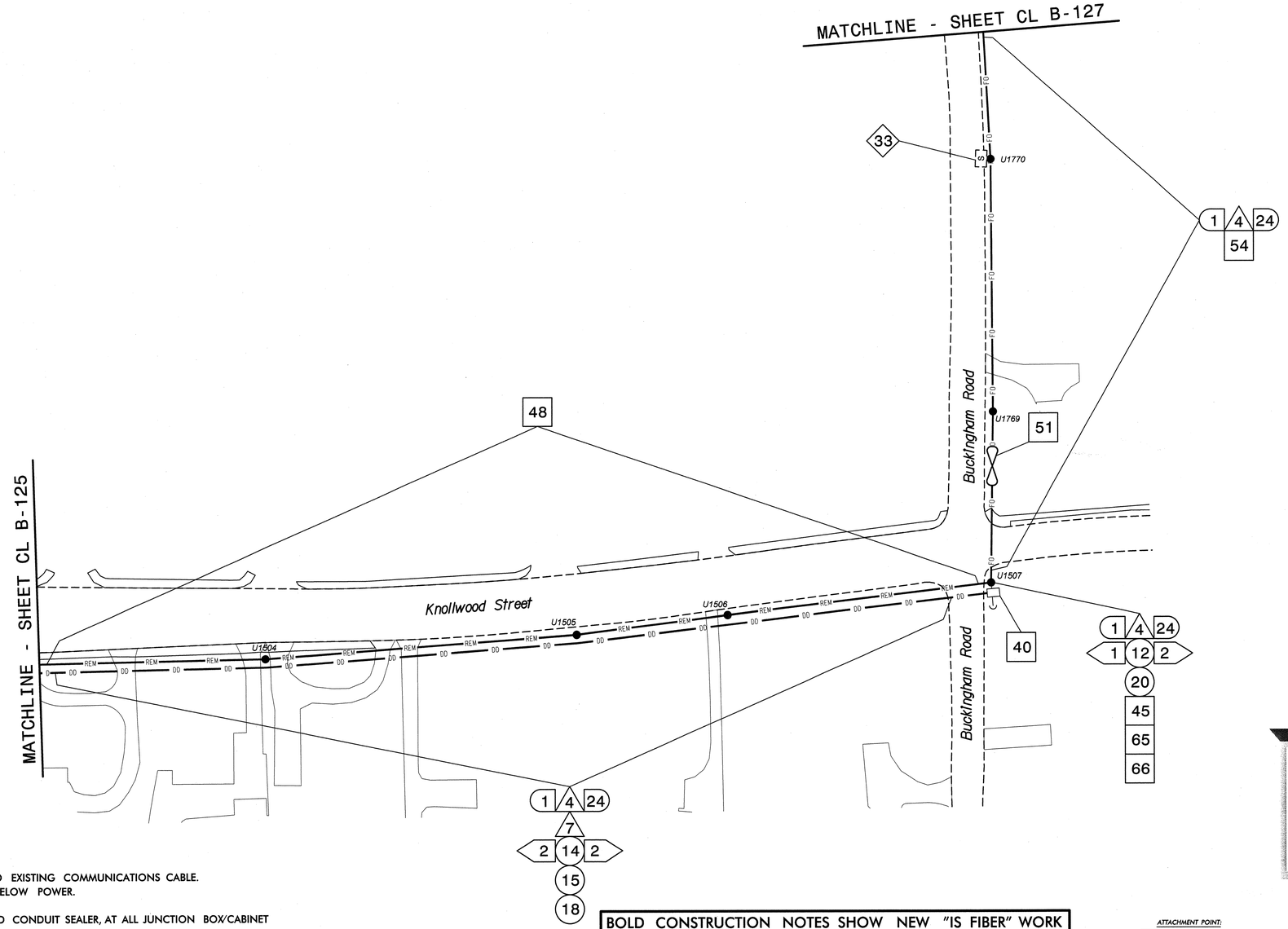
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-126



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SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3/22/13
SIGNATURE DATE

CADD Filename: CL B-126.dgn

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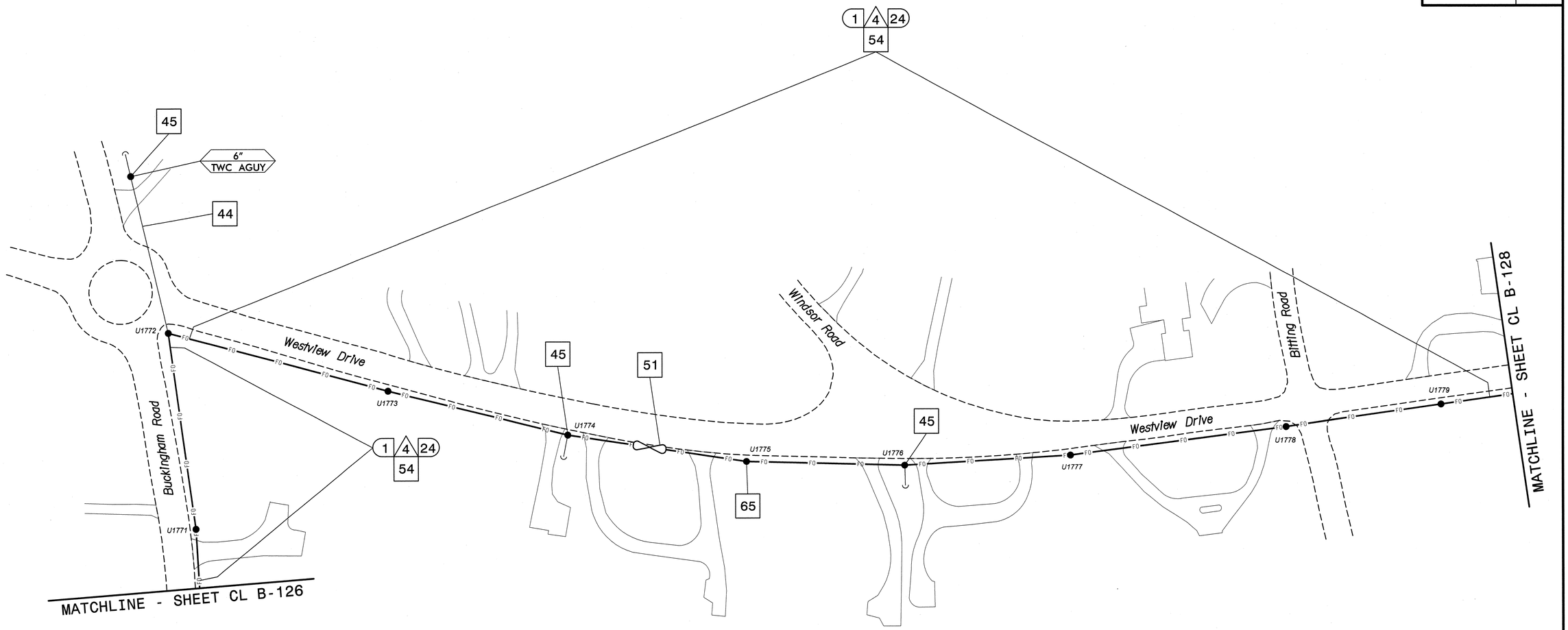
13853

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-127



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12. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
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23. INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
24. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
25. INSTALL NEW RISER INTO POLE MOUNTED CABINET
26. INSTALL DIGITAL VIDEO ENCODER
27. INSTALL NEW ETHERNET EDGE SWITCH IN CABINET
28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
33. REMOVE EXISTING SPLICE /HUB /CCTV CABINET
34. INSTALL CABINET FOUNDATION
35. REMOVE EXISTING CABINET FOUNDATION
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL CCTV WOOD POLE
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41. REMOVE EXISTING JUNCTION BOX
42. INSTALL WOOD POLE
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44. INSTALL AERIAL GUY ASSEMBLY
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46. INSTALL SIDEWALK GUY ASSEMBLY
47. INSTALL MESSENGER CABLE
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
55. LASH CABLE(S) TO EXISTING MESSENGER CABLE
56. LASH CABLE(S) TO NEW MESSENGER CABLE
57. MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB
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59. INSTALL NEW POLE MOUNTED CCTV CABINET
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61. INSTALL UNI-DIRECTIONAL ANTENNA
62. NOT USED
63. INSTALL 900 MHZ ETHERNET RADIO
64. INTERCEPT AND REROUTE EXISTING CONDUITS
65. BOND MESSENGER TO POLE GROUND
66. BOND RISER TO POLE GROUND
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69. REMOVE EXISTING CCTV CAMERA ASSEMBLY
70. NOT USED
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ATTACHMENT POINT:
XXX / YYY — DISTANCE ABOVE (IN) / REFERENCE POINT
YYY / XXX — REFERENCE POINT / DISTANCE BELOW (IN)

CONSTRUCTION NOTE SYMBOLOGY KEY
NUMBER OF CABLE(S)/LOOPS, DETECTOR AMPLIFIERS, GUYS
NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
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ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
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(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-127.dgn

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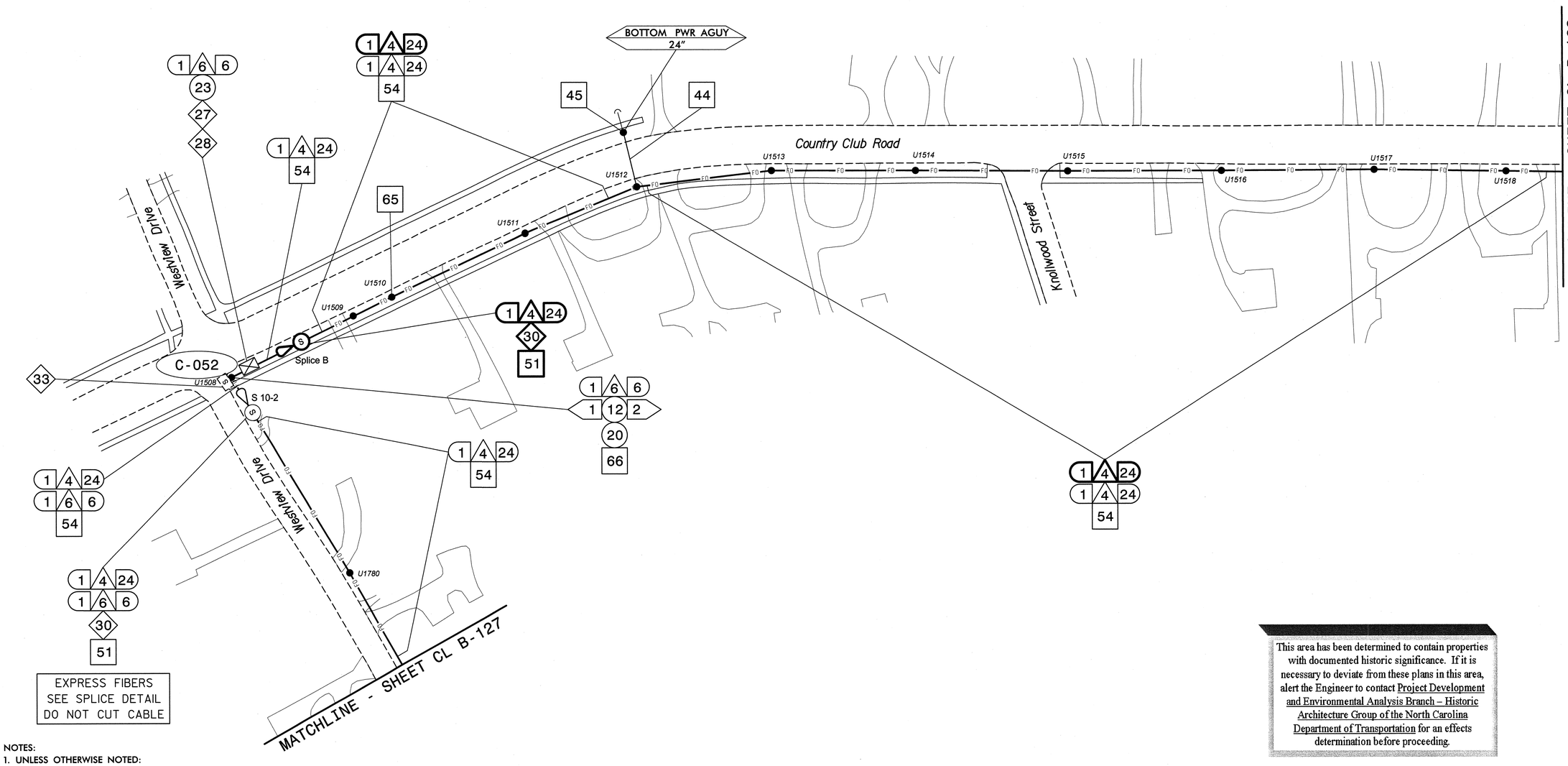
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-128



NOTES:
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Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE DATE 3/27/13
CADD Filename: CL B-128.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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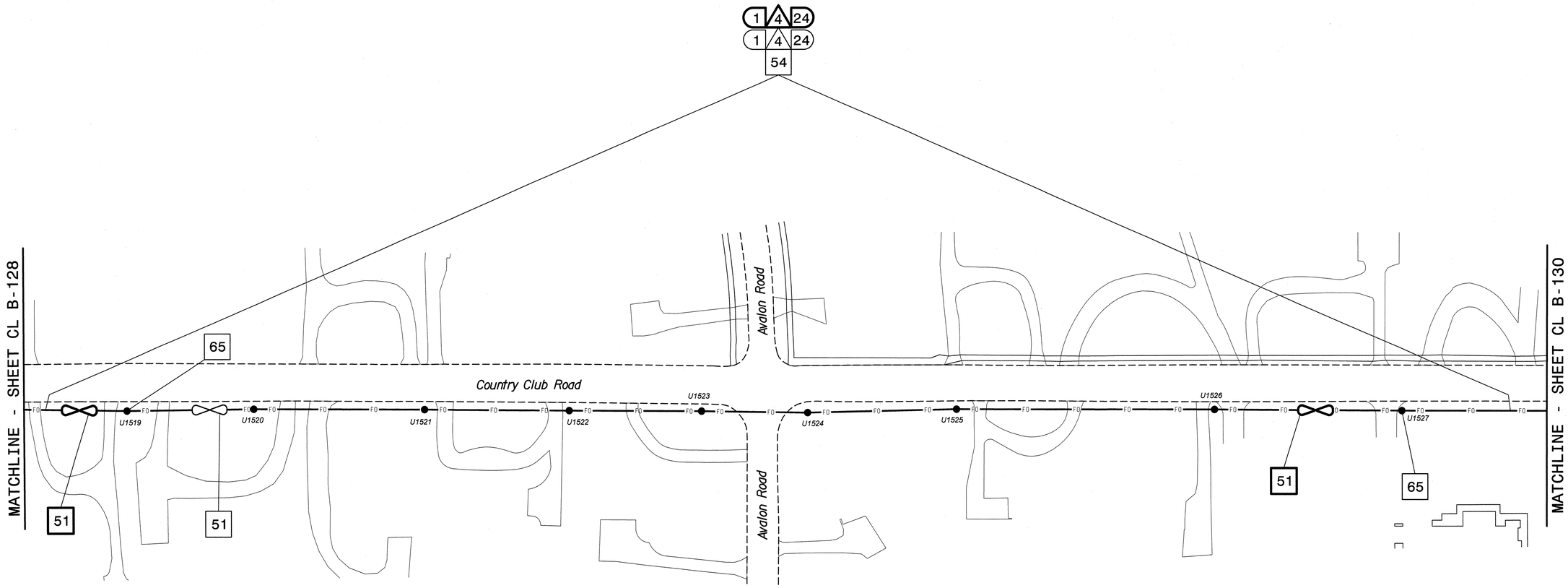

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North Carolina Department of Transportation, Mobility and Safety Division, Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE
CADD Filename: CL B-129.dgn

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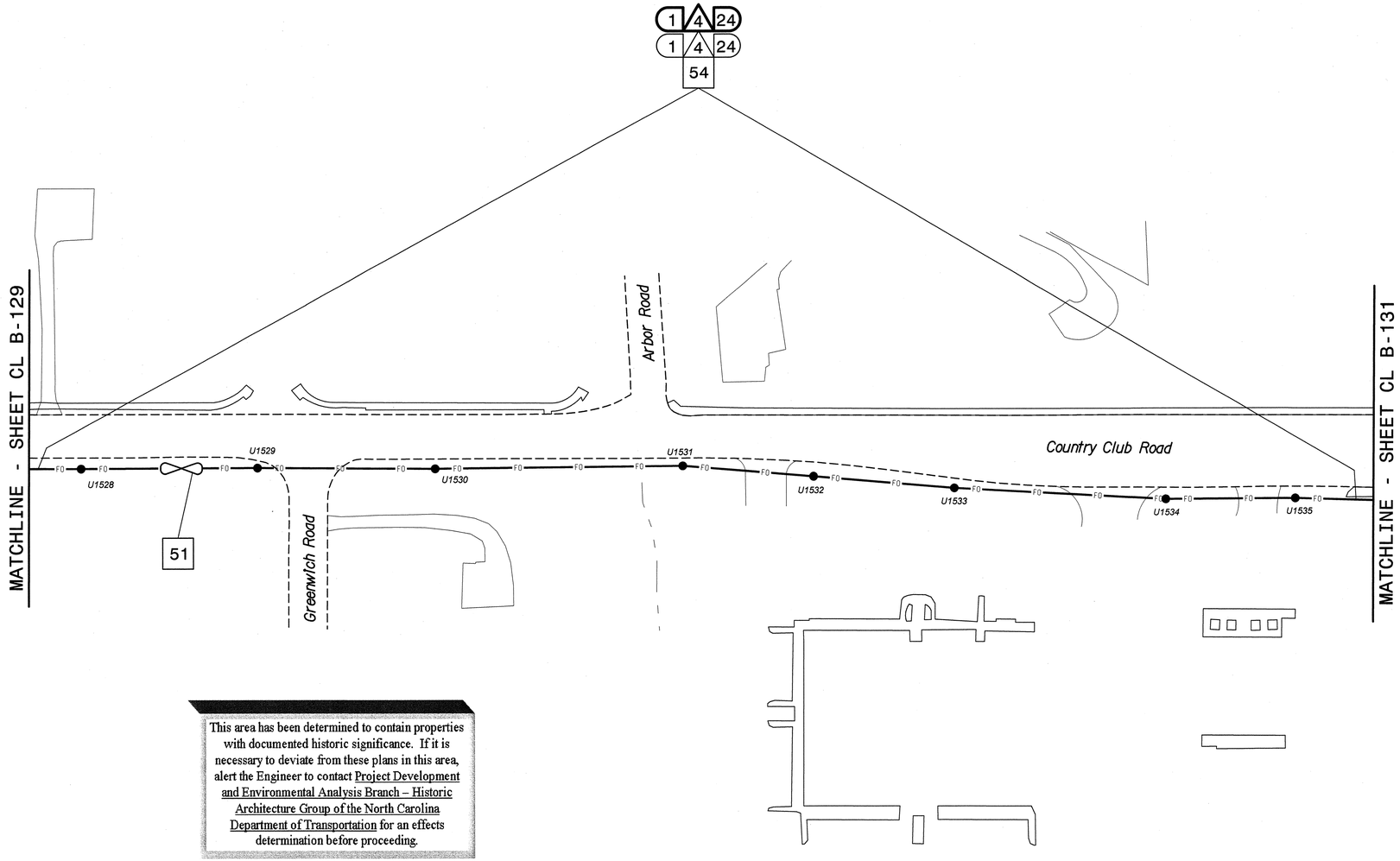
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-130



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Lisa M. Moon 3-22-13
SIGNATURE DATE

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D:#Transportation#Traffic#Curr#100022712 Winston Salem Sig Sys#CL #Phase B#CL B-130.dgn
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PROJECT REFERENCE NO.	SHEET NO.
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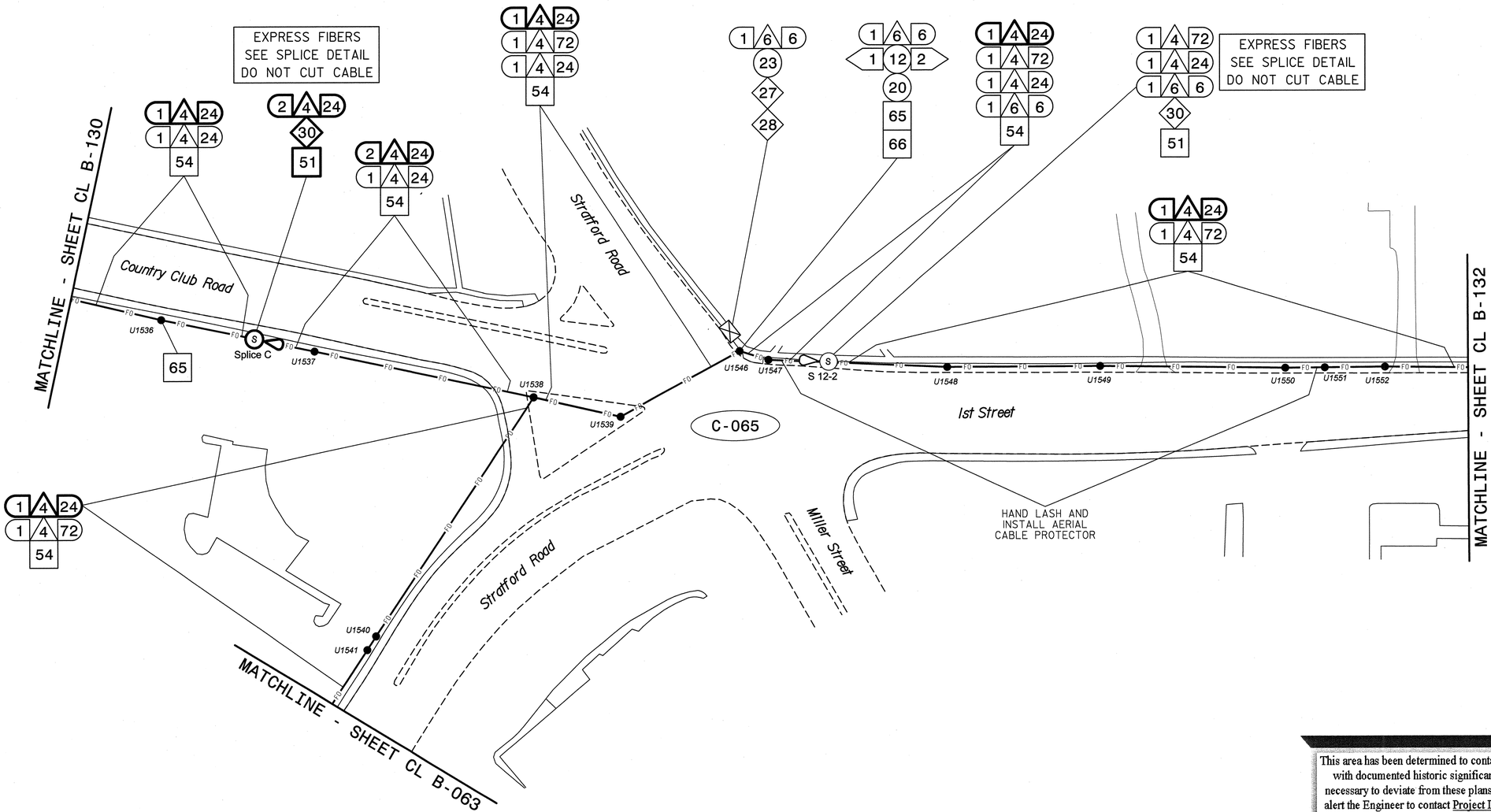

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1	INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	13	INSTALL HEAT SHRINK TUBING RETROFIT KIT	25	INSTALL NEW RISER INTO POLE MOUNTED CABINET	37	INSTALL CCTV WOOD POLE	49	REMOVE EXISTING COMMUNICATIONS CABLE	61	INSTALL UNI-DIRECTIONAL ANTENNA
2	INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14	INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26	INSTALL DIGITAL VIDEO ENCODER	38	INSTALL STANDARD SIZE JUNCTION BOX	50	INSTALL WIRELESS DSL	62	NOT USED
3	INSTALL CATEGORY 5E CABLE	15	DIRECTIONAL DRILL CONDUIT	27	INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39	INSTALL SPECIAL-SIZED JUNCTION BOX	51	INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63	INSTALL 900 MHZ ETHERNET RADIO
4	INSTALL SMFO CABLE	16	BORE AND JACK CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	40	INSTALL OVERSIZED JUNCTION BOX	52	INSTALL DELINEATOR MARKER	64	INTERCEPT AND REROUTE EXISTING CONDUITS
5	INSTALL COAXIAL ANTENNA CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	53	STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65	BOND MESSENGER TO POLE GROUND
6	INSTALL FIBER-OPTIC DROP CABLE	18	INSTALL CABLE(S) IN NEW CONDUIT	30	INSTALL AERIAL SPLICE ENCLOSURE	42	INSTALL WOOD POLE	54	LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66	BOND RISER TO POLE GROUND
7	INSTALL TRACER WIRE	19	INSTALL CABLE(S) IN EXISTING RISER(S)	31	INSTALL SPLICE CABINET	43	REMOVE EXISTING WOOD POLE	55	LASH CABLE(S) TO EXISTING MESSENGER CABLE	67	BOND TRACER WIRE TO POLE GROUND
8	INSTALL CONDUIT UNDERGROUND	20	INSTALL CABLE(S) IN NEW RISER(S)	32	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	44	INSTALL AERIAL GUY ASSEMBLY	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	BOND TRACER WIRE TO EQUIPMENT GROUND BUS
9	INSTALL PVC CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS	33	REMOVE EXISTING SPLICE /HUB /CCTV CABINET	45	INSTALL STANDARD GUY ASSEMBLY	57	MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB	69	REMOVE EXISTING CCTV CAMERA ASSEMBLY
10	INSTALL RIGID, GALVANIZED STEEL CONDUIT	22	INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	34	INSTALL CABINET FOUNDATION	46	INSTALL SIDEWALK GUY ASSEMBLY	58	INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB	70	NOT USED
11	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	23	INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	35	REMOVE EXISTING CABINET FOUNDATION	47	INSTALL MESSENGER CABLE	59	INSTALL NEW POLE MOUNTED CCTV CABINET	71	NOT USED
12	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	48	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60	INSTALL NEW BASE MOUNTED CCTV CABINET	72	INSTALL MANAGED ETHERNET SWITCH

ATTACHMENT POINT:
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YYY REFERENCE POINT DISTANCE BELOW (IN)

CONSTRUCTION NOTE SYMBOLOGY KEY
NUMBER OF CABLE(S)/LOOPS/ DETECTOR AMPLIFIERS, GUYS
NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
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ATKINS
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(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
NCDOT Transportation Mobility and Safety Division
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE: March 2013 REVIEWED BY: MB Toth
PREPARED BY: JAW/AJD REVIEWED BY: LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE Lisa M. Moon 3-22-13 DATE
CADD Filename: CL B-131.dgn

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PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-132

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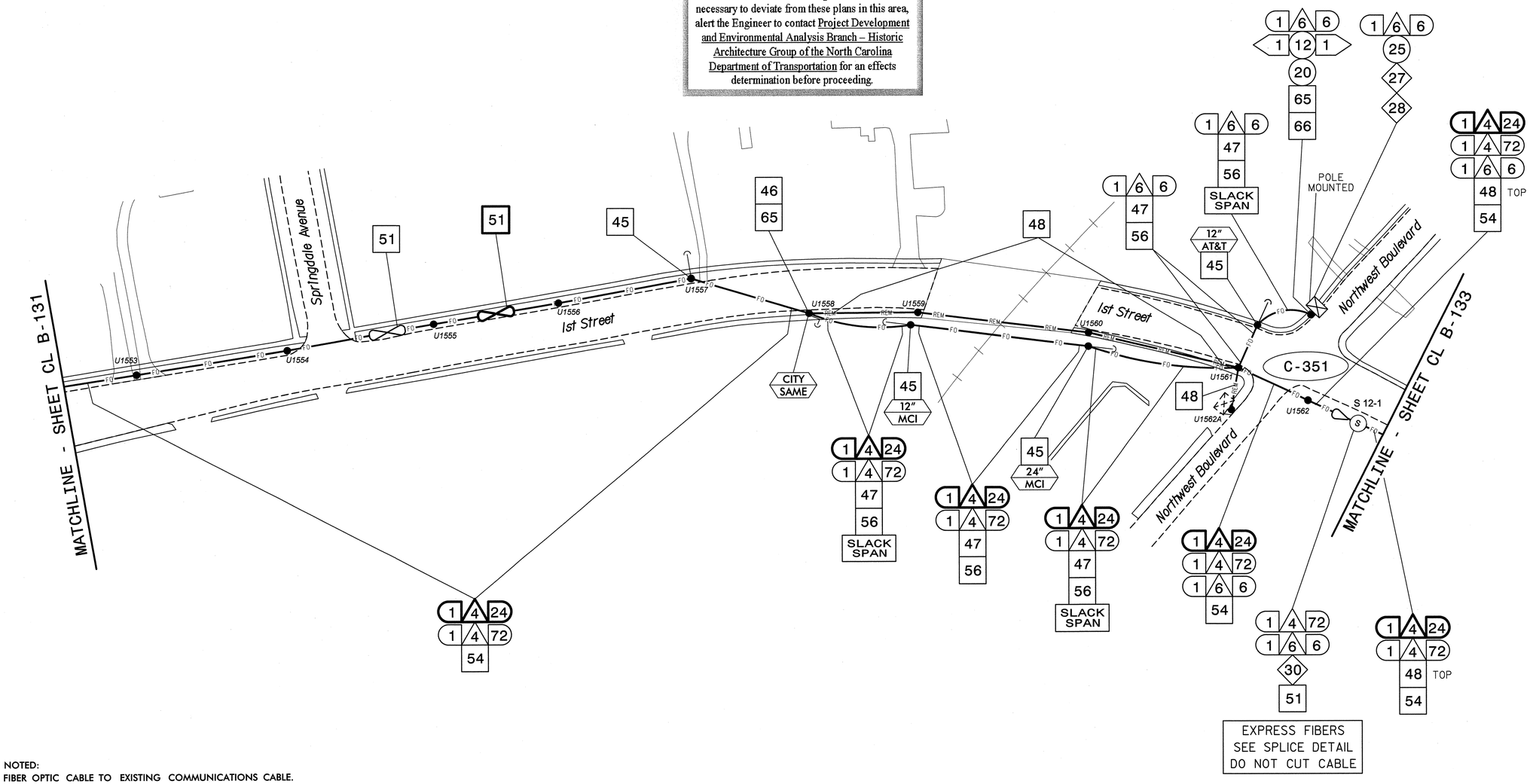

NOTES:
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33. REMOVE EXISTING SPLICE /HUB /CCTV CABINET
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750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M Moon 3-22-13
SIGNATURE DATE

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PROJECT REFERENCE NO.	SHEET NO.
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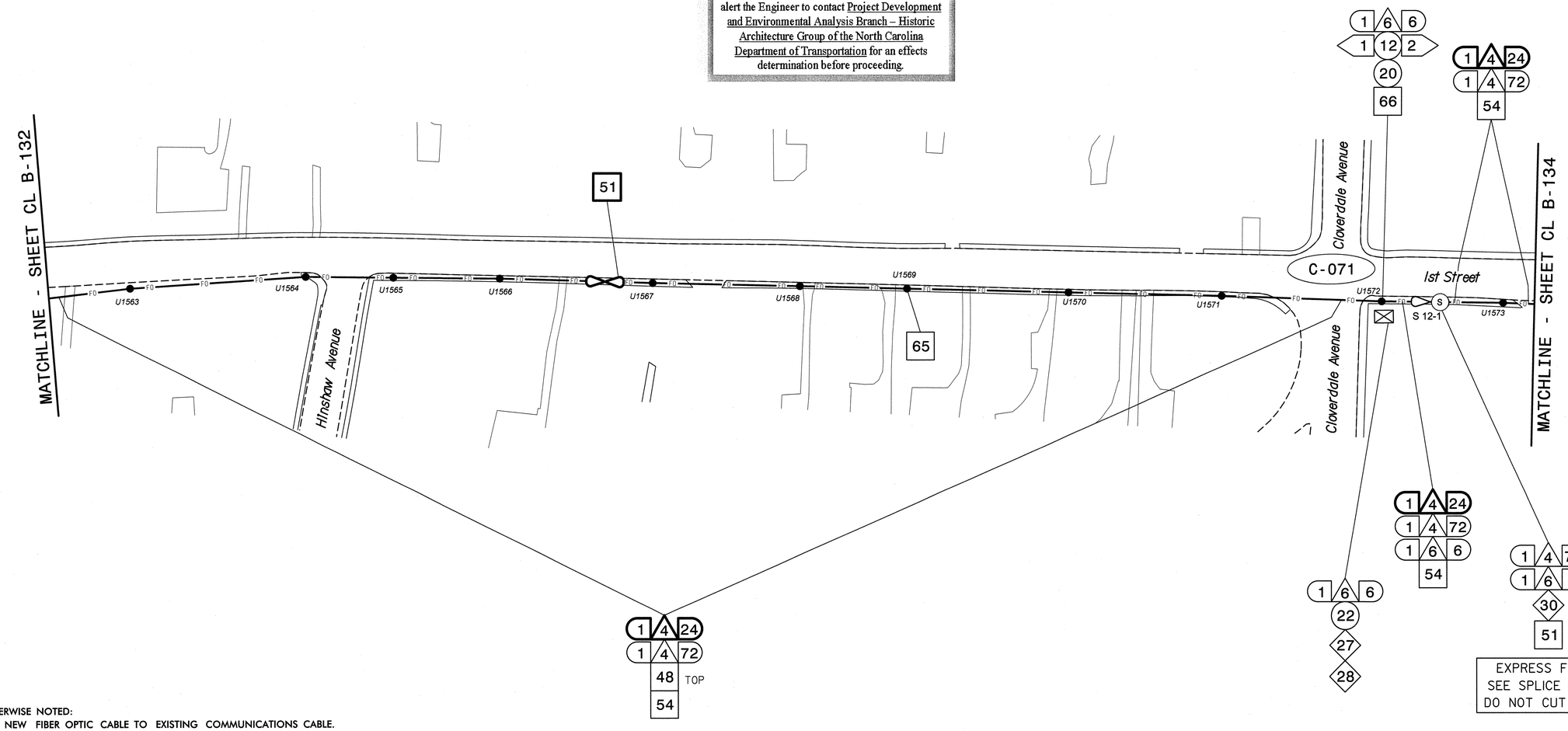

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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE: March 2013 REVIEWED BY: MB Toth
PREPARED BY: JAW/AJD REVIEWED BY: LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
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PROJECT REFERENCE NO.	SHEET NO.
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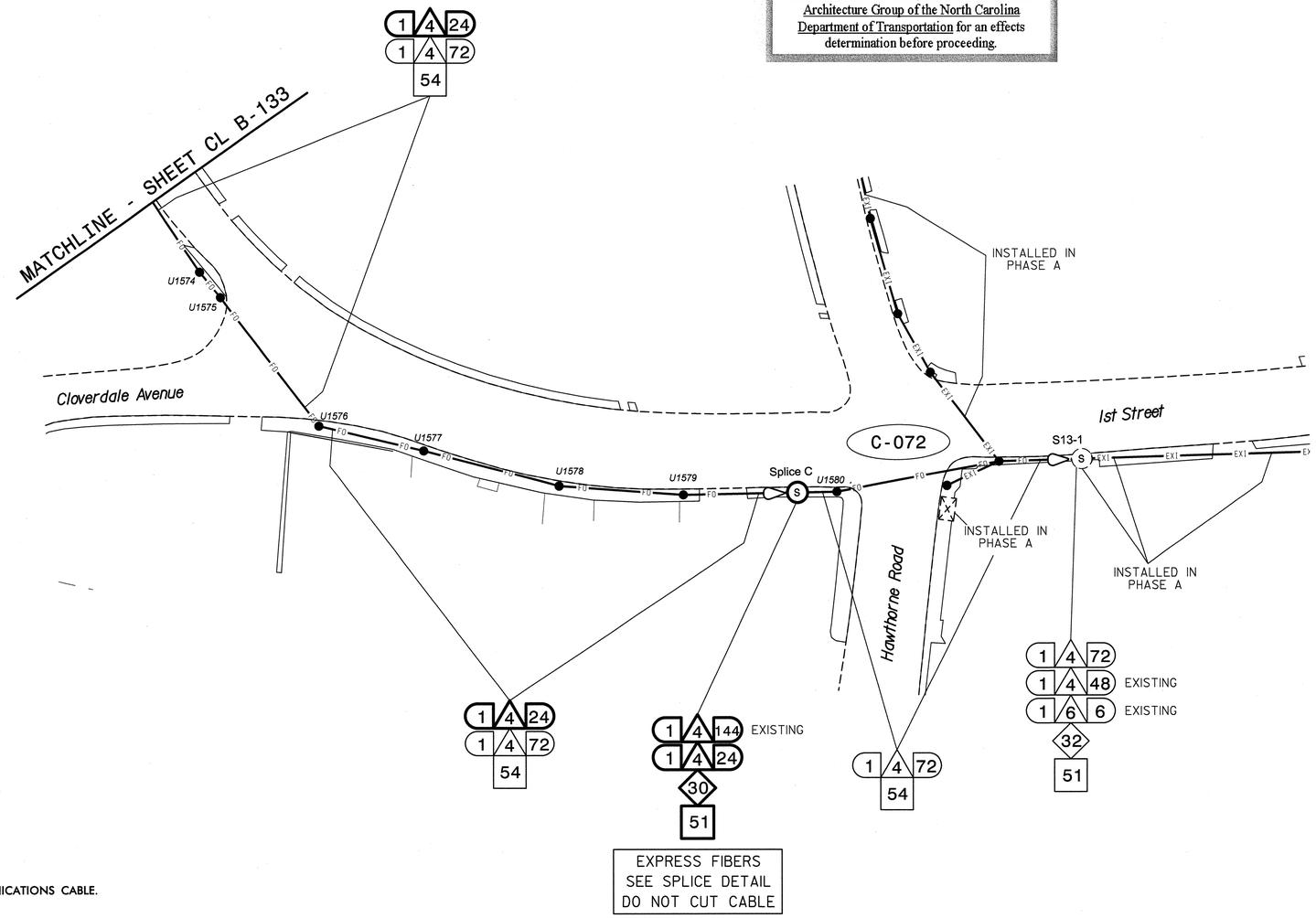

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PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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SIGNATURE Lisa M Moon 3.22.13 DATE

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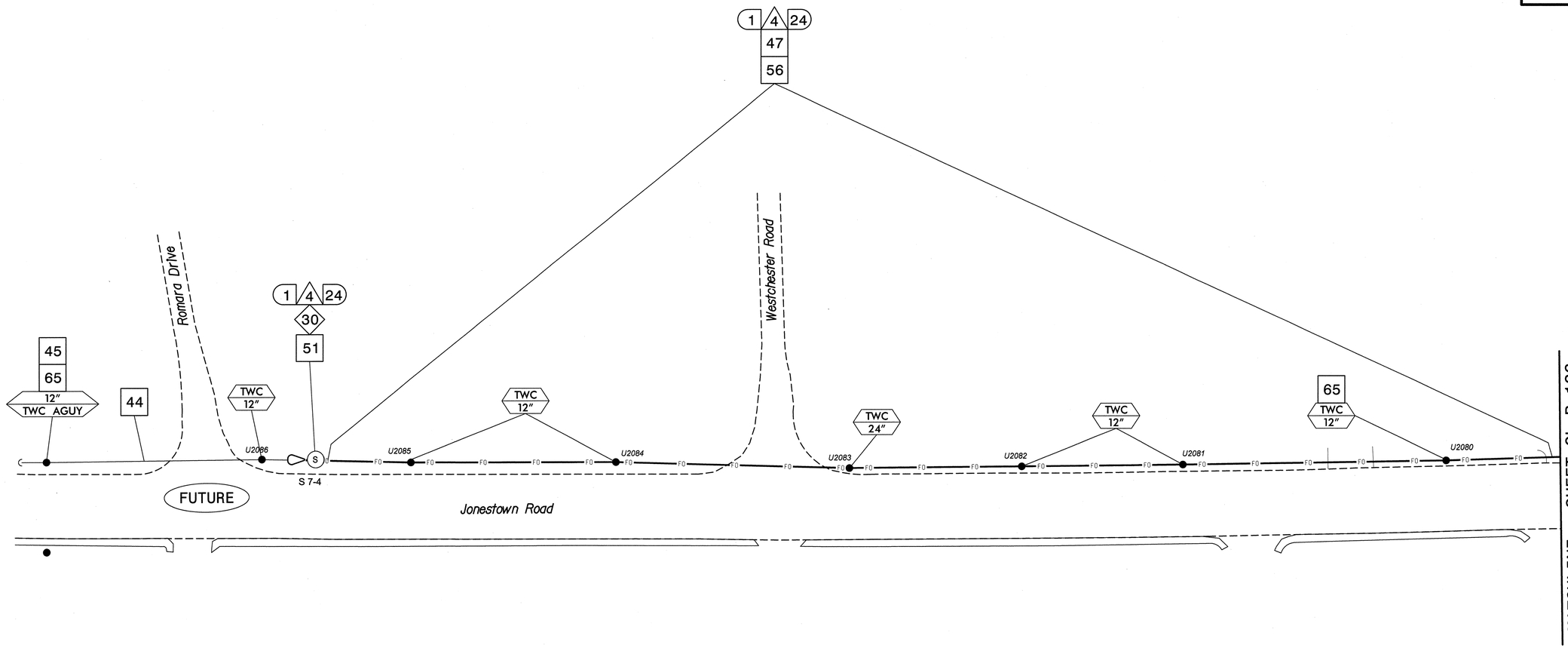

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1 INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	13 INSTALL HEAT SHRINK TUBING RETROFIT KIT	25 INSTALL NEW RISER INTO POLE MOUNTED CABINET	37 INSTALL CCTV WOOD POLE	49 REMOVE EXISTING COMMUNICATIONS CABLE	61 INSTALL UNI-DIRECTIONAL ANTENNA	
2 INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14 INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26 INSTALL DIGITAL VIDEO ENCODER	38 INSTALL STANDARD SIZE JUNCTION BOX	50 INSTALL WIRELESS DSL	62 NOT USED	
3 INSTALL CATEGORY 5E CABLE	15 DIRECTIONAL DRILL CONDUIT	27 INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39 INSTALL SPECIAL-SIZED JUNCTION BOX	51 INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63 INSTALL 900 MHZ ETHERNET RADIO	
4 INSTALL SMFO CABLE	16 BORE AND JACK CONDUIT	28 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	40 INSTALL OVERSIZED JUNCTION BOX	52 INSTALL DELINEATOR MARKER	64 INTERCEPT AND REROUTE EXISTING CONDUITS	
5 INSTALL COAXIAL ANTENNA CABLE	17 INSTALL CABLE(S) IN EXISTING CONDUIT	29 INSTALL UNDERGROUND SPLICE ENCLOSURE	41 REMOVE EXISTING JUNCTION BOX	53 STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65 BOND MESSENGER TO POLE GROUND	
6 INSTALL FIBER–OPTIC DROP CABLE	18 INSTALL CABLE(S) IN NEW CONDUIT	30 INSTALL AERIAL SPLICE ENCLOSURE	42 INSTALL WOOD POLE	54 LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66 BOND RISER TO POLE GROUND	
7 INSTALL TRACER WIRE	19 INSTALL CABLE(S) IN EXISTING RISER(S)	31 INSTALL SPLICE CABINET	43 REMOVE EXISTING WOOD POLE	55 LASH CABLE(S) TO EXISTING MESSENGER CABLE	67 BOND TRACER WIRE TO POLE GROUND	
8 INSTALL CONDUIT UNDERGROUND	20 INSTALL CABLE(S) IN NEW RISER(S)	32 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	44 INSTALL AERIAL GUY ASSEMBLY	56 LASH CABLE(S) TO NEW MESSENGER CABLE	68 BOND TRACER WIRE TO EQUIPMENT GROUND BUS	
9 INSTALL PVC CONDUIT	21 INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS	33 REMOVE EXISTING SPLICE /HUB /CCTV CABINET	45 INSTALL STANDARD GUY ASSEMBLY	57 MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB	69 REMOVE EXISTING CCTV CAMERA ASSEMBLY	
10 INSTALL RIGID, GALVANIZED STEEL CONDUIT	22 INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	34 INSTALL CABINET FOUNDATION	46 INSTALL SIDEWALK GUY ASSEMBLY	58 INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB	70 NOT USED	
11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	23 INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	35 REMOVE EXISTING CABINET FOUNDATION	47 INSTALL MESSENGER CABLE	59 INSTALL NEW POLE MOUNTED CCTV CABINET	71 NOT USED	
12 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24 INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36 INSTALL CCTV CAMERA ASSEMBLY	48 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60 INSTALL NEW BASE MOUNTED CCTV CABINET	72 INSTALL MANAGED ETHERNET SWITCH	

ATTACHMENT POINT:
XXX DISTANCE ABOVE (IN) REFERENCE POINT
YYY REFERENCE POINT DISTANCE BELOW (IN)

CONSTRUCTION NOTE SYMBOLOGY KEY
NUMBER OF CABLE(S)/LOOPS, DETECTOR AMPLIFIERS, GUYS
NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Prepared for the Offices of:
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750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M Moon 3-27-13
SIGNATURE DATE

CADD Filename: CL B-135.dgn

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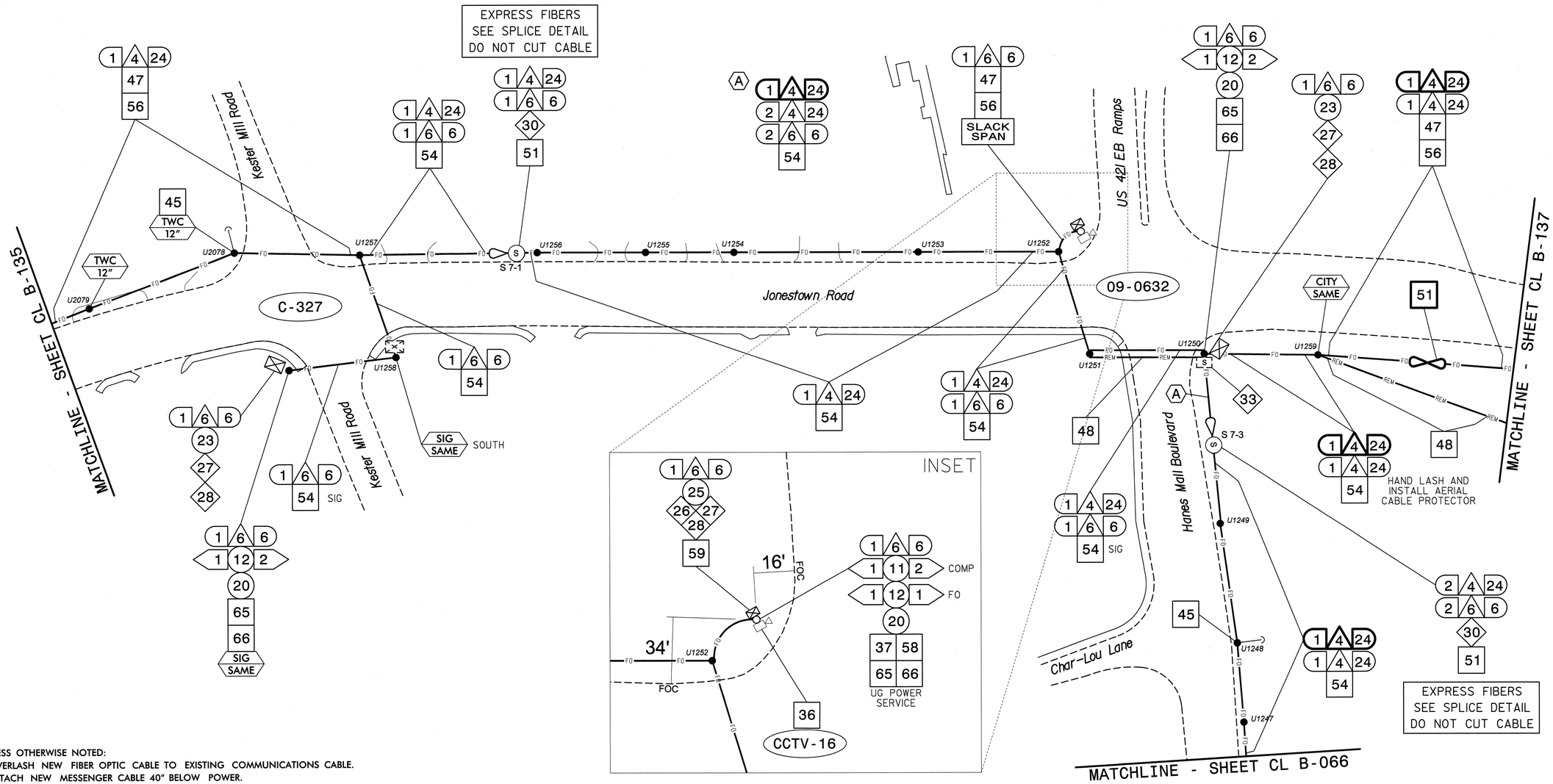
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-136



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29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
33. REMOVE EXISTING SPLICE /HUB /CCTV CABINET
34. INSTALL CABINET FOUNDATION
35. REMOVE EXISTING CABINET FOUNDATION
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL CCTV WOOD POLE
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41. REMOVE EXISTING JUNCTION BOX
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47. INSTALL MESSENGER CABLE
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE
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750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3-22-13
SIGNATURE DATE
CADD Filename: CL B-136.dgn

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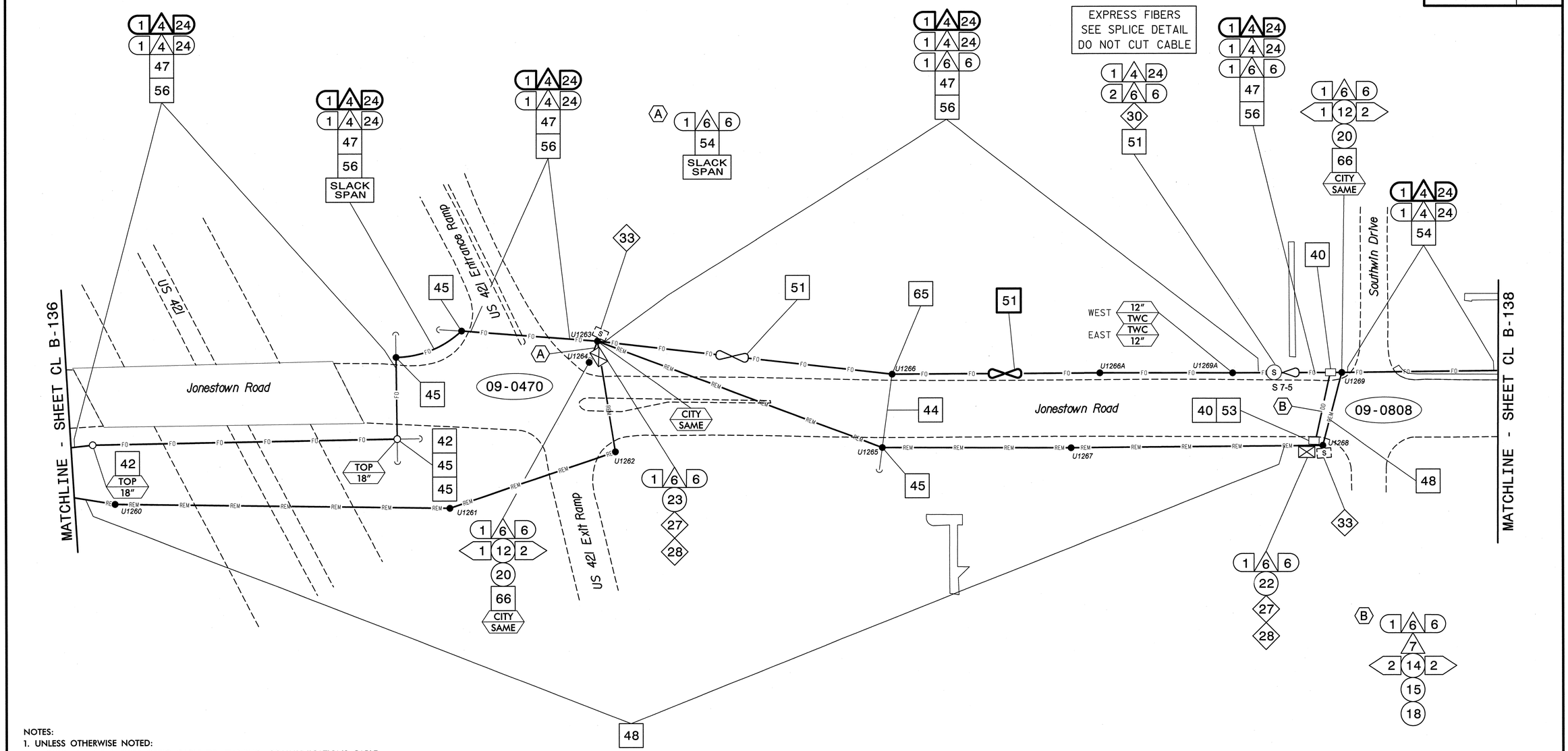
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-137



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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE 3-22-13 DATE
CADD Filename: CL B-137.dgn

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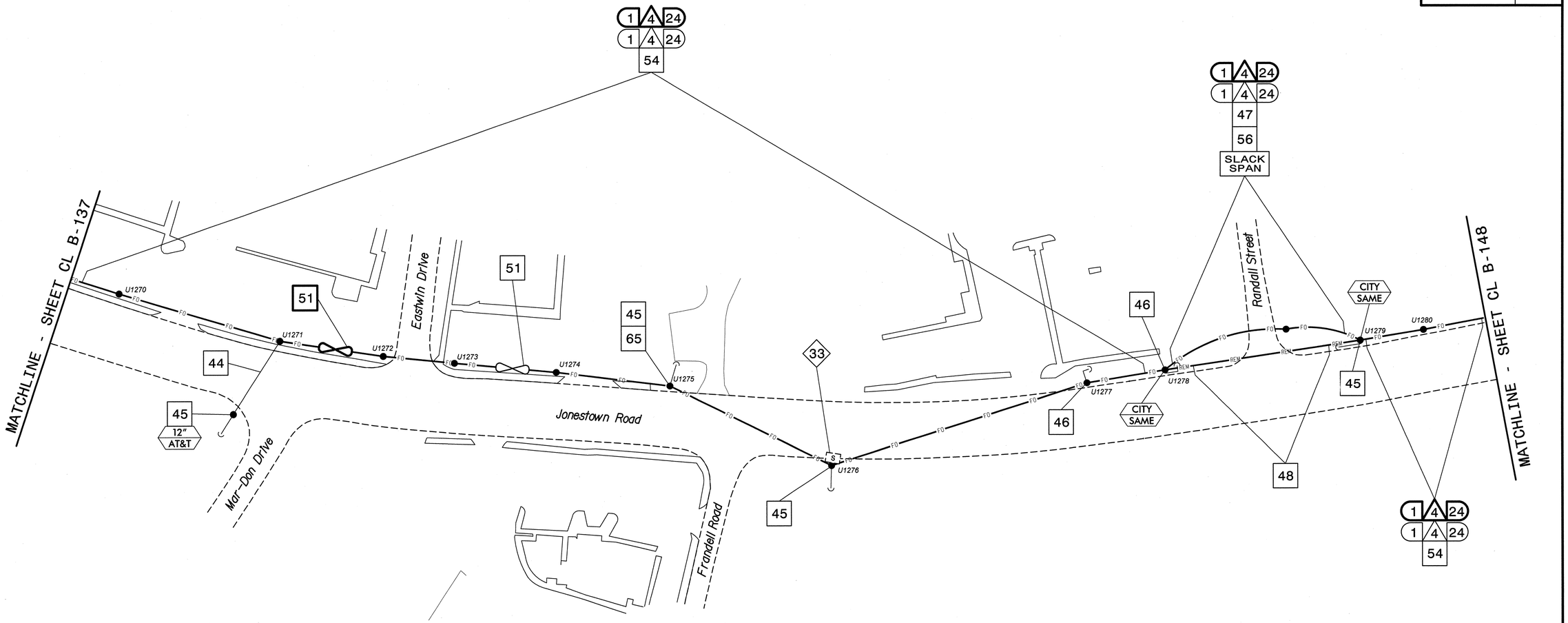
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-138



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Phase B

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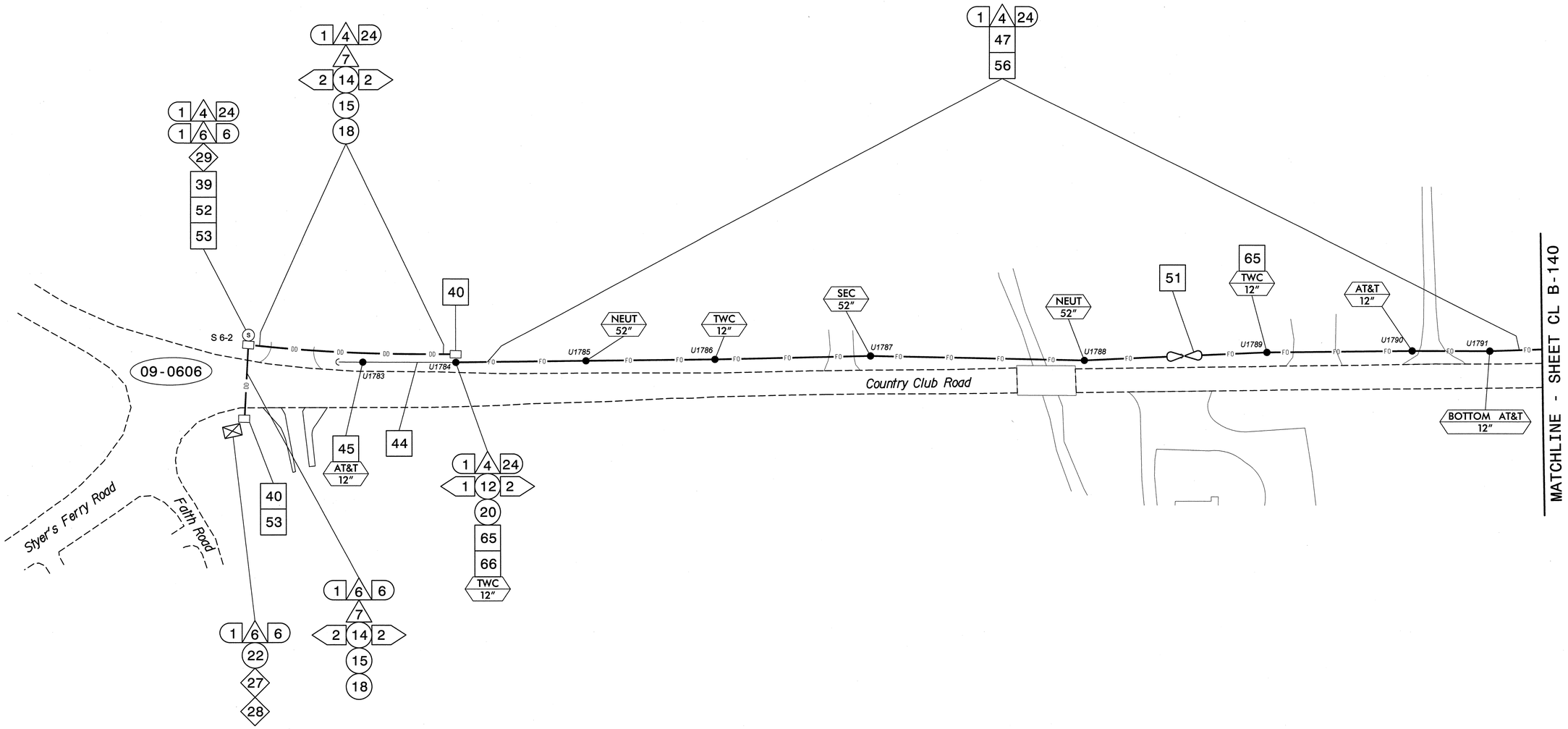

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8. INSTALL CONDUIT UNDERGROUND
9. INSTALL PVC CONDUIT
10. INSTALL RIGID, GALVANIZED STEEL CONDUIT
11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
12. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
13. INSTALL HEAT SHRINK TUBING RETROFIT KIT
14. INSTALL HIGH DENSITY 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
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20. INSTALL CABLE(S) IN NEW RISER(S)
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22. INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
23. INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
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26. INSTALL DIGITAL VIDEO ENCODER
27. INSTALL NEW ETHERNET EDGE SWITCH IN CABINET
28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
29. INSTALL UNDERGROUND SPLICE ENCLOSURE
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31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
33. REMOVE EXISTING SPLICE /HUB /CCTV CABINET
34. INSTALL CABINET FOUNDATION
35. REMOVE EXISTING CABINET FOUNDATION
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL CCTV WOOD POLE
38. INSTALL STANDARD SIZE JUNCTION BOX
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61. INSTALL UNI-DIRECTIONAL ANTENNA
62. NOT USED
63. INSTALL 900 MHZ ETHERNET RADIO
64. INTERCEPT AND REROUTE EXISTING CONDUITS
65. BOND MESSENGER TO POLE GROUND
66. BOND RISER TO POLE GROUND
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69. REMOVE EXISTING CCTV CAMERA ASSEMBLY
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CONSTRUCTION NOTE SYMBOLOGY KEY
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ATKINS
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Prepared for the Offices of:
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DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 | Forsyth County | Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

SCALE: 0 50 — 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
Lisa M. Moon 3.22.13
SIGNATURE DATE
CADD Filename: CL B-139.dgn

13-MAR-2013 13:11
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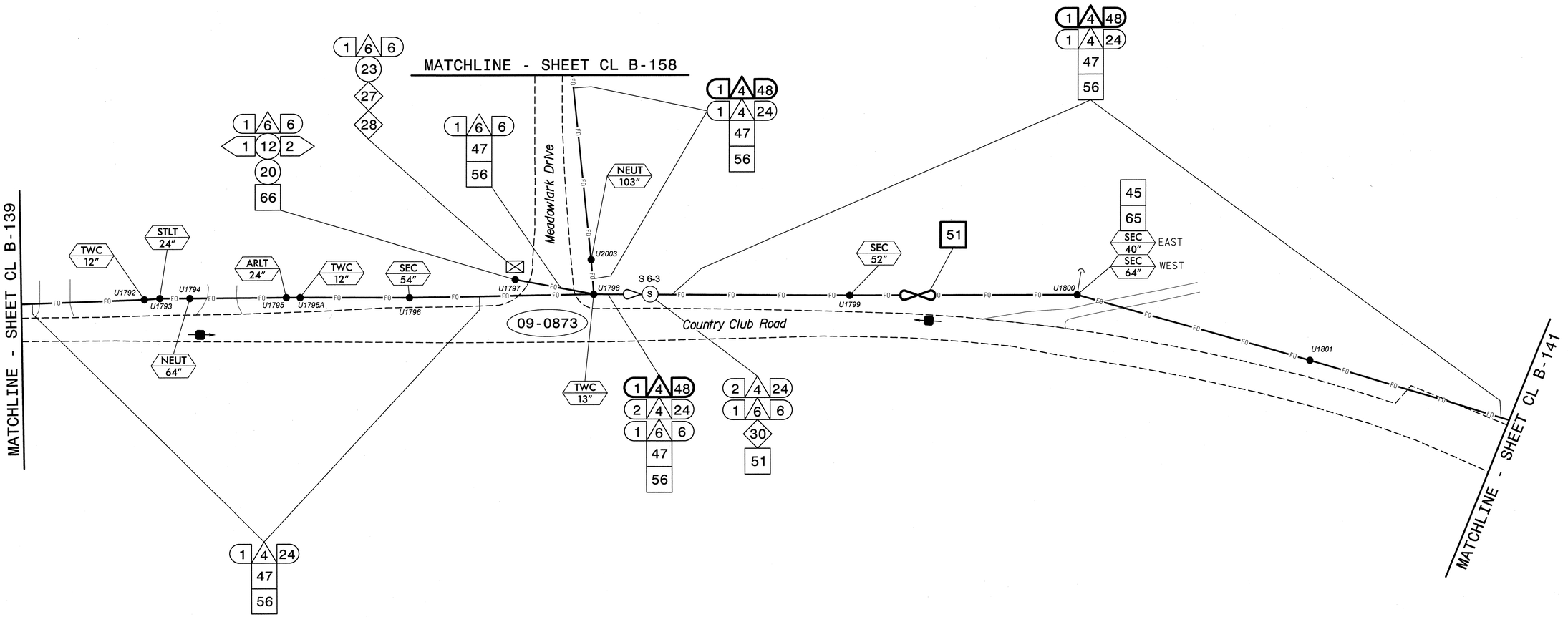
13833

PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-140



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SEE SIGNAL PLAN FOR SYSTEM DETECTOR INSTALLATION/ASSIGNMENT DETAILS. REFER TO "SYSTEM DETECTORS AND CONTROL ZONES" SCHEMATIC FOR ADDITIONAL INFORMATION.

BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

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ATKINS
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE
3-22-13
DATE

CADD Filename: CL B-140.dgn

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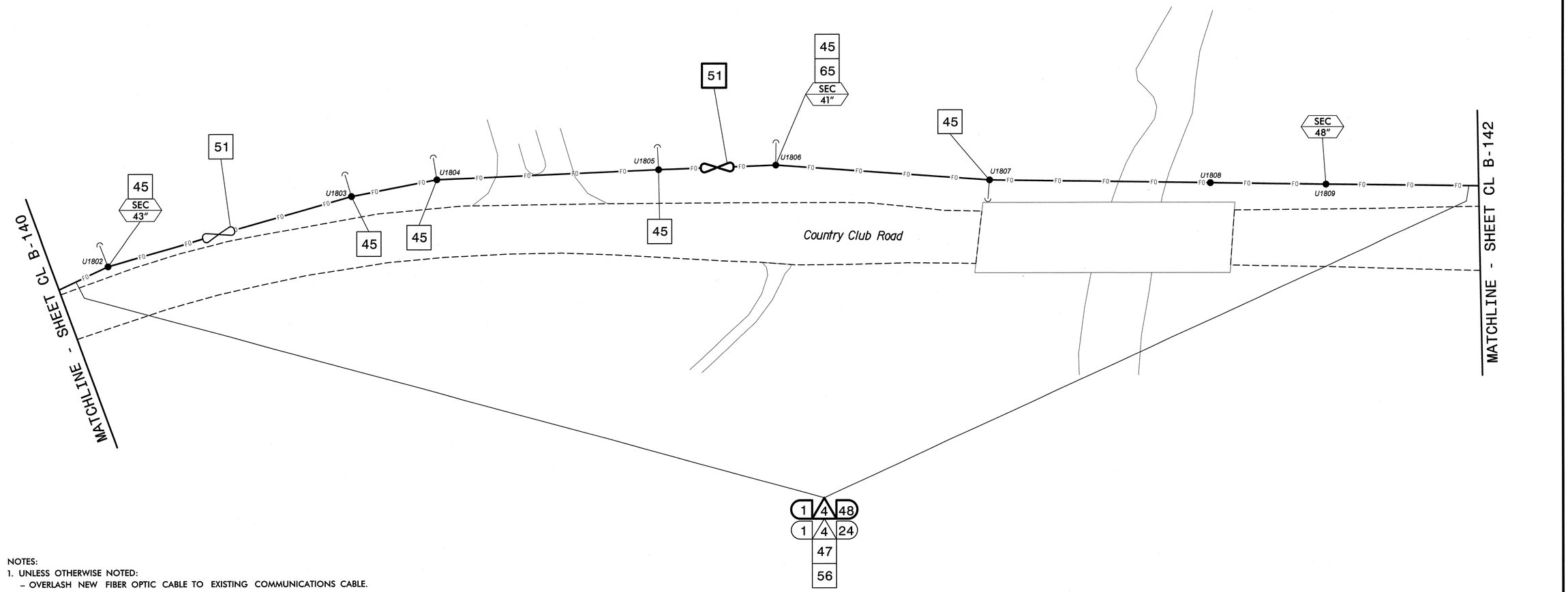
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-141



NOTES:
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BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1	INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	13	INSTALL HEAT SHRINK TUBING RETROFIT KIT	25	INSTALL NEW RISER INTO POLE MOUNTED CABINET	37	INSTALL CCTV WOOD POLE	49	REMOVE EXISTING COMMUNICATIONS CABLE	61	INSTALL UNI-DIRECTIONAL ANTENNA
2	INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE	14	INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	26	INSTALL DIGITAL VIDEO ENCODER	38	INSTALL STANDARD SIZE JUNCTION BOX	50	INSTALL WIRELESS DSL	62	NOT USED
3	INSTALL CATEGORY 5E CABLE	15	DIRECTIONAL DRILL CONDUIT	27	INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	39	INSTALL SPECIAL-SIZED JUNCTION BOX	51	INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	63	INSTALL 900 MHZ ETHERNET RADIO
4	INSTALL SMFO CABLE	16	BORE AND JACK CONDUIT	28	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	40	INSTALL OVERSIZED JUNCTION BOX	52	INSTALL DELINEATOR MARKER	64	INTERCEPT AND REROUTE EXISTING CONDUITS
5	INSTALL COAXIAL ANTENNA CABLE	17	INSTALL CABLE(S) IN EXISTING CONDUIT	29	INSTALL UNDERGROUND SPLICE ENCLOSURE	41	REMOVE EXISTING JUNCTION BOX	53	STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)	65	BOND MESSENGER TO POLE GROUND
6	INSTALL FIBER-OPTIC DROP CABLE	18	INSTALL CABLE(S) IN NEW CONDUIT	30	INSTALL AERIAL SPLICE ENCLOSURE	42	INSTALL WOOD POLE	54	LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	66	BOND RISER TO POLE GROUND
7	INSTALL TRACER WIRE	19	INSTALL CABLE(S) IN EXISTING RISER(S)	31	INSTALL SPLICE CABINET	43	REMOVE EXISTING WOOD POLE	55	LASH CABLE(S) TO EXISTING MESSENGER CABLE	67	BOND TRACER WIRE TO POLE GROUND
8	INSTALL CONDUIT UNDERGROUND	20	INSTALL CABLE(S) IN NEW RISER(S)	32	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	44	INSTALL AERIAL GUY ASSEMBLY	56	LASH CABLE(S) TO NEW MESSENGER CABLE	68	BOND TRACER WIRE TO EQUIPMENT GROUND BUS
9	INSTALL PVC CONDUIT	21	INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS	33	REMOVE EXISTING SPLICE /HUB /CCTV CABINET	45	INSTALL STANDARD GUY ASSEMBLY	57	MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB	69	REMOVE EXISTING CCTV CAMERA ASSEMBLY
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11	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	23	INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)	35	REMOVE EXISTING CABINET FOUNDATION	47	INSTALL MESSENGER CABLE	59	INSTALL NEW POLE MOUNTED CCTV CABINET	71	NOT USED
12	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	24	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	36	INSTALL CCTV CAMERA ASSEMBLY	48	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60	INSTALL NEW BASE MOUNTED CCTV CABINET	72	INSTALL MANAGED ETHERNET SWITCH

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Intelligent Transportation Systems
750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022516 LISA M. MOON

Lisa M. Moon 3-22-13
SIGNATURE DATE

CADD Filename: CL B-141.dgn

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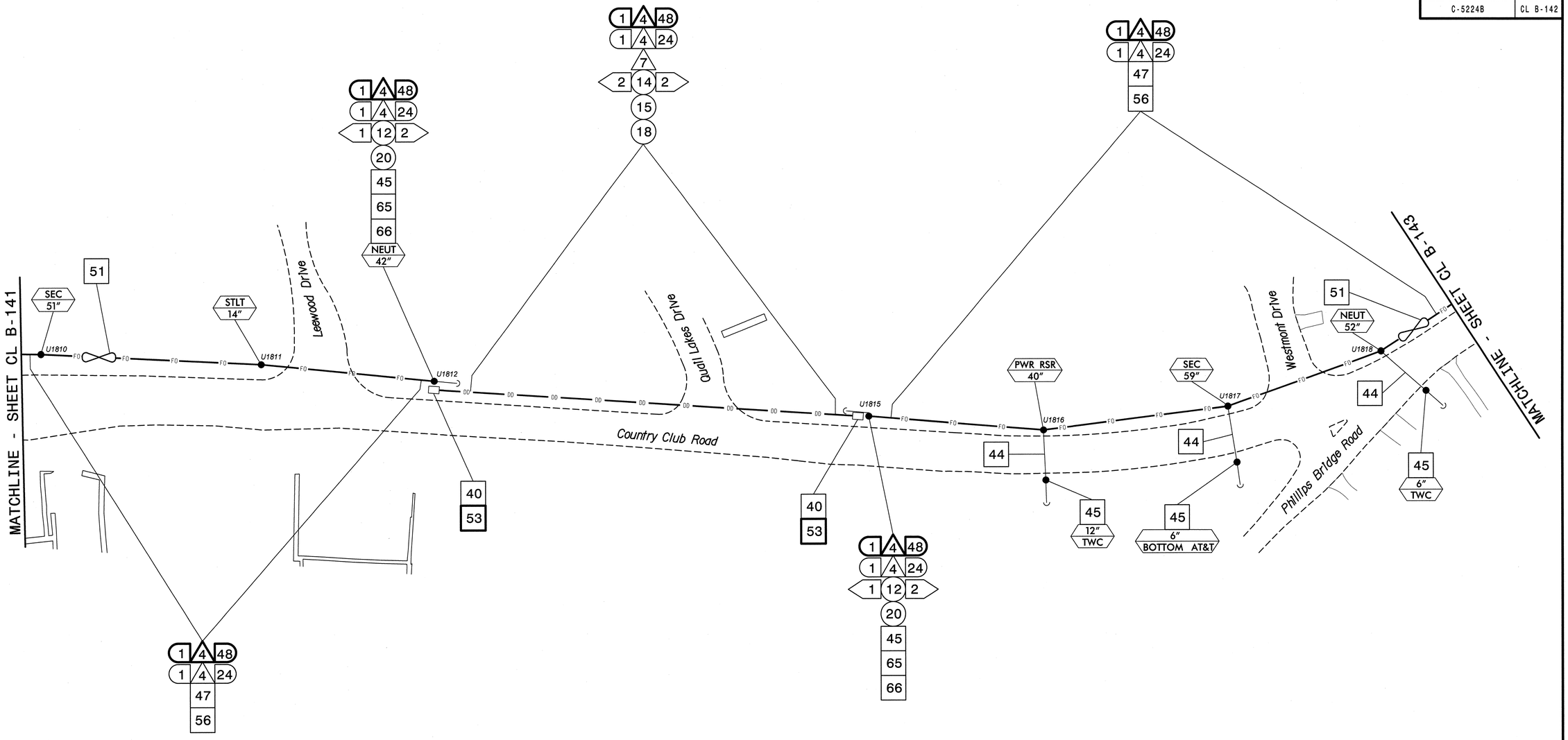
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-142



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Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON
SIGNATURE
3-22-13
DATE
CADD Filename: CL B-142.dgn

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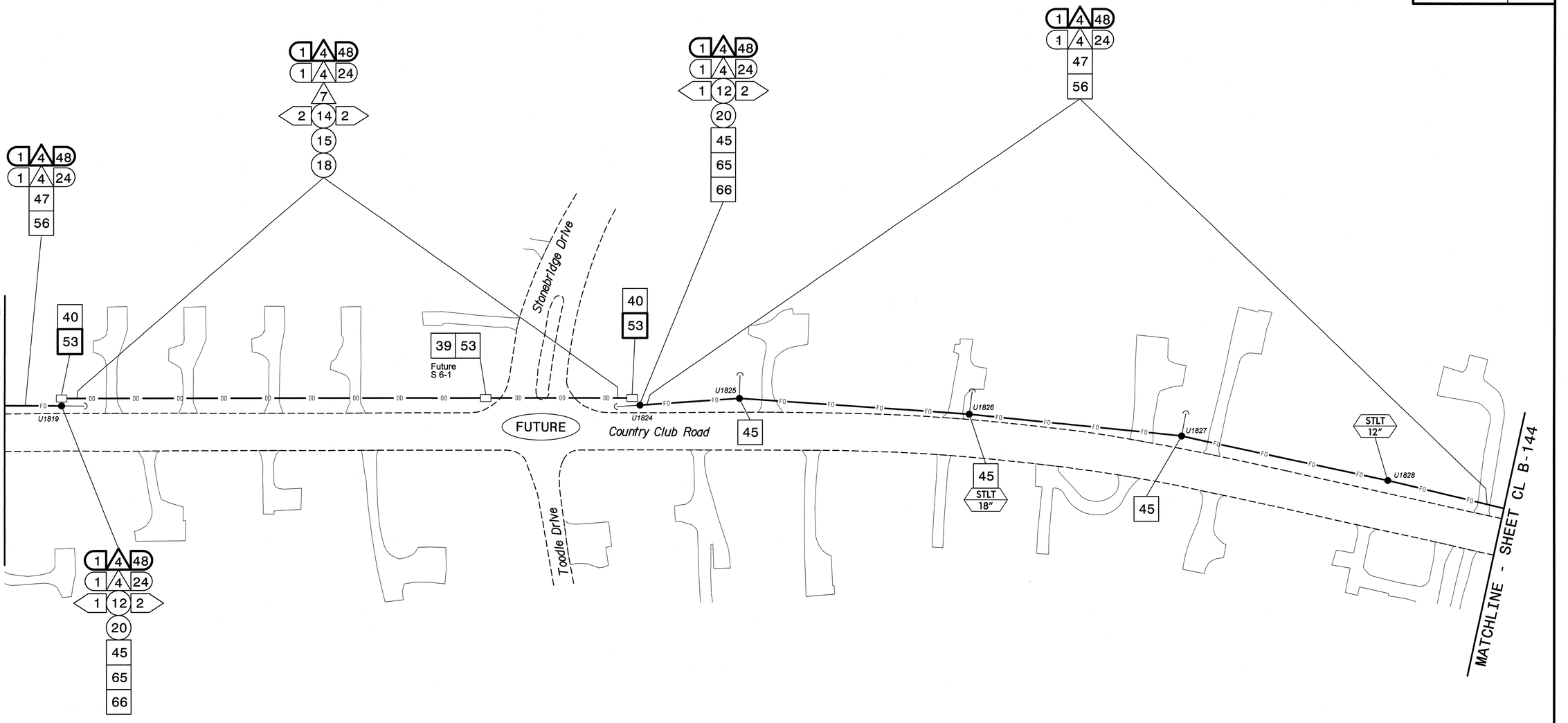
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-143



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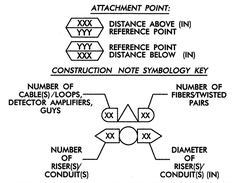
14. INSTALL HIGH DENSITY POLYETHYLENE CONDUIT
15. DIRECTIONAL DRILL CONDUIT
16. BORE AND JACK CONDUIT
17. INSTALL CABLE(S) IN EXISTING CONDUIT
18. INSTALL CABLE(S) IN NEW CONDUIT
19. INSTALL CABLE(S) IN EXISTING RISER(S)
20. INSTALL CABLE(S) IN NEW RISER(S)
21. INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS
22. INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
23. INSTALL NEW RISER INTO CABINET BASE (USE EX CONDUIT STUBOUTS WHEN AVAILABLE)
24. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
25. INSTALL NEW RISER INTO POLE MOUNTED CABINET
26. INSTALL DIGITAL VIDEO ENCODER
27. INSTALL NEW ETHERNET EDGE SWITCH IN CABINET
28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL SPLICE CABINET
32. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
33. REMOVE EXISTING SPLICE /HUB /CCTV CABINET
34. INSTALL CABINET FOUNDATION
35. REMOVE EXISTING CABINET FOUNDATION
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL CCTV WOOD POLE
38. INSTALL STANDARD SIZE JUNCTION BOX
39. INSTALL SPECIAL-SIZED JUNCTION BOX
40. INSTALL OVERSIZED JUNCTION BOX
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
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL WIRELESS DSL
51. INSTALL CABLE STORAGE GUIDE(S) (SNOW SHOE(S)) AND STORE 100 FEET OF EACH CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 50 FEET OF COMMUNICATIONS CABLE (EACH CABLE)
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
55. LASH CABLE(S) TO EXISTING MESSENGER CABLE
56. LASH CABLE(S) TO NEW MESSENGER CABLE
57. MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV/HUB
58. INSTALL NEW ELECTRICAL SERVICE FOR CCTV/HUB
59. INSTALL NEW POLE MOUNTED CCTV CABINET
60. INSTALL NEW BASE MOUNTED CCTV CABINET
61. INSTALL UNI-DIRECTIONAL ANTENNA
62. NOT USED
63. INSTALL 900 MHZ ETHERNET RADIO
64. INTERCEPT AND REROUTE EXISTING CONDUITS
65. BOND MESSENGER TO POLE GROUND
66. BOND RISER TO POLE GROUND
67. BOND TRACER WIRE TO POLE GROUND
68. BOND TRACER WIRE TO EQUIPMENT GROUND BUS
69. REMOVE EXISTING CCTV CAMERA ASSEMBLY
70. NOT USED
71. NOT USED
72. INSTALL MANAGED ETHERNET SWITCH

ATTACHMENT POINT:

XXX / YYY — DISTANCE ABOVE (IN) REFERENCE POINT

YYY / XXX — REFERENCE POINT DISTANCE BELOW (IN)

CONSTRUCTION NOTE SYMBOLOGY KEY



ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

Prepared for the Offices of: North Carolina Department of Transportation — Transportation Mobility and Safety Division — Intelligent Transportation Systems

750 Greenfield Parkway, Garner, NC 27529

SCALE 0 50 1"=50'

Winston-Salem Signal System
Cable Layout Plans
Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
PREPARED BY:	JAW/AJD	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

SIGNATURE Lisa M. Moon 3-22-13 DATE

CADD Filename: CL B-143.dgn

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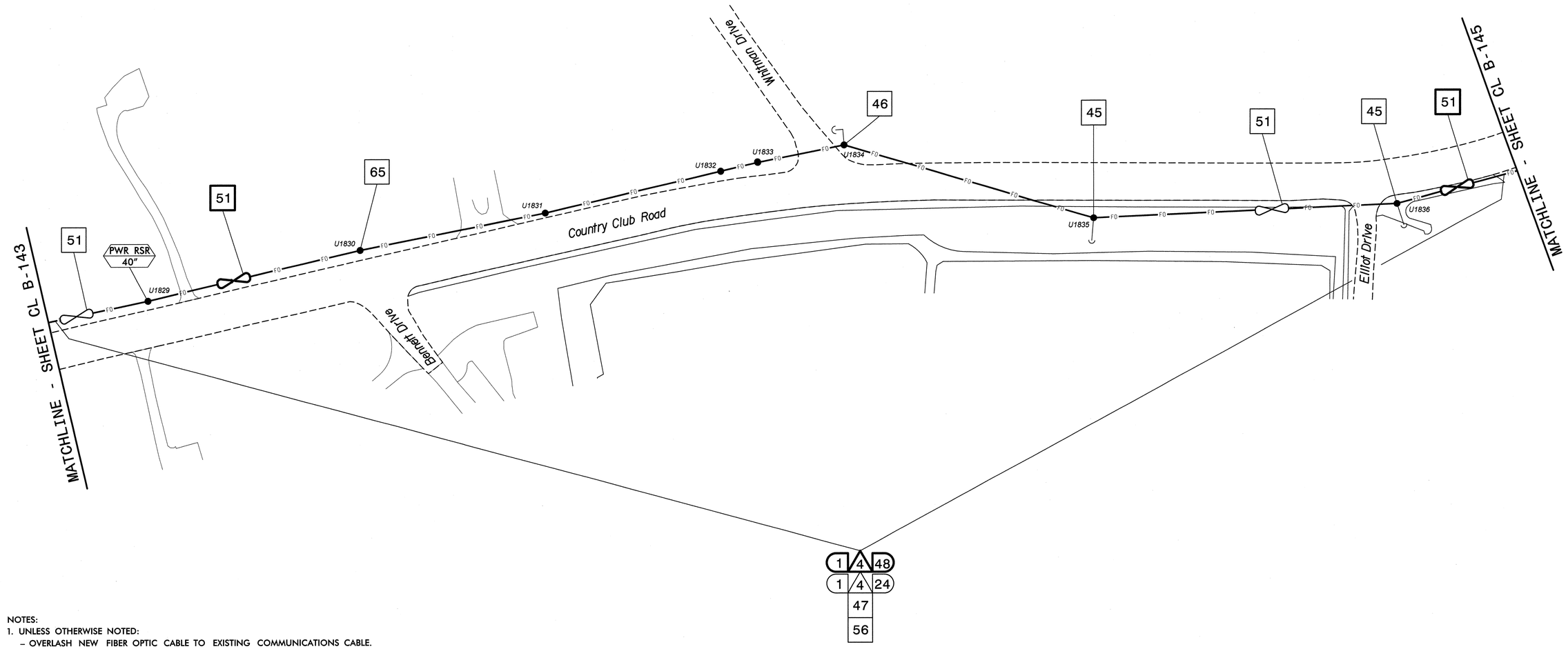
PROJECT REFERENCE NO.	SHEET NO.
C-5224B	CL B-144



NOTES:
1. UNLESS OTHERWISE NOTED:
   – OVERLASH NEW FIBER OPTIC CABLE TO EXISTING COMMUNICATIONS CABLE.
   – ATTACH NEW MESSENGER CABLE 40" BELOW POWER.
   – ATTACH ON FRONT SIDE (FS) OF POLE.
2. SEAL ALL CONDUIT ENDS WITH DUCT AND CONDUIT SEALER, AT ALL JUNCTION BOX/CABINET ENTRANCES.

BOLD CONSTRUCTION NOTES SHOW NEW "IS FIBER" WORK

1. INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
2. INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
3. INSTALL CATEGORY 5E CABLE
4. INSTALL SMFO CABLE
5. INSTALL COAXIAL ANTENNA CABLE
6. INSTALL FIBER-OPTIC DROP CABLE
7. INSTALL TRACER WIRE
8. INSTALL CONDUIT UNDERGROUND
9. INSTALL PVC CONDUIT
10. INSTALL RIGID, GALVANIZED STEEL CONDUIT
11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
12. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
13. INSTALL HEAT SHRINK TUBING RETROFIT KIT
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YYY REFERENCE POINT DISTANCE BELOW (IN)

CONSTRUCTION NOTE SYMBOLOGY KEY
NUMBER OF CABLE(S)/LOOPS, DETECTOR AMPLIFIERS, GUYS
NUMBER OF FIBERS/TWISTED PAIRS
NUMBER OF RISER(S)/ CONDUIT(S)
DIAMETER OF RISER(S)/ CONDUIT(S) (IN)

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Winston-Salem Signal System Cable Layout Plans Phase B

Division 09 Forsyth County Winston-Salem

PLAN DATE:	March 2013	REVIEWED BY:	MB Toth
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