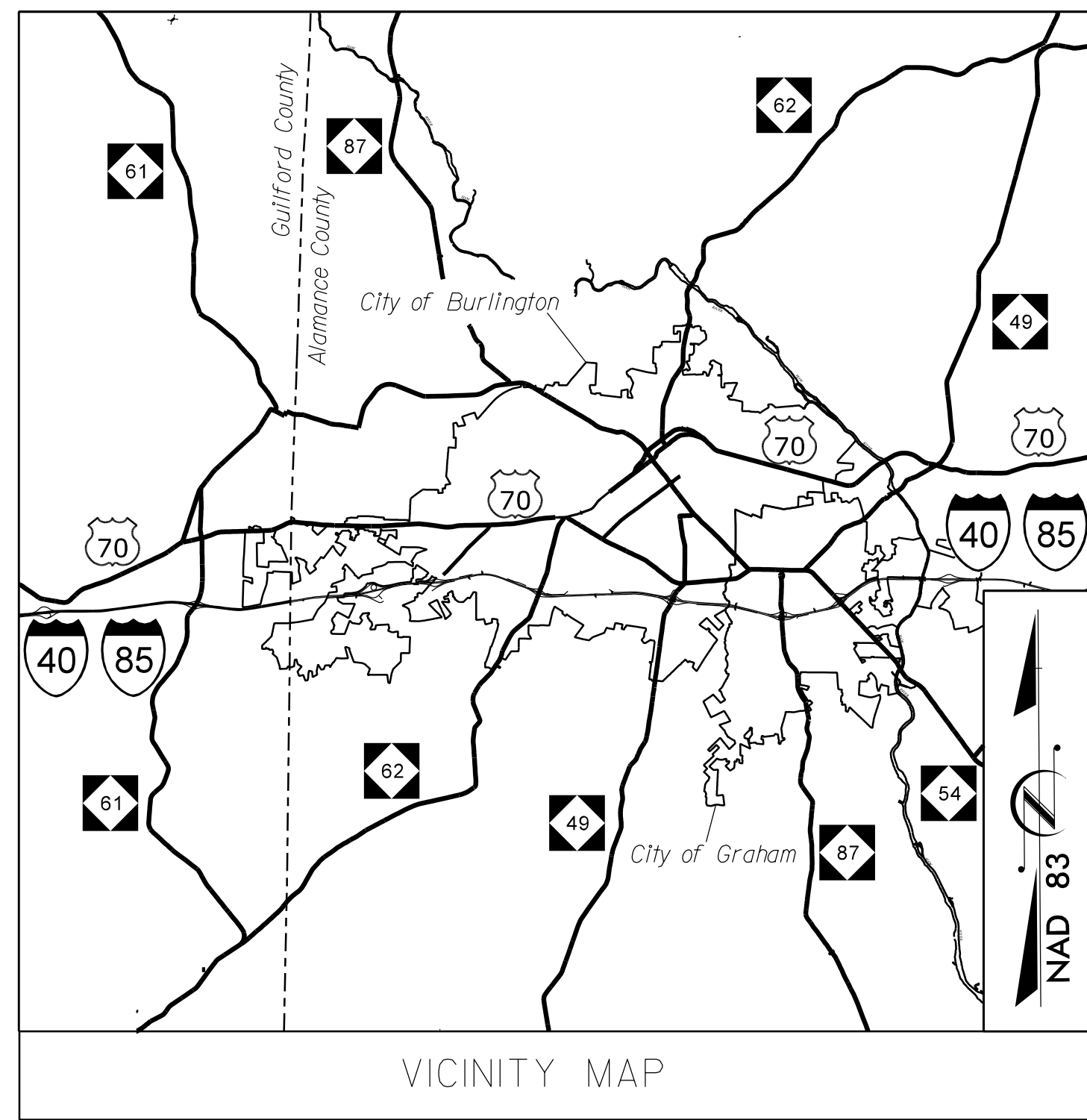


TIP PROJECT: U-6015

CONTRACT: C204111



VICINITY MAP

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED IMPROVEMENTS
CITIES OF BURLINGTON & GRAHAM
COMPUTERIZED TRAFFIC SIGNAL SYSTEM

REPLACEMENT OF EXISTING SIGNAL SYSTEM WITH A NEW 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; UPGRADE AND EXPANSION OF CCTV MONITORING NETWORK; INSTALLING CENTRAL EQUIPMENT AND CENTRAL SOFTWARE; AND INSTALLATION OF AN ETHERNET COMMUNICATIONS NETWORK COMPRISED OF FIBER-OPTIC CABLE AND WIRELESS TECHNOLOGY WITH ALL RELATED EQUIPMENT.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-6015	ITS-1.000	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47160.1.1		PE	
47160.3.1	STBG-0701 (036)	CONST	

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

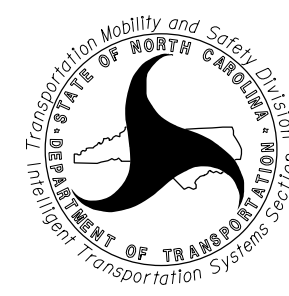


*Volume I of III
Communications & CCTV
Field Infrastructure,
Building Modifications
and Special Details*

2018 STANDARD SPECIFICATIONS

LETTING DATE: SEPTEMBER 18, 2018

PROJECT LENGTH = 55 MILES



750 Greenfield Parkway, Garner, NC 27529

NC DOT CONTACTS:
TRANSPORTATION MOBILITY & SAFETY DIVISION
INTELLIGENT TRANSPORTATION SYSTEMS SECTION
SHERRY YOW - METRO SYSTEMS PROJECT ENGINEER
WILLIAM B. HAIRSTON, III - PROJECT DESIGN ENGINEER
CYNTHIA MULDROW - DESIGN ENGINEER

ATKINS

1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

MELISSA B. TOTH, PE - ATKINS PROJECT MANAGER
H. ALFRED BADGETT, PE - ATKINS SENIOR PROJECT ENGINEER
BRADFORD SLOCUM, PE - ATKINS PROJECT ENGINEER
ANTHONY M. ENCARNACION, PE - ATKINS PROJECT ENGINEER

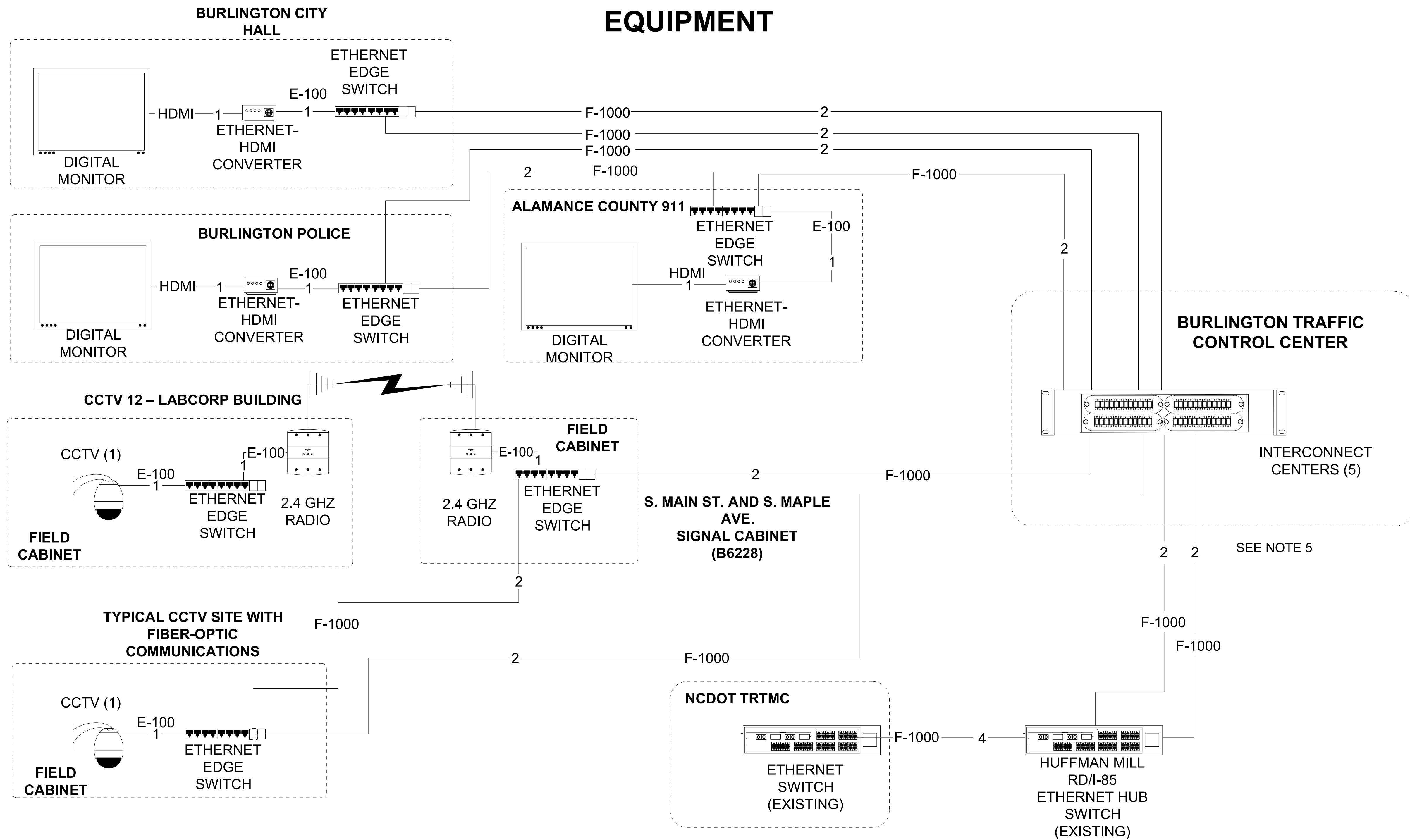


SEAL



DocuSigned by:
Melissa B. Toth 6/13/2018
SIGNATURE DATE

BLOCK DIAGRAM PROPOSED FIELD CCTV EQUIPMENT



NOTES

1. ALL EQUIPMENT PROPOSED EXCEPT WHERE NOTED.
2. CCTV ARE EQUIPPED WITH INTERNAL ENCODERS.
3. EQUIPMENT IN CITY HALL, POLICE DEPT. AND ALAMANCE CO. 911 TO BE PROVIDED AND INSTALLED BY OTHERS.
4. MAINTAIN THE TACTICS SERVERS THROUGHOUT PROJECT.
5. SEE ITS-3.00 FOR ADDITIONAL EQUIPMENT IN TRAFFIC CONTROL CENTER.

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
— USB —	USB	— HDMI —	HDMI
— NTSC —	NTSC VIDEO	— DVI —	DVI
— 2 —	DENOTES NUMBER OF CABLES/ FO STRANDS USED		

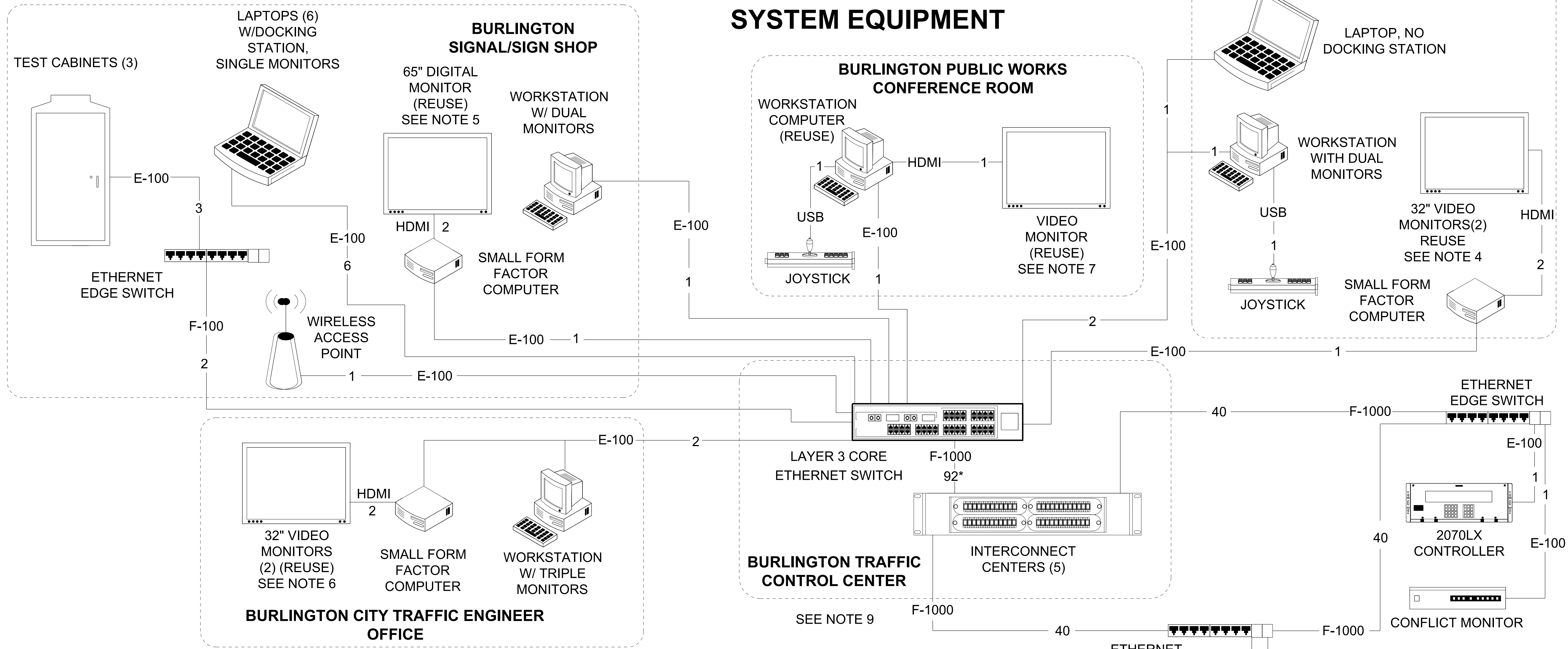
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	Burlington-Graham Signal System Block Diagrams (2 of 3)		
	Division 7 Alamance County	Burlington & Graham	
	PLAN DATE: June 2018	REVIEWED BY: HA Badgett	
	PREPARED BY: JW/AH	REVIEWED BY: BJ Slocum	
SCALE NTS	REVISIONS	INIT. DATE	DATE

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 HOEK7534 AT LUS354180

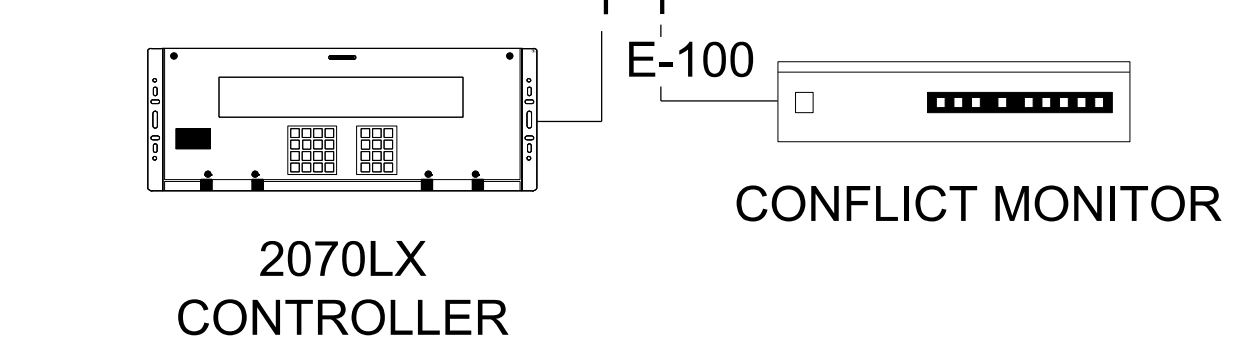
BLOCK DIAGRAM PROPOSED SIGNAL SYSTEM EQUIPMENT



*INCLUDES RINGS TO TRTMC, CITY HALL POLICE DEPT., AND ALAMANCE 911 AS SHOWN ON ITS-3.01

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
— USB —	USB	— HDMI —	HDMI
— NTSC —	NTSC VIDEO	— DVI —	DVI
— 2 —	DENOTES NUMBER OF CABLES/ FO STRANDS USED		

- NOTES**
1. ALL EQUIPMENT PROPOSED EXCEPT WHERE NOTED.
 2. INSTALL ONE SIGNAL SYSTEM WORKSTATION EACH IN TRAFFIC SUPERVISOR AND LEAD TRAFFIC TECHNICIAN OFFICES.
 3. INSTALL SIX SIGNAL SYSTEM LAPTOPS IN SIGNAL/SIGN SHOP AS SHOWN IN THE PLANS.
 4. REUSE TWO 32" MONITORS CONNECTED TO WORKSTATION IN TRAFFIC SUPERVISOR'S OFFICE.
 5. REUSE ONE 65" MONITOR CONNECTED TO ONE LAPTOP IN SIGNAL SHOP.
 6. REUSE TWO 32" MONITORS CONNECTED TO WORKSTATION IN CITY TRAFFIC ENGINEER'S OFFICE.
 7. REUSE EXIST. MONITOR AND WORKSTATION IN CONFERENCE ROOM.
 8. INSTALL SMALL FORM FACTOR COMPUTERS TO DECODE VIDEO TO MONITORS.
 9. SEE ITS-3.00 FOR ADDITIONAL EQUIPMENT IN TRAFFIC CONTROL CENTER.

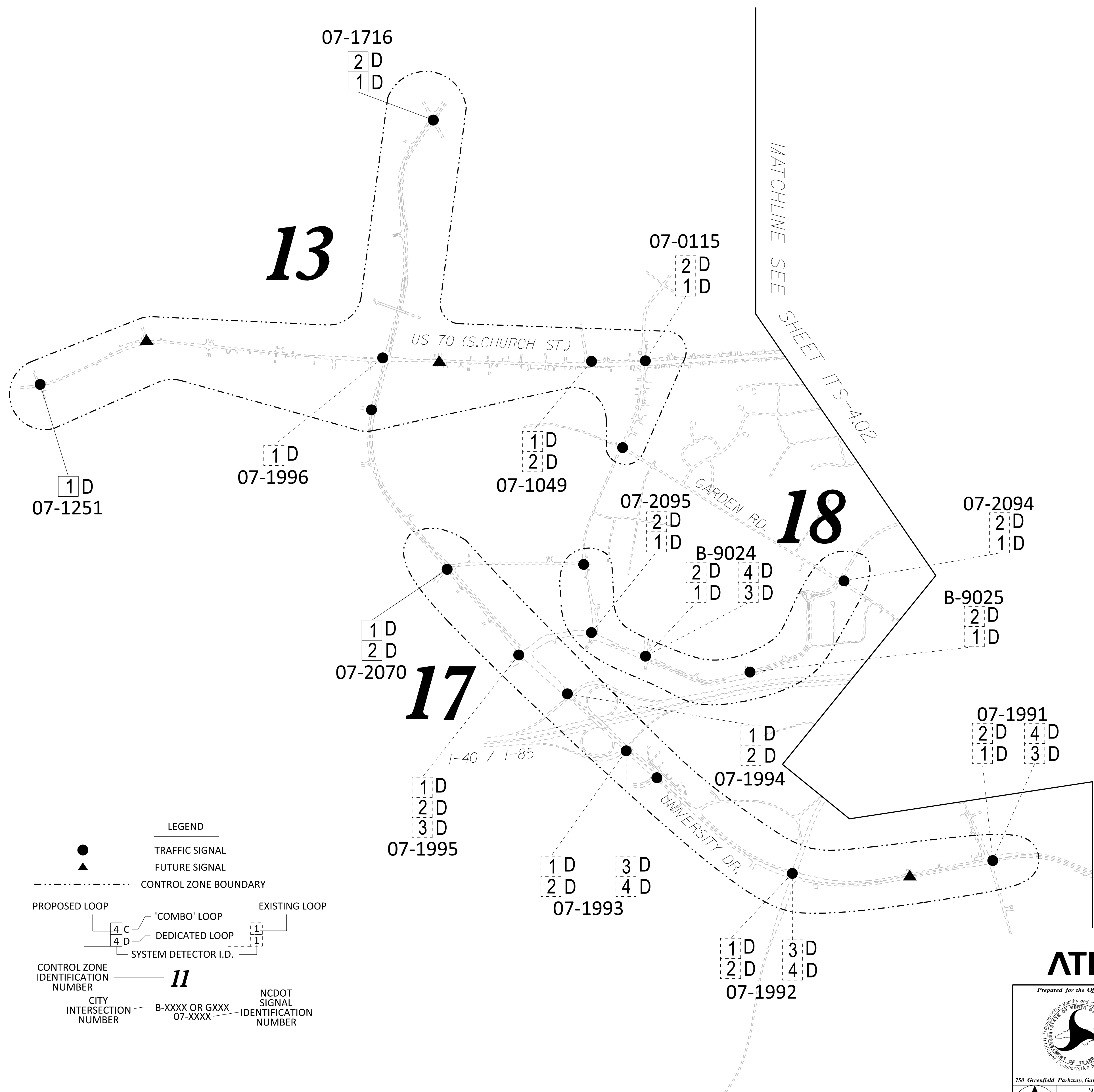


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(919) 876-6888 NCBEES #F-0326

	Burlington-Graham Signal System Block Diagrams (3 of 3)		
	Division 7 Alamance County Burlington & Graham	PLAN DATE: June 2018 REVIEWED BY: HA Badgett	
PREPARED BY: JW/AH	REVISIONS	REVIEWED BY: BJ Slocum	DATE
SCALE: NTS	INIT.	DATE	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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 HOEK7534 AT_LUS354180



MATCHLINE SEE SHEET ITS-4.02

LEGEND

- TRAFFIC SIGNAL
- ▲ FUTURE SIGNAL
- - - CONTROL ZONE BOUNDARY
- PROPOSED LOOP
- EXISTING LOOP
- 4 C 'COMBO' LOOP
- 4 D DEDICATED LOOP
- 1 SYSTEM DETECTOR I.D.
- CONTROL ZONE IDENTIFICATION NUMBER **11**
- CITY INTERSECTION NUMBER B-XXXX OR GXXX
- NCDOT SIGNAL IDENTIFICATION NUMBER 07-XXXX

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Prepared for the Offices of:

 750 Greenfield Parkway, Garner, NC 27529

SCALE: NTS

Burlington-Graham Signal System Detectors and Control Zones (2 of 7)

Division 7 Alamance County Burlington & Graham

PLAN DATE: June 2018 REVIEWED BY: HA Badgett

PREPARED BY: JW/AH REVIEWED BY: BJ Slocum

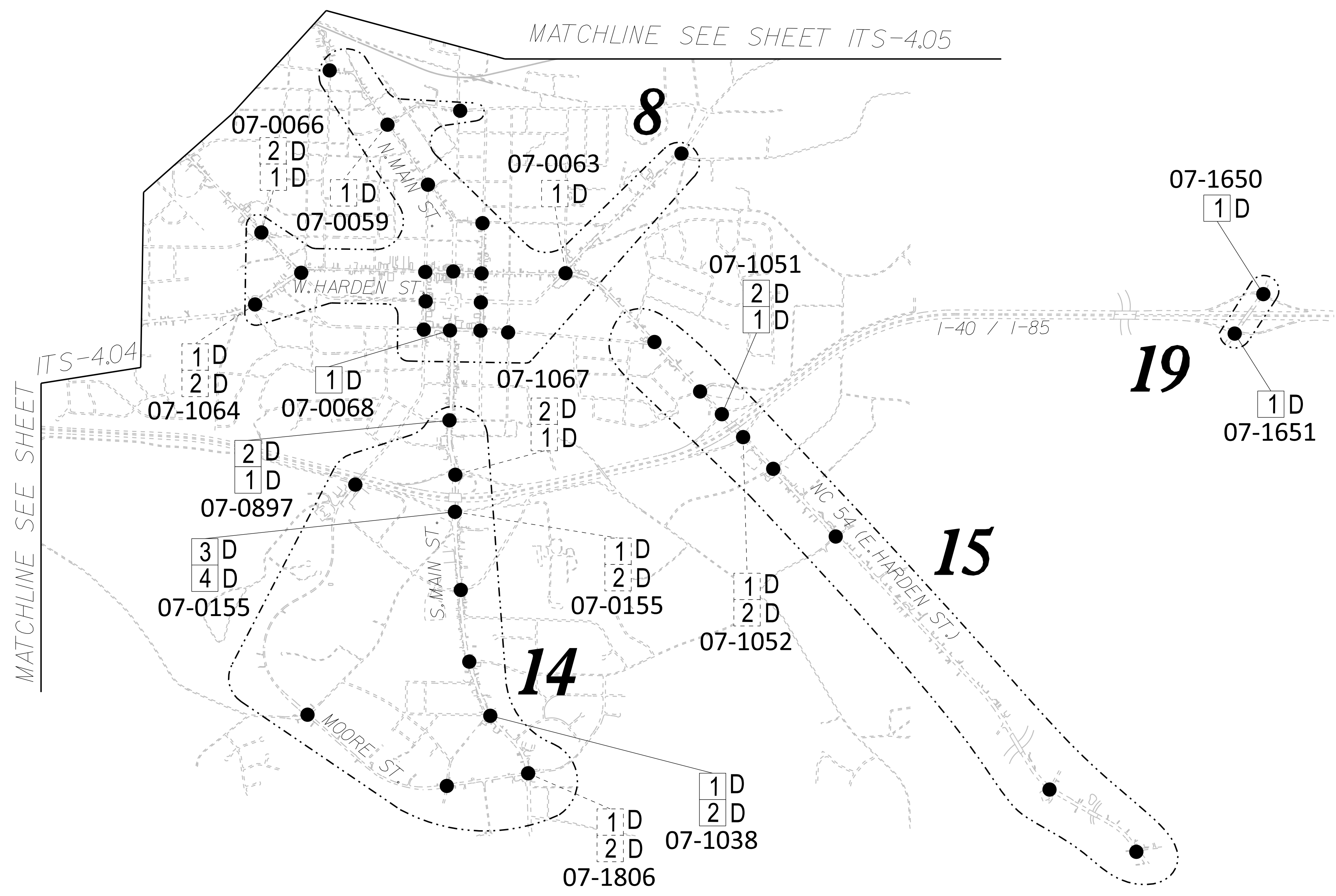
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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 040877
ENGINEER
Bradford J. Slocum
3/2018

DATE

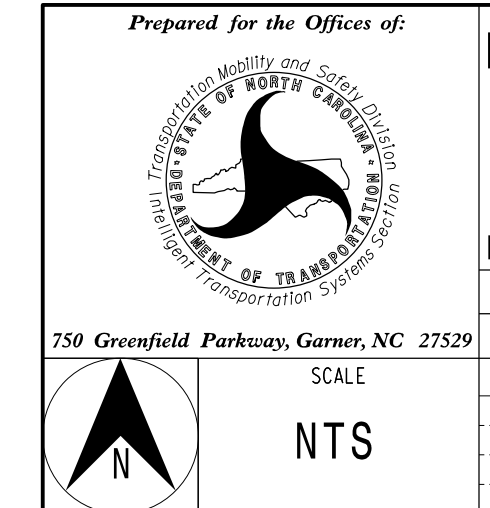
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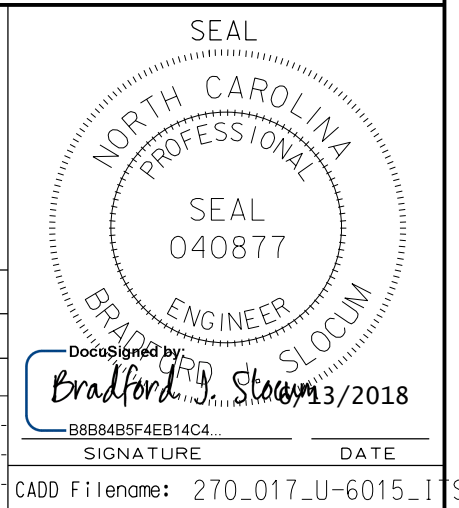
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 (919) 876-6888 NCBEES #F-0326

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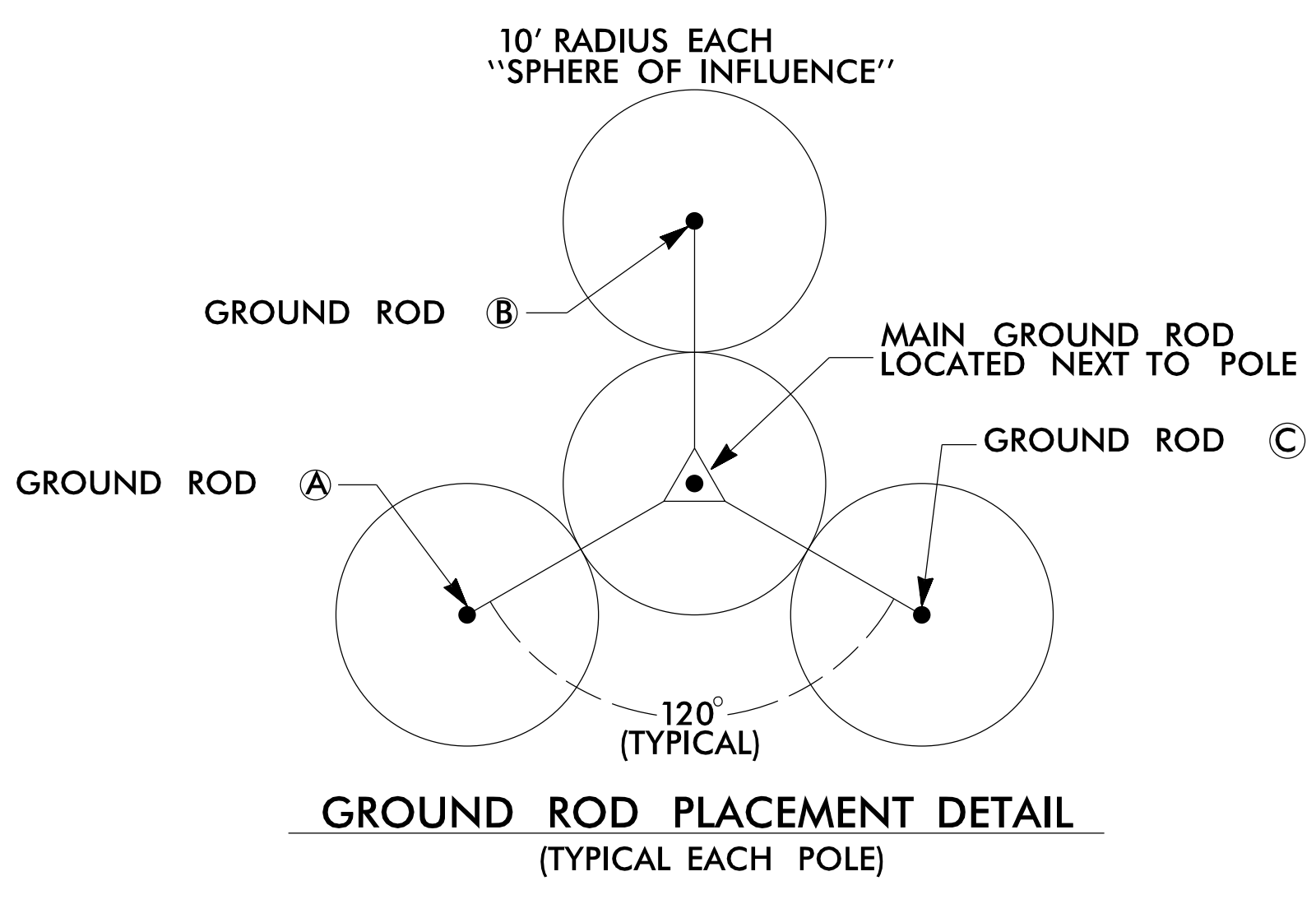
Burlington-Graham Signal System System Detectors and Control Zones (7 of 7)	
Division 7	Alamance County
Burlington & Graham	
PLAN DATE: June 2018	REVIEWED BY: HA Badgett
PREPARED BY: JW/AH	REVIEWED BY: BJ Slocum
REVISIONS	INIT. DATE



SCALE
 NTS

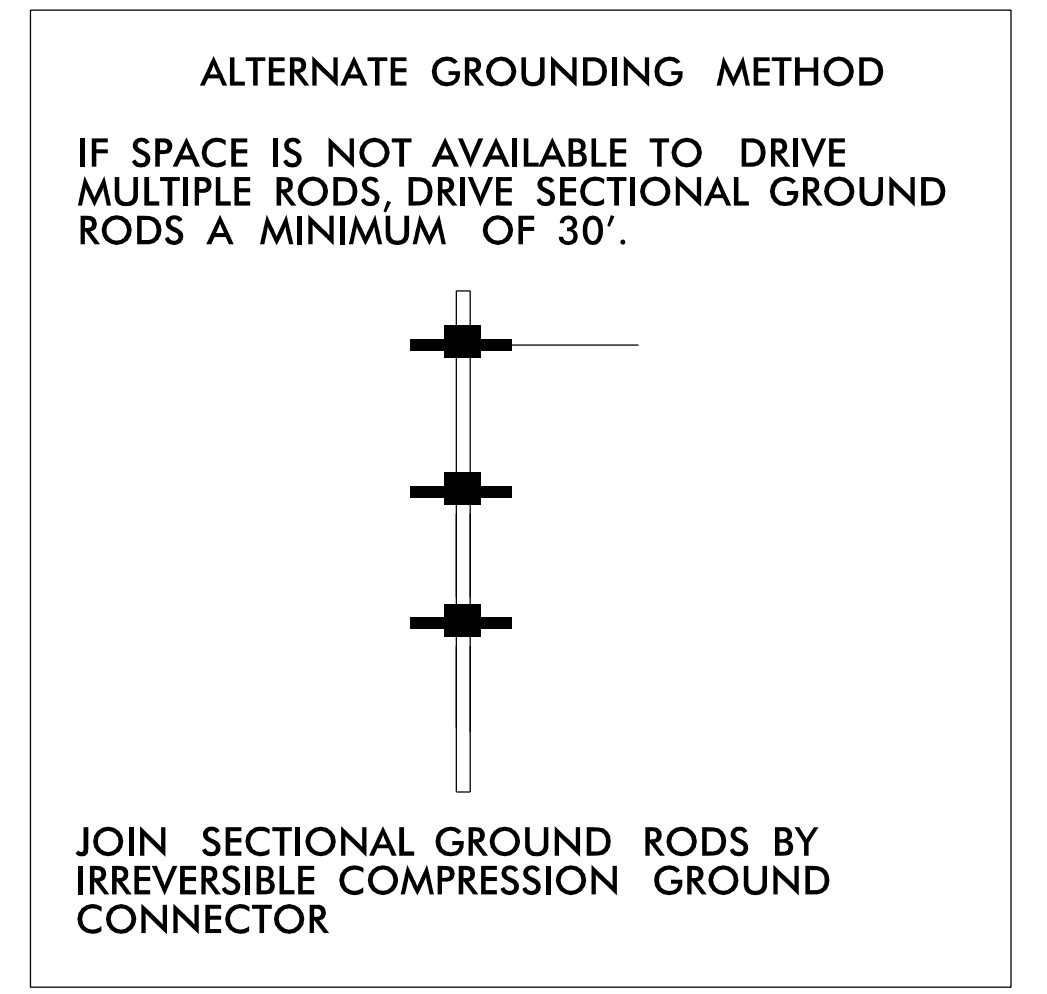
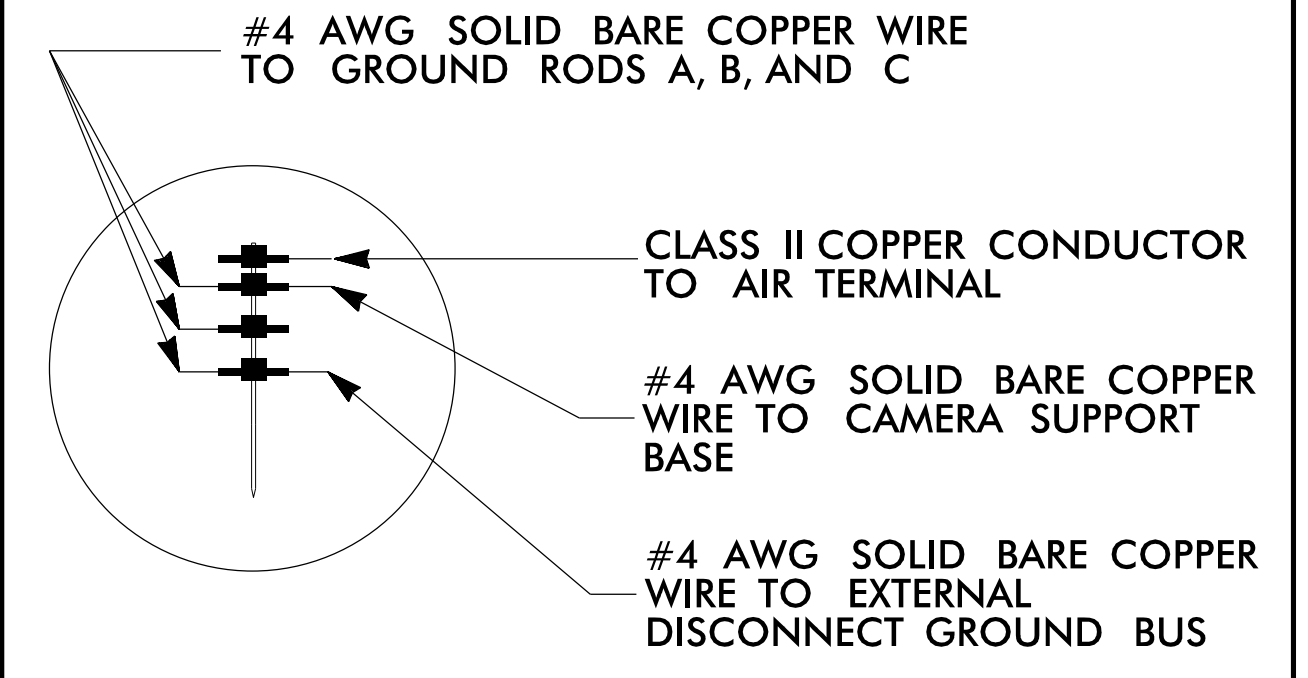
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CCTV MOUNTED ON WOOD POLE



NOTE: ENTRY HEIGHT MAY VARY WITH ATTACHMENT HEIGHT OF CABLES.

0.5 INCH X 36 INCH MINIMUM COPPER-CLAD AIR TERMINAL (CLASS II). BOND TO POLE WITH MECHANICAL BOND



NOTES

1. USE IRREVERSIBLE COMPRESSION GROUND CONNECTOR TO BOND CLASS II, 28 STRAND (MINIMUM), 15 AWG (MINIMUM), ROPE-LAY BARE COPPER CONDUCTOR TO THE MAIN GROUND ROD. MAINTAIN MAXIMUM HORIZONTAL SEPARATION BETWEEN COPPER CONDUCTOR AND RISER.
2. USE IRREVERSIBLE COMPRESSION GROUND CONNECTOR BETWEEN GROUND CONDUCTOR AND TO GROUND RODS.
3. CONTRACTOR MAY, UPON APPROVAL OF THE ENGINEER, INSTALL A 30' SECTIONAL GROUND ROD FOR INSTANCES WHEN CONDITIONS WILL NOT ALLOW FOR THE INSTALLATION OF THE 3 - RADIAL GROUND RODS.
4. STALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12".
5. REPLACE RISERS WHERE CALLED FOR IN PLANS.
6. FOR LOCATION WITH POLE MOUNTED CCTV CABINET SEE ITS-5.06 FOR CONDUITS TO CABINET AND GROUNDING.

CATEGORY 6 ETHERNET SURGE PROTECTOR SECURE TO POLE WITH STAINLESS STEEL STRAPS

BOND #4 AWG SOLID BARE COPPER WIRE TO CAMERA SUPPORT BASE BY AN ALUMINUM TO COPPER #2 - #14 AWG LUG. ATTACH TO CAMERA BASE WITH A STAINLESS STEEL SELF TAPPING SCREW. REMOVE PAINT OR PROTECTIVE COATING WHERE ATTACHING LUG ONLY.

1" RGS RISER FOR CATEGORY 6 ETHERNET CABLE

1" RGS RISER WITH WEATHERHEAD FOR CATEGORY 6 ETHERNET CABLE.

CATEGORY 6 ETHERNET CABLE

SECURE CLASS II, 28 STRAND (MINIMUM), 15 AWG (MINIMUM), ROPE-LAY BARE COPPER LIGHTNING CONDUCTOR TO THE POLE ON 24" CENTERS. USE COPPER CABLE CLIPS DESIGNED FOR USE WITH THE CLASS II COPPER CONDUCTOR. SECURE EACH COPPER CABLE CLIP TO THE POLE USING A 0.25" DIAMETER X 1.5" LONG HEX HEAD, GALVANIZED SCREW.

INSTALL 2" PVC U-GUARD OVER COPPER CONDUCTOR FROM GROUND LEVEL TO 10' (MINIMUM) ABOVE THE GROUND.

FOR POLE MOUNTED CCTV CABINET ROUTE ETHERNET CABLE RISER INTO BASE OF CABINET

INSTALL MARKER TAPE 12" BELOW GRADE AND ABOVE ALL GROUNDING CONDUCTORS.

FINISHED GRADE

24" MIN.

IRREVERSIBLE COMPRESSION GROUND CONNECTOR (TYP.)

GROUND ROD A

TO GROUND ROD B

TO GROUND ROD C

MAIN GROUND ROD INDICATED BY "●" IN GROUND ROD PLACEMENT DETAIL THIS SHEET

TO EXTERNAL DISCONNECT GROUND BUS

5/8" X 10' MIN. COPPER CLAD STEEL GROUND RODS DRIVEN INTO UNDISTURBED EARTH

12" MINIMUM

10 - 20'

1" CONDUIT FOR CATEGORY 6 ETHERNET CABLE TO CABINET

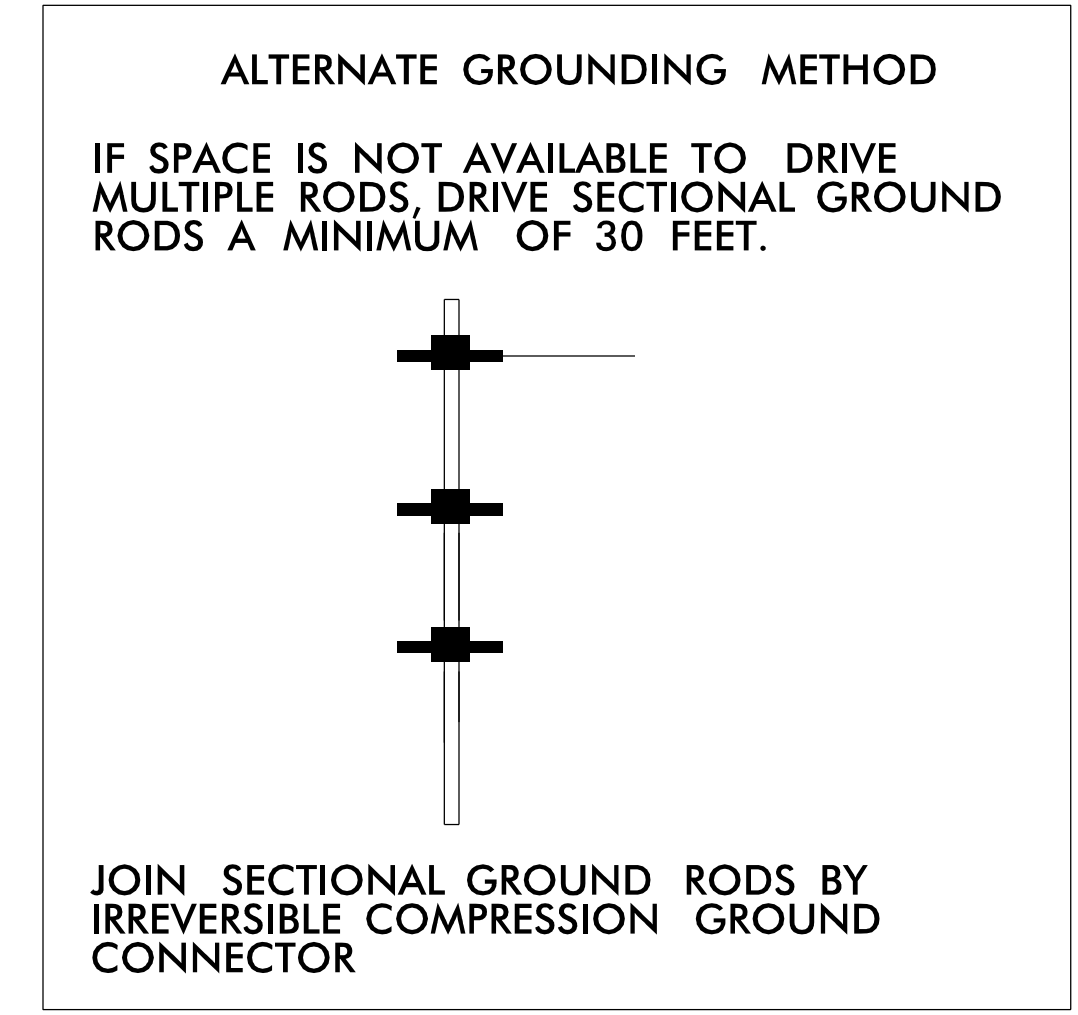
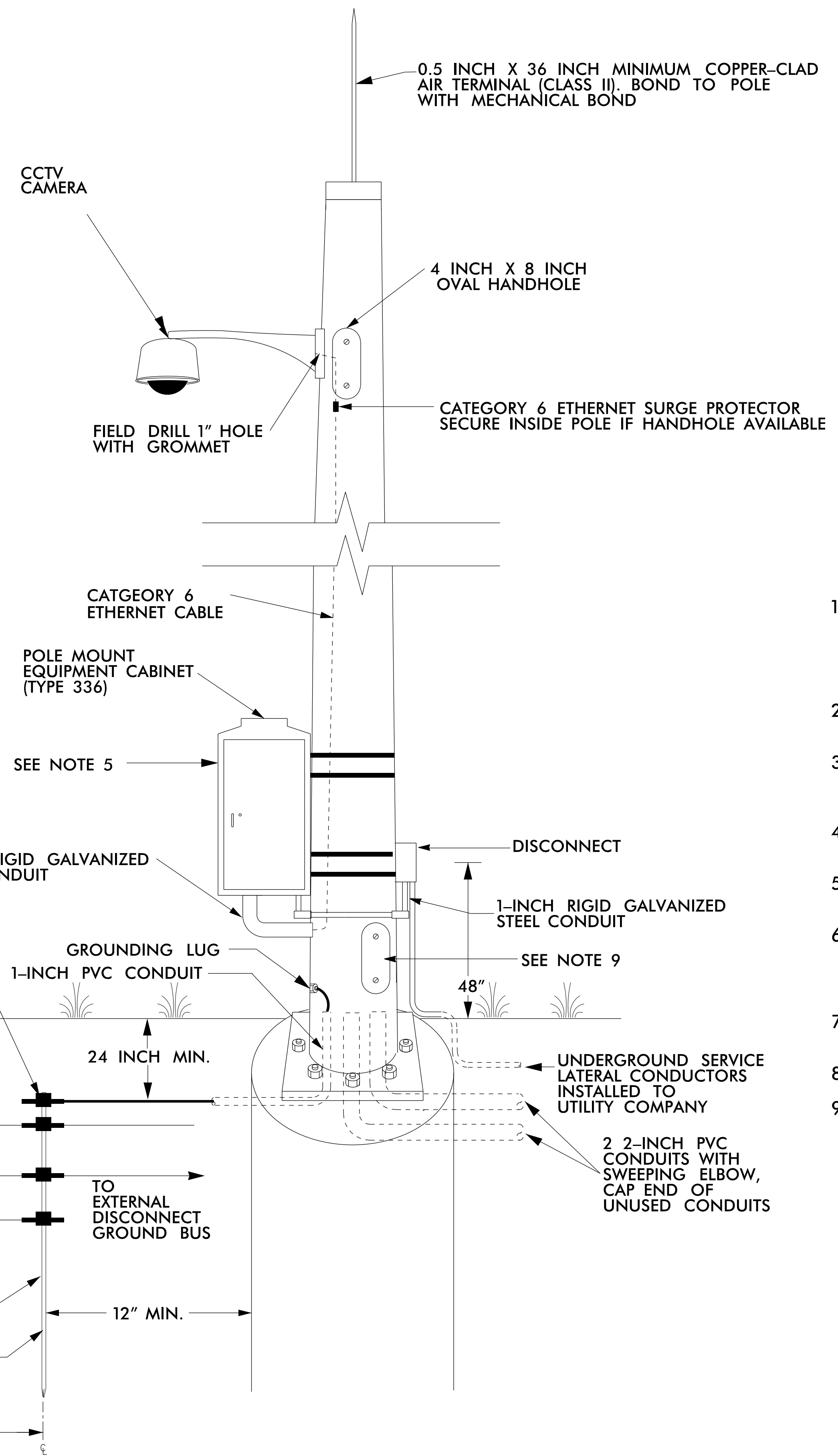
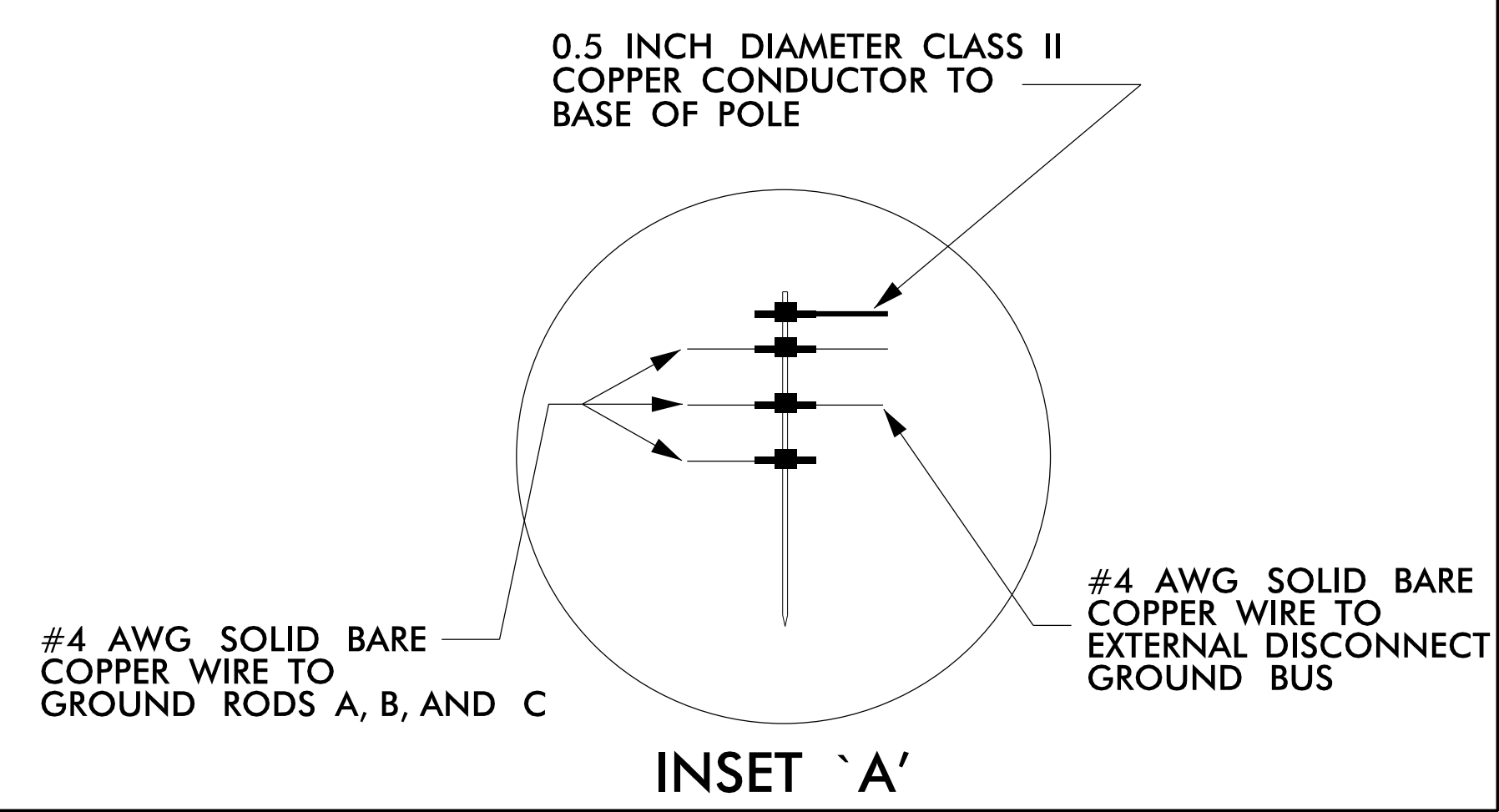
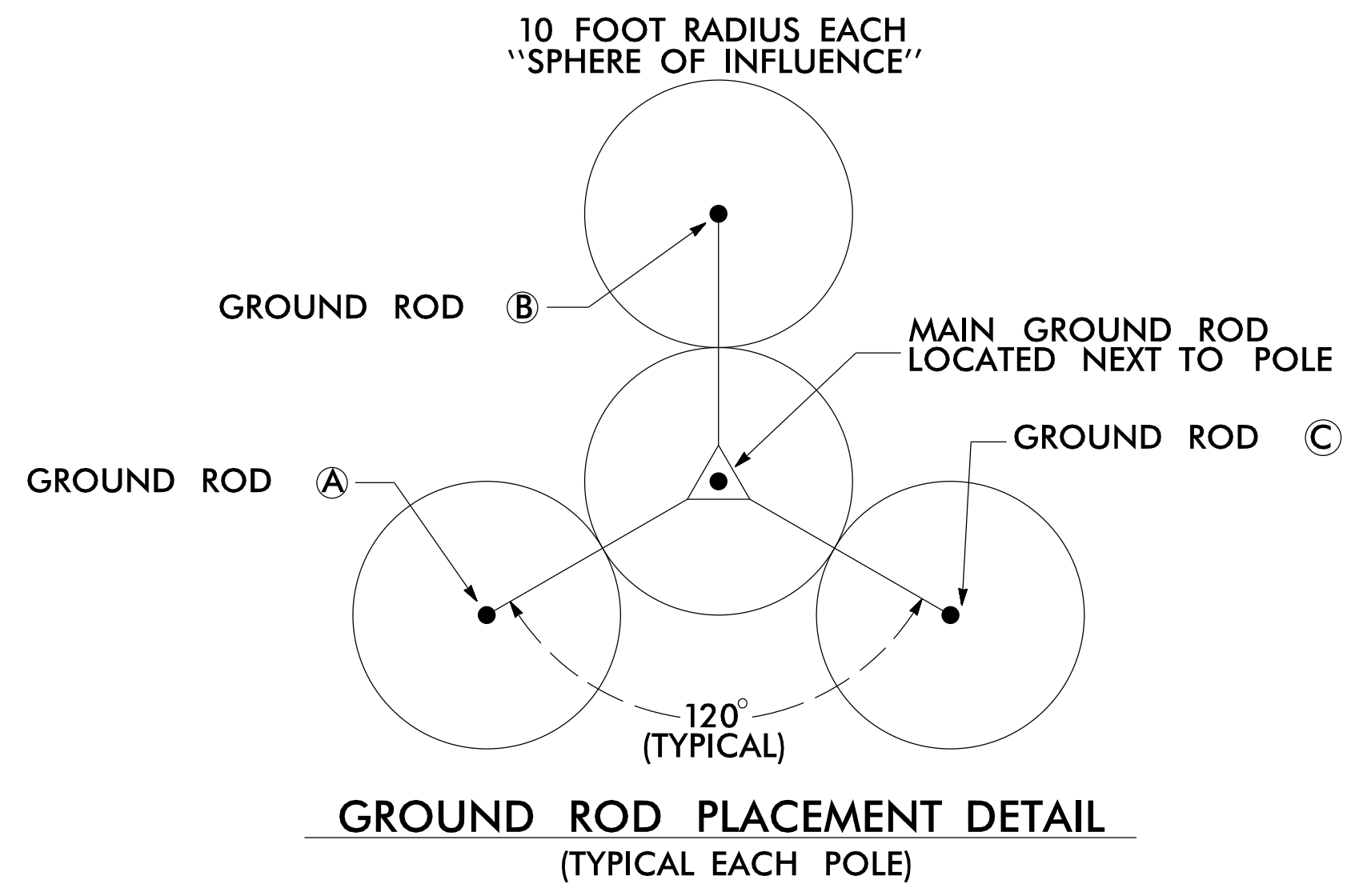
ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	Burlington-Graham Signal System CCTV Camera Installation, Wood Poles		
	Division 7 Alamance County	Burlington & Graham	
PLAN DATE: JUNE 2018	REVIEWED BY: HA Badgett	PREPARED BY: JW/AH	REVIEWED BY: BJ Slocum
SCALE: NTS	REVISIONS	INIT.	DATE

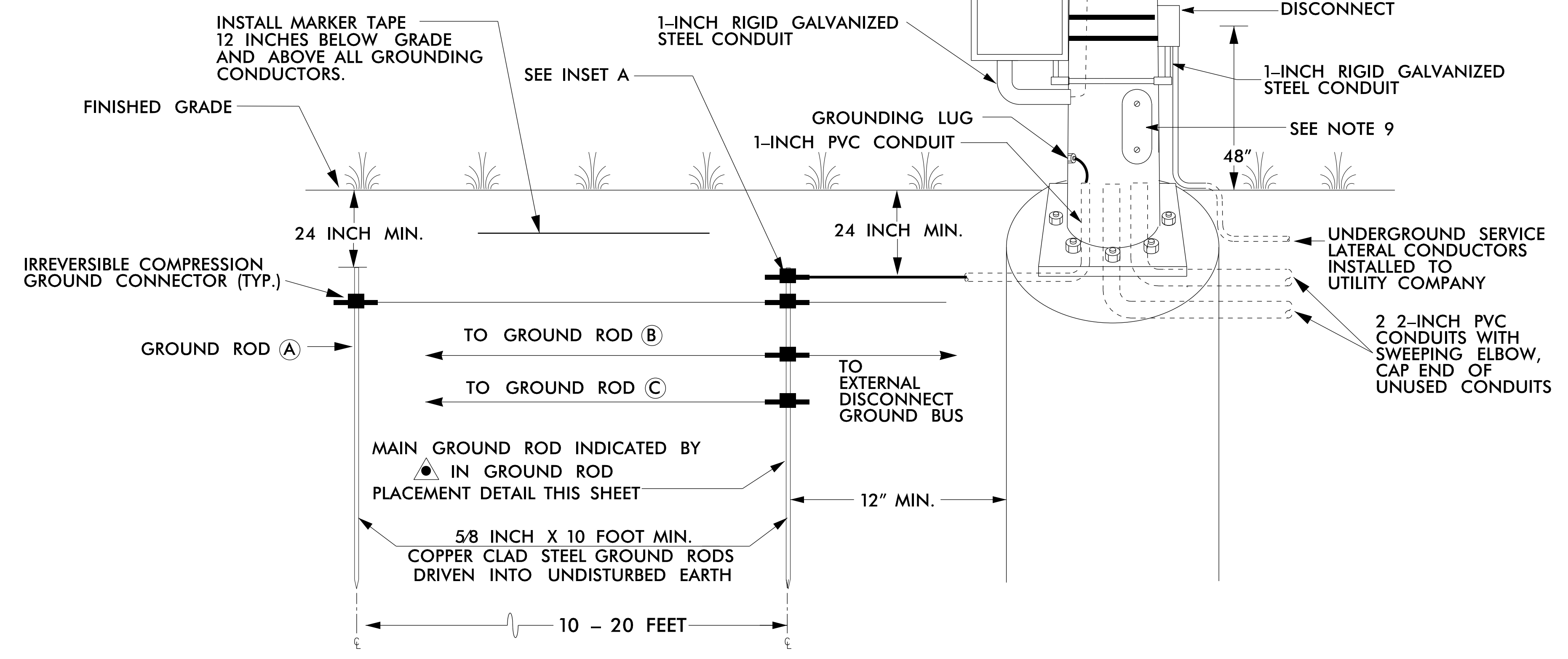
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CCTV MOUNTED ON METAL POLE, POLE MOUNT CCTV CABINET



NOTES

1. USE IRREVERSIBLE COMPRESSION GROUND CONNECTOR TO BOND CLASS II, 28 STRAND (MINIMUM), 15 AWG (MINIMUM) ROPE-LAY BARE COPPER CONDUCTOR TO THE MAIN GROUND ROD. MAINTAIN MAXIMUM HORIZONTAL SEPARATION BETWEEN COPPER CONDUCTOR AND RISER.
2. USE IRREVERSIBLE COMPRESSION GROUND CONNECTOR BETWEEN GROUND CONDUCTOR AND TO GROUND RODS.
3. BOND #4 AWG SOLID BARE COPPER WIRE TO REBAR CAGE AND THE MAIN GROUND ROD BY AN IRREVERSIBLE COMPRESSION GROUND CONNECTOR.
4. ENSURE CAMERA HOUSING, CAMERA, AND PAN-TILT UNIT ARE BONDED TO POLE.
5. REMOVE BONDING JUMPER BETWEEN EQUIPMENT CABINET GROUND BUS AND NEUTRAL BUS.
6. THE CONTRACTOR MAY, UPON APPROVAL OF THE ENGINEER, INSTALL A 30-FOOT SECTIONAL GROUND ROD WHEN CONDITIONS WILL NOT ALLOW FOR THE INSTALLATION OF THE 3 - RADIAL GROUND RODS.
7. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
8. MOUNT DISCONNECT ON OPPOSITE SIDE OF POLE FROM CABINET.
9. FOR CCTV/SIGNAL POLES USE 8" X 27" TERMINAL COMPARTMENT FOR DEDICATED CCTV POLES USE 4" X 8" HANDHOLE.



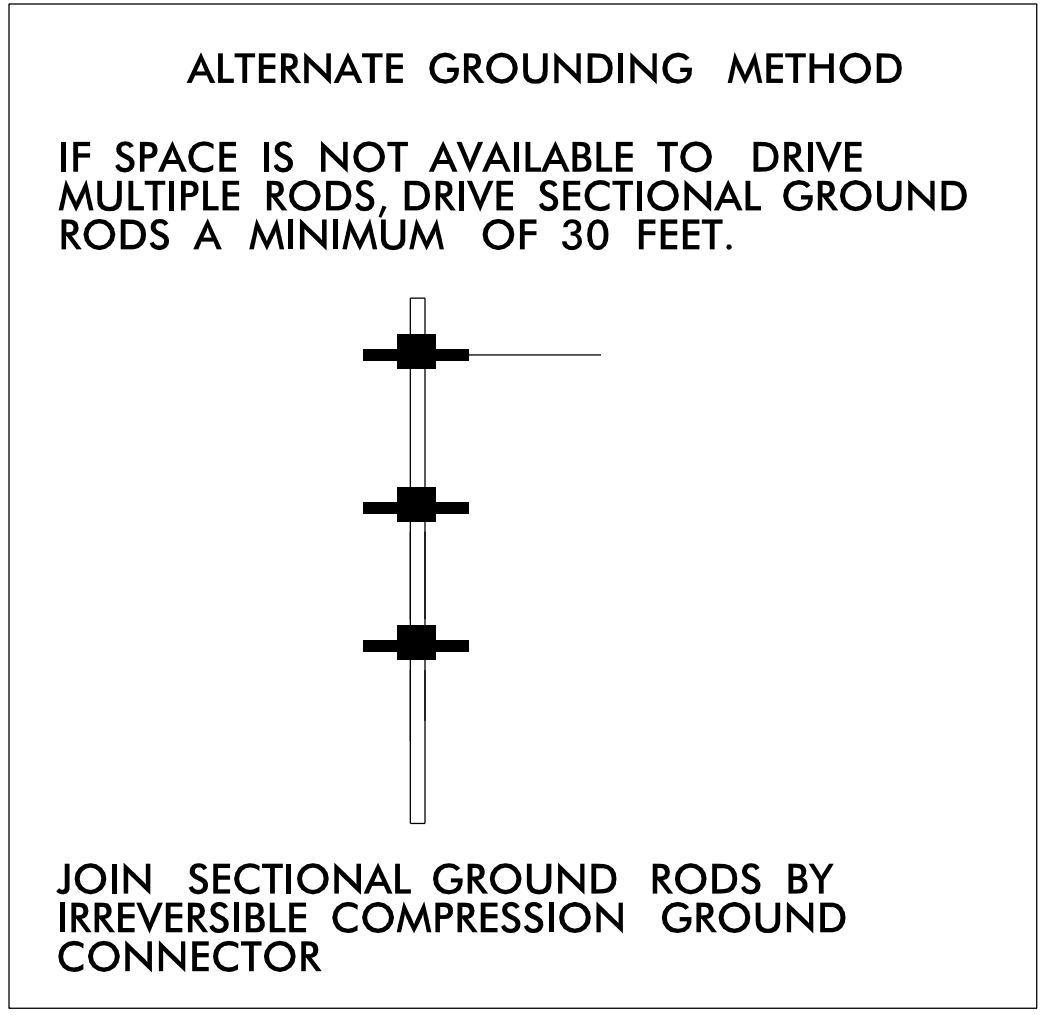
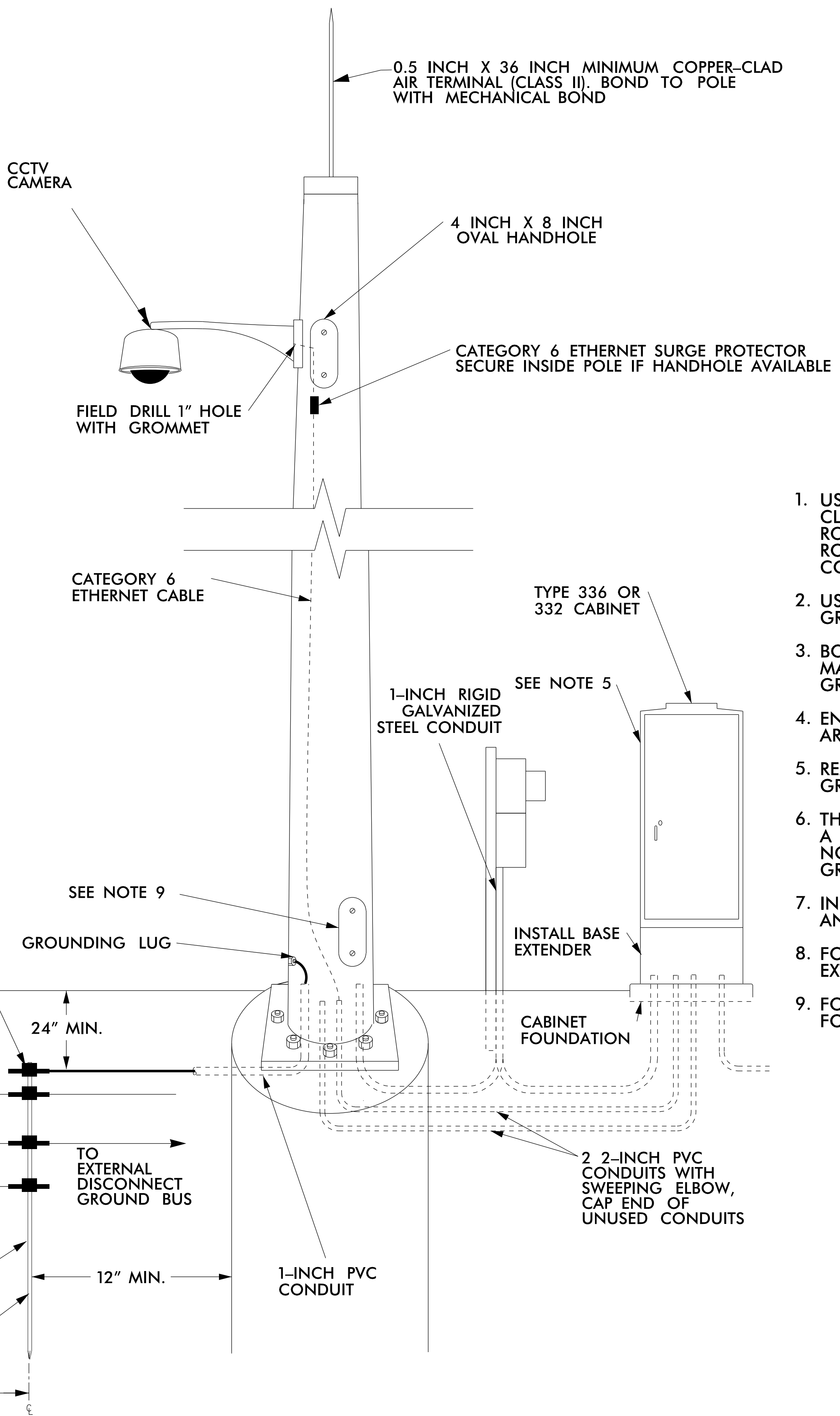
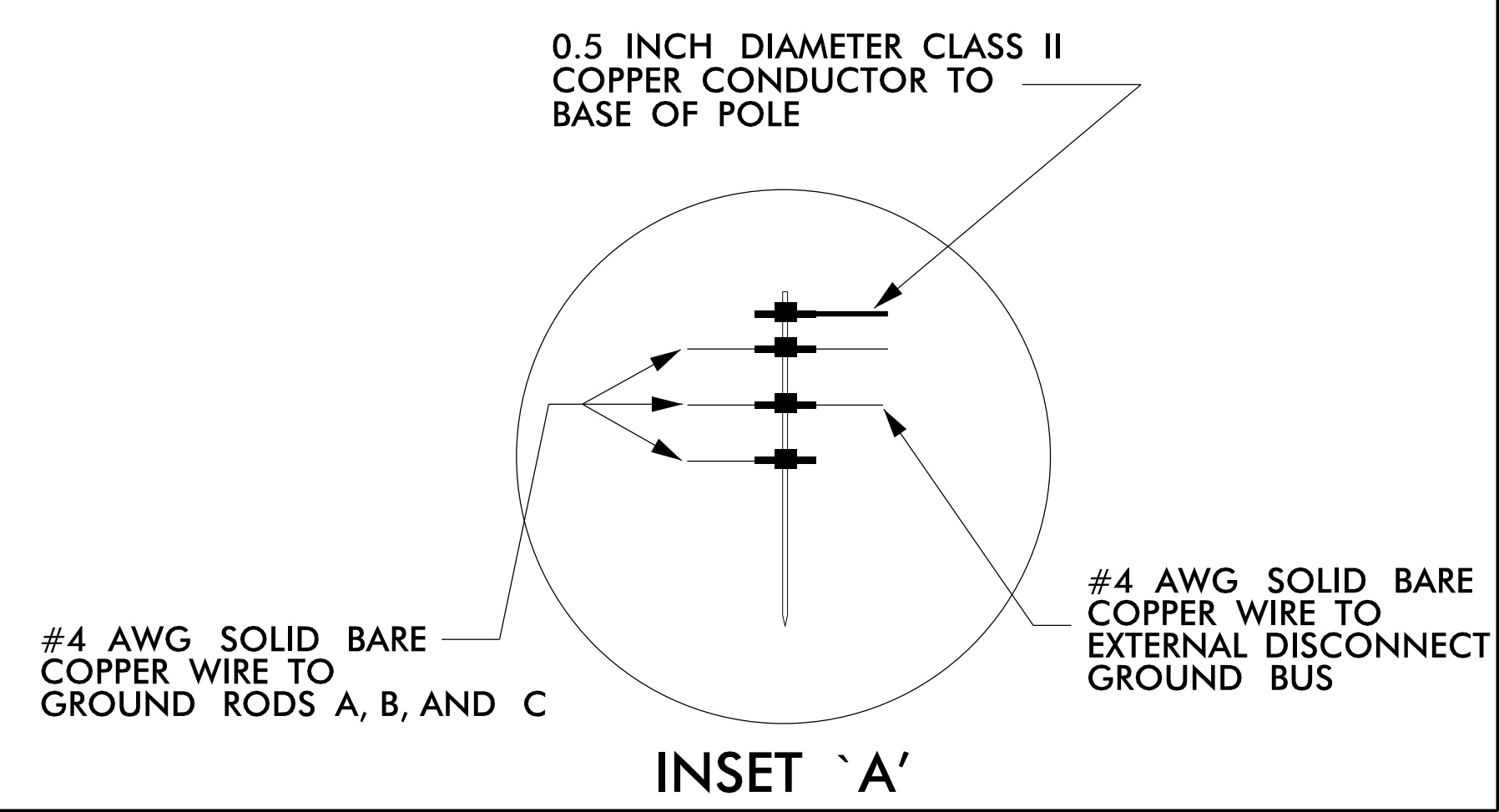
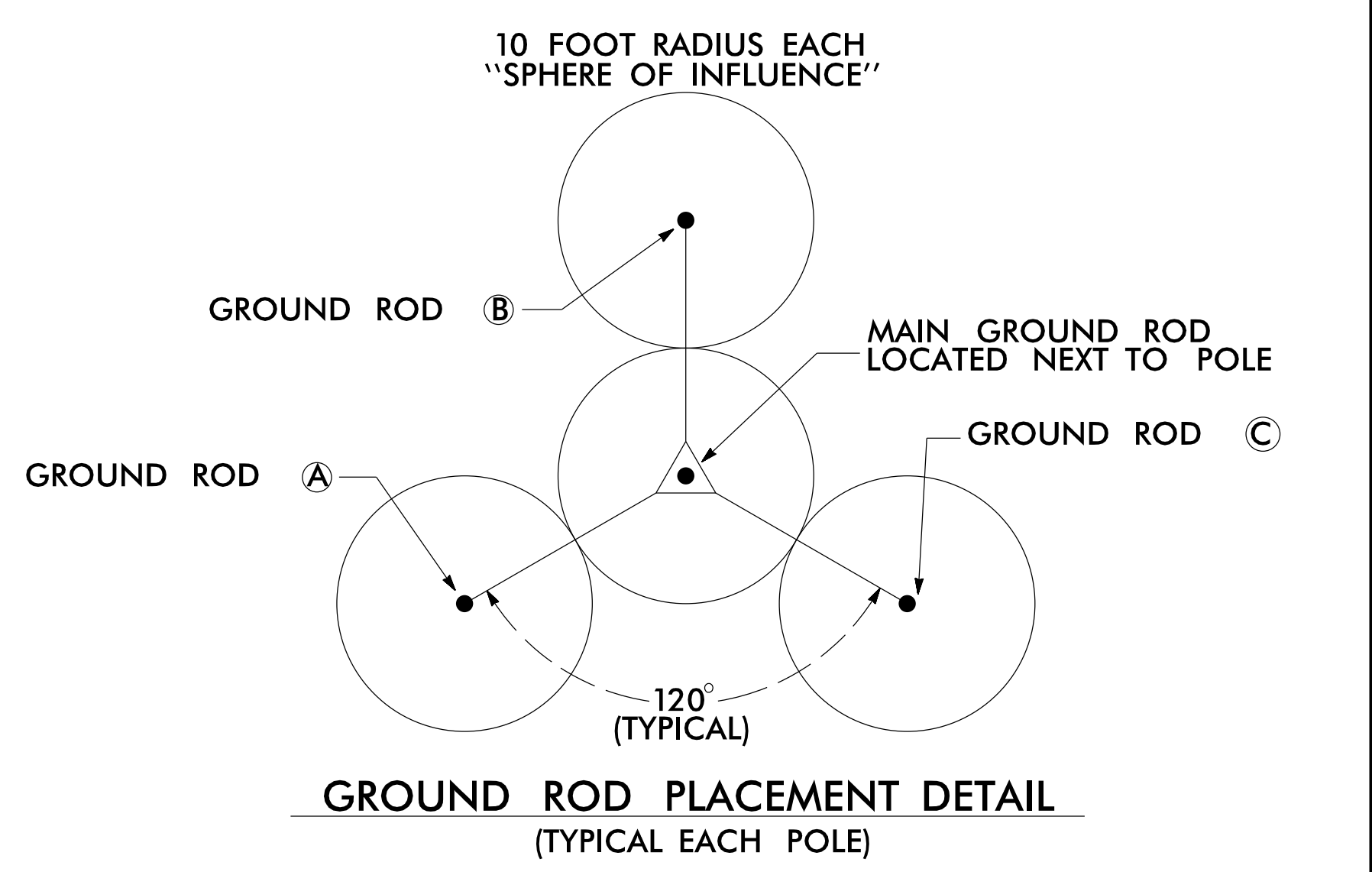
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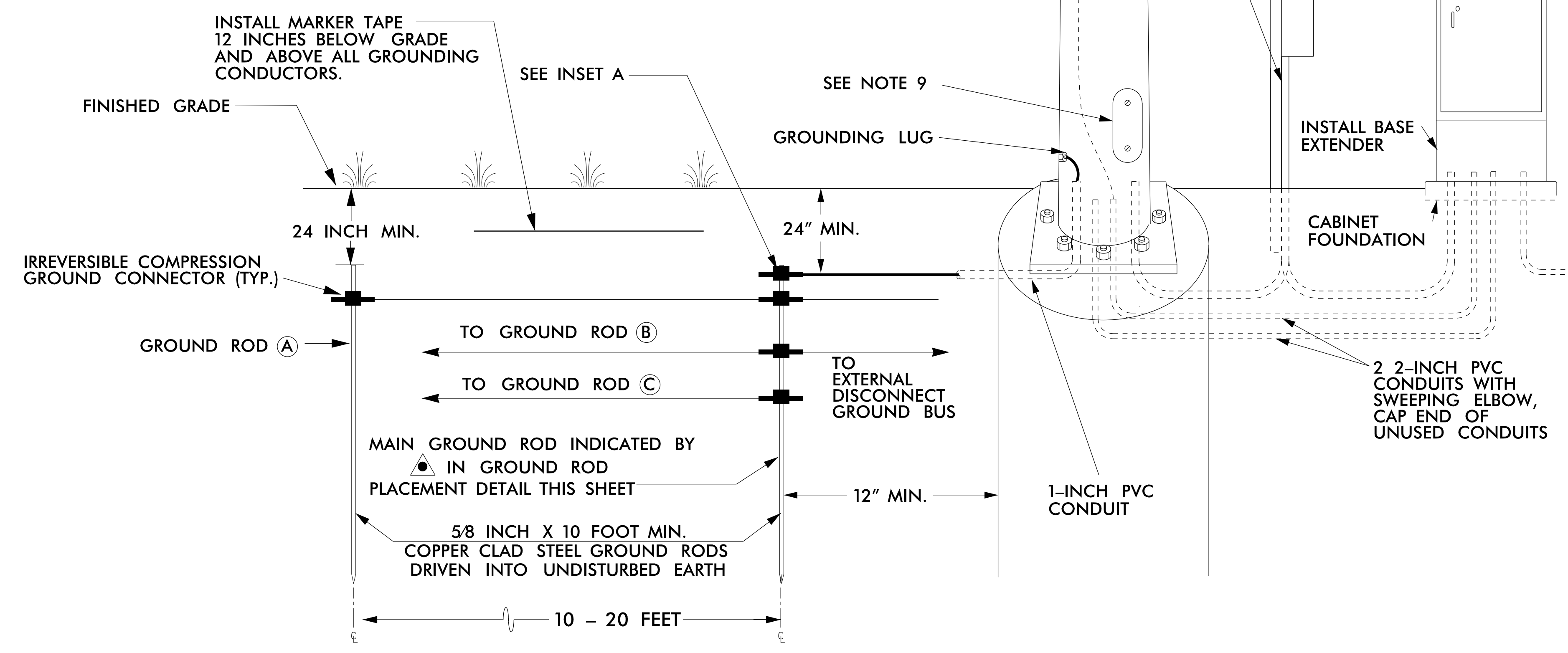
	Burlington-Graham Signal System CCTV Camera Installation, Metal Poles (1 of 3)		
	Division 7 Alamance County PLAN DATE: June 2018 PREPARED BY: JW/AH	Burlington & Graham REVIEWED BY: HA Badgett REVIEWED BY: BJ Slocum	
REVISIONS: INIT. DATE			

CCTV MOUNTED ON METAL POLE GROUND MOUNT SHARED CABINET



NOTES

1. USE IRREVERSIBLE COMPRESSION GROUND CONNECTOR TO BOND CLASS II, 28 STRAND (MINIMUM), 15 AWG (MINIMUM) ROPE-LAY BARE COPPER CONDUCTOR TO THE MAIN GROUND ROD. MAINTAIN MAXIMUM HORIZONTAL SEPARATION BETWEEN COPPER CONDUCTOR AND RISER.
2. USE IRREVERSIBLE COMPRESSION GROUND CONNECTOR BETWEEN GROUND CONDUCTOR AND TO GROUND RODS.
3. BOND #4 AWG SOLID BARE COPPER WIRE TO REBAR CAGE AND THE MAIN GROUND ROD BY AN IRREVERSIBLE COMPRESSION GROUND CONNECTOR.
4. ENSURE CAMERA HOUSING, CAMERA, AND PAN-TILT UNIT ARE BONDED TO POLE.
5. REMOVE BONDING JUMPER BETWEEN EQUIPMENT CABINET GROUND BUS AND NEUTRAL BUS.
6. THE CONTRACTOR MAY, UPON APPROVAL OF THE ENGINEER, INSTALL A 30-FOOT SECTIONAL GROUND ROD WHEN CONDITIONS WILL NOT ALLOW FOR THE INSTALLATION OF THE 3 - RADIAL GROUND RODS.
7. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
8. FOR EXISTING BASE MOUNTED CCTV CABINETS, INSTALL BASE EXTENDER UNDER NEW CABINET.
9. FOR CCTV/SIGNAL POLES USE 8" X 27" TERMINAL COMPARTMENT FOR DEDICATED CCTV POLES USE 4" X 8" HANDHOLE.



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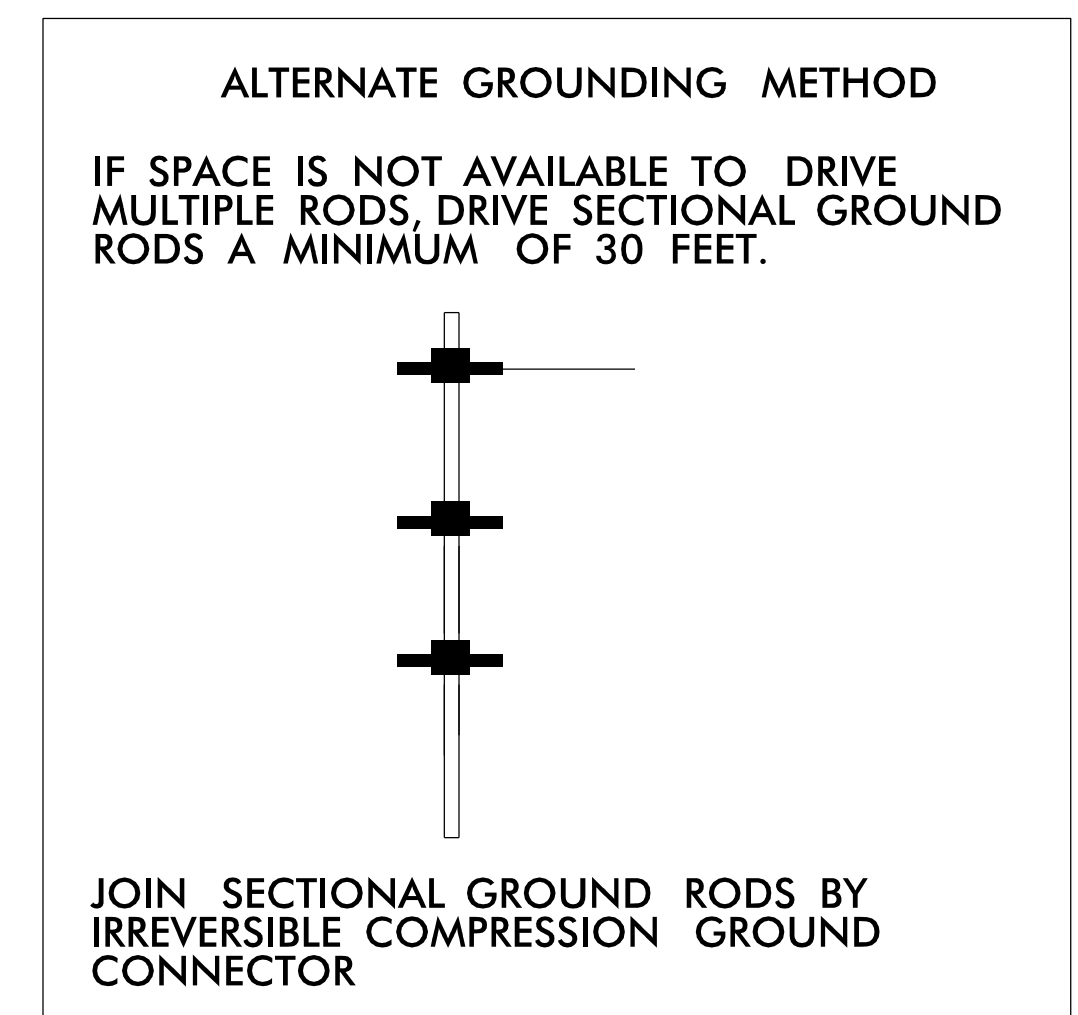
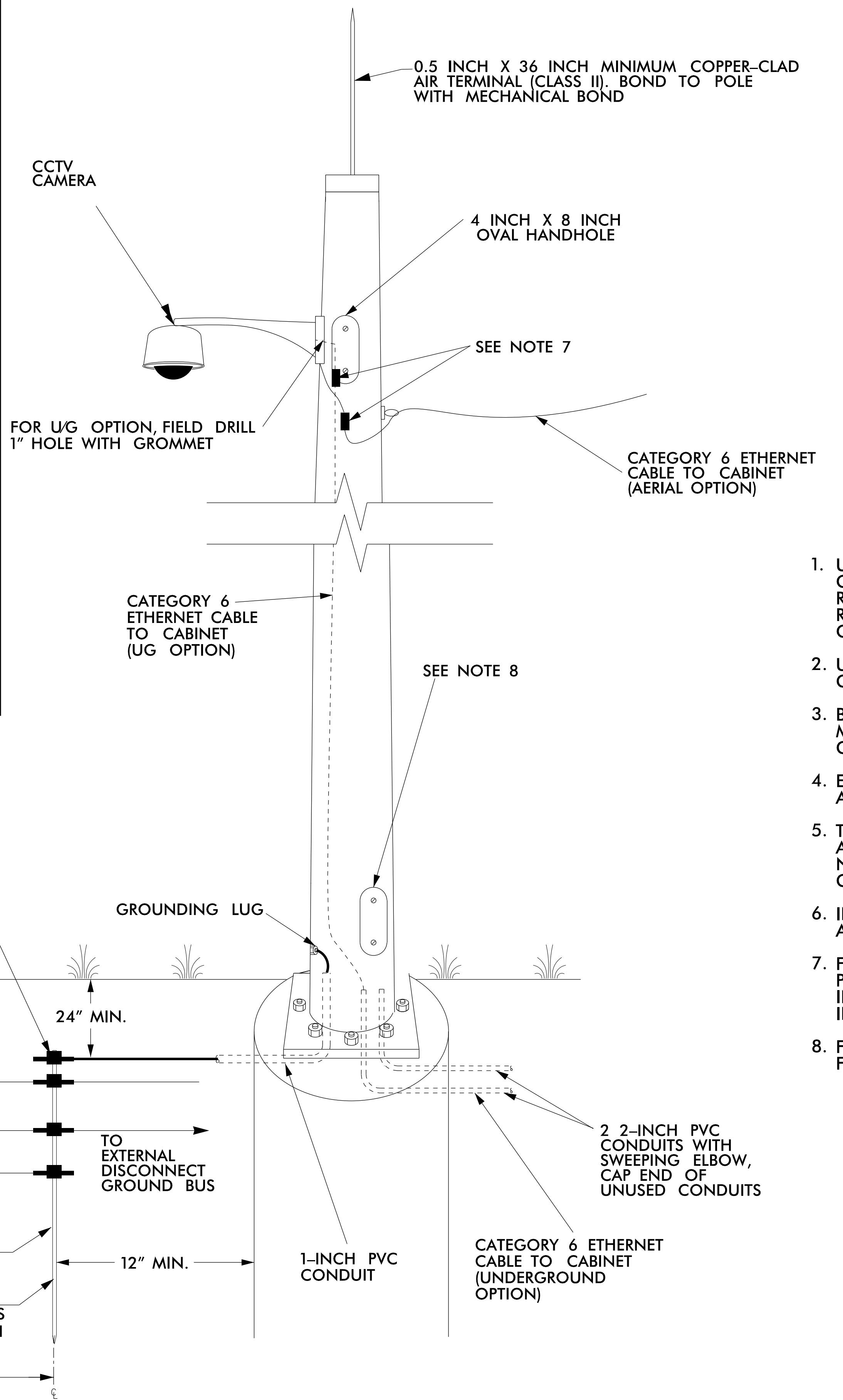
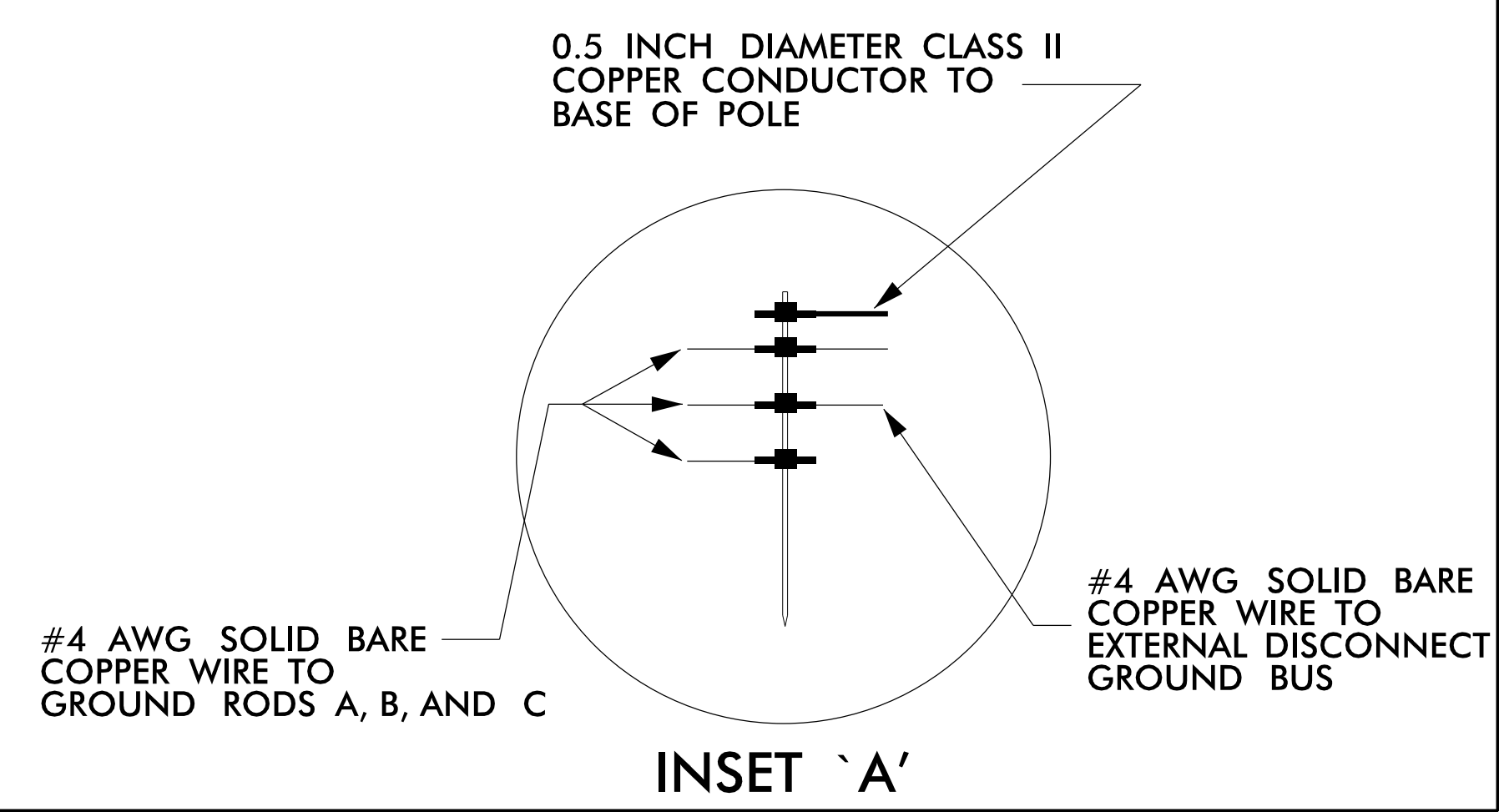
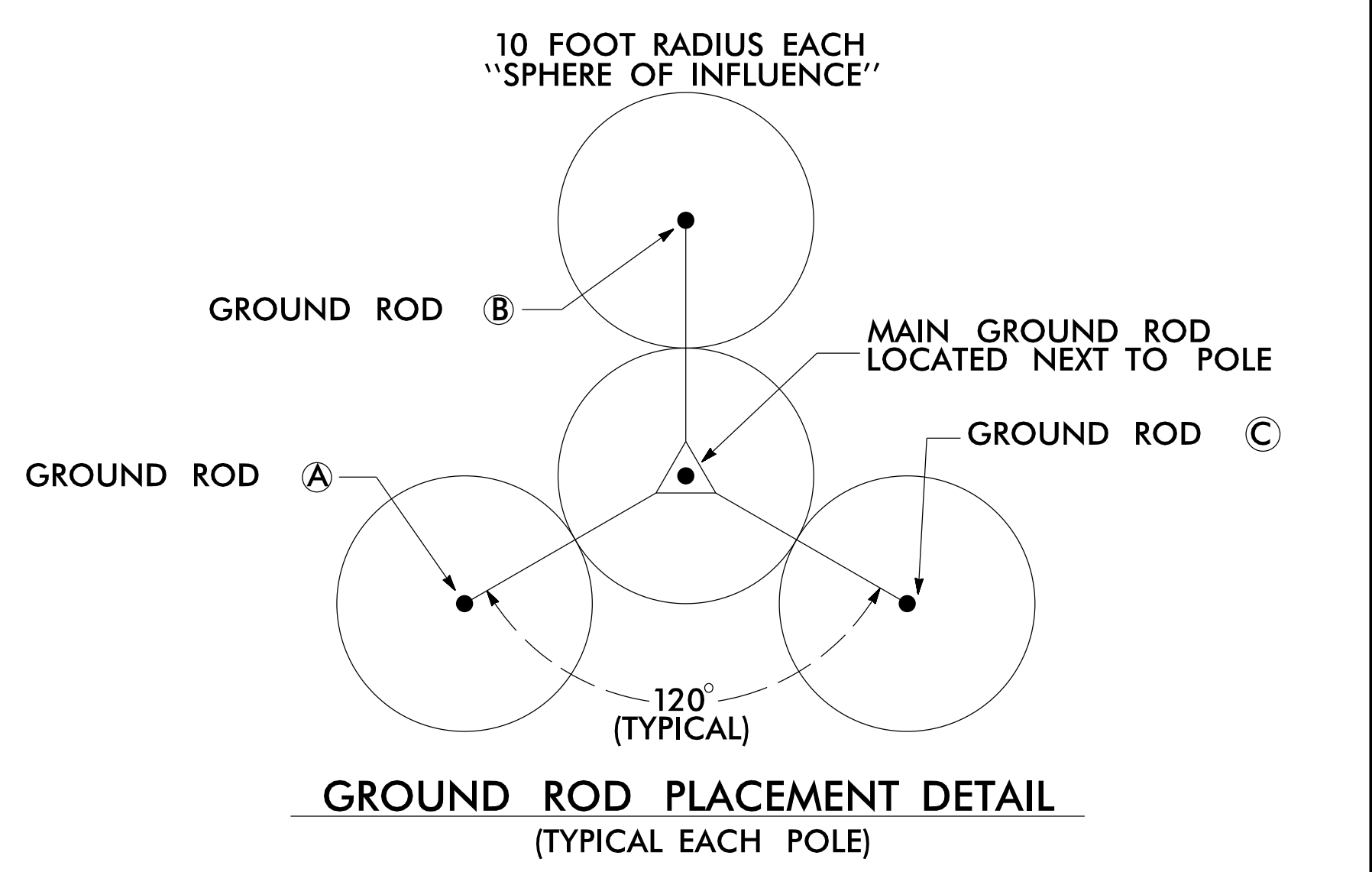
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 (919) 876-6888 NCBEES #F-0326

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Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRANSPORTATION SYSTEMS		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019962 H. ALLEN BADGETT 13/2018
Burlington-Graham Signal System CCTV Camera Installation, Metal Poles (2 of 3)		
Division 7 Alamance County Burlington & Graham		
PLAN DATE: June 2018	REVIEWED BY: HA Badgett	
PREPARED BY: JW/AH	REVIEWED BY: BJ Slocum	
SCALE NTS		
REVISIONS INIT. DATE		
SIGNATURE		

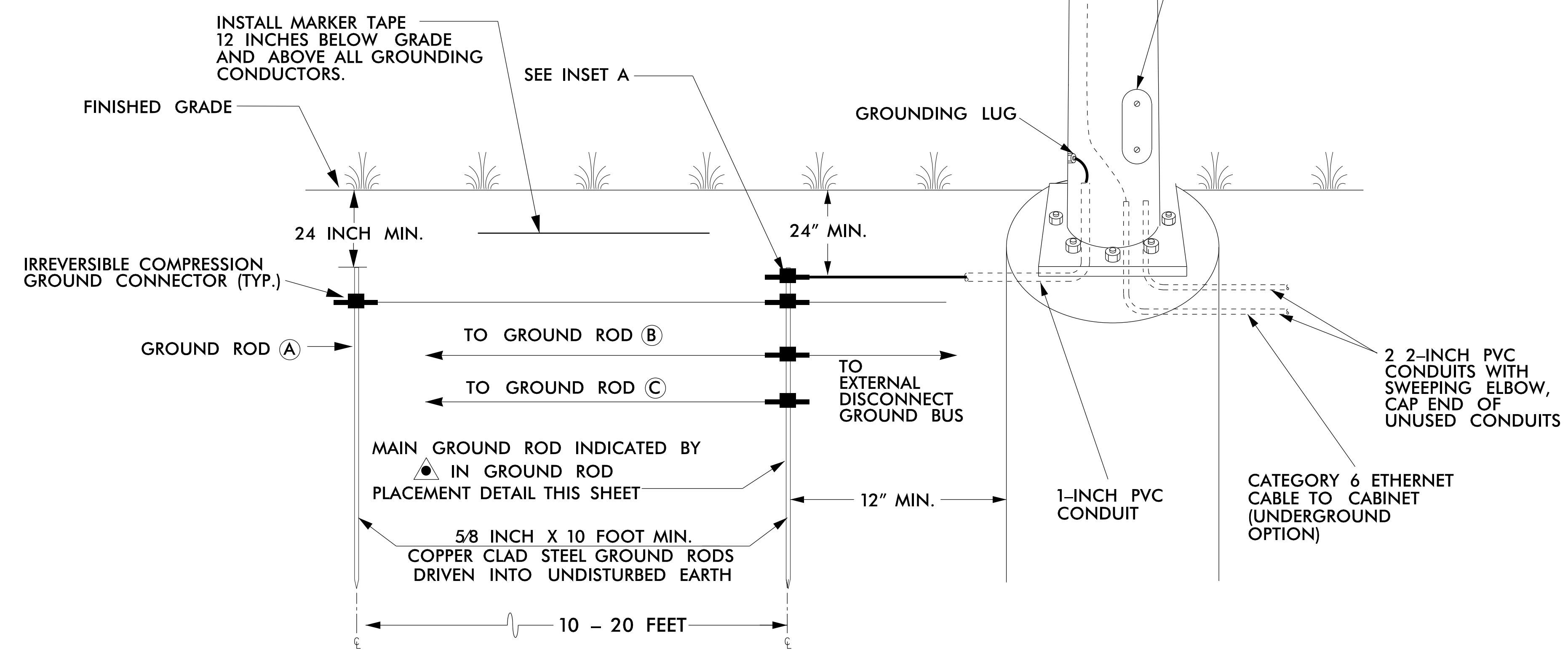
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CCTV MOUNTED ON METAL POLE WITH SHARED GROUND MOUNT CABINET



NOTES

1. USE IRREVERSIBLE COMPRESSION GROUND CONNECTOR TO BOND CLASS II, 28 STRAND (MINIMUM), 15 AWG (MINIMUM) ROPE-LAY BARE COPPER CONDUCTOR TO THE MAIN GROUND ROD. MAINTAIN MAXIMUM HORIZONTAL SEPARATION BETWEEN COPPER CONDUCTOR AND RISER.
2. USE IRREVERSIBLE COMPRESSION GROUND CONNECTOR BETWEEN GROUND CONDUCTOR AND TO GROUND RODS.
3. BOND #4 AWG SOLID BARE COPPER WIRE TO REBAR CAGE AND THE MAIN GROUND ROD BY AN IRREVERSIBLE COMPRESSION GROUND CONNECTOR.
4. ENSURE CAMERA HOUSING, CAMERA, AND PAN-TILT UNIT ARE BONDED TO POLE.
5. THE CONTRACTOR MAY, UPON APPROVAL OF THE ENGINEER, INSTALL A 30-FOOT SECTIONAL GROUND ROD WHEN CONDITIONS WILL NOT ALLOW FOR THE INSTALLATION OF THE 3 - RADIAL GROUND RODS.
6. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
7. FOR AERIAL OPTION, INSTALL CATEGORY 6 ETHERNET CABLE SURGE PROTECTION DEVICE ON SIDE OF POLE. FOR UNDERGROUND OPTION, INSTALL CATEGORY 6 ETHERNET CABLE SURGE PROTECTION DEVICE INSIDE POLE.
8. FOR CCTV/SIGNAL POLES USE 8" X 27" TERMINAL COMPARTMENT FOR DEDICATED CCTV POLES USE 4" X 8" HANDHOLE.



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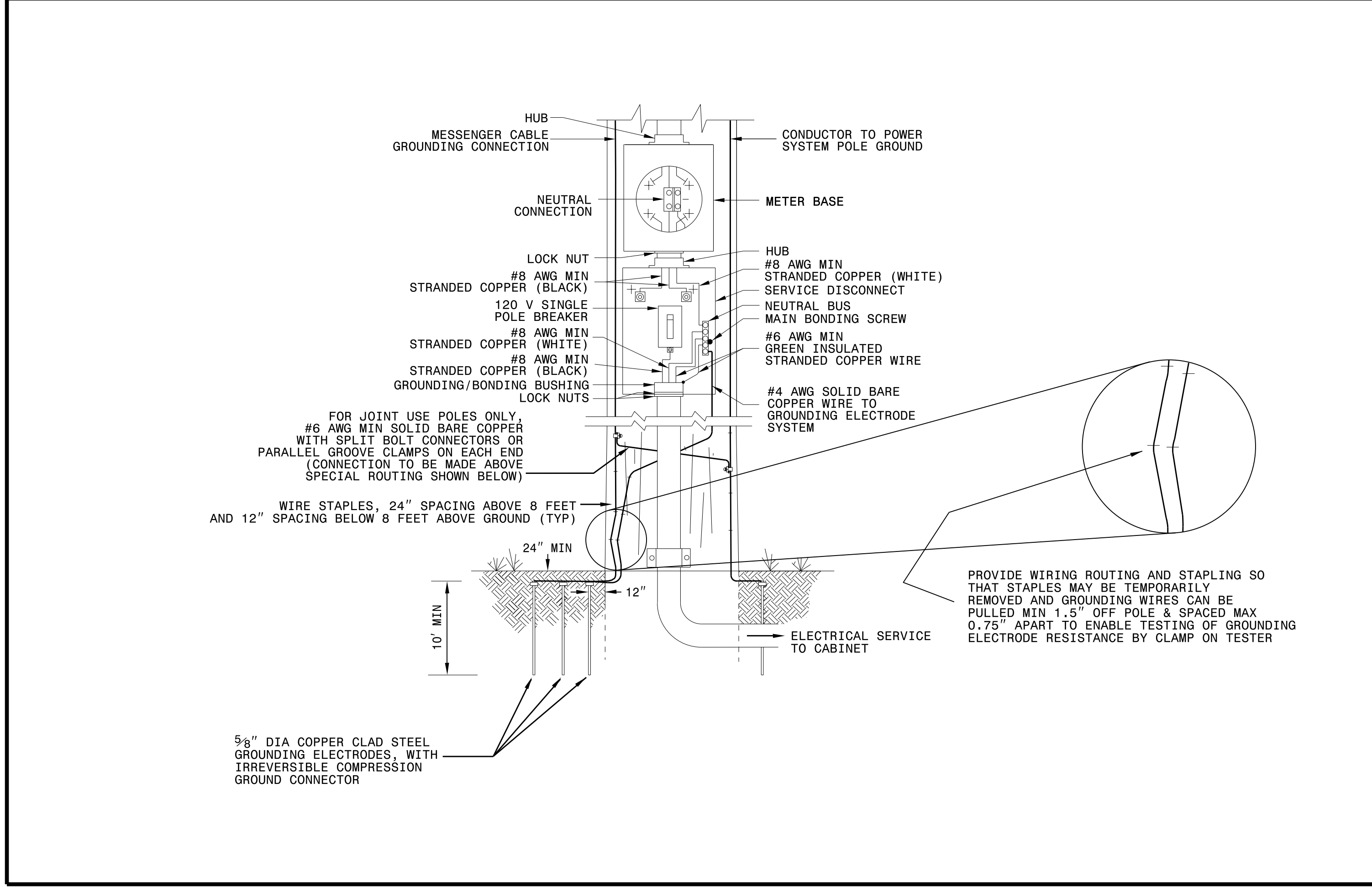
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<p style="font-size: 8px; margin: 0;">750 Greenfield Parkway, Garner, NC 27529</p> <p style="font-size: 12px; margin: 0;">SCALE</p> <p style="font-size: 18px; margin: 0;">NTS</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS	INIT.	DATE				<p style="margin: 0;">DATE</p> <p style="margin: 0;">SIGNATURE</p>
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CADD File name: 270_031_U-6015_ITS-5.03

1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
ELECTRICAL SERVICE GROUNDING
GROUNDING AND BONDING

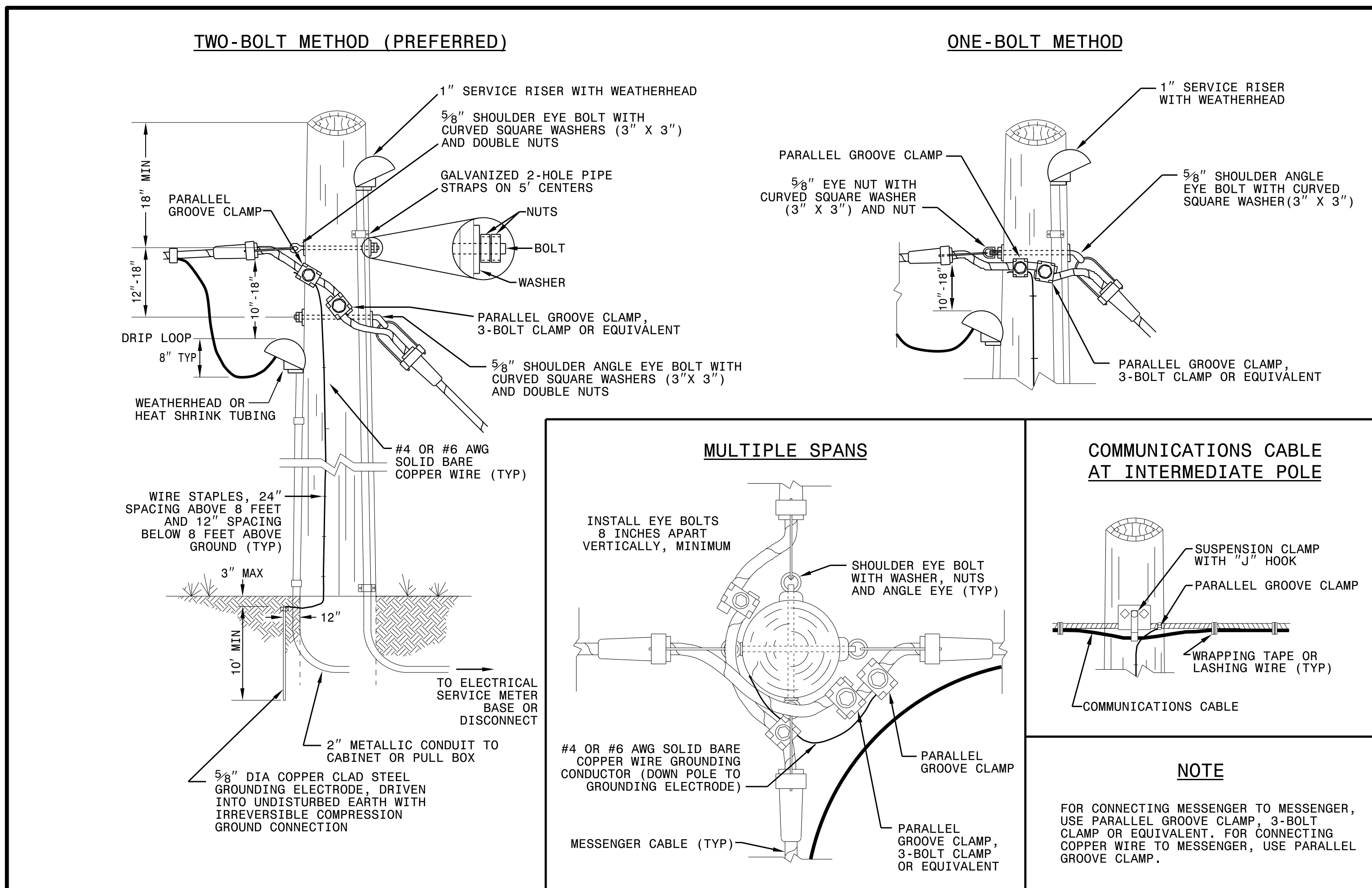
SHEET 1 OF 1
1700D01



1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
WOOD POLES
METHODS OF ATTACHMENT AND GROUNDING

SHEET 1 OF 1
1720D01

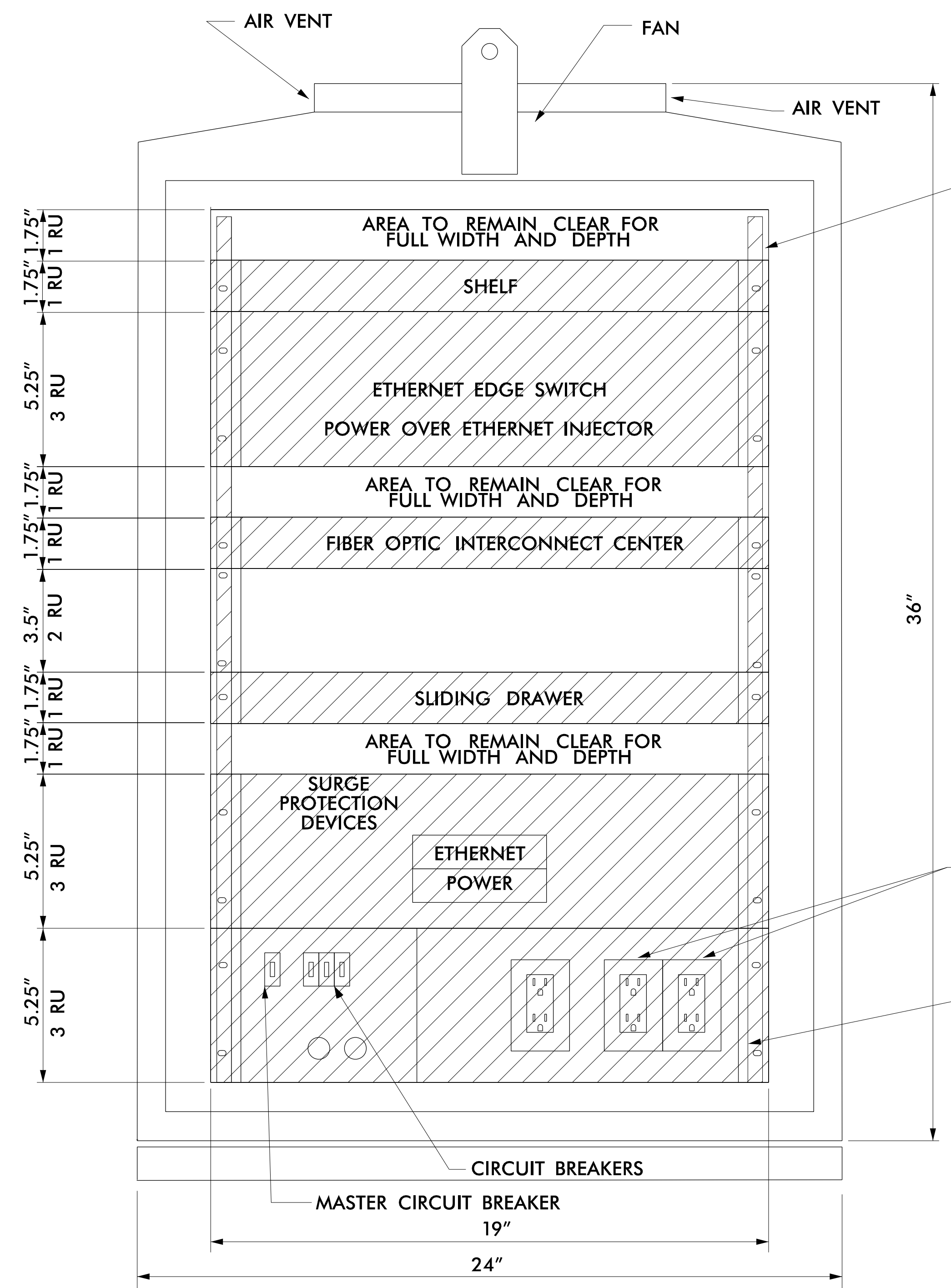


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See Plate for Title

<p>Prepared in the Offices of:</p>	<p>SEAL</p>
<p>750 N. Greenfield Parkway Garner, NC 27529</p>	<p>DocuSigned by: <i>Mohd Aslami</i> 10/11/2017 DATE</p>

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FRONT VIEW

NOTES

1. ALL DIMENSIONS AND SCALE ARE APPROXIMATE.
2. CABINETS WILL BE CALTRANS TYPE 336A
3. CONDUIT ENTRANCES SHALL BE IN BOTTOM OF CABINET.
4. THERE WILL BE FRONT AND REAR DOORS. BOTH DOORS SHALL HAVE THE HINGE-SIDE NEXT TO THE POLE WHEN POLE MOUNTED.

19" EIA RACK WITH TAPPED 10-32 THREADED HOLES

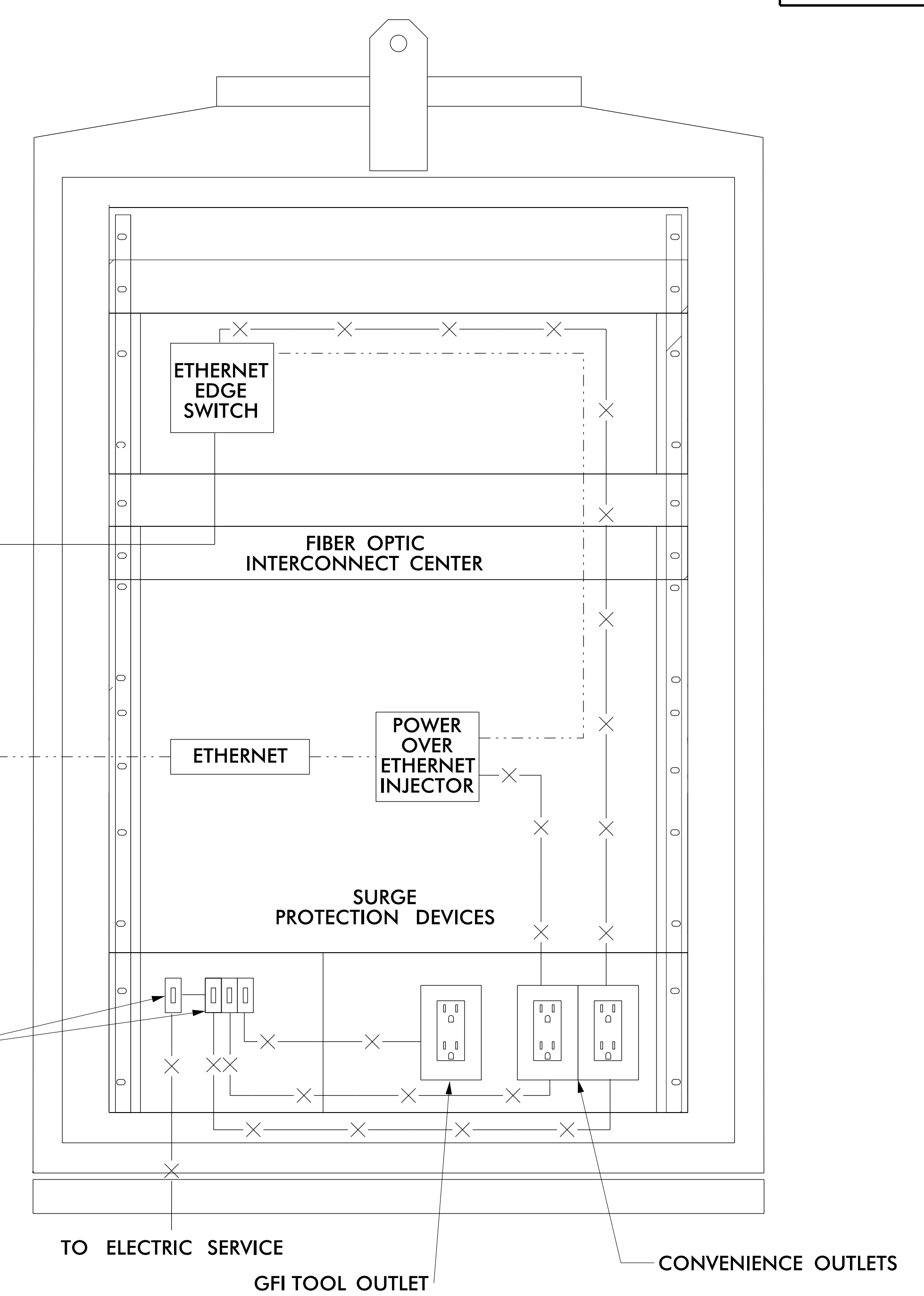
TVSS PROTECTED OUTLETS (2) FOR EQUIPMENT

POWER DISTRIBUTION ASSEMBLY SERVICE ENTRANCE, BREAKER, PRIMARY AC POWER FILTER, TERMINAL BLOCKS, GROUND BUS BAR

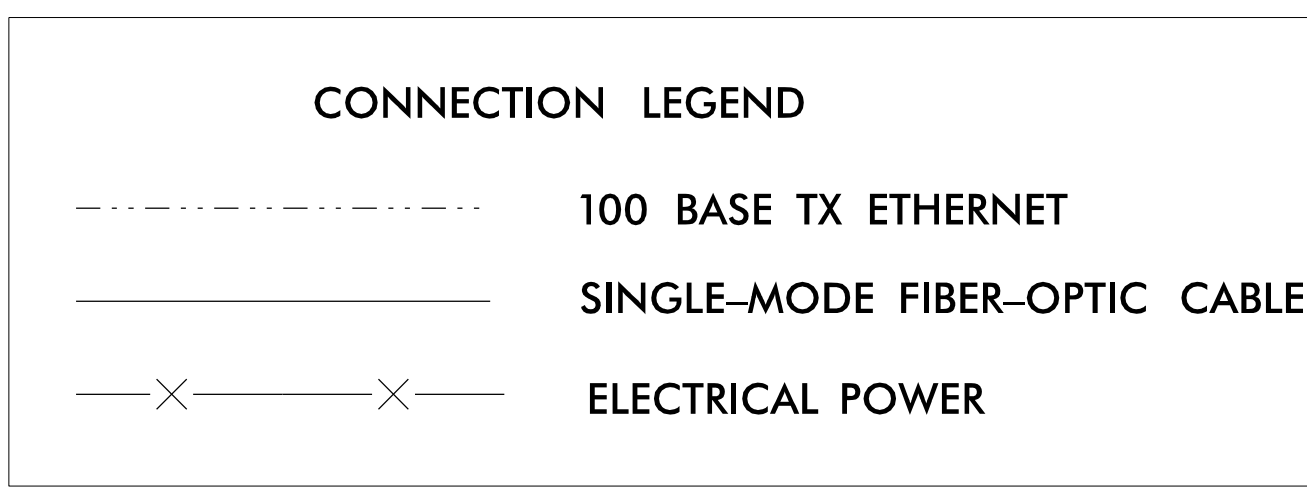
TO FIBER-OPTIC COMMUNICATIONS NETWORK

CATEGORY 6 ETHERNET CABLE

CIRCUIT BREAKERS



CABINET WIRING VIEW



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 (919) 876-6888 NCBES #F-0326

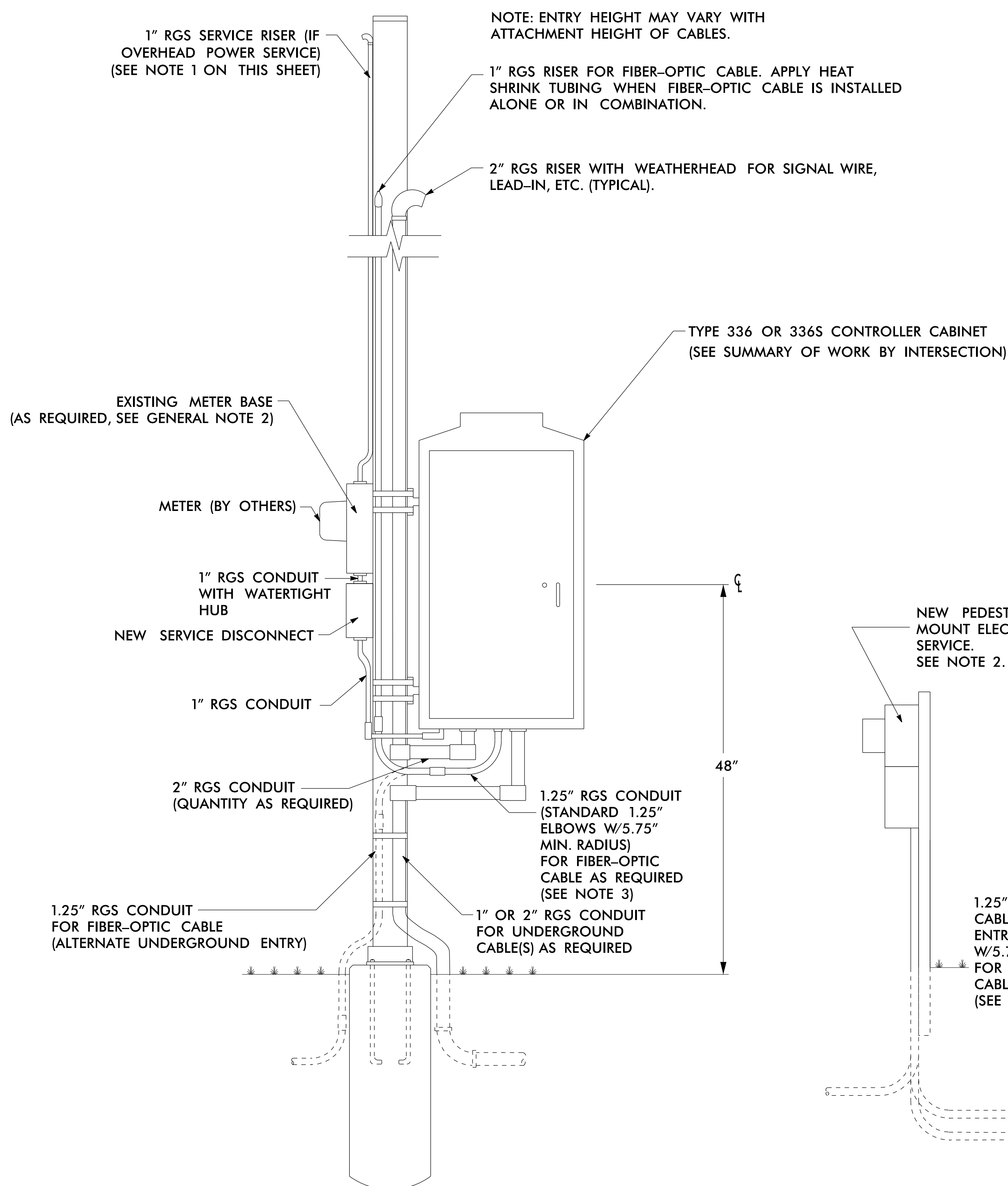
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Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		Burlington-Graham Signal System CCTV Cabinet Assembly Layout		SEAL NORTH CAROLINA PROFESSIONAL SEAL 019962 ENGINEER H. ALFRED BADGETT 11/13/2018
Division 7 Alamance County Burlington & Graham		PLAN DATE: June 2018 REVIEWED BY: HA Badgett		SIGNATURE: _____ DATE: _____
PREPARED BY: JW/AH REVIEWED BY: BJ Slocum		REVISIONS: _____ INIT. DATE: _____		
SCALE: NTS				

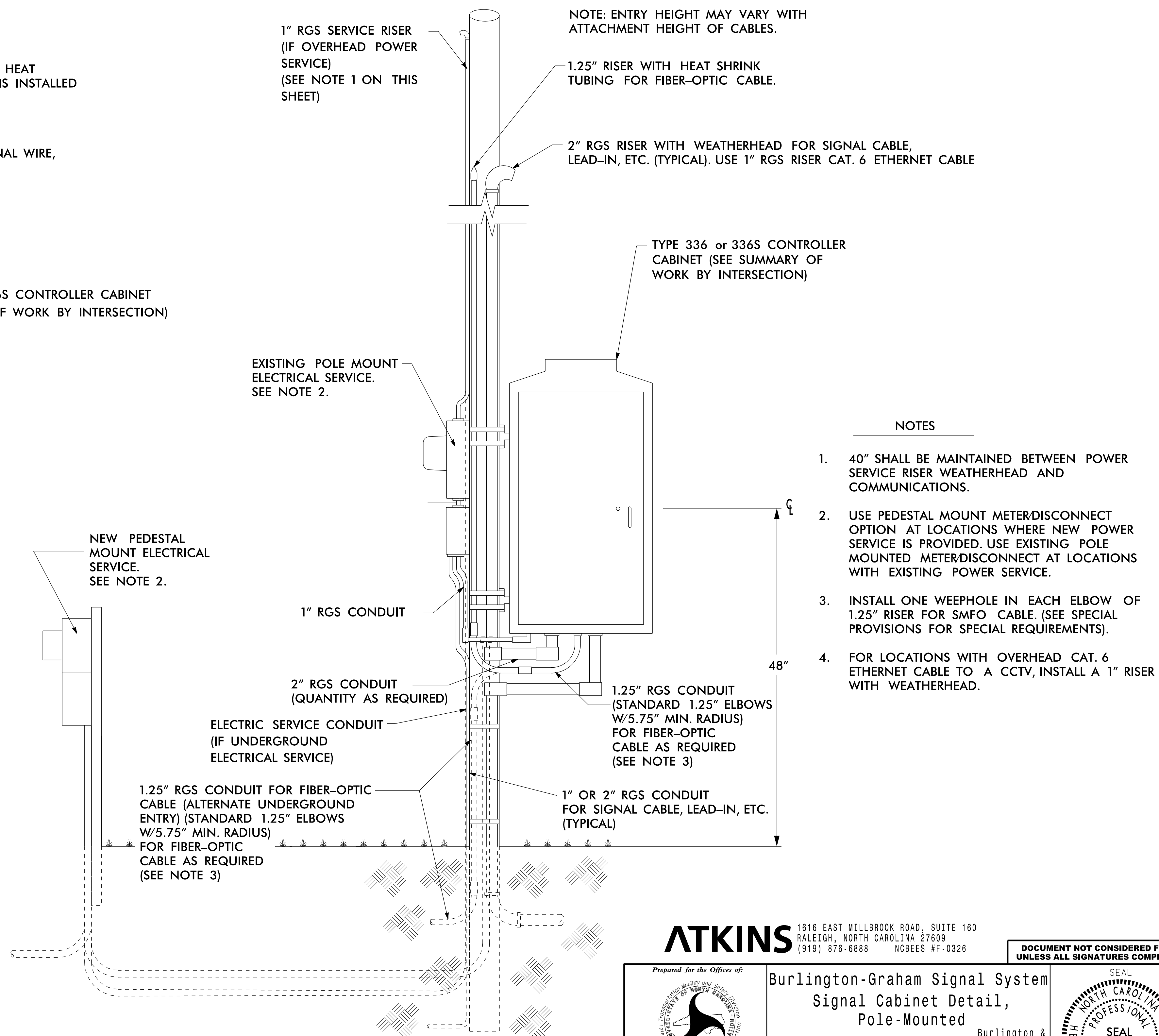
750 Greenfield Parkway, Garner, NC 27529
 CADD File name: 270_032_U-6015_1

POLE-MOUNTED SIGNAL CABINET DETAIL

METAL POLE



WOOD POLE



NOTES

- 40" SHALL BE MAINTAINED BETWEEN POWER SERVICE RISER WEATHERHEAD AND COMMUNICATIONS.
- USE PEDESTAL MOUNT METER/DISCONNECT OPTION AT LOCATIONS WHERE NEW POWER SERVICE IS PROVIDED. USE EXISTING POLE MOUNTED METER/DISCONNECT AT LOCATIONS WITH EXISTING POWER SERVICE.
- INSTALL ONE WEEPHOLE IN EACH ELBOW OF 1.25" RISER FOR SMFO CABLE. (SEE SPECIAL PROVISIONS FOR SPECIAL REQUIREMENTS).
- FOR LOCATIONS WITH OVERHEAD CAT. 6 ETHERNET CABLE TO A CCTV, INSTALL A 1" RISER WITH WEATHERHEAD.

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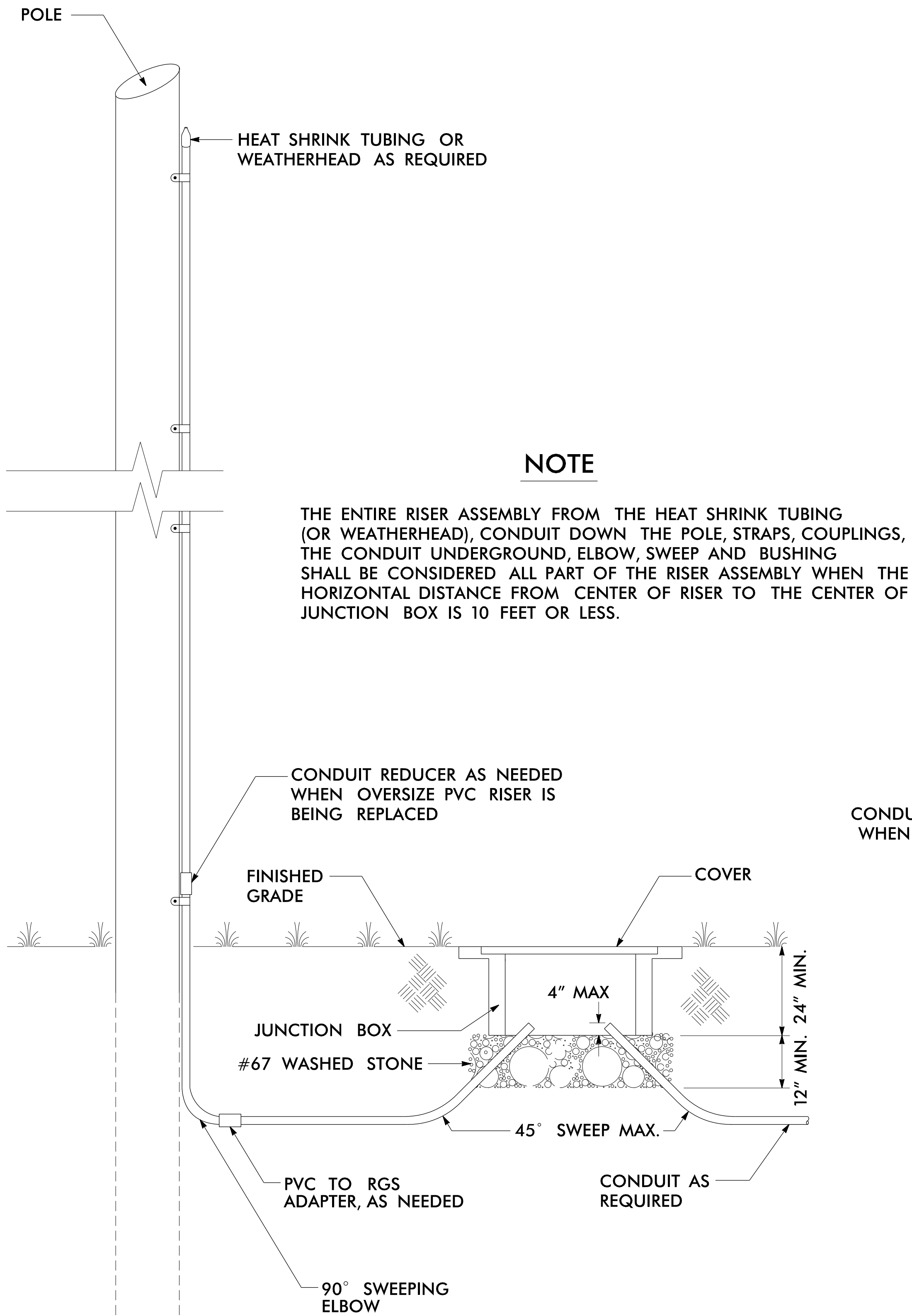
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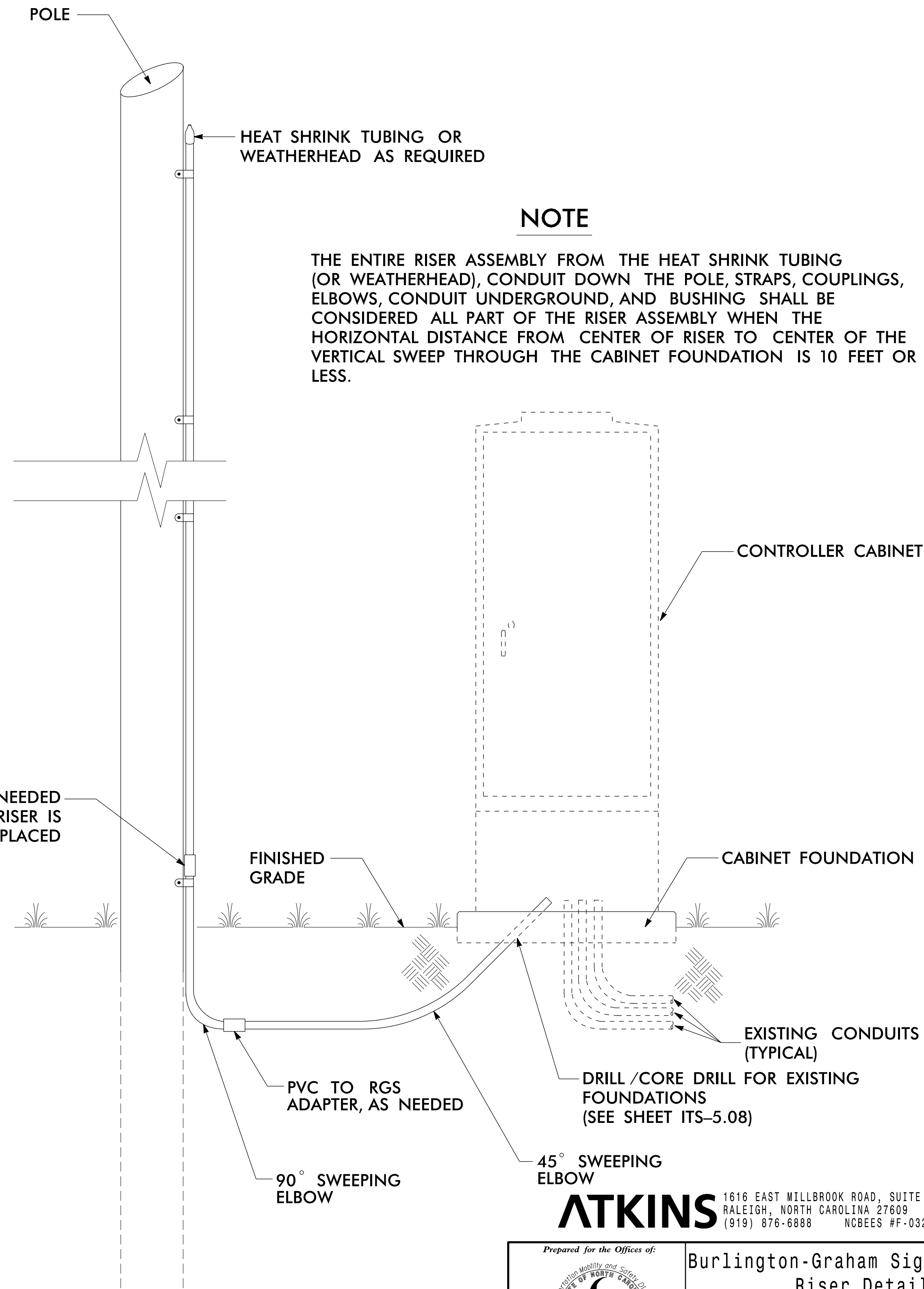
 Prepared for the Offices of: 750 Greenfield Parkway, Garner, NC 27529 SCALE: NTS	Burlington-Graham Signal System Signal Cabinet Detail, Pole-Mounted		
	Division 7 Alamance County Burlington & Graham		
	PLAN DATE: June 2018	REVIEWED BY: HA Badgett	
	PREPARED BY: JW/AH	REVIEWED BY: BJ Slocum	
REVISIONS:		INIT. DATE	DATE
SIGNATURE:		DATE:	DATE:

TYPICAL RISER DETAILS

RISER TO JUNCTION BOX



RISER TO CABINET FOUNDATION



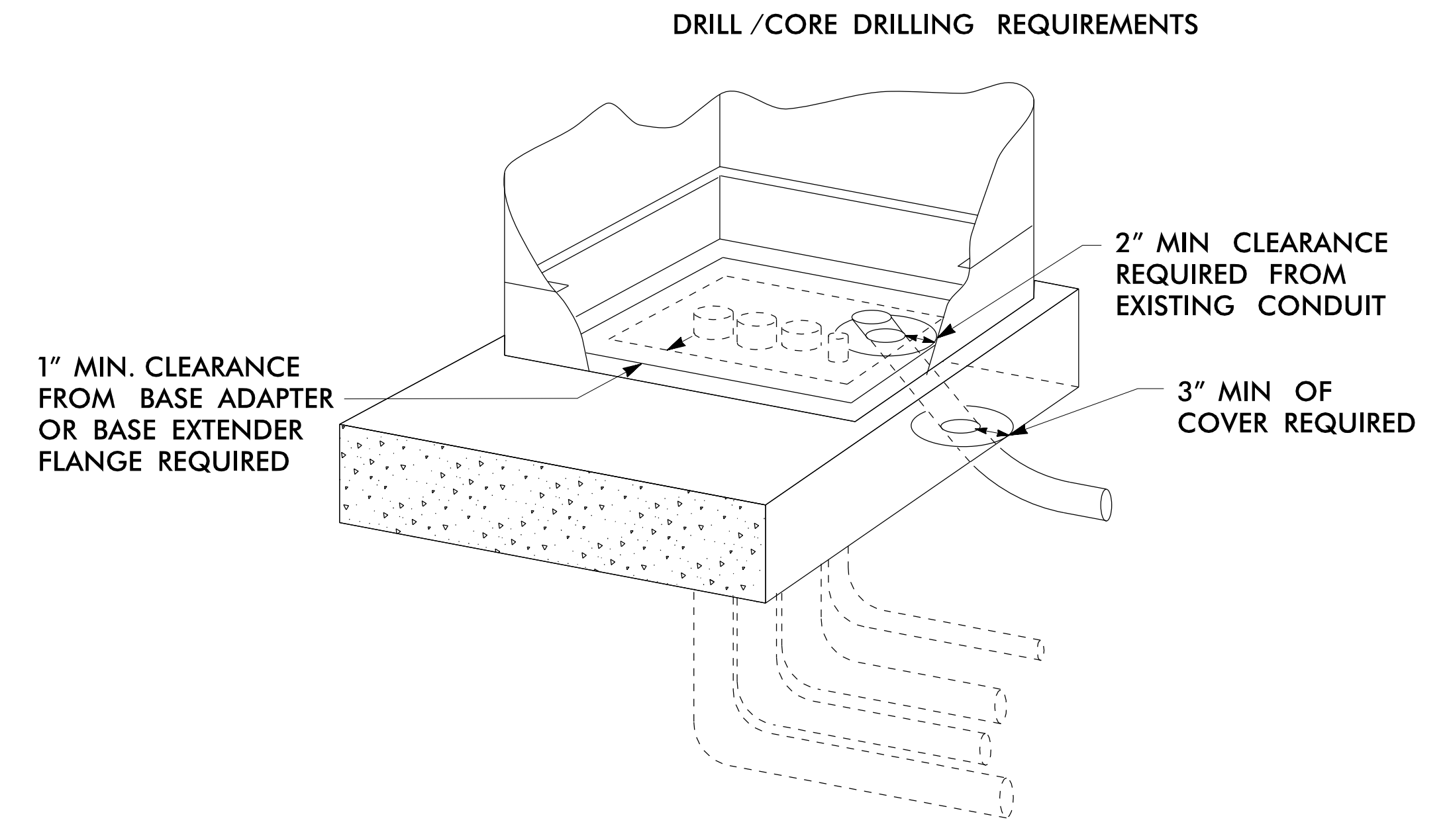
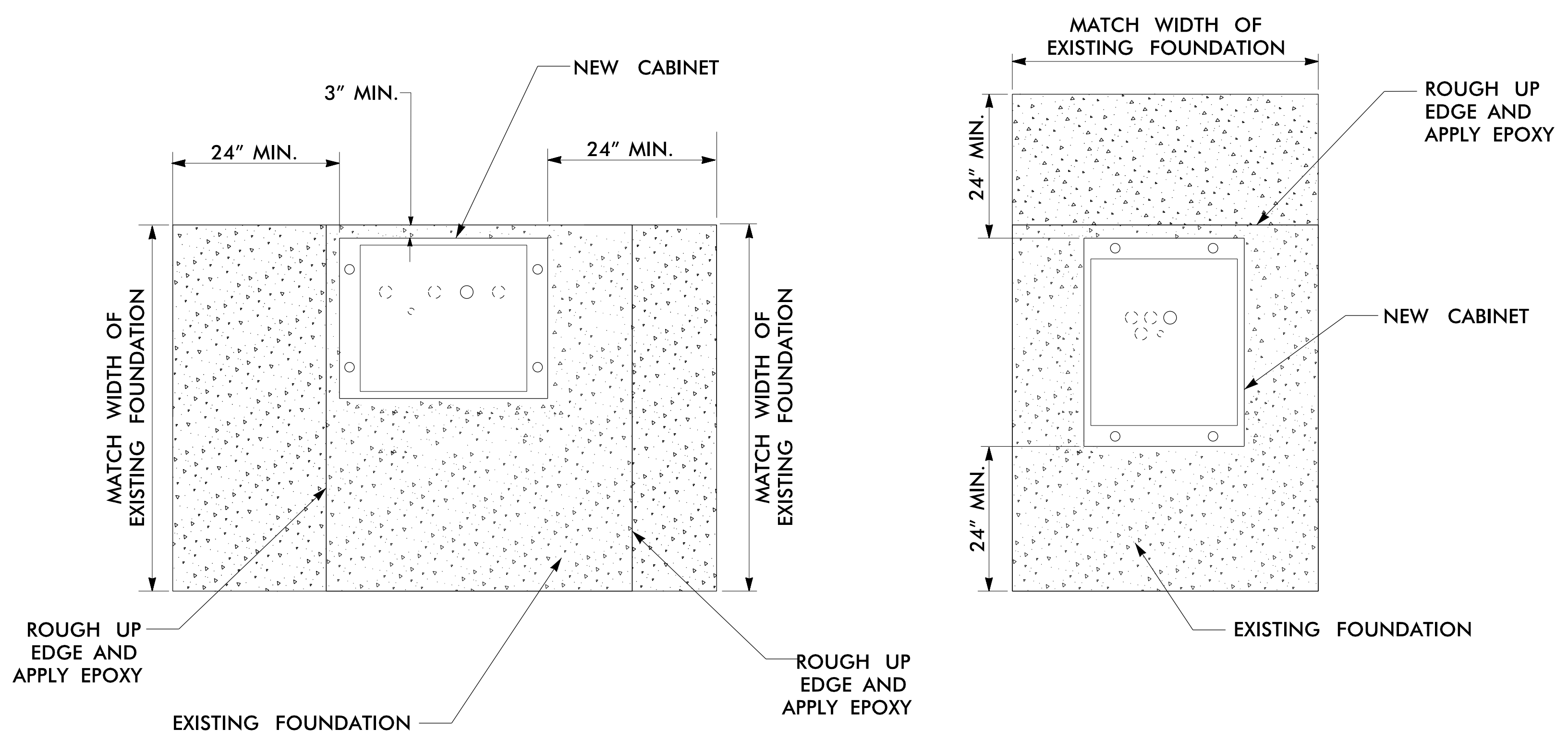
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	Burlington-Graham Signal System Riser Detail		
	Division 7 Alamance County Burlington & Graham		
PLAN DATE: June 2018	REVIEWED BY: HA Badgett		
PREPARED BY: JW/AH	REVIEWED BY: BJ Slocum		
SCALE: NTS	REVISIONS	INIT.	DATE
		SIGNATURE	DATE

TYPICAL FOUNDATION MODIFICATIONS



FOUNDATION EXTENSION	LENGTH OF DOWEL
>16"	18"
>6' AND ≤16"	11"
=6"	8"

NOTES

FOR FOUNDATION MODIFICATIONS:

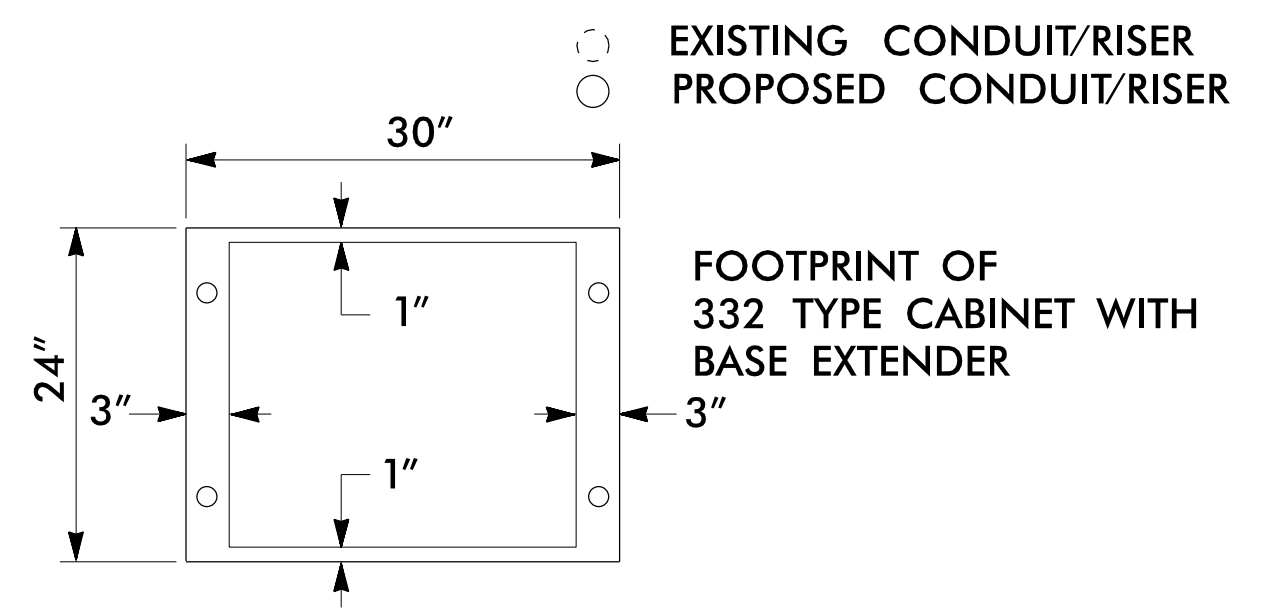
- MAINTENANCE TECHNICIAN PADS SHALL BE ADDED TO THE FOUNDATION TO PROVIDE A MINIMUM PAD AREA THAT EXTENDS 24" FROM THE FRONT AND BACK OF THE CABINET, AND MATCHES THE WIDTH OF THE EXISTING FOUNDATION.
- EXCAVATE THE GROUND AROUND THE EXISTING FOUNDATION TO A DEPTH SUFFICIENT TO EXPOSE A MINIMUM OF 4" OF THE FOUNDATION BELOW EXISTING GRADE.
- ROUGH THE SIDES OF THE EXISTING FOUNDATION FROM THE TOP TO A POINT FOUR INCHES BELOW GRADE BY MEANS OF A CHISEL OR OTHER METHOD APPROVED BY THE ENGINEER.
- WASH THE SIDES OF THE FOUNDATION WITH WATER PRESSURIZED AT 50 PSI AND THOROUGHLY DRY WITH COMPRESSED AIR.
- DRILL HOLES APPROXIMATELY 6" DEEP ON 12-INCH CENTERS INTO THE EXISTING FOUNDATION. INSTALL #4 DOWELS AND EPOXY INTO PLACE. DOWELS SHALL BE THE LENGTH SHOWN IN THE TABLE ABOVE.
- FORM THE SIDES OF THE MODIFIED FOUNDATION TO A MINIMUM DEPTH OF 4" BELOW GRADE.
- POSITION FORMS SO THAT ALL EXISTING EXPOSED FOUNDATION SURFACES AT OR ABOVE GRADE LEVEL WILL BE MATCHED.
- APPLY A COATING OF APPROVED EPOXY BONDING AGENT TO ALL EXPOSED ROUGHENED CONCRETE SURFACES AS RECOMMENDED BY THE MANUFACTURER.
- PROVIDE A ONE INCH CHAMFER ON ALL NEW OUTSIDE EDGES.
- USE CONCRETE TO INSTALL THE MAINTENANCE TECHNICIAN PAD.
- WHERE CABINETS ARE RELOCATED OR ROTATED ON EXISTING FOUNDATION, CUT OFF ANY EXISTING CABINET MOUNTING BOLTS AND GRIND FLUSH WITH THE PAD SURFACE.

NOTES

FOR DRILL AND CORE DRILLING:

- A MINIMUM OF 3" OF COVER SHALL BE MAINTAINED BETWEEN NEW CONDUIT AND EDGE OF EXISTING FOUNDATION.
- MINIMUM CLEARANCES OF 1" FROM THE FLANGE OF THE BASE ADAPTER AND 2" FROM EXISTING CONDUITS SHALL BE MAINTAINED.
- AVOID DAMAGING EXISTING CONDUIT, CONDUCTORS, AND ANCHOR BOLTS. CONTRACTOR SHALL REPAIR SUCH DAMAGES.
- WHERE APPROVED BY THE ENGINEER, EXISTING FOUNDATION MAY BE CHIPPED INSTEAD OF DRILLED FOR CONDUIT ENTRANCE.
- BOND NEW METALLIC CONDUIT TO THE CABINET GROUNDING SYSTEM.
- AFTER INSTALLATION OF CONDUIT, PLACE GROUT TO SEAL AROUND CONDUIT, AND RETURN EXISTING FOUNDATION TO NORMAL APPEARANCE.

LEGEND



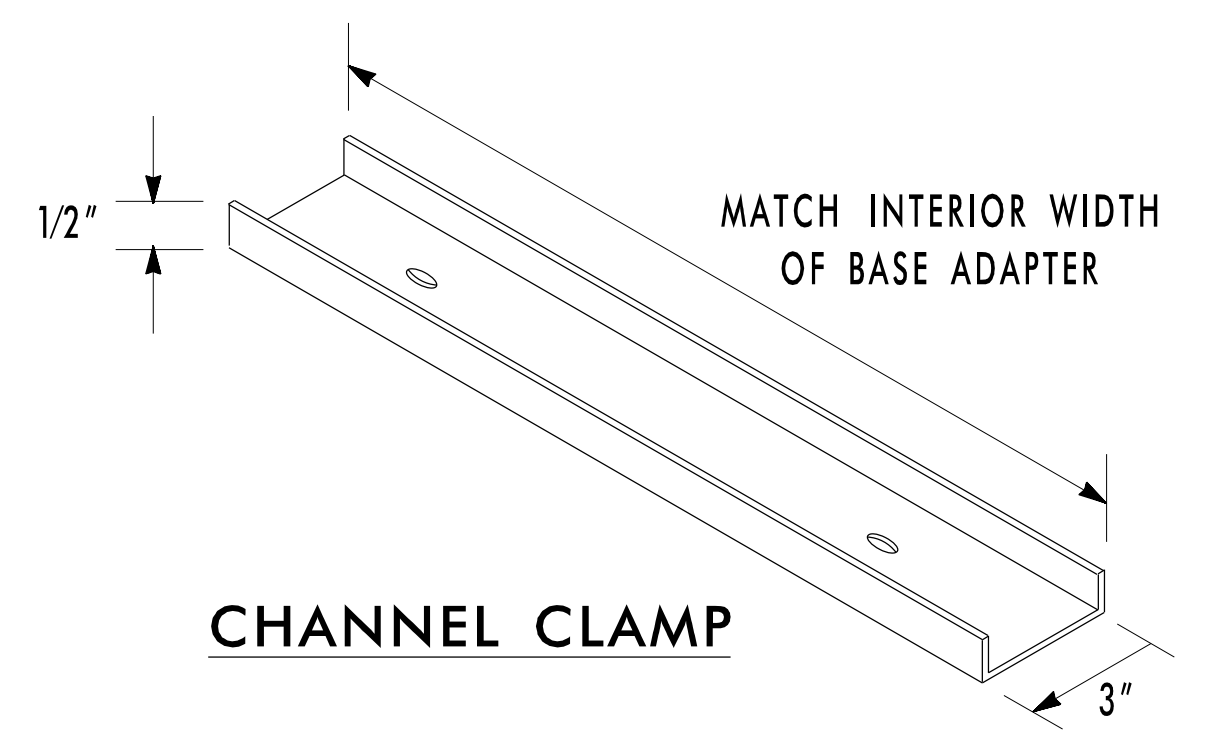
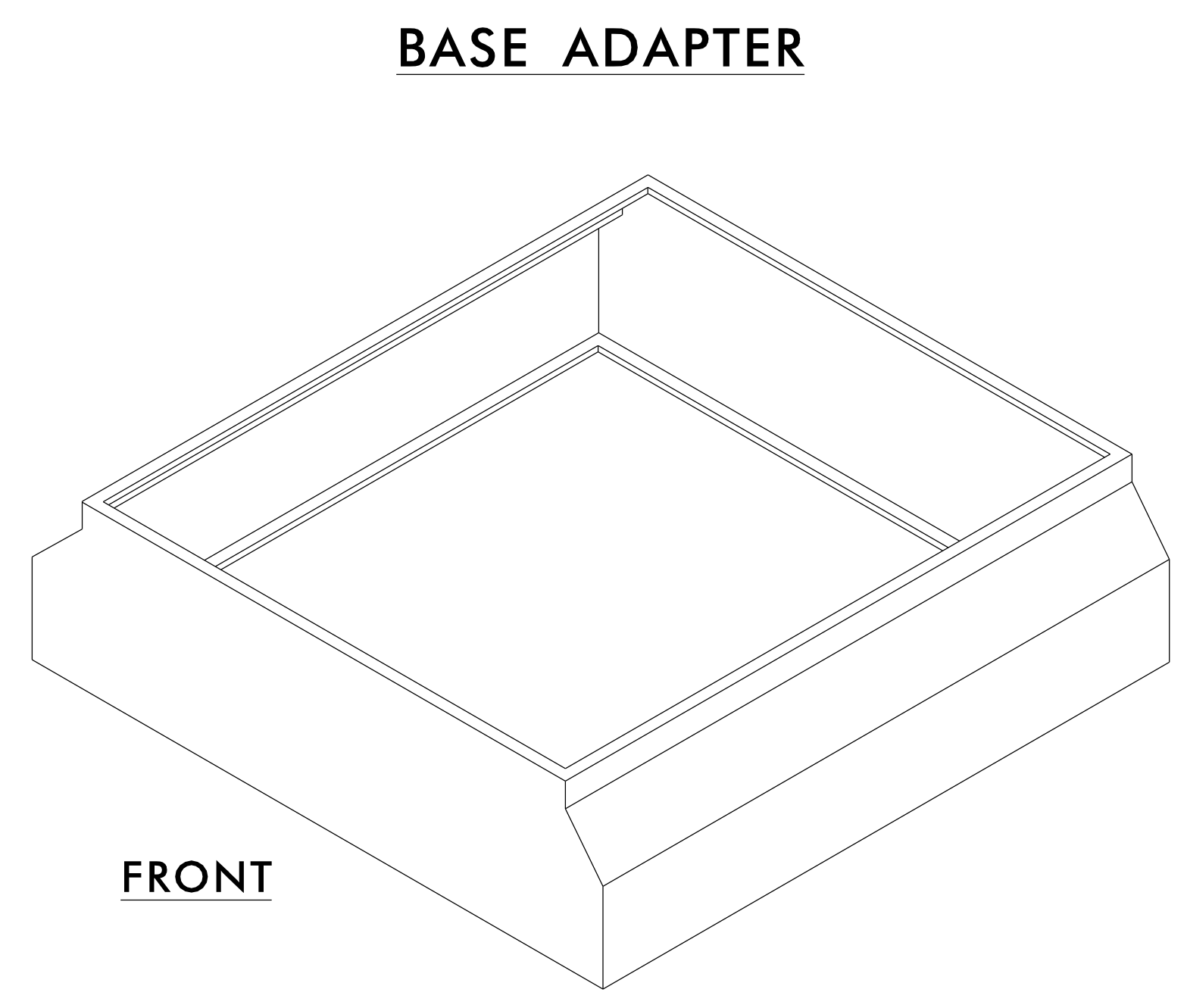
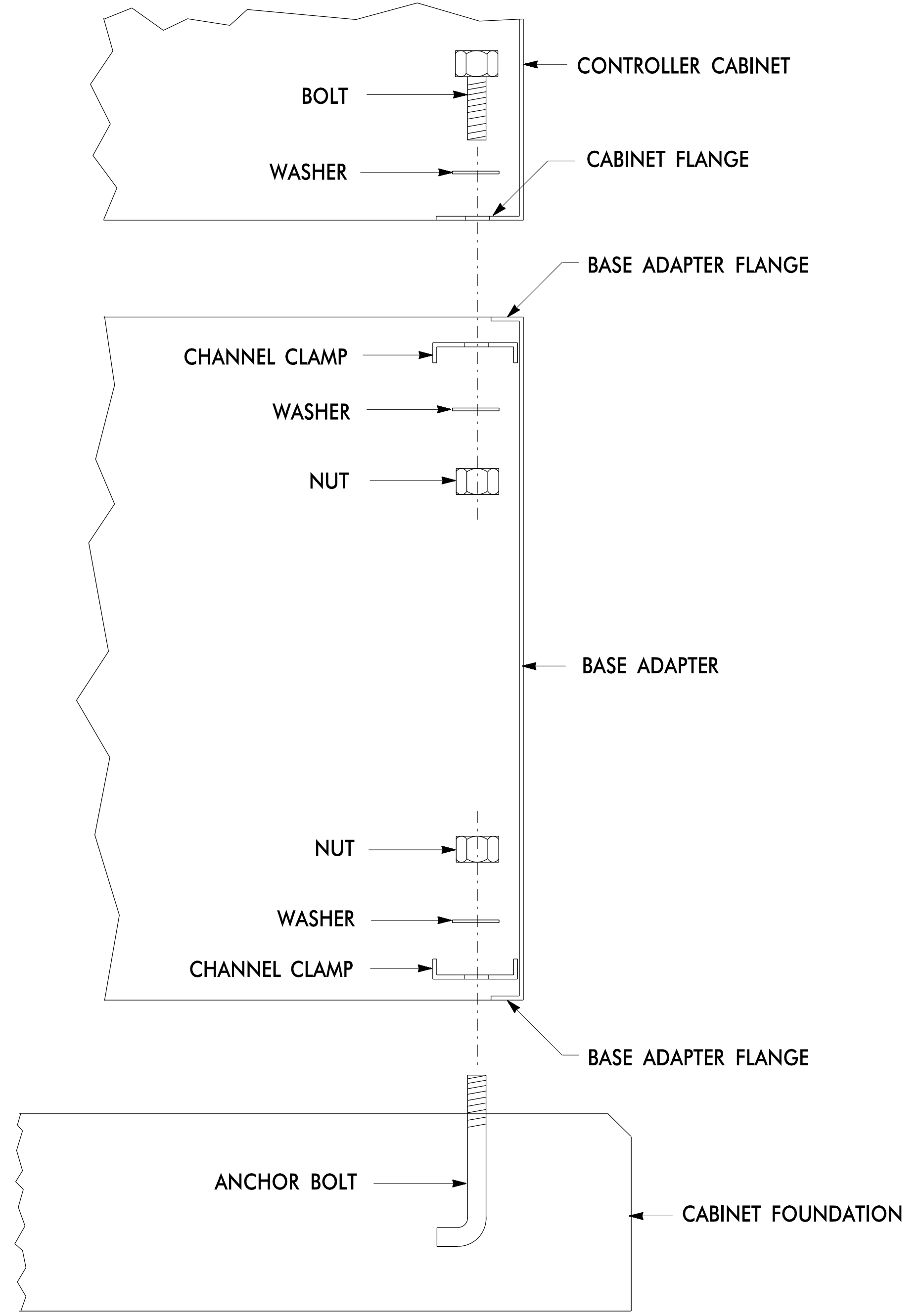
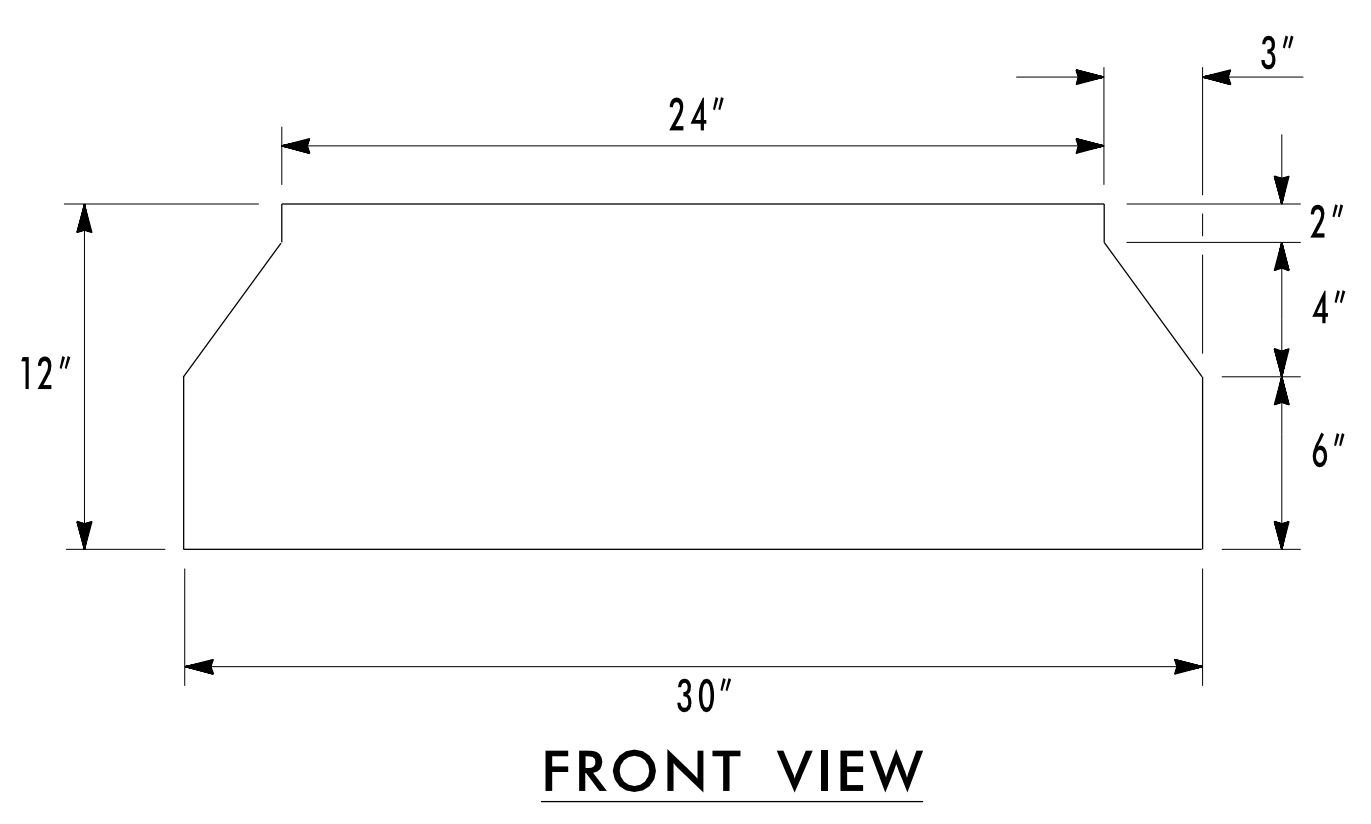
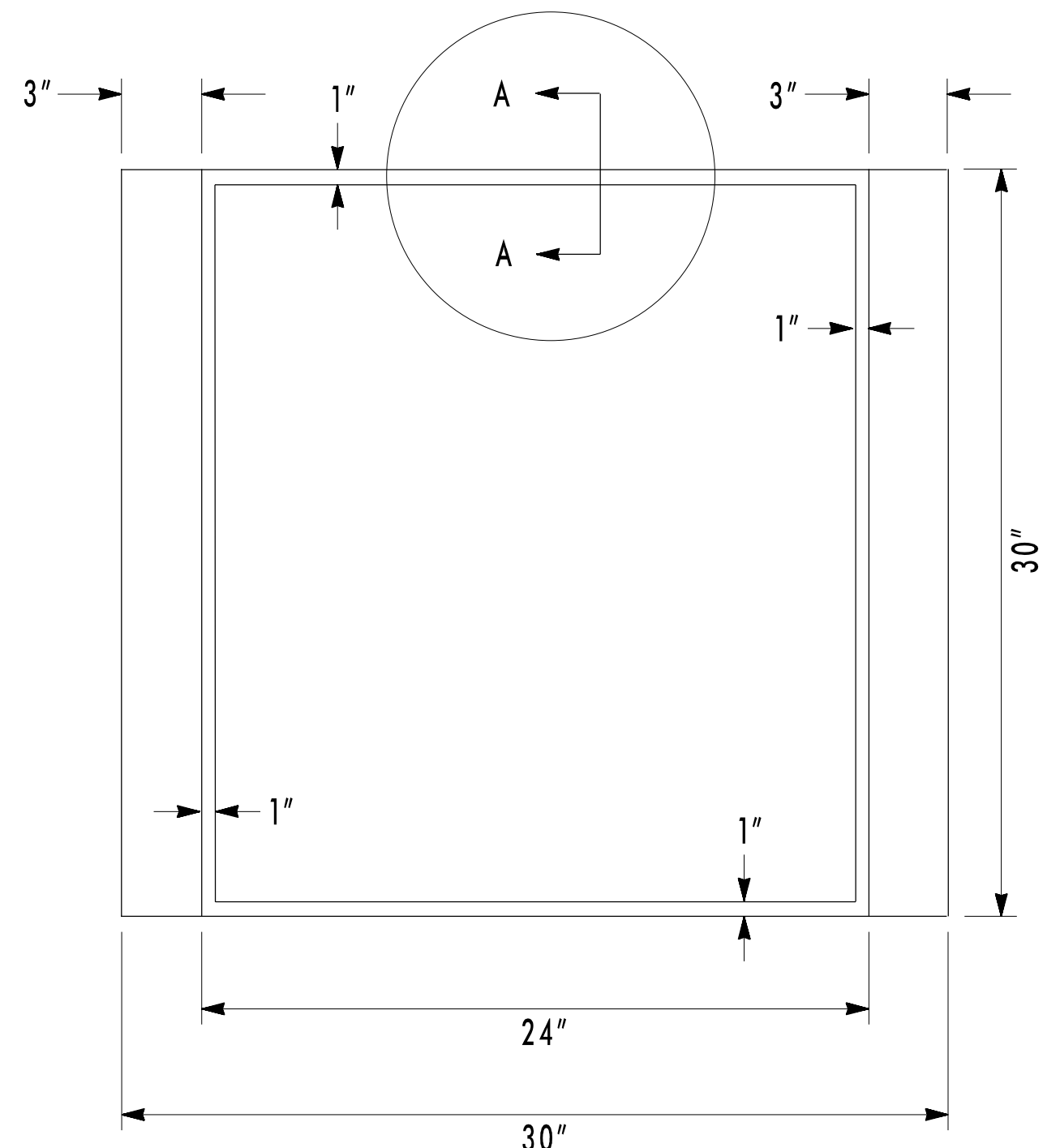
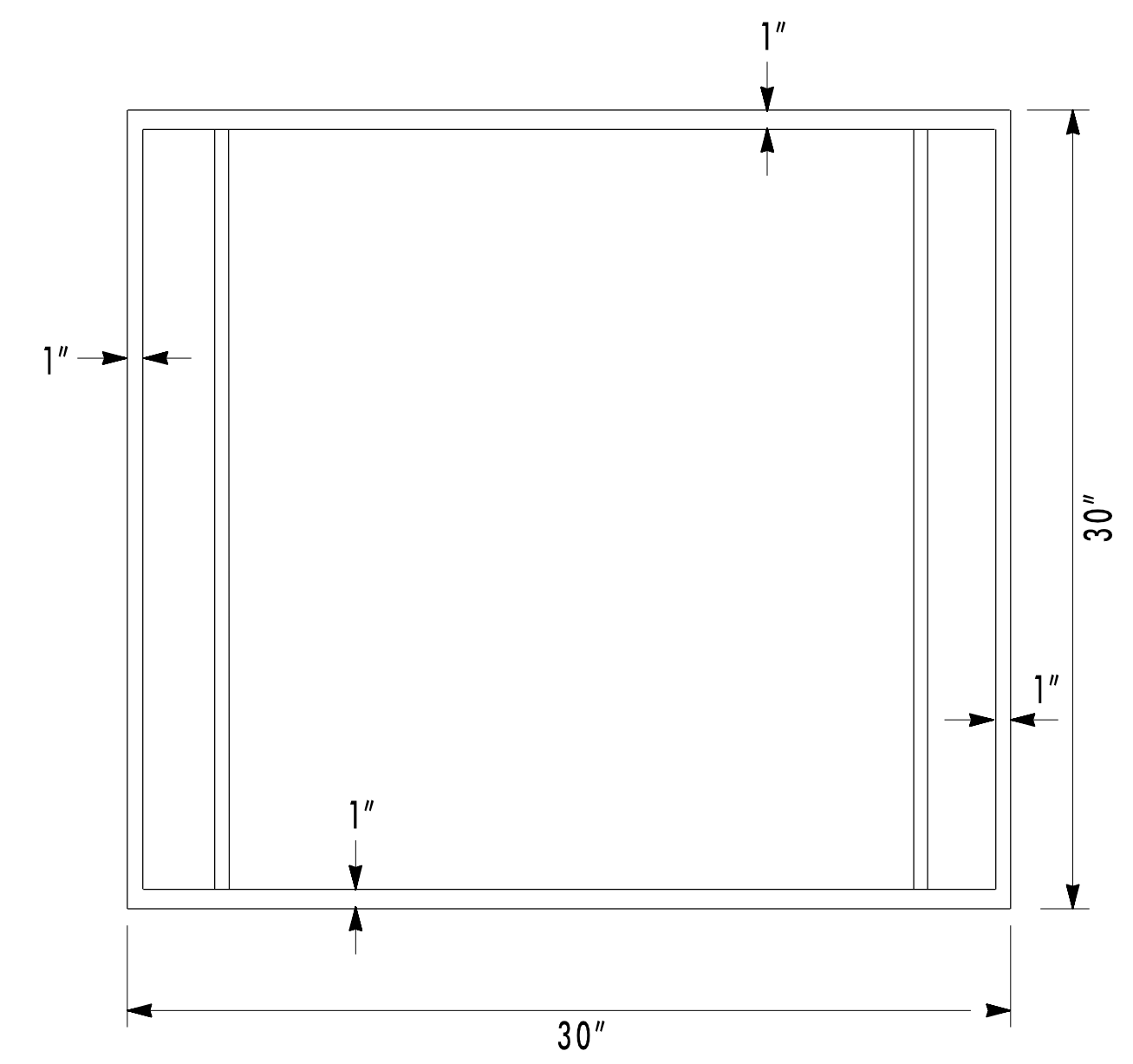
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	Burlington-Graham Signal System Foundation Modification Detail		
	Division 7 Alamance County	Burlington & Graham	
PLAN DATE: June 2018	PREPARED BY: JW/AH	REVIEWED BY: BJ Slocum	DATE: 11/13/2018
SCALE: NTS	REVISIONS	INIT.	DATE

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NOTES FOR BASE ADAPTER

1. FURNISH BASE ADAPTERS WITH FLANGES BOTH TOP AND BOTTOM SIZED AS SHOWN.
2. DRILL HOLES IN CHANNEL CLAMP TO MATCH ANCHOR BOLTS AND CABINET FLANGE BOLT HOLES.
3. APPLY CONTINUOUS, CLEAR, FLEXIBLE, WATERPROOF SEALANT TO TOP AND BOTTOM FLANGES TO SEAL TOP CONNECTION WITH THE CABINET AND BOTTOM CONNECTION WITH THE CABINET FOUNDATION.

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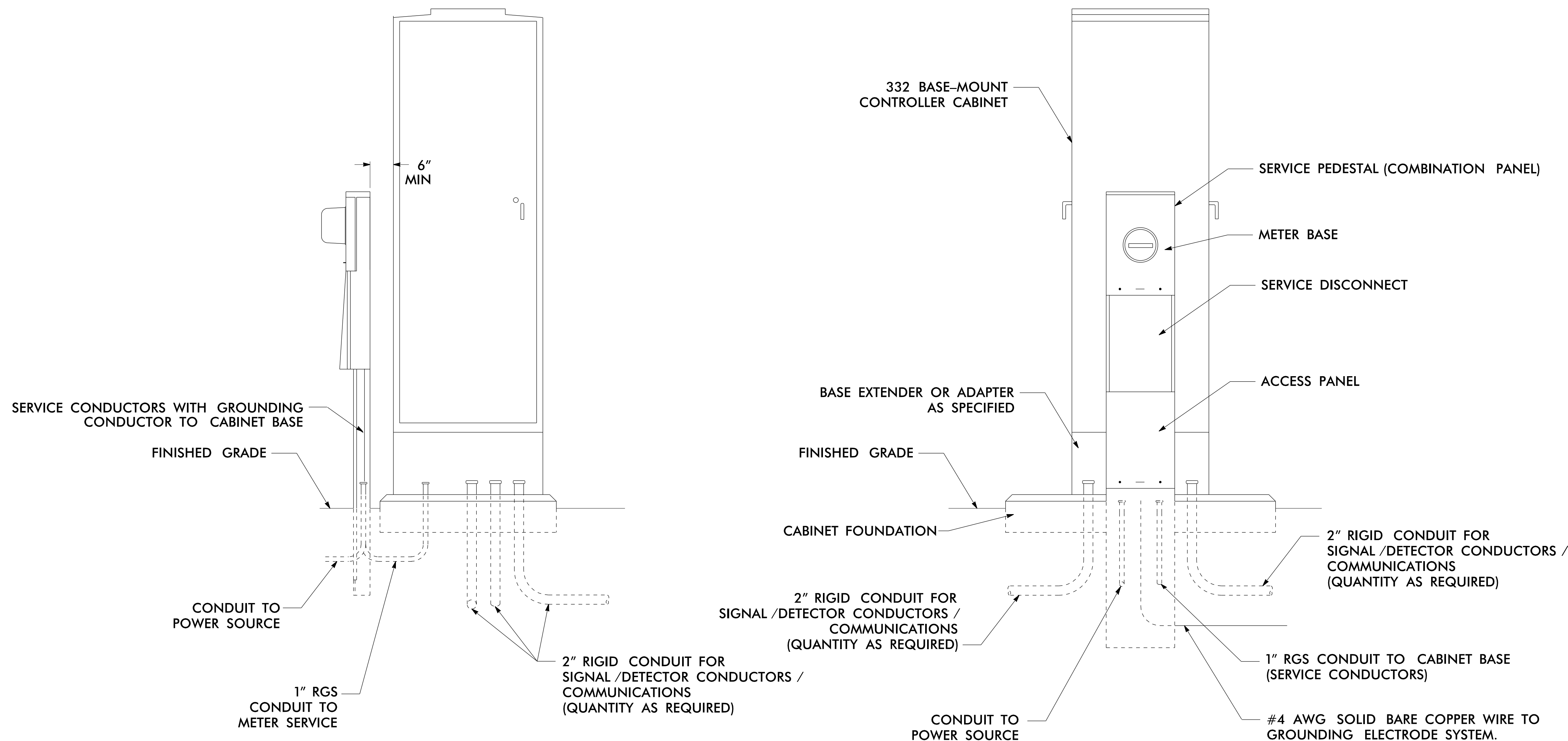
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	<p>Burlington-Graham Signal System Base Adapter Detail</p> <p>Division 7 Alamance County Burlington & Graham</p> <p>PLAN DATE: June 2018 REVIEWED BY: HA Badgett</p> <p>PREPARED BY: JW/AH REVIEWED BY: BJ Slocum</p>										
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REVISIONS	INIT.	DATE									

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GROUND MOUNTED ELECTRICAL SERVICE DETAIL



NOTES

1. TEST GROUNDING SYSTEM USING AN APPROVED METHOD IN ACCORDANCE WITH SPECIAL PROVISIONS. INSTALL GROUND RODS AS DIRECTED BY THE ENGINEER TO MEET THIS REQUIREMENT.
2. REMOVE ANY EXISTING GROUND RODS IN CONCRETE CABINET FOUNDATION BY CUTTING OFF FLUSH WITH FOUNDATION SURFACE.
3. REMOVE BONDING JUMPER IN EQUIPMENT CABINET IF INSTALLED BETWEEN AC NEUTRAL AND EQUIPMENT GROUND.
4. BOND ALL RIGID GALVANIZED STEEL CONDUITS ENTERING THE CABINET TO "EQUIPMENT GROUND".
5. INSTALL RIGID GALVANIZED STEEL CONDUIT (MINIMUM 1") BETWEEN DISCONNECT AND CABINET.
6. SERVICE DISCONNECT GROUND BUS BAR SHALL PROVIDE FOR 2 #4 AWG CONNECTIONS.
7. IF CONDITIONS REQUIRE SERVICE PEDESTAL TO BE INSTALLED IN FRONT OR REAR OF CABINET, MAINTAIN SUFFICIENT CLEARANCE FOR DOOR TO FULLY OPEN.

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Burlington-Graham Signal System
Ground Mounted Electrical
Service Detail

Division 7 Alamance County Burlington & Graham

PLAN DATE: June 2018 REVIEWED BY: HA Badgett

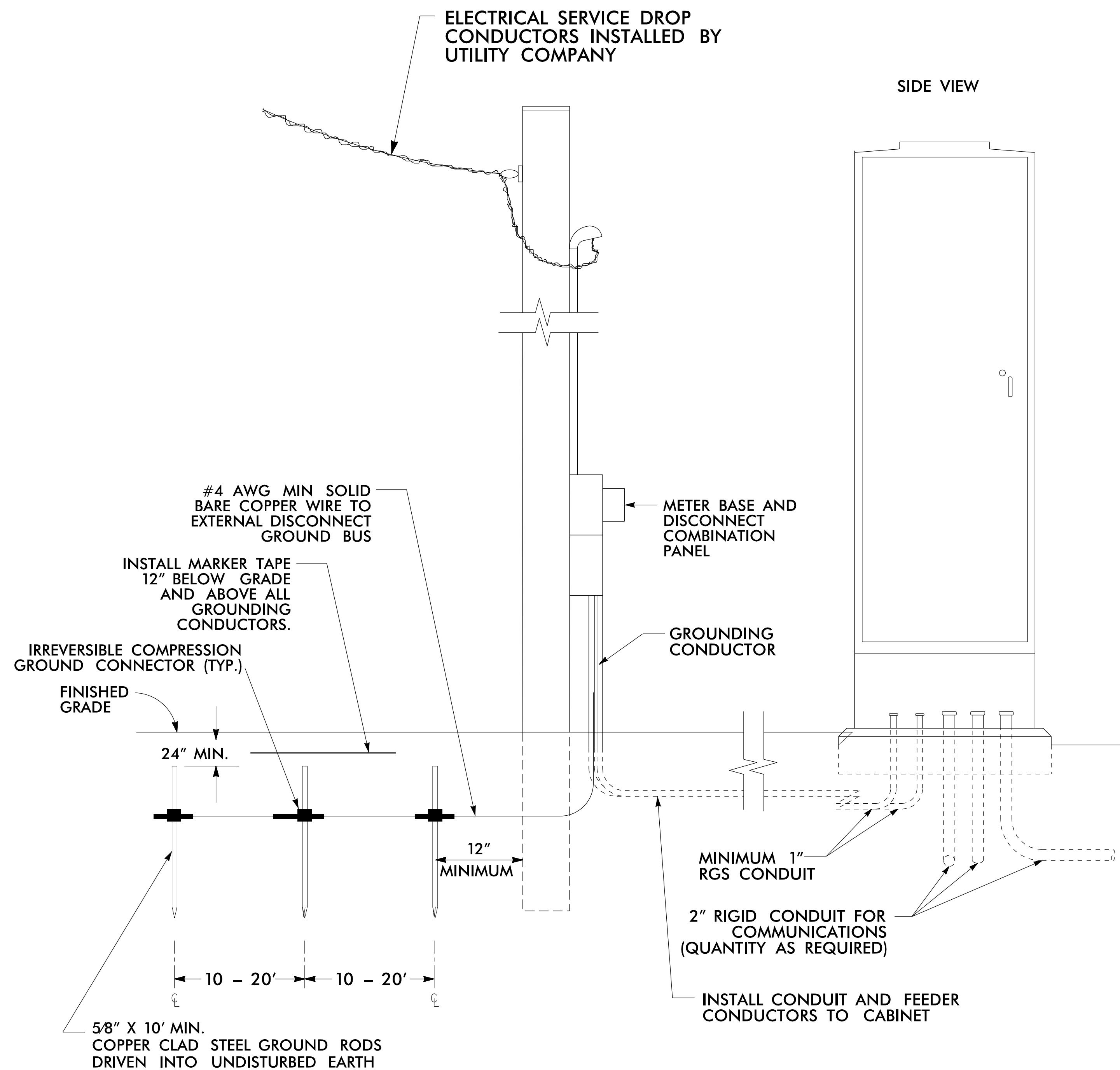
PREPARED BY: JW/AH REVIEWED BY: BJ Slocum

SCALE: NTS

NO.	REVISIONS	INIT.	DATE

DATE: 12/13/2018
SIGNATURE: H. ALLEN BADGETT

OVERHEAD ELECTRICAL SERVICE DETAIL



NOTES

1. TEST GROUNDING SYSTEM USING AN APPROVED METHOD IN ACCORDANCE WITH SPECIAL PROVISIONS. INSTALL GROUND RODS AS DIRECTED BY THE ENGINEER TO MEET THIS REQUIREMENT.
2. REMOVE BONDING JUMPER IN EQUIPMENT CABINET IF INSTALLED BETWEEN AC NEUTRAL AND EQUIPMENT GROUND.
3. BOND ALL RIGID GALVANIZED STEEL CONDUITS ENTERING THE CABINET TO "EQUIPMENT GROUND".
4. INSTALL RIGID GALVANIZED STEEL CONDUIT (MINIMUM 1") BETWEEN DISCONNECT AND CABINET UNLESS OTHERWISE NOTED ON THE PLANS.
5. SERVICE DISCONNECT GROUND BUS BAR SHALL PROVIDE FOR 2 #4 AWG CONNECTIONS.
6. ENSURE EQUIPMENT GROUND IS ELECTRONICALLY BONDED TO CABINET.

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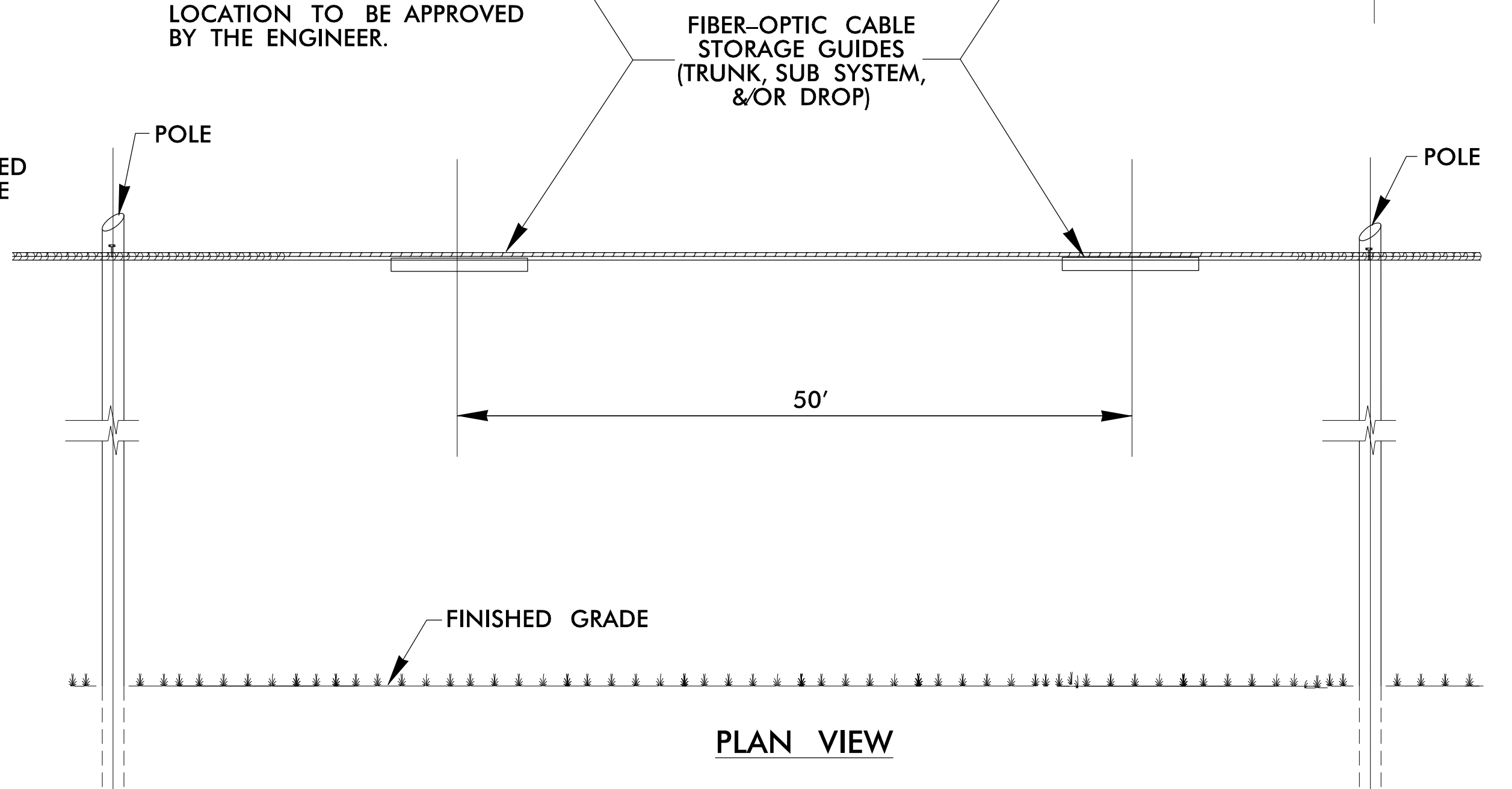
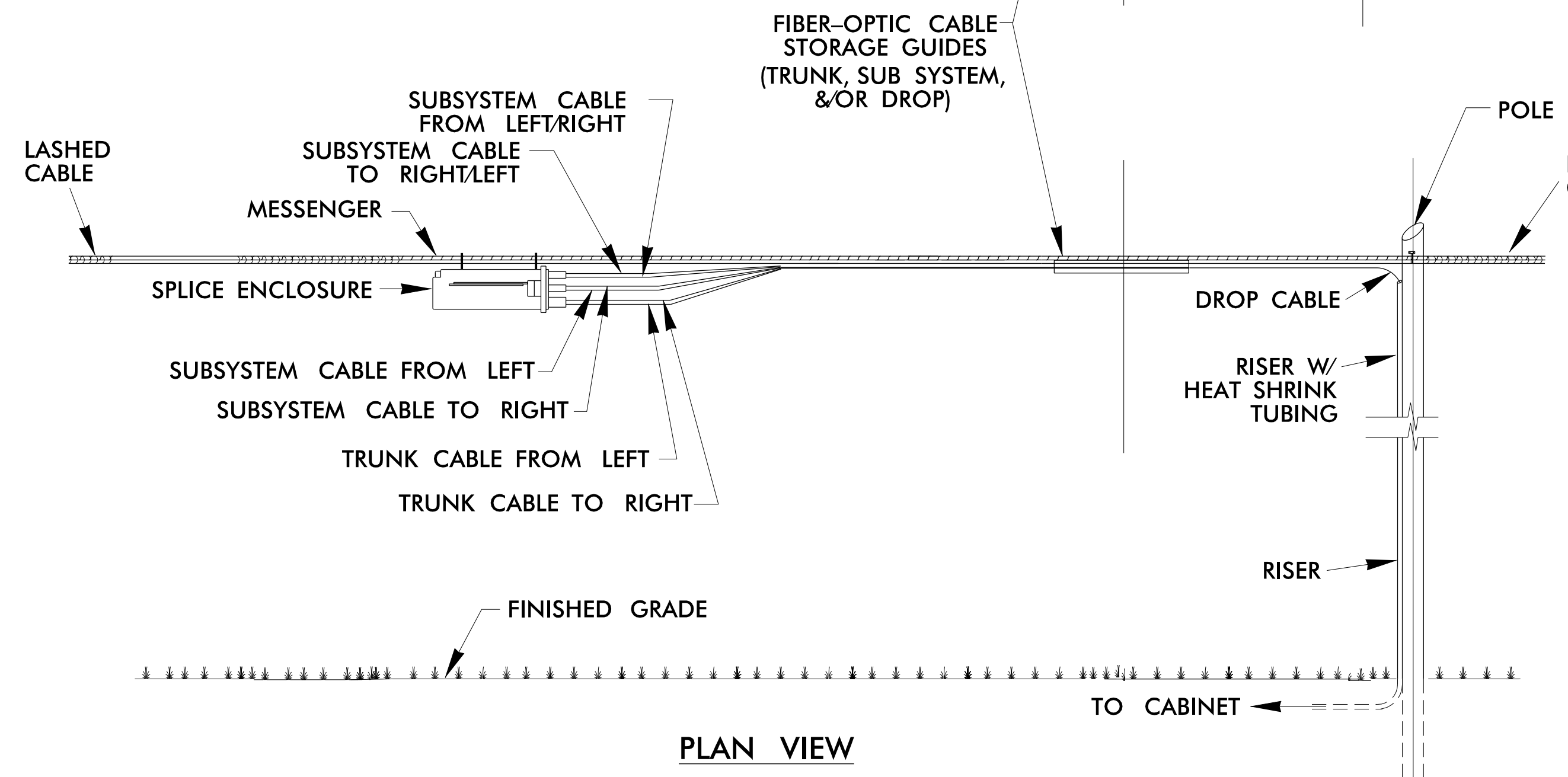
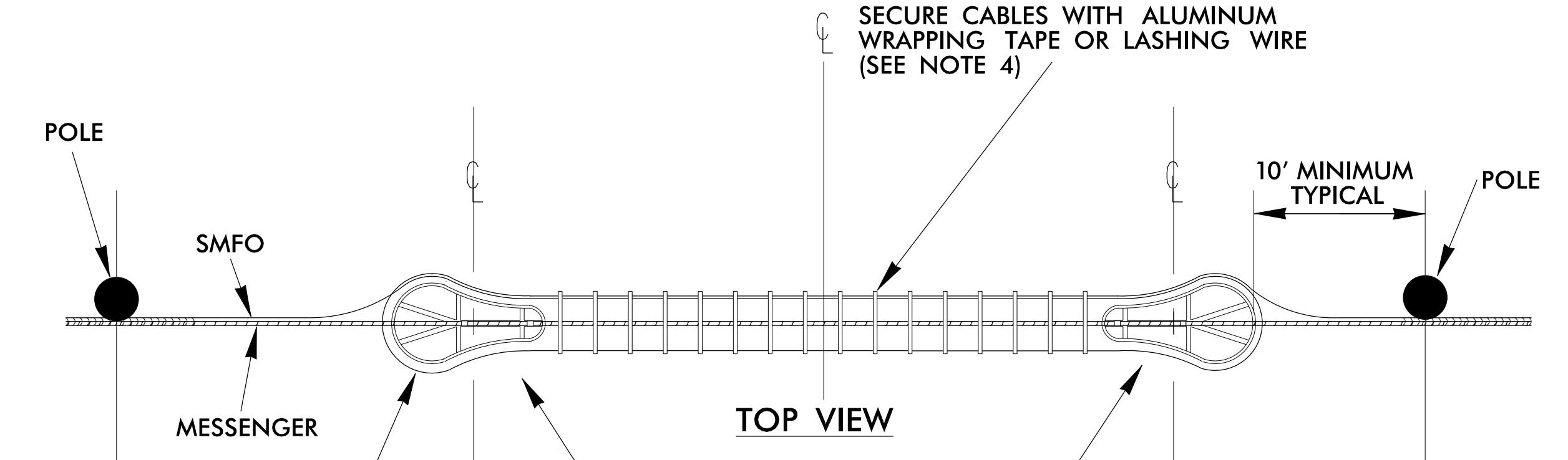
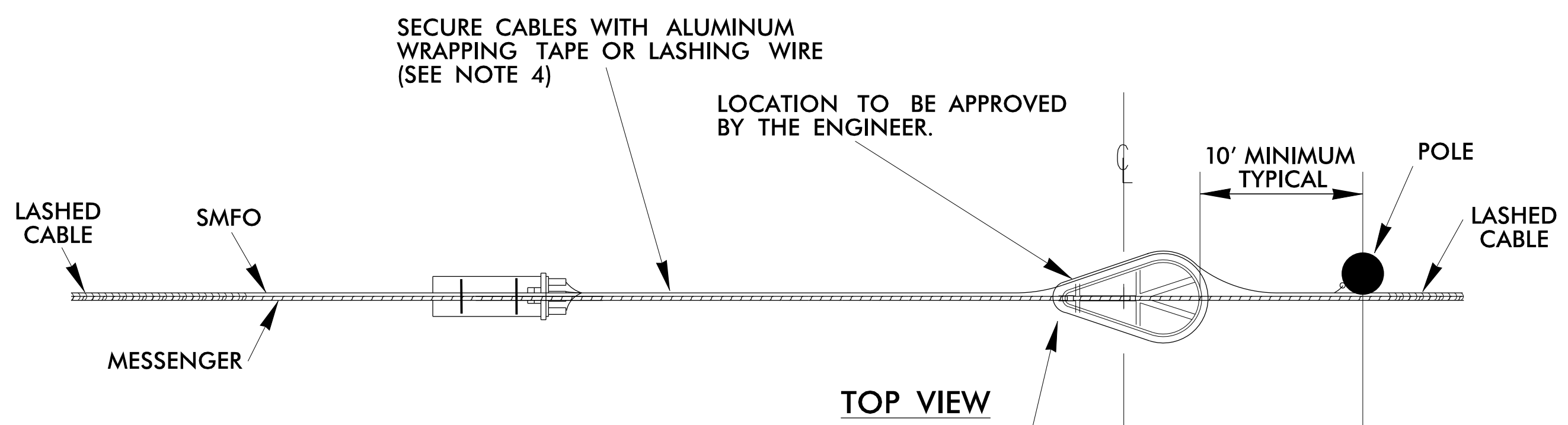
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 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	Burlington-Graham Signal System Overhead Electrical Service Detail		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019962 H. ALLEN BADGETT 13/2018
	Division 7 Alamance County Burlington & Graham		
750 Greenfield Parkway, Garner, NC 27529	SCALE NTS	PLAN DATE: June 2018 PREPARED BY: JW/AH REVIEWED BY: HA Badgett REVIEWED BY: BJ Slocum	REVISIONS INIT. DATE

SPLICE ENCLOSURE WITH STORAGE TYP. DETAIL

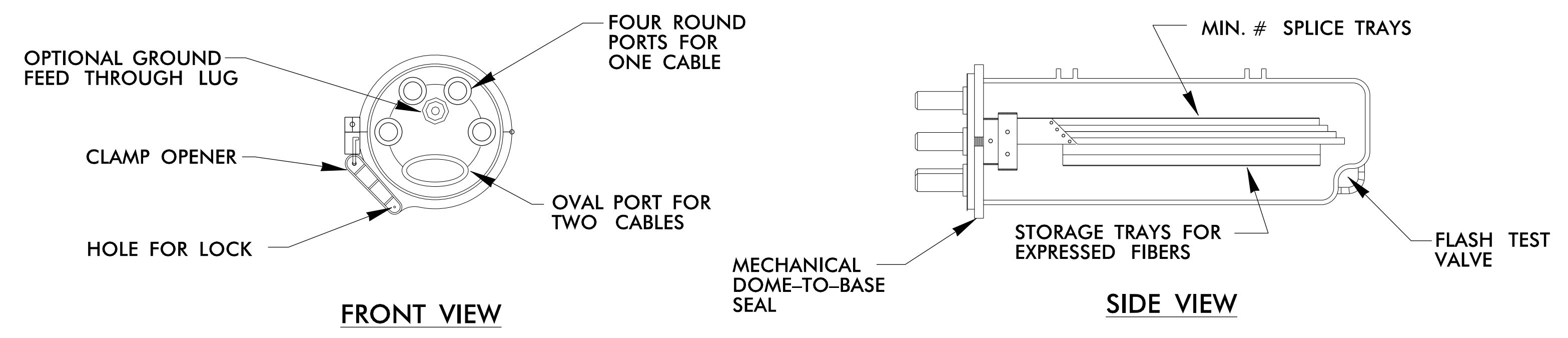
SPARE CABLE STORAGE TYP. DETAIL



NOTES

1. SPARE FIBER-OPTIC CABLE SHALL NOT BE STORED OVER ROADWAYS OR DRIVEWAYS.
2. STORE 100' OF SPARE FIBER-OPTIC CABLE WHERE SHOWN ON PLANS.
3. FIBER-OPTIC CABLE STORAGE GUIDE MATERIAL AND SIZE SHALL BE AS INDICATED IN THE PROJECT SPECIAL PROVISIONS.
4. 0.05" THICK BY 0.3" WIDE ALUMINUM WRAPPING TAPE (FOUR TURNS MINIMUM) AT 6" ON CENTER OR .061" LASHING WIRE WITH ONE 360 DEGREE SPIRAL PER FOOT.
5. FOR SPLICE ENCLOSURES:
 - A) APPLY A HEAT SOURCE, AS RECOMMENDED BY THE MANUFACTURER, TO SHRINK THE HEAT SHRINKABLE TUBING TO PROVIDE A SECURE FIT AROUND THE CABLES AND PORTS.
 - B) PERFORM A PRESSURIZATION FLASH TEST UPON CONCLUSION OF THE SPLICING AND PRIOR TO THE FINAL PLACEMENT OF THE ENCLOSURE.

SPLICE ENCLOSURE DETAILS



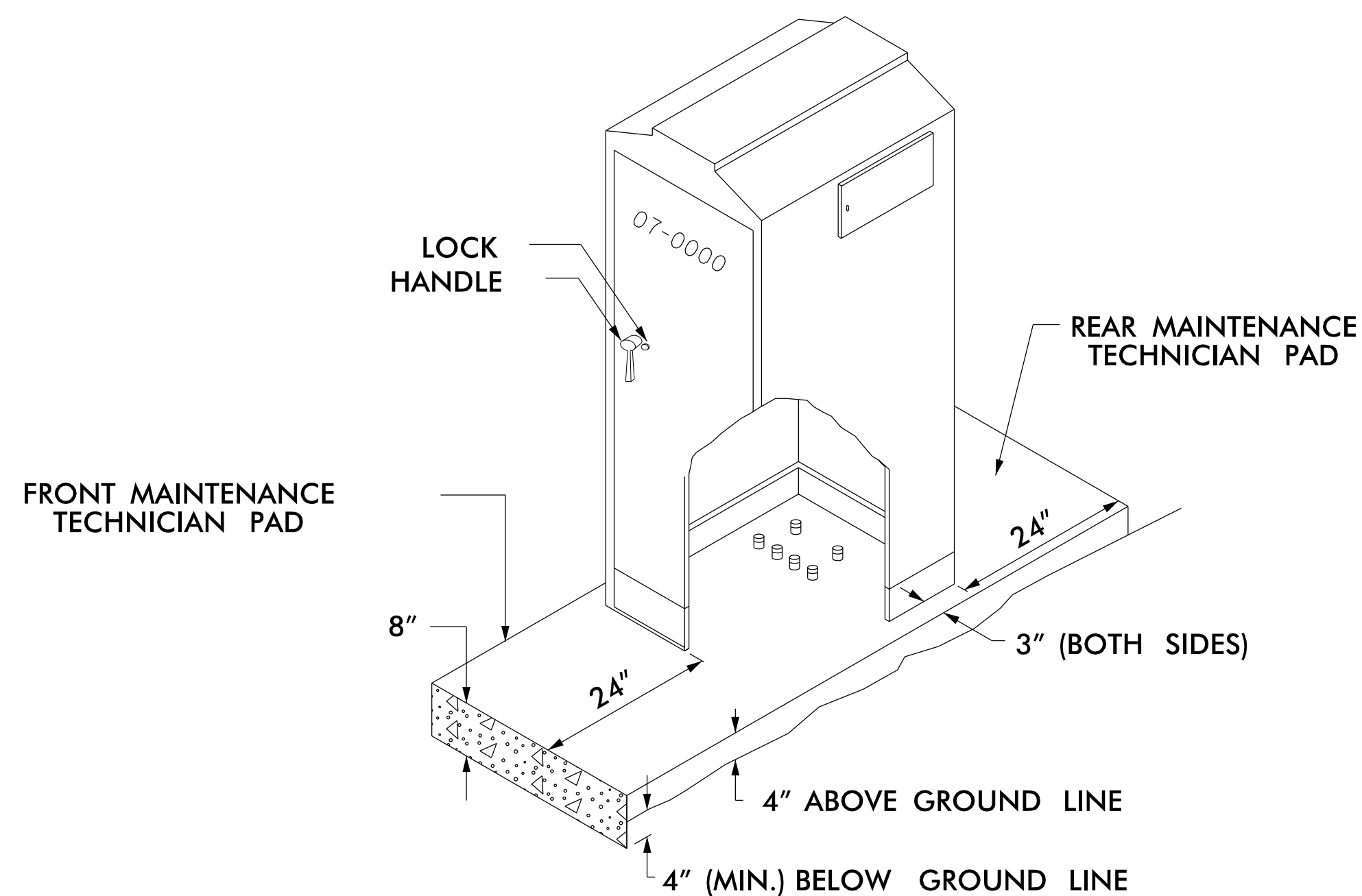
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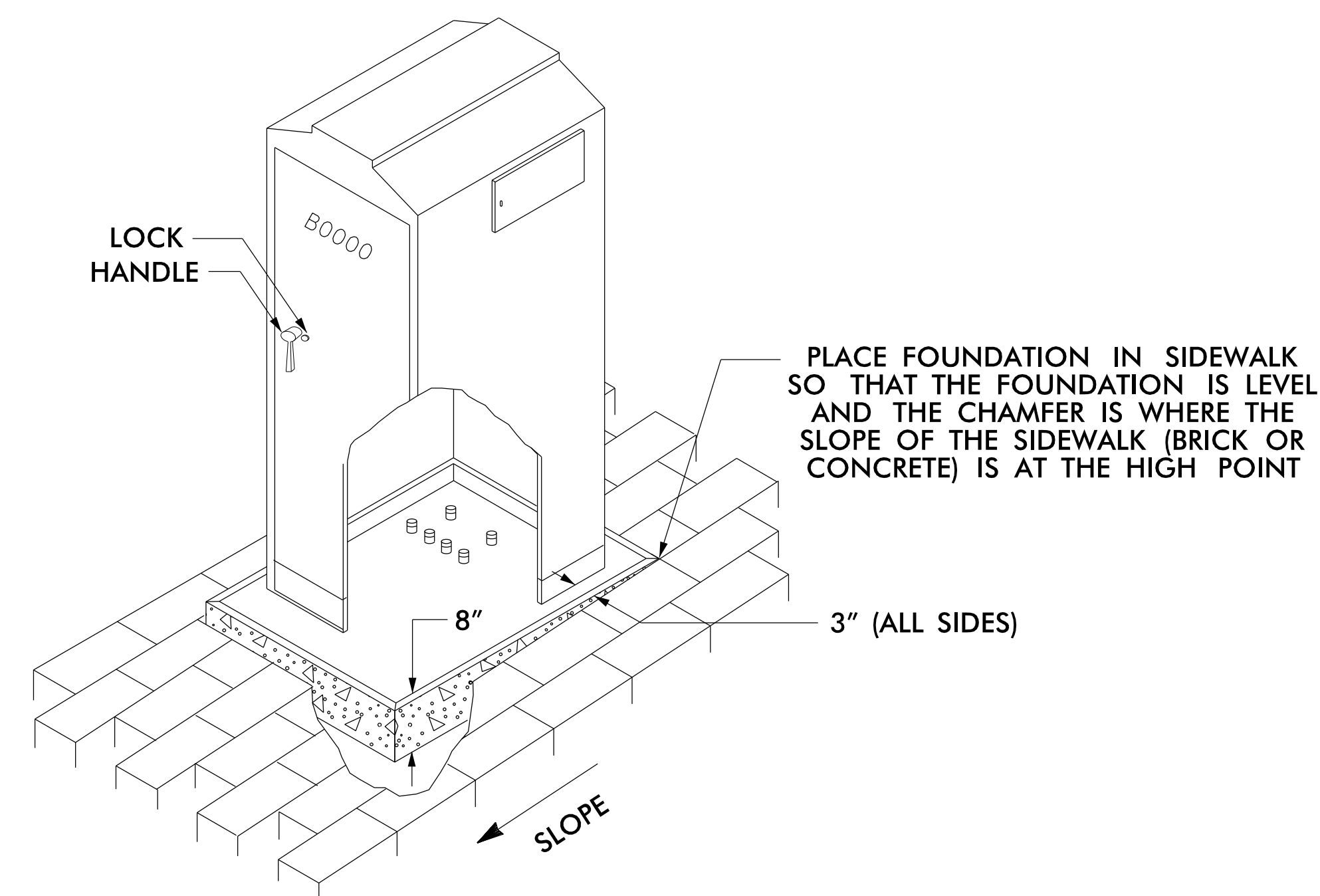
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	Division 7 Alamance County	Burlington & Graham
PLAN DATE: June 2018	REVIEWED BY: HA Badgett	PREPARED BY: JW/AH
SCALE: NTS	REVISIONS	INIT. DATE
SIGNATURE	DATE	DATE

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TYPICAL BASE-MOUNTED CABINET NEW STANDARD FOUNDATION



TYPICAL BASE-MOUNTED CABINET NEW FOUNDATION IN SIDEWALK



NOTES

1. STUB OUT SPARE 2" CONDUIT TO 12" BEYOND EDGE OF CABINET FOUNDATION.
2. SEAL SPARE CONDUIT WITH REMOVABLE CAP.
3. TOPS OF CONDUIT SHALL BE NO LESS THAN 2" AND NO MORE THAN 3" ABOVE FOUNDATION.

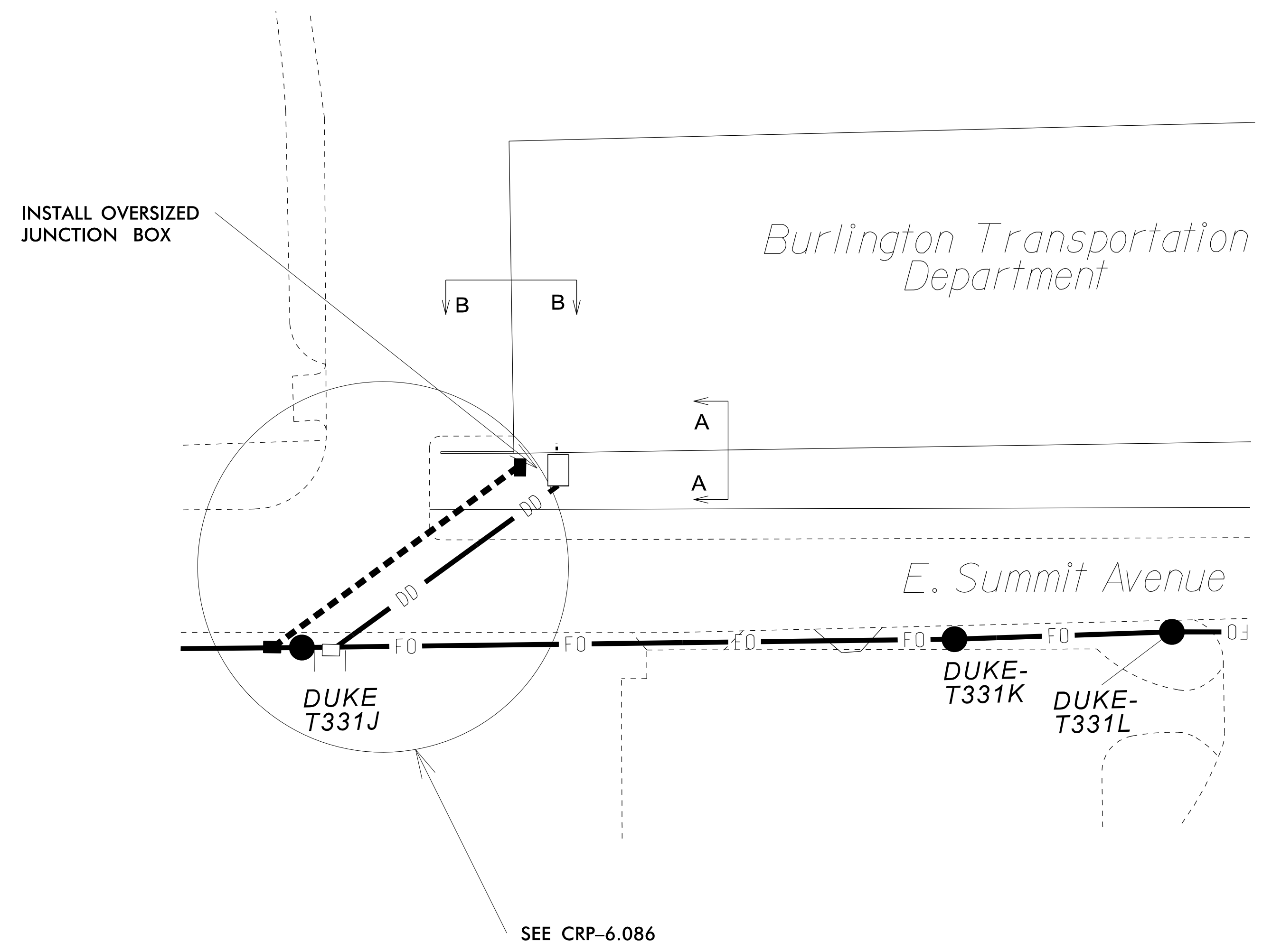
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 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System Base-Mounted Cabinet Foundation Details		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019962 H. ALLEN BADGETT 13/2018
	Division 7 Alamance County Burlington & Graham	PLAN DATE: June 2018 REVIEWED BY: HA Badgett PREPARED BY: JW/AH REVIEWED BY: BJ Slocum	
SCALE NTS	REVISIONS	INIT. DATE	SIGNATURE DATE

CABLE ENTRANCE PLAN VIEW



- NOTES**
- SEE ITS-5.17 FOR CONDUIT ENTRANCE DETAILS.
 - SEE ITS-5.17 FOR SECTION A-A AND B-B VIEWS.

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1616 EAST MILLBROOK ROAD, SUITE 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

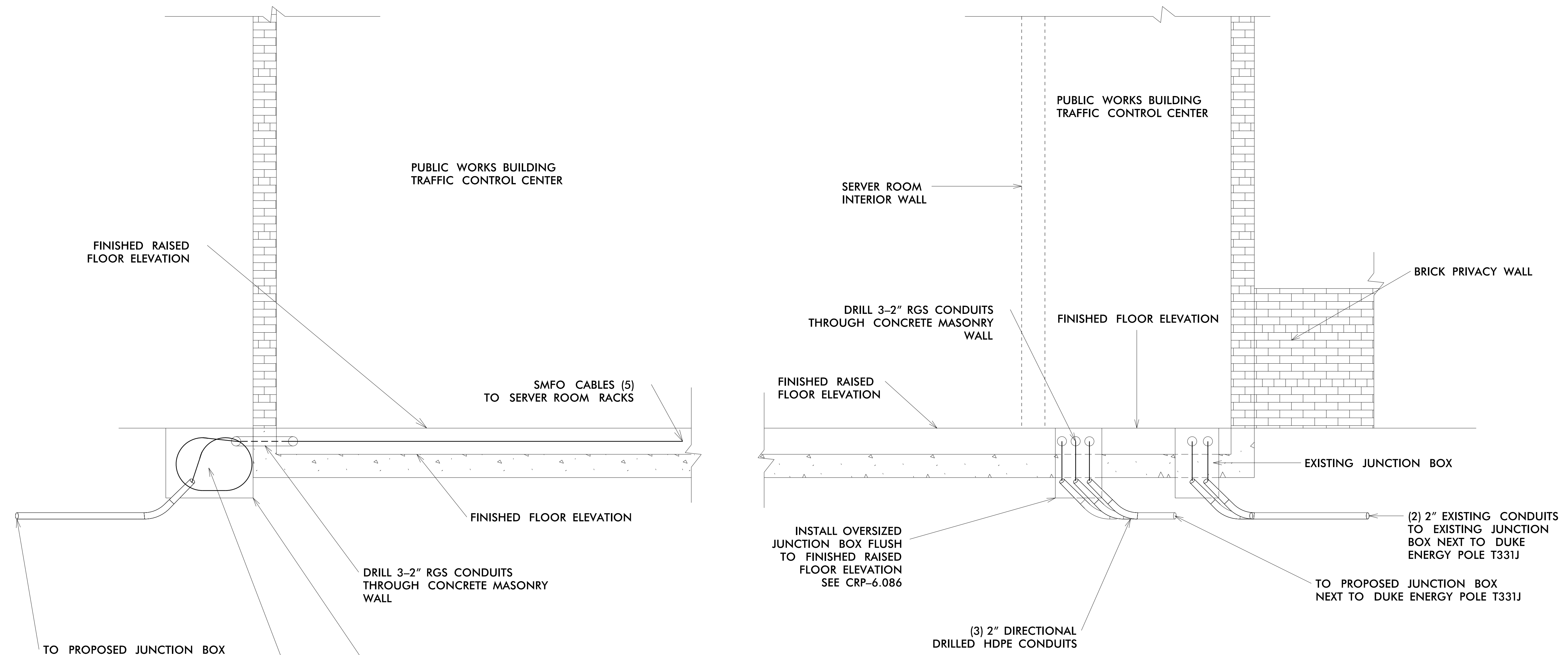
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 UNLESS ALL SIGNATURES COMPLETED

	Burlington-Graham Signal System TCC Details (1 of 10)															
	Division 7 Alamance County Burlington & Graham	PLAN DATE: June 2018 REVIEWED BY: HA Badgett		PREPARED BY: JW/AH REVIEWED BY: BJ Slocum												
750 Greenfield Parkway, Garner, NC 27529 SCALE	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS	INIT.	DATE							<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td style="width: 50%;"> </td> <td style="width: 50%;"> 13/2018 </td> </tr> <tr> <td style="font-size: 6px;"> PROFESSIONAL ENGINEER STATE OF NORTH CAROLINA </td> <td style="font-size: 6px;"> DATE </td> </tr> </table>		13/2018	PROFESSIONAL ENGINEER STATE OF NORTH CAROLINA	DATE
REVISIONS	INIT.	DATE														
	13/2018															
PROFESSIONAL ENGINEER STATE OF NORTH CAROLINA	DATE															

CADD File name: 270_049_U-6015_1

CABLE ENTRANCE ELEVATION SECTION A-A

CABLE ENTRANCE ELEVATION SECTION B-B



NOTES

1. RETAIN CITY IT CABLE

TO PROPOSED JUNCTION BOX
NEXT TO DUKE ENERGY POLE T331J

DRILL 3-2" RGS CONDUITS
THROUGH CONCRETE MASONRY
WALL

INSTALL OVERSIZED
JUNCTION BOX FLUSH
TO FINISHED RAISED
FLOOR ELEVATION
SEE CRP-6.086

STORE 50' OF CABLE
FOR EACH CABLE

FINISHED FLOOR ELEVATION

SMFO CABLES (5)
TO SERVER ROOM RACKS

FINISHED RAISED
FLOOR ELEVATION

PUBLIC WORKS BUILDING
TRAFFIC CONTROL CENTER

PUBLIC WORKS BUILDING
TRAFFIC CONTROL CENTER

SERVER ROOM
INTERIOR WALL

DRILL 3-2" RGS CONDUITS
THROUGH CONCRETE MASONRY
WALL

FINISHED FLOOR ELEVATION

BRICK PRIVACY WALL

FINISHED RAISED
FLOOR ELEVATION

EXISTING JUNCTION BOX

INSTALL OVERSIZED
JUNCTION BOX FLUSH
TO FINISHED RAISED
FLOOR ELEVATION
SEE CRP-6.086

(2) 2" EXISTING CONDUITS
TO EXISTING JUNCTION
BOX NEXT TO DUKE
ENERGY POLE T331J

TO PROPOSED JUNCTION BOX
NEXT TO DUKE ENERGY POLE T331J

(3) 2" DIRECTIONAL
DRILLED HDPE CONDUITS

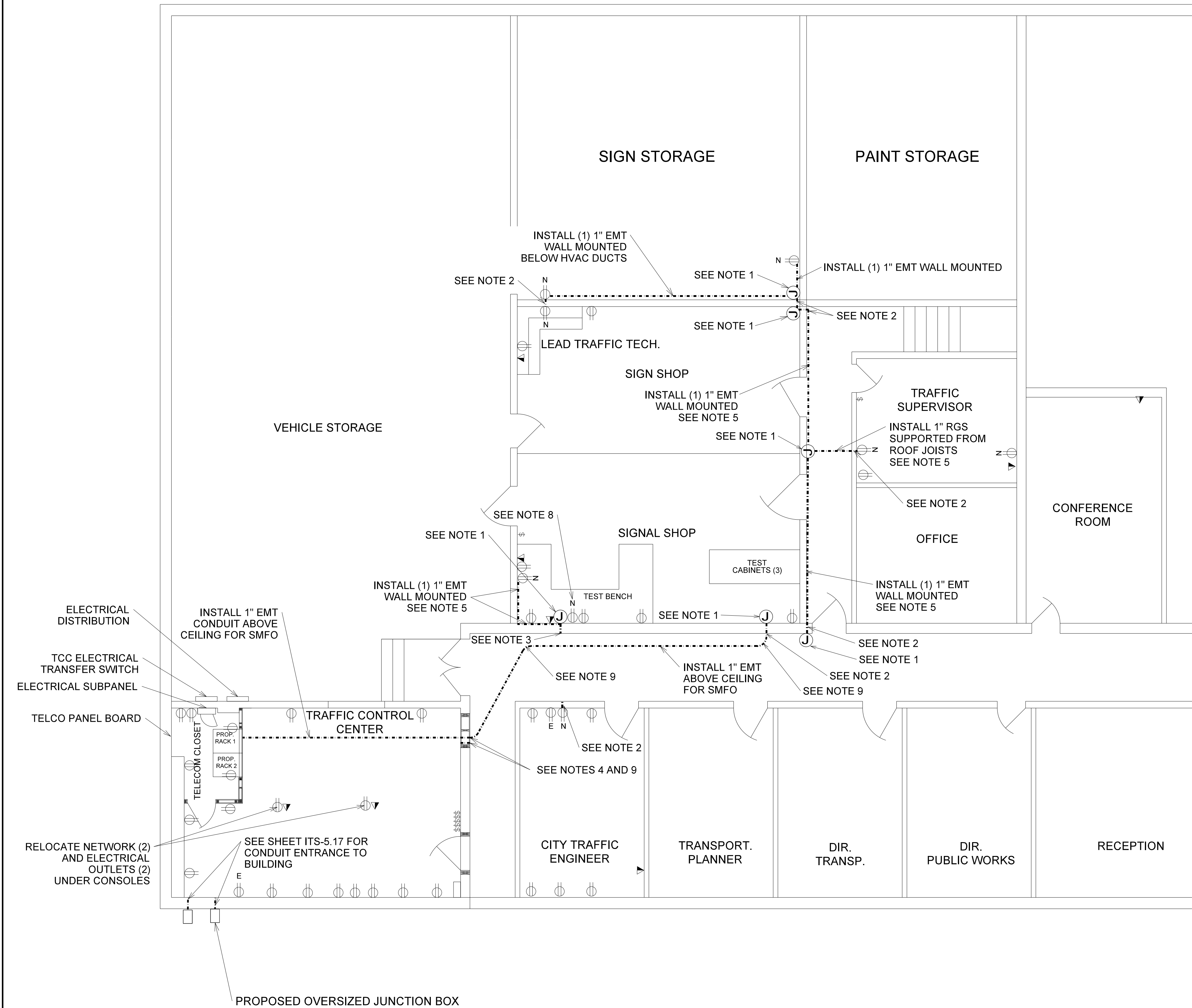
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RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

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	Burlington-Graham Signal System TCC Details (2 of 10)		
	Division 7 Alamance County Prepared by: JW/AH Scale: NTS	Burlington & Graham Reviewed by: HA Badgett Date: June 2018	

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CONDUIT PLAN VIEW



NOTES:

1. INSTALL WALL MOUNT JUNCTION BOX.
2. INSTALL 1" EMT CONDUIT THROUGH WALL, SEAL WITH FIRESTOP.
3. INSTALL 2" EMT CONDUIT THROUGH WALL, SEAL WITH FIRESTOP.
4. INSTALL 1-1" AND 1-2" EMT CONDUIT THROUGH WALL, SEAL WITH FIRESTOP.
5. INSTALL CONDUIT 9' ABOVE FINISHED FLOOR.
6. INSTALL ALL CABLING SUPPORTED BY CABLE HANGERS ATTACHED TO ROOF JOISTS.
7. SEAL CONDUIT SLEEVES THROUGH WALLS WITH FIRESTOP AFTER ALL CABLE INSTALLATION.
8. INSTALL QUAD NETWORK OUTLET BOX.
9. INSTALL EMT CONDUIT FOR FIBER OPTIC CABLE WITH BEND RADIUS OF AT LEAST 6".

LEGEND

- EXIST. ELECTRICAL OUTLET
- EXIST. NETWORK OUTLET
- EXIST. ELECTRICAL SWITCH
- PROP. ELECTRICAL OUTLET
- PROP. JUNCTION BOX
- PROP. WALL
- PROP. VIDEO WALL
- PROP. NETWORK OUTLET
- EXIST. NETWORK CABLING
- PROP. NETWORK CABLING
- PROP. VIDEO CABLING
- PROP. FIBER-OPTIC CABLING
- EXIST. FIBER-OPTIC CABLING

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 (919) 876-6888 NCBES #F-0326

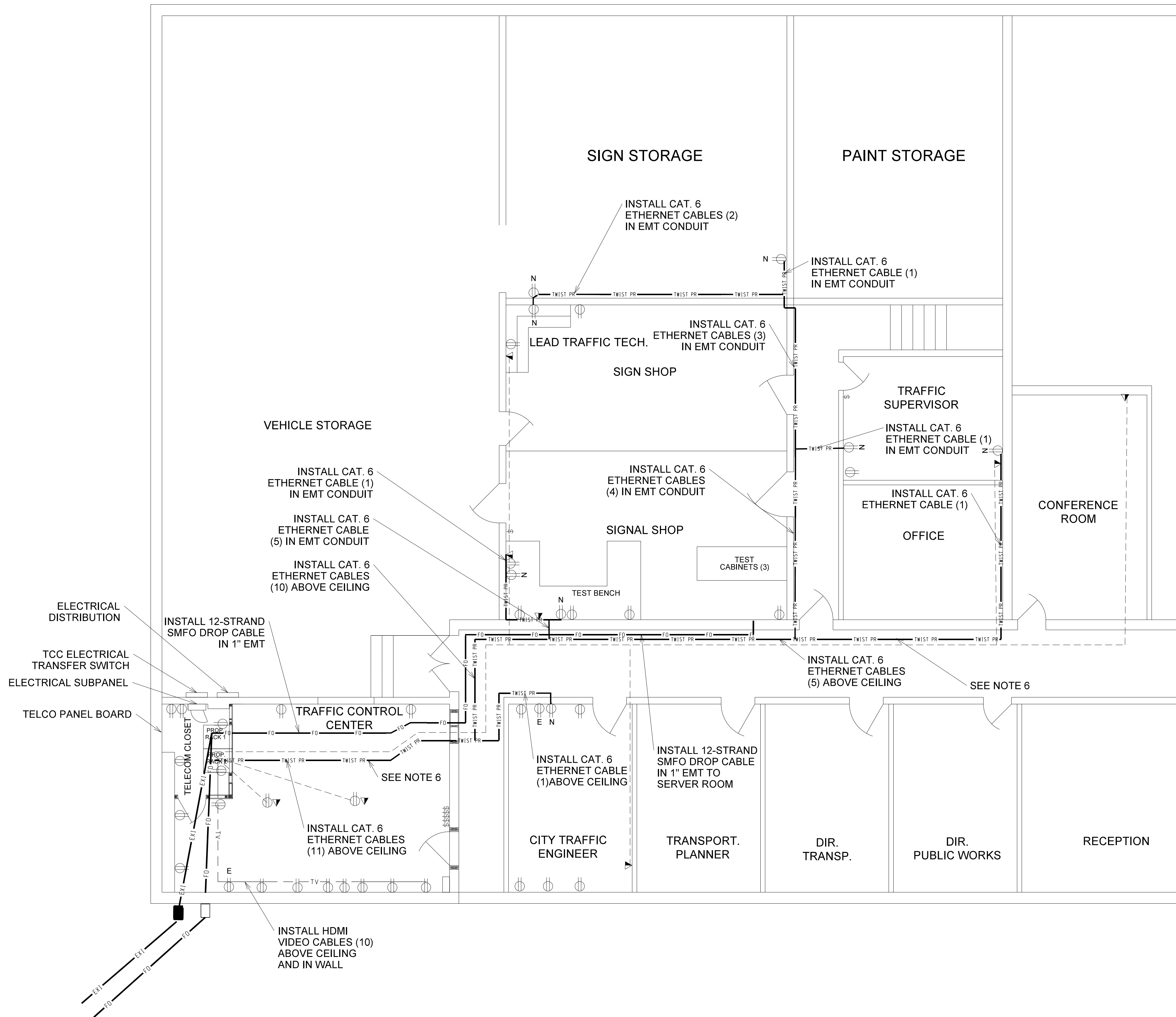
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Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529		Burlington-Graham Signal System TCC Details (3 of 10) Division 7 Alamance County Burlington & Graham	
PLAN DATE: June 2018 PREPARED BY: JW/AH		REVIEWED BY: HA Badgett REVIEWED BY: BJ Slocum	
SCALE: 0 5' 1"		REVISIONS: _____ INIT. DATE _____	

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
HAILEY A. BADGETT
019962
13/2018

CAD0 File name: 270_051_U-6015_ITS-5.18

CABLING PLAN VIEW



NOTES:

1. INSTALL WALL MOUNT JUNCTION BOX.
2. INSTALL 1" EMT CONDUIT THROUGH WALL, SEAL WITH FIRESTOP.
3. INSTALL 2" EMT CONDUIT THROUGH WALL, SEAL WITH FIRESTOP.
4. INSTALL 2-2" EMT CONDUIT THROUGH WALL, SEAL WITH FIRESTOP.
5. INSTALL CONDUIT 9' ABOVE FINISH FLOOR.
6. INSTALL ALL CABLING SUPPORTED BY CABLE HANGERS ATTACHED TO ROOF JOISTS.
7. SEAL CONDUIT SLEEVES THROUGH WALLS WITH FIRESTOP AFTER ALL CABLE INSTALLATION.
8. INSTALL CABLING TO CONSOLES UNDER EXISTING RAISED FLOOR.
9. INSTALL VIDEO WALL CABLING ABOVE CEILING.

LEGEND

- EXIST. ELECTRICAL OUTLET
- EXIST. NETWORK OUTLET
- EXIST. ELECTRICAL SWITCH
- PROP. ELECTRICAL OUTLET
- PROP. JUNCTION BOX
- PROP. WALL
- PROP. VIDEO WALL
- PROP. NETWORK OUTLET
- EXIST. NETWORK CABLING
- PROP. NETWORK CABLING
- PROP. VIDEO CABLING
- PROP. FIBER-OPTIC CABLING
- EXIST. FIBER-OPTIC CABLING

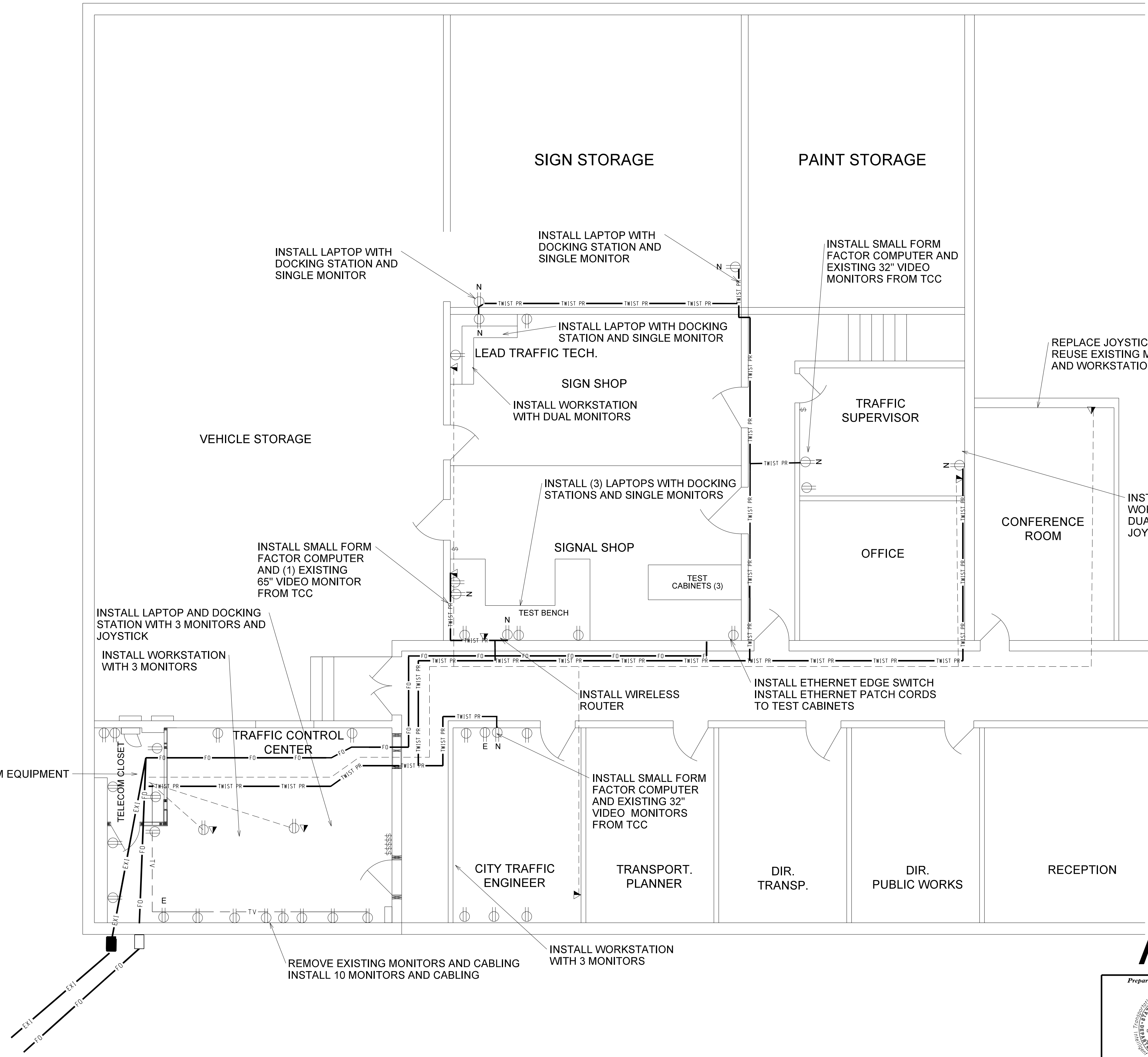
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	Burlington-Graham Signal System TCC Details (4 of 10)		
	Division 7 Alamance County PLAN DATE: June 2018 PREPARED BY: JW/AH	Burlington & Graham REVIEWED BY: HA Badgett REVIEWED BY: BJ Slocum	
REVISIONS: INIT. DATE			

EQUIPMENT PLAN VIEW

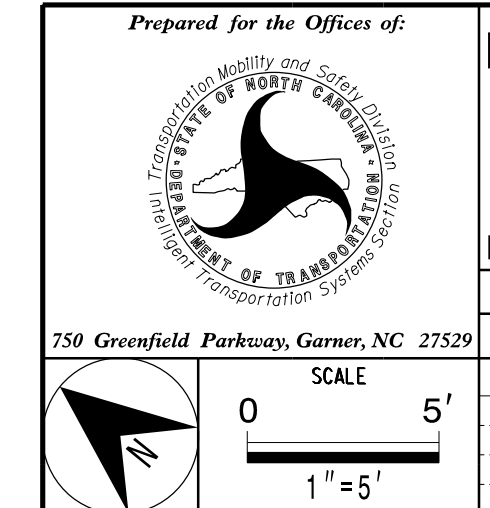


- LEGEND**
- EXIST. ELECTRICAL OUTLET
 - EXIST. NETWORK OUTLET
 - EXIST. ELECTRICAL SWITCH
 - PROP. ELECTRICAL OUTLET
 - PROP. JUNCTION BOX
 - PROP. WALL
 - PROP. VIDEO WALL
 - PROP. NETWORK OUTLET
 - EXIST. NETWORK CABLING
 - PROP. NETWORK CABLING
 - PROP. VIDEO CABLING
 - PROP. FIBER-OPTIC CABLING
 - EXIST. FIBER-OPTIC CABLING

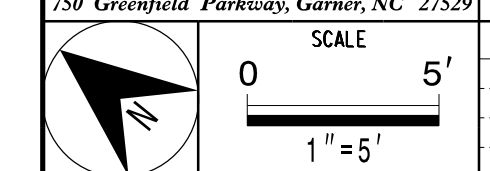
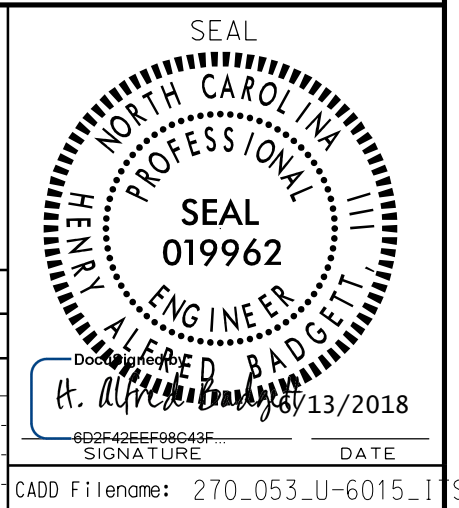
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 HOEK7534 AT LUS354180

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
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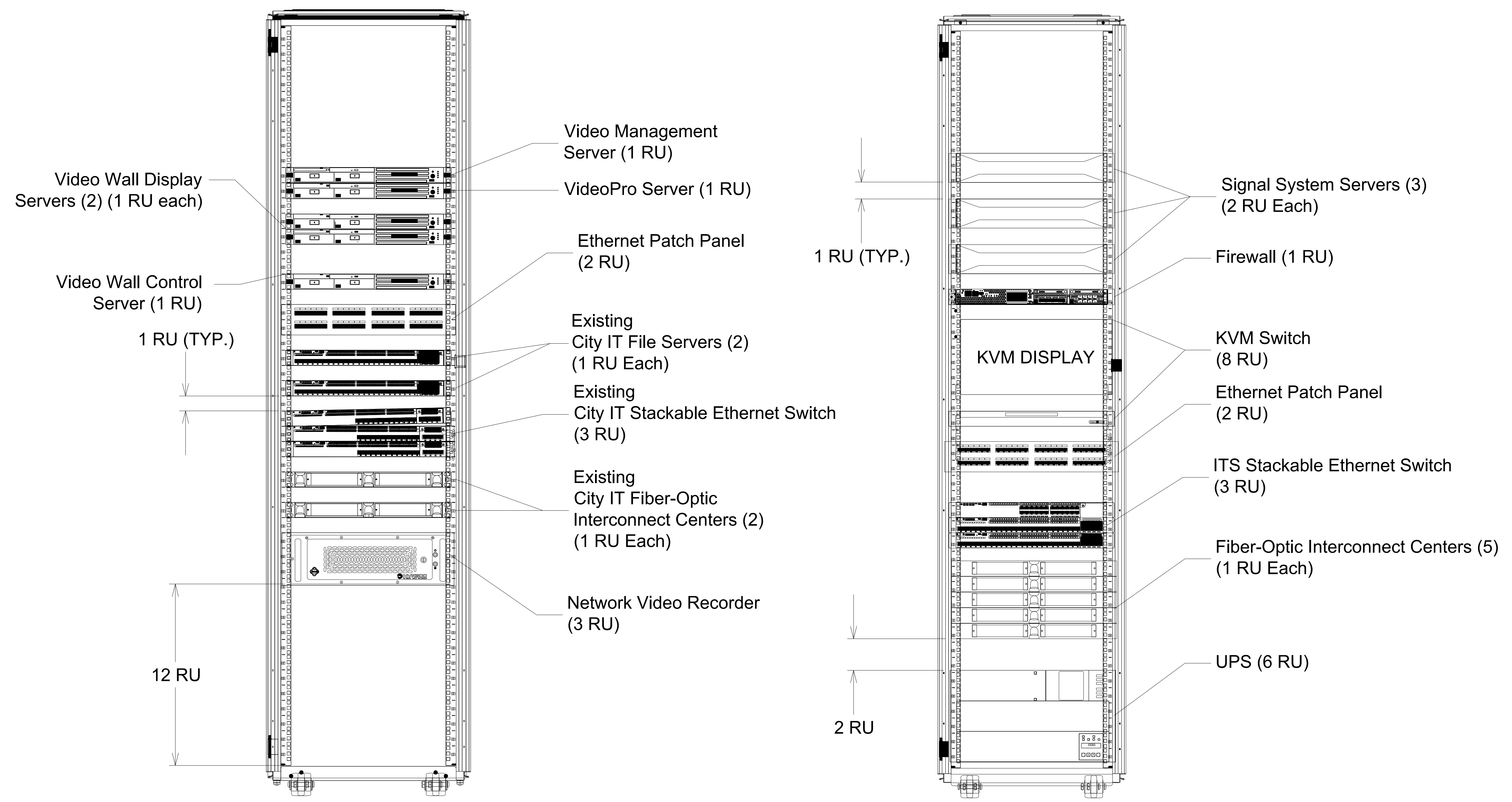
Burlington-Graham Signal System TCC Details (6 of 10)	
Division 7	Alamance County
PLAN DATE: June 2018	REVIEWED BY: HA Badgett
PREPARED BY: JW/AH	REVIEWED BY: BJ Slocum
REVISIONS	INIT. DATE



COMMUNICATIONS RACK LAYOUT

RACK 2
(48 RU)

RACK 1
48 (RU)



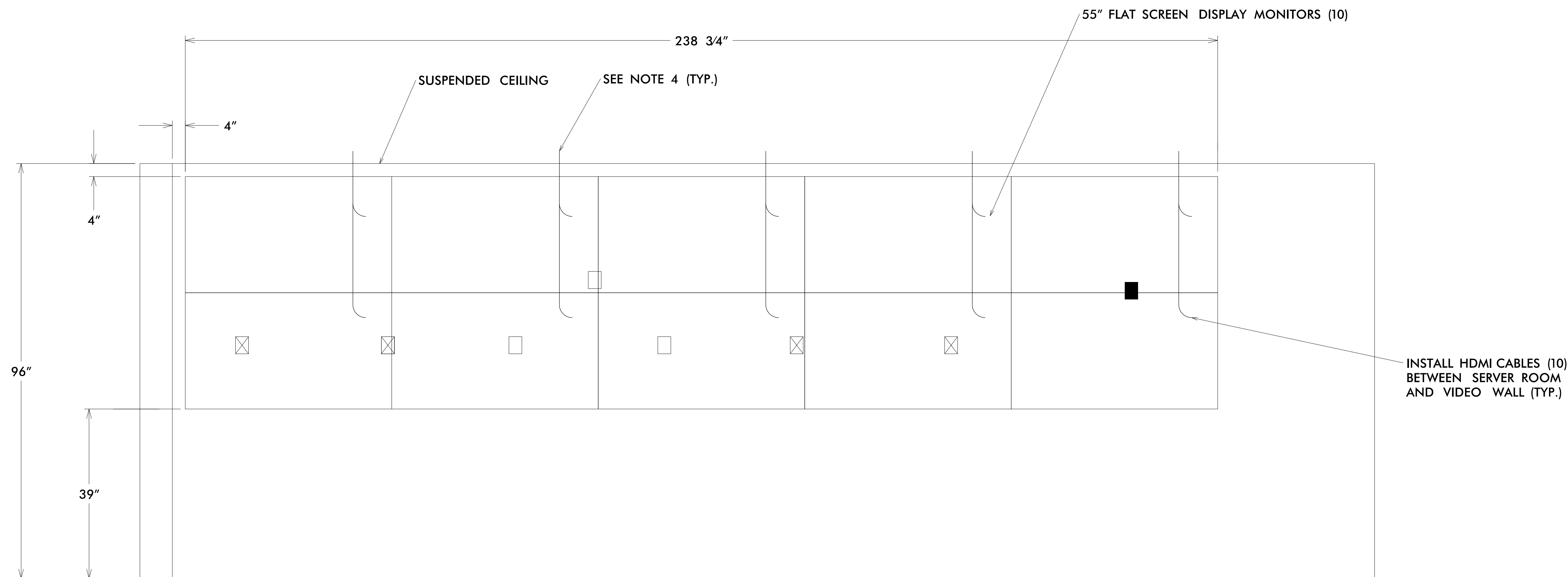
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	Burlington-Graham Signal System TCC Details (7 of 10)		
	Division 7 Alamance County Burlington & Graham	PLAN DATE: June 2018 REVIEWED BY: HA Badgett	
SCALE NTS	REVISIONS INIT. DATE	SIGNATURE DATE	13/2018

VIDEO WALL ELEVATION VIEW



LEGEND

- EXISTING ELECTRICAL QUAD OUTLET BOX
- ⊗ EXISTING ELECTRICAL DUPLEX OUTLET BOX
- PROPOSED ELECTRICAL DUPLEX OUTLET BOX (BY OTHERS)

NOTES

1. ELECTRICAL OUTLETS TO BE INSTALLED BY OTHERS.
2. REMOVE OLD MONITORS AND MOUNTING BRACKETS, REUSE AS SHOWN IN PLANS.
3. REMOVE OLD VIDEO CABLE AND MONITOR POWER CORDS BEFORE INSTALLING NEW MONITORS.
4. INSTALL NEW HDMI VIDEO CABLING ABOVE SUSPENDED CEILING TO SERVER RACKS.
5. INSTALL NEW MONITORS FROM LEFT TO RIGHT.
6. ALIGN MONITORS VERTICALLY AND HORIZONTALLY FOR ZERO CLEARANCE.
7. UTILIZE EXISTING AND PROPOSED ELECTRICAL OUTLETS.
8. INSTALL HDMI CABLE BETWEEN DISPLAY SERVER OUTPUT AND RESPECTIVE MONITOR.

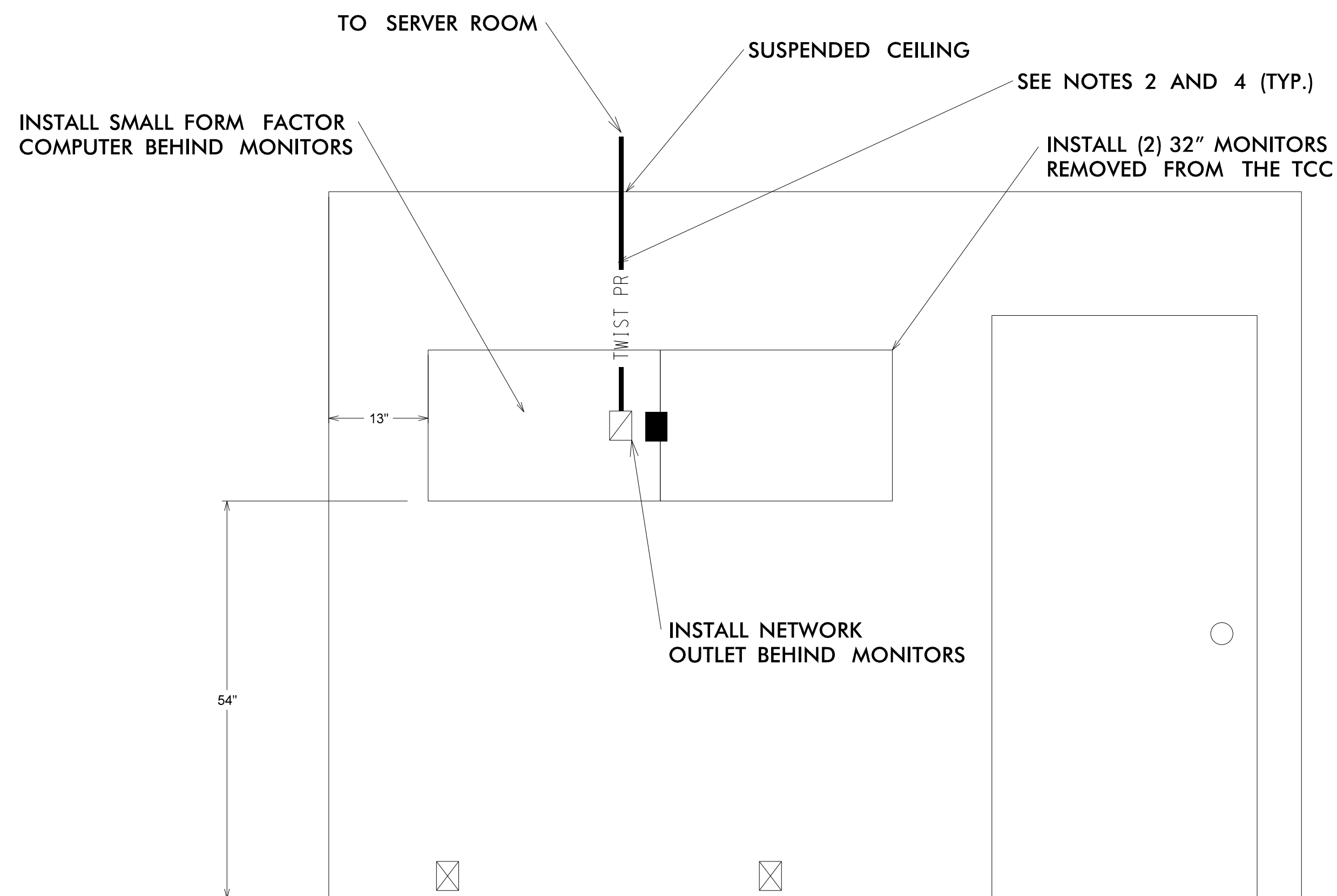
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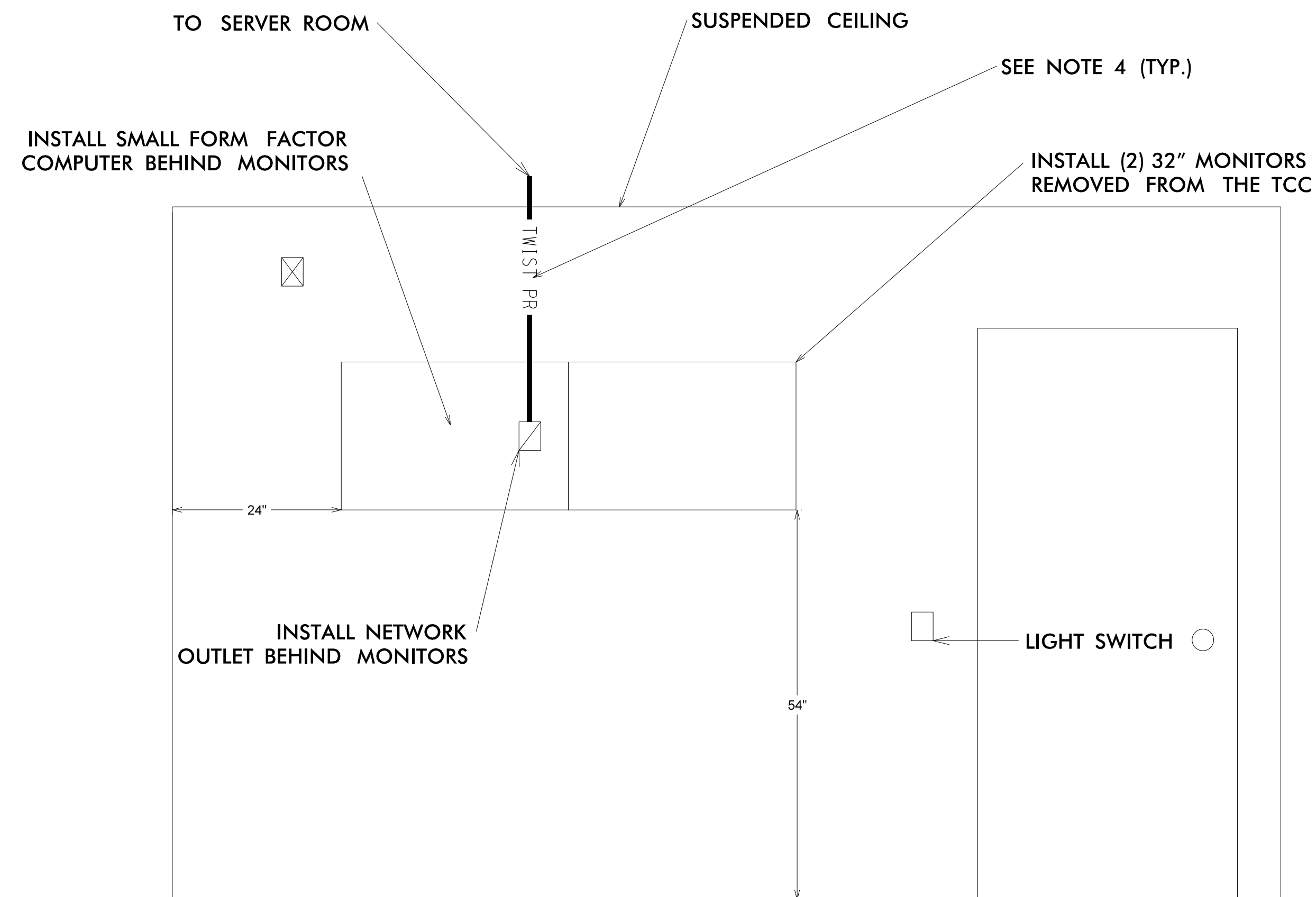
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	Burlington-Graham Signal System TCC Details (8 of 10)		
Division 7 Alamance County Burlington & Graham		PLAN DATE: June 2018 REVIEWED BY: HA Badgett	
PREPARED BY: JW/AH REVIEWED BY: BJ Slocum		REVISIONS INIT. DATE	
SCALE: NTS		DATE: 13/2018	

CITY TRAFFIC ENGINEER MONITOR WALL ELEVATION VIEW



TRAFFIC SUPERVISOR MONITOR WALL ELEVATION VIEW



LEGEND

- EXISTING ELECTRICAL QUAD OUTLET BOX
- EXISTING ELECTRICAL DUPLEX OUTLET BOX
- PROPOSED ELECTRICAL DUPLEX OUTLET BOX (BY OTHERS)
- PROPOSED NETWORK OUTLET

NOTES

1. ELECTRICAL OUTLETS TO BE INSTALLED BY OTHERS.
2. INSTALL NEW NETWORK CABLING ABOVE SUSPENDED CEILING TO SERVER RACKS.
3. INSTALL NETWORK OUTLETS BEHIND MONITORS
4. INSTALL NEW NETWORK CABLING FROM ABOVE CEILING THROUGH WALL TO NETWORK OUTLET. SEE ITS-5.19.
5. ALIGN MONITORS HORIZONTALLY.
6. UTILIZE EXISTING AND PROPOSED ELECTRICAL OUTLETS.
7. INSTALL SMALL FORM FACTOR COMPUTER ON WALL BEHIND MONITORS TO DRIVE WALL MONITORS.
8. INSTALL HDMI CABLING BETWEEN EACH MONITOR AND SMALL FORM FACTOR COMPUTER.

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	Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		750 Greenfield Parkway, Garner, NC 27529
	Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		
Burlington-Graham Signal System TCC Details (9 of 10)		Division 7 Alamance County Burlington & Graham	
PLAN DATE: June 2018		REVIEWED BY: HA Badgett	
PREPARED BY: JW/AH		REVIEWED BY: BJ Slocum	
SCALE: NTS		REVISIONS: INIT. DATE	
SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019962 H. ALLEN BADGETT 6/13/2018		SIGNATURE: DATE	

SUMMARY OF WORK BY CABLE ROUTING PLANS

CABLE ROUTING SHEET NUMBER	MESSANGER CABLE (1/4")	BOND MESSANGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 1 INCH)	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (1 CONDUIT, 2 INCH)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL-SIZED)	JUNCTION BOX STANDARD-SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CCTV ELEC SERVICE	1" RISER WITH WEATHERHEAD FOR CAT 6	1.25" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	HEAT SHRINK TUBING KIT	NEW CABINET ENTRANCE INTO NEW FOUNDATION	DRILL/ CORE DRILL EXIST FOUNDATION
	LF	EA	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.001	1,355	1	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	1	-	-
CRP-6.002	1,350	1	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
CRP-6.003	1,165	1	200	-	-	200	-	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-	-
CRP-6.004	785	1	505	-	-	505	-	-	1	-	-	-	-	2	-	-	-	-	-	1	-	-	-
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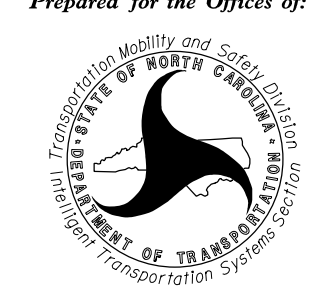
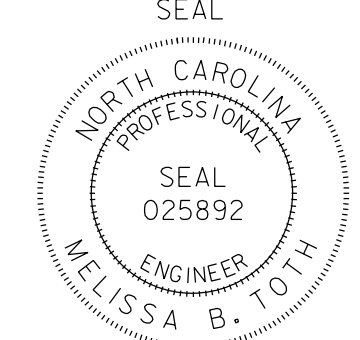
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- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable and CCTV installations that are shown on the cable routing plans (i.e. CRP sheets). Work to be done for traffic signals is shown separately on the signal 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 Quantities and the Project Special Provisions for defined Pay Items for this contract.

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

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	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 1 of 18)		
	Division 7 Alamance County Burlington & Graham		
PLAN DATE: December 2017		REVIEWED BY: HA Badgett	
PREPARED BY: AH/AW		REVIEWED BY: BJ Slocum	
REVISIONS		INIT.	DATE
NTS			
		Date: 6/18/2018 Signature: Melissa B. Toth	


SUMMARY OF WORK BY CABLE ROUTING PLANS

CABLE ROUTING SHEET NUMBER	COMMUNICATIONS CABLE (12-FIBER)	COMMUNICATIONS CABLE (24-FIBER)	CITY IT COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	DROP CABLE (12-FIBER)	HANDLASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE OR INTERCONNECT CENTER	INTERCONNECT CENTER, PATCH PANEL, JUMPERS, FUSION SPLICE CABLE	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	REMOVE CCTV CABINET	INSTALL CCTV CAMERA ASSEMBLY	REMOVE EX CCTV ASSEMBLY	POLE-MOUNTED CCTV CABINET (336)	POLE-MOUNTED CCTV CABINET (NEMA)	CCTV WOOD POLE	WOOD POLE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA
CRP-6.001	-	-	1,415	1,515	-	400	-	1	-	1	1	-	-	1	-	-	-	-	-
CRP-6.002	-	-	1,350	1,450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.003	-	-	1,425	1,425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.004	-	-	1,350	1,350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.005	-	935	1,640	1,800	-	450	-	1	-	1	1	1,470	-	1	-	-	-	-	-
CRP-6.006	-	-	1,495	1,495	-	-	-	-	-	-	-	1,405	-	-	-	-	-	-	-
CRP-6.007	460	-	1,385	1,675	-	790	-	2	-	2	2	360	-	1	1	-	-	-	-
CRP-6.008	-	-	-	1,535	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.009	-	-	-	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.010	-	-	-	1,625	-	330	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.011	-	-	-	1,680	-	465	-	1	-	1	1	-	-	1	-	-	-	-	-
CRP-6.012	-	-	-	1,575	-	290	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.013	-	-	-	1,480	-	325	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.014	-	670	-	1,685	-	395	-	1	-	1	1	105	-	1	1	-	-	-	-
CRP-6.015	-	-	-	1,585	-	935	-	2	-	3	3	-	-	1	-	1	-	-	-
CRP-6.016	-	-	-	1,585	-	390	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.017	-	-	-	1,475	-	330	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.018	-	-	-	1,275	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.019	-	-	-	1,580	-	1,070	-	2	-	3	3	-	-	1	1	-	-	-	-
CRP-6.020	-	-	-	1,495	-	360	-	1	-	1	1	75	-	-	-	-	-	-	-
CRP-6.021	-	-	-	1,535	-	740	-	1	-	1	1	205	-	-	-	-	-	-	-
CRP-6.022	-	-	-	3,465	-	345	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.023	-	-	-	2,990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.024	-	-	-	3,855	-	2,900	-	2	-	5	5	1,220	-	1	-	-	-	-	-
CRP-6.025	640	745	-	1,995	-	1,700	-	4	-	3	3	115	-	-	-	-	-	-	-
CRP-6.026	-	-	-	1,285	-	320	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.027	690	-	430	1,550	-	305	-	1	-	1	1	-	-	1	-	-	-	-	-
CRP-6.028	-	-	-	745	-	3,090	-	1	-	3	3	125	-	1	-	-	-	-	-
CRP-6.029	555	-	-	1,870	-	1,315	-	1	-	3	3	-	-	-	-	-	-	-	-
CRP-6.030	1,105	-	-	-	-	710	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.031	885	-	-	1,045	-	235	-	1	-	1	1	130	-	-	-	-	-	-	-

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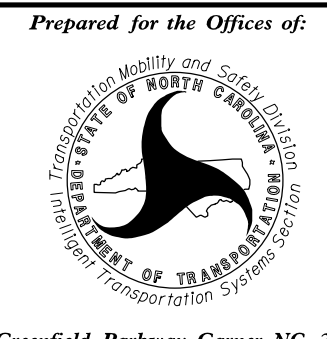
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1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBES #F-0326

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

Prepared for the Offices of:

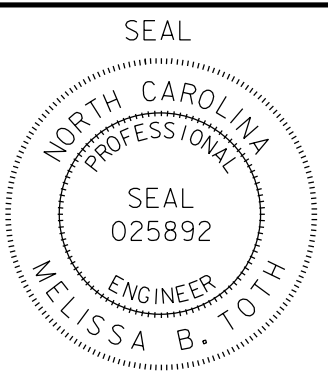


750 Greenfield Parkway, Garner, NC 27529

Burlington-Graham Signal System
Summary of Work by
Cable Routing Plans
(Sheet 2 of 18) Burlington & Graham
Division 7 Alamance County

PLAN DATE: December 2017 REVIEWED BY: HA Badgett
PREPARED BY: AH/AW REVIEWED BY: BJ Slocum

REVISIONS	INIT.	DATE



6/18/2018
DATE

NTS

CADD Filename: 270_060_U-6015_CRP-1.0

SUMMARY OF WORK BY CABLE ROUTING PLANS

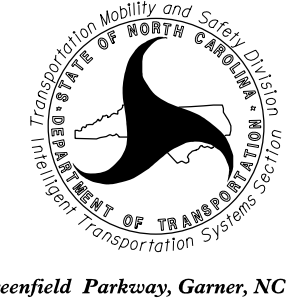
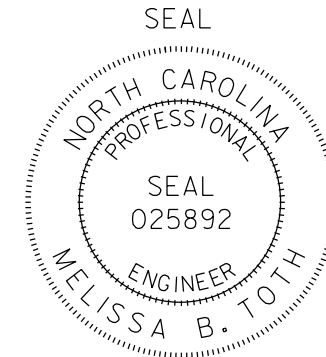
CABLE ROUTING SHEET NUMBER	ETHERNET CABLE (CAT 6)	MODIFY ELEC SERVICE FOR CCTV	REMOVE EXISTING CABINET FOUNDATION	SERVICE CONDUCTORS	NEW ELEC SERVICE FOR CCTV OR RADIO	MODIFY ELEC SERVICE FOR CCTV OR RADIO	INSTALL CABINET FOUNDATION	BASE MOUNTED CCTV CABINET W/ EXTENDER	INSTALL CCTV METAL POLE	INSTALL 2.4 GHZ RADIO	REMOVE EX CCTV METAL POLE	REMOVE WIRELESS COMM EQUIPMENT	BACK PULL FIBER-OPTIC CABLE
	LF	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	LF
CRP-6.001	155	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.002	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.003	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.004	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.005	70	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.006	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.007	270	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.008	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.009	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.010	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.011	190	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.012	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.013	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.014	250	-	-	-	-	-	-	-	-	-	-	-	105
CRP-6.015	50	-	-	-	1	-	-	-	1	-	-	-	-
CRP-6.016	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.017	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.018	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.019	60	-	-	-	-	-	-	1	-	-	-	-	-
CRP-6.020	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.021	-	-	-	-	-	-	-	-	-	-	-	-	205
CRP-6.022	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.023	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.024	250	-	-	-	-	-	1	-	1	-	-	-	210
CRP-6.025	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.026	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.027	230	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.028	255	-	-	-	-	-	1	-	1	-	-	-	-
CRP-6.029	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.030	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.031	-	-	-	-	-	-	-	-	-	-	-	-	-

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- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable and CCTV installations that are shown on the cable routing plans (i.e. CRP 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 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 3 of 18)		
	Division 7 Alamance County	Burlington & Graham	
PLAN DATE: December 2017 PREPARED BY: AH/AW REVISIONS: _____ INIT. DATE _____	REVIEWED BY: HA Badgett REVIEWED BY: BJ Slocum	AUTHORIZED BY: _____ DATE: 6/18/2018 SIGNATURE: _____	SEAL NORTH CAROLINA PROFESSIONAL SEAL 025892 ENGINEER MELISSA B. TOTH
750 Greenfield Parkway, Garner, NC 27529 NTS			CADD File name: 270_060_U-6015_CRP-1.0


SUMMARY OF WORK BY CABLE ROUTING PLANS

CABLE ROUTING SHEET NUMBER	MESSANGER CABLE (1/4")	BOND MESSANGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 1 INCH)	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (1 CONDUIT, 2 INCH)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL-SIZED)	JUNCTION BOX (STANDARD-SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CCTV ELEC SERVICE	1" RISER WITH WEATHERHEAD FOR CAT 6	1.25" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	HEAT SHRINK TUBING KIT	NEW CABINET ENTRANCE INTO NEW FOUNDATION	DRILL/ CORE DRILL EXIST FOUNDATION
	LF	EA	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.032	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
CRP-6.033	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.034	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.035	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	1	-	-
CRP-6.036	420	4	70	-	-	-	70	-	1	-	-	-	-	1	1	2	-	-	-	2	-	-	-
CRP-6.037	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
CRP-6.038	-	2	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-
CRP-6.039	110	4	275	-	-	-	275	-	2	-	-	-	-	3	-	-	-	-	-	3	1	-	-
CRP-6.040	65	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
CRP-6.041	170	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.042	-	1	90	-	-	-	90	-	-	-	2	-	-	-	-	-	-	1	-	1	-	1	-
CRP-6.043	230	3	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1	-
CRP-6.044	1,490	1	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-
CRP-6.045	1,440	1	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
CRP-6.046	720	1	-	-	25	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-
CRP-6.047	-	1	1,320	-	-	795	525	-	3	1	-	-	-	1	-	-	-	-	-	1	-	-	-
CRP-6.048	1,275	1	175	-	-	175	-	-	1	-	-	-	-	4	-	-	-	-	-	1	-	-	-
CRP-6.049	460	1	1,275	-	-	870	280	-	4	1	1	1	-	-	-	-	-	-	-	1	-	-	-
CRP-6.050	-	-	980	-	-	830	150	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	1
CRP-6.051	-	1	1,655	-	20	-	-	-	-	2	-	2	-	-	-	-	-	-	-	1	-	-	-
CRP-6.052	-	-	1,455	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
CRP-6.053	-	-	1,425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.054	-	1	455	-	-	-	-	-	-	1	-	1	-	3	1	-	-	-	-	-	1	-	-
CRP-6.055	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
CRP-6.056	-	1	40	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	-
CRP-6.057	-	-	1,725	-	20	810	120	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-
CRP-6.058	-	-	1,460	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
CRP-6.059	-	-	1,690	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
CRP-6.060	-	1	1,470	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	1	-	-
CRP-6.061	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.062	-	1	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	1	-	-
CRP-6.063	280	3	-	-	-	-	-	-	-	-	-	-	-	5	2	-	-	-	-	-	1	-	-
CRP-6.064	475	3	135	-	20	-	-	-	-	1	-	1	-	2	1	-	-	-	-	2	-	-	-
CRP-6.065	-	2	550	-	-	-	550	-	1	1	-	-	-	2	-	-	-	-	-	2	-	-	1
CRP-6.066	30	3	190	-	-	-	190	-	2	-	-	-	-	2	-	-	-	1	-	2	1	-	-

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 (919) 876-6888 NCBES #F-0326

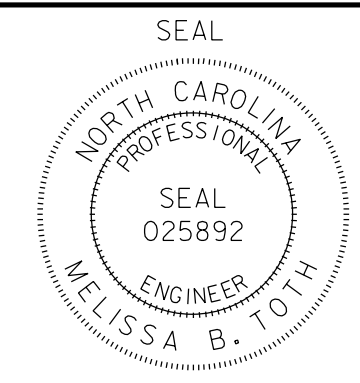
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Burlington-Graham Signal System
 Summary of Work by
 Cable Routing Plans
 (Sheet 4 of 18)

Division 7 Alamance County Burlington & Graham

PLAN DATE: December 2017 REVIEWED BY: HA Badgett
 PREPARED BY: AH/AW REVIEWED BY: BJ Slocum

NTS



Seal of Melissa B. Toth, Professional Engineer, License No. 025892, State of North Carolina.

6/18/2018
 DATE

SUMMARY OF WORK BY CABLE ROUTING PLANS

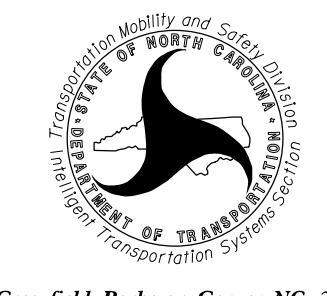

CABLE ROUTING SHEET NUMBER	COMMUNICATIONS CABLE (12-FIBER)	COMMUNICATIONS CABLE (24-FIBER)	CITY IT COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	DROP CABLE (12-FIBER)	HANDLASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE OR INTERCONNECT CENTER	INTERCONNECT CENTER PATCH PANEL, JUMPERS, FUSION SPLICE CABLE	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	REMOVE CCTV CABINET	INSTALL CCTV CAMERA ASSEMBLY	REMOVE EX CCTV ASSEMBLY	POLE-MOUNTED CCTV CABINET (336)	POLE-MOUNTED CCTV CABINET (NEMA)	CCTV WOOD POLE	WOOD POLE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA
CRP-6.032	1,300	-	-	-	-	265	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.033	-	-	-	1,470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.034	-	-	-	1,525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.035	-	-	-	1,795	-	335	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.036	1,185	-	-	1,535	-	280	-	1	-	1	1	425	-	-	-	-	-	-	1
CRP-6.037	-	-	-	1,535	-	480	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.038	280	1,185	-	1,640	-	550	-	1	-	1	1	120	1	1	1	-	-	-	-
CRP-6.039	-	1,660	-	-	-	1,470	-	1	-	2	2	465	-	-	-	-	-	-	-
CRP-6.040	-	1,515	-	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-
CRP-6.041	-	1,495	-	-	-	-	-	-	-	-	-	170	-	-	-	-	-	-	-
CRP-6.042	-	1,610	-	-	-	300	-	1	-	1	1	-	-	1	-	-	-	1	-
CRP-6.043	-	1,910	-	-	-	300	-	1	-	1	1	220	-	-	-	-	-	-	-
CRP-6.044	-	1,590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.045	-	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.046	-	710	-	-	-	310	-	1	-	1	1	15	-	1	-	-	-	-	-
CRP-6.047	-	1,560	-	-	-	65	-	1	-	1	1	400	-	-	-	-	-	-	-
CRP-6.048	-	1,610	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.049	-	1,660	-	-	-	205	-	1	-	1	1	1,140	-	1	-	-	-	-	-
CRP-6.050	-	1,815	-	-	-	45	-	1	-	1	1	-	-	1	1	-	-	-	-
CRP-6.051	-	1,960	-	-	-	765	-	2	-	3	3	1,680	-	1	1	-	-	-	-
CRP-6.052	-	1,575	-	-	-	60	-	1	-	1	1	1,480	-	-	-	-	-	-	-
CRP-6.053	-	1,545	-	-	-	-	-	-	-	-	-	1,425	-	-	-	-	-	-	-
CRP-6.054	-	1,775	-	-	-	75	-	1	-	1	1	455	-	-	-	-	-	-	-
CRP-6.055	-	1,525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.056	-	1,010	-	-	-	535	-	1	-	1	1	40	-	-	-	-	-	-	-
CRP-6.057	330	1,555	-	-	-	45	-	1	-	1	1	780	-	1	-	-	-	-	-
CRP-6.058	-	1,545	-	-	-	100	-	1	-	1	1	1,460	-	-	-	-	-	-	-
CRP-6.059	-	1,520	-	-	-	320	-	1	-	1	1	1,690	-	-	-	-	-	-	-
CRP-6.060	-	1,585	-	-	-	175	-	1	-	1	1	1,470	-	-	-	-	-	-	-
CRP-6.061	-	1,360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.062	-	1,270	-	-	-	260	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.063	1,240	800	-	-	-	360	-	1	-	1	1	50	-	-	-	-	-	-	-
CRP-6.064	450	1,360	-	-	-	120	-	1	1	3	2	610	-	1	1	-	-	-	-
CRP-6.065	-	1,930	-	-	-	70	-	1	-	1	1	550	-	-	-	-	-	-	-
CRP-6.066	465	1,810	-	-	-	240	-	1	-	1	1	260	-	1	-	-	-	-	-

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 ENCLAS386 AT LUIS330048

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

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 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 5 of 18)		
	Division 7 Alamance County Burlington & Graham	PLAN DATE: December 2017 PREPARED BY: AH/AW REVISIONS: _____ INIT. DATE _____	
NTS	CADD File name: 270_060_U-6015_CRP-1.0		

SUMMARY OF WORK BY CABLE ROUTING PLANS

PROJECT REFERENCE NO.	SHEET NO.
U-6015	CRP-1.005

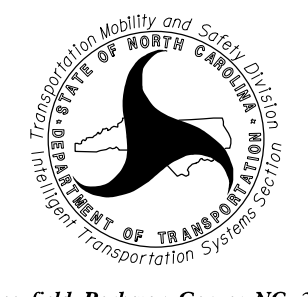
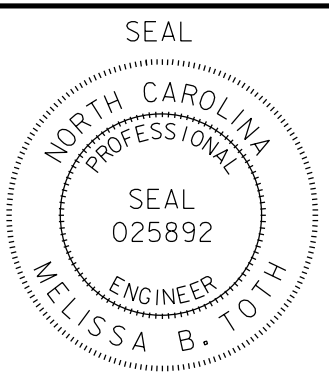
CABLE ROUTING SHEET NUMBER	ETHERNET CABLE (CAT 6)	MODIFY ELEC SERVICE FOR CCTV	REMOVE EXISTING CABINET FOUNDATION	SERVICE CONDUCTORS	NEW ELEC SERVICE FOR CCTV OR RADIO	MODIFY ELEC SERVICE FOR CCTV OR RADIO	INSTALL CABINET FOUNDATION	BASE MOUNTED CCTV CABINET W/ EXTENDER	INSTALL CCTV METAL POLE	INSTALL 2.4 GHZ RADIO	REMOVE EX CCTV METAL POLE	REMOVE WIRELESS COMM EQUIPMENT	BACK PULL FIBER-OPTIC CABLE
	LF	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.032	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.033	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.034	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.035	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.036	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.037	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.038	265	-	-	-	-	-	-	-	1	-	1	-	-
CRP-6.039	-	-	-	-	-	-	-	-	-	-	-	-	265
CRP-6.040	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.041	-	-	-	-	-	-	-	-	-	-	-	-	65
CRP-6.042	145	-	-	-	-	-	1	-	-	-	-	-	170
CRP-6.043	-	-	-	-	-	-	1	-	-	-	-	-	220
CRP-6.044	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.045	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.046	70	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.047	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.048	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.049	180	-	-	-	-	-	-	-	-	-	-	-	1,010
CRP-6.050	55	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.051	60	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.052	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.053	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.054	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.055	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.056	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.057	80	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.058	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.059	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.060	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.061	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.062	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.063	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.064	210	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.065	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.066	165	-	1	-	-	-	1	-	-	-	-	-	-

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

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 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 6 of 18)		
	Division 7 Alamance County Burlington & Graham		
PLAN DATE: December 2017	REVIEWED BY: HA Badgett		
PREPARED BY: AH/AW	REVIEWED BY: BJ Slocum		
REVISIONS	INIT.	DATE	
NTS			
		Date: 6/18/2018 Signature: <i>Melissa B. Toth</i>	

SUMMARY OF WORK BY CABLE ROUTING PLANS



CABLE ROUTING SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 1 INCH)	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (1 CONDUIT, 2 INCH)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL-SIZED)	JUNCTION BOX STANDARD-SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CCTV ELEC SERVICE	1" RISER WITH WEATHERHEAD FOR CAT 6	1.25" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	HEAT SHRINK TUBING KIT	NEW CABINET ENTRANCE INTO NEW FOUNDATION	DRILL/ CORE DRILL EXIST FOUNDATION
	LF	EA	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.067	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.068	-	2	390	-	-	-	390	-	2	-	-	-	-	2	-	-	-	-	-	2	-	-	-
CRP-6.069	-	1	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-
CRP-6.070	-	-	890	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
CRP-6.071	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	1	-	-	-	-
CRP-6.072	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.073	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
CRP-6.074	125	2	235	-	-	-	235	-	1	-	-	-	-	4	2	-	-	-	-	1	1	-	-
CRP-6.075	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.076	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.077	-	1	-	-	20	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	1	-	1
CRP-6.078	-	1	-	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	1	-	-
CRP-6.079	-	1	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-
CRP-6.080	-	1	-	-	-	-	-	-	-	-	-	-	-	4	3	-	-	-	-	-	-	-	-
CRP-6.081	-	1	-	-	25	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	1	-	1
CRP-6.082	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
CRP-6.083	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	-
CRP-6.084	840	3	-	-	-	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	1	-	-
CRP-6.085	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1	-
CRP-6.086	-	1	90	-	-	-	90	90	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-
CRP-6.087	-	1	-	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	1	-	-
CRP-6.088	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
CRP-6.089	-	4	450	-	30	230	-	-	-	1	-	1	-	1	-	-	-	1	-	1	3	-	-
CRP-6.090	250	3	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-
CRP-6.091	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
CRP-6.092	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-
CRP-6.093	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
CRP-6.094	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.095	-	1	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-
CRP-6.096	-	2	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
CRP-6.097	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.098	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.099	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.100	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-
CRP-6.101	-	2	275	-	-	-	275	-	3	-	-	-	-	-	-	1	-	-	-	2	-	-	-

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 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 7 of 18)		 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER MELISSA B. TOTH 025892
	Division 7 Alamance County Prepared by: AH/AW Revisions: _____ Date: _____	Burlington & Graham Prepared by: HA Badgett Reviewed by: BJ Slocum Date: _____	


SUMMARY OF WORK BY CABLE ROUTING PLANS

CABLE ROUTING SHEET NUMBER	COMMUNICATIONS CABLE (12-FIBER)	COMMUNICATIONS CABLE (24-FIBER)	CITY IT COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	DROP CABLE (12-FIBER)	HANDLASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE OR INTERCONNECT CENTER	INTERCONNECT CENTER, PATCH PANEL, JUMPERS, FUSION SPLICE CABLE	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	REMOVE CCTV CABINET	INSTALL CCTV CAMERA ASSEMBLY	REMOVE EX CCTV ASSEMBLY	POLE-MOUNTED CCTV CABINET (336)	POLE-MOUNTED CCTV CABINET (NEMA)	CCTV WOOD POLE	WOOD POLE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA
CRP-6.067	-	1,630	-	-	-	230	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.068	-	1,980	-	-	-	290	-	1	-	1	1	620	-	-	-	-	-	-	-
CRP-6.069	860	-	-	-	-	590	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.070	940	-	-	-	-	70	-	1	-	1	1	885	-	-	-	-	-	-	-
CRP-6.071	1,120	-	-	-	-	410	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.072	-	1,525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.073	-	1,520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.074	580	1,485	-	-	-	190	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.075	-	1,630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.076	-	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.077	-	1,520	-	-	710	450	-	2	-	2	2	-	-	1	-	-	-	-	-
CRP-6.078	-	-	-	-	1,600	370	-	1	-	1	1	30	-	-	-	-	-	-	-
CRP-6.079	-	-	-	-	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.080	-	-	-	-	1,390	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.081	-	-	-	-	2,030	190	-	1	-	1	1	20	-	1	-	-	-	-	-
CRP-6.082	-	-	-	-	3,130	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.083	-	-	-	-	2,830	270	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.084	-	-	-	-	2,380	980	-	1	-	1	1	820	-	-	-	-	-	-	1
CRP-6.085	-	-	-	-	-	660	-	-	-	1	1	-	-	-	-	-	-	-	-
CRP-6.086	-	-	-	4,150	990	-	-	-	-	-	-	90	-	-	-	-	-	-	-
CRP-6.087	-	1,320	-	-	-	410	-	1	-	1	1	20	-	-	-	-	-	-	-
CRP-6.088	-	1,480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.089	-	1,450	-	-	430	1,320	-	2	-	3	3	230	-	1	1	-	-	-	-
CRP-6.090	-	-	-	-	1,180	200	-	-	-	1	1	250	-	-	-	-	-	-	-
CRP-6.091	-	-	-	-	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.092	-	-	-	-	1,530	320	-	1	-	1	1	-	-	1	-	-	-	-	-
CRP-6.093	-	-	-	-	1,580	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.094	-	-	-	-	1,550	230	-	-	-	1	1	-	-	-	-	-	-	-	-
CRP-6.095	-	-	-	-	1,570	330	-	1	-	-	-	-	-	-	-	-	-	-	1
CRP-6.096	-	620	-	-	1,875	365	-	1	-	1	1	-	-	1	-	-	-	-	-
CRP-6.097	-	-	-	-	1,570	405	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.098	-	-	-	-	1,570	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.099	-	-	-	-	1,545	330	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.100	-	-	-	680	1,475	225	-	1	-	1	1	-	-	1	-	-	-	-	-
CRP-6.101	-	-	-	-	1,535	1,685	-	1	-	1	1	200	-	-	-	-	-	-	-

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SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
MELISSA B. TOTH

Burlington-Graham Signal System
Summary of Work by
Cable Routing Plans
(Sheet 8 of 18) Burlington & Graham
Division 7 Alamance County

PLAN DATE: December 2017 REVIEWED BY: HA Badgett
PREPARED BY: AH/AW REVIEWED BY: BJ Slocum

REVISIONS	INIT.	DATE

NTS

Date: 6/18/2018
 Signature: Melissa B. Toth
 CADD File Name: 270_060_U-6015_CRP-1.0

SUMMARY OF WORK BY CABLE ROUTING PLANS



CABLE ROUTING SHEET NUMBER	ETHERNET CABLE (CAT 6)	MODIFY ELEC SERVICE FOR CCTV	REMOVE EXISTING CABINET FOUNDATION	SERVICE CONDUCTORS	NEW ELEC SERVICE FOR CCTV OR RADIO	MODIFY ELEC SERVICE FOR CCTV OR RADIO	INSTALL CABINET FOUNDATION	BASE MOUNTED CCTV CABINET W/ EXTENDER	INSTALL CCTV METAL POLE	INSTALL 2.4 GHZ RADIO	REMOVE EX CCTV METAL POLE	REMOVE WIRELESS COMM EQUIPMENT	BACK PULL FIBER-OPTIC CABLE
	LF	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.067	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.068	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.069	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.070	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.071	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.072	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.073	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.074	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.075	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.076	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.077	260	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.078	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.079	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.080	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.081	190	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.082	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.083	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.084	-	-	-	-	-	-	-	-	-	-	-	-	320
CRP-6.085	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.086	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.087	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.088	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.089	310	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.090	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.091	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.092	130	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.093	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.094	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.095	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.096	220	-	-	-	-	-	-	1	-	-	-	-	-
CRP-6.097	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.098	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.099	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.100	225	-	-	-	-	-	-	1	-	-	-	-	-
CRP-6.101	-	-	-	-	-	-	-	-	-	-	-	-	90

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- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable and CCTV installations that are shown on the cable routing plans (i.e. CRP 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 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 9 of 18) Burlington & Graham Division 7 Alamance County		 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER MELISSA B. TOTH
	PLAN DATE: December 2017 PREPARED BY: AH/AW REVIEWED BY: HA Badgett REVIEWED BY: BJ Slocum	REVIEWED BY: HA Badgett REVIEWED BY: BJ Slocum	
NTS	REVISIONS: INIT. DATE:		SIGNED BY: Melissa B. Toth DATE: 6/18/2018 CADD Filename: 270_060_U-6015_CRP-1.0

SUMMARY OF WORK BY CABLE ROUTING PLANS

CABLE ROUTING SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 1 INCH)	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (1 CONDUIT, 2 INCH)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL-SIZED)	JUNCTION BOX STANDARD-SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CCTV ELEC SERVICE	1" RISER WITH WEATHERHEAD FOR CAT 6	1.25" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	HEAT SHRINK TUBING KIT	NEW CABINET ENTRANCE INTO NEW FOUNDATION	DRILL/ CORE DRILL EXIST FOUNDATION
	LF	EA	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.102	-	3	520	-	-	-	520	-	2	1	-	-	-	1	-	-	-	-	-	2	1	-	-
CRP-6.103	305	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
CRP-6.104	-	1	75	-	-	75	-	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-
CRP-6.105	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.106	-	4	535	-	-	50	-	-	1	2	-	2	-	1	-	-	-	-	-	-	4	-	-
CRP-6.107	295	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.108	1,565	1	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	1	-	-
CRP-6.109	1,465	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.110	1,440	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
CRP-6.111	1,405	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
CRP-6.112	1,430	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
CRP-6.113	985	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-
CRP-6.114	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
CRP-6.115	-	7	595	-	-	40	-	-	-	1	-	1	-	2	-	-	-	-	-	1	6	-	-
CRP-6.116	-	-	2,090	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-
CRP-6.117	-	-	1,390	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
CRP-6.118	-	-	1,405	-	-	55	410	-	3	1	-	1	-	-	-	-	-	-	-	-	-	-	-
CRP-6.119	110	5	320	-	-	320	-	-	3	-	-	-	-	4	-	-	-	-	1	1	3	-	-
CRP-6.120	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	3	1	-
CRP-6.121	-	4	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	4	-	-
CRP-6.122	-	2	140	-	20	-	140	-	2	-	-	-	-	1	1	1	1	-	-	1	-	1	-
CRP-6.123	75	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
CRP-6.124	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.125	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.126	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.127	-	2	1,710	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	2	-	-
CRP-6.128	-	2	175	-	-	-	175	-	2	-	-	-	-	1	-	-	-	-	-	1	1	-	-
CRP-6.129	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1	-	1	-
CRP-6.130	1,070	3	120	-	-	-	120	-	1	-	-	-	-	4	1	-	-	2	-	1	1	-	-
CRP-6.131	1,270	2	800	-	-	-	800	-	3	1	-	-	-	7	1	-	-	-	-	2	-	-	-
CRP-6.132	600	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.133	165	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	-	1	-	-
CRP-6.134	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
CRP-6.135	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.136	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

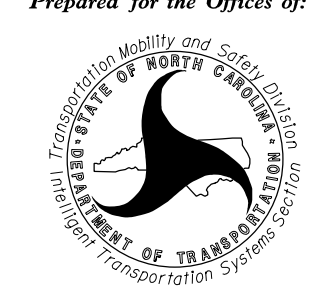
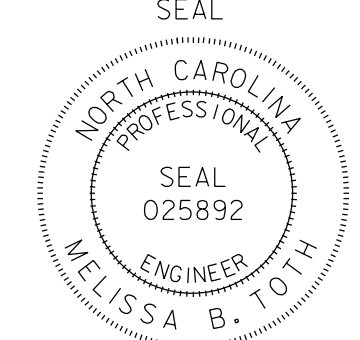
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 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 10 of 18)		
	Division 7 Alamance County Prepared by: AH/AW Revisions: _____ NTS	Reviewed by: HA Badgett Reviewed by: BJ Slocum Date: 6/18/2018 Signature: _____	

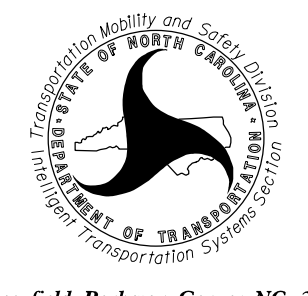
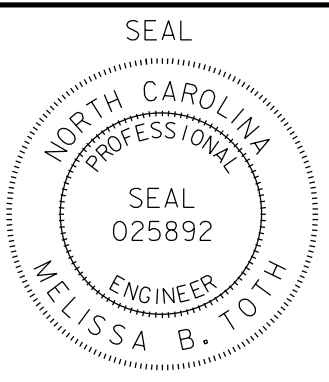
SUMMARY OF WORK BY CABLE ROUTING PLANS

CABLE ROUTING SHEET NUMBER	ETHERNET CABLE (CAT 6)	MODIFY ELEC SERVICE FOR CCTV	REMOVE EXISTING CABINET FOUNDATION	SERVICE CONDUCTORS	NEW ELEC SERVICE FOR CCTV OR RADIO	MODIFY ELEC SERVICE FOR CCTV OR RADIO	INSTALL CABINET FOUNDATION	BASE MOUNTED CCTV CABINET W EXTENDER	INSTALL CCTV METAL POLE	INSTALL 2.4 GHZ RADIO	REMOVE EX CCTV METAL POLE	REMOVE WIRELESS COMM EQUIPMENT	BACK PULL FIBER-OPTIC CABLE
	LF	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.102	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.103	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.104	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.105	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.106	135	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.107	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.108	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.109	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.110	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.111	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.112	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.113	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.114	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.115	60	-	-	-	-	-	-	1	-	-	-	-	-
CRP-6.116	100	-	-	-	-	-	-	-	-	2	-	2	-
CRP-6.117	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.118	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.119	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.120	270	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.121	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.122	190	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.123	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.124	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.125	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.126	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.127	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.128	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.129	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.130	200	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.131	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.132	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.133	55	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.134	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.135	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.136	-	-	-	-	-	-	-	-	-	-	-	-	-

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 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 12 of 18)		 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER 025892 MELISSA B. TOTH
	Division 7 Alamance County Burlington & Graham PLAN DATE: December 2017 REVIEWED BY: HA Badgett PREPARED BY: AH/AW REVIEWED BY: BJ Slocum		
NTS	REVISIONS INIT. DATE		Date: 6/18/2018 Signature: Melissa B. Toth
	CADD File name: 270_060_U-6015_CRP-1.011.dgn		

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SUMMARY OF WORK BY CABLE ROUTING PLANS



CABLE ROUTING SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 1 INCH)	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (1 CONDUIT, 2 INCH)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL-SIZED)	JUNCTION BOX STANDARD-SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CCTV ELEC SERVICE	1" RISER WITH WEATHERHEAD FOR CAT 6	1.25" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	HEAT SHRINK TUBING KIT	NEW CABINET ENTRANCE INTO NEW FOUNDATION	DRILL/ CORE DRILL EXIST FOUNDATION
	LF	EA	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.137	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
CRP-6.138	290	3	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-
CRP-6.139	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
CRP-6.140	-	2	240	-	10	-	240	-	1	-	-	-	-	-	-	-	-	-	-	1	1	1	-
CRP-6.141	-	1	1,200	-	-	-	1,200	-	3	-	-	-	-	-	-	-	-	-	-	1	-	-	-
CRP-6.142	-	2	120	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	2	-	-
CRP-6.143	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.144	-	-	920	-	-	-	920	-	3	1	-	-	-	-	-	-	-	-	-	-	-	1	-
CRP-6.145	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.146	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
CRP-6.147	-	2	-	-	25	-	-	-	-	-	-	-	-	2	2	-	-	1	-	-	1	-	1
CRP-6.148	140	1	-	-	-	-	-	-	-	-	-	-	-	5	1	-	-	-	-	1	-	1	-
CRP-6.149	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
CRP-6.150	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
CRP-6.151	-	2	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	2	-	-
CRP-6.152	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.153	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	1	-	-
CRP-6.154	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.155	1,480	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.156	1,470	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-
CRP-6.157	445	2	695	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	1	2	-	-
CRP-6.158	1,425	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.159	1,430	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.160	625	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	1	-
CRP-6.161	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.162	-	-	1,440	-	-	-	975	-	1	1	-	-	1	-	-	-	-	-	-	-	-	-	1
CRP-6.163	-	-	1,465	-	-	1,190	275	-	4	-	-	-	1	-	-	-	-	-	-	-	-	-	-
CRP-6.164	-	-	1,180	-	-	1,180	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-
CRP-6.165	-	-	230	-	-	105	125	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.166	365	2	1,040	-	-	255	790	-	4	1	-	1	-	2	-	-	-	-	-	2	-	-	-
CRP-6.167	-	-	1,440	-	-	680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.168	-	-	1,480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.169	-	2	1,020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
CRP-6.170	510	1	150	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-	-
CRP-6.171	-	1	1,120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-

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 ENCLAS386 AT LUIS330048

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 13 of 18)		 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER MELISSA B. TOTH 025892
	Division 7 Alamance County Prepared by: AH/AW Revisions: _____ Date: _____	Burlington & Graham Prepared by: HA Badgett Reviewed by: BJ Slocum Date: 6/18/2018	

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 UNLESS ALL SIGNATURES COMPLETED

SUMMARY OF WORK BY CABLE ROUTING PLANS

CABLE ROUTING SHEET NUMBER	COMMUNICATIONS CABLE (12-FIBER)	COMMUNICATIONS CABLE (24-FIBER)	CITY IT COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	DROP CABLE (12-FIBER)	HANDLASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE OR INTERCONNECT CENTER	INTERCONNECT CENTER, PATCH PANEL, JUMPERS, FUSION SPLICE CABLE	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	REMOVE CCTV CABINET	INSTALL CCTV CAMERA ASSEMBLY	REMOVE EX CCTV ASSEMBLY	POLE-MOUNTED CCTV CABINET (336)	POLE-MOUNTED CCTV CABINET (NEMA)	CCTV WOOD POLE	WOOD POLE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA
CRP-6.137	1,430	-	-	-	-	180	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.138	440	1,690	-	-	-	180	-	1	-	1	1	290	-	-	-	-	-	-	-
CRP-6.139	-	1,460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.140	-	540	-	-	-	715	-	1	-	2	2	-	-	-	-	-	-	-	-
CRP-6.141	-	1,380	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.142	-	1,830	-	-	-	980	-	1	-	2	2	110	-	-	-	-	-	-	-
CRP-6.143	-	1,470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.144	-	1,040	-	-	-	45	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.145	1,430	-	-	-	-	260	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.146	1,060	-	-	-	-	200	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.147	1,280	-	-	-	-	605	-	1	-	1	1	-	-	1	-	-	-	1	-
CRP-6.148	1,400	-	-	-	-	420	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.149	1,620	-	-	-	-	270	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.150	1,570	-	-	-	-	415	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.151	2,315	-	-	-	-	815	-	1	-	2	2	-	-	1	-	-	-	-	-
CRP-6.152	1,390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.153	490	-	-	-	-	290	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.154	1,430	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.155	1,580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.156	1,380	-	-	-	-	330	-	1	-	1	1	-	-	-	-	-	-	-	1
CRP-6.157	1,860	-	1,760	-	-	1,385	-	1	-	2	2	-	-	-	-	-	-	-	-
CRP-6.158	1,525	-	1,525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.159	1,530	-	1,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.160	580	-	595	-	-	450	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.161	1,205	-	-	-	-	320	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.162	1,530	-	-	-	-	65	-	1	-	1	1	470	-	-	-	-	-	-	-
CRP-6.163	1,585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.164	1,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.165	290	-	-	-	-	45	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.166	-	1,615	-	-	-	690	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.167	-	1,500	-	-	-	-	-	-	-	-	-	760	-	-	-	-	-	-	-
CRP-6.168	-	1,540	-	-	-	-	-	-	-	-	-	1,480	-	-	-	-	-	-	-
CRP-6.169	-	1,600	-	-	-	220	-	1	-	1	1	1,015	-	-	-	-	-	-	-
CRP-6.170	-	1,580	-	-	-	-	-	-	-	-	-	145	-	-	-	-	-	-	-
CRP-6.171	-	1,640	-	-	-	290	10	1	-	1	1	-	-	-	-	-	-	-	-



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 (919) 876-6888 NCBEES #F-0326

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 14 of 18)		
	Division 7 Alamance County Burlington & Graham	PLAN DATE: December 2017 PREPARED BY: AH/AW REVISIONS: _____ INIT. DATE _____	
NTS		CADD Filename: 270_060_U-6015_CRP-1.0	

SUMMARY OF WORK BY CABLE ROUTING PLANS

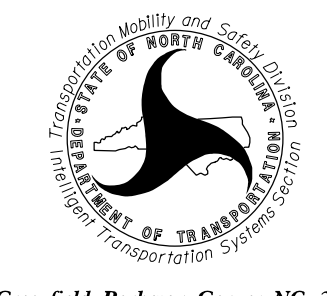

CABLE ROUTING SHEET NUMBER	ETHERNET CABLE (CAT 6)	MODIFY ELEC SERVICE FOR CCTV	REMOVE EXISTING CABINET FOUNDATION	SERVICE CONDUCTORS	NEW ELEC SERVICE FOR CCTV OR RADIO	MODIFY ELEC SERVICE FOR CCTV OR RADIO	INSTALL CABINET FOUNDATION	BASE MOUNTED CCTV CABINET W EXTENDER	INSTALL CCTV METAL POLE	INSTALL 2.4 GHZ RADIO	REMOVE EX CCTV METAL POLE	REMOVE WIRELESS COMM EQUIPMENT	BACK PULL FIBER-OPTIC CABLE
	LF	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.137	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.138	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.139	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.140	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.141	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.142	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.143	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.144	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.145	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.146	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.147	60	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.148	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.149	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.150	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.151	225	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.152	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.153	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.154	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.155	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.156	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.157	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.158	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.159	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.160	-	-	1	-	-	-	1	-	-	-	-	-	-
CRP-6.161	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.162	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.163	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.164	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.165	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.166	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.167	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.168	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.169	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.170	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.171	-	-	-	-	-	-	-	-	-	-	-	-	-

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 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 15 of 18)		 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER MELISSA B. TOTH 025892
	Division 7 Alameda County Burlington & Graham		
PLAN DATE: December 2017		REVIEWED BY: HA Badgett	
PREPARED BY: AH/AW		REVIEWED BY: BJ Slocum	
REVISIONS		INIT. DATE	
NTS		6/18/2018 Meliss B. Toth DATE	

SUMMARY OF WORK BY CABLE ROUTING PLANS

CABLE ROUTING SHEET NUMBER	MESSENGER CABLE (1/4")	BOND MESSENGER CABLE	TRACER WIRE	UNDERGROUND CONDUIT (1 CONDUIT, 1 INCH)	UNDERGROUND CONDUIT (1 CONDUIT, 2 INCH)	UNDERGROUND CONDUIT (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (2 CONDUIT, 2 INCH)	DIRECTIONAL DRILL (1 CONDUIT, 2 INCH)	JUNCTION BOX (OVER-SIZED)	JUNCTION BOX (SPECIAL-SIZED)	JUNCTION BOX STANDARD-SIZED)	REMOVE EXISTING JUNCTION BOX	DELINEATOR MARKER	STANDARD GUY ASSEMBLY	AERIAL GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	1" RISER WITH WEATHERHEAD FOR CCTV ELEC SERVICE	1" RISER WITH WEATHERHEAD FOR CAT 6	1.25" RISER WITH HEAT SHRINK TUBING	2" RISER WITH HEAT SHRINK TUBING	HEAT SHRINK TUBING KIT	NEW CABINET ENTRANCE INTO NEW FOUNDATION	DRILL/ CORE DRILL EXIST FOUNDATION
	LF	EA	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.172	-	2	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-
CRP-6.173	-	1	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
CRP-6.174	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.175	-	1	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	1	-	-
CRP-6.176	-	4	485	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
CRP-6.177	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.178	-	2	170	-	-	-	170	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-
CRP-6.179	-	1	1,115	-	-	-	1,115	-	5	1	-	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.180	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
CRP-6.181	-	1	660	-	-	-	660	-	2	-	-	-	-	-	-	-	-	-	1	1	-	-	-
CRP-6.182	20	1	-	-	-	-	-	-	-	-	-	-	-	2	4	-	-	-	-	-	1	-	-
CRP-6.183	710	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.184	925	2	620	-	-	115	505	-	3	1	-	-	-	3	-	1	-	-	-	2	-	-	-
CRP-6.185	2,210	1	-	-	-	-	-	-	-	-	-	-	-	7	2	1	-	-	-	1	-	1	-
CRP-6.186	525	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
CRP-6.187	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
CRP-6.188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.189	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CRP-6.190	1,345	1	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	1	-	-	-	-
CRP-6.191	1,565	3	300	-	20	-	300	-	2	-	-	-	-	4	1	-	-	-	-	3	-	1	-
CRP-6.192	1,435	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
CRP-6.193	880	1	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	1	-	-	-	-
CRP-6.194	120	1	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	1	-	-
CRP-6.195	1,390	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.196	1,205	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
CRP-6.197	1,055	3	180	-	20	180	-	-	-	1	2	1	-	6	-	-	-	-	-	3	-	-	-
CRP-6.198	-	-	115	-	175	-	-	95	-	1	2	1	-	-	-	-	1	-	-	-	-	-	-
CRP-6.199	-	-	240	-	250	240	-	-	1	1	2	1	-	-	-	-	-	-	-	-	-	-	-
TOTALS	47,895	280	52,120	75	875	8,900	12,870	550	78	38	17	26	3	217	63	11	3	16	11	77	130	24	8

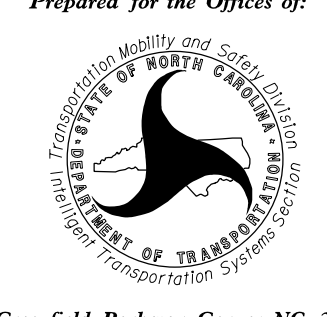
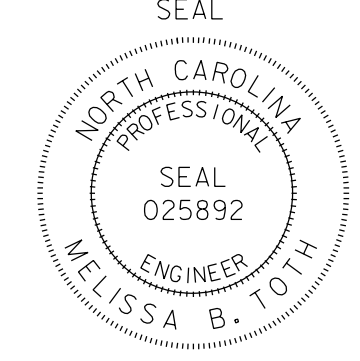
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 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 16 of 18)		 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025892 MELISSA B. TOTH
	Division 7 Alamance County Prepared by: AH/AW Revisions: _____ NTS	Burlington & Graham PLAN DATE: December 2017 REVIEWED BY: HA Badgett REVIEWED BY: BJ Slocum Date: 6/18/2018	

SUMMARY OF WORK BY CABLE ROUTING PLANS



CABLE ROUTING SHEET NUMBER	COMMUNICATIONS CABLE (12-FIBER)	COMMUNICATIONS CABLE (24-FIBER)	CITY IT COMMUNICATIONS CABLE (24-FIBER)	COMMUNICATIONS CABLE (36-FIBER)	COMMUNICATIONS CABLE (48-FIBER)	DROP CABLE (12-FIBER)	HANDLASH & AERIAL CABLE PROTECTOR	SPLICE ENCLOSURE	MODIFY EXISTING SPLICE OR INTERCONNECT CENTER	INTERCONNECT CENTER, PATCH PANEL, JUMPERS, FUSION SPLICE CABLE	ETHERNET EDGE SWITCH	REMOVE EXISTING COMMUNICATIONS CABLE	REMOVE CCTV CABINET	INSTALL CCTV CAMERA ASSEMBLY	REMOVE EX CCTV ASSEMBLY	POLE-MOUNTED CCTV CABINET (338)	POLE-MOUNTED CCTV CABINET (NEMA)	CCTV WOOD POLE	WOOD POLE
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA
CRP-6.172	-	1,790	-	-	-	340	-	1	-	1	1	-	-	1	-	-	-	-	-
CRP-6.173	-	1,480	-	-	-	445	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.174	-	1,500	-	-	-	260	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.175	-	1,520	-	-	-	270	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.176	-	1,750	-	-	-	1,395	-	2	-	3	3	485	-	1	1	-	-	-	-
CRP-6.177	-	1,485	-	-	-	430	-	1	-	1	1	155	-	-	-	-	-	-	-
CRP-6.178	380	1,180	-	-	840	595	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.179	945	-	-	-	1,145	665	-	-	-	2	2	-	-	1	-	-	-	-	-
CRP-6.180	-	-	-	-	1,070	1,550	-	1	-	3	3	-	-	-	-	-	-	-	-
CRP-6.181	-	-	-	1,290	-	210	-	1	-	1	1	-	-	-	-	-	-	-	1
CRP-6.182	-	-	-	1,520	-	280	65	1	-	1	1	110	-	-	-	-	-	-	-
CRP-6.183	400	-	-	1,580	-	260	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.184	-	-	-	1,720	-	45	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.185	1,280	-	-	1,750	-	505	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.186	-	-	-	1,490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.187	-	-	-	1,730	-	1,505	-	1	-	2	2	30	-	-	-	-	-	-	-
CRP-6.188	1,425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.189	600	-	-	-	-	425	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.190	1,185	-	-	-	-	535	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.191	1,985	-	-	-	-	285	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.192	1,535	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.193	755	-	-	-	-	360	-	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.194	1,090	-	-	-	-	325	-	1	-	1	1	80	-	-	-	-	-	-	-
CRP-6.195	1,490	-	-	-	-	-	60	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.196	950	-	-	-	-	500	30	1	-	1	1	-	-	-	-	-	-	-	-
CRP-6.197	945	-	-	-	-	700	-	2	-	2	2	-	-	1	-	-	-	-	1
CRP-6.198	-	-	-	-	-	160	-	1	-	1	1	-	-	1	-	1	-	-	1
CRP-6.199	-	-	-	-	-	300	-	1	-	1	1	-	-	1	-	1	-	-	-
TOTALS	64,905	123,530	15,900	91,035	38,800	84,585	190	161	1	208	208	35,150	2	40	13	3	1	3	7

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- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable and CCTV installations that are shown on the cable routing plans (i.e. CRP 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 Quantities and the Project Special Provisions for defined Pay Items for this contract.

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBES #F-0326

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 17 of 18)		
	Division 7 Alamance County Prepared by: AH/AW Date:	Burlington & Graham Reviewed by: HA Badgett Date:	
Revisions:			Date:
NTS			CAD0 Filename: 270_060_U-6015_CRP-1.0

SUMMARY OF WORK BY CABLE ROUTING PLANS



CABLE ROUTING SHEET NUMBER	ETHERNET CABLE (CAT 6)	MODIFY ELEC SERVICE FOR CCTV	REMOVE EXISTING CABINET FOUNDATION	SERVICE CONDUCTORS	NEW ELEC SERVICE FOR CCTV OR RADIO	MODIFY ELEC SERVICE FOR CCTV OR RADIO	INSTALL CABINET FOUNDATION	BASE MOUNTED CCTV CABINET W/ EXTENDER	INSTALL CCTV METAL POLE	INSTALL 2.4 GHZ RADIO	REMOVE EX CCTV METAL POLE	REMOVE WIRELESS COMM EQUIPMENT	BACK PULL FIBER-OPTIC CABLE
	LF	EA	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
CRP-6.172	270	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.173	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.174	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.175	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.176	70	-	-	-	-	-	-	1	-	-	-	-	-
CRP-6.177	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.178	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.179	110	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.180	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.181	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.182	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.183	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.184	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.185	-	-	-	-	-	-	1	-	-	-	-	-	-
CRP-6.186	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.187	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.188	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.189	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.190	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.191	-	-	1	-	-	-	1	-	-	-	-	-	-
CRP-6.192	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.193	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.194	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.195	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.196	-	-	-	-	-	-	-	-	-	-	-	-	-
CRP-6.197	-	-	-	-	-	-	-	-	1	-	-	-	-
CRP-6.198	45	-	-	155	2	-	-	-	1	-	-	-	-
CRP-6.199	-	1	-	250	1	1	-	-	1	-	-	-	-
TOTALS	6,135	1	3	405	4	1	25	3	17	2	1	2	2,660

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- Work shown on this sheet is a summary of work for the installation of the fiber-optic cable and CCTV installations that are shown on the cable routing plans (i.e. CRP 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 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	Burlington-Graham Signal System Summary of Work by Cable Routing Plans (Sheet 18 of 18)		
	Division 7 Alamance County Burlington & Graham	PREPARED BY: AH/AW REVIEWED BY: HA Badgett BJ Slocum	
750 Greenfield Parkway, Garner, NC 27529 NTS	PLAN DATE: December 2017 REVISIONS INIT. DATE	REVIEWED BY: HA Badgett BJ Slocum	SEAL NORTH CAROLINA PROFESSIONAL SEAL 025892 ENGINEER MELISSA B. TOTH 6/18/2018 DATE CADD File name: 270_060_U-6015_CRP-1.0

CCTV INSTALLATION SUMMARY

PROJECT REFERENCE NO.	SHEET NO.
U-6015	CRP-2.000

SHEET REFERENCE	CCTV CAMERA NUMBER	LOCATION	QUADRANT	POLE				CAMERA STATUS	CAMERA MOUNTING HEIGHT (FT)	POWER SERVICE		CABINET TYPE	DIST. TO SIGNAL CABINET
				TYPE	STATUS	USE TYPE	LENGTH (FT)			TYPE	STATUS		
CRP-064	CCTV-1	HUFFMAN MILL ROAD & I-85	SW	STEEL	EXIST.	CCTV ONLY	50'	REPLACE	45'	UNDERGROUND	EXIST.	TYPE 336 CCTV	n/a
CRP-014	CCTV-2	HUFFMAN MILL ROAD & CHURCH STREET	SE	STEEL	EXIST.	CCTV ONLY	50'	REPLACE	45'	UNDERGROUND	EXIST.	TYPE 336 CCTV	200'
CRP-089	CCTV-3	ALAMANCE ROAD & I-85	SW	STEEL	EXIST.	CCTV ONLY	50'	REPLACE	45'	UNDERGROUND	EXIST.	TYPE 336 CCTV	n/a
CRP-115	CCTV-4	MAPLE AVENUE & I-85	NW	STEEL	EXIST.	CCTV ONLY	50'	REPLACE	45'	UNDERGROUND	EXIST.	TYPE 336 CCTV	n/a
CRP-176	CCTV-5	MAIN STREET & I-85	NW	STEEL	EXIST.	CCTV ONLY	50'	REPLACE	45'	UNDERGROUND	EXIST.	TYPE 336 CCTV	n/a
CRP-106	CCTV-6	HARDEN STREET & I-85	SW	STEEL	EXIST.	CCTV ONLY	50'	REPLACE	45'	UNDERGROUND	EXIST.	TYPE 336 CCTV	n/a
CRP-120	CCTV-7	MEBANE STREET & WEBB AVENUE	SE	STEEL	EXIST.	CCTV ONLY	50'	REPLACE	45'	UNDERGROUND	EXIST.	TYPE 336 CCTV	100'
CRP-019	CCTV-8	CHURCH STREET & O'NEAL STREET	SW	STEEL	EXIST.	CCTV ONLY	50'	REPLACE	45'	UNDERGROUND	EXIST.	TYPE 336 CCTV	n/a
CRP-038	CCTV-9	US 70 (CHURCH STREET) & GRAHAM-HOPEDALE ROAD (REMOVE)	SE	STEEL	REMOVE	n/a	50'	REMOVE	n/a	REMOVE	REMOVE	REMOVE	n/a
CRP-051	CCTV-10	UNIVERSITY DRIVE & I-85	SW	WOOD	EXIST.	CCTV ONLY	50'	REPLACE	45'	UNDERGROUND	EXIST.	TYPE 332 CCTV	n/a
CRP-007	CCTV-11	US 70 (CHURCH STREET) & ST. MARKS CHURCH ROAD (REMOVE)	SE	WOOD	REMOVE	n/a	40'	REMOVE	n/a	REMOVE	REMOVE	REMOVE	n/a
CRP-116	CCTV-12	SOUTH MAIN STREET & EAST DAVIS STREET (LABCORP BLDG.)	NE	BUILD.	EXIST.	CCTV ONLY	n/a	REPLACE	SAME	BUILDING	EXIST.	NEMA 4	n/a
CRP-050	CCTV-13	UNIVERSITY DRIVE & BOONE STATION DRIVE	NW	STEEL	EXIST.	CCTV ONLY	35'	REPLACE	32'	PoE	EXIST.	TYPE 332 SIGNAL	0'
CRP-005	CCTV-14	US 70 (CHURCH STREET) & UNIVERSITY DRIVE	SE	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	280'
CRP-133	CCTV-15	NC 87 (WEBB AVE.) & GLEN RAVEN RD.	NW	WOOD	REPL.	JOINT	50'	PROPOSED	37'	PoE	EXIST.	TYPE 332 SIGNAL	55'
CRP-057	CCTV-16	ST. MARKS CHURCH ROAD/JAVA LANE & BOONE STATION DRIVE	NE	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	80'
CRP-081	CCTV-17	NC 54 (CHAPEL HILL ROAD) & S. MEBANE STREET	SE	STEEL	EXIST.	JOINT	35'	PROPOSED	30'	PoE	EXIST.	TYPE 332 SIGNAL	190'
CRP-122	CCTV-18	NC 87 (WEBB AVENUE) & NC 100 (ANTHONY STREET)	SE	WOOD	PROP.	CCTV ONLY	50'	PROPOSED	37'	PoE	EXIST.	TYPE 332 SIGNAL	190'
CRP-179	CCTV-19	PINE STREET & MAPLE STREET (CITY OF GRAHAM)	NW	WOOD	EXIST.	JOINT	40'	PROPOSED	27'	PoE	EXIST.	TYPE 332 SIGNAL	110'
CRP-172	CCTV-20	MOORE STREET & S. MAIN STREET (NC 87) (CITY OF GRAHAM)	NE	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	270'
CRP-027	CCTV-21	N. FISHER STREET & W. HOLT STREET/RAUHUT STREET	SW	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	230'
CRP-024	CCTV-22	US 70 (CHURCH STREET) & FISHER STREET	n/a	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	240'
CRP-100	CCTV-23	NC 54 (W. HARDEN STREET) & W. ELM STREET	n/a	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	40'	PoE	EXIST.	TYPE 332 SIGNAL	225'
CRP-197	CCTV-24	JIMMIE KERR ROAD (SR 1928) & I-40/85 RAMPS	NE	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	240'
CRP-011	CCTV-25	US 70 (CHURCH STREET) & FORESTDALE DRIVE	SW	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	40'	PoE	EXIST.	TYPE 332 SIGNAL	190'
CRP-015	CCTV-26	US 70 (CHURCH STREET) & GURNEY STREET	n/a	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	UNDERGROUND	PROP.	TYPE 336 CCTV	n/a
CRP-007	CCTV-27	US 70 (CHURCH STREET) & ST. MARKS CHURCH ROAD (RELOCATE/REPLACE CCTV 11)	NW	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	270'
CRP-038	CCTV-28	US 70 (CHURCH STREET) & GRAHAM-HOPEDALE ROAD (RELOCATE/REPLACE CCTV 9)	NW	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	265'
CRP-042	CCTV-29	US 70 (CHURCH STREET) & MCKINNEY STREET	SE	WOOD	PROP.	CCTV ONLY	50'	PROPOSED	37'	PoE	EXIST.	TYPE 332 SIGNAL	145'
CRP-147	CCTV-30	EDGEWOOD AVENUE & SHADOWBROOK DRIVE	NE	WOOD	PROP.	CCTV ONLY	50'	PROPOSED	37'	PoE	EXIST.	TYPE 332 SIGNAL	70'
CRP-151	CCTV-31	EDGEWOOD AVENUE & MEDICAL CENTER DRIVE	SW	WOOD	EXIST.	JOINT	40'	PROPOSED	27'	PoE	EXIST.	TYPE 332 SIGNAL	225'
CRP-049	CCTV-32	UNIVERSITY DRIVE & RURAL RETREAT ROAD	NE	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	180'
CRP-066	CCTV-33	HUFFMAN MILL ROAD & FORESTDALE DRIVE	NE	STEEL	REPL.	JOINT	45'	PROPOSED	40'	PoE	EXIST.	TYPE 332 SIGNAL	165'
CRP-077	CCTV-34	ALAMANCE ROAD & MEBANE STREET	SE	STEEL	EXIST.	JOINT	33'	PROPOSED	30'	PoE	EXIST.	TYPE 332 SIGNAL	260'
CRP-198	CCTV-35	TUCKER STREET & I-40/85	NE	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	UNDERGROUND	PROP.	TYPE 336 CCTV	n/a
CRP-092	CCTV-36	TUCKER STREET & CHAPEL HILL ROAD	SW	STEEL	REPL.	JOINT	40'	PROPOSED	35'	PoE	EXIST.	TYPE 332 SIGNAL	130'
CRP-096	CCTV-37	MAPLE AVENUE & CHAPEL HILL ROAD	SE	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	40'	PoE	EXIST.	TYPE 332 SIGNAL	220'
CRP-046	CCTV-38	UNIVERSITY DRIVE & WESTBROOK AVENUE	SE	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	70'
CRP-130	CCTV-39	UNIVERSITY DRIVE & HAGGARD AVENUE	NE	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	200'
CRP-001	CCTV-40	US 70 (CHURCH STREET) & SPRINGWOOD CHURCH ROAD	SE	STEEL	EXIST.	JOINT	33'	PROPOSED	30'	PoE	EXIST.	TYPE 332 SIGNAL	155'
CRP-028	CCTV-41	US 70 (CHURCH STREET) & TRADE STREET	NE	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	PoE	EXIST.	TYPE 332 SIGNAL	255'
CRP-199	CCTV-42	I-40/85 & MILE MARKER 146.16	n/a	STEEL	PROP.	CCTV ONLY	50'	PROPOSED	45'	UNDERGROUND	EXIST.	TYPE 336 CCTV	n/a

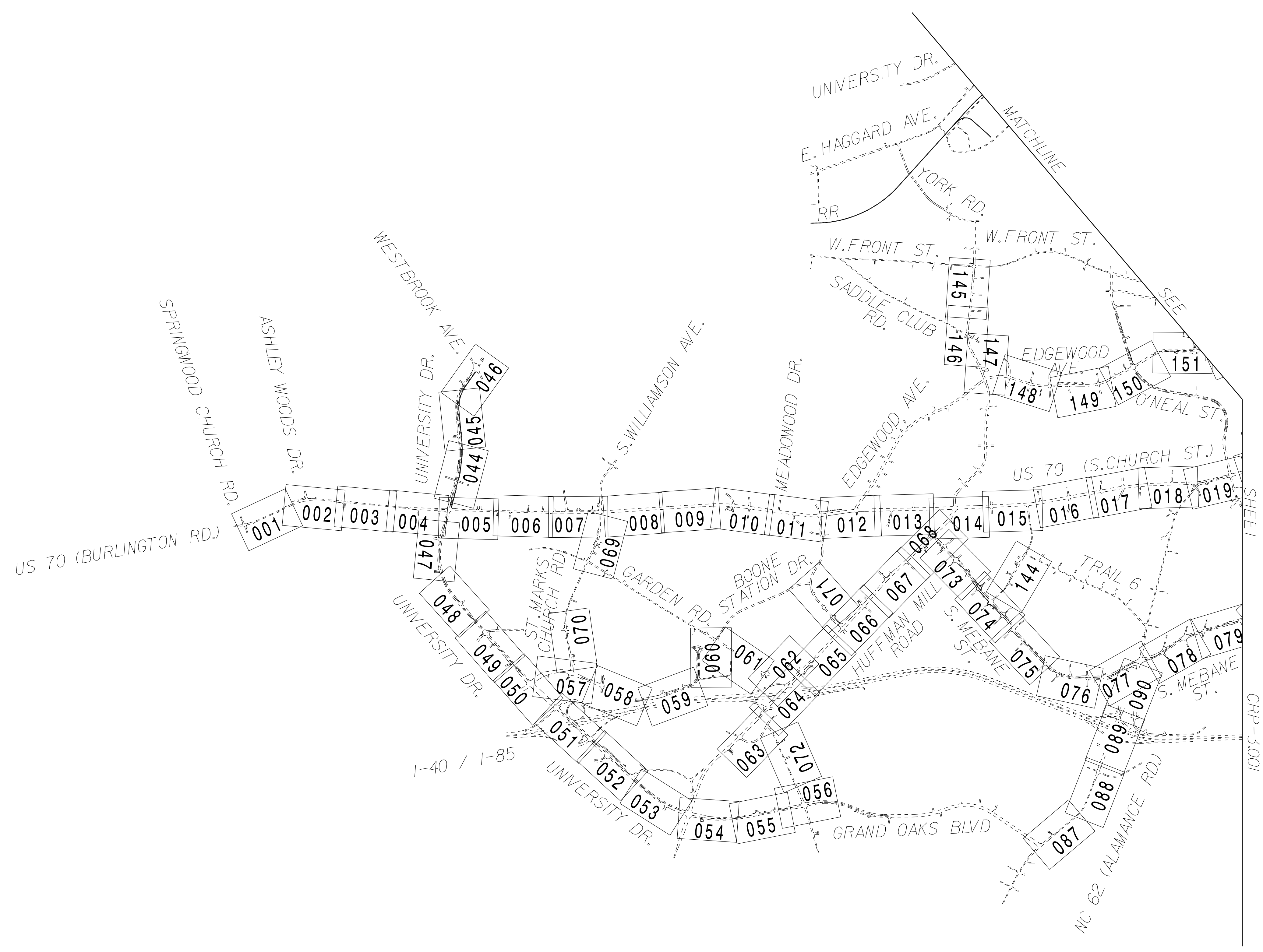
* MOUNT REPLACEMENT CCTV AT THE SAME HEIGHT AS THE EXISTING CCTV.
 BD = Bridge Deck OR = Off Ramp NB = Northbound
 EOP = Edge of Pavement TSCP = Traffic Signal Cabinet SB = Southbound
 EOC = Edge of Concrete TSP = Traffic Signal Pole EB = Eastbound
 ESS = Existing Sign PoE = Power Over Ethernet WB = Westbound
 GR = Guardrail from Signal Cabinet

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

 Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529	Burlington-Graham Signal System CCTV Installation Summary Division 7 Alamance County Burlington & Graham PLAN DATE: December 2017 REVIEWED BY: HA Badgett PREPARED BY: AH/AW REVIEWED BY: BJ Slocum	SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040877 BRAD J. SLOCUM 3/2018 SIGNATURE DATE
NTS	REVISIONS INIT. DATE	

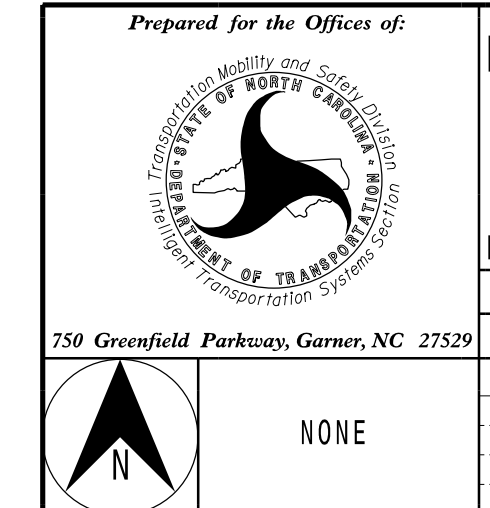
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

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**Burlington-Graham Signal System
 Cable Routing Plans Key Sheet
 (1 of 3)**

Division 7 Alamance County Burlington & Graham

PLAN DATE: April 2018 REVIEWED BY: MB Toth

PREPARED BY: JA Wiles REVIEWED BY: BJ Slocum

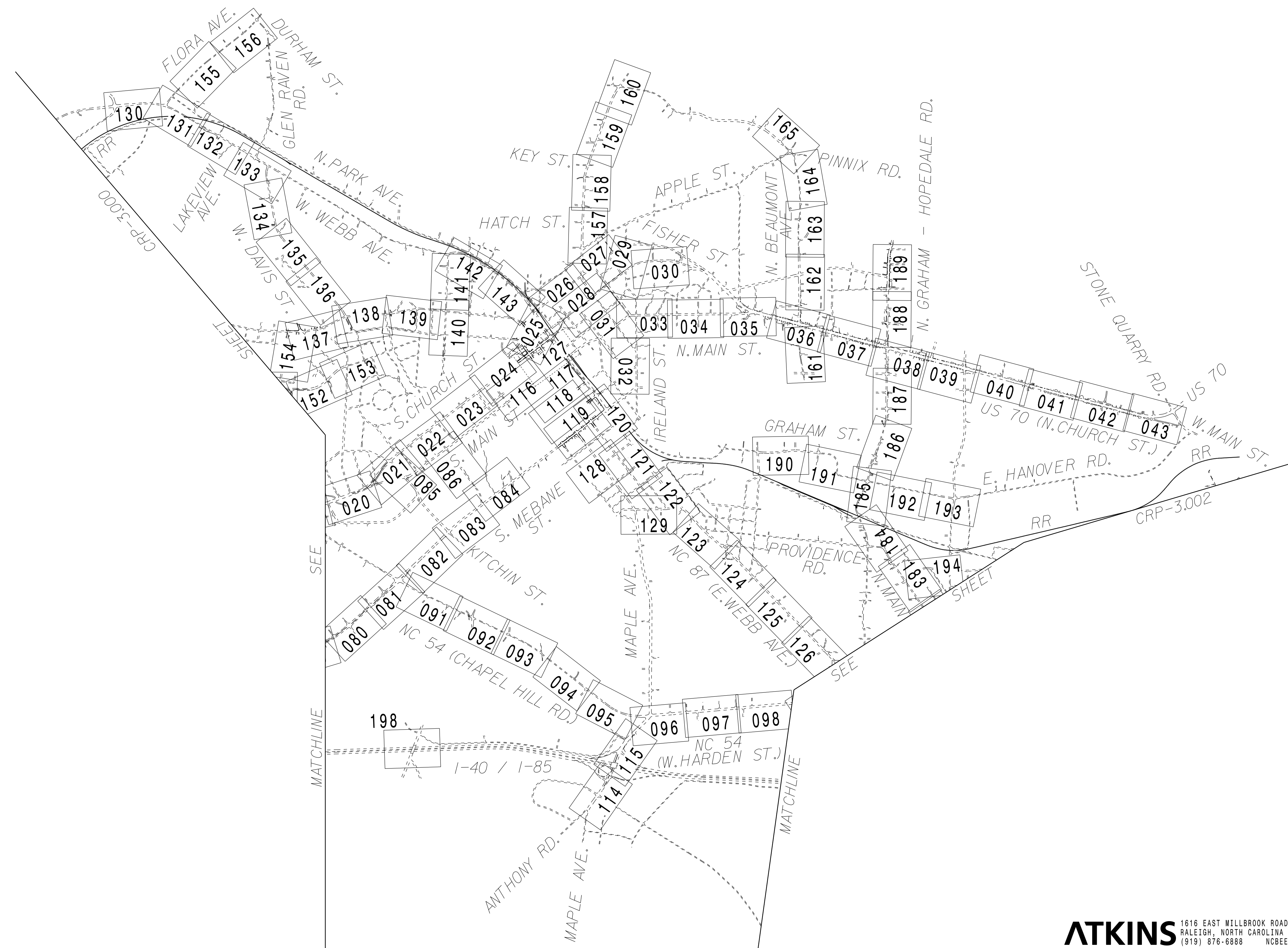
REVISIONS	INIT.	DATE

SEAL
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 025892
 ENGINEER
 MELISSA B. TOTH

DocuSigned by:
Melissa B. Toth 6/13/2018



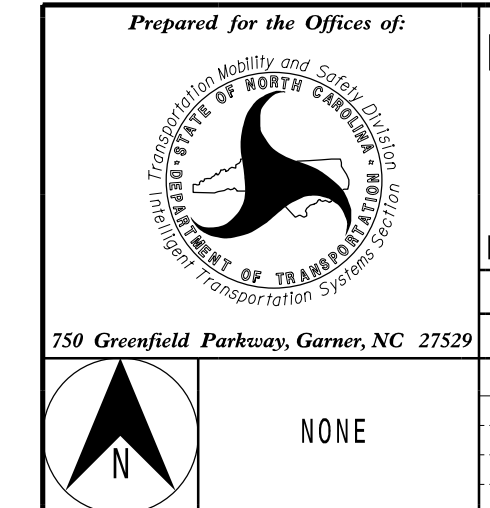
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

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Burlington-Graham Signal System Cable Routing Plans Key Sheet (2 of 3)	
Division 7	Alamance County
PLAN DATE: April 2018	REVIEWED BY: MB Toth
PREPARED BY: JA Wiles	REVIEWED BY: BJ Slocum
REVISIONS	INIT. DATE

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 ENGINEER
 MELISSA B. TOTH

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Melissa B. Toth 6/13/2018

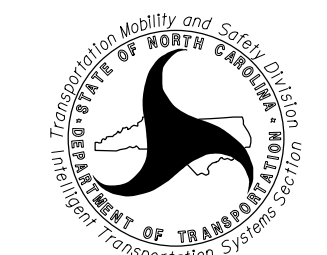
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

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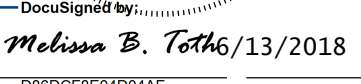
Prepared for the Offices of:

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

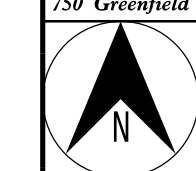
**Burlington-Graham Signal System
 Cable Routing Plans Key Sheet
 (3 of 3)**

Division 7 Alamance County Burlington & Graham

PLAN DATE: April 2018	REVIEWED BY: MB Toth
PREPARED BY: JA Wiles	REVIEWED BY: BJ Slocum

REVISIONS	INIT.	DATE

SEAL
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 025892
 ENGINEER
 MELISSA B. TOTH
 DocuSigned by:

 MELISSA B. TOTH/13/2018
 SEAL



NONE

ABBREVIATIONS

AGUY	Aerial Guy
ARLT	Area Light
AT&T	AT&T
BOT	Bottom Attachment
BS	Backside Attachment
CATV	Cable Television (Spectrum)
CAM	Camera Bracket
CCTV	Closed-Circuit Television
CLINK	Century Link
COB	City of Burlington
COG	City of Graham
COMM	Communications Cable
COMP	Composite Cable
DL	Drip Loop
DRP	Drop
DNET	DukeNet
DUKE	Duke Energy
EXI	Existing Communications Cable
FLCAB	Flasher Cabinet
FOC / FO	Fiber Optic Cable
FS	Front Side Attachment
IMC	Intermediate Metallic Conduit
LIC	Lead-In Cable (Detector)
MSGR	Messenger
NCDOT	North Carolina Department of Transportation
NEUT	Neutral
OH	Overhead
OSS	Overhead Sign Span
OWS	Open Wire Secondary
PNG	Piedmont Natural Gas
PWR	Power
RSR	Riser
SAME	Same Elevation/Attachment Height
SEC	Secondary Power
SGRSR	Signal Riser
SIG	Signal Span
SP	Signal Pole
SO	Standoff
STLT	Streetlight
SVRSR	Service Riser
TEL	Telephone
TFMR	Transformer
TOP	Top of Pole or Top Attachment
TRI	Triplex
UG	Underground
VZN	Verizon
X ANY	Crossing Line, where "Any" is the abbreviation for the overhead line that is crossing exist/prop. cable route

— FO —	NEW FIBER OPTIC COMMUNICATIONS CABLE		NEW CONTROLLER AND CABINET
— EXI —	EXISTING COMMUNICATIONS CABLE		EXISTING CONTROLLER AND CABINET
— REM —	EXISTING COMMUNICATIONS CABLE TO BE REMOVED		NEW SPLICE CABINET
	NEW AND EXISTING AERIAL GUY ASSEMBLY		EXISTING SPLICE CABINET
	NEW CONDUIT		NEW AERIAL SPLICE ENCLOSURE
	EXISTING CONDUIT		EXISTING AERIAL SPLICE ENCLOSURE
— DD —	NEW DIRECTIONAL DRILLED CONDUIT		NEW UNDERGROUND SPLICE ENCLOSURE IN NEW SPECIAL-SIZED JUNCTION BOX
— B&J —	NEW BORED AND JACKED CONDUIT		NEW UNDERGROUND SPLICE ENCLOSURE IN EXISTING SPECIAL-SIZED JUNCTION BOX
	RAILROAD TRACK		EXISTING UNDERGROUND SPLICE ENCLOSURE IN EXISTING SPECIAL-SIZED JUNCTION BOX
	NEW WOOD POLE		NEW CABLE STORAGE GUIDES (SNOW SHOES)
	EXISTING WOOD POLE		EXISTING CABLE STORAGE GUIDES (SNOW SHOES)
	NEW METAL POLE		NEW CCTV CAMERA ASSEMBLY
	EXISTING METAL POLE		EXISTING CCTV CAMERA ASSEMBLY
	EXISTING CONCRETE POLE		EXISTING ELECTRICAL JUNCTION BOX
	NEW STANDARD GUY ASSEMBLY		YAGI ANTENNA
	EXISTING STANDARD GUY ASSEMBLY		OMNI-DIRECTIONAL ANTENNA
	NEW SIDEWALK GUY ASSEMBLY		900 MHZ RADIO / FLAT-PANEL ANTENNA
	EXISTING SIDEWALK GUY ASSEMBLY		
	NEW HUB CABINET		
	EXISTING HUB CABINET		

	NEW STANDARD JUNCTION BOX
	EXISTING STANDARD JUNCTION BOX
	NEW OVER-SIZED OR SPECIAL-SIZED JUNCTION BOX
	EXISTING OVER-SIZED OR SPECIAL-SIZED JUNCTION BOX
	EXISTING UNDERGROUND VAULT
	EXISTING COMMUNICATIONS MANHOLE
W/ PWR	DESIGNATES UNFUSED POWER IN JUNCTION BOX, VAULT OR MANHOLE
	NCDOT SIGNAL ID NUMBER
	CITY OF BURLINGTON SIGNAL INVENTORY NUMBER
	CITY OF GRAHAM SIGNAL INVENTORY NUMBER
	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

LEGEND

GENERAL NOTES

- THESE PLANS WERE PREPARED FROM INVENTORIES AND FIELD DATA COLLECTED DURING JULY 2017 THRU DECEMBER 2017. ACTUAL CONDITIONS IN THE FIELD AT THE TIME OF CONSTRUCTION MAY BE DIFFERENT FROM THOSE SHOWN IN THE PLANS.
- THE FIELD LOCATION OF ANY ITEM TO BE INSTALLED AS PART OF THIS PROJECT SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
- NEW TRAFFIC SIGNAL CONTROLLER CABINETS ARE SPECIFIED ON THE SIGNAL PLANS.
- 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.
- 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.
- 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.
- 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.
- ALL WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED TO BE PERFORMED BY OTHERS.
- 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 ENVIRONMENTAL ANALYSIS UNIT – HISTORIC ARCHITECTURE GROUP OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION FOR AN EFFECTS DETERMINATION BEFORE PROCEEDING.

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

	Prepared for the Offices of: Burlington-Graham Signal System Legend/ General Notes/ Abbreviations		
	Division 7 Alamance County Burlington & Graham		
PLAN DATE: December 2017		REVIEWED BY: HA Badgett	
PREPARED BY: AH/AW		REVIEWED BY: BJ Slocum	
REVISIONS		INIT.	DATE
NTS			
		DocuSigned by: Melissa B. Toth 6/13/2018 08BDC68E4D04AF SIGNATURE DATE	

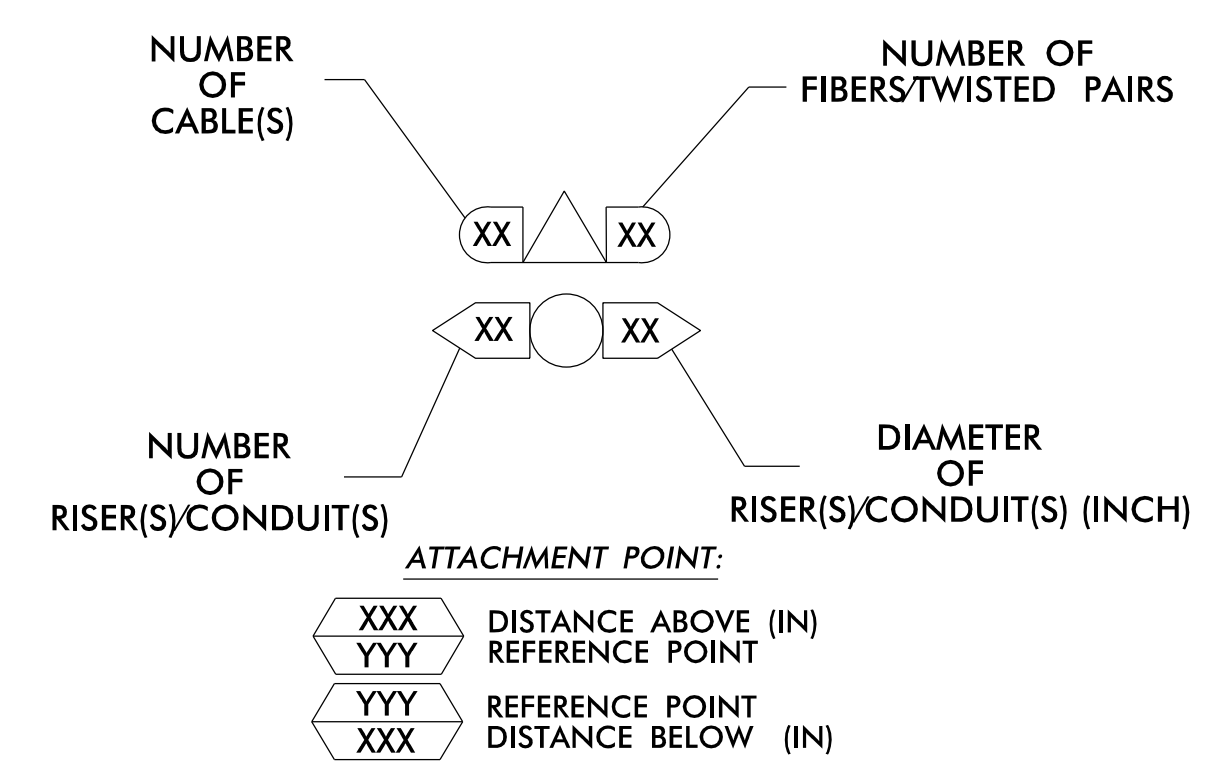
- 1 INSTALL CATEGORY 6 CABLE
- 2 INSTALL LOW VOLTAGE POWER CABLE (24VAC)
- 3 INSTALL COMPOSITE CCTV CABLE
- 4 INSTALL SMFO CABLE
- 5 INSTALL COAXIAL ANTENNA CABLE
- 6 INSTALL FIBER-OPTIC DROP CABLE
- 7 INSTALL TRACER WIRE
- 8 INSTALL CONDUIT UNDERGROUND
- 9 INSTALL PVC CONDUIT
- 10 INSTALL RIGID, GALVANIZED 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 CABINET ENTRANCE
- 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 OVER-SIZED 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 SERVICE CONDUCTORS
- 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
- 58 INSTALL NEW ELECTRICAL SERVICE FOR CCTV OR RADIO
- 59 INSTALL NEW POLE MOUNTED CCTV CABINET (336)
- 60 INSTALL NEW CCTV CABINET (NEMA TYPE 4)
- 60A INSTALL NEW POLE MOUNTED CABINET FOR ANTENNA (RADIO CABINET)
- 61 REMOVE EXISTING CCTV CAMERA ASSEMBLY
- 62 NEW CABINET ENTRANCE INTO NEW FOUNDATION
- 63 DRILL/CORE DRILL EXISTING FOUNDATION

- 64 INTERCEPT AND REROUTE EXISTING CONDUITS
- 65 BOND MESSENGER TO POLE GROUND
- 66 BOND RISER TO POLE GROUND
- 67 BOND TRACER WIRE TO EQUIPMENT GROUND BUS
- 68 BOND TRACER WIRE TO POLE GROUND
- 69 HANDLASH AND INSTALL AERIAL CABLE PROTECTOR
- 70 INSTALL CCTV CABINET DISCONNECT
- 71 INSTALL MANAGED ETHERNET SWITCH
- 72 INSTALL CCTV METAL POLE
- 73 REMOVE EXISTING CCTV METAL POLE
- 74 REMOVE WIRELESS COMMUNICATIONS EQUIPMENT
- 75 COIL CITY IT CABLE
- 76 INSTALL 2.4 GHZ RADIO AND PANEL ANTENNA
- 77 INSTALL BASE MOUNTED CCTV CABINET WITH EXTENDER (336)

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)

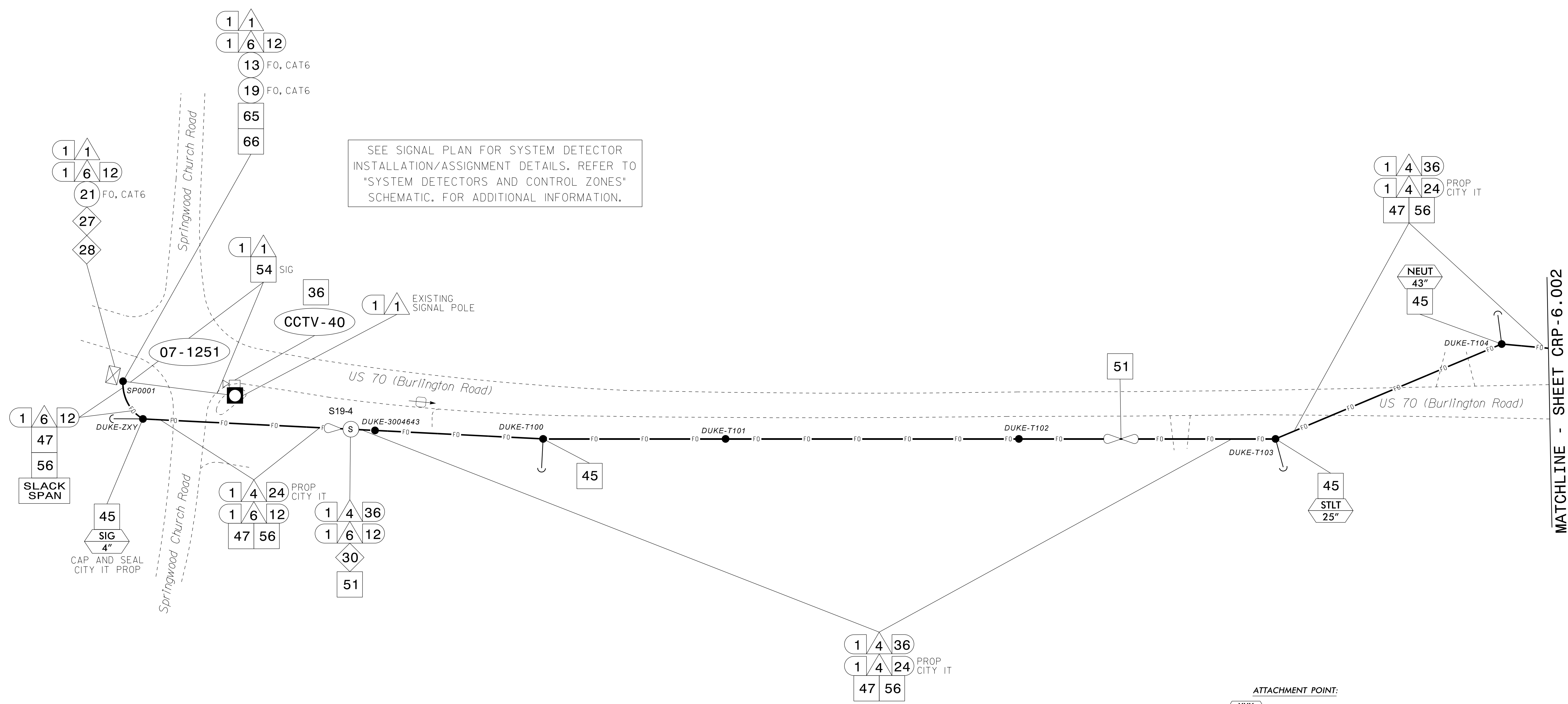


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	Prepared for the Offices of: BURLINGTON-GRAHAM SIGNAL SYSTEM		
	Construction Notes		
750 Greenfield Parkway, Garner, NC 27529 NTS	Division 7 Alamance County Burlington & Graham	REVIEWED BY: HA Badgett	
	PLAN DATE: December 2017	PREPARED BY: AH/AW	REVIEWED BY: BJ Slocum
REVISIONS		INIT.	DATE
SIGNATURE		DATE	

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

ATTACHMENT POINT:

XXX
YYY DISTANCE ABOVE (IN) REFERENCE POINT

YYY
XXX REFERENCE POINT DISTANCE BELOW (IN)

CONSTRUCTION NOTE SYMBOLOLOGY KEY

NUMBER OF CABLE(S) / LOOPS, DETECTOR, AMPLIFIERS, GUYS, ANTENNAS: XX

NUMBER OF FIBER TWISTED PAIRS: XX

NUMBER OF RISER(S) / CONDUIT(S): XX

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

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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

1 INSTALL CATEGORY 6 CABLE	11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	22 INSTALL NEW CONDUIT INTO CABINET BASE (USE EX CABINET ENTRANCE WHEN AVAILABLE)	32 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	43 REMOVE EXISTING WOOD POLE	55 LASH CABLE(S) TO EXISTING MESSENGER CABLE	66 BOND RISER TO POLE GROUND
2 INSTALL LOW VOLTAGE POWER CABLE (24VAC)	12 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	23 INSTALL NEW RISER INTO CABINET BASE (USE EX CABINET ENTRANCE WHEN AVAILABLE)	33 REMOVE EXISTING SPLICE / HUB / CCTV CABINET	44 INSTALL AERIAL GUY ASSEMBLY	56 LASH CABLE(S) TO NEW MESSENGER CABLE	67 BOND TRACER WIRE TO EQUIPMENT GROUND BUS
3 INSTALL COMPOSITE CCTV CABLE	13 INSTALL HEAT SHRINK TUBING KIT	24 INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	34 INSTALL CABINET FOUNDATION	45 INSTALL STANDARD GUY ASSEMBLY	57 MODIFY EXISTING ELECTRICAL SERVICE FOR CCTV	68 BOND TRACER WIRE TO POLE GROUND
4 INSTALL SMFO CABLE	14 INSTALL HIGH DENSITY POLYETHYLENE CONDUIT	25 INSTALL NEW RISER INTO POLE MOUNTED CABINET	35 REMOVE EXISTING CABINET FOUNDATION	46 INSTALL SIDEWALK GUY ASSEMBLY	58 INSTALL NEW ELECTRICAL SERVICE FOR CCTV OR RADIO	69 HANDLASH AND INSTALL AERIAL CABLE PROTECTOR
5 INSTALL COAXIAL ANTENNA CABLE	15 DIRECTIONAL DRILL CONDUIT	26 INSTALL DIGITAL VIDEO ENCODER	36 INSTALL CCTV CAMERA ASSEMBLY	47 INSTALL MESSENGER CABLE	59 INSTALL NEW POLE MOUNTED CCTV CABINET (336)	70 INSTALL CCTV CABINET DISCONNECT
6 INSTALL FIBER-OPTIC DROP CABLE	16 BORE AND JACK CONDUIT	27 INSTALL NEW ETHERNET EDGE SWITCH IN CABINET	37 INSTALL CCTV WOOD POLE	48 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	60 INSTALL NEW CCTV CABINET (NEMA TYPE 4)	71 INSTALL MANAGED ETHERNET SWITCH
7 INSTALL TRACER WIRE	17 INSTALL CABLE(S) IN EXISTING CONDUIT	28 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	38 INSTALL STANDARD SIZE JUNCTION BOX	49 REMOVE EXISTING COMMUNICATIONS CABLE	60A INSTALL NEW POLE MOUNTED CABINET FOR ANTENNA (RADIO)	72 INSTALL CCTV METAL POLE
8 INSTALL CONDUIT UNDERGROUND	18 INSTALL CABLE(S) IN NEW CONDUIT	29 INSTALL UNDERGROUND SPLICE ENCLOSURE	39 INSTALL SPECIAL-SIZED JUNCTION BOX	50 INSTALL SERVICE CONDUCTORS	61 REMOVE EXISTING CCTV CAMERA ASSEMBLY	73 REMOVE EXISTING CCTV METAL POLE
9 INSTALL PVC CONDUIT	19 INSTALL CABLE(S) IN EXISTING RISER(S)	30 INSTALL AERIAL SPLICE ENCLOSURE	40 INSTALL OVER-SIZED JUNCTION BOX	51 INSTALL CABLE STORAGE GUIDE(S) [SNOW SHOE(S)] AND STORE 100 FEET OF EACH CABLE	62 NEW CABINET ENTRANCE INTO NEW FOUNDATION	74 REMOVE WIRELESS COMMUNICATIONS EQUIPMENT
10 INSTALL RIGID, GALVANIZED STEEL CONDUIT	20 INSTALL CABLE(S) IN NEW RISER(S)	31 INSTALL SPLICE CABINET	41 REMOVE EXISTING JUNCTION BOX	52 INSTALL DELINEATOR MARKER	63 DRILL/CORE DRILL EXISTING FOUNDATION	75 BACKPULL AND COIL CITY IT CABLE
	21 INSTALL CABLE(S) IN EXISTING CABINET ENTRANCE		42 INSTALL WOOD POLE	53 STORE 30' OF COMMUNICATIONS CABLE (EACH CABLE)	64 INTERCEPT AND REROUTE EXISTING CONDUITS	76 INSTALL 2.4 GHZ RADIO AND PANEL ANTENNA
				54 LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE	65 BOND MESSENGER TO POLE GROUND	77 INSTALL BASE MOUNTED CCTV CABINET WITH EXTENDER (336)

Prepared for the Offices of:

 Department of Transportation and Safety
 State of North Carolina

Burlington-Graham Signal System Cable Routing Plans

Division 7 Guilford County Burlington & Graham

PLAN DATE: June 2018 REVIEWED BY: M B Toth

PREPARED BY: AME/AJH/VJP/NAP/JAW REVIEWED BY: BJ Slocum

REVISIONS INIT. DATE

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 025892
 MELISSA B. TOTH
 ENGINEER
 Melissa B. Toth/13/2018
 DATE

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