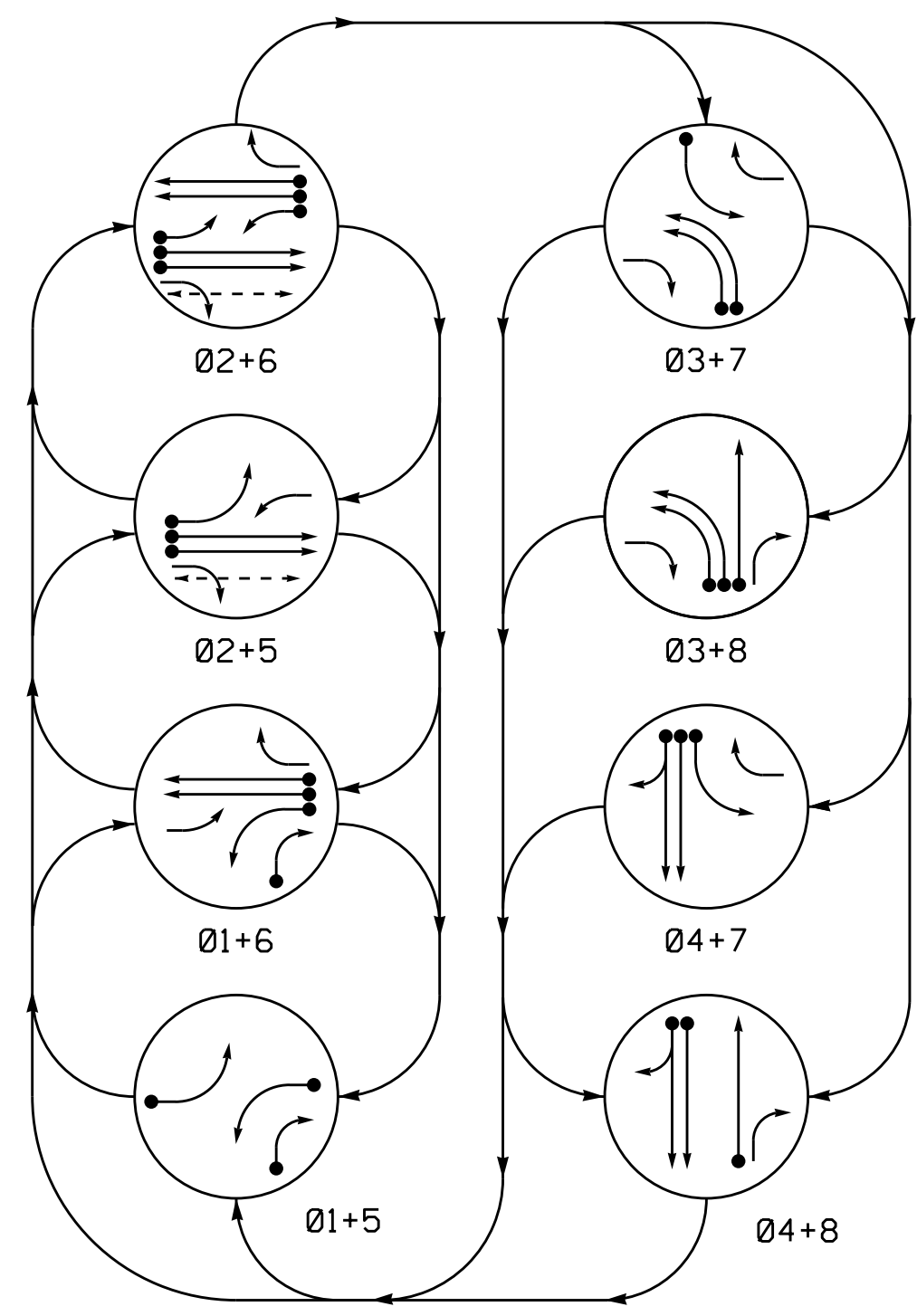


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

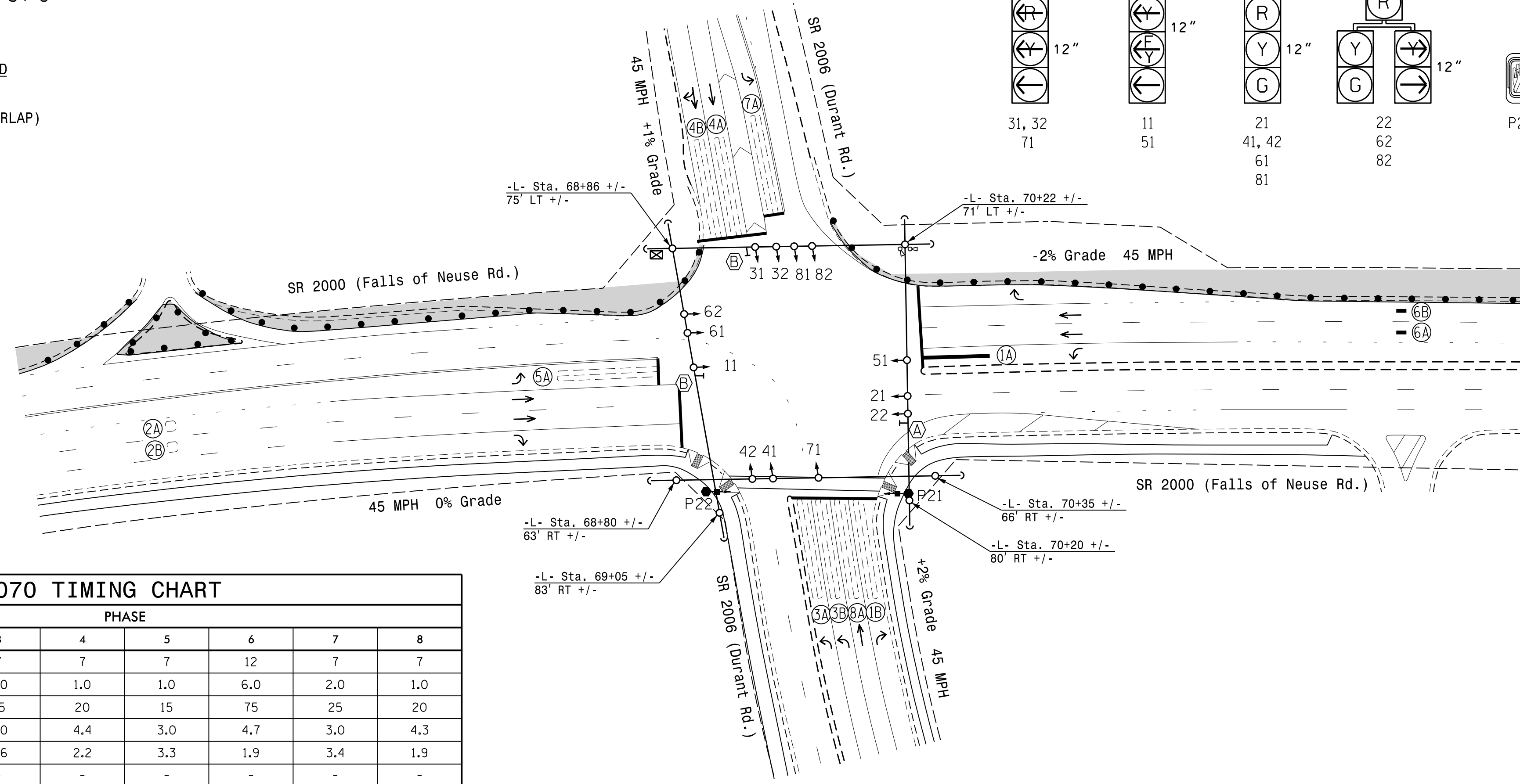
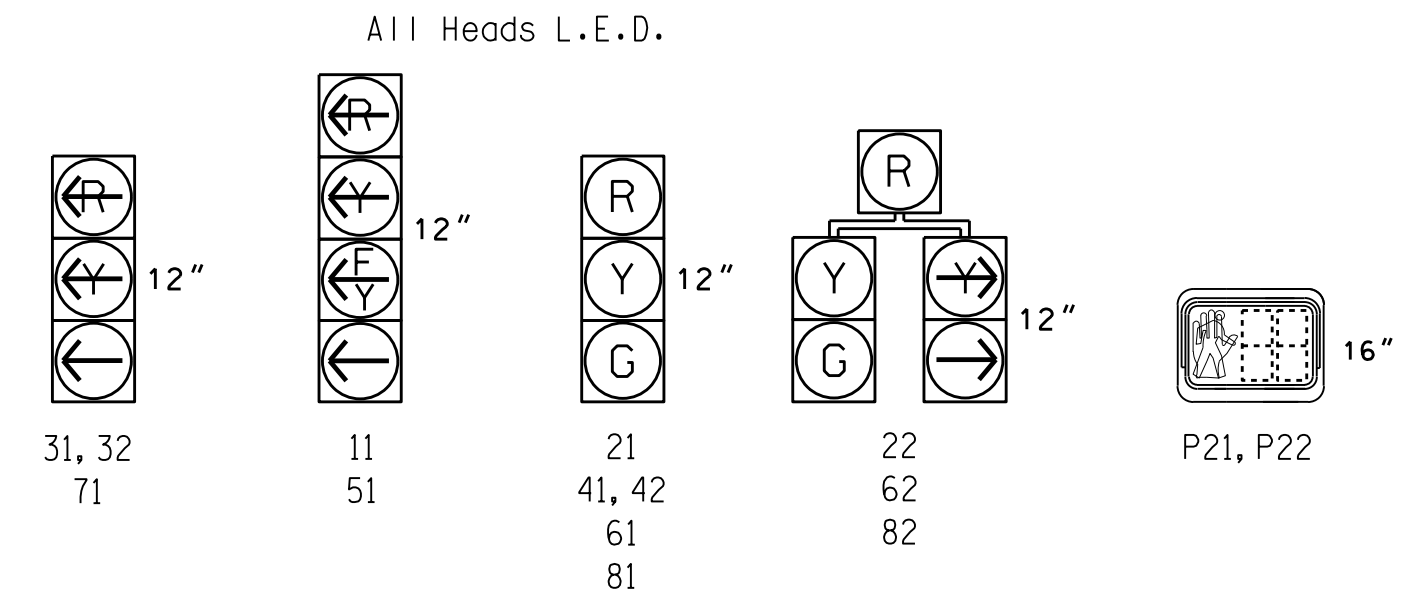
SIGNAL FACE	PHASE								FLASH	
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8		
11										
21	R	R	G	G	R	R	R	R	Y	
22	R	R	G	G	R	R	R	R	Y	
31, 32	R	R	R	R						
41, 42	R	R	R	R	R	R	G	G	R	
51										
61	R	G	R	G	R	R	R	R	Y	
62	R	G	R	G	R	R	R	R	Y	
71	R	R	R	R						
81	R	R	R	R	R	G	R	G	R	
82	R	R	R	R	R	G	R	G	R	
P21, P22	DW	DW	W	W	DW	DW	DW	DRK		

LOOP & DETECTOR UNIT INSTALLATION CHART
SE-PAC 2070 CONTROLLER WITH 170 CABINET

LOOP / ZONE NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	DETECTOR PROGRAMMING														
						ASSIGNED PHASE	TIMING		OPERATION MODE							SWITCH	SYSTEM LOOPS	STATUS		
							DELAY	EXTEND (STRETCH)	VEHICLE	PEDESTRIAN	1 CALL	STOP A	STOP B	PROTECT LEFT THROUGH	PROTECT RIGHT THROUGH				AND	
1A*	6X40	*	0	X	-	1	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
1B	6X60	2-4-2	0	-	X	1	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
2A	6X6	EXIST	300	-	X	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
2B	6X6	EXIST	300	-	X	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
3A	6X60	2-4-2	0	-	X	3	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
3B	6X60	2-4-2	0	-	X	3	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4A	6X60	2-4-2	0	-	X	4	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4B	6X60	2-4-2	0	-	X	4	10 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
5A	6X60	2-4-2	0	-	X	5	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6A*	6X6	*	300	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6B*	6X6	*	300	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
7A	6X60	2-4-2	0	-	X	7	3 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
8A	6X60	2-4-2	0	-	X	8	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-

* Video detection zone.

SIGNAL FACE I.D.



SE-PAC 2070 TIMING CHART

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green *	7	12	7	7	7	12	7	7
Passage Gap *	1.0	6.0	2.0	1.0	1.0	6.0	2.0	1.0
Maximum Green *	15	75	25	20	15	75	25	20
Yellow Change	3.0	4.7	3.0	4.4	3.0	4.7	3.0	4.3
Red Clear	3.5	1.9	3.6	2.2	3.3	1.9	3.4	1.9
Walk *	-	4	-	-	-	-	-	-
Pedestrian Clear	-	21	-	-	-	-	-	-
Added Initial *	-	1.5	-	-	-	1.5	-	-
Maximum Initial *	-	34	-	-	-	34	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	3.0	-	-	-	3.0	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	NON-LOCK	LOCK	NON-LOCK	NON-LOCK	NON-LOCK	LOCK	NON-LOCK	NON-LOCK
Dual Entry	-	-	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

8 Phase Fully Actuated (Raleigh Signal System)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Phase 3 and/or phase 7 may be lagged.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- This intersection features a video detection system. Shown locations of detectors are conceptual only. Refer to the manufacturer's guidelines for optimal detector placement.

LEGEND

- | | | | |
|--|---|--|---|
| | PROPOSED Traffic Signal Head | | EXISTING Traffic Signal Head |
| | PROPOSED Modified Signal Head | | EXISTING Modified Signal Head |
| | PROPOSED Pedestrian Signal Head | | EXISTING Pedestrian Signal Head |
| | PROPOSED Signal Pole with Guy | | EXISTING Signal Pole with Guy |
| | PROPOSED Signal Pole with Sidewalk Guy | | EXISTING Signal Pole with Sidewalk Guy |
| | PROPOSED Inductive Loop Detector | | EXISTING Inductive Loop Detector |
| | PROPOSED Controller & Cabinet | | EXISTING Controller & Cabinet |
| | PROPOSED Junction Box | | EXISTING Junction Box |
| | PROPOSED 2-in Underground Conduit | | EXISTING 2-in Underground Conduit |
| | PROPOSED Right of Way | | EXISTING Right of Way |
| | PROPOSED Directional Arrow | | EXISTING Directional Arrow |
| | PROPOSED Out of Pavement Detector | | EXISTING Out of Pavement Detector |
| | PROPOSED Video Detection Area | | EXISTING Video Detection Area |
| | PROPOSED Construction Zone Drums | | EXISTING Construction Zone Drums |
| | PROPOSED Construction Zone | | EXISTING Construction Zone |
| | PROPOSED Type II Signal Pedestal | | EXISTING Type II Signal Pedestal |
| | PROPOSED Right Arrow "ONLY" Sign (R3-5R) | | EXISTING Right Arrow "ONLY" Sign (R3-5R) |
| | PROPOSED "U-TURN YIELD TO RIGHT TURN" Sign (R10-16) | | EXISTING "U-TURN YIELD TO RIGHT TURN" Sign (R10-16) |

Signal Upgrade - Temporary Design 1 (TMP Phase I)

750 N. Greenfield Pkwy, Garner, NC 27529

SR 2000 (Falls of Neuse Rd.)
at
SR 2006 (Durant Rd.)

Division 5 Wake County Raleigh

PLAN DATE: July 2019 REVIEWED BY: J.A. Lohr

PREPARED BY: J.A. Lohr REVIEWED BY:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

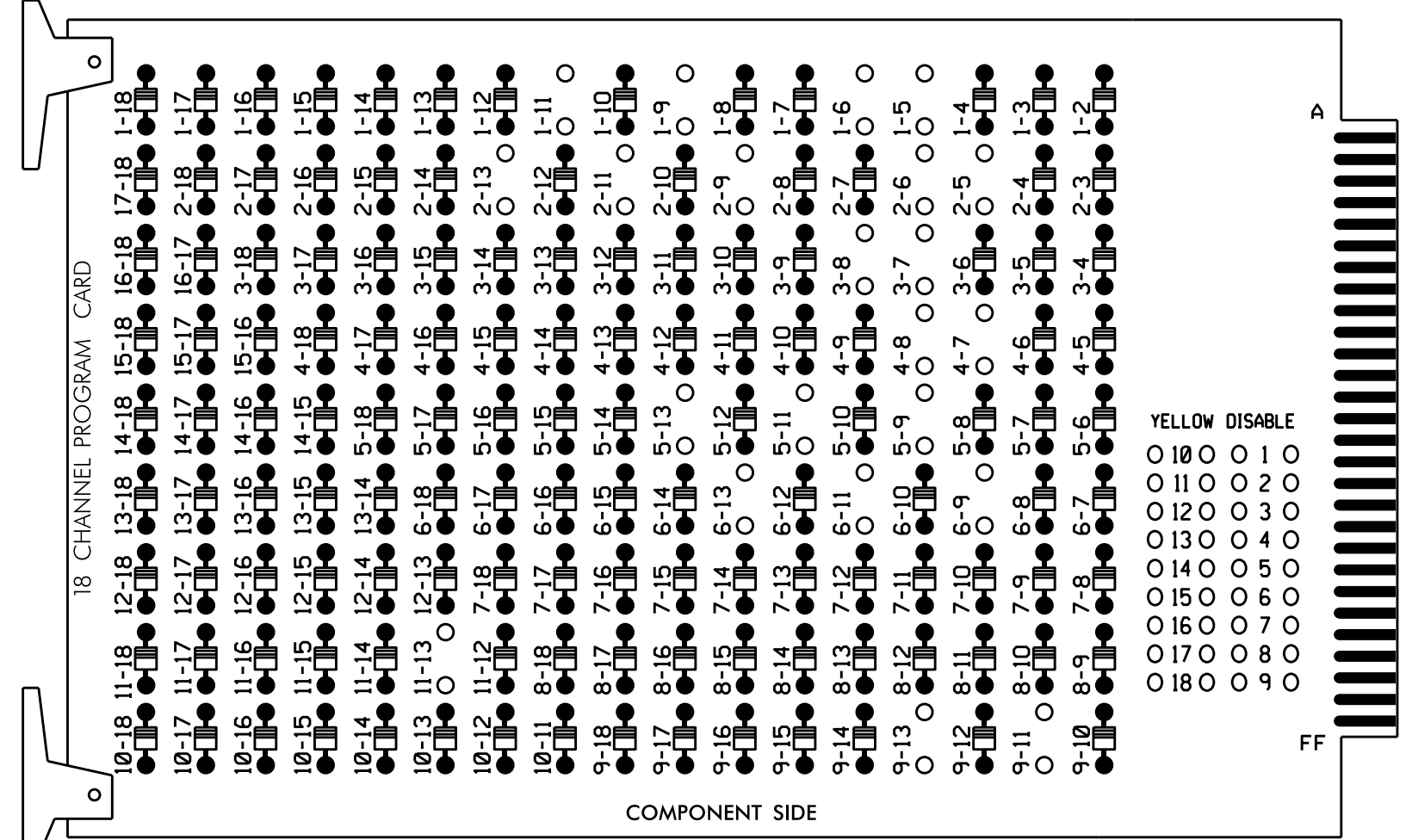
8/28/2019

SIG. INVENTORY NO. 05-1176T1

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7:01 AM

EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL
(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-11, 2-5, 2-6, 2-9, 2-11, 2-13, 3-7, 3-8, 4-7, 4-8, 5-9, 5-11, 5-13, 6-9, 6-11, 6-13, 9-11, 9-13, and 11-13.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that Red Enable is active at all times during normal operation.
- Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

■ = DENOTES POSITION OF SWITCH

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Program controller to start up in phases 2 and 6 green.
- Enable simultaneous gap-out feature for all phases.
- Program phases 2 and 6 for volume density operation.
- The cabinet and controller are part of the Raleigh Signal System.

EQUIPMENT INFORMATION

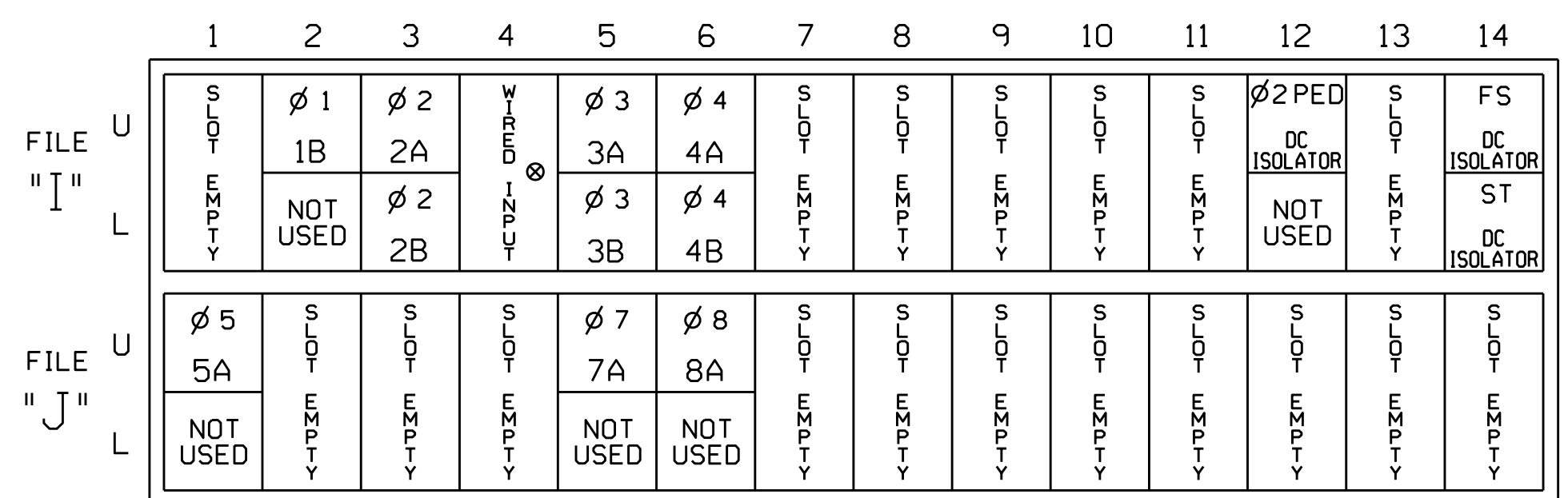
CONTROLLER.....2070LX
 CABINET.....332 W/ AUX
 SOFTWARE.....SE-PAC2070
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
 LOAD SWITCHES USED.....S1,S2,S3,S4,S5,S7,S8,S10,S11,
 AUX S1,AUX S4
 PHASES USED.....1,2,2PED,3,4,5,6,7,8
 OVERLAP A.....1+2
 OVERLAP B.....NOT USED
 OVERLAP C.....5+6
 OVERLAP D.....NOT USED

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6	
CHU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18	
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE	
SIGNAL HEAD NO.	11★	82	21,22	P21, P22	22	31,32	41,42	NU	51★	61,62	NU	62	71	81,82	NU	11★	NU	51★	NU
RED		*	128			101			134			107							
YELLOW			129			102		*	135			108							
GREEN			130			103			136			109							
RED ARROW					116						122		A121				A114		
YELLOW ARROW	126			117	117					123	123		A122				A115		
FLASHING YELLOW ARROW													A123				A116		
GREEN ARROW	127	127		118	118			133			124	124							
⚠																			
🚶																			

NU = Not Used
 * Denotes install load resistor. See load resistor installation detail this sheet.
 ★ See pictorial of head wiring in detail below.

INPUT FILE POSITION LAYOUT
(front view)



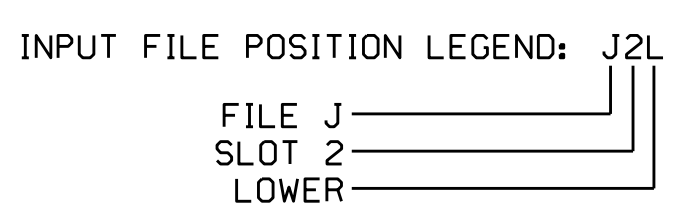
EX.: 1A, 2A, ETC. = LOOP NO.'S
 FS = FLASH SENSE
 ST = STOP TIME
 ⊗ Wired Input - Do not populate slot with detector card

INPUT FILE CONNECTION & PROGRAMMING CHART

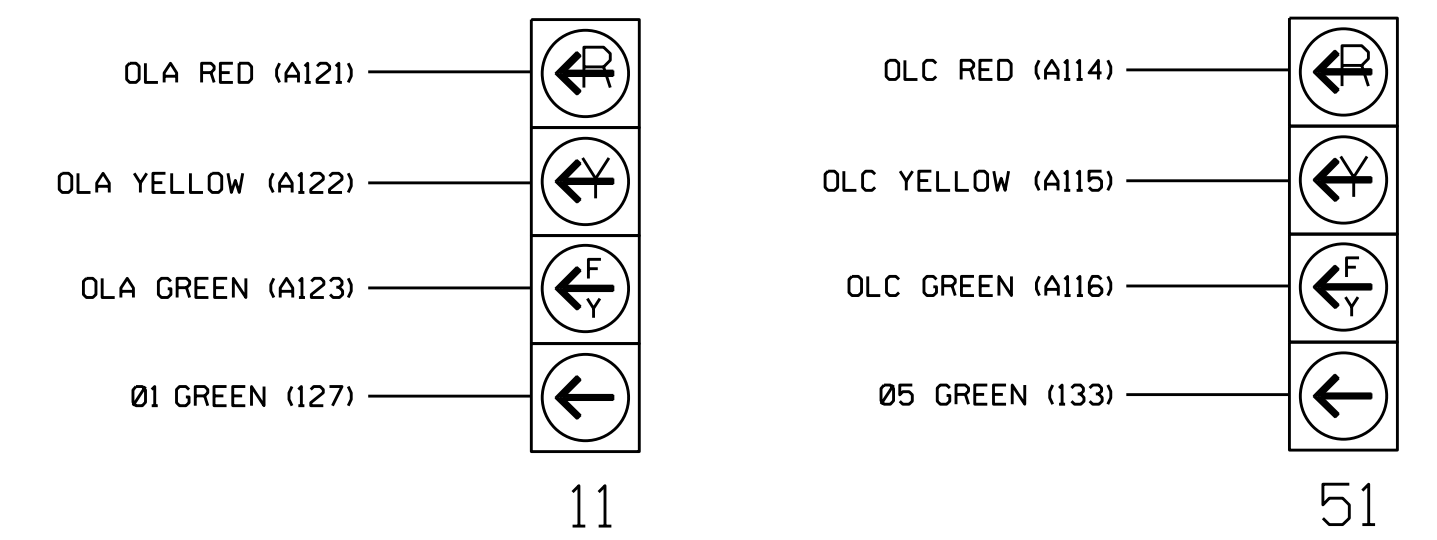
LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	DETECTOR NO.	NEMA PHASE	DELAY TIME	EXTEND (STRETCH) TIME
1B	TB2-5,6	I2U	39	3	1	15	
2A	TB2-9,10	I3U	63	5	2		
2B	TB2-11,12	I3L	76	6	2		
3A	TB4-5,6	I5U	58	9	3		
3B	TB4-7,8	I5L	58	9	3		
4A	TB4-9,10	I6U	41	11	4		
4B	TB4-11,12	I6L	45	12	4	10	
5A'	TB3-1,2	J1U	55	19	5	15	
		I4U	47	7	2		
7A	TB5-5,6	J5U	57	29	7	3	
8A	TB5-9,10	J6U	42	31	8		
PED PUSH BUTTONS							
P21,P22	TB8-4,6	I12U	67	PED 2	2 PED		

NOTE:
 INSTALL DC ISOLATOR IN INPUT FILE SLOT 112.

1Add jumper from J1-W to 14-W, on rear of input file.



FYA SIGNAL WIRING DETAIL
(wire signal heads as shown)

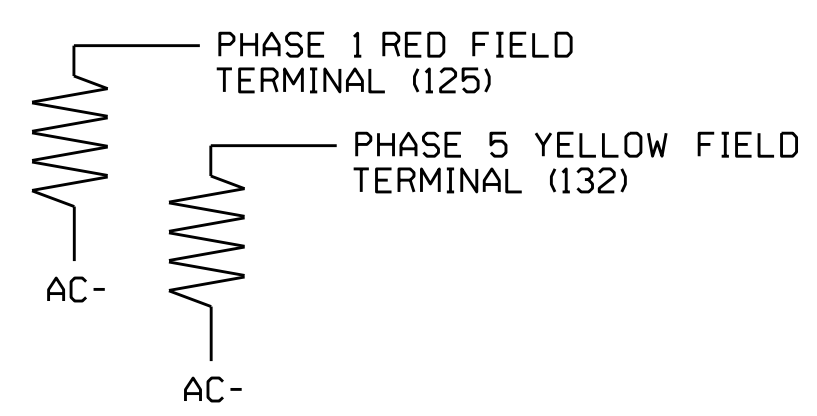


COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

LOAD RESISTOR INSTALLATION DETAIL
(install resistors as shown below)

VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



SPECIAL DETECTOR NOTE

For zones 1A, 6A and 6B, install a video detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer approved mounting locations to accomplish the detection schemes shown on the Signal Design plans.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-1176T1
 DESIGNED: July 2019
 SEALED: 8/28/2019
 REVISED: N/A

Electrical Detail - Temp. Design 1 (TMP Phase I) - Sheet 1 of 2

Electrical and Programming Details For: SR 2000 (Falls of Neuse Rd.) at SR 2006 (Durant Rd.)

Prepared In the Offices of:

Division 5 Wake County Raleigh

PLAN DATE: October 2021 REVIEWED BY:

PREPARED BY: S. Armstrong REVIEWED BY:

REVISIONS INIT. DATE

DocuSigned by:

03/07/2022

SIG. INVENTORY NO. 05-1176T1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
 RYAN W. HOUGH
 PROFESSIONAL ENGINEER
 SEAL 036833

07-MAR-2021 08:59 S:\IT\ASST\15 Signal\work\hough\sig Mon\Projects From Signal Design\Active Projects\armstrong\11 Projects\05-5826 div project\05-1176 div project\05-1176.sm.ele.20190906.dgn

OVERLAP PROGRAMMING DETAIL

1. From Main Menu select 4 - UNIT DATA
2. From UNIT DATA Submenu select 3 - OVERLAP DATA

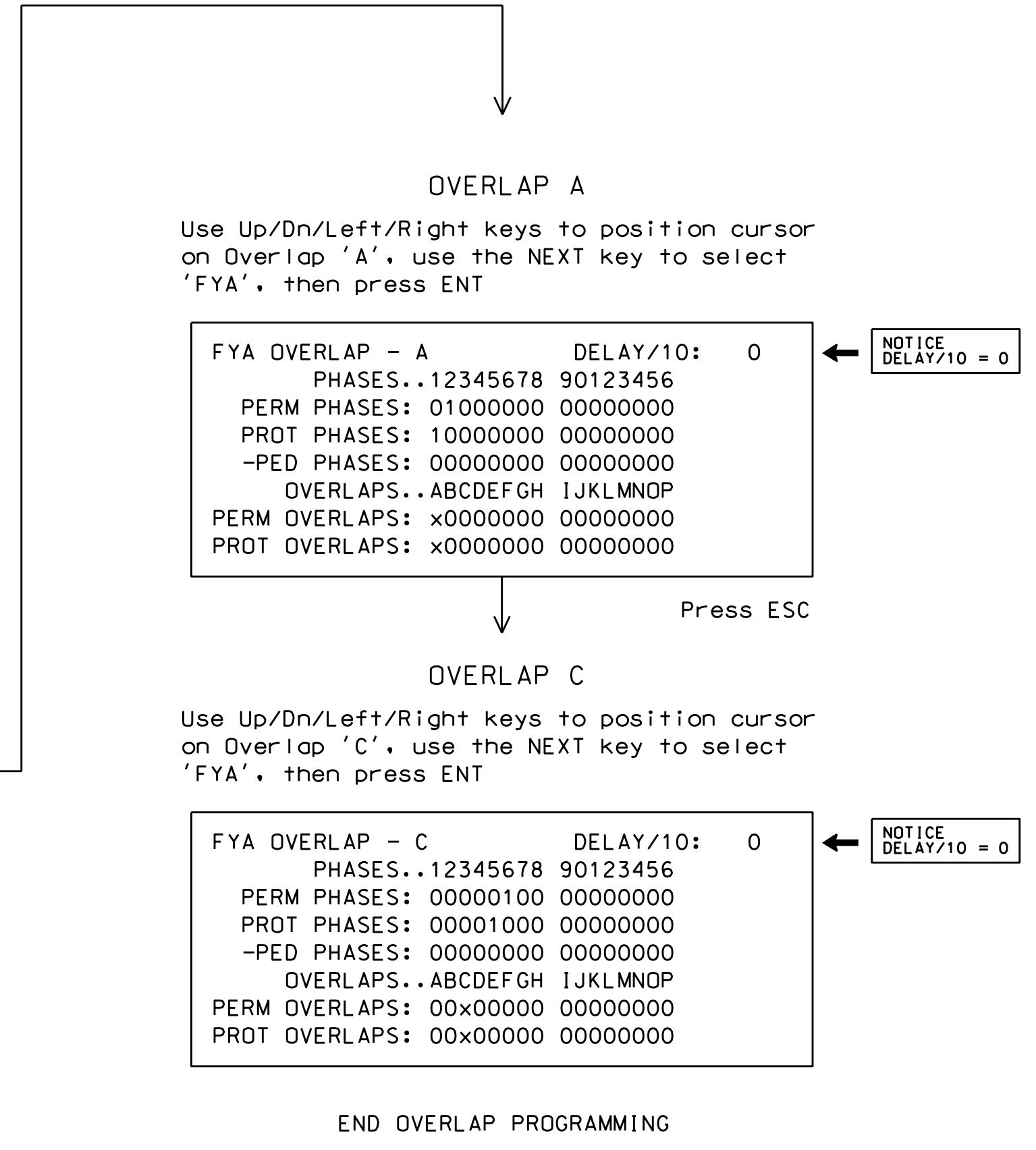
Use Up/Dn/Left/Right keys to position cursor on the desired Overlap. Use the NEXT key to select the overlap type. Press the ENT key and then program as per the Overlap screen(s) shown.

```

OVERLAP DATA

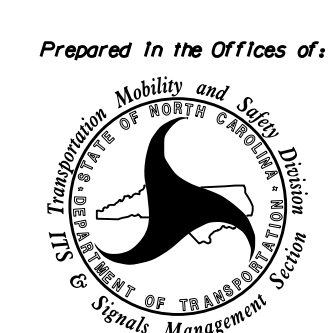
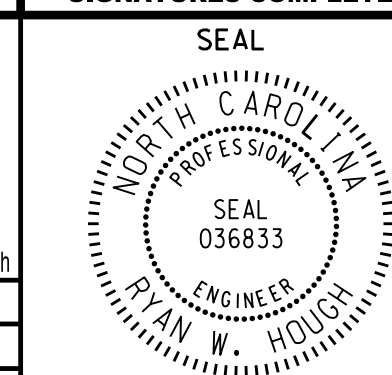
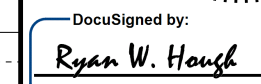
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B: ---  F: ---  J: ---  N: ---
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D: ---  H: ---  L: ---  P: ---

PREV/NEXT TO CYCLE
    
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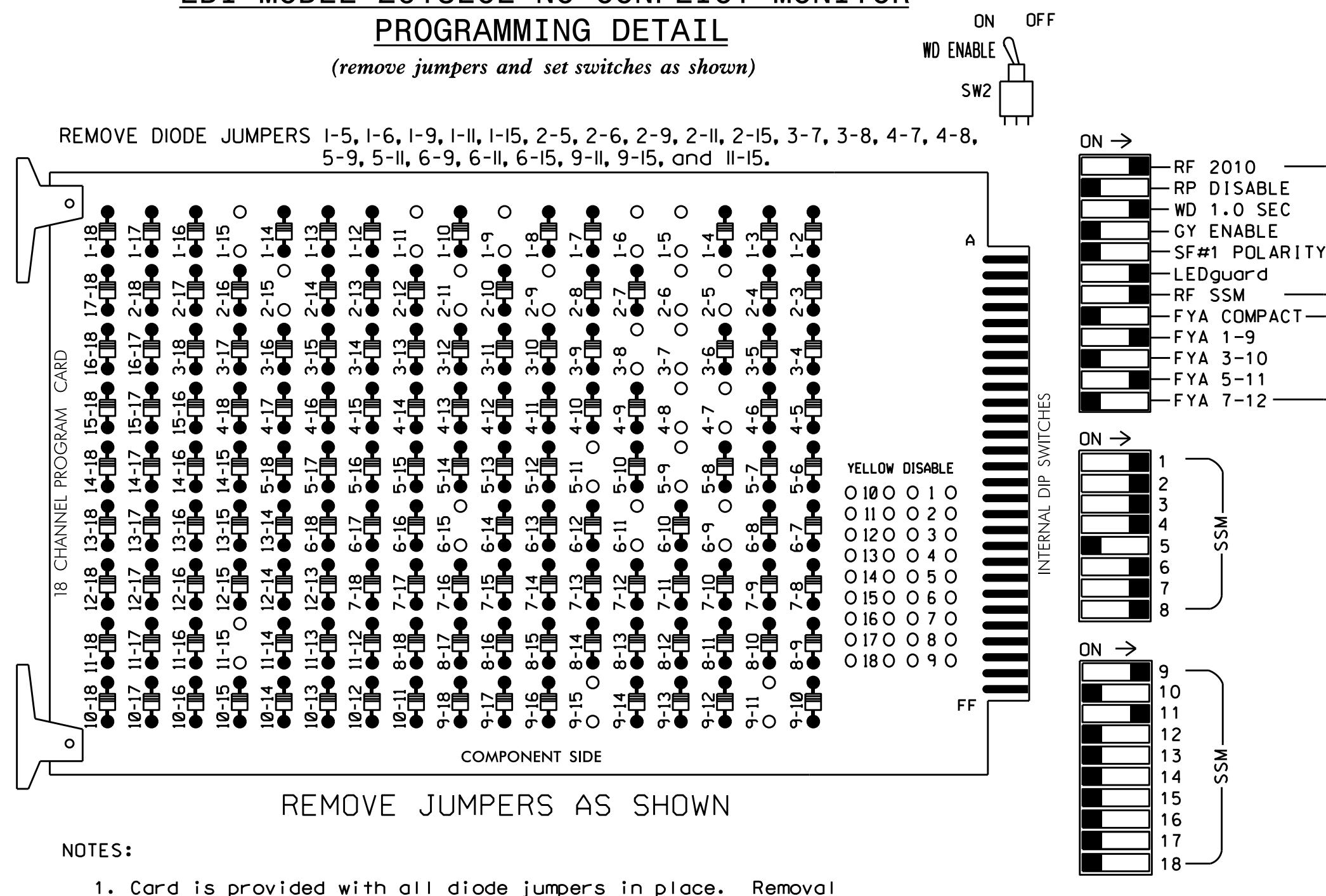


THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-1176T1
 DESIGNED: July 2019
 SEALED: 8/28/2019
 REVISED: N/A

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Electrical Detail - Temp. Design 1 (TMP Phase I) - Sheet 2 of 2		DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED									
ELECTRICAL AND PROGRAMMING DETAILS FOR: Prepared In the Offices of:  750 N. Greenfield Pkwy, Garner, NC 27529	SR 2000 (Falls of Neuse Rd.) at SR 2006 (Durant Rd.) Division 5 Wake County Raleigh PLAN DATE: October 2021 REVIEWED BY: PREPARED BY: S. Armstrong REVIEWED BY:	SEAL  SEAL 036833 ENGINEER RYAN W. HOUGH									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">REVISIONS</th> <th style="width: 10%;">INIT.</th> <th style="width: 10%;">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							DocuSigned by:  03/07/2022 DATE SIG. INVENTORY NO. 05-1176T1
REVISIONS	INIT.	DATE									

EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL
(remove jumpers and set switches as shown)



- REMOVE JUMPERS AS SHOWN
- NOTES:
- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
 - Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
 - Ensure that Red Enable is active at all times during normal operation.
 - Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Program controller to start up in phases 2 and 6 green.
- Enable simultaneous gap-out feature for all phases.
- Program phases 2 and 6 for volume density operation.
- The cabinet and controller are part of the Raleigh Signal System.

EQUIPMENT INFORMATION

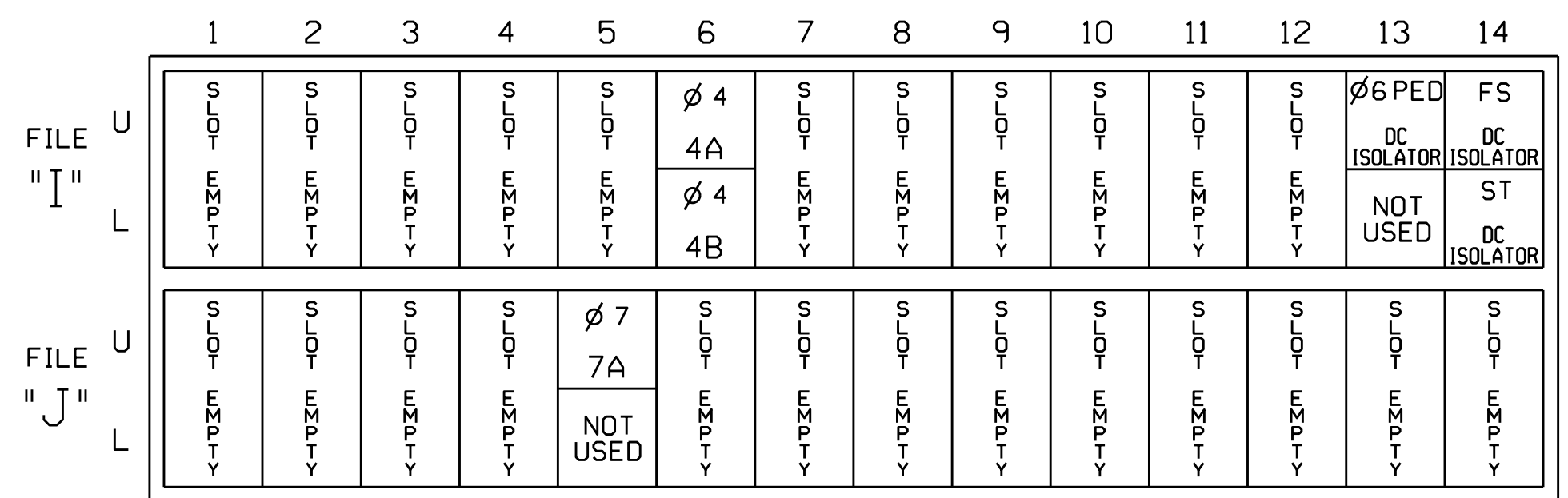
CONTROLLER.....2070LX
 CABINET.....332 W/ AUX
 SOFTWARE.....SE-PAC2070
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
 LOAD SWITCHES USED.....S1,S2,S4,S5,S7,S8,S9,S10,S11,
 AUX S1,AUX S4
 PHASES USED.....1,2,3,4,5,6,6PED,7,8
 OVERLAP A.....1+2
 OVERLAP B.....NOT USED
 OVERLAP C.....5+6
 OVERLAP D.....NOT USED

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6				
CHU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18				
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE				
SIGNAL HEAD NO.	11	82	21,22	NU	22	31,32	41,42	NU	51	61,62	P61, P62	62	71	81,82	NU	11	NU	NU	51	NU	NU	
RED		*	128			101			134					107								
YELLOW			129			102		*	135					108								
GREEN			130			103			136					109								
RED ARROW						116								122							A121	A114
YELLOW ARROW	126				117	117						123	123								A122	A115
FLASHING YELLOW ARROW																					A123	A116
GREEN ARROW	127	127			118	118			133			124	124									
Hand icon													119									
Person icon																						121

NU = Not Used
 * Denotes install load resistor. See load resistor installation detail this sheet.
 ★ See pictorial of head wiring in detail below.

INPUT FILE POSITION LAYOUT
(front view)

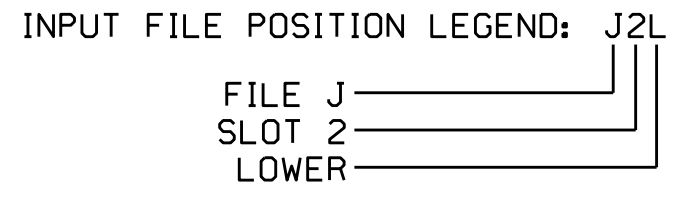


INPUT FILE CONNECTION & PROGRAMMING CHART

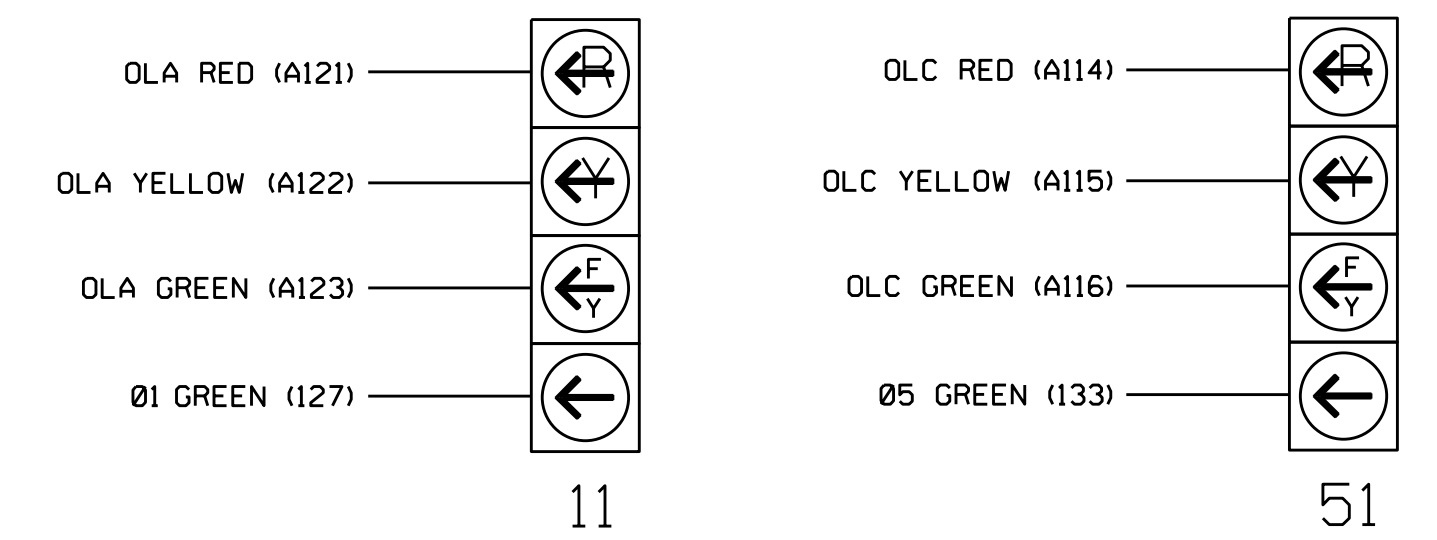
LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	DETECTOR NO.	NEMA PHASE	DELAY TIME	EXTEND (STRETCH) TIME
4A	TB4-9,10	I6U	41	11	4		
4B	TB4-11,12	I6L	45	12	4	10	
7A	TB5-5,6	J5U	57	29	7	3	
PED PUSH BUTTONS							
P61,P62	TB8-7,9	I13U	68	PED 6	6 PED		

NOTE:
 INSTALL DC ISOLATORS IN INPUT FILE SLOT 113.

Remove jumper from J1-W to 14-W on rear of input file, if present.



FYA SIGNAL WIRING DETAIL
(wire signal heads as shown)



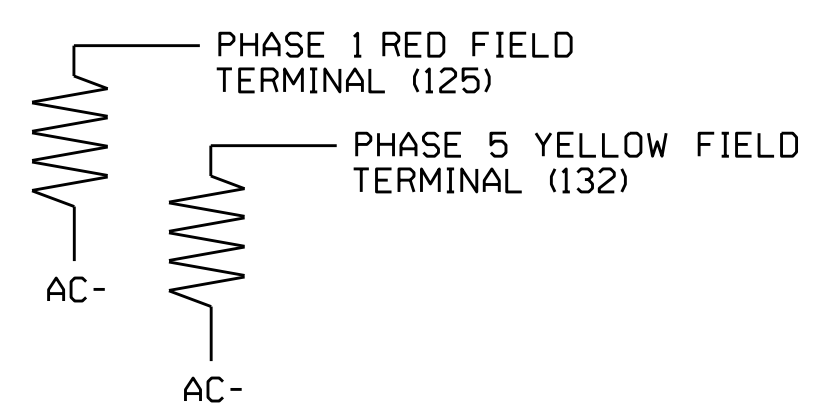
COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

LOAD RESISTOR INSTALLATION DETAIL
(install resistors as shown below)

ACCEPTABLE VALUES

VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



SPECIAL DETECTOR NOTE

For zones 1A, 1B, 2A, 2B, 3A, 3B, 5A, 6A, 6B and 8A, install a video detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer approved mounting locations to accomplish the detection schemes shown on the Signal Design plans.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-1176T2
 DESIGNED: July 2019
 SEALED: 8/28/2019
 REVISED: N/A

Electrical Detail - Temp. Design 2 (TMP Phase II) - Sheet 1 of 2

Electrical and Programming Details For: SR 2000 (Falls of Neuse Rd.) at SR 2006 (Durant Rd.)

Prepared In the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

Division 5 Wake County Raleigh

PLAN DATE: October 2021 REVIEWED BY:

PREPARED BY: S. Armstrong REVIEWED BY:

REVISIONS INIT. DATE

DocuSigned by: Ryan W. Hough 03/07/2022

SEAL: SEAL 036833 ENGINEER RYAN W. HOUGH

SIG. INVENTORY NO. 05-1176T2

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 S08MSTR.DWG

OVERLAP PROGRAMMING DETAIL

1. From Main Menu select 4 - UNIT DATA
2. From UNIT DATA Submenu select 3 - OVERLAP DATA

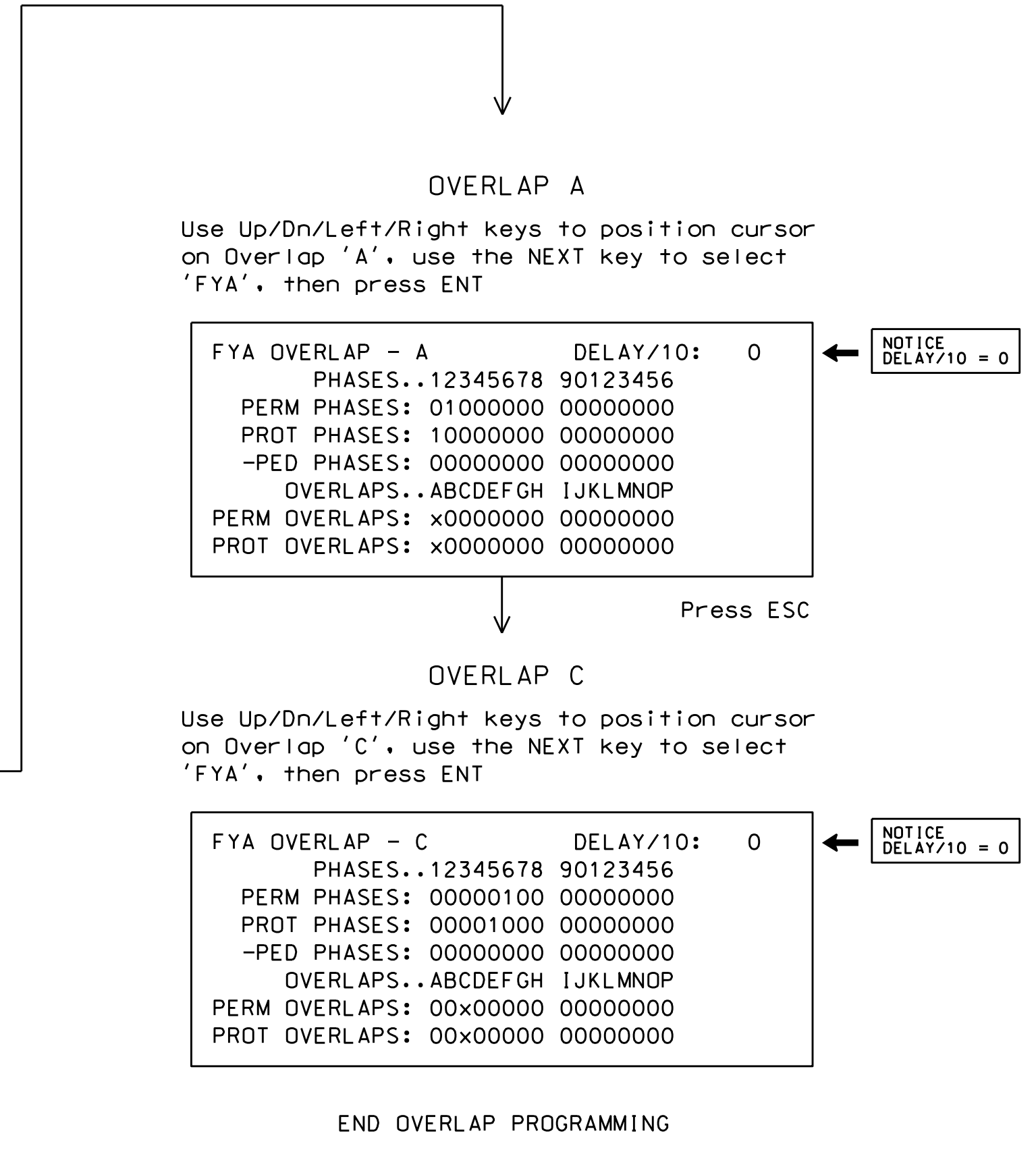
Use Up/Dn/Left/Right keys to position cursor on the desired Overlap. Use the NEXT key to select the overlap type. Press the ENT key and then program as per the Overlap screen(s) shown.

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OVERLAP DATA


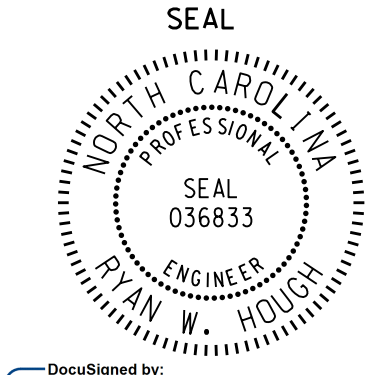
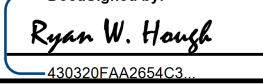
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B: ---  F: ---  J: ---  N: ---
C: FYA  G: ---  K: ---  O: ---
D: ---  H: ---  L: ---  P: ---

PREV/NEXT TO CYCLE
    
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THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-1176T2
DESIGNED: July 2019
SEALED: 8/28/2019
REVISED: N/A

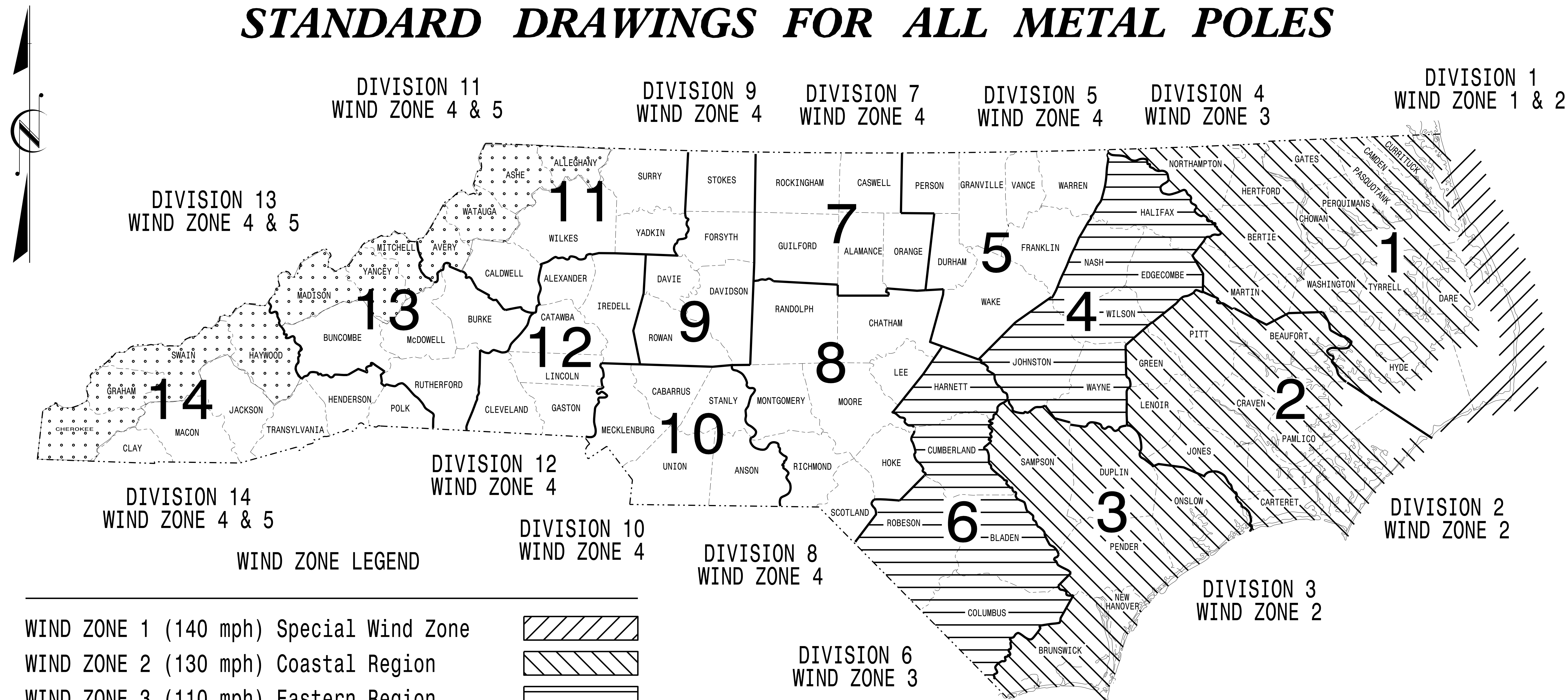
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W01176.dwg
S:\MSR\06.dwg
S:\MSR\06.dwg

Electrical Detail - Temp. Design 2 (TMP Phase II) - Sheet 2 of 2		DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED												
ELECTRICAL AND PROGRAMMING DETAILS FOR: Prepared In the Offices of:  750 N. Greenfield Pkwy, Garner, NC 27529	SR 2000 (Falls of Neuse Rd.) at SR 2006 (Durant Rd.) Division 5 Wake County Raleigh PLAN DATE: October 2021 REVIEWED BY: PREPARED BY: S. Armstrong REVIEWED BY:	SEAL  SEAL 036833 ENGINEER RYAN W. HOUGH												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">REVISIONS</th> <th style="width: 10%;">INIT.</th> <th style="width: 10%;">DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS	INIT.	DATE										DocuSigned by:  03/07/2022 SIG. INVENTORY NO. 05-1176T2
REVISIONS	INIT.	DATE												

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

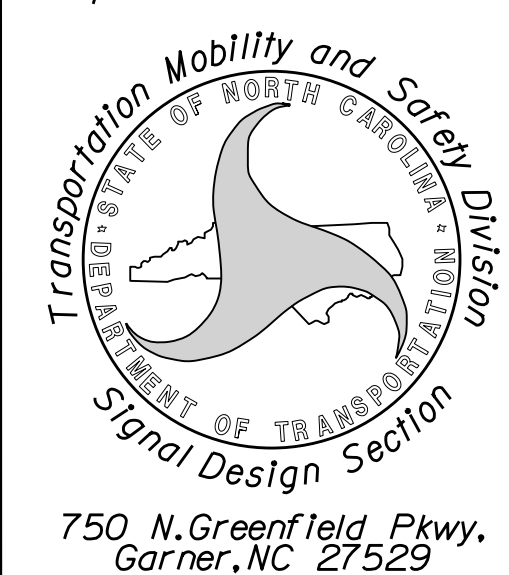
PROJECT I.D. NO. U-5826	SHEET NO. Sig.M1
--------------------------------	-------------------------

STANDARD DRAWINGS FOR ALL METAL POLES



<https://connect.ncdot.gov/resources/safety/Pages/ITS-Design-Resources.aspx>

Prepared In the Offices of:



Designed in conformance
with the latest
2015 Interim to the
6th Edition 2013

AASHTO

Standard Specifications for
Structural Supports for
Highway Signs, Luminaires,
and Traffic Signals

INDEX OF PLANS

DRAWING NUMBER	DESCRIPTION
Sig. M 1	Statewide Wind Zone Map
Sig. M 2	Typical Fabrication Details-All Metal Poles
Sig. M 3	Typical Fabrication Details-Strain Poles
Sig. M 4	Typical Fabrication Details-Mast Arm Poles
Sig. M 5	Typical Fabrication Details-Mast Arm Connection
Sig. M 6	Typical Fabrication Details-Strain Pole Attachments
Sig. M 7	Construction Details-Foundations
Sig. M 8	Standard Strain Pole Foundation-All Soil Conditions

NCDOT CONTACTS:

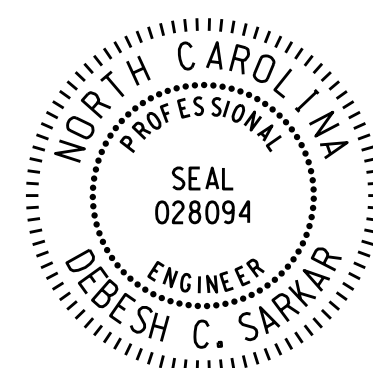
MOBILITY AND SAFETY DIVISION - ITS AND SIGNALS UNIT

M.M. MC DIARMID, P.E. - STATE ITS AND SIGNALS ENGINEER

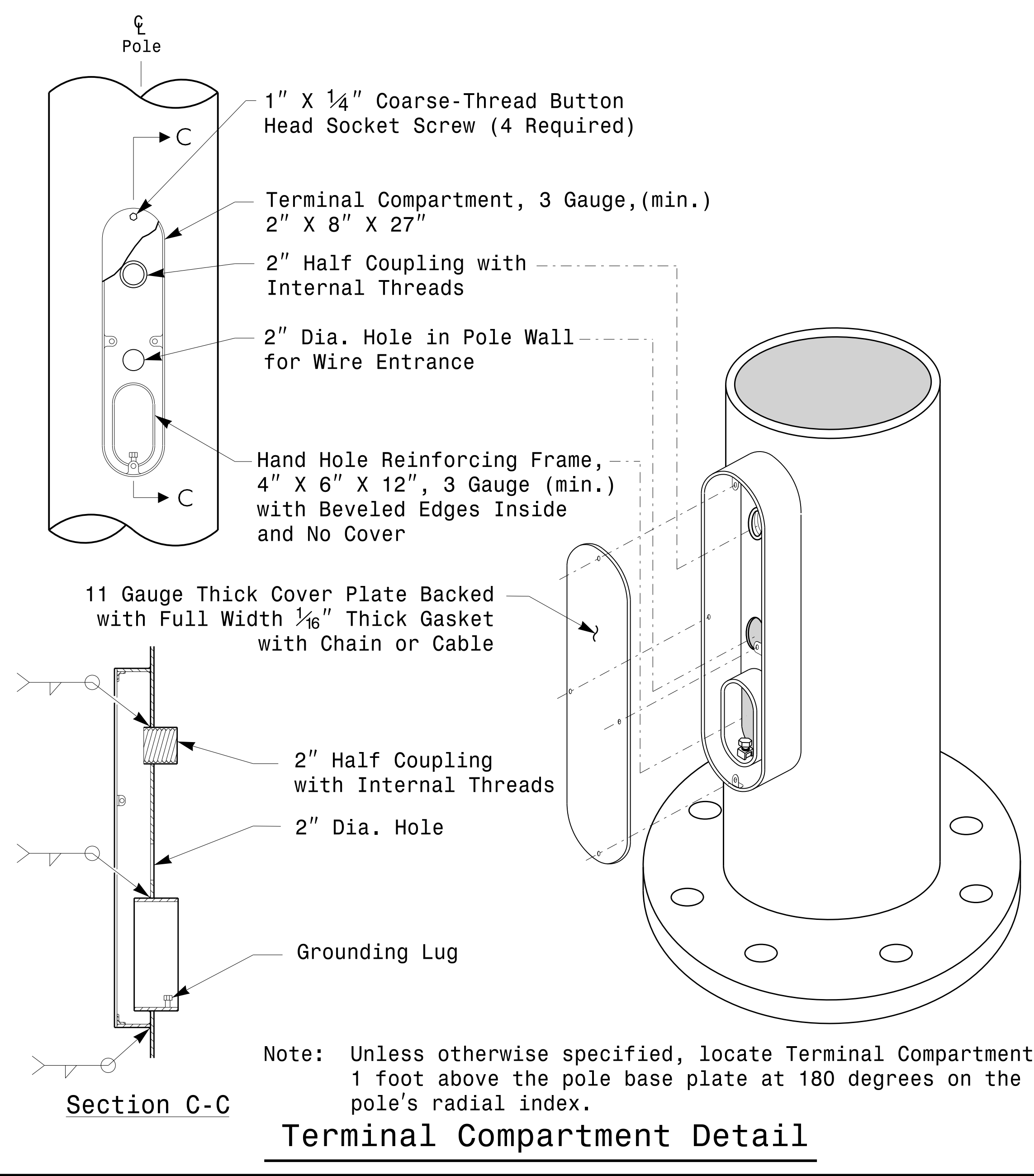
J.P. GALLOWAY, P.E. - STATE SIGNALS ENGINEER

D.C. SARKAR, P.E. - ITS AND SIGNALS SENIOR STRUCTURAL ENGINEER

SEAL



DocuSigned by:
Debesh C. Sarkar
10/11/2017
DATE

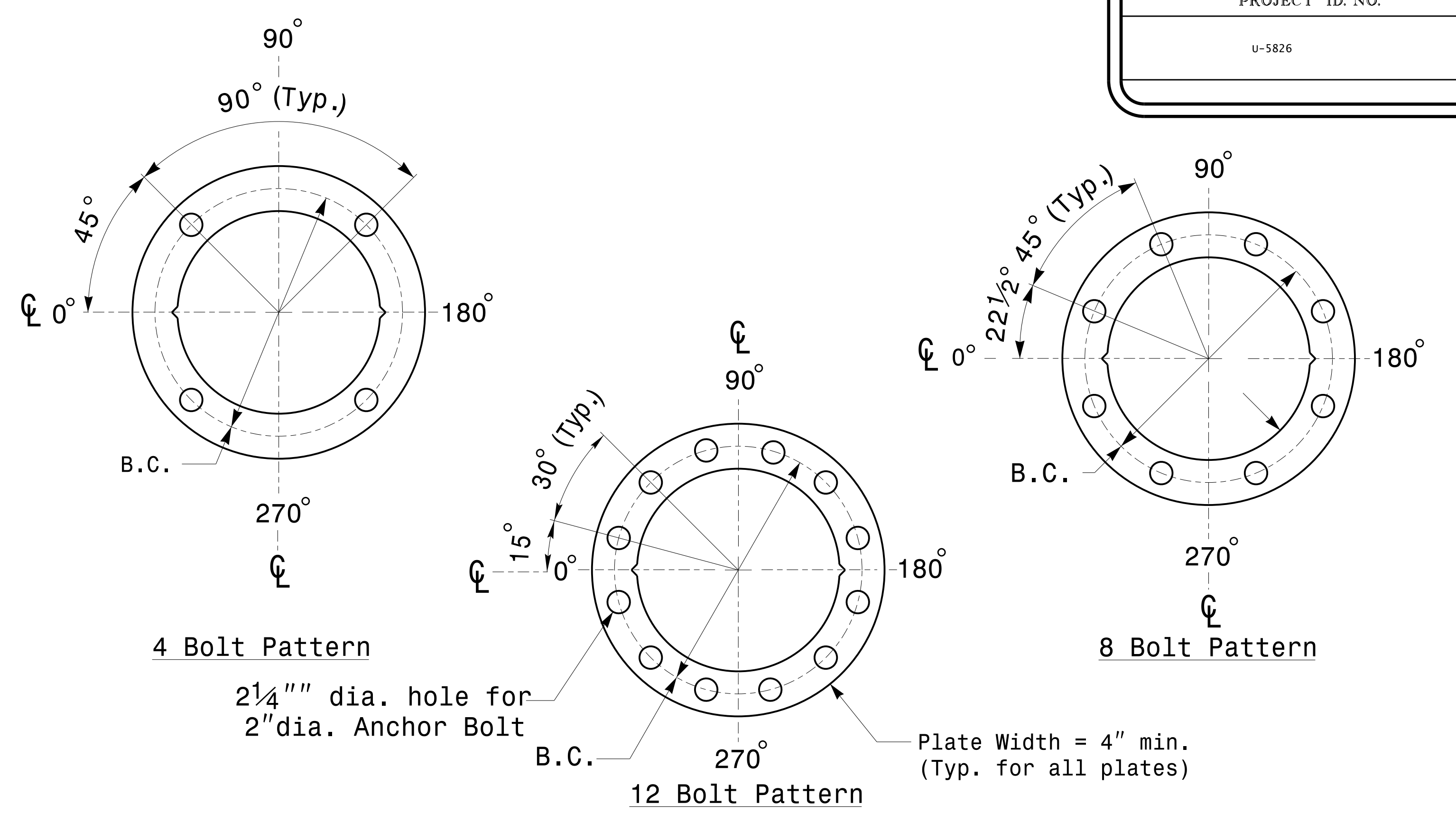


MFG _____	MFG. DATE: MM/YY _____
SHAFT D/T/L/Y _____	_____
ARM-A D/T/L/Y _____	_____
ARM-B D/T/L/Y _____	_____
A.B. DIA./B.C./L/Y _____	_____
NCDOT SIG. INV. NO. _____	_____
NCDOT POLE NO. _____	_____

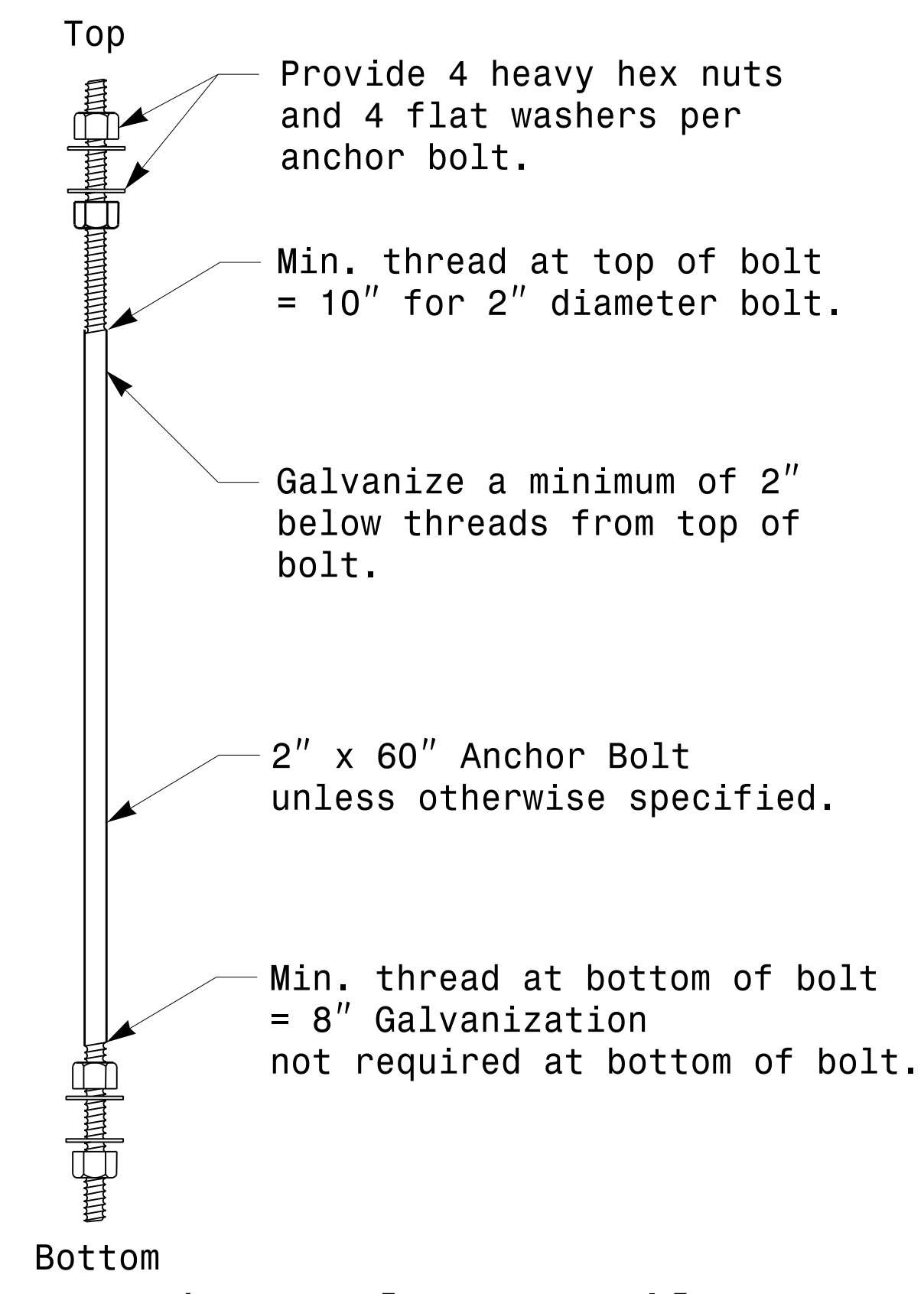
Shaft I.D. Tag
(Provide on Shaft of Strain Poles and Mast Arm Poles Shaft)

- Notes:
- 1) D= Diameter, T= Thickness, L= Length, Y= Yield Strength
 - 2) A.B. = Anchor Bolt
 - 3) B.C. = Bolt Circle of Anchor Bolts
 - 4) If Custom Design, use "NCDOT STANDARD" line for Signal Inv. Number and pole I.D. number
 - 5) See drawing M3 and M4 for mounting positions of I.D. tags.

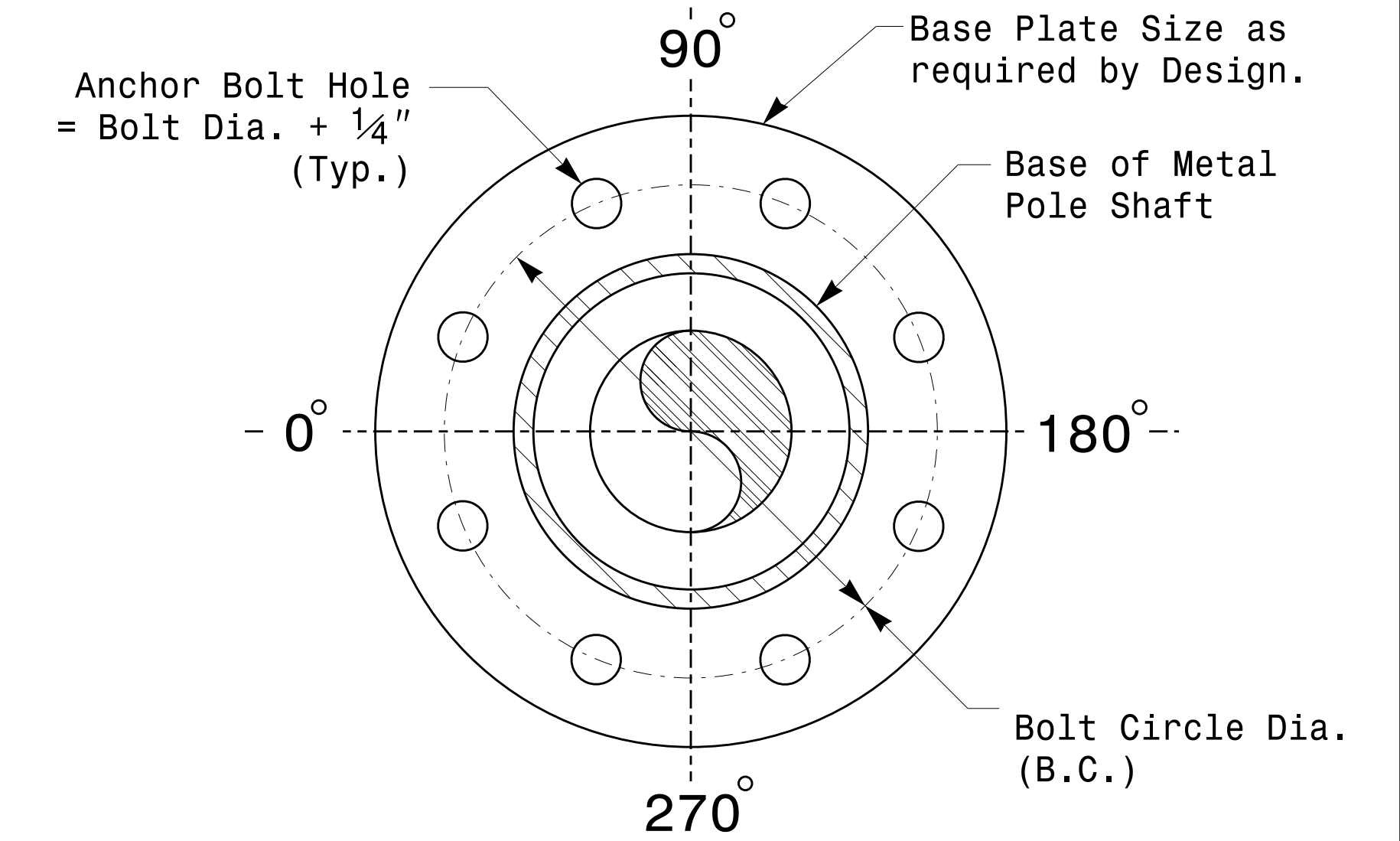
Identification Tag Details



Base Plate Template and Anchor Bolt Lock Plate Details



Anchor Bolt Detail

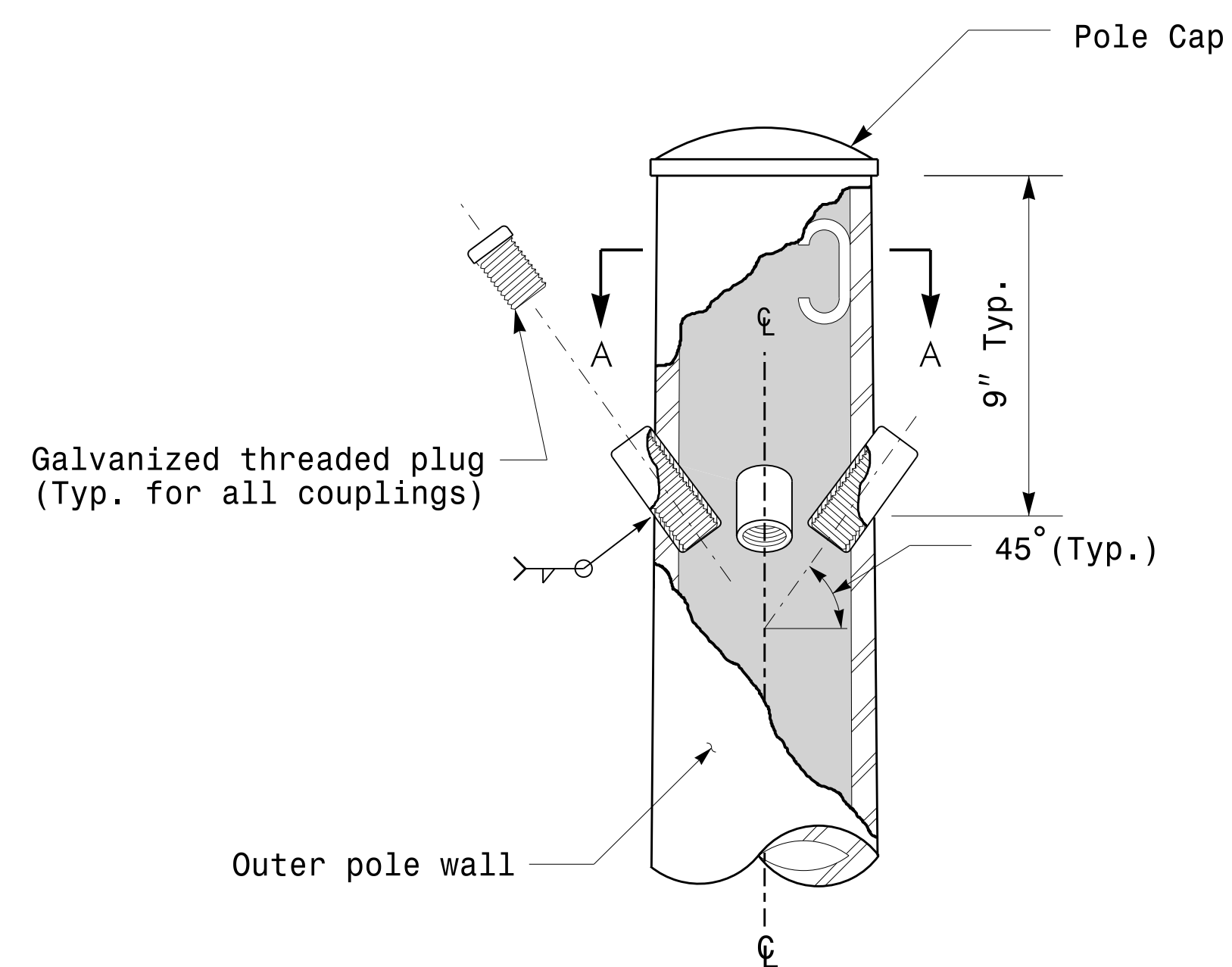


Typical Base Plate Detail

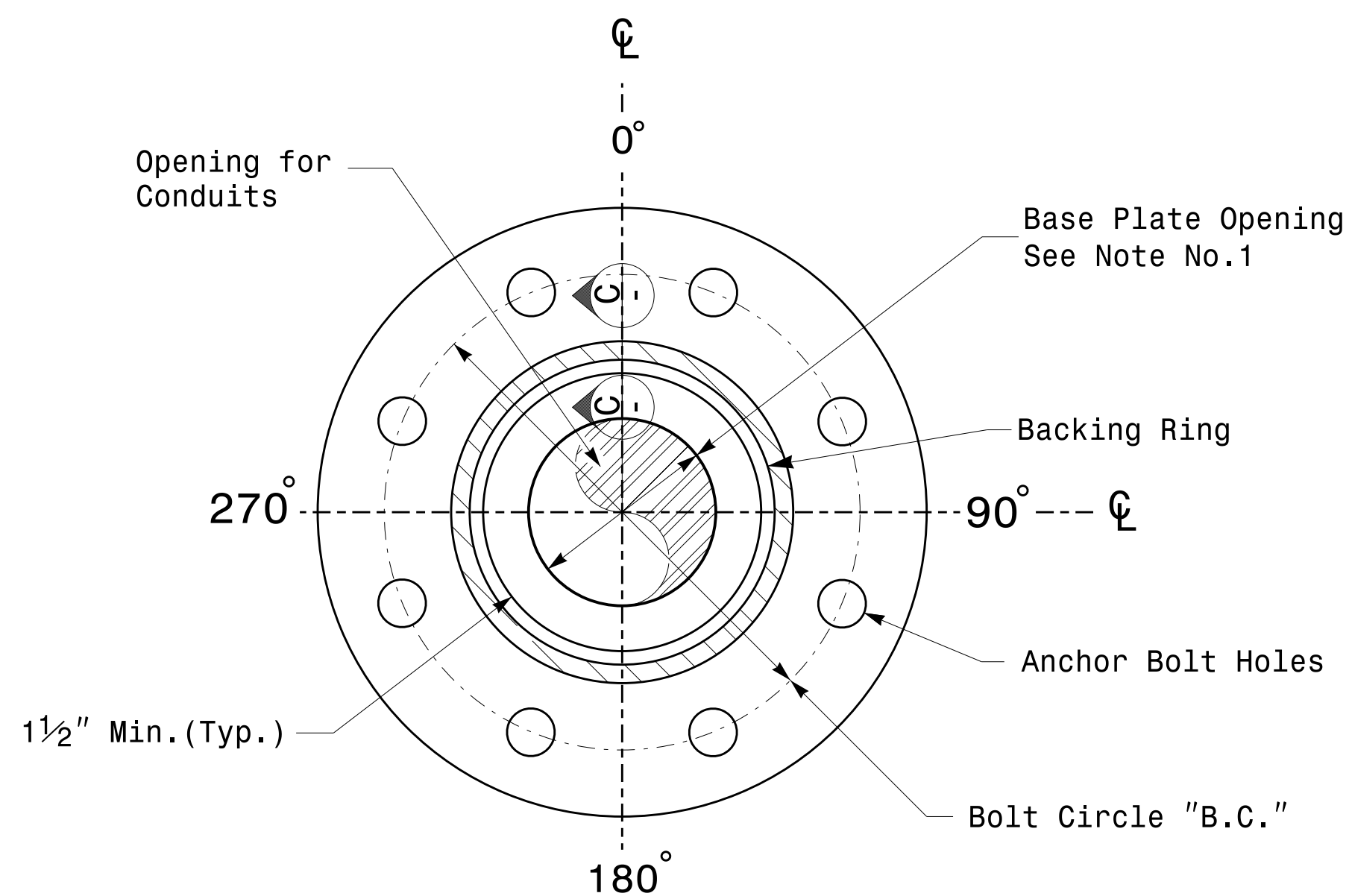
	Typical Fabrication Details For All Metal Poles		
	PLAN DATE: OCTOBER 2017 DESIGNED BY: C.F. ANDREWS	PREPARED BY: N. BITTING REVIEWED BY: D.C. SARKAR	
SCALE: 0 NA NONE	750 N. Greenfield Pkwy, Garner, NC 27529		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028094 DIBESH C. SARKAR DocuSign by: <i>Dibesh C. Sarkar</i> 10/11/2017 DATE

11-051-2017-08:30 11-050-0115 Signal&Sign Design Section Eastern Region 11-050-0115-014 Sig.M2 Std. Fabrication Detail-11-050-0115.dgn

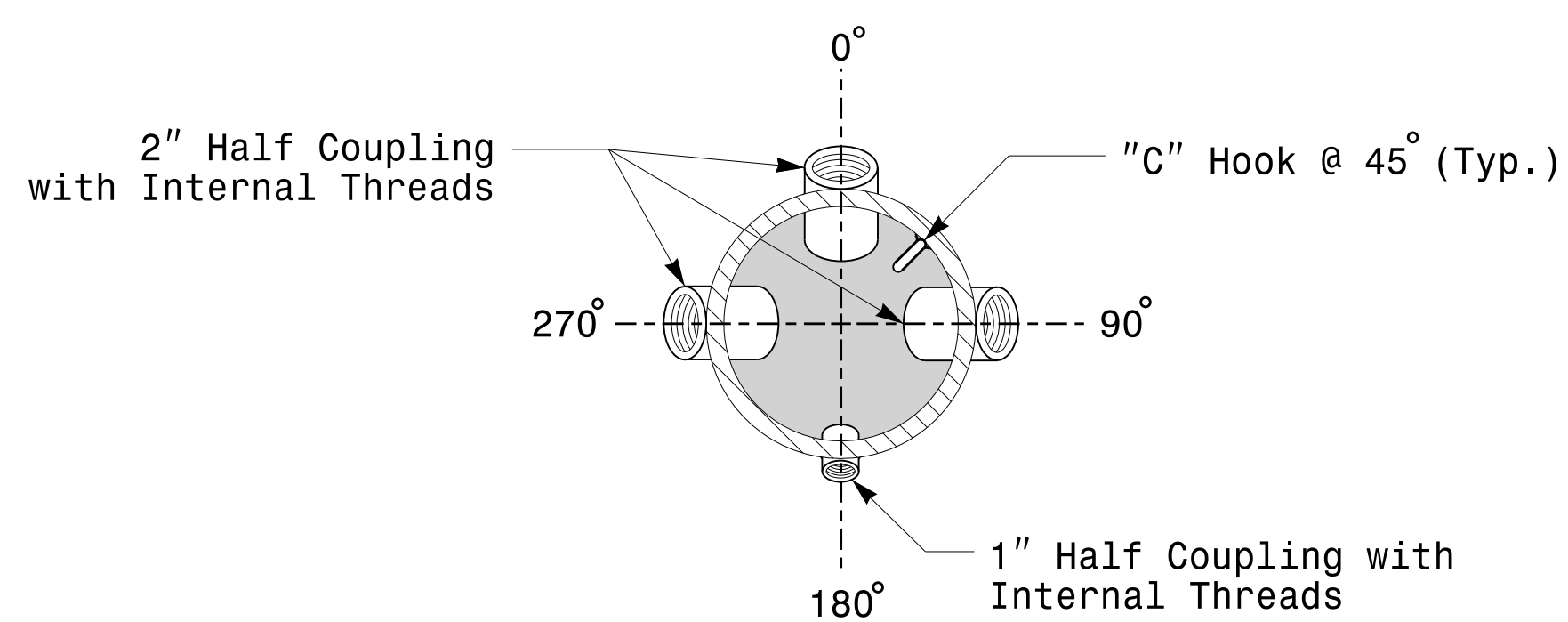
Note:
 1. Opening in pole base plate shall be equal to pole base inside diameter minus 3 1/2" but shall not be less than 8 1/2".



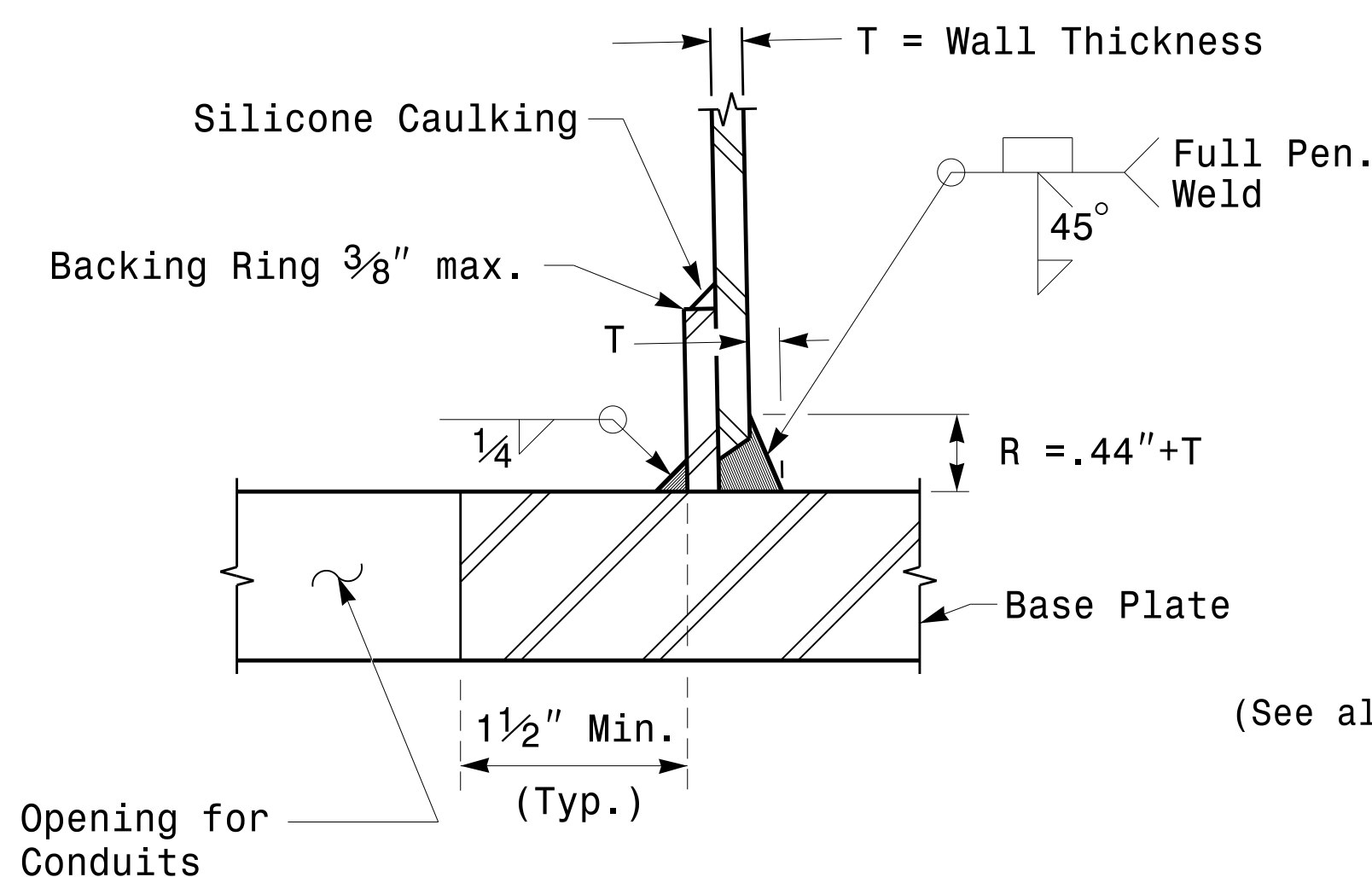
Cable Entrances at Top of Pole



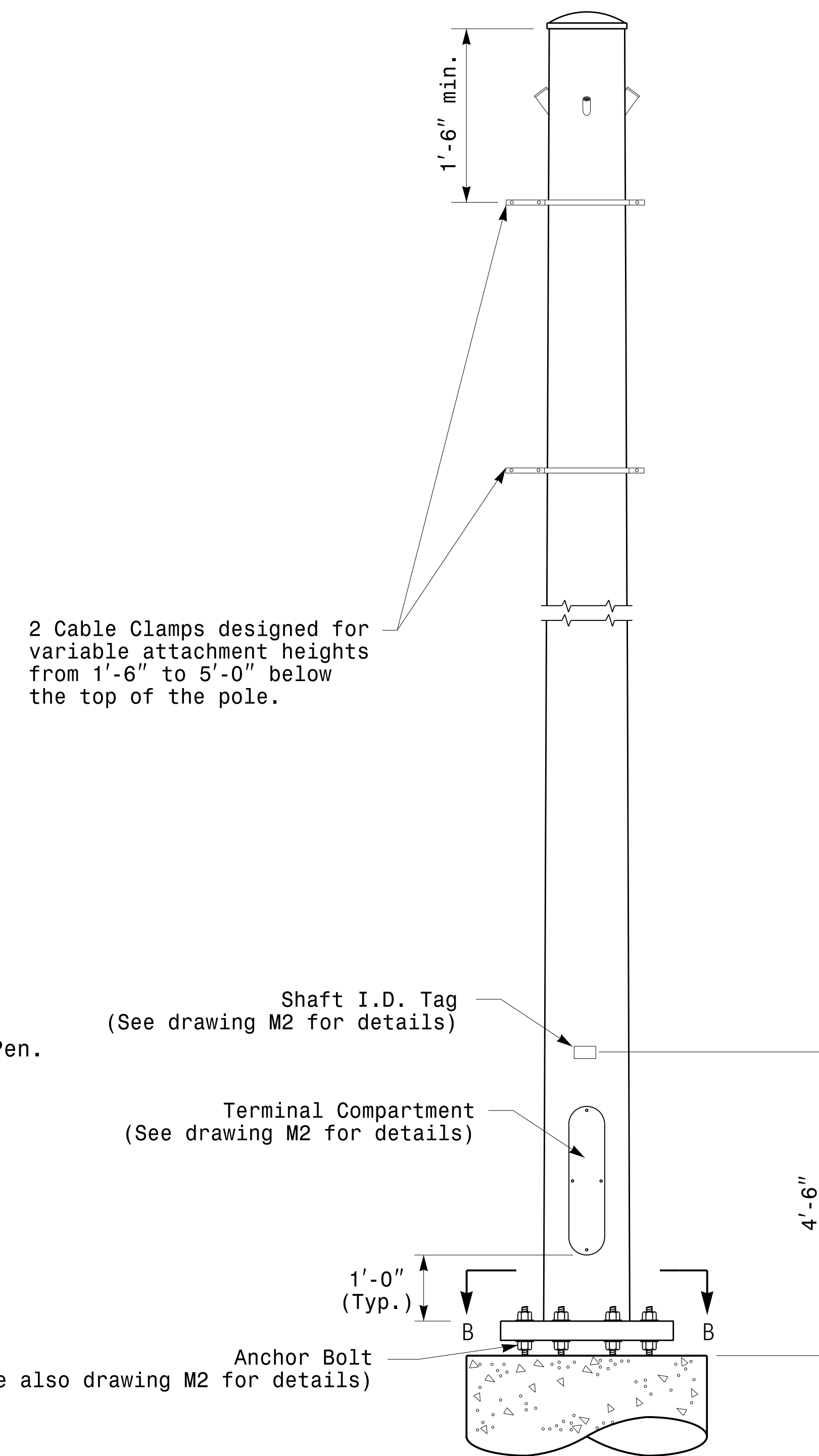
Section B-B
Pole Base Plate Details
(8 and 12 Bolt Pattern)



Section A-A
Radial Orientation for Factory Installed
Accessories at Top of Pole



Section C-C
(Pole Attachment to Base Plate)
Full-Penetration
Groove Weld Detail



Monotube Strain Pole

Prepared in the Offices of:

 750 N. Greenfield Pkwy, Garner, NC 27529

SCALE: 0 NA NONE

Typical Fabrication Details For Strain Poles

PLAN DATE: OCTOBER 2017	DESIGNED BY: K.C. DURIGON
PREPARED BY: N. BITTING	REVIEWED BY: D.C. SARKAR
REVISIONS	INIT. DATE

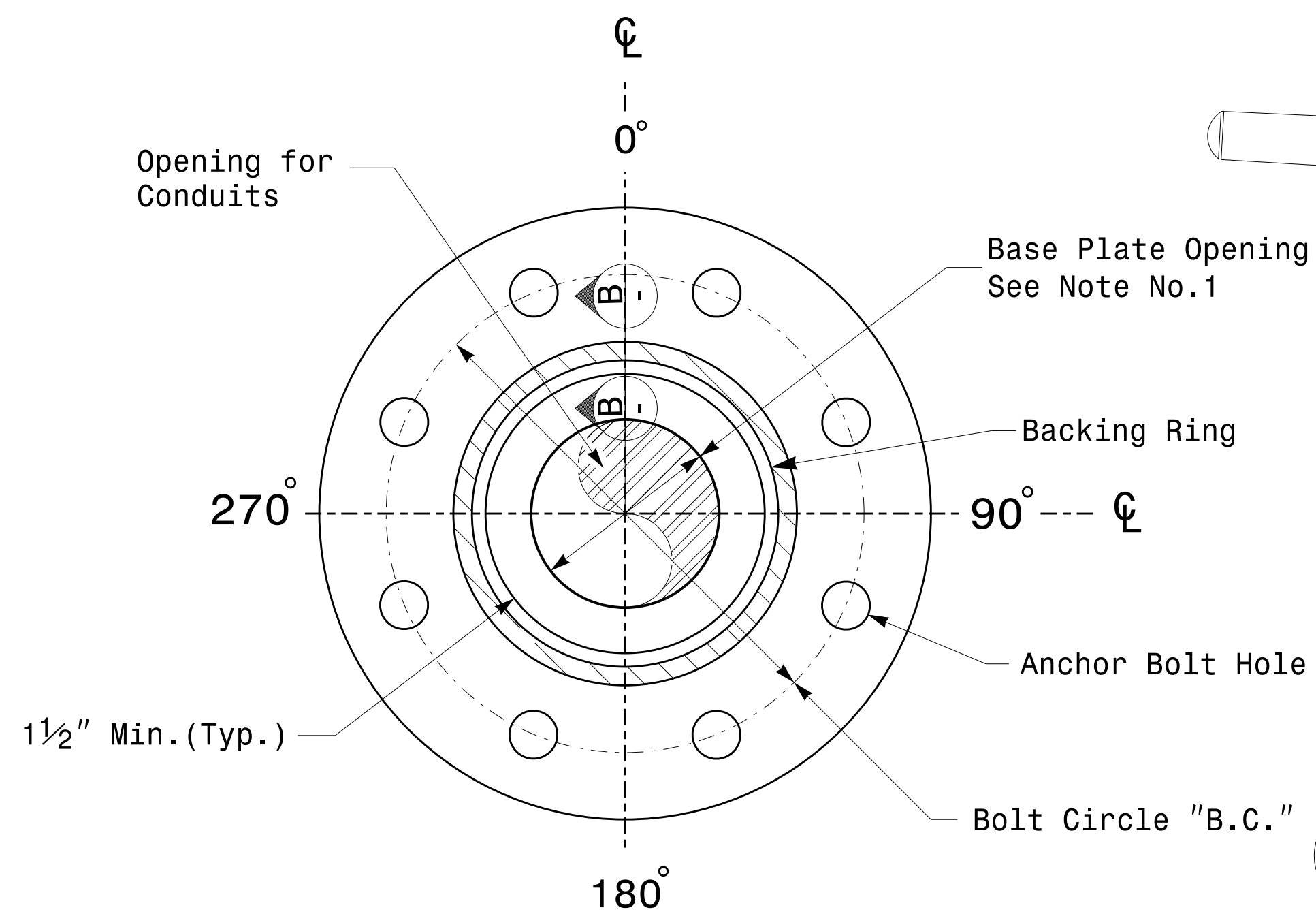
SEAL

DocuSigned by:
 Debesh C. Sarkar
 44EB87816FA4F49E

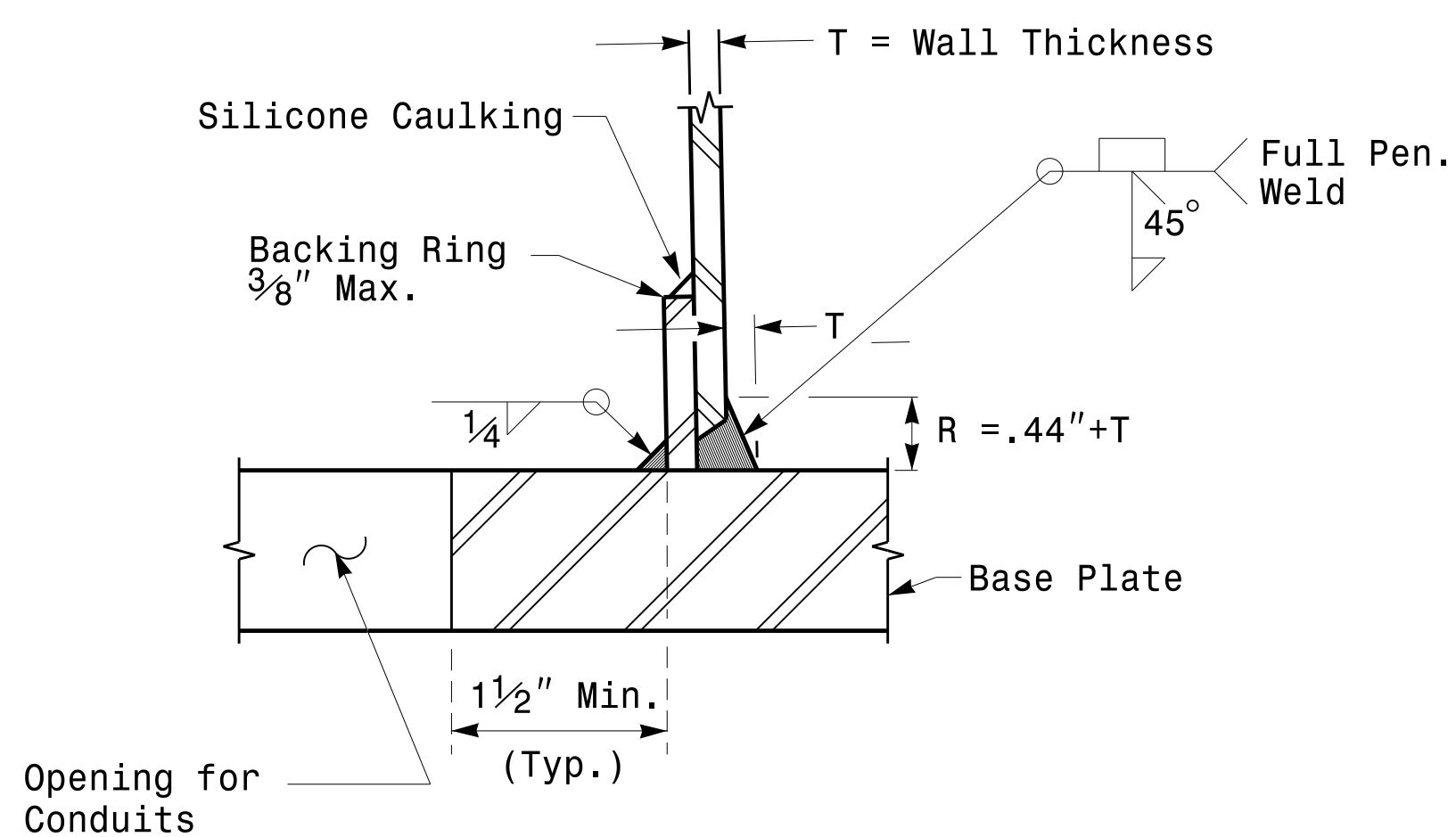
10/11/2017
 DATE

Fabrication Details – Strain Poles

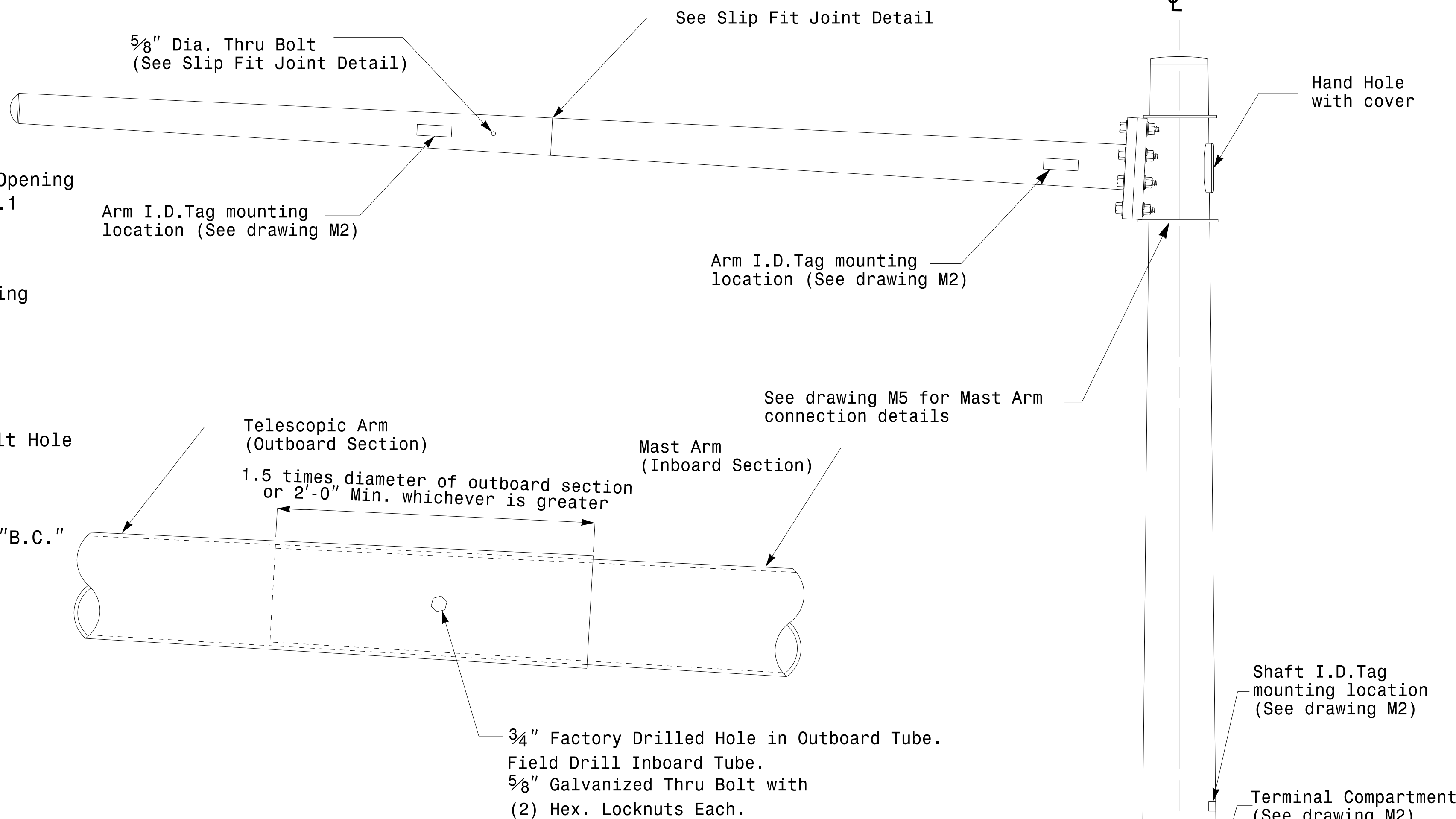
Note:
 1. Opening in pole base plate shall be equal to pole base inside diameter minus 3 1/2" but shall not be less than 8 1/2".



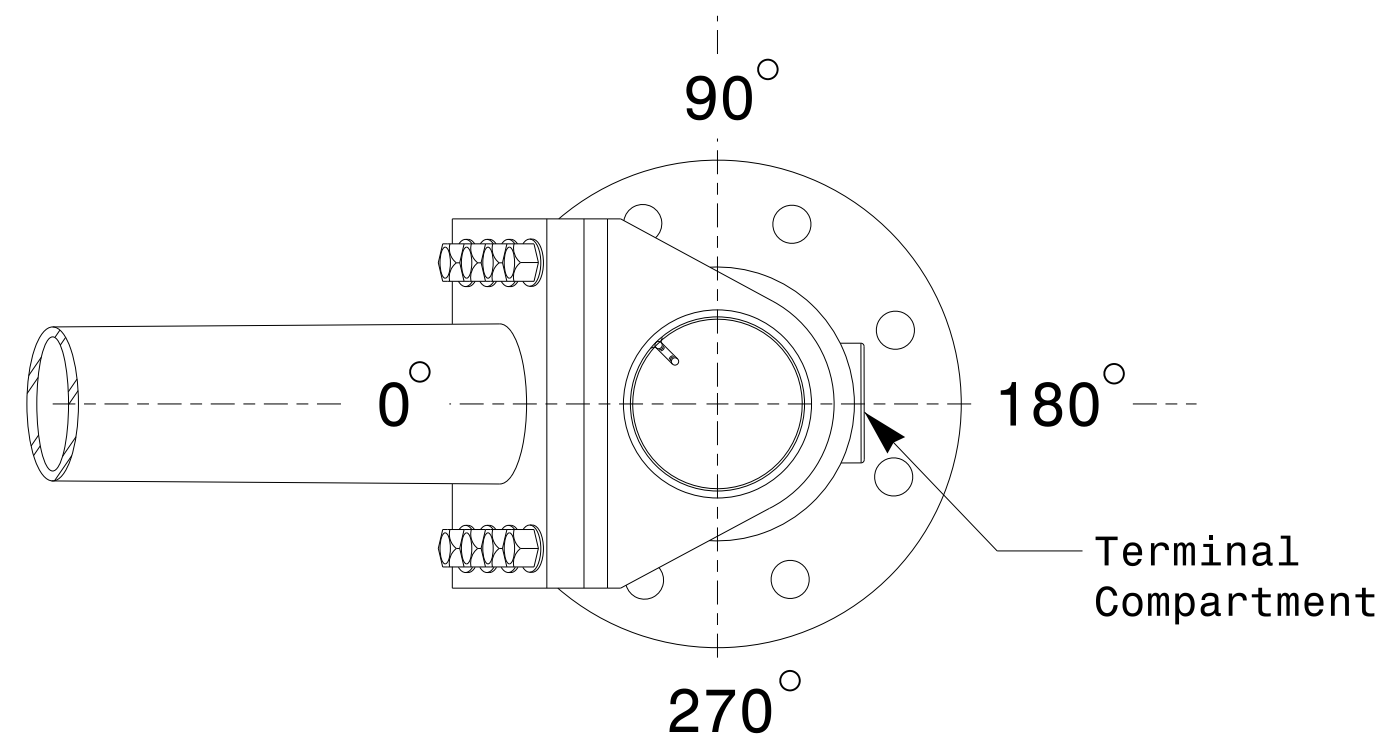
Section A-A
Pole Base Plate Details



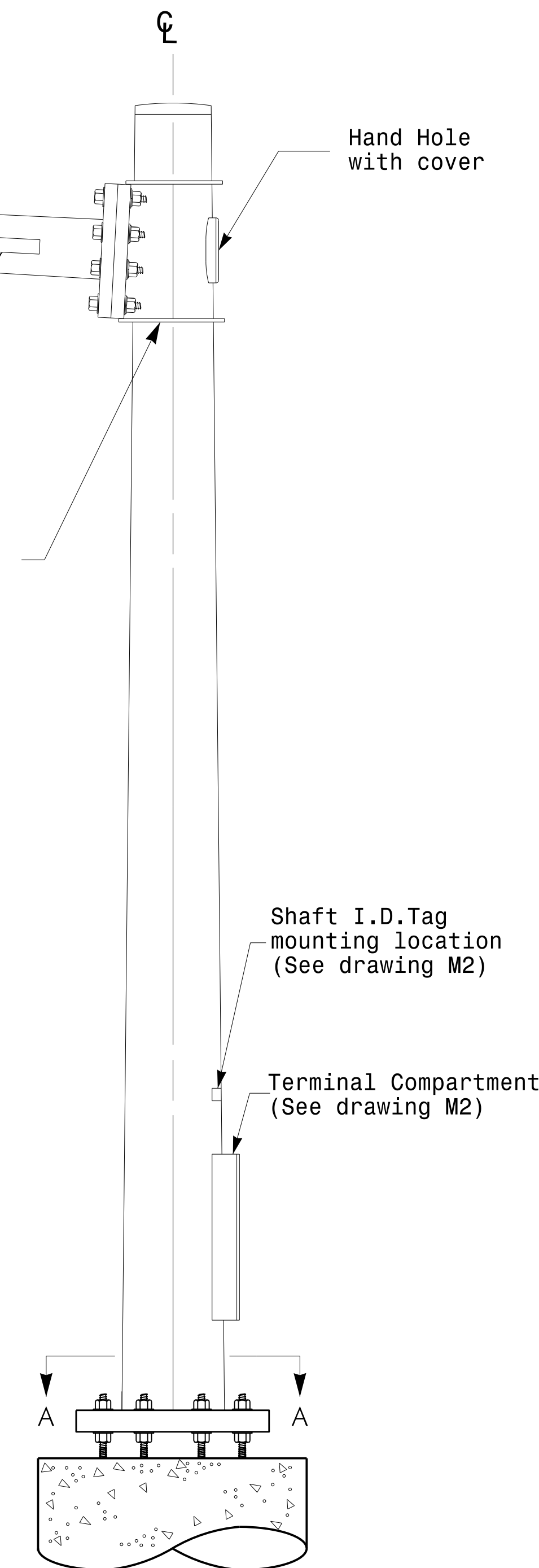
Section B-B
 (Pole Attachment to Base Plate)
Full-Penetration Groove Weld Detail



Slip Fit Joint Detail for Mast Arm



Mast Arm Radial Orientation



Mast Arm Pole

Fabrication Details – Mast Arm Poles

	Typical Fabrication Details For Mast Arm Poles		SEAL
	PLAN DATE: OCTOBER 2017 PREPARED BY: N. BITTING	DESIGNED BY: K.C. DURIGON REVIEWED BY: D.C. SARKAR	
SCALE: 0 NA NONE	DocuSigned by: Dinesh C. Sarkar		10/11/2017 DATE

11-OCT-2017 08:33
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 P:\2108

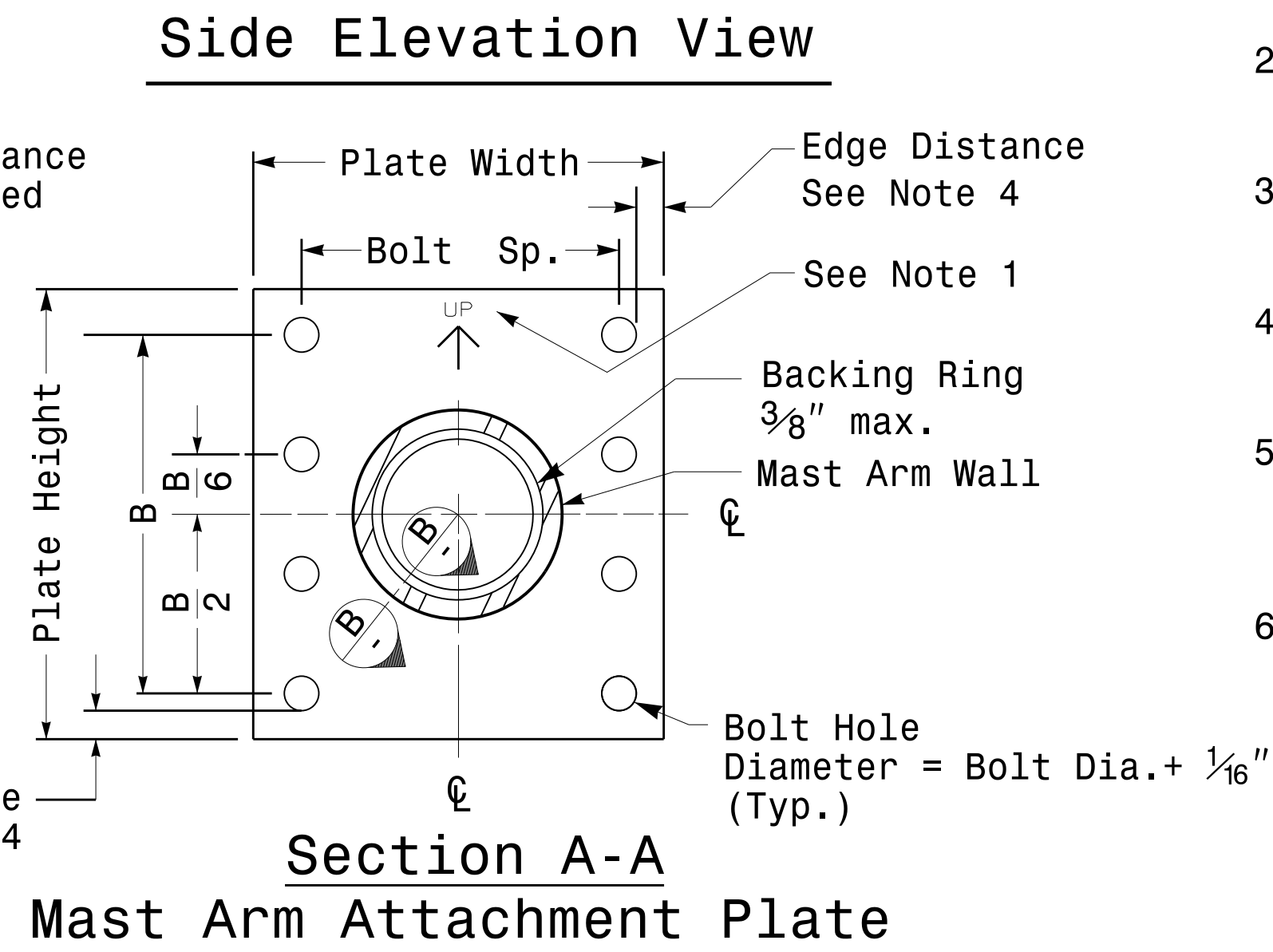
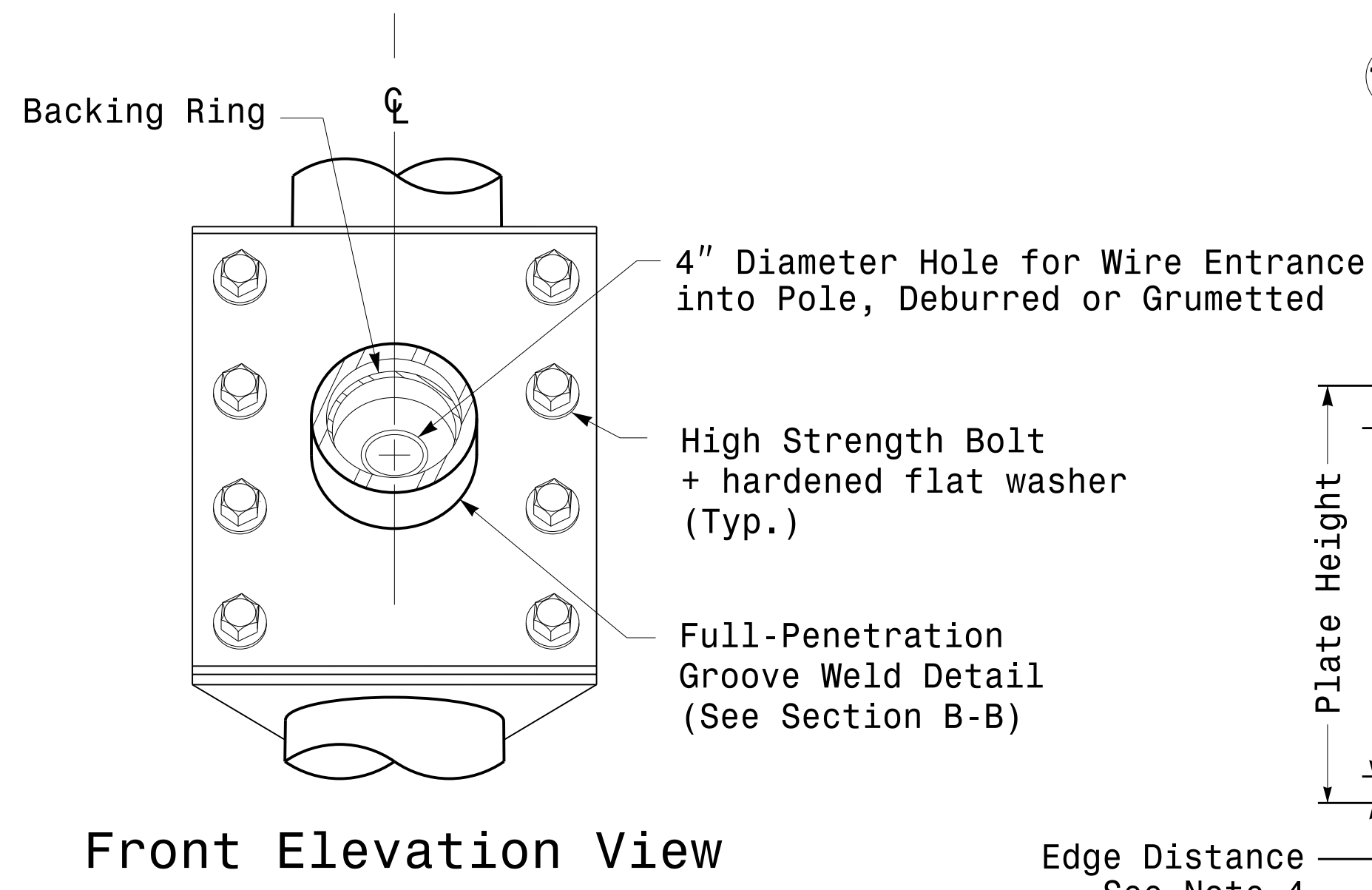
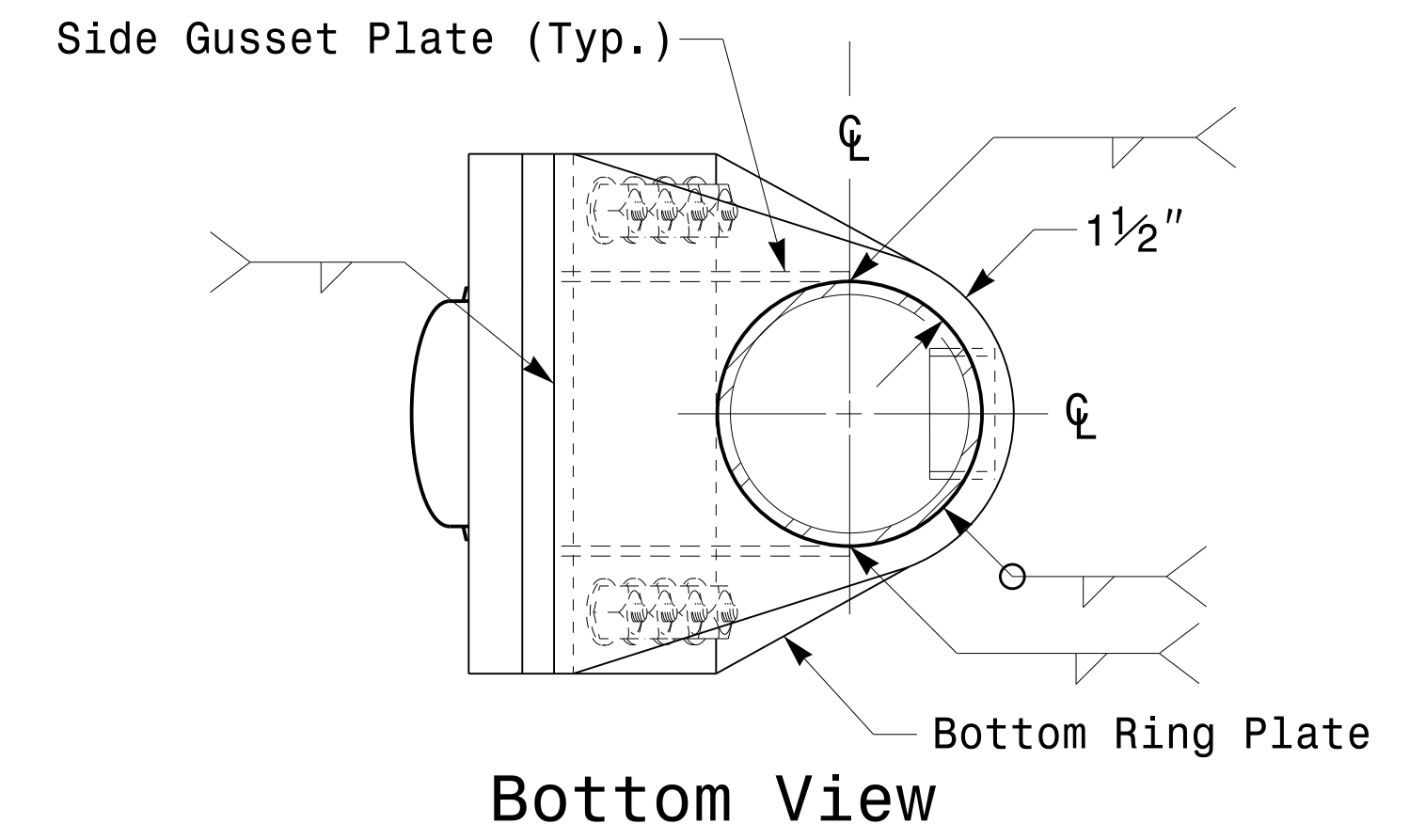
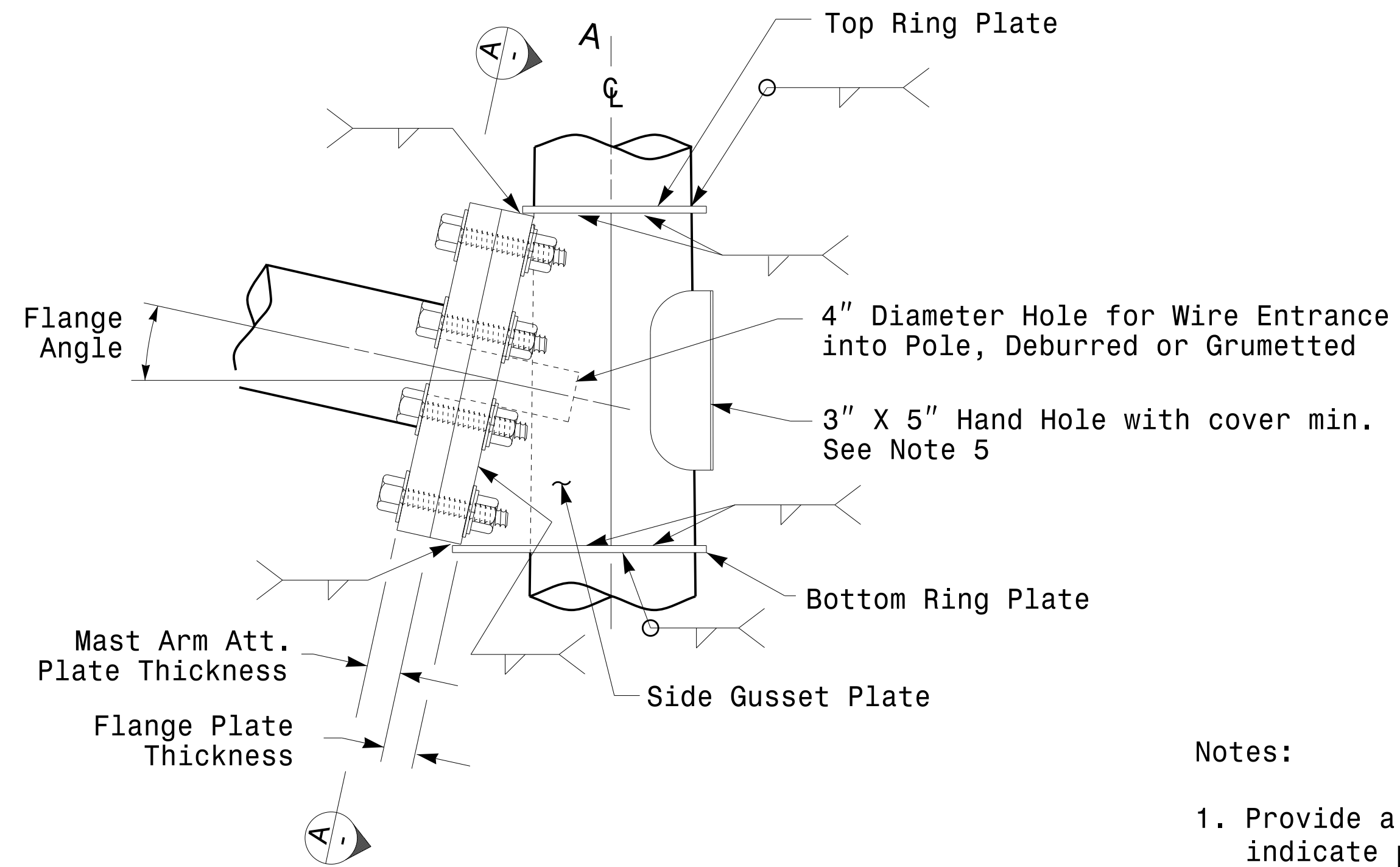
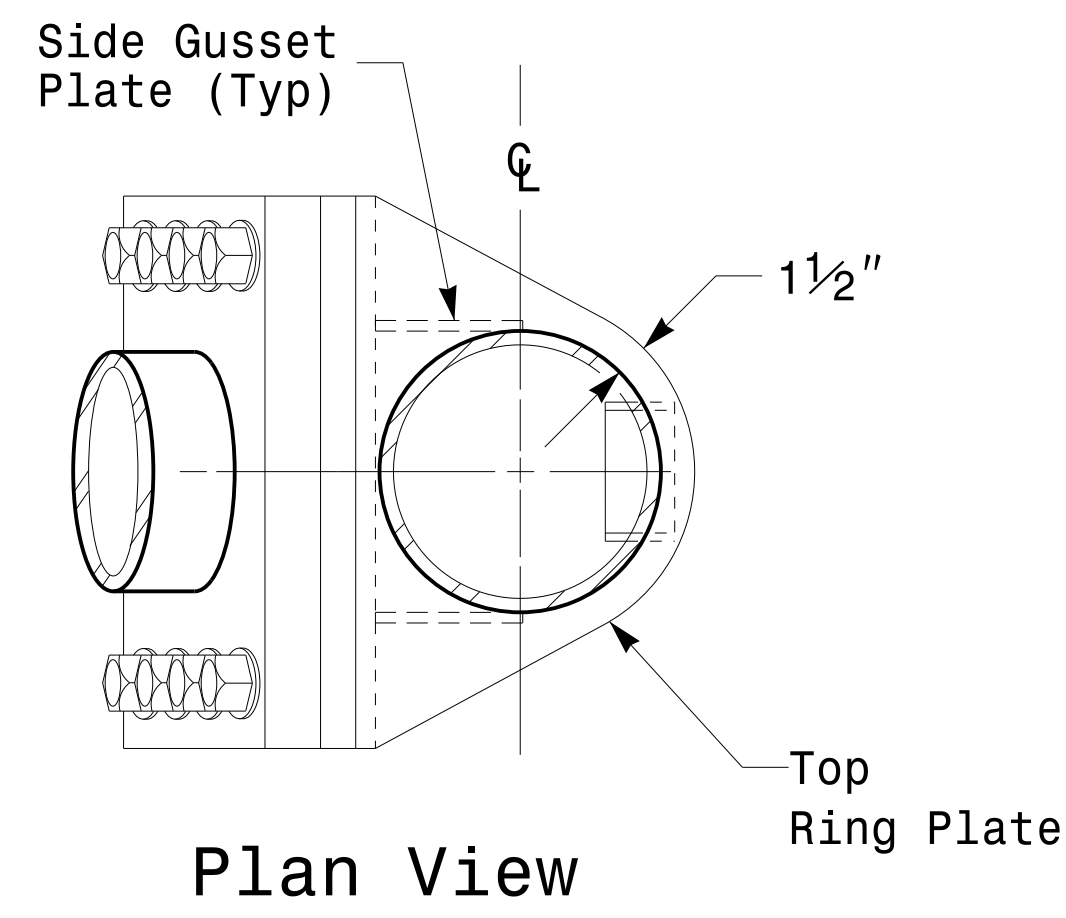
Welded Ring Stiffened Mast Arm Connection

PROJECT ID. NO.

SHEET NO.

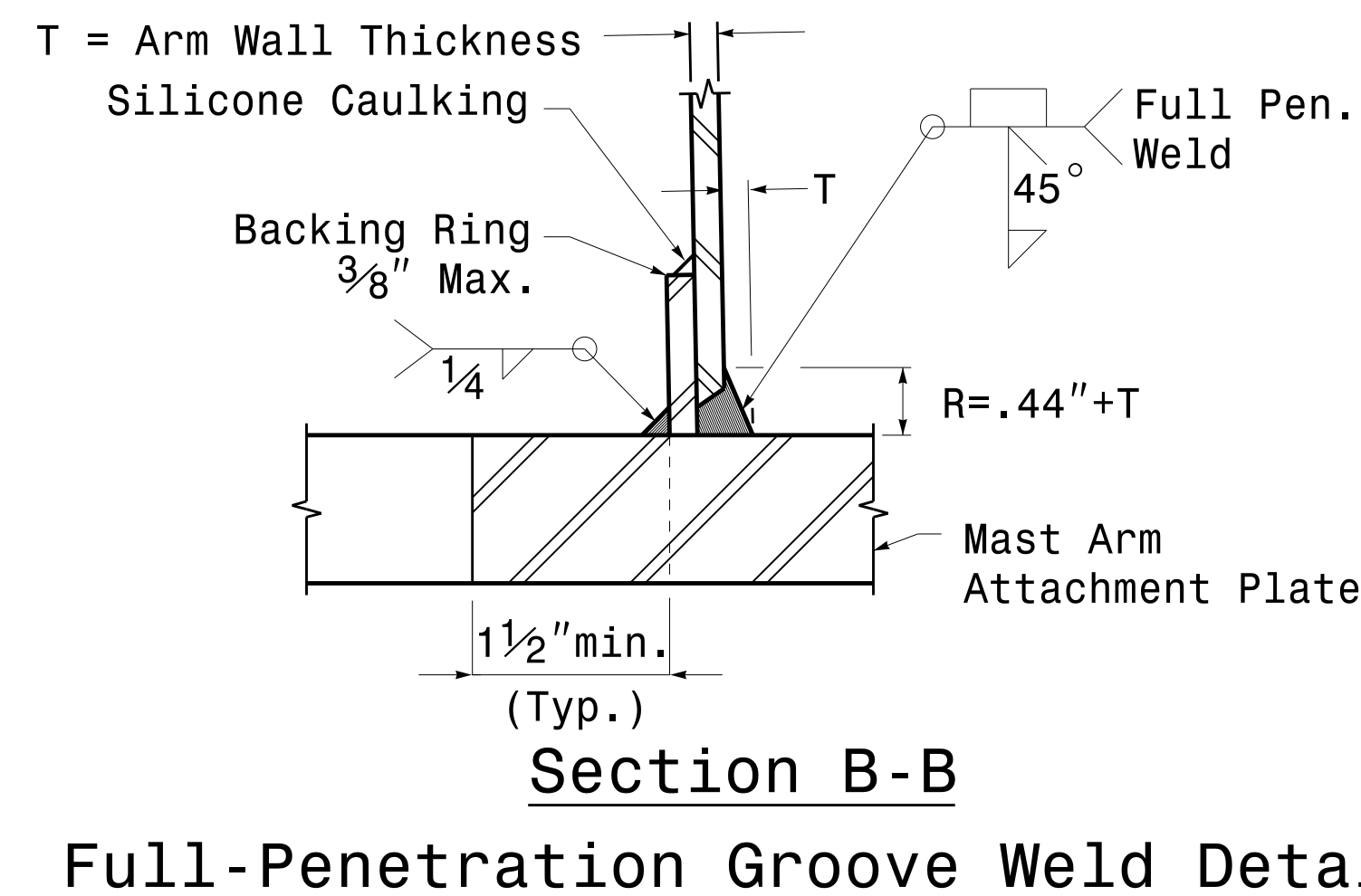
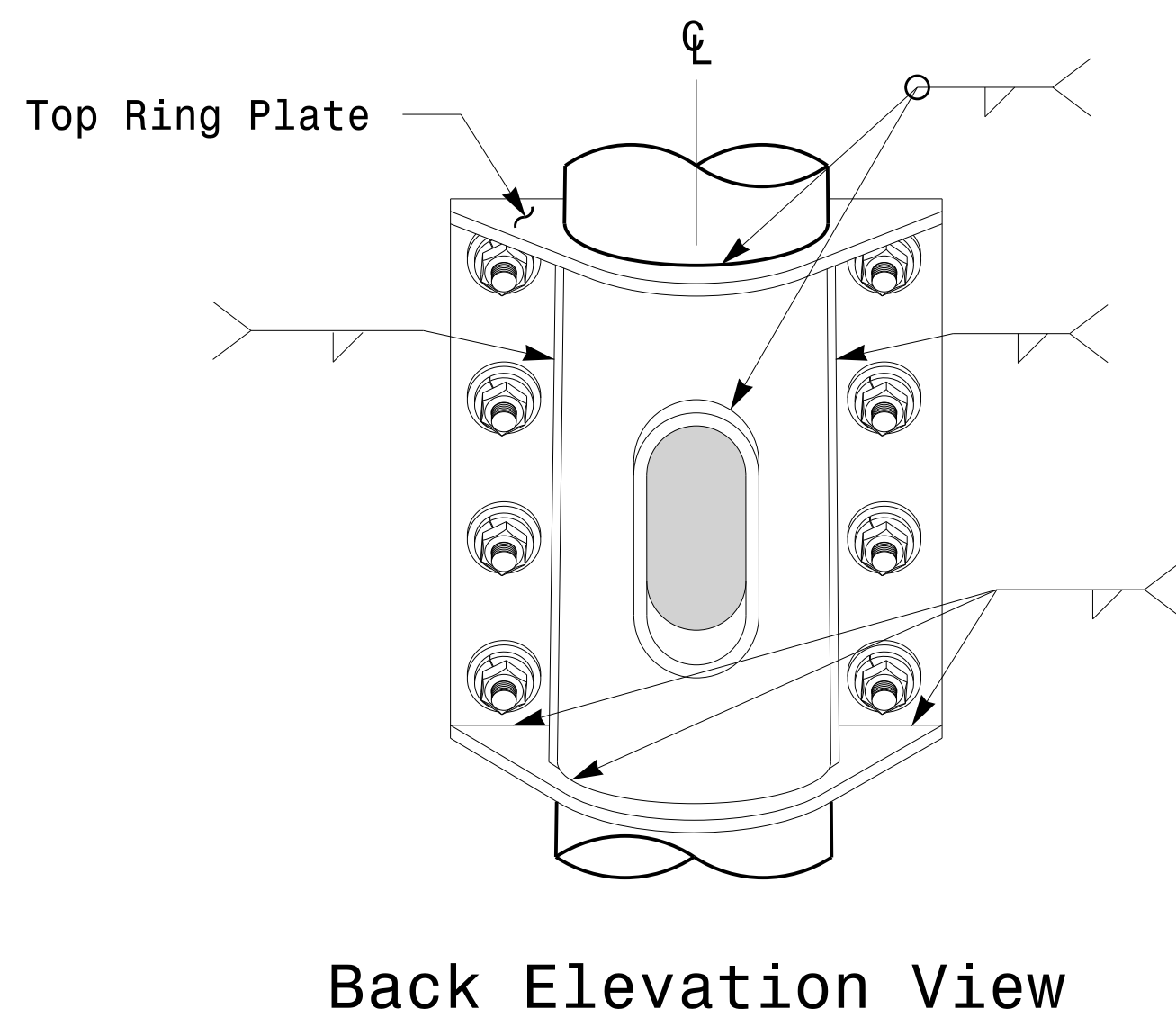
U-5826

Sig.M5



Notes:

1. Provide a permanent means of identification above the mast arm to indicate proper attachment orientation of the mast arm.
2. Designer will determine the size of all structural components, plates, fasteners, and welds shown unless they are already specified.
3. Fabricator is responsible for providing appropriate holes at drainage points to drain galvanizing materials.
4. For minimum edge distance follow AISC Table J3.4 and J3.5. For nominal bolt hole size use Table J3.3.
5. Provide upper handhole as necessary when shaft extensions are required for luminaire arms or camera. For poles without luminaires/camera, wiring can be done through the top of pole.
6. Allowable range of flange tilt angle will vary from 0° to as required.



Prepared in the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE: 0 NA NONE

Typical Fabrication Details For Mast Arm Connection To Pole

PLAN DATE: OCTOBER 2017	DESIGNED BY: C.F. ANDREWS
PREPARED BY: N. BITTING	REVIEWED BY: D.C. SARKAR
REVISIONS	INIT. DATE

SEAL

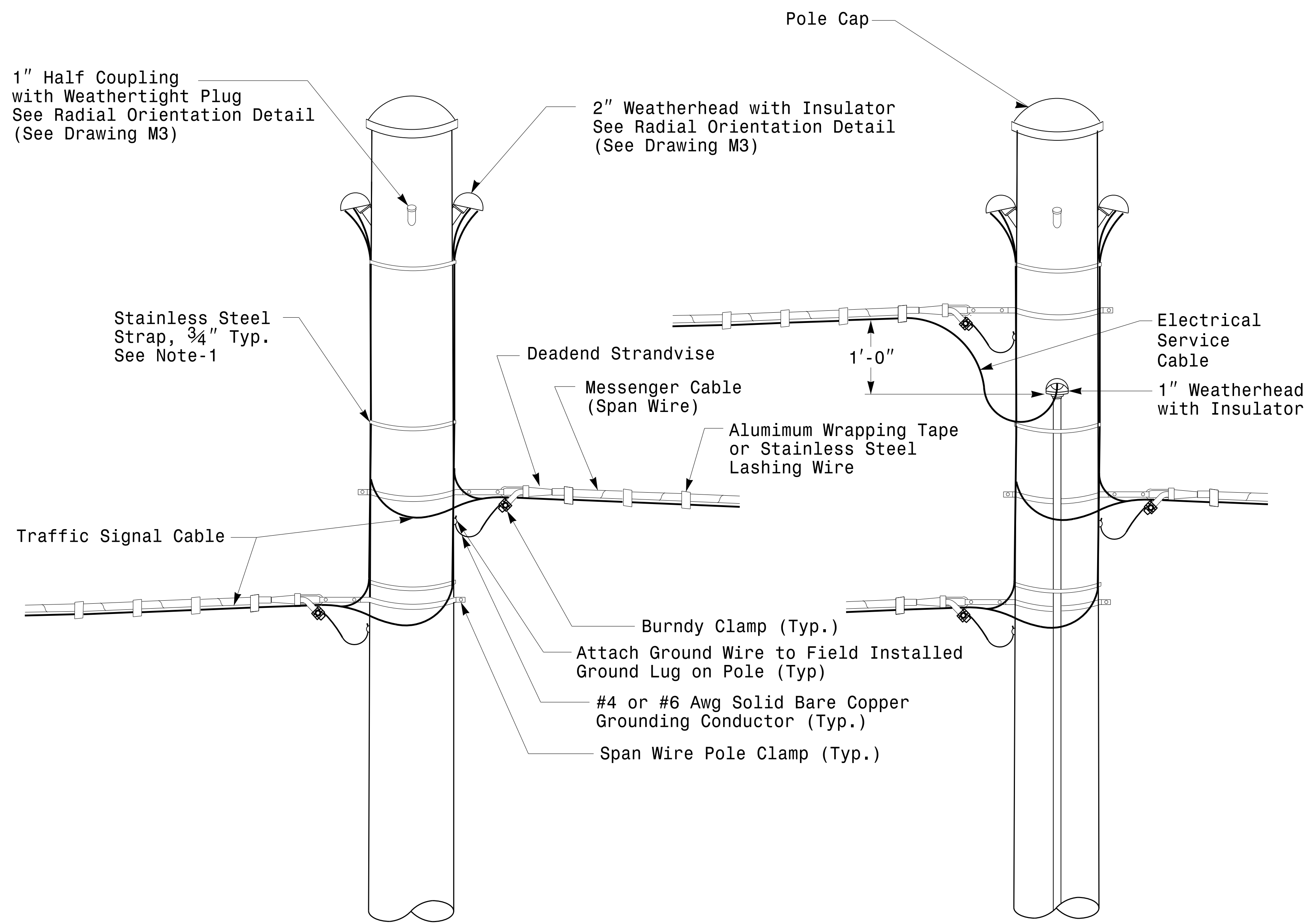
Debesh C. Sarkar

10/11/2017

DATE

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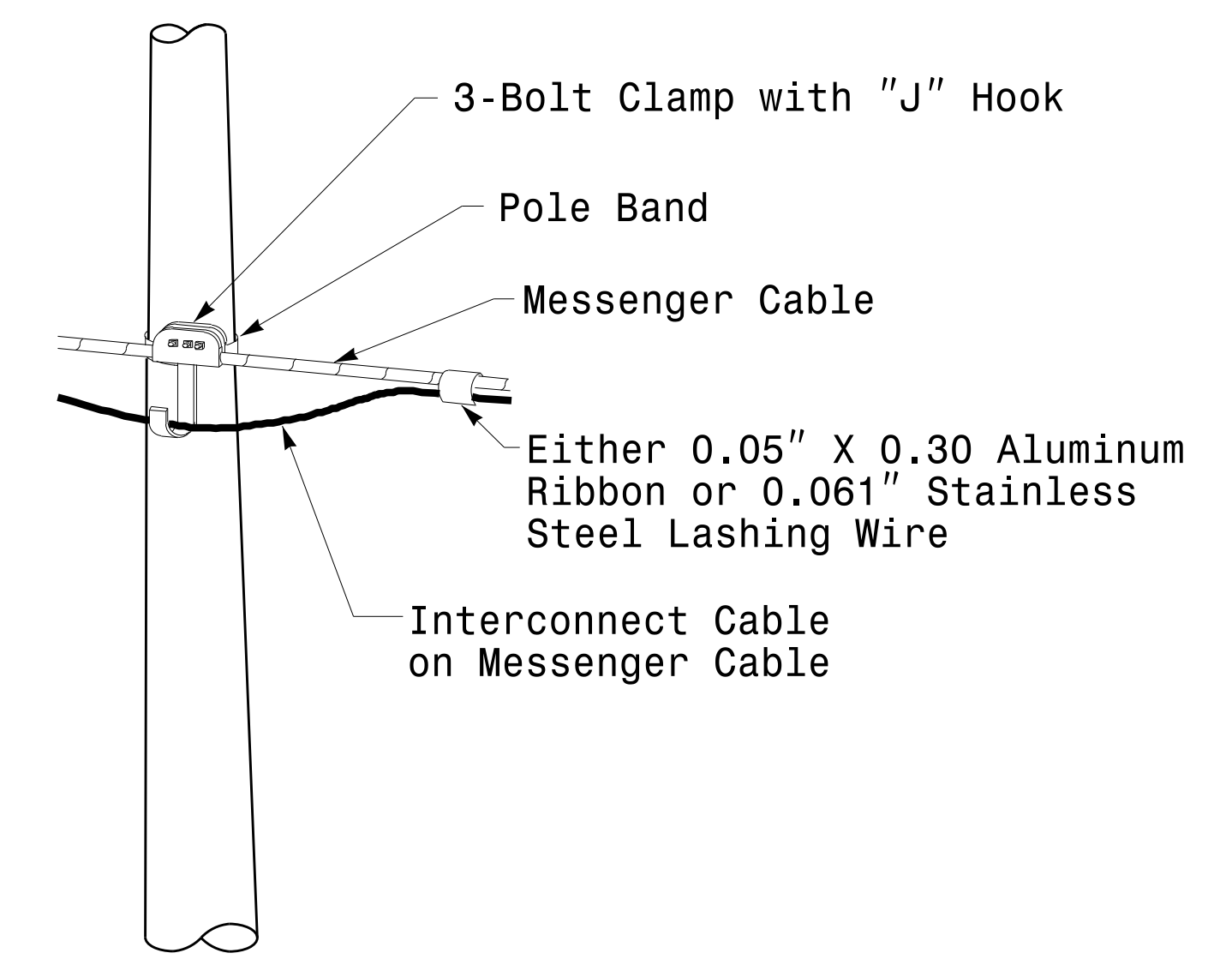
Fabrication Details - Mast Arm Connection



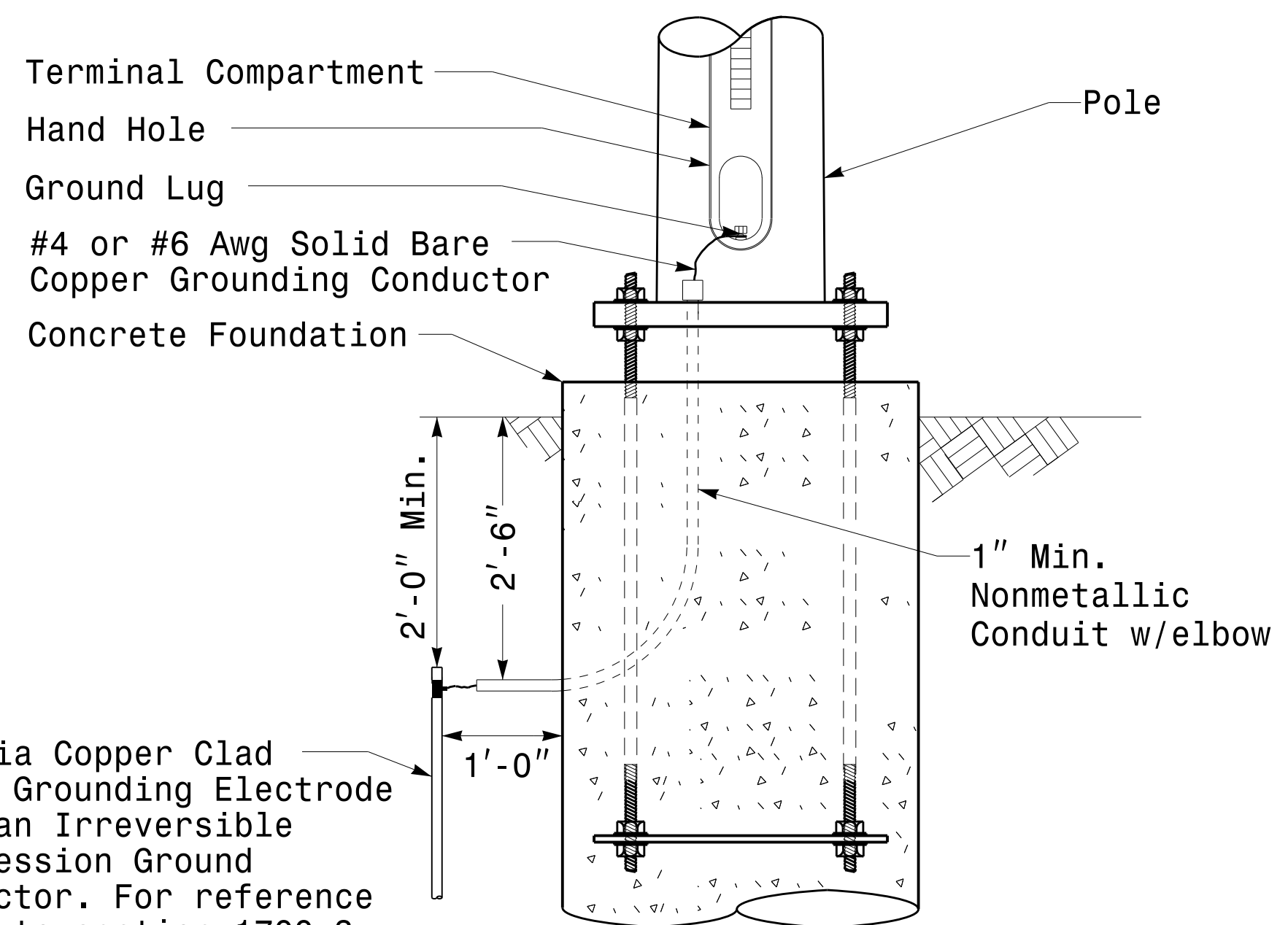
Strain Pole Attachments

NOTE:

1. Strap all signal cables to the side of the pole with 3/4" stainless steel straps when the distance between the spanwire attachment clamp and the weatherheads exceeds 3'-0".
2. Provide minimum two spanwire pole clamps per pole.
3. It is prohibited to attach two span wires at one pole clamp.
4. For general requirements refer to NCDOT Standard Specifications for Roadway and Structures, January 2018.



Attachment of Cable to Intermediate Metal Pole

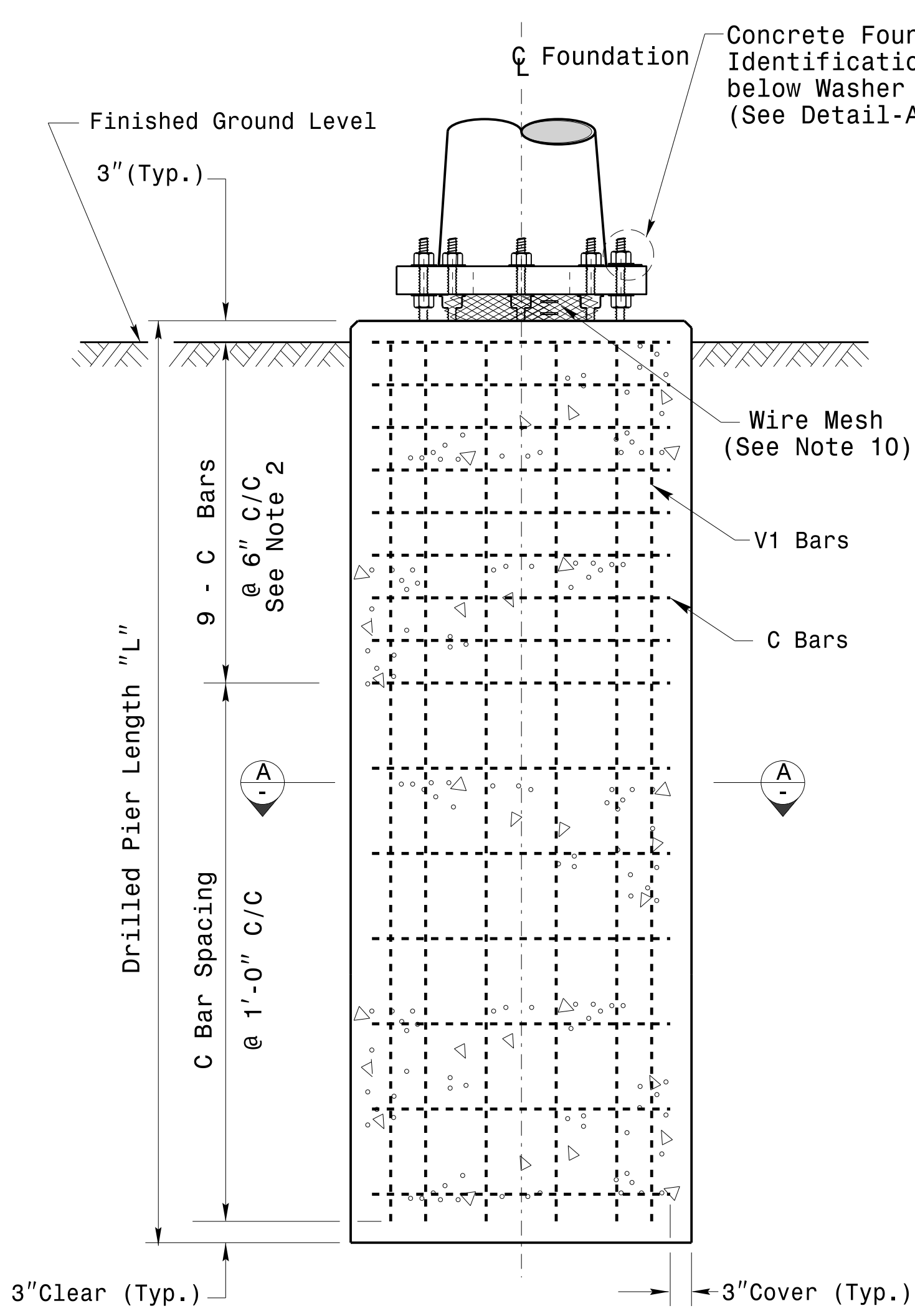


5/8" Dia Copper Clad Steel Grounding Electrode with an Irreversible Compression Ground Connector. For reference refer to section 1700-3 K and L for electrical grounding and bonding requirements, See Note 4.

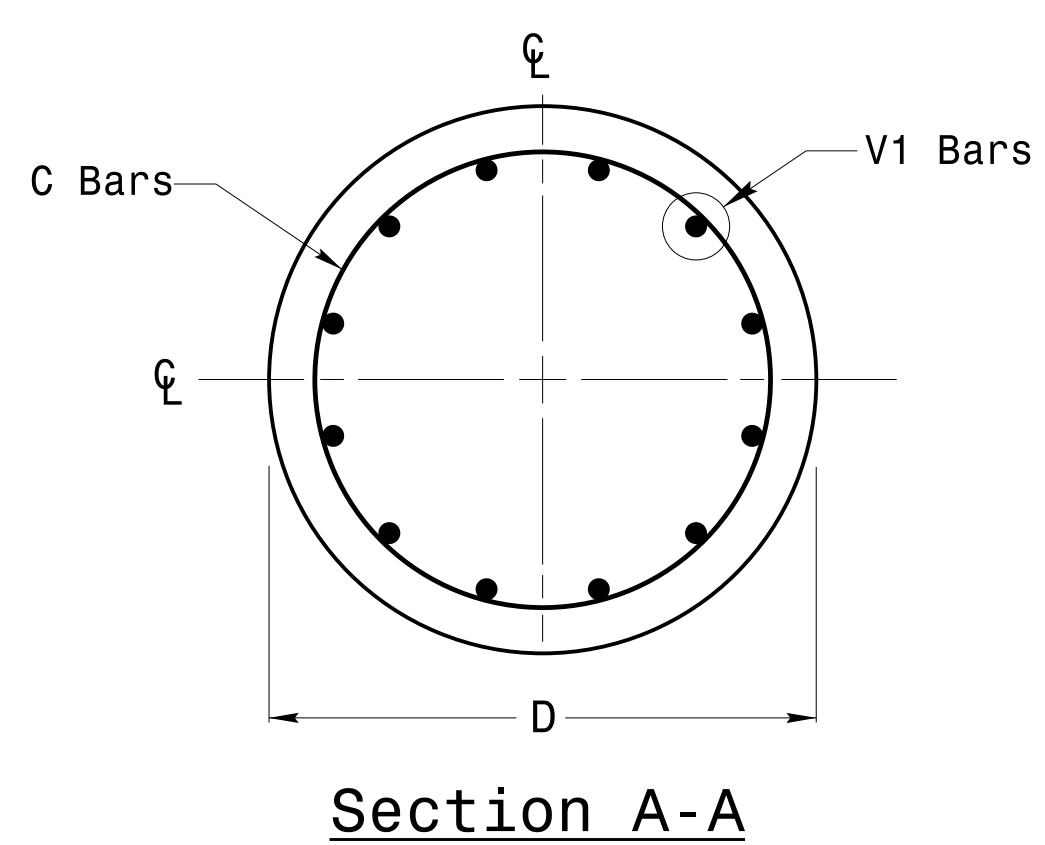
Metal Pole Grounding Detail For Strain Pole and Mast Arm

11-DEC-2017 08:36 136504115 StrainPole.dgn Design Section Eastern Region\m\ Sheets\2016\2014 Sig.M6 Std. Fabrication Detail-Strain Poles.dgn

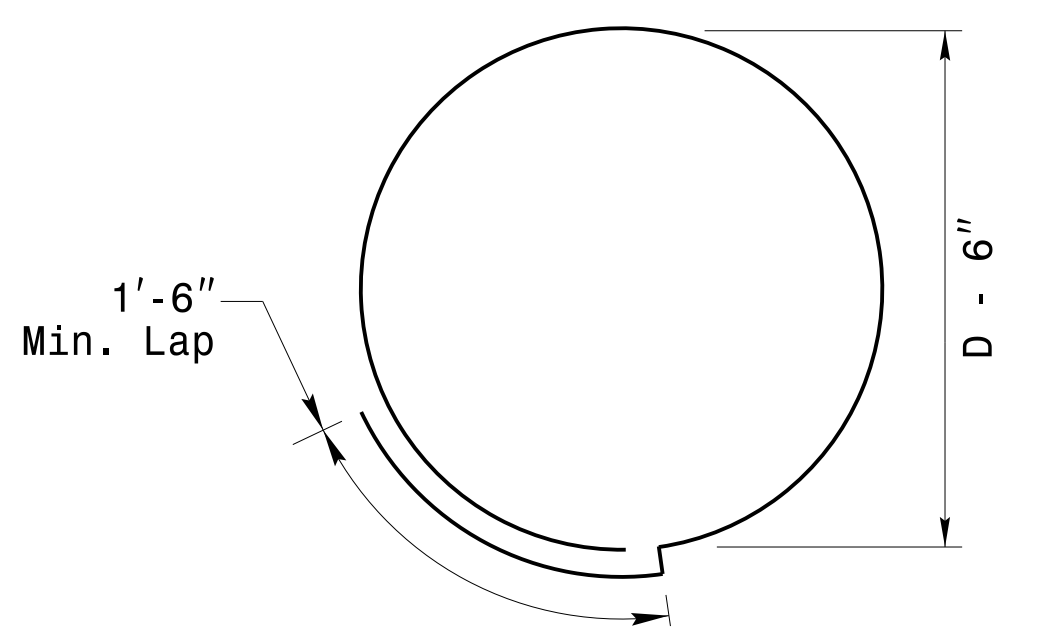
<p>750 N. Greenfield Pkwy, Garner, NC 27529</p>	<p>Typical Fabrication Details For Strain Pole Attachments</p>		<p>SEAL</p> <p>DocuSigned by: D. C. Sarkar DATE</p>
	<p>PLAN DATE: OCTOBER 2017</p> <p>PREPARED BY: N. BITTING</p> <p>SCALE: 0 NA NONE</p>	<p>DESIGNED BY: C.F. ANDREWS</p> <p>REVIEWED BY: D.C. SARKAR</p>	



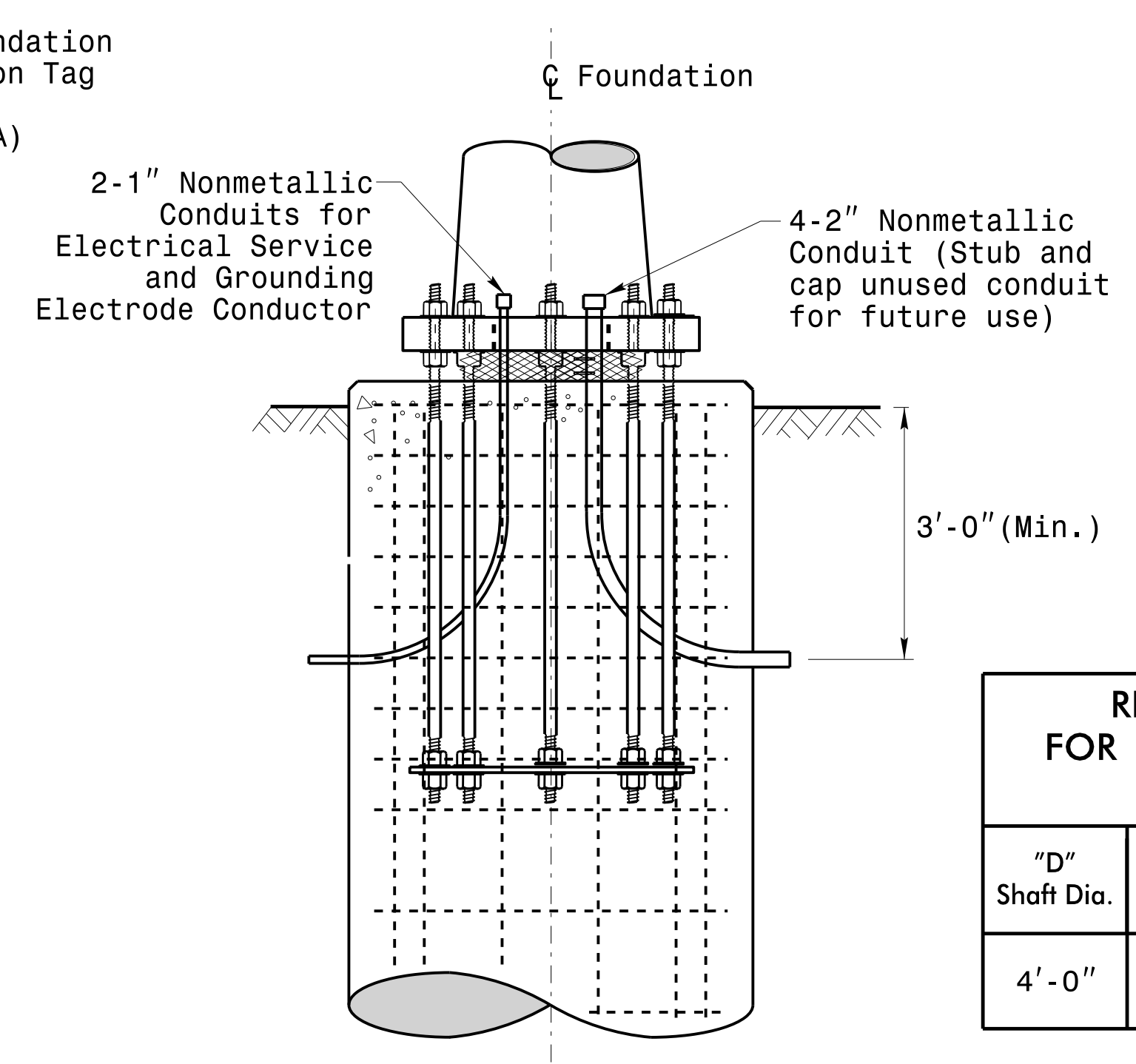
Concrete Shaft Elevation



Section A-A



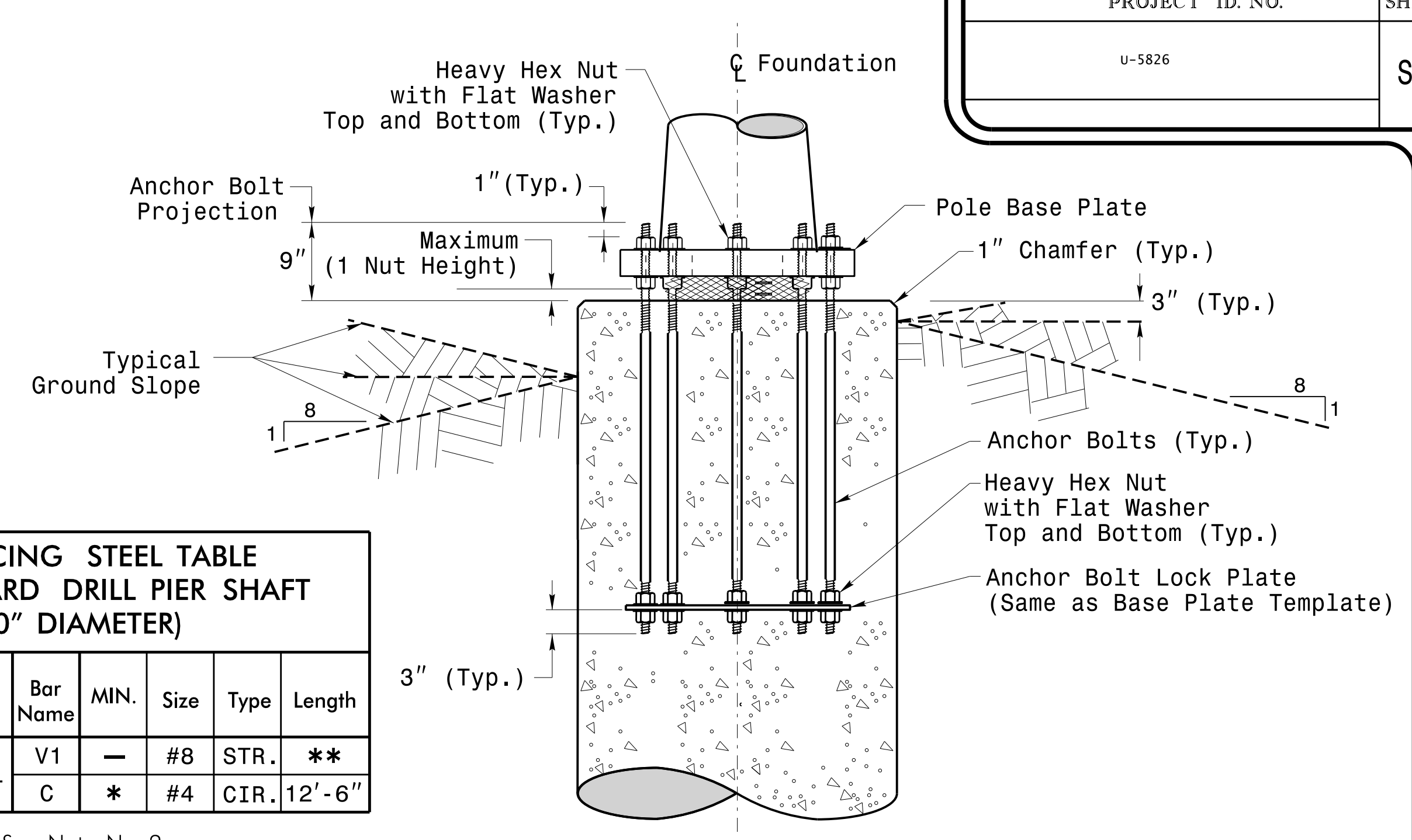
Typical "C" Bar Detail



Typical Foundation Conduit Details

"D" Shaft Dia.	Conc. Volume (cu. yds.)	Bar Name	MIN.	Size	Type	Length
4'-0"	.465 x L	V1	-	#8	STR.	**
		C	*	#4	CIR.	12'-6"

* See Note No. 2
** See Note No. 3

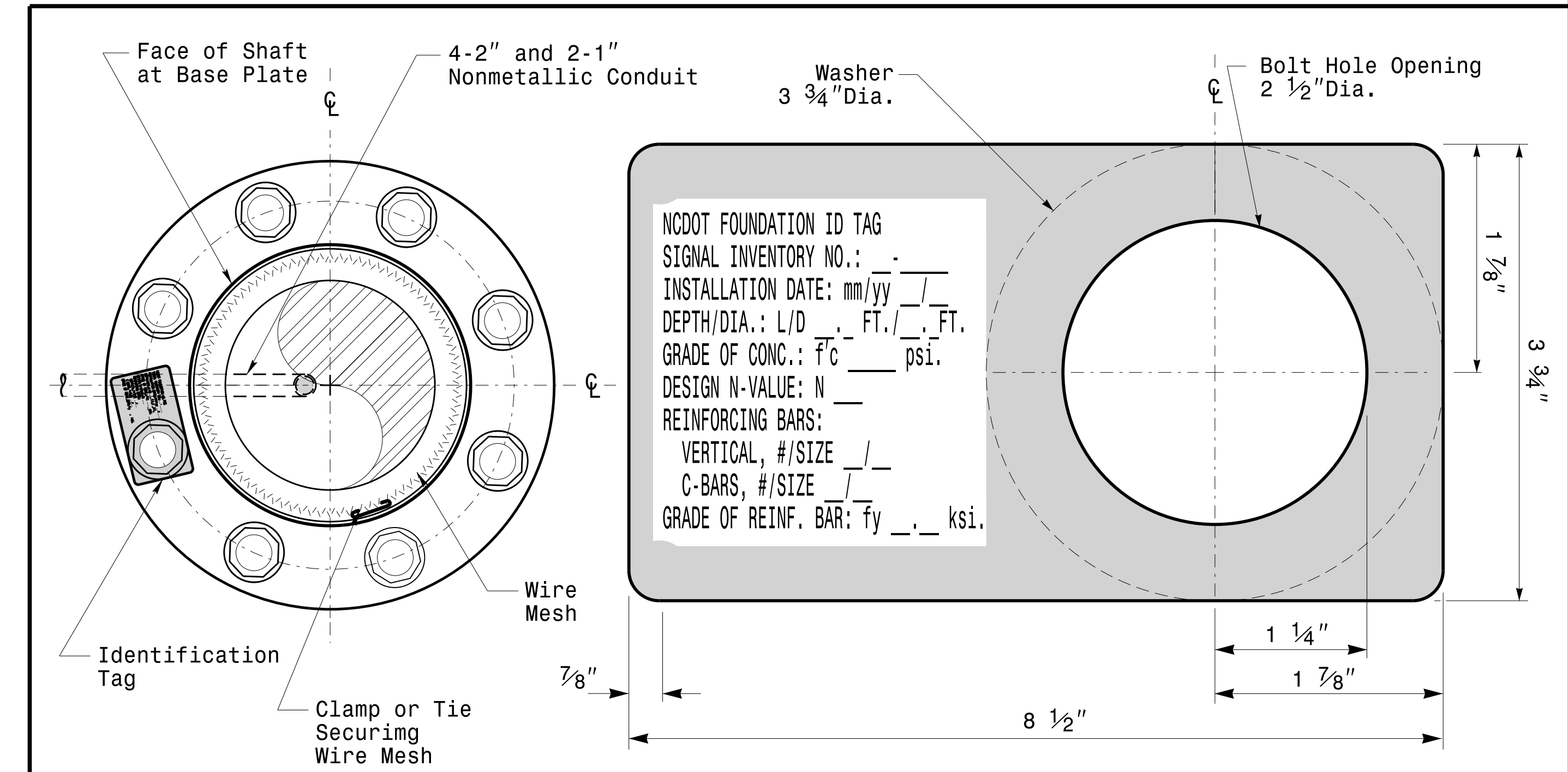


Typical Foundation Anchor Bolt Details

(Reinforcing Cage Not Shown for Clarity)

General Notes:

- If actual subsurface conditions differ significantly from boring data contact the Engineer before excavating or placing concrete.
- Circular tie reinforcing rings may be vertically adjusted by +/-3" at a depth between 2'-0" and 3'-0" to facilitate the installation of electrical conduit entering in the cage.
- For standard foundations, see sheet Sig. M8 for details. Vertical reinforcing bars (V1) may be horizontally adjusted by +/-3" to facilitate the installation of electrical conduit entering into the cage.
- Provide 2" to 5" foundation projection above ground level depending on the ground slope.
- Unless otherwise shown, foundation designs are based on non-sloping level ground surfaces with slope ratios of 8:1 (H:V) or flatter. If actual ground line slopes are steeper contact the Engineer before excavating or placing concrete.
- Construct foundations in accordance with NCDOT Standard Provisions SP09 R005- Foundations and Anchor Rod Assemblies for Metal Poles. All applicable 2018 NCDOT Standard Specifications are referenced in this provision. Refer to the NCDOT Resources/Specifications page located on the Connect NCDOT website.
[https://connect.ncdot.gov/resources/Specifications and Special Provisions.aspx](https://connect.ncdot.gov/resources/Specifications%20and%20Special%20Provisions.aspx)
- Use air entrained AA concrete mix with a compression strength of f'c=4500 psi.(min.) after 28 days.
- Use ASTM A615 grade 60 deformed bars for all reinforcing steel. Maintain at least 3" cover on all reinforcement.
- Locate the Identification Tag on the top of the base plate, directly above the conduit's entry point.
- Provide two layers of galvanized welded 23 gauge (0.25) 6" wide 4 mesh wire around pipes under the base plate and secure it with ties if necessary.
- Preferred location for the I.D. Tag is as shown in Detail-A; directly above the conduit entering the foundation.



Concrete Foundation Identification Tag Details

Detail-A

D = Diameter
L = Length/Depth
mm = Month
yy = Year

	Construction Details For Foundations		
	PLAN DATE: OCTOBER 2018 PREPARED BY: N. BITTING	DESIGNED BY: C.B. COGDILL REVIEWED BY: D.C. SARKAR	

Construction Details - Foundations

11-001-2017-08:33T
13560W115-Strain&sigal Design Section&Eastern Region&M Sheers&2016&2014 Sig.M7 Std. Construction Detail&Strain Poles.dgn
P21

SOIL CONDITION

PROJECT ID. NO.	SHEET NO.
u-5826	Sig.M8

		STANDARD STRAIN POLES					STANDARD FOUNDATIONS 48" Diameter Drilled Pier Length (L) - Feet							Reinforcement				
		Case No.	Pole Height (Ft.)	Base Plate BC (In.)	Reactions at the Pole Base			Clay				Sand			Longitudinal		Stirrups	
					Axial (kip)	Shear (kip)	Moment (ft-kip)	Medium N-Value 4-8	Stiff N-Value 9-15	Very Stiff N-Value 16-30	Hard N-Value >30	Loose N-Value 4-10	Medium N-Value 11-30	Dense N-Value >30	Bar Size (#)	Quantity (ea.)	Bar Size (#)	Spacing (in.)
WIND ZONE 1	LIGHT	S26L3	26	25	2	11	270	19	13	10	8	17	14.5	12.5	8	12	4	12
		S30L3	30	25	2	11	300	19.5	13.5	10	8	17.5	15	13	8	14	4	12
		S35L3	35	25	3	11	320	20	13.5	10.5	8	17.5	15	13	8	14	4	12
	HEAVY	S30H3	30	29	3	16	450	24.5	16	12	9	21	17.5	15	8	16	4	6
		S35H3	35	29	4	16	515	26	17	12.5	9.5	22	18.5	16	8	16	4	6
WIND ZONE 2	LIGHT	S26L2	26	23	2	10	245	18	12.5	9.5	8	16.5	14	12	8	12	4	12
		S30L2	30	23	2	10	270	18.5	12.5	10	8	16.5	14	12.5	8	12	4	12
		S35L2	35	23	3	10	300	19.5	13	10	8	17	14.5	13	8	12	4	12
	HEAVY	S30H2	30	29	3	15	415	23	15.5	11.5	9	20	17	14.5	8	16	4	6
		S35H2	35	29	4	15	475	25	16.5	12	9.5	21	17.5	15.5	8	16	4	6
WIND ZONE 3	LIGHT	S26L2	26	23	2	10	245	18	12.5	9.5	8	16.5	14	12	8	12	4	12
		S30L2	30	23	2	10	270	18.5	12.5	10	8	16.5	14	12.5	8	12	4	12
		S35L2	35	23	3	10	300	19.5	13	10	8	17	14.5	13	8	12	4	12
	HEAVY	S30H2	30	29	3	15	415	23	15.5	11.5	9	20	17	14.5	8	16	4	6
		S35H2	35	29	4	15	475	25	16.5	12	9.5	21	17.5	15.5	8	16	4	6
WIND ZONE 4	LIGHT	S26L1	26	22	2	8	190	16	11.5	8.5	8	15	12.5	11	8	12	4	12
		S30L1	30	22	2	8	205	16.5	11.5	9	8	15	13	11.5	8	12	4	12
		S35L1	35	22	3	8	230	17	12	9	8	15.5	13.5	11.5	8	12	4	12
	HEAVY	S30H1	30	25	3	12	320	20.5	13.5	10.5	8	18	15	13.5	8	16	4	6
		S35H1	35	25	4	12	350	21	14	10.5	8.5	18.5	15.5	13.5	8	16	4	6
WIND ZONE 5	LIGHT	S26L2	26	23	2	10	245	18	12.5	9.5	8	16.5	14	12	8	12	4	12
		S30L2	30	23	2	10	270	18.5	12.5	10	8	16.5	14	12.5	8	12	4	12
		S35L2	35	23	3	10	300	19.5	13	10	8	17	14.5	13	8	12	4	12
	HEAVY	S30H2	30	29	3	15	415	23	15.5	11.5	9	20	17	14.5	8	16	4	6
		S35H2	35	29	4	15	475	25	16.5	12	9.5	21	17.5	15.5	8	16	4	6

General Notes:

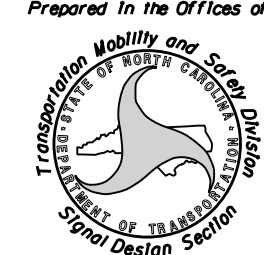

1. Values shown in the "Reactions at the Pole Base" column represent the minimum acceptable capacity allowed for design using a design CSR of 1.00.
2. Use chairs and spacers to maintain proper clearance.
3. For foundation, always use air-entrain concrete mix.

Foundation Selection:

1. Perform a standard penetration test at each proposed foundation site to determine "N" value.
2. Select the appropriate wind zone from M 1 drawing.
3. Select the soil type (Clay or Sand) that best describes the soil characteristics.
4. Get the appropriate standard pole case number from the plans or from the Engineer.
5. Select the appropriate column under "Standard Foundations" based on soil type and "N" value. Select the appropriate row based on the pole load case.
6. The foundation depth is the value shown in the "Standard Foundations" category where the column and the row intersect.
7. Use Construction Procedures and Design Methods prescribed by FHWA-NHI-10-016 for Reference Drilled Shafts.

Standard Strain Pole Foundation-All Soil Condition

48" Dia. Foundations Concrete Volume (cubic yards) = (0.465) x Drilled Pier Length

	<p>Standard Strain Pole Foundation for All Soil Conditions</p> <p>PLAN DATE: OCTOBER 2017 DESIGNED BY: C.B. COGDILL PREPARED BY: N. BITTING REVIEWED BY: D.C. SARKAR</p>									
SCALE: 0 NA NONE	REVISIONS: <table border="1" style="font-size: small;"> <tr> <th>NO.</th> <th>DATE</th> <th>INIT.</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td>7/12/2015</td> <td>N.B.</td> <td>Changed "Foundation Depth" to "Drilled Pier Length" in Conc. Egn.</td> </tr> </table>	NO.	DATE	INIT.	DESCRIPTION	1	7/12/2015	N.B.	Changed "Foundation Depth" to "Drilled Pier Length" in Conc. Egn.	Documented by: <i>D. C. SARKAR</i> DATE: 10/11/2017
NO.	DATE	INIT.	DESCRIPTION							
1	7/12/2015	N.B.	Changed "Foundation Depth" to "Drilled Pier Length" in Conc. Egn.							

11-007-2017-08-10
S:\11242017\Sig.M8\15_Sig.M8_Std_Strain Pole Found.-Saturated Soil_Condition.dgn
mz:insg

- 1 INSTALL REA, PE - 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
- 2 INSTALL COAX CABLE
- 3 INSTALL ETHERNET CABLE - CAT 5e
- 4 INSTALL SMFO CABLE
- 5 INSTALL MMFO CABLE
- 6 INSTALL FIBER OPTIC DROP CABLE ASSEMBLY
- 7 INSTALL TRACER WIRE
- 8 TRENCH
- 9 INSTALL PVC CONDUIT
- 10 INSTALL RIGID, GALVANIZED STEEL CONDUIT
- 11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
- 12 INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL
- 13 INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
- 14 INSTALL POLYETHYLENE CONDUIT
- 15 DIRECTIONAL DRILL CONDUIT
- 16 BORE AND JACK CONDUIT
- 17 INSTALL CABLE(S) IN EXISTING CONDUIT
- 18 INSTALL CABLE(S) IN NEW CONDUIT
- 19 INSTALL CABLE(S) IN EXISTING RISER
- 20 INSTALL CABLE(S) IN NEW RISER
- 21 INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS
- 22 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- 23 INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- 24 INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET
- 25 INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET
- 26 MODIFY EXISTING INTERCONNECT CENTER /SPLICE ENCLOSURE
- 27 INSTALL ETHERNET EDGE SWITCH
- 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 POLE MOUNTED SPLICE CABINET
- 32 INSTALL BASE MOUNTED SPLICE CABINET
- 33 REMOVE EXISTING SPLICE CABINET

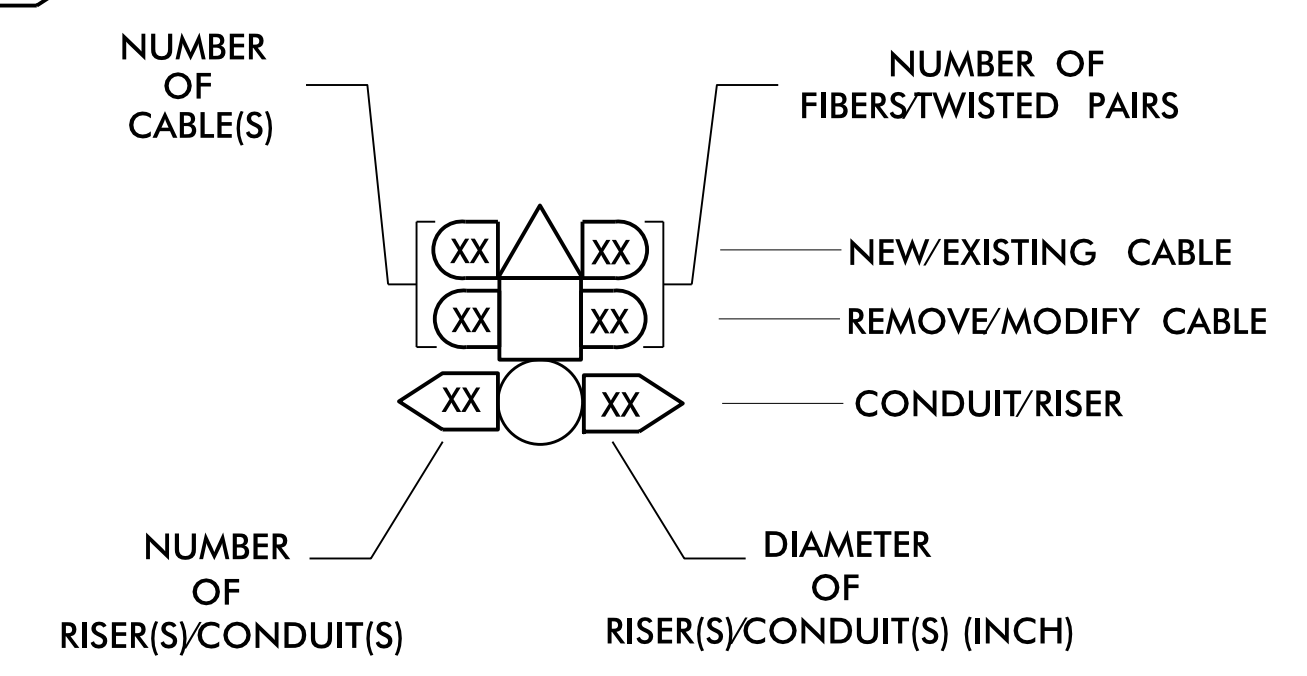
- 34 INSTALL CABINET FOUNDATION
- 35 INSTALL CCTV CAMERA POLE MOUNTED CABINET
- 36 RELOCATE CCTV CAMERA ASSEMBLY
- 37 INSTALL CCTV CAMERA WOOD POLE
- 38 INSTALL CCTV CAMERA METAL POLE AND FOUNDATION
- 39 INSTALL JUNCTION BOX
- 40A INSTALL OVERSIZED JUNCTION BOX
- 40B INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")
- 41 REMOVE EXISTING JUNCTION BOX
- 42 INSTALL WOOD POLE
- 43 REMOVE EXISTING WOOD POLE
- 44 INSTALL AERIAL GUY ASSEMBLY
- 45 INSTALL STANDARD GUY ASSEMBLY
- 46 INSTALL SIDEWALK GUY ASSEMBLY
- 47 INSTALL MESSENGER CABLE
- 48A REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE
- 48B REMOVE EXISTING COMMUNICATIONS CABLE
- 48C REMOVE EXISTING MESSENGER
- 49 BACK PULL EXISTING COMMUNICATIONS CABLE
- 50 REMOVE EXISTING ETHERNET CABLE
- 51 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
- 52A INSTALL DELINEATOR MARKER
- 52B INSTALL JUNCTION BOX MARKER
- 53 STORE 30 FEET OF COMMUNICATIONS CABLE
- 54 LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE
- 55 LASH CABLE(S) TO EXISTING MESSENGER CABLE
- 56 LASH CABLE(S) TO NEW MESSENGER CABLE
- 57 MODIFY EXISTING ELECTRICAL SERVICE
- 58 INSTALL NEW ELECTRICAL SERVICE
- 59 INSTALL NEW ETHERNET EDGE SWITCH
- 60 BOND TRACER WIRE TO EQUIPMENT GROUND BUS
DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS
- 61 BOND RISER AND MESSENGER CABLE TO POLE GROUND
- 62 BOND RISER TO POLE GROUND
- 63 BOND MESSENGER CABLE TO POLE GROUND
- 64 INSTALL HEAT SHRINK TUBING RETROFIT KIT
- 65 INSTALL MOLDABLE DUCT SEAL
- 66 SLACK SPAN

LEGEND

	NEW FIBER OPTIC COMMUNICATIONS CABLE		EXISTING STORAGE RACK FOR "IT" FIBER
	NEW TWISTED PAIR COMMUNICATIONS CABLE		NEW CABLE STORAGE RACKS (SNOW SHOES)
	EXISTING COMMUNICATIONS CABLE		EXISTING CABLE STORAGE RACK (SNOW SHOE)
	EXISTING COMMUNICATIONS CABLE TO BE REMOVED		EXISTING CONTROLLER AND CABINET
	NEW AERIAL GUY ASSEMBLY		NEW CCTV CABINET
	NEW CONDUIT		EXISTING SPLICE CABINET
	EXISTING CONDUIT		NEW SPLICE CABINET
	NEW DIRECTIONAL DRILLED CONDUIT		SIGNAL POLE
	NEW BORED AND JACKED CONDUIT		"IT" CITY OF RALEIGH CoR IT FIBER
	NEW JUNCTION BOX		NEW SIGNALS SPLICE ENCLOSURE ID
	EXISTING JUNCTION BOX		EXISTING SIGNALS SPLICE ENCLOSURE ID TO BE REMOVED
	NEW WOOD POLE		NEW POLE
	EXISTING WOOD POLE		TEMPORARY SIGNAL POLE
	AERIAL SPLICE ENCLOSURE		SIGNAL POLE TO BE REMOVED
	UNDERGROUND SPLICE ENCLOSURE		
	NEW METAL POLE		
	EXISTING METAL POLE		
	NEW CCTV ASSEMBLY		
	EXISTING CCTV ASSEMBLY		
	NEW STANDARD GUY ASSEMBLY		
	NEW SIDEWALK GUY ASSEMBLY		
	SIGNAL INVENTORY NUMBER		
	CITY OF RALEIGH SIGNAL INVENTORY ID NUMBER		

CONSTRUCTION NOTE SYMBOLOGY KEY

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



ATTACHMENT POINT:

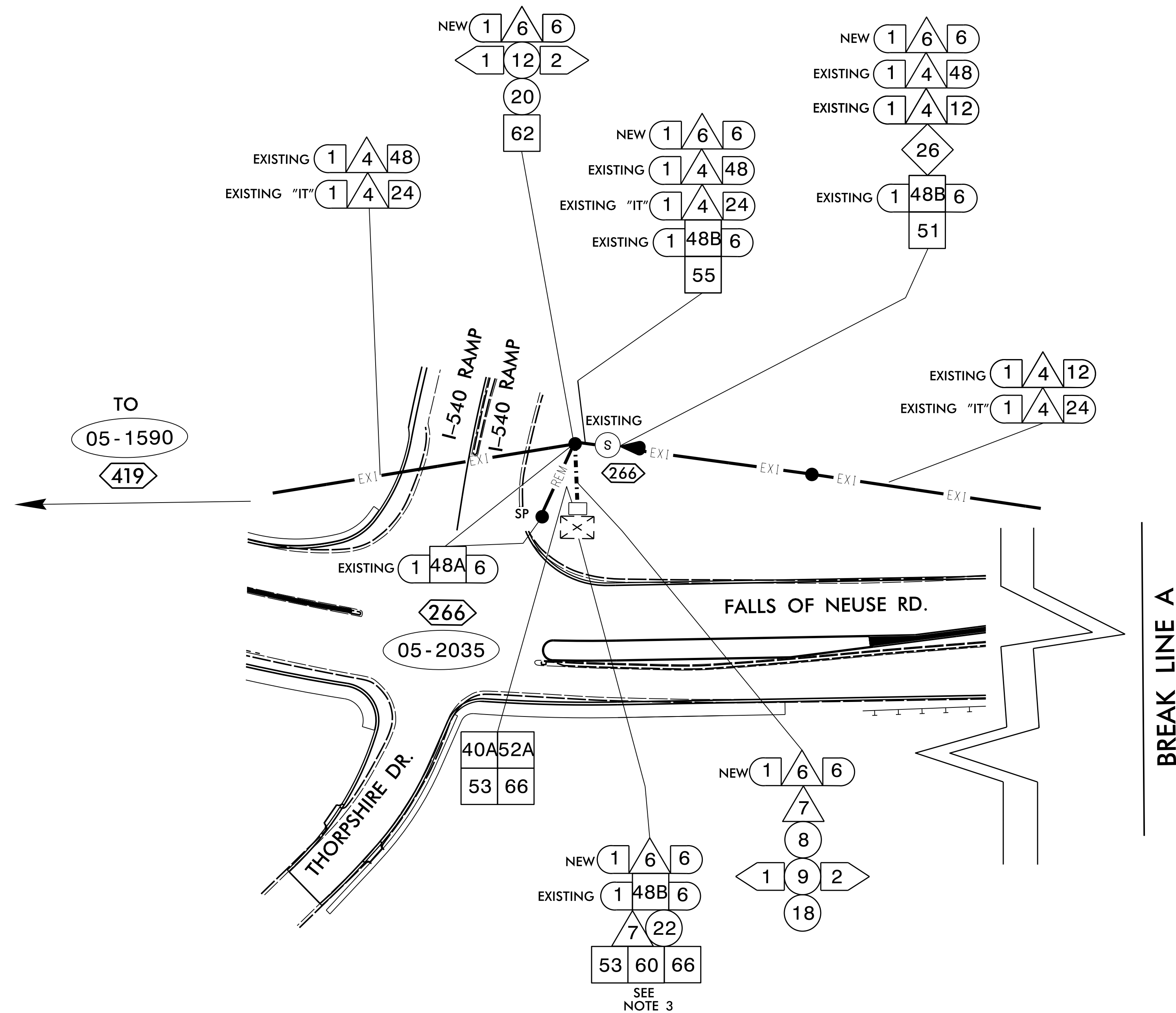
- "SS" symbol/> DISTANCE ABOVE (IN)/ATTACHMENT POINT REFERENCE POINT
- REFERENCE POINT
- "SS" symbol/> DISTANCE BELOW (IN)/ATTACHMENT POINT

"SS" REFERENCE LOCATION
 FS = FRONT SIDE OF POLE
 BS = BACK SIDE OF POLE

THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	CONSTRUCTION NOTES		
	DIVISION 05	WAKE	
PLAN DATE: JANUARY 2023 PREPARED BY: H.T. BERGGREN, EI	REVIEWED BY:		
REVISIONS _____ _____ _____	INIT.	DATE	



THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

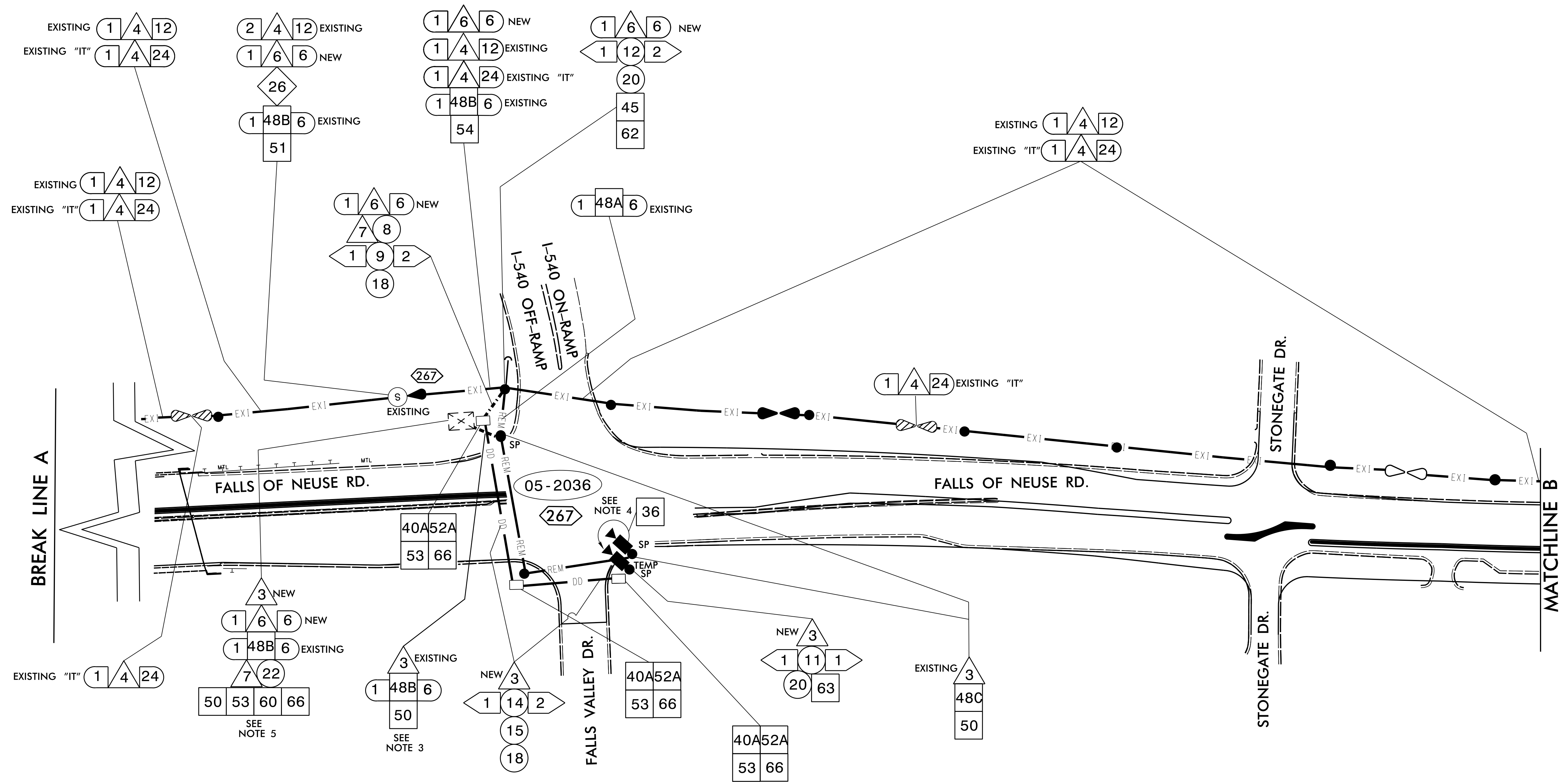
NOTES:

- 1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF RALEIGH SIGNAL SYSTEM OPERATOR, AT (919) 210-4744 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE SIGNAL SYSTEM OPERATOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
- 2) CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE SIGNAL SYSTEM OPERATOR TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.
- 3) REUSE EXISTING ETHERNET EDGE SWITCH IN THE SIGNAL CABINET.

TMP PHASE 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS		
	DIVISION 5 WAKE RALEIGH PLAN DATE: JANUARY 2023 PREPARED BY: H. T. BERGGREN, E.I.	REVIEWED BY: <i>E. Gunn</i> DATE: 01/10/2023	
SCALE: 0 N/A N/A	REVISIONS:	INIT.:	DATE:



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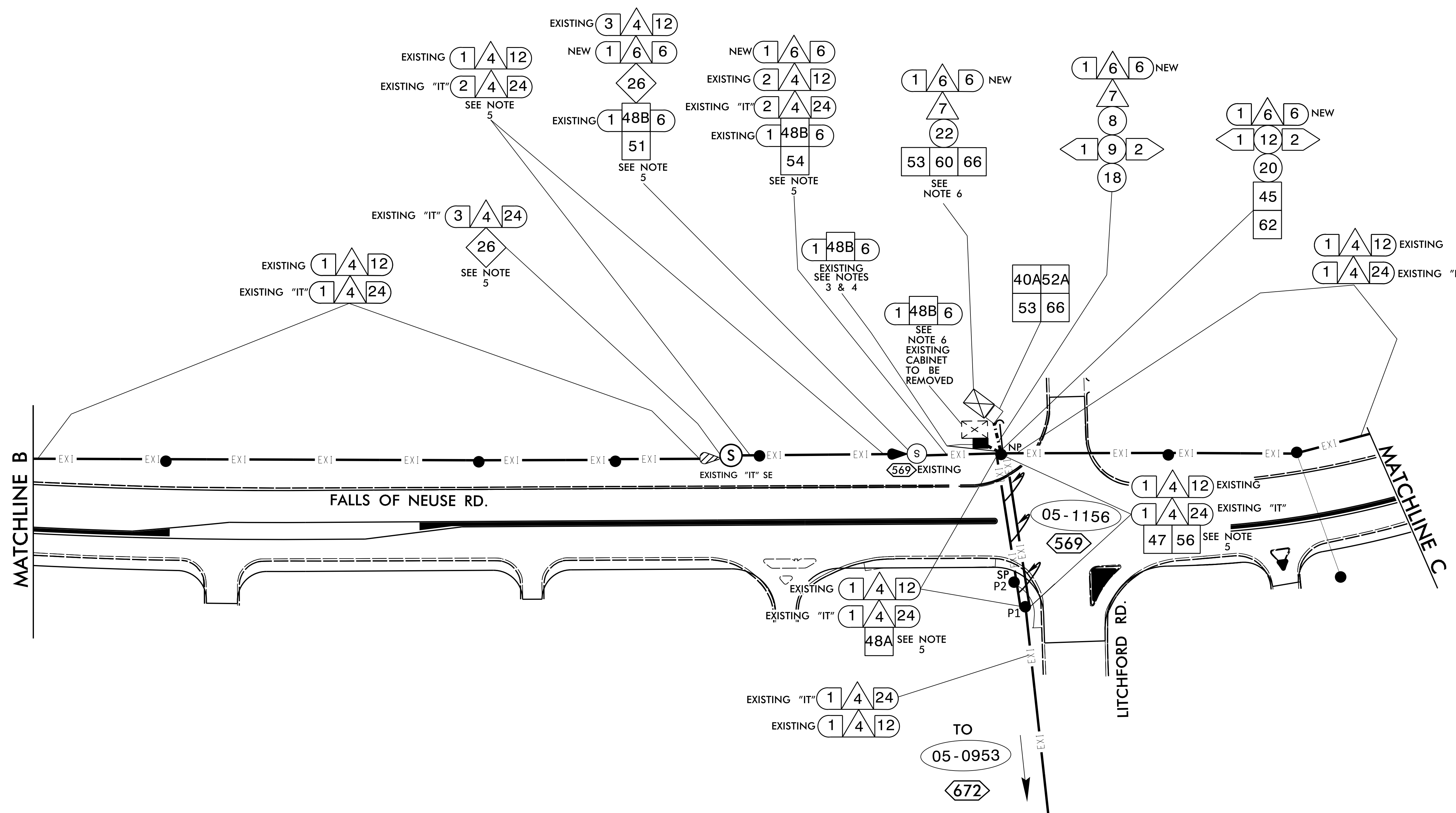
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- 2) CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE SIGNAL SYSTEM OPERATOR TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.
- 3) ABANDON EXISTING CONDUIT.
- 4) RELOCATE EXISTING CCTV TO TEMPORARY SIGNAL POLE. ATTACH CCTV A MINIMUM OF 12" ABOVE SIGNAL CABLE. REUSE EXISTING CCTV EQUIPMENT IN THE SIGNAL CABINET.
- 5) REUSE EXISTING ETHERNET EDGE SWITCH IN THE SIGNAL CABINET.

THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

TMP PHASE 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

<p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS</p>		
	<p>DIVISION 5 WAKE RALEIGH</p> <p>PLAN DATE: JANUARY 2023</p> <p>PREPARED BY: H. T. BERGGREN, E.I.</p>	<p>REVIEWED BY: <i>E. Gunn</i></p> <p>DATE: 01/10/2023</p>	



NOTES:

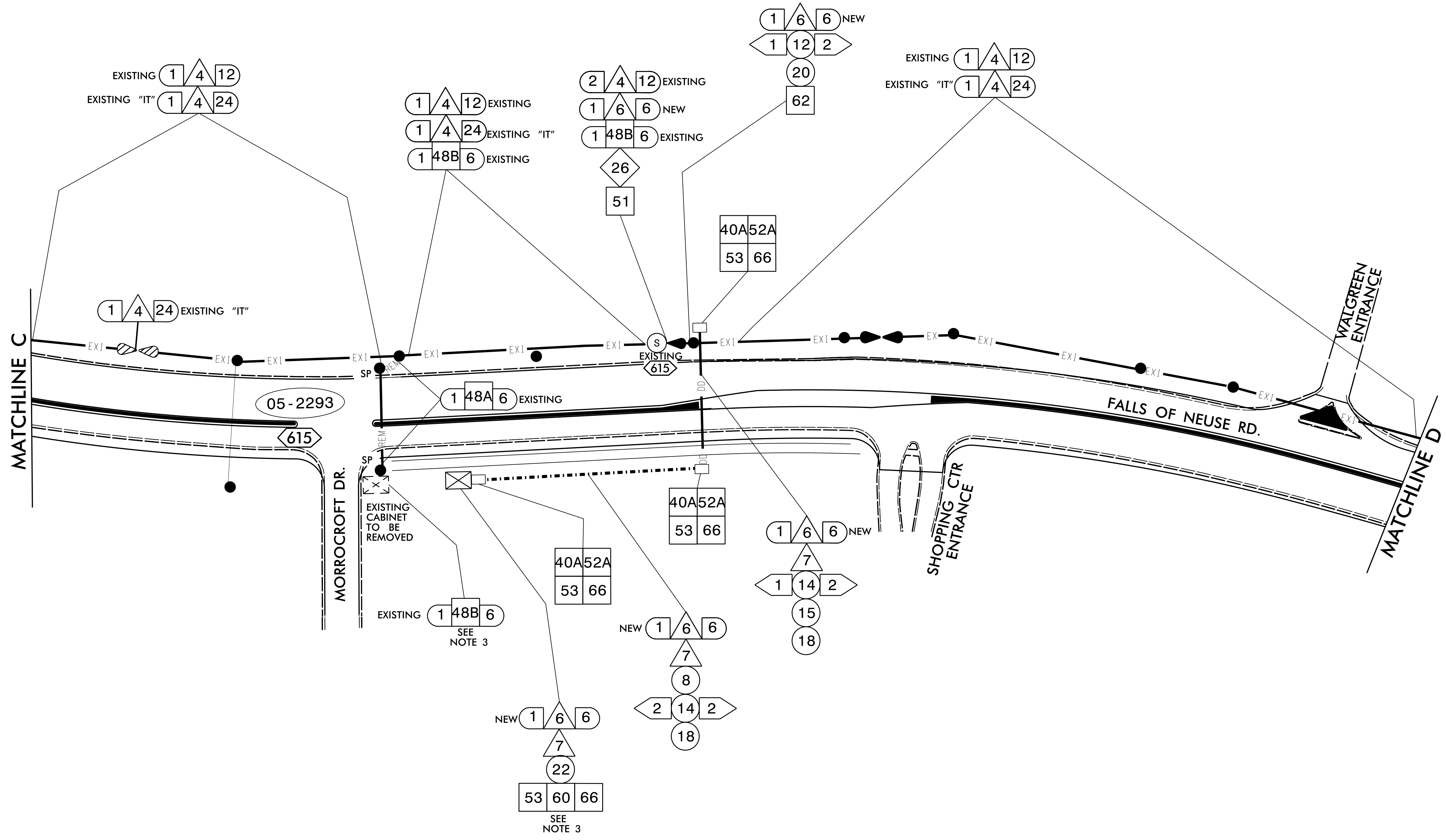
- 1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF RALEIGH SIGNAL SYSTEM OPERATOR, AT (919) 210-4744 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE SIGNAL SYSTEM OPERATOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
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- 3) ABANDON EXISTING CONDUIT.
- 4) REMOVE EXISTING JUNCTION BOX AND BACKFILL WITH APPROVED SUBGRADE MATERIAL.
- 5) DISCONNECT EXISTING 12-FIBER SIGNAL SYSTEM CABLE AND 24-FIBER CITY OF RALEIGH "IT" CABLE FROM EXISTING SPLICE ENCLOSURES SW OF INTERSECTION 05-1156. DELASH AND BACKPULL CABLES TO POLE "P1" AND REROUTE TRANSFERRING FIBER CABLES, FROM POLE "P2" (BEING REMOVED), TO POLE "P1". LASH CABLES TO NEW MESSENGER AS SHOWN. PRIOR TO DISCONNECTING CITY OF RALEIGH "IT" CABLE CONTACT THE CITY OF RALEIGH NETWORK ADMINISTRATOR, ANDREW PIATEK, AT (919) 996-5438. MAY DELASH AND UNCOIL SUFFICIENT SLACK OF 12-FIBER SIGNAL SYSTEM CABLE AND 24-FIBER CITY OF RALEIGH "IT" CABLE FROM EXISTING STORAGE RACKS SW OF INTERSECTION 05-1156 TO TRANSFER CABLES FROM POLE "P1" TO POLE "P2" WITHOUT DISCONNECTING CABLE FROM THE EXISTING SPLICE ENCLOSURES.
- 6) RELOCATE EXISTING ETHERNET EDGE SWITCH AND REUSE IN THE NEW SIGNAL CABINET.

THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

TMP PHASE 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS		
	DIVISION 5 WAKE RALEIGH PLAN DATE: JANUARY 2023 PREPARED BY: H. T. BERGGREN, E.I.	REVIEWED BY: <i>E. Gunn</i> DATE:	
REVISIONS:			INIT. DATE



THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

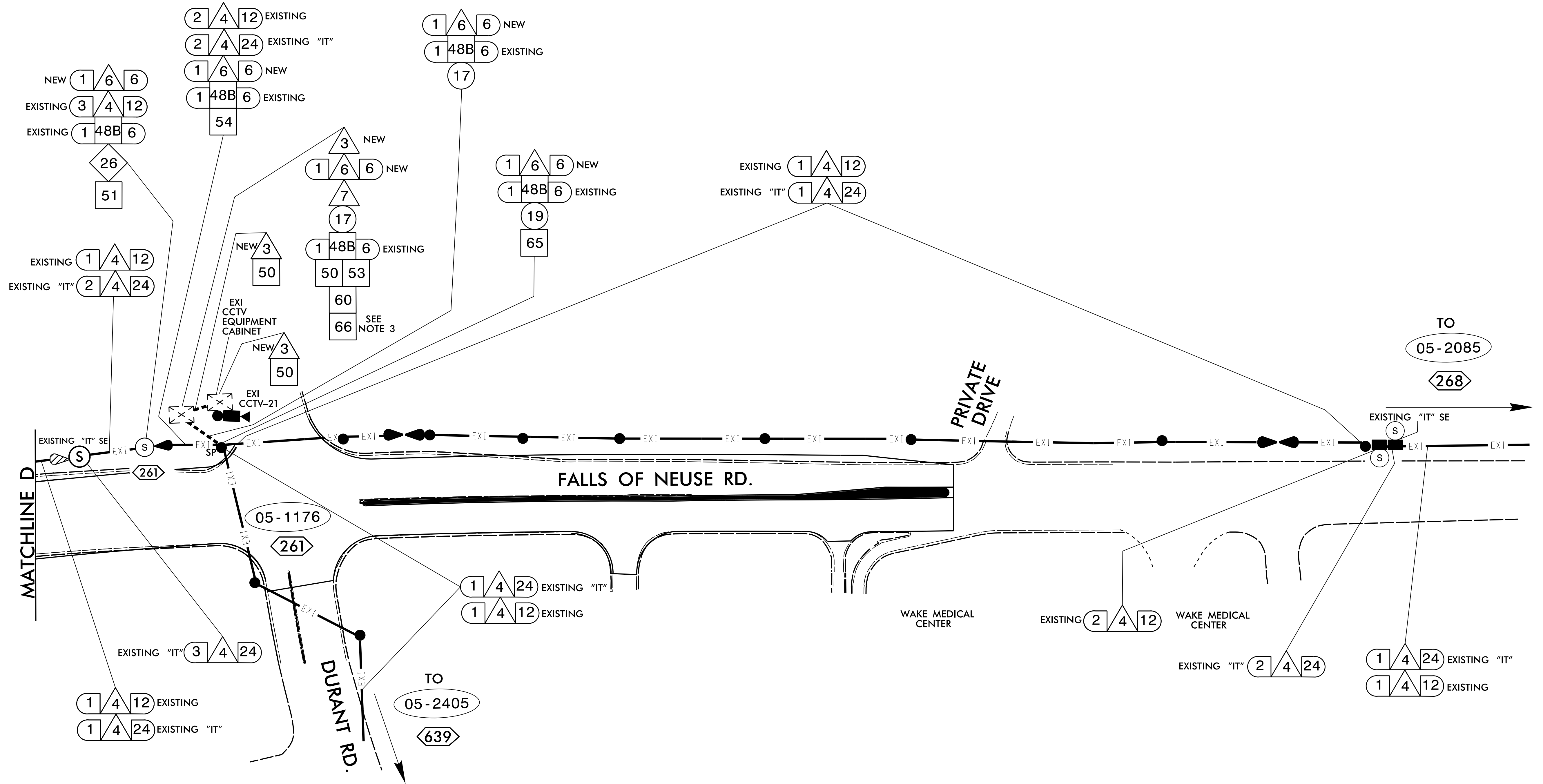
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- 1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF RALEIGH SIGNAL SYSTEM OPERATOR, AT (919) 210-4744 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE SIGNAL SYSTEM OPERATOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
- 2) CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE SIGNAL SYSTEM OPERATOR TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.
- 3) RELOCATE EXISTING ETHERNET EDGE SWITCH AND REUSE IN THE NEW SIGNAL CABINET.

TMP PHASE 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

<p>250 N. Greenfield Pkwy., Greensboro, NC 27426</p>	<p>COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS</p>										
	<p>DIVISION 5 WAKE RALEIGH</p> <p>PLAN DATE: JANUARY 2023</p> <p>PREPARED BY: H. T. BERGGREN, EIT</p>	<p>REVIEWED BY: <i>E. Gunn</i></p> <p>DATE: 01/10/2023</p>		<table border="1"> <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				
REVISIONS	INIT.	DATE									



THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

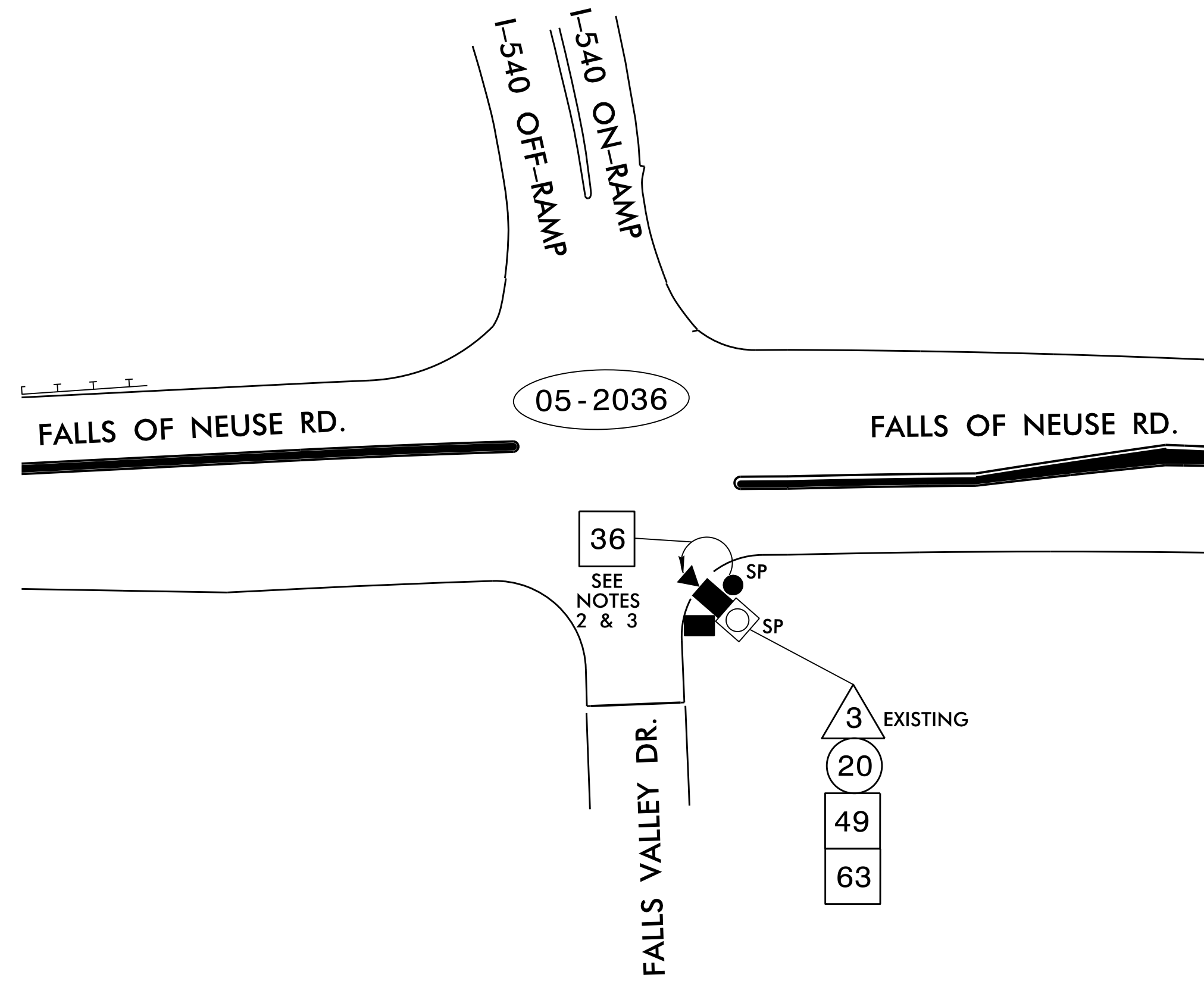
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- 1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF RALEIGH SIGNAL SYSTEM OPERATOR, AT (919) 210-4744 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE SIGNAL SYSTEM OPERATOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS AND THE CCTV ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM AND THE CCTV ARE UP AND OPERATIONAL.
- 2) CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE SIGNAL SYSTEM OPERATOR TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.
- 3) REUSE EXISTING ETHERNET EDGE SWITCH IN THE SIGNAL CABINET.

TMP PHASE 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	<p>COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS</p>		
	<p>DIVISION 5 WAKE RALEIGH</p> <p>PLAN DATE: JANUARY 2023</p> <p>PREPARED BY: H. T. BERGGREN, E.I.</p>	<p>REVIEWED BY: <i>E. Gunn</i></p> <p>DATE: 01/10/2023</p>	



THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14. 2019.

NOTES:

- 1) FIVE (5) DAYS PRIOR TO BEGINNING WORK TO RELOCATE CCTV CONTACT THE CITY OF RALEIGH SIGNAL SYSTEM OPERATOR, AT (919) 210-4744. WORK IS NOT COMPLETE UNTIL THE CCTV IS UP AND OPERATIONAL.
- 2) RELOCATE EXISTING CCTV TO METAL SIGNAL POLE. ATTACH A MINIMUM OF 12" ABOVE SIGNAL CABLE.
- 3) DISCONNECT AND BACKPULL EXISTING ETHERNET CABLE TO EXISTING JUNCTION BOX AND REROUTE TO RELOCATED CCTV THROUGH NEW METAL POLE.

TMP FINAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

<p>Prepared in the Offices of: Department of Transportation, State of North Carolina 750 N. Greenfield Pkwy., Garner, NC 27529</p>	COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS		
	DIVISION 5 WAKE RALEIGH	PLAN DATE: JANUARY 2023 REVIEWED BY: <i>E. Gunn</i>	
PREPARED BY: H. T. BERGGREN, E.I.	REVISIONS	INIT.	DATE
SCALE: 0 N/A N/A	REVISIONS	INIT.	DATE

EXISTING AERIAL SPLICE ENCLOSURE #266
 FALLS OF NEUSE RD AT I-540 RAMP AND THORPSHIRE DR.
 SIG. INV. # 05-2035

EXISTING SPLICE ENCLOSURE NO.

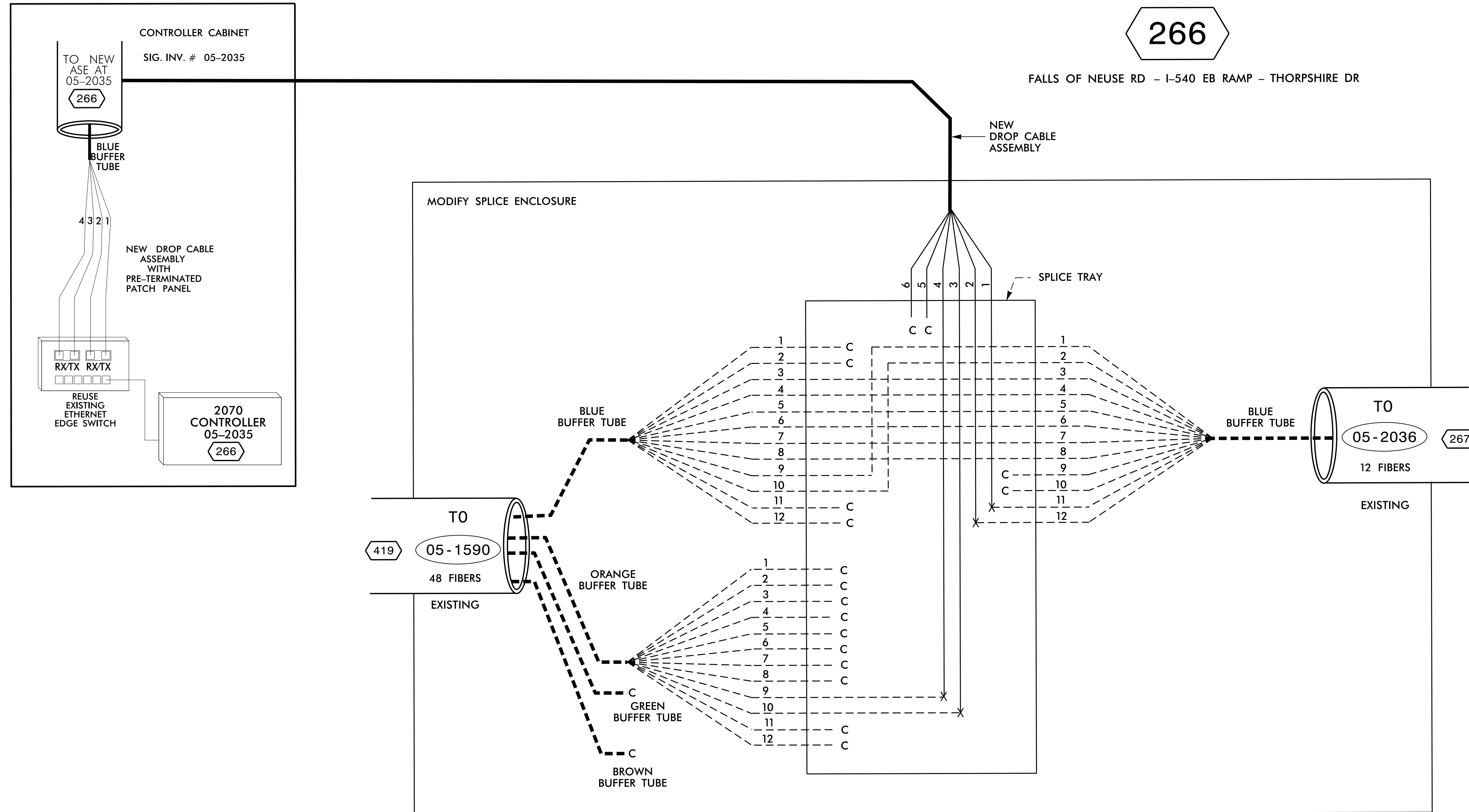
266

FALLS OF NEUSE RD - I-540 EB RAMP - THORPSHIRE DR

LEGEND

COLOR CODE TIA/EIA 598-A		X = FUSION SPLICE INDIVIDUAL FIBER
(1) BLUE	(7) RED	C = CAP AND SEAL
(2) ORANGE	(8) BLACK	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING
(3) GREEN	(9) YELLOW	BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR
(4) BROWN	(10) VIOLET	
(5) SLATE	(11) ROSE	
(6) WHITE	(12) AQUA	

SPLICE TRAY NOTES:
 UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY
 UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE



NOTES:

1. FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF RALEIGH SIGNAL SYSTEM OPERATOR, AT (919) 210-4744 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE SIGNAL SYSTEM OPERATOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
2. CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.
3. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING THE PROPER TERMINATIONS.

4. INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

- 1) SPLICE LOCATION
- 2) DATE
- 3) COMPANY NAME
- 4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

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

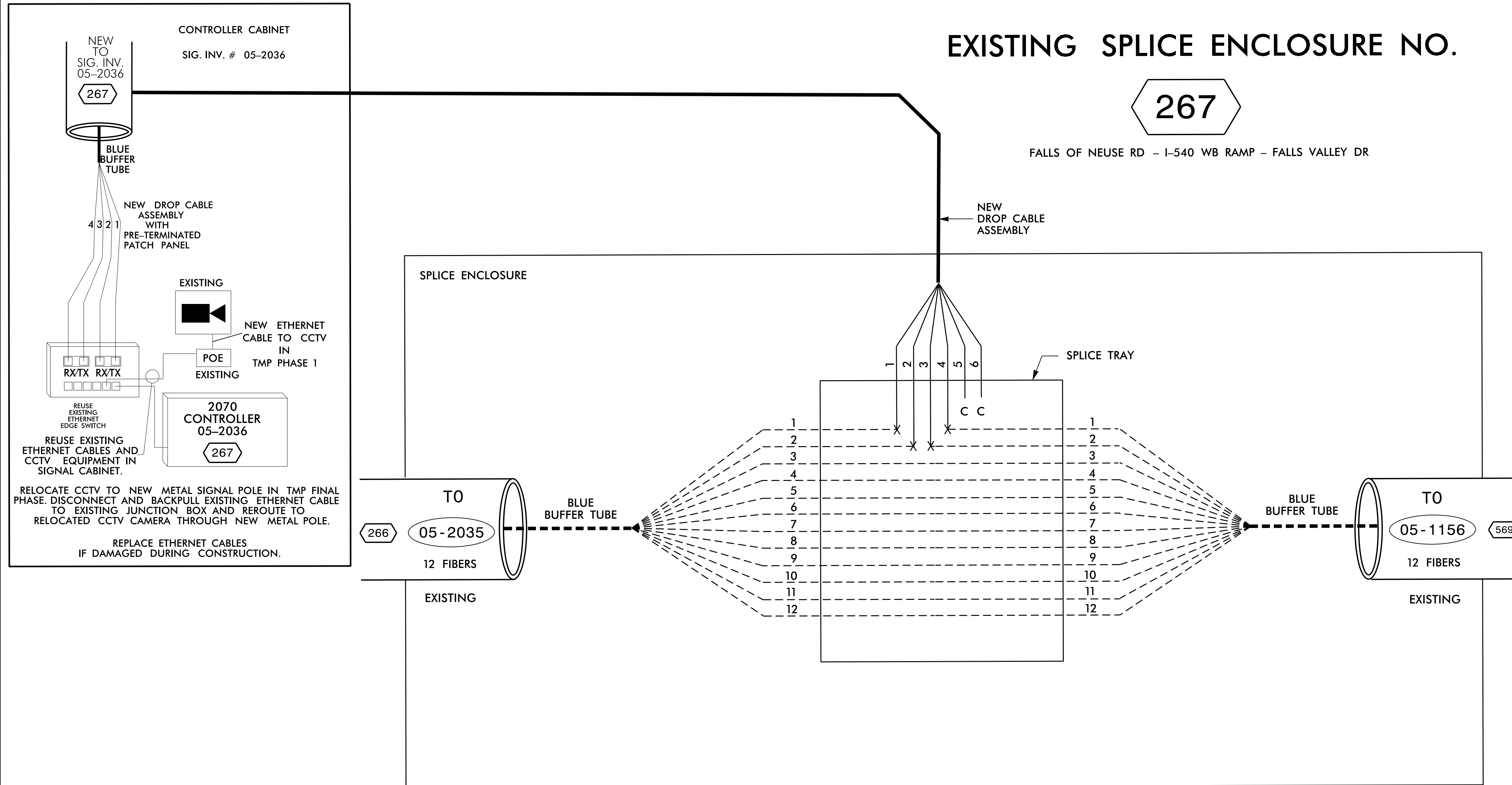
THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

TMP PHASE 1 AND FINAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

<p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS</p>		
	<p>DIVISION 5 WAKE RALEIGH</p> <p>PLAN DATE: JANUARY 2023</p> <p>PREPARED BY: H. T. BERGGREN, E.I.</p>	<p>REVIEWED BY: <i>E. Gunn</i></p> <p>DATE: 01/10/2023</p>	

EXISTING AERIAL SPLICE ENCLOSURE #267
FALLS OF NEUSE RD. AT I-540 RAMP AND FALLS VALLEY DR.
SIG. INV. # 05-2036



LEGEND

COLOR CODE TIA/EIA 598-A		X = FUSION SPLICE INDIVIDUAL FIBER
(1) BLUE	(7) RED	C = CAP AND SEAL
(2) ORANGE	(8) BLACK	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING
(3) GREEN	(9) YELLOW	BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR
(4) BROWN	(10) VIOLET	
(5) SLATE	(11) ROSE	
(6) WHITE	(12) AQUA	

SPLICE TRAY NOTES:
 UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY
 UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE

NOTES:

- FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF RALEIGH SIGNAL SYSTEM OPERATOR, AT (919) 210-4744 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE SIGNAL SYSTEM OPERATOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS AND CCTV ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM AND THE CCTV ARE UP AND OPERATIONAL.
- CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.
- ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING THE PROPER TERMINATIONS.

- INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

- SPLICE LOCATION
- DATE
- COMPANY NAME
- NAME OF INDIVIDUAL PERFORMING THE SPLICING

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

THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

TMP PHASE 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

DIVISION 5 WAKE RALEIGH

PLAN DATE: JANUARY 2023 REVIEWED BY: *E. Gunn*

PREPARED BY: H. T. BERGGREN, E.I.

SCALE: 0 N/A

REVISIONS: _____

INIT. DATE

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046152 ALEX D. STEWART

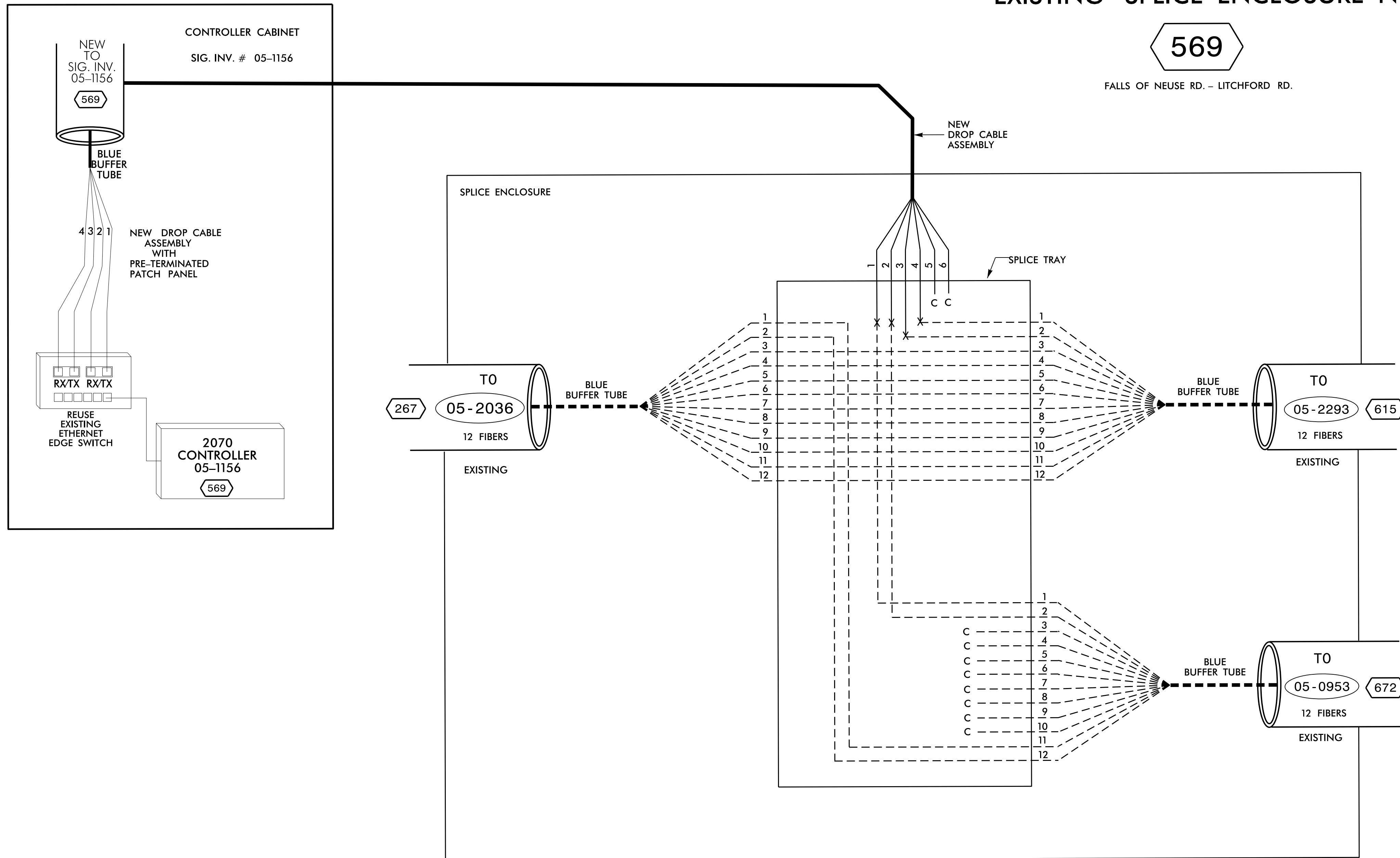
DocuSign ID: 01/10/2023

EXISTING AERIAL SPLICE ENCLOSURE #569
 FALLS OF NEUSE RD. AT LITCHFORD RD.
 SIG. INV. # 05-1156

EXISTING SPLICE ENCLOSURE NO.

569

FALLS OF NEUSE RD. - LITCHFORD RD.



LEGEND

COLOR CODE TIA/EIA 598-A

(1) BLUE	(7) RED	X = FUSION SPLICE INDIVIDUAL FIBER
(2) ORANGE	(8) BLACK	C = CAP AND SEAL
(3) GREEN	(9) YELLOW	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING
(4) BROWN	(10) VIOLET	BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR
(5) SLATE	(11) ROSE	
(6) WHITE	(12) AQUA	

SPLICE TRAY NOTES:
 UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY
 UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE

NOTES:

- FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF RALEIGH SIGNAL SYSTEM OPERATOR, AT (919) 210-4744 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE SIGNAL SYSTEM OPERATOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
- CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.
- ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING THE PROPER TERMINATIONS.

- INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING:
 REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

- SPLICE LOCATION
- DATE
- COMPANY NAME
- NAME OF INDIVIDUAL PERFORMING THE SPLICING

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

THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

TMP PHASE 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

<p>250 N. Greenfield Pkwy., Garner, NC 27529</p>	<p>COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS</p>							
	<p>DIVISION 5 WAKE RALEIGH</p> <p>PLAN DATE: JANUARY 2023 REVIEWED BY: <i>E. Gunn</i></p> <p>PREPARED BY: H. T. BERGGREN, E.I.</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>INIT.</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		NO.	INIT.	DATE		
NO.	INIT.	DATE						

EXISTING AERIAL SPLICE ENCLOSURE #615
 FALLS OF NEUSE RD. AT MORROCROFT DR.
 SIG. INV. #05-2293

EXISTING SPLICE ENCLOSURE NO.

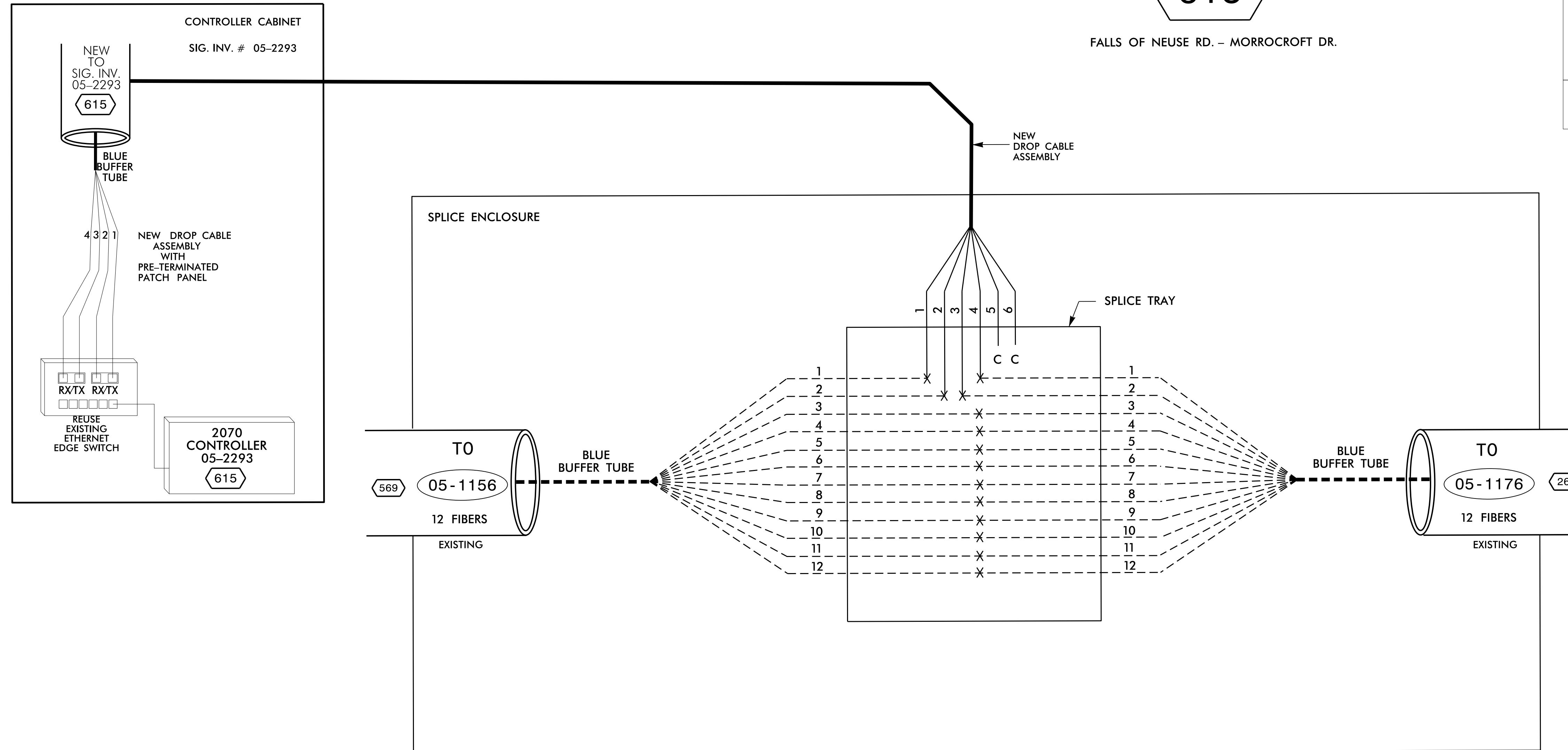
615

FALLS OF NEUSE RD. - MORROCROFT DR.

LEGEND

COLOR CODE TIA/EIA 598-A		
(1) BLUE	(7) RED	X = FUSION SPLICE INDIVIDUAL FIBER
(2) ORANGE	(8) BLACK	C = CAP AND SEAL
(3) GREEN	(9) YELLOW	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING
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(5) SLATE	(11) ROSE	
(6) WHITE	(12) AQUA	

SPLICE TRAY NOTES:
 UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY
 UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE



NOTES:

1. FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF RALEIGH SIGNAL SYSTEM OPERATOR, AT (919) 210-4744 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE SIGNAL SYSTEM OPERATOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
2. CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.
3. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING THE PROPER TERMINATIONS.

4. INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"
 - 1) SPLICE LOCATION
 - 2) DATE
 - 3) COMPANY NAME
 - 4) NAME OF INDIVIDUAL PERFORMING THE SPLICING
- PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

TMP PHASE 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

DIVISION 5 WAKE RALEIGH

PLAN DATE: JANUARY 2023 REVIEWED BY: *E. Gunn*

PREPARED BY: H. T. BERGGREN, EIT

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0 N/A

REVISIONS: INIT. DATE

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046152

01/10/2023

EXISTING AERIAL SPLICE ENCLOSURE #261
 FALLS OF NEUSE RD. AT DURANT RD.
 SIG. INV. # 05-1176

EXISTING SPLICE ENCLOSURE NO.

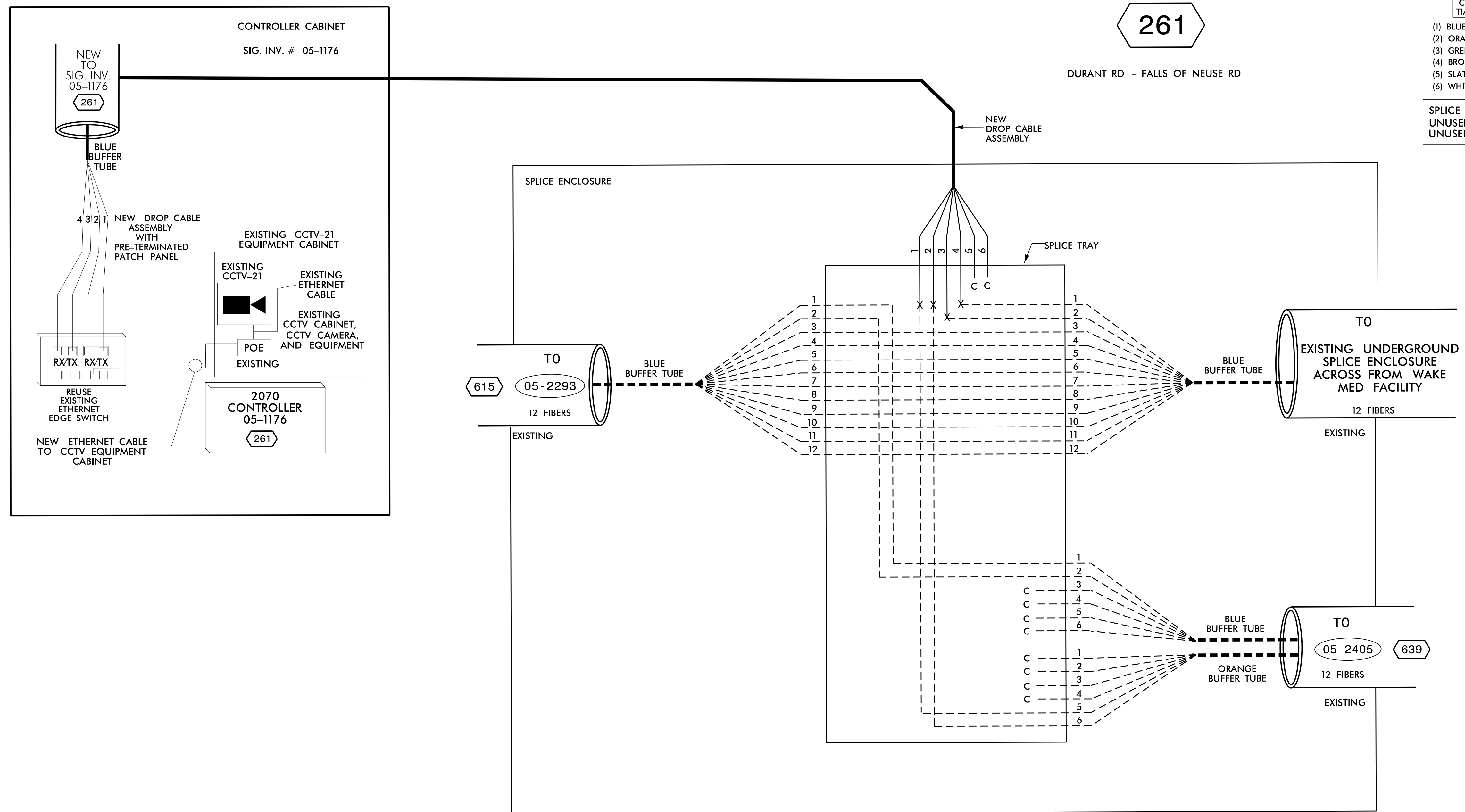
261

DURANT RD - FALLS OF NEUSE RD

LEGEND

COLOR CODE TIA/EIA 598-A	X = FUSION SPLICE INDIVIDUAL FIBER
(1) BLUE (7) RED	C = CAP AND SEAL
(2) ORANGE (8) BLACK	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING
(3) GREEN (9) YELLOW	BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR
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(5) SLATE (11) ROSE	
(6) WHITE (12) AQUA	

SPLICE TRAY NOTES:
 UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY
 UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE



NOTES:

- FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF RALEIGH SIGNAL SYSTEM OPERATOR, AT (919) 210-4744 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE SIGNAL SYSTEM OPERATOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS AND CCTV ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM AND THE CCTV ARE UP AND OPERATIONAL.
- CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.
- ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING THE PROPER TERMINATIONS.

- INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"
 - SPLICE LOCATION
 - DATE
 - COMPANY NAME
 - NAME OF INDIVIDUAL PERFORMING THE SPLICING
- PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

THESE PLANS SUPERCEDE PLANS SEALED BY MOHD ASLAMI ON AUGUST 14, 2019.

TMP PHASE 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS	
	DIVISION 5 WAKE RALEIGH PLAN DATE: JANUARY 2023 PREPARED BY: H. T. BERGGREN, E.I.	REVIEWED BY: <i>E. Gunn</i> DATE:
SCALE: 0 N/A N/A	REVISIONS:	INIT. DATE

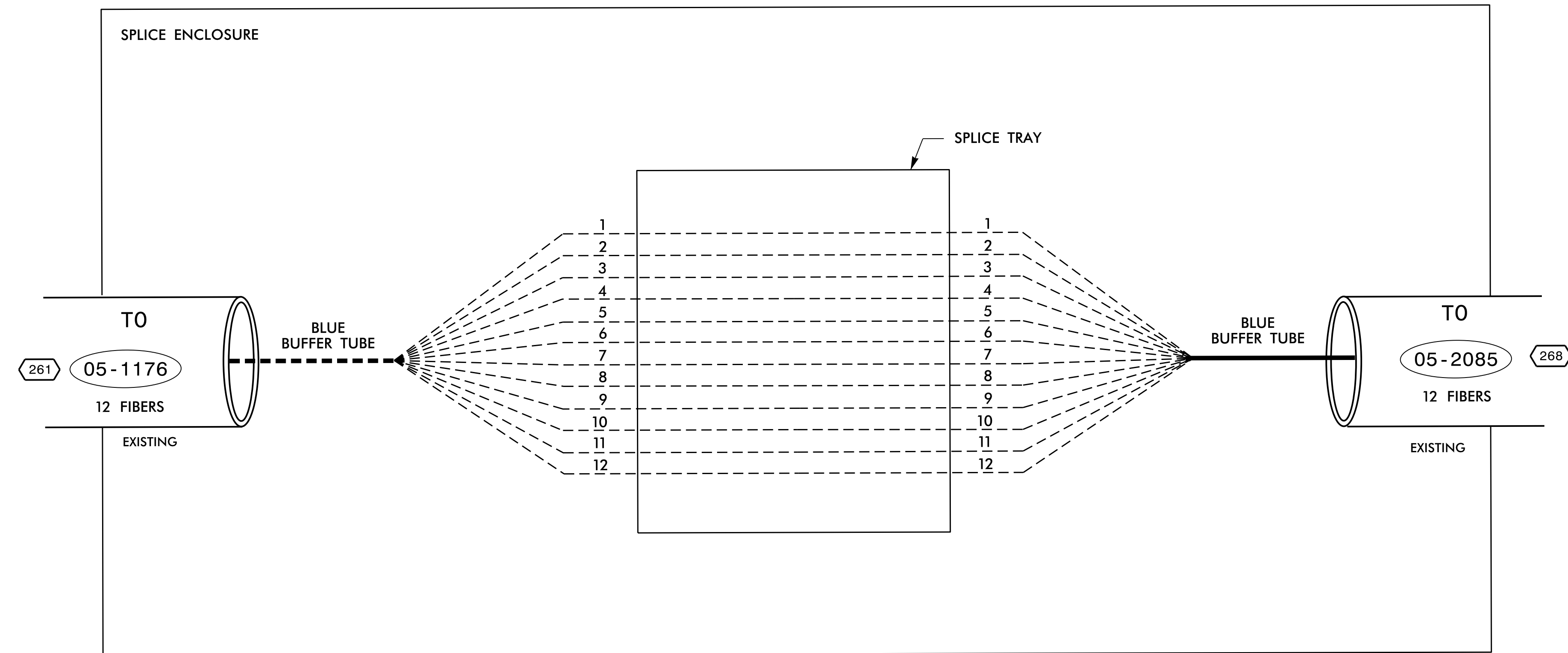
EXISTING UNDERGROUND SPLICE ENCLOSURE
 ALONG FALLS OF NEUSE RD. ACROSS FROM WAKE MED FACILITY
 IN SPECIAL OVERSIZED JUNCTION BOX
 BETWEEN SIG. INV. #05-1176 AND #05-2085

LEGEND

COLOR CODE TIA/EIA 598-A		X = FUSION SPLICE INDIVIDUAL FIBER
(1) BLUE	(7) RED	C = CAP AND SEAL
(2) ORANGE	(8) BLACK	
(3) GREEN	(9) YELLOW	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING
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(5) SLATE	(11) ROSE	
(6) WHITE	(12) AQUA	

SPLICE TRAY NOTES:
 UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY
 UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE

EXISTING SPLICE ENCLOSURE
 NO WORK TO BE PERFORMED
 SHOWN FOR INFORMATION ONLY



THESE PLANS SUPERCEDE PLANS SEALED
 BY MOHD ASLAMI ON AUGUST 14, 2019.

TMP PHASE 1

DOCUMENT NOT CONSIDERED FINAL
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<p>250 N. Greenfield Place, Garner, NC 27529</p>	COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS		
	DIVISION 5 WAKE RALEIGH	PLAN DATE: JANUARY 2023 REVIEWED BY: <i>E. Gunn</i>	
SCALE: 0 N/A N/A	PREPARED BY: H. T. BERGGREN, EI	REVISIONS:	DATE: