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13-OCT-2016 11:05 H:\DDC\Projects\W-5601EP\NC 24 from Circle St to Carol St in Stedman\Cumberland Co\Roadway\proj\W-5601EP_Rdy_fsh.dgn
 \$\$\$USERNAME\$\$\$

CONTRACT: DF00143 **TIP PROJECT: W-5601EP**

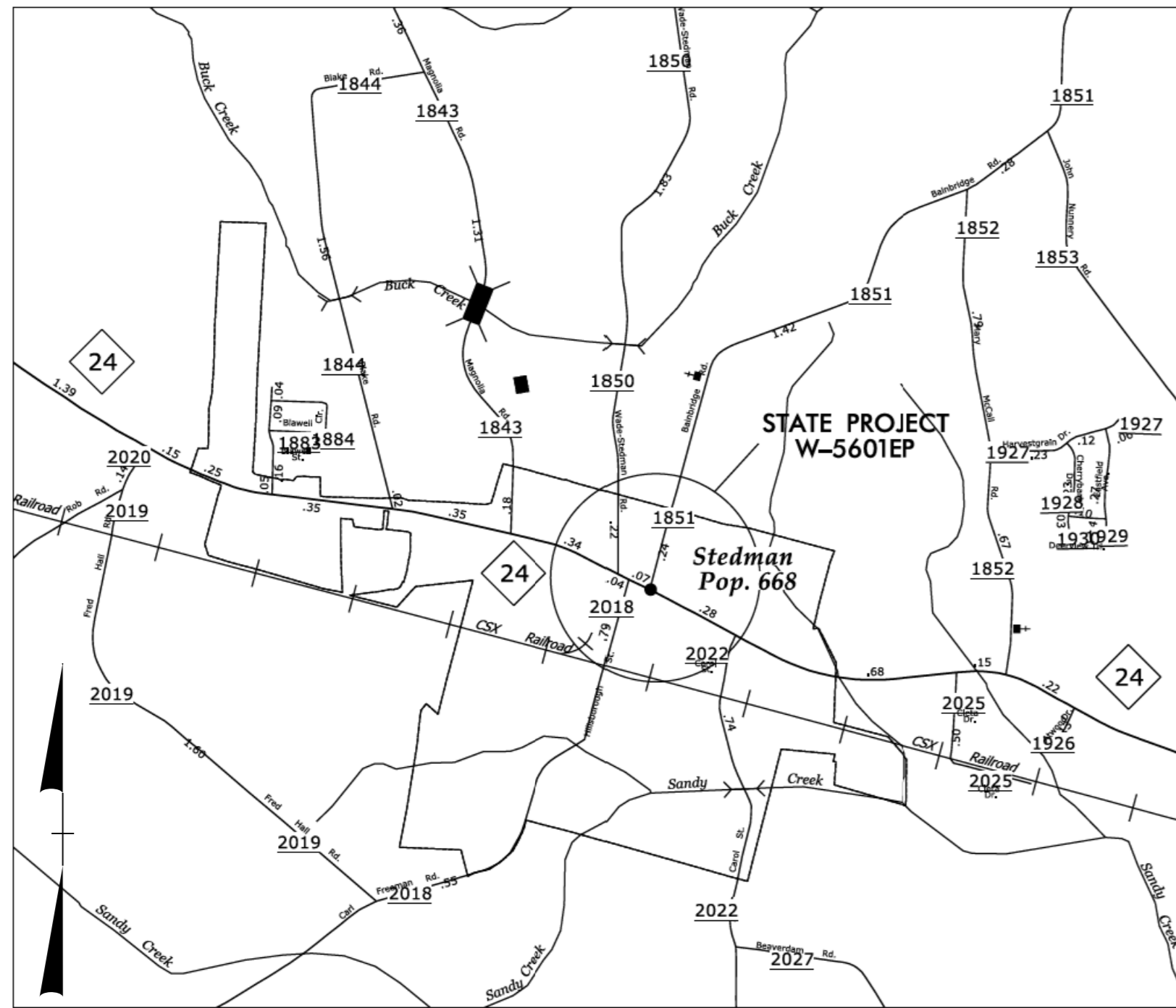
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

LOCATION: NC 24 FROM THE WEST INTERSECTION OF CIRCLE ST TO CAROL ST (SR 2022) IN STEDMAN

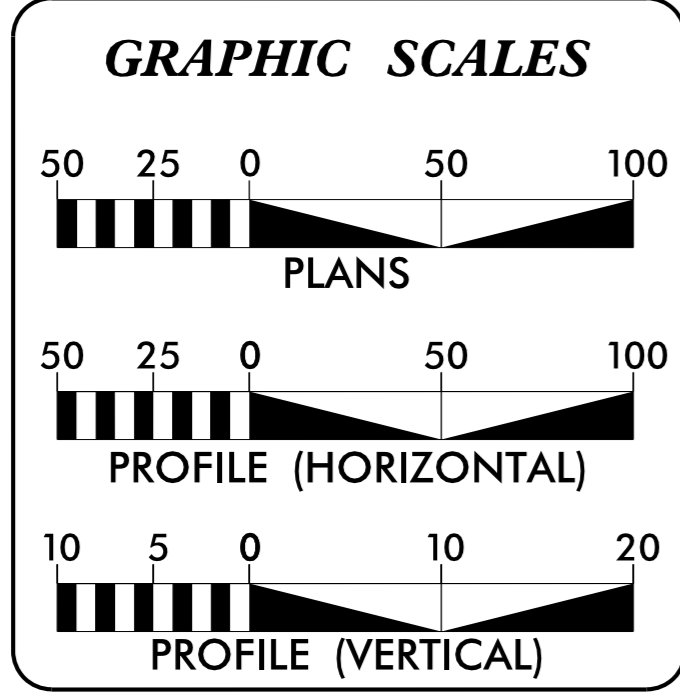
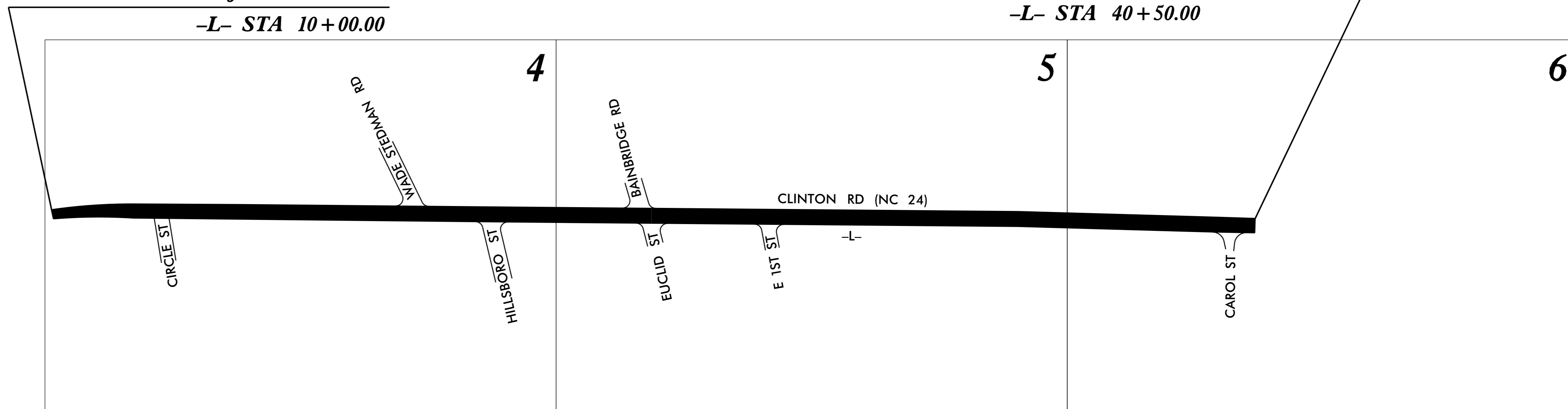
TYPE OF WORK: GRADING, PAVING, RESURFACING, SIGNALS REVISION AND PAVEMENT MARKINGS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5601EP	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50138.1.147	HSIP-0024(076)	P.E.	
50138.3.147	HSIP-0024(076)	CONSTRUCTION	



BEGIN STATE PROJECT W-5601EP
-L- STA 10+00.00

END STATE PROJECT W-5601EP
-L- STA 40+50.00



DESIGN DATA
ADT 2014 = 12,000
ADT 2034 = 21,700

PROJECT LENGTH
TOTAL LENGTH OF STATE PROJECT W-5601EP = 0.578mi

Prepared in the Office of:
DIVISION OF HIGHWAYS
431 Transportation Drive, Fayetteville NC 28301

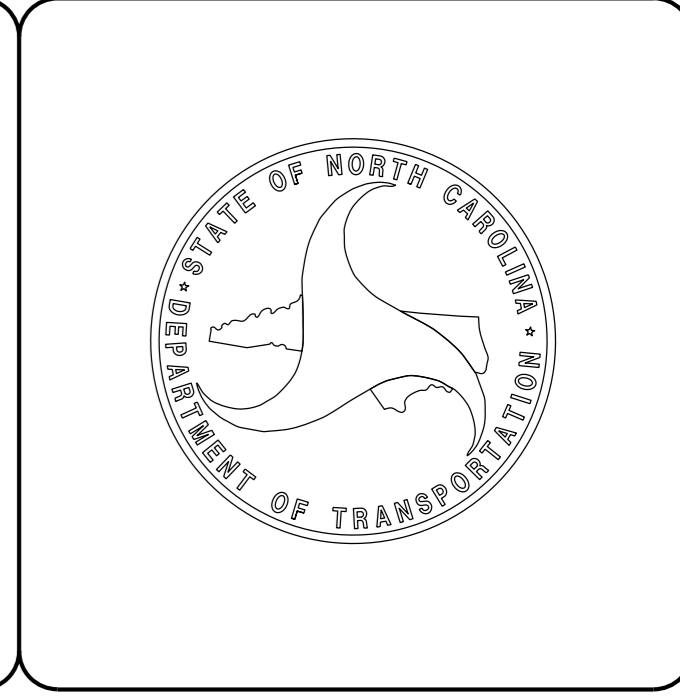
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
N/A

LETTING DATE:
NOVEMBER 16, 2016

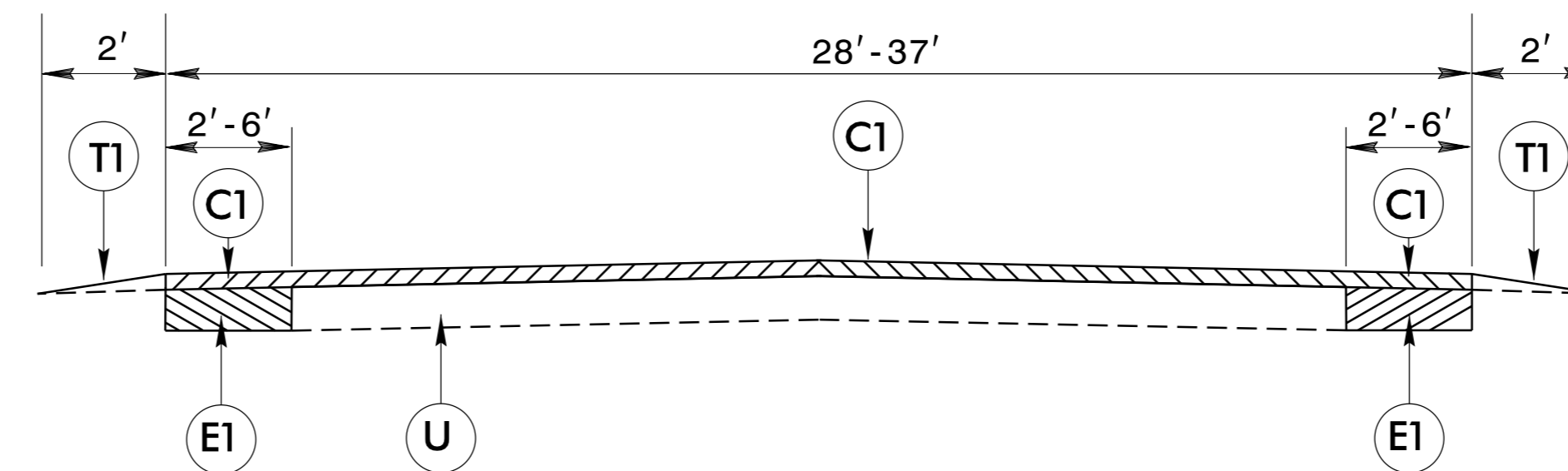
SEAN MATUSZEWSKI
PROJECT ENGINEER

NEIL BUTLER
PROJECT DESIGN ENGINEER

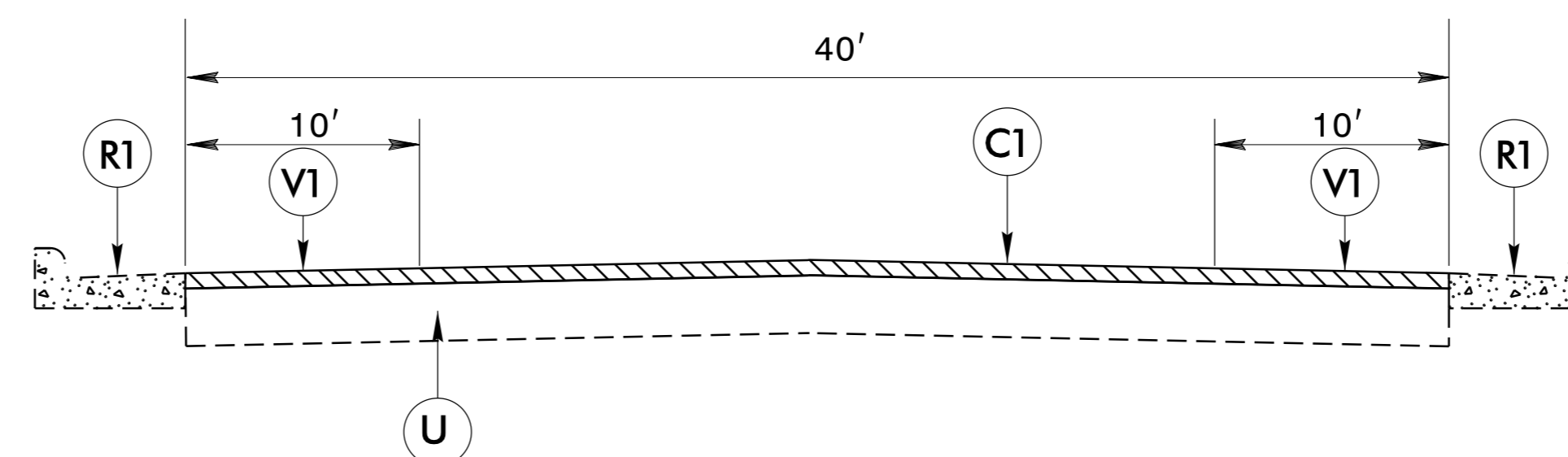


PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E1	5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
R1	EXISTING CURB AND GUTTER
T1	SHOULDER RECONSTRUCTION WITH ASB
U	EXISTING ASPHALT
V1	0" - 1½" MILLING



TYPICAL SECTION NO. 1
-L- STA 10+00.00 - 14+60.00

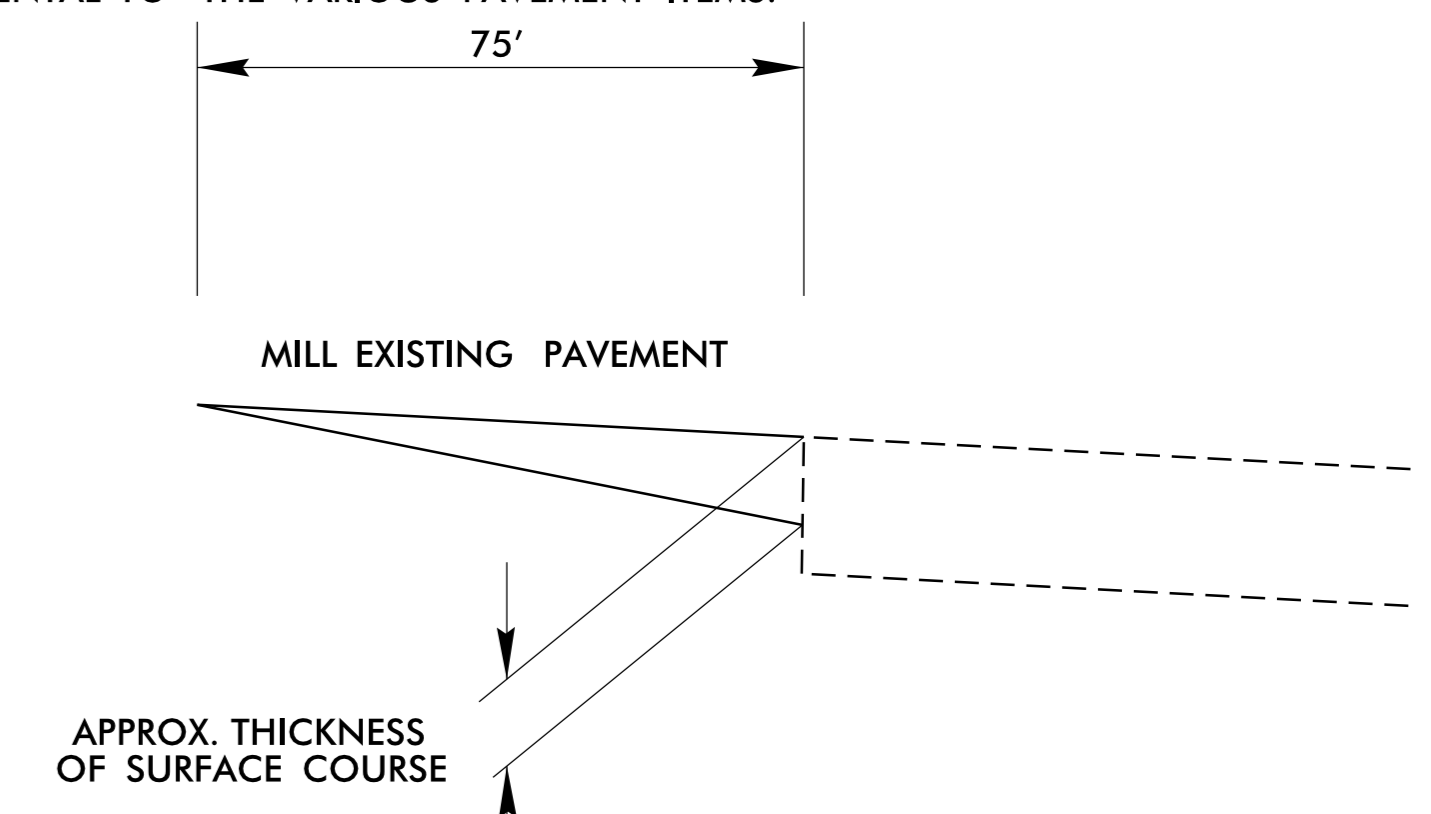


TYPICAL SECTION NO. 2
-L- STA 14+60.00 - 40+50.00

MILLING AT PAVEMENT TIE-INS

FOR SURFACE MIXES OVER 1" IN THICKNESS, MILL THE EXISTING PAVEMENT IN ACCORDANCE WITH THE FOLLOWING SKETCH AS DIRECTED BY THE ENGINEER. LOCATIONS SHALL INCLUDE TIES TO EXISTING PAVEMENT AT THE BEGINNING AND END OF RESURFACING LOCATIONS. PERFORM THE WORK IN ACCORDANCE WITH SECTION 607 OF THE JANUARY 2012 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. RESURFACING WILL BE ACCOMPLISHED AT THE SAME TIME AS THE MILLING OPERATION.

NO PAYMENT WILL BE MADE FOR THIS WORK AS IT WILL BE CONSIDERED INCIDENTAL TO THE VARIOUS PAVEMENT ITEMS.



PROJECT NOTES

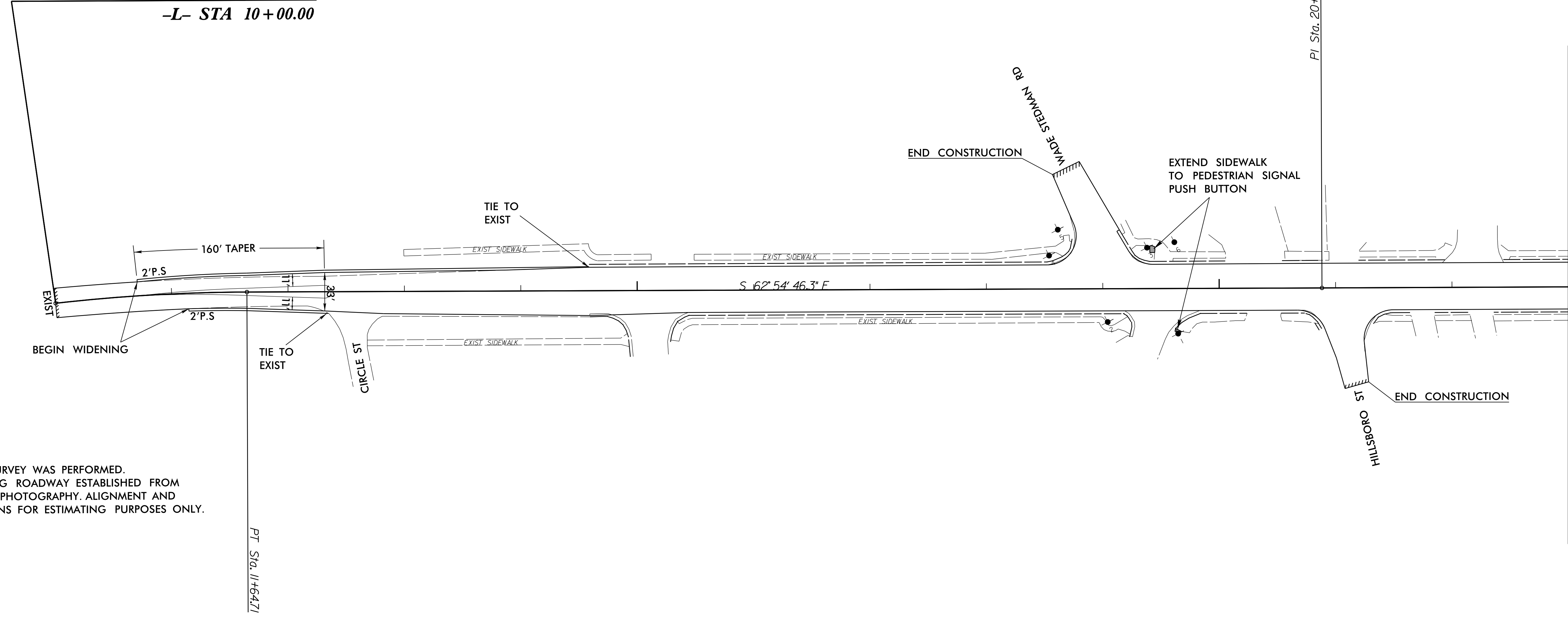
1. The contractor shall not work on both sides of the road simultaneously within the same area.
2. Ingress and egress shall be maintained to all businesses and dwellings on the project.
3. At the end of each workday, the contractor shall be required to backfill any area adjacent to existing travelway that has been graded, leaving no more than a 1" drop-off.
4. A minimum of two-way, two-lane traffic (plus all existing left and right turn lanes) shall be maintained during periods of construction inactivity.
5. The Contractor shall not be allowed to stop traffic for more than 5 minutes at a time in any one direction.
6. During periods of construction inactivity, the difference in elevation between lanes shall not exceed 1-1/2 inch.
7. Access to fire hydrants shall be maintained at all times.
8. During periods of construction inactivity, place cones/drums 3' from existing edge of pavement (travelway) as directed by the Engineer.
9. Channelizing devices in work areas shall be spaced not greater than 50' on center in tangent areas, 45' on center in tapers, and 10' on center in radii, and shall be set 3' off the edge of travelway, unless otherwise indicated on plans.
10. Contractor to install Erosion Control devices as directed by the Engineer.

8/17/99

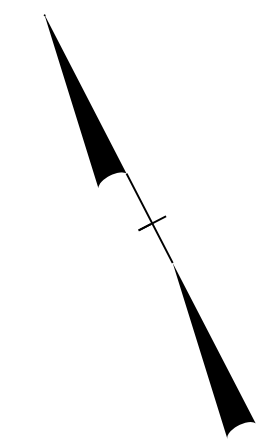
REVISIONS

I4-001-2016 13-41 W-5601EP NC 24 from Circle St to Cerol St in Stedman_CumberLand Co\Roadway\proj\W-5601EP_Redl.psh_4.dgn
 8/17/99 11:58:38 AM

BEGIN STATE PROJECT W-5601EP
-L- STA 10+00.00



NO SURVEY WAS PERFORMED.
 EXISTING ROADWAY ESTABLISHED FROM
 AERIAL PHOTOGRAPHY. ALIGNMENT AND
 STATIONS FOR ESTIMATING PURPOSES ONLY.

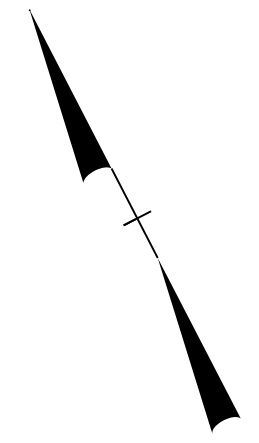
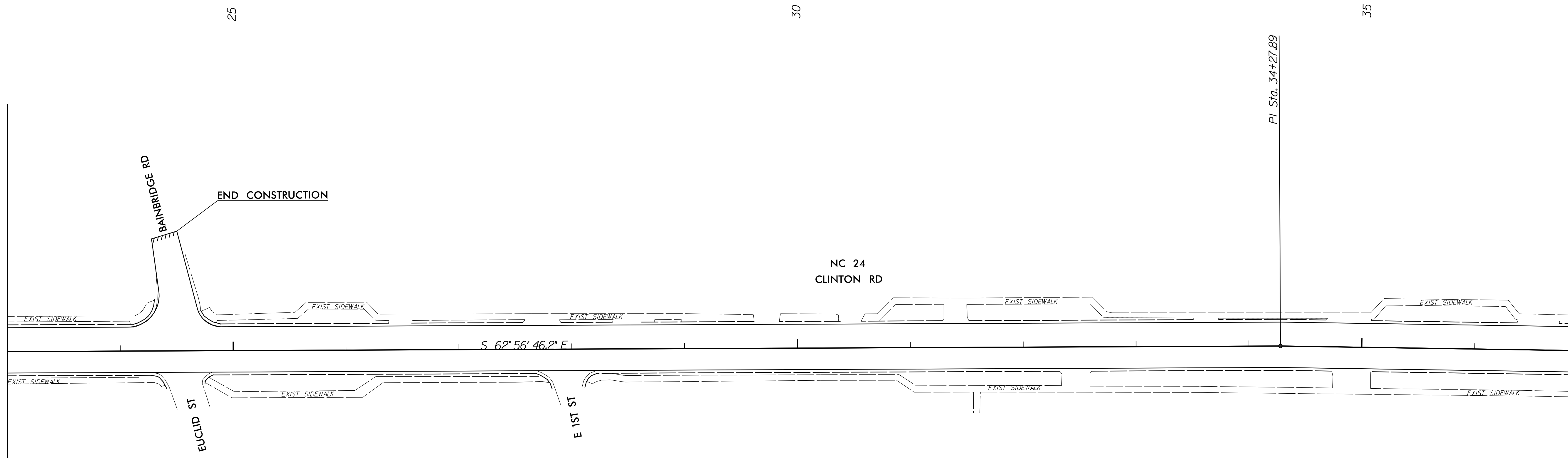


MATCHLINE SHEET 5

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5601EP	5

MATCHLINE SHEET 4



MATCHLINE SHEET 6

REVISIONS

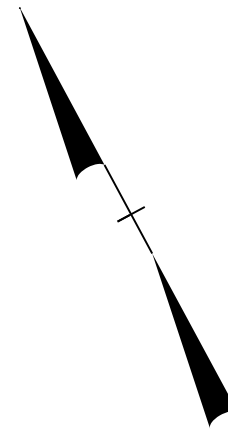
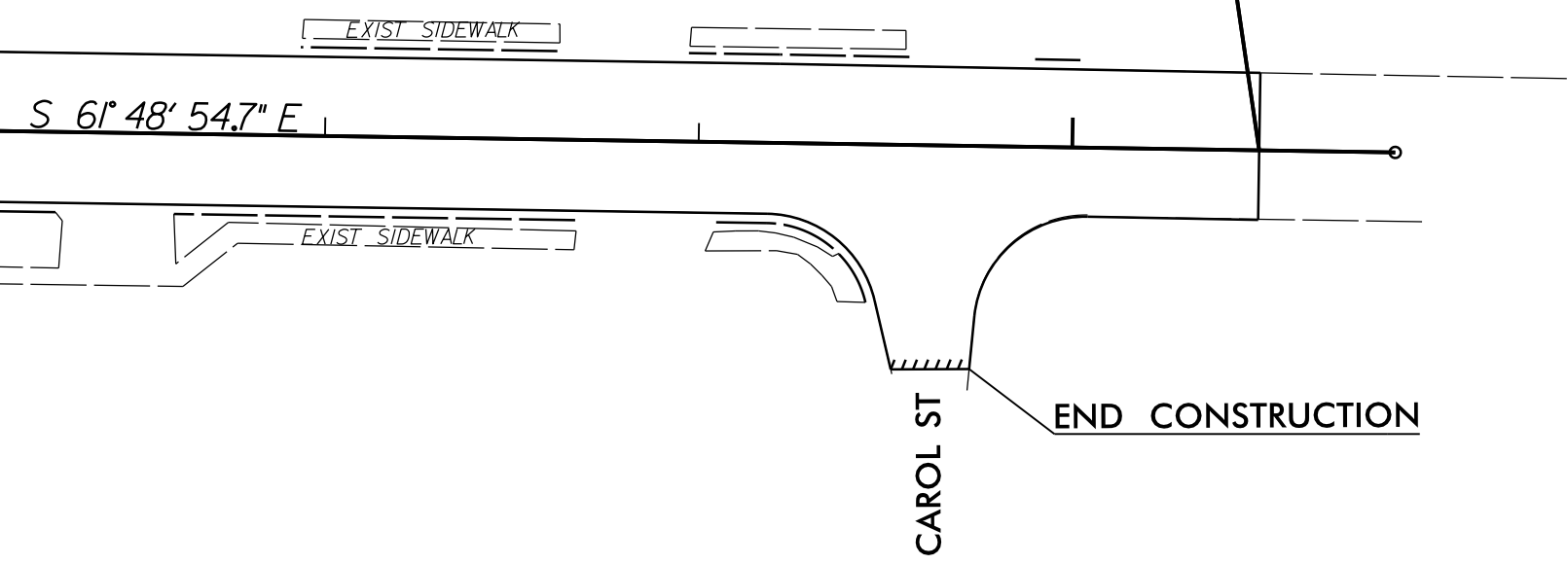
28-SEP-2016 10:25
C:\Roadway\proj\W-5601EP\Redy.psh_6.dgn
C:\Roadway\proj\W-5601EP\Redy.psh_6.dgn

MATCHLINE SHEET 5

END STATE PROJECT W-5601EP

-L- STA 40+50.00

40

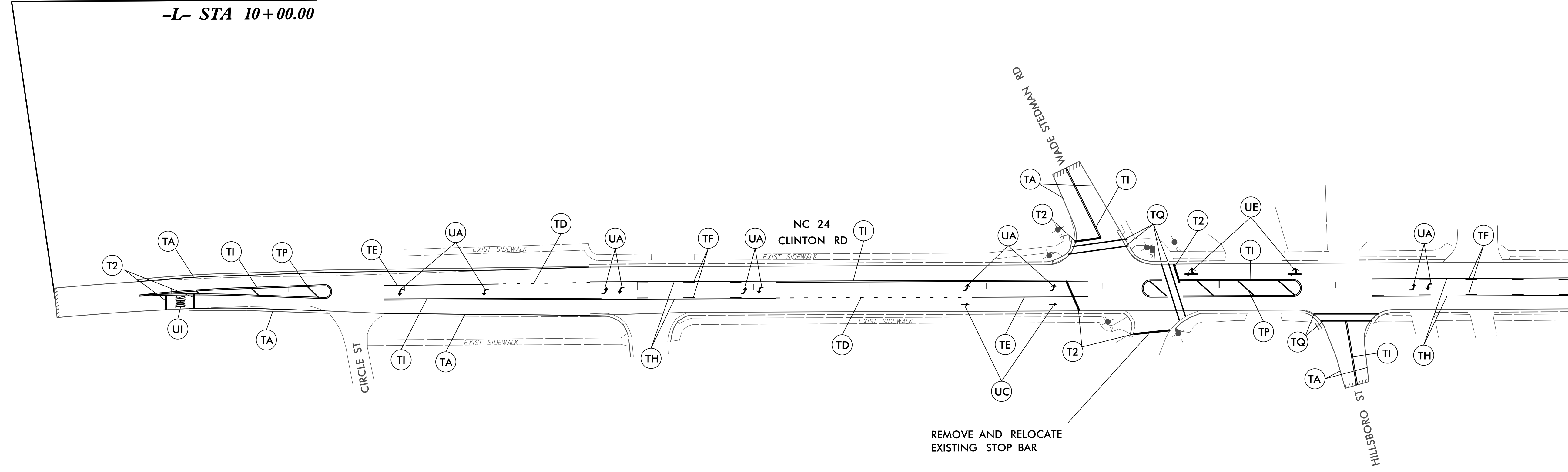


8/17/99

REVISIONS

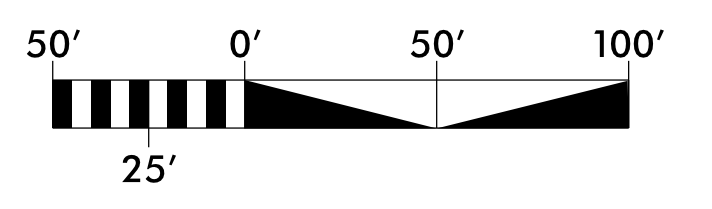
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BEGIN STATE PROJECT W-5601EP
-L- STA 10+00.00



REMOVE AND RELOCATE
EXISTING STOP BAR

LEGEND	
(T2) WHITE STOPBAR/TRANSVERSE BAND (24",120 MIL)	(TP) YELLOW DIAGONAL (8",90 MIL)
(TA) WHITE EDGELINE (4",90 MIL)	(TQ) WHITE CROSSWALK LINE (8",120 MIL)
(TD) 3 FT. - 9 FT./SP WHITE MINISKIP (4",120 MIL)	(UA) LEFT TURN ARROW (90 MIL)
(TE) WHITE SOLID LANE LINE (4",120 MIL)	(UC) STRAIGHT ARROW (90 MIL)
(TF) 10' FT. YELLOW SKIP (4",120 MIL)	(UE) RIGHT / STRAIGHT ARROW (90 MIL)
(TH) YELLOW SINGLE CENTER (4",120 MIL)	(UI) ALPHANUMERIC CHARACTER (90 MIL)
(TI) YELLOW DOUBLE CENTER (4",120 MIL)	



MATCHLINE SHEET PMP-2

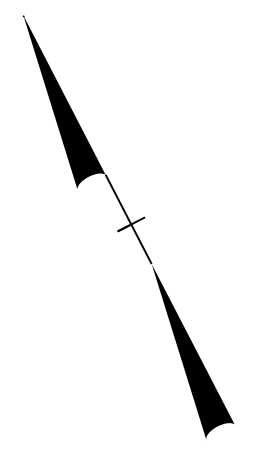
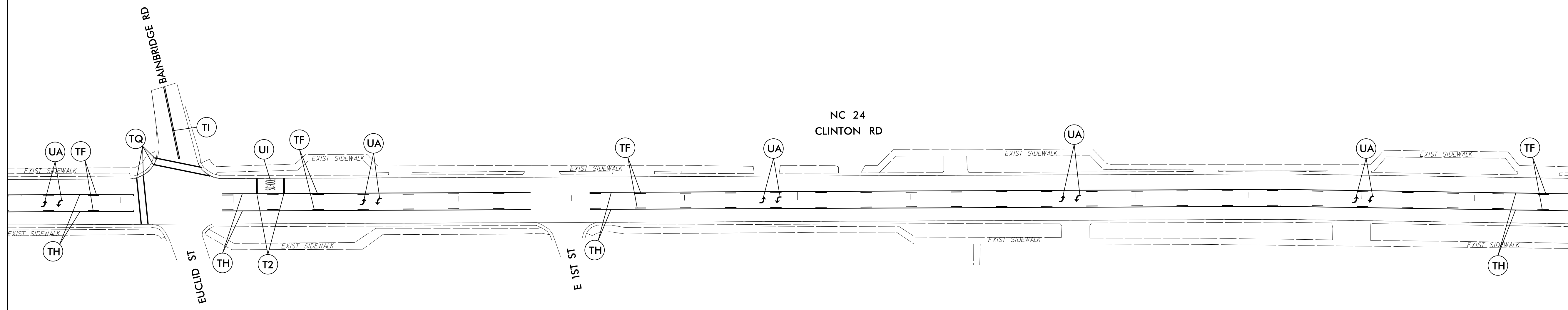
8/17/99

REVISIONS

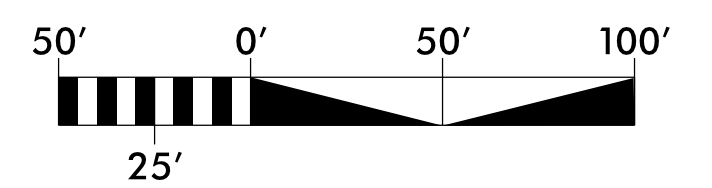
13 SEP 2016 11:34 AM C:\PMP\W-560IEP\NC 24 From Circle St to Carol St in Stedman_Cumberland Co\MP\W-560IEP_PMP_5.dgn

MATCHLINE SHEET PMP-1

MATCHLINE SHEET PMP-3



LEGEND	
(T2)	WHITE STOPBAR/TRANSVERSE BAND (24",120 MIL)
(TF)	10' FT. YELLOW SKIP (4",120 MIL)
(TH)	YELLOW SINGLE CENTER (4",120 MIL)
(TI)	YELLOW DOUBLE CENTER (4",120 MIL)
(TQ)	WHITE CROSSWALK LINE (8",120 MIL)
(UA)	LEFT TURN ARROW (90 MIL)
(UI)	ALPHANUMERIC CHARACTER (90 MIL)



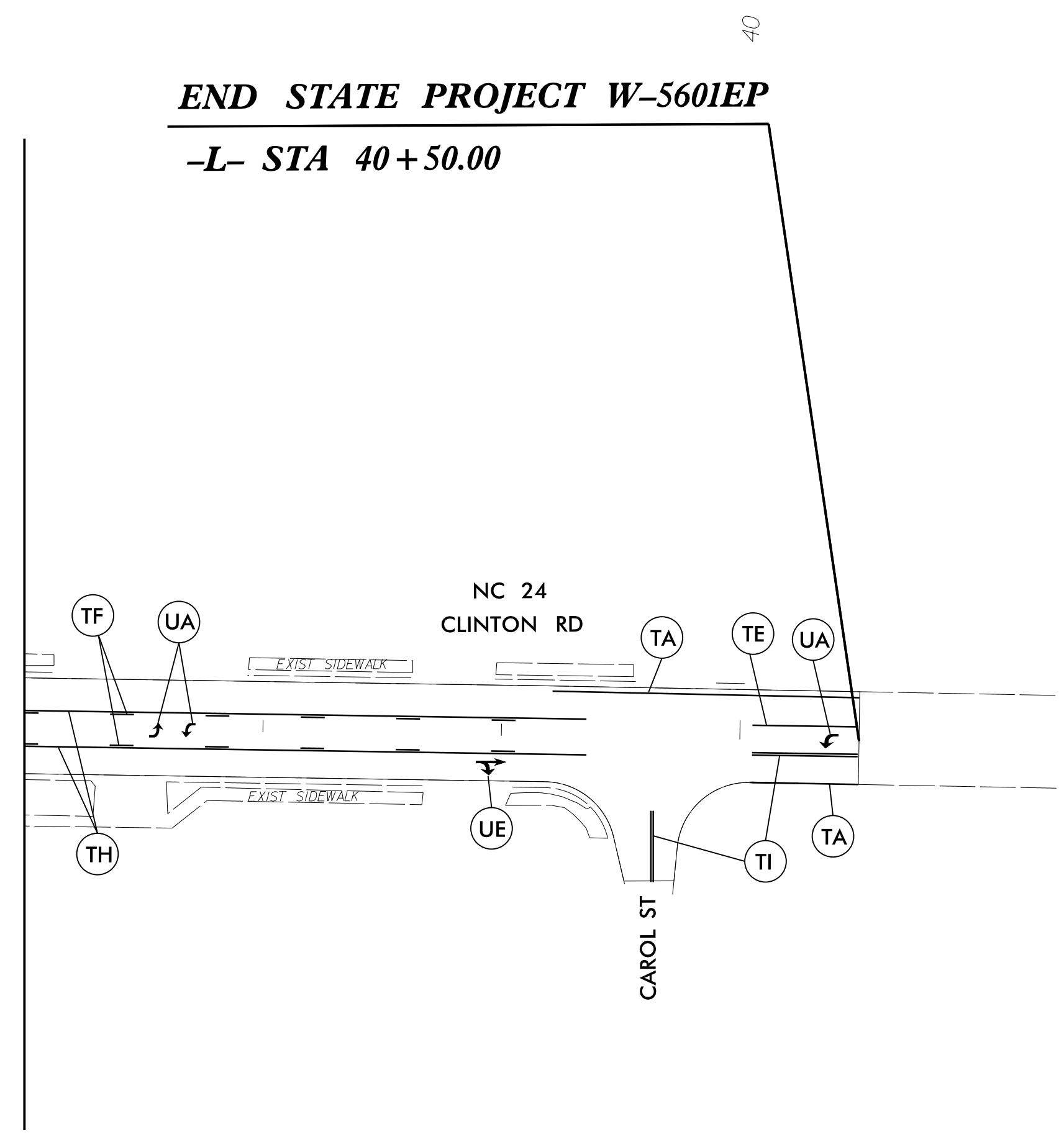
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REVISIONS

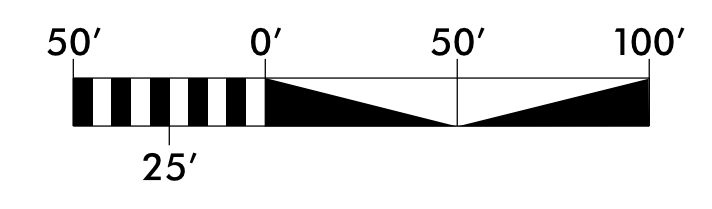
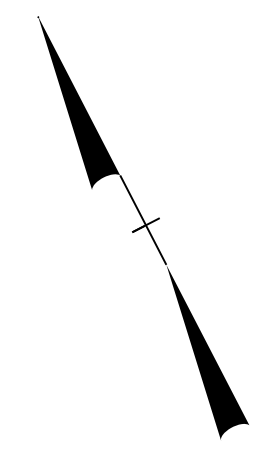
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MATCHLINE SHEET PMP-2

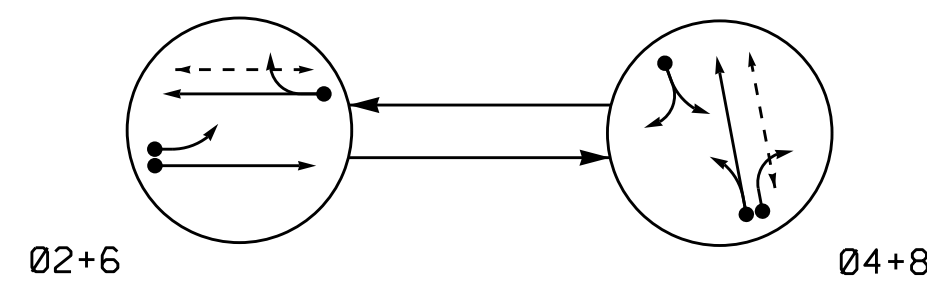
END STATE PROJECT W-5601EP
-L- STA 40+50.00



LEGEND	
TA	WHITE EDGE LINE (4",90 MIL)
TF	10' FT. YELLOW SKIP (4",120 MIL)
TH	YELLOW SINGLE CENTER (4",120 MIL)
TI	YELLOW DOUBLE CENTER (4",120 MIL)
UA	LEFT TURN ARROW (90 MIL)
UE	RIGHT/STRAIGHT ARROW (90 MIL)
TE	WHITE SOLID LANE LINE (4",120 MIL)



PHASING DIAGRAM



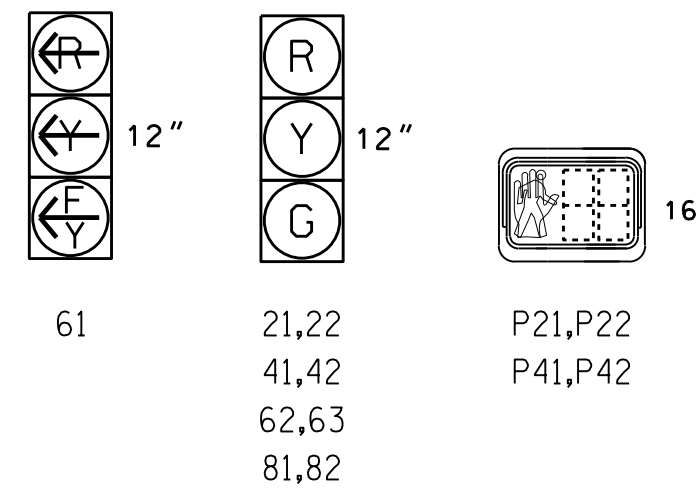
PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE	PHASE		
	Ø2+6	Ø4+8	FLIGHT
21,22	G	R	Y
41,42	R	G	R
61	Y	Y	Y
62,63	G	R	Y
81,82	R	G	R
P21,P22	W	DW	DRK
P41,P42	DW	W	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



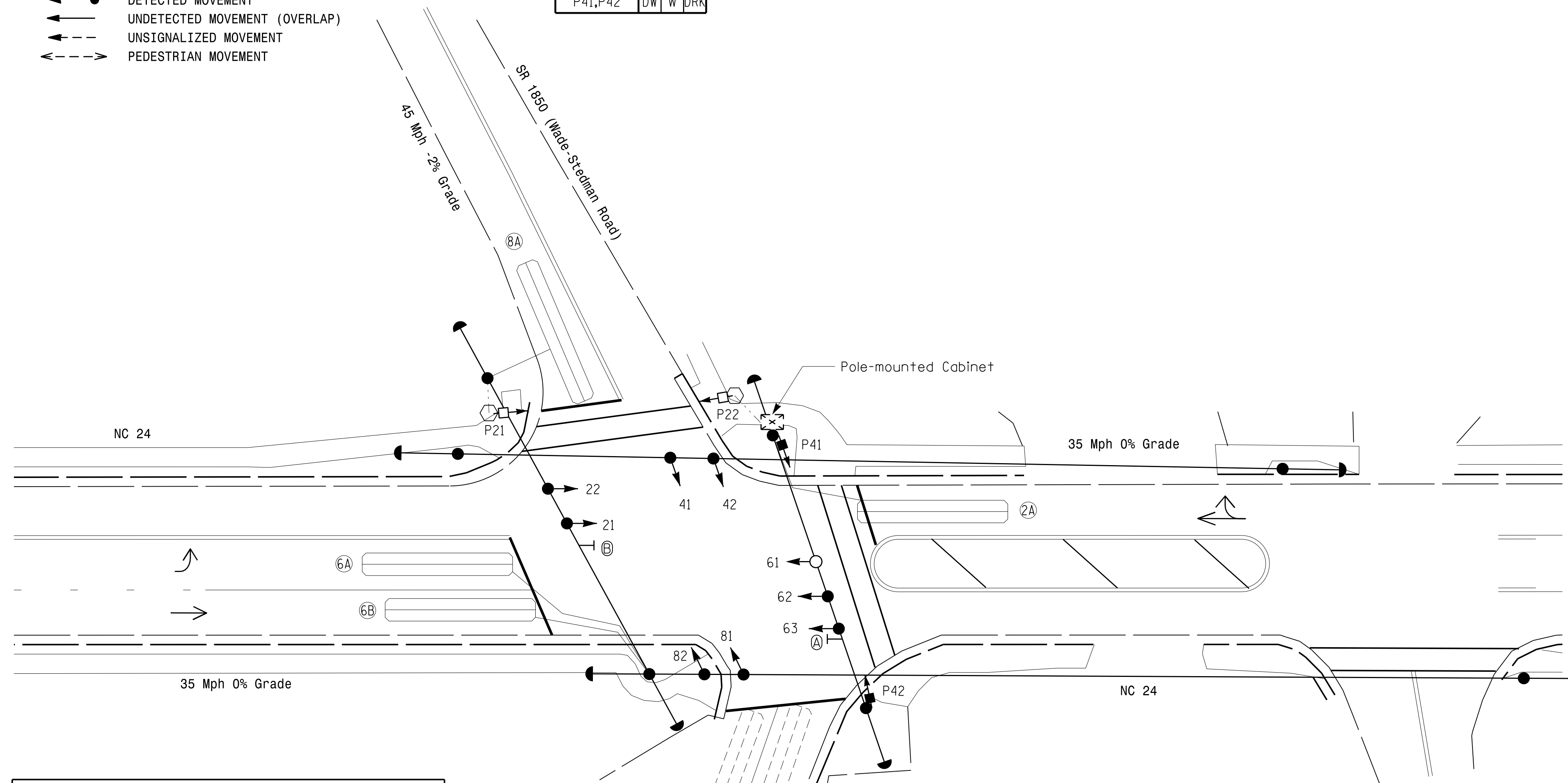
2070 LOOP & DETECTOR INSTALLATION

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING					SYSTEM LOOP	NEW CARD
					PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME		
2A	6X40	0	2-4-2	Y	2	Y	Y	-	-	-	-
4A	6X60	0	2-4-2	-	4	Y	Y	-	-	-	-
4B	6X60	0	2-4-2	-	4	Y	Y	-	10	-	-
6A	6X40	0	2-4-2	Y	6	Y	Y	-	-	-	-
6B	6X40	0	2-4-2	Y	6	Y	Y	-	-	-	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	5	-

2 Phase Fully Actuated Isolated

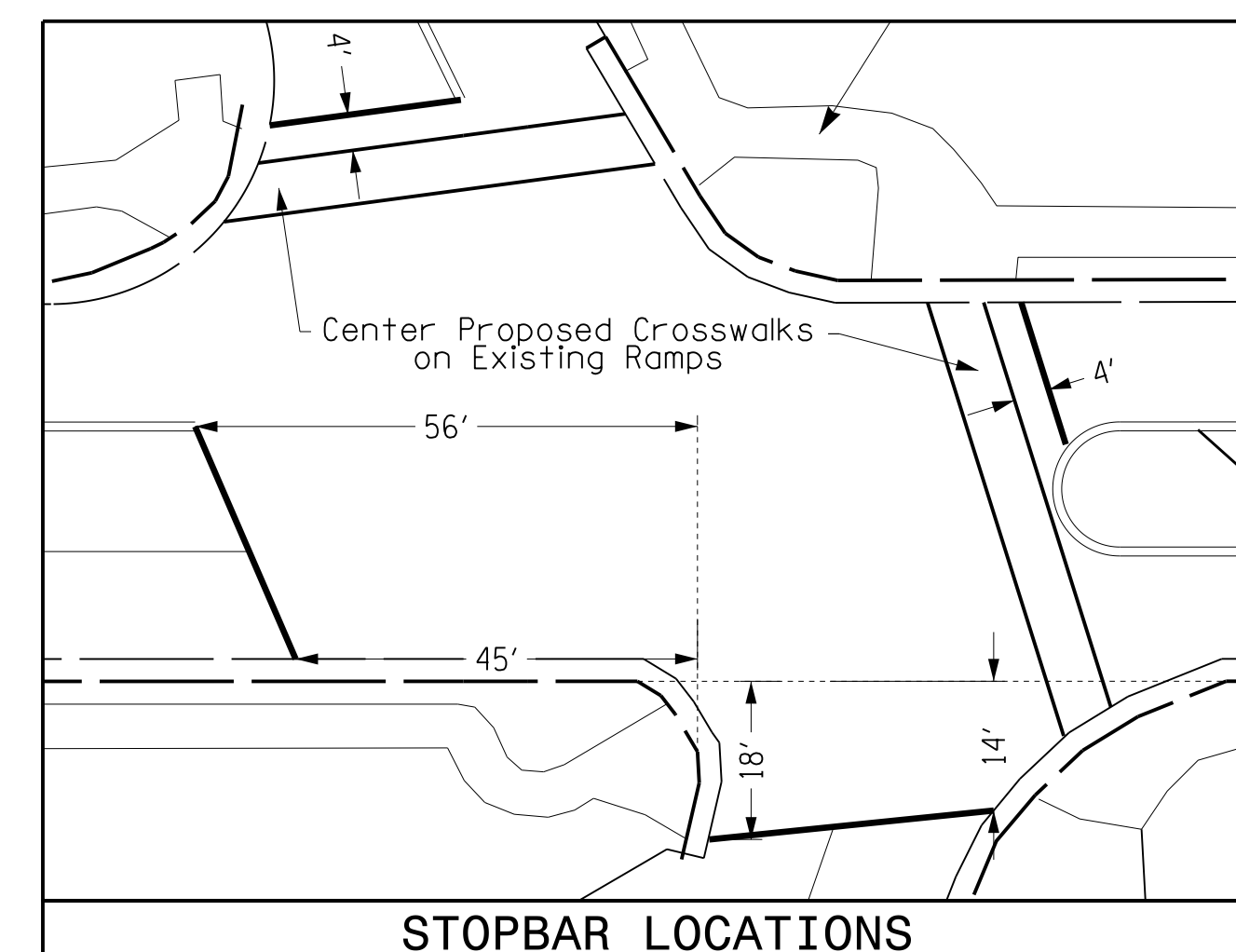
NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Reposition existing signal heads numbered 21, 22, 62, 63.
- Set all detector units to presence mode.
- Program controller to operate using FYA compact mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.



FEATURE	PHASE			
	2	4	6	8
Min Green 1 *	10	7	10	7
Extension 1 *	3.0	2.0	3.0	2.0
Max Green 1 *	45	30	45	30
Yellow Clearance	3.9	4.0	3.9	4.0
Red Clearance	1.7	3.1	1.7	3.1
Walk 1 *	7	7	-	-
Don't Walk 1	11	13	-	-
Seconds Per Actuation *	-	-	-	-
Max Variable Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	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.



LEGEND

- | PROPOSED | EXISTING |
|--|--|
| ○ Traffic Signal Head | ● Traffic Signal Head |
| ● Modified Signal Head | N/A |
| ⊥ Sign | ⊥ Sign |
| ⊥ Pedestrian Signal Head With Push Button & Sign | ⊥ Pedestrian Signal Head With Push Button & Sign |
| ○ Signal Pole with Guy | ● Signal Pole with Guy |
| ○ Signal Pole with Sidewalk Guy | ● Signal Pole with Sidewalk Guy |
| ⊠ Inductive Loop Detector | ⊠ Inductive Loop Detector |
| □ Controller & Cabinet | □ Controller & Cabinet |
| □ Junction Box | □ Junction Box |
| - - - 2-in Underground Conduit | - - - 2-in Underground Conduit |
| - - - Right of Way | - - - Right of Way |
| → Directional Arrow | → Directional Arrow |
| ⊙ No Right Turn Sign (R3-1) | ⊙ No Right Turn Sign (R3-1) |
| ⊙ No Left Turn Sign (R3-2) | ⊙ No Left Turn Sign (R3-2) |
| ○ Type II Signal Pedestal | ● Type II Signal Pedestal |

Signal Upgrade

Prepared In the Offices of:

 750 N. Greenfield Pkwy, Garner, NC 27529

NC 24 At SR 1850 (Wade-Stedman Road) / Stedman Elementary

Division 6 Cumberland County Stedman

PLAN DATE: September 2016 REVIEWED BY: JPG

PREPARED BY: JPG/KGP REVIEWED BY: JPG

REVISIONS: INIT. DATE

SCALE: 0 20 1"=20'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

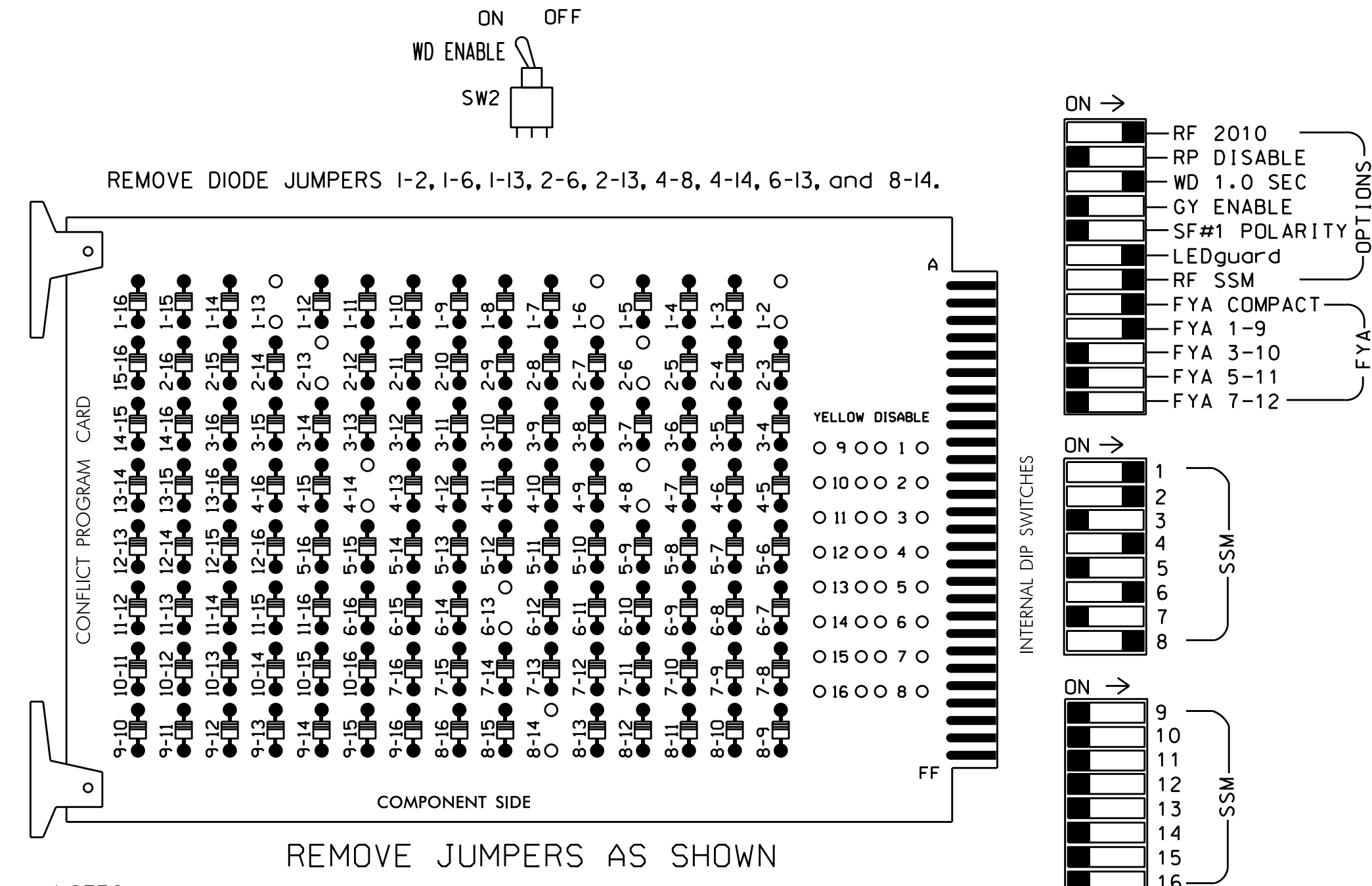
SEAL: JASON P. GALLOWAY, PROFESSIONAL ENGINEER, NO. 029904, DATE 10/11/2016

SIG. INVENTORY NO. 06-0495

I:\2016-2017\06-32\Sigs\112551\112551_Sig\112551_Sig.dgn, 2016madd.dgn
 J:\112551\112551_Sig\112551_Sig.dgn, 2016madd.dgn

EDI MODEL 2010ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE DIODE JUMPERS 1-2, 1-6, 1-13, 2-6, 2-13, 4-8, 4-14, 6-13, and 8-14.

REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Make sure jumpers SEL2-SEL5 are present on the monitor board.
- 2010ECL-NC conflict monitor required for FYA compact mode operation.

■ = 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.
- Ensure that Red Enable is active at all times during normal operation. To prevent Red Failures on unused monitor channels, tie unused red monitor inputs 3,5,7,9,10,11,12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
- Program phases 4 and 8 for Dual Entry.
- Enable Simultaneous Gap-Out for all phases.
- Program phases 2 and 6 for Start Up In Green.
- Program phases 2 and 4 for 'STARTUP PED CALL'.
- Program phases 2 and 6 for Yellow Flash, and overlap 1 as WAG Overlaps.

EQUIPMENT INFORMATION

CONTROLLER.....2070
 CABINET.....336
 SOFTWARE.....ECONOLITE OASIS
 CABINET MOUNT.....POLE
 OUTPUT FILE POSITIONS...12
 LOAD SWITCHES USED.....S1,S2,S2P,S4,S4P,S6,S8
 PHASES USED.....2,2PED,4,4PED,6,8
 OVERLAP "A".....2

SIGNAL HEAD HOOK-UP CHART

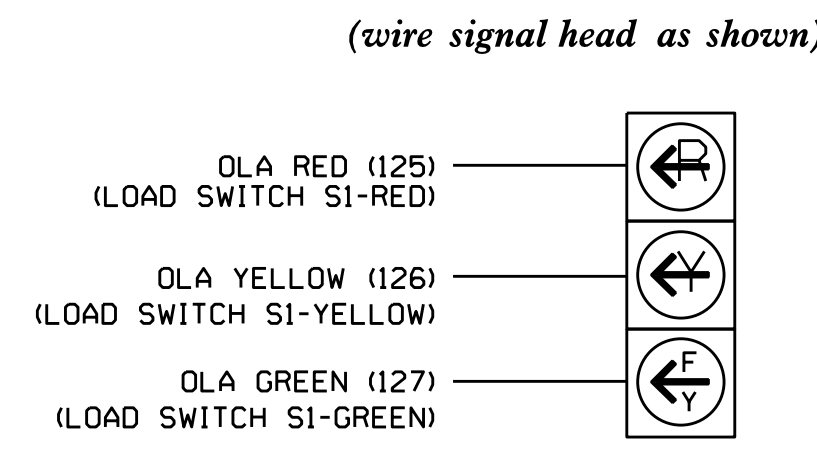
LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P
PHASE	OLA	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED
SIGNAL HEAD NO.	61	21,22	P21, P22	NU	41,42	P41, P42	NU	62,63	NU	NU	81,82	NU
RED		128			101			134			107	
YELLOW		129			102			135			108	
GREEN		130			103			136			109	
RED ARROW	125											
YELLOW ARROW	126											
FLASHING YELLOW ARROW	127											
GREEN ARROW			113		104							
			115		106							

NU = Not Used
 ★ See pictorial of head wiring in detail below.
 NOTE: Load switch S1 requires output remapping. See sheet 2 for details.

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.

FYA SIGNAL WIRING DETAIL



INPUT FILE POSITION LAYOUT

(front view)

FILE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	S	∅ 2	S	∅ 4	S	∅ 6	S	∅ 8	S	∅ 2 PED	S	∅ 4 PED	S	FS
I	2A	NOT USED	4A	6A	8A	DC ISOLATOR	DC ISOLATOR	DC ISOLATOR	DC ISOLATOR	DC ISOLATOR	DC ISOLATOR	DC ISOLATOR	DC ISOLATOR	DC ISOLATOR
L			4B	6B	NOT USED									

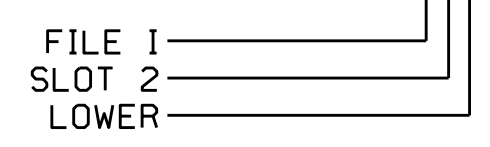
EX. : 1A, 2A, ETC. = LOOP NO.'S
 FS = FLASH SENSE
 ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
2A	TB21-3,4	I2U	39	1	2	2	Y	Y			
4A	TB21-7,8	I4U	41	3	4	4	Y	Y			
4B	TB23-7,8	I4L	45	7	14	4	Y	Y		10	
6A	TB21-11,12	I6U	40	2	6	6	Y	Y			
6B	TB23-11,12	I6L	44	6	16	6	Y	Y			
8A	TB22-1,2	I8U	42	4	8	8	Y	Y			5
PED PUSH BUTTONS											
P21,P22	TB22-9,10	I12U	67	29	PED 2	2 PED					
P41,P42	TB24-9,10	I12L	69	31	PED 4	4 PED					

NOTE: INSTALL DC ISOLATOR IN INPUT FILE SLOT 112.

INPUT FILE POSITION LEGEND:



Electrical Detail - Sheet 1 of 2

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 06-0495
 DESIGNED: September 2016
 SEALED: 10/11/2016
 REVISED: N/A

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	<p>Prepared In the Offices of:</p> <p>NC 24 at SR 1850 (Wade-Stedman Road) / Stedman Elementary</p> <p>Division 6 Cumberland County Stedman</p> <p>PLAN DATE: October 2016 REVIEWED BY: BAS</p> <p>PREPARED BY: S. Armstrong REVIEWED BY:</p>	<p>SEAL</p> <p>STATE OF NORTH CAROLINA</p> <p>PROFESSIONAL ENGINEER</p> <p>SEAL 030530</p> <p>W. JACARY M. LITTLE</p> <p>DocuSigned by: Zachary M. Little 10/11/2016</p> <p>SIG. INVENTORY NO. 06-0495</p>
--	---	--

11-007-2016 13-13
 S:\IT\SSM\15\SIGNAL\work\hgr\oups\g_MarkArmstrong\060495_sml.e xxxxx.dgn
 sarmstrong

FYA SIGNAL OUTPUT REMAPPING ASSIGNMENT PROGRAMMING DETAIL FOR SIGNAL HEAD 61

(program controller as shown below)

FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS), WITH CURSOR IN "OUTPUT ASSIGNMENT#" POSITION, ENTER "14"

```

PAGE:1 C1 PIN:16 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....14
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
    
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```

PAGE:1 C1 PIN:16 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...1
SELECT COLOR(0=RED,1=YEL,2=GRN)...0
    
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN.
PRESS THE 'ENT' KEY AFTER ENTERING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```

PAGE:1 C1 PIN:16 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....14
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
    
```

PRESS "+" KEY FOR OUTPUT 15

```

PAGE:1 C1 PIN:17 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....15
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
    
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```

PAGE:1 C1 PIN:17 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...1
SELECT COLOR(0=RED,1=YEL,2=GRN)...1
    
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN.
PRESS THE 'ENT' KEY AFTER ENTERING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```

PAGE:1 C1 PIN:17 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....15
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
    
```

PRESS "+" KEY FOR OUTPUT 16

```

PAGE:1 C1 PIN:18 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....16
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
    
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```

PAGE:1 C1 PIN:18 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...1
SELECT COLOR(0=RED,1=YEL,2=GRN)...2
    
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN.
PRESS THE 'ENT' KEY AFTER ENTERING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```

PAGE:1 C1 PIN:18 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....16
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
    
```

OUTPUT PROGRAMMING FOR HEAD 61 COMPLETE

OVERLAP PROGRAMMING DETAIL

(program controller as shown below)

FROM MAIN MENU PRESS '8' (OVERLAPS), THEN '1' (VEHICLE OVERLAP SETTINGS).

```

PAGE 1: VEHICLE OVERLAP 'A' SETTINGS
PHASE:          12345678910111213141516
VEH OVL PARENTS: X
VEH OVL NOT VEH:
VEH OVL NOT PED:
VEH OVL GRN EXT:
STARTUP COLOR:  _ RED  _ YELLOW  _ GREEN
FLASH COLORS:   _ RED  _ YELLOW X GREEN
SELECT VEHICLE OVERLAP OPTIONS: (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...Y
GREEN EXTENSION (0-255 SEC)...0.0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)...0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0
OUTPUT AS PHASE # (0=NONE, 1-16)...0
    
```

← NOTICE GREEN FLASH

OVERLAP PROGRAMMING COMPLETE

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 06-0495
DESIGNED: September 2016
SEALED: 10/11/2016
REVISED: N/A

11-007-2016 13:14 S:\IT\SS\11\15\Sigmo\work\hgr\oups\51g_Mon\hmrstrng\060495_sml.ele.vxxxr.dgn sarmstrng

Electrical Detail - Sheet 2 of 2

Prepared In the Offices of:
TRANSPORTATION MOBILITY AND SAFETY
DIVISION OF NORTH CAROLINA
Signal Management Section
750 N. Greenfield Pkwy, Garner, NC 27529

NC 24
at
SR 1850 (Wade-Stedman Road) /
Stedman Elementary

Division 6 Cumberland County Stedman

PLAN DATE: October 2016 REVIEWED BY: BAS

PREPARED BY: S. Armstrong REVIEWED BY:

REVISIONS INIT. DATE

DocuSigned by:
Zachary M. Little 10/11/2016
0021EFD8F5341F DATE

SIG. INVENTORY NO. 06-0495

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

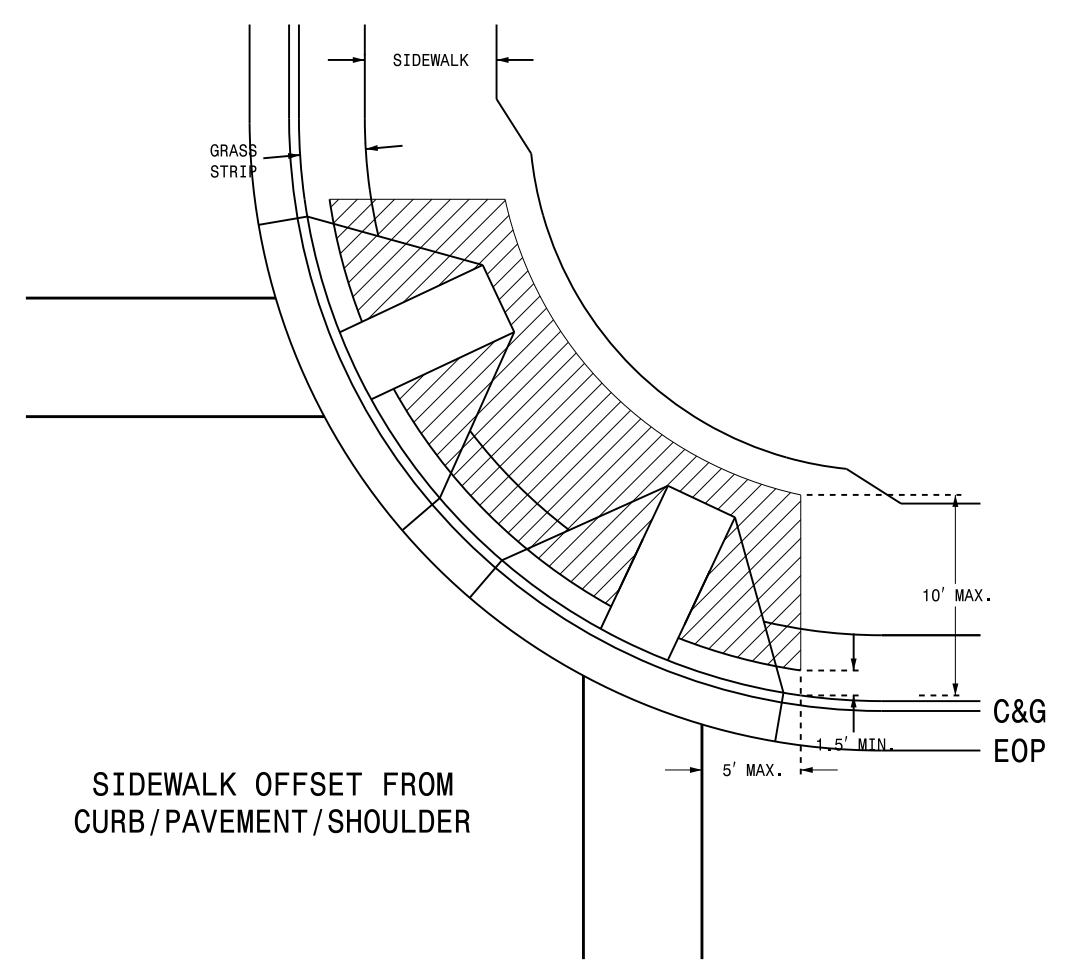
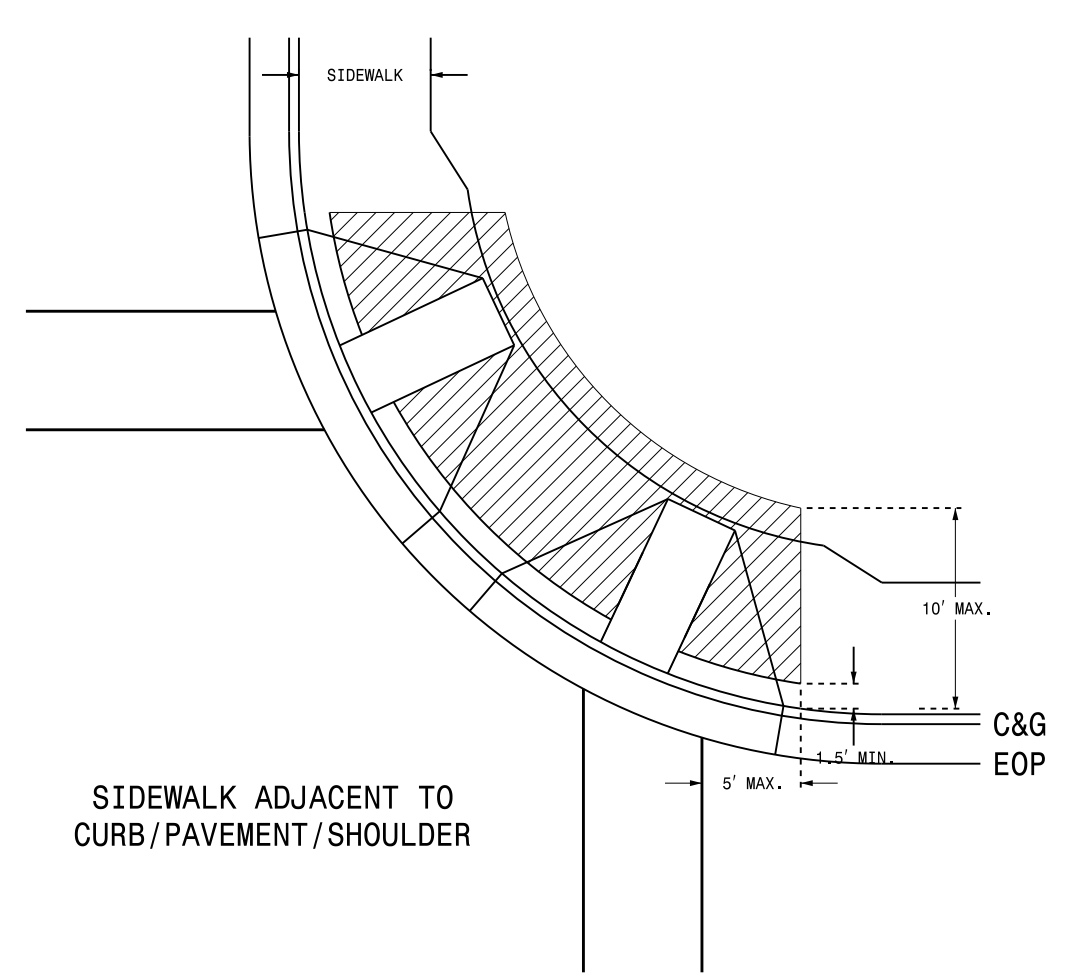
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NORTH CAROLINA
PROFESSIONAL
SEAL
030530
ENGINEER
ZACHARY M. LITTLE

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

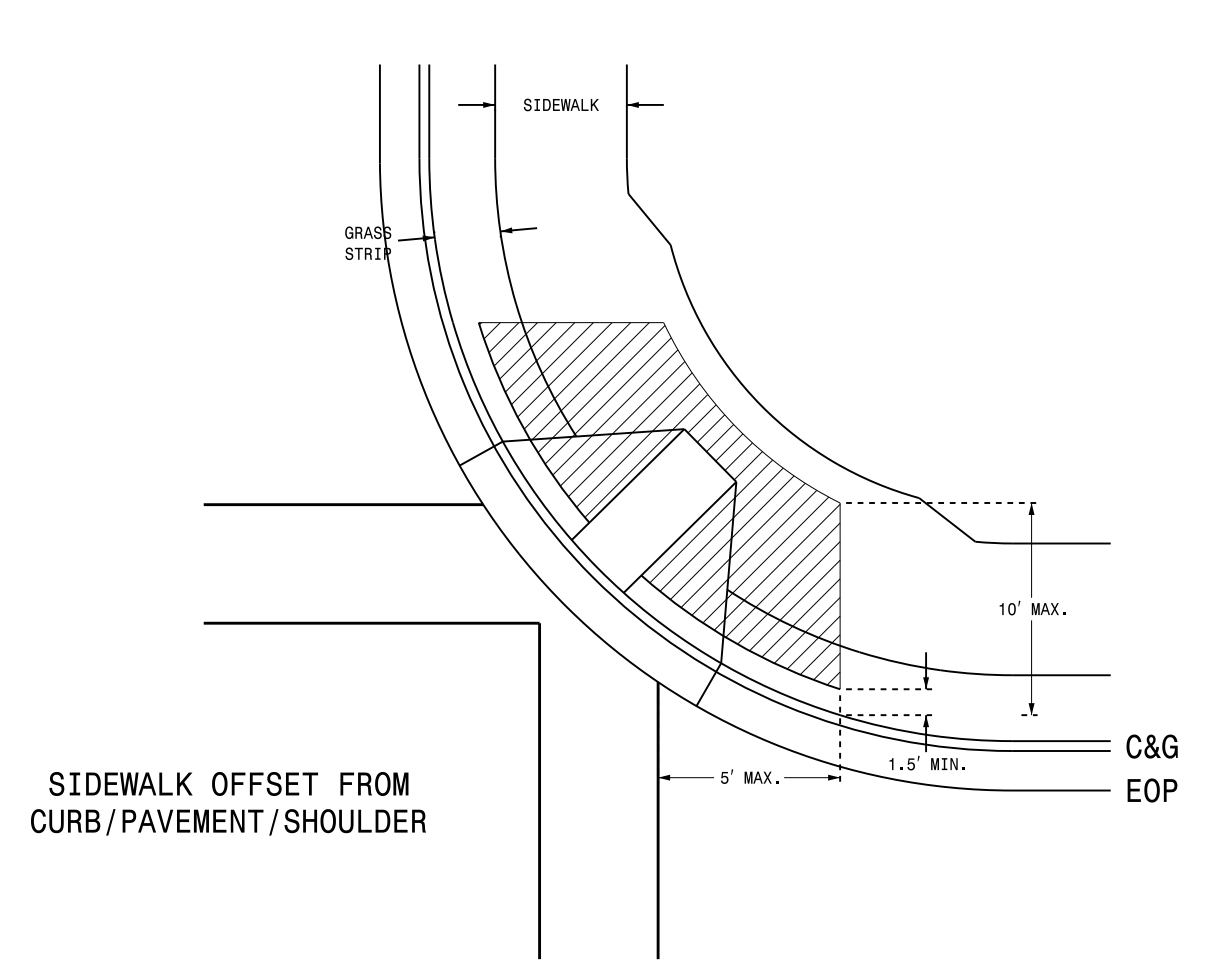
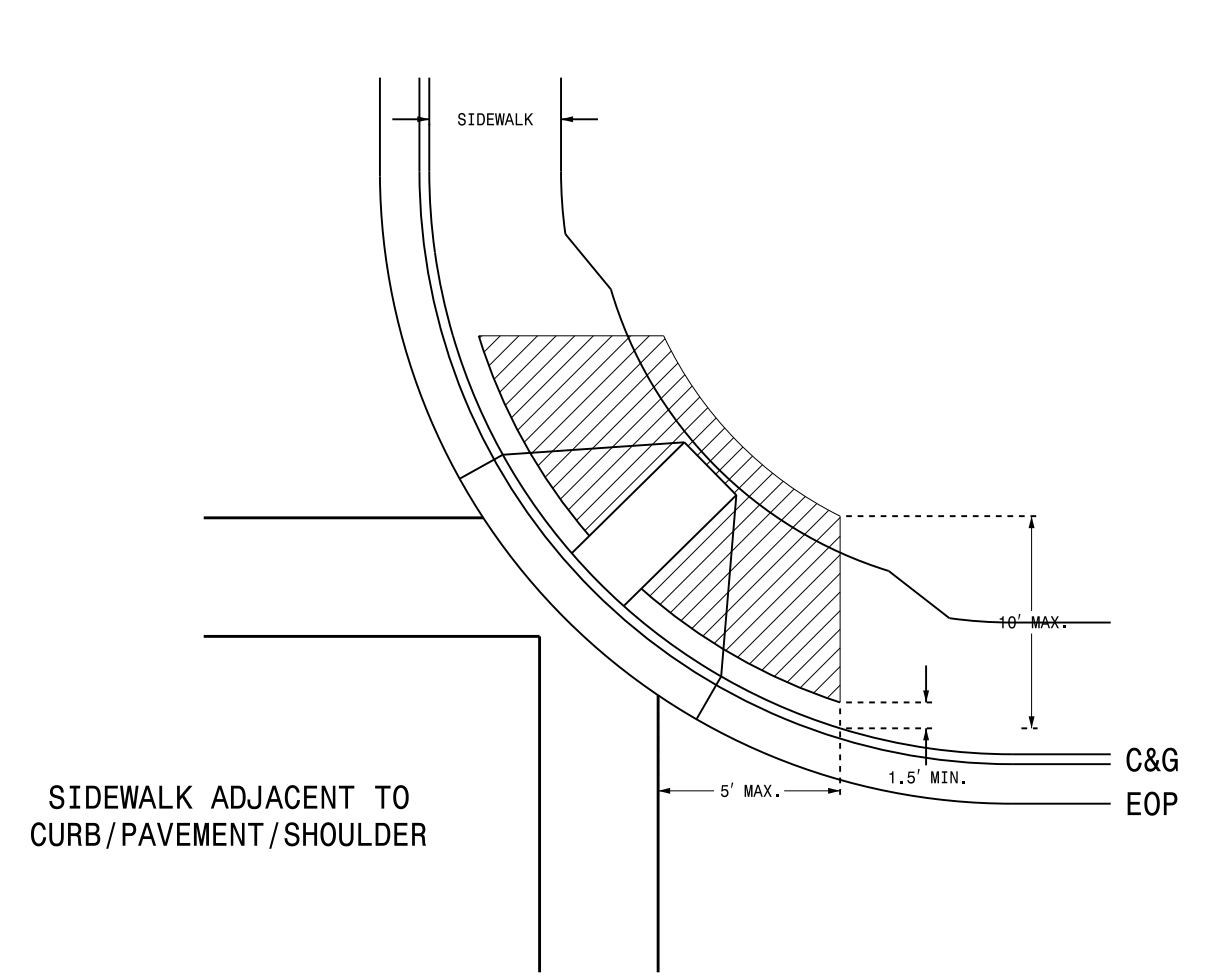
ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
 PLACEMENT DETAIL

SHEET 1 OF 3
1705D01

PUSHBUTTON PLACEMENT
SEPARATE CURB RAMPS



PUSHBUTTON PLACEMENT
SHARED CURB RAMP



- NOTES**
1. Pushbutton pedestals should not be located further than 10 feet from the edge of curb, shoulder, or pavement.
 2. The face of the pushbutton should be parallel to the applicable crosswalk.
 3. Separate pushbuttons used on the same corner should be separated by a distance of at least 10 feet.
 4. Pushbuttons shall be installed adjacent to a level surface with a maximum reach distance of 10 inches.
 5. Maintain 4 feet of clearance around pedestal if located in sidewalk.
 6. Refer to section 1705 of the 2012 NCDOT Roadway Standard Drawings for Pushbutton Assembly details.
 7. Refer to section 1743 of the 2012 NCDOT Roadway Standard Drawings for Pedestal details.
 8. Contact Division Traffic Engineer for pushbutton location approval prior to installation.
 9. Curb ramps are for symbolic use only and may not reflect actual design or field conditions.

PROPOSED	LEGEND
	Signal Pole
	Type I Pushbutton Post
	Type II Signal Pedestal
	Pushbutton & Sign
	Pedestrian Signal Head
	Curb Ramp
	Pushbutton Location Area

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ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
 PLACEMENT DETAIL

SHEET 1 OF 3
1705D01

See Plate for Title

Prepared in the Offices of:

750 N. Greenfield Parkway
Garner, NC 27529

SEAL

DocuSigned by:
Robert J. Ziemba
18084828744604

SIGNATURE

6/17/2014
DATE

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 rz1emba

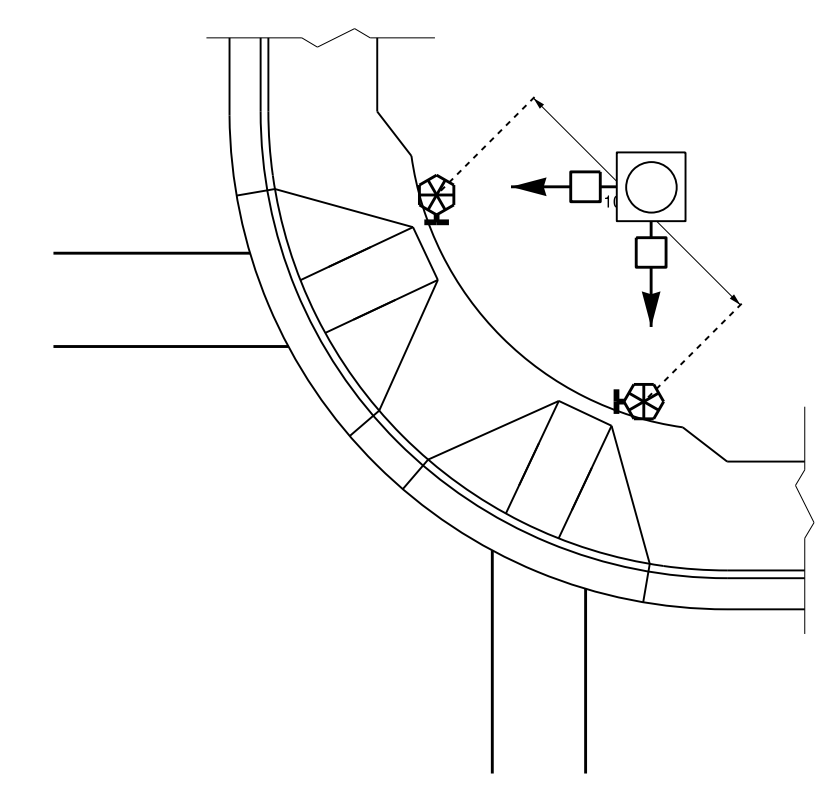
STATE OF NORTH CAROLINA
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06-14

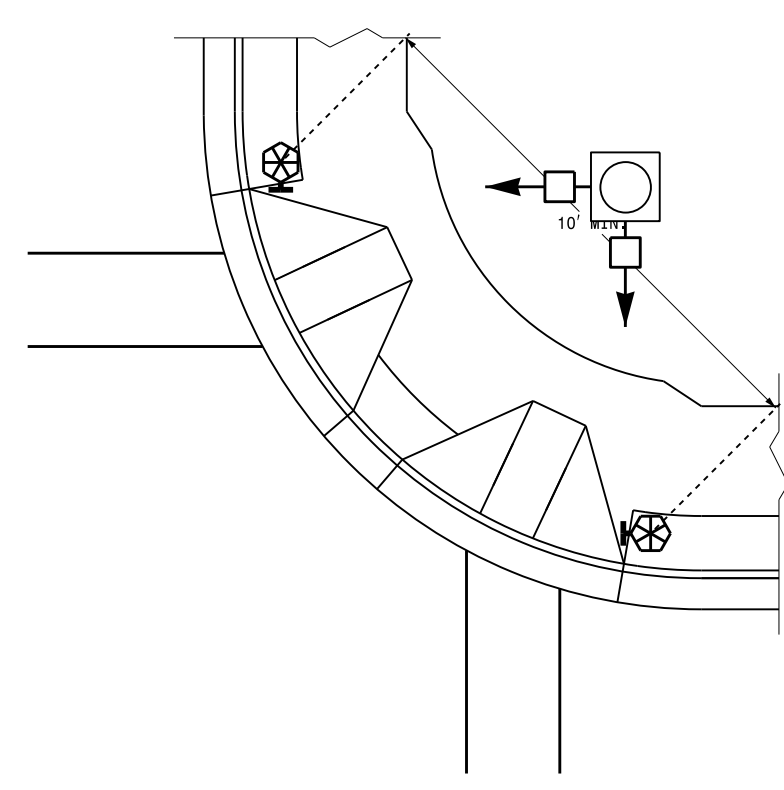
ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 2 OF 3
1705D01

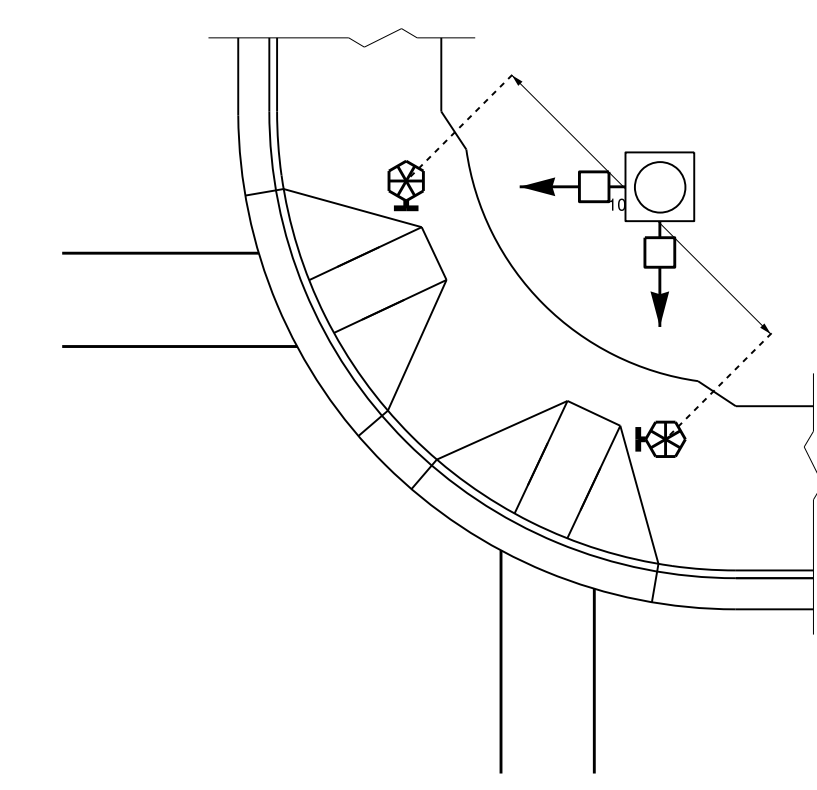
TYPICAL PUSHBUTTON LOCATIONS (CASE I)
SEPARATE CURB RAMPS W/ TYPE I PEDESTALS



BACK OF SIDEWALK IS WITHIN 10'
OF CURB OR PAVEMENT/SHOULDER



GRASS STRIP PLACEMENT IF BACK
OF SIDEWALK EXCEEDS 10' FROM
CURB OR PAVEMENT/SHOULDER



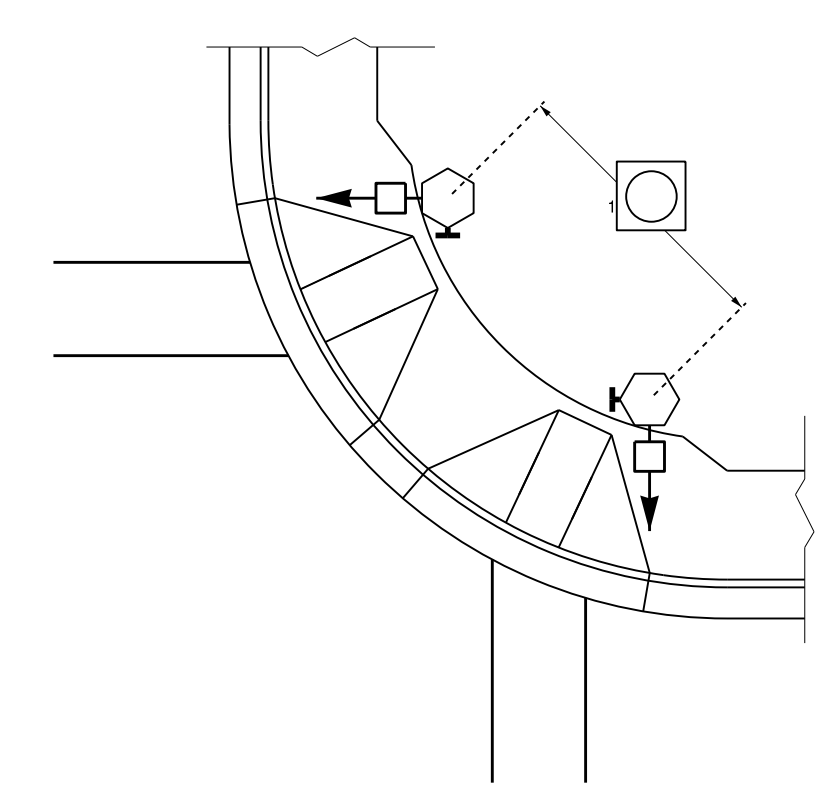
PUSHBUTTON PLACEMENT
IN WIDE SIDEWALK

PROPOSED

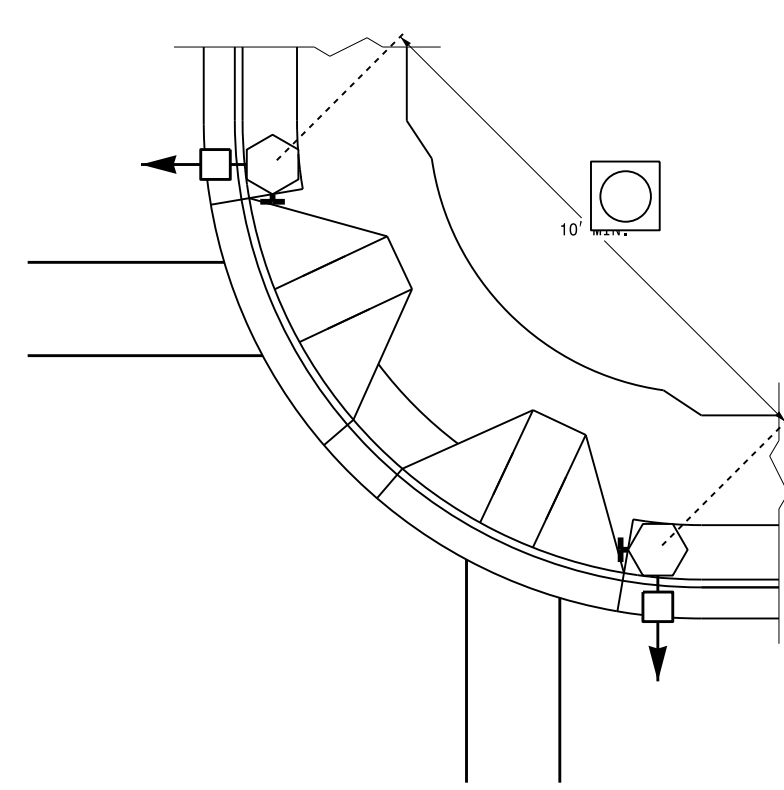
- Signal Pole
- Type I Pushbutton Post
- Type II Signal Pedestal
- Pushbutton & Sign
- Pedestrian Signal Head
- Curb Ramp
- Pushbutton Location Area

LEGEND

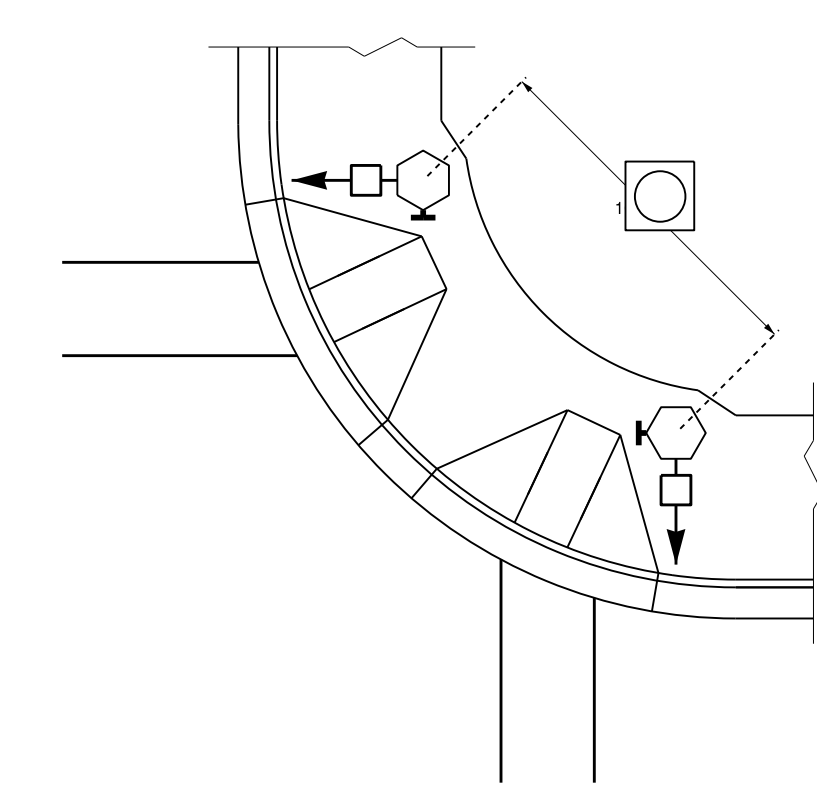
TYPICAL PUSHBUTTON LOCATIONS (CASE II)
SEPARATE CURB RAMPS W/ TYPE II PEDESTALS



BACK OF SIDEWALK IS WITHIN 10'
OF CURB OR PAVEMENT/SHOULDER

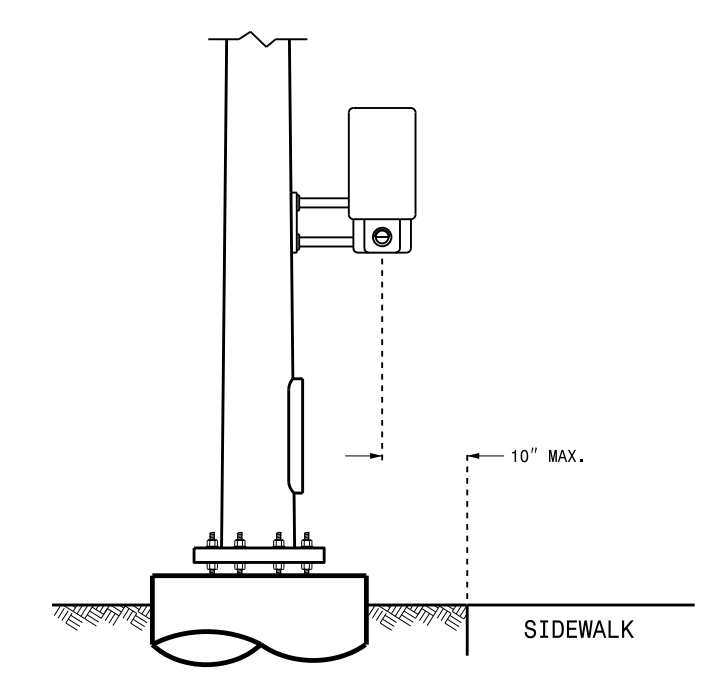


GRASS STRIP PLACEMENT IF BACK
OF SIDEWALK EXCEEDS 10' FROM
CURB OR PAVEMENT/SHOULDER



PUSHBUTTON PLACEMENT
IN WIDE SIDEWALK

OPTIONAL PUSHBUTTON EXTENSION
FACE OF PUSHBUTTON PARALLEL TO
APPLICABLE CROSSWALK



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ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 2 OF 3
1705D01

See Plate for Title

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Garner, NC 27529

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1888488274464

SIGNATURE DATE

6/17/2014

06-1406-2014.r16.s38
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 RALEIGH, N.C.

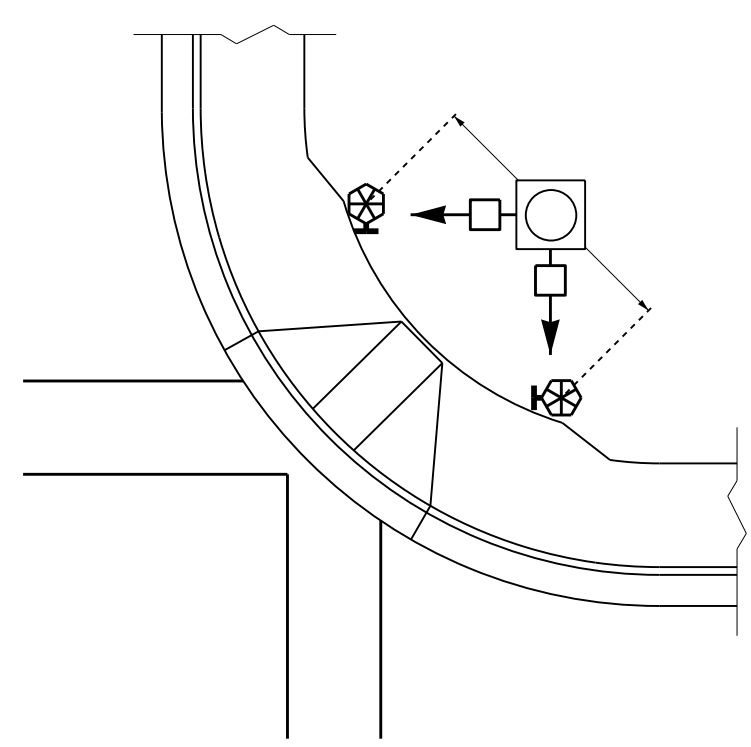
06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
 PLACEMENT DETAIL

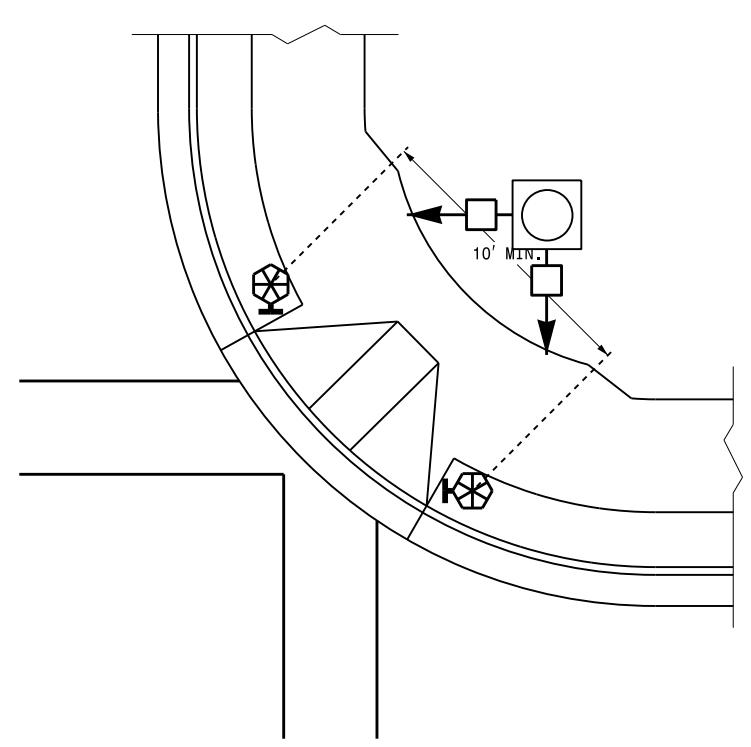
SHEET 3 OF 3
1705D01

TYPICAL PUSHBUTTON LOCATIONS (CASE III)

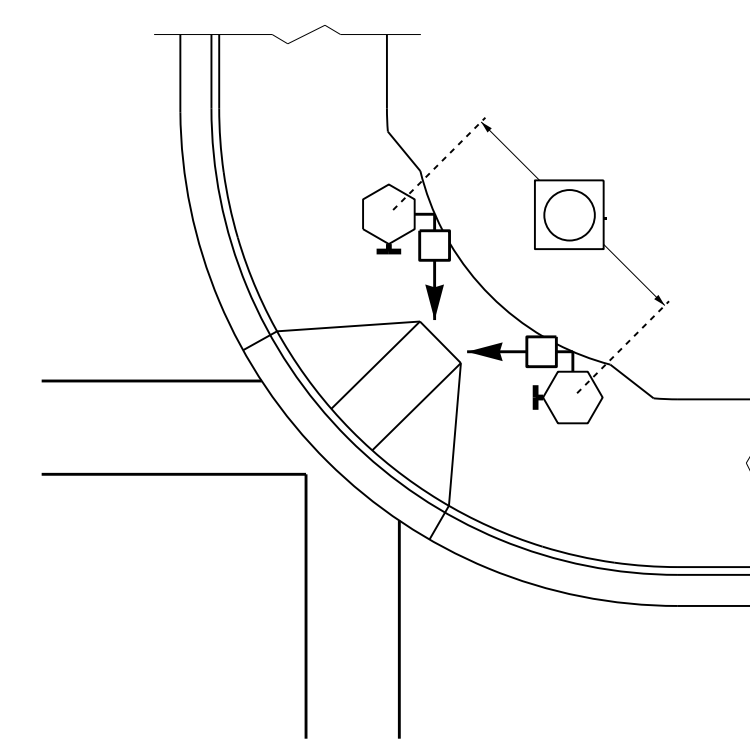
SHARED CURB RAMPS



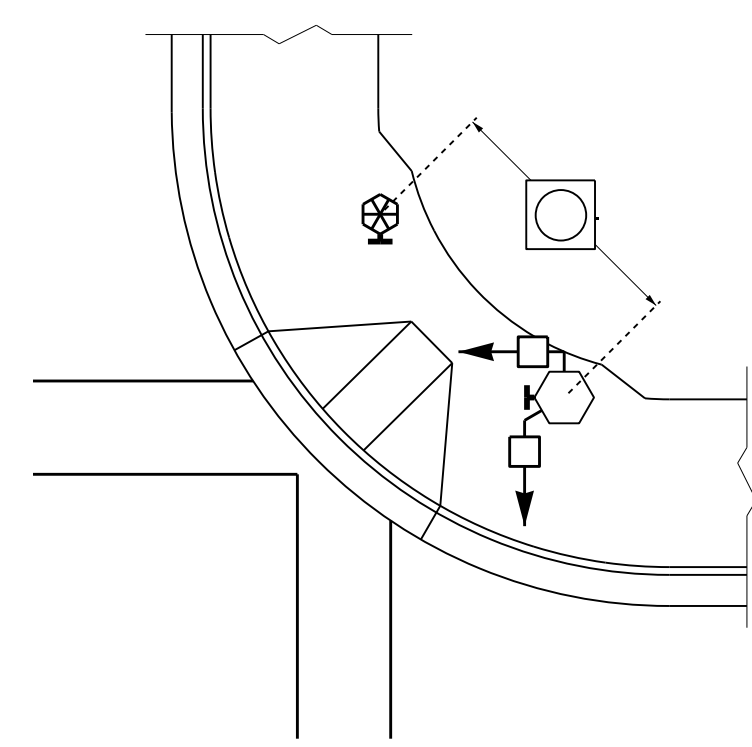
BACK OF SIDEWALK IS WITHIN 10' OF CURB OR PAVEMENT/SHOULDER



GRASS STRIP PLACEMENT IF BACK OF SIDEWALK EXCEEDS 10' FROM CURB OR PAVEMENT/SHOULDER

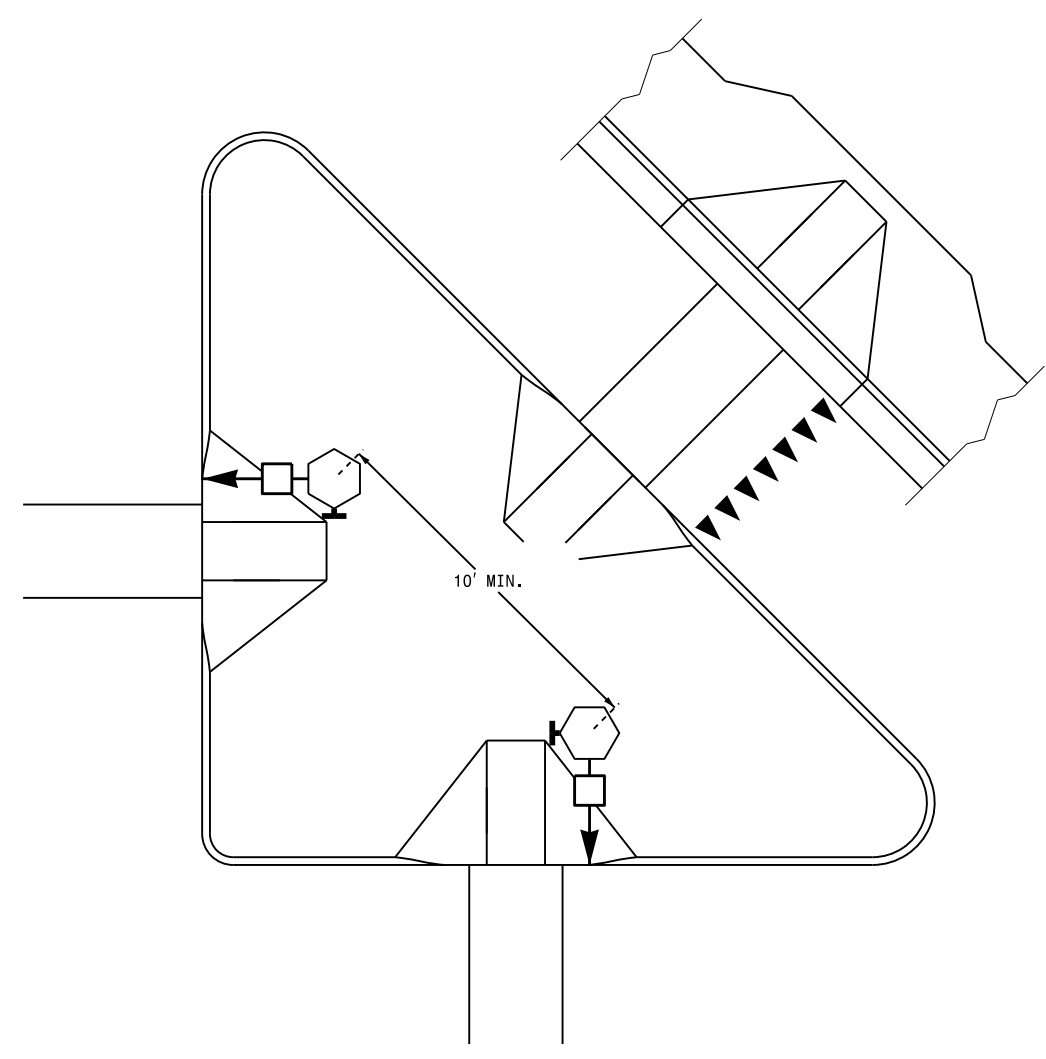


PUSHBUTTON PLACEMENT IN WIDE SIDEWALK (CORRESPONDING PUSHBUTTONS AND SIGNAL HEADS ON DIFFERENT PEDESTALS)

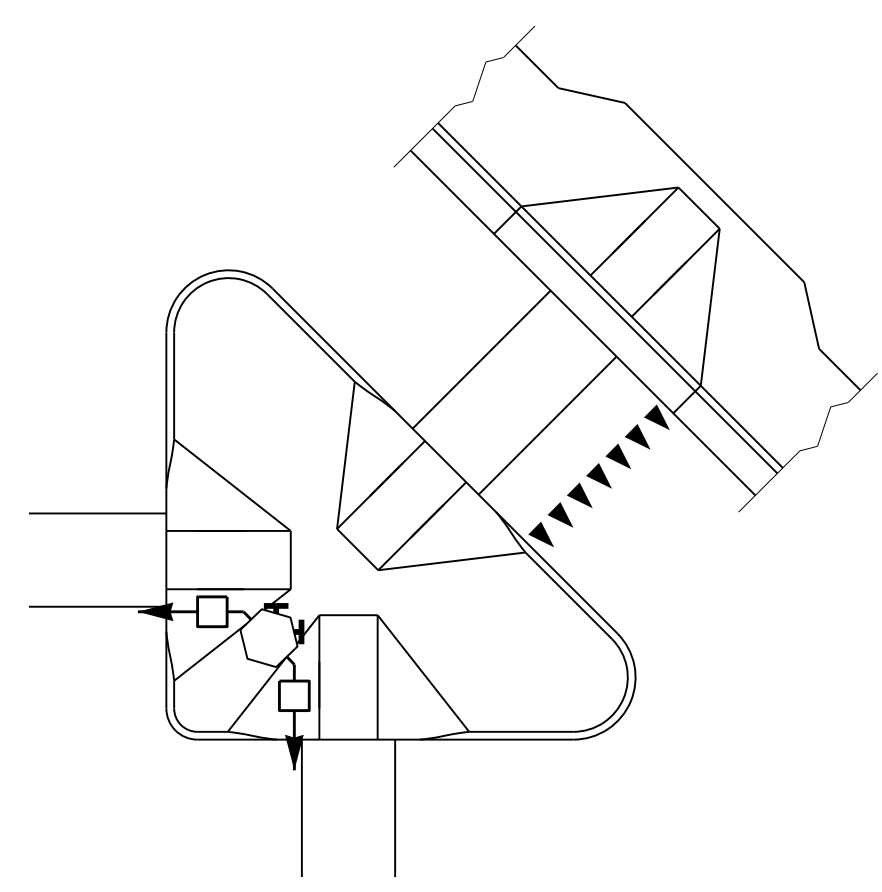


PUSHBUTTON PLACEMENT WITH SHARED TYPE II SIGNAL PEDESTAL AND TYPE I PUSHBUTTON POST

TRAFFIC ISLAND PUSHBUTTON LOCATIONS



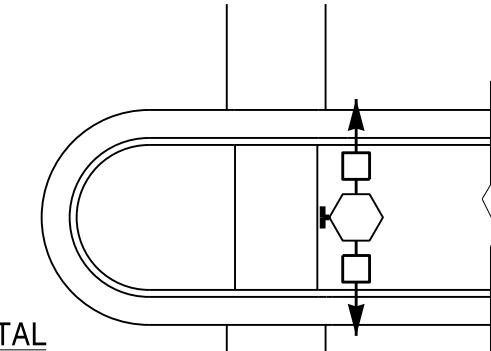
PUSHBUTTON PLACEMENT IN LARGE "PORK CHOP ISLAND" WITH SEPARATE PEDESTALS



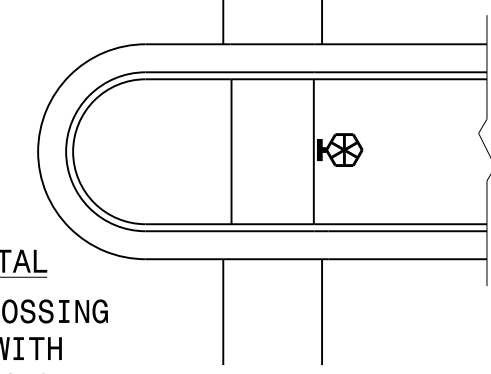
PUSHBUTTON PLACEMENT IN SMALL "PORK CHOP ISLAND" WITH SHARED PEDESTAL

PUSHBUTTON PLACEMENT IN MEDIAN

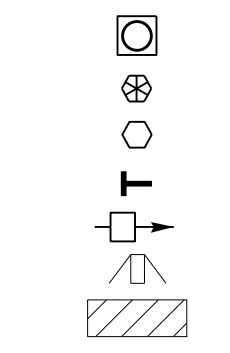
TYPE II PEDESTAL (FOR STAGED OR MULTI-PHASE CROSSING)



TYPE I PEDESTAL (FOR COMPLETE CROSSING CURB TO CURB WITH OPTIONAL REFUGE)



PROPOSED



LEGEND

- Signal Pole
- Type I Pushbutton Post
- Type II Signal Pedestal
- Pushbutton & Sign
- Pedestrian Signal Head
- Curb Ramp
- Pushbutton Location Area

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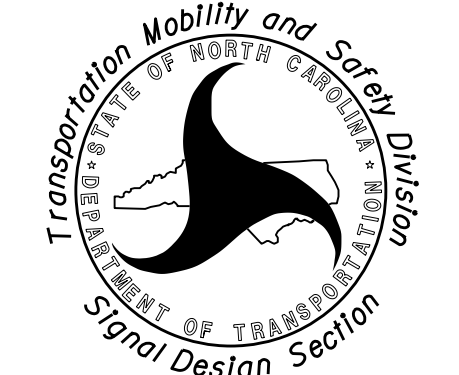
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ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
 PLACEMENT DETAIL

SHEET 3 OF 3
1705D01

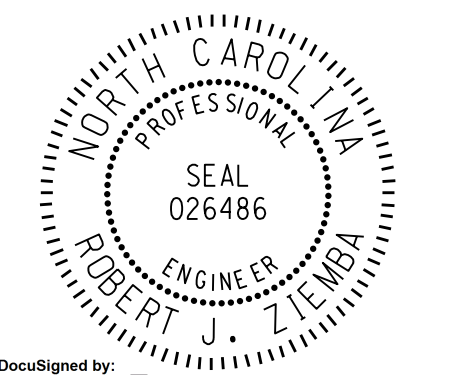
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