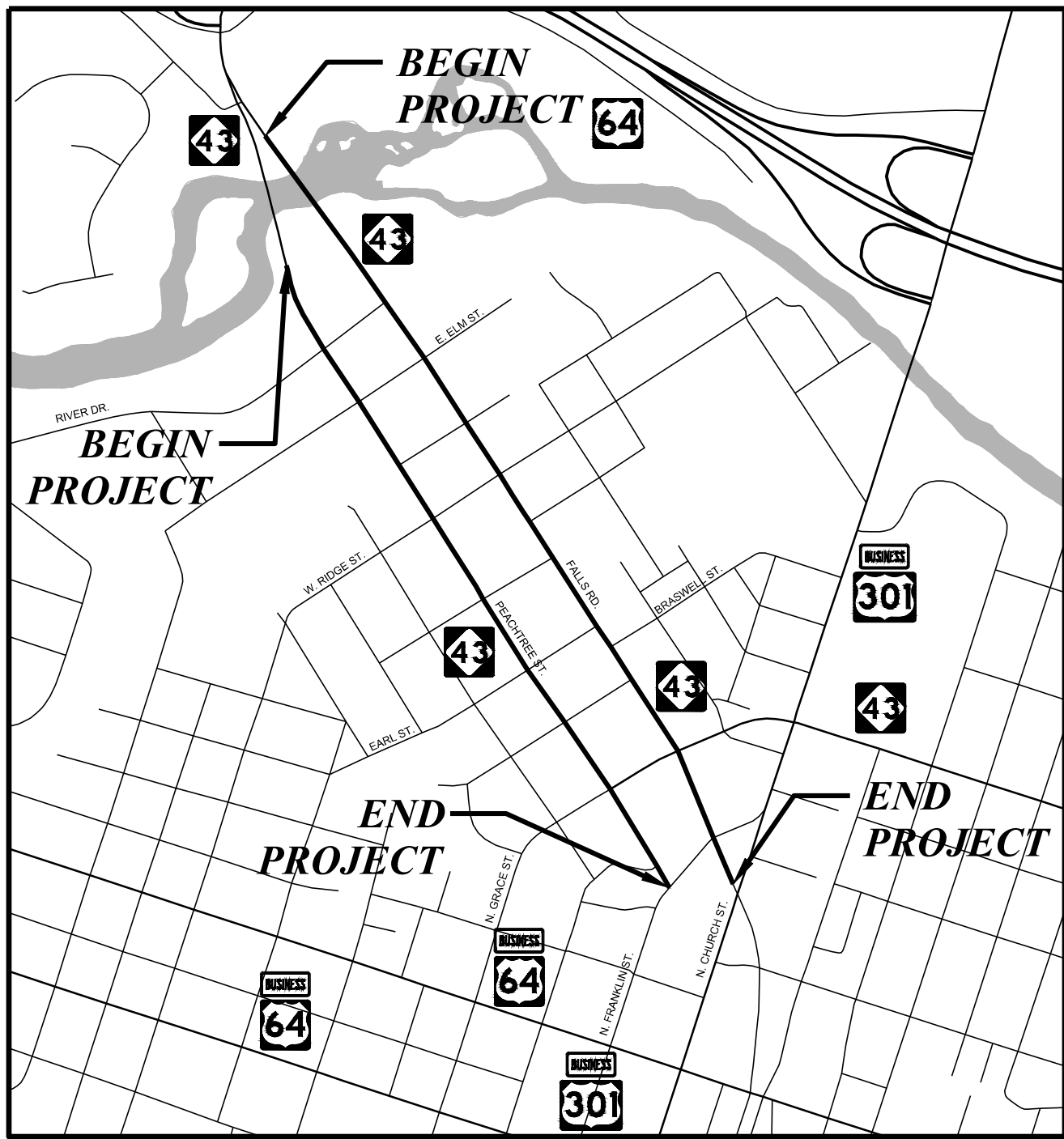


ROCKY MOUNT, NC

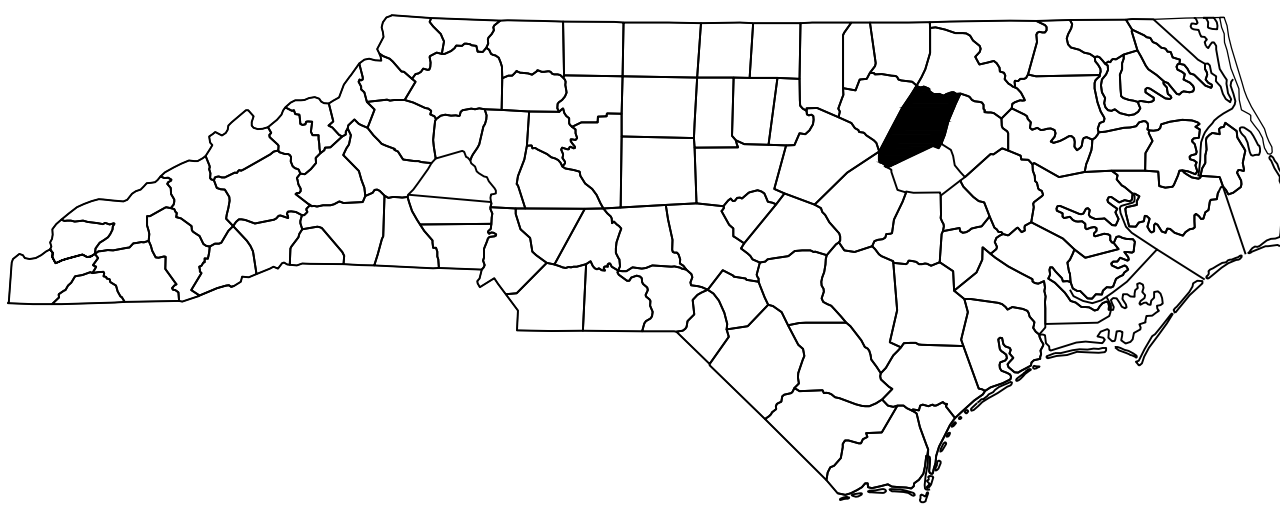
PEACHTREE STREET AND FALLS ROAD

BUFFERED BIKE LANES

JULY 2017

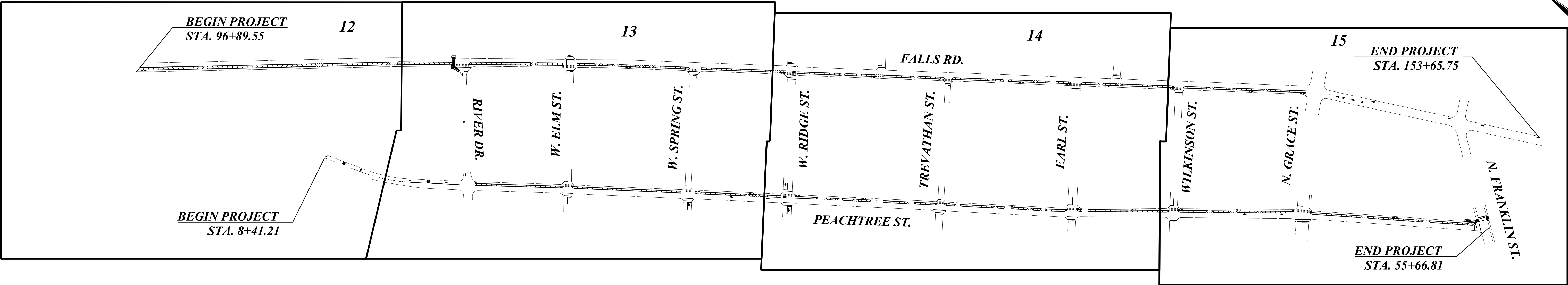


VICINITY MAP
SCALE: 1" = 1000'



DRAWING INDEX

SHEET	CONTENT
1	TITLE SHEET
2	GENERAL NOTES AND LIST OF STANDARD DRAWINGS
3	TYPICAL SECTIONS
4-10	DETAILS
11	BASELINE ALIGNMENT PLAN
12-15	SIGNING AND PAVEMENT MARKING PLANS
16-28	SIGNAL PLANS



PROJECT OWNER

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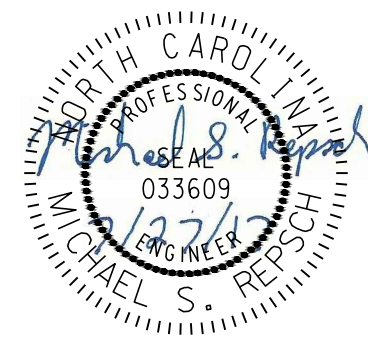
GENERAL NOTES

THIS PROJECT TO BE CONSTRUCTED UNDER THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 2012 STANDARD SPECIFICATIONS

DESIGNED: AEC	REVISIONS
REVIEWED: MSR	NO DATE ITEM
DRAWN: AEC	
2016-138 PROJECT NO.	7/27/17 DATE
N.T.S. SCALE	2016-138_COV FILE



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NC License #P-1301



Peachtree Street and Falls Road
Buffered Bike Lanes
Rocky Mount, NC

TITLE SHEET

SHEET NO.

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 10-31-2014

EFF.01-17-2012
REV.10-30-2012

CURB RAMPS:

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS.
CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.05 and/or 848.06.

SIGNING:

WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL
BE FIELD LOCATED BY THE ENGINEER.

ALL EXISTING SIGNS SHALL REMAIN UNLESS NOTED OTHERWISE.

THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

PAVEMENT MARKINGS:

TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

REMOVE ANY CONFLICTING PAVEMENT MARKINGS

STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS
DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL:

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME DAY AND TIME RESTRICTIONS

I: ALL PROJECT ROADWAYS. MONDAY THRU FRIDAY 6:00AM TO 9:00AM AND 4:00PM TO 8:00PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

I: ALL PROJECT ROADWAYS

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS
DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 8:00 P.M. JANUARY
2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL
8:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE
DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE
HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE
TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF
CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND
THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE
ENGINEER.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED
OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY
STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL
PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- E) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF
TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- F) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- G) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO
GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII,
AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR
ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR
ADDITIONAL REQUIREMENTS.

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard
Drawings" Highway Design Branch - N.C. Department of Transportation -
Raleigh, N. C., Dated January, 2012 are applicable to this project
and by reference hereby are considered a part of these plans:

STD.NO. TITLE

DIVISION 08 - INCIDENTALS

848.01 CONCRETE SIDEWALK
848.06 CURB RAMP

DIVISION 09 - SIGNING

904.10 ORIENTATION OF GROUND MOUNTED SIGNS
904.50 MOUNTING OF TYPE 'D', 'E', AND 'F' SIGNS ON 'U' CHANNEL POSTS

DIVISION 10 - WORK ZONE TRAFFIC CONTROL

1101.01 WORK ZONE ADVANCE WARNING SIGNS
1101.02 TEMPORARY LANE CLOSURES
1101.11 TRAFFIC CONTROL DESIGN TABLES
1110.01 STATIONARY WORK ZONE SIGNS
1110.02 PORTABLE WORK ZONE SIGNS
1115.01 FLASHING ARROW BOARDS
1130.01 DRUM
1135.01 CONES
1145.01 BARRICADES
1150.01 FLAGGING DEVICES
1180.01 SKINNY-DRUM

DIVISION 12 - PAVEMENT MARKINGS, MARKERS AND DELINEATION

1205.01 PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02 PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04 PAVEMENT MARKINGS - INTERSECTIONS
1205.05 PAVEMENT MARKINGS - TURN LANES
1205.09 PAVEMENT MARKINGS - PAINTED ISLANDS

DIVISION 17 - SIGNALS AND TRAFFIC MANAGEMENT SYSTEMS

1705.02 SIGNAL HEADS
1705.03 SIGNAL HEADS
1715.01 UNDERGROUND CONDUIT-TRENCHING
1725.01 INDUCTIVE DETECTION LOOPS
1743.02 PEDESTALS

PAVEMENT MARKING SCHEDULE

SYMBOL DESCRIPTION

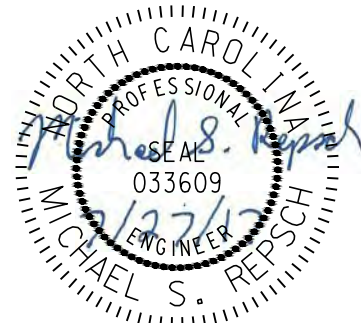
S8 2 FT. - 4 FT./SP WHITE MINISKIP (4", 120 MIL) THERMOPLASTIC
S11 2 FT. - 4 FT./SP WHITE MINISKIP (6", 120 MIL) THERMOPLASTIC
T2 WHITE STOPBAR (24", 120 MIL) THERMOPLASTIC
T3 WHITE CROSSWALK LINE (24", 120 MIL)
T8 2 FT. - 6 FT./SP WHITE MINISKIP (4", 120 MIL) THERMOPLASTIC
T11 2 FT. - 6 FT./SP WHITE MINISKIP (6", 120 MIL) THERMOPLASTIC
T13 3 FT. - 9 FT./SP WHITE MINISKIP (8", 120 MIL) THERMOPLASTIC
T16 YELLOW DOUBLE CENTER (6", 120 MIL)
TE WHITE SOLID LANE LINE (4", 120 MIL) THERMOPLASTIC
TG3 GREEN CROSSWALK LINE (24", 120 MIL) THERMOPLASTIC
TL WHITE SOLID LANE LINE (6", 120 MIL) THERMOPLASTIC
TO WHITE DIAGONAL (8", 90 MIL) THERMOPLASTIC SPACED AT 20' O.C.
TO WHITE CROSSWALK LINE (8", 120 MIL) THERMOPLASTIC
TR WHITE SOLID LANE LINE (8", 120 MIL) THERMOPLASTIC
UA LEFT TURN ARROW (90 MIL) THERMOPLASTIC
UD COMBO. LEFT/STRAIGHT ARROW (90 MIL) THERMOPLASTIC
UI ALPHANUMERIC CHAR. (120 MIL)
UJ BICYCLE SYMBOL, HEATED-IN-PLACE (90 MIL) THERMOPLASTIC
UK BICYCLE STRAIGHT ARROW, HEATED-IN-PLACE (90 MIL) THERMOPLASTIC
UL BICYCLE CHAR., HEATED-IN-PLACE (120 MIL) THERMOPLASTIC
UO1 BICYCLE RIGHT ARROW, HEATED-IN-PLACE (90 MIL)
UO2 BICYCLE LEFT/RIGHT ARROW, HEATED-IN-PLACE (90 MIL)
US BICYCLE LOOP DETECTOR, HEATED-IN-PLACE (90 MIL)

DESIGNED: AEC
REVIEWED: MSR
DRAWN: AEC
2016-138 7/27/17
PROJECT NO. DATE
NO SCALE 2016-138 GEN
SCALE SCALE FILE

REVISIONS		
NO	DATE	ITEM



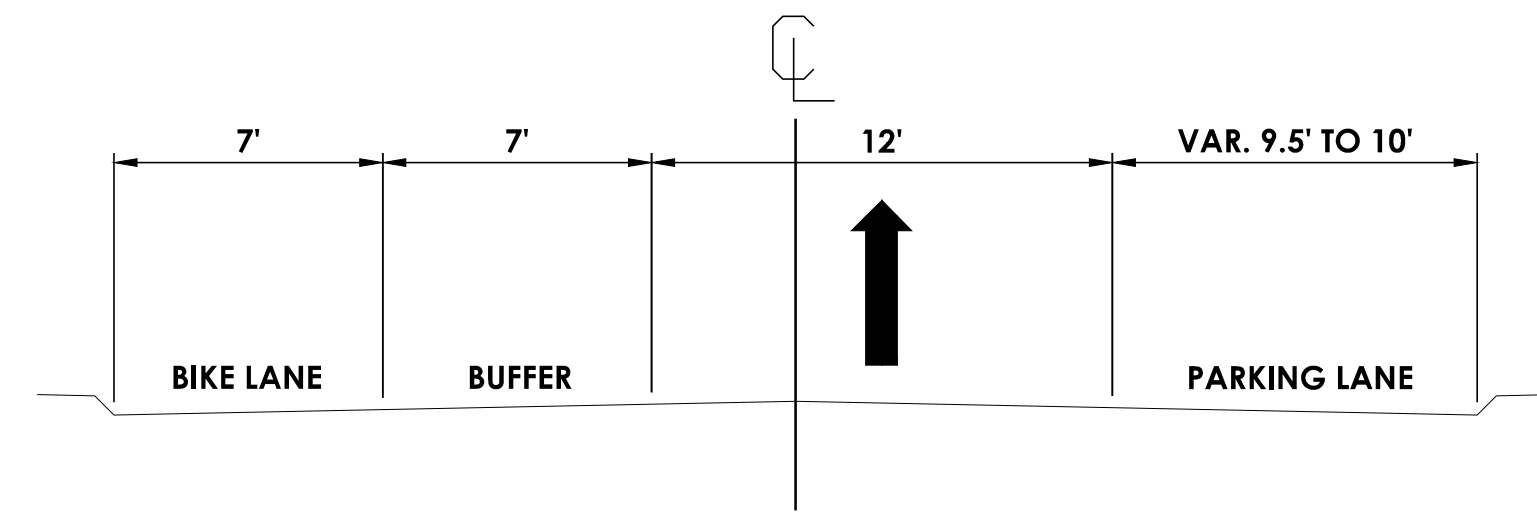
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Peachtree Street and Falls Road
Buffered Bike Lanes
Rocky Mount, NC

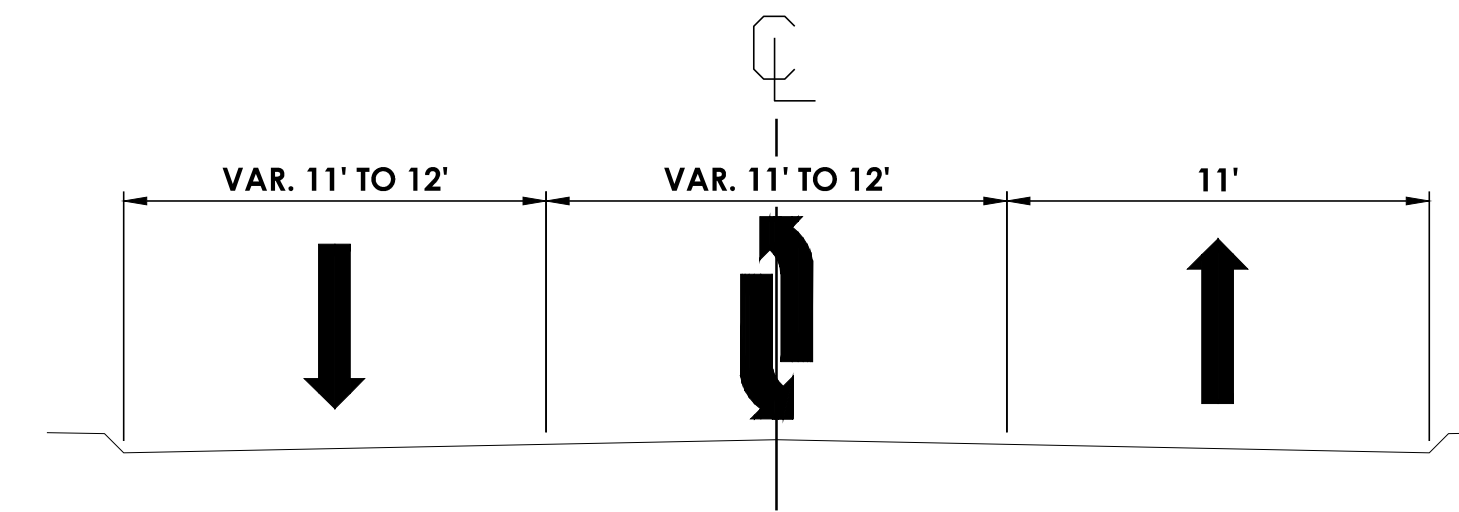
GENERAL NOTES AND
LIST OF STANDARD DRAWINGS

SHEET NO.



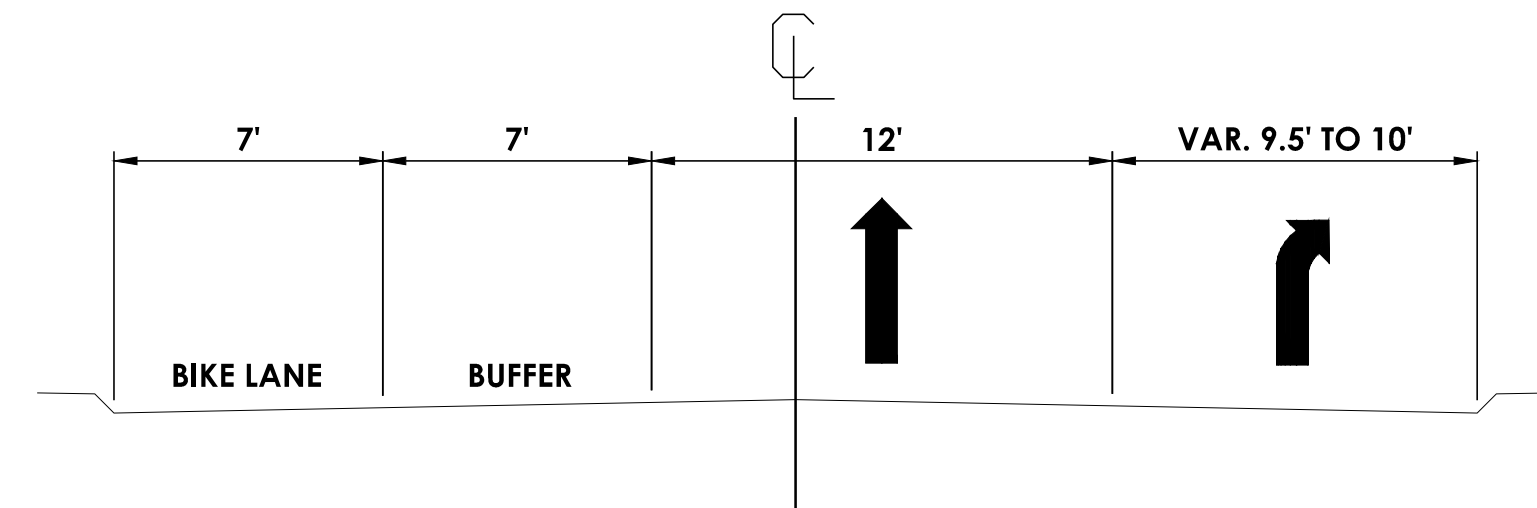
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1:
STA. 14+65 TO STA. 24+96
STA. 27+59 TO STA. 45+45
STA. 48+43 TO STA. 55+12



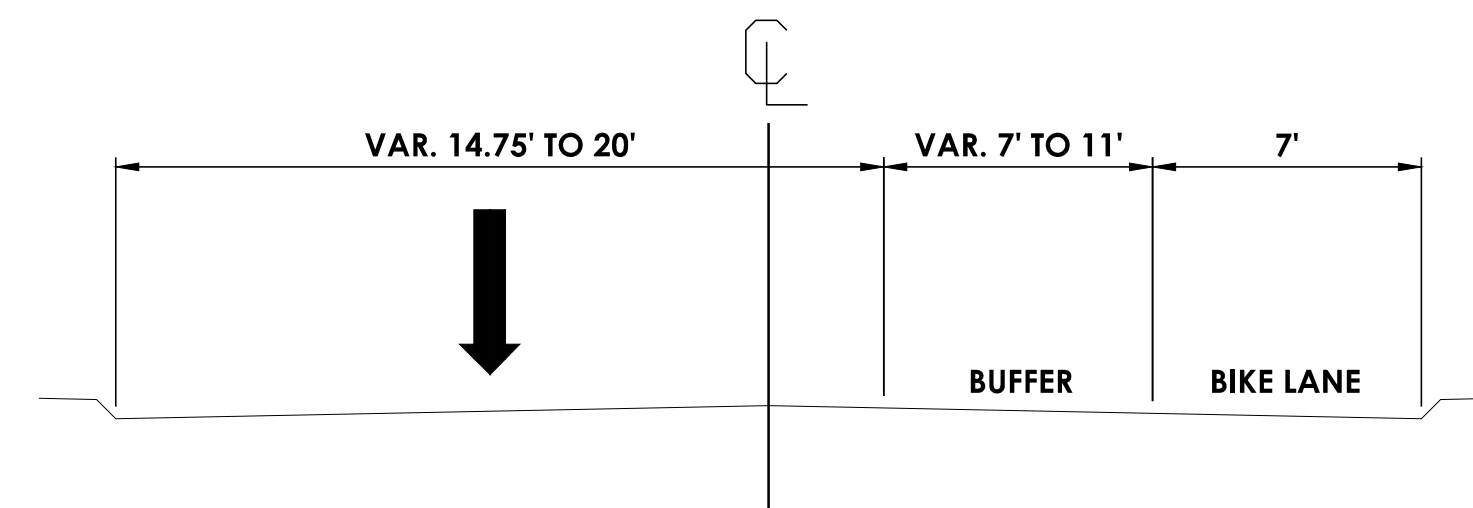
TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5:
STA. 144+91 TO STA. 153+82



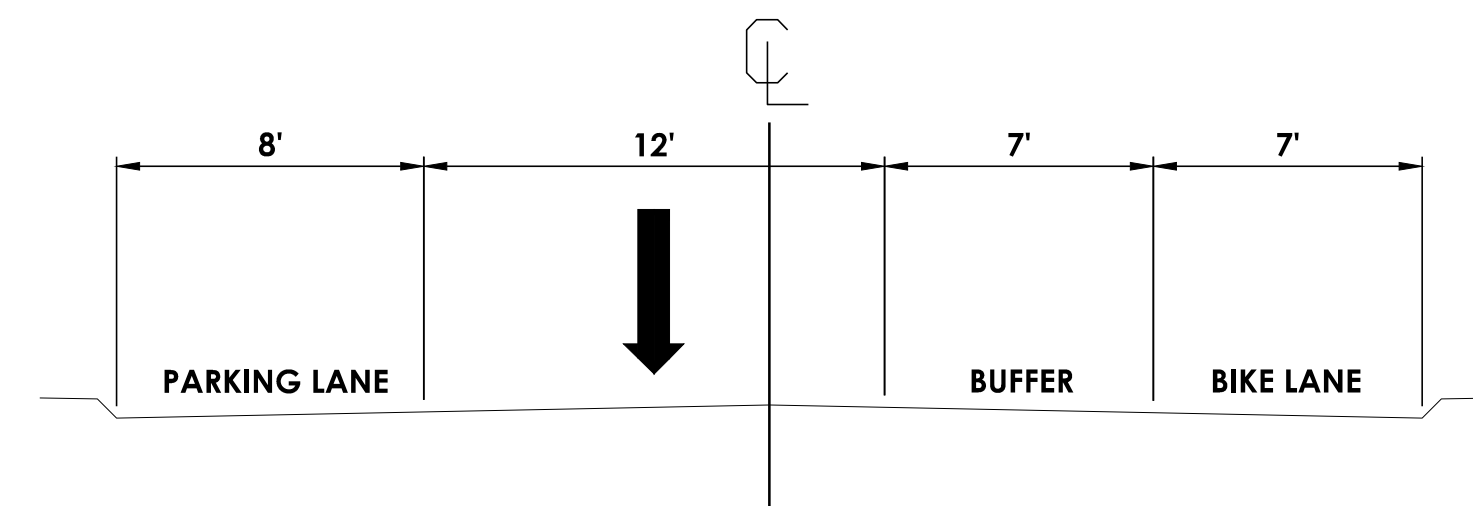
TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2:
STA. 25+72 TO STA. 26+99
STA. 46+46 TO STA. 47+75



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3:
STA. 96+89 TO STA. 119+12



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4:
STA. 119+57 TO STA. 122+99
STA. 123+47 TO STA. 144+05

DESIGNED: AEC
REVIEWED: MSR
DRAWN: AEC
2016-138 7/27/17
PROJECT NO. DATE
1" = 5' 2016-138_TYP
SCALE FILE

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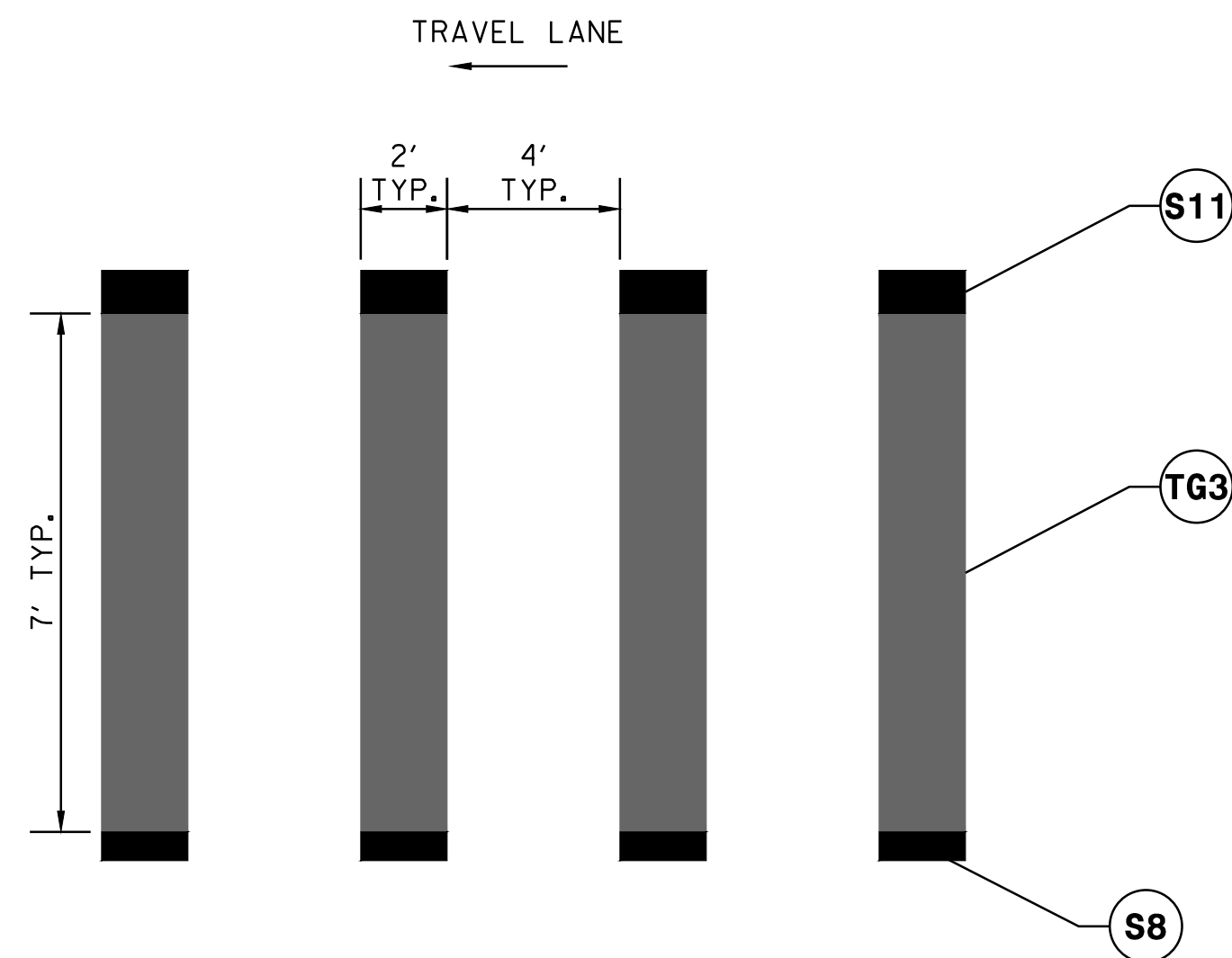
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TYPICAL SECTIONS

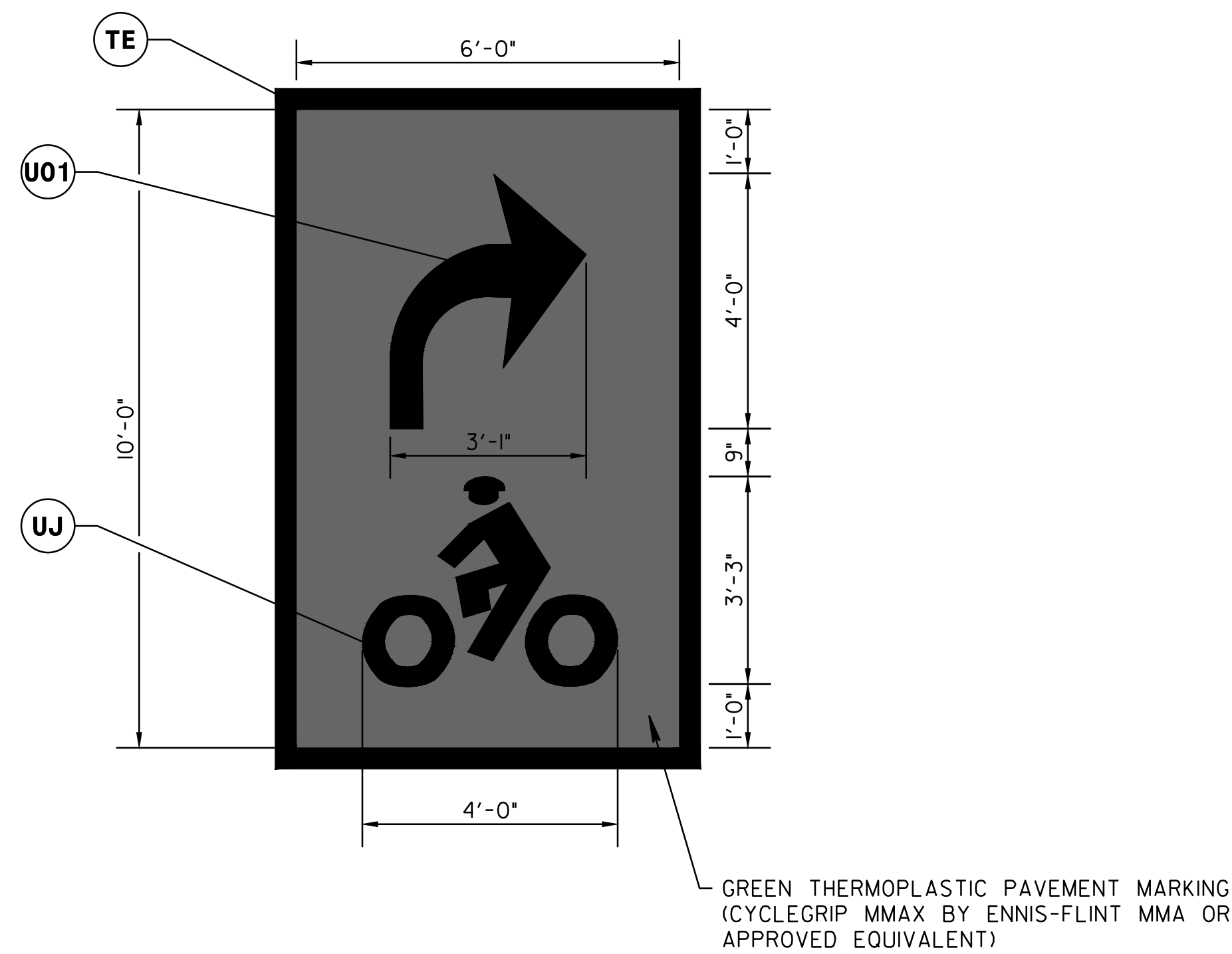
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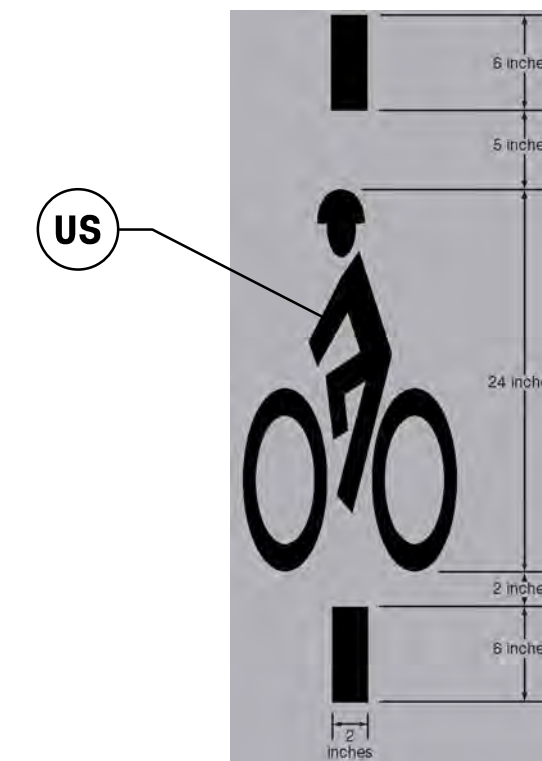
NOTES

- I. GREEN THERMOPLASTIC PAVEMENT MARKING TO BE CYCLEGRIP MMAX BY ENNIS-FLINT MMA OR APPROVED EQUIVALENT

BICYCLE INTERSECTION CROSSING MARKING DETAIL



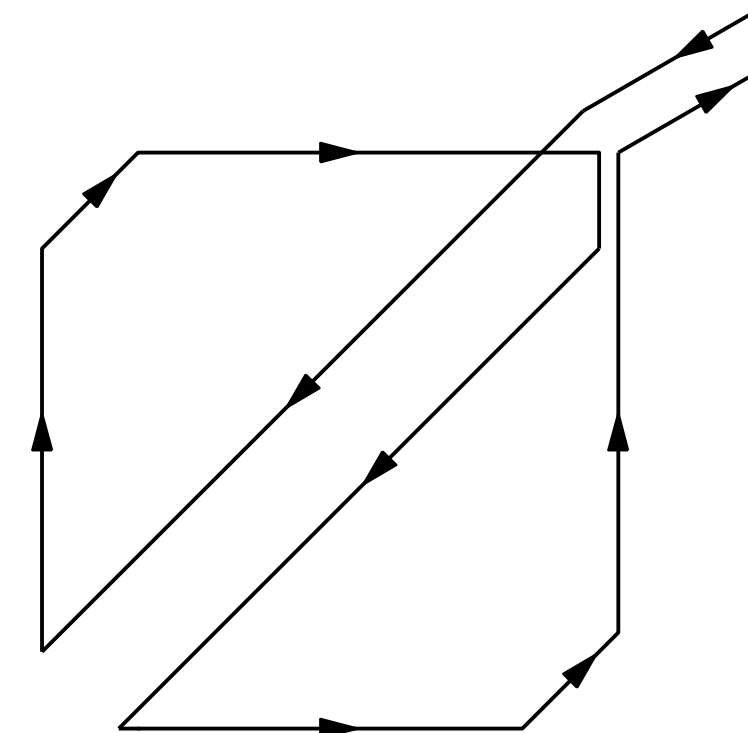
RIGHT TURN BIKE BOX DETAIL



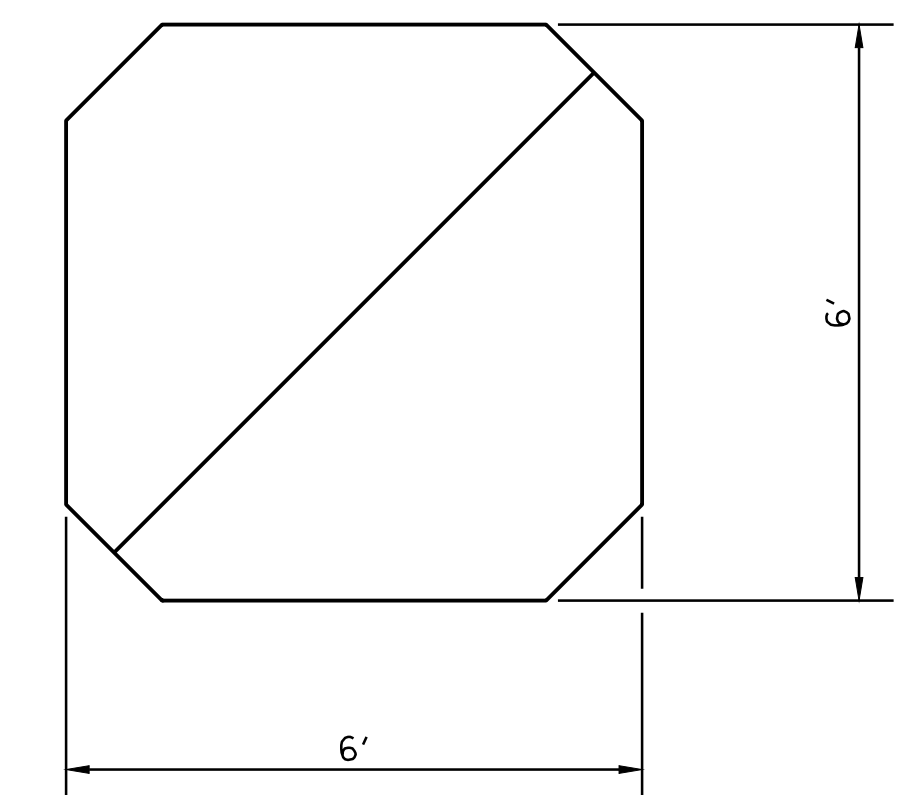
NOTES

- I. PLACE PAVEMENT MARKING SYMBOL OVER CENTER OF BICYCLE LOOP SAWCUT. ADHERE TO SECTION 9C.07 OF THE 2009 MUTCD.

BICYCLE LOOP PAVEMENT MARKING DETAIL



BICYCLE LOOP LAYOUT DETAIL



BICYCLE LOOP SAWCUT DETAIL

DESIGNED: NMN
REVIEWED: MSR
DRAWN: NMN
2016-138 7/27/17
PROJECT NO. DATE
N.T.S. 2016-138_DET
SCALE FILE

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NO	DATE	ITEM

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**Peachtree Street and Falls Road
Buffered Bike Lanes**
Rocky Mount, NC

DETAILS

SHEET NO.

4 OF 28

TIP NO.	SHEET NO.
APPROVED: <i>RW</i>	
DATE: 3/6/12	
SEAL	

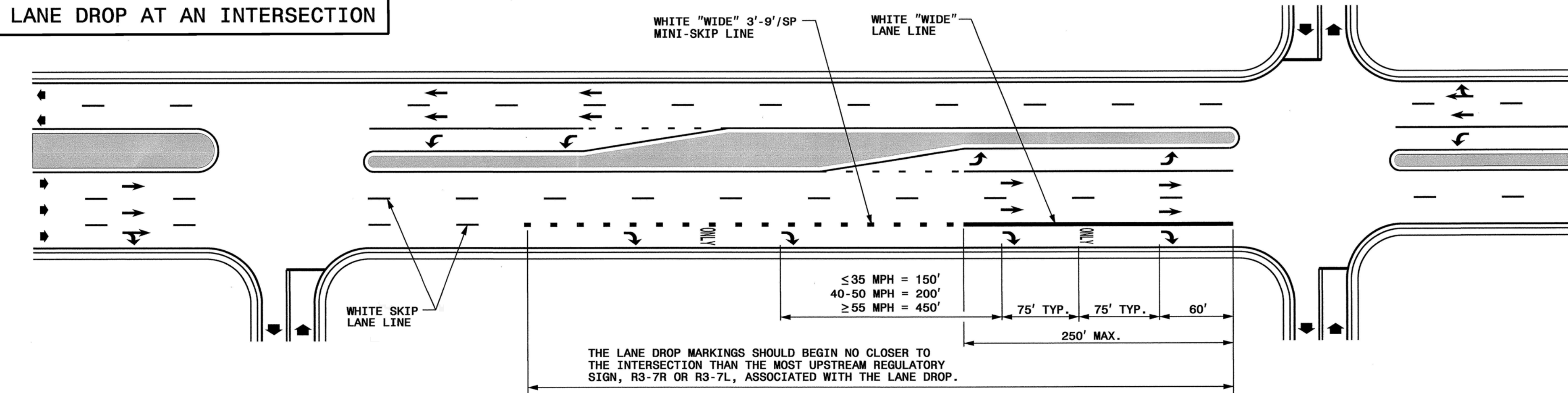
STATE OF
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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

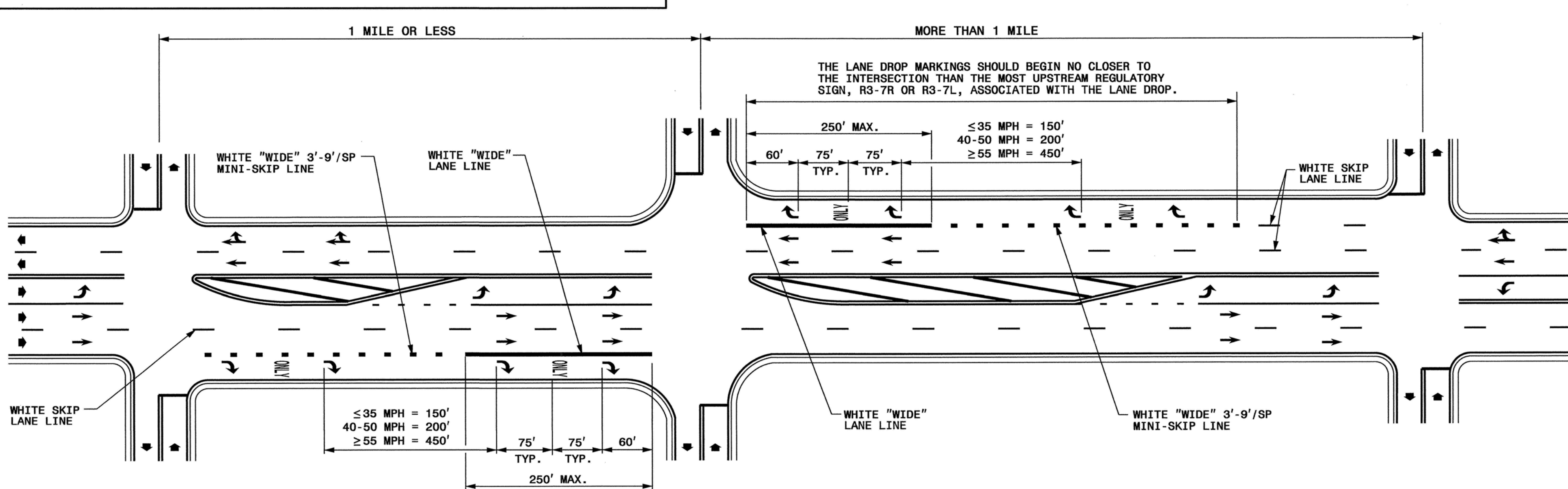
ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

SHEET 1 OF 3
1205D06

LANE DROP AT AN INTERSECTION



LANE DROP AT AN INTERSECTION WITH AN AUXILIARY LANE



GENERAL NOTES:

- 1- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.
- 2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND

- W = WIDTH OF TRAVEL LANE ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS
- ➡ DIRECTION OF TRAFFIC FLOW

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RALEIGH, N.C.

1-12

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

SHEET 1 OF 3
1205D06

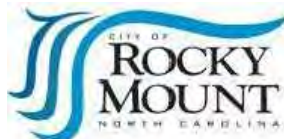
REVISED PAVEMENT MARKING
ROADWAY STANDARD DRAWING

DESIGNED: NMN
REVIEWED: MSR
DRAWN: NMN
2016-138 PROJECT NO.
7/27/17 DATE
N.T.S. SCALE
2016-138_DET FILE

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Peachtree Street and Falls Road
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Rocky Mount, NC

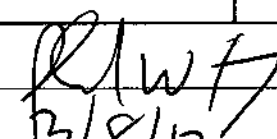
DETAILS

SHEET NO.

TIP NO.

SHEET NO.

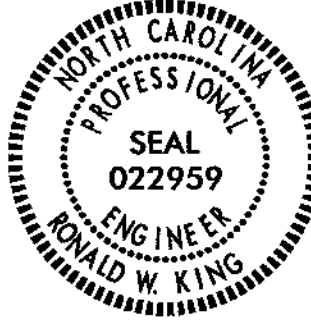
APPROVED:



DATE:

7/8/12

SEAL

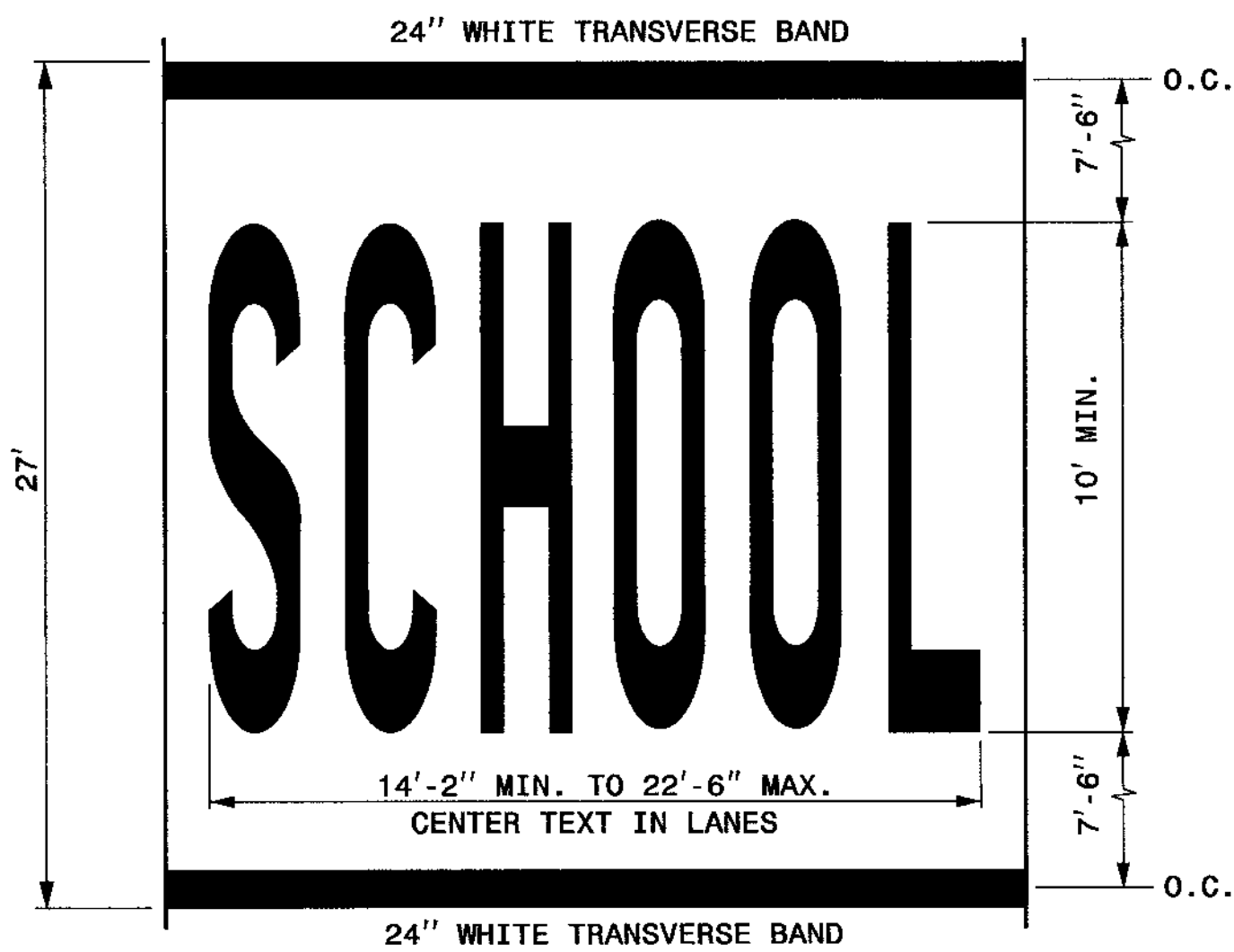


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DEPT. OF TRANSPORTATION
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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
SYMBOLS AND WORD MESSAGES

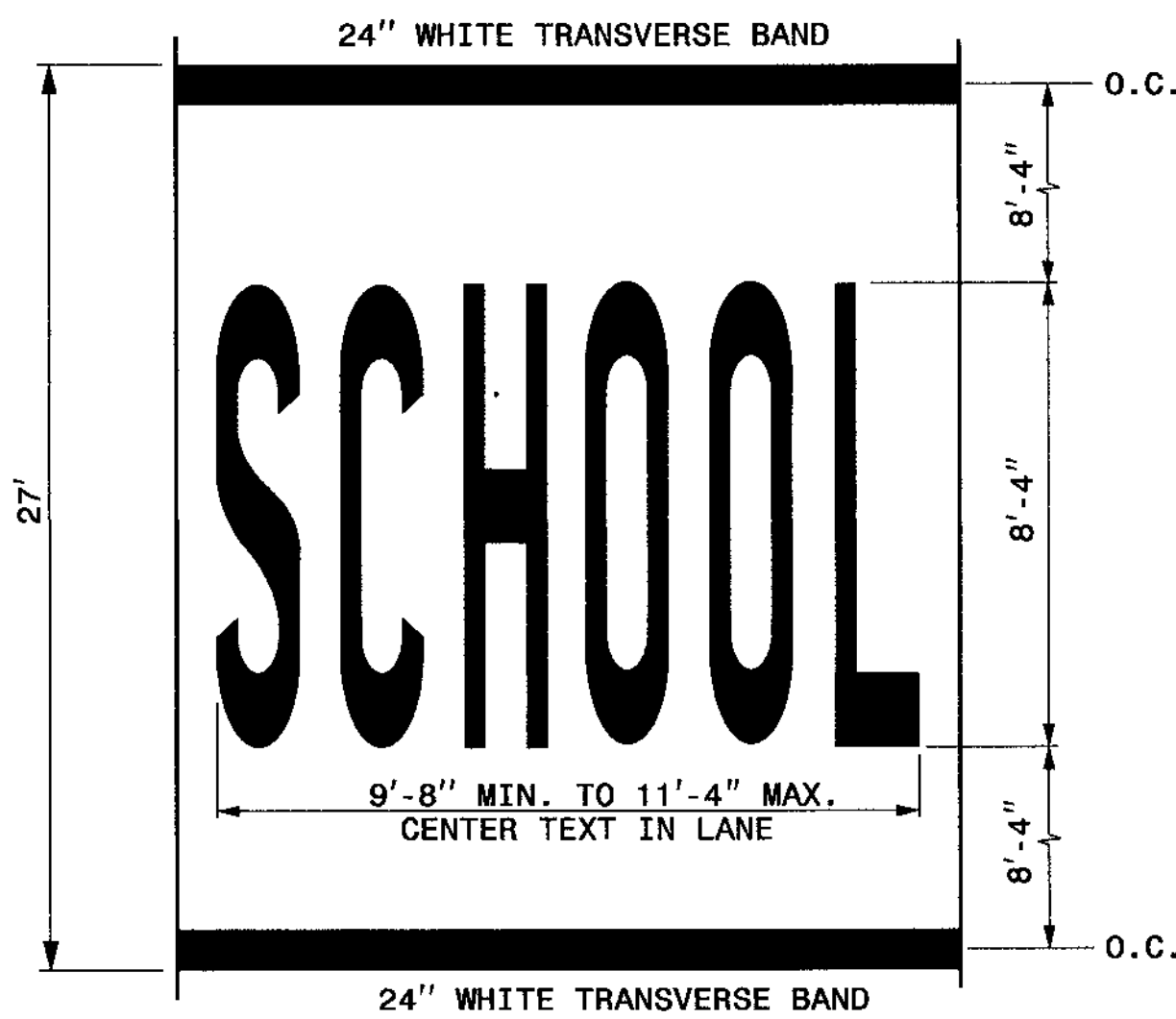
SHEET 3 OF 8
1205D08

MULTI-LANE WIDTH "SCHOOL"

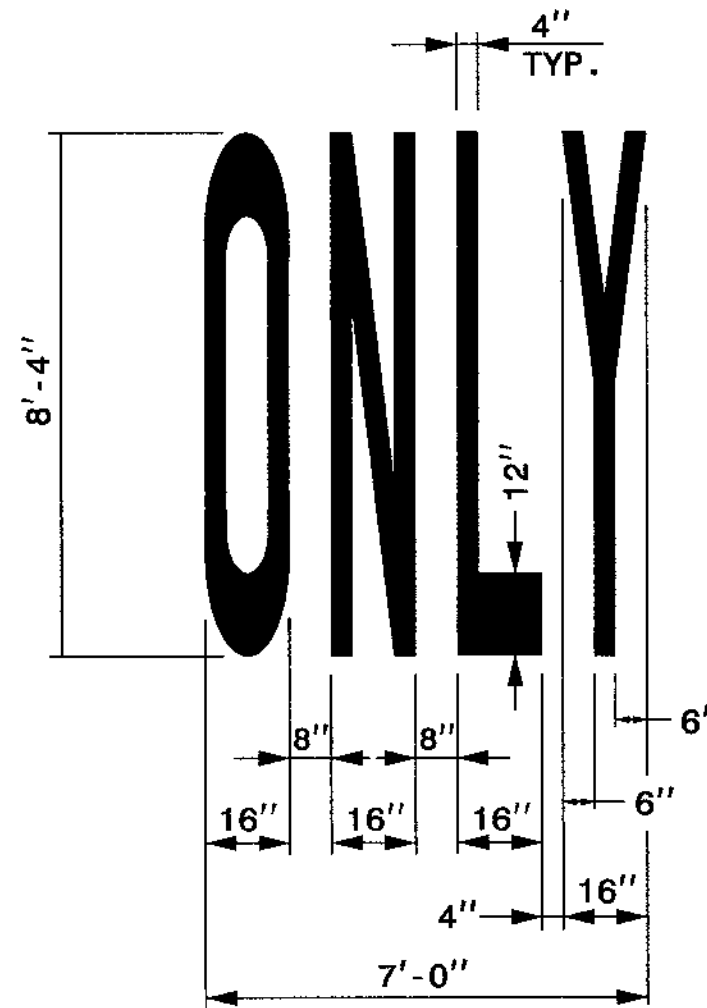


LETTER HEIGHT = 10' MIN.
LETTER WIDTH = 20"
SPACING = 10" MIN./30" MAX. (USE EQUAL SPACING BETWEEN LETTERS)
NOTE: THE TWO-LANE PAVEMENT MARKING DIMENSIONS OF "SCHOOL" SHOWN IN PART 7 OF THE MUTCD MAY ALSO BE USED.

SINGLE LANE WIDTH "SCHOOL"



LETTER HEIGHT = 8'-4"
LETTER WIDTH = 16"
SPACING = 4" MIN./8" MAX. (USE EQUAL SPACING BETWEEN LETTERS)

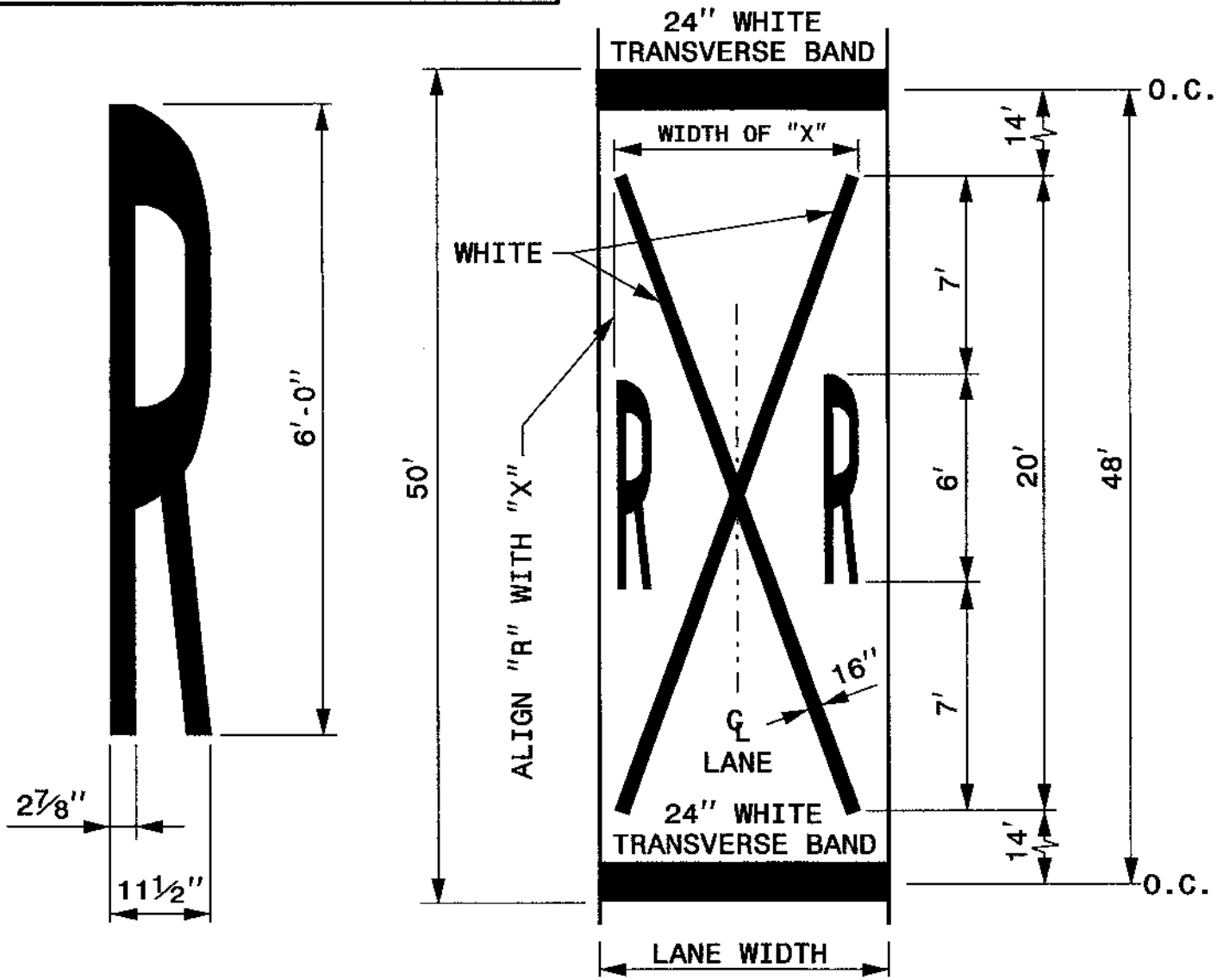


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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
SYMBOLS AND WORD MESSAGES

SHEET 3 OF 8
1205D08

RAILROAD RXR SYMBOL



LANE WIDTH (FEET)	WIDTH OF "X" (FEET)
8' ≤ W ≤ 9'	7'
9' < W ≤ 12'	8'
W > 12'	10'

GENERAL NOTES:

- 1- THE SCHOOL PAVEMENT MARKING CONSISTS OF SIX (6) CHARACTERS. THE TWO (2) 24" TRANSVERSE BANDS WILL BE PAID FOR UNDER A SEPARATE PAY ITEM. REFER TO ROADWAY STANDARD DRAWING 1205.10 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.
- 2- PAVEMENT MARKING IN ADVANCE OF A HIGHWAY-RAIL CROSSING SHALL CONSIST OF TWO (2) CHARACTERS AND TWO (2) 16" LINES (FORMING AN X) WHICH ARE PAID FOR UNDER TWO SEPARATE PAY ITEMS. THE TWO (2) 24" TRANSVERSE BANDS WILL BE PAID FOR UNDER A SEPARATE PAY ITEM. REFER TO ROADWAY STANDARD DRAWING 1205.11 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

REVISED PAVEMENT MARKING
ROADWAY STANDARD DRAWING

DESIGNED: NMN
REVIEWED: MSR
DRAWN: NMN
2016-138
PROJECT NO.
N.T.S.
SCALE

NO	DATE	ITEM



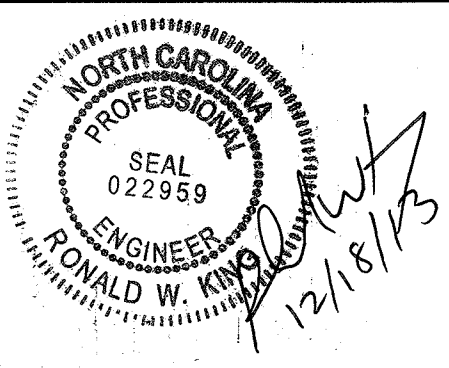
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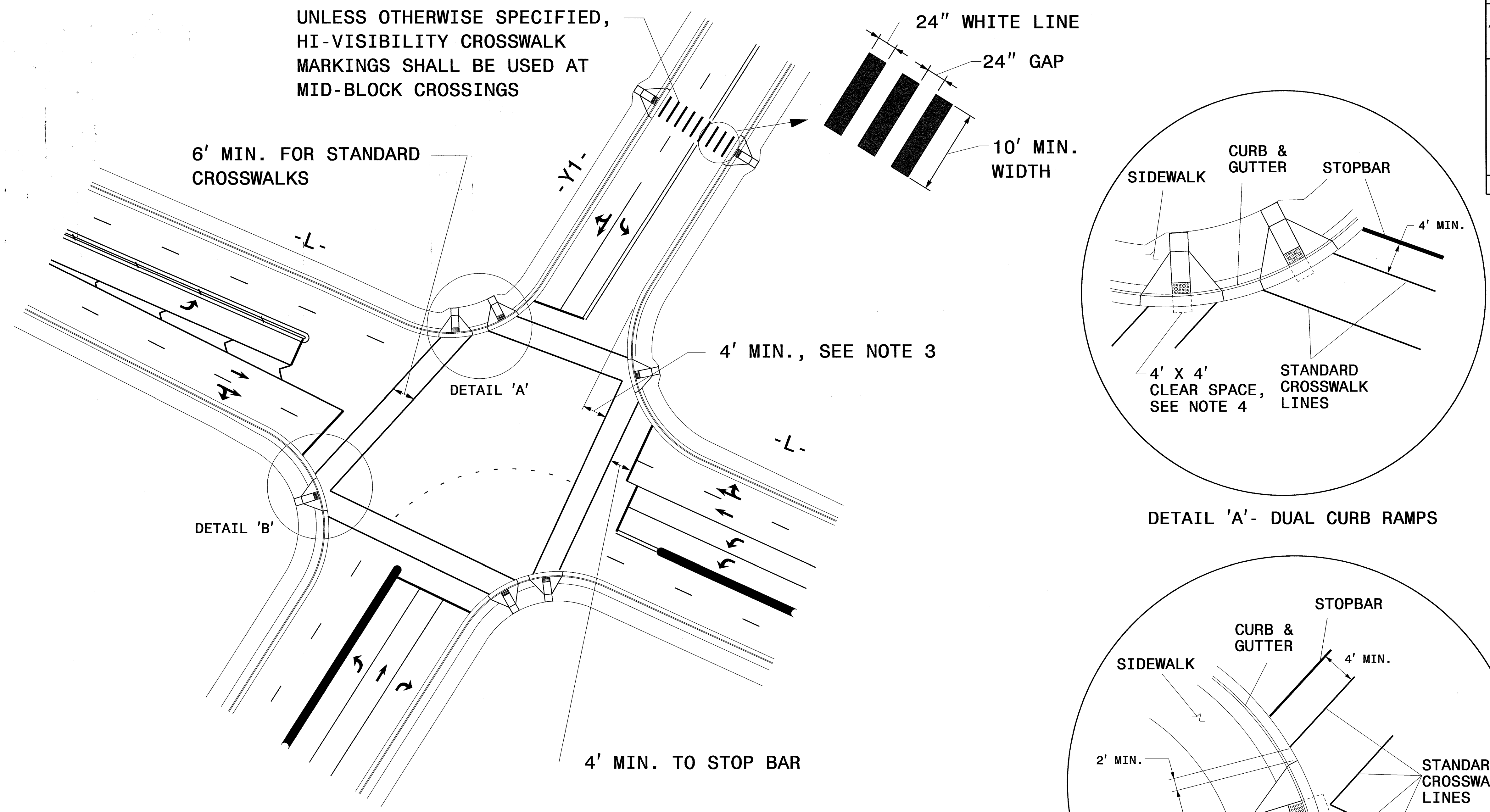


Peachtree Street and Falls Road
Buffered Bike Lanes
Rocky Mount, NC

DETAILS

SHEET NO.

TIP NO.	SHEET NO.
APPROVED: _____	
DATE: _____	
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REVISIONS	



GUIDANCE DETAIL FOR CROSSWALK MARKINGS

- NOTES:
- USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS NOT STATIONED ON THE DETAIL SHEETS OR WHEN FIELD ADJUSTMENTS REQUIRED MOVING STATIONED MARKINGS AS DIRECTED BY THE ENGINEER. REFER TO NCDOT ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.
 - THE CROSSWALK MARKINGS SHOWN ON THE ABOVE DETAILS ARE FOR REFERENCE ONLY. ONLY INSTALL CROSSWALK MARKINGS WHERE SHOWN ON THE DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALL AS SPECIFIED ON THE DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER.
 - SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.
 - BEYOND THE BOTTOM GRADE BRAKE, A CLEAR SPACE OF 4' X 4' MINIMUM SHALL BE PROVIDED WITHIN THE MARKINGS.
 - SINGLE DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2 FEET LONG MINIMUM LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING, SEE DETAIL 'B'.
 - CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS.

DETAIL 'A'- DUAL CURB RAMPS

DETAIL 'B'- SINGLE DIAGONAL CURB RAMP

CROSSWALK PAVEMENT MARKING
GUIDANCE DETAIL

STATE OF
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

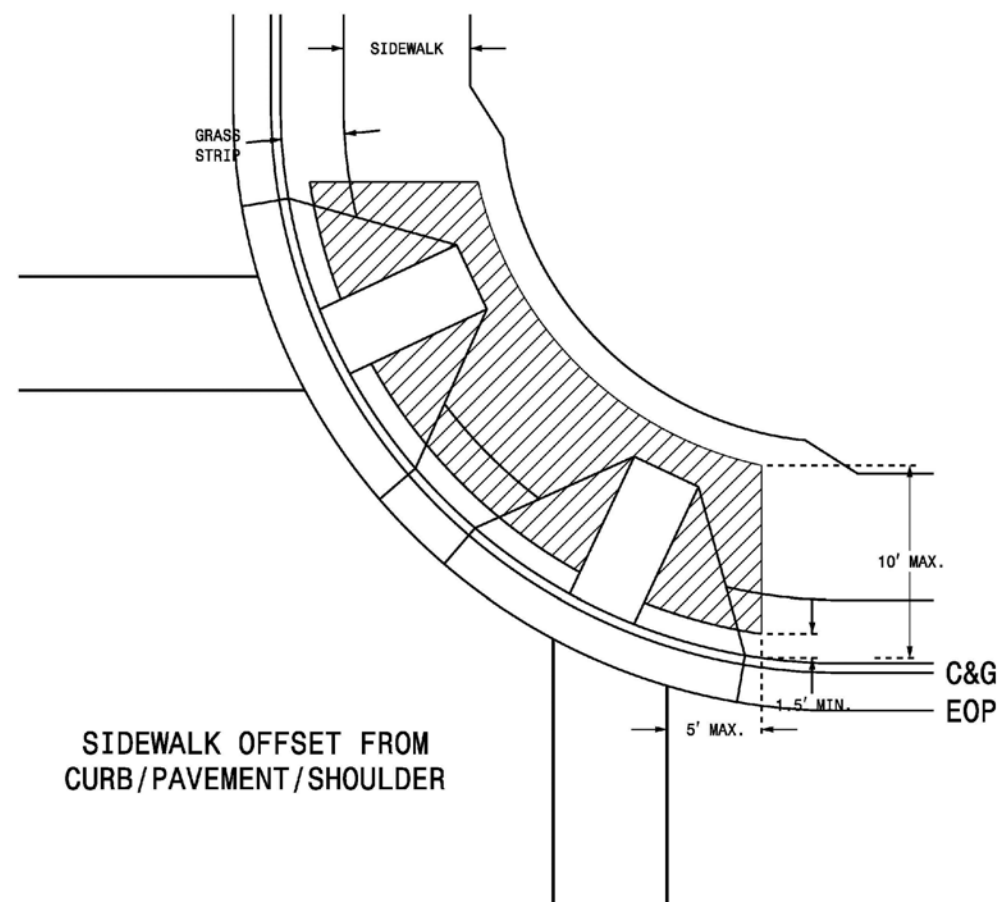
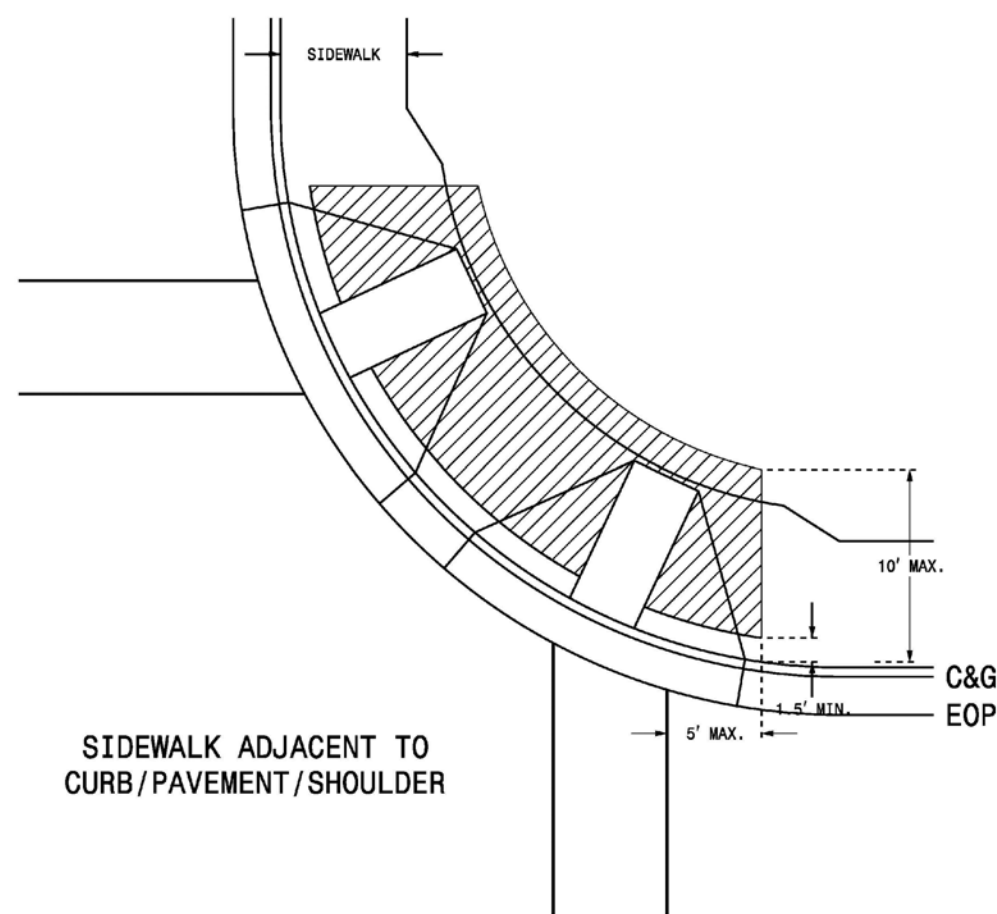
06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

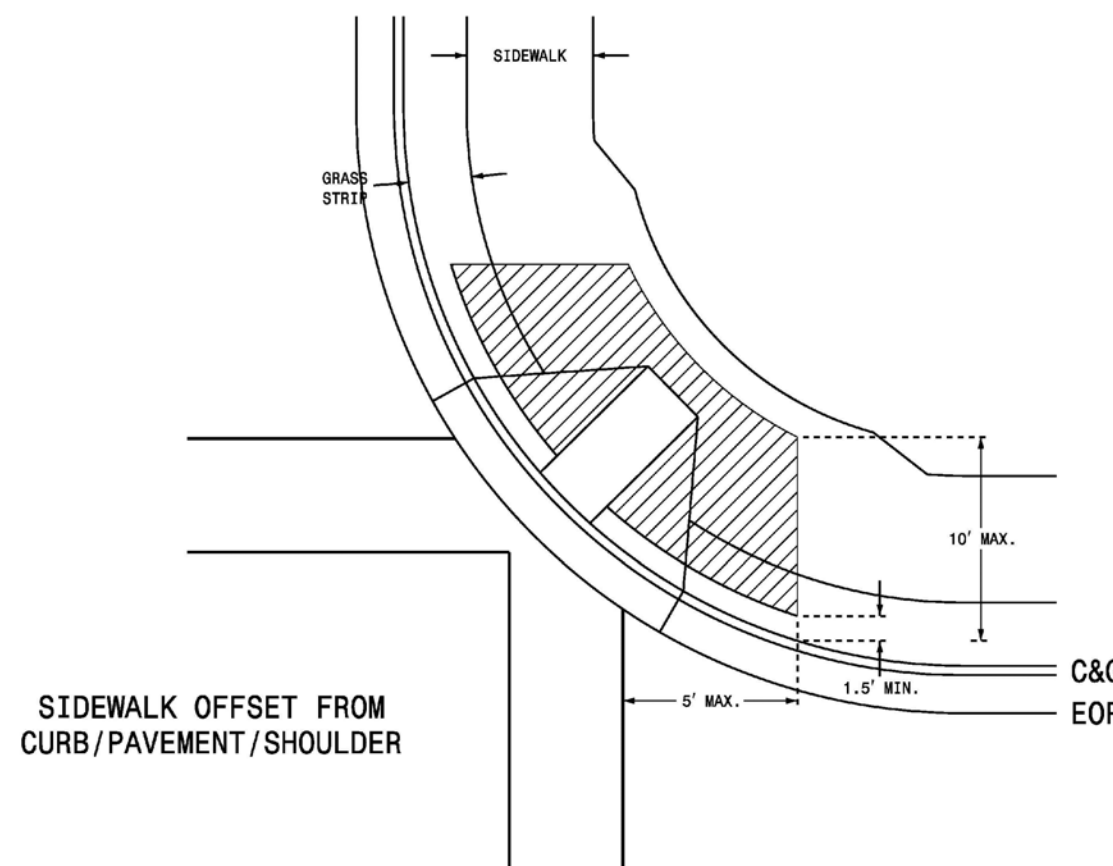
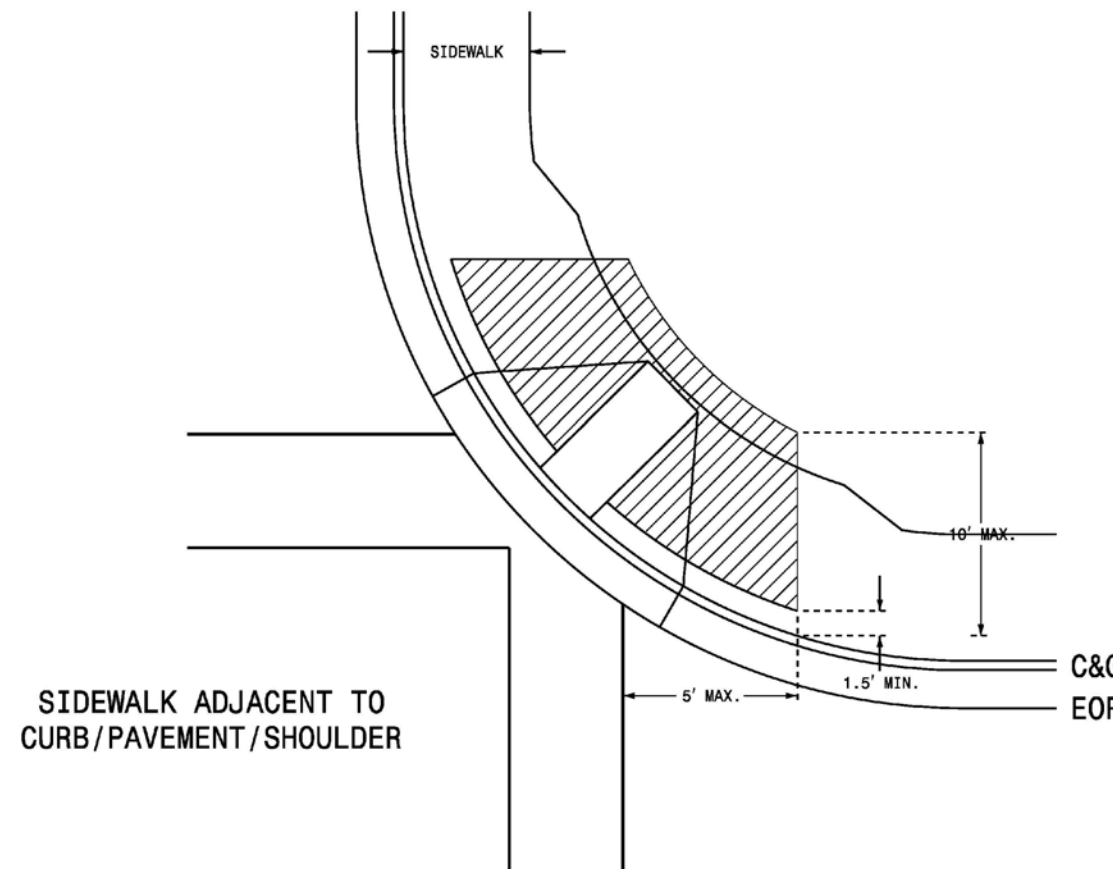
SHEET 1 OF 3

1705D01

PUSHBUTTON PLACEMENT
SEPARATE CURB RAMPS



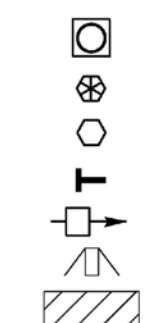
PUSHBUTTON PLACEMENT
SHARED CURB RAMP



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

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

06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 1 OF 3

1705D01

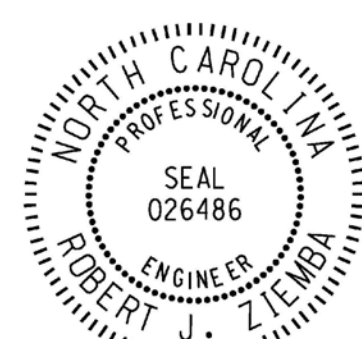
See Plate for Title

Prepared in the Offices of:



750 N. Greenfield Parkway
Garner, NC 27529

SEAL



DocuSigned by
Robert J. Ziemba
SIGNATURE

6/17/2014
DATE

DESIGNED: NMN
REVIEWED: MSR
DRAWN: NMN
2016-138
PROJECT NO.
N.T.S.
SCALE

REVISIONS
NO DATE ITEM



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Peachtree Street and Falls Road
Buffered Bike Lanes
Rocky Mount, NC

DETAILS

SHEET NO.

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

06-14

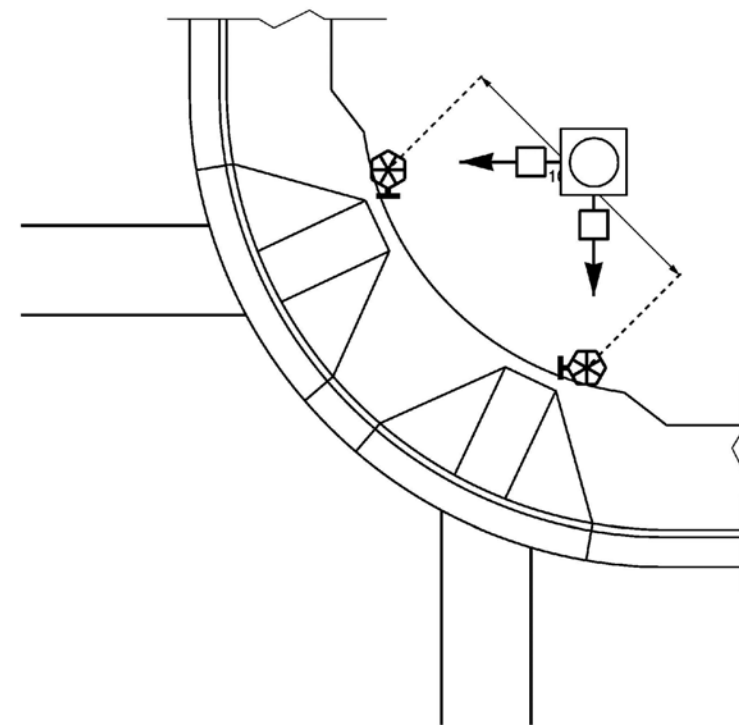
ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 2 OF 3

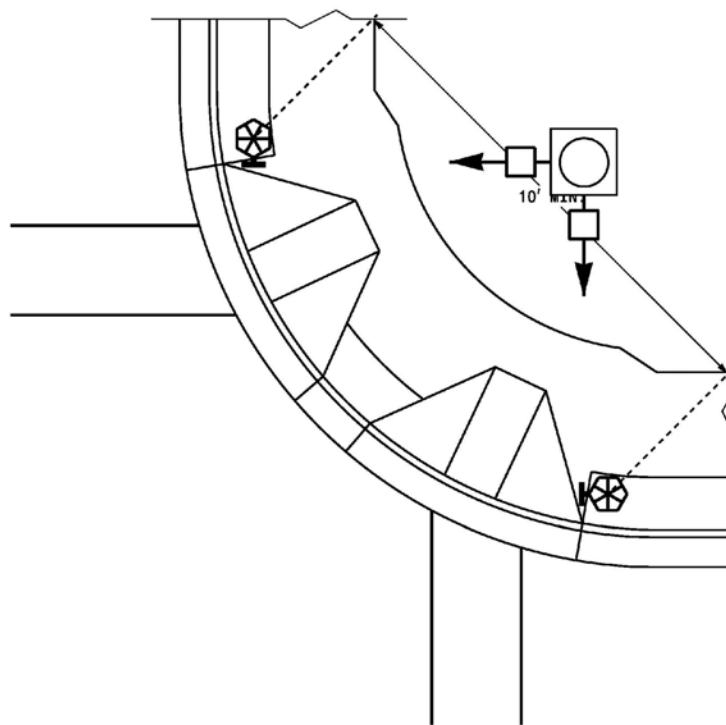
1705D01

TYPICAL PUSHBUTTON LOCATIONS (CASE I)

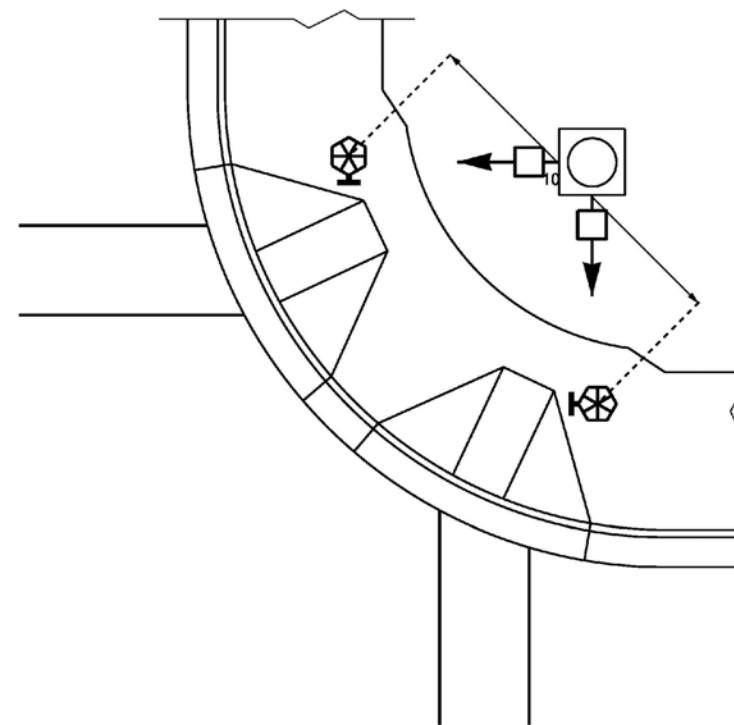
SEPARATE CURB RAMPS W/ TYPE I PEDESTALS



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

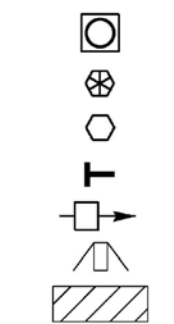


GRASS STRIP PLACEMENT IF BACK
OF SIDEWALK EXCEEDS 10' FROM
CURB OR PAVEMENT/SHOULDER



PUSHBUTTON PLACEMENT
IN WIDE SIDEWALK

PROPOSED

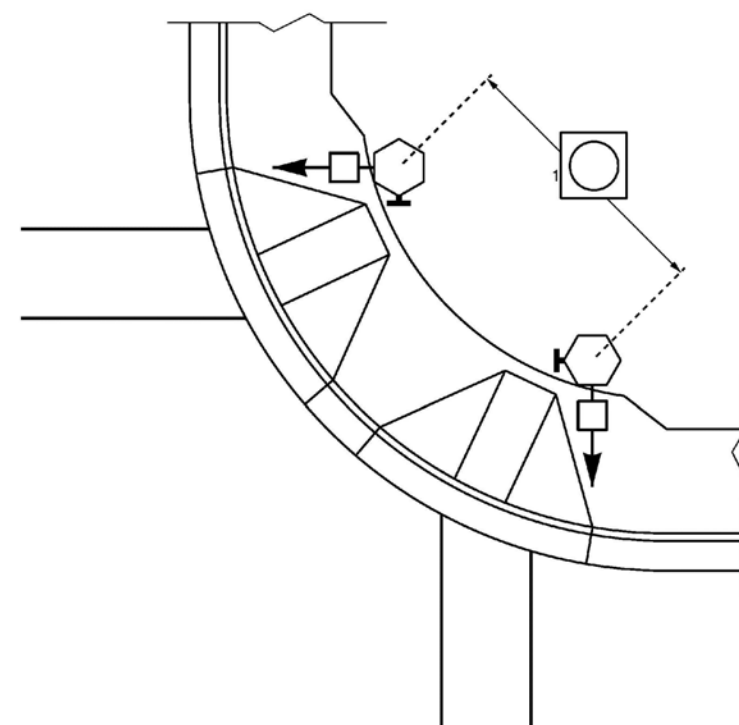


LEGEND

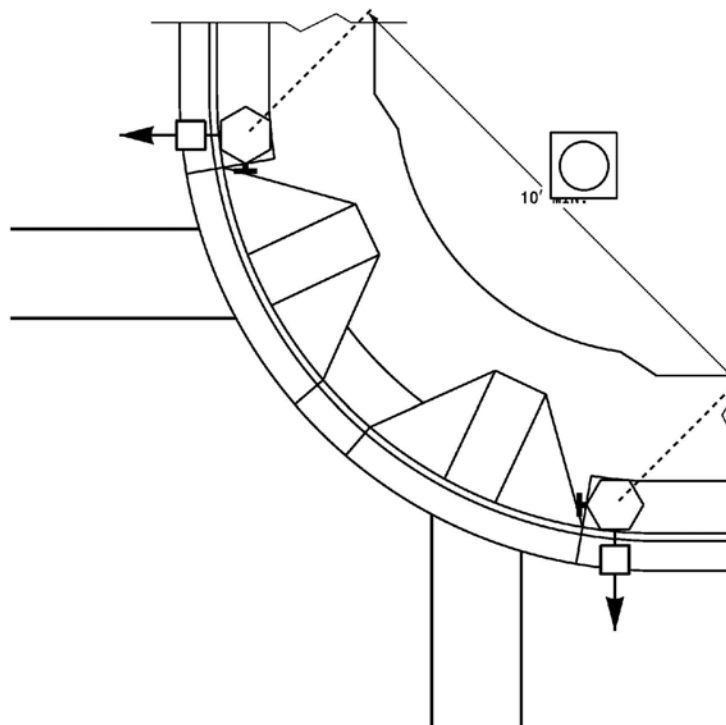
Signal Pole
Type I Pushbutton Post
Type II Signal Pedestal
Pushbutton & Sign
Pedestrian Signal Head
Curb Ramp
Pushbutton Location Area

TYPICAL PUSHBUTTON LOCATIONS (CASE II)

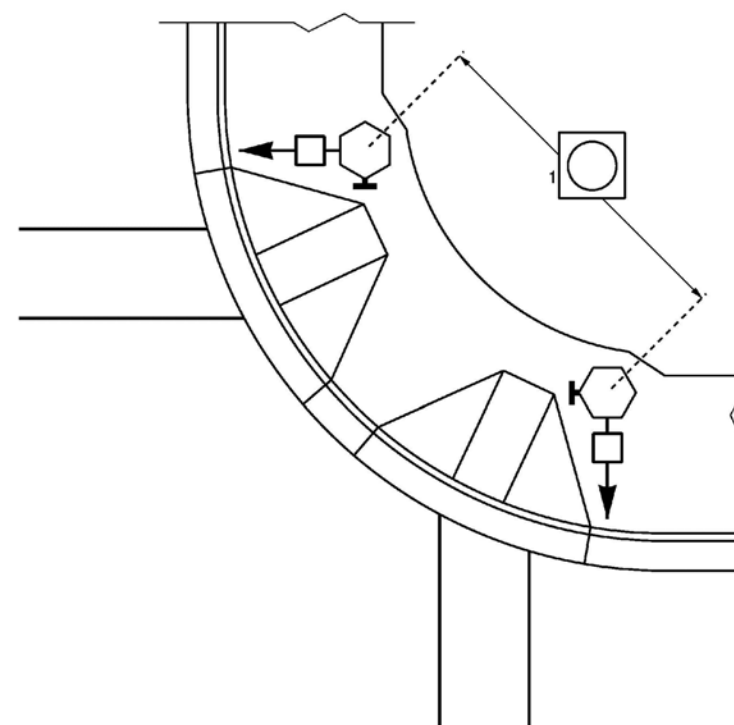
SEPARATE CURB RAMPS W/ TYPE II PEDESTALS



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



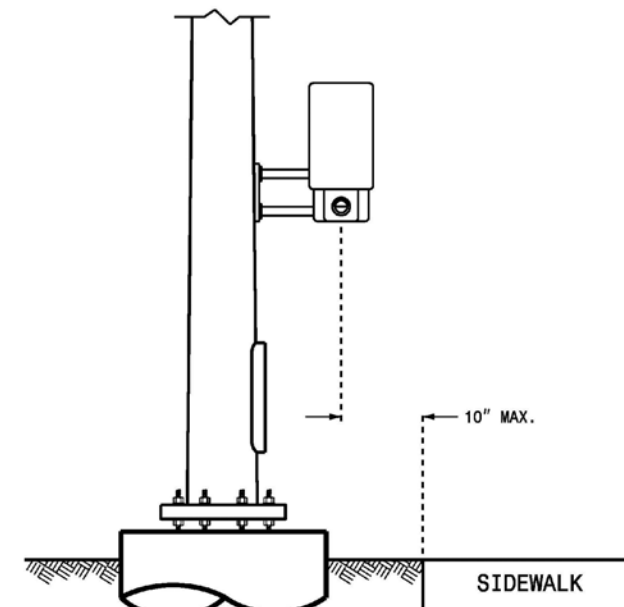
GRASS STRIP PLACEMENT IF BACK
OF SIDEWALK EXCEEDS 10' FROM
CURB OR PAVEMENT/SHOULDER



PUSHBUTTON PLACEMENT
IN WIDE SIDEWALK

OPTIONAL PUSHBUTTON EXTENSION

FACE OF PUSHBUTTON PARALLEL TO
APPLICABLE CROSSWALK



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

06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 2 OF 3

1705D01

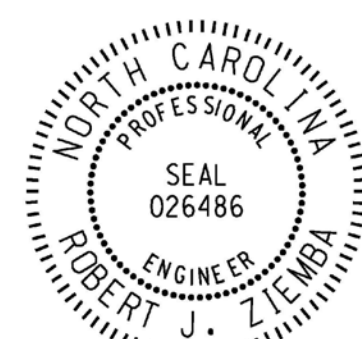
See Plate for Title

Prepared in the Offices of:



750 N. Greenfield Parkway
Garner, NC 27529

SEAL



Disciplined by:
Signature

6/17/2014
DATE

DESIGNED: NMN
REVIEWED: MSR
DRAWN: NMN
2016-138 7/27/17
PROJECT NO. DATE
N.T.S. 2016-138_DET
SCALE FILE

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Peachtree Street and Falls Road
Buffered Bike Lanes
Rocky Mount, NC

DETAILS

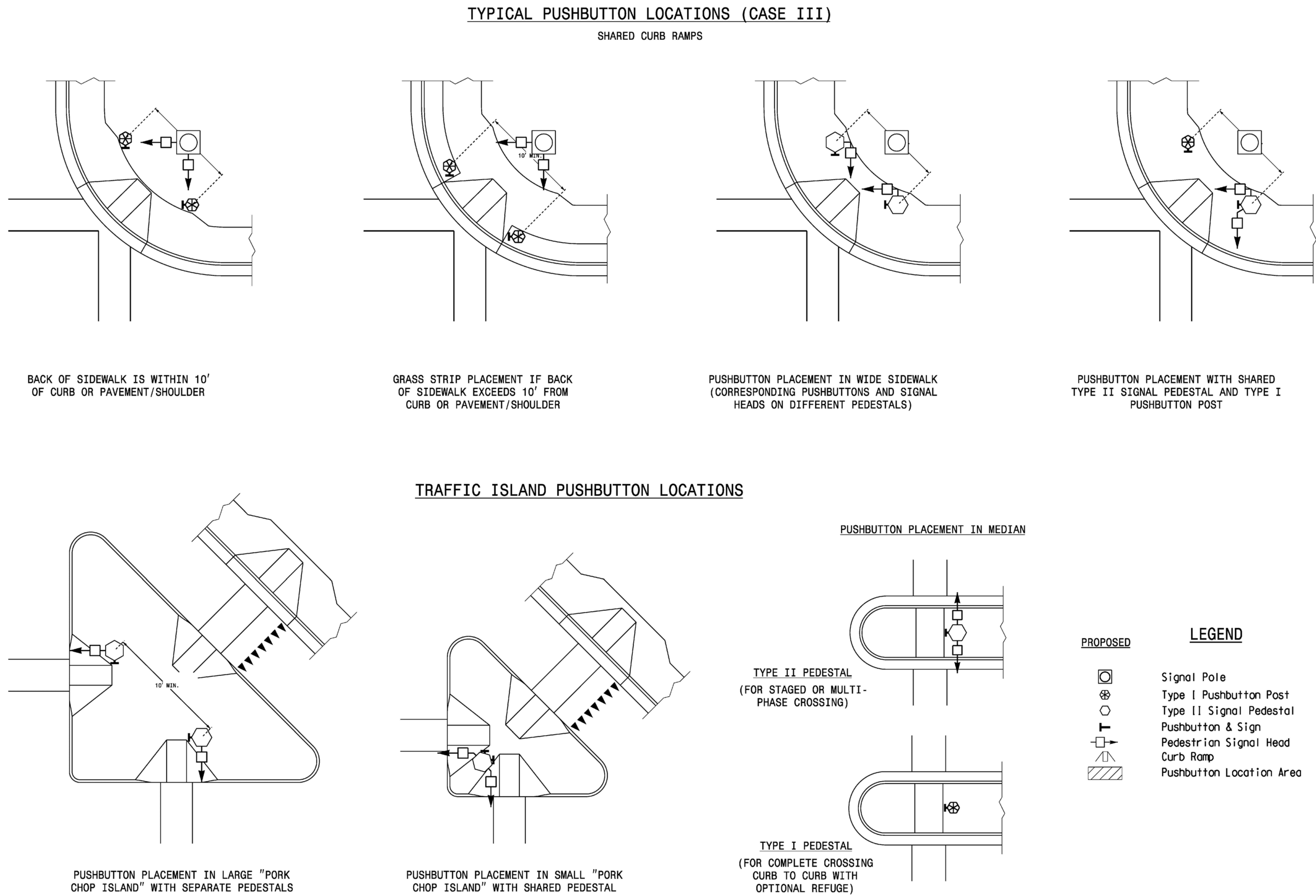
SHEET NO.

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 3 OF 3
1705D01



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

06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 3 OF 3
1705D01

See Plate for Title

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Garner, NC 27529

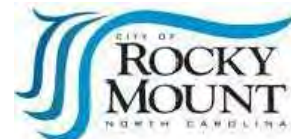
SEAL

ROBERT J. ZIEMBA
ENGINEER
6/17/2014
SIGNATURE DATE

DESIGNED: NMN
REVIEWED: MSR
DRAWN: NMN
2016-138 7/27/17
PROJECT NO. DATE
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MICHAEL S. REPPE
ENGINEER
6/17/2014
SIGNATURE DATE

**Peachtree Street and Falls Road
Buffered Bike Lanes**
Rocky Mount, NC

DETAILS

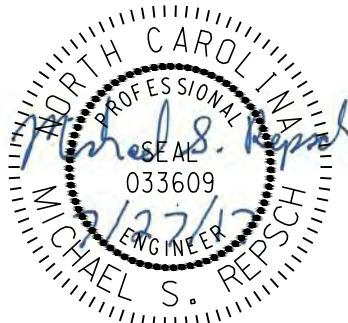
SHEET NO.



DESIGNED: AEC	REVISIONS
REVIEWED: MSR	NO DATE ITEM
DRAWN: AEC	
2016-138	7/27/17
PROJECT NO.	DATE
1" = 200'	2016-138_SPM
SCALE	FILE



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Peachtree Street and Falls Road

Buffered Bike Lanes

Rocky Mount, NC

BASELINE ALIGNMENT PLAN

SHEET NO.

11 OF 28

P:\00-2016-138 ROCKY MOUNT, NC ENGINEERING SERVICES\CAD\2016-138_BAS.DWG



NOTES

- EXISTING ROADWAY WIDTHS ARE BASED ON AERIAL PHOTOGRAPHY AND FIELD MEASUREMENTS. THE CONTRACTOR SHALL LAYOUT PROPOSED PAVEMENT MARKINGS MEASURED FROM FACE OF CURB. IF MINIMUM DIMENSIONS CANNOT BE ACHIEVED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

DESIGNED: AEC
REVIEWED: MSR
DRAWN: AEC
2016-138
PROJECT NO.
1" = 50'
SCALE

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Peachtree Street and Falls Road
Buffered Bike Lanes
Rocky Mount, NC

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.

12 OF 28

MATCH LINE STA. 107+50.00, SEE SHEET 12

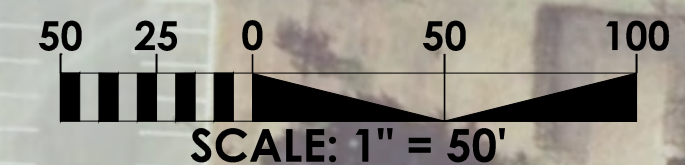
MATCH LINE STA. 122+50.00, SEE SHEET 14

MATCH LINE STA. 11+00.00, SEE SHEET 12

MATCH LINE STA. 26+50.00, SEE SHEET 14

NOTES

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DESIGNED: AEC
REVIEWED: MSR
DRAWN: AEC
2016-138 PROJECT NO.
1" = 50' SCALE
7/27/17 DATE
2016-138_SPM FILE

REVISIONS		
NO	DATE	ITEM



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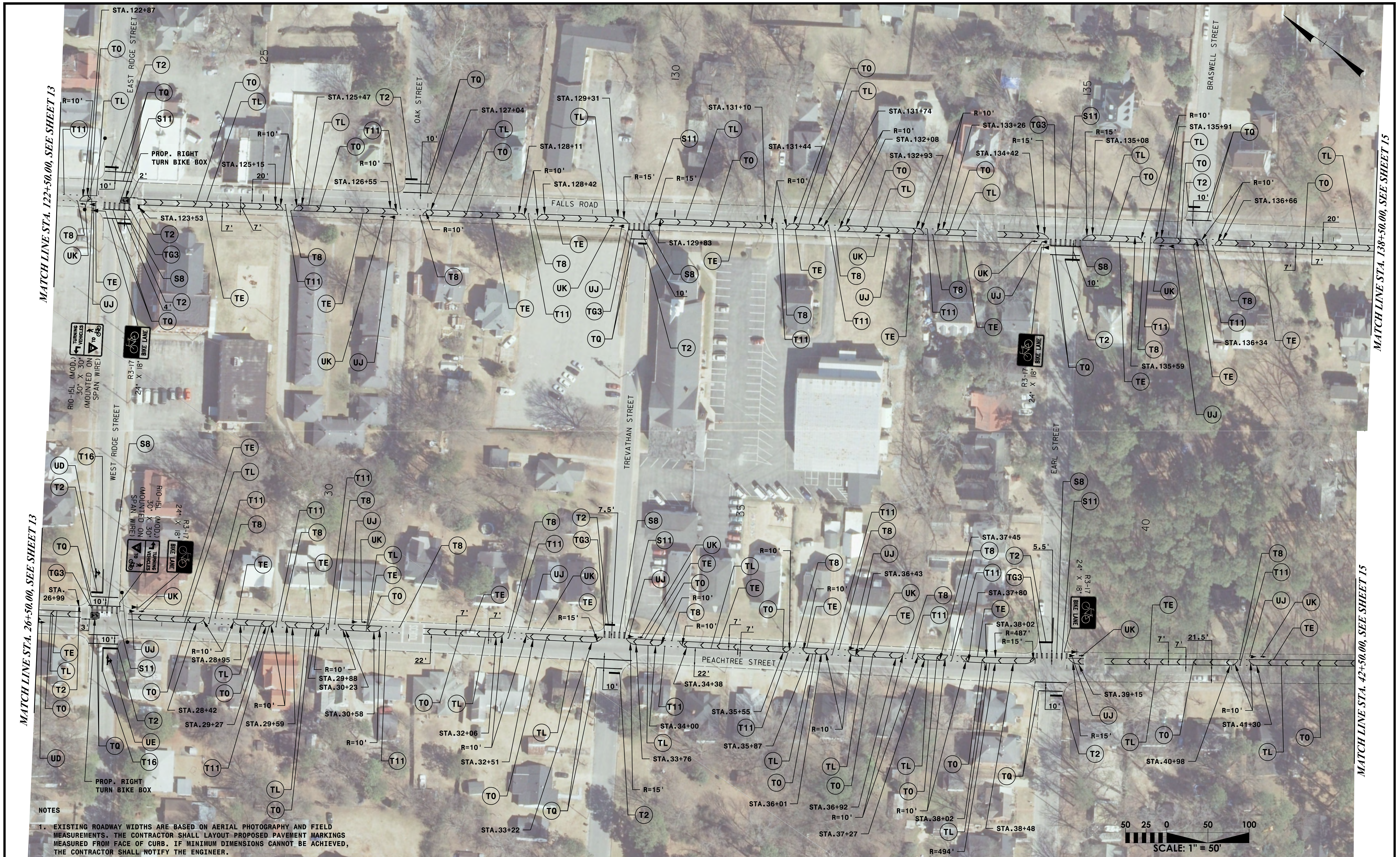


Peachtree Street and Falls Road Buffered Bike Lanes

Rocky Mount, NC

SIGNING AND PAVEMENT MARKING PLAN

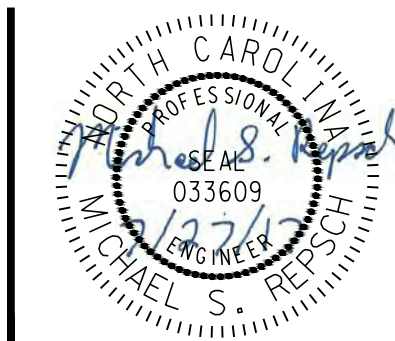
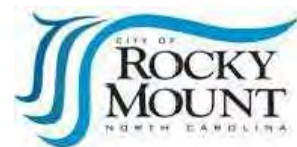
SHEET NO.



DESIGNED: AEC	REVISIONS
REVIEWED: MSR	NO DATE ITEM
DRAWN: AEC	
2016-138	7/27/17
PROJECT NO.	DATE
1" = 50'	2016-138_SPM
SCALE	FILE



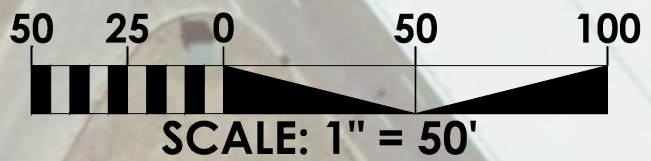
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Peachtree Street and Falls Road Buffered Bike Lanes Rocky Mount, NC

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.



NOTES

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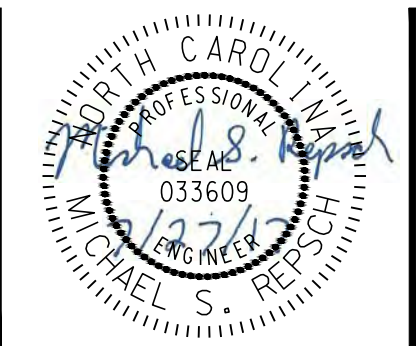
DESIGNED: AEC	REVISIONS
REVIEWED: MSR	NO DATE ITEM
DRAWN: AEC	
2016-138	7/27/17
PROJECT NO.	DATE
1" = 50'	2016-138_SPM
SCALE	FILE



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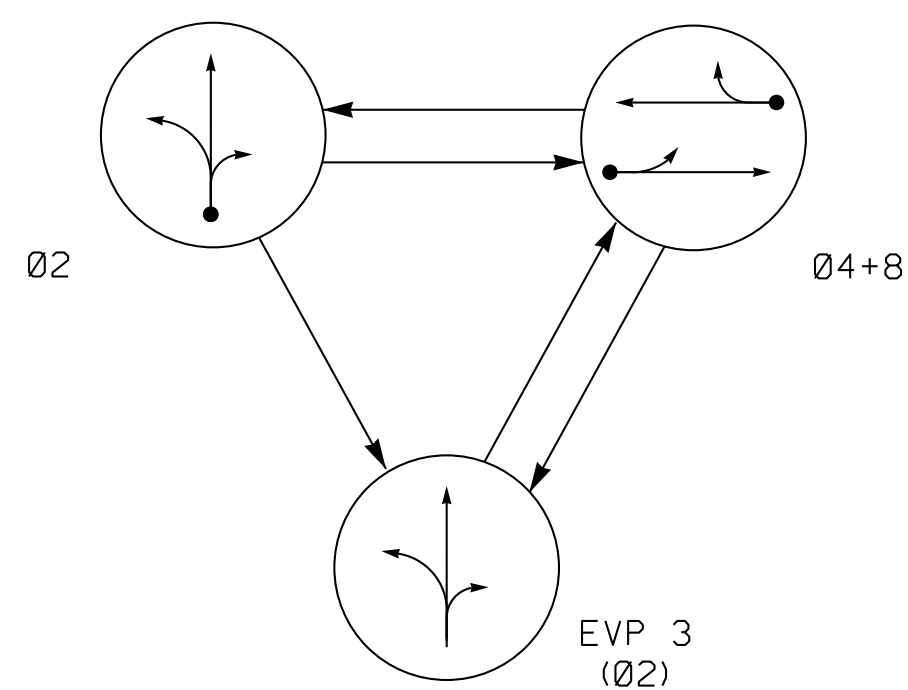


Rocky Mount
North Carolina

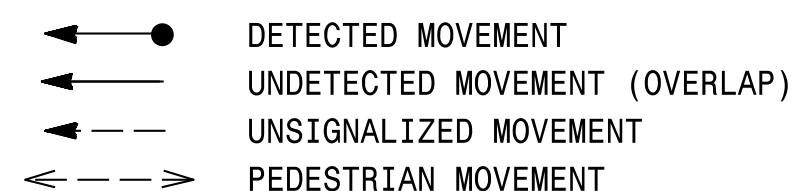


Peachtree Street and Falls Road Buffered Bike Lanes Rocky Mount, NC

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND



2070 EV PREEMPTION	
FUNCTION	PRE 3
Interval 1 – Dwell Green	255
Interval 1 – Dwell Yellow	0,0*
Interval 1 – Dwell Red	0,0*
Interval 5 – Exit Green	1
Interval 5 – Yellow	4,0
Interval 5 – Red	1,0
Exit Phase(s)	4+8
Priority	MEDIUM
Delay Time	0,0
Min Green Before Pre	1
Ped Clear Before Pre	0
Yellow Clear Before Pre	0,0*
Red Clear Before Pre	0,0*
Dwell Min Time	10
Enable Backup Protection	N
Ped Clear Through Yellow	N
Preempt Extend**	5
Omit Overlaps	-

* Time defaults to time used for phase during normal operation

** Program Timing on Optical Detection Unit

OASIS 2070L TIMING CHART			
FEATURE	PHASE		
	2	4	8
Min Green 1 *	10	7	7
Extension 1 *	2.0	1.0	1.0
Max Green 1 *	20	15	15
Yellow Clearance	3.0	4.0	3.8
Red Clearance	1.8	1.0	1.0
Walk 1 *	-	-	-
Don't Walk 1	-	-	-
Seconds Per Actuation *	-	-	-
Max Variable Initial *	-	-	-
Time Before Reduction *	-	-	-
Time To Reduce *	-	-	-
Minimum Gap	-	-	-
Recall Mode	MIN RECALL	-	-
Vehicle Call Memory	-	-	-
Dual Entry	-	ON	ON
Simultaneous Gap	ON	ON	ON

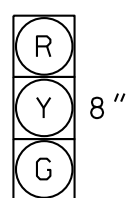
* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

TABLE OF OPERATION

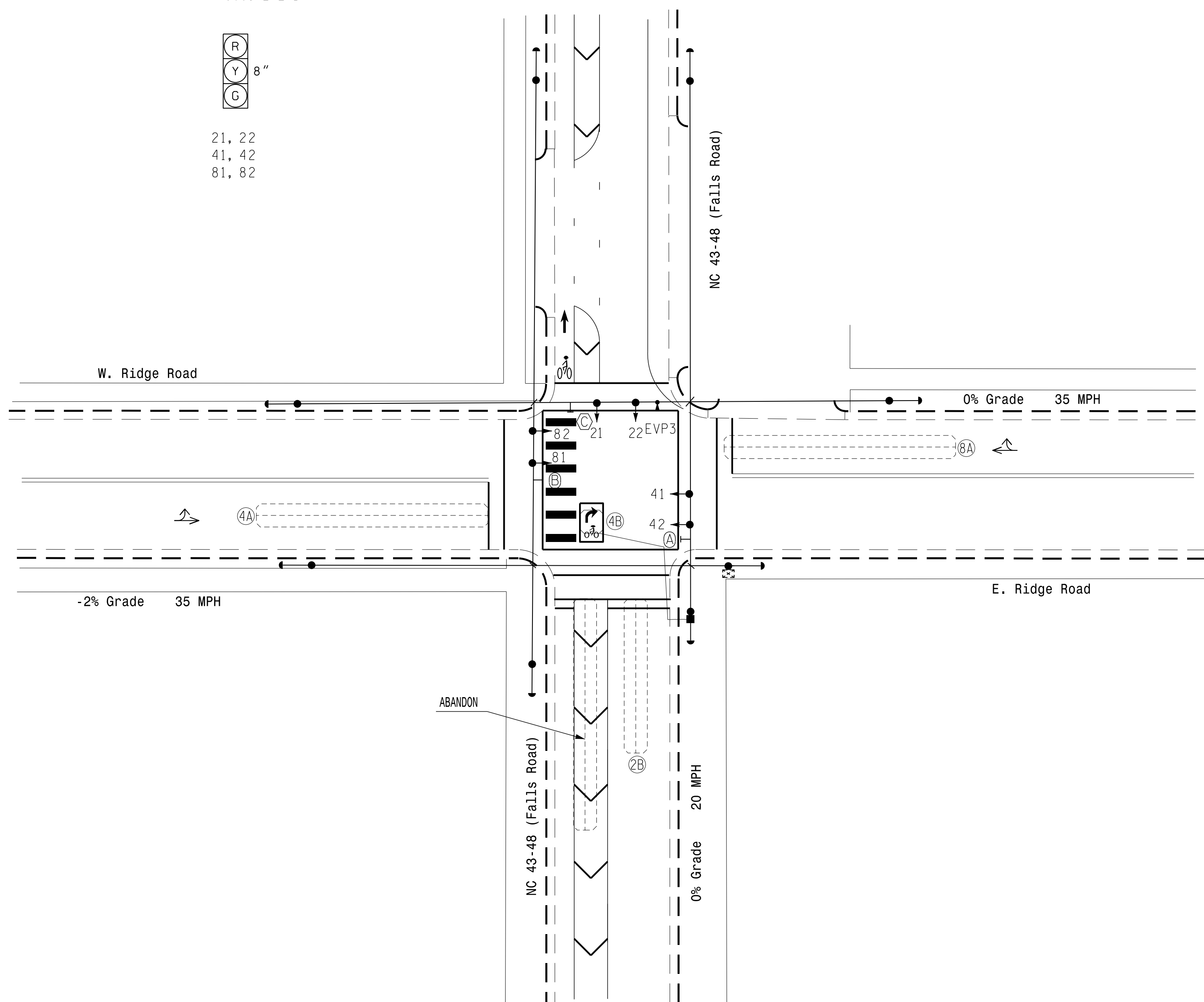
SIGNAL FACE	PHASE			
	0 2	0 4 + 8	E V P 3	F L A S H
21,22	G	R	G	Y
41,42	R	G	R	R
81,82	R	G	R	R

SIGNAL FACE I.D.

All Heads L.E.D.



21, 22
41, 42
81, 82



OASIS 2070L LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD	
2B	6X40	0	2-4-2	-	2	Y Y	-	-	-	-	-	
4A	6X60	0	2-4-2	-	4	Y Y	-	-	3	-	-	
** 4B	6X6	-24	2-4-2 DIAGONAL	Y	4	Y Y	-	-	-	-	-	
8A	6X60	0	2-4-2	-	8	Y Y	-	-	5	-	-	

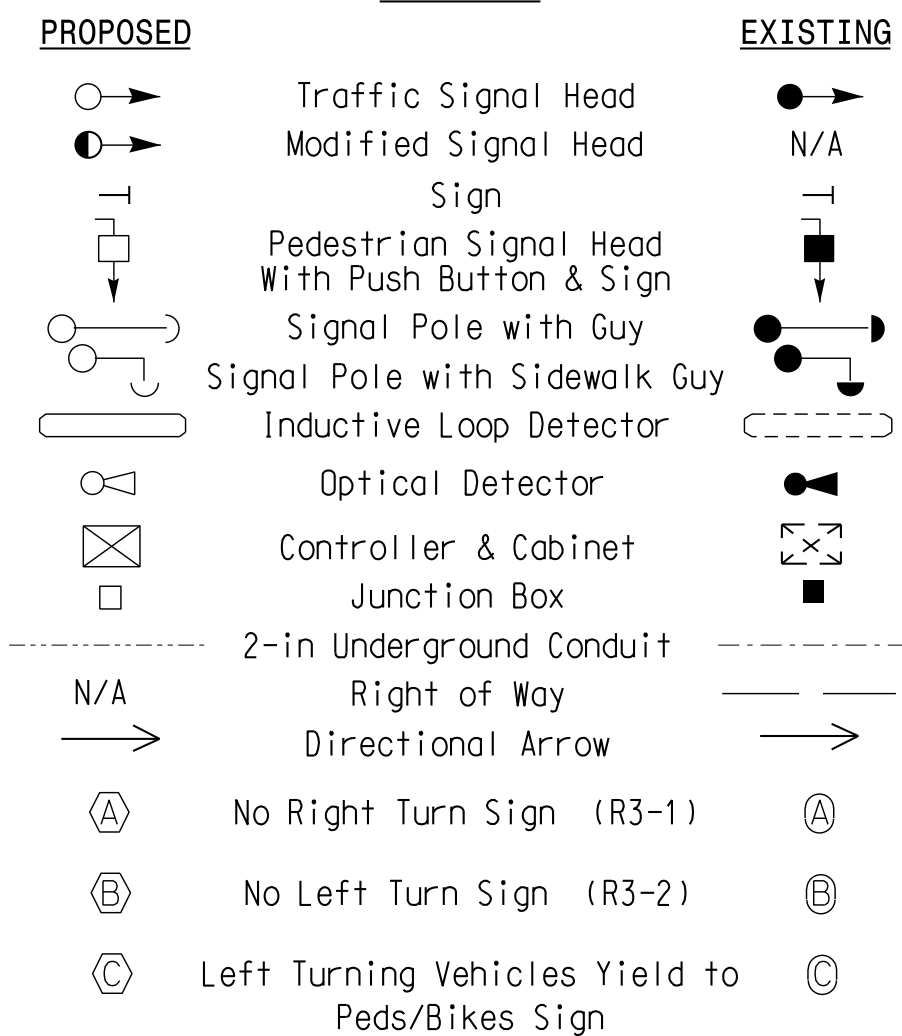
**Set Sensitivity to appropriate level to detect a bicycle

2 Phase w/ Pre-empt
Fully Actuated
Rocky Mount City System

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
5. This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
7. System data: Zone 3
Controller Asset #0040.

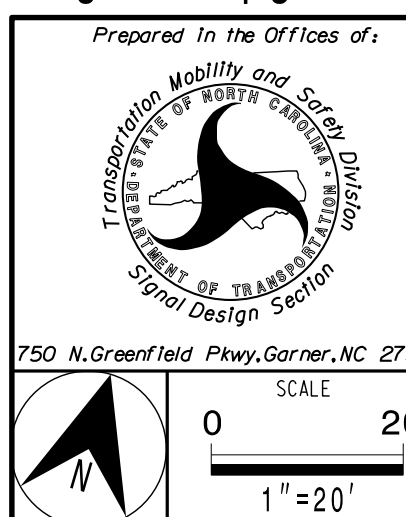
LEGEND



Signal Upgrade



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NC 43-48 (Falls Road)
at
Ridge Road

Division 4 Nash County Rocky Mount

PLAN DATE:	July 2017	REVIEWED BY:
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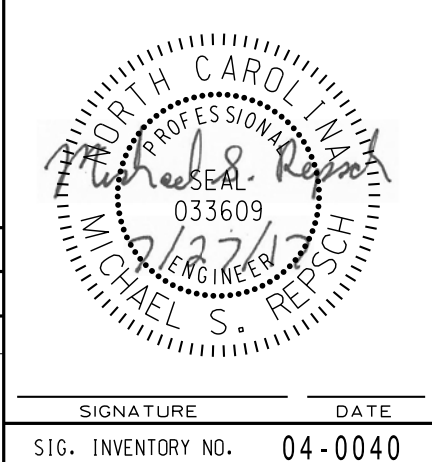
PREPARED BY:	M. Repsch	REVIEWED BY:	
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REVISIONS	INIT.	DATE

[illegible]

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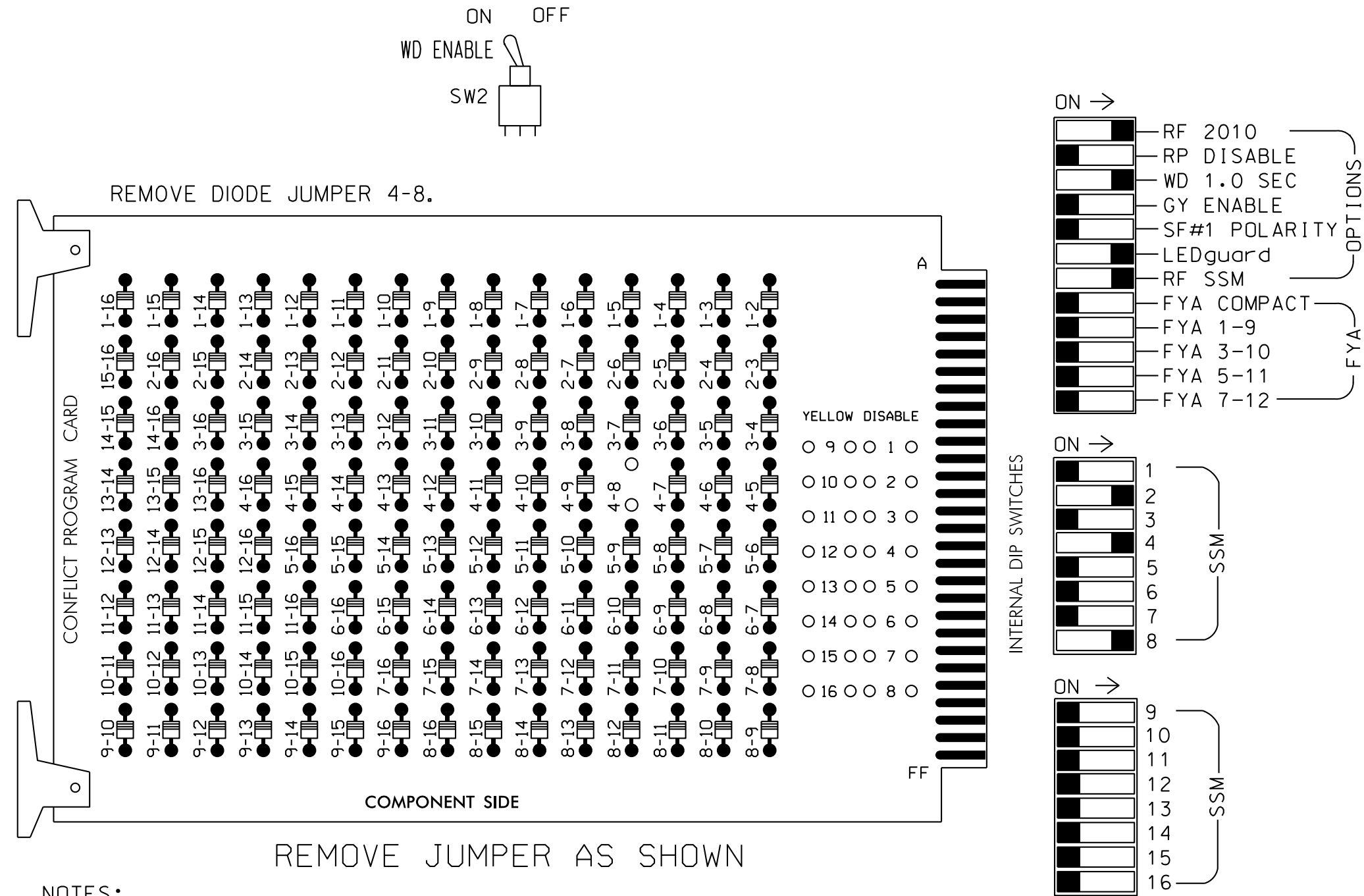
SEAL



SIGNATURE	DATE
SIG. INVENTORY NO.	04-0040

EDI MODEL 2010ECL-NC CONFLICT MONITOR
PROGRAMMING DETAIL

(remove jumper and set switches 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.

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 1,3, 5,6,7,9,10,11,12,13,14,15 & 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 phase 2 for Start Up In Green.
- Program phase 2 for Yellow Flash.
- The cabinet and controller are part of the Rocky Mount City System.

EQUIPMENT INFORMATION

CONTROLLER.....2070L
CABINET.....336
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....POLE
OUTPUT FILE POSITIONS...12
LOAD SWITCHES USED.....S2,S4,S8
PHASES USED.....2,4,8
OVERLAPS.....NONE

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED
SIGNAL HEAD NO.	NU	21,22	NU	NU	41,42	NU	NU	NU	NU	NU	81,82	NU
RED		128			101						107	
YELLOW		129			102						108	
GREEN		130			103						109	
RED ARROW												
YELLOW ARROW												
GREEN ARROW												

NU = Not Used

EMERGENCY VEHICLE PREEMPTION
PROGRAMMING DETAIL

(program controller as shown below)

From Main Menu press 'A' (Preemption), then '1' (Standard Preemptions). Press 'NEXT' to advance to Preemption #3.

PREEMPTION #3	SETTINGS (NEXT:1-10)
INTERVAL/TIMING	CLEAR/DWELL PHASES
GRN YEL RED	12345678910111213141516
1 255 0.0 0.0	X
2 0 0.0 0.0	
3 0 0.0 0.0	
4 0 0.0 0.0	
5 1 4.0 1.0	X X
EXIT CALLS	

PRIORITY (Y/N TO SELECT)MED
DELAY TIMER (0-255 SEC)0
MIN GREEN BEFORE PRE (0= DEFAULT)....1
PED CLEAR BEFORE PRE (0= DEFAULT)....0
YELLOW CLEAR BEFORE PRE (0= DEFAULT).0.0
RED CLEAR BEFORE PRE (0= DEFAULT)....0.0
DWELL MIN TIMER (0-255 SEC)10
DWELL MAX TIMER (0=OFF,1-255MIN)0
DWELL HOLD-OVER TIMER (0-255)0
LATCH CALL?N
LINK TO NEXT PREEMPT?N
ENABLE BACKUP PROTECTION?N
HOLD CLEAR 1 PHASES DURING DELAY?N
FAST GREEN FLASH DWELL PHASES?N
PED CLEARANCE THROUGH YELLOW?N
INHIBIT OVERLAP GREEN EXTENSION?N
SERVICE DURING SOFTWARE FLASH?N
REST IN RED DURING DWELL INTERVAL? ..N
FLASH DWELL INTERVAL?N
ALLOW PEDS IN DWELL INTERVAL?N
RE-TIME DWELL INTERVAL?N
OVERLAPS:N
DWELL INT FLASH YELLOWN
OMIT OVERLAPS:N

Program extend time on optical detector unit for 5.0 sec for EVP3.

INPUT FILE POSITION LAYOUT

(front view)

FILE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	S	NOT USED	S	Ø 4	S	S	S	Ø 8	S	PRE3	S	S	S	FS
I	Ø 2		Ø 4		Ø 2	Ø 4	Ø 8		Ø 2	Ø 4	Ø 8	Ø 2	Ø 4	Ø 8
L	2B		4B		2B	4B	8B		2B	4B	8B	2B	4B	8B

EX.: 1A, 2A, ETC. = LOOP NO.'S

*See Opticom Field Wire Detail below.

FS = FLASH SENSE
ST = STOP TIME
PRE3 = EV PREEMPT

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
2B	TB23-3,4	I2L	43	5	12	2	Y	Y			
4A	TB21-7,8	I4U	41	3	4	4	Y	Y			3
4B	TB23-7,8	I4L	45	7	14	4	Y				
8A	TB22-1,2	I8U	42	4	8	8	Y	Y			5

INPUT FILE POSITION LEGEND: I2L

FILE 1
SLOT 2
LOWER

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 04-0040
DESIGNED: July 2017
SEALED: 07/27/17
REVISED: N/A



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Davidson, North Carolina 28036
p:704.255.6200

Signal Upgrade

ELECTRICAL AND PROGRAMMING DETAILS FOR:		NC 43-48 (Falls Road) at Ridge Road		SEAL	
Prepared in the Offices of:		Nash County Rocky Mount		THOMAS CARROLL Professional Engineer 033609 7/27/17 MICHAEL S. REPSCH	
Division 4		PLAN DATE: July 2017		REVIEWED BY:	
PREPARED BY: M. Repsch		REVIEWED BY:		SIGNATURE DATE	
REVISIONS		INIT.		DATE	
750 N.Greenfield Pkwy, Garner, NC 27529				SIG. INVENTORY NO. 04-0040	

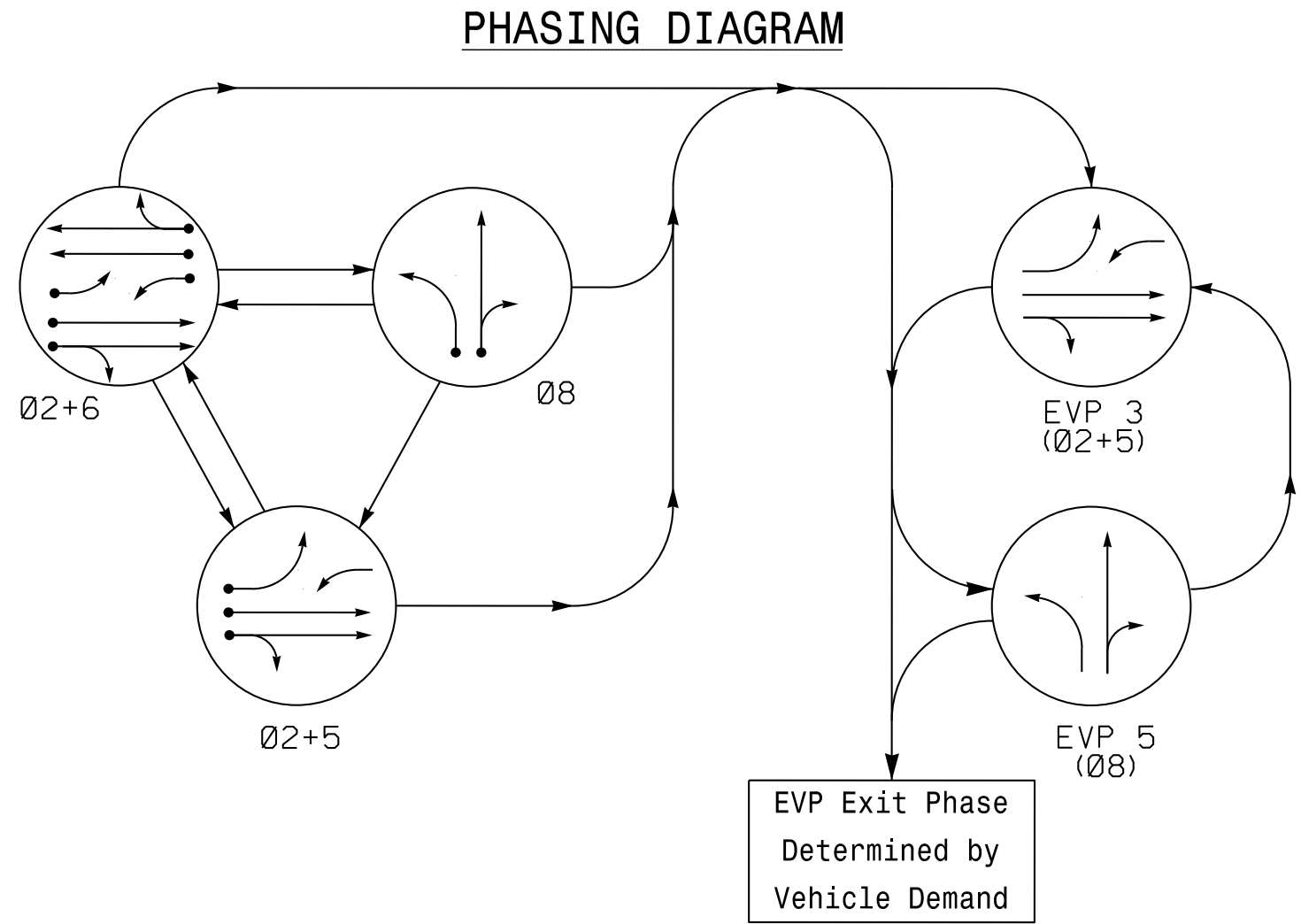
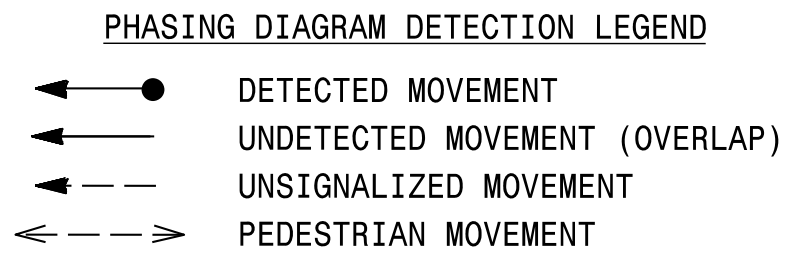
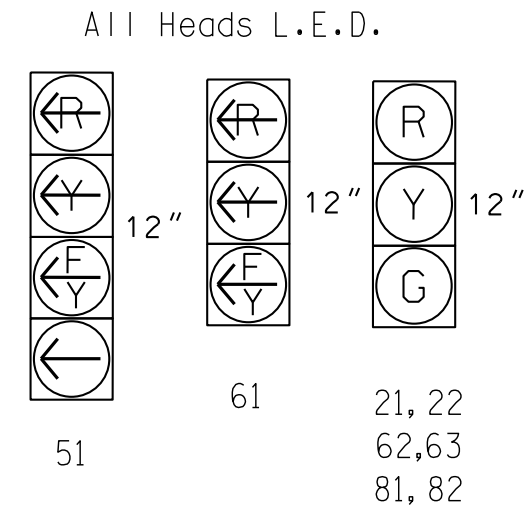


TABLE OF OPERATION

SIGNAL FACE	PHASE					
	02+5	02+6	08	EVP 3	EVP 5	FALLS RD
21,22	G	G	R	G	R	Y
51	←	←	←	←	←	←
61	←	←	←	←	←	←
62,63	R	G	R	R	R	Y
81,82	R	R	G	R	G	R

SIGNAL FACE I.D.



OASIS 2070L LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS				DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME
2A	6X40	0	2-4-2	-	2	Y	Y	-	-	-
2B	6X40	0	2-4-2	-	2	Y	Y	-	-	-
5A	6X40	0	2-4-2	-	5	Y	Y	-	-	10
6A	6X40	0	2-4-2	-	6	Y	Y	-	-	-
6B	6X60	0	2-4-2	-	6	Y	Y	-	-	-
6C	6X60	0	2-4-2	-	6	Y	Y	-	-	-
8A*	6X40	0	2-4-2	-	8	Y	Y	-	-	3
8B	6X40	0	2-4-2	-	8	Y	Y	-	-	10
S15	6X6	+300	5	-	-	-	-	-	-	Y
S16	6X6	+150	5	-	-	-	-	-	-	Y
S17	6X6	+150	5	-	-	-	-	-	-	Y

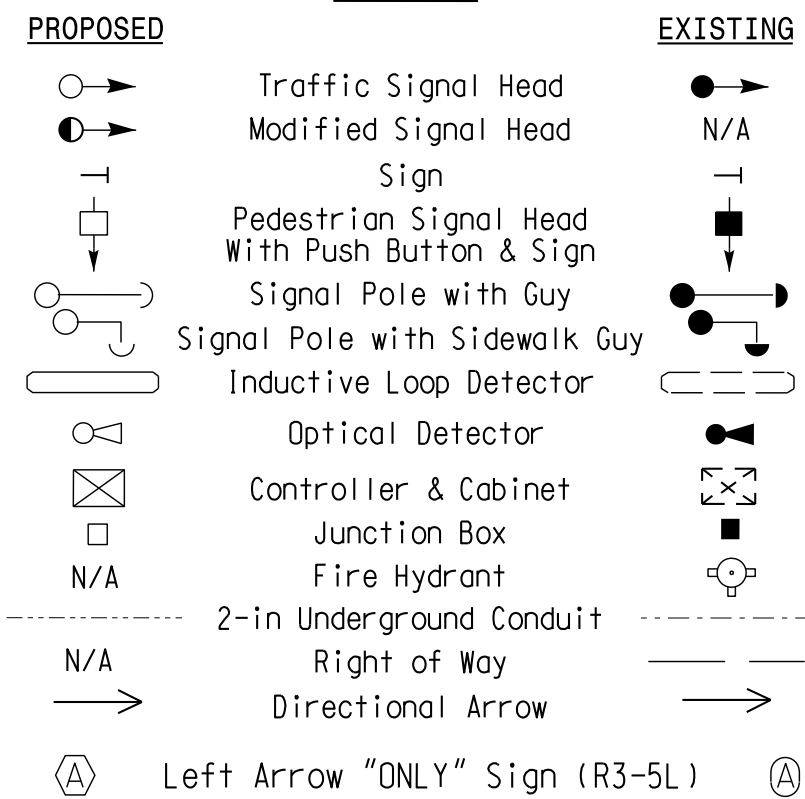
*Adjust Sensitivity to detect bicycles

3 Phase W/ EV Preempt
Fully Actuated
Rocky Mount City System

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 81.
- Set all detector units to presence mode.
- In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
- Pavement markings are existing.
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- System data: ZONE 3 Controller Asset # 0118
- Paint new bicycle markings (as shown on figure 9c-7 of the 2009 edition of the MUTCD for existing loop 8A.

LEGEND



OASIS 2070L TIMING CHART

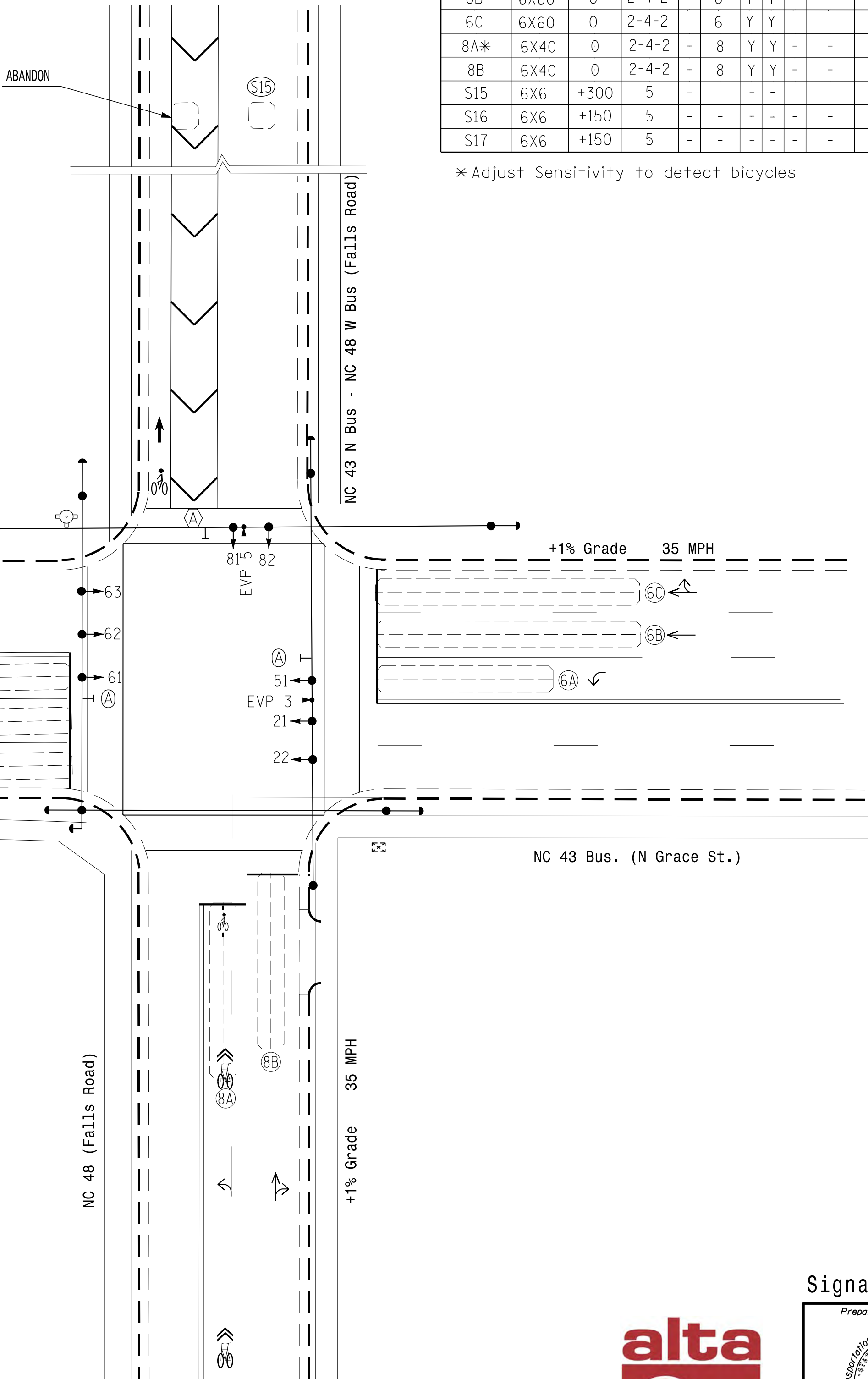
FEATURE	PHASE			
	2	5	6	8
Min Green 1 *	7	7	7	7
Extension 1 *	2.0	2.0	2.0	2.0
Max Green 1 *	30	15	30	30
Yellow Clearance	3.8	3.0	3.8	3.8
Red Clearance	1.1	1.6	1.1	1.5
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	-	-	-	-
Max Variable Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	-	-	-	-
Dual Entry	-	-	-	-
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.

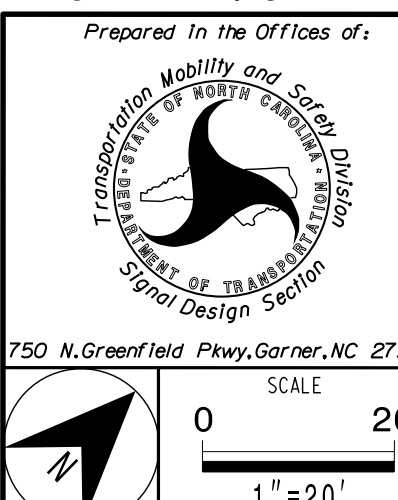
2070 EV PREEMPTION

FUNCTION	PRE 3	PRE 5
Interval 1 - Dwell Green	255	255
Interval 1 - Dwell Yellow	0.0*	0.0*
Interval 1 - Dwell Red	0.0*	0.0*
Interval 5 - Exit Green	0	0
Interval 5 - Yellow	0.0	0.0
Interval 5 - Red	0.0	0.0
Priority	MEDIUM	MEDIUM
Delay Time	0.0	0.0
Min Green Before Pre	1	1
Ped Clear Before Pre	0	0
Yellow Clear Before Pre	0.0*	0.0*
Red Clear Before Pre	0.0*	0.0*
Dwell Min Time	7	7
Enable Backup Protection	N	N
Ped Clear Through Yellow	N	N
Preempt Extend**	5	5
Omit Overlaps	-	-

* Time defaults to time used for phase during normal operation
** Program Timing on Optical Detection Unit



Signal Upgrade



NC 48-NC 43 Bus (N Grace Sreet)
at
NC 43 N Bus-NC 48 W Bus
(Falls Rd.)

Division 4 Nash County Rocky Mount

PLAN DATE: July 2017 REVIEWED BY:

PREPARED BY: M. Repsch REVIEWED BY:

REVISIONS

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



SIGNATURE DATE
SIG. INVENTORY NO. 04-0118

(remove jumpers and set switches as shown)

ON OFF



1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Make sure jumpers SEL2-SEL5 are present on the monitor board.



1. 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.
2. 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 1,3,4, 5,7,10,12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Enable Simultaneous Gap-Out for all phases.
4. Program phases 2 and 6 for Start Up In Green.
5. Program phases 2 and 6 for Yellow Flash, and overlap 1 as Wag Overlaps.
6. The cabinet and controller are part of the Rocky Mount City System.

```
CONTROLLER.....2070L
CABINET.....332 /W/ AUX
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED.....S2,S5,S6,S8,S9,S12.
PHASES USED.....2,5,6,8.
OVERLAP "A".....2
OVERLAP "B".....NOT USED
OVERLAP "C".....2+5+6
OVERLAP "D".....NOT USED
```

★ See pictorial of head wiring in detail below.

1. The sequence display for signal head 51 requires special logic programming. See sheet 2 of 2 for programming instructions.

```
FS = FLASH SENSE
ST = STOP TIME
PRE3,PRE5 = EV PREEMPT
```

* SYSTEM DETECTOR ONLY. REMOVE THE VEHICLE PHASE ASSIGNED TO THIS DETECTOR IN THE DEFAULT PROGRAMMING.

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27-JUL-2017 16:49
P:\00-2016-138 Rocky Mount, NC Engineering Services\CAD\040118_sm_ele.20110516.dgn
mkerpsch AT DUR-M4800-20

1. FROM MAIN MENU PRESS '2' (PHASE CONTROL), THEN '1' (PHASE CONTROL FUNCTIONS). SCROLL TO THE BOTTOM OF THE MENU AND ENABLE ACT LOGIC COMMANDS 1, 2 AND 3.
2. FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).



```

OUTPUT 42 = Overlap C Red
OUTPUT 43 = Overlap C Yellow
OUTPUT 44 = Overlap C Green

```

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

PRESS '+' TWICE

■ NOTICE
GREEN
FLASH

```

PAGE 1: VEHICLE OVERLAP 'C' SETTINGS
PHASE:          |12345678910111213141516
                | X XX
VEH OVL PARENTS:
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
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

From Main Menu press 'A' (Preemption), then '1' (Standard Preemptions). Press 'NEXT' as needed to advance to Preempts 3 and 5.

```

PREEMPTION #3 SETTINGS (NEXT:1-10)
INTERVAL/TIMING CLEAR/DWELL PHASES
GRN YEL RED 12345678910111213141516
1 255 0.0 0.0 X X
2 0 0.0 0.0
3 0 0.0 0.0
4 0 0.0 0.0
5 0 0.0 0.0
EXIT CALLS
OPTIONS
PRIORITY (Y/N TO SELECT) .....MED
DELAY TIMER (0-255 SEC) .....0
MIN GREEN BEFORE PRE (0= DEFAULT)...1
PED CLEAR BEFORE PRE (0= DEFAULT)...0
YELLOW CLEAR BEFORE PRE (0= DEFAULT)..0.0
RED CLEAR BEFORE PRE (0= DEFAULT)...0.0
DWELL MIN TIMER (0-255 SEC) .....7
DWELL MAX TIMER (0=OFF,1-255MIN) ....0
DWELL HOLD-OVER TIMER (0-255) .....0
LATCH CALL? .....N
LINK TO NEXT PREEMPT? .....N
ENABLE BACKUP PROTECTION? .....N
HOLD CLEAR 1 PHASES DURING DELAY? ..N
FAST GREEN FLASH DWELL PHASES? .....N
PED CLEARANCE THROUGH YELLOW? .....N
INHIBIT OVERLAP GREEN EXTENSION? ....N
SERVICE DURING SOFTWARE FLASH? .....N
REST IN RED DURING DWELL INTERVAL? ..N
FLASH DWELL INTERVAL? .....N
ALLOW PEDS IN DWELL INTERVAL? .....N
RE-TIME DWELL INTERVAL? .....N
OVERLAPS: ABCDEFGHIJ KLMNO
DWELL INT FLASH YELLOW
OMIT OVERLAPS:

```

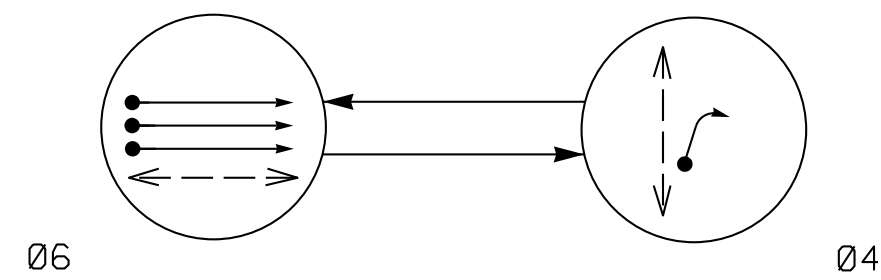
PRESS 'NEXT' TWICE

PROGRAMMING COMPLETE

Program extend time
on optical detector
units for 5.0 seconds.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 04-0118
DESIGNED: June 2017
SEALED: 07/27/17
REVISED: N/A

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- | | |
|-------|-------------------------------|
| ◀● | DETECTED MOVEMENT |
| ◀ | UNDETECTED MOVEMENT (OVERLAP) |
| ◀--- | UNSIGNALIZED MOVEMENT |
| ◀---> | PEDESTRIAN MOVEMENT |

TABLE OF OPERATION	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42
43	44
45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
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85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

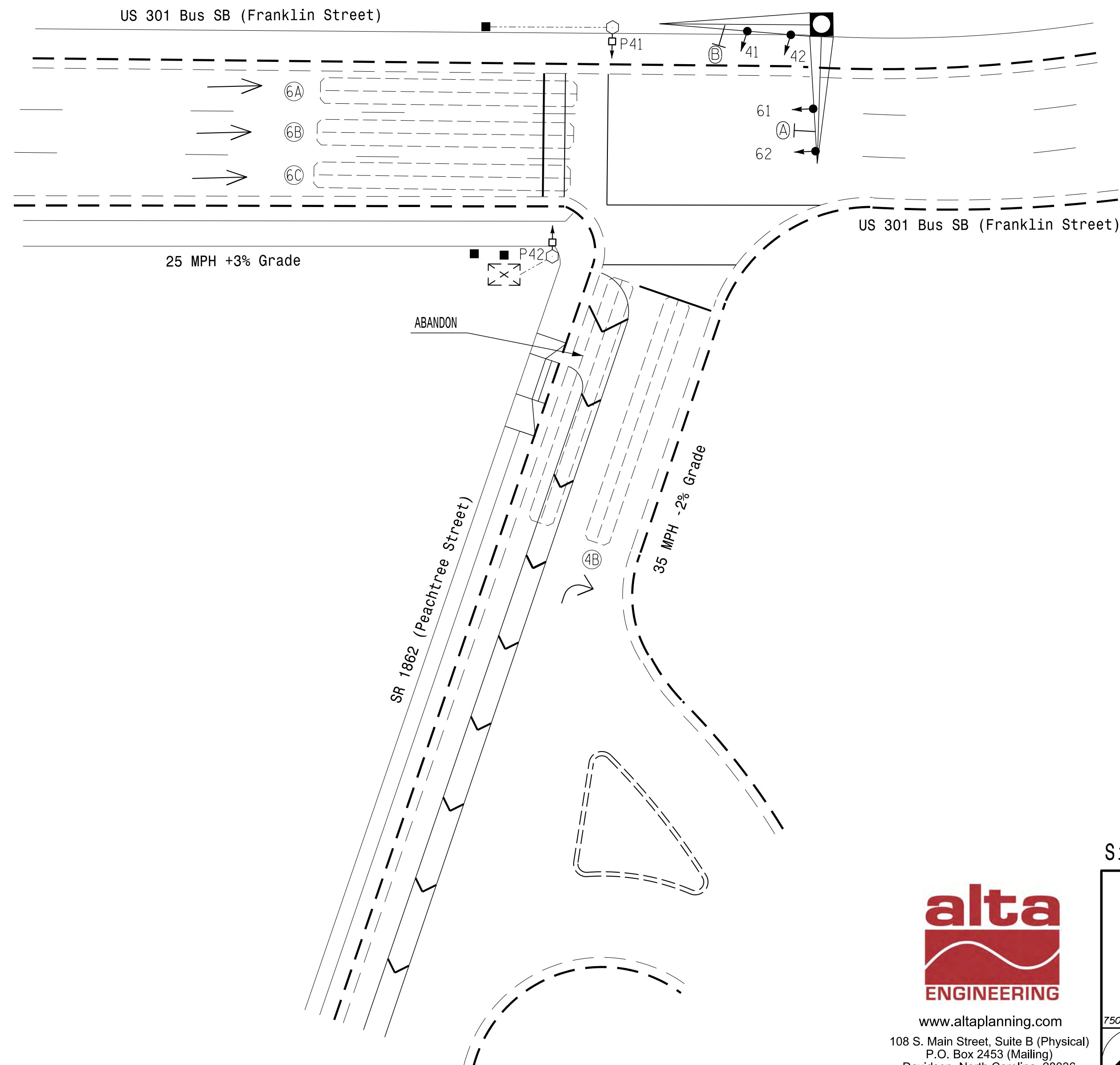
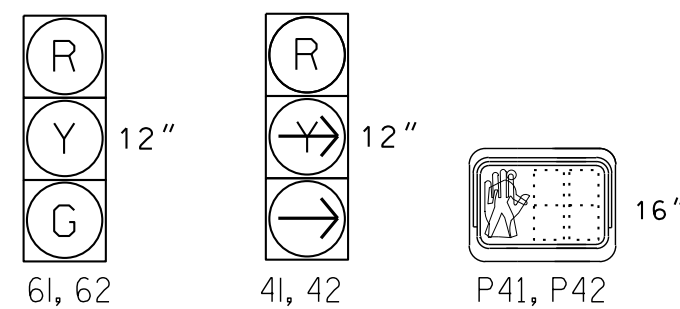
SIGNAL FACE	PHASE		
	Ø 4	Ø 6	F L A S H
4I, 42	→	R	R
6I, 62	R	G	Y
P41, P42	W	DW	DRK

OASIS 2070L LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
4B	6X60	0	2-4-2	-	4	Y	Y	-	-	15	-	-
6A	6X60	-7	2-4-2	-	6	Y	Y	-	-	-	-	-
6B	6X60	-7	2-4-2	-	6	Y	Y	-	-	-	-	-
6C	6X60	-7	2-4-2	-	6	Y	Y	-	-	-	-	-

SIGNAL FACE I.D.

All Heads L.E.D.



OASIS 2070L TIMING CHART

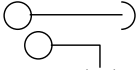
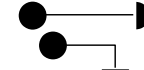
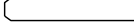
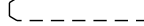
FEATURE	PHASE	
	4	6
Min Green 1 *	7	10
Extension 1 *	2.0	2.0
Max Green 1 *	30	30
Yellow Clearance	3.0	3.1
Red Clearance	1.8	1.4
Walk 1 *	7	-
Don't Walk 1	10	-
Seconds Per Actuation *	-	-
Max Variable Initial *	-	-
Time Before Reduction *	-	-
Time To Reduce *	-	-
Minimum Gap	-	-
Recall Mode	-	MIN RECALL
Vehicle Call Memory	-	-
Dual Entry	-	-
Simultaneous Gap	ON	ON

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

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Reposition existing signal heads numbered 41 and 42.
4. Set all detector units to presence mode.
5. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
7. System Data: Zone 3 Controller Asset #0397.
8. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
9. Program pedestrian heads to countdown the flashing "DON'T WALK" time only.
10. Pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for pushbutton location details.

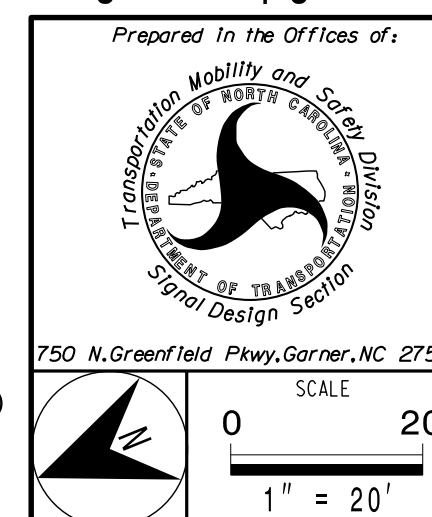
LEGEND

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

Signal Upgrade



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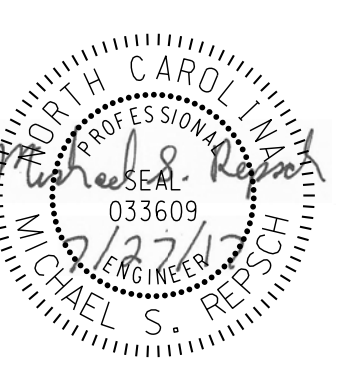
US 301 Bus SB (Franklin Street)
at
SR 1862 (Peachtree Street)

Division 4	Nash County	Rocky Mount
PLAN DATE:	July 2017	REVIEWED BY:
PREPARED BY:	M. Bensch	REVIEWED BY:

[illegible]

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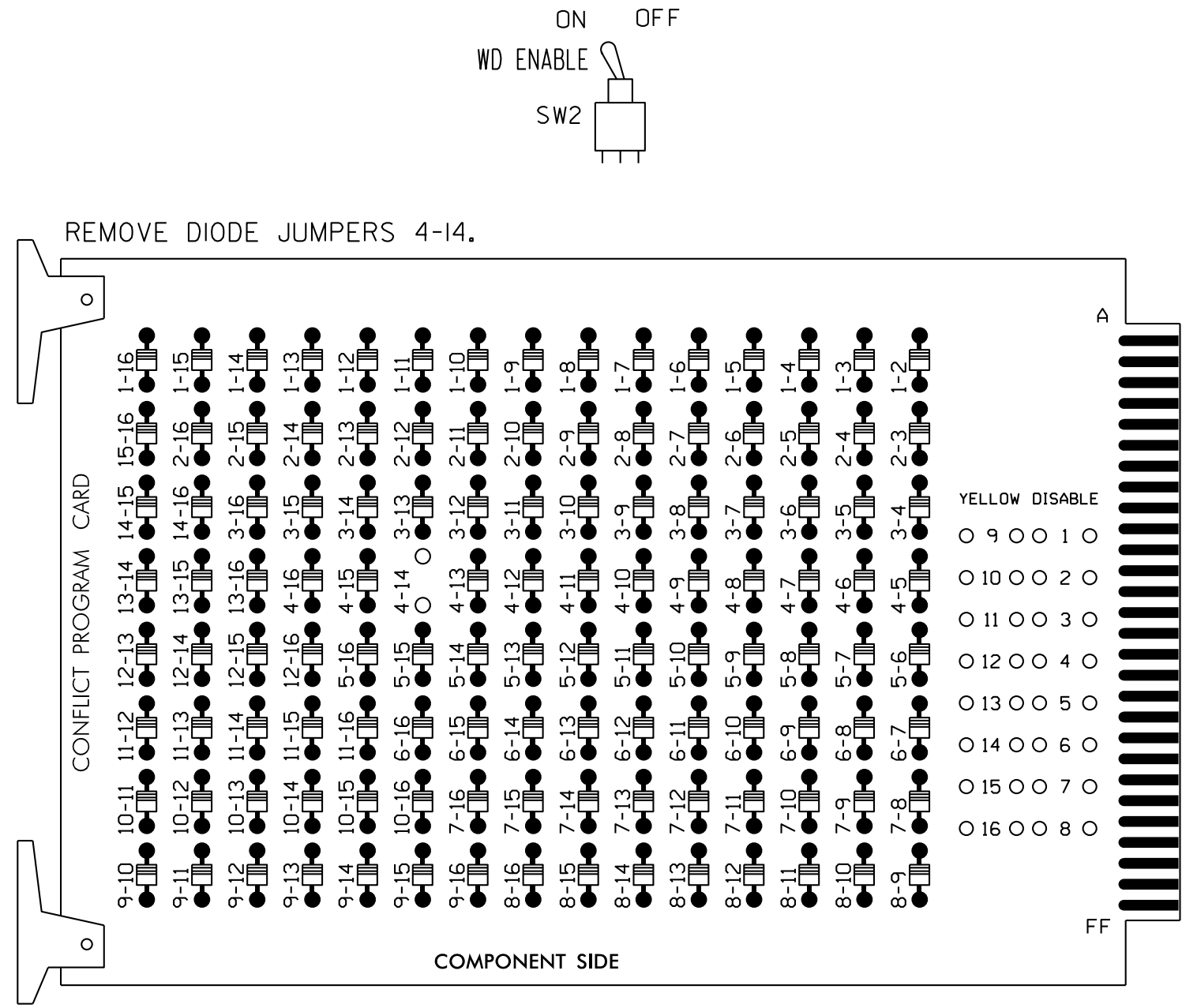
REAL



SIGNATURE	DATE
G. INVENTORY NO.	04-0397

EDI MODEL 2010ECL-NC CONFLICT MONITOR
PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



DO NOT REMOVE ANY 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.

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 1,2,3, 5,7,8,9,10,11,12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
- Enable Simultaneous Gap-Out for all phases.
- Program phase 6 for Start Up In Green.
- Program phase 4 for 'STARTUP PED CALL'.
- Program phase 6 for Yellow Flash.
- The cabinet and controller are part of the Rocky Mount City System.

EQUIPMENT INFORMATION

CONTROLLER.....2070L
CABINET.....332
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...12
LOAD SWITCHES USED.....S4,S4P,S6
PHASES USED.....4,4PED,6
OVERLAPS.....NONE

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED
SIGNAL HEAD NO.	NU	NU	NU	NU	41,42	P41 P42	NU	61,62	NU	NU	NU	NU
RED					101			134				
YELLOW								135				
GREEN								136				
RED ARROW												
YELLOW ARROW					102							
GREEN ARROW					103							
						104						
						106						

NU = Not Used

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.

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
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			15
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y			
6C	TB3-9,10	J3U	64	26	36	6	Y	Y			
PED PUSH BUTTONS											
P41,P42	TB8-5,6	I12L	69	31	PED 4	4 PED					

NOTE:
INSTALL DC ISOLATORS
IN INPUT FILE SLOT
I12.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

INPUT FILE POSITION LAYOUT

(front view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE U	S	S	S	S	S	NOT USED	S	S	S	S	S	NOT USED	S	FS
"I" L	←-VZF	←-VZF	←-VZF	←-VZF	←-VZF	Ø 4	←-VZF	←-VZF	←-VZF	←-VZF	←-VZF	Ø 4 PED	←-VZF	DC ISOLATOR
FILE U	S	Ø 6	Ø 6	S	S	S	S	S	S	S	S	S	S	FS
"J" L	←-VZF	6A	6C	←-VZF	←-VZF	←-VZF	←-VZF	←-VZF	←-VZF	←-VZF	←-VZF	←-VZF	←-VZF	DC ISOLATOR
		Ø 6	NOT USED											

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

Signal Upgrade

ELECTRICAL AND PROGRAMMING
DETAILS FOR:

Prepared in the Offices of:



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Davidson, North Carolina 28036
p:704.255.6200

750 N.Greenfield Pkwy, Garner, NC 27529

US 301 Bus SB (Franklin Street)
at
SR 1862 (Peachtree Street)

Division 4 Nash County Rocky Mount

PLAN DATE: July 2017 REVIEWED BY:

PREPARED BY: M. Repsch REVIEWED BY:

REVISIONS INIT. DATE

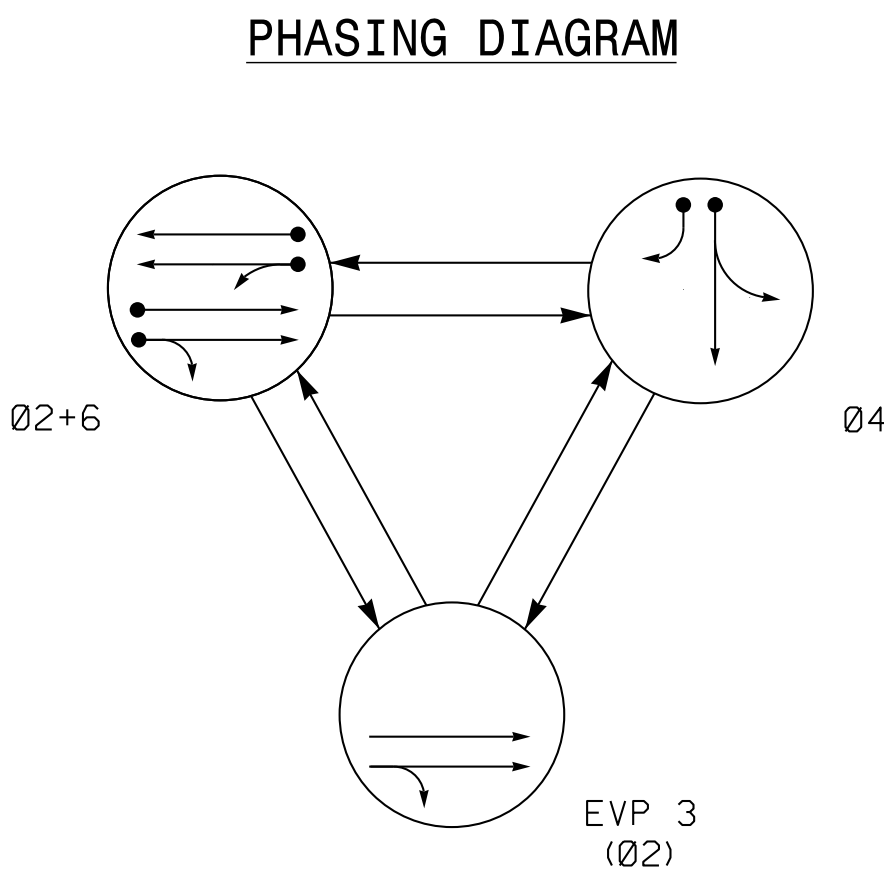
SIGNATURE DATE

SIG. INVENTORY NO. 04-0397

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SEAL

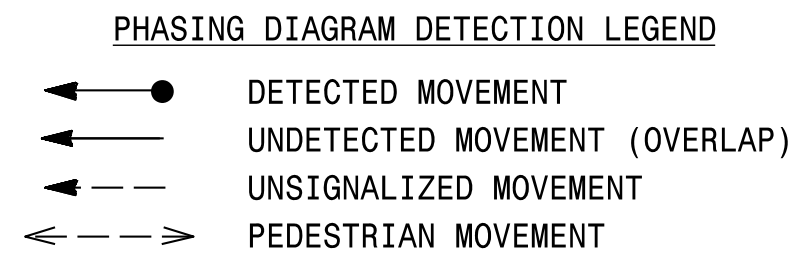
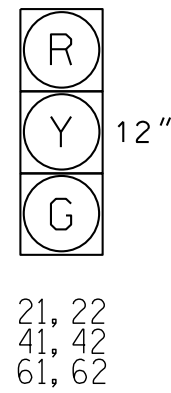




SIGNAL FACE	PHASE			
	Ø 2+6	Ø 4	EVP 3	FLASH
21, 22	G	R	G	Y
41, 42	R	G	R	R
61, 62	G	R	R	Y

SIGNAL FACE I.D.

All Heads L.E.D.



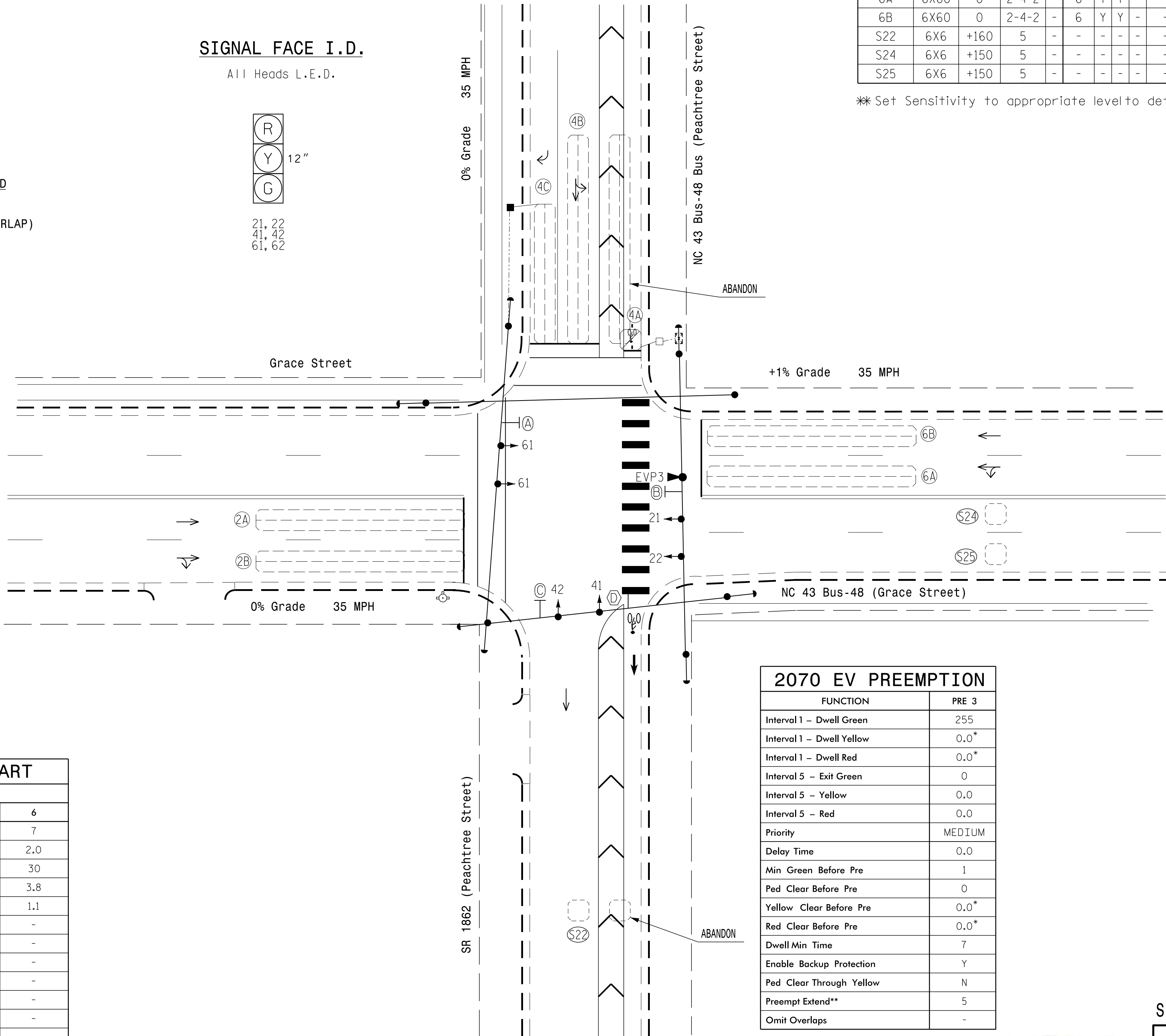
OASIS 2070L LOOP & DETECTOR INSTALLATION CHART												
INDUCTIVE LOOPS						DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X60	0	2-4-2	-	2	Y	Y	-	-	-	-	-
2B	6X60	0	2-4-2	-	2	Y	Y	-	-	-	-	-
** 4A	6X6	0	2-4-2 DIAGONAL	Y	4	Y	-	-	-	-	-	-
4B	6X60	0	2-4-2	-	4	Y	Y	-	-	-	-	-
4C	6X40	0	2-4-2	-	4	Y	Y	-	-	15	-	-
6A	6X60	0	2-4-2	-	6	Y	Y	-	-	-	-	-
6B	6X60	0	2-4-2	-	6	Y	Y	-	-	-	-	-
S22	6X6	+160	5	-	-	-	-	-	-	-	Y	-
S24	6X6	+150	5	-	-	-	-	-	-	-	Y	-
S25	6X6	+150	5	-	-	-	-	-	-	-	Y	-

** Set Sensitivity to appropriate level to detect a bicycle

2 Phase W/EV Preempt
Fully Actuated
Rocky Mount City System

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.
- Set all detector units to presence mode.
- In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- System data: Zone 3 Controller Asset #0408.
- Paint new bicycle markings (as shown on figure 9c-7 of the 2009 edition of the MUTCD for new loop 4A.



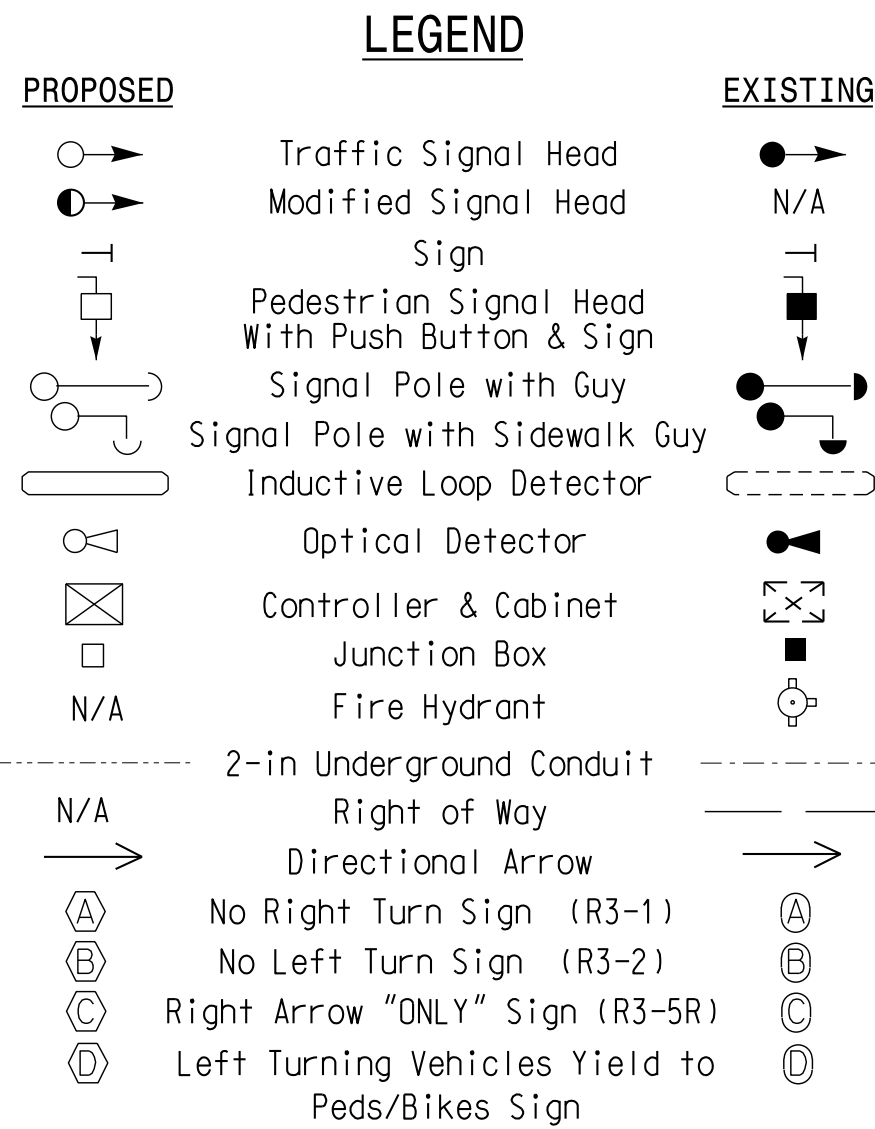
OASIS 2070L TIMING CHART				
FEATURE	PHASE			
	2	4	6	
Min Green 1 *	7	7	7	
Extension 1 *	2.0	1.0	2.0	
Max Green 1 *	30	30	30	
Yellow Clearance	3.8	3.8	3.8	
Red Clearance	1.1	1.5	1.1	
Walk 1 *	-	-	-	
Don't Walk 1	-	-	-	
Seconds Per Actuation *	-	-	-	
Max Variable Initial *	-	-	-	
Time Before Reduction *	-	-	-	
Time To Reduce *	-	-	-	
Minimum Gap	-	-	-	
Recall Mode	MIN RECALL	-	MIN RECALL	
Vehicle Call Memory	-	-	-	
Dual Entry	-	-	-	
Simultaneous Gap	ON	ON	ON	

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

2070 EV PREEMPTION	
FUNCTION	PRE 3
Interval 1 - Dwell Green	255
Interval 1 - Dwell Yellow	0.0*
Interval 1 - Dwell Red	0.0*
Interval 5 - Exit Green	0
Interval 5 - Yellow	0.0
Interval 5 - Red	0.0
Priority	MEDIUM
Delay Time	0.0
Min Green Before Pre	1
Ped Clear Before Pre	0
Yellow Clear Before Pre	0.0*
Red Clear Before Pre	0.0*
Dwell Min Time	7
Enable Backup Protection	Y
Ped Clear Through Yellow	N
Preempt Extend**	5
Omit Overlaps	-

* Time defaults to time used for phase during normal operation

** Program Timing on Optical Detection Unit



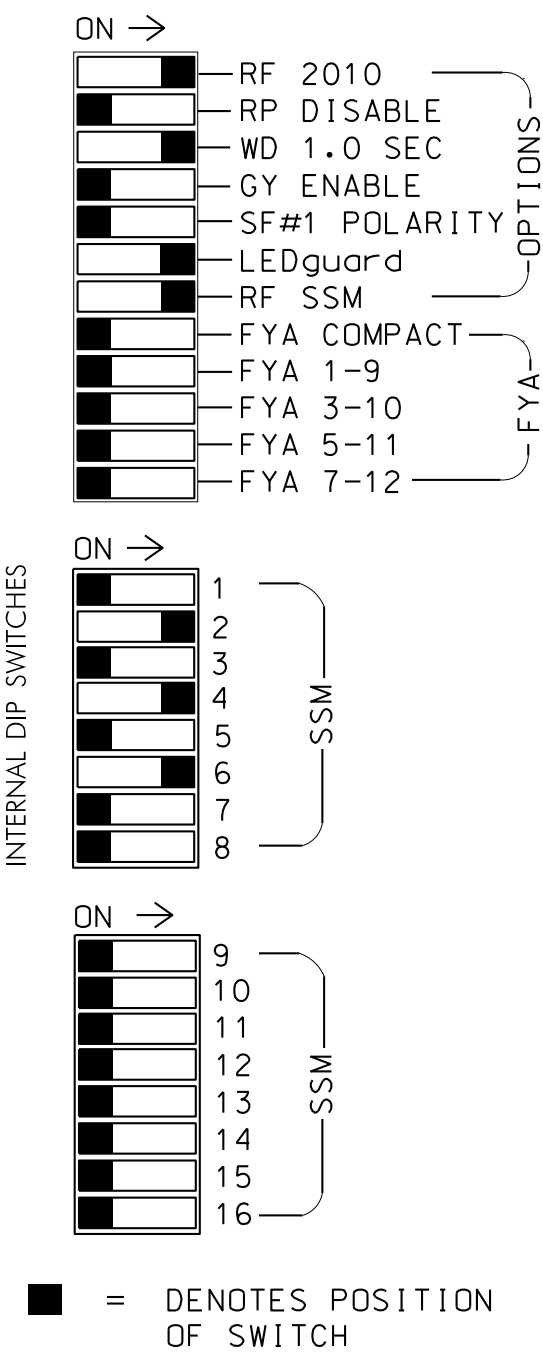
Signal Upgrade



Prepared in the Offices of: Transportation Mobility and Safety Division NORTH CAROLINA DEPARTMENT OF TRANSPORTATION Signal Design Section 750 N. Greenfield Pkwy, Garner, NC 27529	NC 43 Bus-48 (Grace St.) / Grace St. at NC 43 Bus-48 Bus/SR 1862 (Peachtree Street) Division 4 Nash County Rocky Mount PLAN DATE: July 2017 PREPARED BY: M. Repsch REVIEWED BY: [Signature] REVISIONS: [Table] INIT. DATE	SEAL MICHAEL S. REPSCH 033609 SIGNATURE DATE SIG. INVENTORY NO. 04-0408
---	---	---

(remove jumper and set switches as shown)

ON OFF



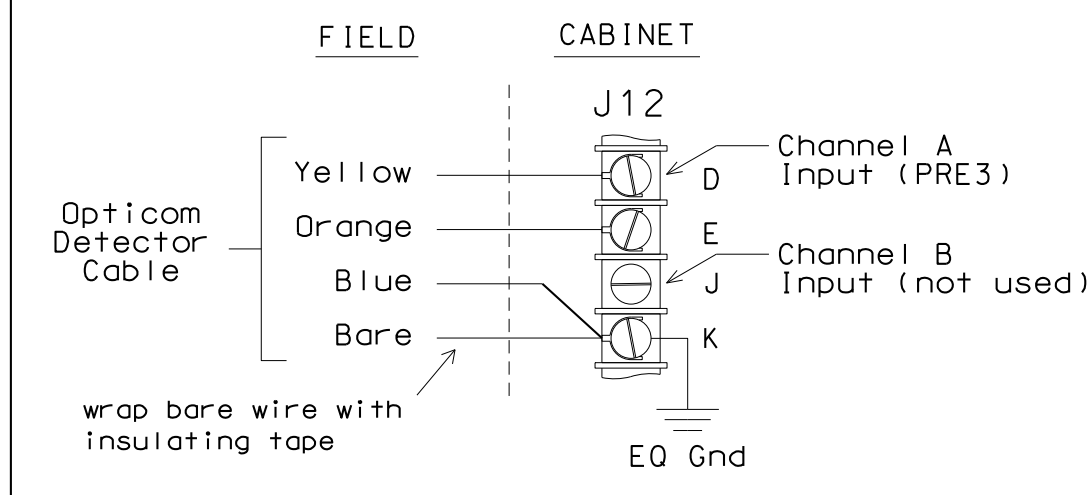
1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Make sure jumpers SEL2-SEL5 are present on the monitor board.

(front view)

EX.: 1A, 2A, ETC. = LOOP NO.'S

```
FS = FLASH SENSE
ST = STOP TIME
PRE = PREEMPT
```

(input file, rear view)

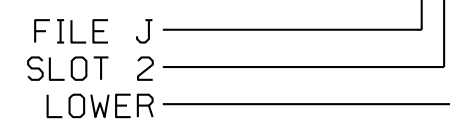


1. To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
2. Ensure that Red Enable is active at all times during normal operation. To prevent Red Failures on unused monitor channels, tie unused red monitor inputs 1,3,5,7,8,9, 10,11,12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Enable Simultaneous Gap-Out for all phases.
4. Program phases 2 and 6 for Start Up In Green.
5. Program phases 2 and 6 for Yellow Flash.
6. The cabinet and controller are part of the Rocky Mount City System.

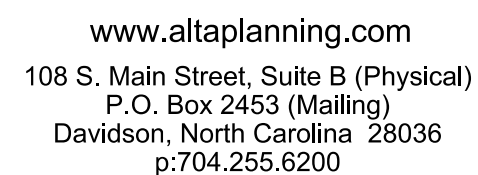
```
CONTROLLER.....2070L
CABINET.....332
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS..12
LOAD SWITCHES USED.....S2,S4,S6
PHASES USED.....2,4,6
OVERLAPS.....NONE
```

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	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y			
4A	TB4-9,10	I6U	41	3	4	4	Y				
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			
4C	TB6-1,2	I7U	65	27	34	4	Y	Y			15
*S22	TB6-9,10	I9U	60	22	11	SYS					
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y			
*S24	TB7-9,10	J9U	59	21	15	SYS					
*S25	TB7-11,12	J9L	61	23	17	SYS					

INPUT FILE POSITION LEGEND: J2L



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 04-0408
DESIGNED: July 2017
SEALED: 07/27/17
REVISED: N/A

[illegible]

NU = Not Used

(program controller as shown below)

From Main Menu press 'A' (Preemption), then '1' (Standard Preemptions). Press 'NEXT' as needed to advance to Preempt 3.

```

PREEMPTION #3          SETTINGS (NEXT:1-10)
INTERVAL/TIMING      CLEAR/DWELL PHASES
GRN YEL RED          12345678910111213141516
1 255 0.0 0.0      X
2 0 0.0 0.0
3 0 0.0 0.0
4 0 0.0 0.0
5 0 0.0 0.0
EXIT CALLS          -----
OPTIONS
PRIORITY (Y/N TO SELECT) .....MED
DELAY TIMER (0-255 SEC) .....0
MIN GREEN BEFORE PRE (0= DEFAULT)....1
PED CLEAR BEFORE PRE (0= DEFAULT)....0
YELLOW CLEAR BEFORE PRE (0= DEFAULT)....0
RED CLEAR BEFORE PRE (0= DEFAULT)....0.0
DWELL MIN TIMER (0-255 SEC) .....7
DWELL MAX TIMER (0-OFF,1-255MIN) .....0
DWELL HOLD-OVER TIMER (0-255) .....0
LATCH CALL? .....N
LINK TO NEXT PREEMPT? .....N
ENABLE BACKUP PROTECTION? .....Y
HOLD CLEAR 1 PHASES DURING DELAY? ...N
FAST GREEN FLASH DWELL PHASES? .....N
PED CLEARANCE THROUGH YELLOW? .....N
INHIBIT OVERLAP GREEN EXTENSION? ...N
SERVICE DURING SOFTWARE FLASH? .....N
REST IN RED DURING DWELL INTERVAL? ..N
FLASH DWELL INTERVAL? .....N
ALLOW PEDS IN DWELL INTERVAL? .....N
RE-TIME DWELL INTERVAL? .....N
OVERLAPS:            ABCDEFGHIJLMNOP
DWELL INT FLASH YELLOW
OMIT OVERLAPS:

```

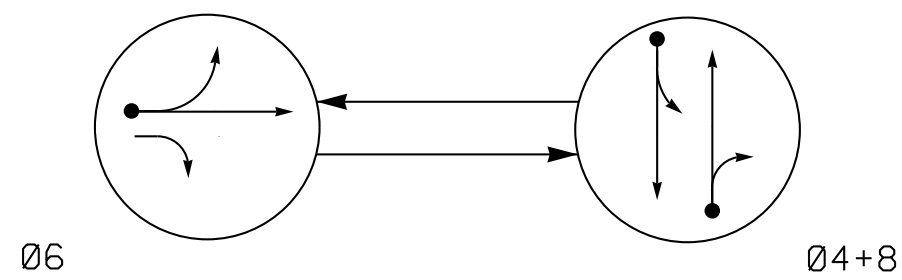
PROGRAMMING COMPLETE

Signal Upgrade

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

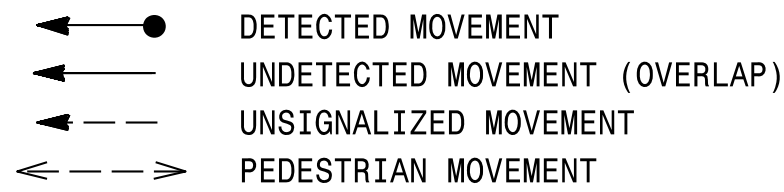
[illegible]

PHASING DIAGRAM



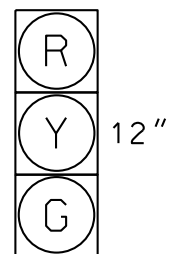
SIGNAL FACE	PHASE		
	Ø 4 + 8	Ø 6	F L A S H
41, 42	G	R	R
61, 62	R	G	Y
81, 82	G	R	R

PHASING DIAGRAM DETECTION LEGEND



SIGNAL FACE I.D.

All Heads L.E.D.



41, 42
61, 62
81, 82

OASIS 2070L LOOP & DETECTOR INSTALLATION CHART											
INDUCTIVE LOOPS						DETECTOR PROGRAMMING					
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP
4A	6X60	0	2-4-2	-	4	Y	Y	-	-	5	-
6B	6X60	0	2-4-2	-	6	Y	Y	-	-	-	-
8A	6X60	0	2-4-2	-	8	Y	Y	-	-	3	-
** 8B	6X6	-25	2-4-2 DIAGONAL	Y	8	Y	-	-	-	-	-

** Set Sensitivity to appropriate level to detect a bicycle

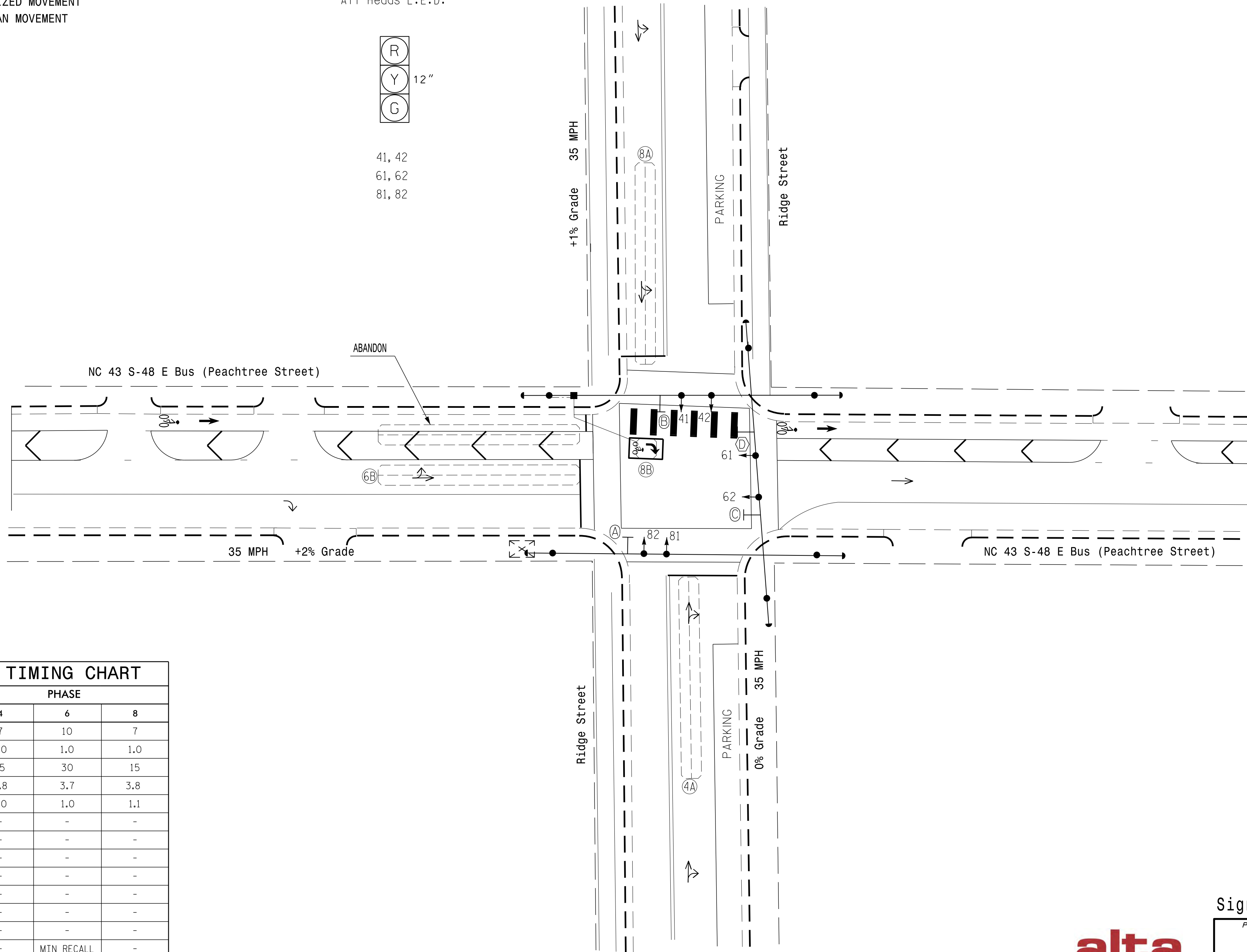
2 Phase
Fully Actuated
Rocky Mount City System

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.
- Set all detector units to presence mode.
- In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- System Data: Zone 3
Controller Asset #0468.

OASIS 2070L TIMING CHART			
FEATURE	PHASE		
	4	6	8
Min Green 1 *	7	10	7
Extension 1 *	1.0	1.0	1.0
Max Green 1 *	15	30	15
Yellow Clearance	3.8	3.7	3.8
Red Clearance	1.0	1.0	1.1
Walk 1 *	-	-	-
Don't Walk 1	-	-	-
Seconds Per Actuation *	-	-	-
Max Variable Initial *	-	-	-
Time Before Reduction *	-	-	-
Time To Reduce *	-	-	-
Minimum Gap	-	-	-
Recall Mode	-	MIN RECALL	-
Vehicle Call Memory	-	-	-
Dual Entry	ON	-	ON
Simultaneous Gap	ON	ON	ON

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



LEGEND

PROPOSED	EXISTING

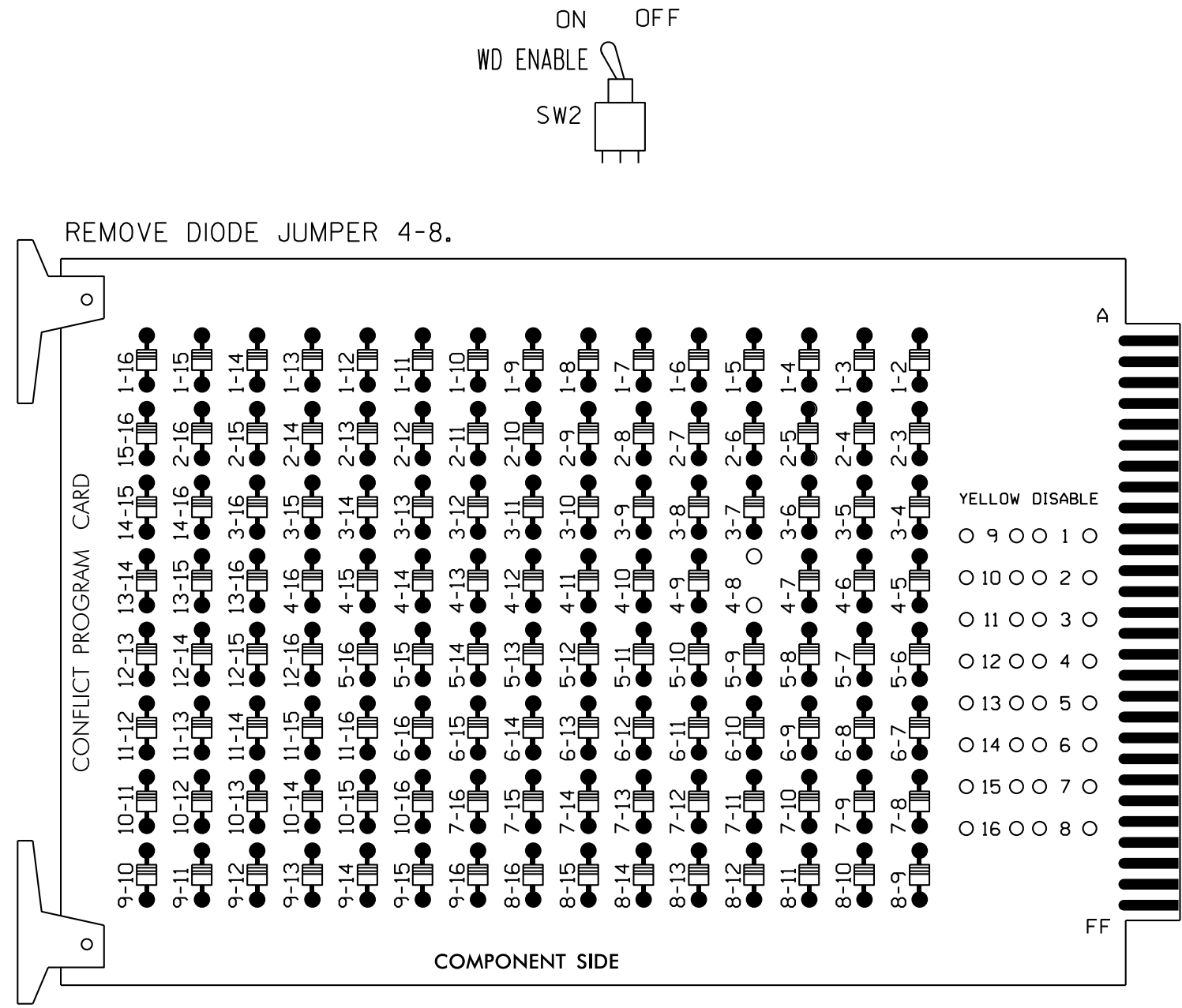
Signal Upgrade



Prepared in the Offices of: 		NC 43 S-48 E Bus (Peachtree Street) at Ridge Street Nash County Rocky Mount		SEAL 	
Division 4		PLAN DATE: July 2017		REVIEWED BY:	
PREPARED BY: M. Repsch		REVIEWED BY:		INIT. DATE	
REVISIONS		INIT.		DATE	
SIGNATURE		DATE		SIC. INVENTORY NO. 04-0468	

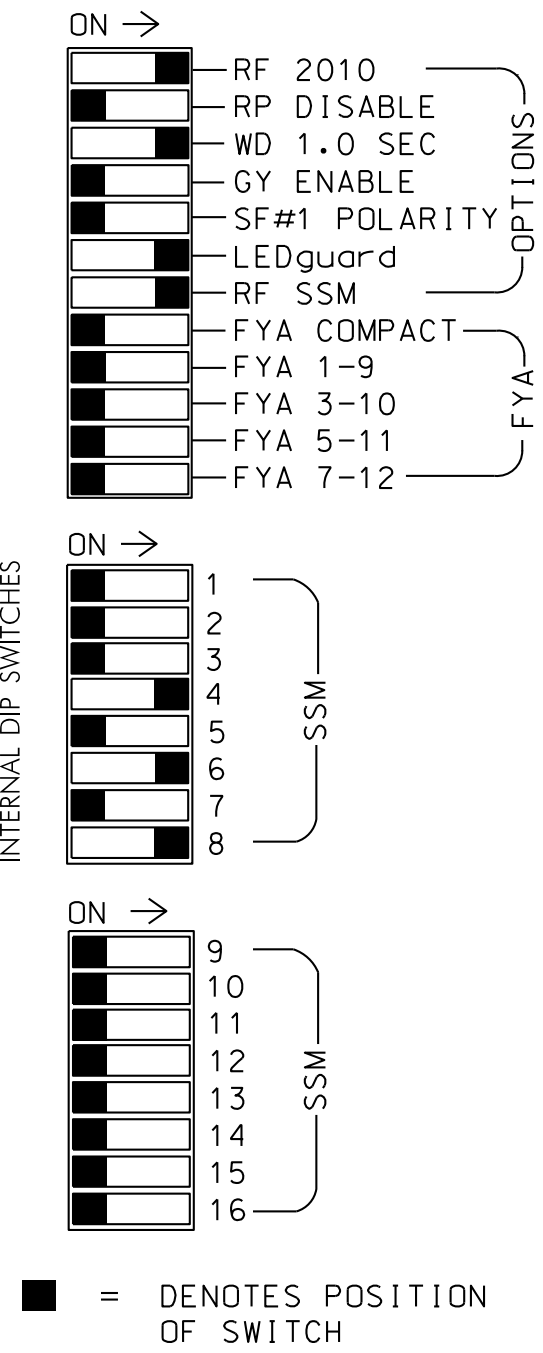
EDI MODEL 2010ECL-NC CONFLICT MONITOR
PROGRAMMING DETAIL

(remove jumpers and set switches 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.



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 1,2,3,5, 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 phase 6 for Start Up In Green.
- Program phase 6 for Yellow Flash.
- The cabinet and controller are part of the Rocky Mount City System.

EQUIPMENT INFORMATION

CONTROLLER.....2070L
CABINET.....332
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...12
LOAD SWITCHES USED.....S4,S6,S8
PHASES USED.....4,6,8
OVERLAPS.....NONE

PROJECT REFERENCE NO.	SHEET NO.
36249.3709	Sig.11

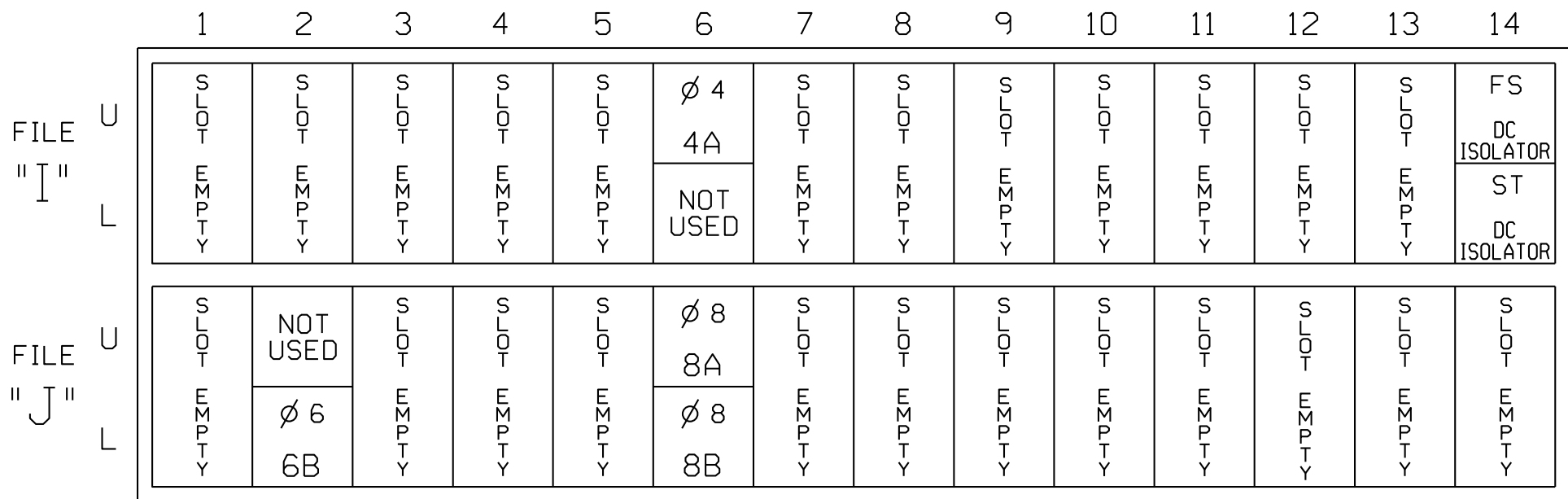
SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED
SIGNAL HEAD NO.	NU	NU	NU	NU	41,42	NU	NU	61,62	NU	NU	81,82	NU
RED					101			134			107	
YELLOW					102			135			108	
GREEN					103			136			109	
RED ARROW												
YELLOW ARROW												
GREEN ARROW												

NU = Not Used

INPUT FILE POSITION LAYOUT

(front view)



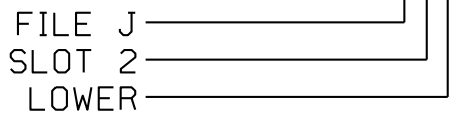
EX. : 1A, 2A, ETC. = LOOP NO.'S

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
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			5
6B	TB3-7,8	J2L	44	6	16	6	Y	Y			
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			3
8B	TB5-11,12	J6L	46	8	18	8	Y				

INPUT FILE POSITION LEGEND: J2L



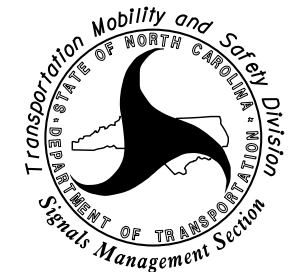
THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 04-0468
DESIGNED: July 2017
SEALED: 07/27/17
REVISED: N/A

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING
DETAILS FOR:

Prepared in the Offices of:



alta
ENGINEERING
www.altaplanning.com
108 S. Main Street, Suite B (Physical)
P.O. Box 2453 (Mailing)
Davidson, North Carolina 28036
p704.255.6200

NC 43 S-48 E Bus
(Peachtree Street)
at
Ridge Street

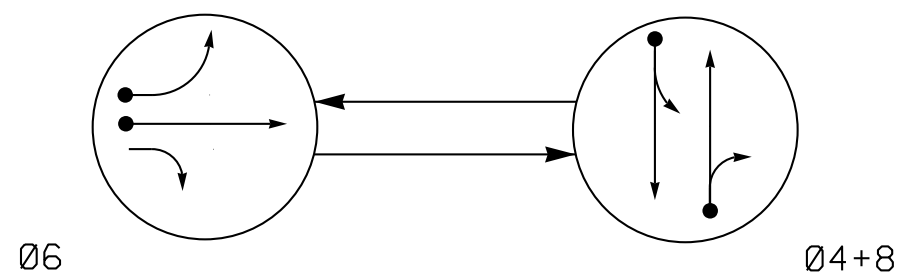
Division 4	Nash County	Rocky Mount
PLAN DATE: July 2017	REVIEWED BY:	
PREPARED BY: M. Repsch	REVIEWED BY:	
REVISIONS	INIT.	DATE

SEAL



SIGNATURE DATE
SIG. INVENTORY NO. 04-0468

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

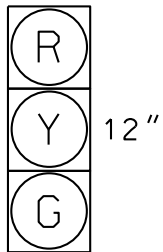
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE		
	Ø4+8	Ø6	FLUSH
41, 42	G	R	R
61, 62	R	G	Y
81, 82	G	R	R

SIGNAL FACE I.D.

All Heads L.E.D.



41, 42
61, 62
81, 82

OASIS 2070L TIMING CHART

FEATURE	PHASE		
	4	6	8
Min Green 1 *	7	10	7
Extension 1 *	1.0	1.0	1.0
Max Green 1 *	15	30	15
Yellow Clearance	3.9	3.8	3.8
Red Clearance	1.1	1.0	1.0
Walk 1 *	-	-	-
Don't Walk 1	-	-	-
Seconds Per Actuation *	-	-	-
Max Variable Initial *	-	-	-
Time Before Reduction *	-	-	-
Time To Reduce *	-	-	-
Minimum Gap	-	-	-
Recall Mode	-	MIN RECALL	-
Vehicle Call Memory	-	-	-
Dual Entry	ON	-	ON
Simultaneous Gap	ON	ON	ON

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

OASIS 2070L LOOP & DETECTOR INSTALLATION CHART												
INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
4A	6X60	0	2-4-2	-	4	Y	Y	-	-	10	-	-
6A	6X60	0	2-4-2	-	6	Y	Y	-	-	-	-	-
6B	6X60	0	2-4-2	-	6	Y	Y	-	-	-	-	-
8A	6X60	0	2-4-2	-	8	Y	Y	-	-	3	-	-
S19	6X6	+150	EXIST	-	-	-	-	-	-	-	Y	-
S20	6X6	++260	EXIST	-	-	-	-	-	-	-	Y	-
S21	6X6	++260	EXIST	-	-	-	-	-	-	-	Y	-

++ Distance from Double Yellow Line

2 Phase
Fully Actuated
Rocky Mount City System

NOTES

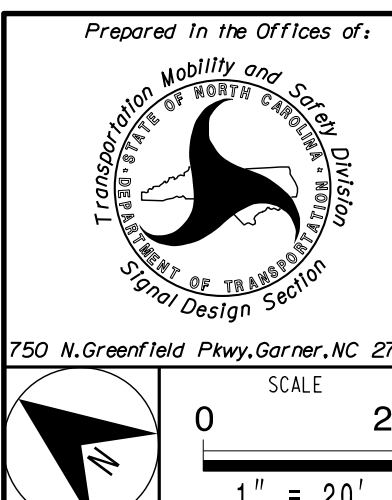
- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Set all detector units to presence mode.
- In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- System Data: Zone 3
Controller Asset #0477.

LEGEND

- | PROPOSED | EXISTING |
|----------|----------|
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Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

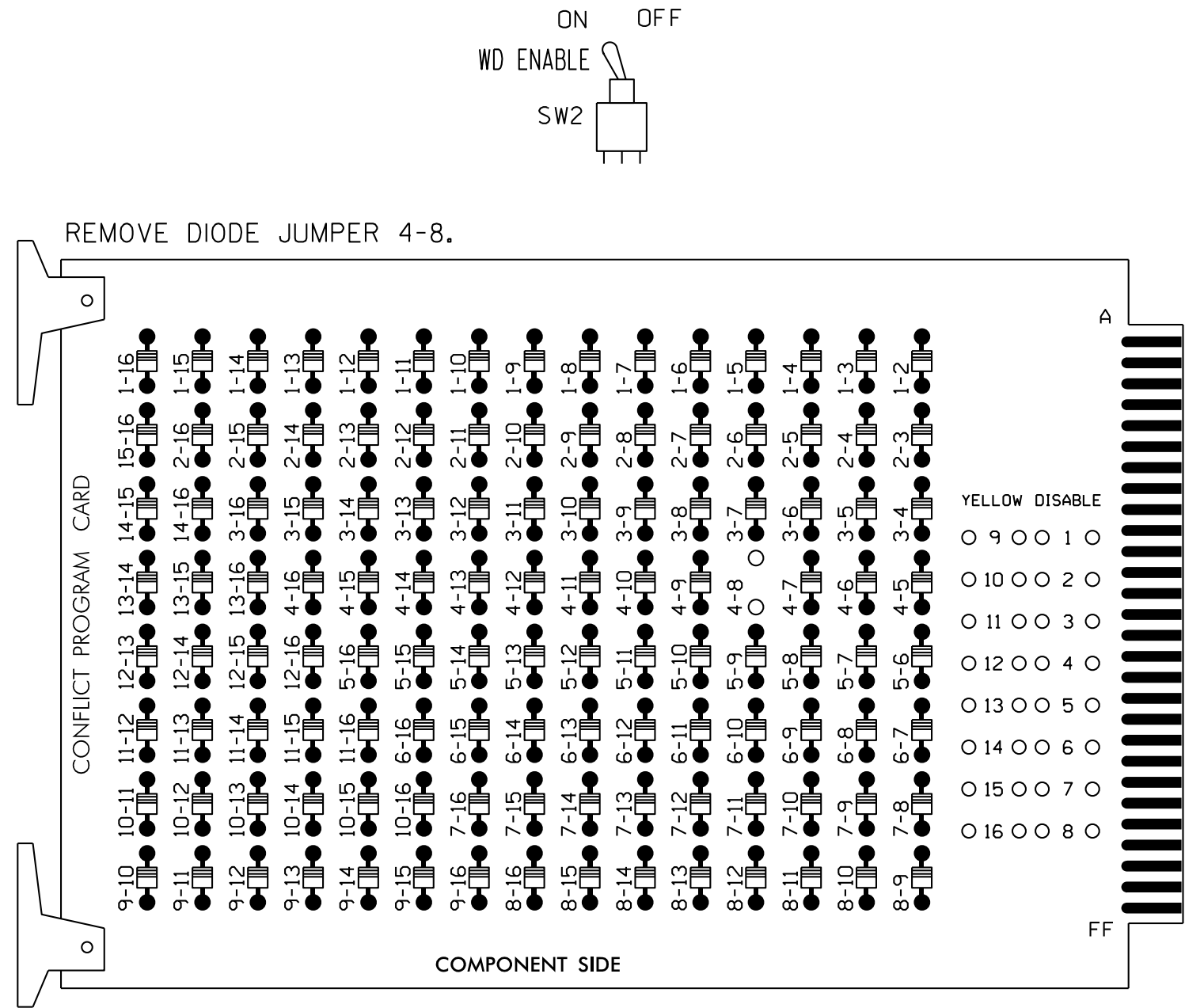


NC 43S-48E Bus (Peachtree Street) at River Drive	
Division 4	Nash County Rocky Mount
PLAN DATE: July 2017	REVIEWED BY:
PREPARED BY: M. Repsch	REVIEWED BY:
REVISIONS	INIT. DATE

SEAL
SIGNATURE DATE
SIG. INVENTORY NO. 04-0477

EDI MODEL 2010ECL-NC CONFLICT MONITOR
PROGRAMMING DETAIL

(remove jumper and set switches as shown)



REMOVE JUMPER 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.

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 1,2,3, 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 phase 6 for Start Up In Green.
- Program phase 6 for Yellow Flash.
- The cabinet and controller are part of the Rocky Mount City System.

EQUIPMENT INFORMATION

CONTROLLER.....2070L
CABINET.....332
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...12
LOAD SWITCHES USED.....S4,S6,S8
PHASES USED.....4,6,8
OVERLAPS.....NONE

PROJECT REFERENCE NO.	SHEET NO.
36249.3709	Sig.13

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED
SIGNAL HEAD NO.	NU	NU	NU	NU	41,42	NU	NU	61,62	NU	NU	81,82	NU
RED					101			134			107	
YELLOW					102			135			108	
GREEN					103			136			109	
RED ARROW												
YELLOW ARROW												
GREEN ARROW												

NU = Not Used

INPUT FILE POSITION LAYOUT

(front view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE U	S	S	S	S	S	Ø 4	S	S	NOT USED	S	S	S	S	FS
"I"	10'S	10'S	10'S	10'S	10'S	4A	10'S	10'S	SYS. DET. S19	10'S	10'S	10'S	10'S	DC ISOLATOR
L	10'S	10'S	10'S	10'S	10'S	NOT USED	10'S	10'S	10'S	10'S	10'S	10'S	10'S	ST
FILE U	S	Ø 6	S	S	S	Ø 8	S	S	SYS. DET. S20	S	S	S	S	DC ISOLATOR
"J"	10'S	6A	10'S	10'S	10'S	8A	10'S	10'S	SYS. DET. S21	10'S	10'S	10'S	10'S	DC ISOLATOR
L	10'S	6B	10'S	10'S	10'S	NOT USED	10'S	10'S	10'S	10'S	10'S	10'S	10'S	DC ISOLATOR

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
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			10
*S19	TB6-11,12	I9L	62	24	13	SYS					
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y			
*S20	TB7-9,10	J9U	59	21	15	SYS					
*S21	TB7-11,12	J9L	61	23	17	SYS					
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			3

* System detector only. Remove the vehicle phase assigned to this detector in the default programming.

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 04-0477
DESIGNED: July 2017
SEALED: 07/27/17
REVISED: N/A

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:	NC 43 S - 48 E Bus. (Peachtree Street) at River Drive		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER MICHAEL S. REPSCH 033609 07/27/17
	Division 4	Nash County	
Prepared in the Offices of:	PLAN DATE: July 2017	REVIEWED BY:	
Transportation Mobility and Safety Division NORTH CAROLINA DEPARTMENT OF TRANSPORTATION Signal Management Section	PREPARED BY: M. Repsch	REVIEWED BY:	
	REVISIONS		INIT. DATE
750 N.Greenfield Pkwy, Garner, NC 27529			
		SIGNATURE DATE	
		SIG. INVENTORY NO. 04-0477	



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