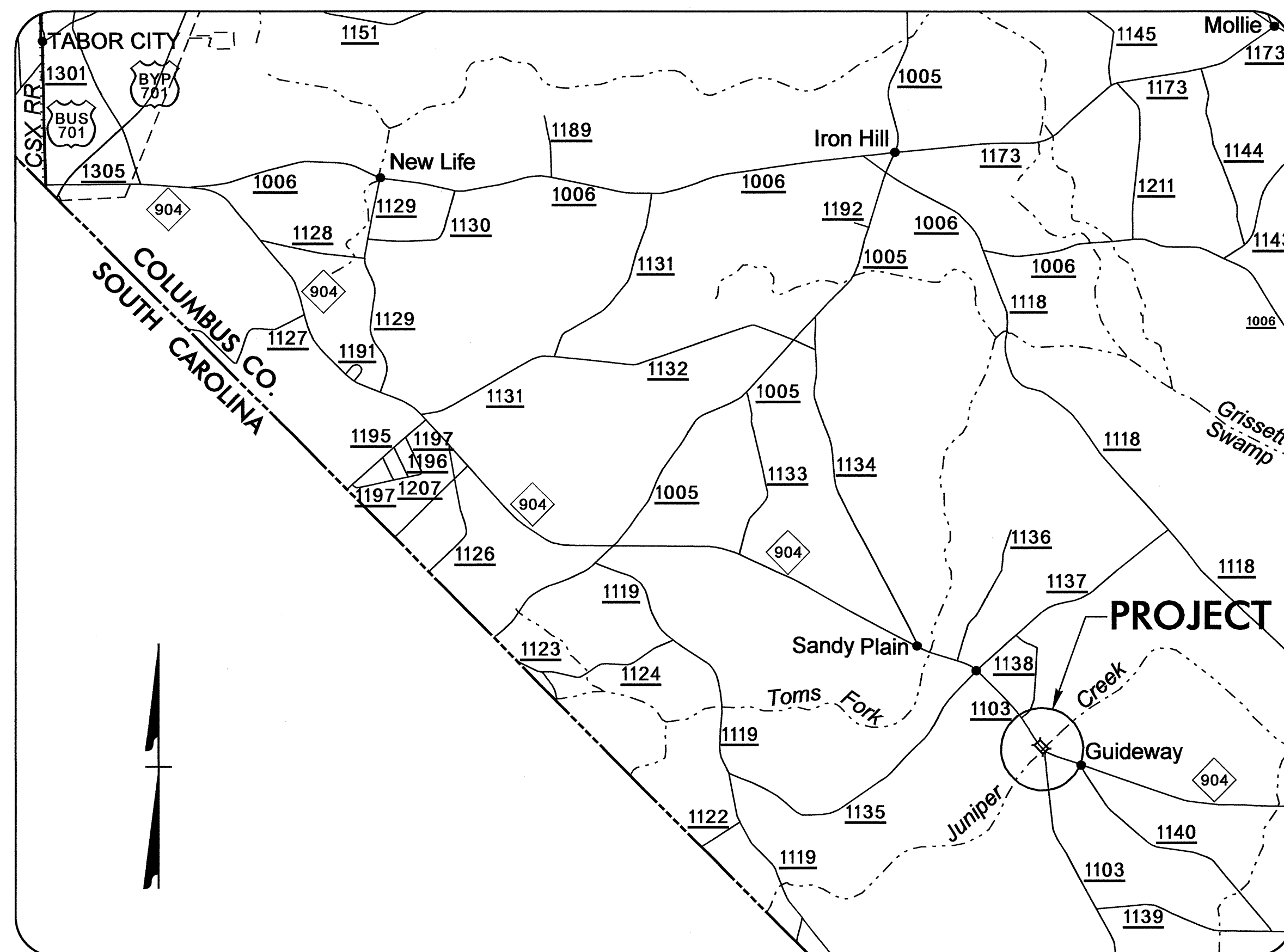


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**COLUMBUS COUNTY**



**VICINITY MAP**

**INDEX OF SHEETS**

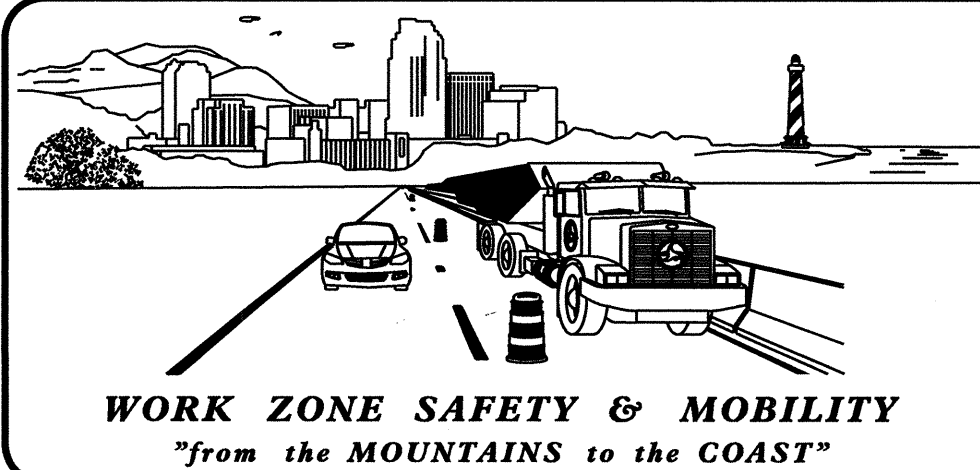
SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND TEMPORARY PAVEMENT MARKING
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES)
TMP-2	N/A
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-5	DOTHAN RD. ROAD CLOSURE AND DETOUR SIGNING
TMP-6	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

SHEET NO.  
TMP-1

**B-4471**

**TIP PROJECT:**

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**N.C.D.O.T. WORK ZONE TRAFFIC CONTROL**  
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561  
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)  
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER  
J. ISHAK, P.E. TRAFFIC CONTROL PROJECT ENGINEER  
TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
S. B. JENNINGS TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_

April 10, 2012

## ROADWAY STANDARD DRAWINGS

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

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

## LEGEND

### GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA
- REMOVAL
- WEDGING
- USER DEFINED (IF NEEDED)

### TEMPORARY PAVEMENT MARKING

- PA PAINT - 4" WHITE EDGELINE
- PD 2' WHITE MINISKIP
- PI DOUBLE YELLOW CENTERLINE
- P2 PAINT - 24" WHITE STOPBAR
- MH TEMPORARY PAVEMENT MARKERS YELLOW & YELLOW

### TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM    SKINNY DRUM    TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW PANEL (TYPE C)
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- CHANGEABLE MESSAGE SIGN

### TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

### SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

### PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

### PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

### PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

APPROVED:	DATE: April 10, 2012		<h3>ROADWAY STANDARD DRAWINGS &amp; LEGEND</h3>
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## GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

- A) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) 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.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- E) 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.
- F) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- G) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

- H) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

- I) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

- J) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

- K) 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.
- L) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
- PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- M) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
- COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- N) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- O) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

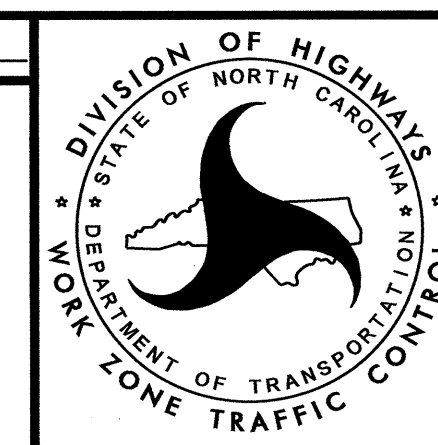
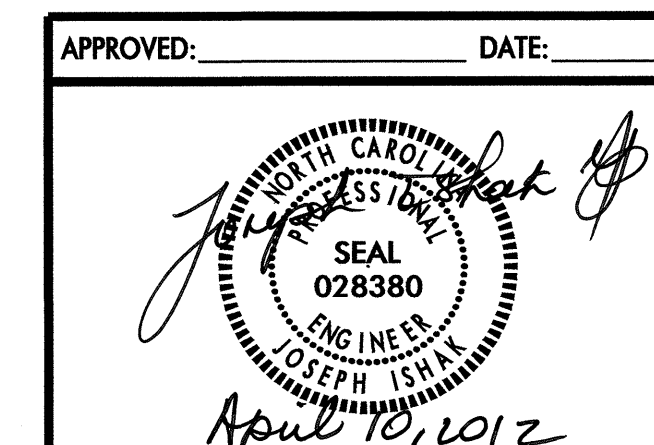
### TRAFFIC CONTROL DEVICES

- P) 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.
- Q) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- R) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
NC 904	PAINT	TEMPORARY RAISED
SR 1103 (DOTHAN RD)	PAINT	TEMPORARY RAISED

- S) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- T) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- U) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

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 sb Jennings AT TE244731



**TRANSPORTATION  
OPERATIONS  
PLAN**

## PHASING

NOTE: IN THE PHASING BELOW, FLAGGER IS DEFINED AS RSD 1101.02, SHEET 1 OF 15.

### PHASE I

#### STEP 1

- INSTALL ADVANCED WORK ZONE WARNING SIGNS ON EXISTING NC 904 AND SR 1103 (DOTHAN RD) AS REQUIRED IN PROJECT NOTES.

#### STEP 2

- AWAY FROM TRAFFIC, AND USING FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING: (SEE SHEET TMP-4)
  - CONSTRUCT -L- FROM -L- STA. 11+10+/- TO STA. 22+50+/- (EXCLUDING TIE-INS), UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE.
  - CONSTRUCT -Y- FROM -Y- STA. 10+00 +/- TO -Y- STA. 12+31+/- (EXCLUDING TIE-INS), UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE.
  - INSTALL PROPOSED GUARDRAIL AS SHOWN ON SHEET TMP-4.
- USING FLAGGERS COMPLETE WIDENING -L- UP TO EDGE AND ELEVATION OF EXISTING PAVMENT AS FOLLOWS:  
TO ORIGINAL AS FOLLOWS: (SEE SHEET TMP-4)
  - L- STA. 11+10+/- TO -L- STA. 13+23+/- AND FROM
  - L- STA. 21+37+/- TO -L- STA. 22+50+/-.
- INSTALL AND COVER DETOUR SIGNS FOR SR 1103 (DOTHAN RD). (SEE SHEET TMP-5)

COMPLETE THE WORK REQUIRED IN PHASE I, STEPS 3 THROUGH 5 IN FORTY-EIGHT (48) CONSECUTIVE HOURS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

#### STEP 3

- INSTALL ROAD CLOSURE SIGNS AND BARRICADES, UNCOVER DETOUR SIGNS TO CLOSE SR 1103 (DOTHAN RD) AND DETOUR TRAFFIC OFFSITE AS SHOWN ON SHEET TMP-5 AND RSD 1101.03, SHEET 1 OF 9)

#### STEP 4

- USING FLAGGERS, PERFORM THE FOLLOWING IN A CONTINUOUS MANNER: TRAFFIC SHALL BE SHIFTED ONTO PROPOSED -L- IN A 2 LANE / 2 WAY PATTERN - SEE SHEETS TMP-4 AND TMP-6)
  - A) CONSTRUCT TIE-INS UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE AS FOLLOWS:
    - L- STA. 11+10+/- TO STA. 14+69+/- AND FROM
    - L- STA. 19+71+/- TO STA. 22+50+/-.
  - B) INSTALL TEMPORARY PAVEMENT MARKING AND MARKERS IN THE FINAL PATTERN AND REMOVE ANY CONFLICTING PAVEMENT MARKINGS. (SEE FINAL PAVEMENT MARKING PLAN)
  - C) COMPLETE INSTALLATION OF PROPOSED GUARDRAIL ON -L- UNLESS AN ALTERNATE POSITIVE PROTECTION METHOD IS IMPLEMENTED AND APPROVED BY THE ENGINEER.
  - D) SHIFT TRAFFIC TO PROPOSED -L- IN TWO LANE, TWO WAY PATTERN AND CLOSE EXISTING TO TRAFFIC.

#### STEP 5

- AWAY FROM TRAFFIC, AND USING FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING: (SEE TMP-6 AND ROADWAY PLANS)
  - A) CONSTRUCT TIE-INS UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE AS FOLLOWS:
    - Y- STA. 10+19 +/- TO -Y- STA. 10+50 +/- AND FROM
    - Y- STA. 11+57 +/- TO -Y- STA. 12+31 +/-.
  - B) INSTALL TEMPORARY PAVEMENT MARKING ON -Y- IN THE FINAL PATTERN, AND REMOVE ANY CONFLICTING PAVEMENT MARKINGS. (SEE FINAL PAVEMENT MARKING PLAN)
  - C) OPEN -Y- (SR 1103 - DOTHAN RD) TO PROPOSED 2 LANE / 2 WAY PATTERN. REMOVE ROAD CLOSURE AND DETOUR SIGNS.

### PHASE II

#### STEP 1

- AWAY FROM TRAFFIC AND USING FLAGGERS AS NECESSARY, REMOVE EXISTING NC 904 AND BRIDGE. (SEE SHEET TMP-6)

#### STEP 2

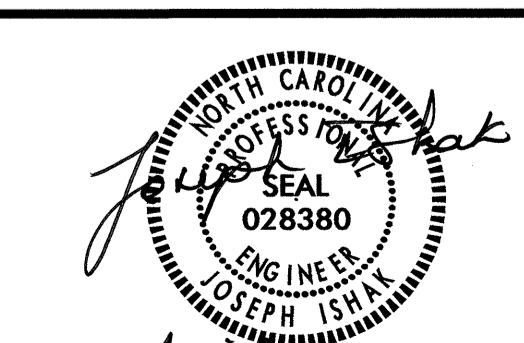

- USING FLAGGERS, PLACE FINAL LAYER OF SURFACE COURSE AND TEMPORARY PAVEMENT MARKINGS AND MARKERS IN FINAL PATTERN. (SEE FINAL PAVEMENT MARKING PLANS)

#### STEP 3

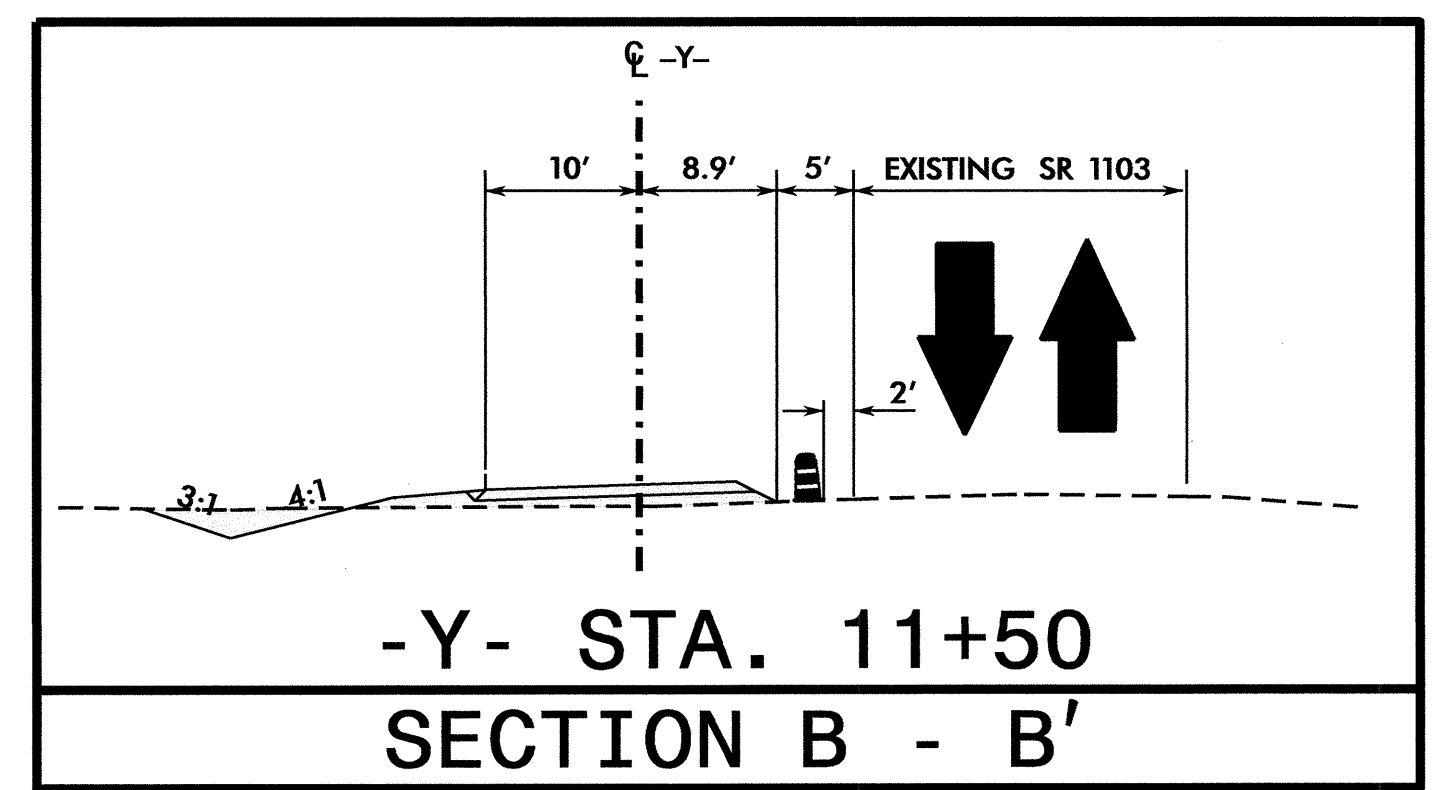
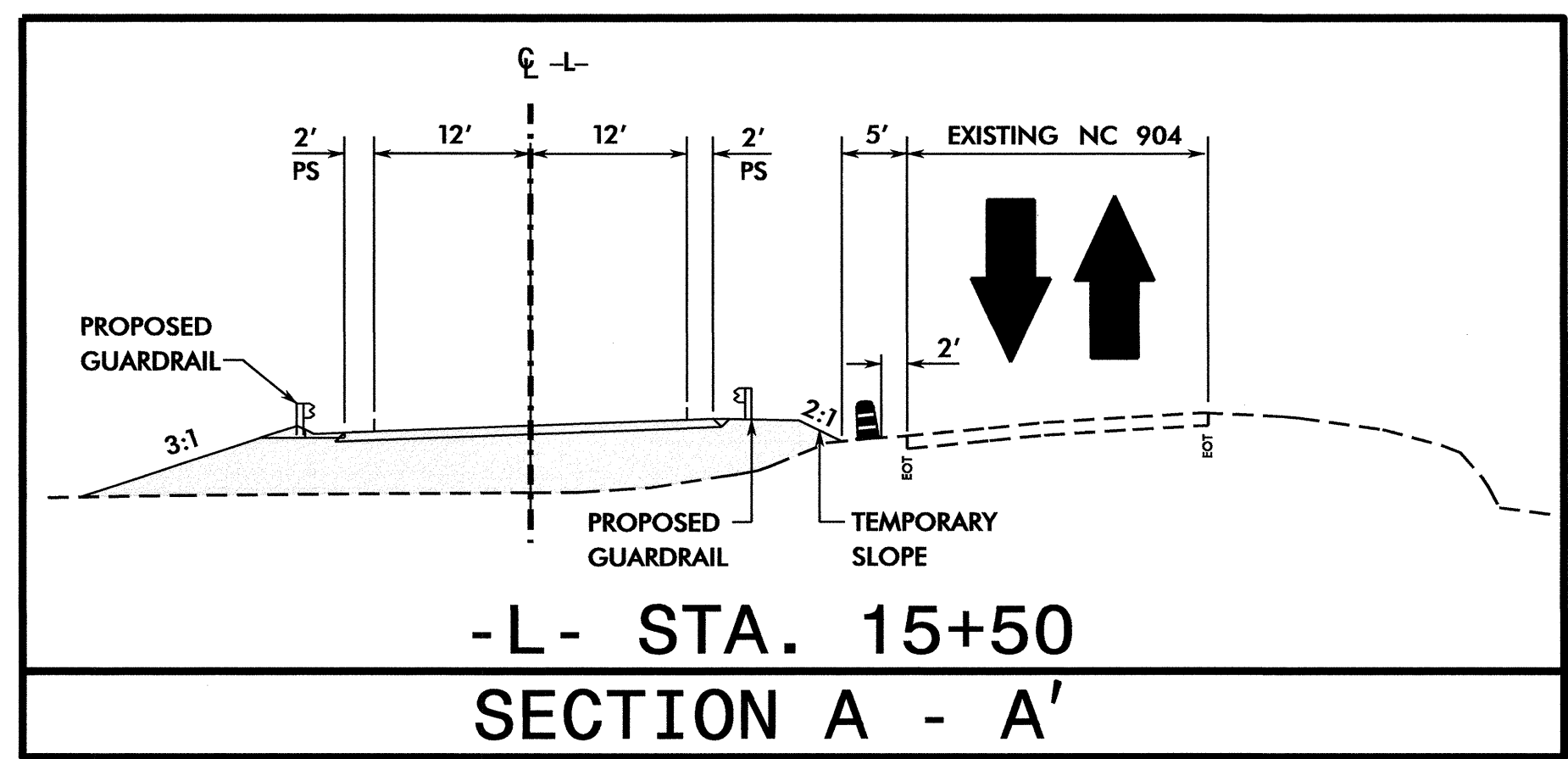
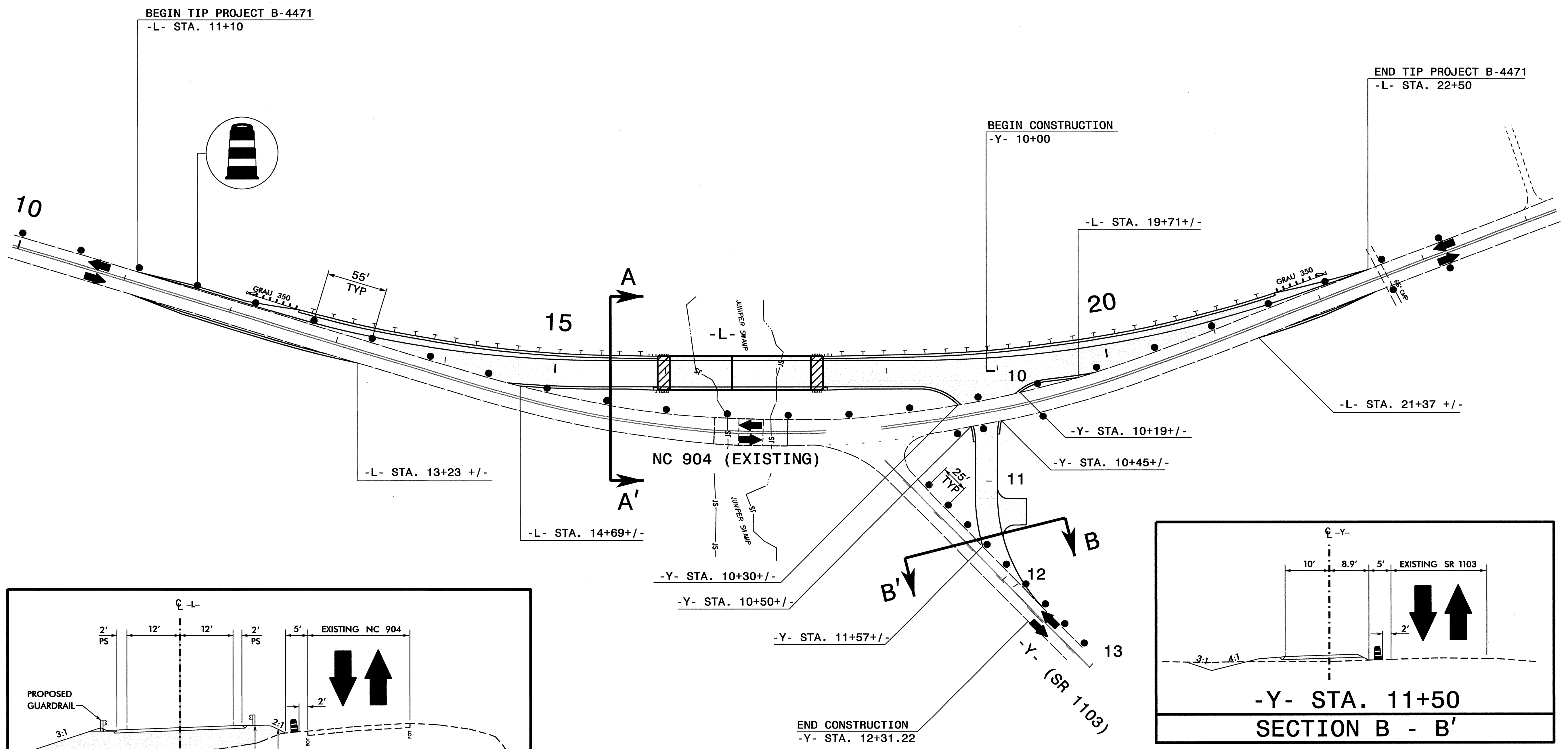
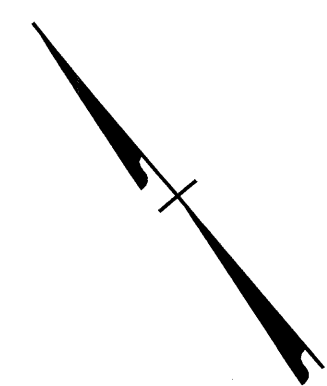
- REMOVE ALL REMAINING WORK ZONE TRAFFIC CONTROL DEVICES.

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 sbjennings AT 1E2473

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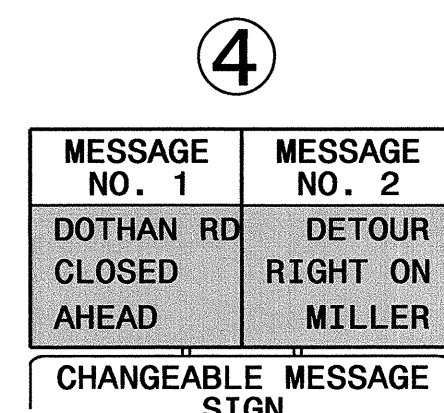
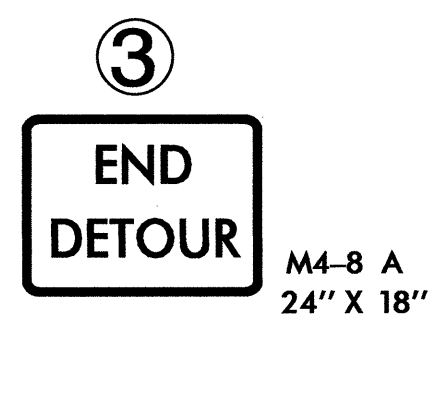
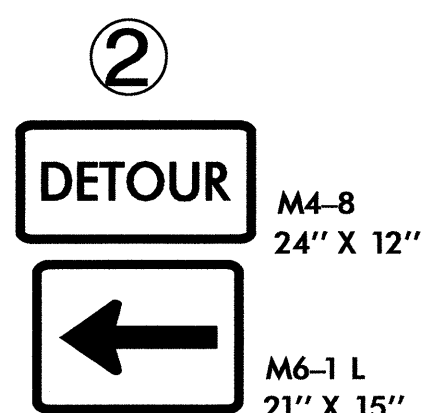
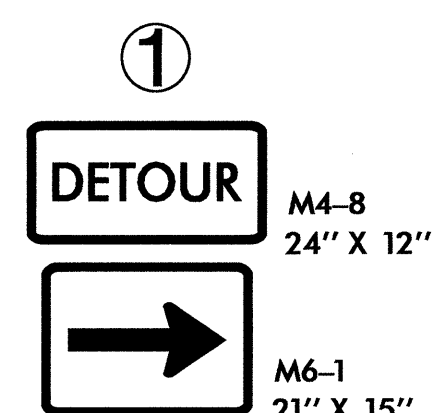
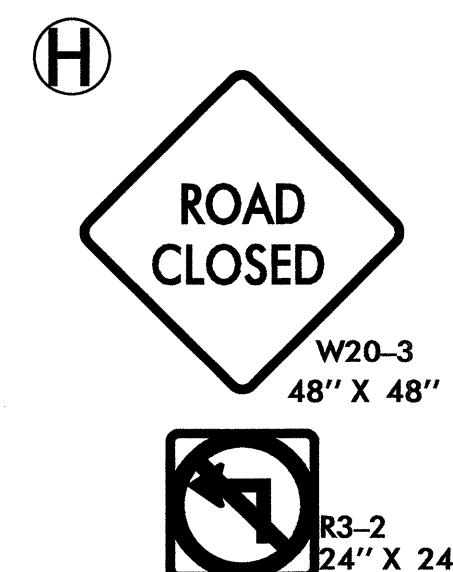
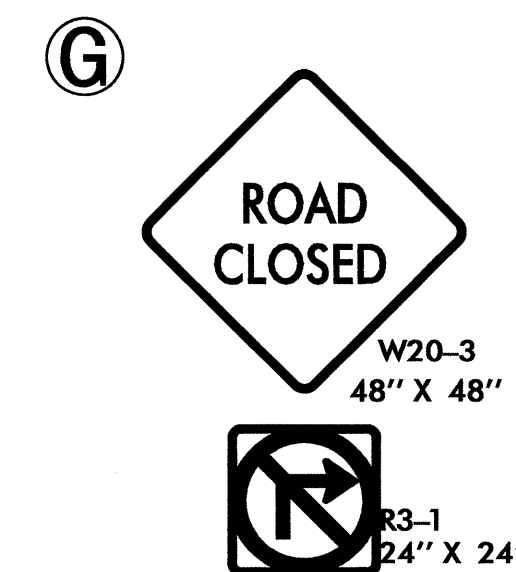
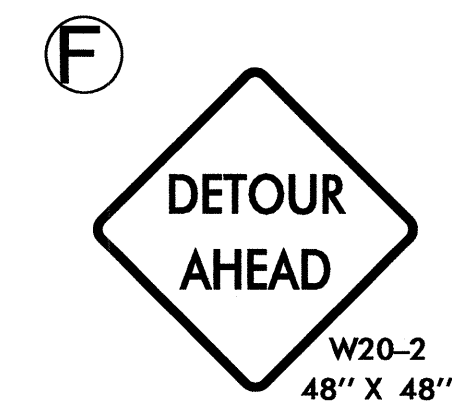
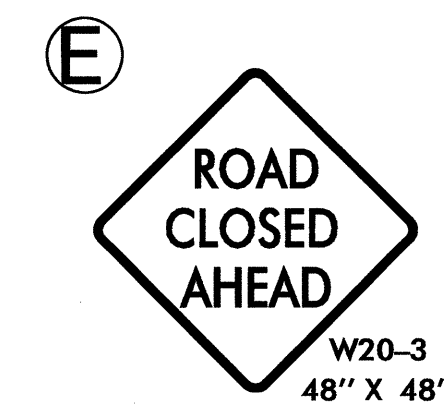
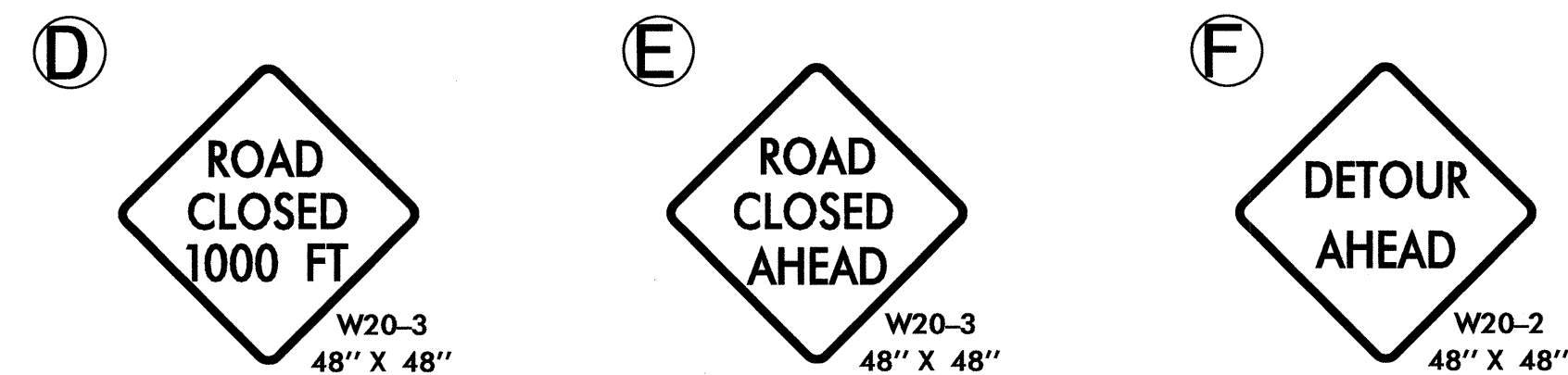
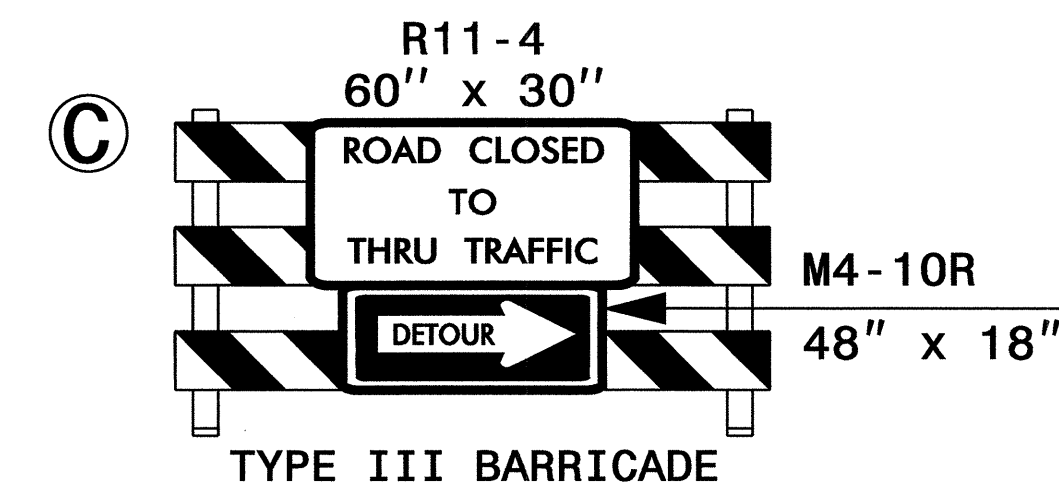
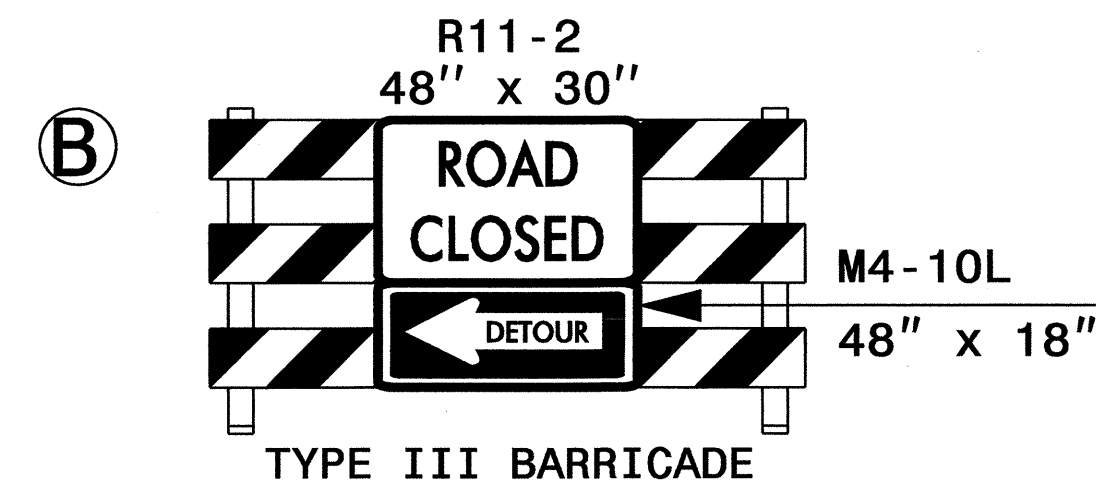
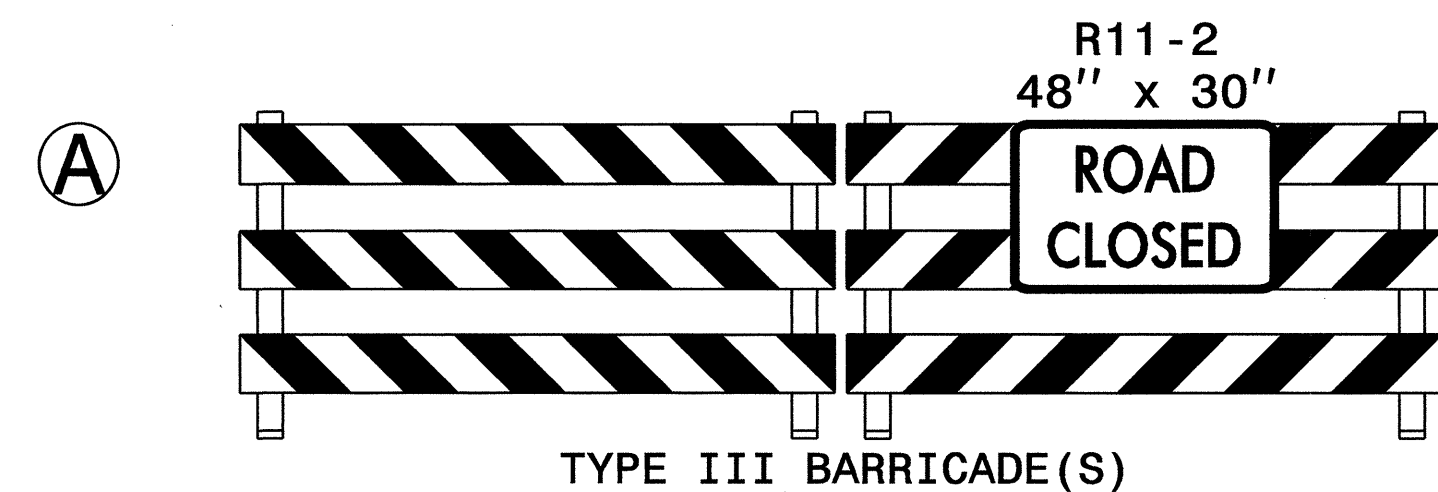
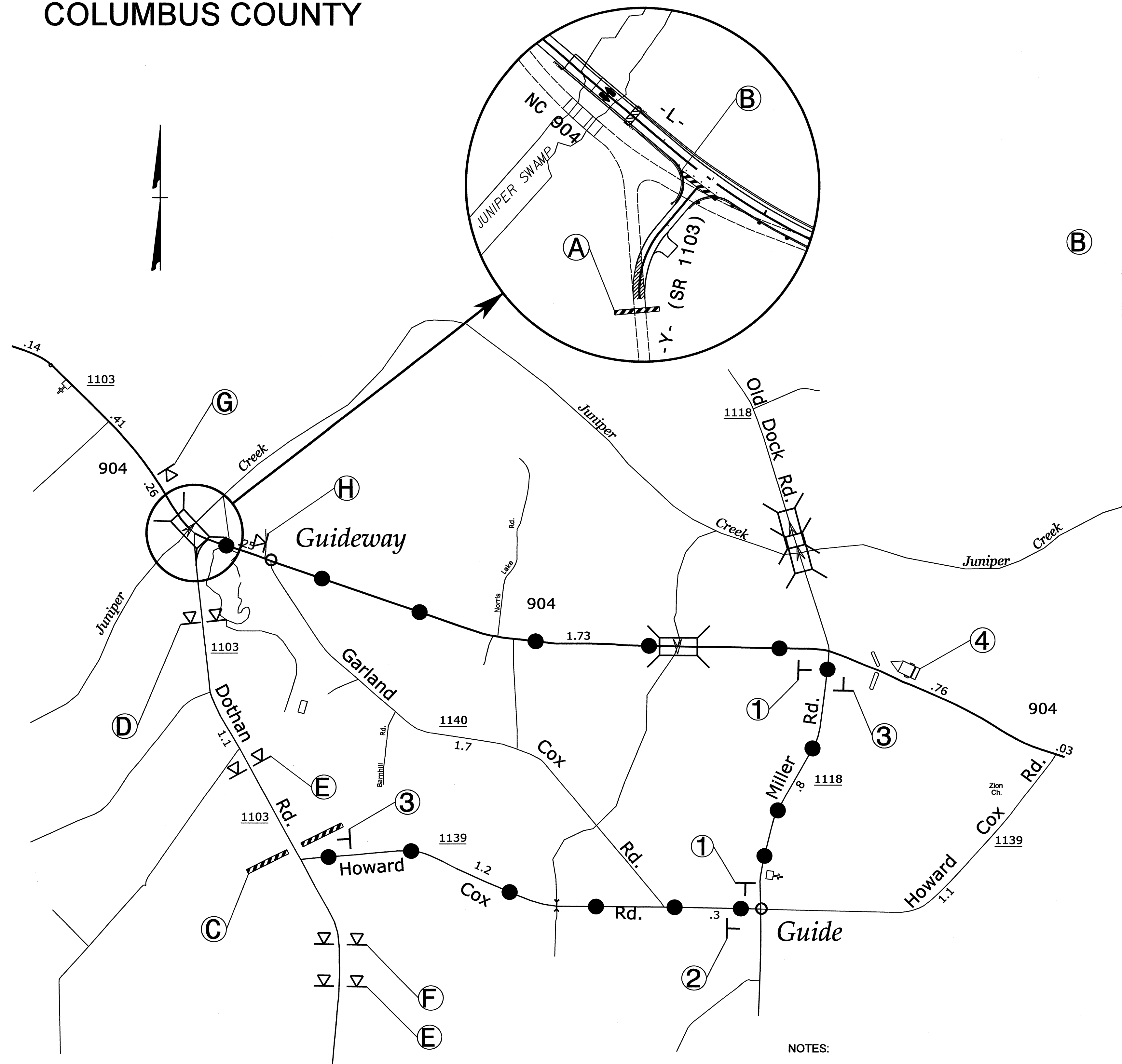
# COLUMBUS COUNTY



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 sbennings AT TE24473

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 April 10, 2012			

# COLUMBUS COUNTY

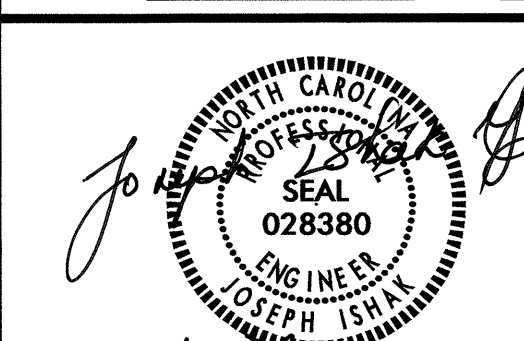
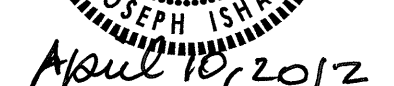


PLACE 1000'+/- EAST OF SR 1118 (MILLER RD), OR AS DIRECTED BY THE ENGINEER

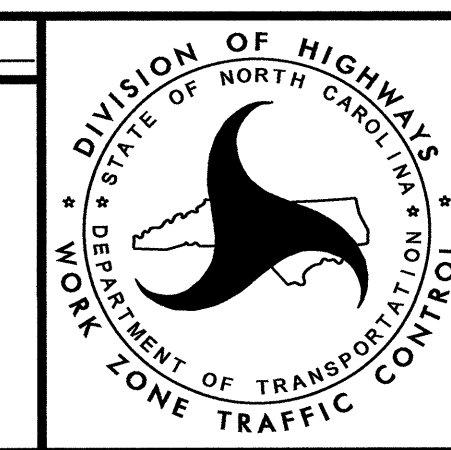
NOTES:

TRAFFIC CONTROL DEVICES (A) THRU (H) SHALL BE INSTALLED ACCORDING TO ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9

TRAFFIC CONTROL DEVICES (1) THRU (4) SHALL BE INSTALLED AS PER ENGINEER'S INSTRUCTION

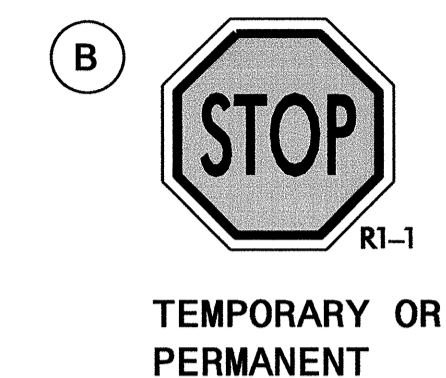
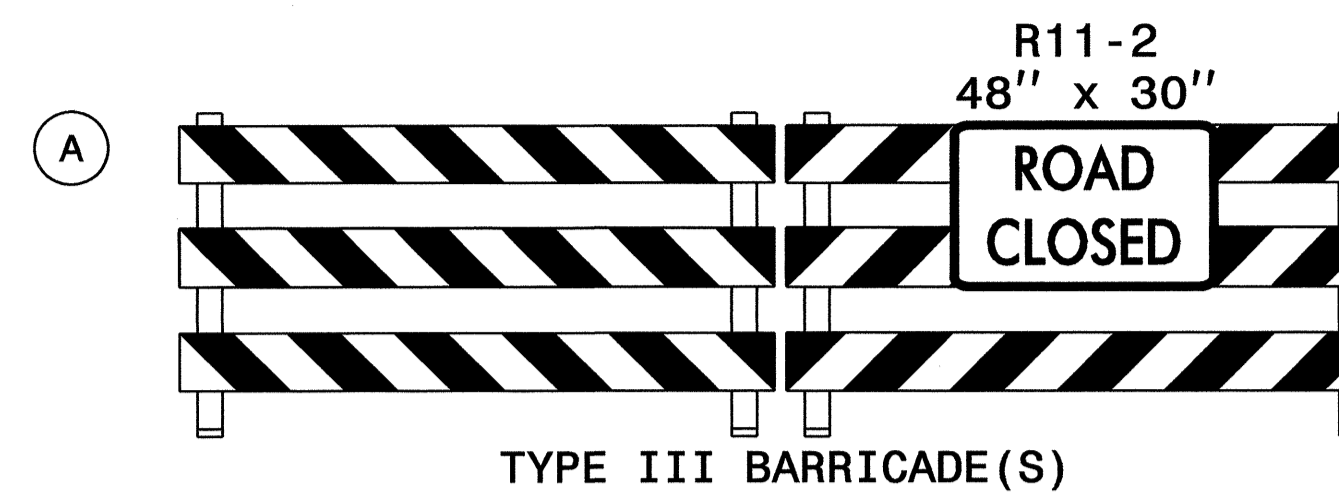
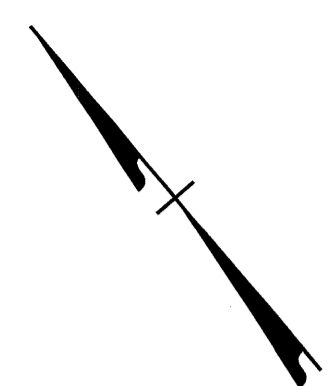
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SEAL: JOSEPH ISTAITIEH, ENGINEER, 028380



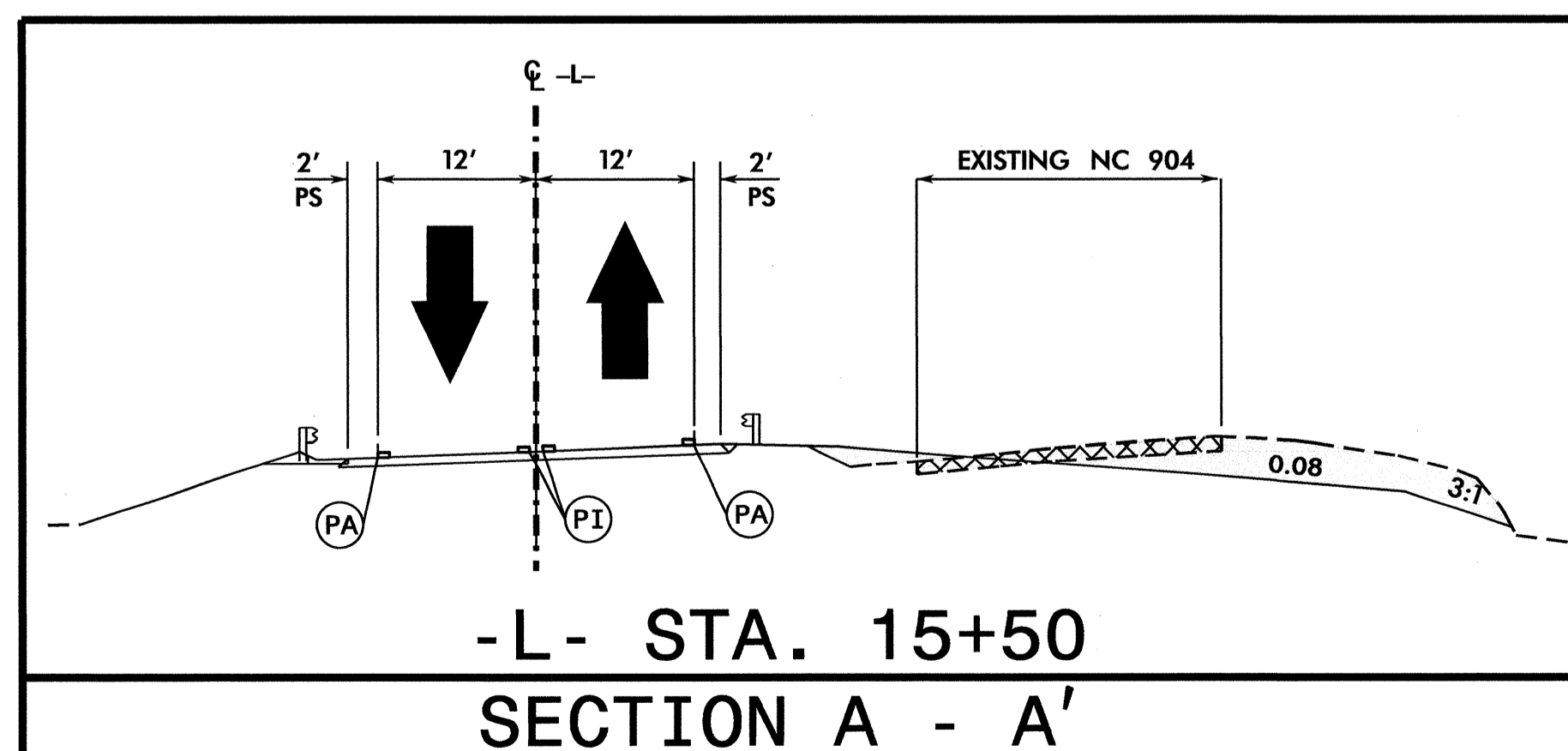
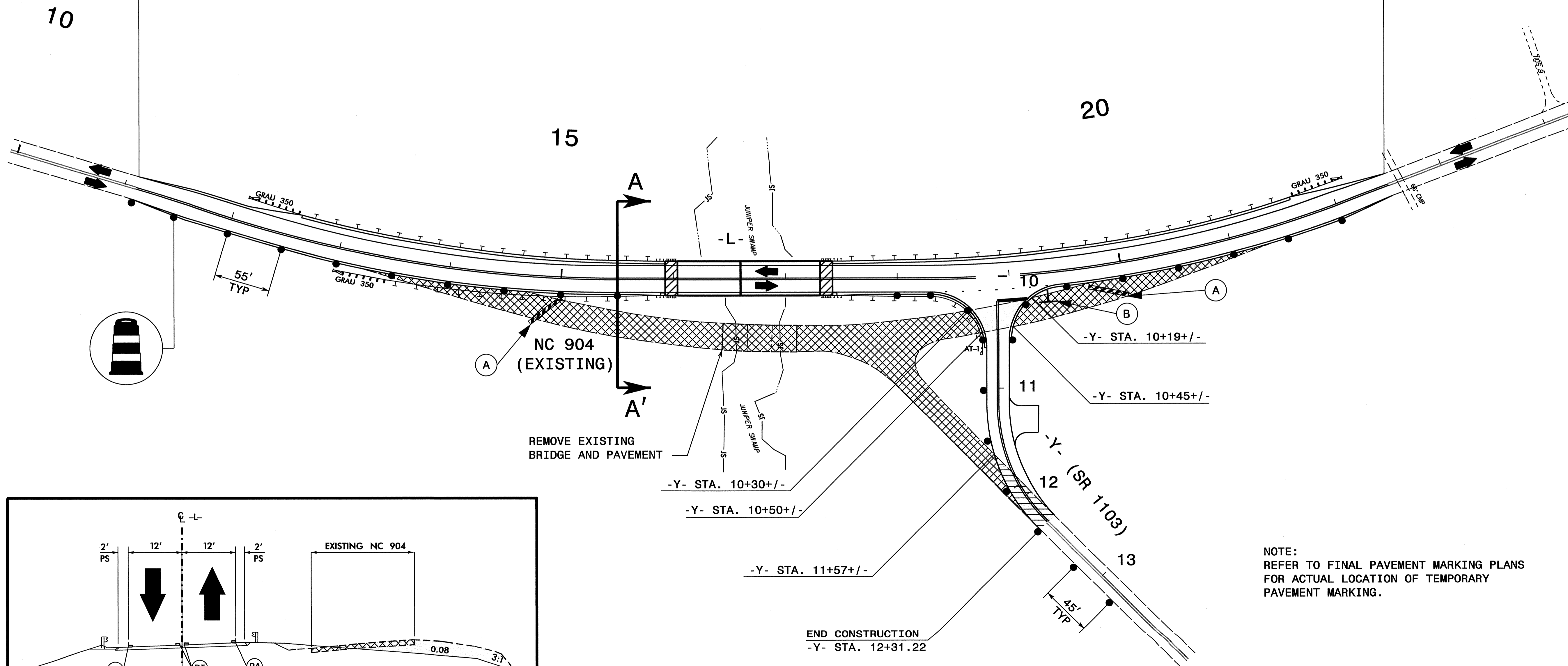
**DOTHAN RD. ROAD CLOSURE AND DETOUR SIGNING**

# COLUMBUS COUNTY



BEGIN TIP PROJECT B-4471  
-L- STA. 11+10

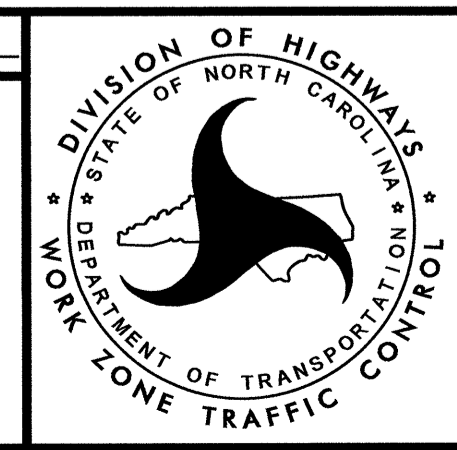
END TIP PROJECT B-4471  
-L- STA. 22+50



NOTE:  
REFER TO FINAL PAVEMENT MARKING PLANS  
FOR ACTUAL LOCATION OF TEMPORARY  
PAVEMENT MARKING.

END CONSTRUCTION  
-Y- STA. 12+31.22

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
*Joseph Isham*  
SEAL 028380  
ENGINEER  
JOSEPH ISHAM  
April 10, 2012



TEMPORARY  
TRAFFIC CONTROL  
PHASE II DETAIL

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