

B-2848

TIP PROJECT:

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED  
TRAFFIC CONTROL, MARKING & DELINEATION  
YANCEY & MITCHELL COUNTIES

STATE PROJECT REFERENCE NO.	SHEET NO.
B-2848	TCP-1

**ROADWAY STANDARD DRAWINGS**

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"-  
ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION-RALEIGH, N.C.,  
DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE  
CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD 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	BARRICADE
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION - REFLECTIVE END TREATMENT
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

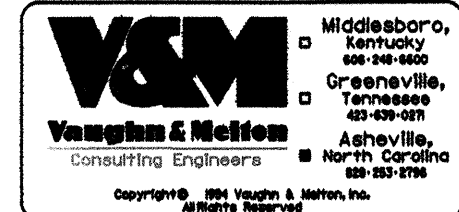
**INDEX OF SHEETS**

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS
TCP-2	PROJECT NOTES
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TCP-8	DETAIL OF LANE CLOSURE USING TRAFFIC SIGNALS
TCP-9	DETAIL DRAWING FOR TWO-WAY UNDIVIDED WORK ZONE WARNING SIGNS
PM-1	PAVEMENT MARKING SCHEDULE

**LEGEND**

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
  - NORTH ARROW
  - PROPOSED PVMT. EXIST. PVMT.
  - WORK AREA
  - REMOVAL OF EXISTING PAVEMENT
- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
  - TYPE II BARRICADE
  - TYPE III BARRICADE
  - CONE
  - DRUM
  - FLASHING ARROW PANEL (TYPE C)
  - TYPE 'B' WARNING LIGHT
  - STATIONARY SIGN
  - PORTABLE SIGN
  - STATIONARY OR PORTABLE SIGN
  - WARNING FLAGS
  - CRASH CUSHION
  - CHANGEABLE MESSAGE SIGN
  - TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
  - POLICE
  - FLAGGER
  - PORTABLE TRAFFIC SIGNAL
- PAVEMENT MARKINGS**
- CRYSTAL/CRYSTAL PAVEMENT MARKER
  - YELLOW/YELLOW PAVEMENT MARKER
  - CRYSTAL/RED PAVEMENT MARKER
  - PAVEMENT MARKING SYMBOLS

100% TCP SUBMITTAL



SCALE:	NONE
DATE:	MAR 2004
DWG. BY:	SCS
DESIGN BY:	RMS
REVIEWED BY:	LDB

APPROVED: *[Signature]*  
DATE: 4/24/06

SEAL

PLAN PREPARED FOR: N.C.D.O.T. TRAFFIC CONTROL, MARKING & DELINEATION SECTION	
J. S. BOURNE, P.E.	TRAFFIC CONTROL ENGINEER
J. S. KITE, P.E.	TRAFFIC CONTROL PROJECT ENGINEER
J. D. KUSE, P.E.	TRAFFIC CONTROL PROJECT DESIGN ENGINEER
D. A. HAYES, E.I.	TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN

# PROJECT NOTES

PROJ. REFERENCE NO. B-2848	SHEET NO. TCP-2
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## GENERAL NOTES

ADAPT THE TRAFFIC CONTROL PLANS, WHEN DIRECTED BY THE ENGINEER, TO MEET FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT. CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE, OR RESULT IN DUPLICATE, OR UNDESIRE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES.

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.

### TIME RESTRICTIONS

A) DO NOT STOP TRAFFIC FOR MORE THAN 30 MINUTES AS FOLLOWS:

ROAD NAME	OPERATION
SR 1304, 1417	HANGING BRIDGE GIRDERS

### 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 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.
- 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) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.
- F) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FT OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.
- G) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON SR 1340, SR 1304, SR 1417 OR SR 1320.

### 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 A DROP-OFF AS FOLLOWS:  
  
 BACKFILL DROP-OFFS THAT EXCEED 2" ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.  
  
 BACKFILL DROP-OFFS THAT EXCEED 3" ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.  
  
 BACKFILL WITH ABC OR SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- I) DO NOT EXCEED A DIFFERENCE OF 1 1/2" IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY MILE THROUGHOUT THE EVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

- K) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.  
  
 WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE DEPARTMENT.
- L) STATE FORCES WILL BE RESPONSIBLE FOR PERMANENT SIGNING.
- M) PROVIDE DETOUR SIGNING OFF THE PROJECT LIMITS.
- N) COVER OR REMOVE ALL DETOUR SIGNS OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.
- O) INSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC BARRIER

- P) INSTALL PORTABLE CONCRETE BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.  
  
 ONCE PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE PORTABLE CONCRETE BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE PORTABLE CONCRETE BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.
- Q) PROTECT THE APPROACH END OF PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.  
  
 OFFSET THE APPROACH END OF THE PORTABLE CONCRETE BARRIER A MINIMUM OF 40' FROM ONCOMING TRAFFIC OR PROTECT AT ALL TIMES BY A TEMPORARY CRASH CUSHION.

INSTALL PORTABLE CONCRETE BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE PORTABLE CONCRETE BARRIER AGAINST THE TRAFFIC FLOW, BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP CLOSED THE SECTION OF THE ROADWAY UNTIL THE BARRIER CAN BE PLACED OR AFTER BARRIER IS REMOVED.

### TRAFFIC CONTROL DEVICES

- R) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT. ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.
- S) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY. STAGGER OR OVERLAP BARRICADES TO ALLOW FOR INGRESS OR EGRESS.
- T) WHEN USING ROADWAY STANDARD NO. 1101.02, DRUMS MAY BE USED IN LIEU OF CONES ON SR 1340 AND SR 1417.

### PAVEMENT MARKINGS AND MARKERS

U) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
SR 1304, 1417	PAINT	NONE
SR 1304, 1320	PAINT	NONE
STRUCTURES	PAINT	SNOWPLOWABLE

V) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
SR 1304, 1417	PAINT	NONE

- W) PLACE AT LEAST TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE ON NEW ASPHALT PAVEMENT. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.
- X) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- Y) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.
- Z) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON AMPLE DRYING TIME, AS DETERMINED BY THE ENGINEER.

### SIGNALS

- AA) INSTALL AND MAKE OPERATIONAL ALL SIGNALS PRIOR TO ALTERING ANY TRAFFIC PATTERN, UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS.
- BB) SHIFT AND REVISE ALL SIGNAL HEADS AS SHOWN ON THE SIGNAL PLANS.

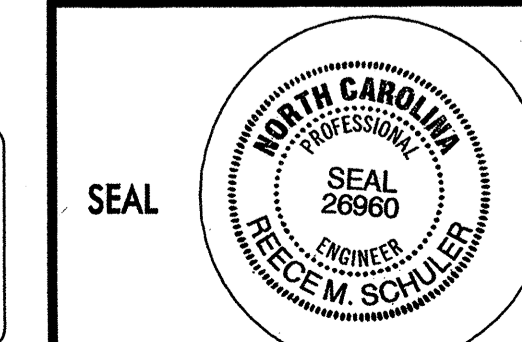
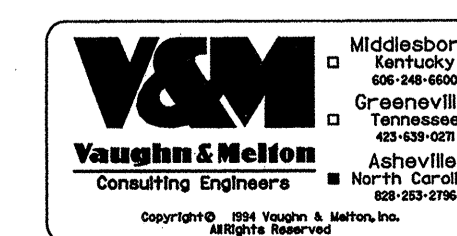
## LOCAL NOTES

1) DO NOT STOP TRAFFIC FOR MORE THAN 15 MINUTES AS FOLLOWS:

ROAD NAME	OPERATION
SR 1304, 1417	SHIFTING TRAFFIC

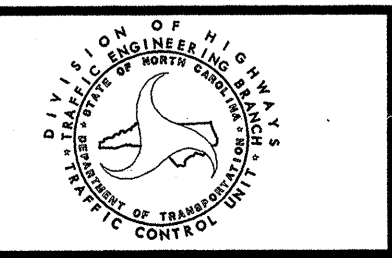
100% TCP SUBMITTAL

APPROVED: *[Signature]* DATE: 2/14/05



## PROJECT NOTES

SCALE: NONE
DATE: MAR04
DWG. BY: SCS
DESIGN BY: RMS
REVIEWED BY: JAC



REVISIONS	

CADD FILE B2848TCP02.DGN

\$\$\$\$\$SYTIME\$\$\$\$\$DGN\$\$\$\$\$USERNAME\$\$\$\$\$

# PROJECT PHASING

## PHASE I

\* STEP 1:  
ERECT WORK ZONE ADVANCED WARNING SIGNS USING DETAIL DRAWINGS FOR WORK ZONE SIGNS. (SEE TCP-8)

\* STEP 2:  
INSTALL ALL OFF-SITE DETOUR 1 SIGNS AS SHOWN ON TCP-5.

\* STEP 3:  
USING ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9, DETOUR TRAFFIC ON SR 1304 AND CLOSE THE EXISTING BRIDGE. INSTALL TYPE III BARRICADES AT BOTH ENDS OF EXISTING BRIDGE. (SEE TCP-4 AND TCP-5)

COMPLETE STEPS 4 THRU 6 IN 120 CONSECUTIVE CALENDAR DAYS (SEE ICT'S FOR LIQUIDATED DAMAGES).

\* STEP 4:  
USING ROADWAY STANDARD 1101.02, SHEET 1 OF 9, AND FLAGGERS, PLACE PORTABLE CONCRETE BARRIER FROM -Y- STA. 11+80 TO STA. 13+20, TEMPORARY PAVEMENT MARKINGS (PAINT) FROM -Y- STA. 9+80 TO STA. 14+70, INSTALL AND ACTIVATE TEMPORARY TRAFFIC SIGNALS AND DIRECT -Y- (SR 1417) TRAFFIC INTO A ONE LANE, TWO WAY PATTERN IN THE EXISTING SOUTHBOUND LANE OF -Y- (SR 1417). (SEE TCP-4 & TCP-8) (SEE SIGNAL PLANS)

\* STEP 5:  
BEHIND LANE CLOSURE, CONSTRUCT -L- FROM STA. 10+10 TO STA. 11+00 (SEE TCP-4).

\* STEP 6:  
COMPLETE -Y- EXCLUDING FINAL PAVEMENT LAYER. USING ROADWAY STANDARD 1101.02, SHEET 1 OF 9, AND FLAGGERS, REMOVE CONCRETE BARRIER, LANE CLOSURES, TEMPORARY SIGNALS AND TEMPORARY PAVEMENT MARKINGS ON THE LEFT EDGE FROM STA. 9+80 TO STA. 14+70 AND STOP BARS. INSTALL TEMPORARY PAVEMENT MARKINGS FROM -Y- STA. 9+80 TO STA. 14+70. COVER DETOUR SIGNS FOR THE EXISTING BRIDGE AND RE-OPEN -Y- TO 2-LANE, 2-WAY TRAFFIC AND THE EXISTING BRIDGE TO ONE LANE, TWO WAY TRAFFIC.

\* STEP 7:  
USING ROADWAY STANDARD 1101.02, SHEET 1 OF 9, AND FLAGGERS, PLACE PORTABLE CONCRETE BARRIER FROM -Y1- STA. 13+80 TO STA. 14+40. (MUST BE PLACED ON TEMP. PAVEMENT.) BEHIND PCB, BEGIN CONSTRUCTION FROM -L- STA 11+00 TO STA 13+80. (SEE TCP-4)

## PHASE II

\* STEP 1:  
INSTALL ALL OFF-SITE DETOUR 2 SIGNS AS SHOWN ON TCP-7.

NOTES: 1) ALL WORK UNDER PHASE II, STEP 2 MUST BE COMPLETED IN A CONTINUOUS OPERATION WHEN SCHOOL IS NOT IN SESSION  
  
2) IF FIELD CONDITIONS ALLOW, USE INCIDENTAL STONE AS NEEDED TO MAINTAIN TRAFFIC ON SITE DURING PHASE II, STEP 2 IN LIEU OF DETOURING TRAFFIC, AS DIRECTED BY THE ENGINEER

\* STEP 2:  
USING RDWY STD NO. 1101.03, SHEET 1 OF 9, UNCOVER THE DETOUR SIGNS FOR THE EXISTING BRIDGE, CLOSE -Y1- AT STA. 12+20, -L- AT STA. 16+00, THE EXISTING BRIDGE, AND DETOUR TRAFFIC ALONG SR 1304, NC 197 AND SR 1320. CONSTRUCT -Y1- AND -L- FROM STA 13+80 TO STA 16+00 EXCLUDING FINAL PAVEMENT LAYER. SEE LOCAL NOTE. (USE TEMPORARY MARKINGS) (SEE TCP-7)

## PHASE III

\* STEP 1  
REMOVE TYPE III BARRICADES AND DETOUR SIGNING FOR -Y1-. INSTALL TYPE III BARRICADES AT END OF BRIDGE -L- STA. 13+80 OPEN -Y1- TO 2-LANE 2-WAY TRAFFIC.

NOTE: WORK IN A CONTINUOUS MANNER TO COMPLETE STEP 2.

\* STEP 2:  
COMPLETE BRIDGE CONSTRUCTION AND INSTALL THE FINAL PAVEMENT MARKINGS ON THE NEW BRIDGE, AND REDIRECT TRAFFIC ONTO NEW BRIDGE. REMOVE OFF-SITE DETOUR.

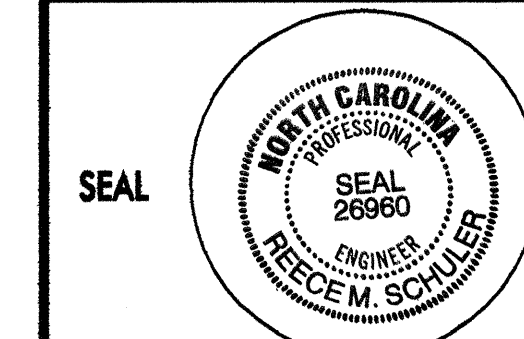
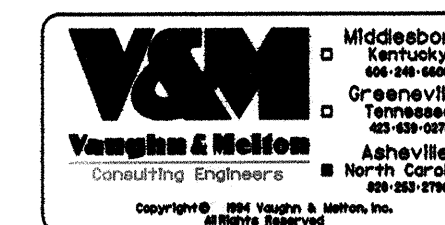
NOTE: THE REMOVAL OF THE EXISTING BRIDGE IS TO BE COORDINATED WITH THE ENGINEER DUE TO ENVIRONMENTAL ISSUES.

\*STEP 3:  
AWAY FROM TRAFFIC, REMOVE EXISTING BRIDGE.

\* STEP 4:  
USING RDWY STD. NO. 1101.02, SHEET 1 OF 9, PLACE THE FINAL LAYER OF SURFACE COURSE AND REMAINING FINAL PAVEMENT MARKINGS (PAINT) ON THE ENTIRE PROJECT.

100% TCP SUBMITTAL

APPROVED: *[Signature]* DATE: 4/24/06



## PHASING

SCALE: NONE		REVISIONS
DATE: MAR04		
DWG. BY: SCS		
DESIGN BY: RMS		
REVIEWED BY: JAC		CADD FILE: B2848TCP03.DGN

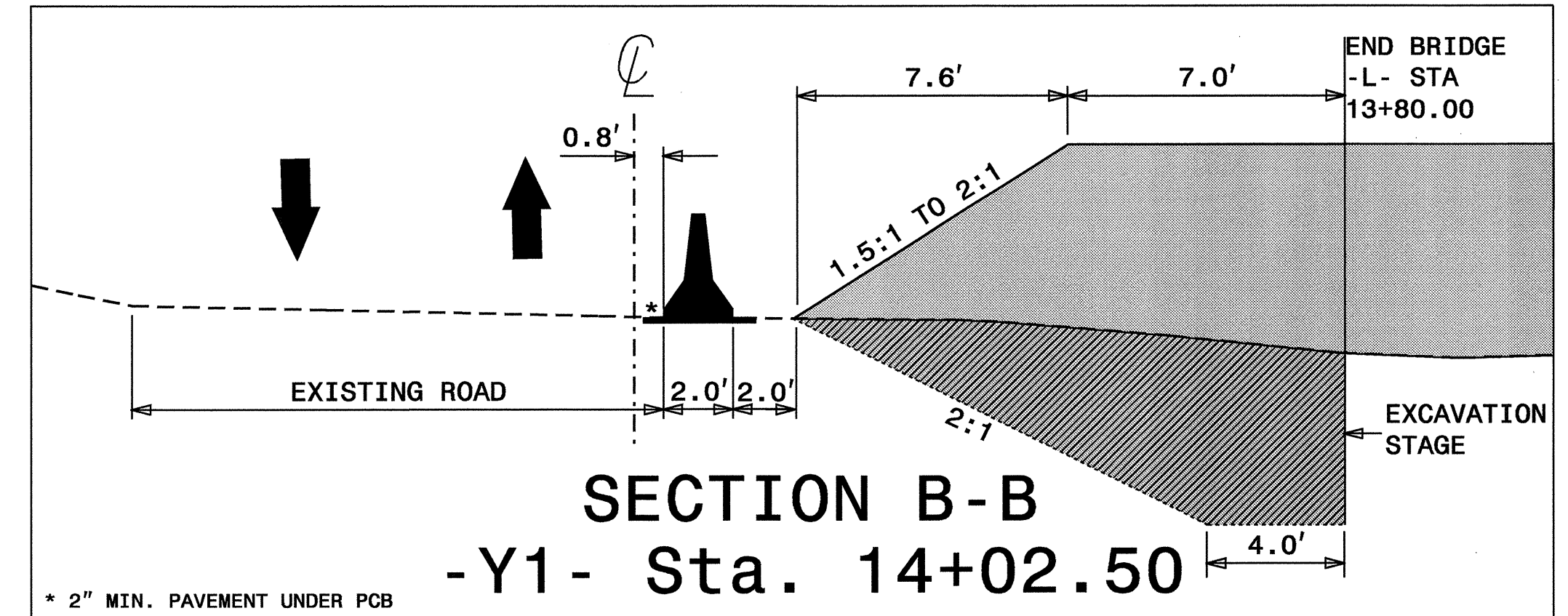
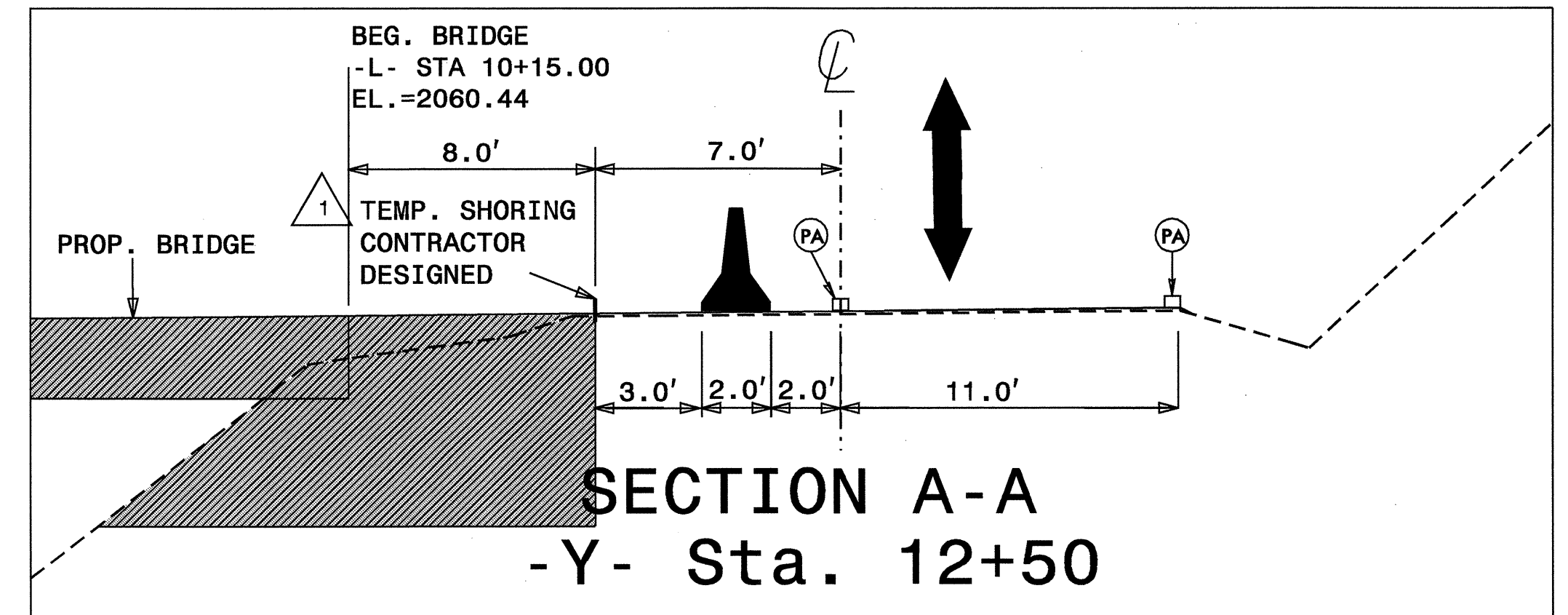
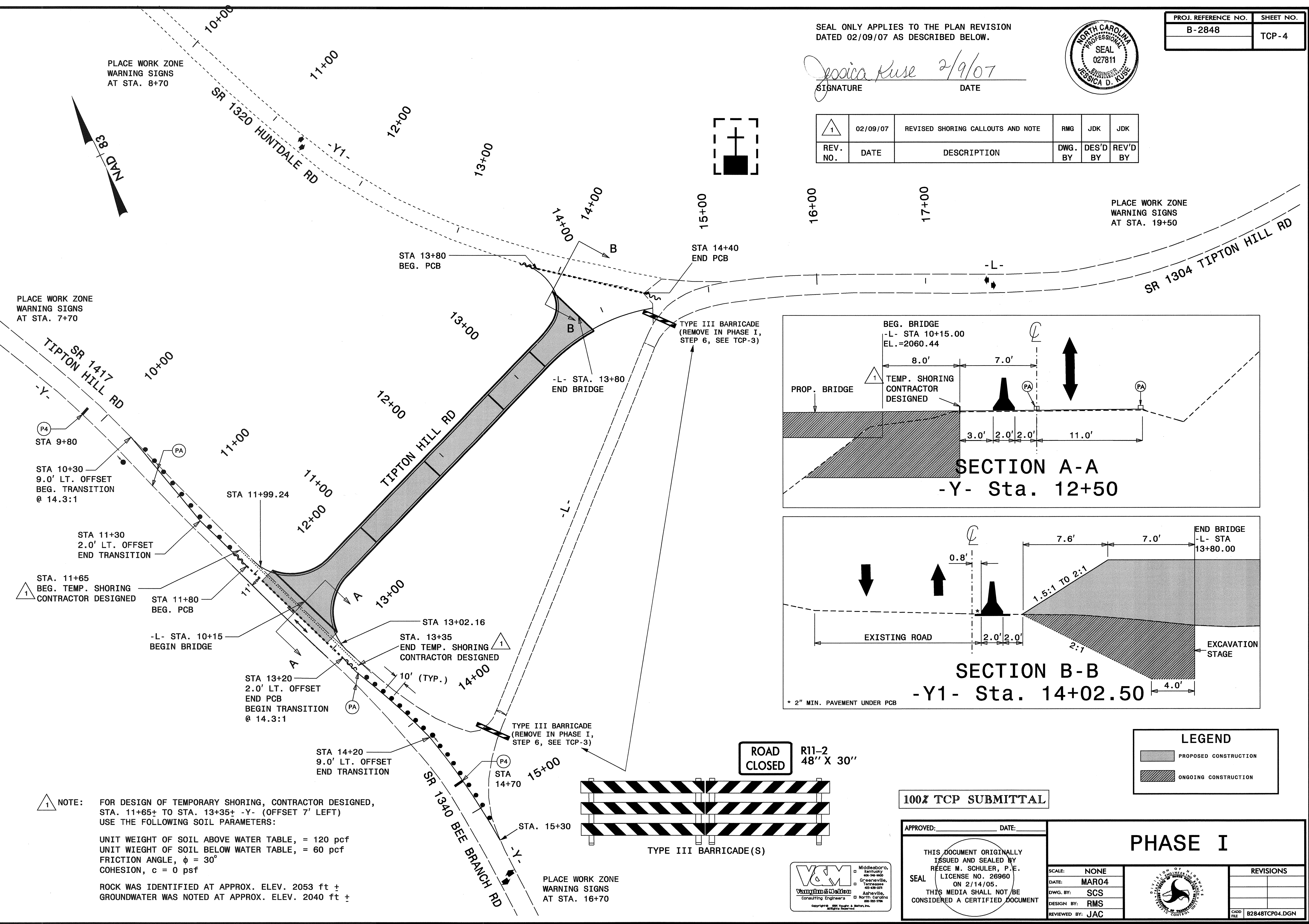
\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DONOR\$\$\$\$\$  
\$\$\$\$\$SERNAME\$\$\$\$\$

SEAL ONLY APPLIES TO THE PLAN REVISION DATED 02/09/07 AS DESCRIBED BELOW.



*Jessica Kuse* 2/9/07  
SIGNATURE DATE

1	02/09/07	REVISED SHORING CALLOUTS AND NOTE	RMG	JDK	JDK
REV. NO.	DATE	DESCRIPTION	DWG. BY	DES'D BY	REV'D BY



PLACE WORK ZONE WARNING SIGNS AT STA. 7+70

PLACE WORK ZONE WARNING SIGNS AT STA. 8+70

PLACE WORK ZONE WARNING SIGNS AT STA. 19+50

STA. 11+65  
BEG. TEMP. SHORING CONTRACTOR DESIGNED

STA. 11+30  
2.0' LT. OFFSET END TRANSITION

STA. 10+30  
9.0' LT. OFFSET BEG. TRANSITION @ 14.3:1

STA. 11+80  
BEG. PCB

-L- STA. 10+15  
BEGIN BRIDGE

STA. 11+99.24

STA. 13+20  
2.0' LT. OFFSET END PCB BEGIN TRANSITION @ 14.3:1

STA. 13+02.16

STA. 13+35  
END TEMP. SHORING CONTRACTOR DESIGNED

STA. 14+20  
9.0' LT. OFFSET END TRANSITION

STA. 14+70

TYPE III BARRICADE (REMOVE IN PHASE I, STEP 6, SEE TCP-3)

STA. 13+80  
BEG. PCB

-L- STA. 13+80  
END BRIDGE

STA. 14+40  
END PCB

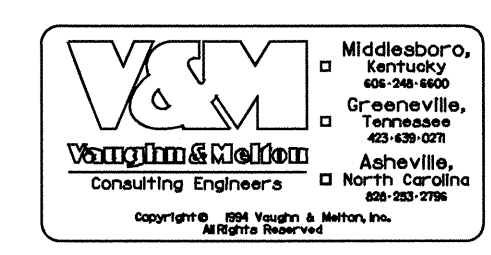
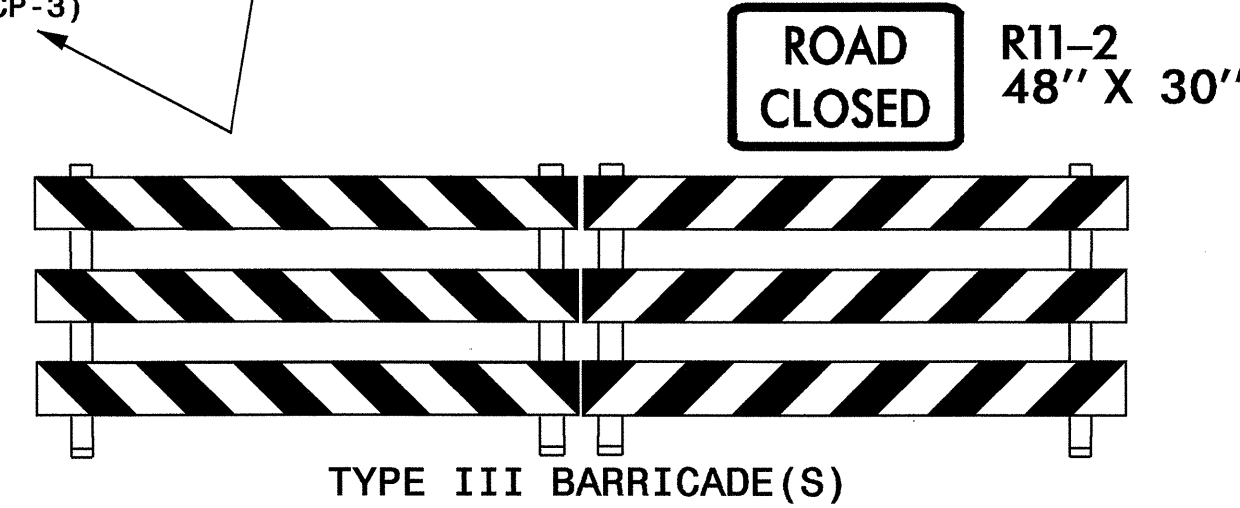
TYPE III BARRICADE (REMOVE IN PHASE I, STEP 6, SEE TCP-3)

PLACE WORK ZONE WARNING SIGNS AT STA. 16+70

NOTE: FOR DESIGN OF TEMPORARY SHORING, CONTRACTOR DESIGNED, STA. 11+65± TO STA. 13+35± -Y- (OFFSET 7' LEFT) USE THE FOLLOWING SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, = 120 pcf  
UNIT WIEGHT OF SOIL BELOW WATER TABLE, = 60 pcf  
FRICTION ANGLE,  $\phi = 30^\circ$   
COHESION,  $c = 0$  psf

ROCK WAS IDENTIFIED AT APPROX. ELEV. 2053 ft ±  
GROUNDWATER WAS NOTED AT APPROX. ELEV. 2040 ft ±



LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

100% TCP SUBMITTAL

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY REECE M. SCHULER, P.E. LICENSE NO. 26960 ON 2/14/05.  
SEAL THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT

PHASE I

SCALE: NONE	REVISIONS
DATE: MAR04	
DWG. BY: SCS	
DESIGN BY: RMS	
REVIEWED BY: JAC	

09-FEB-2007 16:11 \\dot\dfsroot\pco\projects-b\2848\tr\aff\trafficocontrol\tcp\B2848\_TC\_TCP4.dgn

SIGN NUMR: TYPE: D Ground  
 QUANTITY: 1  
 SIGN WIDTH: 3'-6"  
 HEIGHT: 2'-0"  
 TOTAL AREA: 7.0 Sq.Ft.  
 MAT'L: 0.080 in. ALUMINUM

BACKG. COLOR: Orange  
 COPY COLOR: Black

DESIGN BY: DME  
 PROJECT ID: B-2848

CHK BY: DIV: 13

STD #: DATE: Oct 29, 2003

N. C. DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 TRAFFIC ENGINEERING BRANCH  
 SIGNING DEPARTMENT

SYMBOL	X	Y	WID	HT

BORDER TYPE: RECESSED  
 RECESS: 0.38"  
 WIDTH: 0.63"  
 RADII: 1.5"

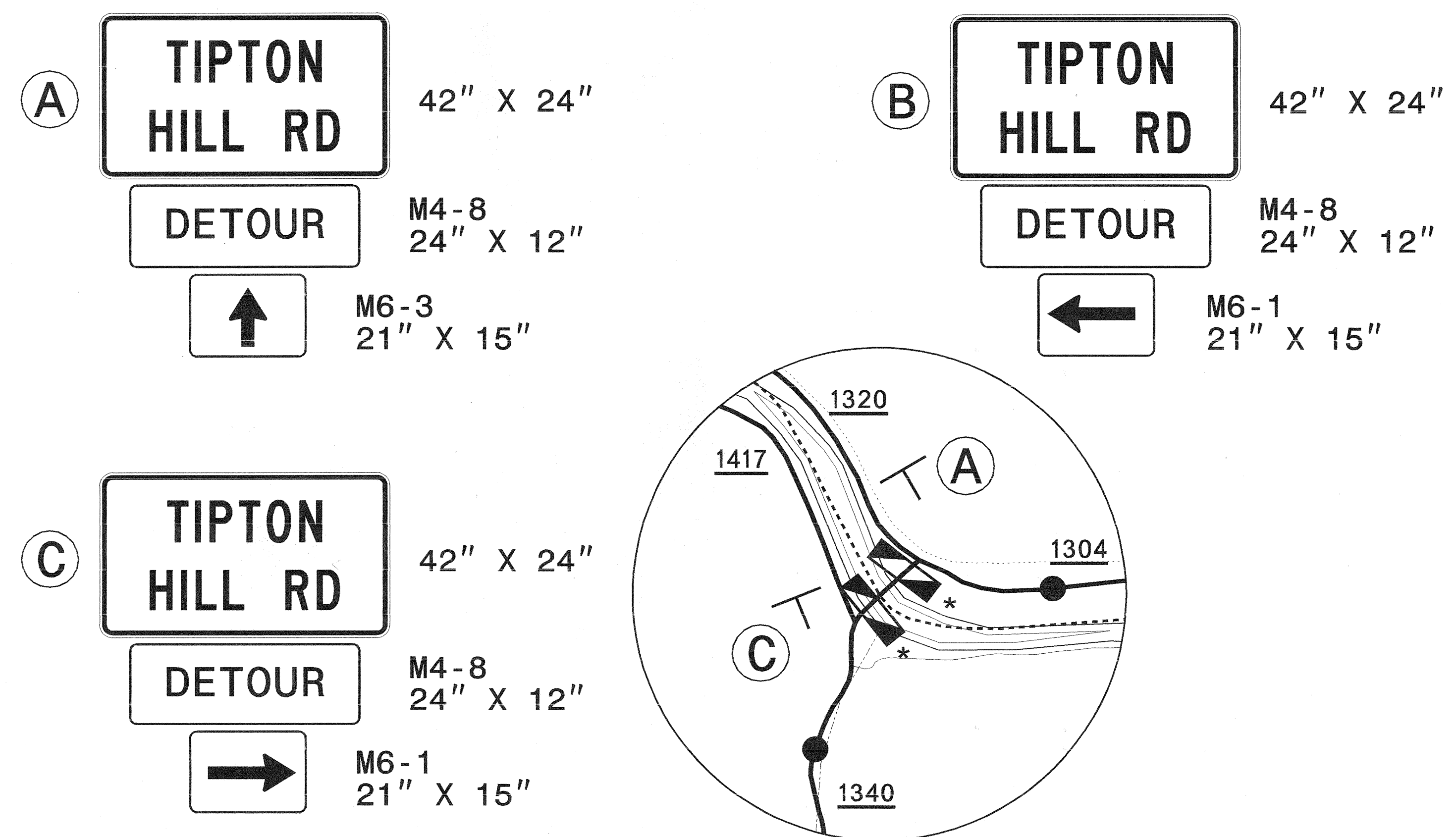
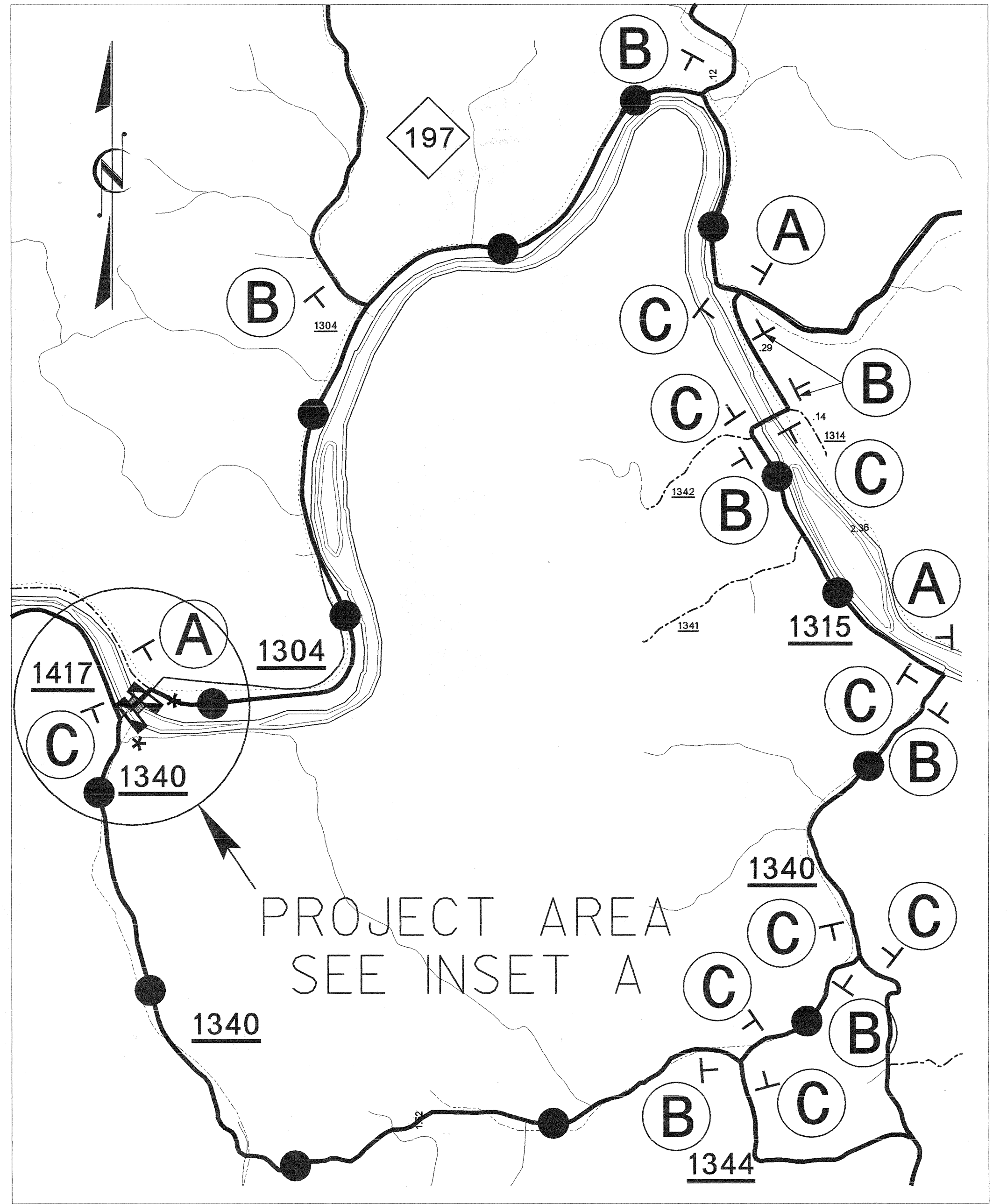
NO. Z BARS: LENGTH: in.

USE NOTES: 1,4  
 1. Legend and border shall be direct applied non-reflective sheeting.  
 2. Legend and border shall be direct applied Type I reflective sheeting.  
 3. Shields shall be Type III reflective sheeting on 0.032" aluminum and demountable.  
 4. Background shall be Type III reflective sheeting.  
 5. Background shall be Type I reflective sheeting.  
 6. Center arrow(s) vertically on sign.

Letter spacings are to start of next letter

Series/Size	Text Length
C6	9.8
C6	22.4
C6	7.2
C6	27.5

Spacing Factor is 1 unless specified otherwise  
 FILENAME: GS40\_ENGL



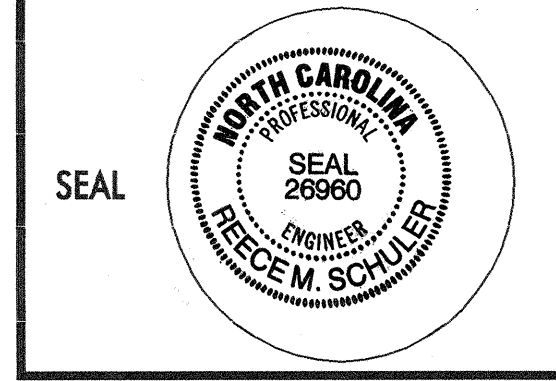
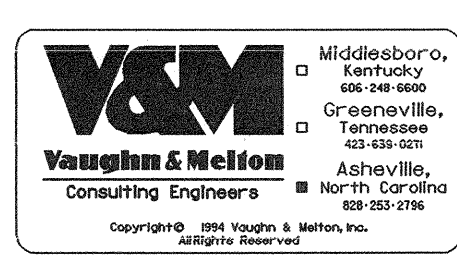
NOTE: ALL DETOUR SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE NOTED.  
 FINAL DETERMINATION OF ARROW DIRECTION IS TO BE DONE IN THE FIELD.

\* SEE ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9, OMITTING "ROAD CLOSED TO THRU TRAFFIC" SIGN, FOR TYPE III BARRICADE LOCATIONS, ADDITIONAL SIGNS MOUNTED ON TYPE III BARRICADES, AND ADDITIONAL WORK ZONE SIGNS.

MAP LEGEND  
 STATE ROADS ———  
 NORTH TOE RIVER |||||

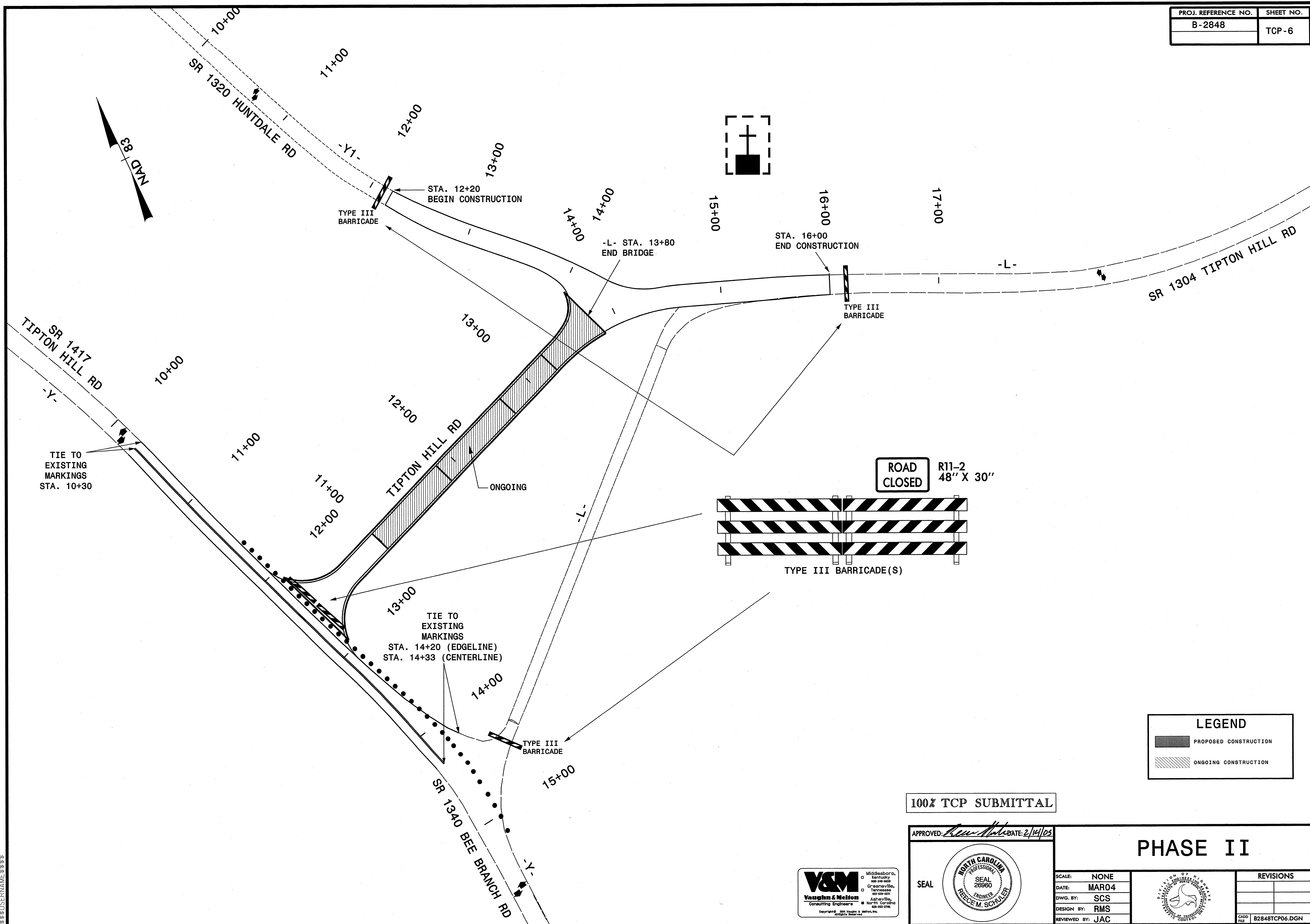
100% TCP SUBMITTAL

APPROVED: *[Signature]* DATE: 5/12/04



OFF-SITE DETOUR 1 SIGNING		REVISIONS	
SCALE: NONE	DATE: MAR04		
DWG. BY: SCS	DESIGN BY: RMS		
REVIEWED BY: JAC			
CADD FILE: B2848TCP05.DGN			

\$\$\$\$\$ SYSTEMS TIME\$\$\$\$\$  
 \$\$\$ DDMMYY\$\$\$\$\$  
 \$\$\$ USERNAME\$\$\$\$\$



100% TCP SUBMITTAL

APPROVED: *New State* DATE: 2/14/05

SEAL

**V&M**  
Vaughn & Melton  
Consulting Engineers

Middlesboro, Kentucky 40288-4600  
Greenville, Tennessee 37420-0000  
Asheville, North Carolina 28820-2756

**SEAL**  
NORTH CAROLINA PROFESSIONAL ENGINEER  
RECEM. SCHULLER

PHASE II

SCALE: NONE		REVISIONS
DATE: MAR04		
DWG. BY: SCS		
DESIGN BY: RMS		
REVIEWED BY: JAC		CARD FILE B2848TCP06.DGN

SYSTEMTIME\$\$\$\$\$  
\$\$\$\$\$DGN\$\$\$\$\$  
\$\$\$\$\$USERNAME\$\$\$\$\$

SIGN NUMR: \_\_\_\_\_  
 TYPE: D Ground  
 QUANTITY: 1

BACKG. COLOR: Orange  
 COPY COLOR: Black

DESIGN BY: DME  
 PROJECT ID: B-2848

CHK BY: \_\_\_\_\_  
 DIV: 13

STD #: \_\_\_\_\_  
 DATE: Oct 29, 2003

N. C. DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 TRAFFIC ENGINEERING BRANCH  
 SIGNING DEPARTMENT

SIGN WIDTH: 4'-0"  
 HEIGHT: 2'-0"  
 TOTAL AREA: 8.0 Sq.Ft.

MAT'L: 0.125 in. ALUMINUM

BORDER TYPE: RECESSED  
 RECESS: 0.38"  
 WIDTH: 0.63"  
 RADII: 1.5"

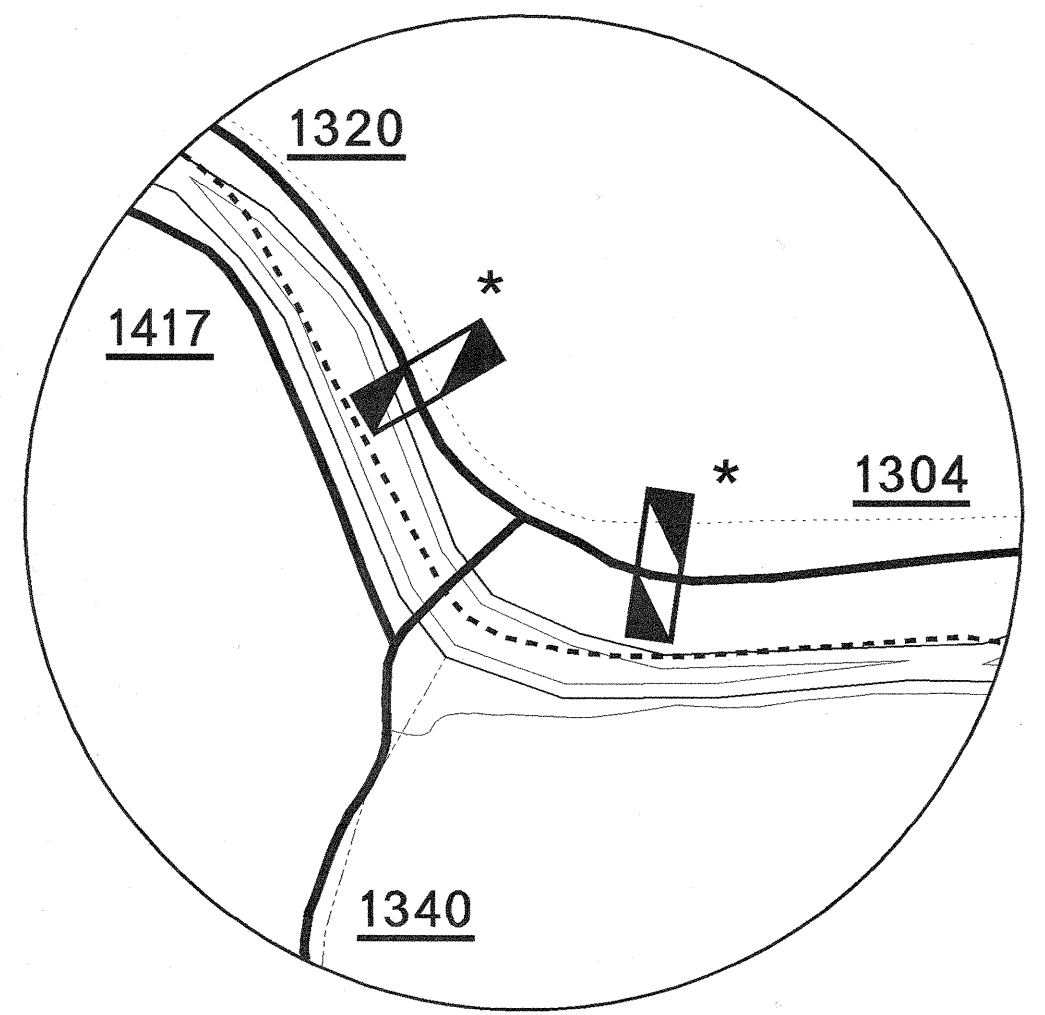
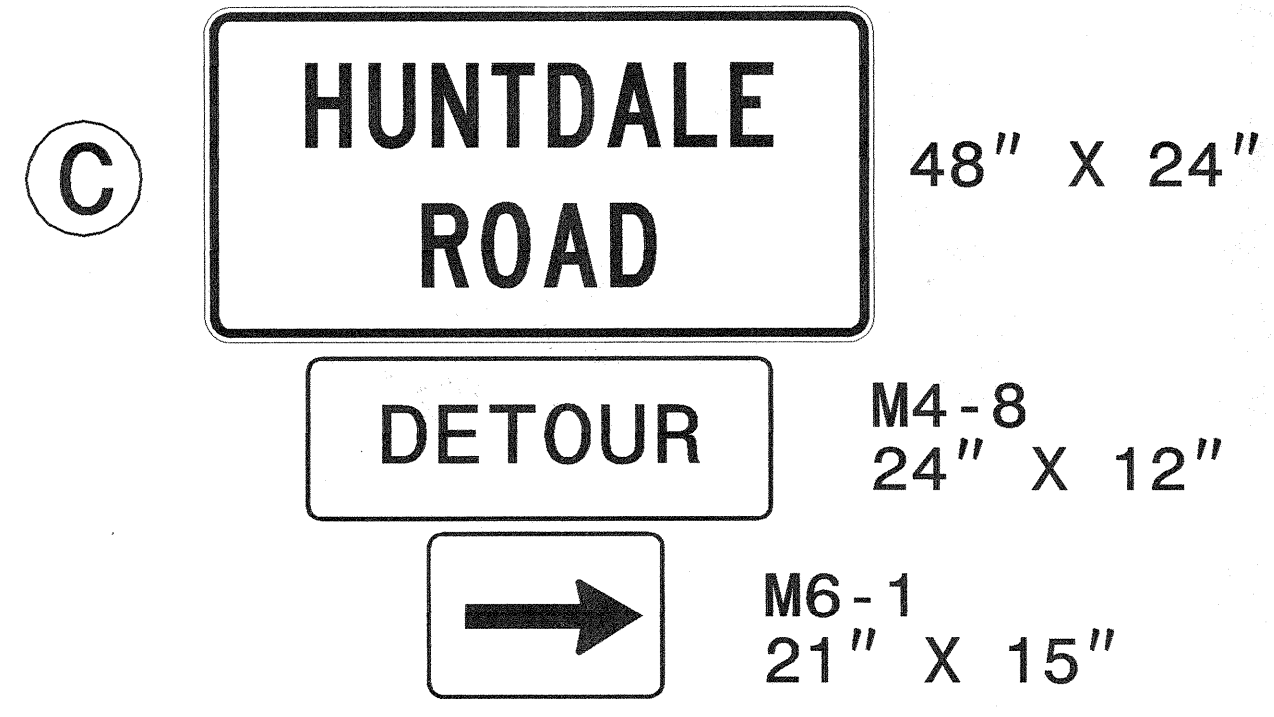
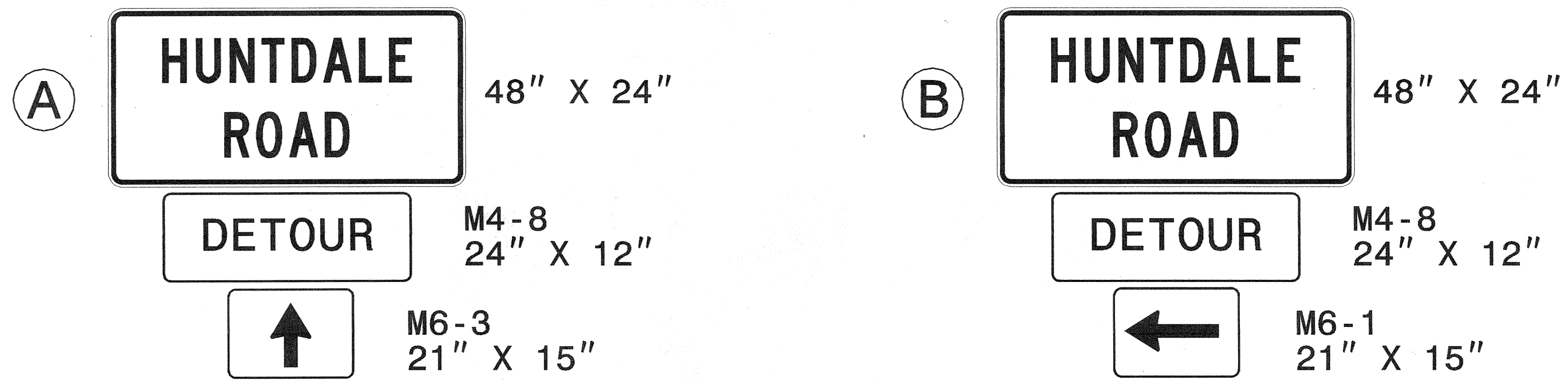
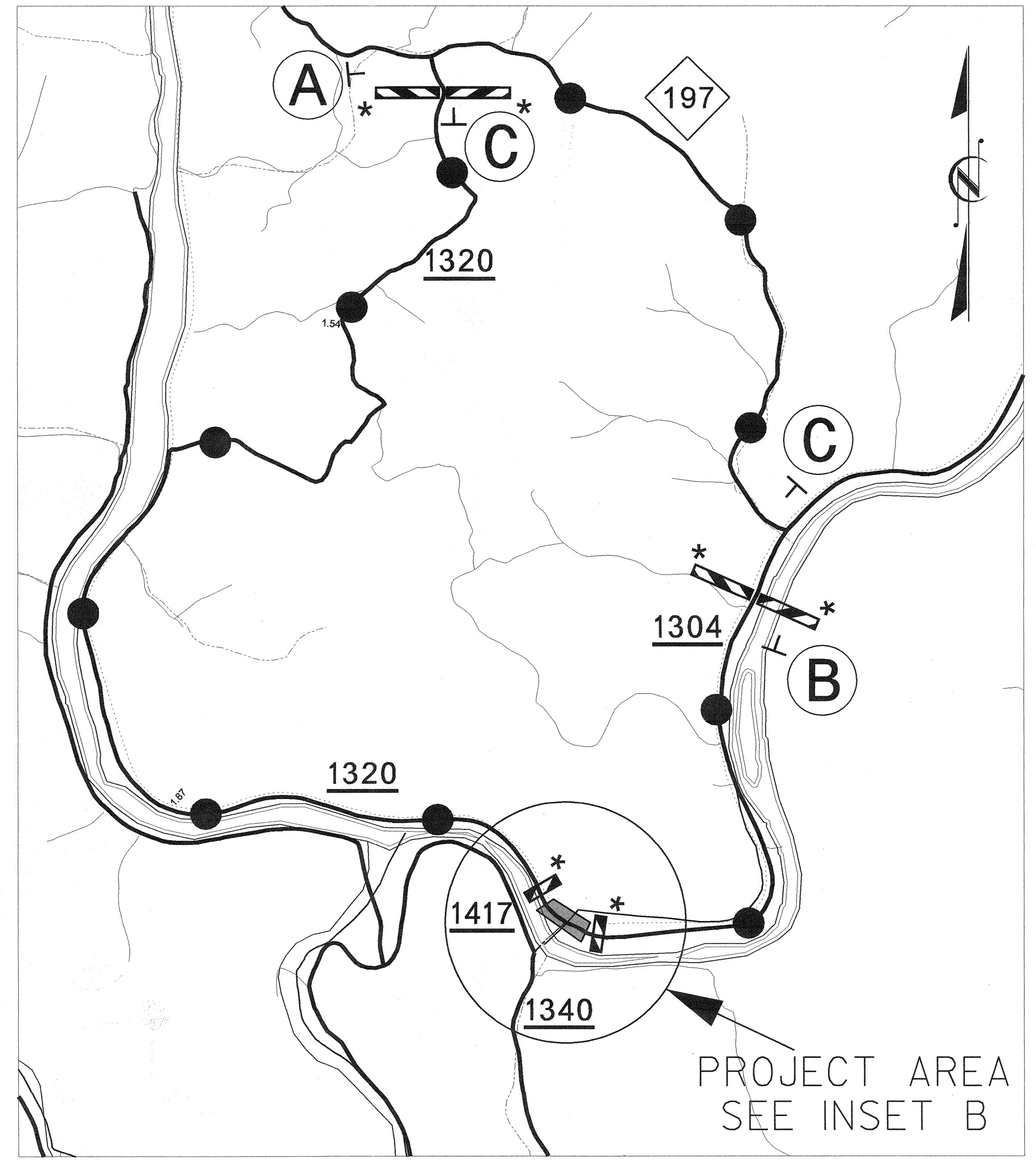
NO. Z BARS:  
 LENGTH: in.

SYMBOL	X	Y	WID	HT

USE NOTES: 1,4  
 1. Legend and border shall be direct applied non-reflective sheeting.  
 2. Legend and border shall be direct applied Type I reflective sheeting.  
 3. Shields shall be Type III reflective sheeting on 0.032" aluminum and demountable.  
 4. Background shall be Type III reflective sheeting.  
 5. Background shall be Type I reflective sheeting.  
 6. Center arrow(s) vertically on sign.

Letter spacings are to start of next letter											Series/Size
											Text Length
	H	U	N	T	D	A	L	E			C6
	7.3	4.5	4.5	4.3	4	4.3	4.8	4	3	7.3	33.5
	R	O	A	D							C6
	15.6	4.3	4.5	4.8	3.3	15.6					16.8

Spacing Factor is 1 unless specified otherwise  
 FILENAME: G540\_ENGL



INSET B

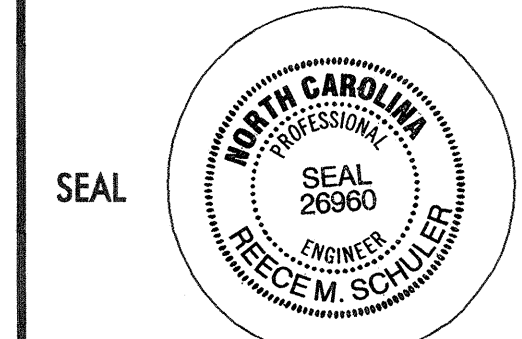
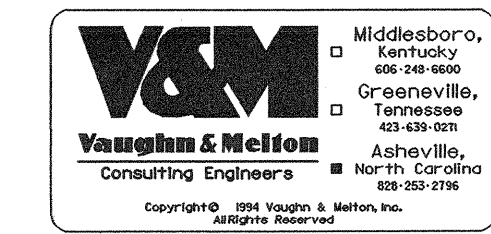
NOTE: ALL DETOUR SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE NOTED.  
 FINAL DETERMINATION OF ARROW DIRECTION IS TO BE DONE IN THE FIELD.  
 \* SEE ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9 FOR TYPE III BARRICADE LOCATIONS, ADDITIONAL SIGNS MOUNTED ON TYPE III BARRICADES, AND ADDITIONAL WORK ZONE SIGNS.

MAP LEGEND

STATE ROADS	—
NORTH TOE RIVER	— — —

100% TCP SUBMITTAL

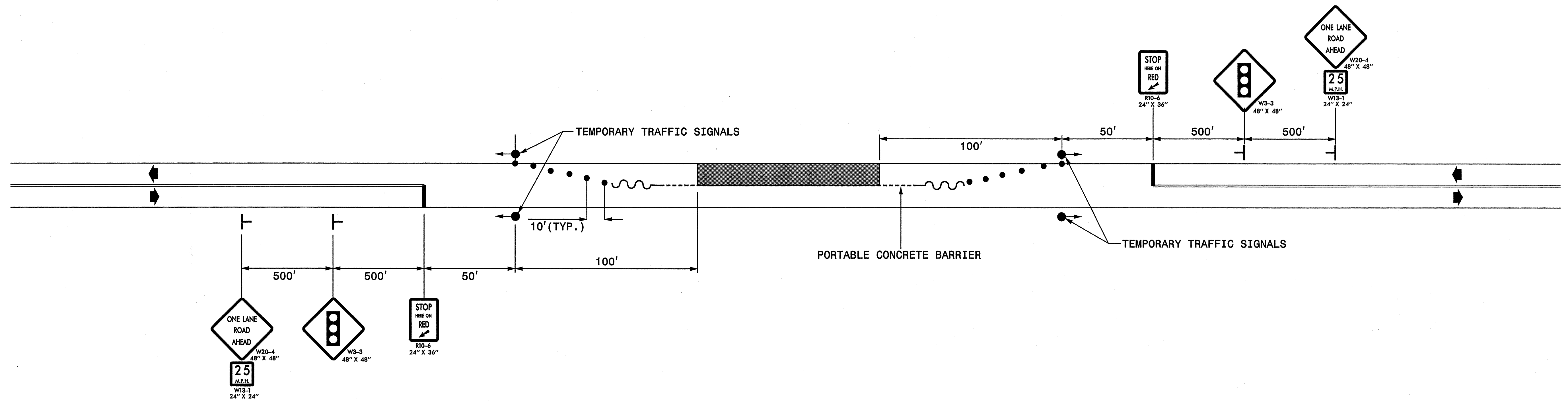
APPROVED: *[Signature]* DATE: 3/16/04



OFF-SITE DETOUR 2 SIGNING

SCALE: NONE		REVISIONS
DATE: MAR04		
DWG. BY: SCS		
DESIGN BY: RMS		
REVIEWED BY: JAC		CADD FILE: B2848TCP07.DGN

\$\$\$\$\$ SYSTEM TIME \$\$\$  
 \$\$\$ SERVER NAME \$\$\$



NOTES:

1. ADVISORY SPEED PANEL (25 MPH, SIGN W13-1) SHALL PORTRAY A SPEED AS DETERMINED BY THE ENGINEER.
2. REFER TO TRAFFIC CONTROL DETAIL DRAWINGS FOR PLACEMENT OF PAVEMENT MARKINGS.

100% TCP SUBMITTAL

APPROVED: *[Signature]* DATE: 2/14/05

SEAL

**North Carolina Professional Engineer**  
 SEAL 26960  
 REECE M. SCHULTE

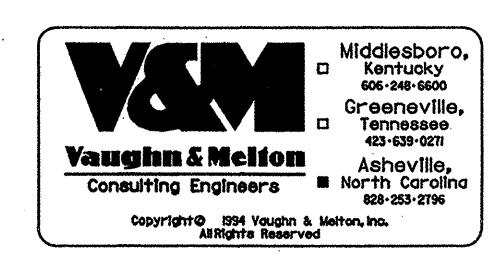
**DETAIL OF LANE CLOSURE USING TRAFFIC SIGNALS**

SCALE: NONE  
 DATE: MAR04  
 DWG. BY: SCS  
 DESIGN BY: RMS  
 REVIEWED BY: JAC

**REVISIONS**

NO.	DESCRIPTION

CADD FILE: B2848TCP08.DGN



\$\$\$\$\$ SYSTEM \$\$\$\$\$\$  
 \$\$\$\$\$\$ USERNAME \$\$\$\$\$\$



