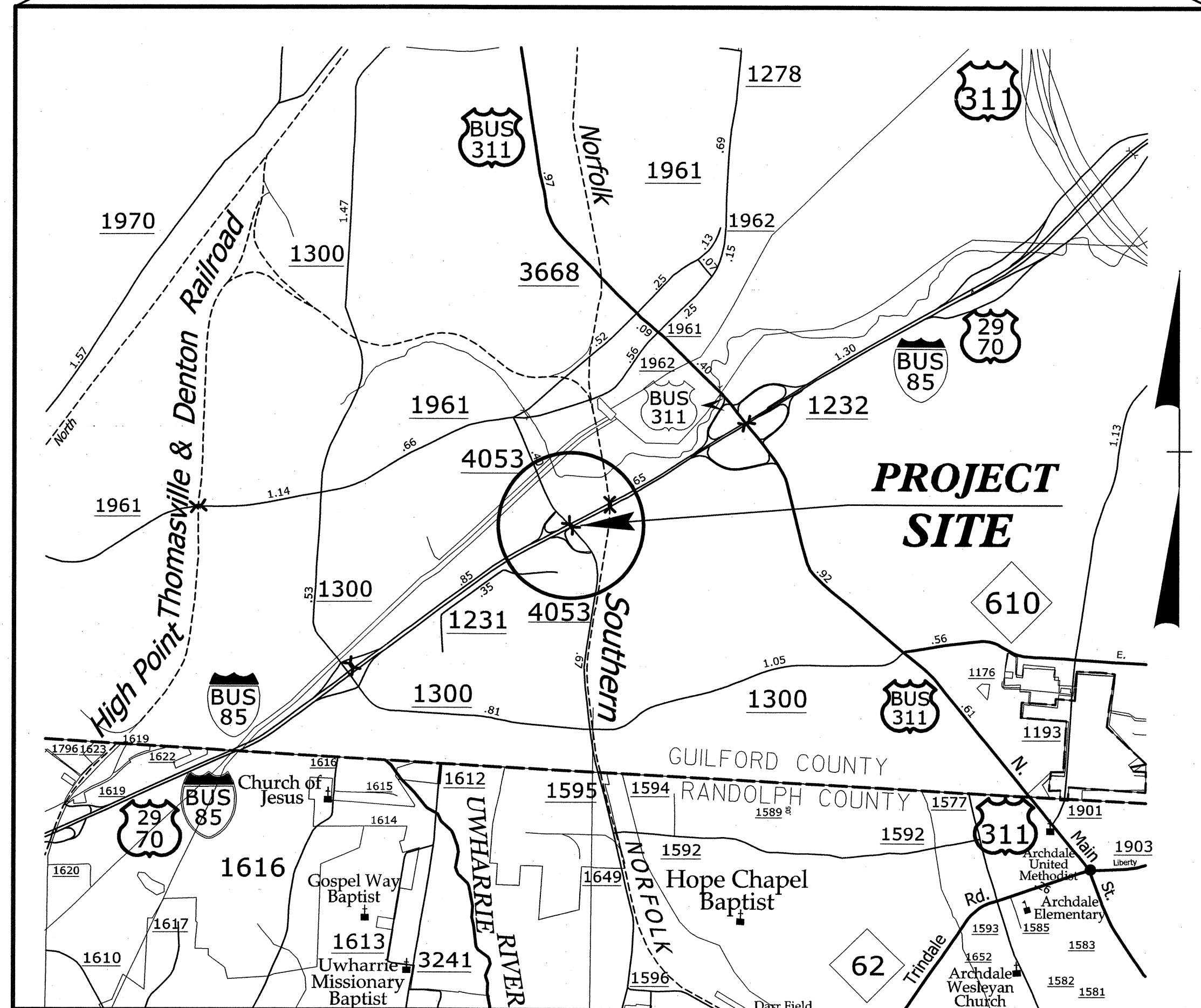
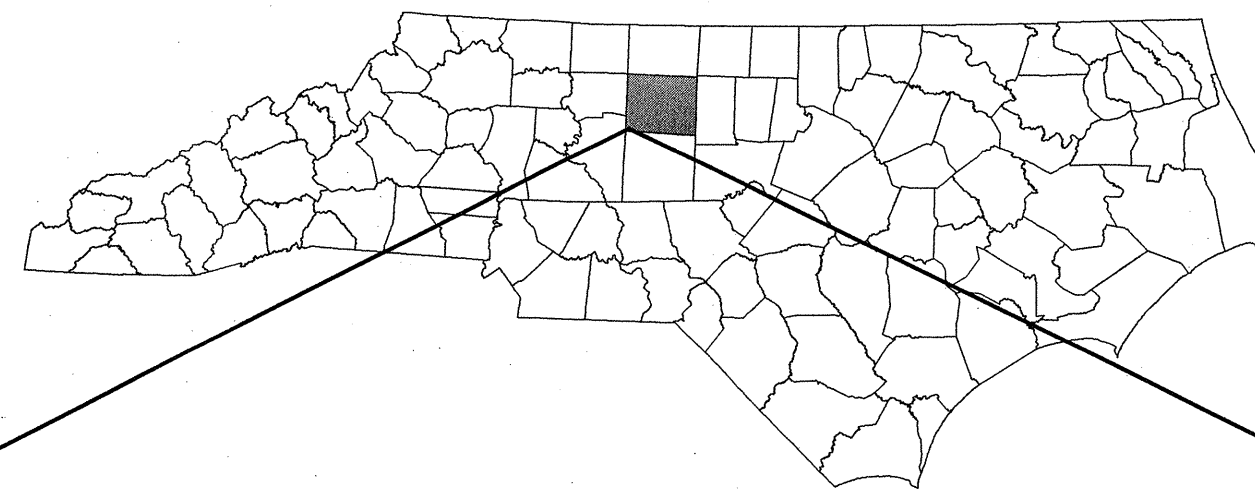


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

GUILFORD COUNTY



<u>INDEX OF SHEETS</u>	
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 & TMP-1C	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)
TMP-2	TEMPORARY SHORING DATA
TMP-2A	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2B	I-85 NORTHBOUND DETOUR
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TMP-2D	SR 4053/SURRETT ROAD (RAMP/LOOPB) DETOUR
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 & TMP-5	PHASE I DETAILS
TMP-6	PHASE I CUT SECTIONS
TMP-7 & TMP-8	PHASE II DETAILS
TMP-9	PHASE II CUT SECTIONS
SD-1	SPECIAL SIGN DESIGNS

SHEET NO.
TMP-1

B-4760

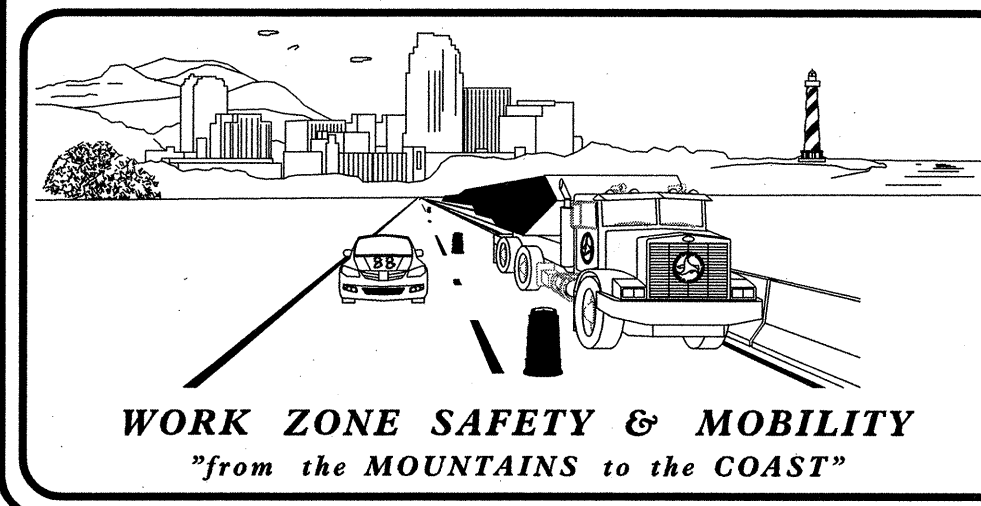
TIP PROJECT:

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

- R. B. EARLY, PE TRAFFIC CONTROL PROJECT ENGINEER
- R. B. EARLY, PE TRAFFIC CONTROL PROJECT DESIGN ENGINEER
- J. A. PHILLIPS TRAFFIC CONTROL DESIGN ENGINEER

APPROVED: *[Signature]*
DATE: *3-27-12*

SEAL



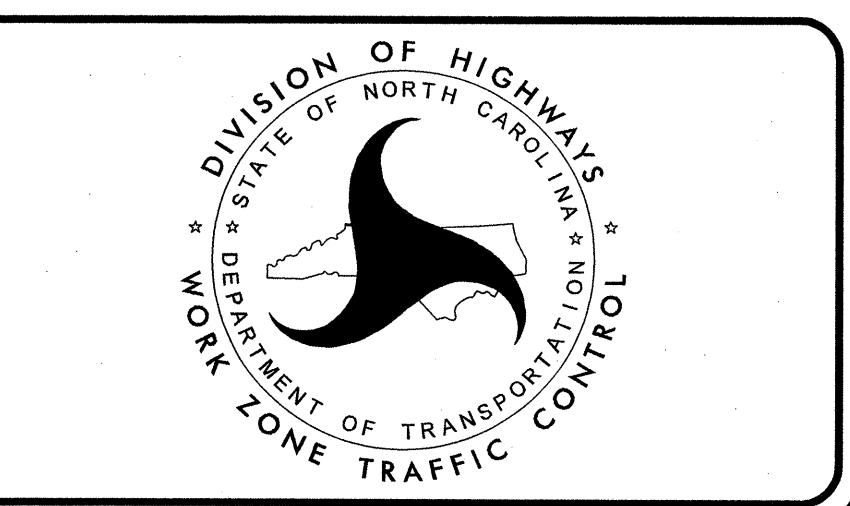
N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER

STEVE KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER

DAVID BISSETTE, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER

TRAFFIC CONTROL DESIGN ENGINEER



REVISIONS
QA/QC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

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:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE 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
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
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
- WEDGE / WIDEN (USING LANE CLOSURES)
- TEMPORARY PAVEMENT / GRADE

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

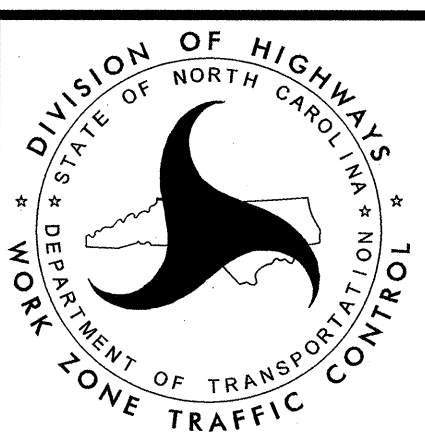
TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION	PAY ITEM
PA	WHITE EDGELINE	PAINT (4")
PD	YELLOW EDGELINE	
PE	WHITE SOLID LANE LINE	
PI	YELLOW DOUBLE CENTER LINE	PAINT (24")
P4	WHITE STOP BAR	

8/17/99
 REVISIONS
 QA/QC STAGE:
 REVIEW:
 CONCUR:
 REVISE:
 VERIFY:

HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

APPROVED: *[Signature]* DATE: 3-27-12
 SEAL



TRANSPORTATION
 MANAGEMENT PLAN
**ROADWAY STANDARD
 DRAWINGS & LEGENDS**

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 UNDESIRABLE 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.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
SURRETT DR.	MONDAY THRU FRIDAY 7:00 AM - 9:00 AM & 3:00 PM - 6:00 PM

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

ROAD NAME
SURRETT DR. US 29 / US 70 / I-85 BUSINESS
HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31ST TO 6:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN UNTIL 6:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 6:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 6:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- FOR SEMI-ANNUAL FURNITURE MARKET WEEK, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF THE FURNITURE MARKET AND 9:00 P.M. THE FOLLOWING SUNDAY AFTER THE FURNITURE MARKET WEEK.
APPROACHING MARKET DATES:

2012	2013	2014	2015
APR 21-26	APR 20-25	APR 5-10	APR 18-23
OCT 13-18	OCT 19-24	OCT 18-23	OCT 17-22
- FOR WYNDHAM PGA TOURNAMENT, BETWEEN THE HOURS OF 7:00 A.M. THE MONDAY BEFORE THE WEEK OF THE TOURNAMENT AND 6:00 P.M. THE FOLLOWING MONDAY AFTER THE TOURNAMENT. (TOURNAMENT DATES OCCUR IN MID AUGUST.)

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	OPERATION(S)
US 29 / US 70 / I-85 BUS	MONDAY - SUNDAY: 6:00 AM - 9:00 PM	OVERHEAD STRUCTURE WORK

LANE CLOSURE REQUIREMENTS

- D) 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.
- E) 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.
- F) 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.
- G) 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 REMAINS WITHIN THE CLOSED TRAVEL LANE.
- H) 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.
- I) DO NOT INSTALL MORE THAN ONE (1) SIMULTANEOUS LANE CLOSURE IN ANY ONE DIRECTION ON SURRETT DR.
- J) DO NOT INSTALL MORE THAN ONE (1) SIMULTANEOUS LANE CLOSURE IN ANY ONE DIRECTION ON I-85 BUS.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- K) 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.
- L) 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' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- N) 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.
- O) 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.

- P) 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.
- Q) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- R) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500' IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

- S) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY 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.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

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

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

- T) PROTECT THE APPROACH END OF MOVABLE/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.

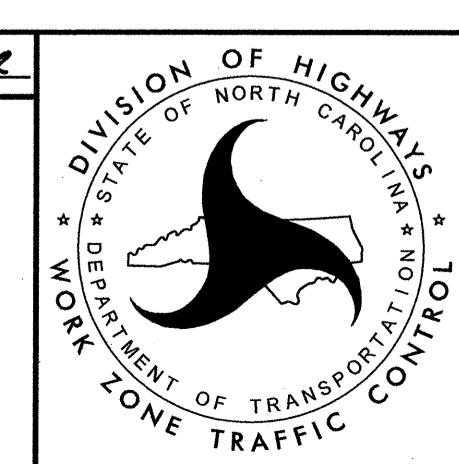
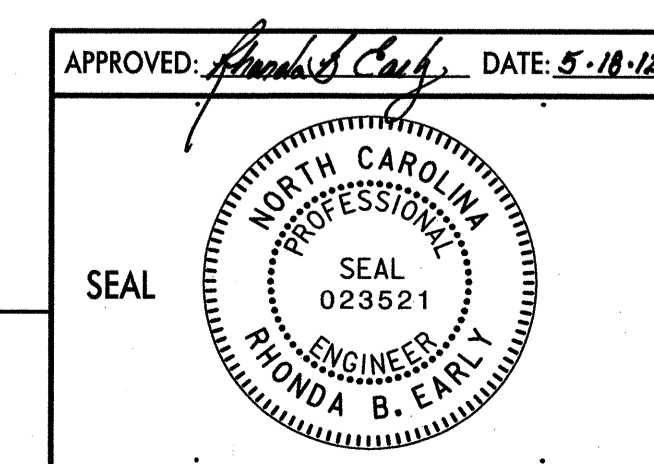
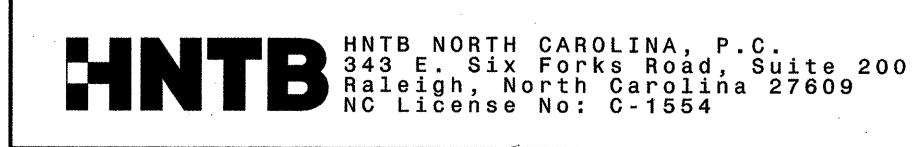
PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS:

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH OR HIGHER	30 FT

TRAFFIC CONTROL DEVICES

- U) 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 OPENED TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- V) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- W) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS) PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

8/17/99
 REVISIONS
 QA/QC STAGE:
 REVIEW:
 CONCUR:
 REVISE:
 VERIFY:



TRANSPORTATION
 MANAGEMENT PLAN
**TRANSPORTATION
 OPERATIONS
 PLAN**

GENERAL NOTES

PAVEMENT MARKINGS AND MARKERS

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

<u>ROAD NAME</u>	<u>MARKING</u>	<u>MARKER</u>
ALL ROADS	PAINT	TEMPORARY RAISED

Y) 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.

Z) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

AA) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

BB) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.

MISCELLANEOUS

CC) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER.

DD) USE STEEL PLATES TO COVER PARTIALLY CONSTRUCTED DRAINAGE STRUCTURES AND BACKFILL AROUND EXPOSED STRUCTURES SO THAT IT IS NOT A HAZARD TO THE MOTORIST OR PEDESTRIAN.

LOCAL NOTES

LN-1 PCB ALONG -EY2- (US 29 / US 70 / I-85 BUS):
 * MUST HAVE A MINIMUM OF 30 INCHES BETWEEN BARRIER AND HAZARD / DROP OFF OR BE ANCHORED BARRIER;
 * LENGTH OF NEED BASED USING A RUN OUT LENGTH OF 345';
 * FLARE RATE OF 16:1 ON APPROACH END.

LN-2 WORK ALONG OUTSIDE SHOULDER REQUIRING LANE CLOSURES CANNOT BE DONE DURING PHASE I, STEP 3 (WHILE PCB IS IN PLACE).

LN-3 COVER DETOUR SIGNS WHEN NOT IN USE. SAME SIGNS WILL BE NEEDED WHEN REMOVING EXISTING BRIDGE.

LN-4 DETOUR SIGNS USED IN THIS STEP WILL NOT BE REUSED AND MAY BE COVERED OR REMOVED.

MANAGEMENT STRATEGIES

THE OBJECTIVE OF THIS PROJECT IS TO REPLACE THE SURRETT DRIVE BRIDGE OVER I-85 BUSINESS BY RELOCATING SURRETT DRIVE AND CONSTRUCTING THE PROPOSED BRIDGE WHILE MAINTAINING TRAFFIC ON THE EXISTING STRUCTURE.


DURING PHASE I, PCB IS PLACED ALONG THE INSIDE LANES OF I-85 BUS TO CONSTRUCT MEDIAN BENT AND LANE CLOSURES ARE USED TO CONSTRUCT END BENTS. THEN THE PROPOSED BRIDGE AND LEFT SIDE (SURRETT RD) IMPROVEMENTS WILL BE COMPLETED. I-85 BUSINESS TRAFFIC WILL BE DETOURED DURING WEEK NIGHTS TO HANG STEEL. THE LAST STEP IS TO CLOSE SURRETT DR OVER A WEEKEND AND CONSTRUCT PROPOSED TIE AND SB I-85 BUS. RAMP ACCESS.

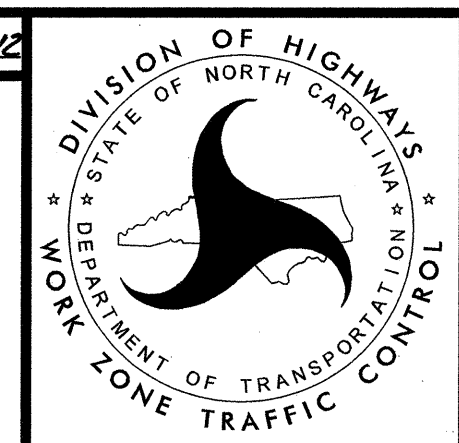
PHASE II BEGINS WITH THE TRAFFIC SHIFTED TO NEW LOCATION. AT THIS TIME THE REMAINDER OF WEDGING AND RIGHT SIDE IMPROVEMENTS ARE TO BE COMPLETED AND THE ABANDONED ROADWAY AND BRIDGE REMOVED. AGAIN, I-85 BUSINESS WILL BE CLOSED USING OFF-SITE DETOURS WHILE THE EXISTING BRIDGE IS REMOVED. ONCE THE WIDENING, WEDGING AND REMOVAL ARE COMPLETED, THE FINAL LAYER OF SURFACE COURSE AND MARKINGS WILL BE PLACED.

REVISIONS

SYSTEMS
 DESIGN
 ENGINEERING
 CONSTRUCTION
 MANAGEMENT
 Q/A/QC STAGE: _____
 REVIEW: _____
 CONCUR: _____
 REVISE: _____
 VERIFY: _____

HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

APPROVED: *[Signature]* DATE: 3-29-12
 SEAL




TRANSPORTATION
 MANAGEMENT PLAN
 TRANSPORTATION
 OPERATIONS
 PLAN

TEMPORARY SHORING NO.1

FOR TEMPORARY SHORING, AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DESIGN TEMPORARY SHORING FROM STATION 22+28, 35 FT. RIGHT OF -L- TO STATION 22+65, 35 FT. RT OF -L- FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 823 FT

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 22+28, 35 FT. RIGHT OF -L- TO STATION 22+65, 35 FT. RT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 22+28, 35 FT. RIGHT OF -L- TO STATION 22+65, 35 FT. RT OF -L- MAY NOT PENETRATE BELOW ELEVATION 828 FT. DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR THE TEMPORARY SHORING FROM STATION STATION 22+28, 35 FT. RIGHT OF -L- TO STATION 22+65, 35 FT. RT OF -L-.

AT THE CONTRACTORS OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 22+28, 35 FT. RIGHT OF -L- TO STATION 22+65, 35 FT. RT OF -L-. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO.2

FOR TEMPORARY SHORING, AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DESIGN TEMPORARY SHORING FROM STATION 24+23, 35 FT. RIGHT OF -L- TO STATION 24+61, 35 FT. RT OF -L- FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 820 FT

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 24+23, 35 FT. RIGHT OF -L- TO STATION 24+61, 35 FT. RT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 24+23, 35 FT. RIGHT OF -L- TO STATION 24+61, 35 FT. RT OF -L- MAY NOT PENETRATE BELOW ELEVATION 823 FT. DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR THE TEMPORARY SHORING FROM STATION 24+23, 35 FT. RIGHT OF -L- TO STATION 24+61, 35 FT. RT OF -L-.

AT THE CONTRACTORS OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 24+23, 35 FT. RIGHT OF -L- TO STATION 24+61, 35 FT. RT OF -L-. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO.3

FOR TEMPORARY SHORING, AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DESIGN TEMPORARY SHORING FROM STATION 11+46, 7 FT. RIGHT OF -EY2- TO STATION 12+24, 7 FT. RT OF -EY2- FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 827 FT

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS. LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 11+46, 7 FT. RIGHT OF -EY2- TO STATION 12+24, 7 FT. RT OF -EY2-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 11+46, 7 FT. RIGHT OF -EY2- TO STATION 12+24, 7 FT. RT OF -EY2- MAY NOT PENETRATE BELOW ELEVATION 800 FT. DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR THE TEMPORARY SHORING FROM STATION 11+46, 7 FT. RIGHT OF -EY2- TO STATION 12+24, 7 FT. RT OF -EY2-.

AT THE CONTRACTORS OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 11+46, 7 FT. RIGHT OF -EY2- TO STATION 12+24, 7 FT. RT OF -EY2-. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO.4

FOR TEMPORARY SHORING, AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DESIGN TEMPORARY SHORING FROM STATION 11+46, 7 FT. LEFT OF -EY2- TO STATION 12+24, 7 FT. LEFT OF -EY2- FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 827 FT

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

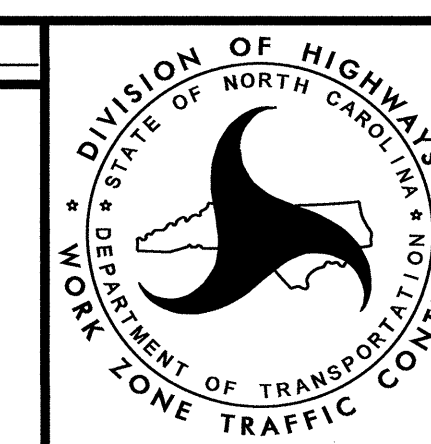
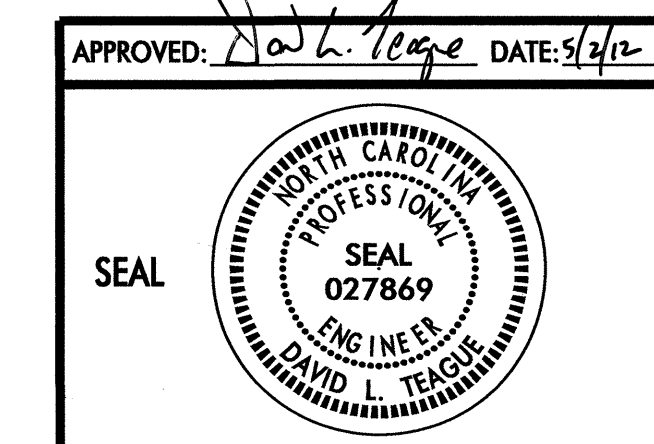
LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 11+46, 7 FT. LEFT OF -EY2- TO STATION 12+24, 7 FT. LEFT OF -EY2-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 11+46, 7 FT. LEFT OF -EY2- TO STATION 12+24, 7 FT. LEFT OF -EY2- MAY NOT PENETRATE BELOW ELEVATION 800 FT. DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR THE TEMPORARY SHORING FROM STATION 11+46, 7 FT. LEFT OF -EY2- TO STATION 12+24, 7 FT. LEFT OF -EY2-.

AT THE CONTRACTORS OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 11+46, 7 FT. LEFT OF -EY2- TO STATION 12+24, 7 FT. LEFT OF -EY2-. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

24-APR-2012 13:27
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 gndisse\trai-AT-1E24360L



TEMPORARY SHORING DATA

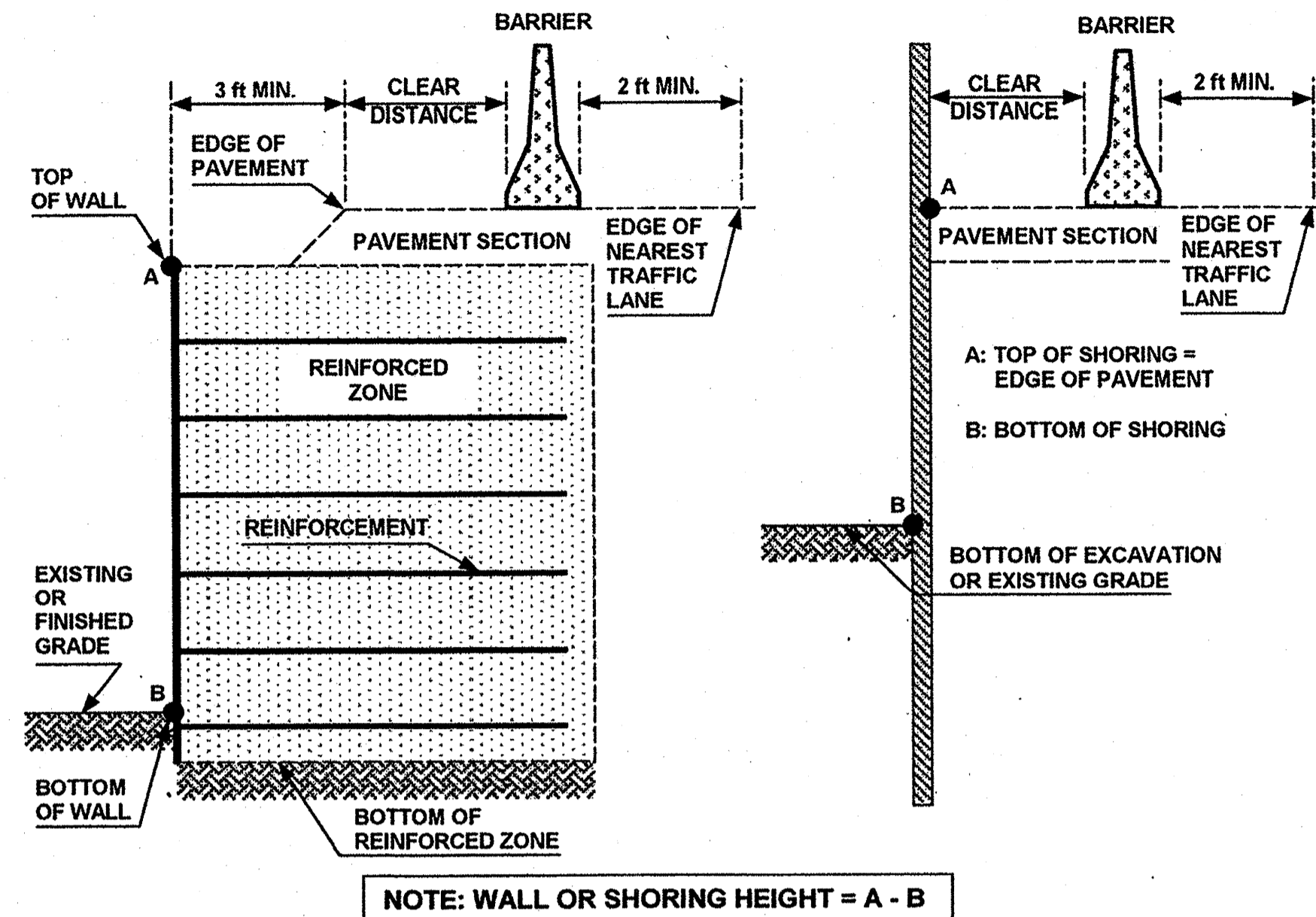


FIGURE A

NOTES

- REFER TO THE TRAFFIC CONTROL PLANS FOR SHORING LOCATIONS AND SOIL PARAMETERS.
- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR MORE INFORMATION ABOUT TEMPORARY SHORING, MEASUREMENT AND PAYMENT.
- PROVIDE PORTABLE CONCRETE BARRIER TO PROTECT TEMPORARY SHORING IF SHORING IS LOCATED WITHIN THE CLEAR ZONE AS DEFINED IN THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED PCB, ANCHORED PCB OR AN OREGON BARRIER FROM THE TABLE SHOWN IN FIGURE B. FOR TRAFFIC LANES AND PORTABLE CONCRETE BARRIER LOCATED ABOVE AND BEHIND TEMPORARY SHORING, THE FOLLOWING ARE DEFINED AS:

CLEAR DISTANCE - HORIZONTAL DISTANCE FROM THE BACK FACE OF THE BARRIER TO THE EDGE OF PAVEMENT FOR TEMPORARY MSE WALL OR TO THE FACE OF NON-ANCHORED TEMPORARY SHORING AS SHOWN IN FIGURE A.

OFFSET - HORIZONTAL DISTANCE FROM THE FRONT FACE OF THE BARRIER TO CENTERLINE OF THE FURTHEST TRAFFIC LANE AS SHOWN IN FIGURE B FOR 3 TRAFFIC LANES.
- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET AN UNANCHORED PCB AGAINST THE TRAFFIC SIDE OF THE SHORING AND DESIGN SHORING FOR TRAFFIC IMPACT OR USE THE "SURCHARGE CASE WITH TRAFFIC IMPACT" FOR THE STANDARD TEMPORARY SHORING. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- USE OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH DETAIL DRAWING AND SPECIAL PROVISION OBTAINED FROM: WORK ZONE TRAFFIC CONTROL UNIT WEB PAGE.
- UNLESS NOTED OTHERWISE ON THE PLANS, SET PORTABLE CONCRETE BARRIER WITH A MINIMUM DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A.
- FOR PORTABLE CONCRETE BARRIER ABOVE AND BEHIND TEMPORARY MSE WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.
- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200' IN LENGTH AND WET OR DRY PAVEMENT.

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
	>56	32	36	42	45	47	51	
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
50-56		26	26	28	32	35	38	
>56	26	27	29	32	36	38		
Anchored PCB or Oregon Barrier	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB or Oregon Barrier	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

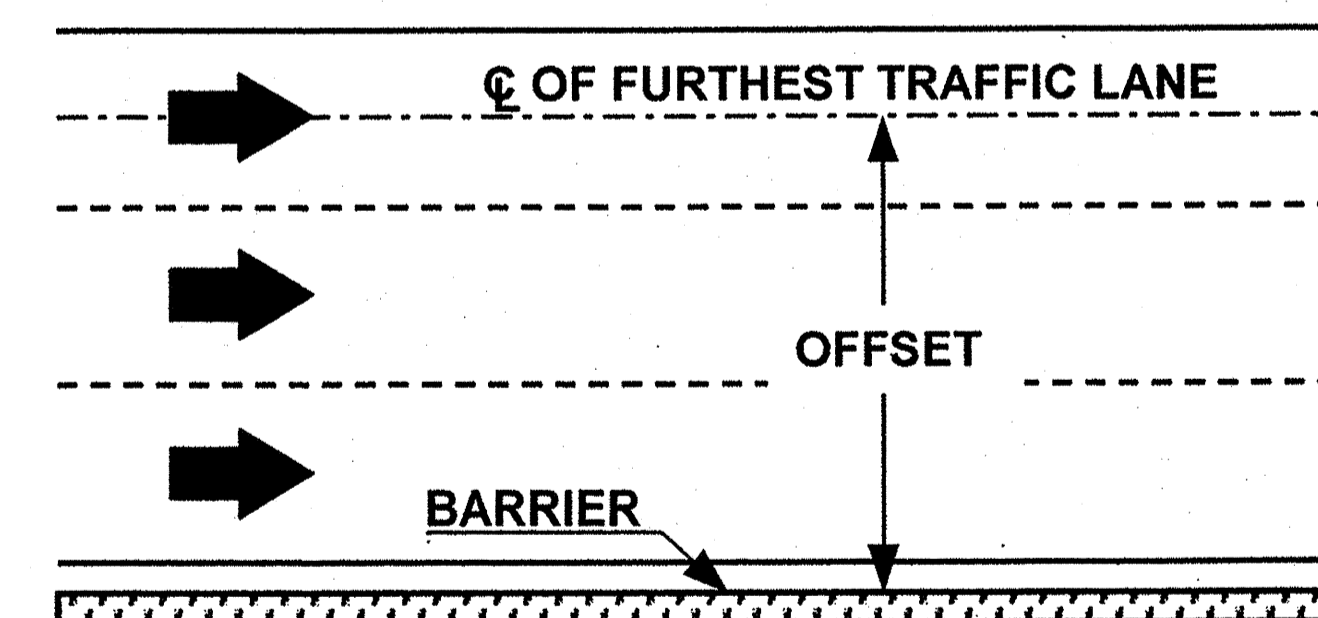
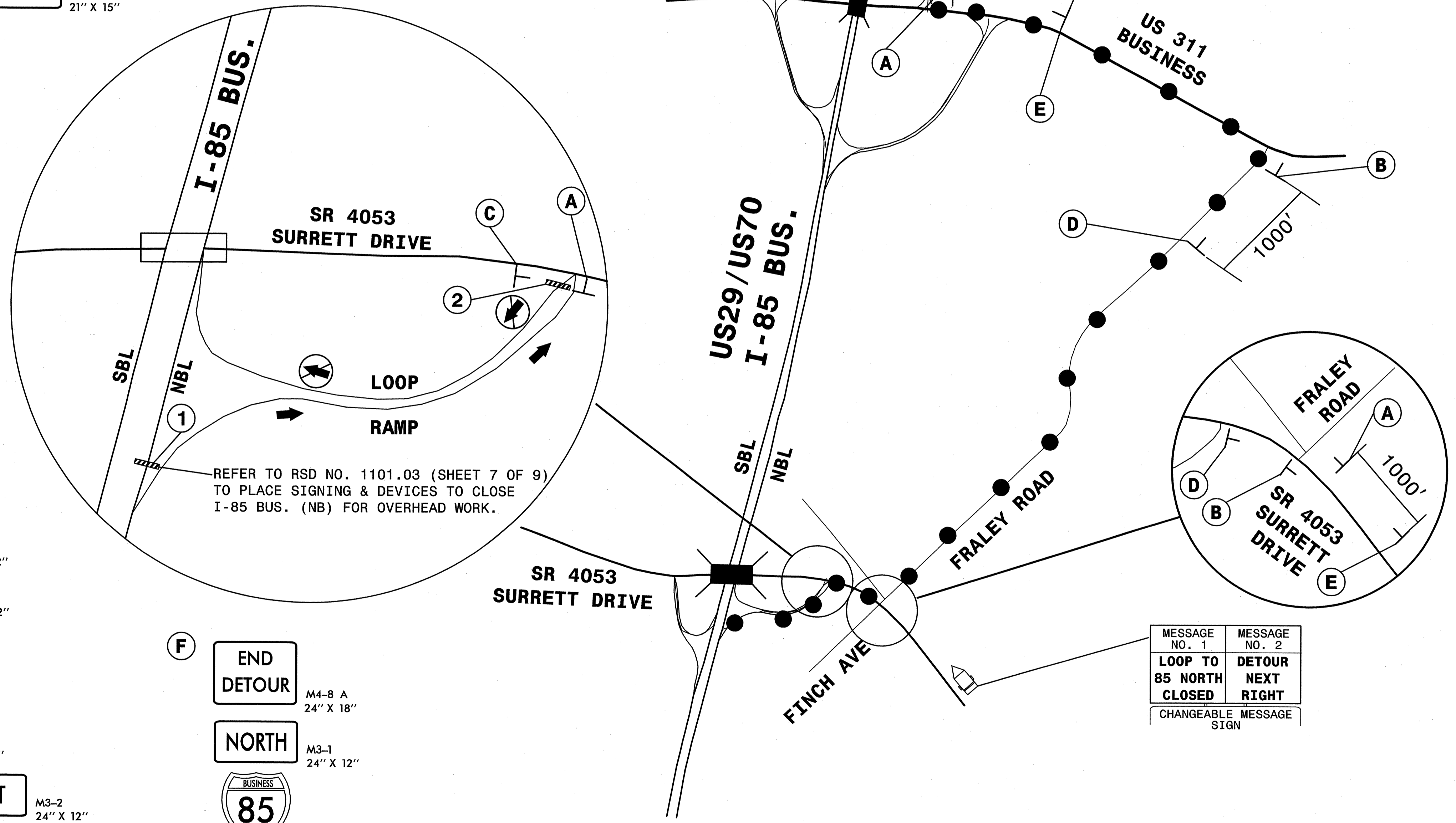
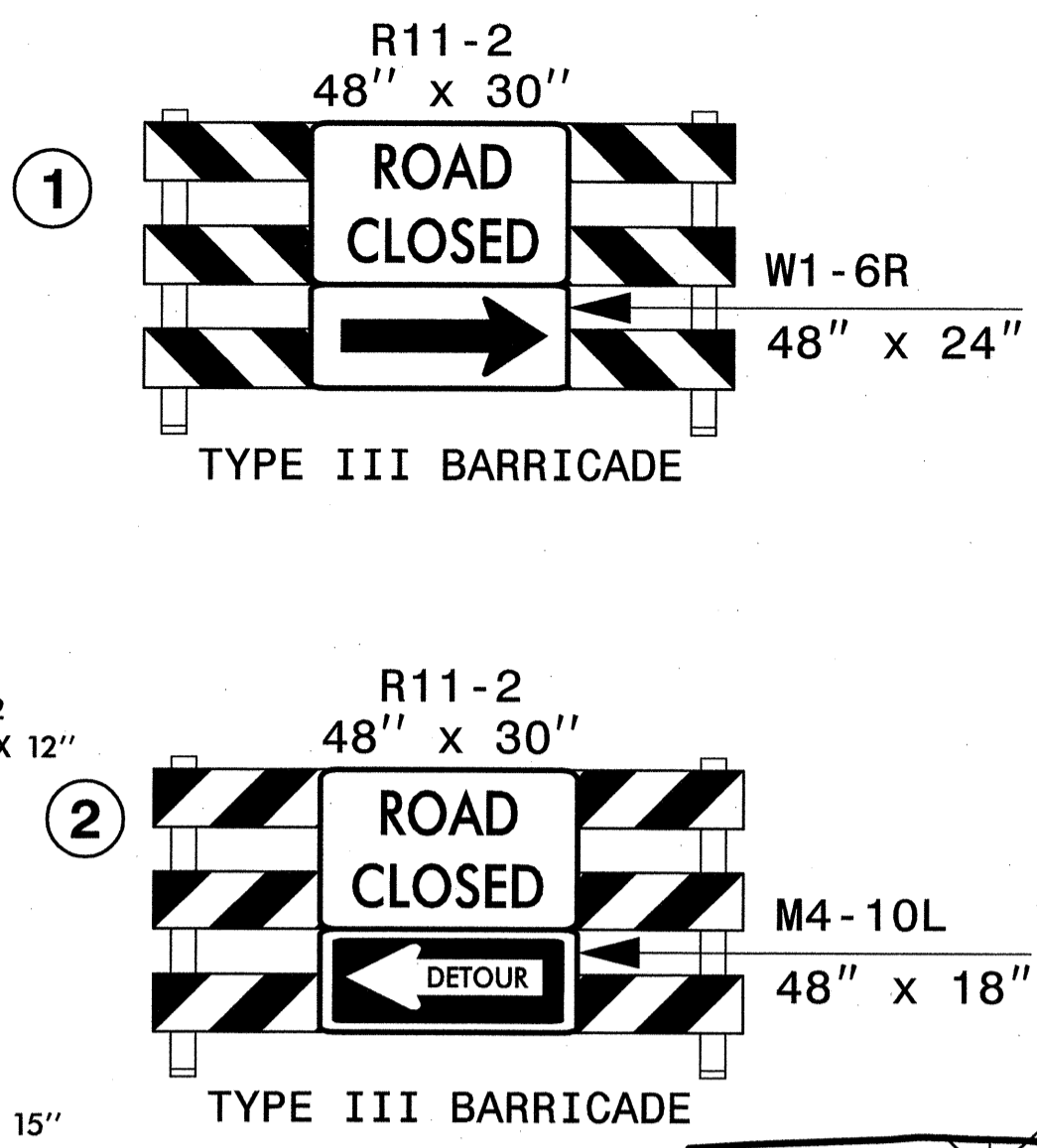
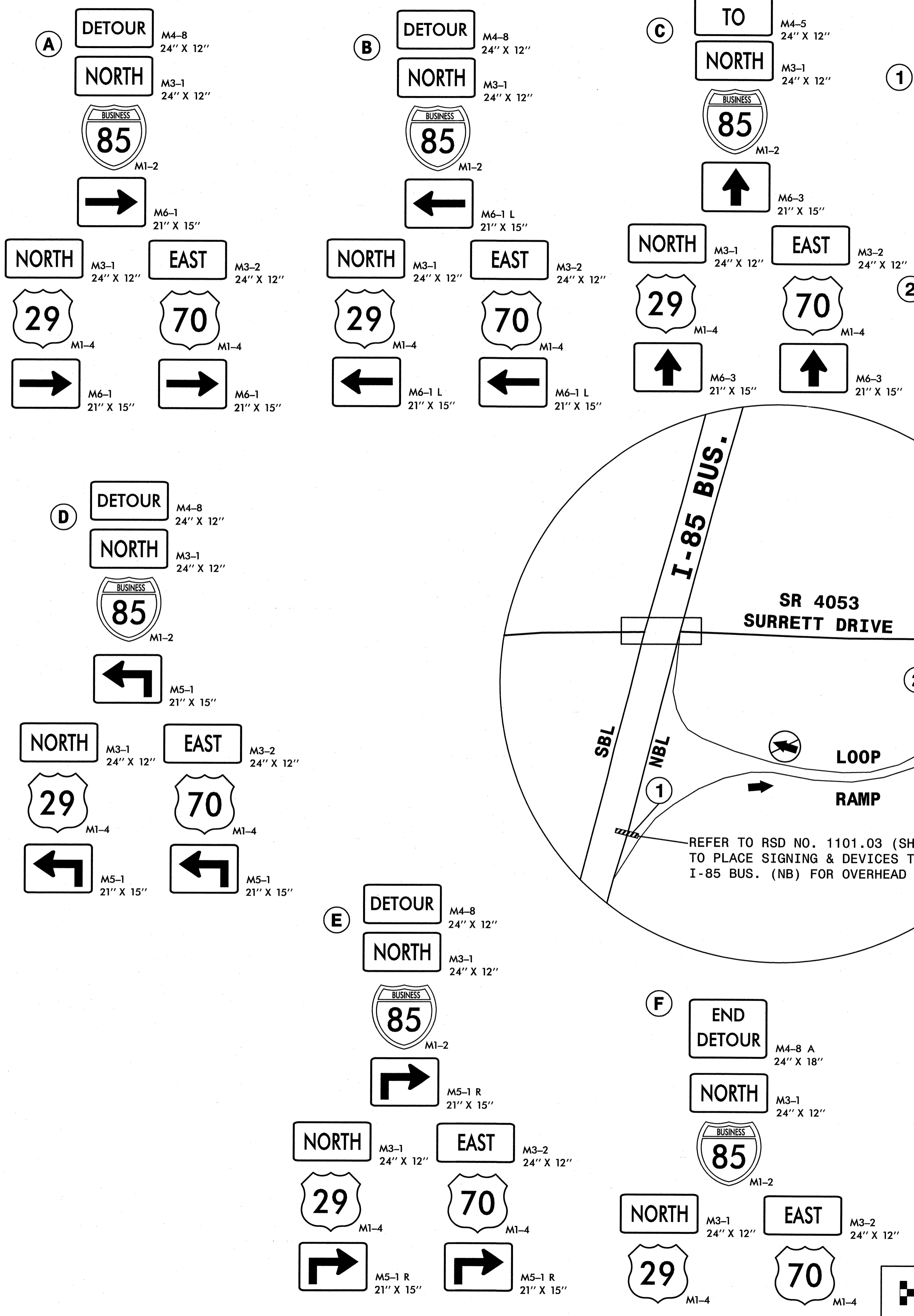


FIGURE B

APPROVED: _____ DATE: _____			PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

8/17/99



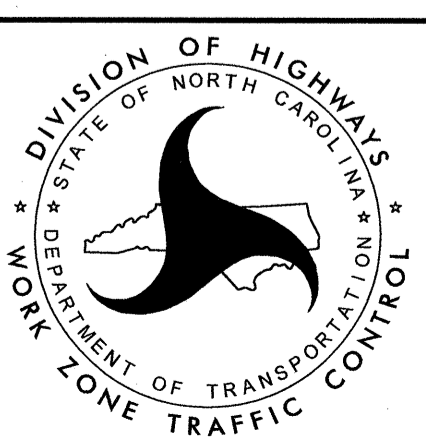
MESSAGE NO. 1	MESSAGE NO. 2
LOOP TO 85 NORTH CLOSED	DETOUR NEXT RIGHT
CHANGEABLE MESSAGE SIGN	

REVISIONS

QAGC STAGE: _____
 REVIEW: _____
 CONCUR: _____
 REVISE: _____
 VERIFY: _____

APPROVED: *Phonda B. Early* DATE: 6-18-12

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 PHONDA B. EARLY
 023521

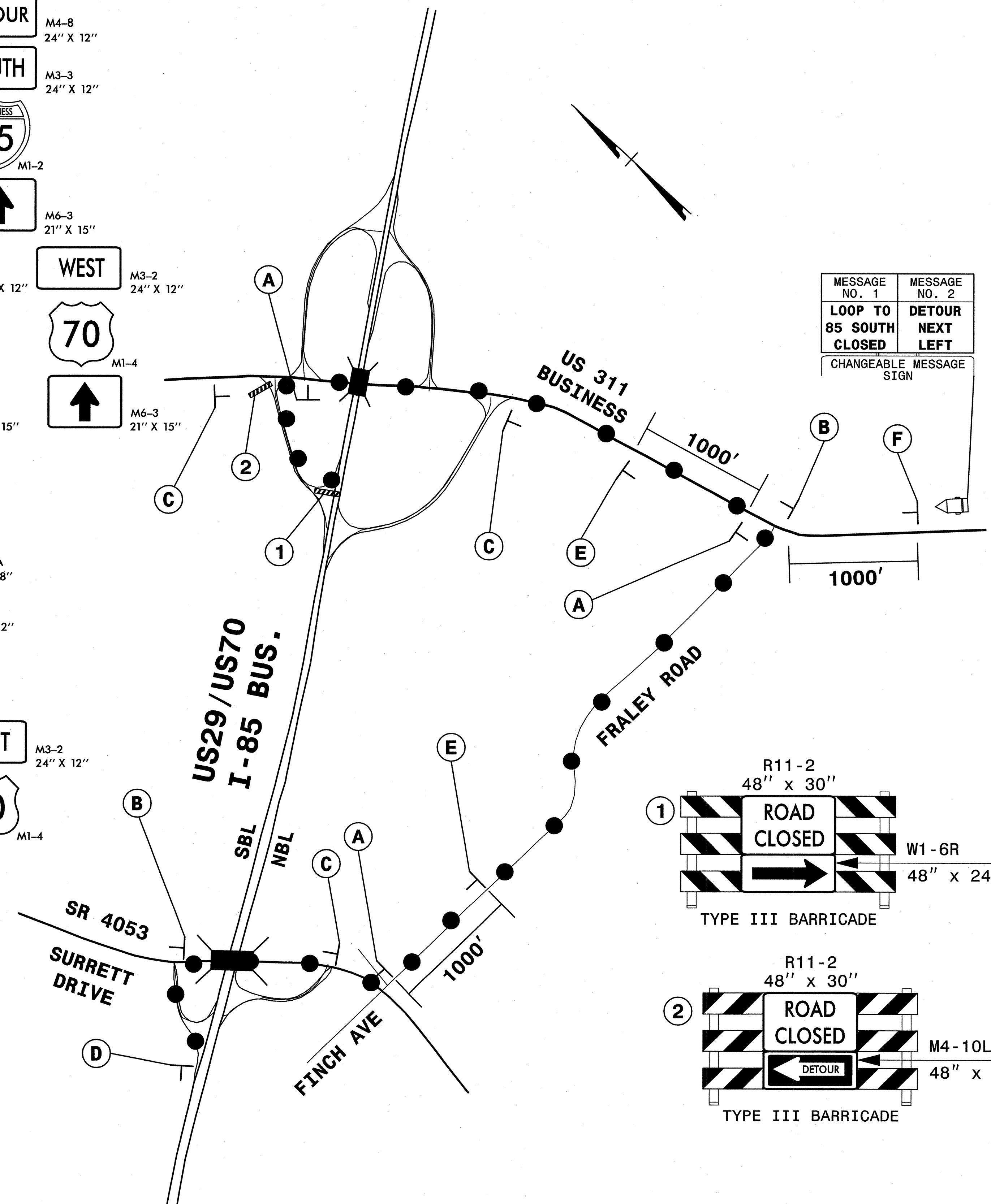
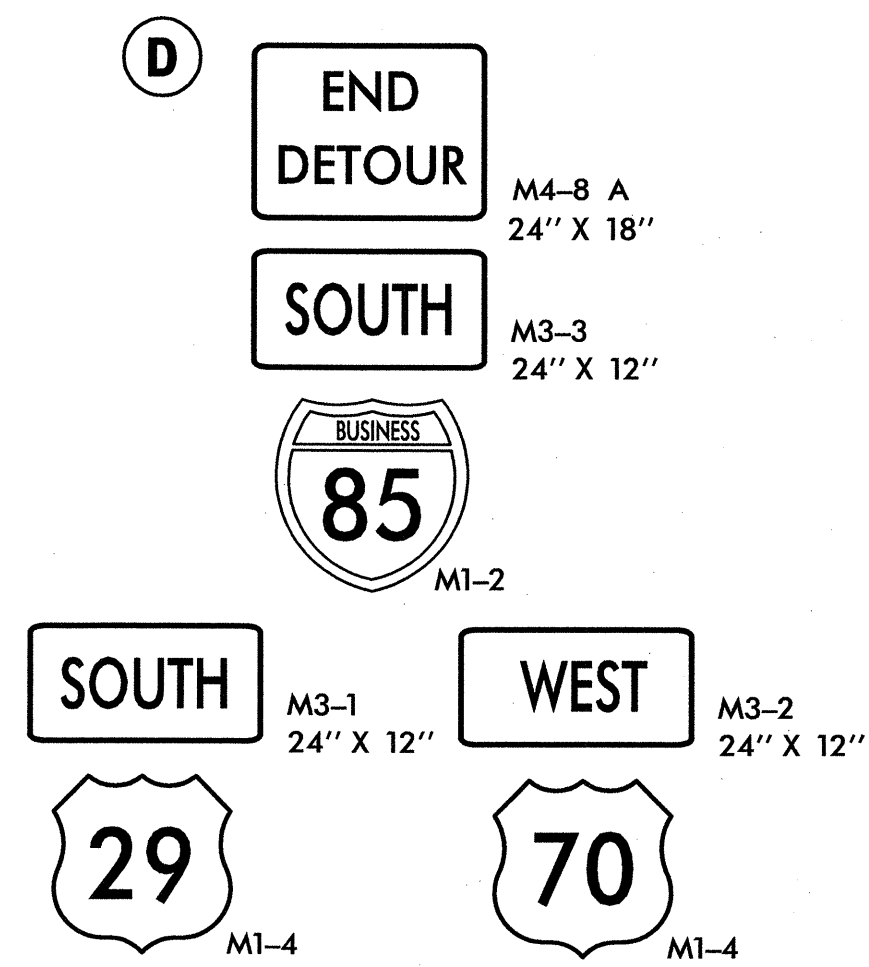
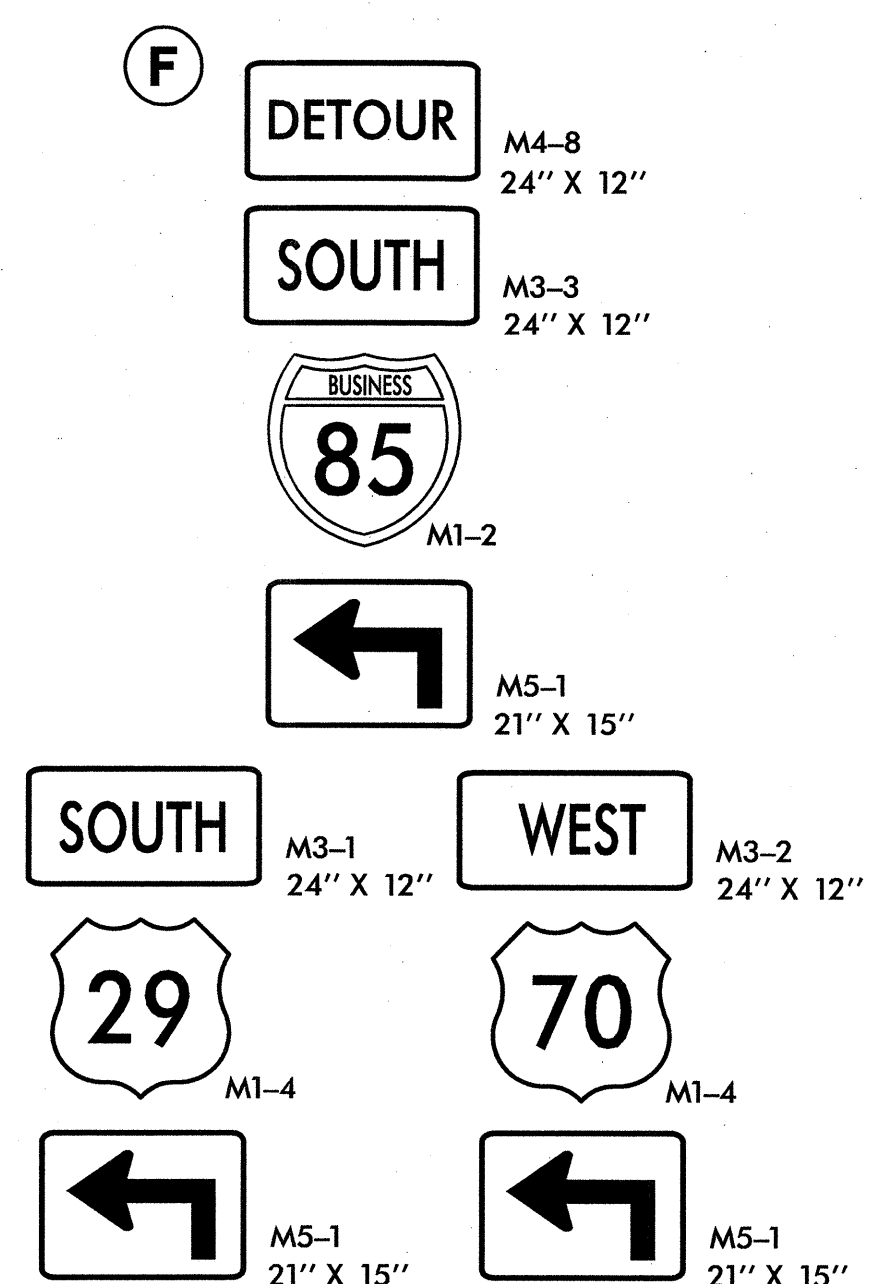
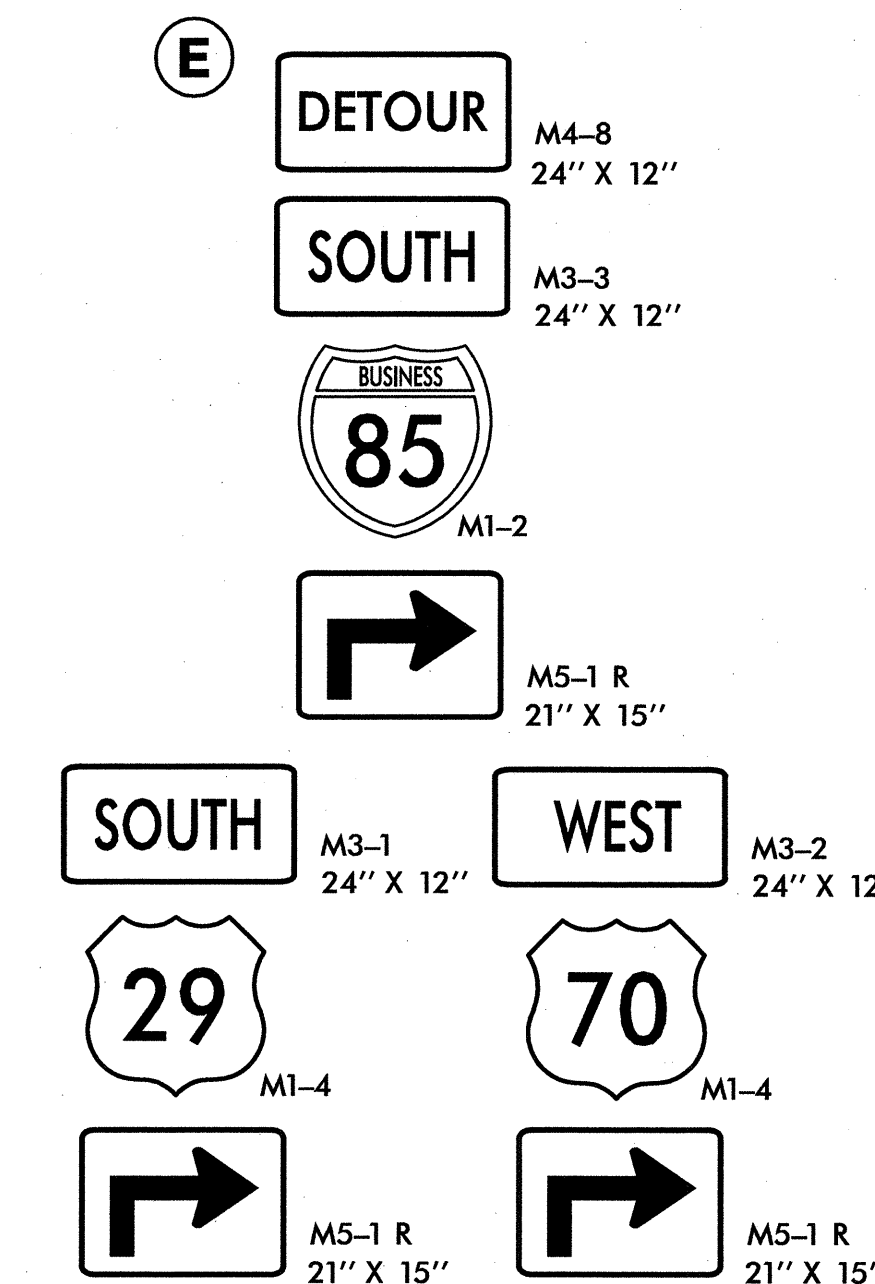
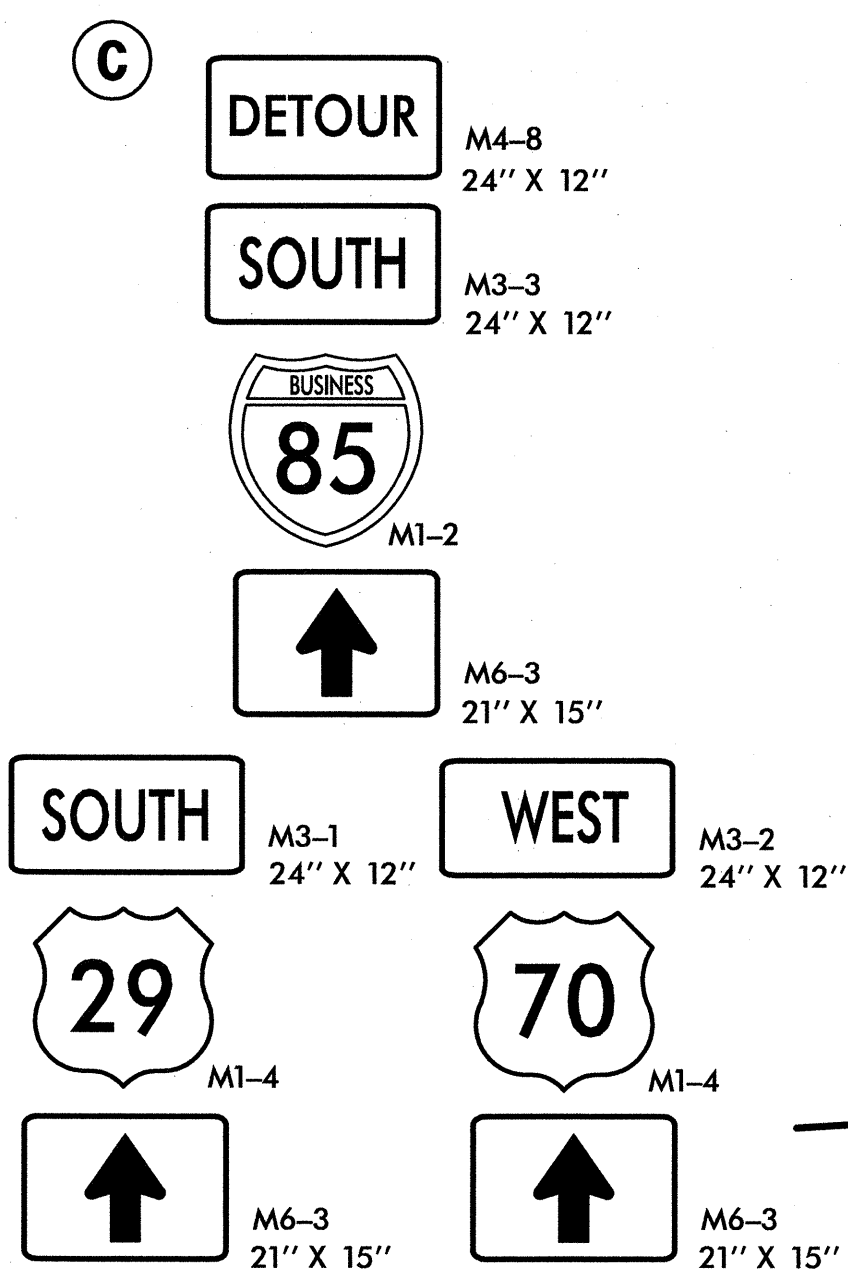
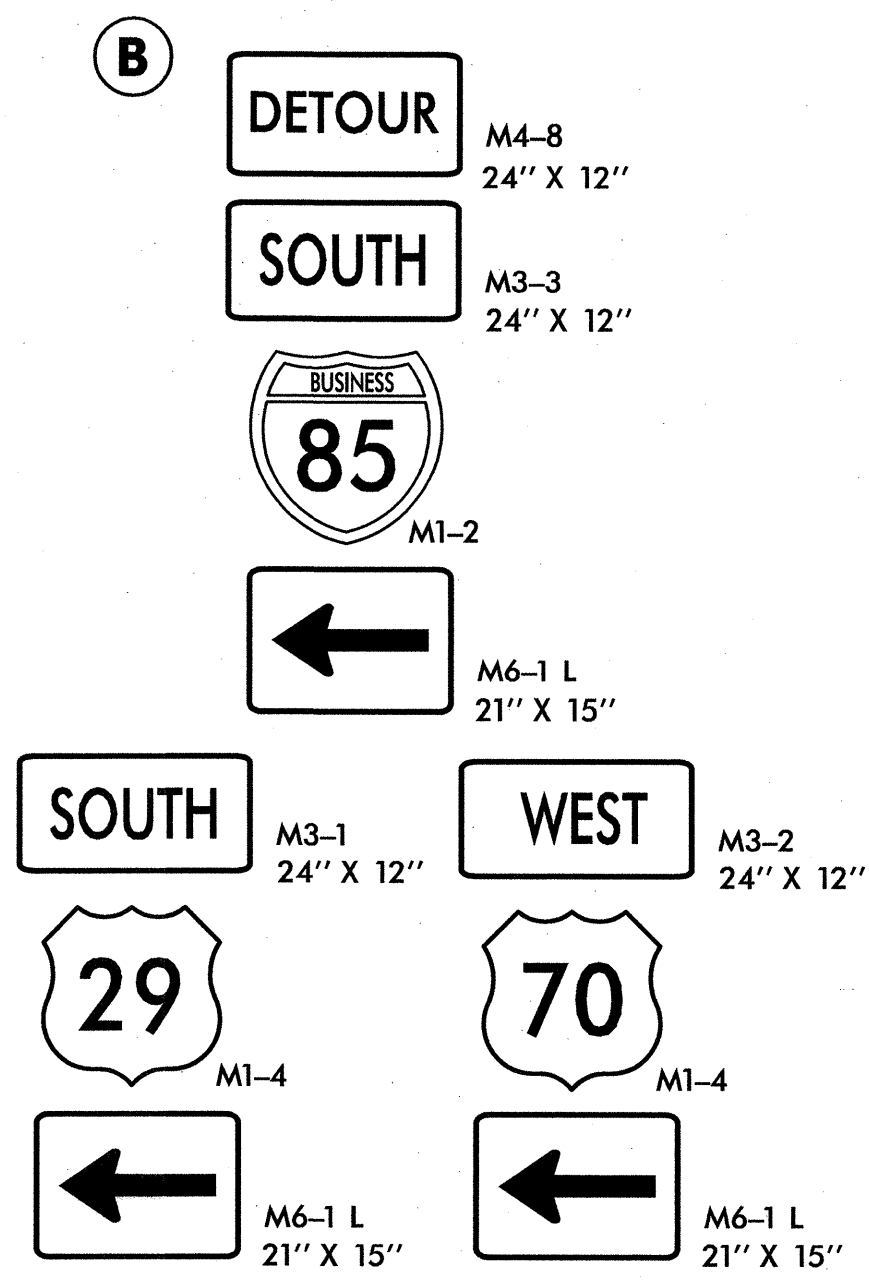
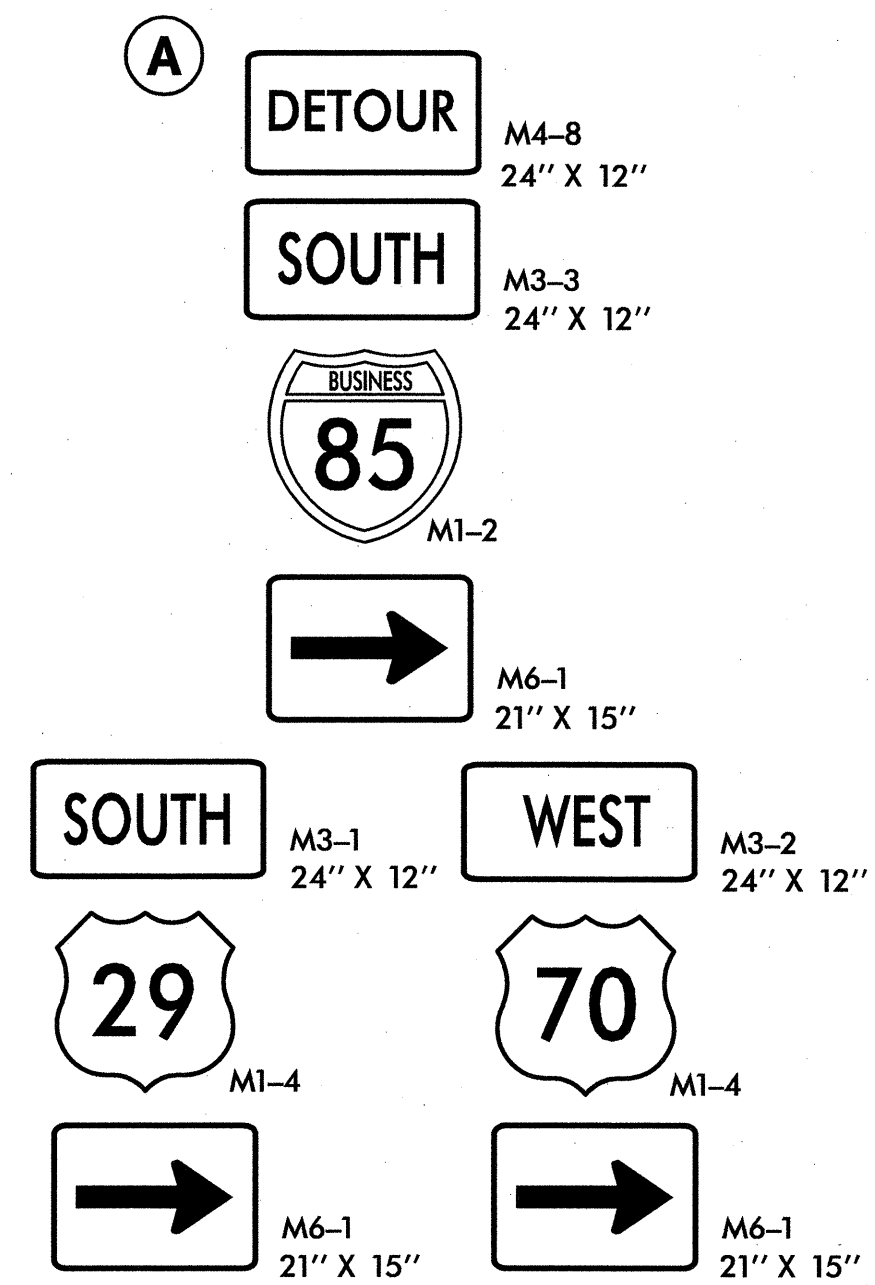


TRANSPORTATION MANAGEMENT PLAN

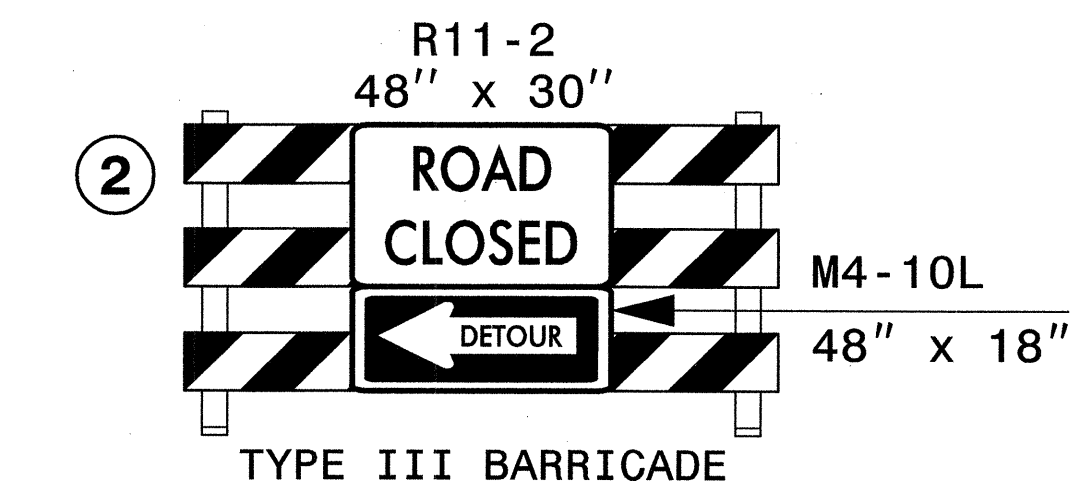
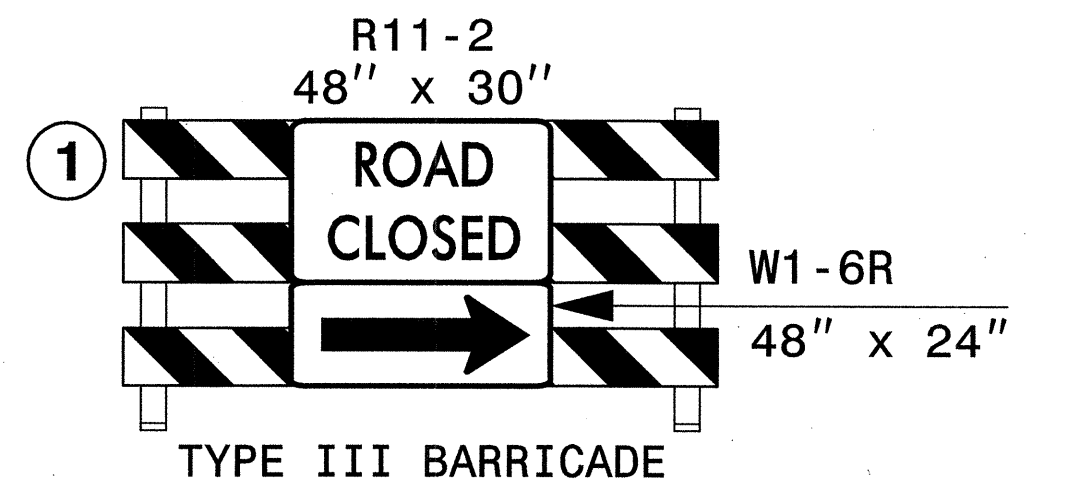
I-85 NORTHBOUND DETOUR

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 HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

8/17/99



MESSAGE NO. 1	MESSAGE NO. 2
LOOP TO 85 SOUTH CLOSED	DETOUR NEXT LEFT
CHANGEABLE MESSAGE SIGN	

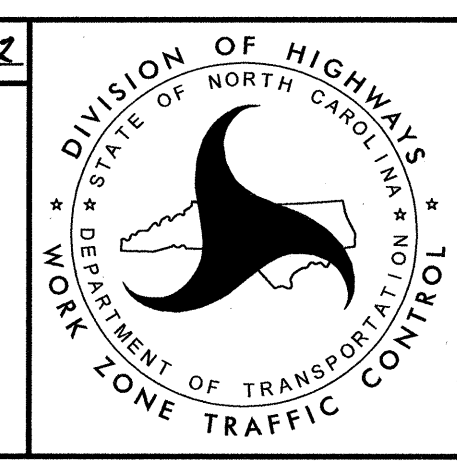
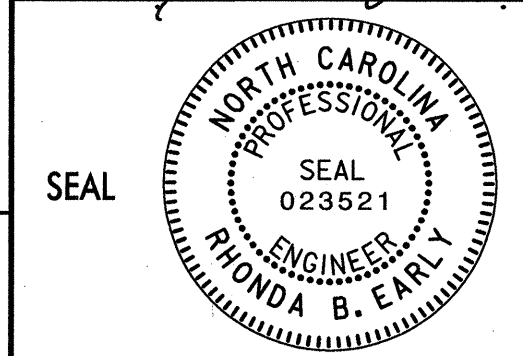


REFER TO ROADWAY STANDARD DRAWING NO. 1101.03 (SHEET 7 OF 9) TO PLACE SIGNING FOR I-85 BUS. (SB) CLOSURE TO HANG STEEL.

REVISIONS

QA/QC STAGE: _____
 REVIEW: _____
 CONCUR: _____
 REVISE: _____
 VERIFY: _____

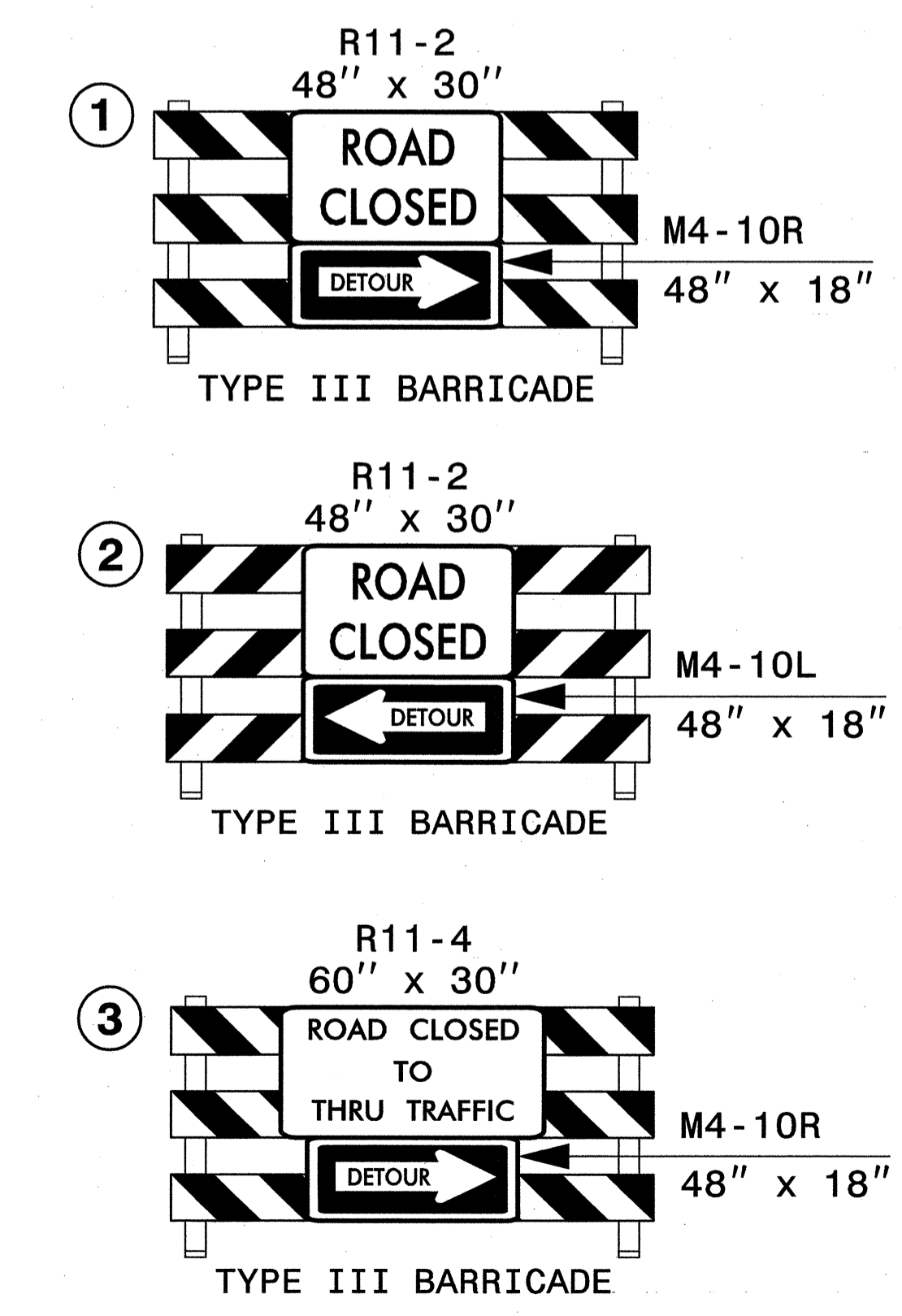
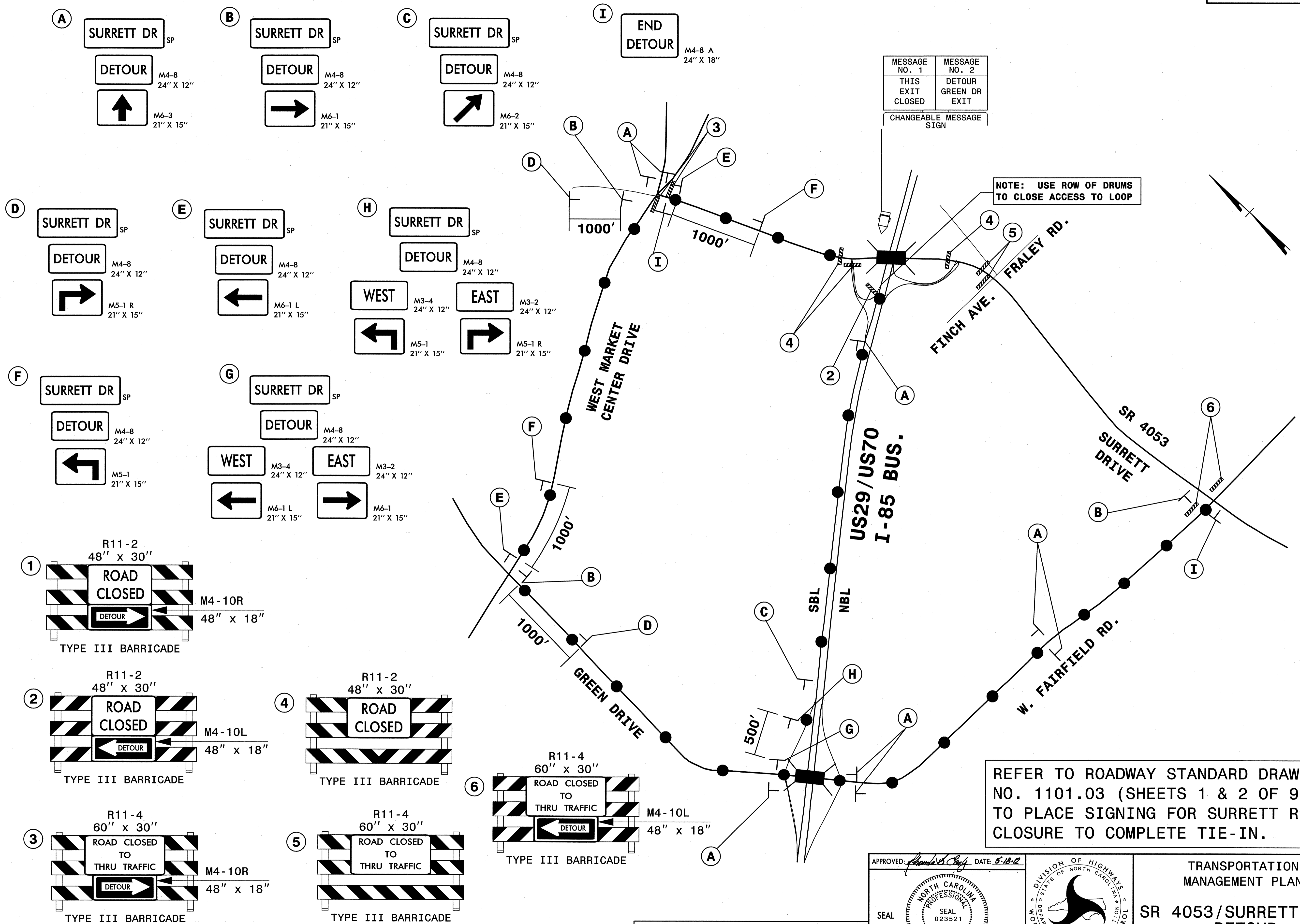
APPROVED: *[Signature]* DATE: 5-18-12



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 Raleigh, North Carolina 27609
 NC License No: C-1554

TRANSPORTATION MANAGEMENT PLAN
 I-85 SOUTHBOUND DETOUR

8/17/99



MESSAGE NO. 1	MESSAGE NO. 2
THIS EXIT CLOSED	DETOUR GREEN DR EXIT
CHANGEABLE MESSAGE SIGN	

NOTE: USE ROW OF DRUMS TO CLOSE ACCESS TO LOOP

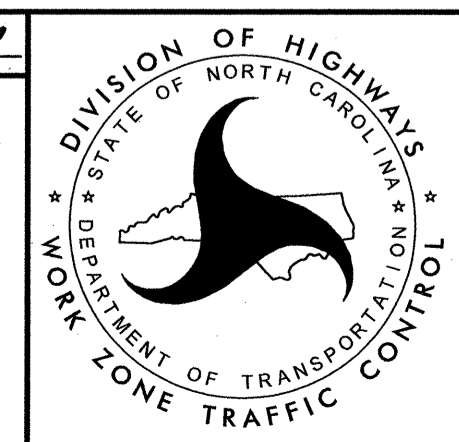
REFER TO ROADWAY STANDARD DRAWING NO. 1101.03 (SHEETS 1 & 2 OF 9) TO PLACE SIGNING FOR SURRETT RD CLOSURE TO COMPLETE TIE-IN.

REVISIONS

QA/QC STAGE: REVIEW: CONCUR: REVISE: VERIFY:

HNTB HNTB NORTH CAROLINA, P.C. 343 E. SIX FORKS ROAD, SUITE 200 RALEIGH, NORTH CAROLINA 27609 NC LICENSE NO. C-1554

APPROVED: *[Signature]* DATE: 5-10-02
 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER PHONDA B. EARLY 023521



TRANSPORTATION MANAGEMENT PLAN
 SR 4053/SURRETT ROAD DETOUR

PHASING

NOTES:

REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES AND BUSINESSES DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

COMPLETE ANY PROPOSED WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE. THIS MAY REQUIRE A COMBINATION OF INSTALLATION OF PROPOSED PIPES, TEMPORARY PIPES, STEEL PLATES, AND TEMPORARY MEDIAN AND OUTSIDE DITCHES.

PAVE PROPOSED CONSTRUCTION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, IN ALL PHASES UNTIL STATED TO INSTALL FINAL LAYER IN THE PHASING.

PHASE I (SEE SHEETS TMP-4 THRU TMP-6)

STEP 1:

INSTALL DETOUR SIGNING AS SHOWN ON SHEETS TMP-2B AND TMP-2C. SIGNS ARE TO BE UNCOVERED ONLY WHEN DETOUR IS ACTIVE.

STEP 2:

INSTALL TEMPORARY SHORING #1 & #2, USING RSD 1101.02 (SHEET 1 OF 15) AS NEEDED. BEGIN CONSTRUCTION PROPOSED BRIDGE END BENTS. (LN-2,3)

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -L- FROM STA 19+65+/- TO STA 22+55+/- AND FROM STA 24+51+/- TO STA 25+00+/-.

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF THE FOLLOWING AS SHOWN ON SHEETS TMP-4 & TMP-5 USING TEMPORARY SLOPES, DRAINAGE AND DITCHES:
 * -L- FROM STA 18+50+/- TO STA 19+65+/-
 * -L- FROM STA 25+00+/- TO STA 27+50+/-

COMPLETE THE REQUIREMENTS OF PHASE I, STEP 3 IN 28 CONSECUTIVE DAYS. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.) (LN-1, 2)

STEP 3:

A) USING RSD 1101.02 (SHEET 3 OF 15), PLACE PCB WITH CRASH CUSHIONS CLOSING THE LEFT LANE OF -EY2- (I-85 BUS.) IN THE FOLLOWING LOCATIONS. (SEE TCP-5):
 * -EY2- (I-85 BUS.) NBL FROM STA 11+00+/- TO STA 15+06+/-
 * -EY2- (I-85 BUS.) SBL FROM STA 8+50+/- TO STA 13+00+/-

B) AWAY FROM TRAFFIC CONSTRUCT THE MEDIAN AREA FOOTING AND PIERS. TEMPORARY SHORING #3 AND #4 ARE REQUIRED FOR FOOTING EXCAVATION.

C) BEGIN CONSTRUCTION OF PROPOSED BRIDGE USING NIGHT-TIME OFF-SITE DETOURS (TMP-2B & TMP-2C) AND RSD 1101.03 (SHEET 7 OF 9) TO HANG STEEL OVER BUS. I-85. (LN-3)

C) REPAIR MEDIAN GUARDRAIL AND REMOVE PCB AND LANE CLOSURE.

STEP 4: USING RSD 1101.02 (SHEET 1 OF 15) AS NEEDED, WIDEN -L- FROM STA 27+50+/- TO STA 31+50+/- (LEFT SIDE). WEDGE EXISTING PAVEMENT FROM CROWN POINT TO TIE TO NEW PAVEMENT ON LEFT SIDE TO PROVIDE SMOOTH ACCESS TO AND FROM -LOOPC- AND PREVENT PONDING WATER.

COMPLETE WORK BEGUN IN STEP 2 AND STEP 3C.

INSTALL AND COVER SURRETT DR / LOOP B DETOUR SIGNS AS SHOWN ON SHEET TMP-2D.

COMPLETE THE REQUIREMENTS OF PHASE I, STEP 5 IN 57 CONSECUTIVE HOURS FROM 9:00 P.M. FRIDAY NIGHT TO 6:00 A.M. MONDAY MORNING. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 5:

A) UNCOVER SURRETT DR DETOUR SIGNS AND CLOSE -L- (SURRETT DR) AND -LOOPB- TO TRAFFIC AS SHOWN ON SHEET TMP-2D.

B) AWAY FROM TRAFFIC, CONSTRUCT THE FOLLOWING:
 * -L- FROM STA 14+50+/- TO STA 18+50+/-
 * -LOOPB- FROM STA 11+50+/- TO TIE TO -L-

C) PLACE TEMPORARY PAVEMENT MARKING ON -L- AND -LOOPB- AS SHOWN ON SHEETS TMP-7 & TMP-8.

D) OPEN -L- AND -LOOPB- TO TRAFFIC AND COVER DETOUR SIGNS. (LN-4)

PHASE II (SEE SHEETS TMP-7 THRU TMP-9)

STEP 1:

USING NIGHT-TIME OFF-SITE DETOURS, REMOVE EXISTING BRIDGE OVER BUS. I-85. SIGNS ARE TO BE UNCOVERED ONLY WHEN DETOUR IS ACTIVE. REPLACE MEDIAN GUARDRAIL AS SHOWN IN ROADWAY CONSTRUCTION PLANS.

STEP 2:

USING RSD 1101.02 (SHEET 1 OF 15) AS NEEDED, COMPLETE THE FOLLOWING:

- * REMOVE ABANDONED PAVEMENT
- * WIDEN -L- FROM STA 20+39+/- TO STA 21+50+/-
- * WIDEN -L- FROM STA 25+00+/- TO STA 27+50+/-
- * WEDGE AND WIDEN -L- FROM STA 27+50+/- TO STA 34+00+/-.
- * WEDGE AND WIDEN -LOOPC- FROM STA 12+00+/- TO -L-
- * WEDGE AND WIDEN -Y4- & -Y4RT-

REMOVE ALL DETOUR SIGNING.

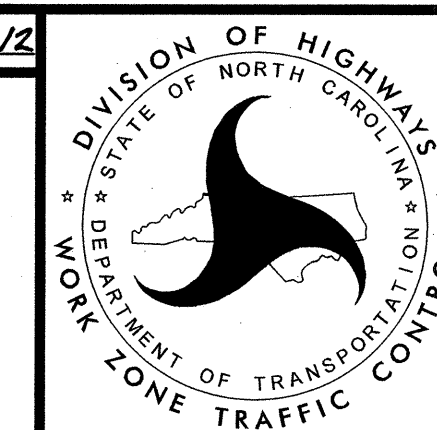
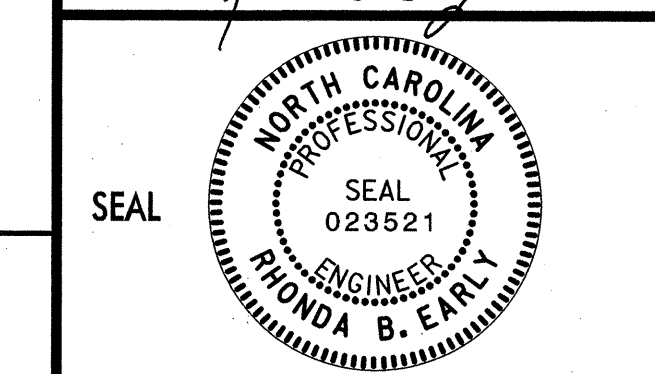
STEP 3:

PLACE FINAL LAYER OF SURFACE COURSE AND CONSTRUCT PROPOSED ISLANDS. PLACE FINAL PAVEMENT MARKING AND MARKERS ACCORDING TO FINAL PAVEMENT MARKING PLANS. REVISE/ADJUST SIGNAL ACCORDING TO SIGNAL PLANS.

REVISIONS

8/17/99
 SYSTEMS
 Q/A/C STAGE
 REVIEW:
 CONCUR:
 REVISE:
 VERIFY:

APPROVED: *Phonda B. Early* DATE: 3.27.12

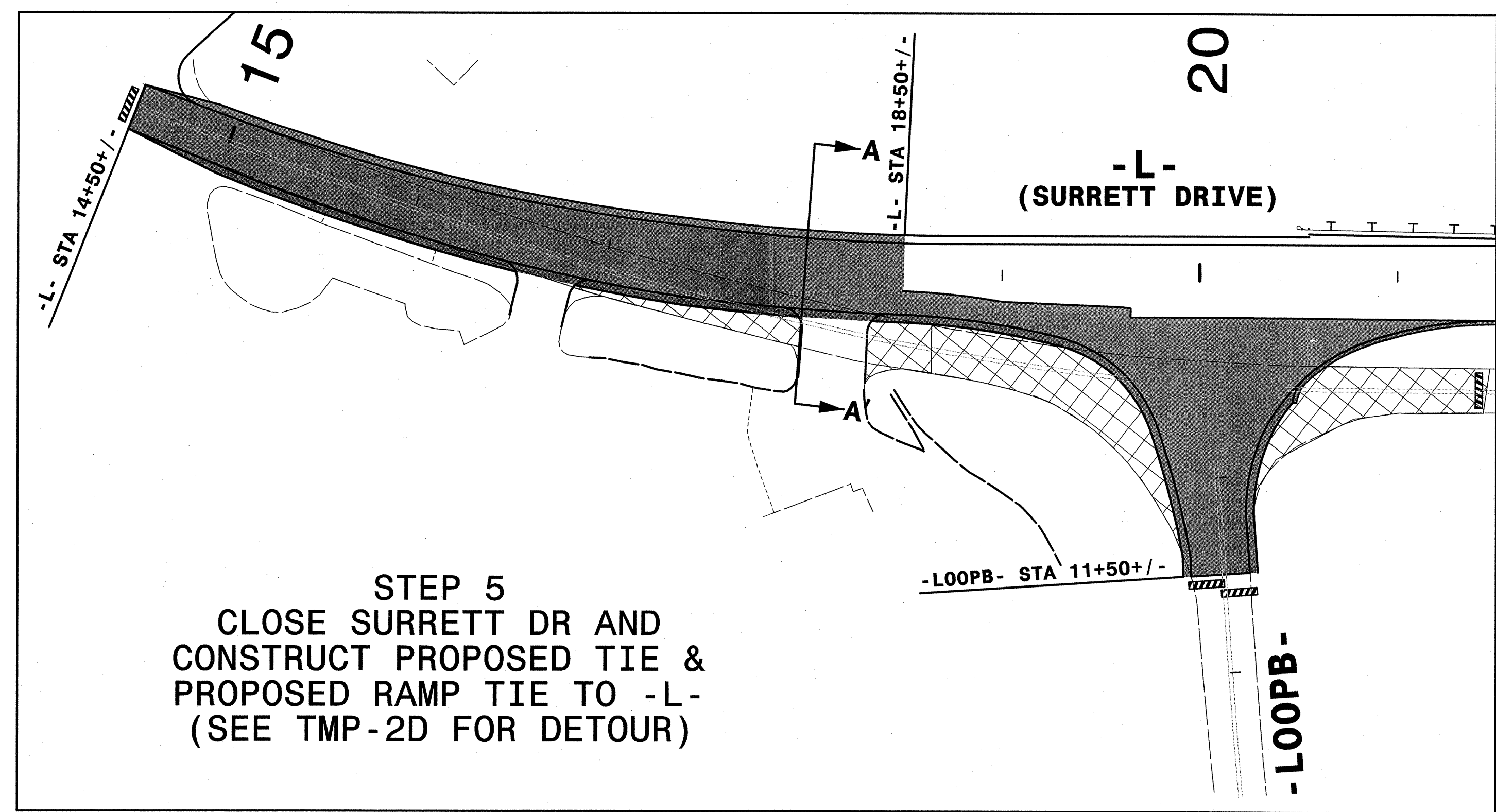
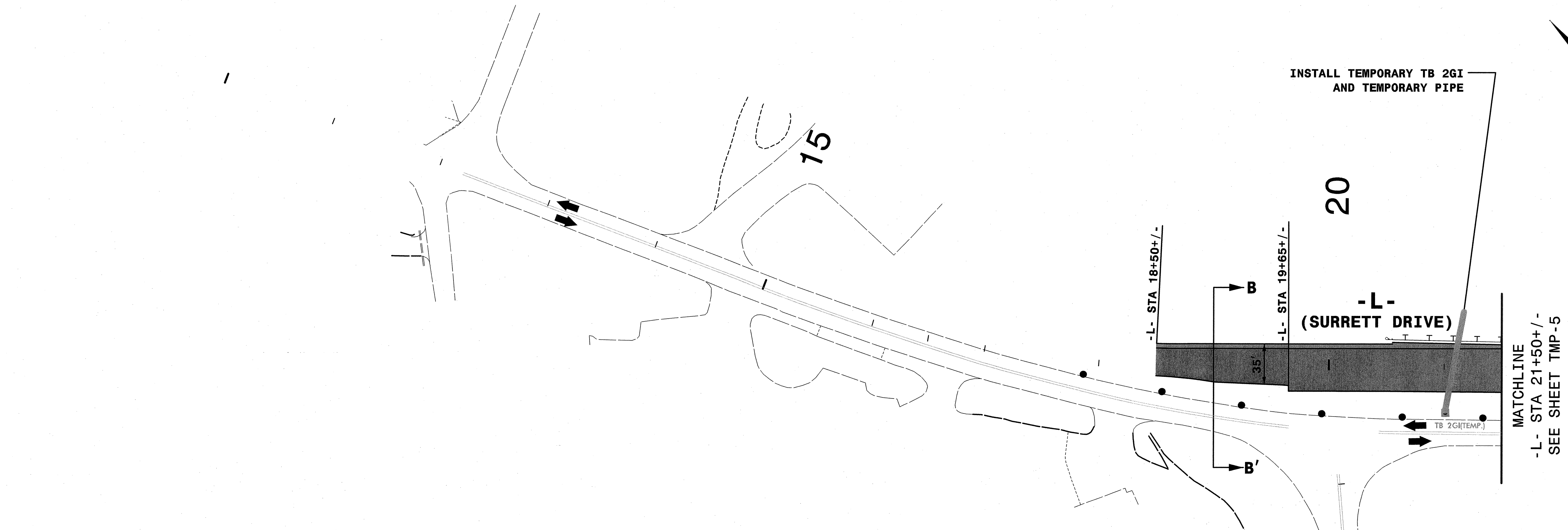


TRANSPORTATION
MANAGEMENT PLAN
PHASING

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Raleigh, North Carolina 27609
NC License No. C-1554

8/17/99

REVISIONS



STEP 5
 CLOSE SURRETT DR AND
 CONSTRUCT PROPOSED TIE &
 PROPOSED RAMP TIE TO -L-
 (SEE TMP-2D FOR DETOUR)

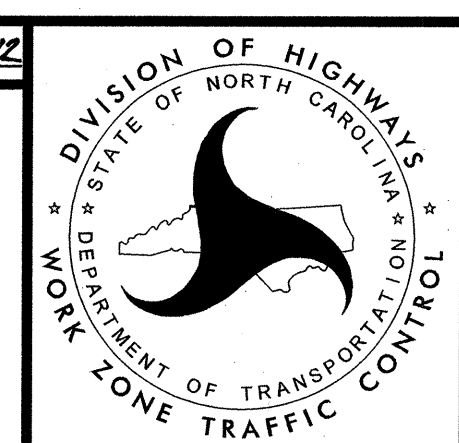
REFER TO SHEET TMP-6 FOR CUT SECTIONS.

SYSTEMS TIME: 00:00:00
 CONCUR: _____
 REVERSE: _____
 VERIFY: _____

QA/QC STAGE:

HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No.: C-1554

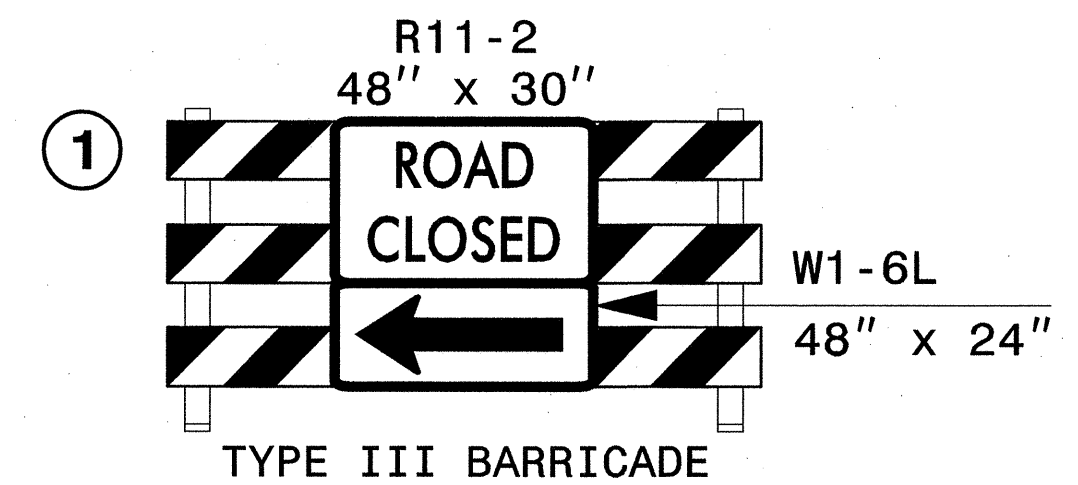
APPROVED: *Prionda B. Early* DATE: 3-27-12
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 PRIONDA B. EARLY
 SEAL 023521



TRANSPORTATION
 MANAGEMENT PLAN
**PHASE I
 DETAIL**
 SHEET 1 OF 2

8/17/99

USE RSD 1101.02 (SHEET 3 OF 15)
TO CLOSE LEFT LANE



PCB W/ CRASH CUSHION ON
-EY2- FROM STA 8+50+/- TO
STA 13+00+/- (W/ 2' SHY
DISTANCE)

INSTALL SHORING (3)
(EXCAVATION FOR FOOTING)
FROM STA 11+46+/- 7' RT OF -EY2-
TO STA 12+24+/- 7' RT OF -EY2-
EST LENGTH: 78'
AVG HT: 4.9'
(SEE TEMPORARY SHORING
DATA SHEET TMP-2)

INSTALL SHORING (2)
(END BENT CONSTRUCTION)
FROM STA 24+23+/- 35' RT OF -L-
TO STA 24+61+/- 35' RT OF -L-
EST LENGTH: 38'
AVG HT: 4.5'
(SEE TEMPORARY SHORING DATA SHEET TMP-2)

AWAY FROM -L- TRAFFIC
CONSTRUCT BRIDGE AND ROADWAY
FROM STA 18+50+/- TO
STA 27+50+/-

WEDGE AND WIDEN FROM EXISTING CROWN
POINT TO LT. SIDE FROM STA 27+50+/-
TO STA 31+50+/-

MATCHLINE
-L- STA 21+50+/-
SEE SHEET TMP-4

-L-
SURRETT DRIVE

-L- STA 27+50+/-

-L- STA 31+50+/-

INSTALL SHORING (1)
(END BENT CONSTRUCTION)
FROM STA 22+28+/- 35' RT OF -L-
TO STA 22+65+/- 35' RT OF -L-
EST LENGTH: 37'
AVG HT: 4.3'
(SEE TEMPORARY SHORING
DATA SHEET TMP-2)

INSTALL SHORING (4)
(EXCAVATION FOR FOOTING)
FROM STA 11+46+/- 7' LT OF -EY2-
TO STA 12+24+/- 7' LT OF -EY2-
EST LENGTH: 78'
AVG HT: 4.9'
(SEE TEMPORARY SHORING DATA SHEET TMP-2)

PCB W/ CRASH CUSHION ON
-EY2- FROM STA 11+00+/- TO
STA 15+06+/- (W/ 2' SHY DISTANCE)

USE RSD 1101.02 (SHEET 3 OF 15)
TO CLOSE LEFT LANE

REFER TO SHEET TMP-2 FOR SHORING DATA SHEET.

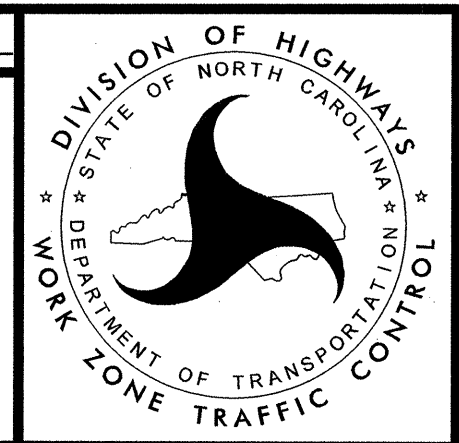
REFER TO SHEET TMP-6 FOR CUT SECTIONS.

REVISIONS

QACQC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

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RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO: C-1554

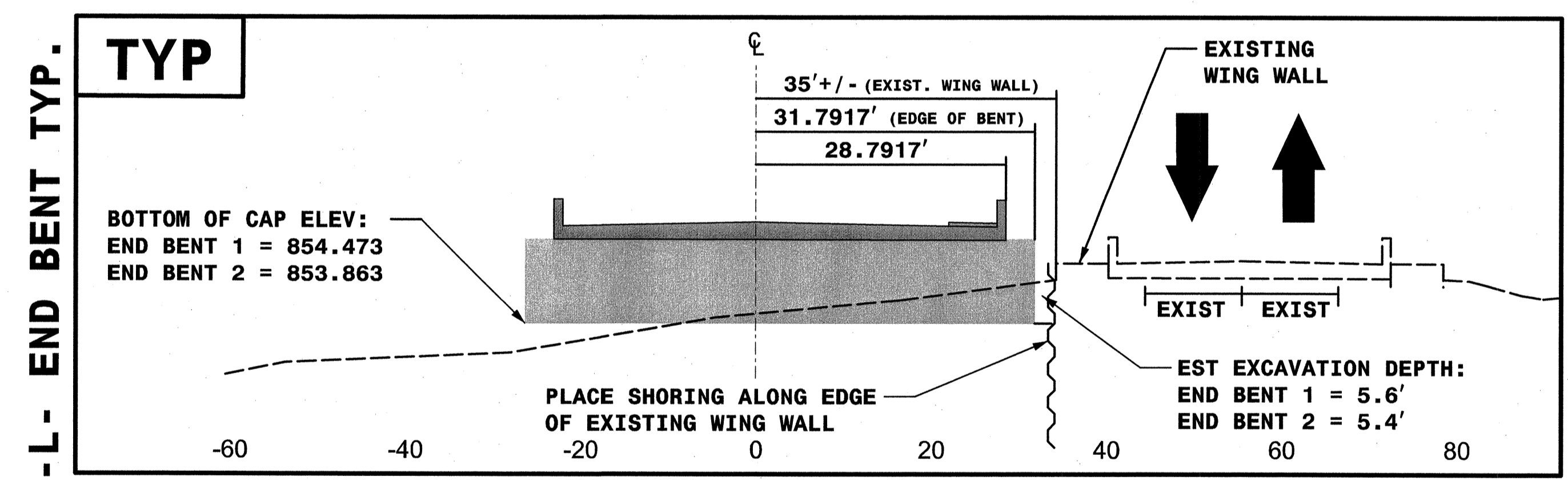
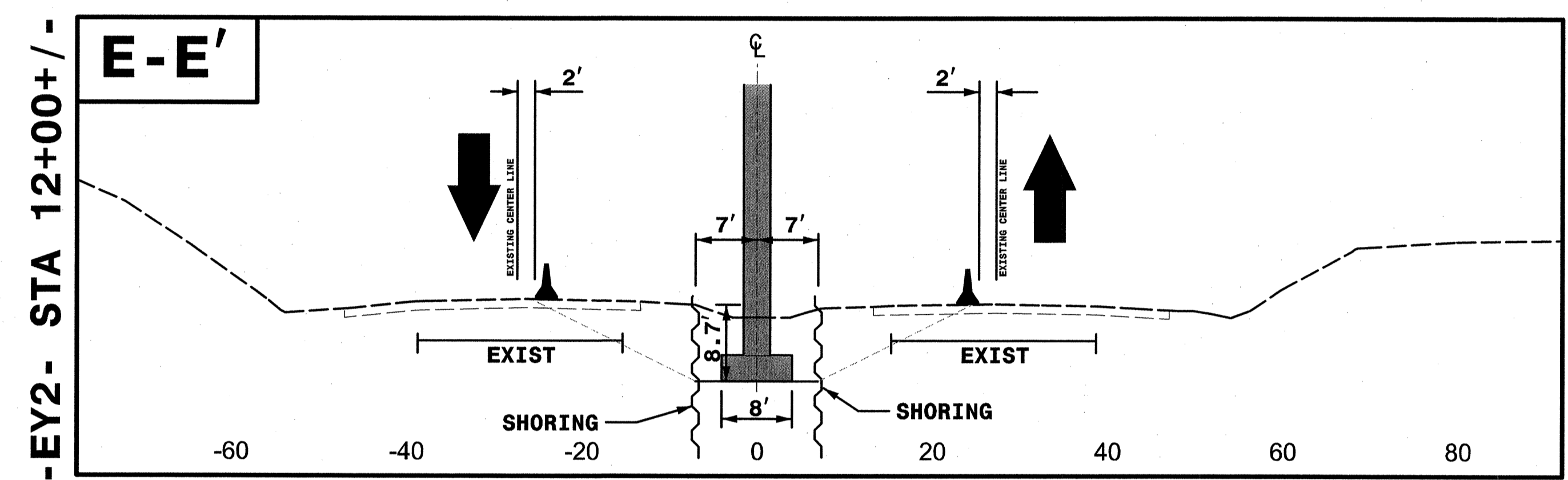
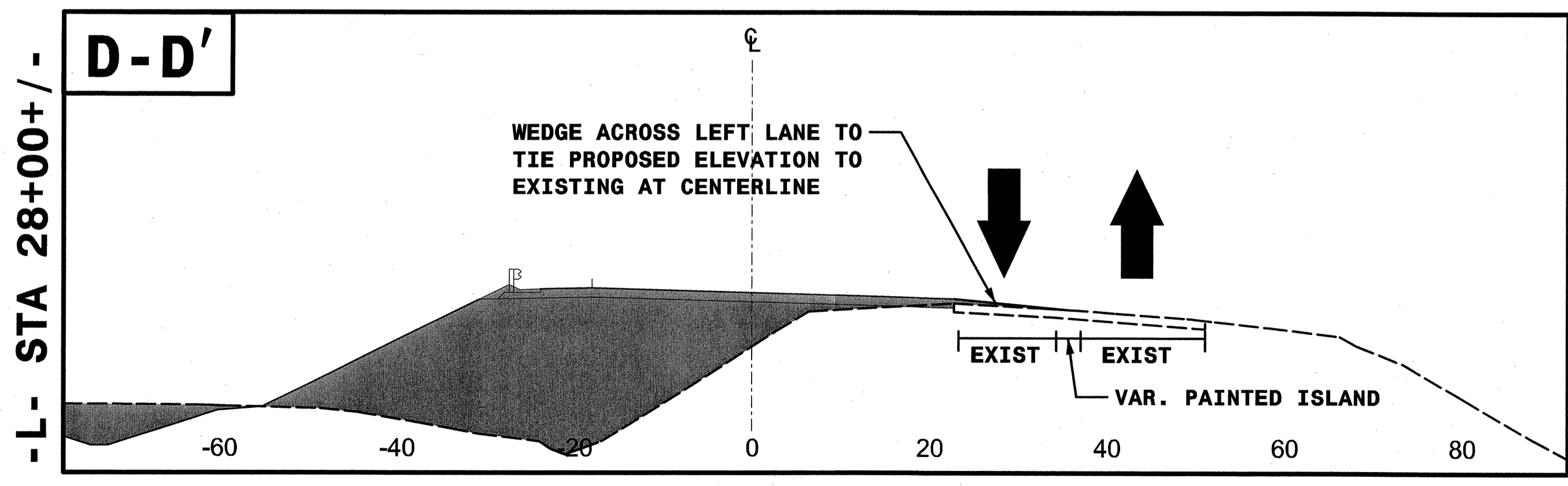
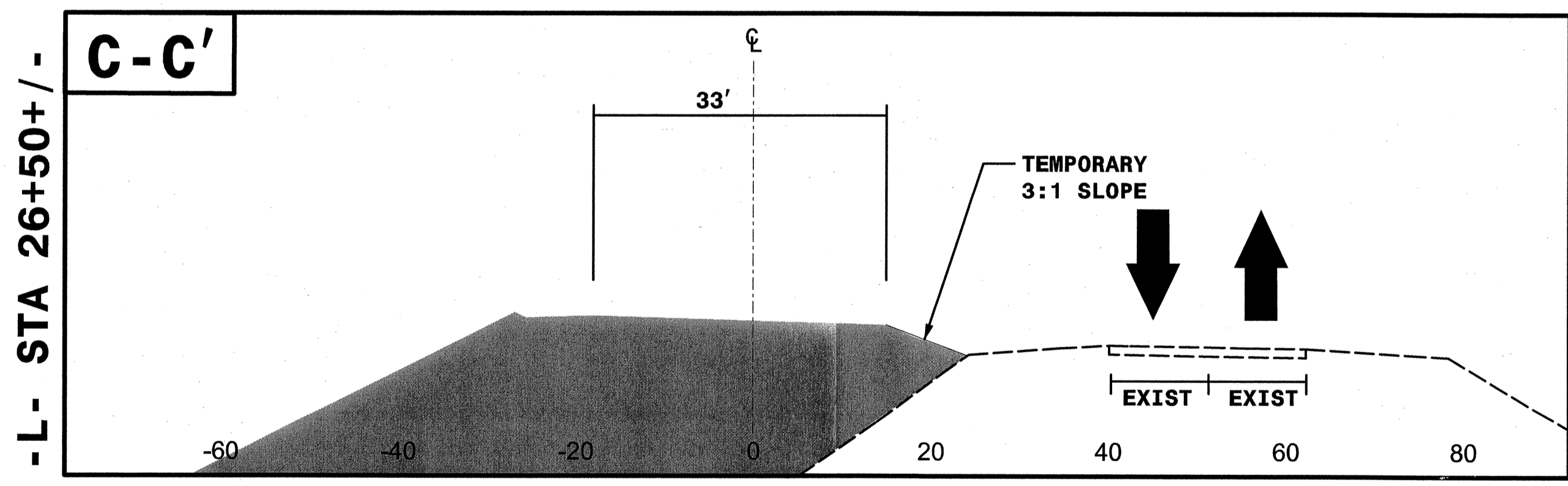
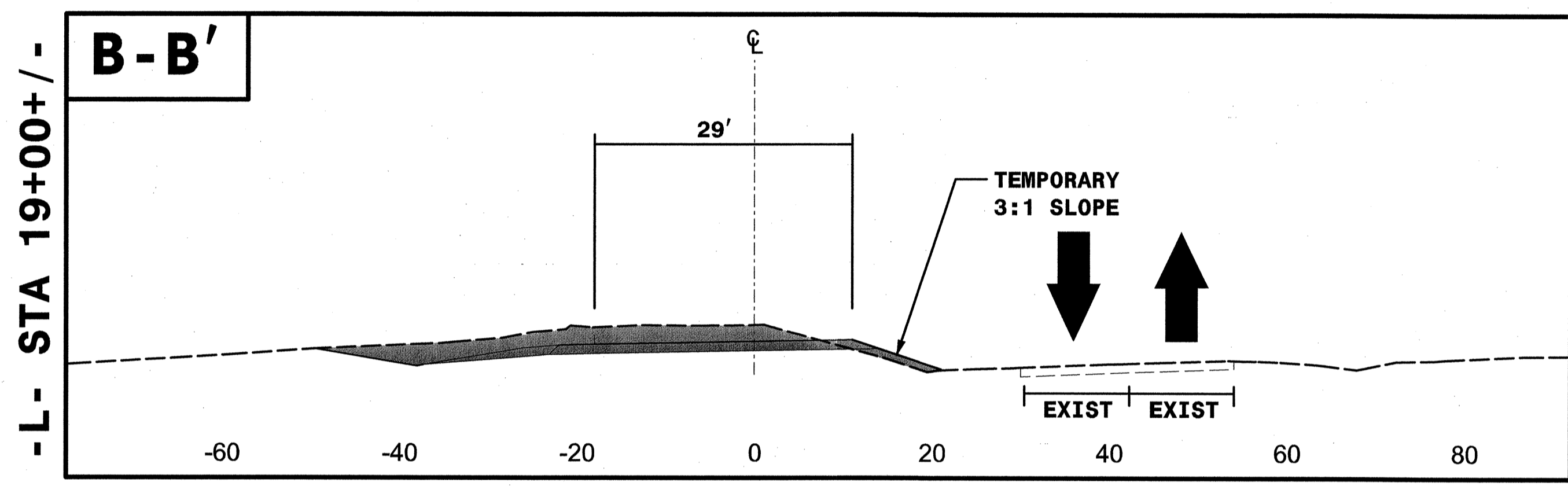
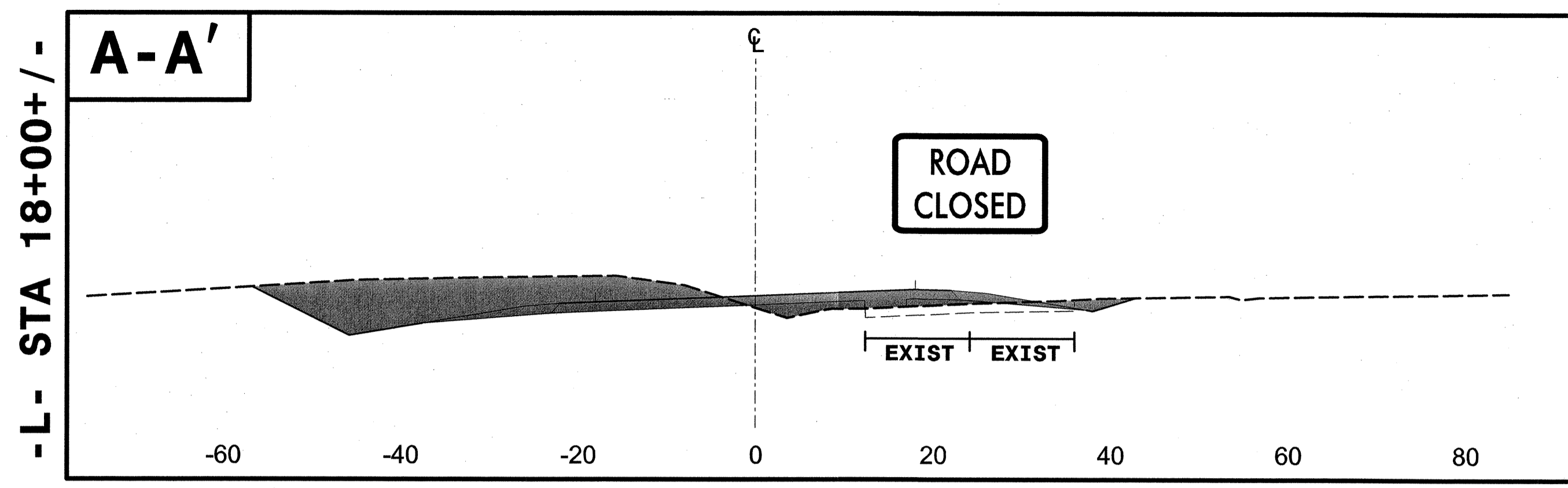
APPROVED: *Frank D. Cuff* DATE: 4.5.12
SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
FRANK D. CUFF
023521



TRANSPORTATION
MANAGEMENT PLAN

PHASE I
DETAIL

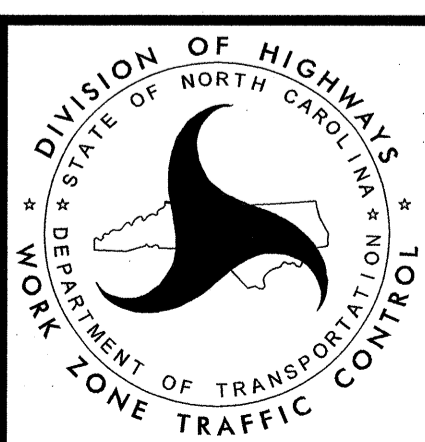
SHEET 2 OF 2



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 QAC STAGE:
 REVIEW:
 CONCUR:
 REVISE:
 VERIFY:

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 NC License No: C-1584

APPROVED: *[Signature]* DATE: 3.27.12
 SEAL
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 PRONDA B. EARLY



TRANSPORTATION
 MANAGEMENT PLAN
 PHASE I
 CUT SECTIONS

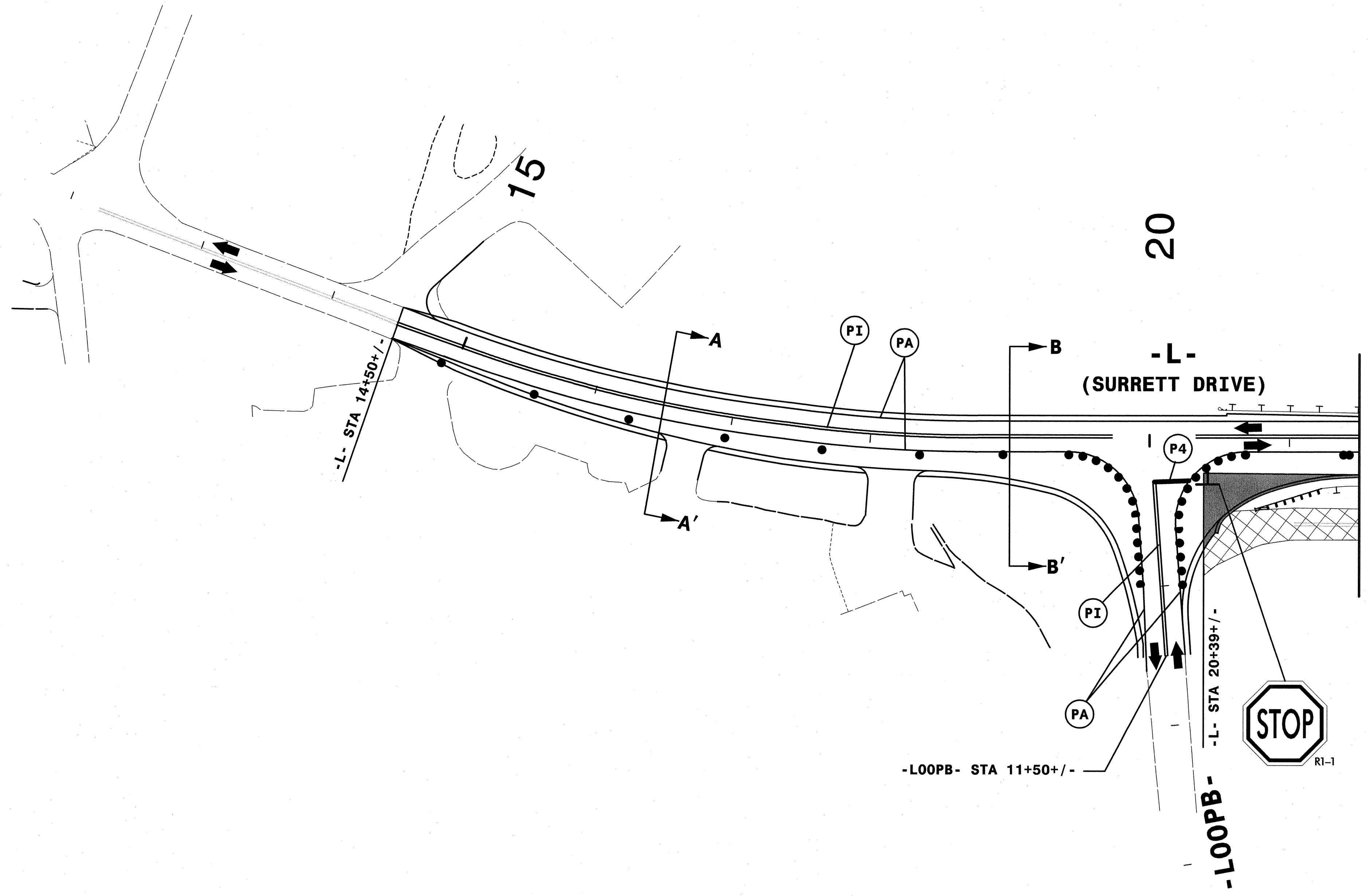
8/17/99

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15

20

NAD 83/2001



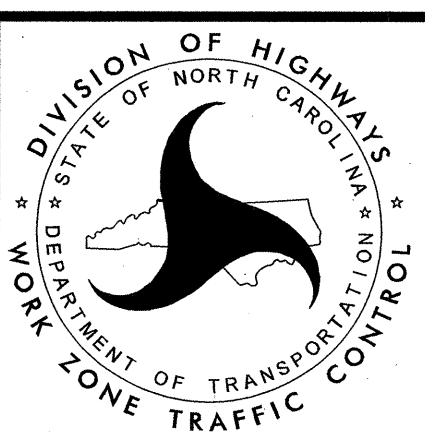
REVISIONS

Q/AQC STAGE:
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CONCUR:
REVISE:
VERIFY:

REFER TO SHEET TMP-9 FOR CUT SECTIONS.

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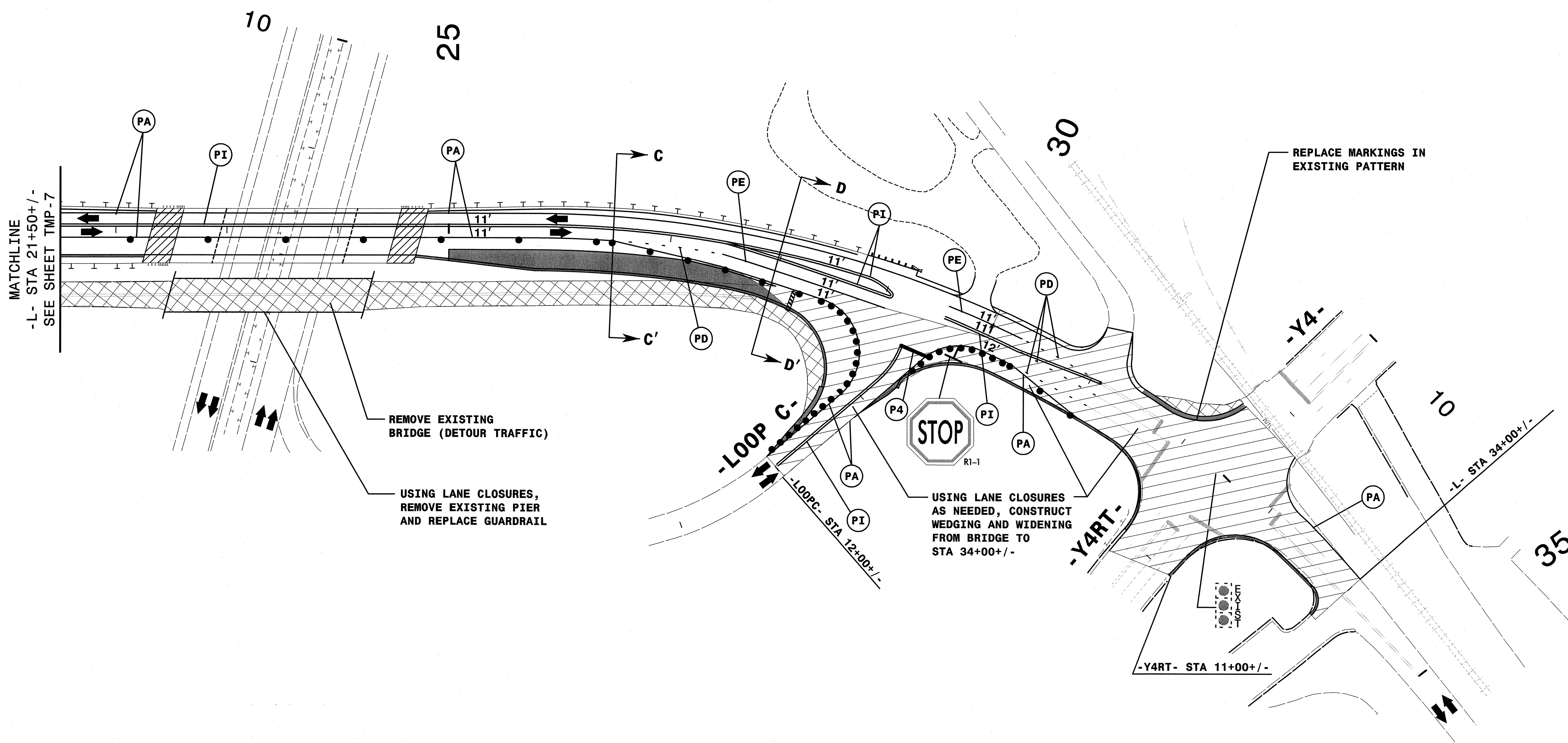
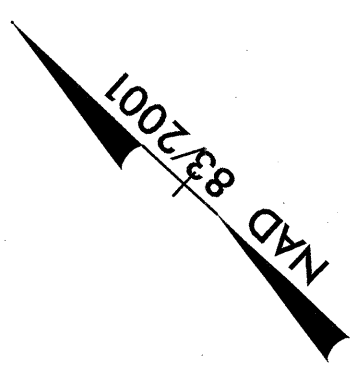
APPROVED: *Phonda B. Early* DATE: 8-27-12
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
PHONDA B. EARLY
SEAL 023521



TRANSPORTATION
MANAGEMENT PLAN

PHASE II
DETAIL

SHEET 1 OF 2



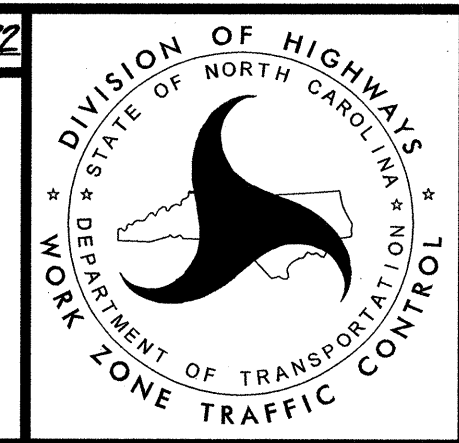
REVISIONS

QA/QC STAGE:
 REVIEW:
 CONCUR:
 REVISE:
 VERIFY:

REFER TO SHEET TMP-9 FOR CUT SECTIONS.

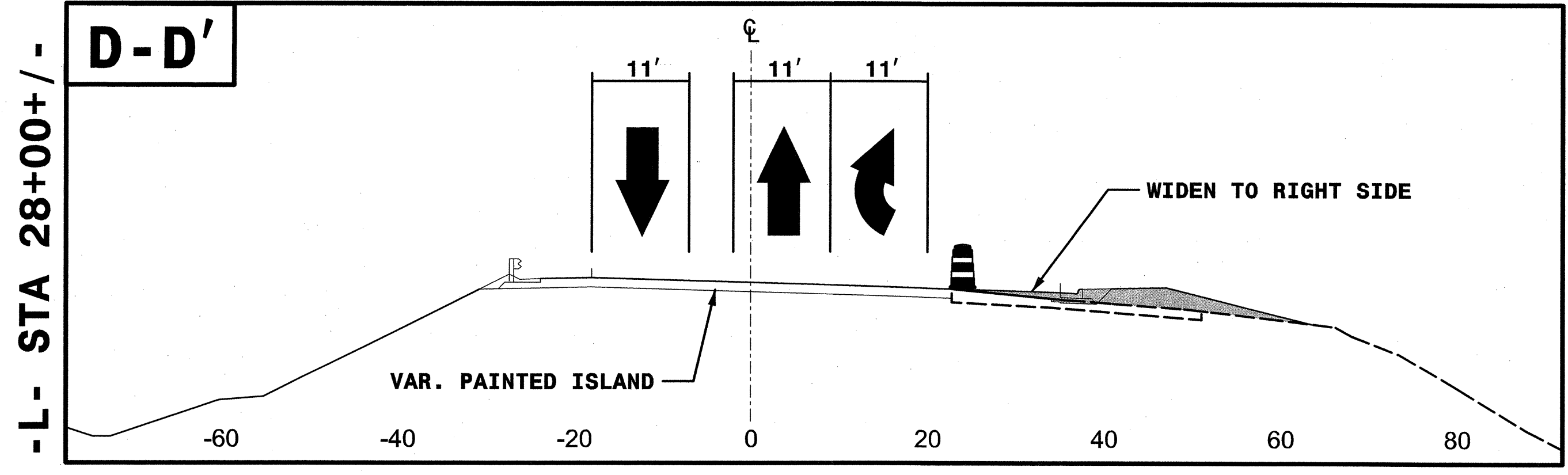
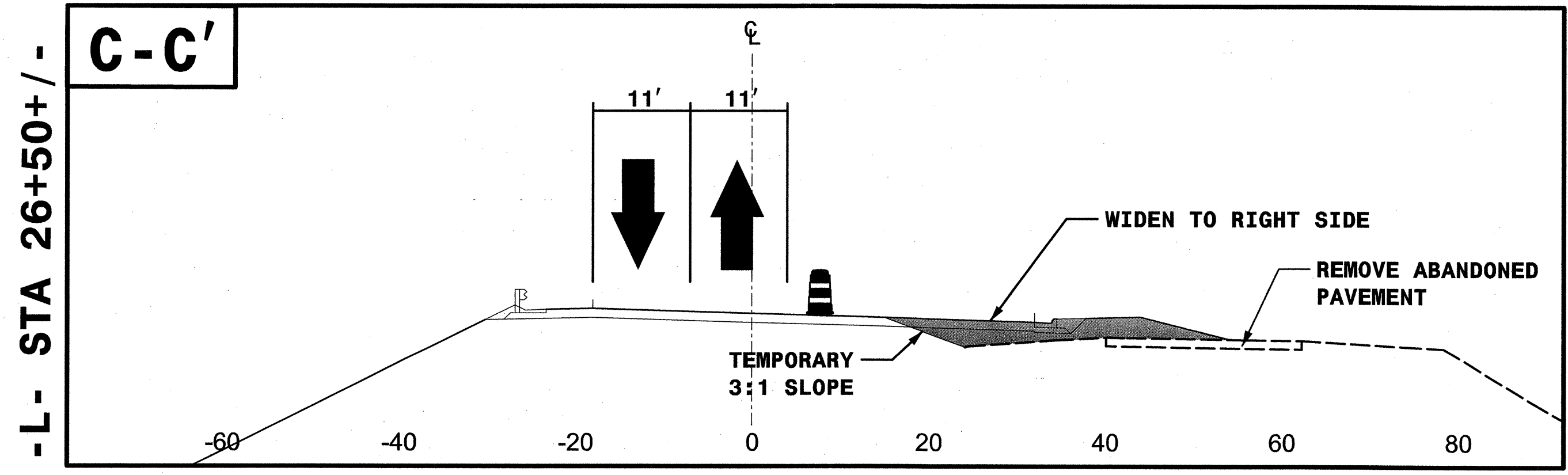
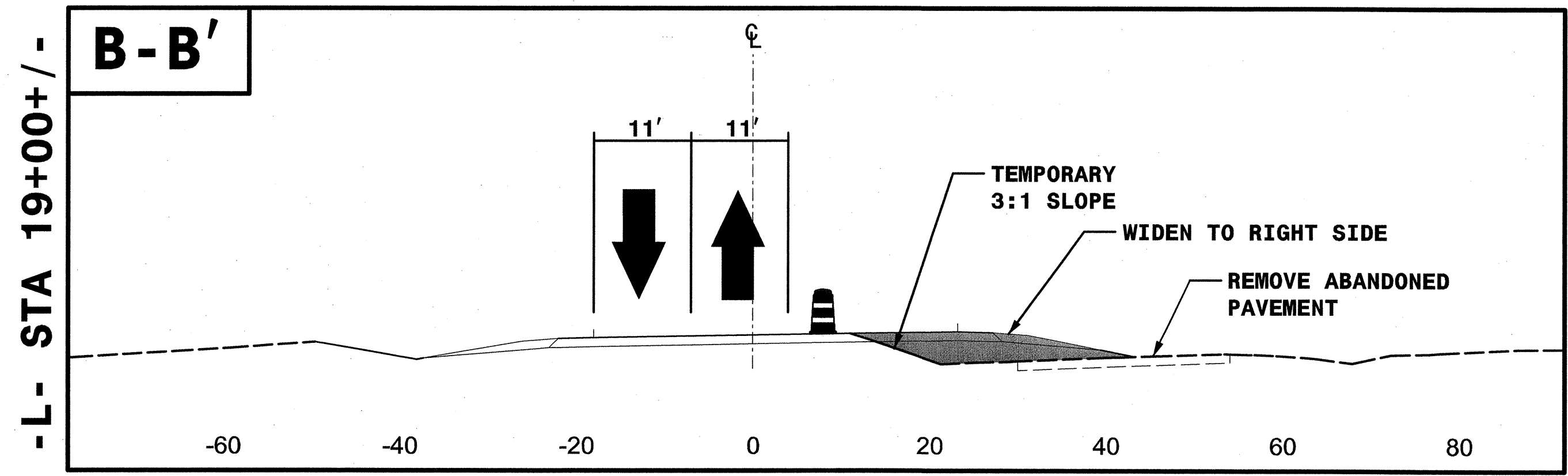
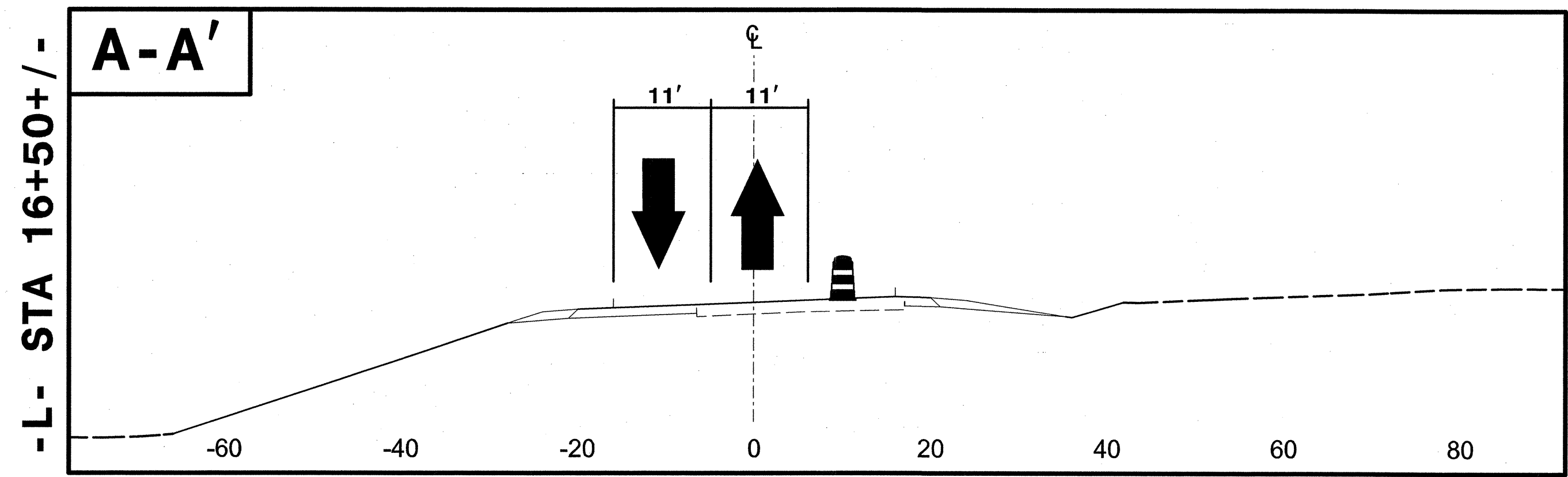
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 RALEIGH, NORTH CAROLINA 27609
 NC LICENSE NO: C-1554

APPROVED: *Handwritten Signature* DATE: 3-27-12
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 NORTH CAROLINA
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 ENGINEER
 PHOENIX B. EARL
 SEAL 023521



TRANSPORTATION
 MANAGEMENT PLAN
 PHASE II
 DETAIL
 SHEET 2 OF 2

8/17/99

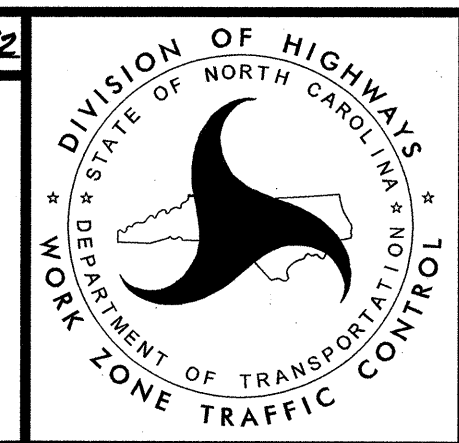


REVISIONS

QA/QC STAGE: _____
 REVIEW: _____
 CONCUR: _____
 REVISE: _____
 VERIFY: _____

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 Raleigh, North Carolina 27609
 NC License No: C-1554

APPROVED: *[Signature]* DATE: 3-27-12
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 PHONDA B. EARL
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TRANSPORTATION
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 PHASE II
 CUT SECTIONS