



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 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
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUM
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

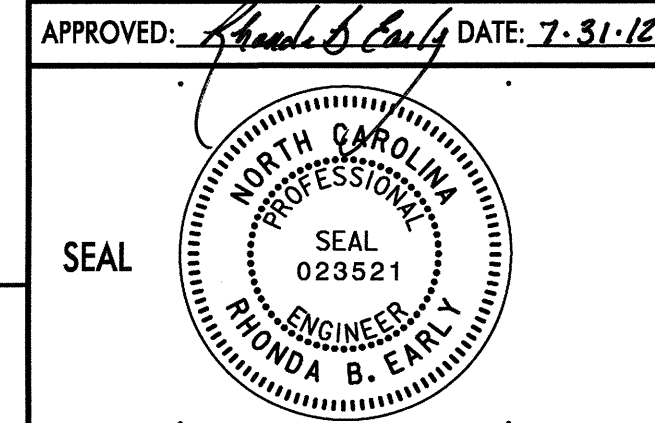
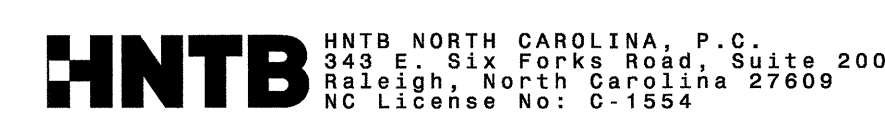
PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION	PAY ITEM
PA	WHITE EDGELINE	PAINT (4")

SYSTEMS DESIGN CONSULTANTS
 10000 WOODLAWN DRIVE
 SUITE 200
 RALEIGH, NC 27609
 TEL: 919-875-8000
 FAX: 919-875-8001
 WWW.SDCON.COM



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
HOPSON RD NC 54 / MIAMI BLVD	MONDAY THRU SUNDAY 6:00 AM - 9:00 AM & 4:00 PM - 7:00 PM

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

ROAD NAME

HOPSON RD.
NC 54 / MIAMI BLVD

HOLIDAY

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

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

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
HOPSON RD	MONDAY - SUNDAY: 5:00 AM - 9:00 PM

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) 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.

TRAFFIC PATTERN ALTERATIONS

H) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

I) 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.

J) 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.

K) 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.

L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC BARRIER

M) 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.

N) 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

O) 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.

P) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED

R) 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.

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

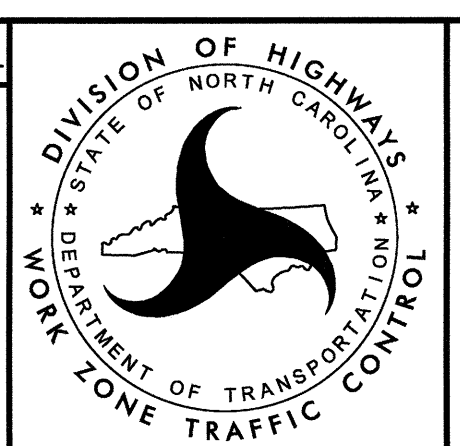
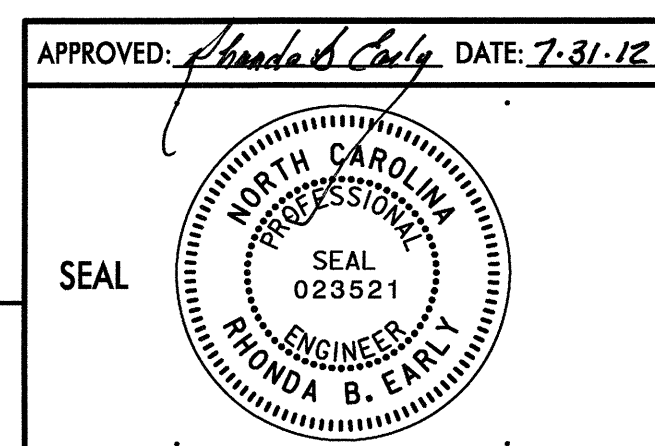
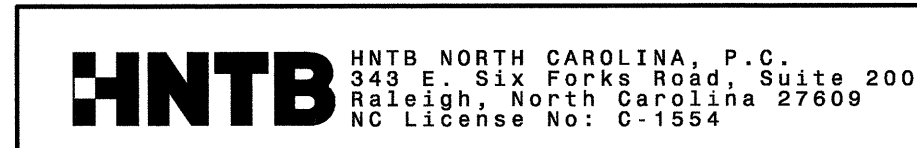
T) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

U) ADJACENT PROJECT(S) MAY BE UNDER CONSTRUCTION DURING THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR WILL COORDINATE WORK ACTIVITIES WITH ENGINEER TO MINIMIZE THE IMPACTS TO THE MOTORIST.

V) ROADWAY REVISIONS AND PLACEMENT OF FINAL PAVEMENT MARKING WILL BE COMPLETED AS A PART OF THE U-4716B PROJECTS.

SYTIME\$DGN\$US\$DRNAME\$



TRANSPORTATION MANAGEMENT PLAN
TRANSPORTATION OPERATIONS PLAN

PHASING



PROJ. REFERENCE NO.	SHEET NO.
U-4716A/C	TMP-3

0371DEL_P17-18

NOTES:

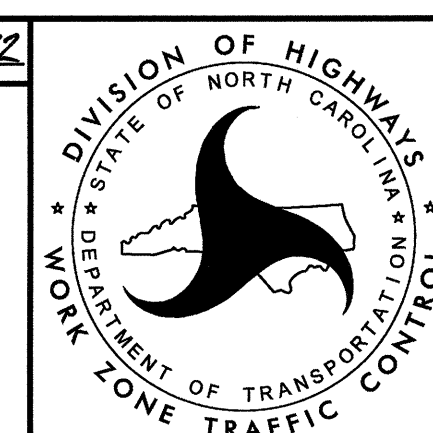
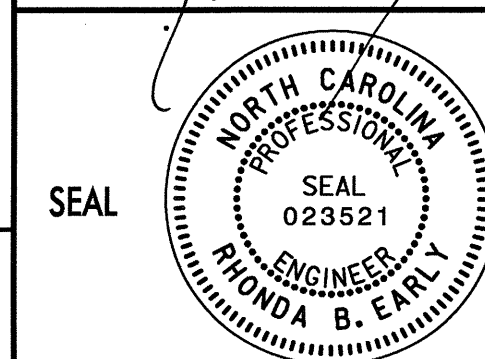
REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

PHASE I (SEE SHEET TMP-4 & TMP-5)

- STEP 1: INSTALL DETOUR SIGNING AS SHOWN ON SHEET TMP-2. SIGNS ARE TO BE UNCOVERED ONLY WHEN DETOUR IS ACTIVE.
- USING RSD 1101.02 (SHEET 1 OF 15), PLACE TEMPORARY PAVEMENT AND INSTALL PCB ALONG HOPSON RD (LT & RT SIDE) AS SHOWN ON TMP-4.
- STEP 2: AWAY FROM TRAFFIC AND BEHIND BARRIER, BEGIN PROPOSED BRIDGE OVER HOPSON RD. USE NIGHT-TIME ROAD CLOSURES & OFF-SITE DETOUR TO HANG STEEL OVER HOPSON RD.
- STEP 3: AWAY FROM TRAFFIC AND WITHOUT DISTURBING CURRENT RAIL LINE, GRADE FOR PROPOSED RAIL REALIGNMENT.
- STEP 4: COMPLETE BRIDGE OVER HOPSON RD AND COVER DETOUR SIGNING. (DO NOT REMOVE DETOUR SIGNING.) PCB PLACED IN STEP 1 IS TO REMAIN IN PLACE UNTIL ROADWAY AT BRIDGE IS WIDENED DURING U-4716B, PHASE II.
- STEP 5: SHIFT RAIL TRAFFIC TO BRIDGE ACCORDING TO RAIL CONSTRUCTION SEQUENCE PLANS.
- STEP 6: USING DRUMS, TYPE III BARRICADES, CLOSE CHURCH STREET AS SHOWN ON TMP-5. PLACE WATER FILLED BARRIER BLOCKING ACCESS TO CROSSING.
- STEP 7: USING RSD 1101.02 (SHEET 3 OF 15) AS NEEDED, COMPLETE PAVEMENT AND PARTIAL ISLAND REMOVAL ALONG NC 54 AS SHOWN ON SHEET 2G. WATER FILLED BARRIER MAY BE REMOVED AS THE PAVEMENT APPROACHING CROSSING IS REMOVED.
- STEP 8: AWAY FROM TRAFFIC, COMPLETE PROPOSED RAIL.

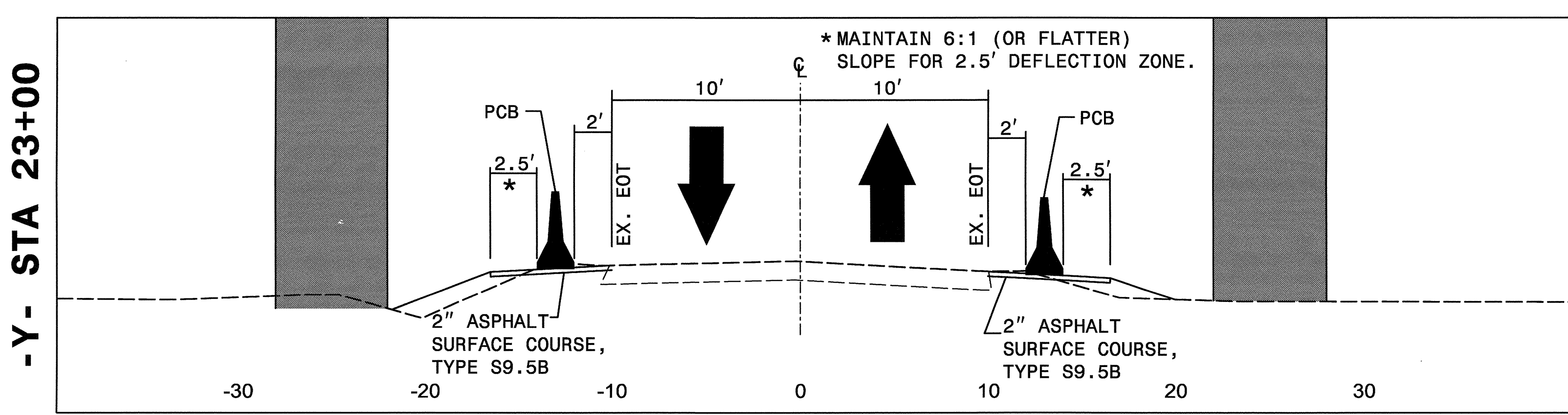
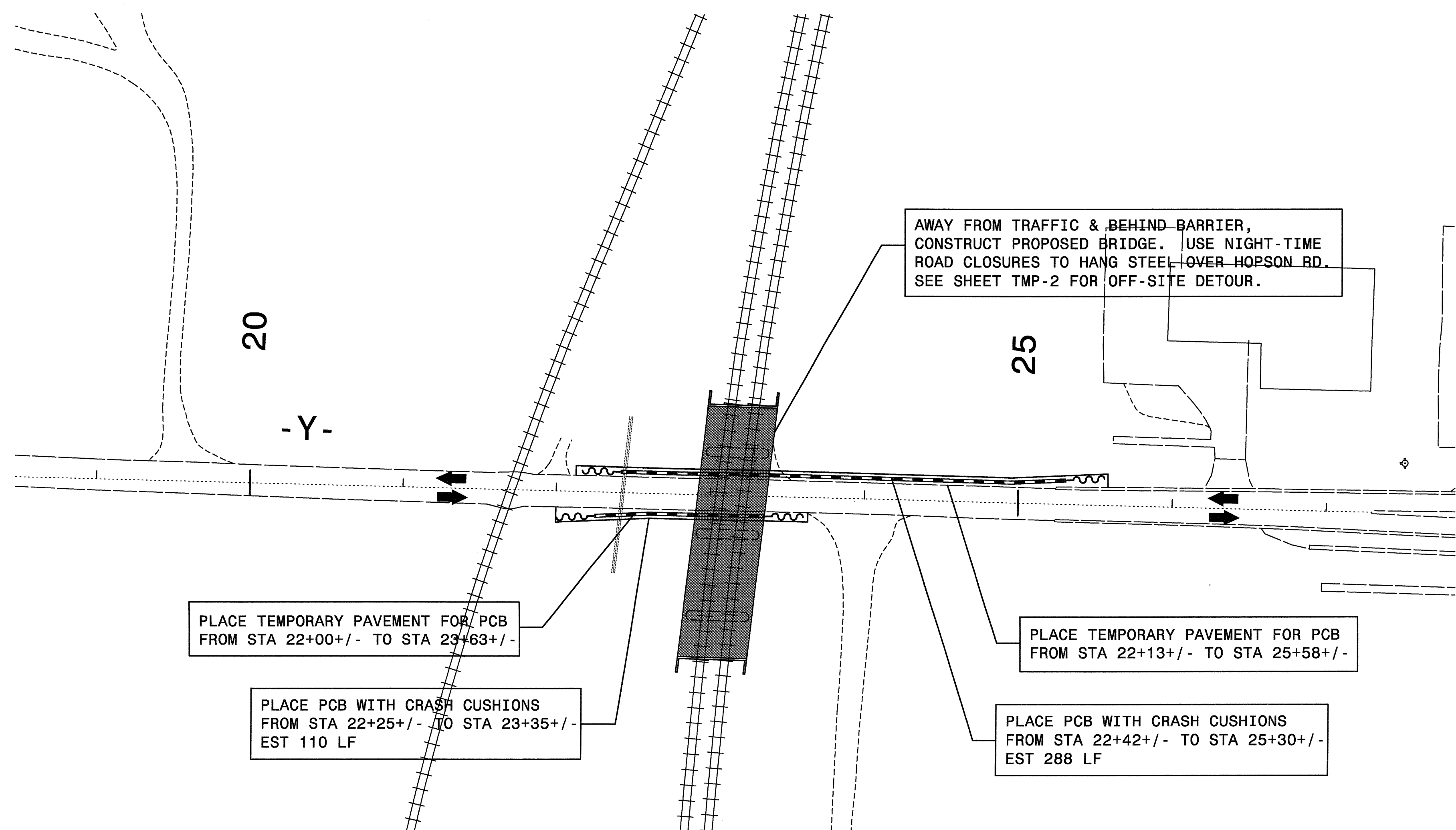
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APPROVED: *Rhonda B. Early* DATE: 7-31-12



TRANSPORTATION
MANAGEMENT PLAN
PHASING

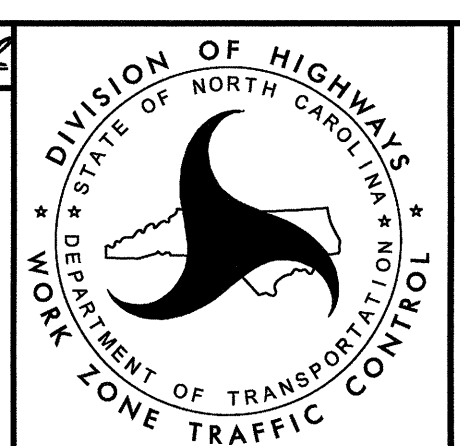
HNTB HNTB NORTH CAROLINA, P.C. 200
343 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO: C-1554



NOTE:
* PCB IS TO REMAIN IN PLACE UNTIL ROADWAY IS WIDENED DURING U-4716B, PHASE II.

SYSTEMS DESIGN
USER NAME

APPROVED: *[Signature]* DATE: 7-31-12
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
PRIONA B. EARLY
023521



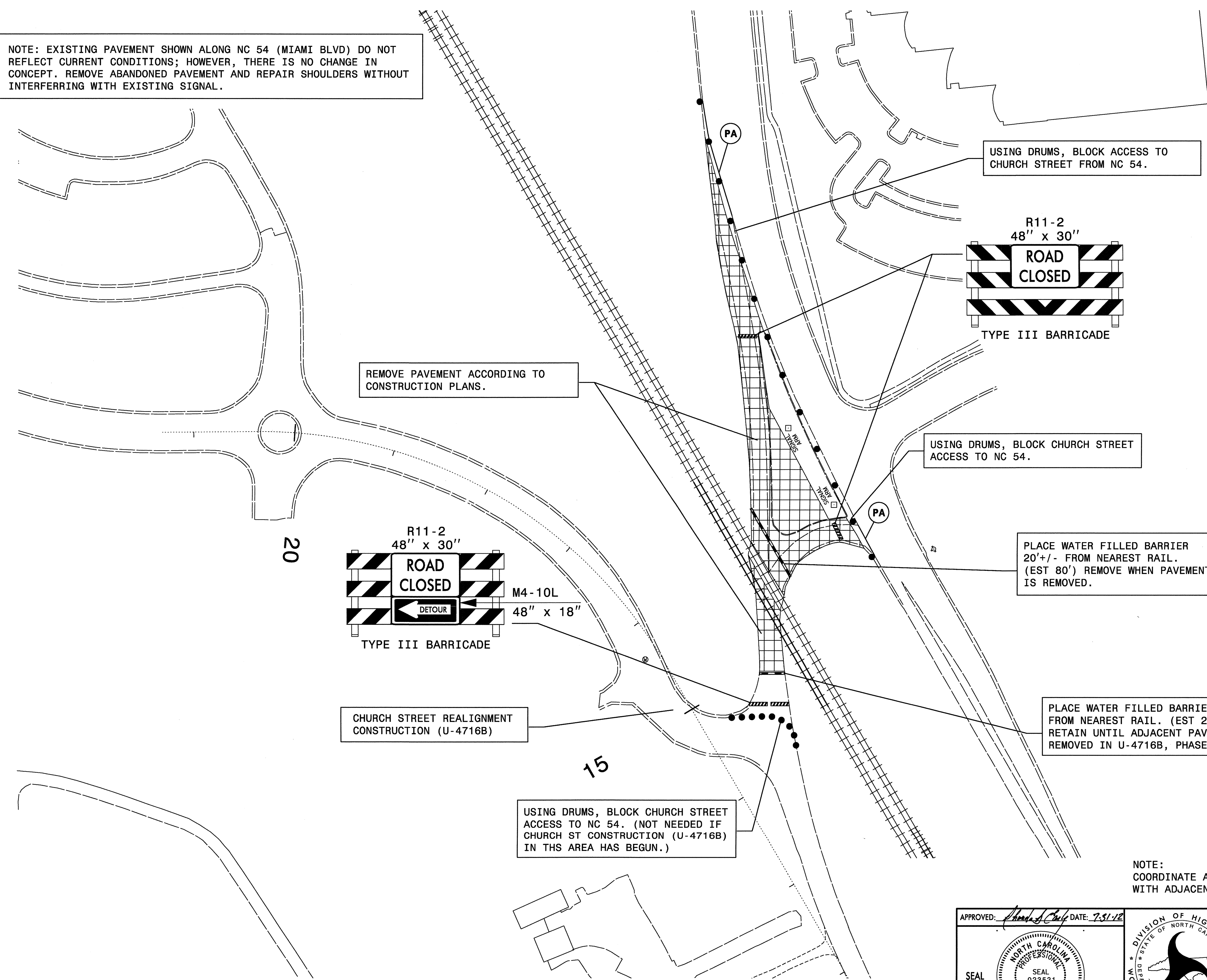
TRANSPORTATION MANAGEMENT PLAN
PHASE I
DETAIL

HNTB
HNTB NORTH CAROLINA, P.C.
343 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27809
NC LICENSE NO: C-1554

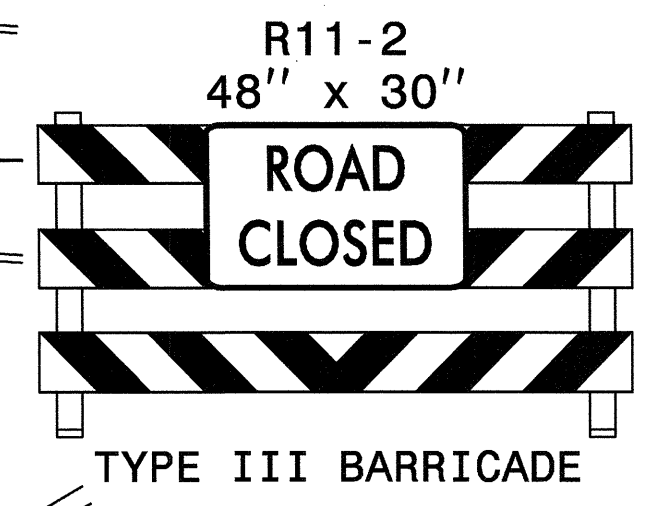


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NOTE: EXISTING PAVEMENT SHOWN ALONG NC 54 (MIAMI BLVD) DO NOT REFLECT CURRENT CONDITIONS; HOWEVER, THERE IS NO CHANGE IN CONCEPT. REMOVE ABANDONED PAVEMENT AND REPAIR SHOULDERS WITHOUT INTERFERING WITH EXISTING SIGNAL.

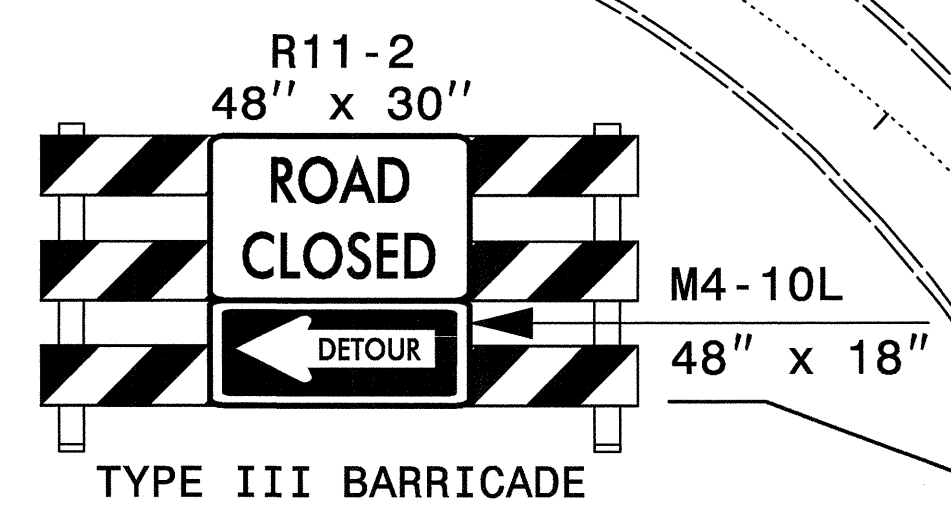


USING DRUMS, BLOCK ACCESS TO CHURCH STREET FROM NC 54.



REMOVE PAVEMENT ACCORDING TO CONSTRUCTION PLANS.

USING DRUMS, BLOCK CHURCH STREET ACCESS TO NC 54.



PLACE WATER FILLED BARRIER 20'+/- FROM NEAREST RAIL. (EST 80') REMOVE WHEN PAVEMENT IS REMOVED.

CHURCH STREET REALIGNMENT CONSTRUCTION (U-4716B)

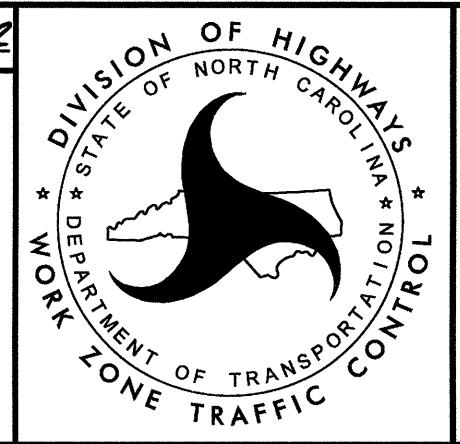
PLACE WATER FILLED BARRIER 20'+/- FROM NEAREST RAIL. (EST 24') RETAIN UNTIL ADJACENT PAVEMENT IS REMOVED IN U-4716B, PHASE III.

USING DRUMS, BLOCK CHURCH STREET ACCESS TO NC 54. (NOT NEEDED IF CHURCH ST CONSTRUCTION (U-4716B) IN THIS AREA HAS BEGUN.)

NOTE: COORDINATE ADJUSTMENT AND PLACEMENT OF DEVICES WITH ADJACENT PROJECT (U-4716B).

SYSTEMS DESIGN SUPERNAME

APPROVED: *[Signature]* DATE: 7.31.12



TRANSPORTATION
MANAGEMENT PLAN

PHASE I
DETAIL

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