

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**JOHNSTON COUNTY**



**PHASING**

NOTE: DETOUR ROUTE SIGNING OUTSIDE OF PROJECT LIMITS WILL BE INSTALLED PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER 21 DAYS PRIOR TO ROAD CLOSURE. SEE SPECIAL PROVISION.

SEE PROJECT SPECIAL PROVISION FOR WORK DESCRIBED IN STEPS 1 THRU 5.

STEP 1 - UNCOVER OFF SITE DETOUR SIGNS INSTALLED BY OTHERS. USING TMP-4 THRU TMP-8, CLOSE MARKET ST TO TRAFFIC AND PEDESTRIANS BETWEEN -L- STA 15+50+/- AND 25+30+/-.

STEP 2 - MODIFY EXISTING SIGNALS ACCORDING TO SIGNAL PLANS.

STEP 3 - AWAY FROM TRAFFIC, REMOVE AND REPLACE EXISTING STRUCTURE (EXCLUDING THE CLASSIC CONCRETE BRIDGE RAIL POUR), PROPOSED GUARDRAIL AND PAVEMENT RECONSTRUCTION WEST OF BRIDGE UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE.

STEP 4 - AWAY FROM TRAFFIC, PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND MARKERS IN THE FINAL PATTERN. (SEE PAVEMENT MARKING PLANS.)

STEP 5 - COVER AND REMOVE ALL DETOUR SIGN ASSEMBLIES, MODIFY EXISTING SIGNALS ACCORDING TO SIGNAL PLANS AND OPEN MARKET ST TO TRAFFIC AND PEDESTRIANS.

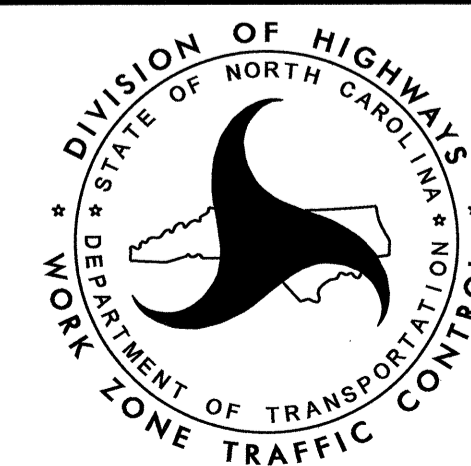
STEP 6 - USING LANE CLOSURES, COMPLETE THE REMAINING WORK, INCLUDING CLASSIC BRIDGE RAIL POUR AND PLACEMENT OF THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS. (SEE RSD 1101.02, SHEET 3.)

STEP 7 - REMOVE ALL TRAFFIC CONTROL DEVICES.

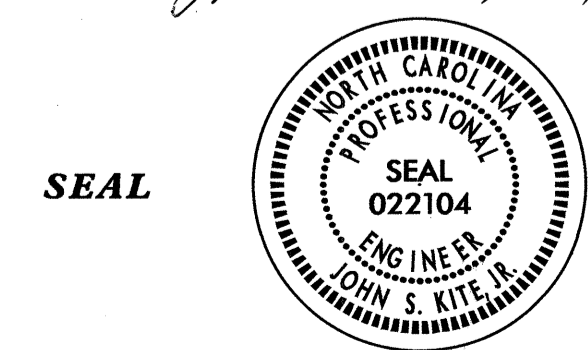


**N.C.D.O.T. WORK ZONE TRAFFIC CONTROL**  
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561  
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)  
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, PE STATE TRAFFIC MANAGEMENT ENGINEER  
J. S. KITE, PE TRAFFIC CONTROL PROJECT ENGINEER  
D. A. PARKER TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
D. E. RICHARDSON TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: *[Signature]*  
DATE: *December 2, 2011*



**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET, PHASING, AND INDEX OF SHEETS
TMP-2	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING
TMP-3	TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES, MANAGEMENT STRATEGIES AND LOCAL NOTE)
TMP-4 THRU TMP-8	TEMPORARY ROAD CLOSURE DETAILS
SD-1	SPECIAL SIGN DESIGN DETAIL

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SHEET NO.  
TMP-1

B-3864

TIP PROJECT:

## 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	ADVANCED WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - (TEMPORARY & PERMANENT)
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

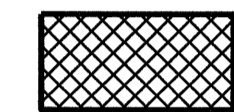
## LEGEND

### GENERAL

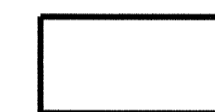
- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.



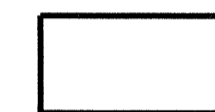
WORK AREA



REMOVAL



USER DEFINED (IF NEEDED)



USER DEFINED (IF NEEDED)

### 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

#### 4" PAINT

- PA WHITE EDGE LINE
- PB YELLOW EDGE LINE
- PC 10 FT WHITE SKIP
- PD 2 FT WHITE MINI SKIP
- PE WHITE SOLID LANE LINE
- PI YELLOW DOUBLE CENTER LINE

#### 8" PAINT

- PX WHITE CROSSWALK LINE

#### 24" PAINT

- P4 WHITE STOP BAR

#### PAINT SYMBOLS

- QA LEFT TURN ARROW
- QC STRAIGHT ARROW
- QE COMBO STRAIGHT/RIGHT ARROW

#### TEMPORARY RAISED PAVEMENT MARKERS

- MH YELLOW/YELLOW
- MI CRYSTAL/RED

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APPROVED:  DATE: 11/3/11 		<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 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
US 70 BUS/MARKET ST	MONDAY THRU FRIDAY 7:00AM TO 7:00PM

NOTE- LANE CLOSURE RESTRICTIONS DO NOT APPLY DURING STEPS 1 THRU 5.

B) 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

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 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.

F) 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.

G) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON US 70 BUS.

### 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 (WB-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.

### SIGNING (CONTINUED)

L) PROVIDE DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

M) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION. (SEE SPECIAL PROVISION.)

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

O) INSTALL BLACK ON ORANGE "DIP" SIGNS (WB-2) AND/OR "BUMP" SIGNS (WB-1) 500 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

### TRAFFIC CONTROL DEVICES

P) 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. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

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

### PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
US 70 BUS/MARKET ST	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.

### TEMPORARY / FINAL SIGNALS

V) SHIFT AND REVISE ALL SIGNAL HEADS AS SHOWN ON THE SIGNAL PLANS.

### MISCELLANEOUS

W) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

## MANAGEMENT STRATEGIES

THE BRIDGE OVER THE NEUSE RIVER WILL BE REPLACED WITH TRAFFIC DETOURED OFF SITE.

OFF SITE DETOUR SIGNING DIRECTS THROUGH TRAFFIC TO ALTERNATE ROUTES WHILE INDICATING ACCESS TO ALL DOWNTOWN BUSINESSES OPEN.

US 70 BUSINESS "THROUGH" TRAFFIC DETOURED TO BOOKER DAIRY RD, SWIFT CREEK RD, GALILEE RD, OR US 70.

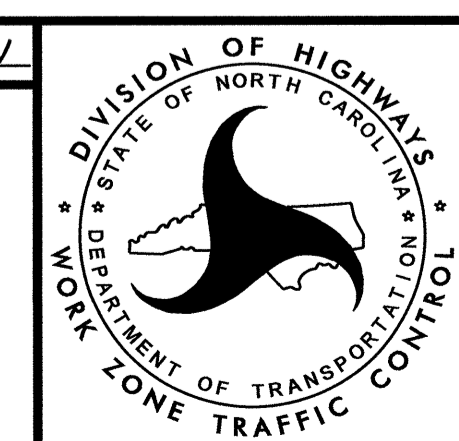
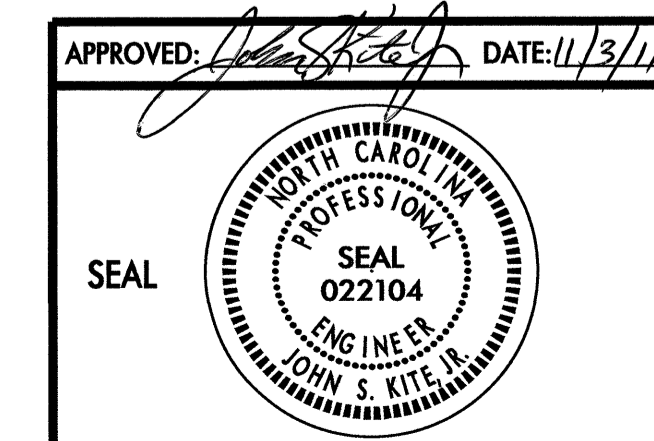
DOWNTOWN BUSINESS TRAFFIC MAINTAINED UP TO SECOND ST.

NC 210 TRAFFIC DETOURED TO WILSON'S MILL RD, BOOKER DAIRY RD AND US 301.

PEDESTRIANS ALONG GREENWAY DETOURED ALONG FIRST ST USING A STRIPED WALKWAY AND PEDESTRIAN DETOUR SIGNING.

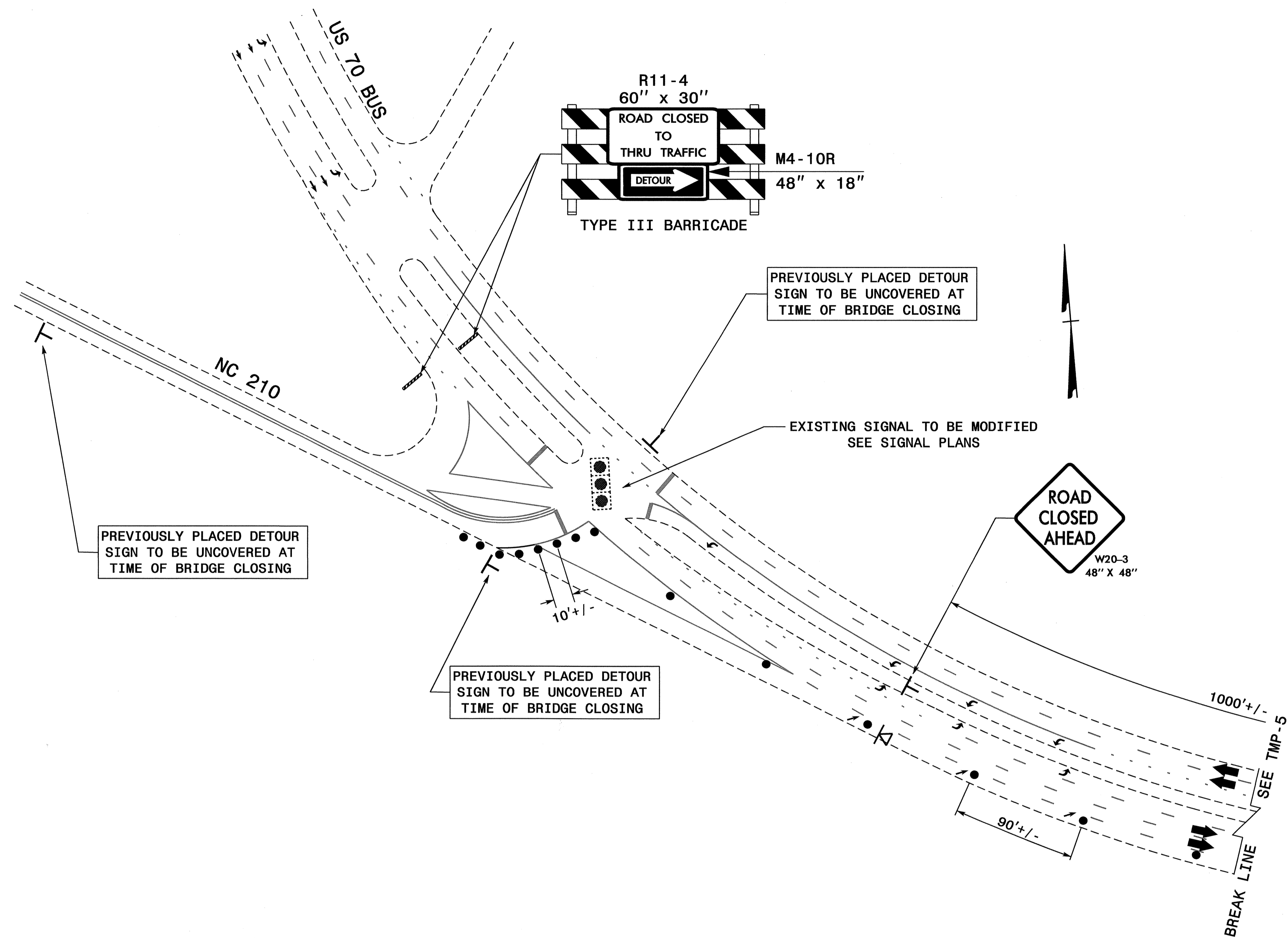
PEDESTRIAN ACCESS BRIDGE MAINTAINED THROUGH LOCAL TRANSPORTATION AGENCY - JCATS.

LOCAL NOTE  
PRIOR TO STRIPING THE TEMPORARY 4' PEDESTRIAN WALKWAY, THE CONTRACTOR SHALL RELOCATE THE EXISTING CONCRETE WHEEL STOPS TO PROVIDE 1' OF CLEAR DISTANCE BETWEEN THE WHEEL STOPS AND THE WALKWAY. UPON RE-OPENING MARKET ST TO TRAFFIC AND PEDESTRIANS, THE CONTRACTOR SHALL RELOCATE THE WHEEL STOPS TO THEIR EXISTING POSITIONS. THE RELOCATION OF THE WHEEL STOPS SHALL BE CONSIDERED INCIDENTAL TO THE TEMPORARY PEDESTRIAN WALKWAY AND NO SEPARATE PAYMENT SHALL BE MADE.



## TRANSPORTATION OPERATIONS PLAN

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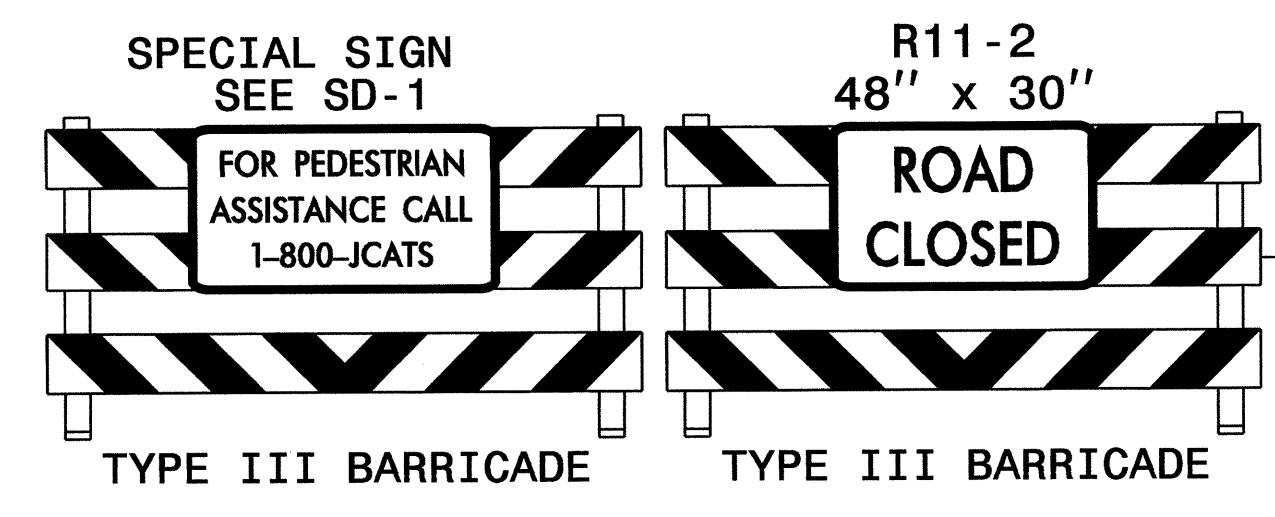
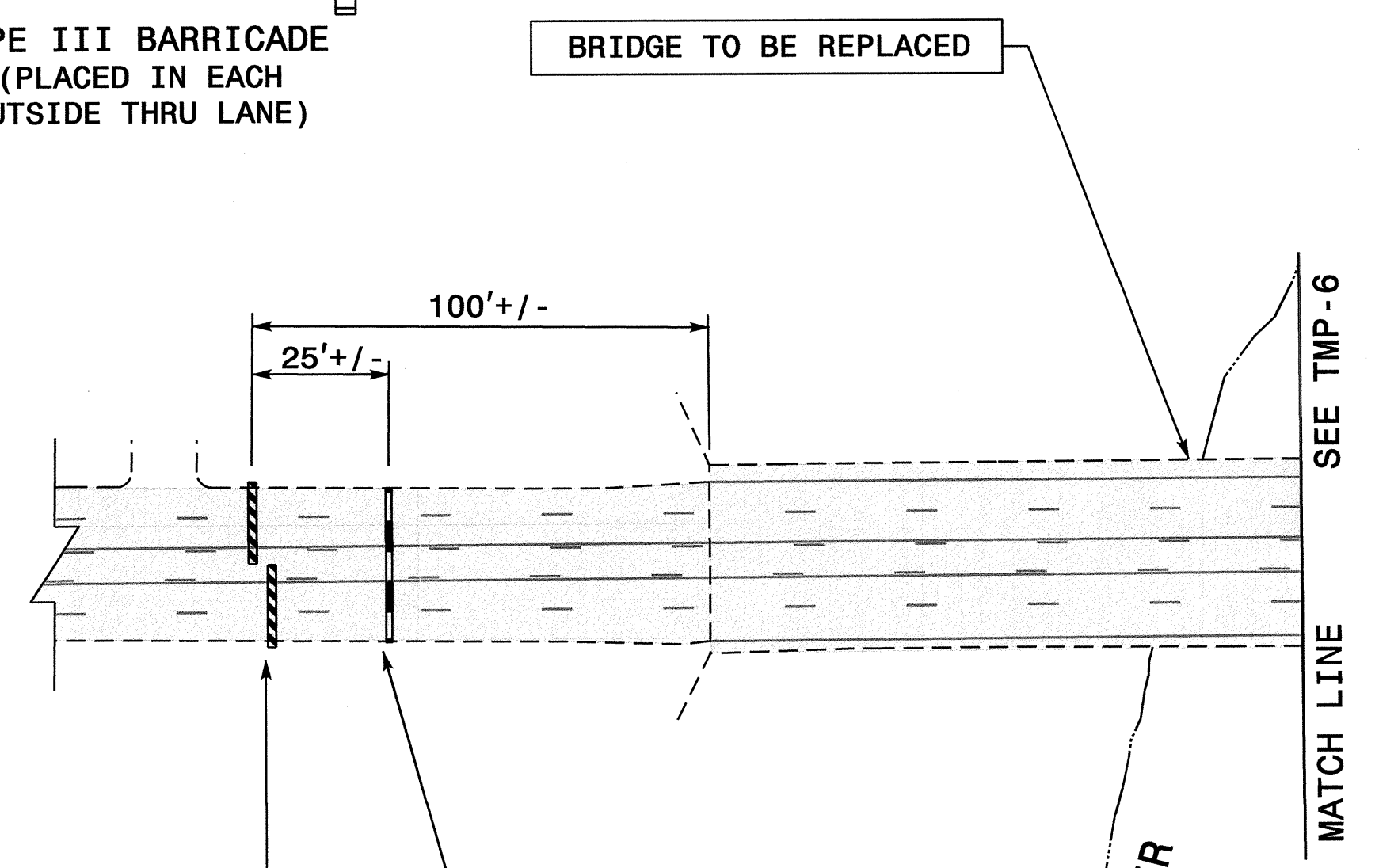
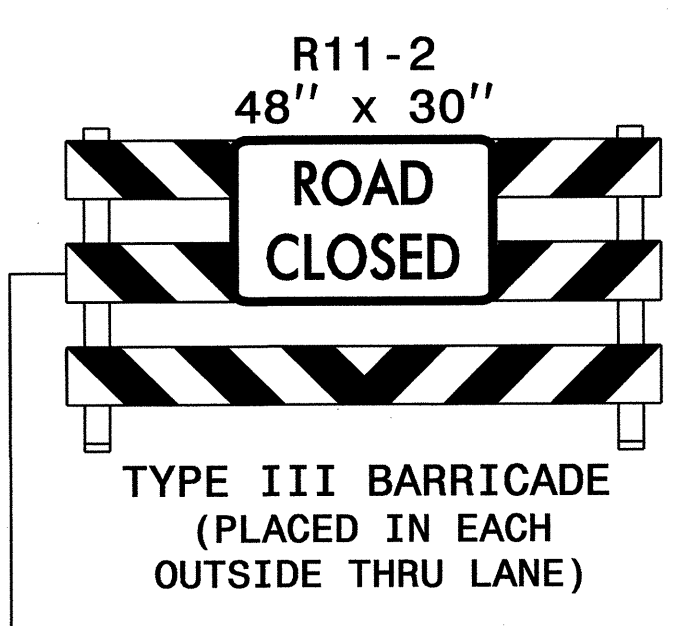
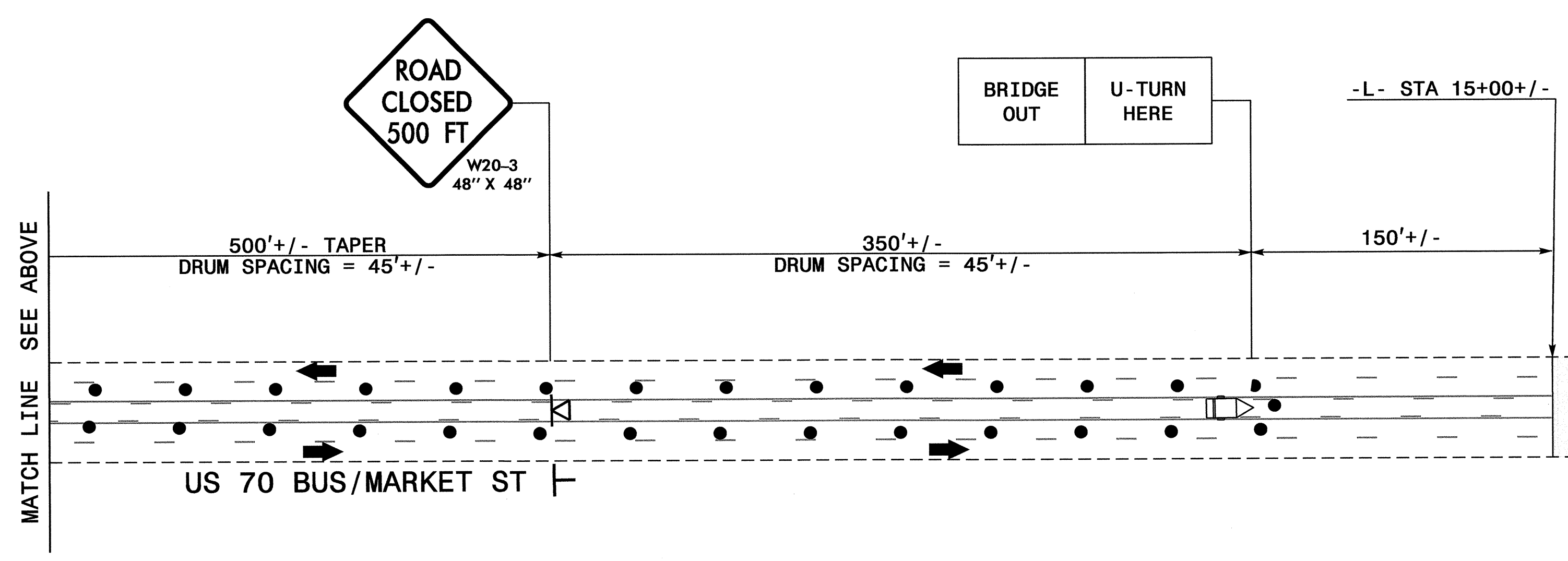
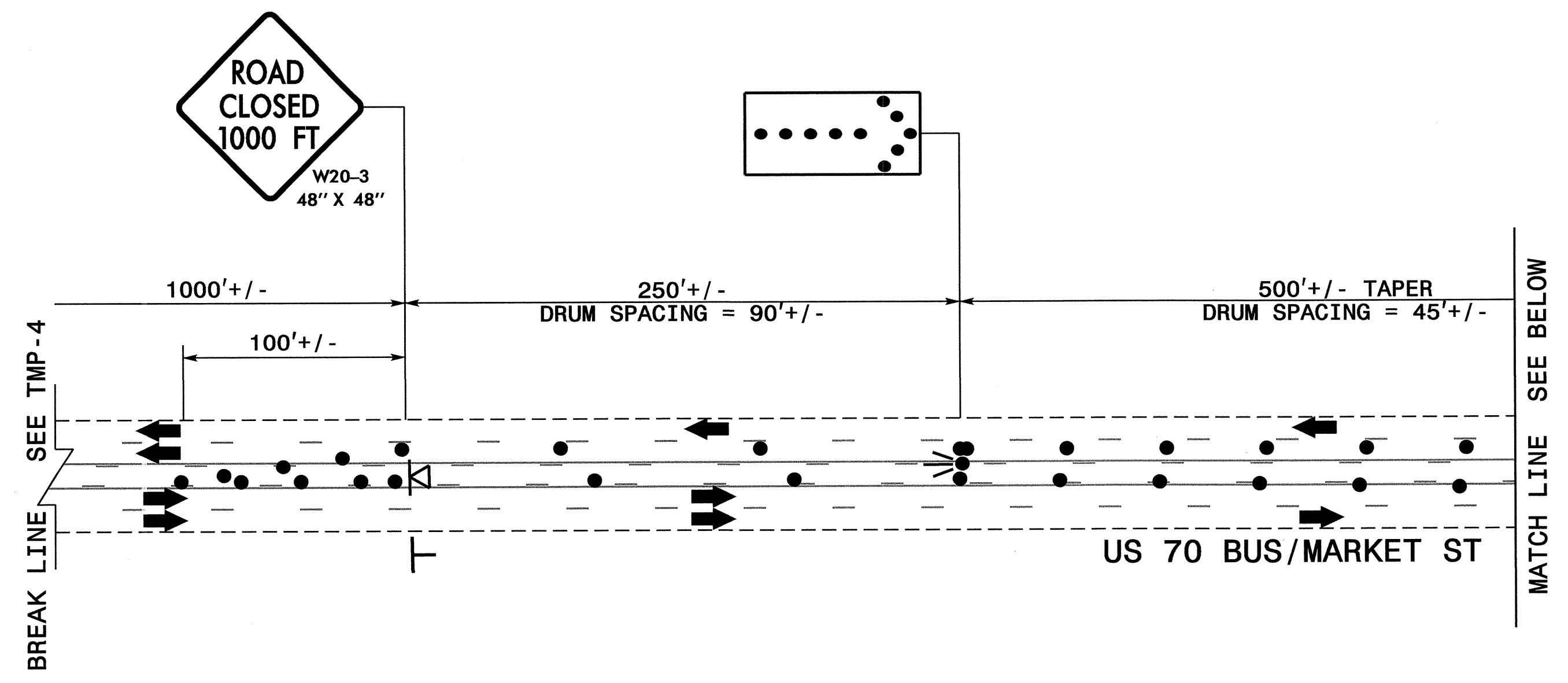


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APPROVED: *John S. Kite* DATE: 12/7/11

SEAL

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DESIGN BY: DR		
REVIEWED BY: DP		



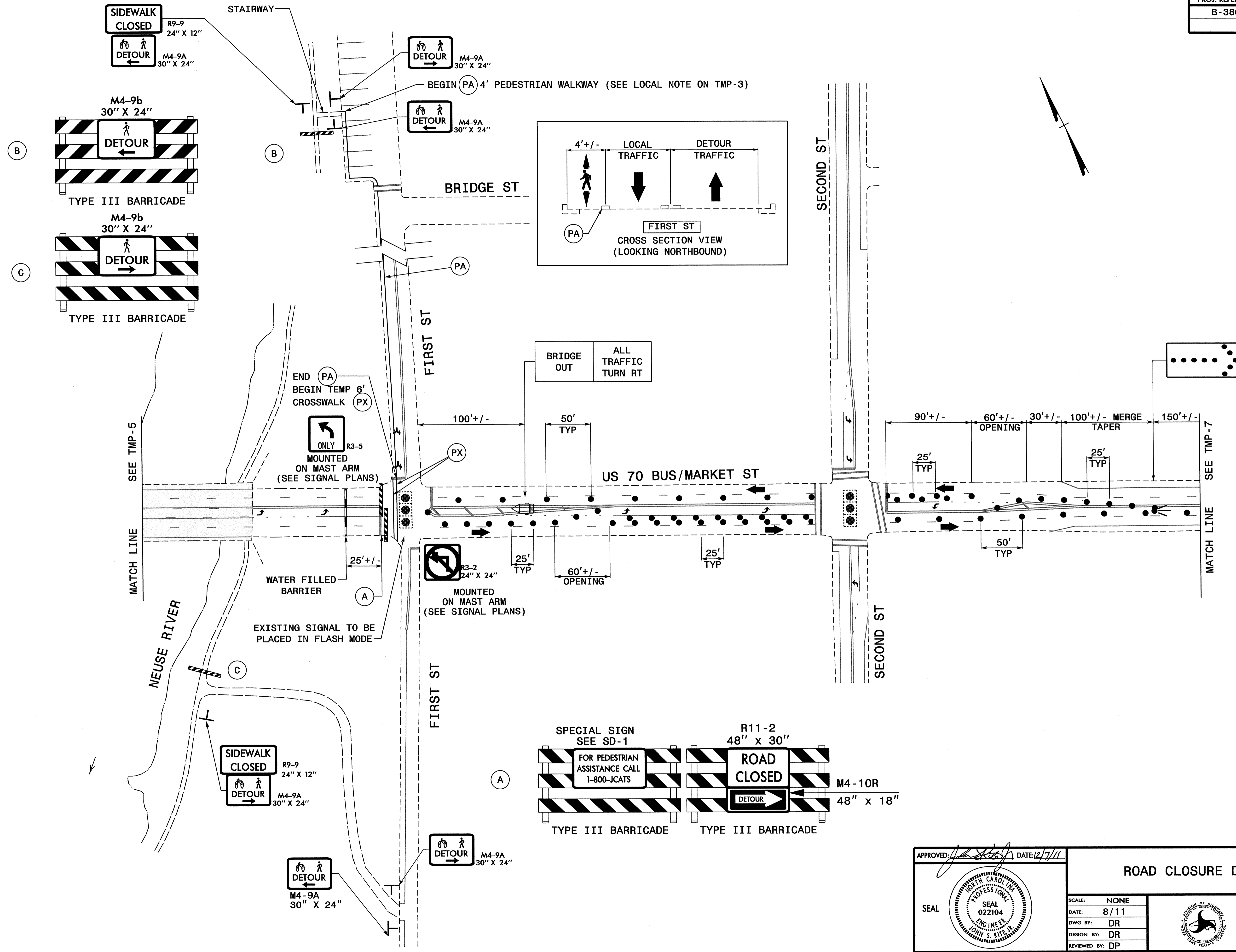
NOTE - CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS

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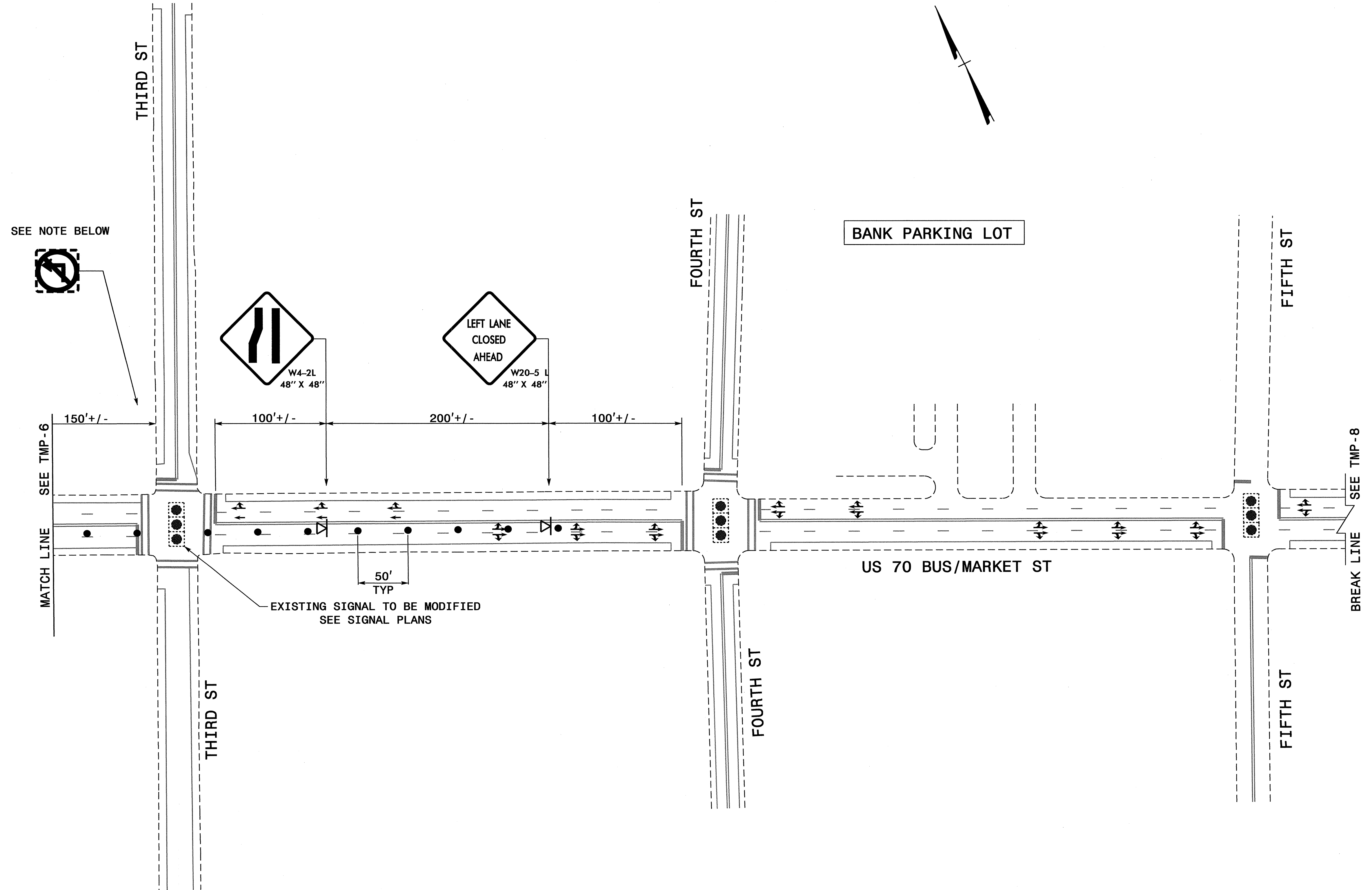
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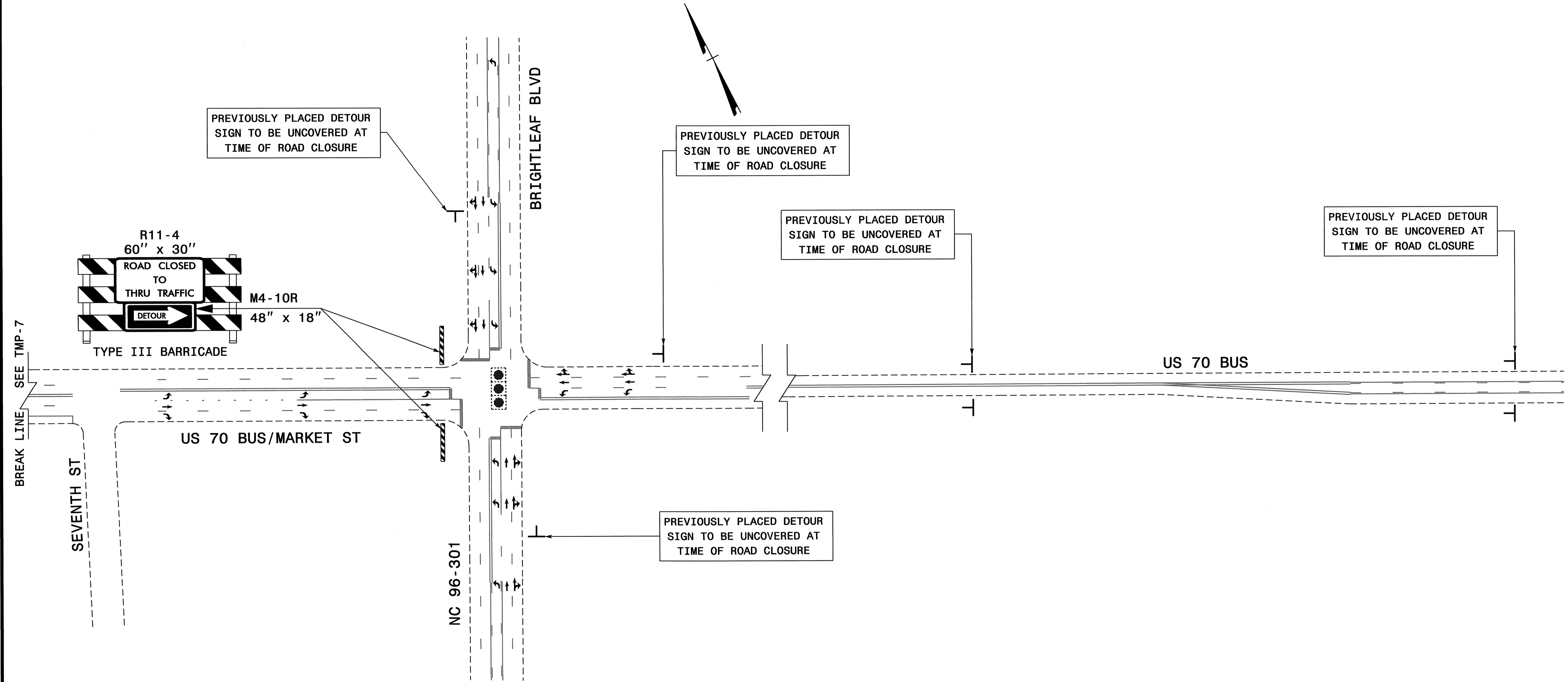


EXISTING SIGNAL TO BE MODIFIED  
SEE SIGNAL PLANS

NOTE: EXISTING SIGN ON SOUTHBOUND APPROACH TO MARKET ST TO BE COVERED OR REMOVED IN ORDER TO ALLOW LEFT TURNS ONTO MARKET ST DURING ROAD CLOSURE. SEE SIGNAL PLANS.  
UNCOVER OR REINSTALL WHEN MARKET ST IS REOPENED.

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