# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO. SHEET NO.

B-5179B TCP-1

# PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

# BUNCOMBE COUNTY

LOCATION: BRIDGES 66, 70, 206, 208, 274, 283, 285, 439 AND 454 ALONG I-240
TYPE OF WORK: TRAFFIC CONTROL FOR BRIDGE DECK PRESERVATION

# ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES 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
1101.04	TEMPORARY SHOULDER CLOSURES
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
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1250.01	PAVEMENT MARKER SPACING
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS

# INDEX OF SHEETS

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TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND INDEX OF SHEETS
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TCP-3, 3A	PROJECT PHASING
TCP-4	OVERVIEW AND VICINITY MAP
TCP-5	I-240 E DETOUR #1 BRIDGES 66, 206, 274, 283
TCP-5A	I-240 E DETOUR #1, SHEET 2
TCP-6	I-240 E DETOUR #2 BRIDGES 66, 206, 283
TCP-7	I-240 W DETOUR #1 BRIDGES 70, 208, 274, 285
TCP-7A	I-240 W DETOUR #1, SHEET 2
TCP-8	I-240 W DETOUR #2 BRIDGES 70, 208, 285
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TCP-11	WORK ZONE ADVANCE WARNING SIGNS

## LEGEND

#### **GENERAL**

DIRECTION OF TRAFFIC FLOW

NORTH ARROW

PROPOSED PVMT. ---- EXIST. PVMT.

WORK AREA

REMOVAL OF EXISTING PAVEMENT

#### TRAFFIC CONTROL DEVICES

T TYPE I BARRICADE

TYPE II BARRICADE

TYPE III BARRICADE

CONE

DRUM
SKINNY DRUM

FLASHING ARROW PANEL (TYPE C)

- STATIONARY SIGN

PORTABLE SIGN

STATIONARY OR PORTABLE SIGN

--- -- PORTABLE CONCRETE BARRIER

TEMPORARY CRASH CUSHION

CHANGEABLE MESSAGE SIGN

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

POLICE

ELAGGE

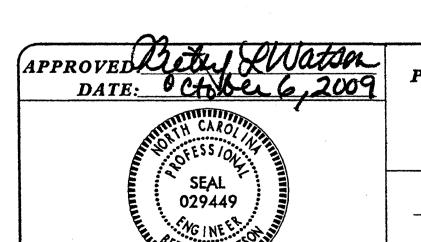
### PAVEMENT MARKINGS

CRYSTAL/CRYSTAL PAVEMENT MARKER

◆ YELLOW/YELLOW PAVEMENT MARKER

CRYSTAL/RED PAVEMENT MARKER

PAVEMENT MARKING SYMBOLS



PLAN PREPARED BY:



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BETSY L. WATSON, PE

GEORGE KARAGEORGE

TRAFFIC CONTROL ENGINEER

TRAFFIC CONTROL DESIGNER

TOUL OUG

2\transportation\design\t

#### PROJECT REFERENCE NO. SHEET NO. B-5179B TCP-2

### GENERAL NOTES

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

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

#### LANE CLOSURE TIME RESTRICTIONS

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

ROAD NAME

DAY AND TIME RESTRICTIONS

6:30 A.M. - 6:30 P.M. EVERY DAY (7 DAYS PER WEEK) I-26 & I-40 INCLUDING ALL RAMPS & LOOPS

I-240 6:30 A.M. - 6:30 P.M. EVERY DAY, EXCEPT INCLUDING ALL RAMPS & LOOPS DURING CLOSURES OF I-240 AS ALLOWED BY NOTE C

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

#### ROAD NAME

I-26, I-40 & I-240 INCLUDING ALL RAMPS & LOOPS

#### HOLIDAY

- 1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:30 P.M. DECEMBER 31st TO 6:30 A.M. JANUARY 2nd. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:30 A.M. THE FOLLOWING TUESDAY.
- 3) FOR EASTER, BETWEEN THE HOURS OF 6:30 P.M. THURSDAY AND 6:30 A.M.
- 4) FOR MEMORIAL DAY. BETWEEN THE HOURS OF 6:30 P.M. FRIDAY TO 6:30 A.M. TUESDAY.
- 5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:30 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:30 A.M. THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY: THEN BETWEEN THE HOURS OF 6:30 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:30 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:30 P.M. FRIDAY AND 6:30 A.M. TUESDAY.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:30 P.M. TUESDAY TO 6:30 A.M. MONDAY.
- 8) FOR CHRISTMAS. BETWEEN THE HOURS OF 6:30 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:30 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- 9) FOR THE BELE CHERE FESTIVAL, BETWEEN THE HOURS OF 6:30 P.M.THE WEDNESDAY BEFORE THE FESTIVAL AND 6:30 A.M. THE WEDNESDAY AFTER THE FESTIVAL.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

I-240 (AREAS 1 AND 2)

6:30 A.M. MONDAY - 6:30 P.M. FRIDAY

#### 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 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 REMAIN 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) PROVIDE A MINIMUM OF 1 MILE BETWEEN LANE CLOSURES, MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

#### PAVEMENT EDGE DROP OFF REQUIREMENTS

J) 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

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

#### SIGNING

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

#### AND

PROVIDE SIGNING REQUIRED FOR THE OFFSITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

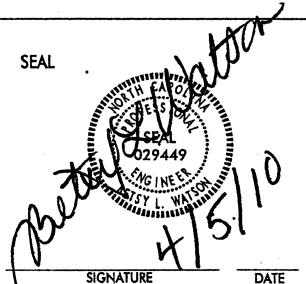
N) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION

#### AND

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFFSITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

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





GENERAL NOTES

NONE AUG. 2009 GK BLW

REVISIONS

#### NOTES GENERAL

#### TRAFFIC BARRIER

P) 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 TEMPORARY BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

PLACE TEMPORARY BARRIER NO CLOSER THAN 2 FT. FROM A TRAVEL LANE, UNLESS OTHERWISE SHOWN IN THE PLAN. A 1 FOOT OFFSET MAY BE USED IF 2 FT. IS NOT ATTAINABLE, 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.

Q) PROTECT THE APPROACH END OF PORTABLE CONCRETE BARRIER AT ALL TIMES INCLUDING DURING INSTALLATION AND REMOVAL OF THE BARRIER. PROTECT APPROACH END BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

#### TRAFFIC CONTROL DEVICES

- R) UNLESS OTHERWISE NOTED IN THE PLANS, SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, 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.
- S) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- T) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

#### PAVEMENT MARKINGS AND MARKERS

- U) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS SHOWN IN THE PAVEMENT MARKING PLAN.
- V) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON FINAL LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME

MARKING

MARKER

ALL ROADS

PAINT (2 APPS)

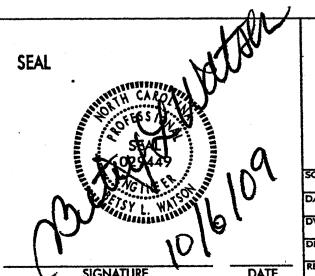
SNOWPLOWABLE

W) REPLACE ALL PAVEMENT MARKINGS AND MARKERS BEFORE RE-OPENING LANES TO TRAFFIC.

#### MISCELLANEOUS

- X) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER.
- Y) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC CONTROL PLAN AND PHASING ARE APPROXIMATE; FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- Z) THE CONTRACTOR IS TO FURNISH, INSTALL, MAINTAIN, RELOCATE AND REMOVE CHANGEABLE MESSAGE SIGNS DURING VARIOUS STAGES OF CONSTRUCTION AT THE DISCRETION OF THE ENGINEER TO ADEQUATELY INFORM MOTORISTS OF CHANGING WORK ZONE CONDITIONS.
- AA) PLACE ALL CHANGEABLE MESSAGE SIGNS AS NEEDED IN THE LOCATIONS AND WITH THE WORD MESSAGES AS SHOWN IN THE TCP OR AS DIRECTED BY THE ENGINEER TO PROVIDE ADVANCE WARNING TO THE PUBLIC DURING CONSTRUCTION.
- BB) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE INCLUDING THE FOLLOWING AREAS OF CONCERN:
  - A. LANE CLOSURE RESTRICTIONS.
  - B. DETOURS OFFSITE AND ONSITE.
  - C. AREAS OF CONSTRICTED HORIZONTAL CLEARANCES (NARROW LANES OR LANES BORDERED WITH EITHER PCB AND/OR GUARDRAIL).
- CC) COORDINATE WITH THE ENGINEER TO MAKE SURE THAT THE FOLLOWING TASKS ARE COMPLETED BY NCDOT PERSONNEL PRIOR TO IMPLEMENTING ANY DETOURS:
  - -SIGNAL TIMINGS ALONG AFFECTED LOCAL ROUTES HAVE BEEN ADJUSTED.
  - -HAR AND DMS MESSAGES HAVE BEEN PREPARED/IMPLEMENTED. -NECESSARY PUBLIC INFORMATION MEASURES HAVE BEEN ADDRESSED.





**GENERAL NOTES** 

AUG. 2009 GK BLW

REVISIONS

# PROJECT REFERENCE NO. SHEET NO. B-5179B TCP-3

#### THE TRAFFIC CONTROL PHASING FOR THIS PROJECT IS DIVIDED INTO 4 AREAS OF CONSTRUCTION

AREA 1 - BRIDGES #283, 66, 206 AND 274 ON I-240 EASTBOUND

AREA 2 - BRIDGES #285, 70, 208 AND 274 ON I-240 WESTBOUND

AREA 3 - BRIDGE #439 I-240 WESTBOUND

AREA 4 - BRIDGE #454 I-240 EASTBOUND

THE FOLLOWING RESTRICTIONS APPLY TO WORK PERFORMED IN THESE AREAS.

- -WHEN WORKING IN AREA 1 DO NOT WORK IN ANY OTHER AREAS.
- -WHEN WORKING IN AREA 2 DO NOT WORK IN ANY OTHER AREAS.
- -WORK IN AREAS 3 AND 4 MAY BE PERFORMED SIMULTANEOUSLY.

INSTALL WORK ZONE ADVANCE WARNING SIGNS PRIOR TO ANY CONSTRUCTION OPERATIONS (TCP-11).

- AREA 1 BRIDGES 283, 66, 206, AND 274 EASTBOUND DIRECTION SEE SHEET TCP-4 FOR OVERVIEW
- STEP 1: BEGIN PREPARATION OF TRAFFIC CONTROL DEVICES FOR IMPLEMENTATION IN NEXT STEP. INSTALL CHANGEABLE MESSAGE SIGNS AS WILL BE REQUIRED FOR ROAD CLOSURES AND PUBLIC INFORMATION.

REPEAT STEPS 2A, 2B AND 2C FOR AS MANY WEEKENDS AS NECESSARY TO COMPLETE THE WORK, ADHERING TO THE OVERALL CONTRACT TIME IN ADDITION TO NOTES B AND C ON SHEET TCP-2. WEEKENDS DO NOT HAVE TO BE CONSECUTIVE.

- STEP 2A: INSTALL TRAFFIC CONTROL DEVICES TO IMPLEMENT I-240 EASTBOUND DETOUR #1 AND CLOSE I-240 EASTBOUND AS SHOWN ON SHEET TCP-5, 5A.
- STEP 2B: CONSTRUCT BRIDGE PRESERVATION FOR BRIDGE NO. 274
  EASTBOUND DIRECTION.

WORK ON BRIDGES 283, 66, AND 206 EASTBOUND MAY BE PERFORMED DURING THIS DETOUR; HOWEVER, ANY WORK THAT IS BEGUN MUST BE COMPLETED SUCH THAT ALL LANES ARE REOPENED TO TRAFFIC BY THE END OF EACH WORK PERIOD.

STEP 2C: REMOVE TRAFFIC CONTROL DEVICES FOR DETOUR AND OPEN I-240 EASTBOUND TO THE NORMAL TRAFFIC PATTERN.

REPEAT STEPS 3A, 3B AND 3C FOR AS MANY WEEKENDS AS NECESSARY TO COMPLETE THE WORK, ADHERING TO THE OVERALL CONTRACT TIME IN ADDITION TO NOTES B AND C ON SHEET TCP-2. WEEKENDS DO NOT HAVE TO BE CONSECUTIVE.

- STEP 3A: INSTALL TRAFFIC CONTROL DEVICES TO IMPLEMENT I-240
  EASTBOUND DETOUR #2 AND CLOSE I-240 EASTBOUND AS SHOWN ON SHEET TCP-6.
- STEP 3B: CONSTRUCT BRIDGE PRESERVATION FOR BRIDGE NO.S 66, 206 AND 283.
- STEP 3C: REMOVE TRAFFIC CONTROL DEVICES FOR DETOUR AND OPEN I-240 EASTBOUND TO THE NORMAL TRAFFIC PATTERN.

- AREA 2 BRIDGES 208, 70, 285, AND 274 WESTBOUND DIRECTION SEE SHEET TCP-4 FOR OVERVIEW
- STEP 1: BEGIN PREPARATION OF TRAFFIC CONTROL DEVICES FOR IMPLEMENTATION IN NEXT STEP. INSTALL CHANGEABLE MESSAGE SIGNS AS WILL BE REQUIRED FOR ROAD CLOSURES AND PUBLIC INFORMATION.
- REPEAT STEPS 2A, 2B AND 2C FOR AS MANY WEEKENDS AS NECESSARY TO COMPLETE THE WORK, ADHERING TO THE OVERALL CONTRACT TIME IN ADDITION TO NOTES B AND C ON SHEET TCP-2. WEEKENDS DO NOT HAVE TO BE CONSECUTIVE.
- STEP 2A: INSTALL TRAFFIC CONTROL DEVICES TO IMPLEMENT I-240
  WESTBOUND DETOUR #1 AND CLOSE I-240 WESTBOUND AS SHOWN ON SHEET
  TCP-7, 7A.
- STEP 2B: CONSTRUCT BRIDGE PRESERVATION FOR BRIDGE NO. 274 WESTBOUND DIRECTION.

WORK ON BRIDGES 208, 70, AND 285 WESTBOUND MAY BE PERFORMED DURING THIS DETOUR; HOWEVER, ANY WORK THAT IS BEGUN MUST BE COMPLETED SUCH THAT ALL LANES ARE REOPENED TO TRAFFIC BY THE END OF EACH WORK PERIOD.

STEP 2C: REMOVE TRAFFIC CONTROL DEVICES FOR DETOUR AND OPEN I-240 WESTBOUND TO THE NORMAL TRAFFIC PATTERN.

REPEAT STEPS 3A, 3B AND 3C FOR AS MANY WEEKENDS AS NECESSARY TO COMPLETE THE WORK, ADHERING TO THE OVERALL CONTRACT TIME IN ADDITION TO NOTES B AND C ON SHEET TCP-2. WEEKENDS DO NOT HAVE TO BE CONSECUTIVE.

- STEP 3A: INSTALL TRAFFIC CONTROL DEVICES TO IMPLEMENT I-240
  WESTBOUND DETOUR #2 AND CLOSE I-240 WESTBOUND AS SHOWN ON SHEET
  TCP-8.
- STEP 3B: CONSTRUCT BRIDGE PRESERVATION FOR BRIDGE NO.S 208, 70 AND 285.
- STEP 3C: REMOVE TRAFFIC CONTROL DEVICES FOR DETOUR AND OPEN 1-240 WESTBOUND TO THE NORMAL TRAFFIC PATTERN.



SEAL STATE OF THE STATE OF THE

TRAFFIC CONTROL PHASING AREA 1 AND AREA 2

SCALE: NONE
DATE: AUG. 2009
DWG. BY: GK
DESIGN BY: BLW
REVIEWED BY: BLW

THE WORK THE WAR THE W

REVISIONS

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AREA 2 - BRIDGES #285, 70, 208 AND 274 ON I-240 WESTBOUND AREA 3 - BRIDGE #439 I-240 WESTBOUND

AREA 4 - BRIDGE #454 I-240 EASTBOUND

THE FOLLOWING RESTRICTIONS APPLY TO WORK PERFORMED IN THESE AREAS.

-WHEN WORKING IN AREA 1 DO NOT WORK IN ANY OTHER AREAS.

-WHEN WORKING IN AREA 2 DO NOT WORK IN ANY OTHER AREAS.

-WORK IN AREAS 3 AND 4 MAY BE PERFORMED SIMULTANEOUSLY

INSTALL WORK ZONE ADVANCE WARNING SIGNS PRIOR TO ANY CONSTRUCTION OPERATIONS (TCP-11).

B-5179B

PROJECT REFERENCE NO.

TCP-3A

SHEET NO.

AREA 4 BRIDGE 454 SEE SHEET TCP-4 FOR OVERVIEW

INTERMEDIATE CONTRACT TIME SPECIAL PROVISION

COMPLETE THE WORK REQUIRED OF AREA 4-STEPS 1 THROUGH 7 IN A CONTINUOUS OPERATION WITHIN A PERIOD OF 9.5 CALENDAR DAYS BETWEEN THE HOURS OF FRIDAY 6:30 P.M. AND MONDAY AT 6:30 A.M...

#### STAGE 1 CONSTRUCTION BRIDGE 454

- STEP 1: CLOSE RAMP CONNECTING CHUNNS COVE RD. TO I-240 EASTBOUND AS SHOWN ON SHEET TCP-10A.
- STEP 2: CLOSE I-240 EASTBOUND LEFT TWO LANES AS SHOWN ON STAGE 1 CONSTRUCTION SHEET TCP-10 (RSD 1101.02 SHEET 5 OF 9).
- STEP 3: BEHIND LANE CLOSURE INSTALL PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHION (TCP-10).
- STEP 4: BEHIND PORTABLE CONCRETE BARRIER CONSTRUCT STAGE 1 OF THE BRIDGE LEFT SIDE PRESERVATION.
- STEP 5: UPON COMPLETION OF STAGE 1 REMOVE PORTABLE CONCRETE BARRIER AND CRASH CUSHION.
- STEP 6: REMOVE TRAFFIC CONTROL DEVICES ON I-240 EASTBOUND AND RESTORE TO NORMAL TRAFFIC PATTERN.
- STEP 7: REMOVE CLOSURE AND RE-OPEN RAMP CONNECTING CHUNNS COVE RD. TO I-240 EASTBOUND.

#### INTERMEDIATE CONTRACT TIME SPECIAL PROVISION

COMPLETE THE WORK REQUIRED OF AREA 4-STEPS 8 THROUGH 14 IN A CONTINUOUS OPERATION WITHIN A PERIOD OF 9.5 CALENDAR DAYS BETWEEN THE HOURS OF FRIDAY 6:30 P.M. AND MONDAY AT 6:30 A.M..

#### STAGE 2 CONSTRUCTION BRIDGE 454

- STEP 8: CLOSE RAMP CONNECTING CHUNNS COVE RD. TO I-240 EASTBOUND AS SHOWN ON SHEET TCP-10A.
- STEP 9: CLOSE I-240 EASTBOUND LEFT TWO LANES AND SHIFT TRAFFIC TO A SINGLE LEFT LANE AS SHOWN ON STAGE 2 CONSTRUCTION SHEET TCP-10 (RSD 1101.02 SHEET 5 OF 9).
- STEP 10: BEHIND LANE CLOSURE INSTALL PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHION.
- STEP 11: BEHIND PORTABLE CONCRETE BARRIER CONSTRUCT STAGE 2 OF THE BRIDGE RIGHT SIDE PRESERVATION.
- STEP 12: UPON COMPLETION OF STAGE 2 REMOVE PORTABLE CONCRETE BARRIER AND CRASH CUSHION.
- STEP 13: REMOVE TRAFFIC CONTROL DEVICES ON I-240 EASTBOUND AND RESTORE TO NORMAL TRAFFIC PATTERN.
- STEP 14: REMOVE CLOSURE AND RE-OPEN RAMP CONNECTOR FROM CHUNNS COVE RD. TO I-240 EASTBOUND.



DATE SIGNATURE

TRAFFIC CONTROL PHASING AREA 3 AND AREA 4

HORTH CAR	
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OR THAN SERVICE	ŗ

NONE

BLW

AUG. 2009 GK

REVISIONS

#### AREA 3 BRIDGE 439 SEE SHEET TCP-4 FOR OVERVIEW

#### INTERMEDIATE CONTRACT TIME SPECIAL PROVISION

COMPLETE THE WORK REQUIRED OF AREA 3-STEPS 1 THROUGH 7 IN A CONTINUOUS OPERATION WITHIN A PERIOD OF 9.5 CALENDAR DAYS BETWEEN THE HOURS OF FRIDAY 6:30 P.M. AND MONDAY AT 6:30 A.M..

#### STAGE 1 CONSTRUCTION BRIDGE 439

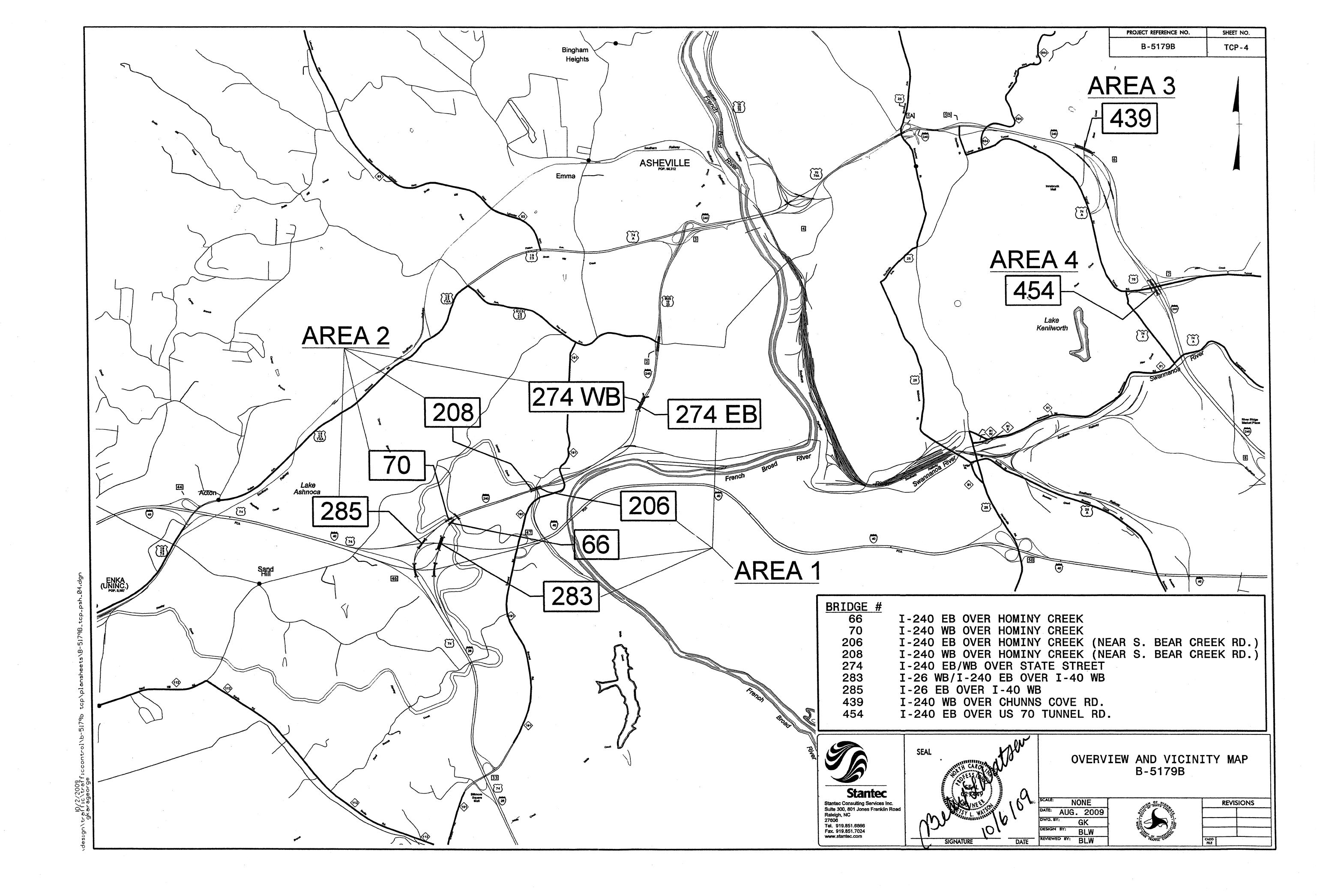
- STEP 1: CLOSE RAMP CONNECTING TUNNEL RD. TO I-240 WESTBOUND AS SHOWN ON SHEET TCP-9A.
- STEP 2: CLOSE I-240 WESTBOUND LEFT LANE (RSD 1101.02 SHEET 3 OF 9) AND SHIFT TRAFFIC TO A SINGLE LEFT LANE AS SHOWN ON SHEET TCP-9 STAGE 1 CONSTRUCTION.
- STEP 3: BEHIND LANE CLOSURE INSTALL PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHION.
- STEP 4: BEHIND PORTABLE CONCRETE BARRIER CONSTRUCT STAGE 1 OF THE BRIDGE RIGHT SIDE PRESERVATION.
- STEP 5: UPON COMPLETION OF STAGE 1 REMOVE PORTABLE CONCRETE BARRIER AND CRASH CUSHION.
- STEP 6: REMOVE TRAFFIC CONTROL DEVICES ON I-240 WESTBOUND AND RESTORE TO NORMAL TRAFFIC PATTERN.
- STEP 7: REMOVE CLOSURE AND RE-OPEN RAMP CONNECTOR FROM TUNNEL RD. TO I-240 WESTBOUND.

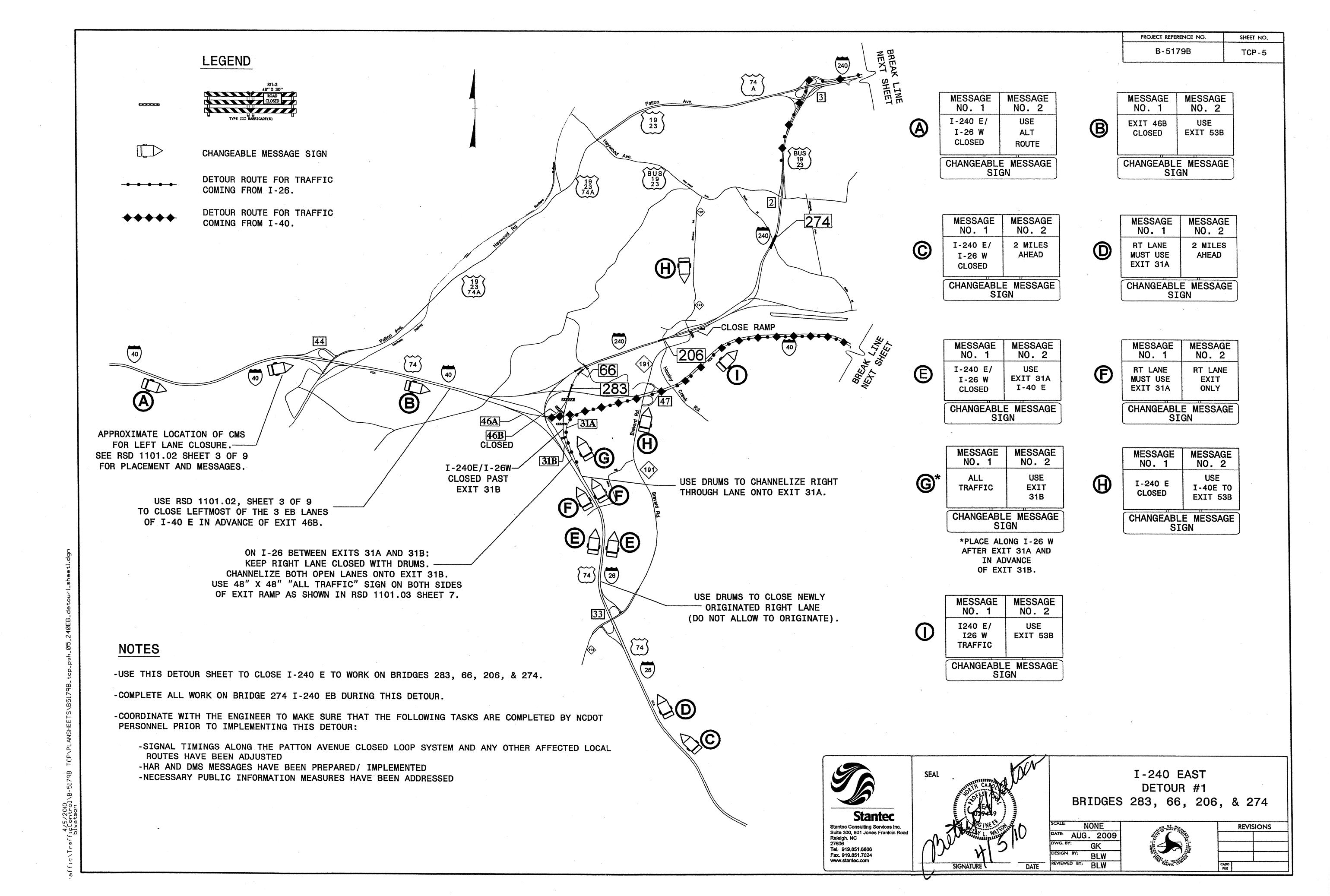
#### INTERMEDIATE CONTRACT TIME SPECIAL PROVISION

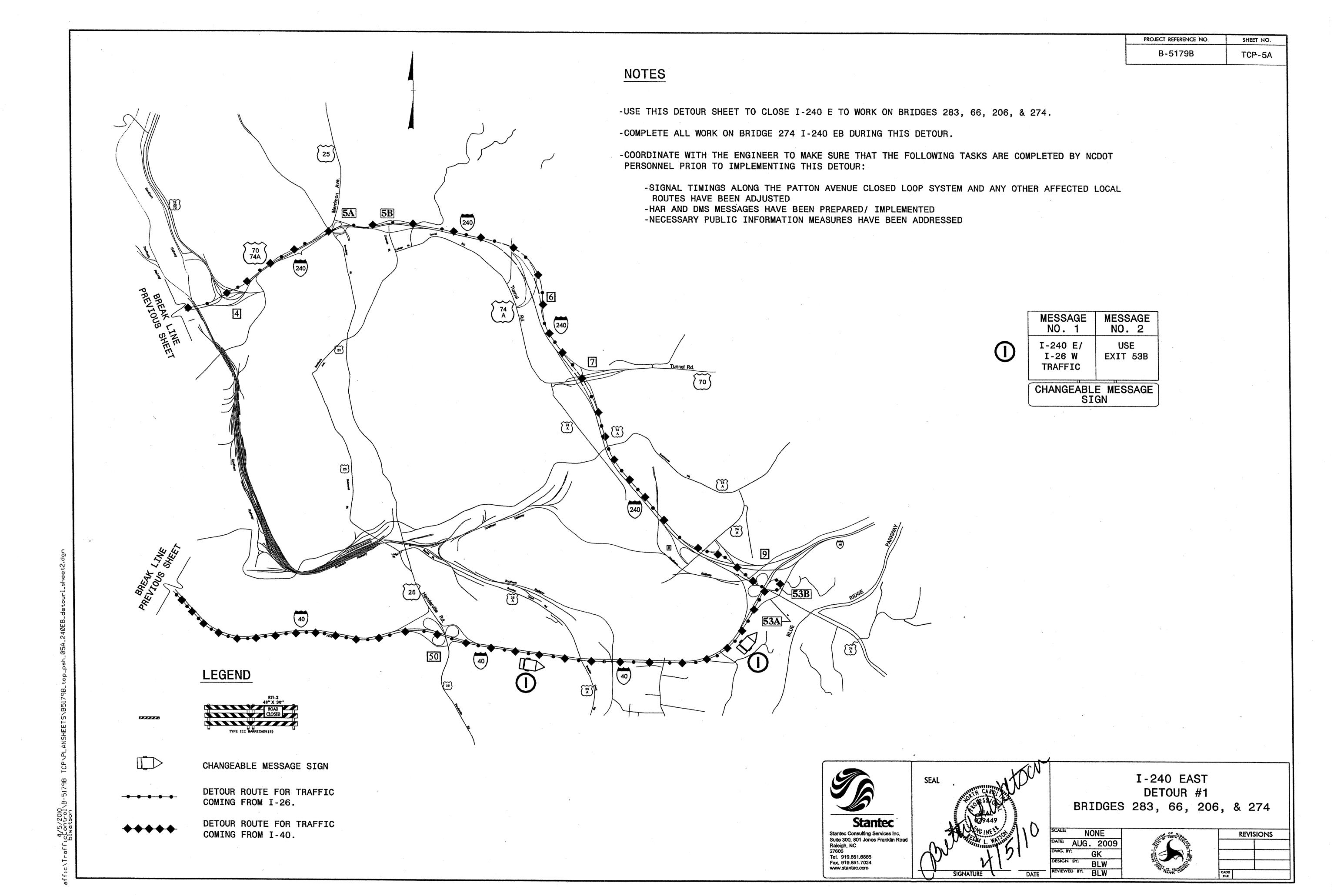
COMPLETE THE WORK REQUIRED OF AREA 3-STEPS 8 THROUGH 14 IN A CONTINUOUS OPERATION WITHIN A PERIOD OF 9.5 CALENDAR DAYS BETWEEN THE HOURS OF FRIDAY 6:30 P.M. AND MONDAY AT 6:30 A.M..

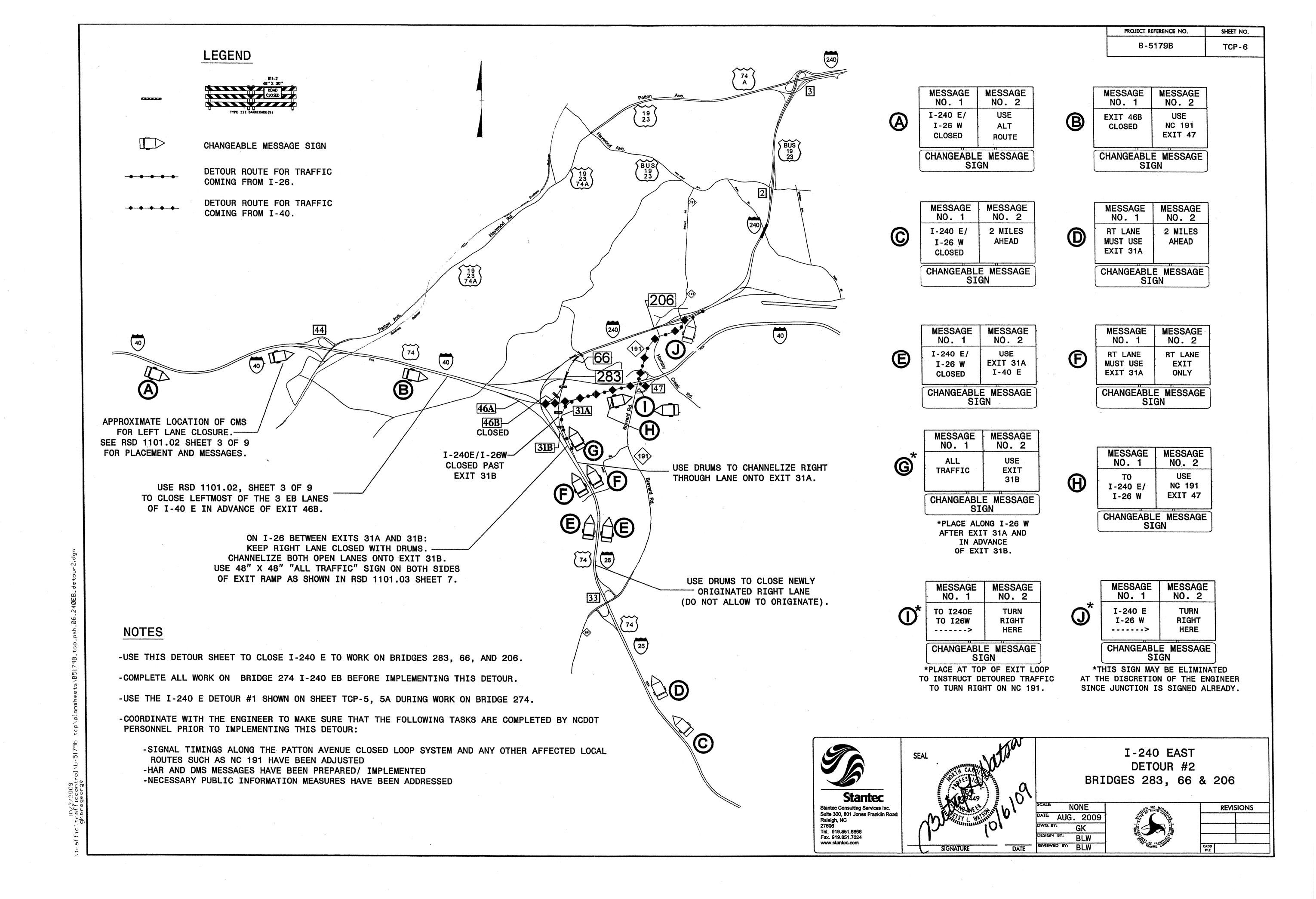
#### STAGE 2 CONSTRUCTION BRIDGE 439

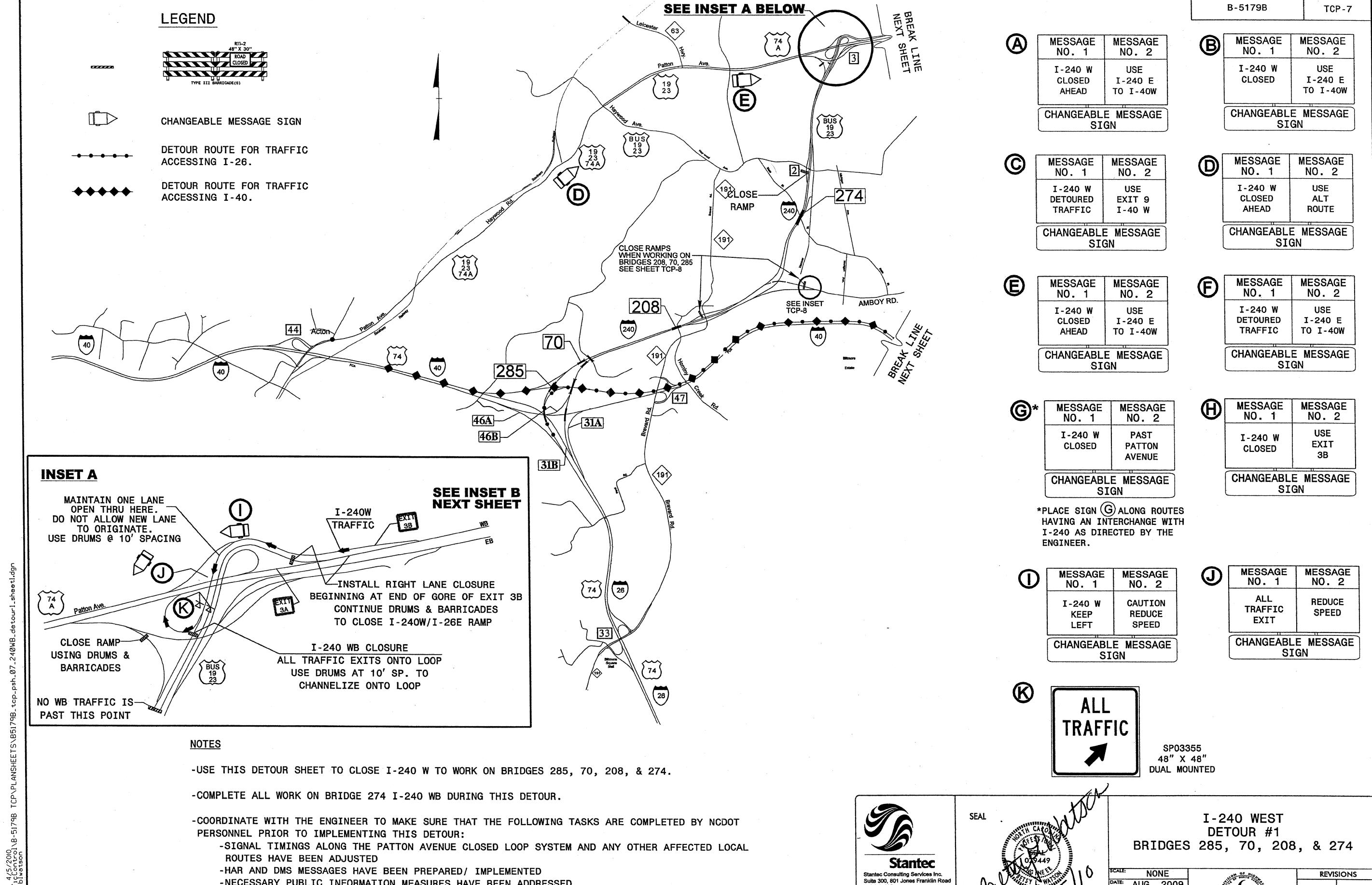
- STEP 8: CLOSE RAMP CONNECTING TUNNEL RD. TO I-240 WESTBOUND AS SHOWN ON SHEET TCP-9A.
- STEP 9: CLOSE I-240 WESTBOUND LEFT LANE (RSD 1101.02 SHEET 3 OF 9) AND PLACE TRAFFIC IN A SINGLE RIGHT LANE AS SHOWN ON SHEET TCP-9 STAGE 2 CONSTRUCTION.
- STEP 10: BEHIND LANE CLOSURE INSTALL PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHION.
- STEP 11: BEHIND PORTABLE CONCRETE BARRIER CONSTRUCT STAGE 2 OF THE BRIDGE LEFT SIDE PRESERVATION.
- STEP 12: UPON COMPLETION OF STAGE 2 REMOVE PORTABLE CONCRETE BARRIER AND CRASH CUSHION.
- STEP 13: REMOVE TRAFFIC CONTROL DEVICES ON I-240 WESTBOUND AND RESTORE TO NORMAL TRAFFIC PATTERN.
- STEP 14: REMOVE CLOSURE AND RE-OPEN RAMP CONNECTOR FROM TUNNEL RD. TO I-240 WESTBOUND.











-NECESSARY PUBLIC INFORMATION MEASURES HAVE BEEN ADDRESSED

PROJECT REFERENCE NO.

AUG. 2009

DATE

GK

BLW

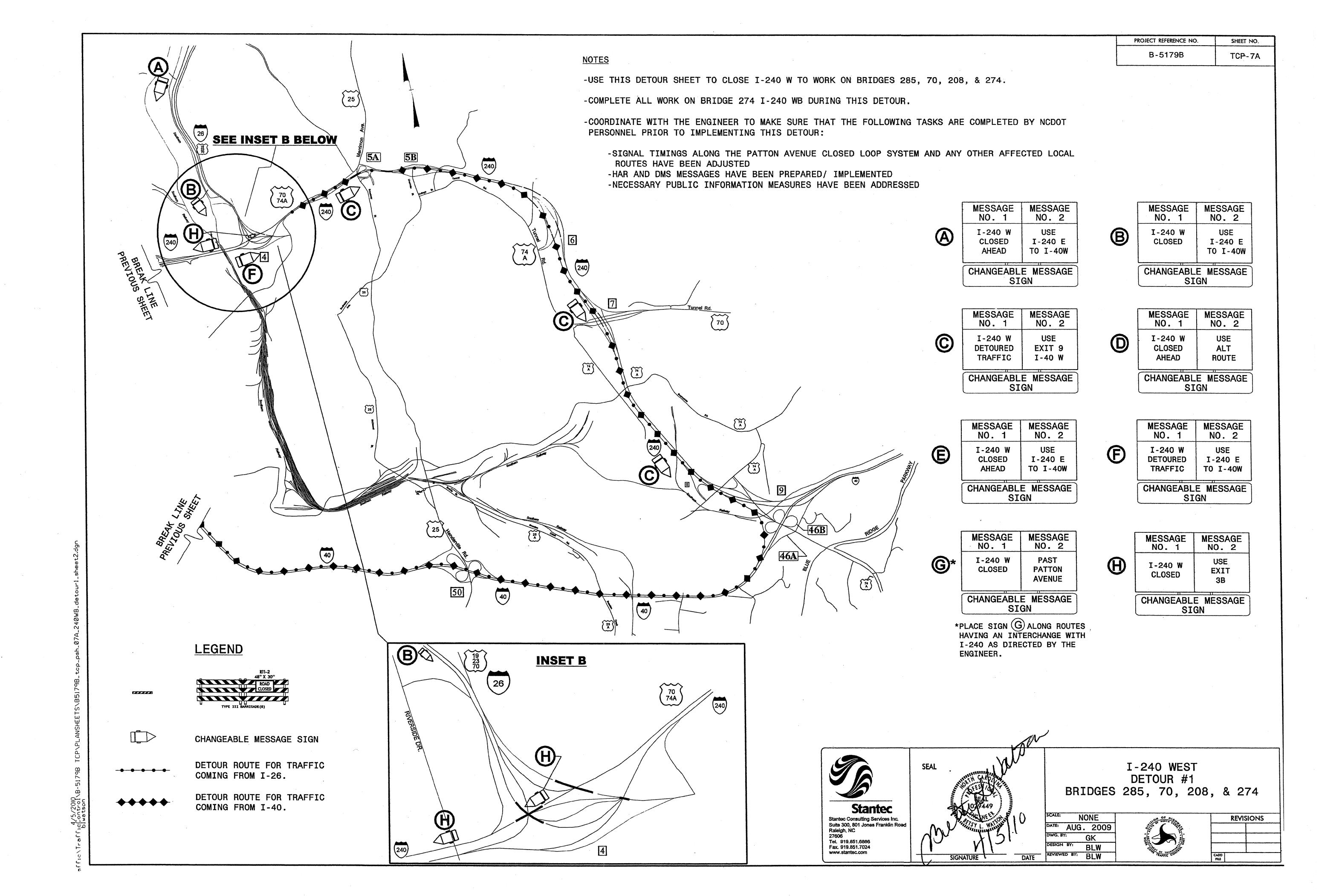
Raleigh, NC 27606

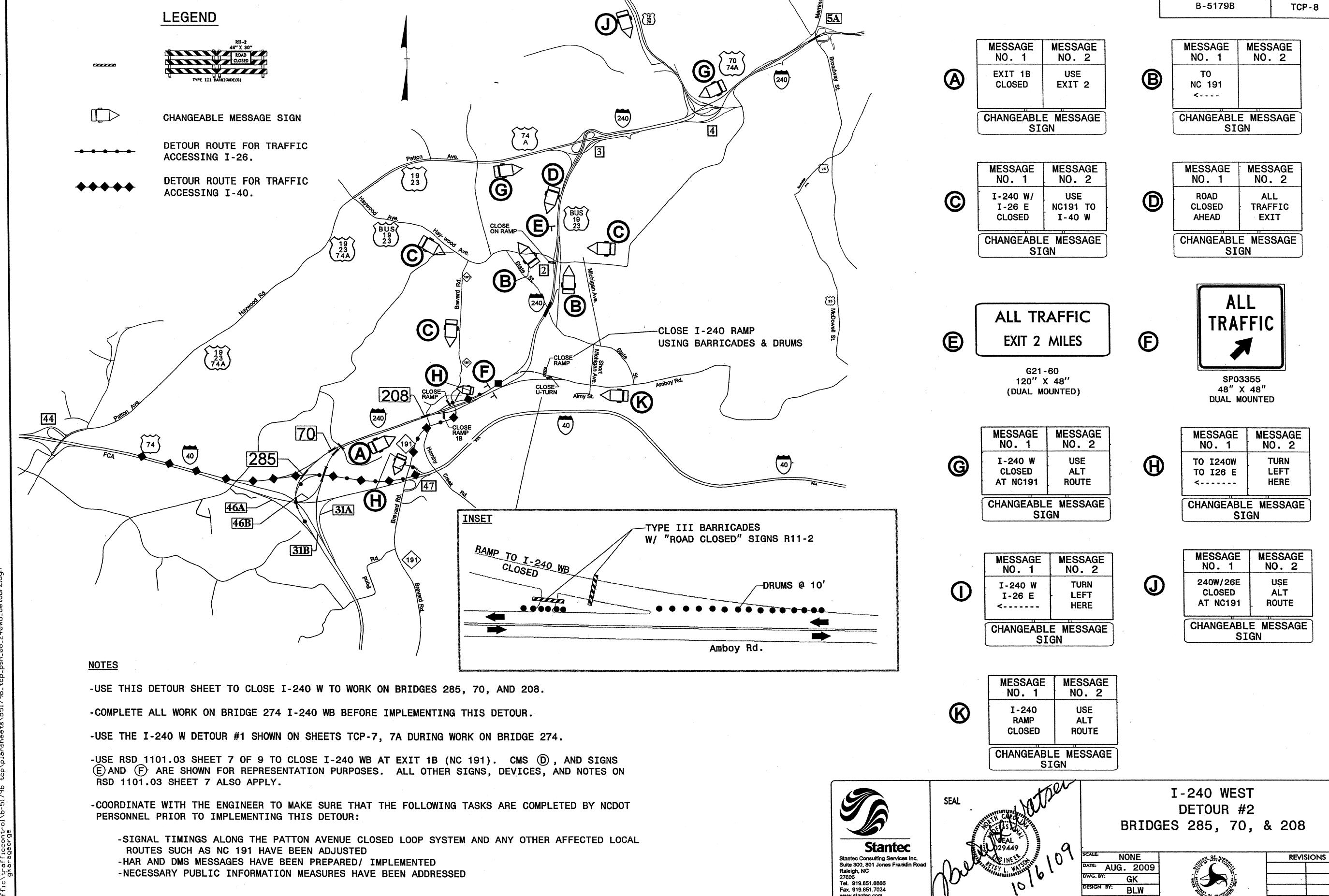
Tel. 919.851.6866 Fax. 919.851.7024

www.stantec.com

SIGNATURE

SHEET NO.



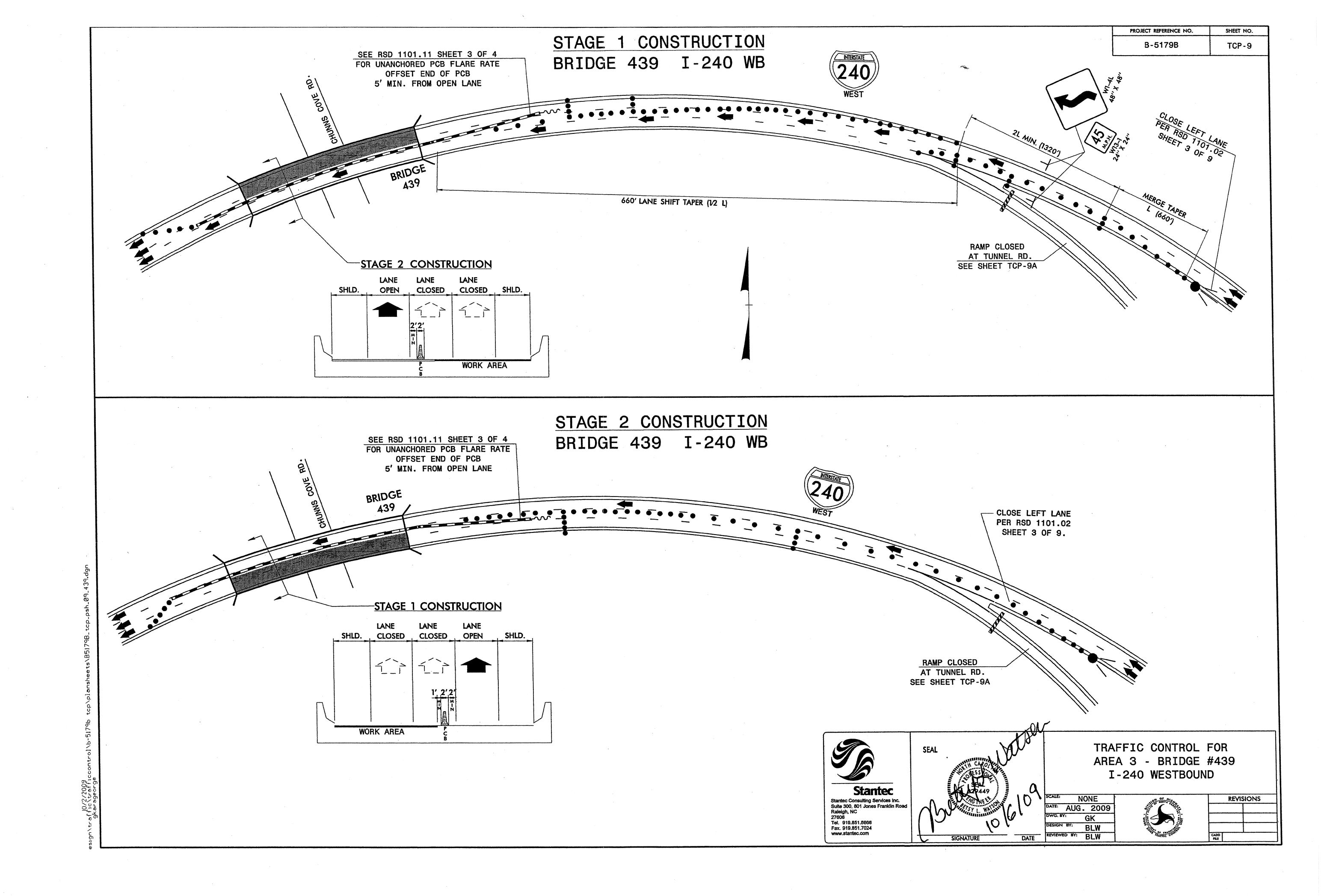


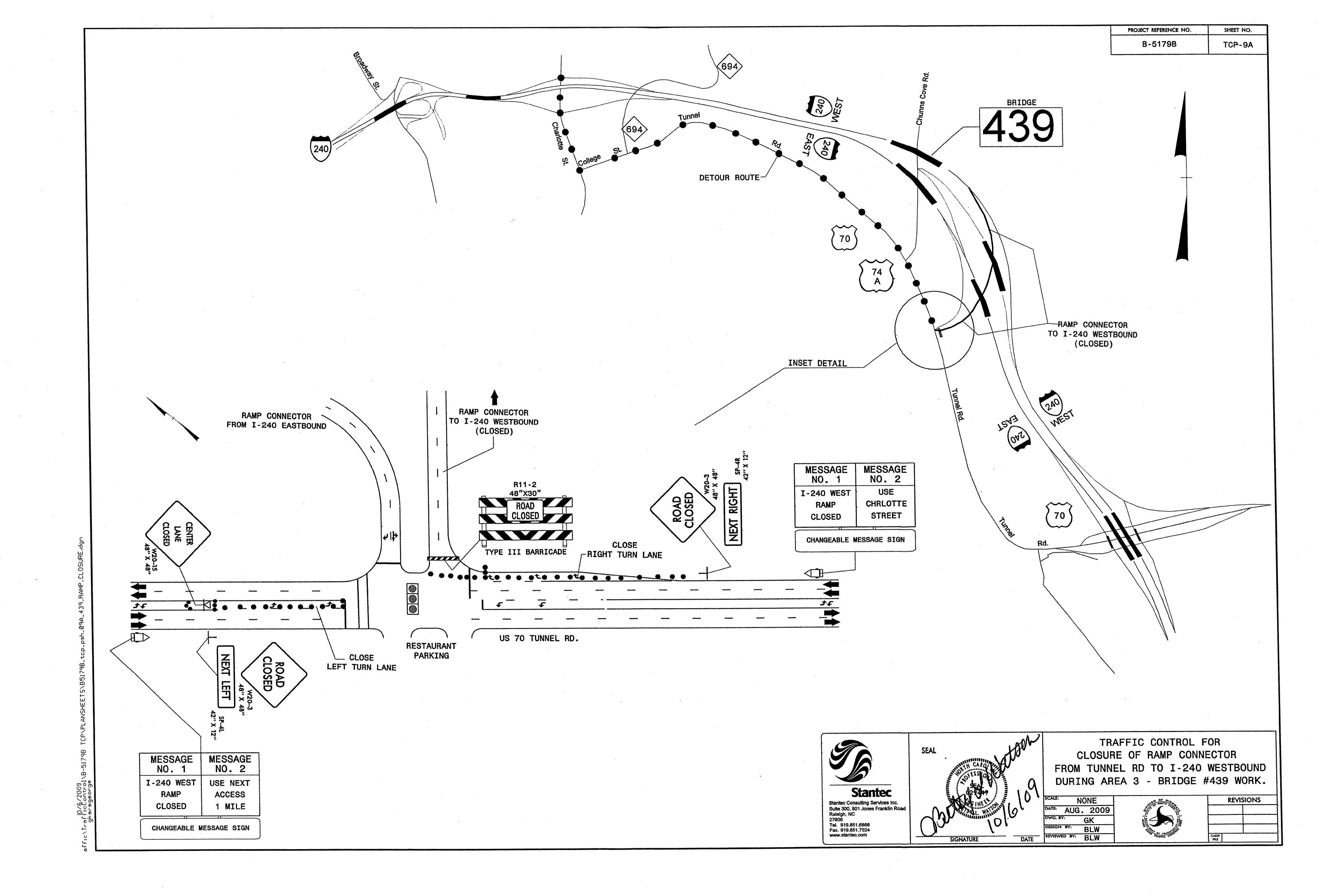
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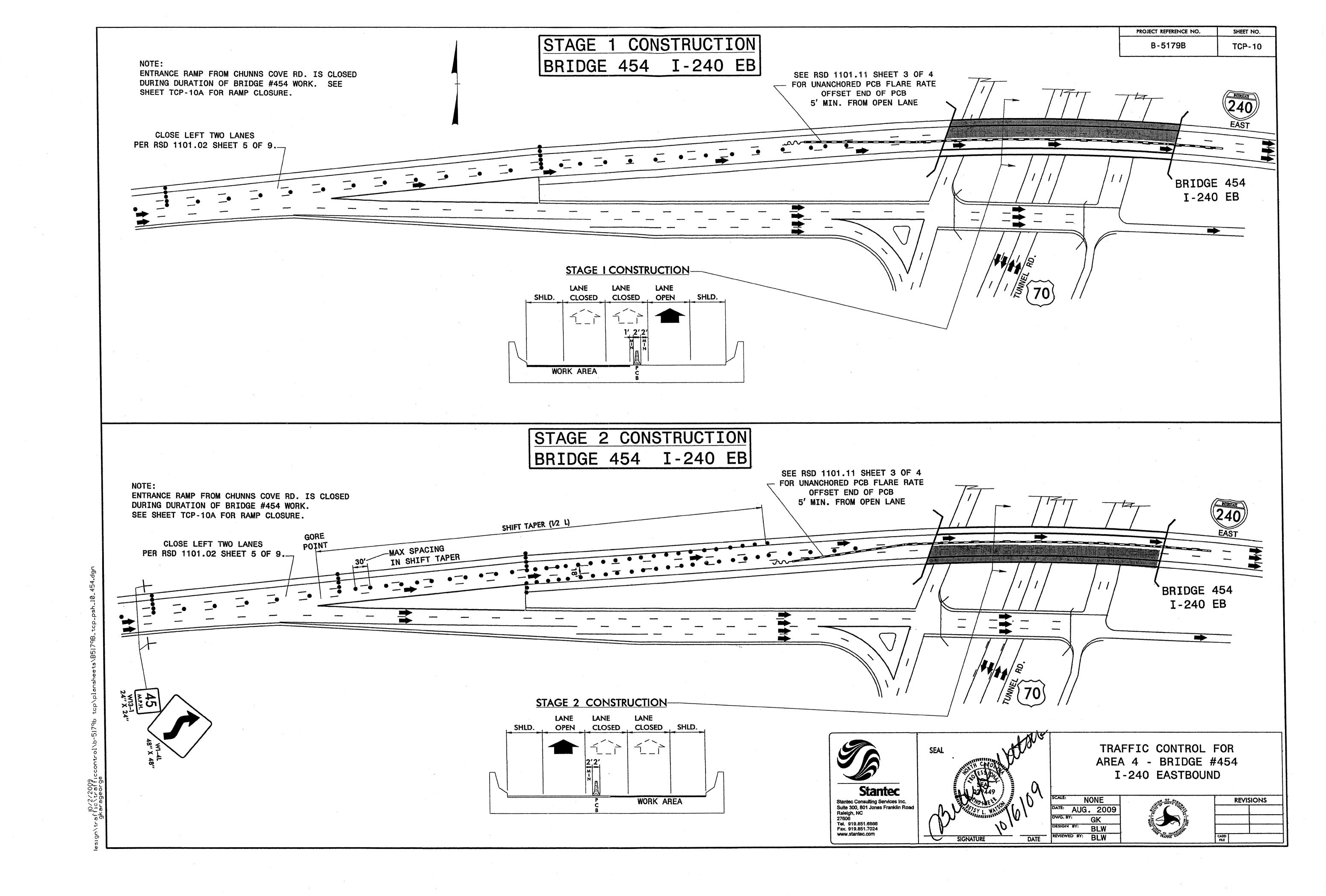
BLW

DATE

SHEET NO.







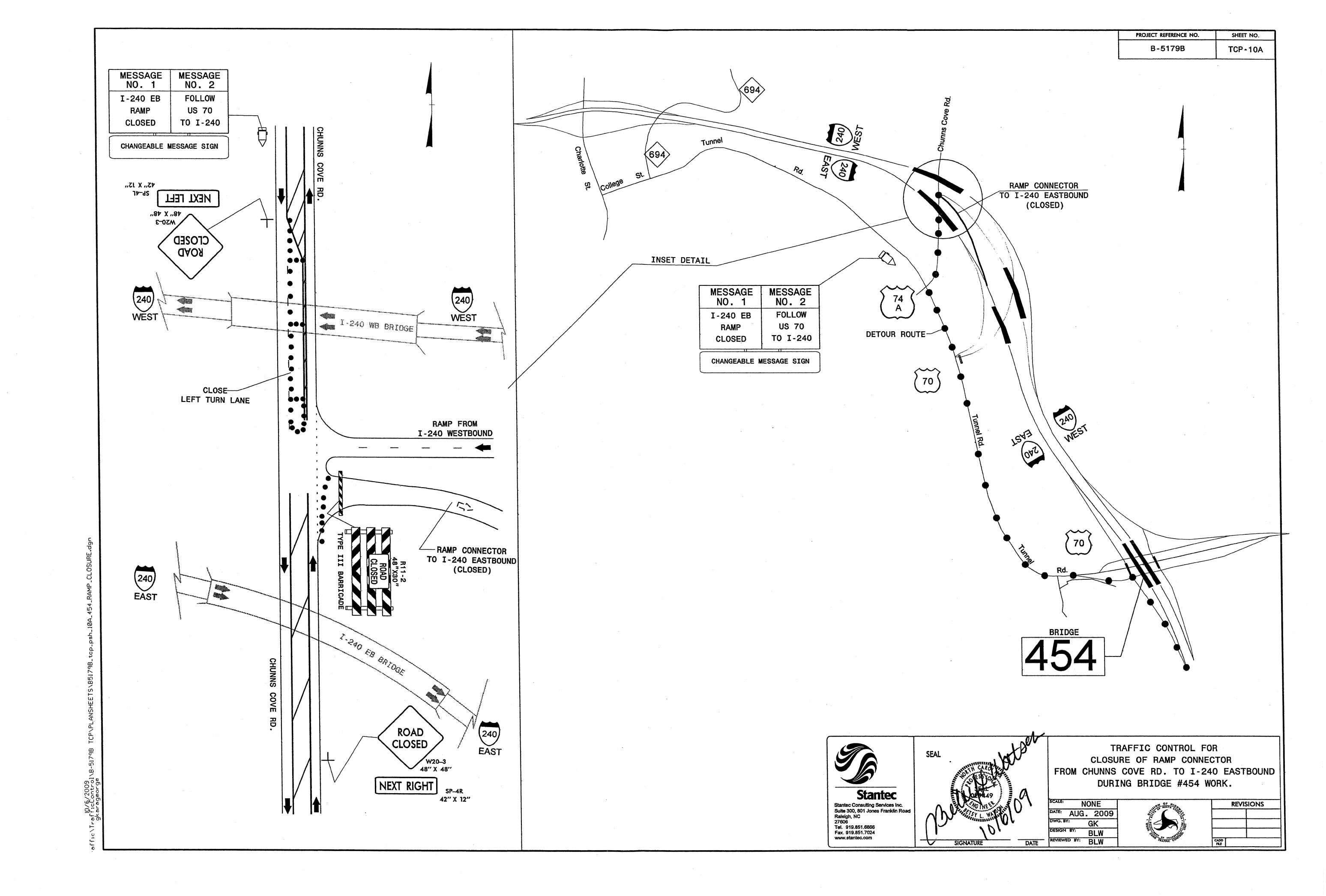
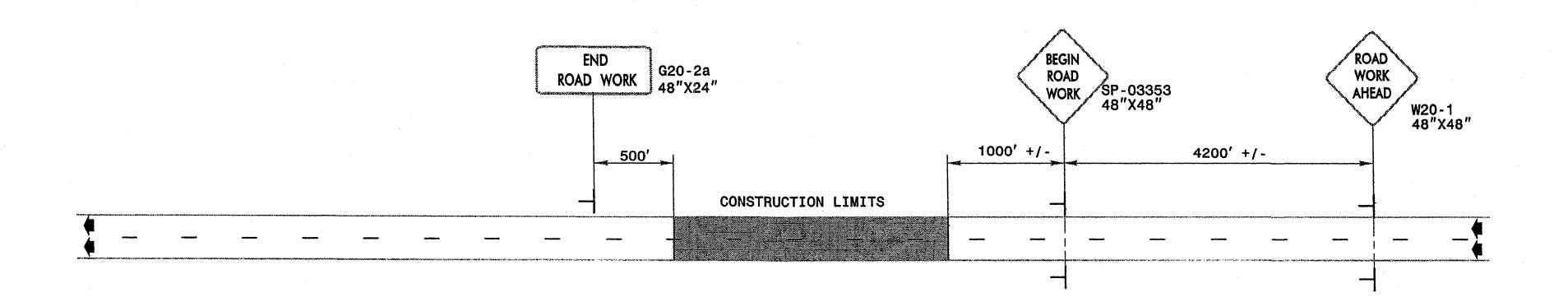


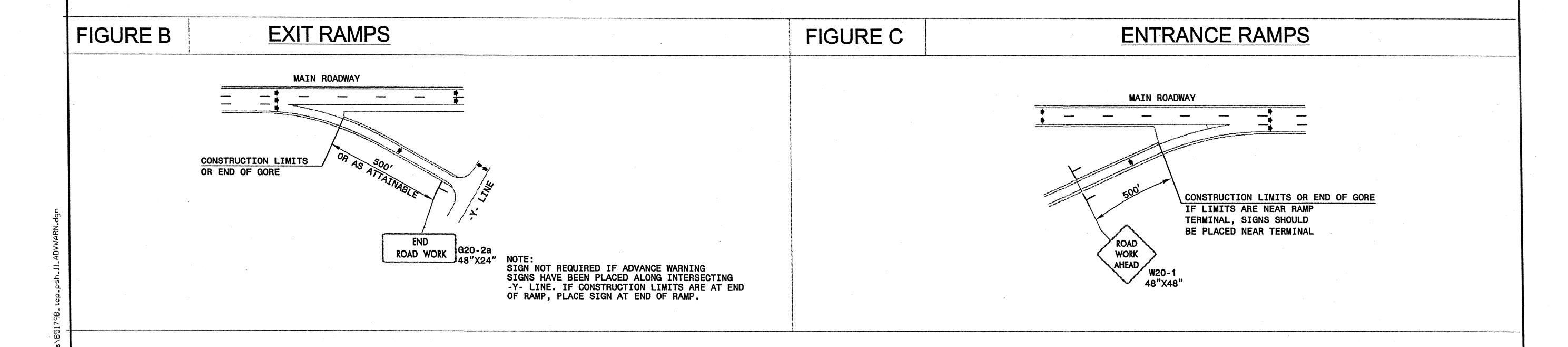
FIGURE A

# PER APPROACH OF MULTI-LANE ROADWAY (4 LANES OR GREATER)

PROJECT REFERENCE NO. SHEET NO.

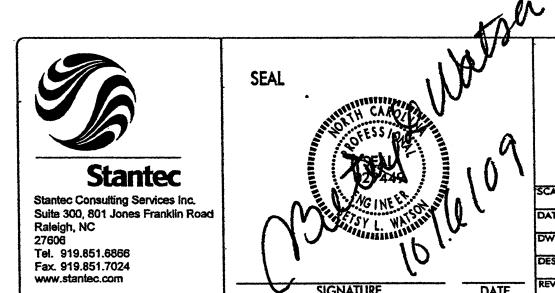
B-5179B TCP-11





#### NOTES:

- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- FOR UNDIVIDED ROADWAYS SIGNS ARE NOT REQUIRED ON THE LEFT SIDE OF EACH APPROACH.



WORK ZONE ADVANCE WARNING SIGNS

NONE

TE: AUG. 2009

G. BY: GK

SIGN BY: BLW

TEWED BY: BLW



REVISIONS
03/04

CADD FILE

jn\traffic\trafficcontrol\b-5179b tcp\p gkarageorge