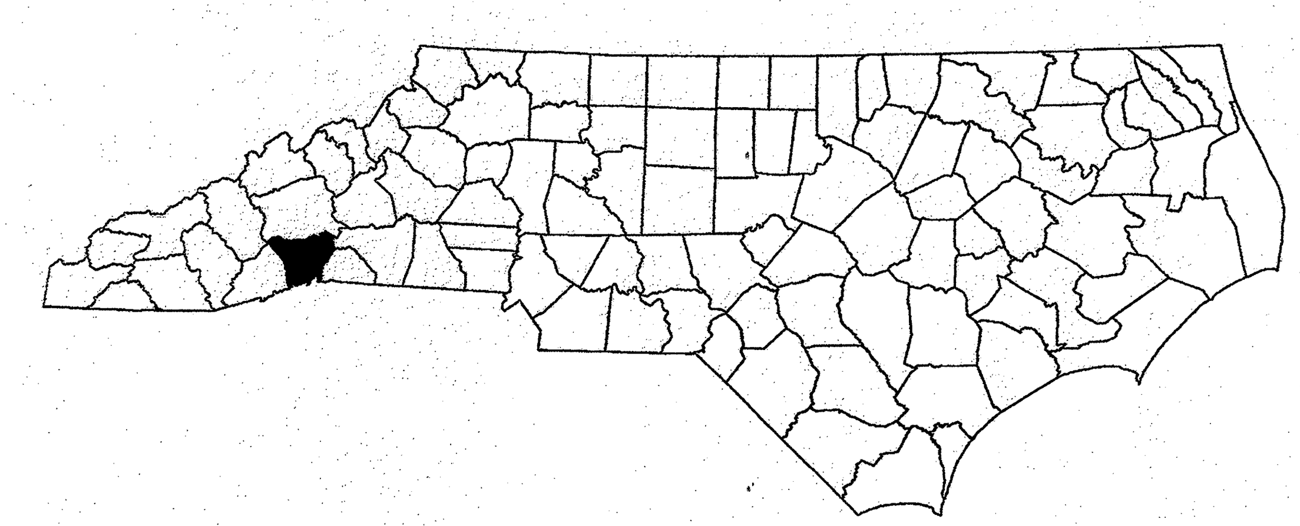
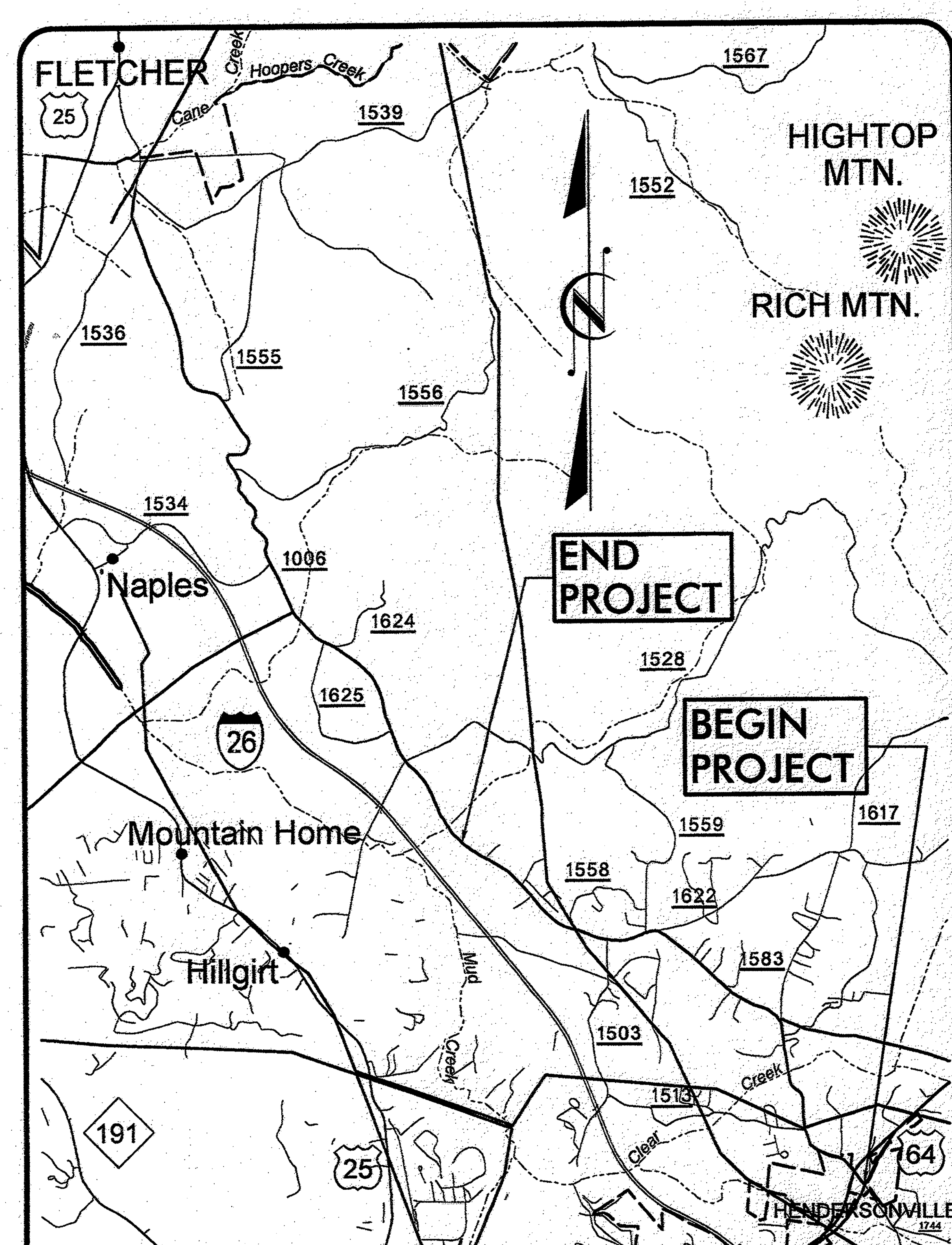
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

HENDERSON COUNTY



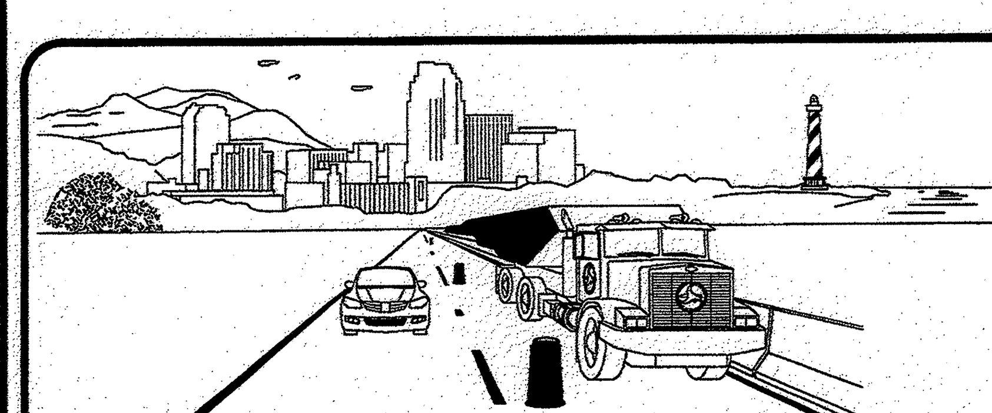


VICINITY MAP

LOCATION: ***SR 1006 (HOWARD GAP RD.) FROM US 64 EAST TO NCDOT PROJECT (B-3662)***

TYPE OF WORK: ***GRADING, PAVING, DRAINAGE, STRUCTURES, AND UTILITIES***

INDEX OF SHEETS



WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
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DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

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APPROVED: [signature]
DATE: 9-5-12

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 037026 ENGINEER STEVEN D. MILLER

TIP PROJECT: R-5207A

$$$$SYSTIME$$$$
$$$$$$DGN$$$$$$
$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-1A

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 JULY 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
1101.06	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 BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES - TYPE III
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED ATTENUATOR - DELINEATION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
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 BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMP TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
	TEMPORARY PAVEMENT MARKINGS PAINT (4")
PA	WHITE EDGELINE
PI	YELLOW DOUBLE CENTER
P8	WHITE MINISKIP
	MARKERS TEMPORARY RAISED PAVEMENT MARKERS
MH	YELLOW & YELLOW

APPROVED: [signature] DATE: 9-5-12

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 037026 STEVEN D. MILLER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

ROADWAY STANDARD DRAWINGS & LEGEND

$$$$SYSTIME$$$$ $$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$ $$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-1B

MANAGEMENT STRATEGIES

-HOWARD GAP ROAD TRAFFIC WILL BE MAINTAINED WITH LANE CLOSURES
-AN ON SITE DETOUR WILL BE CONSTRUCTED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF A BRIDGE
-VARIOUS OFFSITE DETOURS WILL BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF LARGE PIPE CROSSINGS AND ROADWAY UNDERCUT SECTIONS

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.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
HOWARD GAP RD	MON. - FRI. 7:30 AM TO 8:30 AM SCHOOL DAYS MON. - FRI. 2:45 PM TO 3:45 PM SCHOOL DAYS SAT. 8:00 PM - MON. 6:00 AM

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

ROAD NAME

HOWARD GAP RD

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 8:00 P.M. DECEMBER 31ST TO 6:00 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 A.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 8:00 P.M. THURSDAY AND 6:00 A.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 8:00 P.M. FRIDAY TO 6:00 A.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 8:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 A.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN BETWEEN THE HOURS OF 8:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 8:00 P.M. FRIDAY AND 6:00 A.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 8:00 P.M. TUESDAY TO 6:00 A.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 8:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT STOP TRAFFIC OR CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
HOWARD GAP RD	MON. - FRI. 7:30 AM TO 8:30 AM SCHOOL DAYS MON. - FRI. 2:45 PM TO 3:45 PM SCHOOL DAYS SAT. 8:00 PM - MON. 6:00 AM

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

ROAD NAME	OPERATIONS
HOWARD GAP RD	SHIFTING TRAFFIC

LANE AND SHOULDER CLOSURE REQUIREMENTS

E) 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.

F) 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.

G) 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.

H) 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.

I) 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.

PAVEMENT EDGE DROP OFF REQUIREMENTS

J) 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.

K) 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 FT IN ADVANCE OF THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

M) INSTALL ADVANCE WORK ZONE WARNING SIGNS NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

N) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC MANAGEMENT PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTES AS SHOWN IN THE TRAFFIC MANAGEMENT PLANS.

O) 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.

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

Q) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA, AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

R) 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 OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUM), 1135 (CONES) AND 1180 (SKINNY-DRUM) FOR ADDITIONAL REQUIREMENTS.

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED

U) 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.

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

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

APPROVED: [signature] DATE: 9-5-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 037026 ENGINEER STEVEN D. MILLER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATIONS PLAN

SHORING LOCATION NO.1

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

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE INSTALLATION FROM STATION 51+65±, 24 FT RIGHT, TO STATION 52+17±, 24 FT RIGHT.

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

DESIGN TEMPORARY SHORING FROM STATION 51+65±, 24 FT RIGHT, TO STATION 52+17±, 24 FT RIGHT, 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 = 2075 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 51+65±, 24 FT RIGHT, TO STATION 52+17±, 24 FT RIGHT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 51+65±, 24 FT RIGHT, TO STATION 52+17±, 24 FT RIGHT.

AT THE CONSTRUCTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 51+65±, 24 FT RIGHT, TO STATION 52+17±, 24 FT RIGHT. SEE STANDARD DRAWING NO.1801.01 FOR STANDARD TEMPORARY SHORING.

SHORING LOCATION NO.2

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

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE INSTALLATION FROM STATION 50+75±, 24 FT RIGHT, TO STATION 51+15±, 24 FT RIGHT.

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

DESIGN TEMPORARY SHORING FROM STATION 50+75±, 24 FT RIGHT, TO STATION 51+15±, 24 FT RIGHT, 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 = 2075 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 50+75±, 24 FT RIGHT, TO STATION 51+15±, 24 FT RIGHT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 50+75±, 24 FT RIGHT, TO STATION 51+15±, 24 FT RIGHT.

AT THE CONSTRUCTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 50+75±, 24 FT RIGHT, TO STATION 51+15±, 24 FT RIGHT. SEE STANDARD DRAWING NO.1801.01 FOR STANDARD TEMPORARY SHORING.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS DATED JULY 5, 2012 AND SEALED BY A PROFESSIONAL ENGINEER, SHANE C. CLARK, LICENSE # 029869

APPROVED: [illegible] DATE: 9-5-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 037026 ENGINEER STEVEN D. MILLER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TEMPORARY SHORING DATA

$$$$SYSTIME$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-3

PHASING

MAINTAIN DRIVEWAY ACCESS THROUGHOUT THE ENTIRE PROJECT.
AT END OF EACH WORK DAY, REPLACE ANY EXISTING PAVEMENT MARKING OBLITERATED DURING CONSTRUCTION OPERATION WITH TEMPORARY MARKING (PAINT) AND OPEN ALL LANES TO TRAFFIC.

PHASE I

USING ROADWAY STANDARD DRAWING (RSD) 1101.01, INSTALL ADVANCE WARNING SIGNS ON HOWARD GAP ROAD (SR 1006) AND ON -Y- LINES.

CONSTRUCTION WITHIN THE FOUR AREAS MAY TAKE PLACE CONCURRENTLY; HOWEVER, ONLY ONE OFFSITE DETOUR MAY BE USED AT A TIME.

AREA 1: -L- AND -Y- LINES NOT INCLUDED IN AREA 2, AREA 3, AND AREA 4. (SEE TMP-4)

A. USING RSD 1101.02 SHEETS 1 AND 3 OF 15, BEGIN CONSTRUCTION OF DRAINAGE, WEDGING, AND WIDENING UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER AS FOLLOWS:
- -L- STA 11+11± TO 169+96±
- -Y- STA 12+00± TO 14+00±
- -Y1- STA 11+70± TO 15+00±
- -Y2- STA 10+20± TO 13+35±
- -Y3- STA 11+80± TO 13+25±
- -Y4- STA 10+00± TO 11+60±
- -Y5- STA 10+00± TO 12+60±
- -Y6- STA 10+00± TO 11+00±
- -Y7- STA 11+19± TO 12+65±
- -Y8- STA 10+00± TO 13+00±
- -Y9- STA 10+50± TO 11+75±
- -DR1A- STA 10+00± TO 12+50±
- -DRIVE1- STA 10+30± TO 11+62±

B. TO CONSTRUCT THE LARGE DRAINAGE STRUCTURES ACROSS -L-, USE RSD 1101.03 SHEET 1 OF 9, PLACING BARRICADES AND SIGNS AS SHOWN ON THE FOLLOWING OFFSITE DETOUR SHEETS:
- 30" RCP AT -L- STA 151+75±: TMP-11
- 42" CMP AT -L- STA 90+00±: TMP-13

CLOSE HOWARD GAP ROAD AND DETOUR TRAFFIC OFFSITE. REMOVE THE EXISTING DRAINAGE SYSTEM AND CONSTRUCT THE PROPOSED SYSTEM. BACKFILL AND PAVE UP TO EXISTING PAVEMENT ELEVATION. REMOVE TRAFFIC CONTROL DEVICES AND RE-OPEN HOWARD GAP ROAD TO TRAFFIC.

C. TO CONSTRUCT THE UNDERCUT SECTION AT -L- STA 109+50±, USE RSD 1101.03 SHEET 1 OF 9, PLACING BARRICADES AND SIGNS AS SHOWN ON TMP-12. CLOSE HOWARD GAP ROAD AND DETOUR TRAFFIC OFFSITE. CONSTRUCT THE ROADWAY SECTION AND PAVE UP TO EXISTING PAVEMENT ELEVATION. REMOVE TRAFFIC CONTROL DEVICES AND RE-OPEN HOWARD GAP ROAD TO TRAFFIC.

AREA 2: ASYMMETRICAL WIDENING FROM -L- STA 120+00± TO 134+00± (SEE TMP-5 AND TMP-6)

A. AS SHOWN ON TMP-5, CONSTRUCT -Y8- AND THE LEFT SIDE OF -L- FROM -L- STA 120+00± TO 134+00± UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER. USE THE OFFSITE DETOUR DEPICTED ON TMP-11 TO CONSTRUCT THE 36" CMP AT -L- STA 129+50± AND THE 48" CMP AT -L- STA 122+50±.

B. USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING IN A CONTINUOUS MANNER:
- -CONSTRUCT A TIE IN FROM THE EXISTING TRAFFIC PATTERN TO THE PATTERN SHOWN ON TMP-6, USING WEDGING AS NECESSARY.
- -PLACE TEMPORARY PAVEMENT MARKINGS FROM -L- STA 120+29± TO STA 133+40±. REMOVE CONFLICTING MARKINGS. PLACE TEMPORARY MARKERS IN ACCORDANCE WITH RSD 1250.01.
- -PLACE TRAFFIC CONTROL DEVICES AS SHOWN ON TMP-6 AND SHIFT TRAFFIC TO A 2-LANE, 2-WAY PATTERN ON THE LEFT SIDE OF -L-.

C. MAINTAINING TRAFFIC ON THE NEW ALIGNMENT AND USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NECESSARY, COMPLETE CONSTRUCTION OF -Y8- AND -L- FROM -L- STA 120+00± TO 134+00± UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER, REMOVING PAVEMENT AS INDICATED IN THE ROADWAY PLANS.

AREA 3: ONSITE DETOUR -L- STA 67+82± TO 77+79± (SEE TMP-7 AND TMP-8)

A. AS SHOWN ON TMP-7, CONSTRUCT -DET- FROM -L- STA 67+82± TO STA 77+79± INCLUDING THE -DET- FINAL SURFACE LAYER.

B. USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING IN A CONTINUOUS MANNER:
1. CONSTRUCT A TIE IN FROM THE EXISTING TRAFFIC PATTERN TO THE PATTERN SHOWN ON TMP-8, USING WEDGING AS NECESSARY.
2. PLACE TEMPORARY PAVEMENT MARKINGS FROM -L- STA 67+82± TO STA 77+79±. REMOVE CONFLICTING MARKINGS. PLACE TEMPORARY MARKERS IN ACCORDANCE WITH RSD 1250.01.
3. PLACE TRAFFIC CONTROL DEVICES INCLUDING THE TMA AS SHOWN ON TMP-8 AND SHIFT TRAFFIC TO A 2-LANE, 2-WAY PATTERN ON -DET-.
4. COMPLETE -DET- GUARDRAIL CONSTRUCTION, REMOVING THE TMA.

C. REMOVE THE EXISTING -L- STRUCTURE AND CONSTRUCT THE PROPOSED -L- STRUCTURE.

D. COMPLETE -L- CONSTRUCTION FROM -L- STA 67+82± TO STA 77+79± UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER. DO NOT COMPLETE THE GUARDRAIL RIGHT OF -L- FROM STA 70+75± TO STA 71+25±.

E. USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING IN A CONTINUOUS MANNER:
- -CONSTRUCT A TIE IN FROM THE -DET- TRAFFIC PATTERN TO THE FINAL PATTERN, USING WEDGING AS NECESSARY.
- -PLACE TEMPORARY PAVEMENT MARKINGS FROM -L- STA 67+82± TO STA 77+79± IN THE SAME LOCATION AS THE FINAL PAVEMENT MARKINGS SHOWN ON THE PAVEMENT MARKING PLANS. REMOVE CONFLICTING MARKINGS. PLACE TEMPORARY MARKERS IN ACCORDANCE WITH RSD 1250.01.
- -PLACE DEVICES CLOSING -DET- AND PLACE A TMA TO PROTECT THE UNFINISHED END OF THE GUARDRAIL RIGHT OF -L- FROM STA 70+75± TO STA 71+25±.
- -SHIFT TRAFFIC TO THE FINAL PATTERN.
- -COMPLETE THE GUARDRAIL RIGHT OF -L- FROM STA 70+75± TO STA 71+25± AND REMOVE THE TMA.

F. USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NECESSARY, REMOVE -DET- AND COMPLETE DRIVEWAY CONSTRUCTION.

AREA 4: REALIGNMENT FROM -L- STA 44+50± TO STA 58+00±. (SEE TMP-9 AND TMP-10)

A. AS SHOWN ON TMP-9, CONSTRUCT -L- FROM -L- STA 44+50± TO STA 58+00± UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER.
USE THE OFFSITE DETOUR DEPICTED ON TMP-12 TO CONSTRUCT THE TWO 60" CMP AT -L- STA 47+00±. INSTALL TEMPORARY SHORING LOCATION 1 FROM -L- STA 51+65±, 24 FT RIGHT TO 52+17±, 24 FT RIGHT AND TEMPORARY SHORING LOCATION 2 FROM -L- STA 50+75±, 24 FT RIGHT TO 51+15±, 24 FT RIGHT. CONSTRUCT THE PROPOSED -L- STRUCTURE.

B. USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING IN A CONTINUOUS MANNER:
- -CONSTRUCT A TIE IN FROM THE EXISTING TRAFFIC PATTERN TO THE PATTERN SHOWN ON TMP-10, USING WEDGING AS NECESSARY.
- -PLACE TEMPORARY PAVEMENT MARKINGS FROM -L- STA 45+39± TO STA 61+00±. REMOVE CONFLICTING MARKINGS. PLACE TEMPORARY MARKERS IN ACCORDANCE WITH RSD 1250.01.
- -PLACE TRAFFIC CONTROL DEVICES AS SHOWN ON TMP-10 AND SHIFT TRAFFIC TO A 2-LANE, 2-WAY PATTERN ON -L-.

C. USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NECESSARY, REMOVE THE EXISTING STRUCTURE AND PAVEMENT AS INDICATED ON THE ROADWAY PLANS. COMPLETE DRIVEWAY CONSTRUCTION.

PHASE II

STEP 1: WITH TRAFFIC IN THE FINAL PATTERN AND USING RSD 1101.02 SHEET 1 AND 3 OF 15, COMPLETE -L- AND ALL Y-LINE CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER. COMPLETE TRAFFIC SIGNALS. PLACE TEMPORARY PAVEMENT MARKINGS IN THE SAME LOCATION AS THE FINAL PAVEMENT MARKINGS SHOWN ON THE PAVEMENT MARKING PLANS. REMOVE CONFLICTING MARKINGS. PLACE TEMPORARY MARKERS IN ACCORDANCE WITH RSD 1250.01.

STEP 2: CONSTRUCT FINAL SURFACE LAYER AND INSTALL FINAL PAVEMENT MARKINGS AS SHOWN ON THE PAVEMENT MARKING PLANS.

STEP 3: REMOVE ALL TRAFFIC CONTROL DEVICES.

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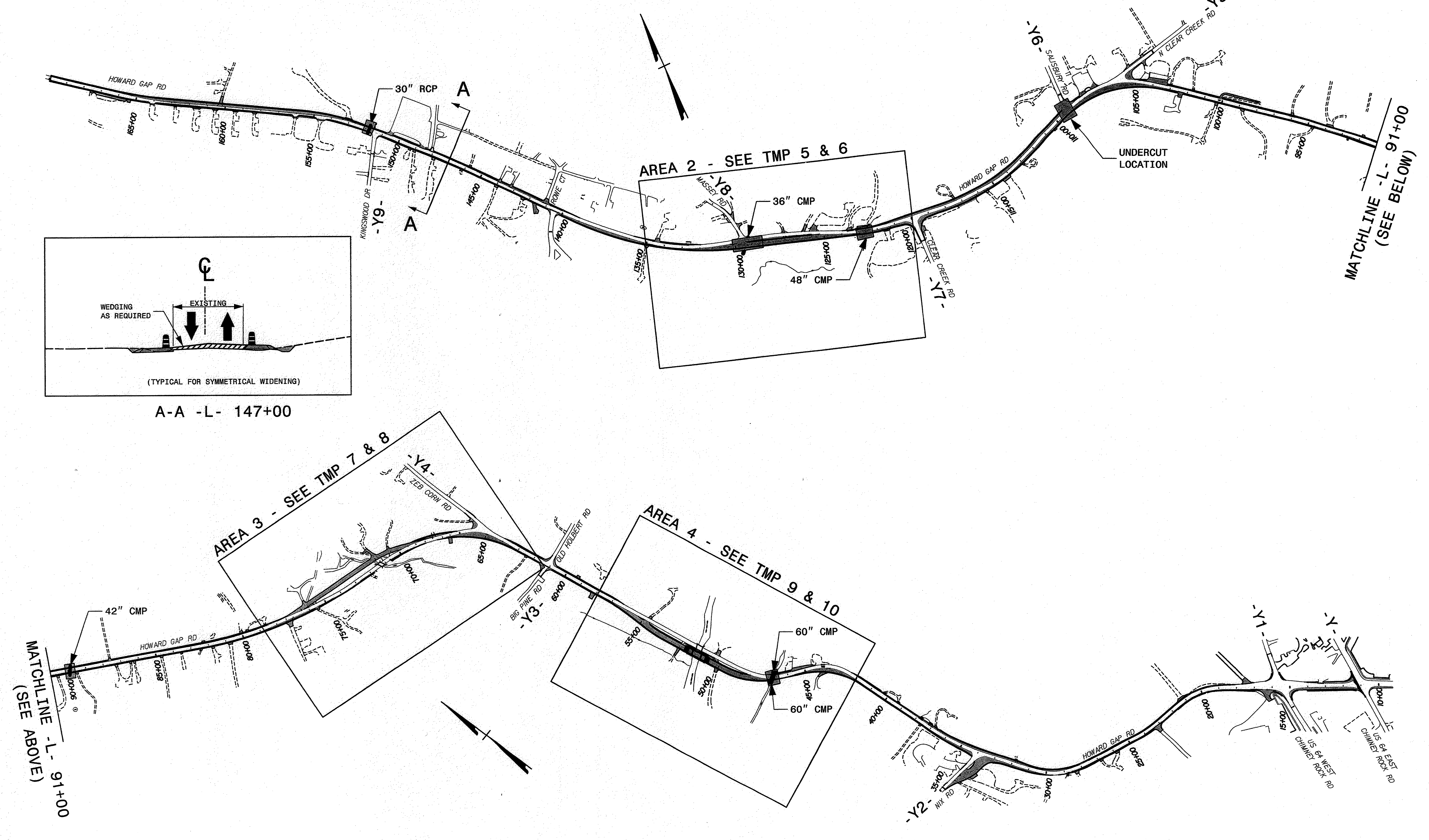
PHASING

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-4



$$$$$SYSTIME$$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

APPROVED: [signature] DATE: 9-5-12

SEAL

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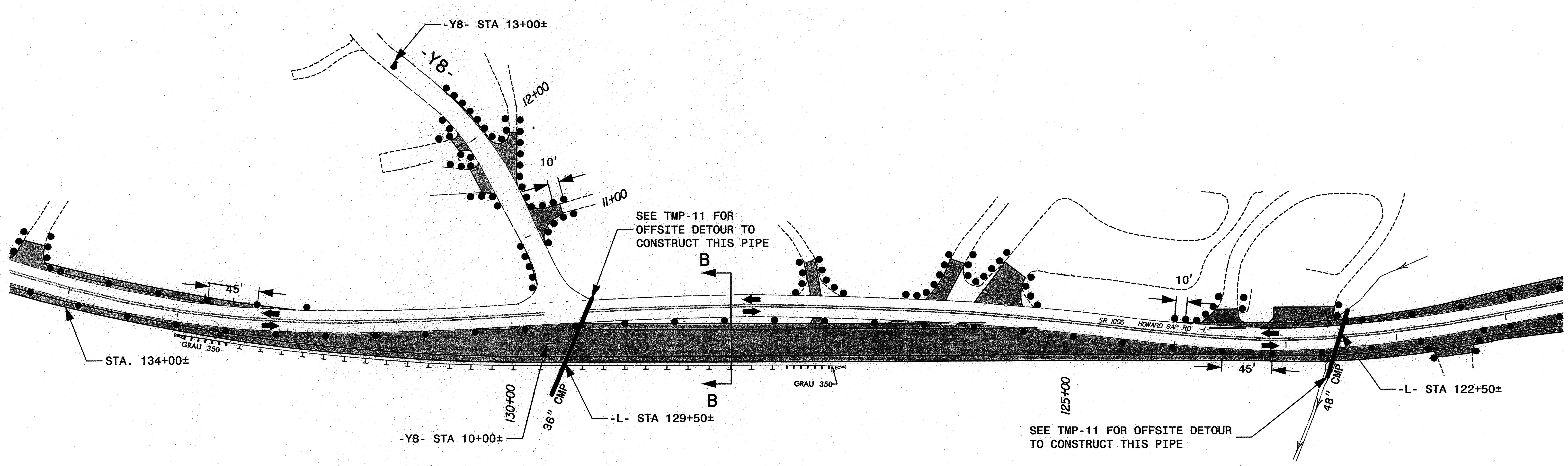
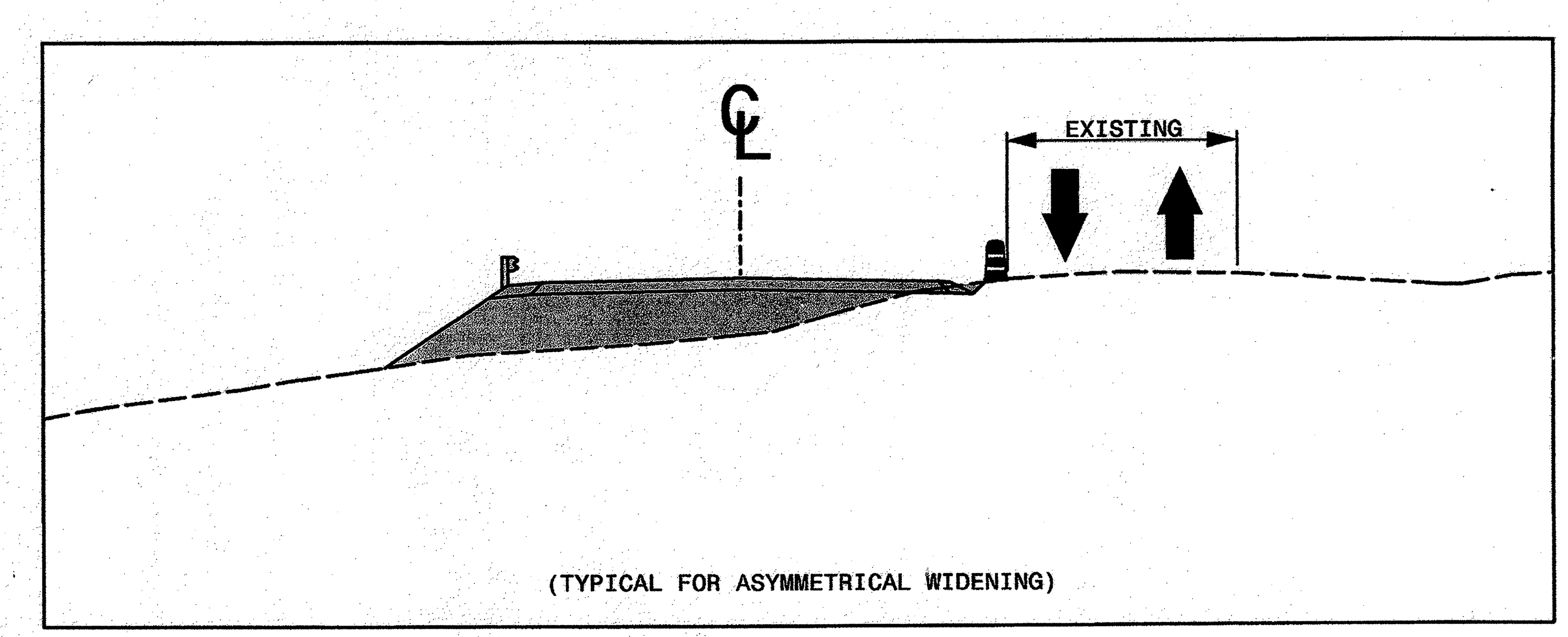
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

OVERVIEW

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-5





B-B -L- 128+00

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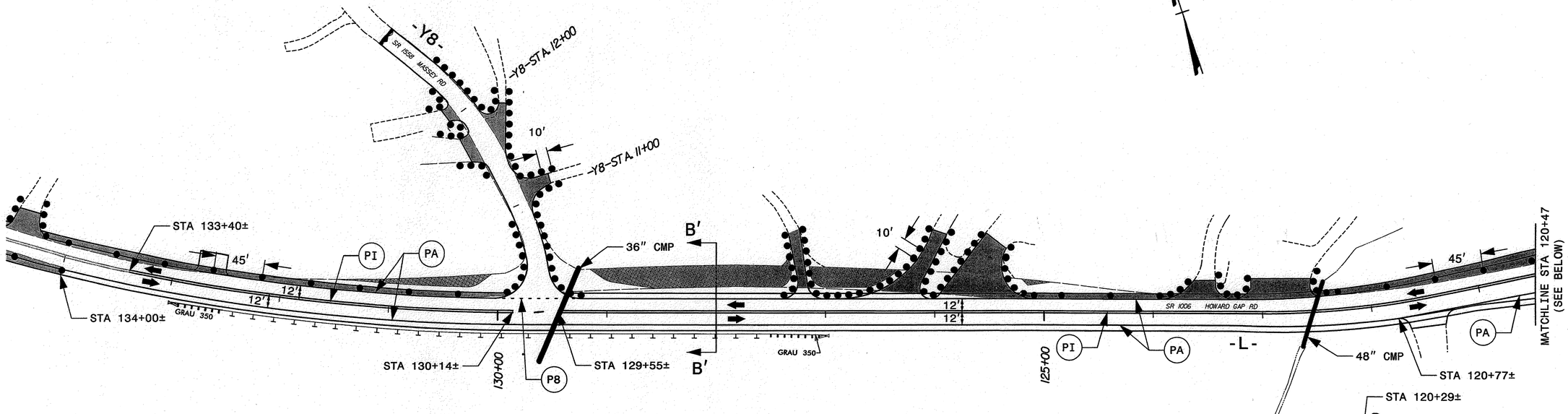
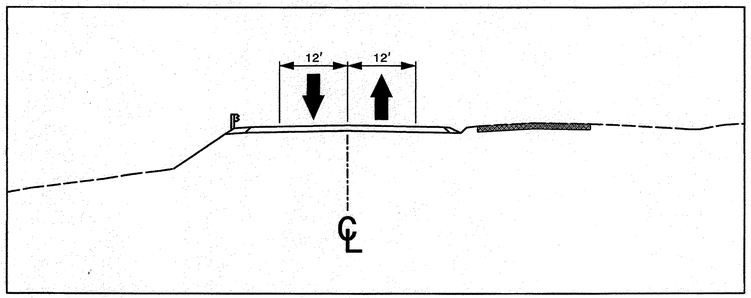
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

AREA 2 DETAIL

$$$$$SYSTIME$$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-6





B'-B' -L- 128+00

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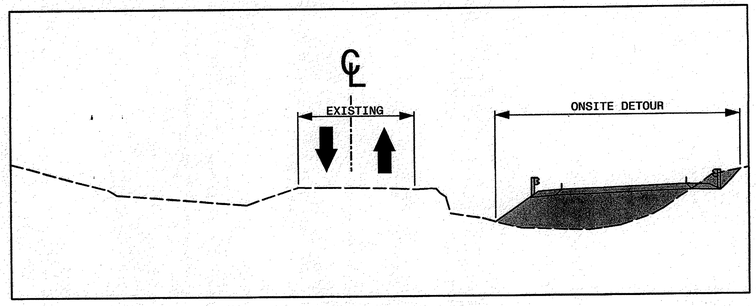
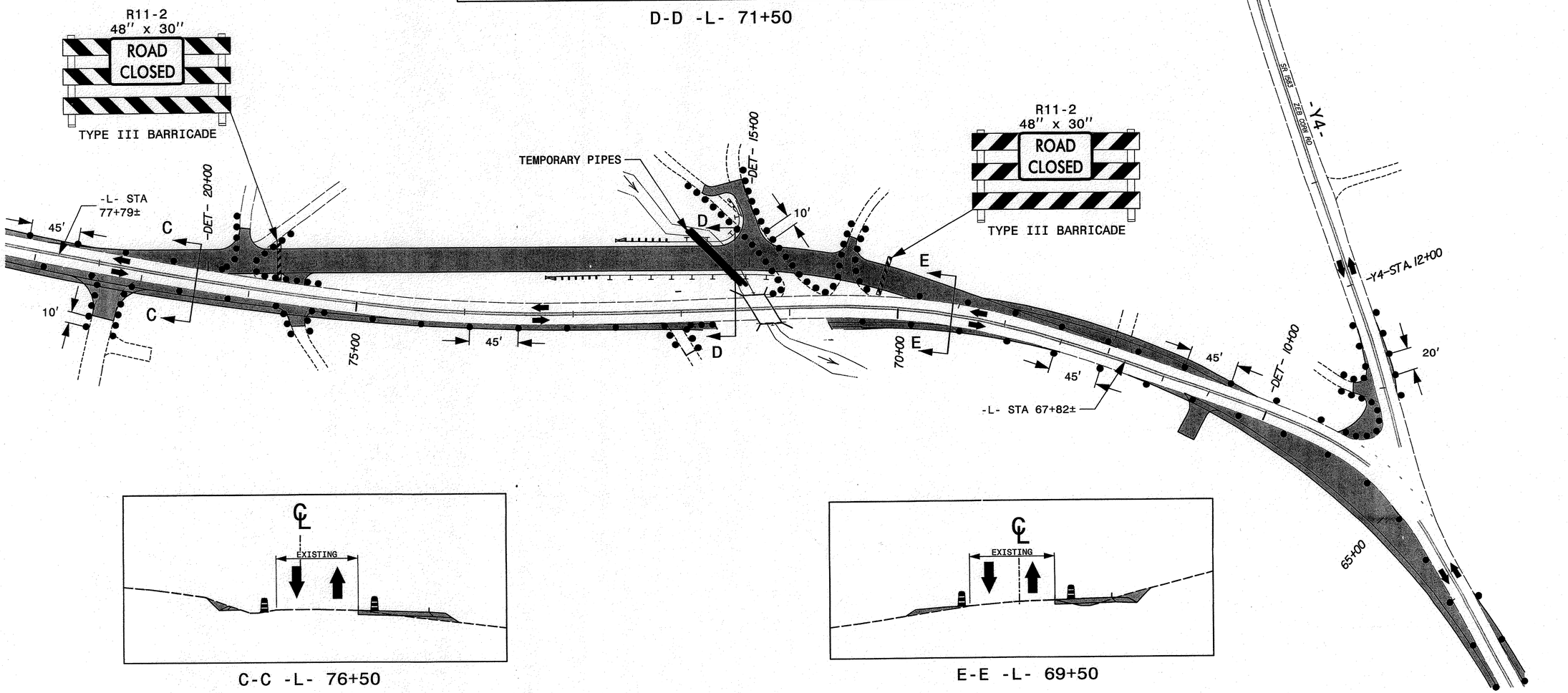
AREA 2 DETAIL

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-7



D-D -L- 71+50



C-C -L- 76+50

E-E -L- 69+50

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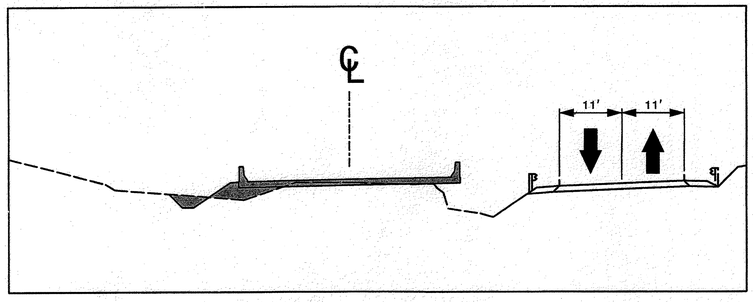
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

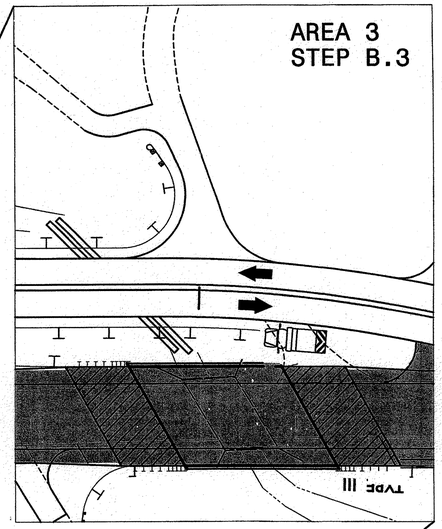
AREA 3 DETAIL

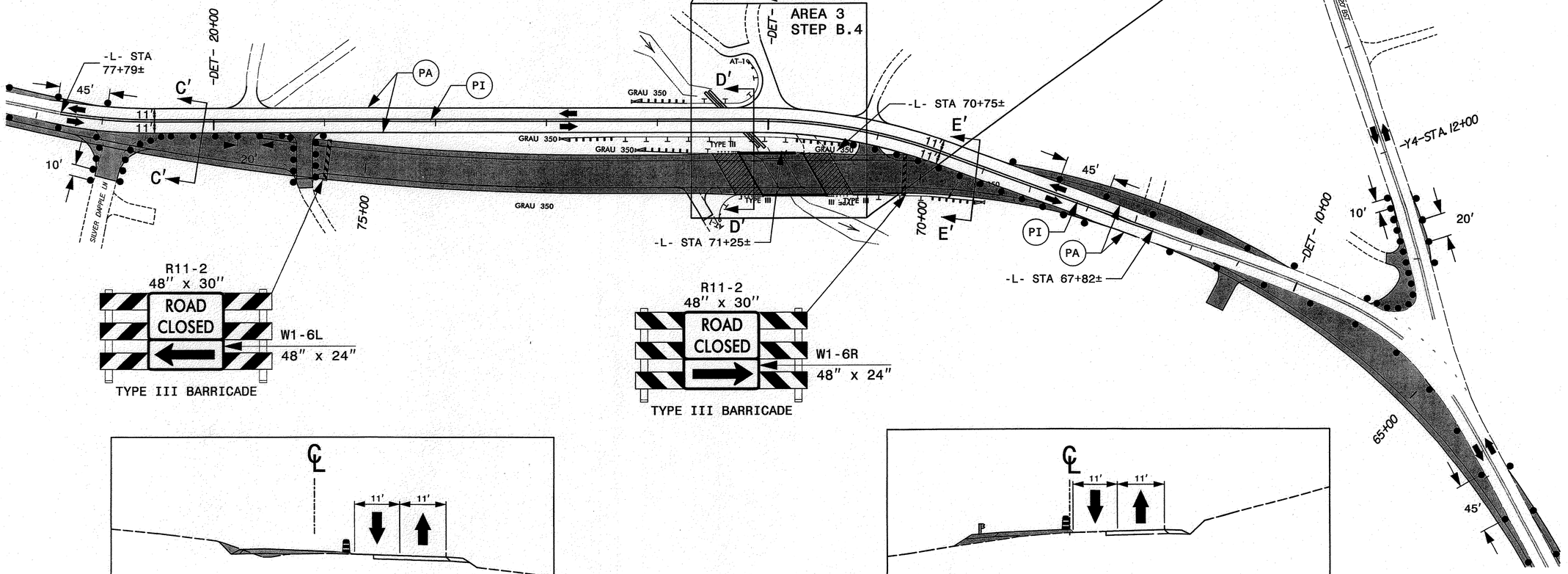
$$$$SYSTIME$$$$
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-8



D'-D' -L- 71+50





TYPE III BARRICADE

TYPE III BARRICADE

C'-C' -L- 76+50

E'-E' -L- 69+50

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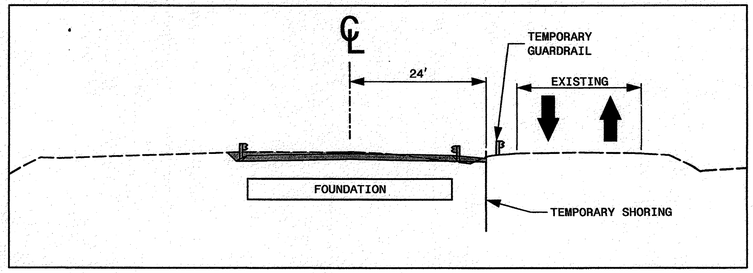
AREA 3 DETAIL

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

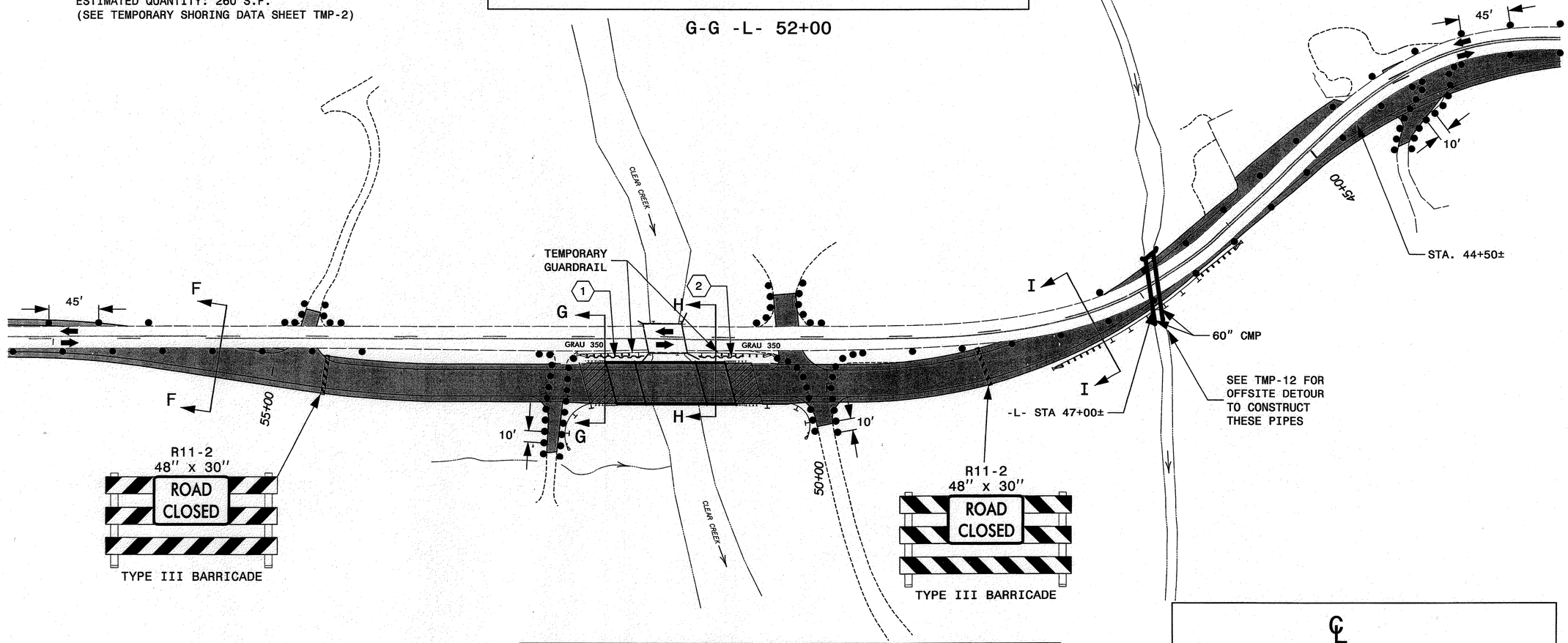
PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-9

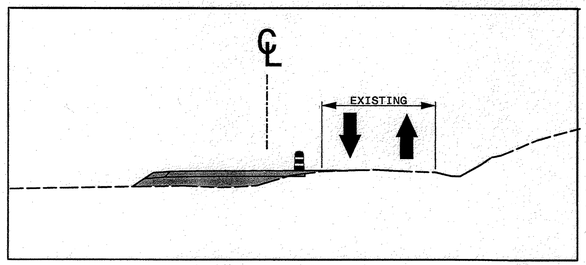
(1) TEMPORARY SHORING
FROM -L- STATION 51+65± 24′ RIGHT OF -L-
TO -L- STATION 52+17± 24′ RIGHT OF -L-
ESTIMATED QUANTITY: 338 S.F.
(SEE TEMPORARY SHORING DATA SHEET TMP-2)

(2) TEMPORARY SHORING
FROM -L- STATION 50+75± 24′ RIGHT OF -L-
TO -L- STATION 51+15± 24′ RIGHT OF -L-
ESTIMATED QUANTITY: 260 S.F.
(SEE TEMPORARY SHORING DATA SHEET TMP-2)

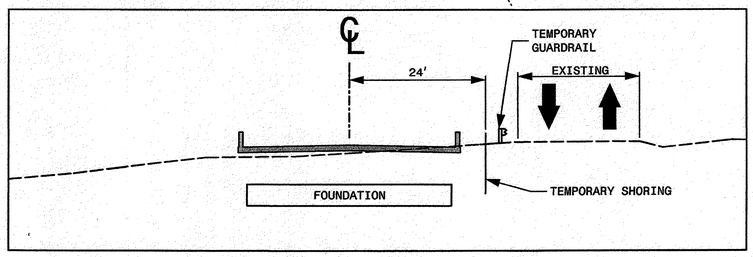


G-G -L- 52+00

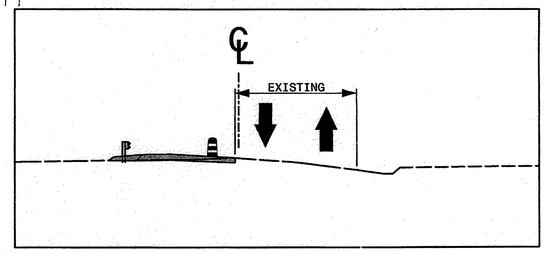




F-F -L- 55+50



H-H -L- 51+00



I-I -L- 47+50

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SEAL

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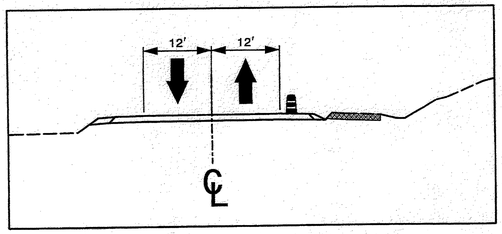
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

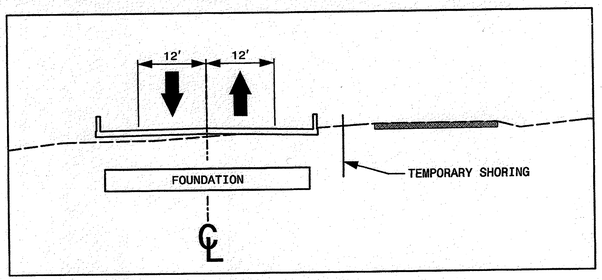
AREA 4 DETAIL

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$USERNAME$$$$

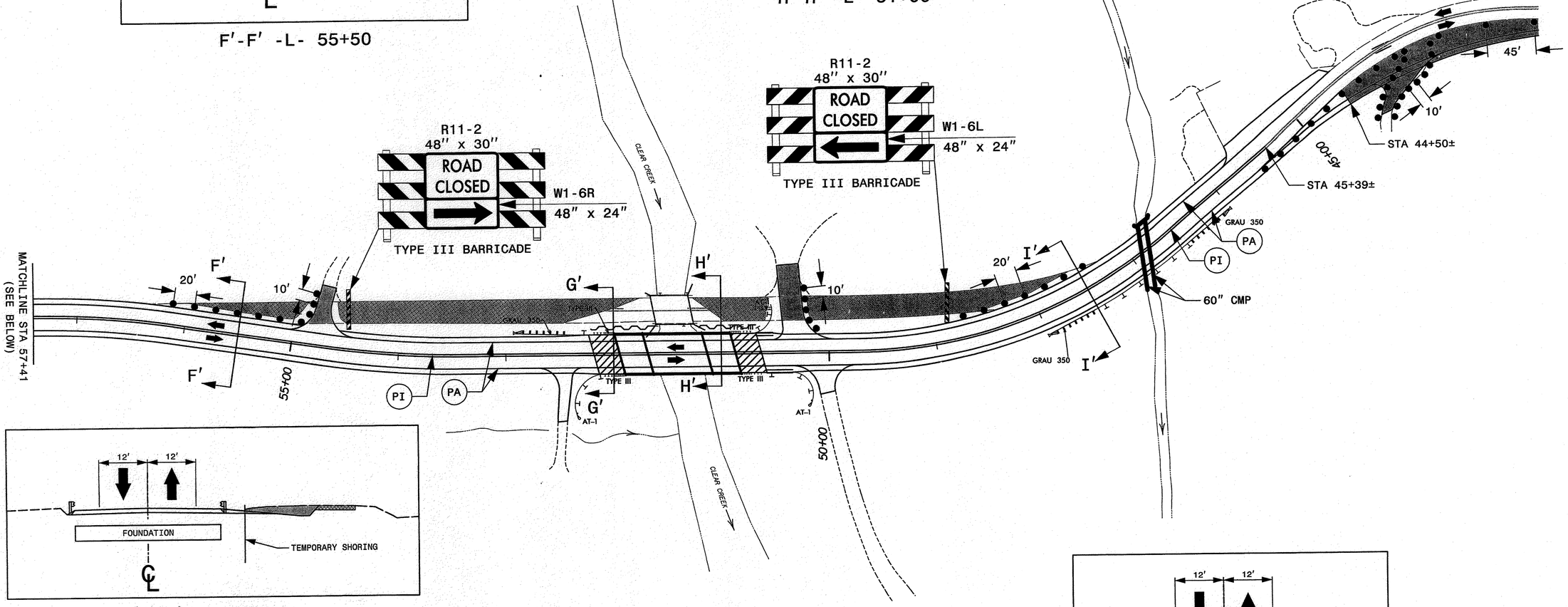
PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-10



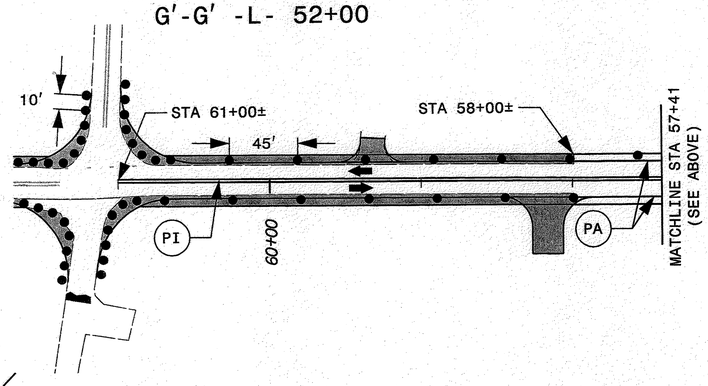
F'-F' -L- 55+50

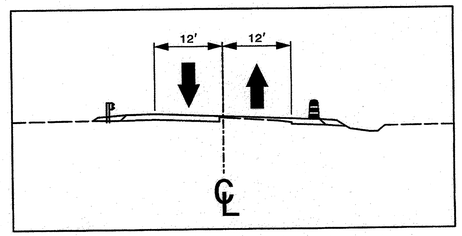


H'-H' -L- 51+00



G'-G' -L- 52+00





I'-I' -L- 47+50

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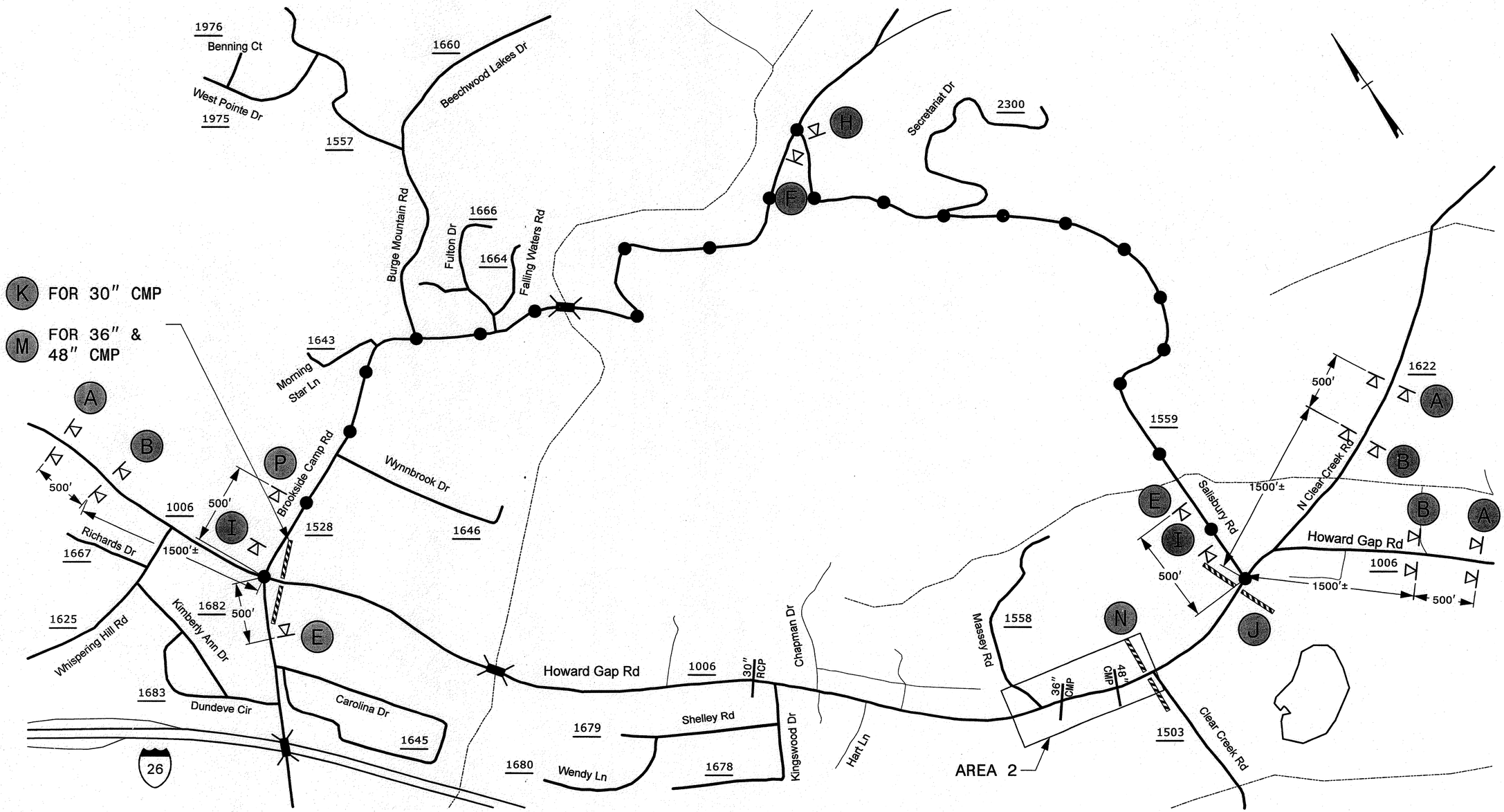
AREA 4 DETAIL

$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-11



SEE TMP-13 FOR SIGN LEGEND

PLACE ADVANCE WARNING SIGNS AND BARRICADES PER RSD 1101.03 SHEET 1 OF 9

APPROVED: _____ DATE: 9-5-12

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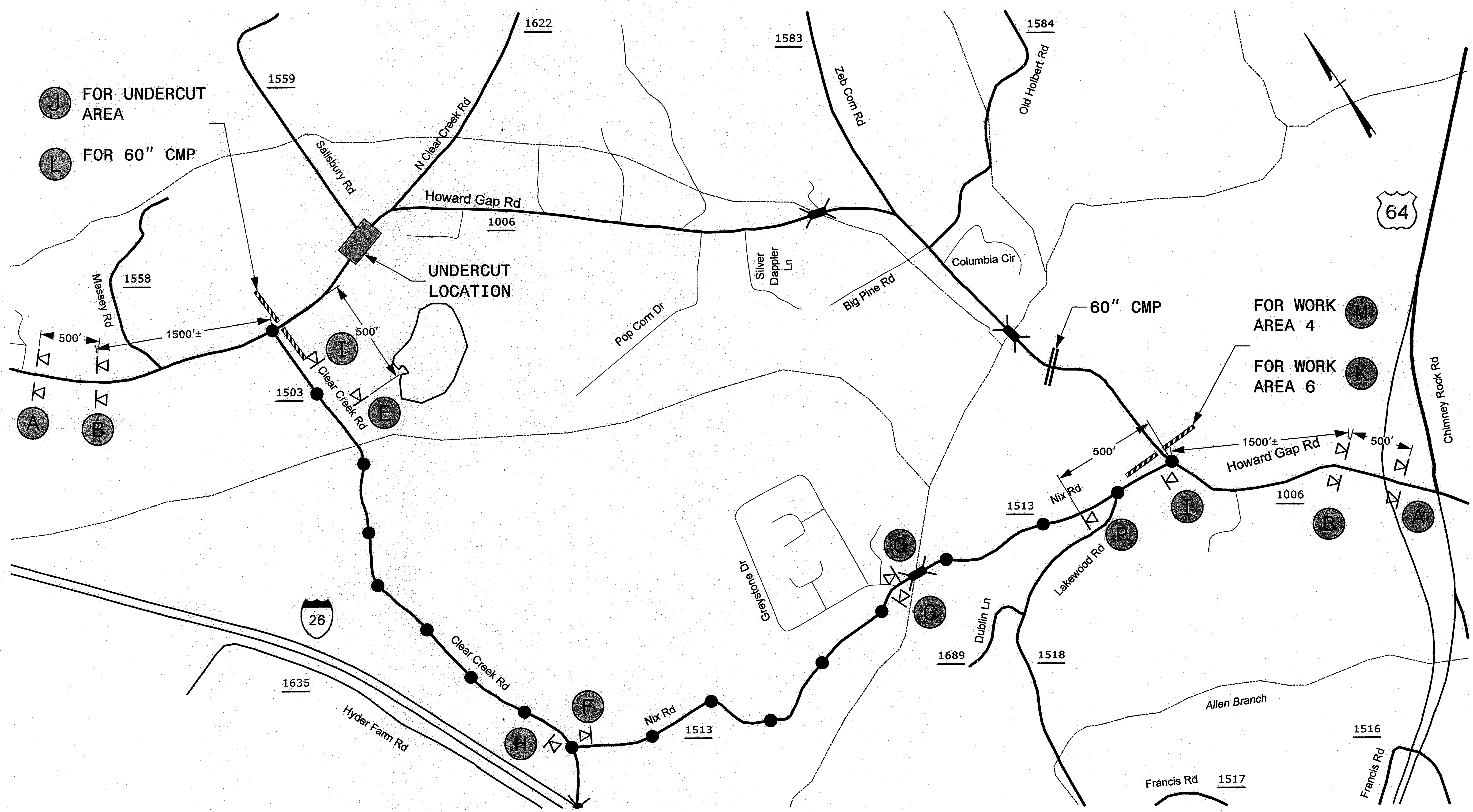
OFFSITE DETOUR

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-12



OFFSITE DETOUR ROUTE

SEE TMP-13 FOR SIGN LEGEND

PLACE ADVANCE WARNING SIGNS AND BARRICADES PER RSD 1101.03 SHEET 1 OF 9

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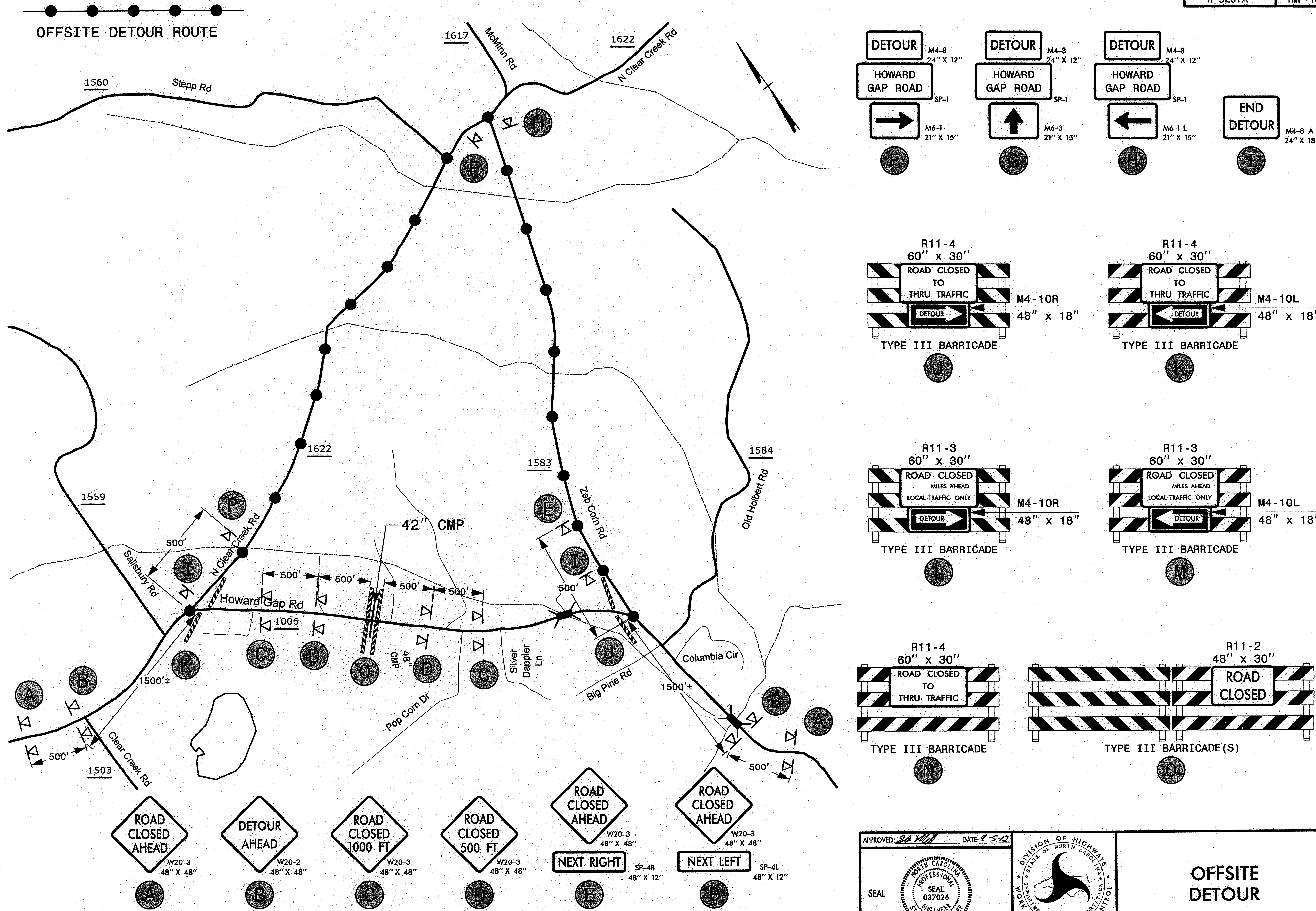
SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 037026 STEVEN D. MILLER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

OFFSITE DETOUR

$$$$$SYSTIME$$$$
$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
R-5207A	TMP-13



APPROVED: [signature] DATE: 9-5-12

SEAL

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DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

OFFSITE DETOUR

$$$$$SYSTIME$$$$ $$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$ $$$$USERNAME$$$$