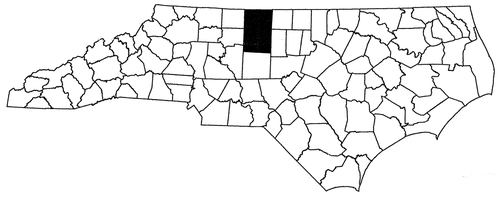
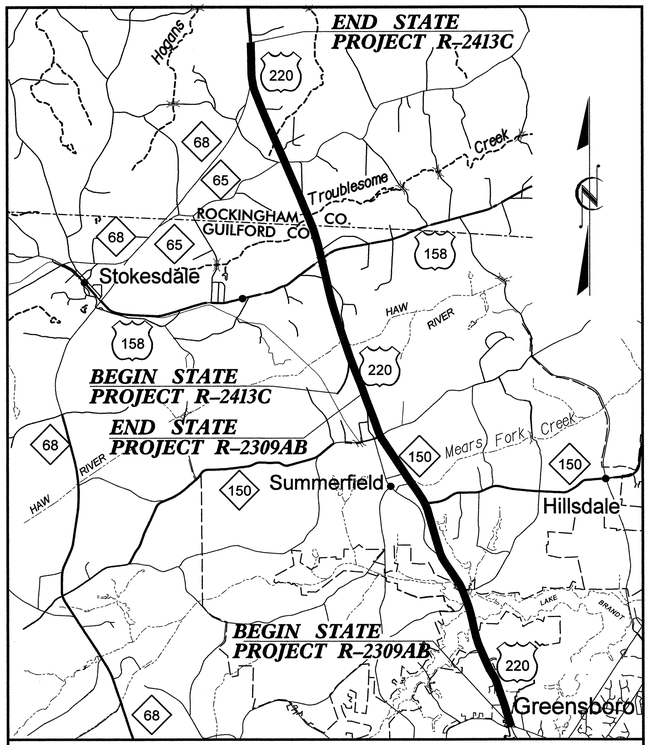
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

GUILFORD – ROCKINGHAM COUNTIES





SKETCH MAP SHOWING THE VICINITY OF STATE PROJECTS R-2309AB & R-2413C

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TMP-2A	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS
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Part 2 of 5

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

Florence & Hutcheson
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APPROVED: Michael S Ryczka
DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RYCZKA

SHEET NO.
TMP-1

R-2309AB / R-2413C

TIP PROJECT:

9/4/2011
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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB/R-2413C	TMP-1A

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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 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
1101.05	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 PANELS
1130.01	DRUMS
1135.01	CONES
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 AND OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE 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 AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - (TEMPORARY AND PERMANENT)
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS
1264.02	PLACEMENT OF OBJECT MARKERS

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA
- CONTINUING CONSTRUCTION
- REMOVAL

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 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

SYMBOL	DESCRIPTION
	PAINT (4")
PA	WHITE EDGELINE
PB	YELLOW EDGELINE
PC	10 FT. WHITE SKIP
PD	2 FT. WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PF	10 FT. YELLOW SKIP
PH	SINGLE YELLOW CENTERLINE
PI	DOUBLE YELLOW CENTERLINE
	PAINT (8")
PR	WHITE GORELINE
PV	YELLOW DIAGONAL
	PAINT (24")
P4	WHITE STOP BAR
	COLD APPLIED PLASTIC, TYPE IV (4")
CA	WHITE EDGELINE
CI	YELLOW CENTERLINE
	PAINT SYMBOL
QA	LEFT ARROW
QB	RIGHT ARROW
QC	STRAIGHT ARROW
QD	COMBO STRAIGHT/LEFT MARKING
QE	COMBO STRAIGHT/RIGHT MARKING
QI	ALPHANUMERIC CHARACTER
	TEMPORARY RAISED MARKERS
MH	YELLOW & YELLOW
MI	CRYSTAL & RED

APPROVED: Michael S Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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

ROADWAY STANDARD DRAWINGS, LEGEND & TEMPORARY PAVEMENT MARKING SCHEDULE

8/25/2011
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Florence & Hutcheson

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
US 220 (SR 2182 TO SR 2313) ASSOCIATED -Y- LINES	MONDAY THRU FRIDAY 6:00AM - 8:00PM SATURDAY THRU SUNDAY 10:00AM - 6:00PM
US 220 (SR 2313 TO NC 68) US 158, NC 65, NC 68	MONDAY THRU FRIDAY 6:00AM - 9:00AM 4:00PM - 6:00PM

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

ROAD NAME

US 220
ALL -Y- LINES

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

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00PM THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00AM FRIDAY AND 8:00PM TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00AM TUESDAY TO 8:00PM MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
9. FOR RACES IN MARTINSVILLE, BETWEEN THE HOURS OF 6:00AM THE FRIDAY BEFORE THE WEEKEND OF THE RACE AND 8:00PM THE MONDAY AFTER THE WEEKEND OF THE RACE.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 158	MONDAY THRU SUNDAY 6:00AM-10:00PM	UP TO 8 HOURS (ACCOMPANIED WITH AN ON-SITE DETOUR) GIRDER PLACEMENT

D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 220	MONDAY THRU SUNDAY 6:00AM-10:00PM	UP TO 30 MINUTES TIE-INS, TRAFFIC SHIFTS AND GIRDER PLACEMENT

PROJECT NOTES

E) 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

F) 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.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN 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.

H) 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.

I) 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.

J) 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.

K) DO NOT INSTALL MORE THAN ONE MILE OF LANE CLOSURE ON US 220 MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

L) DO NOT INSTALL MORE THAN THREE SIMULTANEOUS LANE CLOSURES, IN ANY ONE DIRECTION, ON US 220.

M) PROVIDE A MINIMUM OF TWO MILES BETWEEN LANE CLOSURES, MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

N) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

O) 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.

P) 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) 200 FEET IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

R) 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.

S) PROVIDE PERMANENT SIGNING.

T) PROVIDE DETOUR SIGNING WITHIN AND OFF THE PROJECT LIMITS.

U) COVER OR REMOVE ALL DETOUR SIGNS WITHIN AND OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.

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

W) INSTALL BLACK ON ORANGE 'DIP' SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200 FEET IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

X) 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.

Y) 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

Z) 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.

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

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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB/R-2413C	TMP-1B

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PROJECT NOTES

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS

CADD FILE

GENERAL NOTES (CONT'D)

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED

CC) 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.

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

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

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

TEMPORARY / FINAL SIGNALS

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

MISCELLANEOUS

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

II) THE TRAFFIC MANAGEMENT PLAN WILL BE REVISED UPON SELECTION OF CONCRETE PAVEMENT OPTION BY THE CONTRACTOR.

LOCAL NOTES

1) DO NOT PLACE PROPOSED FILL IN THE AREA OF EXISTING PIPELINES NEAR -LREV- STA 38+10± UNTIL PIPELINE REINFORCEMENT IS CONSTRUCTED (BY OTHERS) TO SUPPORT THE FILL, OR AS DIRECTED BY THE ENGINEER.

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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB/R-2413C	TMP-1C

APPROVED: Michael T Reepke DATE: 1-11-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. REEPKE

PROJECT NOTES

SCALE:	NONE
DATE:	1-12
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

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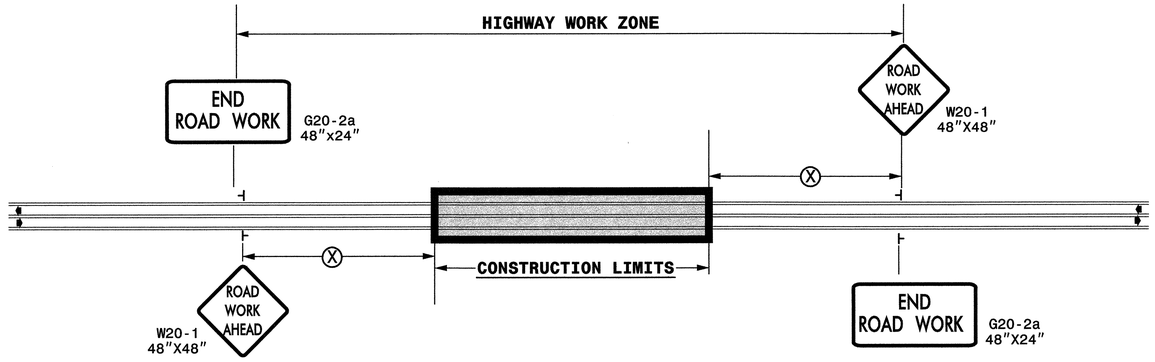
NC License No: P-0258

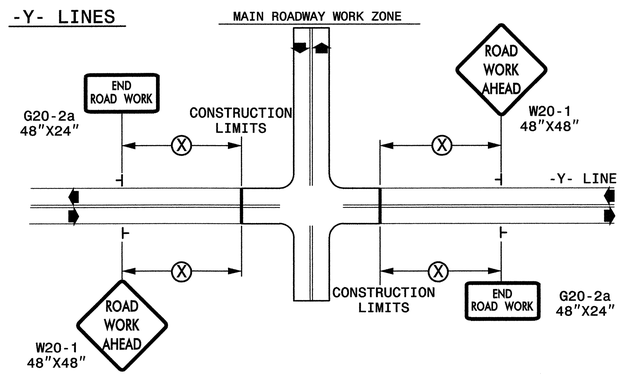
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB/R-2413C	TMP-2A

TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING (X)
≤ 50	500'
≥ 55	1000'

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- 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.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

DETAIL DRAWING FOR TWO-WAY UNDIVIDED WORK ZONE WARNING SIGNS

SHEET 1 OF 1

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCE WORK ZONE WARNING SIGNS

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS	
7-98	10/01
10-98	03/04
01/01	11/04
CADD FILE	

8/23/2011
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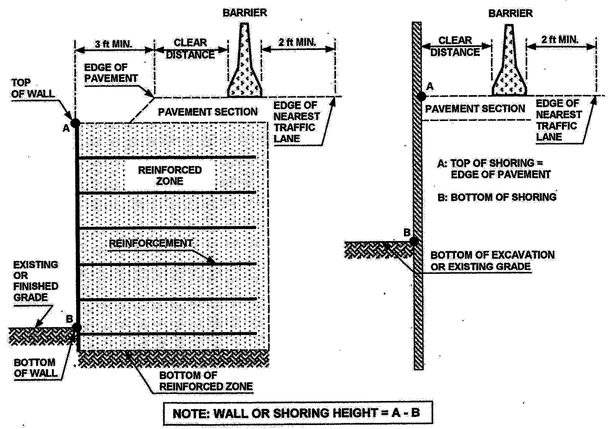
Florence & Hutcheson



NOTE: WALL OR SHORING HEIGHT = A - B

FIGURE A

NOTES

1- REFER TO THE TRAFFIC CONTROL PLANS FOR SHORING LOCATIONS AND SOIL PARAMETERS.

2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR MORE INFORMATION ABOUT TEMPORARY SHORING, MEASUREMENT AND PAYMENT.

3- 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).

4- 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.

5- 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).

6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.

7- USE OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH DETAIL DRAWING AND SPECIAL PROVISION OBTAINED FROM: WORK ZONE TRAFFIC CONTROL UNIT WEB PAGE.

8- 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.

9- 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.

10- 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.

PROJ. REFERENCE NO.	SHEET NO.

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

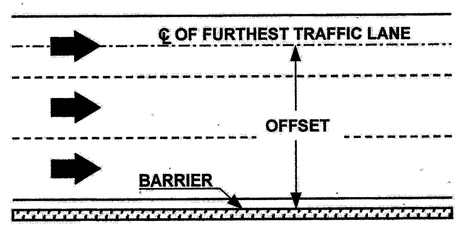


FIGURE B

APPROVED: _____ DATE: _____

SEAL 028380 ENGINEER

Sept 2010

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

PORTABLE CONCRETE BARRIER
AT
TEMPORARY SHORING LOCATIONS

8/23/2011
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TEMPORARY SHORING NOTES

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-2C

TEMPORARY SHORING NO. 1

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM -L- STA. 55+69+/-, 2.5 FT+/- LEFT TO -L- STA. 56+35+/-, 4.0 FT+/- RIGHT THEN TO -L- STA. 56+99+/-, 4.0 FT+/- RIGHT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 55+69+/-, 2.5 FT+/- LEFT TO -L- STA. 56+35+/-, 4.0 FT+/- RIGHT THEN TO -L- STA. 56+99+/-, 4.0 FT+/- RIGHT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

STANDARD SHORING MAY BE APPLICABLE FROM -L- STA. 55+69+/-, 2.5 FT+/- LEFT TO -L- STA. 56+35+/-, 4.0 FT+/- RIGHT THEN TO -L- STA. 56+99+/-, 4.0 FT+/- RIGHT. DO NOT USE STANDARD SHORING FOR HEIGHTS OVER 12 FT FROM -L- STA. 55+69+/-, 2.5 FT+/- LEFT TO -L- STA. 56+35+/-, 4.0 FT+/- RIGHT THEN TO -L- STA. 56+99+/-, 4.0 FT+/- RIGHT.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM -L- STA. 55+69+/-, 2.5 FT+/- LEFT TO -L- STA. 56+35+/-, 4.0 FT+/- RIGHT THEN TO -L- STA. 56+99+/-, 4.0 FT+/- RIGHT. THE TEMPORARY SHORING PROVISION DOES NOT APPLY TO ANCHORED TEMPORARY SHORING. IF ANCHORED SHORING OR TEMPORARY SOIL NAIL WALL IS PROPOSED, SUBMIT WORKING DRAWINGS AND DESIGN CALCULATIONS FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH ARTICLE 105-2 OF THE STANDARD SPECIFICATIONS. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 2

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM -L- STA. 55+66+/-, 3.0 FT+/- LEFT TO -L- STA. 57+06+/-, 3.0 FT+/- LEFT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 55+66+/-, 3.0 FT+/- LEFT TO -L- STA. 57+06+/-, 3.0 FT+/- LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

STANDARD SHORING MAY BE APPLICABLE FROM -L- STA. 55+66+/-, 3.0 FT+/- LEFT TO -L- STA. 57+06+/-, 3.0 FT+/- LEFT. DO NOT USE STANDARD TEMPORARY MSE WALL FOR HEIGHTS OVER 28 FT FROM -L- STA. 55+66+/-, 3.0 FT+/- LEFT TO -L- STA. 57+06+/-, 3.0 FT+/- LEFT.

TEMPORARY SHORING NO. 3

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM -L- STA. 112+00+/-, 8.0 FT+/- LEFT TO -L- STA. 113+35+/-, 8.0 FT+/- LEFT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 112+00+/-, 8.0 FT+/- LEFT TO -L- STA. 113+35+/-, 8.0 FT+/- LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 4

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM -L- STA. 113+35+/-, 8.0 FT+/- LEFT TO -L- STA. 113+45+/-, 0.0 FT+/- THEN TO -L- STA. 113+55+/-, 0.0 FT+/-.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 113+35+/-, 8.0 FT+/- LEFT TO -L- STA. 113+45+/-, 0.0 FT+/- THEN TO -L- STA. 113+55+/-, 0.0 FT+/-, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN BACKFILL FOR A MSE RETAINING WALL OVERLAPS WITH THE REINFORCED ZONE OF A TEMPORARY MSE WALL, USE EITHER SHORING BACKFILL OR THE MATERIAL SPECIFIED FOR THE MSE RETAINING WALL , WHICHEVER IS BETTER, IN THE REINFORCED ZONE.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 5

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM -L- STA. 113+55+/-, 0.0 FT+/- TO -L- STA. 113+66+/-, 0.0 FT+/-.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 113+55+/-, 0.0 FT+/- TO -L- STA. 113+66+/-, 0.0 FT+/-, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN BACKFILL FOR A MSE RETAINING WALL OVERLAPS WITH THE REINFORCED ZONE OF A TEMPORARY MSE WALL, USE EITHER SHORING BACKFILL OR THE MATERIAL SPECIFIED FOR THE MSE RETAINING WALL , WHICHEVER IS BETTER, IN THE REINFORCED ZONE.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 6

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM -L- STA. 115+00+/-, 0.0 FT+/- TO -L- STA. 115+10+/-, 0.0 FT+/- THEN TO -L- STA. 115+20+/-, 8.0 FT+/- LEFT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 115+00+/-, 0.0 FT+/- TO -L- STA. 115+10+/-, 0.0 FT+/- THEN TO -L- STA. 115+20+/-, 8.0 FT+/- LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 7

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM -L- STA. 115+20+/-, 8.0 FT+/- LEFT TO -L- STA. 117+00+/-, 8.0 FT+/- LEFT THEN TO -L- STA. 119+70+/-, 4.8 FT+/- LEFT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 115+20+/-, 8.0 FT+/- LEFT TO -L- STA. 117+00+/-, 8.0 FT+/- LEFT THEN TO -L- STA. 119+70+/-, 4.8 FT+/- LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 8-31-11 AND SEALED BY A PROFESSIONAL ENGINEER, MAJID KHAZAEI, PE, LICENSE #036278.

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

TEMPORARY SHORING NOTES

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS

CADD FILE

9/3/2011
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Florence & Hutcheson

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-2D

TEMPORARY SHORING NOTES

TEMPORARY SHORING NO. 8

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM -L- STA. 133+15+/-, 0.0 FT+/- TO -L- STA. 133+46+/-, 0.0 FT+/-.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 133+15+/-, 0.0 FT+/- TO -L- STA. 133+46+/-, 0.0 FT+/-, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 9

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM -L- STA. 135+14+/-, 0.0 FT+/- TO -L- STA. 135+45+/-, 0.0 FT+/-.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 135+14+/-, 0.0 FT+/- TO -L- STA. 135+45+/-, 0.0 FT+/-, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 10

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM -L- STA. 168+14+/-, 5.0 FT+/- LEFT TO -L- STA. 168+92+/-, 5.0 FT+/- LEFT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 168+14+/-, 5.0 FT+/- LEFT TO -L- STA. 168+92+/-, 5.0 FT+/- LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

STANDARD SHORING MAY BE APPLICABLE FROM -L- STA. 168+14+/-, 5.0 FT+/- LEFT TO -L- STA. 168+92+/-, 5.0 FT+/- LEFT. DO NOT USE STANDARD SHORING FOR HEIGHTS OVER 12 FT FROM -L- STA. 168+14+/-, 5.0 FT+/- LEFT TO -L- STA. 168+92+/-, 5.0 FT+/- LEFT.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM -L- STA. 168+14+/-, 5.0 FT+/- LEFT TO -L- STA. 168+92+/-, 5.0 FT+/- LEFT. THE TEMPORARY SHORING PROVISION DOES NOT APPLY TO ANCHORED TEMPORARY SHORING. IF ANCHORED SHORING IS PROPOSED, SUBMIT WORKING DRAWINGS, DESIGN CALCULATIONS AND AN ANCHORED TEMPORARY SHORING PROVISION FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH ARTICLE 105-2 OF THE STANDARD SPECIFICATIONS. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 11

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM -L- STA. 168+10+/-, 8.5 FT+/- RIGHT TO -L- STA. 168+95+/-, 8.5 FT+/- RIGHT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 168+10+/-, 8.5 FT+/- RIGHT TO -L- STA. 168+95+/-, 8.5 FT+/- RIGHT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 12

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM -L- STA. 246+50+/-, 1.0 FT+/- RIGHT TO -L- STA. 246+62+/-, 4.3 FT+/- RIGHT THEN TO -L- STA. 247+68+/-, 2.8 FT+/- RIGHT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 246+50+/-, 1.0 FT+/- RIGHT TO -L- STA. 246+62+/-, 4.3 FT+/- RIGHT THEN TO -L- STA. 247+68+/-, 2.8 FT+/- RIGHT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

STANDARD SHORING MAY BE APPLICABLE FROM -L- STA. 246+50+/-, 1.0 FT+/- RIGHT TO -L- STA. 246+62+/-, 4.3 FT+/- RIGHT THEN TO -L- STA. 247+68+/-, 2.8 FT+/- RIGHT. DO NOT USE STANDARD SHORING FOR HEIGHTS OVER 12 FT FROM -L- STA. 246+50+/-, 1.0 FT+/- RIGHT TO -L- STA. 246+62+/-, 4.3 FT+/- RIGHT THEN TO -L- STA. 247+68+/-, 2.8 FT+/- RIGHT.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM -L- STA. 246+50+/-, 1.0 FT+/- RIGHT TO -L- STA. 246+62+/-, 4.3 FT+/- RIGHT THEN TO -L- STA. 247+68+/-, 2.8 FT+/- RIGHT. THE TEMPORARY SHORING PROVISION DOES NOT APPLY TO ANCHORED TEMPORARY SHORING. IF ANCHORED SHORING IS PROPOSED, SUBMIT WORKING DRAWINGS, DESIGN CALCULATIONS AND AN ANCHORED TEMPORARY SHORING PROVISION FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH ARTICLE 105-2 OF THE STANDARD SPECIFICATIONS. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 13

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM -L- STA. 246+40+/-, 5.0 FT+/- LEFT TO -L- STA. 247+60+/-, 5.0 FT+/- LEFT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -L- STA. 246+40+/-, 5.0 FT+/- LEFT TO -L- STA. 247+60+/-, 5.0 FT+/- LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
FRICTION ANGLE, φ = 30
COHESION, c = 0 PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 8-31-11 AND SEALED BY A PROFESSIONAL ENGINEER, MAJID KHAZAEI, PE, LICENSE #036278.

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

TEMPORARY SHORING NOTES

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

9/3/2011
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Florence & Hutcheson

TEMPORARY SHORING NOTES

TEMPORARY SHORING NO. 14

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 45+44.00 TO STATION 45+76.00, 0 m FROM CL -LREV-.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 45+44.00 TO STATION 45+76.00, 0 m FROM CL -LREV- MAY NOT PENETRATE BELOW ELEVATION 275 m +- DUE TO THE PRESENCE OF AN OBSTRUCTION, VERY DENSE OR HARD SOIL, WEATHERED OR HARD ROCK.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 45+44.00 TO STATION 45+76.00, 0 m FROM CL -LREV-, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 18.8 kN/m3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 9.4 kN/m3
FRICTION ANGLE, φ = 30 DEGREES
COHESION, c = 0 kPa

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 45+44.00 TO STATION 45+76.00, 0 m FROM CL -LREV-. THE TEMPORARY SHORING PROVISION DOES NOT APPLY TO ANCHORED TEMPORARY SHORING. IF ANCHORED SHORING IS PROPOSED, SUBMIT WORKING DRAWINGS, DESIGN CALCULATIONS AND AN ANCHORED TEMPORARY SHORING PROVISION FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH ARTICLE 105-2 OF THE STANDARD SPECIFICATIONS.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 15
FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM STATION 56+32.00 -LREV- TO STATION 56+76.00 -LREV-, 3.0 m RT FROM CL -LREV-.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 56+32.00 -LREV- TO STATION 56+76.00 -LREV-, 3.0 m RT FROM CL -LREV-, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 18.8 kN/m3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 9.4 kN/m3
FRICTION ANGLE, φ = 30 DEGREES
COHESION, c = 0 kPa

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 16

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

USE A TEMPORARY MSE WALL FROM STATION 57+25.00 -LREV- TO STATION 57+40.49 -LREV-, 1.5 m RT FROM CL -LREV-, FROM STATION 57+40.49 -LREV- TO STATION 57+47.46 -LREV-, 1.5 m RT TO 4.83 m RT FROM CL -LREV-, AND FROM STATION 57+47.46 -LREV- TO STATION 57+63.00 -LREV-, 4.83 m RT FROM CL -LREV-.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 57+25.00 -LREV- TO STATION 57+40.49 -LREV-, 1.5 m RT FROM CL -LREV-, FROM STATION 57+40.49 -LREV- TO STATION 57+47.46 -LREV-, 1.5 m RT TO 4.83 m RT FROM CL -LREV-, AND FROM STATION 57+47.46 -LREV- TO STATION 57+63.00 -LREV-, 4.83 m RT FROM CL -LREV-, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 18.8 kN/m3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 9.4 kN/m3
FRICTION ANGLE, φ = 30 DEGREES
COHESION, c = 0 kPa

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 17

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 69+91.00 -LREV- TO STATION 70+28.00 -LREV-, 5.8 m LT FROM CL -LREV-.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 69+91.00 -LREV- TO STATION 70+28.00 -LREV-, 5.8 m LT FROM CL -LREV- MAY NOT PENETRATE BELOW ELEVATION 270 m +- DUE TO THE PRESENCE OF AN OBSTRUCTION, VERY DENSE OR HARD SOIL, WEATHERED OR HARD ROCK.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 69+91.00 -LREV- TO STATION 70+28.00 -LREV-, 5.8 m LT FROM CL -LREV-, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 18.8 kN/m3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 9.4 kN/m3
FRICTION ANGLE, φ = 30 DEGREES
COHESION, c = 0 kPa

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 69+91.00 -LREV- TO STATION 70+28.00 -LREV-, 5.8 m LT FROM CL -LREV-. THE TEMPORARY SHORING PROVISION DOES NOT APPLY TO ANCHORED TEMPORARY SHORING. IF ANCHORED SHORING IS PROPOSED, SUBMIT WORKING DRAWINGS, DESIGN CALCULATIONS AND AN ANCHORED TEMPORARY SHORING PROVISION FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH ARTICLE 105-2 OF THE STANDARD SPECIFICATIONS.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 8-31-11 AND SEALED BY A PROFESSIONAL ENGINEER, SHIHAI ZHANG, PE, LICENSE #038176.

TEMPORARY SHORING NO. 18

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 79+80.00 -LREV- TO STATION 82+20.00 -LREV-, 5.8 m RT FROM CL -LREV-.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 79+80.00 -LREV- TO STATION 82+20.00 -LREV-, 5.8 m RT FROM CL -LREV-, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 18.8 kN/m3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 9.4 kN/m3
FRICTION ANGLE, φ = 30 DEGREES
COHESION, c = 0 kPa

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

TEMPORARY SHORING NOTES

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT TRAFFIC ENGINEERING BRANCH

REVISIONS

CADD FILE

9/3/2011
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Florence & Hutcheson

PHASE I

THE TRANSPORTATION MANAGEMENT PLAN WILL BE REVISED UPON SELECTION OF CONCRETE PAVEMENT OPTION BY THE CONTRACTOR.

NOTES:

- (M) REFERS TO METRIC PORTION (R-2413C) OF THE COMBINED PROJECT
- "RSD" REFERS TO NCDOT ROADWAY STANDARD DRAWINGS
- "PCB" REFERS TO PORTABLE CONCRETE BARRIER
- ALL PROPOSED ASPHALT CONSTRUCTION IN PHASES I THROUGH PHASE III IS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

STEP 1

USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 OR DRAWING NO. 1101.04, INSTALL ALL WORK ZONE ADVANCE WARNING SIGNS ON US 220 AND ALL -Y- LINES (SEE SHEET TMP-2A).

NOTE: WHEN PERFORMING SIGNAL WORK IN PHASE I, STEP 2, REFERENCE INTERMEDIATE CONTRACT TIMES S1 AND S2 (SEE SIGNAL PLANS).

STEP 2

USING GUARDRAIL, PERMANENTLY CLOSE -Y10- (RHONDAN RD.) AS SHOWN IN ROADWAY PLANS.

USING BARRICADES, CLOSE MURPHY ROAD ACCESS TO US 220 AND CONSTRUCT PROPOSED TURNAROUND NEAR PROPOSED RAMP D (M)(SEE SHEETS TMP-45 & 46).

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT TEMPORARY PAVEMENT ON LEFT SIDE OF EXISTING US 220 FROM END OF EXISTING BRIDGE AT -L- STA. 120+87± TO STA. 126+80± AND FROM -L- STA. 139+13± TO STA. 150+41± (SEE SHEETS TMP-14 & 15). USING RSD 1101.02 (SHEET 1 OF 9), PLACE TEMPORARY PAVEMENT MARKING LINES AND MARKERS AND SHIFT US 220 TRAFFIC ONTO THE TEMPORARY PAVEMENT AT BOTH LOCATIONS (SEE SHEETS TMP-23 THRU TMP-25).

USING RSD 1101.02 (SHEET 1 OF 9), INSTALL PCB AND BEHIND BARRIER BEGIN CONSTRUCTION OF CULVERTS AT THE FOLLOWING LOCATIONS (WIDEN WITH TEMPORARY PAVEMENT FOR PCB PLACEMENT). INSTALL TEMPORARY SHORING FOR CULVERT CONSTRUCTION (SEE SHEETS TMP-18, 27, 32 & 48):

-L- STA 56+35± PORTION LEFT OF -L-
-L- STA 168+50± PORTION RIGHT OF -L-
-L- STA 247+00± PORTION LEFT OF -L-
-L REV- STA 56+54± PORTION UNDER PROPOSED NB LANES (M)
-L REV- STA 57+46± PORTIONS UNDER PROPOSED NB LANES AND UNDER -Y25- (M)

USING RSD 1101.02 (SHEET 1 OF 9), INSTALL PCB (CONCURRENT WITH INSTALLATION FOR CULVERT CONSTRUCTION) AND BEHIND BARRIER BEGIN CONSTRUCTION OF PROPOSED WIDENING FROM -L- STA 52+00± TO STA 57+00±. INSTALL TEMPORARY SHORING FOR ROADWAY CONSTRUCTION AT CULVERT (SEE SHEET TMP-18).

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF THE FOLLOWING PROPOSED (SEE SHEETS TMP-18, 19, 22-42, 44-53, 56 & 60-63):

-L- STA 57+00± TO STA 73+50± LT
-L- STA 63+50± TO STA 69+50± RT
-L- STA 106+70± TO STA 140+00± RT (WITH PCB & TEMP. SHORING)
-L- STA 147+25± TO STA 158+39± RT
-L- STA 164+70± TO STA 170+00± RT (WITH TEMP. SHORING AT CULVERT)
-L- STA 179+00± TO STA 188+95± RT
-L- STA 200+75± TO STA 209+17± RT
-L- STA 225+75± TO STA 245+05± LT
-L- STA 257+25± TO STA 271+15± LT
-L- STA 286+00± TO STA 297+85± RT
-L- STA 310+00± TO STA 316+77± LT
SB -L REV 1- STA 13+50± TO STA 15+78± (M)
SB -L REV 1- STA 18+40± TO STA 19+09± (M)
SB US 220 RAMP STA 19+01 TO STA 10+00± (M)
SB -L REV- STA 18+30± TO STA 21+80± (M)
NB -L REV- STA 18+30± TO STA 20+60± (M)
SB -L REV- STA 23+92± TO STA 26+08± (M) (INCLUDING STRUCTURE)
SB -L REV- STA 40+80± TO STA 44+40± (M)
SB -L REV- STA 44+70± TO PROP. END BENT #2 OF SB STURCTURE OVER US 158 (M)
SB -L REV- STA 46+00± TO STA 53+00± (M)
NB -L REV- STA 55+20± TO STA 58+80± (M)
NB -L REV- STA 61+00± TO STA 69+80± (M)
NB -L REV- STA 70+40± TO STA 73+20± (M)
NB -L REV- STA 74+40± TO STA 76+00± (M)
SB -L REV- STA 83+60± TO STA 87+00± (M)
US 158 RP A STA 10+00± TO STA 15+00± (M)
US 158 RP B FROM -L REV- TO RP B STA 14+20± (M)
US 158 RP C STA 11+40± TO STA 13+80± (M)
US 158 RP C STA 14+20± TO -Y6- (M)
US 158 RP D STA 11+40± TO STA 13+80± (M)
US 158 RP D STA 14+00± TO -Y6- (US 158) (M)
NC 65 RP A STA 11+44± TO STA 14+40± (M)
NC 65 RP B STA 11+07± TO -Y10- (M)
NC 65 RP C FROM -L REV- TO RP C STA 13+80± (M)
-Y10- (NC 65) STA 9+00± TO STA 9+60± (M)

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF THE FOLLOWING TEMPORARY PAVEMENTS (SEE SHEETS TMP-44, 45 & 53):

-XOVRM- (TIE FROM US 158 RP A TO PROPOSED SB LANES AT -L REV- STA 47+20±) (M)
-XOVRL- (TIE FROM US 158 RP B TO PROPOSED SB LANES AT -L REV- STA 42+80±) (M)
-XOVRP- (TIE FROM NC 65 RP D TO PROPOSED NB LANES AT -L REV- STA 72+80±) (M)

USING RSD 1101.02 (SHEET 1 OF 9), BEGIN CONSTRUCTION OF THE FOLLOWING PROPOSED (SEE SHEETS TMP-12, 19, 24, 25, 27, 36, 37, 43, 44, 61 & 62):

-L- STA 143+16± TO STA 147+25± RT
-L- STA 170+00± TO STA 179+00± RT
-Y1- (BRANDT LAKE COURT DR.) STA 8+02± TO STA 10+73± WITH TEMP. TIE TO US 220
-Y14- (SUMMER HAVEN DR.) STA 10+28± TO STA 12+00±
-Y19R- (SYLVANIA RD.) STA 10+40± TO STA 12+95± (M)
-Y19B- (M)
-Y21- (SPOTSWOOD RD.) (M)

USING FLAGGERS AND MAINTAINING ACCESS TO US 220, IN A CONTINUOUS MANNER CONSTRUCT -Y13- (MOREFIELD DR.) STA 10+36± TO STA 12+66± WITH TEMPORARY TIE TO US 220 AND SHIFT TRAFFIC (SEE SHEET TMP-36).

USING RSD 1101.02 (SHEET 1 OF 9), BEGIN CONSTRUCTION OF THE FOLLOWING TEMPORARY PAVEMENTS (SEE SHEETS TMP-30, 34, 35, 46-48, 51 & 53-55):

-L- STA 210+74± TO STA 221+00± WIDENING LT OF US 220
-L- STA 271+15± TO STA 288+10± WIDENING LT OF US 220
-Y8- (NC 150) FROM -L- TO -Y8- STA 15+00± WIDENING LT OF NC 150
-L REV- STA 47+50± TO STA 50+40±, LEFT & RIGHT OF EXISTING US 220 (M)
-XOVRH- (TEMPORARY TIE FROM EXISTING US 220 TO PROPOSED NB LANES) (M)
-XOVRI- (TEMPORARY TIE FROM PROPOSED NB LANES TO EXISTING US 220) (M)
-XOVRO- (TEMPORARY TIE FROM EXISTING US 220 TO PROPOSED SB LANES AT -L REV- STA 49+20±) (M)
-XOVRK- (TEMPORARY TIE FROM NC 65 RP B TO PROPOSED NB LANES AT -L REV- STA 67+80±) (M)

AWAY FROM TRAFFIC, CONSTRUCT THE FOLLOWING (SEE SHEETS TMP-38, 52, 53, 58 & 63):

NB -L REV- STA 73+20± TO STA 74+40± (M)
SB -L REV- STA 90+80± TO STA 91+20± (M)
NC 65 RP D FROM -L REV- TO RP D STA 14+60± (M)

USING RSD 1101.02 (SHEET 1 OF 9), WEDGE AND WIDEN EXISTING AT THE FOLLOWING LOCATIONS (SEE SHEETS TMP-20, 38 & 61):

US 220 FROM -L- STA 82+00± TO STA 84+30± RT
US 220 FROM -L REV 1- STA 13+50± TO STA 16+20± (M)
US 158 FROM -Y6- STA 13+80± TO STA 14+10± RT (M)

USING RSD 1101.02 (SHEETS 1 & 3 OF 9), BEGIN PROPOSED WEDGE AND WIDEN OF EXISTING PAVEMENT AT THE FOLLOWING LOCATIONS (SEE SHEETS TMP-16-22, 26, 28, 29, 31-33, 36, 37, 45, 60 & 61):

-L- STA 21+50± TO STA 52+00± RT & LT
-Y- (HORSE PEN CREEK RD.) STA 1+50± TO STA 9+60± RT & LT
-L- STA 73+50± TO STA 95+89± LT, INCLUDING -Y4- (LAURINDA DR.)
-L- STA 75+00± TO STA 80+00± RT
-L- STA 84+30± TO STA 106+70± RT
-L- STA 158+39± TO STA 164+70± RT
-L- STA 188+95± TO STA 200+75± RT
-L- STA 221+00± TO STA 225+75± LT
-L- STA 245+05± TO STA 257+25± LT (WITH TEMP. SHORING AT CULVERT)
-L- STA 297+85± TO STA 308+00± LT
-L- STA 297+85± TO STA 317+52± RT, INCLUDING -Y15-
-Y6- (US 158) STA 11+80± TO STA 13+80± (WIDEN ONLY TO EXISTING BENTS UNDER EXISTING BRIDGE) (M)
-Y6- (US 158) STA 13+80± TO STA 15+00± LT (M)
-Y6- (US 158) STA 14+10± TO STA 15+00± RT (M)
-Y6- (US 158) STA 15+78± TO STA 17+50± (M)

APPROVED: Michael T. Rzepka DATE: 1-12-12

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I PHASING

SCALE:	NONE
DATE:	1-12
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — STATEWIDE PROJECT DEVELOPMENT & ENGINEERING BRANCH — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS

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Florence & Hutcheson

PHASE I

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT THE FOLLOWING PROPOSED
(SEE SHEETS TMP-10, 20, 38-44, 48-50 & 60):

-Y3- (OWLS ROOST RD.) STA 11+00± TO STA 14+58± UP TO EXIST. EDGE OF PAVEMENT ELEV.
-L REV 1- STA 15+78± TO STA 16+10± (M) WITH TIE TO EXIST. EDGE OF PAVEMENT ELEV.
-Y29- WITH TIE TO EXISTING US 220 (M)
-Y23- (M)
-Y20- & -Y20- REV (SPOTSWOOD RD. EXT.) FROM -Y20- STA 9+77± TO EXISTING US 158 (MAINTAIN DRIVE ACCESSES) (M)
-Y24- (BLACKBURN PROP. ACCESS RD.) (M)
-Y25- (FRIDDLE PROP. ACCESS RD.) (M)
-Y28- (FARRAR STORE RD.) (M)
DRIVEWAY RIGHT OF -L REV- STA 62+40±

USING RSD 1101.02 (SHEETS 1, 6 & 7 OF 9), CONSTRUCT TEMPORARY PAVEMENT/TEMPORARY
WIDENING AT THE FOLLOWING LOCATIONS (SEE SHEETS TMP-45, 53, 57, 58 & 61-63):

-L REV- STA 72+80± TO STA 76+00±, LEFT OF EXISTING US 220 (M)
-L REV- STA 87+65± TO STA 92+40±, LEFT OF EXISTING US 220 (M)
-XOVRD- (MEDIAN CROSSOVER -L REV- STA 92+70± TO STA 96+00±), (RSD 1101.02, SHEET 3 OF 9) (M)
REMOVE CHANNELIZATION AND REPAVE AT EXISTING US 220 AND US 158 RAMP C (M)
-XOVRN- (TEMPORARY RAMP C TIE FROM US 158 RP C TO -Y6- WIDENING) (M)
-XOVRE- (NC 65 RUNAROUND FROM -Y10- STA 6+45± TO STA 9+00±) (M)
-XOVRQ- (TEMPORARY TIE FROM EXISTING US 220 TO PROPOSED NB LANES AT -L REV- STA 74+20±) (M)
DET "B" FROM NC 65 TO NC 65 RP D (M)
-XOVRB- (NB NC 68 TEMPORARY ALIGNMENT) (M)
-XOVRC- (SB NC 68 TEMPORARY ALIGNMENT) (M)

STEP 3

USING RSD 1101.02 (SHEET 1 OF 9), PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS
AND OPEN THE FOLLOWING TO TRAFFIC (SEE SHEETS TMP- 64-66 & 73):

-Y3- (OWLS ROOST RD.)
-Y20- & -Y20- REV (SPOTSWOOD RD. EXT.) (CLOSE EXISTING SPOTSWOOD RD.) (M)
-Y23- (M)
-Y24- (BLACKBURN PROP. ACCESS RD.) (M)
-Y28- (FARRAR STORE RD.) (M)
-Y29- (M)

USING RSD 1101.02 (SHEET 1 OF 9), PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS
AND SHIFT TRAFFIC TO THE FOLLOWING TEMPORARY PATTERNS:

FOR US 220 ACCESS TO WB US 158 (VIA TEMP. RAMP C) (SEE SHEETS TMP-67 & 74):
-XOVRN- (TEMPORARY RAMP C TIE FROM US 158 RP C TO -Y6- WIDENING AT -Y6- STA 14+00±)
CLOSE EXISTING RAMP A (M)

FOR NC 65 ACCESS TO US 220 FROM EAST OF US 220 (SEE SHEETS TMP-68, 69 & 76):
-L REV- STA 72+80± TO STA 76+00±, (US 220 3-LANE SECTION) (M)
-XOVRQ- (TEMPORARY TIE FROM EXISTING US 220 TO PROPOSED NB LANES AT -L REV- STA 74+20±) (M)
NC 65 RP D FROM -L REV- TO RP D STA 14+60± (M)
DET "B" FROM NC 65 TO NC 65 RP D (M)

FOR NC 68 ACCESS TO US 220 (SEE SHEETS TMP- 70-72):
-L REV- STA 86+80± TO STA 92+40±, (2-LANE/2-WAY SECTION) (M)
-XOVRD- (MEDIAN CROSSOVER -L REV- STA 92+70± TO STA 96+00±) (M)
-XOVRB- (NB NC 68 TEMPORARY ALIGNMENT) (INSTALL PCB DIVIDING NC 68 TRAFFIC) (M)
-XOVRC- (SB NC 68 TEMPORARY ALIGNMENT) (M)

-XOVRE- (NC 65 RUNAROUND FROM -Y10- STA 6+45± TO STA 9+00±) (M) (SEE SHEET TMP-75)

AWAY FROM TRAFFIC BEGIN CONSTRUCTION OF THE FOLLOWING PROPOSED
(SEE SHEETS TMP-9, 10, 65-68, 70-72 & 76) (SEE LOCAL NOTE 1):

SB -L REV 1- STA 16+09± TO STA 18+40± (M)
SB US 220 RAMP STA 10+00± TO STA 9+00± (M)
SB -L REV- STA 26+08± TO STA 40+80± (M)
NB -L REV- STA 29+00± TO STA 37+00± (M)
FROM SB STRUCTURE OVER US 158 TO -L REV- STA 46+00± (M)
SB -L REV- STA 86+00± TO STA 90+80± (M)
SB -L REV- STA 91+08± TO STA 94+05± (M)
-Y10- (NC 65) STA 10+65± TO STA 13+90± (M)
NC 65 RP C STA 13+80± TO -Y10- (M)
NC 65 RP D STA 14+60± TO -Y10- (M)
NB -L1 REV- STA 16+43± TO -L REV- (M)
SB -L1 REV- STA 18+20± TO SB -L REV- (M)

USING RSD 1101.02 (SHEET 1 OF 9), INSTALL PCB ON US 158 AND BEGIN CONSTRUCTION OF
REMAINING PORTION OF SB STRUCTURE OVER US 158. DO NOT PERFORM ANY STRUCTURE WORK
REQUIRING ROAD CLOSURES ON US 158 IN THIS STEP (SEE SHEET TMP-67).

USING RSD 1101.02 (SHEET 1 OF 9), INSTALL PCB ALONG US 220 (WIDEN WITH TEMPORARY
PAVEMENT FOR PCB PLACEMENT AS NECESSARY) WITH TEMPORARY SHORING AND BEGIN
CONSTRUCTION OF -Y10- (NC 65) STRUCTURE FROM STA 10+65± (BENT #1) TO STA 10+96± (M).
CONSTRUCTION MUST INCLUDE GIRDER PLACEMENT IN THIS PHASE (SEE SHEET TMP-68).

USING RSD 1101.02 (SHEET 1 OF 9), BEGIN CONSTRUCTION OF THE FOLLOWING
(SEE SHEETS TMP- 64-66, 71 & 72):

-L- STA 80+00± TO STA 82+00± RT (WEDGE AND WIDEN)
-XOVRA- (M)
-XOVRG- (TEMPORARY TIE FROM PROPOSED NB -L1 REV- TO EXISTING SB NC 68) (M)
-XOVRF- (MEDIAN CROSSOVER -L REV- STA 94+70± TO STA 97+00±) (RSD 1101.02, SHEET 3 OF 9) (M)

AWAY FROM TRAFFIC CONSTRUCT THE FOLLOWING PROPOSED (SEE SHEETS TMP-11, 68 & 75):

NB -L REV- STA 58+80± TO STA 61+00± (M)
NB -L REV- STA 69+80± TO STA 70+40± (M)
-Y10- STA 6+64± TO STA 9+00± (EXCEPT LEFT SHOULDER STA 6+64± TO STA 7+60±) (M)

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT THE FOLLOWING PROPOSED (SEE SHEET TMP-73):

US 158 RP A STA 15+00± TO -Y6- (M)
-Y6- (US 158) STA 10+00± TO STA 11+80± LT (M)

USING RSD 1101.03, SHEET 1 OF 9 AND OFF-SITE DETOURS, CLOSE -Y9- (PARSONAGE RD.) AND
-Y11- (MYERS FORK RD.) (ONE -Y- LINE AT A TIME) AS -L- CONSTRUCTION PROGRESSES IN
PROXIMITY AND IN A CONTINUOUS MANNER CONSTRUCT PROPOSED -Y9- AND -Y11- AND REOPEN
WITH TEMPORARY TIES TO EXISTING US 220 (SEE SHEETS TMP-77 & 78 FOR DETOURS).

COMPLETE CONSTRUCTION OF THE FOLLOWING BEGUN IN PHASE I, STEP 2:

CULVERT AT -L- STA 247+00± PORTION LEFT OF -L-
CULVERT AT -L REV- STA 56+54± PORTION UNDER PROPOSED NB LANES (M)
CULVERT AT -L REV- STA 57+46± PORTIONS UNDER PROPOSED NB LANES AND UNDER -Y25- (M)
-L- STA 210+74± TO STA 221+00± WIDENING LT OF US 220
-L- STA 221+00± TO STA 225+75± LT (WEDGE & WIDEN)
-L- STA 225+75± TO STA 245+05± LT
-L- STA 245+05± TO STA 257+25± LT (WEDGE & WIDEN)
-L- STA 257+25± TO STA 271+15± LT
-L- STA 271+15± TO STA 288+10± WIDENING LT OF US 220
-Y8- (NC 150) FROM -L- TO -Y8- STA 15+00± TEMPORARY WIDENING LT OF NC 150
-L REV- STA 47+50± TO STA 50+40±, TEMP. WIDENING LT & RT OF EXISTING US 220 (M)
SB -L REV- STA 48+40± TO STA 49+20± (M)
NB -L REV- STA 55+20± TO STA 58+80± (M)
NB -L REV- STA 61+00± TO STA 69+80± (M)
NB -L REV- STA 70+40± TO STA 73+20± (M)
NB -L REV- STA 74+40± TO STA 76+00± (M)
US 158 RP A STA 10+80± TO STA 15+00± (M)
NC 65 RP B STA 11+07± TO -Y10- (M)
NC 65 RP C FROM -L REV- TO RP C STA 11+65± (M)
-Y6- (US 158) STA 11+80± TO STA 13+80± (WEDGE & WIDEN) (M)
-Y6- (US 158) STA 13+80± TO STA 15+00± LT (WEDGE & WIDEN) (M)
-Y6- (US 158) STA 14+10± TO STA 15+00± RT (WEDGE & WIDEN) (M)
-XOVRH- (TEMPORARY TIE FROM EXISTING US 220 TO PROPOSED NB LANES) (M)
-XOVRI- (TEMPORARY TIE FROM PROPOSED NB LANES TO EXISTING US 220) (M)
-XOVRO- (TEMPORARY TIE FROM EXISTING US 220 TO PROPOSED SB LANES AT -L REV- STA 49+20±) (M)
-XOVRK- (TEMPORARY TIE FROM NC 65 RP B TO PROPOSED NB LANES AT -L REV- STA 67+80±) (M)
-XOVRP- (TEMPORARY TIE FROM NC 65 RP D TO PROPOSED NB LANES AT -L REV- STA 72+80±) (M)

APPROVED: Michael T. Rizyka DATE: 1-11-12

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RIZYKA

PHASE I PHASING

SCALE:	NONE
DATE:	1-12
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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1/11/2012
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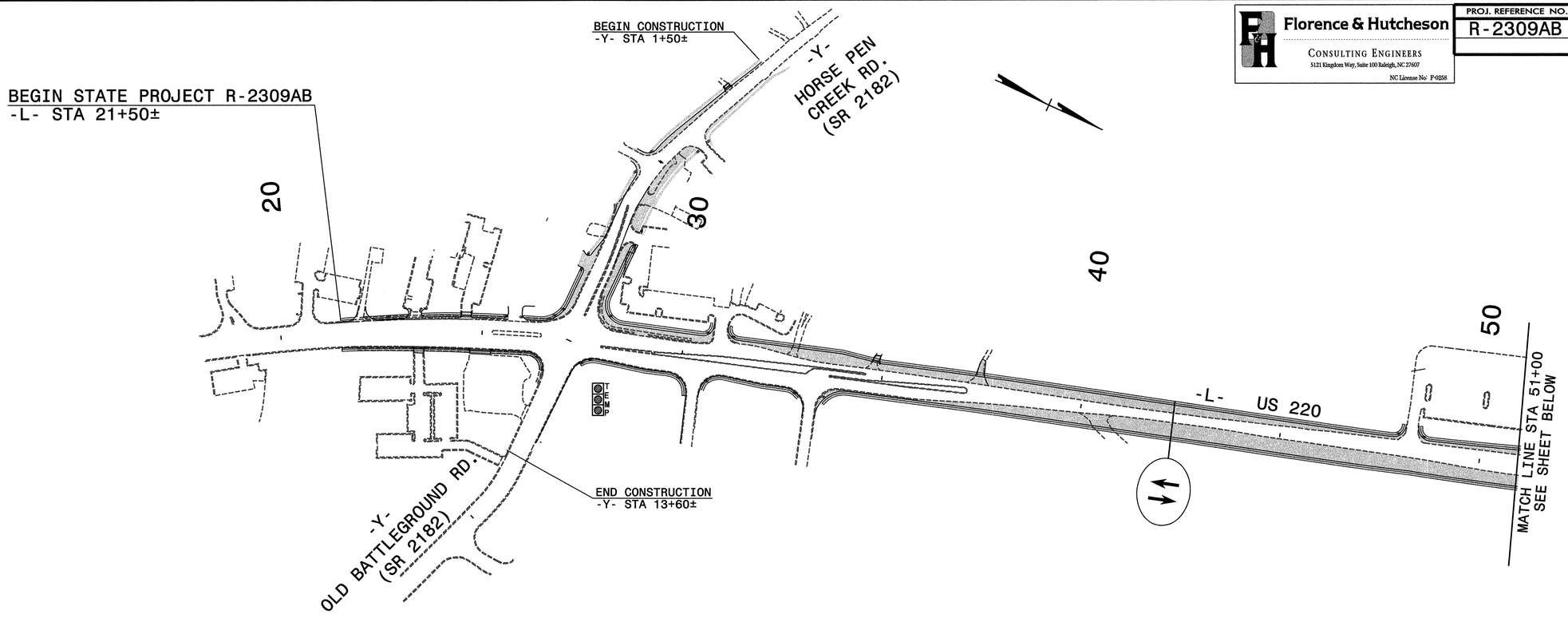
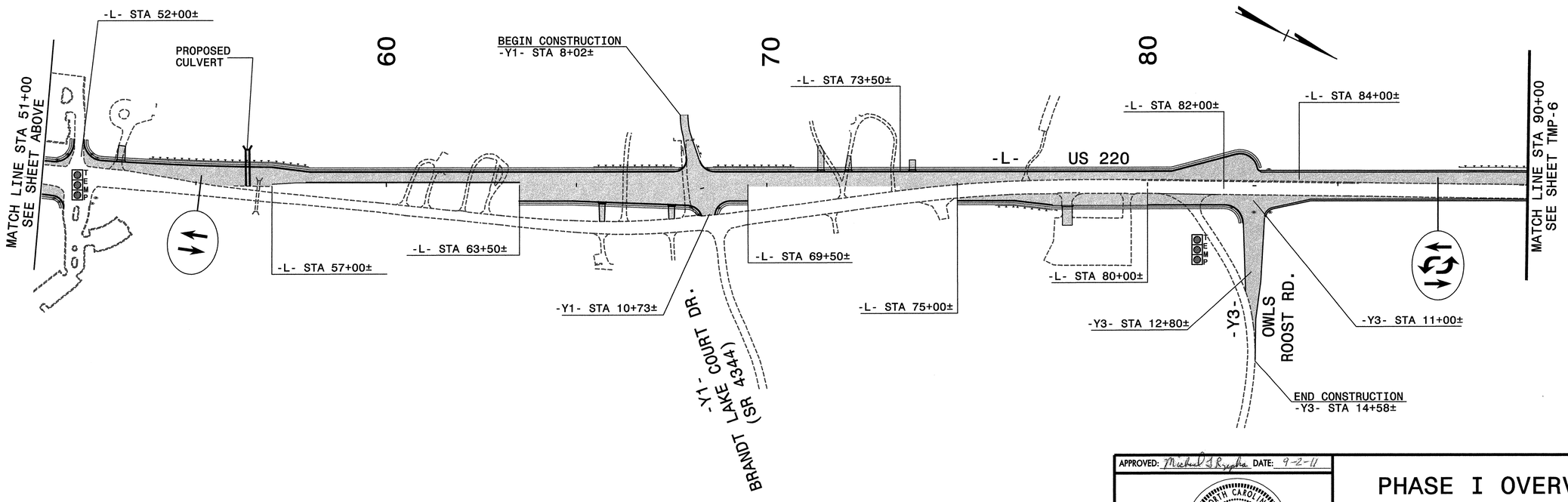
	R-2309AB	TMP-5





LEGEND

PROPOSED CONSTRUCTION

APPROVED: Michael T Ryczka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T IZZEKA

PHASE I OVERVIEW

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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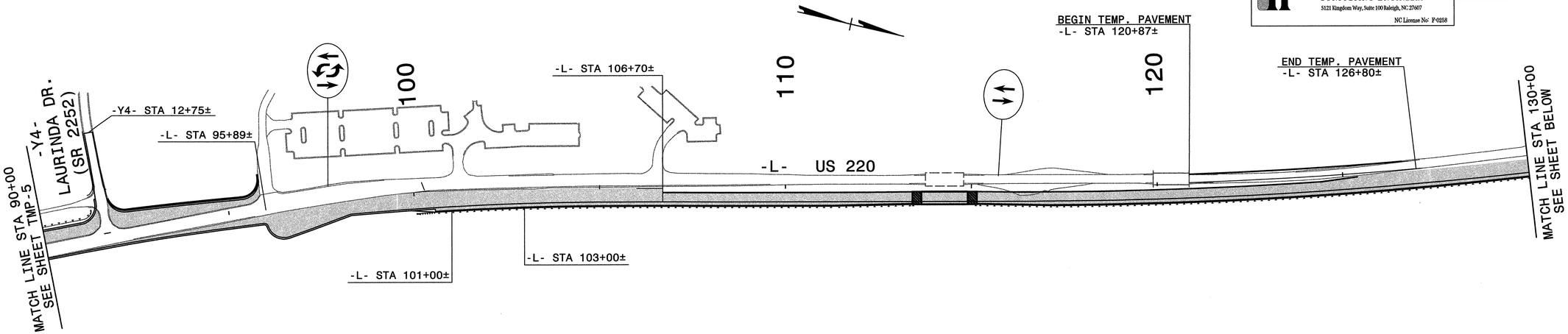
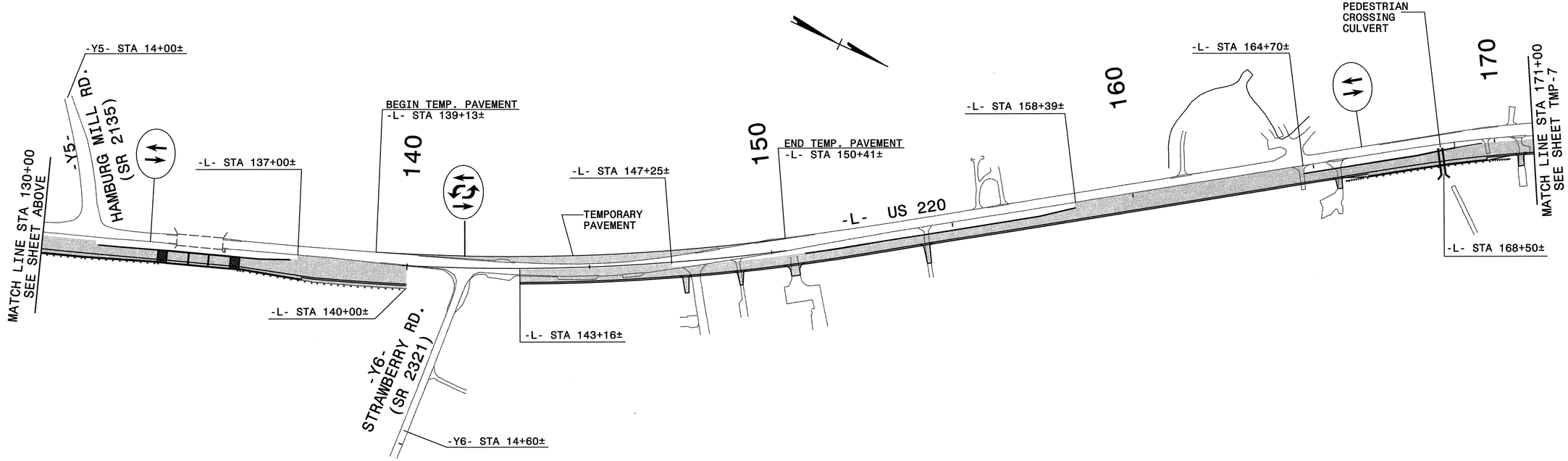
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-6





LEGEND

PROPOSED CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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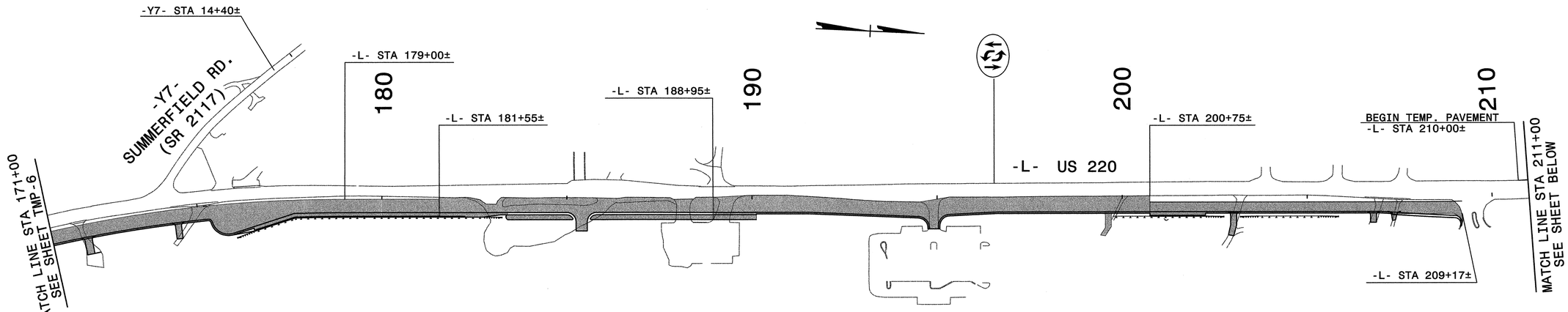
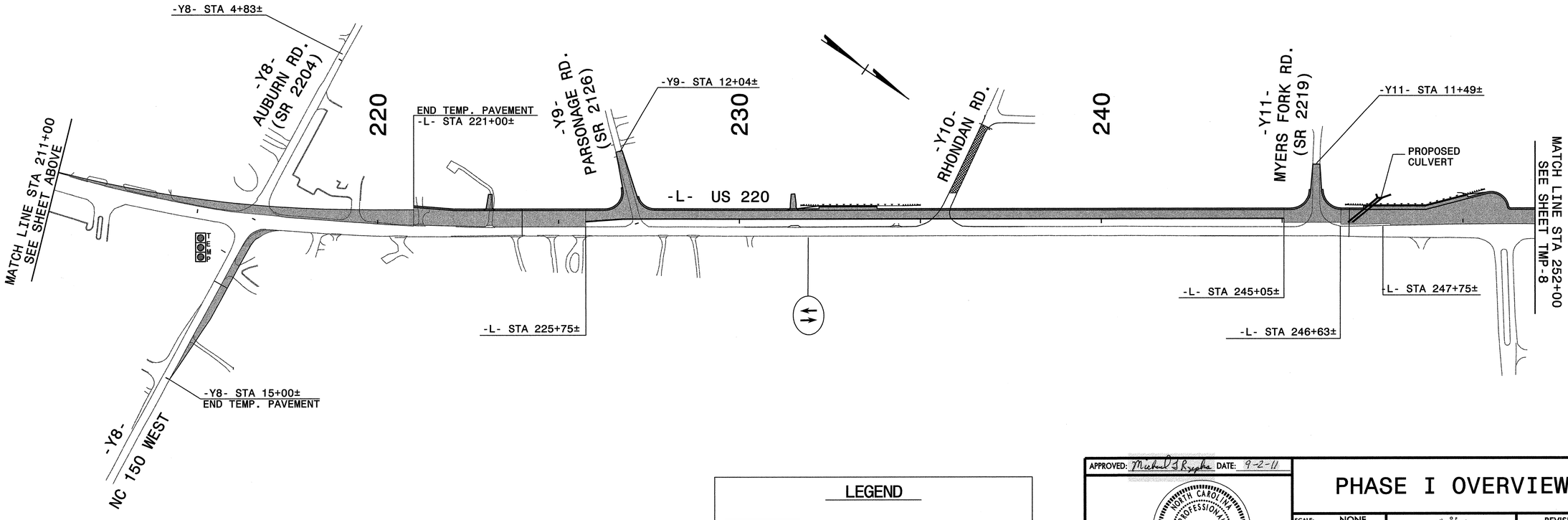
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-7





LEGEND

PROPOSED CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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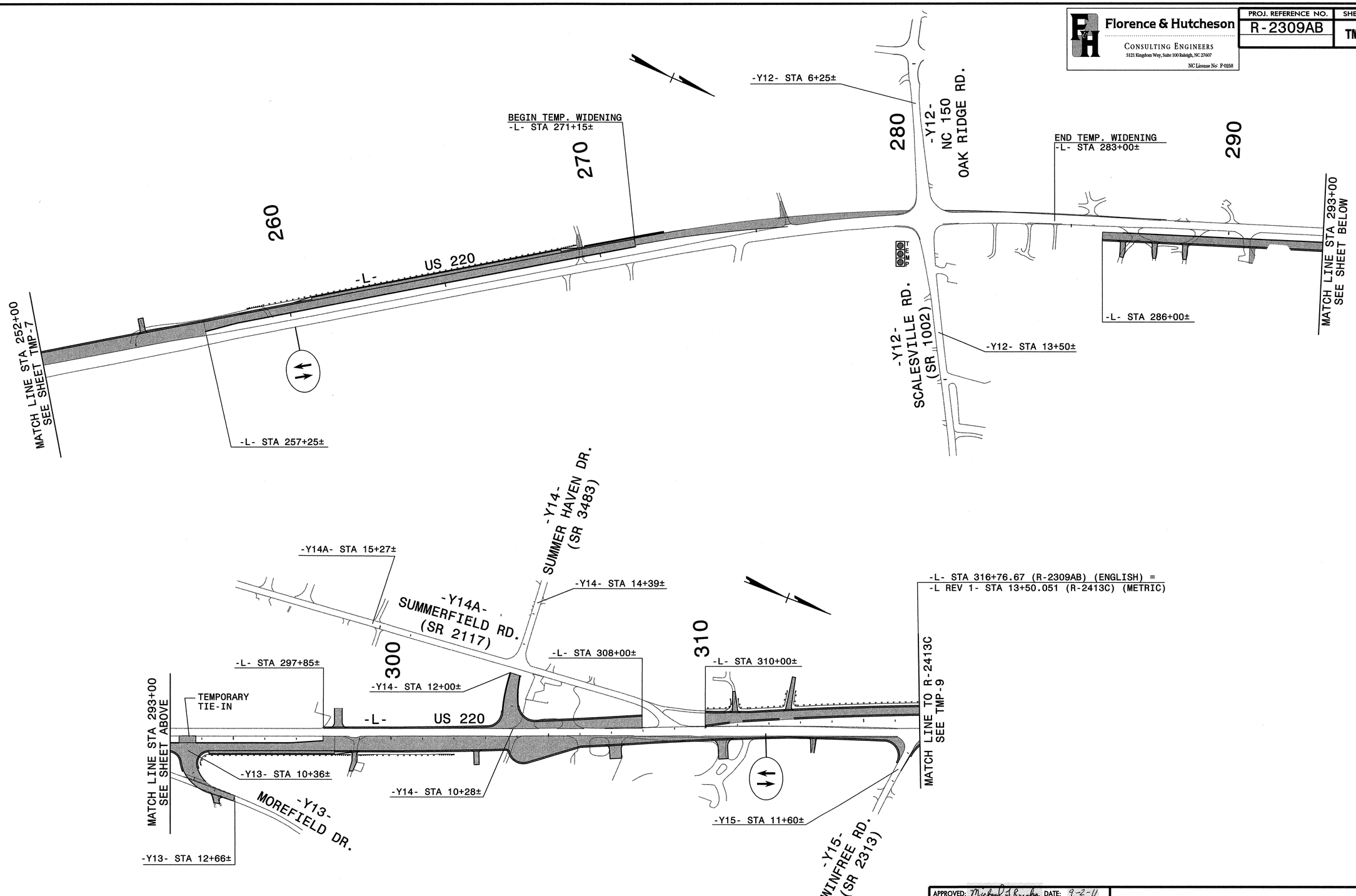
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-8



LEGEND

PROPOSED CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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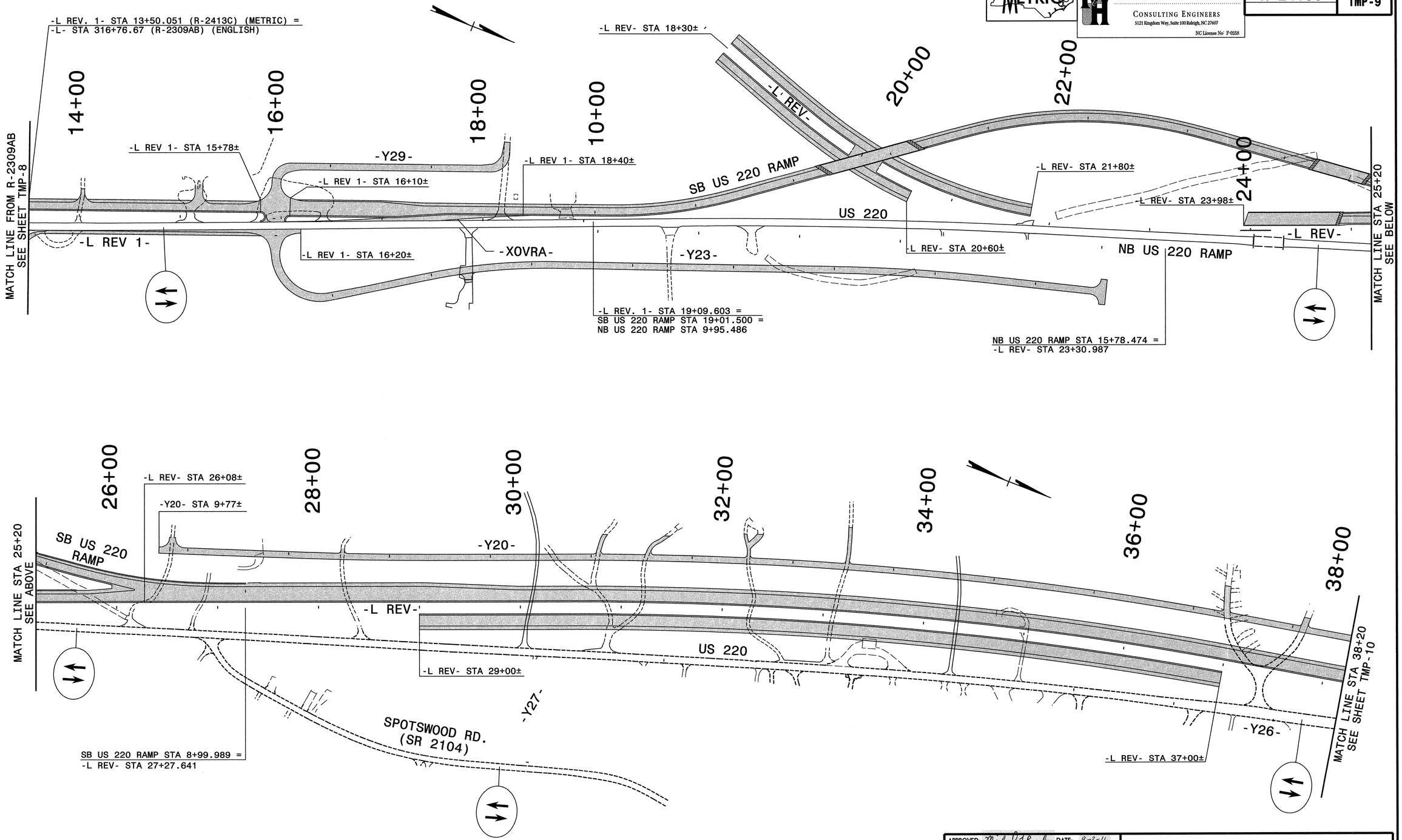
PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-9



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-10

MATCH LINE STA 7+80
SEE THIS SHEET

-Y20-

-Y20- STA 27+20.442 AH=
-Y20-REV STA 27+20.315 BK

US 158

-Y6-

MATCH LINE STA 7+80
SEE THIS SHEET

-Y6- STA 10+00±

-Y20- STA 22+49.280 BK=
-Y20-REV STA 22+49.280 AH

40+00

42+00

44+00

46+00

48+00

50+00

-Y24-

-Y20- REV

SPOTSWOOD RD.
(SR 2104)

-Y6- STA 11+80±

RP B STA 14+20±

RP A

-L REV- STA 48+40±

-L REV- STA 49+20±

-Y20-

-XOVRL-

STEP 2

-Y6-

-L REV- STA 40+80±

-L REV- STA 44+40±

-L REV- STA 46+00±

-XOVRM-

MATCH LINE STA 38+20
SEE SHEET TMP-9

US 220

-L REV-

-XOVRO-

MATCH LINE STA 51+40
SEE SHEET TMP-11

-Y26-

-Y21-

-L REV- STA 44+70±

-XOVRN-

RP C

RP D

RP D STA 11+40±

RP C STA 11+40±

RP D STA 13+80±

RP D STA 14+00±

RP C STA 13+80±

TEMP

STEP 3

STEP 3

-Y6- STA 15+00±

-Y6- STA 15+80±

-Y21-

-Y6- STA 17+50±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
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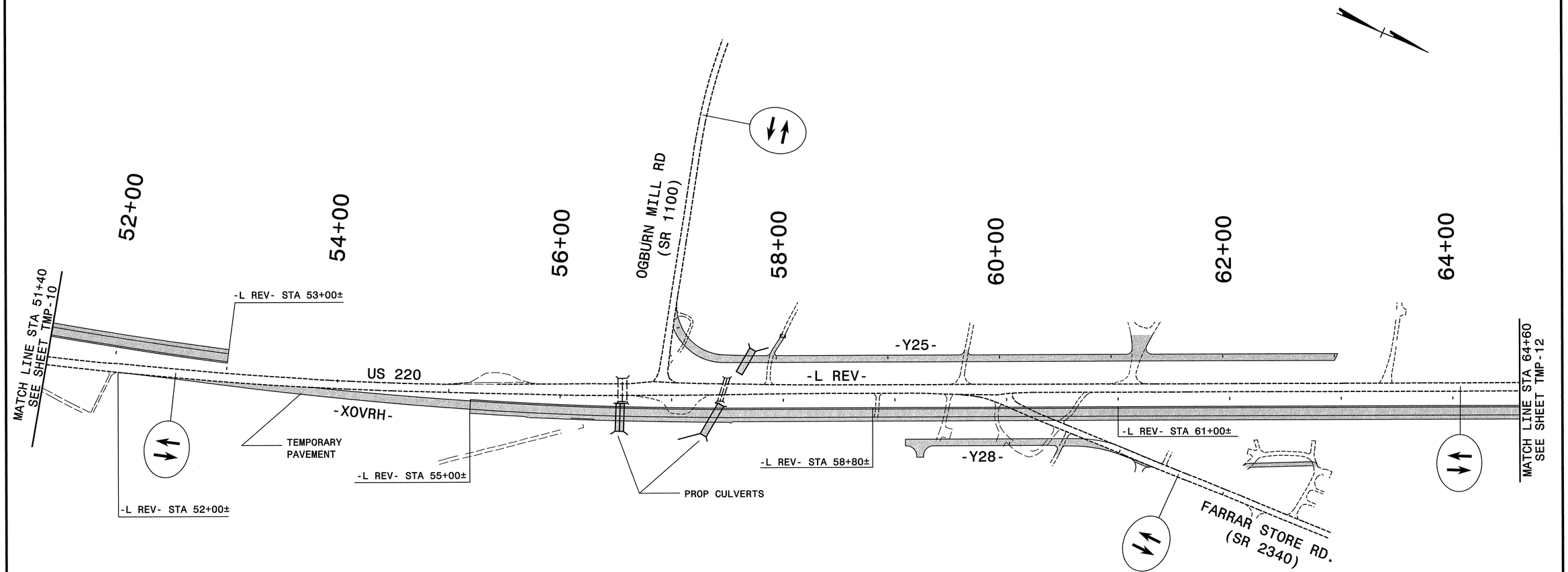
R-2413C	TMP-11



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-12

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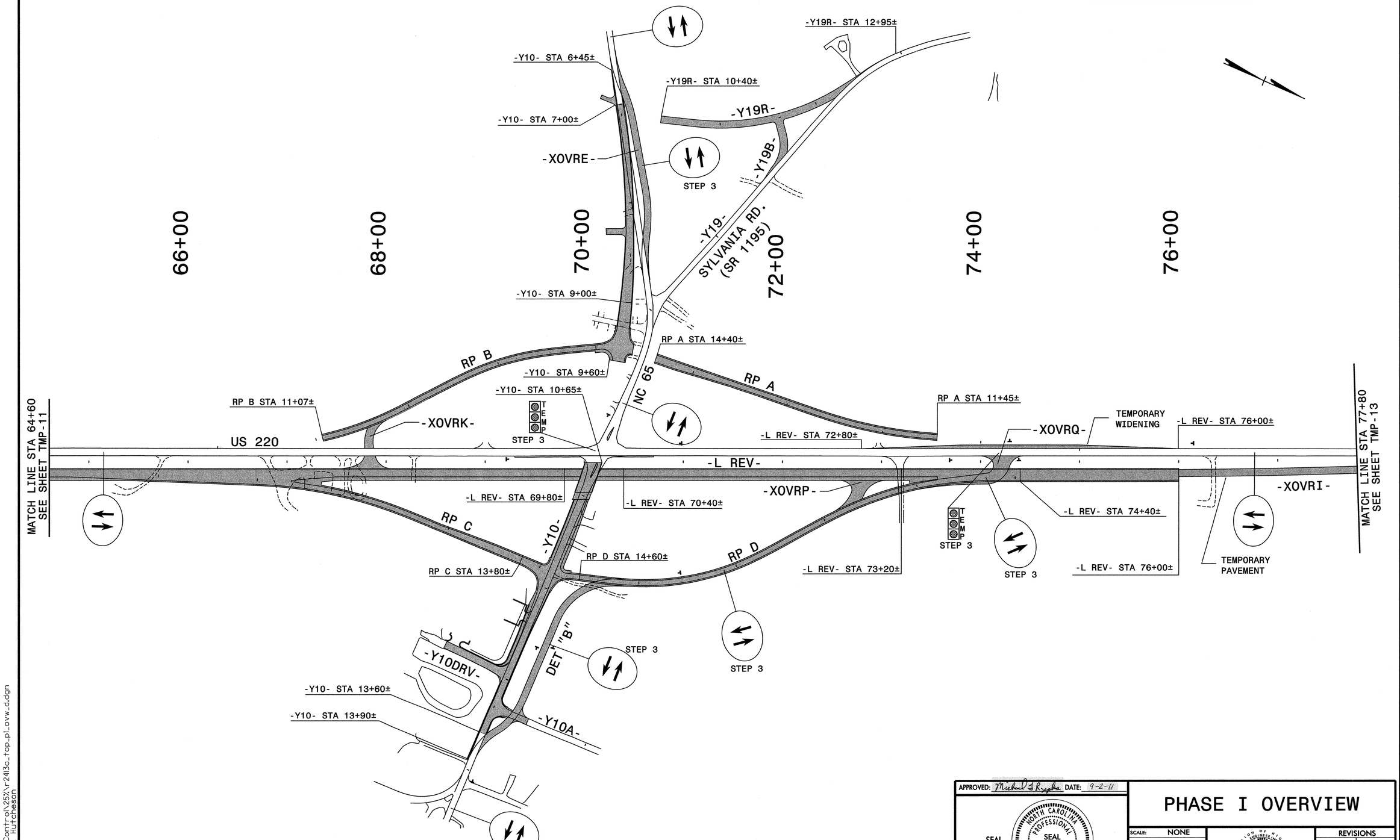

APPROVED: Michael T Rzepka DATE: 9-2-11

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PHASE I OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-13

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NC 68

PRICE FARM RD.
(SR 2805)

STEP 3
-XOVRB-
STEP 2
-L1 REV- STA 18+20±
-XOVRC-
STEP 3
STEP 2

78+00
80+00
82+00
84+00
86+00
88+00
90+00

-L REV- STA 83+60±
-L REV- STA 87+00±

MATCH LINE STA 77+80
SEE SHEET TMP-12

US 220
-L REV-
-XOVRI-
-L REV- STA 82+48±
TEMPORARY
PAVEMENT

BENNETT FARM RD.
(SR 2806)

STEP 2
STEP 3
STEP 3
T
E
M
P

MATCH LINE STA 91+00
SEE THIS SHEET

-L REV- STA 90+80±

92+00
94+00

STEP 3
-XOVRC-
-L REV- STA 91+30±
-L REV- STA 94+05±
-XOVRD-
-XOVRF-

MATCH LINE STA 91+00
SEE THIS SHEET

SB US 220 & NC 68
-L REV-
NB US 220 & NC 68

STEP 3
STEP 3

BENNETT FARM RD.
(SR 2806)

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I OVERVIEW

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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TRAFFIC CONTROL UNIT

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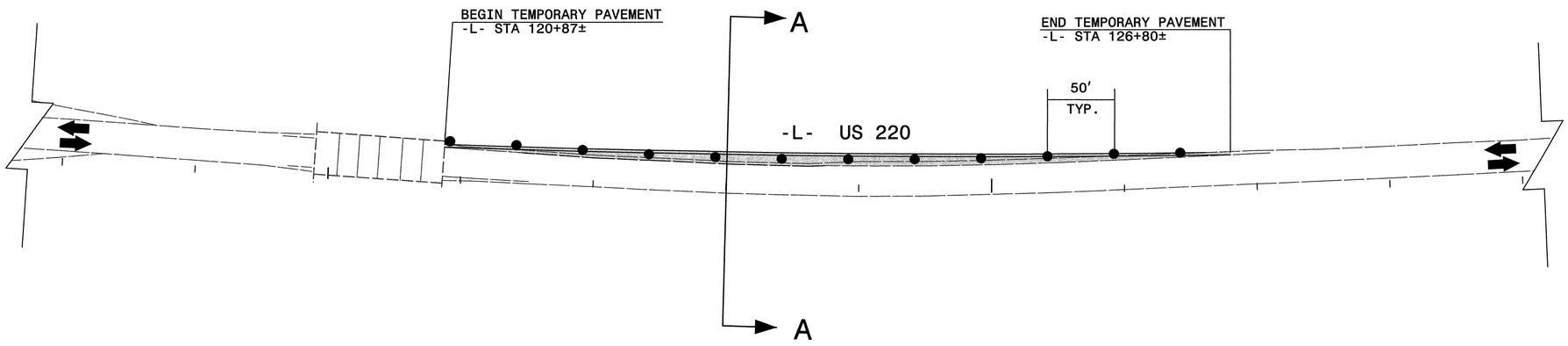
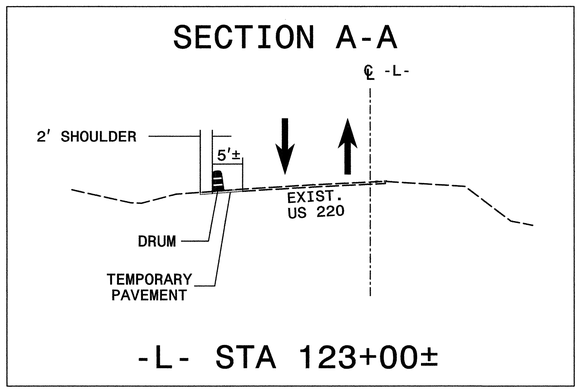
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-14

120

125





APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS STATEWIDE TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

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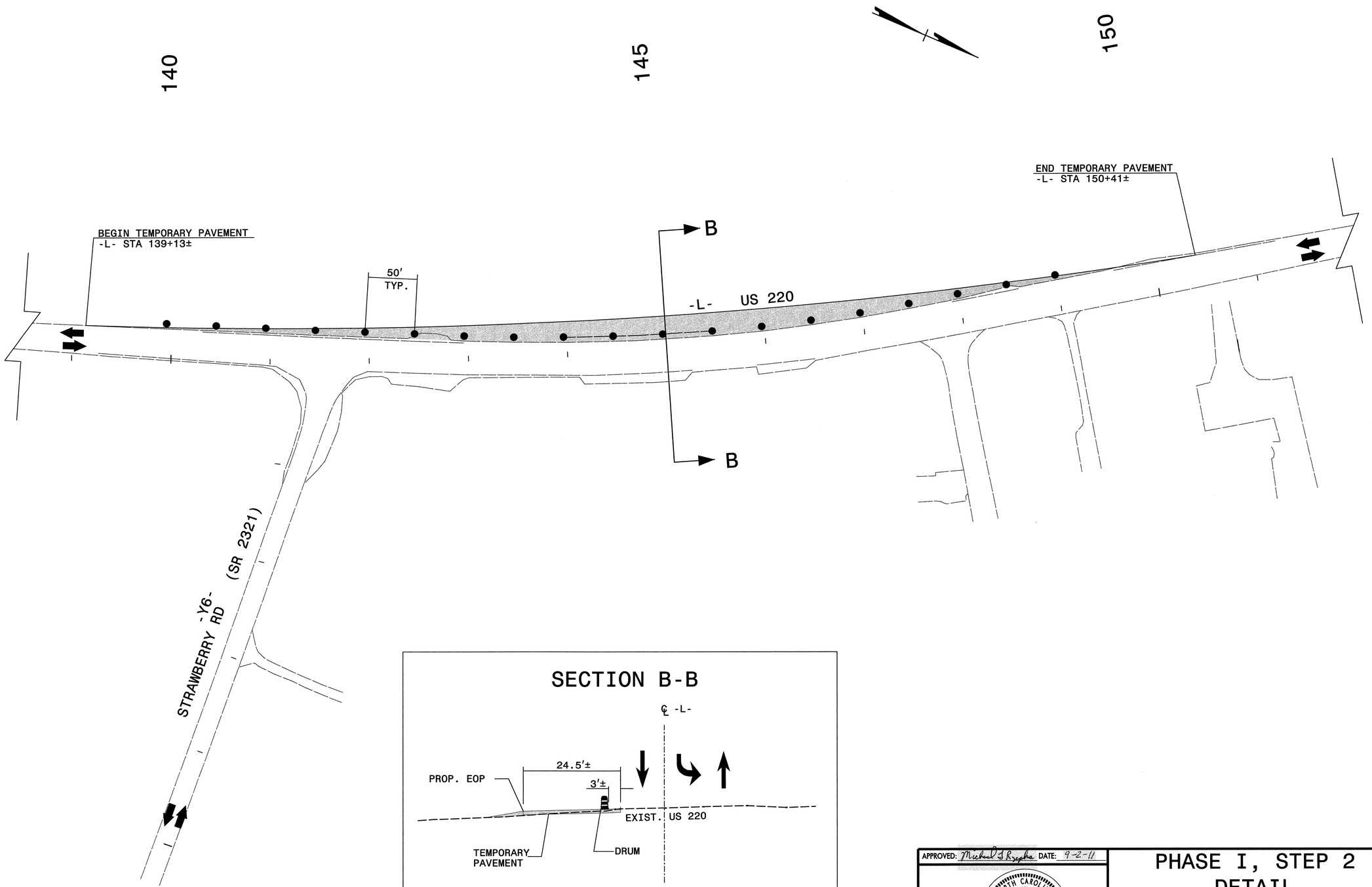
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-15



SECTION B-B

-L- STA 145+00±

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL UNIT

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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-16

BEGIN CONSTRUCTION
-Y- STA 1+50±

-Y-
HORSEPEN CREEK RD
(SR 2182)

50'
TYP.

MATCH LINE
SEE THIS SHEET

25

MATCH LINE
SEE THIS SHEET

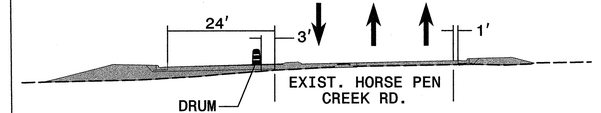
-Y-
HORSEPEN CREEK RD
(SR 2182)

C

C

30

SECTION C-C



-Y- STA 7+00±

35

BEGIN CONSTRUCTION
-L- STA 21+50±

10'
TYP.

-L- US 220

T
E
M
P

50'
TYP.

-L- US 220

MATCH LINE
SEE SHEET TMP-17

END CONSTRUCTION
-Y- STA 13+60±

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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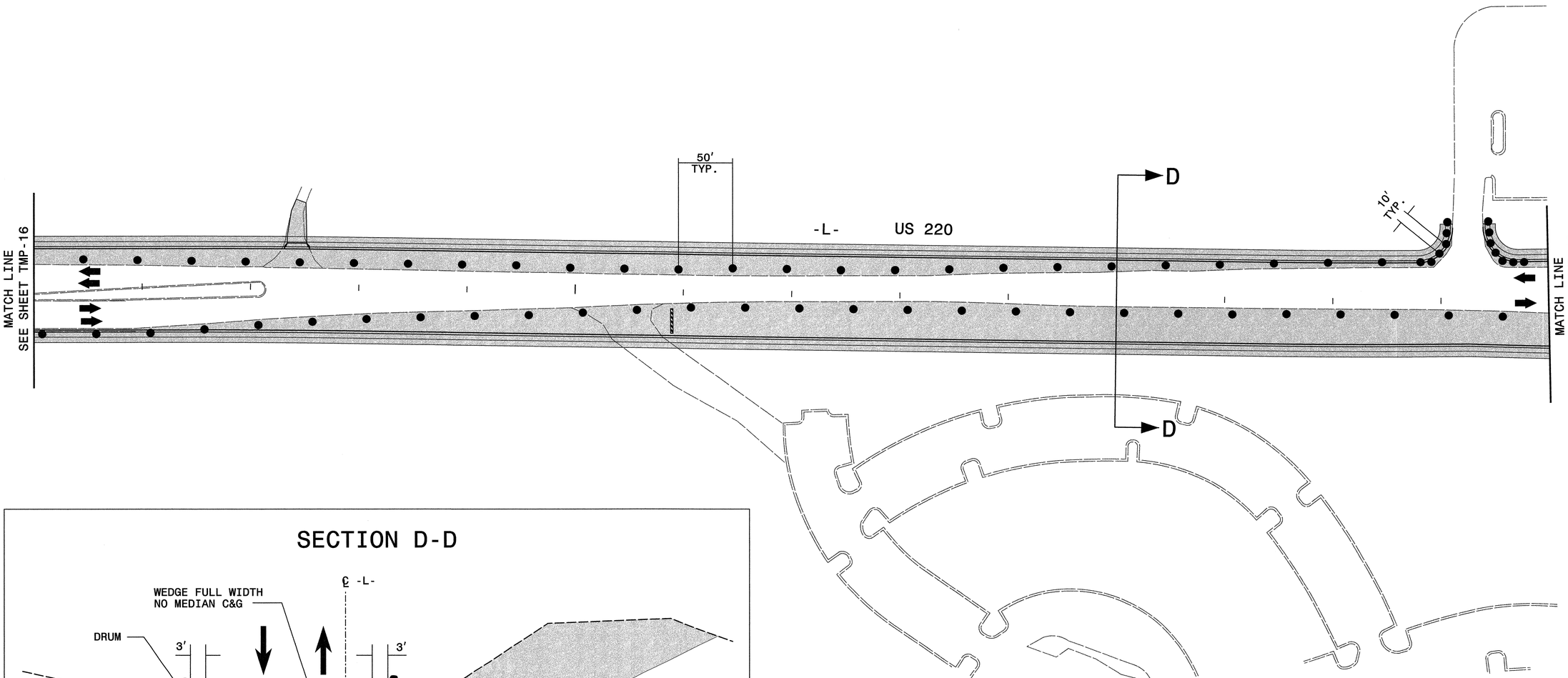
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-17

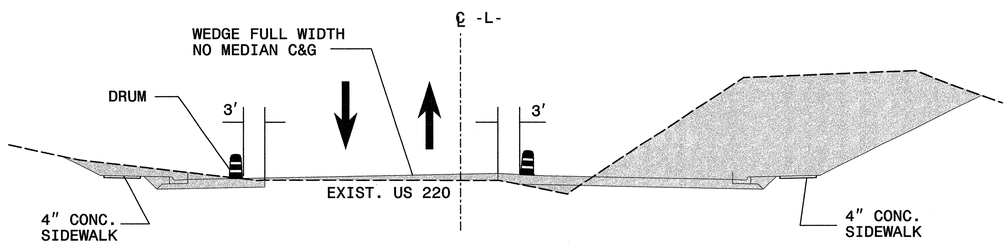
35

40

45



SECTION D-D



-L- STA 45+00

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS · ENGINEERING BRANCH · TRAFFIC ENGINEERING SECTION · STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION · TRAFFIC CONTROL

REVISIONS

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8/23/2011
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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-18

50

55

60

-L- STA 52+00±
BEGIN PCB
2′ OFFSET

E

50′
TYP.

10′
TYP.

MATCH LINE
SEE SHEET TMP-17

TEMP

2 QUANTITY = 2534 SQ. FT.
TEMPORARY SHORING
-L- STA 55+66± TO -L- STA 57+06± 3′ LT
(SEE SHEET TMP-2C)

-L-

US 220

MATCH LINE
SEE SHEET TMP-19

-L- STA 52+00±

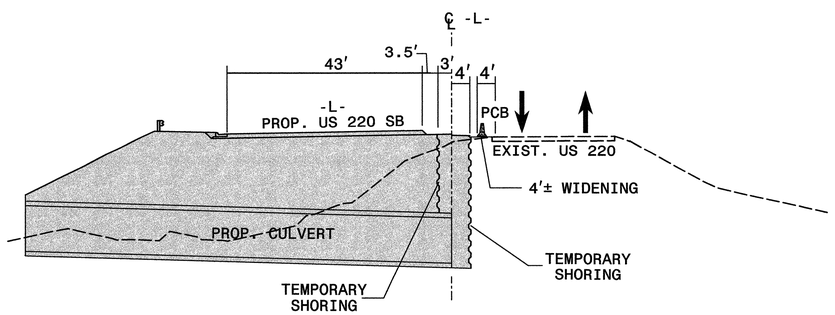
1 QUANTITY = 2444 SQ. FT.
TEMPORARY SHORING
-L- STA 55+69± 2.5′ LT TO -L- STA 56+35± 4′ RT
-L- STA 56+35± TO -L- STA 56+99± 4′ RT
(SEE SHEET TMP-2C)

E

-L- STA 57+00±

-L- STA 60+00±
END PCB
2′ OFFSET

SECTION E-E



-L- STA 56+35±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS

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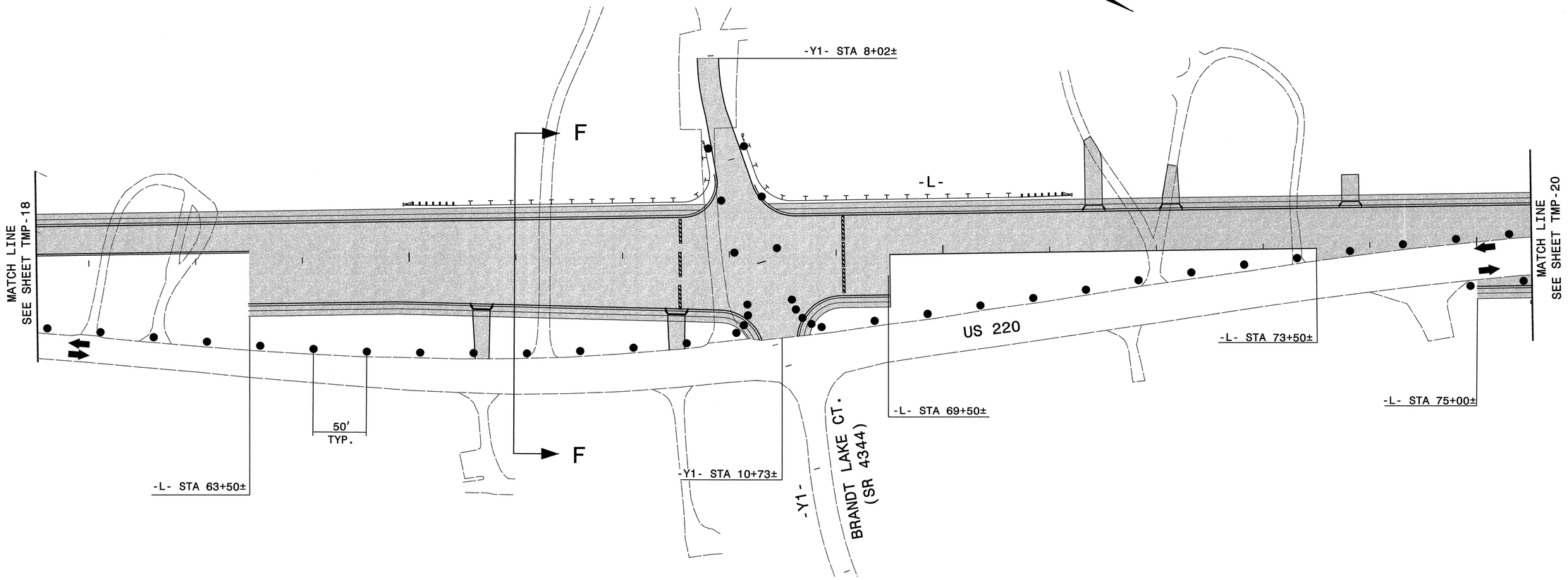
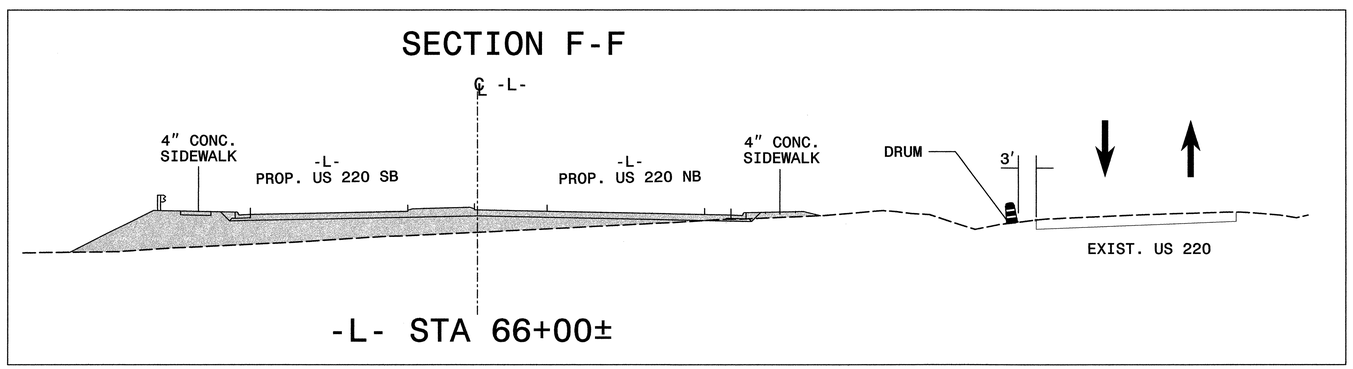
65 70 75





APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-20

80

85

G

H

MATCH LINE
SEE SHEET TMP-19

MATCH LINE
SEE SHEET TMP-21

TEMP

-L- US 220

-L- STA 80+00±

-L- STA 82+00±

-L- STA 84+30±

50′
TYP.

-Y3- STA 11+00±

25′
TYP.

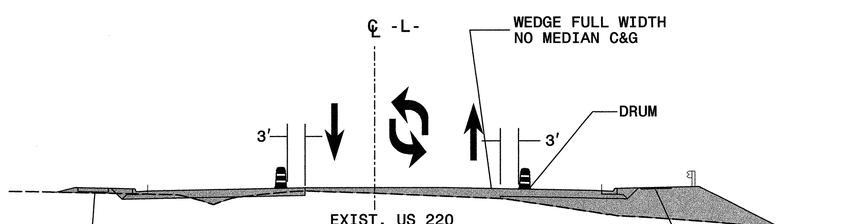
-Y3-, OWLS ROOST RD

END CONSTRUCTION
-Y3- STA 14+58±

G

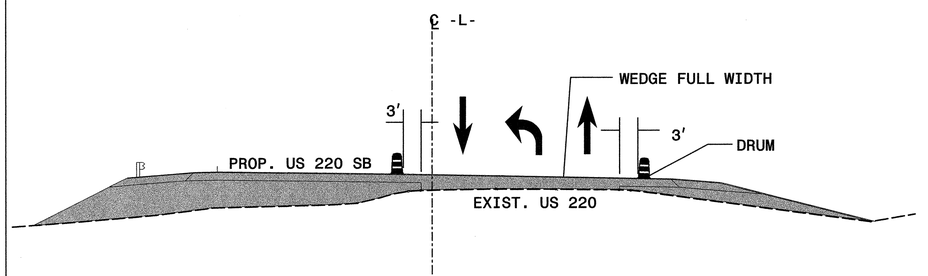
H

SECTION G-G



-L- STA 76+50±

SECTION H-H



-L- STA 89+00±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS	
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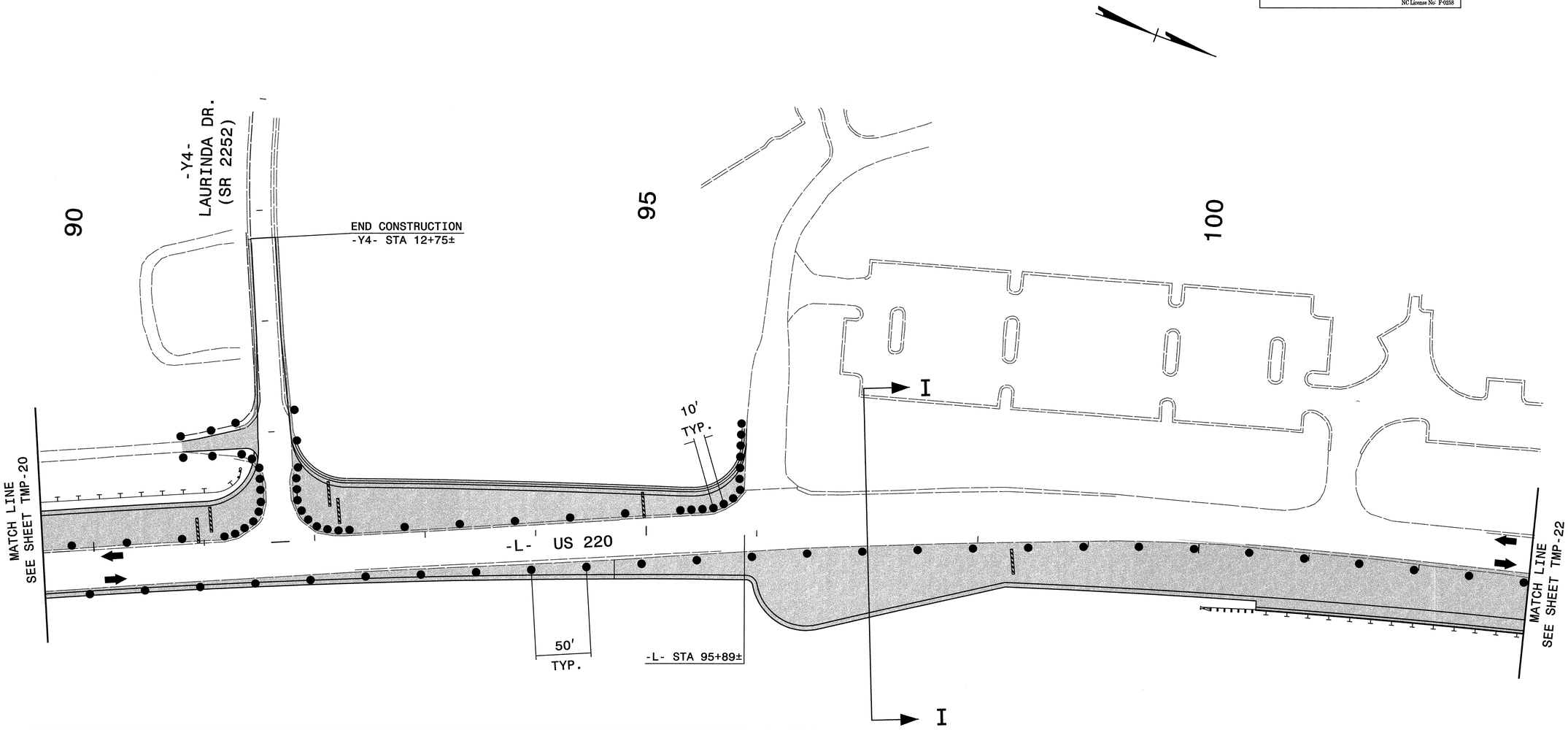
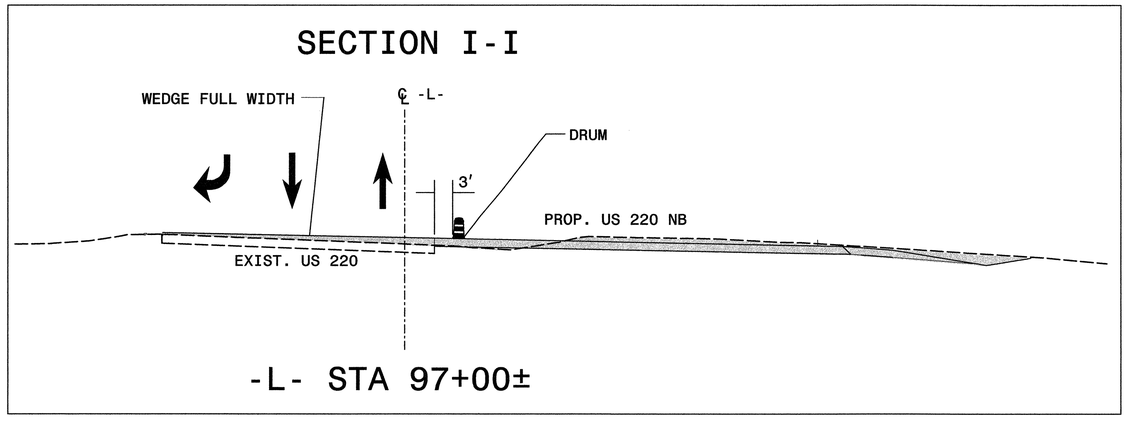
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-21





APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF ENGINEERING SERVICES TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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	R-2309AB	TMP-22

105

110

115

-L- STA 106+70±

BEGIN 4' TEMPORARY WIDENING AND
PCB (2' OFFSET)
-L- STA 107+00±

50'
TYP.

MATCH LINE
SEE SHEET TMP-21

3 QUANTITY = 135 SQ. FT.
TEMPORARY SHORING
-L- STA 112+00± TO -L- STA 113+35± 8' LT
(SEE SHEET TMP-2C)

7 QUANTITY = 810 SQ. FT.
TEMPORARY SHORING
-L- STA 115+20± TO -L- STA 117+00± 8' LT OF -L-
-L- STA 117+00± 8' LT OF -L- TO -L- STA 119+70± 4.8' LT OF -L-
(SEE SHEET TMP-2C)

6 QUANTITY = 170 SQ. FT.
TEMPORARY SHORING
-L- STA 115+00± TO -L- STA 115+10± 0.0' FROM -L-
-L- STA 115+10± 0.0' FROM -L- TO -L- STA 115+20± 8' FROM -L-
(SEE SHEET TMP-2C)

J

-L- STA 113+70±
PCB 1' OFFSET

-L- STA 113+40±
PCB 2' OFFSET

-L- STA 114+90±
PCB 1' OFFSET

-L- STA 115+20±
PCB 2' OFFSET

-L- US 220

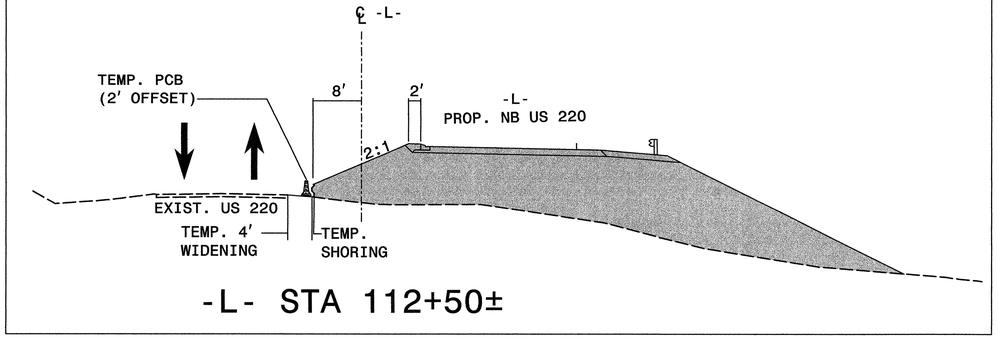
MATCH LINE
SEE SHEET TMP-23

5 QUANTITY = 33 SQ. FT.
TEMPORARY SHORING
-L- STA 113+55± TO -L- STA 113+66± 0.0' FROM -L-
(SEE SHEET TMP-2C)

J

4 QUANTITY = 170 SQ. FT.
TEMPORARY SHORING
-L- STA 113+35± 8' LT TO -L- STA 113+45± 0.0' FROM -L-
-L- STA 113+45± TO -L- STA 113+55± 0.0' FROM -L-
(SEE SHEET TMP-2C)

SECTION J-J



-L- STA 112+50±

APPROVED: Michael T. Keepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KEEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-23

120 125 130

-L- STA 119+89±
END PCB TIE TO
EXISTING BRIDGE
(SEE ROADWAY PLANS
SPECIAL DETAIL,
SHEET 2-AU)

-L- STA 120+87±
BEGIN PAVEMENT MARKING

-L- STA 126+80±
END PAVEMENT MARKING

K

PA PI

-L- US 220

11′ 11′ 11′ 11′

50′
TYP.

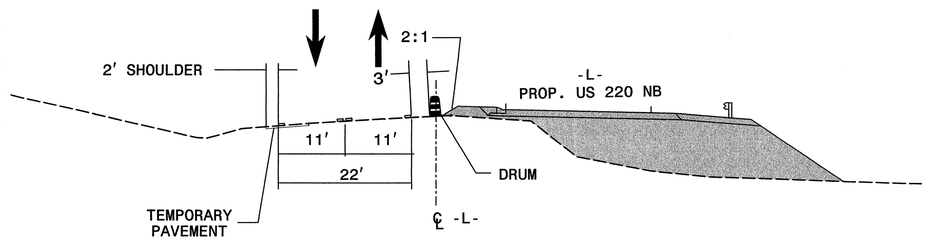
MATCH LINE
SEE SHEET TMP-22

MATCH LINE
SEE SHEET TMP-24

K

(7) QUANTITY = 810 SQ. FT.
TEMPORARY SHORING
-L- STA 115+20± TO -L- STA 117+00± 8′ LT OF -L-
-L- STA 117+00± 8′ LT OF -L- TO -L- STA 119+70± 4.8′ LT OF -L-
(SEE SHEET TMP-2C)

SECTION K-K



-L- STA 123+00±

APPROVED: Michael T. Keepa DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KEEPA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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10/3/2011
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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-24

130

135

140

-Y5-
HAMBURG MILL RD.
(SR 2135)

-L- STA 131+46±

-L- US 220

MATCH LINE
SEE SHEET TMP-23

50'
TYP.

L

-L- STA 137+47±
BEGIN PAVEMENT MARKING

-L- STA 139+13±

-L- STA 141+08±

PV PA PI

-L- STA 142+05±

PA PE PI

QA

MATCH LINE
SEE SHEET TMP-25

10'
TYP.

-L- STA 140+00±

-L- STA 143+16±

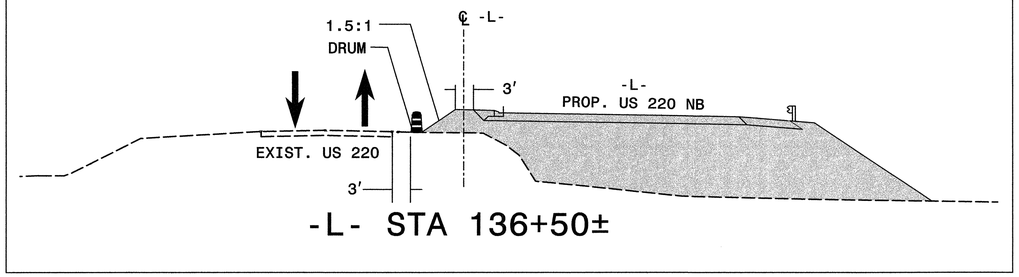
-Y6-
STRAWBERRY RD. (SR 2321)

8 QUANTITY = 217 SQ. FT.
TEMPORARY SHORING
-L- STA 133+15± TO -L- STA 133+46± 0.0' FROM -L-
(SEE SHEET TMP-2D)

9 QUANTITY = 217 SQ. FT.
TEMPORARY SHORING
-L- STA 135+14± TO -L- STA 135+45± 0.0' FROM -L-
(SEE SHEET TMP-2D)

L

SECTION L-L



-L- STA 136+50±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
GEOMETRIC UNIT
TRAFFIC ENGINEERING BRANCH

REVISIONS

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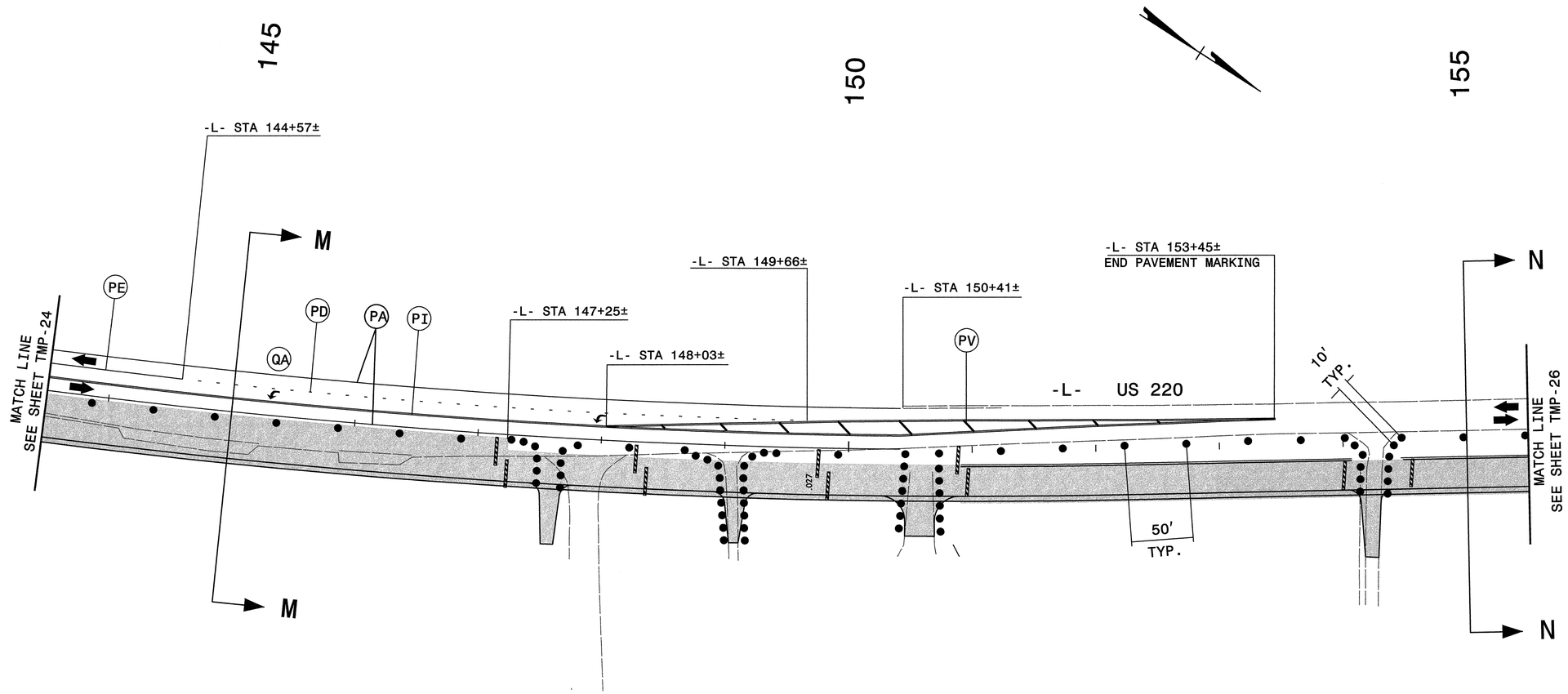
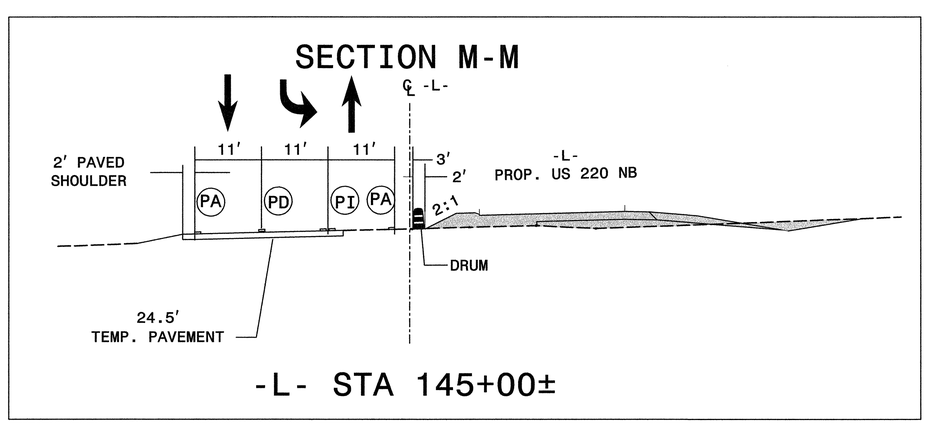
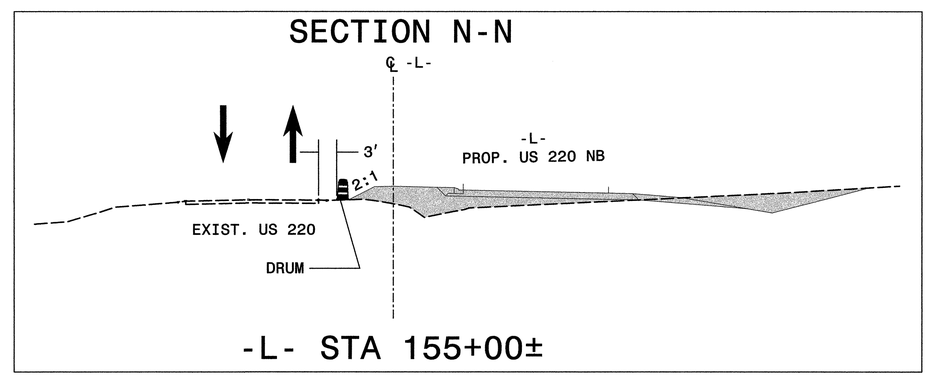
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	R-2309AB	TMP-25







APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

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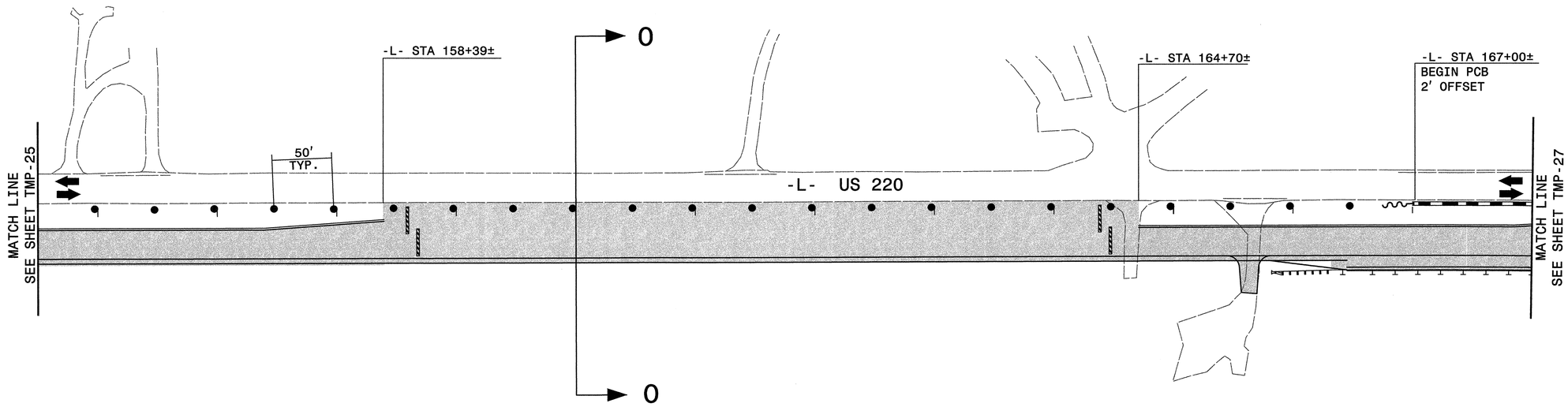
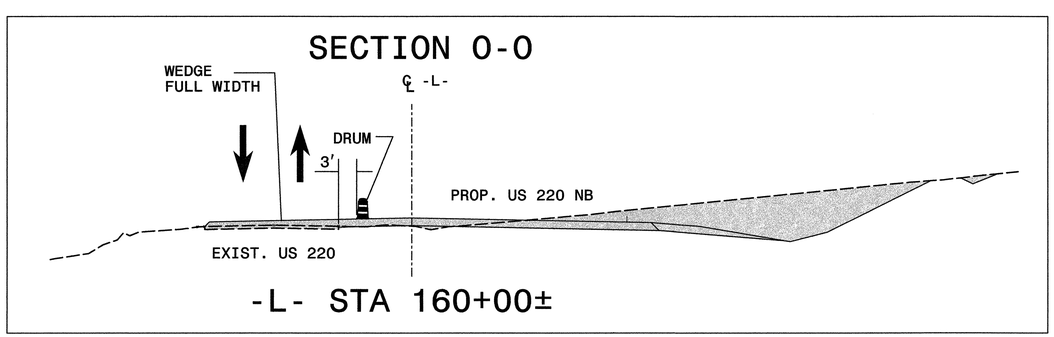
	R-2309AB	TMP-26

160

165





APPROVED: Michael T Ryzha DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RYZHA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
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DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DESIGN UNIT

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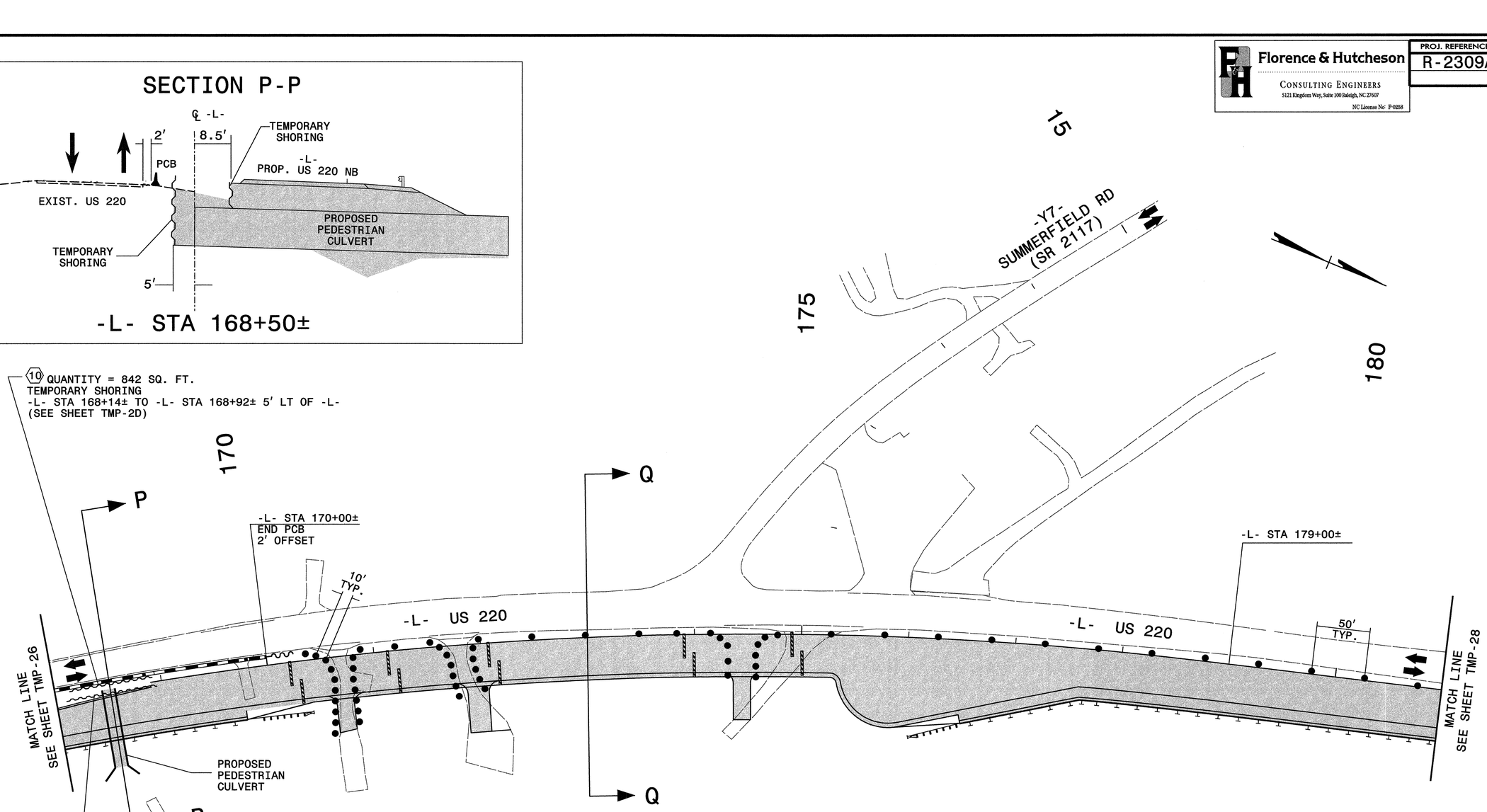
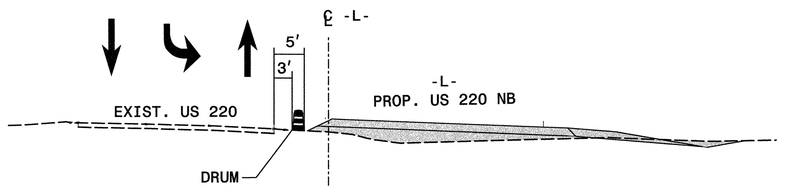
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-27

SECTION P-P

-L- STA 168+50±



SECTION Q-Q



-L- STA 173+00±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

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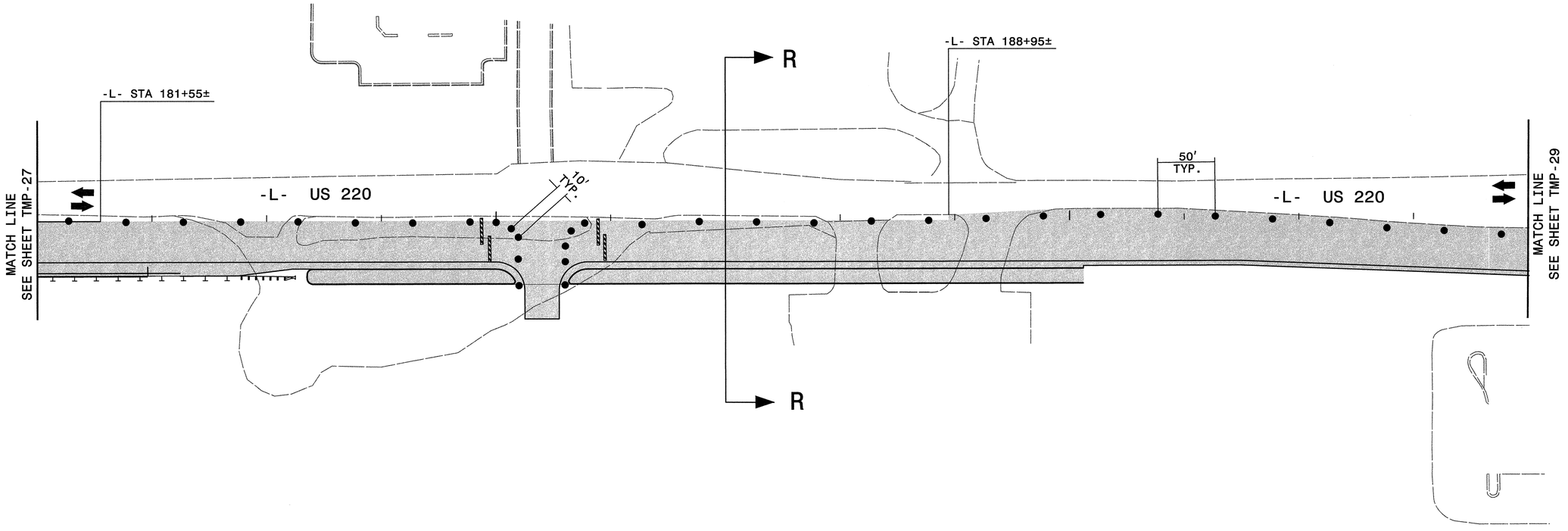
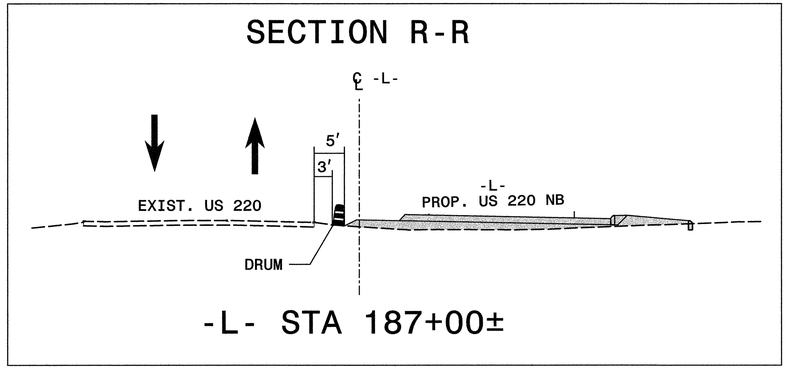
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-28

185

190





APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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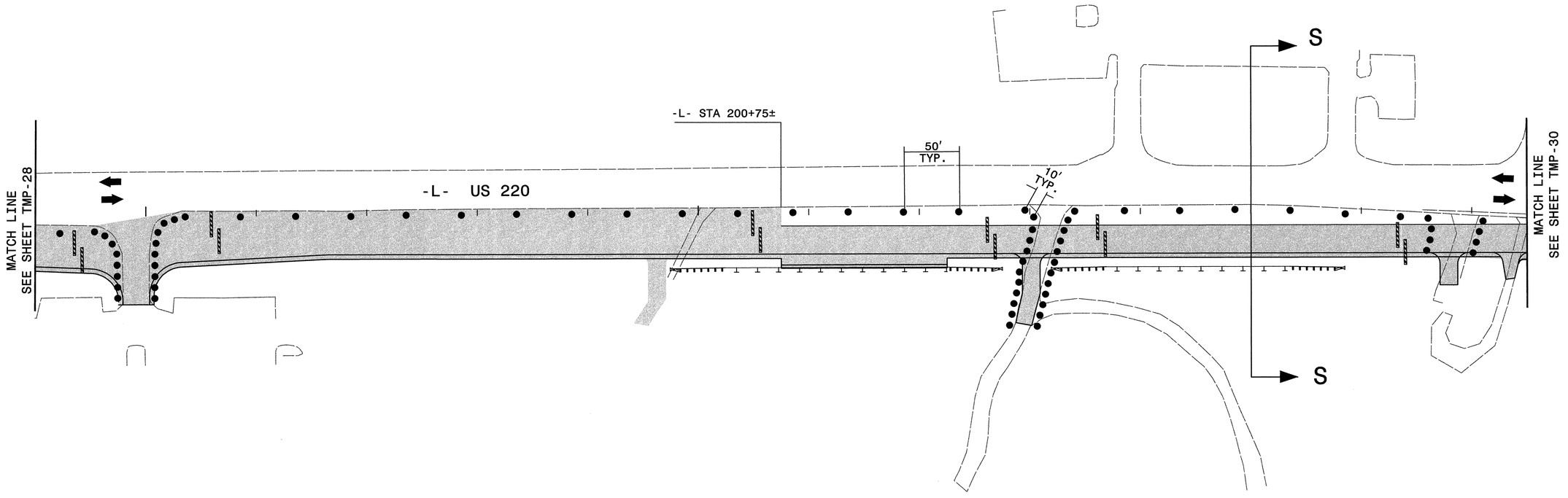
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-29

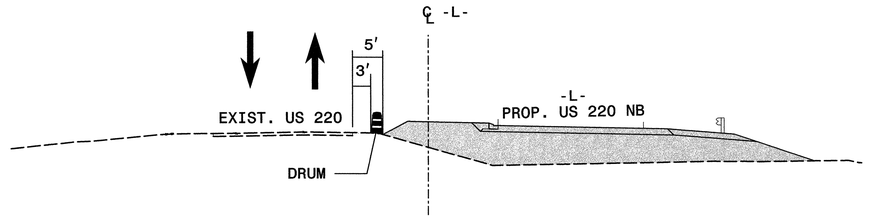
195

200

205



SECTION S-S



-L- STA 205+00±

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

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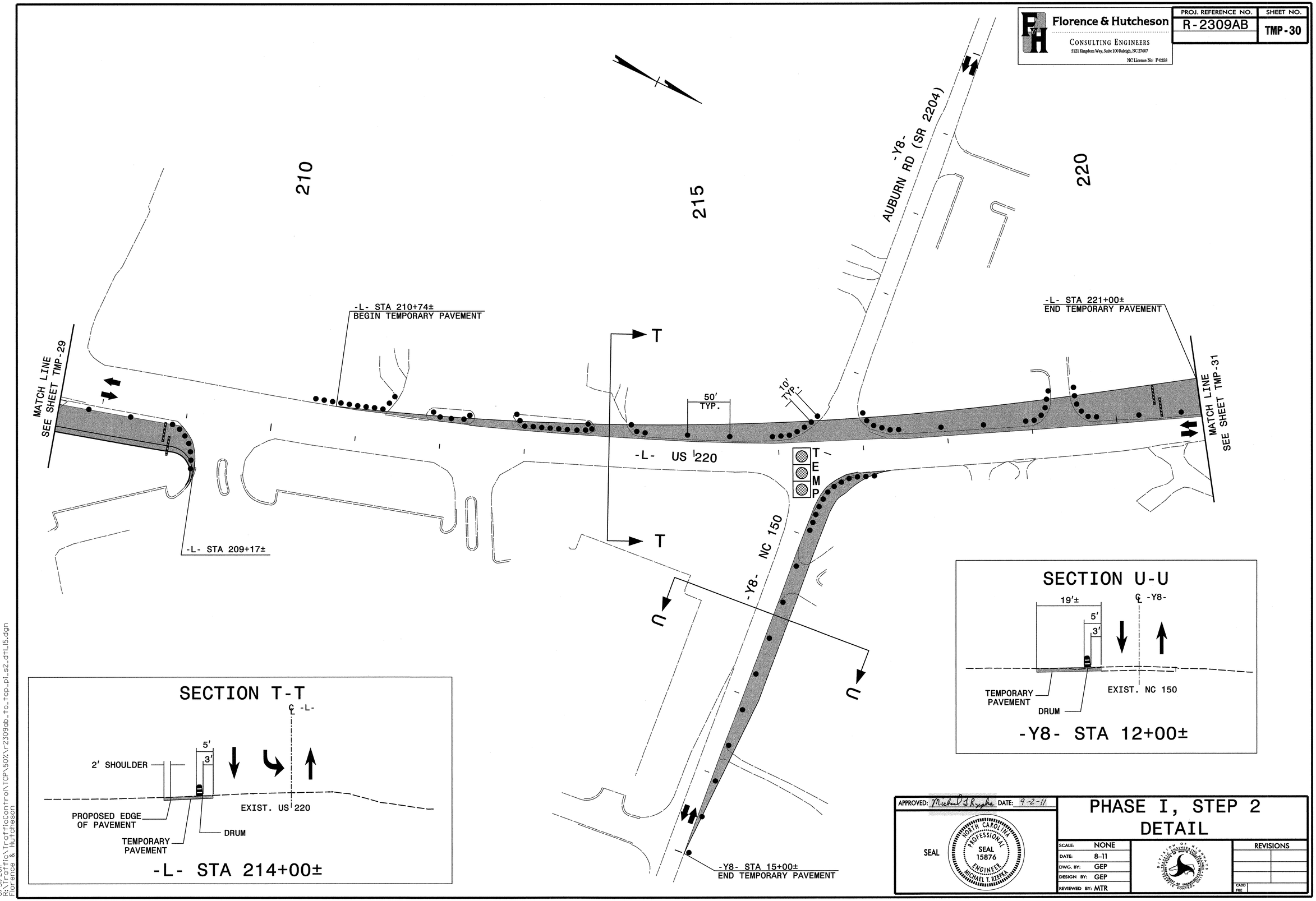
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-30



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2
DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

CADD FILE

8/31/2011
R:\Traffic\TrafficControl\TCP\50%\r2309ab_tc_tcp_pi_s2_dtl_l5.dgn
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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-31

225

230

-Y9- PARSONAGE RD (SR 2126)

-Y9- STA 12+04±
END CONSTRUCTION

V

-L- STA 221+00±

MATCH LINE
SEE SHEET TMP-30

50'
TYP.

-L- US 220

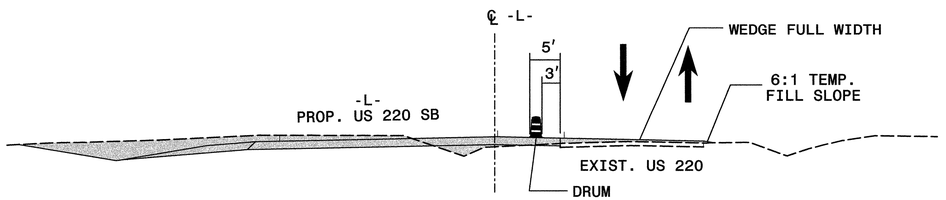
10'
TYP.

MATCH LINE
SEE SHEET TMP-32

V

-L- STA 225+75±

SECTION V-V



-L- STA 224+00±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

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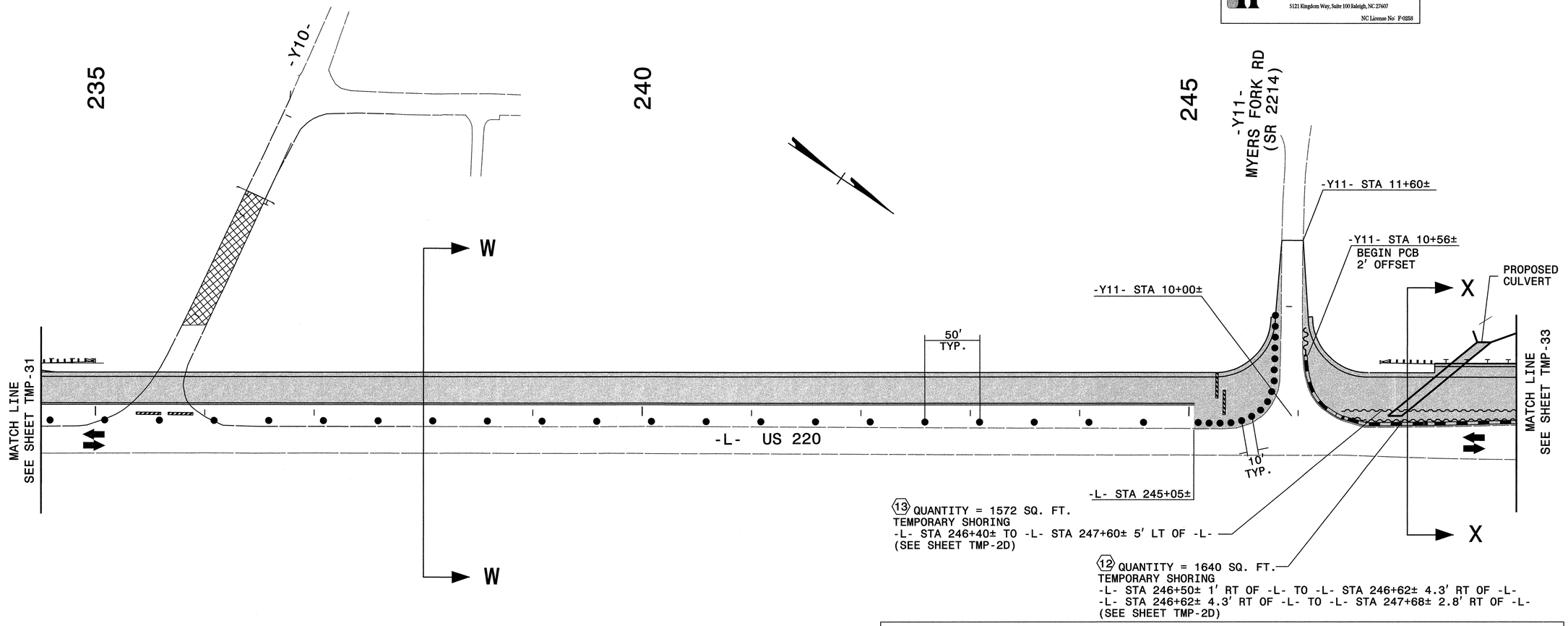
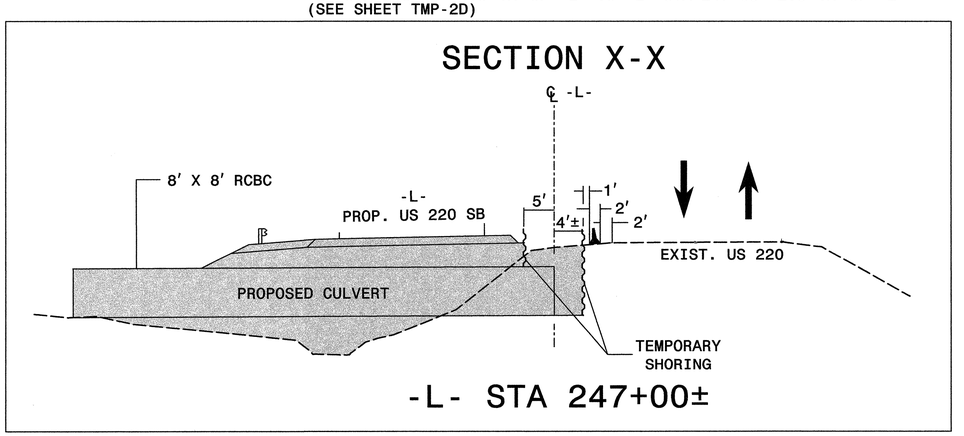
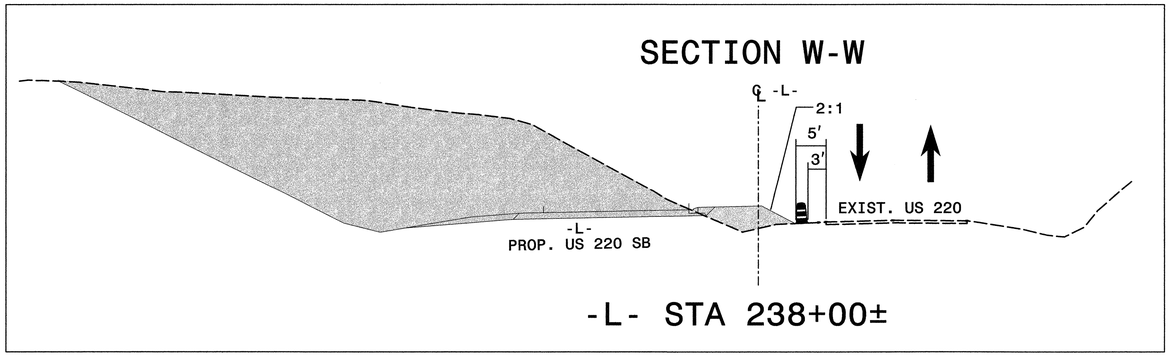
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-32







APPROVED: Michael T Kyzer DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T KYZER

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-33

250

255

260

(13) QUANTITY = 1572 SQ. FT.
TEMPORARY SHORING
-L- STA 246+40± TO -L- STA 247+60± 5' LT OF -L-
(SEE SHEET TMP-2D)

MATCH LINE
SEE SHEET TMP-32

-L- US 220

10' TYP.

50' TYP.

MATCH LINE
SEE SHEET TMP-34

-L- STA 250+00±
END PCB
2' OFFSET

-L- STA 257+25±

SR 2444 (HOSKINS RD)

(12) QUANTITY = 1640 SQ. FT.
TEMPORARY SHORING
-L- STA 246+50± 1' RT OF -L- TO -L- STA 246+62± 4.3' RT OF -L-
-L- STA 246+62± 4.3' RT OF -L- TO -L- STA 247+68± 2.8' RT OF -L-
(SEE SHEET TMP-2D)

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS

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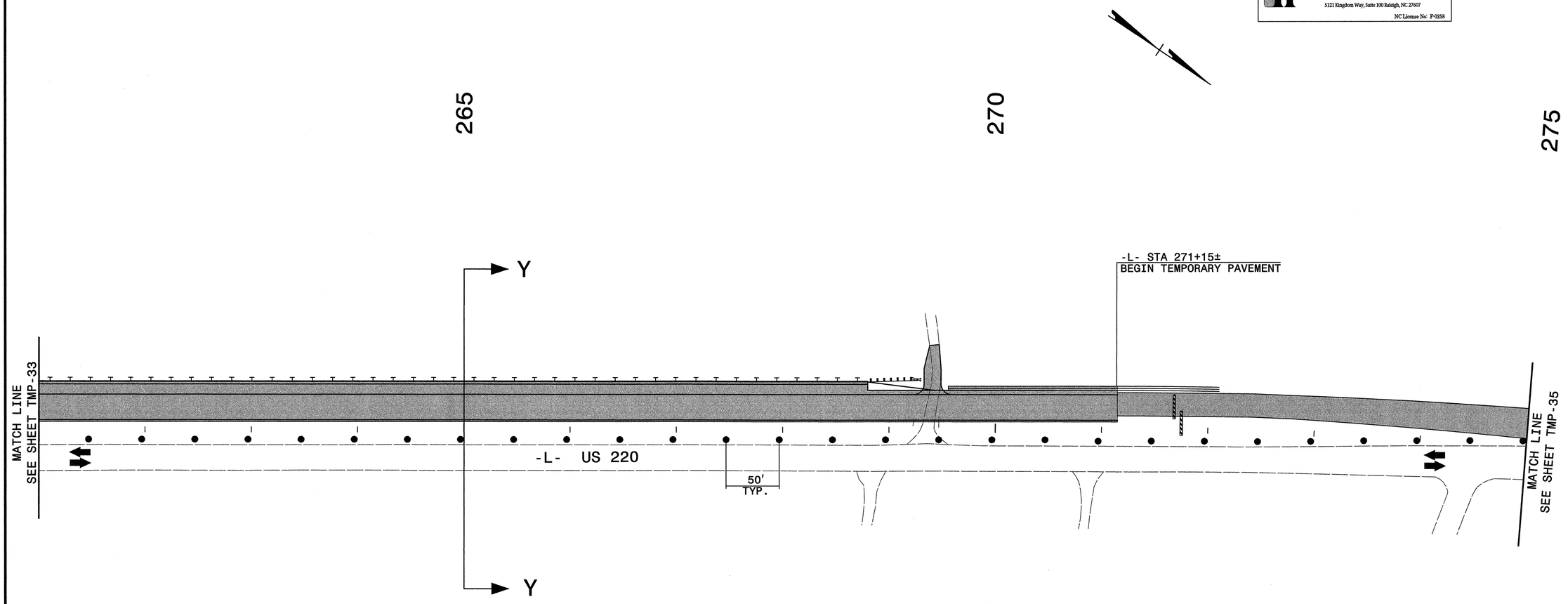
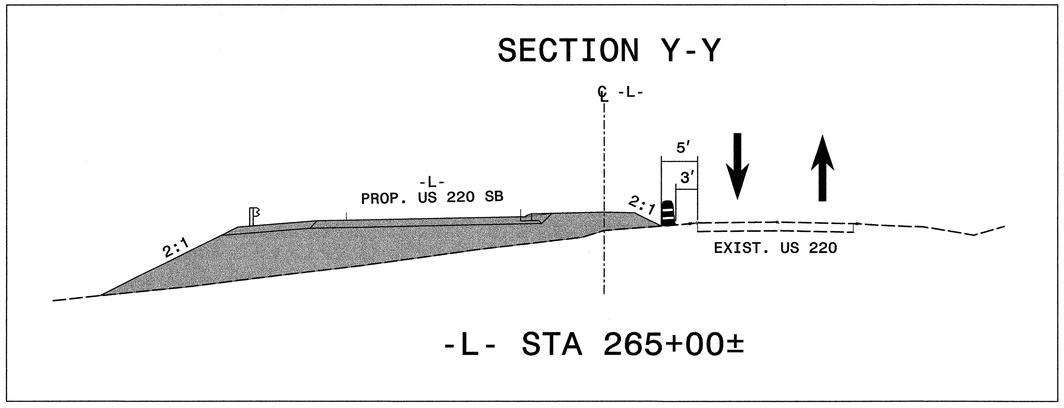
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-34





APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH, NORTH CAROLINA

REVISIONS

CADD FILE

8/30/2011
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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-35

275

-Y12- OAK RIDGE RD (NC 150)

285

-L- STA 283+00±
END TEMPORARY PAVEMENT

10' TYP.

50' TYP.

TEMP

MATCH LINE SEE SHEET TMP-34

-L- US 220

-L- US 220

MATCH LINE SEE SHEET TMP-36

-L- STA 286+00±

-Y12- SCALESVILLE RD (SR 1002)

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS	
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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-36

290

295

300

-Y14A-
SUMMERFIELD RD (SR 2117)

Z

Z

MATCH LINE
SEE SHEET TMP-35

10'
TYP.

50'
TYP.

-Y13- STA 10+36±

TEMPORARY
TIE-IN

-L- STA 297+85±

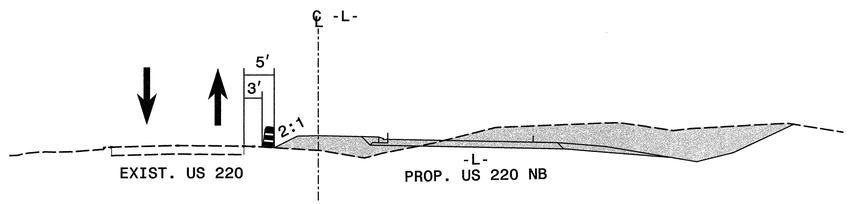
-L- US 220

MATCH LINE
SEE SHEET TMP-37

-Y13-
MOREFIELD DR

-Y13- STA 12+66±
END CONSTRUCTION

SECTION Z-Z



-L- STA 290+00±

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS	
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8/23/2011
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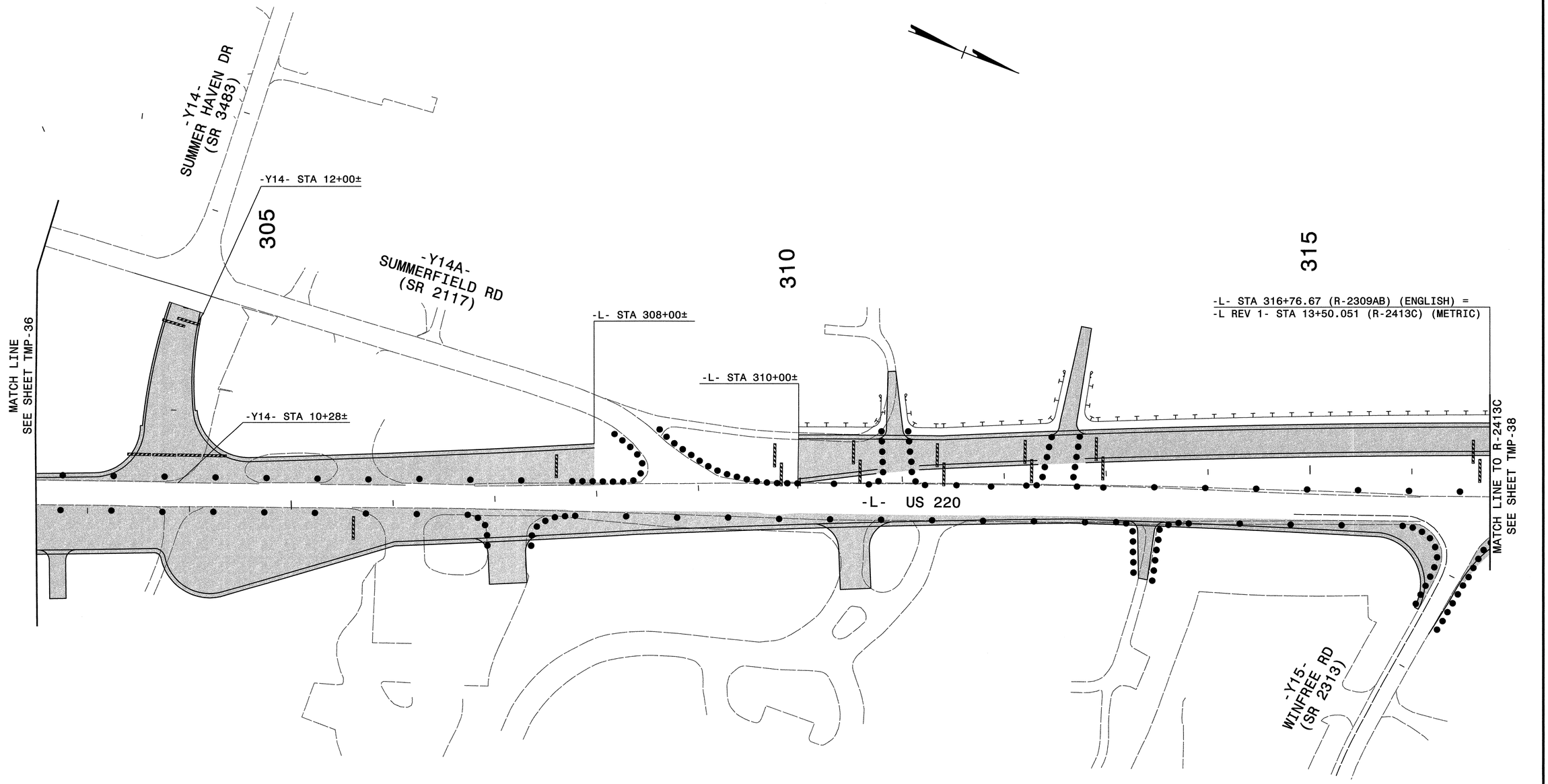
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-37



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL UNIT

REVISIONS	
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8/23/2011
R:\Traffic\TrafficControl\TCP\50X\r-2309ab_tc_top_pl_s2_dtl_22.dgn
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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-38

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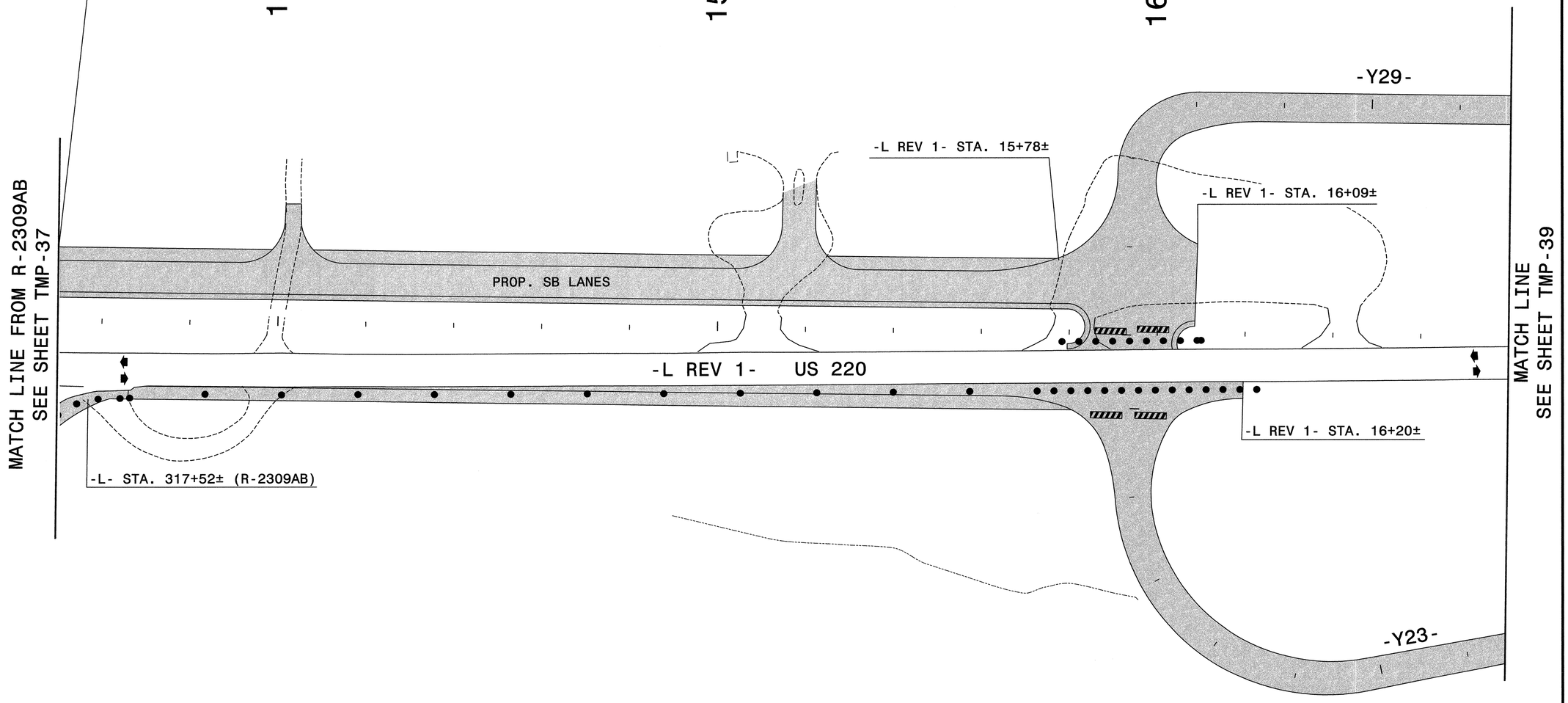
-L REV. 1- STA. 13+50.051 (R-2413C) (METRIC) =
-L- STA. 316+76.67 (R-2309AB) (ENGLISH)



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
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8/24/2011
R:\Traffic Control\25%\r-2413c_tcp_pl_s2_dtl_01.dgn
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METRIC

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-39

17+00

18+00

19+00

11+00

-Y29-

-L REV 1- STA 18+40±

-L REV 1- STA 19+09.603 =
SB US 220 RAMP STA 19+01.500 =
NB US 220 RAMP STA 9+95.486

SB US 220 RAMP

US 220

-L REV 1-

-Y23-

MATCH LINE
SEE SHEET TMP-38

MATCH LINE
SEE SHEET TMP-40

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION RALEIGH, NORTH CAROLINA

REVISIONS	
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8/24/2011
R:\TrafficControl\25%\r2413c_tcp_pl_s2_dtl_02.dgn
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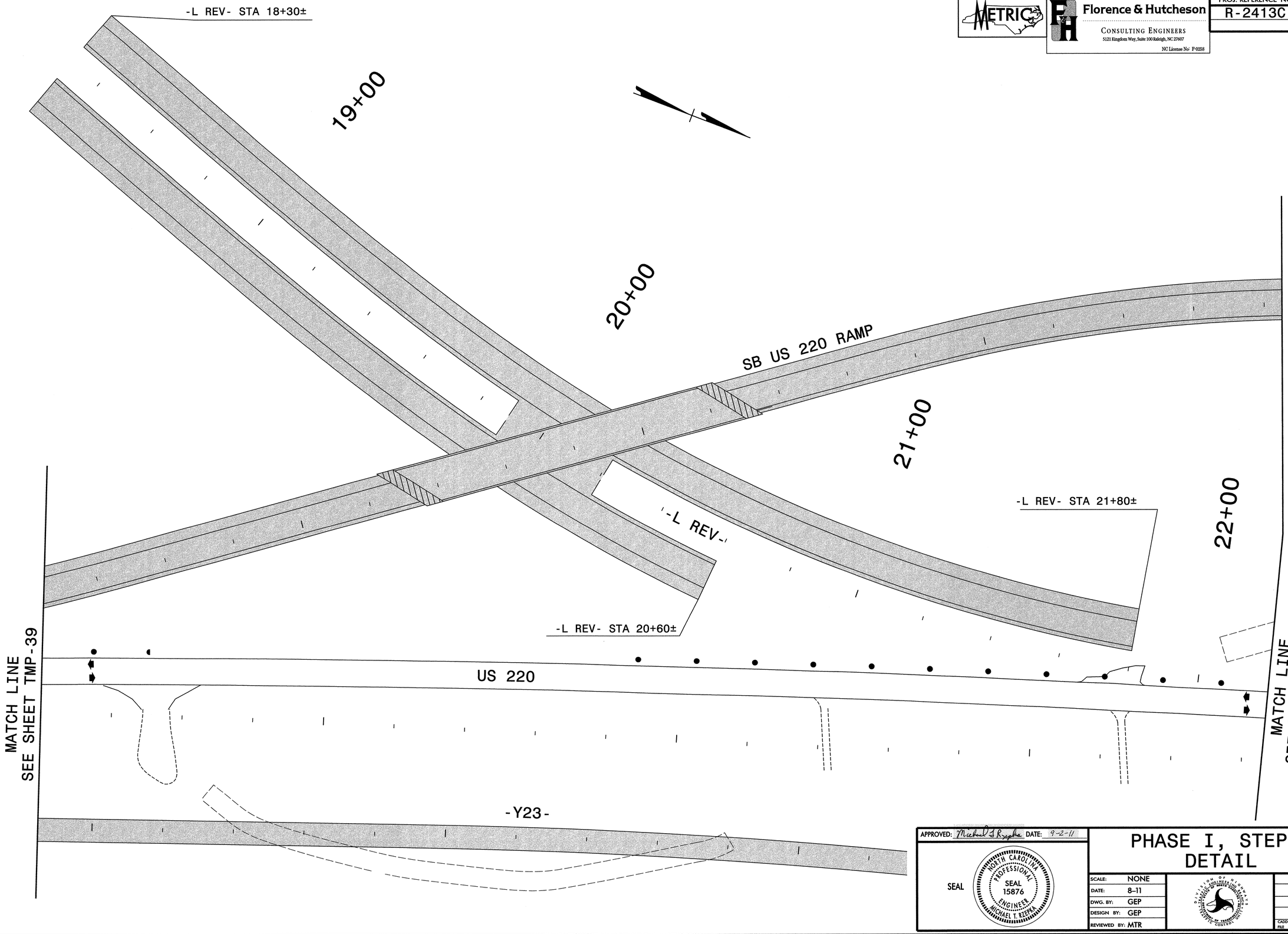
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-40



APPROVED: Michael T. Kezpha DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KEZPHA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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8/24/2011
R:\TrafficControl\25X\r2413c_top_pl_s2_dtl_03.dgn
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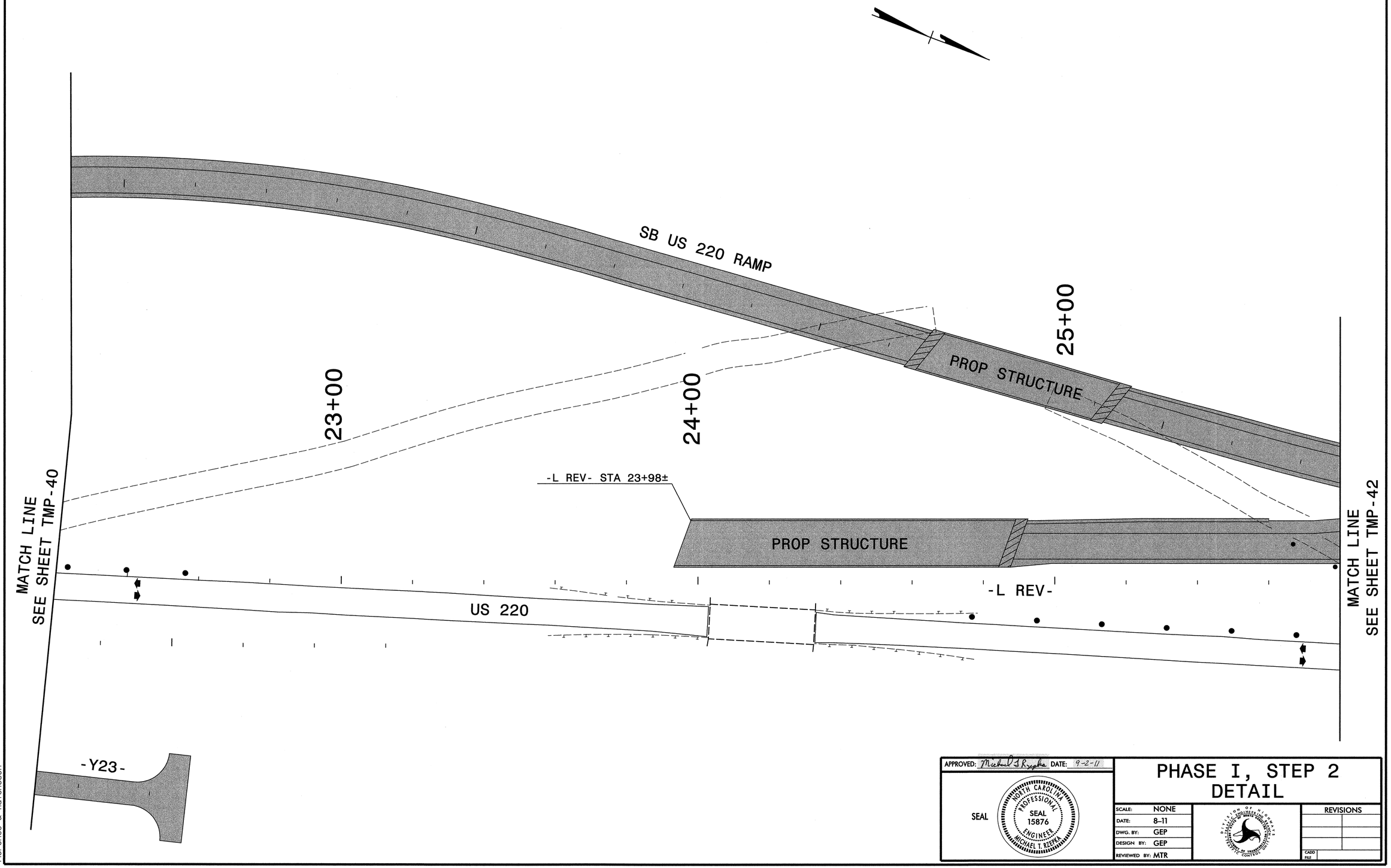
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-41



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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8/31/2011
R:\TrafficControl\25X\r2413c_tcp_p1_s2_dtl_04.dgn
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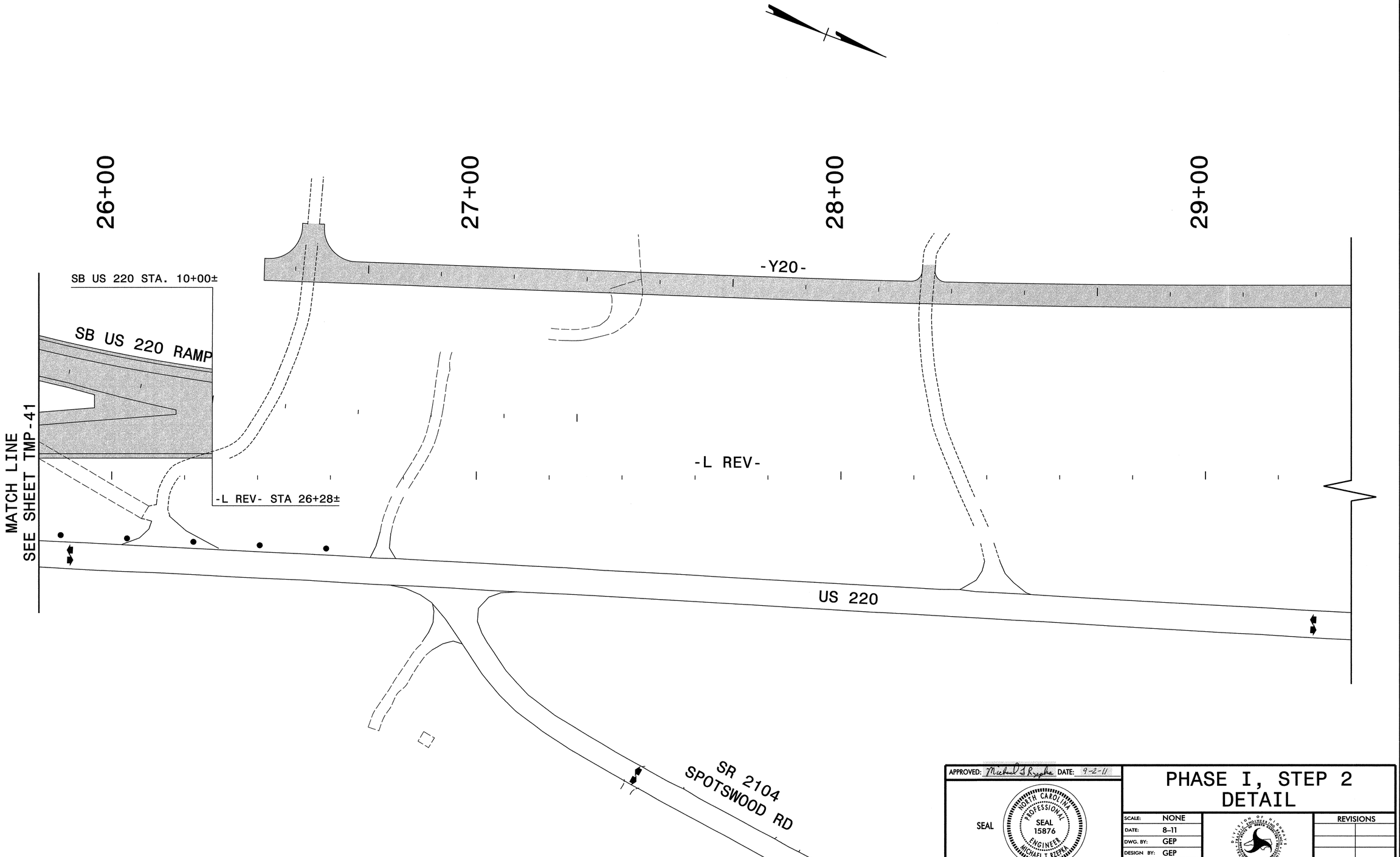
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-42



APPROVED: Michael T. Kiepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KIEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROLS

REVISIONS	
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8/24/2011
R:\TrafficControl\25\r2413c_top_pl_s2_dtl_05.dgn
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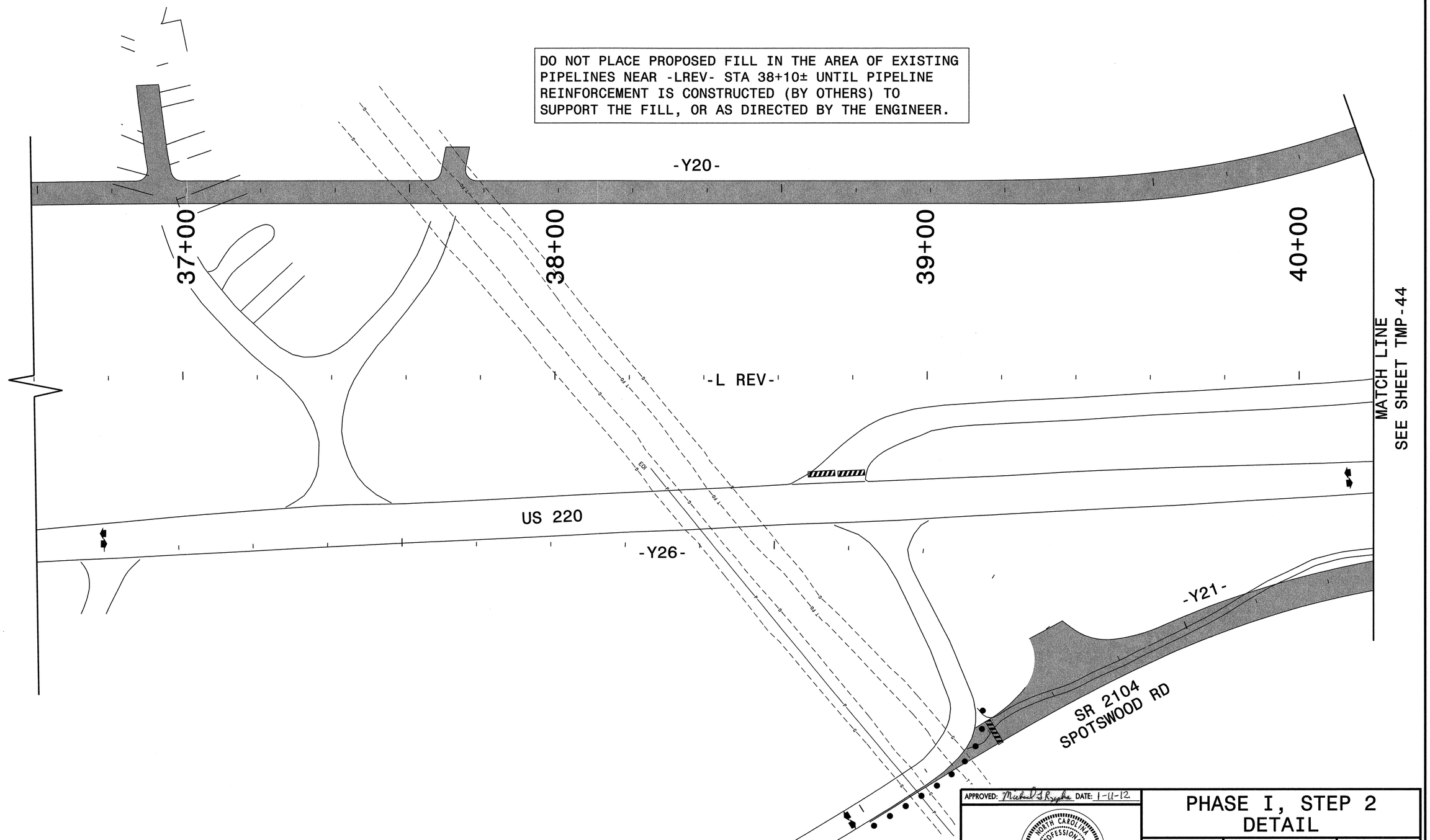
METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0288	PROJ. REFERENCE NO. R-2413C	SHEET NO. TMP-43

DO NOT PLACE PROPOSED FILL IN THE AREA OF EXISTING PIPELINES NEAR -LREV- STA 38+10± UNTIL PIPELINE REINFORCEMENT IS CONSTRUCTED (BY OTHERS) TO SUPPORT THE FILL, OR AS DIRECTED BY THE ENGINEER.



APPROVED: Michael T. Rzepka DATE: 1-11-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	1-12
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
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1/11/2012
R:\TrafficControl\25%\r2413c_tcp_pl_s2_dtl_08.dgn
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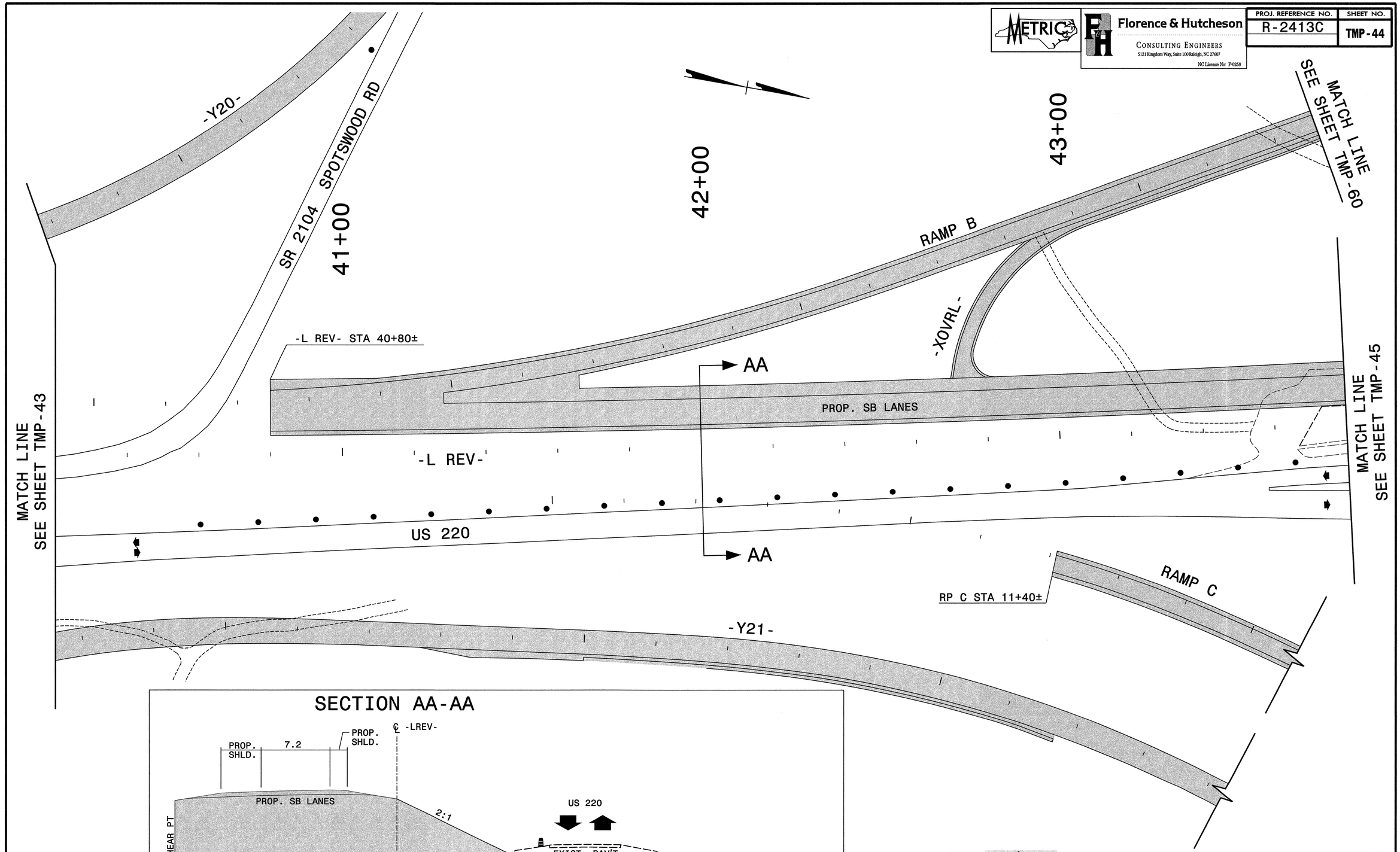
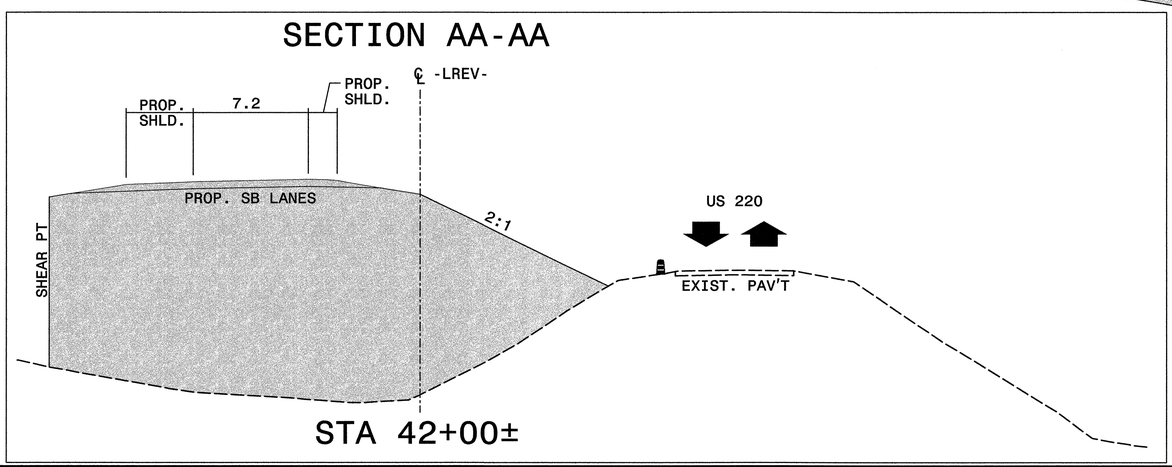
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-44



SECTION AA-AA



STA 42+00±

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DESIGN UNIT

REVISIONS	
CADD FILE	

8/24/2011
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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-45

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NC License No: P-0258

RAMP A

MATCH LINE
SEE SHEET TMP-60

-L REV- STA 44+40±

-L REV- STA 44+70±

-L REV- STA 46+00±

44+00

45+00

46+00

47+00

-XOVRM-

PROP END
BENT #2

PROP. SB LANES

MATCH LINE
SEE SHEET TMP-44

MATCH LINE
SEE SHEET TMP-46

-L REV-

US 220

WIDEN ONLY TO
EXISTING BENTS UNDER
EXISTING STRUCTURE

REMOVE ISLANDS
AND PAVE

US 158

-Y6-

MURPHY RD.

RAMP D

MATCH LINE
SEE SHEET TMP-61

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

CADD FILE

8/30/2011
R:\TrafficControl\25%\r2413c_tcp_pl_s2_dtl10.dgn
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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-46

METRIC

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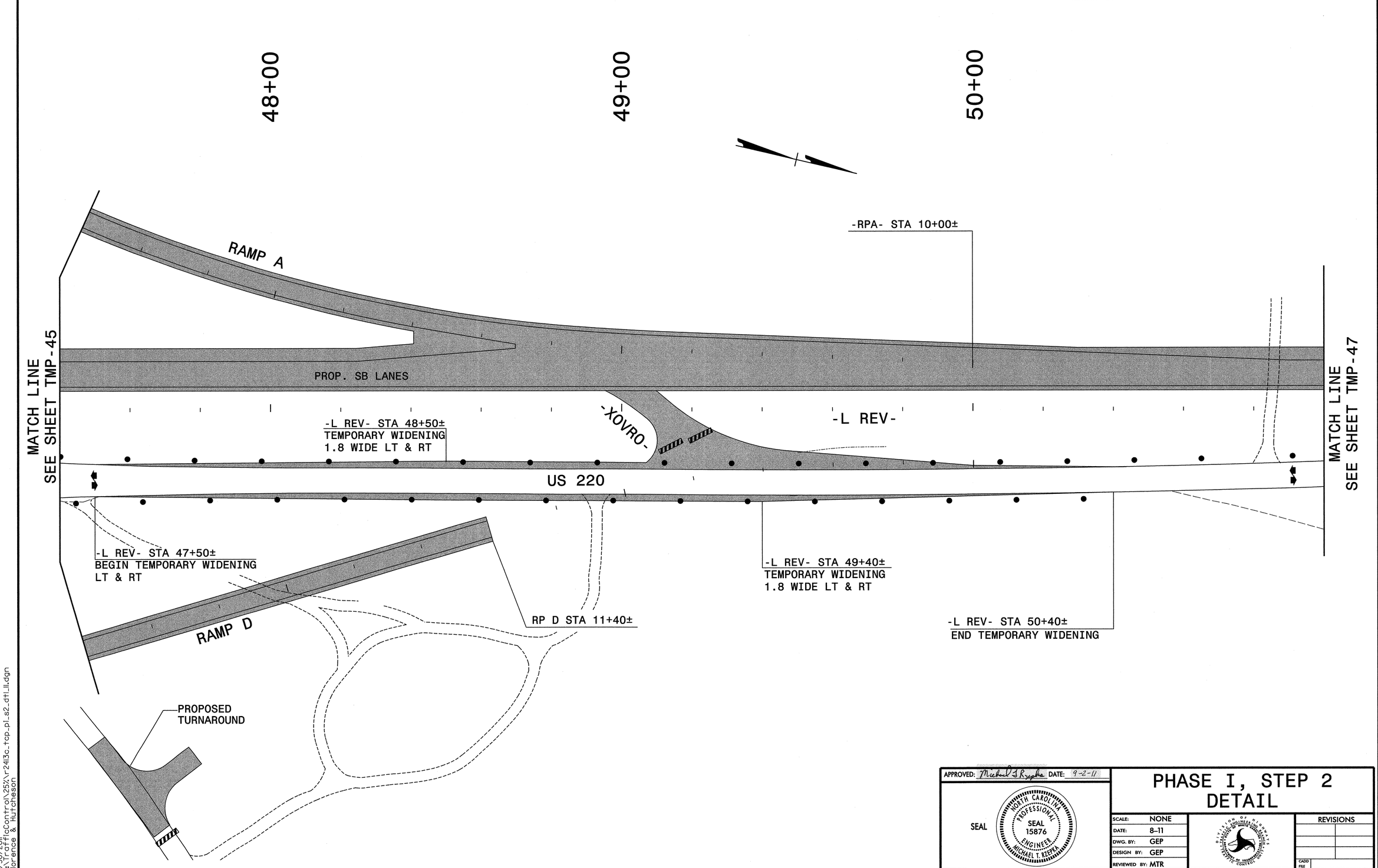
NC License No: F-0258



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STATE OF NORTH CAROLINA

REVISIONS

CADD FILE

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R:\TrafficControl\25%\r2413c_tcp_pl_s2_dtl_ll.dgn
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METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO. R-2413C	SHEET NO. TMP-47

52+00

53+00

54+00

-L REV- STA 53+00±

AB

MATCH LINE
SEE SHEET TMP-46

PROP. SB LANES

-L REV-

US 220

7.2

-XOVRH-

MATCH LINE
SEE SHEET TMP-48

TEMPORARY
PAVEMENT

AB

-L REV- STA 52+04±

SECTION AB-AB

℄ -LREV-

℄ -XOVRH-

US 220

TEMP. PAV'T

TEMP. SHLD.

STA 54+00±

APPROVED: Michael T Kozma DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T KOZMA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
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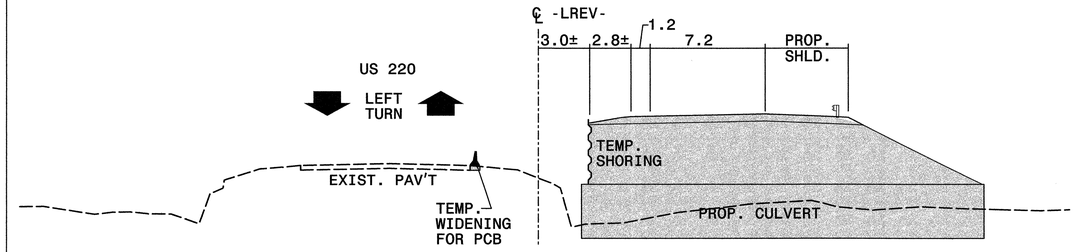
Florence & Hutcheson

SECTION AC-AC



STA 56+54±

55+00

56+00

57+00

58+00

SR 1100 OGBURN MILL RD

PROPOSED CULVERT

-Y25-

AD

MATCH LINE SEE SHEET TMP-47

-L REV- STA 55+80±
BEGIN PCB
0.6 OFFSET

AC

-L REV- STA 57+20±
BEGIN PCB
0.6 OFFSET

PCB

-L REV- STA 57+75±
END PCB
0.6 OFFSET

US 220

7.2

-XOVRH-

PROP. NB LANES

-L REV-

PCB

MATCH LINE SEE SHEET TMP-49

TEMPORARY PAVEMENT

-L REV- STA 55+20±

(15) QUANTITY = 189 SQ. M.
TEMPORARY SHORING
-L REV- STA 56+32± TO -L- STA 56+76± 3.0m RT OF -L REV-
(SEE SHEET TMP-2E)

AC

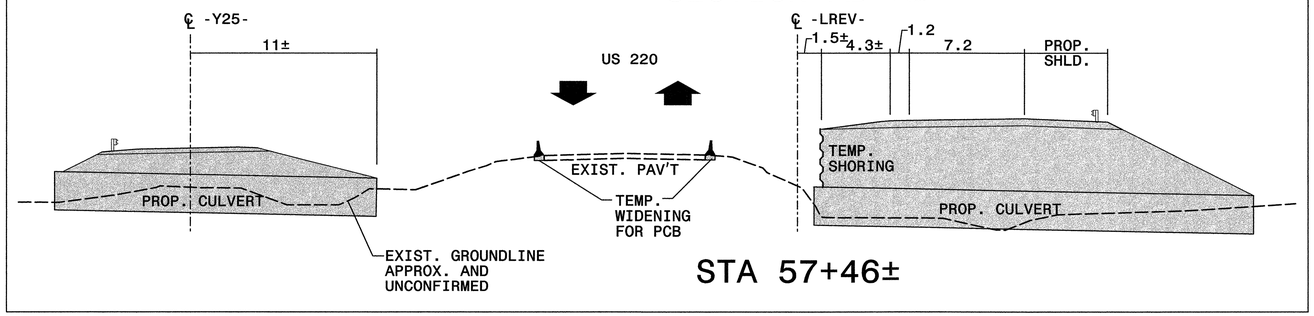
PROPOSED CULVERTS

AD

-L REV- STA 58+00±
END PCB
0.6 OFFSET

(16) QUANTITY = 141 SQ. M.
TEMPORARY SHORING
-L REV- STA 57+25± TO -L REV- STA 57+40± 1.5m RT OF -L REV-
-L REV- STA 57+40± 1.5m RT OF -L REV- TO -L REV- STA 57+47± 4.83m RT OF -L REV-
-L REV- STA 57+47± TO -L REV- STA 57+63± 4.83m RT OF -L REV-
(SEE SHEET TMP-2E)

SECTION AD-AD



STA 57+46±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

CADD FILE

9/3/2011
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5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-49

59+00

60+00

61+00

HENDREN LN

-Y25-

MATCH LINE
SEE SHEET TMP-48

US 220

-L REV-

PROP. NB LANES

-L REV- STA 61+00±

MATCH LINE
SEE SHEET TMP-50

-Y28-

SR 2340
FARRAR STORE RD

-L REV- STA 58+80±

APPROVED: Michael T. Kiepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KIEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25Z\r2413c_top_pl_s2_dtl_l4.dgn
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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-50

62+00

63+00

64+00

65+00

-Y25-

MATCH LINE
SEE SHEET TMP-49

US 220

-L REV-

PROP. NB LANES

MATCH LINE
SEE SHEET TMP-51

DRIVEWAY

SR 2340
FARRAR STORE RD

APPROVED: Michael T. Reszka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RESZKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL

REVISIONS

CADD FILE

8/30/2011
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METRIC

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5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0358

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-51

66+00

67+00

68+00

RAMP B

RP B STA 11+07±

-XOVRK-

US 220

-L REV-

PROP. NB LANES

RAMP C

MATCH LINE
SEE SHEET TMP-50

MATCH LINE
SEE SHEET TMP-52

MATCH LINE
SEE SHEET TMP-63

APPROVED: Michael T. Kiepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KIEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS PREVENTIVE MAINTENANCE AND TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-52

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

RAMP B

MATCH LINE
SEE SHEET TMP-62

RAMP A

RP A STA. 14+40±

70+00

71+00

72+00

MATCH LINE
SEE SHEET TMP-51

AE

US 220

-L REV-

PROP. NB LANES

MATCH LINE
SEE SHEET TMP-53

AE

-L REV- STA 69+80±

-L REV- STA 70+40±

-Y10- NC 65

SECTION AE-AE

℄ -LREV-

US 220

EXIST. PAV'T

2:1

3.3± 1.2 7.2

PROP. SHLD.

PROP. NB LANES

STA 71+00±

MATCH LINE
SEE SHEET TMP-63

RAMP D

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

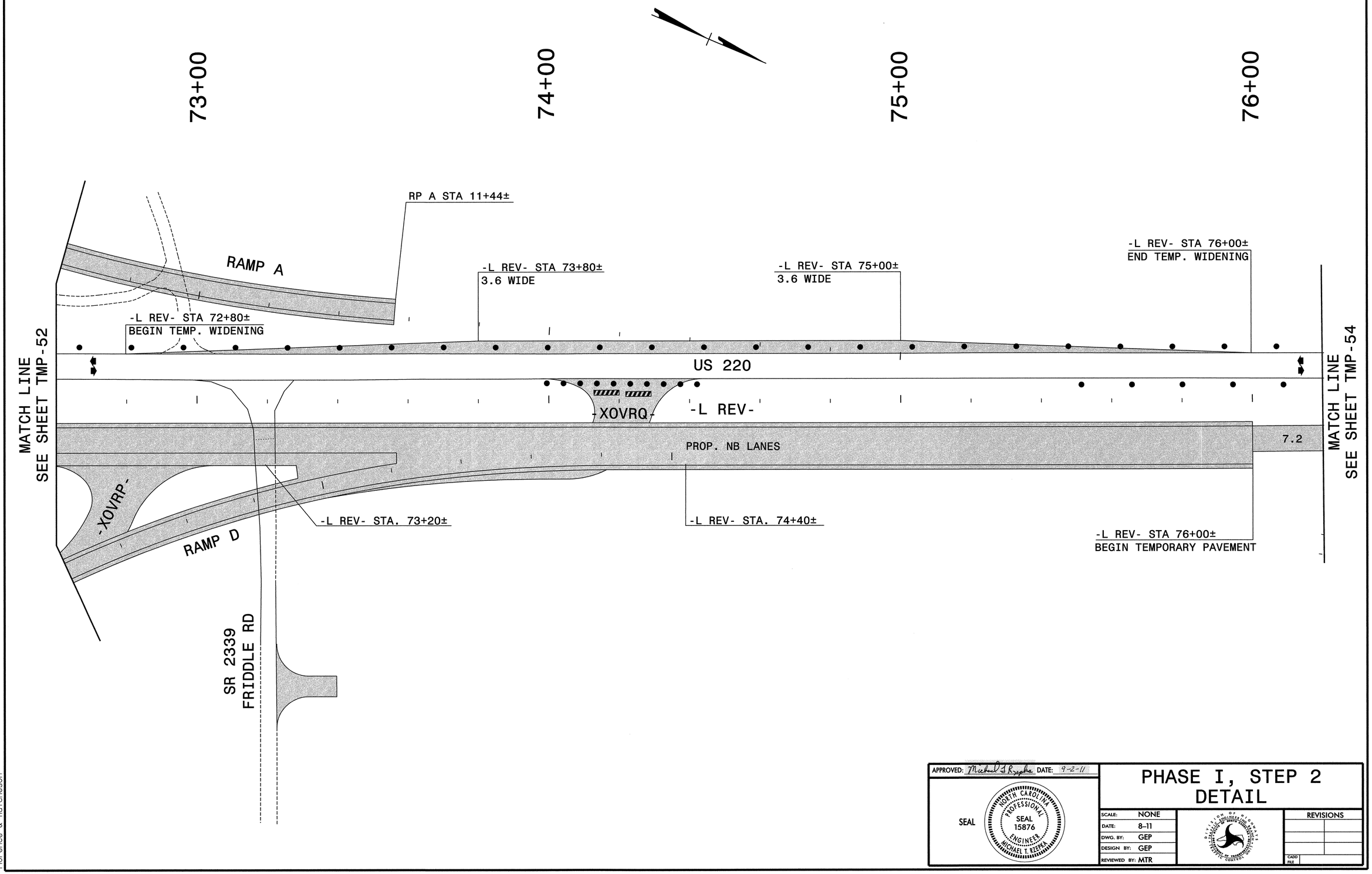
REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25\r-2413c_top_pl_s2_dtl_17.dgn
Florence & Hutcheson

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-53

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

CADD FILE

8/24/2011
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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-54

77+00

78+00

79+00

MATCH LINE
SEE SHEET TMP-53

US 220

-L REV-

7.2 -XOVRI-

MATCH LINE
SEE SHEET TMP-55

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25%\r2413c_tcp_pl_s2_dtl_19.dgn
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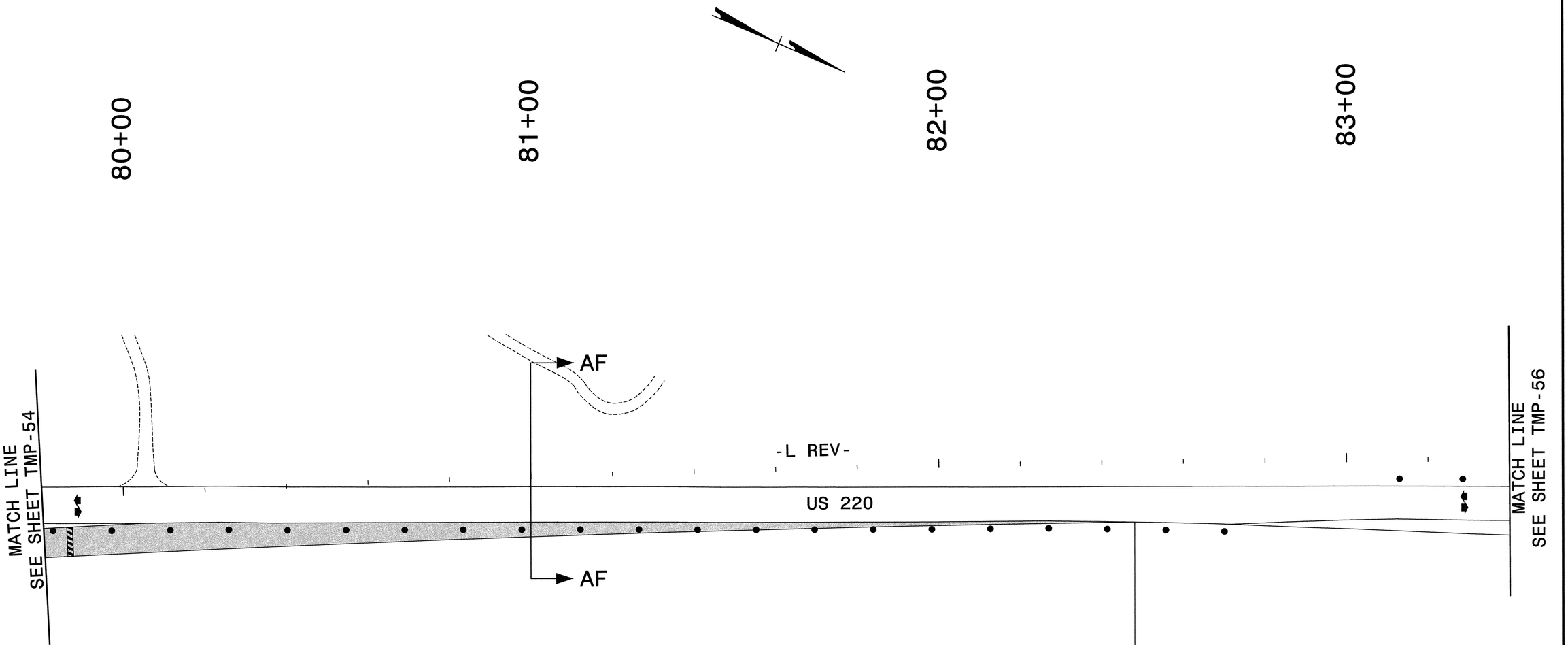
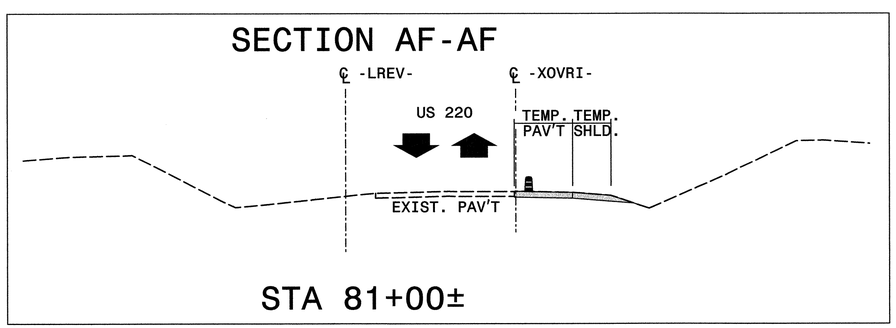
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-55





APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS

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METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO. R-2413C	SHEET NO. TMP-56

84+00

85+00

86+00

-L REV- STA 83+60±

-L REV- STA 87+00±

PROP. SB LANES

-L REV-

US 220

SR 2806 BENNETT FARM RD

MATCH LINE
SEE SHEET TMP-55

MATCH LINE
SEE SHEET TMP-57

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS	
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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-57

MATCH LINE
SEE THIS SHEET

SR 2805 PRICE FARM RD

-L1REV-

NC 68 SBL

-XOVRB-

NC 68 NBL

MATCH LINE
SEE THIS SHEET

NC 68 SBL

-XOVRB-

NC 68 NBL

88+00

89+00

90+00

-L REV- STA 87+65±
BEGIN TEMP. WIDENING

-L1REV- STA 18+51±
BEGIN TEMP. WIDENING

MATCH LINE
SEE SHEET TMP-56

-L REV-
US 220

MATCH LINE
SEE SHEET TMP-58

SR 2806 BENNETT FARM RD

8/24/2011
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APPROVED: Michael T Kiepka DATE: 9-2-11

SEAL

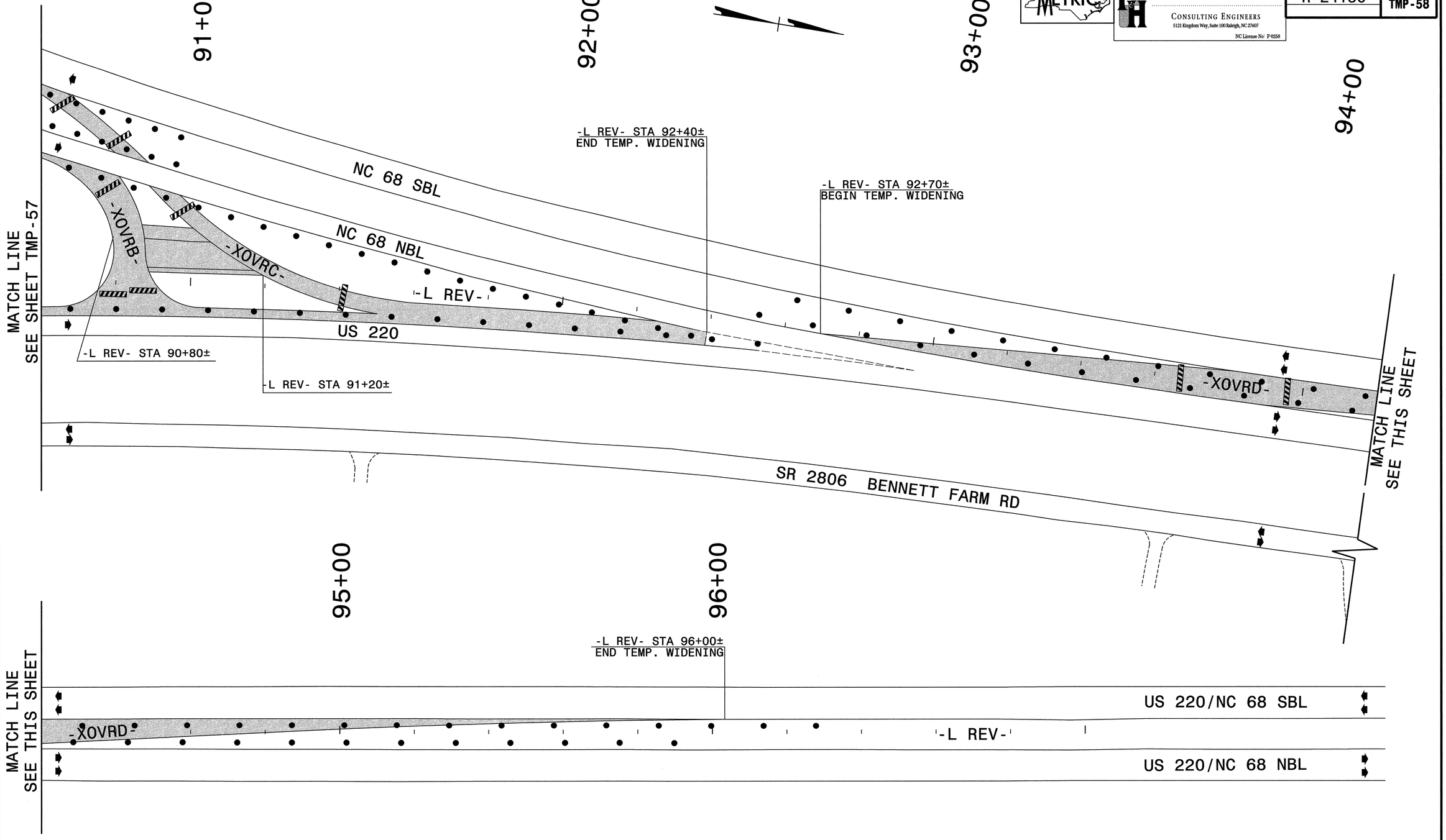
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T KIEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-59

6+00

7+00

8+00

-Y6- US 158

MATCH LINE
SEE SHEET TMP-60

SR 2104 SPOTSWOOD RD

-Y20-

APPROVED: Michael T. Kozpka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KOZPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL

REVISIONS	
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8/24/2011
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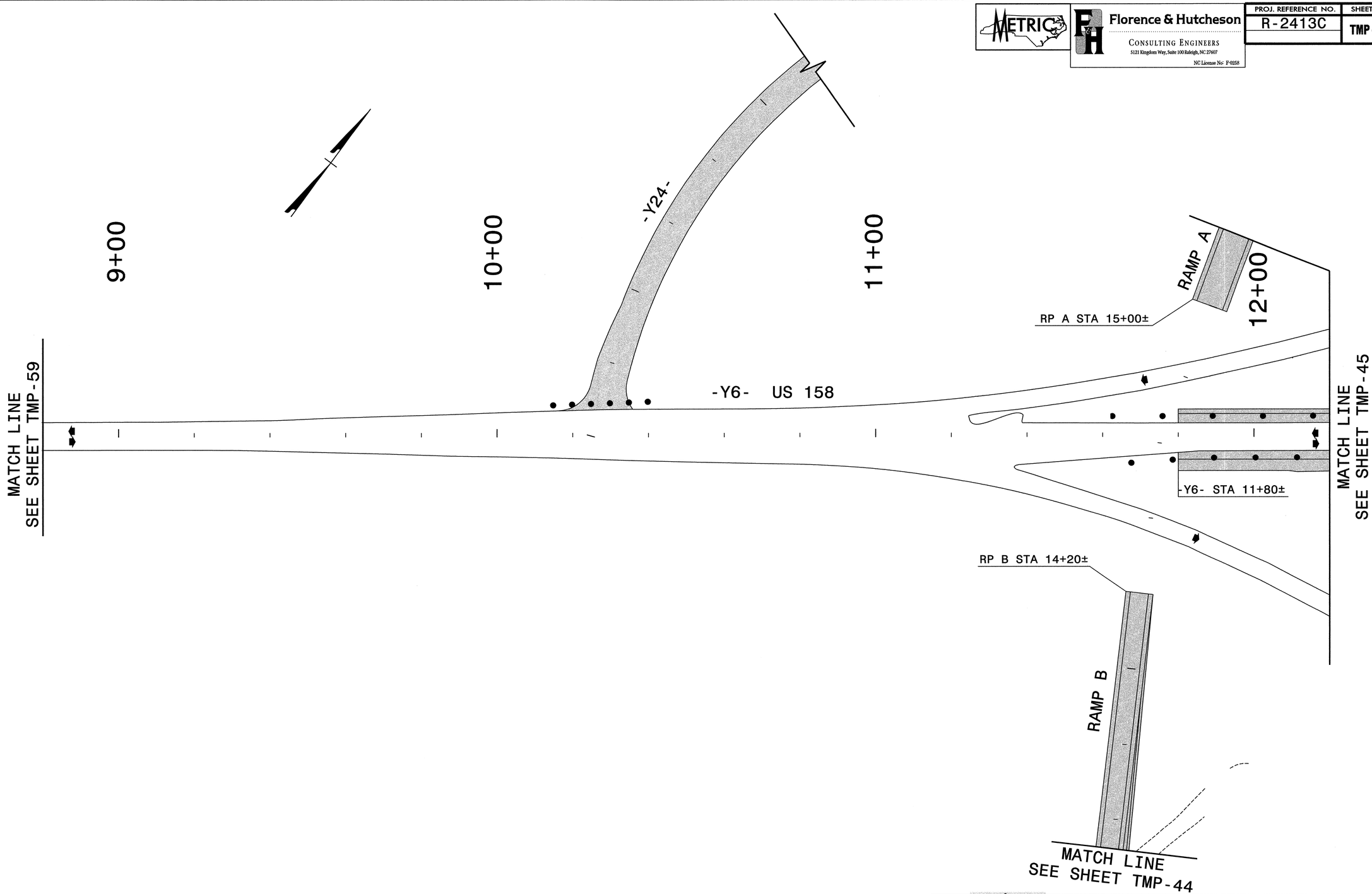
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-60



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
STATE ENGINEERING BRANCH
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
STATE OF NORTH CAROLINA
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

8/24/2011
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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-61

15+00

16+00

17+00

RAMP D

RP D STA 13+80±

RP D STA 14+00±

-Y6- STA 13+80±

-Y6- STA 15+00±

-Y6- STA 15+78±

-Y6- US 158

-Y6- STA 17+50±

MATCH LINE SEE SHEET TMP-45

-XOVRN-

RP C STA 14+20±

-Y6- STA 14+10±

RP C STA 13+80±

RAMP C

-Y21-

SR 2104
SPOTSWOOD RD

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL

REVISIONS	
CADD FILE	

8/30/2011
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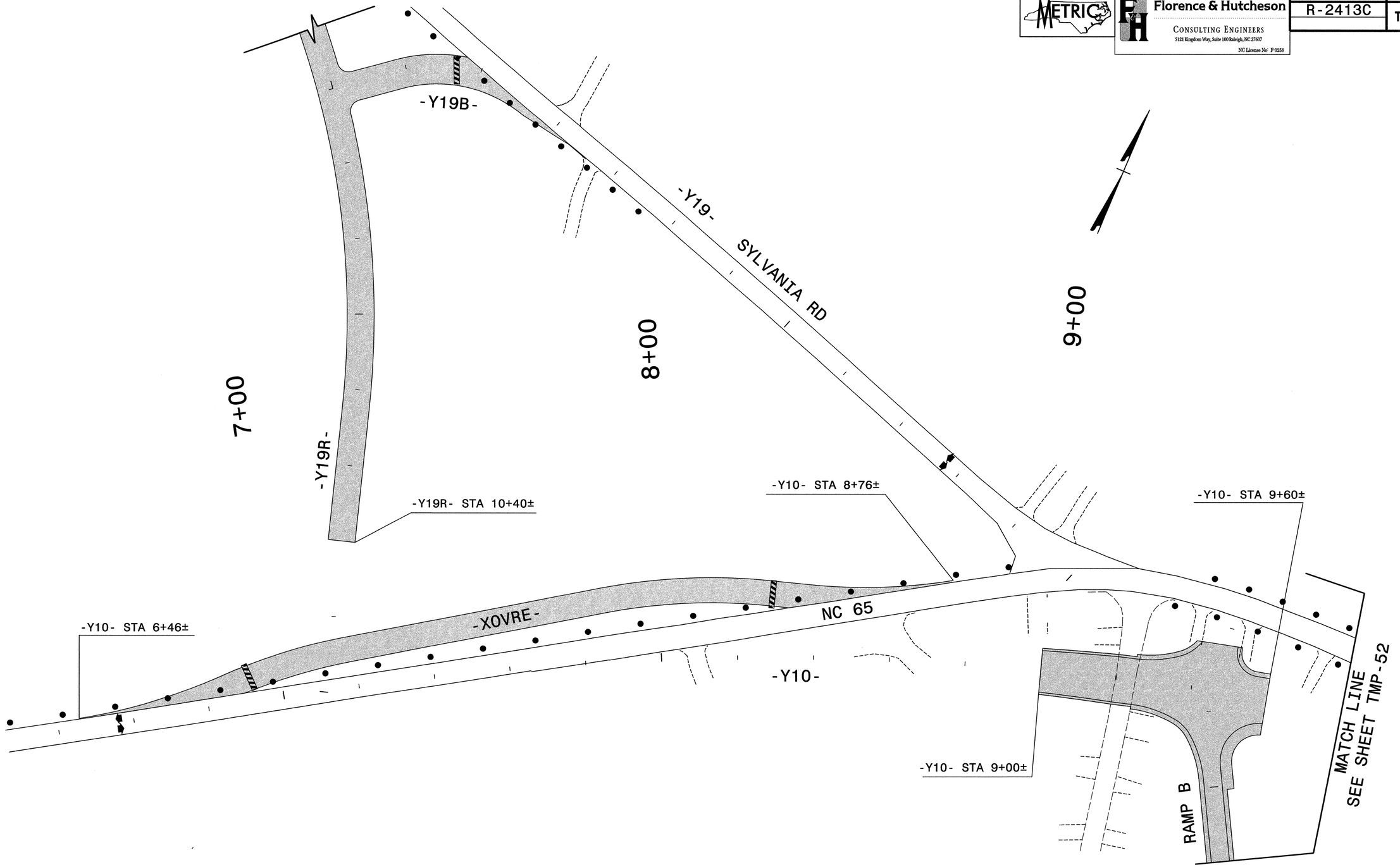
PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-62



APPROVED: Michael T Kiepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T KIEPKA

PHASE I, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING & SAFETY SYSTEMS UNIT TRAFFIC CONTROL

REVISIONS

CADD FILE

8/24/2011
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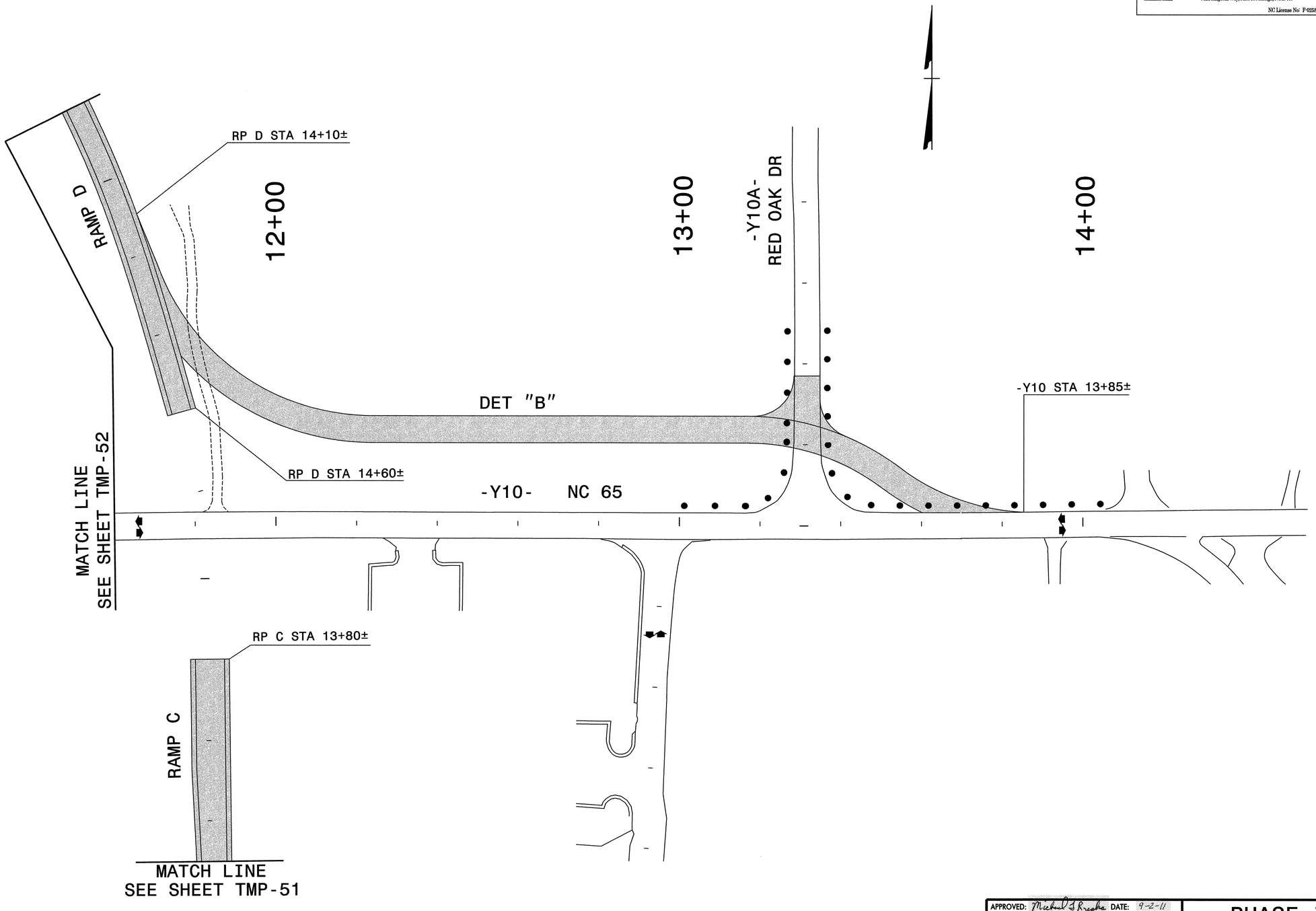


APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

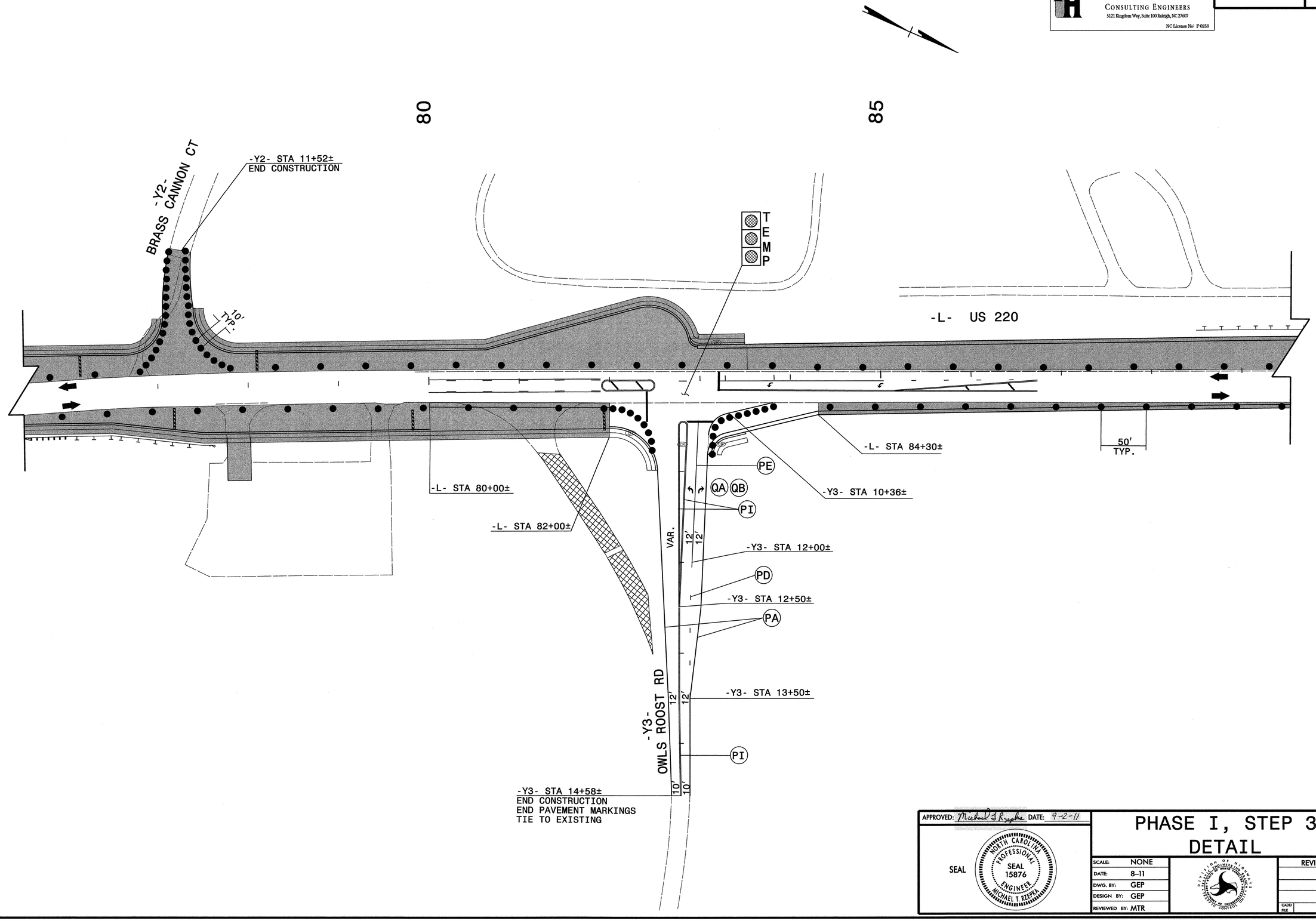
SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DESIGN UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\Traffic Control\25\r2413c_tcp_p1_s2_dtl_28.dgn
Florence & Hutcheson

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	R-2309AB	TMP-64



APPROVED: Michael T. Reszka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RESZKA

PHASE I, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

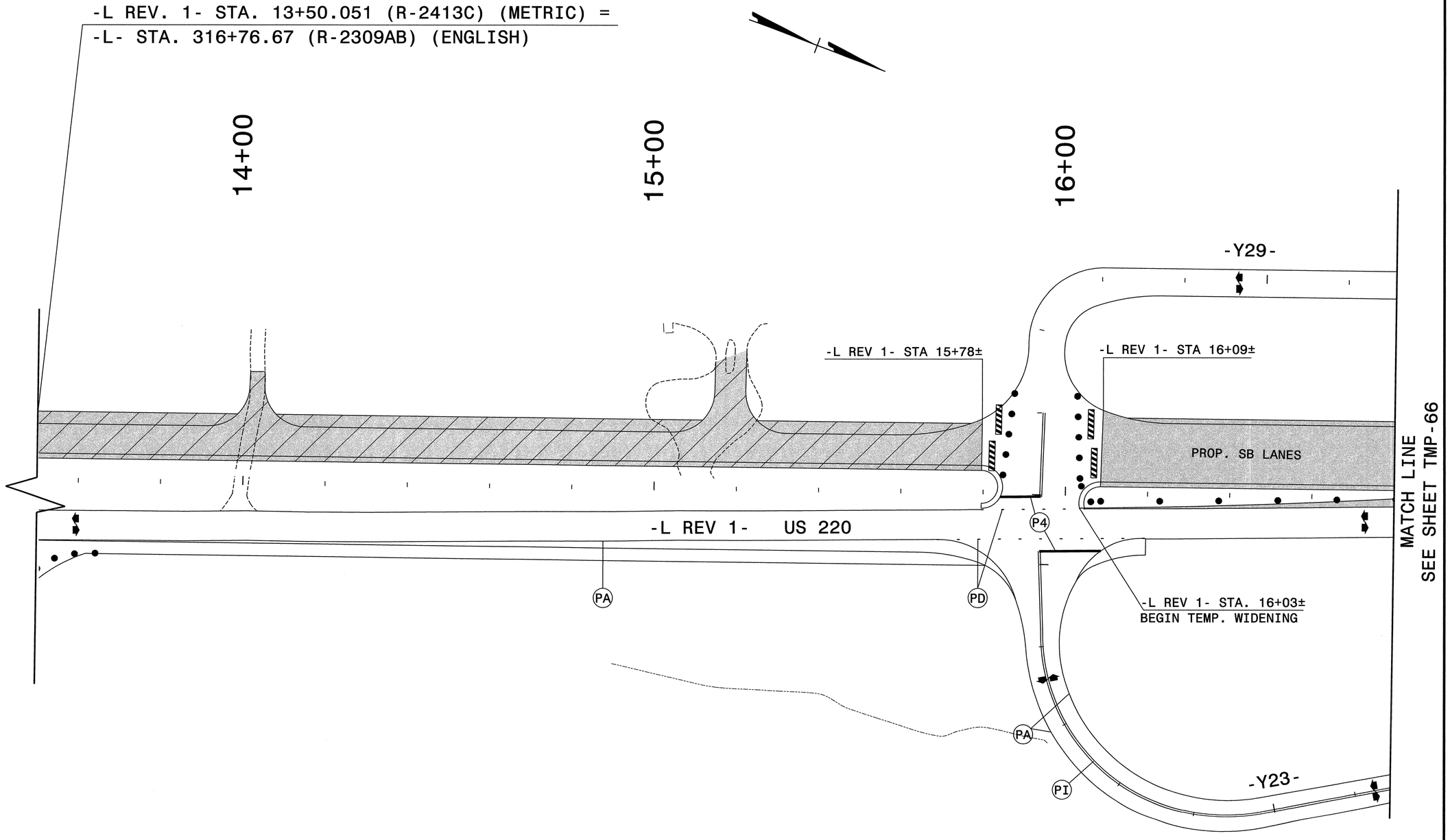
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS	
CADD FILE	

8/31/2011
R:\Traffic\TrafficControl\TCP\50%\r-2309ab_fc_tcp_pl_s3_dtl_05.dgn
Florence & Hutcheson

METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO. R-2413C	SHEET NO. TMP-65

-L REV. 1- STA. 13+50.051 (R-2413C) (METRIC) =
-L- STA. 316+76.67 (R-2309AB) (ENGLISH)



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

CADD FILE

8/24/2011
R:\Traffic Control\25\r2413c_tcp_pl_s3_dtl_01.dgn
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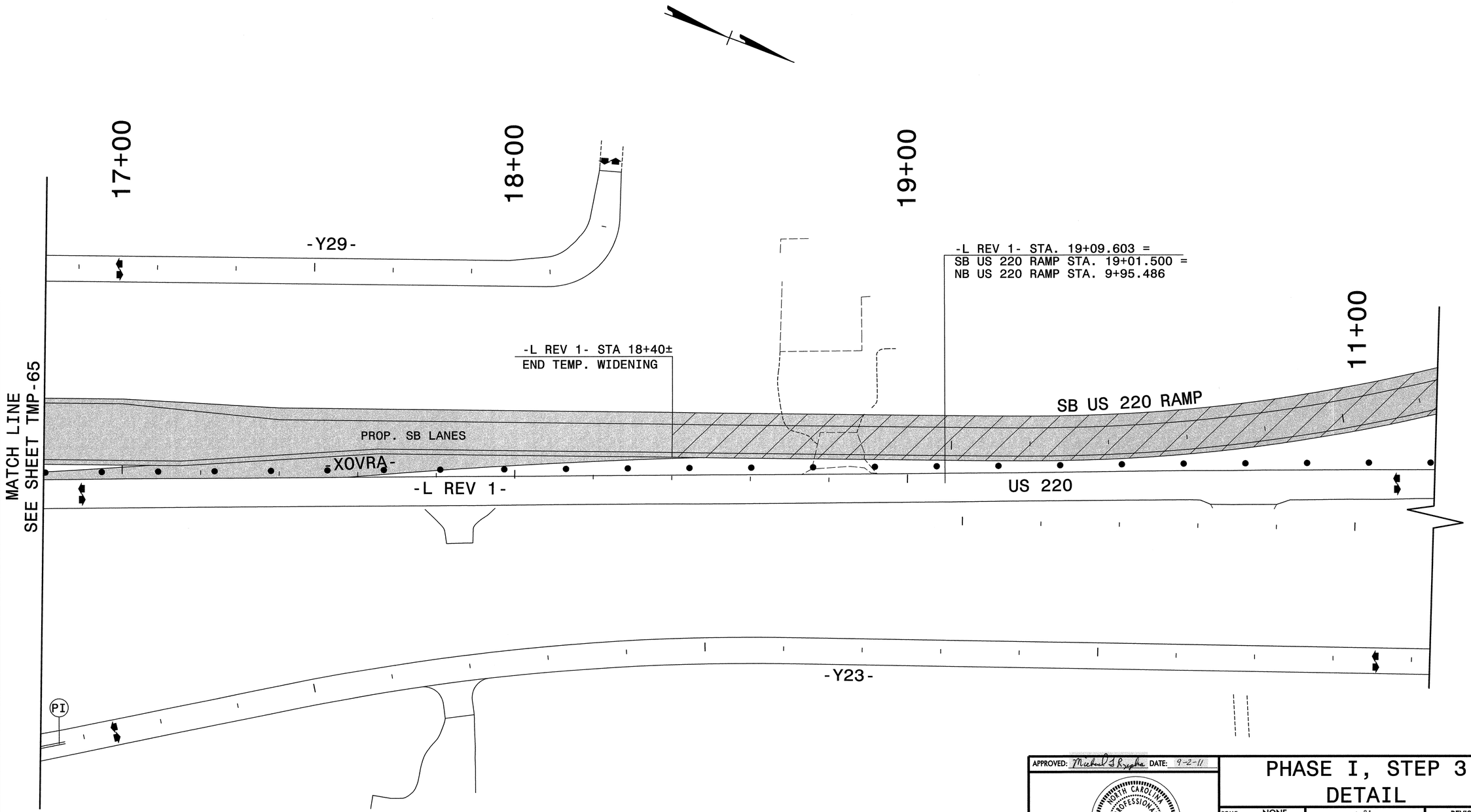
METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-66



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING BUREAU TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25X\r2413c_top_pl_s3_dtl_02.dgn
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METRIC

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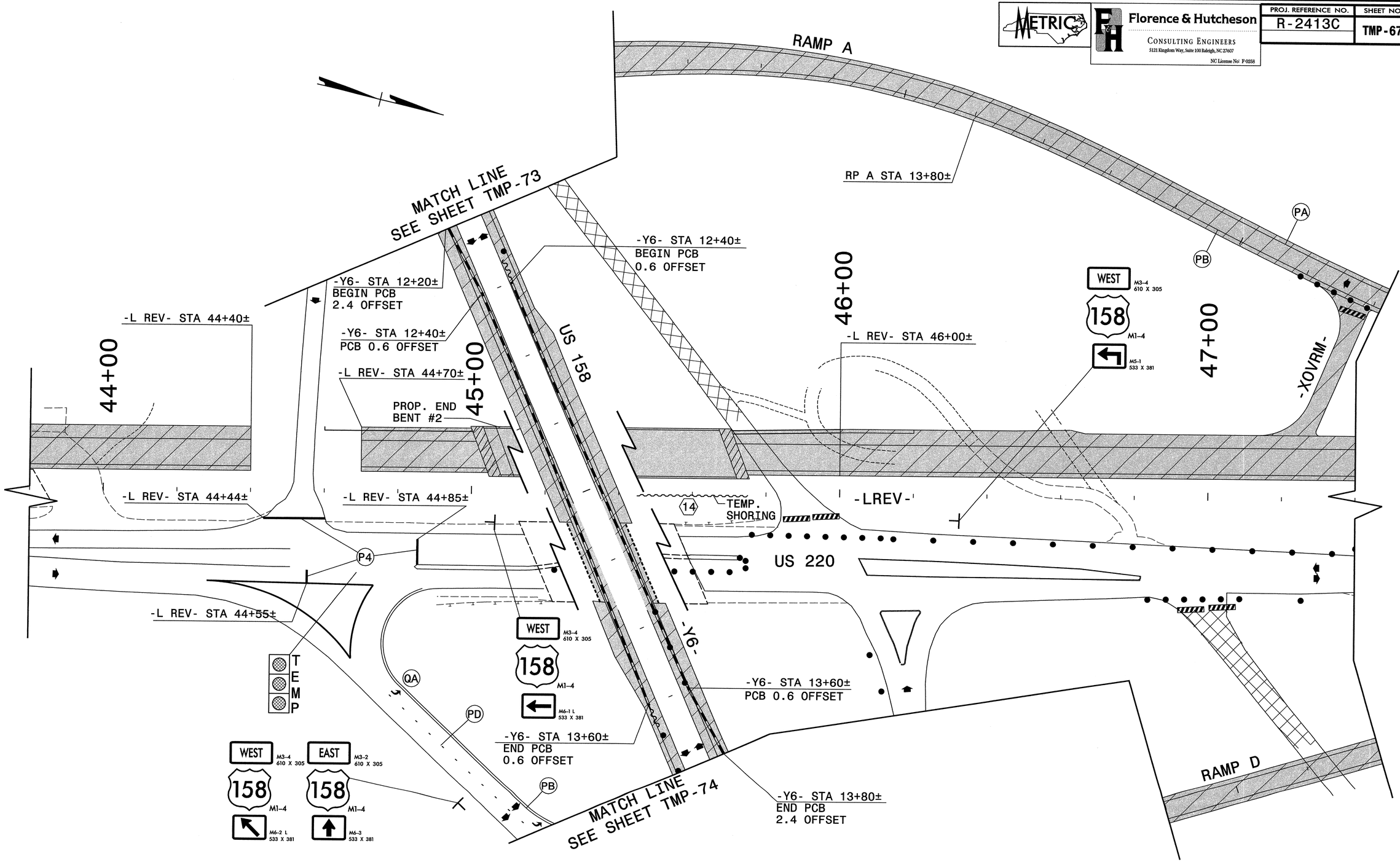
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-67



14 QUANTITY = 106 SQ. M.
TEMPORARY SHORING
-L REV- STA 45+44± TO -L REV- STA 45+76± 0m FROM -L REV-
(SEE SHEET TMP-2E)

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS ENGINEERING AND SAFETY BRANCH TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

9/3/2011
R:\Traffic Control\25\r2413c_tcp_p1_s3_dt1_10.dgn
Florence & Hutcheson

RAMP B

MATCH LINE
SEE SHEET TMP-75

RAMP A

EAST M3-2 610 X 305
65 M1-5
M6-1 L 533 X 381

70+00

71+00

72+00

WEST M3-4 610 X 305
65 M1-5
M6-1 533 X 381

-L REV- STA 69+40±
BEG PCB
0.6 OFFSET

-L REV- STA 70+19±

-L REV- STA 70+37±

-L REV- STA 70+40±

-Y10- STA 10+65±

-L REV- STA 70+01±

AG

T
E
M
P

-L REV- STA 70+60±
END PCB
0.6 OFFSET

17

US 220

ADD TEMP. WIDENING IF NEEDED, FOR PCB PLACEMENT

TEMP. SHORING

PROP. BENT #1

-L REV-

MATCH LINE
SEE SHEET TMP-69

EAST M3-2 610 X 305
65 M1-5
M5-1 R 533 X 381

-L REV- STA 69+80±

AG

-Y10- NC 65

SECTION AG-AG

℄ -LREV-

US 220

NC 65

PCB

EXIST. PAV'T

TEMP. SHORING

EXCAV. FOR BENT CONST.

1.0±

2:1

5.8

5.8

1.2

7.2

PROP. GIRDERS

PROP. SHLD.

PROP. BENT #1

PROP. END BENT #2

STA 70+09±

PA

PI

3.6

3.6

-Y10- STA 10+96±

MATCH LINE
SEE SHEET TMP-76

M1-1L 1219 X 1219

RAMP D

17 QUANTITY = 133 SQ. M.
TEMPORARY SHORING
-L REV- STA 69+91± TO -L REV- STA 70+28± 5.8m LT OF -L REV-
(SEE SHEET TMP-2E)

APPROVED: Michael S Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

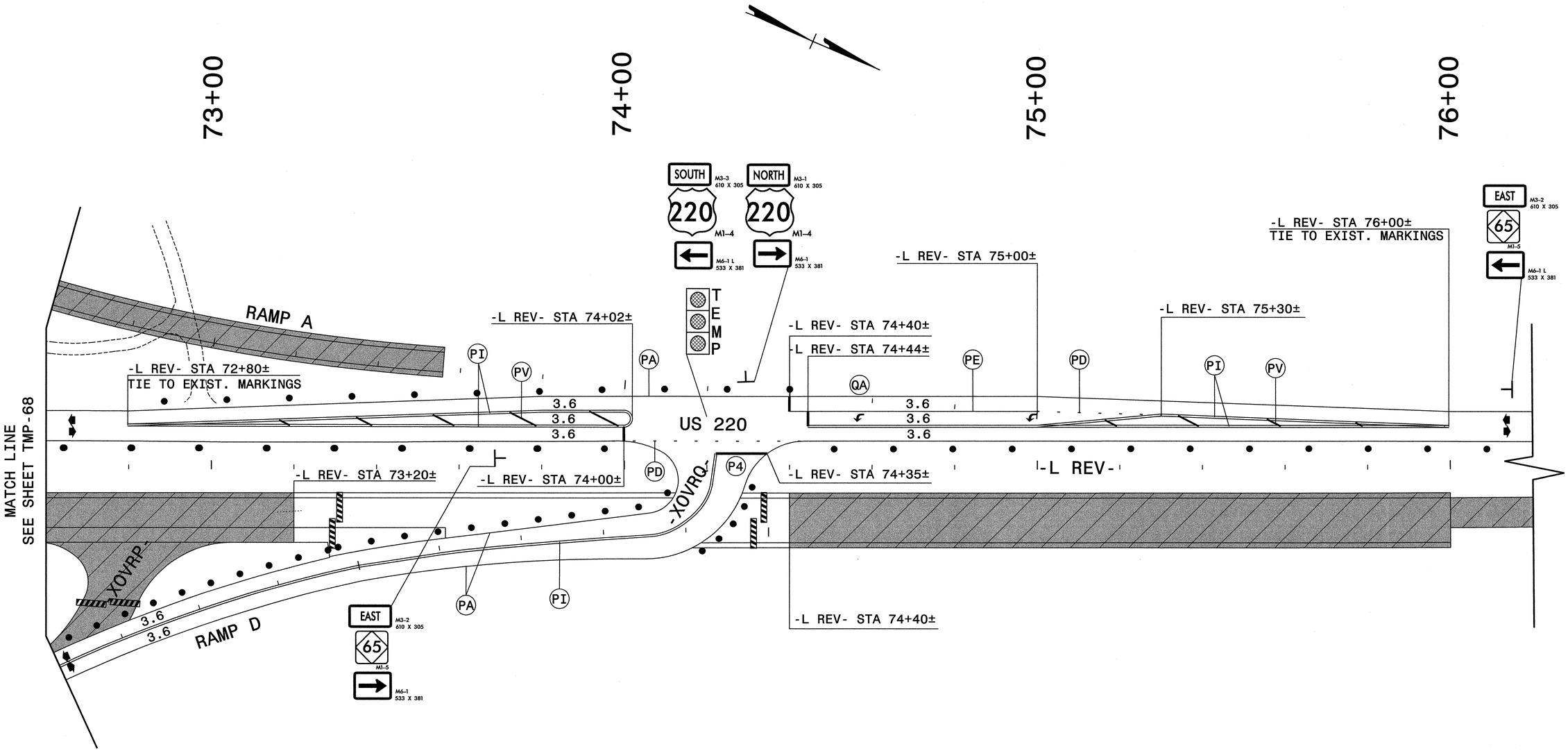
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

9/3/2011
R:\TrafficControl\25%\r2413c_tcp_p1_s3_dtl17.dgn
Florence & Hutcheson

METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
		R-2413C	TMP-69



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/31/2011
R:\TrafficControl\25X\r-2413c_tcp_p1_s3_dtl_l8.dgn
Florence & Hutcheson

84+00

85+00

86+00

-L REV- STA 86+00±

PROP. SB LANES

-L REV-

PA

US 220

PI

-L REV- STA 86+80±

MATCH LINE
SEE SHEET TMP-71

SR 2806 BENNETT FARM RD

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS

CADD FILE

8/24/2011
R:\TrafficControl\25\r2413c_tcp_pi_s3_dtl_2l.dgn
Florence & Hutcheson

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-71

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

MATCH LINE SEE THIS SHEET

-L1REV- STA 14+53±

-L1REV- STA 16+43±

NC 68 SBL

NC 68 NBL

SR 2805 PRICE FARM RD

-XOVRG-

-XOVRB-

-L1REV-

-L1REV- STA 15+69±
BEGIN PCB
0.6 OFFSET

-L1REV- STA 18+20±

-L1REV- STA 18+32±

-L1REV- STA 18+40±
END PCB
0.6 OFFSET

-L1REV- STA 18+53±

TEMPORARY WIDENING

-L REV- STA 90+17±

88+00

89+00

90+00

PROP. SB LANES

-L REV-

US 220

SR 2806 BENNETT FARM RD

MATCH LINE SEE SHEET TMP-70

MATCH LINE SEE SHEET TMP-72

PA PB PC PD QA QB PI

3.6 3.6 4.8

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

8/31/2011
R:\TrafficControl\25%\r2413c_tcp_pi_s3_dtl_22.dgn
Florence & Hutcheson

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-72

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

91+00 92+00 93+00 94+00

MATCH LINE
SEE SHEET TMP-71

-L REV- STA 90+80±
-L REV- STA 91+08±
-L REV- STA 90+66±
-L REV- STA 91+00±
-L REV- STA 92+20±
-L REV- STA 92+55±
-L REV- STA 93+60±
-L REV- STA 94+05±
-L REV- STA 93+93±

PB PA PC P4 PD PI PE QB QI PV

4.8
-XOVRC-
PROP. SB LANES
US 220
3.6
3.6
3.6
-L REV-
3.6
3.6
-XOVRD-
3.6
ONLY

TEMP

68 M1-5
M6-1 533 X 381
68 M1-5
M5-1 R 533 X 381

NORTH M3-1 610 X 305
SOUTH M3-3 610 X 305
220 220
M1-4 M1-4
M6-1 L 533 X 381
M6-1 533 X 381

SR 2806 BENNETT FARM RD

MATCH LINE
SEE THIS SHEET

95+00 96+00

-L REV- STA 96+03±
TIE TO EXIST. MARKINGS

PA PC PB

-XOVRD-
3.6
3.6
-XOVRF-
-L REV-

US 220/NC 68 SBL
US 220/NC 68 NBL

-L REV- STA 97+09±
END TEMP. WIDENING

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

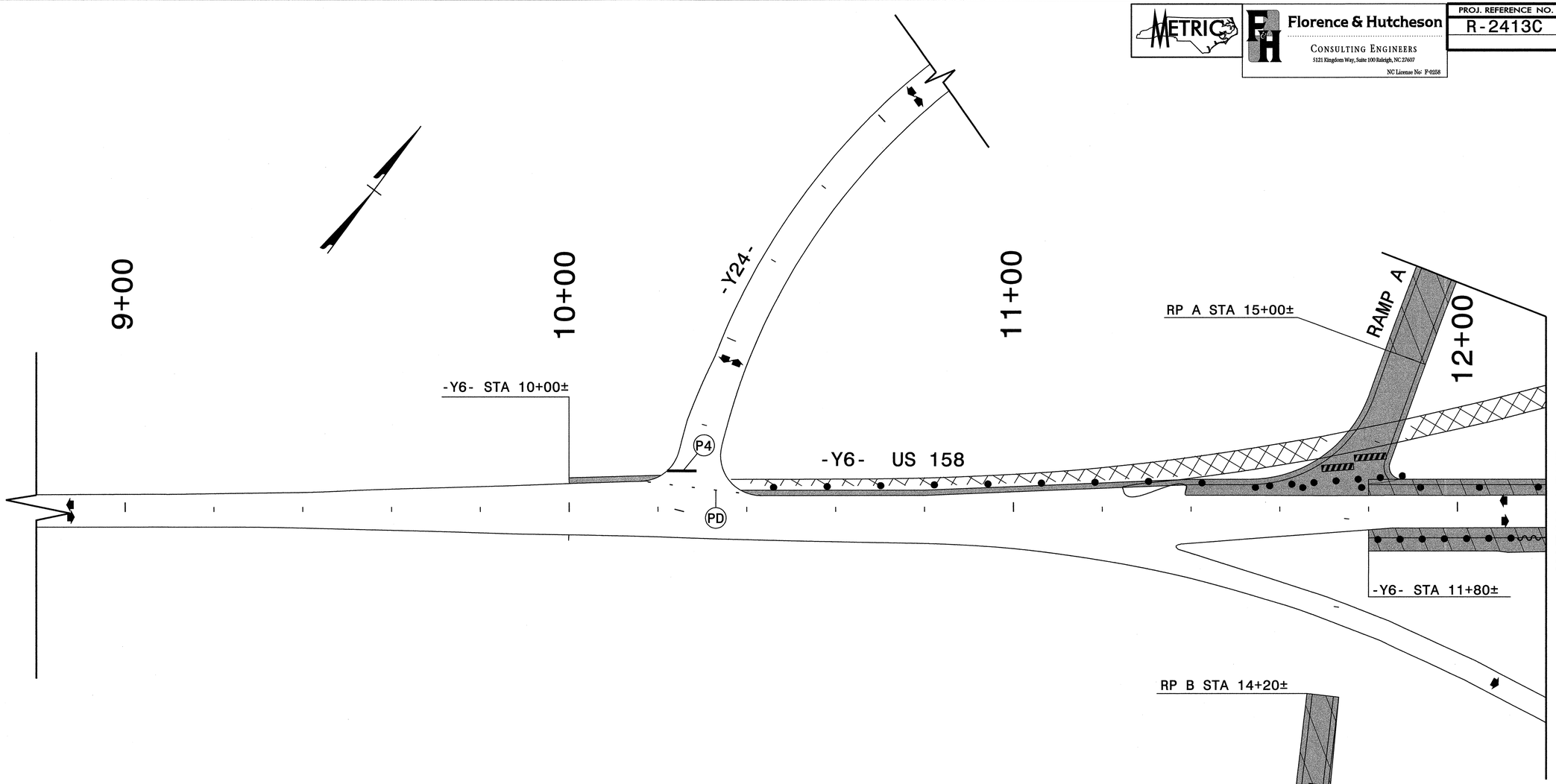
SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

CADD FILE

8/31/2011
R:\TrafficControl\25%\r2413c_tcp_pi_s3_dtl.23.dgn
Florence & Hutcheson

METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
		R-2413C	TMP-73



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

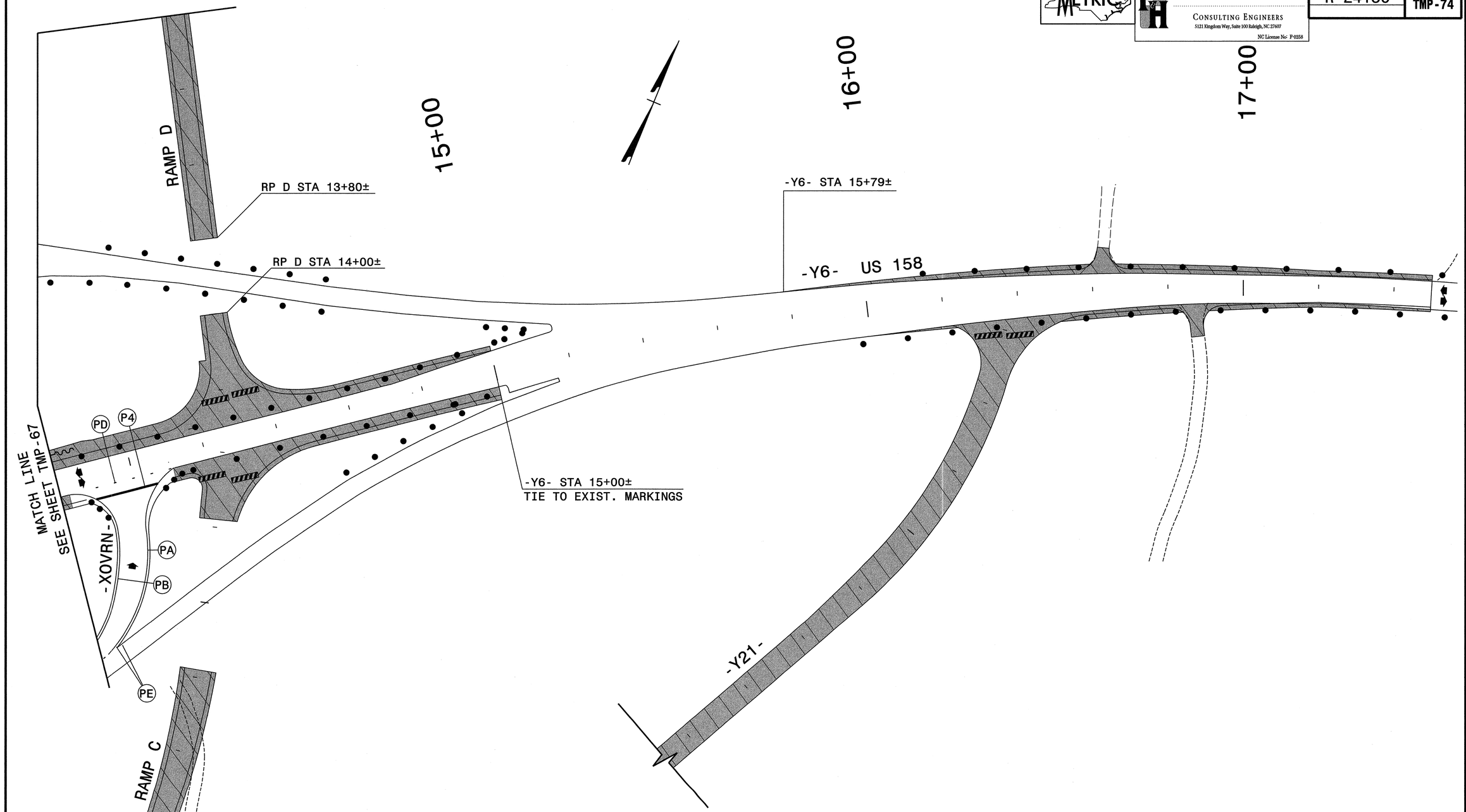
PHASE I, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS	
CADD FILE	

8/3/2011
R:\TrafficControl\25%\r2413c_tcp_pl_s3_dtl_25.dgn
Florence & Hutcheson

METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO. R-2413C	SHEET NO. TMP-74



9/1/2011
R:\TrafficControl\25%\r2413c_tcp_pl_s3_dtl_26.dgn
Florence & Hutcheson

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

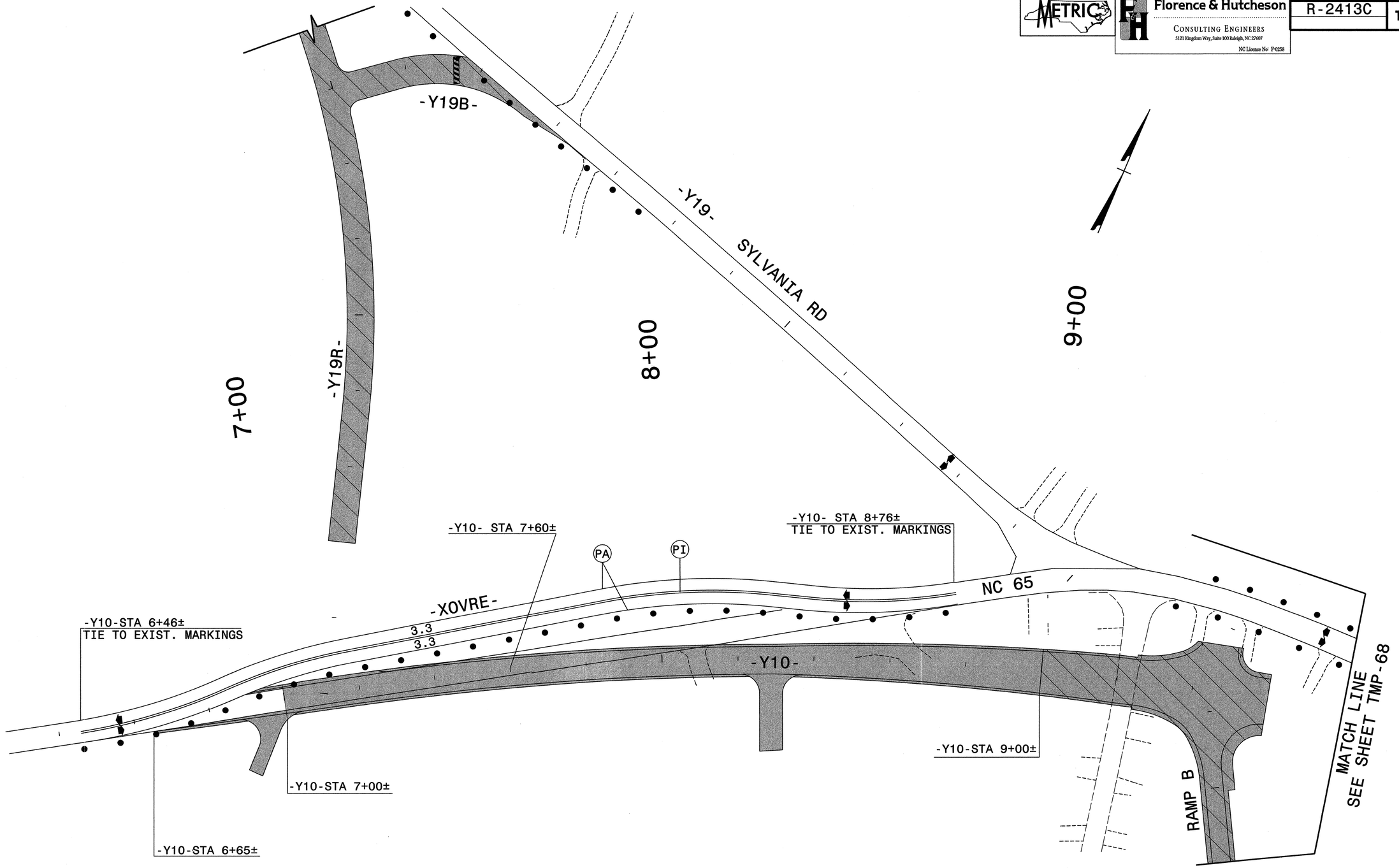
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC ENGINEER

REVISIONS	
CADD FILE	

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-75



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 3 DETAIL

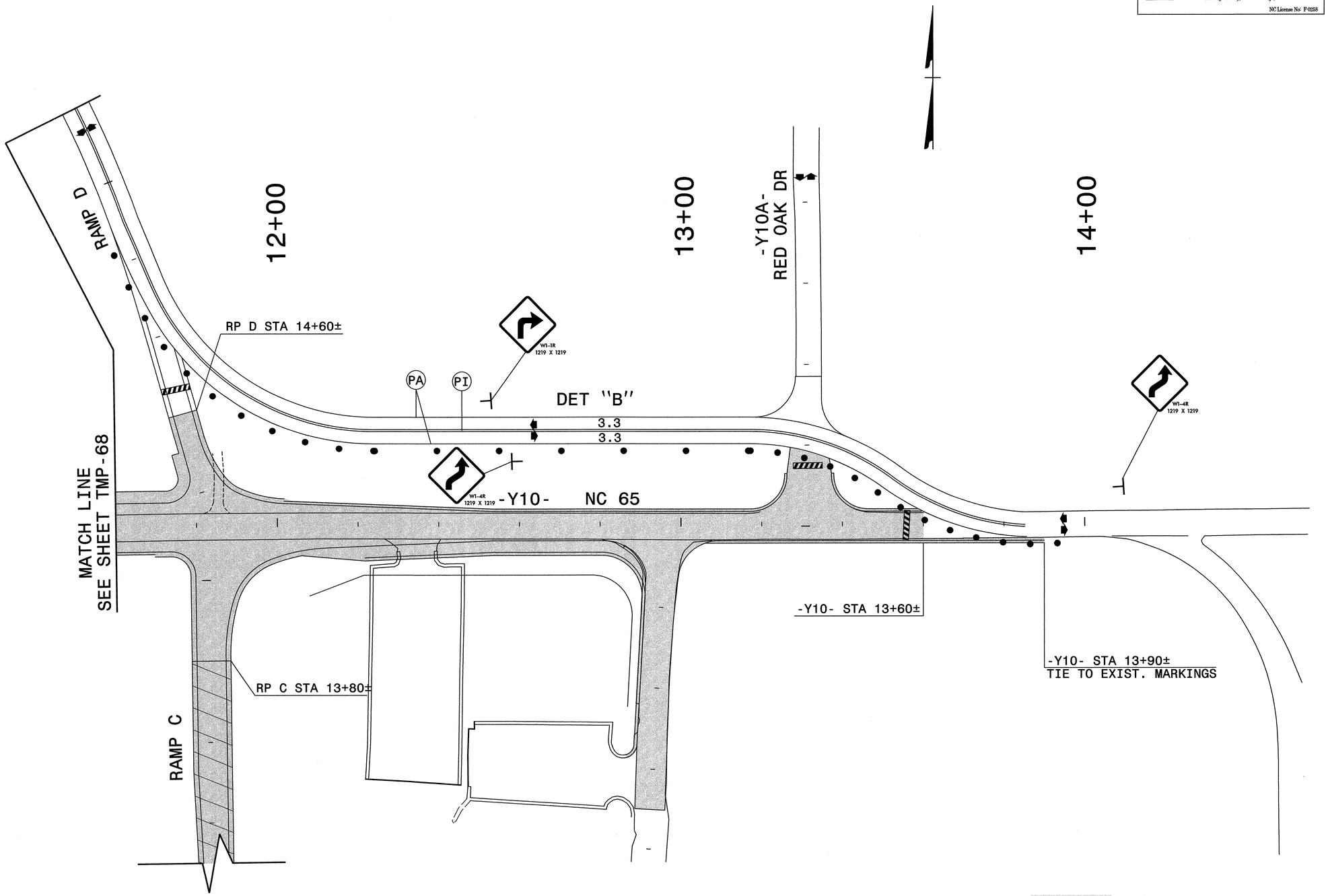
SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DESIGN UNIT

REVISIONS	
CADD FILE	

8/31/2011
R:\TrafficControl\25\r2413c_top_pl_s3_dtl_27.dgn
Florence & Hutcheson

METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO. R-2413C	SHEET NO. TMP-76



APPROVED: Michael T Kiepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T KIEPKA

PHASE I, STEP 3 DETAIL

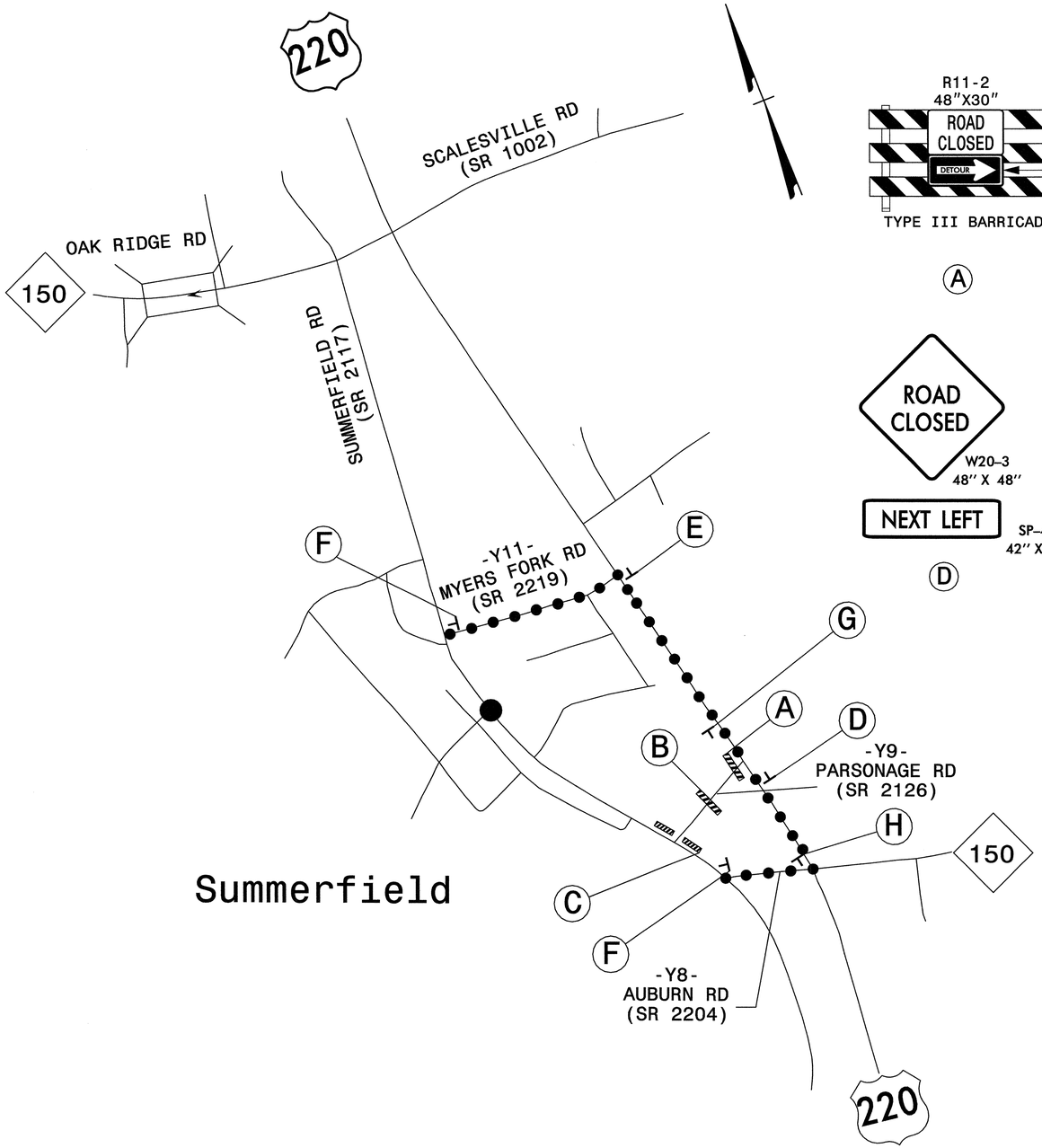
SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

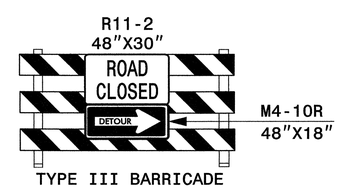
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING & SAFETY SYSTEMS UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25\Vr2413c_top_pl_s3_dtl_28.dgn
Florence & Hutcheson

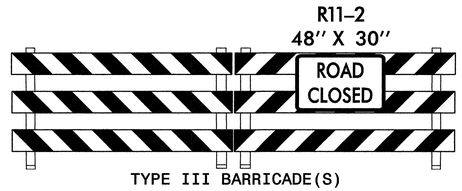
Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	R-2309AB	TMP-77





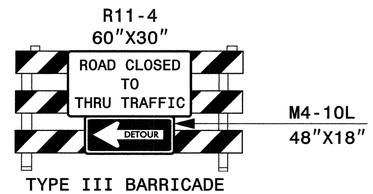
TYPE III BARRICADE

(A)



TYPE III BARRICADE(S)

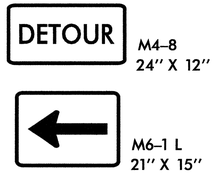
(B)



TYPE III BARRICADE

(C)

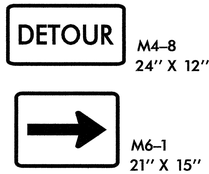
(D)



(E)

(F)

(G)



(H)

SIGN NUMBER: name
TYPE: D
QUANTITY: 1
SIGN WIDTH: 5'-0"
HEIGHT: 2'-6"
TOTAL AREA: 12.5 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0..50"
WIDTH: 0.75"
RADII: 1.875"
NO. Z BARS:
LENGTH:

BACKG COLOR: Orange
COPY COLOR: Black

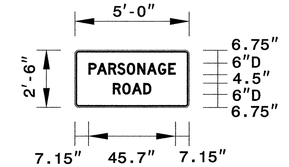
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1 & 2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange retroreflective sheeting.

DESIGN BY: GEP
PROJECT ID: R-2309AB
CHECKED BY:
DIV: 7
DATE: Aug 31, 2011



BORDER
R=1.875"
TH=0.75"
IN=0.50"

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

																										Series/Size Text Length
	P	A	R	S	O	N	A	G	E																	D 2000
	7.2	11.6	17.6	22.3	27.3	32.9	37.8	43.7	49.1																	45.7
	R	O	A	D																						D 2000
	20	24.9	30	36																						20.1

NORTH CAROLINA D.O.T. SIGN DETAIL

LEGEND

DETOUR ROUTES

TYPE III BARRICADE

POST MOUNTED SIGN

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

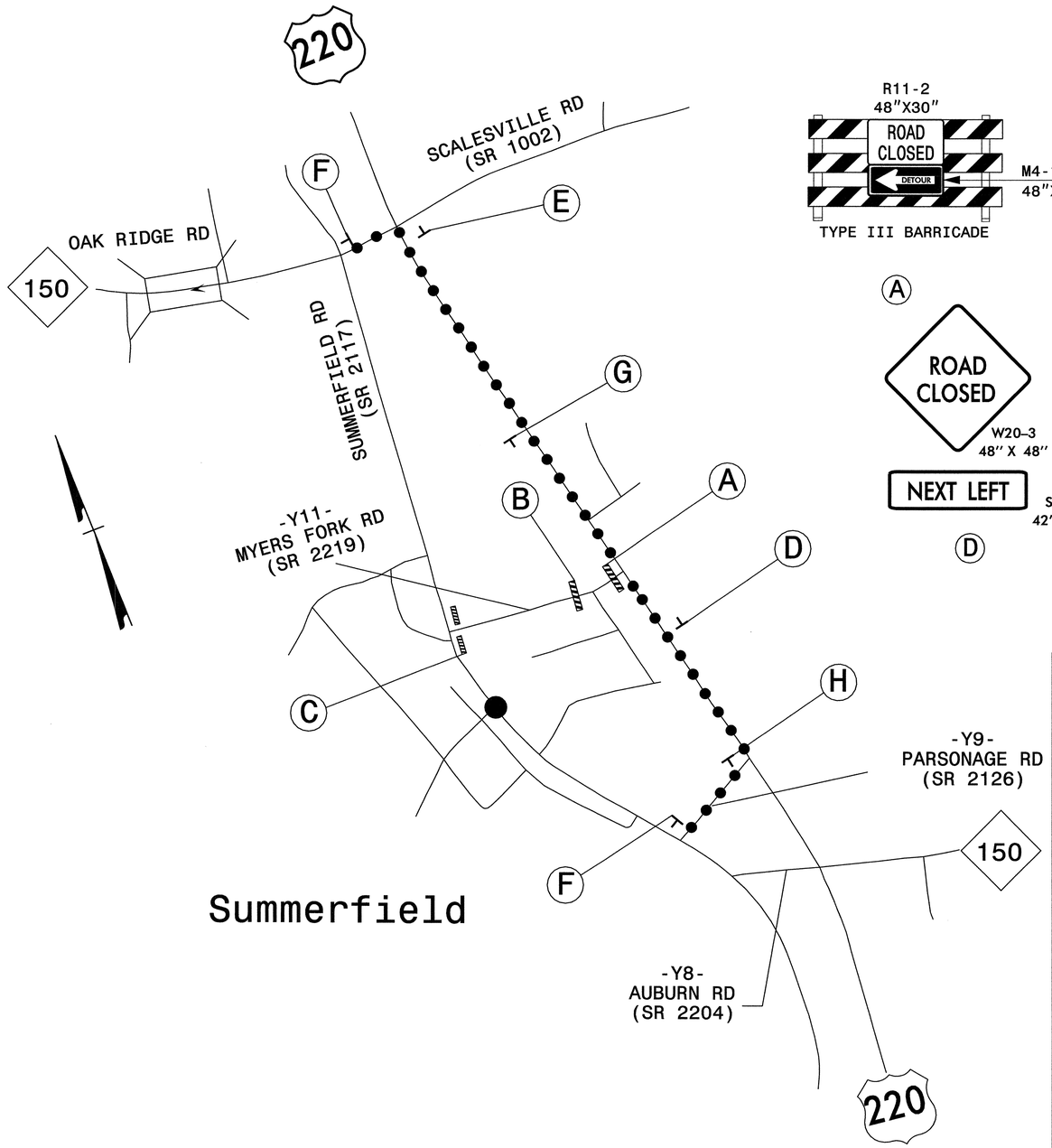
-Y9-
PARSONAGE RD (SR 2126)
DETOUR ROUTE

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

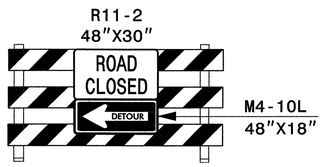
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	R-2309AB	TMP-78

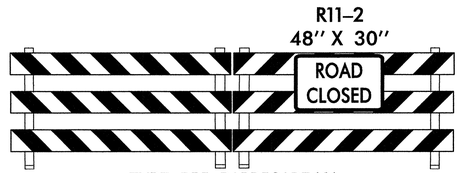


Summerfield



TYPE III BARRICADE

(A)



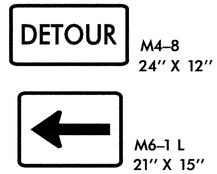
TYPE III BARRICADE(S)

(B)

TYPE III BARRICADE

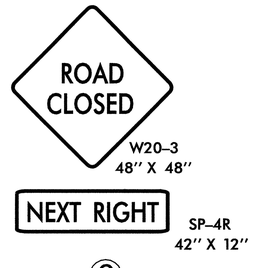
(C)

(D)

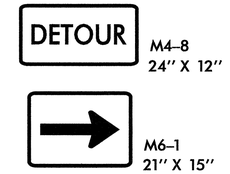


(E)

(F)



(G)



(H)

SIGN NUMBER: name
TYPE: D
QUANTITY: 1
SIGN WIDTH: 4'-0"
HEIGHT: 2'-6"
TOTAL AREA: 10.0 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.50"
WIDTH: 0.75"
RADII: 1.875"
NO. Z BARS:
LENGTH:

BACKG COLOR: Orange
COPY COLOR: Black

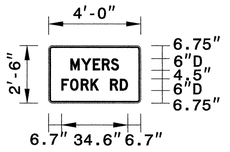
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1 & 2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange retroreflective sheeting.

DESIGN BY: GEP
PROJECT ID: R-2309AB
CHECKED BY:
DIV: 7
DATE: Aug 31, 2011



BORDER
R=1.875"
TH=0.75"
IN=0.50"

Panel Style: construction_guide.ssi
M.U.T.C.D.: 2003 Edition

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

																												Series/Size Text Length
	M	Y	E	R	S																							D 2000
	11.4	17	23.1	27.8	32.5																							25.1
	F	O	R	K		R	D																					D 2000
	6.7	11.2	16.8	21.9	26.1	32.1	37.2																					34.6

NORTH CAROLINA D.O.T. SIGN DETAIL

LEGEND

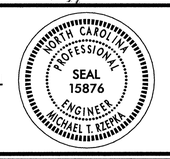
DETOUR ROUTES

TYPE III BARRICADE

POST MOUNTED SIGN

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL



-Y11-
MYERS FORK RD (SR 2214)
DETOUR ROUTE

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL

REVISIONS	
CADD FILE	

THE TRANSPORTATION MANAGEMENT PLAN WILL BE REVISED UPON SELECTION OF CONCRETE PAVEMENT OPTION BY THE CONTRACTOR.

PHASE II

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB/R-2413C	TMP-79

STEP 1A

USING RSD 1101.02 (SHEET 1 OF 9), PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS, REMOVE CONFLICTING PCB AND INSTALL PCB AS SHOWN FOR PHASE II, STEP 1A TRAFFIC PATTERNS AND SHIFT TRAFFIC TO THE FOLLOWING TEMPORARY PATTERNS:

FOR US 220 (2-LANE/2-WAY) (SEE SHEETS TMP- 89-94):
TEMPORARY WIDENING AND PROPOSED LEFT SIDE OF -L- LINE FROM -L- STA 210+00± TO STA 288+00±

FOR NC 150 (SEE SHEET TMP-89):
TEMPORARY PAVEMENT ON THE LEFT SIDE OF -Y8- FROM -L- TO -Y8- STA 15+00±

FOR US 220 (2-LANE/2-WAY) (SEE SHEETS TMP- 97-105):
-XOVRH- (M)
NB -L REV- STA 55+20± TO STA 76+00± (M)
-XOVRI- (M)

FOR US 220 ACCESS TO US 158 (SEE SHEET TMP-96):
-L REV- STA 47+50± TO STA 50+40±, (US 220 3-LANE SECTION) (M)
-XOVRO- (TEMPORARY US 158 RP A TIE AT -L REV- STA 49+20±) (M)
US 158 RP A FROM -L REV- TO -Y6- WIDENING (M)
(CLOSE TEMP. RP C TIE FROM US 158 RP C TO -Y6- WIDENING AT -Y6- STA 14+00±)

FOR NC 65 (WEST OF US 220) (SEE SHEETS TMP-101, 102 & 107):
-Y10- STA 6+64± TO STA 9+40± (M)
NC 65 RP B STA 11+80± TO -Y10- (M)
-XOVRK- (TEMPORARY TIE FROM NC 65 RP B TO PROPOSED NB LANES AT -L REV- STA 67+80±) (M)

FOR NC 65 (EAST OF US 220) (SEE SHEET TMP-103):
-XOVRP- (TEMPORARY TIE FROM NC 65 RP D TO PROPOSED NB LANES AT -L REV- STA 72+80±) (M)

AWAY FROM TRAFFIC/BEHIND BARRIER, BEGIN CONSTRUCTION OF THE FOLLOWING PROPOSED (SEE SHEETS TMP- 90-94, 97-105, 107 & 108):

-L- STA 221+00± TO STA 286+00± RT
SB -L REV- STA 52+40± TO STA 67+80± (M)
SB -L REV- STA 67+90± TO STA 83+60± (M)
US 158 RP D STA 13+80± TO STA 14+00± (M)
NC 65 RP A STA 14+40± TO -Y10- (M)
NC 65 RP A FROM -L REV- TO RP A STA 11+44± (M)
NC 65 RP B FROM -L REV- TO RP B STA 11+07± (M)
-Y10- (NC 65) STA 9+60± TO STA 10+34± (M)

USING ROAD CLOSURES AND UTILIZING RAMPS FOR ONSITE DETOUR, CLOSE US 158 FOR OVERHEAD GIRDER PLACEMENT FOR SB -L- STRUCTURE OVER US 158. WORK MUST BE COMPLETED IN STEP 1A (SEE GENERAL NOTE C).

USING ROAD CLOSURES, COMPLETE WORK REQUIRING US 158 ROAD CLOSURES FOR PROPOSED SB STRUCTURE OVER US 158. USE ON-SITE DETOUR, UTILIZING PROPOSED RAMP A AND EXISTING RAMPS B, C & D. (SEE GENERAL NOTE C).

BEHIND BARRIER BEGIN CONSTRUCTION OF REMAINING -Y10- (NC 65) STRUCTURE FROM STA 10+34± TO STA 10+65± (BENT #1) (M) (SEE SHEET TMP-102).

BEHIND BARRIER BEGIN CONSTRUCTION OF REMAINING CULVERT PORTIONS AT THE FOLLOWING LOCATIONS (SEE SHEETS TMP-91, 92 & 98):

-L- STA 247+00± PORTION RIGHT OF -L-
-L REV- STA 56+54± PORTION UNDER PROPOSED SB LANES (M)
-L REV- STA 57+46± PORTION UNDER PROPOSED SB LANES (M)

USING RSD 1101.02 (SHEET 1 OF 9), BEGIN CONSTRUCTION OF THE FOLLOWING (SEE SHEETS TMP-89, 94, 100, 103, 106 & 108):

-L- STA 209+17± TO STA 215+00± RT
-L- STA 217+50± TO STA 221+00± RT
-Y12- (SCALESVILLE RD.) FROM -L- TO -Y12- STA 13+50± LT & RT WEDGE AND WIDEN
-XOVRJ- (TEMPORARY TIE ACROSS MEDIAN FROM SB -L REV- STA 62+88± TO NB -L REV- STA 65+16±) (M)
TEMPORARY TIE ACROSS MEDIAN AT -L REV- STA 72+90± (M)
-Y10- (NC 65) STA 6+64± TO STA 7+60± LEFT SHOULDER (M)
-Y19- TURNAROUND (M)
-Y19R- (SYLVANIA RD.) FROM -Y10- (NC 65) TO -Y19R- STA 10+40± (M)

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT THE FOLLOWING (SEE SHEET TMP-89):

-L- STA 215+00± TO STA 216+54± RT
-Y8- (NC 150) PROPOSED FROM -L- TO -Y8- STA 15+00± RT

STEP 1B

USING RSD 1101.02 (SHEET 1 & 6 OF 9), COMPLETE THE FOLLOWING (SEE SHEETS TMP-95, 106 & 107):

- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -Y6- AND RESTRIPE TEMPORARY RAMP C (-XOVRN-) FOR A TWO-LANE/TWO-WAY PATTERN ON RAMP C
- SHIFT TRAFFIC TO THE FOLLOWING TEMPORARY PATTERNS:
  - -XOVRN- (TEMPORARY TIE FROM -Y6- STA 14+00± WIDENING TO EXISTING US 158 RAMP C) (M)
  - -Y6- (US 158) STA 12+70± TO STA 15+80± (US 158 3-LANE SECTION) (M)
- CLOSE EXISTING RAMP B

AWAY FROM TRAFFIC AND USING RSD 1101.02 (SHEET 1 OF 9), BEGIN CONSTRUCTION OF THE FOLLOWING (SEE SHEET TMP-95 & 106):

SB -L REV- STA 44+40± TO STA 44+70± (M)
US 158 RP B STA 14+20± TO -Y6- (M)
-Y6- (US 158) STA 10+00± TO STA 11+80± RT (M)

STEP 2

USING RSD 1101.02 (SHEET 1 OF 9), PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND SHIFT -Y8- (NC 150) TRAFFIC TO PROPOSED RIGHT SIDE FROM -L- TO -Y8- STA 15+00± (SEE SHEET TMP-109).

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT THE FOLLOWING (SEE SHEET TMP-109):

-L- STA 216+54± TO STA 217+50± RT
-Y8- (NC 150) PROPOSED FROM -L- TO -Y8- STA 15+00± LT

COMPLETE CONSTRUCTION BEGUN PHASES I & II:

CULVERT AT -L- STA 56+35± PORTION LEFT OF -L-
REMAINING CULVERT PORTIONS UNDER PROPOSED SB LANES AT -L REV- STA 56+54± & -L REV- STA 57+46± (M)
-L- STA 41+50± TO STA 52+00± LT & RT
-L- STA 52+00± TO STA 57+00± LT
-L- STA 57+00± TO STA 95+89± LT
-L- STA 63+50± TO STA 69+50± RT (INCL. -Y1-, BRANDT LAKE COURT DR.)
-L- STA 75+00± TO STA 82+00± RT
-L- STA 84+00± TO STA 140+00± RT
-L- STA 143+16± TO STA 215+00± RT
-L- STA 217+50± TO STA 317+52± RT
SB -L REV 1- STA 16+09± TO STA 19+09± (M)
SB US 220 RAMP STA 19+01 TO STA 9+00± (INCLUDING STRUCTURE) (M)
SB -L REV- STA 25+72± TO STA 48+40± (INCL. SB STUCTURE OVER US 158) (M)
SB -L REV- STA 49+20± TO STA 67+80± (M)
SB -L REV- STA 67+90± TO STA 90+80± (M)
SB -L REV- STA 91+30± TO STA 94+05± (M)
-Y6- (US 158) STA 10+00± TO STA 11+80± RT (M)
-Y10- (NC 65) STA 9+60± TO STA 13+90± (INCLUDING STRUCTURE) (M)
-Y10- (NC 65) STA 6+64± TO STA 7+60± LEFT SHOULDER (M)
-Y19B- (M)
-Y19R- (SYLVANIA RD.) FROM -Y10- (NC 65) TO -Y19R- STA 12+95± (M)
-Y19- TURNAROUND (M)
-Y21- (SPOTSWOOD RD.) (M)
NB -L1 REV- STA 16+43± TO SB -L REV- (M)
US 158 RP A STA 13+80± TO -Y6- (M)
US 158 RP B (M)
NC 65 RP A (M)
NC 65 RP B FROM -L REV- TO RP B STA 11+07± (M)
NC 65 RP C STA 11+65± TO -Y10- (M)
NC 65 RP D STA 14+60± TO -Y10- (M)
-XOVRA- (M)
-XOVRM -(TIE FROM US 158 RP A TO PROPOSED SB LANES AT -L REV- STA 47+20±) (M)
-XOVRL- (TIE FROM US 158 RP B TO PROPOSED SB LANES AT -L REV- STA 42+80±) (M)
-XOVRJ- (TEMPORARY TIE ACROSS MEDIAN FROM SB -L REV- STA 62+88± TO NB -L REV- STA 65+11±) (M)
TEMPORARY TIE ACROSS MEDIAN AT -L REV- STA 72+90± (M)
-XOVRG- (TEMPORARY TIE FROM PROPOSED NB -L1 REV- TO EXISTING SB NC 68) (M)
-XOVRF- (MEDIAN CROSSOVER -L REV- STA 94+70± TO STA 97+00±) (M)

AWAY FROM TRAFFIC, INSTALL PCB ON COMPLETED -L- RIGHT SIDE ALONG MEDIAN FROM -L- STA 109+00± TO STA 126+50±.

STEP 3

3A. USING RSD 1101.02 (SHEET 1 OF 9) OR RSD 1101.04, INSTALL AND COVER ALL ROAD CLOSURE AND DETOUR SIGNING, AS SHOWN ON SHEET TMP-112.

NOTE: PHASE III, STEP 1 MAY BE COMPLETED SIMULTANEOUSLY WITH WORK PERFORMED IN PHASE II, STEP 3B.

COMPLETE THE WORK REQUIRED OF PHASE II, STEP 3B IN 30 CALENDAR DAYS. (SEE SPECIAL PROVISIONS AND LIQUIDATED DAMAGES)

3B. UNCOVER DETOUR SIGNS AND USING RSD 1101.03 (SHEETS 1 AND 2 OF 9), CLOSE EXISTING STRAWBERRY RD., BETWEEN US 220 (-Y6- STA 10+00±) AND -Y6- STA 14+60± (SEE SHEET TMP-110).

USING RSD 1101.02 (SHEET 2 OF 9), MODIFY PAVEMENT MARKING ON US 220 BETWEEN -L- STA 137+47± AND STA 153+45± AS SHOWN ON SHEETS TMP-110 AND TMP-111.

CONSTRUCT -Y6- (STRAWBERRY RD.) AND RIGHT SIDE OF -L- FROM -Y6- STA 10+00± TO STA 14+60± AND -L- STA 140+00± TO STA 143+16± (SEE SHEET TMP-110).

AWAY FROM TRAFFIC, PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON COMPLETED LEFT SIDE OF -L- FROM -L- STA 41+50± TO STA 80+00± AND COMPLETED RIGHT SIDE OF -L- FROM -L- STA 90+00± TO STA 317+52± WHICH CAN BE PLACED WITHOUT CONFLICTING EXISTING MARKINGS. (SEE SHEETS TMP-124 THRU TMP-144). PLACE PCB ALONG INTERIM LEFT EDGE LINE FROM -L- STA 168+00± TO STA 170+71± (SEE SHEET TMP-134).

USING RSD 1101.02 (SHEET 1 OF 9) OR RSD 1101.04, INSTALL AND COVER ALL ROAD CLOSURE AND DETOUR SIGNING, AS SHOWN ON SHEET TMP-167.

USING RSD 1101.02 (SHEET 1 OF 9), REMOVE CONFLICTING PCB, INSTALL PCB AS SHOWN FOR PHASE III, STEP 1 PATTERN AND IN A CONTINUOUS OPERATION SHIFT US 220 TRAFFIC ONTO THE COMPLETED LEFT SIDE OF -L- FROM -L- STA 41+50± TO STA 80+00±, TRANSITION FROM LEFT SIDE TO RIGHT SIDE BETWEEN -L- STA 80+00 AND STA 90+00±, AND RIGHT SIDE FROM -L- STA 90+00± TO STA 317+52±. (SEE SHEETS TMP-124 THRU TMP-144)

SIMULTANEOUSLY,

- COMPLETE PLACEMENT OF TEMPORARY PAVEMENT MARKINGS AND MARKERS.
- REOPEN -Y6- (STRAWBERRY RD.) TO TRAFFIC. (SEE SHEET TMP-131)
- CONSTRUCT A TEMPORARY TIE TO CONNECT EXISTING -Y7- (SUMMERFIELD RD.) TO COMPLETED RIGHT SIDE OF -L- (SEE SHEET TMP-134).

USING RSD 1101.02 (SHEET 1 OF 9), INSTALL PCB ALONG RIGHT EDGE LINE FROM -L- STA 53+00± TO STA 56+80± (SEE SHEET TMP-125).

APPROVED: Michael T Rzepka DATE: 1-12-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE II PHASING

SCALE:	NONE
DATE:	1-12
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER

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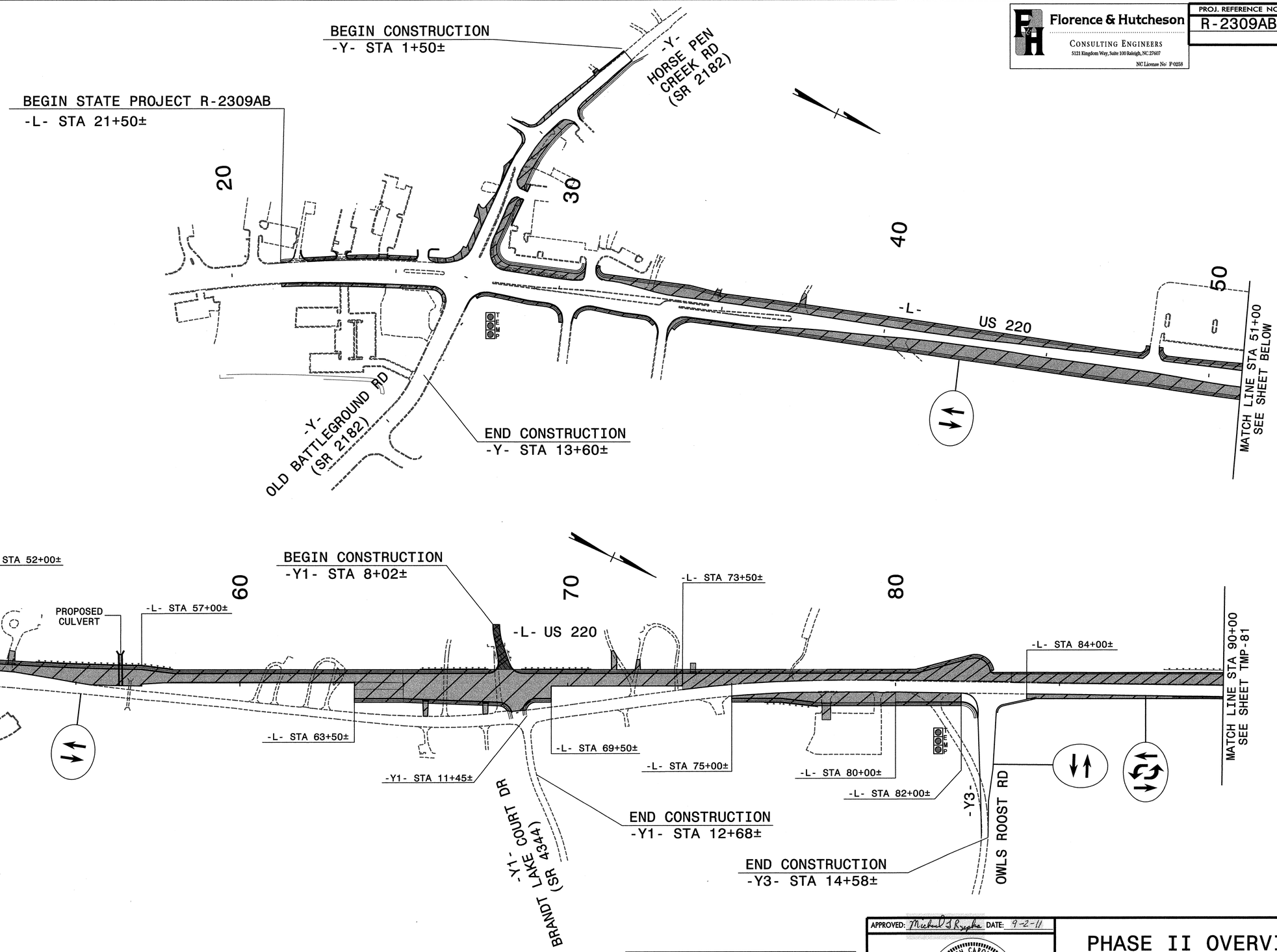
	R-2309AB	TMP-80



LEGEND

- PROPOSED CONSTRUCTION
- ONGOING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL UNIT

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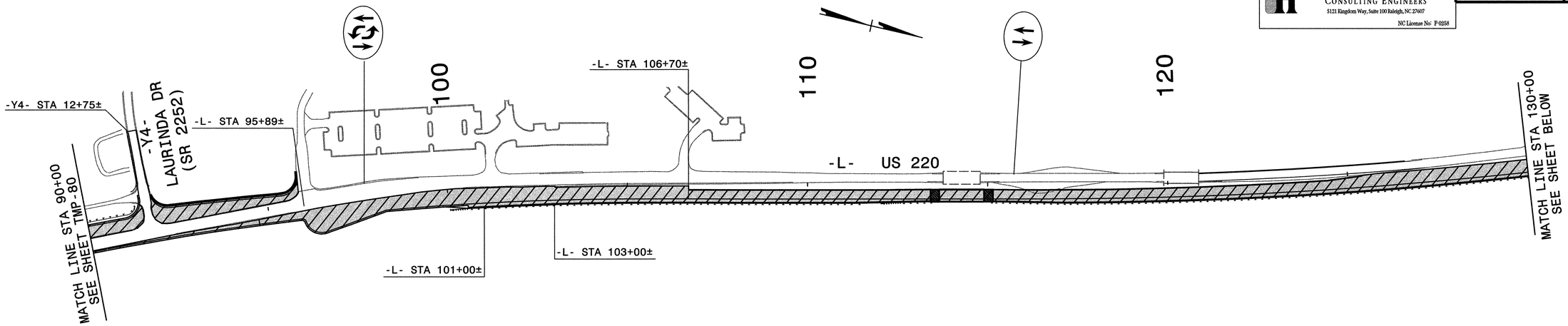
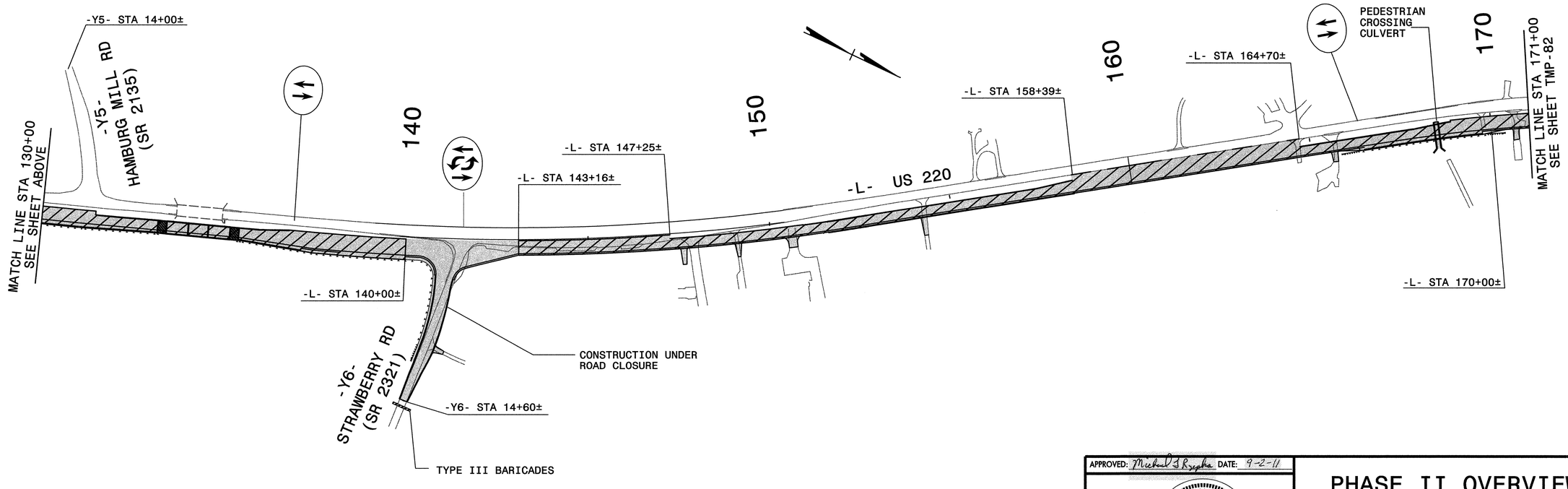
R-2309AB	TMP-81





LEGEND

PROPOSED CONSTRUCTION

ONGOING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II OVERVIEW

SCALE:	NONE
DATE:	8-11
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DESIGN BY:	GEP
REVIEWED BY:	MTR

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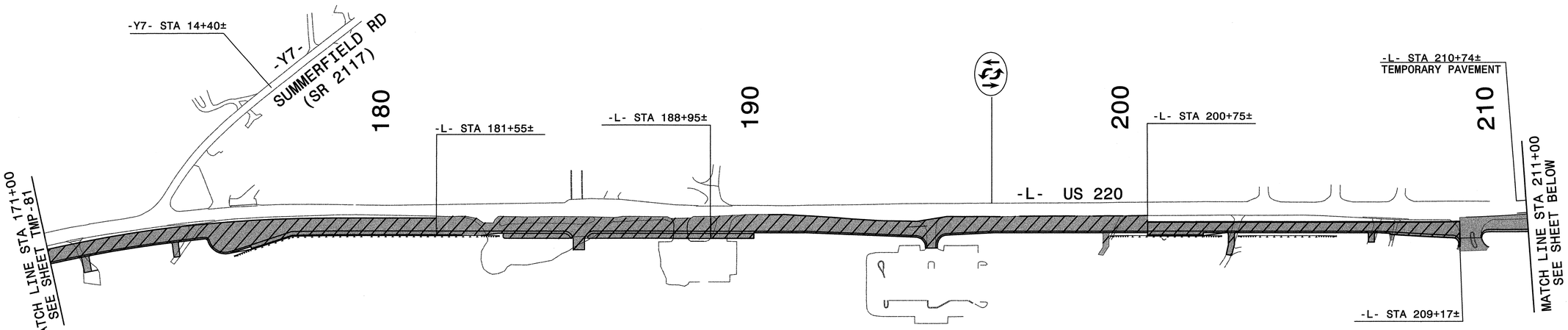
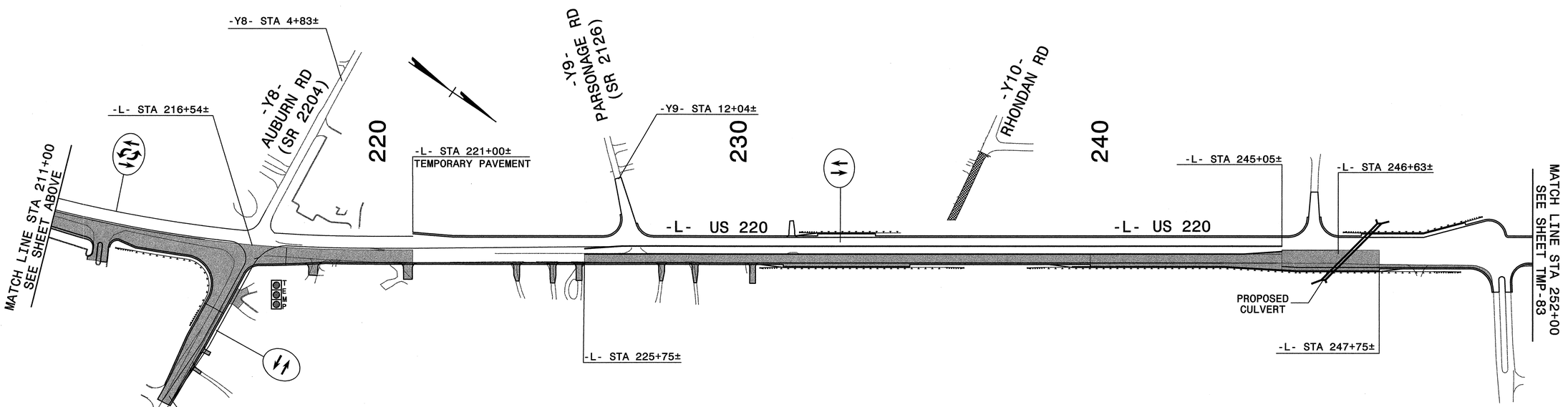
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-82





LEGEND

PROPOSED CONSTRUCTION

ONGOING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II OVERVIEW

SCALE:	NONE
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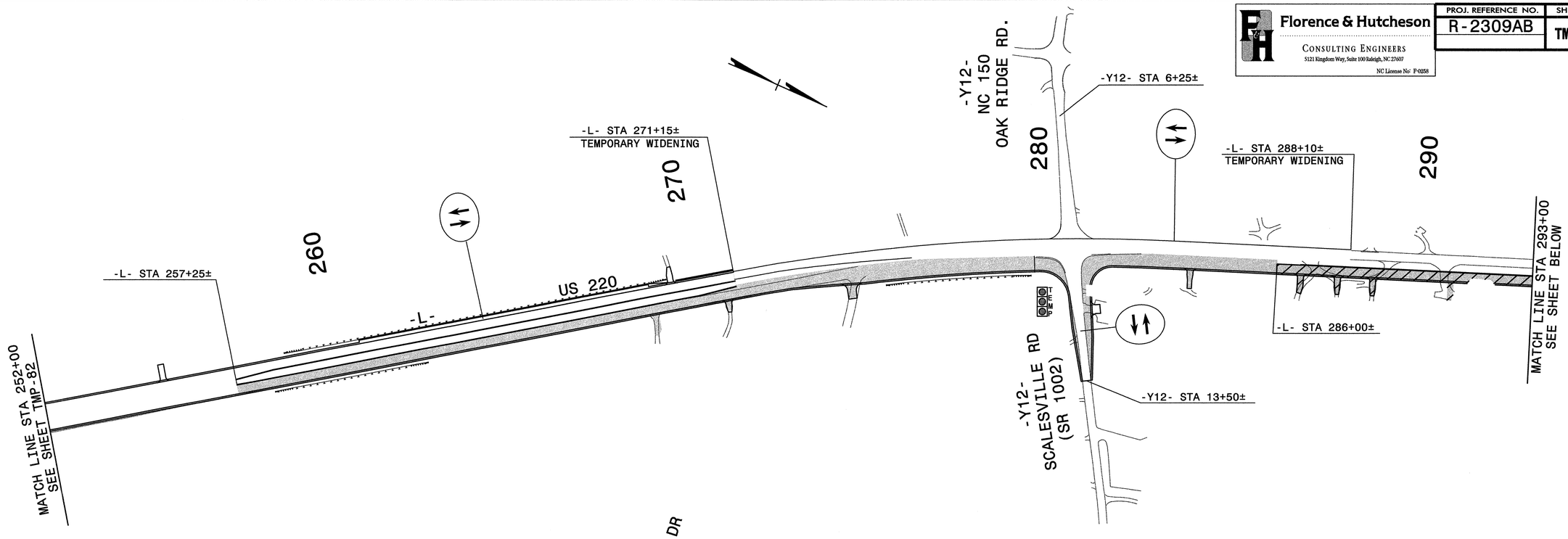
	R-2309AB	TMP-83



LEGEND

PROPOSED CONSTRUCTION

ONGOING CONSTRUCTION

APPROVED: Michael T. Reepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. REEPKA

PHASE II OVERVIEW

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
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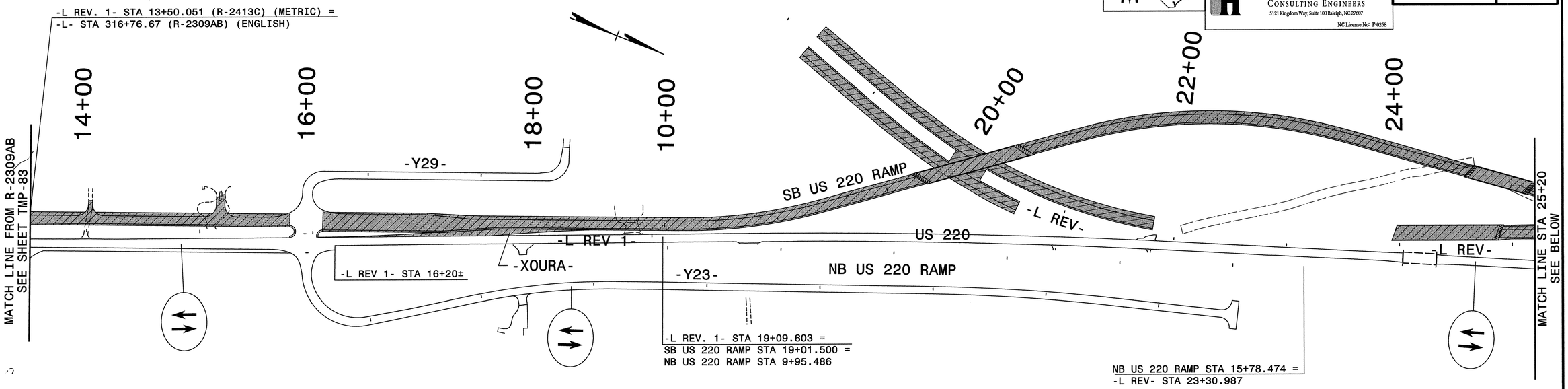
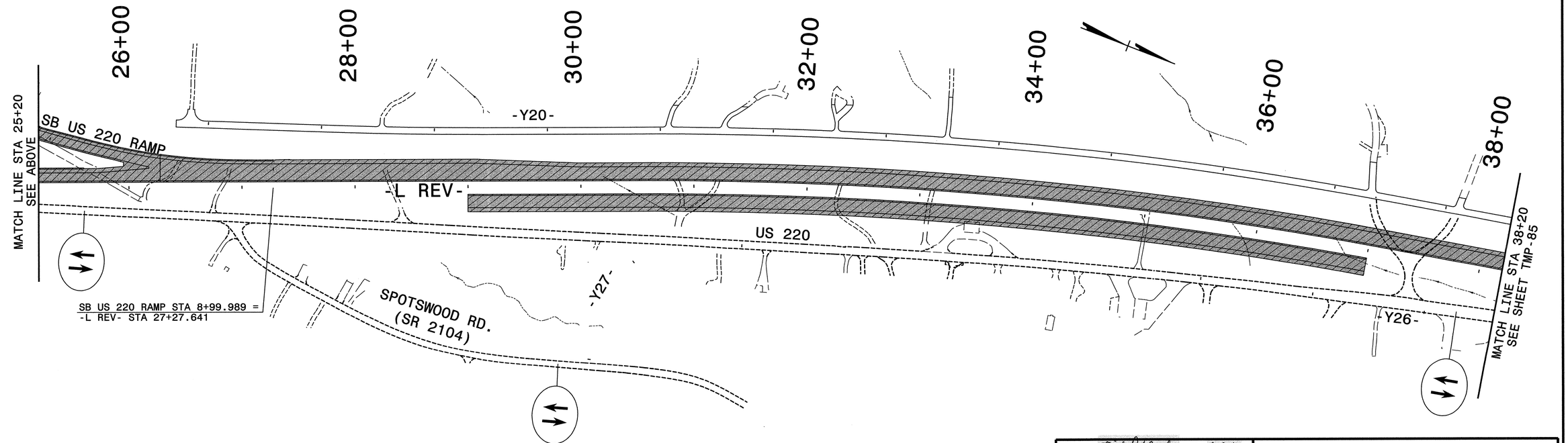
PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-84





APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

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PHASE II OVERVIEW

SCALE:	NONE
DATE:	8-11
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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-85

MATCH LINE STA 7+80
SEE THIS SHEET

-Y20-

-Y20- STA 27+20.442 AH=
-Y20-REV STA 27+20.315 BK

SPOTSWOOD RD.
(SR 2104)

US 158

-Y6- STA 10+00±

-Y6-

MATCH LINE STA 7+80
SEE THIS SHEET

-Y20- STA 22+49.280 BK=
-Y20-REV STA 22+49.280 AH

40+00

42+00

44+00

46+00

48+00

50+00

-Y24-

-Y20- REV

-Y20-

-Y6- STA 11+80±

-Y6-

-XOVRL-

-XOVRM-

RP A

MATCH LINE STA 38+20
SEE SHEET TMP-84

US 220

-L REV-

-XOVRO-

MATCH LINE STA 51+40
SEE SHEET TMP-86

-Y26-

-Y21-

RP C

T
E
M
P

RP D

-Y21-

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II OVERVIEW

SCALE:	NONE
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R-2413C	TMP-86

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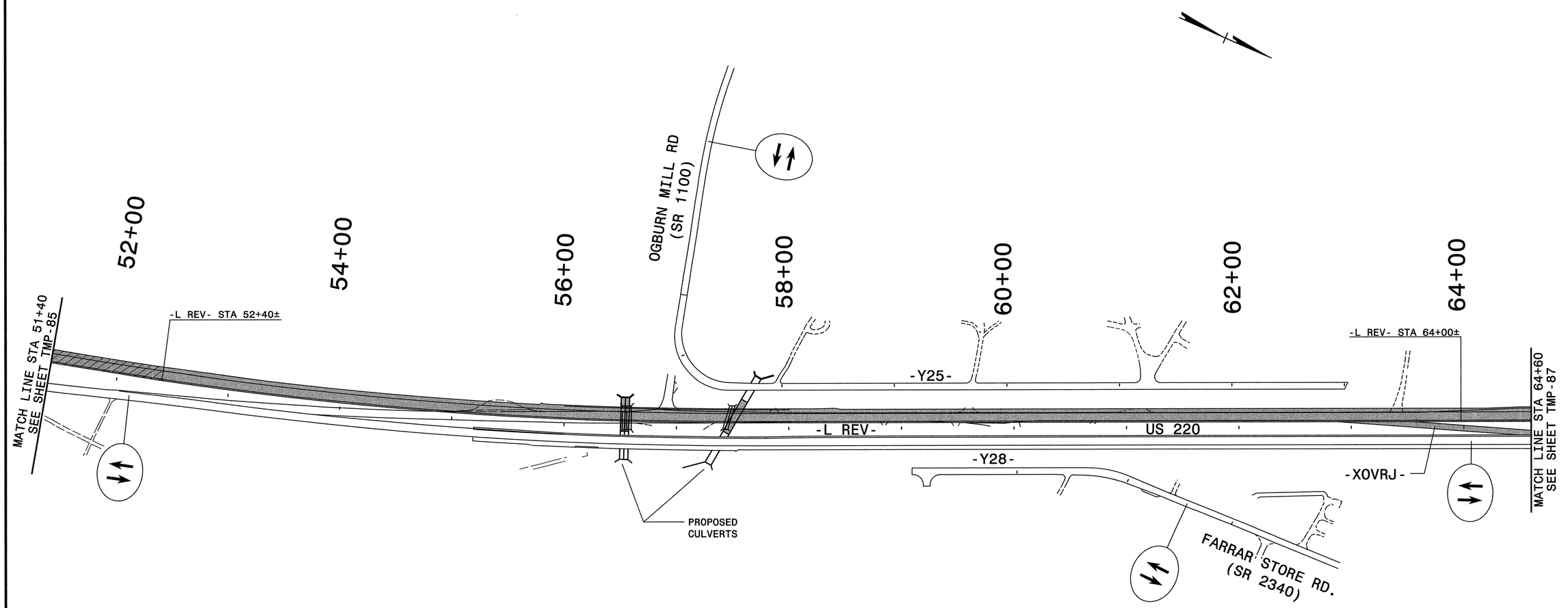

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SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II OVERVIEW

SCALE:	NONE
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DWG. BY:	GEP
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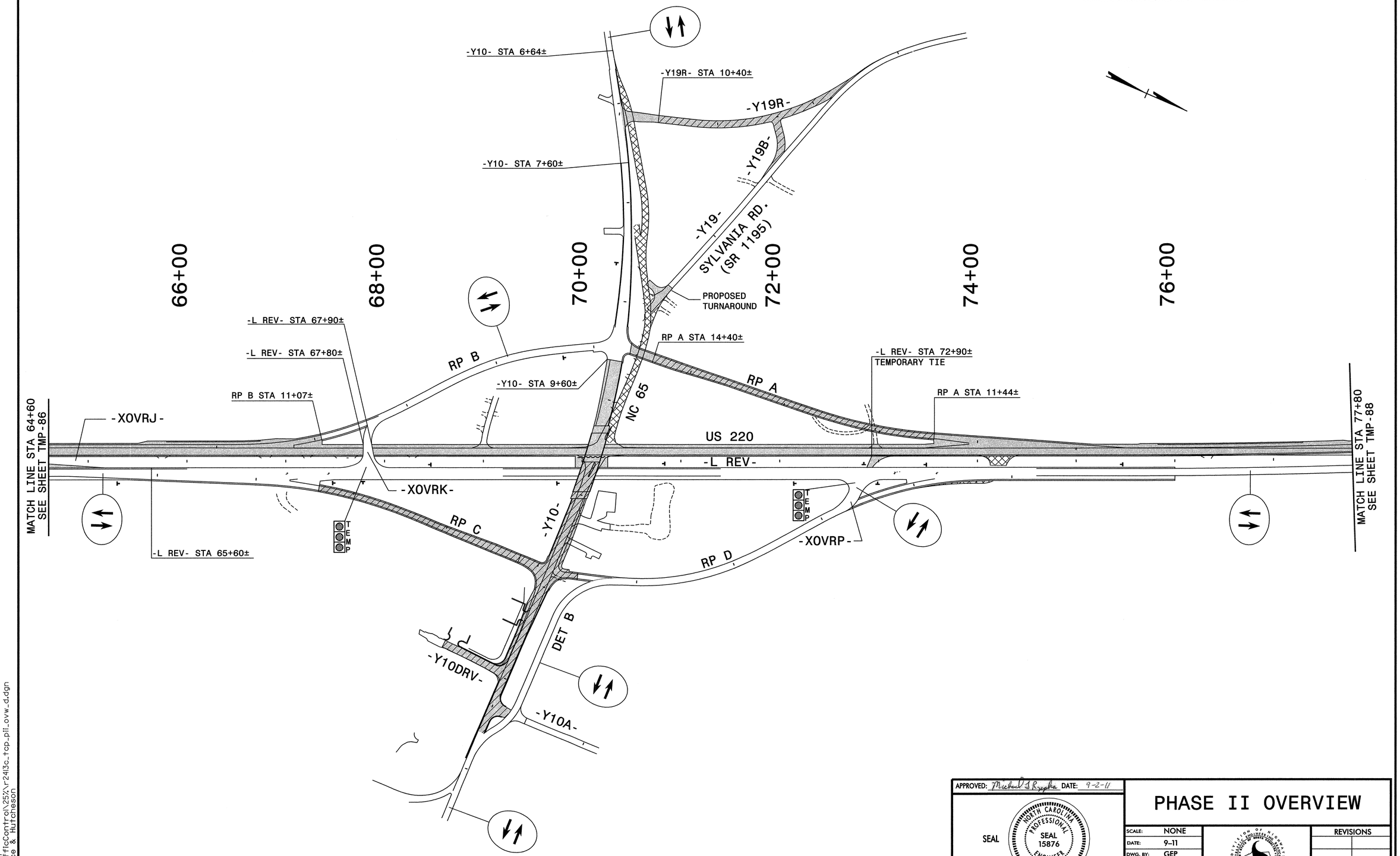

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SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II OVERVIEW

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DATE:	9-11
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R-2413C	TMP-88

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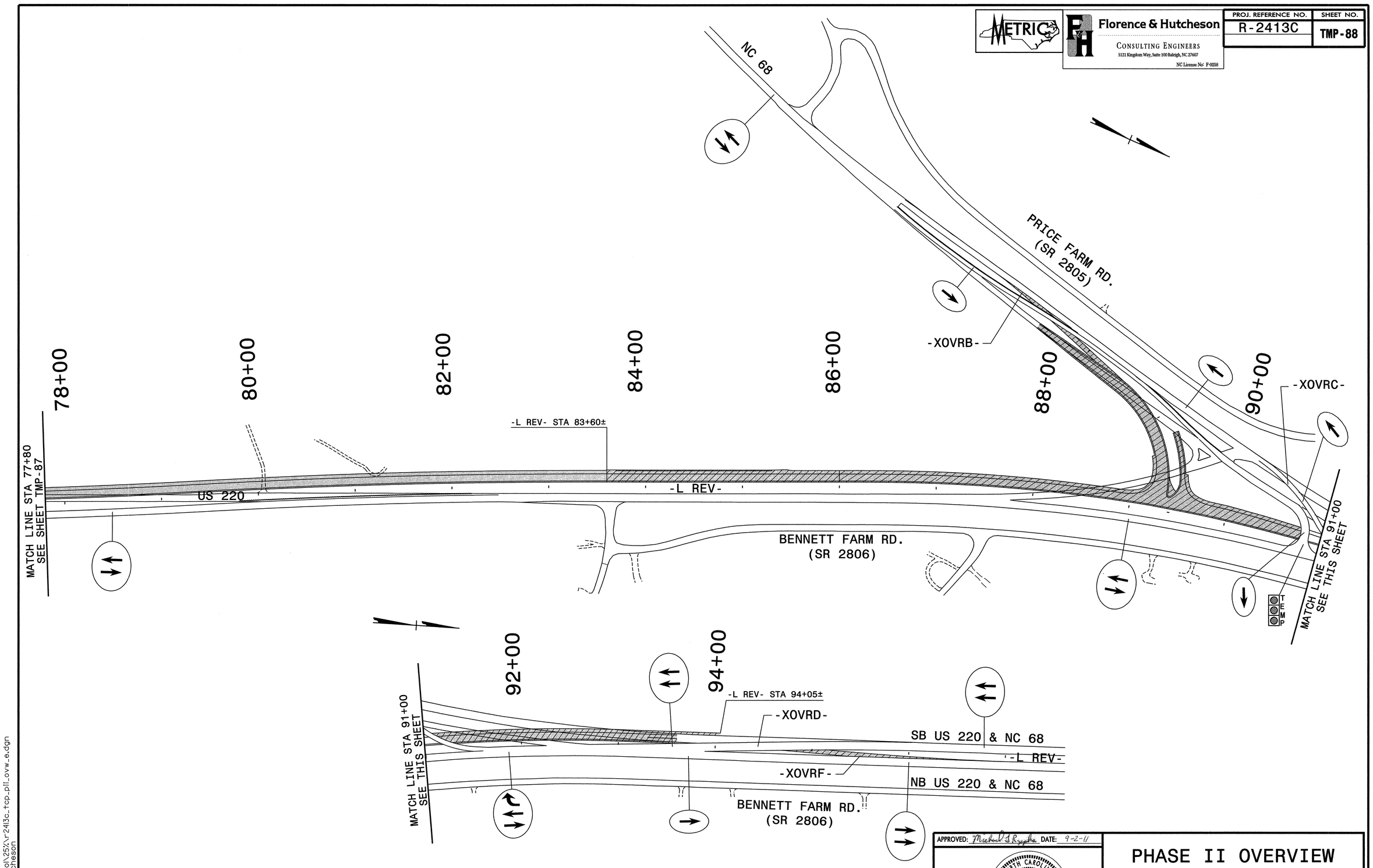

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II OVERVIEW

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-89

210

215

220

AUBURN RD (SR 2204) -Y8-

EXISTING MARKINGS

-L- STA 209+17±

-L- US 220

-L- STA 210+74±

-L- STA 213+23±

-L- STA 214+50±

-L- STA 215+00±

-L- STA 216+15±

-Y8- STA 9+39±

-L- STA 216+25±

-L- STA 217+16±

-L- STA 217+50±

-L- STA 218+69±

-L- STA 220+00±

-L- STA 221+00±

-Y8- STA 10+10±

TEMP

12' 12' 12'

MATCH LINE SEE SHEET TMP-90

11' 11' 11'

PA QA PF PH PD PI PE P4

A A

B B

-Y8- NC 150

-Y8- STA 15+00±

SECTION A-A

℄ -L-

2' SHOULDER

5' 3' 1:1

PROPOSED EDGE OF PAVEMENT

TEMPORARY PAVEMENT

EXIST. US 220

-L- STA 214+00±

SECTION B-B

2' SHOULDER

22' ℄ -Y8- 5' 3' 2:1

EXIST. NC 150

TEMPORARY PAVEMENT

-Y8- STA 12+00±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-90

225

230

-Y9- PARSONAGE RD (SR 2126)

-Y9- STA 12+04±
END CONSTRUCTION

C

-Y9- STA 10+75±

PI

-L- STA 227+80±

TEMPORARY TIE-IN

TEMPORARY TIE-IN

-L- US 220

P4

PF PH PA PV

50' TYP.

10' TYP.

12'
12'
12'

12'
12'

MATCH LINE
SEE SHEET TMP-89

MATCH LINE
SEE SHEET TMP-91

-L- STA 221+00±

-L- STA 226+40±

-L- STA 225+75±

C

SECTION C-C

℄ -L-

5'

3'

DRUM

EXIST. US 220

-L-
PROP. US 220 SB

-L- STA 224+00±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
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DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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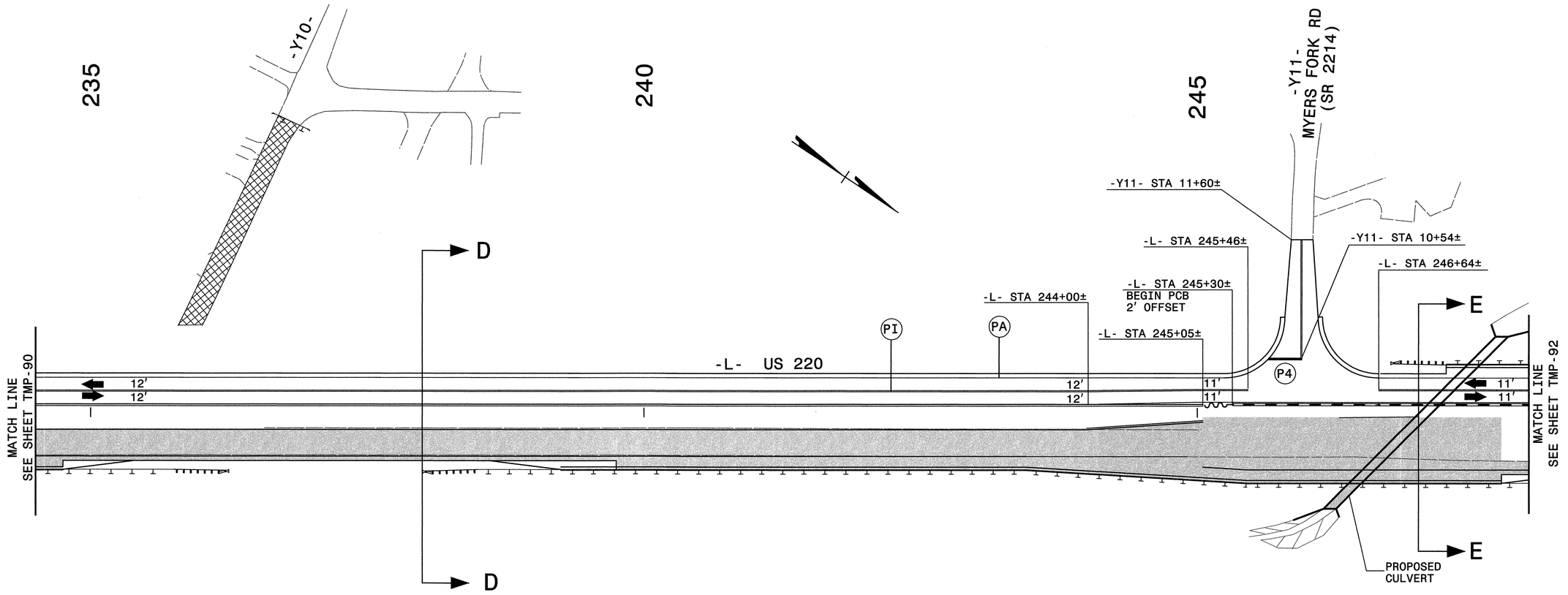
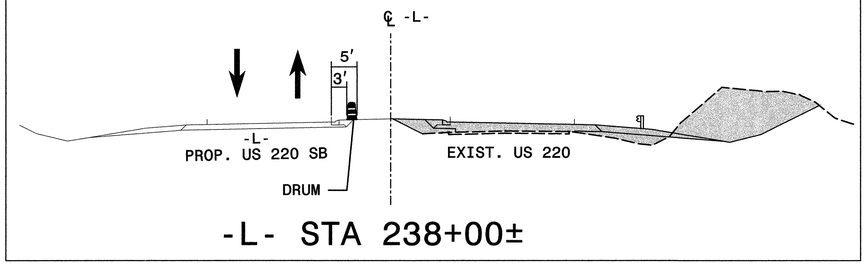
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-91

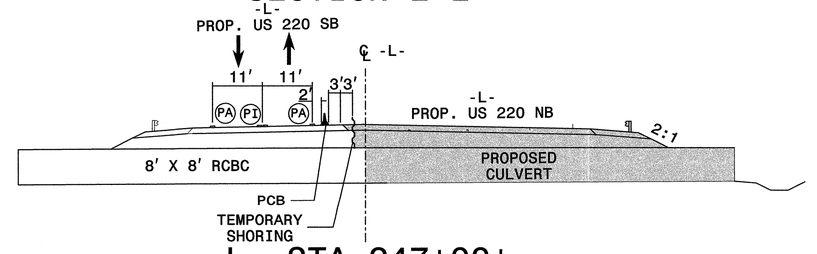


SECTION D-D



-L- STA 238+00±

SECTION E-E



-L- STA 247+00±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
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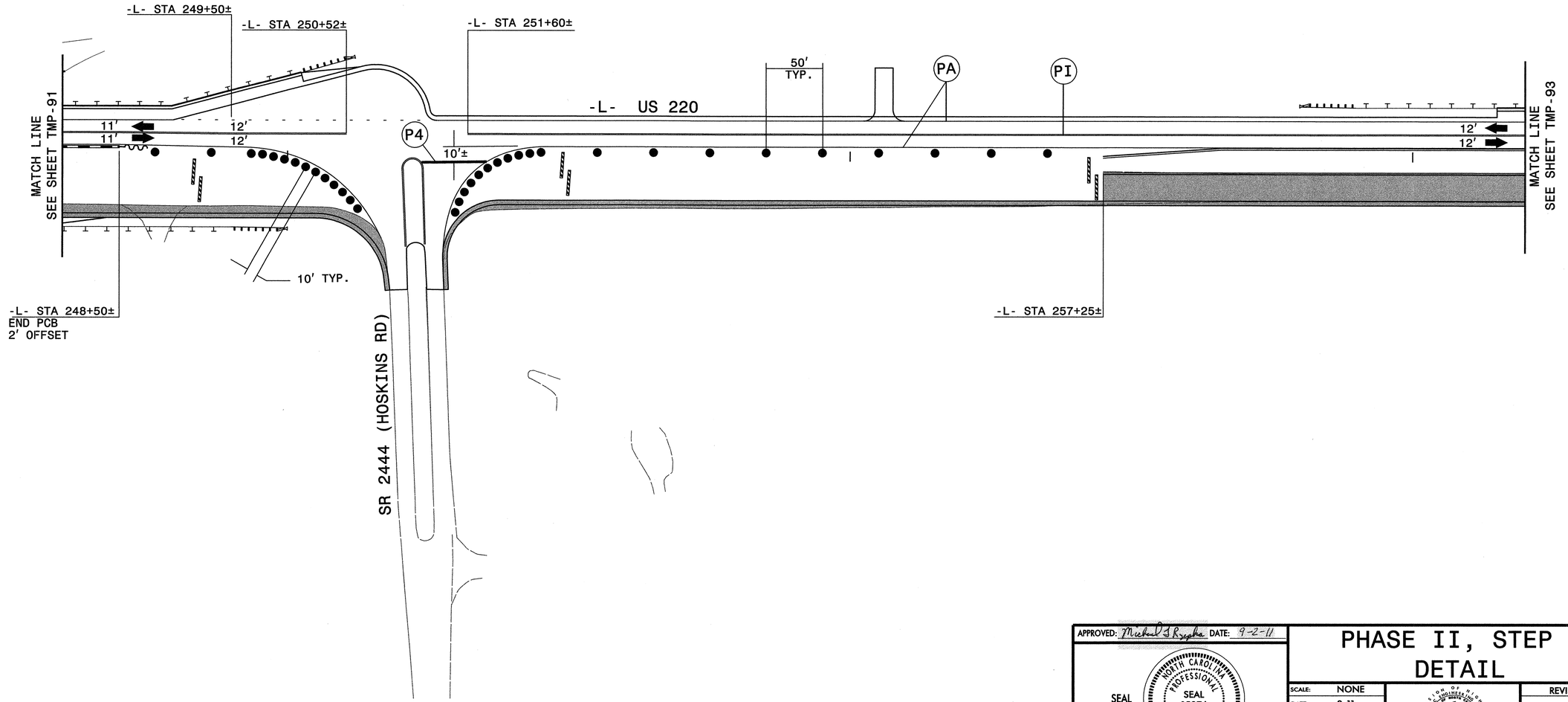
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-92

250

255

260



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
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DESIGN BY:	GEP
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DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER

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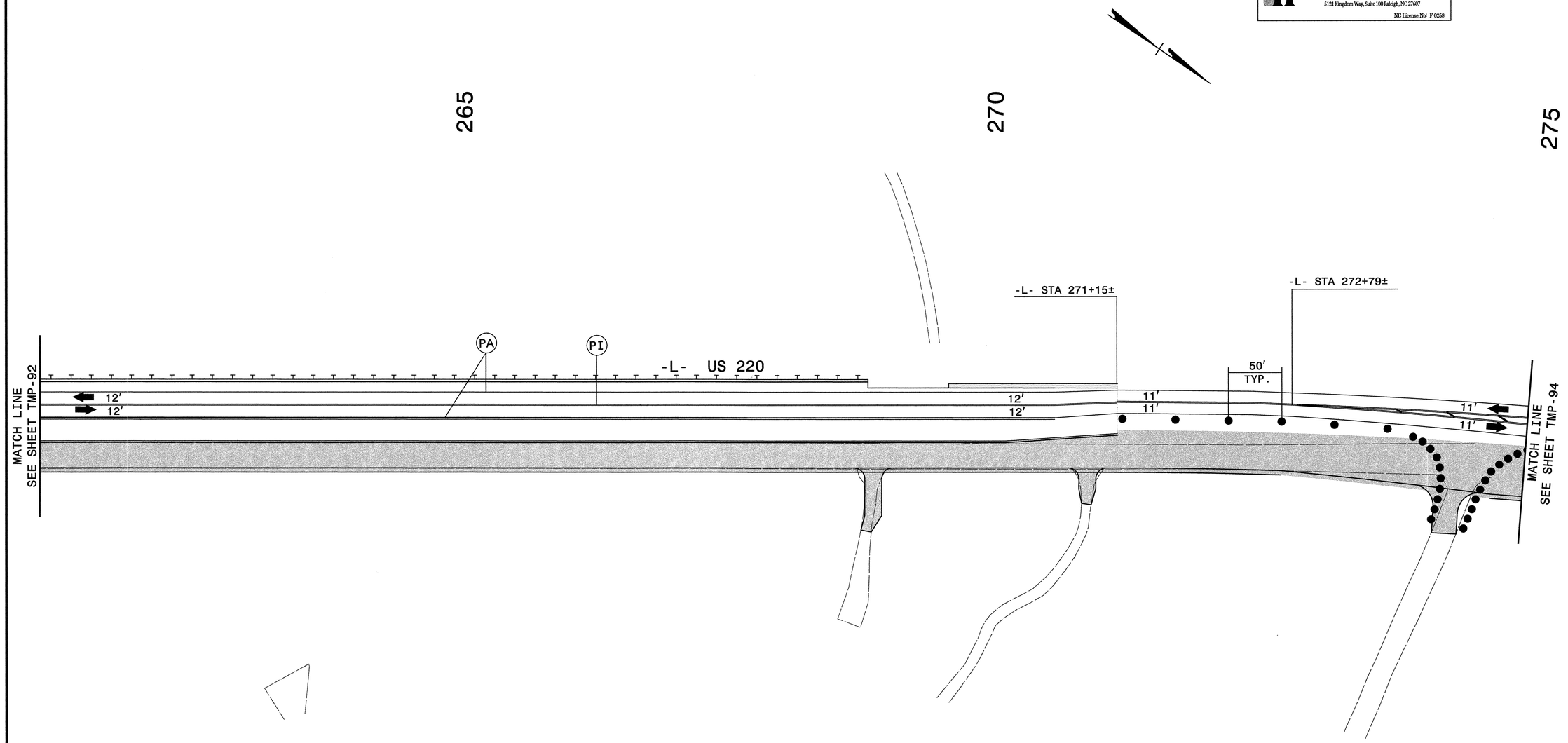
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-93



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
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DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-94

275

-Y12- STA 6+25±

-Y12- OAK RIDGE RD (NC 150)

-Y12- STA 8+28±

-L- STA 277+57±

-L- STA 277+24±

-Y12- STA 9+48±

-L- STA 279+84±

-Y12- STA 9+39±

-L- STA 280+88±

-L- STA 283+40±

-L- STA 284+47±

-L- STA 288+00±
TIE TO EXISTING MARKINGS

285

TEMP

PA PV PI PD QA PE P4

-L- US 220

11′ 11′

MATCH LINE
SEE SHEET TMP-93

-L- STA 276+19±

10′
TYP.

-L- US 220

50′
TYP.

-Y12- STA 10+21±

-Y12- STA 10+95±

-L- STA 286+00±

-Y12- STA 12+12±

-Y12- SCALESVILLE RD (SR 1002)

-Y12- STA 13+50±
END CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

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RAMP A

PA

PB

PD

EAST M3-2 610 X 305
158 M1-4
M6-1 L 533 X 381

WEST M3-4 610 X 305
158 M1-4
M6-1 533 X 381

RP A STA 14+20±

220 M1-4
M5-1 R 533 X 381

MATCH LINE
SEE SHEET TMP-106

-Y6- STA 12+70±
TIE TO EXIST. MARKINGS

46+00

-L REV- STA 46+00±

47+00

-XOVRM-

-L REV- STA 44+40±

44+00

-L REV- STA 44+70±

45+00

-L

PCB

US 158

PA

PROP. END
BENT #2

-LREV-

PR

P4

PE

US 220

-L REV- STA 44+79±

PA

PI

PV

-Y6-

T
E
M
P

PI

220 M1-4
M6-1 533 X 381

WEST M3-4 610 X 305
158 M1-4
M5-1 533 X 381

RAMP D

SOUTH M3-3 610 X 305
220 M1-4
M6-1 L 533 X 381

NORTH M3-1 610 X 305
220 M1-4
M6-1 533 X 381

MATCH LINE
SEE SHEET TMP-107

MATCH LINE
SEE SHEET TMP-96

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1
DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
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DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
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9/4/2011
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METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO. R-2413C	SHEET NO. TMP-96

48+00

49+00

50+00

MATCH LINE
SEE SHEET TMP-95

MATCH LINE
SEE SHEET TMP-97

RAMP A

-L REV- STA 48+40±

-L REV- STA 49+20±
-RP A- STA 10+80±

PB

PA

158
M1-4
M6-1
533 X 381

-XOVRO-

-LREV-

-L REV- STA 47+50±

-L REV- STA 48+50±

PA

QA

QB

PD

-L REV- STA 50+00±

3.6

3.6

3.6

US 220

PV

PI

PD

-L REV- STA 48+20±

PE

PV

PI

PA

RAMP D

WEST
M3-4
610 X 305

-L REV- STA 49+07±

158
M1-4
M6-1 L
533 X 381

-L REV- STA 49+40±

-L REV- STA 50+40±
TIE TO EXIST. MARKINGS

8/24/2011
R:\Traffic Control\25X\r2413c_tcp_p1l_dtl_ll.dgn
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APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
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DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-97

52+00

53+00

54+00

-L REV- STA 52+40±

F

PROP. SB LANES

MATCH LINE
SEE SHEET TMP-96

-L REV-

3.6
3.6

-XOVRH-

MATCH LINE
SEE SHEET TMP-98

US 220

PA

PI

F

-L REV- STA 52+04±

SECTION F-F

℄ -LREV-

℄ -XOVRH-

PROP. SHLD.

PROP. SHLD.

7.2

2.7±

7.2

SHLD.

2:1

US 220

PROP. SB LANES

STA 54+00±

APPROVED: Michael T Kozma DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T KOZMA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
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DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-98

METRIC

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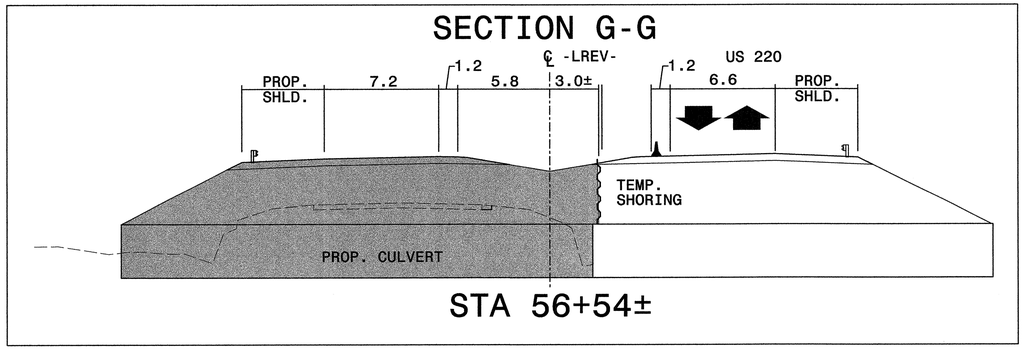

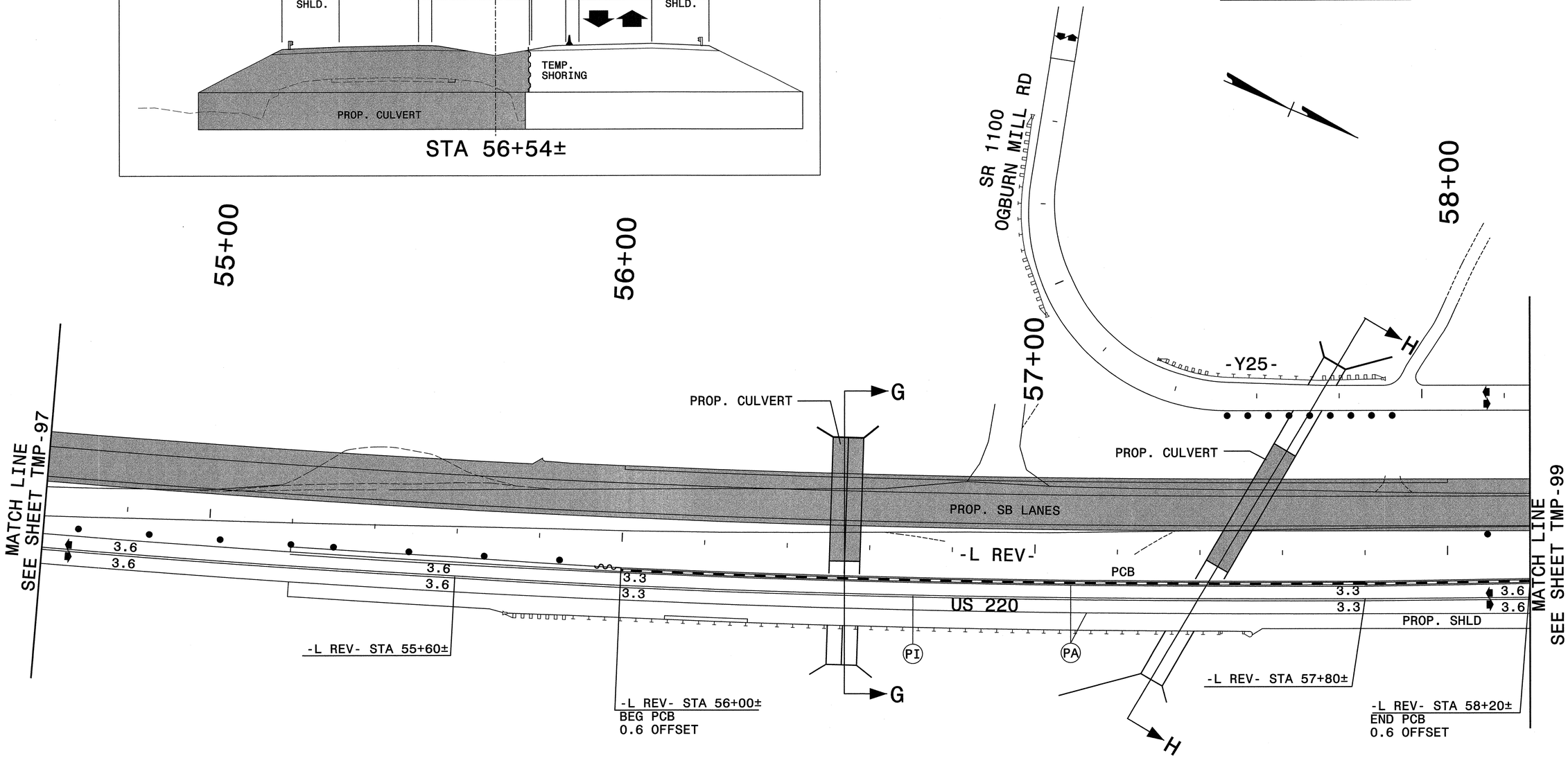

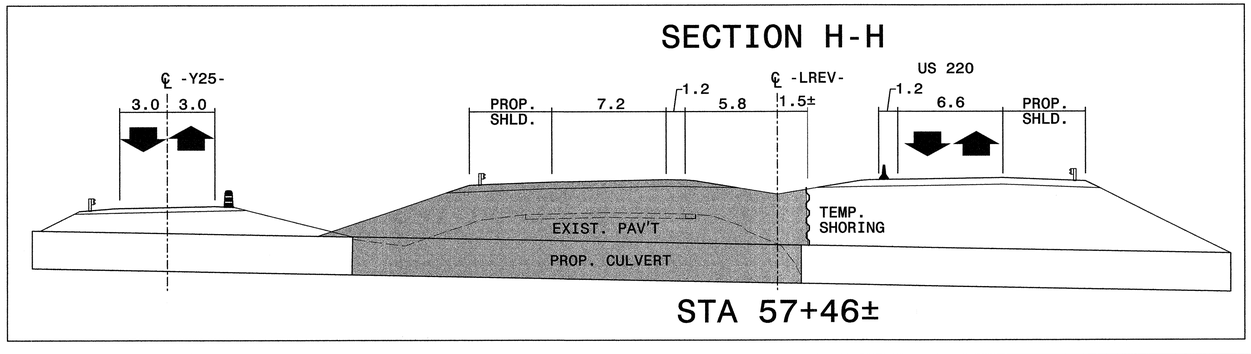

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1
DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-99

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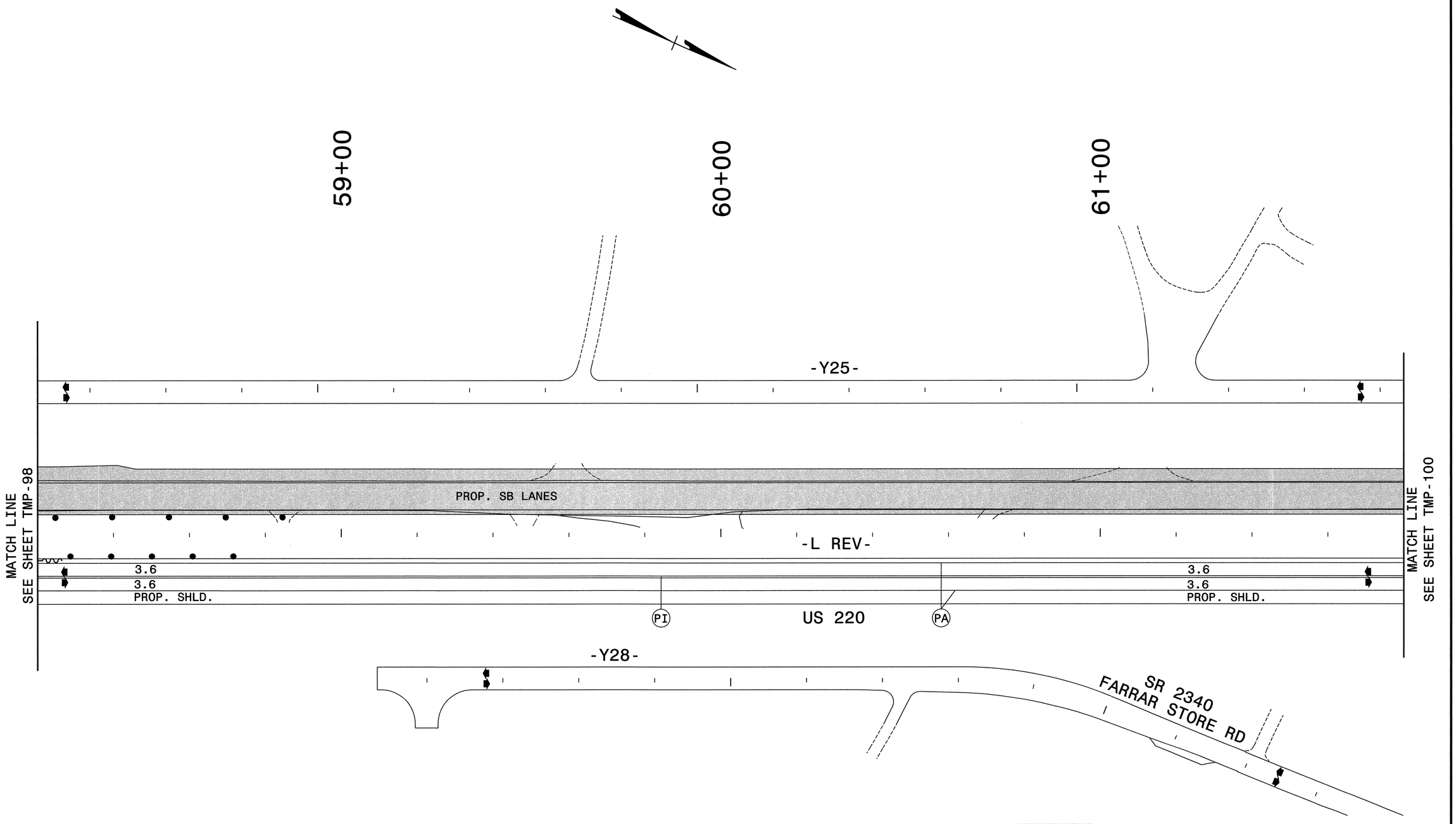

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
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TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-100

62+00

63+00

64+00

65+00

-Y25-

MATCH LINE
SEE SHEET TMP-99

-L REV- STA 62+88±
BEGIN TEMP. WIDENING

PROP. SB LANES

-L REV-

XOVRJ

3.6
3.6
PROP. SHLD.

US 220

3.6
3.6

PA

PI

PA

-L REV- STA 65+16±
END TEMP. WIDENING

MATCH LINE
SEE SHEET TMP-101

WEST
M3-4
610 X 305

65
M1-5

M5-1
533 X 381

SR 2340
FARRAR STORE RD

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
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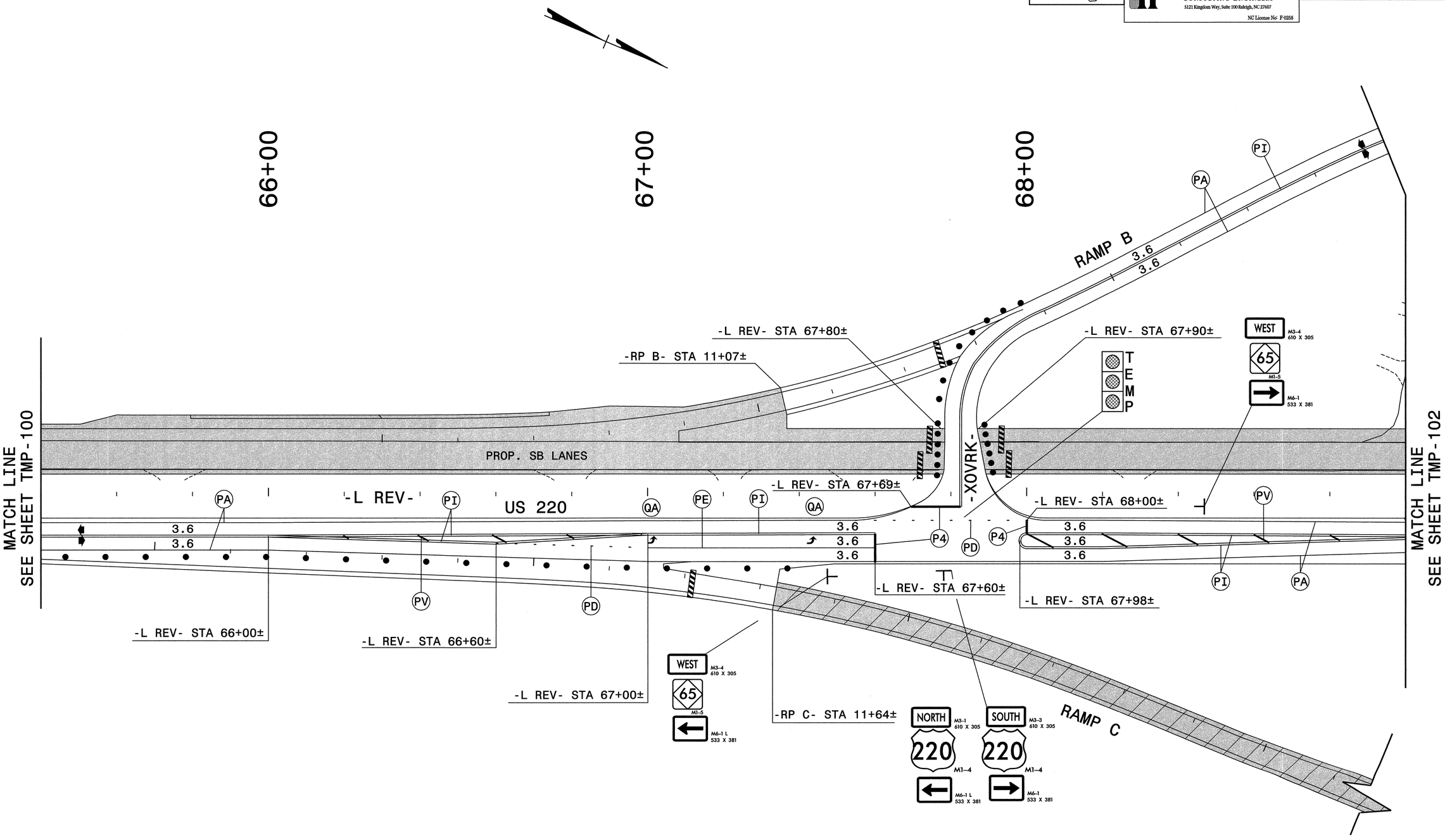

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
STATE TRAFFIC CONTROL UNIT

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-102

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RAMP B

PI

PA

W1-3L
1219 X 1219

MATCH LINE
SEE SHEET TMP-108

-Y10- STA 10+34±

-Y10- STA 10+65±

70+00

71+00

72+00

WEST
M3-4
610 X 305

65
M1-5

M5-1 R
533 X 381

I

PROP.
BENT #1

-L REV- STA 70+80±
END PCB
0.6 OFFSET

-L REV- STA 71+40±
BEGIN 100 TAPER

RAMP A

PROP. SB LANES

MATCH LINE
SEE SHEET TMP-101

PI

PA

3.6
3.6
PROP. SHLD.

PCB

US 220

-L REV-

PA

3.6
3.6
3.6

MATCH LINE
SEE SHEET TMP-103

-L REV- STA 69+20±

-L REV- STA 69+60±
BEG PCB
0.6 OFFSET

PV

PI

-L REV- STA 72+40±
END 100 TAPER

EAST
M3-2
610 X 305

65
M1-5

M5-1 R
533 X 381

I

NC 65

-Y10-

SECTION I-I

℄ -LREV-

PROP. GIRDERS

PROP. SHLD. | 7.2 | 1.2 | 5.8 | 5.8 | 1.2 | 7.2 | PROP. SHLD.

PROP. BENT #1

PCB

US 220

PROP. END BENT #1

PROP. END BENT #2

STA 70+09±

RAMP D

3.6
3.6

EAST
M3-2
610 X 305

65
M1-5

M6-1
533 X 381

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	9-11
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DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS

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73+00

74+00

75+00

76+00

SOUTH M3-3 610 X 305
220 M1-4
M6-1 L 533 X 381

NORTH M3-1 610 X 305
220 M1-4
M6-1 533 X 381

EAST M3-2 610 X 305
65 M1-5
M6-1 L 533 X 381

-RP A- STA 11+44±

-L REV- STA 74+00±

EAST M3-2 610 X 305
65 M1-5
M5-1 533 X 381

RAMP A

-L REV- STA 72+62±

MATCH LINE
SEE SHEET TMP-102

PROP. SB LANES

TEMPORARY TIE

PE QA -L REV- QA PD PV

US 220

PA

3.6
3.6
3.6

3.6
3.6
PROP. SHLD.

PD P4

PI

RAMP D

PI

PA

STOP
R1-1

-L REV- STA 73+00±

-XOVRQ-

-L REV- STA 73+60±
BEGIN 100 TAPER

-L REV- STA 72+60±
END 100 TAPER

-L REV- STA 76+00±

MATCH LINE
SEE SHEET TMP-104

APPROVED: Michael T. Ryczka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RYCZKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-104

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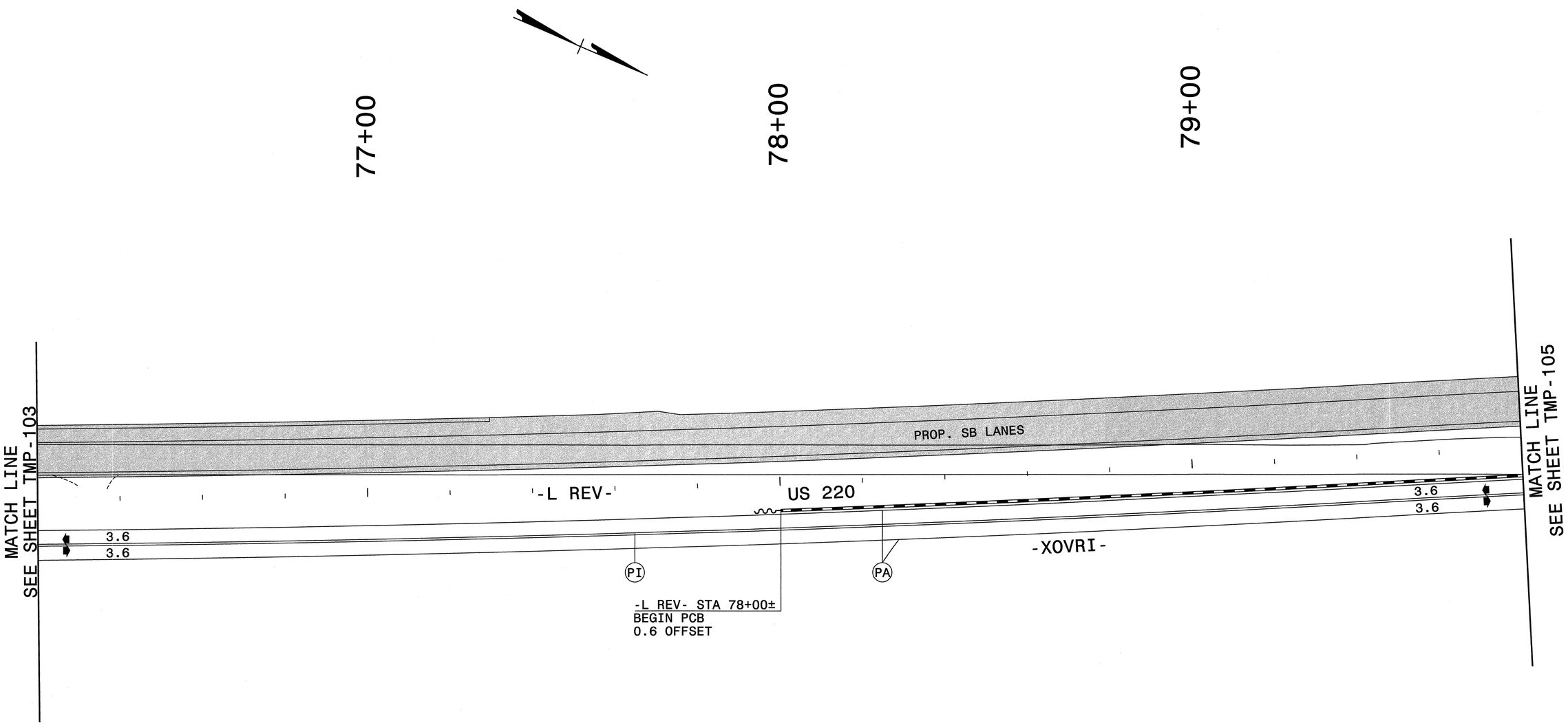


APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

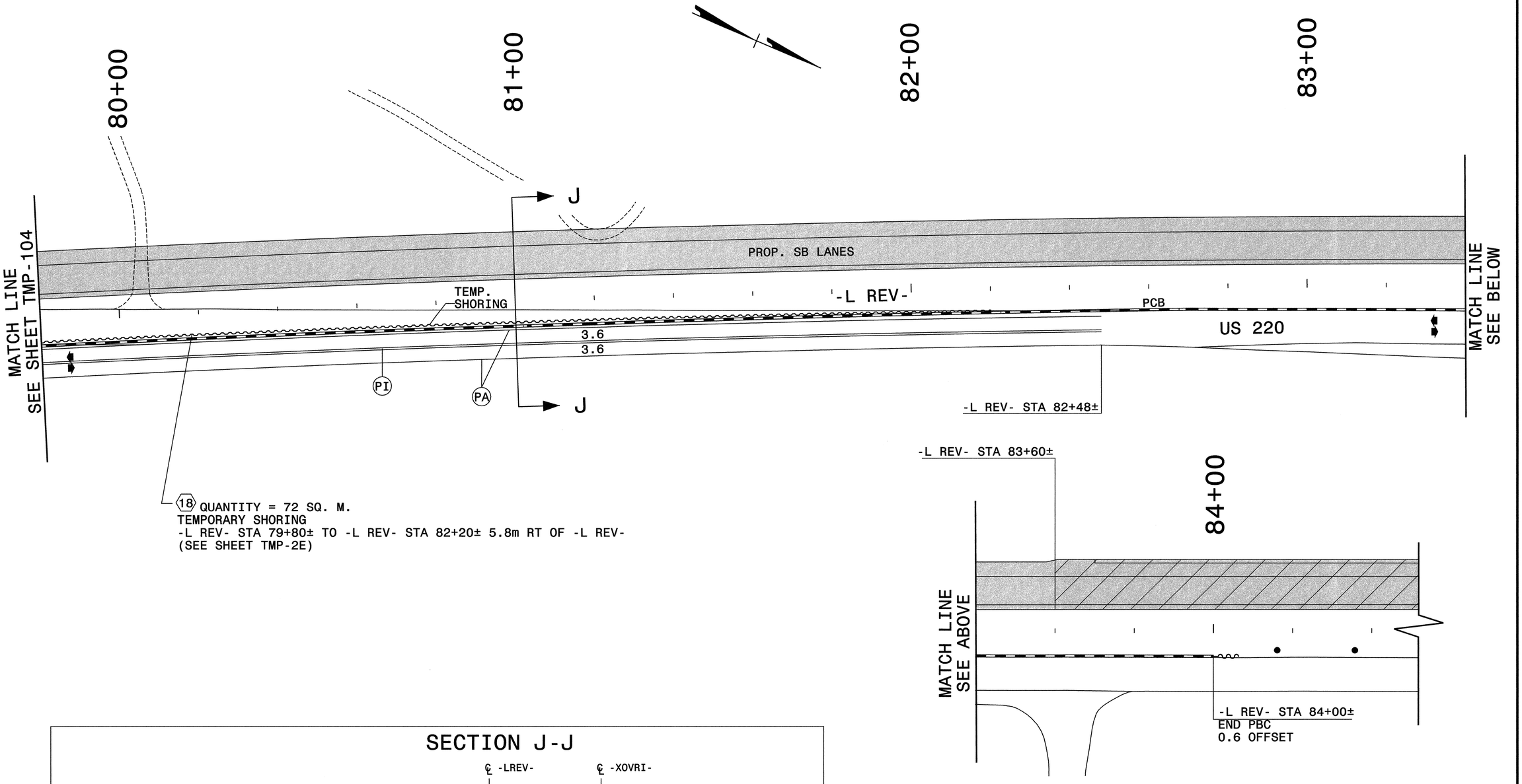
SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

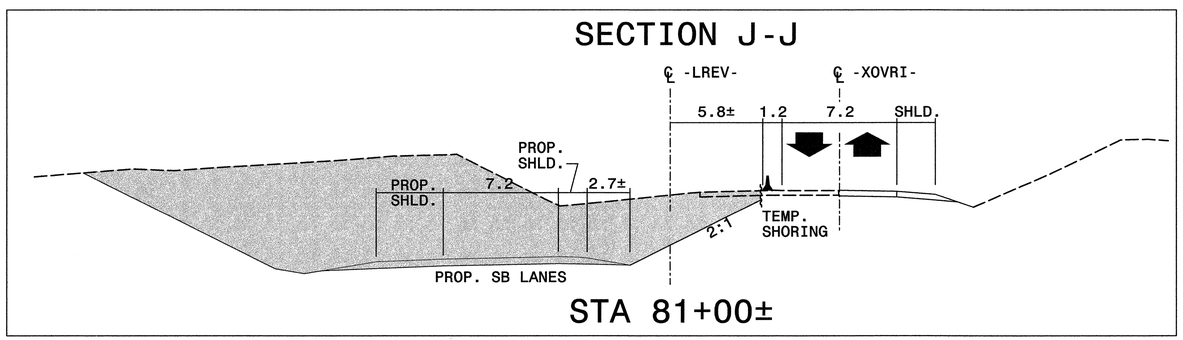
REVISIONS

CADD FILE

8/24/2011
R:\TrafficControl\25%\r2413c_tcp_pii_dtl_19.dgn
Florence & Hutcheson

METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
		R-2413C	TMP-105





APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

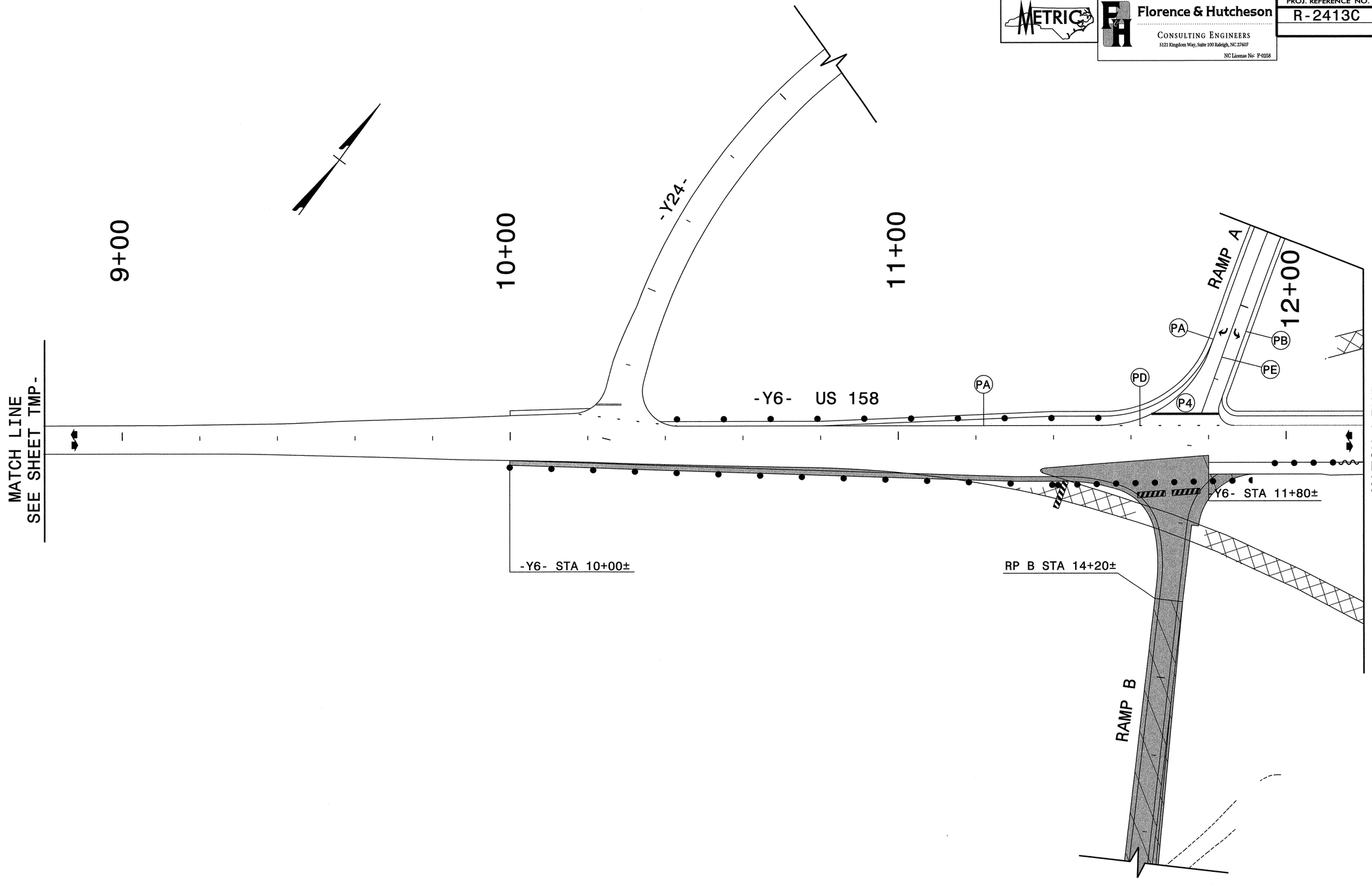
SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

9/3/2011
R:\Traffic Control\25X\r2413c_top_pll_dtl_20.dgn
Florence & Hutcheson

METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO. R-2413C	SHEET NO. TMP-106



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
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Florence & Hutcheson

METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
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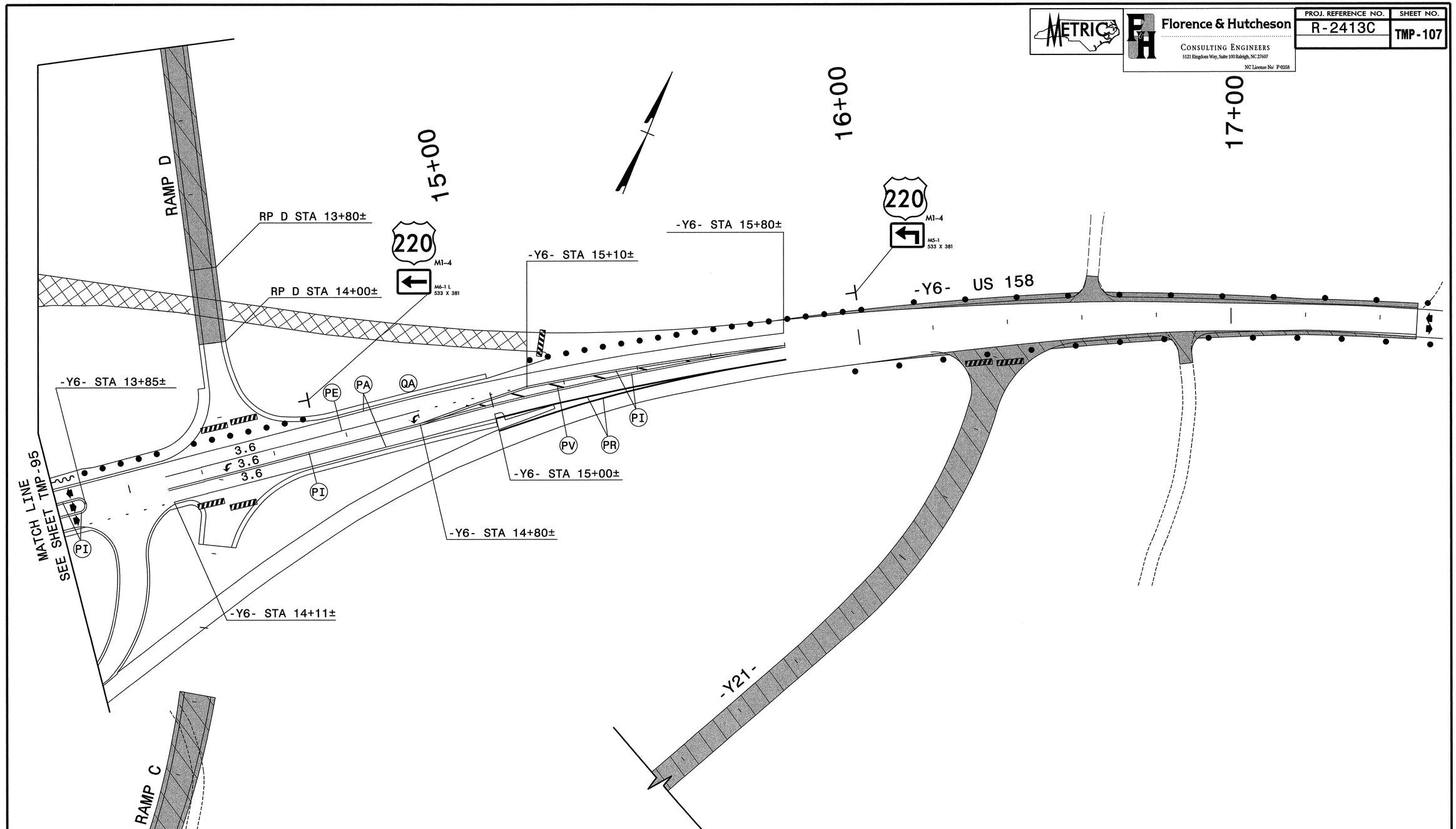


APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF ENGINEERING SERVICES · TRAFFIC ENGINEERING BRANCH · TRAFFIC CONTROL UNIT

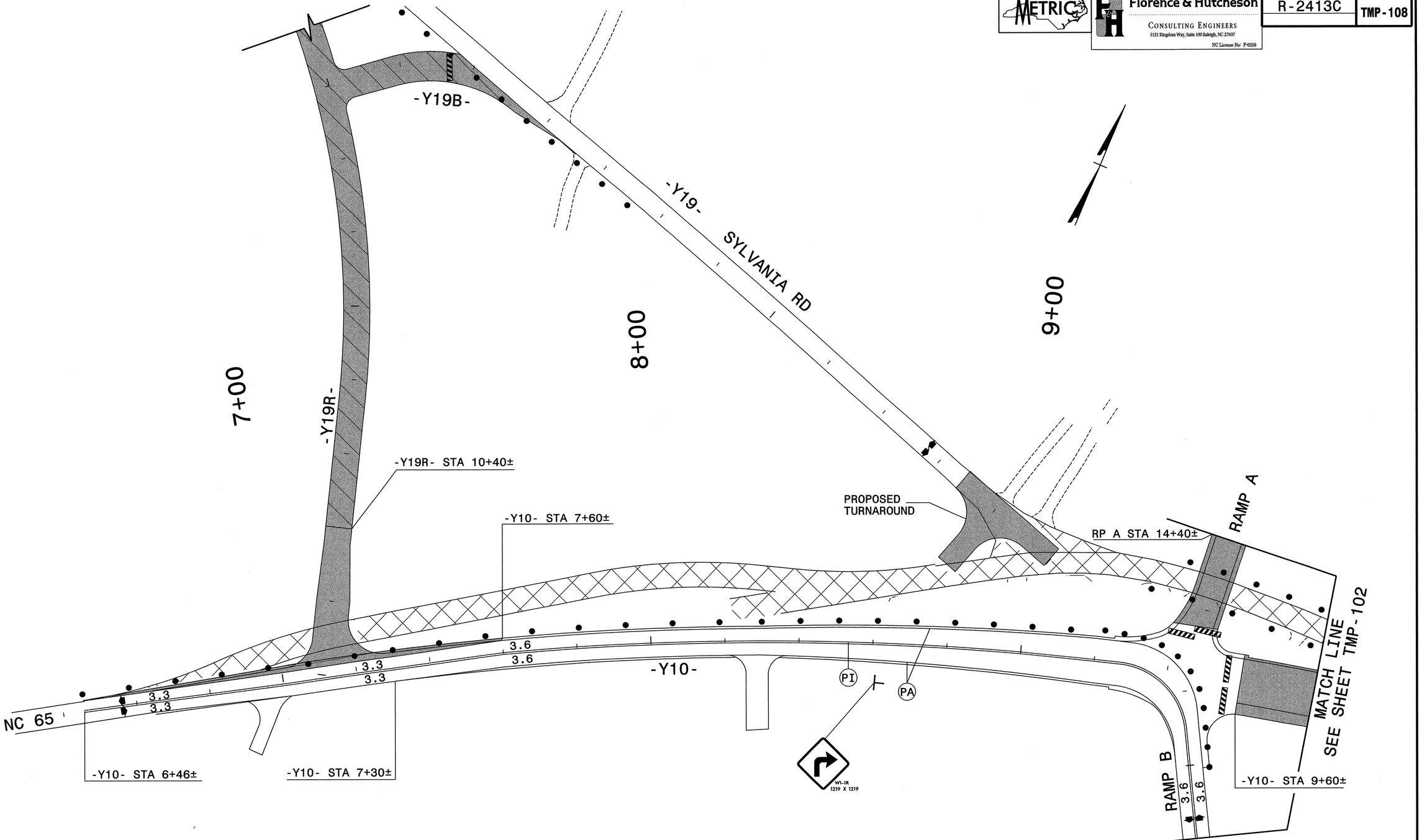
REVISIONS	
CADD FILE	

8/24/2011
R:\Traffic Control\25%\r2413c_tp_pll_dt1_26.dgn
Florence & Hutcheson

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No- P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-108



APPROVED: Michael T Reszka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. REZSKA

PHASE II, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/31/2011
R:\TrafficControl\25%\r2413c_tcp_pll_dtl_27.dgn
Florence & Hutcheson

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CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-109

210

215

220

AUBURN RD (SR 2204)

-Y8-

-L- US 220

-L- STA 213+20±

-L- STA 214+50±

-L- STA TBD

-L- STA TBD

-L- STA 216+54±

-L- STA 218+70±

-L- STA 220+00±

PF

PH

P4

-L- STA 215+00±

-Y8- STA TBD±

-L- STA 217+50±

K

K

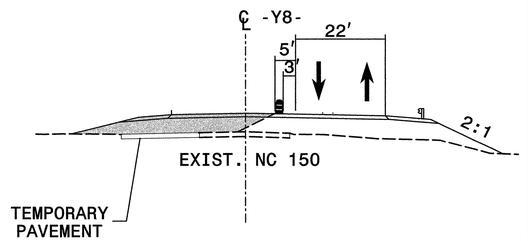
-Y8-
NC 150

PI

PA

-Y8- STA 15+00±

SECTION K-K



-Y8- STA 12+00±

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE II, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

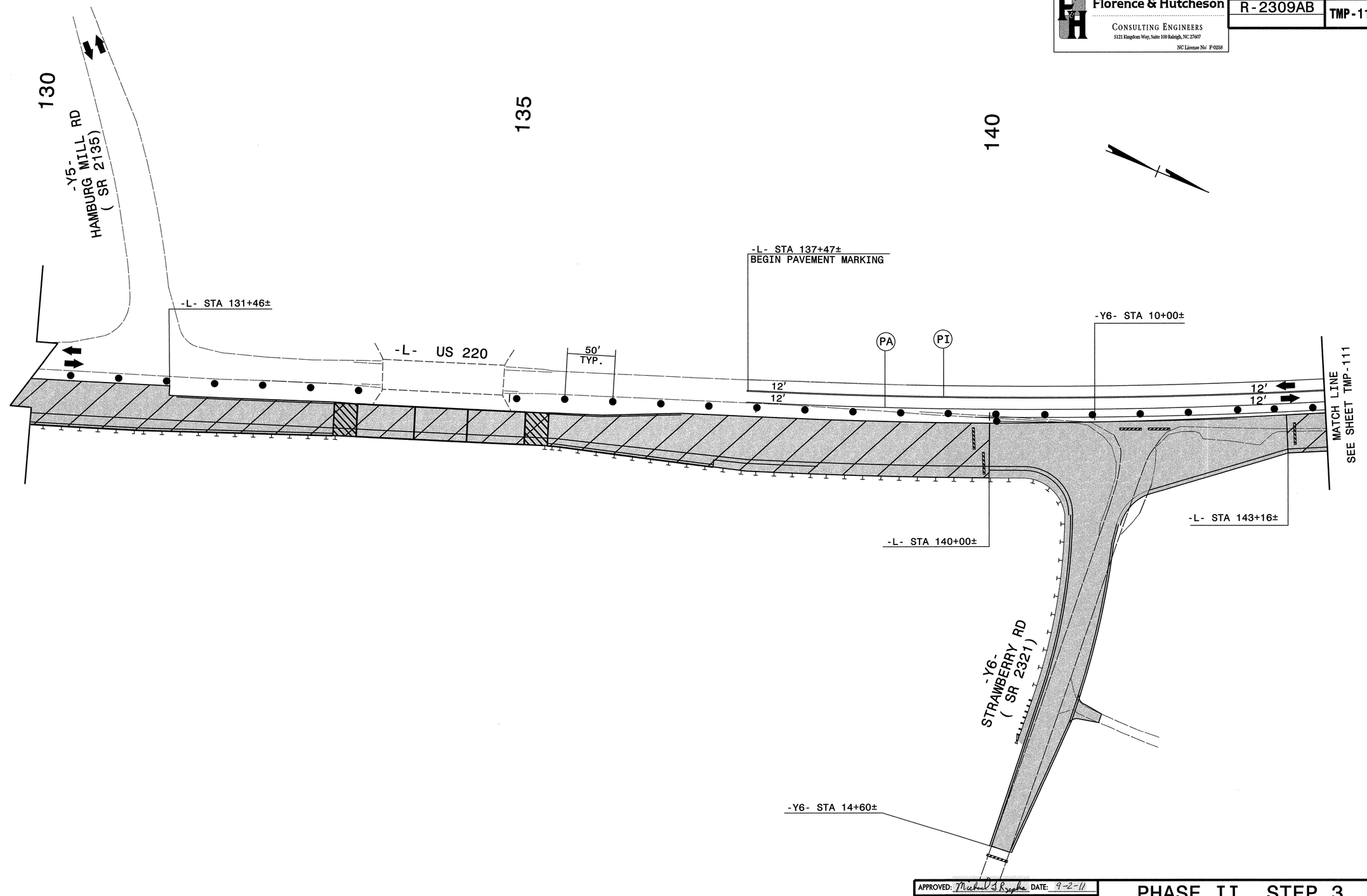
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DESIGN UNIT

REVISIONS	
CADD FILE	

8/23/2011
R:\Traffic\TrafficControlTCP\50X\r-2309ab_tc_tcp_pii_s2_dtl_l5.dgn
Florence & Hutcheson

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-110



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 3
DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
STATE OF NORTH CAROLINA
TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

8/23/2011
R:\Traffic\TrafficControl\TCP\50%\r2309ab_tc_top_pil_s3_dtl_09.dgn
Florence & Hutcheson

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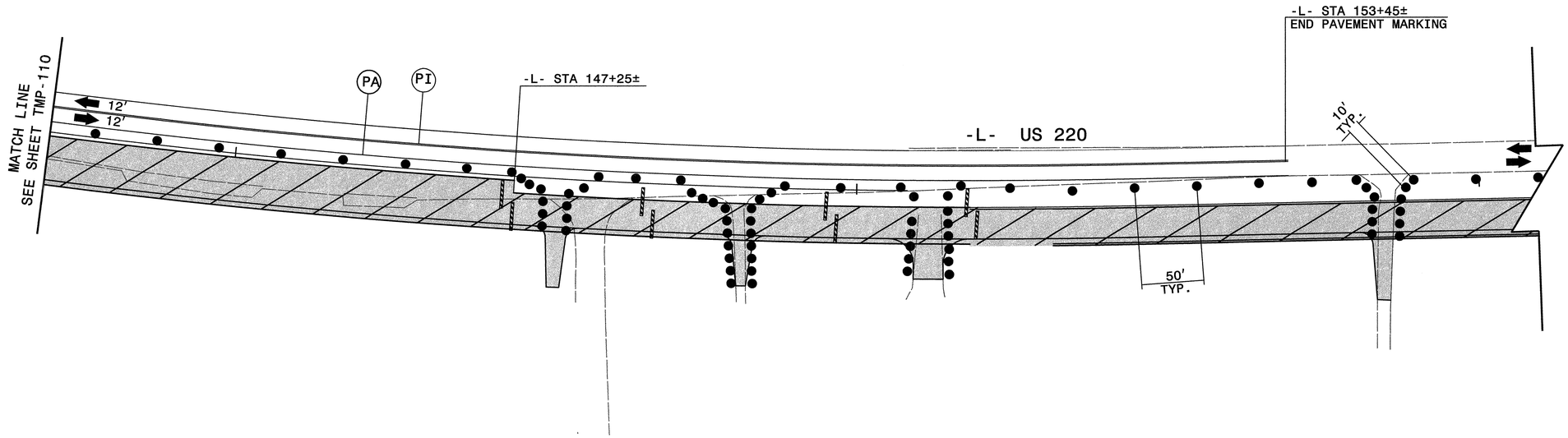
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-111

145

150

155



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/23/2011
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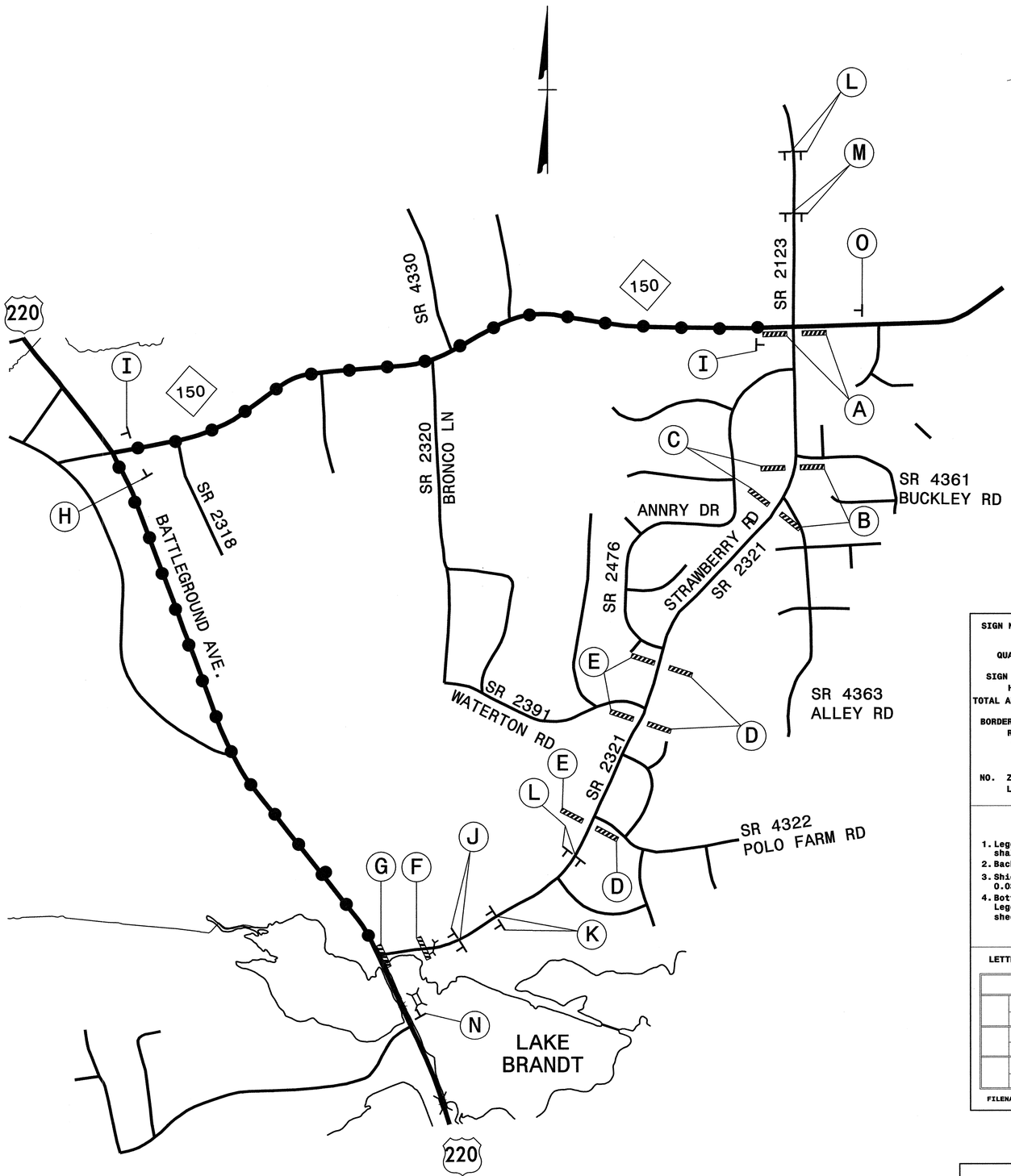
Florence & Hutcheson



R11-3 60" x 30" ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY DETOUR M4-10R 48" x 18" TYPE III BARRICADE — A

R11-3 60" x 30" ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY TYPE III BARRICADE — B

R11-3 60" x 30" ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY TYPE III BARRICADE — C

R11-4 60" x 30" ROAD CLOSED TO THRU TRAFFIC TYPE III BARRICADE — D

R11-4 60" x 30" ROAD CLOSED TO THRU TRAFFIC TYPE III BARRICADE — E

R11-2 48" x 30" ROAD CLOSED TYPE III BARRICADE(S) — F

R11-2 48" x 30" ROAD CLOSED DETOUR M4-10L 48" x 18" TYPE III BARRICADE — G

STRAWBERRY ROAD 60" x 24" DETOUR M4-8 24" x 12" M6-1R 21" x 15" — H

END DETOUR M4-8 A 24" X 18" — I

ROAD CLOSED 500 FT W20-3 48" X 48" — J

ROAD CLOSED 1000 FT W20-3 48" X 48" — K

ROAD CLOSED AHEAD W20-3 48" X 48" — L

DETOUR AHEAD W20-2 48" X 48" — M

ROAD CLOSED W20-3 48" X 48" NEXT RIGHT SP-4R 42" X 12" — N

ROAD CLOSED W20-3 48" X 48" NEXT LEFT SP-4L 42" X 12" — O

LEGEND
- DETOUR ROUTES
- TYPE III BARRICADE
- POST MOUNTED SIGN

SIGN NUMBER:	name
TYPE:	D
QUANTITY:	1
SIGN WIDTH:	5'-0"
HEIGHT:	2'-0"
TOTAL AREA:	10.0 Sq.Ft.
BORDER TYPE:	FLUSH
RECESS:	0"
WIDTH:	0.75"
RADII:	3"
NO. Z BARS:	
LENGTH:	
BACKG COLOR:	Green
COPY COLOR:	White

SYMBOL	X	Y	WID	HT

MAT'L: 0.063" (1.6 mm) ALUMINUM
0.080" (2.0 mm) ALUMINUM
0.125" (3.2 mm) ALUMINUM

USE NOTES:

1. Legend and border(except those that are colored black) shall be direct applied Grade B sheeting.
2. Background shall be Grade A, B, or C reflective sheeting.
3. Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.
4. Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

DESIGN BY: none CHECKED BY:
PROJECT ID: ID DIV: DIV
DATE: Aug 24, 2011

5'-0" × 2'-0"
STRAWBERRY ROAD
3.75" 6"D 4.5" 6"D 3.75"
BORDER 5.05" 50.1" 5.05"
R=3"
TH=0.75"

Panel Style: Standard 6 Inch_D.ssi
M.U.T.C.D.: 2003 Edition

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

												Series/Size Text Length
	S	T	R	A	W	B	E	R	R	Y		D 2000
	5	9.5	14.1	18.7	24.2	30.4	35.5	40.2	45.3	49.9		50.1
	R	O	A	D								D 2000
	20	24.9	30	36								20.1

FILENAME: r2309ab_tc_tcp_detour_y6_strawberry

NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

-Y6-
STRAWBERRY RD (SR 2321)
DETOUR ROUTE

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS

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Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-112

THE TRANSPORTATION MANAGEMENT PLAN WILL BE REVISED UPON SELECTION OF CONCRETE PAVEMENT OPTION BY THE CONTRACTOR.

PHASE III

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0268

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB/R-2413C	TMP-113

NOTE: PHASE III, STEP 1 MAY BE COMPLETED SIMULTANEOUSLY WITH WORK PERFORMED IN PHASE II, STEP 3B.

STEP 1

USING RSD 1101.02 (SHEET 1 OF 9), PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS, REMOVE CONFLICTING PCB AND INSTALL PCB AS SHOWN FOR PHASE III, STEP 1 TRAFFIC PATTERNS AND SIMULTANEOUSLY SHIFT TRAFFIC TO THE FOLLOWING TEMPORARY PATTERNS:

FOR US 220 (2-LANE/2-WAY) (SEE SHEETS TMP- 145-162):
-XOVRA- (M)
SB US 220 RAMP STA 9+00± TO STA 19+01± (M)
SB -L REV- STA 27+27± TO STA 92+70± (M)
-XOVRF- (MEDIAN CROSSOVER -L REV- STA 94+70± TO STA 97+00±) (M)

FOR US 158 (SEE SHEETS TMP-153, 163 & 164):
FINAL PATTERN (M)
US 158 RP A & RP B FINAL PATTERN (M)

FOR NB US 220 ACCESS TO US 158 (SEE SHEET TMP-154):
-XOVRM- (TIE FROM US 158 RP A TO PROPOSED SB LANES AT -L REV- STA 47+20±) (M)

FOR US 158 ACCESS TO NB US 220 (SEE SHEETS TMP-153 & 163):
-XOVRL- (TIE FROM US 158 RP B TO PROPOSED SB LANES AT -L REV- STA 42+80±) (M)

FOR NC 65 (SEE SHEETS TMP- 157-159, 165 & 166):
FINAL PATTERN
NC 65 RP A & RP B FINAL PATTERN

FOR NB US 220 ACCESS TO NC 65 (SEE SHEETS TMP-156 & 157):
-XOVRJ- (TEMPORARY TIE ACROSS MEDIAN FROM SB -L REV- STA 62+88± TO NB -L REV- STA 65+16±) (M)
NC 65 RP C (M)

NC 65 ACCESS TO NB US 220 (SEE SHEETS TMP-158, 159 & 166):
NC 65 RP D (M)
TEMPORARY TIE ACROSS MEDIAN AT -L REV- STA 72+90± (M)

NC 68 ACCESS TO US 220 (2-LANE/2-WAY) (SEE SHEET TMP-161):
SB -L1 REV- STA 18+20± TO SB -L REV- (M)
-XOVRG- (TEMPORARY TIE FROM PROPOSED NB -L1 REV- TO EXISTING SB NC 68) (M)

USING RSD 1101.02 (SHEET 1 OF 9), PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND OPEN THE FOLLOWING TO TRAFFIC):

-Y19R- (SYLVANIA RD.) (M) ACCESS TO NC 65 (SEE SHEET TMP-165)
-Y19B- (M) (SEE SHEET TMP-165)
-Y21- (SPOTSWOOD RD.) (M) (SEE SHEETS TMP-152, 153 & 164)

NOTE: PHASE III, STEP 4 MAY BE COMPLETED SIMULTANEOUSLY WITH WORK PERFORMED IN PHASE III, STEP 2 AND STEP 3.

COMPLETE THE WORK REQUIRED OF PHASE III, STEP 2 AND STEP 3 IN 75 CALENDAR DAYS. (SEE SPECIAL PROVISIONS AND LIQUIDATED DAMAGES)

STEP 2

SIMULTANEOUSLY WITH STEP 1, UNCOVER DETOUR SIGNS AND USING RSD 1101.02 (SHEET 1 OF 9), CLOSE -Y8- (AUBURN RD.) BETWEEN -Y8- STA 6+60± AND STA 10+47±. (SEE SHEETS TMP-137 & TMP-167)

CONSTRUCT -Y8- STA 6+60± TO STA 10+47± AND -L- STA 215+50± TO STA 218+00±. (SEE SHEET TMP-137)

USING RSD 1101.02 (SHEET 1 OF 9), PAVE/WEDGE/CONSTRUCT -Y8- FROM -Y8- STA 5+20± TO STA 6+60±. (SEE SHEET TMP-137)

USING RSD 1101.02 (SHEET 1 OF 9) OR RSD 1101.04, INSTALL AND COVER ALL ROAD CLOSURE AND DETOUR SIGNING, AS SHOWN ON SHEET TMP-171.

PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -Y8- (AUBURN RD.) AND USING RSD 1101.02 (SHEET 1 OF 9), MODIFY PAVEMENT MARKINGS ON -L- (US 220) AND REMOVE DRUMS ON -Y8- (NC 150). REOPEN -Y8- (AUBURN RD.) TO TRAFFIC (SEE SHEET TMP-168).

COMPLETE THE WORK REQUIRED OF PHASE III, STEP 3 IN 30 CALENDAR DAYS. (SEE SPECIAL PROVISIONS AND LIQUIDATED DAMAGES)

STEP 3

UPON REOPENING -Y8- (AUBURN RD.) TO TRAFFIC, SIMULTANEOUSLY, UNCOVER DETOUR SIGNS AND USING RSD 1101.02 (SHEETS 1 & 2 OF 9), CLOSE -Y7- (SUMMERFIELD RD.) BETWEEN -Y7- STA 10+00± AND STA 14+40± (SEE SHEETS TMP-169 AND TMP-171).

CONSTRUCT -Y7- (SUMMERFIELD RD.) FROM -Y7- STA 11+24± TO STA 14+40± AND COMPLETE CONSTRUCTION OF -Y7- BETWEEN -Y7- STA 10+00± AND STA 11+24± AND -L- FROM -L- STA 174+70± TO STA 176+00± (SEE SHEET TMP-169).

BEGIN CONSTRUCTION OF -L- FROM -L- STA 172+00± TO STA 174+70± LT.

PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -Y7- (SUMMERFIELD RD.) AND USING RSD 1101.02 (SHEET 1 OF 9), MODIFY PAVEMENT MARKINGS ON -L-. REOPEN -Y7- (SUMMERFIELD RD.) TO TRAFFIC (SEE SHEET TMP-170).

NOTE: PHASE III, STEP 4 MAY BE COMPLETED SIMULTANEOUSLY WITH WORK PERFORMED IN PHASE III, STEP 2 AND STEP 3.

STEP 4

USING RSD 1101.02 (SHEET 1 OF 9), BEGIN ITS CONSTRUCTION (SEE ITS PLANS AND INTELLIGENT TRANSPORTATION SYSTEMS PROJECT SPECIAL PROVISIONS).

AWAY FROM TRAFFIC, BEGIN PROPOSED CONSTRUCTION AT THE FOLLOWING AREAS (SEE SHEETS TMP-121, 125, 126, 128-137, 141-143, 145-149, 152-155, 159-162 & 164) (SEE LOCAL NOTE 1):

-L- STA 52+00± TO STA 63+50± RT
-L- STA 69+50± TO STA 75+00± RT
-L- STA 95+89± TO STA 172+00± LT
-L- STA 174+70± TO STA 215+50± LT
-L- STA 218+00± TO STA 221+00± LT
-L- STA 271+15± TO STA 297+85± LT
-Y7- STA 10+00± TO STA 11+24±
NB -L REV 1- STA 16+20± TO STA 19+09± (M)
NB US 220 RAMP STA 9+95± TO -L REV- (M)
NB -L REV- STA 20+60± TO STA 29+00± (INCLUDING STRUCTURE) (M)
SB -L REV- STA 21+80± TO STA 23+98± (M)
NB -L REV- STA 37+00± TO STA 42+50± (M)
NB -L REV- STA 42+80± TO STA 45+15± (M)
NB -L REV- STA 45+79± TO STA 48+900± (M)
NB -L REV- STA 49+20± TO STA 55+20± (M)
NB -L REV- STA 76+00± TO STA 94+05± (M)
SB -L1 REV- STA 16+43± TO STA 18+20± (M)
US 158 RP C FROM -L REV- TO RP C STA 10+90± (M)
US 158 RP D FROM -L REV- TO RP D STA 10+80± (M)

BEHIND BARRIER, BEGIN THE FOLLOWING PROPOSED STRUCTURES (SEE SHEETS TMP-125, 129, 131 & 134):

CULVERT AT -L- STA 56+35± RT
BRIDGE FROM -L- STA 113+65± TO STA 114+91± (INCL. EXIST. BRIDGE REMOVAL)
BRIDGE FROM -L- STA 133+43± TO STA 135+50± (INCL. EXIST. BRIDGE REMOVAL)
CULVERT AT -L- STA 168+50± LT

BEHIND BARRIER AND AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF PROPOSED NB STRUCTURE OVER US 158 FROM -L- STA 45+15± TO STA 45+79±. DO NOT PERFORM OVERHEAD WORK REQUIRING US 158 ROAD CLOSURES.

AWAY FROM TRAFFIC, CONSTRUCT THE FOLLOWING:

NB -L REV- STA 42+50± TO STA 42+80± (M)
NB -L REV- STA 48+90± TO STA 49+20± (M)
US 158 RP C STA 10+90± TO STA 11+40± (M)
US 158 RP C STA 13+80± TO STA 14+20± (M)
US 158 RP D STA 10+80± TO STA 11+40± (M)
TEMPORARY MEDIAN TIES AT -L REV- STA 42+70± AND STA 49+10± (M)

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT -Y5- FROM -Y5- STA 10+00± TO STA 14+00± (SEE SHEET TMP-131).

APPROVED: Michael T Rzepka DATE: 1-12-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE III PHASING

SCALE:	NONE
DATE:	1-12
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — STATE TRAFFIC ENGINEER — DEPARTMENT OF TRANSPORTATION — CONTRACTS

REVISIONS

CADD FILE

1/12/2012
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Florence & Hutcheson

PHASE III

USING RSD 1101.02 (SHEET 1 OF 9), WEDGE AND BEGIN CONSTRUCTION OF WIDENING ON BOTH SIDES OF -Y12-, OAK RIDGE RD. FROM -Y12- STA 6+25± TO STA 10+00± (SEE SHEET TMP-142).

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT -Y26-, -Y27-, AND PROPOSED TURNAROUND RIGHT OF -L REV- 27+00± (M). COORDINATE CONSTRUCTION TO MAINTAIN ACCESS TO RESIDENCES (SEE SHEETS TMP- 149-152).

COMPLETE THE FOLLOWING:

US 158 RP C STA 11+40± TO STA 13+80± (M)
US 158 RP D STA 11+40± TO STA 14+00± (M)

STEP 5

USING ROAD CLOSURES, COMPLETE WORK REQUIRING US 158 ROAD CLOSURES FOR PROPOSED NB STRUCTURE OVER US 158. USE ON-SITE DETOUR, UTILIZING PROPOSED RAMPS AND TEMPORARY MEDIAN TIES. KEEP US 158 RAMPS C & D CLOSED WHEN NOT IN USE FOR ON-SITE DETOUR (SEE GENERAL NOTE C & SHEET TMP-172).

COMPLETE CONSTRUCTION IN THE FOLLOWING LOCATIONS:

-L- STA 279+00± TO STA 281+50± LT
-L- STA 297+85± TO STA 308+00± LT
-L- STA 310+00± TO STA 316+77± LT
-Y12- STA 6+25± TO STA 10+00± RT & LT
-Y14- STA 10+28± TO STA 12+00±

USING RSD 1101.02 (SHEET 1 OF 9) OR RSD 1101.04, INSTALL AND COVER ALL ROAD CLOSURES AND DETOUR SIGNING, AS SHOWN ON SHEET TMP-174.

COMPLETE THE WORK REQUIRED OF PHASE III, STEP 6 IN 30 CALENDAR DAYS. (SEE SPECIAL PROVISIONS AND LIQUIDATED DAMAGES)

STEP 6

UNCOVER DETOUR SIGNS AND USING RSD 1101.03. SHEET 1 OF 9, CLOSE -Y14A- (SUMMERFIELD RD.) BETWEEN -Y14A- STA 15+27± AND A POINT APPROXIMATELY 50' SOUTH OF PROPOSED -Y14- CENTERLINE AT -Y14- STA 12+31± (SEE SHEETS TMP-173 AND TMP-175).

CONSTRUCT -Y14A- (SUMMERFIELD RD.) FROM -Y14A- STA 10+00± TO STA 15+27± (SEE SHEET TMP-173).

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT -Y14- (SUMMER HAVEN DR.) FROM -Y14- STA 12+00± TO STA 14+39±. AT END OF EACH DAY'S OPERATION, TWO-LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED ON -Y14- (SUMMER HAVEN DR.) (SEE SHEET TMP-173)

BEGIN CONSTRUCTION OF -L- FROM -L- STA 308+00± TO STA 310+00± LT (SEE SHEET TMP-174).

PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -Y14- (SUMMER HAVEN DR.) AND -Y14A- (SUMMERFIELD DR.) AND USING RSD 1101.02 (SHEET 1 OF 9), MODIFY PAVEMENT MARKINGS ON -L-. REOPEN -Y14A- TO TRAFFIC (SEE SHEET TMP-174).

PHASE IV

STEP 1

COMPLETE REMAINING CONSTRUCTION BEGUN IN PHASES I, II & III.

STEP 2

USING RSD 1101.02 (SHEET 1 OF 9), IN ONE CONTINUOUS OPERATION, SHIFT US 220 TRAFFIC INTO THE OUTSIDE LANES FROM -L- STA 21+50± TO STA 94+05± (M) ON R-2309AB AND R-2413C.

STEP 3

COMPLETE CONSTRUCTION OF -L- MEDIAN CURB AND GUTTER, DRAINAGE, CONCRETE ISLANDS AND MEDIAN FROM -L- STA 21+50± TO -LREV- STA 94+05± (M).

USING RSD 1101.02 (SHEETS 1 & 3 OF 9), REMOVE TEMPORARY AND ABANDONED EXISTING PAVEMENTS.

STEP 4

USING RSD 1101.02 (SHEET 1 OF 9), PLACE THE FINAL LAYER OF SURFACE COURSE ON -L- LINE AND ALL -Y- LINES FINAL PAVEMENT MARKINGS AND MARKERS. OPEN ALL LANES TO TRAFFIC.

STEP 5

REMOVE ALL TRAFFIC CONTROL DEVICES.

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASES III & IV PHASING

SCALE: NONE
DATE: 9-11
DWG. BY: GEP
DESIGN BY: GEP
REVIEWED BY: MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/3/2011
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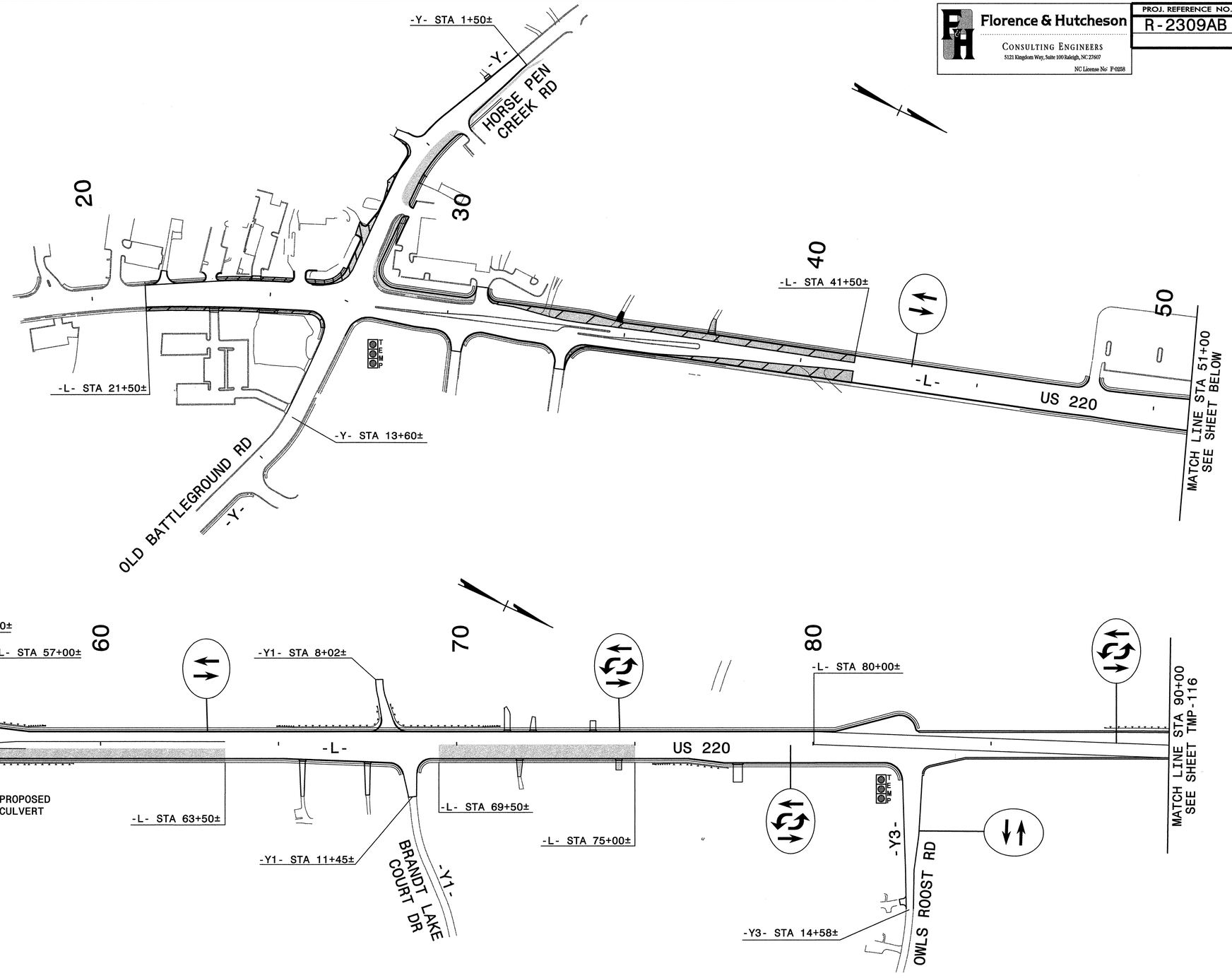
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-115



LEGEND

PROPOSED CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III OVERVIEW

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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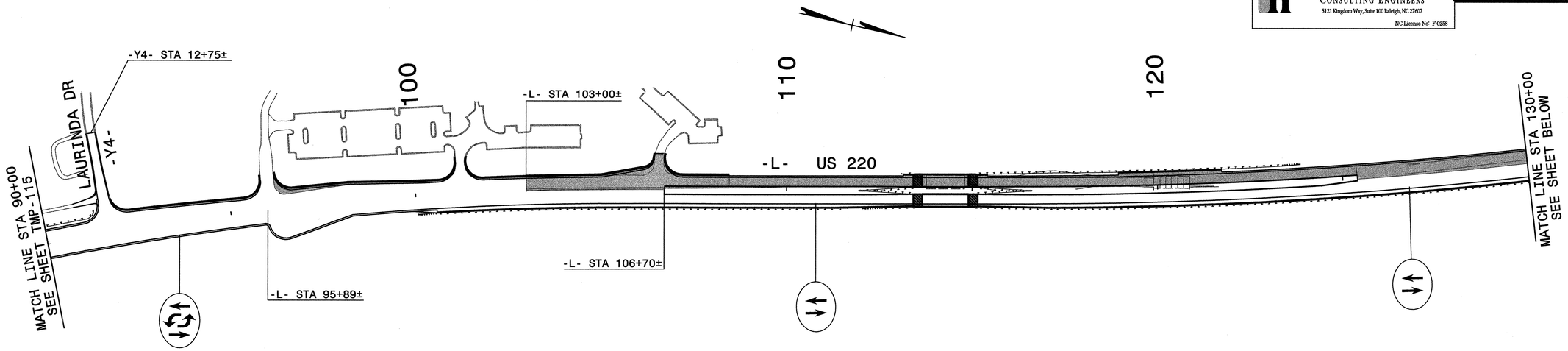
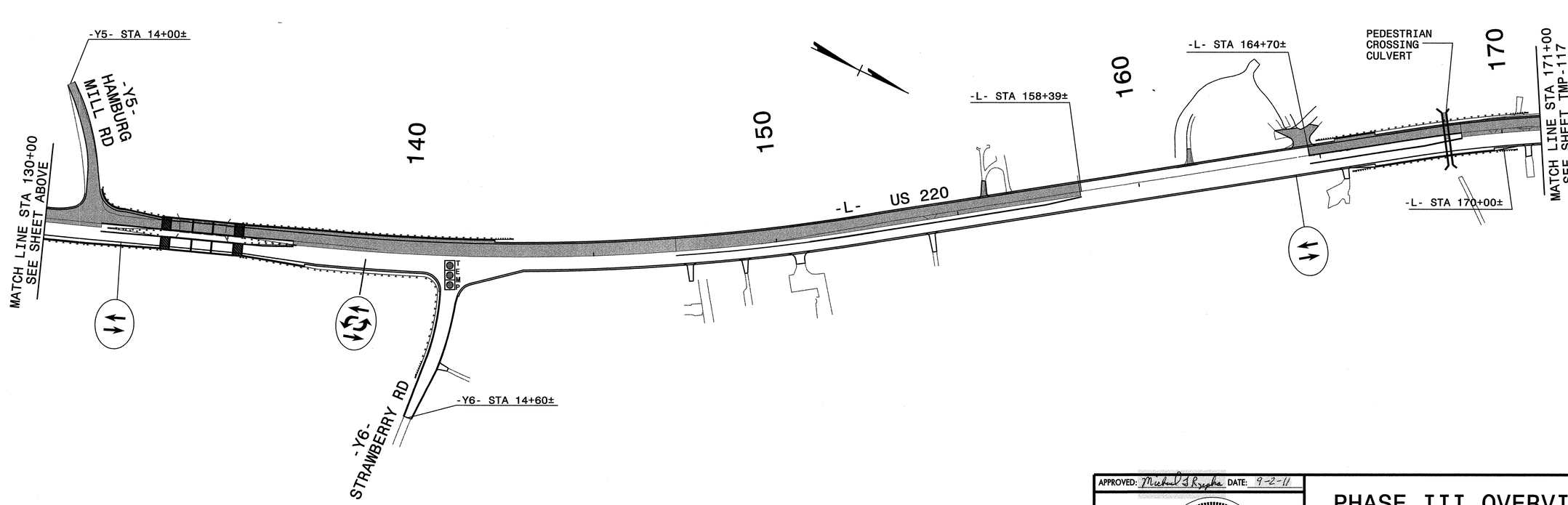
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-116





LEGEND

PROPOSED CONSTRUCTION

APPROVED: Michael T. Kiepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KIEPKA

PHASE III OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS	
CADD FILE	

8/31/2011
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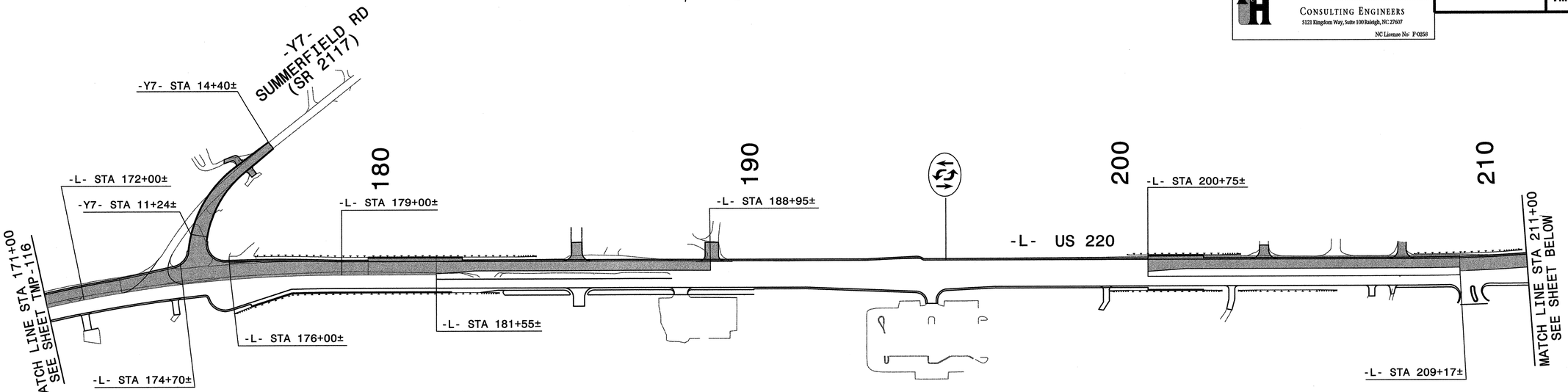

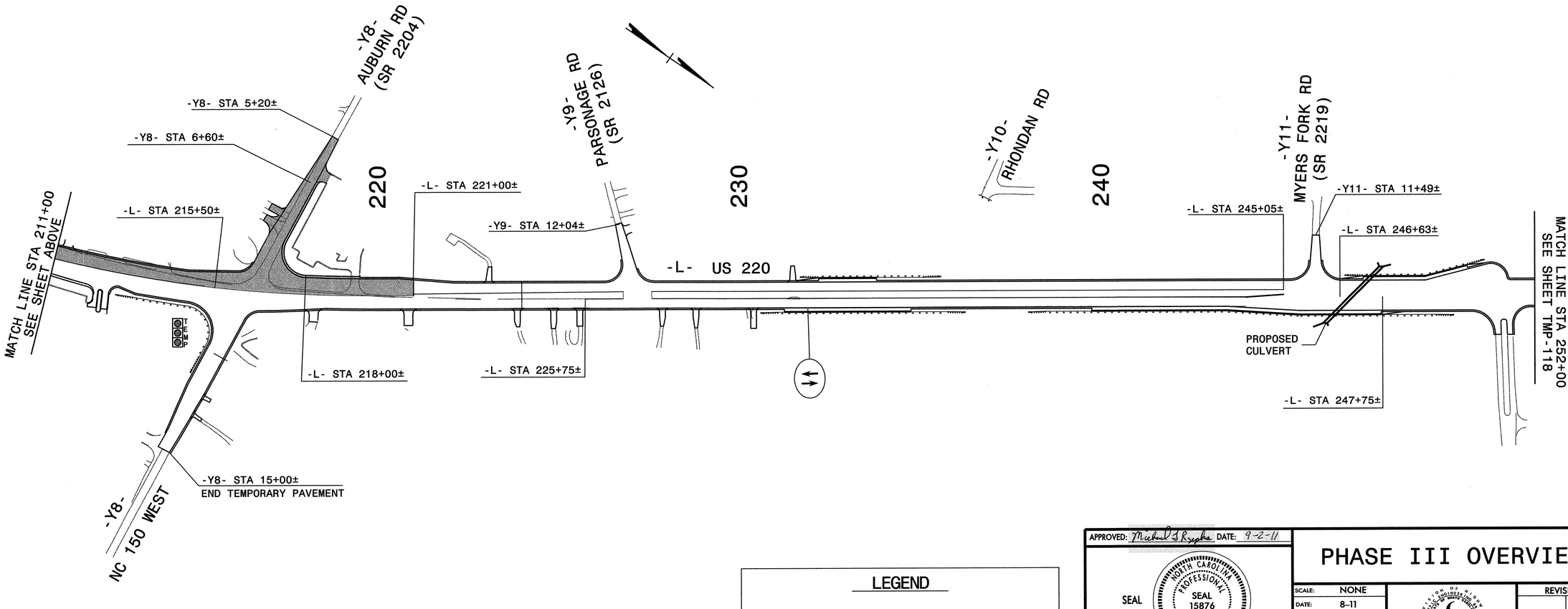

LEGEND

PROPOSED CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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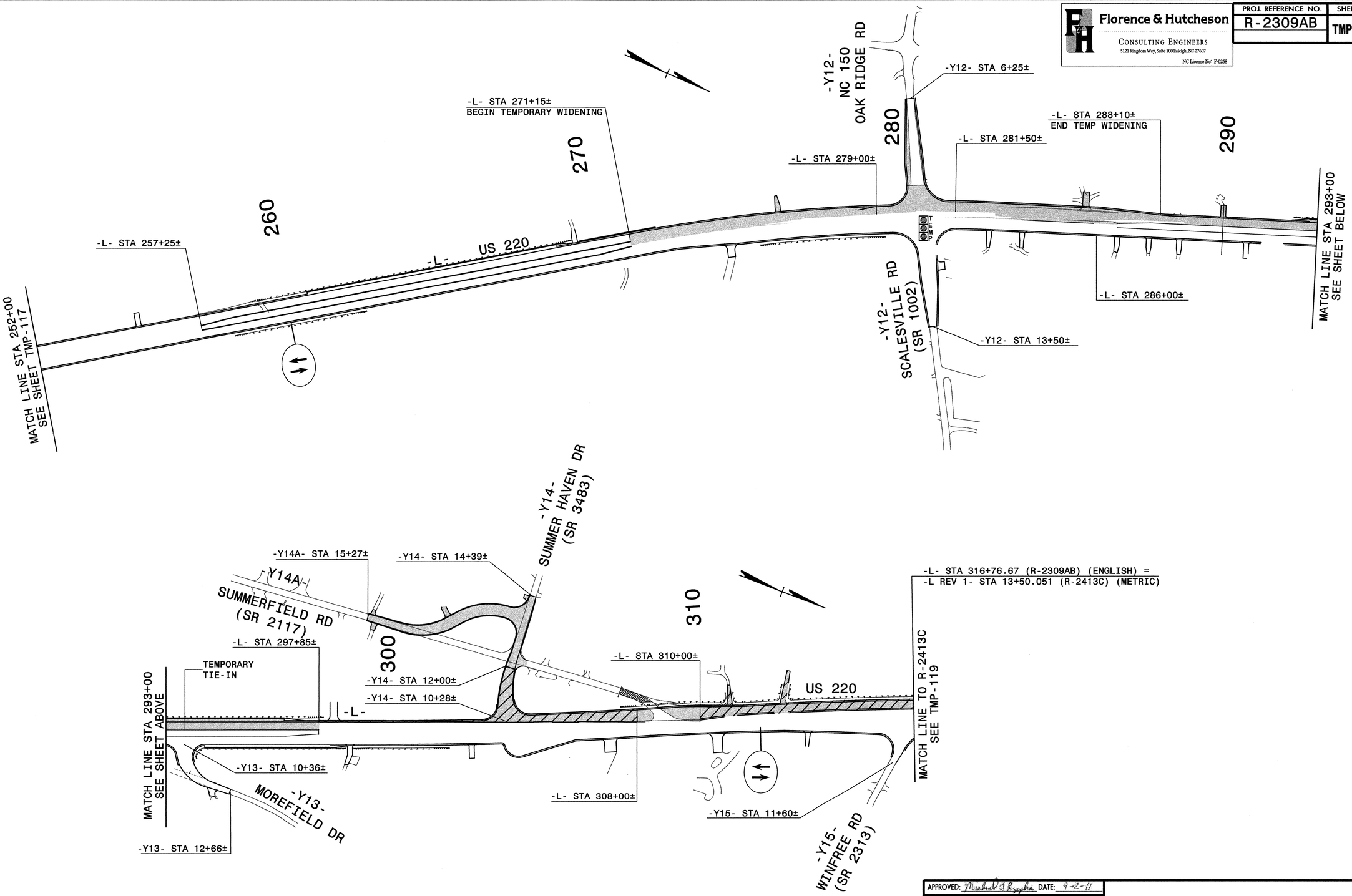
	R-2309AB	TMP-118



LEGEND

PROPOSED CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III OVERVIEW

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

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METRIC

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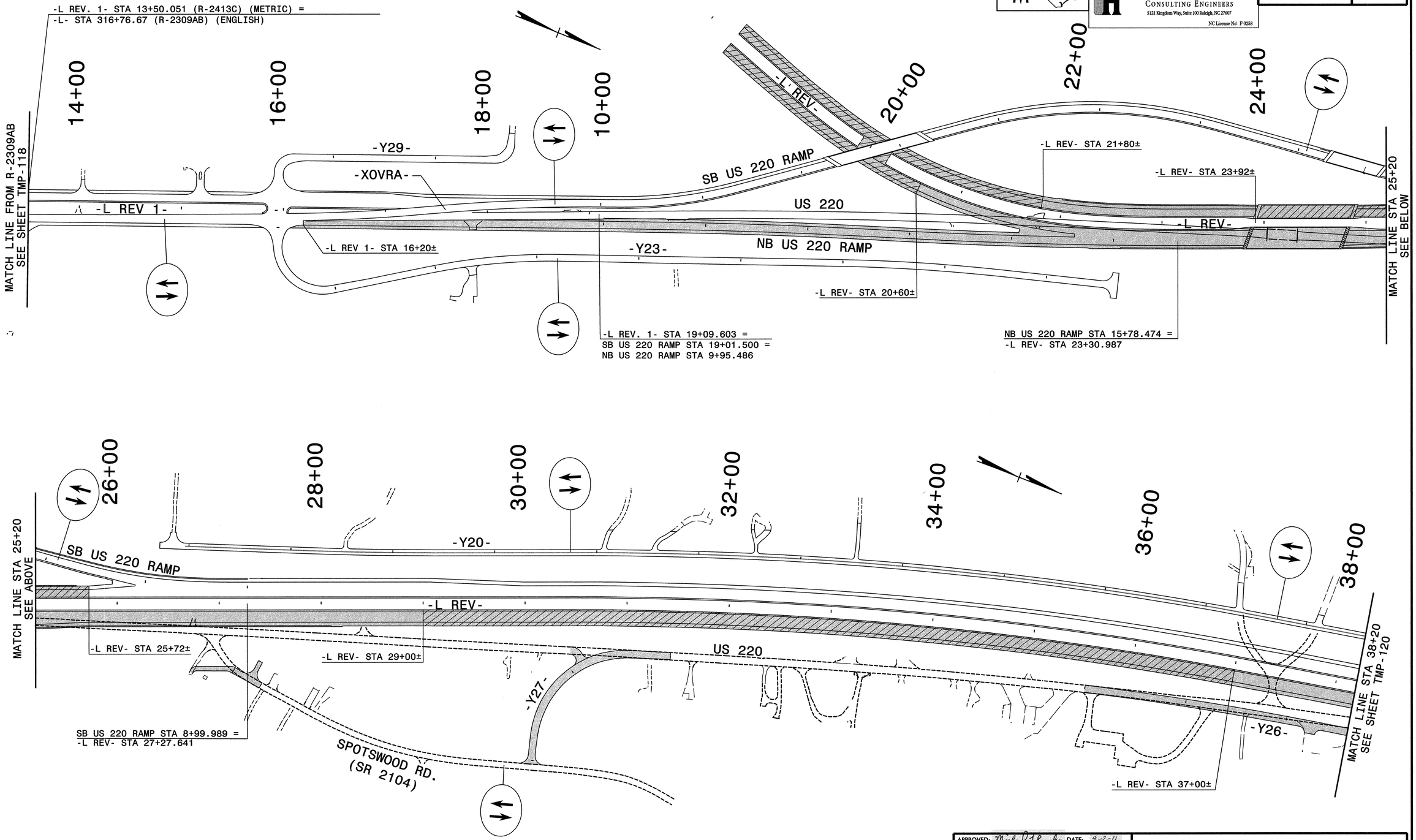
PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-119



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE III OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-120

METRIC

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NC License No: F-0258

MATCH LINE STA 7+80
SEE THIS SHEET

-Y20-

-Y20- STA 27+20.442 AH=
-Y20-REV STA 27+20.315 BK

US 158

-Y6-

MATCH LINE STA 7+80
SEE THIS SHEET

-Y20- STA 22+49.280 BK=
-Y20-REV STA 22+49.280 AH

40+00

42+00

44+00

46+00

48+00

50+00

-Y24-

-Y20- REV

-XOVRL-

TEMP

-Y6-

RP A

-XOVRM-

MATCH LINE STA 38+20
SEE SHEET TMP-119

-Y20-

-L REV-

MATCH LINE STA 51+40
SEE SHEET TMP-121

US 220

-Y26-

-Y21-

RP C

RP D

RP D STA 11+40±

RP C STA 11+40±

RP C STA 13+80±

-Y21-

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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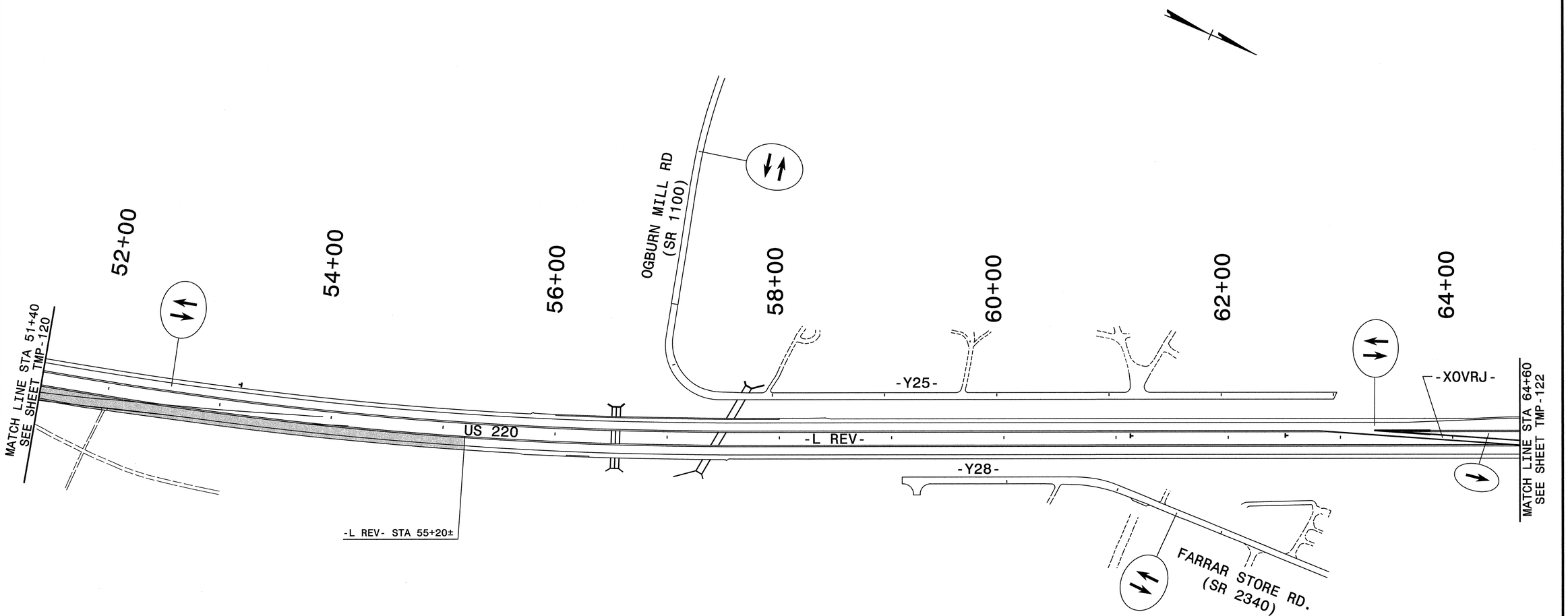

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS

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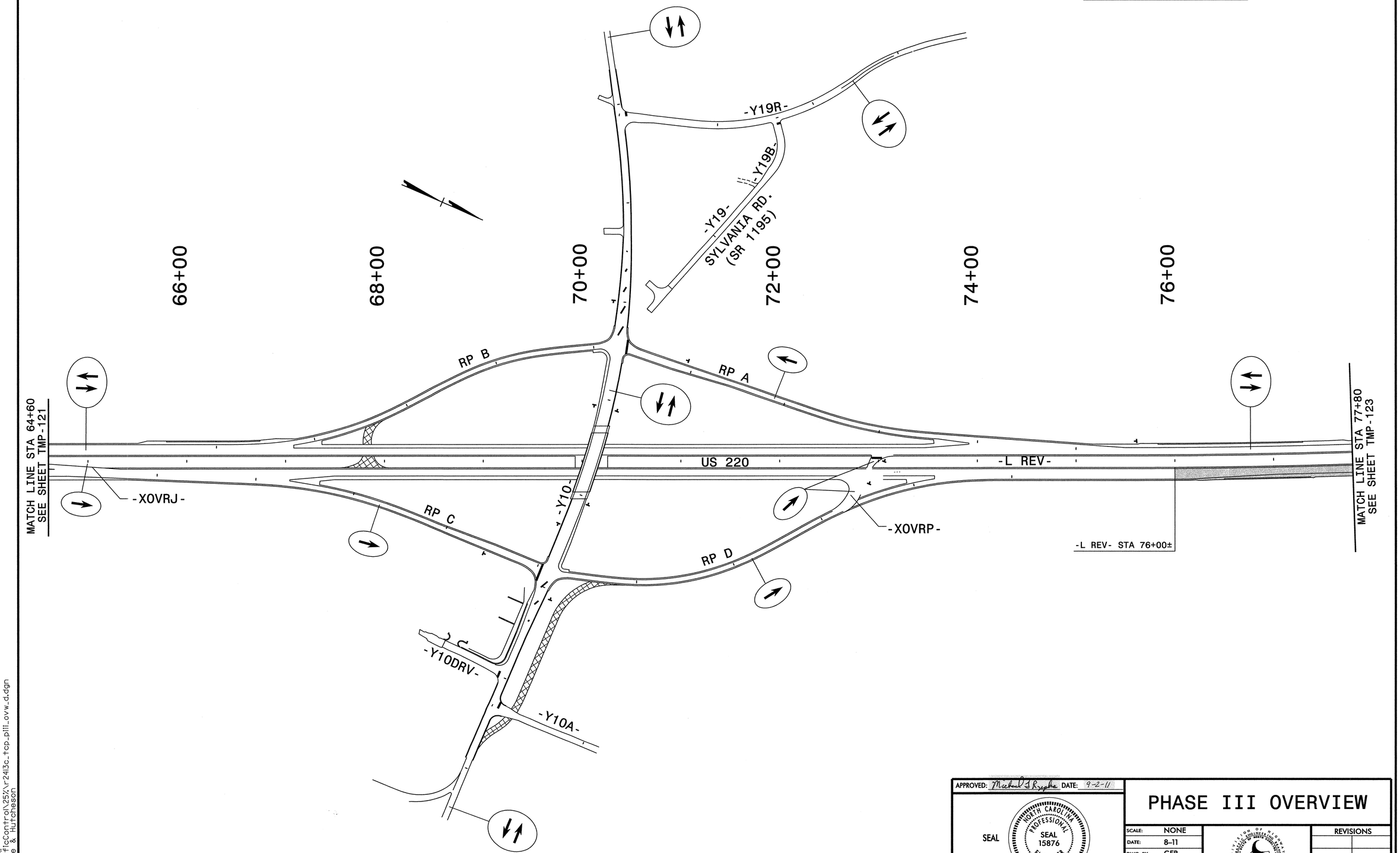
PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-122



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROFESSIONAL ENGINEER
TRAFFIC CONTROL UNIT

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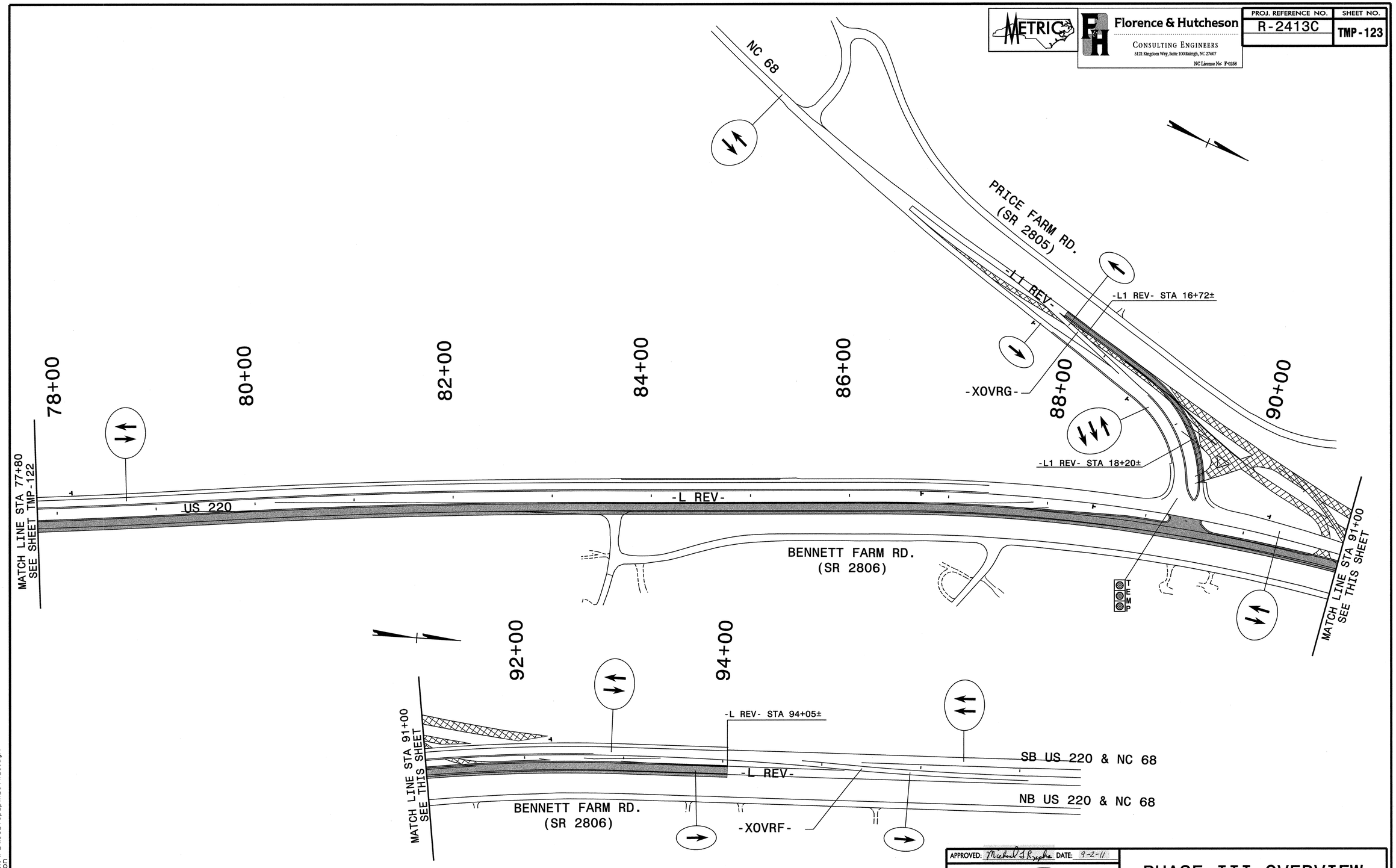
METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0288	PROJ. REFERENCE NO.	SHEET NO.
		R-2413C	TMP-123



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE III OVERVIEW

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
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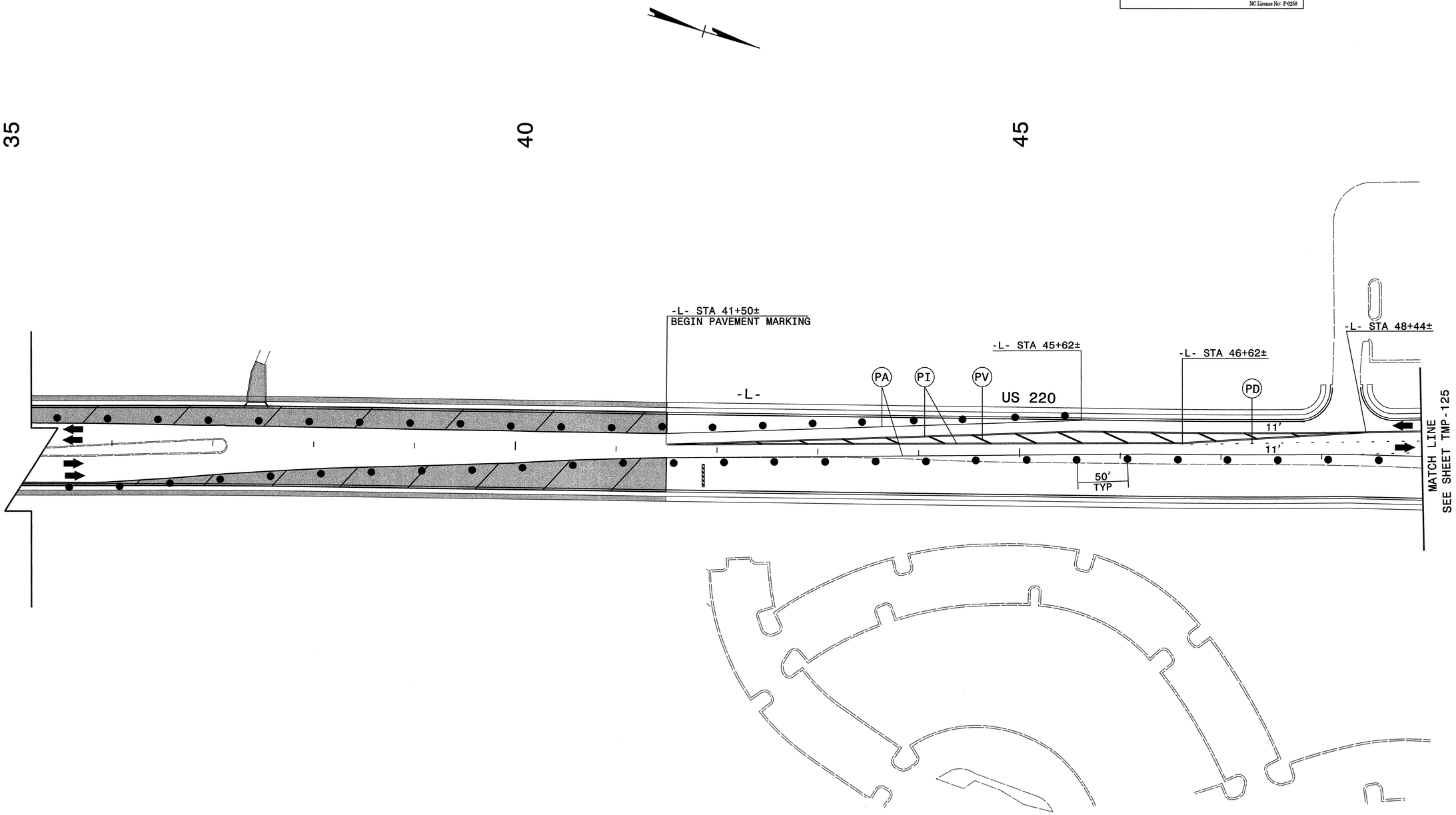
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-124



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1
DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

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8/24/2011
R:\Traffic\TrafficControl\TCP\50%\r2309ab_tc_tcp_pili_sl_dtl_02.dgn
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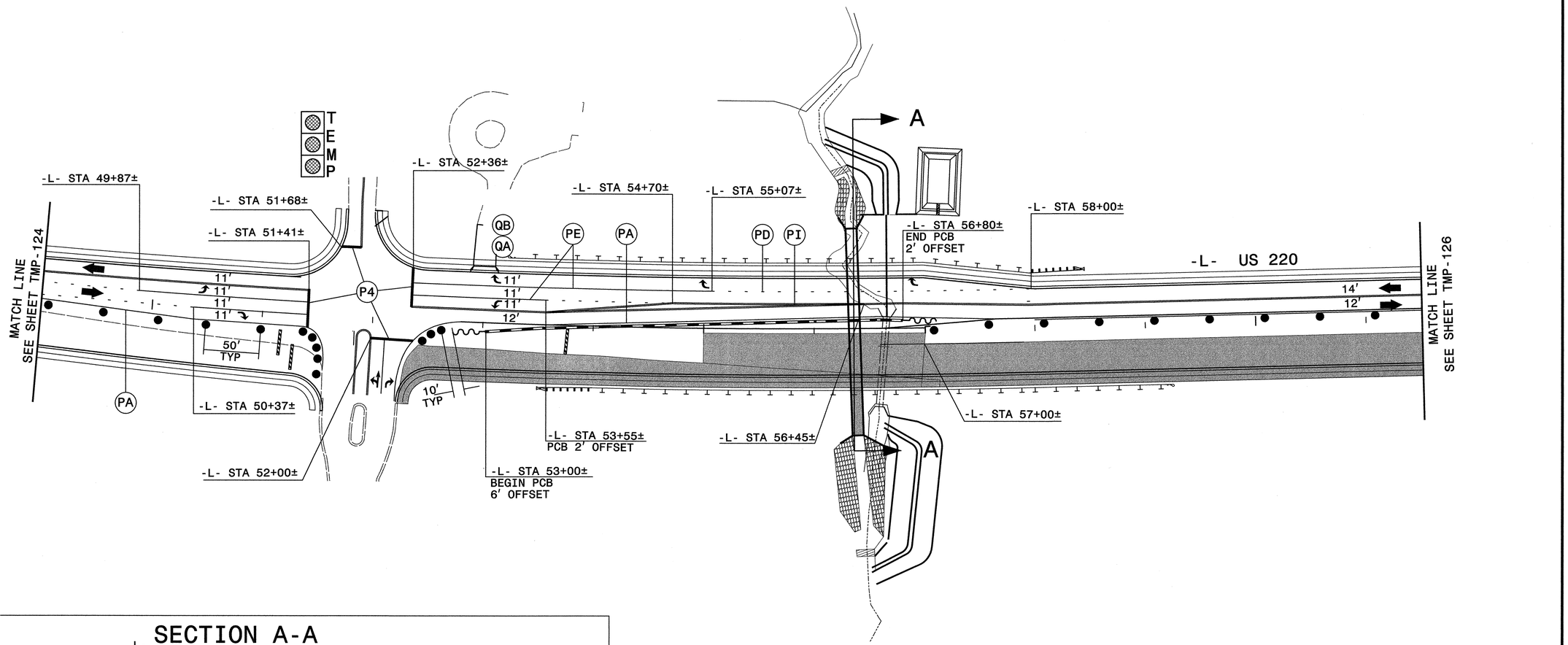
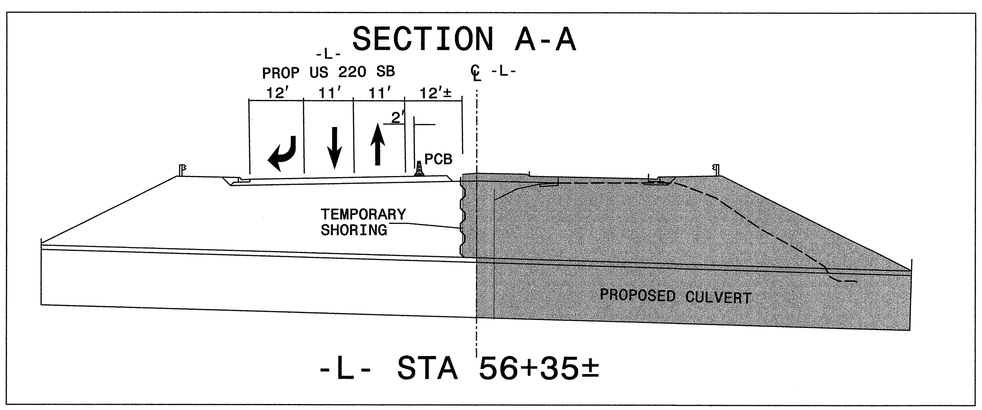
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-125

50

55

60





APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

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REVISIONS	
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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-126

65

70

75

-Y1- STA 8+02±

-L- STA 68+70±

-L- STA 65+38±

-L- STA 67+94±

-L- STA 69+70±

-L- STA 70+93±

-L- STA 63+46±

PI

PV

PH

PA

QA

PF

P4

PE

PD

-L- US 220

MATCH LINE
SEE SHEET TMP-125

MATCH LINE
SEE SHEET TMP-127

14′
12′

11′
11′
11′

11′
11′
11′

50′
TYP

10′
TYP

-L- STA 69+50±

STOP
R1-1

-L- STA 75+00±

-L- STA 63+50±

-Y1-
BRANDT LAKE CT
(SR 4344)

-Y1- STA 12+68±

8/31/2011
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APPROVED: Michael T Rzetka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZETKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
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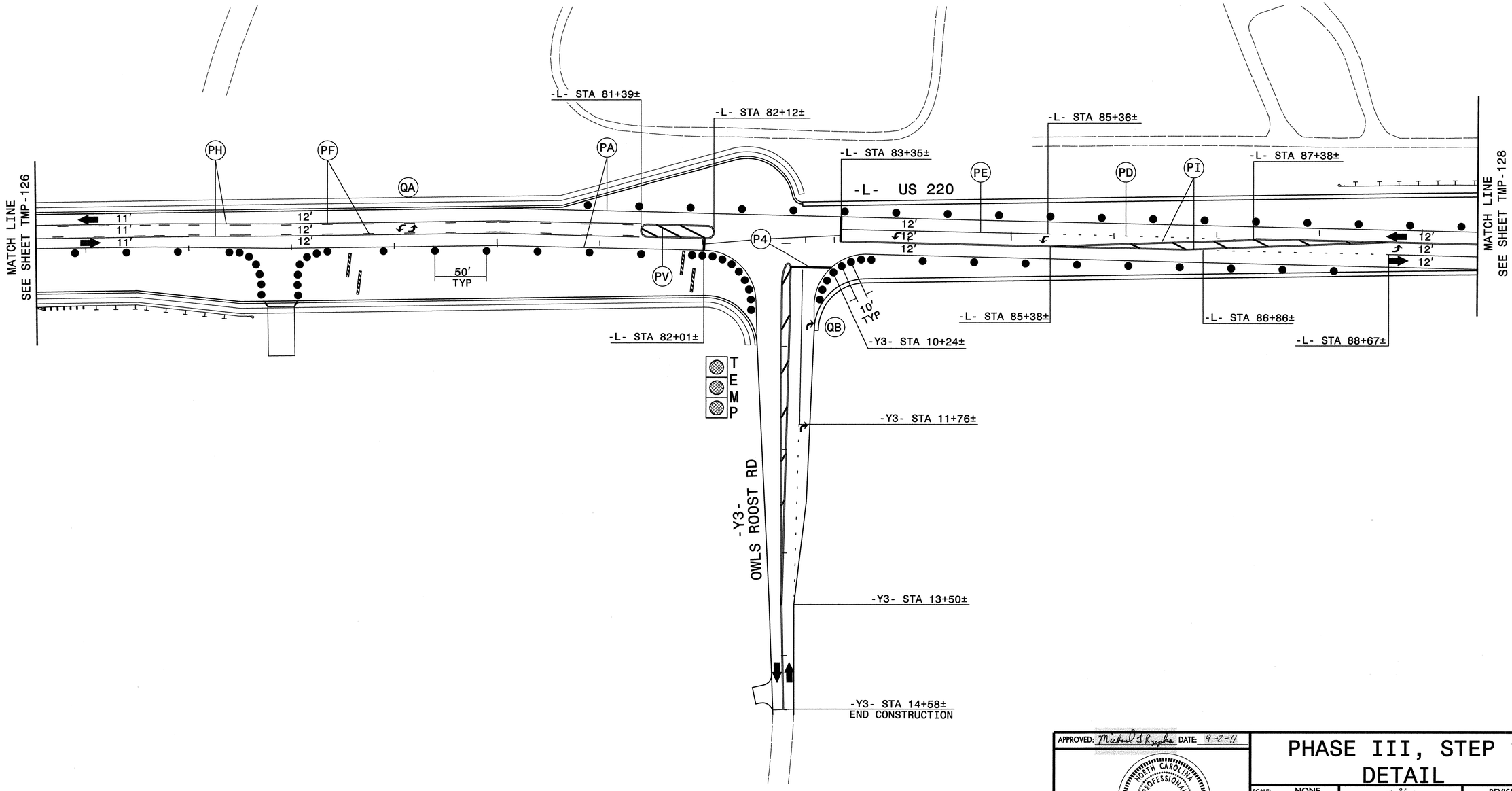
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-127

80

85



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-128

90

95

100

-Y4- LAURINDA DR (SR 2252)

-Y4- STA 12+75±
END CONSTRUCTION

-Y4- STA 10+25±

-L- STA 92+77±

-L- STA 94+70±

-L- US 220

-L- STA 95+83±

-L- STA 96+34±

B

-L- STA 99+33±

-L- STA 97+86±

PA

PV

50'
TYP

PD

PE

PI

10'
TYP

12'

MATCH LINE
SEE SHEET TMP-127

MATCH LINE
SEE SHEET TMP-129

TT

QB

QA

-L- STA 91+11±

-L- STA 92+28±

-L- STA 93+40±

-L- STA 94+71±

-L- STA 95+70±

-L- STA 95+93±

-L- STA 98+23±

-L- STA 99+98±

-L- STA 100+98±

-L- STA 101+36±

-L- STA 102+00±
BEGIN 300' SHIFT

B

SECTION B-B

℄ -L-

5'

3'

4:1

-L- STA 97+00±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-129

105

110

115

C

-L- STA 106+16±

-L- STA 106+70±

-L- STA 108+44±

-L- STA 109+00±
BEGIN PCB
2' OFFSET

-L- US 220

10' TYP

50' TYP

12' 12' 12' 12' 10' 11' 11' 12' 12' 12' 12'

MATCH LINE
SEE SHEET TMP-128

MATCH LINE
SEE SHEET TMP-130

PD QA TT PI PV CI CA PI PA

-L- STA 103+40±

-L- STA 105+00±
END 500' SHIFT

-L- STA 105+16±

-L- STA 106+82±

-L- STA 108+00±
BEGIN 300' SHIFT
SHIFT 6' LT

-L- STA 111+00±
END 300' SHIFT
SHIFT 6' LT

-L- STA 111+43±

-L- STA 113+65±

-L- STA 114+91±

C

SECTION C-C

℄ -L-

2' 4' 12' 12'

-L-
PROP US 220 NB

-L- STA 112+50±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS ESTABLISHMENT OF TRANSPORTATION TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

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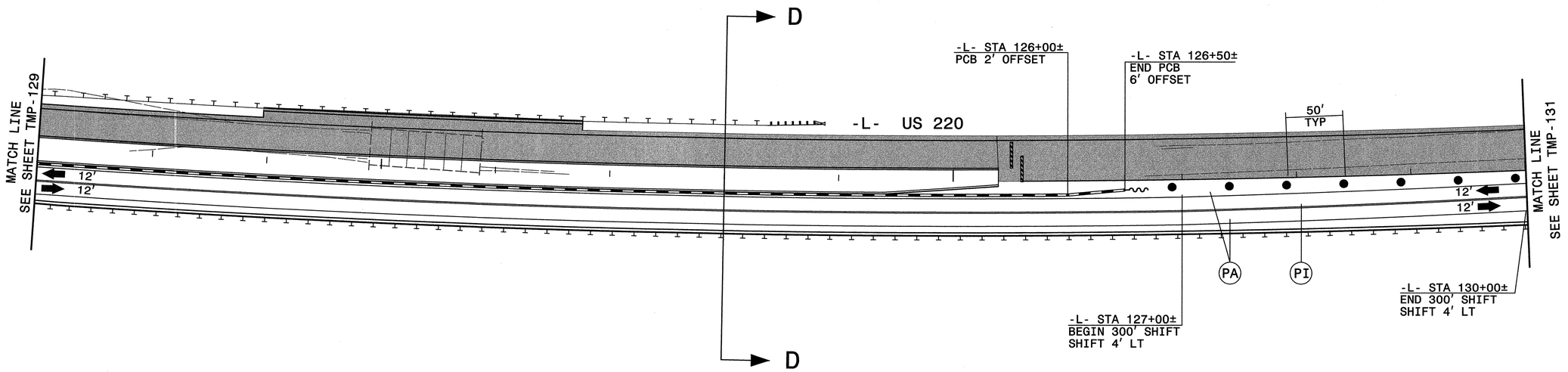
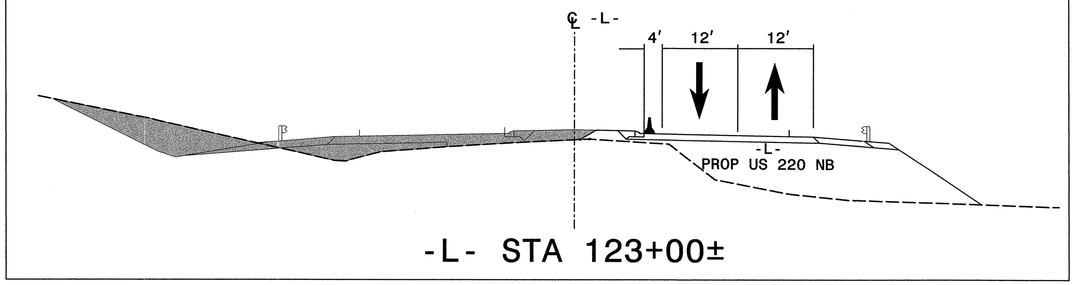
	R-2309AB	TMP-130

120 125 130



SECTION D-D



-L- STA 123+00±

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

CADD FILE

8/31/2011
R:\Traffic\TrafficControl\TCP\50%\r2309ab_tc_tcp_plll_sht08.dgn
Florence & Hutcheson

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
	R-2309AB	TMP-131

130

135

140

-Y5- HAMBURG MILL RD (SR 2135)

-L- US 220

MATCH LINE SEE SHEET TMP-130

MATCH LINE SEE SHEET TMP-132

TEMP

50' TYP

10' TYP

12'

11'

-L- STA 130+90±

-L- STA 131+46±

-L- STA 131+48±

-L- STA 133+43±

-L- STA 135+17±

-L- STA 135+50±

-L- STA 136+00±

-L- STA 137+50±

-L- STA 137+88±

-L- STA 140+37±

-L- STA 141+60±

-L- STA 142+78±

-L- STA 143+09±

-Y6- STA 10+58±

-Y6- STA 11+27±

-Y6- STA 11+65±

-Y6- STA 14+60±

-Y6- STRAWBERRY RD (SR 2321)

PA PI CA CI PD PA PV PE P4 P4 QA QB

E E

TT

SECTION E-E

℄ -L-

4'

-L- PROP US 220 NB

EXIST US 220

-L- STA 136+50±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS GEOMETRIC DESIGN UNIT TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION

REVISIONS	
CADD FILE	

9/4/2011
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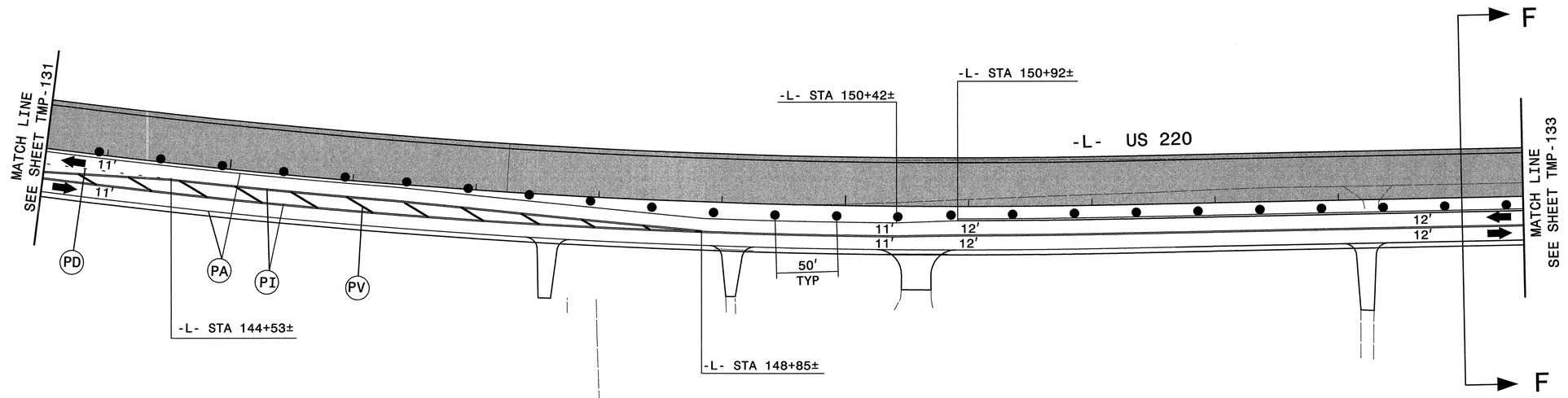
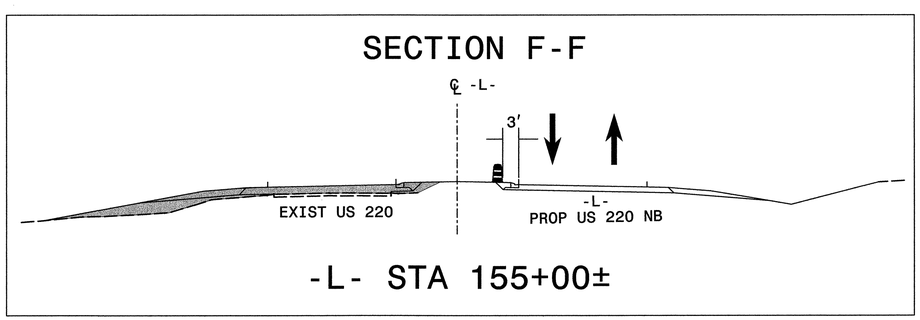
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-132

145 150 155





APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\Traffic\TrafficControl\TCP\50%\r-2309ab_fc_tcp_pill_sl_dtl_l10.dgn
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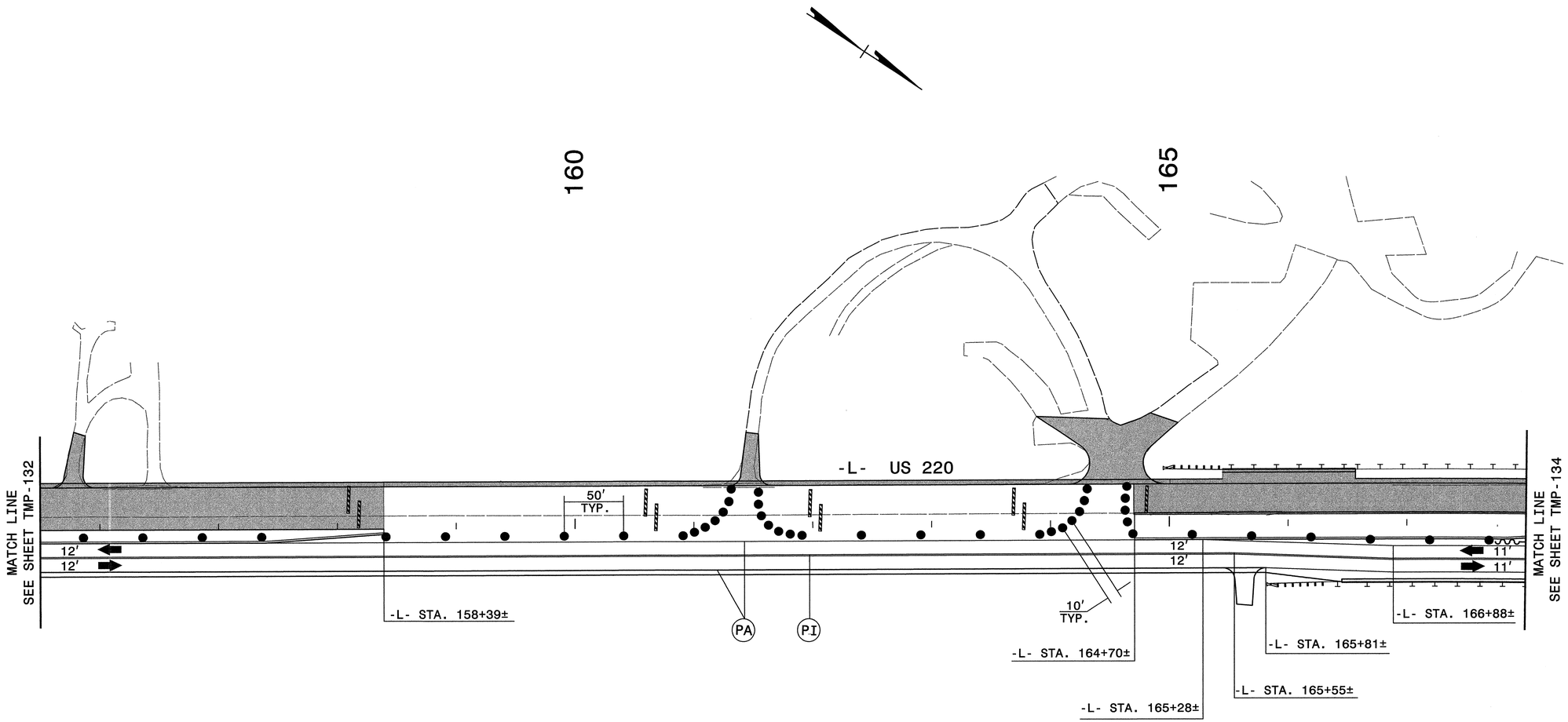
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-133



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS	
CADD FILE	

8/24/2011
R:\Traffic\TrafficControl\TCP\50%\r2309ab_tc_tcp_pIII_sl_dtl_ll.dgn
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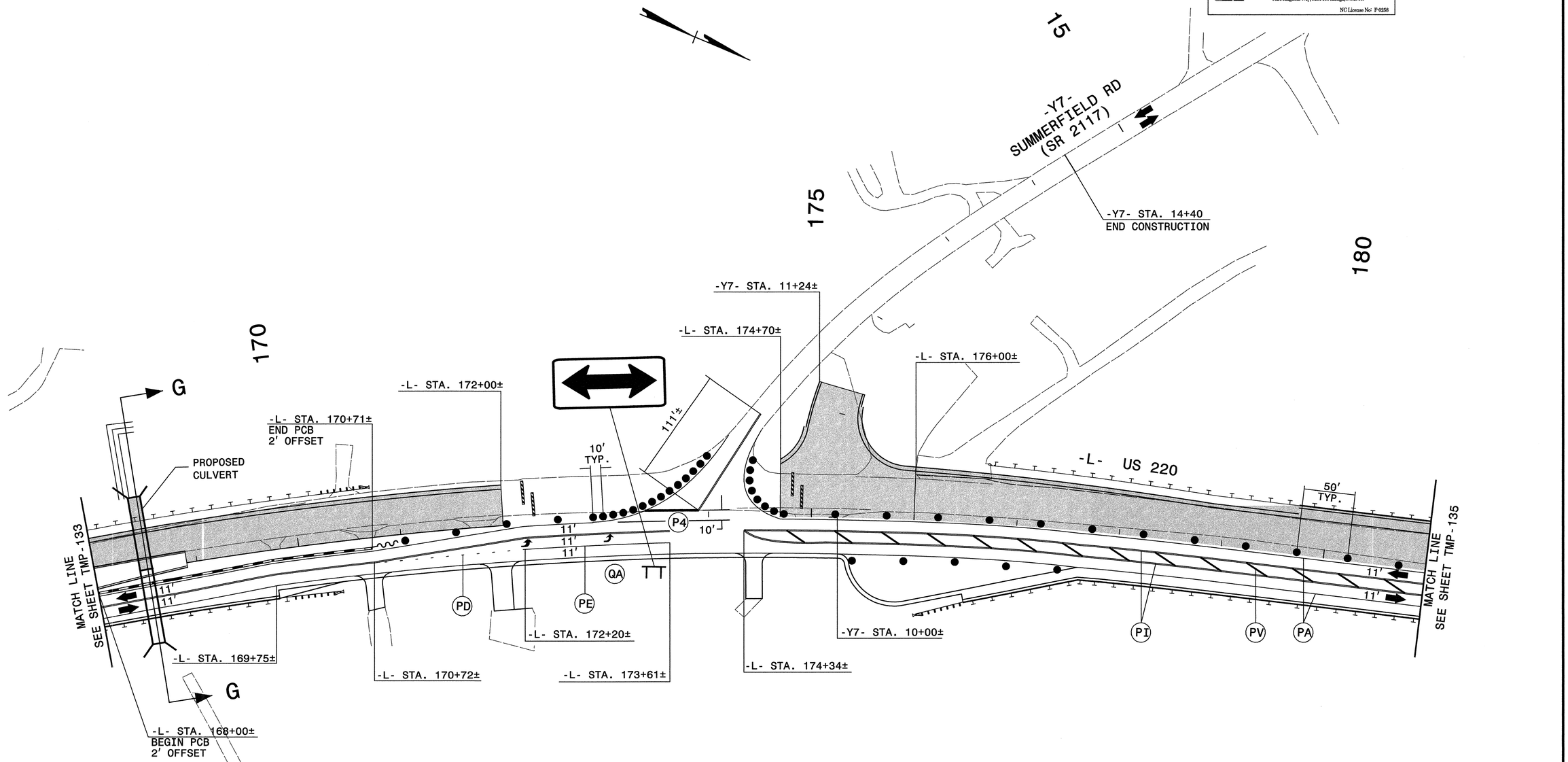
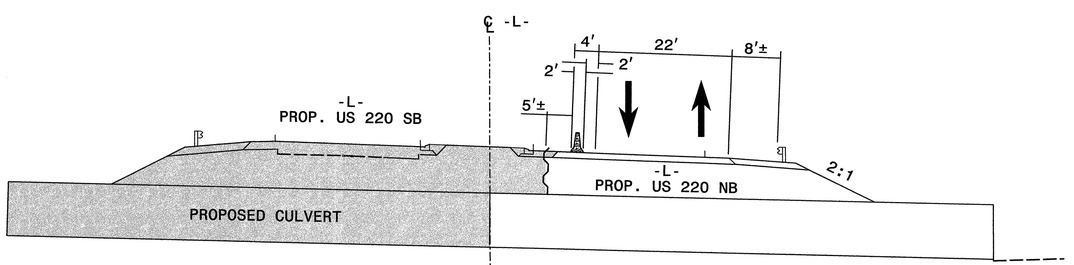


SECTION G-G



-L- STA. 168+50±

APPROVED: Michael T Nzepa DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T NZEPA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
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9/3/2011
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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-135

185

190

-L- STA 188+95±

H

-L- STA 181+55±

-L- US 220

10' TYP

-L- US 220

50' TYP

MATCH LINE SEE SHEET TMP-134

MATCH LINE SEE SHEET TMP-136

11'

11'

11'

11'

QA

PD

PA

PE

PF

PH

PA

PI

PV

PD

-L- STA 181+46±

-L- STA 181+46±

-L- STA 185+13±

-L- STA 185+64±

-L- STA 191+00±

-L- STA 191+48±

H

SECTION H-H

℄ -L-

3'

-L-
PROP US 220 SB

-L-
PROP US 220 NB

-L- STA 187+00±

APPROVED: Michael T. Reszka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RESZKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DESIGN UNIT

REVISIONS	
CADD FILE	

8/24/2011
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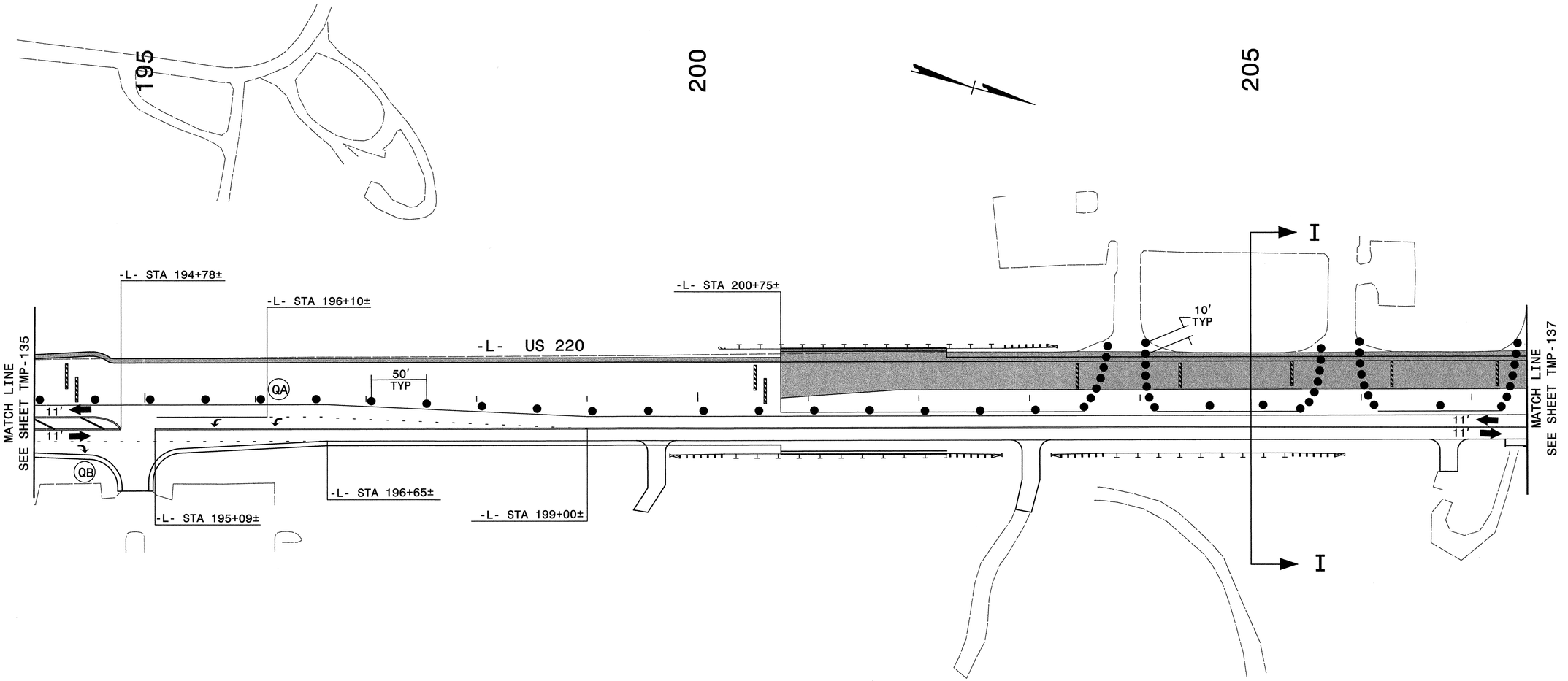
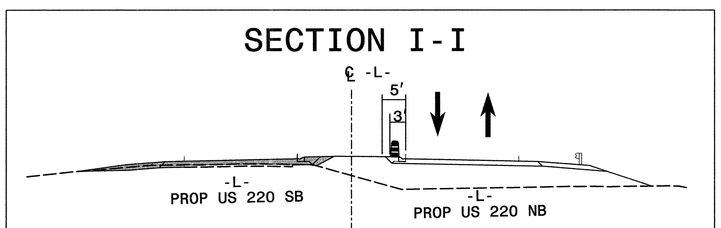
PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-136





APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS ENGINEERING BRANCH TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
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Florence & Hutcheson

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	R-2309AB	TMP-137

210

215

220

-Y8- AUBURN RD (SR 2204)

-Y8- AUBURN RD CLOSURE, STEP 2

-Y8- STA 5+20±

-Y8- STA 6+60±

-Y8- STA 10+47±

-L- STA 215+88±

-L- STA 215+50±

-L- STA 214+82±

-L- STA 221+00±

-L- STA 218+00±

-L- US 220

TEMP

MATCH LINE SEE SHEET TMP-136

MATCH LINE SEE SHEET TMP-138

-L- STA 210+68±

10' TYP

50' TYP

11'

12'

-L- STA 209+90±

-L- STA 209+17±

-L- STA 209+31±

-L- STA 211+44±

-L- STA 212+18±

-L- STA 212+74±

-L- STA 212+89±

-L- STA 213+86±

-L- STA 215+42±

-L- STA 219+32±

-L- STA 216+84±

-Y8- STA 10+00±

-Y8- STA 10+60±

-Y8- STA 10+80±

-Y8- STA 14+88±

-Y8- STA 15+00±

-Y8- NC 150

P4 PI PD PA PV PE PR QA QB

J

SECTION J-J

℄ -L-

5'

3

-L-
PROP US 220 SB

-L- STA 214+00±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL

REVISIONS	
CADD FILE	

9/4/2011
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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-138

225

230

-Y9- PARSONAGE RD (SR 2126)

-Y9- STA 12+04±

-L- STA 221+00±

-L- STA 221+50±

MATCH LINE SEE SHEET TMP-137

10' TYP

50' TYP

P4

10'

-L- US 220

11'
11'
11'

12'
12'

MATCH LINE SEE SHEET TMP-139

QA

PH

PF

PI

PV

PA

PI

PI

-L- STA 223+34±

-L- STA 226+30±

-L- STA 226+85±

-L- STA 227+45±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\Traffic\TrafficControl\TCP\50%\r2309ab_tc_top_plll_sl_dtl16.dgn
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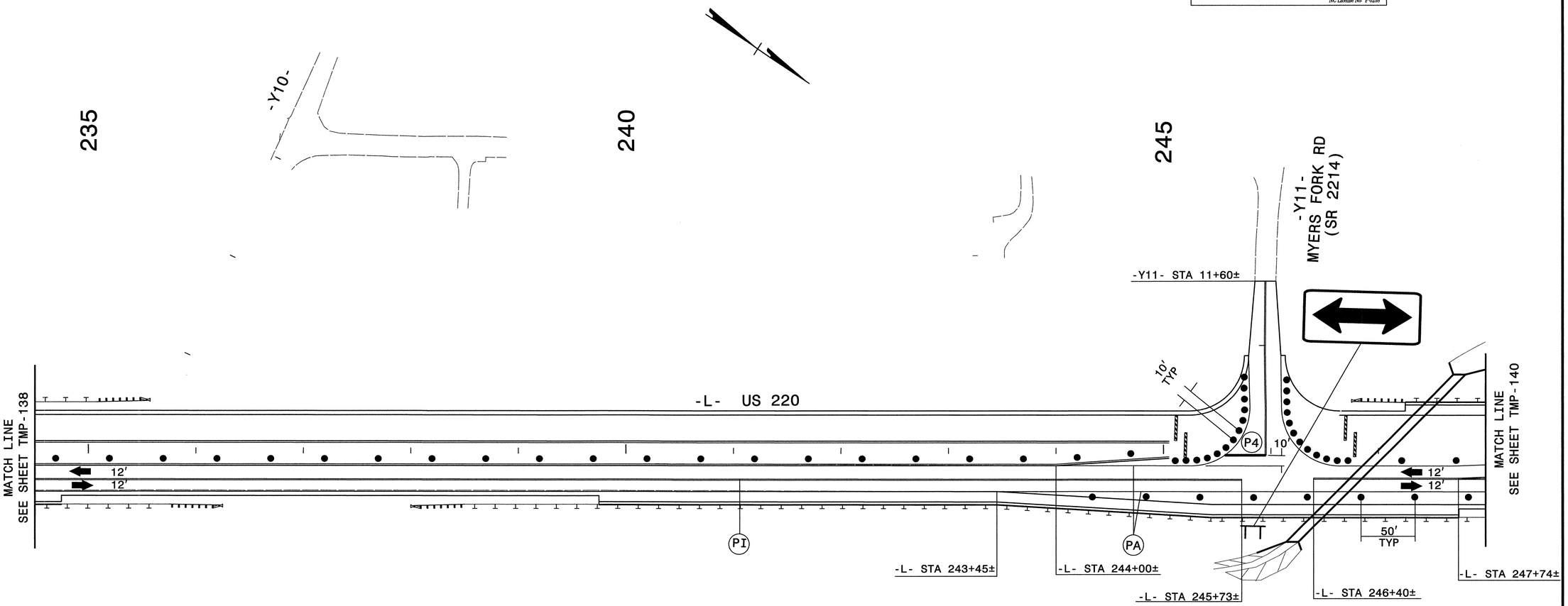
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-139



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS GUIDELINES AND SPECIFICATIONS FOR TRAFFIC CONTROL

REVISIONS	
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8/24/2011
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Florence & Hutcheson

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CONSULTING ENGINEERS
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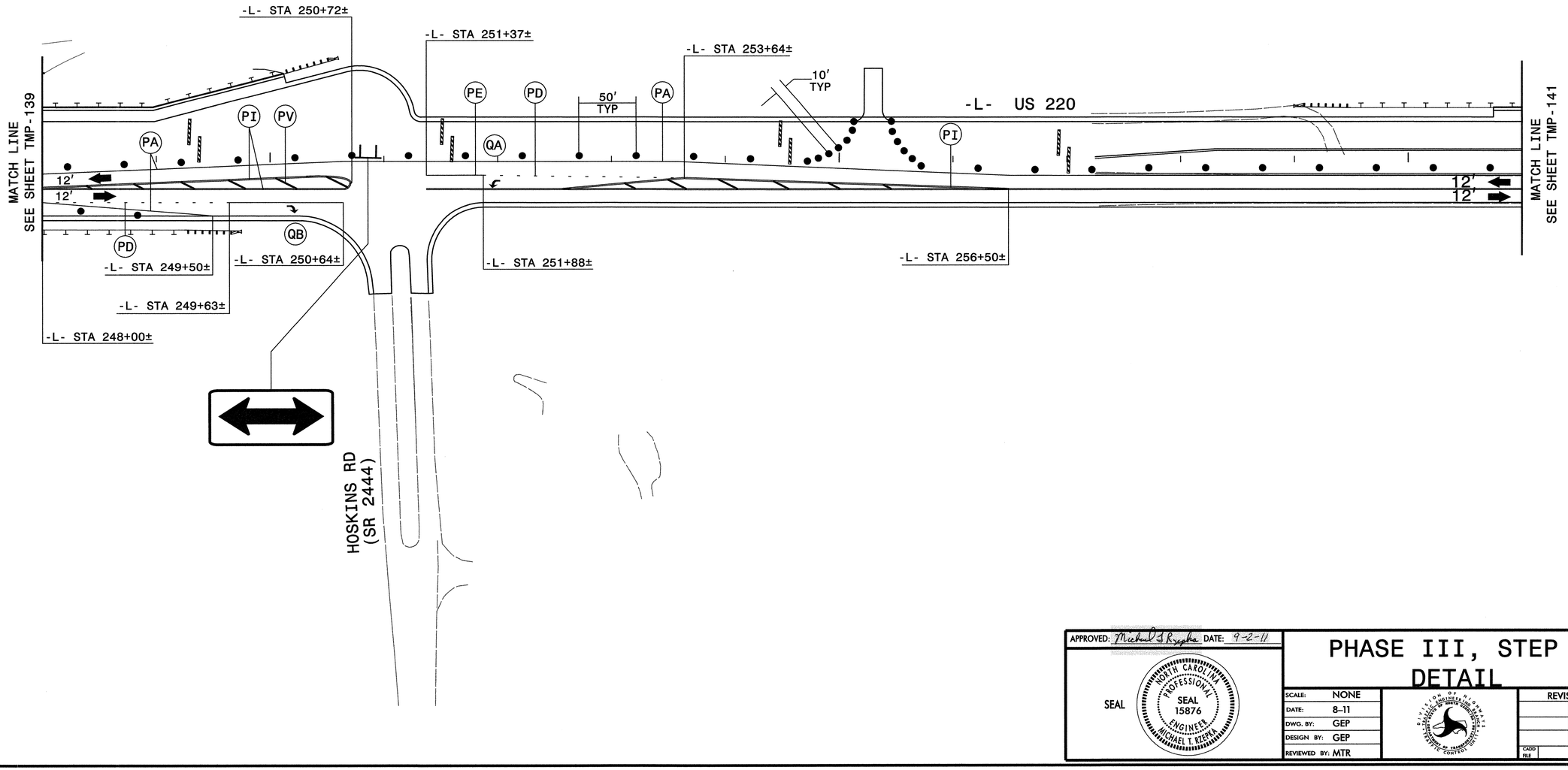
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-140

250

255

260



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
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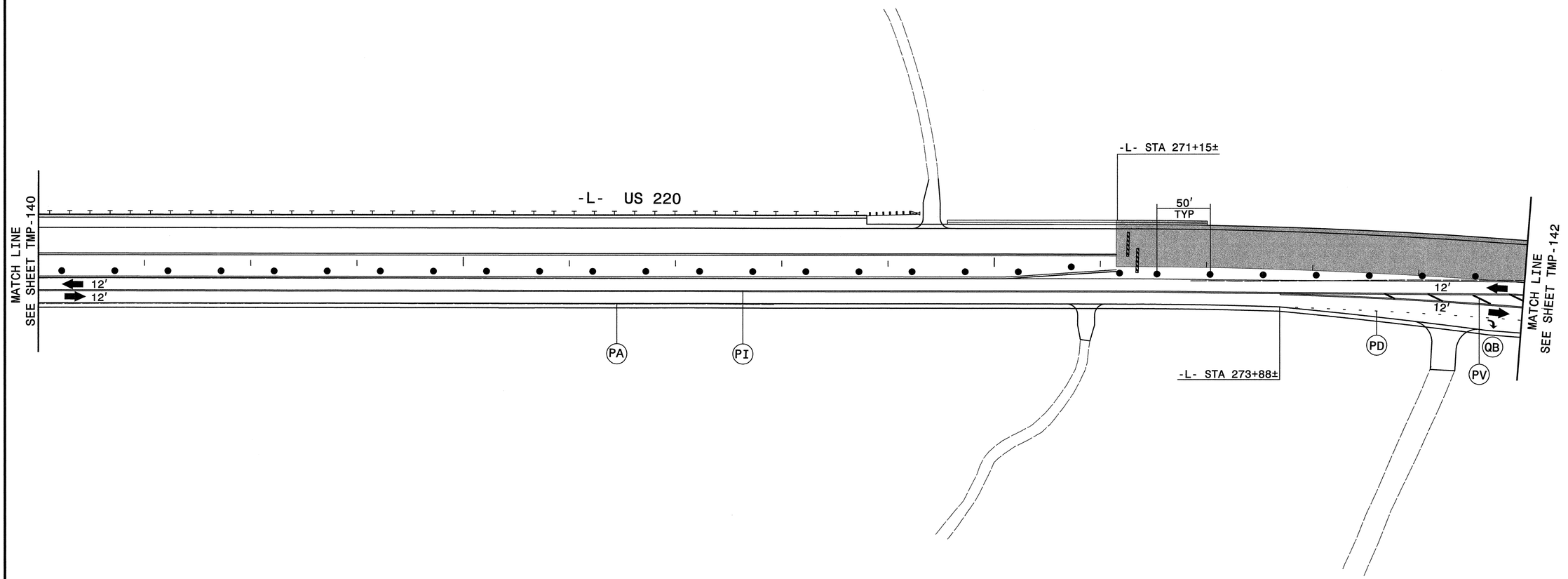
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-141

265

270

275



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

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275

285

-Y12- STA 6+25±

-Y12- OAK RIDGE RD (NC 150)

-Y12- STA 10+00±

-Y12- STA 9+76±

-L- STA 281+04±

-L- STA 281+50±

-L- STA 283+12±

-L- STA 279+72±

-L- STA 281+80±

-L- STA 279+00±

10' TYP

-L- STA 282+15±

50' TYP

-L- US 220

-L- US 220

MATCH LINE SEE SHEET TMP-141

MATCH LINE SEE SHEET TMP-143

12'

12'

12'

12'

12'

12'

12'

12'

12'

12'

P4

PV

PI

PD

PE

-L- STA 276+16±

-L- STA 277+30±

-L- STA 278+38±

-L- STA 279+81±

-Y12- STA 10+74±

-Y12- STA 11+67±

QA

QB

-Y12- STA 12+08±

-L- STA 286+00±

-Y12- SCALESVILLE RD (SR 1002)

-Y12- STA 13+50±

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL

REVISIONS	
CADD FILE	

8/31/2011
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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-143

290

295

300

-Y14A-
SUMMERFIELD RD
(SR 2117)

K

K

MATCH LINE
SEE SHEET TMP-142

MATCH LINE
SEE SHEET TMP-144

-L- STA 293+93±

-L- US 220

-L- STA 297+85±

12'
12'

10'

50'
TYP

12'
12'

-L- STA 293+11±

P4

24'

20'

PI

PA

-Y13- STA 12+66±

-Y13- MOREFIELD DR

SECTION K-K

℄ -L-

5'

3'

-L-
PROP US 220 SB

EXIST US 220

-L-
PROP US 220 NB

-L- STA 290+00±

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

8/24/2011
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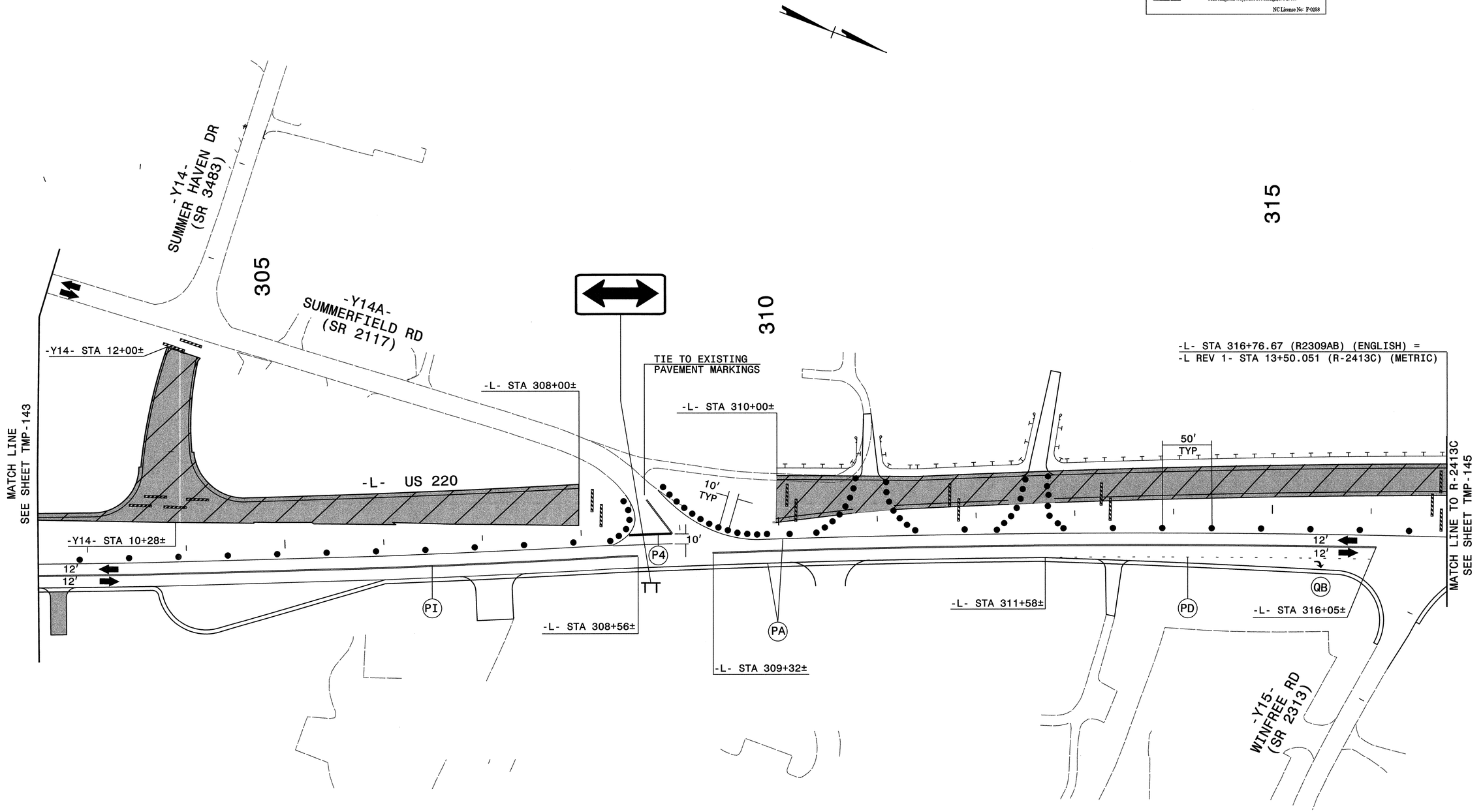

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DESIGN UNIT

REVISIONS	
CADD FILE	

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METRIC

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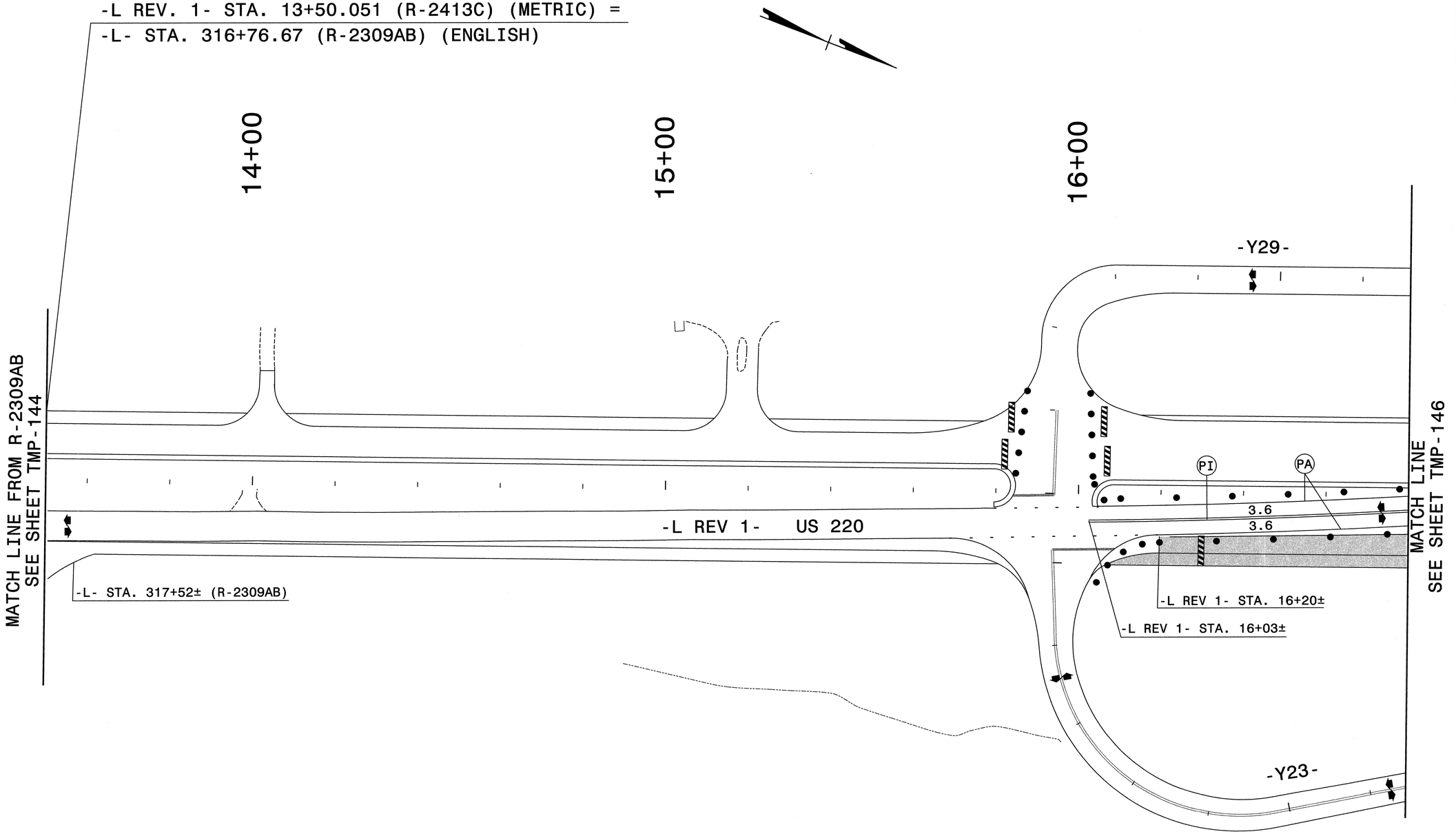
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-145

-L REV. 1- STA. 13+50.051 (R-2413C) (METRIC) =
-L- STA. 316+76.67 (R-2309AB) (ENGLISH)



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25%\r2413c_tcp_pIII_dtl_01.dgn
Florence & Hutcheson

METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO. R-2413C	SHEET NO. TMP-146

17+00

18+00

19+00

-Y29-

-L REV 1- STA. 19+09.603 =
SB US 220 RAMP STA. 19+01.500 =
NB US 220 RAMP STA. 9+95.486

11+00

MATCH LINE
SEE SHEET TMP-145

PA

PI

PA

-XOVRA-

-L REV 1-

SB US 220 RAMP

PROP. SHLD.
3.6
3.6

US 220

PROP. NB LANES

NB US 220 RAMP

MATCH LINE
SEE SHEET TMP-147

-Y23-

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
GEOMETRIC DESIGN UNIT
TRAFFIC ENGINEERING BRANCH
TRAFFIC ENGINEERING DEPARTMENT
TRAFFIC CONTROL UNIT

REVISIONS

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R:\TrafficControl\25%\r2413c_top_pIII_dtl_02.dgn
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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-147

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5121 Kingdom Way, Suite 100 Raleigh, NC 27607
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19+00

20+00

21+00

22+00

SB US 220 RAMP

PI

PROP. SHLD.
3.6
3.6
US 220

PA

PROP. SHLD.
3.6
3.6

-L REV- STA 21+80±

-L REV-

-L REV- STA 20+60±

MATCH LINE
SEE SHEET TMP-146

MATCH LINE
SEE SHEET TMP-148

PROP. NB LANES

NB US 220 RAMP

-Y23-

APPROVED: Michael T. Bzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. BZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

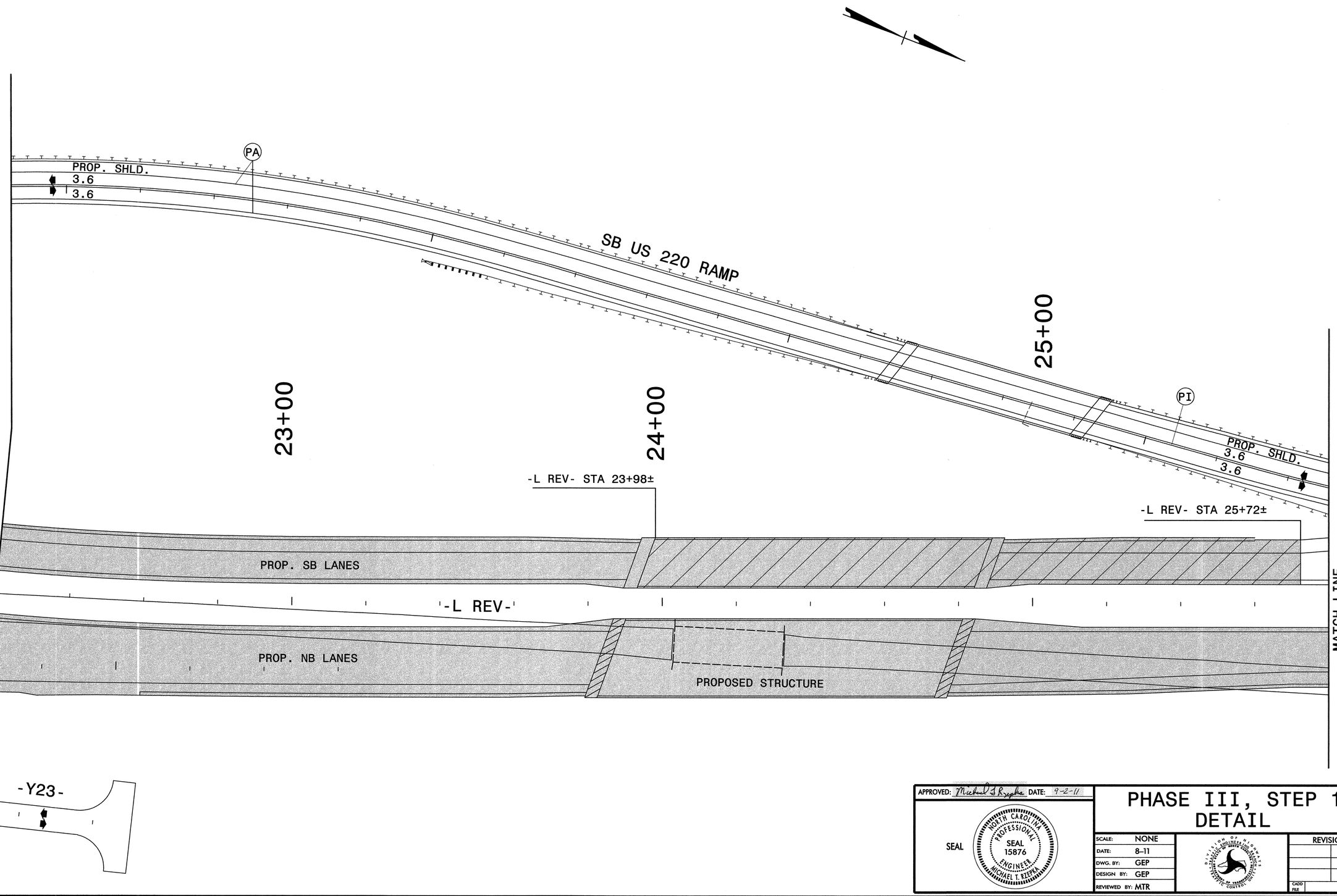
REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25%\r2413c_tcp_pIII_dtl_03.dgn
Florence & Hutcheson

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-148



8/24/2011
R:\TrafficControl\25\r2413c_top_pll_dtl_04.dgn
Florence & Hutcheson

APPROVED: Michael T Ryzpka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RYZPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
GEOMETRIC DESIGN UNIT
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

METRIC

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-149

26+00

27+00

28+00

29+00

-Y20-

PA

SB US 220 RAMP

PROP. SHLD.
3.6
3.6

-SB220RP- STA 9+58±

PA

PI

PROP. SHLD.
3.6
3.6
3.6
3.6

US 220

-L REV-

MATCH LINE
SEE SHEET TMP-148

PROP. NB LANES

MATCH LINE
SEE SHEET TMP-150

-L REV- STA 29+00±

SR 2104
SPOTSWOOD RD

8/24/2011
R:\TrafficControl\25\r2413c_top_pIII_dtl_05.dgn
Florence & Hutcheson

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC ENGINEERING & SAFETY SYSTEMS UNIT
TRAFFIC CONTROL

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-150

-Y20-

30+00

PA

PI

31+00

32+00

PROP. SHLD.
3.6
3.6
3.6

US 220

-L REV-

PROP. SHLD.
3.6
3.6
3.6

MATCH LINE
SEE SHEET TMP-149

MATCH LINE
SEE SHEET TMP-151

OLD US 220

-Y27- STA 10+00±

-Y27-

SR 2104 SPOTSWOOD RD

APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

8/24/2011
R:\TrafficControl\25\r2413c_tcp_pIII_dtl_06.dgn
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PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-151

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

34+00

35+00

36+00

-Y20-

PI

PA

US 220

PROP. SHLD.
3.6
3.6
3.6

-L REV-

PROP. SHLD.
3.6
3.6
3.6

MATCH LINE
SEE SHEET TMP-150

MATCH LINE
SEE SHEET TMP-152

OLD US 220

-Y26-

-Y26- STA 10+00±

APPROVED: Michael T Ryzpka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RYZPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS	
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8/24/2011
R:\TrafficControl\25%\r2413c_tcp_pIII_dtl_07.dgn
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CONSULTING ENGINEERS
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NC License No: P-0288

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-152

-Y20-

37+00

38+00

39+00

40+00

PA

QC

PD

PI

PC

PROP. SHLD.
3.6
3.6
3.6

US 220

-L REV- STA 39+40±

-L REV- STA 36+84±

-L REV-

-L REV- STA 38+50±

MATCH LINE
SEE SHEET TMP-151

MATCH LINE
SEE SHEET TMP-153

-L REV- STA 37+00±

-Y26-

-Y21-

SR 2104
SPOTSWOOD RD

DO NOT PLACE PROPOSED FILL IN THE AREA OF EXISTING PIPELINES NEAR -LREV- STA 38+10± UNTIL PIPELINE REINFORCEMENT IS CONSTRUCTED (BY OTHERS) TO SUPPORT THE FILL, OR AS DIRECTED BY THE ENGINEER.

APPROVED: Michael T Rzepka DATE: 1-11-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

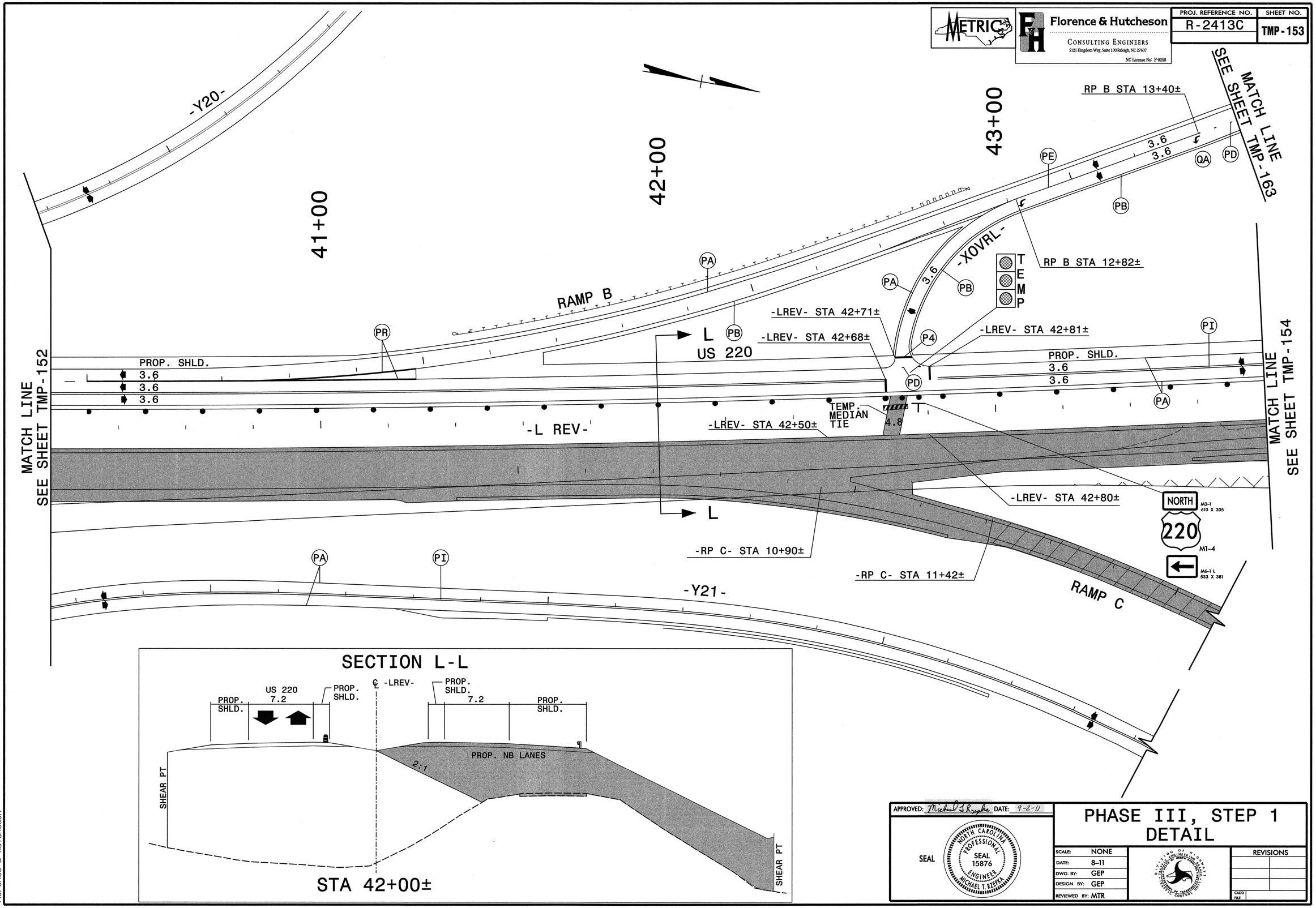
PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	1-12
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

1/11/2012
R:\TrafficControl\25X\r2413c_tcp_plll_dtl_08.dgn
Florence & Hutcheson



SECTION L-L

STA 42+00±

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/31/2011
R:\Traffic Control\25\r-2413c_tmp_pIII_dtl_09.dgn
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NC License No- P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-154

RAMP A

RP A STA 14+20±

MATCH LINE
SEE SHEET TMP-163

EAST M3-2 610 X 305
WEST M3-4 610 X 305
158 M1-4
M6-1 L 533 X 381
M6-1 533 X 381

220 M1-4
M6-1 L 533 X 381

ONE WAY R6-1 L 914 X 305

STOP R1-1

-L REV- STA 47+15±

-XOVRM-

-Y6- STA 13+00±

-L REV- STA 45+55±
BEGIN 100 TAPER

-L REV- STA 46+20±

-L REV- STA 46+55±
END 100 TAPER

PROPOSED STRUCTURE

-L REV-

44+00 45+00 46+00 47+00

US 220

PROP. SHLD.
3.6
3.6
3.6
3.6
3.6
3.6
4.8

PROP. NB LANES

MATCH LINE
SEE SHEET TMP-153

MATCH LINE
SEE SHEET TMP-155

158 M1-4
M5-1 533 X 381

US 158

-Y6- STA 13+54±

-Y6-

220 M1-4
M5-1 533 X 381

158 M1-4
M6-1 L 533 X 381

RAMP D

MATCH LINE
SEE SHEET TMP-164

PA PB PD PE PI PV QA PCB

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

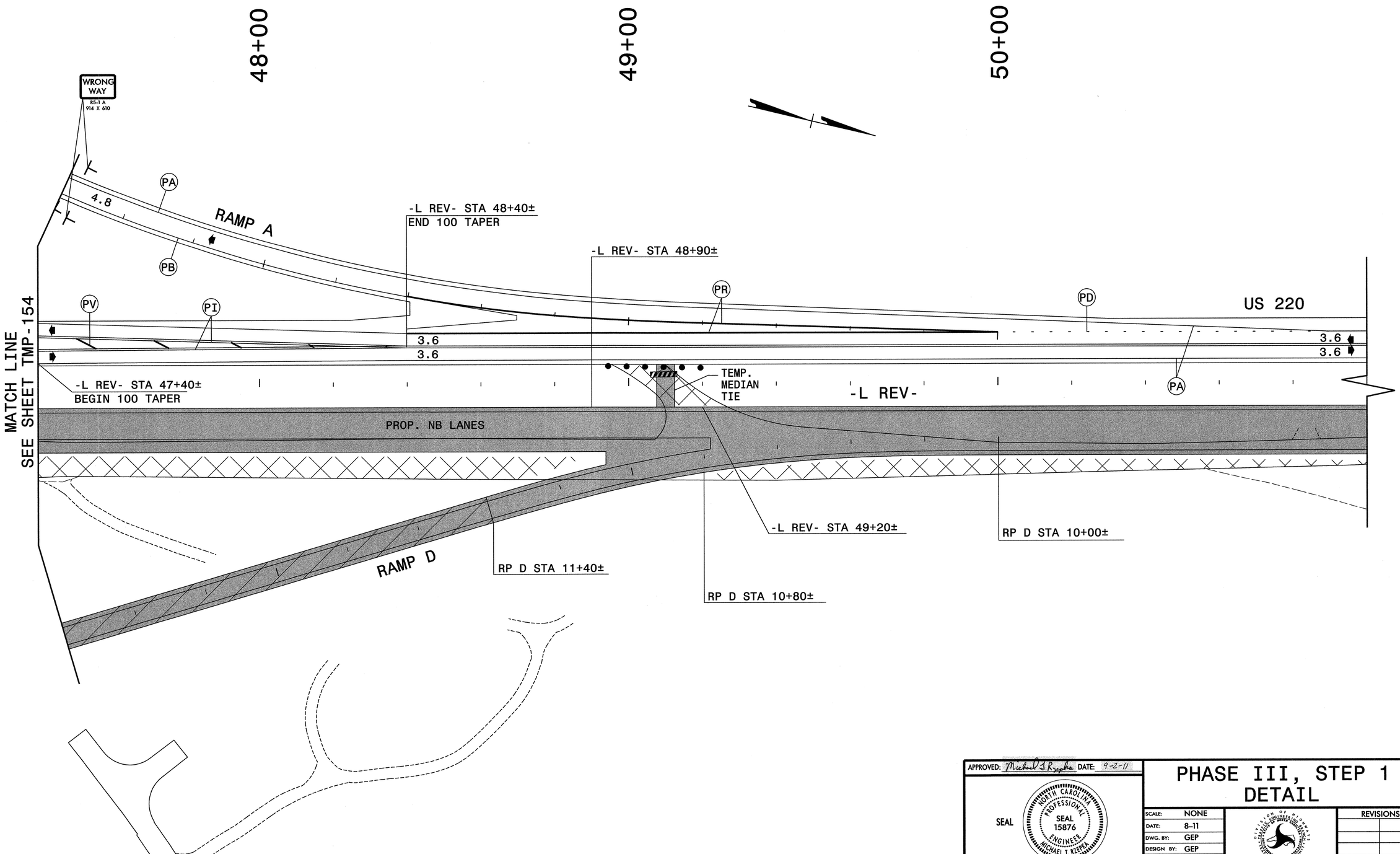
PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

8/31/2011
R:\TrafficControl\25\r2413c_tcp_pll_dtl_10.dgn
Florence & Hutcheson



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION RALEIGH, NORTH CAROLINA

REVISIONS	
CADD FILE	

8/31/2011
R:\TrafficControls\25X\r-2413c_typ_pll_dtl_ll.dgn
Florence & Hutcheson

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

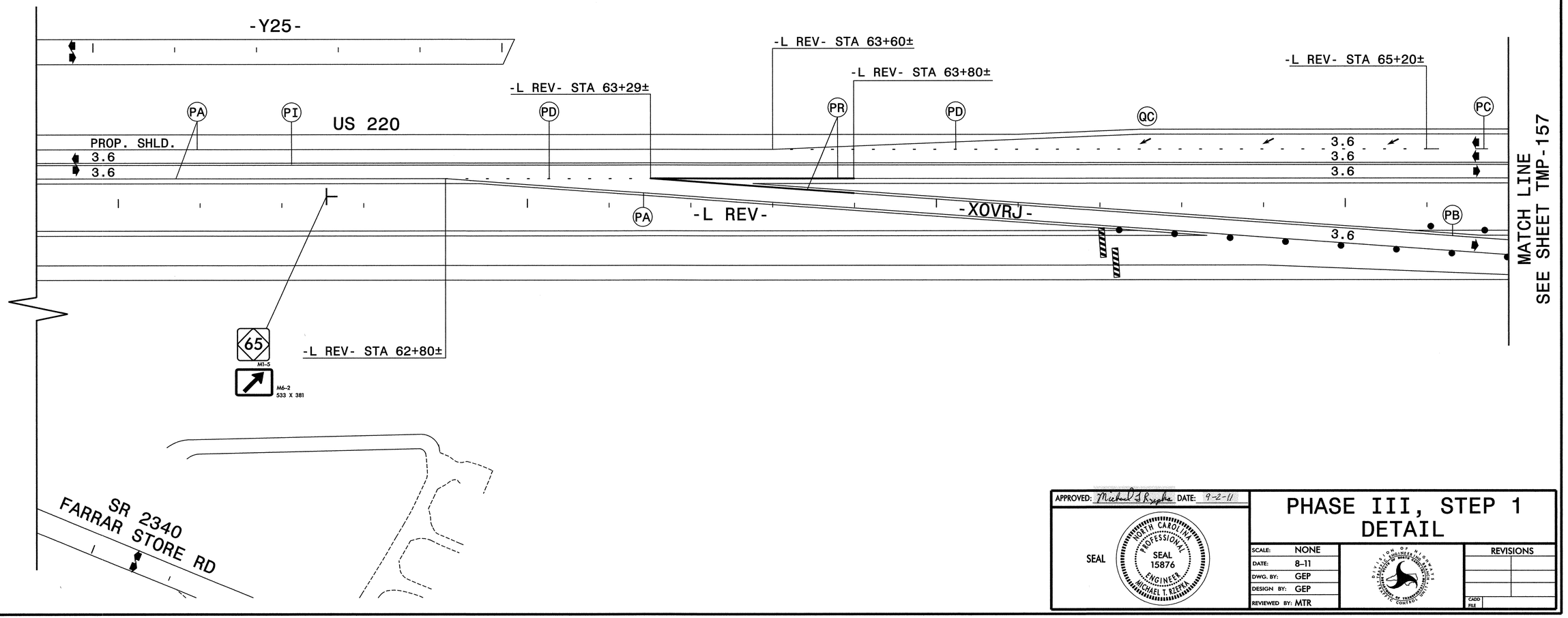
PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-156

62+00

63+00

64+00

65+00



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

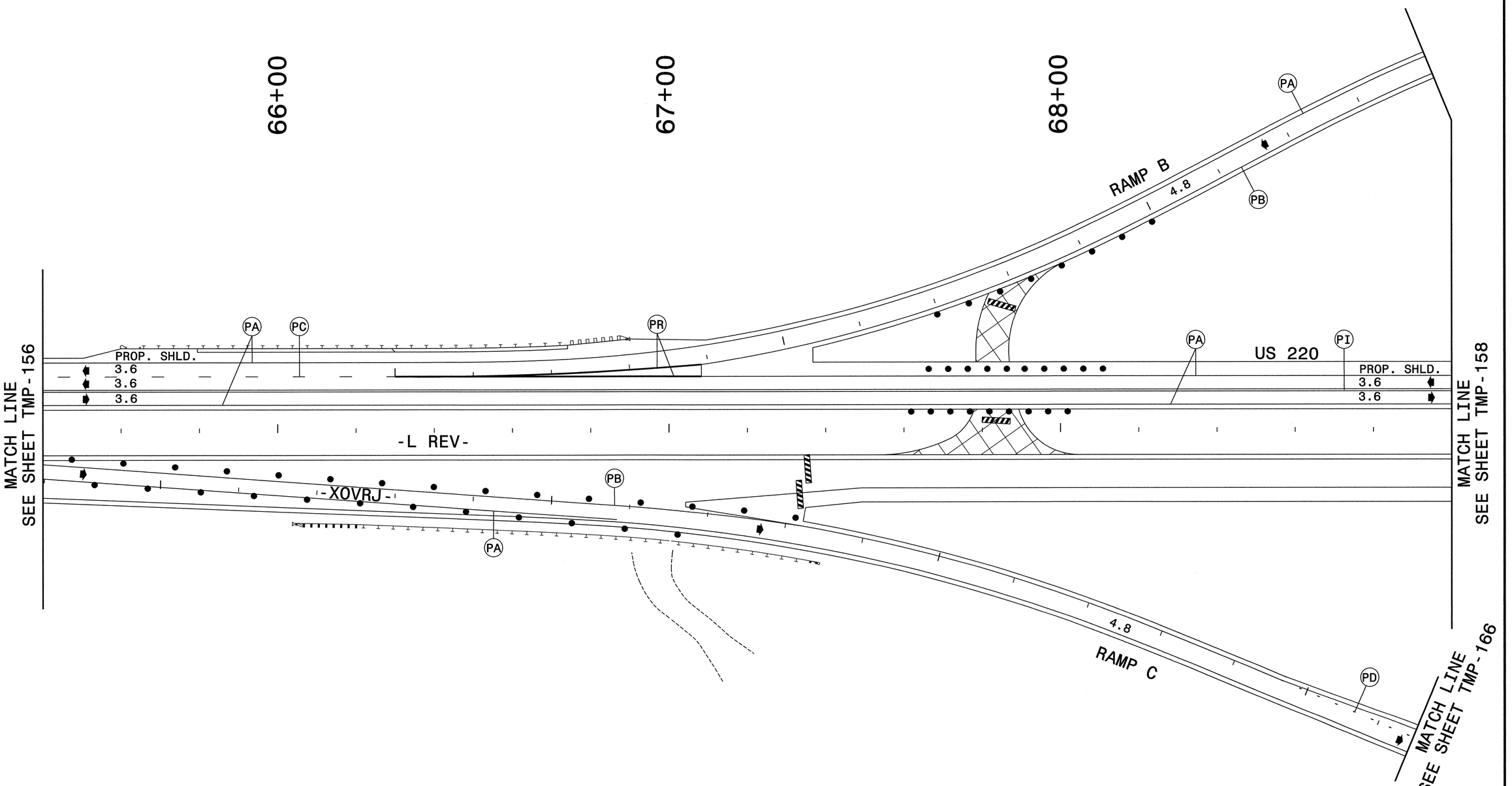
PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS ENGINEERING BRANCH TRAFFIC ENGINEERING SECTION TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25%\r2413c_top_pIII_dt1_l15.dgn
Florence & Hutcheson



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS ENGINEERING AND SAFETY UNIT TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25X\r-2413c_top_pIII_dtl_l6.dgn
Florence & Hutcheson

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-158

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

RAMP B

MATCH LINE
SEE SHEET TMP-165

RAMP A

RAMP D

MATCH LINE
SEE SHEET TMP-157

MATCH LINE
SEE SHEET TMP-159

MATCH LINE
SEE SHEET TMP-166

US 220

NC 65

PROP. SHLD.
3.6
3.6

PROP. SHLD.
3.6
3.6

-L REV-

PROP. NB LANES

3.6
3.6
3.6

3.6
3.6
3.6

70+00

71+00

72+00

RP A STA 14+20±

RP A STA 13+60±

-Y10- STA 10+32±

-Y10- STA 10+90±

-Y10-

PA
PB
PD
PE
PI
QA
QB

EAST M3-2 610 X 305
65 M1-5
M6-1 L 533 X 381

WEST M3-4 610 X 305
65 M1-5
M6-1 533 X 381

NORTH M3-1 610 X 305
220 M1-4
M6-1 L 533 X 381

NORTH M3-1 610 X 305
220 M1-4
M5-1 533 X 381

SOUTH M3-3 610 X 305
220 M1-4
M6-1 L 533 X 381

SOUTH M3-3 610 X 305
220 M1-4
M5-1 533 X 381

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
ENGINEERING BRANCH
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\Traffic Control\25%\r-2413c_tcp_pIII_dtlJT.dgn
Florence & Hutcheson

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

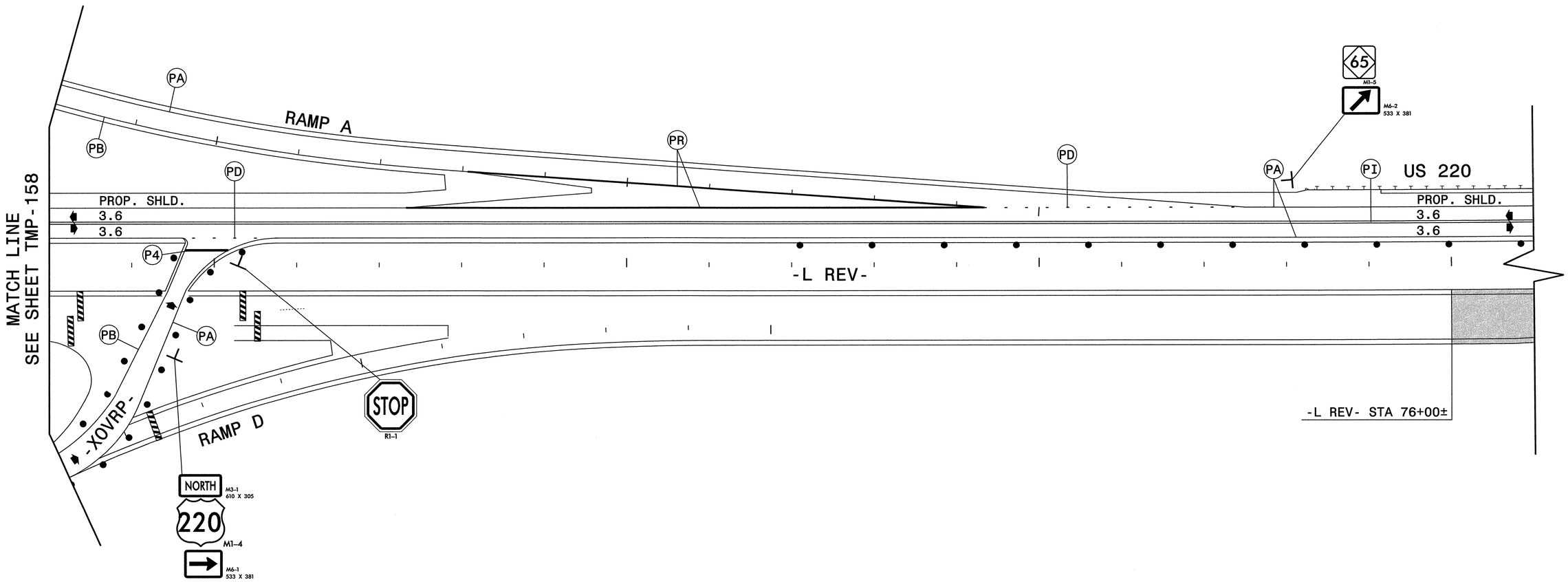
PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-159

73+00

74+00

75+00

76+00



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL

REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25\r2413c_top_pIII_dtl_l8.dgn
Florence & Hutcheson

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-160

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
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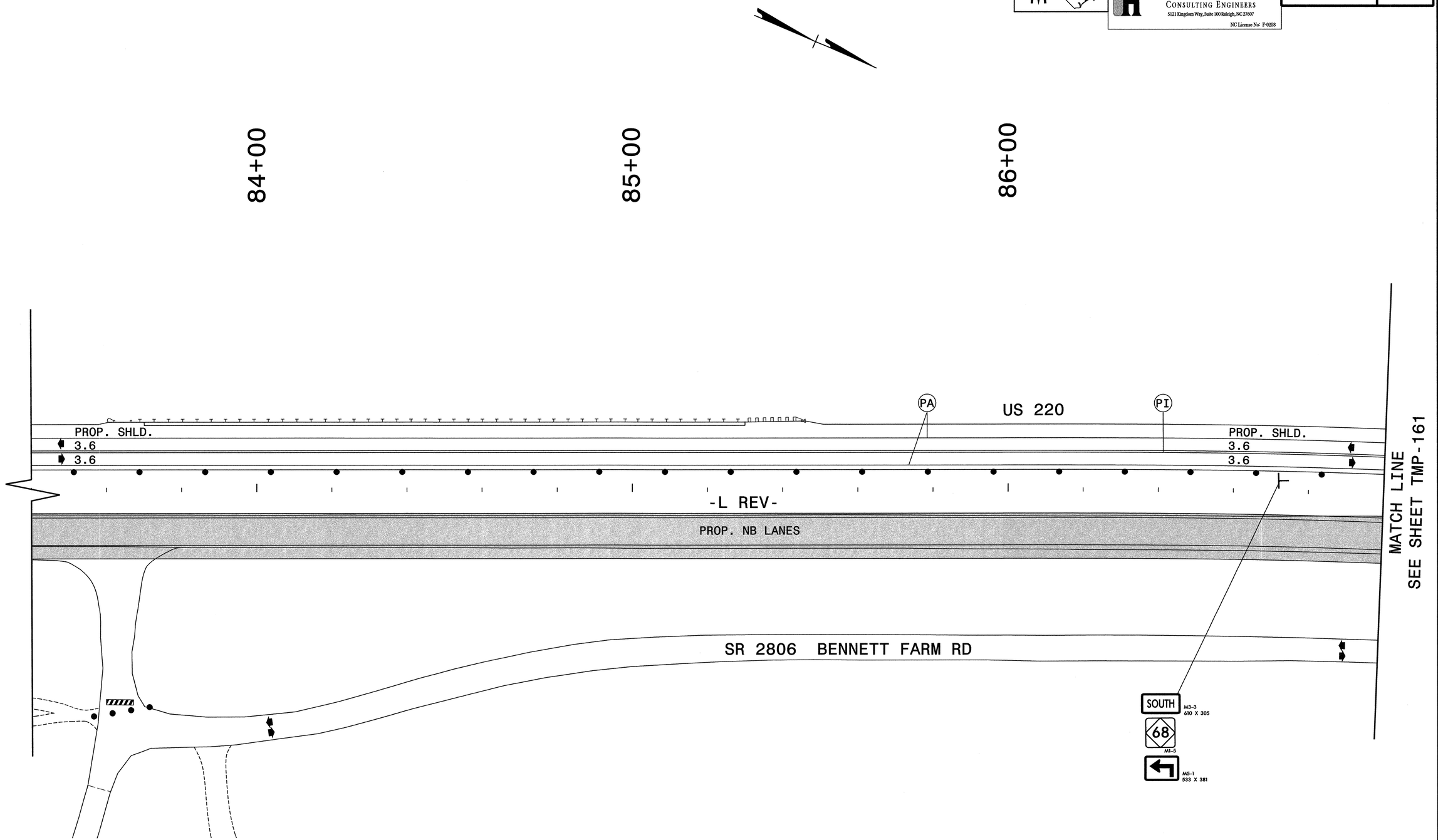
NC License No: F-0258



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

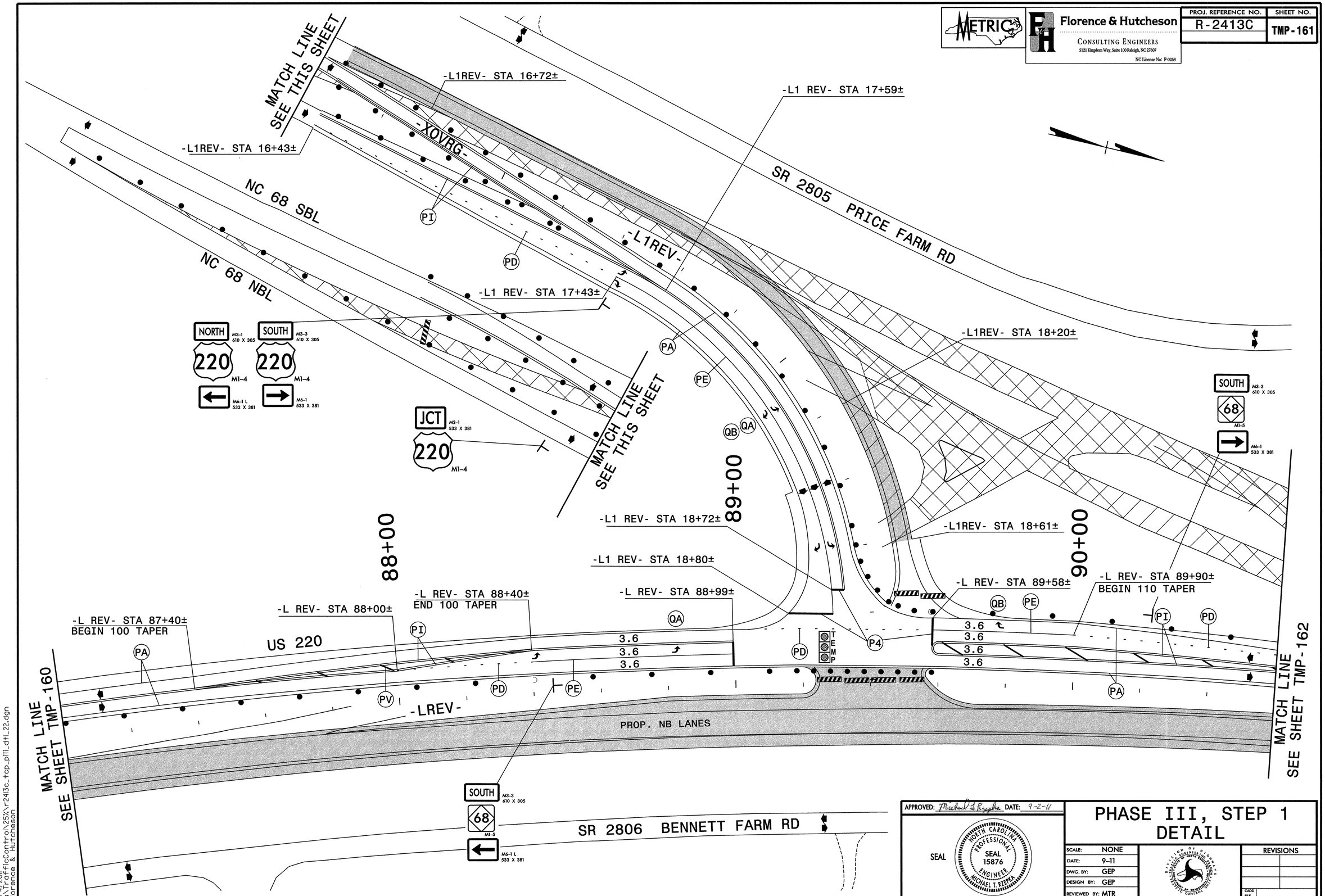
SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
STATE CONTROL UNIT

REVISIONS

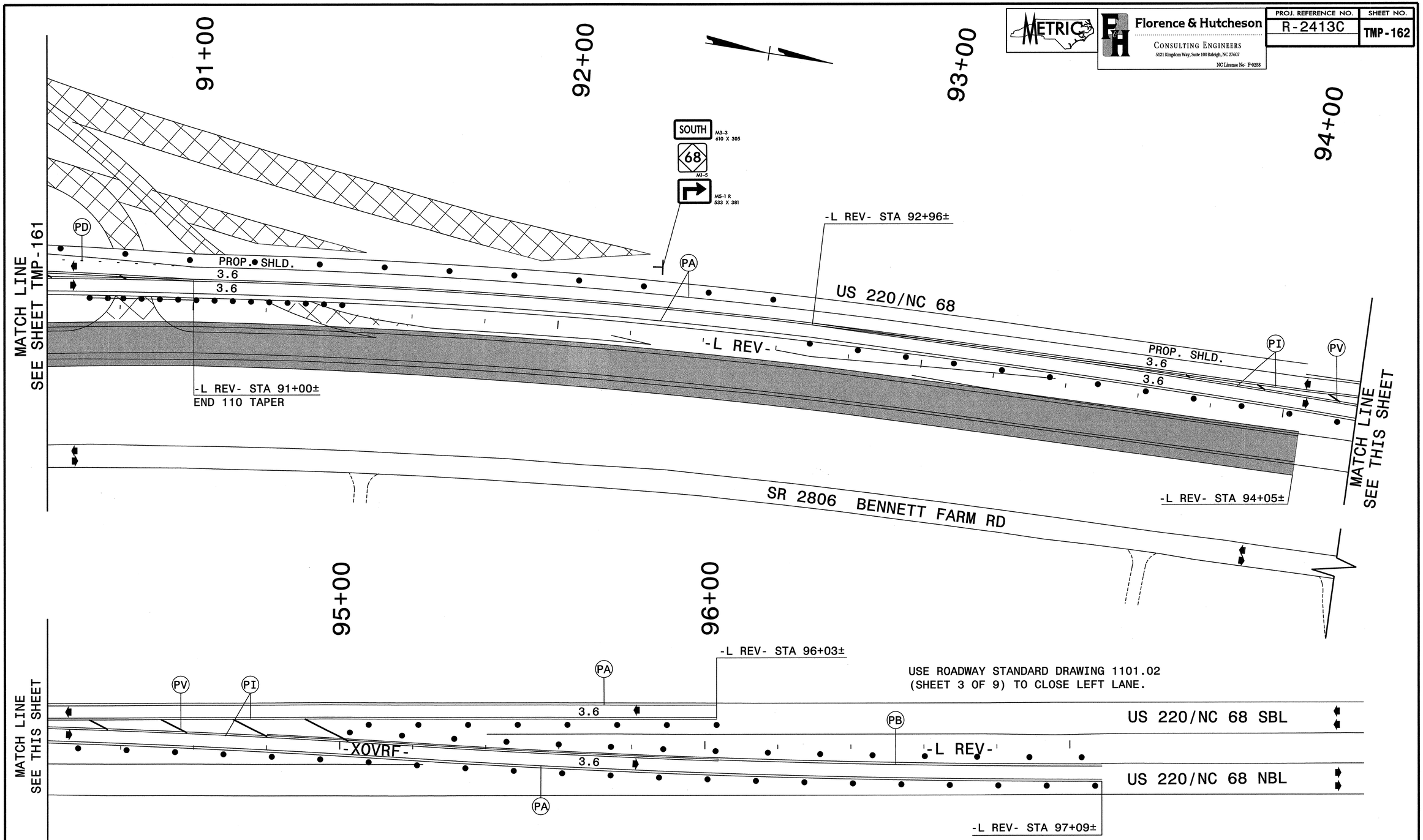
CADD FILE

8/24/2011
R:\TrafficControl\25%\r2413c_tcp_pili_dtl_21.dgn
Florence & Hutcheson



METRIC
Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
R-2413C
SHEET NO.
TMP-161
MATCH LINE SEE THIS SHEET
-L1REV- STA 16+72±
-L1REV- STA 16+43±
-XOVRG-
-L1 REV- STA 17+59±
SR 2805 PRICE FARM RD
NC 68 SBL
NC 68 NBL
-L1REV-
-L1 REV- STA 17+43±
-L1REV- STA 18+20±
NORTH
SOUTH
220
M3-1 610 X 305
M3-3 610 X 305
M1-4
M6-1 L 533 X 381
M6-1 533 X 381
JCT
M2-1 533 X 381
PI
PD
PA
PE
QB
QA
SOUTH
68
M3-3 610 X 305
M1-5
M6-1 533 X 381
89+00
88+00
90+00
-L1 REV- STA 18+72±
-L1REV- STA 18+61±
-L1 REV- STA 18+80±
-L REV- STA 89+58±
-L REV- STA 89+90±
BEGIN 110 TAPER
-L REV- STA 88+40±
END 100 TAPER
-L REV- STA 88+99±
-L REV- STA 88+00±
-L REV- STA 87+40±
BEGIN 100 TAPER
US 220
3.6
3.6
3.6
3.6
3.6
3.6
3.6
TEMP
P4
PV
-LREV-
PROP. NB LANES
MATCH LINE SEE SHEET TMP-160
MATCH LINE SEE SHEET TMP-162
SOUTH
68
M3-3 610 X 305
M1-5
M6-1 L 533 X 381
SR 2806 BENNETT FARM RD
APPROVED: Michael T. Rzepka DATE: 9-2-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE III, STEP 1
DETAIL
SCALE: NONE
DATE: 9-11
DWG. BY: GEP
DESIGN BY: GEP
REVIEWED BY: MTR
REVISIONS
CADD FILE
9/4/2011
R:\TrafficControl\25%\r2413c_tcp_pili_dtl_22.dgn
Florence & Hutcheson

METRIC	Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No- P-0258	PROJ. REFERENCE NO.	SHEET NO.
		R-2413C	TMP-162



USE ROADWAY STANDARD DRAWING 1101.02
(SHEET 3 OF 9) TO CLOSE LEFT LANE.

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

CADD FILE

8/31/2011
R:\TrafficControl\25%\r2413c_top_pll_dtl_23.dgn
Florence & Hutcheson

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-163

9+00

10+00

11+00

12+00

-Y24-

-Y6- US 158

RAMP A

-Y6- STA 11+68±

QB QA PA PB PE PA

3.6 3.6 3.6 3.6 3.6

P4 PD PD PV PI PI PE QB PE QA

-Y6- STA 10+00±
TIE TO EXIST. MARKINGS

-Y6- STA 11+30±

220 M1-4 M6-1 533 X 381

220 M1-4 M5-1 R 533 X 381

RP B STA 14+20±

PA

NORTH M3-1 610 X 305
220 M1-4 M6-2 L 533 X 381

SOUTH M3-3 610 X 305
220 M1-4 M6-3 533 X 381

RAMP B

PB

PD

3.6

MATCH LINE
SEE SHEET TMP-154

MATCH LINE
SEE SHEET TMP-153

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

9/4/2011
R:\TrafficControl\25\r2413c_tcp_pIII_dtl_25.dgn
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METRIC

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CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-164

15+00

16+00

17+00

RAMP D

-Y6- STA 16+58±

-Y6- STA 16+22±

-Y6- STA 17+50±
TIE TO EXIST. MARKINGS

-Y6- US 158

-Y6- STA 17+20±

PA PI PV PD P4 PE QA

3.6

MATCH LINE
SEE SHEET TMP-154

RP C STA 14+20±

RP C STA 13+80±

RAMP C

-Y21-

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL

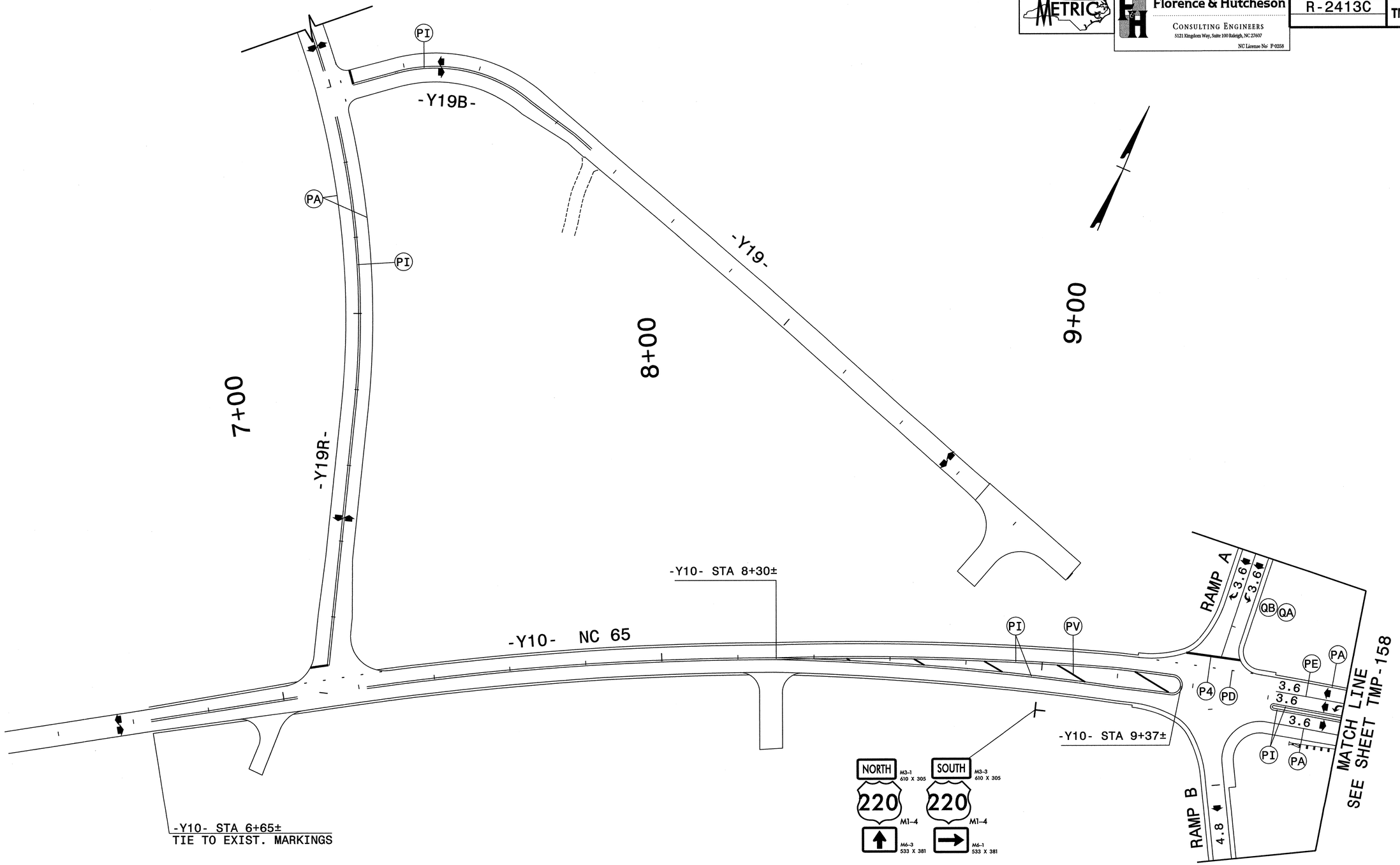
REVISIONS	
CADD FILE	

8/24/2011
R:\TrafficControl\25%\r2413c_tcp_pIII_dtl_26.dgn
Florence & Hutcheson

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-165



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

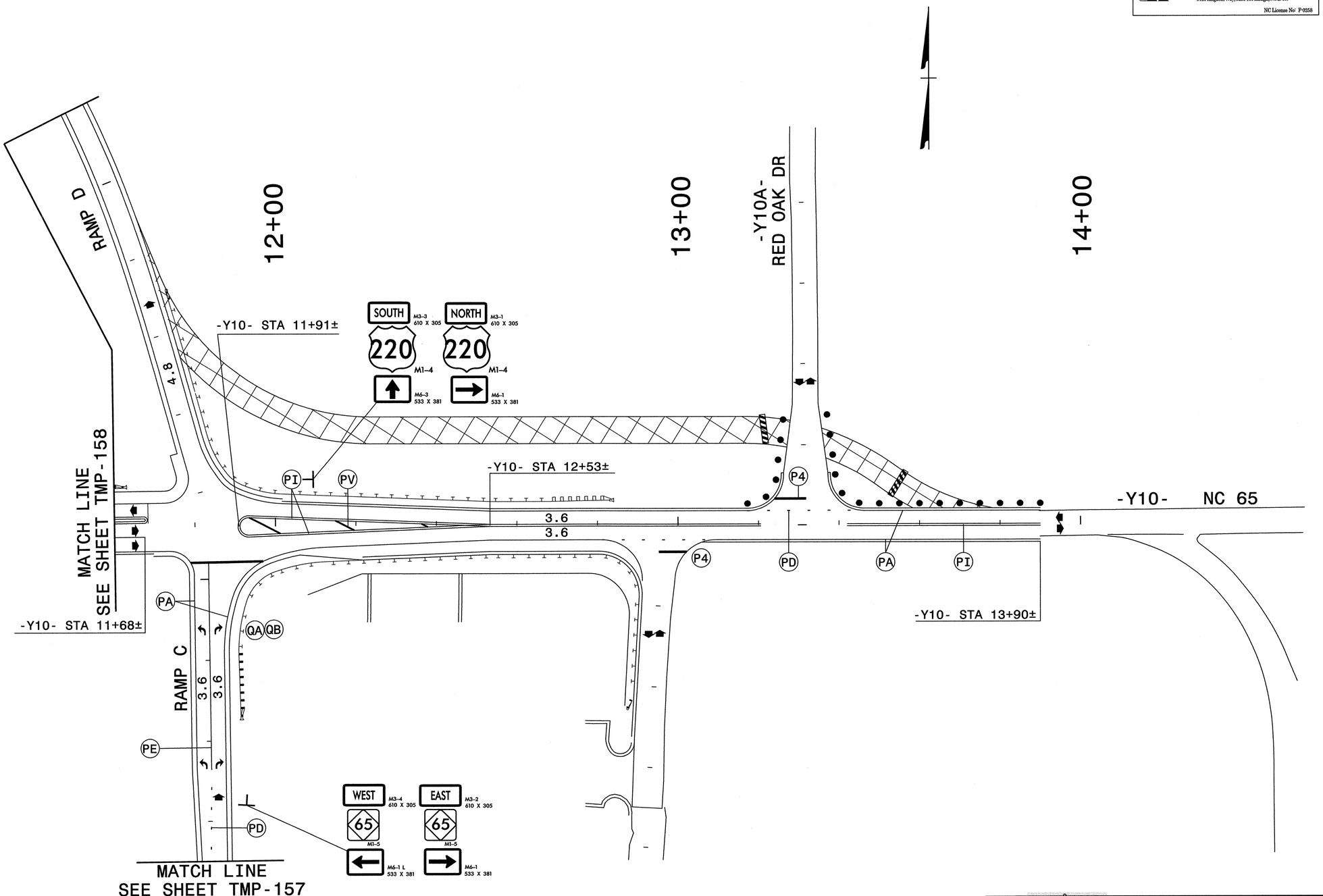
PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS	
CADD FILE	

8/31/2011
R:\TrafficControl\25X\r2413c_tcp_pll_dtl_27.dgn
Florence & Hutcheson



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DESIGN UNIT

REVISIONS	
CADD FILE	

8/31/2011
R:\TrafficControl\25X\r-2413c_top_plll_dfl_28.dgn
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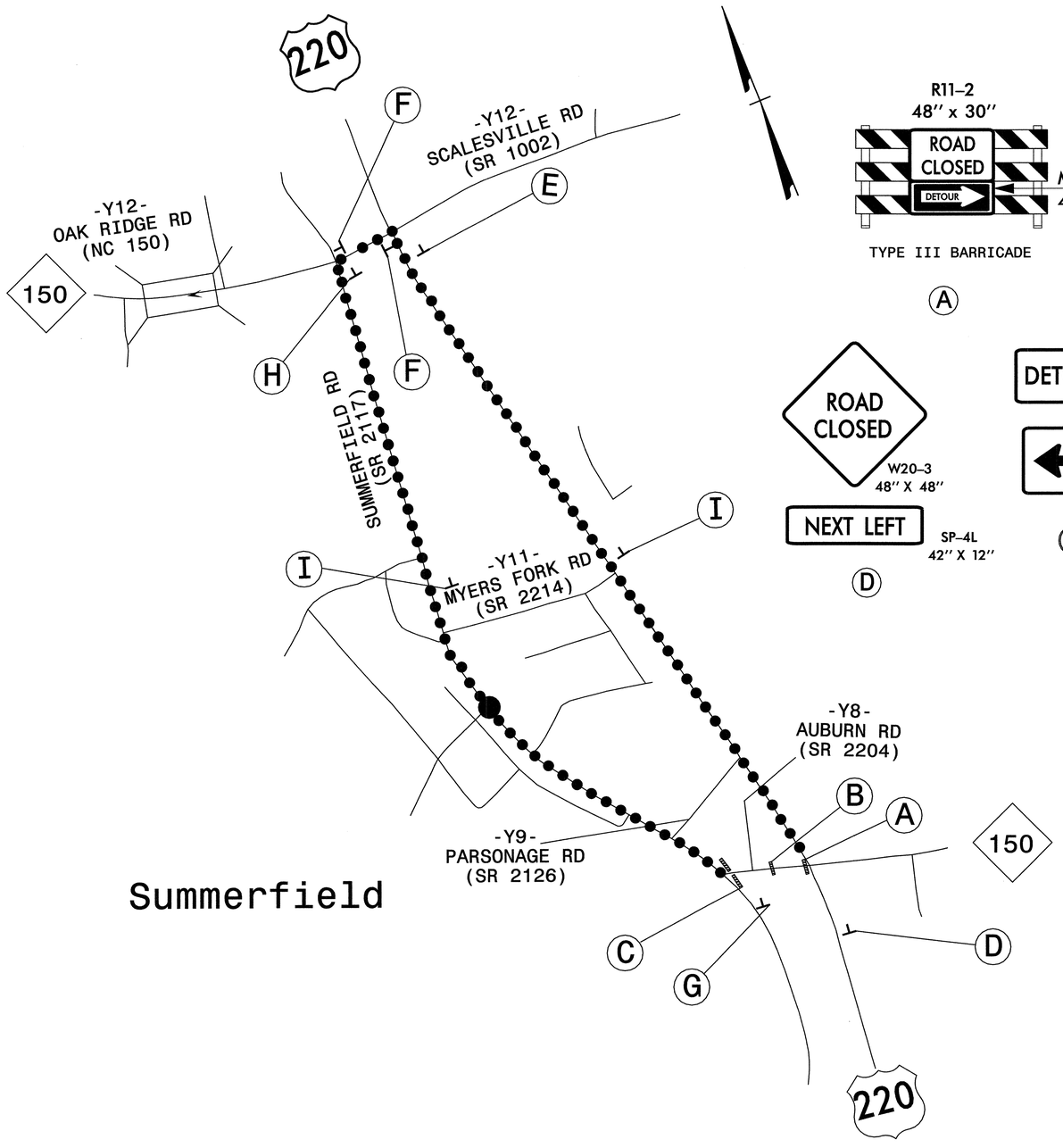
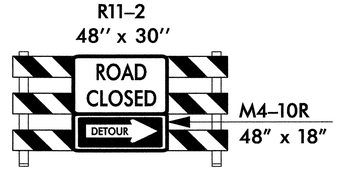
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-167

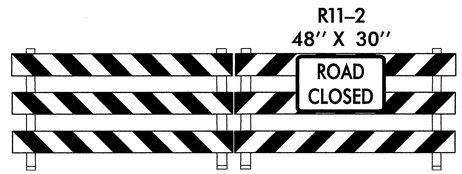


Summerfield



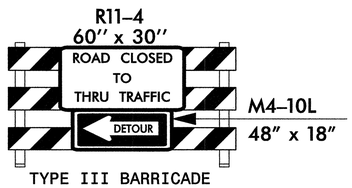
TYPE III BARRICADE

(A)



TYPE III BARRICADE(S)

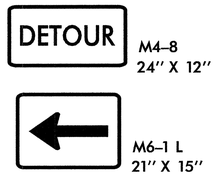
(B)



TYPE III BARRICADE

(C)

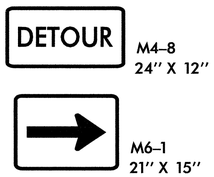
(D)



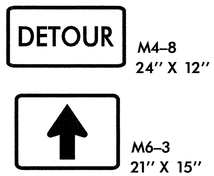
(E)

(F)

(G)



(H)



(I)

SIGN NUMBER: name
TYPE: D
QUANTITY: 1
SIGN WIDTH: 4'-0"
HEIGHT: 2'-6"
TOTAL AREA: 10.0 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.50"
WIDTH: 0.75"
RADII: 1.875"
NO. Z BARS:
LENGTH:

BACKG COLOR: Orange
COPY COLOR: Black

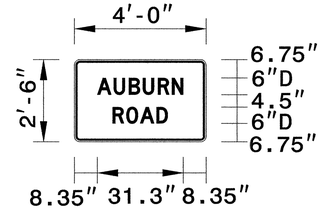
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1 & 2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange retroreflective sheeting.

DESIGN BY: GEP
PROJECT ID: R-2309AB
CHECKED BY:
DIV: 7
DATE: Aug 31, 2011



BORDER
R=1.875"
TH=0.75"
IN=0.50"

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

																											Series/Size Text Length
	A	U	B	U	R	N																					D 2000
	8.3	14.3	19.9	25	30.5	35.6																					31.3
	R	O	A	D																							D 2000
	14	18.9	24	30																							20.1

NORTH CAROLINA D.O.T. SIGN DETAIL

LEGEND
DETOUR ROUTES
TYPE III BARRICADE
POST MOUNTED SIGN

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

-Y8-
AUBURN RD (SR 2204)
DETOUR ROUTE

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL

REVISIONS	
CADD FILE	

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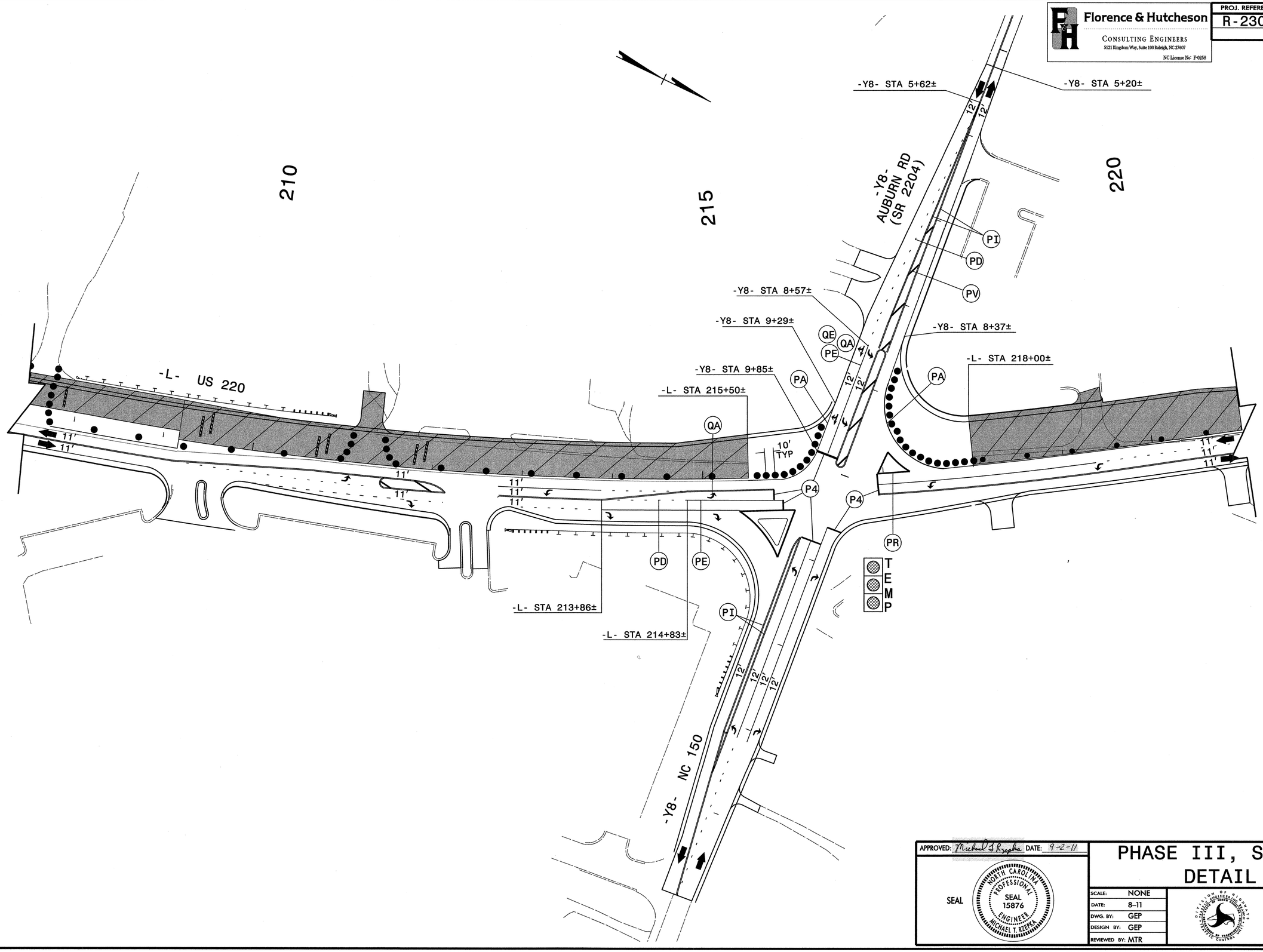
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-168



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 2 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

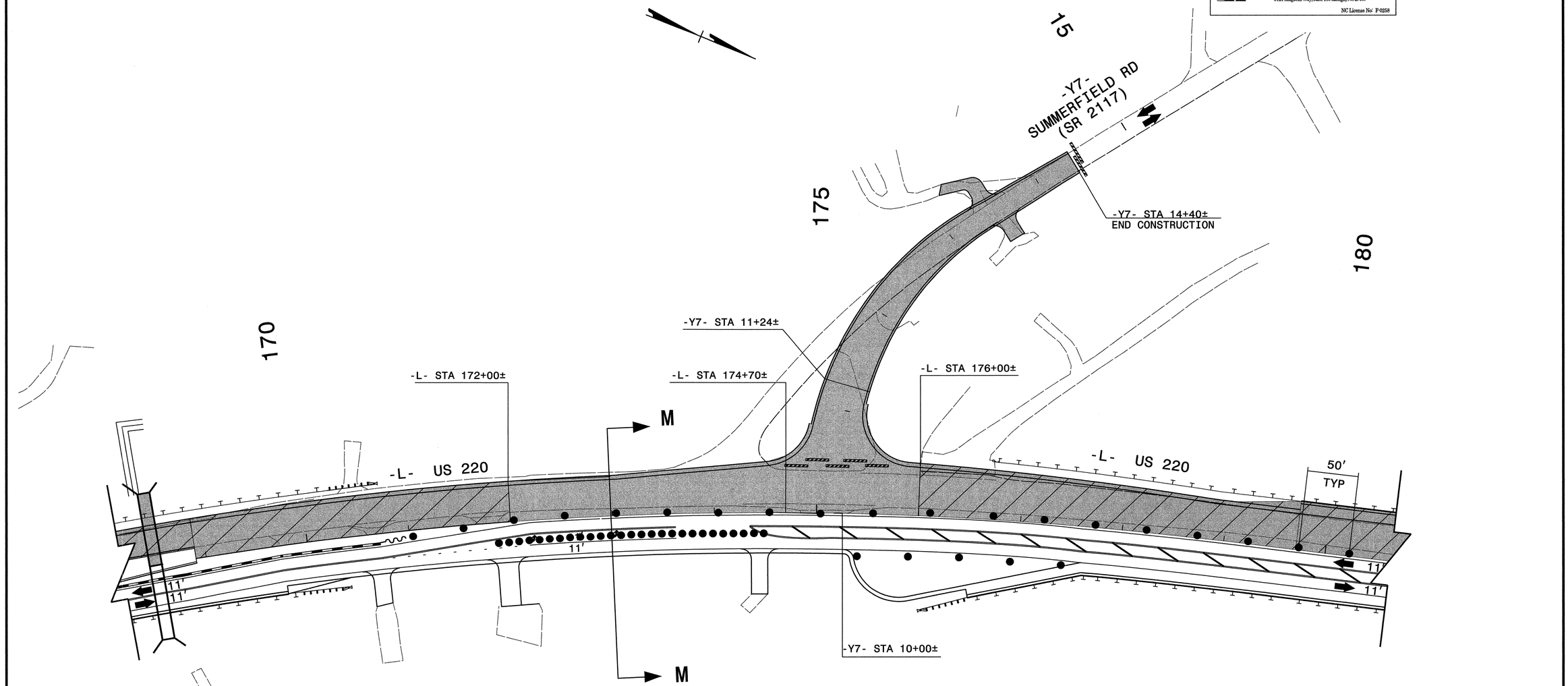
REVISIONS

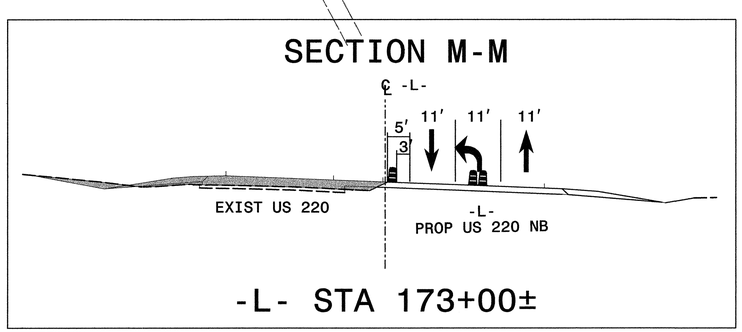
CADD FILE

9/1/2011
R:\Traffic\TrafficControl\TCP\50%\r2309ab_tc_tcp_pill_s2_dtl_l5.dgn
Florence & Hutcheson

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-169





APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER TRAFFIC CONTROL

REVISIONS	
CADD FILE	

8/24/2011
R:\Traffic\TrafficControl\TCP\50%\r2309ab_tc_tcp_pIII_s3_dtl_l2a.dgn
Florence & Hutcheson

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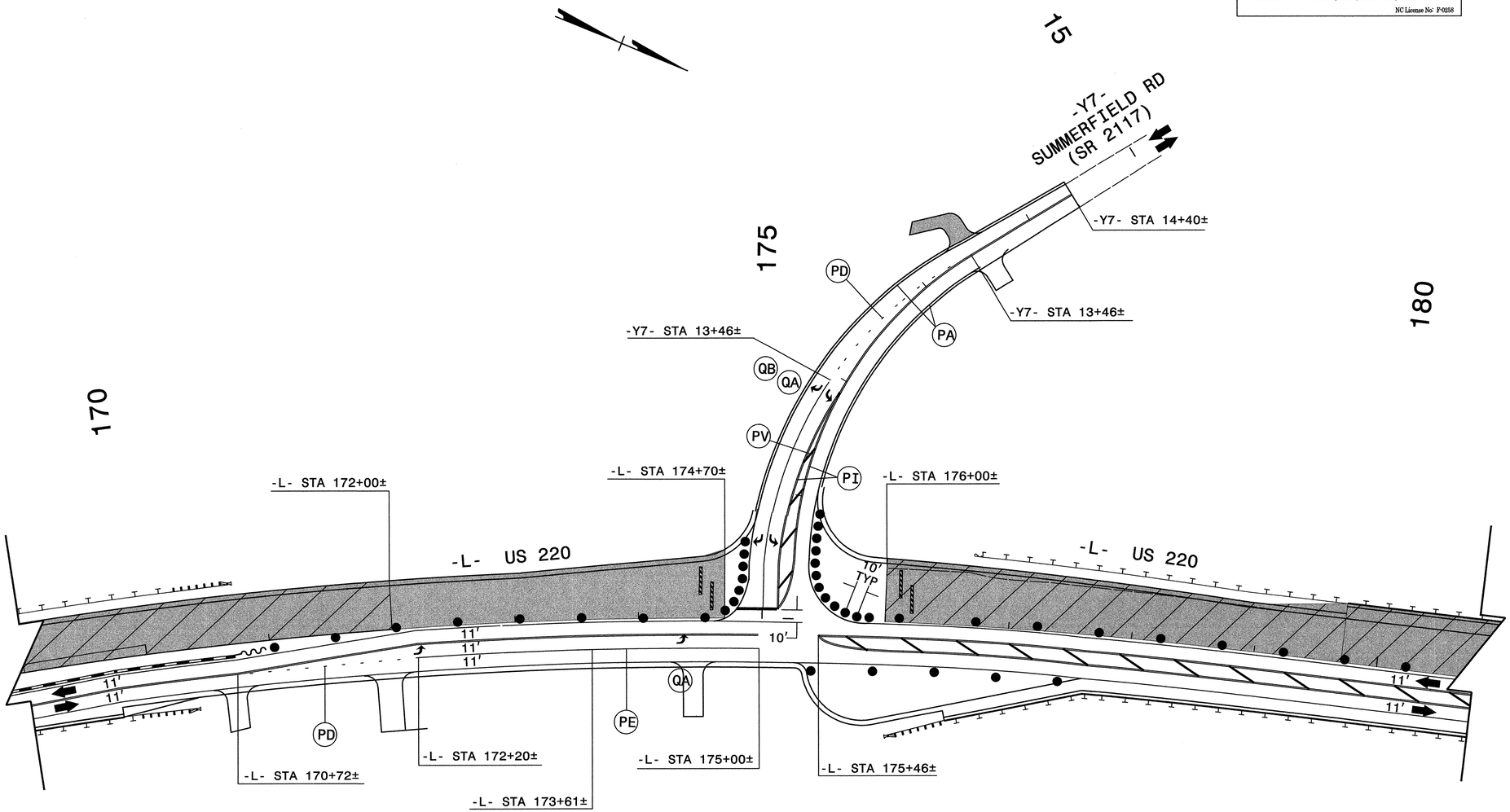
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-170



APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

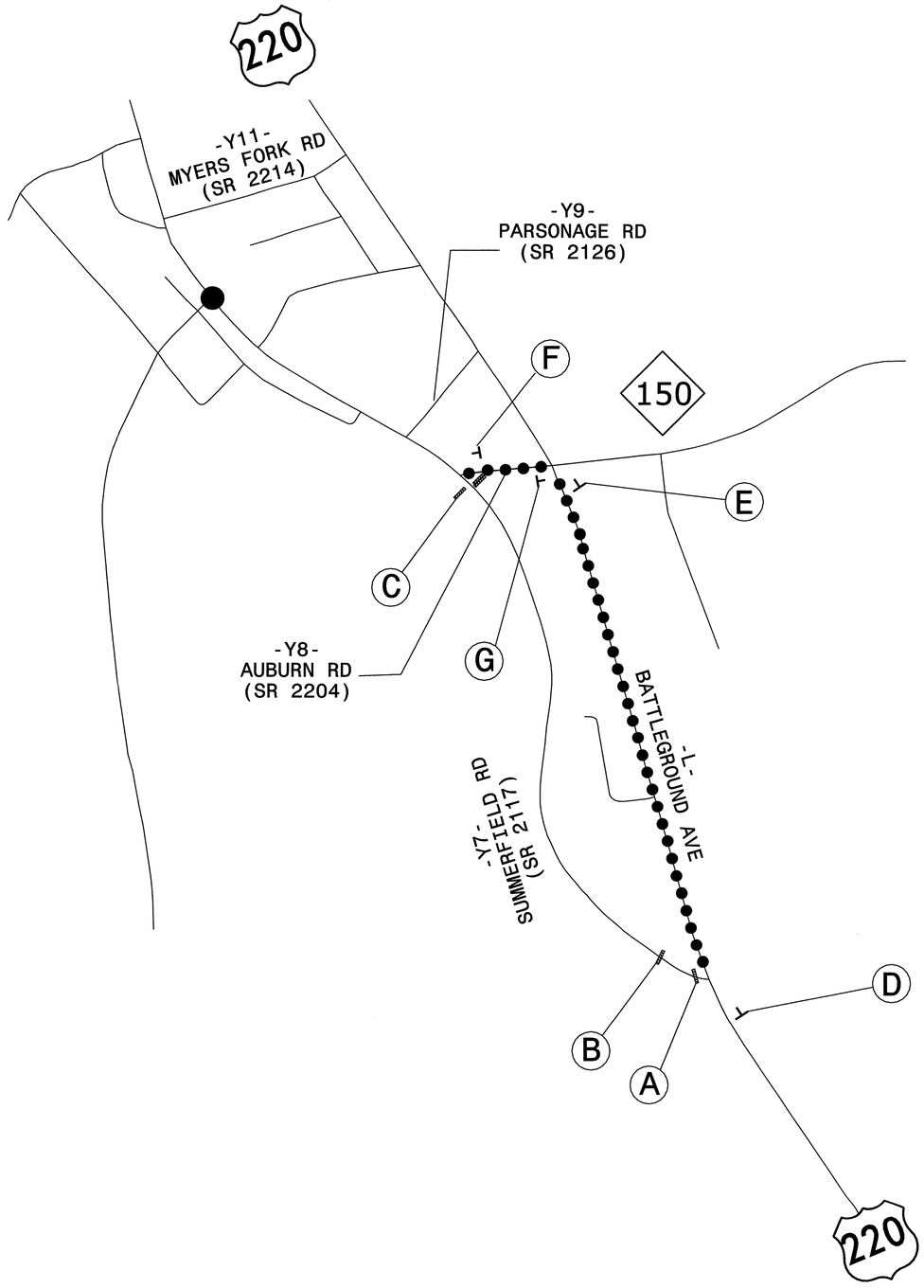
PHASE III, STEP 3 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

CADD FILE

8/24/2011
R:\Traffic\TrafficControl\TCP\50%\r2309ab_tc_tcp_pili_s3_dtl_l2b.dgn
Florence & Hutcheson



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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-171

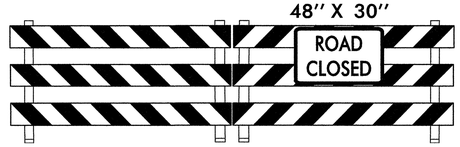
R11–2
48" x 30"

M4–10R
48" x 18"

TYPE III BARRICADE

(A)

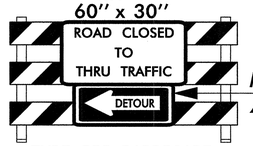
R11–2
48" X 30"



TYPE III BARRICADE(S)

(B)

R11–4
60" x 30"



M4–10L
48" x 18"

TYPE III BARRICADE

(C)

W20–3
48" X 48"

NEXT LEFT

SP–4L
42" X 12"

(D)

DETOUR

M4–8
24" X 12"

M6–1 L
21" X 15"

(E)

END
DETOUR

M4–8 A
24" X 18"

(F)

DETOUR

M4–8
24" X 12"

M6–1
21" X 15"

(G)

SIGN NUMBER: name
TYPE: D
QUANTITY: 1
SIGN WIDTH: 5'-6"
HEIGHT: 2'-6"
TOTAL AREA: 13.8 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.50"
WIDTH: 0.75"
RADII: 1.875"
NO. Z BARS:
LENGTH:

BACKG COLOR: Orange
COPY COLOR: Black

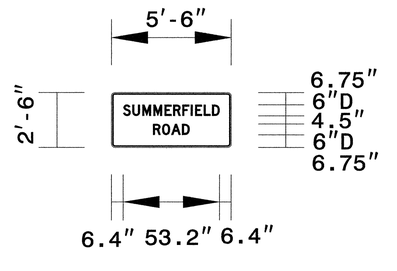
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1 & 2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange retroreflective sheeting.

DESIGN BY: GEP
PROJECT ID: R-2309AB
CHECKED BY:
DIV: 7
DATE: Aug 31, 2011



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

																											Series/Size Text Length
	S	U	M	M	E	R	F	I	E	L	D																D 2000
	6.4	11.5	17	23.2	29.3	34	39.1	43.7	46.1	50.9	55.5																53.2
	R	O	A	D																							D 2000
	23	27.9	33	39																							20.1

NORTH CAROLINA D.O.T. SIGN DETAIL

LEGEND

DETOUR ROUTES

TYPE III BARRICADE

POST MOUNTED SIGN

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

-Y7-
SUMMERFIELD RD (SR 2217)
DETOUR ROUTE

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

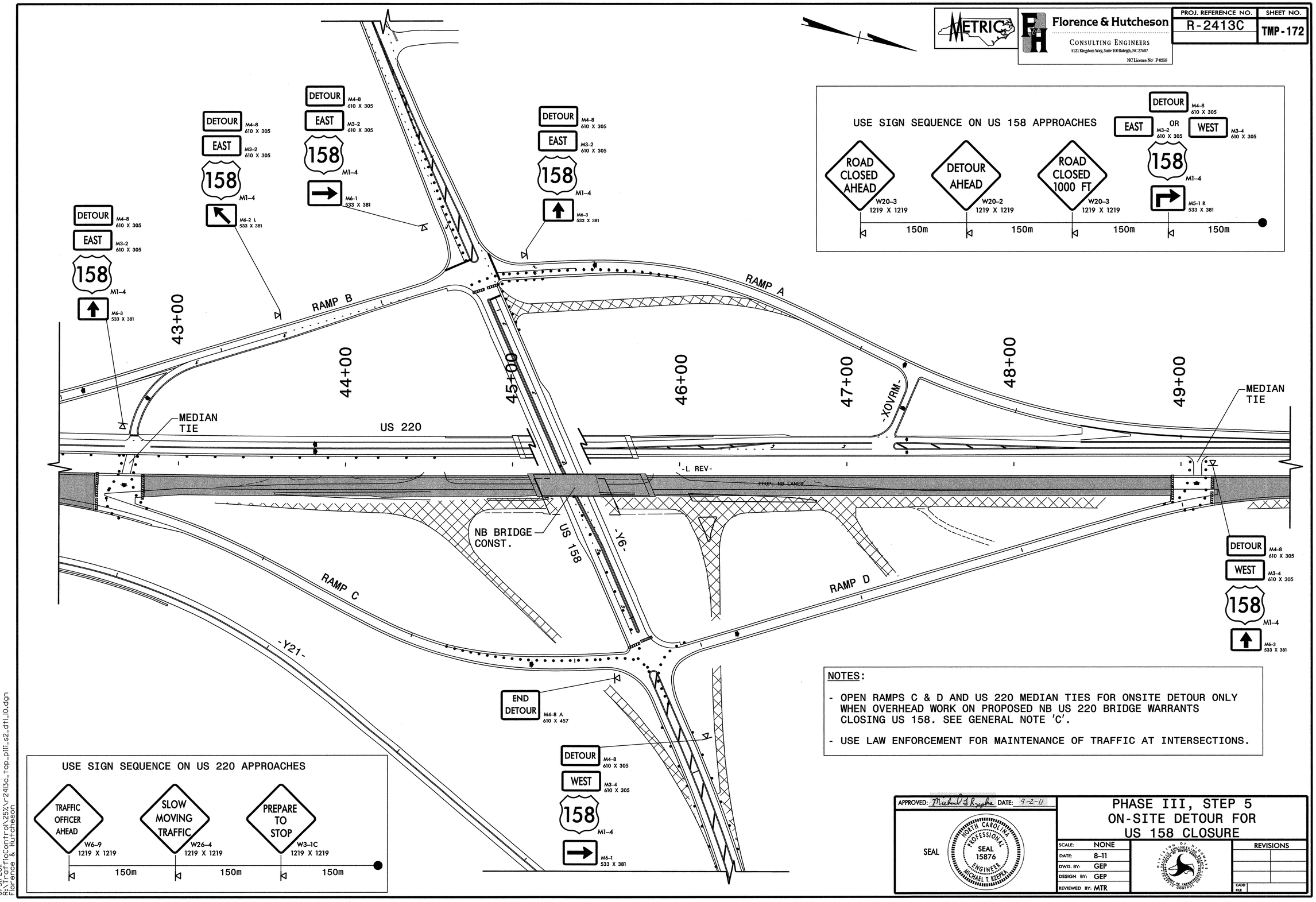
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL

REVISIONS	
CADD FILE	

METRIC

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2413C	TMP-172



USE SIGN SEQUENCE ON US 158 APPROACHES

USE SIGN SEQUENCE ON US 220 APPROACHES

NOTES:

- OPEN RAMPS C & D AND US 220 MEDIAN TIES FOR ONSITE DETOUR ONLY WHEN OVERHEAD WORK ON PROPOSED NB US 220 BRIDGE WARRANTS CLOSING US 158. SEE GENERAL NOTE 'C'.
- USE LAW ENFORCEMENT FOR MAINTENANCE OF TRAFFIC AT INTERSECTIONS.

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 5 ON-SITE DETOUR FOR US 158 CLOSURE

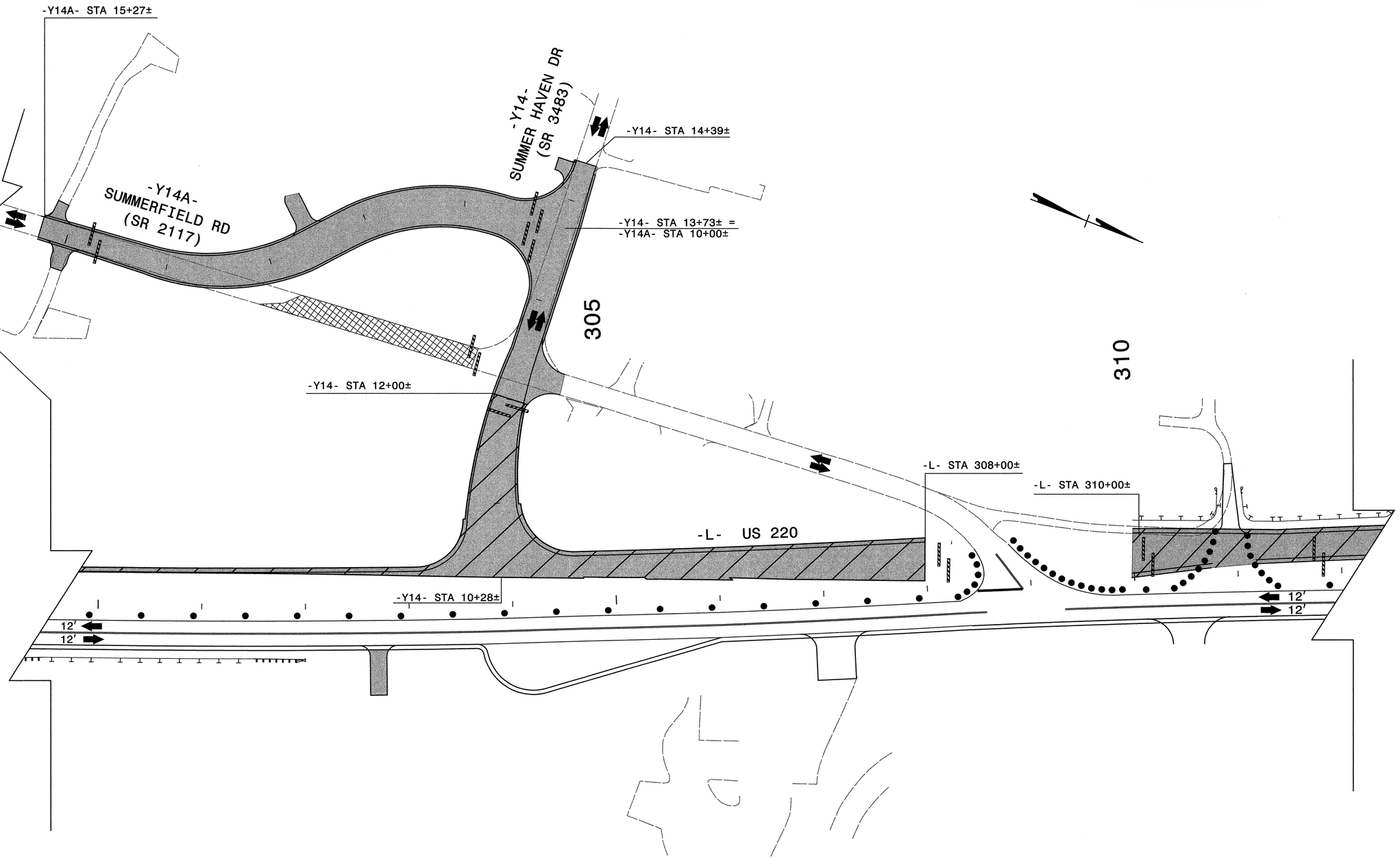
SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

REVISIONS

CADD FILE

8/31/2011
R:\Traffic Control\25%\r2413c_top_plll_s2_dtl_l0.dgn
Florence & Hutcheson

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	R-2309AB	TMP-173



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 6 DETAIL

SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

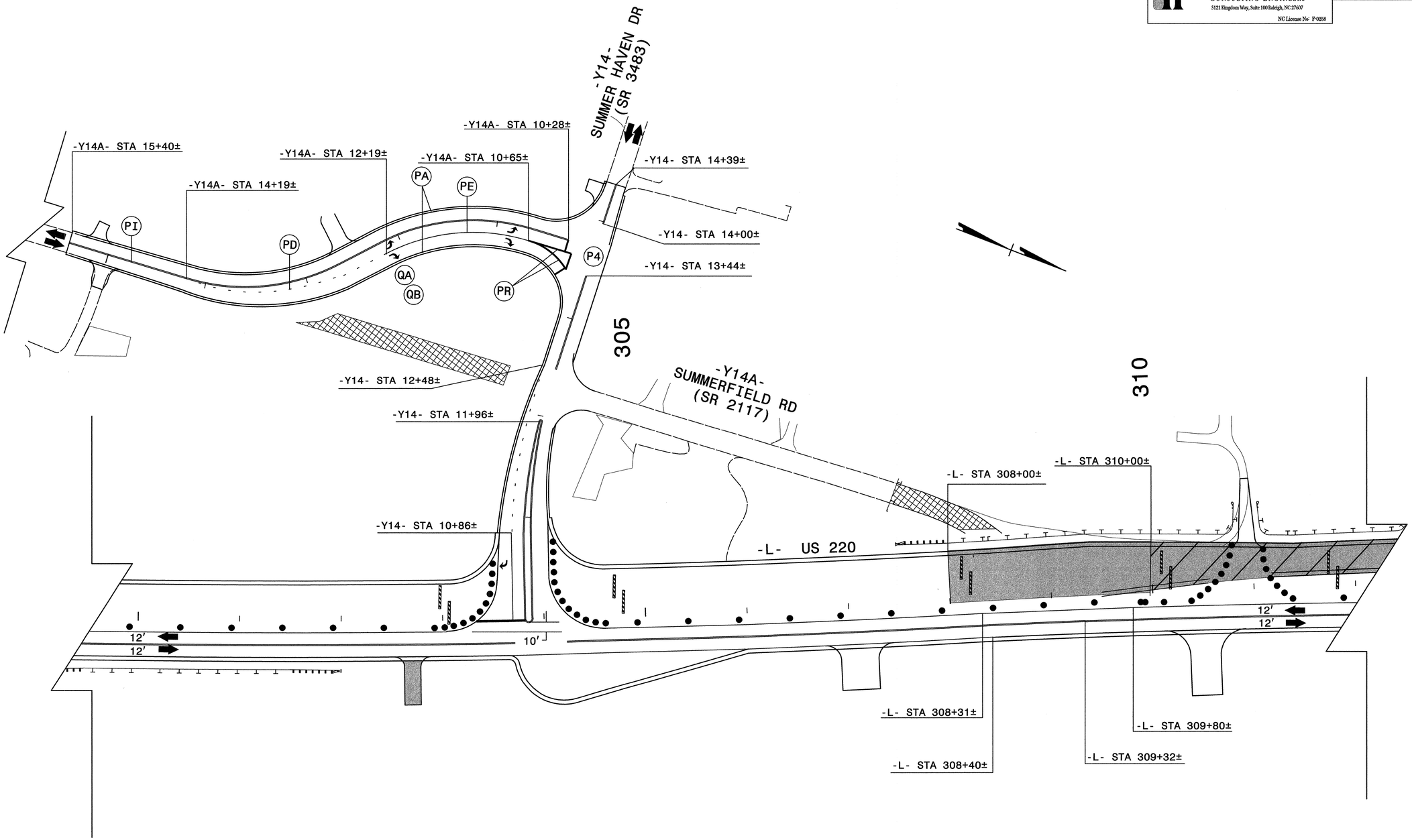
DIVISION OF HIGHWAYS · TRAFFIC ENGINEERING BRANCH · TRAFFIC ENGINEERING BRANCH · TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

8/24/2011
R:\Traffic\TrafficControl\TCP\50%\r2309ab_tc_top_pill_s6_dtl_22a.dgn
Florence & Hutcheson

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
R-2309AB	TMP-174



APPROVED: Michael T Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 6 DETAIL

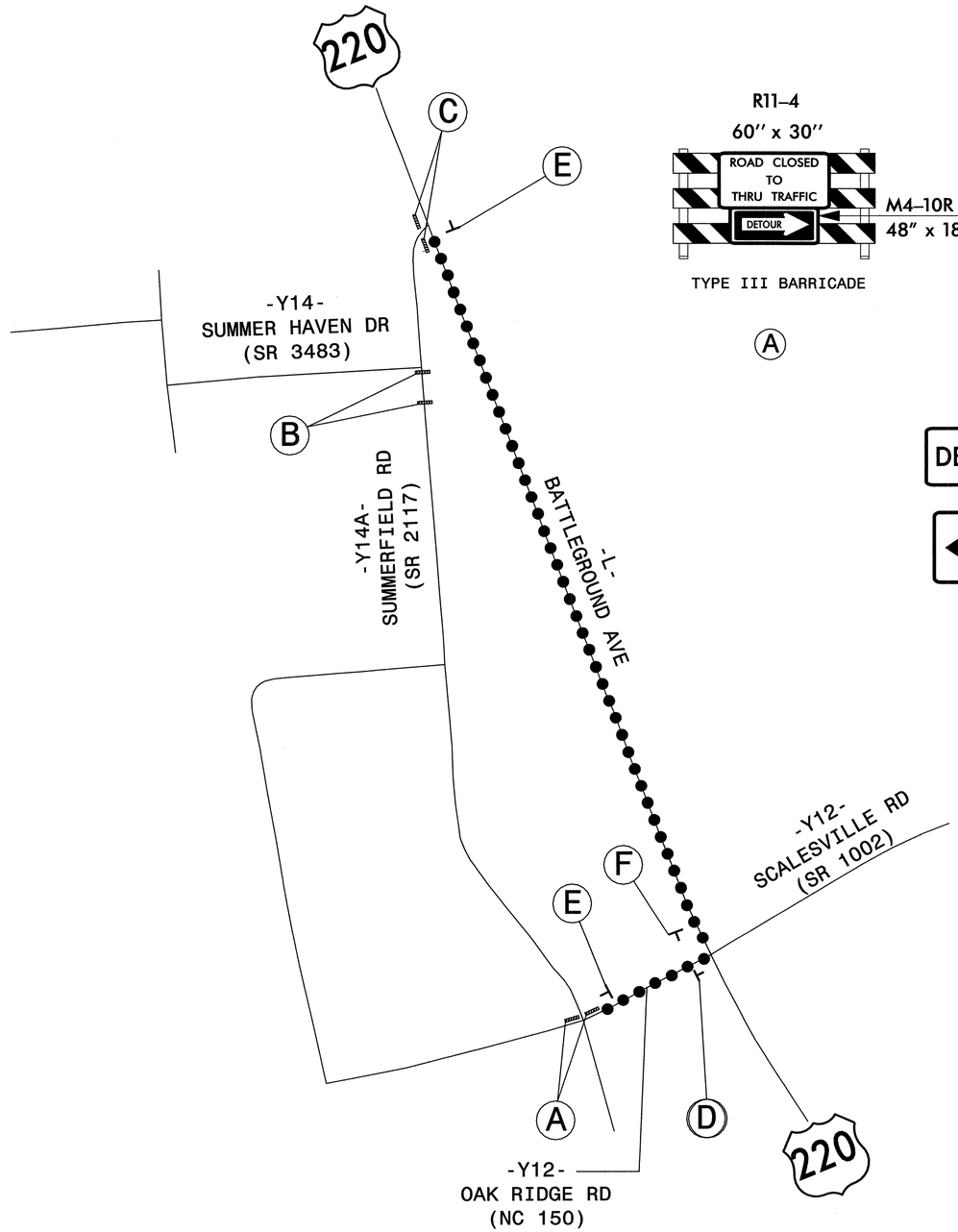
SCALE:	NONE
DATE:	8-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

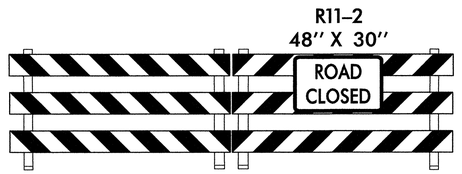
8/24/2011
R:\Traffic\TrafficControl\TCP\50X\r2309ab_tc_tcp_pIII_s6_det22b.dgn
Florence & Hutcheson

Florence & Hutcheson Consulting Engineers 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	R-2309AB	TMP-175



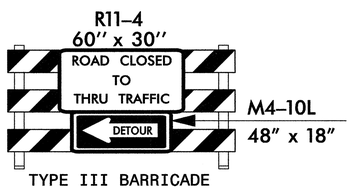
TYPE III BARRICADE

Ⓐ



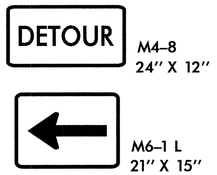
TYPE III BARRICADE(S)

Ⓑ



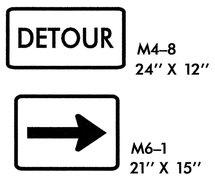
TYPE III BARRICADE

Ⓒ



Ⓓ

Ⓔ



Ⓕ

SIGN NUMBER: name
TYPE: D
QUANTITY: 1
SIGN WIDTH: 5′-6″
HEIGHT: 2′-6″
TOTAL AREA: 13.8 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.50″
WIDTH: 0.75″
RADII: 1.875″
NO. Z BARS:
LENGTH:

BACKG COLOR: Orange
COPY COLOR: Black

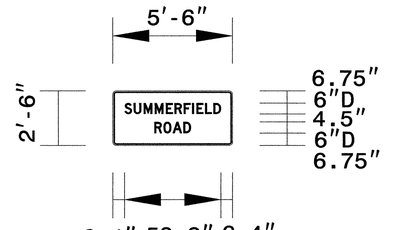
SYMBOL	X	Y	WID	HT

MAT'L: 0.080″ (2.0 mm) ALUMINUM

DESIGN BY: GEP
PROJECT ID: R-2309AB
CHECKED BY:
DIV: 7
DATE: Aug 31, 2011

USE NOTES: 1 & 2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange retroreflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

																											Series/Size Text Length
	S	U	N	M	E	R	F	I	E	L	D																D 2000
	6.4	11.5	17	23.2	29.3	34	39.1	43.7	46.1	50.9	55.5																53.2
	R	O	A	D																							D 2000
	23	27.9	33	39																							20.1

NORTH CAROLINA D.O.T. SIGN DETAIL

LEGEND

DETOUR ROUTES

TYPE III BARRICADE

POST MOUNTED SIGN

APPROVED: Michael T. Rzepka DATE: 9-2-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

-Y14A- SUMMERFIELD RD (SR 2217) DETOUR ROUTE

SCALE:	NONE
DATE:	9-11
DWG. BY:	GEP
DESIGN BY:	GEP
REVIEWED BY:	MTR

DEPARTMENT OF TRANSPORTATION — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL

REVISIONS	
CADD FILE	