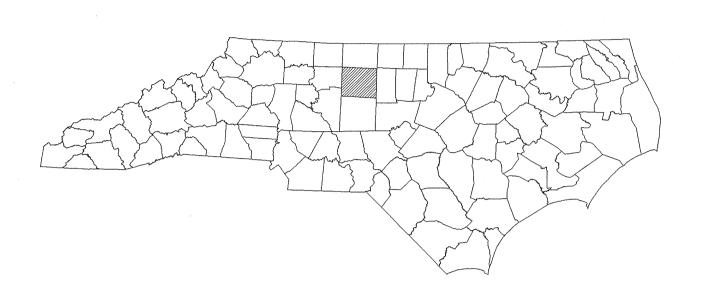
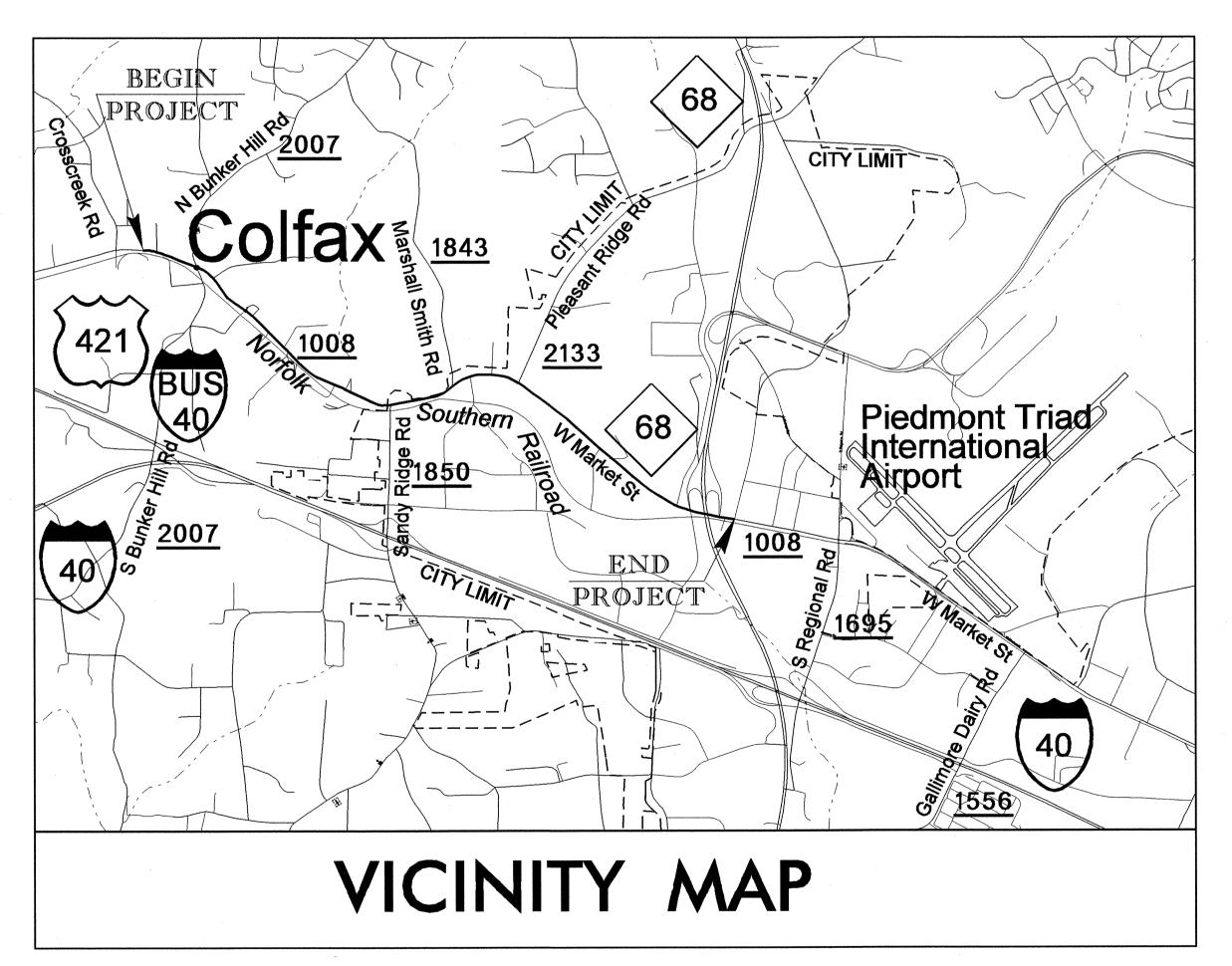
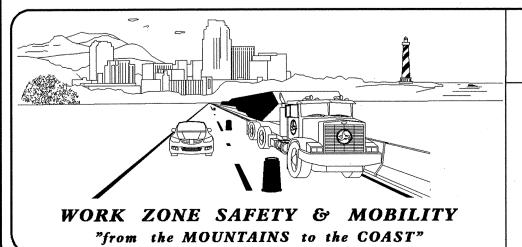
## STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

# TRANSPORTATION MANAGEMENT PLAN

# GUILFORD COUNTY







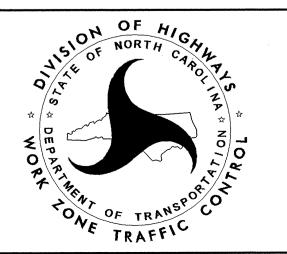
N.C.D.O.T. WORK ZONE TRAFFIC CONTROL 1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561 750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY) PHONE: (919) 773-2800 FAX: (919) 771-2745

PLAN REVIEWED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL SECTION J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER

J. ISHAK, P.E. TRAFFIC CONTROL PROJECT ENGINEER

BEN SCHOENBAUER, P.E TRAFFIC CONTROL PROJECT DESIGN ENGINEER

MICHAEL STEELMAN TRAFFIC CONTROL DESIGN ENGINEER



## INDEX OF SHEETS

SHEET NO. TITLE TITLE SHEET, AND INDEX OF SHEETS TMP-1 LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, TMP-1A LEGEND, AND TEMPORARY PAVEMENT MARKING TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT TMP-1B STRATEGIES, GENERAL NOTES AND LOCAL NOTES) DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS TMP-2A ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS TMP-2B (4 LANES OR GREATER) DETAIL DRAWING FOR ADVANCED WORK ZONE WARNING TMP-2C SIGN DESIGNS TEMPORARY TRAFFIC CONTROL PHASE I PHASING TMP-3 TEMPORARY TRAFFIC CONTROL PHASE I OVERVIEWS TMP-4 TEMPORARY TRAFFIC CONTROL PHASE I DETAILS TMP-9 TEMPORARY TRAFFIC CONTROL PHASE II PHASING TMP-32 TMP-33 TEMPORARY TRAFFIC CONTROL PHASE II OVERVIEWS TEMPORARY TRAFFIC CONTROL PHASE II DETAIL TMP-37 TMP-54 TEMPORARY TRAFFIC CONTROL PHASE III PHASING TMP-55 TEMPORARY TRAFFIC CONTROL PHASE III OVERVIEWS TMP-59 TEMPORARY TRAFFIC CONTROL PHASE III DETAIL TMP-75 TEMPORARY TRAFFIC CONTROL DETOUR ROUTES

SPECIAL SIGN DESIGN

PLAN PREPARED FOR N.C.D.O.T. BY: ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

J. TODD BROOKS, P.E. TRAFFIC CONTROL PROJECT ENGINEER LISA M. MOON, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER

SD-01

BRANDON SCOTT / JONATHAN WILES TRAFFIC CONTROL **DESIGN ENGINEERS** 

APPROVED: 5-3-2011

SHEET NO.

TMP\_1

SEAL

## 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
1101.11	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 & 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
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - (TEMPORARY & PERMANENT)

PROJ. REFERENCE NO.	SHEET NO.
R-2611	TMP-1A

## **LEGEND**

### **GENERAL**

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

----- EXIST. PVMT.

NORTH ARROW

PROPOSED PVMT.

**WORK AREA** 

**REMOVAL** 

WEDGING/OVERLAY OF EXIST



TEMPORARY PAVEMENT

## TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

DRUM SKINNY DRUM © TUBULAR MARKER

TEMPORARY CRASH CUSHION



FLASHING ARROW PANEL (TYPE C)



FLAGGER



LAW ENFORCEMENT



TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)



CHANGEABLE MESSAGE SIGN

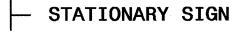


PORTABLE CONCRETE BARRIER (P.C.B.)

WATER FILLED BARRIER (W.F.B.)

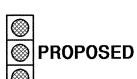
### TEMPORARY SIGNING

PORTABLE SIGN



STATIONARY OR PORTABLE SIGN

## SIGNALS





## PAVEMENT MARKINGS

----EXISTING LINES ----TEMPORARY LINES

## PAVEMENT MARKERS

CRYSTAL/CRYSTAL



◆ YELLOW/YELLOW

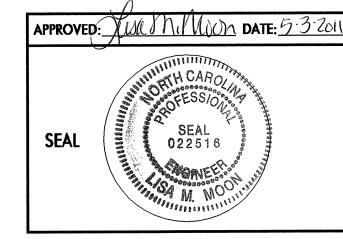
## PAVEMENT MARKING SYMBOLS

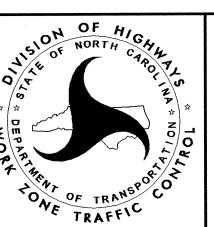
PAVEMENT MARKING SYMBOLS

## TEMPORARY PAVEMENT MARKING

PA	WHITE EDGE LINE	PAINT	(4")	LF
PB	YELLOW EDGE LINE	PAINT	(4")	LF
PC	10 FT. WHITE SKIP	PAINT	(4")	LF
PD	2 FT. WHITE MINISKIP	PAINT	(4")	LF
		PAINT	(4")	LF
(PF	YELLOW CENTER LINE	PAINT	(4")	LF
PG	2 FT. YELLOW MINISKIP	PAINT	(4")	LF
PE PF PG PH PI PX	10 FT. YELLOW SKIP	PAINT	(4")	LF
$(\widetilde{\mathbf{PI}})$	YELLOW DOUBLE CENTER LINE	PAINT	(4")	LF
PX	WHITE CROSSWALK LINE	PAINT	(8")	LF
		PAINT	(12")	LF
(P1 (P3 (P4 (P5	WHITE LINE, RR CROSSBUCK	PAINT	(16")	LF
P4	WHITE STOP BAR	PAINT	(24")	LF
P5	WHITE CROSSWALK LINE	PAINT	(24")	LF
QA	LEFT TURN ARROW MARKING SYMBOLS	PAINT	4	EA
(QB	RIGHT TURN ARROW MARKING SYMBOLS	PAINT	$\rightarrow$	EA
QC	STRAIGHT ARROW MARKING SYMBOLS	PAINT	<b>†</b>	EA
(QD	COMBO. STRT / LT ARROW MARKING SYMBOLS	PAINT	4	EA
QD QE QF	COMBO. STRT / RT ARROW MARKING SYMBOLS	PAINT	<b>}</b>	EA
QF	COMBOL. LT / RT ARROW MARKING SYMBOLS	PAINT	<b>↔</b>	EA
QI	ALPHANUMERIC CHARACTERS	PAINT	CHARACTER	EA
MH	YELLOW & YELLOW, TEMPORARY RAISED PAVEMENT MARKER			EA
MI				EA

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326





ROADWAY STANDARD DRAWINGS & LEGEND

## MANAGEMENT STRATEGIES

MARKET STREET CONSTRUCTION SUMMARY:

MARKET STREET WILL BE CONSTRUCTED USING A COMBINATION OF TEMPORARY PAVEMENT, LANE CLOSURES, WEDGING UNDER TRAFFIC, TEMPORARY PORTABLE CONCRETE BARRIER, TEMPORARY WATER-FILLED BARRIER, TEMPORARY TRAFFIC SIGNALS, MINIMAL OFF-SITE DETOURS, MULTIPLE TRAFFIC SHIFTS AND SHORT TEMPORARY RAMP CLOSURES.

COORDINATION WITH THE RAIL ROADMASTER AND THE RESIDENT IS CRUCIAL FOR THE CONSTRUCTION STAGING OF THE RAILROAD CROSSINGS ON THE SOUTH SIDE OF MARKET STREET.

CONSTRUCTION WILL BE STAGED TO COMPLETE CONSTRUCTION ON THE NORTH SIDE OF MARKET STREET, THEN THE SOUTH SIDE OF MARKET STREET WITH A FINAL SHIFT OF TRAFFIC TO THE PROPOSED OUTSIDE THROUGH LANES TO ALLOW CONSTRUCTION OF THE MEDIAN.

NC 68 RAMP/LOOP CONSTRUCTION SUMMARY:

NC 68 RAMPS AND LOOPS WILL BE CONSTRUCTED USING A COMBINATION OF TEMPORARY PAVEMENT, LANE CLOSURES, WEDGING UNDER TRAFFIC, TEMPORARY PORTABLE CONCRETE BARRIER, TEMPORARY TRAFFIC SIGNALS, MINIMAL OFF-SITE DETOURS, MULTIPLE TRAFFIC SHIFTS AND SHORT TEMPORARY RAMP CLOSURES.

## 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

MARKET STREET
SANDY RIDGE ROAD

MONDAY - FRIDAY 7:00 AM - 6:00 PM

NC 68

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

ROAD NAME

MARKET STREET
SANDY RIDGE ROAD
NC 68

### 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 7:00 AM DECEMBER 31ST TO 6:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 PM THE FOLLOWING TUESDAY.

- 3. FOR EASTER, BETWEEN THE HOURS OF 7:00 AM THURSDAY AND 6:00 PM MONDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 AM FRIDAY 6:00 PM TUESDAY.
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 6:00 PM THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 PM THE TUESDAY AFTER INDEPENDENCE DAY.

- 6. FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 AM FRIDAY AND 6:00 PM TUESDAY.
- 7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 AM TUESDAY TO 6:00 PM MONDAY.
- 8. FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- 9. FOR THE HIGH POINT FURNITURE MARKET, BETWEEN THE HOURS OF 7:00 AM THE FRIDAY BEFORE THE WEEK OF THE FURNITURE MARKET AND 6:00 PM THE FOLLOWING FRIDAY AFTER THE WEEK OF THE FURNITURE MARKET.
- C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

NC 68 RAMP A / LOOP A
NC 68 RAMP B / LOOP B

ALL DAYS, 6:00 AM - 8:00 PM

D) DO NOT STOP TRAFFIC AS FOLLOWS

ROAD NAME DAY AND TIME RESTRICTIONS

DURATION AND OPERATION

MARKET ST

MONDAY - FRIDAY 7:00 AM - 6:00 PM 15 MINUTE TRAFFIC PATTERN SWITCHES

E) DO NOT CONDUCT SINGLE VEHICLE OR MULTI-VEHICLE HAULING AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

MARKET ST

MONDAY - FRIDAY 7:00 AM - 9:00 AM

4:00 PM - 6:00 PM

LANE AND SHOULDER CLOSURE REQUIREMENTS

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.

PROJ. REFERENCE NO. SHEET NO. TMP - 1B

- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- 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.
- I) 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.
- 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.
- K) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- L) DO NOT INSTALL MORE THAN TWO SIMULTANEOUS LANE CLOSURES, IN ANY ONE DIRECTION, ON MARKET STREET. PROVIDE A MINIMUM OF 1 MILE BETWEEN LANE LANE CLOSURES, MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

M) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAVE 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.

OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES.
INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT
IN ADVANCE AND A MINIMUM OF ONCE EVERY HALF MILE THROUGHOUT
THE UNEVEN AREA.



APPROVED: JUSTIM MART DATE: 5-3-2011





TELES 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

- P) 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.
- Q) CONTRACTOR WILL BE RESPONSIBLE FOR PERMANENT SIGNING.
- R) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS. PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- S) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION. COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- T) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- U) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

### TRAFFIC CONTROL DEVICES

T) 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 BEING 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.

PROTECT THE APPROACH END OF 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 PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF 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 FEET
45-50	20 FEET
55	25 FEET
60 MPH OR HIGHER	30 FEET

- U) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.
- V) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- W) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES
  PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN
  UNOPENED LANES ARE CLOSED TO TRAFFIC.

### PAVEMENT MARKINGS AND MARKERS

- X) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS SHOWN IN THE PAVEMENT MARKING PLAN.
- () INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED

- 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.
- AA) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- BB) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.
- CC) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE SKINNY DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.

PROJ. REFERENCE NO.	SHEET NO.
R-2611	TMP-1C

TEMPORARY / FINAL SIGNALS

- DD) NOTIFY THE ENGINEER TWO (2) MONTHS BEFORE A TRAFFIC SIGNAL INSTALLATION BY OTHERS IS REQUIRED.
- EE) SHIFT AND REVISE ALL SIGNAL HEADS AS SHOWN ON THE SIGNAL PLANS.

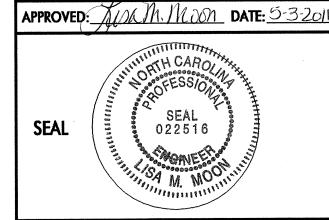
### MISCELLANEOUS

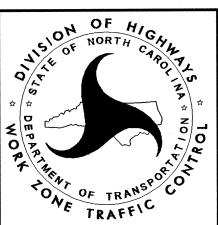
- FF) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER.
- GG) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

## LOCAL NOTES

- LN-1 CONSTRUCT TEMPORARY/PERMANENT LATERAL WEDGING
  BETWEEN NEWLY CONSTRUCTED PAVEMENT AND EXISTING
  PAVEMENT TO MAINTAIN POSITIVE DRAINAGE OF EXISTING
  PAVEMENT AND TO PREVENT PONDING OF WATER ON EXISTING
  PAVEMENT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- LN-2 WHILE MARKET STREET -L- TRAFFIC IS BEING MAINTAINED IN A TEMPORARY PATTERN ON JUST ONE SIDE OF PROPOSED MEDIAN THAT IS UNDER CONSTRUCTION, MAINTAIN REASONABLE ACCESS TO FRONTING PROPERTIES AND DRIVEWAYS ON THE OTHER SIDE OF THE MEDIAN BY PROVIDING TEMPORARY OPENINGS AND TIE-INS THROUGH MEDIANS AS DIRECTED BY THE ENGINEER.
- LN-3 WHEN CONSTRUCTING CURB AND GUTTER IN MEDIAN ENSURE THAT ENOUGH GAPS REMAIN TO MAINTAIN TEMPORARY ACCESS TO DRIVEWAYS ON MARKET STREET.

  LOCATE AND ADD TEMPORARY TIE-INS TO DRIVEWAYS WHEN NECESSARY, AS DIRECTED BY THE ENGINEER.
- LN-4 COORDINATE WITH EMERGENCY SERVICES FOR ANY AND ALL
  TRAFFIC PATTERNS CHANGES, INCLUDING BY NOT LIMITED TO:
  TEMPORARY ROAD CLOSURES ON -Y- LINES FOR RAILROAD
  CROSSING WORK (IF REQUIRED); AND TEMPORARY CLOSURES
  OF NC 68 RAMPS AND LOOPS; OR AS DIRECTED BY THE ENGINEER.



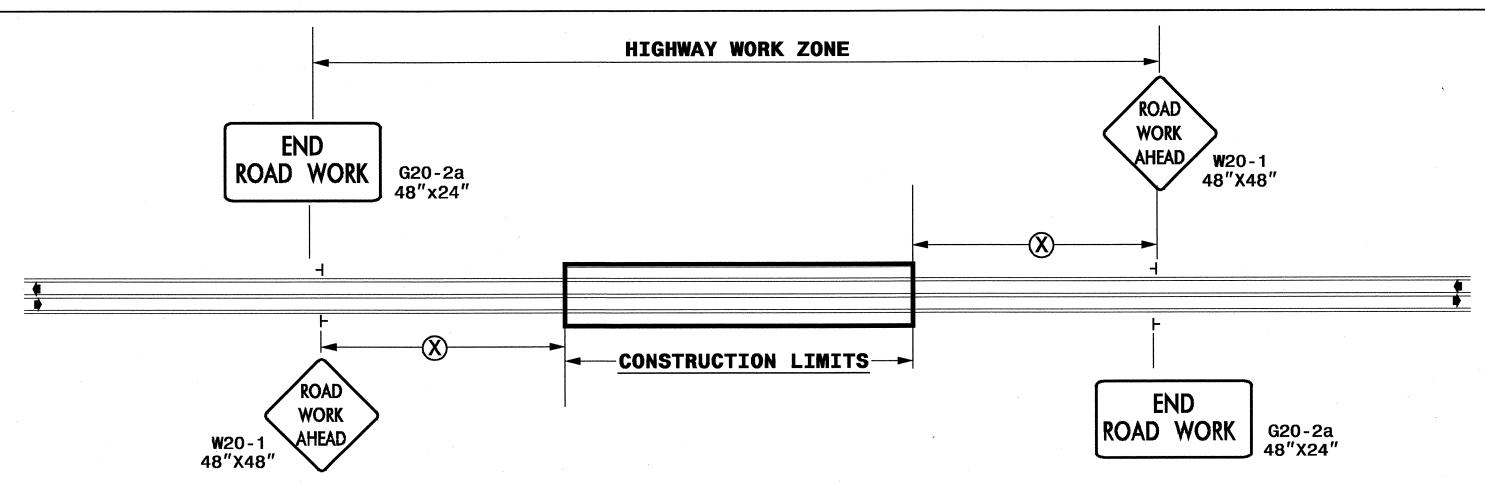


TRANSPORTATION
OPERATIONS
PLAN

TELEST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

PROJ. REFERENCE NO. SHEET NO. R-2611 TMP-2A





	RECOMMENDED MINIMUM SIGN SPACING
POSTED SPEED LIMIT (M.P.H.)	<b>X</b>
≤ 50	500′
≥ 55	1000′

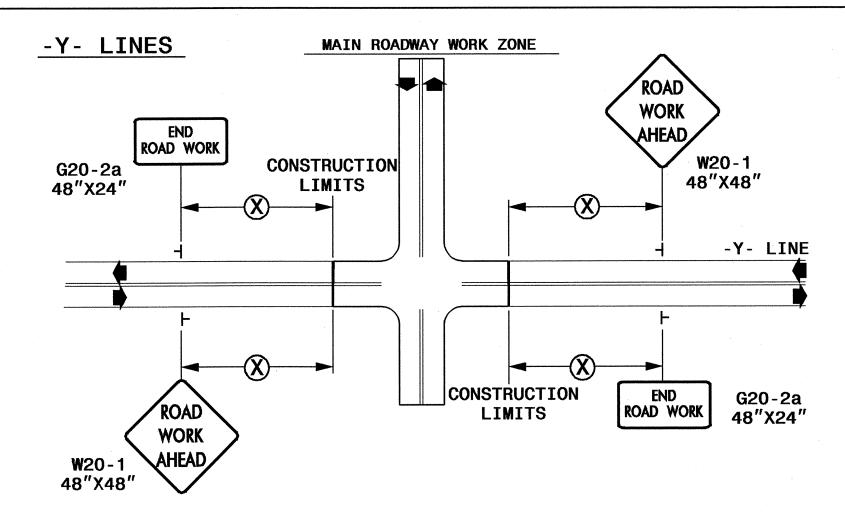
TRANSPORTATION CAROLINA HIGHWAYS NORTH OF. DIVISION 0F OF P STATE

SIGNS

UNDI /ARNI

WA

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



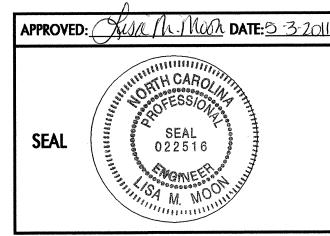
## GENERAL NOTES

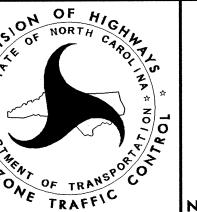
- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, 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

SHEET 1 OF 1





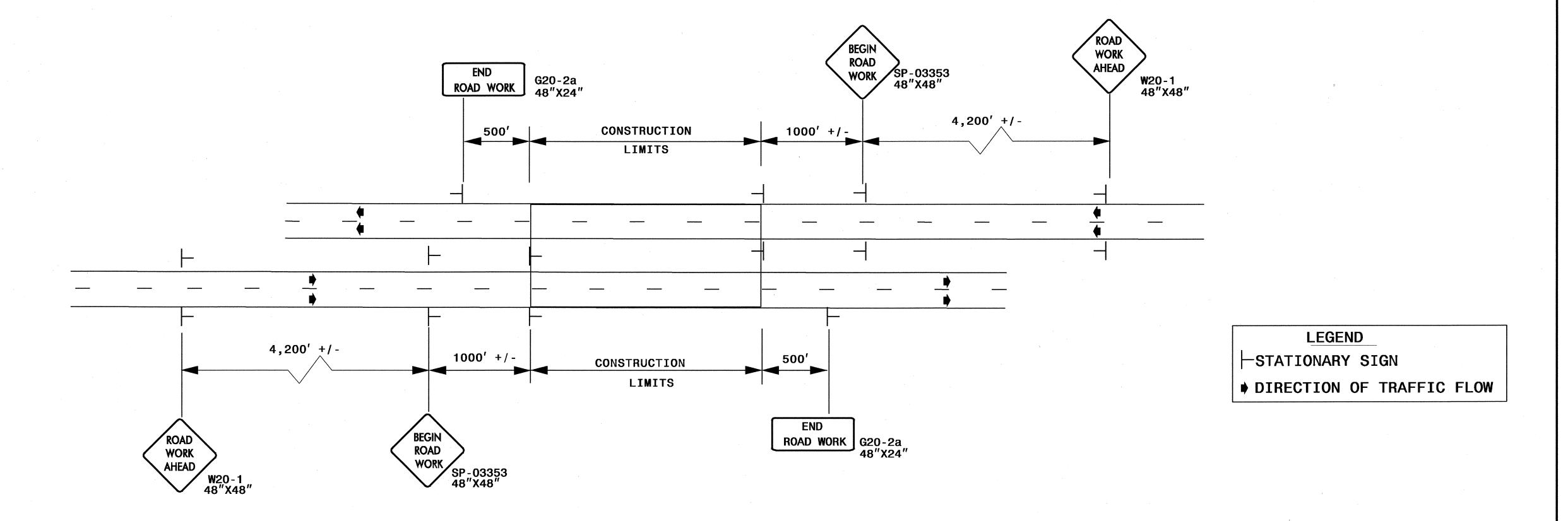
DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS

WORK ZONE WARNING SIGNS

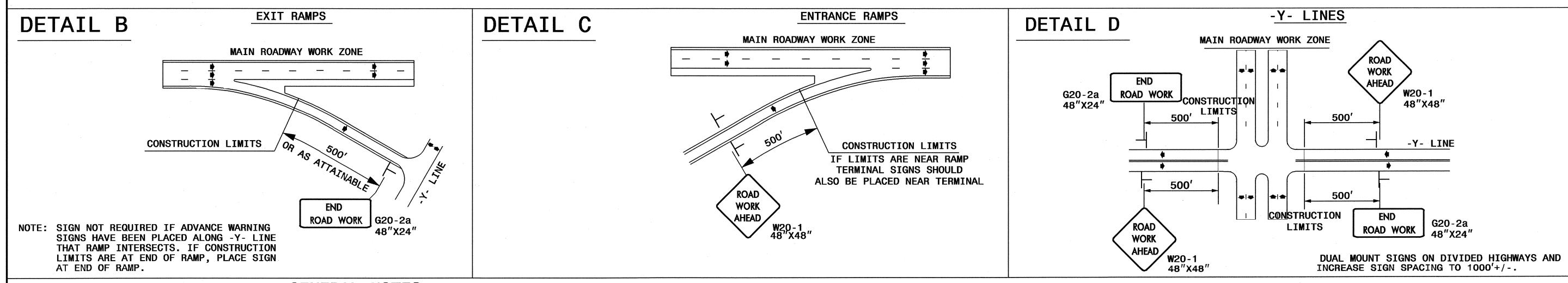
TKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

PROJ. REFERENCE NO. SHEET NO. TMP-2B

## DETAIL A



USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.



### GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED 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.

SEAL

SEAL

SEAL

O22516

M. MONETH

ONE TRANSPORT

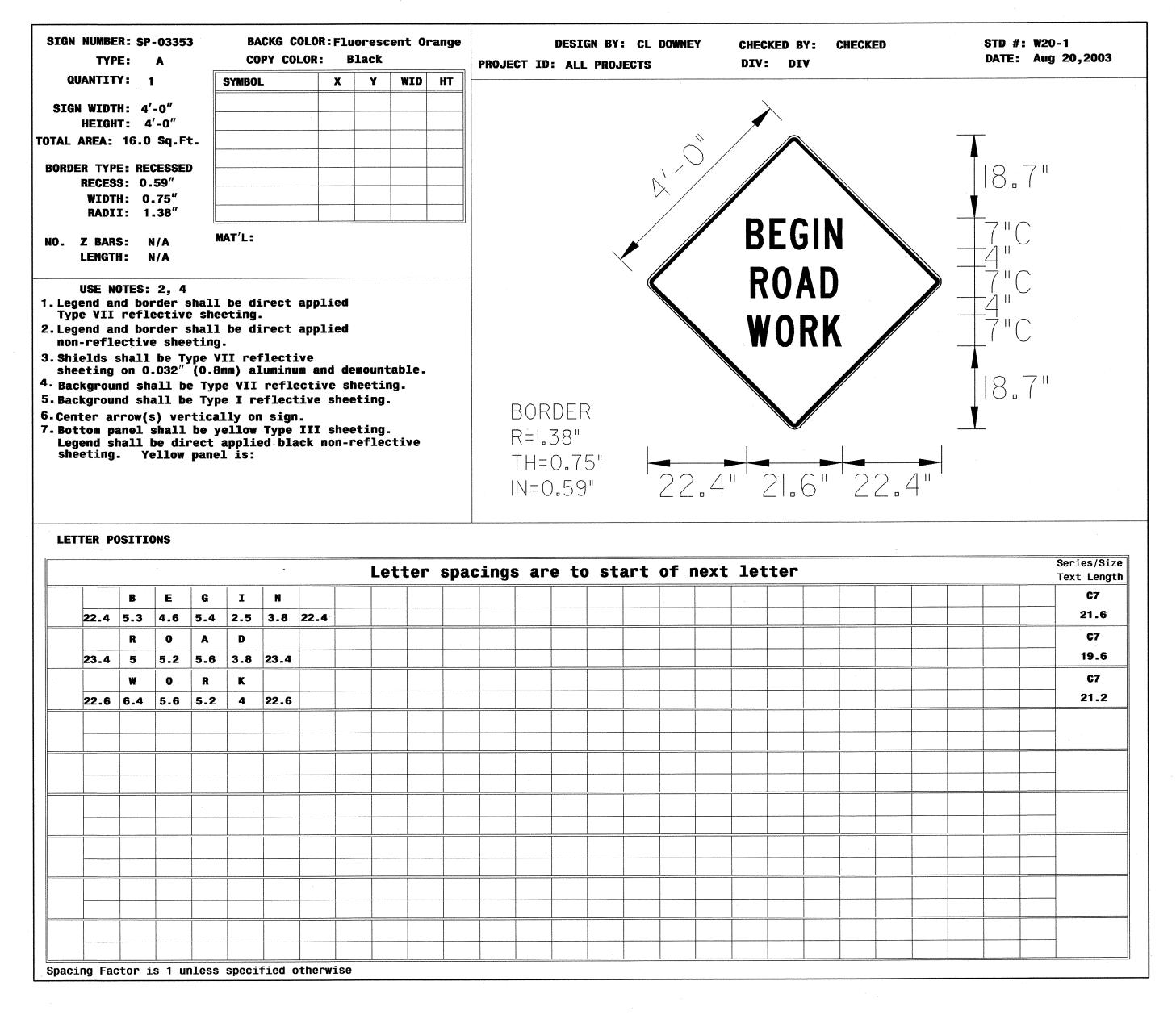
TRAFFIC

SHEET 1 OF 2

ADVANCED WORK ZONE
WARNING SIGNS FOR FREEWAYS
(4 LANES OR GREATER)

NONE

## SP 03353

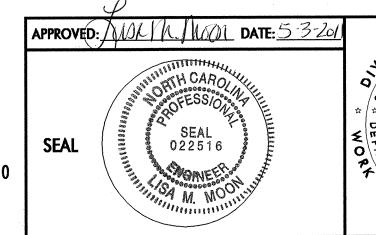


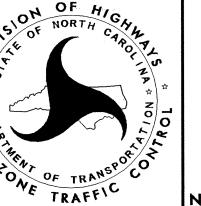
## GENERAL NOTES FOR THE "BEGIN ROAD WORK" SIGN

-SIGN SP-03353 "BEGIN ROAD WORK" ONLY APPLIES TO FULL CONTROL AND PARTIAL CONTROL OF ACCESS ROADWAYS

-WHEN USED, INSTALL SIGN SP-03353 "BEGIN ROAD WORK" ACCORDING TO DETAIL A ON SHEET TCP-67.

SHEET 2 OF 2





DETAIL DRAWING FOR ADVANCED WORK ZONE WARNING SIGN DESIGNS

### PHASE I

### **OBJECTIVES:**

CONSTRUCT MARKET STREET WB LANES, -Y-LINES ON NORTH SIDE OF MARKET STREET AND -Y6- SANDY RIDGE ROAD. WIDEN -Y6- SANDY RIDGE ROAD TO NEW 3-LANE PATTERN AT BEGINNING OF PHASE I. CONSTRUCT ENOUGH PAVEMENT, INCLUDING TEMPORARY PAVEMENT, TO SHIFT MARKET STREET TRAFFIC TO NEW WB PAVEMENT IN THE NEXT PHASE WHILE MAINTAING EXISTING LANE CONFIGURATION WHEREVER POSSIBLE. CONSTRUCT NORTHWARD EXTENSIONS OF EXISTING 2-BARREL BOX CULVERT WEST OF -Y12-.

STEP 1: REVISE THE EXISTING TRAFFIC SIGNALS AT FOLLOWING MARKET ST INTERSECTIONS:

- \* -Y2-/-Y3- BUNKER HILL ROAD [SEE TMP-4 AND TMP-11]
- \* -Y6- SANDY RIDGE ROAD [SEE TMP-5 AND TMP-16A]
- \* -Y10- PLEASANT RIDGE RD [SEE TMP-6 AND TMP-19]
- \* -Y13- THATCHER RD/NC 68 RAMP A/LOOP A [SEE TMP-7 AND TMP-23]
- \* NC 68 LOOP B/RAMP B [SEE TMP-7 AND TMP-24]

MAINTAIN THE EXISTING TRAFFIC SIGNALS AT FOLLOWING MARKET ST INTERSECTIONS:

\* -Y15- BURGESS ROAD [SEE TMP-7 AND TMP-24]

#### -L- MARKET STREET

BEGIN CONSTRUCTION OF THE FOLLOWING AS MUCH AS POSSIBLE AWAY FROM TRAFFIC:

- \* USING RSD 1101.02, SHEETS 1 & 2 OF 9, INSTALL TEMPORARY GUARDRAIL ALONG NORTH SIDE OF MARKET ST AS SHOWN ON TMP-23. ONCE TEMPORARY GUARDRAIL HAS BEEN INSTALLED, BEGIN NORTHERN EXTENSIONS OF EXISTING BOX CULVERT WEST OF -Y12- BRIGHAM RD AT STA 192+00 +/- -L-. [SEE INSET C, TMP-7 AND TMP-23]
- \* PROPOSED RETAINING WALLS ON NORTH SIDE OF MARKET ST:

  \* STA 143+33 +/- TO STA 143+85 +/- -L- [SEE

  TMP-6 AND TMP-19]
  - \* STA 179+85 +/- TO STA 181+12 +/- -L- [SEE TMP-7 AND TMP-22]
- \* PROPOSED WB LANES ON MARKET ST FROM STA 24+00 +/TO STA 49+00 +/- -L-, 5 FEET OR MORE FROM THE NORTH
  EDGE OF EXISTING TRAVEL WAY. [SEE TMP-4, TMP-10,
  TMP-11 AND TMP-12]
- \* PROPOSED EB LANES ON MARKET STREET FROM STA 49+00 +/- TO STA 75+00 +/- -L-, 5 FEET OR MORE FROM THE SOUTH EDGE OF EXISTING TRAVEL WAY. [SEE TMP-4, TMP-5, TMP-12, TMP-13, AND TMP-14]
- \* PROPOSED WB LANES ON MARKET ST FROM STA 75+00 +/TO STA 200+18 +/- -L-, 5 FEET OR MORE FROM THE
  NORTH EDGE OF EXISTING TRAVEL WAY. [SEE TMP-5 THRU
  TMP-7, AND TMP-14 THRU TMP-24]

DURING CONSTRUCTION OF THE ABOVE REFERENCED WB LANES, CONSTRUCT THE FOLLOWING TO FACILITATE DRAINAGE OF THE WB PAVEMENT WHEN TRAFFIC IS SHIFTED TO IT IN PHASE II:

CONSTRUCT PRECAST DRAINAGE STRUCTURES 1106 AND 1108 AND THE CONNECTING 24" RCP-IV PIPE USING RSD 1101.02, SHEETS 1 & 2 OF 9. PARTIALLY CONSTRUCT THE TOPS OF THOSE STRUCTURES TO BELOW GRADE. PERFORM THIS CONSTRUCTION IN SUCCESSIVE OVERNIGHT PERIODS IN ACCORDANCE WITH THE TIME RESTRICTIONS. AT THE END OF THE NIGHT'S OPERATION, CAP THE TOPS OF STRUCTURES 1106 AND 1108 WITH TRAFFIC BEARING CAP, BACKFILL AND PATCH PAVEMENT. REOPEN ALL LANES TO TRAFFIC.

\* PROPOSED WB LANES ON MARKET ST FROM NC 68 RAMP B TO EAST END OF PROJECT, NOT INCLUDING -Y15- BURGESS ROAD RADIUS, 5 FEET OR MORE FROM THE NORTH EDGE OF EXISTING TRAVEL WAY. [SEE TMP-7 AND TMP-24]

\* PROPOSED DRAINAGE ON NORTH SIDE OF MARKET STREET

USING RSD 1101.02, SHEETS 1 & 2 OF 9, BEGIN
CONSTRUCTING CROSS PIPES NEEDED FOR POSITIVE DRAINAGE
OF THE NEW WB PAVEMENT IN PHASE II (I.E. TRUNK
LINES). FOR INLINE MEDIAN DRAINAGE BOXES THAT
CONFLICT WITH TEMPORARY TRAFFIC PATTERNS, PARTIALLY
CONSTRUCT BOXES [REQUEST PRECAST STRUCTURES] BELOW
GRADE, THEN CAP WITH TRAFFIC-BEARING COVER, BACKFILL
AND PATCH PAVEMENT.

USING RSD 1101.02, SHEETS 1 & 2 OF 9, BEGIN TO COLLAR AND EXTEND EXISTING 24" D.I.P. AT STA 63+18 AND CONSTRUCT SOUTH "HALF" OF PROPOSED 42-INCH CROSS PIPE AT STA 63+50. [SEE TMP-13]

#### -Y- LINES

USING RSD 1101.02, SHEETS 1 & 2 OF 9, BEGIN CONSTRUCTION OF THE FOLLOWING -Y-LINES AS MUCH AS POSSIBLE UP TO EDGE AND ELEVATION OF EXISTING TRAVEL WAY:

- \* -Y2- BUNKER HILL ROAD [SEE TMP-4 AND TMP-11]
- \* -Y4- KIDD ROAD [SEE TMP-4 AND TMP-11]
- \* -Y7- MARSHALL SMITH ROAD [SEE TMP-5 AND TMP-17]
- \* -Y9- CENTRAL PLAZA COURT [SEE TMP-6 AND TMP-18]
- \* -Y10- PLEASANT RIDGE ROAD [SEE TMP-6 AND TMP-19]
- \* -Y12- BRIGHAM ROAD [SEE TMP-7 AND TMP-23]

MAINTAIN TRAFFIC IN EXISTING PATTERN ON -Y-LINES.

USING RSD 1101.02, SHEET 1 OF 9, CONSTRUCT PROPOSED WIDENING ALONG -Y6- SANDY RIDGE ROAD UP TO THE EDGE AND ELEVATION OF EXISTING TRAVEL WAY FROM STA. 11+70+/-TO STA. 19+75+/-.

BEGIN CONSTRUCTION OF RAILROAD GRADE CROSSING SIGNALS.

### STEP 2: -Y6- RAILROAD GRADE CROSSING

STEP 2 INCLUDES COMPLETING ALL CONSTRUCTION AT RAILROAD GRADE CROSSING ON -Y6- SANDY RIDGE ROAD. THIS STEP IS NOT DEPENDENT ON ANY OTHER STEP IN PHASE I, BUT HAS TO BE COMPLETED PRIOR TO PHASE I, STEP 8.

(A) COMPLETE RAILROAD GRADE CROSSING SIGNAL WORK ON -Y6-.

STEP 2B SHALL BE DONE UNDER A SEPARATE AND WEEKEND ICT THAT IS NOT CONCURRENT WITH ANY OTHER ICT. THE CONTRACTOR SHALL COMPLETE ALL WORK AT THE -Y6- SANDY RIDGE ROAD GRADE CROSSING DURING ONE WEEKEND PERIOD BETWEEN 6:00 PM FRIDAY AND 7:00 AM ON THE FOLLOWING TUESDAY, NO LATER THAN NOVEMBER 1, 2011. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

(B) TEMPORARILY CLOSE -Y6- SANDY RIDGE ROAD AT THE RAILROAD GRADE CROSSING AND DETOUR TRAFFIC AS SHOWN ON SHEET TMP-80 WHILE RAILROAD FORCES RECONSTRUCT THE CROSSING SURFACE.

\* TEMPORARY GRADE, AS DETERMINED BY THE ENGINEER, FROM -Y6-STA. 11+25+/- TO THE SOUTH EDGE OF EXISTING -L-.[SEE TMP-16] \* CONSTRUCT THE REMAINDER OF -Y6- UP TO BUT NOT INCLUDING

PIPE ACROSS -Y6- ON THE NORTH SIDE OF THE RAILROAD

CROSSING. [SEE TMP-16]

ONCE THE -Y6- CLOSURE IS IMPLEMENTED, PERFORM THE FOLLOWING:

\* CONSTRUCT THE PROPOSED CATCH BASINS (PRECAST) AND CROSS

THE FINAL LAYER OF SURFACE COURSE FROM -Y6- STA. 11+25+/TO 19+75+/- [SEE TMP-16] PLACE TEMPORARY (PAINT) PAVEMENT
MARKINGS ON -Y6- AS SHOWN ON SHEET TMP-16A.

REOPEN -Y6- IMMEDIATELY UPON COMPLETION OF GRADE CROSSING WORK, CONSTRUCTION OF THE -Y6- TEMPORARY TIE-IN TO MARKET STREET, AND INSTALLATION OF TEMPORARY MARKINGS ON -Y6- [SEE TMP-16A FOR TEMPORARY MARKINGS]

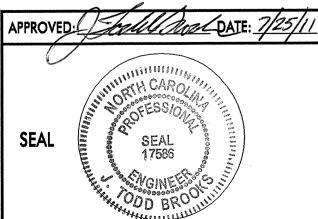
THE RAILROAD GRADE CROSSING FOR -Y3- AND -Y13- MAY BE CONSTRUCTED IN CONJUNCTION WITH THIS -Y6- GRADE CROSSING CONSTRUCTION [SEE PHASE II, STEP 4 ON TMP-32A]. DO NOT CLOSE AND DETOUR ANY TWO OF THE CROSSINGS ON -Y3-, -Y6-AND -Y13- SIMULTANEOUSLY.

#### STEP 3: STA 15+00 -L- TO STA 24+00 -L-

STEP 3 INCLUDES THE CONSTRUCTION ON MARKET STREET FROM STA 15+00 TO STA 24+00 -L-. THIS STEP IS NOT REQUIRED TO BE COMPLETED PRIOR TO THE BEGINNING OF PHASE 1, STEPS 4 - 7, BUT SHALL BE COMPLETED PRIOR TO PHASE 2.

- (A) USING RSD 1101.02, SHEET 1 OF 9, CONSTRUCT TEMPORARY WIDENING ALONG SOUTH SIDE OF MARKET ST FROM STA 15+00 +/- TO STA 26+48 +/- -L-TO FACILITATE THE REMOVAL OF UNSUITABLE MATERIALS AND UNDERCUT ALONG NORTH SIDE. [SEE TMP-8 AND SECTION L-L]
- (B) ONCE THE TEMPORARY WIDENING IS COMPLETE, USE RSD 1101.02, SHEET 1 OF 9 TO:
  - i. REVISE MARKINGS ON MARKET ST AND SHIFT TRAFFIC INTO TEMPORARY TWO-LANE, TWO-WAY PATTERN ON TEMPORARY WIDENING FROM STA 15+00 +/- TO STA 26+48 +/- -L- [SEE TMP -8 AND SECTION M-M].
  - ii. INSTALL WATER-FILLED BARRIER (W.F.B.) ALONG
    NORTH SIDE OF TEMPORARY TRAVEL WAY BETWEEN
    STA 16+25 +/- AND STA 23+89 +/- -L-. MAINTAIN
    ACCESS TO ALL DRIVEWAYS AND -Y1- THROUGH
    OPENINGS IN W.F.B. MAINTAIN INGRESS/EGRESS
    FROM COLFAX FIRE DEPARTMENT AT ALL TIMES.
    [SEE TMP-8 AND SECTION M-M]
- (C) WORKING BEHIND W.F.B., REMOVE UNSUITABLE MATERIALS AND EXCAVATE UNDERCUT ALONG NORTH SIDE OF MARKET ST FROM STA 16+25 +/- TO STA 24+00 +/- -L-. MAINTAIN INGRESS/EGRESS FROM COLFAX FIRE DEPARTMENT AT ALL TIMES. USE RSD 1101.02, SHEET 1 OF 9 WHEN WORKING ADJACENT TO -Y1- IRA DRIVE.

(SEE TMP-3B FOR CONTINUATION OF STEP 3)





PHASING PHASE I

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(E) USING RSD 1101.02, SHEETS 1 & 2 OF 9, CONSTRUCT PROPOSED WB PAVEMENT (24\* MIN) ON MARKET ST UP TO BUT NOT INCLUDING FINAL LAYER FROM STA 10+25 +/TO STA 24+00 +/- -L-, INCLUDING WEDGING OF EXISTING PAVEMENT. [SEE TMP-9 THRU TMP-10 AND SECTIONS A-A AND M-M ON TMP-4 & TMP-10].

#### STEP 4: -LOOP A-/-RAMP A-

STEP 4 INCLUDES THE CONSTRUCTION OF -LOOP A-/-RAMP A-.
THIS STEP IS NOT REQUIRED TO BE COMPLETED PRIOR TO THE
BEGINNING OF PHASE 1, STEPS 5 - 7, BUT SHALL BE
COMPLETED PRIOR TO PHASE 2.

(A) TEMPORARILY SHIFT RAMP A AND LOOP A TRAFFIC INTO NARROWED 12-FT LANE ON WEST SIDE OF RAMP A AND EAST SIDE OF LOOP A RESPECTIVELY AND CONSTRUCT 4 FT OF TEMPORARY WIDENING ALONG THE EAST SIDE OF RAMP A FROM STA 25+00 +/- TO STA 28+50 +/- AS SHOWN IN SECTION P-P IN INSET ON TMP-25. MOVE DRUMS TO EDGE OF TRAVEL WAY AND RESTORE ORIGINAL TRAFFIC PATTERN ON RAMP A AND LOOP A BY THE END OF THE WORK PERIOD.

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK REQUIRED IN PHASE I, STEP 4B WITHIN A SINGLE OVERNIGHT WORK PERIOD BETWEEN 8:00 PM AND 6:00 AM. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

(B) STEP 4B IS FOR INSTALLATION OF P.C.B WITH COORESPONDING TRAFFIC SHIFT:

- i. ACTIVATE C.M.S. ON NC 68 SB, INSTALL/UNCOVER DETOUR SIGNS, AND INSTALL TYPE III BARRICADES AND DRUMS TO TEMPORARILY CLOSE NC 68 RAMP A AND DETOUR RAMP A TRAFFIC AS SHOWN ON TMP-75.
- ii. WHILE RAMP A IS CLOSED TO TRAFFIC, INSTALL WARNING SIGNS, REVISE PAVEMENT MARKINGS AND INSTALL P.C.B. WITH CRASH CUSHION ALONG WEST SIDE OF RAMP A AS SHOWN ON TMP-23, TMP-25 AND SECTION O-O.

REVISE THE MARKET ST/RAMP A SIGNAL TO MODIFY DETECTION, PHASING AND SIGNAL DISPLAYS FOR NEW TRAFFIC PATTERN ON THE RAMP A SB APPROACH.

- iii. REMOVE BARRICADES, COVER DETOUR SIGNS AND REOPEN RAMP A TO TRAFFIC BY THE END OF THE WORK PERIOD.
- (C) WORKING BEHIND P.C.B. AND RIGHT LANE CLOSURE, PERFORM THE FOLLOWING CONSTRUCTION ON WEST SIDE OF RAMP A [SEE TMP-23 AND TMP-25 AND SECTION O-0]:
  - \* REMOVE EXISTING GUARDRAIL FROM STA 20+50 +/- TO STA 27+06 +/-
  - \* CONSTRUCT PROPOSED WIDENING AS MUCH AS POSSIBLE BEHIND P.C.B AND LANE CLOSURE FROM STA 20+50 +/TO MARKET ST -L-, NOT TO INCLUDE MONOLITHIC ISLAND FOR RIGHT TURN CHANNELIZATION, UP TO EXISTING EDGE AND ELEVATION.
  - \* INSTALL PROPOSED GUARDRAIL ALONG THE WEST SIDE OF RAMP A FROM STA 20+50 +/- TO STA 27+06 +/-.

## PHASING

USING THE SAME ICT AS USED IN PHASE 1, STEP 4B, THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK REQUIRED IN PHASE I, STEP 4D WITHIN A SINGLE OVERNIGHT WORK PERIOD BETWEEN 8:00 PM AND 6:00 AM. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

- (D) STEP 4D IS FOR REMOVAL OF P.C.B:
  - i. ACTIVATE C.M.S. ON NC 68 SB, INSTALL/UNCOVER DETOUR SIGNS, AND INSTALL TYPE III BARRICADES AND DRUMS TO TEMPORARILY CLOSE NC 68 RAMP A AND DETOUR RAMP A TRAFFIC AS SHOWN ON TMP-75.
  - ii. WHILE RAMP A IS CLOSED TO TRAFFIC, REMOVE P.C.B. AND CRASH CUSHION AND INSTALL DRUMS SPACED 20 FT C-C IN PLACE OF THE P.C.B. ON THE WEST SIDE OF RAMP A.
  - iii. REMOVE BARRICADES, COVER DETOUR SIGNS AND REOPEN RAMP A TO TRAFFIC BY THE END OF THE WORK PERIOD.
- (E) USING OVERNIGHT CLOSURES AND DETOURS OF RAMP A / LOOP A, CONSTRUCT THE FOLLOWING [SEE TMP-1B GENERAL NOTE C FOR DAY AND TIME RESTRICTIONS]:
  - \* CURB & GUTTER AND WIDENING ON EAST SIDE OF -LOOP A- UP TO EDGE AND ELEVATION OF EXISTING TRAVELWAY.
  - \* PROPOSED WIDENING FROM STA 20+50 +/- TO STA 27+25 OF -RAMP A-,INCLUDING WEDGING OF EXISTING PAVEMENT UP TO BUT NOT INCLUDING FINAL SURFACE LAYER
  - \* PROPOSED WIDENING ON WEST SIDE OF RAMP A FROM STA 27+25 +/- TO MARKET STREET -L-, INCLUDING WEDGING OF EXISTING PAVEMENT, AND NOT TO INCLUDE MONOLITHIC ISLAND FOR RIGHT TURN CHANNELIZATION.
    [SEE TMP-23 AND TMP-25 AND SECTION 0-0]

REOPEN LOOP A AND RAMP A AND RESTORE TRAFFIC TO THE EXISTING PATTERN BY THE END OF EACH OVERNIGHT WORK PERIOD.

USING THE SAME ICT AS USED IN PHASE 1, STEP 4B, THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK REQUIRED IN PHASE I, STEP 4F WITHIN A SINGLE OVERNIGHT WORK PERIOD BETWEEN 8:00 PM AND 6:00 AM. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

- (F) STEP 4F IS FOR A TRAFFIC SHIFT AND REVISION OF TRAFFIC SIGNAL:
  - i. ACTIVATE C.M.S. ON NC 68 SB, INSTALL/UNCOVER DETOUR SIGNS, AND INSTALL TYPE III BARRICADES AND DRUMS TO TEMPORARILY CLOSE NC 68 RAMP A AND DETOUR RAMP A TRAFFIC AS SHOWN ON TMP-75.
  - ii. INSTALL MARKINGS AND INSTALL DRUMS SPACED 20 FT C-C ALONG THE EAST SIDE OF RAMP A AS SHOWN ON TMP-26.

H

R-2611 TMP-3B

PROJ. REFERENCE NO. SHEET NO.

REVISE THE MARKET ST/RAMP A SIGNAL TO MODIFY DETECTION, PHASING AND SIGNAL DISPLAYS FOR NEW TRAFFIC PATTERN ON THE RAMP A SB APPROACH.

- iii. REMOVE BARRICADES, COVER DETOUR SIGNS AND REOPEN RAMP A TO TRAFFIC BY THE END OF THE WORK PERIOD.
- (G) USING OVERNIGHT CLOSURES AND DETOURS OF LOOP A, PERFORM THE FOLLOWING [SEE TMP-1B GENERAL NOTE C FOR DAY AND TIME RESTRICTIONS, AND SEE TMP-26]:
- i. OBLITERATE EXISTING MEDIAN BETWEEN RAMP A AND LOOP A.

CONSTRUCT CURB & GUTTER AND WIDENING ON WEST SIDE OF -LOOP A- UP TO EDGE AND ELEVATION OF EXISTING PAVEMENT.

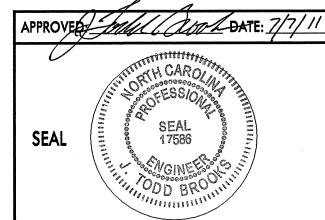
- ii. WEDGE MEDIAN AREA AND LOOP A UP TO BUT NOT INCLUDING FINAL SURFACE LAYER.
- iii. CONSTRUCT PROPOSED MONOLITHIC MEDIAN BETWEEN RAMP A AND LOOP A.

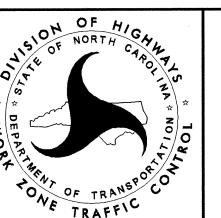
### STEP 5: -LOOP B-/-RAMP B-

STEP 5 INCLUDES THE CONSTRUCTION OF -LOOP B-/-RAMP B-.
THIS STEP IS NOT REQUIRED TO BE COMPLETED PRIOR TO THE
BEGINNING OF PHASE 1, STEPS 6 - 7, BUT SHALL BE
COMPLETED PRIOR TO PHASE 1, STEP 8.

- (A) USING OVERNIGHT CLOSURES AND DETOURS OF LOOP A,
  PERFORM THE FOLLOWING [SEE TMP-1B GENERAL NOTE C
  FOR DAY AND TIME RESTRICTIONS1:
  - i. TEMPORARILY CLOSE LOOP B AND RAMP B AND DETOUR LOOP B AND RAMP B TRAFFIC AS SHOWN ON TMP-77 AND TMP-78. CONSTRUCT THE FOLLOWING [SEE TMP-7 & TMP-24]:
    - \* PROPOSED DRAINAGE STRUCTURES AND CROSS-PIPES,
    - \* CURB & GUTTER AND PAVEMENT WIDENING AND WEDGING UP TO BUT NOT INCLUDING FINAL SURFACE LAYER
    - \* MONOLITHIC ISLAND IN NE RADIUS
    - \* MEDIAN BETWEEN RAMP B AND LOOP B
  - ii. REOPEN LOOP B AND RAMP B AND RESTORE TRAFFIC TO THE EXISTING PATTERN BY THE END OF EACH OVERNIGHT WORK PERIOD.
  - iii. USING RSD 1101.02, SHEETS 1 & 2 OF 9, COMPLETE CONSTRUCT THE NORTH SIDE OF MARKET STREET BETWEEN RAMP B AND -Y15- BURGESS STREET, EXCLUDING INTERSECTION RADIUS AT -Y15-, INCLUDING ANY NECESSARY WEDGING TO TIE TO EXISTING LANES TO CREATE A DRIVEABLE SURFACE FOR TRAFFIC PATTERN IN NEXT STEP. [SEE TMP-27]

(SEE TMP-3C FOR CONTINUATION OF STEP 5)





PHASING PHASE I

TELEST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

USING THE SAME ICT AS USED IN PHASE 1, STEP 4B, THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK REQUIRED IN PHASE I, STEP 5B WITHIN A SINGLE OVENIGHT WORK PERIOD BETWEEN 8:00 PM AND 6:00 AM. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES1

(B) STEP 5B IS FOR A TRAFFIC SHIFT AND REVISION OF TRAFFIC SIGNAL:

- i. UPON COMPLETION OF CONSTRUCTION ON RAMP B/ LOOP B, ACTIVATE C.M.S. ON NC 68 NB, INSTALL/ UNCOVER DETOUR SIGNS, AND INSTALL TYPE III BARRICADES AND DRUMS TO TEMPORARILY CLOSE NC 68 LOOP B AND DETOUR LOOP B TRAFFIC AS SHOWN ON TMP-78.
- ii. WHILE LOOP B IS CLOSED TO TRAFFIC, REVISE PAVEMENT MARKINGS AS SHOWN ON TMP-27.

REVISE THE MARKET ST/RAMP B SIGNAL TO MODIFY DETECTION, PHASING AND SIGNAL DISPLAYS FOR NEW TRAFFIC PATTERN ON THE LOOP B SB APPROACH.

- iii. REMOVE BARRICADES, COVER DETOUR SIGNS AND REOPEN LOOP B TO TRAFFIC BY THE END OF THE WORK PERIOD.
- (C) ONCE SIGNAL REVISION IS COMPLETED, USING OVERNIGHT CLOSURES AND DETOURS OF LOOP B AND RAMP B, REMOVE EXISITNG PAVEMENT ON WEST SIDE OF LOOP B AS SHOWN ON TMP-27. [SEE TMP-1B GENERAL NOTE C FOR DAY AND TIME RESTRICTIONS]

STEP 6: STA 49+00 -L- TO STA 75+00 -L-

STEP 6 INCLUDES THE CONSTRUCTION OF STA 49+00 TO STA 75+00 OF MARKET STREET -L-. THIS STEP IS NOT REQUIRED TO BE COMPLETED PRIOR TO THE BEGINNING OF PHASE 1, STEPS 7 - 8, BUT SHALL BE COMPLETED PRIOR TO PHASE 2.

(A) THE INTENT OF PHASE I, STEP 6A IS TO COMPLETE CONSTRUCTION OF ENOUGH EB PAVEMENT ON MARKET ST -L-IN FRONT OF COLFAX ELEMENTRAY SCHOOL TO BE ABLE TO SHIFT TRAFFIC ONTO FUTURE EASTBOUND LANES TO FINALIZE CONSTRUCTION ON THE WESTBOUND LANES DURING PHASE I. THE EASTBOUND LANES MUST ACCOMMODATE A MINIMUM OF TWO 11-FT LANES DURING SUMMER MONTHS WHEN SCHOOL IS OUT AND ACCOMMODATE A MINIMUM OF 3 11-FT LANES, WHICH INCLUDES AN EXCLUSIVE LEFT TURN LANE INTO THE MAIN ENTRACE OF THE SCHOOL, DURING THE SCHOOL YEAR. [SEE TMP-12, TMP-13 AND TMP-14]

PHASING

i. USING RSD 1101.02, SHEETS 1 & 2 OF 9, CONSTRUCT THE FOLLOWING TO ENABLE A SOUTHWARD SHIFT OF MARKET ST SO THAT CONSTRUCTION OF THE WB LANES CAN BE FINALIZED DURING PHASE I [SEE TMP-12 THRU TMP-14]:

- a. COMPLETE CONSTRUCTION OF EXTENSION OF EXISTING 24" D.I.P. AT STA 63+18 AND SOUTH "HALF" OF PROPOSED 42-INCH CROSS PIPE AT STA 63+50. [SEE TMP-13]
- b. COMPLETE CONSTRUCTION OF PROPOSED EB LANES OF MARKET ST -L- BETWEEN STA 49+34 +/- -L-AND STA 73+05 +/- -L- UP TO BUT NOT FINAL SURFACE LAYER. INCLUDING TIE-INS TO EXISTING PAVEMENT AT EACH END. [SEE TMP-12 THRU TMP-14 AND SECTIONS N-N AND C-C]
- ii. UPON COMPLETION OF PROPOSED EB LANES OF MARKET ST -L-, PLACE TEMPORARY MARKINGS AND DRUMS AS MUCH AS POSSIBLE BETWEEN STA 49+34 +/- -L-AND STA 73+05 +/- -L- IN PREPARATION FOR TRAFFIC SHIFT TO EB LANES. [SEE SECTION C-C ON TMP-4, TMP-5, AND SEE TMP-28 THRU TMP-30]

PERFORM CONSTRUCTION IN FRONT OF COLFAX ELEMENTARY SCHOOL AS SHOWN IN STEP 6B. BEGIN THE WORK NO EARLIER THAN 2 WEEKS AFTER THE END OF COLFAX ELEMATAY SCHOOL'S ACADEMIC YEAR. THIS WORK SHALL BE COMPLETED NO LATER THAN 2 WEEKS PRIOR TO THE BEGINNING OF THE SUBSEQUENT COLFAX ELEMENTARY SCHOOL'S ACADEMIC YEAR. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES

- (B) STEP 6B FINALIZES CONSTRUCTION IN FRONT OF SCHOOL:
  - i. USING RSD 1101.02, SHEETS 1 & 2 OF 9, CONSTRUCT THE TIE-INS BETWEEN THE PROPOSED EB LANES AND EXISTING PAVEMENT AND SHIFT MARKET STREET TRAFFIC SOUTHWARD ONTO NEW ALIGNMENT BETWEEN STA 49+34 +/- -L- AND STA 73+05 +/- -L- [SEE TMP-28 THRU TMP-30 AND SECTION C-C]
  - ii. ONCE TRAFFIC HAS BEEN SHIFTED, CONSTRUCT THE FOLLOWING:
    - \* BEGIN CONSTRUCTION OF THE NORTH "HALF" OF PROPOSED 42-INCH CROSS PIPE AT STA 63+50. [SEE TMP-29]
    - \* 24 FT (MIN) OF PROPOSED WB PAVEMENT UP TO BUT NOT INCLUDING FINAL LAYER BETWEEN STA 49+00 +/- AND 56+96 +/- -L-[SEE TMP-28 AND TMP-29]
    - \* REMAINING WIDTH OF ENTIRE ROADWAY SECTION BETWEEN STA 56+96 +/- AND 63+00 +/- -L-, INCLUDING TEMPORARY PAVEMENT IN FUTURE MEDIAN FROM STA 56+96 +/- TO 57+96 +/- -L-[SEE SECTION C-C, TMP-4, AND TMP-29]
    - \* 24 FT (MIN) OF PROPOSED WB PAVEMENT UP TO BUT NOT INCLUDING FINAL LAYER BETWEEN STA 64+00 +/- AND STA 75+00 +/- -L-. [SEE TMP-29 AND TMP-30]

PROJ. REFERENCE NO. SHEET NO. R-2611 TMP-3C

iii. UPON COMPLETION OF WORK DESCRIBED ABOVE, AND PRIOR TO THE BEGINNING OF A NEW SCHOOL YEAR, USING RSD 1101.02, SHEETS 1 & 2 OF 9, REVISE THE PAVEMENT MARKINGS AND SHIFT MARKET STREET TRAFFIC IN NEW PATTERN BETWEEN STA 56+00 +/- -L- AND STA 64+20 +/- -L-. [SEE TMP-31]

#### STEP 7: DRAINAGE CONSTRUCTION

COMPLETE CONSTRUCTION OF THE FOLLOWING BEGUN IN PHASE I, STEP 1 ON MARKET ST:

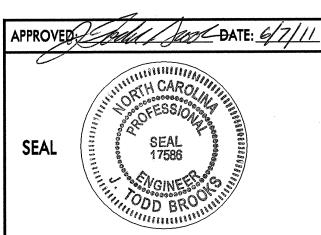
- \* BEHIND TEMPORARY GUARDRAIL, EXTENSION OF EXISTING 2-BARREL BOX CULVERT WEST OF -Y12-, AND CONSTRUCT FILL EMBANKENT OVER CULVERT EXTENSION ON NORTH SIDE OF MARKET ST FROM STA 190+00 +/- -L- TO -Y12-. [SEE TMP-23]
- \* COMPLETE CONSTRUCTION OF THE NORTH "HALF" OF PROPOSED 42-INCH CROSS PIPE AT STA 63+50 BEGUN IN PHASE I, STEP 6 ON MARKET ST. [SEE TMP-31]
- STEP 8: THE INTENT OF PHASE I, STEP 8 IS TO COMPLETE CONSTRUCTION OF ENOUGH WB PAVEMENT ON MARKET ST -L-TO PROVIDE A MINIMUM OF TWO 12-FT LANES DURING PHASE 2 AND TO MAINTAIN EXCLUSIVE LEFT TURN LANES AND TWO-WAY LEFT TURN LANES WHERE THEY CURRENTLY EXIST. TO PROVIDE THE LEFT TURN LANES, TEMPORARILY WIDEN THE TWO LANES OF WB PERMANENT PAVEMENT EITHER BY BUILDING TEMPORARY PAVEMENT IN LOCATION OF PROPOSED MEDIAN OR PARTIALLY WEDGING ADJACENT EXISTING PAVEMENT.

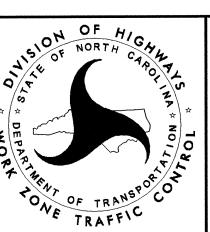
STA 24+00 -L- TO -Y4-

USING RSD 1101.02, SHEETS 1 & 2 OF 9, COMPLETE CONSTRUCTION OF PROPOSED WB PAVEMENT ON MARKET ST. BEGUN IN PHASE I, STEP 1, UP TO BUT NOT INCLUDING FINAL SURFACE LAYER AS FOLLOWS:

\* CONSTRUCT 24 FT (MIN) FROM STA 24+00 +/- TO STA 26+27 +/-, WITH TAPER FROM 24 FT (MIN) TO 36 FT (MIN) BETWEEN STA 26+27 +/- AND STA 27+77, AND A 36 FT (MIN) FROM STA 27+77 +/- -L- TO -Y4-, INCLUDING ALL TEMPORARY PAVEMENT IN LOCATION OF PROPOSED MEDIAN ON MARKET ST WEST OF -Y2-/-Y3- TO PROVIDE SUFFICIENT PAVEMENT WIDTH FOR PHASE II TRAFFIC PATTERN. [SEE TMP-10 AND TMP-11]

(SEE TMP-3D FOR CONTINUATION OF STEP 8)







#### -Y4- TO STA 49+00 24'

USING RSD 1101.02, SHEETS 1 & 2 OF 9, COMPLETE CONSTRUCTION OF PROPOSED WB PAVEMENT (24 FT MIN) ON MARKET ST, BEGUN IN PHASE I, STEP 1, UP TO BUT NOT INCLUDING FINAL SURFACE LAYER FROM -Y4- KIDD ROAD TO STA 49+00 +/- -L-. [SEE TMP-11 AND TMP-12]

#### STA 75+00 -L- TO NC 68 RAMP A -L-

COMPLETE CONSTRUCTION OF PROPOSED RETAINING WALLS ON NORTH SIDE OF MARKET ST BEGUN IN PHASE I, STEP 1. [SEE TMP-6, TMP-7, TMP-19, AND TMP-22]

USING RSD 1101.02, SHEETS 1 & 2 OF 9, CONTINUE AND COMPLETE CONSTRUCTION PROPOSED WB LANES ON MARKET ST BEGUN IN PHASE I, STEP 1, INCLUDING ADDITIONAL PAVEMENT FOR PHASE II LEFT TURN LANES, AS FOLLOWS:

- \* 36 FT (MIN) STA 75+00 +/- TO STA 80+00 +/- -L-[SEE TMP-14]
- \* 26 FT (MIN) STA 80+00 +/- TO STA 98+00 +/- -L-[SEE SECTION D-D ON TMP-5, TMP-14, AND TMP-15]
- \* 36 FT (MIN) STA 98+00 +/- TO STA 105+00 +/- -L-[SEE SECTION E-E ON TMP-5 AND TMP-15]
- \* 26 FT (MIN) STA 105+00 +/- TO STA 115+00 +/- -L-[SEE SECTION F-F ON TMP-5 AND TMP-16 & TMP-17]
- \* 36 FT (MIN) STA 115+00 +/- -L- TO NC 68 RAMP A [SEE SECTIONS G-G & H-H ON TMP-6; SECTIONS I-I & J-J ON TMP-7; AND TMP-17 THRU TMP-23]

FOR 36 FT (MIN) WIDE AREAS ABOVE, CONSTRUCT PAVEMENT UP TO EDGE AND ELEVATION OF THE EXISTING TRAVEL WAY, THEN PARTIALLY WEDGE ACROSS THE ADJACENT EXISTING PAVEMENT TO PROVIDE A SMOOTH TIE-IN.

### NC 68 RAMP A TO EAST END OF PROJECT

USING RSD 1101.02, SHEETS 1 & 2 OF 9, COMPLETE CONSTRUCTING WB WIDENING OF MARKET ST UP TO EDGE OF ELEVATION OF EXISTING TRAVEL WAY FOR THE FOLLOWING LOCATIONS:

- \* FROM NC 68 RAMP A TO 200+18 +/- -L- BEGUN IN PHASE I, STEP 1. [SEE TMP-23 THRU TMP-27 AND SECTION K-K, STEP 1]
- \* FROM STA 200+18 +/- -L- TO NC 28 LOOP B
  [SEE TMP-27]
- \* FROM -Y15- TO END OF PROJECT, BEGUN IN PHASE 1, STEP 1, NOT INCLUDING -Y15- BURGESS ROAD NORTHWEST INTERSECTION RADIUS [SEE TMP-27]

USING RSD 1101.02, SHEET 4 OF 9, OBLITERATE EXISTING MONOLITHIC MEDIANS ON MARKET ST EAST OF -Y13-/NC 68 RAMP A AND THATCHER ROAD -Y13- SOUTH OF MARKET STREET AND PATCH PAVEMENT [SEE TMP-23 AND TMP-24]. OUTLINE SHAPE OF FORMER MEDIANS WITH TEMPORARY DOUBLE YELLOW MARKINGS AND PLACE DRUMS SPACED 10-FT C-C IN FORMER MEDIAN LOCATION.

## **PHASING**

ONCE MEDIAN HAS BEEN REMOVED, USE RSD NO. 1101.02, SHEETS 2, 3 & 4 OF 9, TO WEDGE THE EB PAVEMENT ON MARKET ST UP TO BUT NOT INCLUDING FINAL LAYER BETWEEN NC 68 RAMP A/LOOP A AND EAST END OF PROJECT. TAPER WB PAVEMENT LATERALLY TO SMOOTHLY TIE INTO THE EXISTING EB PAVEMENT. [SEE TMP-23, TMP-24, SECTION K-K, STEP 2, AND TMP-27]

#### DRAINAGE CONSTRUCTION

COMPLETE CONSTRUCTION OF THE FOLLOWING BEGUN IN PHASE I. STEP 1 ON MARKET ST:

\* PORTIONS OF DRAINAGE SYSTEMS REQUIRED TO POSITIVELY DRAIN THE WB PAVEMENT DURING PHASE II.

#### -Y- LINES

USING RSD 1101.02, SHEETS 1 & 2 OF 9, CONTINUE AND COMPLETE CONSTRUCTION BEGUN IN PHASE I, STEP 1 OF THE FOLLOWING -Y-LINES AS MUCH AS POSSIBLE UP TO EDGE AND ELEVATION OF EXISTING TRAVEL WAY, THEN WEDGE UP TO BUT NOT INCLUDING FINAL SURFACE LAYER:

- \* -Y1- IRA DRIVE [SEE TMP-4 & TMP-10]
- \* -Y2- BUNKER HILL ROAD [SEE TMP-4 &TMP-11]
- \* -Y4- KIDD ROAD [SEE TMP-4 & TMP-11]
- \* -Y9- CENTRAL PLAZA COURT [SEE TMP-6 & TMP-18]
- \* -Y12- BRIGHAM ROAD [SEE TMP-7 AND TMP-23]

WEDGE A TEMPORARY TIE BETWEEN EXISTING MARKET STREET PAVEMENT AND THE NEW -Y-LINE PAVEMENT AS REQUIRED.

USING RSD 1101.02, SHEET 1 OF 9, CONSTRUCT -Y7MARSHALL SMITH ROAD AS FOLLOWS [SEE TMP-5 & TMP-17]:

- \* COMPLETE CONSTRUCTION ON EAST SIDE BEGUN IN PHASE I, STEP 1 UP TO EXISTING EDGE & ELEVATION.
  [SEE TMP-5]
- \* WEDGE EAST SIDE OF -Y7- UP TO BUT NOT INCLUDING FINAL SURFACE LAYER. PLACE TEMPORARY PAVEMENT MARKINGS, DRUMS AND BARRICADES AND SHIFT TRAFFIC INTO TEMPORARY TWO-LANE, TWO-WAY PATTERN ON EAST SIDE. [SEE TMP-5, INSET B AND TMP-17]
- \* CONSTRUCT REMAINING WEST SIDE OF -Y7- INCLUDING NW INTERSECTION RADIUS, UP TO BUT NOT INCLUDING FINAL LAYER. [SEE TMP-5, INSET B AND TMP-17]

USING RSD 1101.02, SHEETS 1 AND 4 OF 9, CONSTRUCT -Y10- PLEASANT RIDGE ROAD AS FOLLOWS [SEE TMP-6 AND TMP-19]:

- \* COMPLETE CONSTRUCTION ON EAST SIDE BEGUN IN PHASE I, STEP 1 UP TO EXISTING EDGE & ELEVATION.
- \* OBLITERATE EXISTING MONOLITHIC MEDIAN ON AND PATCH PAVEMENT. OUTLINE SHAPE OF FORMER MEDIAN WITH TEMPORARY DOUBLE YELLOW MARKINGS AND PLACE DRUMS SPACED 10-FT C-C IN FORMER MEDIAN LOCATION.
- \* ONCE MEDIAN HAS BEEN REMOVED, USE RSD NO. 1101.02, SHEETS 2, 3 & 4 OF 9, TO WEDGE UP TO BUT NOT INCLUDING FINAL LAYER. CONSTRUCT PROPOSED MONOLITHIC CONCRETE MEDIANS AND ISLANDS. [SEE TMP-19]

STEP 9: THE INTENT OF PHASE I, STEP 9 IS TO WEDGE THE -Y6SANDY RIDGE ROAD TIE-IN TO MARKET STREET UP TO FINAL
GRADE (EXCLUDING FINAL LAYER) IMMEDIATELY PRIOR TO
SHIFTING MARKET STREET INTO PHASE II TEMPORARY TRAFFIC
PATTERN ON NEWLY CONSTRUCTED WB PAVEMENT. BECAUSE THIS
TIE-IN WILL CREATE A HUMP ON EXISTING MARKET STREET
TRAVEL WAY THROUGH THE -Y6- INTERSECTION, THIS WORK

SHEET NO.

TMP-3D

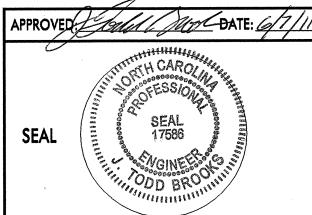
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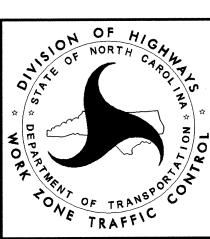
R-2611

USING RSD 1101.02, SHEETS 1 & 2 OF 9, WEDGE THE -Y6-SANDY RIDGE ROAD TIE-IN TO MARKET STREET UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER (EXCLUDING CURB RADII) FROM STA. 11+25+/- -Y6- TO THE EDGE OF THE NEWLY CONSTRUCTED WB PAVEMENT ON MARKET STREET. [SEE TMP-16A] WEDGE THE EXISTING PAVEMENT ON MARKET STREET LONGITUDINALLY IN CONJUNCTION WITH THIS -Y6- WEDGING TO RAMP EXISTING MARKET STREET UP THROUGH THIS INTERSECTION AS DIRECTED BY THE ENGINEER. REPLACE MARKINGS CONCEALED BY WEDGING AND INSTALL "BUMP" (W8-1) SIGNS ON EB AND WB MARKET STREET APPROACHES TO THE -Y6- INTERSECTION BY THE END OF EACH DAY'S WEDGING OPERATION.

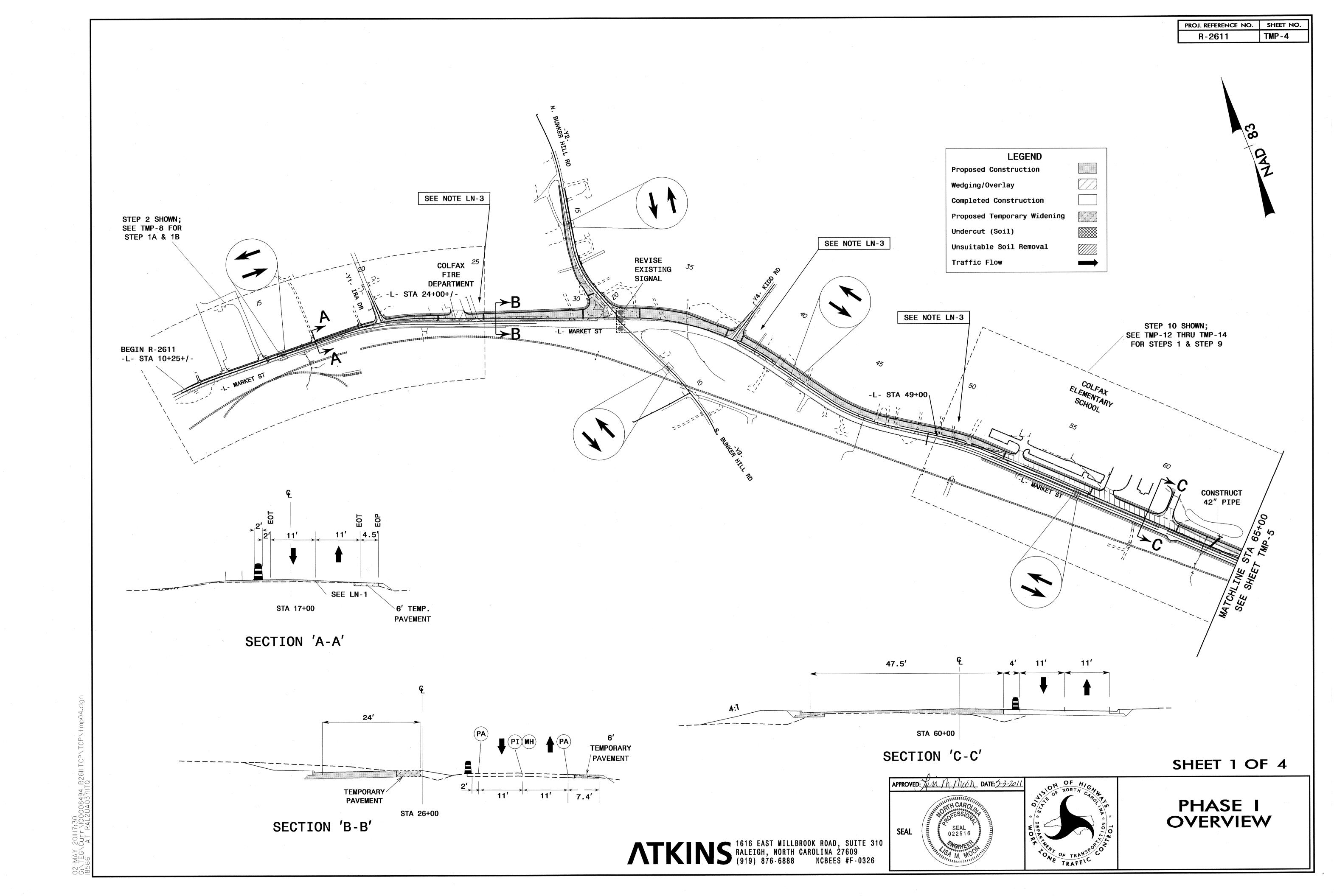
MUST BE DONE AT THE CONCLUSION OF PHASE I TO MINIMIZE

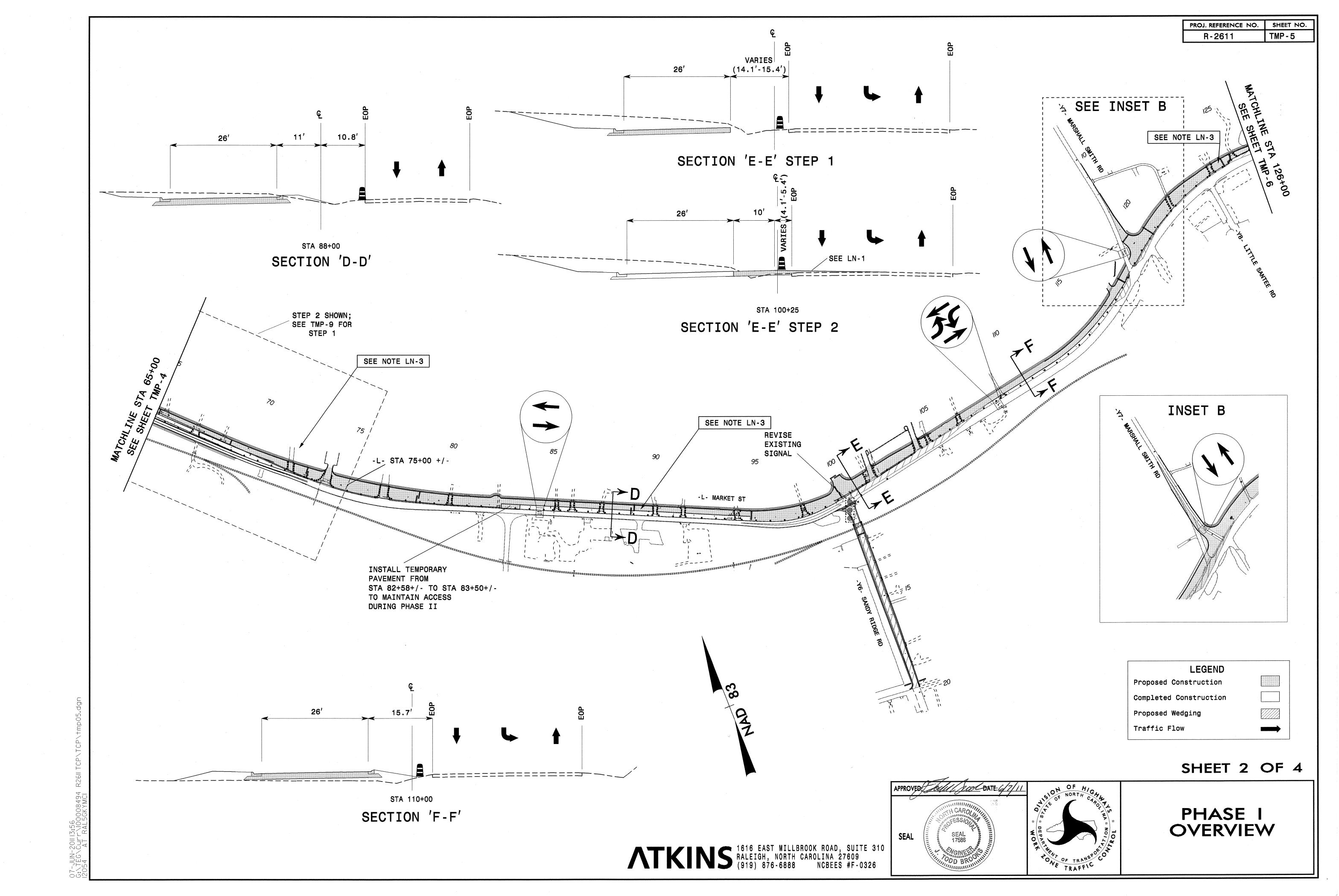
THE LENGTH OF TIME TRAFFIC MUST RIDE OVER THIS AREA.

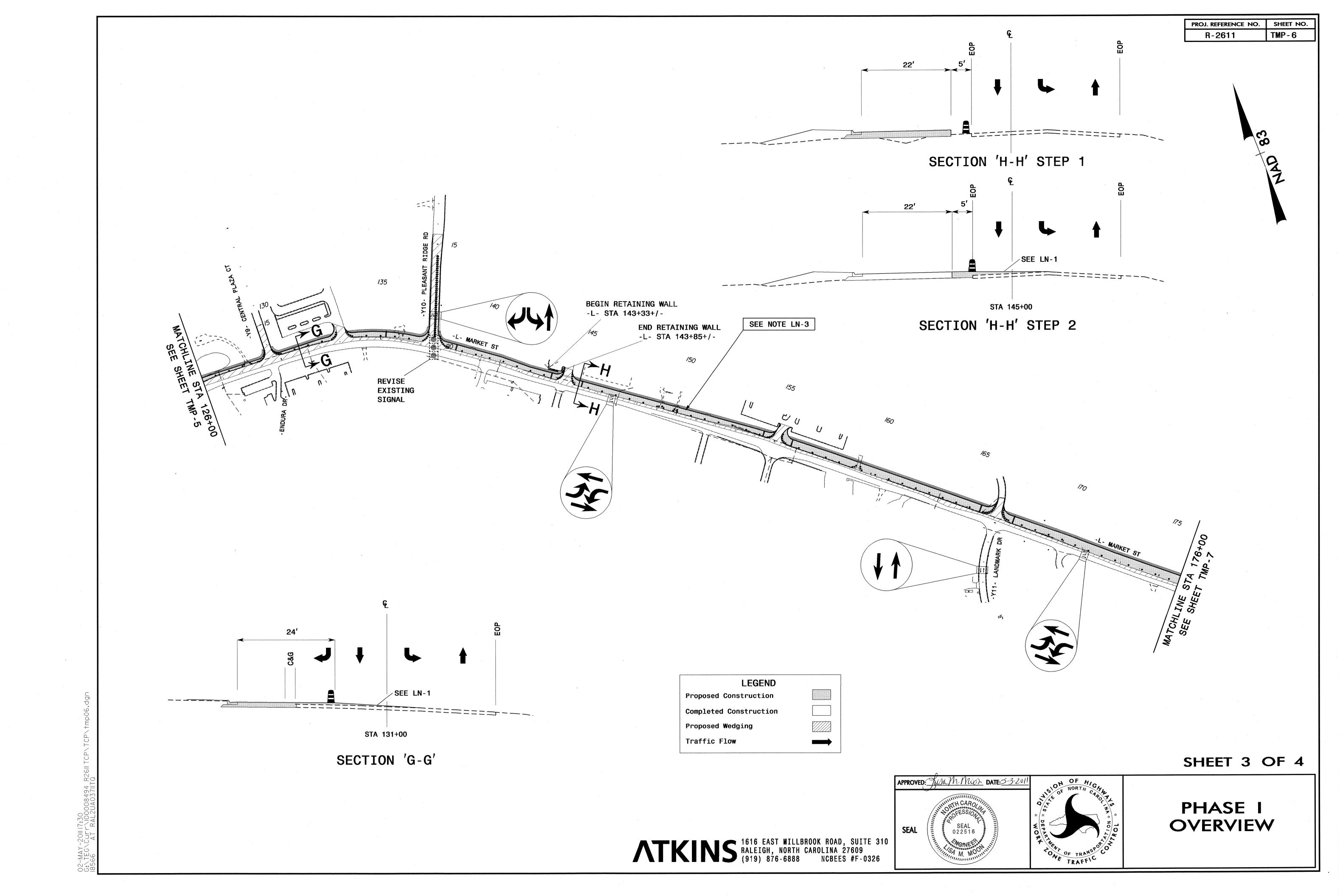


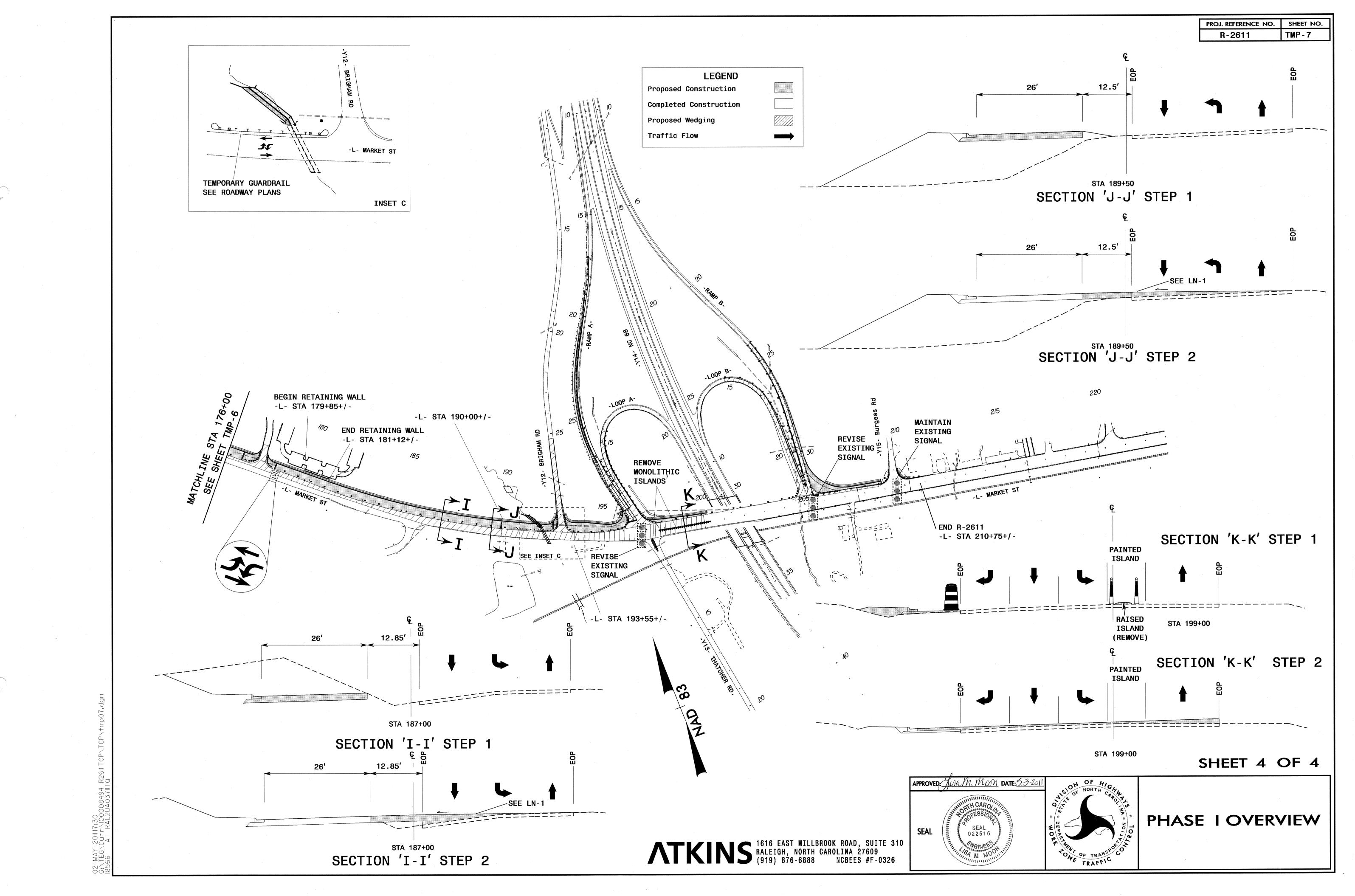


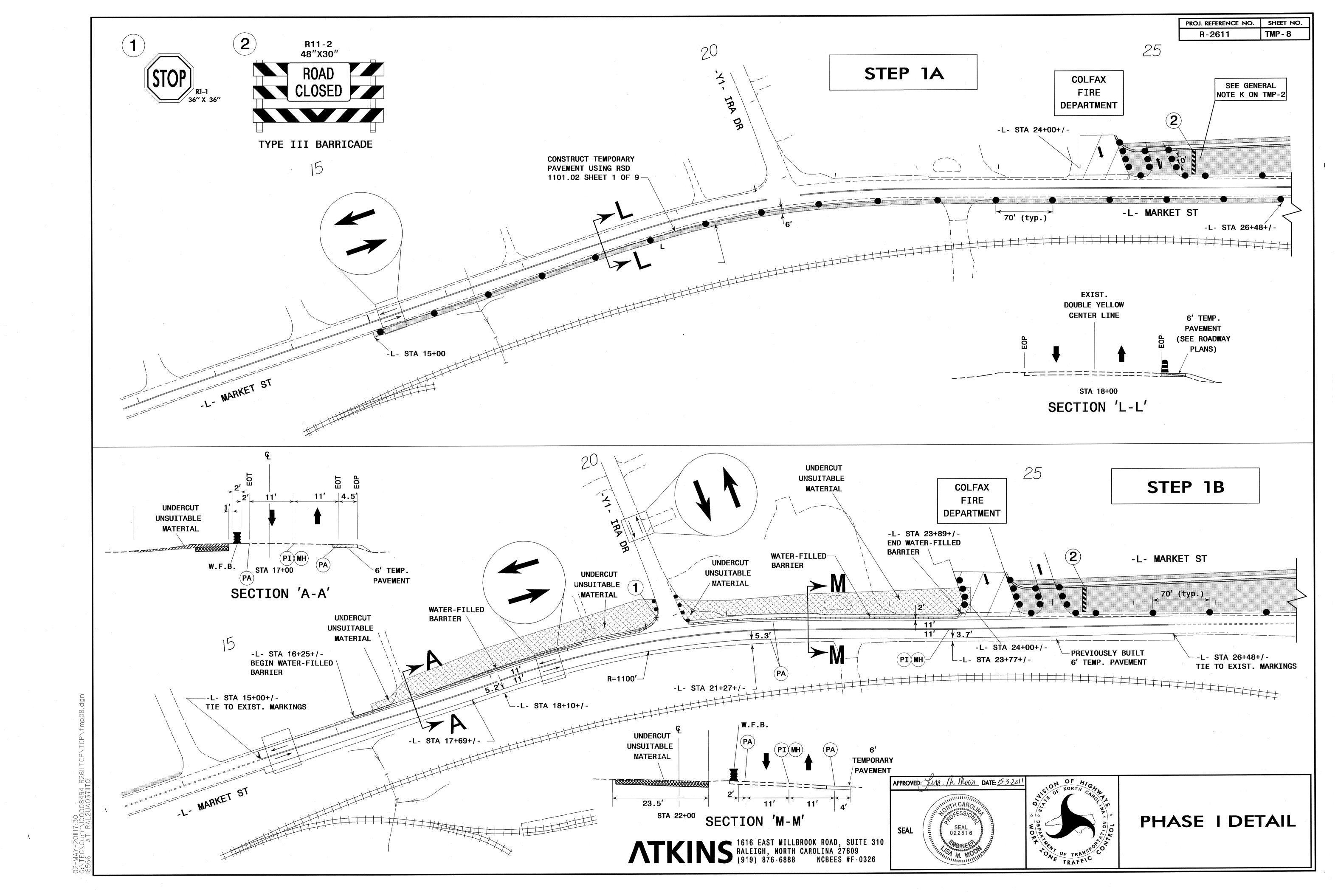
PHASING PHASE I



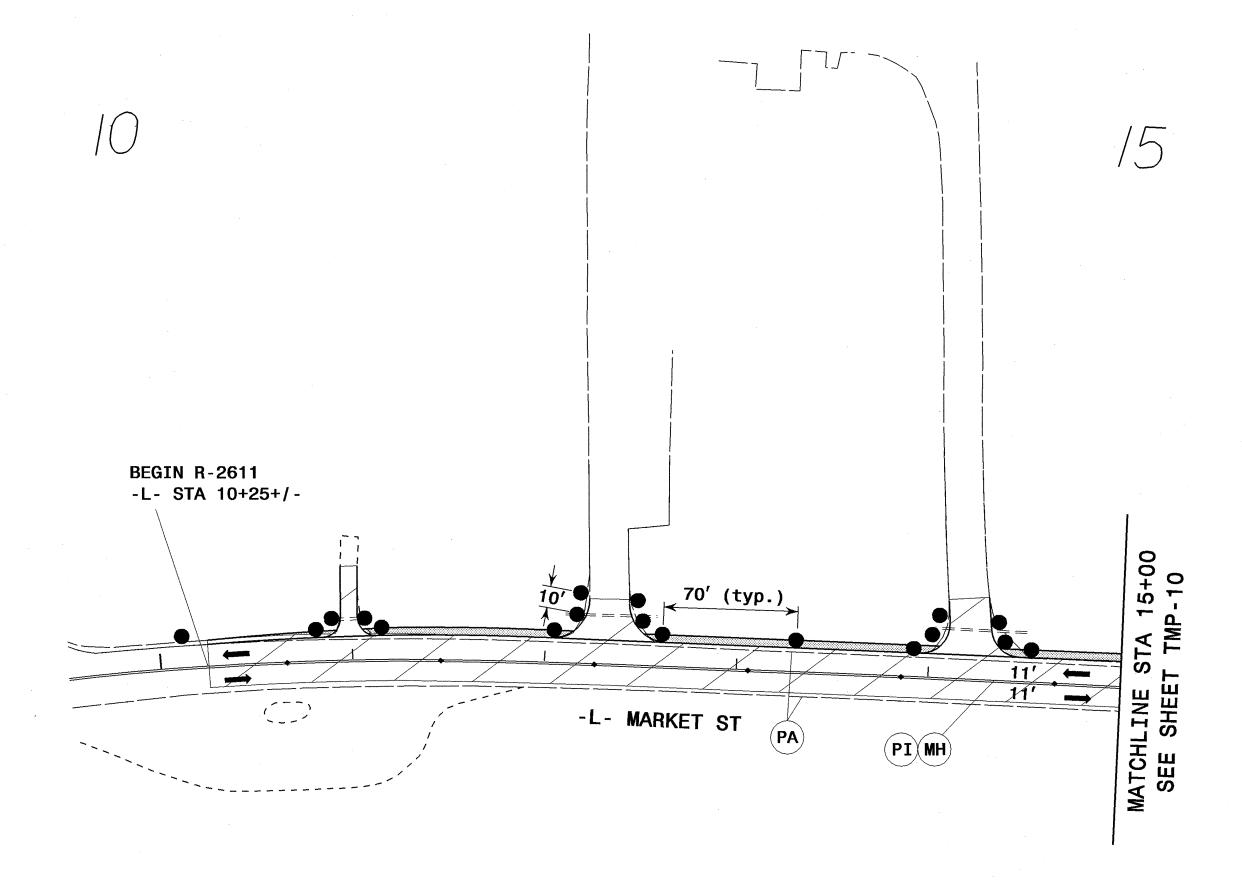






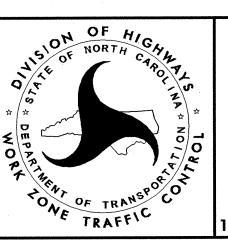


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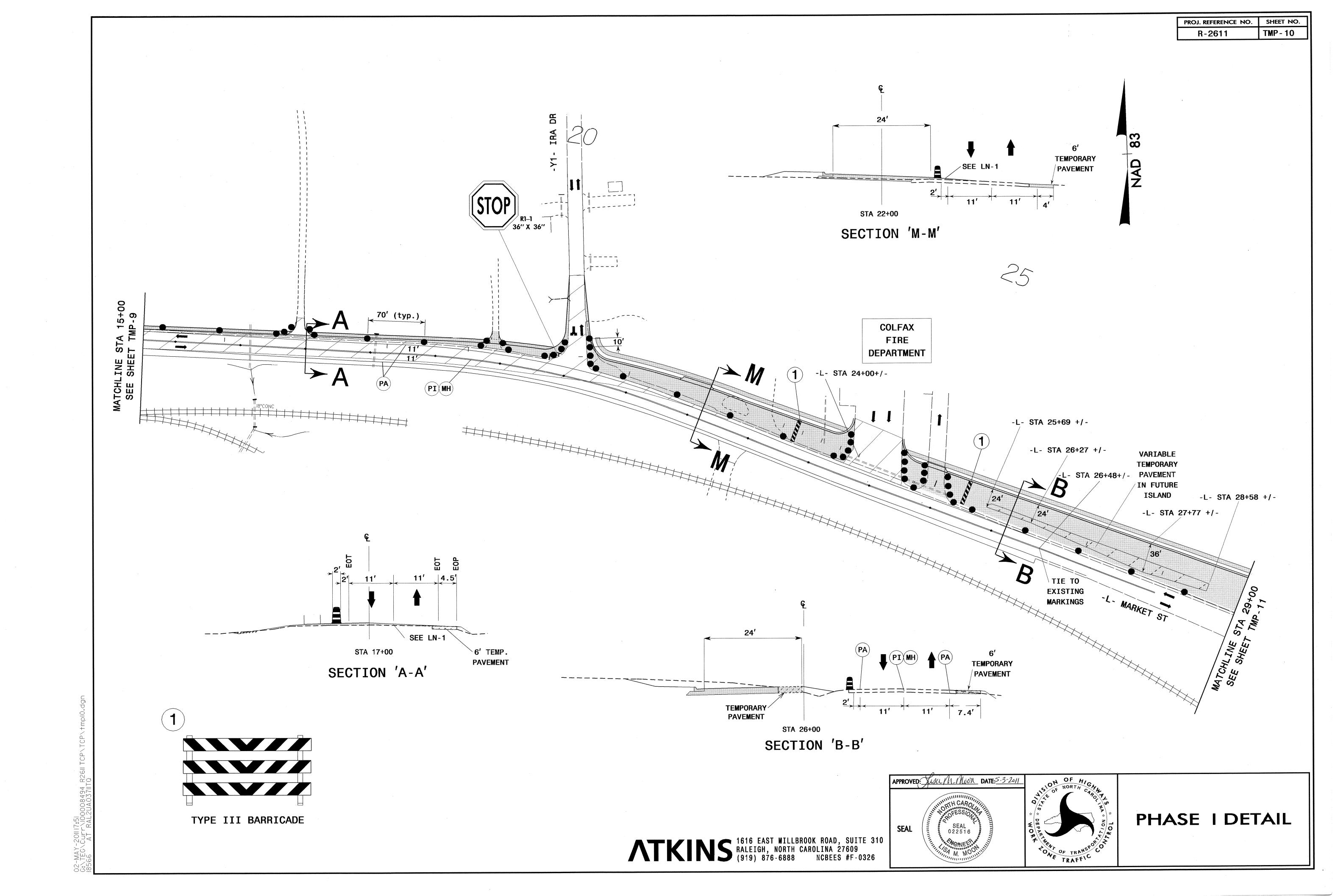


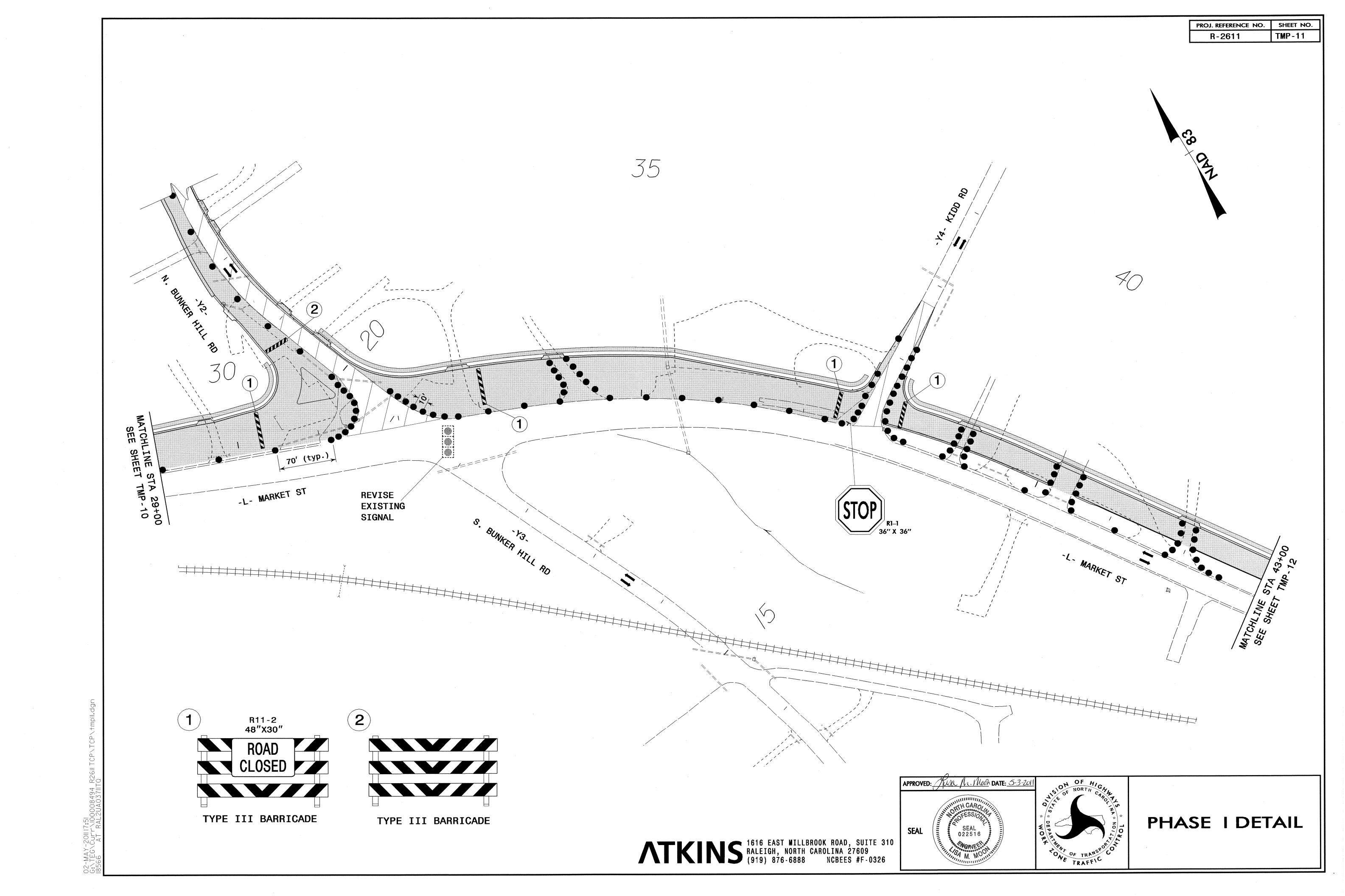
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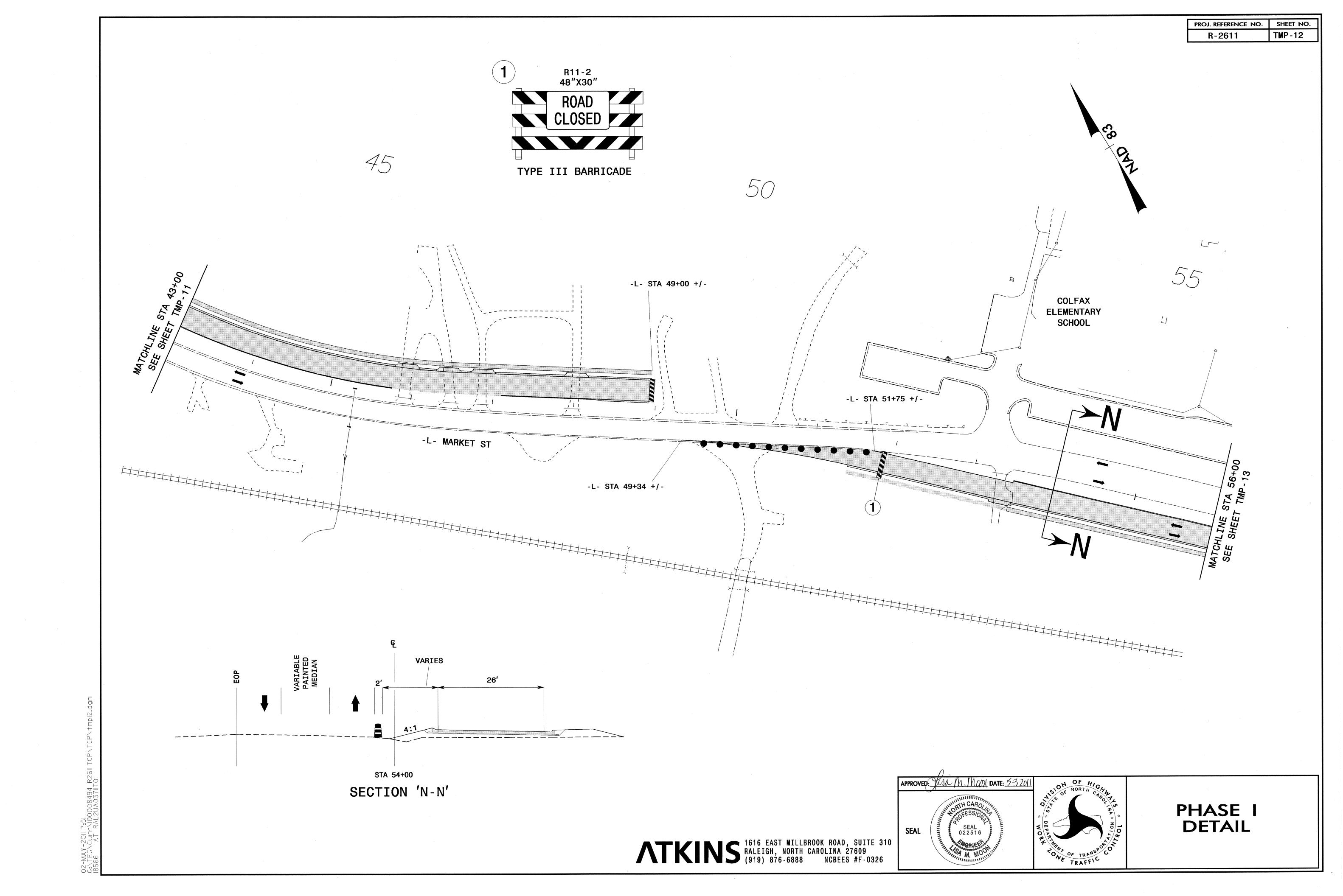
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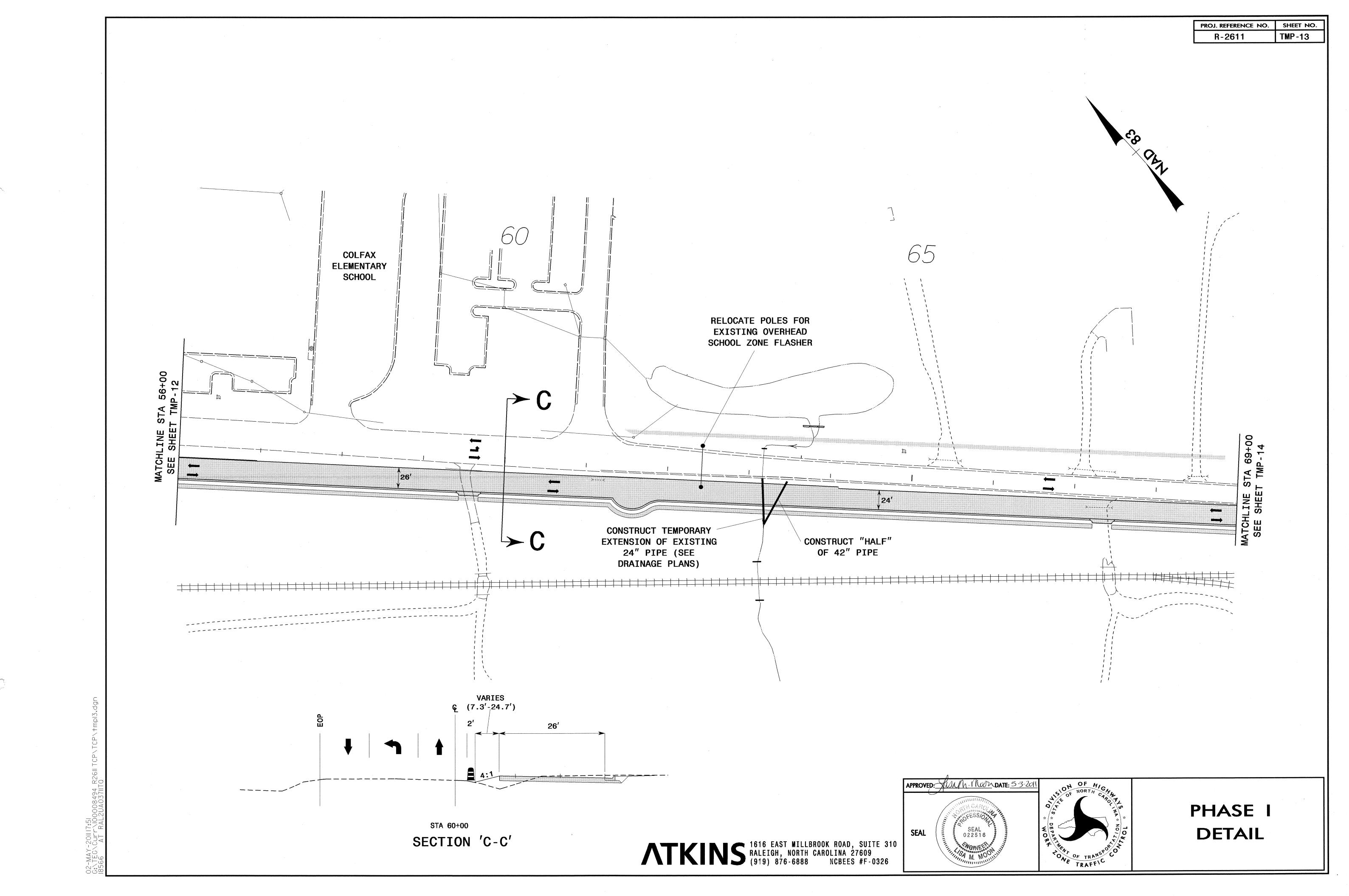


PHASE I DETAIL









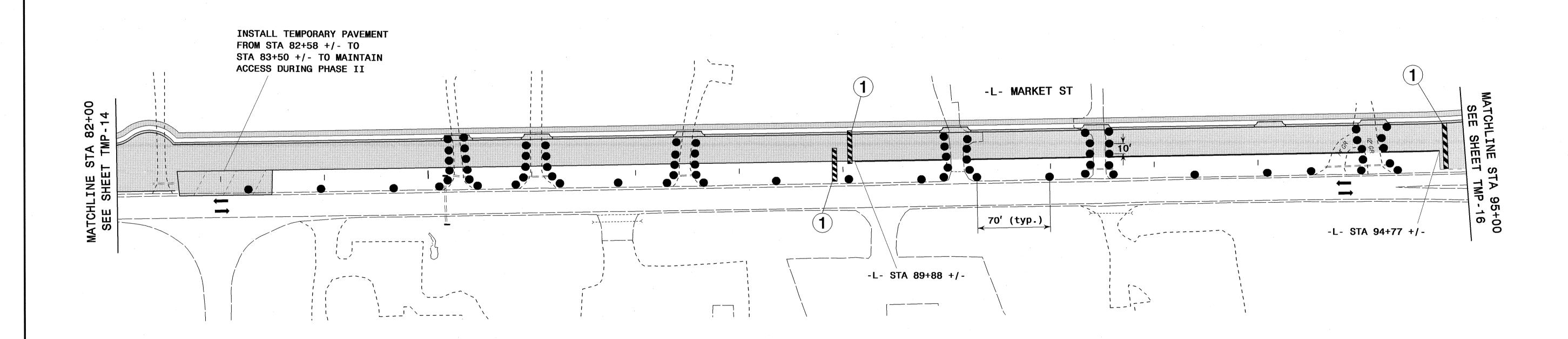
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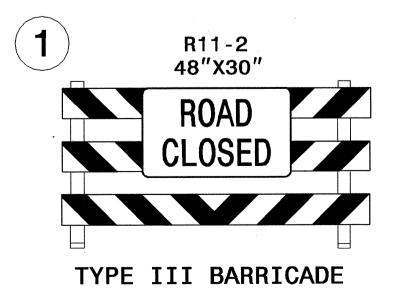
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58 QA/Y

35

90

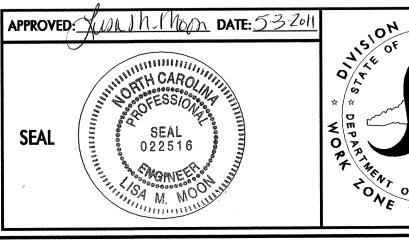




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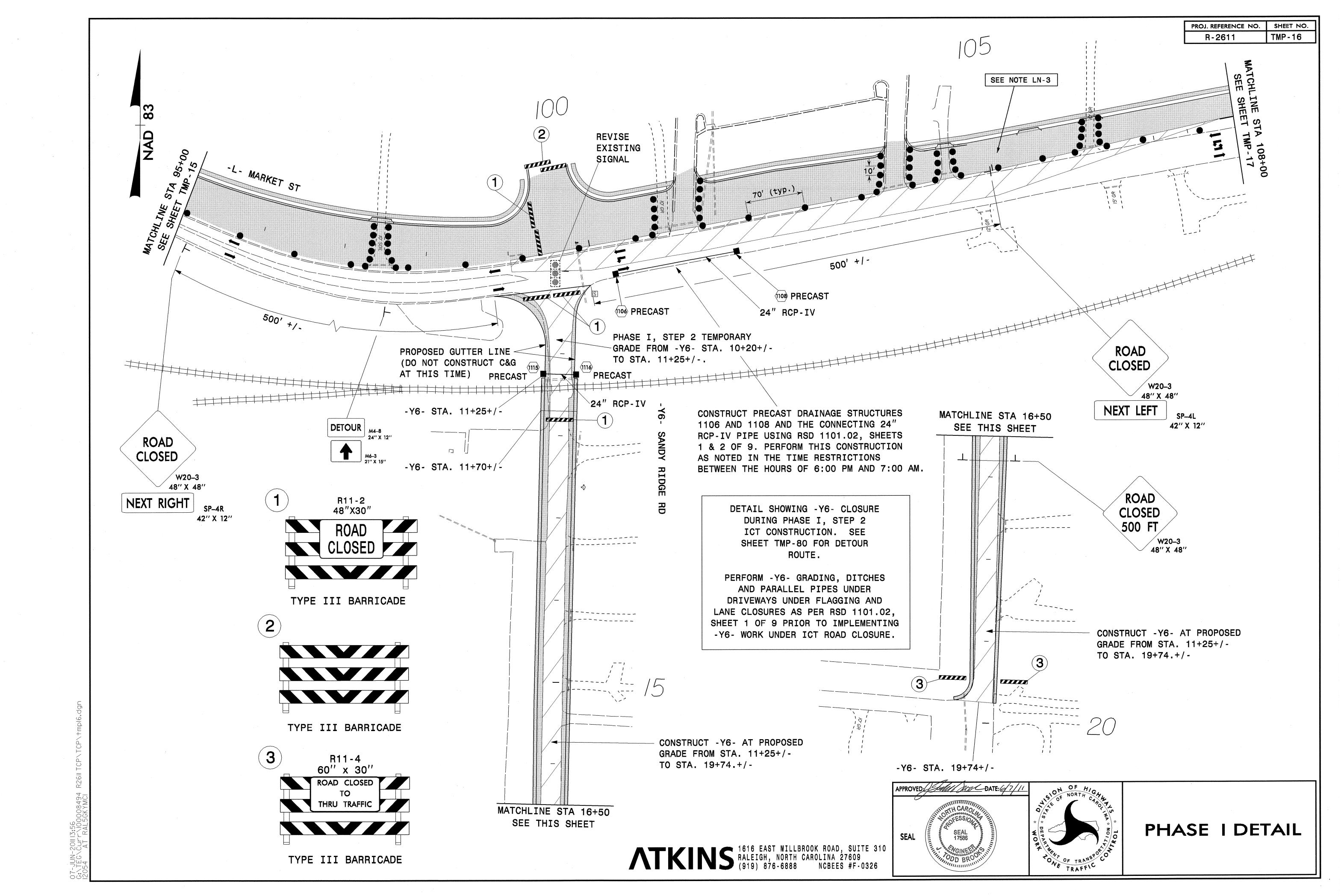
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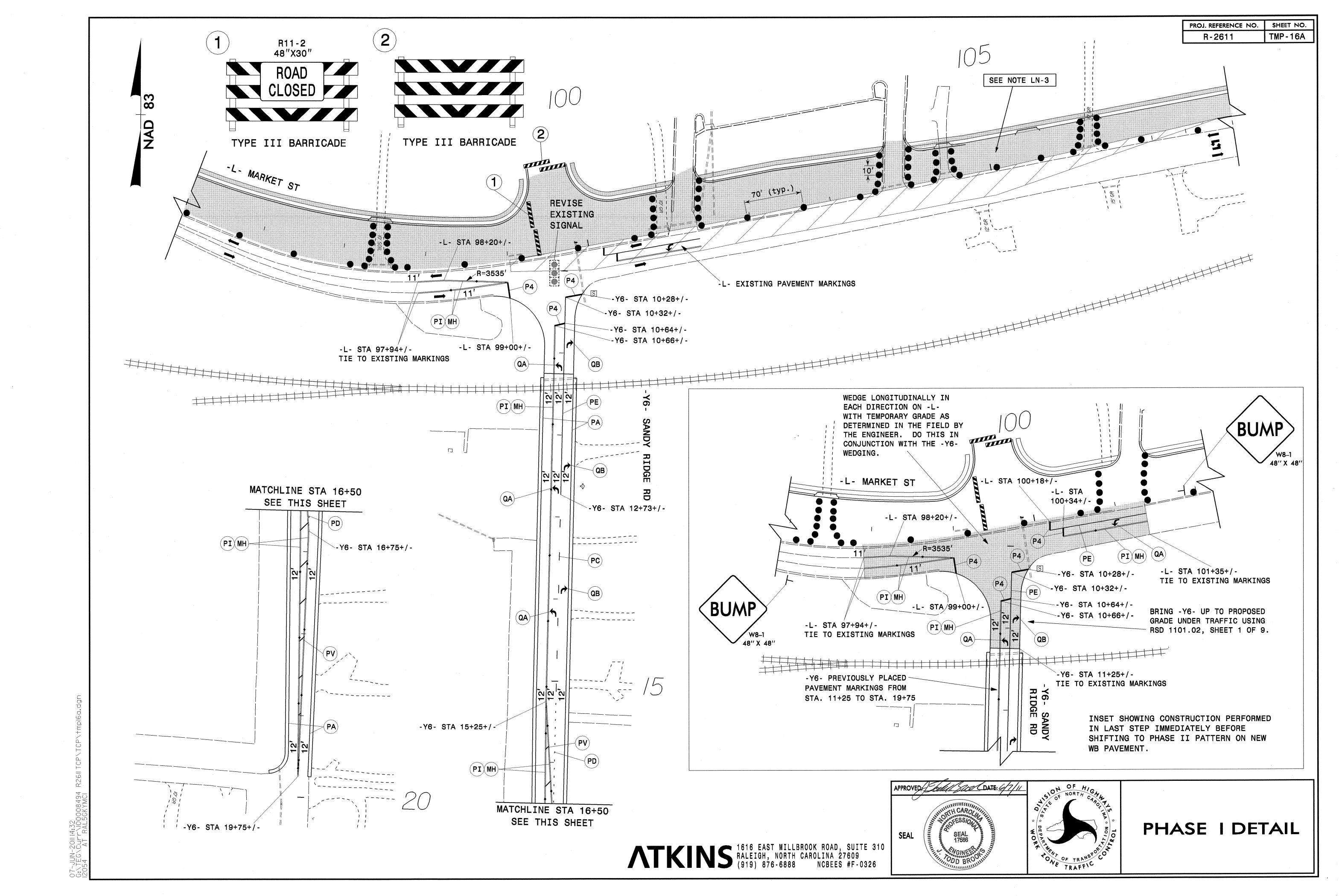
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

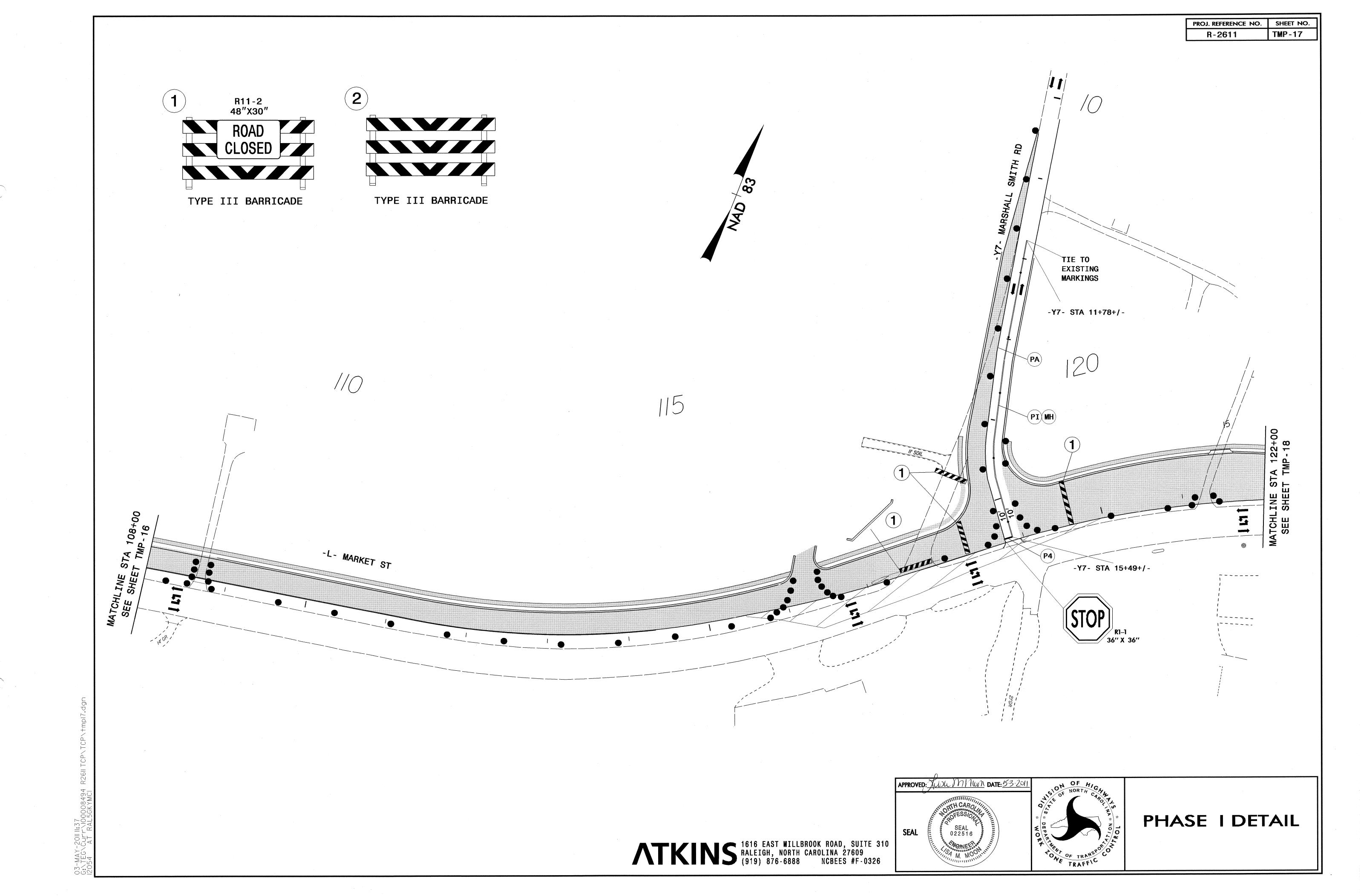


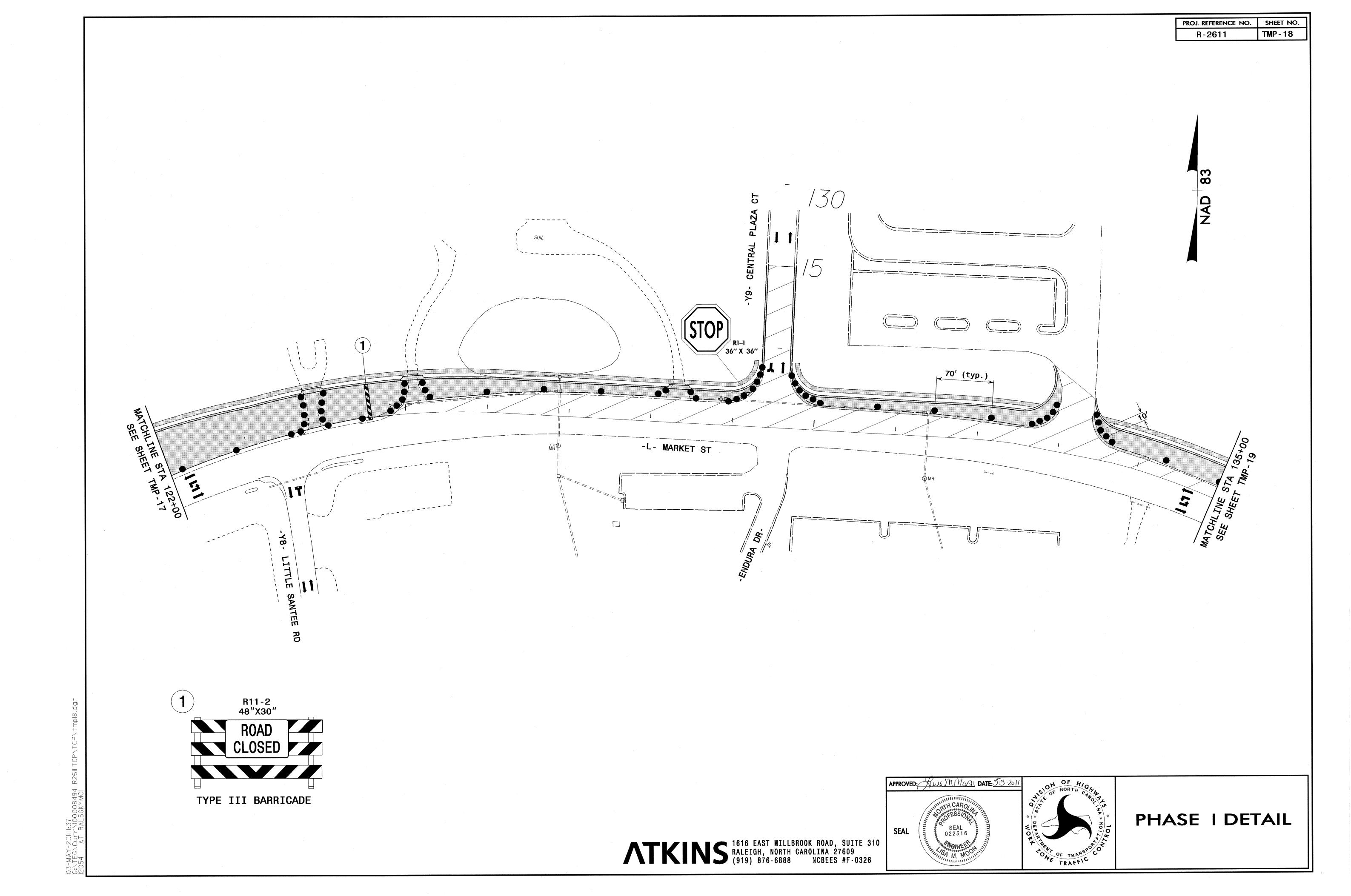


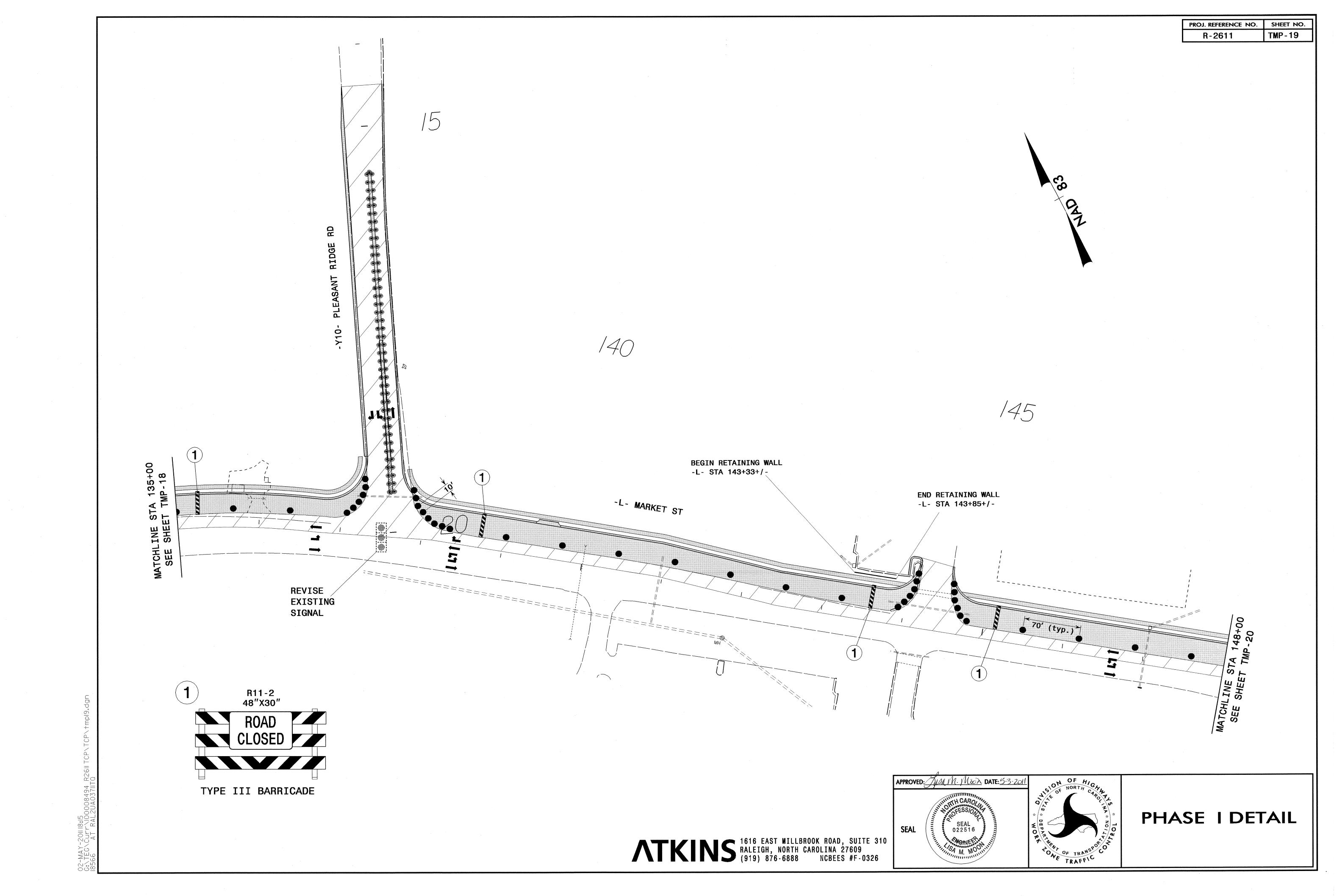
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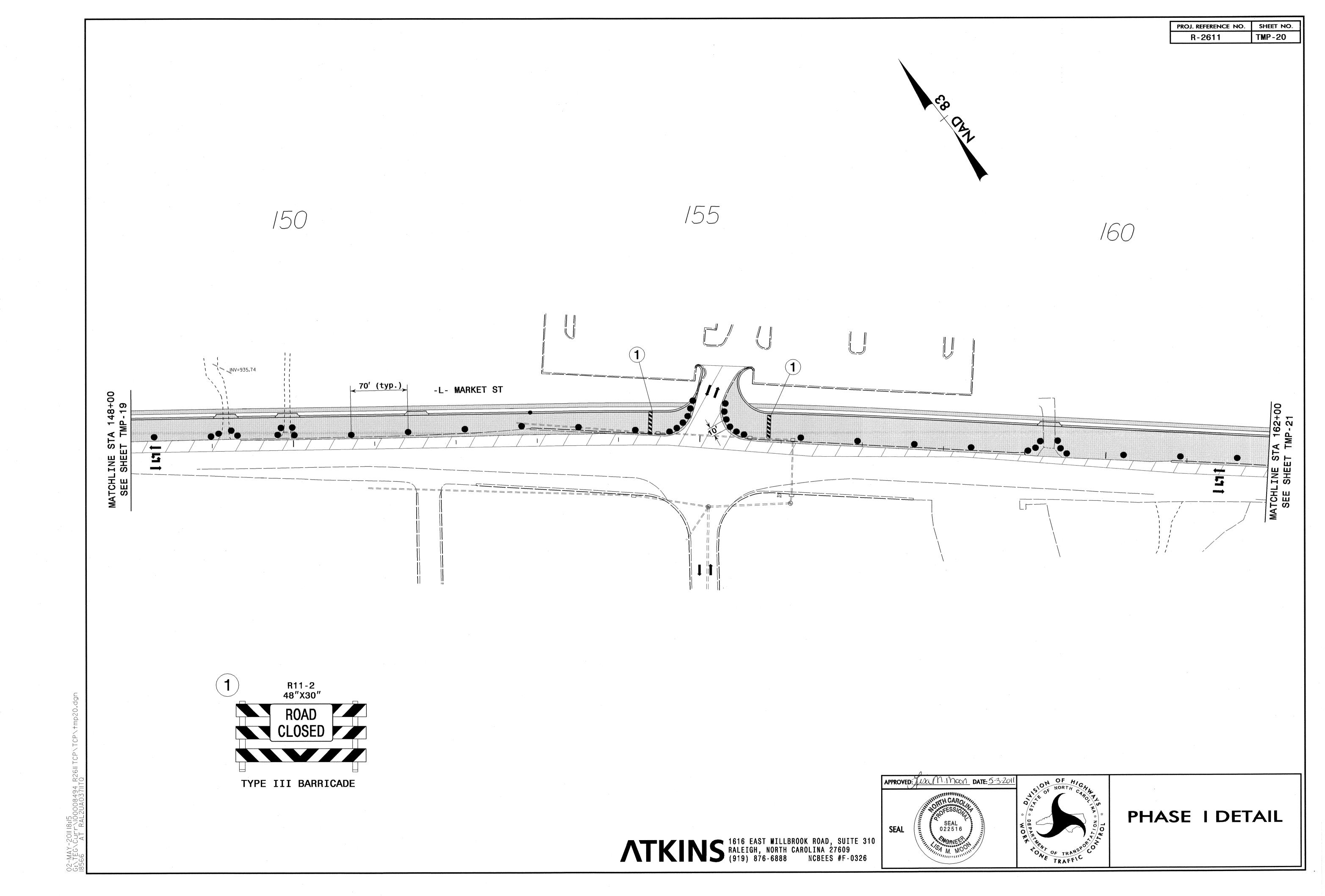


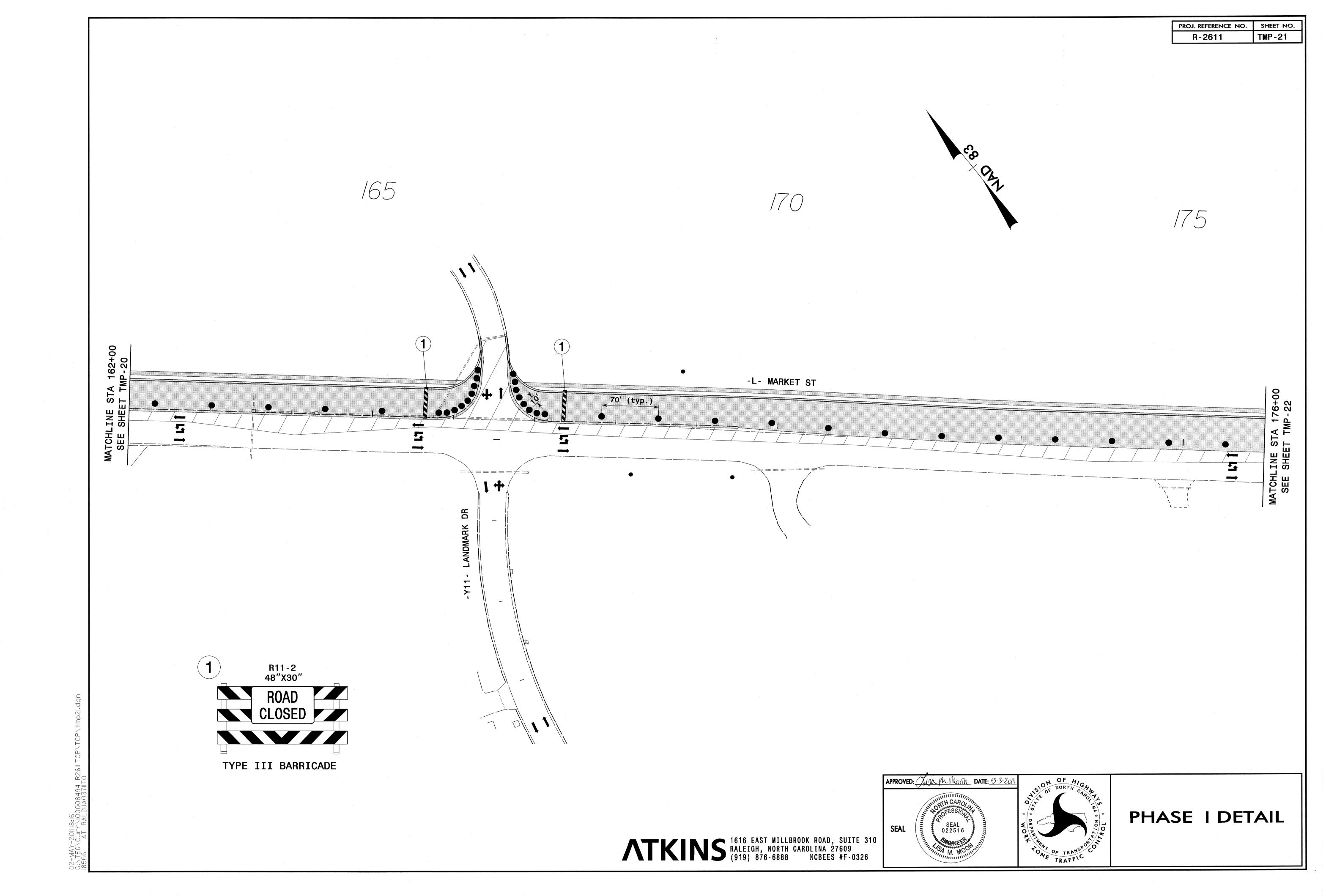






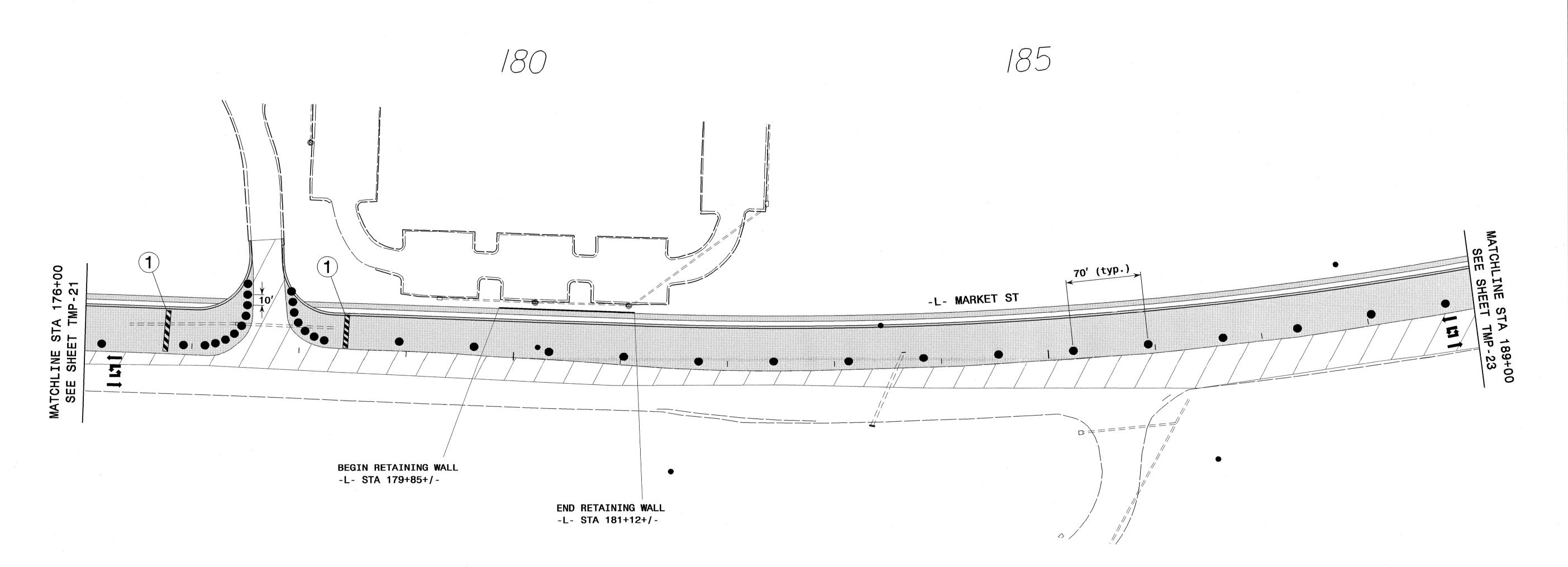


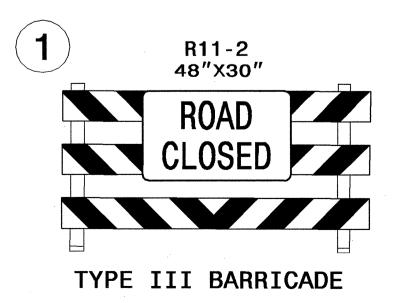




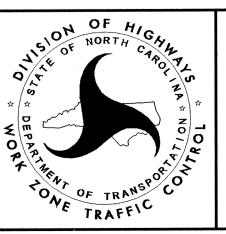
PROJ. REFERENCE NO. SHEET NO. TMP-22

Co CAI



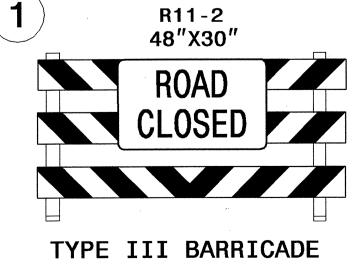


SEAL SEAL 022516

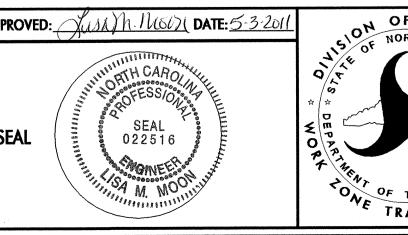


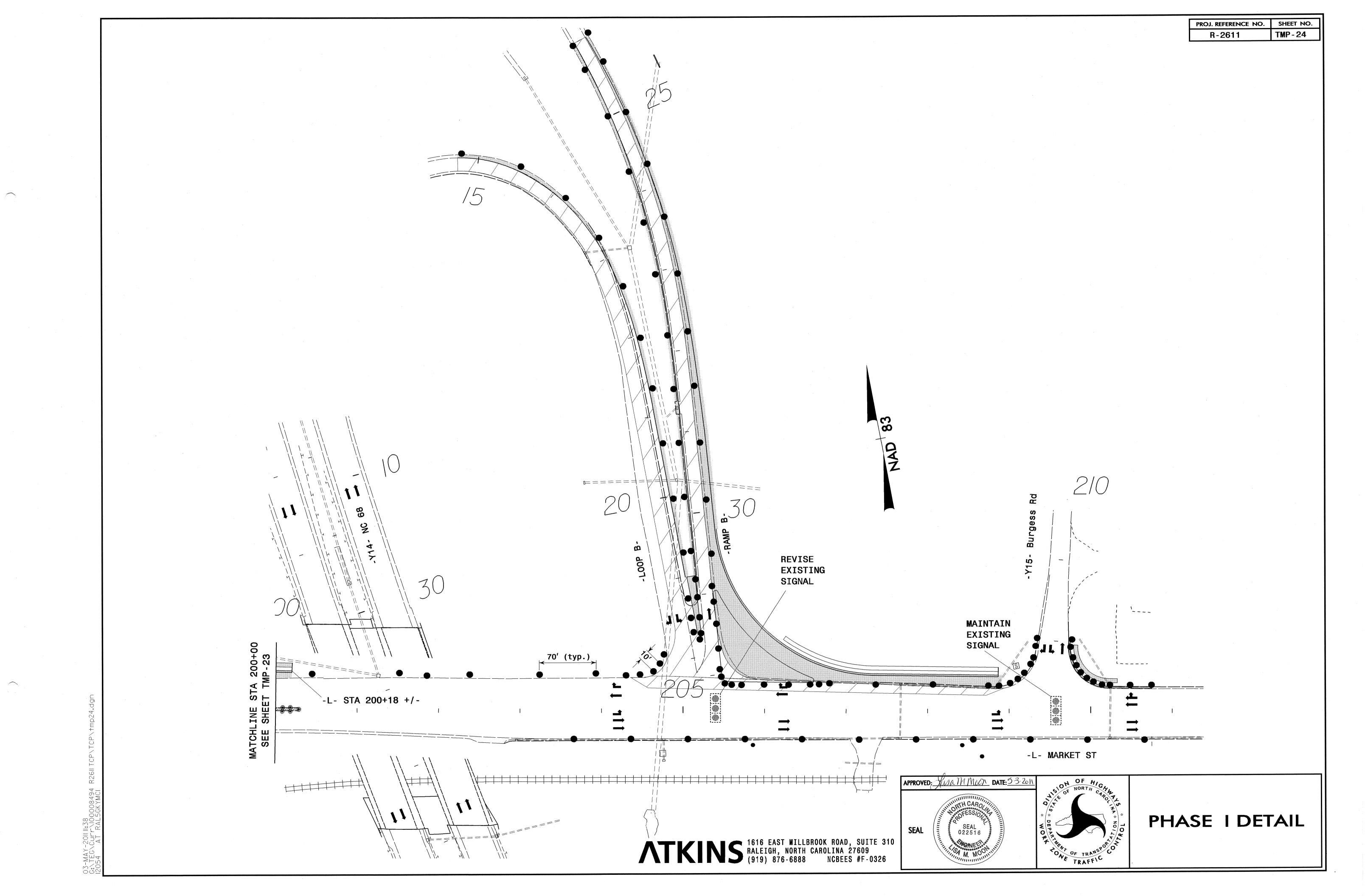
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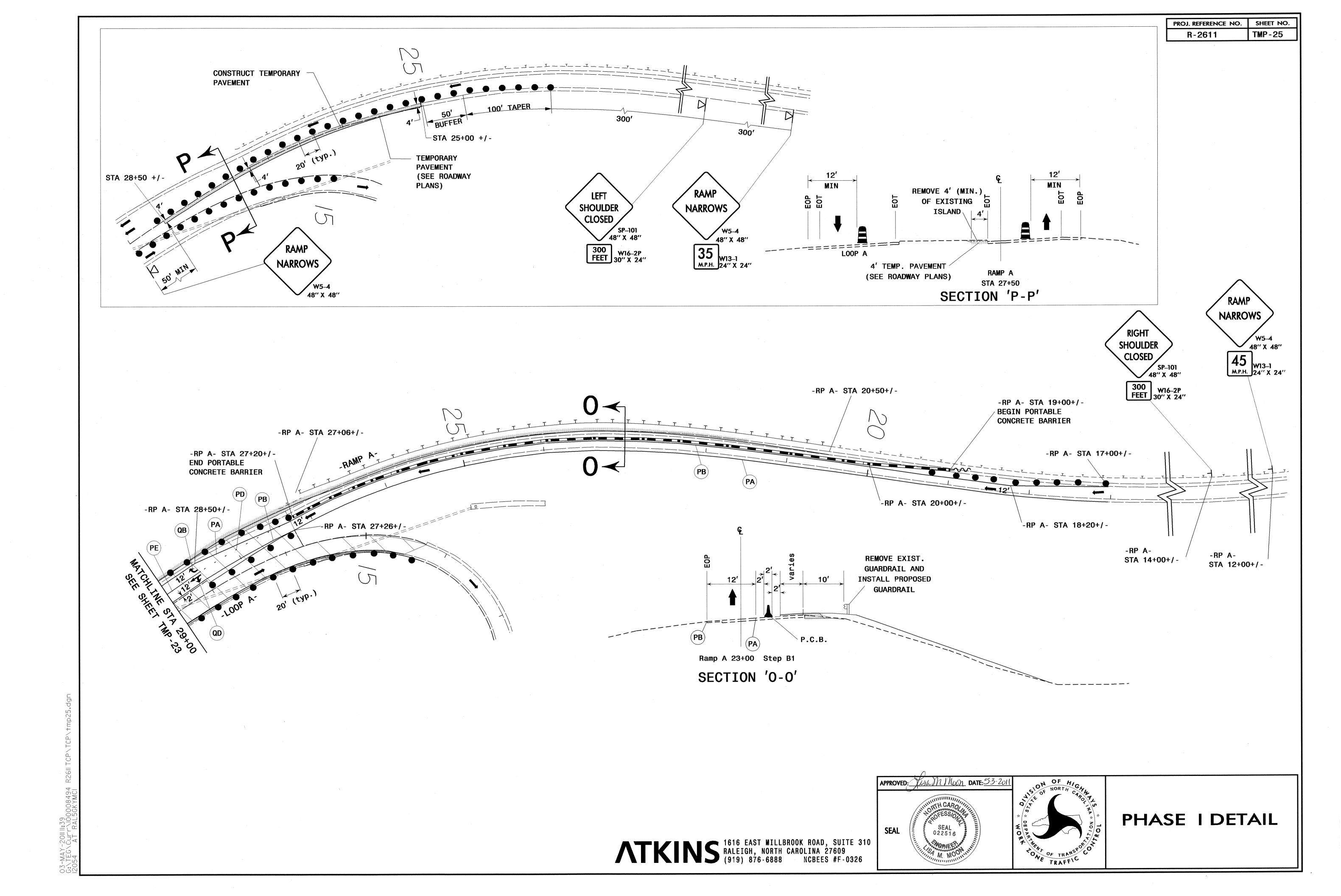
PROJ. REFERENCE NO. SHEET NO. R-2611 TMP-23 REMOVE EXIST.
MONOLITHIC
CONC. MEDIAN -RAMP A- STA 30+72+/-===== : STA 189+00 ET TMP-22 -L- MARKET ST -L- MARKET ST REMOVE TEMPORARY GUARDRAIL [\_\_\_\_\_/ REVISE **EXISTING** SIGNAL REMOVE EXIST.
MONOLITHIC
CONC. MEDIAN PAINTED ISLAND SECTION 'K-K' STEP 1 PAINTED ISLAND SECTION 'K-K' STEP 2 STA 199+00 R11-2 48"X30" APPROVED: JUSA M. MODI DATE: 5-3-2011 PHASE I DETAIL SEAL



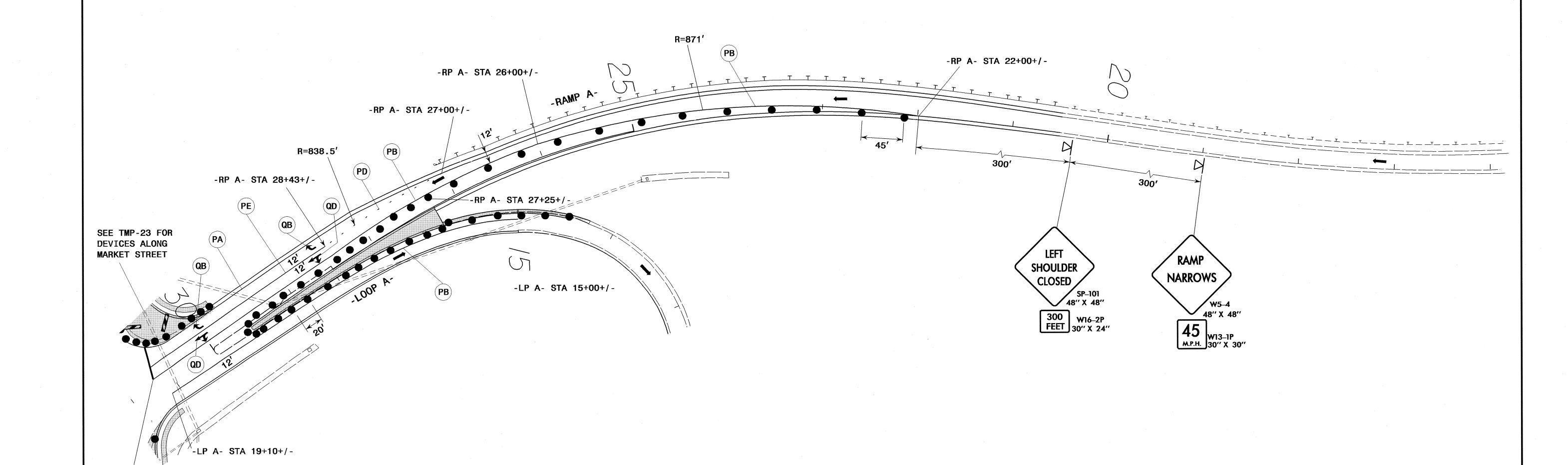
ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326



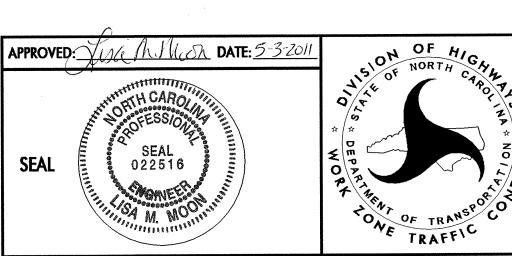




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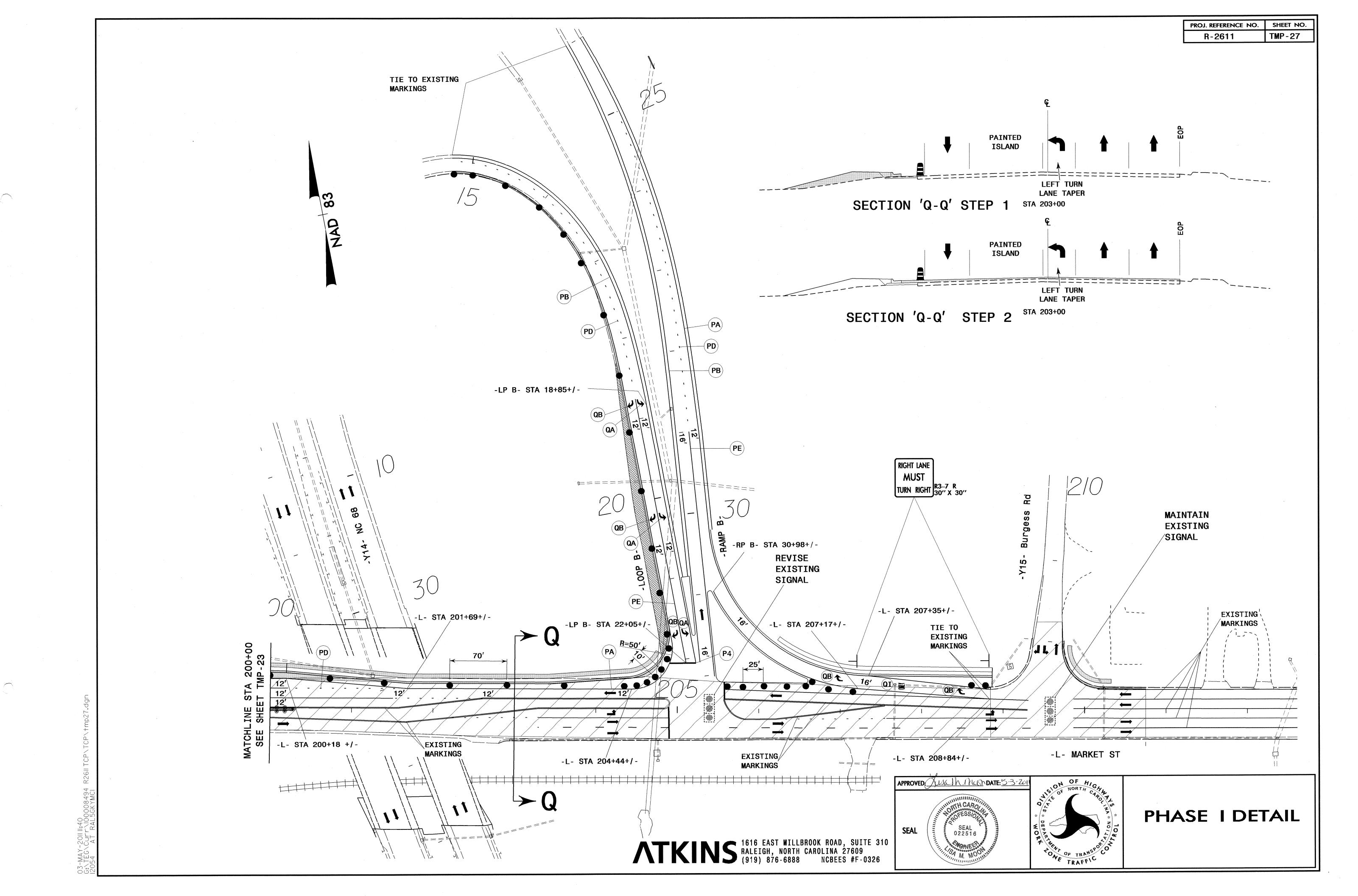


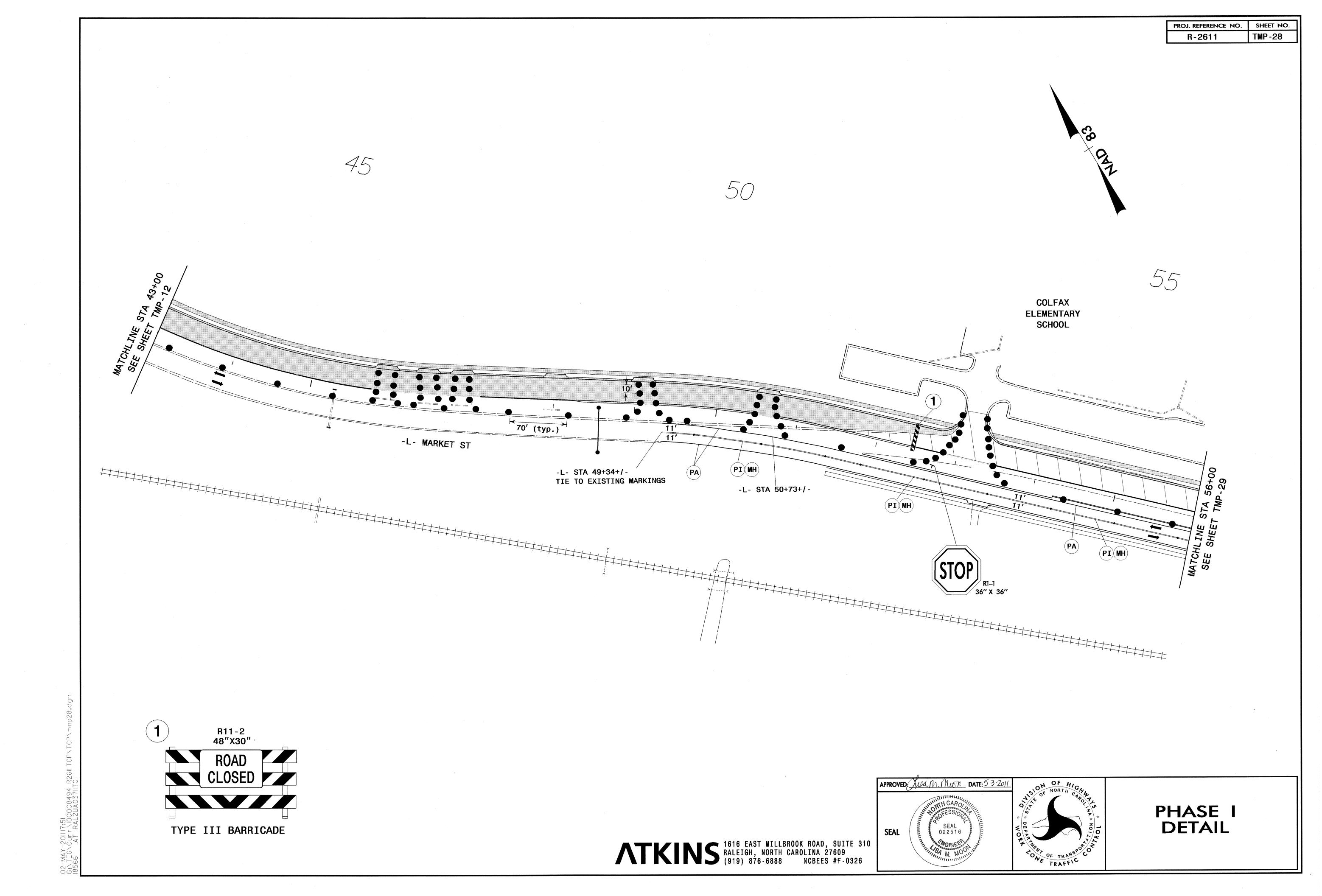
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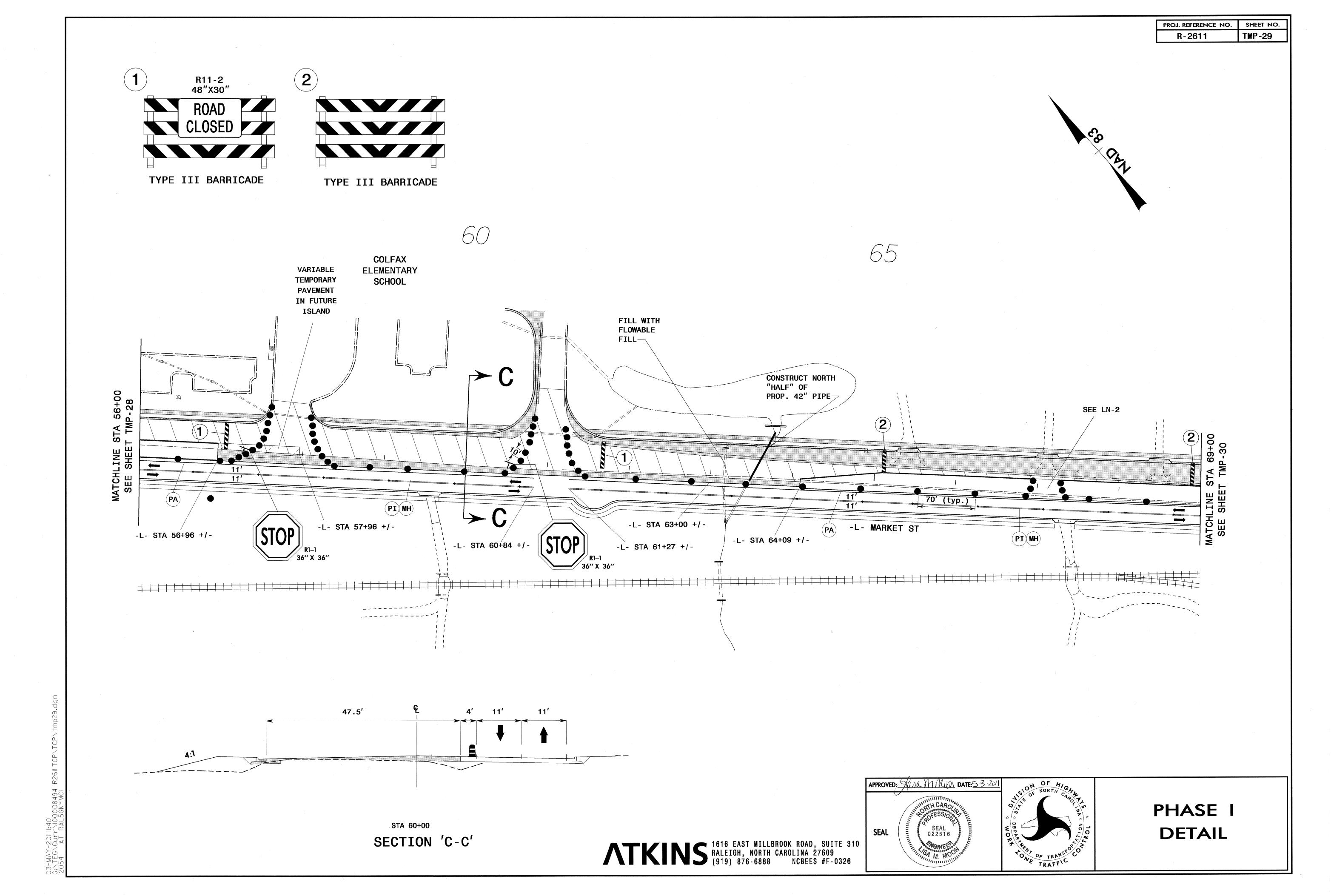


PHASE I DETAIL

-RP A- STA 28+43+/-

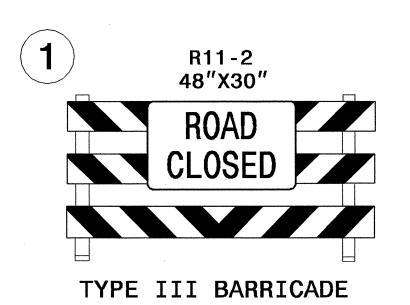


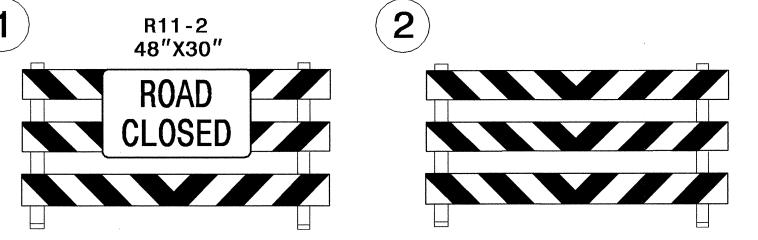




PROJ. REFERENCE NO. SHEET NO. TMP-30 R-2611

70' (typ.) -L- MARKET ST 

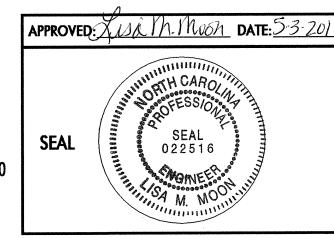


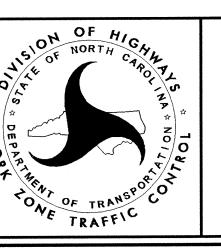


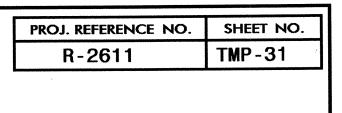
-L- STA 73+06 +/-

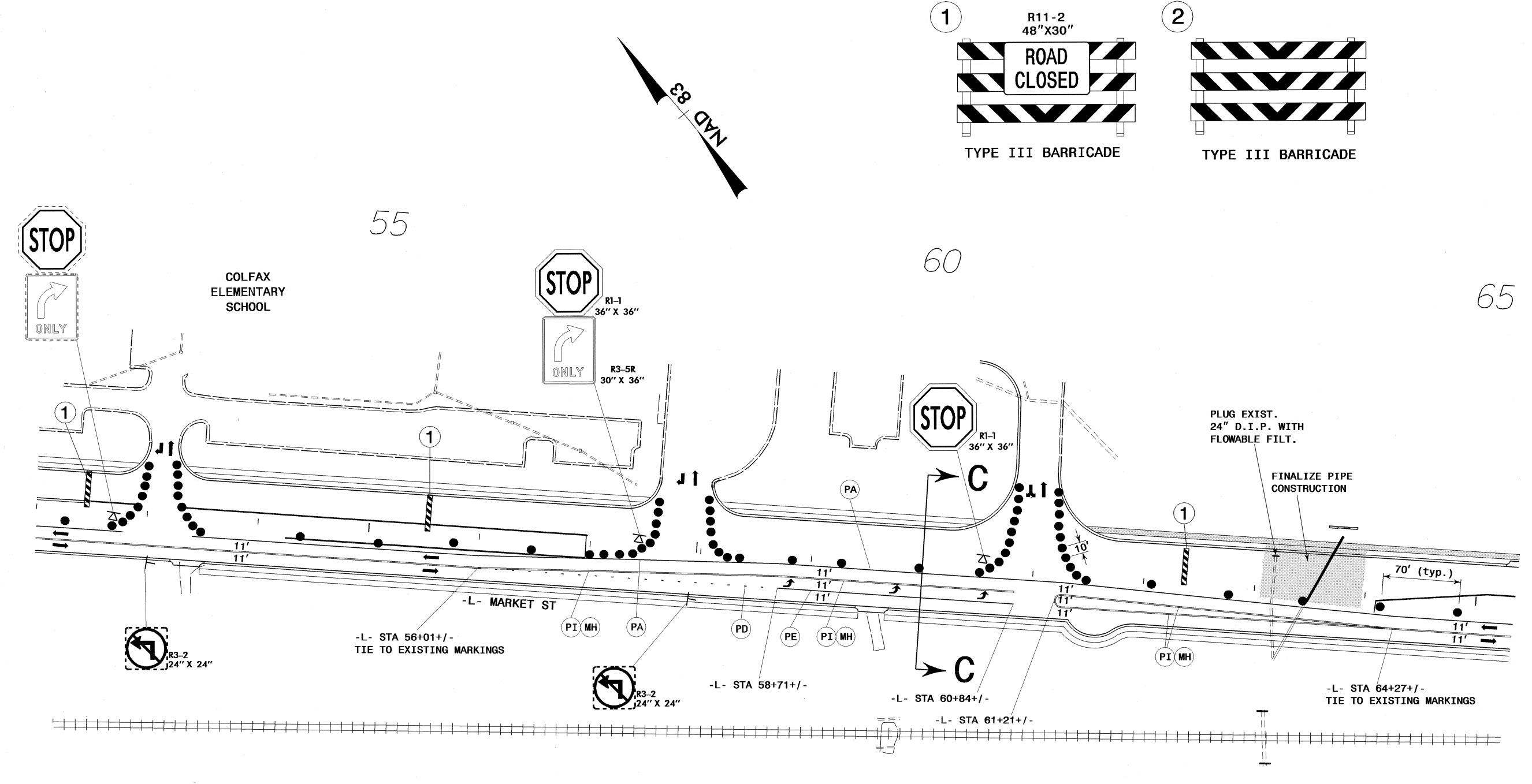
TIE TO EXISTING MARKINGS

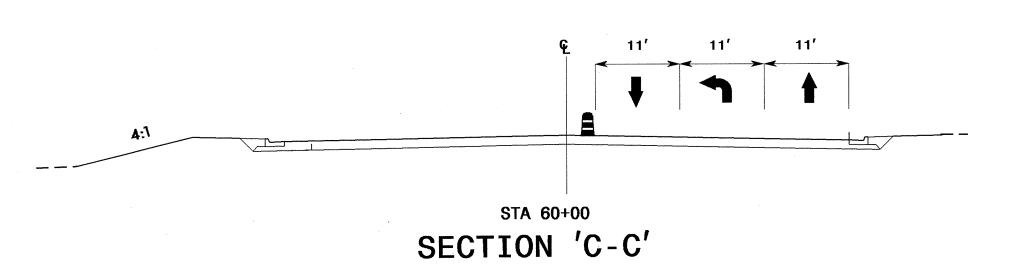
TYPE III BARRICADE



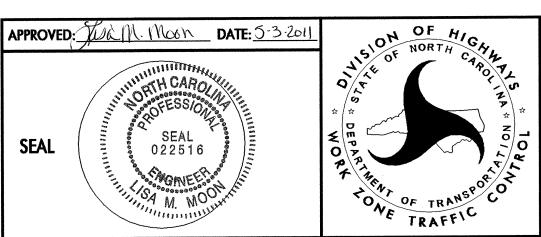








ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326



### PHASE II

#### **OBJECTIVES:**

COMPLETE EXTENSION OF EXISTING BOX CULVERT WEST OF -Y12-. CONSTRUCT MARKET STREET EB LANES AND -Y-LINES ON SOUTH SIDE OF MARKET STREET. CONSTRUCT RAILROAD CROSSINGS.

> THE CONTRACTOR SHALL COMPLETE ALL WORK IN PHASE 2, STEP 1 DURING ONE WEEKEND PERIOD BETWEEN 6:00 PM FRIDAY AND 7:00 AM ON MONDAY. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES!

- STEP 1: USING RSD 1101.02, SHEET 1 OF 9, FLAGGERS AND LAW ENFORCEMENT AT SIGNALIZED INTERSECTIONS, PERFORM THE FOLLOWING WORK TO SHIFT TRAFFIC FROM THE PHASE I TRAFFIC PATTERN TO THE PHASE II TRAFFIC PATTERN ON THE NEWLY CONSTRUCTED WB LANES OF MARKET ST BETWEEN WEST END OF PROJECT AND EAST END OF PROJECT AS SHOWN ON TMP-37 THRU TMP-53:
  - \* REVISE EXISTING TRAFFIC SIGNALS AT THE FOLLOWING MARKET ST INTERSECTIONS TO PHASE II TEMPORARY PATTERN:
  - \* -Y2-/-Y3- BUNKER HILL ROAD [SEE TMP-39 AND TMP-53]
  - \* SCHOOL SPEED ZONE FLASHERS [SEE TMP-40 & TMP-411
  - \* -Y6- SANDY RIDGE ROAD [SEE TMP-44 AND TMP-53]
  - \* -Y10- PLEASANT RIDGE ROAD [SEE TMP-47]
  - \* -Y13- THATCHER ROAD/NC 68 RAMP A [SEE TMP-51]
  - \* NC 68 RAMP B/LOOP B [SEE TMP-52]
  - \* REVISE PAVEMENT MARKINGS AND SIGNS ON THE FOLLOWING -Y-LINES ON NORTH SIDE OF MARKET ST TO PROPOSED PHASE II TRAFFIC PATTERN:
  - \* -Y1- IRA DRIVE [SEE TMP-38]
  - \* -Y2- N. BUNKER HILL ROAD [SEE TMP-39] \* -Y4- KIDD ROAD [SEE TMP-39]

  - \* COLFAX ELEMENTARY SCHOOL DRIVEWAYS [SEE TMP-40 & TMP-41]
  - \* -Y7- MARSHALL SMITH ROAD [SEE TMP-45]
  - \* -Y9- CENTRAL PLAZA COURT [SEE TMP-46]
  - \* -Y10- PLEASANT RIDGE ROAD [SEE TMP-47]
  - \* -Y12- BRIGHAM ROAD [SEE TMP-51]
  - \* NC 68 RAMP A/LOOP A [SEE TMP-51]
  - \* NC 68 RAMP B/LOOP B [SEE TMP-52]
  - \* -Y15- BURGESS ROAD [SEE TMP-52]
  - \* PAVE AND MARK TIE-INS BETWEEN NEW WB PAVEMENT AND EXISTING PAVEMENT AT THE WEST END OF THE PROJECT [SEE TMP-37 AND TMP-38].
  - \* SHIFT MARKET ST TRAFFIC INTO PHASE II TWO-LANE, TWO-WAY PATTERN ON THE FUTURE WESTBOUND LANES AS SHOWN ON TMP-37 THRU TMP-53.

\* REVISE PAVEMENT MARKINGS AND SIGNS ON THE FOLLOWING -Y-LINES ON SOUTH SIDE OF MARKET ST TO PROPOSED PHASE II TRAFFIC PATTERN:

- \* -Y3- S. BUNKER HILL ROAD [SEE TMP-39]
- \* -Y6- SANDY RIDGE ROAD [SEE TMP-44]
- \* -Y8- LITTLE SANTEE ROAD [SEE TMP-46]
- \* -Y11- LANDMARK DRIVE [SEE TMP-49]
- \* -Y13- THATCHER ROAD [SEE TMP-51]

(NOTE: THIS SHIFT INVOLVES 6 TRAFFIC SIGNALS, TWO SCHOOL SPEED ZONE FLASHERS AND 8 STOP CONTROLLED INTERSECTIONS)

STEP 2: MARKET ST -L- FROM -Y3- TO EAST END OF PROJECT

BEGIN CONSTRUCTION OF THE FOLLOWING AS MUCH AS POSSIBLE AWAY FROM TRAFFIC:

- \* PROPOSED EB LANES ON MARKET ST -L- FROM STA 27+00 +/- TO EAST END OF THE PROJECT. THIS INCLUDES ANY REMAINING CURB & GUTTER CONSTRUCTION IN THE -Y3- RADII AT -L-. [SEE TMP-38 THRU TMP-53]
- \* PROPOSED DRAINAGE ON SOUTH SIDE OF MARKET ST FROM -Y3- TO EAST END OF THE PROJECT.

BEGIN SOUTHERN EXTENSIONS OF BARRELS OF EXISTING BOX CULVERT WEST OF -Y12- BRIGHAM RD AT STA 192+00 +/- -L-. [SEE TMP-51].

USING RSD 1101.02 SHEET 3 OF 9 TO TEMPORARILY CLOSE OUTSIDE EB THROUGH LANE FROM STA 201+00 +/- -L- TO EAST END OF PROJECT, BEGIN CONSTRUCTING PROPOSED EB WIDENING ON MARKET ST FROM NC 68 RAMP A/LOOP A TO EAST END OF PROJECT. UP TO EDGE AND ELEVATION OF EXISTING TRAVEL WAY. [SEE TMP-52]

USING RSD 1101.02, SHEET 4 OF 9, INSTALL PROPOSED MONOLITHIC ISLAND ON MARKET ST AT NC 68 RAMP A FOR CHANNELIZED RIGHT TURN. [SEE TMP-51].

## -Y- LINES

USING RSD 1101.01, SHEET 1 OF 9, BEGIN WEDGING AND WIDENING THE FOLLOWING -Y- LINES UP TO BUT NOT INCLUDING FINAL SURFACE LAYER:

- \* -Y3- S. BUNKER HILL ROAD [SEE TMP-39]
- \* -Y8- LITTLE SANTEE ROAD [SEE TMP-46]
- \* ENDURA DRIVE [SEE TMP-46]
- \* -Y11- LANDMARK ROAD [SEE TMP-49]
- \* -Y13- THATCHER ROAD [SEE TMP-51]

WIDEN -Y-LINES UP TO EDGE AND ELEVATION OF EXISTING FIRST THEN WEDGE AND PAVE UP TO BUT NOT INCLUDING FINAL SURFACE LAYER WHILE MAINTAING TRAFFIC IN EXISTING PATTERN.

#### STEP 3: STA 10+25 +/- -L- TO -Y3-

STEP 3 INCLUDES THE CONSTRUCTION ON MARKET STREET FROM STA 15+00 TO STA 24+00 -L-. THIS STEP IS NOT REQUIRED TO BE COMPLETED PRIOR TO THE BEGINNING OF PHASE 2, STEPS 4 - 5, BUT SHALL BE COMPLETED PRIOR TO PHASE 3.

USING RSD 1101.02, SHEET 1 OF 9, PERFORM THE FOLLOWING CONSTRUCTION ON MARKET STREET:

- (A) INSTALL WATER-FILLED BARRIER (W.F.B.) ALONG SOUTH SIDE OF MARKET ST FROM STA 16+00 +/- -L-TO STA 22+33 +/- -L- AS SHOWN ON TMP-38 AND SECTION A-A). WORKING BEHIND W.F.B, REMOVE TEMPORARY PAVMENT AND UNSUITABLE MATERIAL ALONG THE SOUTH SIDE OF MARKET STREET BETWEEN STA 16+25 +/- AND STA 24+00 +/- -L-. [SEE TMP-38]
- (B) AS SOON AS EXCAVATION OF UNSUITABLE MATERIALS AND UNDERCUT IS COMPLETE, BACKFILL AREA ABUTTING EXISTING PAVEMENT THEN REMOVE W.F.B. AND REPLACE IT WITH DRUMS SPACED 70 FT C-C (MAX).
- (C) CONSTRUCT PROPOSED EB PAVEMENT ON MARKET STREET, INCLUDING EXISTING PAVEMENT REMOVAL UP TO EDGE AND ELEVATION OF EXISTING PAVEMENT FROM STA 10+25 +/- TO -Y3- S. BUNKER HILL ROAD. WEDGE NEW EB PAVEMENT AND ADJACENT EXISTING PAVEMENT UP TO BUT NOT INCLUDING FINAL SURFACE LAYER. [SEE TMP-37 THRU TMP-39, SECTION A-A ON TMP-38, AND SECTION B-B ON TMP-33]

# STEP 4: RAILROAD GRADE CROSSINGS ON -Y3- AND -Y13-

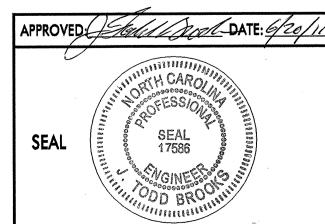
STEP 4 INCLUDES THE COMPLETING ALL CONSTRUCTION AT THE RAILROAD GRADE CROSSINGS ON -Y3- AND -Y13-. THIS STEP IS NOT DEPENDENT ON ANY OTHER PRIOR PHASE OR STEP OF THIS PROJECT, BUT HAS TO BE COMPLETED PRIOR THE BEGINNING OF PHASE III.

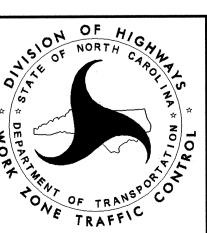
(A) COMPLETE RAILROAD GRADE CROSSING SIGNAL WORK.

STEP 4B SHALL BE DONE UNDER SEPARATE AND NON-SIMULTANEOUS WEEKEND ICTS. THE CONTRACTOR SHALL COMPLETE ALL WORK AT EACH GRADE CROSSING LOCATION DURING ONE WEEKEND PERIOD BETWEEN 6:00 PM FRIDAY AND 7:00 AM ON TUESDAY. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

(B) TEMPORARILY CLOSE -Y3- AND -Y13- LINES ONE AT A TIME AT THEIR RAILROAD GRADE CROSSINGS AND DETOUR TRAFFIC AS SHOWN ON SHEET TMP-79 WHILE RAILROAD FORCES RECONSTRUCT THE CROSSING SURFACE. REOPEN - Y3 - AND - Y13 - IMMEDIATELY UPON COMPLETION OF GRADE CROSSING WORK.

DO NOT CLOSE AND DETOUR ANY TWO OF THE CROSSINGS ON THE -Y- LINES SIMULTANEOUSLY.





PHASING PHASE II

TENS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

# PHASING

STEP 5: MARKET ST -L-

COMPLETE SOUTH EXTENSION OF BOX CULVERT.

USING RSD 1101.02 SHEETS 1 & 2 OF 9, COMPLETE CONSTRUCTION OF THE FOLLOWING BEGUN IN PHASE II, STEP 2:

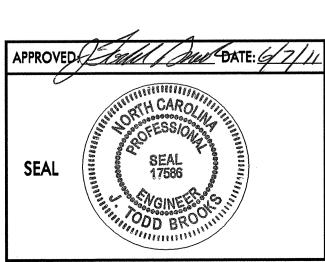
- \* EB LANES ON MARKET ST UP TO BUT NOT INCLUDING FINAL SURFACE LAYER FROM STA 27+00 +/- TO EAST END OF PROJECT. [SEE TMP-38 THRU TMP-52]
- \* PROPOSED DRAINAGE ON SOUTH SIDE OF MARKET ST FROM -Y3- TO EAST END OF PROJECT.

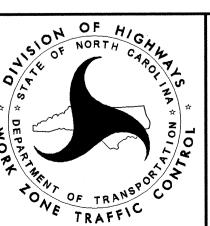
INSTALL TEMPORARY PAVEMENT MARKINGS ON NEWLY CONSTRUCTED EB LANES OF MARKET ST AS MUCH AS POSSIBLE AWAY FROM TRAFFIC TO PREPARE FOR SHIFT TO PHASE III TEMPORARY PATTERN. [SEE TMP-59 THRU TMP-73]

-Y- LINES

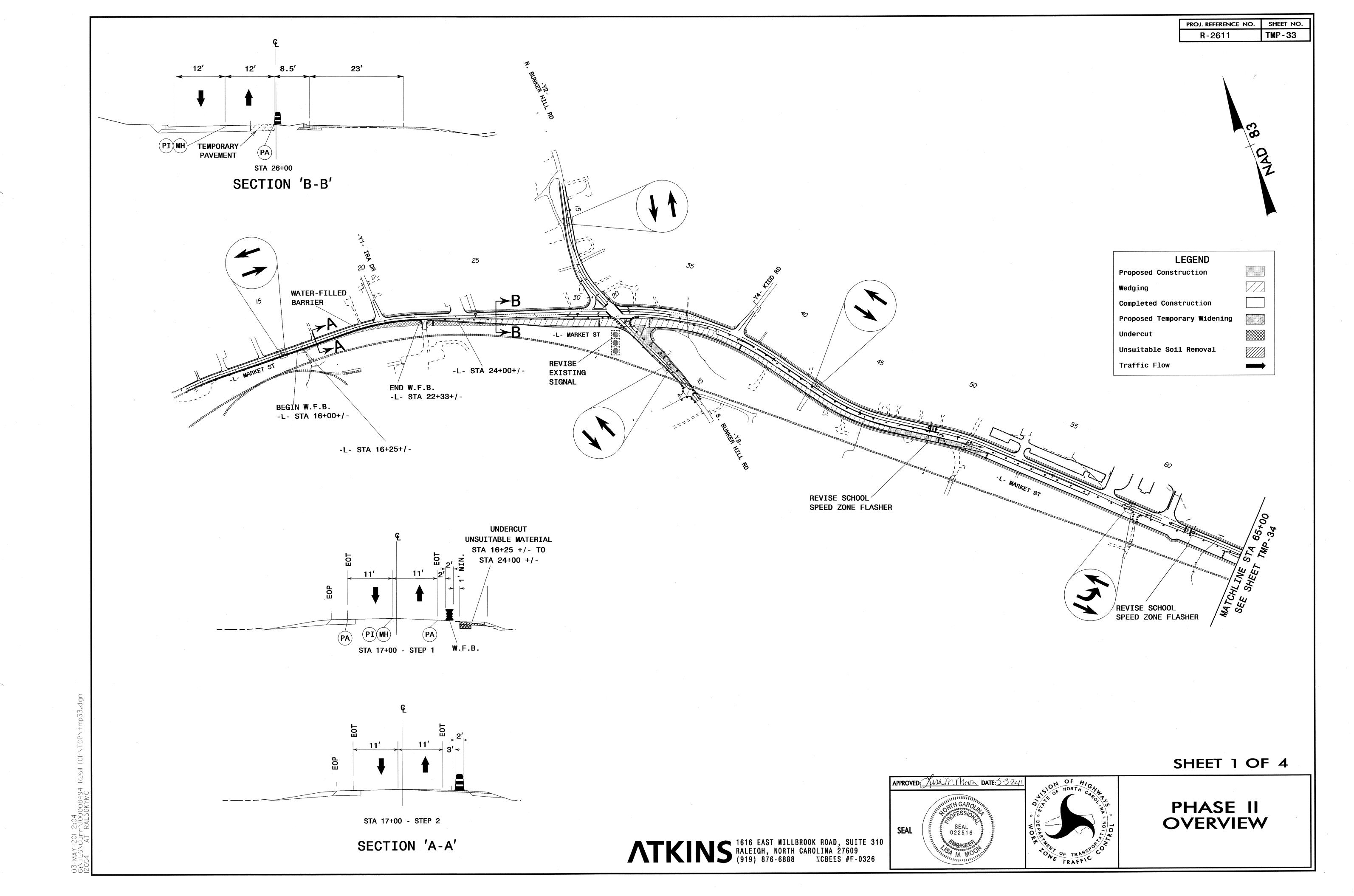
USING RSD 1101.01, SHEET 1 OF 9, COMPLETE WEDGING AND WIDENING BEGUN IN PHASE II, STEP 1, ON THE FOLLOWING -Y- LINES UP TO BUT NOT INCLUDING FINAL SURFACE LAYER:

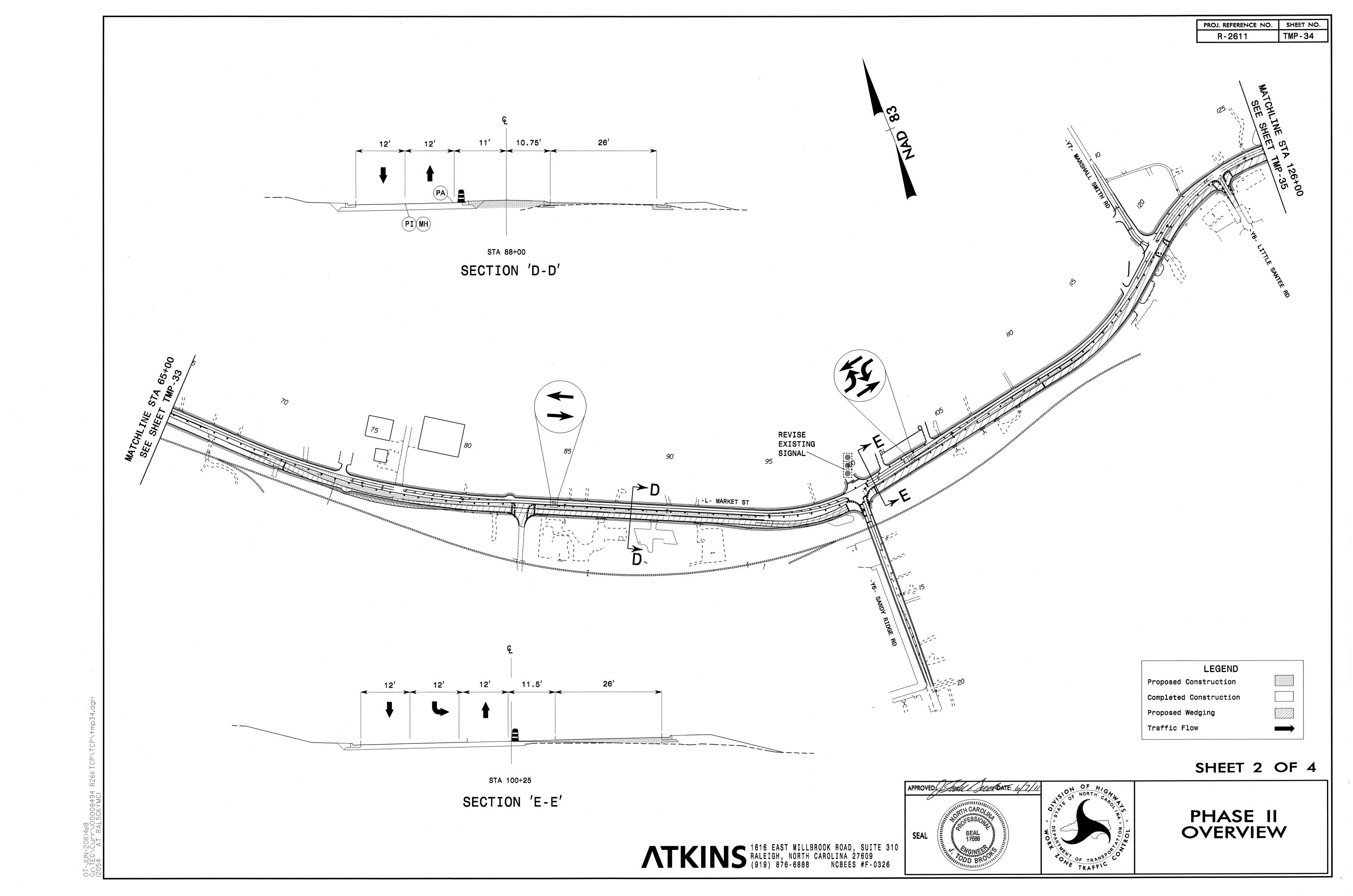
- \* -Y3- S. BUNKER HILL ROAD [SEE TMP-39]
- \* -Y6- SANDY RIDGE ROAD [SEE TMP-44 & TMP-53]
- \* -Y8- LITTLE SANTEE ROAD [SEE TMP-46]
- \* ENDURA DRIVE [SEE TMP-46]
- \* -Y11- LANDMARK ROAD [SEE TMP-49]
- \* -Y13- THATCHER ROAD [SEE TMP-51]

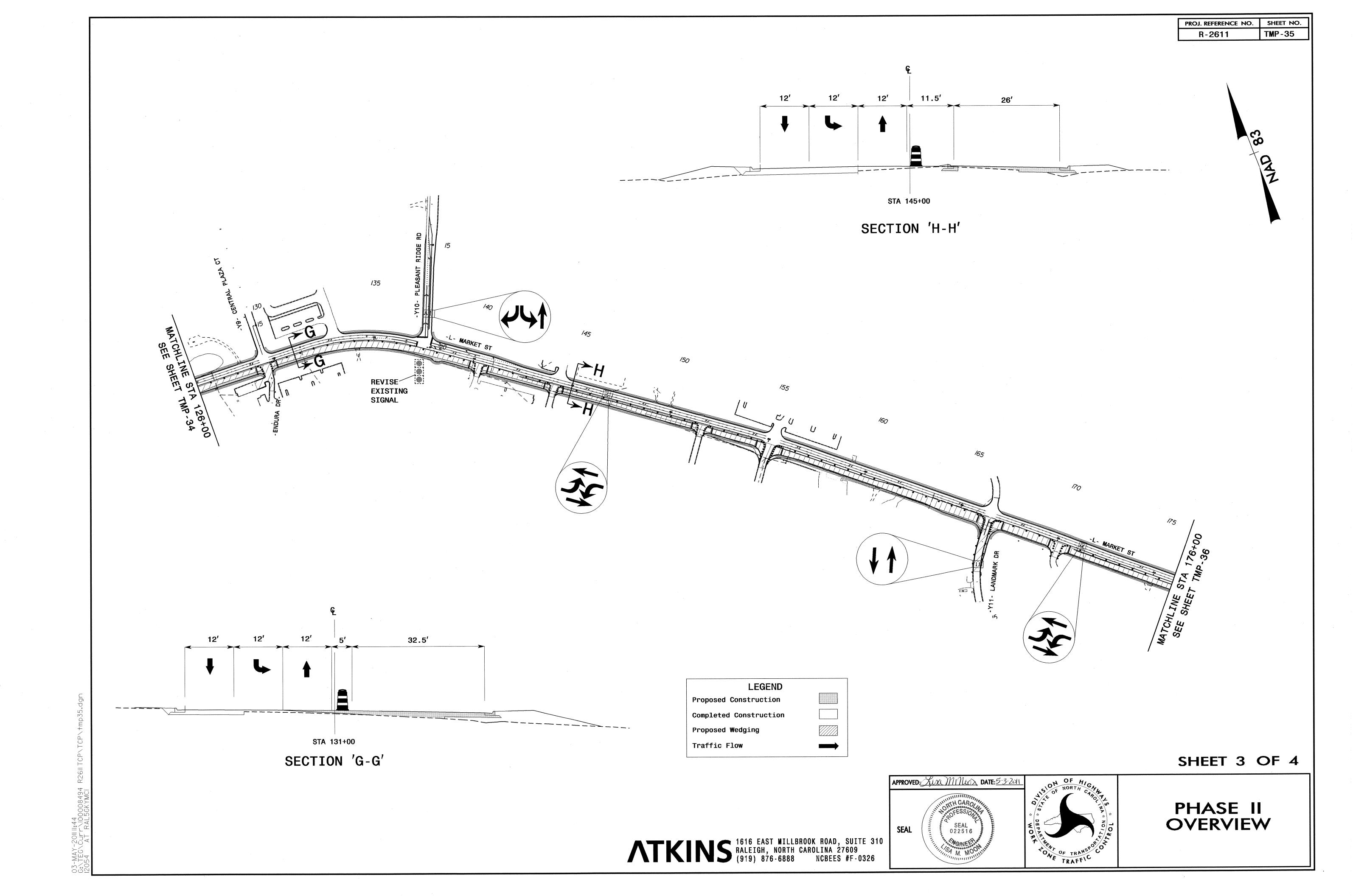


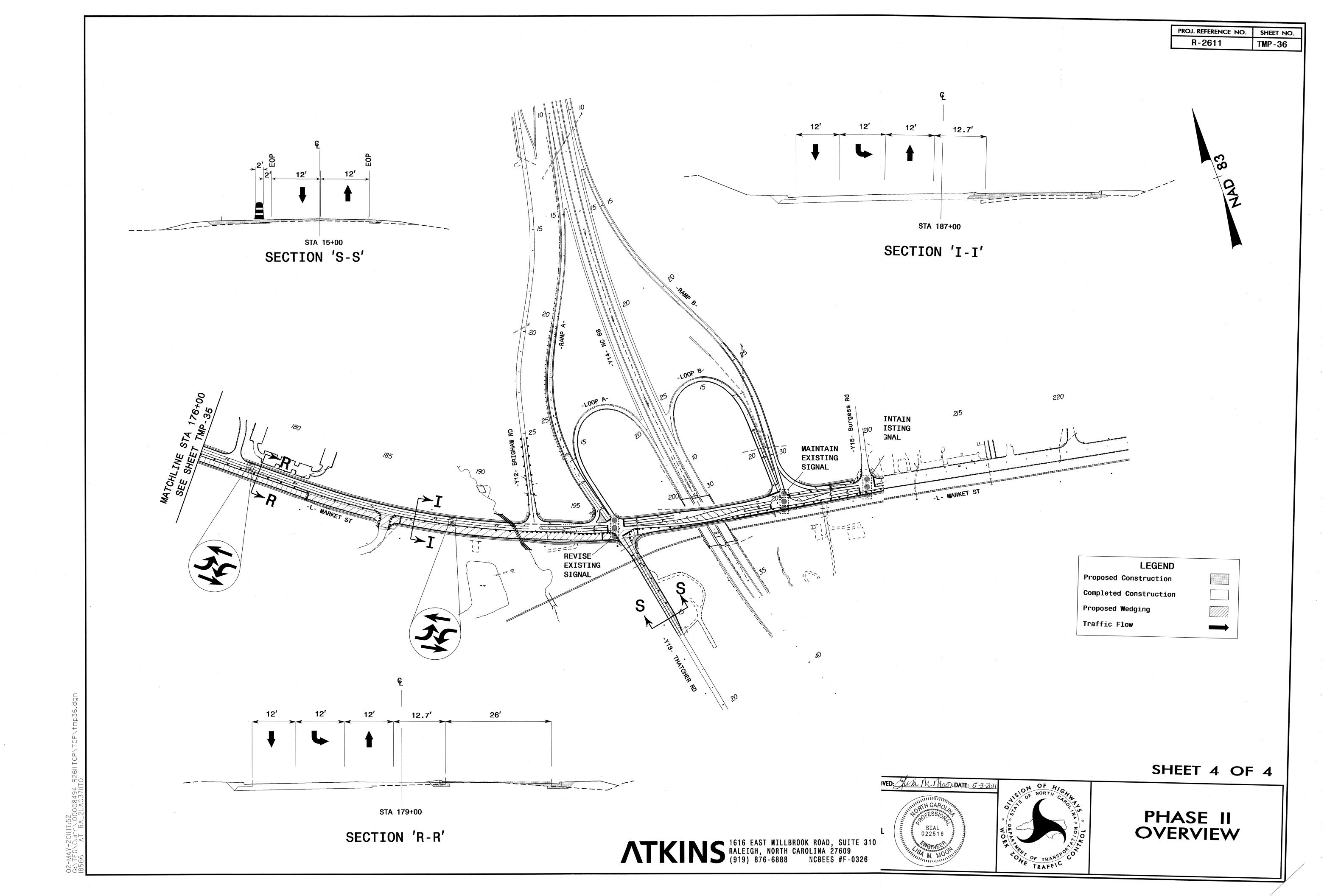


PHASING PHASE II









BEGIN R-2611
-L- STA 10+25+/TIE TO EXISTING MARKINGS

OO+91 VI

PA

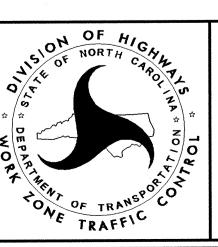
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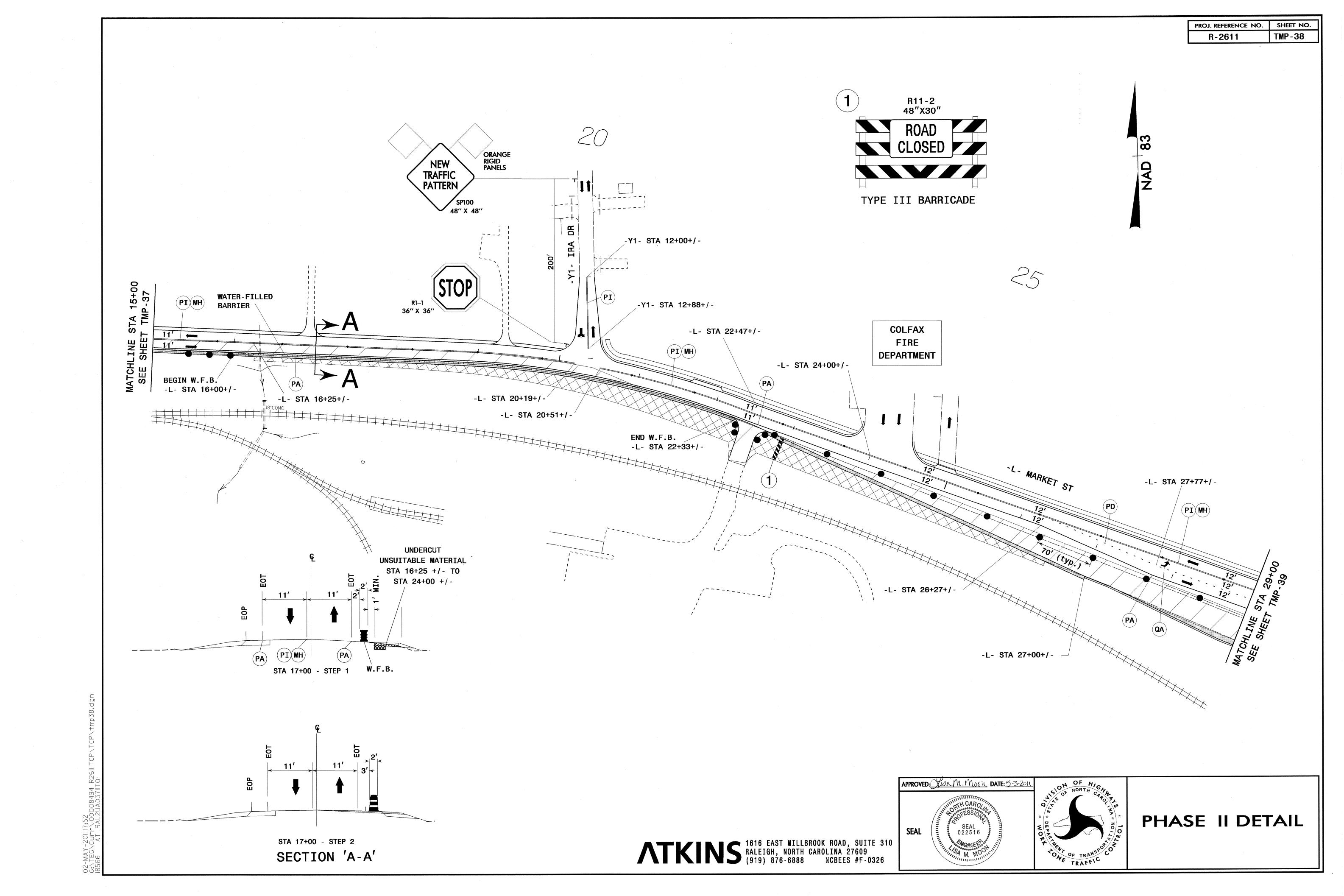
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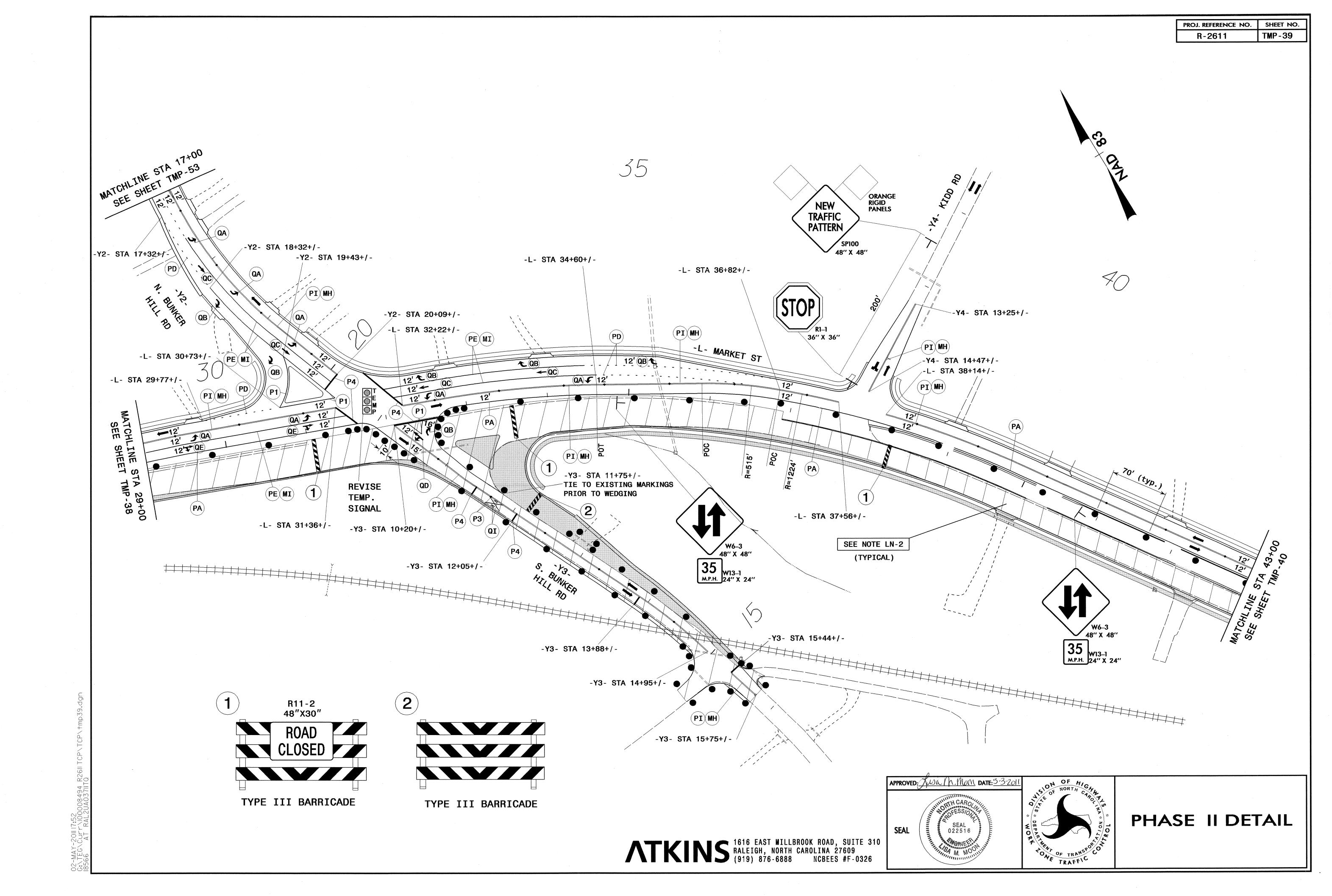
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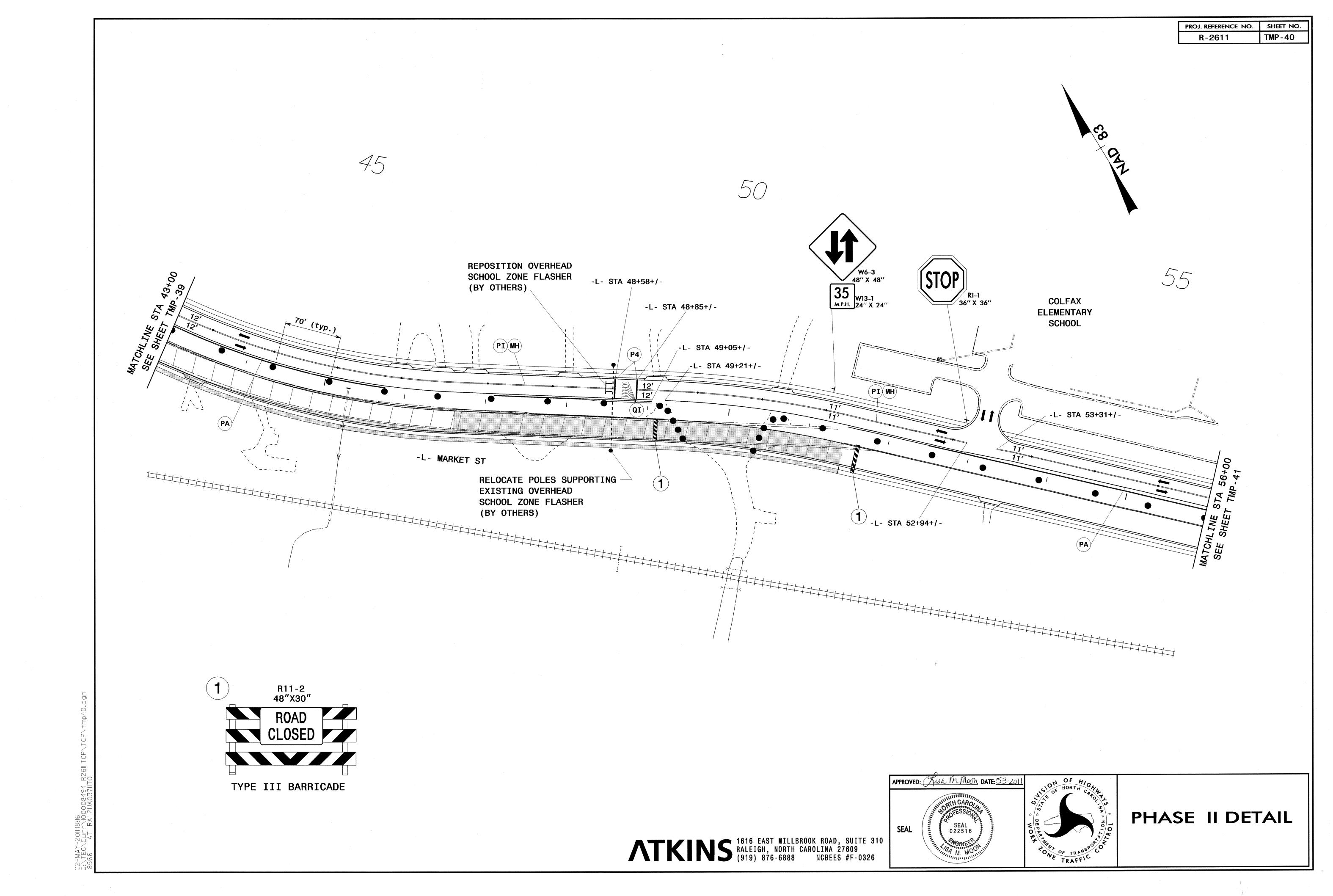
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APPROVED: TWE M. MOON DATE: 5-3-2011

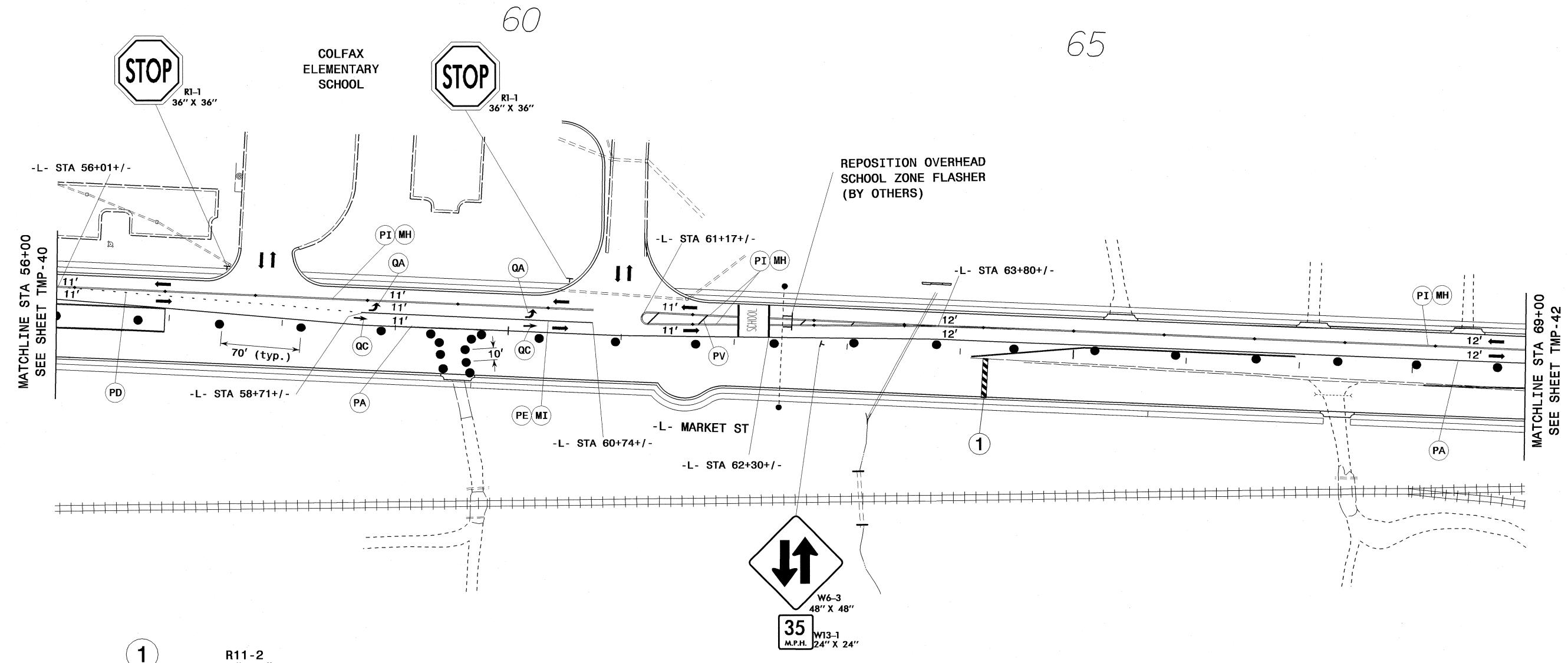


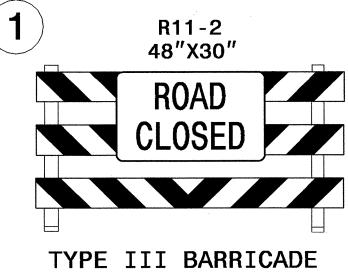




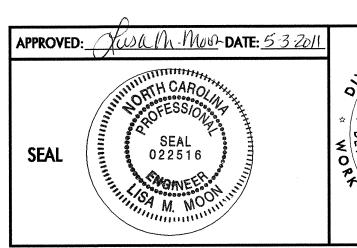


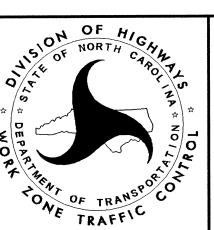
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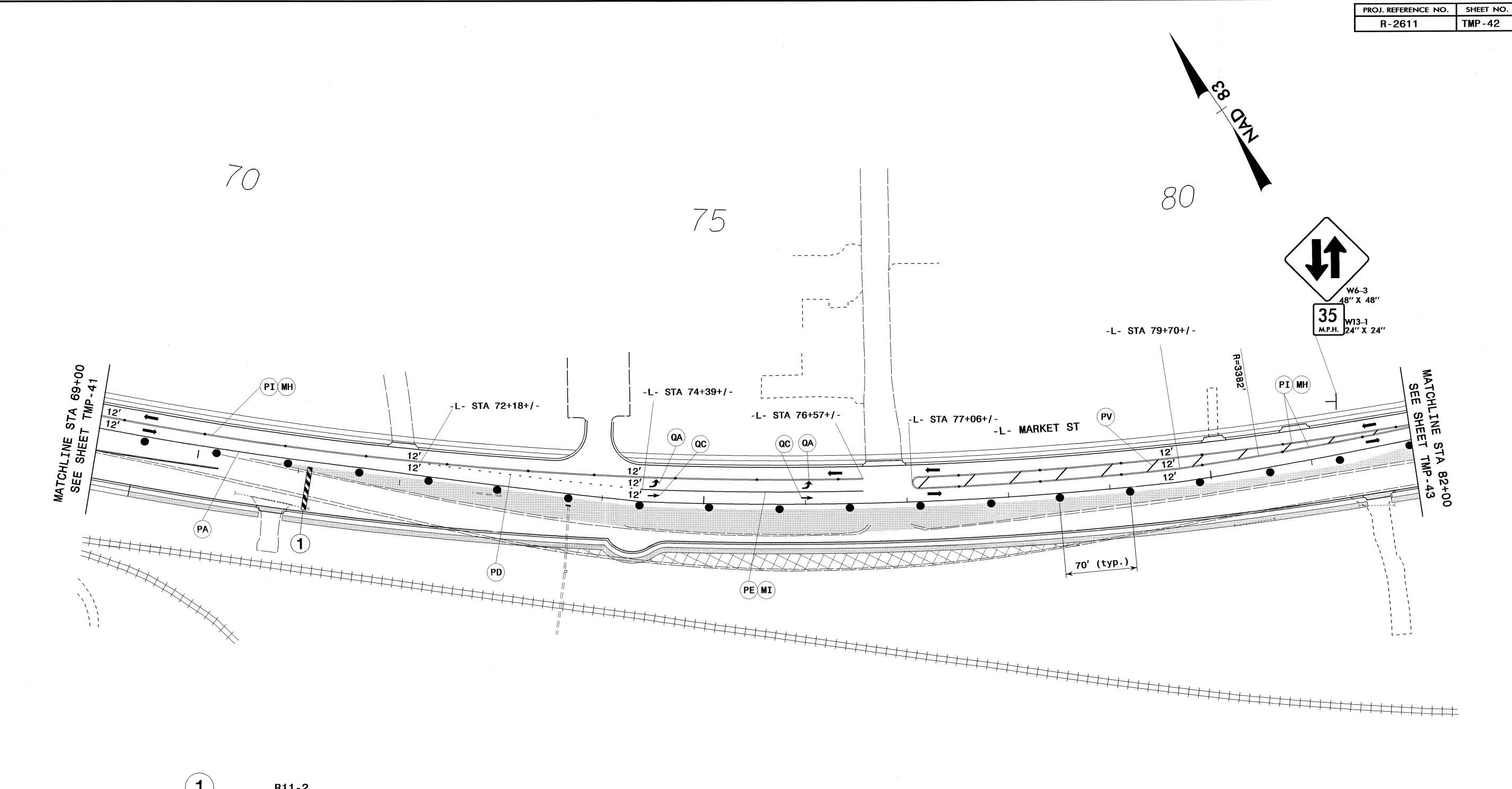


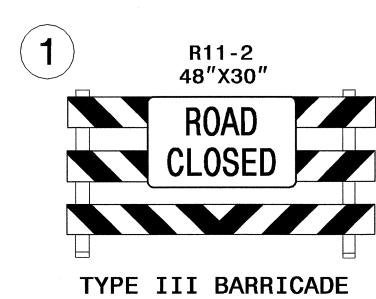


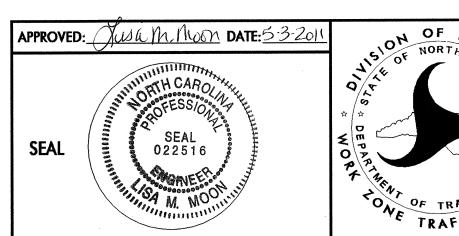
TKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326







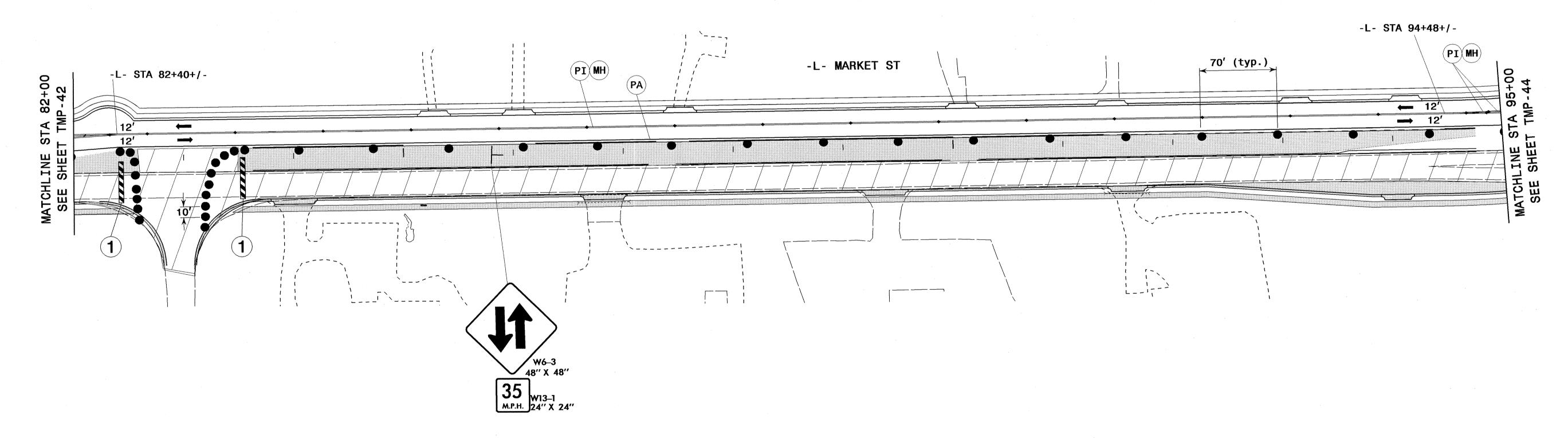


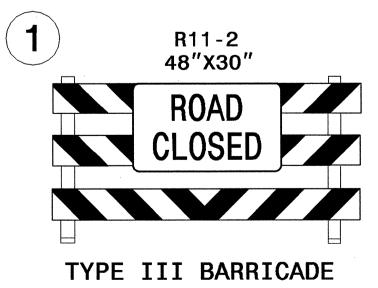


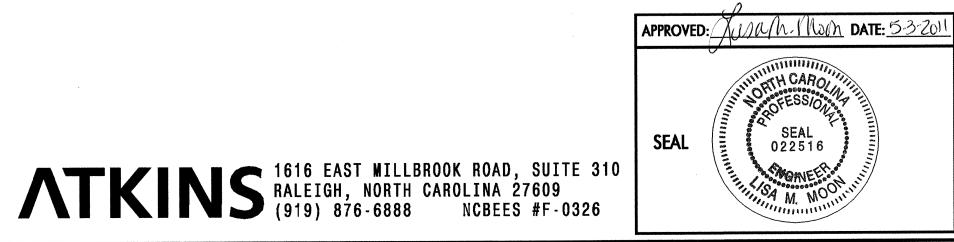
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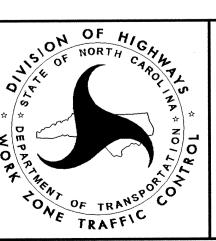
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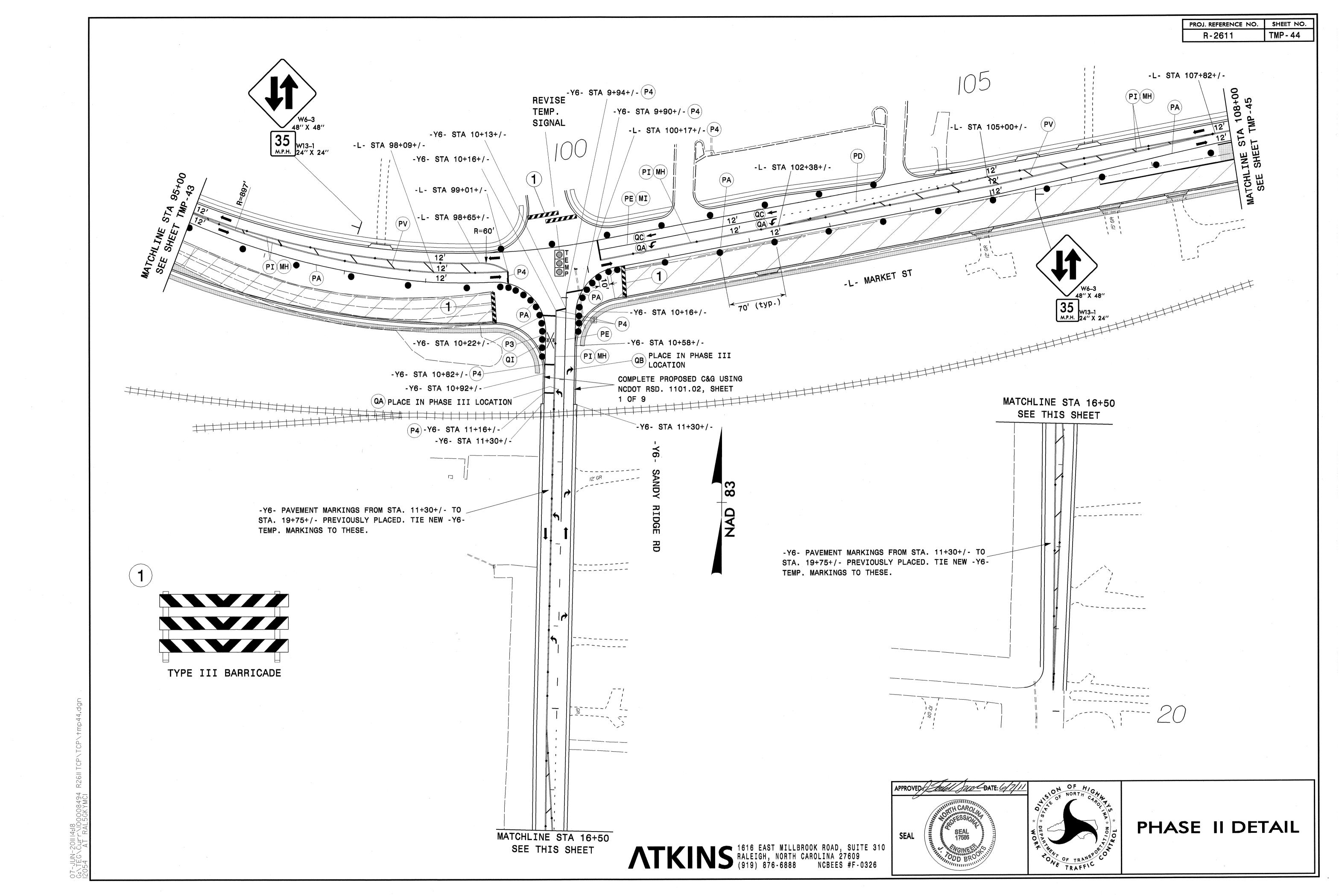
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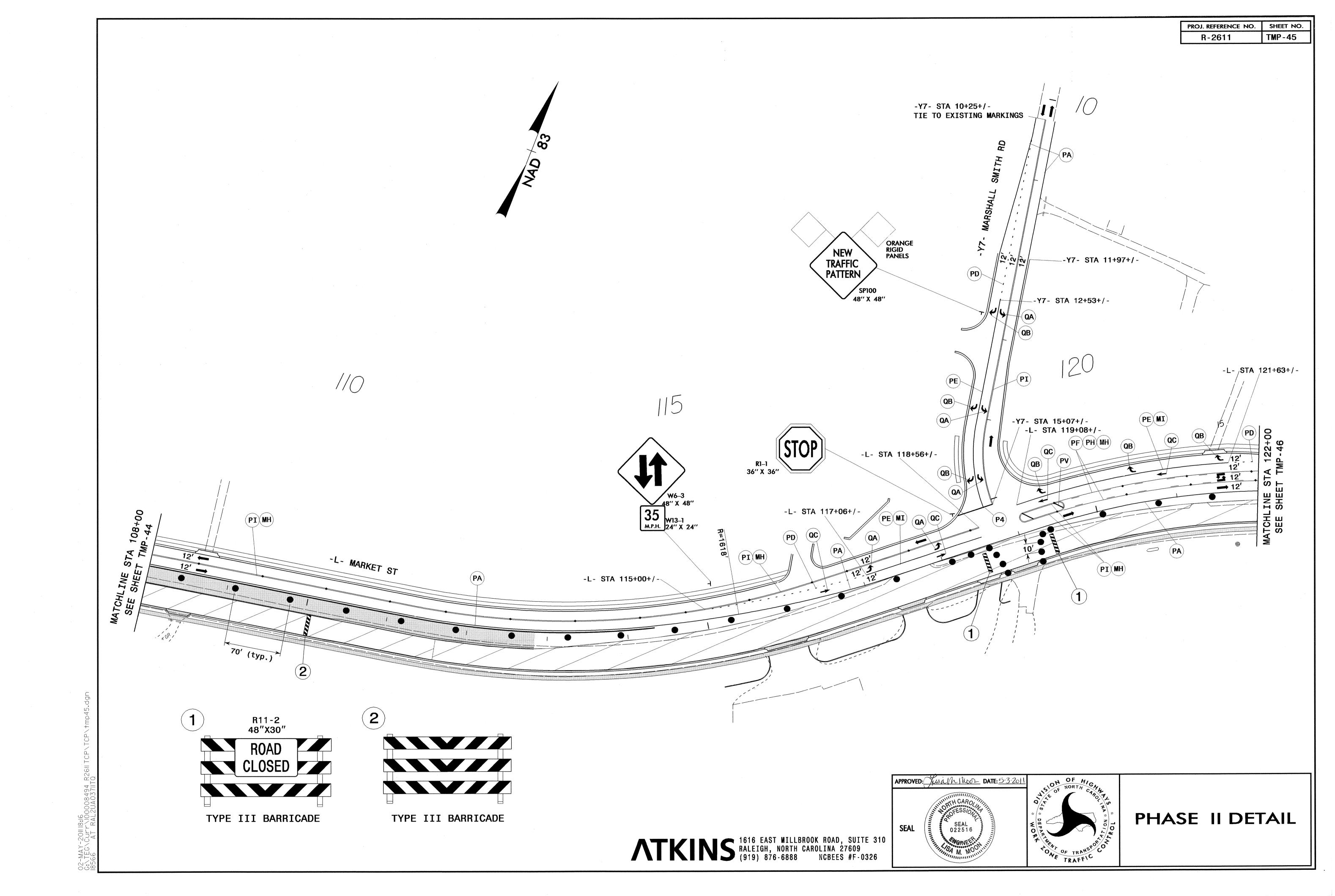






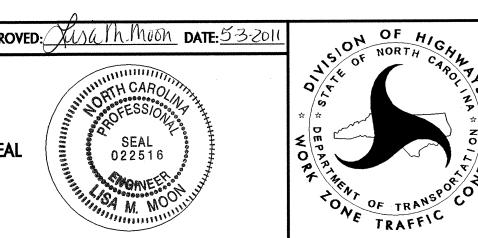


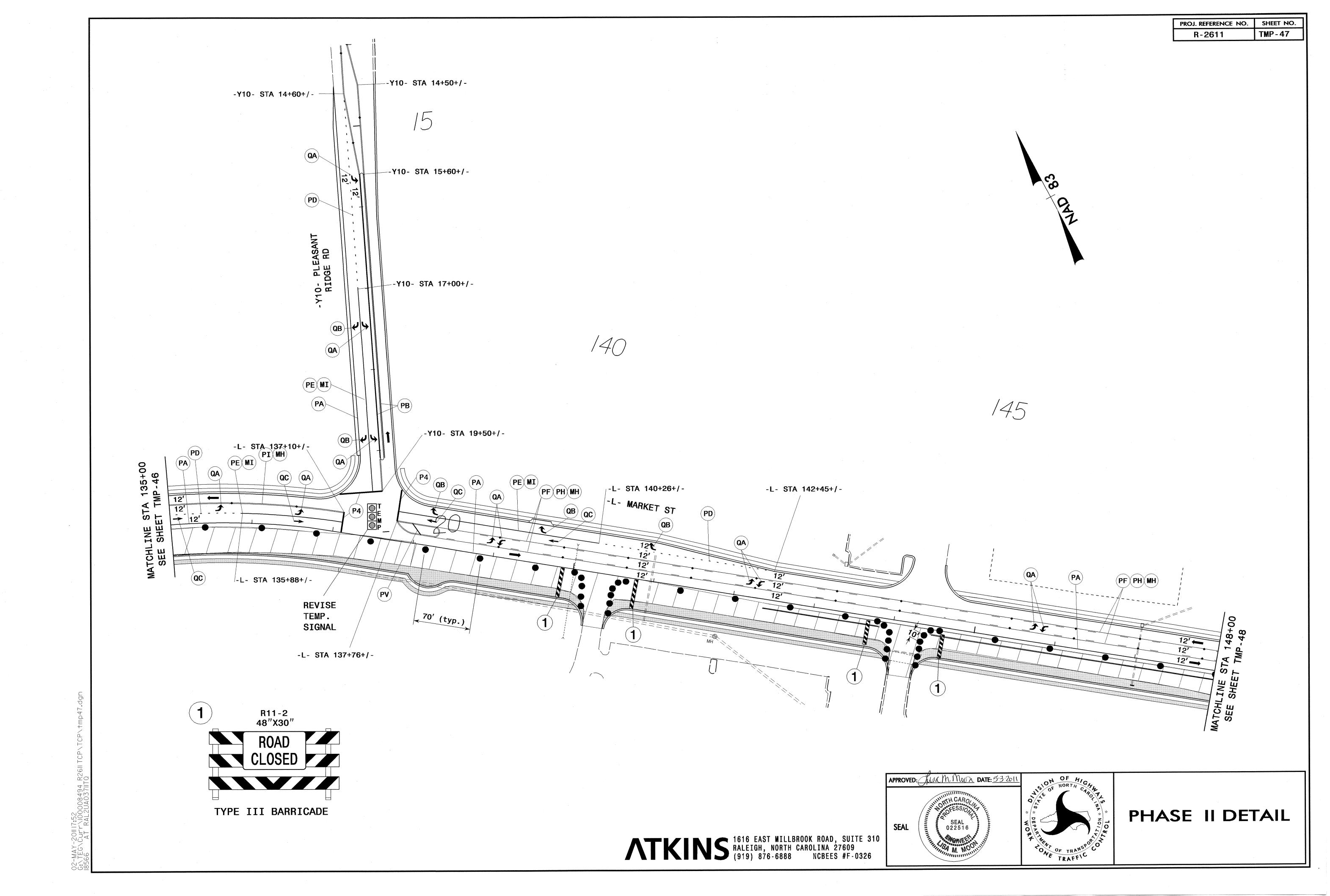




PROJ. REFERENCE NO. SHEET NO. R-2611 NEW TRAFFIC PATTERN SP100 48" X 48" R1–1 36" X 36" -Y9- STA 15+00+/-PI) -L- STA 123+30+/--L- STA 123+72+/-PF PH MH -Y9- STA 16+46+/-\129+26+/--L- STA 129+74+/-PF PH MH PF PH MH -L- STA 134+57+/-70' (typ.) -L- MARKET ST -Y8- STA 10+10+/--Y8- STA 11+05+/-TIE TO EXISTING MARKINGS -Y8- STA 11+75+/-R11-2 48"X30" APPROVED: XUATH MOON DATE: 5-3-2011 TYPE III BARRICADE PHASE II DETAIL SEAL

TENS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326



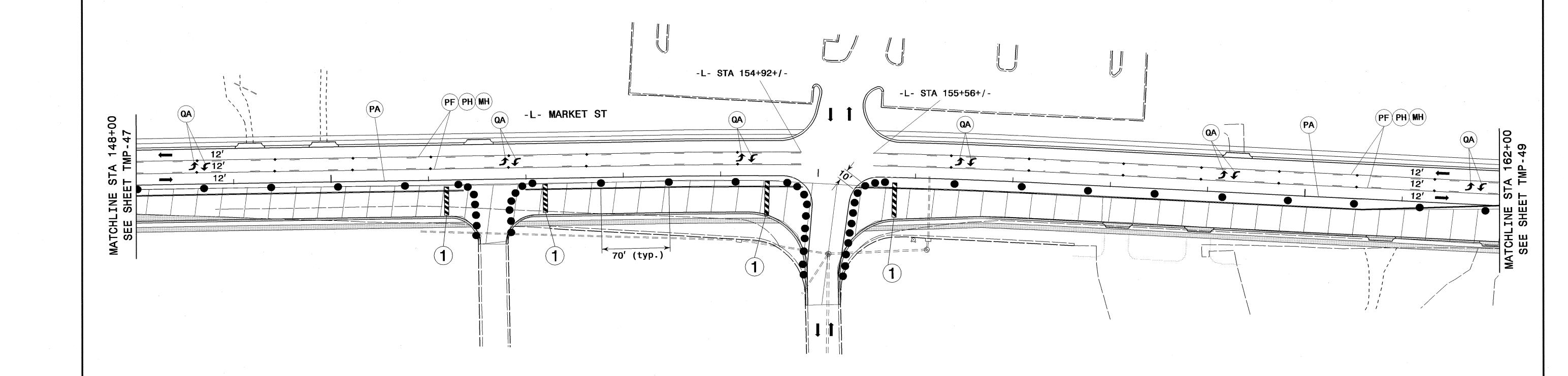


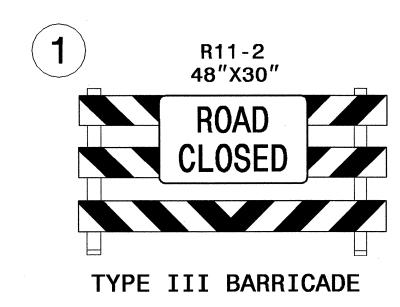
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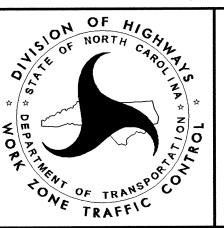
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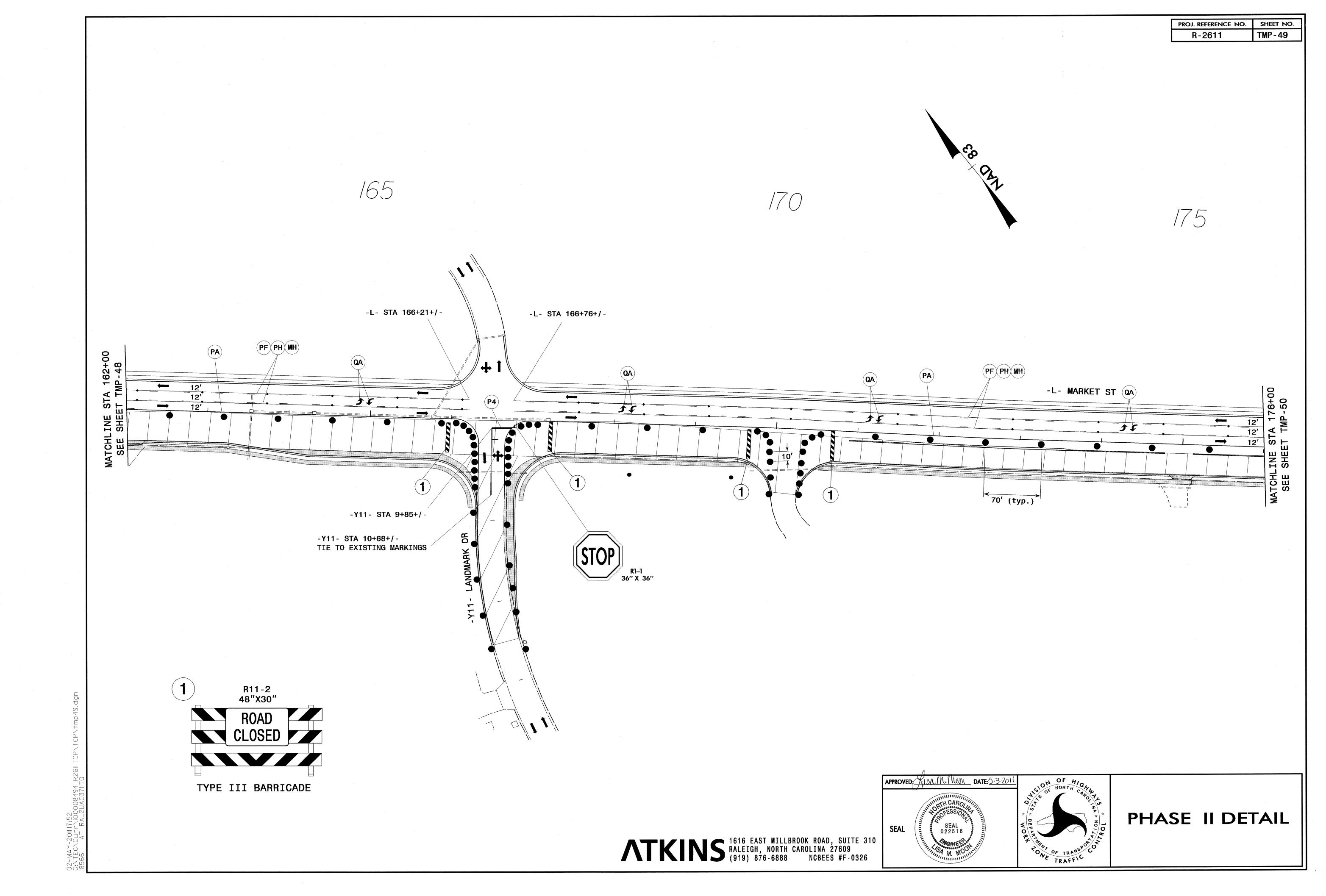


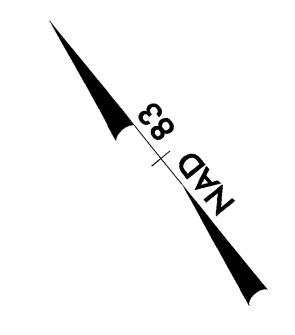


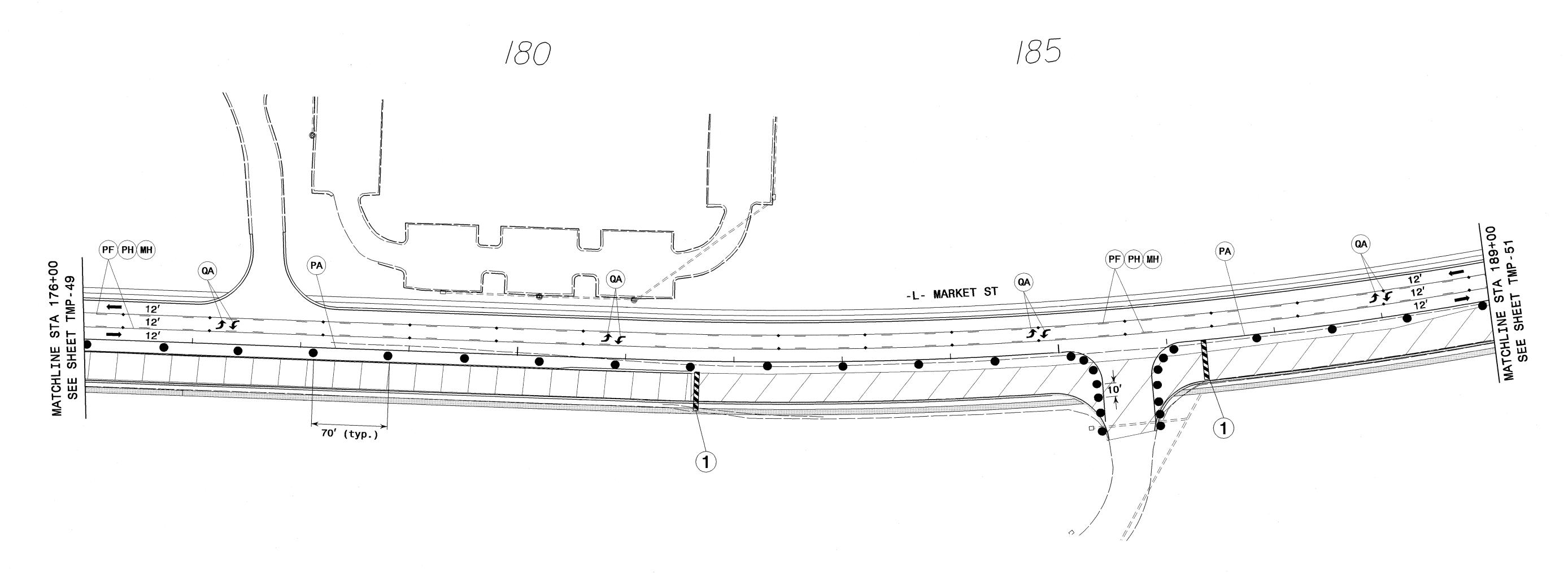
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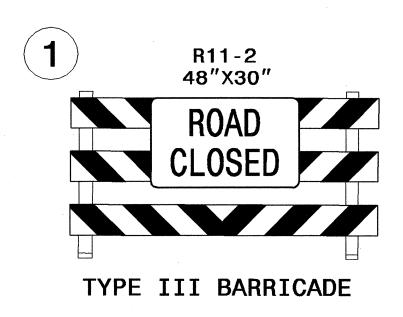
APPROVED: JULIA MOON DATE: 5-3-2011

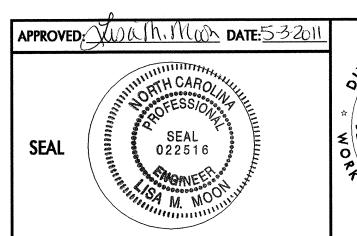


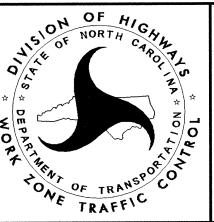


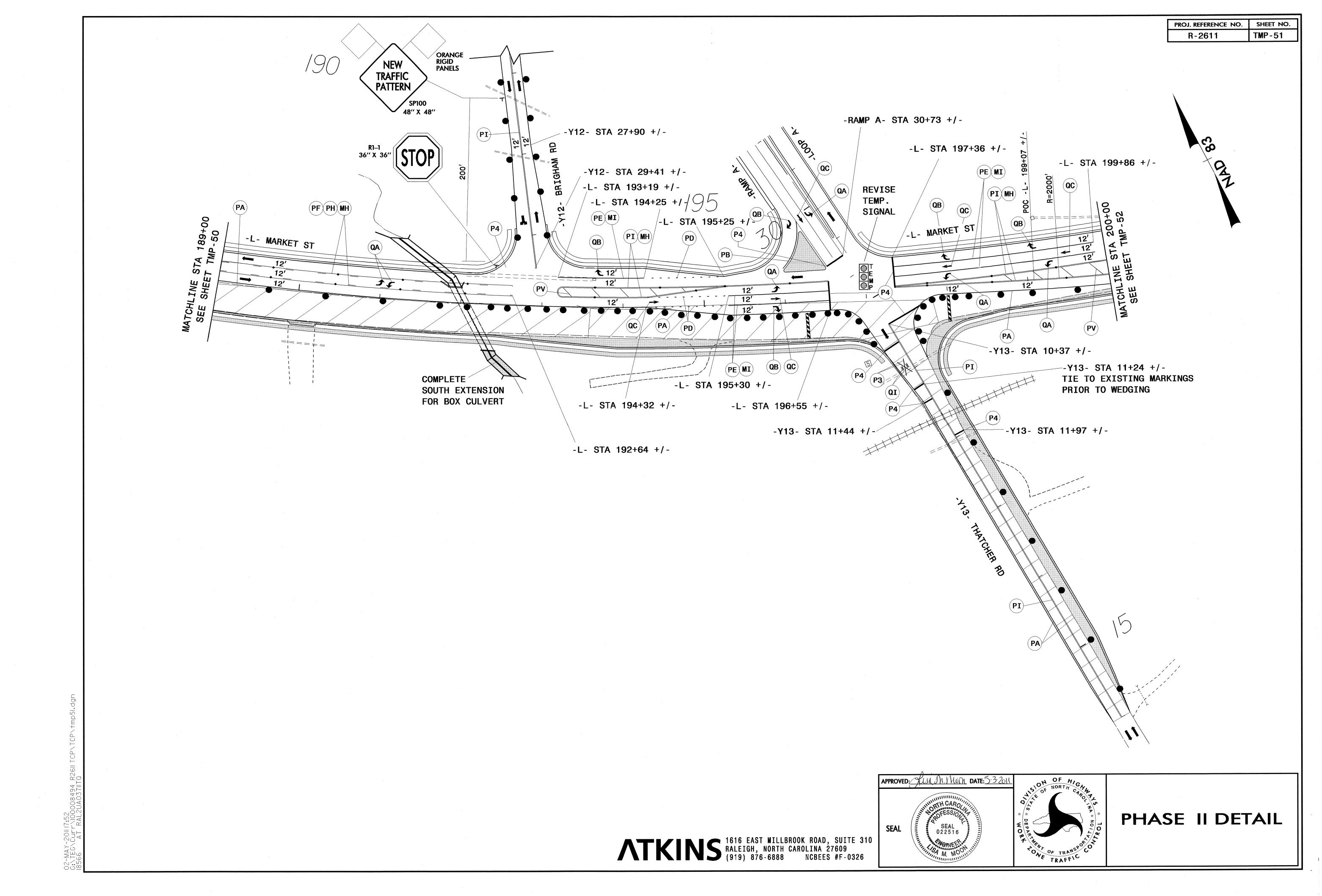




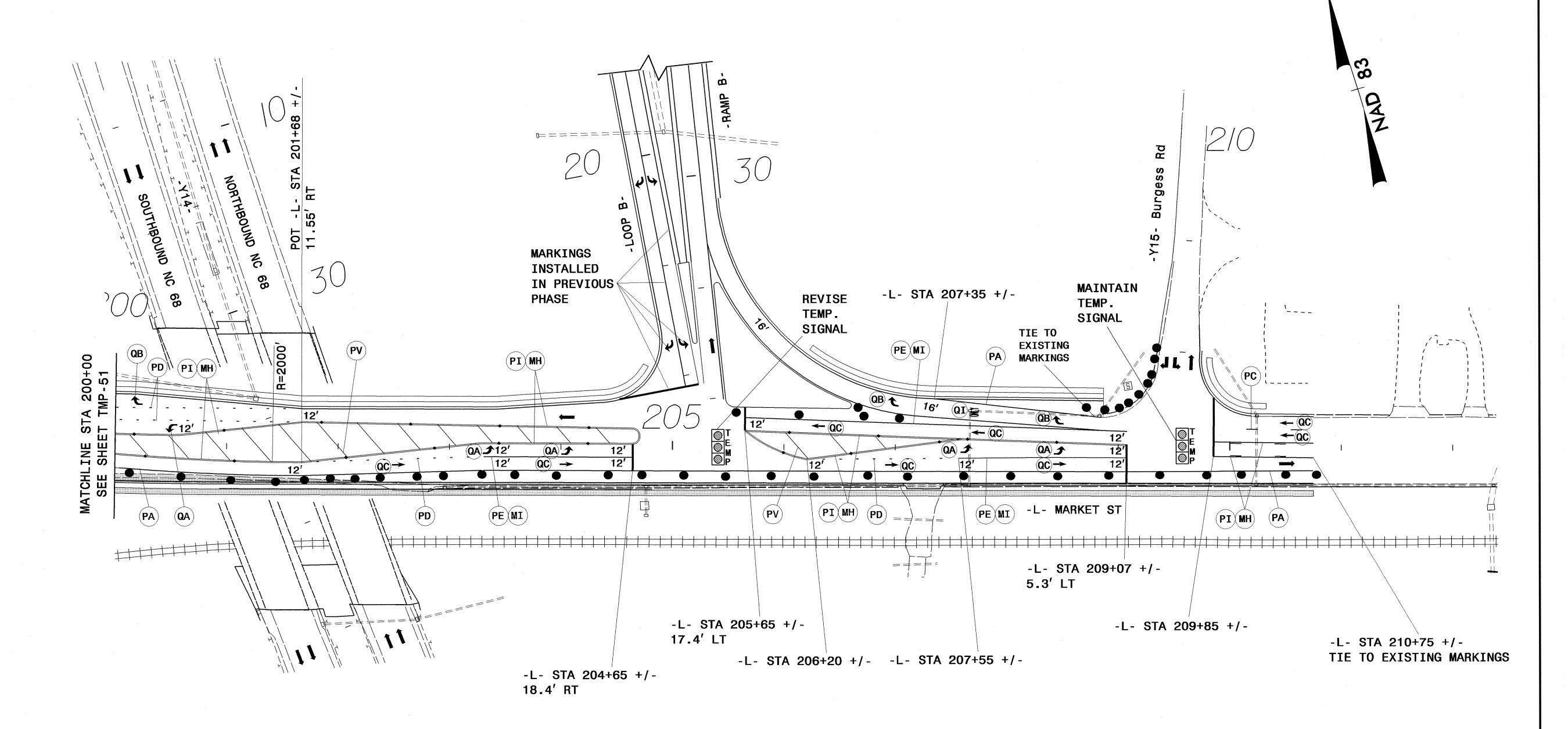




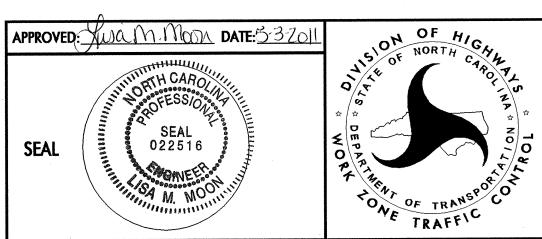




SHEET NO. PROJ. REFERENCE NO. TMP-52 R-2611



SEAL

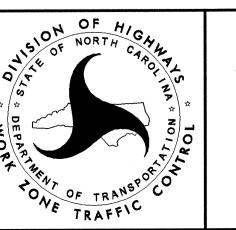


-Y2- STA 13+64 +/TIE TO EXISTING
MARKINGS

-Y2- STA 16+17 +/PD

MATCHLINE STA 17+00
SEE SHEET TMP-39

SEAL SEAL 17586



## OBJECTIVES:

SHIFT EB TRAFFIC TO NEWLY CONSTRUCTED EB PAVEMENT. COMPLETE
MEDIANS ON MARKET STREET. PLACE FINAL SURFACE LAYER AND
FINAL PAVEMENT MARKINGS ON ALL ROADS.

USING THE SAME ICT AS USED IN PHASE 2, STEP 1,
THE CONTRACTOR SHALL COMPLETE ALL WORK IN PHASE III,
STEP 1 DURING ONE WEEKEND PERIOD BETWEEN 6:00 PM
FRIDAY AND 7:00 AM ON MONDAY. [SEE INTERMEDIATE
CONTRACT TIME AND LIQUIDATED DAMAGES]

- STEP 1: USING RSD 1101.02, SHEET 1 OF 9, FLAGGERS AND LAW ENFORCEMENT AT SIGNALIZED INTERSECTIONS, PERFORM THE FOLLOWING WORK TO SHIFT TRAFFIC FROM THE PHASE II TRAFFIC PATTERN ON MARKET ST -L- AS SHOWN ON TMP-58 THRU TMP-73:
  - \* REVISE EXISTING TRAFFIC SIGNALS AT THE FOLLOWING MARKET STREET INTERSECTIONS TO PHASE III TEMPORARY PATTERN:
  - \* -Y3-/-Y4- BUNKER HILL ROAD [SEE TMP-60]
  - \* SCHOOL SPEED ZONE FLASHERS [SEE TMP-61, TMP-62]
  - \* -Y6- SANDY RIDGE ROAD [SEE TMP-65]
  - \* -Y10- PLEASANT RIDGE ROAD [SEE TMP-68]
  - \* -Y13- THATCHER ROAD/NC 68 RAMP A [SEE TMP-72]
  - \* NC 68 RAMP B/LOOP B [SEE TMP-73]
  - \* REMOVE EXISTING TRAFFIC SIGNALS AT THE FOLLOWING MARKET STREET INTERSECTIONS:
    - \* -Y15- BURGESS ROAD (REMOVE)[SEE TMP-73]
  - \* REVISE PAVEMENT MARKINGS AND SIGNS ON THE FOLLOWING -Y-LINES TO PROPOSED PHASE III TRAFFIC PATTERN:
    - \* -Y3- S. BUNKER HILL ROAD [SEE TMP-60]
  - \* -Y6- SANDY RIDGE ROAD [SEE TMP-65]
  - \* -Y8- LITTLE SANTEE ROAD [SEE TMP-67]
  - \* ENDURA DRIVE [SEE TMP-67]
  - \* -Y11- LANDMARK ROAD [SEE TMP-70]
  - \* -Y13- THATCHER ROAD [SEE TMP-72]
  - \* REVISE PAVEMENT MARKINGS ON MARKET STREET AT PROPOSED TIE-IN POINTS AT EAST AND WEST ENDS OF PROJECT [SEE TMP-59 AND TMP-73]
  - \* SHIFT EB MARKET ST TRAFFIC ONTO NEW EB LANES OF MARKET STREET AND DRUM OFF FORMER PHASE II EB LANE.

STEP 2:

- (A) USING RSD NO. 1101.02 SHEETS 3 & 4 OF 9, TEMPORARILY CLOSE WB RIGHT TURN LANE ON MARKET STREET AT -Y15- TO CONSTRUCT -Y15- NW RADIUS [TMP-73].
- (B) USING RSD 1101.02, SHEET 1 OF 9, FLAGGERS AND LAW ENFORCEMENT AT SIGNALIZED INTERSECTIONS, REVISE PAVEMENT MARKINGS ON MARKET STREET AT FROM STA 202+09 +/- TO EAST END OF PROJECT ON MARKET ST -L- AS SHOWN ON TMP-74.
- (C) SHIFT WB MARKET ST TRAFFIC ONTO NEW WB LANES OF MARKET STREET.

# **PHASING**

R-2611 TMP-54

PROJ. REFERENCE NO.

SHEET NO.

# PHASIN

#### STEP 3:

USING RSD NO. 1101.02 SHEETS 3 & 4 OF 9, TEMPORARILY CLOSE EB LEFT TURN LANES OFF MARKET STREET TO PERFORM THE FOLLOWING CONSTRUCTION IN THE MARKET STREET MEDIAN [SEE TMP-58 THRU TMP-72, AND TMP-74]:

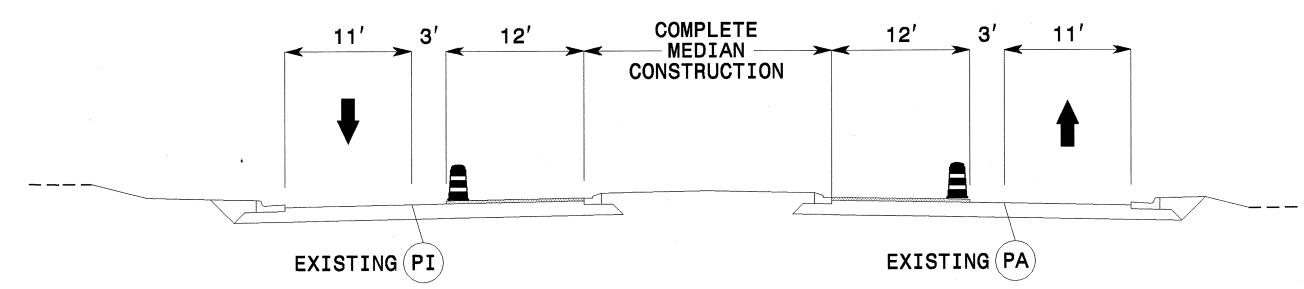
- \* COMPLETE CONSTRUCTION OF CATCH BASINS LOCATED IN MEDIANS.
- \* CONSTRUCT PROPOSED MONOLITHIC CONCRETE MEDIANS AND ISLANDS.
- \* REMOVE TEMPORARY PAVEMENT AND TEMPORARY DRIVEWAY TIE-INS AND COMPLETE CONSTRUCTION OF MEDIAN CURB AND GUTTER.

#### STEP 4:

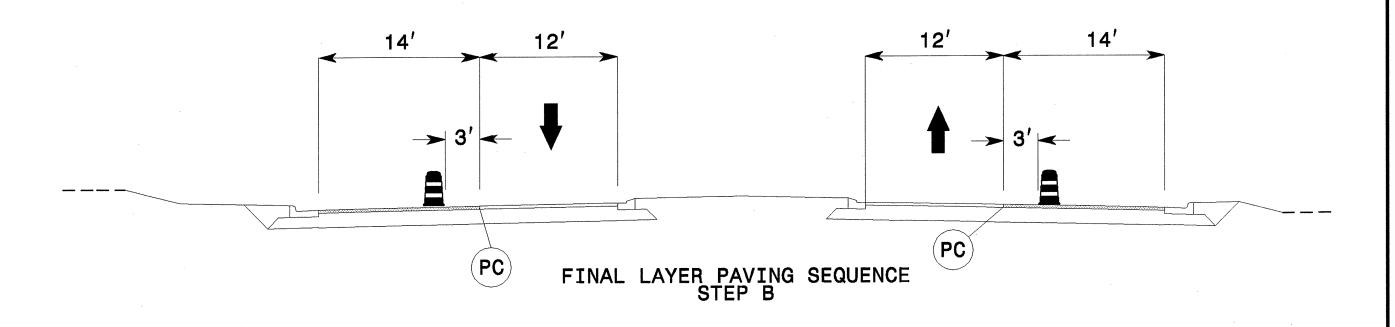
(A) COMPLETE CONSTRUCTION OF FINAL SIGNALS.

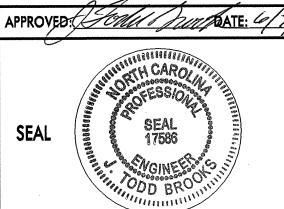
USING RSD NO. 1101.02 SHEETS 1 THRU 4 OF 9,
PLACE FINAL SURFACE LAYER AND FINAL MARKINGS ON
MARKET STREET AND ALL -Y-LINES. SEE STAGED
CONSTRUCTION SECTIONS ON THIS SHEET.

(B) OPEN ALL LANES TO TRAFFIC.



FINAL LAYER PAVING SEQUENCE STEP A



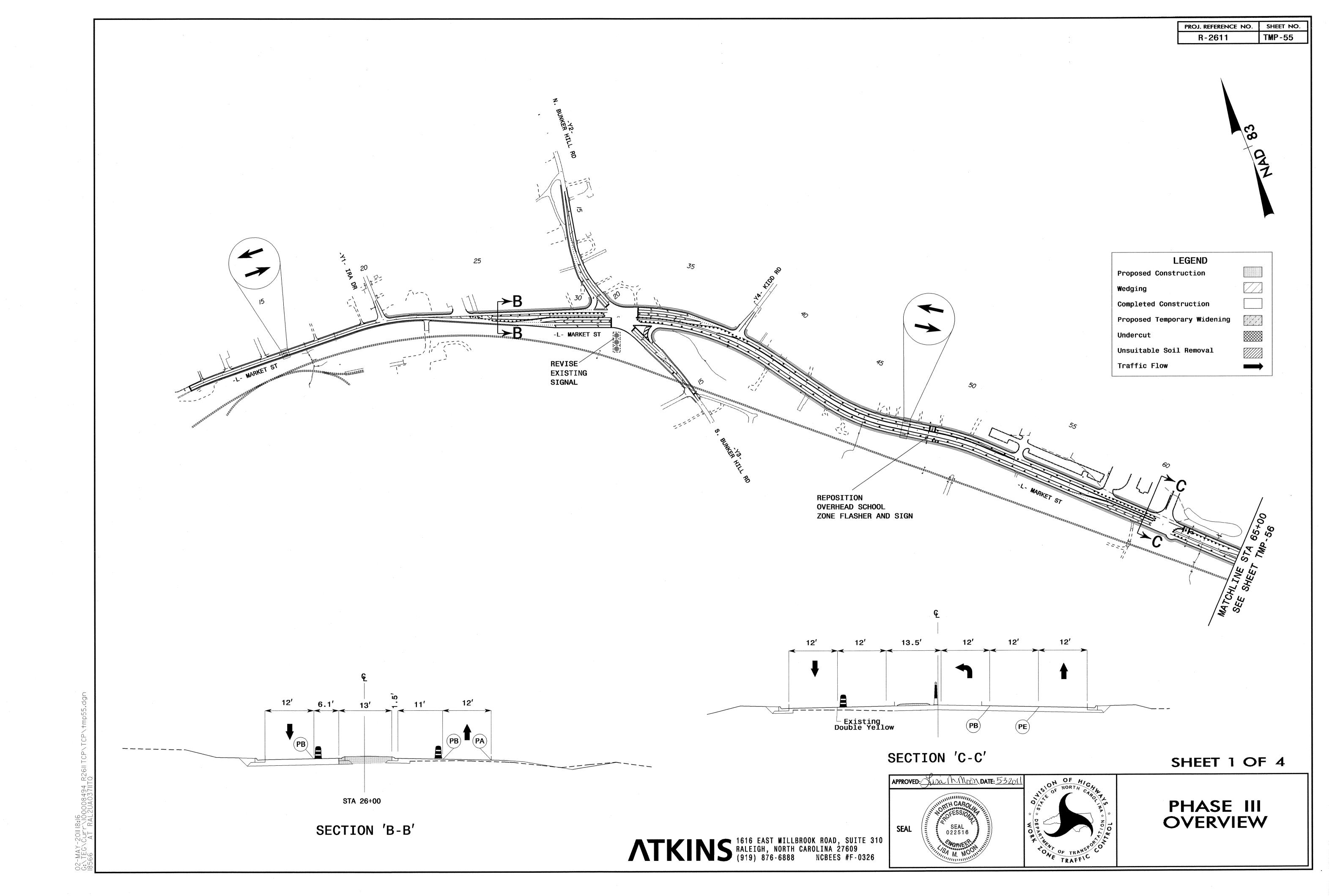


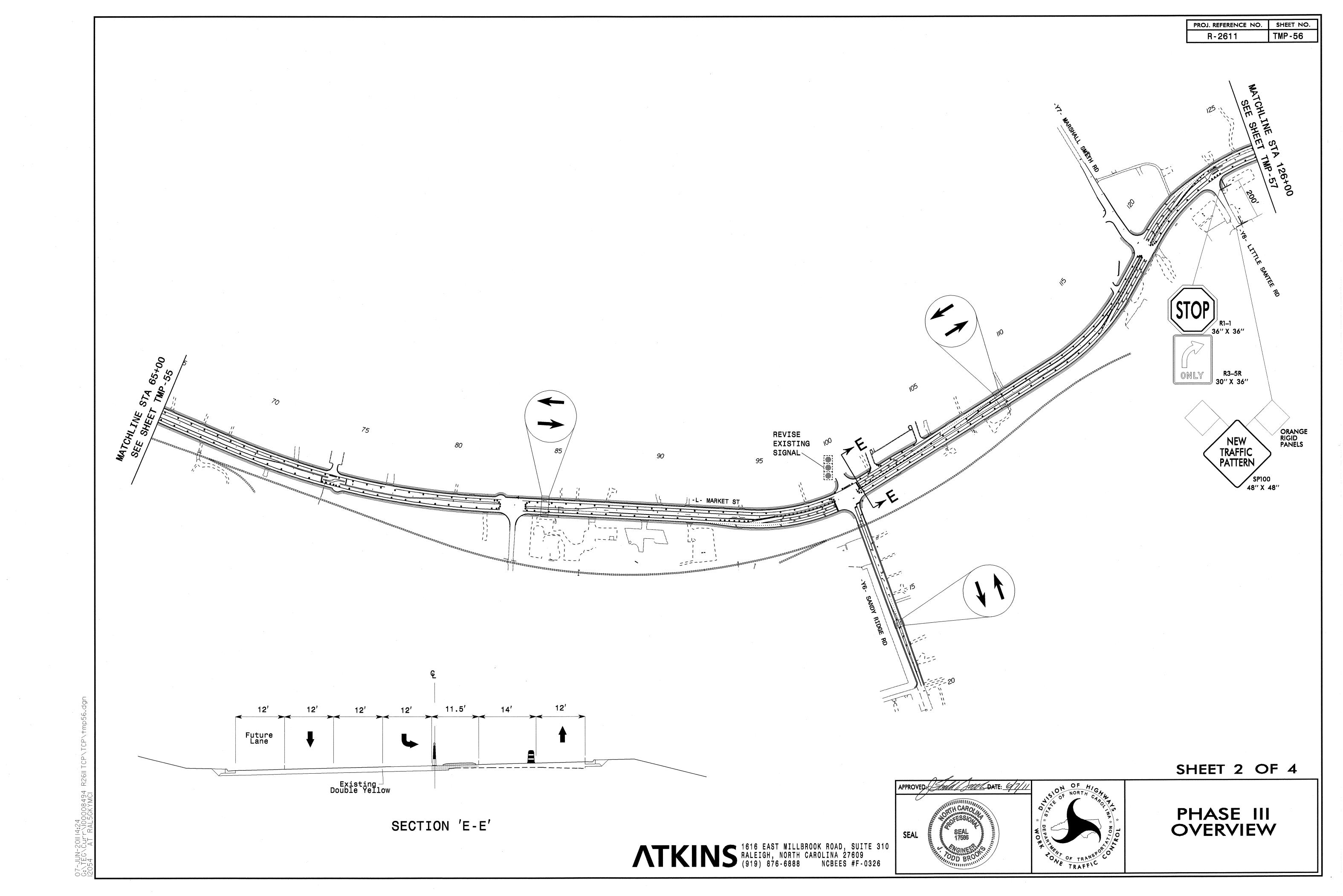


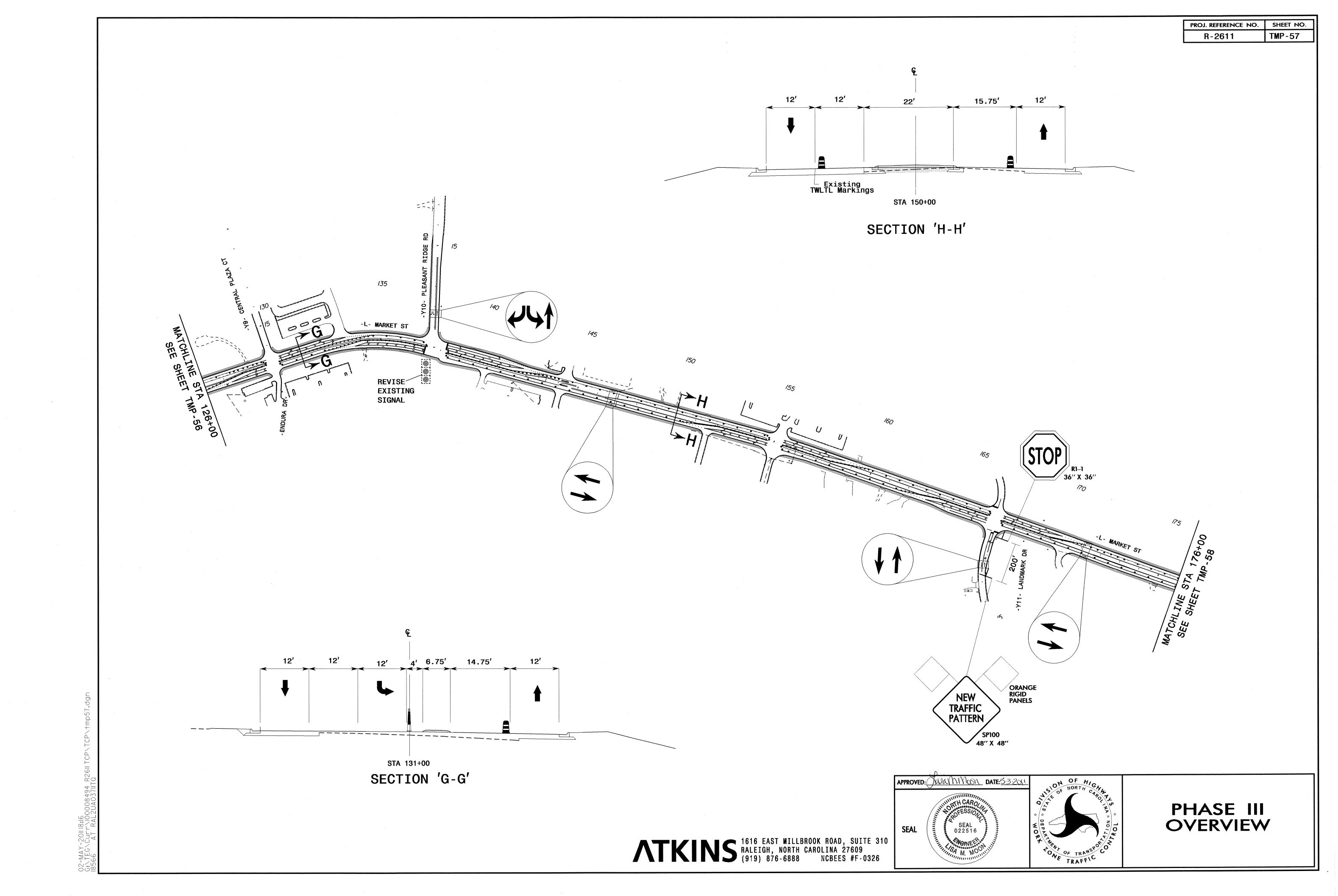
PHASING PHASE III

CULTYNOO008494 R2611TCP\TCP\+mp54.dg AT RAL5GKYMC1

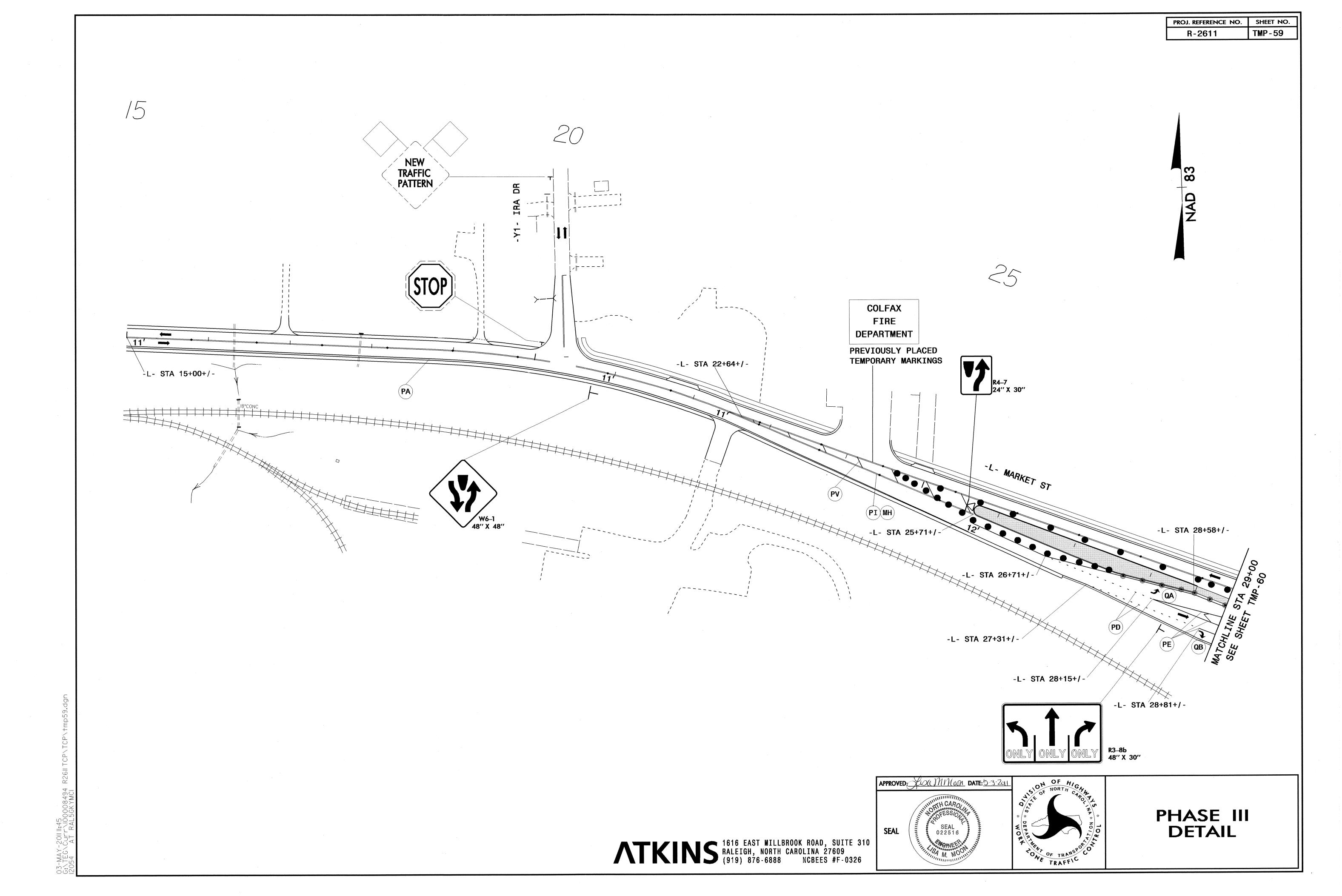
TKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

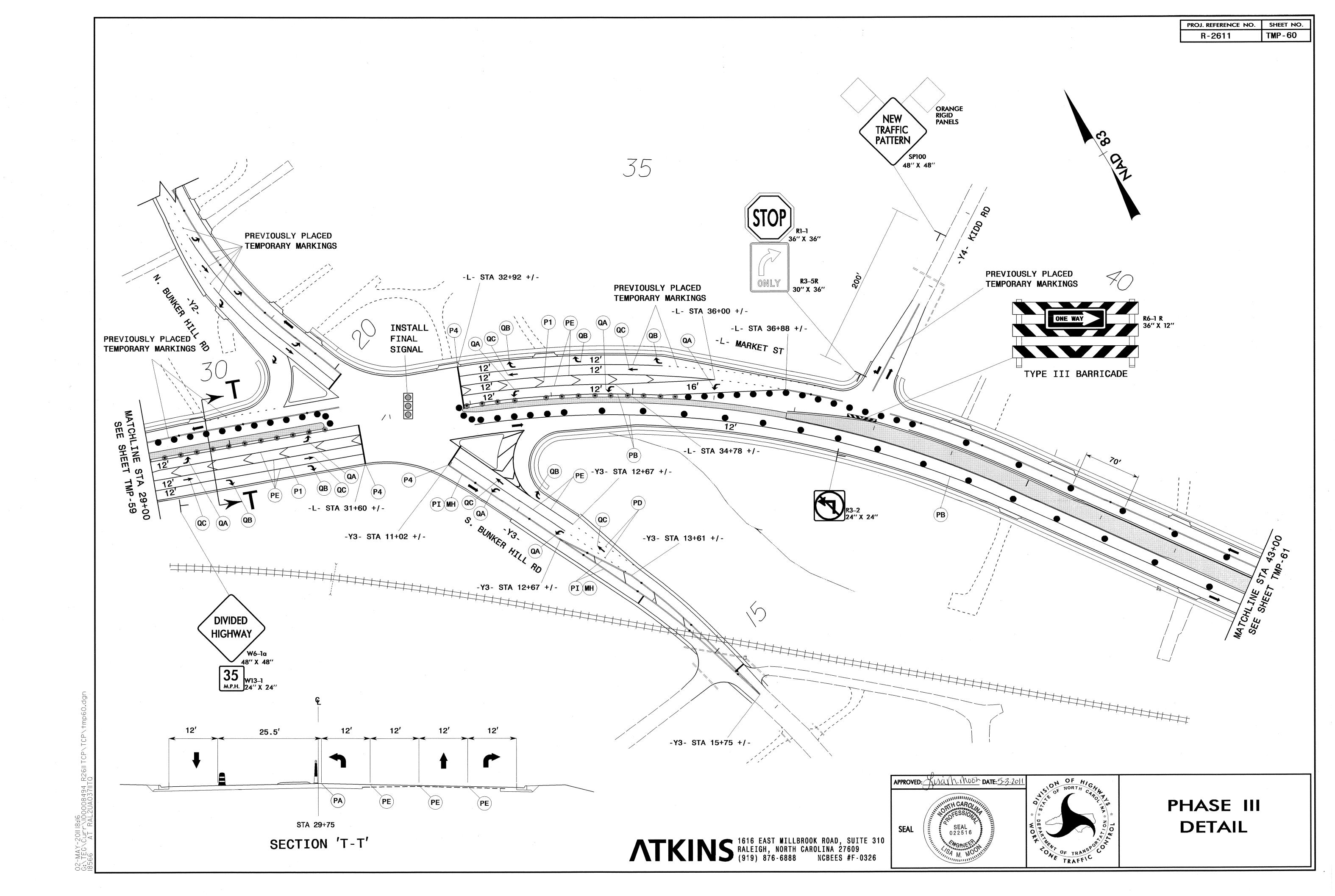


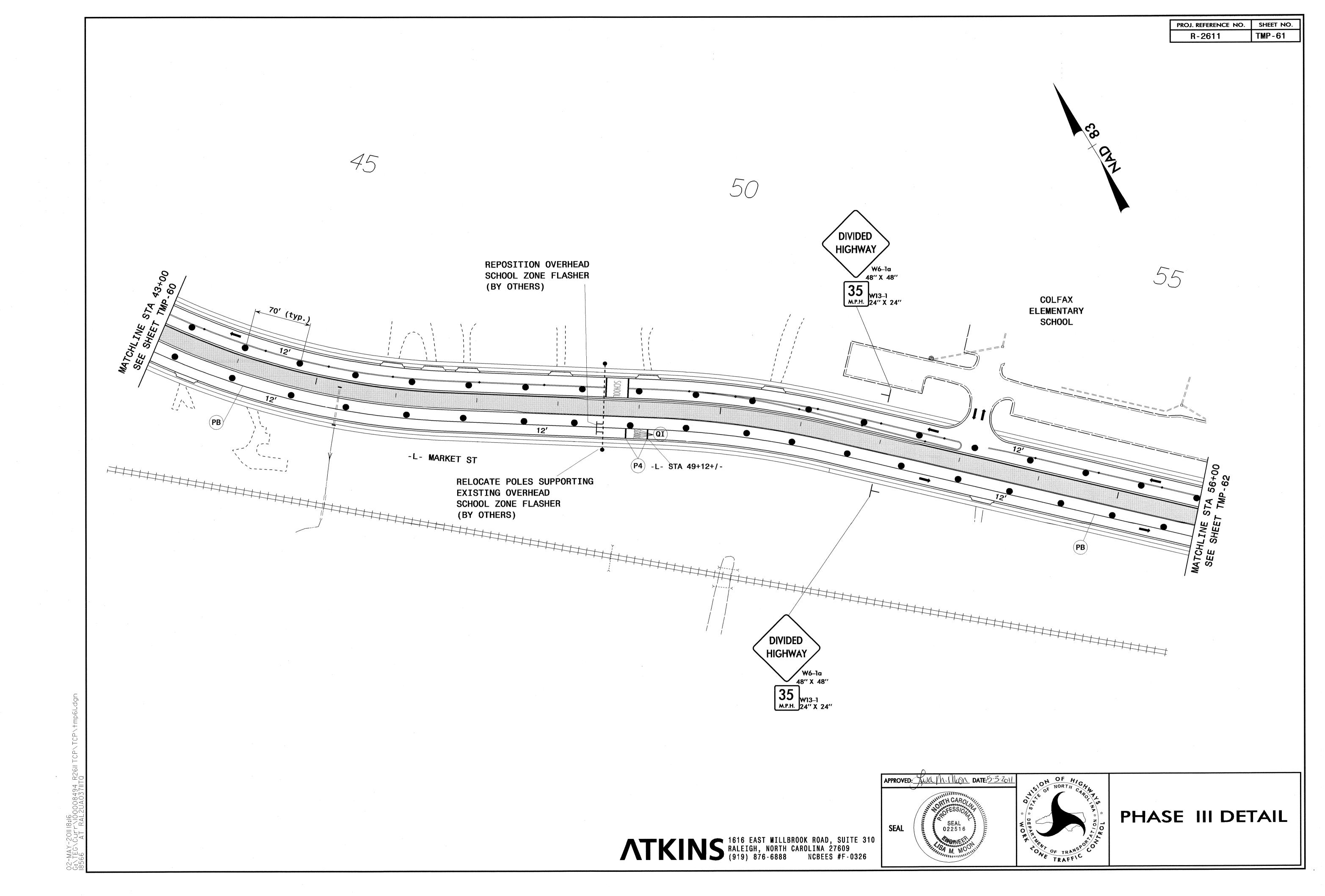




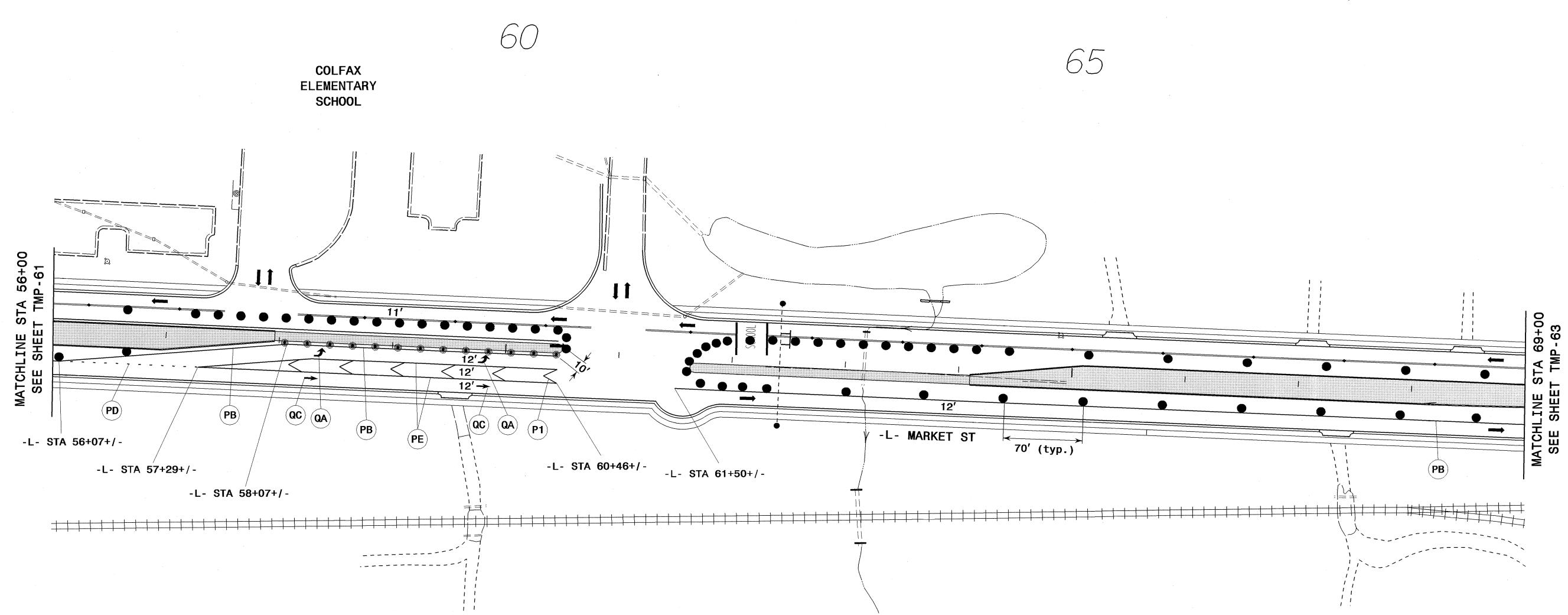
R-2611 REVISE EXISTING SIGNAL 12.7′ APPROVED: JUNE MOUN DATE: 5:3:2011 \_Existing Double Yellow PHASE III OVERVIEW STA 187+00 SECTION 'I-I' TKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326







CS CAT

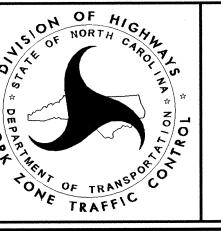


SEAL

SEAL

SEAL

ONE FROM M. MOON. INC. 1971.

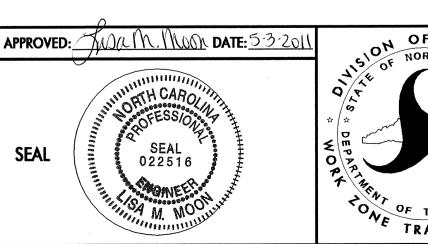


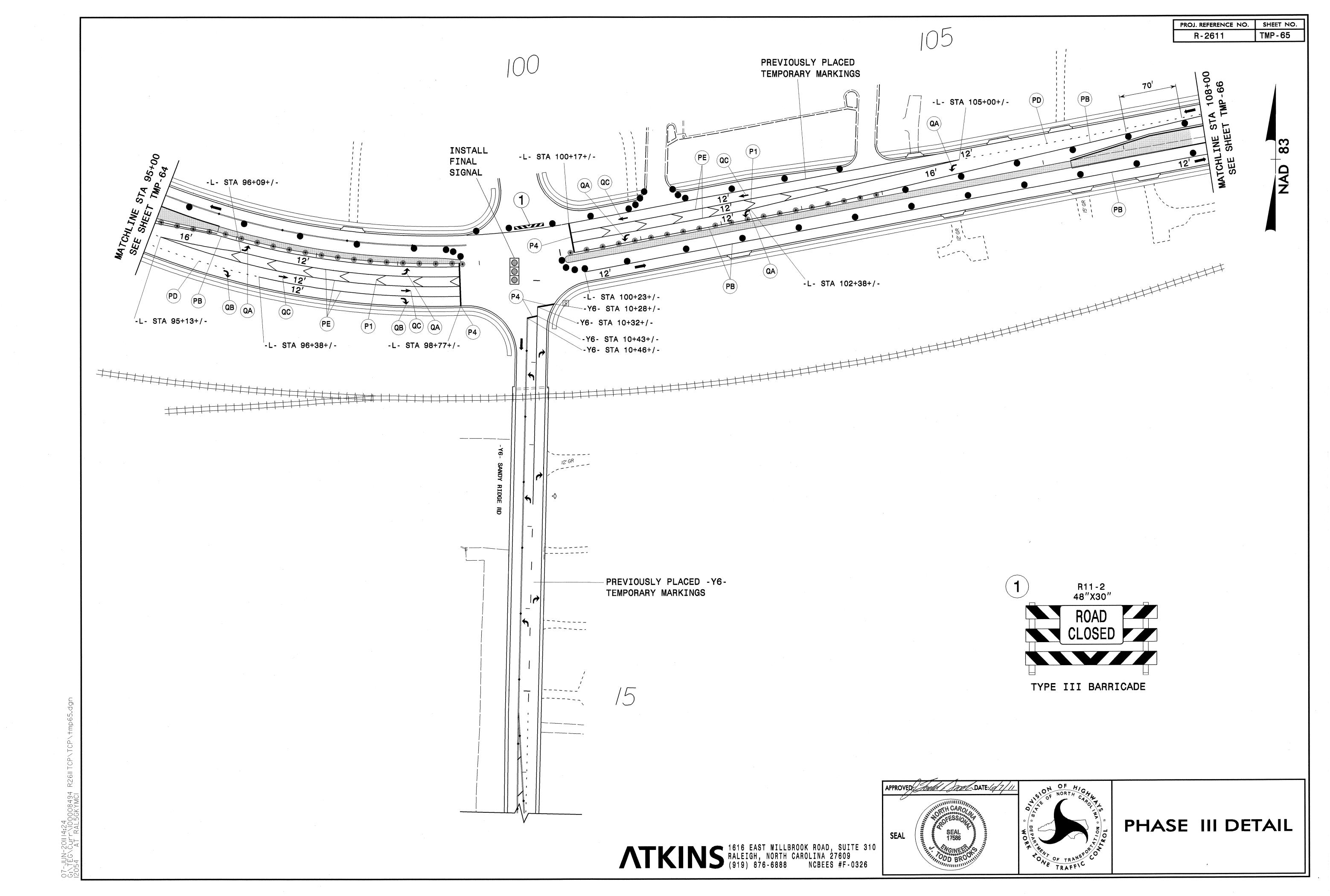
PROJ. REFERENCE NO. SHEET NO. TMP-63 R-2611 -L- MARKET ST WILLIAM O 70' (typ.) TYPE III BARRICADE TYPE III BARRICADE APPROVED: JUICH, MOONDATE: 5-3-201

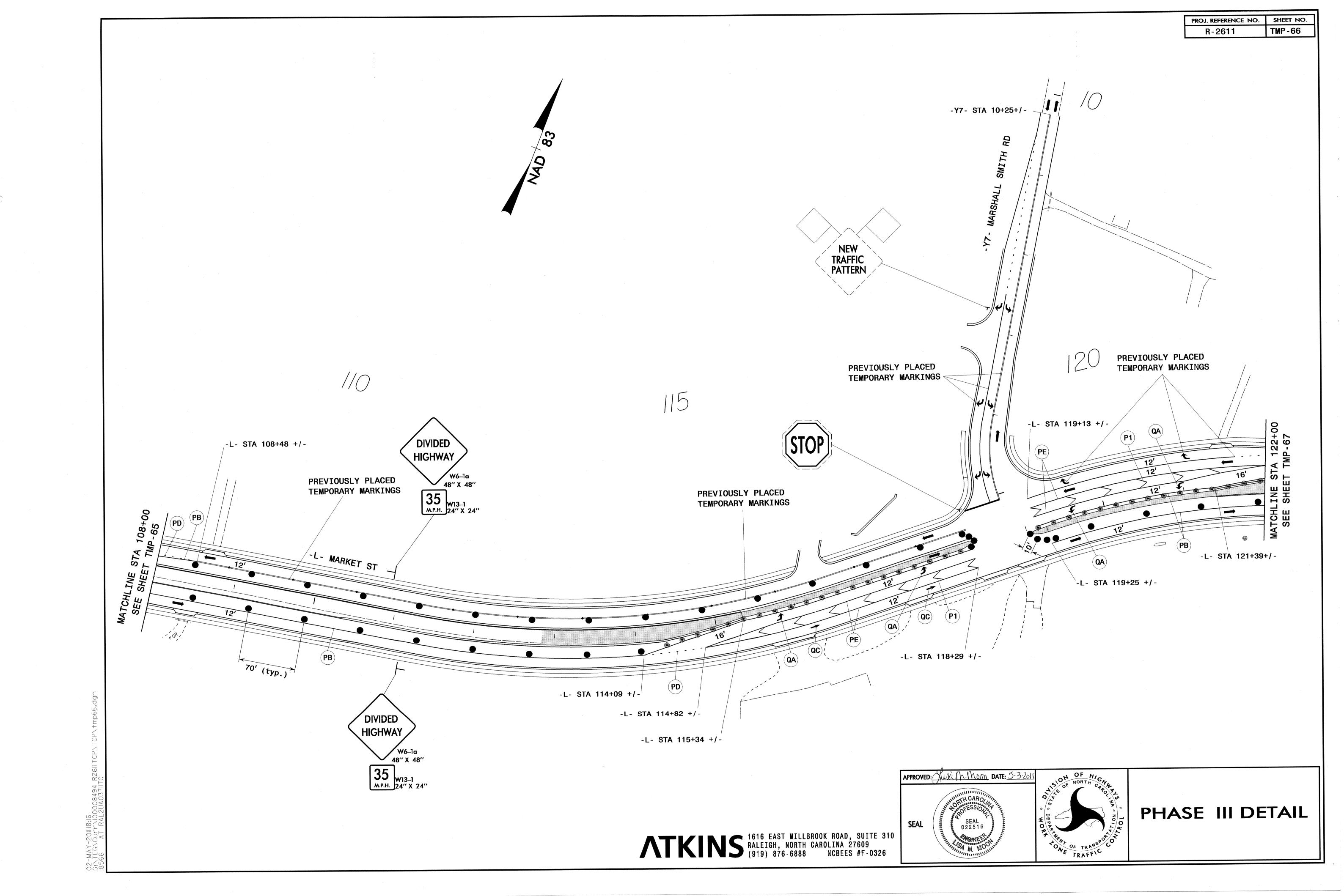
ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

PROJ. REFERENCE NO. SHEET NO. TMP-64 R-2611 85 HIGHWAY W6-1a 48" X 48" 35 W13-1 24" X 24" -L- MARKET ST -----70' (typ.) PD -L- STA 92+31 +/--L- STA 94+38 +/--L- STA 82+29 +/--L- STA 83+42 +/-DIVIDED ` HIGHWAY W6-la 48" X 48" 35 M.P.H. W13-1 24" X 24" APPROVED: MACH. MOOR DATE: 5-3-2011

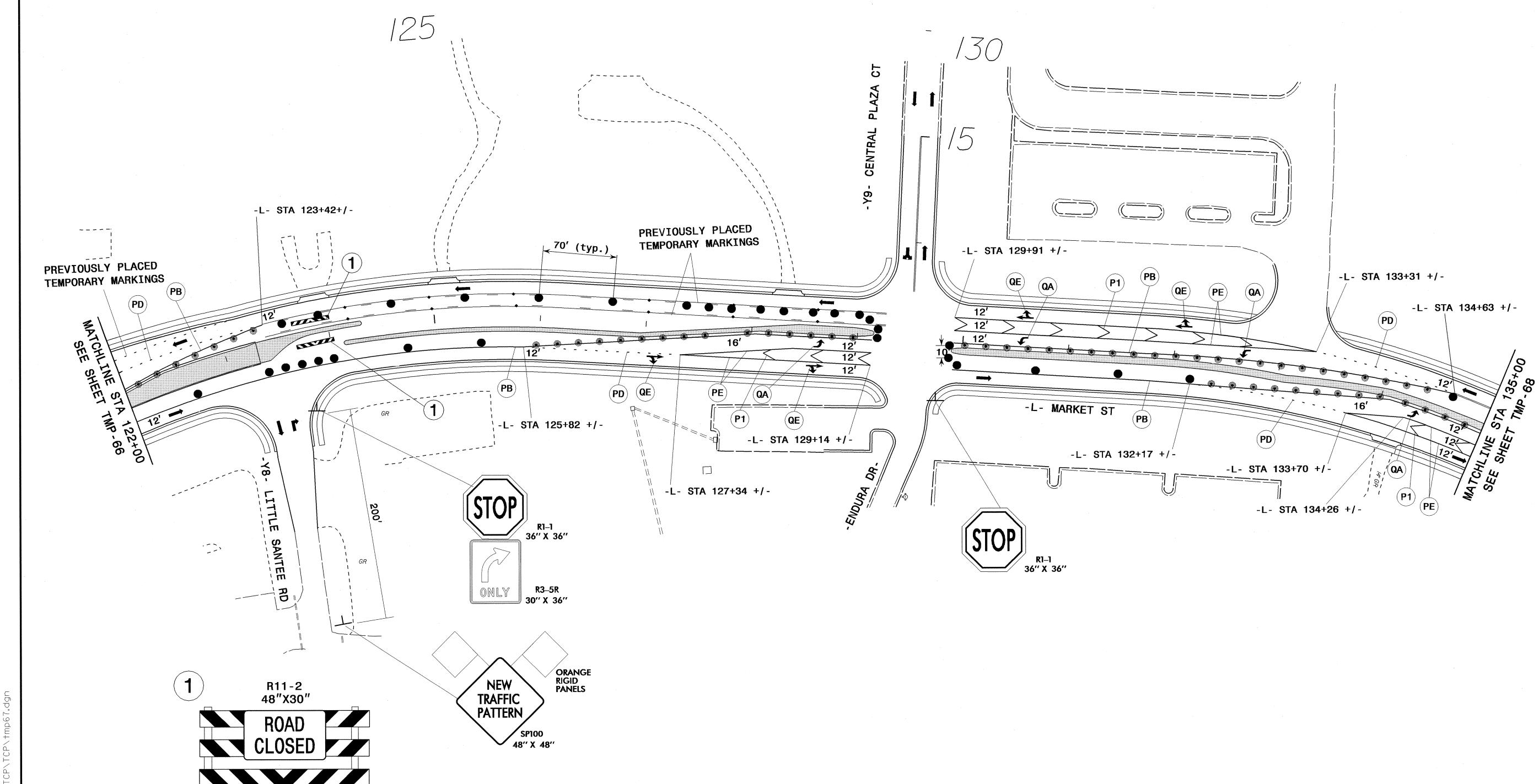
TKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326







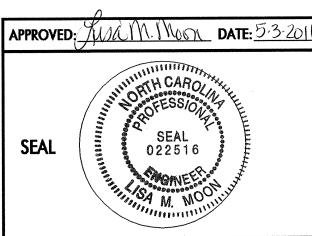
PROJ. REFERENCE NO. SHEET NO. TMP-67

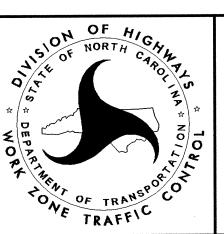


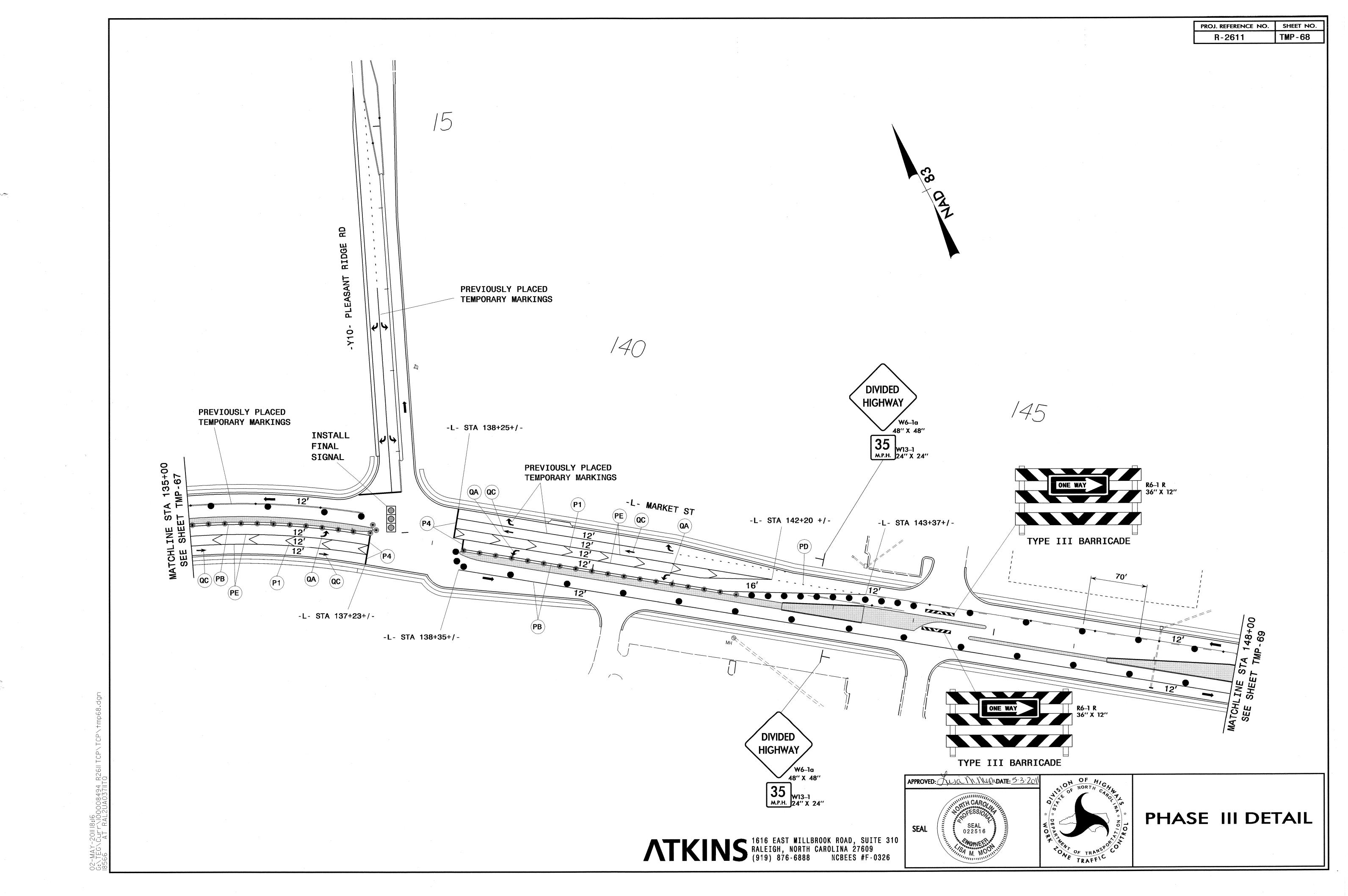
'-20|| | 8;|6 | | Curr | 100008494 | R26|| TCP | TCP | Tmp | AT | RAI 2|| A 37|| TO

TYPE III BARRICADE

TKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326







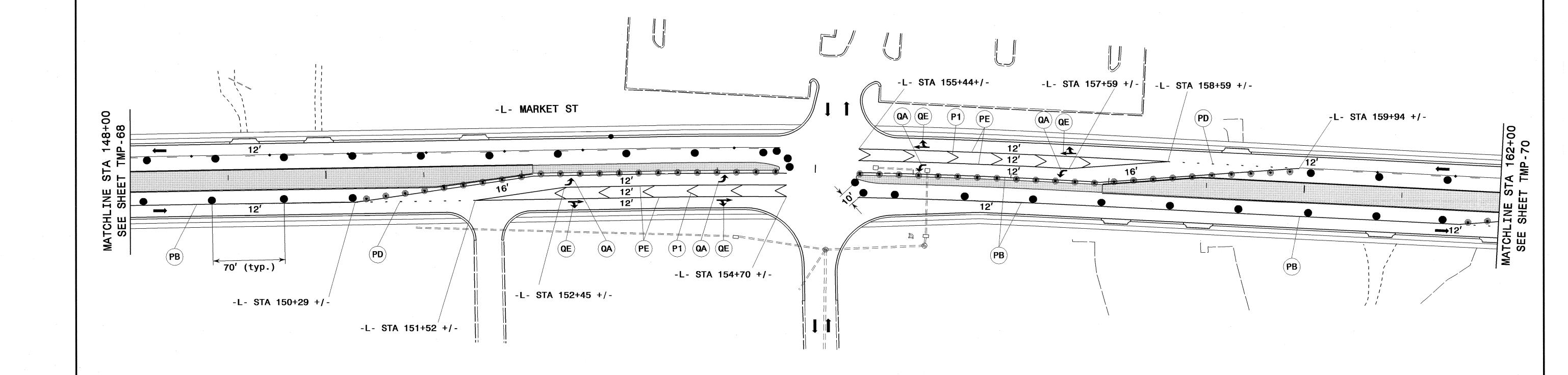
PROJ. REFERENCE NO. SHEET NO. TMP-69

Co CAT

50

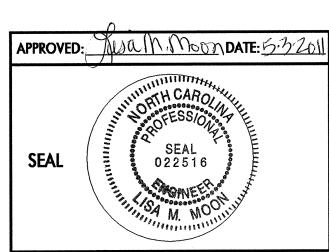
155

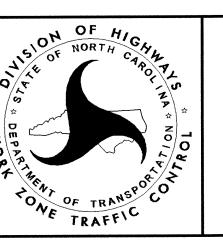
160



Y-20|| 18:16 ;\Curr\|00008494 R26|| TCP\TCP\+mp69.dg| AT RAI 2||A037||T0

TKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326





SHEET NO. PROJ. REFERENCE NO. R-2611 TMP-70 -L- STA 166+88 +/--L- STA 169+92 +/--L- STA 171+16 +/-162+00 NP-69 -L- MARKET ST 12' 🗲 <u> 12'</u> 12' 12' → 12' **→** 12' QA QC PD ~-Y11- STA 10+41 +/--Y11- STA 10+50 +/--L- STA 162+94 +/-QD) -L- STA 166+15 +/--L- STA 163+60 +/--L- STA 164+26 +/--Y11- STA 11+48 +/-QD---Y11- STA 12+49 +/-TIE TO EXISTING MARKINGS APPROVED: 101 M. M. M. DATE: 5-3-20[] PHASE III DETAIL TKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

PROJ. REFERENCE NO. SHEET NO. TMP-71 R-2611 -L- STA 187+92 +/-

DIVIDED
HIGHWAY

W6-1a

48" X 48"

35

W3-1

MPH 24" X 24"

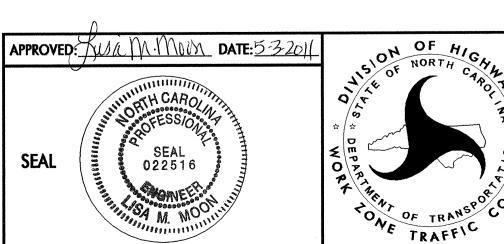
ROAD
CLOSED

180

70' (typ.)

TYPE III BARRICADE

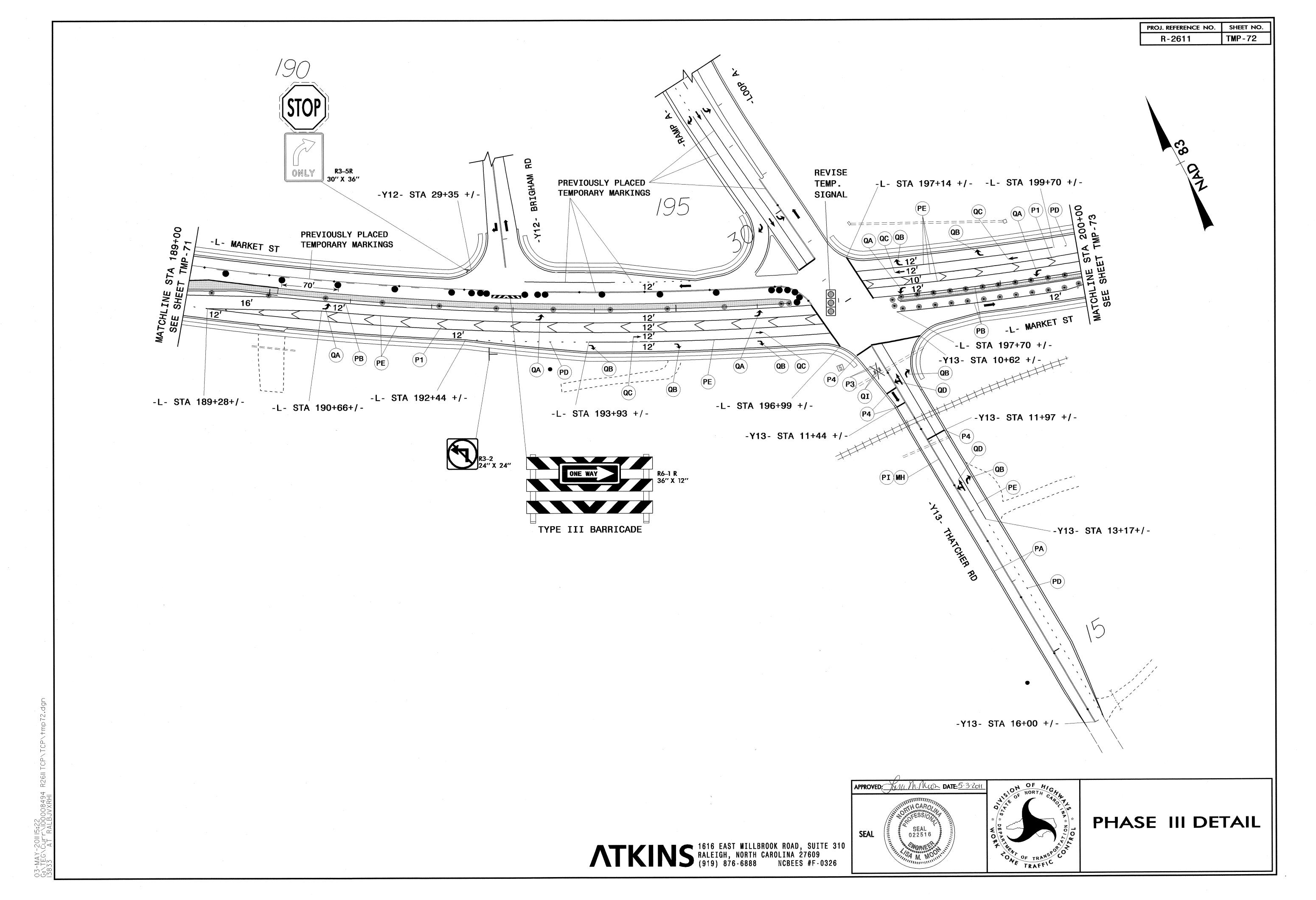
TELEST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326



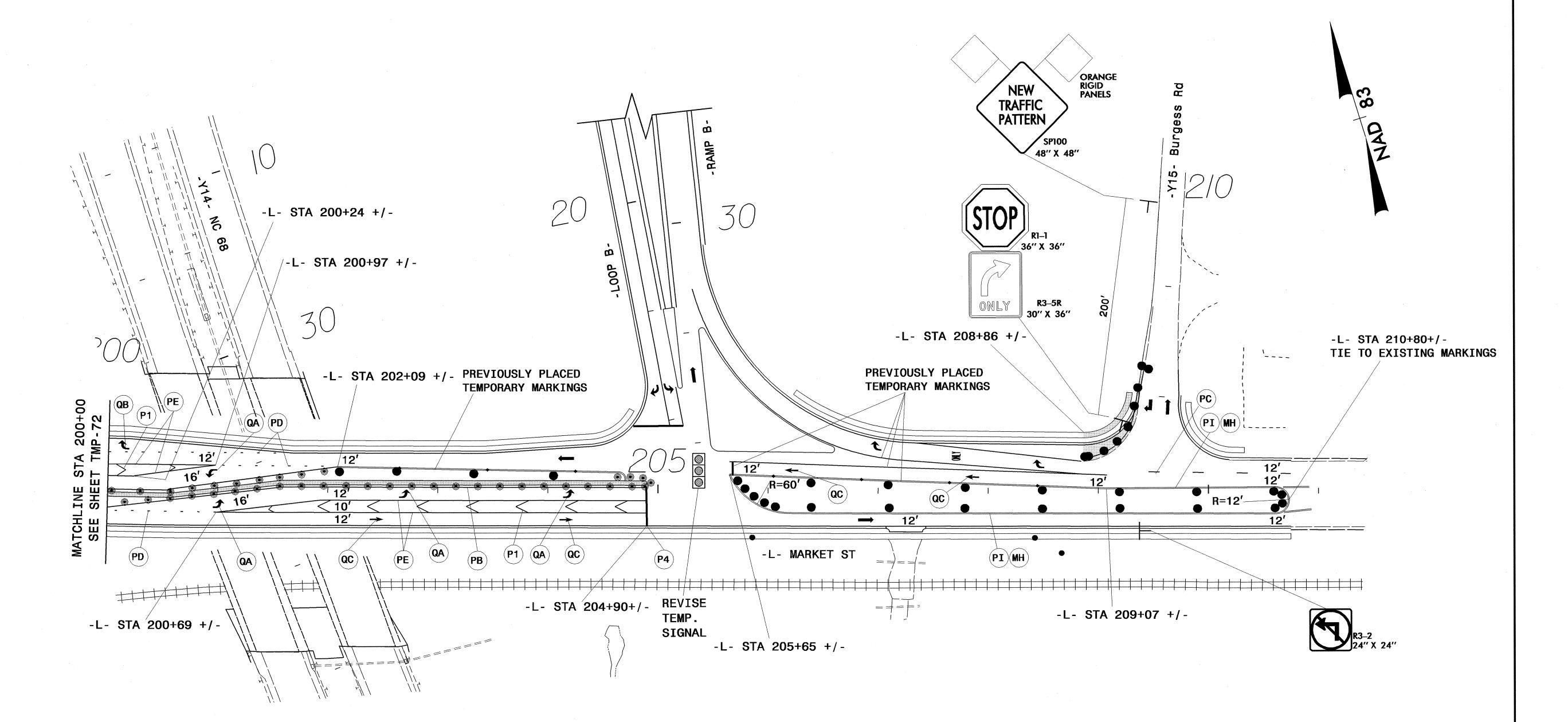
185

-L- MARKET ST

35 M.P.H. 24" X 24"

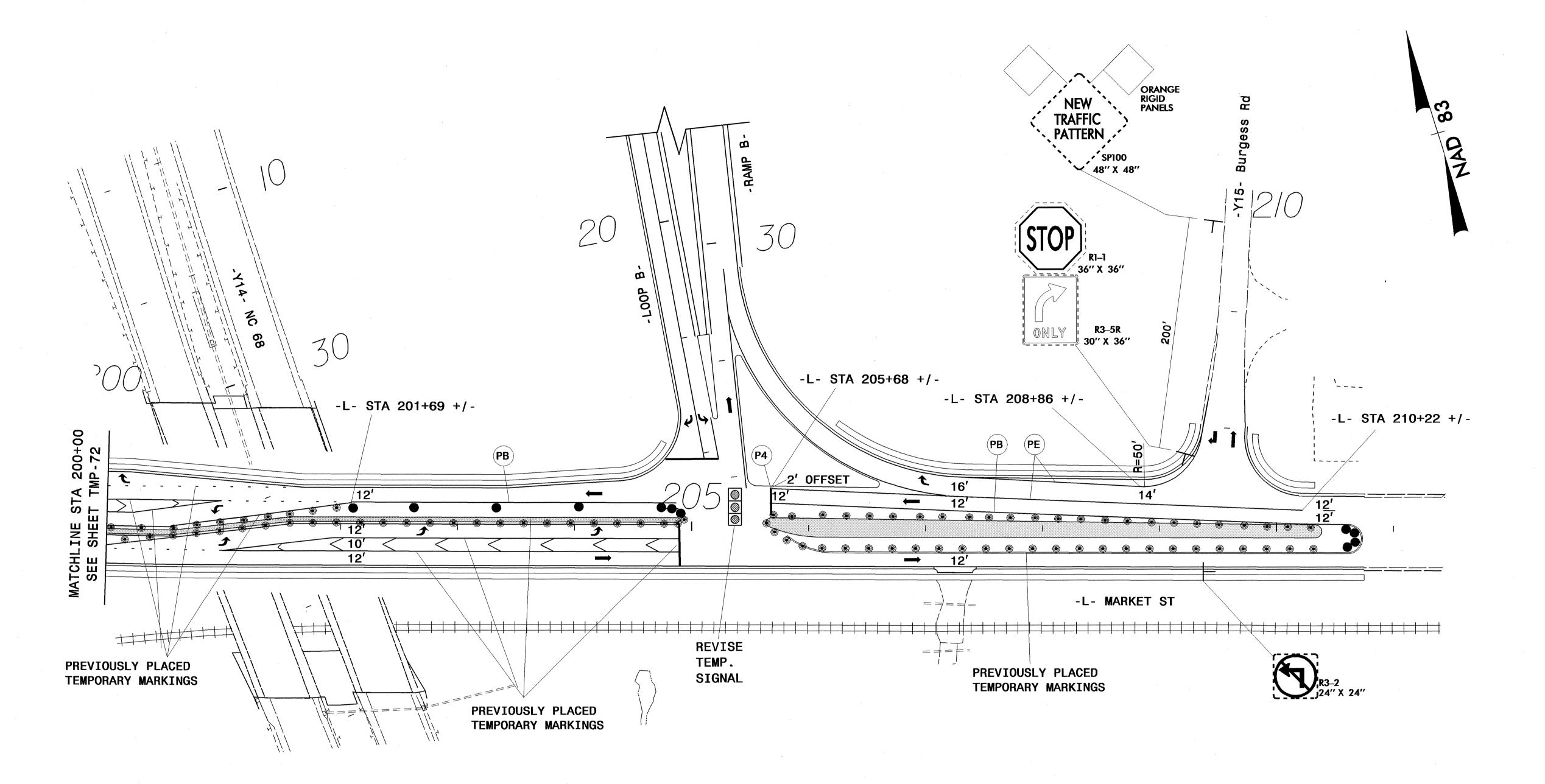


PROJ. REFERENCE NO. SHEET NO. TMP - 73





PROJ. REFERENCE NO. SHEET NO. TMP - 74



SEAL

310

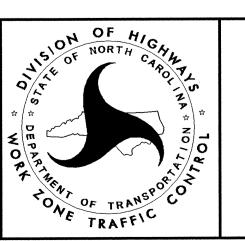
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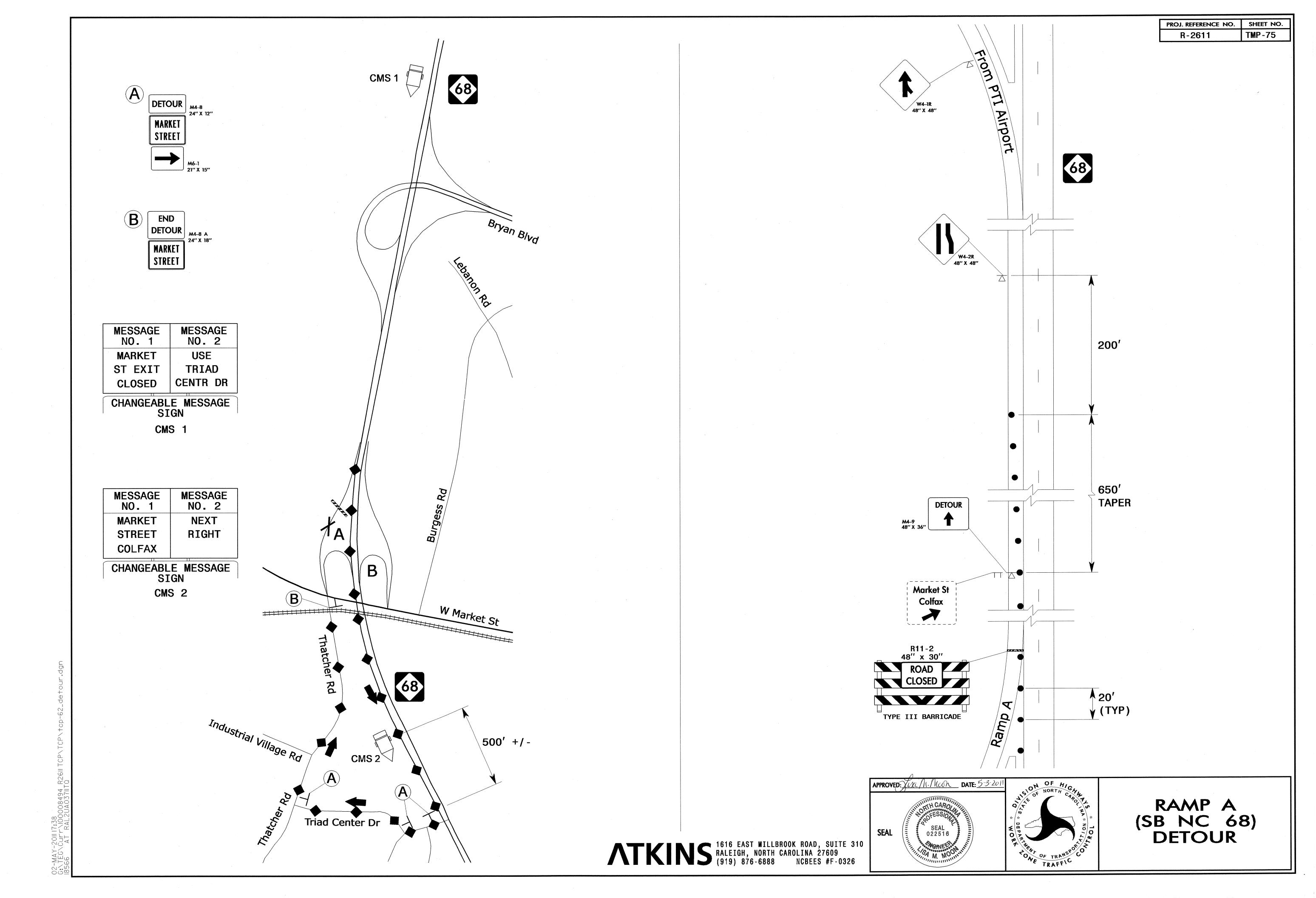
310

SEAL

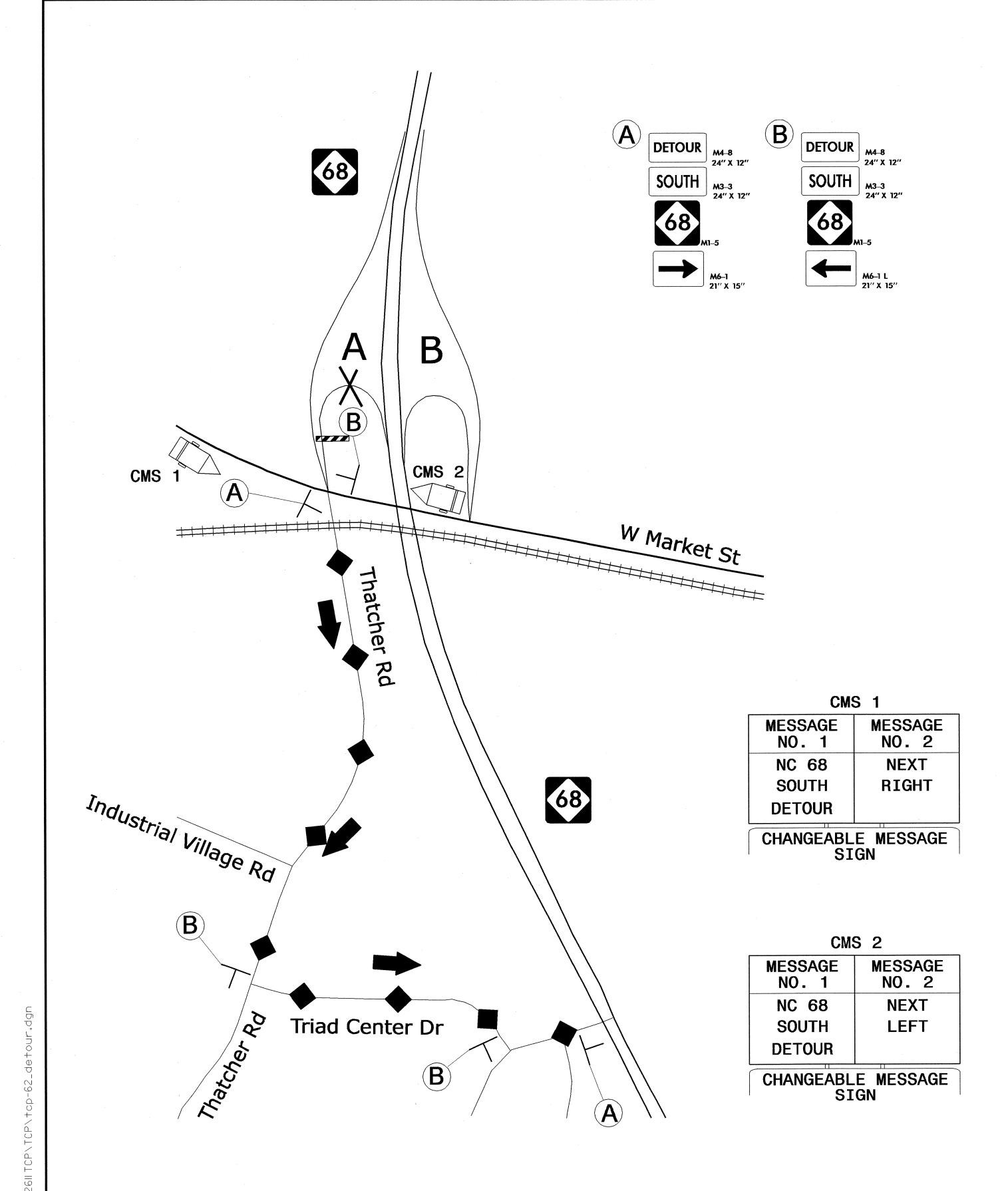
310

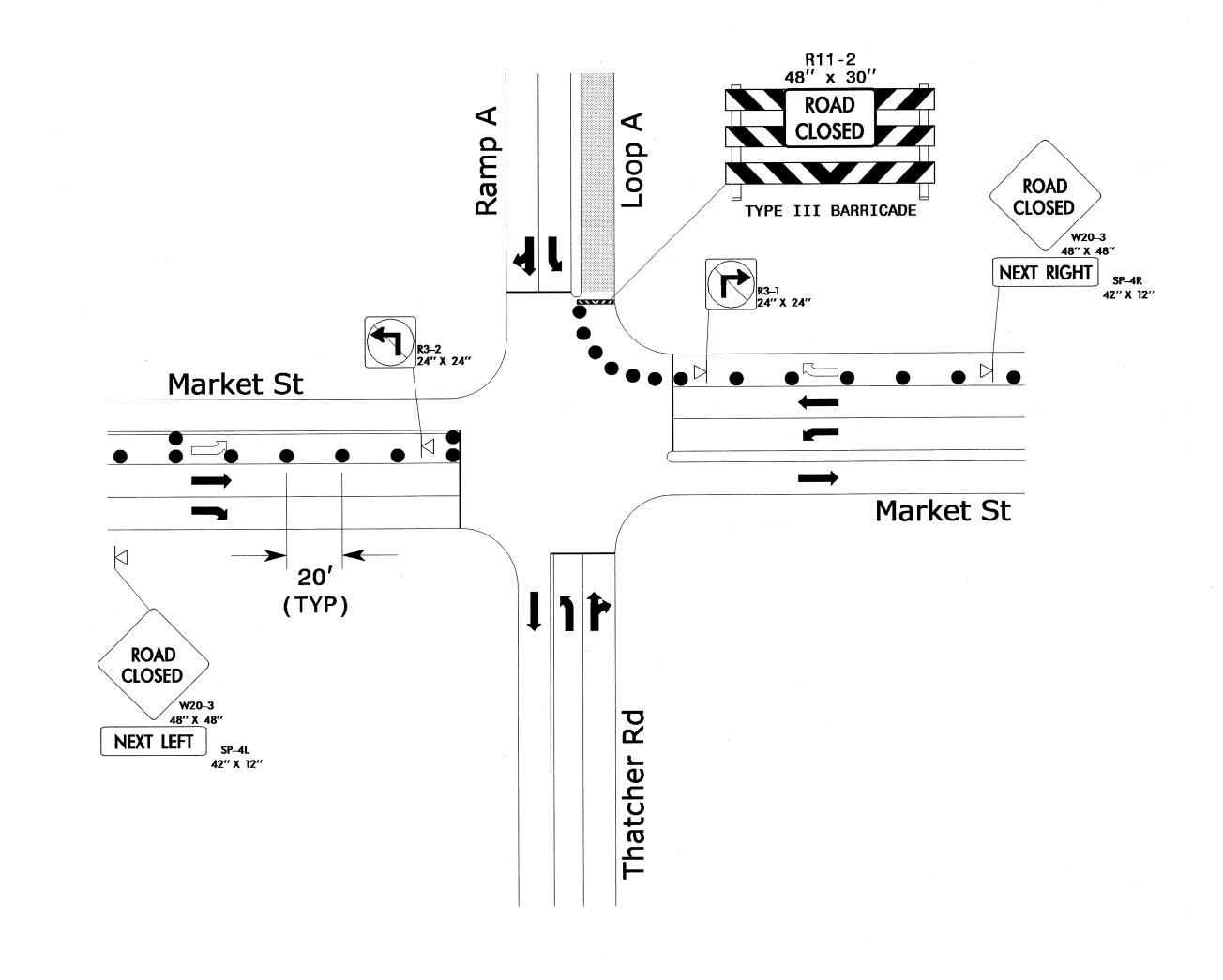
APPROVED: JUNE M MOSSA DATE: 5-3-2011





PROJ. REFERENCE NO. SHEET NO. TMP-76





SEAL

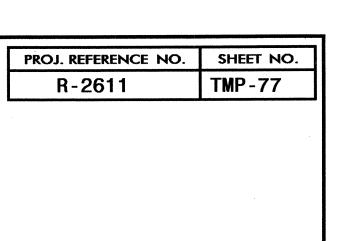
SEAL

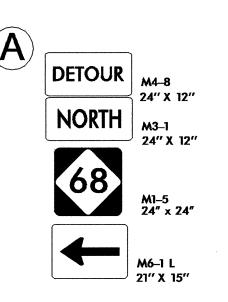
SEAL

OF TRANSPORT

TRAFFIC

LOOP A (SB NC 68) DETOUR





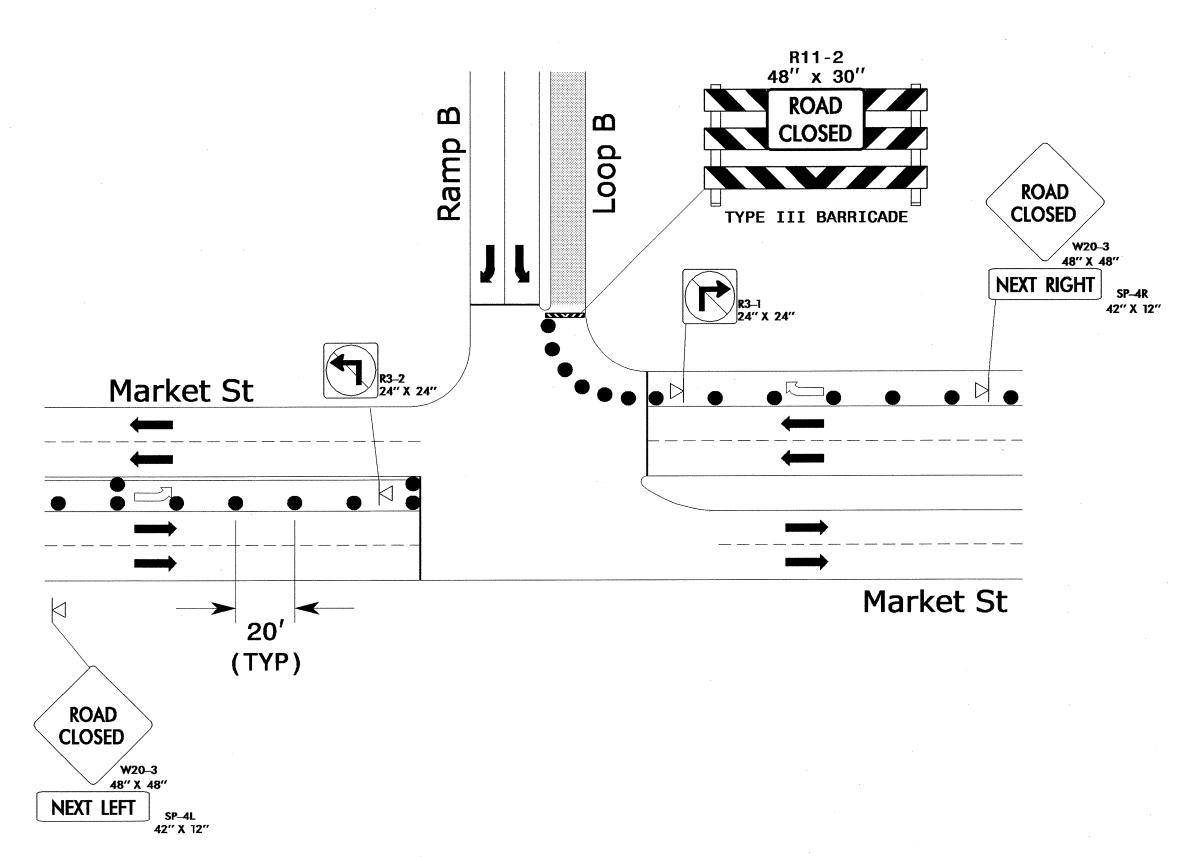
Bentley Rd

CMS 1	
MESSAGE NO. 1	MESSAGE NO. 2
NC 68	BURGESS
NORTH	RD 2ND
DETOUR	LEFT
CHANGEABLE MESSAGE SIGN	

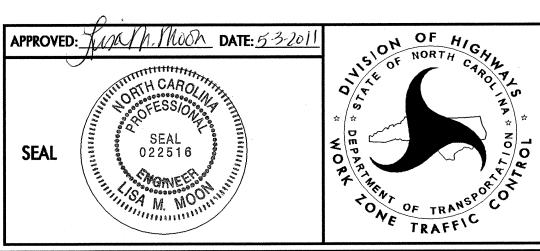
MESSAGE NO. 1	MESSAGE NO. 2
NC 68	NEXT
NORTH	LEFT
DETOUR	

CMS 2

CHANGEABLE MESSAGE SIGN



TENS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326



RAMP B (NB NC 68) DETOUR

CMS 1

Industrial Village Rd

Triad Center Dr

68

Brigham Rd

Canoe Rd

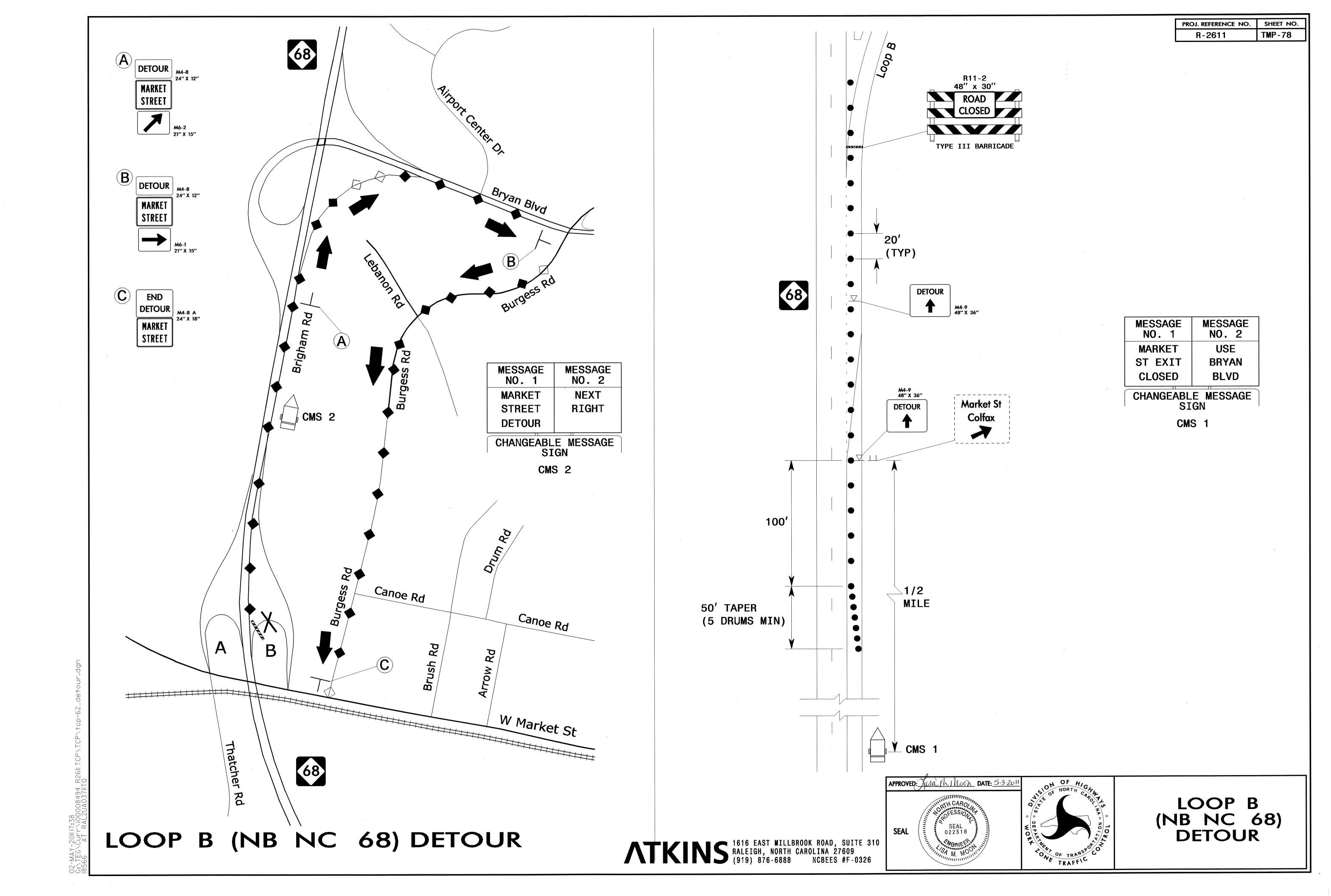
68

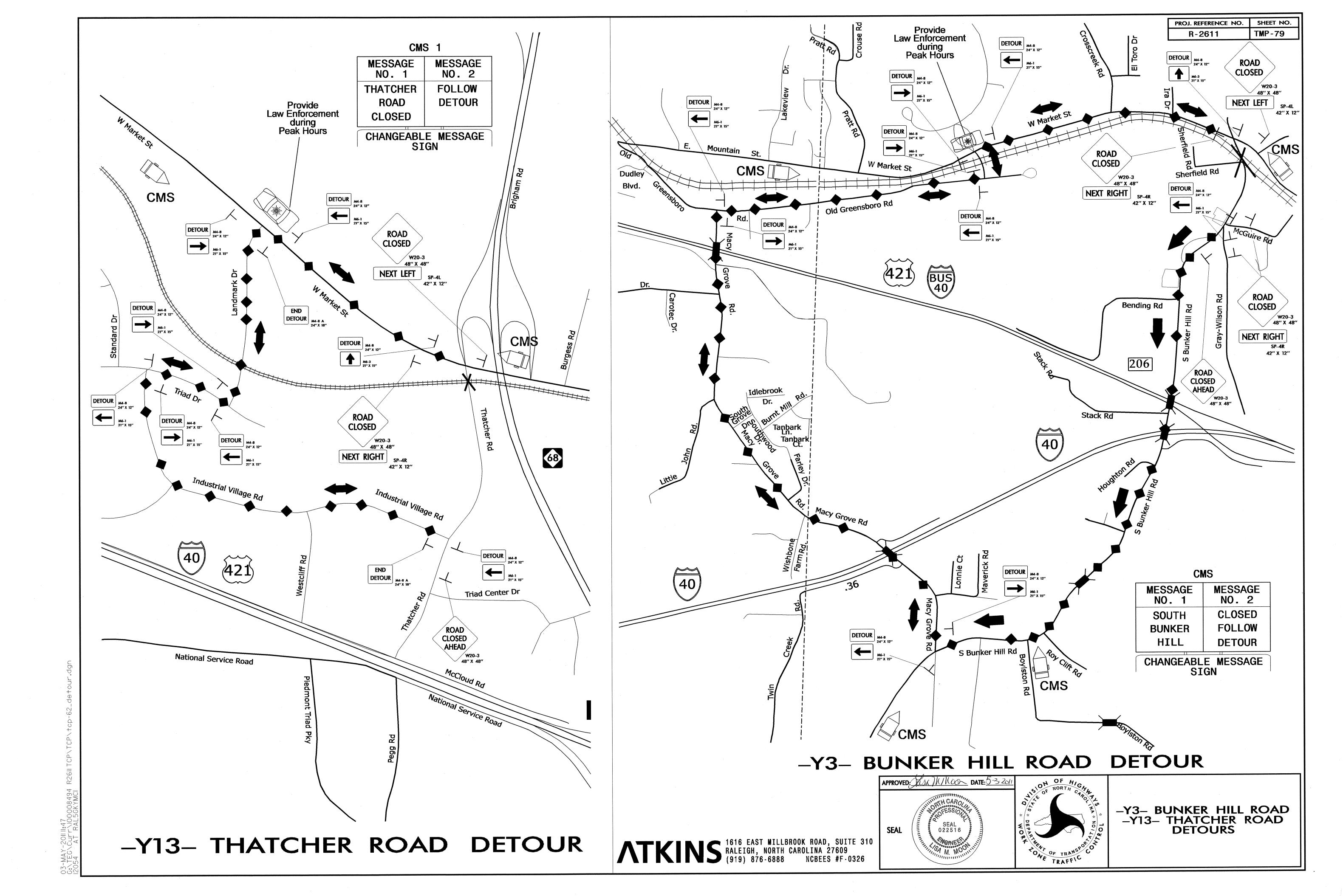
Canoe Rd

W Market St

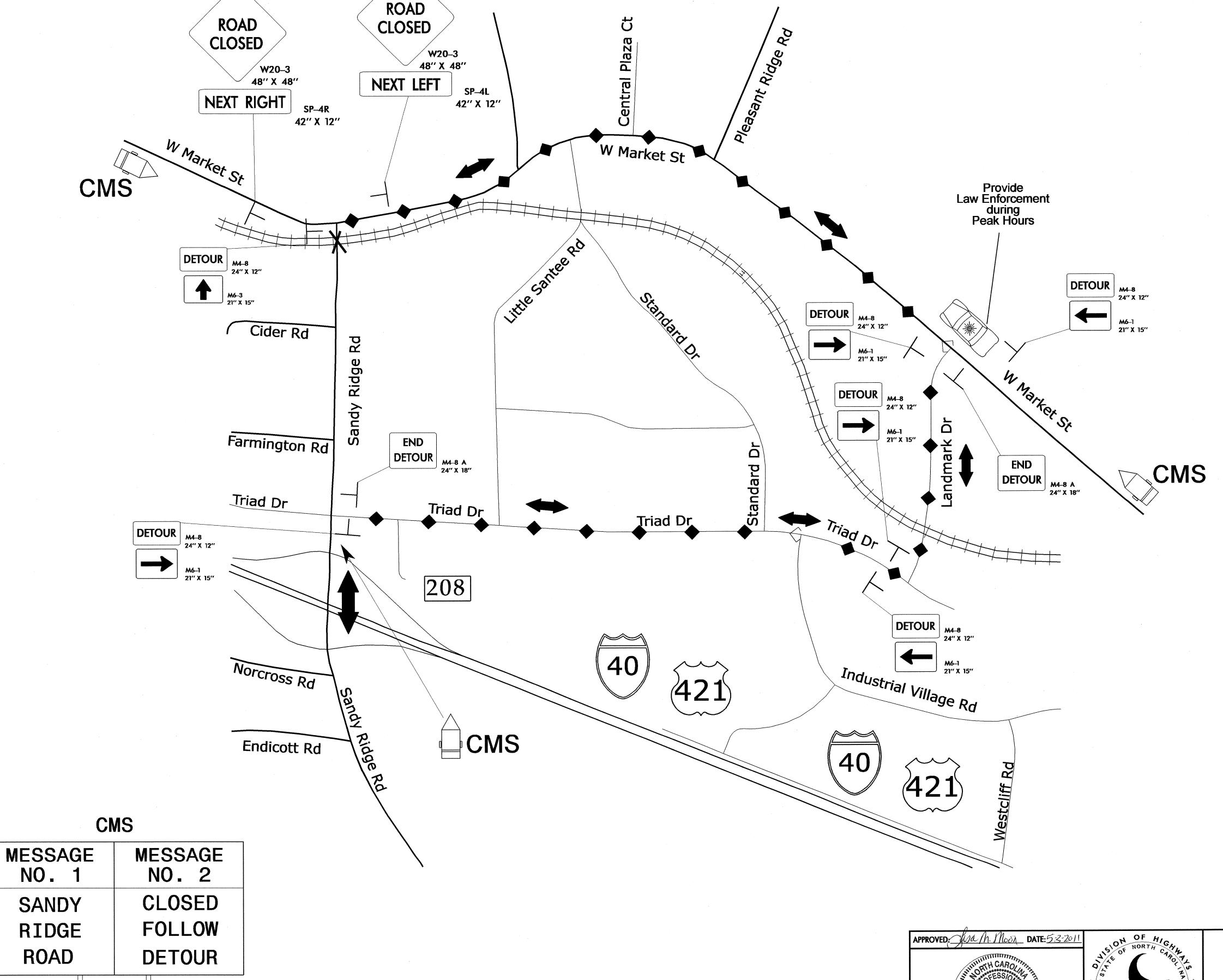
Bryan Blvd

Brigholm Rd



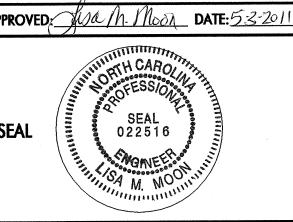


SHEET NO. PROJ. REFERENCE NO. TMP-80 R-2611



CHANGEABLE MESSAGE

SIGN





\_Y6\_ SANDY RIDGE ROAD DETOUR